



GRAND HAVEN
 11181 MARWILL AVENUE
 WEST OLIVE, MI 49460
 TEL: (616) 847-1680 FAX: (616) 847-9970
 www.cardnojfnw.com

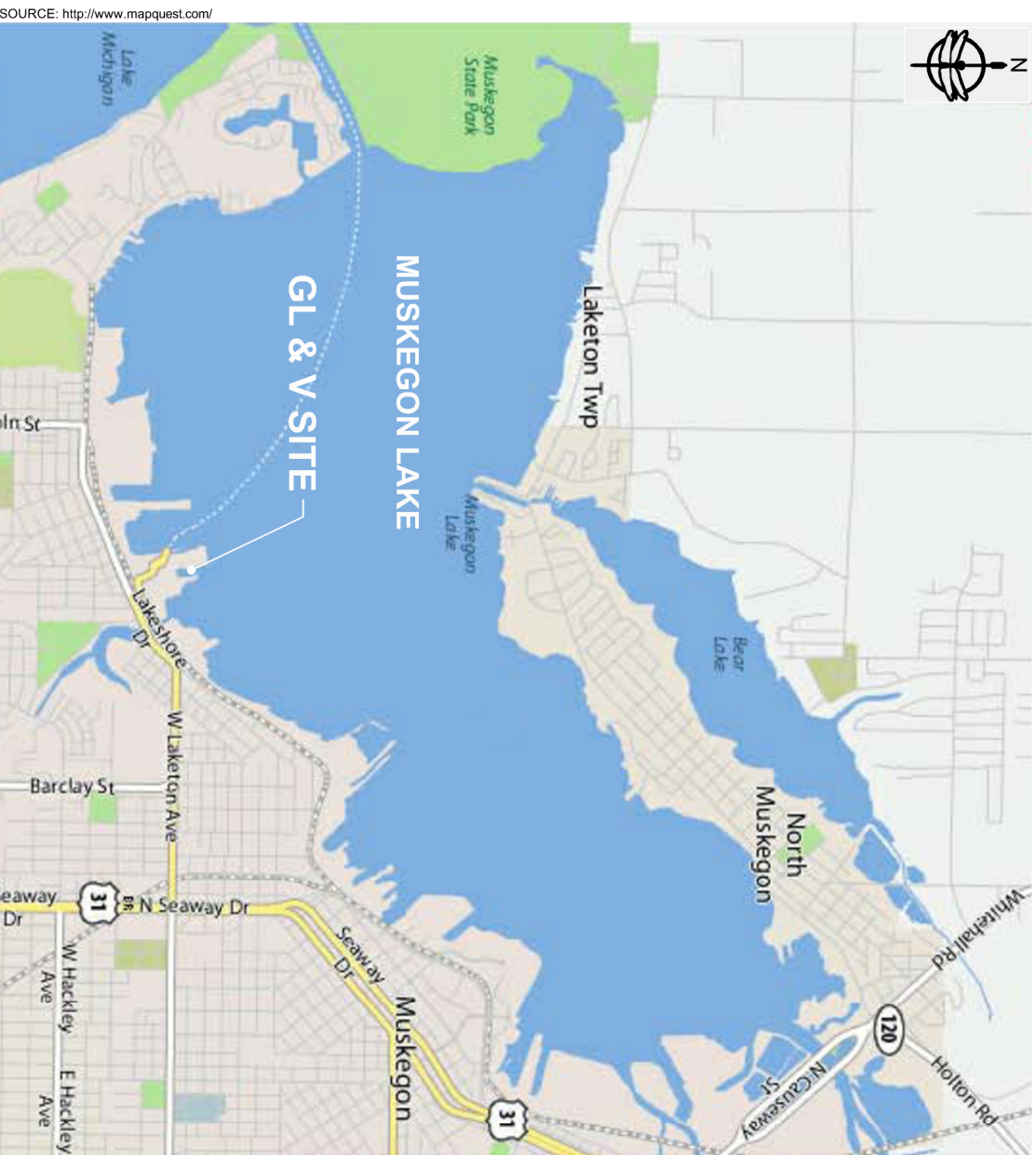
West Michigan Shoreline Regional Development Commission and the Muskegon Lake Watershed Partnership GL & V Site Restoration

Muskegon County, Michigan March, 2013
AS-BUILT PLANS. APPROVED BY: SCOTT DIERKS, P.E.

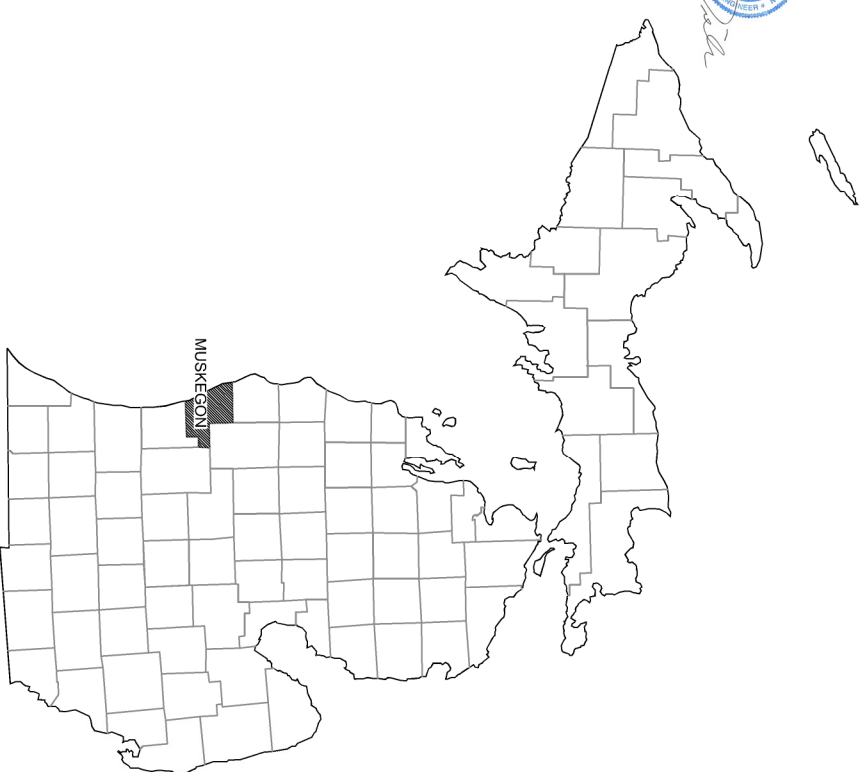


SHEET INDEX

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VICINITY MAP
 NOT TO SCALE



MICHIGAN STATE MAP
 NOT TO SCALE



Our mission is to provide the highest quality environmental services to our clients while positively impacting the lives of our employees and the conservation of natural resources through prosperity and stewardship.

COVER SHEET
 GL & V, LLC
 MARINE DREDGE AND SHORELINE RESTORATION
 West Michigan Shoreline Regional Community
 Muskegon, MI

DRAWN BY: WL
 DESIGNED BY: BM
 DATE: November 5, 2013
 JOB NO: 0902035.18

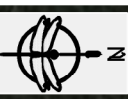
DRAWING NO.
1
 OF 11

**BEFORE YOU DIG
 CALL 811
 WORKING TOGETHER
 1-800-480-7171**

**PRELIMINARY DRAWING.
 NOT APPROVED FOR CONSTRUCTION.**

Location: R:\Projects\0902035\0902035_westmichiganshoreline\mxd\muskegonlake\CAD\great lake dock\17glt\sheet611 Location Map_ASBuilt.dwg
 Layout Tab Name: 1 COVER SHEET.1 Images: ARSA Logo.jpg; GL Logo-3rd0509.jpg; NOAA Logo.jpg; SBD_stamp.jpg; stamp.jpg; wmsrdc_logo_big.jpg; SBD_stamp.jpg; Xref: _CoverTB-2204_ASBuilt.dwg
 Last Saved By: wesley.landon, 11/5/2013 9:40:14 AM
 Plotted By: Wesley Landon (Grand Haven) Plotted: November 5, 2013, 9:40:57 AM

