

Tuesday, October 28, 2025

7:00 PM

McFarland Municipal Center
5915 Milwaukee St, McFarland
Community Room

AGENDA - Amended

The public may attend in-person or remotely through the Zoom webinar or telephone options listed below. *Please Note: Virtual attendance is offered as a convenience, but technical difficulties beyond the Village's control may prevent or limit its availability at any meeting. The public is encouraged to attend the meeting in person to assure full access to the proceedings.*

PLEASE CLICK THE LINK BELOW TO JOIN THE ZOOM WEBINAR:

<https://us02web.zoom.us/j/88221462299>

Or by Telephone: +1 (312) 626-6799

Webinar ID: 882 2146 2299

Press *9 to raise/lower hand. Press *6 to mute/unmute.

1. CALL TO ORDER.
2. ROLL CALL.
3. PUBLIC ANNOUNCEMENTS, COMMUNICATIONS, AND PROCLAMATIONS.
 - a. Designating November Social Connection Awareness Month in the Village of McFarland.
4. CONSENT AGENDA.
 - a. All items listed under the Consent Agenda will be approved in one motion unless a Board member requests that the item be removed for individual discussion and action. Any item(s) removed for individual consideration shall be considered in the same order in which they were originally listed on the agenda under Business.
 - 1) Motion to approve the minutes of the October 9, 2025 special meeting (Budget Review #2).
 - 2) Motion to approve the minutes of the October 16, 2025 regular meeting.
 - 3) Motion to approve checks in the amount of \$133,704.47
 - 4) Motion to approve resolution 2025-24: a resolution approving the temporary closure of Overlook Drive.
 - 5) Motion to approve a memorandum of agreement with the Wisconsin Historical Society Preservation Office for a historical comprehensive survey as recommended by the Landmarks Committee.
 - 6) Motion to approve issuing a Request for Bid for a comprehensive historical survey as recommended by the Landmarks Committee.
 - 7) Motion to approve renewal of a contract with General Engineering Company for building inspection services as recommended by the Plan Commission.
 - 8) Motion to approve authorize to bid the project for the Babcock Channel Water Main Crossing as recommended by the Public Works & Utilities Committee.

- 9) Motion to approve authorizing the 2026 Stormwater Maintenance projects for bid as recommended by the Public Works & Utilities Committee.
- 10) Motion to approve authorizing the Holscher Water Tower repainting for bid as recommended by the Public Works & Utilities Committee.

5. PUBLIC APPEARANCES.

- a. This is an opportunity for members of the public to address the Village Board for items that are not on the agenda. Please remember this is a hybrid meeting conducted in person and through the Zoom online meeting platform. Meeting attendees wishing to address the Board about items not on the agenda may do so at this time. Zoom attendees should type their name and address in the Question and Answer feature within the Zoom online meeting platform at this time. Members of the public who are present in person and wish to address the Board should fill out a public comment form and turn into the meeting chairperson. When you are called upon to speak, state your name, address, and provide your comments to the Board for their consideration. Please adhere to the 3-minute time limit. Additionally, you may send your public comments to village.clerk@mcfarland.wi.us to be included as part of the meeting.

Members of the public may also speak during their selected agenda item as they designate on the public comment form or in the Question and Answer feature on Zoom.

6. PUBLIC HEARINGS.

- a. On the proposed budget for the year 2026 and establishing the 2025 payable in 2026 property tax levy for the Village of McFarland.

7. BUSINESS.

- a. Parks and Recreation Committee (Trustees Fessler & Leamy)
 - 1) Discussion and action regarding the playground development proposal for the park within Prairie Place Subdivision.
- b. Plan Commission (President Brassington & Trustee Fessler)
 - 1) Discussion and action on a Final Plat for Sperle Corners, including associated Street and Utility Plan, Stormwater Management Plan, and Development Agreement, submitted by Lakestone Properties for a 147-unit residential subdivision located at parcel 0610-024-9691-1.
- c. Sustainability & Natural Resources Committee (Trustees Peña & Leamy)
 - 1) Discussion and action regarding the award of contract for installation of a photovoltaic system for Lift Station #2.
 - 2) Discussion and action regarding the award of contract for installation of a battery energy storage system at the Public Safety Center.

8. SCHEDULE NEXT MEETING DATE.

- a. Thursday, October 30, 2025 at 6:00 pm - Special Village Board (Budget Review)

- b. Thursday, November 6, 2025 at 6:00 pm - Special Village Board (Budget Review)
- c. Tuesday, November 11, 2025 at 7:00 pm - Regular Village Board
- d. Tuesday, November 25, 2025 at 7:00 pm - Regular Village Board

9. ADJOURNMENT.

Any person who has a qualifying disability as defined by the Americans with Disabilities Act that requires the meeting or materials at the meeting to be in an accessible location or format should contact the McFarland Municipal Center at (608)838-3153, 5915 Milwaukee Street, McFarland, Wisconsin, or village.clerk@mcfarland.wi.us by 2:00 p.m. at least 5 business days prior to the meeting so that any necessary arrangements can be made to accommodate each request. If the meeting or request is less than 5 business days from the meeting, requests for accommodations may still be made and reasonable efforts will be made to accommodate each request.



www.mcfarland.wi.us | 5915 Milwaukee St, McFarland, WI 53558 | 608.838.7117

PROCLAMATION

Designating November Social Connection Awareness Month in the Village of McFarland.

WHEREAS; the U.S. Surgeon General has classified social isolation and loneliness as a public health crisis, with approximately one in three adults in the U.S. experiencing measurable levels of loneliness according to the Centers for Disease Control and Prevention; and

WHEREAS; while people of all ages, backgrounds, and abilities can experience social isolation and loneliness, research shows that older adults and people with disabilities, especially those with intersecting marginalized identities, are more likely to experience high levels of loneliness; and

WHEREAS; according to the U.S. Department of Health and Human Services, social isolation and loneliness can increase the risk for physical, emotional, and psychological health impacts, including increased depressive symptoms, cognitive decline, risk for heart disease, stroke, dementia and premature death; and

WHEREAS; according to the Wisconsin Department of Health Services, Wisconsinites have expressed a desire for their communities to be more socially connected, including through virtual and face-to-face interaction, community events, civic engagement and establishing communities that are more inclusive of and welcoming to people of all personal characteristics and abilities; and

WHEREAS; the Wisconsin Coalition for Social Connection, together with partners across the state and country, strives to raise awareness of and support social connection policies, initiatives and activities for older adults and individuals with disabilities; and

WHEREAS; today, the Village of McFarland affirms its commitment to supporting all community members who are experiencing social isolation and loneliness, and older adults and people with disabilities in particular, and is raising awareness of and engaging in interventions to improve social connections in our community.

Now, Therefore, be it proclaimed by the McFarland Village Board, that November is hereby

Social Connection Awareness Month

And THAT, all community members are encouraged to participate in appropriate activities and to support social connection.

Proclaimed at a regular meeting of the McFarland Village Board on this 28th day of October, 2025.

ATTEST:

APPROVED:

Cassandra Suettinger
Deputy Administrator/Clerk Village

Stephanie Brassington
Village President

VILLAGE OF
McFarland
SUMMARY SHEET

MEETING DATE: Tuesday, October 28, 2025

SECTION: Consent Agenda

The Consent Agenda is for routine, procedural, and self-explanatory non-controversial items. Items will be approved by one motion unless a Board member requests that the item be removed. Board members who have a question on an item on the consent agenda or would like to have additional discussion, should request an item be removed from the consent agenda and discussed separately. Items requested to be dealt with separately, will be dealt with in the same order in which they were originally listed on the Consent Agenda under Business.

VILLAGE OF MCFARLAND

Village Board Minutes

Thursday, October 9, 2025 - 6:00 PM

1. CALL TO ORDER.

Village President Brassington called the special meeting of the McFarland Village Board to order at 6:00 pm in the Community Room of the McFarland Municipal Center.

2. ROLL CALL.

Village Board members present: Village Trustee Kathy Annen, Village Trustee Ken Boyd, Village President Stephanie Brassington, Village Trustee Luke Fessler, Village Trustee Alisa Leamy, Village Trustee Miguel Peña, Village Trustee Lowell J. Prill

Village Board members not present: None.

Staff Present: Village Administrator Matt Schuenke, Deputy Administrator/Clerk Cassandra Suettinger, Interim Police Chief Brian Redman, Community and Economic Development Director Andrew Bremer, Public Works Director Lee Igl, Outreach Director Katie Gletty-Syoen, and Fire/EMS Director Chris Dennis.

3. PUBLIC APPEARANCES.

- a. This is an opportunity for members of the public to address the Village Board for items that are not on the agenda. Please remember this is a hybrid meeting conducted in person and through the Zoom online meeting platform. Meeting attendees wishing to address the Board about items not on the agenda may do so at this time. Zoom attendees should type their name and address in the Question and Answer feature within the Zoom online meeting platform at this time. Members of the public who are present in person and wish to address the Board should fill out a public comment form and turn into the meeting chairperson. When you are called upon to speak, state your name, address, and provide your comments to the Board for their consideration. Please adhere to the 3-minute time limit. Additionally, you may send your public comments to village.clerk@mcfarland.wi.us to be included as part of the meeting.*

Members of the public may also speak during their selected agenda item as they designate on the public comment form or in the Question and Answer feature on Zoom.

None.

4. BUSINESS.

- a. Discussion and review of the 2026 Budget including the following sections:*

- 1) Changes since the last distribution.*

Village Administrator Schuenke did not have any changes to report.

- 2) General Fund (100).*

Respective Department Heads presented on their proposed 2026 budgets.

- 3) Affordable Housing Fund (215).*

Community & Economic Development Director Andrew Bremer presented the proposed 2026 Affordable Housing Fund (215)

- 4) Tax Increment District #3 Fund (305).*

Community & Economic Development Director Andrew Bremer presented the proposed 2026 Tax Increment District #3 Fund.

5) Tax Increment District #4 Fund (310).

Community & Economic Development Director Andrew Bremer presented the proposed 2026 Tax Increment District #4 Fund(310).

6) Tax Increment District #5 Fund (315).

Community & Economic Development Director Andrew Bremer presented the proposed 2026 Tax Increment District #5 Fund(315).

7) Tax Increment District #6 Fund (320).

Community & Economic Development Director Andrew Bremer presented the proposed 2026 Tax Increment District #6 Fund(320).

8) Utilities Fund (600).

Public Works Director Lee Igl presented the proposed 2026 Utilities Fund (600) Budget.

9) Stormwater Utility Fund (605).

Public Works Director Lee Igl presented the proposed 2026 Storm Water Fund (605) Budget.

10) Solid Waste Fund (610).

Public Works Director Lee Igl presented the proposed 2026 Solid Waste Fund (610) Budget.

11) Capital Projects Fund (400).

Review of the Capital Projects fund was deferred to the next budget review meeting.

12) Parks Fund (405).

Review of the Parks fund was deferred to the next budget review meeting.

b. Review schedule for future meetings.

Village Administrator Schuenke provided the remaining review scheduled for the 2026 Budget Review Process.

5. SCHEDULE NEXT MEETING DATE.

a. Thursday, October 16, 2025 at 7:00 pm - Regular Village Board

b. Tuesday, October 28, 2025 at 7:00 pm - Regular Village Board

c. Thursday, October 30, 2025 at 6:00 pm - Special Village Board (Budget Review)

d. Thursday, November 6, 2025 at 6:00 pm - Special Village Board (Budget Review)

6. ADJOURNMENT.

Motion by Village Trustee Kathy Annen, second by Village Trustee Miguel Peña, to adjourn at 8:03 p.m.

Pursuant to law, written notice of this meeting was given to the public and posted on the public bulletin board in accordance with Open Meetings Law.

Respectfully submitted,

Cassandra Suettinger
Deputy Administrator/Clerk

VILLAGE OF MCFARLAND

Village Board Minutes

Thursday, October 16, 2025 - 7:00 PM

1. CALL TO ORDER.

Village President Brassington called the regular meeting of the McFarland Village Board to order at 7:00 pm in the Community Room of the McFarland Municipal Center.

2. ROLL CALL.

Village Board members present: Village Trustee Kathy Annen, Village Trustee Ken Boyd, Village President Stephanie Brassington, Village Trustee Luke Fessler, Village Trustee Alisa Leamy, Village Trustee Miguel Peña

Village Board members not present: Village Trustee Lowell J. Prill

Staff Present: Village Administrator Matt Schuenke, Deputy Administrator/Clerk Cassandra Suettinger, Interim Police Chief Brian Redman, Public Works Director Lee Igl, and Outreach Director Katie Gletty-Syoen.

3. PUBLIC ANNOUNCEMENTS, COMMUNICATIONS, AND PROCLAMATIONS.

None.

4. CONSENT AGENDA.

a. All items listed under the Consent Agenda will be approved in one motion unless a Board member requests that the item be removed for individual discussion and action. Any item(s) removed for individual consideration shall be considered in the same order in which they were originally listed on the agenda under Business.

1) Motion to approve the minutes of the September 25, 2025 regular meeting.

2) Motion to approve the minutes of the September 29, 2025 special meeting (Budget Review #1).

3) Motion to approve checks in the amount of \$750,635.02

4) Motion to approve an Event Permit Application from the Madison Curling Club for the MadTown Double Down to take place on December 4-7, 2025 with the conditions provided by Village Staff.

5) Motion to approve an Event Permit Application from Healthy Journey Chiropractic for the Halloween Parade to take place on October 18, 2025 with the conditions provided by Village Staff.

6) Discussion and action on a "Class A" liquor and Class "A" beer license for Kwik Trip Inc. D/B/A Kwik Trip 1210, Michael Mueller, Agent, for the premise at 4015 Terminal Drive, McFarland WI 53558 as recommended by the Public Safety Committee with the conditions provided.

7) Discussion and recommendation on a "Class B" liquor and Class "B" beer license for El Gallito Madison LLC, D/B/A La Penca McFarland, Josue Miranda-Lopez, Agent, for

the premise at 6115 US Highway 51, McFarland WI 53558 as recommended by the Public Safety Committee.

Motion by President Stephanie Brassington, second by Trustee Luke Fessler, to approve the consent agenda as presented. Motion carries 6 - 0 - 0 by acclamation.

5. PUBLIC APPEARANCES.

- a. This is an opportunity for members of the public to address the Village Board for items that are not on the agenda. Please remember this is a hybrid meeting conducted in person and through the Zoom online meeting platform. Meeting attendees wishing to address the Board about items not on the agenda may do so at this time. Zoom attendees should type their name and address in the Question and Answer feature within the Zoom online meeting platform at this time. Members of the public who are present in person and wish to address the Board should fill out a public comment form and turn into the meeting chairperson. When you are called upon to speak, state your name, address, and provide your comments to the Board for their consideration. Please adhere to the 3-minute time limit. Additionally, you may send your public comments to village.clerk@mcfarland.wi.us to be included as part of the meeting.

Members of the public may also speak during their selected agenda item as they designate on the public comment form or in the Question and Answer feature on Zoom.

None.

6. BUSINESS.

- a. Presentation from Safe Communities.

Cheryl Wittke, presented an overview of the partnership between Safe Communities and the Village of McFarland. Safe Communities requested the Village consider increasing its donation for the 2026 budget.

- b. Discussion regarding transition of McFarland Youth Center transitioning to youth services provided through Village operations.

Michael J. Burke, 6406 Exchange Street, spoke in support of the Village taking over the McFarland Youth Center operations.

Missy Burke, 6406 Exchange Street, spoke in support of the Village taking over the McFarland Youth Center operations.

Cherise Caradine, 5008 Valley Drive, spoke in support of the Village taking over the McFarland Youth Center operations.

Karl Thornton, 6310 Pheasant Run, spoke in support of the Village taking over the McFarland Youth Center operations.

Cyann Caradine, 5008 Valley Drive, spoke in support of the Village taking over the McFarland Youth Center operations.

Allison Schwantes, 5803 East Open Meadow, spoke in support of the Village taking over the McFarland Youth Center operations.

Katie Miller, 5212 Broadhead Street, did not wish to speak, but yielded her time to Shawn Miller.

Rebecca Stokes, 3474 Orvold Park Drive, spoke in support of the Village taking over the McFarland Youth Center operations..

Penny Symons, 2683 Bruce Parkway, spoke in support of the Village taking over the

McFarland Youth Center operations.

Sarah Rowe, 2447 CTH Rd AB, spoke in support of the Village taking over the McFarland Youth Center operations.

Melanie Ribok-Tiboris, 6307 Johnson St, spoke in support of the Village taking over the McFarland Youth Center operations.

Gus Robak Tiboris, spoke in support of the McFarland Youth Center

Jill Ruhnde, 6201 Renee Court, spoke in support of the Village taking over the McFarland Youth Center operations.

Brooke Clark, did not state address, spoke in support of the Village taking over the McFarland Youth Center operations.

Meghan Lundy, 3400 Kuehling Dr, spoke in support of the Village taking over the McFarland Youth Center operations.

Fred Bartman, 5116 N Autumn Lane, spoke in support of the Village taking over the McFarland Youth Center operations.

Teegan Bartman, 5116 N Autumn Lane, spoke in support of the Village taking over the McFarland Youth Center operations.

Molly RP, 2425 Woodland Road, spoke in support of the Village taking over the McFarland Youth Center operations.

Max Kolk, 5113 Valley drive, 5116 N Autumn Lane, spoke in support of the Village taking over the McFarland Youth Center operations.

Katelyn Ossman, 5108 Erling Avenue, spoke in support of the Village taking over the McFarland Youth Center operations.

Kallow Rose, 5108 Erling Avenue, spoke in support of the Village taking over the McFarland Youth Center operations.

Kaelyn, 5108 Erling Avenue, spoke in support of the Village taking over the McFarland Youth Center operations.

Grace Burke, 64066 Exchange Street, spoke in support of the Village taking over the McFarland Youth Center operations.

Tom Mooney, 6205 Pheasant Run, spoke in support of the Village taking over the McFarland Youth Center operations.

Cordale Wright, 4716 Dale Street, spoke in support of the Village taking over the McFarland Youth Center operations.

Moaura Donnely, 3542 East Dyreson Road, spoke in support of the Village taking over the McFarland Youth Center operations.

Nicole Ninedorf, 4716 Dale Street, spoke in support of the Village taking over the McFarland Youth Center operations.

Shawn Miller, address, spoke in support of the Village taking over the McFarland Youth Center operations.

Meghan Beckler, managing director, spoke in support of the Village taking over the McFarland Youth Center operations.

Did not want to speak, but wanted to register support

Sue Ossman, 6119 Johnson St, did not wish to speak, but wished to register support for the Village taking over the McFarland Youth Center operations.

Chad Ary, 5108 Erling Avenue, 6119 Johnson St, did not wish to speak, but wished to register support for the Village taking over the McFarland Youth Center operations.

Bertram Vaughan, 5860 Lexington Street, 6119 Johnson St, did not wish to speak, but wished to register support for the Village taking over the McFarland Youth Center operations.

Luke Larson, did not provide address, 6119 Johnson St, did not wish to speak, but wished to register support for the Village taking over the McFarland Youth Center operations.

Village Administrator Schuenke provided an overview of the Youth Services Transition. He provided the history of the discussion as well as discussions that have been had to date regarding how the McFarland Youth Center could fit into Village operations.

The Board requested staff provide an outline of the options with the relevant costs. The Board will plan to discuss the matter further at a Committee of the Whole meeting on October 28th beginning at 5 p.m.

The Board recessed at 9:45. The Board returned to open session at 9:51 p.m.

c. Public Works & Utilities Committee (President Brassington & Trustee Prill)

1) Discussion and action on the conventional rate case for test year 2026 for submittal to the Public Service Commission.

Motion by President Stephanie Brassington, second by Trustee Luke Fessler, to approve the conventional rate case for test year 2026 for submittal to the Public Service Commission. Motion carries 6 - 0 - 0 by acclamation.

2) Discussion and action regarding Well 5 drilling and authorize the project for bid.

Motion by Village President Stephanie Brassington, second by Village Trustee Luke Fessler, to approve Well 5 drilling and authorize the project for bid. Motion carries 6 - 0 - 0 by acclamation.

d. Discussion and review of the 2026 Budget including the following sections:

1) Youth Center Fund (210).

Village Administrator Schuenke provided an overview of the proposed 2026 Youth Center Fund (210) Budget.

2) Debt Service Fund (300).

Village Administrator Schuenke provided an overview of the proposed Debt Service Fund (300) Budget.

3) Capital Projects Fund (400).

Village Administrator Schuenke provided an overview of the proposed 2026 Capital Projects Fund (400) Budget.

4) Parks Fund (405).

Village Administrator Schuenke provided an overview of the proposed 2026 Parks Fund (405) Budget.

5) Retiree Fund (700).

Deputy Administrator/Clerk Suettinger provided an overview of the proposed 2026 Budget for the Retiree Fund (700).

7. REQUESTS FOR REFERRAL OF NEW ITEMS.

- a. Discussion and action on referral from Trustee Peña for the Village to study regulations surrounding e-bikes and e-scooters.

Motion by Village Trustee Miguel Peña, second by Village President Stephanie Brassington, to approve referring studying regulations surrounding e-bikes and e-scooters to the Public Safety Committee. Motion carries 6 - 0 - 0 by acclamation.

8. CLOSED SESSION.

- a. Discussion and action on entering into Closed Session in accordance with Wis. Stats. 19.85(1)(c) to consider employment, promotion, compensation, or other performance evaluation data of any public employee over which the governmental body has jurisdiction or exercises responsibility, specifically to consider employment contract for the Village Administrator position.

Motion by President Stephanie Brassington, second by Trustee Kathy Annen, to postpone this item to a future Village Board meeting.

9. RECONVENE INTO OPEN SESSION.

No action taken.

10. ACTION ON ITEMS DISCUSSED IN CLOSED SESSION.

- a. Discussion and action regarding an employment contract for the Village Administrator position.

No action taken.

11. SCHEDULE NEXT MEETING DATE.

- a. Tuesday, October 28, 2025 at 7:00 pm - Regular Village Board
- b. Thursday, October 30, 2025 at 6:00 pm - Special Village Board (Budget Review)
- c. Thursday, November 6, 2025 at 6:00 pm - Special Village Board (Budget Review)
- d. Tuesday, November 11, 2025 at 7:00 pm - Regular Village Board
- e. Tuesday, November 25, 2025 at 7:00 pm - Regular Village Board

12. ADJOURNMENT.

Motion by Village Trustee Miguel Peña, second by Village Trustee Luke Fessler, to adjourn at 10:22 p.m.

Pursuant to law, written notice of this meeting was given to the public and posted on the public bulletin board in accordance with Open Meetings Law.

Respectfully submitted,
Cassandra Suettinger
Deputy Village Administrator/Clerk

Report Criteria:
Detail report type printed

Vendor Number	Name	Invoice Number	Description	Seq	Invoice Date	Invoice Amount	Discount Amount	Check Amount	Check Issue Date
30	ALLIANT ENERGY/WP&L	101125	5115 TERMINAL DPW	1	10/11/2025	523.24	.00	523.24	10/17/2025
		101125	PSC 6001 BROADHEAD	2	10/11/2025	2,016.62	.00	2,016.62	10/17/2025
		101125	MUNICIPAL CENTER 591	3	10/11/2025	1,970.69	.00	1,970.69	10/17/2025
		101125	3234 CTY RD AB	4	10/11/2025	300.55	.00	300.55	10/17/2025
		101125	DOG PARK 6300 ELVEHJ	5	10/11/2025	121.84	.00	121.84	10/17/2025
		101125	FLOOD LIGHT 2860 HIDD	6	10/11/2025	37.03	.00	37.03	10/17/2025
		101125	SOCCER BLDG 4820 MA	7	10/11/2025	13.75	.00	13.75	10/17/2025
		101125	4806 MCDANIEL LN	8	10/11/2025	185.82	.00	185.82	10/17/2025
		101125	CEDAR GLADE BATHRO	9	10/11/2025	28.04	.00	28.04	10/17/2025
		101125	5307 HOUGH ST	10	10/11/2025	16.70	.00	16.70	10/17/2025
		101125	5802 MAIN ST	11	10/11/2025	82.75	.00	82.75	10/17/2025
		101125	LIFT#2 6407 PHEASANT	12	10/11/2025	240.38	.00	240.38	10/17/2025
		101125	WELL 4 ELECTRIC	13	10/11/2025	1,943.80	.00	1,943.80	10/17/2025
		101125	LIBRARY 5920	14	10/11/2025	2,754.88	.00	2,754.88	10/17/2025
Total 30:						10,236.09	.00	10,236.09	
68	BADGER WELDING SUPP	3906427	WELD SUPPLIES	1	10/16/2025	79.90	.00	79.90	10/22/2025
Total 68:						79.90	.00	79.90	
166	CINTAS CORPORATION #	8407832481	FIRST AID SUPPLIES - RE	1	10/10/2025	13.20	.00	13.20	10/22/2025
		8407832481	FIRST AID SUPPLIES - RE	2	10/10/2025	13.20	.00	13.20	10/22/2025
		8407832481	FIRST AID SUPPLIES - RE	3	10/10/2025	13.20	.00	13.20	10/22/2025
		8407832481	FIRST AID SUPPLIES - RE	4	10/10/2025	48.38	.00	48.38	10/22/2025
Total 166:						87.98	.00	87.98	
172	CITY OF MADISON TREA	66632	MCDANIEL BEACH TESTI	1	09/26/2025	1,024.00	.00	1,024.00	10/22/2025
Total 172:						1,024.00	.00	1,024.00	
194	CONCENTRA	104276637	CONCENTRA PHYSICAL	1	10/06/2025	314.00	.00	314.00	10/22/2025
Total 194:						314.00	.00	314.00	
476	JEFFERSON FIRE & SAF	IN332309	CHARGER HOLDER & CO	1	10/09/2025	84.30	.00	84.30	10/22/2025
		IN332329	TRUCK 5" ADAPTERS	1	10/09/2025	2,145.00	.00	2,145.00	10/22/2025
		IN332630	STREAMLIGHT FLASHLIG	1	10/16/2025	655.70	.00	655.70	10/22/2025
		IN332655	SCBA REPAIR	1	10/16/2025	362.77	.00	362.77	10/22/2025
Total 476:						3,247.77	.00	3,247.77	
634	MENARDS - MONONA	91066	VEHICLE MAINTENANCE	1	10/10/2025	35.88	.00	35.88	10/22/2025
		91066	PARKS SUPPLIES	2	10/10/2025	12.61	.00	12.61	10/22/2025
		91286	STORM INLET REPAIRS	1	10/14/2025	177.52	.00	177.52	10/22/2025
		91358	PARKS SUPPLIES	1	10/15/2025	10.88	.00	10.88	10/22/2025
		91411	PARKS SUPPLIES	1	10/16/2025	134.40	.00	134.40	10/22/2025
		91411	VEHICLE MAINTENANCE	2	10/16/2025	17.94	.00	17.94	10/22/2025
Total 634:						389.23	.00	389.23	
764	PREMIER PAINT & WALLP	GY22Z	PSC FACILITY MAINTENA	1	10/20/2025	49.99	.00	49.99	10/22/2025

Vendor Number	Name	Invoice Number	Description	Seq	Invoice Date	Invoice Amount	Discount Amount	Check Amount	Check Issue Date
Total 764:						49.99	.00	49.99	
765	LEGAL SHIELD	108629-1015	LEGAL SHIELD	1	10/15/2025	131.60	.00	131.60	10/22/2025
Total 765:						131.60	.00	131.60	
775	PUBLIC SERVICE COMM	2509-I-03490	PSC FEE FOR WELL 5	1	10/15/2025	146.63	.00	146.63	10/22/2025
Total 775:						146.63	.00	146.63	
836	SCHILLING SUPPLY COM	1025446-00	BATHROOM SUPPLIES	1	10/15/2025	590.94	.00	590.94	10/22/2025
Total 836:						590.94	.00	590.94	
844	SCHWAAB INC	4892513	DEPOSIT STAMP	1	10/10/2025	34.50	.00	34.50	10/22/2025
Total 844:						34.50	.00	34.50	
870	SLINDE TRUCKING	41322	MUNICIPAL CENTER MUL	1	09/19/2025	120.00	.00	120.00	10/22/2025
		41327	MUNICIPAL CENTER MUL	1	09/22/2025	80.00	.00	80.00	10/22/2025
Total 870:						200.00	.00	200.00	
926	AXON ENTERPRISE INC	INUS387126	TASER BUNDLE PAYMEN	1	10/15/2025	4,664.40	.00	4,664.40	10/22/2025
Total 926:						4,664.40	.00	4,664.40	
958	TOWN & COUNTRY ENGI	28741	MC224 LIFT STATION 2 I	1	09/18/2025	4,092.50	.00	4,092.50	10/22/2025
		28742	KWIK TRIP - TERMINAL D	1	09/18/2025	120.00	.00	120.00	10/22/2025
		28743	MC230 2025 STREET & U	1	09/18/2025	31,204.38	.00	31,204.38	10/22/2025
		28744	MC234 SIGGELKOW RD	1	09/18/2025	757.50	.00	757.50	10/22/2025
		28745	MC208 USH 51 DOT PRO	1	09/18/2025	1,885.00	.00	1,885.00	10/22/2025
		28746	MC220 WELL NO 5 PRELI	1	09/18/2025	436.43	.00	436.43	10/22/2025
		28747	MC237 2025 GIS SUPPOR	1	09/18/2025	273.38	.00	273.38	10/22/2025
		28747	MC237 2025 GIS SUPPOR	2	09/18/2025	273.38	.00	273.38	10/22/2025
		28747	MC237 2025 GIS SUPPOR	3	09/18/2025	273.38	.00	273.38	10/22/2025
		28747	MC237 2025 GIS SUPPOR	4	09/18/2025	1,002.36	.00	1,002.36	10/22/2025
		28748	MC242 2026 STREET & U	1	09/18/2025	3,221.25	.00	3,221.25	10/22/2025
		28749	APRIL HILLS	1	09/18/2025	2,058.75	.00	2,058.75	10/22/2025
		28763	MC240 WELL 5 FINAL DE	1	09/18/2025	2,201.25	.00	2,201.25	10/22/2025
Total 958:						47,799.56	.00	47,799.56	
992	US CELLULAR	0759184356	LIBRARY CELL PHONE	1	09/28/2025	43.75	.00	43.75	10/22/2025
		0761786551	PD PHONE	1	10/10/2025	36.01	.00	36.01	10/22/2025
Total 992:						79.76	.00	79.76	
1005	VANGUARD UTILITY PA	10865	STREETLIGHT LOCATES	1	10/01/2025	336.32	.00	336.32	10/22/2025
Total 1005:						336.32	.00	336.32	
1245	PROFESSIONAL PEST C	880620	MC PEST CONTROL EXT	1	10/14/2025	175.00	.00	175.00	10/22/2025
Total 1245:						175.00	.00	175.00	

Vendor Number	Name	Invoice Number	Description	Seq	Invoice Date	Invoice Amount	Discount Amount	Check Amount	Check Issue Date
1256	BOUND TREE MEDICAL L	85954142	EMS - SUPPLIES	1	10/10/2025	154.45	.00	154.45	10/22/2025
		85955880	EMS - SUPPLIES	1	10/13/2025	95.38	.00	95.38	10/22/2025
Total 1256:						249.83	.00	249.83	
1989	CORPORATE BUSINESS	40295494	ADMIN COPIERS	1	10/07/2025	142.50	.00	142.50	10/17/2025
		40295494	ADMIN COPIERS - SOS	2	10/07/2025	47.50	.00	47.50	10/17/2025
Total 1989:						190.00	.00	190.00	
2058	MICROMARKETING LLC	991719	AUDIO BOOKS	1	10/09/2025	165.89	.00	165.89	10/22/2025
Total 2058:						165.89	.00	165.89	
2121	LAKESIDE INTERNATION	8321272P	VEHICLE MAINTENANCE	1	10/13/2025	218.36	.00	218.36	10/22/2025
		8321272P	VEHICLE MAINTENANCE	2	10/13/2025	218.36	.00	218.36	10/22/2025
		8321272P	VEHICLE MAINTENANCE	3	10/13/2025	218.36	.00	218.36	10/22/2025
		8321272P	VEHICLE MAINTENANCE	4	10/13/2025	800.62	.00	800.62	10/22/2025
		8321909P	VEHICLE MAINTENANCE	1	10/21/2025	84.17	.00	84.17	10/22/2025
		8321909P	VEHICLE MAINTENANCE	2	10/21/2025	22.96	.00	22.96	10/22/2025
		8321909P	VEHICLE MAINTENANCE	3	10/21/2025	22.96	.00	22.96	10/22/2025
		8321909P	VEHICLE MAINTENANCE	4	10/21/2025	22.96	.00	22.96	10/22/2025
Total 2121:						1,608.75	.00	1,608.75	
2162	KNOLL, KAREN	KK101425	RENTAL PROP ASSOC C	1	10/14/2025	129.00	.00	129.00	10/22/2025
		KK101425	RENTAL PROP ASSOC C	2	10/14/2025	100.00	.00	100.00	10/22/2025
		KK101425	RENTAL PROP ASSOC C	3	10/14/2025	100.00	.00	100.00	10/22/2025
Total 2162:						329.00	.00	329.00	
2237	MADISON COLLEGE	CORP-00000	FIRE RECRUIT ACADEMY	1	09/23/2025	1,032.15	.00	1,032.15	10/22/2025
Total 2237:						1,032.15	.00	1,032.15	
9140	TRITECH FORENSICS IN	01224426	EVIDENCE/INVESTIGATI	1	10/09/2025	116.87	.00	116.87	10/22/2025
		01224598	EVIDENCE SUPPLY	1	10/10/2025	88.00	.00	88.00	10/22/2025
		01228092	EVIDENCE/INVESTIGATI	1	10/17/2025	38.90	.00	38.90	10/22/2025
		01228728	EVIDENCE/INVESTIGATI	1	10/21/2025	349.00	.00	349.00	10/22/2025
Total 9140:						592.77	.00	592.77	
9143	ORIENTAL TRADING CO	7389323690	PROGRAM SUPPLIES	1	10/03/2025	91.96	.00	91.96	10/22/2025
Total 9143:						91.96	.00	91.96	
16236	WEBER, MARK	MW101125	UNIFORM ALLOWANCE -	1	10/11/2025	150.00	.00	150.00	10/22/2025
		MW101125	UNIFORM ALLOWANCE	2	10/11/2025	200.00	.00	200.00	10/22/2025
Total 16236:						350.00	.00	350.00	
16247	CITY TREASURER	2798990	STORMWATER CHARGE	1	10/06/2025	34.96	.00	34.96	10/22/2025
Total 16247:						34.96	.00	34.96	
16257	CORPORATE BUSINESS	388374	COPIER LEASE	1	10/16/2025	85.40	.00	85.40	10/17/2025
		388383	PW COLOR COPY OVER	1	10/16/2025	10.45	.00	10.45	10/22/2025

Vendor Number	Name	Invoice Number	Description	Seq	Invoice Date	Invoice Amount	Discount Amount	Check Amount	Check Issue Date
		388383	PW COLOR COPY OVER	2	10/16/2025	10.45	.00	10.45	10/22/2025
		388383	PW COLOR COPY OVER	3	10/16/2025	10.45	.00	10.45	10/22/2025
		388383	PW COLOR COPY OVER	4	10/16/2025	38.33	.00	38.33	10/22/2025
		388384	COPIER USAGE	1	10/16/2025	36.11	.00	36.11	10/22/2025
Total 16257:						191.19	.00	191.19	
16296	DANE CO DEPT OF HUM	OCT 2025	MEALSITE DONATION - M	1	10/01/2025	3,447.00	.00	3,447.00	10/22/2025
		OCT 2025	MEALSITE DONATION - C	2	10/01/2025	995.00	.00	995.00	10/22/2025
Total 16296:						4,442.00	.00	4,442.00	
16333	WI DEPT OF JUSTICE - TI	455TIME-000	TIME ACCESS	1	10/10/2025	384.00	.00	384.00	10/22/2025
Total 16333:						384.00	.00	384.00	
16489	ZIETSMA, JOEL	JZ102225	FLEX REFUND PAYMENT	1	10/22/2025	211.54	.00	211.54	10/22/2025
Total 16489:						211.54	.00	211.54	
16552	VERIDIAN HOMES	2.85084.00-1	REFUND OVERPAYMENT	1	10/15/2025	110.10	.00	110.10	10/22/2025
		2.85106.00-1	REFUND OVERPAYMENT	1	10/15/2025	.02	.00	.02	10/22/2025
Total 16552:						110.12	.00	110.12	
16777	AT&T MOBILITY II LLC	2873326607	FIRSTNET OCTOBER	1	10/12/2025	733.78	.00	733.78	10/22/2025
		28734591101	LIBRARY CELL PHONE	1	10/12/2025	37.10	.00	37.10	10/22/2025
Total 16777:						770.88	.00	770.88	
17084	AMAZON CAPITAL SERVI	13VC-VWCD	AUDIOVISUAL MATERIAL	1	10/19/2025	130.27	.00	130.27	10/22/2025
		143P-FT4T-N	KEY TAGS	1	10/17/2025	84.00	.00	84.00	10/22/2025
		1C3Q-LYGF-	PARKS SUPPLIES	1	10/20/2025	296.76	.00	296.76	10/22/2025
		1C6T-LVQG-	PARKS SUPPLIES REFUN	1	10/13/2025	44.40-	.00	44.40-	10/22/2025
		1CWW-GJT6	DVD	1	10/15/2025	27.99	.00	27.99	10/22/2025
		1KPH-VPN3-	SUPPLIES - TONER & DO	1	10/20/2025	205.63	.00	205.63	10/22/2025
		1LH6-R7QL-	CASCADE DISH SOAP	1	10/06/2025	33.30	.00	33.30	10/22/2025
		1NN9-1J93-4	DVD	1	10/19/2025	29.84	.00	29.84	10/22/2025
		1PKT-J11P-3	PARKS SUPPLIES	1	10/16/2025	304.49	.00	304.49	10/22/2025
		1T7M-G6FH-	WINDSHIELD WIPERS	1	10/14/2025	61.89	.00	61.89	10/22/2025
Total 17084:						1,129.77	.00	1,129.77	
17140	US BANK VOYAGER FLE	8694160992	PD FUEL	1	10/01/2025	2,292.91	.00	2,292.91	10/17/2025
		8694160992	MC FUEL	2	10/01/2025	146.15	.00	146.15	10/17/2025
		8694160992	FIRE/EMS FUEL	3	10/01/2025	1,405.80	.00	1,405.80	10/17/2025
		8694160992	PW FUEL	4	10/01/2025	1,441.48	.00	1,441.48	10/17/2025
		8694160992	PW FUEL	5	10/01/2025	262.09	.00	262.09	10/17/2025
		8694160992	PW FUEL	6	10/01/2025	131.04	.00	131.04	10/17/2025
		8694160992	PARKS FUEL	7	10/01/2025	252.56	.00	252.56	10/17/2025
		8694160992	PW FUEL	8	10/01/2025	262.09	.00	262.09	10/17/2025
		8694160992	PW FUEL	9	10/01/2025	131.04	.00	131.04	10/17/2025
		8694160992	PW FUEL	10	10/01/2025	393.13	.00	393.13	10/17/2025
Total 17140:						6,718.29	.00	6,718.29	
17205	LEADER INDEPENDENT	MNA-192419	LEADER INDEPENDENT	1	10/20/2025	144.80	.00	144.80	10/22/2025

Vendor Number	Name	Invoice Number	Description	Seq	Invoice Date	Invoice Amount	Discount Amount	Check Amount	Check Issue Date
Total 17205:						144.80	.00	144.80	
17320	PARKITECTURE & PLANN	24.029-12	COMMUNITY PARK PHAS	1	10/10/2025	19,342.72	.00	19,342.72	10/22/2025
Total 17320:						19,342.72	.00	19,342.72	
17420	BIG RIVER MAGAZINE	102125	MAGAZINE SUBSCRIPTI	1	10/21/2025	43.00	.00	43.00	10/22/2025
Total 17420:						43.00	.00	43.00	
17569	MCFARLAND ACE HARD	014505/T	PLANT SAUCERS/POTS F	1	10/08/2025	32.58	.00	32.58	10/22/2025
		014507/T	PSC FACILITY MAINTENA	1	10/09/2025	8.62	.00	8.62	10/22/2025
		014509/T	FASTENERS	1	10/09/2025	11.16	.00	11.16	10/22/2025
		014524/T	FASTENERS	1	10/13/2025	24.57	.00	24.57	10/22/2025
		014536/T	VEHICLE MAINTENANCE	1	10/15/2025	3.59	.00	3.59	10/22/2025
		014542/T	PSC FACILITY MAINTENA	1	10/15/2025	14.39	.00	14.39	10/22/2025
		014559/T	SURGE PROTECTOR - P	1	10/20/2025	17.99	.00	17.99	10/22/2025
		014561/T	FASTENERS	1	10/20/2025	18.12	.00	18.12	10/22/2025
		014563/T	BUMPER PAD	1	10/20/2025	4.49	.00	4.49	10/22/2025
		014565/T	PSC SUPPLIES	1	10/21/2025	4.66	.00	4.66	10/22/2025
		014569/T	PUBLIC WORKS SUPPLIE	1	10/22/2025	3.59	.00	3.59	10/22/2025
Total 17569:						143.76	.00	143.76	
17626	BOB'S COPY SHOP	70046	FOAM CORE MOUNT	1	10/08/2025	48.00	.00	48.00	10/22/2025
Total 17626:						48.00	.00	48.00	
17672	WISCONSIN POLICE LEA	14083	GRADY CONFERENCE R	1	10/21/2025	700.00	.00	700.00	10/22/2025
Total 17672:						700.00	.00	700.00	
17685	INGRAM LIBRARY SERVI	91167898	BOOKS	1	10/13/2025	390.03	.00	390.03	10/22/2025
		91333470	BOOKS	1	10/20/2025	62.91	.00	62.91	10/22/2025
Total 17685:						452.94	.00	452.94	
17760	WILSON, CLAYTON	CW101125	UNIFORM ALLOWANCE -	1	10/11/2025	125.53	.00	125.53	10/22/2025
Total 17760:						125.53	.00	125.53	
18013	KING, ADAM	AK101425	DNR SAFETY COURSE	1	10/14/2025	30.50	.00	30.50	10/22/2025
Total 18013:						30.50	.00	30.50	
18068	SIMPLE NETWORK CON	33888	HARDWARE REPLACEM	1	10/06/2025	228.00	.00	228.00	10/22/2025
Total 18068:						228.00	.00	228.00	
18113	JM BRENNAN INC	21004020	BOILER #2 REPAIR	1	10/17/2025	1,761.85	.00	1,761.85	10/22/2025
Total 18113:						1,761.85	.00	1,761.85	
18175	BUCKY'S DUMPSTER & P	106037	PORTABLE RESTROOMS	1	10/17/2025	150.00	.00	150.00	10/22/2025
		106038	PORTABLE RESTROOMS	1	10/17/2025	150.00	.00	150.00	10/22/2025
		106039	PORTABLE RESTROOMS	1	10/17/2025	150.00	.00	150.00	10/22/2025

Vendor Number	Name	Invoice Number	Description	Seq	Invoice Date	Invoice Amount	Discount Amount	Check Amount	Check Issue Date
		106040	PORTABLE RESTROOMS	1	10/17/2025	150.00	.00	150.00	10/22/2025
		106041	PORTABLE RESTROOMS	1	10/17/2025	200.00	.00	200.00	10/22/2025
	Total 18175:					800.00	.00	800.00	
18193	MADISON PARTY RENTA	284538	TABLES & CHAIRS RENT	1	10/09/2025	725.75	.00	725.75	10/22/2025
	Total 18193:					725.75	.00	725.75	
18248	GREEN COUNTY HUMAN	100925	NUTRITION STAFF ANNU	1	10/09/2025	26.00	.00	26.00	10/17/2025
	Total 18248:					26.00	.00	26.00	
18289	E.H. WOLF & SONS INC	337350	PUBLIC WORKS FUEL	1	10/20/2025	180.33	.00	180.33	10/22/2025
		337354	DYED DIESEL FUEL	1	10/20/2025	386.62	.00	386.62	10/22/2025
	Total 18289:					566.95	.00	566.95	
18343	WHIPPLE, RICH	RW101325	UNIFORM ALLOWANCE	1	10/13/2025	58.96	.00	58.96	10/22/2025
	Total 18343:					58.96	.00	58.96	
18377	VESTIS LLC	6140683397	MAT RENTAL	1	10/10/2025	63.35	.00	63.35	10/22/2025
		6140687676	MAT RENTAL	1	10/17/2025	63.35	.00	63.35	10/22/2025
	Total 18377:					126.70	.00	126.70	
18405	EMS MANAGEMENT & C	EMS-019851	EMS MC	1	09/30/2025	2,745.73	.00	2,745.73	10/22/2025
	Total 18405:					2,745.73	.00	2,745.73	
18407	WESTPHAL & SONS LAW	2518	5802-04 MAIN ST TID#4	1	10/03/2025	325.00	.00	325.00	10/22/2025
	Total 18407:					325.00	.00	325.00	
18467	CAROUSEL DIGITAL SIG	CSL-INV-202	DIGITAL SIGNAGE SOFT	1	10/17/2025	1,268.50	.00	1,268.50	10/22/2025
		CSL-INV-202	DIGITAL SIGNAGE SOFT	2	10/17/2025	88.50	.00	88.50	10/22/2025
		CSL-INV-202	DIGITAL SIGNAGE SOFT	3	10/17/2025	88.50	.00	88.50	10/22/2025
		CSL-INV-202	DIGITAL SIGNAGE SOFT	4	10/17/2025	88.50	.00	88.50	10/22/2025
		CSL-INV-202	DIGITAL SIGNAGE SOFT	5	10/17/2025	88.50	.00	88.50	10/22/2025
		CSL-INV-202	DIGITAL SIGNAGE SOFT	6	10/17/2025	442.50	.00	442.50	10/22/2025
		CSL-INV-202	DIGITAL SIGNAGE SOFT	7	10/17/2025	442.50	.00	442.50	10/22/2025
		CSL-INV-202	DIGITAL SIGNAGE SOFT	8	10/17/2025	442.50	.00	442.50	10/22/2025
	Total 18467:					2,950.00	.00	2,950.00	
18469	LOY, KRISTOPHER	KL100925	FPW ICE	1	10/09/2025	19.47	.00	19.47	10/22/2025
	Total 18469:					19.47	.00	19.47	
18472	SCHMITZ, JAYDEN	JS101625	UNIFORM ALLOWANCE -	1	10/16/2025	200.00	.00	200.00	10/22/2025
	Total 18472:					200.00	.00	200.00	
18529	ASSOCIATED TECH SER	245798	PSC FACILITY MAINTENA	1	10/08/2025	1,192.64	.00	1,192.64	10/22/2025

Vendor Number	Name	Invoice Number	Description	Seq	Invoice Date	Invoice Amount	Discount Amount	Check Amount	Check Issue Date
Total 18529:						1,192.64	.00	1,192.64	
18564	NAPA AUTO PARTS	011067	TRUCK 4, 7, & 29 MAINT	1	10/21/2025	101.13	.00	101.13	10/22/2025
		011067	TRUCK 4, 7, & 29 MAINT	2	10/21/2025	27.58	.00	27.58	10/22/2025
		011067	TRUCK 4, 7, & 29 MAINT	3	10/21/2025	27.58	.00	27.58	10/22/2025
		011067	TRUCK 4, 7, & 29 MAINT	4	10/21/2025	27.58	.00	27.58	10/22/2025
Total 18564:						183.87	.00	183.87	
18586	HOFFMAN, KAREN ANN	KH101725	PROGRAM FEES	1	10/17/2025	664.82	.00	664.82	10/22/2025
Total 18586:						664.82	.00	664.82	
18593	OREILLY AUTO PARTS	3841-236552	PW VEHICLE MAINTENA	1	10/09/2025	15.68	.00	15.68	10/22/2025
		3841-236552	PW VEHICLE MAINTENA	2	10/09/2025	15.68	.00	15.68	10/22/2025
		3841-236552	PW VEHICLE MAINTENA	3	10/09/2025	15.68	.00	15.68	10/22/2025
		3841-236552	PW VEHICLE MAINTENA	4	10/09/2025	57.47	.00	57.47	10/22/2025
Total 18593:						104.51	.00	104.51	
18613	OLSON TOON LANDSCA	200156	PSC FACILITY MAINTENA	1	10/10/2025	235.00	.00	235.00	10/22/2025
Total 18613:						235.00	.00	235.00	
18632	MKG INTERNATIONAL	001	STICK TO IT WORKSHOP	1	10/09/2025	90.00	.00	90.00	10/22/2025
Total 18632:						90.00	.00	90.00	
18633	MGT IMPACT SOLUTION	GHR100121	COMP AND CLASS UPDA	1	10/12/2025	1,844.70	.00	1,844.70	10/22/2025
		GHR100121	COMP AND CLASS UPDA	2	10/12/2025	128.70	.00	128.70	10/22/2025
		GHR100121	COMP AND CLASS UPDA	3	10/12/2025	128.70	.00	128.70	10/22/2025
		GHR100121	COMP AND CLASS UPDA	4	10/12/2025	128.70	.00	128.70	10/22/2025
		GHR100121	COMP AND CLASS UPDA	5	10/12/2025	128.70	.00	128.70	10/22/2025
		GHR100121	COMP AND CLASS UPDA	6	10/12/2025	643.50	.00	643.50	10/22/2025
		GHR100121	COMP AND CLASS UPDA	7	10/12/2025	643.50	.00	643.50	10/22/2025
		GHR100121	COMP AND CLASS UPDA	8	10/12/2025	643.50	.00	643.50	10/22/2025
Total 18633:						4,290.00	.00	4,290.00	
18634	TDS TREASURY	101425	US CELLULAR/BURMA W	1	10/14/2025	6,500.00	.00	6,500.00	10/22/2025
Total 18634:						6,500.00	.00	6,500.00	
Grand Totals:						133,017.27	.00	133,017.27	

Report Criteria:
Detail report type printed

Pay Period Date	Journal Code	Check Issue Date	Payee	Payee ID	Amount
10/10/2025	CDPT	10/16/2025	VM SCTF	5	104.93
10/18/2025	CDPT	10/24/2025	FIRE FIGHTERS LOCAL 31	8	302.81
10/18/2025	CDPT	10/24/2025	DOBBERSTEIN LAW FIRM	9	279.46

PAYROLL RELATED \$687.20

Street Use Permit

10/03/2025 11:12 AM (CDT)

Applicant Information

Name	Nick Swenson (Nick's Custom Tree Care)
Phone	
Email Address	
Address	
Address where closure is needed: 6027 Overlook Drive, McFarland, WI 53558	
Will you be using a Contractor?	Yes

Contractor Information

Company Name	Reon Rounds Tree Service
Name of Primary Contact	Reon Rounds
Contractor Phone Number	
Contractor Email Address	
Contractor Address	
Location	6027 Overlook Drive, McFarland, WI 53558
Start Date	11/05/2025
End Date	11/05/2025
Description, including measurements of what portion of the street/alley/sidewalk/way will be encumbered:	We will need the full width of the street
Description of items (materials, pods, equipment, etc.) that will cause the encumbrance:	Tree removal utilizing a crane (Merlo 50.30). There is a hollow dual stem Basswood that originates on the north side of 6027 Overlook drive and overhangs a secondary power line and the primary power lines. Due to the trees condition, it is not safely climbable, so a crane is needed to safely complete this removal. This removal will prevent catastrophic failure which is highly likely to impact the power lines, were it to occur.

Please Read Carefully Before Signing

By signing this application, I acknowledge the following terms and conditions:

Certifications

- Obstructions shall be sufficiently lighted at night so as to be in full view of the public from all directions;
 - Sidewalk traffic shall not be interrupted, but temporary sidewalks of not less than four feet in width guarded by a closed fence of least four feet high on both sides may be maintained during the period of occupancy;
 - No fire hydrant may be blocked from ready access, as determined by the Fire/EMS Chief, Building Inspector or Director of Public Works;
 - Upon termination of the work necessitating such obstruction, all parts of the street, alleys, sidewalks or public grounds occupied under the street privilege permit shall be vacated, cleaned of all rubbish and obstructions and placed in a safe condition for public travel at the expense of the permittee; and
 - If the Village so requires, I will execute and file with the Village a bond in an amount not exceeding \$10,000.
-

By signing below, I further acknowledge and accept that I will indemnify and save harmless the Village from all liability for accidents or damage caused by reason of operations under said permit and will remove such encumbrance upon termination of the operations and will leave the vacated premises in a clean and sanitary condition and repair any and all damage to the streets, alley, sidewalks or public property of the Village resulting from such building or moving operations.

SignatureA solid black rectangular box used to redact the signature of the person certifying the work.

Date

10/03/2025

RESOLUTION 2025-24

A RESOLUTION APPROVING THE TEMPORARY CLOSURE OF OVERLOOK DRIVE

WHEREAS, Nick Swenson of Reon Rounds Tree Service has petitioned the Village to close Overlook Drive to take down a tree,

WHEREAS, the temporary closure would minimize safety concerns and potential damage to nearby infrastructure,

WHEREAS, this temporary closure is granted and subject to all the following conditions:

- Submittal and approval of a traffic control plan and proposed notification letter by the Village Public Works Department. Submittal must be made at least 2 business days in advance of the proposed closure.
- Notification is to be delivered to all residents of Overlook Drive at least 48 hours prior to road closure.
- No parking signs are to be posted at least 24 hours prior to the road closure in the work zone. Signs shall be posted on both sides of the street.
- Police, Fire & Rescue, and Public Works shall be notified the day or prior to the start of the road closure and once the road has been reopened.
- Any damage to the roadway or curblane will be the responsibility of the resident and/or tree company to repair.
- Contractor will provide personnel at the intersection of Overlook Drive and South Court to remind drivers needing access to Overlook Drive, that they will be operating their vehicle going to the wrong way on a one-way street and to use extreme caution.

NOW, THEREFORE, BE IT RESOLVED, that the Village of McFarland Board of Trustees hereby authorizes temporary closure of Overlook drive at 6027 Overlook Drive on November 5th

BE IT FURTHER RESOLVED that confirmed copies of this resolution will be forwarded by the Village Clerk to the applicant to ensure compliance with above aforementioned conditions.

Adopted this 28th day of October, 2025

Stephanie Brassington
Village President

ATTEST:

Cassandra Suettinger
Deputy Administrator/Clerk

RESOLUTION 2025-24	
MOTION	SECOND
ACTION	DATE
Adopted	
Referred	
Tabled	
Withdrawn	
Defeated	
Published	
INDIVIDUAL VOTING RECORD	
Annen –	Boyd –
Brassington –	Fessler –
Leamy –	Peña –
Prill –	
VOTING RESULTS	
Motion Carried	
Motion Defeated:	

**VILLAGE OF
McFarland
SUMMARY SHEET**

MEETING DATE: Tuesday, October 28, 2025

SECTION: Business

DEPARTMENT: Community Development

CONTACT: Andrew Bremer, Comm & Eco Dev Director

AGENDA ITEM: Motion to approve a memorandum of agreement with the Wisconsin Historical Society Preservation Office for a historical comprehensive survey as recommended by the Landmarks Committee.

PREVIOUS ACTION:

September 4, 2024 - Landmarks Commission recommended to the Village Board approval submittal of a WHS grant application.

September 10, 2024 - Village Board approved submittal of the WHS grant application.

December 9, 2024 - Landmarks Commission discussed details of the Wisconsin Historical Society Grant

October 9, 2025 - Landmarks Commission unanimously recommends approval of the memorandum of agreement with the WHS for a historical property survey

ISSUE SUMMARY:

Staff submitted the application for the Certified Local Government (CLG) Grant Program in December 2024 for a comprehensive historic property survey through the Wisconsin Historical Society's (WHS). The application included a request for \$25,000 in grant funding under the "*Initial intensive survey of the community*" project type. The comprehensive historic property survey is consistent in Sec. 62-394 Historic Structures And Sites Designation Criteria to determine new structures, locations, or sites among the community's historic designation. On February 28, 2025, WHS announced the Village was a recipient of the CLG Award for \$20,520.

The awarded difference was due to gathered quotes received. Due to delays at the federal level with funding sources for the Historic Preservation Fund, WHS withheld sending out Memorandum of Agreements (MOA) to recipients that would kick-off projects. In July 2025, the funding had finally been released and MOAs were sent out to awardees in September. All awardees will receive a 6-month extension on their projects moving the project deadline to March 2027. The packet includes the draft MOA and SOW and will be included as Exhibit A and B of the Request for Bids.

Next Steps

The tentative schedule includes anticipated project milestones. Meeting dates with the Landmarks Commission and Village Board are shown for the week they are anticipated, but none have been confirmed. Staff will reach out in December to confirm the meeting date for the Landmarks Commission during the week of January 12-16, 2026. The full schedule and description is included in Section 8 of the bid documents. The schedule accommodates for holiday breaks and staff schedules. The consultants are responsible for submittal of their project



schedule.

- October 28 - Village Board reviews bid documents for the historical comprehensive survey.
- October 29 - RFB Issuance Date
- November 21 - Deadline for submittal of written questions to Staff.
- December 12 - RFBs due at 4:00 PM
- December 15-January 8, 2026 - Evaluation of submitted RFBs
- January 12-16, 2026 - TBD Landmarks Commission recommendation on preferred consultant (one date of this week)
- January 27, 2026 - Village Board meeting for acceptance of the recommended bid.
- By February 27, 2026 - Village Attorney to draft final contract for signatures. Project commencement.
- March 2027 - Certified Local Government Project Completion Deadline. This includes the 6-month extension.

FINANCIAL/BUDGET IMPACT:

Funding for this project is anticipated to be entirely paid through the WHS grant. This is an award total of \$20,520.

VILLAGE PLAN REFERENCE:

[2017 Comprehensive Plan](#)

Identified in the Comprehensive Plan Volume 2, Chapter 3 - Culture and Community Character, Initiative 3: Reinvigorate McFarland's Historic Preservation Efforts. The section lists efforts to achieve this may include: *Update historic building survey.*

ORDINANCE REFERENCE:

Sec. 62-394 Historic Structures and Sites Designation Criteria

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Recommended motion:

Motion, and second, to approve a memorandum of agreement with the Wisconsin Historical Society Preservation Office for a historical comprehensive survey.

ATTACHMENTS:

1. Memorandum of Agreement - McFarland 2025 survey - DRAFT_09.23.2025
2. Scope of Work - McFarland 2025 survey - DRAFT_09.23.2025



MEMORANDUM OF AGREEMENT
BETWEEN
WISCONSIN STATE HISTORIC PRESERVATION OFFICE
AND
VILLAGE OF MCFARLAND, WISCONSIN

SUBJECT: Funding up to \$20,520 from federal Historic Preservation Fund through a subgrant from the Wisconsin State Historic Preservation Office to the village of McFarland, Wisconsin.

Project No. WI-25-xxxxx

DATE OF GRANT AWARD: Feb. 21, 2025

POINT OF CONTACT: Jason Tish: jason.tish@wisconsinhistory.org 608-264-6512

GRANTEE PROJECT MANAGER: Kong Thao

This agreement between the State Historic Preservation Office (SHPO), and the Village of McFarland, Wisconsin (Grantee) stipulates the terms and conditions of the funding for the above-referenced project, as well as the scope of work for the project. The Grantee will undertake and coordinate a project to complete a village-wide, intensive, architecture and history survey to identify historic properties.

Completion of the survey is supported by funding up to \$20,520 from the federal Historic Preservation Fund (HPF) through a subgrant from the Wisconsin SHPO in support of historic preservation activities in Wisconsin. The HPF was established in 1977 to provide financial assistance to states and local governments to carry out activities related to preservation. Funding is provided from Outer Continental Shelf oil and gas lease revenues, not tax dollars, and an amount is appropriated annually by Congress. The Catalog of Federal Domestic Assistance number is 15.904.

The SHPO and the Grantee agree to the following:

Scope of Work

The Grantee shall carry out the project as stipulated herein and in the attached *Scope of Work*.

Period of Work Performance

All work related to this project shall be conducted between the date of the *Purchase Order* issued by the Wisconsin Historical Society for this project and **March 30, 2027**, with intermediate deadlines as stipulated below. A *Purchase Order* for reimbursement from the grant award will be issued after this MOA is executed.

Intermediate Deadlines

There are intermediate deadlines for project activities, reporting, and deliverables stipulated below and in the *Scope of Work*. Intermediate deadlines may be amended subject to the *Amendments* section below.

Feb. 27, 2026 – **Consultant** must be hired. **First Progress Report** to SHPO is due.

May 29, 2026 – **Second Progress Report** to SHPO is due.

Aug. 28, 2026 – **Third Progress Report** to SHPO is due.

Nov. 27, 2026 – **Fourth Progress Report** to SHPO is due.

Feb. 26, 2027 – All **deliverables** in the *Scope of Work* are due.

Mar. 1, 2027 – **Project work must be complete**, final reimbursement requests prepared.

Mar. 12, 2027 – Final **Reimbursement Request** is due.

Mar. 31, 2027 – End of grant period.

The Grantee shall notify the SHPO if any situation arises that will adversely affect the timely or successful completion of this project.

Qualified Professional Consultation

To complete the *Scope of Work*, the Grantee will enter into a contract with a principal investigator whose professional qualifications have been reviewed by the SHPO and determined to meet the [Secretary of the Interior Professional Qualifications Standards for Architectural History, Historic Architecture, or History](#). (Professional Standards)

Subcontractors hired by the principal investigator to conduct project work shall also meet the Professional Standards. The Grantee shall verify that subcontractors meet the Professional Standards.

SHPO staff shall maintain contact with the project manager and principal investigator for the duration of the project and provide any training, advice, and technical assistance needed for the successful completion of project work.

Contracts

If requested by SHPO, the Grantee shall allow SHPO staff to review and approve drafts of contracts for project-related work prior to executing such contracts.

The Grantee will comply with federal procurement standards in Chapter 17 of the [Historic Preservation Fund Grants Manual](#) (*HPF Manual*) when obtaining professional consulting services, and will submit documentation of such *prior to contracting* with a vendor.

The Grantee will not contract with any party who is disbarred, suspended, or is otherwise excluded from or ineligible for participation in Federal assistance programs under *Executive Order 12549, Debarment and Suspension*.

SHPO staff will provide the Grantee with a list of qualified consultants who are known by the SHPO to have provided qualified staff for historic preservation projects in Wisconsin.

Allowable Costs

Generally, expenses for the following types of activities directly related to project work are reimbursable under this grant when they are incurred in the completion of project. See Ch. 13 of the *HPF Manual* for more specific eligibility requirements.

- Professional and consulting service
- Travel
- Equipment, materials, and supplies used for project activities
- Exhibits for public display of progress and accomplishments
- Meeting facilities
- Printing of project materials and deliverables
- Public outreach (print and digital), mailings, public meetings
- Time spent by local government staff coordinating project activities or hiring and collaborating with consultants.

Deviation from items in the budget proposed by the Grantee must be negotiated with and approved by SHPO staff – see *Amendments* below.

All project-related costs are subject to applicable principles in the following [Office of Management and Budget \(OMB\) Circulars](#).

- *A-21 Cost Principles for Educational Institutions* (as revised 5/10/2004);
- *A-87 Cost Principles for State, Local and Indian Tribal Governments* (as revised 5/10/2004);
- *A-122 Cost Principles for Nonprofit Organizations* (as revised 5/10/2004);
- *A-102 Grants and Cooperative Agreements with State and Local Governments* (as amended 8/29/97);
- *A-110 Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Nonprofit Organizations*, (as amended 9/30/99), and
- *A-133 Audits of Institutions of States, Local Governments, and Nonprofit Institutions* (as revised 6/27/03).

If the Grantee receives \$750,000 or more annually in federal funding, the Grantee shall comply with the provisions of [OMB Circular A-133](#), [Single Audit Act of 1984](#), and submit to the SHPO a copy of the audit report within 30 days of publication.

All project-related spending shall meet federal requirements for the Historic Preservation Fund, meet state requirements for the HPF subgrant program, conform to the approved project budget and occur within the period of performance, and be necessary and reasonable for the completion of the *Scope of Work*.

Grant funding may not be used for any work associated with "lobbying," in accordance with [18 U.S.C. 1913](#).

Reimbursement

The Grantee may request reimbursement for project-related expenses at any time throughout the project period as consultant's invoices are paid. Reimbursement requests will be paid up to 75% of the total project cost until all stipulations are satisfied.

The Grantee will request reimbursement for project-related expenses by completing a *Reimbursement Request* form provided by the SHPO. Each *Reimbursement Request* must be accompanied by:

- Documentation of project-related expenses (receipts, invoices, etc.)
- Documentation that those expenses were paid (receipt, invoices marked as "paid," payment records from a third party, etc.)

On receipt of a *Reimbursement Request*, the SHPO will reimburse the Grantee within 60 days for allowable, incurred, and documented costs directly related to the grant-funded project.

The SHPO will reimburse the Grantee up to 75% of the grant award prior to the completion of the project. The SHPO will release the remaining 25% of the grant award after completion of all project work and receipt of all deliverables stipulated in the SOW.

The Grantee will submit a final *Reimbursement Request* on or before **March 12, 2027**, for the remainder of project-related expenses.

Reimbursement of project-related expenses is subject to availability of federal HPF funding committed to the SHPO from the National Park Service.

Retention of Records

The Grantee shall retain all records related to project expenses and the procurement of professional services for at least five years after completion of the project. The Grantee shall provide, upon request, access to these records to the State Legislative Audit Bureau, the SHPO, the National Park Service, the Department of the Interior, the Comptroller of the United States, and any of their duly authorized representatives.

Amendments

Scope of Work - After the execution of this MOA, the Grantee may propose changes to the *Scope of Work* or deliverables to the SHPO in writing in accordance with the requirements in section 11 of the *CLG Subgrant Manual*. The SHPO will respond in writing within 30 days, either accepting or rejecting the proposed changes.

Budget - Amendments to line items in the budget proposed in the Grantee's application, and approved by virtue of the grant award, must be approved in consultation with SHPO staff before unexpected costs are incurred.

Period of Performance - The *Period of Performance* may be extended if unforeseen circumstances unexpectedly delay the completion of the project. If the Grantee believes their project has become constrained such that an extension is needed to successfully complete the project, they may request an extension from the CLG Coordinator.

General Stipulations

Because federal funds will be used to complete this project, materials produced with this funding will remain in the public domain and may not be copyrighted.

The Grantee shall comply with all federal and state laws and regulations concerning equal opportunity, affirmative action, and fair employment practices.

The Grantee will comply with all applicable regulations, laws, policies, guidelines, and requirements of this federal grant program, including applicable Secretary of the Interior's standards.

The Grantee shall comply *with Title VI of the Civil Rights Act of 1964* that states that no person, on the grounds of race, color, marital status, religious creed, or national origin, will be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving federal assistance.

The Grantee shall comply with the *Rehabilitation Act of 1973* and the *Age Discrimination Act of 1975* and all requirements imposed by or pursuant to the *Department of the Interior Regulations (43 CFR 17)* issued pursuant to these titles, to the end that, no person in the United States will, on the grounds of age or physical ability, be excluded from participation in, denied the benefits of, or otherwise subjected to discrimination under any program or activity for which the Grantee receives financial assistance from the National Park Service, and hereby gives assurance that it will immediately take any measures to effectuate this agreement.

During the period of this grant (execution through **March 31, 2027**), any income earned by a Grantee from any project-related activities for which the Grantee requests reimbursement will be subtracted from the amount of the grant award.

The Grantee does hereby indemnify and hold harmless the State Historic Preservation Office, the Wisconsin Historical Society, and its officers, employees, and agents from actions or claims filed in response to any injury or damage received by any persons or property resulting from the Grantee's efforts to accomplish the *Scope of Work*.

Acknowledgment of Federal Assistance

The following acknowledgment of federal assistance will be printed in any publication or visual product resulting from this project. Publications, materials, projects, news release, speeches, websites, and other dissemination of information relating to this project must also acknowledge the financial support of the National Park Service and the Wisconsin Historical Society.

The activity that is the subject of this (type of publication) has been financed (in part/entirely) with Federal Funds from the National Park Service, U.S. Department of the Interior, and administered by the Wisconsin State Historic Preservation Office. However, the contents and opinions do not necessarily reflect the views or policies of the Dept. of the Interior or the Wisconsin State Historic Preservation Office. Nor does the mention of trade names or commercial products constitute endorsement or recommendation by the Dept. of the Interior or the Wisconsin State Historic Preservation Office.

Termination of This Agreement

Either party may terminate this agreement by written notification to the other before the project is completed, and at least 60 days prior to the termination of the agreement.

If this agreement is terminated by the SHPO, except for reasons of non-compliance by the Grantee, the SHPO shall reimburse the Grantee up to 100% of the eligible costs incurred up to the termination date.

If this agreement is terminated by the Grantee, the SHPO may, at the discretion of the State Historic Preservation Officer, reimburse the Grantee for a maximum of 50% of the eligible costs incurred to the termination date, or may require the Grantee to return any or all federal funds transferred to the Grantee by the termination date, depending upon the circumstances of the termination.

This agreement becomes effective upon signature by both parties below, and the receipt by the Grantee of a *Purchase Order* for the contract sum from the Wisconsin Historical Society on behalf of the State Historic Preservation Officer.

VILLAGE OF MCFARLAND

Matt Schuenke
Village Administrator – Village of McFarland, Wisconsin

Date

WISCONSIN STATE HISTORIC PRESERVATION OFFICE

Amy Wyatt
Deputy State Historic Preservation Officer

Date



Scope of Work

Project No. WI-25-xxxxx

McFarland, Wisconsin

The State Historic Preservation Office (SHPO) and the Village of McFarland, Wisconsin (Grantee), agree to the following scope of work and conditions for the completion of a village-wide, intensive, architecture and history survey.

Scope

The Grantee shall hire and collaborate with a consultant who meets the *Secretary of the Interior's Professional Qualification Standards for History, Historic Architecture, or Architectural History* to complete a village-wide survey to identify properties that may meet the eligibility criteria for the National Register of Historic Places (NRHP).

Survey Area

The survey area shall be the corporate boundary of the village of McFarland.

Survey Manual

In carrying out the field work and research for the survey, the Grantee shall comply with all requirements and guidance in the [Architecture-History Survey Manual](#) (*Survey Manual*). The Grantee will direct the principal investigator to the *Survey Manual* and advise them that compliance is required.

Subgrant Manual

The Grantee will comply with all standards and requirements in the [CLG Subgrant Manual](#) (*Subgrant Manual*) for allocation and use of federal funding. The Grantee will direct the principal investigator to the *Subgrant Manual* and inform them that compliance is required.

Request for Bids

After the execution of the *Memorandum of Agreement* (MOA), the Grantee will issue a *Request for Bids* (RFB) to qualified historic preservation consultants. The Grantee shall use a competitive process in the procurement of consulting services.

Principal Investigator and Village staff

The consultant selected to conduct the survey shall serve as the Principal Investigator for the project and must meet the [Secretary of the Interior's Professional Qualification Standards for History, Historic Architecture, or Architectural History](#). The Grantee's Project Manager shall assist in facilitating the work of the survey. Time spent by village staff to facilitate the project is eligible for reimbursement by the subgrant and may be tracked and claimed for reimbursement.

Reconnaissance phase

The project shall include a village-wide reconnaissance survey to identify properties that fit the scope of the survey and may meet the NRHP criteria for eligibility, either currently or in the next 10 years. The reconnaissance survey shall *exclude* properties already listed in the NRHP. Fieldwork and data collection during the reconnaissance phase shall be conducted according to the protocols and standards in the *Survey Manual*.

Intensive phase

The intensive phase of the survey shall include site-specific research on all properties determined to be potentially eligible for the NRHP, properties located within a potentially eligible historic district, and those properties included in the survey report to provide comparative context for potentially eligible properties. Areas that are determined to be potentially eligible as historic districts shall be defined on maps included in the survey report, and contributing properties within districts identified by address according to guidance for Historic Districts in the *Survey Manual*.

Data Entry

Property data collected during both phases of the survey shall be entered into the *Wisconsin Historic Preservation Database* (WHPD) by the consultant. Data entry shall comply with the requirements in the *Survey Manual*.

Intensive Survey Report

An Intensive Survey Report shall be prepared that synthesizes and organizes field observations and research collected during the reconnaissance and intensive phases of the survey. The report shall contain the components and analysis outlined in the *Survey Manual* for Intensive Survey Reports

Ownership of Documents

All information gathered, data collected, photos taken, and reports prepared during the completion of this project shall be the property of the SHPO and shall not be made publicly available until the project is complete and deliverables are submitted to the SHPO.

Intellectual Property

The Consultant shall grant the SHPO a non-exclusive, irrevocable, royalty-free license to all copyrightable material ("Material") created within the scope of the agreement without limitation. The SHPO shall have the right to reproduce, alter, modify, publish, and display all Material created under the scope of this agreement as necessary in the opinion of SHPO to conform to and comply with their requirements and standards, and those of the National Park Service.

Public Engagement

The Grantee shall coordinate and host at least two information sessions in accordance with the *Survey Manual* guidance on community engagement. The first session shall be held prior to the start of field work and noticed in places and forums likely to reach property owners in the survey area. The session shall present the project's scope, intent, and methodology to

property owners in the survey area, and solicit input on important history and places in the survey area. The second shall be held after the field work is complete and noticed in places and forums likely to reach property owners in the survey area. It shall present the findings of the survey. Additional information sessions may be held at the discretion of the Grantee as necessary. SHPO staff shall be invited to participate in all informational meetings.

Deliverables

1. Survey Report:

On completion of the *Survey Report*, the final version shall be submitted to the SHPO in PDF format along with three color copies printed on acid-free paper: one unbound and two bound.

2. WHPD data:

Property data collected during both phases of the survey shall be entered into the *Wisconsin Historic Preservation Database* (WHPD) by the consultant according to the guidance for data entry in the *Survey Manual*.

All deliverables are due **February 26, 2027**.

McFarland
SUMMARY SHEET

MEETING DATE: Tuesday, October 28, 2025

SECTION: Business

DEPARTMENT: Community Development

CONTACT: Andrew Bremer, Comm & Eco Dev Director, Kong Thao, Associate Planner

AGENDA ITEM: Motion to approve issuing a Request for Bid for a comprehensive historical survey as recommended by the Landmarks Committee.

PREVIOUS ACTION:

September 4, 2024 - Landmarks Commission recommended approval of Village Board to submit for grant application.

September 10, 2024 - Village Board approved submittal of the grant application.

December 9, 2024 - Landmarks Commission discussed details of the Wisconsin Historical Society Grant

October 9, 2025 - Landmarks Commission unanimously recommended issuing the Request for Bids

ISSUE SUMMARY:

The packet includes a draft of the Request for Bids and Scope of Work (SOW). The RFB covers the background information about the village's history, referencing adopted plans and their initiatives on historical preservation, and past activities completed. The RFB outlines deliverable in Section 5, which will produce a document for the Landmarks Commission to review summarizing the consultant's recommendation and evaluation of historical properties.

The RFB includes a proposal to schedule for Landmarks Commission meetings as needed for updates to the survey including public information meetings. After the signatures have been completed, WHS will provide a final draft including an assigned Project Number. Staff's review of the SOW is consistent with the intent of the RFB and finds no outstanding issues. The referenced attachments will include the Memorandum of Agreement as Exhibit A and SOW as Exhibit B within the RFB.

Next Steps:

- October 28 - Village Board reviews bid documents for the historical comprehensive survey.
- October 29 - RFB Issuance Date
- November 21 - Deadline for submittal of written questions to Staff.
- December 12 - RFBs due at 4:00 PM
- December 15-January 8, 2026 - Evaluation of submitted RFBs
- January 12-16, 2026 - TBD Landmarks Commission recommendation on preferred consultant (one date of this week)



- January 27, 2026 - Village Board meeting for acceptance of the recommended bid.
- By February 27, 2026 - Village Attorney to draft final contract for signatures. Project commencement.
- March 2027 - Certified Local Government Project Completion Deadline. This includes the 6-month extension.

FINANCIAL/BUDGET IMPACT:

The CLG Grant Program does not require a local match for the grant. The requested amount for the grant fund was \$25,000. The awarded amount was \$20,520 based on the collection of estimates received.

VILLAGE PLAN REFERENCE:

ORDINANCE REFERENCE:

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Recommended motion:

Motion, and second, to issue a Request for Bid for a comprehensive historical survey.

ATTACHMENTS:

1. Village of McFarland Historical Property Survey RFB_10.02.2025



Request For Bids

Intensive Historical Property Survey

RFB Issuance Date: October 29, 2025

RFB Due Date: By 4:00 PM on December 12, 2025

Please Submit to:

Village of McFarland
Department of Community & Economic Development
Attn: Kong Thao
Associate Planner
5915 Milwaukee Street
PO Box 110
McFarland, WI 53558
Kong.thao@mcfarland.wi.gov

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SECTION 1 Purpose

The purpose of this Request for Bids (RFB) is to receive competitive bids from qualified consultants who are interested in completing a comprehensive survey of properties in the Village of McFarland. The intent of the survey is to review new properties to be considered as local historical properties consistent with the Village's code on Historic Preservation, [Sec. 62-393 – Historic Preservation Purpose](#). The properties listed shall meet the Village's designation criteria in [Sec. 62-394. Historic Structures and Sites Designation Criteria](#).

SECTION 2 History and Background

The Village of McFarland is located adjacent to the southeast side of the City of Madison in Dane County. The January 1, 2025 population of McFarland is estimated at 9,737 residents. US Highway 51 serves as the main connection point between the cities of Madison and Stoughton. The Village of McFarland has 75 permanent employees supplemented by seasonal, temporary, and part-time employees when necessary. The Village's primary departments include Administration, Community & Economic Development, Fire and Rescue, Library, Public Works (including Parks and Utilities), Police, and Senior Outreach. More information about the Village is available at www.mcfarland.wi.us.

In March 1991, the Landmarks Commission designated 18 properties as locally designated historic properties. Later in 2019, through annexation to the Village, 5979 Siggelkow Road, Waubesa School was added. There of the properties are listed as part of the State and National Register, including 5923 Exchange Street (McFarland House), 6003 Exchange Street (Edwards-Larson House), and 5979 Siggelkow Road (Waubesa School). There are also two Native American Mound Groups (Siggelkow Park Mound Group and Lewis Mound Group) list as part of the National Register.

Historic McFarland – A Walking Tour

Originally published in 1986 by the McFarland Historical Society, this handbook documents the earliest recorded attempt to identify historic properties in the downtown area of McFarland. The handbook includes related background information on each property, who lived there, architectural significance, and a map. Not all properties in this handbook were deemed appropriate to designate as historic properties under the Village's Historic Preservation Ordinance in 1991. The publication was updated in 2016.

Story Map

This digital tool is a helpful interactive alternative to the handbook. The tool includes current historically designated properties on an interactive map. Now in a digital format, users can access this interactive map through their phone while scrolling through the properties. The link can be found on the Landmarks Commission's committee page. Viewers can click on icons over each

property to read more about their history. The tool is a modern take on a resourceful document and flexible to updates as needed.

Certified Local Government, 2019

The Village of McFarland has been a member of the Certified Local Government (CLG) Program and local partner in the Federal Preservation Program since 2019. In 2026, this will mark 7 years as a CLG member. The Village would not be able to receive grant funding for the CLG Grant if not a member.

Division 62-II-6 Historic Preservation (Village Zoning Code)

This section of the Village's Zoning Code provides regulations specific to locally designated historic properties. The Village does not maintain any Historical Districts. Designated historic properties are not all centrally located, however they are more apparent within the Village's Downtown area and along Exchange Street.

Project Supporting Plans

The following list of Village plans are provided to the consultant for added background information relating to initiatives and recommendations to expand historic preservation efforts.

- [2017 Comprehensive Plan](#):
 - Chapter 3 – Culture and Community Character
 - Initiative #3 (pages 26-27). *Reinvigorate McFarland's Historic Preservation Efforts. A range of efforts, like updating a historic building inventory or becoming a Certified Local Government, could further distinguish McFarland as a village with history.*
 - Objective #2: *Advance heritage preservation and link to quality of life and prosperity.*

Village Project Staff and Committees

The Community & Economic Development Department oversees administration of the historic properties in the Village. The Department consists of the following four positions: Director, Associate Planner, Community Development Specialist, and Building Inspector (contracted). The Village also uses a contracted Village Engineer. The Associate Planner, Kong Thao, will serve as the Village's Project Manager and will be the primary liaison with the consultant team. The Director will serve as Project Supervisor. Due to the nature of the survey, the Associate Planner and Director are available for regular reviews of the consultant team's survey progress.

The Village's Landmarks Commission will provide additional project oversight. Project updates will begin at the staff level with the consultant before updates are provided to the Landmarks Commission. The Landmarks Commission does not hold regular meetings and are scheduled as needed. The Landmarks Commission has historically met at 4:00 PM. Village Staff may assist with scheduling to ensure quorum and no conflicts with other scheduled meetings. The Village Staff team do not anticipate additional input from other Village committees and boards to be required through the project process except for final review and acceptance of the consultant's final report by the Village Board. The Village is currently utilizing a hybrid of in-person and Zoom

public meetings. The Consultant should anticipate a combination of in-person, remote, or hybrid meetings throughout the planning process.

SECTION 3 Project Objectives

Broad objectives for this project include, but are not limited to:

1. Build-off the work completed as summarized in the prior section to provide a comprehensive historic survey of properties in the Village.
2. Improve recognition of historic properties, leading to preservation of the Village's culture and heritage.
3. Utilize [Sec. 62-394 Historic Structures and Sites Designation Criteria](#) along with consultant expertise, and the [Architecture-History Survey Manual](#) to review and assess properties within the Village to determine eligibility for historic designation.
4. To engage with Village Staff, the Landmarks Commission, property owners and the public to provide information regarding the project purpose, survey methodology, and survey findings.
5. Maintain compliance with the terms of the Memorandum of Agreement between the Wisconsin State Historic Preservation Office and the Village, attached as Exhibit A to this Request for Bids.

SECTION 4 Scope of Work & Project Budget

In addition to the requirements in the Scope of Work described in Exhibit B of the RFB, the selected Consultant shall providing the following services:

1. Staff Meetings. The consultant should anticipate a sufficient number of meetings with Village staff to develop the comprehensive survey of historic properties. This should include an initial project kickoff meeting to determine the project schedule and public engagement plan, periodic project check-in meetings, and meetings prior to Landmarks Commission or public engagement meetings. Staff meetings may be held remotely.
2. Landmarks Commission Meetings. The consultant should budget for at least three meetings with the Landmarks Commission to review key elements of the survey. The first meeting should serve as a project kickoff to introduce the consultant to the Commission and public and to explain the purpose of the study, project schedule, survey methodology, etc. An additional meeting shall be held to review the results of the draft survey report findings. A final meeting shall be held to review the final survey report. Attendance at Landmarks Commission meetings may be completed remotely.

The Scope of Work described above and in Exhibit B is considered the minimum project requirements. It is expected that consultants will submit bids that provide the Village with more specific recommendations for approaches, tasks, and deliverables based on their expertise from past work on similar projects. Innovative approaches that meet the intent of the Plan Objectives and Scope of Work are welcomed, these could be presented as additional services or additional approaches in the consultant response if desired.

Project Budget

The Village was awarded a grant from Wisconsin Historic Society through the Certified Local Government Grant Program for this project. The awarded \$20,500 for this project, of which \$2,500 will be utilized by the Village for in-house project related expenses.

SECTION 5 Deliverables

The selected Consultant shall complete a final list of properties recommended for historic designation that contain at a minimum, those items described in Exhibit B. The Consultant shall provide the Village with electronic copies of any text, charts, tables, checklists, graphics, images and photos in their original file format. All deliverables are due no later than February 26, 2027.

SECTION 6 RFB Submittal Requirements

1) Qualification Details consisting of:

- a. Cover Letter – Including, but not limited to a statement of understanding and approach to this project.
- b. Experience – A summary of three to five similar or relevant projects that the consultant has executed within the last seven years. Hard copies of similar or relevant survey reports are not desired and can be provided electronically or via hyperlink within the bid if desired.
- c. References – Provide three to five municipal client references for which the consultant has provided similar services within the last seven years. Include the name, email, and telephone number of the contact person and a description of services provided to that contact.

2) Technical Details consisting of:

- a. Scope of Work – A description of the approach to be taken toward completion of each item listed under Section 4 of this RFB and within Exhibit B, including any draft and final deliverables. An explanation of any variances to the proposed Scope of Work as outlined in the Exhibit A and Exhibit B, and any insights into the project gained as a result of developing the bid or from past project experiences.

3) Project Management Details consisting of:

- a. Key Personnel – A list or organization chart of personnel directly assigned to the project, along with responsibilities on this project and resumes. Clearly illustrate the responsibilities and lines of communication and authority relative to your project management team. Describe your plan to interface with Village staff. The Consultant's Project Manager, who will be responsible for planning, coordinating, and conducting the majority of the work, including meeting attendance with Village Staff and Landmarks Commission must be identified and committed to the project. The Village reserves the right to approve Consultant's Project Manager and any requested personnel and subcontractor changes during the course of the project.
- b. Quality Control – Describe quality control measures and processes to ensure the project requirements are achieved within the project budget and schedule.
- c. Village Staff Commitments – Identification of those items within the Scope of Work for which the consultant anticipates assistance by Village staff. Village staff will serve as the point of contact for public inquires during the planning process, will attend all public meetings, will maintain a project website, and provide public outreach of activities through existing Village social media outlets, electronic and community newsletters. Village staff can also provide existing zoning GIS data and property assessment data as requested.
- d. Project Schedule – A proposed schedule that indicates project milestones by phases or tasks, delivery of draft and final project deliverables, and overall timeline for completion of the project within the required grant requirements. Identification of meetings with Village Staff, Landmarks Commission, and the public, including summary of targeted discusses and meeting outcomes.
- e. Supplemental Information – Any other information deemed necessary to address the requests of this RFB.

4) Cost and Labor Hours Details consisting of:

- a. Cost – Lump Sum price to complete the project as proposed in the Consultant's base Scope of Work, estimated labor hours and hourly rates of personnel.

- b. Additional Scope/Fees – Total fee, hours per employee, and hourly rates by employees, for any additional services not identified as included in the Consultant’s base Scope of Work.

5) General requirements consisting of:

- a. Due Date – **Responses to the RFB must be received by 4:00 PM CST on December 12, 2025.** Bids received late, for any reason, shall not be accepted.
- b. Format & Location – Prospective consultants shall provide one (1) electronic PDF copy. RFB submittals shall be emailed to the Associate Planner, Kong Thao at kong.thao@mcfarland.wi.gov and the Community & Economic Development Director at andrew.bremer@mcfarland.wi.gov, subject: Bid for Comprehensive Historical Property Survey. An email more than 25 MB won’t be accepted by the Village’s email server. Files more than 25 MB can be sent via a drop box link provided the link is sent by the submittal deadline. Alternatively, consultants may submit an electronic PDF copy via a USB flash drive to the McFarland Department of Community & Economic Development. Flash drives must be received prior to the RFB due date.

Attn: Kong Thao, Associate Planner
Community & Economic Development Department
Bid for Comprehensive Historical Property Survey
5915 Milwaukee Street, PO Box 110,
McFarland, WI 53558.

- c. Property – All information developed as part of this RFB, including graphics and data, shall become the property of the Village. All text shall be submitted electronically as is most convenient. All original graphics generated as a part of the RFB shall be submitted to the Village in an easily reproducible hardcopy and electronic format as applicable.

SECTION 7 Evaluation Criteria

The following criteria will be used to evaluate each bid submitted:

- Key Personnel Experience (30 points). Experience and qualifications relevant to key personnel and their associated project roles and estimated labor hours.
- Project Experience (15 points). Level of experience of the firm completing similar projects with local government entities of similar size, structure, and complexity. Familiarity with Wisconsin historical preservation state statutes.

- Scope of Work (20 points). Level of responsiveness and technical approaches to the scope of work outlined within the RFB. Demonstration of knowledge and innovative approaches particular to the desired Scope of Work and Plan Objectives.
- Cost Effectiveness (25 points). Ability to meet budget/value as related to proposed and additional costs. Hourly rates of key personnel, estimated total labor hours, total project budget.
- Project Schedule (5 points). Ability to be responsive in meeting schedule required to complete the survey report and deliverables. Quality and clarity of proposed planning process, project meetings and outcomes.
- Quality of Submittal (5 points). Quality, clarity and completeness of submittal package, including identification of draft and final deliverables. Consultants shall not submit verbatim sections of this RFB as their bid.

SECTION 8 Method & Timeline of Selection

The RFB Evaluation Team will consist of the Village Administrator; Community and Economic Development Director; Associate Planner, and Landmarks Commission Chair. They will conduct an evaluation of bids submitted. They will make a recommendation to the Landmarks Commission who will make the final recommendation to the Village Board for action. The following method and timeline will be utilized in order to select the desired bid:

- **October 29th – RFB Issuance Date.**
- **November 21st – Deadline for submittal of written questions.** Questions regarding this RFB shall be emailed to the Associate Planner at kong.thao@mcfarland.wi.gov and the Community & Economic Development Director at andrew.bremer@mcfarland.wi.gov.
- **December 5th – Responses to written questions.** Responses to all submitted written questions will be posted to the [Village website](#).
- **December 12, 2025 – RFB Due Date.** Bids shall be submitted no later than 4:00 PM on Friday December 12th.
- **December 15th through January 8, 2026– Evaluation.** The Evaluation Team will review the bids and decide which, in its sole discretion, it chooses to further consider via an in-person or virtual interviews as needed. At its discretion, the Evaluation Team may host interviews with consultants in order to make a recommendation on a preferred consultant to the Landmarks Commission. Interviews may be held remotely. Alternatively, Village Staff may follow-up with individual consultants to seek clarification on questions related to bids received as needed.

- **January 12th – January 21, 2026 – Landmarks Commission Recommendation.** The Landmarks Commission will meet to consider the recommendation of the Evaluation Team in order to make their own recommendation to the Village Board.
- **January 27, 2026 – Village Board.** The Board will take final action to consider acceptance of the recommended bid and enter into a contract for this purpose.
- **By February 27, 2026 – Final Contract & Project Commencement.** The Village Attorney will draft the final contract for signatures utilizing the approved bid and the Village's Standard Contract Template (Exhibit C).
- **By February 26, 2027 – Certified Local Government Project Completion Deadline.** All deliverables in the Scope of Work are due.

SECTION 9 Terms and Conditions

Each bid will be reviewed to determine if it meets the submittal requirements contained within this RFB. Failure to meet the requirements for the RFB can be cause for rejection of the bid. The Village may reject any bid if it is conditional, incomplete, contains irregularities, or if in the sole discretion of the Village not considered in our best interest. The Village may waive an immaterial deviation in a bid, but this shall in no way modify the bid document or excuse the Consultant from compliance with the contract requirements if the Consultant is awarded a contract. A prospective Consultant may be requested for an interview at the sole discretion of the Village. The recommended Consultant will be selected and approved by the Village Board.

The Village uses a standard template contract for such services and will require its utilization for this project. A copy of the standard template is provided as Exhibit C and will be updated to adapt to the bid ultimately selected.

There is no expressed or implied obligation for the Village to reimburse firms for any expenses incurred in preparing bids in response to this request. Materials submitted by respondents are subject to public inspection under Wisconsin law. Any language purporting to render the entire bid confidential or proprietary will be ineffective and will be disregarded.

The Village will not discriminate against individuals due to sex, race, religion, creed, color, national origin, age, disability, sexual orientation, ancestry, marital status, arrest or conviction record, military service, or any other characteristics protected by law. This applies to all Consultants submitting bids to this project and their sub-consultants.

The Village reserves the right to retain all bids submitted, and to use any idea in a bid, regardless of whether the bid was selected. Submission of a bid indicates acceptance by the firm of the conditions contained in the RFB, unless clearly and specifically noted in the bid submitted and confirmed in the contract between the Village and the Consultant.

All property rights, including publication rights of all reports produced by the selected firm in connection with services performed under this agreement shall be vested in the Village.

The Village reserves the right to reject any or all bids submitted.

SECTION 10 RFB Exhibits

Exhibit A: Memorandum of Agreement

Exhibit B: Scope of Work

Exhibit C: Sample Standard Contract Template



MEMORANDUM OF AGREEMENT
BETWEEN
WISCONSIN STATE HISTORIC PRESERVATION OFFICE
AND
VILLAGE OF MCFARLAND, WISCONSIN

SUBJECT: Funding up to \$20,520 from federal Historic Preservation Fund through a subgrant from the Wisconsin State Historic Preservation Office to the village of McFarland, Wisconsin.

Project No. WI-25-xxxxx

DATE OF GRANT AWARD: Feb. 21, 2025

POINT OF CONTACT: Jason Tish: jason.tish@wisconsinhistory.org 608-264-6512

GRANTEE PROJECT MANAGER: Kong Thao

This agreement between the State Historic Preservation Office (SHPO), and the Village of McFarland, Wisconsin (Grantee) stipulates the terms and conditions of the funding for the above-referenced project, as well as the scope of work for the project. The Grantee will undertake and coordinate a project to complete a village-wide, intensive, architecture and history survey to identify historic properties.

Completion of the survey is supported by funding up to \$20,520 from the federal Historic Preservation Fund (HPF) through a subgrant from the Wisconsin SHPO in support of historic preservation activities in Wisconsin. The HPF was established in 1977 to provide financial assistance to states and local governments to carry out activities related to preservation. Funding is provided from Outer Continental Shelf oil and gas lease revenues, not tax dollars, and an amount is appropriated annually by Congress. The Catalog of Federal Domestic Assistance number is 15.904.

The SHPO and the Grantee agree to the following:

Scope of Work

The Grantee shall carry out the project as stipulated herein and in the attached *Scope of Work*.

Period of Work Performance

All work related to this project shall be conducted between the date of the *Purchase Order* issued by the Wisconsin Historical Society for this project and **March 30, 2027**, with intermediate deadlines as stipulated below. A *Purchase Order* for reimbursement from the grant award will be issued after this MOA is executed.

Intermediate Deadlines

There are intermediate deadlines for project activities, reporting, and deliverables stipulated below and in the *Scope of Work*. Intermediate deadlines may be amended subject to the *Amendments* section below.

Feb. 27, 2026 – **Consultant** must be hired. **First Progress Report** to SHPO is due.

May 29, 2026 – **Second Progress Report** to SHPO is due.

Aug. 28, 2026 – **Third Progress Report** to SHPO is due.

Nov. 27, 2026 – **Fourth Progress Report** to SHPO is due.

Feb. 26, 2027 – All **deliverables** in the *Scope of Work* are due.

Mar. 1, 2027 – **Project work must be complete**, final reimbursement requests prepared.

Mar. 12, 2027 – Final **Reimbursement Request** is due.

Mar. 31, 2027 – End of grant period.

The Grantee shall notify the SHPO if any situation arises that will adversely affect the timely or successful completion of this project.

Qualified Professional Consultation

To complete the *Scope of Work*, the Grantee will enter into a contract with a principal investigator whose professional qualifications have been reviewed by the SHPO and determined to meet the [*Secretary of the Interior Professional Qualifications Standards for Architectural History, Historic Architecture, or History*](#). (Professional Standards)

Subcontractors hired by the principal investigator to conduct project work shall also meet the Professional Standards. The Grantee shall verify that subcontractors meet the Professional Standards.

SHPO staff shall maintain contact with the project manager and principal investigator for the duration of the project and provide any training, advice, and technical assistance needed for the successful completion of project work.

Contracts

If requested by SHPO, the Grantee shall allow SHPO staff to review and approve drafts of contracts for project-related work prior to executing such contracts.

The Grantee will comply with federal procurement standards in Chapter 17 of the [*Historic Preservation Fund Grants Manual*](#) (*HPF Manual*) when obtaining professional consulting services, and will submit documentation of such *prior to contracting* with a vendor.

The Grantee will not contract with any party who is disbarred, suspended, or is otherwise excluded from or ineligible for participation in Federal assistance programs under *Executive Order 12549, Debarment and Suspension*.

SHPO staff will provide the Grantee with a list of qualified consultants who are known by the SHPO to have provided qualified staff for historic preservation projects in Wisconsin.

Allowable Costs

Generally, expenses for the following types of activities directly related to project work are reimbursable under this grant when they are incurred in the completion of project. See Ch. 13 of the *HPF Manual* for more specific eligibility requirements.

- Professional and consulting service
- Travel
- Equipment, materials, and supplies used for project activities
- Exhibits for public display of progress and accomplishments
- Meeting facilities
- Printing of project materials and deliverables
- Public outreach (print and digital), mailings, public meetings
- Time spent by local government staff coordinating project activities or hiring and collaborating with consultants.

Deviation from items in the budget proposed by the Grantee must be negotiated with and approved by SHPO staff – see *Amendments* below.

All project-related costs are subject to applicable principles in the following [Office of Management and Budget \(OMB\) Circulars](#).

- *A-21 Cost Principles for Educational Institutions* (as revised 5/10/2004);
- *A-87 Cost Principles for State, Local and Indian Tribal Governments* (as revised 5/10/2004);
- *A-122 Cost Principles for Nonprofit Organizations* (as revised 5/10/2004);
- *A-102 Grants and Cooperative Agreements with State and Local Governments* (as amended 8/29/97);
- *A-110 Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Nonprofit Organizations*, (as amended 9/30/99), and
- *A-133 Audits of Institutions of States, Local Governments, and Nonprofit Institutions* (as revised 6/27/03).

If the Grantee receives \$750,000 or more annually in federal funding, the Grantee shall comply with the provisions of [OMB Circular A-133](#), [Single Audit Act of 1984](#), and submit to the SHPO a copy of the audit report within 30 days of publication.

All project-related spending shall meet federal requirements for the Historic Preservation Fund, meet state requirements for the HPF subgrant program, conform to the approved project budget and occur within the period of performance, and be necessary and reasonable for the completion of the *Scope of Work*.

Grant funding may not be used for any work associated with "lobbying," in accordance with [18 U.S.C. 1913](#).

Reimbursement

The Grantee may request reimbursement for project-related expenses at any time throughout the project period as consultant's invoices are paid. Reimbursement requests will be paid up to 75% of the total project cost until all stipulations are satisfied.

The Grantee will request reimbursement for project-related expenses by completing a *Reimbursement Request* form provided by the SHPO. Each *Reimbursement Request* must be accompanied by:

- Documentation of project-related expenses (receipts, invoices, etc.)
- Documentation that those expenses were paid (receipt, invoices marked as "paid," payment records from a third party, etc.)

On receipt of a *Reimbursement Request*, the SHPO will reimburse the Grantee within 60 days for allowable, incurred, and documented costs directly related to the grant-funded project.

The SHPO will reimburse the Grantee up to 75% of the grant award prior to the completion of the project. The SHPO will release the remaining 25% of the grant award after completion of all project work and receipt of all deliverables stipulated in the SOW.

The Grantee will submit a final *Reimbursement Request* on or before **March 12, 2027**, for the remainder of project-related expenses.

Reimbursement of project-related expenses is subject to availability of federal HPF funding committed to the SHPO from the National Park Service.

Retention of Records

The Grantee shall retain all records related to project expenses and the procurement of professional services for at least five years after completion of the project. The Grantee shall provide, upon request, access to these records to the State Legislative Audit Bureau, the SHPO, the National Park Service, the Department of the Interior, the Comptroller of the United States, and any of their duly authorized representatives.

Amendments

Scope of Work - After the execution of this MOA, the Grantee may propose changes to the *Scope of Work* or deliverables to the SHPO in writing in accordance with the requirements in section 11 of the *CLG Subgrant Manual*. The SHPO will respond in writing within 30 days, either accepting or rejecting the proposed changes.

Budget - Amendments to line items in the budget proposed in the Grantee's application, and approved by virtue of the grant award, must be approved in consultation with SHPO staff before unexpected costs are incurred.

Period of Performance - The *Period of Performance* may be extended if unforeseen circumstances unexpectedly delay the completion of the project. If the Grantee believes their project has become constrained such that an extension is needed to successfully complete the project, they may request an extension from the CLG Coordinator.

General Stipulations

Because federal funds will be used to complete this project, materials produced with this funding will remain in the public domain and may not be copyrighted.

The Grantee shall comply with all federal and state laws and regulations concerning equal opportunity, affirmative action, and fair employment practices.

The Grantee will comply with all applicable regulations, laws, policies, guidelines, and requirements of this federal grant program, including applicable Secretary of the Interior's standards.

The Grantee shall comply *with Title VI of the Civil Rights Act of 1964* that states that no person, on the grounds of race, color, marital status, religious creed, or national origin, will be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving federal assistance.

The Grantee shall comply with the *Rehabilitation Act of 1973* and the *Age Discrimination Act of 1975* and all requirements imposed by or pursuant to the *Department of the Interior Regulations (43 CFR 17)* issued pursuant to these titles, to the end that, no person in the United States will, on the grounds of age or physical ability, be excluded from participation in, denied the benefits of, or otherwise subjected to discrimination under any program or activity for which the Grantee receives financial assistance from the National Park Service, and hereby gives assurance that it will immediately take any measures to effectuate this agreement.

During the period of this grant (execution through **March 31, 2027**), any income earned by a Grantee from any project-related activities for which the Grantee requests reimbursement will be subtracted from the amount of the grant award.

The Grantee does hereby indemnify and hold harmless the State Historic Preservation Office, the Wisconsin Historical Society, and its officers, employees, and agents from actions or claims filed in response to any injury or damage received by any persons or property resulting from the Grantee's efforts to accomplish the *Scope of Work*.

Acknowledgment of Federal Assistance

The following acknowledgment of federal assistance will be printed in any publication or visual product resulting from this project. Publications, materials, projects, news release, speeches, websites, and other dissemination of information relating to this project must also acknowledge the financial support of the National Park Service and the Wisconsin Historical Society.

The activity that is the subject of this (type of publication) has been financed (in part/entirely) with Federal Funds from the National Park Service, U.S. Department of the Interior, and administered by the Wisconsin State Historic Preservation Office. However, the contents and opinions do not necessarily reflect the views or policies of the Dept. of the Interior or the Wisconsin State Historic Preservation Office. Nor does the mention of trade names or commercial products constitute endorsement or recommendation by the Dept. of the Interior or the Wisconsin State Historic Preservation Office.

Termination of This Agreement

Either party may terminate this agreement by written notification to the other before the project is completed, and at least 60 days prior to the termination of the agreement.

If this agreement is terminated by the SHPO, except for reasons of non-compliance by the Grantee, the SHPO shall reimburse the Grantee up to 100% of the eligible costs incurred up to the termination date.

If this agreement is terminated by the Grantee, the SHPO may, at the discretion of the State Historic Preservation Officer, reimburse the Grantee for a maximum of 50% of the eligible costs incurred to the termination date, or may require the Grantee to return any or all federal funds transferred to the Grantee by the termination date, depending upon the circumstances of the termination.

This agreement becomes effective upon signature by both parties below, and the receipt by the Grantee of a *Purchase Order* for the contract sum from the Wisconsin Historical Society on behalf of the State Historic Preservation Officer.

VILLAGE OF MCFARLAND

Matt Schuenke
Village Administrator – Village of McFarland, Wisconsin

Date

WISCONSIN STATE HISTORIC PRESERVATION OFFICE

Amy Wyatt
Deputy State Historic Preservation Officer

Date



Scope of Work

Project No. WI-25-xxxxx

McFarland, Wisconsin

The State Historic Preservation Office (SHPO) and the Village of McFarland, Wisconsin (Grantee), agree to the following scope of work and conditions for the completion of a village-wide, intensive, architecture and history survey.

Scope

The Grantee shall hire and collaborate with a consultant who meets the *Secretary of the Interior's Professional Qualification Standards for History, Historic Architecture, or Architectural History* to complete a village-wide survey to identify properties that may meet the eligibility criteria for the National Register of Historic Places (NRHP).

Survey Area

The survey area shall be the corporate boundary of the village of McFarland.

Survey Manual

In carrying out the field work and research for the survey, the Grantee shall comply with all requirements and guidance in the [Architecture-History Survey Manual](#) (*Survey Manual*). The Grantee will direct the principal investigator to the *Survey Manual* and advise them that compliance is required.

Subgrant Manual

The Grantee will comply with all standards and requirements in the [CLG Subgrant Manual](#) (*Subgrant Manual*) for allocation and use of federal funding. The Grantee will direct the principal investigator to the *Subgrant Manual* and inform them that compliance is required.

Request for Bids

After the execution of the *Memorandum of Agreement* (MOA), the Grantee will issue a *Request for Bids* (RFB) to qualified historic preservation consultants. The Grantee shall use a competitive process in the procurement of consulting services.

Principal Investigator and Village staff

The consultant selected to conduct the survey shall serve as the Principal Investigator for the project and must meet the [Secretary of the Interior's Professional Qualification Standards for History, Historic Architecture, or Architectural History](#). The Grantee's Project Manager shall assist in facilitating the work of the survey. Time spent by village staff to facilitate the project is eligible for reimbursement by the subgrant and may be tracked and claimed for reimbursement.

Reconnaissance phase

The project shall include a village-wide reconnaissance survey to identify properties that fit the scope of the survey and may meet the NRHP criteria for eligibility, either currently or in the next 10 years. The reconnaissance survey shall *exclude* properties already listed in the NRHP. Fieldwork and data collection during the reconnaissance phase shall be conducted according to the protocols and standards in the *Survey Manual*.

Intensive phase

The intensive phase of the survey shall include site-specific research on all properties determined to be potentially eligible for the NRHP, properties located within a potentially eligible historic district, and those properties included in the survey report to provide comparative context for potentially eligible properties. Areas that are determined to be potentially eligible as historic districts shall be defined on maps included in the survey report, and contributing properties within districts identified by address according to guidance for Historic Districts in the *Survey Manual*.

Data Entry

Property data collected during both phases of the survey shall be entered into the *Wisconsin Historic Preservation Database* (WHPD) by the consultant. Data entry shall comply with the requirements in the *Survey Manual*.

Intensive Survey Report

An Intensive Survey Report shall be prepared that synthesizes and organizes field observations and research collected during the reconnaissance and intensive phases of the survey. The report shall contain the components and analysis outlined in the *Survey Manual* for Intensive Survey Reports

Ownership of Documents

All information gathered, data collected, photos taken, and reports prepared during the completion of this project shall be the property of the SHPO and shall not be made publicly available until the project is complete and deliverables are submitted to the SHPO.

Intellectual Property

The Consultant shall grant the SHPO a non-exclusive, irrevocable, royalty-free license to all copyrightable material ("Material") created within the scope of the agreement without limitation. The SHPO shall have the right to reproduce, alter, modify, publish, and display all Material created under the scope of this agreement as necessary in the opinion of SHPO to conform to and comply with their requirements and standards, and those of the National Park Service.

Public Engagement

The Grantee shall coordinate and host at least two information sessions in accordance with the *Survey Manual* guidance on community engagement. The first session shall be held prior to the start of field work and noticed in places and forums likely to reach property owners in the survey area. The session shall present the project's scope, intent, and methodology to

property owners in the survey area, and solicit input on important history and places in the survey area. The second shall be held after the field work is complete and noticed in places and forums likely to reach property owners in the survey area. It shall present the findings of the survey. Additional information sessions may be held at the discretion of the Grantee as necessary. SHPO staff shall be invited to participate in all informational meetings.

Deliverables

1. Survey Report:

On completion of the *Survey Report*, the final version shall be submitted to the SHPO in PDF format along with three color copies printed on acid-free paper: one unbound and two bound.

2. WHPD data:

Property data collected during both phases of the survey shall be entered into the *Wisconsin Historic Preservation Database* (WHPD) by the consultant according to the guidance for data entry in the *Survey Manual*.

All deliverables are due **February 26, 2027**.

VILLAGE OF MCFARLAND CONTRACT

Expiration Date: _____

Maximum Cost: _____

Registered Agent: _____

**Street Address of
Registered Agent:** _____

City, State, Zip: _____

THIS CONTRACT, made and entered into, by and between the Village of McFarland (hereinafter referred to as "VILLAGE") and _____ (hereinafter referred to as "PROVIDER"),

WHEREAS VILLAGE, whose address is 5915 Milwaukee St., P.O. Box 110, McFarland, WI 53558, desires to purchase services from PROVIDER for the purpose of _____; and

WHEREAS PROVIDER, whose business address is _____, is able and willing to provide such services;

NOW, THEREFORE, in consideration of the above premises and the mutual covenants of the parties hereinafter set forth, the receipt and sufficiency of which are acknowledged by each party, VILLAGE and PROVIDER agree as follows:

- I. **TERM.** The term of this Contract shall commence as of the date on which all parties have executed this Contract and shall end as of the EXPIRATION DATE set forth on page 1 hereof, unless sooner agreed to in writing by the parties or as provided in Section IV. VILLAGE may, in its sole discretion, extend the completion date of PROVIDER's services, under the same terms and conditions. PROVIDER shall complete its obligations under this Contract not later than the EXPIRATION DATE, and by the date set by the VILLAGE and agreed to by PROVIDER if this Contract is extended.
- II. **SERVICES.**
 - A. PROVIDER agrees to provide the services detailed in the attached Schedule A, which is fully incorporated herein by reference.
 - B. PROVIDER shall commence, carry on and complete its obligations under this Contract with all deliberate speed and in a sound, economical and efficient manner, in accordance with this Contract and all applicable laws. In providing services under this Contract, PROVIDER agrees to cooperate with the various departments, agencies, employees and officers of VILLAGE. Time is of the essence with regard to all dates for completion of any services under this Contract unless expressly provided otherwise.
 - C. PROVIDER agrees to secure at PROVIDER's own expense all personnel necessary to carry out PROVIDER's obligations under this Contract. Such personnel shall not be deemed to be

employees of VILLAGE nor shall they or any of them have or be deemed to have any direct contractual relationship with VILLAGE.

III. ASSIGNMENT/TRANSFER. PROVIDER shall neither assign nor transfer any interest or obligation in this Contract, without the prior written consent of VILLAGE unless otherwise provided herein, provided that claims for money due or to become due to PROVIDER from VILLAGE under this Contract may be assigned to a bank, trust company or other financial institution without such approval if and only if the instrument of assignment contains a provision substantially to the effect that the right of the assignee in and to any moneys due or to become due to PROVIDER shall be subject to prior claims of all persons, firms and corporations for services rendered or materials supplied for the performance of the work called for in this Contract. PROVIDER shall promptly provide notice of any such assignment or transfer to VILLAGE.

IV. TERMINATION.

- A. VILLAGE may terminate this Contract for any reason upon thirty (30) day written notice to PROVIDER.
- B. The following shall constitute grounds for immediate termination:
 - 1. violation by PROVIDER of applicable State, Federal or local law, or failure by PROVIDER to comply with applicable State and Federal service standards, as expressed by applicable statutes, rules and regulations.
 - 2. failure by PROVIDER to carry applicable licenses or certifications as required by law in order to complete the services to be provided under this Contract.
 - 3. failure of PROVIDER to comply with reporting requirements contained herein.
 - 4. inability of PROVIDER to perform the work provided for herein.
- C. Failure of the Village Board to appropriate sufficient funds to carry out VILLAGE's obligations hereunder shall result in automatic termination of this Contract as of the date funds are no longer available, without notice.
- D. Failure by VILLAGE to make payment to PROVIDER as required under the terms of this Contract, after PROVIDER has provided written notice to VILLAGE of non-payment and the failure continues unremedied for twenty-one (21) days.
- E. Upon the expiration or any termination of this Contract, all finished and unfinished documents, services, papers, data, products, and the like prepared, produced or made by PROVIDER under this Contract shall at the option of VILLAGE become the property of VILLAGE, and PROVIDER shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents, services, papers, data, and/or products. Notwithstanding the above, PROVIDER shall not be relieved of liability to VILLAGE for damages sustained by VILLAGE by virtue of any breach of this Contract by PROVIDER, and VILLAGE may withhold any payments to PROVIDER for the purpose of offset.

V. PAYMENT. VILLAGE agrees to make such payments for services rendered under this Contract as and in the manner specified herein and in the attached Schedule B, which is fully incorporated herein by reference. Notwithstanding any language to the contrary in this Contract or its attachments, VILLAGE shall never be required to pay more than the sum set forth on page 1 of this Contract under the heading MAXIMUM COST, for all services rendered by PROVIDER under this Contract for the contracted services, unless otherwise agreed to by the parties by written agreement.

VI. REPORTS. PROVIDER agrees to make reports on the status of its services upon reasonable request by VILLAGE.

VII. DELIVERY OF NOTICE. Notices, bills, invoices and reports required by this Contract shall be deemed delivered as of the date of postmark if deposited in a United States mailbox, first class postage attached, addressed to a party's business address as set forth above. Either party may change the address to which notices should be sent by written notice to the other party.

VIII. INSURANCE.

- A. PROVIDER shall indemnify, hold harmless and defend VILLAGE, its boards, committees, agencies, officers, employees and representatives against any and all liability, loss (including, but not limited to, property damage, bodily injury and loss of life), damages, costs or expenses which VILLAGE, its officers, employees, agencies, boards, commissions and representatives may sustain, incur or be required to pay by reason of PROVIDER's acts or omissions in the course of furnishing the services or goods required to be provided under this Contract, provided, however, that the provisions of this paragraph shall not apply to liabilities, losses, charges, costs, or expenses to the extent caused by or resulting from the acts or omissions of VILLAGE, its agencies, boards, commissions, officers, employees or representatives. The obligations of PROVIDER under this paragraph shall survive the expiration or termination of this Contract.
- B. In order to protect itself and VILLAGE, its officers, boards, committees, agencies, agents, volunteers, employees and representatives under the indemnity provisions of the subparagraph above, PROVIDER shall, at PROVIDER's own expense, obtain and at all times during the term of this Contract keep in full force and effect the insurance coverages, limits, and endorsements listed below. When obtaining required insurance under this Contract and otherwise, PROVIDER agrees to preserve VILLAGE's subrogation rights in all such matters that may arise that are covered by PROVIDER's insurance. Neither these requirements nor the VILLAGE's review or acceptance of PROVIDER's certificates of insurance is intended to limit or qualify the liabilities or obligations assumed by the PROVIDER under this Contract.

