



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 _____ Name of Business/Subdivision Jade at North Hills
Property Tax ID Number MNFV00939 Address of Property N72W12727 Good Hope Road
Date 3/12/2020 _____

Dry Pond	
Wet Pond	
Other	X

Pond ID: Underground
Stormwater Vault
System (StormTrap)
SWP24N012

Location of Pond Below parking lot

Year Pond Constructed 2018 Year of Last Certification 2020

Compliance Verification	Design	Actual	Compliant Yes No	Comments (Condition of Structure)
Primary Outlet Pipe				Outlet Pipe Material
Opening Diameter (inches)	12	12	X	HDPE connecting vault to outlet control structure
Upstream Invert	802.50	802.58	X	
Downstream Invert	802.40	802.24	X	
Length (feet)	29	29	X	
Slope (%)	0.35	1.17	X	
Secondary Outlet Pipe	(If Applicable)			Outlet Pipe Material
Opening Diameter (inches)	na	na		
Upstream Invert	na	na		
Downstream Invert	na	na		
Length (feet)	na	na		
Slope (%)	na	na		
Riser	(If Applicable)			Riser Material
Opening Diameter (inches)	60	60	X	Concrete Outlet Control Structure
Elevation	811.60	811.68	X	
Upper Discharge Control	(If Applicable)			
Opening Diameter (inches)	4.65	4.65	X	
Elevation	805.00	805.04	X	

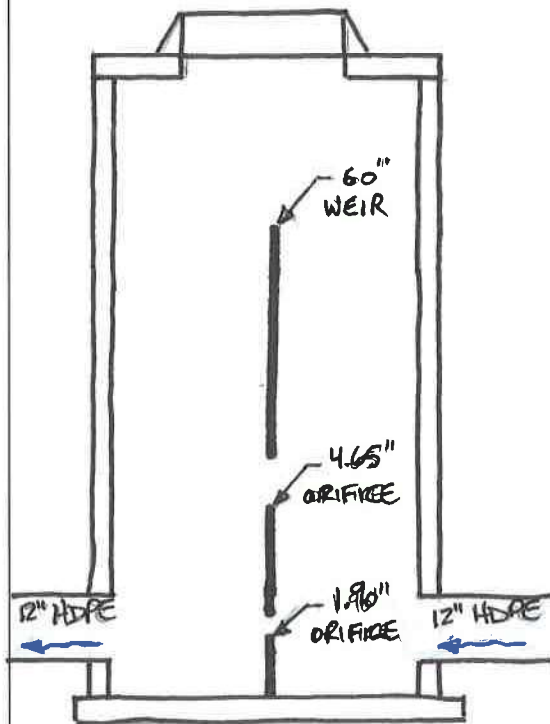
Compliance Verification	Design	Actual	Compliant Yes No		Comments	
Lower Discharge Control	(If Applicable)					
Opening Diameter (inches)	1.90	1.90	X			
Elevation	802.50	802.58	X			
Other (Description)						
Opening Type and Size (inches)	na	na				
Elevation						
Emergency Spillway						
Elevation	809.50	809.54	X		Steel Weir Plate	
Length of spillway (feet)	5	5	X			
Embankment	Present Yes no		Comments/Maintenance Requirements			
Unauthorized Plantings, trees, or woody vegetation		na				
Animal burrows or slope erosion		na				
Storm Sewer Outfalls	Type & Size		Location		Comments	
Outfall 1	na					
Outfall 2	na					
Outfall 3	na					
Storage Properties	Design	Actual	Compliant Yes No		Not Applicable	Equipment Used
Normal Water Elevation (Wet Ponds)	802.50	802.58	X			
Design High Water Elevation	809.49	809.54	X			
Area at Normal Water Elevation (Ac) (Wet Ponds)	0.0113	0.0113	X			
Area at Design High Water Elevation (Ac)	0.150	0.150	X			
Active Storage Available (Ac-Ft)*	1.056	1.050	X			
Lowest Elevation at Top of Embankment (If Applicable)	na	na				
Average Elevation at Top of Embankment (If Applicable)	na	na				
Maximum Bottom Elevation	799.00	799.08	X			
Average Pond Bottom Elevation	799.00	799.08	X			
Pond Bottom Area (Ac)	0.0113	0.0113	X			
Maximum Pond Depth	10.50'	10.46'	X			
Average Pond Depth	10.50'	10.46'	X			
Average Permanent Pool Depth (Wet Ponds)	3.50'	3.50'	X			

