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: 15 NE
Property Tax ID Number: 0057158
Name of Business/Subdivision: HUNTER'S RIDGE ESTATES
Address of Property:

Dry Pond	X
Wet Pond	
Other	

Description: SWP15N005 P-0065B, U-0261

Location Of Pond: SOUTHWEST OF PILGRIM RD & COUNTRYSIDE DR

Year Pond Constructed: 1987
Year of Last Certification: 2018

Compliance Verification	Design (Non-AsBuilt)	Actual (GPS)	Compliant Yes	Compliant No	Comments (Condition of Structure)
Primary Outlet Pipe (ST001974)					Outlet Pipe Material
Opening Diameter (inches)	18" RCP	18" RCP	Y	-	18" RCP IN GOOD CONDITION, REPAIR GAP/SMALL SINK HOLE @ JOINT
Upstream Invert	837.50	837.53	Y	-	
Downstream Invert	837.50	837.35	Y	-	
Length (feet)	54.0 FT	55.4 FT	Y	-	
Slope (%)	0.0024'/,	0.0032'/,	Y	-	ELEVATIONS TO VARY SLIGHTLY FROM YEAR TO YEAR DUE TO GPS TECHNOLOGY
Secondary Outlet Pipe	N/A				Outlet Pipe Material
Opening Diameter (inches) (ST001976)	15" RCP	15" RCP	Y	-	15" RCP IN GOOD CONDITION
Upstream Invert	837.50	837.30	Y	-	
Downstream Invert	837.50	837.20	Y	-	
Length (feet)	6.0 FT	6.0 FT	Y	-	
Slope (%)	0.0000'/,	0.0167'/,	Y	-	
Riser	N/A				Riser Material
Opening Diameter (inches) (ST001973)		24"x24"	Y	-	GOOD CONDITION
Elevation		841.00	Y	-	
Upper Discharge Control	N/A				
Opening Diameter (inches)					
Elevation					

Compliance Verification	Design	Actual	Compliant Yes	Compliant No	Comments
Lower Discharge Control	N/A				
Opening Diameter (inches)					
Elevation					
Other (Description)	N/A				
Opening Type and Size (inches)					
Elevation					
Emergency Spillway					
Elevation	842.00	841.50	Y		
Length of spillway (feet)	10.0 FT	4.0 FT	Y		

Embankment	Present Yes	Present No	Comments/Maintenance Requirements
Unauthorized Plantings, trees, or woody vegetation	-	N	
Animal burrows or slope erosion or hole	Y	-	REPAIR JOINT GAP/SINK HOLE @ OUTLET PIPE

Storm Sewer Outfalls	Type & Size	Location	Comments
Outfall 1 (ST006016)	RCP - 36"	NORTHWESTERLY EMBANKMENT	RCP IN GOOD CONDITION
Outfall 2			
Outfall 3			

Storage Properties	Design (NON-ASBUILT)	Actual (GPS)	Compliant Yes	Compliant No	Not Applicable	Equipment Used
Normal Water Elevation *(Wet Ponds)*	-	-	-	-	N/A	GPS EQUIPMENT: GEOMAX ZENITH35 & CARLSON SURVEYOR2 WITH SURV CE v5.04
Design High Water Elevation	842.00	841.50	Y			
Area at Normal Water Elevation (Ac) (Wet Ponds)	-	-	-	-	N/A	
Area at Design High Water Elevation (Ac)	-	0.638 AC	Y			
Active Storage Available (Ac-Ft)*	-	11.856 ACFT	Y			
Lowest Elevation at Top of Embankment (If Applicable)	842.00	843.28	Y			
Average Elevation at Top of Embankment (If Applicable)	844.00	843.70	Y			
Maximum Bottom Elevation	842.00	837.49	Y			
Average Pond Bottom Elevation	838.50	838.50	Y			
Pond Bottom Area (Ac)	-	0.267 AC	Y			
Maximum Pond Depth	4.5 FT	4.01 FT	Y			
Average Pond Depth	4.0 FT	3.00 FT	Y			
Average Permanent Pool Depth *(Wet Ponds)*	-	-	-	-	N/A	