Commercial General Liability.

PROVIDER agrees to maintain Commercial General Liability insurance at a limit of not less than \$1,000,000 per occurrence. Coverage shall include, but not be limited to, Bodily Injury and Property Damage to Third Parties, Contractual Liability, Personal Injury and Advertising Injury Liability, Premises-Operations, Independent Providers and Subcontractors, and Fire Legal Liability. The policy shall not exclude Explosion, Collapse, and Underground Property Damage Liability Coverage unless the VILLAGE waives such requirement in writing. The policy shall list the VILLAGE as an Additional Insured.

Professional Liability.

PROVIDER agrees to maintain Professional Liability insurance at a limit of not less than \$1,000,000 per occurrence. The policy shall list VILLAGE as an Additional Insured.

Commercial/Business Automobile Liability.

PROVIDER agrees to maintain Commercial/Business Automobile Liability insurance at a limit of not less than \$1,000,000 Each Occurrence. PROVIDER further agrees coverage shall include liability for Owned, Non-Owned & Hired automobiles. In the event PROVIDER does not own automobiles, PROVIDER agrees to maintain coverage for Hired & Non-Owned Auto Liability, which may be satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Liability policy.

Workers' Compensation.

PROVIDER agrees to maintain Workers' Compensation insurance to the extent required by law.

Umbrella or Excess Liability.

PROVIDER may satisfy the minimum liability limits required above for Commercial General

Liability and Business Auto Liability through an Umbrella or Excess Liability policy provided that the Annual Aggregate limit shall not be less than the highest "Each Occurrence" limit for the Commercial General Liability and Business Auto Liability. PROVIDER agrees to list the VILLAGE as an "Additional Insured" on its Umbrella or Excess Liability policy.

- C. Upon execution of this Contract, PROVIDER shall furnish VILLAGE with a Certificate of Insurance listing VILLAGE as an additional insured and, upon request, certified copies of the required insurance policies. If PROVIDER's insurance is underwritten on a Claims-Made basis, the Retroactive Date shall be prior to or coincide with the date of this Contract. The Certificate of Insurance shall state that professional malpractice or errors and omissions coverage, if the services being provided are professional services, is Claims-Made and indicate the Retroactive Date, and PROVIDER shall maintain coverage for the duration of this Contract and for six (6) years following the completion of this Contract. PROVIDER shall furnish VILLAGE, annually on the policy renewal date, a Certificate of Insurance as evidence of coverage. It is further agreed that PROVIDER shall furnish the VILLAGE with a 30-day notice of aggregate erosion, in advance of the Retroactive Date, cancellation, or renewal. It is also agreed that on Claims-Made policies, either PROVIDER or VILLAGE may invoke the tail option on behalf of the other party and that the Extended Reporting Period premium shall be paid by PROVIDER. In the event any action, suit or other proceeding is brought against VILLAGE upon any matter herein indemnified against, VILLAGE shall give reasonable notice thereof to PROVIDER and shall cooperate with PROVIDER's attorneys in the defense of the action, suit or other proceeding. PROVIDER shall furnish evidence of adequate Workers' Compensation Insurance, if required. In case of any sublet of work under this Contract, PROVIDER shall furnish evidence that each and every subcontractor has in force and effect insurance policies providing coverage identical to that required of PROVIDER.
 - D. The VILLAGE, acting at its sole option and through its Village Board, may waive any and all requirements contained in this Contract, such waiver to be in writing only. Such waiver may include or be limited to a reduction in the amount of coverage required above. The extent of waiver shall be determined solely by Village Board taking into account the nature of the work and other factors relevant to VILLAGE's exposure, if any, under this Contract.
- IX. NO WAIVER BY PAYMENT OR ACCEPTANCE. In no event shall the making of any payment or acceptance of any service or product required by this Contract constitute or be construed as a waiver by VILLAGE of any breach of the covenants of this Contract or a waiver of any default of PROVIDER and the making of any such payment or acceptance of any such service or product by VILLAGE while any such default or breach shall exist shall in no way impair or prejudice the right of VILLAGE with respect to recovery of damages or other remedy as a result of such breach or default.
- X. NON-DISCRIMINATION. During the term of this Contract, PROVIDER agrees not to discriminate on the basis of age, race, ethnicity, religion, color, gender, disability, marital status, sexual orientation, national origin, cultural differences, ancestry, physical appearance, arrest record or conviction record, military participation or membership in the national guard, state defense force or any other reserve component of the military forces of the United States, or political beliefs against any person, whether a recipient of services (actual or potential) or an employee or applicant for employment, except to the extent that such factors are substantially related to the qualifications of such person to perform the work or receive the services. Such equal opportunity shall include but not be limited to the following: employment, upgrading, demotion, transfer, recruitment, advertising, layoff, termination, training, rates of pay, and any other form of compensation or level of service(s). PROVIDER agrees to post in conspicuous places, available to all employees, service recipients and applicants for employment and services, notices setting forth the provisions of this paragraph.
- XI. PUBLIC RECORDS. The PROVIDER acknowledges and understands that the VILLAGE is a governmental entity. As such, all communications and other documents prepared or received by the PROVIDER in connection with the services provided by PROVIDER under this Contract may

be governed by the Wisconsin Public Records Law and that, in the event of a request for such documents, the VILLAGE may be legally obligated to produce them. The PROVIDER agrees that it will provide all such documents to the VILLAGE if determined by VILLAGE to be necessary to comply with a proper Public Records Law request by either (1) retaining all such documents for a period of not less than seven (7) years after completion of the Work and providing copies to the VILLAGE promptly upon request in exchange for the reasonable cost of copying or (2) providing a copy of each such document to the VILLAGE upon the expiration of the Contract. In the event the PROVIDER fails to make such documents available to the VILLAGE as provided herein, the PROVIDER shall indemnify the VILLAGE for any penalties, costs, expenses (including reasonable attorney fees) incurred due to its inability to comply with the Public Records Law with respect to such documents. The obligations under this paragraph to produce and retain records, including the provisions for indemnity, shall survive the expiration or termination of this Contract.

XII. MISCELLANEOUS.

- A. PROVIDER is registered to do business in the State of Wisconsin; the persons executing this Contract on its behalf are authorized to do so, and the name and address of PROVIDER's registered agent is as set forth opposite the heading REGISTERED AGENT on page 1 of this Contract. PROVIDER shall notify VILLAGE immediately, in writing, of any change in its registered agent, his or her address, and PROVIDER's legal status. For a partnership, the term 'registered agent' shall mean a general partner. The person(s) executing this Contract on behalf of PROVIDER individually represent(s) that he, she or they are duly authorized to enter into this Contract and bind the PROVIDER hereto, and that no signatures other than those shown in the signature blocks below are necessary to make this Contract binding on PROVIDER.
- B. Controlling Law and Venue. It is expressly agreed that in the event of any disagreement or controversy between the parties, Wisconsin law shall be controlling. Venue for any legal proceedings shall lie solely in the Dane County Circuit Court.
- C. Limitation of Contract. This Contract is intended to be an agreement solely between the parties hereto and for their benefit only. No part of this Contract shall be construed to add to, supplement, amend, abridge or repeal existing duties, rights, benefits or privileges of any third party or parties, including but not limited to employees of either of the parties.
- D. Entire Contract. The entire agreement of the parties is contained herein and this Contract supersedes any and all oral agreements and negotiations between the parties relating to the subject matter hereof. The parties expressly agree that this Contract shall not be amended in any fashion except in writing, executed by both parties.
- E. Counterparts. The parties may evidence their agreement to this contract upon one or several counterparts of this instrument, which together shall constitute a single instrument.
- F. Severability. In the event any provision, term or clause contained in this Contract shall be determined unlawful or unenforceable, such determination shall not affect the remaining provisions of this Contract which shall remain in full force and effect. In the event any such provision, term or clause shall be determined unlawful or unenforceable as to any particular person or circumstances, such determination shall not affect the applicability of such provision to any other person or under any other circumstances.
- G. Neither Party shall be liable to the other Party for failure or delay in performance of this Contract due to acts of God, acts of governmental authorities other than the VILLAGE, extraordinary weather conditions or other natural catastrophes, or any other cause beyond the reasonable control or contemplation of either Party or as otherwise defined by law ("Force Majeure Event"), provided the delayed Party shall make reasonable efforts to avoid

or mitigate such delay and shall promptly notify the other Party in writing of the cause of the delay and its extent.

IN WITNESS WHEREOF, VILLAGE and PROVIDER, by their respective authorized agents, have caused this Contract and its Schedules to be executed, effective as of the date by which all parties hereto have affixed their respective signatures, as indicated below.

FOR PROVIDER:

Date Signed: _____

FOR VILLAGE:

Date Signed: _____
Carolyn Clow, Village President

Date Signed: _____
Cassandra Suettinger, Deputy Administrator/Clerk

Approved as to form:

Daniel J. Evans
Attorney for the Village

VILLAGE OF MCFARLAND CONTRACT

Schedule A – Scope of Services

Pursuant to Section II(A) of this Contract, the PROVIDER shall provide _____

In accomplishing the scope of services and providing the deliverables as outlined above, the PROVIDER will provide the services in a timely and professional manner.

VILLAGE personnel shall cooperate with the PROVIDER and its agents in the performance of the PROVIDER's obligations hereunder.

VILLAGE OF MCFARLAND CONTRACT

Schedule B – Payment for Services

For and in consideration of the services provided under this Contract, the VILLAGE will pay PROVIDER as follows:

VILLAGE OF MCFARLAND CONTRACT

Schedule C – Project Schedule

Please note the following project schedule:

Task

Time Frame

The term of the Contract shall be in effect within the dates stated unless otherwise provided according to the terms of this contract. The Project Schedule may be amended at any time by mutual agreement between the VILLAGE and PROVIDER.

VILLAGE OF
McFarland
SUMMARY SHEET

MEETING DATE: Tuesday, October 28, 2025

SECTION: Business

DEPARTMENT: Community Development

CONTACT: Andrew Bremer, Comm & Eco Dev Director

AGENDA ITEM: Motion to approve renewal of a contract with General Engineering Company for building inspection services as recommended by the Plan Commission.

PREVIOUS ACTION:

October 21, 2025, Plan Commission unanimously recommended renewal of a contract with General Engineering Company for building inspection services.

ISSUE SUMMARY:

Included in the packet is a contract to extend the Village's building inspection services with General Engineering Company (GEC). GEC has been serving as the Village's contracted residential and commercial building inspector since 2019. The contract was previously extended three times in 2019, 2020, and 2022. The last two extensions have covered a three-year contract period. Similarly, the contract extension provided in the packet would extend the contract with GEC for another three years through December 31, 2028.

FINANCIAL/BUDGET IMPACT:

Under the terms of the contract, the Village is billed an hourly rate for building inspection services up to a maximum of \$100,000 per year. The historical and proposed hourly rates are provided below for reference purposes. Building permit revenue is used to offset the costs of the inspection services. On average, GEC provides about 4-5 hours per day of inspection services.

Hourly Rates:

2019 = \$70.00

2020-2022 = \$70.00

2023-2025 = \$75.00

2026 = \$80.00 (*proposed*)

2027 = \$85.00 (*proposed*)

2028 = \$85.00 (*proposed*)

The average annual hourly rate increase from 2019 through 2028 equates to 2.4% increase per year.

VILLAGE PLAN REFERENCE:

ORDINANCE REFERENCE:



BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Recommended motion:

Motion, second to approve renewal of a contract with General Engineering Company for building inspection services as provided in the packet.

ATTACHMENTS:

1. Building Inspection Contract (General Engineering)_10.09.25

VILLAGE OF MCFARLAND CONTRACT

Expiration Date: December 31, 2028

Maximum Cost: \$100,000.00 per year

Registered Agent: Bradley Boettcher

Street Address: 916 Silver Lake Drive, PO Box 340

City, State, Zip: Portage, WI 53901

THIS CONTRACT, made and entered into, by and between the Village of McFarland (hereinafter referred to as "VILLAGE") and General Engineering Company (hereafter, "PROVIDER"),

WHEREAS VILLAGE, whose address is 5915 Milwaukee St., P.O. Box 110, McFarland, WI 53558, desires to purchase services from PROVIDER for the purpose of receiving Building Inspection services within the Community & Economic Development Department; and

WHEREAS PROVIDER, whose address is 916 Silver Lake Drive (PO Box 340), Portage, WI 53901, is able and willing to provide such services;

NOW, THEREFORE, in consideration of the above premises and the mutual covenants of the parties hereinafter set forth, the receipt and sufficiency of which are acknowledged by each party, VILLAGE and PROVIDER agree as follows:

- I. TERM. The term of this Contract shall commence as of January 1, 2026, provided all parties have executed this Contract prior to January 1, 2026 and shall end as of the EXPIRATION DATE set forth on page 1 hereof, unless sooner agreed to in writing by the parties or as provided in Section IV. PROVIDER shall complete its obligations under this Contract not later than the EXPIRATION DATE.
- II. SERVICES.
 - A. PROVIDER agrees to provide the services detailed in the attached Schedule A.
 - B. PROVIDER shall commence, carry on and complete its obligations under this Contract with all deliberate speed and in a sound, economical and efficient manner, in accordance with this Contract and all applicable laws. In providing services under this Contract, PROVIDER agrees to cooperate with the various departments, agencies, employees and officers of VILLAGE. Time is of the essence with regard to all dates for completion of any services under this Contract unless expressly provided otherwise.
 - C. PROVIDER agrees to secure at PROVIDER's own expense all personnel necessary to carry out PROVIDER's obligations under this Contract. Such personnel shall not be deemed to be employees of VILLAGE nor shall they or any of them have or be deemed to have any direct contractual relationship with VILLAGE.

- D. All services by PROVIDER shall be performed in a good and workmanlike manner and consistent with all standards of performance customary in the State of Wisconsin as well as any standards of quality advertised by PROVIDER.
- III. ASSIGNMENT/TRANSFER: PROVIDER shall neither assign nor transfer any interest or obligation in this Contract, without the prior written consent of VILLAGE unless otherwise provided herein, provided that claims for money due or to become due PROVIDER from VILLAGE under this Contract may be assigned to a bank, trust company or other financial institution without such approval if and only if the instrument of assignment contains a provision substantially to the effect that the right of the assignee in and to any moneys due or to become due to PROVIDER shall be subject to prior claims of all persons, firms and corporations for services rendered or materials supplied for the performance of the work called for in this Contract. PROVIDER shall promptly provide notice of any such assignment or transfer to VILLAGE.
- IV. TERMINATION.
- A. The Village may terminate this Contract for any reason upon thirty (30) day written notice to PROVIDER.
- B. The following shall constitute grounds for immediate termination:
1. violation by PROVIDER of any State, Federal or local law, or failure by PROVIDER to comply with any applicable States and Federal service standards, as expressed by applicable statutes, rules and regulations.
 2. failure by PROVIDER to carry applicable licenses or certifications as required by law in order to complete the services to be provided under this Contract.
 3. failure of PROVIDER to comply with reporting requirements contained herein.
 4. inability of PROVIDER to perform the work provided for herein.
- C. Failure of the Village Board or the State or Federal Governments to appropriate sufficient funds to carry out VILLAGE's obligations hereunder, shall result in automatic termination of this Contract as of the date funds are no longer available, without notice.
- D. Upon the expiration or any termination of this Contract, all finished and unfinished documents, services, papers, data, products, and the like prepared, produced or made by PROVIDER under this Contract shall at the option of VILLAGE become the property of VILLAGE, and PROVIDER shall be entitled to receive just and equitable compensation, for any satisfactory work completed on such documents, services, papers, data, products. Notwithstanding the above, PROVIDER shall not be relieved of liability to VILLAGE for damages sustained by VILLAGE by virtue of any breach of this Contract by PROVIDER, and VILLAGE may withhold any payments to PROVIDER for the purpose of offset. Notwithstanding the above, all inspection reports and records created by PROVIDER pursuant to this Contract shall immediately become the property of VILLAGE and PROVIDER is not entitled to any additional compensation for providing those reports and records to VILLAGE.
- V. PAYMENT. VILLAGE agrees to make such payments for services rendered under this Contract as and in the manner specified herein and in the attached Schedule B, which is fully incorporated herein by reference. Notwithstanding any language to the contrary in this Contract or its attachments, VILLAGE shall never be required to pay more than the sum set forth on page 1 of this Contract under the heading MAXIMUM COST, for all services rendered by PROVIDER under this Contract.
- VI. REPORTS. PROVIDER agrees to make such reports as are reasonably requested by VILLAGE.

VII. DELIVERY OF NOTICE. Notices, bills, invoices and reports required by this Contract shall be deemed delivered as of the date of postmark if deposited in a United States mailbox, first class postage attached, addressed to a party's address as set forth above. Either party may change the address to which notices should be sent by written notice to the other party.

VIII. INSURANCE.

A. PROVIDER shall indemnify, hold harmless and defend VILLAGE, its boards, committees, agencies, officers, employees and representatives against any and all liability, loss (including, but not limited to, property damage, bodily injury and loss of life), damages, costs or expenses which VILLAGE, its officers, employees, agencies, boards, commissions and representatives may sustain, incur or be required to pay by reason of PROVIDER's acts or omissions in the course of furnishing the services or goods required to be provided under this Contract, provided, however, that the provisions of this paragraph shall not apply to liabilities, losses, charges, costs, or expenses to the extent caused by or resulting from the acts or omissions of VILLAGE, its agencies, boards, commissions, officers, employees or representatives. The obligations of PROVIDER under this paragraph shall survive the expiration or termination of this Contract.

B. In order to protect itself and VILLAGE, its officers, boards, committees, agencies, agents, volunteers, employees and representatives under the indemnity provisions of the subparagraph above, PROVIDER shall, at PROVIDER's own expense, obtain and at all times during the term of this Contract keep in full force and effect the insurance coverages, limits, and endorsements listed below. When obtaining required insurance under this Contract and otherwise, PROVIDER agrees to preserve VILLAGE's subrogation rights in all such matters that may arise that are covered by PROVIDER's insurance. Neither these requirements nor the VILLAGE's review or acceptance of PROVIDER's certificates of insurance is intended to limit or qualify the liabilities or obligations assumed by the PROVIDER under this Contract.

Commercial General Liability.

PROVIDER agrees to maintain Commercial General Liability insurance at a limit of not less than \$1,000,000 per occurrence. Coverage shall include, but not be limited to, Bodily Injury and Property Damage to Third Parties, Contractual Liability, Personal Injury and Advertising Injury Liability, Premises-Operations, Independent PROVIDERs and Subcontractors, and Fire Legal Liability. The policy shall not exclude Explosion, Collapse, and Underground Property Damage Liability Coverage unless the VILLAGE waives such requirement in writing. The policy shall list the VILLAGE as an Additional Insured.

Commercial/Business Automobile Liability.

PROVIDER agrees to maintain Commercial/Business Automobile Liability insurance at a limit of not less than \$1,000,000 Each Occurrence. PROVIDER further agrees coverage shall include liability for Owned, Non-Owned & Hired automobiles. In the event PROVIDER does not own automobiles, PROVIDER agrees to maintain coverage for Hired & Non-Owned Auto Liability, which may be satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Liability policy.

Workers' Compensation.

PROVIDER agrees to maintain Workers Compensation insurance to the extent required by law.

Umbrella or Excess Liability.

PROVIDER may satisfy the minimum liability limits required above for Commercial General Liability and Business Auto Liability through an Umbrella or Excess Liability policy provided that the Annual Aggregate limit shall not be less than the highest "Each Occurrence" limit for the Commercial General Liability and Business Auto Liability. PROVIDER agrees to list the VILLAGE as an "Additional Insured" on its Umbrella or Excess Liability policy.

- C. Upon execution of this Contract, PROVIDER shall furnish VILLAGE with a Certificate of Insurance listing VILLAGE as an additional insured and, upon request, certified copies of the required insurance policies. If PROVIDER's insurance is underwritten on a Claims- Made basis, the Retroactive Date shall be prior to or coincide with the date of this Contract. The Certificate of Insurance shall state that professional malpractice or errors and omissions coverage, if the services being provided are professional services is Claims- Made and indicate the Retroactive Date, and PROVIDER shall maintain coverage for the duration of this Contract and for six (6) years following the completion of this Contract. PROVIDER shall furnish VILLAGE, annually on the policy renewal date, a Certificate of Insurance as evidence of coverage. It is further agreed that PROVIDER shall furnish the VILLAGE with a 30-day notice of aggregate erosion, in advance of the Retroactive Date, cancellation, or renewal. It is also agreed that on Claims-Made policies, either PROVIDER or VILLAGE may invoke the tail option on behalf of the other party and that the Extended Reporting Period premium shall be paid by PROVIDER. In the event any action, suit or other proceeding is brought against VILLAGE upon any matter herein indemnified against, VILLAGE shall give reasonable notice thereof to PROVIDER and shall cooperate with PROVIDER's attorneys in the defense of the action, suit or other proceeding. PROVIDER shall furnish evidence of adequate Worker's Compensation Insurance, if required. In case of any sublet of work under this Contract, PROVIDER shall furnish evidence that each and every subcontractor has in force and effect insurance policies providing coverage identical to that required of PROVIDER.
- D. The VILLAGE, acting at its sole option and through its Village Board, may waive any and all requirements contained in this Contract, such waiver to be in writing only. Such waiver may include or be limited to a reduction in the amount of coverage required above. The extent of waiver shall be determined solely by Village Board taking into account the nature of the work and other factors relevant to VILLAGE's exposure, if any, under this Contract.
- IX. NO WAIVER BY PAYMENT OR ACCEPTANCE. In no event shall the making of any payment or acceptance of any service or product required by this Contract constitute or be construed as a waiver by VILLAGE of any breach of the covenants of this Contract or a waiver of any default of PROVIDER and the making of any such payment or acceptance of any such service or product by VILLAGE while any such default or breach shall exist shall in no way impair or prejudice the right of VILLAGE with respect to recovery of damages or other remedy as a result of such breach or default.
- X. NON-DISCRIMINATION. During the term of this Contract, PROVIDER agrees not to discriminate on the basis of age, race, ethnicity, religion, color, gender, disability, marital status, sexual orientation, national origin, cultural differences, ancestry, physical appearance, arrest record or conviction record, military participation or membership in the national guard, state defense force or any other reserve component of the military forces of the United States, or political beliefs against any person, whether a recipient of services (actual or potential) or an employee or applicant for employment, except to the extent that such factors are substantially related to the qualifications of such person to perform the work or receive the services. Such equal opportunity shall include but not be limited to the following: employment, upgrading, demotion, transfer, recruitment, advertising, layoff, termination, training, rates of pay, and any other form of compensation or level of service(s). PROVIDER agrees to post in conspicuous places, available to all employees, service recipients and applicants for employment and services, notices setting forth the provisions of this paragraph.
- XI. RECORDS. Upon request by VILLAGE, PROVIDER shall provide any or all documents and records, including digital records, PROVIDER creates pursuant to its work under this or any

prior Contract with VILLAGE, including, but limited to, records of inspections, without additional compensation from VILLAGE. PROVIDER shall provide such records to VILLAGE in a useable and legible format or program, as may be requested by VILLAGE. PROVIDER also acknowledges and understands that VILLAGE is a governmental entity. As such, all communications and other documents prepared or received by PROVIDER in connection with the services provided by PROVIDER under this Contract may be governed by the Wisconsin Public Records Law and that, in the event of a request for such documents, VILLAGE may be legally obligated to produce them. PROVIDER agrees that it will provide all such documents to VILLAGE if determined by VILLAGE to be necessary to comply with a proper Public Records Law request by either (1) retaining all such documents for a period of not less than seven (7) years after completion of the Work and providing copies to VILLAGE promptly upon request in exchange for the reasonable cost of copying or (2) providing a copy of each such document to VILLAGE upon the expiration of the Contract. In the event PROVIDER fails to make such documents available to VILLAGE as provided herein, PROVIDER shall indemnify VILLAGE for any penalties, costs, expenses (including reasonable attorney fees) incurred due to its inability to comply with the Public Records Law with respect to such documents. The obligations under this paragraph to produce and retain records, including the provisions for indemnity, shall survive the expiration or termination of this Contract.

XII. MISCELLANEOUS.

- A. Registered Agent. PROVIDER warrants that it has complied with all necessary requirements to do business in the State of Wisconsin, that the persons executing this Contract on its behalf are authorized to do so, and, if a corporation, that the name and address of PROVIDER's registered agent is as set forth opposite the heading REGISTERED AGENT on page 1 of this Contract. PROVIDER shall notify VILLAGE immediately, in writing, of any change in its registered agent, his or her address, and PROVIDER's legal status. For a partnership, the term 'registered agent' shall mean a general partner. The person(s) executing this Contract on behalf of PROVIDER individually warrants and represents that he, she or they are duly authorized to enter into this Contract and bind the PROVIDER hereto, and that no signatures other than those shown in the signature blocks below are necessary to make this Contract binding on PROVIDER.
- B. Controlling Law and Venue. It is expressly agreed that in the event of any disagreement or controversy between the parties, Wisconsin law shall be controlling. Venue for any legal proceedings shall lie solely in the Dane County Circuit Court.
- C. Limitation of Contract. This Contract is intended to be an agreement solely between the parties hereto and for their benefit only. No part of this Contract shall be construed to add to, supplement, amend, abridge or repeal existing duties, rights, benefits or privileges of any third party or parties, including but not limited to employees of either of the parties.
- D. Entire Contract. The entire agreement of the parties is contained herein and this Contract supersedes any and all oral agreements and negotiations between the parties relating to the subject matter hereof. The parties expressly agree that this Contract shall not be amended in any fashion except in writing, executed by both parties.
- E. Counterparts. The parties may evidence their agreement to this contract upon one or several counterparts of this instrument, which together shall constitute a single instrument.
- F. Severability. In the event any provision, term or clause contained in this Contract shall be determined unlawful or unenforceable, such determination shall not affect the

remaining provisions of this Contract which shall remain in full force and effect. In the event any such provision, term or clause shall be determined unlawful or unenforceable as to any particular person or circumstances, such determination shall not affect the applicability of such provision to any other person or under any other circumstances.

- G. Relationship of Parties. It is understood, agreed, and is the intent of the parties that the PROVIDER is at all times acting and performing as an independent contractor, not as a servant or employee of VILLAGE, and the PROVIDER shall not hold itself out as such. Nothing in this Contract shall be deemed to create an employment, partnership, or joint venture relationship between VILLAGE and PROVIDER or any of the PROVIDER's employees. Notwithstanding the foregoing, PROVIDER shall be the VILLAGE's "agent" as that term is specifically utilized and defined by the court in *Estate of Lyons v. CNA Ins.*, 207 Wis. 2d 446, 558 N.W.2d 658 (Ct. App. 1996) and as further explained in *Melchert et al. v. Pro Electric Contractors et al.*, 2017 WI 30, for purposes of governmental contractor immunity.

IN WITNESS WHEREOF, VILLAGE and PROVIDER, by their respective authorized agents, have caused this Contract and its Schedules to be executed, effective as of the date by which all parties hereto have affixed their respective signatures, as indicated below.

FOR PROVIDER:

Date Signed: _____
Michael E. Parrott, Director of Inspections

Date Signed: _____
Adam G. Maier, Programs Manager

FOR VILLAGE:

Date Signed: _____
Stephanie Brassington, Village President

Date Signed: _____
Cassandra Suettinger, Deputy Administrator/Clerk

VILLAGE OF MCFARLAND CONTRACT

Schedule A – Scope of Services

Pursuant to Section II(A) of this Contract, the PROVIDER shall provide the following services:

1. Administer and enforce chs. SPS 320 to 325 and 327, Uniform Dwelling Code, chs. SPS 361 to 366, SPS 375-379 and SPS 381-387 Commercial Building Code, and Building Code of the Village of McFarland, including general construction, plumbing, heating, air conditioning, and erosion control, as applicable. Review permit applications for compliance with applicable zoning codes. In addition, administer and enforce the VILLAGE's zoning codes as directed by the Zoning Administrator.
2. Issue various residential and commercial permits, including building, electrical, plumbing, HVAC, erosion control, occupancy, sign permits, driveway permits, swimming pool permits, demolition permits, permits for the construction of accessory structures, and permits for the operation of bed and breakfast establishments as required under Chapter 62 of the McFarland Municipal Code. PROVIDER shall not collect fees from permit applicants but shall not issue any permits until the applicable fee has been paid to the VILLAGE.
3. Review applications for solar energy systems under §62-210 and wind energy systems under §62-208(a) and approve minor modifications to telecommunications equipment under §62-206(d) of the McFarland Municipal Code.
4. Conduct on-site residential and commercial inspections of work in progress as scheduled by PROVIDER with permit holders to ensure that applicable state or local codes are met, as well as initial inspections of premises that are subject to an application for a permit to keep chickens under §62-69(d), for an alcoholic beverage licenses under §11-58(a), or to operate as a tourist rooming house under §11-358 of the McFarland Municipal Code. Items inspected include footings, foundations, framing, electrical, plumbing, mechanical systems, and sewer and water lateral connections, except that PROVIDER shall not be responsible for performing commercial electrical inspections.
5. Maintain records of permit applications, plans, permits and inspections related to the building inspector's duties.
6. Research questions, problems, and complaints regarding the various codes to be enforced by PROVIDER under this Agreement.
7. Issue warnings, stop work orders, and municipal citations to enforce the VILLAGE's Building and Zoning Codes.
8. Assist the Property Maintenance Code Inspector as needed to ensure compliance with property maintenance codes and ordinances. Assist the Zoning Administrator as needed to ensure compliance with zoning, floodplain zoning, or shoreland zoning codes and ordinances.
9. Perform such other duties as are delegated exclusively to the building inspector, and upon request, perform such other duties as authorized by, the McFarland Municipal Code.
10. Prepare and submit monthly activity reports for inspection services performed during each calendar month of service provided.
11. When requested by the VILLAGE, complete and submit a year-end report to the VILLAGE after the end of each calendar year, and at the termination or expiration of this Contract.

In accomplishing the objectives of this Schedule as detailed above, the PROVIDER will adhere to the concepts, provisions, and inspection features of its proposal dated October 25, 2018.

VILLAGE personnel shall cooperate with the PROVIDER and its agents in the performance of the PROVIDER's obligations hereunder.

VILLAGE OF MCFARLAND CONTRACT

Schedule B – Payment for Services

For and in consideration of the services provided under this Contract, the VILLAGE will pay PROVIDER the hourly rates provide below plus mileage at the applicable IRS mileage rate as compensation for building inspection services provided, to a maximum of \$100,000 per year.

Hourly Rates per Year:

- 2026 = \$80.00 per hour
- 2027 = \$85.00 per hour
- 2028= \$85.00 per hour

The VILLAGE shall pay for time and mileage for both the time spent within the Village of McFarland as well as the time and mileage for the commute. The VILLAGE retains the right to require the PROVIDER to use a VILLAGE owned vehicle while performing inspection services under Schedule A within the VILLAGE.

The PROVIDER shall invoice the VILLAGE monthly for the work or other services performed. Said invoices shall include, at a minimum, the dates and hours worked each day for each employee of the PROVIDER rendering services under this Contract, including applicable mileage. The Village shall pay the PROVIDER within 30 days of the receipt of each invoice from the PROVIDER.

PROVIDER will furnish all labor and other services necessary in order to perform the work as specified by the VILLAGE detailed in Schedule A of this Contract.

VILLAGE OF MCFARLAND CONTRACT

Schedule C – Project Schedule

The term of the agreement shall be from January 1, 2026 until December 31, 2028 unless otherwise provided according to the terms of this contract.

VILLAGE OF
McFarland
SUMMARY SHEET

MEETING DATE: Tuesday, October 28, 2025

SECTION: Business

DEPARTMENT: Public Works

CONTACT: Lee Igl, Public Works Director

AGENDA ITEM: Motion to approve authorize to bid the project for the Babcock Channel Water Main Crossing as recommended by the Public Works & Utilities Committee.

PREVIOUS ACTION:

None.

ISSUE SUMMARY:

The project under consideration is the construction of a new water main connection from the western edge of USH 51 right-of-way to the southern end of South Court.

Exhibit 1 shows the proposed water main connection in the context of the larger system. This proposed connection would be 630 feet in length, crossing both the existing Dane County Babcock Park parcel and the Babcock channel. The new water main connection will provide increased system redundancy, improved water quality, and improved fire flow capabilities to the Village's existing system.

Staff is asking for a recommendation to the Village Board for approval of the project to be put out for bid.

FINANCIAL/BUDGET IMPACT:

The engineer's estimated cost of the project is:

Construction \$180,000

Contingency \$ 20,000

Engineering \$ 30,000

Total \$230,000

The estimate included in the Capital Improvement Plan for the Babcock Channel Water Main crossing is \$226,500.

VILLAGE PLAN REFERENCE:

ORDINANCE REFERENCE:

None.

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

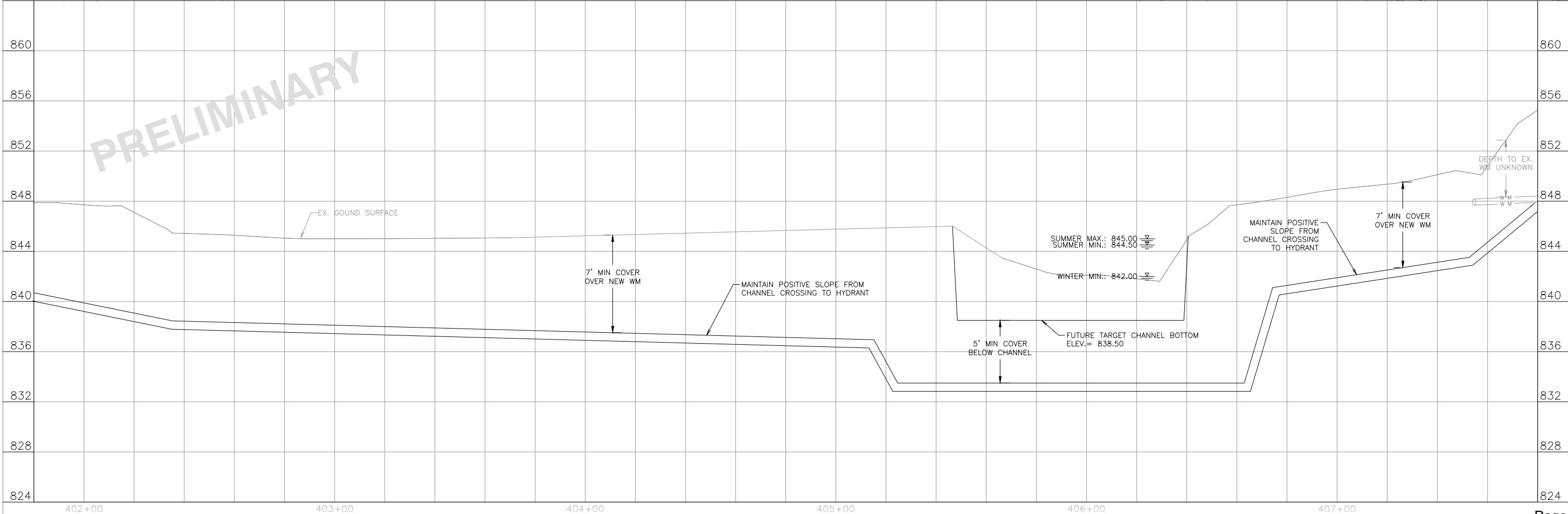
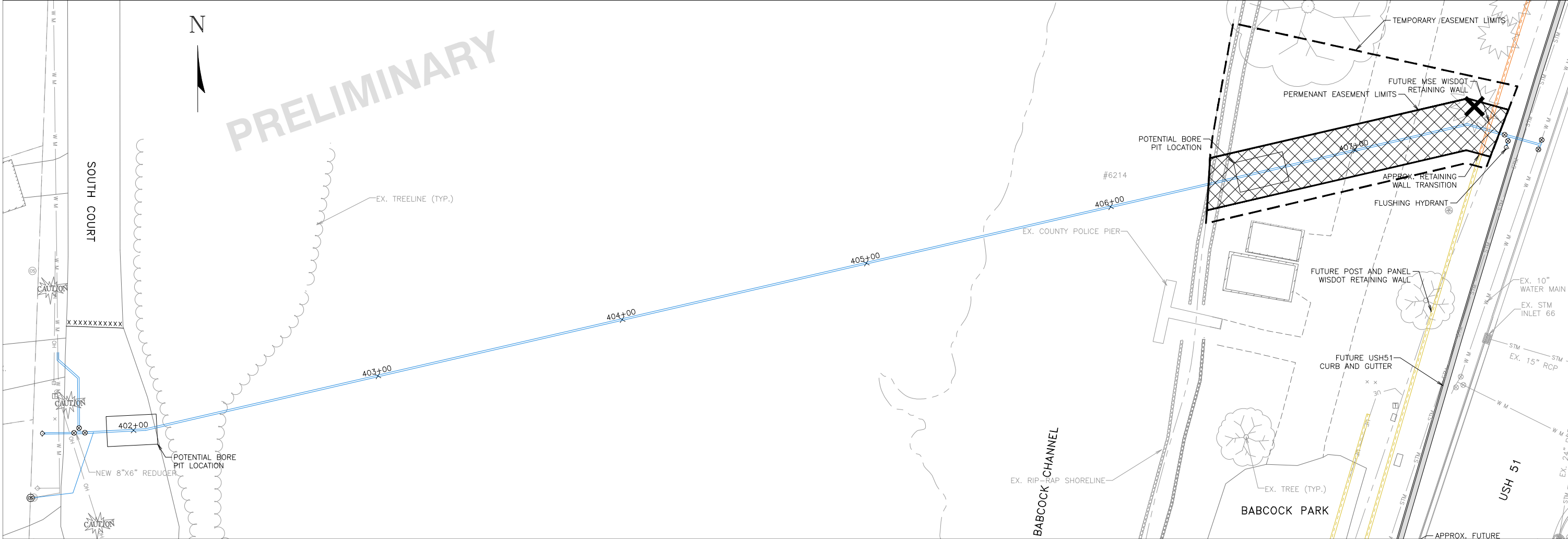
The Public Works & Utilities Committee will review the item at their 10/27 meeting and provide a recommendation for the Village Board.



Motion to approve authorizing the Babcock Channel Water Main Crossing project for bid as recommended by the Public Works Committee.

ATTACHMENTS:

1. MC 242- BABCOCK CHANNEL CROSSING-Y0
2. Pages from Village of McFarland Water Crossing Alt Analysis- USH51 to South Court



6264 Nesbitt Road
Madison, WI 53719
(608) 273-3350
www.tceengineers.net

tc TOWN & COUNTRY
ENGINEERING, INC.

EXHIBIT 3 BABCOCK CHANNEL
CROSSING ALTERNATIVES

Station 401+80 To Station 407+80

2025 STREET AND UTILITY IMPROVEMENTS
USH 51 TO SOUTH COURT CROSSING

Village of McFarland, Wisconsin

PROJECT NO.:
MC 230

DRAWING FILE:
MC 230 - BABCOCK CHANNEL
CROSSING.DWG

DRAWN BY:
P.J.R.

CHECKED BY:
T.J.S.

DATE:
10-22-25

REVISIONS:

SCALE: HORIZONTAL
0 5 10 20

VERTICAL
2 4

SHEET:
Y0

Page 81 of 444

Exhibit 1
Water Main System and Project Location
Village of McFarland

Lake Waubesa

PROJECT LOCATION

- Hydrants
- Water Valves
- Hydrant Valve
 - Main Valve
 - Water Services
- Water System Devices
- Well
 - Storage Tank
- Water Mains
- Diameter
- Unknown
 - 2" or smaller
 - 4
 - 6
 - 8
 - 10
 - 12
- Water Laterals
- Streets
- Municipal Boundary
- Tax Parcels

tc TOWN & COUNTRY ENGINEERING, INC.

6264 Nesbitt Road
Madison, WI 53719
(608) 273-3350
www.tcengineers.net

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Date: 5/16/2025
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EXHIBIT 2a
Village of McFarland Water Model Results
Existing System Pressures and Fireflow

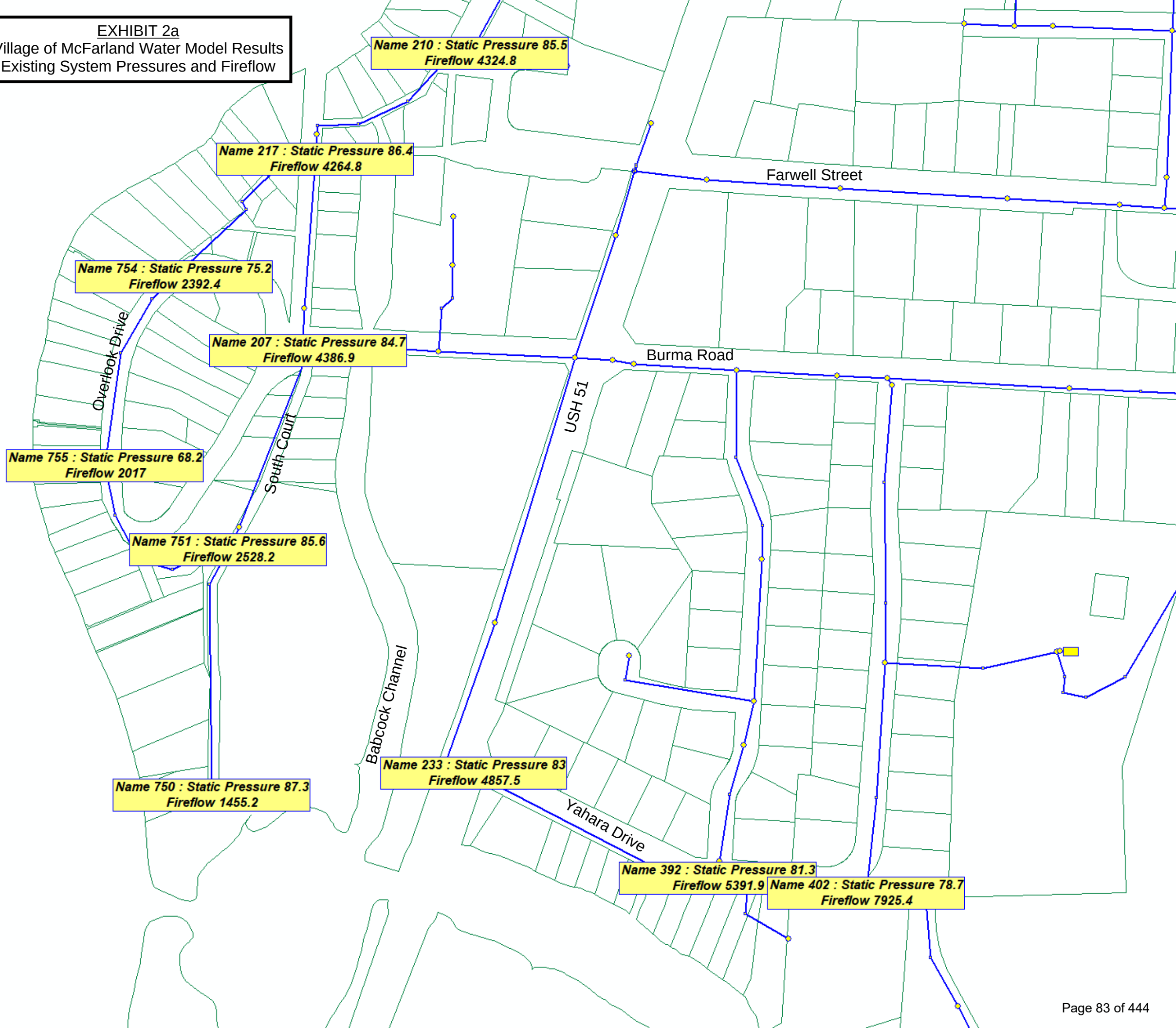
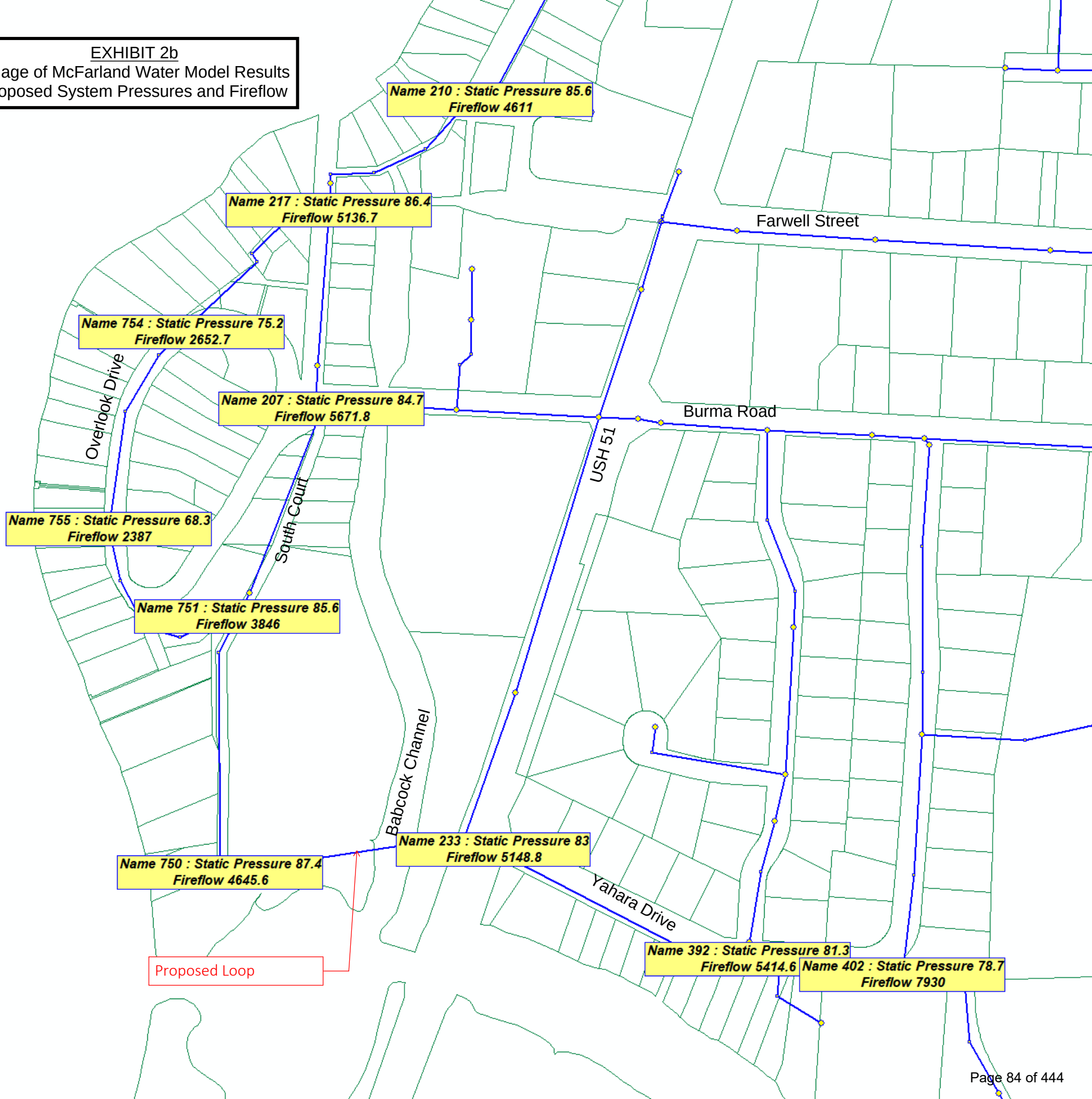


EXHIBIT 2b
Village of McFarland Water Model Results
Proposed System Pressures and Fireflow



VILLAGE OF
McFarland
SUMMARY SHEET

MEETING DATE: Tuesday, October 28, 2025

SECTION: Business

DEPARTMENT: Public Works

CONTACT: Lee Igl, Public Works Director

AGENDA ITEM: Motion to approve authorizing the 2026 Stormwater Maintenance projects for bid as recommended by the Public Works & Utilities Committee.

PREVIOUS ACTION:

Both projects were approved in the Stormwater Management plan in 2025.

ISSUE SUMMARY:

The project under consideration is the maintenance of two of the Village's municipal stormwater treatment devices, the Farwell Lagoon and the Highland Oaks Park facility. The Farwell Lagoon is located west of the intersection of USH 51 and Farwell Street and south of Severson Street. The Highland Oaks Pond is located south of the intersection of Osborn Drive and Oak Hollow Drive. Work at both of these locations primarily involves the removal of accumulated sediment and also involves some vegetation management and outfall improvements.

Staff is looking for recommendation to Village Board for approval of the projects and put them out for bid.

FINANCIAL/BUDGET IMPACT:

The engineer's estimated cost of the project is:

Construction- \$350,000

Contingency- \$33,000

Engineering- \$45,000

The estimate included in the Capital Improvement Plan for the two stormwater projects combined is \$428,000.

VILLAGE PLAN REFERENCE:

ORDINANCE REFERENCE:

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

The Public Works & Utilities Committee will review the item at their 10/27 meeting and provide a recommendation for the Village Board.

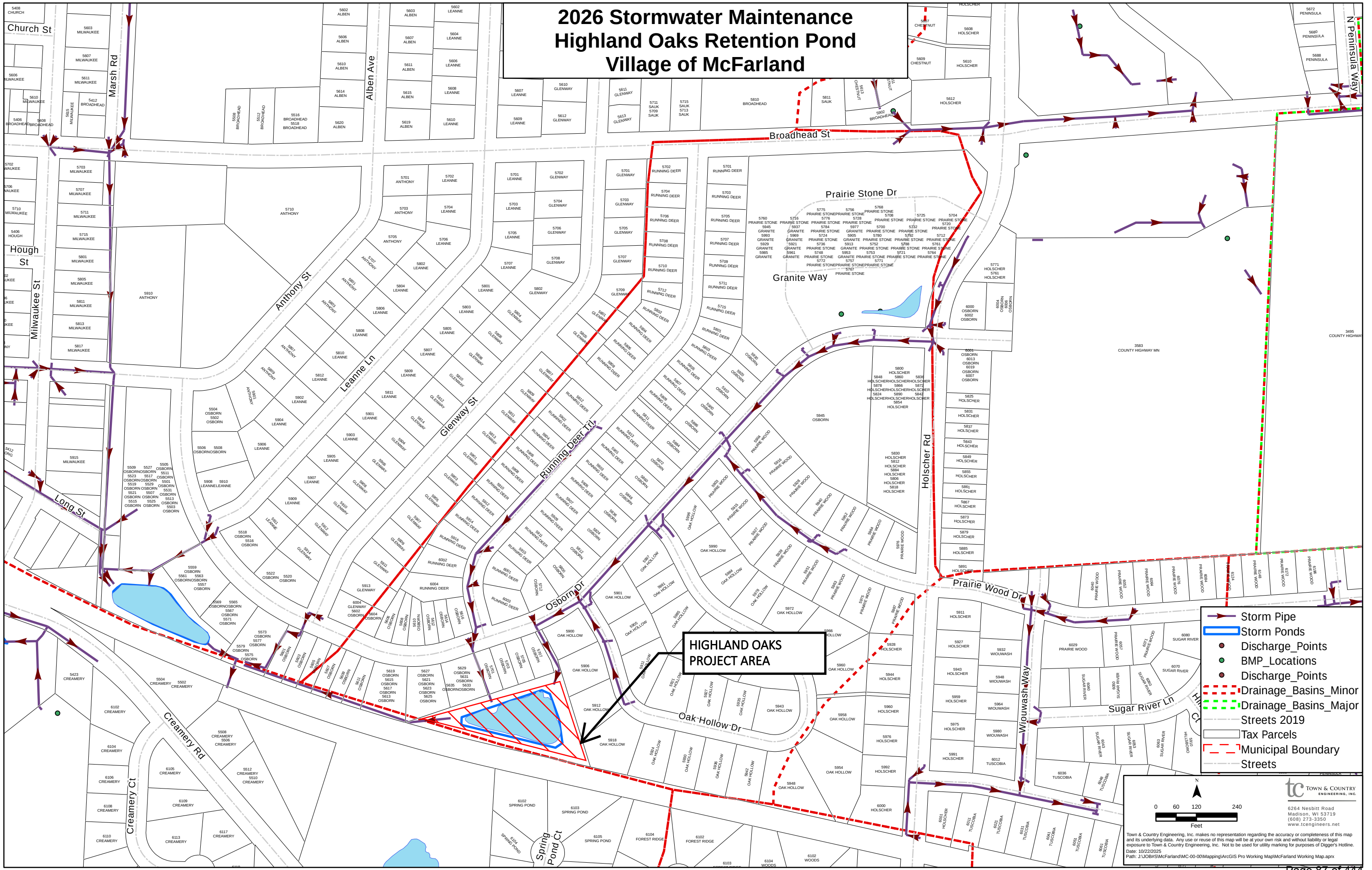
Motion and second to approve authorizing the 2026 Stormwater Maintenance projects for bid as recommended by the Public Works Committee.



ATTACHMENTS:

1. Highland Oaks Project Area Map
2. Farwell Lagoon Area Map

2026 Stormwater Maintenance
Highland Oaks Retention Pond
Village of McFarland



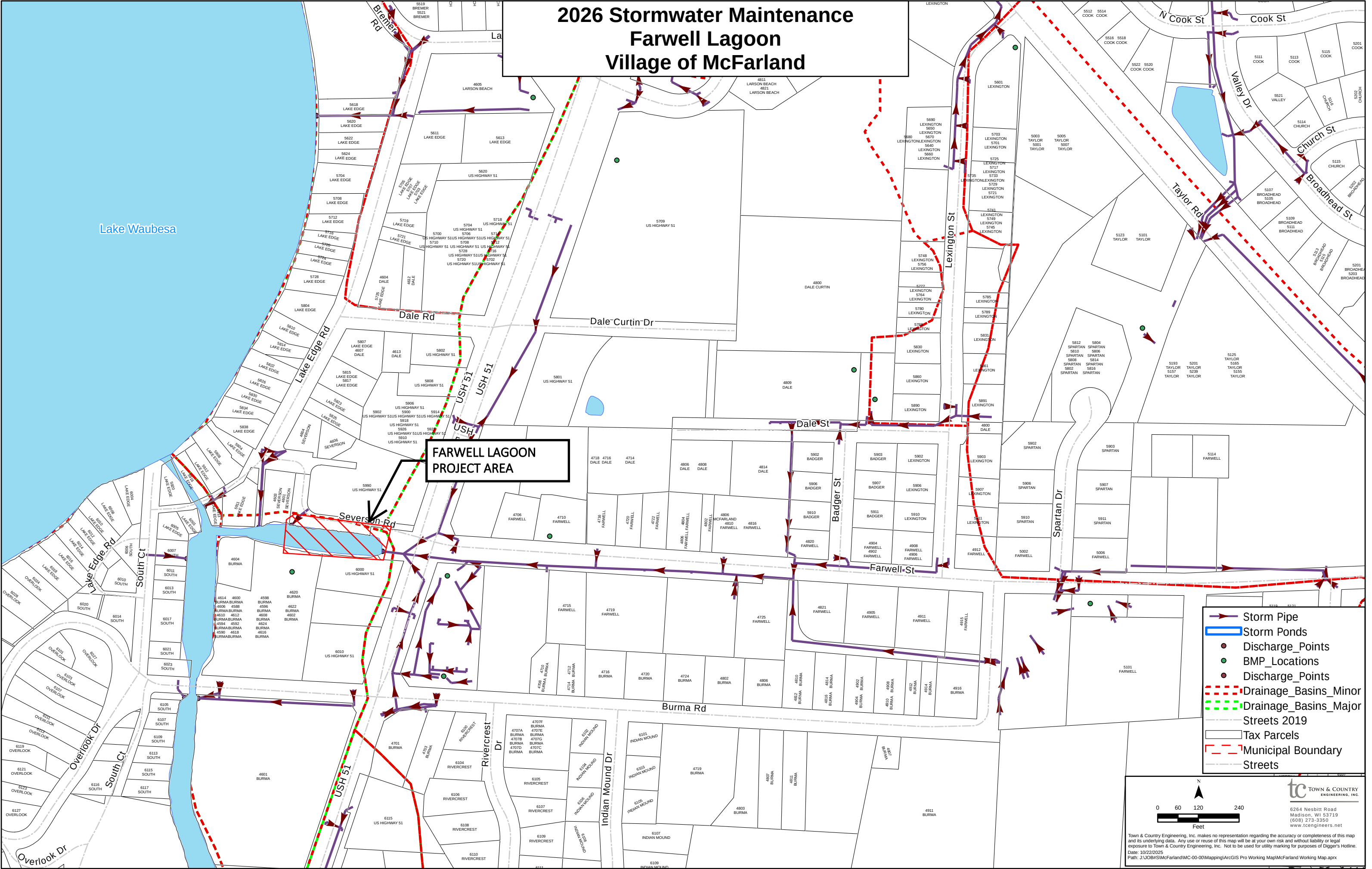
- Storm Pipe
- Storm Ponds
- Discharge_Points
- BMP_Locations
- Discharge_Points
- Drainage_Basins_Minor
- Drainage_Basins_Major
- Streets 2019
- Tax Parcels
- Municipal Boundary
- Streets

0 60 120 240
Feet

tc TOWN & COUNTRY
ENGINEERING, INC.

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Madison, WI 53719
(608) 273-3350
www.tcengineers.net

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**VILLAGE OF
McFarland
SUMMARY SHEET**

MEETING DATE: Tuesday, October 28, 2025

SECTION: Business

DEPARTMENT: Public Works

CONTACT: Lee Igl, Public Works Director

AGENDA ITEM: Motion to approve authorizing the Holscher Water Tower repainting for bid as recommended by the Public Works & Utilities Committee.

PREVIOUS ACTION:

The Public Works & Utilities Committee reviewed the task order during their June 23, 2025, meeting.

The Village Board approved Town and County's proposal for engineering services for design and applying for Safe Drinking Water funding during their June 24, 2025, meeting.

ISSUE SUMMARY:

The Holscher Road water tower was constructed in 2000 and has been in service since that date. It is inspected every 5 years, with the most recent inspection noting that the paint has reached a point where an overcoat is recommended (to avoid the cost of sandblasting and re-painting if left as-is). In addition, there are several features of the tower that do not comply with current Village and DNR requirements. The Village is pursuing Safe Drinking Water funding through the DNR to take advantage of low interest rates. This project is intended to address all the painting and other repairs recommended in the 2022 Dixon inspection report and identified in the subsequent DNR inspection.

FINANCIAL/BUDGET IMPACT:

The estimate included in the Capital Improvement Plan for the painting of Holscher Water Tower is \$500,000.

VILLAGE PLAN REFERENCE:

ORDINANCE REFERENCE:

None.

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

The Public Works & Utilities Committee will review the item at their 10/27 meeting and provide a recommendation for the Village Board.

Motion to approve authorizing the Holscher Water Tower repainting for bid as recommended by the Public Works & Utility Committee.

ATTACHMENTS:



None

McFarland
SUMMARY SHEET

MEETING DATE: Tuesday, October 28, 2025

SECTION: Business

DEPARTMENT: Administration

CONTACT: Matt Schuenke, Village Administrator

AGENDA ITEM: On the proposed budget for the year 2026 and establishing the 2025 payable in 2026 property tax levy for the Village of McFarland.

PREVIOUS ACTION:

None.

ISSUE SUMMARY:

Included within your packet is a copy of the public hearing notice. The public hearing will be opened like all other hearings, we will receive comment as provided, and then the hearing will be closed. A second public hearing will be held when we are scheduled for final action at our meeting on November 25, 2025.

FINANCIAL/BUDGET IMPACT:

None.

VILLAGE PLAN REFERENCE:

None.

ORDINANCE REFERENCE:

None.

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Presented for the hearing to be held to receive comments from the public.

ATTACHMENTS:

1. 2026 Budget - Public Hearing Notice 10222025 mgs

VILLAGE OF MCFARLAND

NOTICE OF PUBLIC HEARING

Notice is hereby given that there will be Public Hearings held before the Village Board in the Community Room of the Municipal Center located at 5915 Milwaukee Street, McFarland, WI 53558, at which time interested parties and citizens shall have an opportunity to be heard concerning the proposed 2026 Budget. The Budget is available for viewing at the McFarland Municipal Center lobby from 8:00 am to 4:30 pm, Monday through Friday or on the Village website at www.mcfarland.wi.us. Please note the following dates and times:

Public Hearing #1:

Tuesday, October 28, 2025 at 7:00 pm

Public Hearing #2:

Tuesday, Noember 25, 2025 at 7:00 pm

If you are not able to attend the meeting or would like to provide written comment in advance, please send to Village of McFarland, Attn: Village Administrator, PO Box 110, McFarland, WI 53558 or email to matt.schuenke@mcfarland.wi.gov.

Detailed below are the summaries of revenues, expenses, and fund balances of all Village funds as is required for reporting purposes by Wisconsin State Statute 65.90.

SUMMARY OF GENERAL FUND

<u>Revenues</u>							<u>Expenses</u>						
Revenue Category	2024 Actual	2025 Budget	YTD 6/30/2025	2025 Projected	2026 Budget	% Change Prev Year	Expense Category	2024 Actual	2025 Budget	YTD 6/30/2025	2025 Projected	2026 Budget	% Change Prev Year
Taxes	4,515,002	4,526,000	4,526,000	4,526,000	4,448,250	-1.72%	General Government	1,018,959	1,047,000	611,925	1,043,655	1,050,250	0.31%
Special Assessments	0	0	0	0	0	0.00%	Public Safety	4,762,125	4,731,500	2,361,932	4,658,951	4,993,250	5.53%
Intergovernmental Rev	1,123,763	1,188,250	389,455	1,204,697	1,382,500	16.35%	Public Works	1,029,651	1,107,750	563,421	1,143,152	1,132,000	2.19%
Licenses and Permits	287,144	386,500	155,808	374,632	377,000	-2.46%	Health & Human Serv	398,553	430,500	160,641	394,696	459,000	6.62%
Fines, Forf, and Penalties	64,325	122,000	39,331	77,500	110,000	-9.84%	Culture, Rec, and Ed	556,240	668,500	312,272	676,596	692,250	3.55%
Public Charges for Services	590,813	673,500	347,048	753,107	814,250	20.90%	Conserve & Develop	252,380	253,500	114,585	240,591	254,750	0.49%
Intergovern Charges	503,533	537,500	263,224	528,263	549,500	2.23%	Debt Service	See Debt Service - Fund 300					
Miscellaneous Revenue	460,304	492,500	227,040	495,122	500,000	1.52%	Capital Outlay	See Capital Projects - Fund 400					
Other Financing Sources	388,702	312,500	0	307,248	400,000	28.00%	Other Financing Uses	109,659	0	2,500	2,500	0	0.00%
Total REVENUES	7,933,586	8,238,750	5,947,906	8,266,570	8,581,500	4.16%	Total EXPENDITURES	8,127,568	8,238,750	4,127,275	8,160,141	8,581,500	4.16%

<i>General Fund (Actual)</i>	2024	2025	YTD	2025	2026					Difference	% Change
	Actual	Budget	6/30/2025	Projected	Budget	DEBT Service ** - as of	12/31/2022	12/31/2023	12/31/2024	vs. 2022	vs. 2022
Fund Balance - Begin	2,133,342	-----	-----	1,955,060	2,055,239	Governmental Activities	42,461,927	47,418,621	52,130,761	4,712,140	9.94%
Fund Balance - End	1,955,060	-----	-----	2,055,239	2,055,239	Business Type Activities	8,284,757	7,213,695	9,832,923	2,619,228	36.31%

Total Outstanding Debt 50,746,684 54,632,316 61,963,684 7,331,368 13.42%

** Outstanding General Obligation Debt including principal and interest expense.

Dated this 2nd day of October, 2025.

Cassandra Suettinger, Deputy Village Administrator/Clerk

McFarland, Wisconsin

	2024 Actual	2025 Actual	2026 Budget	% Change Prev Year
Property Tax Rates	\$6.09	\$ 5.98	\$ 5.98	0.00%

VILLAGE OF MCFARLAND

Summary of Other Governmental Funds

Comm/Tech Fund 200	2024 Actual	2025 Budget	YTD 6/30/2025	2025 Projected	2026 Budget	% Change Prev Year
Total Revenue	122,946	0	0	0	0	0.00%
Taxes	0	0	0	0	0	0.00%
Other Revenue	122,946	0	0	0	0	0.00%
Total Expense	100,255	0	0	0	0	0.00%
Fund Balance - Begin	75,244	-----	-----	956	0	
Fund Balance - End	956	-----	-----	0	0	
Fund discontinued after the 2024 Budget.						

Debt Service Fund 300	2024 Actual	2025 Budget	YTD 6/30/2025	2025 Projected	2026 Budget	% Change Prev Year
Total Revenue	4,030,305	4,701,500	3,989,540	4,708,485	5,153,000	9.60%
Taxes	3,400,000	3,890,000	3,890,000	3,890,000	4,517,500	16.13%
Other Revenue	630,305	811,500	99,540	818,485	635,500	-21.69%
Total Expense	4,167,079	4,701,500	2,304,117	4,708,485	5,153,000	9.60%
Fund Balance - Begin	700,451	-----	-----	563,676	180,199	
Fund Balance - End	563,676	-----	-----	180,199	(20,301)	
The Debt Service Fund is not required to maintain a minimum level of reserves beyond any unexpected revenues collected from impact fees.						

Library Fund 205	2024 Actual	2025 Budget	YTD 6/30/2025	2025 Projected	2026 Budget	% Change Prev Year
Total Revenue	1,147,470	1,201,250	1,188,125	1,205,617	1,250,000	4.06%
Taxes	768,000	800,750	800,750	800,750	845,250	5.56%
Other Revenue	379,470	400,500	387,375	404,867	404,750	1.06%
Total Expense	1,153,136	1,201,250	632,368	1,199,032	1,250,000	4.06%
Fund Balance - Begin	273,938	-----	-----	269,123	275,708	
Fund Balance - End	269,123	-----	-----	275,708	275,708	
Minimum Fund Balance Requirement of 10% of Exp 119,903 125,000						

TID #3 Fund 305	2024 Actual	2025 Budget	YTD 6/30/2025	2025 Projected	2026 Budget	% Change Prev Year
Total Revenue	1,474,463	2,324,250	1,877,948	2,037,509	2,448,500	5.35%
Taxes	1,339,260	1,602,500	1,731,191	1,731,191	1,731,000	8.02%
Other Revenue	135,203	721,750	146,757	306,318	717,500	-0.59%
Total Expense	1,417,761	2,324,250	436,261	2,037,509	2,448,500	5.35%
Fund Balance - Begin	659,540	-----	-----	716,243	599,127	
Fund Balance - End	716,243	-----	-----	599,127	46,877	

Youth Center Fund 210	2024 Actual	2025 Budget	YTD 6/30/2025	2025 Projected	2026 Budget	% Change Prev Year
Total Revenue	40,000	40,750	32,500	40,250	40,750	0.00%
Taxes	25,000	25,000	25,000	25,000	25,000	0.00%
Other Revenue	15,000	15,750	7,500	15,250	15,750	0.00%
Total Expense	40,250	40,750	40,250	40,250	40,750	0.00%
Fund Balance - Begin	1,928	-----	-----	1,678	1,678	
Fund Balance - End	1,678	-----	-----	1,678	928	

TID #4 Fund 310	2024 Actual	2025 Budget	YTD 6/30/2025	2025 Projected	2026 Budget	% Change Prev Year
Total Revenue	799,449	1,025,250	221,174	1,044,581	1,144,000	11.58%
Taxes	152,574	172,000	185,988	185,988	172,000	0.00%
Other Revenue	646,875	853,250	35,186	858,593	972,000	13.92%
Total Expense	748,942	1,025,250	104,346	607,680	1,144,000	11.58%
Fund Balance - Begin	265,361	-----	-----	315,867	752,768	
Fund Balance - End	315,867	-----	-----	752,768	752,768	

Dated this 2nd day of October, 2025.

Cassandra Suettinger, Deputy Village Administrator/Clerk
McFarland, Wisconsin

VILLAGE OF MCFARLAND

Summary of Other Governmental Funds

TID #5 <i>Fund 315</i>	2024 Actual	2025 Budget	YTD 6/30/2025	2025 Projected	2026 Budget	% Change Prev Year
Total Revenue	331,872	804,750	455,943	862,488	862,000	7.11%
Taxes	319,464	394,750	426,459	426,459	426,000	0.00%
Other Revenue	12,408	410,000	29,485	436,029	436,000	6.34%
Total Expense	180,040	804,750	128,532	189,957	862,000	7.11%
Fund Balance - Begin	(395,164)	-----	-----	(243,332)	429,198	
Fund Balance - End	(243,332)	-----	-----	429,198	229,198	

Stormwater <i>Fund 605</i>	2024 Actual	2025 Budget	YTD 6/30/2025	2025 Projected	2026 Budget	% Change Prev Year
Total Revenue	1,063,964	1,470,000	401,772	1,834,640	1,891,250	28.66%
Taxes	0	0	0	0	0	0.00%
Other Revenue	1,063,964	1,470,000	401,772	1,834,640	1,891,250	28.66%
Total Expense	740,076	1,470,000	332,936	1,771,190	1,891,250	28.66%
Cash & Equiv - Begin	1,092	-----	-----	788,841	522,736	
Cash & Equiv - End	788,841	-----	-----	522,736	499,486	

Capital Projects <i>Fund 400</i>	2024 Actual	2025 Budget	YTD 6/30/2025	2025 Projected	2026 Budget	% Change Prev Year
Total Revenue	10,452,530	12,527,750	1,586,211	13,928,933	12,892,250	2.91%
Taxes	10,000	15,000	15,000	15,000	20,000	0.00%
Other Revenue	10,442,530	12,512,750	1,571,211	13,913,933	12,872,250	2.87%
Total Expense	6,573,296	12,527,750	3,758,671	10,361,202	12,892,250	2.91%
Fund Balance - Begin	1,698,158	-----	-----	5,467,513	7,077,796	
Fund Balance - End	5,467,513	-----	-----	7,077,796	4,049,046	
The Capital Projects Fund shall maintain reserves as of December 31 of each year sufficient to pay the cost of projects under construction but not yet finished.						

Solid Waste <i>Fund 610</i>	2024 Actual	2025 Budget	YTD 6/30/2025	2025 Projected	2026 Budget	% Change Prev Year
Total Revenue	550,381	660,250	568,925	662,940	696,750	5.53%
Taxes	54,250	50,000	50,000	50,000	150,000	200.00%
Other Revenue	496,131	610,250	518,925	612,940	546,750	-10.41%
Total Expense	645,629	660,250	336,608	662,940	696,750	5.53%
Fund Balance - Begin	68,272	-----	-----	(26,977)	(113,156)	
Fund Balance - End	(26,977)	-----	-----	(113,156)	(113,156)	
Minimum Fund Balance Requirement of 10% of Exp				66,294	69,675	

Parks <i>Fund 405</i>	2024 Actual	2025 Budget	YTD 6/30/2025	2025 Projected	2026 Budget	% Change Prev Year
Total Revenue	254,518	700,000	53,423	106,846	865,000	23.57%
Taxes	0	0	0	0	0	0.00%
Other Revenue	254,518	700,000	53,423	106,846	865,000	23.57%
Total Expense	523,559	700,000	8,342	8,342	865,000	23.57%
Fund Balance - Begin	1,018,469	-----	-----	749,396	847,900	
Fund Balance - End	749,396	-----	-----	847,900	120,400	

Retiree <i>Fund 700</i>	2024 Actual	2025 Budget	YTD 6/30/2025	2025 Projected	2026 Budget	% Change Prev Year
Total Revenue	54,719	75,000	53,287	57,500	75,000	0.00%
Taxes	50,000	50,000	50,000	50,000	50,000	0.00%
Other Revenue	4,719	25,000	3,287	7,500	25,000	0.00%
Total Expense	17,565	75,000	0	29,000	75,000	0.00%
Fund Balance - Begin	124,552	-----	-----	161,705	190,205	
Fund Balance - End	161,705	-----	-----	190,205	172,205	

Utilities <i>Fund 600</i>	2024 Actual	2025 Budget	YTD 6/30/2025	2025 Projected	2026 Budget	% Change Prev Year
Total Revenue	4,411,709	9,835,750	1,880,917	9,777,622	10,112,000	2.81%
Taxes	0	0	0	0	0	0.00%
Other Revenue	4,411,709	9,835,750	1,880,917	9,777,622	10,112,000	2.81%
Total Expense	3,824,696	9,835,750	1,284,420	9,683,417	10,112,000	2.81%
Cash & Equivalent - Begin	3,227,516	-----	-----	2,370,411	2,464,616	
Cash & Equivalent - End	2,370,411	-----	-----	2,464,616	2,464,617	

Canine <i>Fund 800</i>	2024 Actual	2025 Budget	YTD 6/30/2025	2025 Projected	2026 Budget	% Change Prev Year
Total Revenue	27,673	25,500	25,441	26,660	25,750	0.98%
Taxes	0	0	0	0	0	0.00%
Other Revenue	27,673	25,500	25,441	26,660	25,750	0.98%
Total Expense	27,417	25,500	13,200	16,222	25,750	0.98%
Fund Balance - Begin	50,809	-----	-----	51,065	61,503	
Fund Balance - End	51,065	-----	-----	61,503	61,503	

Dated this 2nd day of October, 2025.

Cassandra Suettinger, Deputy Village Administrator/Clerk
McFarland, Wisconsin

McFarland
SUMMARY SHEET

MEETING DATE: Tuesday, October 28, 2025

SECTION: Business

DEPARTMENT: Public Works

CONTACT: Lee Igl, Public Works Director

AGENDA ITEM: Discussion and action regarding the playground development proposal for the park within Prairie Place Subdivision.

PREVIOUS ACTION:

A park in or near Prairie Place was listed in the 2024 to 2028 Capital Improvement Plan. During the August 1, 2023, meeting, the Parks & Recreation committee recommended approval of the 2024 to 2028 Capital Improvement Plan with the inclusion of a playground at Prairie Place.

The Parks & Recreation Committee recommended approval to the Village Board regarding a proposal from Parkitecture for design services for Prairie Place playground at their March 4, 2025, meeting.

A public information meeting was held on July 10th, presenting and discussing potential locations in Juniper Ridge and in Prairie Place.

The Parks and Recreation Committee reviewed feedback from the public and provided their own input to further refine the proposed playground at its meeting on September 2, 2025.

At their October 23, 2025 meeting, the Parks and Recreation Committee unanimously recommended approval of the proposal to develop a playground within the park at Prairie Place Subdivision.

ISSUE SUMMARY:

A playground improvement within the park at Prairie Place subdivision was originally discussed in 2023, during the 2024 to 2028 CIP discussions. Funds were designated as part of the CIP for a playground in or near the Prairie Place subdivision. As the subdivision was developed, park impact fees were collected from building permits that could be used for park improvements. Park impact fees are not designated for a specific area or park, but for the overall improvement of the park system. During the 2025 to 2029 CIP discussion, funds were designated for a playground in or around the Prairie Place subdivision. Parkitecture presented their proposal for the layout and design of a playground in this area during the March committee meeting.

A public information meeting was held on July 10th for public feedback. Two locations were presented, and discussed, along with what size and types of equipment could be added. There was not one clear location desired by the attendees. Many were concerned about the ecological effects and the larger budget needed to put the park in Juniper Ridge. The other location in



Prairie Place raised a lot of concern about the proximity to Holscher Road, traffic and impeding the sledding hill, which is highly used.

Staff continued to look at additional options and Parkitecture presented a third location option during the Parks & Recreation Committee meeting on September 2nd. The committee reviewed the third proposed location and discussed the three playground options presented during the meeting. During the September 2nd meeting, the committee desired additional discussion at an upcoming meeting with Parkitecture reviewing a few possible equipment amenities.

Staff confirmed with Westshore Pipeline that the playground safety surface could encroach on the pipeline easement, with the understanding that the equipment may have to be removed in an emergency or if pipeline construction would need to occur. A construction project would have prior notice and the equipment could be removed in a reusable manner.

The Parks and Recreation Committee reviewed the final proposal and unanimously recommended the Village Board move forward with implementation. If approved by the Village Board, the equipment would be installed in the Spring of 2026.

FINANCIAL/BUDGET IMPACT:

The 2025 budget includes funds of \$160,000 for a possible playground near the Prairie Place subdivision.

Expense:

Playground equipment and installation	\$ 94,672
Contingency	<u>\$ 5,328</u>
Total	\$100,000

VILLAGE PLAN REFERENCE:

[2025-2029 Capital Improvement Plan](#)

ORDINANCE REFERENCE:

None.

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Recommended Motion:

Motion, second to approve the playground development proposal from Lee Recreation, LLC in the amount of \$94,672 including contingency for a total project cost of \$100,000 for the park within Prairie Place Subdivision.

ATTACHMENTS:

1. 10-10-2025 Quote 142-206880-1 Prairie Place, McFarland
2. 25_1015 Prairie Place Plans
3. Option 3
4. 10.18.2025 L. Morris



DATE: October 10, 2025

TO: Blake Theisen
901 Deming Way
Suite 201
Madison, WI 53717

FROM: Megan Lee Cunningham & Pat Groom

RE: **Playground Proposal #142-206880-1, Prairie Place, McFarland**

BCI BURKE "Play That Moves You"

1-#NUCLEUS Modular Structure \$57,105.00
DECKS: 4-Square, 1-Split Square
SLIDES: Viper Straight Slide @ 48" Deck Ht., Contour Slide @ 72" Deck Ht.
SHADE: 1-EZ Tension 15' x 19' ShadePlay Canopy
CLIMBERS: Pursuit Climber, Formis Ladder, Jungle Vine Climber, Shasta Climber, Snake Climber
UPPER BODY: 90 Degree Overhead
MOTION: 12' Kid Koaster Deck to Deck, Niche Capsule Nano
BALANCE: 1-Ovistep Launch Pad
PLAY ACTIVITY PANELS: Spinner Crescent Panel, Hide the Numbers Panel

1-#560-2610 Spinetic w/ Speed Limiter \$ 7,986.00

Subtotal Equipment	\$65,091.00
Discount	(\$ 9,764.00)
Installation/Assembly	\$19,530.00
Surfacing	\$ 3,850.00
4' Plastic Border Timbers	\$ 2,200.00
Site Work	\$12,265.00
Freight	\$ 1,500.00
TOTAL	\$94,672.00

SURFACING NOTES:

70yd³ Engineered Wood Fiber Surfacing, Delivered & Installed

SITE WORK NOTES:

- Excavation/Disposal
- Installation of 4" og Gravel
- Installation of Weed Barrier
- Installation of Border Timbers @ Grade
- Pour 5' x 5' Concrete Walkway

Quote Accepted by: _____ Date: _____

Terms: Net 20

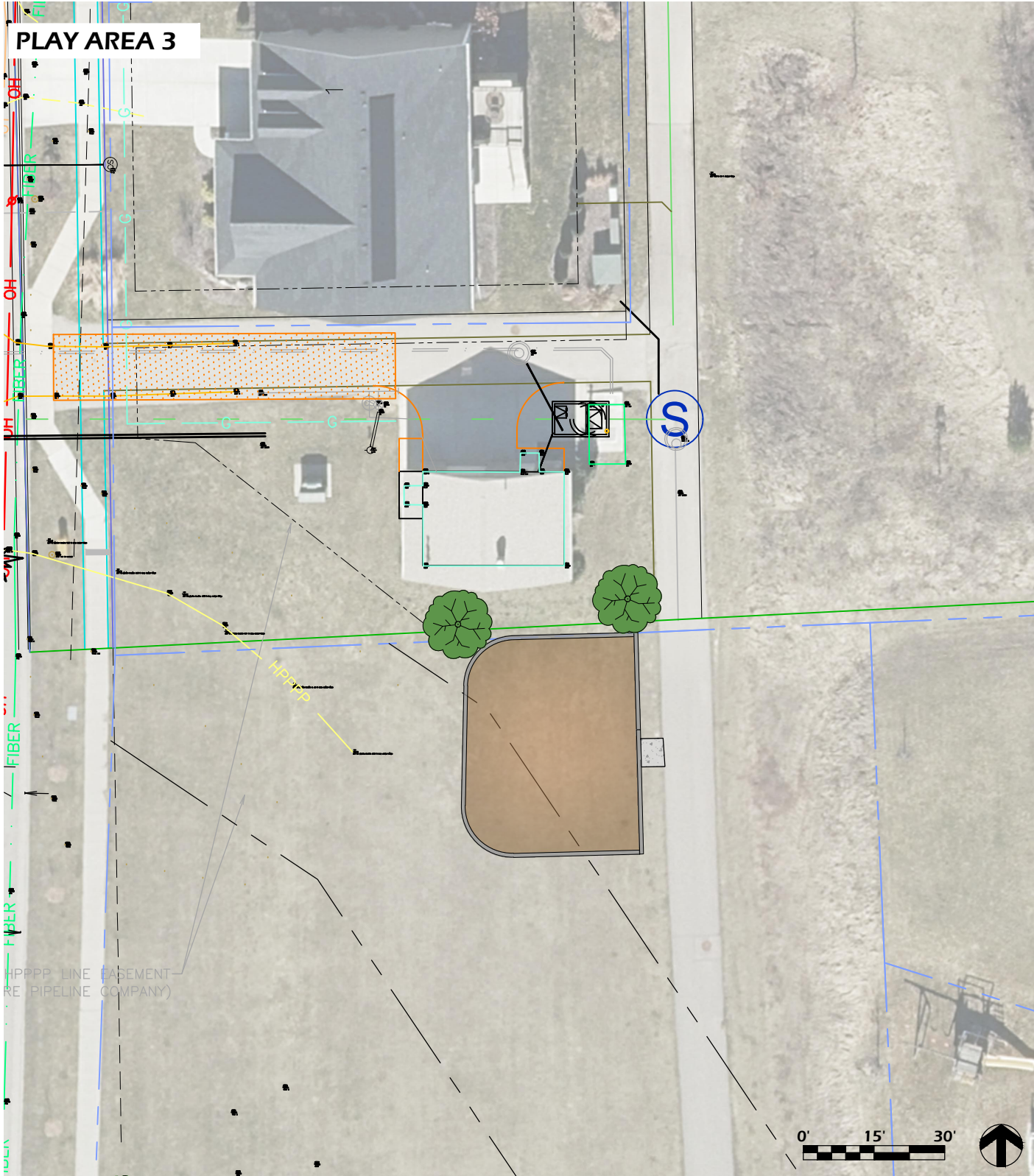
Marking of Private Lines, Site Preparation, Disposal of Garbage and Site Restoration is the Responsibility of the Customer.

Lead time: 10-12 Weeks Upon Receipt of Order

Quote Effective: **Until 11-10-2025**

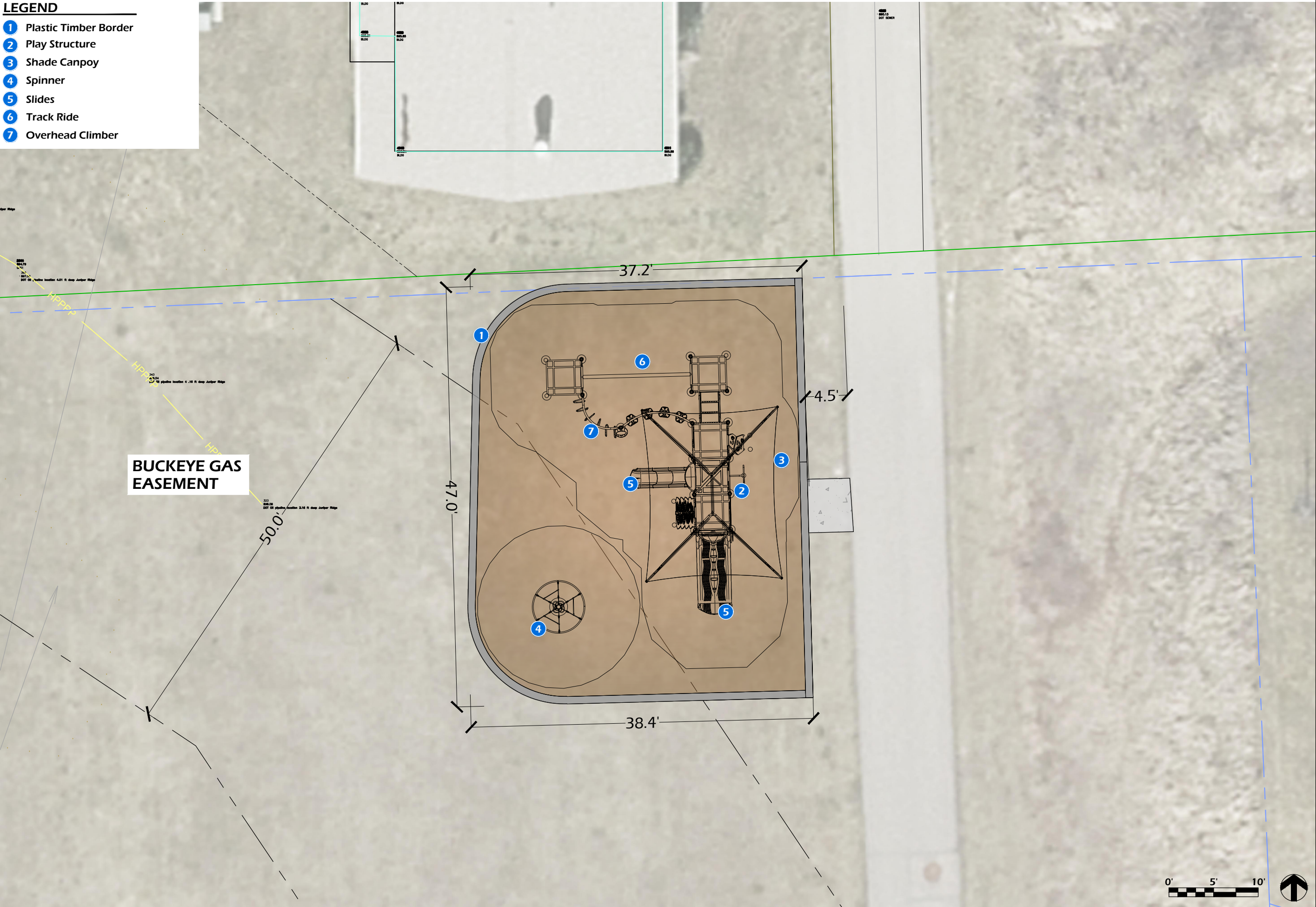
File: V:\25.018 McFarland Prairie Place\Place\CAD\LW -- Copy.dwg Layout: C100 User: Blake Plotted: Oct 15, 2025 -- 8:50am

- LEGEND**
- 1 Existing Multi-use Trail
 - 2 Existing Pump Station
 - 3 Proposed Play Area
 - 4 Open Lawn/Sledding Hill



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- LEGEND**
- 1 Plastic Timber Border
 - 2 Play Structure
 - 3 Shade Canpoy
 - 4 Spinner
 - 5 Slides
 - 6 Track Ride
 - 7 Overhead Climber



PARKITECTURE + PLANNING
901 Deming Way, Suite 201
Madison, WI 53717
608.203.8203

Project Name: PRAIRIE PLACE PARK Holscher Road McFarland, WI 53558	
Sheet Title: PLAYGROUND EQUIPMENT PLAN	
Revisions:	
Project #: 25.018 Issued For: Review Date: 10/01/2025	
Sheet Number: C101	

Page 99 of 444



COLOR KEY	
	TAN
	OLIVE
	BROWN
	TAN/GREEN
	BROWN/TAN
	BROWN/TAN



PRAIRIE PLACE PARK
Holscher Road
McFarland, WI 53558

PLAYGROUND RENDERINGS

Project Name:

Revisions:

Project #: 25.018
Issued For: Review
Date: 10/01/2025

Sheet Number

C102

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- LEGEND**
- 1 Existing Multi-use Trail
 - 2 Existing Pump Station
 - 3 Proposed Play Area
 - 4 Open Lawn/Sledding Hill



Aimee Irwin

From: Public Works
Subject: FW: Concerns Regarding a Playground Park at Prairie Place Sledding Hill

From: Laurie Morris <lmorrishm2@gmail.com>
Sent: Saturday, October 18, 2025 10:14 AM
To: Cassandra Suettinger <Cassandra.Suettinger@mcfarland.wi.gov>
Subject: Concerns Regarding a Playground Park at Prairie Place Sledding Hill

Dear Parks and Recreation Committee,

We are writing to you again, to express our continued opposition to constructing a Prairie Place Playground Park. As was mentioned in our earlier email, in 2018, we inquired about purchasing a lot in Prairie Place. At that time, the builder shared that there would not be a Playground Park in Prairie Place, because it was not required by the Village and that the developer had decided against it. No land was designated for a playground or park in Prairie Place. Having several parks within a 10-minute walk did not discourage us from building and living in Prairie Place.

[If the Village of McFarland accepted the absence of a Playground Park in Prairie Place in 2018, why isn't it acceptable to not have a Playground Park in Prairie Place now?](#)

According to the '10-Minute Walk Time to Village Playground' map of the Comprehensive Outdoor Recreation Plan (CORP), there are 4 parks that meet this requirement for the Prairie Place neighborhood which provide a variety of equipment for varying ages: Juniper Ridge, Highland Oaks, Cedar Ridge and Ridgeview Tot Lot.

We have frequented the Juniper Ridge, Highland Oaks, Cedar Ridge and Ridgeview Tot Lots with our 5 grandchildren, pushing them in a stroller, and pulling them in a wagon. All 4 of these parks are within a 10-minute walk of the Prairie Place neighborhood.

[Why does the Village feel a Playground Park in Prairie Place is needed, when there are 4 parks that meet the '10-Minute Walk Time to Village Playground' in the CORP?](#)

The Prairie Place neighborhood is beautifully landscaped with hills, ponds, prairies, paths, and is a habitat to a variety of wildlife and many bird species. *Having a pair of the Great Horned Owl in the neighborhood is unique, as is the Sledding Hill.*

At the September 2, Parks and Recreation Committee meeting, a decision was made to no longer consider the original 2 proposed sites for a Playground at the top of Prairie Place Sledding Hill and the Juniper Ridge Conservancy. During the meeting, a new Playground site was proposed at the bottom of the Prairie Place Sledding Hill, near the Pumphouse.

We would like to express our opposition to a Playground Park at the bottom of Prairie Place Sledding Hill for the following reasons:

- The Sledding Hill in Prairie Place has become very popular and is used by many throughout the Village. The entire area, from the condos to the Pumphouse, is used for sledding. The snow drifts near the Pumphouse, which sets up a curved sledding path, offering a unique sledding experience. Sledders enjoy the gentle incline and slight rotation near the bottom of the hill. Constructing a Playground on the proposed site would significantly reduce the sledding area and eliminate the unique sledding experience.
- The proposed site is not 'Flat' as was stated. The proposed site has a 2-way stormwater drainage design to move the water down the hill, across the path and flow to the south. During heavy rainfall and when the snow melts, the path has puddles and ice on it. Constructing a Playground on the proposed site would further impede the water drainage and increase water and ice on the path.

- The proposed site is not easily accessible for anyone, other than the residents in Prairie Place and Juniper Ridge. Anyone who drives to use the Playground Park would need to park on Holscher and use the steep path or park on Pine Ridge Way, which is a distance using the path. Parking on Shooting Star Court was suggested during the meeting as an access point. While that may be feasible for the neighborhood residents, as they most likely would walk or bike, it is not a viable access point for anyone who drives to use the Playground Park. There is a safety concern with the potential of additional traffic on Shooting Star Court. This proposed site seems to limit easy access for inclusivity.

Two options were presented during the meeting: The proposed site at the bottom of Prairie Place Sledding Hill near the Pumphouse or do nothing. The decision to do nothing is not a bad thing.

In summary, we enjoy and appreciate the Village parks. We often walk and bike through the Village and frequent the parks with our grandchildren. With adequate playgrounds near Prairie Place, we believe a Playground Park in Prairie Place is not needed, and that the Sledding Hill should be embraced as a unique recreational option in the Village.

We appreciate all the time that you and the committee members give to make the Village a better place.

Thank you,

Lyle and Laurie Morris

6070 Shooting Star Ct

McFarland, WI 53558

McFarland
SUMMARY SHEET

MEETING DATE: Tuesday, October 28, 2025

SECTION: Business

DEPARTMENT: Community Development

CONTACT: Andrew Bremer, Comm & Eco Dev Director

AGENDA ITEM: Discussion and action on a Final Plat for Sperle Corners, including associated Street and Utility Plan, Stormwater Management Plan, and Development Agreement, submitted by Lakestone Properties for a 147-unit residential subdivision located at parcel 0610-024-9691-1.

PREVIOUS ACTION:

May 20, 2025 - Plan Commission held public hearing on request for rezone and preliminary plat review.

June 17, 2025 - Plan Commission recommended approval of rezone and preliminary plat review of Sperle Corners.

June 24, 2025 - Village Board approves of rezone and preliminary plat review of Sperle Corners.

September 16, 2025 - Plan Commission held public hearing on a final plat and Phase 1 Detailed Plan.

September 17, 2025 - Public Works & Utilities Committee discussed the Final Plat, associated Street and Utility Plans, and recommended approval to Village Board with three conditions of approval.

October 21, 2025 - Plan Commission unanimously recommended approval of the Final Plat and associated submittal with the conditions of approval as provided in the staff report.

ISSUE SUMMARY:

Lakestone Properties is requesting approval of a Final Plat for parcel 0610-024-9691-1 at the northwest intersection of Elvehjem Road and County Hwy AB, to be named Sperle Corners, for a proposed 147-unit residential subdivision. The Preliminary Plat was approved by the Village Board at the June 24, 2025 meeting. The public hearing for this item was held at the September 16, 2025 Plan Commission meeting. The proposed plat will include 18 residential Lots and 2 public Outlots. The proposed plat includes a mix of 2-unit, 4-unit, multifamily buildings, dedicated stormwater (Outlot 1) and parkland (Outlot 2). Lots 3-16 each are designed for zero lot line duplex buildings (14 total units), Lots 1, 2, and 17 each include four-plex buildings (16 total units), and Lot 18 includes two 40-unit multifamily apartments and one 37-unit apartment building (117 total units). Phase 1 construction activities will include Building #1, a 40-unit apartment building on Lot 18 (western building), Devil's Lake Way street and utility construction, extension of public water main along Elvehjem Road to the planned intersection of Devil's Lake Way, two stormwater retention systems, and mass grading on the property.

Review Procedures for Final Plat

Per Sec. 56-38(b), *The Plan Commission shall examine the Final Plat as to its conformance with*



the approved Preliminary Plat, any conditions of approval of the Preliminary Plat, this Chapter and all applicable ordinances, rules, regulations, comprehensive plans, and compressive plan components, which may affect it and shall recommend approval, conditional approval or rejection of the Plat to the Village Board. Although not required under the Village's Subdivision Ordinance, it is also customary for the Public Works and Utilities Committee to make recommendations to the Village Board and Plan Commission on land development and redevelopment proposals to the extent they affect public utilities or other public facilities. The Public Works and Utilities Committee reviewed the Final Plat at their September 17 meeting and recommended approval conditioned on the applicant addressing the concerns raised in the staff reports from the Village Engineer (dated September 8, 2025) and Fire Chief (dated September 5, 2025) and updating the Street and Utility Plans to include stubbing a water lateral to the front property line of Outlot 2 for future public park use. The packet includes updated plans dated 09.22.2025 from the applicant addressing the prior staff comments along with responses to the Village Engineer's and Fire Chief's September review letters.

Department Comments

Included in the packet is a staff report from the Village Engineer (dated 09.08.25) regarding recommended conditions of approval for the Final Plat, Street and Utility Plan, and Stormwater Management Plan. The packet also includes a staff report from the Village Fire Chief (dated 09.05.2025). Noting that it is the intent of the developer to restrict the south and west side of Devil's Lake Way for no on-street parking based on the width of the street as recommended in their [Traffic Impact Analysis Report](#). The Village Engineer and Fire Chief are recommending the developer submit a plan sheet to illustrate the fire department access plan and on-street parking restrictions to confirm acceptable apparatus maneuver along the curve of Devil's Lake Way prior to the October 21st Plan Commission meeting. Staff notes that the revised plan documents dated 09.22.2025 did not fully address all of the prior staff comments. Items of particular note include:

- **Elvehjem Road Public Water Utility.** Lakestone has proposed a private water main through the parking lot of Lot 18 to serve future apartment buildings 1-3 in lieu of the developer extending the public main from Devil's Lake Way to CTH AB. Under Sec. 56-120 of the Subdivision Code, utility services shall be extended to the farthest limit of the parcel or lot upon which a building permit is requested unless otherwise excused by the Village Board, Plan Commission or Village utilities officials. The intent of this provision is to allow the next developer downstream the ability to connect to the utility, similar to how utilities were previously brought to the western edge of Lakestone's property for their future connection. Previous concepts from Lakestone included connecting water laterals from the three apartment buildings along Elvehjem Road to the proposed public water main. The private main on Lot 18 is essentially the same length as the public main on Elvehjem Road and is thus redundant. Lakestone would also be responsible for any repairs to the proposed private main on Lot 18 versus only being responsible for private laterals if the buildings are connected to a public main on Elvehjem Road. Lakestone has agreed to remove the private main on Lot 18 and phase construction and connection of the public water main on Elvehjem Road from Devil's Lake Way to CTH AB with construction of each building. However, the plans in the packet don't reflect those changes yet.



- Fire Lane Plan. The packet includes a Fire Lane Plan (dated October 3, 2025); however, it does not address all of the concerns raised in the Fire Chief's September 5 review letter. Amendments are needed to account for turning from north/west for lots 1 and 17, a 26' fire apparatus access road width within 20 feet of a hydrant and a 26' wide aerial access road will be required on Lot 18 because of buildig's roof edge exceeds 30' from the ground plane.

In addition to addressing the Village Engineer and Fire Chief review comments, the prior conditions of approval for the Preliminary Plat included:

1. *Lakestone to include a note on the Final Plat noting the grading and development restrictions in the 75' wetland setback area. This condition has been met.*
2. *Lakestone shall have 24 months after the date of approval of the Preliminary Plat to file the Final Flat for review and approval by the Village Board, otherwise the Preliminary Plat will be considered void unless an extension is requested in writing and granted by the Village prior to the 24 month termination date. The condition has been met.*
3. *Concurrent with the Final Plat, review and approval of a development agreement between Lakestone and the Village. Sec. 56-104 of the Subdivision Code also requires the subdivider to enter into a development agreement with the Village to furnish and construct the proposed improvements in accordance with the final approved plans and specifications. Included in the packet is an updated copy of the development agreement, which is similar to the agreement utilized for Rosewood Fields.*

Public Comments

The Department did not receive any public comments prior to the publication of this packet.

Next Steps

Additional planned meetings are highlighted below. Village staff will work with the Developer on additional plan edits to address final staff comments.

- October 28 Village Board meeting. Approval of Final Plat, including associated Street and Utility Plan, Stormwater Management Plan, and Development Agreement.

FINANCIAL/BUDGET IMPACT:

The developer shall be responsible for the costs for the street and utility improvements for the proposed plat in accordance with the development agreement and Village ordinances.

VILLAGE PLAN REFERENCE:

Comprehensive Plan, 2017

The Village Comprehensive Plan Future Land Use Map identifies the proposed development site for future "Neighborhood" uses and wetlands. Page 33 of Volume 2, describes that *areas planned for "Neighborhood" development include a range of housing choices compatible with the Village's current and desired character are permitted, along with parks and smaller-scale institutional uses like senior housing and churches....see the Village's separate East Side*



Neighborhood Plan for further conceptual guidance for future land uses in this area." Figure 4.1 lists the Typical Implementing Zoning Districts in Neighborhood areas include R-1 Residence District, R-2 Single- and Two-Family Residence, R-3 General Residence, R-E Elderly Residence, PD Planned Development, PD-I Planned Development Infill. The Applicant's approved Planned Unit Development General Plan includes a range of housing choices and a public park.

East Side Plan, 2023

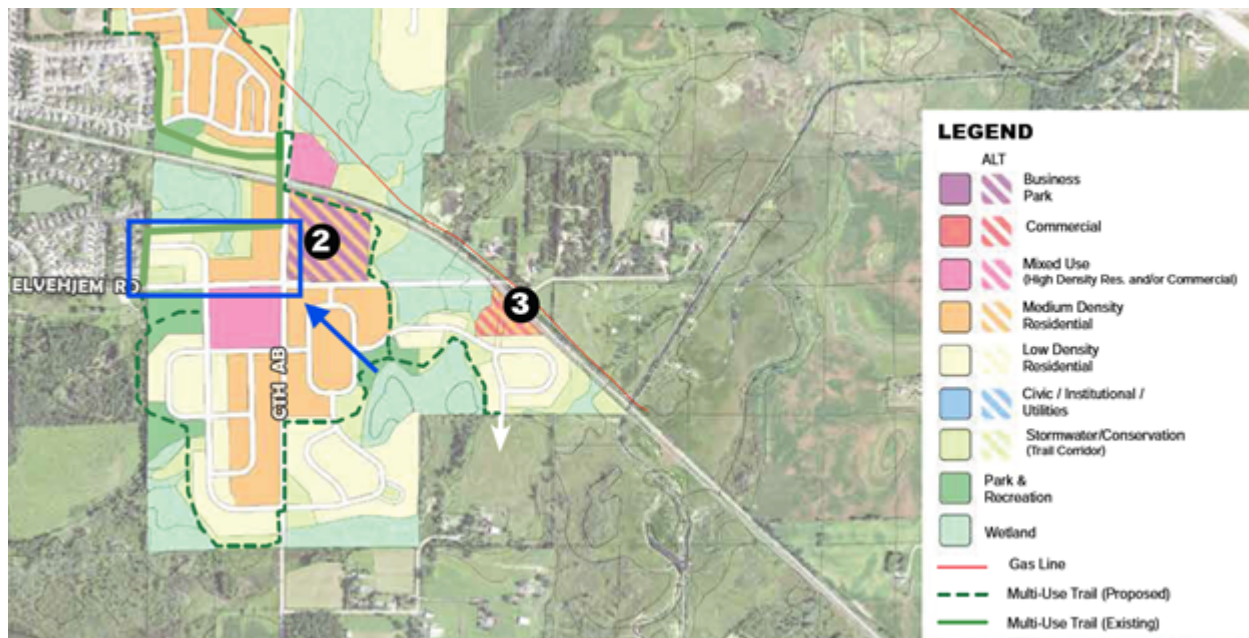
The 2023 East Side Master Plan Concept ([Chapter 4](#)) identifies multiple uses for the property (see image below). The uses include Low Density Residential, Medium Density Residential, Stormwater/Conservation, and Wetlands. The following land use category descriptions are as provided. As stated, *"these policies shall be enforceable through the generalized future land map in the Village's Comprehensive Plan (Chapter 4, Page 65)."*

- Stormwater & Conservation (SC) *"areas include conservation areas, cemeteries, stormwater management, greenways, major public trails, and land recommendations for preservation."* The location of wetlands shown in the 2023 East Side Plan was based on available WDNR aerial data. A wetland delineation was completed for the property in October 2022 that showed considerably fewer wetland areas than the WDNR aerial data. The Village requires a minimum 75-foot building setback from wetland boundaries. The Final Plat, Street and Utility Plan and Stormwater Management Plan includes additional detail on wetland and stormwater management areas.
- Low Density Residential (LDR) *primarily consists of single-unit detached homes with strategically located 2-unit attached, 3-/4-unit buildings (triple and fourplex, respectively). Typical net densities should average 2-5 units per acre (throughout the entire neighborhood plan), with individual developments up to 10 units per acre. Three and 4-unit structures are most appropriate as a transition use when facing or next to more intensive institutional, residential or commercial uses. Lots 1-17 are generally aligned with the area mapped as LDR in the 2023 East Side Plan. These lots have net densities ranging from 2.0-8.9 dwelling units per acre with a total net density of 6.1 dwelling units per acre, below the maximum 10 units per acre for individual developments. The 2023 East Side Plan does not mandate that all areas mapped LDR must include single-family dwelling units. The context of each development area should be considered as well. While the Final Plat does not include any single-family homes, it does continue the existing pattern of duplex developments to the west before transitioning to 4-unit buildings and then apartment buildings. In addition, the existing duplex residential buildings on Perrot Place are more than 150 feet from the proposed building footprints on Lots 8 and 9. Physical barriers from the existing bike and pedestrian path, existing tree line, and wetlands, create added separation between the existing residential homes and the proposed dwelling units.*
- Medium Density Residential (MDR) *"includes detached single-unit homes and attached housing units such as duplexes, triplexes, townhomes, small and mid-sized multi-unit buildings. Developments in MDR areas should provide the greatest diversity of housing unit types, forms, and prices. Typical net densities should average 5-15 units per acre (throughout the entire neighborhood plan), with individual developments up to 20 dwelling units/acre...densities greater than 20 DU/AC for legally restricted affordable*

housing units." The net density of Lot 18 is 15.9 DU/AC, below the maximum 20 units per acre for individual developments.

Page 62 of Chapter 4 of the East Side Plan states that *"while the general pattern of land uses and major streets shown in this concept should be reflected in actual development, it is recognized that more detailed elements within the concept, such as the locations of minor streets, location/sizing of stormwater management areas, precise boundaries of land uses, or the specific dimensions of blocks, are only concepts."* Along the west lot line, the concept includes similar scale housing types to the existing neighborhood to the west, transitioning to larger residential type buildings with higher unit counts to the east along CTH AB, consistent with the intent of the 2023 East Side Plan. In Staff's opinion, the Final Plat provides a consistent layout with the intent of the Master Plan Concept from the 2023 East Side Plan and is consistent with the prior approved Preliminary Plat.

East Side Master Plan Future Land Use Map.



ORDINANCE REFERENCE:

[Chapter 56 Subdivisions](#)

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Recommended motion:

Motion, and second, to approve a Final Plat for Sperle Corners, including associated Street and Utility Plan, Stormwater Management Plan, and Development Agreement with the following conditions of approval:

- 1. Applicant to submit final revised plans for acceptance by the Fire Chief to address those*



comments raised in the Fire Chief staff report dated September 5, 2025.

- 2. Applicant to submit final revised plans for acceptance by the Village Engineer to address those comments raised in the Village Engineer's staff report dated September 8, 2025, including adding a water lateral to the front property line of Outlot 2 for future public park use.*
- 3. Applicant to submit final revised plans for acceptance by the Village Engineer removing the proposed private water main on Lot 18 and constructing a public water main along the Elvehjem Road right-of-way to CTH AB to serve proposed buildings on Lot 18.*
- 4. Applicant to provide final exhibits for the Development Agreement for review and acceptance by the Village Engineer, Community & Economic Development Director, and Village Attorney prior to recording.*

ATTACHMENTS:

1. 9.16.25 - Sperle Corners - final plat - Lakestone - newspaper
2. Sperle Corners Final Plat and Street and Utility Plan_08.05.25(rev 10.17.25)
3. Sperle Corners Stormwater Submittal (10-17-2025)
4. Development Agreement for Sperle Corners - 10.15.25
5. Sperle Corners PUD Detailed Plan - Fire Chief Letter of Review_09.05.2025
6. Sperle Corners PUD Detailed Plan - Fire Chief Letter of Review_09.05.2025-Quam Response 10-2-2025
7. Sperle Corners PUD - Village Engineer Letter of Review_09.08.2025
8. Sperle Corners PUD - Village Engineer Letter of Review_09.08.2025_Quam Responses 9-22-2025

Please publish in the
Leader Independent on
August 28, 2025 and September 4, 2025

**VILLAGE OF MCFARLAND
NOTICE OF PUBLIC HEARING
BEFORE THE PLAN COMMISSION**

NOTICE IS HEREBY GIVEN that there will be a public hearing before the Plan Commission on Tuesday, September 16, 2025 at 7:00 p.m. in the Community Room of the Municipal Center, 5915 Milwaukee St., McFarland, Wisconsin, at which time interested parties and citizens shall have an opportunity to be heard concerning the following:

A request by Lakestone Properties and Management LLC for review and possible recommendation to the Village Board for approval of a Final Plat for Sperle Corners Subdivision, lands located at the northwest corner of Elvehjem Road and County Highway AB, Parcel #154/0610-024-9691-1, Village of McFarland, WI.

A complete copy of the applicant's application is available for review online at www.mcfarland.wi.us/pendingrequests or at the Village of McFarland Municipal Center, Community & Economic Development Department, 5915 Milwaukee Street, McFarland, WI 53558 (Monday-Friday, 8:00 a.m. to 4:30 p.m.).

Residents wishing to attend the meeting can do so in-person at the Municipal Center or via Zoom by visiting <https://us02web.zoom.us/j/85755749643> or Telephone: Dial (for higher quality, dial a number based on your current location): US: +1 (312) 626-6799 Webinar ID: 857 5574 9643. Please Note: Virtual attendance is offered as a convenience, but technical difficulties beyond the Village's control may prevent or limit its availability at any meeting. The public is encouraged to attend the meeting in person to assure full access to the proceedings.

If you cannot attend the meeting, you may submit your written comments to the Plan Commission by email to community.development@mcfarland.wi.us or by mail to Community Development Department, Village of McFarland, P.O. Box 110, McFarland, WI 53558-0110. Submission must be received no later than the Wednesday prior to the meeting date to be included in the packet.

McFarland

VILLAGE OF
Community & Economic Development

Plan Commission Application – 2025

~Application must be completed in full~

Applicant	Lakestone Properties and Management, LLC	Applicant's Agent	Brett Riemen
Property Owner (if different)	Diana Sperle & Mary Teppo	Name	
Address		Address	5910 Main St, McFarland WI 53558
Email		Email	brett@lakestoneproperties.com
Phone #		Phone #	608-838-1800

Parcel No(s). _____ **Type of Proposal – Please check boxes below that apply**

Requires Public Hearing (Class One)	FEES	Requires Public Hearing (Class Two)	FEES	Public Hearing Not required	FEES
☐ Preliminary Plat	\$500+AF	☐ Conditional Use	\$425+F	☐ Annexation	At cost
☐ Preliminary Plat (reapplication)	\$500+BF	☒ Rezoning (map)	\$475+F	☒ Dev. Agreement Including Addendums	\$400+F
☐ Certified Survey Map	\$300+FG	☐ Zoning Amendment (text)	\$475+F	☒ Final Plat	\$500+CF
☐ Condominium	\$300+EF	☐ USA/MMSD Annexation	At cost	☐ Final Plat (reapplication)	\$400+DF
☐ Comprehensive Plan Amendment	\$500+F			☒ Site/Design Review	\$400+F

+ = Plus publication and notification charges

A = Plus \$50.00 per lot

B = Any preliminary plat which has previously been reviewed/revised within the last 36 months

C = Plus \$50.00 for each lot within the final plat

D = Any final plat which has been previously reviewed/revised within the last 36 months

E = Plus \$40.00 for each unit shown

F = Plus actual legal, engineering and financial consulting costs incurred by the Village

G = Plus \$25.00 per lot for two or more lots.

Escrow Deposits (covers costs for outside consultants; e.g., engineers, attorneys, etc.)	
☐ R-E, R-3 & PD (up to 50 acres)	\$5,000
☐ R-E, R-3 & PD (greater than 50 acres)	\$10,000
☐ Site/Design Review (less than 2,000 sq. ft.)	\$1,000
☐ Site/Design Review (2,000 sq. ft. or more)	\$2,000
☒ All Plats including condominiums	\$5,000

Nature of the development proposal: Must provide address of proposed development, legal description, current zoning and description of proposal/request. (Attach additional papers if needed)

Development of Lot 18, Phase 1 Apartment building, associated drive aisles and parking lots in conformance with the approved planned development.

PLEASE READ AND SIGN AT THE BOTTOM ON THE REVERSE SIDE

Has this specific proposal been previously discussed or acted upon by the Plan Commission?

☒ YES ☐ NO (If "yes" state the nature and the date(s) of the previous application.)

Planned Development approved June 6, 2025

Submittal Requirements: One (1) hard copy 8 ½ x 11, except site plan sheets which should be 11 x 17, and one (1) electronic (pdf) copy. A completed in full application can be submitted to the Community Development Department (5915 Milwaukee Street, McFarland, WI 53558, community.development@mcfarland.wi.gov), with fees included with submittal **by *NOON of the deadline day**, according to the schedule below.

Village of McFarland Plan Commission 2025 Schedule

The Village of McFarland Plan Commission normally conducts meetings on the third Tuesday of each month, unless otherwise noted below at 7:00 p.m. at the McFarland Municipal Center in the Community Room. To ensure adequate time for staff review, and publication of legal notices, potential agenda item materials are required to be submitted per the schedule listed below.

***Submittal Deadline Noon on:**

For Scheduled 2025 Meeting date of:

December 10 (2024)-----	January 21
January 7-----	February 18
February 4-----	March 18
March 4-----	April 15
April 8-----	May 20
May 5-----	June 17
June 3-----	July 15
July 8-----	August 19
August 5-----	September 16
September 9-----	October 21
October 7-----	November 18
November 4-----	December 16
December 9-----	January 20, 2026

Applications requiring a public hearing will be scheduled for a hearing according to the schedule above. If there is written or verbal public opposition submitted as part of the public hearing the Plan Commission will postpone action on the application to a subsequent meeting so that concerns can be analyzed if concerns can't be addressed during the hearing. If there is no public opposition and no unresolved issues by Village Staff or Plan Commission members, the Plan Commission may take action on the application at the same meeting as the public hearing. Applicants are encouraged to contact the Community & Economic Development Director for a pre-application meeting to review the project and submittal requirements prior to submitting an official application.