*To Determine Active Storage $V = (H/3)(A1 + A2 + (\sqrt{A1 \cdot A2}))$

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

Sketch Outlet or Attach to Document



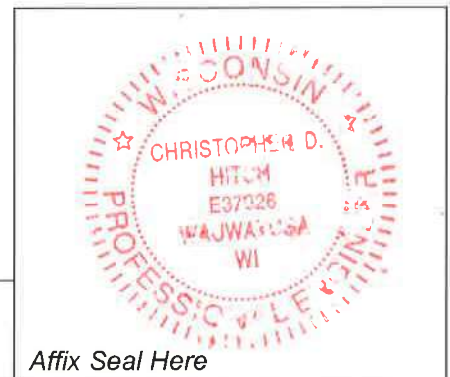
Please see attached photos

Please see attached photos

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

Inspection Firm:	<u>The Expeditors, Inc.</u>	Inspector Name :	<u>Jeff Leamy / Patrick Hartung</u>
Phone Number:	<u>139 N. Main Street</u>	Inspection Date:	<u>03/12/2020</u>
Address:	<u>Dousman, WI 53118</u>		

Certifying Professional Name:	<u>Christopher D. Hitch, P.E.</u>
Phone Number:	<u>262-781-1000</u>



Date:	Signature:
<u>2.10.2021</u>	

Jade at North Hills – Village of Menomonee Falls

Photos taken during installation: March 13-15, 2018



Jade at North Hills – Village of Menomonee Falls
Photos taken during installation: March 13-15, 2018



STRUCTURAL DESIGN LOADING CRITERIA

LIVE LOADING: AASHTO HS-20 HIGHWAY LOADING
GROUND WATER TABLE: BELOW INVERT OF SYSTEM
SOIL BEARING PRESSURE: 3000 PSF
SOIL DENSITY: 120 PCF
EQUIVALENT UNSATURATED LATERAL ACTIVE EARTH PRESSURE: 35 PSF / FT.
EQUIVALENT SATURATED LATERAL ACTIVE EARTH PRESSURE: 80 PSF/FT. (IF WATER TABLE PRESENT)
APPLICABLE CODES: AASHTO ACI-318
BACKFILL TYPE: $\frac{3}{4}$ " STONE AGGREGATE

STORMTRAP SYSTEM INFORMATION

LIVE STORAGE REQ'D: 45,869.00 CUBIC FEET
LIVE STORAGE PROV: 46,003.91 CUBIC FEET
UNIT HEADROOM: 7'-0" DOUBLETRAP
UNIT QUANTITY: 124 TOTAL UNITS

SITE SPECIFIC DESIGN CRITERIA

1. STORMTRAP UNITS SHALL BE MANUFACTURED AND INSTALLED ACCORDING TO SHOP DRAWINGS APPROVED BY THE INSTALLING CONTRACTOR AND ENGINEER OF RECORD. THE SHOP DRAWINGS SHALL INDICATE SIZE AND LOCATION OF ROOF OPENINGS AND INLET/ OUTLET PIPE TYPES, SIZES, INVERT ELEVATIONS AND SIZE OF OPENINGS.
2. COVER RANGE: MIN. 1.00' MAX. 2.90' CONSULT STORMTRAP FOR ADDITIONAL COVER OPTIONS.
3. ALL DIMENSIONS AND SOIL CONDITIONS, INCLUDING BUT NOT LIMITED TO GROUNDWATER AND SOIL BEARING CAPACITY ARE REQUIRED TO BE VERIFIED IN THE FIELD BY OTHERS PRIOR TO STORMTRAP INSTALLATION.
4. FOR STRUCTURAL CALCULATIONS THE GROUND WATER TABLE IS ASSUMED TO BE BELOW INVERT OF SYSTEM . IF WATER TABLE IS DIFFERENT THAN ASSUMED, CONTACT STORMTRAP.

