*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: 11 NW
Property Tax ID Number: 0042973005
Name of Business/Subdivision: VMF COMMUNITY CENTER
Address of Property: W153 N8681 MARGARET RD, MENOMONEE FALLS, WI 53051

| | |
|---|---|
| Dry Pond | X |
| Wet Pond | |
| Other | |

Description: SWP11N002

Location Of Pond: WEST OF ENTRANCE TO COMMUNITY CENTER OFF OF MENO RVR PKWY

Year Pond Constructed: 1995
Year of Last Certification: 2018

| **Compliance Verification** | Design (Non-AsBuilt) | Actual (GPS) | Compliant Yes | Compliant No | Comments ( Condition of Structure) |
|---|---|---|---|---|---|
| ***Primary Outlet Pipe*** (ST0011229) | | | | | Outlet Pipe Material |
| Opening Diameter (inches) | NOT LISTED | 12” | Y | - | 12” RCP IN GOOD CONDITION |
| Upstream Invert | 756.50 | 757.51 | Y | - | |
| Downstream Invert | 756.41 | 756.41 | Y | - | |
| Length (feet) | 20.0 FT | 14.0 FT | Y | - | ELEVATIONS TO VARY SLIGHTLY FROM YEAR TO YEAR DUE TO GPS TECHNOLOGY |
| Slope (%) | 0.0045’/, | 0.0786’/, | Y | - | SLOPE FROM INLET OPENING TO RIVER OUTLET WHICH INCLUDES 169.4 FT OF PIPE |
| ***Secondary Outlet Pipe*** | N/A | | | | Outlet Pipe Material |
| Opening Diameter (inches) | | | - | - | |
| Upstream Invert | | | - | - | |
| Downstream Invert | | | - | - | |
| Length (feet) | | | - | - | |
| Slope (%) | | | - | - | |
| ***Riser*** | N/A | | | | Riser Material |
| Opening Diameter (inches) | | | - | - | |
| Elevation | | | - | - | |
| ***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 | - | | - | - | |
| Length of spillway (feet) | - | | - | - | |

| ***Embankment*** | Present Yes | Present No | Comments/Maintenance Requirements |
|---|---|---|---|
| Unauthorized Plantings, trees, or woody vegetation | - | N | |
| Animal burrows or slope erosion or hole | Y | - | TRIP HAZARD/TRENCH NE CORNER POND. REPAIR NEEDED. |

| ***Storm Sewer Outfalls*** | Type & Size | Location | Comments |
|---|---|---|---|
| Outfall 1 (ST011221) | RCP - 12" | NORTHWEST CORNER | RCP IN GOOD CONDITION, RIPRAP IN END SECTION |
| Outfall 2 (ST011227) | RCP – 24" | EAST EMBANKMENT | RCP IN GOOD CONDITION, RIPRAP IN END SECTION |
| Outfall 3 (ST015054) | CORRUGATED PVC – 12" | NORTHWEST CORNER | GOOD CONDITION |

| **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 | 762.00 | 762.43 | Y | - | | |
| Area at Normal Water Elevation (Ac) (Wet Ponds) | - | - | - | - | N/A | |
| Area at Design High Water Elevation (Ac) | - | 0.197 AC | Y | - | | |
| Active Storage Available (Ac-Ft)* | - | 1.133 ACFT | Y | - | | |
| Lowest Elevation at Top of Embankment (If Applicable) | 762.00 | 762.33 | Y | - | | |
| Average Elevation at Top of Embankment (If Applicable) | 762.00 | 762.45 | Y | - | | |
| Maximum Bottom Elevation | 757.00 | 758.01 | Y | - | | |
| Average Pond Bottom Elevation | 757.50 | 758.20 | Y | - | | |
| Pond Bottom Area (Ac) | - | 0.090 AC | Y | - | | |
| Maximum Pond Depth | 5.5 FT | 4.42 FT | Y | - | | |
| Average Pond Depth | 4.25 FT | 4.23 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*

# Margaret Rd Retention Pond (West) - SWP11N002

## Overview



## Outlet ST015054


## Outlet ST011221


## Outlet ST011227

# Margaret Rd Retention Pond (West) - SWP11N002

## Manhole ST011228 &
## Inlet ST011229


## Outlet ST006390

# Margaret Rd Retention Pond (West) - SWP11N002

## Repairs Needed (11/2023)

1) Repair trip hazard at Outlet ST011227.

| *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: | 11/14/2023 |
| Address: | W156N8480 PILGRIM RD<br>MENOMONEE FALLS, WI<br>53051 | | |

Certifying Professional Name: THOMAS M. HOFFMAN, P.E.

