



ASbuilt (2014)

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	SE ¼ Section 34	Name of Business/Subdivision	Dickson Hollow Senior Housing
Property Tax ID Number	MNFV0136997001	Address of Property	W156N4881 Pilgrim Road
Date	August 29, 2016		Menomonee Falls, WI 53051

Dry Pond	
Wet Pond	X
Other	

Location of Pond Adjacent to Pilgrim Road, north of Gas Station and south of entrance (see plan)

Pond ID: SWP #4 345007

Year Pond Constructed	2015	Year of Last Certification	2016
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Compliance Verification	Design	Actual	Compliant Yes No		Comments (Condition of Structure)
Primary Outlet Pipe					Outlet Pipe Material
Opening Diameter (inches)	12"	15"	X		<ul style="list-style-type: none"> - RCP - 10.5" ORIFICE PLATE (8" DESIGN) ON OUTLET PIPE, IE 797.18 - SEE RECORD DRAWINGS
Upstream Invert	798.00	797.18	X		
Downstream Invert	796.61	796.40	X		
Length (feet)	150.5	151.05	X		
Slope (%)	0.92	0.52	X		
Secondary Outlet Pipe	(If Applicable) N/A				Outlet Pipe Material
Opening Diameter (inches)					
Upstream Invert					
Downstream Invert					
Length (feet)					
Slope (%)					
Riser	(If Applicable)				Riser Material
Opening Diameter (inches)	48	48	X		<ul style="list-style-type: none"> - RCP - SEE RECORD DRAWINGS
Elevation	799.45	799.08	X		
Upper Discharge Control	(If Applicable) N/A				
Opening Diameter (inches)					
Elevation					

Compliance Verification	Design	Actual	Compliant Yes No	Comments	
Lower Discharge Control	(If Applicable)				
Opening Diameter (inches)	3"	4"	X	- SEE RECORD DRAWINGS	
Elevation	798.00	797.10	X		
Other (Description)	N/A				
Opening Type and Size (inches)					
Elevation					
Emergency Spillway					
Elevation	803.80	803.50	X		
Length of spillway (feet)	20	20'	X	- RECORD DRAWINGS	
Embankment	Present Yes no		Comments/Maintenance Requirements		
Unauthorized Plantings, trees, or woody vegetation		X			
Animal burrows or slope erosion		X			
Storm Sewer Outfalls	Type & Size		Location	Comments	
Outfall 1 R-100	FES - 36		SW CORNER	RCP	
Outfall 2 R-300	FES - 36		WEST CENTRAL	RCP	
Outfall 3 R-400	FES - 36		WEST CENTRAL NORTH OF R-300	RCP	
Outfall 4 R-610	FES - 36		NORTH/NE CORNER	RCP	
Storage Properties	Design	Actual	Compliant Yes No	Not Applicable	Equipment Used
Normal Water Elevation (Wet Ponds)	798.00	797.18	X		- SEE SUMMARY TABLES AT HWE
Design High Water Elevation	803.74	803.44	X		
Area at Normal Water Elevation (Ac) (Wet Ponds)	0.58	0.50	X		
Area at Design High Water Elevation (Ac)	0.95	0.95	X		
Active Storage Available (Ac-Ft)*	3.45	3.53	X		
Lowest Elevation at Top of Embankment (If Applicable)	804.50	804.20	X		
Average Elevation at Top of Embankment (If Applicable)				X	
Maximum Bottom Elevation	793.00	792.10	X		
Average Pond Bottom Elevation		792.40			
Pond Bottom Area (Ac)	0.22	0.16	X		
Maximum Pond Depth	10.74	11.04	X		AT HWE
Average Pond Depth				X	
Average Permanent Pool Depth (Wet Ponds)	5	4.8	X		

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

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

<p><i>Sketch Outlet or Attach to Document</i></p> <p><i>See attached</i></p>	<p><i>Place Photograph of Pond or Attach to Document</i></p> <p><i>See attached</i></p>
	<p><i>Place Photograph of Pond or Attach to Document</i></p> <p><i>See attached</i></p>

Attach As-built Survey to the Document for the first report submission

Inspection Firm:	R.A. Smith National, Inc.	Inspector Name :	Survey Division / Bob Harley & Jason Heinonen – LDS Division
Phone Number:	(262) 781-1000	Inspection Date:	Spring / Summer 2016
Address:	16745 W. Bluemound Road		
	Brookfield, WI 53005		

Certifying Professional
 Name: Jason Heinonen
 Phone Number: (262) 317-3378



<p>Date:</p> <p>11/3/16</p>	<p>Signature:</p> <p><i>[Handwritten Signature]</i></p>
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Affix Seal Here

Dickson Hollow Storm Water Management Facilities

SWP P1



View looking south.



