



Village of Menomonee Falls  
 W156 N8480 Pilgrim Road  
 Menomonee Falls, WI 53051-3140  
 Telephone: (262) 532-4200

## STORMWATER MANAGEMENT FACILITIES OPERATION AND INSPECTION REPORT

Quarter Section 11NW Name of Business/Subdivision MENO. FALLS VILLAGE HALL  
 Property Tax ID Number 0042964001 Address of Property W156N8480 PILGRIM RD  
MENO. FALLS, WI 53051

Dry Pond	X
Wet Pond	
Other	

Description: SWP11N005  
P-145

Location Of Pond NEW PARKING LOT @ NW  
CORNER-METCALFE LOT  
WESTERLY POND

Year Pond Constructed 2013 Year of Last Certification N/A

Compliance Verification	Design (Non-AsBuilt)	Actual (GPS)	Compliant		Comments (Condition of Structure)
			Yes	No	
<b>Primary Outlet Pipe</b> (ST013440)					Outlet Pipe Material
Opening Diameter (inches)	15" RCP	15" RCP	-	-	15" RCP IN GOOD CONDITION  ELEVATIONS TO VARY SLIGHTLY FROM YEAR TO YEAR DUE TO GPS TECHNOLOGY
Upstream Invert	782.00	782.27	-	-	
Downstream Invert	782.00	781.89	-	-	
Length (feet)	55.8 FT	57.0 FT	-	-	
Slope (%)	0.0000 %	0.0067 %	-	-	
<b>Secondary Outlet Pipe</b>	N/A				Outlet Pipe Material
Opening Diameter (inches)			-	-	
Upstream Invert			-	-	
Downstream Invert			-	-	
Length (feet)			-	-	
Slope (%)			-	-	
<b>Riser (ST013440)</b>					Riser Material
Opening Diameter (inches)	12"	21"	-	-	* ELEV AT TOP OF OVERFLOW STRUCTURE
Elevation	785.50	785.40*	-	-	
<b>Upper Discharge Control</b>					
Opening Diameter (inches)	-	-	-	-	
Elevation	-	-	-	-	

Compliance Verification	Design	Actual	Compliant		Comments	
			Yes	No		
<b>Lower Discharge Control</b>	(ST013440)					
Opening Diameter (inches)	1.5"	1.5"	-	-	* INVERT ELEVATION OF 1.5" LOWER OPENING IN LARGE OVERFLOWSTRUCTURE LARGE OVERFLOW LEADS TO 12" RCP	
Elevation	782.00	781.89*	-	-		
<b>Other (Description)</b>	N/A					
Opening Type and Size (inches)			-	-		
Elevation			-	-		
<b>Emergency Spillway</b>						
Elevation	785.00	786.20*	-	-	* ELEVATION AT TOP OF RIPRAP, LOW POINT	
Length of spillway (feet)	10.0 FT	13.0 FT	-	-		
<b>Embankment</b>	Present Yes No		Comments/Maintenance Requirements			
Unauthorized Plantings, trees, or woody vegetation	-	N	ANIMAL BURROW BY CONCRETE PAD BEYOND NE SIDE OF POND			
Animal burrows or slope erosion or hole	Y	-				
<b>Storm Sewer Outfalls</b>	Type & Size		Location		Comments	
Outfall 1 (ST013447)	15" RCP		W SIDE OF POND		GOOD CONDITION	
Outfall 2	-		-		-	
Outfall 3	-		-		-	
<b>Storage Properties</b>	Design (NON-ASBUILT)	Actual (GPS)	Compliant Yes No		Not Applicable	Equipment Used
Normal Water Elevation (Wet Ponds)	N/A	N/A	-	-	N/A	GPS EQUIPMENT: SOKKIA GSR2700ISX & CARLSON SURVEYOR+ WITH SURV CE v3.02
Design High Water Elevation	785.00	786.20	-	-		
Area at Normal Water Elevation (Ac) (Wet Ponds)	N/A	N/A	-	-	N/A	
Area at Design High Water Elevation (Ac)	0.056 AC	0.057 AC	-	-		
Active Storage Available (Ac-Ft)*	0.426 ACFT	0.424 ACFT	-	-		
Lowest Elevation at Top of Embankment (If Applicable)	785.00	786.20	-	-		
Average Elevation at Top of Embankment (If Applicable)	786.5	786.25	-	-		
Maximum Bottom Elevation	782.00	781.92	-	-		
Average Pond Bottom Elevation	0.009 AC	0.006 AC	-	-		
Pond Bottom Area (Ac)	0.009 AC	0.006 AC	-	-		
Maximum Pond Depth	4.5 FT	4.4 FT	-	-		
Average Pond Depth	4.5 FT	4.4 FT	-	-		
Average Permanent Pool Depth (Wet Ponds)	N/A	N/A	-	-	N/A	