SOURCE: http://www.mapquest.com/

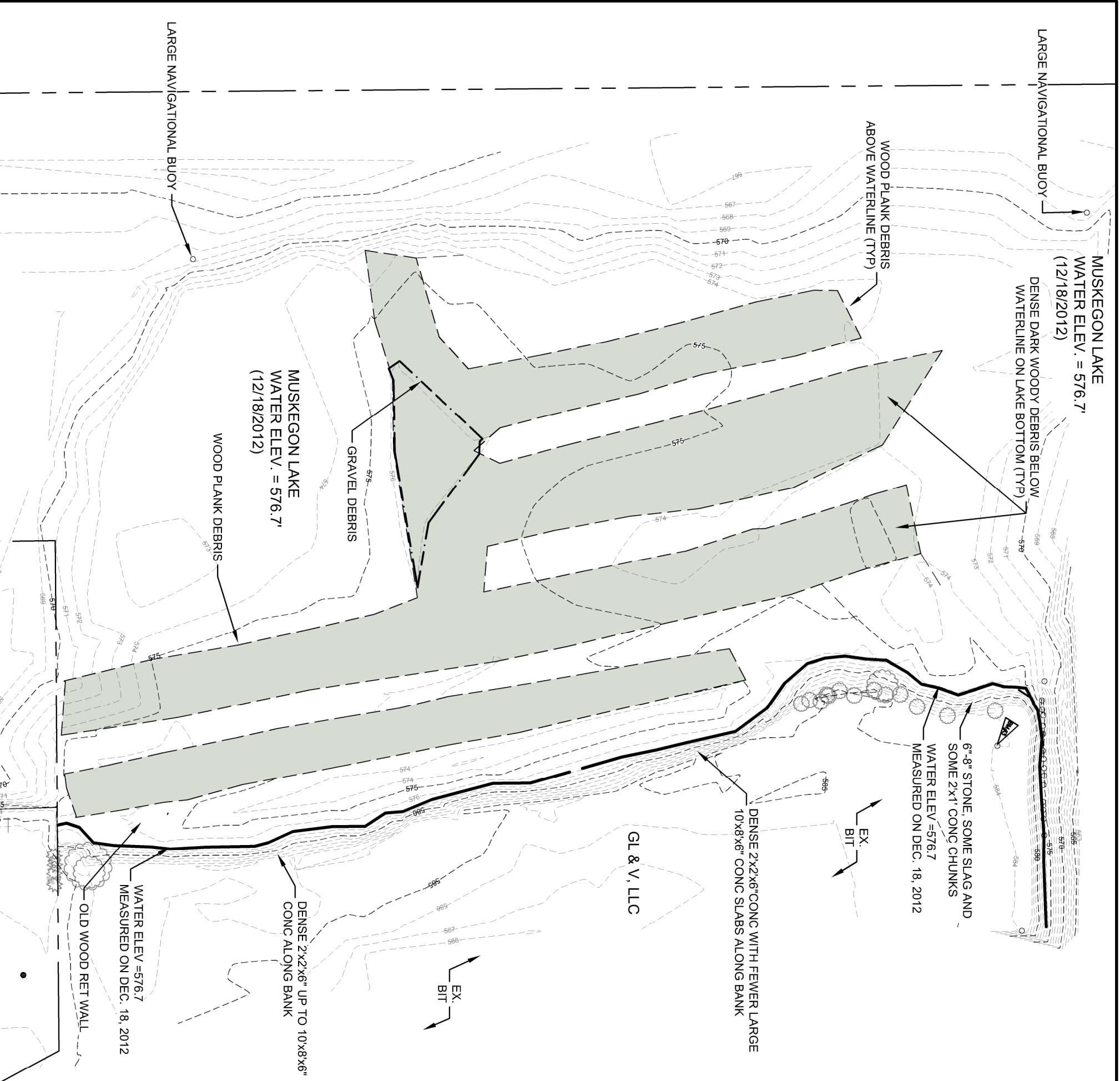


WMSRDC
 WEST MICHIGAN SHORELINE
 REGIONAL DEVELOPMENT COMMISSION

MLWMP
 Muskegon Lake
 Watershed Partnership



DRAWING NO. 2 OF 11	JOB NO.: 0902035_18 DATE: November 5, 2013 DESIGNED BY: BM DRAWN BY: WL	LOCATION MAP GL & V, LLC MARINE DREDGE AND SHORELINE RESTORATION West Michigan Shoreline Regional Community Muskegon, MI	REVISION <table border="1" style="width: 100%; height: 40px;"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>							 Cardno JFNew GRAND HAVEN 11181 MARWILL AVENUE WEST OLIVE, MI 49460 TEL: (616) 847-1880 FAX: (616) 847-9970 www.cardnojfnew.com



- LEGEND**
- EXISTING MAJOR CONTOUR
 - - - EXISTING MINOR CONTOUR
 - PROPERTY LINE
 - WATER LINE AS OF 12/18/2012
 - GRAVEL
 - SLAB WOOD
 - EXISTING TREE / SHRUB
 - ▲ SITE BENCHMARK

BM #3 EL. 584.56'
 CHISELED "X" ON W/ARM TO BOAT
 TIE OFF @ NW COR OF GREAT LAKES
 DOCK W/ PENINSULA

NOTES:

- 1) 100-YR FLOODPLAIN ELEVATION = 584.0'
- 2) ORDINARY HIGH WATER MARK (OHWM) = 580.5'
- 3) ALL PROPERTY AND/OR RIGHT OF WAY LINES ARE APPROXIMATE.
- 4) TOPOGRAPHIC SURVEY PROVIDED BY FLEIS & VANDENBRINK ENGINEERING, INC. ON 12/18/2012.














BEFORE YOU DIG
 CALL 3 1 1
 WORKING TOGETHER
 1-800-482-3111

<p>EXISTING CONDITIONS - MARINE DEBRIS</p> <p>GL & V, LLC MARINE DREDGE AND SHORELINE RESTORATION West Michigan Shoreline Regional Community Muskegon, MI</p>	<p>REVISION</p> <table border="1" style="width: 100%; height: 50px;"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>									<p>Cardno JFNew</p> <p>GRAND HAVEN 11181 MARWILL AVENUE WEST OLIVE, MI 49460 TEL: (616) 847-1880 FAX: (616) 847-9970 www.cardnojfnew.com</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">DRAWN BY:</td> <td>WL</td> </tr> <tr> <td>DESIGNED BY:</td> <td>BM</td> </tr> <tr> <td>DATE:</td> <td>November 5, 2013</td> </tr> <tr> <td>JOB NO.:</td> <td>0902035.18</td> </tr> </table>	DRAWN BY:	WL	DESIGNED BY:	BM	DATE:	November 5, 2013	JOB NO.:	0902035.18
DRAWN BY:	WL																		
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DATE:	November 5, 2013																		
JOB NO.:	0902035.18																		
<p>DRAWING NO. 3</p>	<p>OF 11</p>																		



LEGEND

-  EXISTING MAJOR CONTOUR
-  EXISTING MINOR CONTOUR
-  PROPERTY LINE
-  WATER LINE AS OF 12/18/2012
-  GRAVEL
-  SLAB WOOD
-  EXISTING TREE / SHRUB
-  SITE BENCHMARK
-  LIMIT OF PROPOSED DREDGING
-  PROPOSED DREDGE AREA
-  PROPOSED TURBIDITY CURTAIN

NOTES:

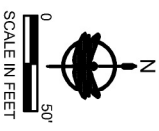
- 1) 100-YR FLOODPLAIN ELEVATION = 584.0'
- 2) ORDINARY HIGH WATER MARK (OHWM) = 580.5'
- 3) ALL PROPERTY AND/OR RIGHT OF WAY LINES ARE APPROXIMATE.
- 4) CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING DAMAGE TO EXISTING STRUCTURES, PAVING AREAS, UTILITIES, OR TURF GRASS.
- 5) ALL QUANTITIES LISTED ARE APPROXIMATIONS. CONTRACTORS WILL BE PAID ON A PER-JUNIT BASIS FOR MATERIAL ACTUALLY UTILIZED.
- 6) INSTALL TURBIDITY CURTAIN AROUND WORK AREA DURING DREDGING OPERATIONS.
- 7) TOPOGRAPHIC SURVEY PROVIDED BY FLEIS & VANDENBRINK ENGINEERING, INC. ON 12/18/2012.
- 8) SESC BMP'S UTILIZES MICHIGAN DMB KEYING SYSTEM.