View looking north.



Village of Menomonee Falls
 W156 N8480 Pilgrim Road
 Menomonee Falls, WI 53051-3140
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STORMWATER MANAGEMENT FACILITIES OPERATION AND INSPECTION REPORT

Quarter Section SE 1/4 Section 34 Name of Business/Subdivision Dickson Hollow Senior Housing
 Property Tax ID Number MNFV0136997001 Address of Property W156N4881 Pilgrim Road
 Date August 29, 2016 Menomonee Falls, WI 53051

Dry Pond	
Wet Pond	X
Other	

Location of
Pond

Adjacent to wetland, north of
 existing wetland ditch and the
 northeast corner of the building
 (see plan)

Pond ID: SWP P2 345010

Year Pond
Constructed

2015

Year of Last
Certification

2016

Compliance Verification	Design	Actual	Compliant Yes No	Comments (Condition of Structure)
Primary Outlet Pipe				Outlet Pipe Material
Opening Diameter (inches)	12	12	X	<ul style="list-style-type: none"> - RCP - 4" ORIFICE PLATE ON OUTLET PIPE, IE 801.02 - SEE RECORD DRAWINGS
Upstream Invert	801.00	801.02	X	
Downstream Invert	800.89	800.52	X	
Length (feet)	31.9	30.94	X	
Slope (%)	0.35	2.20	X	
Secondary Outlet Pipe	(If Applicable) N/A			Outlet Pipe Material
Opening Diameter (inches)				
Upstream Invert				
Downstream Invert				
Length (feet)				
Slope (%)				
Riser	(If Applicable)			Riser Material
Opening Diameter (inches)	24	24	X	<ul style="list-style-type: none"> - RCP - SEE RECORD DRAWINGS
Elevation	804.00	802.87	X	
Upper Discharge Control	(If Applicable)			
Opening Diameter (inches)	4	4	X	<ul style="list-style-type: none"> - SEE RECORD DRAWINGS
Elevation	802.15	801.90	X	

Compliance Verification	Design	Actual	Compliant Yes No		Comments	
Lower Discharge Control	(If Applicable)					
Opening Diameter (inches)	1	1.5	X		- SEE RECORD DRAWINGS	
	801.00	800.97	X			
Other (Description)	N/A					
Opening Type and Size (inches)						
Elevation						
Emergency Spillway						
Elevation	803.50	803.47	X		- SEE RECORD DRAWINGS	
Length of spillway (feet)	5	7	X			
Embankment	Present Yes no		Comments/Maintenance Requirements			
Unauthorized Plantings, trees, or woody vegetation		X				
Animal burrows or slope erosion		X				
Storm Sewer Outfalls N/A	Type & Size		Location		Comments	
Outfall 1					- VIA SWALE	
Outfall 2						
Outfall 3						
Storage Properties	Design	Actual	Compliant Yes No		Not Applicable	Equipment Used
Normal Water Elevation (Wet Ponds)	801.00	801.02	X			- SEE SUMMARY TABLES AT HWE
Design High Water Elevation	803.90	803.43	X			
Area at Normal Water Elevation (Ac) (Wet Ponds)	0.07	0.10	X			
Area at Design High Water Elevation (Ac)	0.21	0.18	X			
Active Storage Available (Ac-Ft)*	0.28	0.25	X			
Lowest Elevation at Top of Embankment (If Applicable)	804.50	804.20	X			
Average Elevation at Top of Embankment (If Applicable)					X	
Maximum Bottom Elevation	797.00	796.8	X			
Average Pond Bottom Elevation		797.6	X			
Pond Bottom Area (Ac)	0.004	0.015	X			
Maximum Pond Depth	6.90	6.7	X			AT HWE
Average Pond Depth					X	
Average Permanent Pool Depth (Wet Ponds)	4	3.4	X			