AS-BUILT INFORMATION SHOWN ON THIS PLAN WAS OBTAINED FROM FIELD SURVEY DATA COLLECTED BY TRIO ENGINEERING IN MARCH 2018.

StormTrap[®]

PATENTS LISTED AT: (HTTP://STORMTRAP.COM/PATENT)

1287 WINDHAM PARKWAY
ROMEIOVILLE, IL 60446
P:815-941-4549 / F:331-318-5347

ENGINEER INFORMATION:

TRIO ENGINEERING
12660 W. NORTH AVE.
BUILDING D
BROOKFIELD, WI 53005

PROJECT INFORMATION:

JADE AT NORTH
HILLS WETVAULT
MENOMONEE FALLS, WI

CURRENT ISSUE DATE:

11/1/2017

ISSUED FOR:

APPROVAL

REV.	DATE:	ISSUED FOR:	DWN BY:
5	11/1/2017	APPROVAL	KW
4	10/11/2017	APPROVAL	KW
3	10/04/2017	PRELIMINARY	DS
2	8/19/2017	PRELIMINARY	DS
1	7/14/2017	PRELIMINARY	DS

SCALE:

NTS

SHEET TITLE:

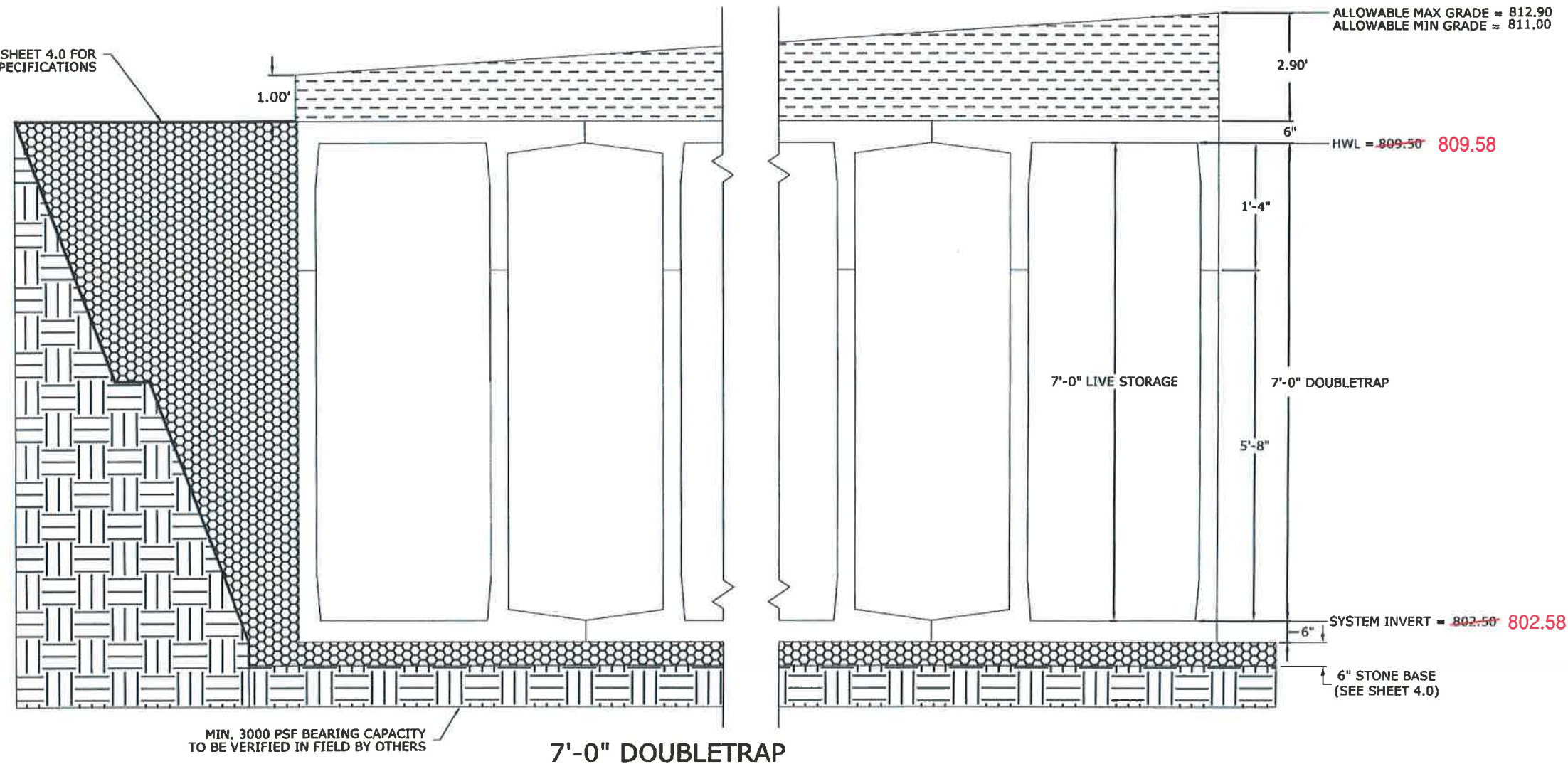
DOUBLETRAP
DESIGN
CRITERIA

SHEET NUMBER:

1.0



SEE SHEET 4.0 FOR
BACKFILL SPECIFICATIONS



LIVE LOADING:	AASHTO HS-20 HIGHWAY LOADING
GROUND WATER TABLE:	BELOW INVERT OF SYSTEM
SOIL BEARING PRESSURE:	3000 PSF
SOIL DENSITY:	120 PCF
EQUIVALENT UNSATURATED LATERAL ACTIVE EARTH PRESSURE:	35 PSF / FT.
EQUIVALENT SATURATED LATERAL ACTIVE EARTH PRESSURE:	80 PSF/FT. (IF WATER TABLE PRESENT)
APPLICABLE CODES:	AASHTO ACI-318
BACKFILL TYPE:	¾" STONE AGGREGATE