SESC & DEMOLITION SUMMARY

ITEM	UNIT	QTY
MARINE DEBRIS REMOVAL	CY	78,456

SESC CONTROL MEASURES

 = TURBIDITY CURTAIN




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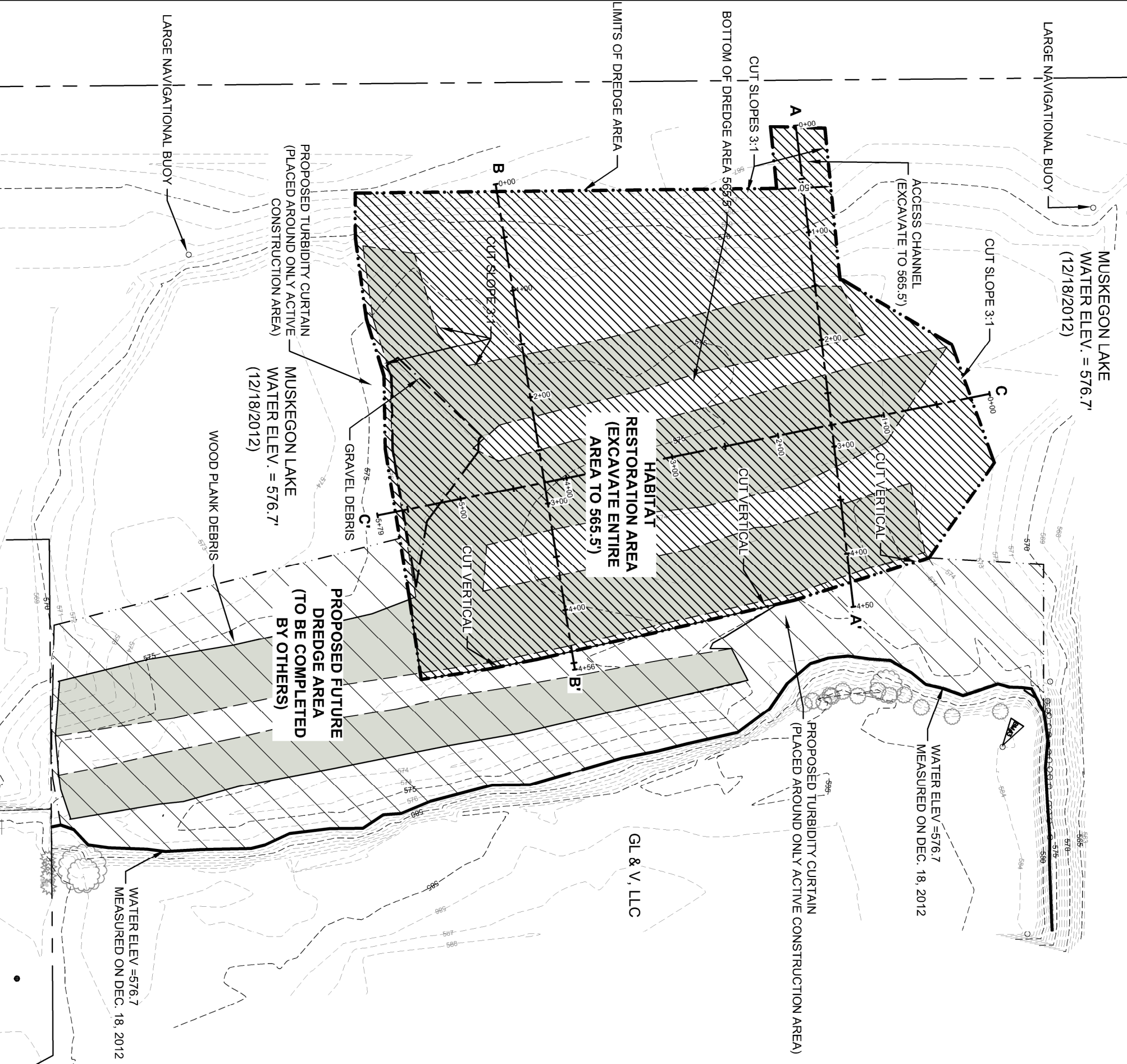
WMSRDC
 WEST MICHIGAN SHORELINE
 REGIONAL DEVELOPMENT COMMISSION



MLWPP
 Muskegon Lake Watershed Partnership



DRAWN BY:	WL
DESIGNED BY:	BM
DATE:	November 5, 2013
JOB NO.:	0902035.18
SESC - MARINE DEBRIS	
GL & V, LLC	
MARINE DREDGE AND SHORELINE RESTORATION	
West Michigan Shoreline Regional Community	
Muskegon, MI	
DRAWING NO.	4
OF	11



LEGEND

	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	PROPERTY LINE
	WATER LINE AS OF 12/18/2012
	GRAVEL
	SLAB WOOD
	EXISTING TREE / SHRUB
	SITE BENCHMARK
	CROSS SECTIONS
	LIMIT OF PROPOSED DREDGING
	LIMIT OF FUTURE DREDGING (TO BE COMPLETED BY OTHERS)
	PROPOSED DREDGE AREA
	PROPOSED FUTURE DREDGE AREA (TO BE COMPLETED BY OTHERS)

- NOTES:**
- 1) 100-YR FLOODPLAIN ELEVATION = 584.0'
 - 2) ORDINARY HIGH WATER MARK (OHWM) = 580.5'
 - 3) ALL PROPERTY AND/OR RIGHT OF WAY LINES ARE APPROXIMATE.
 - 4) CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING DAMAGE TO EXISTING STRUCTURES, PAVING AREAS, UTILITIES, OR TURF GRASS.
 - 5) ALL QUANTITIES LISTED ARE APPROXIMATIONS. CONTRACTORS WILL BE PAID ON A PER-UNIT BASIS FOR MATERIAL ACTUALLY UTILIZED.
 - 6) EXCAVATE APPROXIMATELY 53,008 CUBIC YARDS OF MARINE DEBRIS FROM 3.73 ACRES WITHIN THE OHWM.
 - 7) ALL EXCAVATED MATERIALS SHALL BECOME CONTRACTOR'S PROPERTY AND SHALL BE REMOVED FROM PROJECT SITE. CONTRACTOR IS WHOLLY RESPONSIBLE FOR THE MATERIAL ONCE IT HAS BEEN REMOVED FROM THE LAKE BOTTOM.
 - 8) CONTRACTOR SHALL DISPOSE OF MATERIAL AT A LOCATION OF HIS CHOOSING. CONTRACTOR ASSUMES FULL LIABILITY FOR DISPOSAL OF MATERIAL, BUT MATERIAL MAY NOT BE DISPOSED OF IN ANY FEDERAL, STATE OR LOCAL REGULATED WETLAND, WATERBODY, OR SENSITIVE ENVIRONMENTAL AREA. DISPOSAL AREA IS SUBJECT TO APPROVAL BY THE ENGINEER, MDEQ, AND USACE PRIOR TO DISPOSAL.
 - 9) CONTRACTOR SHALL BE RESPONSIBLE FOR CONTAINING AND REMOVING ALL DISLODGED WOOD. CONTAINMENT MEASURES SUCH AS TURBIDITY CURTAINS SHALL BE USED TO PREVENT WOOD FROM MIGRATING OUTSIDE THE RESTORATION AREA. ANY WOOD THAT DOES MIGRATE OUTSIDE THE RESTORATION AREAS SHALL BE IMMEDIATELY GATHERED AND DISPOSED OF BY THE CONTRACTOR.
 - 10) CONTRACTOR MAY TEMPORARILY STORE MATERIAL FOR DRYING AT A LOCATION OF HIS CHOOSING PRIOR TO FINAL DISPOSAL. ALL STORING AND DISPOSAL LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR AND ARE SOLELY HIS RESPONSIBILITY. ANY TEMPORARY STOCKPILE LOCATIONS CANNOT BE LOCATED WITHIN ANY FEDERAL, STATE, OR LOCAL REGULATED WETLAND, WATERBODY OR SENSITIVE ENVIRONMENTAL AREA AND SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER, MDEQ, AND USACE.
 - 11) TOPOGRAPHIC SURVEY PROVIDED BY FLEIS & VANDENBRINK ENGINEERING, INC. ON 12/18/2012.