\*To Determine Active Storage  $V = \left( \left( \frac{H}{3} \right) \left( A1 + A2 + \left( \left( A1 + A2 \right)^{\left( \frac{1}{2} \right)} \right) \right) \right)$

Wet Ponds Use  $H =$  Height of Section,  $A1 =$  area at normal water elevation,  $A2 =$  area at top section

Dry Ponds Use  $H =$  Height of Section,  $A1 =$  pond bottom area,  $A2 =$  area at top section

# Village Hall Metcalfe Parking Lot Retention Pond – SWP11N005

Overview (Looking SE)



Overflow Structure ST013440



# Village Hall Metcalfe Parking Lot Retention Pond – SWP11N005

Outlet ST013447



Emergency Spillway



## Village Hall Metcalfe Parking Lot Retention Pond – SWP11N005

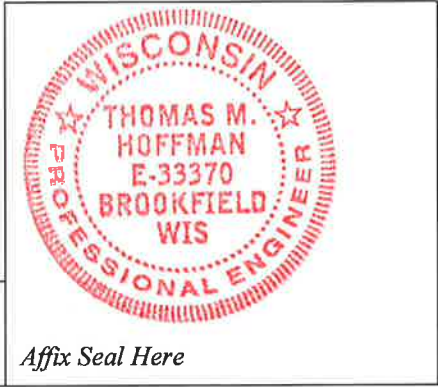
### Repairs Needed (5/19/2014)

- Animal burrows evident around NE side of pond by concrete slab

<i>Sketch Outlet</i>	<i>Place Photograph of Pond</i>
	<i>Place Photograph of Pond</i>

Inspection Firm:	VILLAGE OF MENOMONEE FALLS	Inspector Name :	CHRISTOPHER M GARIEPY
Phone Number:	262-532-4411	Inspection Date:	5/19/2014
Address:	W156N8480 PILGRIM RD		
	MENOMONEE FALLS, WI		
	53051		

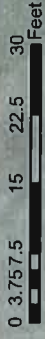
Certifying Professional Name: Thomas M Hoffman  
 Phone Number: 262-532-4415



Date: <u>3/24/2015</u>	Signature: <u>[Handwritten Signature]</u>
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*Affix Seal Here*

