



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	03 N	Name of Business/Subdivision	GRAND AVENUE
Property Tax ID Number	0010993	Address of Property	BIO-RETENTION POND
			W168N9308 GRAND AVE
			MENOMONEE FALLS, WI 53051

Dry Pond	X
Wet Pond	
Other	

Description: SWP03N009
P-0176

Location Of Pond
NORTHEAST OF
GRAND AVENUE &
FOREST DRIVE

Year Pond Constructed 2017 Year of Last Certification N/A

Compliance Verification	Design (Non-AsBuilt)	Actual (GPS)	Compliant Yes No		Comments (Condition of Structure)
Primary Outlet Pipe (ST015864)					Outlet Pipe Material
Opening Diameter (inches)	6" PVC	6" PVC	-	-	6" PVC IN GOOD CONDITION
Upstream Invert	834.40	834.39	-	-	
Downstream Invert	834.40	834.62	-	-	
Length (feet)	36.0 FT	35.2 FT	-	-	
Slope (%)	0.0000'%,	- 0.609'%,	-	-	
Secondary Outlet Pipe	N/A				Outlet Pipe Material
Opening Diameter (inches)			-	-	
Upstream Invert			-	-	
Downstream Invert			-	-	
Length (feet)			-	-	
Slope (%)			-	-	
Riser					Riser Material
Opening Diameter (inches) (ST015864)	24"	24"	-	-	REINFORCED CONCRETE RISER IN GOOD CONDITION
Elevation	837.60	837.45	-	-	
Upper Discharge Control	N/A				
Opening Diameter (inches)			-	-	
Elevation			-	-	

Compliance Verification	Design	Actual	Compliant Yes No		Comments	
Lower Discharge Control	N/A					
Opening Diameter (inches)			-	-		
Elevation			-	-		
Other (Description)	N/A					
Opening Type and Size (inches)			-	-		
Elevation			-	-		
Emergency Spillway						
Elevation	838.00		-	-	SPILLWAY CLEAR OF VEGETATION	
Length of spillway (feet)	10.0 LF		-	-		
Embankment	Present Yes No		Comments/Maintenance Requirements			
Unauthorized Plantings, trees, or woody vegetation	-	N				
Animal burrows or slope erosion or hole	-	N				
Storm Sewer Outfalls	Type & Size		Location		Comments	
Outfall 1 (ST015863)	RCP - 18"		SOUTH EMBANKMENT		RCP IN GOOD CONDITION, RIPRAP IN END SECTION	
Outfall 2 (ST015861)	RCP – 15"		NORTHWEST EMBANKMENT		RCP IN GOOD CONDITION	
Outfall 3						
Storage Properties	Design (NON-ASBUILT)	Actual (GPS)	Compliant Yes No	Not Applicable	Equipment Used	
Normal Water Elevation (Wet Ponds)	-	-	-	-	N/A	GPS EQUIPMENT: GOEMAX ZENITH35 & CARLSON SURVEYOR2 WITH SURV CE v5.04
Design High Water Elevation	838.00	838.40	-	-		
Area at Normal Water Elevation (Ac) (Wet Ponds)	-	-	-	-	N/A	
Area at Design High Water Elevation (Ac)	0.169 AC	0.196 AC	-	-		
Active Storage Available (Ac-Ft)*	0.269 ACFT	0.500 ACFT	-	-		
Lowest Elevation at Top of Embankment (If Applicable)	838.00	838.31	-	-		
Average Elevation at Top of Embankment (If Applicable)	839.00	838.60	-	-	N/A	
Maximum Bottom Elevation	837.00	838.80	-	-		
Average Pond Bottom Elevation	837.00	836.70	-	-		
Pond Bottom Area (Ac)	0.110 AC	0.122 AC	-	-		
Maximum Pond Depth	1.00 FT	1.89 FT	-	-		
Average Pond Depth	1.00 FT	1.70 FT	-	-		
Average Permanent Pool Depth (Wet Ponds)	-	-	-	-	N/A	