RESTORATION SUMMARY

ITEM	UNIT	QTY
MARINE DEBRIS REMOVAL	CY	78,456

WEST MICHIGAN SHORELINE REGIONAL DEVELOPMENT COMMISSION

WMSRDC

MLWPP
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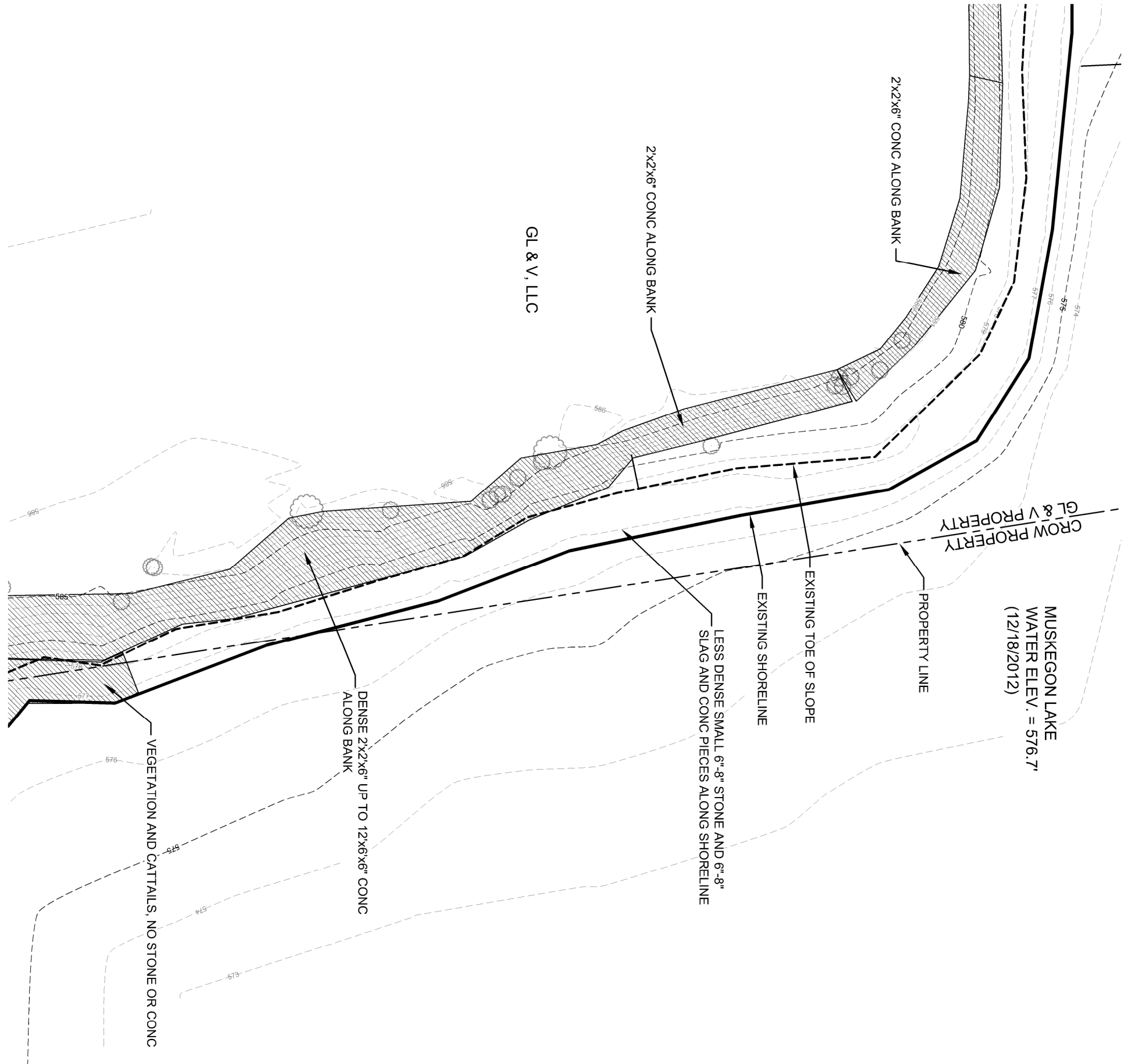
PROPOSED CONDITIONS - MARINE DEBRIS

GL & V, LLC
 MARINE DREDGE AND SHORELINE RESTORATION
 West Michigan Shoreline Regional Community
 Muskegon, MI

DRAWN BY: WL
 DESIGNED BY: BM
 DATE: November 5, 2013
 JOB NO.: 0902035.18



DRAWING NO. **5**
 OF 11



MUSKEGON LAKE
 WATER ELEV. = 576.7'
 (12/18/2012)

GL & V, LLC

GL & V PROPERTY
 CROW PROPERTY

PROPERTY LINE

EXISTING TOE OF SLOPE

EXISTING SHORELINE

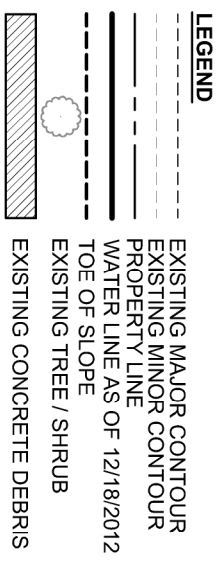
LESS DENSE SMALL 6"-8" STONE AND 6"-8" SLAG AND CONC PIECES ALONG SHORELINE

2x2x6" CONC ALONG BANK

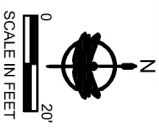
2x2x6" CONC ALONG BANK

DENSE 2x2x6" UP TO 12x6x6" CONC ALONG BANK

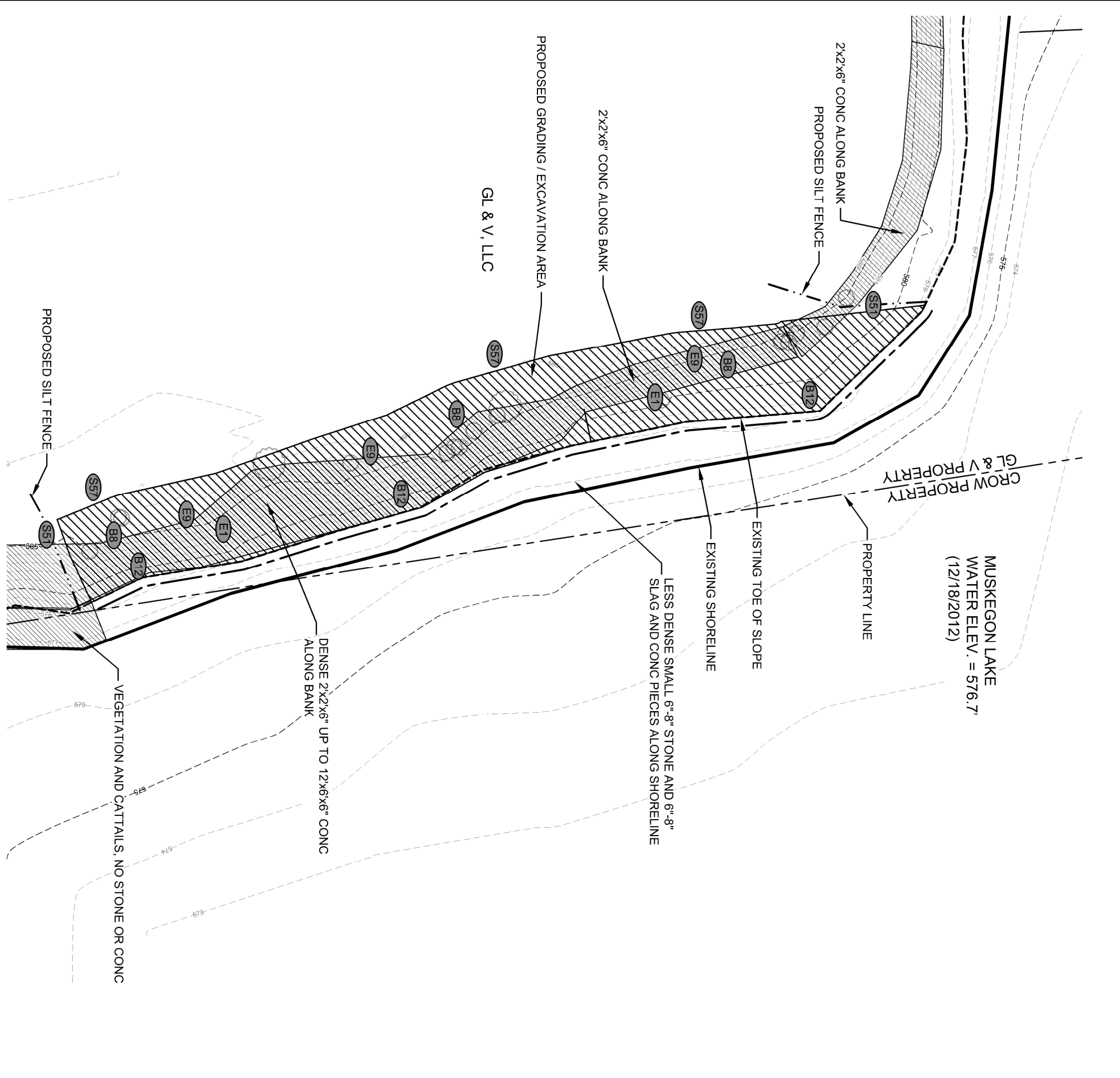
VEGETATION AND CATTAILS, NO STONE OR CONC



- NOTES:**
- 1) 100-YR FLOODPLAIN ELEVATION = 584.0'
 - 2) ORDINARY HIGH WATER MARK (OHWM) = 580.5'
 - 3) ALL PROPERTY AND/OR RIGHT OF WAY LINES ARE APPROXIMATE.
 - 4) TOPOGRAPHIC SURVEY PROVIDED BY FLEIS & VANDENBRINK ENGINEERING, INC. ON 12/18/2012.