Phone Number: (262) 532-4415

| *Date:* | *Signature:* | *Affix Seal Here* |
|---|---|---|
| 2/26/2024 | | THOMAS M. HOFFMAN E-33370 BROOKFIELD WIS |

Acre Feet pond storage volume calculations for:

**Margaret Rd Basin ( W )**
**SWP11N002**

Year of Inspection: **2023**

= Entered Value
= Calculated Value
= Description of Elevations Calculated

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

| | | |
|---|---|---|
| **H1 =** | 758.20 | Lower Height Elevation in Feet (Pond Bottom for Dry Pond **OR** Top of Observed Water Level) |
| **H2 =** | 762.33 | Height at Bottom of Spillway (Wet or Dry) |
| **H3 =** | 762.45 | 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 =** | 3,930.40 | **0.0902** | Area of H1 | Area 1 = Area at Pond Bottom for Dry Pond **OR** Top of Observed Water Level |
| **Area 2 =** | 8,576.71 | **0.1969** | Area of H2 | Area 2 = Area at Bottom of Spillway |
| **Area 3 =** | 8,576.71 | **0.1969** | 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= | 1.3767 | x | 0.2871 | + | 0.5358 |
| V= | 1.3767 | x | 0.8230 | | |
| **V=** | **1.1329** | **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= | 1.4167 | x | 0.2871 | + | 0.5358 |
| V= | 1.4167 | x | 0.8230 | | |
| **V=** | **1.1659** | **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= | 252.7333 | x | 0.0902 | + | 0.3004 |
| V= | 252.7333 | x | 0.3906 | | |
| ~~**V=**~~ | ~~**98.7207**~~ | ~~**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= | 254.1500 | x | 0.1969 | + | 0.4437 |
| V= | 254.1500 | x | 0.6406 | | |
| ~~**V=**~~ | ~~**162.8140**~~ | ~~**AcFt**~~ | | | |

# SWP11N002-SWP11N003
# Margaret Ave - MF School Dist
# MNFV0042973005
# Pond Inspection11/14/2023 CMG

SWP11N002

SWP11N003

SWP11N002
P-0147

SWP11N003
P-0147

MNFV0042973005
VILLAGE OF MENOMONEE FALLS
N85W15382 MENOMONEE RIVER PKWY

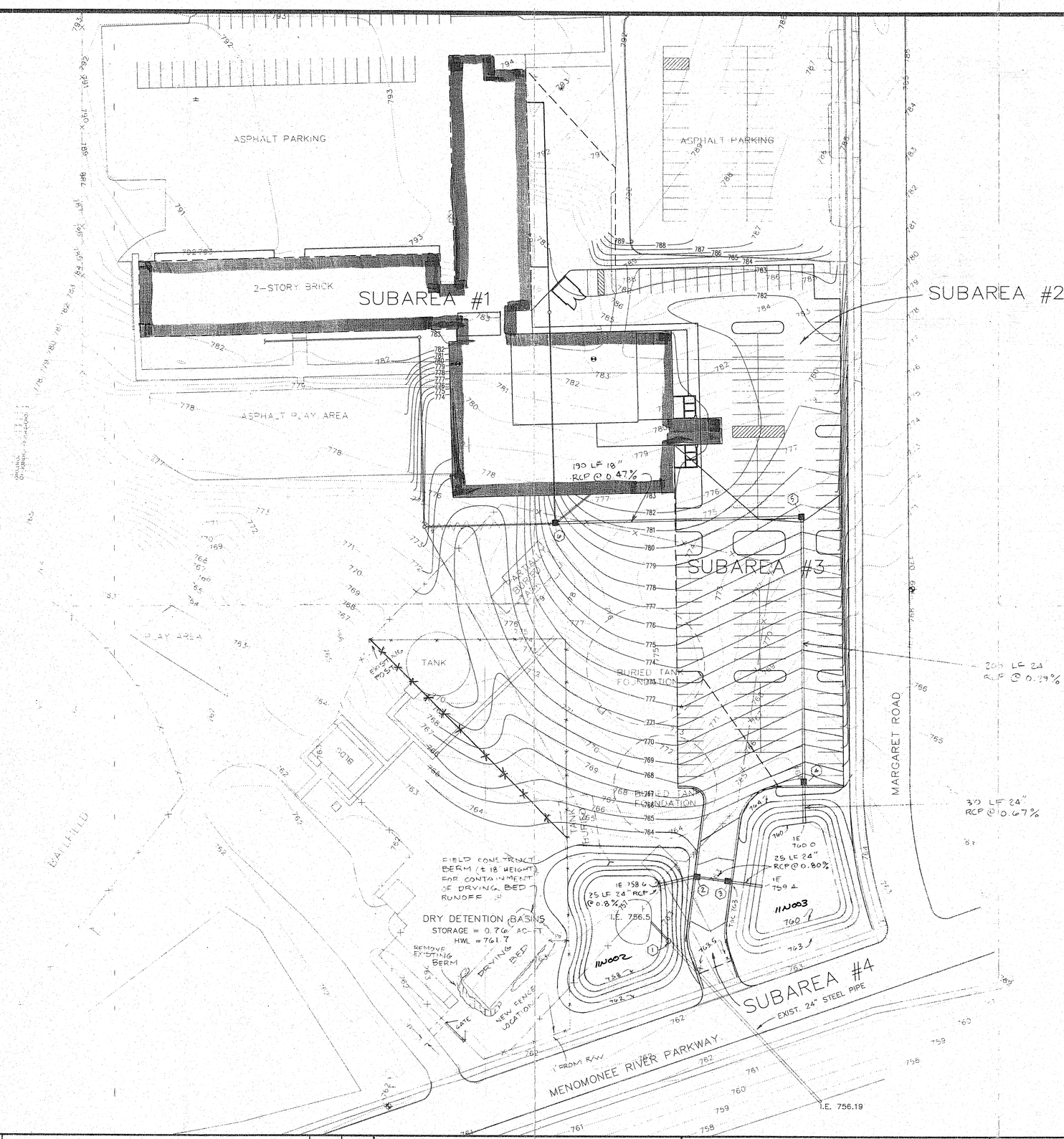
MNFV0042973007
VILLAGE OF
MENOMONEE FALLS