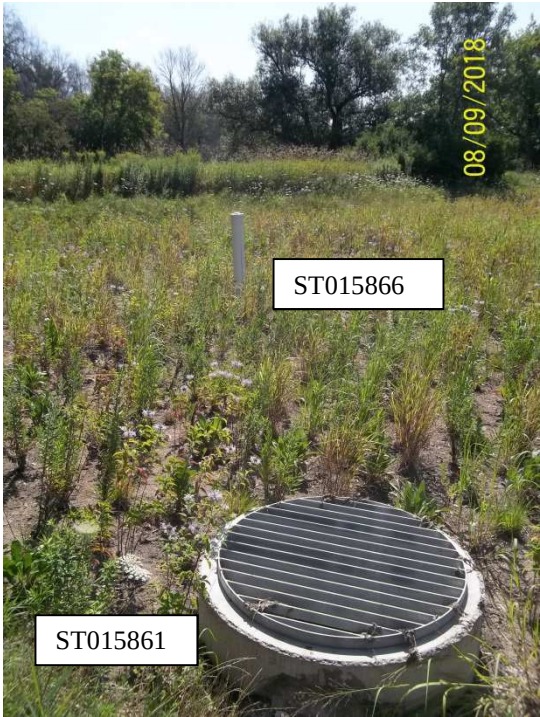
*To Determine Active Storage $V = \left(\left(\frac{H}{3} \right) \left(A_1 + A_2 + \left(\left(A_1 + A_2 \right)^{\wedge} \left(\frac{1}{2} \right) \right) \right) \right)$
 Wet Ponds Use H = Height of Section , A1= area at normal water elevation, A2=area at top section
 Dry Ponds Use H= Height of Section, A1= pond bottom area, A2=area at top section

Grand Avenue Bio-Retention Basin – SWP03N009

Overview



Outlet ST015861 &
Clean-out ST015866



Outlet ST015863



Grand Avenue Bio-Retention Basin – SWP03N009

Inlet ST015864



Outlet ST015865



Grand Avenue Bio-Retention Basin – SWP03N009

Spillway (NE Corner)

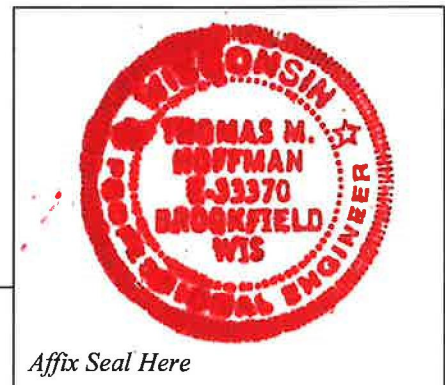


Repairs Needed (8/2018)
None

<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:	08/10/2018
Address:	W156N8480 PILGRIM RD MENOMONEE FALLS, WI 53051		

Certifying	THOMAS M. HOFFMAN, P.E.
Professional Name:	
Phone Number:	(262) 532-4415