<p>EXISTING CONDITIONS - SHORELINE RESTORATION</p> <p>GL & V, LLC</p> <p>MARINE DREDGE AND SHORELINE RESTORATION</p> <p>West Michigan Shoreline Regional Community</p> <p>Muskegon, MI</p>	<p>REVISION</p> <table border="1" style="width: 100%; height: 40px;"> <tr> <td style="width: 5%;"> </td> <td style="width: 15%;"> </td> <td style="width: 15%;"> </td> <td style="width: 15%;"> </td> <td style="width: 15%;"> </td> <td style="width: 15%;"> </td> </tr> </table>							<p>GRAND HAVEN 11181 MARWILL AVENUE WEST OLIVE, MI 49460 TEL: (616) 847-1880 FAX: (616) 847-9970 www.cardnojfnew.com</p>	<p>DRAWING NO.</p> <p style="font-size: 24pt; font-weight: bold;">6</p> <p>OF 11</p>
<p>DRAWN BY: WL</p> <p>DESIGNED BY: BM</p> <p>DATE: November 5, 2013</p> <p>JOB NO.: 0902035.18</p>	<p>WEST MICHIGAN SHORELINE REGIONAL DEVELOPMENT COMMISSION</p> <p>MLWMP</p> <p>Muskegon Lake Watershed Partnership</p>	<p>Cardno JFNew</p>	<p>BEFORE YOU DIG CALL MISS DIG</p>						



MUSKEGON LAKE
 WATER ELEV. = 576.7'
 (12/18/2012)

LEGEND

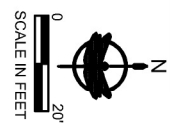
- EXISTING MAJOR CONTOUR
- - - EXISTING MINOR CONTOUR
- PROPERTY LINE
- WATER LINE AS OF 12/18/2012
- TOE OF SLOPE
- EXISTING TREE / SHRUB
- ▨ EXISTING CONCRETE DEBRIS
- ▨ PROPOSED SILT FENCE
- ▨ PROPOSED GRADING / EXCAVATION AREA

- NOTES:**
- 1) 100-YR FLOODPLAIN ELEVATION = 584.0'
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 - 5) ALL QUANTITIES LISTED ARE APPROXIMATIONS. CONTRACTORS WILL BE PAID ON A PER-UNIT BASIS FOR MATERIAL ACTUALLY UTILIZED.
 - 6) PLACEMENT OF SILT FENCE AS INDICATED ON PLAN MUST BE COMPLETED PRIOR TO COMMENCEMENT OF DEMOLITION ACTIVITIES.
 - 7) TOPOGRAPHIC SURVEY PROVIDED BY FLEIS & VANDENBRINK ENGINEERING, INC. ON 12/18/2012.
 - 8) SESC BMP'S UTILIZES MICHIGAN DMB KEYING SYSTEM.

SESC & DEMOLITION SUMMARY

ITEM	UNIT	QTY
MISCELLANEOUS CONCRETE, RUBBLE, SOIL AND DEBRIS REMOVAL	CY	1,318
CLEARING/RUBBING	AC	0.27
SILT FENCE INSTALLATION	LF	110

- SESC CONTROL MEASURES**
- Ⓟ = PERMANENT SEEDING
 - Ⓟ12 = RIPRAP
 - Ⓟ1 = SELECTIVE GRADING/SHAPING
 - Ⓟ9 = MULCH BLANKETS
 - Ⓟ1 = SILT FENCE
 - Ⓟ7 = VEGETATIVE BUFFER STRIP



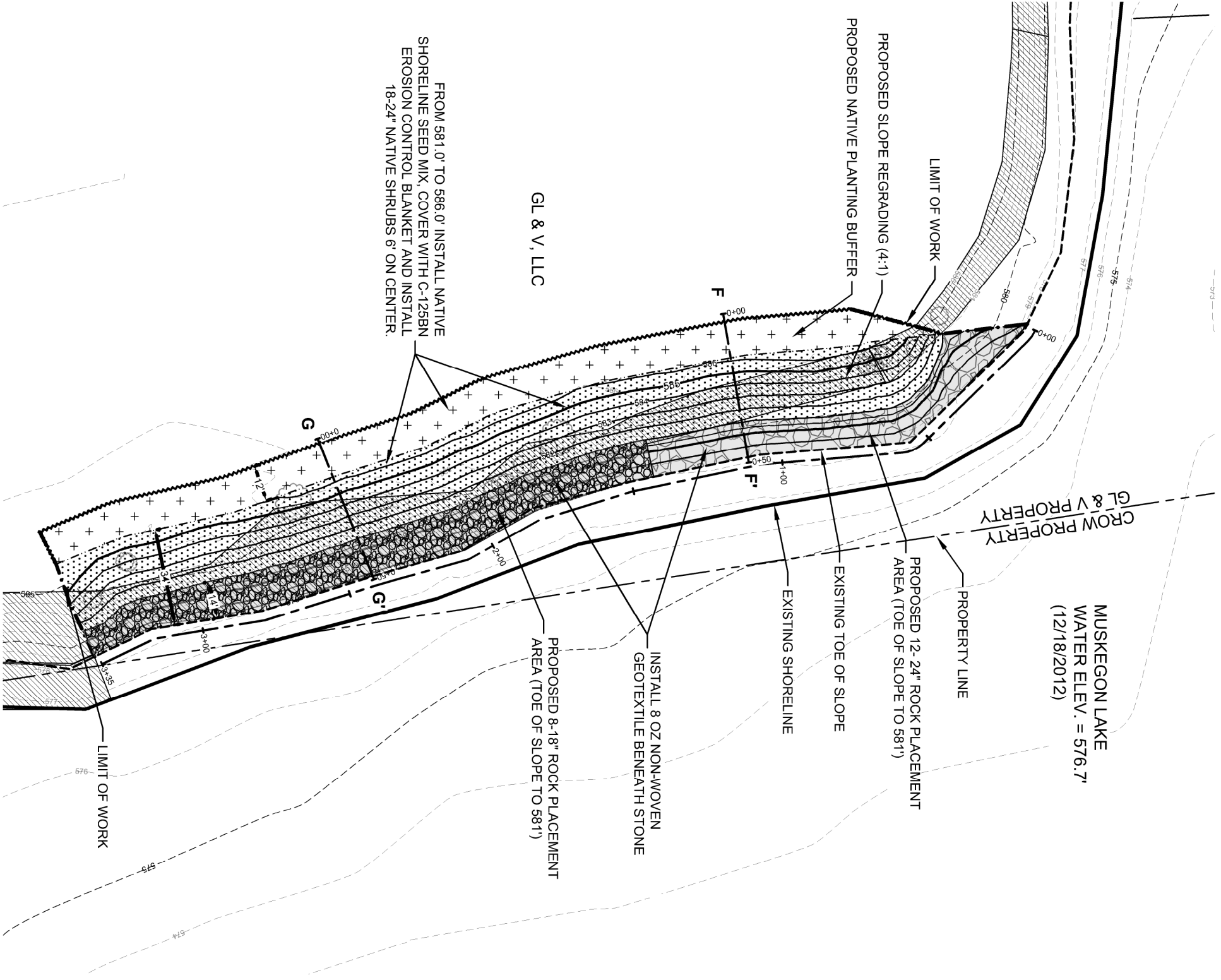
WMSRDC
 WEST MICHIGAN SHORELINE
 REGIONAL DEVELOPMENT COMMISSION

MLWMP
 Muskegon Lake
 Watershed Partnership



<p>DRAWING NO. 7</p> <p>OF 11</p>	<p>SESC - SHORELINE RESTORATION</p> <p>GL & V, LLC MARINE DREDGE AND SHORELINE RESTORATION West Michigan Shoreline Regional Community Muskegon, MI</p>	<p>REVISION</p> <table border="1" style="width: 100%; height: 100px;"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>											<p>Cardno JFNew</p> <p>GRAND HAVEN 11181 MARWILL AVENUE WEST OLIVE, MI 49460 TEL: (616) 847-1880 FAX: (616) 847-9970 www.cardnojfnew.com</p>
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SOURCE: http://www.mapquest.com/