*To Determine Active Storage $V = ((H/3) (A1 + A2 + ((A1 + A2) ^ (½))))$

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*

Hunter's Ridge Estates (Pilgrim Rd & Countryside)
Retention Pond - SWP15N005

Overview

ST006016

Hunter's Ridge Estates (Pilgrim Rd & Countryside)
Retention Pond - SWP15N005

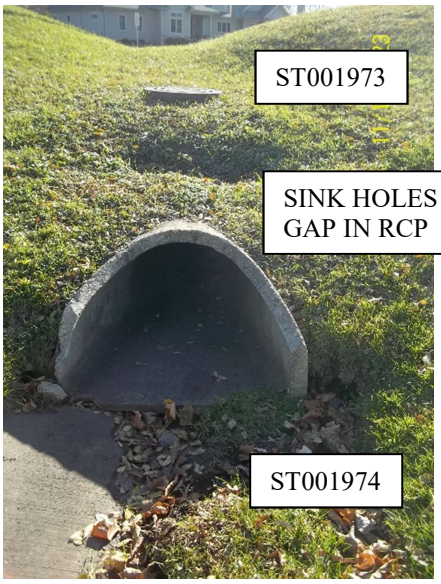
ST001973, ST001974, & Emergency Spillway

Emergency Spillway Inlet ST001976 & Manhole ST001975

Hunter's Ridge Estates (Pilgrim Rd & Countryside)
Retention Pond - SWP15N005

Repairs Needed (11/2023)

1) Fix top of RCP
2) Fill Sink Hole



Sketch Outlet	*Place Photograph of Pond*
	Place Photograph of Pond

Inspection Firm:	VILLAGE OF MENOMONEE FALLS	Inspector Name :	CHRISTOPHER M GARIEPY
Phone Number:	262-532-4411	Inspection Date:	11/15/2023
Address:	W156N8480 PILGRIM RD MENOMONEE FALLS, WI 53051		

Certifying Professional Name: THOMAS M. HOFFMAN

Phone Number: (262) 532-4415

Date:	*Signature:*	*Affix Seal Here*
2/26/2024		

WISCONSIN
THOMAS M. HOFFMAN
E-33370
BROOKFIELD
WIS
PROFESSIONAL ENGINEER

Acre Feet pond storage volume calculations for:

Hunter's Ridge Estates on Countryside Dr
SWP15N005

= Entered Value
= Calculated Value
= Description of Elevations Calculated

Year of Inspection: 2023

Example: H = H2-H1, where H2 > H1

H1 =	838.50	Lower Height Elevation in Feet (Pond Bottom for Dry Pond **OR** Top of Observed Water Level)	
H2 =	841.50	Height at Bottom of Spillway (Wet or Dry)	
H3 =	843.45	Higher Height Elevation in Feet (Top of Bank Around Pond - Wet or Dry)	
H4 =	0.00	Bottom of Wet Pond Elevation in Feet (Wet Ponds Only)	

	Sq.Ft.	Acres		
Area 1 =	11,609.20	**0.2665**	Area of H1	Area 1 = Area at Pond Bottom for Dry Pond **OR** Top of Observed Water Level
Area 2 =	27,810.40	**0.6384**	Area of H2	Area 2 = Area at Bottom of Spillway
Area 3 =	37,233.10	**0.8548**	Area of H2	Area 3 = Area at Top of Bank
Area 4 =	-	**0.0000**	Area of H3	Area 4 = Area at Bottom of Pond (Wet Ponds Only)

Equation to determine Volume (AcFt) of pond storage capacity from
Bottom of Dry Pond to Bottom of Spillway:

V = (((H2-H1)/3)(A1+A2 + (√(A1+A2))))

	Feet		Acres		Acres
V=	((H2-H1)/3)	x	(A1+A2	+	√(A1+A2))
V=	1.0000	x	0.9049	+	0.9513
V=	1.0000	x	1.8562		
V=	**1.8562**	**AcFt**			

Equation to determine Volume (AcFt) of pond storage capacity from
Bottom of Dry Pond to Top of Bank at Spillway:

V = (((H3-H1)/3)(A1+A3 + (√(A1+A3))))

	Feet		Acres		Acres
V=	((H3-H1)/3)	x	(A1+A3	+	√(A1+A3))
V=	1.6500	x	1.1213	+	1.0589
V=	1.6500	x	2.1802		
V=	**3.5973**	**AcFt**			

Equation to determine Volume (AcFt) of pond storage capacity from
Bottom of Pond to Top of Water:

V = (((H1-H4)/3)(A1+A4 + (√(A1+A4))))

	Feet		Acres		Acres
V=	((H4-H1)/3)	x	(A1+A4	+	√(A1+A4))
V=	279.5000	x	0.2665	+	0.5162
V=	279.5000	x	0.7828		
~~**V=**~~	~~**218.7806**~~	~~**AcFt**~~			

Equation to determine Volume (AcFt) of pond storage capacity from
Bottom of Pond to Top of Bank at Spillway:

V = (((H3-H4)/3)(A3+A4 + (√(A3+A4))))

	Feet		Acres		Acres
V=	((H3-H4)/3)	x	(A3+A4	+	√(A3+A4))
V=	281.1500	x	0.8548	+	0.9245
V=	281.1500	x	1.7793		
~~**V=**~~	~~**500.2456**~~	~~**AcFt**~~			