**SWP11N005-SWP11N006**  
**Municipal Campus - Metcalfe Lot**  
**MNFV0042964001**  
**Pond Inspection 051914 CMG**



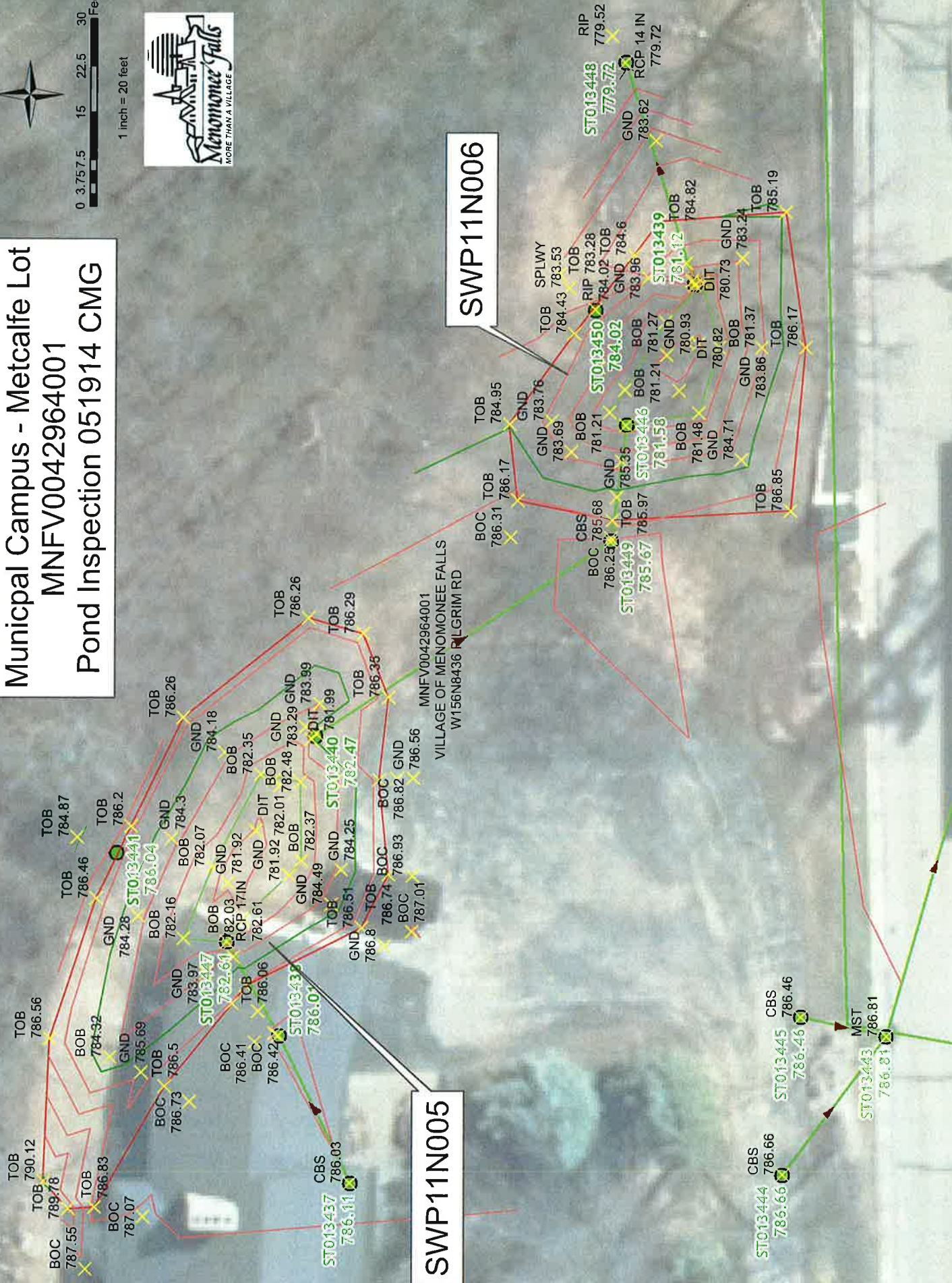
1 inch = 20 feet



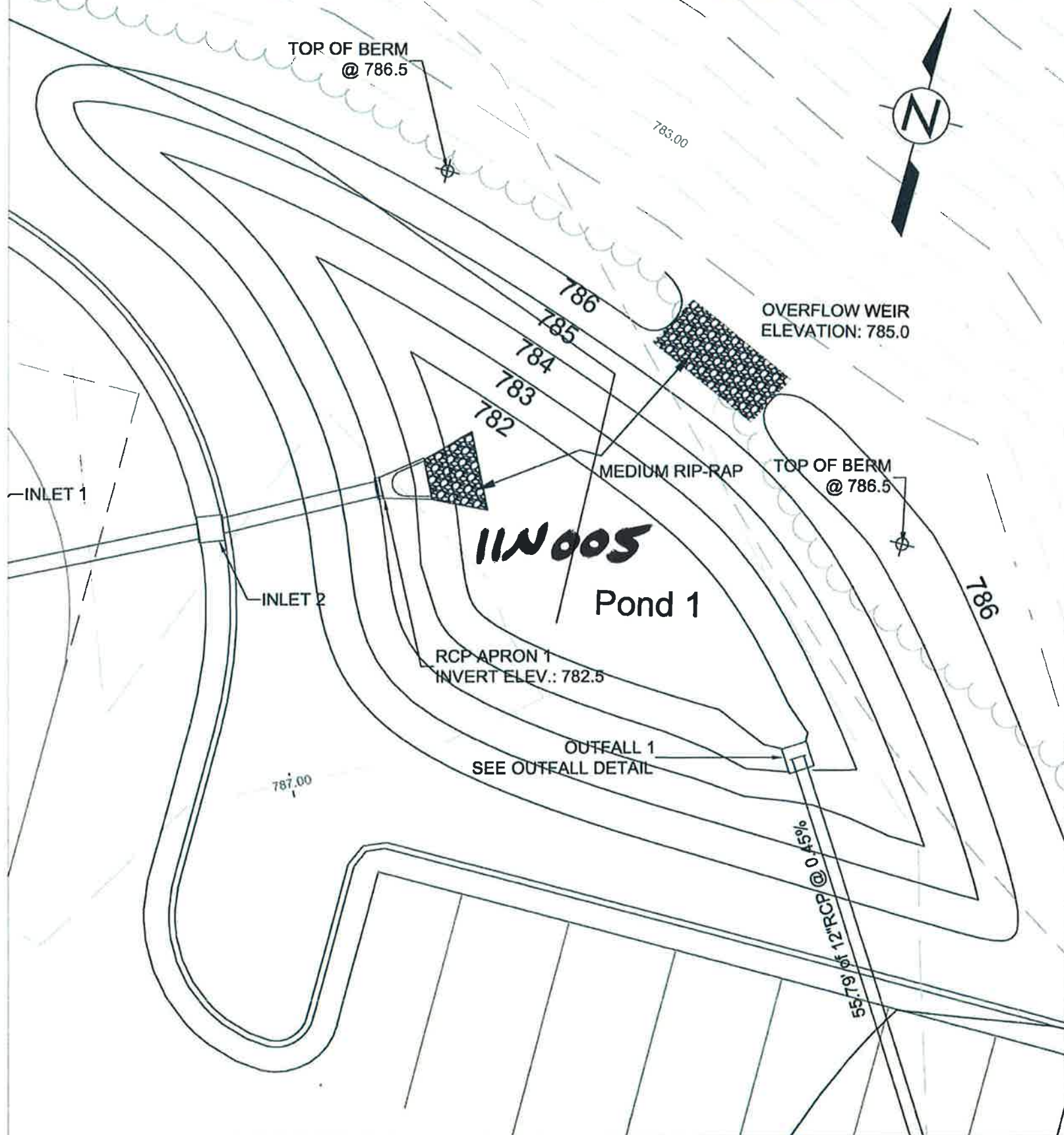
**SWP11N005**

**SWP11N006**

VILLAGE OF MEMOMONEE FALLS  
 MNFV0042964001  
 W156N8436 GRIM RD



# 75' Wetland Buffer

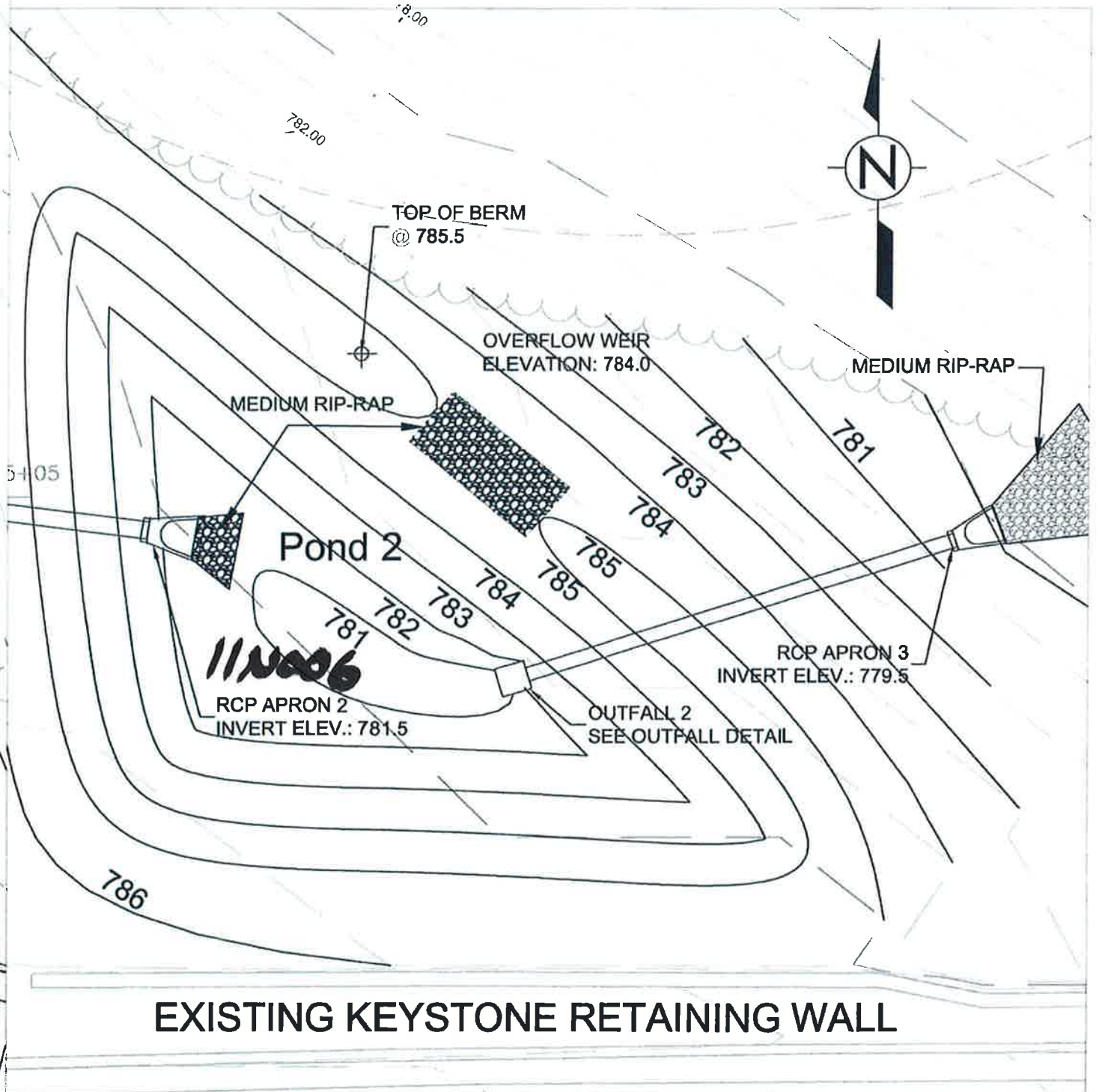


TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN  