FROM 581.0' TO 586.0' INSTALL NATIVE SHORELINE SEED MIX, COVER WITH C-125BN EROSION CONTROL BLANKET AND INSTALL 18-24\"/>

GL & V, LLC

CROW PROPERTY
GL & V PROPERTY

MUSKEGON LAKE
WATER ELEV. = 576.7'
(12/18/2012)

RESTORATION SUMMARY			
ITEM	UNIT	QTY	
MISCELLANEOUS WOOD, CONCRETE, AND DEBRIS REMOVAL	CY	1,318	
12-24\"/>			

- NOTES:
- 1) 100-YR FLOODPLAIN ELEVATION = 584.0'
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 - 3) ALL PROPERTY AND/OR RIGHT OF WAY LINES ARE APPROXIMATE
 - 4) CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING DAMAGE TO EXISTING STRUCTURES, PAVING AREAS, UTILITIES, OR TURF GRASS.
 - 5) ALL QUANTITIES LISTED ARE APPROXIMATIONS. CONTRACTORS WILL BE PAID ON A PER-UNIT BASIS FOR MATERIAL ACTUALLY UTILIZED.
 - 6) PLACEMENT OF SILT FENCE AS INDICATED ON PLAN MUST BE COMPLETED PRIOR TO COMMENCEMENT OF DEMOLITION ACTIVITIES.
 - 7) EXCAVATE APPROXIMATELY 1,318 CUBIC YARDS OF BROKEN CONCRETE / SOIL FROM 335 L.F. OF SHORELINE INCLUDING 363 CUBIC YARDS FROM 0.10 ACRES OF THE 100-YR FLOODPLAIN.
 - 8) PLACE APPROXIMATELY 312 CUBIC YARDS OF TOE STONE AND 312 CUBIC YARDS OF TOPSOIL WITHIN THE EXCAVATED AREA.
 - 9) BANK SHALL BE GRADED BACK ON A 4:1 SLOPE.
 - 10) STONE WILL BE PLACED FROM THE TOE OF THE RE-GRADED SLOPE UP TO ELEVATION 581.0'. STONE SIZE WILL VARY FROM 12-24\"/>

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPERTY LINE
- WATER LINE AS OF 12/18/2012
- TOE OF SLOPE
- EXISTING TREE / SHRUB
- SHORELINE STATIONING
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- LIMIT OF SITE GRADING
- LIMIT OF NATIVE PLANTING BUFFER
- LIMIT OF WORK
- PROPOSED ROCK PLACEMENT AREA (12-24\"/>

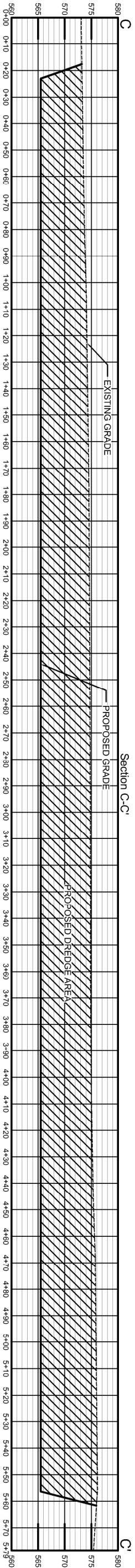
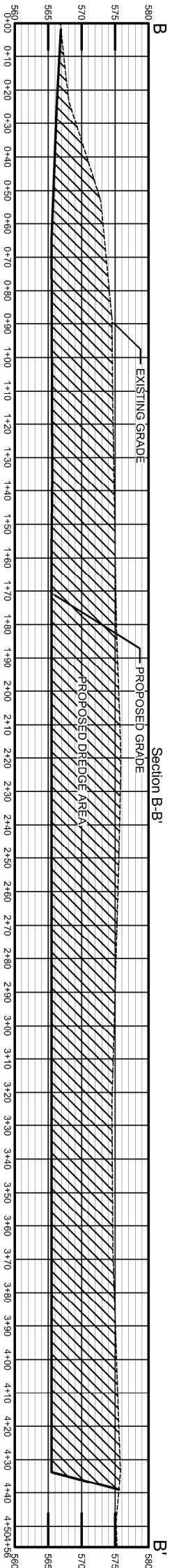
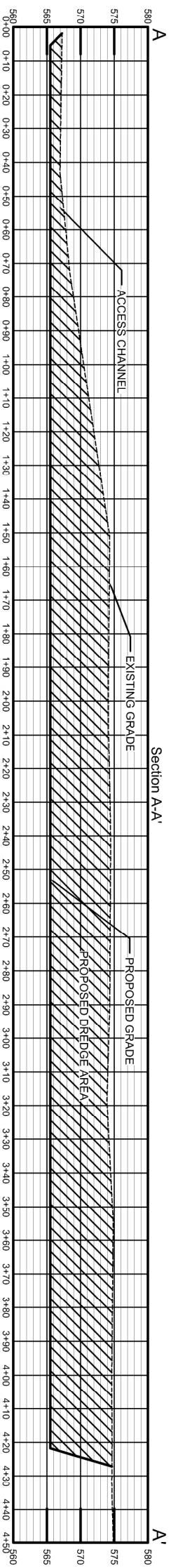
WMSRDC
WEST MICHIGAN SHORELINE REGIONAL DEVELOPMENT COMMISSION

MLWPP
Muskegon Lake Watershed Partnership



0 20'
SCALE IN FEET

DRAWING NO. 8	DRAWN BY: WL DESIGNED BY: BM DATE: November 5, 2013 JOB NO.: 0902035.18	PROPOSED CONDITIONS - SHORELINE RESTORATION GL & V, LLC MARINE DREDGE AND SHORELINE RESTORATION West Michigan Shoreline Regional Community Muskegon, MI		REVISION
		 GRAND HAVEN 11181 MARWILL AVENUE WEST OLIVE, MI 49460 TEL: (616) 847-1880 FAX: (616) 847-9970 www.cardnojfnw.com		



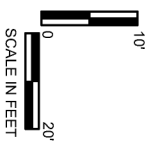
LEGEND

EXISTING GRADE

PROPOSED GRADE

PROPOSED EXCAVATION AREA

NOTE: DREDGE SIDE SLOPES ARE 3:1.