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

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

<p><i>Sketch Outlet or Attach to Document</i></p> <p><i>See attached</i></p>	<p><i>Place Photograph of Pond or Attach to Document</i></p> <p><i>See attached</i></p> <p><i>Place Photograph of Pond or Attach to Document</i></p> <p><i>See attached</i></p>
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Address:	16745 W. Bluemound Road		
	Brookfield, WI 53005		

Certifying Professional
 Name: Jason Heinonen
 Phone Number: (262) 317-3378



<p>Date:</p> <p><i>11/3/16</i></p>	<p>Signature:</p> <p><i>[Signature]</i></p>
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10-3-2012

Dickson Hollow Storm Water Management Facilities

SWP P2



View looking southwest.



View looking north.



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STORMWATER MANAGEMENT FACILITIES OPERATION AND INSPECTION REPORT

Quarter Section
 Property Tax ID Number
 Date August 29, 2016

SE ¼ Section 34
MNFV0136997001

Name of Business/Subdivision
 Address of Property

Dickson Hollow Senior Housing
W156N4881 Pilgrim Road
Menomonee Falls, WI 53051

Dry Pond	X
Wet Pond	
Other	

Location of
 Pond

Adjacent to Pilgrim Road, north of
 existing wetland ditch and east of
 the future east Brownstone
 Building (see plan)

Pond ID: SWP 23 345009

Year Pond
 Constructed

2015

Year of Last
 Certification

2016

Compliance Verification	Design	Actual	Compliant Yes No		Comments (Condition of Structure)
Primary Outlet Pipe					Outlet Pipe Material
Opening Diameter (inches)	12	12	X		<ul style="list-style-type: none"> - RCP - 4" ORIFICE PLATE ON OUTLET PIPE, IE 796.99 - SEE RECORD DRAWINGS
Upstream Invert	797.00	796.99	X		
Downstream Invert	796.83	796.51	X		
Length (feet)	34.0	31.6	X		
Slope (%)	0.50	1.52	X		
Secondary Outlet Pipe	(If Applicable) N/A				Outlet Pipe Material
Opening Diameter (inches)					
Upstream Invert					
Downstream Invert					
Length (feet)					
Slope (%)					
Riser	(If Applicable)				Riser Material
Opening Diameter (inches)	24	24	X		<ul style="list-style-type: none"> - RCP - SEE RECORD DRAWINGS
Elevation	800.00	799.86	X		
Upper Discharge Control	(If Applicable)				
Opening Diameter (inches)					
Elevation					

Compliance Verification	Design	Actual	Compliant Yes No	Comments	
Lower Discharge Control	(If Applicable)				
Opening Diameter (inches)	2.5	2.5	X		- SEE RECORD DRAWINGS
Elevation	797.00	796.89	X		
Other (Description)	N/A				
Opening Type and Size (inches)					
Elevation					
Emergency Spillway					
Elevation	800.80	800.10	X		- SEE RECORD DRAWINGS
Length of spillway (feet)	3	5	X		
Embankment	Present Yes no		Comments/Maintenance Requirements		
Unauthorized Plantings, trees, or woody vegetation		X			
Animal burrows or slope erosion		X			
Storm Sewer Outfalls N/A	Type & Size		Location		Comments
Outfall 1					- VIA SHEET FLOW
Outfall 2					
Outfall 3					
Storage Properties	Design	Actual	Compliant Yes No	Not Applicable	Equipment Used
Normal Water Elevation (Wet Ponds)				X	- SEE SUMMARY TABLES
Design High Water Elevation	799.61	798.24	X		
Area at Normal Water Elevation (Ac) (Wet Ponds)				X	
Area at Design High Water Elevation (Ac)	0.18	0.38	X		
Active Storage Available (Ac-Ft)*	0.23	0.20	X		
Lowest Elevation at Top of Embankment (If Applicable)	801.00	800.7	X		
Average Elevation at Top of Embankment (If Applicable)				X	
Maximum Bottom Elevation	797.00	796.89			
Average Pond Bottom Elevation				X	
Pond Bottom Area (Ac)	0.08	0.05	X		
Maximum Pond Depth				X	
Average Pond Depth				X	
Average Permanent Pool Depth (Wet Ponds)				X	

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

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

<p><i>Sketch Outlet or Attach to Document</i></p> <p><i>See attached</i></p>	<p><i>Place Photograph of Pond or Attach to Document</i></p> <p><i>See attached</i></p>
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Dickson Hollow Storm Water Management Facilities

SWP P3



View looking east.