**CALL DIGGERS HOTLINE**  
 1-800-242-8511  
 TOLL FREE  
 FAX A LOCATE 1-800-336-3840  
 TDD (FOR HEARING IMPAIRED) 1-800-342-2289  
(414) 286-1181 (NEBRASKA METRO)  
 300 SOUTH MAIN STREET (1ST FL)  
 MILWAUKEE, WI 53202  
 SERVICE BEFORE YOU DIGGERS

REVISIONS	COMMENTS
3/15/13	
5/15/13	
6/11/13	

POND DETAIL	
STRUCTURE DEMOLITION & PARKING LOT EXPANSION	
VILLAGE HALL	
VILLAGE OF MENOMONEE FALLS	
DRAWN BY: JVA	SCALE: 1" = 10' HORIZ.
CHECKED BY: JJA	DIRECTOR OF ENGINEERING: [Signature]
SHEET NO: 6	TOTAL SHEETS: 15
VMF PROJECT # 15020	

EXISTING UNDERGROUND UTILITY INFORMATION WAS OBTAINED FROM AVAILABLE RECORDS. THE ENGINEER MAKES NO GUARANTEE AS TO THE ACCURACY OF THIS INFORMATION. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING EXACT LOCATIONS OF ALL UTILITIES FROM DIGGER'S HOTLINE BEFORE BEGINNING CONSTRUCTION.