CROSS SECTIONS - MARINE DEBRIS

GL & V, LLC

MARINE DREDGE AND SHORELINE RESTORATION

West Michigan Shoreline Regional Community

Muskegon, MI

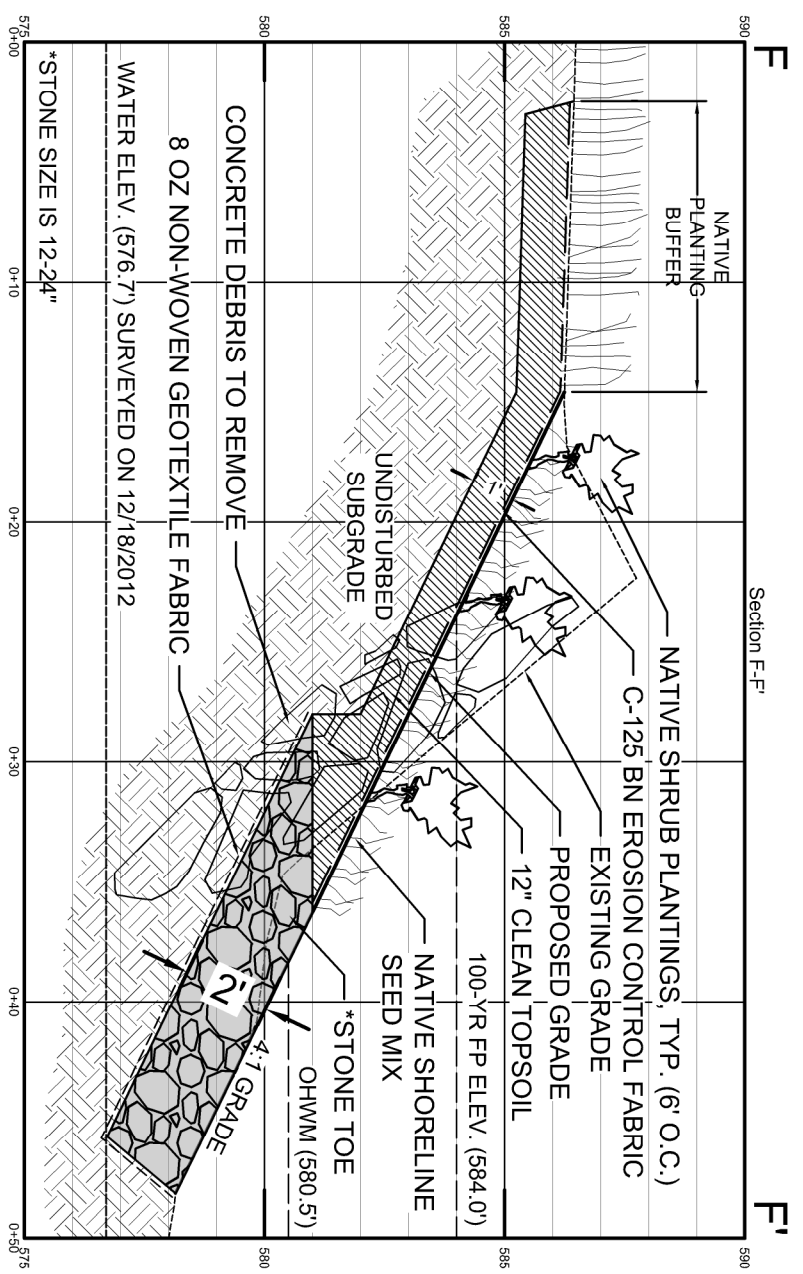
DRAWN BY: WL

DESIGNED BY: BM

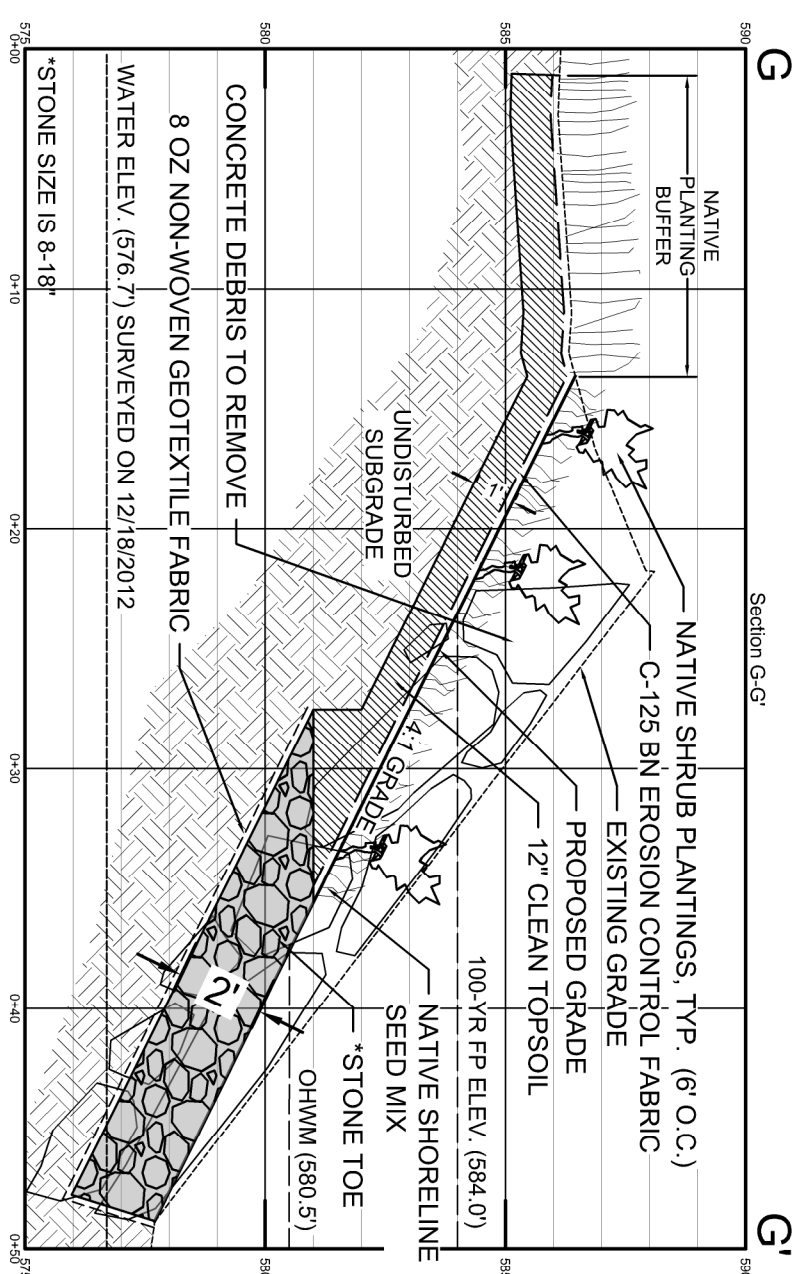
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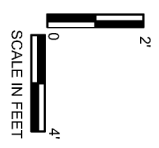


Section F-F'



Section G-G'

- LEGEND**
- EXISTING GRADE
 - PROPOSED GRADE
 - STONE PLACEMENT AREA
 - UNDISTURBED SUBGRADE
 - CLEAN TOPSOIL PLACEMENT
 - WATER ELEV. (577.1')
 - OHWM (580.5')
 - 100-YR FP ELEV. (584.0')
 - CONCRETE DEBRIS TO BE REMOVED



WMSRDC
 WEST MICHIGAN SHORELINE
 REGIONAL DEVELOPMENT COMMISSION

MLWMP
 Muskegon Lake
 Watershed Partnership



<p>CROSS SECTIONS - SHORELINE RESTORATION</p> <p>GL & V, LLC MARINE DREDGE AND SHORELINE RESTORATION West Michigan Shoreline Regional Community Muskegon, MI</p>	<p>Cardno JFNew</p> <p>GRAND HAVEN 11181 MARWILL AVENUE WEST OLIVE, MI 49460 TEL: (616) 847-1880 FAX: (616) 847-9970 www.cardnojfn.com</p>	<p>REVISION</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50px; height: 20px;"></td> <td style="width: 50px; height: 20px;"></td> </tr> <tr> <td style="width: 50px; height: 20px;"></td> <td style="width: 50px; height: 20px;"></td> </tr> <tr> <td style="width: 50px; height: 20px;"></td> <td style="width: 50px; height: 20px;"></td> </tr> </table>							<p>DRAWN BY: WL</p> <p>DESIGNED BY: BM</p> <p>DATE: November 5, 2013</p> <p>JOB NO: 0902035.18</p>
<p>DRAWING NO.</p> <p style="font-size: 24pt;">10</p> <p>OF 11</p>									