VILLAGE OF Menomonee Falls

SWP15N005
Pilgrim Rd & Countryside Dr - MNFV0057158
Pond Inspection 2023-1115 CMG

N
W E
S

0 3.75 7.5 15 22.5 30 Feet
1 inch = 30 feet

MNFV0057096
KENNETH B
N76

MNFV0057097
ELIZABETH A CONRAD
N76W15702 COUNTRYSIDE DR

MNFV0057098
THOMAS J AND KAREN F TAUBENHEIM
N76W15736 COUNTRYSIDE DR

MNFV0057141
JILL A SORENSON REVOCABLE TRUST
N76W15641 COUNTRYSIDE DR

MNFV0057140
RALPH MCCLAIN JR AND TAMMYR TRAMEL-MCCLAIN
N76W15671 COUNTRYSIDE DR

MNFV0057139
NICHOLAS DROUILLARD AND JESSICA DROUILLARD
N76W15703 COUNTRYSIDE DR

MNFV0057138
GWENDOLYN JOHNSON
N76W15727 COUNTRYSIDE DR

MNFV0057137
ROGER BOSMAN AND SUSAN BOSMAN
N76W15755 COUNTRYSIDE DR

MNFV0057158
VILLAGE OF
MENOMONEE FALLS

MNFV0060997
PHYLLIS M WATERS TRUST
N75W15758 COLONY RD

MNFV0060998
TOBIN R WATERS AND JAN BICKEL
N75W15722 COLONY RD

MNFV0060967
DEREK ROBINS AND CHELSEA ROBINS
W156N7597 PILGRIM RD

COUNTRYSIDE DR

PILGRIM RD

8"
8"

MHS 847.35
R 847.44'
SN15N065
MST 847.09
ST006017 847.13
ST006018 847.19
MST 847.16
ST006020 847.22
R 846.81'
SN15N066
ST006021 846.49

GND 846.18
TOB 846.72
TOB 847.73
TOB 845.3
BOB 840.26
BOB 840.54
TOB 847.13
BOB 840.03
TOB 847.36
TOB 846.93
DIT 846.08
GND 838.45
GND 838.77
BOB 838.86
TOB 844.38
SWP15N005
P-0065M
TOB 848.22
ST006016 838.37
BOB 839.68
RCP 36IN 838.51
DIT 838.51
PLAYGROUND STRUCTURE 839.92
BOB 840.5
BOB 839.38
DIT 838.29
DIT 838.31
GND 838.79
GND 838.84
GND 838.78
PLAYGROUND STRUCTURE 840.42
GND 838.65
GND 838.5
GND 838.3
GND 838.36
GND 838.32
BOB 838.57
TOB 843.77
DIT FILLED WITHE SEDIMENT 838.29
GND 838.57
GND 838.52
GND 838.95
GND 838.65
GND 838.26
DIT 837.96
GND 838.03
GND 838.26
GND 838.12
DIT 837.49
GND 838.1
BOB 838.65
RCP 18IN 837.53
TOB 843.89
SINK HOLES 839.16
BOB 838.33
GND 838.33
GND 838.79
GND 839.68
GND 839.6
GND 840.86
GND 840.28
DIT 839.77
GND 840.41
GND 840.45
ASHES BURN PIT 840.52
BOB 842.06
GND 841.76
BOB 841.35
DIT 840.96
BOB 841.3
BOB 840.65
BOB 839.06
TOB 843.28
TOB 843.72
TOB 843.49
TOB 843.53
SPILLWAY 841.54
SPILLWAY 841.48
SPILLWAY 841.25
GND 841.41
GND 840.74
DIT 837.57
RCP 12IN 837.3
DIT 837.8
ST001977 840.52
ST001976 837.5
MST 840.59
BOB 842.35
BOB 842.26
GND 842.92
TOB 844.67
TOB 844
TOB 844.26
TOB 848.42
TOB 846.82

GAP

Sink hole repair needed.

87-22-16

HUNTERS' RIDGE ESTATES

Materials

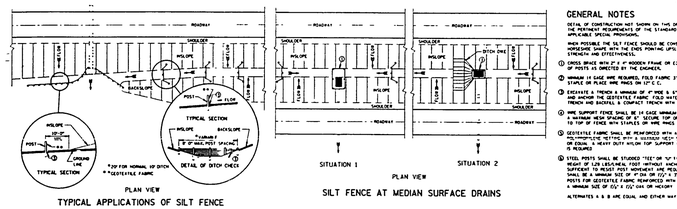
1. Synthetic filter fabric shall be a pervious sheet of propylen, nylon, polyester or ethylene yarn and shall be certified by the manufacturer or supplier as conforming to the following requirements:

PHYSICAL PROPERTY	TEST	REQUIREMENTS
Filtering Efficiency	VTM-51	75% (min.)
Tensile Strength at 20% (max.) Elongation*	VTM-52	Extra Strength- 50 lbs./lin. in. (min.) Standard Strength- 30 lbs./lin. in. (min.)
Flow Rate	VTM-51	0.3 gal./sq.ft./min.(min.)