Acknowledgements:

- I understand failure to provide required materials/information/fees by the submittal deadline can result in this application being withdrawn for consideration by the Plan Commission. Materials submitted for review after the submittal deadline date, or incomplete submittals, may be held over until the next scheduled meeting.
- I understand any fees not paid for (i.e. legal notices, mailings, consultant review costs, etc.) will require any permits to be withheld until all payments are made in full. In addition, all application fees are non-refundable.
- I understand Plan Commission applications requiring a Public Hearing may not be acted on the same night as the Public Hearing

X

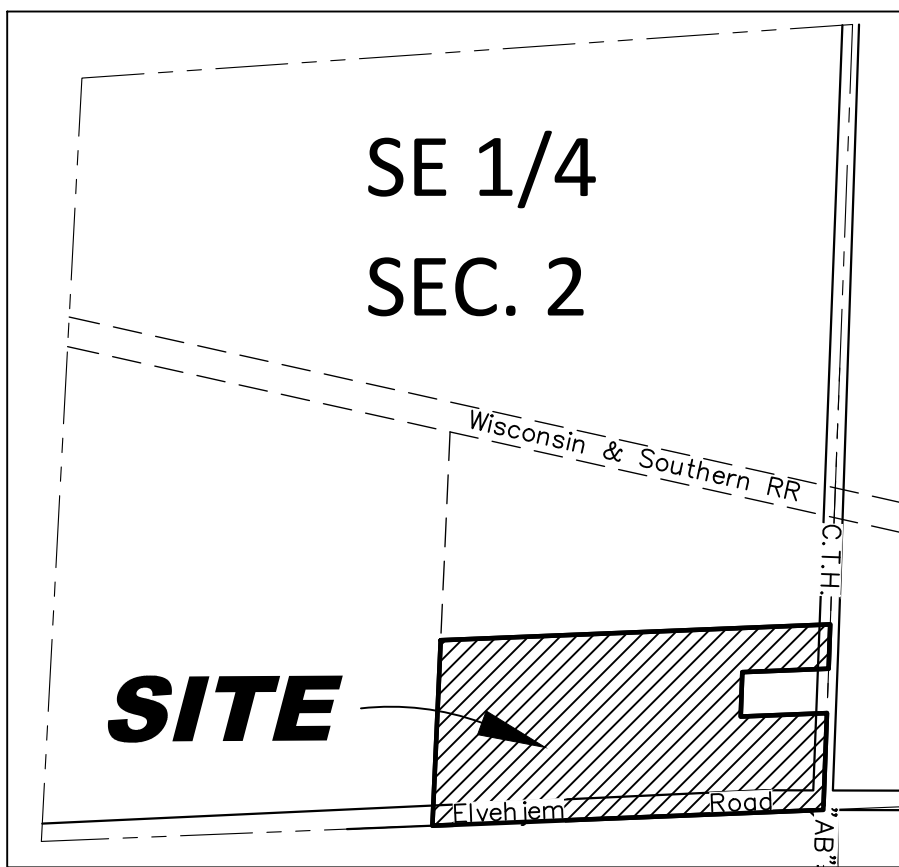
Signature of Applicant/Agent

Date

8/5/25

SPERLE CORNERS

Part of the SE 1/4 of the SE 1/4 of Section 2, Township 6 North, Range 10 East, Village of McFarland, Dane County, Wisconsin FINAL PLAT



Vicinity Map

Not to Scale

ENGINEER/SURVEYOR:

Ryan Quam, P.E.
Matthew E. Hoglund, P.L.S.
Quam Engineering, LLC
4604 Siggelkow Road – Suite A
McFarland, WI 53558
Ph: (608) 838-7750

OWNER & SUBDIVIDER:

Lakestone Properties & Management, LLC
c/o Brian Spanos
5910 Main Street, Suite 1
McFarland, WI 53558
Ph: (608) 838-1800

SURVEYOR'S CERTIFICATE:

I, Matthew E. Hoglund, Professional Land Surveyor, do hereby certify to the best of my knowledge and belief:

That I have surveyed, divided, and mapped Sperle Corners, being a part of the Southeast one-quarter of the Southeast one-quarter of Section 2, Township 6 North, Range 10 East, Village of McFarland, Dane County, Wisconsin, being more particularly described as follows:

BEGINNING at the Southeast Corner of said Section 2; thence, along the South line of said Southeast 1/4, South 87°41'38" West, 1321.53 feet to the Southwest corner of said Southeast 1/4 of the Southeast 1/4, said point also being the Southeast corner of the plat of Park View Estates, recorded in Volume 57 of Plats on Pages 782 through 785 as Document No. 3459436;

thence, along the East line of said plat, North 02°34'49" East, 626.90 feet to the Southwest corner of Lot 3 of Certified Survey Map (CSM) No. 15493, recorded in Volume 111 of CSMs on Pages 284 through 286 as Document No. 5637506;

thence, along the South line of said CSM and its Easterly extension, North 87°40'27" East, 1316.58 feet to the Southeast corner of said CSM, lying on the East line of aforesaid Southeast one-quarter;

thence, along said East line, South 02°07'34" East, 149.72 feet to the Northeast corner of Lot 1 of CSM No. 1455, recorded in Volume 6 of CSMs on Page 144 as Document No. 1400799;

thence, along the North line of last said CSM, South 87°41'15" West, 291.58 feet to the Northwest corner of said Lot 1;

thence, along the West line of said Lot 1, South 02°07'34" West, 150.00 feet to the Southwest corner of said Lot 1;

thence, along the South line of said Lot 1, North 87°41'15" East, 291.58 feet to the Southeast corner of said Lot 1, lying on said East line of the Southeast one-quarter;

thence, along said East line, South 02°07'34" East, 327.23 feet to the **POINT OF BEGINNING**.

The above-described parcel contains 780,586 sq. feet or 17.9198 acres, more or less, and is **SUBJECT TO** easements for Public road right-of-way purposes for Elvehjem Road and County Trunk Highway "AB" and is **ALSO SUBJECT TO** all other matters of record and/or fact.

That I have made such survey, land division, and plat by the direction of Brian Spanos of LAKESTONE PROPERTIES & MANAGEMENT LLC, owner of said land. That such plat is a correct representation of all of the exterior boundaries of the land surveyed and the subdivision thereof made; that I have fully complied with the provisions of Chapter 236 of the Wisconsin State Statutes and Chapter 56 of the Village of McFarland Subdivision Ordinance in surveying, dividing, and mapping the same.

Dated this 8th day of February, 2025.

Matthew E. Hoglund
Professional Land Surveyor
No. 10000
State of Wisconsin
P.L.S. S-1910

VILLAGE TREASURER'S CERTIFICATE:

STATE OF WISCONSIN)
COUNTY DANE) SS

I, _____, being the duly appointed, qualified and acting Village Treasurer of the Village of McFarland, do hereby certify that in accordance with the records in my office, there are no unpaid taxes or unpaid special assessments as of _____ (date) on any of the land included in the plat of SPERLE CORNERS.

Date: _____
Village Treasurer

COUNTY TREASURER'S CERTIFICATE:

STATE OF WISCONSIN)
COUNTY DANE) SS

I, Adam Gallagher, being the duly elected, qualified and acting treasurer of the County of Dane, do hereby certify that the records in my office show no unredeemed tax sales and no unpaid taxes or unpaid special assessments as of _____ (date) affecting the lands included in the plat of SPERLE CORNERS.

Date: _____
Adam Gallagher - Treasurer

REGISTER OF DEEDS CERTIFICATE:

Received for recording this ____ day of _____, 20____, at

____ o'clock ____ M. and recorded in Volume ____ of Plats on

Pages ____ as Document No. ____.

Kristi Chlebowski, Dane County Register of Deeds

OWNER'S CERTIFICATE:

LAKESTONE PROPERTIES & MANAGEMENT LLC, a Limited Liability Company duly organized and existing under and by virtue of the laws of the State of Wisconsin, as owner, does hereby certify that said company caused the land described on this plat to be surveyed, divided, mapped, and dedicated as represented on this plat. LAKESTONE PROPERTIES & MANAGEMENT LLC does further certify that this plat is required by s.236.10 or s.236.12 to be submitted to the following for approval or objection:

- 1) Village of McFarland
- 2) Department of Administration

IN WITNESS WHEREOF, the said LAKESTONE PROPERTIES & MANAGEMENT LLC has caused these presents to be

signed by Brian C. Spanos, Member and Brett A. Riemen, Member at

_____, Wisconsin,

and its company seal to be hereunto affixed on this ____, day of _____, 20__.

In the presence of: _____
Brian C. Spanos Brett A. Riemen

STATE OF WISCONSIN)
COUNTY DANE) SS

Personally came before me this ____ day of _____, 20____, Brian C. Spanos and Brett A. Riemen of the above named Limited Liability Company, to me known to be the person(s) who executed the foregoing instrument, and to me known to be Members of said Limited Liability Company, and acknowledged that they executed the foregoing instrument as such officer as the deed of said company, by its authority.

(Notary Seal) _____ Notary Public, _____, Wisconsin

My commission expires _____.

NOTES:

1. Outlot 1 is dedicated to the Public for wetland preservation and stormwater management purposes to be owned & maintained by the the Village of McFarland.
2. Outlot 2 is dedicated to the Public for park and recreational purposes to be owned & maintained by the the Village of McFarland.
3. All streets will be dedicated to the Public to be owned & maintained by the Village of McFarland.
4. Current zoning of the property within this plat is A-1 Agricultural Transition, with portions also being in the Dane County Wetland District (inland & Shoreland) 75' buffer and Shoreland District (Secondary) 1000' buffer.
5. Proposed zoning for Lots 1-18 and Outlots 1 and 2 is PD - Planned Development.
6. Wetlands shown were digitized from the October 13, 2022 Wetland Delineation Report by Ruekert-Mielke.
7. Date of boundary field survey: February 6, 2025.
8. See Sheet 2 for Boundary Survey, Lot and easement details.
9. Public Utility Easements (PUEs) Dedicated to the Public herein are for the use of public bodies and private quasi-public utilities having the right to serve this subdivision for electric, telephone, cable TV, internet data and street lighting purposes. Easements shown are 12 feet wide, 6 feet each side from the lot lines, unless otherwise noted. No utility pole, pedestal, manhole, vault, cable or anchor shall be placed so as to disturb any survey monument or obstruct vision along any lot or street line. The unauthorized disturbance of a survey monument is a violation of s.236.32 of Wisconsin Statutes.
10. Public Storm Sewer/Stormwater Management Easements Dedicated to the Public herein are for Storm Sewer and Stormwater Management purposes. Easements shown are 12 feet wide, 6 feet each side from the lot lines, unless otherwise noted. No piping or structures shall be placed so as to disturb any survey monument or obstruct vision along any lot or street line. The unauthorized disturbance of a survey monument is a violation of s.236.32 of Wisconsin Statutes.
11. The Cluster Mailbox Easement, over a part of Lot 2 as shown on Sheet 2 hereof, is for U.S. Postal Service approved, multiple gang, multi-user joint mailboxes. A Cluster Mailbox Easement Agreement will be recorded by separate instrument that will denote the specific lots benefiting from said easement and will set forth the requirements and restrictions for the installation, maintenance, repair and replacement of the cluster mailboxes and associated improvements.

CONSENT OF CORPORATE MORTGAGEE:

_____, a corporation duly organized and existing under and by virtue of the laws of the State of Wisconsin, mortgagee of the above described land, does hereby consent to the surveying, dividing, mapping, and dedication of the land described on this plat, and does hereby consent to the above certificate of LAKESTONE PROPERTIES & MANAGEMENT LLC, owner.

IN WITNESS WHEREOF, the said _____ has caused these presents to be signed by _____, its _____, and _____, its _____, at _____, Wisconsin, and its corporate seal to be hereunto affixed on this _____, day of _____, 20__.

In the presence of:

_____, _____ (Corporate Seal)

By: _____, Date: _____

its

By: _____, Date: _____

its

STATE OF WISCONSIN)
COUNTY) SS

Personally came before me this ____ day of _____, 20____, _____ and _____ of the above named corporation,

to me known to be the persons who executed the foregoing instrument, and to me known to be such _____ and _____ of said corporation, and acknowledged that they executed the foregoing instrument as such officers as the deed of said corporation, by its authority.

(Notary Seal) _____ Notary Public, _____, Wisconsin

My commission expires _____.

VILLAGE OF MCFARLAND APPROVAL CERTIFICATE:

Resolved that the plat of Sperle Corners, in the Village of McFarland, LAKESTONE PROPERTIES & MANAGEMENT LLC, owner, is hereby approved and dedications accepted by the Village Board.

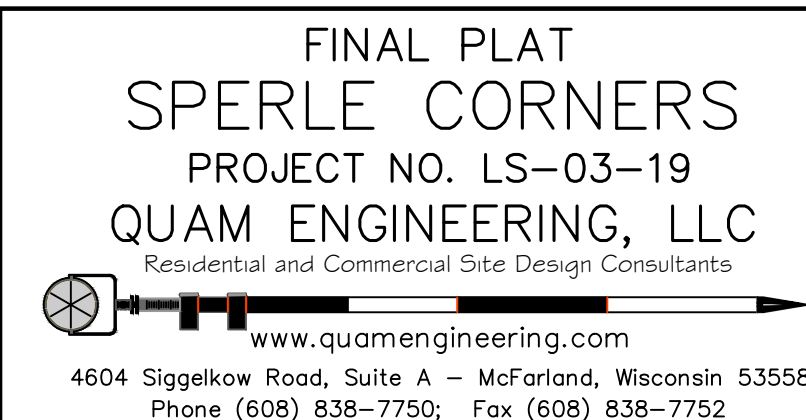
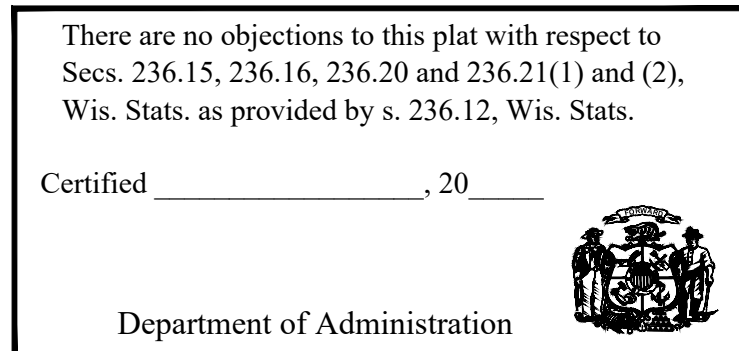
Date: _____ Approved _____ Title: _____

I hereby certify that the foregoing is a copy of a Resolution adopted by the Village Board of the Village of McFarland.

Date: _____ Signed _____ Village Clerk

DRAFT

SHEET 1 OF 3



There are no objections to this plat with respect to
Secs. 236.15, 236.16, 236.20 and 236.21(1) and (2),
Wis. Stats. as provided by s. 236.12, Wis. Stats.

Certified _____, 20____

Department of Administration

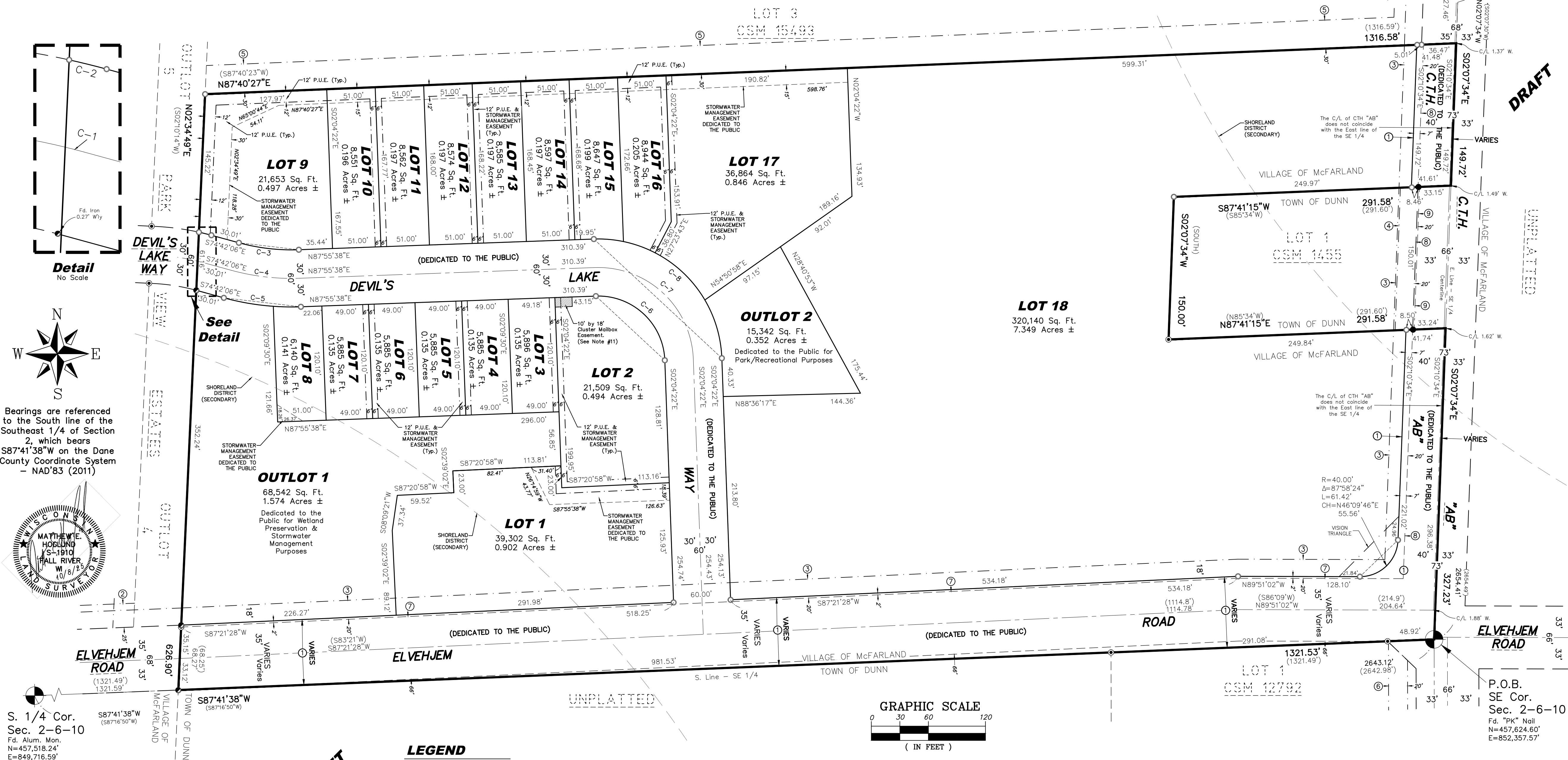


SPERLE CORNERS

Part of the SE 1/4 of the SE 1/4 of Section 2, Township 6 North,
Range 10 East, Village of McFarland, Dane County, Wisconsin

FINAL PLAT

Total Area
780,586 Sq. Ft.
17.9198 Acres ±



S. 1/4 Cor.
Sec. 2-6-10
Fd. Alum. Mon.
N=457,518.24'
E=849,716.59'

EASEMENT/RIGHT-OF-WAY NOTES

- Right-of-Way dedicated to the Public as noted hereon.
- 25' Public Stormwater Easement per Park View Estates.
- 20' WP&L Gas Main Easement per Vol. 378, P. 577 - Doc. No. 1052660.
- 20' Utility Easement per CSM 1455.
- 30' Public Sewer, Water and Bike Path Easement per CSM 15493.
- 20' WP&L Gas Main Easement per Vol. 397, P. 330 - Doc. No. 1082351.
- 66' Wide Conveyance of Lands for Highway Purposes to the Town of Dunn per Doc. 1008944 & Dane County Hwy. Survey Proj. No. 61-14.
- West Line of Conveyance of Lands for Highway Purposes to the Town of Dunn per Doc. 831820 & Survey Plat Map No. 249 by Alex Ely, Dane County Surveyor, dated March 26, 1952.
- CSM 1455 depicted W. R/W CTH "AB" 33' W. of Section Line vs. prior Doc. 831820 & Survey Plat Map No. 249 used hereon.

LEGEND

- 3/4" Rebar Found
- 1-1/4" Iron Rebar Found
- 1" Iron Pipe Found (unless noted)
- 1-1/4" by 18" Iron Rebar Set Weighing 4.30 lbs./ft.
- All other Lot and Outlot Corners are Set 3/4" by 18" Iron Rebar Weighing 1.50 lbs./ft. (43.12')
- Record Dimensions (if different)
- Boundary Lines per this Survey
- Deed/Survey Line of Record
- Existing R/W Line
- Sectional Subdivision Line
- Existing Easement Line
- Lot or R/W Line
- Centerline
- Public Utility & Stormwater Management Easement (PUE) Dedicated Hereon (12' wide unless noted)
- Storm Sewer/Stormwater Management Easement Dedicated Hereon

CURVE DATA TABLE

CURVE	RADIUS	DELTA	LENGTH	CHORD	TANGENT BEARINGS
C1	240.00'	01°36'50"	6.76'	S75°30'31"E - 6.76'	S76°18'56"E (on map)
C2	270.00'	02°51'39"	13.48'	S76°07'56"E - 13.48'	S77°33'45"E (on map)
C3	210.00'	17°22'16"	63.67'	S83°23'14"E - 63.42'	(on map) (on map)
C4	240.00'	17°22'16"	72.76'	S83°23'14"E - 72.49'	(on map) (on map)
C5	270.00'	17°22'16"	81.86'	S83°23'14"E - 81.55'	(on map) (on map)
OUTLOT 1	11°13'00"	52.86'	S80°18'36"E - 52.77'	-	-
LOT 8	06°09'16"	29.00'	S88°59'44"E - 28.99'	-	-
C6	70.00'	90°00'00"	109.96'	S47°04'22"E - 99.00'	(on map) (on map)
C7	100.00'	90°00'00"	157.08'	S47°04'22"E - 141.42'	(on map) (on map)
C8	130.00'	90°00'00"	204.20'	S47°04'22"E - 183.85'	(on map) (on map)
LOT 15	13°49'15"	31.36'	S85°09'45"E - 31.28'	-	-
LOT 16	15°38'50"	35.50'	S70°25'42"E - 35.39'	-	-
LOT 27	32°08'46"	72.94'	S46°31'54"E - 71.98'	-	-
OUTLOT 2	28°23'09"	64.40'	S16°15'57"E - 63.75'	-	-

ENGINEER/SURVEYOR:

Ryan Quam, P.E.
Matthew E. Hoglund, P.L.S.
Quam Engineering, LLC
4604 Siggelkow Road - Suite A
McFarland, WI 53558
Ph: (608) 838-7750

OWNER & SUBDIVIDER:

Lakestone Properties & Management, LLC
c/o Brian Spanos
5910 Main Street, Suite 1
McFarland, WI 53558
Ph: (608) 838-1800

SEE SHEET 1 FOR NOTES & CERTIFICATES.
SEE SHEET 3 FOR WETLAND DETAILS.
SHEET 2 OF 3

FINAL PLAT
SPERLE CORNERS
PROJECT NO. LS-03-19
QUAM ENGINEERING, LLC
Residential and Commercial Site Design Consultants

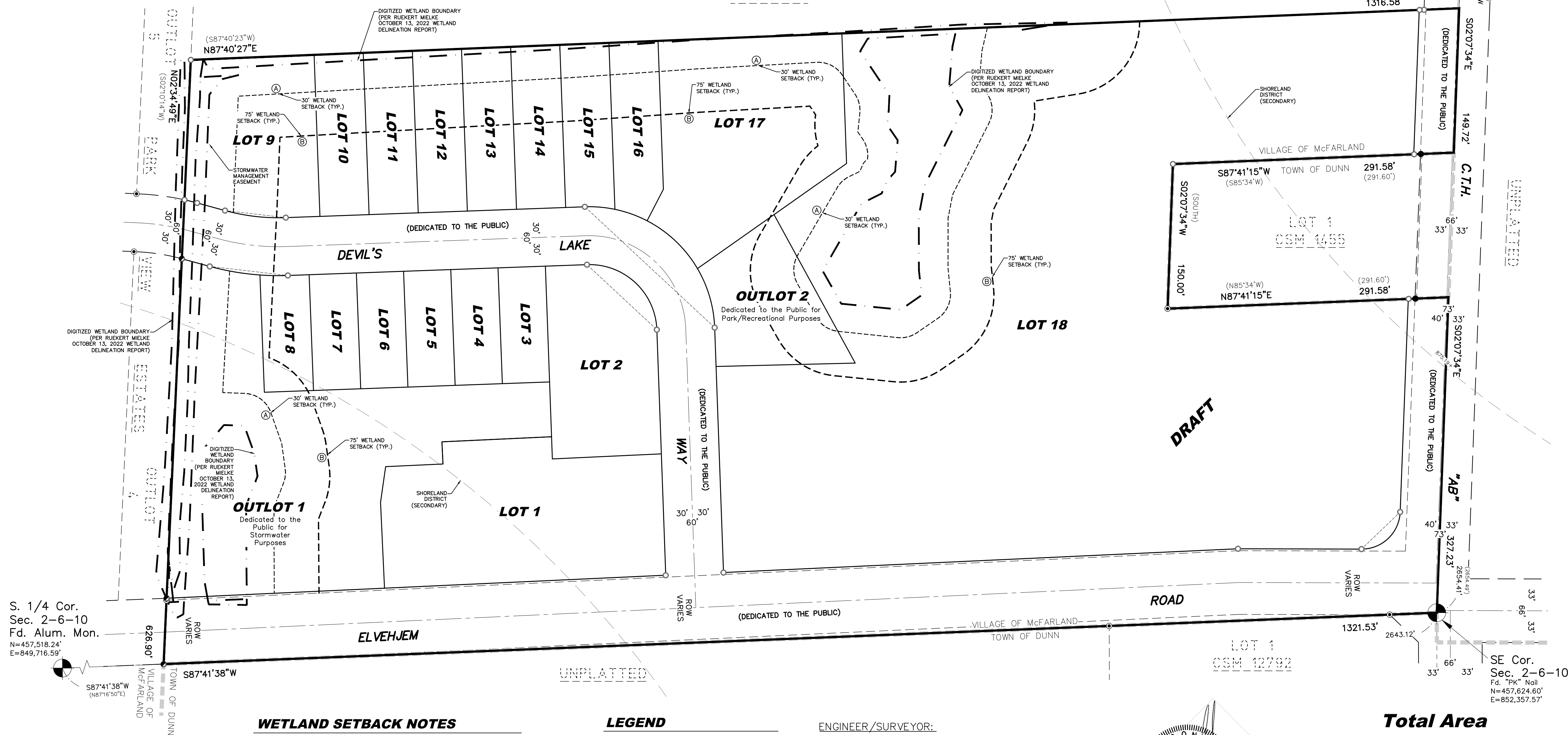
www.quamengineering.com
4604 Siggelkow Road, Suite A - McFarland, Wisconsin 53558
Phone (608) 838-7750; Fax (608) 838-7752

Part of the SE 1/4 of the SE 1/4 of Section 2, Township 6 North, Range 10 East, Village of McFarland, Dane County, Wisconsin

DRAFT

LOT 3
CSM 15493

E. 1/4 Cor.
Sec. 2-6-10
Fd. "PK" Nail
N=460,277.18'
E=852,456.04'



- (A) There shall be no grading within 30' of the delineated wetland boundaries without the written approval of the Village of McFarland in consultation with CARPC.
- (B) There shall be no impervious surfaces within 75' of the delineated wetland boundaries without the written approval of the Village of McFarland in consultation with CARPC.

● 3/4" Rebar Found
 ● 1-1/4" Iron Rebar Found
 ⊙ 1" Iron Pipe Found (unless noted)
 ○ 1-1/4" by 18" Iron Rebar Set
 Weighing 4.30 lbs./ft.

All other Lot and Outlot Corners are Set 3/4"
 by 18" Iron Rebar Weighing 1.50 lbs./ft.

(43.12') Record Dimensions (if different)
 _____ Boundary Lines per this Survey
 _____ Deed/Survey Line of Record
 _____ Existing R/W Line
 - - - - - Sectional Subdivision Line
 _____ Wetland Line
 _____ 75' Wetland Buffer
 _____ Lot or R/W Line
 - - - - - Centerline
 _____ Municipal Boundary

ENGINEER/SURVEYOR:
Ryan Quam, P.E.
Matthew E. Hoglund, P.L.S.
Quam Engineering, LLC
4604 Siggelkow Road – Suite A
McFarland, WI 53558
Ph: (608) 838-7750

OWNER & SUBDIVIDER:
Lakestone Properties & Management, LLC
c/o Brian Spanos
5910 Main Street, Suite 1
McFarland, WI 53558
Ph: (608) 838-1800



There are no objections to this plat with respect to Secs. 236.15, 236.16, 236.20 and 236.21(1) and (2), Wis. Stats. as provided by s. 236.12, Wis. Stats.

Certified _____, 20____

Department of Administration



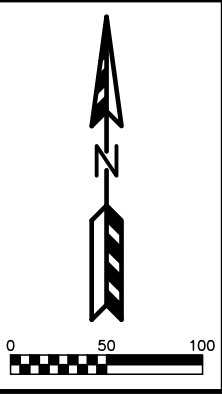
Total Area
780,586 Sq. Ft.
17.9198 Acres±

SEE SHEET 1 FOR NOTES & CERTIFICATES.
SEE SHEET 2 FOR BOUNDARY SURVEY.
LOT & EASEMENT DETAILS.

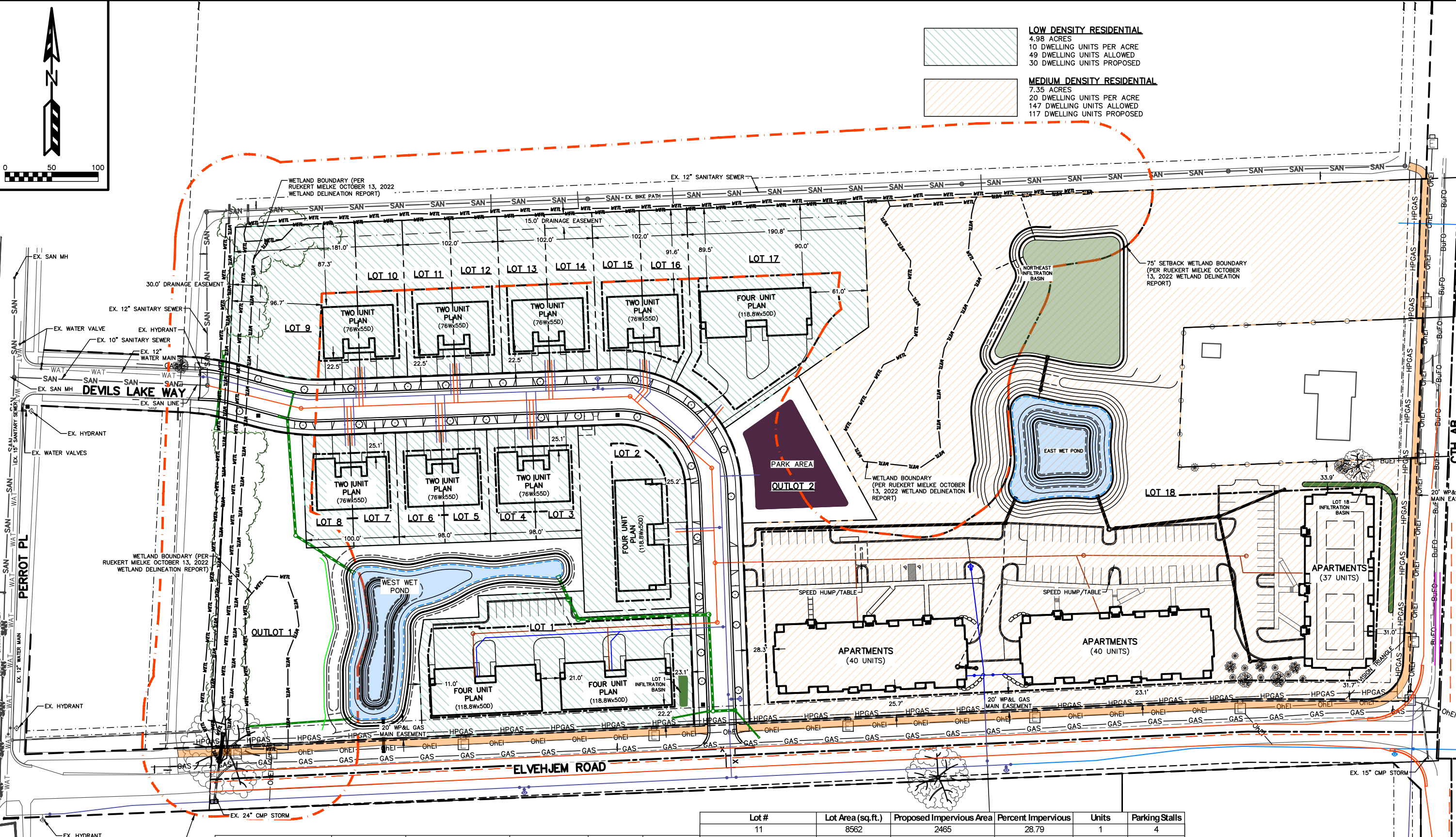
SHEET 3 OF 3

FINAL PLAT
SPERLE CORNERS
PROJECT NO. LS-03-19
QUAM ENGINEERING, LLO
Residential and Commercial Site Design Consultants

4604 Siggelkow Road, Suite A – McFarland, Wisconsin 53558
Phone (608) 838-7750; Fax (608) 838-7752



- LOW DENSITY RESIDENTIAL**
4.98 ACRES
10 DWELLING UNITS PER ACRE
49 DWELLING UNITS ALLOWED
30 DWELLING UNITS PROPOSED
- MEDIUM DENSITY RESIDENTIAL**
7.35 ACRES
20 DWELLING UNITS PER ACRE
147 DWELLING UNITS ALLOWED
117 DWELLING UNITS PROPOSED



Lot #	Lot Area (sq.ft.)	Proposed Impervious Area	Percent Impervious	Units	Parking Stalls
1	41008	24502	59.75	8	42
2	21509	8047	37.41	4	16
3	5896	2525	42.83	1	4
4	5885	2515	42.74	1	4
5	5885	2514	42.72	1	4
6	5885	2515	42.74	1	4
7	5885	2514	42.72	1	4
8	6140	2517	40.99	1	4
9	21653	2465	11.38	1	4
10	8551	2464	28.82	1	4
11	8562	2465	28.79	1	4

Lot #	Lot Area (sq.ft.)	Proposed Impervious Area	Percent Impervious	Units	Parking Stalls
11	8562	2465	28.79	1	4
12	8574	2466	28.76	1	4
13	8585	2464	28.70	1	4
14	8597	2465	28.67	1	4
15	8647	2465	28.51	1	4
16	8944	2680	29.96	1	4
17	36864	10995	29.83	4	16
18	320229	87117	27.20	117	214
Outlot 1	66857	0	0.00	0	0
Outlot 2	15342	0	0.00	0	0
Street ROW	50005	38570	77.13	0	0
TOTALS	669503	204285	30.51	147	344

Avg. # Parking Stalls per Unit

2.34

SPERLE CORNERS – VILLAGE OF MCFARLAND
GENERAL DEVELOPMENT PLAN
EXHIBIT: 1 OF 1
DATED: OCTOBER 17, 2025

QUAM ENGINEERING, LLC
Residential and Commercial Site Design Consultants
www.quamengineering.com
4604 Siggelkow Road, Suite A – McFarland, Wisconsin 53558
Phone (608) 838-7750; Fax (608) 838-7752

SPERLE CORNERS RESIDENTIAL

SUBDIVISION

STREET AND UTILITY CONSTRUCTION

VILLAGE OF MCFARLAND

DANE COUNTY, WISCONSIN

SHEET	INDEX	DESCRIPTION
1		COVER PAGE
2		EXISTING SITE PLAN
3		OVERALL GRADING AND STORM WATER MANAGEMENT PLAN
4		WEST POND PLAN
5		EAST POND PLAN
6	0+00 - 6+00	DEVILS LAKE WAY - PLAN AND PROFILE
7	6+00 - 10+00	DEVILS LAKE WAY - PLAN AND PROFILE
8	20+00 - 27+50	STORM SEWER - PLAN AND PROFILE
9	29+00 - 35+00	STORM SEWER - PLAN AND PROFILE
10	50+00 - 56+00	WATER MAIN - PLAN AND PROFILE
11	56+00 - 62+00	WATER MAIN - PLAN AND PROFILE
12		SIGN & LIGHTING PLAN
13		STREET TREE PLAN
14		DETAILS #1
15		DETAILS #2
16		DETAILS #3
17		DETAILS #4



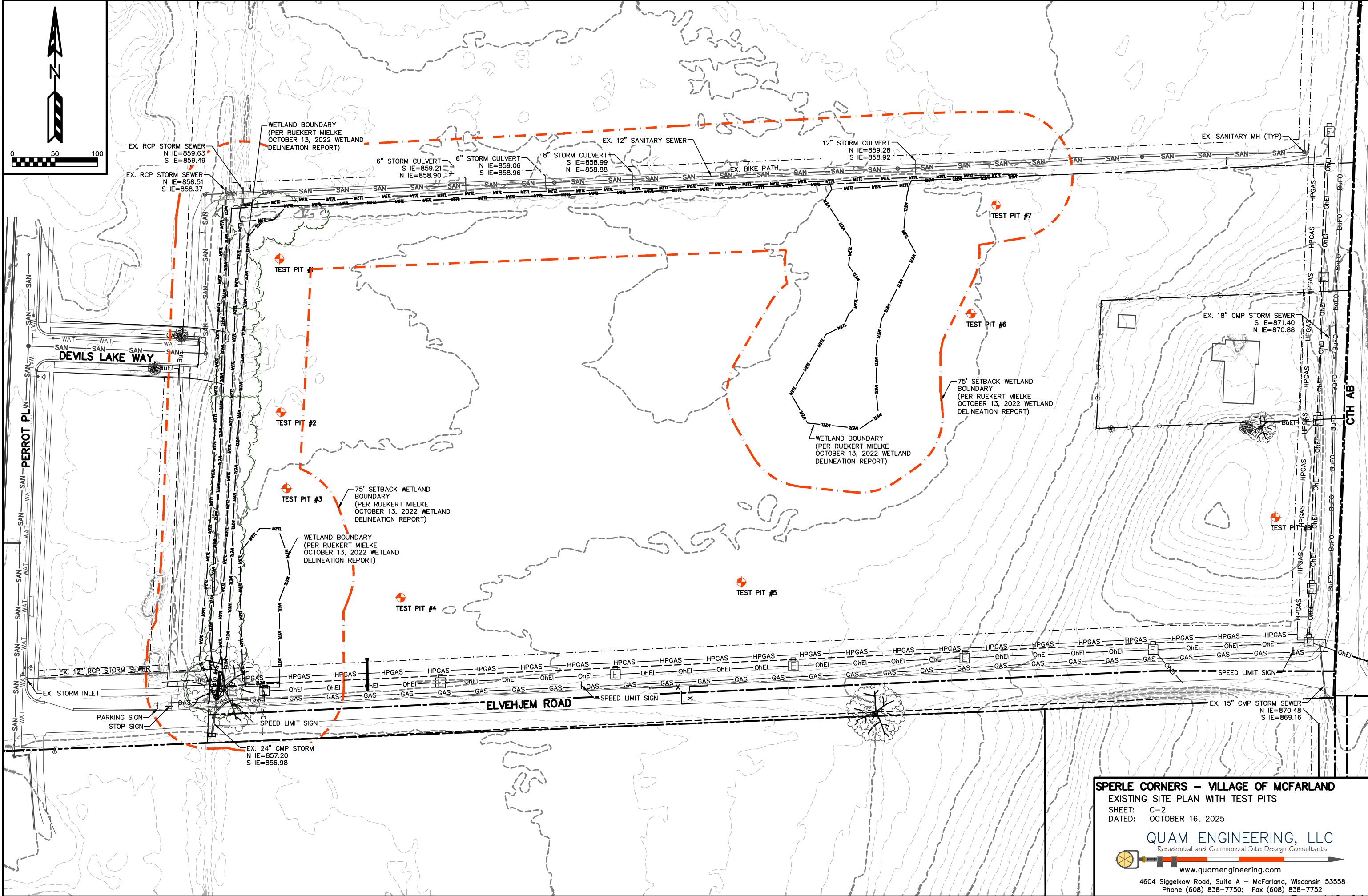
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SPERLE CORNERS - VILLAGE OF MCFARLAND

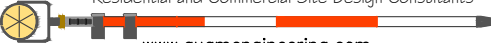
EXISTING SITE PLAN WITH TEST PITS

SHEET: C-2

DATED: OCTOBER 16, 2025

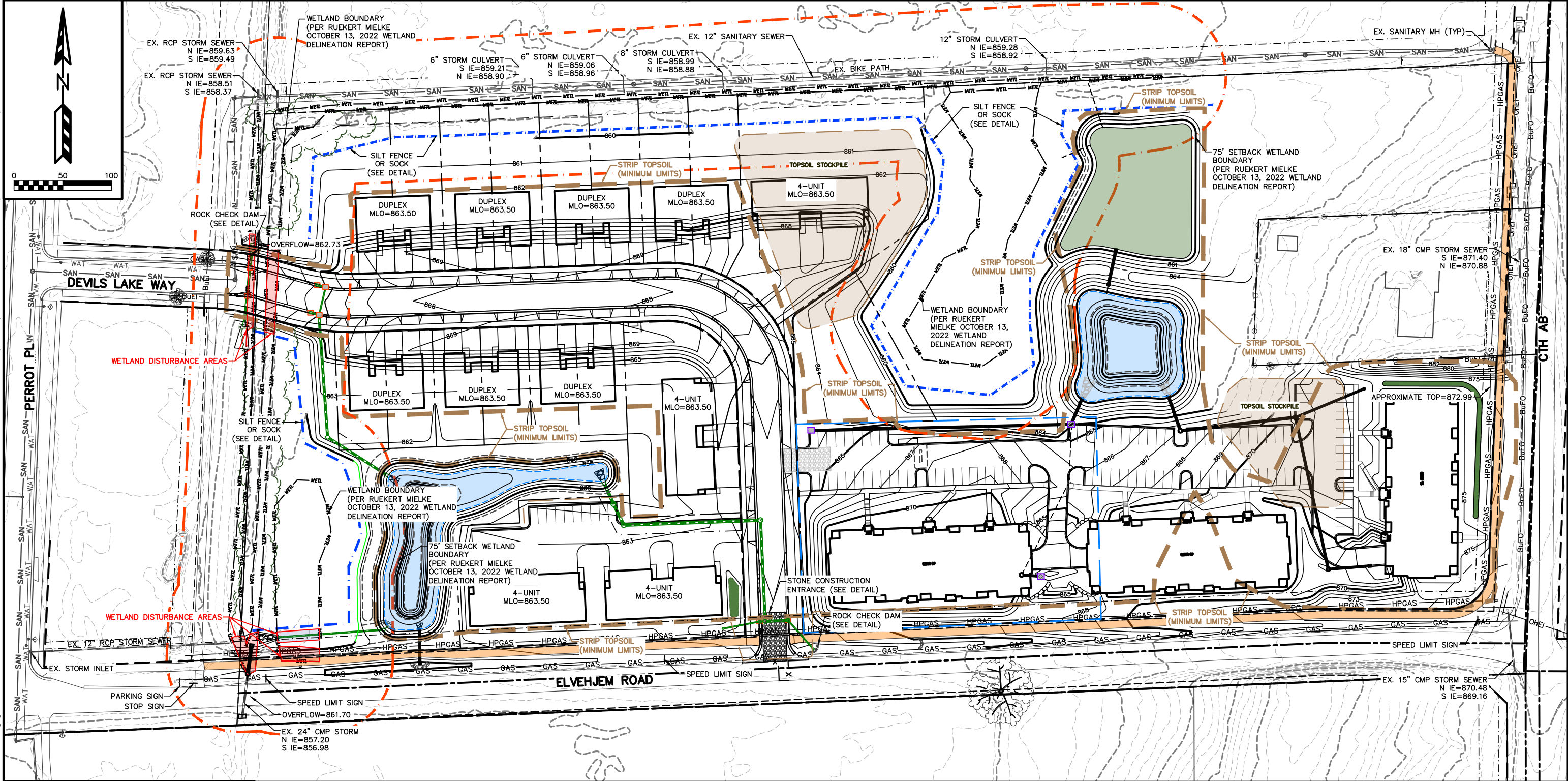
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LEGEND FOR COMMON LINES:	
	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPERTY LINE
	ROAD RIGHT-OF-WAY
	EASEMENT LINE
	75 FT SHORELINE SETBACK
	EXISTING FENCE
	EXISTING BURIED WATER MAIN/SERVICE
	EXISTING BURIED SANITARY SEWER/LATERAL
	EXISTING BURIED GAS LINE
	EXISTING BURIED COMMUNICATION LINE
	EXISTING BURIED FIBER OPTIC LINE
	EXISTING BURIED TELEPHONE LINE
	EXISTING BURIED ELECTRIC LINE
	EXISTING OVERHEAD UTILITY LINE
	EXISTING OVERHEAD ELECTRIC LINE
	PROPOSED SILT FENCE/SOCK (SEE DETAIL)
	PROPOSED LIMITS OF DISTURBANCE
	MINIMUM LOWEST OPENING
	FLEXSTORM INLET PROTECTION (SEE DETAIL)

SPERLE CORNERS – VILLAGE OF MCFARLAND

OVERALL GRADING & STORM WATER MANAGEMENT PLAN

SHEET: C-3

DATED: OCTOBER 16, 2025

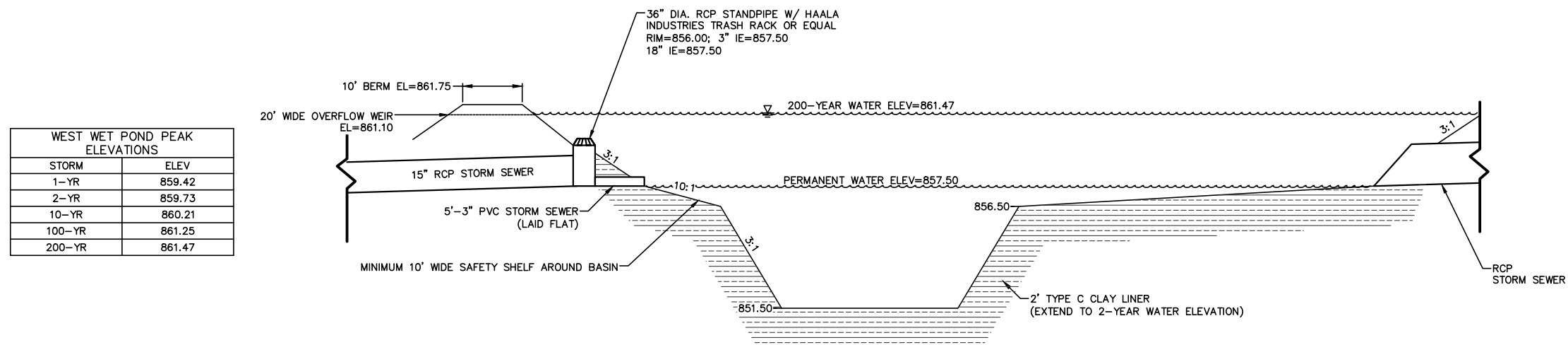
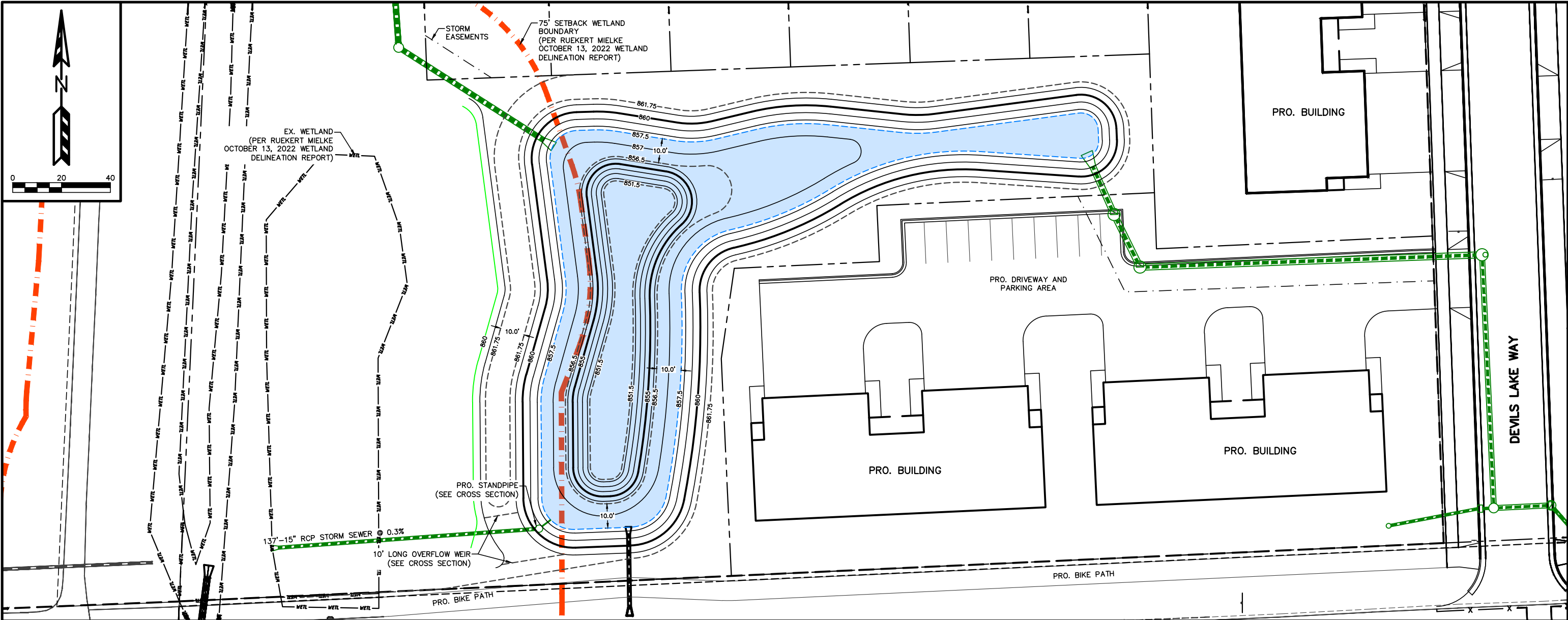
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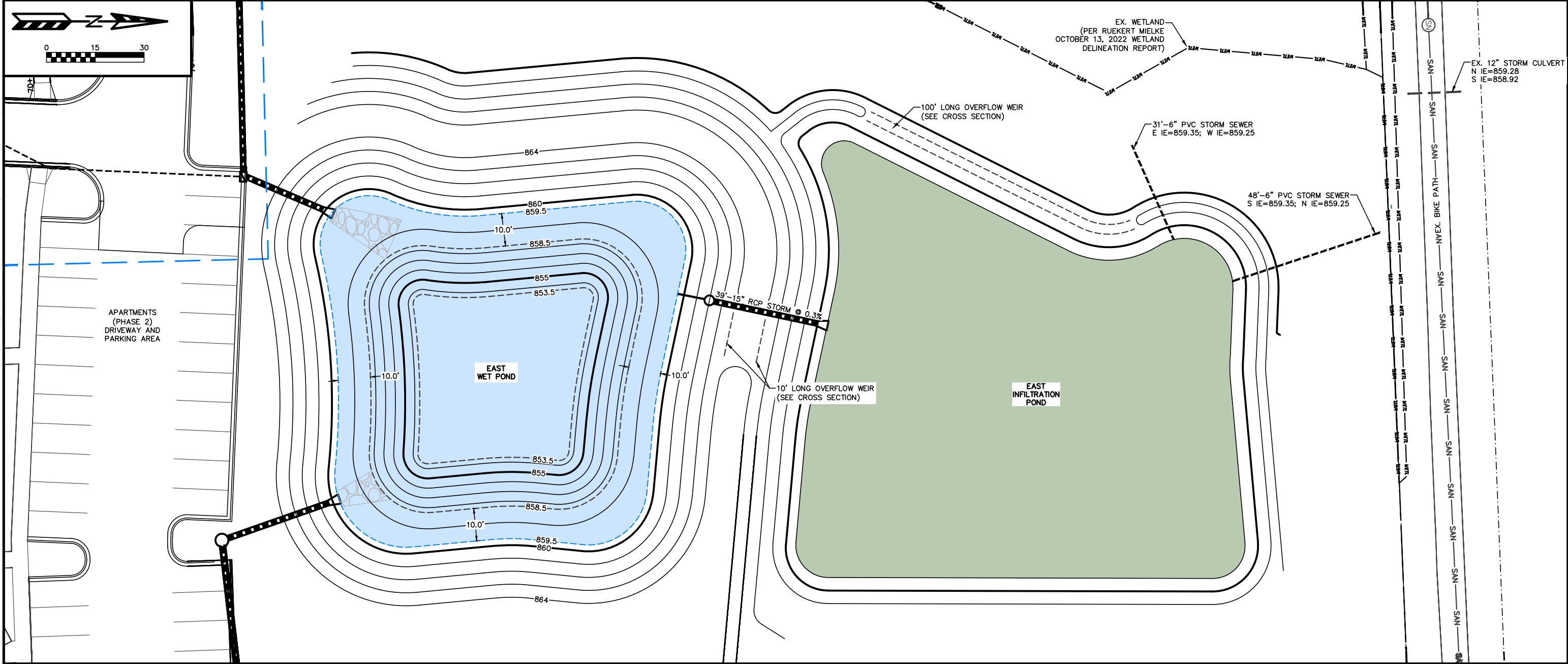


CONTRACTOR SHALL NOTIFY ENGINEER WHEN POND IS GRADED TO FINISH ELEVATIONS FOR AS-BUILT TOPOGRAPHIC COLLECTION. IF PUMPING IS REQUIRED TO ALLOW THE BOTTOM TO BE COLLECTED, CONTRACTOR SHALL ARRANGE FOR PUMPING.

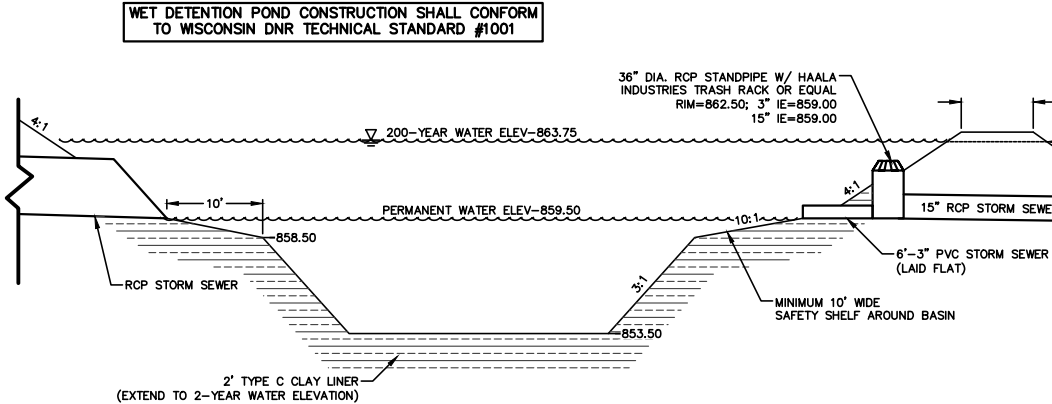


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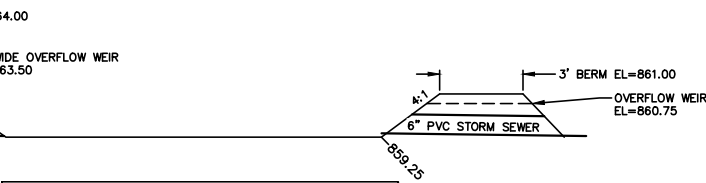


EAST WET POND PEAK ELEVATIONS	
STORM	ELEV
1-YR	861.48
2-YR	861.80
10-YR	862.61
100-YR	863.42
200-YR	863.75



EAST WET DETENTION POND CROSS SECTION

INFILTRATION BASIN CONSTRUCTION SHALL CONFORM TO WISCONSIN DNR TECHNICAL STANDARD #1003



EAST INFILTRATION BASIN CROSS SECTION

CONTRACTOR SHALL NOTIFY ENGINEER WHEN POND IS GRADED TO FINISH ELEVATIONS FOR AS-BUILT TOPOGRAPHIC COLLECTION. IF PUMPING IS REQUIRED TO ALLOW THE BOTTOM TO BE COLLECTED, CONTRACTOR SHALL ARRANGE FOR PUMPING.

THE SEED MIXTURE FOR THE INFILTRATION BASIN BOTTOM SHALL BE RAINWATER RENEWAL SEED MIX SUPPLIED BY AGRECOL OR EQUIVALENT. MIX 80% SAND, 20% COMPOST WITH THE NATIVE LOAMY FINE SAND SOIL.

EAST INFILTRATION BASIN PEAK ELEVATIONS	
STORM	ELEV
1-YR	859.65
2-YR	859.67
10-YR	859.96
100-YR	860.96
200-YR	861.00

CONTRACTOR SHALL NOTIFY ENGINEER WHEN POND IS GRADED TO FINISH ELEVATIONS FOR AS-BUILT TOPOGRAPHIC COLLECTION. IF PUMPING IS REQUIRED TO ALLOW THE BOTTOM TO BE COLLECTED, CONTRACTOR SHALL ARRANGE FOR PUMPING.

TO PREVENT COMPACTION OF SUBSOILS, CONTRACTOR SHALL PROTECT AGAINST MACHINERY ENTERING OR COMPACTING THE INFILTRATION AREA.

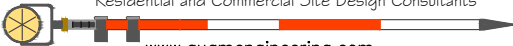
LAKESTONE PROPERTIES - VILLAGE OF MCFARLAND

EAST POND PLAN

SHEET: C-5

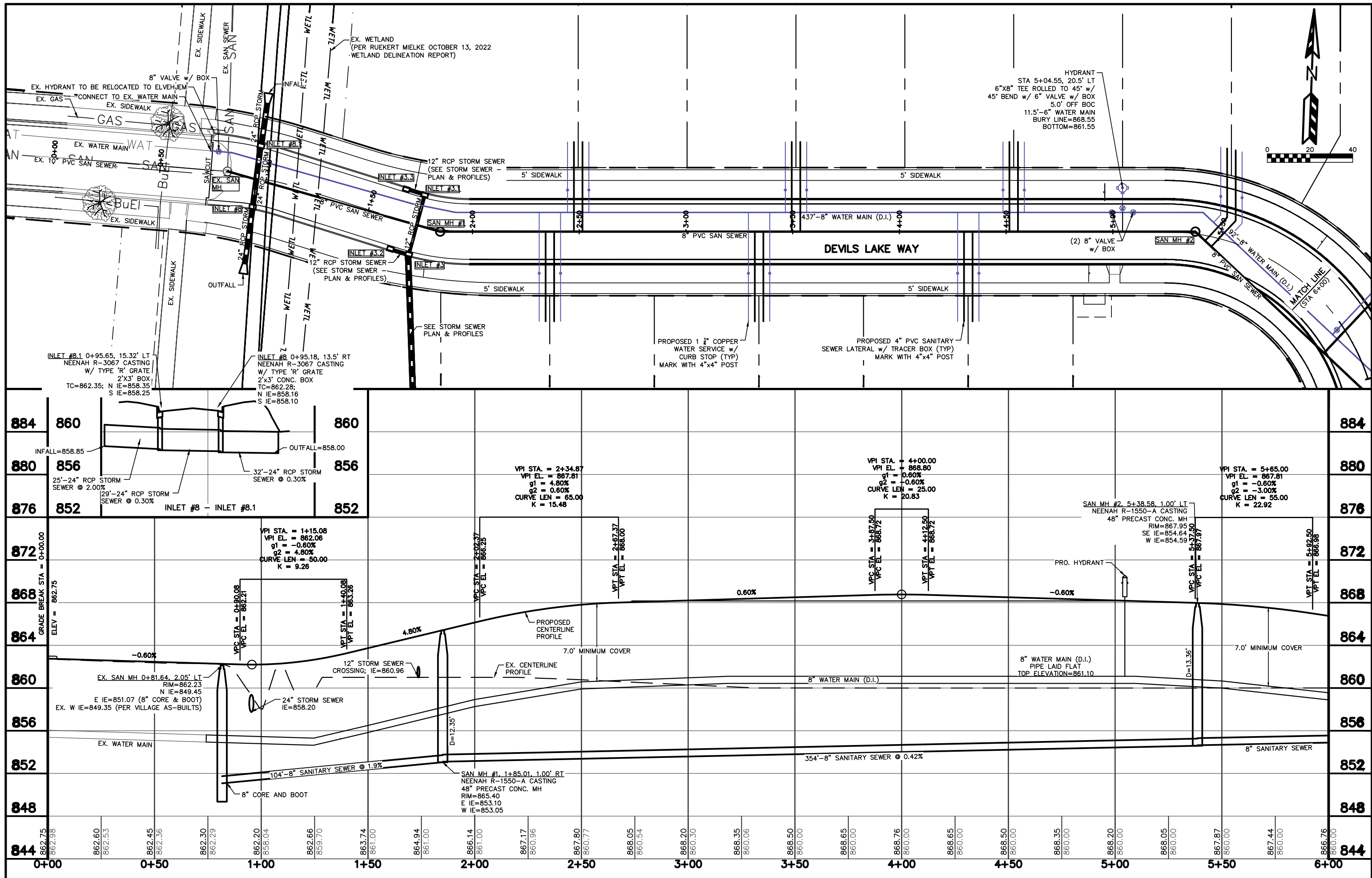
DATED: OCTOBER 16, 2025

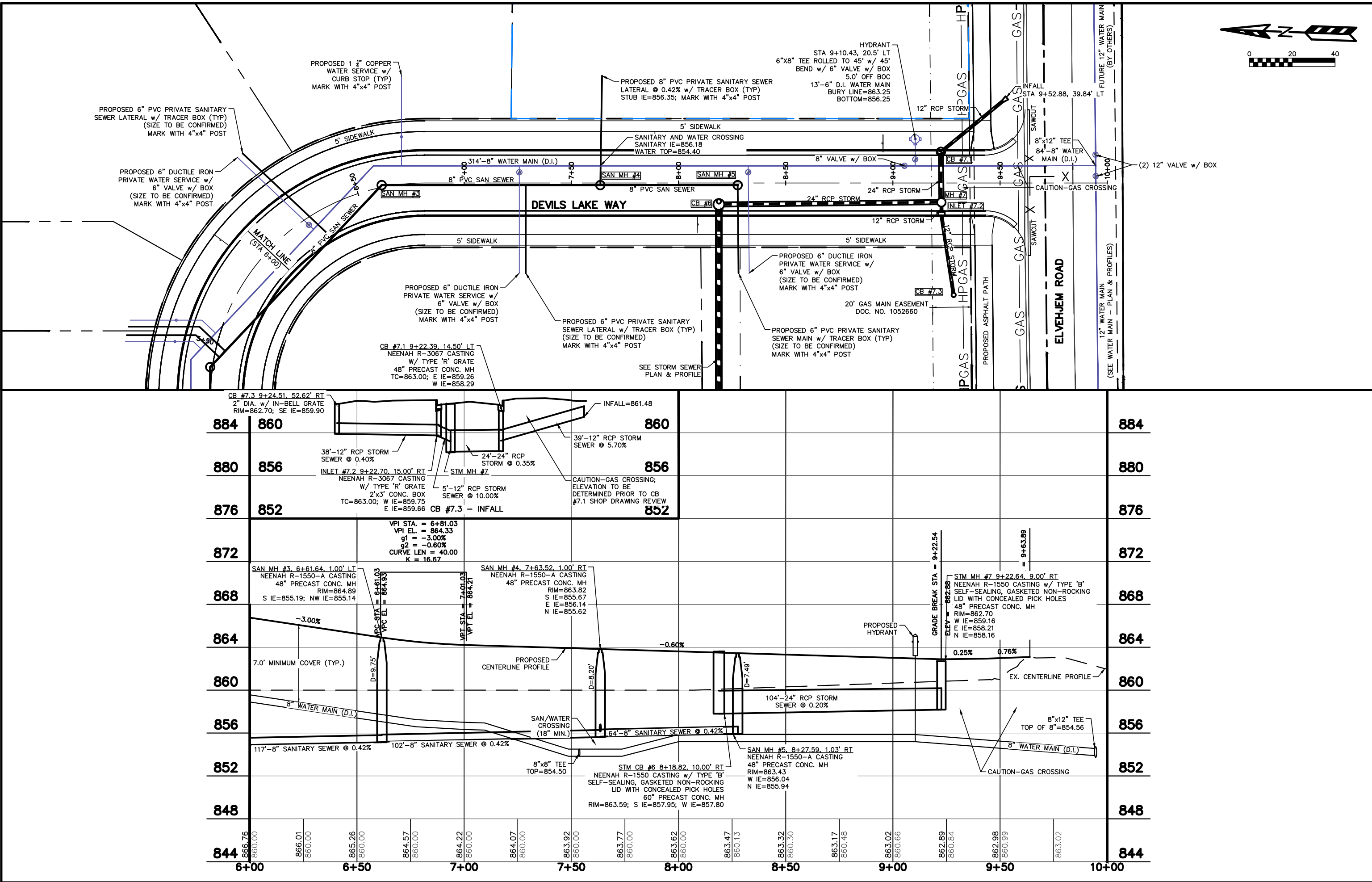
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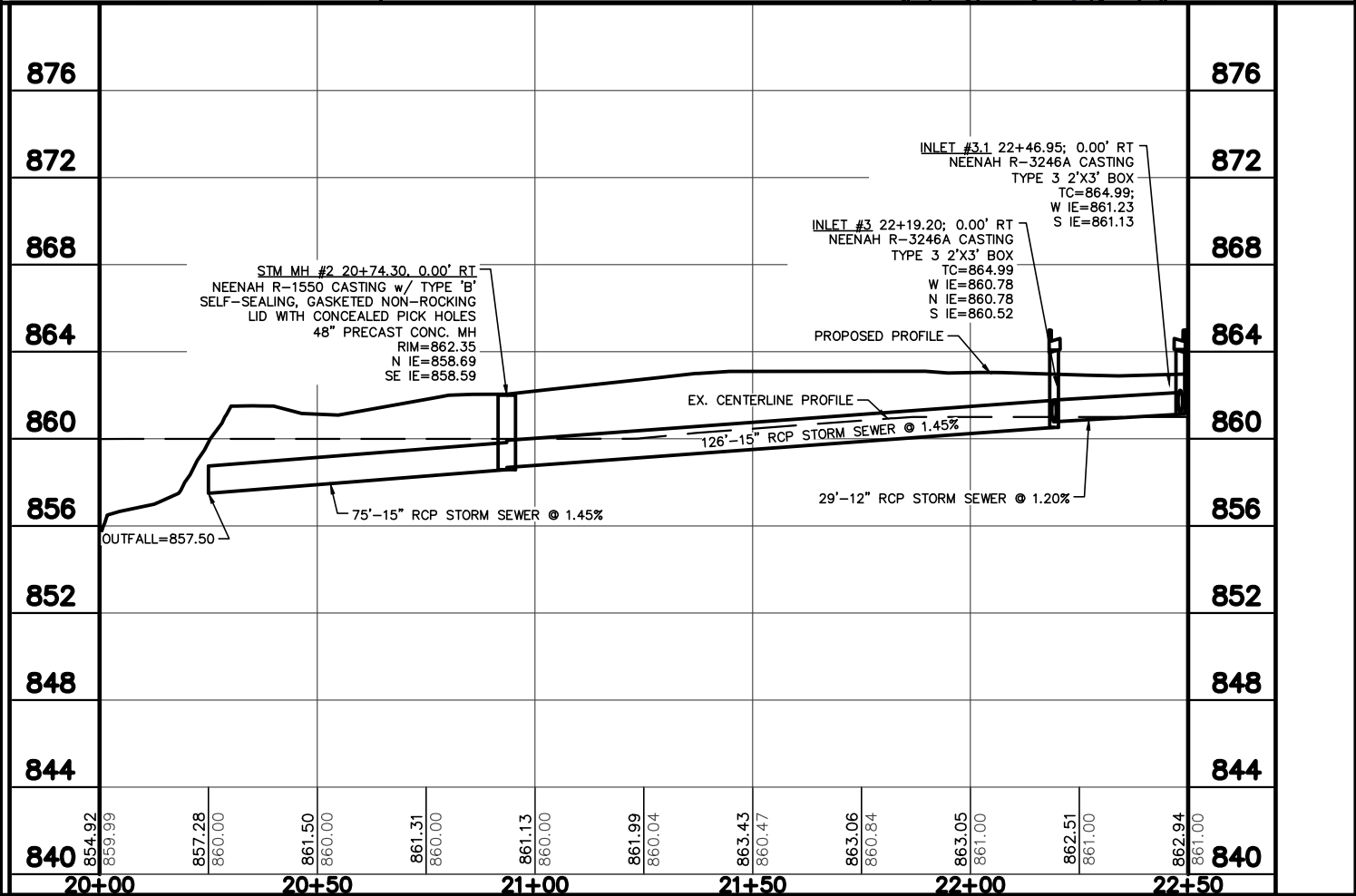
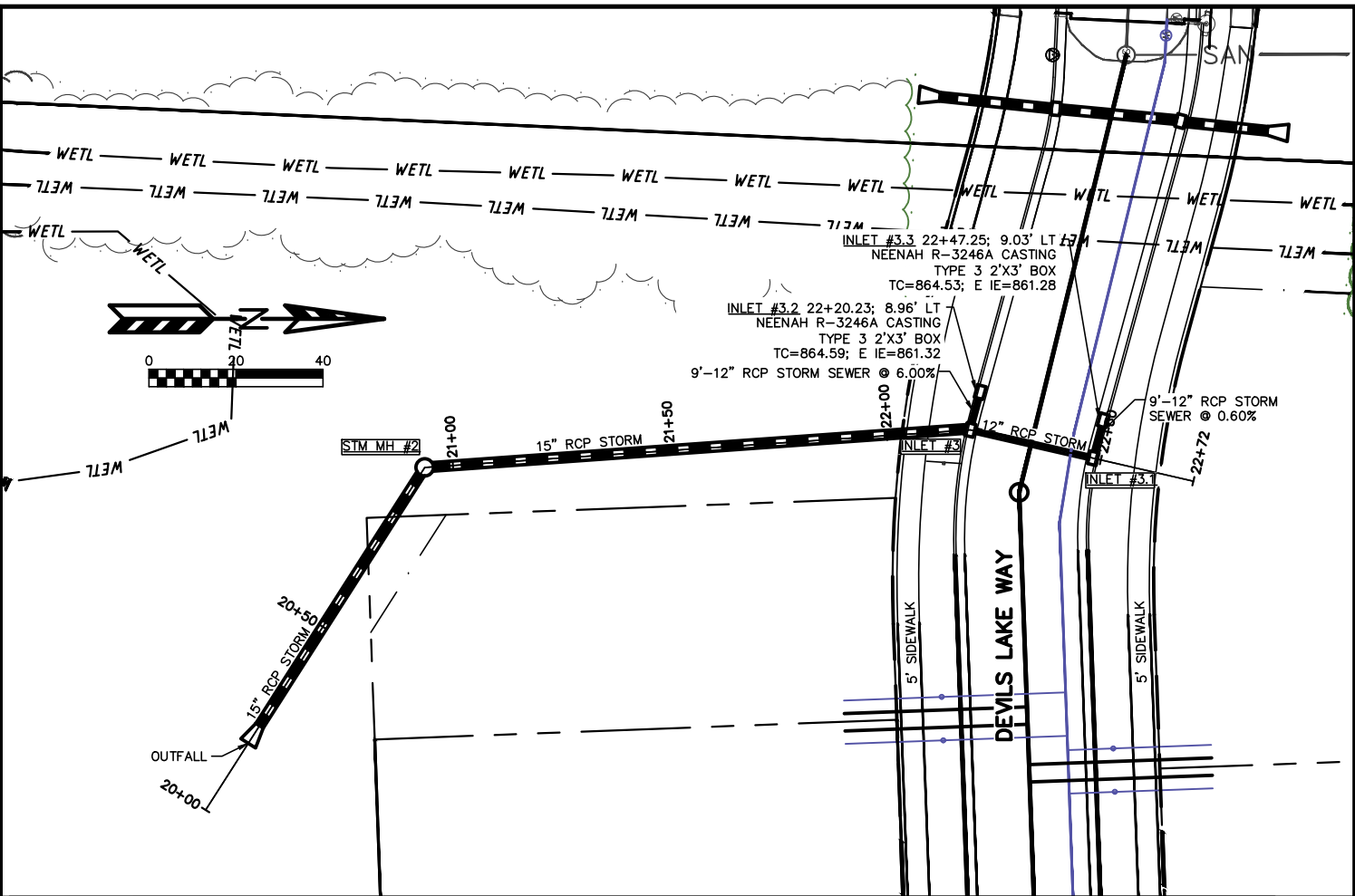
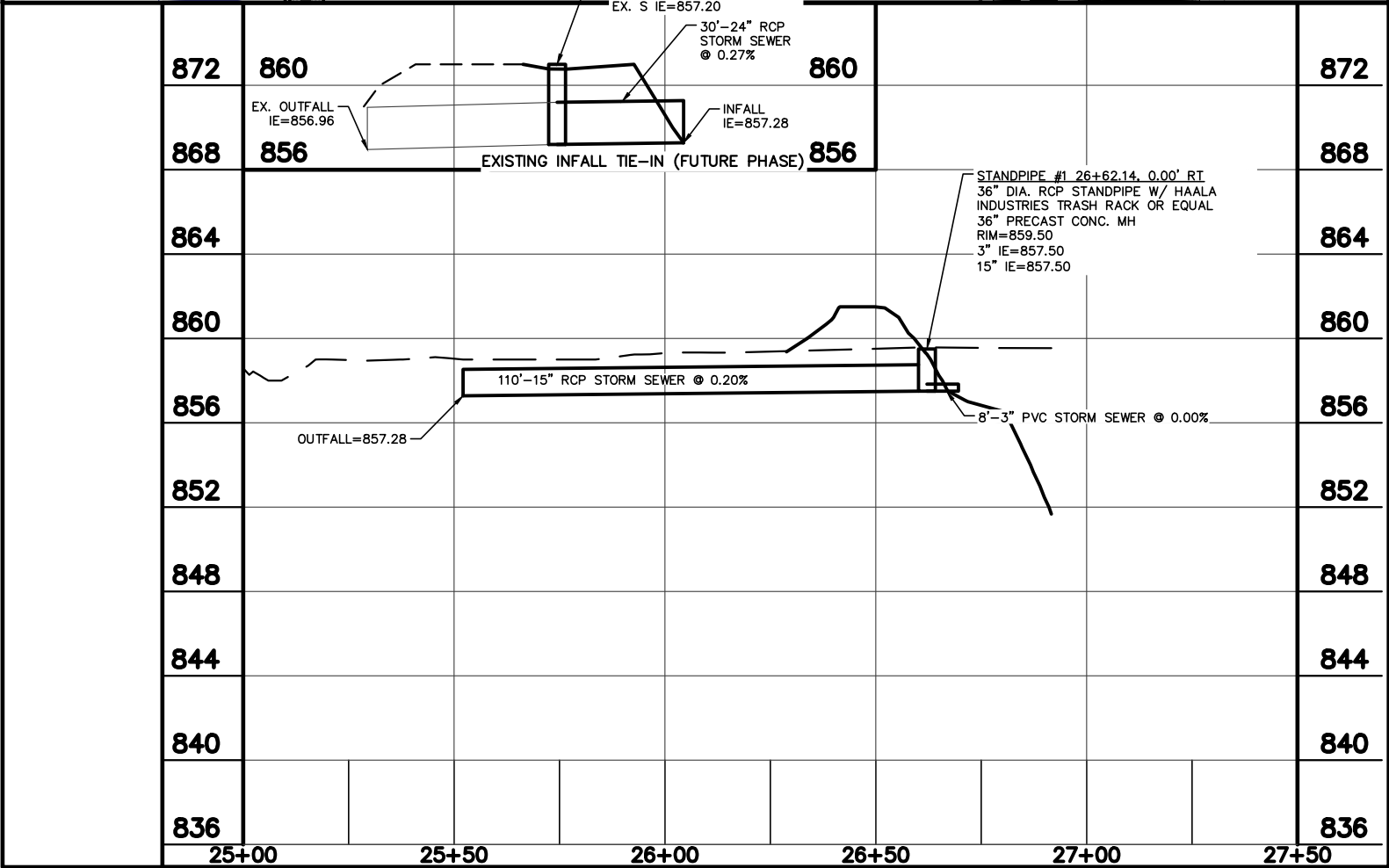
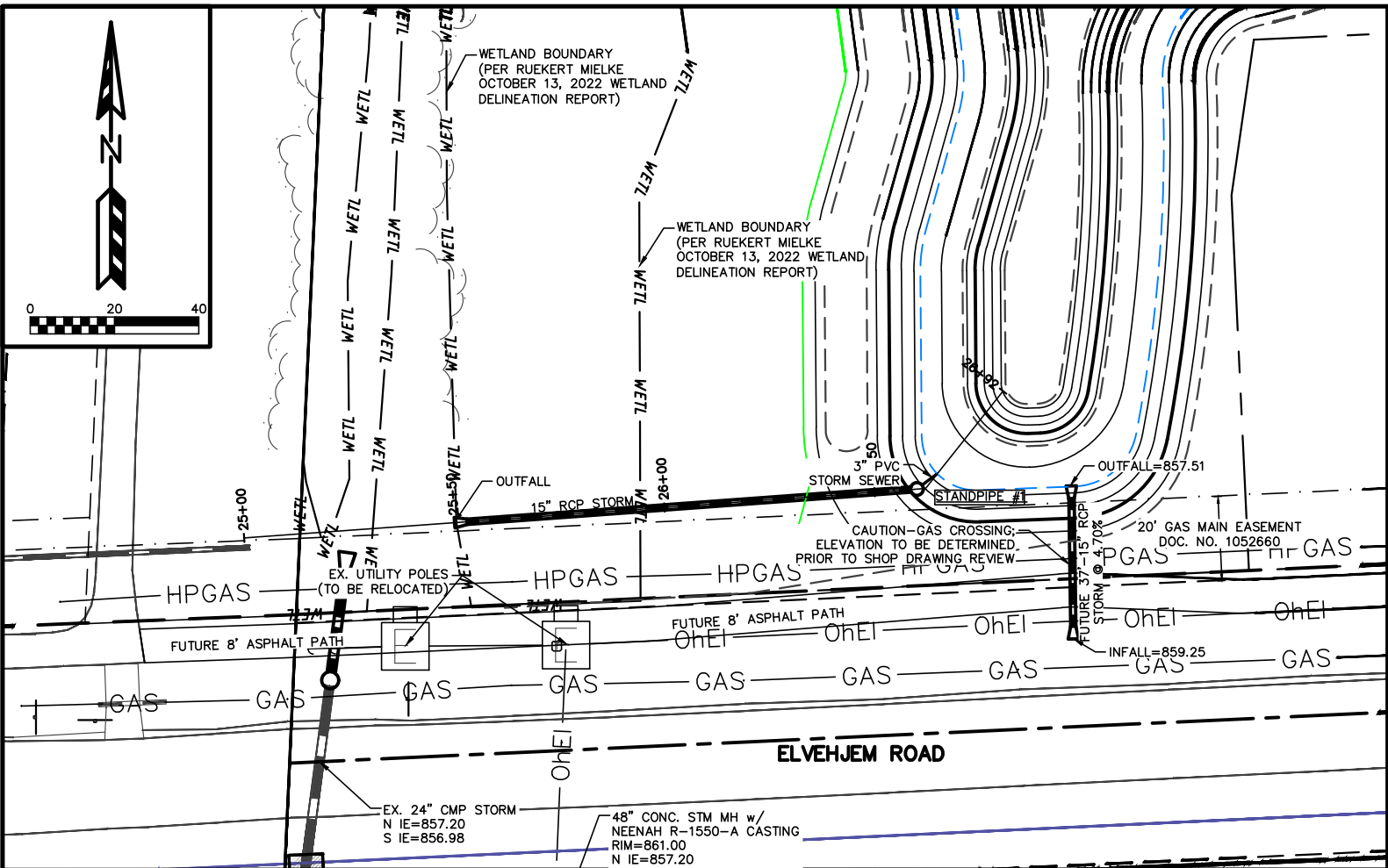


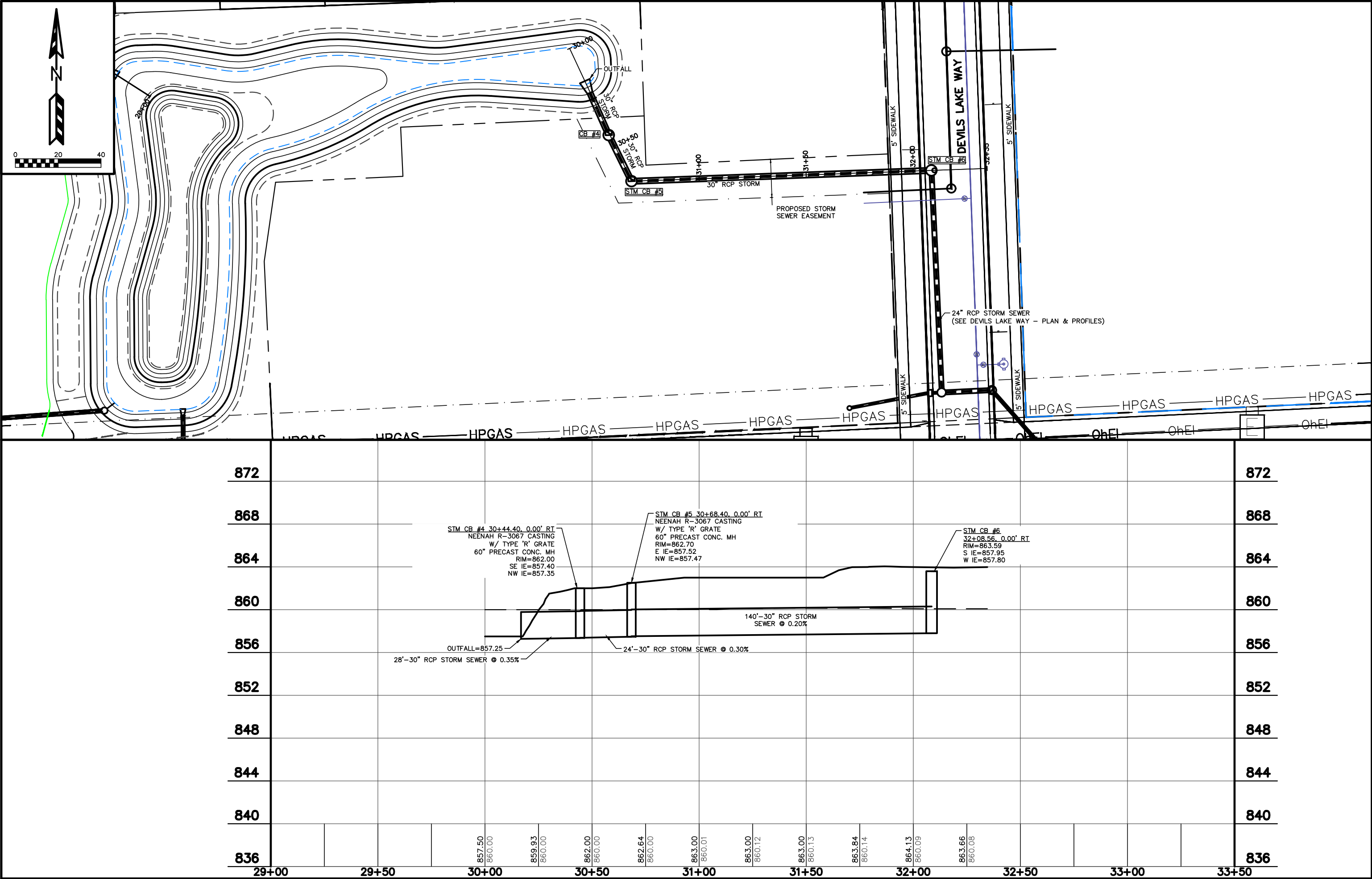
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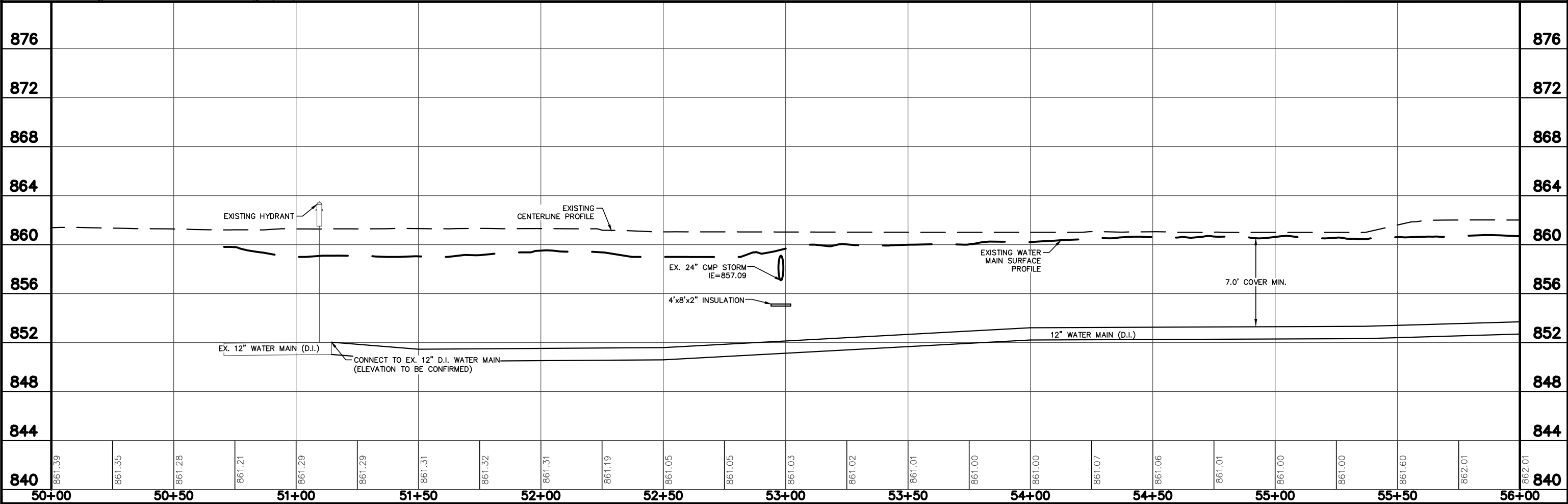
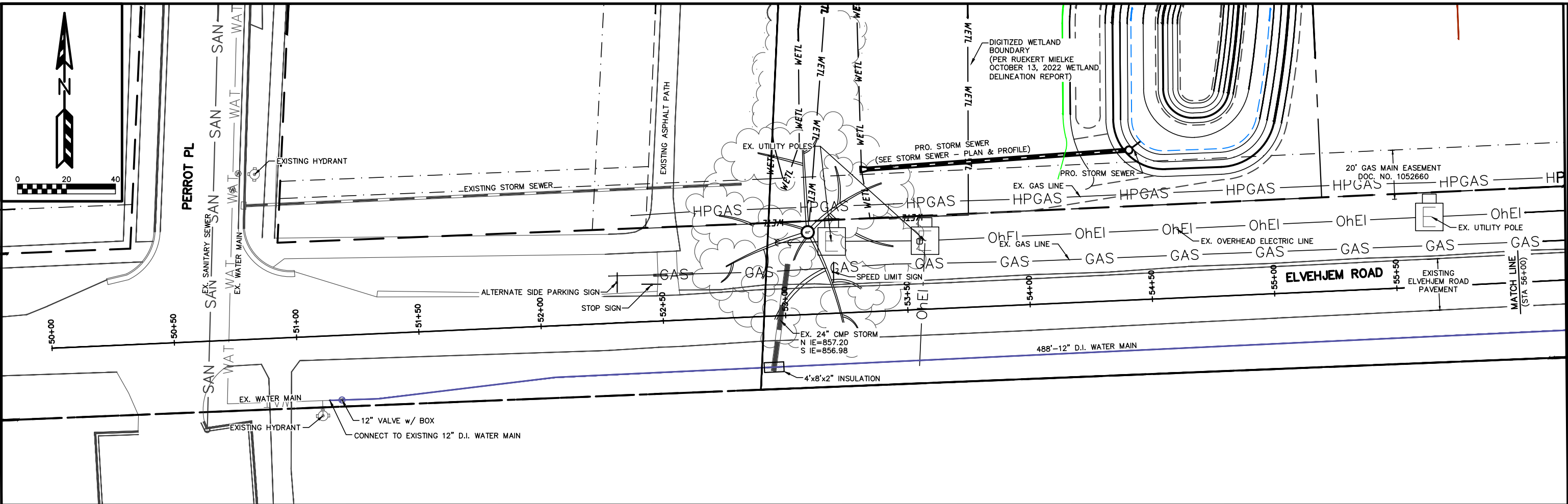
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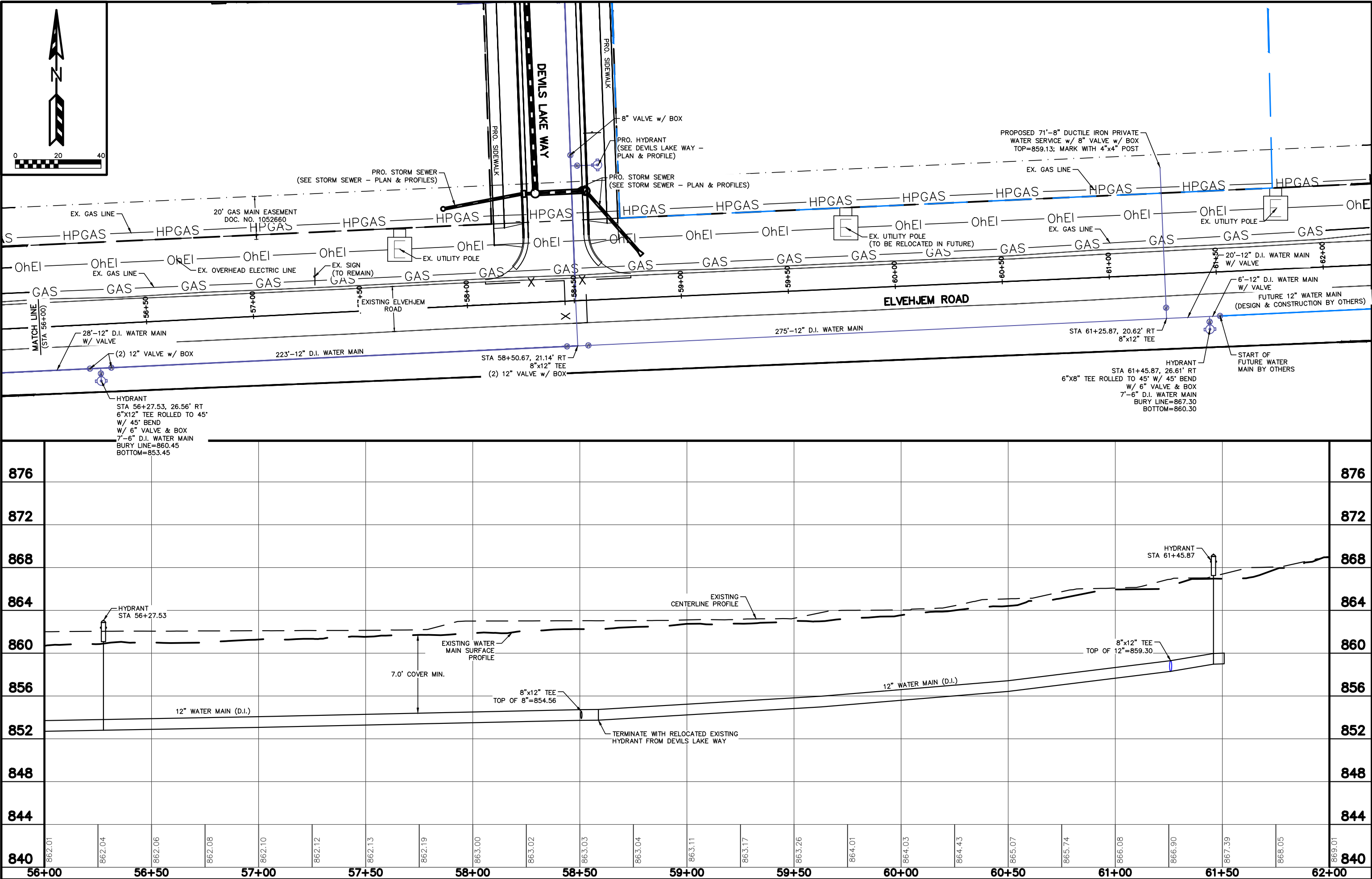


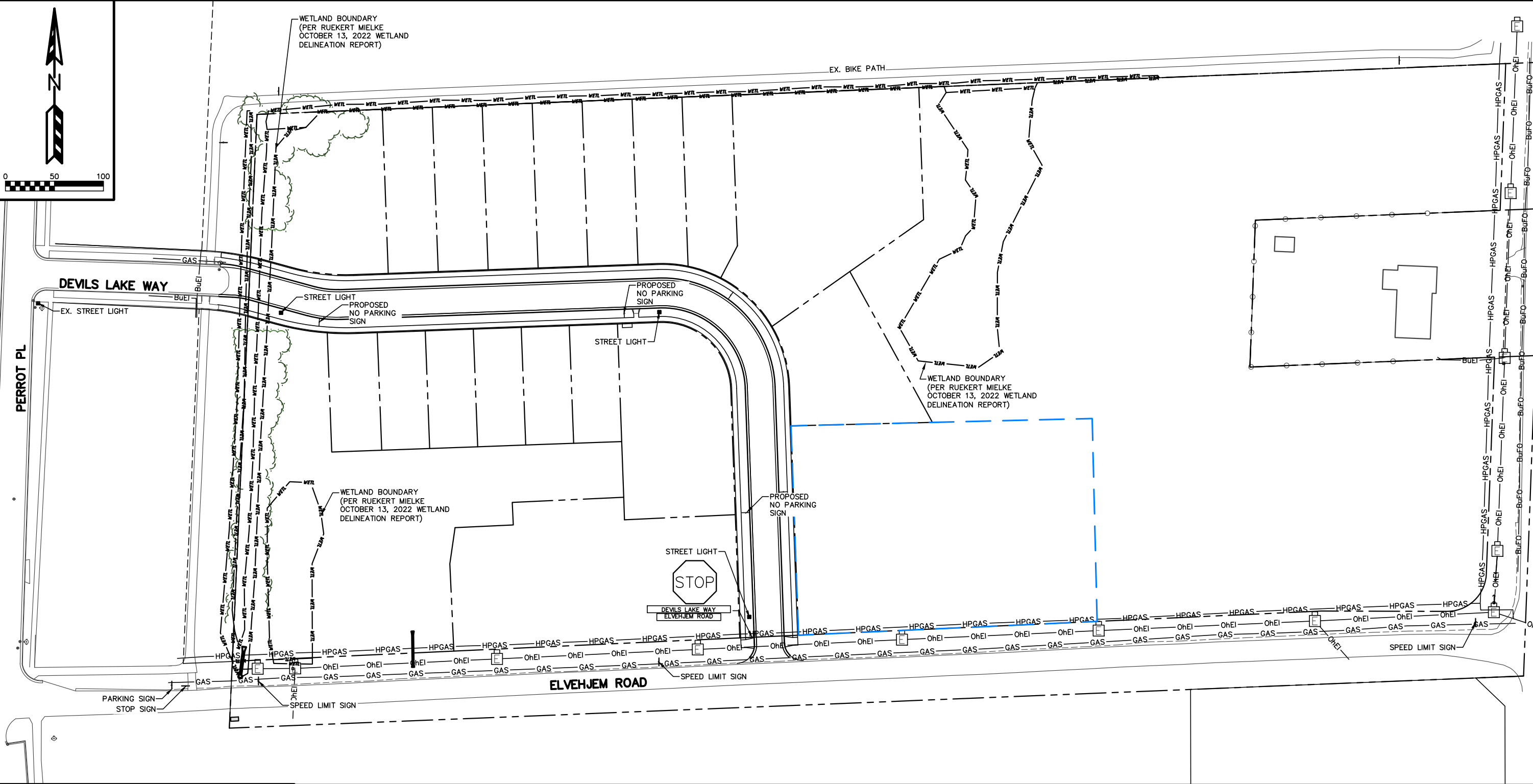






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SIGNING AND LIGHTING LEGEND

STOP SIGN - SIGN DESIGNATION R1-1

STREET SIGNS

DEVILS LAKE WAY STREET NAME SIGNS

STREET LIGHT (DESIGN BY OTHERS)

SIGNAGE NOTES:

ALL SIGNS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGNS SHALL BE A DISTANCE OF 7" FROM GROUND LEVEL TO THE BOTTOM OF THE SIGN MOUNTED ON THE POST AND LOCATED 3' BEHIND THE BACK OF CURB.

STREET NAME SIGNS SHALL HAVE WHITE LETTERS AND GREEN BACKGROUND.

STREET NAME SIGNS SHALL BE PLACED ABOVE STOP SIGNS AT INTERSECTIONS THAT REQUIRE STOP SIGNS.

SIGN POSTS SHALL BE 1.75" O.D., GALVANIZED 10 FT LONG, 13 GAUGE, AND 0.095 WALL THICKNESS. MOUNT SIGN AT TOP OF THE POST, AND INSTALL POSTS 3' DEEP AND MIX 1/2 BAG OF 80 LB SAKRETE CONCRETE POURING IS AROUND THE POST BELOW THE GROUND BEFORE COVERING WITH 8".

SPERLE CORNERS - VILLAGE OF MCFARLAND

SIGN AND LIGHTING PLAN

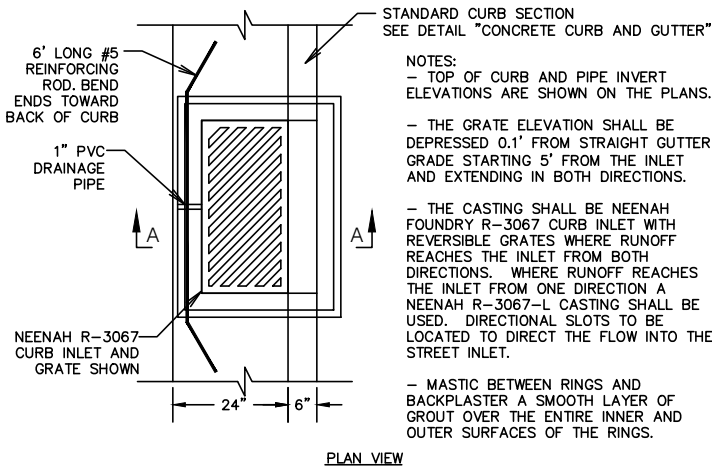
SHEET: C-12

DATED: OCTOBER 16, 2025

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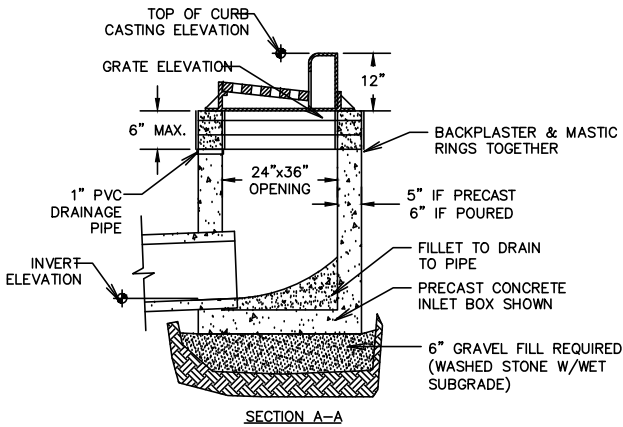
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1 RECTANGULAR STREET INLET

2 NOT TO SCALE



MANHOLE SIZE	DIMENSION	
	A	B (MIN.)
48"	48"	5"
60"	60"	6"
72"	72"	7"
84"	84"	7"
96"	96"	9"

NOTES:
CONCRETE SHALL BE 4000 PSI, 28 DAY COMPRESSIVE STRENGTH, 6.5 BAG MIX WITH 1~2% AIR ENTRAINMENT.

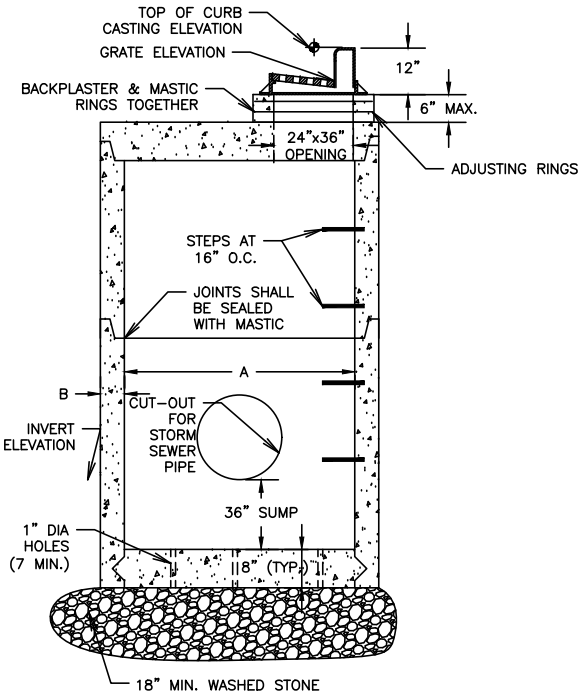
MANHOLE STEPS SHALL CONFORM TO ASTM-C478 & SHALL BE NEENAH FOUNDRY R-1981-N OR APPROVED EQUAL. STEPS SHALL BE SPACED 16" ON CENTER.

A MAXIMUM OF 6" OF ADJUSTING RINGS SHALL BE USED TO ADJUST THE MANHOLE-TYPE CURB CATCH BASIN CASTING TO THE FINISHED GRADE. ALL RINGS SHALL BE SEALED TOGETHER USING MASTIC AND ALL JOINTS SHALL BE BACK PLASTERED INSIDE AND OUT WITH CEMENT MORTAR.

THE GRATE ELEVATION SHALL BE DEPRESSED 0.1' FROM STRAIGHT GUTTER GRADE STARTING 5' FROM THE INLET AND EXTENDING IN BOTH DIRECTIONS.

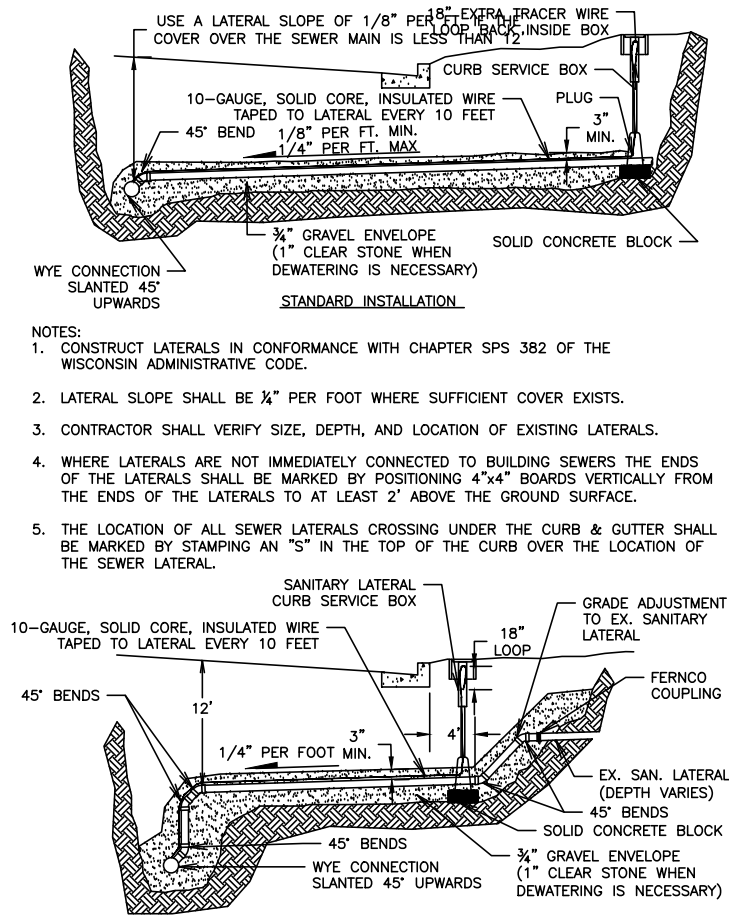
MANHOLE-TYPE CURB CATCH BASIN CASTING SHALL BE NEENAH FOUNDRY R-3067 WITH REVERSIBLE GRATES WHERE RUNOFF REACHES THE INLET FROM BOTH DIRECTIONS. WHERE RUNOFF REACHES THE INLET FROM ONE DIRECTION A NEENAH R-3067-L CASTING SHALL BE USED. DIRECTIONAL SLOTS TO BE LOCATED TO DIRECT THE FLOW INTO THE STREET INLET.

A 2x3 LID OPENING IS REQUIRED FOR MANHOLE-TYPE CURB CATCH BASINS.



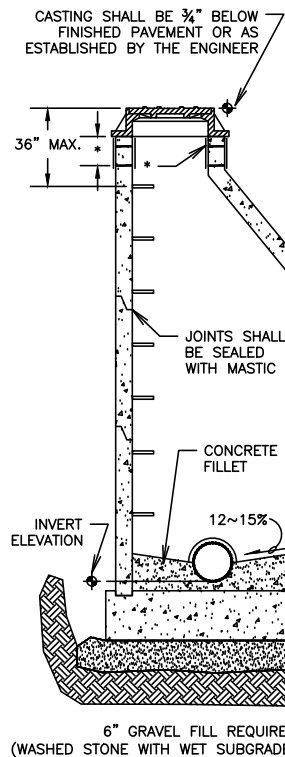
1 STORM SEWER MANHOLE

2 NOT TO SCALE



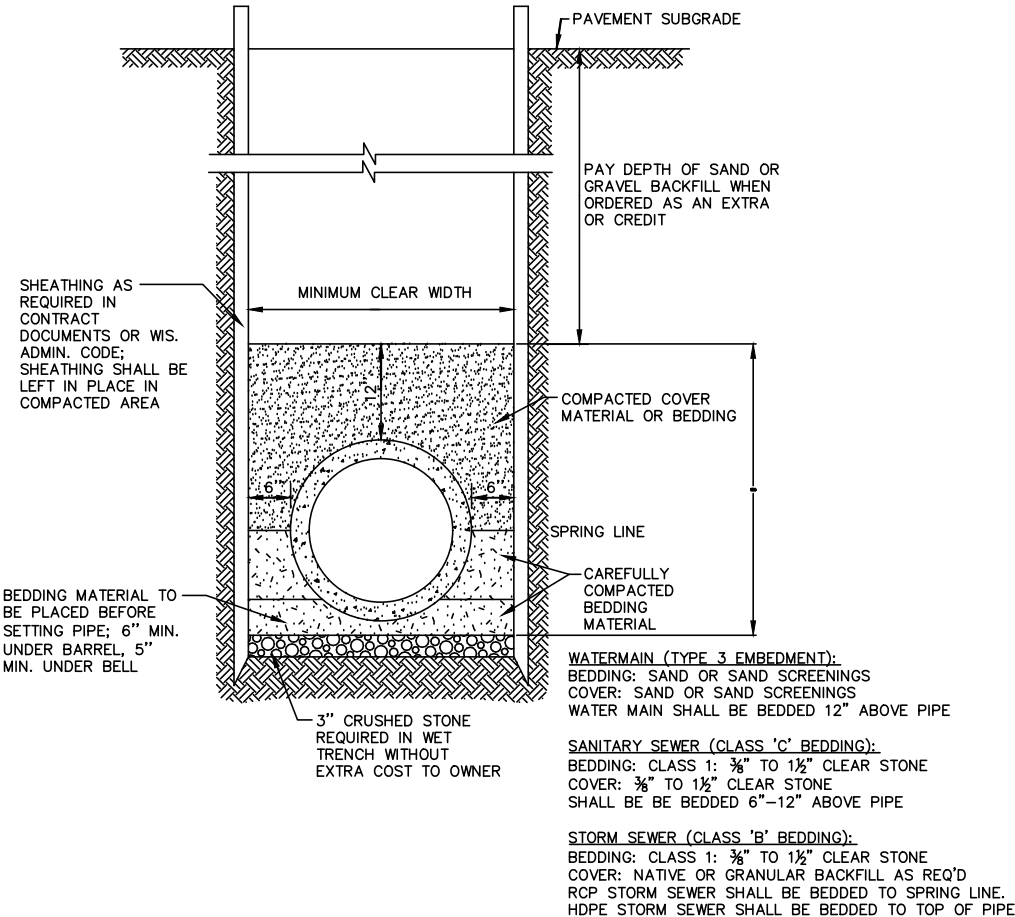
1 LATERAL WITH TRACER WIRE

2 NOT TO SCALE



1 SANITARY SEWER MANHOLE

2 NOT TO SCALE



1 STANDARD TRENCH SECTION

2 NOT TO SCALE

NOTES:
MANHOLE CASTING SHALL BE HEAVY DUTY, NEENAH FOUNDRY CO. CATALOG LISTING NO. R-1710, WITH TYPE "B" NON-ROCKING LID, GASKET SEAL AND CONCEALED PICKHOLES

ADJUST FRAME TO GRADE WITH AT LEAST TWO RINGS OF DIFFERENT THICKNESSES. RINGS SHALL BE REINFORCED WITH ONE NO. 3 STEEL BAR CENTERED WITHIN EACH RING.
MANHOLE CASTINGS AND STEPS SHALL BE LOCATED OVER THE EFFLUENT PIPE FOR PIPES BETWEEN 8" AND 18" IN DIAMETER. CASTINGS AND STEPS SHALL BE LOCATED OVER THE BENCH FOR PIPES GREATER THAN 18" IN DIAMETER.

CONCRETE SHALL BE 4000 PSI, 28 DAY COMPRESSIVE STRENGTH, 6.5 BAG MIX WITH 1~2% AIR ENTRAINMENT.

STEEL REINFORCEMENT SHALL CONFORM TO ASTM C-478 STANDARDS.

FLAT-TOP COVERS SHALL BE USED WHERE THE TOTAL RIM TO INVERT DEPTH IS LESS THAN 6 FEET AND MAY BE USED FOR MANHOLE DIAMETERS GREATER THAN 5 FEET.

SEE SPECIFICATION NARRATIVE FOR PIPE SEAL AND CHIMNEY SEAL REQUIREMENTS.

MANHOLE STEPS SHALL CONFORM TO ASTM-C478 & SHALL BE NEENAH FOUNDRY CO. R-1981-N OR APPROVED EQUAL. STEPS SHALL BE SPACED 16" ON CENTER.

* A MINIMUM OF 3" TO A MAXIMUM OF 6" OF ADJUSTING RINGS SHALL BE USED TO ADJUST THE MANHOLE CASTING TO THE FINISHED GRADE. ALL RINGS SHALL BE SEALED TOGETHER USING MASTIC AND ALL JOINTS SHALL BE BACK PLASTERED INSIDE AND OUT WITH CEMENT MORTAR.

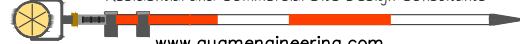
SPERLE CORNERS – VILLAGE OF MCFARLAND

DETAILS

SHEET: C-14

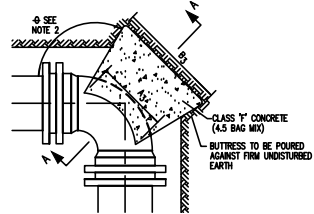
DATED: OCTOBER 16, 2025

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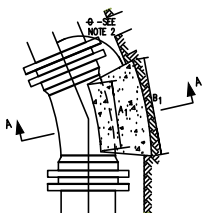


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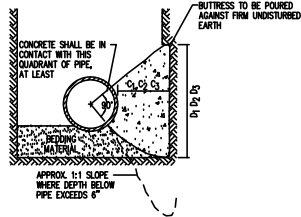
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PLAN – 90° BEND



PLAN – 22 1/2° BEND

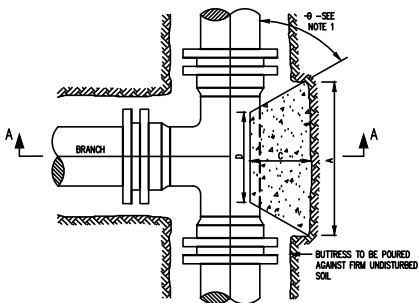


SECTION A-A

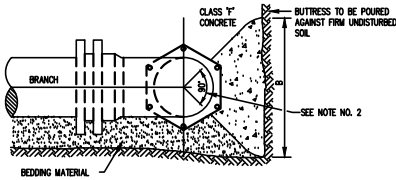
BUTRESS DIMENSIONS					
PIPE SIZE	22 1/2° BENDS	45° BENDS	90° BENDS	135° BENDS	180° BENDS
6"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
8"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
12"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
16"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
20"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
24"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
30"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"

NOTES

1. DIMENSIONS IN TABLE ARE BASED ON A WATER PRESSURE OF 150 PSI AND ON EARTH RESISTANCE OF 2 TONS PER SQUARE FOOT.
2. DIMENSION C1 C2 C3 SHOULD BE LARGE ENOUGH TO MAKE ANGLE θ EQUAL TO OR LARGER THAN 45°.
3. DIMENSION A1 A2 A3 SHOULD BE AS LARGE AS POSSIBLE WITHOUT INTERFERING WITH M.J. BOLTS.
4. SHAPE OF BACK OF BUTRESS MAY VARY AS LONG AS POUR IS AGAINST FIRM UNDISTURBED EARTH.
5. ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED IN POLYETHYLENE.