EXISTING KEYSTONE RETAINING WALL





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REVISIONS

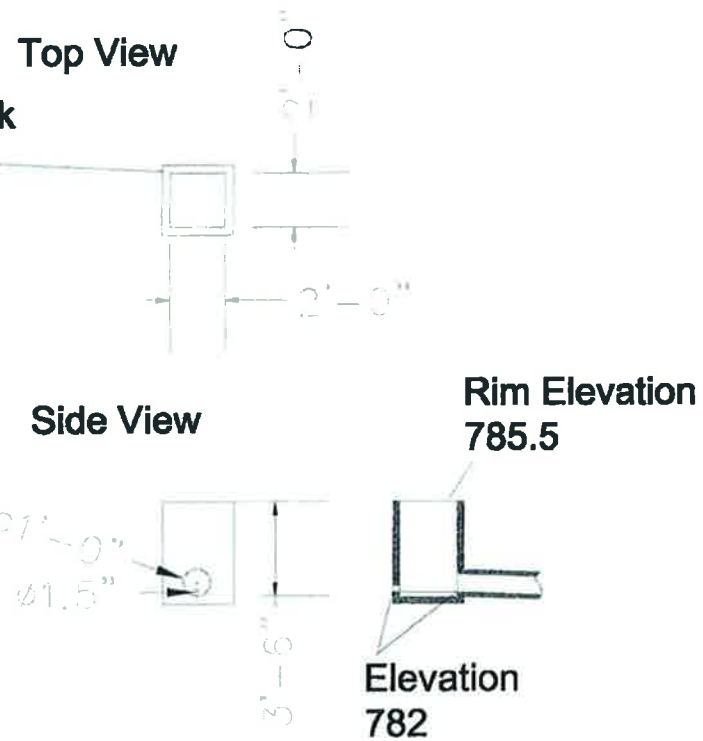
REVISIONS	COMMENTS
3/15/13	
6/12/13	

<b>POND OUTFALL DETAIL</b>	
STRUCTURE DEMOLITION & PARKING LOT EXPANSION	
VILLAGE HALL	
VILLAGE OF MENOMONEE FALLS	
DRAWN BY JUB	DIRECTOR OF ENGINEERING DATE
CHECKED BY JBI	
SCALE NOT TO SCALE	VMF PROJECT # 15020
SHEET NO. 7	TOTAL SHEETS 15

**Pond 1 Outfall Detail**

**Reinforced  
Concrete Riser &  
Pipe**

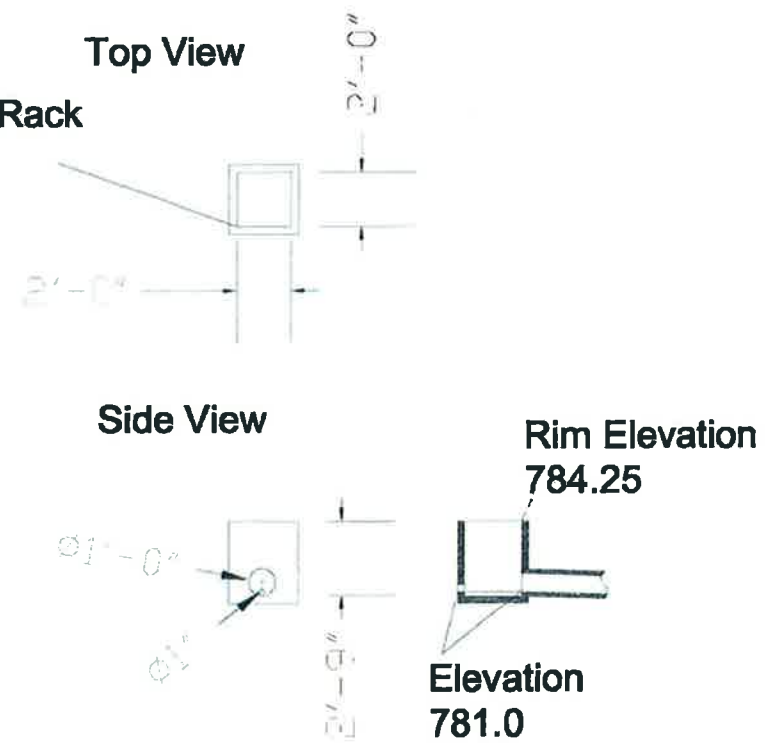
**Galvanized Trash Rack  
1/4" Wire Mesh  
4"x4" Opening**