LIVE STORAGE REQ'D:	45,869.00 CUBIC FEET
LIVE STORAGE PROV:	46,003.91 CUBIC FEET
UNIT HEADROOM:	10'-6" DOUBLETRAP
UNIT QUANTITY:	124 TOTAL UNITS

1. STORMTRAP UNITS SHALL BE MANUFACTURED AND INSTALLED ACCORDING TO SHOP DRAWINGS APPROVED BY THE INSTALLING CONTRACTOR AND ENGINEER OF RECORD. THE SHOP DRAWINGS SHALL INDICATE SIZE AND LOCATION OF ROOF OPENINGS AND INLET/ OUTLET PIPE TYPES, SIZES, INVERT ELEVATIONS AND SIZE OF OPENINGS.
2. COVER RANGE: MIN. 1.00' MAX. 2.90' CONSULT STORMTRAP FOR ADDITIONAL COVER OPTIONS.
3. ALL DIMENSIONS AND SOIL CONDITIONS, INCLUDING BUT NOT LIMITED TO GROUNDWATER AND SOIL BEARING CAPACITY ARE REQUIRED TO BE VERIFIED IN THE FIELD BY OTHERS PRIOR TO STORMTRAP INSTALLATION.
4. FOR STRUCTURAL CALCULATIONS THE GROUND WATER TABLE IS ASSUMED TO BE BELOW INVERT OF SYSTEM . IF WATER TABLE IS DIFFERENT THAN ASSUMED, CONTACT STORMTRAP.



TRIO ENGINEERING
12660 W. NORTH AVE.
BUILDING D
BROOKFIELD, WI 53005

JADE AT NORTH
HILLS WETVAULT
MENOMONEE FALLS, WI

11/1/2017

APPROVAL

REV.	DATE:	ISSUED FOR:	DWN BY:
	11/1/2017	APPROVAL	KW
4	10/11/2017	APPROVAL	KW
3	10/04/2017	PRELIMINARY	DS
2	8/19/2017	PRELIMINARY	DS
1	7/14/2017	PRELIMINARY	DS

NTS

DOUBLETRAP DESIGN CRITERIA

1.1