PLAN



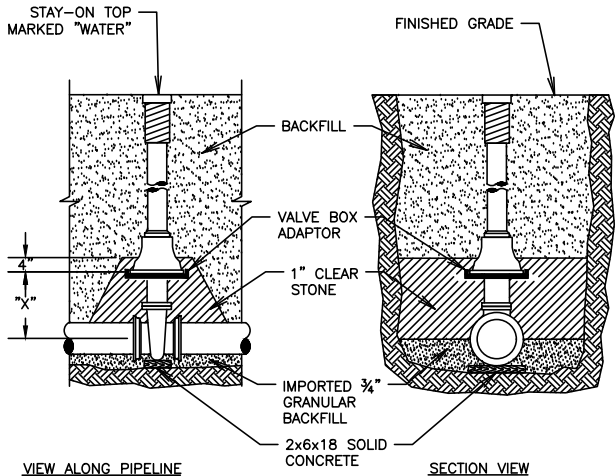
SECTION A-A

BUTRESS DIMENSIONS					
B.D.	A	B	C	D	
6"	1'-3"	1'-0"	1'-0"	1'-0"	1'-0"
8"	1'-6"	1'-0"	1'-0"	1'-0"	1'-0"
12"	2'-3"	2'-0"	2'-0"	2'-0"	2'-0"
16"	3'-2"	2'-6"	2'-6"	2'-6"	2'-6"
20"	4'-0"	3'-0"	3'-0"	3'-0"	3'-0"
24"	5'-3"	3'-4"	3'-4"	3'-4"	3'-4"
30"	6'-3"	4'-3"	4'-3"	4'-3"	4'-3"

B.D. = BRANCH DIAMETER

NOTES

1. DIMENSION 'C' SHOULD BE LARGE ENOUGH TO MAKE ANGLE EQUAL TO OR LARGER THAN 45°.
2. CONCRETE SHOULD BEAR ON THIS QUADRANT OF PIPE AS A MINIMUM.
3. DIMENSION 'D' SHOULD BE AS LARGE AS POSSIBLE BUT CONCRETE SHOULD NOT INTERFERE WITH MECHANICAL JOINTS.
4. BUTRESS DIMENSIONS ARE BASED ON A SOIL RESISTANCE OF TWO TONS PER SQ. FT. AND A WATER PRESSURE OF 150 PSI.
5. ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED IN POLYETHYLENE.



PIPE DIA., INCHES	6	8	10	12	14	16
"X" DIMENSION, INCHES	12	13	17	21	25	30

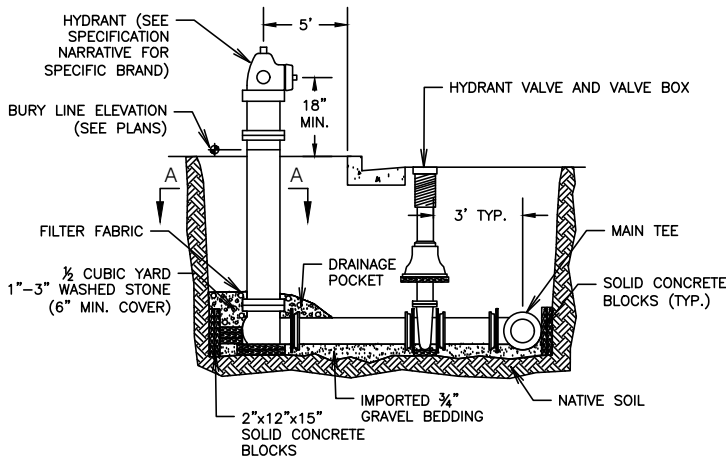
NOTES:

- VALVES SHALL BE SECURED WITH RODDING OR MEGALUGS TO THE NEAREST "TEE" FITTING OR TO THE FIRST JOINT CONNECTING A FULL SECTION OF WATER MAIN PIPE. SEE RODDING DETAIL "OFFSET AND RODDING".

DETAIL
VALVE BOX SETTING

2 STANDARD GATE VALVE BOX SETTING
2 NOT TO SCALE

1 GATE VALVE AND GATE VALVE ADAPTOR
1 NOT TO SCALE

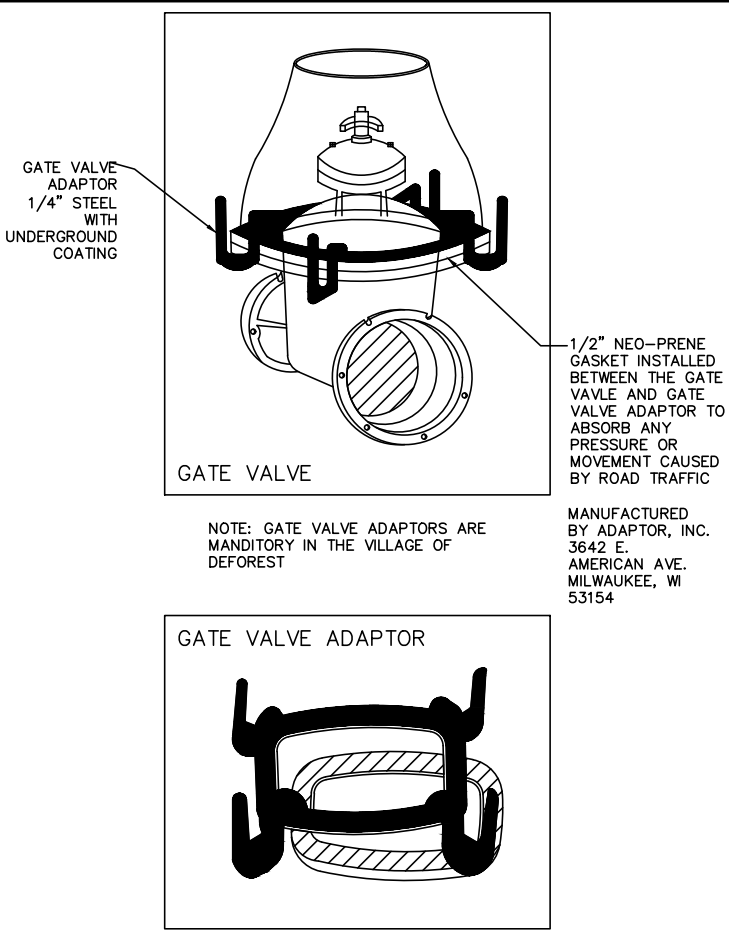


NOTES:

- THE HYDRANT AND HYDRANT VALVE SHALL BE CONNECTED TO THE MAIN TEE BY MEGALUGS.
- FILTER FABRIC SHALL BE WRAPPED AROUND THE DRAIN POCKET.
- WHERE THE HYDRANT IS INSTALLED AT THE HIGH POINT OF THE WATER MAIN ON MAINS 10 INCHES IN DIAMETER AND LARGER, THE CONTRACTOR SHALL TIP THE MAIN TEE UPWARDS 45 DEGREES AND USE A 45 DEGREE FITTING TO ALLOW AIR TO ESCAPE FROM THE MAIN.
- WHERE THE LOCATION OF THE HYDRANT VALVE BOX WOULD BE IN ANY PORTION OF THE CURB AND GUTTER, THE CONTRACTOR SHALL PLACE THE VALVE IN THE TERRACE AREA.

SECTION A-A

2 STANDARD HYDRANT SETTING
2 NOT TO SCALE



NOTE: GATE VALVE ADAPTORS ARE MANDATORY IN THE VILLAGE OF DEFOREST

MANUFACTURED BY ADAPTOR, INC.
3642 E. AMERICAN AVE.
MILWAUKEE, WI 53154

GATE VALVE ADAPTOR

SPERLE CORNERS – VILLAGE OF MCFARLAND

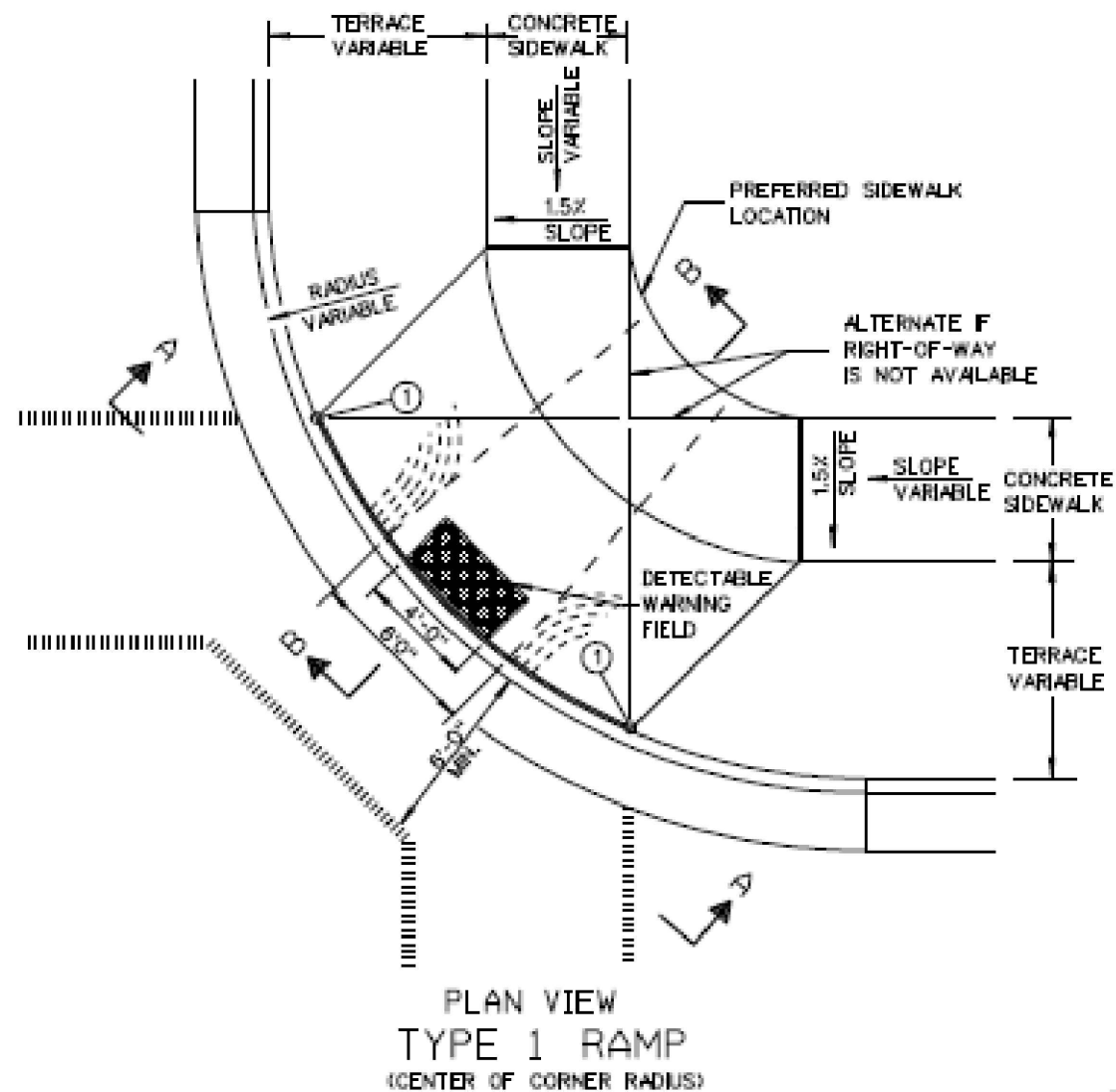
DETAILS

SHEET: C-15
DATED: OCTOBER 16, 2025

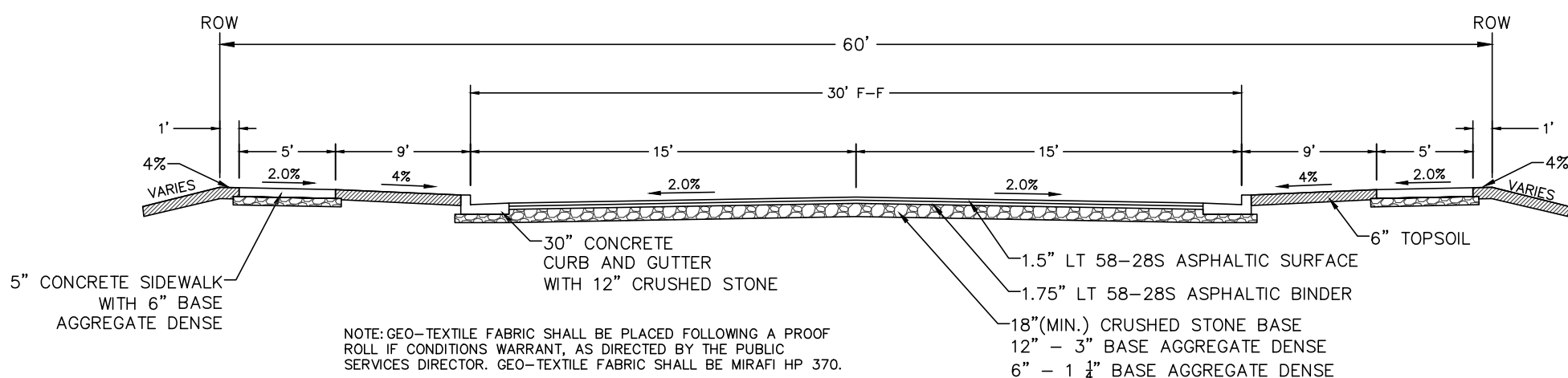
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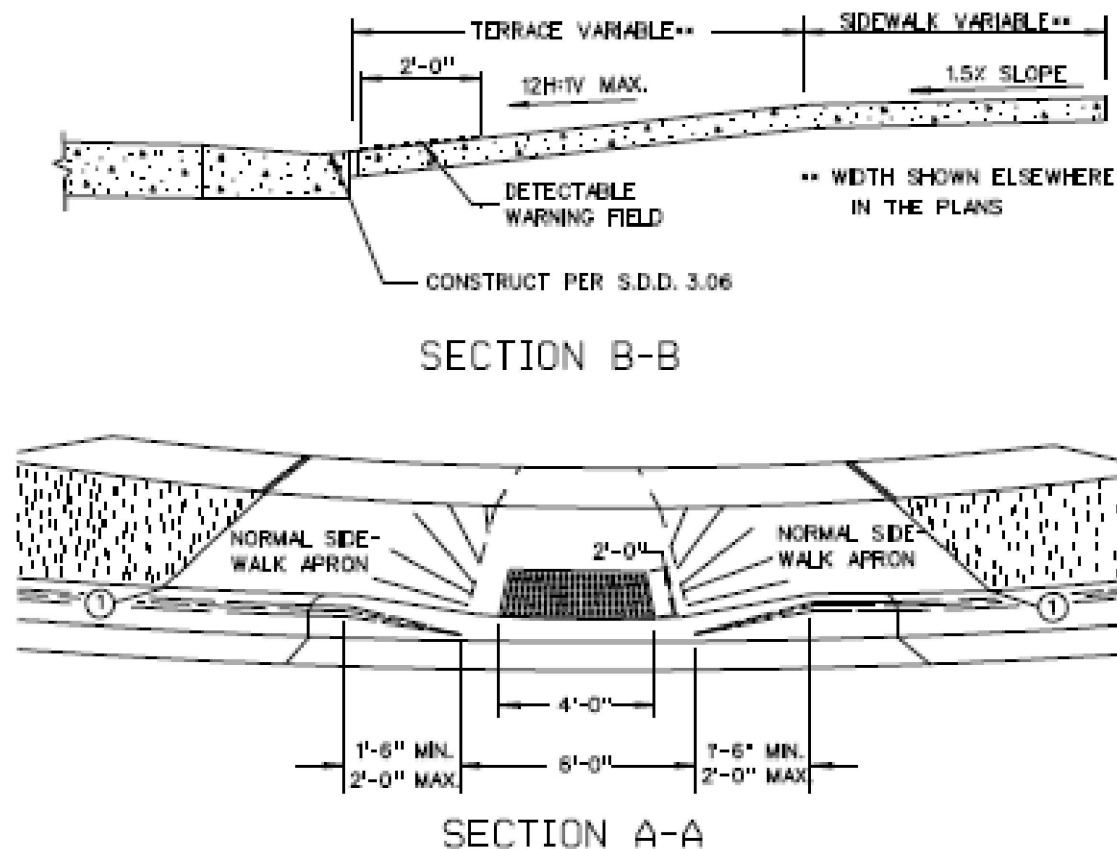
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PLAN VIEW
TYPE 1 RAMP
(CENTER OF CORNER RADIUS)



TYPICAL ROADWAY CROSS-SECTIONS



DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

RAMPS SHALL BE BUILT AT 12H:1V OR FLATTER. WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP
DETECTABLE WARNING FIELD".

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

THE DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE.

① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

DETECTABLE WARNING FIELDS SHALL BE METAPANEL BY METADOME, LLC OR NEENAH 4984 PLATES.

WIRE OR CABLE SIZES SHALL BE AS FOLLOWS:

4 INCH CALIPER - 11-12 GAUGE
LARGER THAN 4 INCH CALIPER - 8-10 GAUGE

TIGHTEN WIRE OR CABLE ONLY ENOUGH TO KEEP

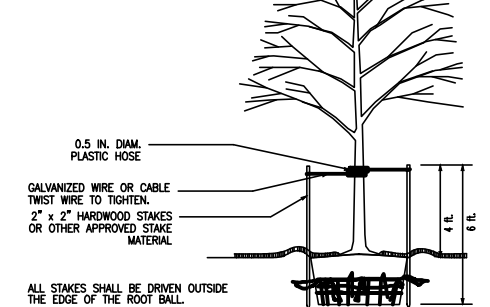
TIGHTEN WIRE OR CABLE ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT. PLASTIC HOSE SHALL BE LONG ENOUGH TO ACCOMMODATE 1.5 IN. OF GROWTH AND BUFFER ALL BRANCHES FROM THE WIRE.

TUCK ANY LOOSE ENDS OF THE WIRE OR CABLE INTO THE WIRE WRAP SO THAT NO SHARP WIRE ENDS ARE EXPOSED.

ALL BURLAP AND WIRE CAGES SHALL BE REMOVED FROM ROOTS PRIOR TO PLANTING.

PLANTING DEPTH OF TREE SHALL BE SUCH THAT ROOT FLAIR IS VISIBLE JUST ABOVE GRADE

PLANTING DEPTH OF TREE SHALL BE SUCH THAT ROOT FLAIR IS VISIBLE JUST ABOVE GRADE.



PROVIDE 4" THICKNESS OF ORGANIC MULCH AROUND ALL TREES. MULCH SHOULD NOT REST AGAINST THE TREE TRUNK. LEAVE 1/2" AROUND THE TRUNK FREE OF MULCH.

ASSURE THAT THE BEARING SURFACE OF THE PROTECTIVE COVERING OF THE WIRE OR CABLE AGAINST THE TREE TRUNK IS A MINIMUM OF 0.5 INCH.

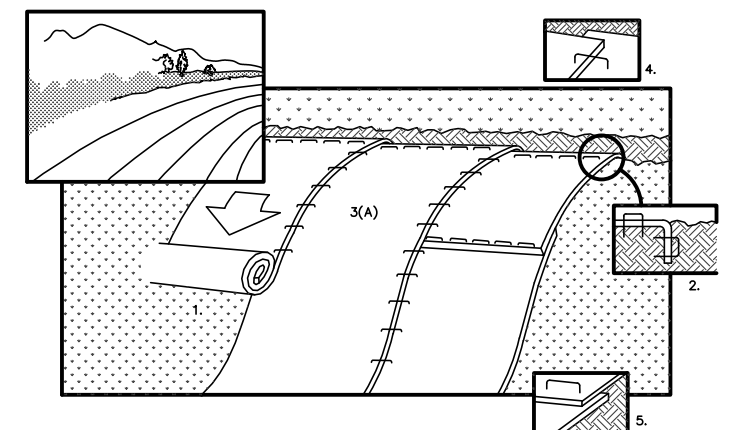
REMOVE ALL STAKING AS SOON AS THE TREE HAS GROWN SUFFICIENT ROOTS TO OVERCOME THE PROBLEM THAT REQUIRED THE TREE TO BE STAKED. STAKES SHALL BE REMOVED NO LATER THE END OF THE FIRST GROWING SEASON AFTER PLANTING.

TREES NORMALLY DO NOT NEED TO BE STAKED AND STAKING CAN BE HARMFUL TO THE TREE. STAKING SHOULD BE DONE ONLY WITH THE APPROVAL OF THE LANDSCAPE ARCHITECT IF IT IS EXPECTED THAT THE TREE WILL NOT BE ABLE TO SUPPORT ITSELF. THE FOLLOWING ARE REASONS WHY TREES DO NOT REMAIN STRAIGHT.

- o TREES WITH POOR - QUALITY ROOT BALLS OR ROOT BALLS THAT HAVE BEEN CRACKED OR DAMAGED. REJECT RATHER THAN STAKE.
- o TREES THAT HAVE GROWN TOO CLOSE TOGETHER IN THE NURSERY, RESULTING IN WEAK TRUNKS. REJECT RATHER THAN STAKE.
- o PLANTING PROCEDURES THAT DO NOT ADEQUATELY TAMP SOILS AROUND THE ROOT BALL. CORRECT THE PLANTING PROCEDURE.

- o PLANTING FILLERED TREES THAT DO NOT REQUIRE IT. TAMPS JUST AROUND THE ROOT BALL. CORRECT THE PLANTING PROCEDURE.
- o ROOT BALLS PLACED ON SOFT SOIL. TAMPS SOILS UNDER ROOT BALL PRIOR TO PLANTING.
- o ROOT BALLS WITH VERY SANDY SOIL OR VERY WET CLAY SOIL. STAKING ADVISABLE.
- o TREES LOCATED IN A PLACE OF EXTREMELY WINDY CONDITIONS. STAKING ADVISABLE.

TREE PLANTING DETAIL



NOTE: REFER TO GENERAL STAPLE PATTERN GUIDE FOR CORRECT STAPLE PATTERN RECOMMENDATIONS FOR SLOPE INSTALLATIONS.

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF FERTILIZER AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.
5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 4" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY
6. ALL BLANKETS MUST BE SECURELY FASTENED TO THE SLOPE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS RECOMMENDED BY THE MANUFACTURER.
7. SLOPES 5:1 SHOULD BE COVERED WITH CLASS 1 TYPE A AT A MINIMUM.

EROSION CONTROL MAT – SLOPE INSTALLATION

SPERLE CORNERS – VILLAGE OF MCFARLAND

DETAILS

SHEET: C-16

DATED: OCTOBER 16, 2025

QUAM ENGINEERING, LLC
Residential and Commercial Site Design Consultants

www.quamengineering.com

4604 Siggelkow Road, Suite A – McFarland, Wisconsin 53558
Phone (608) 838-7750; Fax (608) 838-7752

4" x 10" x 10 GA. STEEL PLATE (CUT AS SHOWN) WELDED TO ALL FOUR CORNERS OF TELESPAR TUBE

SIDE VIEW:

- LENGTH SHOWN ON MISC. Q'TYS
- TELESCOPE PIECES FLUSH AT TOP
- 18" DIA SCHEDULE 40 PVC BOX-OUT
- 36"
- 2" SQUARE X 36"

CROSS SECTIONAL VIEW:

- SIGN
- SEE SIGN PLATE A4-B FOR BOLT WASHER, & NUT MATERIAL
- 1.75" STEEL TUBULAR SQUARE UPPER SECTION
- ALL HOLES $\frac{1}{8}$ " SPACED 1' C-C ALL FOUR SIDES
- $\frac{3}{4}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT
- 2 1/2" GRAVEL OR DIRT
- $\frac{3}{4}$ " ZINC PLATED ANCHOR BOLT AND NUT
- 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)

LENGTH SHOWN ON MISC. Q'TYS
 TELESCOPE PIECES FLUSH AT TOP
 1.75" STEEL TUBULAR SQUARE UPPER SECTION
 ALL HOLES $\frac{3}{16}$ " SPACED 1" C-C
 ALL FOUR SIDES
 $\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT
 $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT
 $2\frac{1}{2}$ " SQUARE X 18" (SOIL STABILIZING SLEEVE)
 2" SQUARE X 36"

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

THE STONE CONSTRUCTION ENTRANCE SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION. THE STONE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED BY THE CONTRACTOR IN A CONDITION, WHICH WILL PREVENT THE TRACKING OF MUD OR DRY SEDIMENT ONTO THE PUBLIC STREET. SEDIMENT REACHING PUBLIC STREET SHALL BE REMOVED BY STREET CLEANING (NOT HYDRAULIC FLUSHING) BEFORE THE END OF EACH WORKDAY.

EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO GRADING OPERATIONS AND SHALL BE PROPERLY MAINTAINED FOR MAXIMUM EFFECTIVENESS UNTIL VEGETATION IS ESTABLISHED. ALL EROSION CONTROL MEASURES AND STRUCTURES SERVING THE SITE MUST BE INSPECTED AT LEAST WEEKLY OR WITHIN 24 HOURS OF A 0.5 INCH RAIN EVENT. ALL MAINTENANCE WILL FOLLOW AN INSPECTION WITHIN 24 HOURS.

CUT AND FILL SLOPES SHALL BE NO GREATER THAN 3:1.

ALL DISTURBED AREAS MUST BE TEMPORARILY STABILIZED WITHIN 14 DAYS OF LAST ACTIVITY.
ALL DISTURBED AREAS SHOULD BE STABILIZED WITHIN 7 DAYS OF FINAL GRADING.

PERIMETER CONTROL SHALL BE INSTALLED AROUND STOCKPILES, AND STOCKPILES SHALL BE STABILIZED THAT WILL REMAIN INACTIVE FOR 7 DAYS OR LONGER.

EROSION CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ACCEPTANCE OF THIS PROJECT. EROSION CONTROL MEASURES AS SHOWN SHALL BE THE MINIMUM PRECAUTIONS THAT WILL BE ALLOWED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECOGNIZING AND CORRECTING ALL EROSION CONTROL PROBLEMS THAT ARE A RESULT OF CONSTRUCTION ACTIVITIES. ADDITIONAL EROSION CONTROL MEASURES, AS REQUESTED IN WRITING BY THE STATE OR LOCAL INSPECTORS, OR THE DEVELOPER'S ENGINEER, SHALL BE INSTALLED WITHIN 24 HOURS.

TIME SCHEDULE:
OCTOBER 15 – NOVEMBER 1, 2025

INSTALL INITIAL EROSION CONTROL DEVICES AND
ROUGH GRADE SITE AND WET PONDS.

NOVEMBER 1, 2025 – MAY 15, 2026

CONSTRUCT UTILITIES AND STREETS. CONSTRUCT WEST WET POND PER WEST WET POND CROSS SECTION AND CONSTRUCT THE EAST WET POND AND EAST INFILTRATION BASIN PER CROSS SECTIONS. RESTORE ALL PVIOUS DISTURBED AREAS.

RESTORATION SHALL OCCUR AS SOON AFTER THE DISTURBANCE AS PRACTICAL.

ALL PVIOUS DISTURBED AREAS SHALL RECEIVE A MINIMUM OF FOUR (4) INCHES OF TOPSOIL, SEED, AND MULCH. RESTORATION WILL OCCUR AS SOON AFTER THE DISTURBANCE AS PRACTICAL. SEED MIXTURE 40 SHALL BE USED ON ALL DISTURBED AREAS. ALL SEED MIXTURES SHALL BE IN ACCORDANCE WITH SECTION 630 OF D.O.T. SPECIFICATIONS. AN EQUAL AMOUNT OF ANNUAL RYEGRASS SHALL BE ADDED TO THE MIX.

ALL PVIOUS DISTURBED AREAS SHALL RECEIVE FERTILIZER. FERTILIZER SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS: NITROGEN, NOT LESS THAN 16%; PHOSPHORIC ACID, NOT LESS THAN 8%; POTASH, NOT LESS THAN 8%. FERTILIZER SHALL BE APPLIED AT THE RATE OF FOUR (4) POUNDS PER 1,000 SQUARE FEET. SEED MIXTURE 40 SHALL BE APPLIED AT THE RATE OF FOUR (4) POUNDS PER 1,000 SQUARE FEET. MULCH SHALL CONSIST OF HAY OR STRAW APPLIED AT THE RATE OF TWO (2) TONS PER ACRE.

SEEDING FROM SEPTEMBER 16 THROUGH NOVEMBER 15 IS TO BE AVOIDED TO PREVENT FREEZING OF NEW GROWTH. DORMANT SEEDING, IF NECESSARY, SHALL BE COMPLETED AFTER NOVEMBER 15. DORMANT SEEDING SHALL NOT BE APPLIED ON TOP OF SNOW. DISTURBED AREAS SHALL HAVE EROSION MAT APPLIED OVER DORMANT SEEDING. IF DORMANT SEEDING DOES NOT RESULT IN AT LEAST 70% COVER BY MAY 15, ADDITIONAL SEEDING SHALL BE REQUIRED.

OWNER:
LAKESTONE PROPERTIES &
MANAGEMENT, LLC
ATTN: BRETT RIEMEN
BRIAN SPANOS
5910 MAIN STREET, SUITE 1

ENGINEER:
QUAM ENGINEERING, LLC
ATTN: RYAN QUAM
4604 SIGGELKOW ROAD, SUITE A
MCFARLAND, WI 53558

1. EXCAVATED MATERIAL FROM THE UTILITY TRENCH NOT SUITABLE FOR BACKFILL AS DEEMED BY THE PUBLIC SERVICES DIRECTOR SHALL BE REMOVED AND REPLACED WITH SELECT TRENCH BACKFILL.
2. ALL SILT FENCE SHALL BE PROPERLY INSTALLED, MAINTAINED, AND REMOVED UPON ESTABLISHMENT OF VEGETATION.
3. ALL SITES SHALL BE ADEQUATELY PROTECTED TO PREVENT SEDIMENT FROM LEAVING THE SITE.
4. ACCESS TO THE CONSTRUCTION SITE SHALL BE LIMITED TO THE STONE ENTRANCE PADS SHOWN ON THE PLANS.
5. STREETS SHALL BE SWEEP CLEAN EVERY DAY.
6. EROSION MAT IS REQUIRED FOR ALL RESTORATION ON SLOPES AT OR GREATER THAN 5:1, AND IN AREAS THAT CHANNEL WATER. EROSION MAT SHALL ALSO BE PROVIDED IN ALL STREET TERRACES WITHIN THE ROW.
7. EROSION MAT AND STAPLES SHALL BE BIODEGRADABLE (CURLEX NET FREE OR APPROVED EQUAL).
8. ALL STORM WATER MANAGEMENT FACILITIES SHALL BE SEEDDED WITH A NATIVE SEED MIXTURE WITHIN THE LIMITS OF THE OUTLOT OR EASEMENT. THE NATIVE SEED MIXTURE SHALL BE APPROVED BY THE DIRECTOR OF PUBLIC SERVICES.
9. ANY PROPOSED CHANGES TO THE GRADING AND EROSION CONTROL PLAN MUST BE SUBMITTED TO THE VILLAGE ENGINEER AND APPROVED.

SHEET: C-17

SHEET: C-17
DATED: OCTOBER 16, 2025

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SILT SOCK SHALL CONFORM TO WISCONSIN DNR TECHNICAL STANDARD #1056

MAINTAIN SILT SOCKS UNTIL VEGETATION IS ESTABLISHED.

CROSSING ROD STAKES (10' SPACING) NOMINAL 2" x 2" x 30" MIN

FILTEREXX SILT SOCK (OR EQUAL) (12" DIA)

SHEET FLOW

SILT SOCK DETAIL

ROCK CHECK DAM DETAIL

FLEXSTORM INLET PROTECTION DETAIL

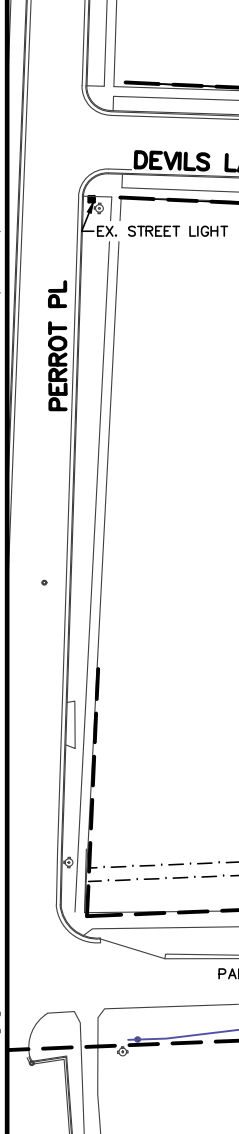
PLAN VIEW

SECTION A - A

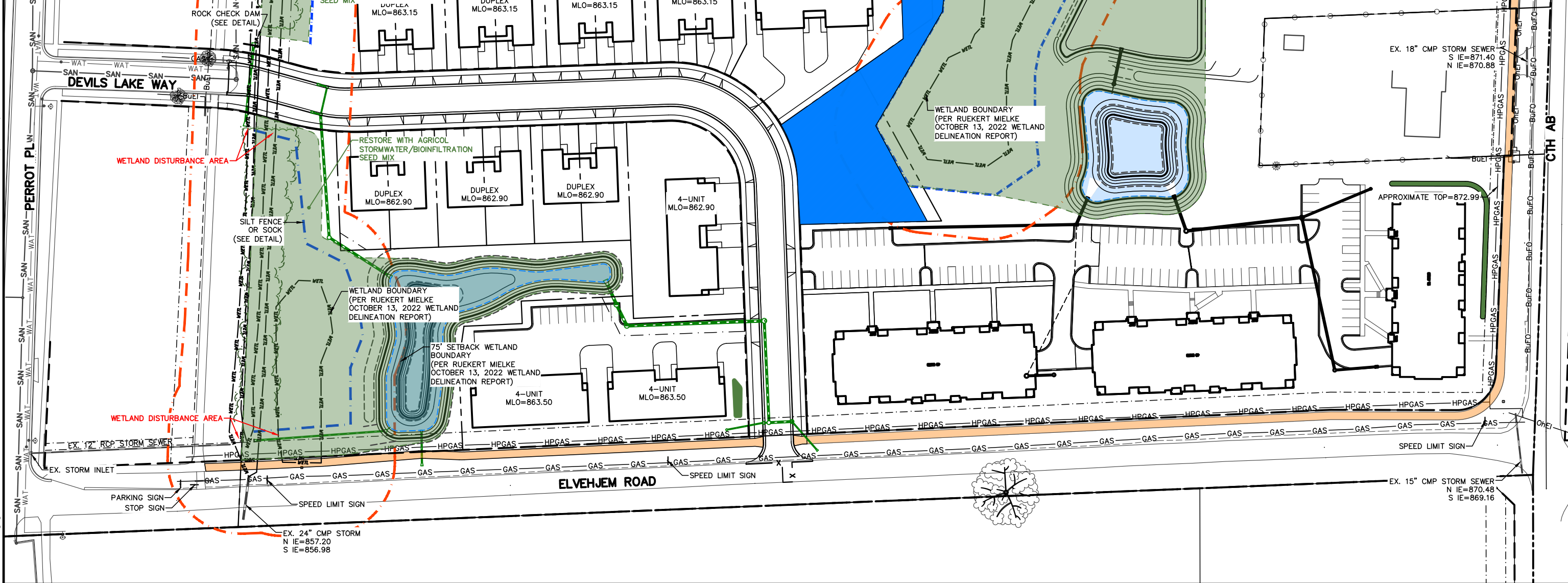
RIPRAP SHALL BE PLACED AS DEFINED IN SECTION 606 OF WISCONSIN D.O.T. SPECIFICATIONS. STONE PIECES SHALL BE WELL GRADED, RANGING IN DIAMETER AS DESCRIBED IN THE ADJACENT CHART.

RIPRAP DETAIL

PARK POND SWALE AND SOUTH POND SWALE CROSS SECTION



Page 133 of 444



SPEARLE CORNERS – VILLAGE OF MCFARLAND
WETLAND AND POND RESTORATION PLAN
 SHEET: C-1
 DATED: AUGUST 5, 2025

QUAM ENGINEERING, LLC
Residential and Commercial Site Design Consultants



www.quamengineering.com

4604 Siggelkow Road, Suite A – McFarland, Wisconsin 53555
 Phone (608) 838-7750; Fax (608) 838-7752



October 17, 2025

Community & Economic Development Department

Attn: Andrew Bremer
5915 Milwaukee Street
McFarland, WI 53558

Re: Sperle Corners – Village of McFarland

Enclosed are the following documents for the above referenced project:

1. Sperle Corners – Village of McFarland Plan Set (17 Pages) and Lot 18-Phase 1 Apartments (3 Pages)
2. Universal Soil Loss Equation (USLE) worksheet
3. Existing Drainage Plan
4. Pre-Development HydroCAD Report
5. Proposed Drainage Plan
6. Post-Development HydroCAD Reports
7. Storm Sewer Drainage Plans
8. Rational Method Worksheets
9. WinSLAMM Drainage Plan
10. Sediment Control Calculations
11. Hydrologic Soil Information;
12. Soil and Site Evaluation – Storm (2024)
13. Stormwater Management Maintenance Agreement;

The proposed development includes the construction of several new duplexes and 4-unit homes, as well as the construction of larger apartment buildings in phase 2. Phase 1 of the development includes the extension of Devils Lake Way to connect with Elvehjem Road and the construction of seven duplexes, four four-unit buildings, and an apartment building as well as a wet ponds and an infiltration basin to meet rate and sediment control standards. Phase 2 includes the construction of two additional apartment buildings along with the adjacent parking lots. Runoff to the existing wetlands is being maintained by routing half of the water from the infiltration basin to the central wetland. In addition, the runoff from the back of the north, phase 1 lots is being directed to the northern wetland which is adjacent to the existing bike path along the north side of the property.

The documents are being submitted to address erosion control and stormwater management requirements for the proposed combination of new development for all phases and will meet the following performance standards as defined in the Village of McFarland Ordinance as follows:

Erosion Control

The proposed construction shall include erosion control measures to prevent gully and bank erosion and limit total off-site erosion to less than 5.0 tons per acre per year.

All runoff during construction shall be directed to flow through erosion control measures as shown on the Grading and Erosion Control Plan. The USLE calculation worksheet is included and indicates that soil loss will be less than 5.0 tons per acre per year.

Sediment Control

For new development, the proposed construction shall include design practices to retain soil particles greater than five microns (80% reduction) on the entire site resulting from the one-year 24-hour storm event. For redevelopment resulting in exposed surface parking and drive areas, design practices to retain soil particles greater than twenty microns (40% reduction) resulting from a one-year 24-hour storm event shall be included.

The proposed wet ponds and infiltration basin are designed to retain soil particles greater than five microns (80% reduction) on the entire site resulting from the one-year 24-hour storm event. The sediment control calculations include treatment of the existing roadway as a substitution for portions of the proposed roadway and roof area that will not be treated by the proposed wet ponds and infiltration basin. The detailed sediment control calculations are included as Exhibit #10.

Oil and Grease Control

The first ½" runoff shall be treated using oil and grease removal technology.

Oil and grease control is not required on the phase 1 duplexes and 4-unit areas of the site because the driveways and streets will contain minimal vehicle parking, and the proposed use does not include drive-through or vehicle maintenance. Therefore, the site is not a significant contributor of oil and grease.

On the phase 1 and phase 2 apartment sites, oil and grease control will be provided by the FlexStorm PCP inlet filter.

Runoff Rate Control

All stormwater facilities shall be designed, installed and maintained to effectively maintain pre-development peak runoff rates for the 1, 2, 10, 100, and 200-year, 24-hour storm event.

The proposed wet pond, infiltration basin, wetland seeding, and deep tilling will effectively maintain pre-development peak runoff rates for the 2, 10, 100, and 200 year, 24-hour storm event. The following table summarizes how the proposed stormwater management practices meet standards for peak flow rates. The 1-year rain event is being managed to the greatest extent possible while maintaining drainage to existing wetlands.

Storm Event (Year)	Total Existing Flow Rate (cfs)	Total Proposed Flow Rate Without Pond (cfs)	Total Proposed Flow Rate With Pond (cfs)
1	1.12	24.16	1.42
2	1.86	28.87	1.86
10	6.31	48.23	4.59
100	23.49	92.72	13.92
200	30.50	108.49	24.01

Outlets

Discharges from the site must have a stable outlet capable of carrying the designed flow at a non-erosive velocity.

The wet ponds, infiltration basin, riprap pads, and restored lawn area will provide a stable outlet for the site.

Infiltration

All downspouts, driveways, and other impervious areas shall be directed to pervious areas, where feasible. Additionally, for residential and non-residential developments design practices to infiltrate sufficient runoff volume so that post-development infiltration volume shall be at least 90% of the pre-development infiltration volume, based on average annual rainfall per Dane County Ordinance. If entire site has 5+ feet of clay-textured soils dedicate 2% of the site to infiltration practices that maximize infiltration and conform to applicable standards.

Due to the clayey soils throughout the site, 2% of the site has been proposed for an infiltration basin and a phase 2 infiltration swale while maintaining the design draw down depth of the infiltration basin.

If the documents are satisfactory, please approve the erosion control and storm water management permits. If you have any questions or comments, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark A. Fendry". The signature is fluid and cursive, with the first name "Mark" being the most prominent.

Mark Fendry, P.E.

CC: Brian Berquist, Town and County Engineering
Brett Riemen, Lakestone Properties and Management

FN: LS-03-19

SPERLE CORNERS RESIDENTIAL

SUBDIVISION

STREET AND UTILITY CONSTRUCTION

VILLAGE OF MCFARLAND

DANE COUNTY, WISCONSIN

SHEET	INDEX	DESCRIPTION
1		COVER PAGE
2		EXISTING SITE PLAN
3		OVERALL GRADING AND STORM WATER MANAGEMENT PLAN
4		WEST POND PLAN
5		EAST POND PLAN
6	0+00 - 6+00	DEVILS LAKE WAY - PLAN AND PROFILE
7	6+00 - 10+00	DEVILS LAKE WAY - PLAN AND PROFILE
8	20+00 - 27+50	STORM SEWER - PLAN AND PROFILE
9	29+00 - 35+00	STORM SEWER - PLAN AND PROFILE
10	50+00 - 56+00	WATER MAIN - PLAN AND PROFILE
11	56+00 - 62+00	WATER MAIN - PLAN AND PROFILE
12		SIGN & LIGHTING PLAN
13		STREET TREE PLAN
14		DETAILS #1
15		DETAILS #2
16		DETAILS #3
17		DETAILS #4



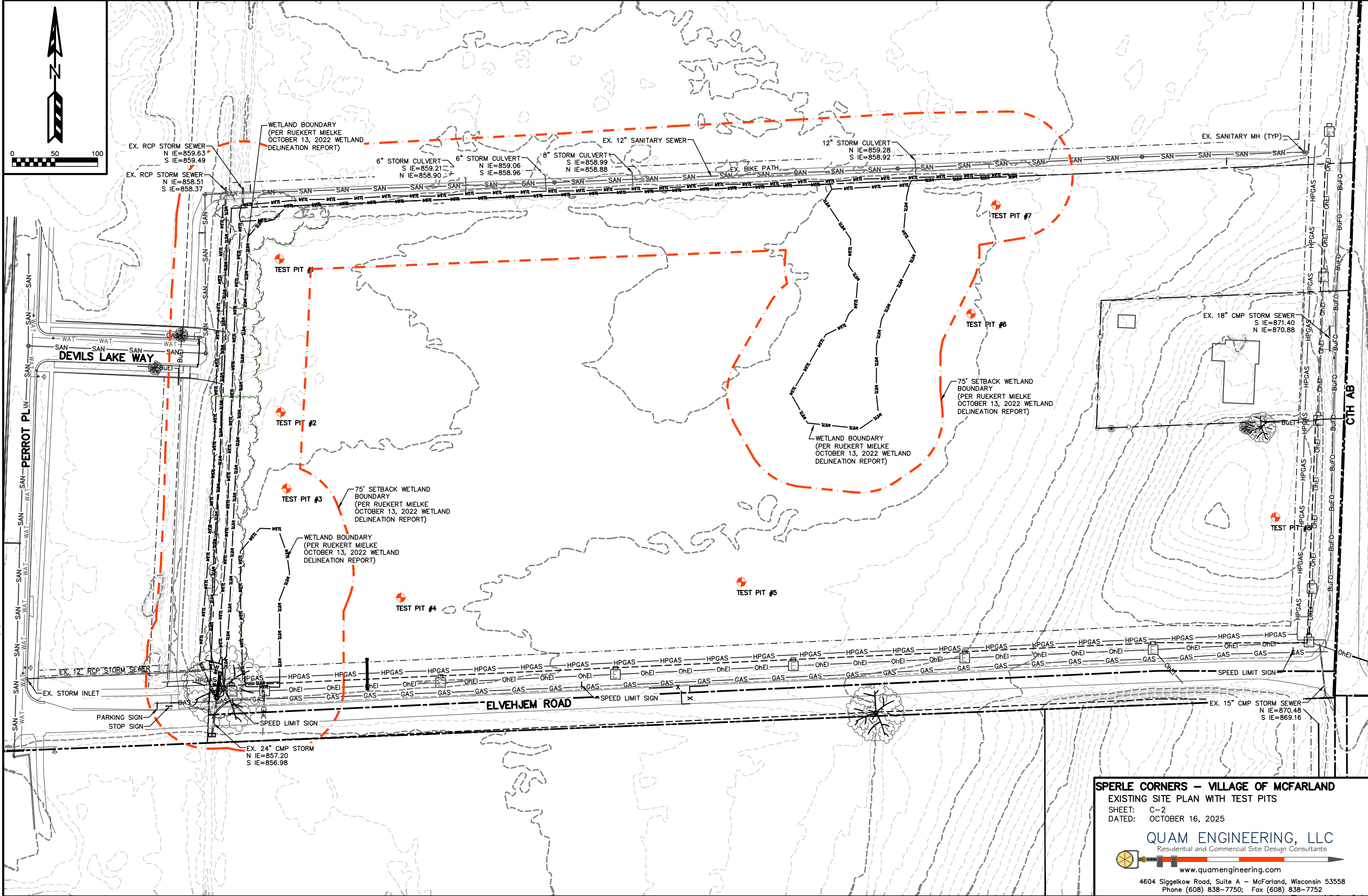
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SPERLE CORNERS - VILLAGE OF MCFARLAND

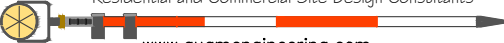
EXISTING SITE PLAN WITH TEST PITS

SHEET: C-2

DATED: OCTOBER 16, 2025

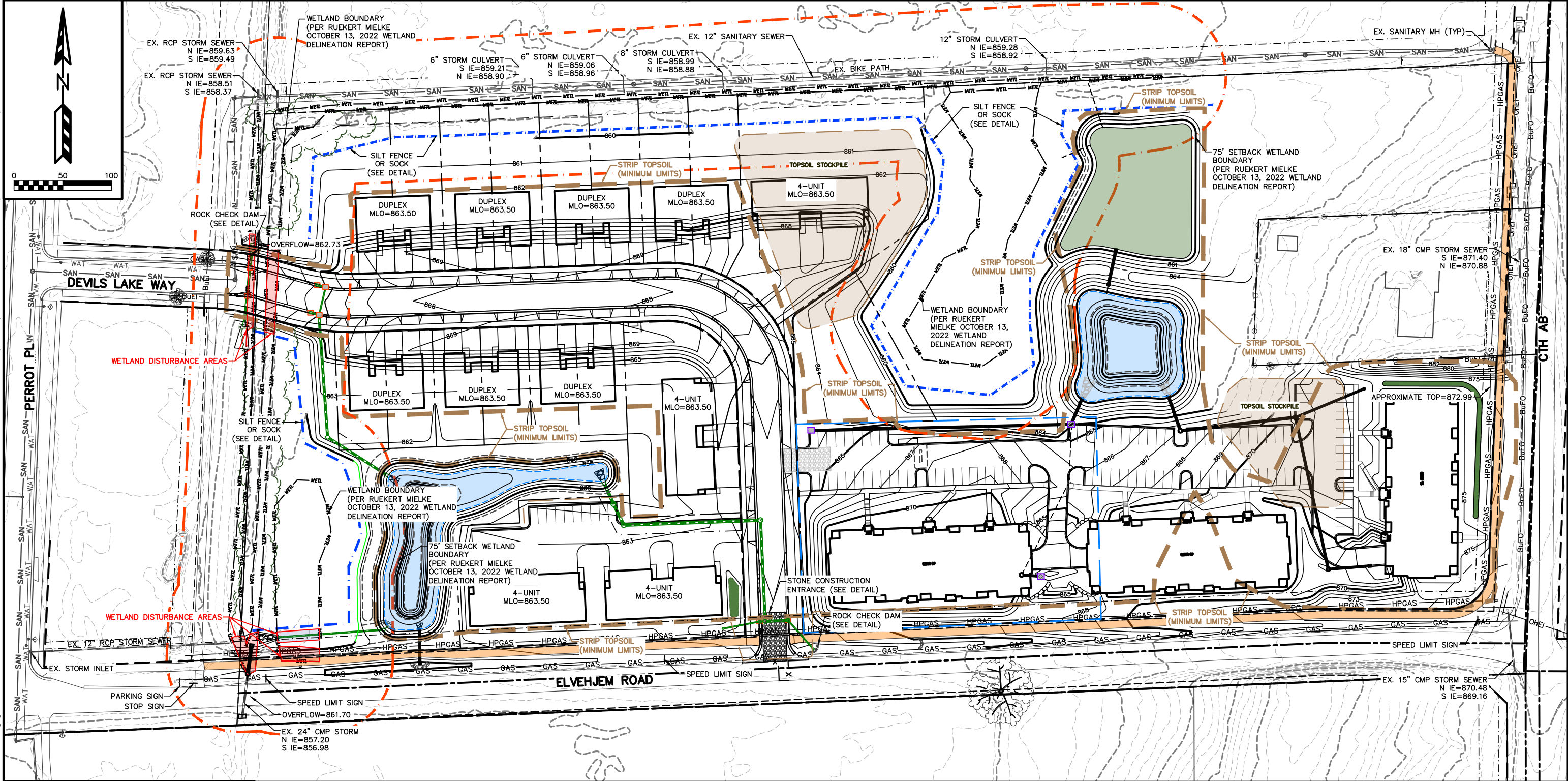
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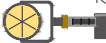
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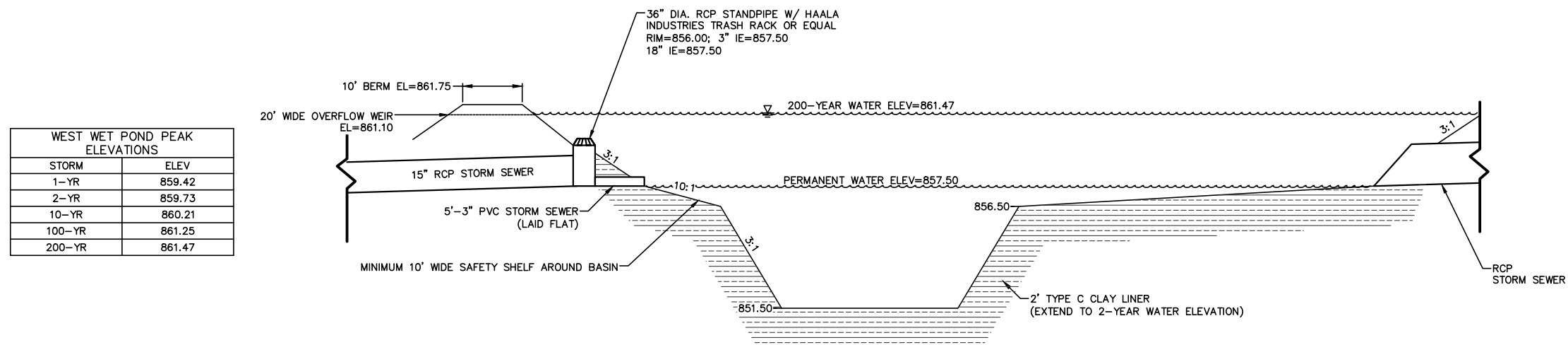
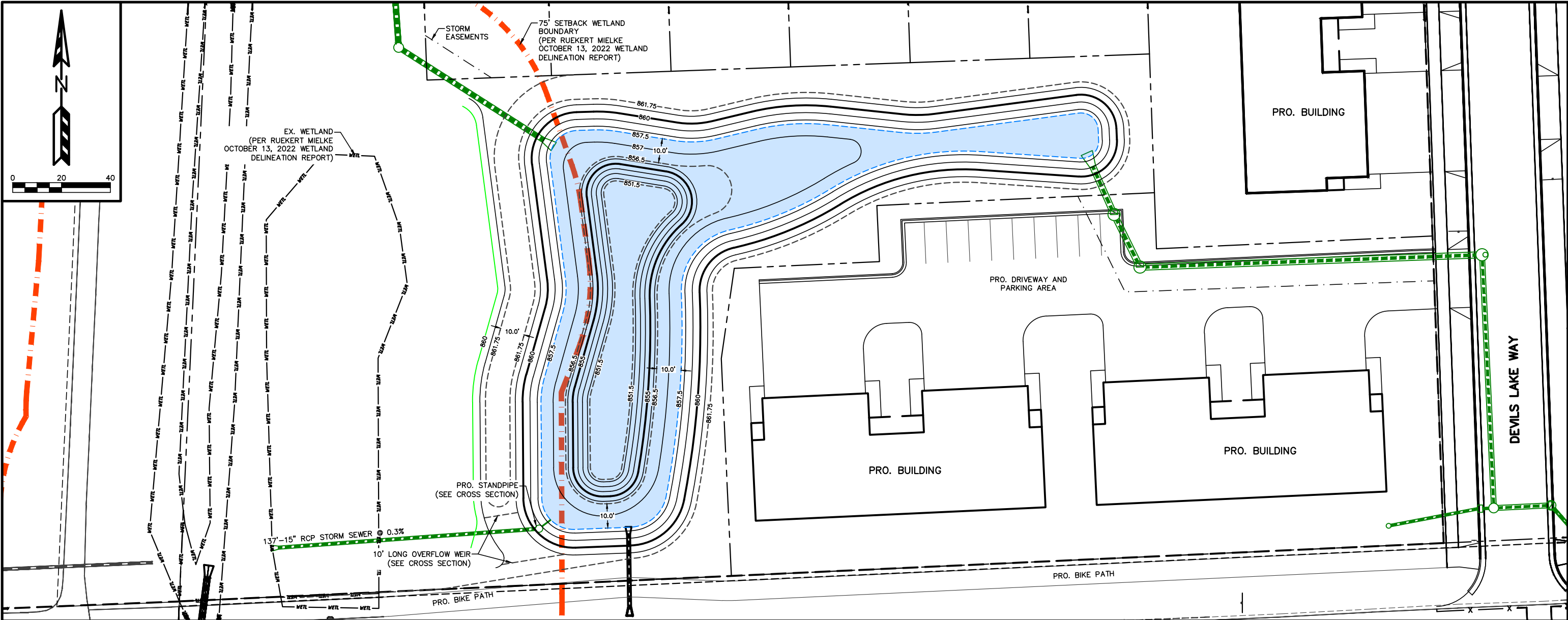


LEGEND FOR COMMON LINES:	
964	EXISTING MINOR CONTOUR
965	EXISTING MAJOR CONTOUR
964	PROPOSED MINOR CONTOUR
965	PROPOSED MAJOR CONTOUR
---	PROPERTY LINE
---	ROAD RIGHT-OF-WAY
---	EASEMENT LINE
---	75 FT SHORELINE SETBACK
---	EXISTING FENCE
WAT	EXISTING BURIED WATER MAIN/SERVICE
SAN	EXISTING BURIED SANITARY SEWER/LATERAL
GAS	EXISTING BURIED GAS LINE
BuCom	EXISTING BURIED COMMUNICATION LINE
BuFO	EXISTING BURIED FIBER OPTIC LINE
BuTel	EXISTING BURIED TELEPHONE LINE
BuEl	EXISTING BURIED ELECTRIC LINE
OhUt	EXISTING OVERHEAD UTILITY LINE
OhEl	EXISTING OVERHEAD ELECTRIC LINE
---	PROPOSED SILT FENCE/SOCK (SEE DETAIL)
---	PROPOSED LIMITS OF DISTURBANCE
MLO	MINIMUM LOWEST OPENING
---	FLEXSTORM INLET PROTECTION (SEE DETAIL)

SPERLE CORNERS – VILLAGE OF MCFARLAND
OVERALL GRADING & STORM WATER MANAGEMENT PLAN
SHEET: C-3
DATED: OCTOBER 16, 2025

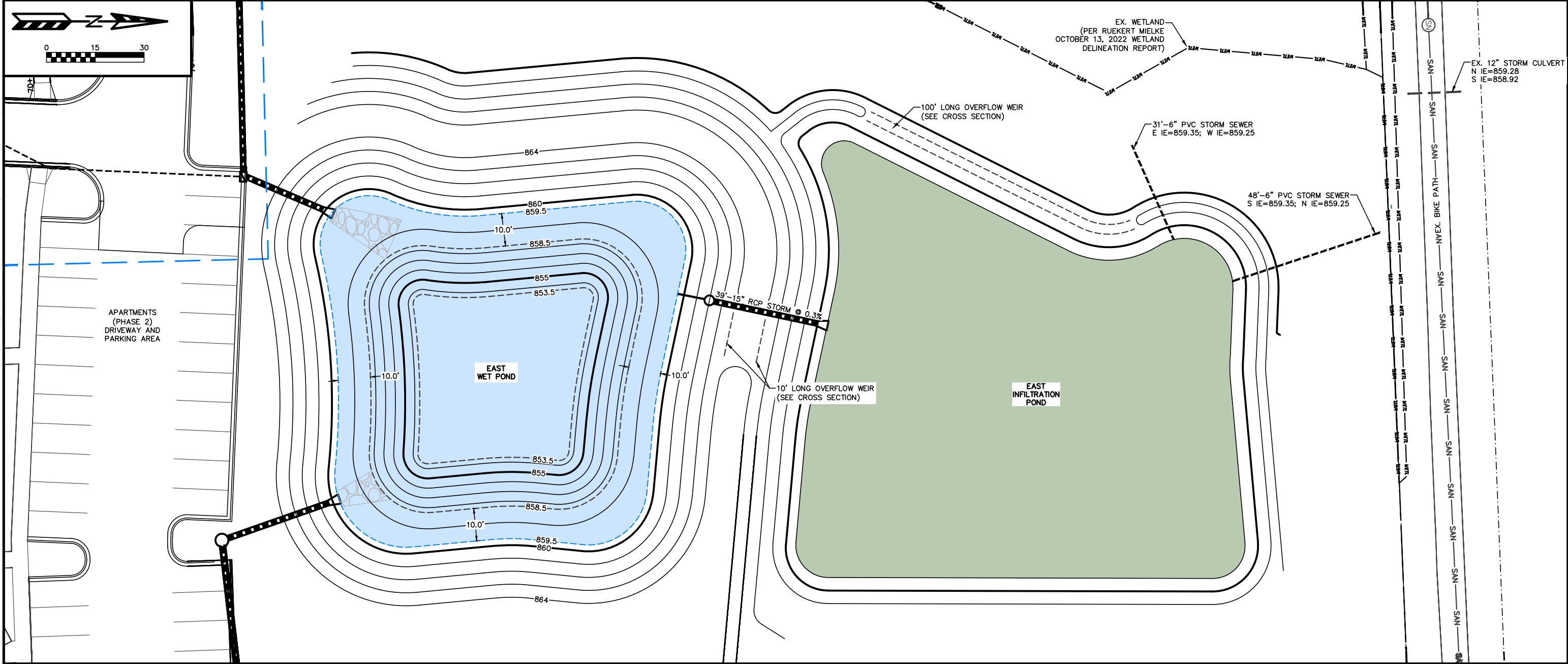
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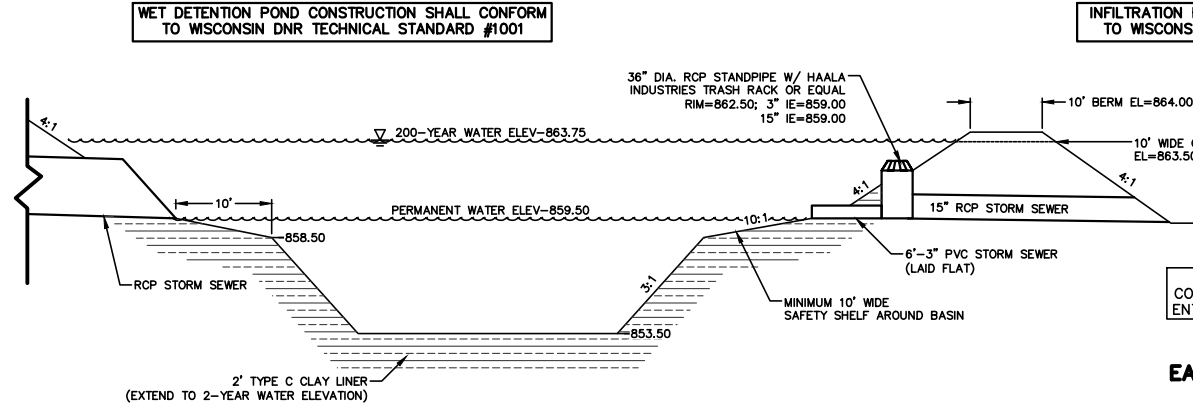


CONTRACTOR SHALL NOTIFY ENGINEER WHEN POND IS GRADED TO FINISH ELEVATIONS FOR AS-BUILT TOPOGRAPHIC COLLECTION. IF PUMPING IS REQUIRED TO ALLOW THE BOTTOM TO BE COLLECTED, CONTRACTOR SHALL ARRANGE FOR PUMPING.

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Phone (608) 838-7750; Fax (608) 838-7752

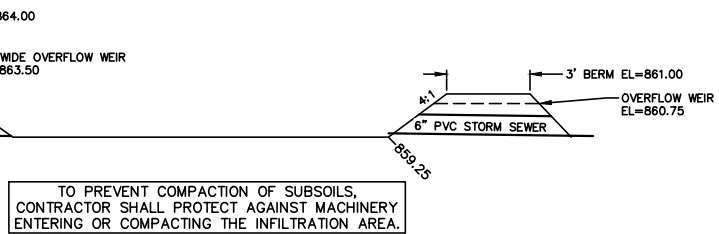


EAST WET POND PEAK ELEVATIONS	
STORM	ELEV
1-YR	861.48
2-YR	861.80
10-YR	862.61
100-YR	863.42
200-YR	863.75



EAST WET DETENTION POND CROSS SECTION

INFILTRATION BASIN CONSTRUCTION SHALL CONFORM TO WISCONSIN DNR TECHNICAL STANDARD #1003



EAST INFILTRATION BASIN CROSS SECTION

CONTRACTOR SHALL NOTIFY ENGINEER WHEN POND IS GRADED TO FINISH ELEVATIONS FOR AS-BUILT TOPOGRAPHIC COLLECTION. IF PUMPING IS REQUIRED TO ALLOW THE BOTTOM TO BE COLLECTED, CONTRACTOR SHALL ARRANGE FOR PUMPING.

THE SEED MIXTURE FOR THE INFILTRATION BASIN BOTTOM SHALL BE RAINWATER RENEWAL SEED MIX SUPPLIED BY AGRECOL OR EQUIVALENT. MIX 80% SAND, 20% COMPOST WITH THE NATIVE LOAMY FINE SAND SOIL.

EAST INFILTRATION BASIN PEAK ELEVATIONS	
STORM	ELEV
1-YR	859.65
2-YR	859.67
10-YR	859.96
100-YR	860.96
200-YR	861.00

LAKESTONE PROPERTIES - VILLAGE OF MCFARLAND

EAST POND PLAN

SHEET: C-5

DATED: OCTOBER 16, 2025

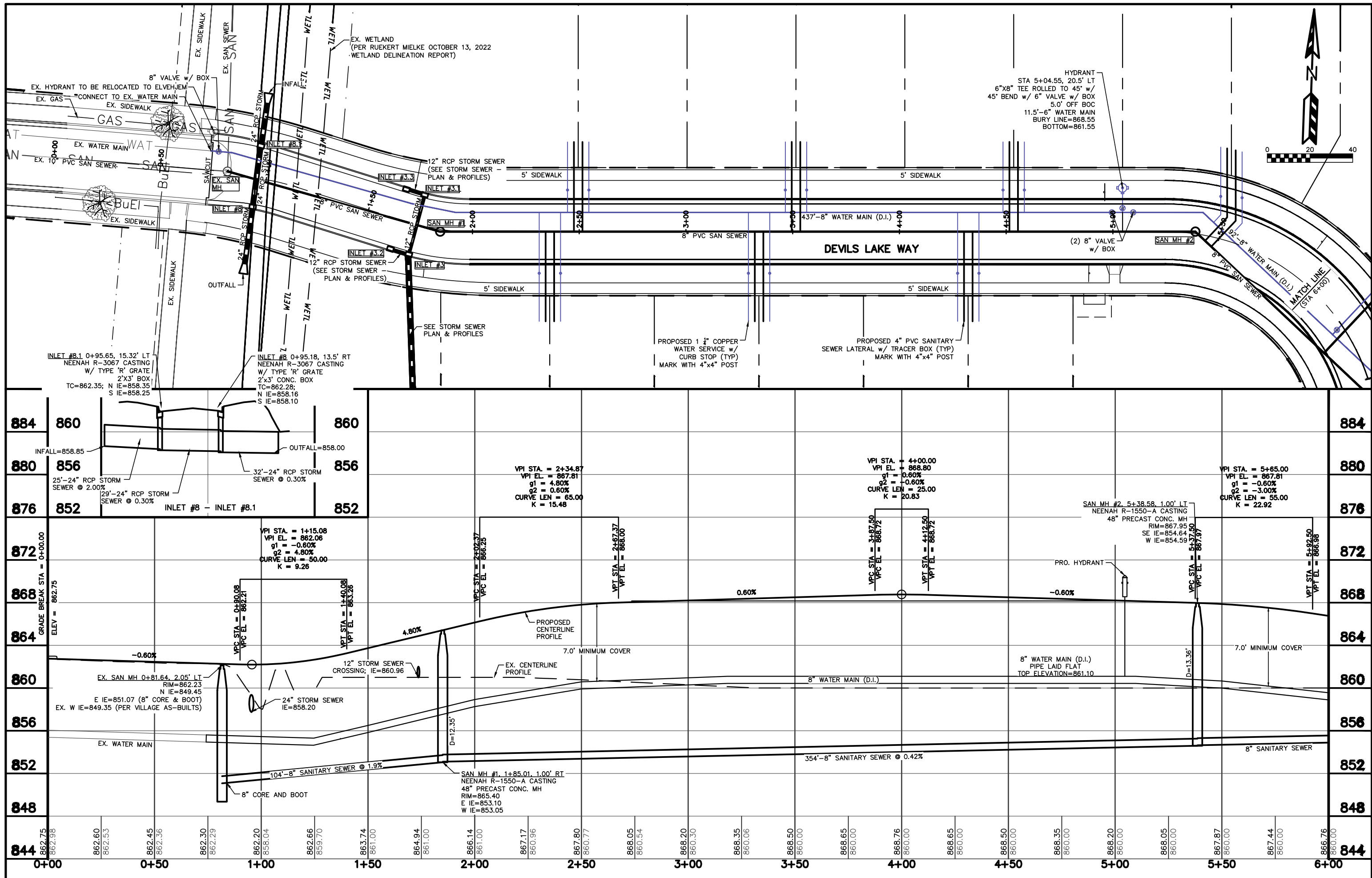
QUAM ENGINEERING, LLC

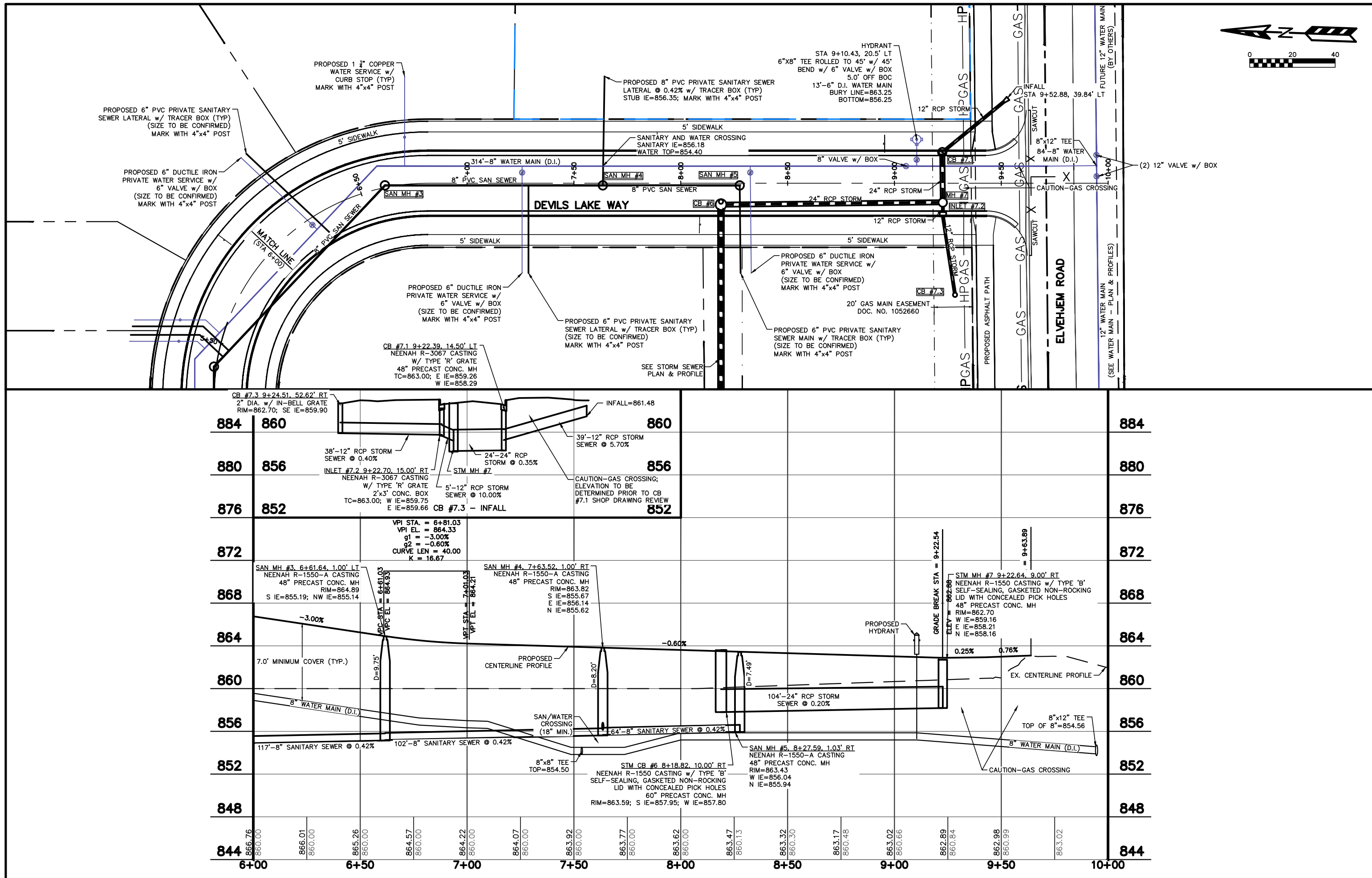
Residential and Commercial Site Design Consultants

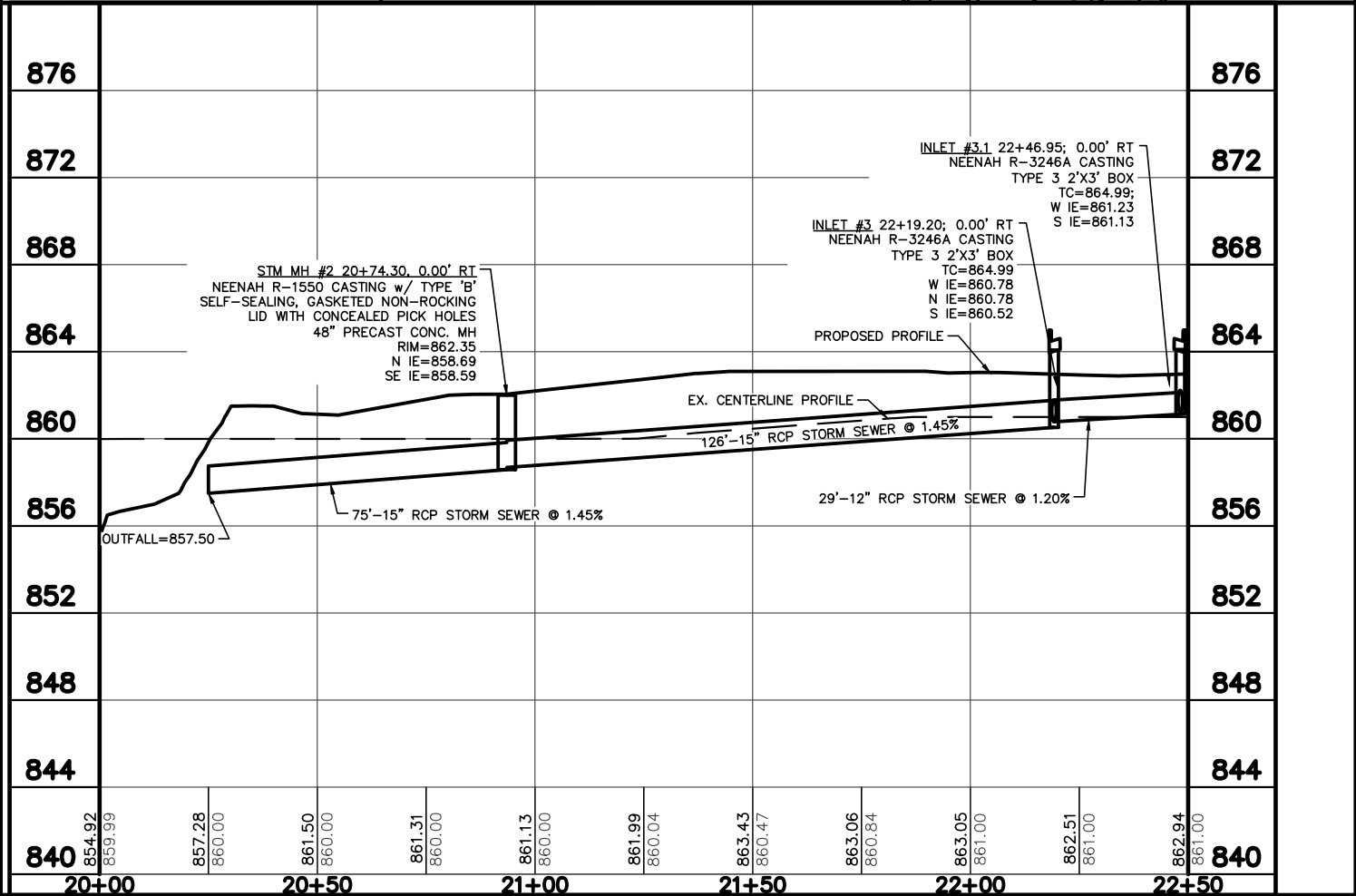
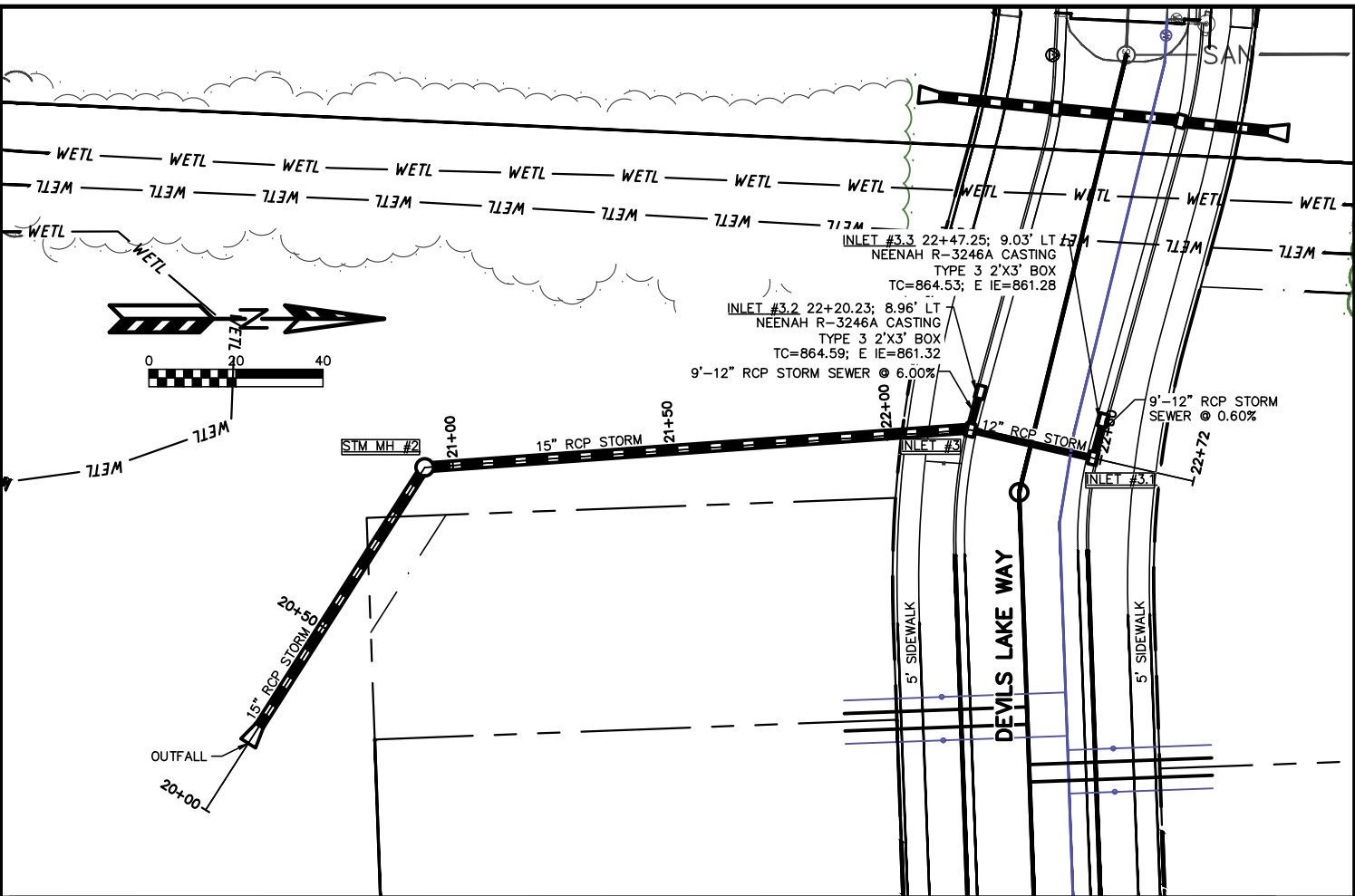
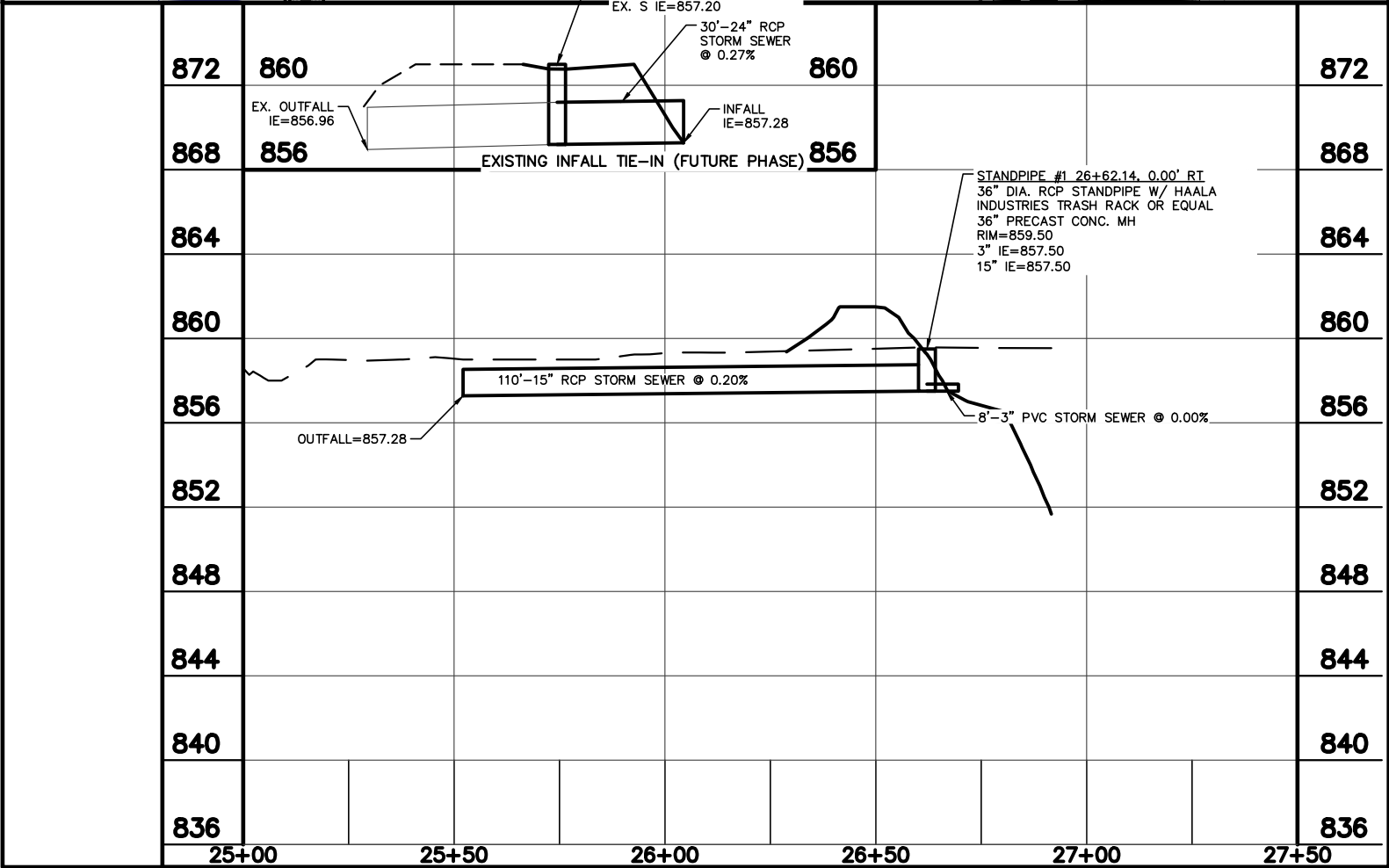
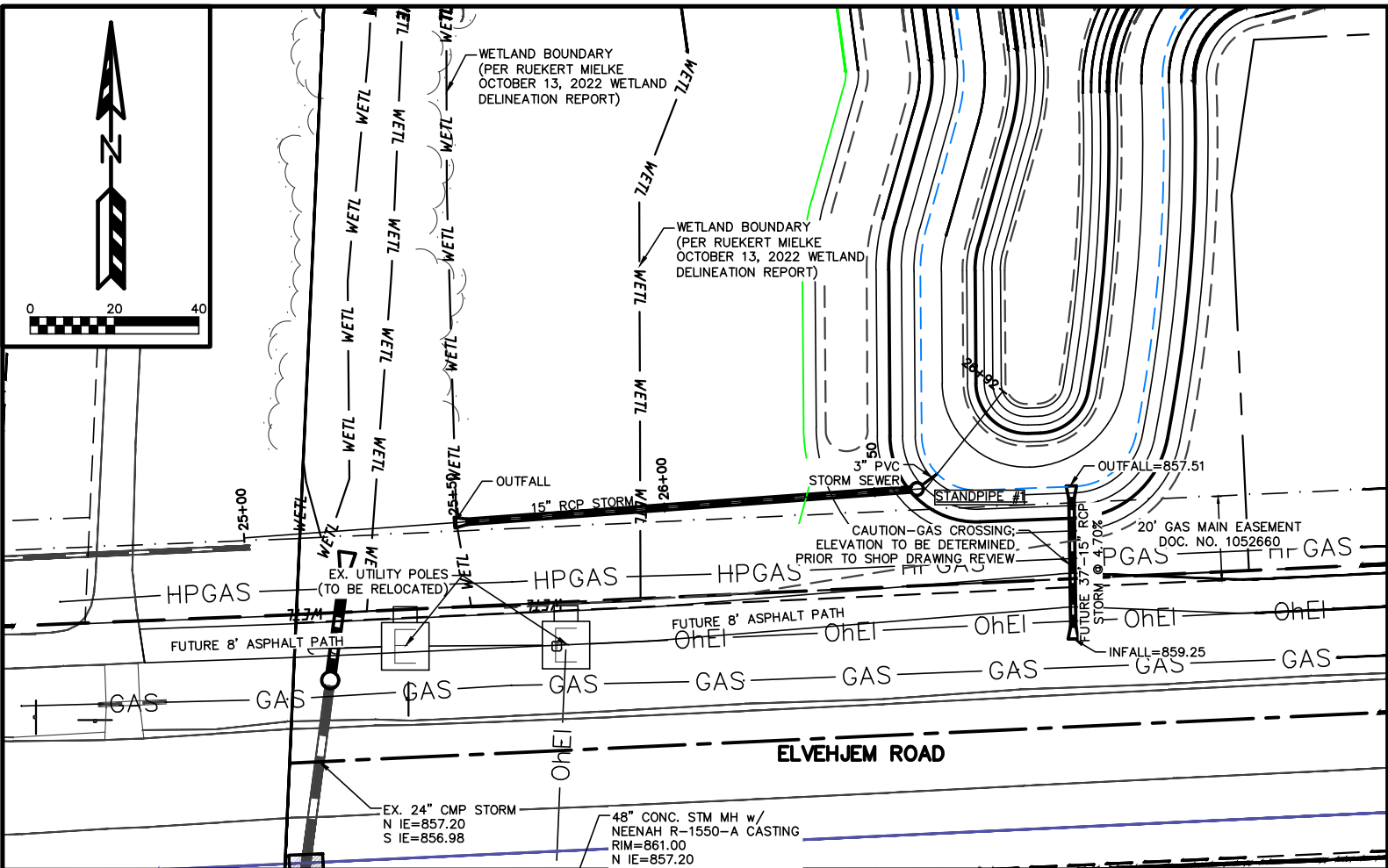
www.quamengineering.com

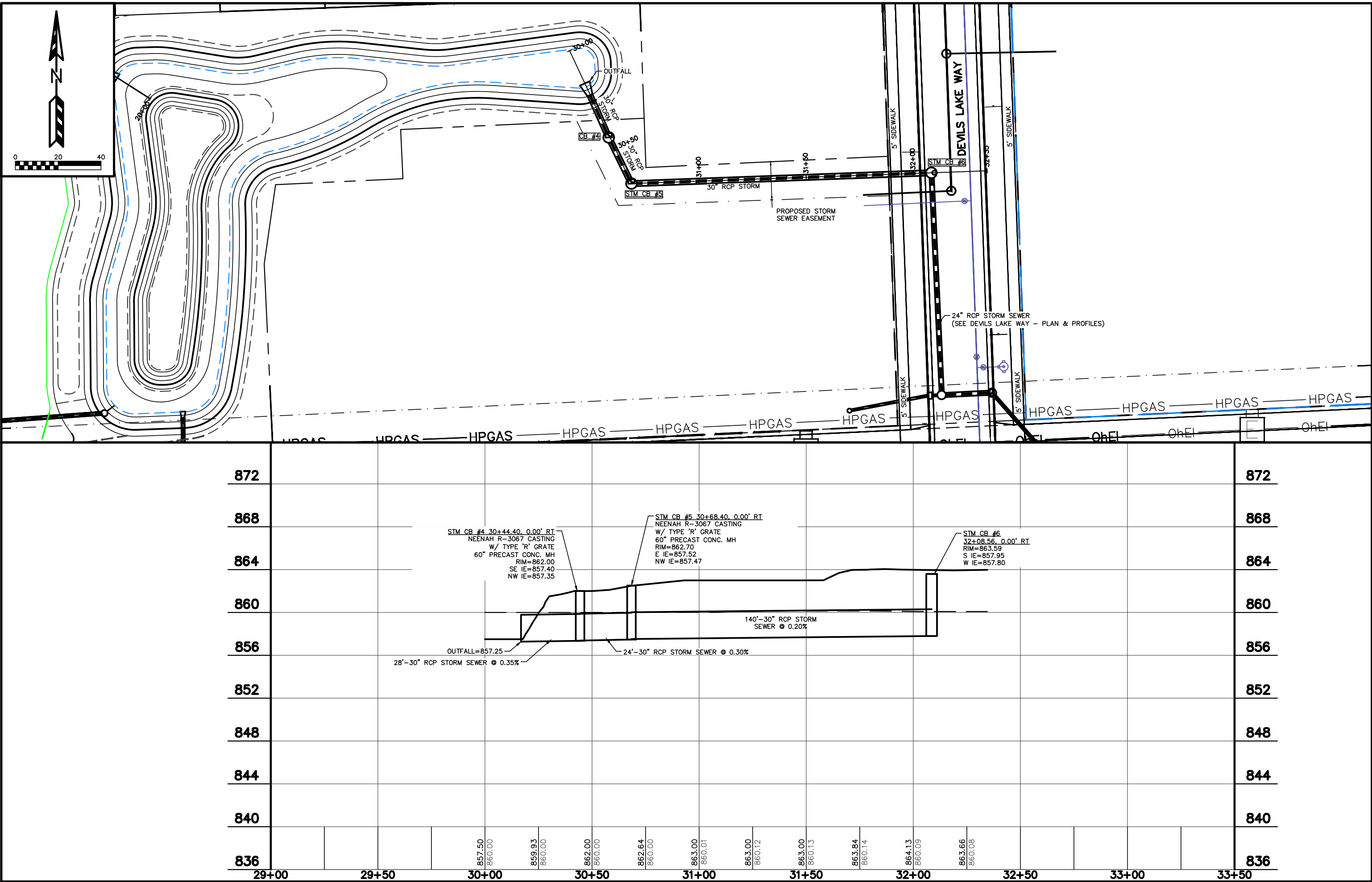
4604 Siggelkow Road, Suite A - McFarland, Wisconsin 53558

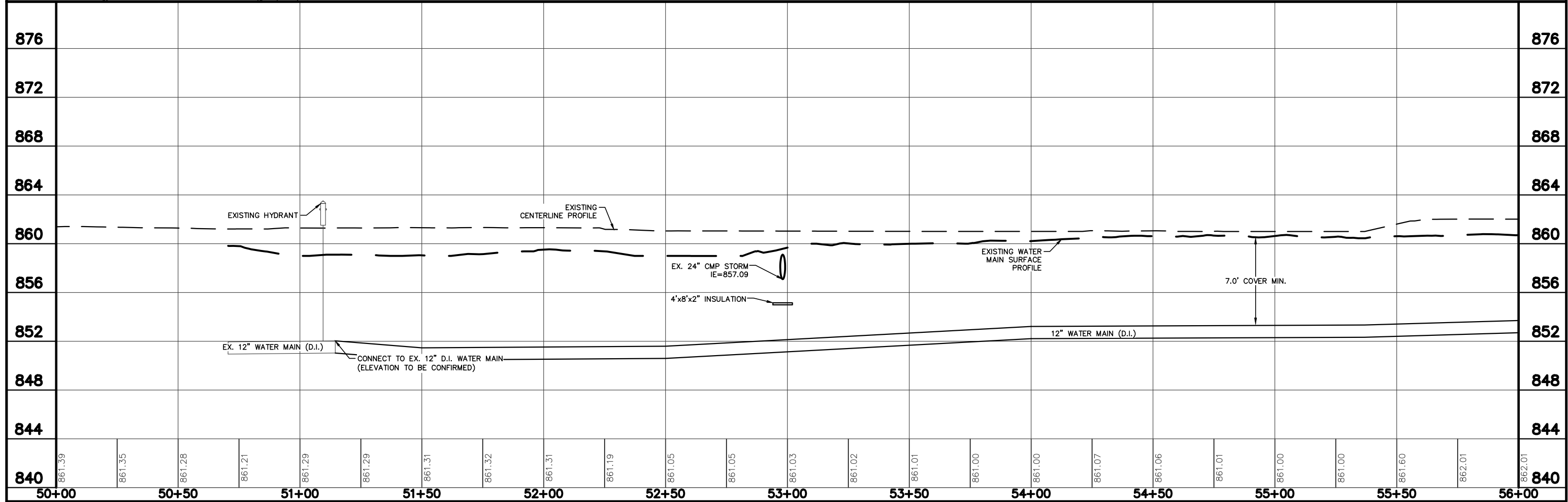
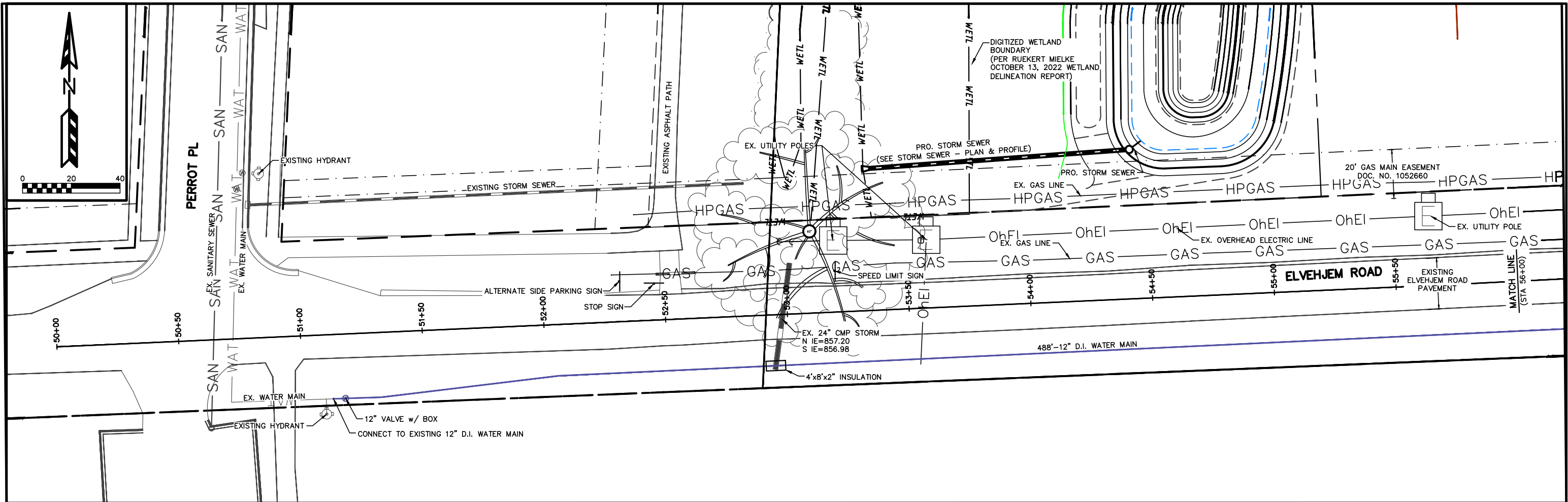
Phone (608) 838-7750; Fax (608) 838-7752



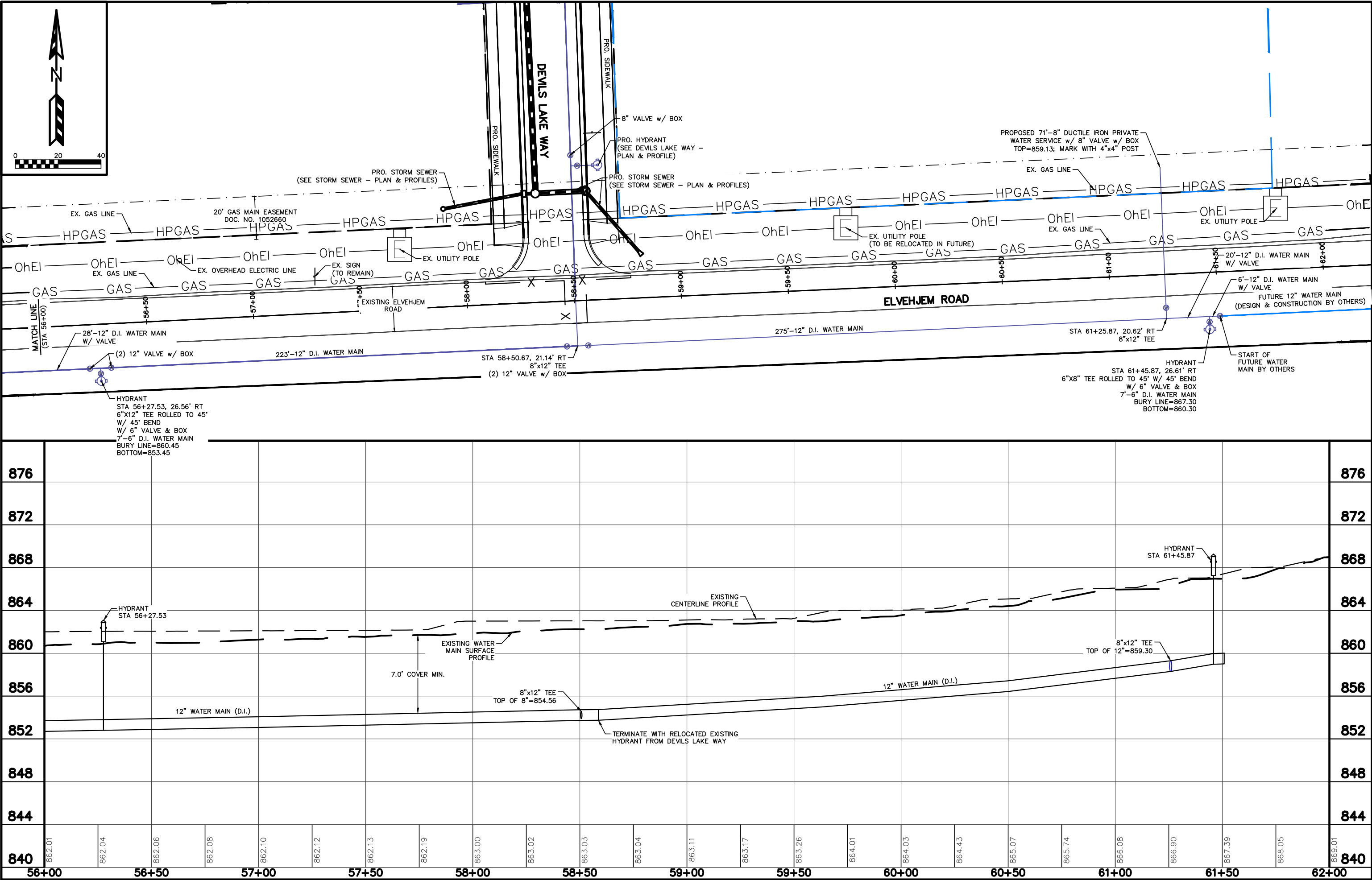








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LS-03-19\DEVILS LAKE WAY PLAN AND PROFILE.DWG

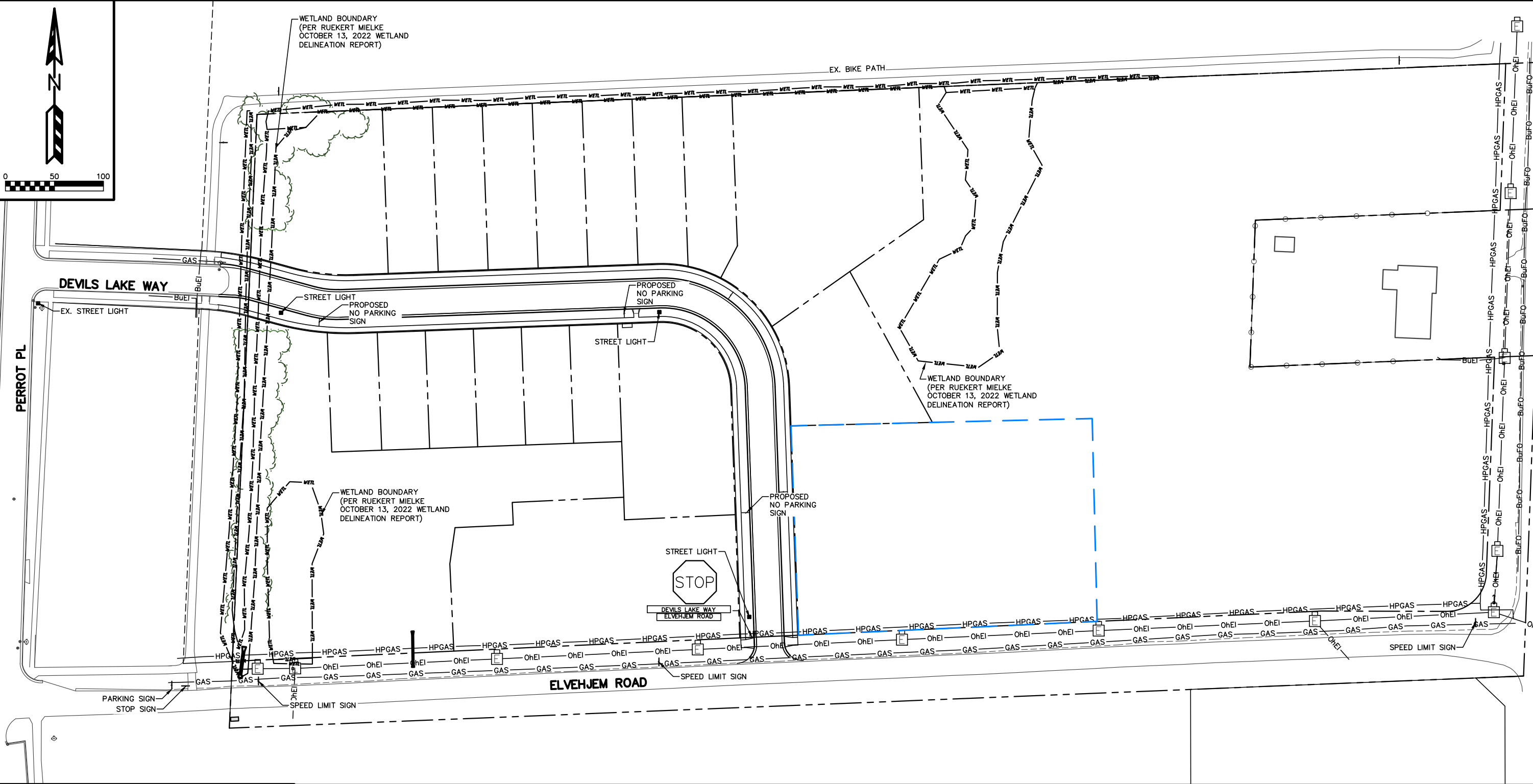
SPERLE CORNERS RESIDENTIAL SUBDIVISION - WATER MAIN

LS-03-19

10/16/2025

SHEET C-11

Page 148 of 444



SIGNING AND LIGHTING LEGEND

STOP SIGN - SIGN DESIGNATION R1-1

STREET SIGNS

STREET NAME SIGNS

STREET LIGHT (DESIGN BY OTHERS)

SIGNAGE NOTES:

ALL SIGNS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGNS SHALL BE A DISTANCE OF 7" FROM GROUND LEVEL TO THE BOTTOM OF THE SIGN MOUNTED ON THE POST AND LOCATED 3' BEHIND THE BACK OF CURB.

STREET NAME SIGNS SHALL HAVE WHITE LETTERS AND GREEN BACKGROUND.

STREET NAME SIGNS SHALL BE PLACED ABOVE STOP SIGNS AT INTERSECTIONS THAT REQUIRE STOP SIGNS.

SIGN POSTS SHALL BE 1.75" O.D., GALVANIZED 10 FT LONG, 13 GAUGE, AND 0.095 WALL THICKNESS. MOUNT SIGN AT TOP OF THE POST, AND INSTALL POSTS 3' DEEP AND MIX 1/2 BAG OF 80 LB SAKRETE CONCRETE POURING IS AROUND THE POST BELOW THE GROUND BEFORE COVERING WITH 8".

SPERLE CORNERS - VILLAGE OF MCFARLAND

SIGN AND LIGHTING PLAN

SHEET: C-12

DATED: OCTOBER 16, 2025

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1 RECTANGULAR STREET INLET
2 NOT TO SCALE

MANHOLE SIZE	DIMENSION	
	A	B (MIN.)
48"	48"	5"
60"	60"	6"
72"	72"	7"
84"	84"	7"
96"	96"	9"

NOTES:

CONCRETE SHALL BE 4000 PSI, 28 DAY COMPRESSIVE STRENGTH, 6.5 BAG MIX WITH 1~2% AIR ENTRAINMENT.

MANHOLE STEPS SHALL CONFORM TO
ASTM-C478 & SHALL BE NEENAH
FOUNDRY R-1981-N OR APPROVED
EQUAL. STEPS SHALL BE SPACED 16"
ON CENTER.

A MAXIMUM OF 6" OF ADJUSTING RINGS SHALL BE USED TO ADJUST THE MANHOLE-TYPE CURB CATCH BASIN CASTING TO THE FINISHED GRADE. ALL RINGS SHALL BE SEALED TOGETHER USING MASTIC AND ALL JOINTS SHALL BE BACK PLASTERED INSIDE AND OUT WITH CEMENT MORTAR.

THE GRATE ELEVATION SHALL BE
DEPRESSED 0.1' FROM STRAIGHT
GUTTER GRADE STARTING 5' FROM THE
INLET AND EXTENDING IN BOTH
DIRECTIONS.

MANHOLE-TYPE CURB CATCH BASIN CASTING SHALL BE NEENAH FOUNDRY R-3067 WITH REVERSIBLE GRATES WHERE RUNOFF REACHES THE INLET FROM BOTH DIRECTIONS. WHERE RUNOFF REACHES THE INLET FROM ONE DIRECTION A NEENAH R-3067-L CASTING SHALL BE USED. DIRECTIONAL SLOTS TO BE LOCATED TO DIRECT THE FLOW INTO THE STREET INLET.

A 2x3 LID OPENING IS REQUIRED FOR
MANHOLE-TYPE CURB CATCH BASINS.

1 **STORM SEWER MANHOLE**
2 NOT TO SCALE

STANDARD TRENCH SECTION

NOT TO SCALE

1 LATERAL WITH TRACER WIRE
2 NOT TO SCALE

SPERLE CORNERS - VILLAGE OF MCFARLAND
DETAILS

DETAILS

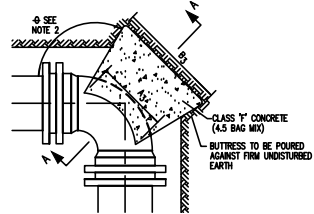
SHEET: C-14

DATED: OCTOBER 16, 2025

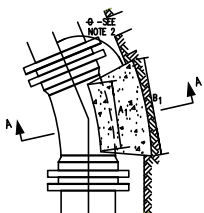
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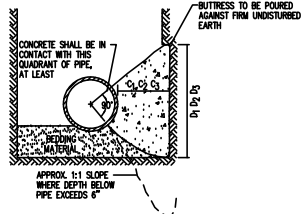
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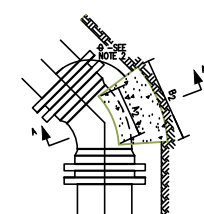
PLAN - 90° BEND



PLAN - 22 1/2° BEND



SECTION A-A

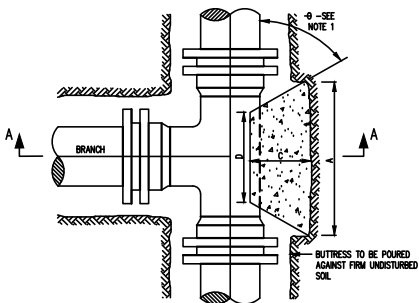


PLAN - 45° BEND

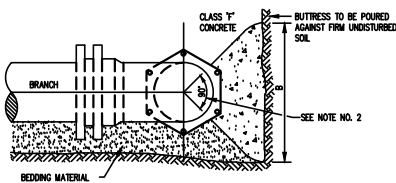
BUTTRESS DIMENSIONS							
PIPE SIZE	22 1/2° BENDS			45° BENDS			90° BENDS
	B ₁	D ₁	B ₂	D ₂	B ₃	D ₃	
6"	1'-0"	1'-0"	1'-0"	1'-0"	1'-4"	1'-4"	
8"	1'-0"	1'-0"	1'-4"	1'-2"	1'-10"	1'-4"	
12"	1'-4"	1'-4"	1'-10"	1'-10"	2'-8"	2'-3"	
16"	1'-10"	1'-8"	2'-4"	2'-4"	3'-10"	2'-10"	
20"	2'-4"	2'-0"	3'-3"	2'-10"	5'-0"	3'-4"	
24"	2'-10"	2'-4"	4'-0"	3'-3"	6'-4"	3'-10"	
30"	3'-6"	3'-0"	5'-4"	3'-10"	8'-0"	4'-8"	

NOTES

1. DIMENSIONS IN TABLE ARE BASED ON A WATER PRESSURE OF 150 psi AND ON EARTH RESISTANCE OF 2 TONS PER SQUARE FOOT.
2. DIMENSION C1 C2 C3 SHOULD BE LARGE ENOUGH TO MAKE ANGLE ϕ EQUAL TO OR LARGER THAN 45°.
3. DIMENSION A1 A2 A3 SHOULD BE AS LARGE AS POSSIBLE WITHOUT INTERFERING WITH M.J. BOLTS.
4. SHAPE OF BACK OF BUTTRESS MAY VARY AS LONG AS POUR IS AGAINST FIRM UNDISTURBED EARTH.
5. ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED IN POLYETHYLENE.



PLAN



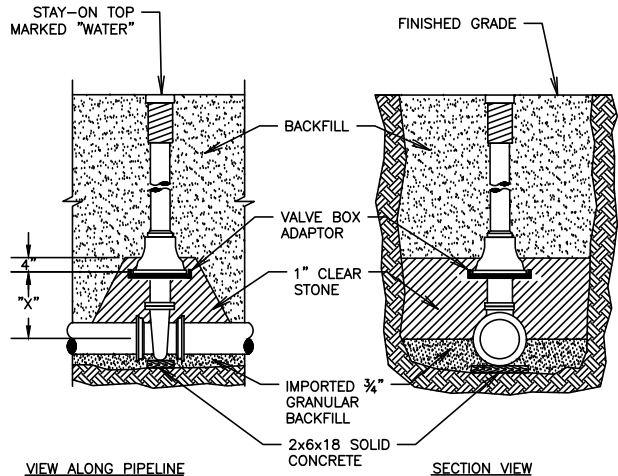
SECTION A-A

BUTTRESS DIMENSIONS				
B.D.	A	B	C	D
6"	1'-3"	1'-0"		
8"	1'-4"	1'-4"		
12"	2'-3"	2'-0"		
16"	3'-2"	2'-4"		
20"	4'-0"	3'-0"		
24"	5'-3"	3'-4"		
30"	6'-3"	4'-3"		

B.D. = BRANCH DIAMETER

NOTES

1. DIMENSION 'C' SHOULD BE LARGE ENOUGH TO MAKE ANGLE EQUAL TO OR LARGER THAN 45°.
2. CONCRETE SHOULD BEAR ON THIS QUADRANT OF PIPE AS A MINIMUM.
3. DIMENSION 'D' SHOULD BE AS LARGE AS POSSIBLE BUT CONCRETE SHOULD NOT INTERFERE WITH MECHANICAL JOINTS.
4. BUTTRESS DIMENSIONS ARE BASED ON A SOIL RESISTANCE OF TWO TONS PER SQ. FT. AND A WATER PRESSURE OF 150 psi.
5. ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED IN POLYETHYLENE.



PIPE DIA., INCHES	6	8	10	12	14	16
"X" DIMENSION, INCHES	12	13	17	21	25	30

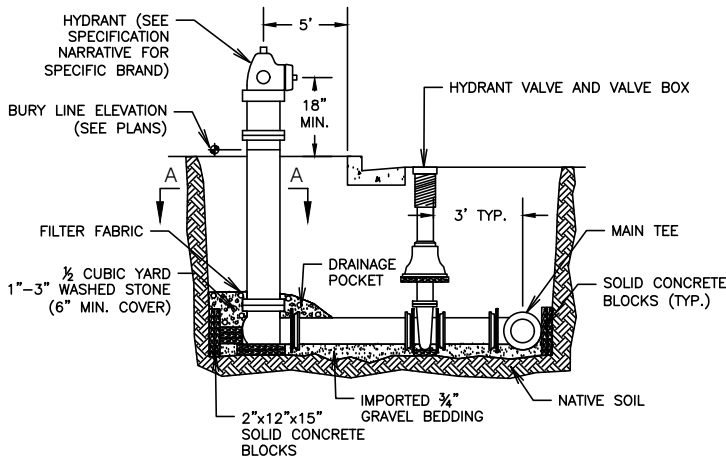
NOTES:

- VALVES SHALL BE SECURED WITH RODDING OR MEGALUGS TO THE NEAREST "TEE" FITTING OR TO THE FIRST JOINT CONNECTING A FULL SECTION OF WATER MAIN PIPE. SEE RODDING DETAIL "OFFSET AND RODDING".