MARGARET RD

MENOMONEE RIVER PKWY

SINKHOLE 765.14
CBS 765.22
ST011222 764.94
GND 765.38
GND 765.27
TOB 764.85
TOB 764.27
TOB 763.64
ST011223 760.72
RCP 18IN 760.76
BOB 760.48
BOB 760.58
OUTLET FILLED W DEBRIS 761.26
TOB 764.33
GND 760.26
BOB 760.57
GND LOWSPOT 759.27
BOB 759.87
GND 759.64
GND 759.9
TOB 763.84
TOB 763.31
BOB 760.29
BOB 759.62
GND 759.6
GND 759.52
GND 759.85
RCP 24IN 759.16
GND 759.15
GND 759.35
FILLED IN SINKHOLE 759.78
BOB 760.1
BOB 759.97
BOB 759.6
BOB 760.55
GND 761.3
TOB 763.64
GND 763.64
TOB 763.28
BOB 760.17
BOB 759.9
TOB 763.56
BOB 760.5
GND 763.54
TOB 763.32
GND 763.3
BOC 763.6
TOB 763.41
TOB 762.76
TOB 762.82
GND 763.24
GND 762.98
TOB 762.67
MST 762.86
ST011228 762.99
ST011229 757.57
RCP 12IN 757.51
BOB 757.65
GND 758.22
BOB 758.26
BOB 759.08
GND 761.79
TOB 762.33
TOB 762.41
GND 758.01
PVC CRGTD 12IN 761.48
ST011221 760.56
RCP 12IN 760.41
TOB 764.61
TOB 764.59
TOB 764.25
TOB 764.21
TOB 763.19
TOB 763.76
BOB 758.89
BOB 758.29
BOB 758.65
BOB 758.74
RCP 24IN 758.68
CBS 762.7
ST011226 762.42
CBS 762.8
ST011225 762.53
ST011224 759.2
ST011227 758.75
BOB 758.28
TOB 763.05
TOB 764.57
BOB 758.31
GND 758.02
GND 758.07
763.48
6"
12"
12"
ST006396 762.5
ST006395 762.58
MHS 761.64
30" R SN11N149
761.63'
30"
12"

VILLAGE OF Menomonee Falls




SCALE: 1" = 40'

PROPOSED STORM DRAINAGE

| STRUCTURE | RIM/T/G | N | E | S | W |
|---|---|---|---|---|---|
| 1 | 760.0 | 756.41 | | 756.4 | |
| 2 | 762.5 | | 758.9 | | 758.8 |
| 3 | 762.5 | | 759.2 | | 759.1 |
| 4 | 764.8 | 760.6 | | 760.2 | |
| 5 | 778.5 | | | 761.2 | 761.4 |
| 6 | 777.5 | 773.5 * | 762.3 | | 764.33 |

* 774.56 NE

11N002 0042.973.005

11N003 0042.973.005

MARGARET AVE PONDS / COMMUNITY CENTER PONDS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DESIGNED BY MCS | VERIFY SCALES LENGTH OF BAR IS 1" ON ORIGINAL DRAWING | | | | | | |
| DRAWN BY TLM/MCS | | | | | | | |
| CHECKED BY | IF BAR IS NOT 1" ON THIS DRAWING, ADJUST SCALE(S) ACCORDINGLY | 1 | 7-14-99 | REVISE STORM SEWER PER VILLAGE | KMC | | |
| APPROVED BY | | NO. | DATE | REVISION | BY | APVD | |

Applied Technologies

MENOMONEE FALLS
COMMUNITY CENTER
MENOMONEE FALLS, WISCONSIN

STORMWATER
MANAGEMENT PLAN
DEVELOPED SITE

PROJECT NO. 1931 | DATE APR 1995

DRAWING NO. D2

11N002 11N003

D 0147