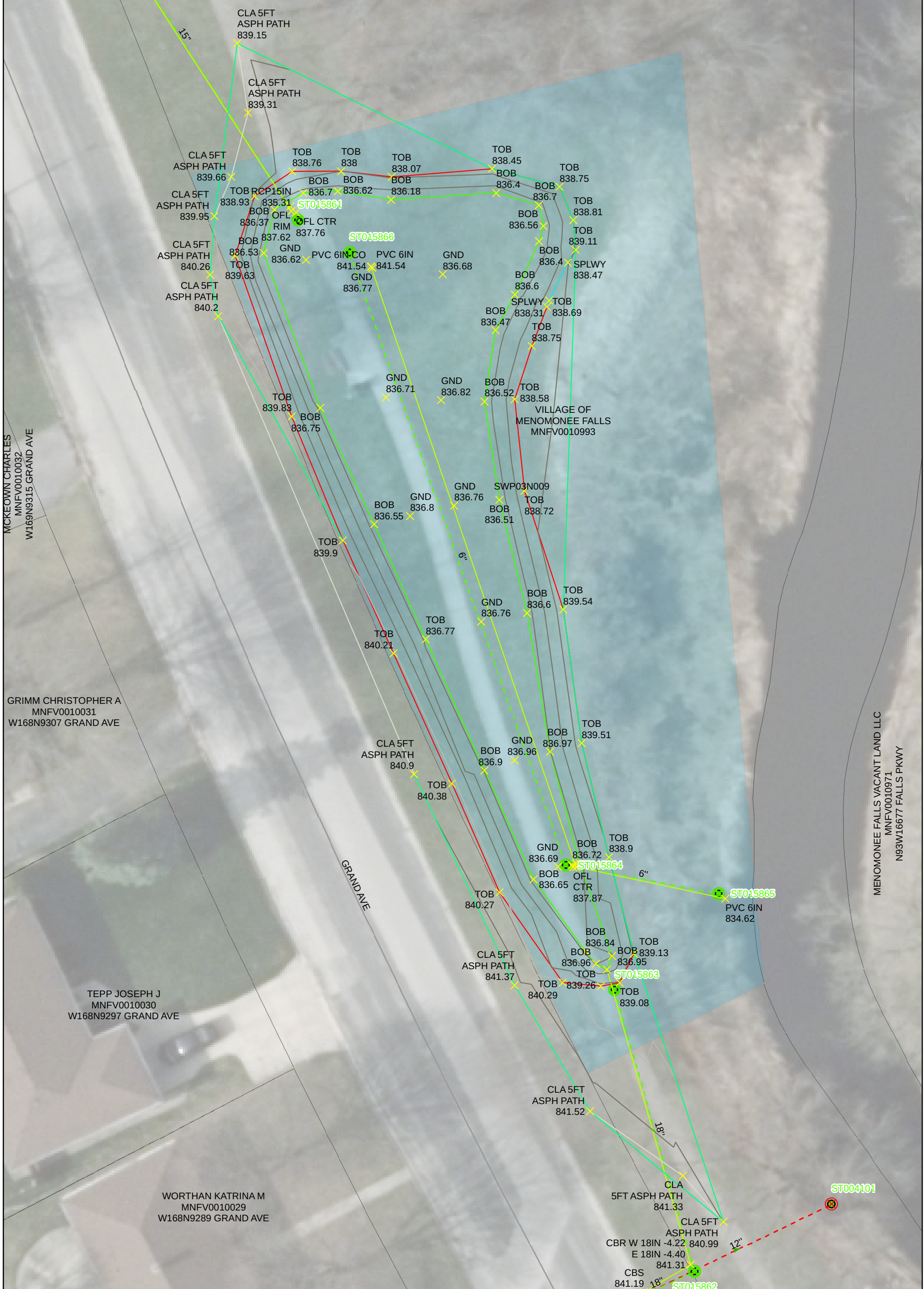
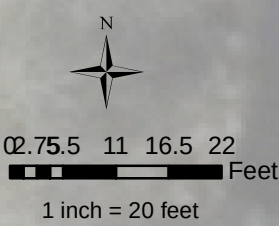


Date:	Signature:
4/3/2019	<i>[Handwritten Signature]</i>

Affix Seal Here



SWP03N009
GRAND AVE BIO-RETENTION BASIN
SURVEY DATA 08102018 CMG BC



$$H = 838.40 - 836.70 = 1.7 \text{ FT}$$

$$A_1 = 0.122 \text{ AC}$$

$$A_2 = 0.196 \text{ AC}$$

2018
03N009

Manual Area Bldg Retention Basin

15-8

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

$$V = \left(\frac{1.7 \text{ FT}}{3} \right) (0.122 \text{ AC} + 0.196 \text{ AC} + \sqrt{0.122 \text{ AC} \times 0.196 \text{ AC}})$$

$$V = (0.567 \text{ FT}) (0.318 \text{ AC} + \sqrt{0.318 \text{ AC}})$$

$$V = (0.567 \text{ FT}) (0.318 \text{ AC} + 0.564 \text{ AC})$$

$$V = (0.567 \text{ FT}) (0.882 \text{ AC})$$

$$V = 0.500 \text{ AC FT} \quad \checkmark \text{ cmg 8/15/18}$$

$$H = 838 - 837 = 1.0 \text{ FT}$$

$$A_1 = 0.110 \text{ AC}$$

$$A_2 = 0.169 \text{ AC}$$

$$V = \left(\frac{1.0 \text{ FT}}{3} \right) (0.110 \text{ AC} + 0.169 \text{ AC} + \sqrt{0.110 \text{ AC} \times 0.169 \text{ AC}})$$

$$V = 0.333 \text{ FT} (0.279 \text{ AC} + \sqrt{0.279 \text{ AC}})$$

$$V = 0.333 \text{ FT} (0.279 \text{ AC} + 0.528 \text{ AC})$$

$$V = 0.333 \text{ FT} (0.807 \text{ AC})$$

$$V = 0.269 \text{ AC FT} \quad \checkmark \text{ cmg 8/15/18}$$

Design