DETAIL
VALVE BOX SETTING

2 STANDARD GATE VALVE BOX SETTING
2 NOT TO SCALE

1 GATE VALVE AND GATE VALVE ADAPTOR
1 NOT TO SCALE

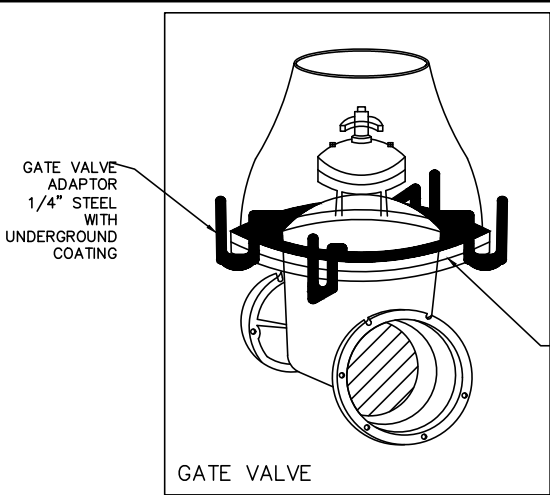


NOTES:

- THE HYDRANT AND HYDRANT VALVE SHALL BE CONNECTED TO THE MAIN TEE BY MEGALUGS.
- FILTER FABRIC SHALL BE WRAPPED AROUND THE DRAIN POCKET.
- WHERE THE HYDRANT IS INSTALLED AT THE HIGH POINT OF THE WATER MAIN ON MAINS 10 INCHES IN DIAMETER AND LARGER, THE CONTRACTOR SHALL TIP THE MAIN TEE UPWARDS 45 DEGREES AND USE A 45 DEGREE FITTING TO ALLOW AIR TO ESCAPE FROM THE MAIN.
- WHERE THE LOCATION OF THE HYDRANT VALVE BOX WOULD BE IN ANY PORTION OF THE CURB AND GUTTER, THE CONTRACTOR SHALL PLACE THE VALVE IN THE TERRACE AREA.

SECTION A-A

2 STANDARD HYDRANT SETTING
2 NOT TO SCALE

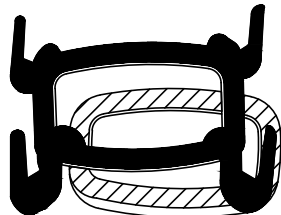


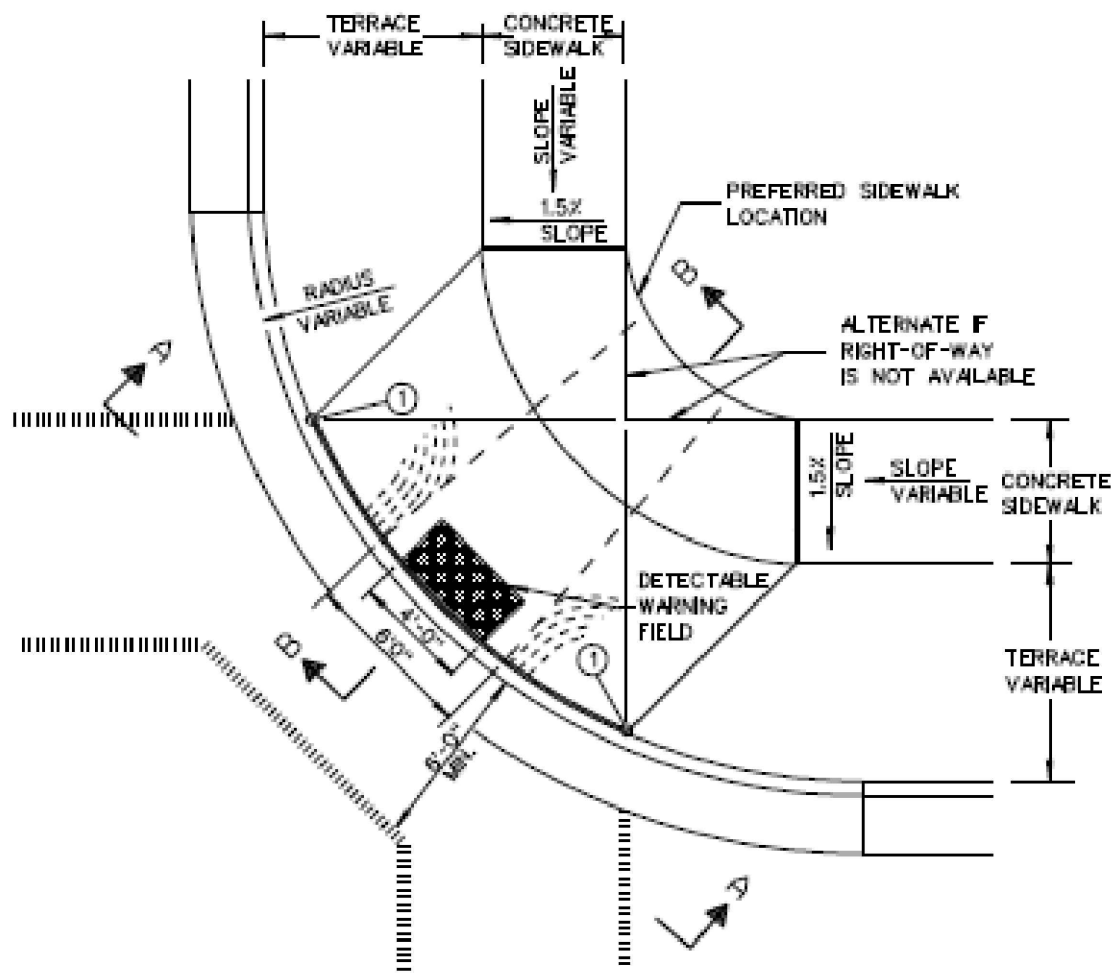
NOTE: GATE VALVE ADAPTORS ARE MANDATORY IN THE VILLAGE OF DEFOREST

1/2" NEO-PRENE GASKET INSTALLED BETWEEN THE GATE VALVE AND GATE VALVE ADAPTOR TO ABSORB ANY PRESSURE OR MOVEMENT CAUSED BY ROAD TRAFFIC

MANUFACTURED BY ADAPTOR, INC.
3642 E. AMERICAN AVE.
MILWAUKEE, WI 53154

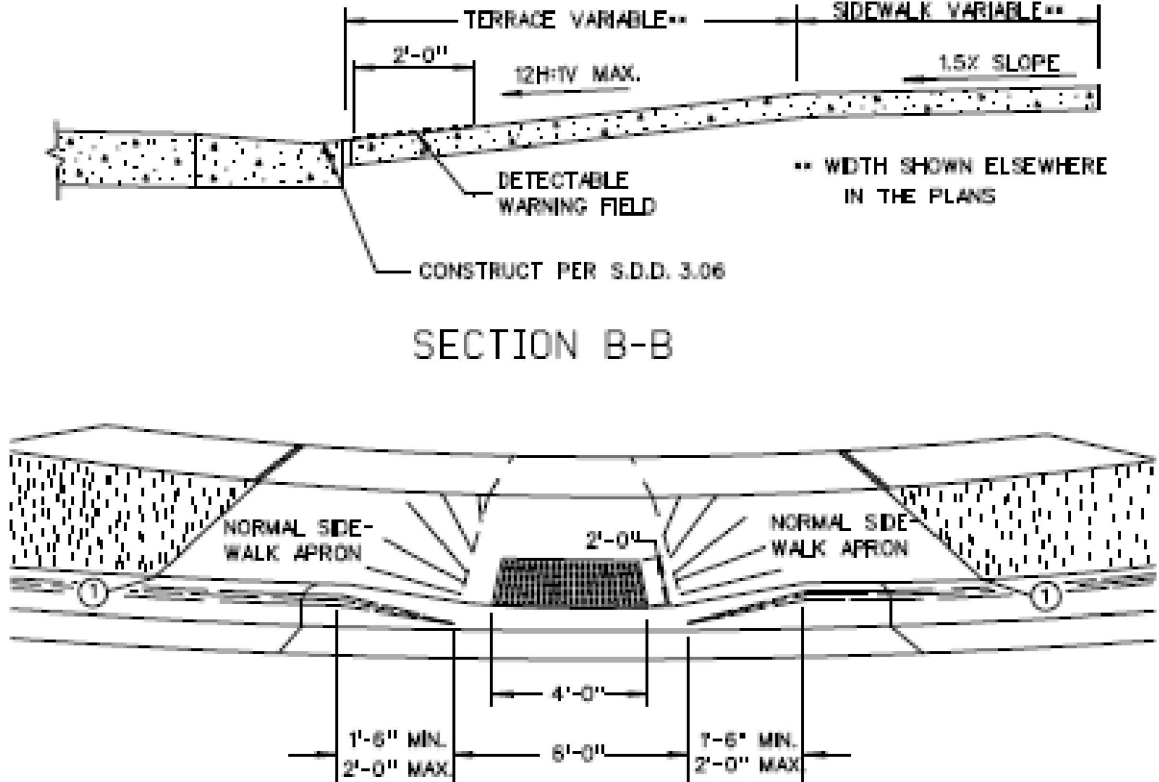
GATE VALVE ADAPTOR





PLAN VIEW
TYPE 1 RAMP
(CENTER OF CORNER RADIUS)

2 STANDARD CURB RAMP – TYPE 1
2 NOT TO SCALE



SECTION A-A

SECTION B-B

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

RAMPS SHALL BE BUILT AT 12H:1V OR FLATTER. WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD".

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

THE DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE.

① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

DETECTABLE WARNING FIELDS SHALL BE METAPANEL BY METADOME, LLC OR NEENAH 4984 PLATES.

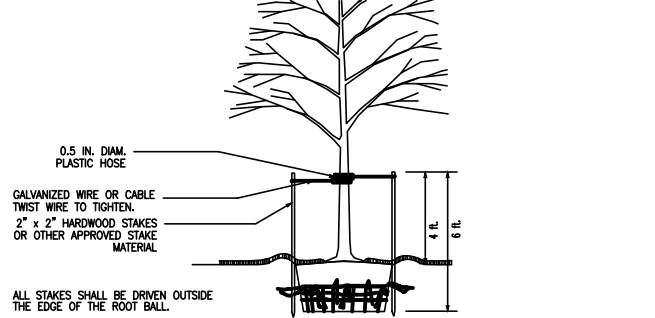
WIRE OR CABLE SIZES SHALL BE AS FOLLOWS:
4 INCH CAULPER – 11-12 GAUGE
LARGER THAN 4 INCH CAULPER – 9-10 GAUGE

TIGHTEN WIRE OR CABLE ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT. PLASTIC HOSE SHALL BE LONG ENOUGH TO ACCOMMODATE 1.5 IN. OF GROWTH AND BUFFER ALL BRANCHES FROM THE WIRE.

TUCK ANY LOOSE ENDS OF THE WIRE OR CABLE INTO THE WIRE WRAP SO THAT NO SHARP WIRE ENDS ARE EXPOSED.

ALL BURLAP AND WIRE CAGES SHALL BE REMOVED FROM ROOTS PRIOR TO PLANTING.

PLANTING DEPTH OF TREE SHALL BE SUCH THAT ROOT FLAIR IS VISIBLE JUST ABOVE GRADE.



PROVIDE 4" THICKNESS OF ORGANIC MULCH AROUND ALL TREES. MULCH SHOULD NOT REST AGAINST THE TREE TRUNK. LEAVE 3" AROUND THE TRUNK FREE OF MULCH.

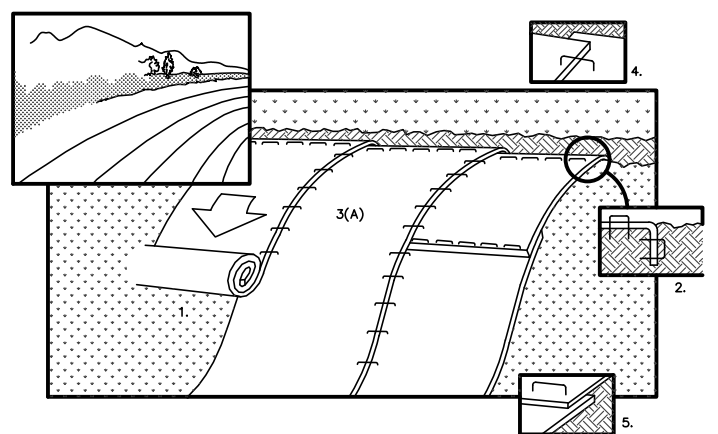
ASSURE THAT THE BEARING SURFACE OF THE PROTECTIVE COVERING OF THE WIRE OR CABLE AGAINST THE TREE TRUNK IS A MINIMUM OF 0.5 INCH.

REMOVE ALL STAKING AS SOON AS THE TREE HAS GROWN SUFFICIENT ROOTS TO OVERCOME THE PROBLEM THAT REQUIRED THE TREE TO BE STAKED. STAKES SHALL BE REMOVED NO LATER THE END OF THE FIRST GROWING SEASON AFTER PLANTING.

TREES NORMALLY DO NOT NEED TO BE STAKED AND STAKING CAN BE HARMFUL TO THE TREE. STAKING SHOULD BE DONE ONLY WITH THE APPROVAL OF THE LANDSCAPE ARCHITECT IF IT IS EXPECTED THAT THE TREE WILL NOT BE ABLE TO SUPPORT ITSELF. THE FOLLOWING ARE REASONS WHY TREES DO NOT REMAIN STRAIGHT.

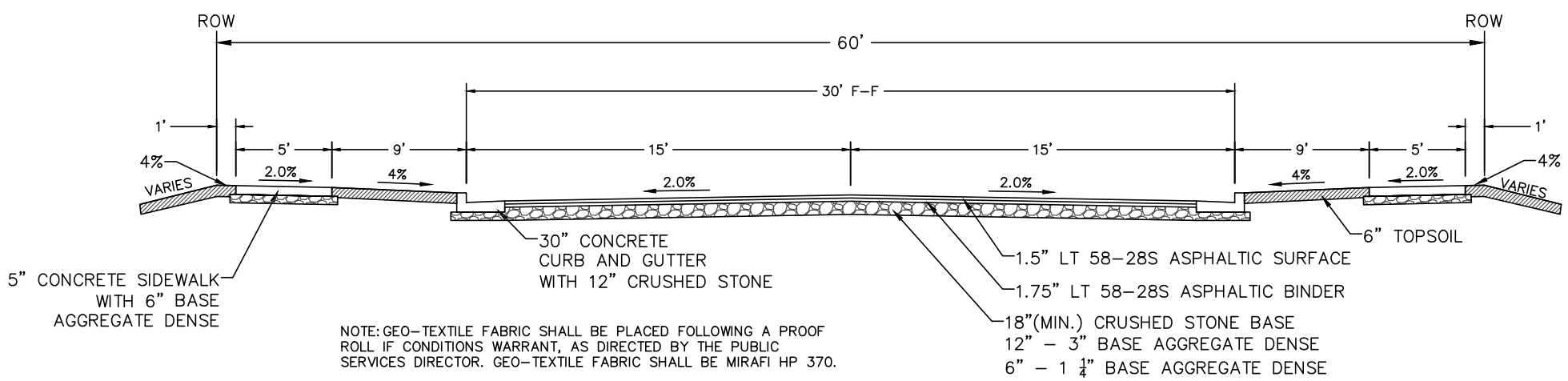
- TREES WITH POOR – QUALITY ROOT BALLS OR ROOT BALLS THAT HAVE BEEN CRACKED OR DAMAGED. REJECT RATHER THAN STAKE.
- TREES THAT HAVE GROWN TOO CLOSE TOGETHER IN THE NURSERY, RESULTING IN WEAK TRUNKS. REJECT RATHER THAN STAKE.
- PLANTING PROCEDURES THAT DO NOT ADEQUATELY TAMP SOILS AROUND THE ROOT BALL. CORRECT THE PLANTING PROCEDURE.
- ROOT BALLS PLACED ON SOFT SOIL. TAMP SOILS UNDER ROOT BALL PRIOR TO PLANTING.
- ROOT BALLS WITH VERY SANDY SOIL OR VERY WET CLAY SOIL. STAKING ADVISABLE.
- TREES LOCATED IN A PLACE OF EXTREMELY WINDY CONDITIONS. STAKING ADVISABLE.

TREE PLANTING DETAIL



- NOTE: REFER TO GENERAL STAPLE PATTERN GUIDE FOR CORRECT STAPLE PATTERN RECOMMENDATIONS FOR SLOPE INSTALLATIONS.
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF FERTILIZER AND SEED.
NOTE: WHEN USING CELL-0-SEED DO NOT SEED PREPARED AREA. CELL-0-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
 2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
 3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE.
 4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.
 5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 4" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY
 6. ALL BLANKETS MUST BE SECURELY FASTENED TO THE SLOPE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS RECOMMENDED BY THE MANUFACTURER.
 7. SLOPES 5:1 SHOULD BE COVERED WITH CLASS I TYPE A AT A MINIMUM.

EROSION CONTROL MAT – SLOPE INSTALLATION

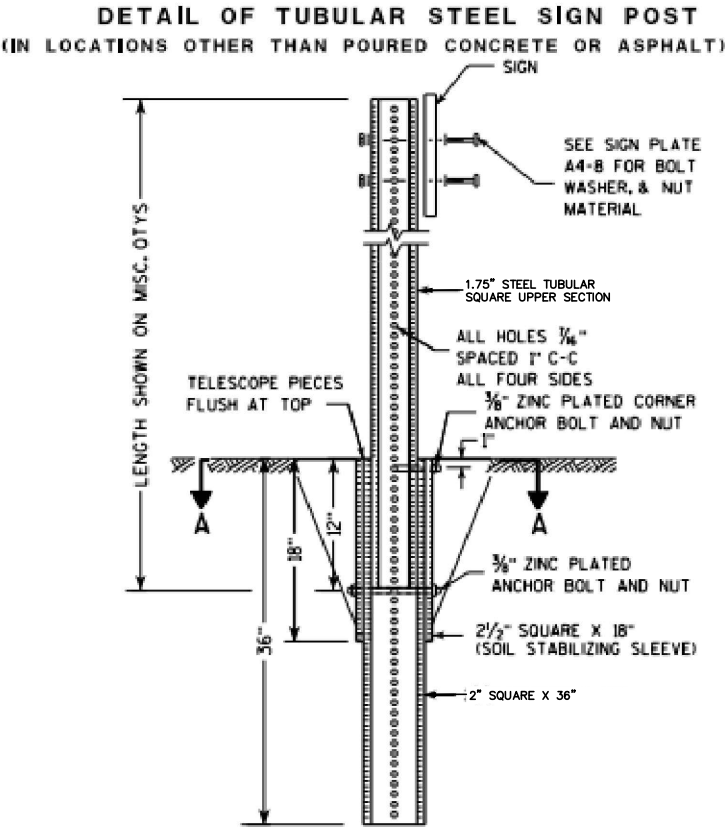
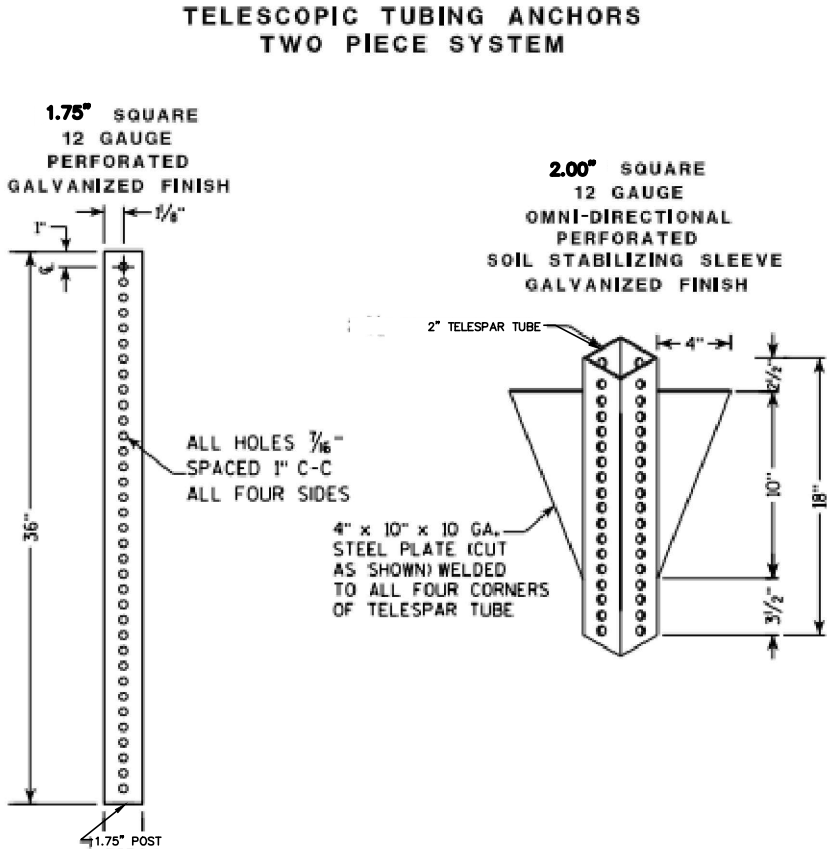


TYPICAL ROADWAY CROSS-SECTIONS

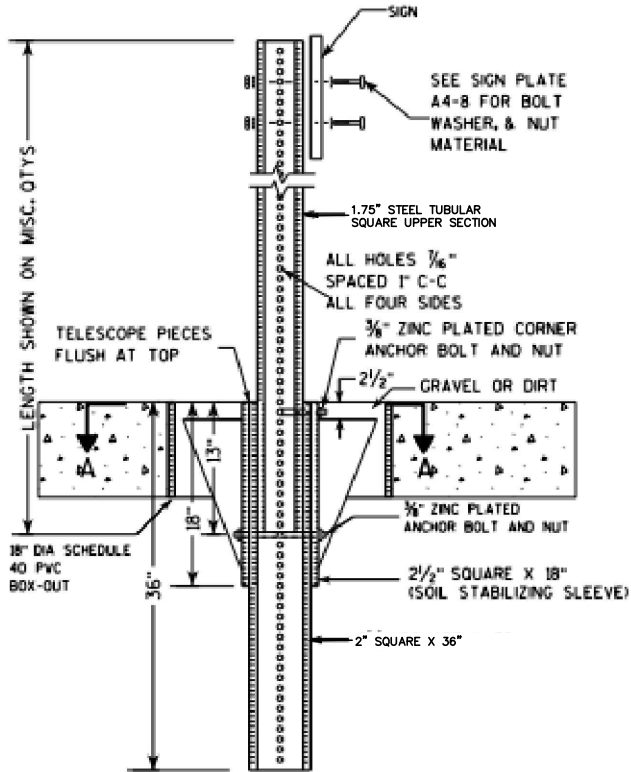
SPERLE CORNERS – VILLAGE OF MCFARLAND

DETAILS
SHEET: C-16
DATED: OCTOBER 16, 2025

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Residential and Commercial Site Design Consultants
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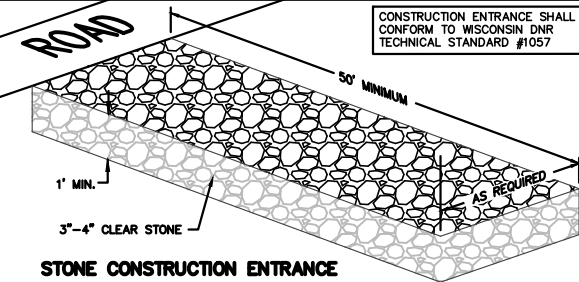
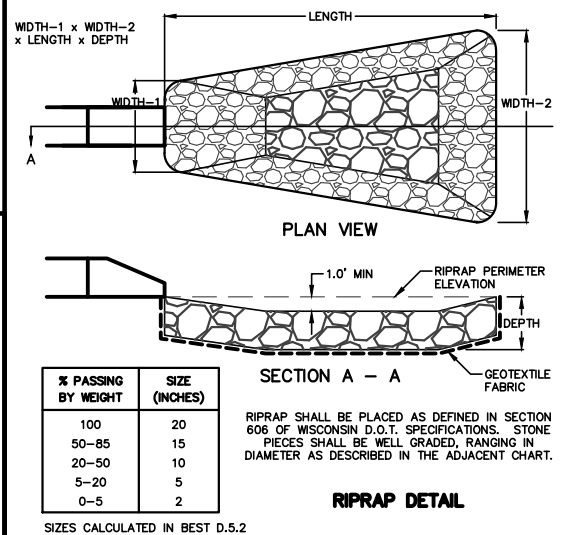
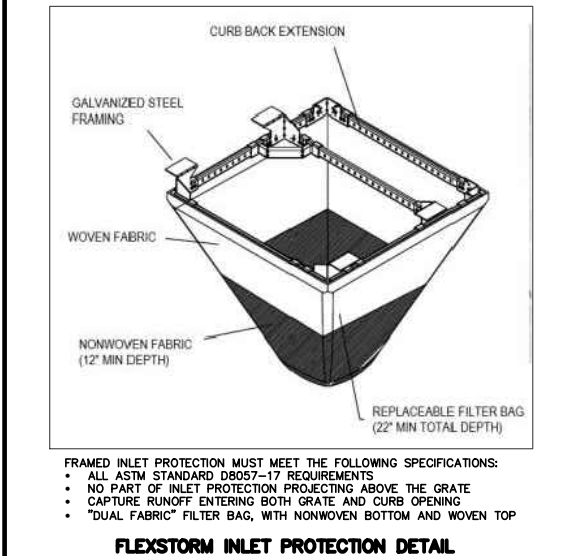
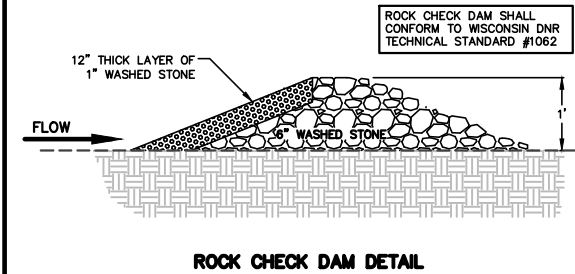
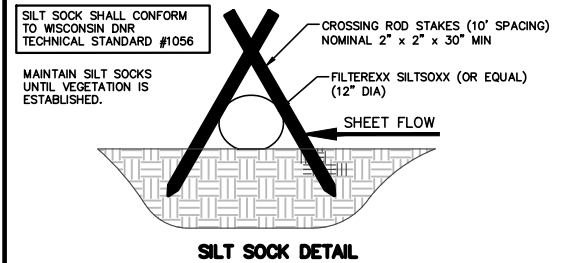
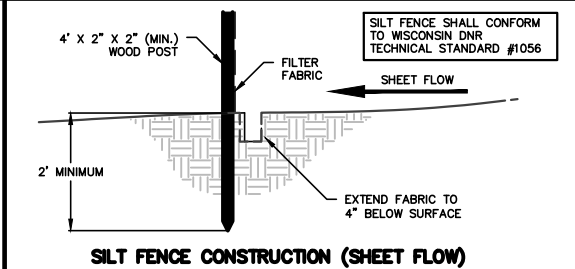
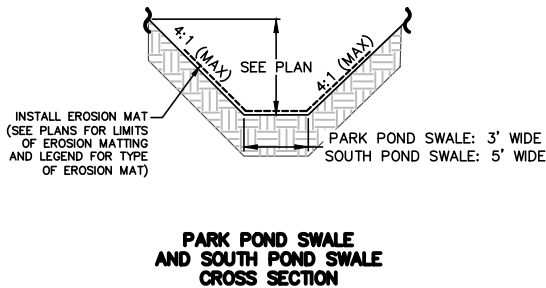
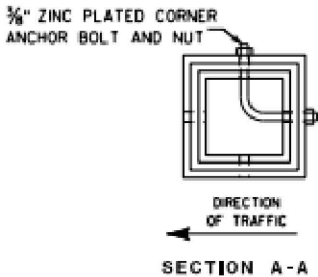


**DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)**



Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft. shall be mounted on multiple posts (see above table).



EROSION NOTES:
THE STONE CONSTRUCTION ENTRANCE SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION. THE STONE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED BY THE CONTRACTOR IN A CONDITION, WHICH WILL PREVENT THE TRACKING OF MUD OR DRY SEDIMENT ONTO THE PUBLIC STREET. SEDIMENT REACHING PUBLIC STREET SHALL BE REMOVED BY STREET CLEANING (NOT HYDRAULIC FLUSHING) BEFORE THE END OF EACH WORKDAY.

EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO GRADING OPERATIONS AND SHALL BE PROPERLY MAINTAINED FOR MAXIMUM EFFECTIVENESS UNTIL VEGETATION IS ESTABLISHED. ALL EROSION CONTROL MEASURES AND STRUCTURES SERVING THE SITE MUST BE INSPECTED AT LEAST WEEKLY OR WITHIN 24 HOURS OF A 0.5 INCH RAIN EVENT. ALL MAINTENANCE WILL FOLLOW AN INSPECTION WITHIN 24 HOURS.

CUT AND FILL SLOPES SHALL BE NO GREATER THAN 3:1.
ALL DISTURBED AREAS MUST BE TEMPORARILY STABILIZED WITHIN 14 DAYS OF LAST ACTIVITY. ALL DISTURBED AREAS SHOULD BE STABILIZED WITHIN 7 DAYS OF FINAL GRADING.

PERIMETER CONTROL SHALL BE INSTALLED AROUND STOCKPILES, AND STOCKPILES SHALL BE STABILIZED THAT WILL REMAIN INACTIVE FOR 7 DAYS OR LONGER.

EROSION CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ACCEPTANCE OF THIS PROJECT. EROSION CONTROL MEASURES AS SHOWN SHALL BE THE MINIMUM PRECAUTIONS THAT WILL BE ALLOWED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECOGNIZING AND CORRECTING ALL EROSION CONTROL PROBLEMS THAT ARE A RESULT OF CONSTRUCTION ACTIVITIES. ADDITIONAL EROSION CONTROL MEASURES, AS REQUESTED IN WRITING BY THE STATE OR LOCAL INSPECTORS, OR THE DEVELOPER'S ENGINEER, SHALL BE INSTALLED WITHIN 24 HOURS.

TIME SCHEDULE:
OCTOBER 15 – NOVEMBER 1, 2025
NOVEMBER 1, 2025 – MAY 15, 2026
INSTALL INITIAL EROSION CONTROL DEVICES AND
ROUGH GRADE SITE AND WET PONDS.
CONSTRUCT UTILITIES AND STREETS. CONSTRUCT WEST
WET POND PER WEST WET POND CROSS SECTION AND
CONSTRUCT THE EAST WET POND AND EAST
INFILTRATION BASIN PER CROSS SECTIONS. RESTORE
ALL PVIOUSLY DISTURBED AREAS.

RESTORATION NOTES:
RESTORATION SHALL OCCUR AS SOON AFTER THE DISTURBANCE AS PRACTICAL.

ALL PVIOUSLY DISTURBED AREAS SHALL RECEIVE A MINIMUM OF FOUR (4) INCHES OF TOPSOIL, SEED, AND MULCH. RESTORATION WILL OCCUR AS SOON AFTER THE DISTURBANCE AS PRACTICAL. SEED MIXTURE 40 SHALL BE USED ON ALL DISTURBED AREAS. ALL SEED MIXTURES SHALL BE IN ACCORDANCE WITH SECTION 630 OF D.O.T. SPECIFICATIONS. AN EQUAL AMOUNT OF ANNUAL RYEGRASS SHALL BE ADDED TO THE MIX.

ALL PVIOUSLY DISTURBED AREAS SHALL RECEIVE FERTILIZER. FERTILIZER SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS: NITROGEN, NOT LESS THAN 16%; PHOSPHORIC ACID, NOT LESS THAN 8%; POTASH, NOT LESS THAN 8%. FERTILIZER SHALL BE APPLIED AT THE RATE OF FOUR (4) POUNDS PER 1,000 SQUARE FEET. SEED MIXTURE 40 SHALL BE APPLIED AT THE RATE OF FOUR (4) POUNDS PER 1,000 SQUARE FEET. MULCH SHALL CONSIST OF HAY OR STRAW APPLIED AT THE RATE OF TWO (2) TONS PER ACRE.

SEEDING FROM SEPTEMBER 16 THROUGH NOVEMBER 15 IS TO BE AVOIDED TO PREVENT FREEZING OF NEW GROWTH. DORMANT SEEDING, IF NECESSARY, SHALL BE COMPLETED AFTER NOVEMBER 15. DORMANT SEEDING SHALL NOT BE APPLIED ON TOP OF SNOW. DISTURBED AREAS SHALL HAVE EROSION MAT APPLIED OVER DORMANT SEEDING. IF DORMANT SEEDING DOES NOT RESULT IN AT LEAST 70% COVER BY MAY 15, ADDITIONAL SEEDING SHALL BE REQUIRED.

OWNER:
LAKESTONE PROPERTIES &
MANAGEMENT, LLC
ATTN: BRETT RIEMEN
BRIAN SPANOS
5910 MAIN STREET, SUITE 1
MCFARLAND, WI 53558

ENGINEER:
QUAM ENGINEERING, LLC
ATTN: RYAN QUAM
4604 SIGGELKOW ROAD, SUITE A
MCFARLAND, WI 53558

- EXCAVATED MATERIAL FROM THE UTILITY TRENCH NOT SUITABLE FOR BACKFILL AS DEEMED BY THE PUBLIC SERVICES DIRECTOR SHALL BE REMOVED AND REPLACED WITH SELECT TRENCH BACKFILL.
- ALL SILT FENCE SHALL BE PROPERLY INSTALLED, MAINTAINED, AND REMOVED UPON ESTABLISHMENT OF TURF.
- ALL SITES SHALL BE ADEQUATELY PROTECTED TO PREVENT SEDIMENT FROM LEAVING THE SITE.
- ACCESS TO THE CONSTRUCTION SITE SHALL BE LIMITED TO THE STONE ENTRANCE PADS SHOWN ON THE PLANS.
- STREETS SHALL BE SWEEPED CLEAN EVERY DAY.
- EROSION MAT IS REQUIRED FOR ALL RESTORATION ON SLOPES AT OR GREATER THAN 5:1, AND IN AREAS THAT CHANNEL WATER. EROSION MAT SHALL ALSO BE PROVIDED IN ALL STREET TERRACES WITHIN THE ROW.
- EROSION MAT AND STAPLES SHALL BE BIODEGRADABLE (CURLEX NET FREE OR APPROVED EQUAL).
- ALL STORM WATER MANAGEMENT FACILITIES SHALL BE SEED WITH A NATIVE SEED MIXTURE WITHIN THE LIMITS OF THE OUTLOT OR EASEMENT. THE NATIVE SEED MIXTURE SHALL BE APPROVED BY THE DIRECTOR OF PUBLIC SERVICES.
- ANY PROPOSED CHANGES TO THE GRADING AND EROSION CONTROL PLAN MUST BE SUBMITTED TO THE VILLAGE ENGINEER AND APPROVED.

SPERLE CORNERS – VILLAGE OF MCFARLAND
DETAILS
SHEET: C-17
DATED: OCTOBER 16, 2025

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Page 154 of 444

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SITE PLAN

SHEET: C-2

DATED: OCTOBER 16, 2025

QUAM ENGINEERING, LLC

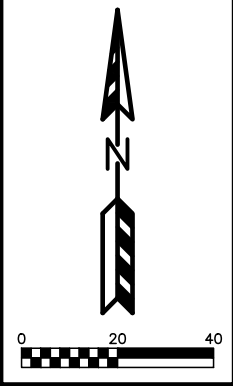
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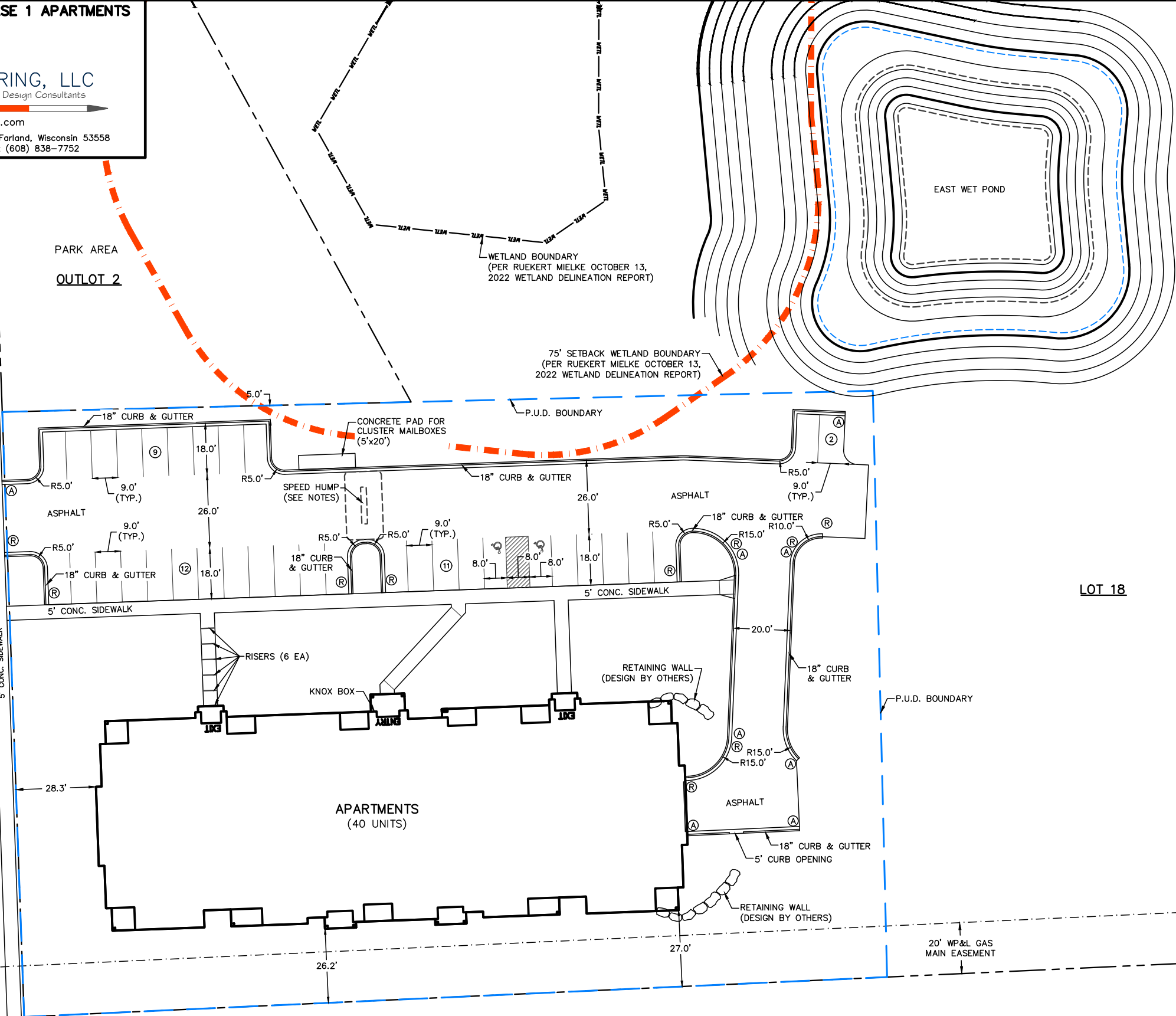
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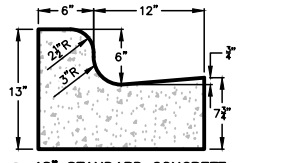
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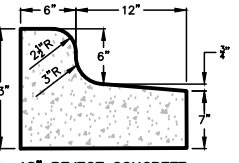
DEVILS LAKE WAY



SPEED HUMP NOTES:
THE PROPOSED SPEED HUMPS MUST COMPLY WITH THE FOLLOWING:
• MAINTAIN ANGLE OF APPROACH OR DEPARTURE FOR FIRE APPARATUS TO BE 8 DEGREES OR LESS. (NFPA 1901 12.3.2.2)
• HEIGHT LESS THAN 8-INCHES (NFPA 1901 12.3.2.2)



Ⓐ 18" STANDARD CONCRETE CURB & GUTTER



Ⓑ 18" REJECT CONCRETE CURB & GUTTER

CONCRETE CURB NOTES:

- LATERAL CONTRACTION JOINTS SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 15' NOR LESS THAN 6' IN LENGTH. THE JOINTS SHALL BE A MINIMUM OF 3" IN DEPTH.
- EXPANSION JOINTS SHALL BE PLACED TRANSVERSLY AT RADIUS POINTS ON CURVES OF RADIUS 200' OR LESS, AND AT ANGLE POINTS, OR AS DIRECTED BY THE ENGINEER. THE EXPANSION JOINT SHALL BE A ONE PIECE OF ASPHALTIC MATERIAL HAVING THE SAME DIMENSIONS AS CURB & GUTTER AT THAT STATION AND BE 1/2" THICK.
- IN ALL CASES, CONCRETE CURB & GUTTER SHALL BE PLACED ON THOROUGHLY COMPACTED 4" CRUSHED STONE.

SITE INFORMATION BLOCK - PHASE 3	
Site Address	SPERLE CORNERS LOT 18
Site acreage (total)	7.35 ACRES
Current Zoning	PD, PLANNED DEVELOPMENT
Surface Coverage:	
Building	15,750 SQFT
Parking Lot/Asphalt Drive	15,992 SQFT
Sidewalk & Ret. Walls	1,793 SQFT
TOTAL IMPERVIOUS	33,535 SQFT
Maximum Building Height: 33' EAVE, 51' RIDGE, 42' ROOF MID POINTE	

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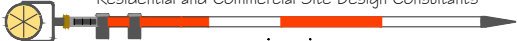
SPERLE CORNERS, LOT 18-PHASE 1 APARTMENTS

GRADING AND EROSION CONTROL PLAN

SHEET: C-3
DATED: OCTOBER 16, 2025

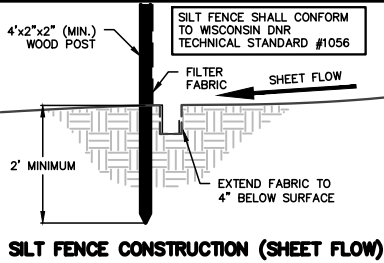
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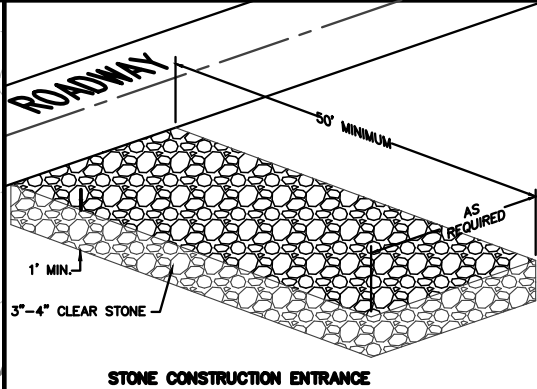


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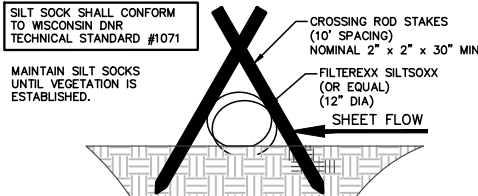
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SILT FENCE CONSTRUCTION (SHEET FLOW)



STONE CONSTRUCTION ENTRANCE



SILT SOCK DETAIL

EROSION NOTES:

THE STONE CONSTRUCTION ENTRANCE SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION. THE TRACKING PAD IS TO BE MAINTAINED BY THE CONTRACTOR IN A CONDITION, WHICH WILL PREVENT THE TRACK OF MUD OR DRY SEDIMENT ONTO THE ADJACENT PUBLIC STREETS. SEDIMENT REACHING THE PUBLIC ROAD SHALL BE REMOVED BY STREET CLEANING (NOT HYDRAULIC FLUSHING) BEFORE THE END OF EACH WORKDAY.

EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO GRADING OPERATIONS AND SHALL BE PROPERLY MAINTAINED FOR MAXIMUM EFFECTIVENESS UNTIL VEGETATION IS ESTABLISHED. ALL EROSION CONTROL MEASURES AND STRUCTURES SERVING THE SITE MUST BE INSPECTED AT LEAST WEEKLY OR WITHIN 24 HOURS OF A 0.5 INCH RAIN EVENT. ALL MAINTENANCE WILL FOLLOW AN INSPECTION WITHIN 24 HOURS.

CUT AND FILL SLOPES SHALL BE NO GREATER THAN 3:1.

EROSION CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ACCEPTANCE OF THIS PROJECT. EROSION CONTROL MEASURES AS SHOWN SHALL BE THE MINIMUM PRECAUTIONS THAT WILL BE ALLOWED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECOGNIZING AND CORRECTING ALL EROSION CONTROL PROBLEMS THAT ARE A RESULT OF CONSTRUCTION ACTIVITIES. ADDITIONAL EROSION CONTROL MEASURES, AS REQUESTED IN WRITING BY THE STATE OR LOCAL INSPECTORS, OR THE DEVELOPER'S ENGINEER, SHALL BE INSTALLED WITHIN 24 HOURS.

TIME SCHEDULE:

MAY 1-30, 2026

INSTALL INITIAL EROSION CONTROL DEVICES.

MAY 15, 2026 - APRIL 30, 2027

CONSTRUCT BUILDING & PARKING LOT AND RESTORE PREVIOUS DISTURBED AREAS.

RESTORATION NOTES:

ALL PREVIOUS DISTURBED AREAS SHALL RECEIVE A MINIMUM OF FOUR (4) INCHES OF TOPSOIL, SEED AND MULCH. ALL PREVIOUS DISTURBED AREAS SHALL RECEIVE FERTILIZER EXCEPT NATIVE PLANTING AREAS. RESTORATION WILL OCCUR AS SOON AFTER THE DISTURBANCE AS PRACTICAL. SEED MIXTURE 40 SHALL BE USED ON ALL OTHER DISTURBED AREAS. MIXTURES SHALL BE IN ACCORDANCE WITH SECTION 630 OF D.O.T. SPECIFICATIONS. AN EQUAL AMOUNT OF ANNUAL RYEGRASS SHALL BE ADDED TO THE MIX.

SEED MIXTURES SHALL BE APPLIED AT THE RATE OF FOUR (4) POUNDS PER 1,000 SQUARE FEET. FERTILIZER SHALL BE APPLIED AT THE RATE OF FOUR (4) POUNDS PER 1,000 SQUARE FEET. MULCH SHALL CONSIST OF HAY OR STRAW APPLIED AT THE RATE OF 2 TONS PER ACRE.

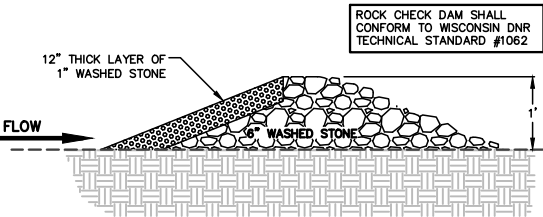
FERTILIZER SHALL MEET THE MINIMUM REQUIREMENTS THAT FOLLOW: NITROGEN, NOT LESS THAN 16%; PHOSPHORIC ACID, NOT LESS THAN 8%; POTASH, NOT LESS THAN 8%.

OWNER:

LAKESTONE PROPERTIES & MANAGEMENT, LLC
ATTN: BRIAN SPANOS
5910 MAIN STREET, SUITE 1
MCFARLAND, WI 53558

ENGINEER:

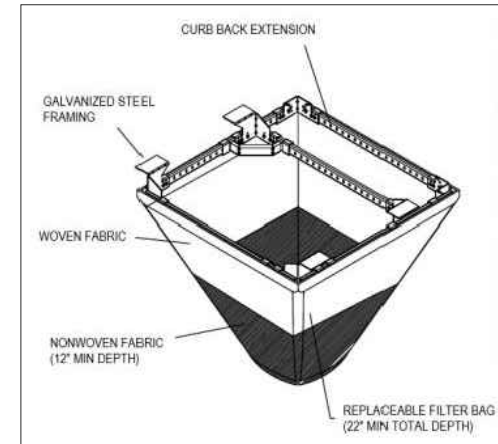
QUAM ENGINEERING, LLC
ATTN: RYAN QUAM
4604 SIGGELKOW ROAD, SUITE A
MCFARLAND, WI 53558



ROCK CHECK DAM DETAIL

EROSION CONTROL LEGEND

- INSTALL WISDOT CLASS I TYPE B EROSION MAT
- INSTALL FLEXSTORM CATCH-IT INLET PROTECTION DURING CONSTRUCTION. (SEE DETAIL)
- INSTALL FLEXSTORM CATCH-IT BAG DURING CONSTRUCTION (SEE DETAIL), REPLACE WITH FLEXSTORM PURE INLET FILTER WITH PCP BAG DURING FINAL RESTORATION FOR OIL AND GREASE CONTROL
- INSTALL TEMPORARY SILT SOCK DITCH CHECK (EVERY 2 FEET OF DROP IN SWALES)
- INSTALL ROCK CHECK DAM



- FRAMED INLET PROTECTION MUST MEET THE FOLLOWING SPECIFICATIONS:
- ALL ASTM STANDARD D8057-17 REQUIREMENTS
- NO PART OF INLET PROTECTION PROJECTING ABOVE THE GRATE
- CAPTURE RUNOFF ENTERING BOTH GRATE AND CURB OPENING
- "DUAL FABRIC" FILTER BAG, WITH NONWOVEN BOTTOM AND WOVEN TOP

FLEXSTORM INLET PROTECTION DETAIL



TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN
CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE

TD0(FOR THE HEARING IMPAIRED)(800)542-2289

WS. STATUTE 182.0175 (1974)
REQUIRES MIN. OF 3 WORK DAYS
NOTICE BEFORE YOU EXCAVATE

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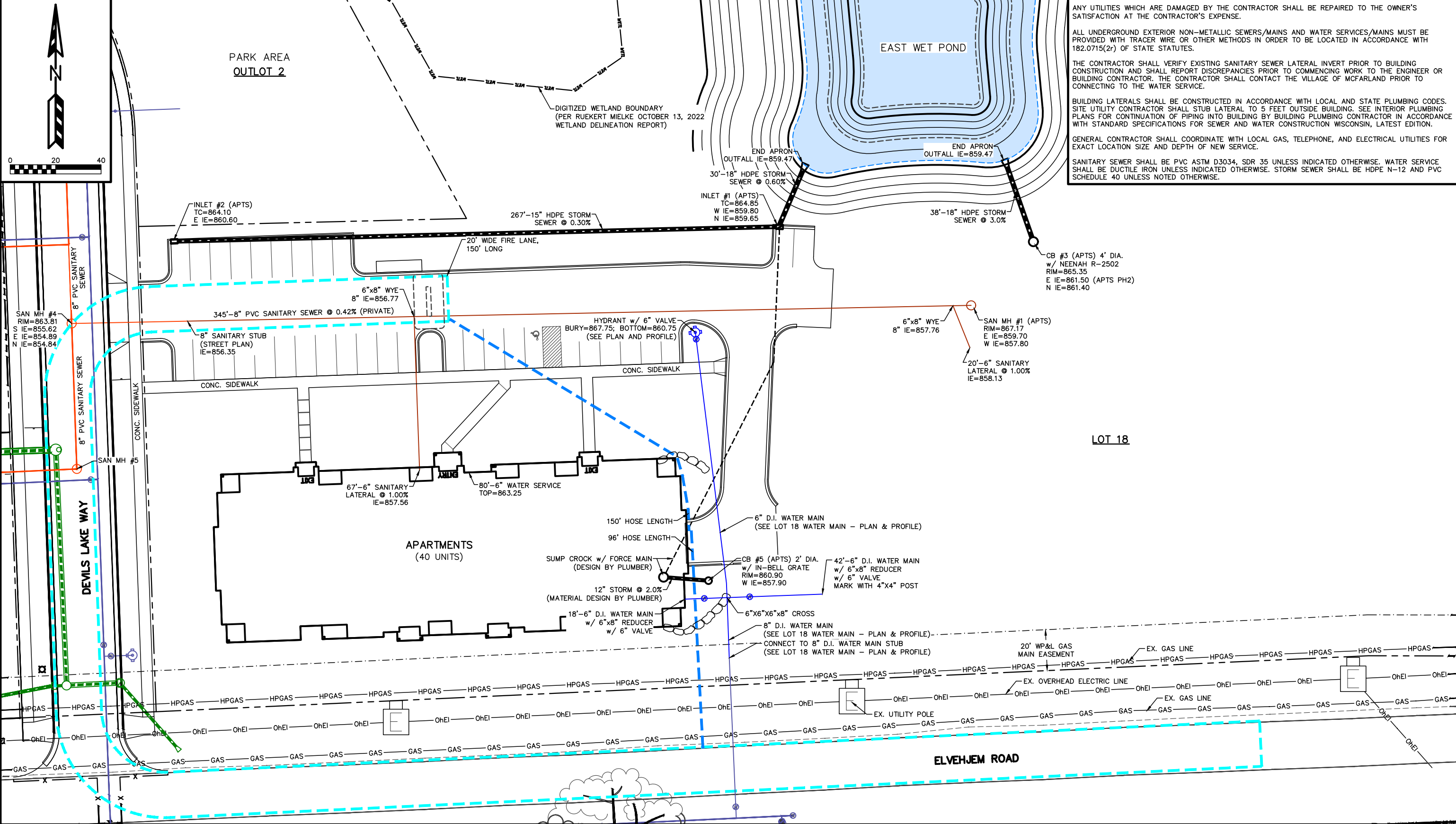
SPERLE CORNERS, LOT 18-PHASE 1 APARTMENTS

UTILITY PLAN
SHEET: C-4
DATED: OCTOBER 16, 2025

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Phone (608) 838-7750; Fax (608) 838-7752


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WIS. STATUTE 182.0175 (1974)
REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

UTILITY NOTES:
CONTACT VILLAGE PRIOR TO CONNECTING PROPOSED UTILITIES INTO EXISTING UTILITIES. ALL CONNECTIONS SHALL BE PHOTOGRAPHED AND NEW STORM PIPES SHALL NOT EXTRUDE INTO EXISTING STORM PIPES.
ALL SANITARY SEWER, STORM SEWER AND WATER MAIN CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE MOST CURRENT EDITION OF VILLAGE OF MCFARLAND STANDARD SPECIFICATIONS FOR PUBLIC WORKS IMPROVEMENTS AND WISCONSIN DSPS STANDARDS.
THE LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES OR FITTINGS AND MAY VARY SLIGHTLY FROM THE PLAN. LENGTHS SHALL BE VERIFIED IN THE FIELD DURING CONSTRUCTION.
MAINTAIN AN 8 FOOT MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN PUBLIC SANITARY SEWER, WATER MAIN AND STORM SEWER. PROVIDE 18" MINIMUM VERTICAL SEPARATION WHERE SEWER CROSSES OVER WATER MAIN AND PROVIDE 12" MINIMUM VERTICAL SEPARATION WHERE WATER MAIN CROSSES OVER SEWER.
ANY UTILITIES WHICH ARE DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
ALL UNDERGROUND EXTERIOR NON-METALLIC SEWERS/MAINS AND WATER SERVICES/MAINS MUST BE PROVIDED WITH TRACER WIRE OR OTHER METHODS IN ORDER TO BE LOCATED IN ACCORDANCE WITH 182.0715(2r) OF STATE STATUTES.
THE CONTRACTOR SHALL VERIFY EXISTING SANITARY SEWER LATERAL INVERT PRIOR TO BUILDING CONSTRUCTION AND SHALL REPORT DISCREPANCIES PRIOR TO COMMENCING WORK TO THE ENGINEER OR BUILDING CONTRACTOR. THE CONTRACTOR SHALL CONTACT THE VILLAGE OF MCFARLAND PRIOR TO CONNECTING TO THE WATER SERVICE.
BUILDING LATERALS SHALL BE CONSTRUCTED IN ACCORDANCE WITH LOCAL AND STATE PLUMBING CODES. SITE UTILITY CONTRACTOR SHALL STUB LATERAL TO 5 FEET OUTSIDE BUILDING. SEE INTERIOR PLUMBING PLANS FOR CONTINUATION OF PIPING INTO BUILDING BY BUILDING PLUMBING CONTRACTOR IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION WISCONSIN, LATEST EDITION.
GENERAL CONTRACTOR SHALL COORDINATE WITH LOCAL GAS, TELEPHONE, AND ELECTRICAL UTILITIES FOR EXACT LOCATION SIZE AND DEPTH OF NEW SERVICE.
SANITARY SEWER SHALL BE PVC ASTM D3034, SDR 35 UNLESS INDICATED OTHERWISE. WATER SERVICE SHALL BE DUCTILE IRON UNLESS INDICATED OTHERWISE. STORM SEWER SHALL BE HDPE N-12 AND PVC SCHEDULE 40 UNLESS NOTED OTHERWISE.





Soil Loss & Sediment Discharge Calculation Tool

for use on Construction Sites in the State of Wisconsin

WDNR Version 2.0 (06-29-2017)



YEAR 1

Developer: Lakestone Properties and Management

Project: Sperle Corners - Village of McFarland (Phase 1)

Date: 04/08/25

County: Dane

Version 1.0

Activity (1)	Begin Date (2)	End Date (3)	Period % R (4)	Annual R Factor (5)	Sub Soil Texture (6)	Soil Erodibility K Factor (7)	Slope (%) (8)	Slope Length (ft) (9)	LS Factor (10)	Land Cover C Factor (11)	Soil loss A (tons/acre) (12)	SDF (13)	Sediment Control Practice (14)	Sediment Discharge (t/ac) (15)
Bare Ground	09/15/25	10/01/25	4.0%	150	Silt Loam	0.43	0.2%	300	0.10	1.00	0.3	0.284	Silt Fence	0.0
Bare Ground	10/01/25	05/15/26	22.8%	150	Silt Loam	0.43	7.0%	30	0.45	1.00	6.7	0.750	Silt Fence	3.0
Seed with Mulch or Er	05/15/26	07/14/26	37.1%	150	Silt Loam	0.43	7.0%	30	0.45	0.10	1.1	0.750	Silt Fence	0.5
End	07/14/26	-----	-----	-----	-----	-----			-----	-----	-----	0.000		0.0
		-----	-----	-----	-----	-----			-----	-----	-----	0.000		0.0
		-----	-----	-----	-----	-----			-----	-----	-----	0.000		0.0
		-----	-----	-----	-----	-----			-----	-----	-----	0.000		0.0
TOTAL											8.0		TOTAL	3.5
													% Reduction Required	NONE

Notes:

See Help Page for further descriptions of variables and items in drop-down boxes.

The last land disturbing activity on each sheet must be 'End'. This is either 12 months from the start of construction or final stabilization.

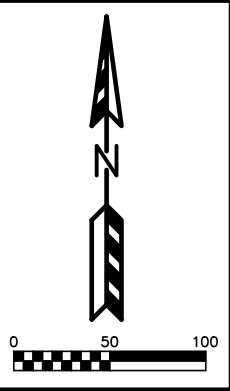
For periods of construction that exceed 12 months, please demonstrate that 5 tons/acre/year is not exceeded in any given 12 month period.

NOTE: THIS TOOL ONLY ADDRESSED SOIL EROSION DUE TO SHEET FLOW. MEASURES TO CONTROL CHANNEL EROSION MAY ALSO BE REQUIRED TO MEET SEDIMENT DISCHARGE REQUIREMENTS.

Recommended Permanent Seeding Dates:

4/1-5/15 and 8/7-8/29 Turf, introduced grasses and legumes
Thaw-6/30 Native Grasses, forbs, and legumes

Designed By:	MAF
Date	4/8/2025



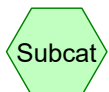
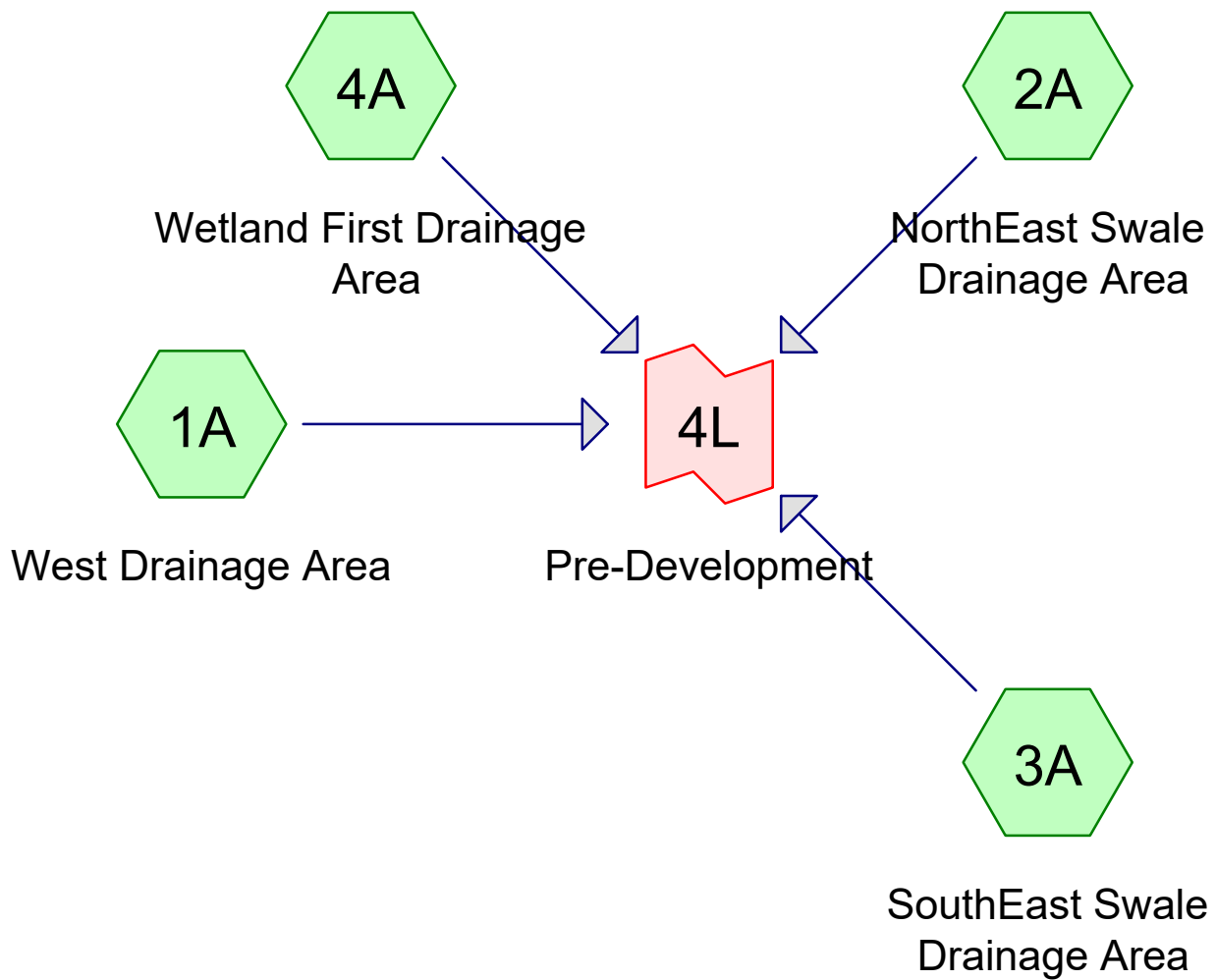
LEGEND FOR DRAINAGE AREAS:

	WEST DRAINAGE AREA AREA = 8.596 ACRES TC = 38.5 MINUTES
	WETLAND FIRST DRAINAGE AREA AREA = 5.534 ACRES TC = 9.3 MINUTES
	NORTHEAST SWALE DRAINAGE AREA AREA = 0.309 ACRES TC = 6 MINUTES
	SOUTHEAST SWALE DRAINAGE AREA AREA = 0.337 ACRES TC = 6 MINUTES



SPERLE CORNERS – VILLAGE OF MCFARLAND
EXISTING DRAINAGE PLAN
EXHIBIT: #3
DATED: AUGUST 5, 2025

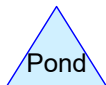
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4604 Siggelkow Road, Suite A – McFarland, Wisconsin 53558
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Subcat



Reach



Pond



Link

Routing Diagram for PreDevelopment

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PreDevelopment

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Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
12.686	58	Ag, HSG B (1A, 2A, 3A, 4A)
0.060	58	Grass, HSG B (2A, 3A)
1.424	58	Offsite Grass, HSG B (1A, 2A, 3A, 4A)
0.054	98	Offsite Roof (4A)
0.044	98	Offsite Sidewalk (1A)
0.406	98	Offsite Street (1A)
0.102	58	Woods, HSG B (4A)
14.776	59	TOTAL AREA

PreDevelopment

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MSE 24-hr 4 1-Year Rainfall=2.49"

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Page 3

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points x 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1A: West Drainage Area Runoff Area=8.596 ac 5.23% Impervious Runoff Depth=0.24"
Flow Length=600' Slope=0.0020 '/' Tc=33.3 min CN=WQ Runoff=0.83 cfs 0.174 af

Subcatchment2A: NorthEast Swale Runoff Area=0.309 ac 0.00% Impervious Runoff Depth=0.13"
Tc=6.0 min CN=WQ Runoff=0.01 cfs 0.003 af

Subcatchment3A: SouthEast Swale Runoff Area=0.337 ac 0.00% Impervious Runoff Depth=0.13"
Tc=6.0 min CN=WQ Runoff=0.02 cfs 0.004 af

Subcatchment4A: Wetland First Drainage Runoff Area=5.534 ac 0.98% Impervious Runoff Depth=0.15"
Flow Length=380' Tc=9.3 min CN=WQ Runoff=0.29 cfs 0.070 af

Link 4L: Pre-Development

Inflow=1.12 cfs 0.251 af
Primary=1.12 cfs 0.251 af

Total Runoff Area = 14.776 ac Runoff Volume = 0.251 af Average Runoff Depth = 0.20"
96.59% Pervious = 14.272 ac 3.41% Impervious = 0.504 ac

PreDevelopment

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MSE 24-hr 4 1-Year Rainfall=2.49"

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Page 4

Summary for Subcatchment 1A: West Drainage Area

Runoff = 0.83 cfs @ 12.53 hrs, Volume= 0.174 af, Depth= 0.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-Year Rainfall=2.49"

Area (ac)	CN	Description
* 7.375	58	Ag, HSG B
* 0.406	98	Offsite Street
* 0.044	98	Offsite Sidewalk
* 0.771	58	Offsite Grass, HSG B
8.596		Weighted Average
8.146		94.77% Pervious Area
0.450		5.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.6	100	0.0020	0.13		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.84"
20.7	500	0.0020	0.40		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
33.3	600	Total			

PreDevelopment

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MSE 24-hr 4 1-Year Rainfall=2.49"

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Summary for Subcatchment 2A: NorthEast Swale Drainage Area

Runoff = 0.01 cfs @ 12.36 hrs, Volume= 0.003 af, Depth= 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-Year Rainfall=2.49"

Area (ac)	CN	Description
* 0.021	58	Grass, HSG B
* 0.232	58	Ag, HSG B
* 0.056	58	Offsite Grass, HSG B
0.309		Weighted Average
0.309		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

PreDevelopment

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MSE 24-hr 4 1-Year Rainfall=2.49"

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Page 6

Summary for Subcatchment 3A: SouthEast Swale Drainage Area

Runoff = 0.02 cfs @ 12.36 hrs, Volume= 0.004 af, Depth= 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-Year Rainfall=2.49"

Area (ac)	CN	Description
* 0.039	58	Grass, HSG B
* 0.195	58	Ag, HSG B
* 0.103	58	Offsite Grass, HSG B
0.337		Weighted Average
0.337		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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MSE 24-hr 4 1-Year Rainfall=2.49"

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Summary for Subcatchment 4A: Wetland First Drainage Area

Runoff = 0.29 cfs @ 12.38 hrs, Volume= 0.070 af, Depth= 0.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-Year Rainfall=2.49"

Area (ac)	CN	Description
* 0.102	58	Woods, HSG B
* 4.884	58	Ag, HSG B
* 0.054	98	Offsite Roof
* 0.494	58	Offsite Grass, HSG B
5.534		Weighted Average
5.480		99.02% Pervious Area
0.054		0.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	50	0.0800	0.24		Sheet Flow, Grass: Short n= 0.150 P2= 2.84"
1.5	50	0.1000	0.55		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.84"
4.4	280	0.0140	1.06		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
9.3	380	Total			

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MSE 24-hr 4 1-Year Rainfall=2.49"

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Summary for Link 4L: Pre-Development

Inflow Area = 14.776 ac, 3.41% Impervious, Inflow Depth = 0.20" for 1-Year event
Inflow = 1.12 cfs @ 12.49 hrs, Volume= 0.251 af
Primary = 1.12 cfs @ 12.49 hrs, Volume= 0.251 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

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MSE 24-hr 4 2-Year Rainfall=2.84"

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Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points x 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1A: West Drainage Area Runoff Area=8.596 ac 5.23% Impervious Runoff Depth=0.35"
Flow Length=600' Slope=0.0020 '/' Tc=33.3 min CN=WQ Runoff=1.32 cfs 0.250 af

Subcatchment2A: NorthEast Swale Runoff Area=0.309 ac 0.00% Impervious Runoff Depth=0.22"
Tc=6.0 min CN=WQ Runoff=0.04 cfs 0.006 af

Subcatchment3A: SouthEast Swale Runoff Area=0.337 ac 0.00% Impervious Runoff Depth=0.22"
Tc=6.0 min CN=WQ Runoff=0.04 cfs 0.006 af

Subcatchment4A: Wetland First Drainage Runoff Area=5.534 ac 0.98% Impervious Runoff Depth=0.25"
Flow Length=380' Tc=9.3 min CN=WQ Runoff=0.76 cfs 0.114 af

Link 4L: Pre-Development

Inflow=1.86 cfs 0.376 af
Primary=1.86 cfs 0.376 af

Total Runoff Area = 14.776 ac Runoff Volume = 0.376 af Average Runoff Depth = 0.31"
96.59% Pervious = 14.272 ac 3.41% Impervious = 0.504 ac

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MSE 24-hr 4 2-Year Rainfall=2.84"

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Summary for Subcatchment 1A: West Drainage Area

Runoff = 1.32 cfs @ 12.57 hrs, Volume= 0.250 af, Depth= 0.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-Year Rainfall=2.84"

Area (ac)	CN	Description
* 7.375	58	Ag, HSG B
* 0.406	98	Offsite Street
* 0.044	98	Offsite Sidewalk
* 0.771	58	Offsite Grass, HSG B
8.596		Weighted Average
8.146		94.77% Pervious Area
0.450		5.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.6	100	0.0020	0.13		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.84"
20.7	500	0.0020	0.40		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
33.3	600	Total			

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MSE 24-hr 4 2-Year Rainfall=2.84"

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Summary for Subcatchment 2A: NorthEast Swale Drainage Area

Runoff = 0.04 cfs @ 12.20 hrs, Volume= 0.006 af, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-Year Rainfall=2.84"

Area (ac)	CN	Description
* 0.021	58	Grass, HSG B
* 0.232	58	Ag, HSG B
* 0.056	58	Offsite Grass, HSG B
0.309		Weighted Average
0.309		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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MSE 24-hr 4 2-Year Rainfall=2.84"

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Summary for Subcatchment 3A: SouthEast Swale Drainage Area

Runoff = 0.04 cfs @ 12.20 hrs, Volume= 0.006 af, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-Year Rainfall=2.84"

Area (ac)	CN	Description
* 0.039	58	Grass, HSG B
* 0.195	58	Ag, HSG B
* 0.103	58	Offsite Grass, HSG B
0.337		Weighted Average
0.337		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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MSE 24-hr 4 2-Year Rainfall=2.84"

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Summary for Subcatchment 4A: Wetland First Drainage Area

Runoff = 0.76 cfs @ 12.24 hrs, Volume= 0.114 af, Depth= 0.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-Year Rainfall=2.84"

Area (ac)	CN	Description
* 0.102	58	Woods, HSG B
* 4.884	58	Ag, HSG B
* 0.054	98	Offsite Roof
* 0.494	58	Offsite Grass, HSG B
5.534		Weighted Average
5.480		99.02% Pervious Area
0.054		0.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	50	0.0800	0.24		Sheet Flow, Grass: Short n= 0.150 P2= 2.84"
1.5	50	0.1000	0.55		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.84"
4.4	280	0.0140	1.06		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
9.3	380	Total			

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MSE 24-hr 4 2-Year Rainfall=2.84"

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Summary for Link 4L: Pre-Development

Inflow Area = 14.776 ac, 3.41% Impervious, Inflow Depth = 0.31" for 2-Year event
Inflow = 1.86 cfs @ 12.49 hrs, Volume= 0.376 af
Primary = 1.86 cfs @ 12.49 hrs, Volume= 0.376 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

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MSE 24-hr 4 10-Year Rainfall=4.09"

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Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points x 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1A: West Drainage Area Runoff Area=8.596 ac 5.23% Impervious Runoff Depth=0.87"
Flow Length=600' Slope=0.0020 '/' Tc=33.3 min CN=WQ Runoff=4.45 cfs 0.624 af

Subcatchment2A: NorthEast Swale Runoff Area=0.309 ac 0.00% Impervious Runoff Depth=0.71"
Tc=6.0 min CN=WQ Runoff=0.29 cfs 0.018 af

Subcatchment3A: SouthEast Swale Runoff Area=0.337 ac 0.00% Impervious Runoff Depth=0.71"
Tc=6.0 min CN=WQ Runoff=0.31 cfs 0.020 af

Subcatchment4A: Wetland First Drainage Runoff Area=5.534 ac 0.98% Impervious Runoff Depth=0.74"
Flow Length=380' Tc=9.3 min CN=WQ Runoff=4.50 cfs 0.340 af

Link 4L: Pre-Development

Inflow=6.31 cfs 1.002 af
Primary=6.31 cfs 1.002 af

Total Runoff Area = 14.776 ac Runoff Volume = 1.002 af Average Runoff Depth = 0.81"
96.59% Pervious = 14.272 ac 3.41% Impervious = 0.504 ac

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MSE 24-hr 4 10-Year Rainfall=4.09"

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Summary for Subcatchment 1A: West Drainage Area

Runoff = 4.45 cfs @ 12.54 hrs, Volume= 0.624 af, Depth= 0.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-Year Rainfall=4.09"

Area (ac)	CN	Description
* 7.375	58	Ag, HSG B
* 0.406	98	Offsite Street
* 0.044	98	Offsite Sidewalk
* 0.771	58	Offsite Grass, HSG B
8.596		Weighted Average
8.146		94.77% Pervious Area
0.450		5.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.6	100	0.0020	0.13		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.84"
20.7	500	0.0020	0.40		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
33.3	600	Total			

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MSE 24-hr 4 10-Year Rainfall=4.09"

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Summary for Subcatchment 2A: NorthEast Swale Drainage Area

Runoff = 0.29 cfs @ 12.15 hrs, Volume= 0.018 af, Depth= 0.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-Year Rainfall=4.09"

Area (ac)	CN	Description
* 0.021	58	Grass, HSG B
* 0.232	58	Ag, HSG B
* 0.056	58	Offsite Grass, HSG B
0.309		Weighted Average
0.309		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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MSE 24-hr 4 10-Year Rainfall=4.09"

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Summary for Subcatchment 3A: SouthEast Swale Drainage Area

Runoff = 0.31 cfs @ 12.15 hrs, Volume= 0.020 af, Depth= 0.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-Year Rainfall=4.09"

Area (ac)	CN	Description
* 0.039	58	Grass, HSG B
* 0.195	58	Ag, HSG B
* 0.103	58	Offsite Grass, HSG B
0.337		Weighted Average
0.337		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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MSE 24-hr 4 10-Year Rainfall=4.09"

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Summary for Subcatchment 4A: Wetland First Drainage Area

Runoff = 4.50 cfs @ 12.19 hrs, Volume= 0.340 af, Depth= 0.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-Year Rainfall=4.09"

Area (ac)	CN	Description
* 0.102	58	Woods, HSG B
* 4.884	58	Ag, HSG B
* 0.054	98	Offsite Roof
* 0.494	58	Offsite Grass, HSG B
5.534		Weighted Average
5.480		99.02% Pervious Area
0.054		0.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	50	0.0800	0.24		Sheet Flow, Grass: Short n= 0.150 P2= 2.84"
1.5	50	0.1000	0.55		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.84"
4.4	280	0.0140	1.06		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
9.3	380	Total			

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MSE 24-hr 4 10-Year Rainfall=4.09"

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Summary for Link 4L: Pre-Development

Inflow Area = 14.776 ac, 3.41% Impervious, Inflow Depth = 0.81" for 10-Year event
Inflow = 6.31 cfs @ 12.21 hrs, Volume= 1.002 af
Primary = 6.31 cfs @ 12.21 hrs, Volume= 1.002 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

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MSE 24-hr 4 100-Year Rainfall=6.66"

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Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points x 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1A: West Drainage Area Runoff Area=8.596 ac 5.23% Impervious Runoff Depth=2.40"
Flow Length=600' Slope=0.0020 '/' Tc=33.3 min CN=WQ Runoff=14.62 cfs 1.721 af

Subcatchment2A: NorthEast Swale Runoff Area=0.309 ac 0.00% Impervious Runoff Depth=2.18"
Tc=6.0 min CN=WQ Runoff=1.04 cfs 0.056 af

Subcatchment3A: SouthEast Swale Runoff Area=0.337 ac 0.00% Impervious Runoff Depth=2.18"
Tc=6.0 min CN=WQ Runoff=1.13 cfs 0.061 af

Subcatchment4A: Wetland First Drainage Runoff Area=5.534 ac 0.98% Impervious Runoff Depth=2.22"
Flow Length=380' Tc=9.3 min CN=WQ Runoff=16.22 cfs 1.025 af

Link 4L: Pre-Development

Inflow=23.49 cfs 2.864 af

Primary=23.49 cfs 2.864 af

Total Runoff Area = 14.776 ac Runoff Volume = 2.864 af Average Runoff Depth = 2.33"
96.59% Pervious = 14.272 ac 3.41% Impervious = 0.504 ac

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MSE 24-hr 4 100-Year Rainfall=6.66"

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Summary for Subcatchment 1A: West Drainage Area

Runoff = 14.62 cfs @ 12.50 hrs, Volume= 1.721 af, Depth= 2.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-Year Rainfall=6.66"

Area (ac)	CN	Description
* 7.375	58	Ag, HSG B
* 0.406	98	Offsite Street
* 0.044	98	Offsite Sidewalk
* 0.771	58	Offsite Grass, HSG B
8.596		Weighted Average
8.146		94.77% Pervious Area
0.450		5.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.6	100	0.0020	0.13		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.84"
20.7	500	0.0020	0.40		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
33.3	600	Total			

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MSE 24-hr 4 100-Year Rainfall=6.66"

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Summary for Subcatchment 2A: NorthEast Swale Drainage Area

Runoff = 1.04 cfs @ 12.14 hrs, Volume= 0.056 af, Depth= 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-Year Rainfall=6.66"

Area (ac)	CN	Description
* 0.021	58	Grass, HSG B
* 0.232	58	Ag, HSG B
* 0.056	58	Offsite Grass, HSG B
0.309		Weighted Average
0.309		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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MSE 24-hr 4 100-Year Rainfall=6.66"

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Summary for Subcatchment 3A: SouthEast Swale Drainage Area

Runoff = 1.13 cfs @ 12.14 hrs, Volume= 0.061 af, Depth= 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-Year Rainfall=6.66"

Area (ac)	CN	Description
* 0.039	58	Grass, HSG B
* 0.195	58	Ag, HSG B
* 0.103	58	Offsite Grass, HSG B
0.337		Weighted Average
0.337		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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MSE 24-hr 4 100-Year Rainfall=6.66"

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Summary for Subcatchment 4A: Wetland First Drainage Area

Runoff = 16.22 cfs @ 12.18 hrs, Volume= 1.025 af, Depth= 2.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-Year Rainfall=6.66"

Area (ac)	CN	Description
* 0.102	58	Woods, HSG B
* 4.884	58	Ag, HSG B
* 0.054	98	Offsite Roof
* 0.494	58	Offsite Grass, HSG B
5.534		Weighted Average
5.480		99.02% Pervious Area
0.054		0.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	50	0.0800	0.24		Sheet Flow, Grass: Short n= 0.150 P2= 2.84"
1.5	50	0.1000	0.55		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.84"
4.4	280	0.0140	1.06		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
9.3	380	Total			

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MSE 24-hr 4 100-Year Rainfall=6.66"

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Summary for Link 4L: Pre-Development

Inflow Area = 14.776 ac, 3.41% Impervious, Inflow Depth = 2.33" for 100-Year event
Inflow = 23.49 cfs @ 12.19 hrs, Volume= 2.864 af
Primary = 23.49 cfs @ 12.19 hrs, Volume= 2.864 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

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MSE 24-hr 4 200-Year Rainfall=7.53"

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Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points x 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1A: West Drainage Area Runoff Area=8.596 ac 5.23% Impervious Runoff Depth=3.01"
Flow Length=600' Slope=0.0020 '/' Tc=33.3 min CN=WQ Runoff=18.68 cfs 2.158 af

Subcatchment2A: NorthEast Swale Runoff Area=0.309 ac 0.00% Impervious Runoff Depth=2.78"
Tc=6.0 min CN=WQ Runoff=1.34 cfs 0.071 af

Subcatchment3A: SouthEast Swale Runoff Area=0.337 ac 0.00% Impervious Runoff Depth=2.78"
Tc=6.0 min CN=WQ Runoff=1.46 cfs 0.078 af

Subcatchment4A: Wetland First Drainage Runoff Area=5.534 ac 0.98% Impervious Runoff Depth=2.82"
Flow Length=380' Tc=9.3 min CN=WQ Runoff=21.04 cfs 1.301 af

Link 4L: Pre-Development

Inflow=30.50 cfs 3.608 af

Primary=30.50 cfs 3.608 af

Total Runoff Area = 14.776 ac Runoff Volume = 3.608 af Average Runoff Depth = 2.93"
96.59% Pervious = 14.272 ac 3.41% Impervious = 0.504 ac

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MSE 24-hr 4 200-Year Rainfall=7.53"

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Summary for Subcatchment 1A: West Drainage Area

Runoff = 18.68 cfs @ 12.49 hrs, Volume= 2.158 af, Depth= 3.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-Year Rainfall=7.53"

Area (ac)	CN	Description
* 7.375	58	Ag, HSG B
* 0.406	98	Offsite Street
* 0.044	98	Offsite Sidewalk
* 0.771	58	Offsite Grass, HSG B
8.596		Weighted Average
8.146		94.77% Pervious Area
0.450		5.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.6	100	0.0020	0.13		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.84"
20.7	500	0.0020	0.40		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
33.3	600	Total			

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MSE 24-hr 4 200-Year Rainfall=7.53"

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Summary for Subcatchment 2A: NorthEast Swale Drainage Area

Runoff = 1.34 cfs @ 12.14 hrs, Volume= 0.071 af, Depth= 2.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-Year Rainfall=7.53"

Area (ac)	CN	Description
* 0.021	58	Grass, HSG B
* 0.232	58	Ag, HSG B
* 0.056	58	Offsite Grass, HSG B
0.309		Weighted Average
0.309		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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Summary for Subcatchment 3A: SouthEast Swale Drainage Area

Runoff = 1.46 cfs @ 12.14 hrs, Volume= 0.078 af, Depth= 2.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

MSE 24-hr 4 200-Year Rainfall=7.53"

Area (ac)	CN	Description
* 0.039	58	Grass, HSG B
* 0.195	58	Ag, HSG B
* 0.103	58	Offsite Grass, HSG B
0.337		Weighted Average
0.337		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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Summary for Subcatchment 4A: Wetland First Drainage Area

Runoff = 21.04 cfs @ 12.17 hrs, Volume= 1.301 af, Depth= 2.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-Year Rainfall=7.53"

Area (ac)	CN	Description
* 0.102	58	Woods, HSG B
* 4.884	58	Ag, HSG B
* 0.054	98	Offsite Roof
* 0.494	58	Offsite Grass, HSG B
5.534		Weighted Average
5.480		99.02% Pervious Area
0.054		0.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	50	0.0800	0.24		Sheet Flow, Grass: Short n= 0.150 P2= 2.84"
1.5	50	0.1000	0.55		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.84"
4.4	280	0.0140	1.06		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
9.3	380	Total			

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MSE 24-hr 4 200-Year Rainfall=7.53"

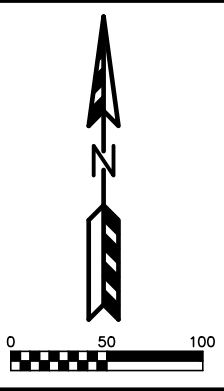
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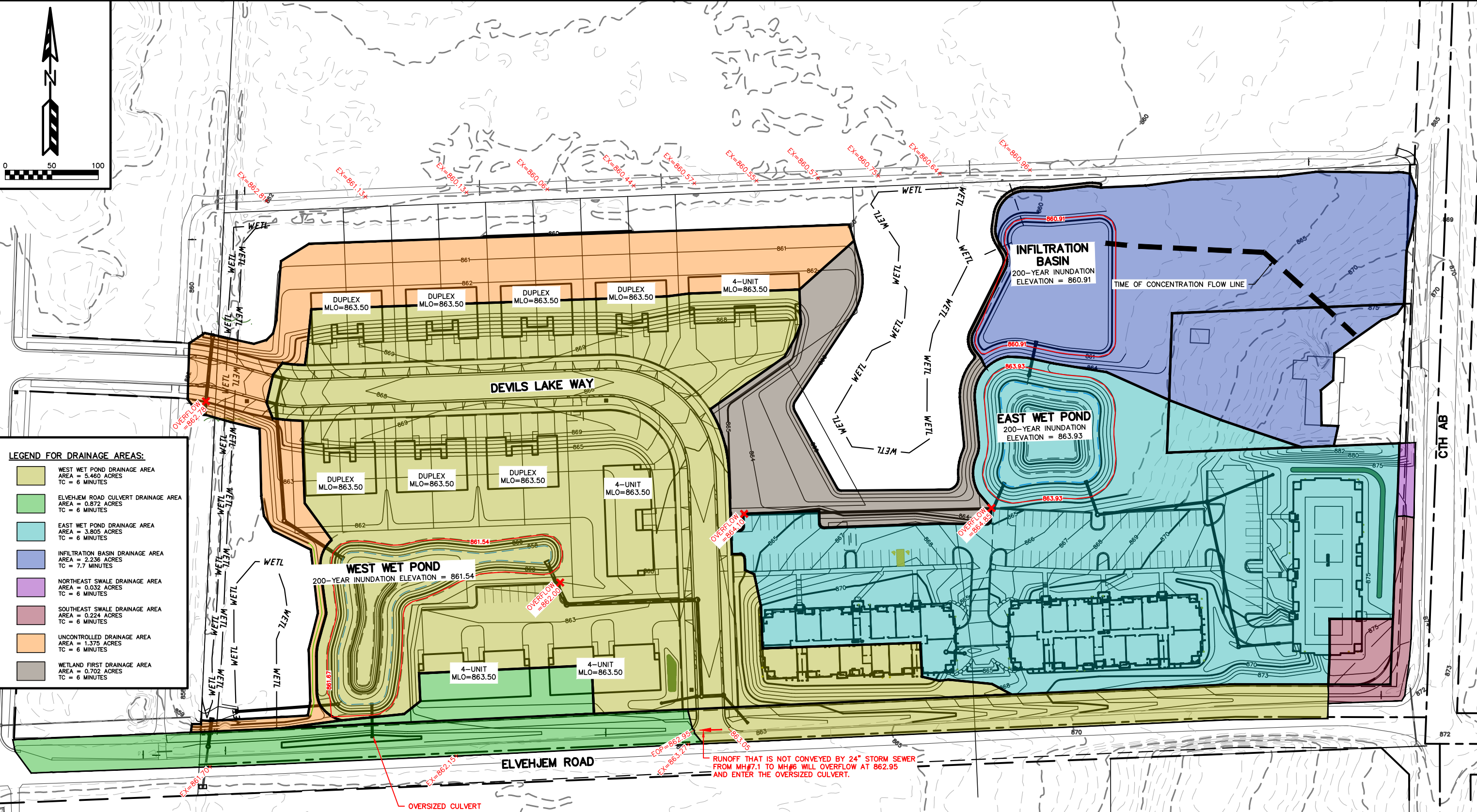
Summary for Link 4L: Pre-Development

Inflow Area = 14.776 ac, 3.41% Impervious, Inflow Depth = 2.93" for 200-Year event
Inflow = 30.50 cfs @ 12.19 hrs, Volume= 3.608 af
Primary = 30.50 cfs @ 12.19 hrs, Volume= 3.608 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs



LEGEND FOR DRAINAGE AREAS:	
	WEST WET POND DRAINAGE AREA AREA = 5.460 ACRES TC = 6 MINUTES
	ELVEHJEM ROAD CULVERT DRAINAGE AREA AREA = 0.872 ACRES TC = 6 MINUTES
	EAST WET POND DRAINAGE AREA AREA = 3.805 ACRES TC = 6 MINUTES
	INFILTRATION BASIN DRAINAGE AREA AREA = 2.236 ACRES TC = 7.7 MINUTES
	NORTHEAST SWALE DRAINAGE AREA AREA = 0.032 ACRES TC = 6 MINUTES
	SOUTHEAST SWALE DRAINAGE AREA AREA = 0.224 ACRES TC = 6 MINUTES
	UNCONTROLLED DRAINAGE AREA AREA = 1.375 ACRES TC = 6 MINUTES
	WETLAND FIRST DRAINAGE AREA AREA = 0.702 ACRES TC = 6 MINUTES



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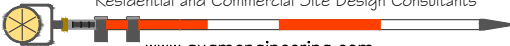
PROPOSED DRAINAGE PLAN

EXHIBIT: #5

DATED: OCTOBER 17, 2025

QUAM ENGINEERING, LLC

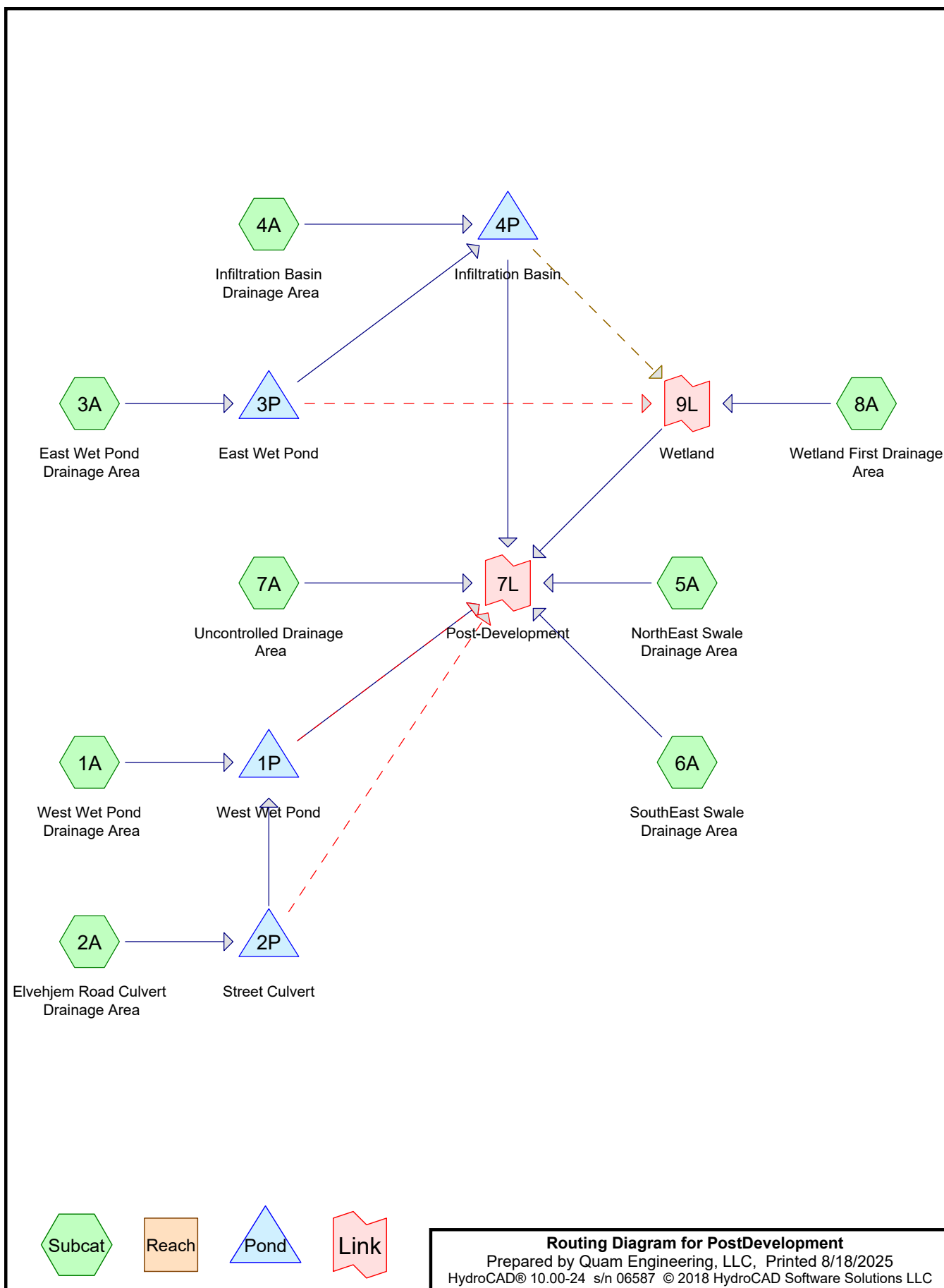
Residential and Commercial Site Design Consultants



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Phone (608) 838-7750; Fax (608) 838-7752

INUNDATION EVENT WAS MODELED ASSUMING
THAT ALL WATER REACHED THE POND AS
DESIGNED BUT ONLY LEFT THE POND THROUGH
THE OVERFLOW WEIR.



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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.702	58	>75% Grass cover, Good, HSG B (8A)
4.312	74	>75% Grass cover, Good, HSG C (1A, 2A, 3A, 4A, 6A, 7A)
1.000	58	Deep Tilled HSG C Soils (7A)
0.633	58	Offsite Grass, HSG B (3A, 4A, 5A, 6A)
0.054	98	Offsite Roof (4A)
0.329	98	Offsite Sidewalk (1A, 2A, 5A, 6A)
0.429	98	Offsite Street (1A, 2A)
1.632	98	Proposed Pavement (1A, 3A)
2.512	98	Proposed Roof (1A, 2A, 3A, 6A, 7A)
0.277	98	Proposed Sidewalk (1A, 2A, 3A, 7A)
0.566	98	Proposed Street (1A, 7A)
1.522	58	Undisturbed Grass, HSG B (3A, 4A)
0.808	100	Water/Infiltration Area (1A, 3A, 4A)
14.776	81	TOTAL AREA

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Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points x 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1A: West Wet Pond

Runoff Area=5.530 ac 59.82% Impervious Runoff Depth=1.61"

Tc=6.0 min CN=WQ Runoff=12.17 cfs 0.740 af

Pond 1P: West Wet Pond

Peak Elev=859.42' Storage=27,058 cf Inflow=13.74 cfs 0.851 af

Primary=0.32 cfs 0.820 af Secondary=0.00 cfs 0.000 af Outflow=0.32 cfs 0.820 af

Subcatchment 2A: Elvehjem Road Culvert

Runoff Area=0.872 ac 55.85% Impervious Runoff Depth=1.53"

Tc=6.0 min CN=WQ Runoff=1.84 cfs 0.111 af

Pond 2P: Street Culvert

Peak Elev=859.87' Storage=270 cf Inflow=1.84 cfs 0.111 af

Primary=1.64 cfs 0.111 af Secondary=0.00 cfs 0.000 af Outflow=1.64 cfs 0.111 af

Subcatchment 3A: East Wet Pond Drainage

Runoff Area=3.805 ac 55.98% Impervious Runoff Depth=1.50"

Tc=6.0 min CN=WQ Runoff=7.76 cfs 0.476 af

Pond 3P: East Wet Pond

Peak Elev=861.48' Storage=13,280 cf Inflow=7.76 cfs 0.476 af

Primary=0.32 cfs 0.471 af Secondary=0.00 cfs 0.000 af Outflow=0.32 cfs 0.471 af

Subcatchment 4A: Infiltration Basin

Runoff Area=2.236 ac 16.77% Impervious Runoff Depth=0.55"

Flow Length=280' Tc=7.7 min CN=WQ Runoff=1.23 cfs 0.102 af

Pond 4P: Infiltration Basin

Peak Elev=859.65' Storage=5,870 cf Inflow=1.49 cfs 0.573 af

cfs 0.128 af Primary=0.14 cfs 0.205 af Secondary=0.00 cfs 0.000 af Tertiary=0.16 cfs 0.234 af Outflow=0.32 cfs 0.567 af

Subcatchment 5A: NorthEast Swale

Runoff Area=0.032 ac 53.13% Impervious Runoff Depth=1.26"

Tc=6.0 min CN=WQ Runoff=0.05 cfs 0.003 af

Subcatchment 6A: SouthEast Swale

Runoff Area=0.224 ac 36.16% Impervious Runoff Depth=1.06"

Tc=6.0 min CN=WQ Runoff=0.32 cfs 0.020 af

Subcatchment 7A: Uncontrolled Drainage

Runoff Area=1.375 ac 15.20% Impervious Runoff Depth=0.51"

Tc=6.0 min CN=WQ Runoff=0.80 cfs 0.059 af

Link 7L: Post-Development

Inflow=1.42 cfs 1.349 af

Primary=1.42 cfs 1.349 af

Subcatchment 8A: Wetland First Drainage

Runoff Area=0.702 ac 0.00% Impervious Runoff Depth=0.13"

Tc=6.0 min CN=58 Runoff=0.03 cfs 0.008 af

Link 9L: Wetland

Inflow=0.17 cfs 0.242 af

Primary=0.17 cfs 0.242 af

Total Runoff Area = 14.776 ac Runoff Volume = 1.519 af Average Runoff Depth = 1.23"
55.29% Pervious = 8.169 ac 44.71% Impervious = 6.607 ac

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MSE 24-hr 4 1-Year Rainfall=2.49"

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Summary for Subcatchment 1A: West Wet Pond Drainage Area

Runoff = 12.17 cfs @ 12.13 hrs, Volume= 0.740 af, Depth= 1.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

MSE 24-hr 4 1-Year Rainfall=2.49"

Area (ac)	CN	Description
* 1.252	98	Proposed Roof
* 0.759	98	Proposed Pavement
* 0.143	98	Proposed Sidewalk
* 0.529	98	Proposed Street
* 1.977	74	>75% Grass cover, Good, HSG C
* 0.280	100	Water/Infiltration Area
* 0.120	98	Offsite Sidewalk
* 0.225	98	Offsite Street
0.245	74	>75% Grass cover, Good, HSG C
5.530		Weighted Average
2.222		40.18% Pervious Area
3.308		59.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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Summary for Pond 1P: West Wet Pond

Inflow Area = 6.402 ac, 59.28% Impervious, Inflow Depth = 1.60" for 1-Year event
Inflow = 13.74 cfs @ 12.13 hrs, Volume= 0.851 af
Outflow = 0.32 cfs @ 15.16 hrs, Volume= 0.820 af, Atten= 98%, Lag= 181.7 min
Primary = 0.32 cfs @ 15.16 hrs, Volume= 0.820 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 859.42' @ 15.16 hrs Surf.Area= 16,270 sf Storage= 27,058 cf

Plug-Flow detention time= 1,033.2 min calculated for 0.820 af (96% of inflow)
Center-of-Mass det. time= 1,012.7 min (1,785.4 - 772.7)

Volume	Invert	Avail.Storage	Storage Description
#1	857.50'	71,963 cf	Surface (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
857.50	12,000	0	0
858.00	13,000	6,250	6,250
859.00	15,300	14,150	20,400
860.00	17,600	16,450	36,850
861.00	20,000	18,800	55,650
861.75	23,500	16,313	71,963

Device	Routing	Invert	Outlet Devices
#1	Primary	857.50'	15.0" Round Outlet Culvert L= 136.0' Ke= 0.500 Inlet / Outlet Invert= 857.50' / 857.23' S= 0.0020 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	857.50'	3.0" Round Culvert L= 5.0' Ke= 0.500 Inlet / Outlet Invert= 857.50' / 857.50' S= 0.0000 '/' Cc= 0.900 n= 0.010, Flow Area= 0.05 sf
#3	Device 1	860.00'	36.0" Horiz. Standpipe C= 0.600 Limited to weir flow at low heads
#4	Secondary	861.10'	20.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.32 cfs @ 15.16 hrs HW=859.42' TW=0.00' (Dynamic Tailwater)

↑ **1=Outlet Culvert** (Passes 0.32 cfs of 4.42 cfs potential flow)

↑ **2=Culvert** (Inlet Controls 0.32 cfs @ 6.45 fps)

↑ **3=Standpipe** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=857.50' TW=0.00' (Dynamic Tailwater)

↑ **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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MSE 24-hr 4 1-Year Rainfall=2.49"

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Summary for Subcatchment 2A: Elvehjem Road Culvert Drainage Area

Runoff = 1.84 cfs @ 12.13 hrs, Volume= 0.111 af, Depth= 1.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-Year Rainfall=2.49"

Area (ac)	CN	Description
* 0.124	98	Proposed Roof
* 0.014	98	Proposed Sidewalk
0.106	74	>75% Grass cover, Good, HSG C
* 0.145	98	Offsite Sidewalk
* 0.204	98	Offsite Street
0.279	74	>75% Grass cover, Good, HSG C
0.872		Weighted Average
0.385		44.15% Pervious Area
0.487		55.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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Summary for Pond 2P: Street Culvert

Inflow Area = 0.872 ac, 55.85% Impervious, Inflow Depth = 1.53" for 1-Year event
Inflow = 1.84 cfs @ 12.13 hrs, Volume= 0.111 af
Outflow = 1.64 cfs @ 12.16 hrs, Volume= 0.111 af, Atten= 11%, Lag= 1.9 min
Primary = 1.64 cfs @ 12.16 hrs, Volume= 0.111 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 859.87' @ 12.16 hrs Surf.Area= 765 sf Storage= 270 cf

Plug-Flow detention time= 6.4 min calculated for 0.111 af (100% of inflow)

Center-of-Mass det. time= 6.4 min (782.6 - 776.1)

Volume	Invert	Avail.Storage	Storage Description
#1	859.25'	12,325 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
859.25	100	0	0
860.00	900	375	375
861.00	4,000	2,450	2,825
862.00	15,000	9,500	12,325

Device	Routing	Invert	Outlet Devices
#1	Primary	859.25'	15.0" Round Culvert L= 37.0' Ke= 0.500 Inlet / Outlet Invert= 859.25' / 857.51' S= 0.0470 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Secondary	861.50'	100.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=1.60 cfs @ 12.16 hrs HW=859.86' TW=858.73' (Dynamic Tailwater)

↑**1=Culvert** (Inlet Controls 1.60 cfs @ 2.67 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=859.25' TW=0.00' (Dynamic Tailwater)

↑**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Summary for Subcatchment 3A: East Wet Pond Drainage Area

Runoff = 7.76 cfs @ 12.13 hrs, Volume= 0.476 af, Depth= 1.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-Year Rainfall=2.49"

Area (ac)	CN	Description
* 0.942	98	Proposed Roof
* 0.873	98	Proposed Pavement
* 0.108	98	Proposed Sidewalk
* 0.277	58	Undisturbed Grass, HSG B
1.342	74	>75% Grass cover, Good, HSG C
* 0.207	100	Water/Infiltration Area
* 0.056	58	Offsite Grass, HSG B
3.805		Weighted Average
1.675		44.02% Pervious Area
2.130		55.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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MSE 24-hr 4 1-Year Rainfall=2.49"

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Summary for Pond 3P: East Wet Pond

Inflow Area = 3.805 ac, 55.98% Impervious, Inflow Depth = 1.50" for 1-Year event
Inflow = 7.76 cfs @ 12.13 hrs, Volume= 0.476 af
Outflow = 0.32 cfs @ 13.64 hrs, Volume= 0.471 af, Atten= 96%, Lag= 90.4 min
Primary = 0.32 cfs @ 13.64 hrs, Volume= 0.471 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 861.48' @ 13.64 hrs Surf.Area= 7,854 sf Storage= 13,280 cf

Plug-Flow detention time= 540.8 min calculated for 0.471 af (99% of inflow)
Center-of-Mass det. time= 533.9 min (1,305.3 - 771.4)

Volume	Invert	Avail.Storage	Storage Description
#1	859.50'	37,100 cf	Surface (Prismatic) Listed below (Recalc) x 0.8

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
859.50	7,000	0	0
860.00	7,700	3,675	3,675
861.00	9,100	8,400	12,075
862.00	10,600	9,850	21,925
863.00	12,200	11,400	33,325
864.00	13,900	13,050	46,375

Device	Routing	Invert	Outlet Devices
#1	Primary	859.50'	15.0" Round Outlet Culvert L= 39.0' Ke= 0.500 Inlet / Outlet Invert= 859.50' / 859.38' S= 0.0031 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	859.50'	3.0" Round Culvert L= 6.0' Ke= 0.500 Inlet / Outlet Invert= 859.50' / 859.50' S= 0.0000 '/' Cc= 0.900 n= 0.010, Flow Area= 0.05 sf
#3	Device 1	862.50'	36.0" Horiz. Standpipe C= 0.600 Limited to weir flow at low heads
#4	Secondary	863.50'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.32 cfs @ 13.64 hrs HW=861.48' TW=859.57' (Dynamic Tailwater)

↑ **1=Outlet Culvert** (Passes 0.32 cfs of 5.84 cfs potential flow)

↑ **2=Culvert** (Inlet Controls 0.32 cfs @ 6.55 fps)

↑ **3=Standpipe** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=859.50' TW=0.00' (Dynamic Tailwater)

↑ **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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MSE 24-hr 4 1-Year Rainfall=2.49"

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Summary for Subcatchment 4A: Infiltration Basin Drainage Area

Runoff = 1.23 cfs @ 12.15 hrs, Volume= 0.102 af, Depth= 0.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-Year Rainfall=2.49"

Area (ac)	CN	Description
* 1.245	58	Undisturbed Grass, HSG B
0.122	74	>75% Grass cover, Good, HSG C
* 0.321	100	Water/Infiltration Area
* 0.054	98	Offsite Roof
* 0.494	58	Offsite Grass, HSG B
2.236		Weighted Average
1.861		83.23% Pervious Area
0.375		16.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	50	0.0800	0.24		Sheet Flow, Grass: Short n= 0.150 P2= 2.84"
1.5	50	0.1000	0.55		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.84"
2.8	180	0.0140	1.06		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
7.7	280	Total			

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MSE 24-hr 4 1-Year Rainfall=2.49"

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Summary for Pond 4P: Infiltration Basin

Inflow Area = 6.041 ac, 41.47% Impervious, Inflow Depth > 1.14" for 1-Year event
Inflow = 1.49 cfs @ 12.15 hrs, Volume= 0.573 af
Outflow = 0.32 cfs @ 18.49 hrs, Volume= 0.567 af, Atten= 78%, Lag= 380.4 min
Discarded = 0.02 cfs @ 9.75 hrs, Volume= 0.128 af
Primary = 0.14 cfs @ 18.49 hrs, Volume= 0.205 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Tertiary = 0.16 cfs @ 18.49 hrs, Volume= 0.234 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 859.65' @ 18.49 hrs Surf.Area= 15,587 sf Storage= 5,870 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 404.8 min (1,616.9 - 1,212.1)

Volume	Invert	Avail.Storage	Storage Description
#1	859.25'	29,625 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
859.25	14,000	0	0
860.00	17,000	11,625	11,625
861.00	19,000	18,000	29,625

Device	Routing	Invert	Outlet Devices
#1	Primary	859.35'	6.0" Round Culvert L= 48.0' Ke= 0.500 Inlet / Outlet Invert= 859.35' / 859.25' S= 0.0021 '/' Cc= 0.900 n= 0.010, Flow Area= 0.20 sf
#2	Tertiary	859.35'	6.0" Round Culvert L= 31.0' Ke= 0.500 Inlet / Outlet Invert= 859.35' / 859.25' S= 0.0032 '/' Cc= 0.900 n= 0.010, Flow Area= 0.20 sf
#3	Secondary	860.75'	30.0' long x 3.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32
#4	Discarded	859.25'	0.070 in/hr Exfiltration over Surface area from 859.24' - 859.26' Excluded Surface area = 0 sf

Discarded OutFlow Max=0.02 cfs @ 9.75 hrs HW=859.27' (Free Discharge)
↑**4=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.14 cfs @ 18.49 hrs HW=859.65' TW=0.00' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 0.14 cfs @ 1.68 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=859.25' TW=0.00' (Dynamic Tailwater)
↑**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.16 cfs @ 18.49 hrs HW=859.65' TW=0.00' (Dynamic Tailwater)
↑**2=Culvert** (Barrel Controls 0.16 cfs @ 1.90 fps)

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MSE 24-hr 4 1-Year Rainfall=2.49"

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Summary for Subcatchment 5A: NorthEast Swale Drainage Area

Runoff = 0.05 cfs @ 12.13 hrs, Volume= 0.003 af, Depth= 1.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-Year Rainfall=2.49"

Area (ac)	CN	Description
* 0.017	98	Offsite Sidewalk
* 0.015	58	Offsite Grass, HSG B
0.032		Weighted Average
0.015		46.87% Pervious Area
0.017		53.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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Summary for Subcatchment 6A: SouthEast Swale Drainage Area

Runoff = 0.32 cfs @ 12.13 hrs, Volume= 0.020 af, Depth= 1.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-Year Rainfall=2.49"

Area (ac)	CN	Description
* 0.034	98	Proposed Roof
0.075	74	>75% Grass cover, Good, HSG C
* 0.047	98	Offsite Sidewalk
* 0.068	58	Offsite Grass, HSG B
0.224		Weighted Average
0.143		63.84% Pervious Area
0.081		36.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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Summary for Subcatchment 7A: Uncontrolled Drainage Area

Runoff = 0.80 cfs @ 12.13 hrs, Volume= 0.059 af, Depth= 0.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-Year Rainfall=2.49"

Area (ac)	CN	Description
* 0.160	98	Proposed Roof
* 0.012	98	Proposed Sidewalk
* 0.037	98	Proposed Street
* 1.000	58	Deep Tilled HSG C Soils
0.166	74	>75% Grass cover, Good, HSG C
1.375		Weighted Average
1.166		84.80% Pervious Area
0.209		15.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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MSE 24-hr 4 1-Year Rainfall=2.49"

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Summary for Link 7L: Post-Development

Inflow Area = 14.776 ac, 44.71% Impervious, Inflow Depth > 1.10" for 1-Year event
Inflow = 1.42 cfs @ 12.14 hrs, Volume= 1.349 af
Primary = 1.42 cfs @ 12.14 hrs, Volume= 1.349 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

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MSE 24-hr 4 1-Year Rainfall=2.49"

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Summary for Subcatchment 8A: Wetland First Drainage Area

Runoff = 0.03 cfs @ 12.36 hrs, Volume= 0.008 af, Depth= 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-Year Rainfall=2.49"

Area (ac)	CN	Description
* 0.702	58	>75% Grass cover, Good, HSG B
0.702		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

PostDevelopment*MSE 24-hr 4 1-Year Rainfall=2.49"*

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Summary for Link 9L: Wetland

Inflow Area = 0.702 ac, 0.00% Impervious, Inflow Depth = 4.14" for 1-Year event
Inflow = 0.17 cfs @ 18.33 hrs, Volume= 0.242 af
Primary = 0.17 cfs @ 18.33 hrs, Volume= 0.242 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

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MSE 24-hr 4 2-Year Rainfall=2.84"

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Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points x 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1A: West Wet Pond

Runoff Area=5.530 ac 59.82% Impervious Runoff Depth=1.90"

Tc=6.0 min CN=WQ Runoff=14.41 cfs 0.874 af

Pond 1P: West Wet Pond

Peak Elev=859.73' Storage=32,183 cf Inflow=16.27 cfs 1.006 af

Primary=0.34 cfs 0.969 af Secondary=0.00 cfs 0.000 af Outflow=0.34 cfs 0.969 af

Subcatchment 2A: Elvehjem Road Culvert

Runoff Area=0.872 ac 55.85% Impervious Runoff Depth=1.81"

Tc=6.0 min CN=WQ Runoff=2.19 cfs 0.132 af

Pond 2P: Street Culvert

Peak Elev=859.94' Storage=321 cf Inflow=2.19 cfs 0.132 af

Primary=1.95 cfs 0.132 af Secondary=0.00 cfs 0.000 af Outflow=1.95 cfs 0.132 af

Subcatchment 3A: East Wet Pond Drainage

Runoff Area=3.805 ac 55.98% Impervious Runoff Depth=1.78"

Tc=6.0 min CN=WQ Runoff=9.21 cfs 0.564 af

Pond 3P: East Wet Pond

Peak Elev=861.80' Storage=15,875 cf Inflow=9.21 cfs 0.564 af

Primary=0.35 cfs 0.558 af Secondary=0.00 cfs 0.000 af Outflow=0.35 cfs 0.558 af

Subcatchment 4A: Infiltration Basin

Runoff Area=2.236 ac 16.77% Impervious Runoff Depth=0.69"