**Pond 2 Outfall Detail**

**Reinforced  
Concrete Riser &  
Pipe**

**Galvanized Trash Rack  
1/4" Wire Mesh  
4"x4" Opening**



As-Built 2014 DATA

2014  
11N005  
11N006

$$H_2 - H_1 = 786.20 - 782.16 = 4.04'$$

$$A_1 = 268.15F \left( \frac{AC}{4350.5F} \right) = 0.006AC$$

$$A_2 = 247.605F \left( \frac{AC}{4350.5F} \right) = 0.057AC$$

$$V = \left( \frac{H}{3} \right) (A_1 + A_2 + \sqrt{A_1 A_2})$$

$$V = \left( \frac{4.04'}{3} \right) (0.006AC + 0.057AC + \sqrt{0.006AC \cdot 0.057AC})$$

$$V = (1.35') (0.063AC + \sqrt{0.063AC})$$

$$V = (1.35') (0.314AC)$$

$$V = \underline{0.424ACFT}$$

$$H_2 - H_1 = 784.60 - 781.21 = 3.39'$$

$$A_1 = 212.78F \left( \frac{AC}{4350.5F} \right) = 0.005AC$$

$$A_2 = 1384.52F \left( \frac{AC}{4350.5F} \right) = 0.032AC$$

$$V = \left( \frac{H}{3} \right) (A_1 + A_2 + \sqrt{A_1 A_2})$$

$$V = \left( \frac{3.39'}{3} \right) (0.005AC + 0.032AC + \sqrt{0.005AC \cdot 0.032AC})$$

$$V = (1.13') (0.037AC + \sqrt{0.037AC})$$

$$V = (1.13') (0.229AC)$$

$$V = \underline{0.259ACFT}$$

CMG  
2/9/15

COMBINED STORAGE CAPACITY 11N005 + 11N006

$$V_T = 0.424ACFT + 0.259ACFT$$

$$V_T = \underline{0.683ACFT}$$

$$V_{TOTAL} = \underline{0.683ACFT}$$

## Plan Data

2014  
11N005  
11N006

$$H_2 - H_1 = 786 - 782 = 4.0'$$

$$A_1 = 394.45 \text{ SF} \left( \frac{\text{AC}}{4350 \text{ SF}} \right) = 0.009 \text{ AC}$$

$$A_2 = 2,440.75 \text{ SF} \left( \frac{\text{AC}}{4350 \text{ SF}} \right) = 0.056 \text{ AC}$$

011N005

$$V = \left( \frac{H}{3} \right) (A_1 + A_2 + \sqrt{A_1 + A_2})$$

$$V = \left( \frac{4.0'}{3} \right) (0.009 \text{ AC} + 0.056 \text{ AC} + \sqrt{0.009 \text{ AC} + 0.056 \text{ AC}})$$

$$V = (1.33') (0.065 \text{ AC} + \sqrt{0.065 \text{ AC}})$$

$$V = (1.33') (0.320 \text{ AC})$$

$$V = \underline{0.4256 \text{ ACFT}}$$

CJG  
2/9/15

$$H_2 - H_1 = 785 - 781 = 4.0 \text{ FT}$$

$$A_1 = 90.45 \text{ SF} \left( \frac{\text{AC}}{4350 \text{ SF}} \right) = 0.002 \text{ AC}$$

$$A_2 = 1575.2 \text{ SF} \left( \frac{\text{AC}}{4350 \text{ SF}} \right) = 0.036 \text{ AC}$$

011N006

$$V = \left( \frac{4.0'}{3} \right) (0.002 \text{ AC} + 0.036 \text{ AC} + \sqrt{0.002 \text{ AC} + 0.036 \text{ AC}})$$

$$V = (1.33') (0.038 \text{ AC} + \sqrt{0.038 \text{ AC}})$$

$$V = (1.33') (0.233 \text{ AC})$$

$$V = \underline{0.310 \text{ ACFT}}$$

COMBINED TOTAL STORAGE CAPACITY 011N005 + 011N006

$$V_T = 0.426 \text{ ACFT} + 0.310 \text{ ACFT}$$

$$V_T = \underline{0.736 \text{ ACFT}}$$