View looking south.



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Quarter Section SE ¼ Section 34 Name of Business/Subdivision Dickson Hollow Senior Housing
Property Tax ID Number MNFV0136997001 Address of Property W156N4881 Pilgrim Road
Date August 29, 2016 Menomonee Falls, WI 53051

Dry Pond	X
Wet Pond	
Other	

Location of
Pond

Adjacent to Pilgrim Road, south of
existing wetland ditch and north of
the entrance (see plan)

Pond ID: SWP P4- 345008

Year Pond
Constructed 2015 Year of Last
Certification 2016

Compliance Verification	Design	Actual	Compliant Yes No	Comments (Condition of Structure)
Primary Outlet Pipe				Outlet Pipe Material
Opening Diameter (inches)	12	12	X	<ul style="list-style-type: none"> - RCP - 4" ORIFICE PLATE ON OUTLET PIPE, IE 796.63 - SEE RECORD DRAWINGS
Upstream Invert	797.00	796.63	X	
Downstream Invert	796.78	796.48	X	
Length (feet)	43.5	45.34	X	
Slope (%)	0.50	0.33	X	
Secondary Outlet Pipe	(If Applicable) N/A			Outlet Pipe Material
Opening Diameter (inches)				
Upstream Invert				
Downstream Invert				
Length (feet)				
Slope (%)				
Riser	(If Applicable)			Riser Material
Opening Diameter (inches)	24	24	X	<ul style="list-style-type: none"> - RCP - SEE RECORD DRAWINGS
Elevation	798.50	798.42	X	
Upper Discharge Control	(If Applicable) N/A			
Opening Diameter (inches)				
Elevation				

Compliance Verification	Design	Actual	Compliant Yes No		Comments	
Lower Discharge Control	(If Applicable)					
Opening Diameter (inches)	1.5	1.5	X		- SEE RECORD DRAWINGS	
Elevation	797.00	796.52	X			
Other (Description)	N/A					
Opening Type and Size (inches)						
Elevation						
Emergency Spillway						
Elevation	800.00	800.32	X		- SEE RECORD DRAWINGS	
Length of spillway (feet)	3	6	X			
Embankment	Present Yes no		Comments/Maintenance Requirements			
Unauthorized Plantings, trees, or woody vegetation		X				
Animal burrows or slope erosion		X				
Storm Sewer Outfalls N/A	Type & Size		Location		Comments	
Outfall 1					- VIA SHEET FLOW	
Outfall 2						
Outfall 3						
Storage Properties	Design	Actual	Compliant Yes No		Not Applicable	Equipment Used
Normal Water Elevation (Wet Ponds)					X	- SEE SUMMARY TABLES
Design High Water Elevation	798.38	798.40	X			
Area at Normal Water Elevation (Ac) (Wet Ponds)					X	
Area at Design High Water Elevation (Ac)	.06	.06	X			
Active Storage Available (Ac-Ft)*	.03	.04	X			
Lowest Elevation at Top of Embankment (If Applicable)	801.00	800.5	X			
Average Elevation at Top of Embankment (If Applicable)					X	
Maximum Bottom Elevation	797.00	796.5	X			
Average Pond Bottom Elevation					X	
Pond Bottom Area (Ac)	.03	.03	X			
Maximum Pond Depth					X	
Average Pond Depth					X	
Average Permanent Pool Depth (Wet Ponds)					X	

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

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

<p><i>Sketch Outlet or Attach to Document</i></p> <p><i>See attached</i></p>	<p><i>Place Photograph of Pond or Attach to Document</i></p> <p><i>See attached</i></p>
	<p><i>Place Photograph of Pond or Attach to Document</i></p> <p><i>See attached</i></p>

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Phone Number:	(262) 781-1000	Inspection Date:	Spring / Summer 2016
Address:	16745 W. Bluemound Road Brookfield, WI 53005		

Certifying Professional
 Name: Jason Heinonen
 Phone Number: (262) 317-3378

<p>Date:</p> <p>11/3/16</p>	<p>Signature:</p> 	 <p><i>Affix Seal Here</i></p>
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Dickson Hollow Storm Water Management Facilities

SWP P4



View looking east.



View looking west.