Flow Length=280' Tc=7.7 min CN=WQ Runoff=1.57 cfs 0.128 af

Pond 4P: Infiltration Basin

Peak Elev=859.67' Storage=6,282 cf Inflow=1.85 cfs 0.687 af

cfs 0.129 af Primary=0.17 cfs 0.256 af Secondary=0.00 cfs 0.000 af Tertiary=0.19 cfs 0.292 af Outflow=0.37 cfs 0.677 af

Subcatchment 5A: NorthEast Swale

Runoff Area=0.032 ac 53.13% Impervious Runoff Depth=1.49"

Tc=6.0 min CN=WQ Runoff=0.06 cfs 0.004 af

Subcatchment 6A: SouthEast Swale

Runoff Area=0.224 ac 36.16% Impervious Runoff Depth=1.28"

Tc=6.0 min CN=WQ Runoff=0.38 cfs 0.024 af

Subcatchment 7A: Uncontrolled Drainage

Runoff Area=1.375 ac 15.20% Impervious Runoff Depth=0.66"

Tc=6.0 min CN=WQ Runoff=1.04 cfs 0.075 af

Link 7L: Post-Development

Inflow=1.86 cfs 1.633 af

Primary=1.86 cfs 1.633 af

Subcatchment 8A: Wetland First Drainage

Runoff Area=0.702 ac 0.00% Impervious Runoff Depth=0.22"

Tc=6.0 min CN=58 Runoff=0.09 cfs 0.013 af

Link 9L: Wetland

Inflow=0.20 cfs 0.305 af

Primary=0.20 cfs 0.305 af

Total Runoff Area = 14.776 ac Runoff Volume = 1.815 af Average Runoff Depth = 1.47"
55.29% Pervious = 8.169 ac 44.71% Impervious = 6.607 ac

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MSE 24-hr 4 2-Year Rainfall=2.84"

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Summary for Subcatchment 1A: West Wet Pond Drainage Area

Runoff = 14.41 cfs @ 12.13 hrs, Volume= 0.874 af, Depth= 1.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

MSE 24-hr 4 2-Year Rainfall=2.84"

Area (ac)	CN	Description
* 1.252	98	Proposed Roof
* 0.759	98	Proposed Pavement
* 0.143	98	Proposed Sidewalk
* 0.529	98	Proposed Street
* 1.977	74	>75% Grass cover, Good, HSG C
* 0.280	100	Water/Infiltration Area
* 0.120	98	Offsite Sidewalk
* 0.225	98	Offsite Street
0.245	74	>75% Grass cover, Good, HSG C
5.530		Weighted Average
2.222		40.18% Pervious Area
3.308		59.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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Summary for Pond 1P: West Wet Pond

Inflow Area = 6.402 ac, 59.28% Impervious, Inflow Depth = 1.89" for 2-Year event
Inflow = 16.27 cfs @ 12.13 hrs, Volume= 1.006 af
Outflow = 0.34 cfs @ 15.26 hrs, Volume= 0.969 af, Atten= 98%, Lag= 187.7 min
Primary = 0.34 cfs @ 15.26 hrs, Volume= 0.969 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 859.73' @ 15.26 hrs Surf.Area= 16,979 sf Storage= 32,183 cf

Plug-Flow detention time= 1,111.1 min calculated for 0.969 af (96% of inflow)
Center-of-Mass det. time= 1,091.4 min (1,864.4 - 773.0)

Volume	Invert	Avail.Storage	Storage Description
#1	857.50'	71,963 cf	Surface (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
857.50	12,000	0	0
858.00	13,000	6,250	6,250
859.00	15,300	14,150	20,400
860.00	17,600	16,450	36,850
861.00	20,000	18,800	55,650
861.75	23,500	16,313	71,963

Device	Routing	Invert	Outlet Devices
#1	Primary	857.50'	15.0" Round Outlet Culvert L= 136.0' Ke= 0.500 Inlet / Outlet Invert= 857.50' / 857.23' S= 0.0020 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	857.50'	3.0" Round Culvert L= 5.0' Ke= 0.500 Inlet / Outlet Invert= 857.50' / 857.50' S= 0.0000 '/' Cc= 0.900 n= 0.010, Flow Area= 0.05 sf
#3	Device 1	860.00'	36.0" Horiz. Standpipe C= 0.600 Limited to weir flow at low heads
#4	Secondary	861.10'	20.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.34 cfs @ 15.26 hrs HW=859.73' TW=0.00' (Dynamic Tailwater)

↑ **1=Outlet Culvert** (Passes 0.34 cfs of 5.09 cfs potential flow)

↑ **2=Culvert** (Inlet Controls 0.34 cfs @ 6.99 fps)

↑ **3=Standpipe** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=857.50' TW=0.00' (Dynamic Tailwater)

↑ **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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MSE 24-hr 4 2-Year Rainfall=2.84"

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Summary for Subcatchment 2A: Elvehjem Road Culvert Drainage Area

Runoff = 2.19 cfs @ 12.13 hrs, Volume= 0.132 af, Depth= 1.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-Year Rainfall=2.84"

Area (ac)	CN	Description
* 0.124	98	Proposed Roof
* 0.014	98	Proposed Sidewalk
0.106	74	>75% Grass cover, Good, HSG C
* 0.145	98	Offsite Sidewalk
* 0.204	98	Offsite Street
0.279	74	>75% Grass cover, Good, HSG C
0.872		Weighted Average
0.385		44.15% Pervious Area
0.487		55.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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MSE 24-hr 4 2-Year Rainfall=2.84"

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Summary for Pond 2P: Street Culvert

Inflow Area = 0.872 ac, 55.85% Impervious, Inflow Depth = 1.81" for 2-Year event
Inflow = 2.19 cfs @ 12.13 hrs, Volume= 0.132 af
Outflow = 1.95 cfs @ 12.16 hrs, Volume= 0.132 af, Atten= 11%, Lag= 2.0 min
Primary = 1.95 cfs @ 12.16 hrs, Volume= 0.132 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 859.94' @ 12.16 hrs Surf.Area= 833 sf Storage= 321 cf

Plug-Flow detention time= 19.7 min calculated for 0.132 af (100% of inflow)

Center-of-Mass det. time= 18.8 min (793.4 - 774.6)

Volume	Invert	Avail.Storage	Storage Description
#1	859.25'	12,325 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
859.25	100	0	0
860.00	900	375	375
861.00	4,000	2,450	2,825
862.00	15,000	9,500	12,325

Device	Routing	Invert	Outlet Devices
#1	Primary	859.25'	15.0" Round Culvert L= 37.0' Ke= 0.500 Inlet / Outlet Invert= 859.25' / 857.51' S= 0.0470 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Secondary	861.50'	100.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=1.90 cfs @ 12.16 hrs HW=859.93' TW=858.93' (Dynamic Tailwater)

↑**1=Culvert** (Inlet Controls 1.90 cfs @ 2.80 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=859.25' TW=0.00' (Dynamic Tailwater)

↑**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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MSE 24-hr 4 2-Year Rainfall=2.84"

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Summary for Subcatchment 3A: East Wet Pond Drainage Area

Runoff = 9.21 cfs @ 12.13 hrs, Volume= 0.564 af, Depth= 1.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-Year Rainfall=2.84"

Area (ac)	CN	Description
* 0.942	98	Proposed Roof
* 0.873	98	Proposed Pavement
* 0.108	98	Proposed Sidewalk
* 0.277	58	Undisturbed Grass, HSG B
1.342	74	>75% Grass cover, Good, HSG C
* 0.207	100	Water/Infiltration Area
* 0.056	58	Offsite Grass, HSG B
3.805		Weighted Average
1.675		44.02% Pervious Area
2.130		55.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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Summary for Pond 3P: East Wet Pond

Inflow Area = 3.805 ac, 55.98% Impervious, Inflow Depth = 1.78" for 2-Year event
Inflow = 9.21 cfs @ 12.13 hrs, Volume= 0.564 af
Outflow = 0.35 cfs @ 13.72 hrs, Volume= 0.558 af, Atten= 96%, Lag= 95.6 min
Primary = 0.35 cfs @ 13.72 hrs, Volume= 0.558 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 861.80' @ 13.72 hrs Surf.Area= 8,241 sf Storage= 15,875 cf

Plug-Flow detention time= 583.0 min calculated for 0.558 af (99% of inflow)
Center-of-Mass det. time= 578.4 min (1,348.8 - 770.4)

Volume	Invert	Avail.Storage	Storage Description
#1	859.50'	37,100 cf	Surface (Prismatic) Listed below (Recalc) x 0.8

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
859.50	7,000	0	0
860.00	7,700	3,675	3,675
861.00	9,100	8,400	12,075
862.00	10,600	9,850	21,925
863.00	12,200	11,400	33,325
864.00	13,900	13,050	46,375

Device	Routing	Invert	Outlet Devices
#1	Primary	859.50'	15.0" Round Outlet Culvert L= 39.0' Ke= 0.500 Inlet / Outlet Invert= 859.50' / 859.38' S= 0.0031 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	859.50'	3.0" Round Culvert L= 6.0' Ke= 0.500 Inlet / Outlet Invert= 859.50' / 859.50' S= 0.0000 '/' Cc= 0.900 n= 0.010, Flow Area= 0.05 sf
#3	Device 1	862.50'	36.0" Horiz. Standpipe C= 0.600 Limited to weir flow at low heads
#4	Secondary	863.50'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.35 cfs @ 13.72 hrs HW=861.80' TW=859.62' (Dynamic Tailwater)

↑ **1=Outlet Culvert** (Passes 0.35 cfs of 6.87 cfs potential flow)

↑ **2=Culvert** (Inlet Controls 0.35 cfs @ 7.10 fps)

↑ **3=Standpipe** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=859.50' TW=0.00' (Dynamic Tailwater)

↑ **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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MSE 24-hr 4 2-Year Rainfall=2.84"

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Summary for Subcatchment 4A: Infiltration Basin Drainage Area

Runoff = 1.57 cfs @ 12.15 hrs, Volume= 0.128 af, Depth= 0.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-Year Rainfall=2.84"

Area (ac)	CN	Description
* 1.245	58	Undisturbed Grass, HSG B
0.122	74	>75% Grass cover, Good, HSG C
* 0.321	100	Water/Infiltration Area
* 0.054	98	Offsite Roof
* 0.494	58	Offsite Grass, HSG B
2.236		Weighted Average
1.861		83.23% Pervious Area
0.375		16.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	50	0.0800	0.24		Sheet Flow, Grass: Short n= 0.150 P2= 2.84"
1.5	50	0.1000	0.55		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.84"
2.8	180	0.0140	1.06		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
7.7	280	Total			

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MSE 24-hr 4 2-Year Rainfall=2.84"

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Summary for Pond 4P: Infiltration Basin

Inflow Area = 6.041 ac, 41.47% Impervious, Inflow Depth > 1.36" for 2-Year event
Inflow = 1.85 cfs @ 12.16 hrs, Volume= 0.687 af
Outflow = 0.37 cfs @ 17.64 hrs, Volume= 0.677 af, Atten= 80%, Lag= 328.7 min
Discarded = 0.02 cfs @ 9.20 hrs, Volume= 0.129 af
Primary = 0.17 cfs @ 17.64 hrs, Volume= 0.256 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Tertiary = 0.19 cfs @ 17.64 hrs, Volume= 0.292 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 859.67' @ 17.64 hrs Surf.Area= 15,693 sf Storage= 6,282 cf

Plug-Flow detention time= 387.8 min calculated for 0.676 af (98% of inflow)
Center-of-Mass det. time= 359.6 min (1,603.5 - 1,244.0)

Volume	Invert	Avail.Storage	Storage Description
#1	859.25'	29,625 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
859.25	14,000	0	0
860.00	17,000	11,625	11,625
861.00	19,000	18,000	29,625

Device	Routing	Invert	Outlet Devices
#1	Primary	859.35'	6.0" Round Culvert L= 48.0' Ke= 0.500 Inlet / Outlet Invert= 859.35' / 859.25' S= 0.0021 '/' Cc= 0.900 n= 0.010, Flow Area= 0.20 sf
#2	Tertiary	859.35'	6.0" Round Culvert L= 31.0' Ke= 0.500 Inlet / Outlet Invert= 859.35' / 859.25' S= 0.0032 '/' Cc= 0.900 n= 0.010, Flow Area= 0.20 sf
#3	Secondary	860.75'	30.0' long x 3.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32
#4	Discarded	859.25'	0.070 in/hr Exfiltration over Surface area from 859.24' - 859.26' Excluded Surface area = 0 sf

Discarded OutFlow Max=0.02 cfs @ 9.20 hrs HW=859.27' (Free Discharge)
↑**4=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.17 cfs @ 17.64 hrs HW=859.67' TW=0.00' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 0.17 cfs @ 1.75 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=859.25' TW=0.00' (Dynamic Tailwater)
↑**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.19 cfs @ 17.64 hrs HW=859.67' TW=0.00' (Dynamic Tailwater)
↑**2=Culvert** (Barrel Controls 0.19 cfs @ 1.97 fps)

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MSE 24-hr 4 2-Year Rainfall=2.84"

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Summary for Subcatchment 5A: NorthEast Swale Drainage Area

Runoff = 0.06 cfs @ 12.13 hrs, Volume= 0.004 af, Depth= 1.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-Year Rainfall=2.84"

Area (ac)	CN	Description
* 0.017	98	Offsite Sidewalk
* 0.015	58	Offsite Grass, HSG B
0.032		Weighted Average
0.015		46.87% Pervious Area
0.017		53.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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Summary for Subcatchment 6A: SouthEast Swale Drainage Area

Runoff = 0.38 cfs @ 12.13 hrs, Volume= 0.024 af, Depth= 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-Year Rainfall=2.84"

Area (ac)	CN	Description
* 0.034	98	Proposed Roof
0.075	74	>75% Grass cover, Good, HSG C
* 0.047	98	Offsite Sidewalk
* 0.068	58	Offsite Grass, HSG B
0.224		Weighted Average
0.143		63.84% Pervious Area
0.081		36.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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MSE 24-hr 4 2-Year Rainfall=2.84"

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Summary for Subcatchment 7A: Uncontrolled Drainage Area

Runoff = 1.04 cfs @ 12.14 hrs, Volume= 0.075 af, Depth= 0.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

MSE 24-hr 4 2-Year Rainfall=2.84"

Area (ac)	CN	Description
* 0.160	98	Proposed Roof
* 0.012	98	Proposed Sidewalk
* 0.037	98	Proposed Street
* 1.000	58	Deep Tilled HSG C Soils
0.166	74	>75% Grass cover, Good, HSG C
1.375		Weighted Average
1.166		84.80% Pervious Area
0.209		15.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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MSE 24-hr 4 2-Year Rainfall=2.84"

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Summary for Link 7L: Post-Development

Inflow Area = 14.776 ac, 44.71% Impervious, Inflow Depth > 1.33" for 2-Year event

Inflow = 1.86 cfs @ 12.14 hrs, Volume= 1.633 af

Primary = 1.86 cfs @ 12.14 hrs, Volume= 1.633 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

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MSE 24-hr 4 2-Year Rainfall=2.84"

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Summary for Subcatchment 8A: Wetland First Drainage Area

Runoff = 0.09 cfs @ 12.20 hrs, Volume= 0.013 af, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-Year Rainfall=2.84"

Area (ac)	CN	Description
* 0.702	58	>75% Grass cover, Good, HSG B
0.702		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

PostDevelopment*MSE 24-hr 4 2-Year Rainfall=2.84"*

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Summary for Link 9L: Wetland

Inflow Area = 0.702 ac, 0.00% Impervious, Inflow Depth = 5.21" for 2-Year event
Inflow = 0.20 cfs @ 17.25 hrs, Volume= 0.305 af
Primary = 0.20 cfs @ 17.25 hrs, Volume= 0.305 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

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MSE 24-hr 4 10-Year Rainfall=4.09"

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Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points x 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1A: West Wet Pond

Runoff Area=5.530 ac 59.82% Impervious Runoff Depth=2.99"

Tc=6.0 min CN=WQ Runoff=22.76 cfs 1.376 af

Pond 1P: West Wet Pond

Peak Elev=860.21' Storage=40,651 cf Inflow=25.43 cfs 1.586 af

Primary=3.41 cfs 1.539 af Secondary=0.00 cfs 0.000 af Outflow=3.41 cfs 1.539 af

Subcatchment 2A: Elvehjem Road Culvert

Runoff Area=0.872 ac 55.85% Impervious Runoff Depth=2.89"

Tc=6.0 min CN=WQ Runoff=3.50 cfs 0.210 af

Pond 2P: Street Culvert

Peak Elev=860.23' Storage=659 cf Inflow=3.50 cfs 0.210 af

Primary=2.70 cfs 0.210 af Secondary=0.00 cfs 0.000 af Outflow=2.70 cfs 0.210 af

Subcatchment 3A: East Wet Pond Drainage

Runoff Area=3.805 ac 55.98% Impervious Runoff Depth=2.82"

Tc=6.0 min CN=WQ Runoff=14.72 cfs 0.894 af

Pond 3P: East Wet Pond

Peak Elev=862.61' Storage=22,930 cf Inflow=14.72 cfs 0.894 af

Primary=1.49 cfs 0.888 af Secondary=0.00 cfs 0.000 af Outflow=1.49 cfs 0.888 af

Subcatchment 4A: Infiltration Basin

Runoff Area=2.236 ac 16.77% Impervious Runoff Depth=1.32"

Flow Length=280' Tc=7.7 min CN=WQ Runoff=3.60 cfs 0.246 af

Pond 4P: Infiltration Basin

Peak Elev=859.96' Storage=10,995 cf Inflow=3.95 cfs 1.134 af

cfs 0.131 af Primary=0.42 cfs 0.461 af Secondary=0.00 cfs 0.000 af Tertiary=0.47 cfs 0.520 af Outflow=0.91 cfs 1.113 af

Subcatchment 5A: NorthEast Swale

Runoff Area=0.032 ac 53.13% Impervious Runoff Depth=2.38"

Tc=6.0 min CN=WQ Runoff=0.10 cfs 0.006 af

Subcatchment 6A: SouthEast Swale

Runoff Area=0.224 ac 36.16% Impervious Runoff Depth=2.17"

Tc=6.0 min CN=WQ Runoff=0.67 cfs 0.040 af

Subcatchment 7A: Uncontrolled Drainage

Runoff Area=1.375 ac 15.20% Impervious Runoff Depth=1.30"

Tc=6.0 min CN=WQ Runoff=2.42 cfs 0.149 af

Link 7L: Post-Development

Inflow=4.59 cfs 2.758 af

Primary=4.59 cfs 2.758 af

Subcatchment 8A: Wetland First Drainage

Runoff Area=0.702 ac 0.00% Impervious Runoff Depth=0.71"

Tc=6.0 min CN=58 Runoff=0.65 cfs 0.041 af

Link 9L: Wetland

Inflow=0.76 cfs 0.562 af

Primary=0.76 cfs 0.562 af

Total Runoff Area = 14.776 ac Runoff Volume = 2.963 af Average Runoff Depth = 2.41"
55.29% Pervious = 8.169 ac 44.71% Impervious = 6.607 ac

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Summary for Subcatchment 1A: West Wet Pond Drainage Area

Runoff = 22.76 cfs @ 12.13 hrs, Volume= 1.376 af, Depth= 2.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-Year Rainfall=4.09"

Area (ac)	CN	Description
* 1.252	98	Proposed Roof
* 0.759	98	Proposed Pavement
* 0.143	98	Proposed Sidewalk
* 0.529	98	Proposed Street
* 1.977	74	>75% Grass cover, Good, HSG C
* 0.280	100	Water/Infiltration Area
* 0.120	98	Offsite Sidewalk
* 0.225	98	Offsite Street
0.245	74	>75% Grass cover, Good, HSG C
5.530		Weighted Average
2.222		40.18% Pervious Area
3.308		59.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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Summary for Pond 1P: West Wet Pond

Inflow Area = 6.402 ac, 59.28% Impervious, Inflow Depth = 2.97" for 10-Year event
Inflow = 25.43 cfs @ 12.13 hrs, Volume= 1.586 af
Outflow = 3.41 cfs @ 12.59 hrs, Volume= 1.539 af, Atten= 87%, Lag= 27.8 min
Primary = 3.41 cfs @ 12.59 hrs, Volume= 1.539 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 860.21' @ 12.59 hrs Surf.Area= 18,111 sf Storage= 40,651 cf

Plug-Flow detention time= 909.5 min calculated for 1.539 af (97% of inflow)
Center-of-Mass det. time= 890.9 min (1,662.8 - 771.9)

Volume	Invert	Avail.Storage	Storage Description
#1	857.50'	71,963 cf	Surface (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
857.50	12,000	0	0
858.00	13,000	6,250	6,250
859.00	15,300	14,150	20,400
860.00	17,600	16,450	36,850
861.00	20,000	18,800	55,650
861.75	23,500	16,313	71,963

Device	Routing	Invert	Outlet Devices
#1	Primary	857.50'	15.0" Round Outlet Culvert L= 136.0' Ke= 0.500 Inlet / Outlet Invert= 857.50' / 857.23' S= 0.0020 ' /' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	857.50'	3.0" Round Culvert L= 5.0' Ke= 0.500 Inlet / Outlet Invert= 857.50' / 857.50' S= 0.0000 ' /' Cc= 0.900 n= 0.010, Flow Area= 0.05 sf
#3	Device 1	860.00'	36.0" Horiz. Standpipe C= 0.600 Limited to weir flow at low heads
#4	Secondary	861.10'	20.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=3.40 cfs @ 12.59 hrs HW=860.21' TW=0.00' (Dynamic Tailwater)

↑ **1=Outlet Culvert** (Passes 3.40 cfs of 6.00 cfs potential flow)

↑ **2=Culvert** (Inlet Controls 0.38 cfs @ 7.75 fps)

↑ **3=Standpipe** (Weir Controls 3.02 cfs @ 1.51 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=857.50' TW=0.00' (Dynamic Tailwater)

↑ **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Summary for Subcatchment 2A: Elvehjem Road Culvert Drainage Area

Runoff = 3.50 cfs @ 12.13 hrs, Volume= 0.210 af, Depth= 2.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-Year Rainfall=4.09"

Area (ac)	CN	Description
* 0.124	98	Proposed Roof
* 0.014	98	Proposed Sidewalk
0.106	74	>75% Grass cover, Good, HSG C
* 0.145	98	Offsite Sidewalk
* 0.204	98	Offsite Street
0.279	74	>75% Grass cover, Good, HSG C
0.872		Weighted Average
0.385		44.15% Pervious Area
0.487		55.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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Summary for Pond 2P: Street Culvert

Inflow Area = 0.872 ac, 55.85% Impervious, Inflow Depth = 2.89" for 10-Year event
 Inflow = 3.50 cfs @ 12.13 hrs, Volume= 0.210 af
 Outflow = 2.70 cfs @ 12.14 hrs, Volume= 0.210 af, Atten= 23%, Lag= 0.9 min
 Primary = 2.70 cfs @ 12.14 hrs, Volume= 0.210 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 860.23' @ 12.58 hrs Surf.Area= 1,603 sf Storage= 659 cf

Plug-Flow detention time= 39.7 min calculated for 0.210 af (100% of inflow)
 Center-of-Mass det. time= 38.9 min (809.2 - 770.3)

Volume	Invert	Avail.Storage	Storage Description
#1	859.25'	12,325 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
859.25	100	0	0
860.00	900	375	375
861.00	4,000	2,450	2,825
862.00	15,000	9,500	12,325

Device	Routing	Invert	Outlet Devices
#1	Primary	859.25'	15.0" Round Culvert L= 37.0' Ke= 0.500 Inlet / Outlet Invert= 859.25' / 857.51' S= 0.0470 ' S= 0.0470 ' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Secondary	861.50'	100.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=2.68 cfs @ 12.14 hrs HW=860.14' TW=859.56' (Dynamic Tailwater)
 ↑1=Culvert (Outlet Controls 2.68 cfs @ 4.02 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=859.25' TW=0.00' (Dynamic Tailwater)
 ↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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MSE 24-hr 4 10-Year Rainfall=4.09"

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Summary for Subcatchment 3A: East Wet Pond Drainage Area

Runoff = 14.72 cfs @ 12.13 hrs, Volume= 0.894 af, Depth= 2.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-Year Rainfall=4.09"

Area (ac)	CN	Description
* 0.942	98	Proposed Roof
* 0.873	98	Proposed Pavement
* 0.108	98	Proposed Sidewalk
* 0.277	58	Undisturbed Grass, HSG B
1.342	74	>75% Grass cover, Good, HSG C
* 0.207	100	Water/Infiltration Area
* 0.056	58	Offsite Grass, HSG B
3.805		Weighted Average
1.675		44.02% Pervious Area
2.130		55.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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Summary for Pond 3P: East Wet Pond

Inflow Area = 3.805 ac, 55.98% Impervious, Inflow Depth = 2.82" for 10-Year event
Inflow = 14.72 cfs @ 12.13 hrs, Volume= 0.894 af
Outflow = 1.49 cfs @ 12.76 hrs, Volume= 0.888 af, Atten= 90%, Lag= 38.0 min
Primary = 1.49 cfs @ 12.76 hrs, Volume= 0.888 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 862.61' @ 12.77 hrs Surf.Area= 9,258 sf Storage= 22,930 cf

Plug-Flow detention time= 611.3 min calculated for 0.887 af (99% of inflow)
Center-of-Mass det. time= 608.4 min (1,375.8 - 767.4)

Volume	Invert	Avail.Storage	Storage Description
#1	859.50'	37,100 cf	Surface (Prismatic) Listed below (Recalc) x 0.8

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
859.50	7,000	0	0
860.00	7,700	3,675	3,675
861.00	9,100	8,400	12,075
862.00	10,600	9,850	21,925
863.00	12,200	11,400	33,325
864.00	13,900	13,050	46,375

Device	Routing	Invert	Outlet Devices
#1	Primary	859.50'	15.0" Round Outlet Culvert L= 39.0' Ke= 0.500 Inlet / Outlet Invert= 859.50' / 859.38' S= 0.0031 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	859.50'	3.0" Round Culvert L= 6.0' Ke= 0.500 Inlet / Outlet Invert= 859.50' / 859.50' S= 0.0000 '/' Cc= 0.900 n= 0.010, Flow Area= 0.05 sf
#3	Device 1	862.50'	36.0" Horiz. Standpipe C= 0.600 Limited to weir flow at low heads
#4	Secondary	863.50'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=1.48 cfs @ 12.76 hrs HW=862.61' TW=859.81' (Dynamic Tailwater)

↑ **1=Outlet Culvert** (Passes 1.48 cfs of 8.92 cfs potential flow)

↑ **2=Culvert** (Inlet Controls 0.40 cfs @ 8.05 fps)

↑ **3=Standpipe** (Weir Controls 1.09 cfs @ 1.07 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=859.50' TW=0.00' (Dynamic Tailwater)

↑ **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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MSE 24-hr 4 10-Year Rainfall=4.09"

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Summary for Subcatchment 4A: Infiltration Basin Drainage Area

Runoff = 3.60 cfs @ 12.16 hrs, Volume= 0.246 af, Depth= 1.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-Year Rainfall=4.09"

Area (ac)	CN	Description
* 1.245	58	Undisturbed Grass, HSG B
0.122	74	>75% Grass cover, Good, HSG C
* 0.321	100	Water/Infiltration Area
* 0.054	98	Offsite Roof
* 0.494	58	Offsite Grass, HSG B
2.236		Weighted Average
1.861		83.23% Pervious Area
0.375		16.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	50	0.0800	0.24		Sheet Flow, Grass: Short n= 0.150 P2= 2.84"
1.5	50	0.1000	0.55		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.84"
2.8	180	0.0140	1.06		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
7.7	280	Total			

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MSE 24-hr 4 10-Year Rainfall=4.09"

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Summary for Pond 4P: Infiltration Basin

Inflow Area = 6.041 ac, 41.47% Impervious, Inflow Depth > 2.25" for 10-Year event
Inflow = 3.95 cfs @ 12.16 hrs, Volume= 1.134 af
Outflow = 0.91 cfs @ 13.78 hrs, Volume= 1.113 af, Atten= 77%, Lag= 97.3 min
Discarded = 0.02 cfs @ 7.40 hrs, Volume= 0.131 af
Primary = 0.42 cfs @ 13.78 hrs, Volume= 0.461 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Tertiary = 0.47 cfs @ 13.78 hrs, Volume= 0.520 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 859.96' @ 13.78 hrs Surf.Area= 16,851 sf Storage= 10,995 cf

Plug-Flow detention time= 302.2 min calculated for 1.113 af (98% of inflow)
Center-of-Mass det. time= 268.1 min (1,518.7 - 1,250.6)

Volume	Invert	Avail.Storage	Storage Description
#1	859.25'	29,625 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
859.25	14,000	0	0
860.00	17,000	11,625	11,625
861.00	19,000	18,000	29,625

Device	Routing	Invert	Outlet Devices
#1	Primary	859.35'	6.0" Round Culvert L= 48.0' Ke= 0.500 Inlet / Outlet Invert= 859.35' / 859.25' S= 0.0021 '/' Cc= 0.900 n= 0.010, Flow Area= 0.20 sf
#2	Tertiary	859.35'	6.0" Round Culvert L= 31.0' Ke= 0.500 Inlet / Outlet Invert= 859.35' / 859.25' S= 0.0032 '/' Cc= 0.900 n= 0.010, Flow Area= 0.20 sf
#3	Secondary	860.75'	30.0' long x 3.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32
#4	Discarded	859.25'	0.070 in/hr Exfiltration over Surface area from 859.24' - 859.26' Excluded Surface area = 0 sf

Discarded OutFlow Max=0.02 cfs @ 7.40 hrs HW=859.27' (Free Discharge)
↑**4=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.42 cfs @ 13.78 hrs HW=859.96' TW=0.00' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 0.42 cfs @ 2.22 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=859.25' TW=0.00' (Dynamic Tailwater)
↑**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.47 cfs @ 13.78 hrs HW=859.96' TW=0.00' (Dynamic Tailwater)
↑**2=Culvert** (Barrel Controls 0.47 cfs @ 2.47 fps)

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MSE 24-hr 4 10-Year Rainfall=4.09"

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Summary for Subcatchment 5A: NorthEast Swale Drainage Area

Runoff = 0.10 cfs @ 12.13 hrs, Volume= 0.006 af, Depth= 2.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-Year Rainfall=4.09"

Area (ac)	CN	Description
* 0.017	98	Offsite Sidewalk
* 0.015	58	Offsite Grass, HSG B
0.032		Weighted Average
0.015		46.87% Pervious Area
0.017		53.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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MSE 24-hr 4 10-Year Rainfall=4.09"

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Summary for Subcatchment 6A: SouthEast Swale Drainage Area

Runoff = 0.67 cfs @ 12.13 hrs, Volume= 0.040 af, Depth= 2.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-Year Rainfall=4.09"

Area (ac)	CN	Description
* 0.034	98	Proposed Roof
0.075	74	>75% Grass cover, Good, HSG C
* 0.047	98	Offsite Sidewalk
* 0.068	58	Offsite Grass, HSG B
0.224		Weighted Average
0.143		63.84% Pervious Area
0.081		36.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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MSE 24-hr 4 10-Year Rainfall=4.09"

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Summary for Subcatchment 7A: Uncontrolled Drainage Area

Runoff = 2.42 cfs @ 12.14 hrs, Volume= 0.149 af, Depth= 1.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-Year Rainfall=4.09"

Area (ac)	CN	Description
* 0.160	98	Proposed Roof
* 0.012	98	Proposed Sidewalk
* 0.037	98	Proposed Street
* 1.000	58	Deep Tilled HSG C Soils
0.166	74	>75% Grass cover, Good, HSG C
1.375		Weighted Average
1.166		84.80% Pervious Area
0.209		15.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

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MSE 24-hr 4 10-Year Rainfall=4.09"

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Summary for Link 7L: Post-Development

Inflow Area = 14.776 ac, 44.71% Impervious, Inflow Depth > 2.24" for 10-Year event
Inflow = 4.59 cfs @ 12.56 hrs, Volume= 2.758 af
Primary = 4.59 cfs @ 12.56 hrs, Volume= 2.758 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

PostDevelopment

MSE 24-hr 4 10-Year Rainfall=4.09"

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Summary for Subcatchment 8A: Wetland First Drainage Area

Runoff = 0.65 cfs @ 12.15 hrs, Volume= 0.041 af, Depth= 0.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-Year Rainfall=4.09"

Area (ac)	CN	Description
* 0.702	58	>75% Grass cover, Good, HSG B
0.702		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

PostDevelopment*MSE 24-hr 4 10-Year Rainfall=4.09"*

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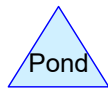
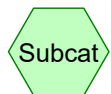
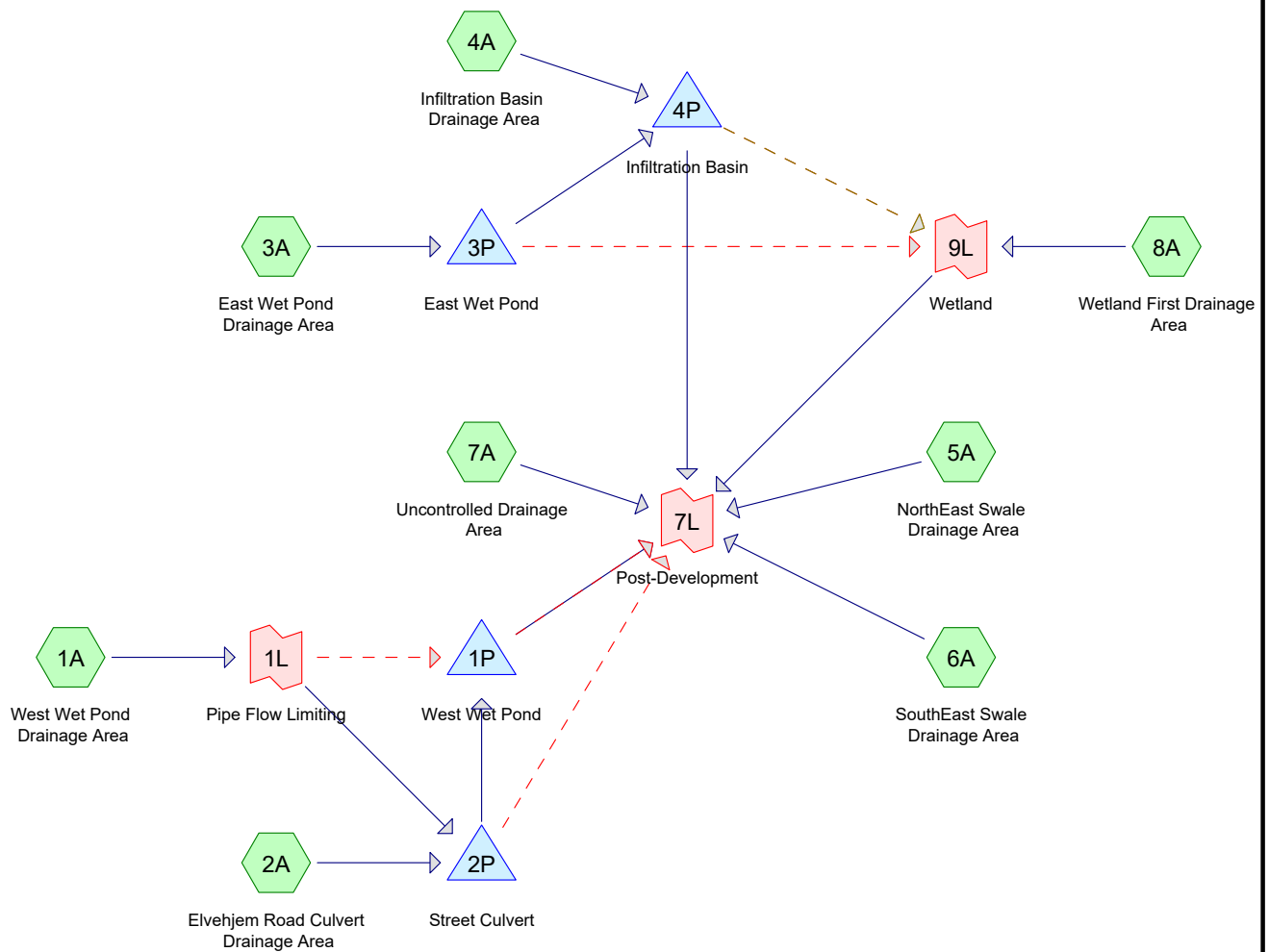
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Summary for Link 9L: Wetland

Inflow Area = 0.702 ac, 0.00% Impervious, Inflow Depth = 9.60" for 10-Year event
Inflow = 0.76 cfs @ 12.15 hrs, Volume= 0.562 af
Primary = 0.76 cfs @ 12.15 hrs, Volume= 0.562 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs



Routing Diagram for PostDevelopment-100 Year
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PostDevelopment-100 Year

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.702	58	>75% Grass cover, Good, HSG B (8A)
4.312	74	>75% Grass cover, Good, HSG C (1A, 2A, 3A, 4A, 6A, 7A)
1.000	58	Deep Tilled HSG C Soils (7A)
0.633	58	Offsite Grass, HSG B (3A, 4A, 5A, 6A)
0.054	98	Offsite Roof (4A)
0.329	98	Offsite Sidewalk (1A, 2A, 5A, 6A)
0.429	98	Offsite Street (1A, 2A)
1.632	98	Proposed Pavement (1A, 3A)
2.512	98	Proposed Roof (1A, 2A, 3A, 6A, 7A)
0.277	98	Proposed Sidewalk (1A, 2A, 3A, 7A)
0.566	98	Proposed Street (1A, 7A)
1.522	58	Undisturbed Grass, HSG B (3A, 4A)
0.808	100	Water/Infiltration Area (1A, 3A, 4A)
14.776	81	TOTAL AREA

PostDevelopment-100 Year

MSE 24-hr 4 100-Year Rainfall=6.66"

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Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points x 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1A: West Wet Pond Runoff Area=5.530 ac 59.82% Impervious Runoff Depth=5.36"
Tc=6.0 min CN=WQ Runoff=40.75 cfs 2.470 af

Link 1L: Pipe Flow Limiting above 7.93 cfs below 7.93 cfs delayed by 6.0 min Inflow=40.75 cfs 2.470 af
Primary=7.93 cfs 0.288 af Secondary=32.82 cfs 2.182 af

Pond 1P: West Wet Pond Peak Elev=861.21' Storage=59,885 cf Inflow=38.49 cfs 2.839 af
Primary=7.52 cfs 2.743 af Secondary=1.74 cfs 0.045 af Outflow=9.26 cfs 2.789 af

Subcatchment 2A: Elvehjem Road Culvert Runoff Area=0.872 ac 55.85% Impervious Runoff Depth=5.24"
Tc=6.0 min CN=WQ Runoff=6.33 cfs 0.381 af

Pond 2P: Street Culvert Peak Elev=861.74' Storage=8,756 cf Inflow=14.26 cfs 0.669 af
Primary=6.32 cfs 0.657 af Secondary=1.81 cfs 0.011 af Outflow=6.64 cfs 0.669 af

Subcatchment 3A: East Wet Pond Drainage Runoff Area=3.805 ac 55.98% Impervious Runoff Depth=5.12"
Tc=6.0 min CN=WQ Runoff=26.83 cfs 1.623 af

Pond 3P: East Wet Pond Peak Elev=862.94' Storage=35,117 cf Inflow=26.83 cfs 1.623 af
Primary=9.52 cfs 1.607 af Secondary=0.00 cfs 0.000 af Outflow=9.52 cfs 1.607 af

Subcatchment 4A: Infiltration Basin Runoff Area=2.236 ac 16.77% Impervious Runoff Depth=3.01"
Flow Length=280' Tc=7.7 min CN=WQ Runoff=9.16 cfs 0.561 af

Pond 4P: Infiltration Basin Peak Elev=860.85' Storage=26,790 cf Inflow=14.61 cfs 2.169 af
cfs 0.133 af Primary=0.85 cfs 0.867 af Secondary=2.30 cfs 0.148 af Tertiary=0.96 cfs 0.979 af Outflow=4.14 cfs 2.127 af

Subcatchment 5A: NorthEast Swale Runoff Area=0.032 ac 53.13% Impervious Runoff Depth=4.43"
Tc=6.0 min CN=WQ Runoff=0.19 cfs 0.012 af

Subcatchment 6A: SouthEast Swale Runoff Area=0.224 ac 36.16% Impervious Runoff Depth=4.24"
Tc=6.0 min CN=WQ Runoff=1.34 cfs 0.079 af

Subcatchment 7A: Uncontrolled Drainage Runoff Area=1.375 ac 15.20% Impervious Runoff Depth=3.01"
Tc=6.0 min CN=WQ Runoff=6.08 cfs 0.345 af

Link 7L: Post-Development Inflow=13.92 cfs 5.358 af
Primary=13.92 cfs 5.358 af

Subcatchment 8A: Wetland First Drainage Runoff Area=0.702 ac 0.00% Impervious Runoff Depth=2.18"
Tc=6.0 min CN=58 Runoff=2.36 cfs 0.128 af

Link 9L: Wetland Inflow=3.55 cfs 1.255 af
Primary=3.55 cfs 1.255 af

Total Runoff Area = 14.776 ac Runoff Volume = 5.599 af Average Runoff Depth = 4.55"
55.29% Pervious = 8.169 ac 44.71% Impervious = 6.607 ac

PostDevelopment-100 Year

MSE 24-hr 4 100-Year Rainfall=6.66"

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Summary for Subcatchment 1A: West Wet Pond Drainage Area

Runoff = 40.75 cfs @ 12.13 hrs, Volume= 2.470 af, Depth= 5.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-Year Rainfall=6.66"

Area (ac)	CN	Description
* 1.252	98	Proposed Roof
* 0.759	98	Proposed Pavement
* 0.143	98	Proposed Sidewalk
* 0.529	98	Proposed Street
* 1.977	74	>75% Grass cover, Good, HSG C
* 0.280	100	Water/Infiltration Area
* 0.120	98	Offsite Sidewalk
* 0.225	98	Offsite Street
0.245	74	>75% Grass cover, Good, HSG C
5.530		Weighted Average
2.222		40.18% Pervious Area
3.308		59.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

PostDevelopment-100 Year*MSE 24-hr 4 100-Year Rainfall=6.66"*

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Summary for Link 1L: Pipe Flow Limiting

Inflow Area = 5.530 ac, 59.82% Impervious, Inflow Depth = 5.36" for 100-Year event
Inflow = 40.75 cfs @ 12.13 hrs, Volume= 2.470 af
Primary = 7.93 cfs @ 12.10 hrs, Volume= 0.288 af, Atten= 81%, Lag= 0.0 min
Secondary = 32.82 cfs @ 12.23 hrs, Volume= 2.182 af

Primary outflow = Inflow above 7.93 cfs below 7.93 cfs delayed by 6.0 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

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MSE 24-hr 4 100-Year Rainfall=6.66"

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Summary for Pond 1P: West Wet Pond

Inflow Area = 6.402 ac, 59.28% Impervious, Inflow Depth = 5.32" for 100-Year event
 Inflow = 38.49 cfs @ 12.23 hrs, Volume= 2.839 af
 Outflow = 9.26 cfs @ 12.65 hrs, Volume= 2.789 af, Atten= 76%, Lag= 25.7 min
 Primary = 7.52 cfs @ 12.65 hrs, Volume= 2.743 af
 Secondary = 1.74 cfs @ 12.65 hrs, Volume= 0.045 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 861.21' @ 12.65 hrs Surf.Area= 20,965 sf Storage= 59,885 cf

Plug-Flow detention time= 554.1 min calculated for 2.787 af (98% of inflow)
 Center-of-Mass det. time= 544.0 min (1,317.6 - 773.6)

Volume	Invert	Avail.Storage	Storage Description
#1	857.50'	71,963 cf	Surface (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
857.50	12,000	0	0
858.00	13,000	6,250	6,250
859.00	15,300	14,150	20,400
860.00	17,600	16,450	36,850
861.00	20,000	18,800	55,650
861.75	23,500	16,313	71,963

Device	Routing	Invert	Outlet Devices
#1	Primary	857.50'	15.0" Round Outlet Culvert L= 136.0' Ke= 0.500 Inlet / Outlet Invert= 857.50' / 857.23' S= 0.0020 '/ Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	857.50'	3.0" Round Culvert L= 5.0' Ke= 0.500 Inlet / Outlet Invert= 857.50' / 857.50' S= 0.0000 '/ Cc= 0.900 n= 0.010, Flow Area= 0.05 sf
#3	Device 1	860.00'	36.0" Horiz. Standpipe C= 0.600 Limited to weir flow at low heads
#4	Secondary	861.10'	20.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=7.52 cfs @ 12.65 hrs HW=861.21' TW=0.00' (Dynamic Tailwater)

↑ **1=Outlet Culvert** (Barrel Controls 7.52 cfs @ 6.13 fps)

↑ **2=Culvert** (Passes < 0.45 cfs potential flow)

↑ **3=Standpipe** (Passes < 37.38 cfs potential flow)

Secondary OutFlow Max=1.73 cfs @ 12.65 hrs HW=861.21' TW=0.00' (Dynamic Tailwater)

↑ **4=Broad-Crested Rectangular Weir** (Weir Controls 1.73 cfs @ 0.81 fps)

PostDevelopment-100 Year

MSE 24-hr 4 100-Year Rainfall=6.66"

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Summary for Subcatchment 2A: Elvehjem Road Culvert Drainage Area

Runoff = 6.33 cfs @ 12.13 hrs, Volume= 0.381 af, Depth= 5.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-Year Rainfall=6.66"

Area (ac)	CN	Description
* 0.124	98	Proposed Roof
* 0.014	98	Proposed Sidewalk
0.106	74	>75% Grass cover, Good, HSG C
* 0.145	98	Offsite Sidewalk
* 0.204	98	Offsite Street
0.279	74	>75% Grass cover, Good, HSG C
0.872		Weighted Average
0.385		44.15% Pervious Area
0.487		55.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

PostDevelopment-100 Year

MSE 24-hr 4 100-Year Rainfall=6.66"

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Summary for Pond 2P: Street Culvert

Inflow Area = 6.402 ac, 59.28% Impervious, Inflow Depth = 1.25" for 100-Year event
 Inflow = 14.26 cfs @ 12.13 hrs, Volume= 0.669 af
 Outflow = 6.64 cfs @ 12.41 hrs, Volume= 0.669 af, Atten= 53%, Lag= 16.7 min
 Primary = 6.32 cfs @ 12.14 hrs, Volume= 0.657 af
 Secondary = 1.81 cfs @ 12.41 hrs, Volume= 0.011 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 861.74' @ 12.41 hrs Surf.Area= 12,103 sf Storage= 8,756 cf

Plug-Flow detention time= 30.5 min calculated for 0.669 af (100% of inflow)
 Center-of-Mass det. time= 29.7 min (780.4 - 750.7)

Volume	Invert	Avail.Storage	Storage Description
#1	859.25'	12,325 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
859.25	100	0	0
860.00	900	375	375
861.00	4,000	2,450	2,825
862.00	15,000	9,500	12,325

Device	Routing	Invert	Outlet Devices
#1	Primary	859.25'	15.0" Round Culvert L= 37.0' Ke= 0.500 Inlet / Outlet Invert= 859.25' / 857.51' S= 0.0470 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Secondary	861.70'	100.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=6.28 cfs @ 12.14 hrs HW=861.20' TW=860.07' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 6.28 cfs @ 5.12 fps)

Secondary OutFlow Max=1.60 cfs @ 12.41 hrs HW=861.73' TW=0.00' (Dynamic Tailwater)
 ↑2=Broad-Crested Rectangular Weir (Weir Controls 1.60 cfs @ 0.49 fps)

PostDevelopment-100 Year

MSE 24-hr 4 100-Year Rainfall=6.66"

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Summary for Subcatchment 3A: East Wet Pond Drainage Area

Runoff = 26.83 cfs @ 12.13 hrs, Volume= 1.623 af, Depth= 5.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-Year Rainfall=6.66"

Area (ac)	CN	Description
* 0.942	98	Proposed Roof
* 0.873	98	Proposed Pavement
* 0.108	98	Proposed Sidewalk
* 0.277	58	Undisturbed Grass, HSG B
1.342	74	>75% Grass cover, Good, HSG C
* 0.207	100	Water/Infiltration Area
* 0.056	58	Offsite Grass, HSG B
3.805		Weighted Average
1.675		44.02% Pervious Area
2.130		55.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

PostDevelopment-100 Year

MSE 24-hr 4 100-Year Rainfall=6.66"

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Summary for Pond 3P: East Wet Pond

Inflow Area = 3.805 ac, 55.98% Impervious, Inflow Depth = 5.12" for 100-Year event
 Inflow = 26.83 cfs @ 12.13 hrs, Volume= 1.623 af
 Outflow = 9.52 cfs @ 12.29 hrs, Volume= 1.607 af, Atten= 65%, Lag= 9.8 min
 Primary = 9.52 cfs @ 12.29 hrs, Volume= 1.607 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 862.94' @ 12.29 hrs Surf.Area= 12,640 sf Storage= 35,117 cf

Plug-Flow detention time= 619.9 min calculated for 1.607 af (99% of inflow)
 Center-of-Mass det. time= 613.6 min (1,376.5 - 762.9)

Volume	Invert	Avail.Storage	Storage Description
#1	859.50'	49,300 cf	Surface (Prismatic) Listed below (Recalc) x 0.8

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
859.50	10,000	0	0
860.00	10,700	5,175	5,175
861.00	12,200	11,450	16,625
862.00	14,100	13,150	29,775
863.00	15,900	15,000	44,775
864.00	17,800	16,850	61,625

Device	Routing	Invert	Outlet Devices
#1	Primary	859.50'	15.0" Round Outlet Culvert L= 39.0' Ke= 0.500 Inlet / Outlet Invert= 859.50' / 859.38' S= 0.0031 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	859.50'	3.0" Round Culvert L= 6.0' Ke= 0.500 Inlet / Outlet Invert= 859.50' / 859.50' S= 0.0000 '/' Cc= 0.900 n= 0.010, Flow Area= 0.05 sf
#3	Device 1	862.50'	36.0" Horiz. Standpipe C= 0.600 Limited to weir flow at low heads
#4	Secondary	863.50'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=9.47 cfs @ 12.29 hrs HW=862.94' TW=860.26' (Dynamic Tailwater)

↑ **1=Outlet Culvert** (Passes 9.47 cfs of 9.65 cfs potential flow)

↑ **2=Culvert** (Inlet Controls 0.39 cfs @ 7.89 fps)

↑ **3=Standpipe** (Weir Controls 9.08 cfs @ 2.18 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=859.50' TW=0.00' (Dynamic Tailwater)

↑ **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

PostDevelopment-100 Year

MSE 24-hr 4 100-Year Rainfall=6.66"

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Summary for Subcatchment 4A: Infiltration Basin Drainage Area

Runoff = 9.16 cfs @ 12.15 hrs, Volume= 0.561 af, Depth= 3.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-Year Rainfall=6.66"

Area (ac)	CN	Description
* 1.245	58	Undisturbed Grass, HSG B
0.122	74	>75% Grass cover, Good, HSG C
* 0.321	100	Water/Infiltration Area
* 0.054	98	Offsite Roof
* 0.494	58	Offsite Grass, HSG B
2.236		Weighted Average
1.861		83.23% Pervious Area
0.375		16.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	50	0.0800	0.24		Sheet Flow, Grass: Short n= 0.150 P2= 2.84"
1.5	50	0.1000	0.55		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.84"
2.8	180	0.0140	1.06		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
7.7	280	Total			

PostDevelopment-100 Year

MSE 24-hr 4 100-Year Rainfall=6.66"

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Summary for Pond 4P: Infiltration Basin

Inflow Area = 6.041 ac, 41.47% Impervious, Inflow Depth > 4.31" for 100-Year event
 Inflow = 14.61 cfs @ 12.24 hrs, Volume= 2.169 af
 Outflow = 4.14 cfs @ 12.87 hrs, Volume= 2.127 af, Atten= 72%, Lag= 37.9 min
 Discarded = 0.02 cfs @ 5.90 hrs, Volume= 0.133 af
 Primary = 0.85 cfs @ 12.87 hrs, Volume= 0.867 af
 Secondary = 2.30 cfs @ 12.87 hrs, Volume= 0.148 af
 Tertiary = 0.96 cfs @ 12.87 hrs, Volume= 0.979 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 860.85' @ 12.87 hrs Surf.Area= 18,699 sf Storage= 26,790 cf

Plug-Flow detention time= 249.8 min calculated for 2.126 af (98% of inflow)
 Center-of-Mass det. time= 206.2 min (1,433.4 - 1,227.3)

Volume	Invert	Avail.Storage	Storage Description
#1	859.25'	29,625 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
859.25	14,000	0	0
860.00	17,000	11,625	11,625
861.00	19,000	18,000	29,625

Device	Routing	Invert	Outlet Devices
#1	Primary	859.35'	6.0" Round Culvert L= 48.0' Ke= 0.500 Inlet / Outlet Invert= 859.35' / 859.25' S= 0.0021 '/' Cc= 0.900 n= 0.010, Flow Area= 0.20 sf
#2	Tertiary	859.35'	6.0" Round Culvert L= 31.0' Ke= 0.500 Inlet / Outlet Invert= 859.35' / 859.25' S= 0.0032 '/' Cc= 0.900 n= 0.010, Flow Area= 0.20 sf
#3	Secondary	860.75'	30.0' long x 3.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32
#4	Discarded	859.25'	0.070 in/hr Exfiltration over Surface area from 859.24' - 859.26' Excluded Surface area = 0 sf

Discarded OutFlow Max=0.02 cfs @ 5.90 hrs HW=859.27' (Free Discharge)
 ↳ **4=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.85 cfs @ 12.87 hrs HW=860.85' TW=0.00' (Dynamic Tailwater)
 ↳ **1=Culvert** (Barrel Controls 0.85 cfs @ 4.35 fps)

Secondary OutFlow Max=2.29 cfs @ 12.87 hrs HW=860.85' TW=0.00' (Dynamic Tailwater)
 ↳ **3=Broad-Crested Rectangular Weir** (Weir Controls 2.29 cfs @ 0.77 fps)

Tertiary OutFlow Max=0.96 cfs @ 12.87 hrs HW=860.85' TW=0.00' (Dynamic Tailwater)
 ↳ **2=Culvert** (Barrel Controls 0.96 cfs @ 4.90 fps)

PostDevelopment-100 Year

MSE 24-hr 4 100-Year Rainfall=6.66"

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Summary for Subcatchment 5A: NorthEast Swale Drainage Area

Runoff = 0.19 cfs @ 12.13 hrs, Volume= 0.012 af, Depth= 4.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-Year Rainfall=6.66"

Area (ac)	CN	Description
* 0.017	98	Offsite Sidewalk
* 0.015	58	Offsite Grass, HSG B
0.032		Weighted Average
0.015		46.87% Pervious Area
0.017		53.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

PostDevelopment-100 Year

MSE 24-hr 4 100-Year Rainfall=6.66"

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Summary for Subcatchment 6A: SouthEast Swale Drainage Area

Runoff = 1.34 cfs @ 12.13 hrs, Volume= 0.079 af, Depth= 4.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-Year Rainfall=6.66"

Area (ac)	CN	Description
* 0.034	98	Proposed Roof
0.075	74	>75% Grass cover, Good, HSG C
* 0.047	98	Offsite Sidewalk
* 0.068	58	Offsite Grass, HSG B
0.224		Weighted Average
0.143		63.84% Pervious Area
0.081		36.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

PostDevelopment-100 Year*MSE 24-hr 4 100-Year Rainfall=6.66"*

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Summary for Subcatchment 7A: Uncontrolled Drainage Area

Runoff = 6.08 cfs @ 12.13 hrs, Volume= 0.345 af, Depth= 3.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-Year Rainfall=6.66"

Area (ac)	CN	Description
* 0.160	98	Proposed Roof
* 0.012	98	Proposed Sidewalk
* 0.037	98	Proposed Street
* 1.000	58	Deep Tilled HSG C Soils
0.166	74	>75% Grass cover, Good, HSG C
1.375		Weighted Average
1.166		84.80% Pervious Area
0.209		15.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

PostDevelopment-100 Year*MSE 24-hr 4 100-Year Rainfall=6.66"*

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Summary for Link 7L: Post-Development

Inflow Area = 14.776 ac, 44.71% Impervious, Inflow Depth > 4.35" for 100-Year event
Inflow = 13.92 cfs @ 12.20 hrs, Volume= 5.358 af
Primary = 13.92 cfs @ 12.20 hrs, Volume= 5.358 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

PostDevelopment-100 Year

MSE 24-hr 4 100-Year Rainfall=6.66"

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Summary for Subcatchment 8A: Wetland First Drainage Area

Runoff = 2.36 cfs @ 12.14 hrs, Volume= 0.128 af, Depth= 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-Year Rainfall=6.66"

Area (ac)	CN	Description
* 0.702	58	>75% Grass cover, Good, HSG B
0.702		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

PostDevelopment-100 Year*MSE 24-hr 4 100-Year Rainfall=6.66"*

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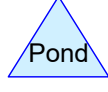
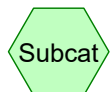
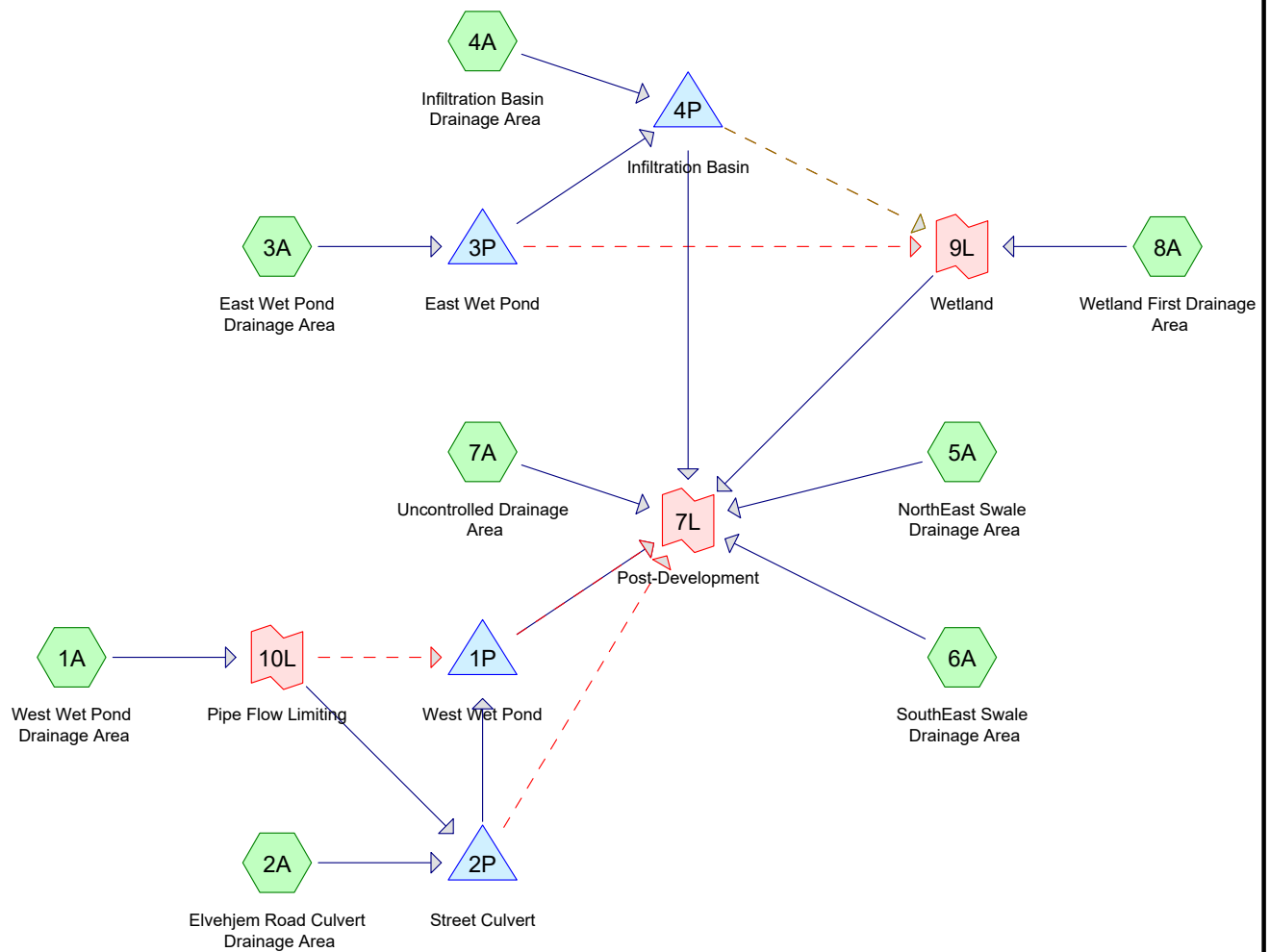
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Summary for Link 9L: Wetland

Inflow Area = 0.702 ac, 0.00% Impervious, Inflow Depth > 21.45" for 100-Year event
Inflow = 3.55 cfs @ 12.87 hrs, Volume= 1.255 af
Primary = 3.55 cfs @ 12.87 hrs, Volume= 1.255 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs



Routing Diagram for PostDevelopment-200 Year
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PostDevelopment-200 Year

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.702	58	>75% Grass cover, Good, HSG B (8A)
4.312	74	>75% Grass cover, Good, HSG C (1A, 2A, 3A, 4A, 6A, 7A)
1.000	58	Deep Tilled HSG C Soils (7A)
0.633	58	Offsite Grass, HSG B (3A, 4A, 5A, 6A)
0.054	98	Offsite Roof (4A)
0.329	98	Offsite Sidewalk (1A, 2A, 5A, 6A)
0.429	98	Offsite Street (1A, 2A)
1.632	98	Proposed Pavement (1A, 3A)
2.512	98	Proposed Roof (1A, 2A, 3A, 6A, 7A)
0.277	98	Proposed Sidewalk (1A, 2A, 3A, 7A)
0.566	98	Proposed Street (1A, 7A)
1.522	58	Undisturbed Grass, HSG B (3A, 4A)
0.808	100	Water/Infiltration Area (1A, 3A, 4A)
14.776	81	TOTAL AREA

PostDevelopment-200 Year

MSE 24-hr 4 200-Year Rainfall=7.53"

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Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points x 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1A: West Wet Pond

Runoff Area=5.530 ac 59.82% Impervious Runoff Depth=6.18"

Tc=6.0 min CN=WQ Runoff=46.94 cfs 2.850 af

Pond 1P: West Wet Pond

Peak Elev=861.32' Storage=62,231 cf Inflow=42.97 cfs 3.196 af

Primary=7.68 cfs 2.941 af Secondary=5.06 cfs 0.204 af Outflow=12.73 cfs 3.145 af

Subcatchment 2A: Elvehjem Road Culvert

Runoff Area=0.872 ac 55.85% Impervious Runoff Depth=6.06"

Tc=6.0 min CN=WQ Runoff=7.31 cfs 0.440 af

Pond 2P: Street Culvert

Peak Elev=861.79' Storage=9,405 cf Inflow=16.68 cfs 0.772 af

Primary=6.04 cfs 0.677 af Secondary=7.11 cfs 0.095 af Outflow=11.36 cfs 0.772 af

Subcatchment 3A: East Wet Pond Drainage

Runoff Area=3.805 ac 55.98% Impervious Runoff Depth=5.93"

Tc=6.0 min CN=WQ Runoff=31.04 cfs 1.879 af

Pond 3P: East Wet Pond

Peak Elev=863.27' Storage=39,245 cf Inflow=31.04 cfs 1.879 af

Primary=10.07 cfs 1.863 af Secondary=0.00 cfs 0.000 af Outflow=10.07 cfs 1.863 af

Subcatchment 4A: Infiltration Basin

Runoff Area=2.236 ac 16.77% Impervious Runoff Depth=3.66"

Flow Length=280' Tc=7.7 min CN=WQ Runoff=11.28 cfs 0.682 af

Pond 4P: Infiltration Basin

Peak Elev=860.97' Storage=29,112 cf Inflow=21.39 cfs 2.545 af

cfs 0.134 af Primary=0.90 cfs 0.914 af Secondary=7.76 cfs 0.422 af Tertiary=1.01 cfs 1.033 af Outflow=9.69 cfs 2.503 af

Subcatchment 5A: NorthEast Swale

Runoff Area=0.032 ac 53.13% Impervious Runoff Depth=5.17"

Tc=6.0 min CN=WQ Runoff=0.23 cfs 0.014 af

Subcatchment 6A: SouthEast Swale

Runoff Area=0.224 ac 36.16% Impervious Runoff Depth=4.99"

Tc=6.0 min CN=WQ Runoff=1.59 cfs 0.093 af

Subcatchment 7A: Uncontrolled Drainage

Runoff Area=1.375 ac 15.20% Impervious Runoff Depth=3.67"

Tc=6.0 min CN=WQ Runoff=7.46 cfs 0.421 af

Link 7L: Post-Development

Inflow=24.01 cfs 6.299 af

Primary=24.01 cfs 6.299 af

Subcatchment 8A: Wetland First Drainage

Runoff Area=0.702 ac 0.00% Impervious Runoff Depth=2.78"

Tc=6.0 min CN=58 Runoff=3.04 cfs 0.162 af

Link 9L: Wetland

Inflow=9.16 cfs 1.618 af

Primary=9.16 cfs 1.618 af

Link 10L: Pipe Flow Limiting

above 9.37 cfs below 9.37 cfs delayed by 6.0 min Inflow=46.94 cfs 2.850 af

Primary=9.37 cfs 0.331 af Secondary=37.57 cfs 2.519 af

Total Runoff Area = 14.776 ac Runoff Volume = 6.542 af Average Runoff Depth = 5.31"**55.29% Pervious = 8.169 ac 44.71% Impervious = 6.607 ac**

PostDevelopment-200 Year

MSE 24-hr 4 200-Year Rainfall=7.53"

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Summary for Subcatchment 1A: West Wet Pond Drainage Area

Runoff = 46.94 cfs @ 12.13 hrs, Volume= 2.850 af, Depth= 6.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-Year Rainfall=7.53"

Area (ac)	CN	Description
* 1.252	98	Proposed Roof
* 0.759	98	Proposed Pavement
* 0.143	98	Proposed Sidewalk
* 0.529	98	Proposed Street
* 1.977	74	>75% Grass cover, Good, HSG C
* 0.280	100	Water/Infiltration Area
* 0.120	98	Offsite Sidewalk
* 0.225	98	Offsite Street
0.245	74	>75% Grass cover, Good, HSG C
5.530		Weighted Average
2.222		40.18% Pervious Area
3.308		59.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

PostDevelopment-200 Year

MSE 24-hr 4 200-Year Rainfall=7.53"

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Summary for Pond 1P: West Wet Pond

Inflow Area = 6.402 ac, 59.28% Impervious, Inflow Depth = 5.99" for 200-Year event
 Inflow = 42.97 cfs @ 12.23 hrs, Volume= 3.196 af
 Outflow = 12.73 cfs @ 12.53 hrs, Volume= 3.145 af, Atten= 70%, Lag= 18.3 min
 Primary = 7.68 cfs @ 12.53 hrs, Volume= 2.941 af
 Secondary = 5.06 cfs @ 12.53 hrs, Volume= 0.204 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 861.32' @ 12.53 hrs Surf.Area= 21,481 sf Storage= 62,231 cf

Plug-Flow detention time= 501.8 min calculated for 3.142 af (98% of inflow)
 Center-of-Mass det. time= 492.8 min (1,265.4 - 772.6)

Volume	Invert	Avail.Storage	Storage Description
#1	857.50'	71,963 cf	Surface (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
857.50	12,000	0	0
858.00	13,000	6,250	6,250
859.00	15,300	14,150	20,400
860.00	17,600	16,450	36,850
861.00	20,000	18,800	55,650
861.75	23,500	16,313	71,963

Device	Routing	Invert	Outlet Devices
#1	Primary	857.50'	15.0" Round Outlet Culvert L= 136.0' Ke= 0.500 Inlet / Outlet Invert= 857.50' / 857.23' S= 0.0020 ' /' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	857.50'	3.0" Round Culvert L= 5.0' Ke= 0.500 Inlet / Outlet Invert= 857.50' / 857.50' S= 0.0000 ' /' Cc= 0.900 n= 0.010, Flow Area= 0.05 sf
#3	Device 1	860.00'	36.0" Horiz. Standpipe C= 0.600 Limited to weir flow at low heads
#4	Secondary	861.10'	20.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=7.67 cfs @ 12.53 hrs HW=861.32' TW=0.00' (Dynamic Tailwater)

↑ **1=Outlet Culvert** (Barrel Controls 7.67 cfs @ 6.25 fps)

↑ **2=Culvert** (Passes < 0.45 cfs potential flow)

↑ **3=Standpipe** (Passes < 39.05 cfs potential flow)

Secondary OutFlow Max=5.02 cfs @ 12.53 hrs HW=861.32' TW=0.00' (Dynamic Tailwater)

↑ **4=Broad-Crested Rectangular Weir** (Weir Controls 5.02 cfs @ 1.16 fps)

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MSE 24-hr 4 200-Year Rainfall=7.53"

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Summary for Subcatchment 2A: Elvehjem Road Culvert Drainage Area

Runoff = 7.31 cfs @ 12.13 hrs, Volume= 0.440 af, Depth= 6.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-Year Rainfall=7.53"

Area (ac)	CN	Description
* 0.124	98	Proposed Roof
* 0.014	98	Proposed Sidewalk
0.106	74	>75% Grass cover, Good, HSG C
* 0.145	98	Offsite Sidewalk
* 0.204	98	Offsite Street
0.279	74	>75% Grass cover, Good, HSG C
0.872		Weighted Average
0.385		44.15% Pervious Area
0.487		55.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

PostDevelopment-200 Year

MSE 24-hr 4 200-Year Rainfall=7.53"

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Summary for Pond 2P: Street Culvert

Inflow Area = 6.402 ac, 59.28% Impervious, Inflow Depth = 1.45" for 200-Year event
 Inflow = 16.68 cfs @ 12.13 hrs, Volume= 0.772 af
 Outflow = 11.36 cfs @ 12.34 hrs, Volume= 0.772 af, Atten= 32%, Lag= 12.5 min
 Primary = 6.04 cfs @ 12.14 hrs, Volume= 0.677 af
 Secondary = 7.11 cfs @ 12.34 hrs, Volume= 0.095 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 861.79' @ 12.34 hrs Surf.Area= 12,679 sf Storage= 9,405 cf

Plug-Flow detention time= 28.0 min calculated for 0.771 af (100% of inflow)
 Center-of-Mass det. time= 28.4 min (778.2 - 749.9)

Volume	Invert	Avail.Storage	Storage Description
#1	859.25'	12,325 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
859.25	100	0	0
860.00	900	375	375
861.00	4,000	2,450	2,825
862.00	15,000	9,500	12,325

Device	Routing	Invert	Outlet Devices
#1	Primary	859.25'	15.0" Round Culvert L= 37.0' Ke= 0.500 Inlet / Outlet Invert= 859.25' / 857.51' S= 0.0470 ' S Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Secondary	861.70'	100.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=6.01 cfs @ 12.14 hrs HW=861.41' TW=860.38' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 6.01 cfs @ 4.90 fps)

Secondary OutFlow Max=6.94 cfs @ 12.34 hrs HW=861.79' TW=0.00' (Dynamic Tailwater)
 ↑2=Broad-Crested Rectangular Weir (Weir Controls 6.94 cfs @ 0.79 fps)

PostDevelopment-200 Year

MSE 24-hr 4 200-Year Rainfall=7.53"

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Summary for Subcatchment 3A: East Wet Pond Drainage Area

Runoff = 31.04 cfs @ 12.13 hrs, Volume= 1.879 af, Depth= 5.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-Year Rainfall=7.53"

Area (ac)	CN	Description
* 0.942	98	Proposed Roof
* 0.873	98	Proposed Pavement
* 0.108	98	Proposed Sidewalk
* 0.277	58	Undisturbed Grass, HSG B
1.342	74	>75% Grass cover, Good, HSG C
* 0.207	100	Water/Infiltration Area
* 0.056	58	Offsite Grass, HSG B
3.805		Weighted Average
1.675		44.02% Pervious Area
2.130		55.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

PostDevelopment-200 Year

MSE 24-hr 4 200-Year Rainfall=7.53"

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Summary for Pond 3P: East Wet Pond

Inflow Area = 3.805 ac, 55.98% Impervious, Inflow Depth = 5.93" for 200-Year event
 Inflow = 31.04 cfs @ 12.13 hrs, Volume= 1.879 af
 Outflow = 10.07 cfs @ 12.20 hrs, Volume= 1.863 af, Atten= 68%, Lag= 4.3 min
 Primary = 10.07 cfs @ 12.20 hrs, Volume= 1.863 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 863.27' @ 12.32 hrs Surf.Area= 13,123 sf Storage= 39,245 cf

Plug-Flow detention time= 549.7 min calculated for 1.862 af (99% of inflow)
 Center-of-Mass det. time= 545.8 min (1,307.4 - 761.6)

Volume	Invert	Avail.Storage	Storage Description
#1	859.50'	49,300 cf	Surface (Prismatic) Listed below (Recalc) x 0.8

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
859.50	10,000	0	0
860.00	10,700	5,175	5,175
861.00	12,200	11,450	16,625
862.00	14,100	13,150	29,775
863.00	15,900	15,000	44,775
864.00	17,800	16,850	61,625

Device	Routing	Invert	Outlet Devices
#1	Primary	859.50'	15.0" Round Outlet Culvert L= 39.0' Ke= 0.500 Inlet / Outlet Invert= 859.50' / 859.38' S= 0.0031 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	859.50'	3.0" Round Culvert L= 6.0' Ke= 0.500 Inlet / Outlet Invert= 859.50' / 859.50' S= 0.0000 '/' Cc= 0.900 n= 0.010, Flow Area= 0.05 sf
#3	Device 1	862.50'	36.0" Horiz. Standpipe C= 0.600 Limited to weir flow at low heads
#4	Secondary	863.50'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=10.07 cfs @ 12.20 hrs HW=863.15' TW=860.24' (Dynamic Tailwater)

↑ **1=Outlet Culvert** (Barrel Controls 10.07 cfs @ 8.20 fps)

↑ **2=Culvert** (Passes < 0.40 cfs potential flow)

↑ **3=Standpipe** (Passes < 16.07 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=859.50' TW=0.00' (Dynamic Tailwater)

↑ **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

PostDevelopment-200 Year

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Summary for Subcatchment 4A: Infiltration Basin Drainage Area

Runoff = 11.28 cfs @ 12.15 hrs, Volume= 0.682 af, Depth= 3.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-Year Rainfall=7.53"

Area (ac)	CN	Description
* 1.245	58	Undisturbed Grass, HSG B
0.122	74	>75% Grass cover, Good, HSG C
* 0.321	100	Water/Infiltration Area
* 0.054	98	Offsite Roof
* 0.494	58	Offsite Grass, HSG B
2.236		Weighted Average
1.861		83.23% Pervious Area
0.375		16.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	50	0.0800	0.24		Sheet Flow, Grass: Short n= 0.150 P2= 2.84"
1.5	50	0.1000	0.55		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.84"
2.8	180	0.0140	1.06		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
7.7	280	Total			

PostDevelopment-200 Year

MSE 24-hr 4 200-Year Rainfall=7.53"

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Summary for Pond 4P: Infiltration Basin

Inflow Area = 6.041 ac, 41.47% Impervious, Inflow Depth > 5.06" for 200-Year event
 Inflow = 21.39 cfs @ 12.17 hrs, Volume= 2.545 af
 Outflow = 9.69 cfs @ 12.67 hrs, Volume= 2.503 af, Atten= 55%, Lag= 30.3 min
 Discarded = 0.02 cfs @ 5.45 hrs, Volume= 0.134 af
 Primary = 0.90 cfs @ 12.67 hrs, Volume= 0.914 af
 Secondary = 7.76 cfs @ 12.67 hrs, Volume= 0.422 af
 Tertiary = 1.01 cfs @ 12.67 hrs, Volume= 1.033 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 860.97' @ 12.67 hrs Surf.Area= 18,946 sf Storage= 29,112 cf

Plug-Flow detention time= 222.7 min calculated for 2.503 af (98% of inflow)
 Center-of-Mass det. time= 183.4 min (1,354.4 - 1,171.0)

Volume	Invert	Avail.Storage	Storage Description
#1	859.25'	29,625 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
859.25	14,000	0	0
860.00	17,000	11,625	11,625
861.00	19,000	18,000	29,625

Device	Routing	Invert	Outlet Devices
#1	Primary	859.35'	6.0" Round Culvert L= 48.0' Ke= 0.500 Inlet / Outlet Invert= 859.35' / 859.25' S= 0.0021 '/' Cc= 0.900 n= 0.010, Flow Area= 0.20 sf
#2	Tertiary	859.35'	6.0" Round Culvert L= 31.0' Ke= 0.500 Inlet / Outlet Invert= 859.35' / 859.25' S= 0.0032 '/' Cc= 0.900 n= 0.010, Flow Area= 0.20 sf
#3	Secondary	860.75'	30.0' long x 3.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32
#4	Discarded	859.25'	0.070 in/hr Exfiltration over Surface area from 859.24' - 859.26' Excluded Surface area = 0 sf

Discarded OutFlow Max=0.02 cfs @ 5.45 hrs HW=859.27' (Free Discharge)
 ↳ **4=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.90 cfs @ 12.67 hrs HW=860.97' TW=0.00' (Dynamic Tailwater)
 ↳ **1=Culvert** (Barrel Controls 0.90 cfs @ 4.58 fps)

Secondary OutFlow Max=7.72 cfs @ 12.67 hrs HW=860.97' TW=0.00' (Dynamic Tailwater)
 ↳ **3=Broad-Crested Rectangular Weir** (Weir Controls 7.72 cfs @ 1.16 fps)

Tertiary OutFlow Max=1.01 cfs @ 12.67 hrs HW=860.97' TW=0.00' (Dynamic Tailwater)
 ↳ **2=Culvert** (Barrel Controls 1.01 cfs @ 5.16 fps)

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Summary for Subcatchment 5A: NorthEast Swale Drainage Area

Runoff = 0.23 cfs @ 12.13 hrs, Volume= 0.014 af, Depth= 5.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-Year Rainfall=7.53"

Area (ac)	CN	Description
* 0.017	98	Offsite Sidewalk
* 0.015	58	Offsite Grass, HSG B
0.032		Weighted Average
0.015		46.87% Pervious Area
0.017		53.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

PostDevelopment-200 Year

MSE 24-hr 4 200-Year Rainfall=7.53"

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Summary for Subcatchment 6A: SouthEast Swale Drainage Area

Runoff = 1.59 cfs @ 12.13 hrs, Volume= 0.093 af, Depth= 4.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-Year Rainfall=7.53"

Area (ac)	CN	Description
* 0.034	98	Proposed Roof
0.075	74	>75% Grass cover, Good, HSG C
* 0.047	98	Offsite Sidewalk
* 0.068	58	Offsite Grass, HSG B
0.224		Weighted Average
0.143		63.84% Pervious Area
0.081		36.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

PostDevelopment-200 Year

MSE 24-hr 4 200-Year Rainfall=7.53"

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Summary for Subcatchment 7A: Uncontrolled Drainage Area

Runoff = 7.46 cfs @ 12.13 hrs, Volume= 0.421 af, Depth= 3.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-Year Rainfall=7.53"

Area (ac)	CN	Description
* 0.160	98	Proposed Roof
* 0.012	98	Proposed Sidewalk
* 0.037	98	Proposed Street
* 1.000	58	Deep Tilled HSG C Soils
0.166	74	>75% Grass cover, Good, HSG C
1.375		Weighted Average
1.166		84.80% Pervious Area
0.209		15.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

PostDevelopment-200 Year*MSE 24-hr 4 200-Year Rainfall=7.53"*

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Summary for Link 7L: Post-Development

Inflow Area = 14.776 ac, 44.71% Impervious, Inflow Depth > 5.12" for 200-Year event
Inflow = 24.01 cfs @ 12.36 hrs, Volume= 6.299 af
Primary = 24.01 cfs @ 12.36 hrs, Volume= 6.299 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

PostDevelopment-200 Year*MSE 24-hr 4 200-Year Rainfall=7.53"*

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Summary for Subcatchment 8A: Wetland First Drainage Area

Runoff = 3.04 cfs @ 12.14 hrs, Volume= 0.162 af, Depth= 2.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-Year Rainfall=7.53"

Area (ac)	CN	Description
* 0.702	58	>75% Grass cover, Good, HSG B
0.702		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

PostDevelopment-200 Year*MSE 24-hr 4 200-Year Rainfall=7.53"*

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Summary for Link 9L: Wetland

Inflow Area = 0.702 ac, 0.00% Impervious, Inflow Depth > 27.65" for 200-Year event
Inflow = 9.16 cfs @ 12.67 hrs, Volume= 1.618 af
Primary = 9.16 cfs @ 12.67 hrs, Volume= 1.618 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

PostDevelopment-200 Year*MSE 24-hr 4 200-Year Rainfall=7.53"*

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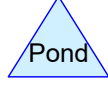
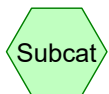
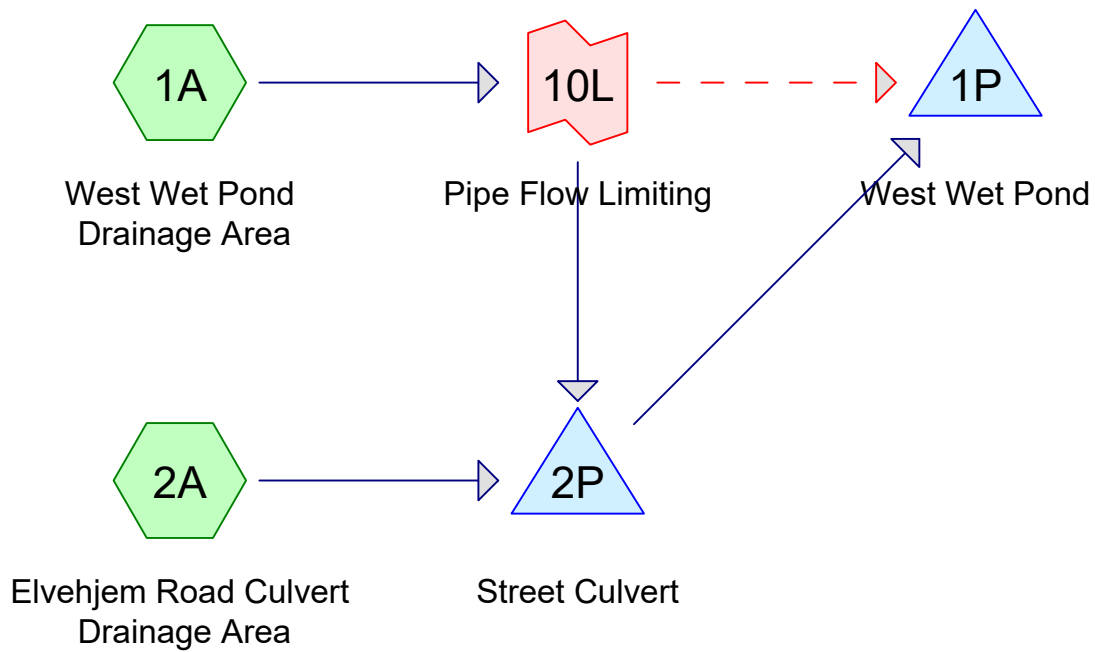
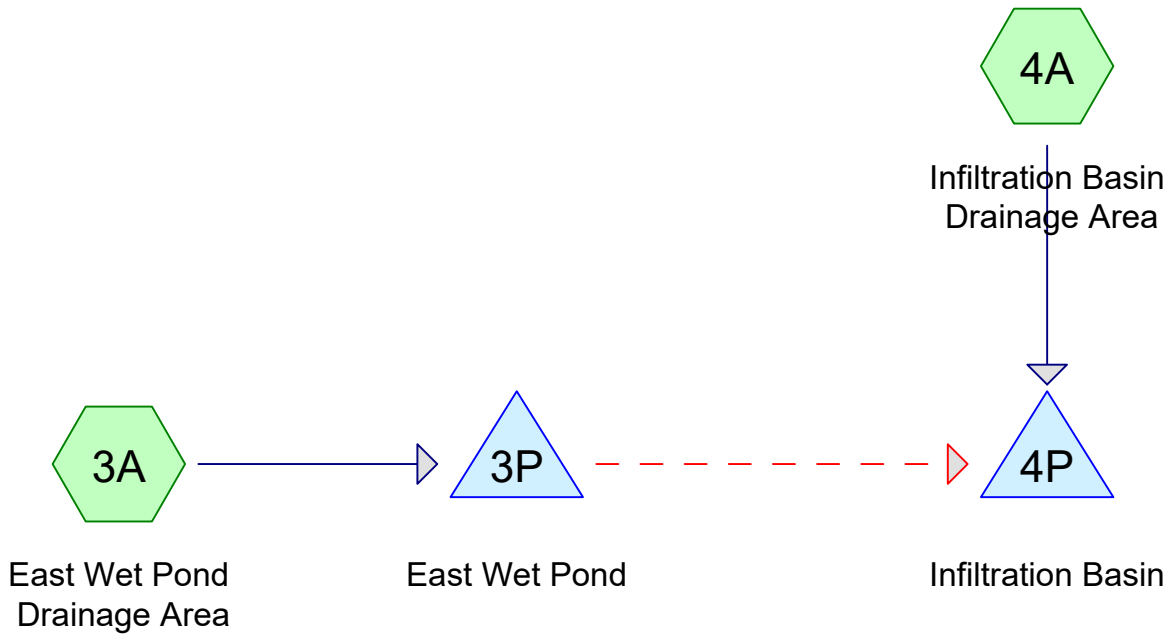
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Summary for Link 10L: Pipe Flow Limiting

Inflow Area = 5.530 ac, 59.82% Impervious, Inflow Depth = 6.18" for 200-Year event
Inflow = 46.94 cfs @ 12.13 hrs, Volume= 2.850 af
Primary = 9.37 cfs @ 12.10 hrs, Volume= 0.331 af, Atten= 80%, Lag= 0.0 min
Secondary = 37.57 cfs @ 12.23 hrs, Volume= 2.519 af

Primary outflow = Inflow above 9.37 cfs below 9.37 cfs delayed by 6.0 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs



Routing Diagram for Inundation

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Inundation

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
4.071	74	>75% Grass cover, Good, HSG C (1A, 2A, 3A, 4A)
0.550	58	Offsite Grass, HSG B (3A, 4A)
0.054	98	Offsite Roof (4A)
0.265	98	Offsite Sidewalk (1A, 2A)
0.429	98	Offsite Street (1A, 2A)
1.632	98	Proposed Pavement (1A, 3A)
2.318	98	Proposed Roof (1A, 2A, 3A)
0.265	98	Proposed Sidewalk (1A, 2A, 3A)
0.529	98	Proposed Street (1A)
1.522	58	Undisturbed Grass, HSG B (3A, 4A)
0.808	100	Water/Infiltration Area (1A, 3A, 4A)
12.443	84	TOTAL AREA

Inundation

MSE 24-hr 4 200-Year Rainfall=7.53"

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Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points x 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1A: West Wet Pond

Runoff Area=5.530 ac 59.82% Impervious Runoff Depth=6.18"
Tc=6.0 min CN=WQ Runoff=46.94 cfs 2.850 af

Pond 1P: West Wet Pond

Peak Elev=861.54' Storage=67,073 cf Inflow=41.99 cfs 3.082 af
Outflow=14.96 cfs 1.758 af

Subcatchment 2A: Elvehjem Road Culvert

Runoff Area=0.872 ac 55.85% Impervious Runoff Depth=6.06"
Tc=6.0 min CN=WQ Runoff=7.31 cfs 0.440 af

Pond 2P: Street Culvert

Peak Elev=861.80' Storage=9,551 cf Inflow=16.68 cfs 0.772 af
Primary=5.42 cfs 0.563 af Secondary=8.53 cfs 0.133 af Outflow=11.63 cfs 0.697 af

Subcatchment 3A: East Wet Pond Drainage

Runoff Area=3.805 ac 55.98% Impervious Runoff Depth=5.93"
Tc=6.0 min CN=WQ Runoff=31.04 cfs 1.879 af

Pond 3P: East Wet Pond

Peak Elev=863.93' Storage=48,242 cf Inflow=31.04 cfs 1.879 af
Outflow=7.15 cfs 0.907 af

Subcatchment 4A: Infiltration Basin

Runoff Area=2.236 ac 16.77% Impervious Runoff Depth=3.66"
Flow Length=280' Tc=7.7 min CN=WQ Runoff=11.28 cfs 0.682 af

Pond 4P: Infiltration Basin

Peak Elev=860.91' Storage=27,920 cf Inflow=11.34 cfs 1.589 af
Discarded=0.02 cfs 0.134 af Secondary=4.68 cfs 0.966 af Outflow=4.70 cfs 1.100 af

Link 10L: Pipe Flow Limiting

above 9.37 cfs below 9.37 cfs delayed by 6.0 min Inflow=46.94 cfs 2.850 af
Primary=9.37 cfs 0.331 af Secondary=37.57 cfs 2.519 af

Total Runoff Area = 12.443 ac Runoff Volume = 5.852 af Average Runoff Depth = 5.64"
49.37% Pervious = 6.143 ac 50.63% Impervious = 6.300 ac

Inundation

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MSE 24-hr 4 200-Year Rainfall=7.53"

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Summary for Subcatchment 1A: West Wet Pond Drainage Area

Runoff = 46.94 cfs @ 12.13 hrs, Volume= 2.850 af, Depth= 6.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

MSE 24-hr 4 200-Year Rainfall=7.53"

Area (ac)	CN	Description
* 1.252	98	Proposed Roof
* 0.759	98	Proposed Pavement
* 0.143	98	Proposed Sidewalk
* 0.529	98	Proposed Street
* 1.977	74	>75% Grass cover, Good, HSG C
* 0.280	100	Water/Infiltration Area
* 0.120	98	Offsite Sidewalk
* 0.225	98	Offsite Street
0.245	74	>75% Grass cover, Good, HSG C
5.530		Weighted Average
2.222		40.18% Pervious Area
3.308		59.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Inundation

MSE 24-hr 4 200-Year Rainfall=7.53"

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Summary for Pond 1P: West Wet Pond

Inflow Area = 6.402 ac, 59.28% Impervious, Inflow Depth = 5.78" for 200-Year event
Inflow = 41.99 cfs @ 12.23 hrs, Volume= 3.082 af
Outflow = 14.96 cfs @ 12.36 hrs, Volume= 1.758 af, Atten= 64%, Lag= 8.3 min
Secondary = 14.96 cfs @ 12.36 hrs, Volume= 1.758 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 861.54' @ 12.36 hrs Surf.Area= 22,508 sf Storage= 67,073 cf

Plug-Flow detention time= 226.2 min calculated for 1.758 af (57% of inflow)
Center-of-Mass det. time= 118.2 min (889.7 - 771.5)

Volume	Invert	Avail.Storage	Storage Description
#1	857.50'	71,963 cf	Surface (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
857.50	12,000	0	0
858.00	13,000	6,250	6,250
859.00	15,300	14,150	20,400
860.00	17,600	16,450	36,850
861.00	20,000	18,800	55,650
861.75	23,500	16,313	71,963

Device	Routing	Invert	Outlet Devices
#1	Secondary	861.10'	20.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Secondary OutFlow Max=14.69 cfs @ 12.36 hrs HW=861.53' (Free Discharge)
↑**1=Broad-Crested Rectangular Weir** (Weir Controls 14.69 cfs @ 1.70 fps)

Inundation

MSE 24-hr 4 200-Year Rainfall=7.53"

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Summary for Subcatchment 2A: Elvehjem Road Culvert Drainage Area

Runoff = 7.31 cfs @ 12.13 hrs, Volume= 0.440 af, Depth= 6.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-Year Rainfall=7.53"

Area (ac)	CN	Description
* 0.124	98	Proposed Roof
* 0.014	98	Proposed Sidewalk
0.106	74	>75% Grass cover, Good, HSG C
* 0.145	98	Offsite Sidewalk
* 0.204	98	Offsite Street
0.279	74	>75% Grass cover, Good, HSG C
0.872		Weighted Average
0.385		44.15% Pervious Area
0.487		55.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Inundation

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MSE 24-hr 4 200-Year Rainfall=7.53"

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Summary for Pond 2P: Street Culvert

Inflow Area = 6.402 ac, 59.28% Impervious, Inflow Depth = 1.45" for 200-Year event
Inflow = 16.68 cfs @ 12.13 hrs, Volume= 0.772 af
Outflow = 11.63 cfs @ 12.33 hrs, Volume= 0.697 af, Atten= 30%, Lag= 11.9 min
Primary = 5.42 cfs @ 12.13 hrs, Volume= 0.563 af
Secondary = 8.53 cfs @ 12.33 hrs, Volume= 0.133 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 861.80' @ 12.33 hrs Surf.Area= 12,805 sf Storage= 9,551 cf

Plug-Flow detention time= 57.8 min calculated for 0.697 af (90% of inflow)
Center-of-Mass det. time= 22.1 min (771.9 - 749.9)

Volume	Invert	Avail.Storage	Storage Description
#1	859.25'	12,325 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
859.25	100	0	0
860.00	900	375	375
861.00	4,000	2,450	2,825
862.00	15,000	9,500	12,325

Device	Routing	Invert	Outlet Devices
#1	Primary	859.25'	15.0" Round Culvert L= 37.0' Ke= 0.500 Inlet / Outlet Invert= 859.25' / 857.51' S= 0.0470 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Secondary	861.70'	100.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=5.36 cfs @ 12.13 hrs HW=861.40' TW=860.58' (Dynamic Tailwater)
↑**1=Culvert** (Inlet Controls 5.36 cfs @ 4.36 fps)

Secondary OutFlow Max=8.27 cfs @ 12.33 hrs HW=861.80' (Free Discharge)
↑**2=Broad-Crested Rectangular Weir** (Weir Controls 8.27 cfs @ 0.84 fps)

Inundation

MSE 24-hr 4 200-Year Rainfall=7.53"

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Page 8

Summary for Subcatchment 3A: East Wet Pond Drainage Area

Runoff = 31.04 cfs @ 12.13 hrs, Volume= 1.879 af, Depth= 5.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-Year Rainfall=7.53"

Area (ac)	CN	Description
* 0.942	98	Proposed Roof
* 0.873	98	Proposed Pavement
* 0.108	98	Proposed Sidewalk
* 0.277	58	Undisturbed Grass, HSG B
1.342	74	>75% Grass cover, Good, HSG C
* 0.207	100	Water/Infiltration Area
* 0.056	58	Offsite Grass, HSG B
3.805		Weighted Average
1.675		44.02% Pervious Area
2.130		55.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Inundation

MSE 24-hr 4 200-Year Rainfall=7.53"

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Summary for Pond 3P: East Wet Pond

Inflow Area = 3.805 ac, 55.98% Impervious, Inflow Depth = 5.93" for 200-Year event
Inflow = 31.04 cfs @ 12.13 hrs, Volume= 1.879 af
Outflow = 7.15 cfs @ 12.40 hrs, Volume= 0.907 af, Atten= 77%, Lag= 16.2 min
Secondary = 7.15 cfs @ 12.40 hrs, Volume= 0.907 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 863.93' @ 12.40 hrs Surf.Area= 14,127 sf Storage= 48,242 cf

Plug-Flow detention time= 250.0 min calculated for 0.906 af (48% of inflow)
Center-of-Mass det. time= 139.0 min (900.6 - 761.6)

Volume	Invert	Avail.Storage	Storage Description
#1	859.50'	49,300 cf	Surface (Prismatic) Listed below (Recalc) x 0.8
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
859.50	10,000	0	0
860.00	10,700	5,175	5,175
861.00	12,200	11,450	16,625
862.00	14,100	13,150	29,775
863.00	15,900	15,000	44,775
864.00	17,800	16,850	61,625

Device	Routing	Invert	Outlet Devices
#1	Secondary	863.50'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Secondary OutFlow Max=7.15 cfs @ 12.40 hrs HW=863.93' TW=860.41' (Dynamic Tailwater)
↑**1=Broad-Crested Rectangular Weir** (Weir Controls 7.15 cfs @ 1.68 fps)

Inundation

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MSE 24-hr 4 200-Year Rainfall=7.53"

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Summary for Subcatchment 4A: Infiltration Basin Drainage Area

Runoff = 11.28 cfs @ 12.15 hrs, Volume= 0.682 af, Depth= 3.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-Year Rainfall=7.53"

Area (ac)	CN	Description
* 1.245	58	Undisturbed Grass, HSG B
0.122	74	>75% Grass cover, Good, HSG C
* 0.321	100	Water/Infiltration Area
* 0.054	98	Offsite Roof
* 0.494	58	Offsite Grass, HSG B
2.236		Weighted Average
1.861		83.23% Pervious Area
0.375		16.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	50	0.0800	0.24		Sheet Flow, Grass: Short n= 0.150 P2= 2.84"
1.5	50	0.1000	0.55		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.84"
2.8	180	0.0140	1.06		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
7.7	280	Total			

Inundation

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MSE 24-hr 4 200-Year Rainfall=7.53"

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Summary for Pond 4P: Infiltration Basin

Inflow Area = 2.236 ac, 16.77% Impervious, Inflow Depth = 8.53" for 200-Year event
Inflow = 11.34 cfs @ 12.16 hrs, Volume= 1.589 af
Outflow = 4.70 cfs @ 12.92 hrs, Volume= 1.100 af, Atten= 59%, Lag= 45.4 min
Discarded = 0.02 cfs @ 7.00 hrs, Volume= 0.134 af
Secondary = 4.68 cfs @ 12.92 hrs, Volume= 0.966 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 860.91' @ 12.92 hrs Surf.Area= 18,820 sf Storage= 27,920 cf

Plug-Flow detention time= 351.8 min calculated for 1.100 af (69% of inflow)
Center-of-Mass det. time= 246.2 min (1,103.0 - 856.8)

Volume	Invert	Avail.Storage	Storage Description
#1	859.25'	29,625 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
859.25	14,000	0	0
860.00	17,000	11,625	11,625
861.00	19,000	18,000	29,625
Device	Routing	Invert	Outlet Devices
#1	Secondary	860.75'	30.0' long x 3.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32
#2	Discarded	859.25'	0.070 in/hr Exfiltration over Surface area from 859.24' - 859.26' Excluded Surface area = 0 sf

Discarded OutFlow Max=0.02 cfs @ 7.00 hrs HW=859.27' (Free Discharge)
↑**2=Exfiltration** (Exfiltration Controls 0.02 cfs)

Secondary OutFlow Max=4.66 cfs @ 12.92 hrs HW=860.91' (Free Discharge)
↑**1=Broad-Crested Rectangular Weir** (Weir Controls 4.66 cfs @ 0.97 fps)

Inundation

Prepared by Quam Engineering, LLC

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MSE 24-hr 4 200-Year Rainfall=7.53"

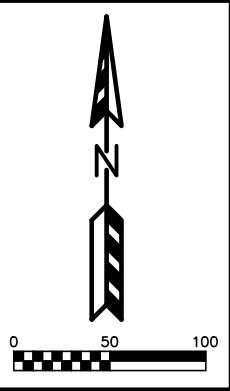
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Summary for Link 10L: Pipe Flow Limiting

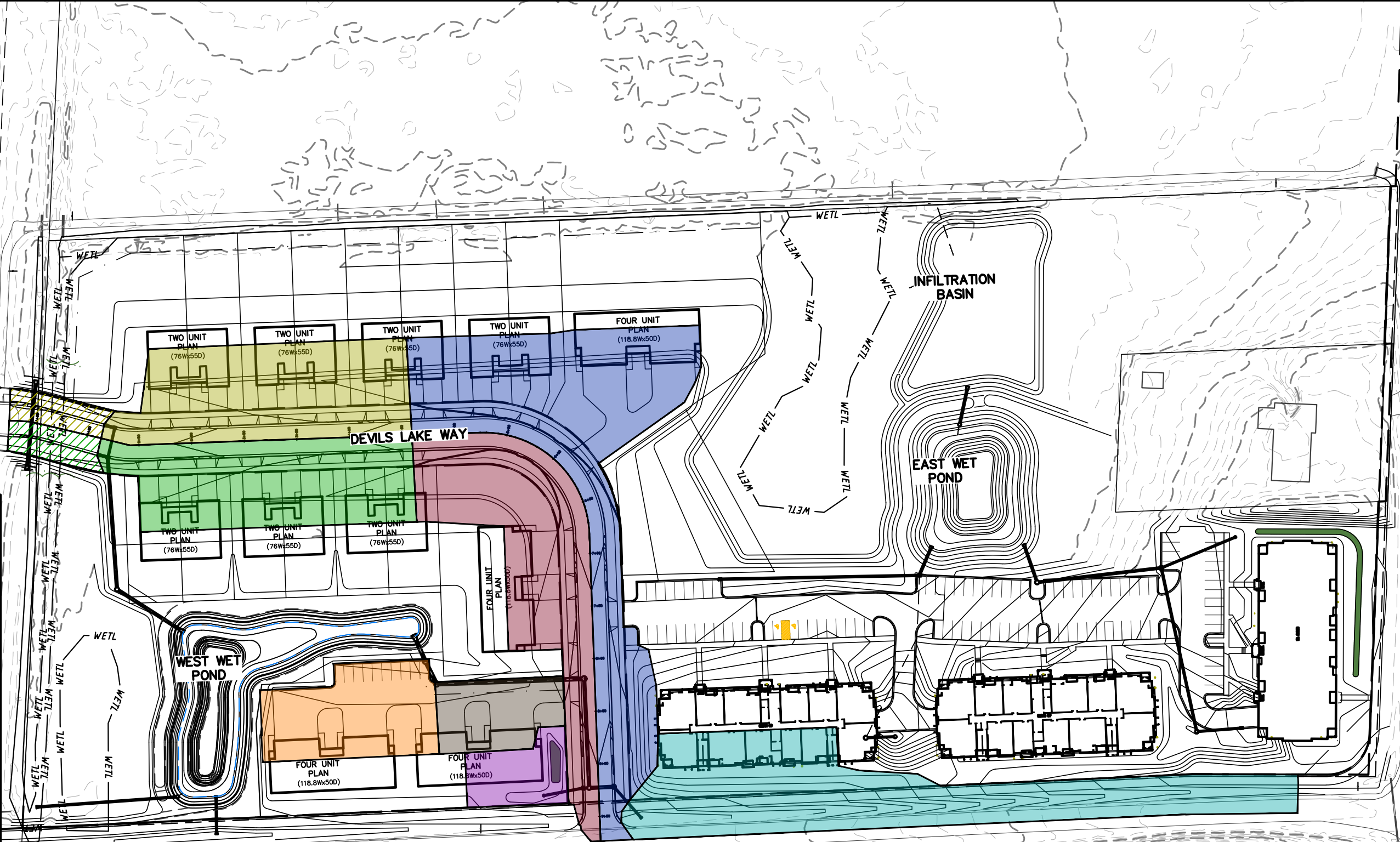
Inflow Area = 5.530 ac, 59.82% Impervious, Inflow Depth = 6.18" for 200-Year event
Inflow = 46.94 cfs @ 12.13 hrs, Volume= 2.850 af
Primary = 9.37 cfs @ 12.10 hrs, Volume= 0.331 af, Atten= 80%, Lag= 0.0 min
Secondary = 37.57 cfs @ 12.23 hrs, Volume= 2.519 af

Primary outflow = Inflow above 9.37 cfs below 9.37 cfs delayed by 6.0 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs



LEGEND FOR DRAINAGE AREAS:

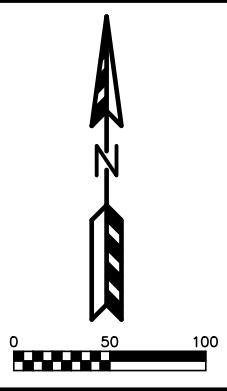
	DOUBLE INLET #3.1 & #3.3 AREA = 0.533 ACRES
	DOUBLE INLET #3 & 3.2 AREA = 0.537 ACRES
	INLET #8.1 AREA = 0.050 ACRES
	INLET #8 AREA = 0.050 ACRES
	INFALL AREA = 0.835 ACRES
	INLET #7.1 AREA = 0.921 ACRES
	CATCH BASIN #7.3 AREA = 0.130 ACRES
	INLET #7.2 AREA = 0.618 ACRES
	CATCH BASIN #5 AREA = 0.176 ACRES
	CATCH BASIN #4 AREA = 0.309 ACRES



CTH AB

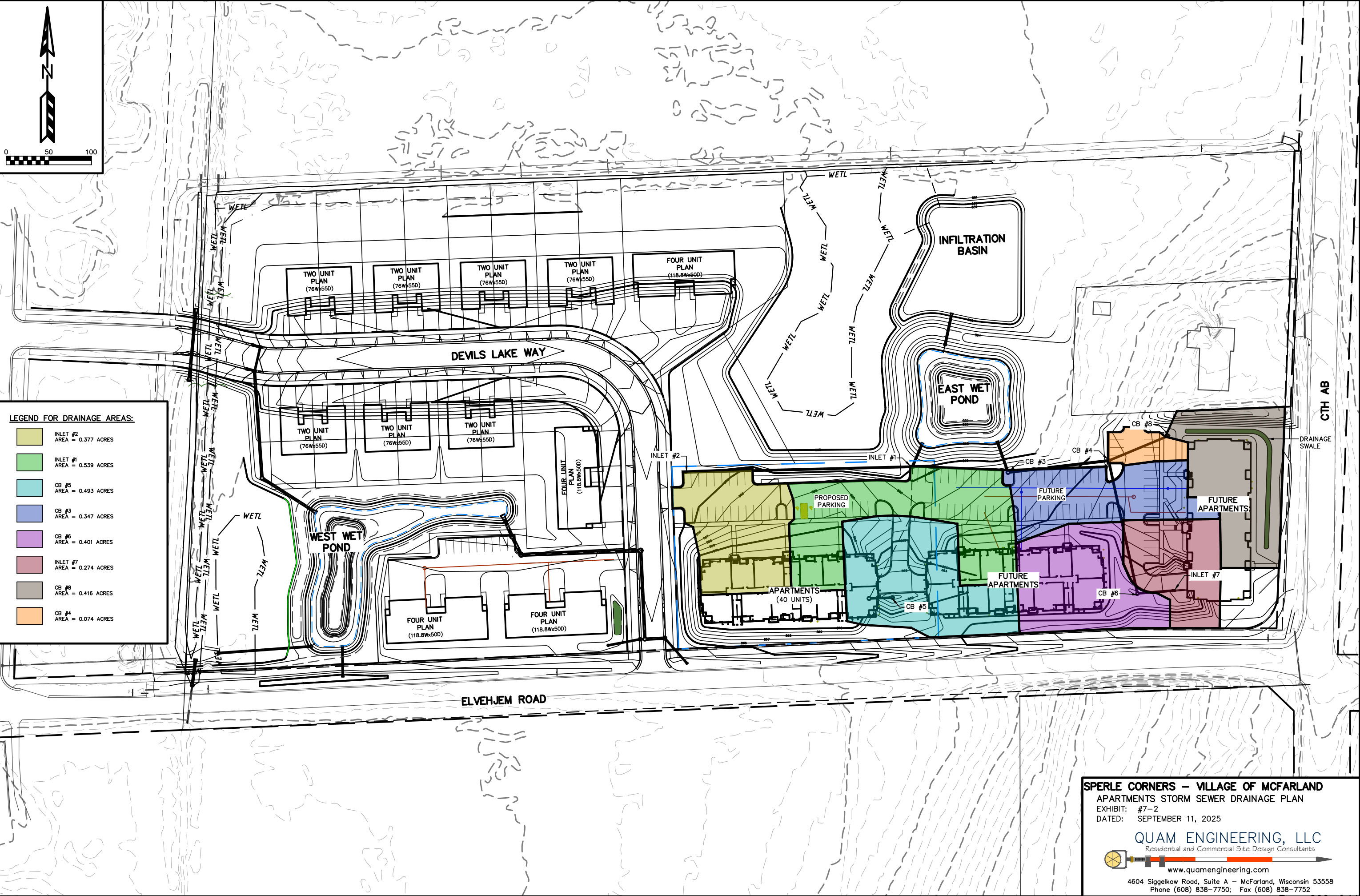
SPERLE CORNERS – VILLAGE OF MCFARLAND
PHASE 1 STORM SEWER DRAINAGE PLAN
EXHIBIT: #7
DATED: AUGUST 5, 2025

QUAM ENGINEERING, LLC
Residential and Commercial Site Design Consultants
www.quamengineering.com
4604 Siggelkow Road, Suite A – McFarland, Wisconsin 53558
Phone (608) 838-7750; Fax (608) 838-7752



LEGEND FOR DRAINAGE AREAS:

- INLET #2
AREA = 0.377 ACRES
- INLET #1
AREA = 0.539 ACRES
- CB #5
AREA = 0.493 ACRES
- CB #3
AREA = 0.347 ACRES
- CB #6
AREA = 0.401 ACRES
- INLET #7
AREA = 0.274 ACRES
- CB #8
AREA = 0.416 ACRES
- CB #4
AREA = 0.074 ACRES



SPERLE CORNERS - VILLAGE OF MCFARLAND

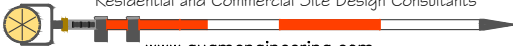
APARTMENTS STORM SEWER DRAINAGE PLAN

EXHIBIT: #7-2

DATED: SEPTEMBER 11, 2025

QUAM ENGINEERING, LLC

Residential and Commercial Site Design Consultants



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Phase 1 Rational Method Worksheet - Storm Sewer Sizing

PROJECT: Sperle Corners - Village of McFarland

Computed by: MAF

DATE: 10/17/2025

LOCATION		BASIN		RAINFALL - RUNOFF					SEWER			
Upstream Structure	Downstream Structure	Runoff Coefficient C	Area (acres) A	Design Storm (Yr)	Rain Intensity (in/hr) I	Direct Runoff (cfs) $Q=C*I*A$	Other Runoff (cfs)	Design Runoff (cfs)	Sewer Size (in)	Min Slope of Sewer (%)	Manning's Number n	Capacity Flowing Full (cfs)
Dbl Inlet #3.1/3	Dbl Inlet #3/3.2	0.66	0.533	100	10.92	3.84	----	3.84	12	1.20%	0.013	3.90
Dbl Inlet #3/3.2	MH #2	0.66	0.537	100	10.92	3.87	3.84	7.71	15	1.45%	0.013	7.78
MH #2	West Wet Pond	----	----	100	10.92	----	7.71	7.71	15	1.45%	0.013	7.78
Infall	Inlet #7.1	0.66	0.835	100	10.92	6.02	----	6.02	12	5.70%	0.013	8.51
Inlet #7.1	MH #7	0.66	0.921	100	10.92	6.64	6.02	12.66	24	3.50%	0.013	42.32
CB #7.3	Inlet #7.2	0.66	0.130	100	10.92	0.94	----	0.94	12	0.40%	0.013	2.25
Inlet #7.2	MH #7	0.66	0.618	100	10.92	4.45	0.94	5.39	12	10.00%	0.013	11.27
MH #7	MH #6	----	----	100	10.92	----	18.05	18.05	24	0.20%	0.013	10.12
MH #6	CB #5	----	----	100	10.92	----	10.12	10.12	30	0.20%	0.013	18.34
CB #5	CB #4	0.95	0.176	100	10.92	1.83	10.12	11.95	30	0.30%	0.013	22.47
CB #4	West Wet Pond	0.95	0.309	100	10.92	3.21	11.95	15.16	30	0.35%	0.013	24.27
$C_{100}=0.66$; High Density Residential with HSG C soils and slopes greater than 6% from FDM Procedure 13-10-5, Figure 2												
$C_{100}=0.95$; Impervious from FDM Procedure 13-10-5, Figure 2												
I_{100} = rainfall intensity in Dane County for a time of concentration of 5 minutes from FDM Procedure 13-10, Attachment 5.4												
Capacity Flowing Full was determined using Manning's Equation												

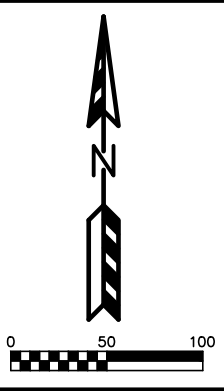
Apartments Rational Method Worksheet - Storm Sewer Sizing

PROJECT: Sperle Corners - Village of McFarland

Computed by: MAF

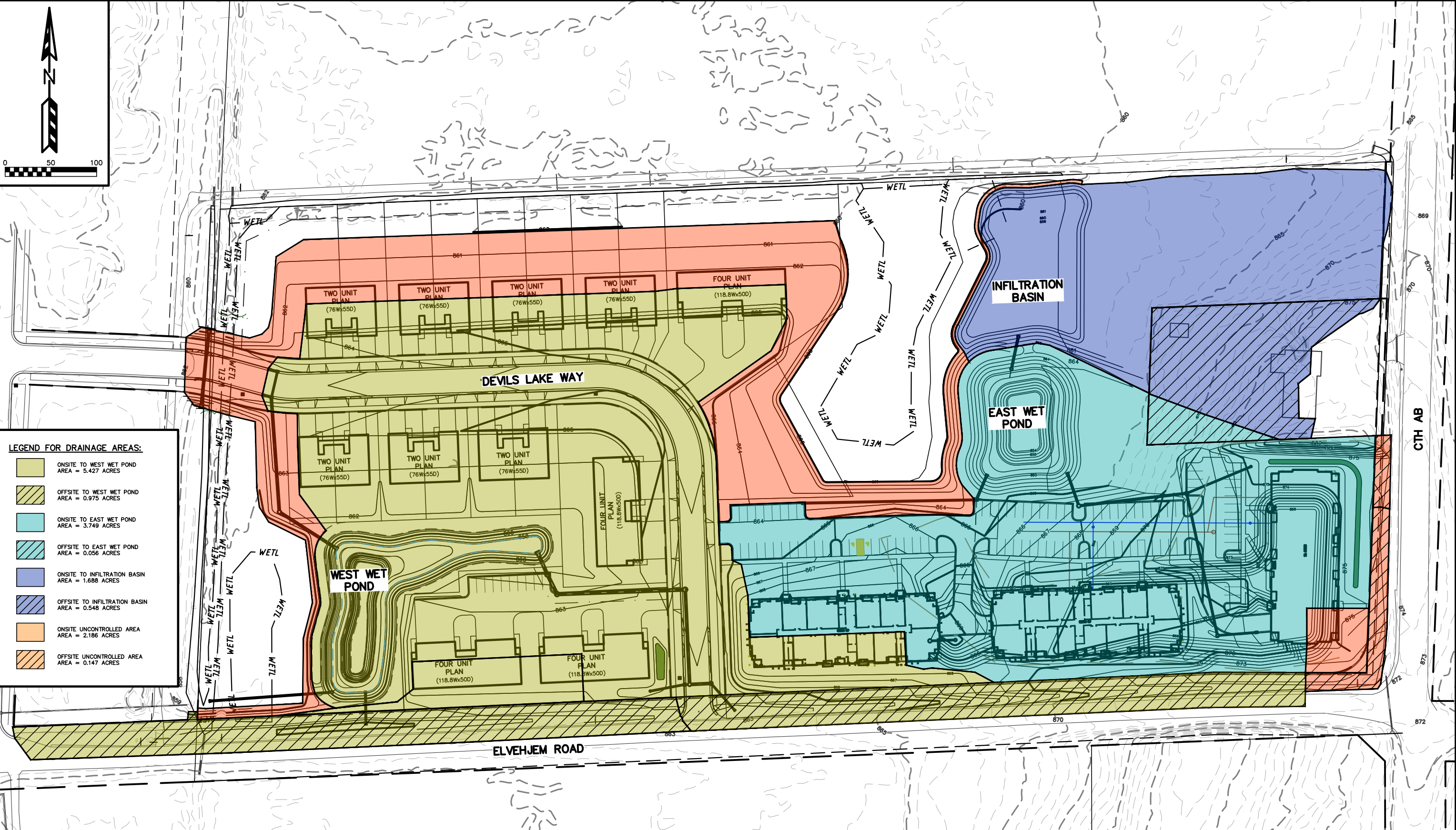
DATE: 10/17/2025

LOCATION		BASIN		RAINFALL - RUNOFF					SEWER			
Upstream Structure	Downstream Structure	Runoff Coefficient C	Area (acres) A	Design Storm (Yr) Y_r	Rain Intensity (in/hr) I	Direct Runoff (cfs) $Q=C*I*A$	Other Runoff (cfs)	Design Runoff (cfs)	Sewer Size (in)	Min Slope of Sewer (%)	Manning's Number n	Capacity Flowing Full (cfs)
CB #5	West Apt Pump	0.66	0.493	100	10.92	3.55	----	3.55	12	2.00%	0.013	5.04
Future Inlet #7	Future CB #6	0.66	0.274	100	10.92	1.97	----	1.97	12	0.60%	0.013	2.76
Future CB #6	Future CB #4	0.66	0.401	100	10.92	2.89	1.97	4.86	15	0.80%	0.013	5.78
Future CB #8	Future CB #4	0.66	0.416	100	10.92	3.00	----	3.00	12	2.00%	0.013	5.04
Future CB #4	CB #3	0.78	0.074	100	10.92	0.63	7.86	8.49	18	1.20%	0.013	11.51
CB #3	East Wet Pond	0.78	0.347	100	10.92	2.96	8.49	11.45	18	3.00%	0.012	19.71
Inlet #2	Inlet #1	0.78	0.377	100	10.92	3.21	----	3.21	15	0.30%	0.012	3.83
Inlet #1	East Wet Pond	0.78	0.539	100	10.92	4.59	3.21	7.80	18	0.60%	0.012	8.81
$C_{100}=0.66$; Up to 60% Impervious Area with HSG C soils and slopes greater than 6% from FDM Procedure 13-10-5, Figure 2 $C_{100}=0.78$; Up to 80% Impervious Area with HSG C soils and slopes greater than 6% from FDM Procedure 13-10-5, Figure 2 I_{100} = rainfall intensity in Dane County for a time of concentration of 5 minutes from FDM Procedure 13-10, Attachment 5.4 Capacity Flowing Full was determined using Manning's Equation												



LEGEND FOR DRAINAGE AREAS:

	ONSITE TO WEST WET POND AREA = 5.427 ACRES
	OFFSITE TO WEST WET POND AREA = 0.975 ACRES
	ONSITE TO EAST WET POND AREA = 3.749 ACRES
	OFFSITE TO EAST WET POND AREA = 0.056 ACRES
	ONSITE TO INFILTRATION BASIN AREA = 1.688 ACRES
	OFFSITE TO INFILTRATION BASIN AREA = 0.548 ACRES
	ONSITE UNCONTROLLED AREA AREA = 2.186 ACRES
	OFFSITE UNCONTROLLED AREA AREA = 0.147 ACRES



SPERLE CORNERS – VILLAGE OF MCFARLAND
WINSLAMM DRAINAGE PLAN
EXHIBIT: #9
DATED: AUGUST 5, 2025

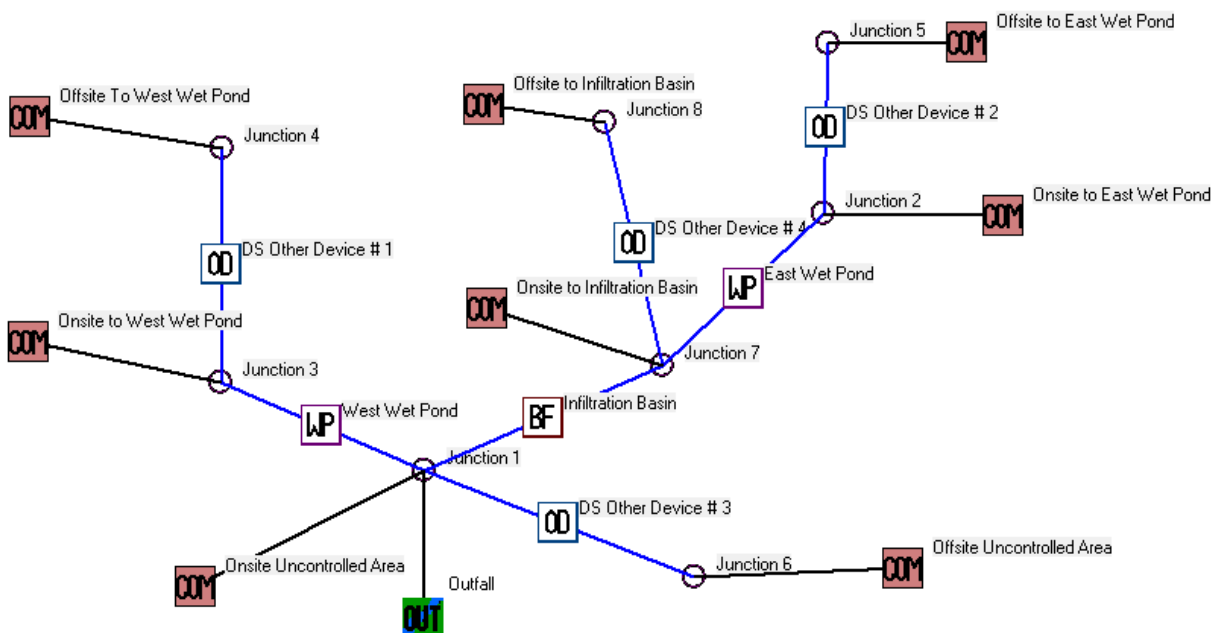
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SEDIMENT CONTROL CALCULATIONS

The following calculations using the WinSLAMM output indicates that the proposed development will remove 80% of total suspended solids (TSS). 0.357 acres of the off-site street area was substituted from the off-site area to the West Wet Pond to the Onsite Area to West Wet pond as a substitution for not treating 0.357 acres of uncontrolled roof, street and sidewalk around the northwest side of the site. This area is included as source area 38 in "Onsite to West Wet Pond."