*Requirements reduced by 50 percent after 6 months of installation.

Synthetic filter fabric contain ultraviolet ray inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0° F to 120° F.

2. Burlap shall be 10 ounce per square yard fabric.
3. Posts for Silt Fences shall be either 4-inch diameter wood or 1.33 pounds per linear foot steel with a minimum length of 5 feet. Steel posts shall have projections for fastening wire to them.
4. Stakes or Filter Barriers shall be 1" x 2" wood (preferred) or equivalent metal with a minimum length of 3 feet.
5. Wire fence reinforcement for silt fences using standard strength filter cloth shall be a minimum of 42 inches in height, a minimum of 14 gauge and shall have a maximum mesh spacing of 6 inches.



GENERAL NOTES

DETAIL OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE APPLICABLE PORTIONS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

WHEN POSSIBLE THE SILT FENCE SHOULD BE CONSTRUCTED IN AN ARC OR HORSESHOE SHAPE, WITH THE ENDS POINTING UPSLOPE, TO MAXIMIZE BOTH STRENGTH AND EFFECTIVENESS.

① CROSS BRACE WITH 2" x 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS AS DIRECTED BY THE ENGINEER.

② MINIMUM 14 GAGE WIRE REQUIRED, FOLD FABRIC 2" OVER THE WIRE AND STAPLE OR PLACE WIRE RINGS ON 12" C.C.

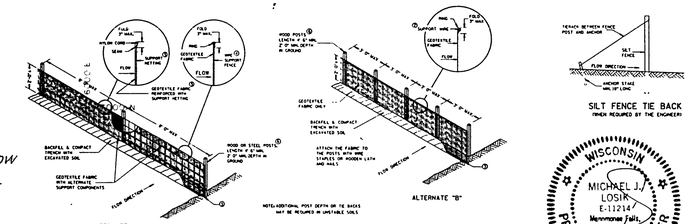
③ EMBEDDED A MINIMUM OF 8" AND A MAXIMUM OF 12" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC FOLD MATERIAL TO BE PLACED IN TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

④ WIRE SUPPORT FENCE SHALL BE 14 GAGE MINIMUM WOVEN WIRE WITH A MAXIMUM MESH SPACING OF 6". SECURE TOP OF GEOTEXTILE FABRIC TO TOP OF FENCE WITH STAPLES OR WIRE RINGS AT 12" C.C.

⑤ GEOTEXTILE FABRIC SHALL BE REINFORCED WITH AN INDUSTRIAL POLYPROPYLENE NETTING WITH A MAXIMUM MESH SPACING OF ½" OR EQUAL, A HEAVY DUTY NYLON TOP SUPPORT CORD OR EQUIVALENT IS REQUIRED.

⑥ STEEL POSTS SHALL BE STUDDED "TEE" OR "U" TYPE WITH A MINIMUM WEIGHT OF 1.33 LBS/LINEAL FOOT (WITHOUT ANCHORS OR ANCHOR PLATES) AND SHALL BE OF SUFFICIENT LENGTH. POST LENGTHS SHALL BE A MINIMUM SIZE OF 4'-0" OR 5'-0" EXCEPT WOOD POSTS FOR GEOTEXTILE FABRIC REINFORCED WITH NETTING SHALL BE A MINIMUM SIZE OF 5'-0" DIA OR HEAVIER.

ALTERNATES A & B ARE EQUAL AND EITHER MAY BE USED



SILT FENCING DETAIL

WISCONSIN
MICHAEL J. LOSIK
E-11214
Menomonee Falls, WI
PROFESSIONAL ENGINEER

REVISIONS	SCALE 1" = 40'
9-2-87 9-25-87	DATE DRAWN BY R K W 7-20-87 DESIGNED BY M J L 7-7-87 CHECKED BY N F S 8-3-87 APPROVED BY
	1/4 SEC NO NE & NW 1/4 SEC 15-8-20
	LOSIK JOB NO 86-14

EROSION CONTROL PLAN
FOR
HUNTERS' RIDGE ESTATES
VILLAGE OF MENOMONEE FALLS WISCONSIN

MICHAEL J. LOSIK & ASSOC., INC.
240 REGENCY COURT
WAUKESHA, WI 53186
(414) 784 7999
PROFESSIONAL ENGINEERS LAND SURVEYORS

SHEET 19 OF 22 | FILE NO