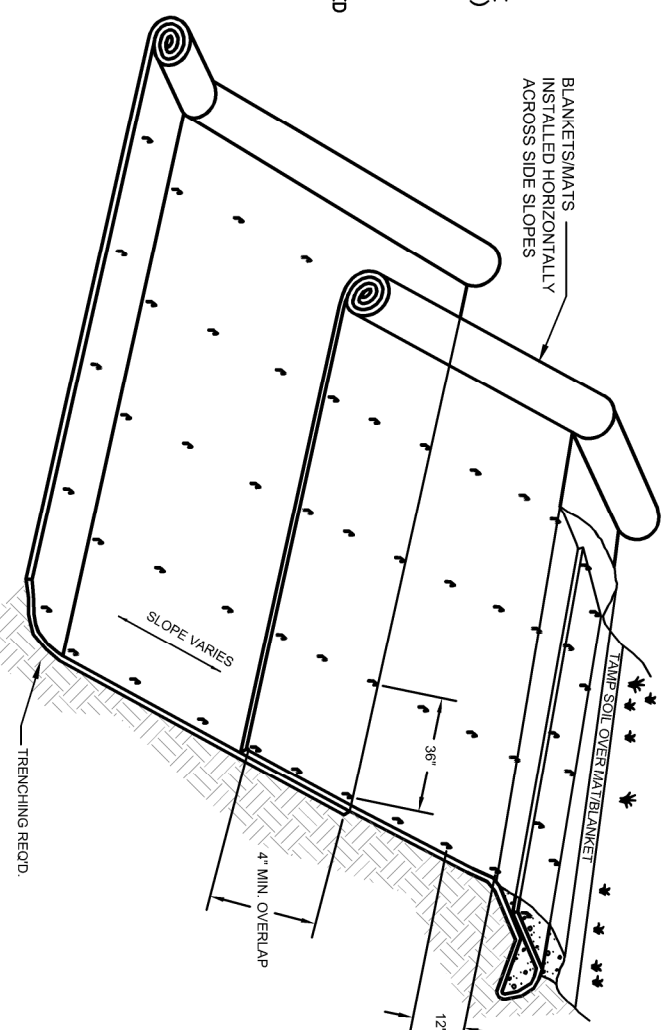
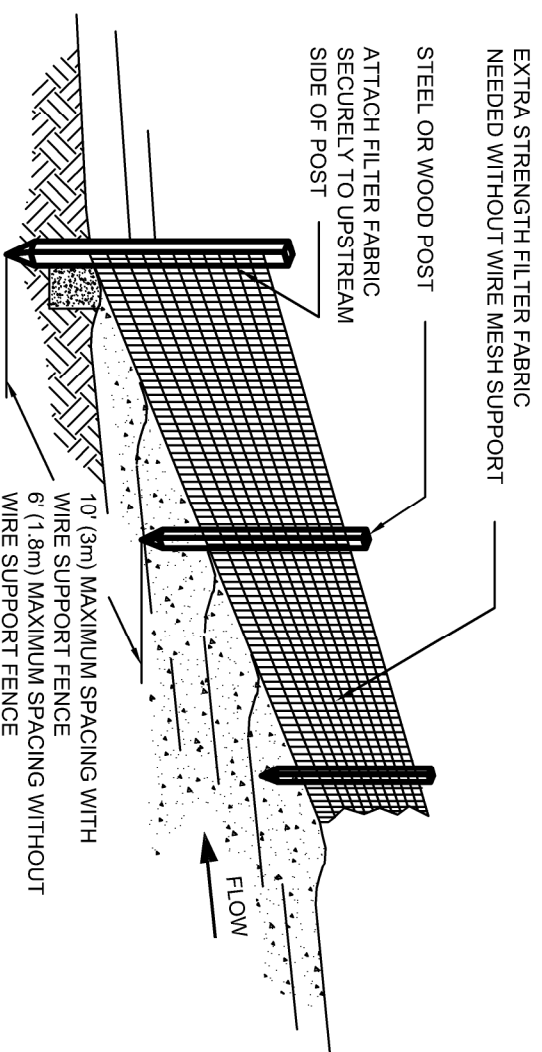
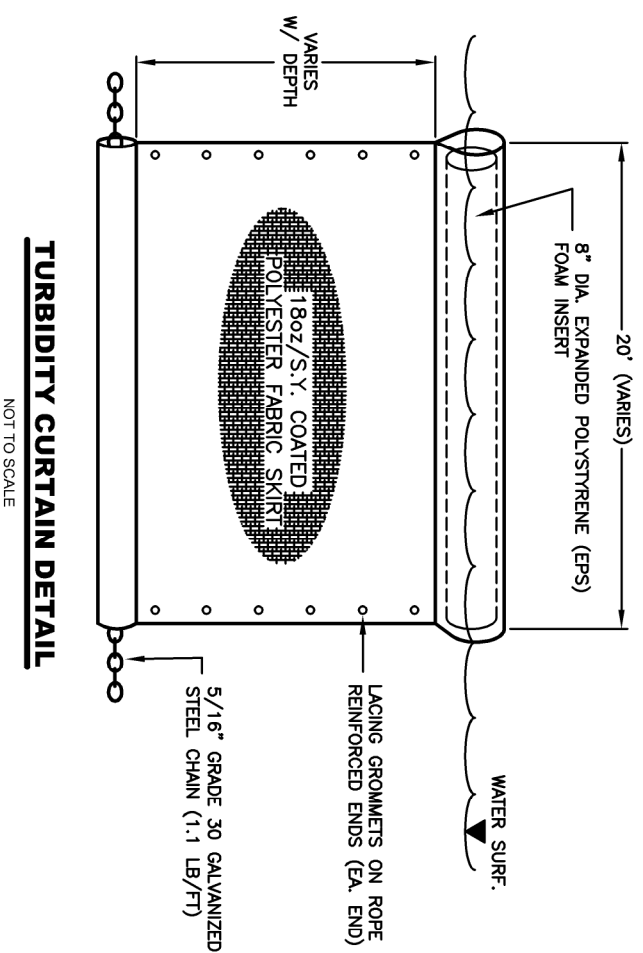
NATIVE SHORELINE SEED MIX

Scientific Name	Common Name	PLS OZ Per Acre
<i>Agastache scrophulariaefolia</i>	Purple giant hyssop	4
<i>Andropogon gerardii</i>	Big bluestem grass	32
<i>Aquilegia canadensis</i>	Wild columbine	0.5
<i>Asclepias tuberosa</i>	Butterfly weed	3
<i>Asclepias verticillata</i>	Whorled milkweed	1
<i>Aster laevis</i>	Smooth blue aster	2
<i>Aster novae-angliae</i>	New England aster	2
<i>Aster umbellatus</i>	Flat-top aster	2
<i>Avena sativa</i>	Seed oats	512
<i>Cinna arundinacea</i>	Common wood reed	2
<i>Coreopsis lanceolata</i>	Sand coreopsis	6
<i>Coreopsis tripteris</i>	Tall coreopsis	2
<i>Echinacea pallida</i>	Purple coneflower	4
<i>Elymus canadensis</i>	Canada wild rye	8
<i>Elymus virginicus</i>	Virginia wild rye	8
<i>Eupatorium maculatum</i>	Spotted Joe-pye weed	1
<i>Helenium autumnale</i>	Sneezeweed	2
<i>Helianthus giganteus</i>	Tall sunflower	2
<i>Helianthus grosseserratus</i>	Sawtooth sunflower	2
<i>Liatris aspera</i>	Rough blazing star	1
<i>Liatris spicata</i>	Marsh blazing star	2
<i>Lobelia siphilitica</i>	Great blue lobelia	2
<i>Monarda fistulosa</i>	Wild bergamot	4
<i>Monarda punctata</i>	Horse mint	2
<i>Panicum virgatum</i>	Switch grass	4
<i>Penstemon digitalis</i>	Fox glove beard tongue	4
<i>Penstemon hirsutus</i>	Hairy beard tongue	2
<i>Physostegia virginiana</i>	Obedient plant	1
<i>Pycnanthemum virginianum</i>	Common mountain mint	1
<i>Ratibida pinnata</i>	Yellow coneflower	6
<i>Rudbeckia hirta</i>	Black-eyed Susan	2
<i>Rudbeckia subtomentosa</i>	Sweet black-eyed Susan	2
<i>Schizachyrium scoparium</i>	Little bluestem grass	48
<i>Solidago speciosa</i>	Showy goldenrod	2
<i>Spartina pectinata</i>	Prairie cord grass	8
<i>Tradescantia ohioensis</i>	Common spiderwort	4
<i>Verbena hastata</i>	Blue vervain	3
<i>Verbesina alternifolia</i>	Wingstem	4
<i>Vernonia missouriensis</i>	Missouri ironweed	2
<i>Veronicastrum virginicum</i>	Culver's root	1
<i>Zizia aurea</i>	Golden Alexanders	4
	Total PLS Ounces	704.50
	Total PLS Pounds	44.03

NATIVE BARE ROOT SHRUBS

Native Bare Root Shrub Planting (18-24" @ 6' spacing)

Latin Name	Common Name	Qty
<i>Cornus amomum</i>	Silky Dogwood	50
<i>Cornus sericea</i>	Red-Osier Dogwood	50
<i>Salix exiguua</i>	Sandbar Willow	50
<i>Sambucus canadensis</i>	Elderberry	50
		200



- NOTES:**
- SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
 - INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9" (225mm) MAXIMUM RECOMMENDED STORAGE HEIGHT.

- NOTES:**
- REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.



DETAILS
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