WinSLAMM Model Summary:



Land Use:

Onsite to East Wet Pond

Source Area #	Source Area	Area (acres)	Source Area Parameters	First Control Practice	Second Control Practice
Roofs					
1	Roofs 1	0.942	Entered	--	--
Parking					
13	Paved Parking 1	0.873	Entered	--	--
Driveways/Sidewalks					
31	Sidewalks 1	0.108	Entered	--	--
Streets					
Landscaped Areas					
45	Large Landscaped Areas 1	0.277	Entered	--	--
46	Large Landscaped Areas 2	1.342	Entered	--	--
Other Areas					
70	Water Body Areas	0.207	Entered	--	--

Land Use:

Onsite to West Wet Pond

Source Area #	Source Area	Area (acres)	Source Area Parameters	First Control Practice	Second Control Practice
Roofs					
1	Roofs 1	1.376	Entered	--	--
Parking					
13	Paved Parking 1	0.759	Entered	--	--
Driveways/Sidewalks					
31	Sidewalks 1	0.157	Entered	--	--
Streets					
37	Streets 1	0.529	Entered	--	--
38	Street Swapped for Uncontr	0.243	Entered	--	--
Landscaped Areas					
45	Large Landscaped Areas 1	2.083	Entered	--	--
Other Areas					
70	Water Body Areas	0.280	Entered	--	--

SEDIMENT CONTROL CALCULATIONS

Land Use:

Offsite To West Wet Pond

Source Area #	Source Area	Area (acres)	Source Area Parameters	First Control Practice	Second Control Practice
	Roofs	0.000			
	Parking	0.000			
	Driveways/Sidewalks	0.265			
31	Sidewalks 1	0.265	Entered	-- ▼	-- ▼
	Streets	0.186			
37	Streets 1	0.186	Entered	-- ▼	-- ▼
	Landscaped Areas	0.524			
45	Large Landscaped Areas 1	0.524	Entered	-- ▼	-- ▼
	Other Areas	0.000			

Land Use:

Offsite to East Wet Pond

Source Area #	Source Area	Area (acres)	Source Area Parameters	First Control Practice	Second Control Practice
	Roofs	0.000			
	Parking	0.000			
	Driveways/Sidewalks	0.000			
	Streets	0.000			
	Landscaped Areas	0.056			
45	Large Landscaped Areas 1	0.056	Entered	-- ▼	-- ▼
	Other Areas	0.000			

Land Use:

Onsite Uncontrolled Area

Source Area #	Source Area	Area (acres)	Source Area Parameters	First Control Practice	Second Control Practice
	Roofs	0.000			
	Parking	0.000			
	Driveways/Sidewalks	0.000			
	Streets	0.000			
	Landscaped Areas	2.186			
45	Large Landscaped Areas 1	1.702	Entered	-- ▼	-- ▼
46	Large Landscaped Areas 2	0.241	Entered	-- ▼	-- ▼
57	Area swapped to Wet Wet P	0.243	Entered	-- ▼	-- ▼
	Other Areas	0.000			

Land Use:

Offsite Uncontrolled Area

Source Area #	Source Area	Area (acres)	Source Area Parameters	First Control Practice	Second Control Practice
	Roofs	0.000			
	Parking	0.000			
	Driveways/Sidewalks	0.064			
31	Sidewalks 1	0.064	Entered	-- ▼	-- ▼
	Streets	0.000			
	Landscaped Areas	0.083			
45	Large Landscaped Areas 1	0.083	Entered	-- ▼	-- ▼
	Other Areas	0.000			

Land Use:

Onsite to Infiltration Basin

Source Area #	Source Area	Area (acres)	Source Area Parameters	First Control Practice	Second Control Practice
	Roofs	0.000			
	Parking	0.000			
	Driveways/Sidewalks	0.000			
	Streets	0.000			
	Landscaped Areas	1.367			
45	Large Landscaped Areas 1	1.245	Entered	-- ▼	-- ▼
46	Large Landscaped Areas 2	0.122	Entered	-- ▼	-- ▼
	Other Areas	0.321			
70	Water Body Areas	0.321	Entered	--	--

Land Use:

Offsite to Infiltration Basin

Source Area #	Source Area	Area (acres)	Source Area Parameters	First Control Practice	Second Control Practice
	Roofs	0.054			
1	Roofs 1	0.054	Entered	-- ▼	-- ▼
	Parking	0.000			
	Driveways/Sidewalks	0.000			
	Streets	0.000			
	Landscaped Areas	0.494			
45	Large Landscaped Areas 1	0.494	Entered	-- ▼	-- ▼
	Other Areas	0.000			

SEDIMENT CONTROL CALCULATIONS

West Wet Pond

Wet Detention Control Device

Pond Number 2

Drainage System Control Practice

Initial Stage Elevation (ft): 6.00

Maximum Inflow into Pond (cfs)
Enter 0 or leave blank for no limit:

Copy Pond Data

Paste Pond Data

Create Pond
Stage-Area Values

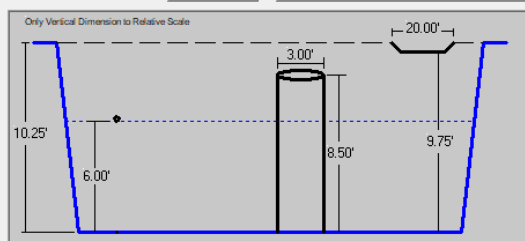
Refresh
Schematic

Enter fraction (greater
than 0) that you want to
modify all pond areas by
and then select 'Modify
Pond Areas' button

0.00

Modify Pond
Areas

Recalculate Cumulative Volume



Delete Pond

Cancel

Continue

Press 'F1' for Help

Control Practice #: 2 CP Index #: 2

Stage (ft)	Area (acres)	Cumulative Volume (ac-ft)
0	0.00	0.000
1	0.01	0.0440
2	0.50	0.0480
3	1.50	0.0620
4	2.50	0.0760
5	3.50	0.0920
6	4.50	0.1060
7	5.50	0.1910
8	6.00	0.2750
9	6.50	0.2980
10	7.50	0.3510
11	8.50	0.4020
12	9.50	0.4570
13	10.25	0.4960
14		
15		
16		
17		

Add Sharp Crested Weir

Weir Length (ft)
Height from datum to
bottom of weir opening (ft)

Add V-Notch Weir

Weir Angle (<180 degrees)
Height from datum to
bottom of weir opening (ft)
Number of V-Notch weirs

Remove Orifice Set 1

Orifice Diameter (ft) 0.25
Invert elevation above datum (ft) 6.00
Number of orifices in set 1

Add Orifice Set 2

Orifice Diameter (ft)
Invert elevation above datum (ft)
Number of orifices in set

Add Orifice Set 3

Orifice Diameter (ft)
Invert elevation above datum (ft)
Number of orifices in set

Add Stone Weeper

Width at bottom of weeper (ft)
Weeper side slope (L:H:TV)
Upstream side slope (L:H:TV)
Downstream side slope (L:H:TV)
Horizontal flow path length
at top of weeper (ft)
Average rock diameter (ft)
Distance from bottom to top
of weeper (ft)
Height from datum to
bottom of weeper (ft)

Remove Vertical Stand Pipe

Pipe diameter (ft) 3.00
Height above datum (ft) 8.50

Month	Evaporation (in/day)	Water Withdraw Rate (ac-ft/day)
Jan	0.00	0.000
Feb	0.00	0.000
Mar	0.00	0.000
Apr	0.00	0.000
May	0.00	0.000
Jun	0.00	0.000
Jul	0.00	0.000
Aug	0.00	0.000
Sep	0.00	0.000
Oct	0.00	0.000
Nov	0.00	0.000
Dec	0.00	0.000

Stage (ft)	Natural Seepage Rate (in/hr)	Other Outflow Rate (cfs)
0.00	0.00	0.000
0.01	0.00	0.000
0.50	0.00	0.000
1.50	0.00	0.000
2.50	0.00	0.000
3.50	0.00	0.000
4.50	0.00	0.000

Remove Broad Crested Weir (Required)

Weir crest length (ft) 20.00
Weir crest width (ft) 10.00
Height from datum to
bottom of weir opening (ft) 9.75

Add Seepage Basin

Infiltration rate (in/hr)
Width of device (ft)
Length of device (ft)
Invert elevation of seepage
basin inlet above datum (ft)

Add Pump

East Wet Pond

Wet Detention Control Device

Pond Number 1

Drainage System Control Practice

Initial Stage Elevation (ft): 6.00

Maximum Inflow into Pond (cfs)
Enter 0 or leave blank for no limit:

Copy Pond Data

Paste Pond Data

Create Pond
Stage-Area Values

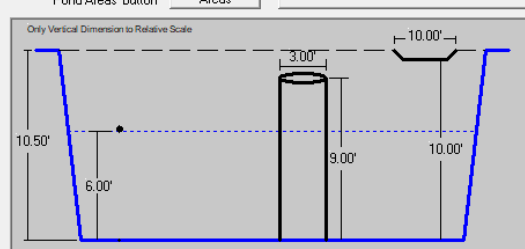
Refresh
Schematic

Enter fraction (greater
than 0) that you want to
modify all pond areas by
and then select 'Modify
Pond Areas' button

0.00

Modify Pond
Areas

Recalculate Cumulative Volume



Delete Pond

Cancel

Continue

Press 'F1' for Help

Control Practice #: 1 CP Index #: 1

Stage (ft)	Area (acres)	Cumulative Volume (ac-ft)
0	0.00	0.000
1	0.01	0.0440
2	0.50	0.0510
3	1.50	0.0640
4	2.50	0.0780
5	3.50	0.0940
6	4.50	0.1120
7	5.50	0.1630
8	6.00	0.2070
9	6.50	0.2230
10	7.50	0.2590
11	8.50	0.2960
12	9.50	0.3370
13	10.50	0.3790
14		
15		
16		
17		

Add Sharp Crested Weir

Weir Length (ft)
Height from datum to
bottom of weir opening (ft)

Add V-Notch Weir

Weir Angle (<180 degrees)
Height from datum to
bottom of weir opening (ft)
Number of V-Notch weirs

Remove Orifice Set 1

Orifice Diameter (ft) 0.25
Invert elevation above datum (ft) 6.00
Number of orifices in set 1

Add Orifice Set 2

Orifice Diameter (ft)
Invert elevation above datum (ft)
Number of orifices in set

Add Orifice Set 3

Orifice Diameter (ft)
Invert elevation above datum (ft)
Number of orifices in set

Add Stone Weeper

Width at bottom of weeper (ft)
Weeper side slope (L:H:TV)
Upstream side slope (L:H:TV)
Downstream side slope (L:H:TV)
Horizontal flow path length
at top of weeper (ft)
Average rock diameter (ft)
Distance from bottom to top
of weeper (ft)
Height from datum to
bottom of weeper (ft)

Remove Vertical Stand Pipe

Pipe diameter (ft) 3.00
Height above datum (ft) 9.00

Month	Evaporation (in/day)	Water Withdraw Rate (ac-ft/day)
Jan	0.00	0.000
Feb	0.00	0.000
Mar	0.00	0.000
Apr	0.00	0.000
May	0.00	0.000
Jun	0.00	0.000
Jul	0.00	0.000
Aug	0.00	0.000
Sep	0.00	0.000
Oct	0.00	0.000
Nov	0.00	0.000
Dec	0.00	0.000

Stage (ft)	Natural Seepage Rate (in/hr)	Other Outflow Rate (cfs)
0.00	0.00	0.000
0.01	0.00	0.000
0.50	0.00	0.000
1.50	0.00	0.000
2.50	0.00	0.000
3.50	0.00	0.000
4.50	0.00	0.000

Remove Broad Crested Weir (Required)

Weir crest length (ft) 10.00
Weir crest width (ft) 10.00
Height from datum to
bottom of weir opening (ft) 10.00

Add Seepage Basin

Infiltration rate (in/hr)
Width of device (ft)
Length of device (ft)
Invert elevation of seepage
basin inlet above datum (ft)

Add Pump

SEDIMENT CONTROL CALCULATIONS

Infiltration Basin

Biofiltration Control Device

Drainage System Control Practice

Device Properties **Biofilter Number 1**

Top Area (sf)	19000
Bottom Area (sf)	14000
Total Depth (ft)	1.75
Typical Width (ft) (Cost est. only)	10.00
Native Soil Infiltration Rate (in/hr)	0.070
Native Soil Infiltration Rate COV	N/A
Infil. Rate Fraction-Bottom (0.001-1)	1.000
Infil. Rate Fraction-Sides (0.001-1)	0.001
Rock Filled Depth (ft)	0.00
Rock Fill Porosity (0-1)	0.00
Engineered Media Type	Media Data
Engineered Media Infiltration Rate	0.00
Engineered Media Infiltration Rate COV	N/A
Engineered Media Depth (ft)	0.00
Engineered Media Porosity (0-1)	0.00
Percent solids reduction due to Engineered Media (0-100)	N/A
Inflow Hydrograph Peak to Average Flow Ratio	3.80
Number of Devices in Source Area or Upstream Drainage System	1

☐ Activate Pipe or Box Storage ☐ Pipe ☐ Box

Diameter (ft) _____
Length (ft) _____
Within Biofilter (check if Yes) ☐
Perforated (check if Yes) ☐
Bottom Elevation (ft above datum) _____
Discharge Orifice Diameter (ft) _____

Select Native Soil Infiltration Rate

☐ Sand - 8 in/hr	☐ Clay loam - 0.1 in/hr
☐ Loamy sand - 2.5 in/hr	☐ Silty clay loam - 0.05 in/hr
☐ Sandy loam - 1.0 in/hr	☐ Sandy clay - 0.05 in/hr
☐ Loam - 0.5 in/hr	☐ Silty clay - 0.04 in/hr
☐ Silt loam - 0.3 in/hr	☐ Clay - 0.02 in/hr
☐ Sandy silt loam - 0.2 in/hr	☐ Rain Barrel/Cistern - 0.00 in/hr

Estimated Surface Drain Time = 17.14 hrs.

Add Sharp Crested Weir

Weir Length (ft) _____
Height from datum to bottom of weir opening (ft) _____

Remove Broad Crested Weir-Reqd

Weir crest length (ft) 30.00
Weir crest width (ft) 3.00
Height from datum to bottom of weir opening (ft) 1.50

Add Vertical Stand Pipe

Pipe diameter (ft) _____
Height above datum (ft) _____

Remove Surface Discharge Pipe

Pipe Diameter (ft) 0.50
Invert elevation above datum (ft) 0.10
Number of pipes at invert elev. 2

Add Drain Tile/Underdrain

Pipe Diameter (ft) _____
Invert elevation above datum (ft) _____
Number of pipes at invert elev. _____

Add Other Outlet

Stage Number	Stage (ft)	Other Outflow Rate (cfs)
1		
2		
3		
4		
5		

Add Evapotranspiration

Soil porosity (saturation moisture content, 0-1) _____
Soil field moisture capacity (0-1) _____
Permanent wilting point (0-1) _____
Supplemental irrigation used? ☐
Fraction of available capacity when irrigation starts (0-1) _____
Fraction of available capacity when irrigation stops (0-1) _____
Fraction of biofilter that is vegetated _____
Plant type _____
Root depth (ft) _____
ET Crop Adjustment Factor _____

Evaporation

Month	Evapotranspiration (in/day)	Evaporation (in/day)
Jan		
Feb		
Mar		
Apr		
May		
Jun		
Jul		
Aug		
Sep		
Oct		
Nov		
Dec		

Plant Types

1	2	3	4

Biofilter Geometry Schematic Refresh Schematic

Press 'F1' for Help Delete Cancel Continue

Control Practice #: 6 CP Index #: 6

WinSLAMM Output Summary:

File Name: Q:\Projects\LS-03-19\EC5\WM-McFarland\WinSLAMM.mdb

Outfall Output Summary

	Runoff Volume (cu. ft.)	Percent Runoff Reduction	Runoff Coefficient (Rv)	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of All Land Uses without Controls	618908		0.36	97.15 (1)	3754 (1)	
Outfall Total with Controls	508794	17.79 %	0.30	20.32	645.3	82.81 %
Current File Output: Annualized Total After Outfall Controls	510192				647.1	

Years in Model Run: 1.00

(1) Values reduced to remove off-site loadings due to setting Other Control Device Concentration Reduction values to 1.

Print Output Summary to .csv File
Print Output Summary to Text File
Print Output Summary to Printer

Total Area Modeled (ac) 14.776

Total Control Practice Costs

Capital Cost	N/A
Land Cost	N/A
Annual Maintenance Cost	N/A
Present Value of All Costs	N/A
Annualized Value of All Costs	N/A

Perform Outfall Flow Duration Curve Calculations

Receiving Water Impacts Due To Stormwater Runoff
(CWP Impervious Cover Model)

	Calculated Rv	Approximate Urban Stream Classification
Without Controls	0.36	Poor
With Controls	0.30	Poor

SEDIMENT CONTROL CALCULATIONS

Wet Pond Pre-Treatment

Site Description:								
Col. #:	2	3	4	5	6	7	8	9
Control Practice No.	Control Practice Type	Control Practice Name or Location	Total Inflow Volume (cf)	Total Outflow Volume (cf)	Percent Volume Reduction	Total Influent Load (lbs)	Total Effluent Load (lbs)	Percent Load Reduction
1	Wet Detention Pond	East Wet Pond	199032	199578	-0.274	936.1	131.0	86.01
2	Wet Detention Pond	West Wet Pond	354614	355587	-0.274	2513	287.0	88.58

WinSLAMM Input Data:

Data file name: Q:\Projects\LS-03-19\ECSWM-McFarland\WinSLAMM.mdb

WinSLAMM Version 10.4.1

Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.RAN

Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx

Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx

Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std

Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std

Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std

Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std

Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std

Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std

Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False

Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx

Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv

Cost Data file name:

If Other Device Pollutant Load Reduction Values = 1, Off-site Pollutant Loads are Removed from Pollutant Load % Reduction calculations

Seed for random number generator: -42

Study period starting date: 01/01/81 Study period ending date: 12/31/81

Start of Winter Season: 12/02 End of Winter Season: 03/12

Date: 08-01-2025 Time: 14:28:45

Site information:

LU# 1 - Commercial: Onsite to East Wet Pond Total area (ac): 3.749

1 - Roofs 1: 0.942 ac. Pitched Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

13 - Paved Parking 1: 0.873 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

31 - Sidewalks 1: 0.108 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

45 - Large Landscaped Areas 1: 0.277 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

46 - Large Landscaped Areas 2: 1.342 ac. Normal Clayey Low Density Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

70 - Water Body Areas: 0.207 ac. Source Area PSD File:

LU# 2 - Commercial: Onsite to West Wet Pond Total area (ac): 5.427

1 - Roofs 1: 1.376 ac. Pitched Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

13 - Paved Parking 1: 0.759 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

31 - Sidewalks 1: 0.157 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

SEDIMENT CONTROL CALCULATIONS

37 - Streets 1: 0.529 ac. Intermediate Street Length = 0.29 curb-mi Street Width (assuming two curb-mi per street mile) = 30.09828 ft

Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz

38 - Street Swapped for Uncontrolled Roof: 0.243 ac. Intermediate Street Length = 0.196 curb-mi Street Width (assuming two curb-mi per street mile) = 20.45663 ft

Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz

45 - Large Landscaped Areas 1: 2.083 ac. Normal Clayey Low Density Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz

70 - Water Body Areas: 0.280 ac. Source Area PSD File:

LU# 3 - Commercial: Offsite To West Wet Pond Total area (ac): 0.975

31 - Sidewalks 1: 0.265 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

37 - Streets 1: 0.186 ac. Intermediate Street Length = 0.236 curb-mi Street Width (assuming two curb-mi per street mile) = 13.00424 ft

Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz

45 - Large Landscaped Areas 1: 0.524 ac. Normal Clayey Low Density Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz

LU# 4 - Commercial: Offsite to East Wet Pond Total area (ac): 0.056

45 - Large Landscaped Areas 1: 0.056 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 5 - Commercial: Onsite Uncontrolled Area Total area (ac): 2.186

45 - Large Landscaped Areas 1: 1.702 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

46 - Large Landscaped Areas 2: 0.241 ac. Normal Clayey Low Density Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz

57 - Area swapped to Wet Wet Pond: 0.243 ac. Normal Silty Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz

LU# 6 - Commercial: Offsite Uncontrolled Area Total area (ac): 0.147

31 - Sidewalks 1: 0.064 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

45 - Large Landscaped Areas 1: 0.083 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 7 - Commercial: Onsite to Infiltration Basin Total area (ac): 1.688

45 - Large Landscaped Areas 1: 1.245 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

46 - Large Landscaped Areas 2: 0.122 ac. Normal Clayey Low Density Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz

70 - Water Body Areas: 0.321 ac. Source Area PSD File:

LU# 8 - Commercial: Offsite to Infiltration Basin Total area (ac): 0.548

1 - Roofs 1: 0.054 ac. Pitched Disconnected Normal Silty Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz

45 - Large Landscaped Areas 1: 0.494 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

SEDIMENT CONTROL CALCULATIONS

Control Practice 1: Wet Detention Pond CP# 1 (DS) - East Wet Pond

Particle Size Distribution file name: Not needed - calculated by program

Initial stage elevation (ft): 6

Peak to Average Flow Ratio: 3.8

Maximum flow allowed into pond (cfs): No maximum value entered

Outlet Characteristics:

Outlet type: Orifice 1

1. Orifice diameter (ft): 0.25

2. Number of orifices: 1

3. Invert elevation above datum (ft): 6

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 10

2. Weir crest width (ft): 10

3. Height from datum to bottom of weir opening: 10

Outlet type: Vertical Stand Pipe

1. Stand pipe diameter (ft): 3

2. Stand pipe height above datum (ft): 9

Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.01	0.0440	0.00	0.00
2	0.50	0.0510	0.00	0.00
3	1.50	0.0640	0.00	0.00
4	2.50	0.0780	0.00	0.00
5	3.50	0.0940	0.00	0.00
6	4.50	0.1120	0.00	0.00
7	5.50	0.1630	0.00	0.00
8	6.00	0.2070	0.00	0.00
9	6.50	0.2230	0.00	0.00
10	7.50	0.2590	0.00	0.00
11	8.50	0.2960	0.00	0.00
12	9.50	0.3370	0.00	0.00
13	10.50	0.3790	0.00	0.00

Control Practice 2: Wet Detention Pond CP# 2 (DS) - West Wet Pond

Particle Size Distribution file name: Not needed - calculated by program

Initial stage elevation (ft): 6

Peak to Average Flow Ratio: 3.8

Maximum flow allowed into pond (cfs): No maximum value entered

Outlet Characteristics:

Outlet type: Orifice 1

1. Orifice diameter (ft): 0.25

2. Number of orifices: 1

3. Invert elevation above datum (ft): 6

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 20

2. Weir crest width (ft): 10

3. Height from datum to bottom of weir opening: 9.75

Outlet type: Vertical Stand Pipe

SEDIMENT CONTROL CALCULATIONS

1. Stand pipe diameter (ft): 3
2. Stand pipe height above datum (ft): 8.5

Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.01	0.0440	0.00	0.00
2	0.50	0.0480	0.00	0.00
3	1.50	0.0620	0.00	0.00
4	2.50	0.0760	0.00	0.00
5	3.50	0.0920	0.00	0.00
6	4.50	0.1060	0.00	0.00
7	5.50	0.1910	0.00	0.00
8	6.00	0.2750	0.00	0.00
9	6.50	0.2980	0.00	0.00
10	7.50	0.3510	0.00	0.00
11	8.50	0.4020	0.00	0.00
12	9.50	0.4570	0.00	0.00
13	10.25	0.4960	0.00	0.00

Control Practice 3: Other Device CP# 1 (DS) - DS Other Device # 1

Fraction of drainage area served by device (ac) = 1.00
 Particulate Concentration reduction fraction = 1.00
 Filterable Concentration reduction fraction = 1.00
 Runoff volume reduction fraction = 0

Control Practice 4: Other Device CP# 2 (DS) - DS Other Device # 2

Fraction of drainage area served by device (ac) = 1.00
 Particulate Concentration reduction fraction = 1.00
 Filterable Concentration reduction fraction = 1.00
 Runoff volume reduction fraction = 0

Control Practice 5: Other Device CP# 3 (DS) - DS Other Device # 3

Fraction of drainage area served by device (ac) = 1.00
 Particulate Concentration reduction fraction = 1.00
 Filterable Concentration reduction fraction = 1.00
 Runoff volume reduction fraction = 0

Control Practice 6: Biofilter CP# 1 (DS) - Infiltration Basin

1. Top area (square feet) = 19000
2. Bottom area (square feet) = 14000
3. Depth (ft): 1.75
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0.07
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 0.001
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 0
10. Porosity of rock filled volume = 0
11. Engineered soil infiltration rate: 0
12. Engineered soil depth (ft) = 0

SEDIMENT CONTROL CALCULATIONS

- 13. Engineered soil porosity = 0
- 14. Percent solids reduction due to flow through engineered soil = 0
- 15. Biofilter peak to average flow ratio = 3.8
- 16. Number of biofiltration control devices = 1
- 17. Particle size distribution file: Not needed - calculated by program
- 18. Initial water surface elevation (ft): 0

Soil Data Soil Type Fraction in Eng. Soil

Biofilter Outlet/Discharge Characteristics:

Outlet type: Broad Crested Weir

- 1. Weir crest length (ft): 30
- 2. Weir crest width (ft): 3
- 3. Height of datum to bottom of weir opening: 1.5

Outlet type: Surface Discharge Pipe

- 1. Surface discharge pipe outlet diameter (ft): 0.5
- 2. Pipe invert elevation above datum (ft): 0.1
- 3. Number of surface pipe outlets: 2

Control Practice 7: Other Device CP# 4 (DS) - DS Other Device # 4

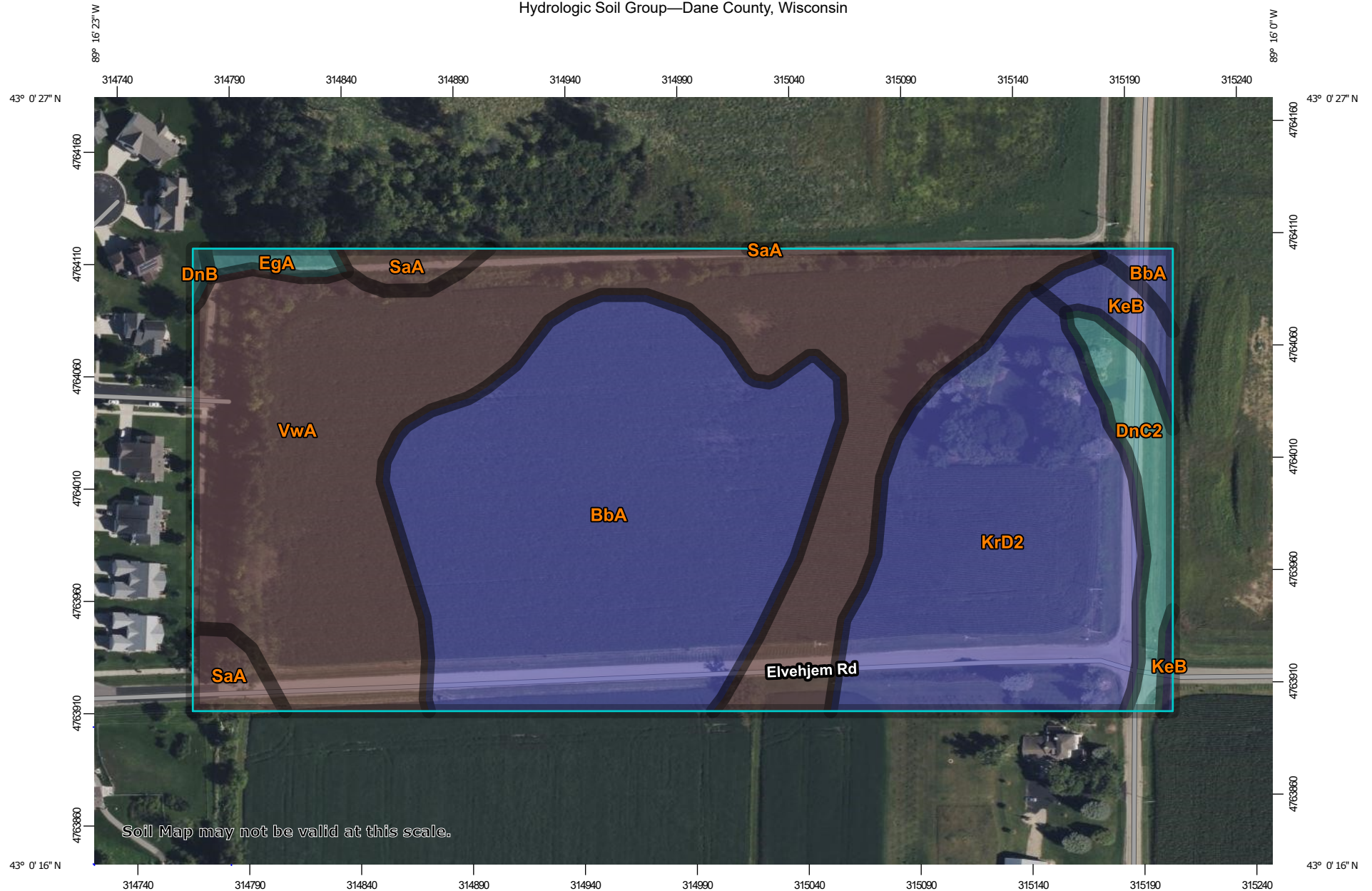
Fraction of drainage area served by device (ac) = 1.00

Particulate Concentration reduction fraction = 1.00

Filterable Concentration reduction fraction = 1.00

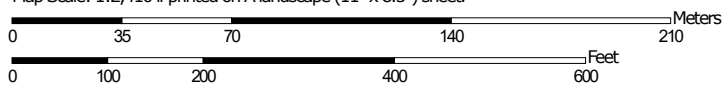
Runoff volume reduction fraction = 0

Hydrologic Soil Group—Dane County, Wisconsin



Soil Map may not be valid at this scale.

Map Scale: 1:2,410 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Dane County, Wisconsin
 Survey Area Data: Version 23, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 4, 2022—Sep 13, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BbA	Batavia silt loam, gravelly substratum, 0 to 2 percent slopes	B	7.1	31.7%
DnB	Dodge silt loam, 2 to 6 percent slopes	C	0.0	0.2%
DnC2	Dodge silt loam, 6 to 12 percent slopes, eroded	C	0.8	3.6%
EgA	Elburn silt loam, gravelly substratum, 0 to 3 percent slopes	C	0.2	0.8%
KeB	Kegonsa silt loam, 2 to 6 percent slopes	B	0.4	1.8%
KrD2	Kidder soils, 10 to 20 percent slopes, eroded	B	4.6	20.6%
SaA	Sable silty clay loam, 0 to 2 percent slopes	B/D	0.5	2.3%
VwA	Virgil silt loam, gravelly substratum, 0 to 3 percent slopes	B/D	8.7	39.1%
Totals for Area of Interest			22.4	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher



Attachment 2:

1002-CPS-23
Division of Industry Services
P. O. Box 2658
Madison, Wisconsin 53701
Scott Walker, Governor
Laura Gutierrez, Secretary

SOIL AND SITE EVALUATION – STORM

In accordance with SPS 382.365, 385, Wis. Adm. Code, and WDNR Standard 1002

Page 1 of 3

Attach a complete site plan on paper not less than 8 1/2 x 11 inches in size. Plan must include, but not limited to: vertical and horizontal reference point (BM), direction and percent of slope, scale or dimensions, north arrow, and BM referenced to nearest road

Please print all information

Personal information you provide may be used for secondary purposes [Privacy Law, s. 15.04(1)(m)]

County <u>Dane</u>	
Parcel I.D. <u>0610-024-9691-1</u>	
Reviewed by: _____ Date: _____	
Property Owner <u>Lakestone Properties</u>	Property Location Govt. Lot <u>SE 1/4 SE 1/4</u> S <u>7</u> T <u>6</u> N R <u>10</u> (E or W)
Property Owner Mail Address _____	Lot # _____ Block # _____ Subd. Name or CSM # _____
City _____ State _____ Zip Code _____ Phone Number _____	☐ City ☒ Village ☐ Town Nearest Road <u>McFarland Elvehjem Rd</u>
Drainage area _____ ☐ sq ft ☐ acres Test site suitable for (check all that apply): ☐ Site not suitable; ☐ Bioretention; ☐ Subsurface Dispersal System; ☐ Reuse; ☐ Irrigation; ☐ Other _____	Hydraulic Application Test Method ☒ Morphological Evaluation ☐ Double Ring Infiltrometer ☐ Other: (specify) _____ Soil Moisture Date of soil borings: <u>1-29-25</u> USDA-NRCS WETS Value: ☐ Dry = 1; ☒ Normal = 2; ☐ Wet = 3.

#OBS. ☒ Pit ☐ Boring Ground surface elevation: 860.96 ft. Elevation of limiting factor 859.96 ft.

Horizon	Depth in	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr
1	0-12	10YR 3/2	—	sil	2mgr	mfr	cs	5	—	.13
2	12-60	10YR 4/2	C2d 7.5YR 5/8 10YR 7/2	sic	1fshk	mfr	gw	5	—	.07
3	60-108	10YR 5/4	"	s	0sg	ml	—	5	—	3.6

Comments: Water observed @ 60"

#OBS. ☒ Pit ☐ Boring Ground surface elevation: 860.99 ft. Elevation of limiting factor 859.99 ft.

Horizon	Depth in	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr
1	0-12	10YR 3/2	—	sil	2mgr	mfr	cs	5	—	.13
2	12-67	10YR 4/2	C2d 7.5YR 5/8 10YR 7/2	sic	1fshk	mfr	gw	5	—	.07
3	67-170	10YR 5/4	"	s	0sg	ml	—	5	—	3.6

Comments: Water observed @ 70"

Name (Please Print) <u>Jeffrey T. Levake</u>	Signature <u>[Signature]</u>	Credential Number <u>CST #223322</u>
Address <u>P.O. Box 568 Lake Mills, WI 53551</u>	Date Evaluation Conducted <u>1-29-25</u>	Telephone Number <u>920-968-7567</u>
		SBD-10793 (R01/17)

WDNR
September 2017

TP3 #OBS. ☒ Pit ☐ Boring Ground surface elevation 859.99 ft. Elevation of limiting factor 858.99 ft. Page 2 of 3

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frgs.	% Fines	Hydraulic App Rate Inches/Hr
1	0-12	10YR 3/2	~	s.l	2mgr	mfr	cs	5	-	.13
2	12-60	10YR 4/2	C2d 7.5YR 5/8 10YR 7/2	sic	1fshk	mfr	cs	5	-	.07
3	60-96	10YR 4/2	" "	scl	1fshk	mfr	gw	5	-	.11
4	96-120	10YR 5/4	" "	s	Osg	ml	-	5	-	3.6

Comments: Water observed @ 60"

TP4 #OBS. ☒ Pit ☐ Boring Ground surface elevation 859.87 ft. Elevation of limiting factor 858.87 ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frgs.	% Fines	Hydraulic App Rate Inches/Hr
1	0-12	10YR 3/2	~	s.l	2mgr	mfr	cs	5	-	.13
2	12-50	10YR 4/2	C2d 7.5YR 5/8 10YR 7/2	sic	1fshk	mfr	gw	5	-	.07
3	50-108	10YR 5/4	" "	s	Osg	ml	-	5	-	3.6

Comments: Water observed @ 50"

TP5 #OBS. ☒ Pit ☐ Boring Ground surface elevation 860.27 ft. Elevation of limiting factor 859.27 ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frgs.	% Fines	Hydraulic App Rate Inches/Hr
1	0-12	10YR 3/2	~	s.l	2mgr	mfr	cs	5	-	.13
2	12-55	10YR 4/2	C2d 7.5YR 5/8 10YR 7/2	sic	1fshk	mfr	gw	5	-	.07
3	55-120	10YR 5/4	" "	s	Osg	ml	-	5	-	3.6

Comments: Water observed @ 55"

TP6 #OBS. ☒ Pit ☐ Boring Ground surface elevation 860 ft. Elevation of limiting factor 858.4 ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frgs.	% Fines	Hydraulic App Rate Inches/Hr
1	0-20	10YR 3/2	~	s.l	2mgr	mfr	cs	5	-	.13
2	20-103	10YR 4/2	C2d 7.5YR 5/8 10YR 7/2	sic	1fshk	mfr	gw	5	-	.07
3	103-120	10YR 5/4	" "	s	Osg	ml	-	5	-	3.6

Comments: Water observed @ 103"

SBD-10793 (R 7/17)

Overall Site Comments:

WDNR
September 2017

Tp7 #OBS. ☒ Pit ☐ Boring Ground surface elevation. 860.77 ft. Elevation of limiting factor 859.47 ft. Page 3 of 3

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr
1	0-10	10YR 3/2	~	sil	2mgr	mfr	cs	5	-	.13
2	10-65	10YR 4/2	C2d 7.5YR 5/8 10YR 7/2	sil	1fsbk	mfr	gw	5	-	.07
3	65-108	10YR 5/4	" "	s	0sg	ml	-	5	-	3.6

Comments: Water observed @ 65"

TP8 #OBS. ☒ Pit ☐ Boring Ground surface elevation. 881.8 ft. Elevation of limiting factor 869.8 ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr
1	0-6	10YR 3/2	~	sil	2mgr	mfr	cs	5	-	.13
2	6-42	7.5YR 4/6	~	sil	1msbk	mfr	gw	5	-	.11
3	42-144	10YR 5/4	~	sl	1fpl	mfr	-	15	-	.5

Comments:

#OBS. ☐ Pit ☐ Boring Ground surface elevation. _____ ft. Elevation of limiting factor _____ ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr

Comments:

#OBS. ☐ Pit ☐ Boring Ground surface elevation. _____ ft. Elevation of limiting factor _____ ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr

Comments:

SBD-10793 (R 7/17)

Overall Site Comments:

WDNR
September 2017

STORM WATER MANAGEMENT SYSTEM MAINTENANCE AGREEMENT

THIS AGREEMENT ("Agreement"), entered into this _____ day of _____, 2022, by and between Ezra Properties (the "Owner"), and Village of McFarland, a Wisconsin Municipal Corporation (the "Village"), collectively, the "Parties".

RECITALS

A. The Owner is developing certain real property located in the Village of McFarland legally described in paragraph 2 herein (the "Property").

B. The Parties desire to set forth their obligations for the maintenance of certain storm water management improvements on the Property.

NOW THEREFORE, in consideration of the mutual covenants herein set forth and other good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the Parties hereby agree as follows.

Recording area (Dane Co. Register of
Deeds)

Send To: Village of McFarland
5915 Milwaukee Street
McFarland, WI 53558
608-838-3151

0610-024-9691-1

Parcel Identification Numbers

1. Sole Agreement. This agreement is the sole applicable agreement pertaining to storm water management for the described Property.

2. Site Legal Description. The Property subject to this agreement is legally described as follows: SEC 2-6-10 S 19 A SE1/4 SE1/4 EXC LOT 1 CSM 1455, Village of McFarland Dane County, WI

3. Responsible Party.

a. **CONSTRUCTION PHASE MAINTENANCE**. The Owner is responsible for satisfying the provisions of this agreement throughout the Property for the duration of the construction and warranty period.

b. **POST-CONSTRUCTION PERPETUAL MAINTENANCE**. The Owner is responsible for maintaining the storm water management system in perpetuity upon completion of all construction phases and expiration of the warranty period.

4. Permanent Components Of The Storm Water Management System.

a. The storm water management system for the property consists of the following management practices, their components, and the drainage conveyance as referenced in Section 4b:

- + Two (2) Wet Retention Pond
- + One (1) Infiltration Basin
- + One (1) Infiltration Swale
- + Three (3) Sorbent Inlet Filters

b. The drainage areas served by the storm water management practices include portions of the property referenced in Section 2 and some off-site run-on from the Elvehjem Road Right-of-Way, as shown on the Proposed Drainage Plan.

5. Inspection And Maintenance Schedule.

- a. All components of the storm water management system shall be inspected by the Responsible Party:
- at least semi-annually in early Spring and early Autumn; and
 - within 72 hours following any major storm or flood event of sufficient intensity or duration to pose significant risk of damage to the system.
- b. The following components shall be inspected by the Responsible Party more frequently as follows:

Wet Pond

- Annually inspect all components of the wet pond, including inlets, outlets, riprap, and safety shelf, and sediment depth.
- Keep embankments clear of woody vegetation.
- Mowing in buffer areas around stormwater ponds should be minimized. If occasional mowing is necessary, mow no shorter than 6 inches.
- Application of fertilizer, herbicide, pesticide or other chemicals is discouraged.
- Remove sediment from permanent pool once average depth is 3.5 feet or less. Protect liner from damage during sediment removal, if present.
- Excavation is prohibited below the original design depth unless approved by Dane County Water Resources Engineering Department.

Infiltration Basin

- Inspect quarterly to ensure proper function and check for any potential problems. Inspect overflow spillway for indication of failure and make note of vegetation condition. If standing water is observed over 50% of the basin floor 3 days after rainfall, the basin is clogged and must be restored.
- Remove trash and other debris regularly.
- Mowing or burning shall be used to maintain the vegetation.
- Mow newly planted seed once it reaches a height of 10 to 12 inches down to a height of 5 to 6 inches. After establishment, if burning cannot be accommodated, mowing shall occur once in the spring (prior to April 15) or in the fall (after November 1) to a height of 5 to 6 inches.
- Burning may begin the second year, in the early spring (prior to May 1st) or in the late fall (after November 1st). Burning shall be done two consecutive years, then up to three years passing before the next burning. Under no circumstances shall burning occur every other year.
- Restoration includes removing the top 2 to 3 inches, chisel plowing, then adding topsoil and compost before seeding. If deep tilling is used, the basin shall be drained and the soils dried to a depth of 8 inches. If the basin was planted in turf grass and clogging again occurs after these restoration procedures have been used, the owner /operator shall replant with prairie style vegetation using the soil preparation method recommended by the native nursery in the area.
- During winter months, all draw down devices in the pond shall be opened to discourage infiltration of runoff water containing high levels of chlorides.

Sorbent Inlet Filters

- Maintain Flexstorm PCP Inlet Filter, or equal, according to the manufacturer's guidelines.
- Inspect inlet filters quarterly. Repair when the performance of a filter is compromised.

- c. The Responsible Party shall make the appropriate repairs whenever the performance of a storm water management practice or component is compromised due to sediment or debris.

6. Regulations.

- a. Mowing in buffer areas, pond banks and drainage ways shall be minimized to the greatest extent possible in order to maximize filtration of runoff. If occasional mowing is necessary, the mowing height shall be no shorter than six inches.
- b. Applications of fertilizers, herbicides, pesticide or other chemical applications are prohibited in buffer areas, on pond banks and along drainage ways, unless specifically authorized by the Village Engineer on an individual event basis, and provided that the application is performed by professional personnel certified for that purpose.
- c. Snow shall not be dumped directly onto conditioned planting beds designed for infiltration or for bioretention, or on sites designated as buffer areas.

7. Maintenance Of Inspection Records.

a. The Owner shall maintain records of the results of all site inspections and any enforcement actions, correction actions or other documented contacts and any follow-up actions taken by or at the direction of Owner or Responsible Party for seven years after such action.

b. The Village Engineer shall maintain public records of the results of all Village inspections of the site, shall inform the Owner of the inspection results, and shall indicate any specific corrective actions required to bring the storm water management practice or component into accordance with this Agreement.

8. Default by Responsible Party. In the event that the Village determines that Responsible Party has failed to comply with any of the responsibilities as set forth in this Agreement, the Village shall give written notice to Owner identifying any said default and requiring compliance within five working days of receipt of the notice or such longer period of time as specified by the Village in the notice. In the event Owner fails to complete any actions required to remedy the default within said five day period, unless extended by the Village in writing, Owner consents that Village may enter the property on which private storm water management systems and practices are located, correct the default and charge the cost of such corrective action to Owner. If Owner fails to pay for said costs of corrective action then Village shall be entitled to place the cost of the corrective action on the tax roll for the Owner's property as a special charge pursuant to Wis. Stats. § 66.0627.

9. Severability. All provisions of this Agreement are severable, and if any one or more provision is deemed unenforceable for any reason, the remaining provisions shall remain in full force and effect.

10. Binding Agreement. All provisions of this Agreement, including the benefits and burdens hereunder, run with the property and are binding upon and inure to the benefit of the parties hereto and their successors and assigns.

11. Amendment; Termination. This Agreement may be amended or terminated by a document signed by the Owner and the Village.

12. Requirement to Record. This Agreement and any subsequent amendments thereto shall be recorded at the Dane County Register of Deeds.

13. Governing Law. This Agreement at all times shall be enforced in accordance with the laws of the State of Wisconsin.

14. Assignment. A Responsible Party's obligations may not be assigned to another party without the prior written consent of Village except that such consent is not required when a Responsible Party as property owner transfers fee simple title to a buyer who will assume the maintenance responsibilities of the owner / responsible party.

15. Notices. All notices to be given under the terms of this Agreement shall be in writing and signed by the person serving the notice and shall be sent registered or certified mail, return receipt requested, postage prepaid, or hand delivered to the addresses of the parties listed below:

FOR THE VILLAGE:

Village of McFarland
5915 Milwaukee Street
McFarland, WI 53558
608-838-3151

FOR THE OWNER:

Lakestone Properties and Management, LLC
5910 Main Street, Suite 1
McFarland, WI 53558

FOR THE OWNER:

By: _____

Name: _____

Title: _____

Date: _____

STATE OF WISCONSIN)
) ss.
COUNTY OF _____)

Personally came before me this _____ day of _____, 20____, the above-named _____, to me known to be the person who executed the foregoing and acknowledged the same.

Notary Public, State of Wisconsin
My Commission: _____

VILLAGE OF MCFARLAND

By: _____

Name: _____

Title: Village President

Date: _____

By: _____

Name: _____

Title: Village Clerk

Date: _____

DEVELOPMENT AGREEMENT FOR SPERLE CORNERS

This Development Agreement for Sperle Corners (the “**Agreement**”) is made as of the ____ day of _____, 2025, by and between the Village of McFarland, a Wisconsin Municipal Corporation (“**Village**”) and Lakestone Properties & Management, LLC, a Wisconsin limited liability company (“**Developer**”).

WITNESSETH:

WHEREAS, Developer is the fee simple owner of the real property described in Exhibit “A”, attached hereto and incorporated herein by reference (the “**Property**”); and

WHEREAS, Developer wishes to develop the Property as a platted subdivision, to be known as Sperle Corners (the “**Plat**”), for such purposes as may now or hereafter be permitted under the applicable zoning of the Property (the “**Development**”); and

WHEREAS, Developer agrees to construct the Development on the Property in accordance with this Agreement, and all applicable rules and regulations of any governmental authority having jurisdiction, including but not limited to applicable ordinances, rules and regulations of the Village; and

WHEREAS, it is the intention of the parties that this Agreement govern all future phases of the Development, the estimated extent of each such phase being described in Exhibit “A” (each as may be subsequently modified hereafter a “**Phase**” and collectively the “**Phases**”) with the understanding that the development of future Phases shall comply with the approved engineering plans described in Exhibit “B”, attached hereto and incorporated herein by reference, and that future Phases are to be commenced only after approval and execution of an appropriate amendment to this Agreement; and

WHEREAS, Developer wishes to proceed with the installation of public improvements to serve the Development in conformance with Village requirements (the “**Improvements**”); and

WHEREAS, execution of the final Plat by the Village and the recording thereof is contingent upon the execution of this Agreement and the submittal of all documents required by this Agreement; and

WHEREAS, this Agreement contains the following exhibits provided for under this Agreement, all of which are incorporated herein as if fully set forth:

Exhibit “A”: Legal description of plat and estimated phasing plan

Exhibit “B”: Engineering plans

Exhibit "C": Parkland dedication and fees in lieu of dedication

Exhibit "D": Restriction as to future sale of lots

Exhibit "E": Public Improvement Costs Secured by Surety

NOW, THEREFORE, in accordance with the above recitals, the granting of approval for the development of the Property by the Village so as to permit Developer to sell lots in the Development to third parties, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, it is agreed by and between the parties hereto as follows:

1) Covenant to Develop. Developer agrees to develop the Property in accordance with the terms, covenants and conditions of this Agreement, and all Laws and Ordinances.

2) Improvements. Developer agrees to fully comply with any and all applicable provisions of the Village Subdivision Ordinances, whether or not specifically addressed in this Agreement, other than where the Village Board has granted variances to provisions of the Village Subdivision Ordinances and to construct or install all required Improvements in a good and workmanlike manner in accordance with plans approved by the Village. The Developer and the Village hereby specifically agree as follows:

A. Streets, Storm Sewer, Sidewalks and Paths.

1. The Developer shall install curb and gutter, storm sewer and inlets, sidewalks, paths, and pavement on all streets within the Plat, to the established standards and/or specifications of the Village as specified in the approved engineering plans, on a Phase-by-Phase basis.

2. Elvehjem Road and CTH AB Paths. The cost to design, construct, and install the 8' path along Elvehjem Road from the intersection of Devil's Lake Way to CTH AB, and continuing north to the northern property line of the Plat, shall be a future obligation of the Developer to be incurred as part of future Phases of the Development. The Developer acknowledges that in the event that the Village designs, constructs and installs this path prior to the commencement by the Developer of Apartment Buildings #2 and #3, the Developer shall reimburse the Village for the associated costs.

3. The Developer shall construct and maintain suitable access to Elvehjem Road for the use by construction vehicles and contractors throughout all Phases of the construction of the Development

4. Developer shall complete construction, at its sole expense, of any improvements to CTH AB as may be required by the County of Dane for development of the Property and provide County of Dane Highway Department approval before starting work. An engineer's estimate for these improvements is provided as part of Exhibit E. The Developer acknowledges that in the event that the Village designs, constructs and installs improvements to the intersection of CTH AB and Elvehjem Road prior to the Developer constructing their required improvements, the Developer shall reimburse the Village for that portion of the intersection improvements required by its development based on the Village Engineer's updated cost estimate of the improvements required by Dane County for the Development.

5. The Developer shall proof roll all subgrade to provide adequate stability for road construction, prior to the placement of crushed aggregate base course and again upon completion of the base course installation. The Developer shall coordinate with the Director of Public Works to observe the proof rolling prior to the paving of the lower lift (binder).

6. The Developer shall pave the upper lift (surface) of asphalt on all streets during the construction season following the season during which the lower lift (binder) is installed. During binder installation, asphalt shall be wedged near the inlets in order to force water into the curb inlets rather than allowing water to bypass the inlets.

7. Initial construction plans for the Improvements described in subparagraph (A)(1), above, have been presented for approval by the Village.

B. Street Lights and Street Signs. The Developer shall pay for and install a street lighting system and street name signs along public streets and ways within or adjoining the Property according to plans and specifications approved by the Village. The Developer shall be responsible for the Pole and Fixture Contribution to Alliant Energy for street light installation and shall make payment thereof prior to installation. If the Developer contemplates the use of street lights other than the Village standard, then the Developer shall present the nonstandard street light design to the Village for approval. The Developer or the Development subdivision association (the "HOA"), as applicable, shall bear all costs for installation and long-term maintenance of nonstandard street lights should the Village agree to their use.

C. Regulatory Signs. The Developer will place the required regulatory signs as specified in the approved Plans. All signage shall be in accordance with applicable MUTCD and Village Ordinances.

D. Sanitary Sewer.

a) The Developer shall provide utility easements, construct, install and furnish a complete sewerage system, including public mains to serve the Plat, in

accordance with the plans and specifications submitted to and approved by the Village and the State of Wisconsin Department of Natural Resources. Laterals shall be extended five feet beyond the public right-of-way line or to the outer limits of the associated public utility easement where no right-of-way is present. Lateral ends shall be marked with a red painted 4' x 4' post extending approximately 12" above finish grade. Laterals shall be installed with an underground tracer wire according to the details on the approved Plans. Adequate easements shall be provided on the plat or by separate instruments for sanitary sewer main proposed outside of the right-of-way.

b) No sanitary sewer main installation shall be accepted by the Village until satisfactory low pressure air test and mandrel results are obtained in compliance with the Village's specifications as provided in Section 33 31 13-Sanitary Sewerage Piping, dated May 9, 2022 on file with the Village, as amended and in effect as of the date on which the inspection occurs. The Developer or its Contractor shall provide the Village with satisfactory low pressure air tests and mandrel results, and televising results, prior to requesting Village Acceptance of any sanitary sewer main installation.

c) The cost of construction of the sewer system shall be paid by the Developer.

d) The incremental cost for pipe sizes greater than eight-inch (8") diameter shall be borne by the Village, and either credited or reimbursed to the Developer. The incremental cost shall be based only on the retail price of pipe and fittings.

E. East Side Sewer Interceptor. The Village previously constructed the East Side Sewer Interceptor (the "Sewer Interceptor") located adjacent to the west and north property lines of the Property. The Village has previously adopted a Preliminary Assessment Report which includes a cost per dwelling unit of \$1,389.02 for benefitted properties, including the Property. The Village and Developer hereby acknowledge that the initial construction plans for the Improvements described in subparagraph (A)(1), above, do not contemplate connections to the Sewer Interceptor and therefore at this time no special assessment is due from the Developer. The Developer hereby acknowledges that if the Improvements described in subparagraph (A)(1), above, are modified in a manner such that sanitary sewer from the Development, or any future Phases, connects to the Sewer Interceptor, the Village may specially assess the cost of the Sewer Interceptor against benefitted properties.

F. Madison Metropolitan Sewerage District Charges. The Developer shall pay to the Village the area sewer assessment and treatment plant charges as determined by the Madison Metropolitan Sewerage District ("**MMSD**") on or before the date such payment is due from the Village to MMSD. Subject to the approval of MMSD, and the recording of an appropriate deed restriction if required by MMSD, the assessments to be charged by MMSD will be based on the land area contained within

the plans submitted to MMSD. The parties agree that such plans shall be submitted on a Phase-by-Phase basis. Payment for any Phase shall be made prior to commencement of that Phase's construction. If notwithstanding submission of the plans on a Phase-by-Phase basis, MMSD shall charge assessments based on the entire Plat, or on a basis other than the lands contained within a Phase, Developer shall pay the Village the entire assessment which MMSD has billed to the Village.

G. Water.

a) The Developer shall provide utility easements, construct, install and furnish a complete water distribution system, including public mains to service the Property, in accordance with the plans and specifications submitted to and approved by the Village and the State of Wisconsin Department of Natural Resources. Service laterals shall be extended five feet beyond the public right-of-way line or to the outer limits of the associated public utility easement where no right-of-way is present. Curb boxes shall be Mueller Minneapolis boxes with 1.5" diameter extension. All water service fittings shall be compression fittings; no flared fittings are allowed. Lateral ends shall be marked with a blue painted 4' x 4' post extending approximately 12" above finish grade. Water main pipe shall be ductile iron, Class 52. All water main tees, valves, bends, hydrants, reducers, etc. shall be mechanically restrained, with polyethylene encasement and tracer wires in addition to joint connectivity. Valve boxes must include gate valve adaptors by Adaptors, Inc. Appropriate flushing devices shall be installed at all temporary ends of the water mains. Adequate easements shall be provided on the associated Plat or by separate instruments for water distribution lines proposed outside of the public right-of-way.

b) Water main installations shall not be accepted until a bacteriologically safe sample and satisfactory pressure and leakage test results are obtained. The Developer or its Contractor shall arrange for the flushing of the main and collection of the samples required for this testing by, or under the direction and supervision of, a Village employee. Upon completion of the water mains and service laterals and Acceptance of the system by the Village, ownership and control of the system (except service laterals, which shall be privately owned and maintained) shall be turned over without reservation to the Village. When required by the Village Engineer, the water mains shall be provided in locations, sizes, and depths necessary to serve future developments and Phases.

c) The cost of construction of the water system shall be paid by the Developer. The incremental cost for pipe sizes greater than eight-inch (8") diameter shall be borne by the Village and either credited or reimbursed to the Developer. The incremental cost shall be based only on the retail price of pipe and fittings. Pursuant to Schedule X-2 of the McFarland Water Utility Tariffs approved by the Public Service Commission of Wisconsin, the Developer will be entitled to reimbursement of a portion

of the cost of the water main extension from additional customers who connect to the mains within 10 years of completion of construction at the time of such connection.

H. Fire Hydrants. Fire hydrants (Waterous Pacer WB 67) shall be installed by the Developer according to the Plans.

I. Stormwater/Surface Water Drainage. The storm water management and conveyance system, including post-construction Best Management Practices (BMPs), inlets, manholes, pipes, swales, and appurtenances, shall be installed by the Developer as shown on the approved Plans and Village Ordinances. Adequate easements and deed restrictions shall be provided for any stormwater conveyance system components that are located outside of a publicly dedicated outlot or rights-of-way within the Development. Adequate access shall be provided to and around all detention basins for Village personnel and equipment to maintain such basins. Such access shall be within a publicly dedicated outlot or right-of-way, except where easements over adjacent private land are approved by the Village Engineer.

Stormwater facilities shall be planted with native seed mixtures and/or native plug plantings conducive to the site conditions, according to the approved Plans.

Pursuant to §236.29(4), Wis. Stats., dedication to the public of lands intended to include permanent facilities for stormwater management as shown on a plat is not accepted until 80% of the lots in the subdivision are sold and a professional engineer has certified that the facility is in proper working condition, construction sediment has been removed and required plantings are fully-established and reasonably free of invasive species.

Within the final month of the guarantee period associated with each stormwater basin constructed under this Agreement, as specified in Section 4 of this Agreement, the Developer shall survey and remove all sediment that may have accumulated before or during the warranty period from such stormwater basin.

J. Erosion and Sedimentation Control. The Developer shall construct, install, furnish and effectively implement adequate facilities for erosion and sedimentation control throughout the entire Property in accordance with the plans and specifications submitted to and approved by the Village. No contractors shall commence installation of Improvements prior to the installation of approved erosion control measures and receipt of an erosion control and stormwater management permit. Contractor work prior to such conditions shall be subject to Village citation per the Ordinances, which the Village may issue to the Developer. Street terrace areas shall be seeded and mulched from curb to the sidewalk. All disturbed land including topsoil stockpiles shall be seeded and stabilized for erosion control immediately following the completion of site grading.

K. Street Trees. The Developer shall submit a tree planting plan for approval by the Village Forester. All trees shall be of approved species and planted as required by Village Ordinances. Street trees shall be located such that they do not conflict with utility services and/or driveways. At Village's option Developer shall either:

a) Pay to the Village the estimated cost of the trees to be planted in each Phase of the Development at the same time as Developer submits to the Village the Development Agreement or appropriate Amendment for the Phase in question. The Village shall be responsible for planting all trees within the Phase prior to completion of the final lift of asphalt on the public streets; or

b) Plant the trees in accordance with the approved plan. In such event, the Developer shall post with the Village Clerk prior to commencing work on a Phase, Surety, as that term is defined below, in the appropriate amount for the tree planting plan approved by the Village for such Phase of the Plat prior to commencement of construction of any Improvements for such Phase.

c) Trees shall have a minimum diameter of 1.5 inches per tree as measured at six (6) inches above ground level as required by Village Ordinances. It shall be the sole responsibility of the Village and homeowners to maintain said tree plantings in accordance with the Ordinances.

L. Plat Monumentation. The Developer, through information assembled by a Professional Land Surveyor, shall provide evidence that all monuments have been set per Wis. Stat. §236.15, as amended. If approved by the Director of Public Works, only the exterior boundary monuments need be set at the time of the plat recording, with the placement of the interior monuments deferred pursuant to Wis. Stat. §236.15(1)(h), as amended, for a reasonable period of time determined by the Director in order to allow for construction of Improvements that may otherwise interfere with monumentation. If such approval is granted, the Developer shall increase the amount of the required security to include 120% of the estimated cost for future monumenting.

M. Maintenance. The Developer shall control weeds and all growth of natural vegetation during the process of completing the Improvements in a manner that is consistent with the Ordinances. The Developer shall have this responsibility on all private lots before they are transferred to another party, and on all public rights-of-way or other dedicated lands until all Improvements that are required to be installed by the Developer are in fact installed and Accepted by the Village. The Developer shall coordinate cleaning of all streets affected by construction of the Improvements to the satisfaction of the Director of Public Works. If, in the opinion of the Director, additional street cleaning is needed to control a potential erosion or nuisance problem (including surface water runoff from a lot or outlot within the Development), the Village reserves the right to perform street cleaning and invoice the Developer at a standard rate set by the Village. Such cleaning shall not be considered as a substitute for standard erosion

control measures, nor relieve the Developer of any liability under the Ordinances. This general street cleaning requirement shall only be an obligation of Developer until acceptance of all of the Improvements.

N. House Numbering. Prior to the occupancy of any housing unit, numbers shall be installed on that unit identifying the street address, which shall be clearly visible and readable from the street at all times. The Village Zoning Administrator shall assign house numbers for each lot and notify the Developer upon assignment.

O. Other Requirements. The Developer shall be responsible for ensuring proper construction of all items listed herein or as required by local or state regulations whether or not included in this Agreement. All requirements and conditions of the Director of Public Works' approval shall be adequately satisfied on the Plans and implemented during construction of the Improvements. Other requirements may be imposed as determined reasonably necessary by the Director and/or as listed in the Ordinances.

P. Pre-Construction Meetings. A pre-construction meeting shall be scheduled between the Developer, the Contractors, and the Village prior to commencement of any construction on the Improvements for each Phase. The Developer shall, prior to each such meeting, notify all utilities of the planned construction and the date and location of the pre-construction meeting. As part of the pre-construction meeting for Outlot 1 the Village Forester shall field mark any existing trees along the west side of Outlot 1 that should be removed or saved by the Developer as part of improvements to Outlot 1.

Q. Inspection and Acceptance of Work.

a) Compaction testing shall be performed by an independent testing laboratory at intervals determined by the Village on the backfill for all underground utility construction and in all fill areas within public road rights-of-way. A Village designee shall be present during the performance of all required acceptance tests. The Village's designated inspector shall conduct a final inspection of all Improvements and, if acceptable, certify such Improvements as being in compliance with the standards and specifications of the Village.

b) The Village shall provide timely notice to the Developer whenever inspection reveals that an improvement does not conform to the Village's adopted standards and specifications or is otherwise defective. The Developer shall have 30 days from the issuance of such notice to correct or substantially correct the defect, unless a longer compliance time is specified in this Agreement. The Village shall not declare a default under this Agreement during the 30 days or otherwise specified correction period on account of such defect unless the Village determines that immediate action is required in order to remedy a situation which poses a significant

threat to health or public safety. The Developer shall have no obligation to correct defects in, or the failure of, any improvement found to exist or occurring after the one-year guarantee period expires.

c) The Developer agrees that the Improvements will not be accepted by the Village until:

1. all outstanding fees and charges to be paid by the Developer under the Ordinances or as required by this Agreement have been paid in full;
2. all conditions imposed for the final approvals of the associated subdivision plat has been satisfied;
3. the associated subdivision plat, restrictive covenants, and all required public easements have been duly recorded in the Office of the Register of Deeds for Dane County, Wisconsin;
4. affidavits and lien waivers are received by the Village indicating that all Contractors providing work, services or materials in connection with the Improvements have been paid in full for all such work, services and materials; and
5. the Village has received evidence through a satisfactory title report that no liens (such as outstanding mortgages and special assessments) or other encumbrances encumber the Improvements, except for those approved in writing by the Village; and
6. the Village has determined that all Improvements have been constructed and/or installed in a good and workmanlike manner, including any work necessary to adequately address the issues outstanding at the time of conditional engineering approval of the Improvements.

3) Insurance Required of Contractors. The Developer shall assure that its general contractor maintains insurance per the schedule in this Section. The Developer shall require the general contractor to provide to the Village's Director of Public Works a current certificate of insurance to evidence compliance with this Agreement. The Developer shall require each Contractor who is not covered by the general contractor's insurance policy, as determined by the general contractor's certificate of insurance, to provide to the Village's Director of Public Works a current certificate of insurance. Insurance certificates shall list the Village of McFarland and Town & Country Engineering as additional named insureds, and all policy provisions or endorsements

necessary to evidence the additional insured coverage shall be provided with the certificate. Minimum required coverage limits are:

- A. Workers' Compensation per applicable state and federal law, and in the amount of \$500,000 for employer's liability.
- B. Contractor's Liability Insurance, which shall also include completed operations and product liability coverages and shall not exclude coverage for property under the care, custody, and control of the Contractor, in the following amounts:
 - a) General Aggregate (except Products/Completed Operations): \$1,000,000.
 - b) Products/Completed Operations: \$1,000,000.
 - c) Personal and Advertising Injury: \$1,000,000.
 - d) Each Occurrence (Bodily Injury and Property Damage): \$1,000,000. Property damage liability insurance shall provide Explosion, Collapse, and Underground Coverages where applicable.
 - e) Excess Liability—General Aggregate: \$1,000,000.
 - f) Excess Liability—Each Occurrence: \$1,000,000.
- C. Automobile Liability: Either:
 - a) Bodily Injury—Each Person: \$1,000,000; Bodily Injury—Each Accident: \$1,000,000; and Property Damage--\$500,000, OR
 - b) Combined Single Limit (Bodily Injury and Property Damage)—Each Accident: \$1,000,000.
- D. Umbrella policy (pay on behalf form), with limits of \$2,000,000 for bodily injury, personal injury, and property damage on a combined basis.

4) Guarantee of the Work. The Developer agrees to guarantee all work performed under this Agreement against defects in workmanship or materials for a period of one (1) year from the date of Acceptance by the Village. If any damage or defect should appear during this guarantee period, the Developer agrees to make any and all required replacements or repairs of the defective work at the Developer's own expense. This expense includes total and complete restoration of any disturbed surface within the Development or on adjacent property, in a good and workmanlike manner and to the standards provided in this Agreement and the Plans. Each repair or replacement performed pursuant to this Section shall be guaranteed on the same terms and conditions (including the guarantee of all future corrections of defects) for an additional period equal to the original guarantee period from the completion thereof.

5) Park Dedication, Parkland Improvement Fees, Parkland Improvements.

a) The Developer agrees to dedicate, in partial fulfillment of the parkland dedication requirement for the Plat, that number of acres, and in addition, to pay the fee (the “**Park Dedication Fee**”) in lieu of dedication for the Plat, as shown in Exhibit “C”, attached hereto and incorporated herein by reference. The Park Dedication Fee shall be paid on a per Phase basis, prior to commencement of construction on such Phase, at the rate in effect as of the date on which an amendment to this Development Agreement is entered into for the Phase in question, with the total amount of the Park Dedication Fee being divided by the number of Dwelling Units in the entire Plat, and the resulting sum multiplied by the number of Dwelling Units in the Phase in question. The number of Dwelling Units shall be determined in accordance with the following table:

Single Family Residence = 1 Dwelling Unit

Multi-Family Twin Home = 1 Dwelling Unit per Twin Unit or Condominium Unit

Multi-Family Townhouse = 1 Dwelling Unit per Townhouse Unit or
Condominium Unit

Multi-Family Apartments = 1 Dwelling Unit per Apartment Unit

b) Park Improvement Impact Fees shall be paid upon the issuance of a building permit for each of the final lots of the Development at the then current rate.

c) For public parkland dedicated on the Plat the Developer shall properly grade and seed the parkland according to the approved Plans and pursuant to the Village Subdivision Ordinance, including installation of a water lateral to the property line of all dedicated parklands. In lieu of seeding the park, the Village may require Lakestone to provide a payment for costs related to the seeding and two years’ worth of maintenance expenses for the turf within Outlot 2 of the Plat.

d) Park improvements. The Village agrees to design and construct park improvements in its sole discretion within Outlot 2 of the Plat. The Village agrees to construct these improvements on or before December 31, 2027, provided the Developer has met its obligations under sub. paragraph c) above. The Village shall be responsible for the maintenance of Outlot 2 improvements, including turf and playground surfacing after the park improvements have been installed, except that the Developer shall be responsible for two years’ worth of maintenance expenses for establishment of the turf.

e) Library Improvement Impact Fees, Public Safety Center Impact Fees, Public Water Well Impact Fees and a Public Water Tower Impact Fees, at the then current, rates charged by the Village, will be paid by Developer at the issuance of Building Permits.

6) Time of Completion. Developer shall submit to the Village an amendment to this Agreement specifying the requested Phase of construction and such other

matters as are required herein or as may be requested by Developer with respect to the particular Phase in question. Developer agrees that Substantial Completion of the improvements required hereunder with respect to each Phase shall occur on or before 18 months after execution of a Development Agreement or an amendment hereto for the Phase in question. The finish course of asphalt shall be constructed by Developer on or before 18 months after Substantial Completion of a Phase. If construction of Improvements in any Phase does not commence within nine (9) months of approval of the associated Plans, the Plans associated with that Phase shall be resubmitted for review and approval. The Improvements shall be subject to any applicable regulations in effect at the time of each review, including any new ordinances enacted by the Village.

7) Reimbursement of Engineering, Inspections, Administrative and Miscellaneous Costs. Pursuant to the Village Subdivision Ordinance, the Developer agrees to reimburse the Village for engineering, inspections, administrative, legal and review fees incurred by the Village prior to and after the recording of the final Plat, at the times specified by the Village.

A. The Village shall provide the Developer with a quarterly accounting of all costs incurred under this Section. Upon request, the Village will provide the Developer with monthly accounting of all costs incurred under this Section.

B. The Developer shall pay all outstanding engineering, inspection, legal and administrative fees prior to the Village signing the final Plat.

C. The Developer shall pay all Village engineering, inspection and administrative expenses incurred after the Village signs the Plat and through the end of all construction in the Development.

8) Method of Improvement. The Developer hereby agrees to engage contractors for all work covered by this Agreement who are qualified to perform the work and who shall be listed as qualified for such work by the Village, or by one of its Commissions in the event the Village or Commission has published lists of approved contractors prior to the date of this Agreement. The Developer further agrees to use materials and make the various installations in accordance with the approved plans and specifications made a part of this Agreement by reference, and including those standard specifications as the Village or its Commission may have adopted prior to this date.

9) As-Built Plans. Prior to final acceptance, the Developer shall provide the Village with as-built plans. As-built plans shall be provided in both an electronic format and in hard copy. As-built plans in electronic format and readable by AutoCAD must be provided showing all horizontal and vertical locations of public sanitary, water, and storm water utilities i.e. manholes, hydrants, water main bends and tees, valves, sanitary and water lateral curb boxes, inlets, endwalls, etc. All vertical information shall

be on NAVD88 datum. The profile drawings must also show the diameter, length and slope of all pipes. In addition, Developer shall provide to the Village as-built-plans showing the finished surface elevations at all lot corners demonstrating positive drainage between lot corners, and also showing the finished surface elevation of all stormwater management ponds, swales and infiltration areas for the Phase in question. The horizontal location of all water and sewer services shall be located as follows:

- (i) Sewer laterals shall be located by the distance to the sewer 'wye' from the downstream manhole.
- (ii) The ends of stubbed sewer laterals for future connection shall be located and the elevations determined and shown.
- (iii) Water laterals shall be located by the distance from the nearest hydrant or valve on the main (whichever is closest) to the corporation stop.
- (iv) The distance to the curb stop from the main shall also be provided.

Any bends in the water main shall be indicated by the length from the nearest main-line valve. For mapping purposes, a single electronic point file of the entire development describing the as-built surface features of the new sanitary sewer, water system and storm sewer system, i.e. manholes, hydrants, water main bends, lateral curb boxes, valves, inlets, endwalls, etc., on the Dane County Coordinate system must be provided. This point file must include; northing, easting, elevation (NAVD88), and a point description. The Village's engineer can obtain the electronic file for the surface features, at the Developer's cost, when requested by either the Village or the Developer, provided that the Developer locates these features in the field. The Village Engineer will update all applicable Village maps and computer water and stormwater models. The cost of updating of Village maps and computer water and stormwater models to incorporate this development shall be borne by the Developer.

All sanitary sewer mains shall be televised in accordance with the Village's standard specifications. A colored DVD of the televising as well as a written report of the location of laterals and lengths of pipe shall be provided to the Village before final acceptance of the sewer.

10) Building Openings. Developer shall place a note on the Plat approved by the Village identifying the lots in the Plat which require certain minimum unprotected building foundation opening elevations two (2) feet above the peak water elevation during a 200-year storm event based on the approved stormwater management plan, so potential buyers are made aware of the lots as to which the foregoing is applicable. Developer shall record a restrictive covenant enforceable by the Village requiring compliance with all minimum opening elevations as shown on the plat.

11) Issuance of Building Permits. Developer shall request from the Village Board the waiver required under Village Ordinances in order to permit Developer to construct a model home. Developer shall provide access to the model home by means of a gravel driveway from a public thoroughfare sufficient to provide emergency vehicle access to the model home. No occupancy permit shall be issued for the model home until completion of all infrastructure Improvements.

12) Responsibility of Village.

A. The Village will perform no repair, maintenance, or snow plowing on any improvement until accepted by the Village. Developer shall assure that all dedicated streets shall be cleared of snow and ice after the issuance of any building permit and prior to acceptance by the Village Director of Public Works.

B. Except for the surface course of asphalt pavement, the Village shall accept the completed Improvements upon satisfactory testing and inspection of the same in accordance with the Village's standard practices, satisfactory placement of a binder course of asphalt pavement and satisfaction of all conditions of paragraph 2Q hereof.

13) Inspection. The Village shall inspect the status of the work in progress to determine if the work is progressing in a workmanlike manner pursuant to the Village Subdivision Ordinance and accepted industry standards. Notwithstanding the foregoing, the Developer has selected and appointed all Contractors, and the Village shall have no responsibility whatsoever for the Contractors or for the quality of the materials or workmanship provided by such Contractors. No authority granted herein to the Village in connection with the review or approval of the Improvements, shall be deemed to create any liability whatsoever on the part of the Village or its agents. No inspection of the Improvements by the Village or any agent of the Village shall alter the exclusive responsibility of the Developer for the construction and/or installation of such Improvements in a good and workmanlike manner and in accordance with the approved Plans and specifications.

14) Surety.

A. The Developer agrees to furnish to the Village, and to maintain in effect through the guaranty period provided in Section 4, at Developer's option either a letter of credit or a surety bond (in either case the "**Surety**") for each Phase in the minimum amount of 120% of the cost of the infrastructure Improvements for that Phase, in order to secure performance of this Agreement in accordance with the Village's Subdivision Ordinance. The amount of the Surety for Phase 1 shall include surety for completion of the Park Improvements described in Section 5.c, and in total shall be \$_____.

B. In the event the Developer fails to complete all Improvements in compliance with this Agreement and the Village approved Plans for the associated Phase, or fails to commence the repair or replace any Improvements as required during the guarantee period within thirty (30) days after notice from the Village and to promptly complete such repairs or replacements thereafter, or fails to pay any amounts required to be paid under this Agreement within ten (10) days of written notice thereof by the Village, the Village may perform or have performed all necessary work, and supply or have supplied all necessary equipment, goods, materials or services, to complete, repair or replace all or any part of some or all of the required Improvements in satisfactory form and/or satisfy any payment obligation of Developer hereunder, and recover all costs it incurs from the Surety. Notwithstanding the foregoing, in the event any required repair is necessary to prevent a substantial risk of harm to persons or property, no notice period shall be required. As used in this paragraph, "promptly" shall mean that repair or replacement is undertaken without delay, and completed as soon as reasonably practicable thereafter, considering all of the circumstances including, but not limited to, the nature of the required work, the availability of labor and materials, seasonal and other weather conditions, and the remaining term of the Surety, except that Developer's financial condition or circumstances shall not excuse any delay. In the event the Village validly exercises its right to recovery against the Surety, the Developer agrees to pay to the Village all of its costs and expenses, including reasonable attorneys' fees, relating to such exercise, and such expenses shall be recoverable from the Surety. The Surety shall be payable to the Village at any time upon presentation of (i) notice to the surety of the amount which the Village is entitled to be paid pursuant to the terms of this Agreement; (ii) an affidavit executed by the Village President, the Village Administrator or any other authorized Village officer stating that the Developer is in default under this Agreement; and (iii) the original of the Surety (if required by the surety). No provision in any Surety shall grant or require any opportunity for cure beyond that afforded Developer under this Agreement prior to the payment of the Village's claim or draft.

C. As work progresses on installation of Improvements constructed as part of this Agreement, the Village Engineer, upon written request from the Developer from time to time, shall recommend a reduction in the amount of the Surety as hereinafter provided when portions of construction (water, sanitary sewer, street, sidewalk, greenway or other Improvements) have been accepted by the Village. Upon such recommendation, the Village Community & Economic Development Director is authorized to reduce the amount of the Surety. At no time during the construction shall the Surety be reduced to less than fifteen percent (15%) of the original amount, plus any amount determined sufficient by the Village to cover all costs of any remaining construction.

D. Upon written request by the Developer and determination by the Village that the Developer has reached substantial completion of the public Improvements for the Phase in question in accordance with the terms of this

Agreement, the Village shall allow the Surety to be reduced to no less than fifteen percent (15%) of the original amount, which shall be held for a period of 14 months from the date of acceptance in accordance with paragraph 2(Q) of this Agreement, and then shall be released in its entirety by the Village.

E. A similar Surety shall be provided by the Developer for each subsequent Phase of the development as required.

F. Exhibit "E", attached hereto and incorporated herein by reference, describes the Public Improvement Costs secured by the Surety furnished by the Developer and approved by the Village for Phase 1 of the Plat. A similar exhibit shall be provided by the Developer and approved by the Village for each subsequent Phase of the Development as required.

15) Miscellaneous.

A. Binding Effect. The terms and conditions of the Agreement shall run with the land and be binding upon the parties, their heirs, successors and assigns.

B. No Waiver. Nothing set forth in this Agreement shall be construed as, nor is intended to be, a waiver or release of any obligations imposed upon the Developer or the Village by the Ordinances, or any statutes or regulations applicable to the Improvements. No approval by the Director of Public Works, Village Engineer, Village Attorney, or any other person acting on behalf of the Village shall be construed as a waiver of any of the requirements of the Ordinances, or any statute or regulation governing the Improvements.

C. Developer as Independent Contractor. Notwithstanding any other provisions of this Agreement to the contrary, the Developer is an independent contractor, and nothing herein shall be construed so as to make the Developer, its Contractors or consultants agents of the Village, or the Village, its employees, agents or consultants agents of the Developer. However, this does not limit the Village regulatory control over Developer regarding the quality of the required work or any other regulatory power of the Village. Furthermore, nothing contained in this Agreement shall be construed as creating any contractual relationship whatsoever between the Developer and the Village's consultants (planning, engineering, financial, and legal) or any persons or entities other than the Village.

D. Remedies for Breach. In the event of any breach by Developer of this Agreement, whether or not subsequently cured, the Developer shall pay, in addition to any damages or other relief obtained by the Village, all of the Village's costs and expenses, including reasonable attorneys' fees, relating to such breach, all of which shall be due and payable as incurred and shall be added to any judgment obtained by the Village.

E. No Third-Party Beneficiaries. This Agreement is intended solely to regulate the obligations of the parties hereto with respect to one another. Nothing in this Agreement is intended to create, admit or imply any liability to any third-party nor to provide any benefit to any person, firm, corporation or governmental or non-governmental entity not a party to this Agreement.

F. Limitation on Damages. In no event and under no circumstances shall the Village be liable under this Agreement to Developer for consequential, incidental, indirect, special or punitive damages, and Developer waives any claim to such damages. By way of example, and not limitation, "consequential damages" include lost profits or income, the cost of replacement financing, damage to reputation, lost business opportunities and loss of property values or anticipated property value increases. This limitation shall be effective regardless of the theory of liability and regardless of any breach or claim of breach.

G. Payment Deadlines. Time is of the essence with respect to all payments required to be made by Developer under this Agreement.

H. Notices. Any notice required hereunder shall be given in writing, signed by the party giving notice, personally delivered or mailed by certified or registered mail, return receipt requested, to the following:

To the Village:

Village Administrator
Village of McFarland
5915 Milwaukee St.
McFarland, WI 53558-0110

To the Developer:

Brett Riemen & Brian Spanos
Lakestone Properties & Management, LLC
5910 Main Street
McFarland, WI 53558

I. Severability. If one or more of the provisions contained in this Agreement shall, for any reason, be held to be invalid, illegal or unenforceable, such invalidity, illegality or unenforceability shall not affect any other provision. If any such provision is held to be invalid as applied to any property or circumstances, such determination shall not affect the applicability of such provision to any other property or circumstances.

J. Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed an original. A facsimile or digitally transmitted signature is deemed the equivalent of an original signature.

K. Recording. Either the Developer or Village may record a copy of this Agreement or a memorandum of this Agreement with the Register of Deeds for Dane County, Wisconsin.

L. Reserved Powers. Nothing contained in this Agreement constitutes a waiver of the Village's sovereign immunity under applicable law. All rights are reserved. This Agreement constitutes the Village's permission to develop the Property in Phases. All future amendments concerning a Phase shall be substantially and materially in conformance with the terms of this Agreement and the requirements of Village ordinances except as otherwise provided in Section 15 (N), below.

M. Governmental Authority. The Developer understands and acknowledges that as a governmental entity, the Village cannot surrender its governmental authority by contract, and nothing in this Agreement shall be construed to preclude or limit the exercise by the Village of any governmental authority vested in it by law.

N. Standards and Ordinances. Whenever references are made in this Agreement to standards, codes, or Ordinances in accordance with which the Development is to be performed, the latest revision of the Village's Ordinances shall apply unless otherwise expressly stated. In case of conflict between any referenced standard or code on the one hand, and any provision of this Agreement on the other hand, the more stringent requirement shall govern. All applicable laws, ordinances, statutes, rules, regulations, or orders in effect at the time the relevant work under this Agreement is performed shall apply to the Developer and its Contractors, employees, and representatives. The Developer shall procure and pay for all permits, licenses, certifications and other applicable governing authority requirements and inspections and shall furnish any documentation, bonds, security, or deposits required to permit any work within Development.

O. Compliance with Laws. The Improvements shall be constructed in accordance with all Village, County, State, and Federal ordinances, laws and regulations. In the event of enactment or amendment of any federal or state laws after the date of this Agreement establishing new requirements or obligations related to any Improvements not yet accepted by the Village, the Developer shall take such action as may be necessary to comply with such laws.

P. Changes in Laws. In the event any future legislation is enacted by the state or federal government which preempts the Village's right to enforce any provision of this Agreement, the parties agree that such legislation shall not affect the obligations hereunder. The Developer waives any and all right it may have under such subsequent

legislation to the extent it would affect its rights or obligations hereunder. In the event the rights created or altered by such subsequent legislation are not, or cannot be waived, the Village shall have the right to terminate this Agreement.

Q. Neutral Construction. The parties acknowledge that this Agreement is the product of negotiations between the parties and that, prior to the execution hereof, each party has had full and adequate opportunity to have this Agreement reviewed by, and to obtain the advice of, its own legal counsel. Nothing in this Agreement shall be construed more strictly for or against any party because that party's attorney drafted this agreement or any part hereof.

R. Agreement Interpretation. All questions concerning interpretation or clarification of this Agreement or applicable Village Ordinances, including the discovery of ambiguities, conflicts, discrepancies, errors or omissions, or the acceptable performance thereof by the Developer, shall be immediately submitted in writing to the Village for resolution. The Developer shall, at all times, proceed with the work implementing the Development in accordance with the determinations, instructions, and clarifications of the Village, but all such determinations, instructions and clarifications shall be consistent with the terms of this Agreement. The Developer shall be solely responsible for requesting instructions or interpretations and shall be solely liable for any costs and expenses arising from its failure to do so.

S. Indemnification. The Developer will defend, indemnify and hold the Village and its officials, agents and employees harmless for all losses, claims, liabilities, expenses and costs, including reasonable attorney fees, arising from damages to property or injuries to the person occurring in connection with the making of the Improvements under this contract, except to the extent such damages or injuries are caused by the willful misconduct of the Village and its officials, agents and employees.

T. Restrictive Covenant. Developer agrees to record, contemporaneously with the recording of the Sperle Corners Plat that certain Restrictive Covenant (the "**Restriction**") restricting the sale of lots in future Phases without the prior written approval of the Village, a copy of which Restriction is attached hereto as Exhibit "D", and incorporated herein by reference.

[Signature page to follow]

Dated this _____ day of _____, 2025.

VILLAGE OF MCFARLAND

By: _____

Print Name: Stephanie Brassington

Print Title: Village President

Attest:

Print Name: Cassandra Suettinger

Print Title: Deputy Administrator/Clerk

STATE OF WISCONSIN)
)ss>
COUNTY OF DANE)

Personally came before me, _____, notary public for the above State and County, this ____ day of _____, 2025, the above named Stephanie Brassington and Cassandra Suettinger, to me known to be the person who executed the foregoing instrument and acknowledged the same in the capacity and for the purposes therein intended.

Print Name: _____

Notary Public, State of Wisconsin

My Commission expires:

By: Brett Riemen, Authorized Signatory

STATE OF WISCONSIN)
)ss>
COUNTY OF DANE)

Print Name: _____
 Notary Public, State of Wisconsin
 My Commission expires: _____

EXHIBIT "A"

Page 1 Legal Description of Plat

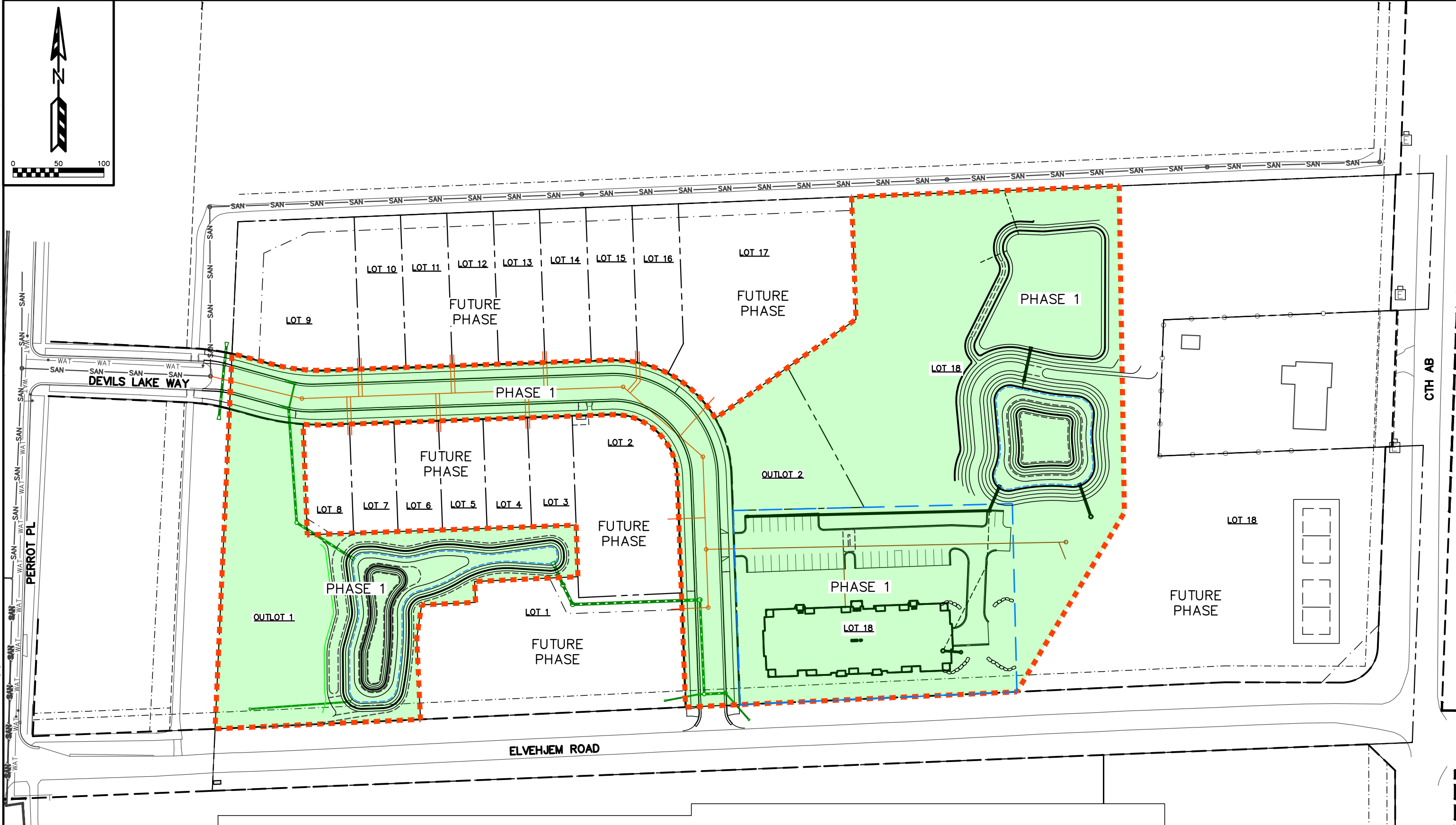
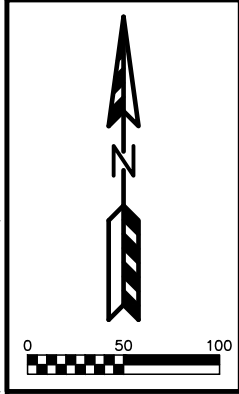
Being a part of the Southeast one-quarter of the Southeast one-quarter of Section 2, Township 6 North, Range 10 East, Village of McFarland, Dane County, Wisconsin, being more particularly described as follows:

BEGINNING at the Southeast Corner of said Section 2; thence, along the South line of said Southeast 1/4, South 87°41'38" West, 1321.53 feet to the Southwest corner of said Southeast 1/4 of the Southeast 1/4, said point also being the Southeast corner of the plat of Park View Estates, recorded in Volume 57 of Plats on Pages 782 through 785 as Document No. 3459436; thence, along the East line of said plat, North 02°34'49" East, 626.90 feet to the Southwest corner of Lot 3 of Certified Survey Map (CSM) No. 15493, recorded in Volume 111 of CSMs on Pages 284 through 286 as Document No. 5637506; thence, along the South line of said CSM and its Easterly extension, North 87°40'27" East, 1316.58 feet to the Southeast corner of said CSM, lying on the East line of aforesaid Southeast one-quarter; thence, along said East line, South 02°07'34" East, 149.72 feet to the Northeast corner of Lot 1 of CSM No. 1455, recorded in Volume 6 of CSMs on Page 144 as Document No. 1400799; thence, along the North line of last said CSM, South 87°41'15" West, 291.58 feet to the Northwest corner of said Lot 1; thence, along the West line of said Lot 1, South 02°07'34" West, 150.00 feet to the Southwest corner of said Lot 1; thence, along the South line of said Lot 1, North 87°41'15" East, 291.58 feet to the Southeast corner of said Lot 1, lying on said East line of the Southeast one-quarter; thence, along said East line, South 02°07'34" East, 327.23 feet to the **POINT OF BEGINNING**.

The above-described parcel contains 780,586 sq. feet or 17.9198 acres, more or less, and is **SUBJECT TO** easements for Public road right-of-way purposes for Elvehjem Road and County Trunk Highway "AB" and is **ALSO SUBJECT TO** all other matters of record and/or fact.

Page 2
Phasing Plan

NOTE: To be updated by Developer prior to recording Development Agreement with approved plans.



SPERLE CORNERS - VILLAGE OF MCFARLAND

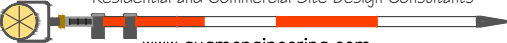
PHASING PLAN

EXHIBIT: 1 OF 1

DATED: OCTOBER 17, 2025

QUAM ENGINEERING, LLC

Residential and Commercial Site Design Consultants



www.quamengineering.com

4604 Siggelkow Road, Suite A - McFarland, Wisconsin 53558
Phone (608) 838-7750; Fax (608) 838-7752

EXHIBIT “B”

Engineering Plans

See attached.

NOTE: To be updated prior to recording Development Agreement with approved plans.

EXHIBIT "C"

Parkland Dedication and Fees in Lieu of Dedication

1. Dedication requirement:

147 Duplex, Townhouse and Multi-Family Dwelling Units (collectively "MFDU") @ 1,463 square feet/unit = 215,061 square feet or 4.94 acres.

2. Dedication by plat:

Outlot 2 = 15,342 square feet
8 feet for path Elvehjem Road and
CTH AB (excluding 2921 CTH AB frontage) = 13,663 square feet

Total = 29,005 Square feet or 0.67 acres

3. Fee in lieu of dedication:

215,061 – 29,005 = 186,056 square feet
29,005 / 215,061 = 13.4869% (percent of required dedication provided by developer)

4. Fee in lieu of dedication by unit (by way of example for 2025):

MFDU fee in lieu of dedication = \$3,321.52 (as of 1/1/2025)*
MFDU: 0.134869 x \$3,321.52/MFDU* = \$447.97 per MFDU*

Total = \$2,873.55 per MFDU*

*The Park Fee In Lieu of Dedication shall be paid on a per Phase basis, prior to commencement of construction on such Phase, at the rate in effect as of the date on which this Development Agreement is entered into, or as of the date on which an amendment to this Development Agreement is entered into for the Phase in question.

EXHIBIT “D”

Restriction as to Future Sale of Lots

See attached.

	Declaration of Conditions, Covenants and Restrictions Sperle Corners, Village of McFarland, Dane County, WI
<i>Document Number</i>	<i>Title of Document</i>

WHEREAS, Lakestone Properties & Management, LLC, a Wisconsin Limited Liability Company (“**Owner**”) owner of those lots described in Exhibit “A” attached hereto and incorporated herein by reference, (the “**Lots**”), will construct certain public work improvements in construction phases as authorized by the Village of McFarland to provide services to said Lots; and

Name and Return Address:

Allen Reuter
Reuter, Whitish & Evans, S.C.
4600 American Parkway, Suite 104
Madison, Wisconsin 53718

See Exhibit “A”
(Parcel Identification Number)

WHEREAS, authority to construct said public work improvements in construction phases is contingent upon the Owner recording a deed restriction restricting the sale of Lots included in future construction phases without prior approval of the Village of McFarland.

NOW, THEREFORE, the undersigned Owner hereby declares and provides:

1) The Village of McFarland and Owner have entered into a Development Agreement for Sperle Corners containing certain agreements of the parties with respect to construction and development of the Sperle Corners Subdivision. Record notice is hereby given of such Development Agreement. A copy of the Development Agreement is maintained at the Offices of the Village of McFarland.

2) That the Lots shall not be sold or transferred until such time as an instrument is recorded by the Village of McFarland in the Dane County Register of Deeds office, approving the sale or transfer of said Lots. The Owner shall be entitled to a release of the restrictions contained herein as to those Lots governed by a subsequent development agreement (or amendment to the existing Development Agreement) at such time as surety is provided to the Village of McFarland to ensure the performance of the contract for subdivision improvements for a future construction phase. This restriction shall not be in effect for those lots described in Exhibit “B”, attached hereto and incorporated herein by reference (the “**Phase 1 Lots**”).

Dated this _____ day of _____, 20_____.

**LAKESTONE PROPERTIES &
MANAGEMENT, LLC**

By: _____

Print Name: _____

Print Title: _____

**STATE OF WISCONSIN)
)ss>
COUNTY OF DANE)**

Personally came before me, a notary public for the above State and County, this
_____ day of _____, 20__, the above named _____,
to me known to be the person who executed the foregoing instrument and acknowledged
the same in the capacity and for the purposes therein intended.

Print Name: _____

Notary Public, State of Wisconsin

My Commission expires:

Drafted by:
Allen Reuter

Exhibit "A" to Restriction

Lots Subject to Restriction

Lots 1-17 within Sperle Corners, recorded in Volume _____ of Plats on pages _____ as Document Number _____ in the Dane County Register of Deeds Office, located in the Village of McFarland, Dane County, Wisconsin.

NOTE: To be updated prior to recording Restriction.

Exhibit “B” to Restriction

Phase 1 Lots

Lot 18 within Sperle Corners, recorded in Volume _____ of Plats on pages _____ as Document Number _____ in the Dane County Register of Deeds Office, located in the Village of McFarland, Dane County, Wisconsin.

NOTE: To be updated prior to recording Restriction.

EXHIBIT “E”

Public Improvements Costs Secured by Surety

See attached.

NOTE: To be provided by Developer prior to recording Development Agreement based on approved plans.

September 5, 2025

Re: Design Review of Lakestone Properties Sperle Corners Proposed Development

We completed our review of the detailed PUD plan dated August 5, 2025.

We recognize that the project is still developing, and not all items are fully designed and documented. Below is a list of items that we noted that aren't displaying compliance with applicable codes or should be considered during the design of the project.

- The fire lane plan that was submitted previously indicates that the maximum roadway width would be required to comply with turning radius. The current plan submission doesn't include where parking restrictions will be placed on Devils Lake Way. Based on our review on streeting will be permitted in front Lots 3-13. The north/south portion of Devils Lake Way will not be permitted to have street parking. It should be noted that the fire department access requires vertical clearance of 13' 6", with the design utilizing full street width the provided trees can't extend over the street unless they are taller than 13' 6".
 - The department's recommendation is not to permit the current proposed street width.
- Any curb area within 20' of fire hydrant will be required to be signed as no parking. The curb shall be painted to produce a 20-foot stripe extending ten feet to each side of the hydrant. Areas without curbs shall have a four-inch-wide yellow stripe placed on the pavement.
- The provide elevations for the apartment buildings on Lot 18 an eave height of 32' 1 ½", which would require aerial access. The current access width doesn't comply with the 26' width for aerial access.
- The traffic calming devices (speed bumps) are required to be approved by the fire code official and will be required to be submitted. Speed bumps will not be accepted, and any traffic calming must comply with the following:

- Maintain angle of approach or departure for fire apparatus to be 8 degrees or less. (NFPA 1901 12.3.2.2)
- Height less than 8" (NFPA 1901 12.3.2.2)
- The indicated phase 1 apartments site plan has a fire department access road that exceeds 150' without an approved turn-around. Occupancy of phase 1 will not be able to be granted until a turn-around is provided or the access is built out to provide the turn-around.
- When considering the Lot 18 units as a multi-family development the IFC requires (2) separate access roads unless all buildings are equipped with approved automatic fire sprinkler systems. It would be preferable to add a second access road to Elvehjem between the (37) unit and (40) unit apartment buildings. If not added, any building on the lot will require approved automatic fire sprinklers including a shed or an accessory building that is constructed in the future.
- Any building with 3 units or more will require an automatic fire sprinkler system and Knox key box. It is encouraged to provide Knox key boxes on all buildings and especially any buildings that are rented. The plans have not included floor plans for buildings, and it is understood that the floorplans more than likely haven't been developed. It should be noted though that any building with a fire sprinkler will require a riser room that is accessible without entering a private dwelling.
- The buildings will need to comply with IFC section 510 for emergency responder radio coverage.

Code sections for reference:

SPS 362.0903 (5)(a) Except as provided in pars. (b) to (cm), an automatic sprinkler system installed in accordance with IBC section 903.3 shall be provided throughout all buildings with a Group R fire area.

IBC 509.1 Fire protection equipment shall be identified in an approved manner. Rooms containing controls for air-conditioning systems, sprinkler risers and valves, or other fire detection, suppression or control elements shall be identified

for the use of the fire department. Approved signs required to identify fire protection equipment and equipment location shall be constructed of durable materials, permanently installed and readily visible.

IBC 916.1 Emergency responder radio coverage shall be provided in all new buildings in accordance with Section 510 of the International Fire Code.

IFC 503.2.1 Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm), exclusive of shoulders, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13 feet 6 inches (4115 mm).

IFC 503.2.4 The required turning radius of a fire apparatus access road shall be determined by the fire code official.

IFC 503.3 Where required by the fire code official, approved signs or other approved notices or markings that include the words NO PARKING—FIRE LANE shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. The means by which fire lanes are designated shall be maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.

IFC 503.4.1. Traffic calming devices shall be prohibited unless approved by the fire code official.

IFC 504.1 Exterior doors and openings required by this code or the International Building Code shall be maintained readily accessible for emergency access by the fire department. An approved access walkway leading from fire apparatus access roads to exterior openings shall be provided when required by the fire code official.

IFC 507.5.1 Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 400 feet (122 m) from a hydrant on a fire apparatus access road, as measured by an approved route

around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the fire code official.

Exceptions:

1. For Group R-3 and Group U occupancies, the distance requirement shall be 600 feet (183 m).

2. For buildings equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the distance requirement shall be 600 feet (183 m).

IFC D103.4 Dead-end fire apparatus access roads in excess of 150 feet (45 720 mm) shall be provided with width and turnaround provisions in accordance with Table D103.4.

IFC D105.1 Where the vertical distance between the grade plane and the highest roof surface exceeds 30 feet (9144 mm), approved aerial fire apparatus access roads shall be provided. For purposes of this section, the highest roof surface shall be determined by measurement to the eave of a pitched roof, the intersection of the roof to the exterior wall, or the top of parapet walls, whichever is greater.

IFC D105.2 Aerial fire apparatus access roads shall have a minimum unobstructed width of 26 feet (7925 mm), exclusive of shoulders, in the immediate vicinity of the building or portion thereof.

IFC D105.3 At least one of the required access routes meeting this condition shall be located within a minimum of 15 feet (4572 mm) and a maximum of 30 feet (9144 mm) from the building and shall be positioned parallel to one entire side of the building. The side of the building on which the aerial fire apparatus access road is positioned shall be approved by the fire code official.

IFC D106.1 Multiple-family residential projects having more than 100 dwelling units shall be equipped throughout with two separate and approved fire apparatus access roads. Exception: Projects having up to 200 dwelling units may have a single approved fire apparatus access road when all buildings, including

nonresidential occupancies, are equipped throughout with approved automatic sprinkler systems installed in accordance with Section 903.3.1.1 or 903.3.1.2.

VOM 26-146 (a) Required. Newly constructed commercial buildings and residential buildings containing three or more dwelling units, or when access to or within a structure or an area is unduly difficult because of secured openings or where immediate access is necessary for lifesaving or firefighting purposes, the Fire/EMS Chief may require that a key box be installed in an accessible location. The key box shall be a type approved by the Fire and Emergency Medical Services Department and shall contain those keys found to be necessary to provide emergency access.

VOM 26-176 Where the Village water system is available, and any portion of a commercial or industrial building containing 7,000 square feet or more of gross interior area, or a residential building containing more than two dwelling units and containing 7,000 square feet or more of gross interior area, is set back more than 300 feet from the centerline of the nearest abutting public right-of-way, the owner shall install approved fire hydrants at such owner's expense. The set back distances shall be determined by measuring the travel distance from a municipal hydrant along the centerline of a municipal street or private road suitable for travel by fire apparatus.

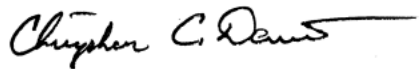
VOM 26-177 (a) One hydrant shall be located at the main entryway to such building or complex. Additional hydrants shall be provided around the perimeter of the building or complex so that no hydrant is more than 400 feet from any other approved hydrant as described in Section 26-176.

VOM 26-181 Fire hydrants shall be marked with the curb painted yellow. The curb shall be painted to produce a 20-foot stripe extending ten feet to each side of the hydrant. Areas without curbs shall have a four inch wide yellow stripe placed on the pavement.

The following items should be noted to assist in the project being completed smoothly and in a timely fashion:

- Village of McFarland is a delegated agent for the State of Wisconsin to perform fire protection and fire alarm systems reviews.
- Before the installation of any fire protection system a work permit is required to be issued by McFarland Fire & Rescue.
- Fire protection and fire alarm system reviews require the submission of architectural plans and would the owner to submit on behalf of the sprinkler and fire alarm contractors.
- Any privately owned piping including underground mains and laterals that are associated with or supply fire sprinkler systems require to be reviewed and inspected by McFarland Fire & Rescue before being concealed by building finishes or ground.
- Approval of the fire sprinkler system will require a flow test witnessed by McFarland Fire & Rescue within 1 year prior to the submission of plans for approval.
- The display of addresses for Lots 1, 10 and 11 may require additional signage at Devil's Lake Way. We would recommend reviewing with building inspection and McFarland Fire & Rescue Department before requesting occupancy inspections.

Sincerely,



Christopher C. Dennis, Chief
Fire & Rescue Department
Village of McFarland

CC:

McFarland Fire & Rescue Department Prevention
McFarland Community Development
McFarland Public Works

September 5, 2025

Re: Design Review of Lakestone Properties Sperle Corners Proposed Development

We completed our review of the detailed PUD plan dated August 5, 2025.

We recognize that the project is still developing, and not all items are fully designed and documented. Below is a list of items that we noted that aren't displaying compliance with applicable codes or should be considered during the design of the project.

- The fire lane plan that was submitted previously indicates that the maximum roadway width would be required to comply with turning radius. The current plan submission doesn't include where parking restrictions will be placed on Devils Lake Way. Based on our review on streeting will be permitted in front Lots 3-13. The north/south portion of Devils Lake Way will not be permitted to have street parking. It should be noted that the fire department access requires vertical clearance of 13' 6", with the design utilizing full street width the provided trees can't extend over the street unless they are taller than 13' 6".
 - The department's recommendation is not to permit the current proposed street width. **The attached Devils Lake Way Fire Lane Plan has been prepared. It indicates the fire lane with parking on the north and east side of Devils Lake Way and three "No Parking" signs on the south and west side of Devils Lake Way.**
- Any curb area within 20' of fire hydrant will be required to be signed as no parking. The curb shall be painted to produce a 20-foot stripe extending ten feet to each side of the hydrant. Areas without curbs shall have a four-inch-wide yellow stripe placed on the pavement. **The painting notes "WITHIN 10' OF FIRE HYDRANT" have been added to the plans. We subsequently received a note from Brian Berquist indicating "-Remove the yellow curb painting lines and notes (the Village does not paint curbs)". Please clarify what is required to satisfy this comment.**
- The provide elevations for the apartment buildings on Lot 18 an eave height of 32' 1 ½", which would require aerial access. The current access width doesn't

comply with the 26' width for aerial access. The parking lot has been adjusted to include 26' wide driveways to allow for aerial access as shown on the revised Apartments Site Plan.

- The traffic calming devices (speed bumps) are required to be approved by the fire code official and will be required to be submitted. Speed bumps will not be accepted, and any traffic calming must comply with the following:
 - Maintain angle of approach or departure for fire apparatus to be 8 degrees or less. (NFPA 1901 12.3.2.2)
 - Height less than 8" (NFPA 1901 12.3.2.2)

The speed bumps have been removed from the plans.

- The indicated phase 1 apartments site plan has a fire department access road that exceeds 150' without an approved turn-around. Occupancy of phase 1 will not be able to be granted until a turn-around is provided or the access is built out to provide the turn-around. A fire lane plan has been prepared for phase 1. The 150' fire lane in the parking lot, as well as the fire lanes in Devils Lake Way and Elvehjem Road will provide sufficient hose length distances.
- When considering the Lot 18 units as a multi-family development the IFC requires (2) separate access roads unless all buildings are equipped with approved automatic fire sprinkler systems. It would be preferable to add a second access road to Elvehjem between the (37) unit and (40) unit apartment buildings. If not added, any building on the lot will require approved automatic fire sprinklers including a shed or an accessory building that is constructed in the future. Buildings will include automatic fire sprinklers.
- Any building with 3 units or more will require an automatic fire sprinkler system and Knox key box. It is encouraged to provide Knox key boxes on all buildings and especially any buildings that are rented. The plans have not included floor plans for buildings, and it is understood that the floorplans more than likely haven't been developed. It should be noted though that any building with a fire sprinkler will require a riser room that is accessible without entering a private dwelling. Buildings will include knox key boxes.
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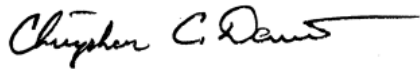
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- Approval of the fire sprinkler system will require a flow test witnessed by McFarland Fire & Rescue within 1 year prior to the submission of plans for approval.
- The display of addresses for Lots 1, 10 and 11 may require additional signage at Devil's Lake Way. We would recommend reviewing with building inspection and McFarland Fire & Rescue Department before requesting occupancy inspections.

Sincerely,

A handwritten signature in black ink, appearing to read "Christopher C. Dennis".

Christopher C. Dennis, Chief
Fire & Rescue Department
Village of McFarland

CC:

McFarland Fire & Rescue Department Prevention
McFarland Community Development
McFarland Public Works

September 8, 2025

Mr. Andrew Bremer, AICP
Community & Economic Development Director
Village of McFarland
5915 Milwaukee Street
P.O. Box 110
McFarland, WI 53558

Subject: Sperle Corners Development – Detailed Development Plan Submittal Review

Dear Andrew:

We have received the updated Detailed Development Plan submittal dated August 18, 2025 for Sperle Corners, a proposed new residential development north of Elvehjem Road and west of CTH AB, south of an existing multi-use trail, and east of some existing residential areas on Perrot Place. The preliminary plat, plans, and stormwater management report have been reviewed from a public works perspective. Our comments are shown below, organized by the appropriate document and/or drawing sheet number.

Construction Plans

All Sheets

- Confirm water main has 7 feet of cover. Some hydrant locations appear to show closer to 8 feet cover.
- Move all shutoffs for future large water laterals (6-inch and larger) to be within 6 feet of the main.
- Call out future private sewer and water mains as “PRIVATE”

Sheet C-3

- Spot grades should be provided at all lot corners and relative high/low points in the grading plan to allow for checking the final grades against the proposed grading plan.

Sheet C-6

- The existing hydrant at the current end of Devil’s Lake Way should be removed and relocated to the proposed new dead end at the Elvehjem Road intersection.
- Add main valves on both sides of the proposed hydrant near STA 5+05.
- Add a main valve on the east end of the proposed main connection for testing purposes.

Sheet C-7

- A valve should be added to the west leg of the tee at Elvehjem Road, and the northern valve on said tee be moved just north of the nearby proposed hydrant.

Sheet C-10

- The proposed hydrant near STA 55+28 on Elvehjem Road should have valves on both sides of the hydrant tee.
- Add a ditchline profile showing existing ground above the proposed water main to confirm proper bury depth.
- Add insulation between the new water main and proposed storm sewer crossing Elvehjem Road.

Sheet 16

- Confirm that the Village fire apparatus maneuver through the layout with parking as intended.

Final Plat

We have no further comments on the plat and recommend Village approval.

Stormwater Management Plan

The stormwater management design as proposed will meet the Village, County, and State performance standards, however there are several important items that will be needed prior to recommending Village approval:

- A plan view of the site showing the extent of overland water flow during a 200-year storm (assuming all inlets are plugged) must be provided to ensure water does not enter private properties.
- The Storm Sewer Sizing exhibit shows several pipes over capacity. Explanation should be provided for this (or upsizing of piping).

Please feel free to contact us with any questions or comments regarding this review.

Very truly yours,
TOWN & COUNTRY ENGINEERING, INC.



Brian R. Berquist, P.E.
President

cc: Mr. Lee Igl, Director of Public Works, Village of McFarland (*via email*)

Mr. Matthew Schuenke, Administrator, Village of McFarland (*via email*)

Mr. Ryan Quam, Quam Engineering (*via email*)

BRB:sai

J:\JOB#S\McFarland\MC-236-M6 Teppo-Sperle Property Review\1. Admin and PM\Review Letter 3.docx

September 8, 2025

Mr. Andrew Bremer, AICP
Community & Economic Development Director
Village of McFarland
5915 Milwaukee Street
P.O. Box 110
McFarland, WI 53558

Subject: Sperle Corners Development – Detailed Development Plan Submittal Review

Dear Andrew:

We have received the updated Detailed Development Plan submittal dated August 18, 2025 for Sperle Corners, a proposed new residential development north of Elvehjem Road and west of CTH AB, south of an existing multi-use trail, and east of some existing residential areas on Perrot Place. The preliminary plat, plans, and stormwater management report have been reviewed from a public works perspective. Our comments are shown below, organized by the appropriate document and/or drawing sheet number.

Construction Plans

All Sheets

- Confirm water main has 7 feet of cover. Some hydrant locations appear to show closer to 8 feet cover. **The water main has 7' of cover. The bottom of 6" water line is assumed to be fairly flat from the hydrant to the tee. The bury line is set approximately 3" above the adjacent curb elevation. The distance from the bury line to the bottom of 6" hydrant lead is to the nearest 0.5' increment and ends up being 8' deep from bury line to bottom of hydrant lead at each of the three hydrants.**
- Move all shutoffs for future large water laterals (6-inch and larger) to be within 6 feet of the main. **The attached plans dated 9-22-25 have been revised to address this item.**
- Call out future private sewer and water mains as "PRIVATE" **The attached plans dated 9-22-25 have been revised to address this item.**

Sheet C-3

- Spot grades should be provided at all lot corners and relative high/low points in the grading plan to allow for checking the final grades against the proposed grading plan. **Proposed spot elevations have been added.**

Sheet C-6

- The existing hydrant at the current end of Devil's Lake Way should be removed and relocated to the proposed new dead end at the Elvehjem Road intersection. **The attached plans dated 9-22-25 have been revised to address this item (See sheet C-6 and C-11).**
- Add main valves on both sides of the proposed hydrant near STA 5+05. **Valves have been added.**
- Add a main valve on the east end of the proposed main connection for testing purposes. **A 12" valve has been added near station 51+10 as shown on Sheet C-10.**

Sheet C-7

- A valve should be added to the west leg of the tee at Elvehjem Road, and the northern valve on said tee be moved just north of the nearby proposed hydrant. **The 12" valve has been added near station 58+45 and the 8" valve has been shifted north as shown on sheets C-6 and C-11.**

Sheet C-10

- The proposed hydrant near STA 55+28 on Elvehjem Road should have valves on both sides of the hydrant tee. **Two 12" valves have been added.**
- Add a ditchline profile showing existing ground above the proposed water main to confirm proper bury depth. **The ditch line profile has been added.**
- Add insulation between the new water main and proposed storm sewer crossing Elvehjem Road. **One 4'x8'x2" insulation sheet has been added.**

Sheet 16

- Confirm that the Village fire apparatus maneuver through the layout with parking as intended. The existing Devils Lake Way is 32' face to face. **The initial Devils Lake Way design was 28' face to face as discussed with Village staff during the initial staff meeting. The current design is 30' face to face. If the face to face distance needs to be adjusted or if parking needs to be restricted in certain locations, then this will need to be discussed/directed with Village staff and/or Fire Department. This comment should not affect the water main design or delay the Owner Approval Letter.**

Final Plat

We have no further comments on the plat and recommend Village approval.

Stormwater Management Plan

The stormwater management design as proposed will meet the Village, County, and State performance standards, however there are several important items that will be needed prior to recommending Village approval:

- A plan view of the site showing the extent of overland water flow during a 200-year storm (assuming all inlets are plugged) must be provided to ensure water does not enter private properties. **This item will be provided by Mark Fendry under a separate email. This comment should not affect the water main design or delay the Owner Approval Letter.**
- The Storm Sewer Sizing exhibit shows several pipes over capacity. Explanation should be provided for this (or upsizing of piping). **This item will be provided by Mark Fendry under a separate email. This comment should not affect the water main design or delay the Owner Approval Letter.**

Please feel free to contact us with any questions or comments regarding this review.

Very truly yours,
TOWN & COUNTRY ENGINEERING, INC.



Brian R. Berquist, P.E.
President

cc: Mr. Lee Igl, Director of Public Works, Village of McFarland (via email)
Mr. Matthew Schuenke, Administrator, Village of McFarland (via email)
Mr. Ryan Quam, Quam Engineering (via email)

BRB:sai

VILLAGE OF
McFarland
SUMMARY SHEET

MEETING DATE: Tuesday, October 28, 2025

SECTION: Business

DEPARTMENT: Public Works

CONTACT: Lee Igl, Public Works Director, Andrew Bremer, Comm & Eco Dev Director

AGENDA ITEM: Discussion and action regarding the award of contract for installation of a photovoltaic system for Lift Station #2.

PREVIOUS ACTION:

August 27, 2025 Public Works and Utility Committee recommended approval to the Village Board of the request for proposals for photovoltaic systems for Lift Station #2.

September 8, 2025 Sustainability & Natural Resources Committee recommended approval to the Village Board of the request for proposals for photovoltaic systems for Lift Station #2.

September 9, 2025 Village Board approves issuing a Request for Proposals for installation of a photovoltaic system for Lift Station #2.

September 10, 2025 Project put out for bid

October 2, 2025 Bid window closes.

September 16, 2025, Sustainability & Natural Resources Committee unanimously recommended the award of contract to Arch Solar.

ISSUE SUMMARY:

The new Lift Station #2 located at 6407 Pheasant Run has been designed to be "solar ready", including the ability to add solar panels to the roof and related electrical components within the building's electrical room. The Village Board approved issuing a Request for Proposal for installation of a photovoltaic system at their September 9, 2025 meeting. The Village received interest from six firms but only received one submittal, Arch Solar of Plymouth, WI. The installation would be completed in the spring of 2026. The project will start in 2025, making it eligible for a Focus on Energy tax credits.

FINANCIAL/BUDGET IMPACT:

The solar portion of the lift station project was budgeted at \$55,000. Funding is through the existing capital borrowing for the entire Lift Station #2 improvement project paid for by the sanitary sewer rates within the Utilities Fund.. The solar project bid was \$45,206.45. There will be some additional administration costs with installation and rebate submittal. The project should also be eligible for Elective Pay from the IRS of up to 30% of the project costs. HGA estimates the anticipated payback with incentives is approximately 11.3 years.

VILLAGE PLAN REFERENCE:

2021 Sustainability Plan. Includes the goal of achieving 50% of total municipal energy consumed per year generated from renewable by 2030 and 100% by 2040.



ORDINANCE REFERENCE:

None.

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Recommended motion:

Motion, second, to approve the award of contract to Arch Solar, for installation of a photovoltaic system at Lift Station #2, for \$45,206.45.

ATTACHMENTS:

1. Lift Station 2 Solar Recommendation Letter
2. 6407 Pheasant Run Arch Solar Bid

October 9, 2025

Village of McFarland
5915 Milwaukee Street, P.O. Box 110
McFarland, WI 53558

Attention: Mr. Matthew Schuenke, Village Administrator

Subject: Analysis of Proposals and Recommendation for Award of Contract; Lift
Station 2 Solar Installation; Village of McFarland

RFP Deadline: October 2, 2025 at 12:00 p.m. local time local time

Ladies and Gentlemen:

The purpose of this letter is to analyze the proposal received for the Lift Station 2 Solar Photovoltaic Array and to recommend award of a contract. This project involves the addition of a 14 kW solar array at the Village's Lift Station 2 Site.

The RFP was sent directly to six solar installation contractors and posted on the Village's website. One contractor submitted a bid.

A summary of the bids is as follows:

Contractor	Arch Solar, Inc.
Base Bid	\$45,206.45

The proposal was properly submitted.

Arch Solar is an experienced photovoltaic design and installation contractor that has completed many similar projects in the Dane County area. The bid prices are slightly higher than the pre-bid estimate due to elevated pricing for end-of-year projects. We recommend that Arch Solar, Inc. be awarded a contract for the base proposal for a total of \$45,206.45.

If you have any questions with respect to our thoughts on this matter, I am available at your convenience to discuss them with you.

Respectfully,
TOWN & COUNTRY ENGINEERING, INC.



Tim Stieve, P.E.
Project Engineer

TS:sai

J:\TCDead\McFarland\Mc-198-W2 Lift Station #2 Improvements\Spec and Reports\Solar\Recommendation Ltr.docx



Dear Mr. Stieve and the Village of McFarland

Arch solar is excited and proud to submit the following response. Our staff of dedicated energy professionals have successfully executed numerous residential, commercial, and utility projects resulting in homeowners, businesses, and non-profits throughout Wisconsin choosing a clean sustainable form of energy. Our mission is to educate, inspire and empower current and future generations to choose a clean, sustainable form of energy. We believe our mission aligns with the Village's desire to utilize solar PV not only for the energy it produces, but also for the educational impact it will have on the community. We are confident Arch Solar is uniquely positioned to ensure the success of these installations.

Arch Solar is more than capable of handling the entire workload outlined in the RFP. We are committed to executing successful installations, and strive to offer unparalleled customer service, industry-leading products and advanced technologies. We've built our company without high pressure tactics or misleading assumptions. Once an owner chooses to go forward with Arch, we have a dedicated Operations and Engineering team that expertly and efficiently guide our customers through the process of going solar. Arch also offers an in-house operations and maintenance team that can quickly be dispatched to handle any future issues with completed projects.

We have responded to all relevant sections of the RFP and would call attention to Arch Solar's established reputation as one of Wisconsin's leading solar installers. We thank you for your consideration and for the opportunity to highlight our capabilities and experience in completing projects of this nature.

Sincerely,
Kyle Pockey
Solar Energy Consultant
Arch Solar



I. Bidder Qualifications

- Wisconsin Contractor's License number: 1097745
- Focus on Energy Trade Ally
- Member of Amicus Solar Cooperative
- Multiple Master Electricians and NABCEP Certified Installers and Office personnel

II. Scope of Work

Location: McFarland Lift Station 2

Project Address: 6407 Marsh Woods Drive, McFarland, WI 53558

System Size: 14.17 (kWdc)

Project Design Details:

	Quantity	Make/Model
Modules	26	ZNShine ZXM7-SHLD144 545-watt
Inverter	26	Enphase IQ9N-3P microinverters

Design or other notes: Layout is subject to change at the request of owner or for technical requirements.

Approximate Layout of Project:





This project includes but is not limited to:

- 1) Install (26) – ZNShine ZXM7-SHLD144 545-watt solar modules.
- 2) Install (26) – Enphase IQ9N-3P microinverters.
- 3) Install IronRidge XR100 module racking
- 4) Install all combiner boxes, disconnect switches, overcurrent protection devices, meters, enclosures, conduit, wire, warning placards and any other equipment required for a code compliant photovoltaic system.
- 5) Install all performance monitoring equipment.
- 6) Obtain all required permits and approvals from any authorities having jurisdiction.
- 7) Complete paperwork for Focus on Energy incentive, if applicable.
- 8) Administer interconnection agreement with local electric utility.



Installed system price - \$45,206.45

Base Bid Pricing Table

SITE AND SYSTEM INFO	DETAILS	
System Type	RM Gable Fixed	
Module	ZNShine ZXM7-SHLD144 545-watt	
Module Quantity	26	
DC Watts	14170	
COMPONENT	PRICE	PRICE PER WATT
Panels	\$ 7,207.70	\$ 0.5087
Inverters	\$ 11,566.74	\$ 0.8163
Racking	\$ 6,712.00	\$ 0.4737
Ballast Block	\$ -	\$ -
BOS	\$ 4,618.46	\$ 0.3259
Add On Items	\$ -	\$ -
Labor	\$ 6,145.00	\$ 0.4337
Shipping	\$ 430.00	\$ 0.0303
Rental Equipment	\$ 1,550.00	\$ 0.1094
Permitting	\$ 2,580.00	\$ 0.1821
Engineering	\$ 4,396.55	\$ 0.3103
Total	\$ 45,206.45	\$ 3.1903

Components and warranties:

Modules – ZNShine ZXM7-SHLD144

- 545-watt output
- 12-year product warranty
- 30-year linear power performance warranty

Inverters – Enphase IQ9N-3P microinverters

- 427-watt output
- 25-year limited warranty
- Includes panel level production-monitoring

Racking – IronRidge XR100

- 25-year product warranty



Bid Documents:

Receipt of the following bid documents is included in Contractor's pricing:

- Bid Specifications
- Roof Layout Plan

Logistics of project

A. Anticipated Contractor installation timeline:

Arch's anticipated installation would have substantial completion of the project to take place in Q1-Q2 of 2026, with commissioning to follow.

B. Anticipated material lead times:

All PV panels, inverters, racking, and balance-of-system components are stocked in our Plymouth and Milwaukee warehouses. When the stock of any component is depleted, we utilize local vendors to fulfill orders and restocking.

C. Rebates or incentives associated with the project:

Owner will be eligible for all incentives included within the 2022 Inflation Reduction Act, namely the 30% Federal Tax Credit for renewables as well as the 10% Domestic Content Bonus Credit.

Owner will also be eligible for Focus on Energy Prescriptive Renewable Incentives. Arch Solar will apply for and provide support with the Owner's application for the Focus incentives, with incentives being paid directly to the Owner.

The project will meet all criteria required by Focus on Energy to qualify for the Prescriptive Renewable Incentives.



III. Arch Solar Profile

A. Company Profile

Arch Electric Inc. was founded by Ed and Mindy Zinthefer in 2003. Arch is headquartered in Plymouth, WI with an office and warehouse in Milwaukee, WI and Madison, WI as well. Arch's Wisconsin State Electrical Contractor License number is WI # 1097745. Beginning in 2022, Arch Solar subdivided as the business unit focused on primarily residential and small commercial customers. In 2023, Arch developed what were originally departments into independent, but collaborative, business units. Arch Solar Inc. works on primarily residential solar with some non-profit, agricultural and small commercial projects.

Arch is an equal opportunity employer that invests in its staff development and encourages diversity and inclusiveness in accordance with the Wisconsin Fair Employment Act. We have women and minorities in key leadership positions. Our Professional Employment Organization is Empower HR, which is a nationally recognized expert in all facets of workplace compliance, leadership development, career development, and HR best practices training.

Currently, Arch as a whole has over 170 full-time employees including Master, Journeymen, and Apprentice Electricians. We have 29 NABCEP-trained professionals on staff, nine of whom are in the field. The Certifications vary from NABCEP Associate to NABCEP Certified Installers and NABCEP Technical Sales. Arch Solar Inc itself has over 30 employees, many with NABCEP credentials and other specializations. Every person our customers interact with is an Arch employee, and we're proud of that fact!

B. Efficiency

Our experienced operations staff allows for us to manage the significant workload that residential, commercial, and utility solar projects represent. We utilize a CRM to efficiently track where customers are at in the decision-making process, and have integrated our project management tool into our CRM so there is seamless handoff from our sales to operations team.

Arch has an excellent website and growing social media presence that we can leverage to promote the renewable project throughout your community. We can easily add landing pages or customized forms to our website, and have community partnerships that we can leverage to bring more awareness to the project, i.e. Madison Mallards sponsorship.

C. Financial profile

Arch is a financially stable company with good cash-to-asset ratio and excellent credit. In 2018 we purchased the building we had been leasing in Plymouth. Arch also opened its Milwaukee office in December of 2018 to better serve the market there. There was tremendous growth in 2018 for Arch that has strengthened our longevity and commitment as a long term player in the Wisconsin solar industry. In early 2020 Arch opened its Madison office and warehouse on Vondron Rd in Madison. In 2022 Arch solar leased a larger building with warehouse in Milwaukee and has been growing our team in that area and throughout the southern half of our great state. Arch's approach to growth is measured and our financial position is strong. More information on our financial situation available upon request. Arch Solar Inc. was originally a department of Arch Electric Inc, but is now an independent business focused on residential, small commercial and non-profit solar.



D. Additional benefits

Arch is excited to offer educational sessions throughout the project for interested citizens of Verona and beyond. We'd love to facilitate such opportunities to ensure the program's success as well as leveraging our existing community partnerships such as our partnership with non-profit groups like RENEW Wisconsin, the MREA, and our sponsorship of the Madison Mallards to bring more awareness to the program overall.

Arch Solar believes in providing a living wage for all employees. We ensure our employees are well-trained, well-compensated, and highly qualified for the work we ask them to do. Rather than simply post to social media about equity and inclusion, we're busy participating. Arch has also been a long-term supporter of non-profit groups like the MREA and RENEW WI. Arch Solar Inc. was founded by Ed and Mindy Zinthefer in 2003. Arch is a Woman Owned Business Enterprise with Mindy Zinthefer being the owner and CEO. There is also a second generation succession plan for the company as Jolynn and Cody VanGinkel, have become integral leaders of the management team. Arch is headquartered in Plymouth, WI with offices in Milwaukee and Madison, Wisconsin. Their Wisconsin State Electrical Contractor License number is WI # 1097745.



IV. Qualifications of Project Team

Key personnel and their qualifications for this project are as follows, and more info can be found about our fantastic team at <https://archelec.com/about-our-team/>

A. Arch Management Team



Mindy Zinthefer – Chief Executive Officer

Mindy has been with Arch since its inception in 2003. She encouraged Ed to take a giant leap of faith and follow their vision for a company with the utmost regard to quality, service, and environmental stewardship. Her role in Arch now centers on administration, strategic development and overall business sustainability.



Ed Zinthefer – Chief Technical Officer and Director of Operations WI Master Electrician # 270617 and NABCEP #032407-74

Ed is a 20+ year Master Electrician. In 2005, Ed became one of the first Wisconsin NABCEP Certified Solar PV Installers. He is also one of nine IREC Certified Master PV Trainers. In the past, he was been a Compliancy Agent for Focus on Energy and an instructor at the MREA. Ed is involved in system design, procurement and overall quality control.



Jolynn Van Ginkel – Vice President

Jolynn grew up in the family business and is the second- generation preparing to continue to lead the company toward its ambition of serving the underserved solar market in Wisconsin. She is intrinsically engaged with all aspects of the business and has done everything from driving a forklift while unloading semis, to managing the parts and pieces of inventory to creating Arch's digital presence.



Angie Kochanski – Director of Business Development

Angie has been in the solar industry since 2012 and has a diverse background in various sectors of the industry. In early 2022 Angie was promoted to Director of Arch Solar, the team responsible for residential and small-scale solar projects. She takes pride in assisting people as they make a commitment to invest in solar and ensures they feel confident through the process. Angie has a 3kw solar installation on her home in Milwaukee and enjoys sharing her personal solar experience with others. Angie has had experience leading 6 group buys in recent years.



Justin Van Camp – Head of Design and Engineering

Justin began his career at Arch in 2019 as a Solar Designer / Engineer. He graduated from UW-Oshkosh with a BS in Environmental Engineering and has also received his NABCEP PV Design Specialist degree and FAA Part 107 Drone Pilot Certification. He loves that he can come to work and make the world a better, cleaner, more sustainable place and fight against climate change. When he is not working, he enjoys golfing, hiking/backpacking/camping, and playing video games.



Kyle Pockey – Solar Energy Consultant

Kyle graduated in Spring of 2022 with a degree in Electrical Engineering Technology from Waukesha County Technical College and joined Arch later that fall. Kyle has an extensive sales and support background in both the automotive repair and construction equipment industries. He is eager to align his skills with his passion for sustainability at Arch! He is a resident of Madison and loves helping his neighbors evaluate their solar potential.



Operations, Maintenance, Design & Admin Team

Arch Solar has a talented team of solar professionals that make up our O&M, Design and Operations teams. They manage every aspect of project setup, including permitting, interconnection applications and post installation service.

Dani Beierschmitt – Solar PV Designer



Laura Schneider – Solar Project Coordinator



Tyler Weber- Service & Quality Management Specialist



Ryan Punzenberger – Head of Estimating and Procurement



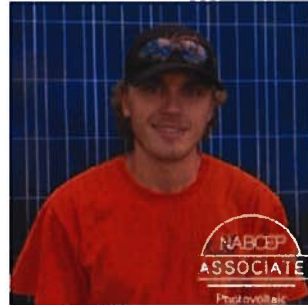
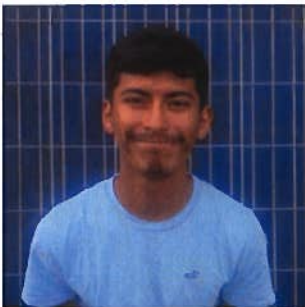
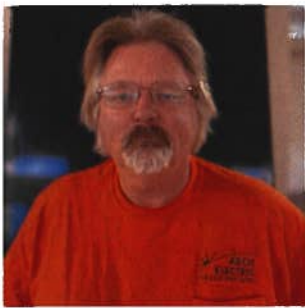
Josh Wall – Asset Manager





Installation Crews

Arch has grown our installation team in size and number over the past few years. Arch has 3 full-time electricians on staff and several individuals pursuing an electrical license as part of our apprenticeship program. Our installers are essential to our success, and we've been able to grow this team to over a dozen of the hardest working folks you'll meet. Subcontractors are not used by Arch Solar for the design, installation or maintenance of your system.





V. Business Practices

A. Permitting and interconnection:

Arch operations staff ensure that one-line diagrams and other permitting requirements are submitted in a timely manner. This should enable the permitting process to move quickly, depending on the workload and turnaround time for permitting agencies. Interconnection timing in many ways is determined by the utility and their workload, but we will have staff and/or subcontractors ready for commissioning when they are scheduled.

B. Financing and incentives

Arch staff are happy to help facilitate successful Focus on Energy incentive reservation and follow-up. We will provide all relevant solar information required by lenders and incentive providers in a timely manner.

C. Change Orders

We will make every effort to minimize or eliminate change orders, but they do happen occasionally. If a change order is needed, we notify the customer before any work has begun and provide them with the cost and other change order details.

D. Work practices

Arch Solar takes safety incredibly seriously. Many of our staff have taken (or are in the process of taking) OSHA 10 and OSHA 30 training courses. Our teams discuss safety hazards and follow all OSHA required safety practices. We have regular unannounced safety audits performed by consultants and staff.



VI. Work Quality

A. Warranties:

Installation Warranty:

Workmanship: All Arch Solar installations include a 5-year workmanship warranty that is detailed in the example contract found in the appendix (exhibit C).

Equipment Warranties: Please refer to the appendix for spec sheet & warranty information.

B. Installations

Arch Solar shows that they take pride in their work by returning to a job site to broom-clean condition upon completion of the installations. During installations we take all necessary steps to reduce negative impacts to the property, and our in-house operations team keeps the customers well informed of the work schedule so they can plan accordingly. In most cases residential installations take 2 days to complete, minimizing the disturbance for all involved. The addition of batteries or ground mounting will increase the time required.

C. Project completion

Arch Solar monitors quality throughout the installation and interconnection process. We have quality control procedures and checklists that we require for all our installations, no matter how small.

In addition to our own quality control procedures, we have vast experience working with inspectors, AHJ's and utilities, which gives our technicians the ability to anticipate questions and challenges before they occur.

Commercial References

References

Mike O'Connor – Dominion Properties

<https://dominion-properties.com/Development/SageOnJackson/>

Cell: (414) 406-8888

Mike Schneider – School Sisters of St. Francis

<https://www.jsonline.com/story/money/2017/07/20/school-sisters-saint-francis-get-largerooftop-solar-array/493253001/>

Cell: (414) 588-0540

David Nankin – Fairfield Marriot Hotel – Pleasant Prairie

<https://archelec.com/fairfield-marriot-in-pleasant-prairie-goes-solar/>

Cell: (847) 910-5055

Cliff Canovi – IKEA Oak Creek

<https://www.jsonline.com/picture-gallery/money/2018/08/01/foxconn-solarpanels/878732002/>

Office: (414) 766-0560 x1200

Ken Manninen - Alliance Manufacturing, Inc.

<https://www.alliancemfginc.com/alliance-goes-green-with-solar-energy/>

Office: (920) 922-8100





Acknowledgement:

The undersigned represents that it has examined the sites, read the RFP and understands the documents and conditions affecting the project. The undersigned understands and will perform all work associated with this project within all applicable laws, ordinances, rules and regulations that may affect cost, progress or performance of the work. The undersigned accordingly submits the following proposal. The undersigned has examined any and all Addenda if any issued during the Proposal period and is familiar with all the contents thereof and acknowledges all Addenda.

Arch Solar	2302 Vondron Rd
Legal Name of Company	Street Address
<i>Kyle Pockey</i>	Madison, WI 53718
By (signature)	City, State Zip
Solar Energy Consultant	(608) 228-3347
	kyle@archsolar.com
Title	Telephone
	Email

ZXM7-SHLD144 Series



Znshinesolar 10BB HALF-CELL Light-Weight
Double Glass Monocrystalline PERC PV Module

525W | 530W | 535W | 540W | 545W | 550W



Excellent Cell Efficiency

MBB technology decreases the distance between busbar and finger grid line which is benefit to power increase.



Better Weak Illumination Response

More power output in weak light condition, such as haze, cloudy, and early morning.



Anti PID

Ensured PID resistance through the quality control of cell manufacturing process and raw materials.



Adapt To Harsh Outdoor Environment

Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity environment.



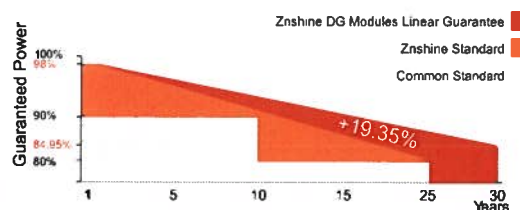
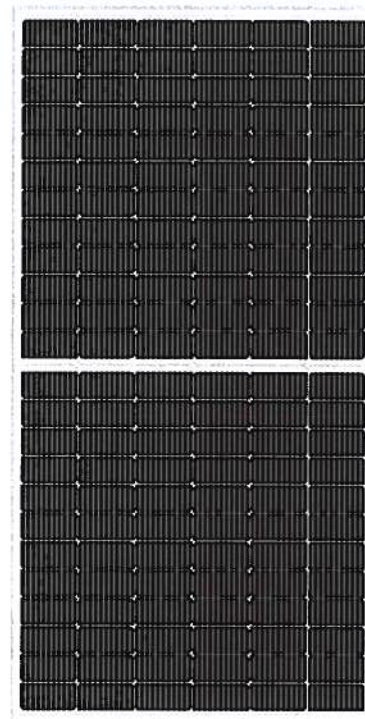
TIER 1

Global, Tier 1 bankable brand, with independently certified state-of-the-art automated manufacturing.



Excellent Quality Management System

Warranted reliability and stringent quality assurances well beyond certified requirements.



12 years product guarantee
30 years output guarantee



0.45% annual degradation
after the first year



IEC61215/IEC61730/IEC61701/IEC62716/UL61730

ISO 9001: Quality Management System

ISO 14001: Environmental Management System

ISO45001: Occupational Health and Safety Management System

Founded in 1988, ZnShine solar is a world's leading high-tech PV module manufacturer. With the state-of-the-art production lines, the company boasts module capacity of 6GW. Bloomberg has listed ZNShine as a global Tier 1 PV module maker. Today Znshine has distributed its sales to more than 60 countries around the globe.

ELECTRICAL CHARACTERISTICS | STC*

Nominal Power Watt Pmax(W)*	525	530	535	540	545	550
Power Output Tolerance Pmax(%)	0~+3	0~+3	0~+3	0~+3	0~+3	0~+3
Maximum Power Voltage Vmp(V)	40.80	41.00	41.20	41.40	41.60	41.80
Maximum Power Current Imp(A)	12.88	12.94	13.00	13.05	13.11	13.16
Open Circuit Voltage Voc(V)	49.10	49.30	49.50	49.70	49.90	50.10
Short Circuit Current Isc(A)	13.60	13.66	13.72	13.78	13.84	13.90
Module Efficiency (%)	20.26	20.45	20.65	20.84	21.03	21.23

*STC (Standard Test Condition): Irradiance 1000W/m², Module Temperature 25°C, AM 1.5

*Measuring tolerance: ±3%

ELECTRICAL CHARACTERISTICS | NMOT*

Maximum Power Pmax(Wp)	392.60	396.30	400.00	403.50	407.20	410.80
Maximum Power Voltage Vmpp(V)	38.00	38.20	38.30	38.50	38.70	38.90
Maximum Power Current Imp(A)	10.34	10.39	10.43	10.48	10.52	10.57
Open Circuit Voltage Voc(V)	45.90	46.10	46.20	46.40	46.60	46.80
Short Circuit Current Isc(A)	10.98	11.03	11.08	11.13	11.18	11.23

*NMOT(Nominal module operating temperature):Irradiance 600W/m² Ambient Temperature 70°C, AM 1.5, Wind Speed 1m/s

MECHANICAL DATA

Solar cells	Mono PERC
Cells orientation	144 (6×24)
Module dimension	2285×1134×35 mm(With Frame)
Weight	34 kg
Glass	2.0 mm±2.0mm, High Transmission, AR Coated Heat Strengthened Glass
Junction box	IP 68, 3 diodes
Cables	4 mm ² , 350 mm
Connectors	MC4-compatible

TEMPERATURE RATINGS

NMOT	44°C ±2°C
Temperature coefficient of Pmax	-0.35%/°C
Temperature coefficient of Voc	-0.29%/°C
Temperature coefficient of Isc	0.05%/°C

WORKING CONDITIONS

Maximum system voltage	1500 V DC
Operating temperature	-40°C~+85°C
Maximum series fuse	25 A
Maximum load(snow/wind)	5400 Pa / 2400 Pa

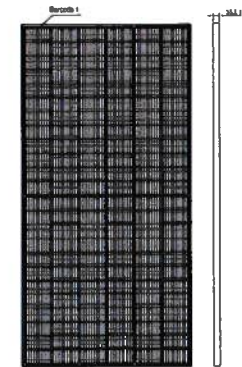
*Do not connect Fuse in Combine Box with two or more strings in parallel connection

*Remark:Electrical data in this catalog do not refer to a single module and they are not part of the offer. They only serve for comparison among different module types

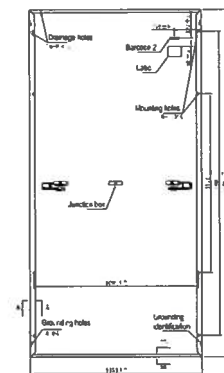
PACKAGING CONFIGURATION

Piece/Box	31
Piece/Container(40'HQ)	620
Piece/Container(With additional small package)	/

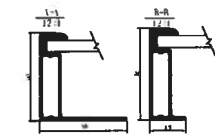
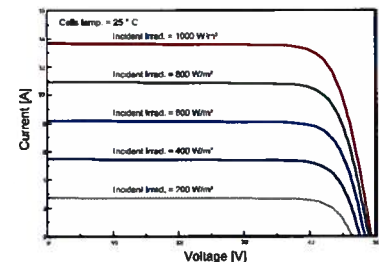
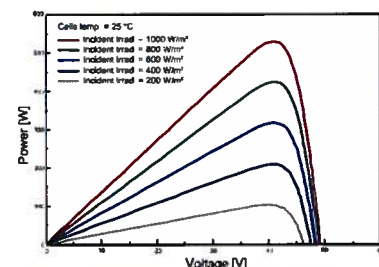
*Please be kindly advised that PV modules should be handled and installed by qualified people who have professional skills and please carefully read the safety and installation instructions before using our PV modules.

DIMENSIONS(MM)


Front View



Back View


I-V CURVES OF PV MODULE(530W)

P-V CURVES OF PV MODULE(530W)


Limited Warranty for Double Glass Solar PV Modules

1. Limited Product Warranty – Twelve Years Repair, Replacement or Refund Remedy

Subject to the below exclusions, ZNSHINE PV-Tech Co., Ltd. (hereinafter referred to as “ZNSHINE PV”) warrants to the original buyer (the “Buyer”) that the modules shall be free from defects in materials and workmanship that have an effect on module functionality under normal application, installation, use and service conditions as specified in ZNSHINE PV’s standard product documentation and are hence endowed with a Limited Product Warranty of twelve (12) years, and only the modules installed on rooftop, where the minimum clearance between rooftop surface and backside of module is less than 500mm, are hereby endowed with a limited product warranty of fifteen (15) years valid for shipment date ex. ZNSHINE factory from January 1st, 2020 to December 31st, 2020.

ZNSHINE PV guarantees that the module will maintain the mechanical integrity and stability in accordance with approved operation methods described in our installation instructions; the glass of a module will maintain its integrity provided there are no indications of localized impacts or external forces; and that the cable and connector plug of a module will remain safe and operational provided modules are professionally installed. Any damages caused by abrasion, improper installation or animals are exempt from this warranty.

Claims under the warranty can only be accepted if the Buyer can provide proof that the malfunctioning or non-conformity of a module results exclusively from defects in materials and/or product under normal application, installation, use and service conditions specified in ZNSHINE PV’s standard product documentation. To this end, the Buyer shall also provide evidence such as module purchase date, transportation, storage, and deployment information. Any color change on module or any other changes on module appearance do not represent defects, insofar the change in appearance does

not stem from defects in material and/or product, and does not cause degradation of functionality of the module. If the product fails to conform to this warranty, ZNSHINE PV will, at its option, either repair or replace the product, or provide an appropriate residual market value of the product(s) as compensation.

2. 30-Year Limited Peak Power Warranty (Linear Warranty)

If, within a period of thirty (30) years from the date shown in the invoice to the customer (Warranty Start Date), any module exhibits a power output inferior to the lowest value of nominal power output indicated by ZNSHINE PV in their Product Information Sheet, provided that such loss in power is determined by ZNSHINE PV (at its sole and absolute discretion) to be due to defects in material or product, ZNSHINE PV will replace such loss in power by either providing additional modules to the customer to make up for such loss in power, or by replacing the defective module(s) at the option of ZNSHINE PV.

ZNSHINE PV guarantees that the loss of power output with respect to the nominal power output specified in the relevant Product Data Sheet and measured at Standard Test Conditions (STC) for the Product(s) shall not exceed:

(1) for poly-crystalline Double-Glass Modules: 2.5% in the first year, thereafter 0.5% per year ending with 83% in the 30th year from the Warranty Start Date

(2) for mono-crystalline Double-Glass Modules: 3.0% in the first year, thereafter 0.5% per year ending with 82.5% in the 30th year from the Warranty Start Date

(3) for PERC-monocrystalline Double-Glass Modules: 3.0% in the first year, thereafter 0.5% per year ending with 82.5% in the 30th year from the Warranty Start Date

3. Exclusions and Limitations

1) In any event, all warranty claims must be filed within the applicable warranty period.

2) The “Limited Product Warranty” and the “Limited Peak Power Warranty” do not apply to any modules which have been subjected to:

- Misuse, abuse, neglect or accident;
- Alteration, improper installation or application;
- Non-observance of ZNSHINE PV’s installation and maintenance instructions;
- Repair or modifications by someone other than an approved service technician of ZNSHINE PV;
- Power failure surges, lighting, flood, fire, accidental breakage or other events outside ZNSHINE PV’s control.

3) Both the “Limited Product Warranty” and the “Limited Peak Power Warranty” do not cover any transportation charge, custom clearance or any other costs for return of the modules, or for reshipment of any re- paired or replaced modules, or costs associated with installation, removal or re-installation of the PV-modules.

4) Warranty claims will not be honored if the type or serial number of the modules have been altered, removed or made illegible.

4. Limitation of Warranty Scope

These “Limited Warranties for PV Modules” set forth herein are expressly in lieu of and exclude all other express or implied warranties, including but not limited to warranties of merchant ability and of fitness for particular purpose, use or application, and all other obligations or liabilities on the part of ZNSHINE PV, unless such other obligations or liabilities are expressly agreed to in writing signed and approved by ZNSHINE PV. ZNSHINE PV shall have no responsibility or liability whatsoever for damage or injury to persons or property, or for other loss or injury resulting from any cause whatsoever arising out of or related to the modules, including, without limitation, any defects in the module, or from use or installation. Under no circumstances shall ZNSHINE PV be liable for incidental, consequential or special damages, howsoever caused. Loss of use, loss of profits, loss of production, and loss of revenues are

specifically and without limitation excluded. As for the single unit of module, ZNSHINE PV's aggregate liability, if any, in damages or otherwise, shall not exceed the invoice value as paid by the customer.

5. Obtaining Warranty Performance

If the Customer feels a justified claim covered by this "Limited Warranty for PV Modules", an immediate notification directly to ZNSHINE PV shall be filed by mailing a (registered/certified) letter in writing to the addresses of ZNSHINE PV listed here under, or, sending an email letter to the email account of ZNSHINE PV listed here under. Together with the notification, the Customer should enclose the evidence of the claim with the corresponding serial number of the module(s) and the invoice on which the modules have been purchased. The return of any PV modules will not be accepted unless prior written authorization has been given by ZNSHINE PV.

6. Severability

If a part, provision or clause of this "Limited Warranty for PV Modules", or the application thereof to any person or circumstance, is held invalid, void or unenforceable, such holding shall not affect and shall leave all other parts, provisions, clauses or applications of this "Limited Warranty for PV Modules", and to this end such other parts, provisions, clauses or applications of this "Limited Warranty for PV Modules" shall be treated as severable.

7. Disputes

In case of any discrepancy in a warranty claim, a first-class international testing institute such as Fraunhofer ISE in Freiburg, Germany, TÜV Rhineland in Cologne, Germany or ASU Arizona State University shall be involved to judge the claim finally.

All fees and expenses shall be borne by the losing party, unless otherwise awarded. The final explanation right shall be borne by ZNSHINE PV.

8. Various

The repair or replacement of the modules or the supply of additional modules does not cause the beginning of new warranty terms, nor shall the original terms of this “Limited Warranty for PV Modules” be extended. Any replaced modules shall become the property of ZNSHINE PV made for their disposal. ZNSHINE PV has the right to deliver another type (different in size, color, shape and/or power) in case ZNSHINE PV discontinued producing the replaced modules at the time of the claim.

9. Warranty transfer

This warranty is transferable when the product remains installed in its original location at the warranty registration.

10. Claim Verification and Remediation Process

If the Buyer believes that it has a justified claim covered by the limited warranties set forth above, then the Buyer shall comply with the following Return Material Authorization (“RMA”) process. The Buyer must submit such claim in writing to ZNSHINE PV within the applicable warranty period specified above to the following addresses:

Global:

ZNSHINE PV TECH Co., Ltd.

#1 Zhixi Industry Zone, Jintan, Jiangsu Province People’s Republic of China

ZIP code: 213251

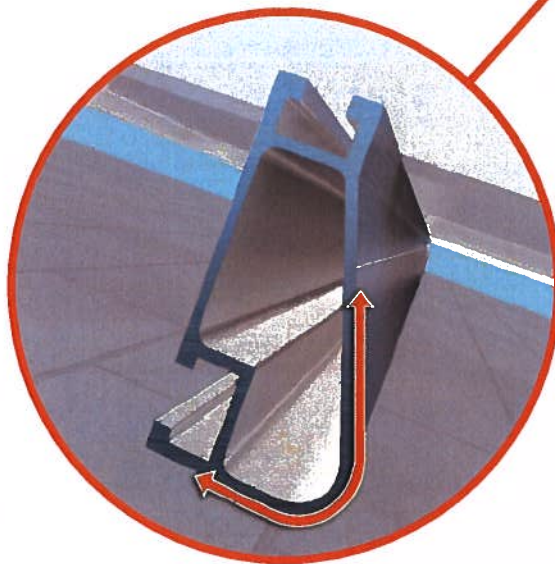
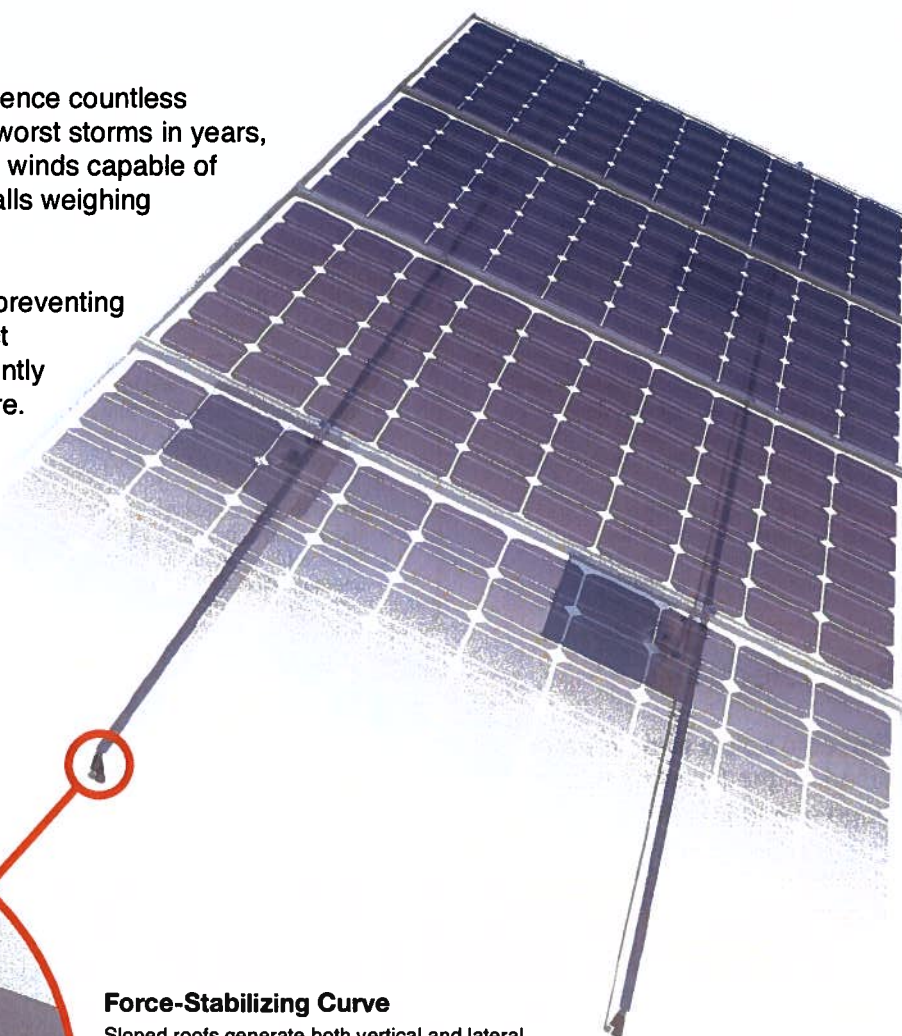


XR Rail Family

Solar Is Not Always Sunny

Over their lifetime, solar panels experience countless extreme weather events. Not just the worst storms in years, but the worst storms in 40 years. High winds capable of ripping panels from a roof, and snowfalls weighing enough to buckle a panel frame.

XR Rails are the structural backbone preventing these results. They resist uplift, protect against buckling and safely and efficiently transfer loads into the building structure. Their superior spanning capability requires fewer roof attachments, reducing the number of roof penetrations and the amount of installation time.



Force-Stabilizing Curve

Sloped roofs generate both vertical and lateral forces on mounting rails which can cause them to bend and twist. The curved shape of XR Rails is specially designed to increase strength in both directions while resisting the twisting. This unique feature ensures greater security during extreme weather and a longer system lifetime.

Compatible with Flat & Pitched Roofs



XR Rails are compatible with FlashFoot and other pitched roof attachments.



IronRidge offers a range of tilt leg options for flat roof mounting applications.

Corrosion-Resistant Materials

All XR Rails are made of 6000-series aluminum alloy, then protected with an anodized finish. Anodizing prevents surface and structural corrosion, while also providing a more attractive appearance.



XR Rail Family

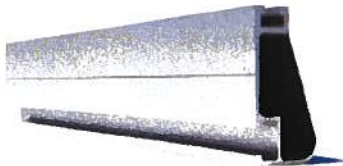
The XR Rail Family offers the strength of a curved rail in three targeted sizes. Each size supports specific design loads, while minimizing material costs. Depending on your location, there is an XR Rail to match.



XR10

XR10 is a sleek, low-profile mounting rail, designed for regions with light or no snow. It achieves spans up to 6 feet, while remaining light and economical.

- 6' spanning capability
- Moderate load capability
- Clear & black anodized finish
- Internal splices available



XR100

XR100 is the ultimate residential mounting rail. It supports a range of wind and snow conditions, while also maximizing spans up to 10 feet.

- 10' spanning capability
- Heavy load capability
- Clear & black anodized finish
- Internal splices available



XR1000

XR1000 is a heavyweight among solar mounting rails. It's built to handle extreme climates and spans up to 12 feet for commercial applications.

- 12' spanning capability
- Extreme load capability
- Clear anodized finish
- Internal splices available

Rail Selection

The table below was prepared in compliance with applicable engineering codes and standards.* Values are based on the following criteria: ASCE 7-16, Gable Roof Flush Mount, Roof Zones 1 & 2e, Exposure B, Roof Slope of 8 to 20 degrees and Mean Building Height of 30 ft. Visit IronRidge.com for detailed certification letters.

Load		Rail Span					
Snow (PSF)	Wind (MPH)	4'	5' 4"	6'	8'	10'	12'
None	90	XR10		XR100		XR1000	
	120						
	140						
	160						
20	90						
	120						
	140						
	160						
30	90						
	160						
40	90						
	160						
80	160						
120	160						

*Table is meant to be a simplified span chart for conveying general rail capabilities. Use approved certification letters for actual design guidance.

Limited Warranties and Disclaimer

THIS LIMITED WARRANTY CAN ALSO BE FOUND ONLINE AT WWW.IRONRIDGE.COM.

IRONRIDGE WARRANTS THAT DURING THE WARRANTY PERIOD, THE PRODUCT WILL BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP, AS FURTHER PROVIDED BELOW.

IRONRIDGE'S RESPONSIBILITY FOR DEFECTIVE GOODS IS LIMITED TO REPAIR, REPLACEMENT, OR REFUND AS DESCRIBED IN THIS WARRANTY STATEMENT.

Who may use this Warranty?

IronRidge extends this limited warranty only to the party who originally purchased IronRidge or QuickMount PV (the "**Products**"), and any subsequent owner of the Products, subject to assignability below ("**Purchaser**"), provided the Products are installed properly and used for the purpose for which the Products are designed.

This limited warranty is assignable by Purchaser and any subsequent owner of the Products, provided that the Products remain installed at the original installation location, and provided that any subsequent owner agrees in writing to be bound by the terms of this IronRidge Limited Warranties and Disclaimer document and provides proof of purchase of the Products. Change in ownership of the Products or assignment of this Warranty will not cause the warranty periods provided herein to be reset. Any subsequent owners to whom this limited warranty is assigned shall be considered a subsequent Purchaser for purposes of this limited warranty during the period of ownership of the Products.

What does this Warranty cover?

This limited warranty provides that Products will be free of materials and manufacturing defects that materially impair the use of the Product for its designed purpose.

This Warranty excludes:

- a) any defect that has not been reported to IronRidge in writing (i) within the warranty periods set forth below and (ii) within ten (10) days after discovery of such defect;
- b) normal wear (including discoloration, rusting or corrosion of any pre-plated steel, or staining of any aluminum); cosmetic damage; damage resulting from negligence, accident, misuse, overloading, abuse, or improper installation (including failure to follow professional instruction and/or certification); the failure to comply with applicable laws including local building code limits; or damage from acts of God, war, criminal acts, explosions, fire, vandalism, or any other events of force majeure as may apply in accordance with applicable law;

- c) Products that have been altered, modified, or repaired without IronRidge's prior written authorization;
- d) damage to or caused by, or defects in, third party parts or materials not sold by IronRidge (irrespective of IronRidge documentation);
- e) any defect that arises as a result of any third party products, components, or materials used by the Purchaser in conjunction with the Product, which third party products or materials have not been provided for such use by or on behalf of IronRidge or the use of which has not been expressly authorized by IronRidge;
- f) Products installed, used, or maintained in a manner contrary to IronRidge documentation, including any defect that arises from the faulty handling, storage, assembly, loading, or installation of the Product, or any handling, storage, assembly, loading, or installation not in accordance with the instructions given by IronRidge, or any defect that arises from mounting the Product on a solar module, building, roof, or other construction that is unsuitable for the mounting of the Product;
- g) damage to the Products during shipment, storage, or installation;
- h) any defect that does not materially impair the use of the Product for the purpose for which it was designed, including without limitation non-structural accessories.

Further, the Finish Warranty (as defined below) shall not apply to surface oxidation or to any foreign residue deposited on a Product finish, or to Products installed in corrosive atmospheric conditions, and shall be void if the practices specified in AAMA 609 and 610-02, *Cleaning and Maintenance for Architecturally Finished Aluminum*, or ASTM 780/A780M-09, *Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings*, as applicable, are not followed.

What is the period of coverage?

This limited warranty shall commence on the date of shipment of the Products and last for a period of twenty-five (25) years (the "**Warranty Period**"). Notwithstanding the foregoing, the Warranty Period for accessories and electrical junction boxes shall be limited to a period of ten (10) years from the date of shipment. IronRidge further warrants that all Products with finishes will be free of visible defects, peeling, and cracking for a period of five (5) years from the date of shipment (the "**Finish Warranty**"); provided, however, that no Finish Warranty shall apply to mill aluminum, pre-plated steel, and/or polymeric Products. IronRidge may change the availability of this limited warranty at its discretion, but any changes will not be retroactive.

What are your remedies under this warranty?

With respect to any defective product during the Warranty Period, IronRidge will, in its sole discretion, either (a) repair or replace such Product (or defective part) free of charge or (b) refund the purchase price of the product. Such repair, replacement, or refund will not cause the Warranty Periods to be reset, will completely satisfy and discharge IronRidge's liability and obligation with respect to this

limited warranty, and will not create an expectation of warranty coverage beyond the Warranty Period. A refurbished Product may be used to repair or replace the defective components. Transportation, installation, labor, or any other costs or losses associated with failure of warranty compliance, or Product replacement or repair, are not covered by this limited warranty and are not reimbursable.

If IronRidge's warranty assessment reveals that a Product is not defective, IronRidge shall return the Product (if such Product was shipped to IronRidge for the assessment) and the Purchaser shall promptly reimburse IronRidge for all reasonable costs incurred by IronRidge in performing the assessment.

How do you obtain warranty service?

To report any defect or warranty claim or to obtain warranty services, Purchaser must call (800) 227-9523 ext. 1 or contact IronRidge at <https://www.ironridge.com/company/contact-us/> during the Warranty Period.

IronRidge may request Purchaser to provide information reasonably known to the Purchaser in respect of the alleged defect or warranty claim, including, as appropriate, photographs or video recordings of the alleged defect. Purchaser shall provide IronRidge without undue delay with all additional information and cooperation (including access to facilities and premises) reasonably requested by IronRidge in respect of any warranty claim to enable IronRidge to assess each claim under this limited warranty.

LIMITATION OF LIABILITY

Except as set forth above, IronRidge sells the Products on an "AS IS" basis, which may not be free of errors or defects, and ALL EXPRESS OR IMPLIED REPRESENTATIONS AND WARRANTIES, INCLUDING ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, COURSE OF PERFORMANCE, OR TRADE PRACTICE, ARE HEREBY DISCLAIMED.

THE REMEDIES DESCRIBED ABOVE ARE PURCHASER'S SOLE AND EXCLUSIVE REMEDIES AND IRONRIDGE'S ENTIRE LIABILITY FOR ANY BREACH OF THIS LIMITED WARRANTY. IRONRIDGE'S LIABILITY SHALL UNDER NO CIRCUMSTANCES EXCEED THE ACTUAL AMOUNT PAID BY PURCHASER FOR THE DEFECTIVE PRODUCT, NOR SHALL IRONRIDGE UNDER ANY CIRCUMSTANCES BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL OR PUNITIVE DAMAGES OR LOSSES, WHETHER DIRECT OR INDIRECT, INCLUDING WITHOUT LIMITATION, CLAIMS BY PURCHASER FOR DAMAGES SUFFERED BY PURCHASER'S CUSTOMERS OR CLAIMS OF THIRD PARTIES.

Force Majeure. IronRidge shall not be responsible for delays or failures in its performance resulting from acts or omissions beyond its reasonable control, whatever the source or cause.

IQ9 Commercial Microinverters

The high-powered, smart grid-ready IQ9 Commercial Microinverters support 480 VAC and 208/220 VAC three-phase commercial PV systems. They boost energy harvesting and integrate with the IQ Gateway Commercial Pro, Enphase App, and analysis software for easy operation and maintenance.^{1,2}



Key specifications	IQ9N-3P-277-A-US/ IQ9N-3P-277-A-DOM-US	IQ9N-3P-208-A-US/ IQ9N-3P-208-A-DOM-US
Peak output power	427 VA	
Nominal grid voltage	277 V (L-N)	208 V (L-L)/220 V (L-L)
Nominal frequency	60 Hz	
CEC weighted efficiency	97.5%	
Operating voltage	16–60 V	
Peak power tracking voltage	28–45 V	
Max. short-circuit DC input current	25 A	
Ambient air temperature range	–40°C to 65°C (–40°F to 149°F)	



Easy

- Lightweight design with easy plug-and-play connectors
- Power line communication (PLC) for quick and hassle-free setup



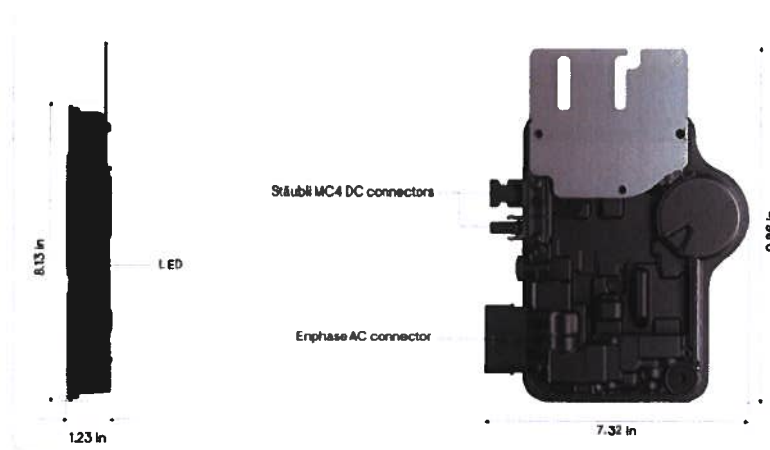
Smart

- Complies with the latest advanced grid support standards
- Remote automatic updates for current grid requirements
- Configurable to support a wide range of grid profiles
- Meets CA Rule 21 (UL 1741-SA) and IEEE 1547 (UL 1741-SB) requirements (pending)



Reliable

- Over one million cumulative hours of testing
- Class II double-insulated enclosure
- Optimized for the latest high-powered PV modules
- Tailored solutions for different grid configurations, including 480 VAC WYE and 208 VAC/220 VAC DELTA
- Industry-leading limited warranty of up to 25 years



This is a preliminary product data sheet. The products mentioned are yet to be certified. Specifications are subject to change without notice.

² IQ9N-3P Microinverters are made in the USA. The PCBA, electrical parts, and enclosure are domestically manufactured to meet the eligibility requirements for the ITC domestic content bonus adder.

Input data (DC)	Units	IQ9N-3P-277-A-US/ IQ9N-3P-277-A-DOM-US	IQ9N-3P-208-A-US/ IQ9N-3P-208-A-DOM-US
Commonly used module power for pairing	W		340–600 ³
Operating voltage	V		16–60
Min./Max. startup input voltage	V		21/60
Peak power tracking voltage	V		28–45
Max. DC continuous current (module Imp)	A		16
Max. DC short-circuit current (module Isc)	A		20
Max. short-circuit DC input current	A		25
DC port backfeed current	A		0
Output data (AC)	Units	IQ9N-3P-277-A-US/ IQ9N-3P-277-A-DOM-US	IQ9N-3P-208-A-US/ IQ9N-3P-208-A-DOM-US
Peak output power ⁴	VA		427
Max. continuous output power ⁴	VA		427
Nominal grid voltage ⁵	–	277 V (L-N)	208 V (L-L)/220 V (L-L)
Min.–Max. grid voltage	–	243–305 V (L-N)	183–229 V (L-L)/198–242 V (L-L)
Max. continuous output current	A	1.54	2.05/1.94
Nominal frequency	Hz		60
Max. microinverters per 20 A 480 V WYE (277 L-N) three-phase branch circuit	–	30	–
Max. microinverters per 20 A, 208 V/220 V DELTA three-phase branch circuit	–	–	12
Total harmonic distortion	%		<5
Power factor setting	–		1
Power factor range	–		0.85 leading ... 0.85 lagging
CEC weighted efficiency	%		97.5
Nighttime power consumption (tare loss)	mW	<150	<80
Mechanical data		IQ9N-3P-277-A-US/ IQ9N-3P-277-A-DOM-US	IQ9N-3P-208-A-US/ IQ9N-3P-208-A-DOM-US
Ambient air temperature range		–40°C to 65°C (–40°F to 149°F)	
Relative humidity range		4% to 100% (condensing)	
Overvoltage class AC port		III	
AC connector type		Enphase QD 4-pin connector	
DC connector type		MC4	
Dimensions (H × W × D)		206.48 mm (8.12") × 186.03 mm (7.32") × 31.25 mm (1.23") (without mounting brackets)	
Weight		1.2 kg (2.65 lb)	
Cooling		Natural convection – no fans	
Enclosure		Class II double-insulated, corrosion-resistant polymeric enclosure	

³ Pairing PV modules with wattage above the limit may result in additional clipping losses. See the compatibility calculator at <https://enphase.com/installers/microinverters/calculator>.

⁴ IQ9 Commercial Microinverters generate a single-phase AC output. A three-phase configuration with phase balancing is achieved through the use of a three-phase QD cable.

⁵ The nominal voltage range can be configured if required by the utility. For interconnection with other system voltages, a transformer is required to connect to the grid.

Mechanical data	IQ9N-3P-277-A-US/ IQ9N-3P-277-A-DOM-US	IQ9N-3P-208-A-US/ IQ9N-3P-208-A-DOM-US
Environmental category/UV exposure rating	NEMA Type 6; outdoor	
Altitude	<3000 m (<9842 ft)	
Approved for wet locations	Yes	
Communication	IQ9N-3P-277-A-US/ IQ9N-3P-277-A-DOM-US	IQ9N-3P-208-A-US/ IQ9N-3P-208-A-DOM-US
Communication	Power line communication (PLC)	
Monitoring	Enphase App monitoring and analysis software	
Gateway compatibility	IQ Gateway Commercial Pro (GW0-1CL-1N-D0-OR)	IQ Gateway Commercial Pro (GW0-1CL-1N-D0-OR) and IQ Gateway Commercial 2 (ENV2- IQC2-AM3-3P)
Standards	IQ9N-3P-277-A-US/ IQ9N-3P-277-A-DOM-US	IQ9N-3P-208-A-US/ IQ9N-3P-208-A-DOM-US
Grid compliance (pending)	CA Rule 21 (UL 1741-SB), UL 62109-1, UL 1741/IEEE 1547, FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 107.1-01. This product is UL Listed as PV rapid shutdown equipment and conforms with NEC 2014, NEC 2017, NEC 2020 and NEC 2023 section 690.12 and C22.1-2018 Rule 64-218 rapid shutdown of PV systems for AC and DC conductors, when installed according to the manufacturer's instructions.	



Enphase Energy, Inc. Limited Warranty – United States, United States Territories and Canada

This Limited Warranty is effective for Covered Products (defined below) that are activated on or after October 1, 2023, *unless* a newer limited warranty has been posted which applies to your Covered Product's date of activation. Always check <https://enphase.com/warranty/us> for the correct limited warranty governing your Covered Product.

- Limited Warranty.** Subject to the terms of this Limited Warranty, Enphase Energy, Inc. ("Enphase") warrants to the Covered Owner (defined below) that the product(s) listed below and installed for use at the original end user location (the "Original Location") (each a "Covered Product") will be free from defects in workmanship and materials for the applicable limited warranty period set forth below (each, a "Limited Warranty Period"), provided that the Original Location is located within the following territories:

United States, United States territories (including Puerto Rico, Northern Mariana Islands, U.S. Virgin Islands, American Samoa, and Guam), and Canada

This Limited Warranty is valid only (a) when the Covered Products are sold to the Covered Owner by Enphase itself or by an Enphase authorized reseller and (b) to the extent permitted by the applicable laws of the territories mentioned above.

Covered Product	Limited Warranty Period
IQ8 Microinverters IQ8MC-72-M-US IQ8AC-72-M-US IQ8HC-72-M-US IQ8-60-2-US IQ8-60-M-US IQ8P-3P-72-E-US IQ8PLUS-72-2-US IQ8PLUS-72-M-US IQ8M-72-2-US IQ8M-72-M-US IQ8A-72-2-US IQ8H-3P-72-E-US IQ8A-72-M-US IQ8H-240-72-2-US IQ8H-240-72-M-US IQ8H-208-72-2-US IQ8H-208-72-M-US IQ8X-80-M-US	25 years from the Activation Date.
IQ7 Microinverters IQ7-60-2-US IQ7-60-M-US IQ7-60-E-US IQ7PLUS-72-2-US IQ7PLUS-72-M-US IQ7PLUS-72-E-US IQ7A-72-M-US IQ7X-96-2-US IQ7X-96-ACM-US IQ7X-96-ACM-US-NM IQ7PLUS-72-ACM-US IQ7PLUS-72-ACM-US-NM	25 years from the Activation Date
IQ System Controller 3/3G with SKUs: SC200D111C240US01 SC200G111C240US01 IQ System Controller 2 with SKUs: EP200G101-M240US01 EP200G-SC2-RSD-KIT	10 years from the Activation Date.
IQ Load Controller with SKU: EP-NA-LK02-040	5 years from the Activation Date
IQ Gateway with SKUs: ENV-IQ-AM1-240 ENV2-IQ-AM1-240 ENV-IQ-AM3-3P ENV2-IQC2-AM3-3P IQ Combiner 3/3C with SKUs: X-IQ-AM1-240-3C X-IQ-AM1-240-3 IQ Combiner 3-ES/3C-ES with SKUs: X-IQ-AM1-240-3C-ES X-IQ-AM1-240-3-ES IQ Combiner 4/4C with SKUs: X2-IQ-AM1-240-4C X2-IQ-AM1-240-4 X-IQ-AM1-240-4C X-IQ-AM1-240-4 IQ Combiner 5/5C with SKUs: X-IQ-AM1-240-5C X-IQ-AM1-240-5	5 years from the Activation Date.
Current Transformers with SKUs: CT-200-SPLIT CT-200-CLAMP CT-200-SOLID CT-400-SOLID CT-600-SPLIT	5 years from the Activation Date.
Communications Kit: COMMS-KIT-01 COMMS-CELLMODEM-M1-06 COMMS-KIT-02	5 years from the Activation Date.
Range Extender: COMMS-24-EXT-01	5 years from the Activation Date.
Mobile Connect: CELLMODEM-M1 CELLMODEM-M1-06-SP-05 CELLMODEM-M1-06-AT-05 CELLMODEM-03	5 years from the Activation Date

For purposes of this Limited Warranty, "**Activation Date**" means the earlier of (i) the date the Covered Product is registered with Enphase, or (ii) the date the Covered Product is activated at the Original Location via the Enphase's Installer Portal. A Covered Product is considered "activated" when the solar system has received "permission to operate" by authorities having jurisdiction.

2. **Registration.** Subject to Section 3, this Limited Warranty is also conditioned on the Covered Owner registering the Covered Product within forty-five (45) days from the date of first installation (the "**Registration**") by either (a) completing and returning the registration card (found at the end of this Limited Warranty) to the address set forth in this Section 2; (b) registering on-line at www.enphase.com/register-my-product; or (c) registering through the Enphase Installer Platform or the Enphase® application when an IQ Gateway product is purchased and installed as part of the PV solar system.

Return Registration Card to:

Enphase Energy, Inc.
Attn: Product Registration NA Customer Service
1819 S. Cobalt Point Way
Meridian, ID 83642
United States of America

3. **REGISTRATION EXCEPTION.** IF THE COVERED OWNER IS A RESIDENT OF CALIFORNIA, CONNECTICUT, OR ANY OTHER STATE OR PROVINCE THAT FORBIDS THE RETURN OF A REGISTRATION CARD AS A CONDITION PRECEDENT TO ANY WARRANTY COVERAGE OFFERED UNDER THIS LIMITED WARRANTY, THEN THE REGISTRATION REQUIREMENTS DESCRIBED IN SECTION 2 ABOVE SHALL NOT APPLY.
4. **Covered Owner.** For the purposes of this Limited Warranty, the "**Covered Owner**" shall mean the person or entity that purchases a Covered Product from Enphase or an Enphase-authorized reseller and installs (or has installed) such Covered Product at the Original Location. In addition, Covered Owner shall include subsequent transferees (each, a "**Transferee**") as long as (a) the Covered Product remains at the Original Location, (b) the Transferee submits to Enphase a completed "Change of Ownership Form," which Enphase may modify from time to time in its sole discretion (c) the Transferee pays the applicable transfer fee ("**Transfer Fee**") set forth in the Change of Ownership Form within 30 days from the date of transfer from the Covered Owner to the Transferee, and (d) subject to Section 3, the Transferee complies with the Registration requirement in Section 2. The submission of a Change of Ownership Form is required in order for the Transferee to receive continued Limited Warranty coverage on the transferred Covered Product. The Transfer Fee is subject to reasonable adjustment from time to time (as determined at Enphase's discretion). The Change of Ownership Form and payment instructions for the Transfer Fee are available at <https://enphase.com/en-us/support/how-to-transfer-ownership>.
5. **Continuous Connectivity.** The Covered Products should be continuously connected to the internet during the warranty period, except where interrupted by causes outside of the Covered Owner's reasonable control. This will help ensure that potential defects in the Product can be diagnosed remotely and that the Product can receive over-the-air firmware updates.
6. **How to Obtain Warranty Service.**
 - a. To obtain warranty service for a Covered Product, the Covered Owner must comply with the Return Merchandise Authorization (RMA) Procedure available at <https://enphase.com/en-us/support/return-merchandise-authorization-procedure>. Unless Enphase specifically instructs the Covered Owner otherwise, the Covered Owner must return the allegedly defective Covered Product to Enphase in the original packaging or equivalent. If the allegedly defective Covered Product is not received by Enphase within 60 days of Enphase providing an RMA number to Covered Owner, pursuant to the RMA Procedure, Enphase will invoice the Covered Owner, and the Covered Owner will pay, the then-current list price for such new product or product part. We recommend that Covered Owners use a tracking service for their protection. The RMA Procedure allows Covered Owners to generate a prepaid mailing label for the return.
 - b. If a Covered Owner returns a Covered Product to Enphase (i) without an RMA from Enphase or (ii) without all parts included in the original package, Enphase retains the right to either (1) refuse delivery of such return; or (2) charge a restocking fee equal to the higher of fifteen (15) per cent of the original Covered Owner's purchase price of the Covered Product or the retail value of the missing parts.

- c. By returning a Covered Product, Covered Owner hereby acknowledges that ownership of the Covered Product is transferred to Enphase upon Enphase's receipt of the Covered Product. If the claim is justified based on this Limited Warranty, Enphase will bear the cost of shipping the repaired or replacement Covered Product to
- d. Covered Owner (or to the installer authorized by Covered Owner to replace the Covered Product) at the Original Location. Any Covered Product returned to Enphase that Enphase determines is not covered under this Limited Warranty, or that is returned to Enphase without a valid RMA, may be rejected, and returned at the Covered Owner's cost (subject to prepayment), or kept for 30 days for pick-up by the Covered Owner, and then disposed of in Enphase's sole discretion without further liability or obligation to Covered Owner.
- e. Once a returned Covered Product is received and inspected, Enphase will notify Covered Owner (or the installer authorized by Covered Owner to replace the Covered Product) that Enphase has received the returned Covered Product.

7. Remedies.

- a. During the applicable Warranty Period, if Enphase confirms the existence of a defect that is covered by the Limited Warranty, Enphase will, at Enphase's option, either (i) repair or replace the Covered Product free of charge, or (ii) refund the Covered Owner the actual purchase price for the Covered Product less reasonable depreciation based on use at the time the Covered Owner notifies Enphase of the defect. Enphase will not elect to issue a refund unless (1) Enphase is unable to provide a replacement and repair is not commercially practicable or cannot be timely made, or (2) Covered Owner is willing to accept such a refund. In the event of a defect, to the extent permitted by law, these are the Covered Owner's sole and exclusive remedies.
- b. If Enphase repairs or replaces the Covered Product pursuant to this Limited Warranty, (i) Enphase will, at its option, use new and/or reconditioned parts or products of the Covered Product's original or improved design, and (ii) the Limited Warranty will continue to apply to the repaired or replacement product for the remainder of the original Limited Warranty Period or ninety (90) days from the date Covered Owner receives the repaired or replacement product, whichever is later.
- c. If Enphase issues a refund (rather providing a repaired or replacement Covered Product), such refund will be processed and paid within 2 weeks of Enphase's receipt of the Covered Product.

8. Limited Warranty Limitations and Exclusions.

- a. This Limited Warranty does not include any cost of labor related to (i) un-installing Covered Product; (ii) re-installing a repaired or replacement product, or (iii) the removal, installation or troubleshooting of the Covered Owner's electrical systems.
- b. The Limited Warranty does not cover, and Enphase will not be responsible for any delays, lost or damage or any other damage to any Covered Product caused by a freight carrier.
- c. This Limited Warranty does not apply to, and Enphase will not be responsible for, any defect in or damage to any Covered Products: (i) that have been misused, neglected, tampered with, altered, or otherwise damaged, either internally or externally; (ii) that have been improperly installed, operated, handled or used, including use under conditions for which the product was not designed, use in an unsuitable environment, or use in a manner contrary to the Enphase User Manual or applicable laws or regulations; (iii) that have been subjected to fire, water, generalized corrosion, biological infestations, acts of nature, or input voltage that creates operating conditions beyond the applicable maximum or minimum limits listed in the applicable Covered Product Data Sheet (as published online at www.enphase.com), including high input voltage from generators or lightning strikes; (iv) that have been subjected to damage caused by third party components not provided by Enphase and used with the Covered Products or any damage to the Covered Products caused by service performed by anyone who is not a representative of Enphase; (v) if the original identification markings (including trademark or serial number) of such products have been defaced, altered, or removed (other than by fading through regular wear and tear); (vi) if the Grid Profile (utility approved operating parameters) of the Covered Product has been altered, and such alteration causes the product to malfunction, fail, or fail to optimally perform; or (vii) if the Covered Product is not using the most up-to-date software or firmware version made available by Enphase and the defect or damage could have been avoided by using such firmware or software version.
- d. The Limited Warranty does not cover cosmetic, technical or design defects, or shortcomings which do not

materially influence or affect energy production or degrade form, fit, or function of the Covered Products, or any defects or parts requiring replacement due to ordinary wear and tear, corrosion, rust or stains, scratches, dents on the casing or paintwork of the Covered Product. The Limited Warranty does not cover costs related to the removal, installation or troubleshooting of the Covered Owner's electrical systems.

- e. The Limited Warranty does not apply to, and the term "Covered Product" shall not include, any third-party products that may be installed with the Covered Products at the Original Location.
 - f. For the avoidance of doubt, software programs installed in the Covered Products and the recovery and reinstallation of such software programs and data are not covered under this Limited Warranty. Enphase does not warrant that the operations of the Covered Product will be uninterrupted or error-free. No Enphase employee or authorized reseller is authorized to make any modification, extension, or addition to this Limited Warranty. If any term of this Limited Warranty is held to be illegal or unenforceable, the legality or enforceability of the remaining terms shall not be affected or impaired.
9. **Assignment.** Enphase expressly reserves the right to novate or assign its rights and obligations under this Limited Warranty to a third party with the demonstrated expertise and requisite resources needed to effectively discharge the obligations hereunder.
10. **Disclaimer of Warranties.** THIS LIMITED WARRANTY IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY ENPHASE AND, EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ALL OTHER WARRANTIES AND CONDITIONS, WHETHER EXPRESS OR IMPLIED, STATUTORY, OR OTHERWISE, ARISING BY LAW, COURSE OF DEALING, COURSE OF PERFORMANCE USAGE OF TRADE, OR OTHERWISE (INCLUDING WARRANTIES AND CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT, OR WARRANTIES AS TO THE ACCURACY, SUFFICIENCY OR SUITABILITY OF ANY TECHNICAL OR OTHER INFORMATION PROVIDED IN MANUALS OR OTHER DOCUMENTATION) SHALL BE LIMITED IN DURATION TO THE DURATION OF THIS LIMITED WARRANTY.

THE GRANT OF THIS LIMITED WARRANTY BY ENPHASE IS CONDITIONED UPON AGREEMENT BY THE COVERED OWNER TO THE TERMS, CONDITIONS AND REQUIREMENTS HEREIN. THE LAWS OF CERTAIN JURISDICTIONS DO NOT ALLOW FOR THE EXCLUSIONS ON THE DURATION OF AN IMPLIED WARRANTY OR FOR EXCLUSIONS OR LIMITATIONS ON LEGAL WARRANTIES. WHERE SUCH LAWS APPLY TO THE COVERED OWNER, SOME OR ALL OF THE EXCLUSIONS OR LIMITATION MAY NOT APPLY TO COVERED OWNER, AND SUCH COVERED OWNER MAY HAVE ADDITIONAL RIGHTS. THIS LIMITED WARRANTY GIVES COVERED OWNER SPECIFIC LEGAL RIGHTS, AND COVERED OWNER MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM JURISDICTION TO JURISDICTION.

11. **Limitation of Liability.** EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, IN NO EVENT WILL ENPHASE BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSSES, COSTS OR EXPENSES HOWEVER ARISING, WHETHER IN CONTRACT OR TORT, INCLUDING WITHOUT LIMITATION ANY ECONOMIC LOSSES OF ANY KIND, ANY LOSS OR DAMAGE TO PROPERTY, OR ANY PERSONAL INJURY.

SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO COVERED OWNER AND COVERED OWNER MAY HAVE ADDITIONAL RIGHTS.

12. **Governing law.** This Limited Warranty shall be governed by the laws of the State of California, USA, without giving effect to any conflict of laws principles that may require the application of the law of another jurisdiction.

13. **Arbitration.**

- a. ***Please read the following arbitration agreement in this Section ("Arbitration Agreement") carefully. It requires Covered Owner ("you") to arbitrate disputes with ENPHASE and limits the manner in which you can seek relief from Enphase ("us"). THE LAWS OF CERTAIN JURISDICTIONS DO NOT PERMIT THE USE OF MANDATORY ARBITRATION CLAUSES. WHERE SUCH LAWS APPLY TO THE COVERED OWNER, THIS ARBITRATION CLAUSE MAY NOT APPLY.***
- b. **Applicability of Arbitration Agreement.** You agree that any dispute or claim relating in any way to your access or use of the Covered Products, or to any aspect of your relationship with Enphase, will be resolved by binding arbitration, rather than in court, except that (i) you may assert claims in small claims court if your

claims qualify; and (ii) you or Enphase may seek equitable relief in court for infringement or other misuse of intellectual property rights (such as trademarks, trade dress, domain names, trade secrets, copyrights, and patents).

- c. **Arbitration Rules and Forum.** For any dispute with Enphase in connection with this Limited Warranty, Covered Owner agrees to first contact Enphase at the email address identified below and attempt to resolve the dispute with us informally. If the dispute has not been resolved after 60 days, both parties agree to resolve such dispute through binding arbitration under the Optional Expedited Arbitration Procedures then in effect for the Judicial Arbitration and Mediation Services ("JAMS"). JAMS may be contacted at www.jamsadr.com. The existence, content and result of the arbitration shall be held in confidence by all participants. The arbitration will be conducted by a single arbitrator selected by agreement of the parties or, failing such agreement, appointed in accordance with the JAMS rules. The arbitration shall be conducted in English and in Santa Clara County, California. If JAMS is not available to arbitrate, the parties will select an alternative arbitral forum. If the arbitrator finds that Covered Owner cannot afford to pay JAMS's filing, administrative, hearing and/or other fees and cannot obtain a waiver from JAMS, Enphase will pay them for Covered Owner. In addition, Enphase will reimburse all such JAMS's filing, administrative, hearing and/or other fees for claims totaling less than \$10,000 unless the arbitrator determines the claims are frivolous. Any judgment on the award rendered by the arbitrator may be entered in any court of competent jurisdiction. The arbitrator shall have exclusive authority to determine the scope and enforceability of this Arbitration Agreement, and (b) resolve any dispute related to the interpretation, applicability, enforceability or formation of this Arbitration Agreement including, but not limited to any claim that all or any part of this Arbitration Agreement is void or voidable. The arbitration will decide the rights and liabilities, if any, of the parties. The arbitration proceeding will not be consolidated with any other matters or joined with any other cases or parties. The arbitrator shall have the authority to grant motions dispositive of all or part of any claim. The arbitrator shall have the authority to award monetary damages and to grant any non-monetary remedy or relief available to an individual under applicable law, the arbitral forum's rules, and the Limited Warranty. The arbitrator shall issue a written award and statement of decision describing the essential findings and conclusions on which the award is based, including the calculation of any damages awarded. The arbitrator has the same authority to award relief on an individual basis that a judge in a court of law would have. The award of the arbitrator is final and binding upon the parties.
- d. **Waiver of Jury Trial.** YOU AND ENPHASE HEREBY WAIVE ANY CONSTITUTIONAL AND STATUTORY RIGHTS TO SUE IN COURT AND HAVE A TRIAL IN FRONT OF A JUDGE OR A JURY. You and ENPHASE are instead electing that all claims and disputes shall be resolved by arbitration under this Arbitration Agreement, except as specified in sections above. An arbitrator can award on an individual basis the same damages and relief as a court and must follow this Agreement as a court would. However, there is no judge or jury in arbitration, and court review of an arbitration award is subject to very limited review.
- e. **Waiver of Class or Other Non-Individualized Relief.** ALL CLAIMS AND DISPUTES WITHIN THE SCOPE OF THIS ARBITRATION AGREEMENT MUST BE ARBITRATED ON AN INDIVIDUAL BASIS AND NOT ON A CLASS OR COLLECTIVE BASIS, ONLY INDIVIDUAL RELIEF IS AVAILABLE, AND CLAIMS OF MORE THAN ONE COVERED OWNER CANNOT BE ARBITRATED OR CONSOLIDATED WITH THOSE OF ANY OTHER COVERED OWNER. If a decision is issued stating that applicable law precludes enforcement of any of this subsection's limitations as to a given claim for relief, then such claim must be severed from the arbitration and brought into the State or Federal Courts located in San Francisco, California. All other claims shall be arbitrated.
- f. **30-Day Right to Opt Out.** You have the right to opt out of the provisions of this Arbitration Agreement by sending written notice of your decision to opt out to Enphase Energy, Inc., 47281 Bayside Parkway, Fremont, California, 94538, attention: General Counsel, within 30 days after first becoming subject to this Arbitration Agreement. You may also opt-out of the provisions of this Arbitration Agreement by sending written notice of your decision to the following email address: legal@enphaseenergy.com. Your notice must include your name and address, and an unequivocal statement that you want to opt out of this Arbitration Agreement. If you opt out of this Arbitration Agreement, all other parts of this Agreement will continue to apply to you. Opting out of this Arbitration Agreement has no effect on any other arbitration agreements that you may currently have, or may enter in the future, with us.
- g. **Severability.** Except as provided above, if any part or parts of this Arbitration Agreement are found under the law to be invalid or unenforceable, then such specific part or parts shall be of no force and effect and shall

be severed and the remainder of the Arbitration Agreement shall continue in full force and effect.

h. Survival of Agreement. This Arbitration Agreement will survive the termination of your relationship with Enphase.

Customer Support:

United States, US Territories and Canada
Puerto Rico

<https://support.enphase.com/s/contact-us>

<https://www4.enphase.com/es-lac/contact-support-es-lac>

(877) 797-4743

+1 (800) 821-1487

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Product Registration Form



Failure to complete and return this Product Registration Form does not diminish your warranty rights.

Please return this form to:

Enphase Energy, Inc.
Attn: Product Registration
NA Customer Service
1819 S. Cobalt Point Way
Meridian, ID 83642
United States of America

(or, you may register on-line at <https://enphase.com/en-us/product-registration-en-us>)

First Name _____ Last Name _____
E-mail _____
Phone Number (Area Code) _____

Contact Address

Street Address: _____
Street Address (line 2) _____
City _____
State/Province _____ Zip Code _____

Address of installation: same as Contact Address? Yes / No
(If, "Yes", Enphase will use Contact Address as Address of Installation)

Address of Installation

Street Address: _____
Street Address (line 2) _____
City _____
State/Province _____ Zip Code _____

Installer Information

Installer Name _____
Installer Contact Info _____
E-mail _____
Phone Number (Area Code) _____

Product Information

Microinverter SKU (e.g.: IQ7-60-2-US) _____
Number of Units Installed _____
Serial Numbers of Units installed _____

Purchased from _____
Purchase Date (MM/DD/YY) _____
Installation Date (MM/DD/YY) _____
Permitted to Operate Date (MM/DD/YY) _____

☐ I agree to receive critical product information about the registered products at the email and/or contact provided above.



ARCHELE-05

KMILLER01

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

12/31/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER AVID Risk Solutions 2501 Parmenter Street Suite 200A Middleton, WI 53562	CONTACT NAME: PHONE (A/C, No, Ext): (608) 827-4525 FAX (A/C, No): (608) 827-4712 E-MAIL ADDRESS: certificates@avidrisk.com
INSURED Arch Electric Inc 1237 Pilgrim Rd STE Plymouth, WI 53073	INSURER(S) AFFORDING COVERAGE INSURER A: Travelers Property Casualty Company of America NAIC # 25674 INSURER B: INSURER C: INSURER D: INSURER E: INSURER F:

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR GEN L AGGREGATE LIMIT APPLIES PER ☒ POLICY ☒ PRO-JECT ☐ LOC OTHER		CO-6X273467	1/1/2025	1/1/2026	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000
A	☒ AUTOMOBILE LIABILITY ☒ ANY AUTO OWNED AUTOS ONLY ☒ HIRED AUTOS ONLY ☐ SCHEDULED AUTOS ☒ NON-OWNED AUTOS ONLY		810-6X28636A	1/1/2025	1/1/2026	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
A	☒ UMBRELLA LIAB ☒ OCCUR ☒ EXCESS LIAB CLAIMS-MADE DED ☒ RETENTION \$ 10,000		CUP-6X29292A	1/1/2025	1/1/2026	EACH OCCURRENCE \$ 10,000,000 AGGREGATE \$ 10,000,000
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ALL EMPLOYERS PARTNERS, EXECUTIVE OFFICERS, EMB, S, E, L, I, C, O, P (Mandatory in WI) If yes describe under DESCRIPTION OF OPERATIONS below	Y IN N/A	UB-6X292076	1/1/2025	1/1/2026	☒ PER STATUTE ☒ OTH-ER EL EACH ACCIDENT \$ 1,000,000 EL DISEASE - EA EMPLOYEE \$ 1,000,000 EL DISEASE - POLICY LIMIT \$ 1,000,000
A	Rented/Leased Equip		QT-630-8X471836-TIL-25	1/1/2025	1/1/2026	Limit 250,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

CANCELLATION

Arch Solar, Inc.
1553 S 38th St
Milwaukee, WI 53215

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

McFarland
SUMMARY SHEET

MEETING DATE: Tuesday, October 28, 2025

SECTION: Business

DEPARTMENT: Community Development

CONTACT: Andrew Bremer, Comm & Eco Dev Director

AGENDA ITEM: Discussion and action regarding the award of contract for installation of a battery energy storage system at the Public Safety Center.

PREVIOUS ACTION:

January 9, 2023 - S&NR recommended approval to the Village Board for the submittal of two OEI Energy Innovation Grant Program Applications

April 19, 2023 - Staff presented to the Committee, award of grant application by the PSC for Battery Storage and Microgrid technology at the Public Safety Center.

May 8, 2023 - S&NR recommended approval to the Village Board for HGA's proposal design, bid and construction administration services for installation of battery and microgrid at the Public Safety Center.

May 9, 2023 - Village Board approval of HGA contract.

September, 2023 - Grant contract signed with OEI.

February 22, 2024 - S&NR and Village Board project update meeting.

March 11, 2024 - S&NR unanimously recommended approval of the bid documents.

March 26, 2024 - Village Board approval to bid project.

May 1, 2024 - Bid opening

May 28, 2024 - Village Board rejects bids.

July 8, 2024 - S&NR unanimously recommends submitting the proposed grant amendments with a preferred alternative to reallocate the funding to the Community Center.

July 23, 2024 - Village Board approves submitting the proposed grant amendments with a preferred alternative to reallocate the funding to the Community Center.

April 14, 2025 - S&NR recommends to Village Board the existing OEI Grant Agreement for the Public Safety Center.

April 22, 2025 - Village Board approves to amend existing OEI Grant Agreement for the Public Safety Center to an energy storage system-only project.

August 11, 2025 - S&NR unanimously recommends to Village Board release of request for bids for the energy storage system.

August 26, 2025 - Village Board approves release of request for bids for the energy storage system.

September 2, 2025 - Bid opens for battery energy storage systems.

September 30, 2025 - Bid submittal deadline.

October 16, 2025 - S&NR unanimously recommends award of contract for installation of a battery energy storage system to All Energy with two conditions of approval.

ISSUE SUMMARY:



The Village Board approved amending the OEI grant agreement for the Public Safety Center to an energy storage system-only (grid-connected battery) project at their April 22, 2025 meeting. The Village's energy consultant, HGA, has completed an update for construction and bid documents to reflect the revised project scope. The S&NR Committee recommended approval of the updated bid documents to the Village Board at their August 11, 2025 meeting. The Village Board approved the bid documents at the August 26th meeting. Similar to the previous bid announcement, the announcement of the bid lasted 30 days and ran through the month of September. During that time, the Village received four bids for the project. The packet includes a summary of the bids received. Michael Barnett from HGA and Staff have reviewed the bid documents and recommend the submittal from All Energy Solar, conditioned on pre-approval by the Public Service Commission that the proposed products will meet the ARRA By American requirements of the Village's project grant. HGA has requested All Energy provide the ARRA compliance form.

Previously discussed at the [March 10, 2025 S&NR committee meeting](#), HGA presented the Public Safety Center's 2024 energy data and the benefits of renewable energy use and on-site generation. At the following April 14, 2025 S&NR committee meeting, those key takeaways were summarized within the [staff report](#) stating that the solar and geothermal for the building performed as modeled. However, the building appeared to use more energy than expected. The function of the battery energy storage system is to optimize the building's energy use during peak times throughout the day while addressing the overall observed energy use intensity of the building. At the [April 22, 2025 Village Board meeting](#), HGA presented additional information regarding utility costs and benefits of a battery system. One of those benefits is to reduce the amount of energy the Village needs to buy from the grid when on-site solar production is lower than building demand. When excess on-site energy is being generated at the Public Safety Center it is sold back to the grid at wholesale prices. However, when additional energy is required from the grid it is purchased at retail prices. As utility rates increase, so to do the operational costs to the Village. Noting at that time, the Public Safety Center was on Alliant's utility rate GS-1 but has since been moved to Alliant's Cg-2 (time of use rate structure) which has a higher cost per kWh. In addition, Alliant is currently finishing up their rate case and have reached a [settlement](#) with intervenors that may be approved by the [Public Service Commission](#) later this year. If approved, the Cg-2 rates would increase by 7.1% in 2026 and a 12.8% incremental increase by 2027.

FINANCIAL/BUDGET IMPACT:

The revised 2025 grant budget is \$432,150, which includes a \$250,000 grant from the Office of Energy and Innovation and a minimum \$182,150 local share, including \$5,000 in-kind Village labor. The project costs roughly breaks down as follows:

- \$177,150 Contractual (includes \$82,000 for HGA design and commissioning services)
- \$250,000 Equipment
- \$5,000 in-kind Village labor for grant administration

The Village originally budgeted a local share of \$255,000, including \$5,000 in-kind Village labor. With the OEI grant match the project budget is \$432,150 (with minimum local share) to



\$505,000 (within original budgeted local share). Subtracting the HGA design services and in-kind labor leaves a remaining project budget for construction and installation of the battery system between \$345,150 to \$418,000. The recommended bid from All Energy Solar is \$366,929, for a final project cost of \$453,929. Subtracting the OEI grant of \$250,000 leaves a final local share of \$203,929 (including \$5,000 in-kind staff support). With IRS Elective Pay incentives (~30% of the Village's share or ~\$60K) brings the net cost to the Village for the battery at ~\$140,000. HGA estimates an annual savings from the battery of ~\$10K (year 1) and the payback period would be ~14 years if utility rates remain unchanged. The actual performance/optimization of the battery could also impact the payback period. HGA estimates the anticipated battery life is ~15 years. The bid includes a 10-year warranty on the battery and two year installation warranty. The bid includes one year of operational support for the battery software from RedCloud from the date of substantial completion, with optional annual support charged at \$2,500 thereafter.

VILLAGE PLAN REFERENCE:

2023/2024 Strategic Implementation Plan. Goal B, Action Step VI, Install battery storage at Public Safety Center through OEI grant award for excess power created in solar array.

2021 Sustainability Plan. Includes the goal of achieving 50% of total municipal energy consumed per year generated from renewables by 2030 and 100% by 2040.

ORDINANCE REFERENCE:

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Recommended motion:

Motion, second, to approve award of contract to All Energy Solar for installation of a battery energy storage system at the Public Safety Center, for \$366,929, conditioned on pre-approval by the Public Service Commission that the proposed products will meet the ARRA By American requirements and battery size requirements of the Village's project grant.

ATTACHMENTS:

1. PSC BESS Bid Summary
2. All Energy Solar - bid - 9.30.25

		Spec (75kW, 125kwh)				Spec (125kW, 250kwh)
Company	Base bid	BESS Capacity (Base)	BESS Model	BESS Dispatch Control	Alternate #1 Price	BESS Capacity (Alternate)
All Energy Solar	\$366,929	60kw-ac / 120kwh-ac	SolArk 60K-3Ph-480V	muGrid Redcloud	\$588,425	120kw-ac / 240kwh-ac
Arch Solar C&I	\$446,285	70 kw-ac / 143 kwh-ac	Kronus Engineering	muGrid Redcloud	\$515,952	Current ESS 125kW / 261kWh
Eagle Point Solar	\$447,260	70 kw-ac / 143 kwh-ac	Kronus Engineering	muGrid Redcloud	\$499,048	Current ESS 125kW / 261kWh
Universal Power Systems	\$498,000	?	?	?	\$573,000	?

DOCUMENT 004113
BID FORM - STIPULATED SUM (SINGLE-PRIME CONTRACT)

1.1 BID INFORMATION

- A. Bidder: _____.
- B. Project Name: Public Safety Building Microgrid.
- C. Project Location: 6001 Broadhead Street, McFarland, Wisconsin 53558.
- D. Owner: Village of McFarland.
- E. Architect/Engineer: Hammel, Green and Abrahamson, Inc., 333 East Erie Street, Milwaukee, Wisconsin 53202.
- F. Architect Project Number: 4715-004-00.

1.2 CERTIFICATIONS AND BASE BID (MICROGRID)

- A. Base Bid, Single-Prime (All Trades) Contract: The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by Hammel, Green and Abrahamson, Inc. and Architect's consultants, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, including all scheduled allowances, necessary to complete the construction of the above-named project, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:

1. _____ Dollars (\$_____).
2. The above amount may be modified by amounts indicated by the Bidder on the below "Alternate Bids" article.

All trades not included below.....Dollars (\$_____).

Electrical.....Dollars (\$_____).

BESS Equipment Cost.....Dollars (\$_____).

1.3 MUNICIPAL CODE BIDDER QUALIFICATIONS

- A. The undersigned Bidder, has carefully examined the Village of McFarland Municipal Code 23-95 "Bidder Qualifications" in its entirety. In addition, complete the Village of McFarland Affidavit of Qualifications form following this section and submit with Bid Form.

1. Village Municipal Code Path: Village of McFarland : Municipal Code (municipalcodeonline.com)

1.4 ALTERNATE BIDS

- A. Refer to Section 012300 "Alternates" for full descriptions.
- B. Alternate Bid No. 1 - **Grid Connected BESS (125 kW)** - State the addition to/deduction from the base bid (75 kW BESS) to achieve a grid connected BESS.

ADD /~~DEDUCT~~ _____ Dollars (\$_____).

1.5 SALES AND USE TAX

- A. Contractors are to follow State Law regarding sales and use tax exemption for the purchase of building materials.

- B. The Village of McFarland is an exempt entity for sales tax purposes pursuant to §77.54(9a)(b), Wis. Stats. and materials purchased by contractors for incorporation into any Village of McFarland facility (other than roads, highways or streets) under a contract with the Village of McFarland are similarly exempt from the imposition of sales taxes pursuant to §77.54(9m), Wis. Stats. Bids should not include sales tax on exempt materials or other tangible personal property which will become components of the facility. A copy of the Village of McFarland Certificate of Tax Exempt Status (CES) will be provided to the successful bidder at the time of contracting for use in documenting tax-exempt purchases.

1.6 BID GUARANTEE

- A. The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish surety as specified within 10 days after a written Notice of Award, if offered within 60 days after receipt of bids, and on failure to do so agrees to forfeit to Owner the attached cash, cashier's check, certified check, U.S. money order, or bid bond, as liquidated damages for such failure, in the following amount constituting five percent (5%) of the Base Bid amount above:

1. _____ Dollars (\$_____).

- B. In the event Owner does not offer Notice of Award within the time limits stated above, Owner will return to the undersigned the cash, cashier's check, certified check, U.S. money order, or bid bond.

1.7 PRODUCTS, SUBCONTRACTORS AND SUPPLIERS

- A. The bidder shall submit as part of their bid itemized product manufacturers, model numbers, capacities, locations, and quantities of products that are proposed for the major equipment (BESS, inverter, microgrid controller).
- B. The following companies shall execute subcontracts for the portions of the Work indicated
- C. List the various portions of the work and the names and business addresses of the subcontractors and major material suppliers proposed to perform work, furnish materials or render service on or about the project. Subcontractors with subcontracts of \$5,000 or less need not be listed. Work for which a subcontractor is not listed will be performed by this Contractor. Submit Affidavit of Qualifications from each subcontractor. Subcontractors not meeting the qualifications established by Sec. 23-95 of the McFarland Municipal Code as evidenced by the affidavit will be rejected.

CLASS OF WORK

NAME AND ADDRESS OF SUBCONTRACTOR

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

1.8 TIME OF COMPLETION

- A. The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date specified in a written Notice to Proceed to be issued by Architect, and shall fully complete the Work within 200 calendar days.

1.9 ACKNOWLEDGEMENT OF ADDENDA

- A. The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:

1. Addendum No. 1, dated _____.

1.10 BID SUPPLEMENTS

- A. The following supplements are a part of this Bid Form and are attached hereto.
1. Bid Form Supplement - Bid Bond Form (AIA Document A310-2010).

1.11 CONTRACTOR'S LICENSE

- A. The undersigned further states that it is a duly licensed contractor, for the type of work proposed, in the State of Wisconsin, and that all fees, permits, etc., pursuant to submitting this proposal have been paid in full.

1.12 REJECTION OF BIDS

- A. The Owner reserves the right to accept or reject any or all of the above proposals.

1.13 SUBMISSION OF BID

- A. Respectfully submitted this ____ day of _____, 2025.
- B. Submitted By: _____ (Name of bidding firm or corporation).
- C. Authorized Signature:  _____ (Handwritten signature).
- D. Signed By: _____ (Type or print name).
- E. Title: _____ (Owner/Partner/President/Vice President).
- F. Witnessed By:  _____ (Handwritten signature).
- G. Attest:  _____ (Handwritten signature).
- H. By: _____ (Type or print name).
- I. Title: _____ (Corporate Secretary or Assistant Secretary).
- J. Street Address: _____.
- K. City, State, Zip: _____.
- L. Phone: _____.

M. License No.:_____.

N. Federal ID No.:_____ (Affix Corporate Seal Here).

END OF DOCUMENT



REQUEST FOR BID

Public Safety Building Microgrid Ready Energy Storage System
6001 Broadhead Street, McFarland, WI 53558

Pricing for this Proposal is valid for (30) days.

September 30th, 2025

RE: Request for Bid - PSB Microgrid Ready Energy Storage System

Attn: Andrew Bremmer, AICP - Community & Economic Development Director

On behalf of HGA, All Energy Solar is prepared to execute the design, installation and commissioning of the described Energy Storage System for the Base Bid Public Safety Building Microgrid Ready Energy Storage System Project at 6001 Broadhead Street, McFarland, Wisconsin 53558 USA.

Proposed System BASE BID

Storage System AC kW : 60.00

Storage System AC kWh : 120.00

Main System Components

(1) 60K-3 Ph.-480V Hybrid Inverter Charger

277/480V Y or D Output, 60kW AC Output

200A Grid Pass Through, 4x 1000V/36A

Includes MPPT Inputs, Compatible with SOL-ARK L3 HV-60 and L3 HVR-60 BESS

PAIRED WITH :

(2) 60kWh Outdoor DC Battery Energy Storage System

0.5C Continuous Charge / Discharge

Compatible with SOL-ARK 30K-3 Ph.-208V and 60K-3 Ph.-480V Inverters

Base Bid Project Cost : \$366,929.00

On behalf of HGA, All Energy Solar is prepared to execute the design, installation and commissioning of the described Energy Storage System for the Alternate Bid #1 Public Safety Building Microgrid Ready Energy Storage System Project at 6001 Broadhead Street, McFarland, Wisconsin 53558 USA.

Proposed System ALTERNATE BID 1

Storage System AC kW : 120.00

Storage System AC kWh : 240.00

Main System Components

(2) 60K-3 Ph.-480V Hybrid Inverter Charger

277/480V Y or D Output, 60kW AC Output

200A Grid Pass Through, 4x 1000V/36A

Includes MPPT Inputs, Compatible with SOL-ARK L3 HV-60 and L3 HVR-60 BESS

PAIRED WITH :

(4) 60kWh Outdoor DC Battery Energy Storage System

0.5C Continuous Charge / Discharge

Compatible with SOL-ARK 30K-3 Ph.-208V and 60K-3 Ph.-480V Inverters

Base Bid Project Cost : \$588,425.00

Interconnection Plan

DC conductors from Sol-Ark LFP Battery Modules will be wired via integrated wire management within Sol-Ark BESS Cabinet(s) System to cabinet-mounted Sol-Ark inverter(s), where AC conductors transition to underground PVC. AC conductors then connect the remaining Balance of Systems equipment (BESS Transformer, DER Switchboard) as shown on sheets E050 & E060 of HGA Drawings. Equipment to be approximately located per sheet E030.

Bid Inclusions

1. BESS Warranty, expires at 6000 cycles OR 10-Year Term, whichever occurs first
2. 2 Year Installation Warranty per Bid Requirements
3. Davis Bacon Act Wages per Bid Requirements
4. RedCloud EMS Site Controller
5. 1 Year RedCloud Operational Support from Date of Substantial Completion
 - a. charged at \$2,500.00 annually thereafter
6. Interconnection submissions and approvals, based on provided Drawings / Plans
7. Procurement of Full BESS Installation equipment, wires and conduit
8. Off-loading and on-loading of equipment, including necessary rental equipment
9. Material Handling for BESS Installation
10. Performing of the Full Mechanical and Electrical Scopes of Work
11. Building and Electrical Permits and Inspections
12. Coordination of any and all Required Testing and Certifications
13. Safety Procedures and Planning
14. Apprentice, Journeyman and Master Electricians to perform Scopes of Work
15. Abiding by Davis Bacon Act Wages Reporting and Payroll
16. All BESS Project Management Provided by All Energy Solar
17. Training & Demonstration Session for Owner's Maintenance Personnel
18. As-built Shop Drawings

Bid Exclusions

1. Any rooftop work relating to the existing PV System
2. Unforeseen groundwork
3. Upgrade(s) or repair(s) to the Facility or Utility electrical infrastructure
4. Backup power during electrical outage for Final System Connections
5. Supplemental Interconnection and/or Feasibility Studies
6. Tree removal and/or tree trimming
7. Taxes

Prepared by: Samuel D. Wood
All Energy Solar
sam.wood@allenergysolar.com

Additional information about our Company or past project references available upon request.



Sol-Ark Commercial Energy Solutions

An aerial photograph of a vast solar farm. The rows of solar panels stretch far into the distance, creating a strong sense of perspective. Three workers in safety gear are visible in the middle ground, providing a sense of scale to the massive installation.

A global energy technology leader with over 6 generations of hybrid inverters

Deep engineering expertise in smart energy solutions

A track record of results. For over a decade, Sol-Ark has been solving complex energy challenges with innovation and technology

Powered by a vast ecosystem including thousands of distributors, installers, EPCs, integrators, and battery manufacturers

Trusted by global Fortune 500 companies in telecommunications, retail, big tech, restaurants, and the largest space agency in the world

60K-480V

C&I Hybrid Inverter

Inverter Model Name:

60K-3P-480V

Sol-Ark Product SKU:

60K-3P-480V

Input Data (PV)

Max. Allowed PV Power (STC)	78,000W
MPPT Voltage Range	150-850V
Startup Voltage	180V
Max. Input Voltage ¹	1,000V
Max. operating input current per MPPT	36A
Max. short circuit current per MPPT	55A
No. of MPP Trackers	4
No. of PV Strings per MPPT	2
Max. AC Coupled Input	60,000W

Output Data (AC)

Nominal AC Voltage (3Φ)	277/480V
Grid Frequency	50 / 60Hz
Real Power, max continuous (3Φ)	60,000W
Max. Output Current	72.3A
Peak Apparent Power (10s, off-grid, 3Φ)	90,000VA
Max. Grid Passthrough Current (10min)	200A
Continuous Grid Passthrough Current	180A
Power Factor Output Range	+/- 0.8 adjustable
Backup Transfer Time	5ms (adjustable)
CEC Efficiency	96.5%
Max Efficiency	97.5%
Design (DC to AC)	Transformerless DC
Stackable	Up to 10 in parallel

Battery Input Data (DC)

Battery Chemistry	Lithium iron phosphate
No. of Battery Inputs	2
Battery Input Terminal Rating	50A
Nominal DC Voltage	≥ 600V
Operating Voltage Range	160 - 800V
Battery Capacity Range	50 – 9900Ah
Max. Battery Charge / Discharge Current	100A (50A per input)
Charge Controller Type	3-Stage with Equalization
Grid to Battery Charging Efficiency	96.0%
Automatic Generator Start (AGS)	2 Wire Start - Integrated
BMS Communication ²	CANBus & RS485

General Data

Dimensions (H x W x D)	894 x 528 x 295 mm (35.2 x 20.8 x 11.6 in)
Weight	80 Kg / 176 lb.
Enclosure	IP65 / NEMA 3R
Ambient Temperature	-40 - 60°C, >45°C Derating
Noise	< 30 dB @ 25°C (77°F)
Idle Consumption - No Load	60W
Communication and Monitoring	Wi-Fi & LAN Hardware Included
Warranty ³	10 Years (15 Years)

Category

Certifications and Listings (Grid Support Interactive Inverter)	UL 1741-2021 (UL1741SB), CSA C22.2 No 107.1-16, IEEE 1547-2018 & 1547a-2020 & 1547.1-2020 (SRD V2.0), UL 1741 CRD-PCS, UL1699B, CEC, SGIP ⁴
PV DC Disconnect Switch – NEC 240.15	Integrated
Ground Fault Detection – NEC 690.5	Integrated
PV Rapid Shutdown Control – NEC 690.12	Integrated
PV Arc Fault Detection – NEC 690.11	Integrated
PV Input Lightning Protection	Integrated
PV String Input Reverse Polarity Protection	Integrated
Surge Protection	DC Type II / AC Type III

1. See Installation Guide for more details on sizing array strings. The highest input voltage is based on the open-circuit voltage of the array at the minimum design temperature.

2. Active BMS communication is required for all lithium batteries. A list of compatible batteries can be found on our website.

3. 5-year extension is available for purchase by registered Gold level installers only.

4. Pending listing.



Sol-Ark Commercial Energy Solutions



Unlocking the Full Energy Value for Commercial



Reduce Electricity Demand Charges



Improve Energy Resilience Both Behind and in Front of the Meter



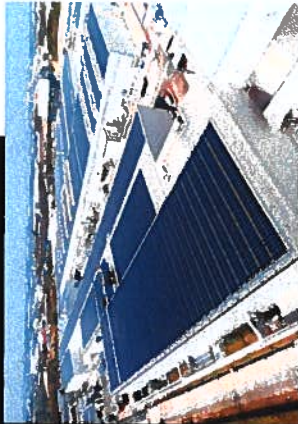
Leverage Storage as a Competitive Advantage



Optimize Energy Use



Gain New Revenue by Selling Excess Energy Back to the Local Utility



Rooftop

Easy retrofit with including AC coupling interconnection port up to 2X solar capacity or DC-couple directly onto the inverter



Ground Mount

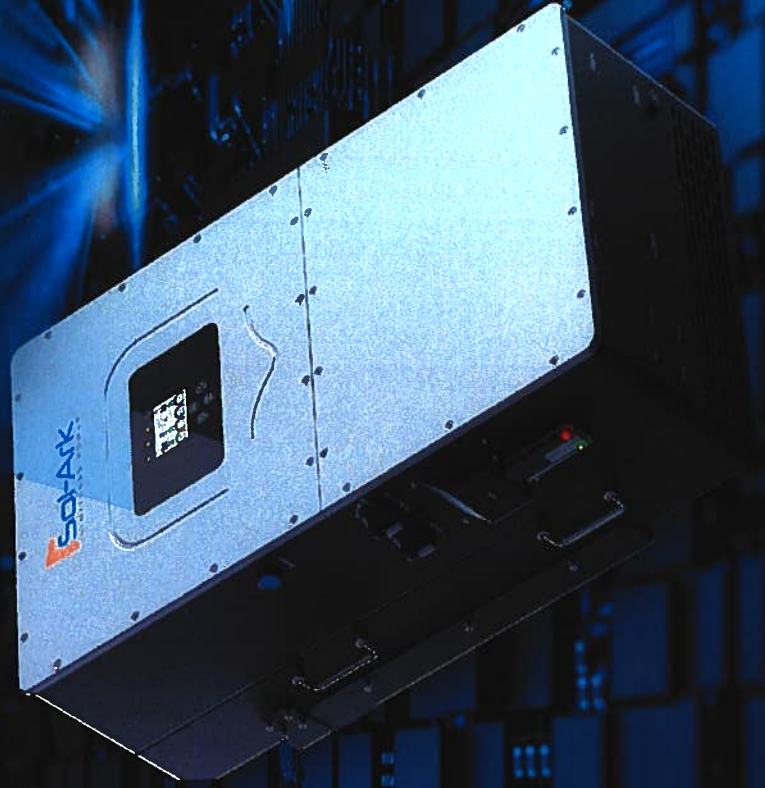
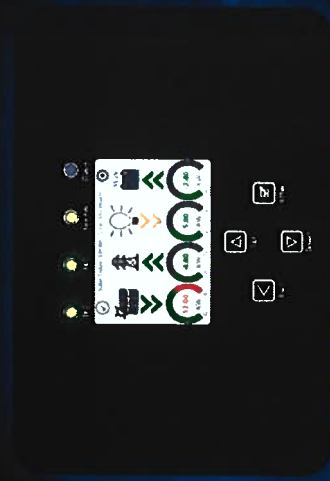
Rugged and space efficient outdoor ratings to accommodate a wide variety of project environments with or without batteries



Carports, EV Charging Stations, Mechatron EV Carports

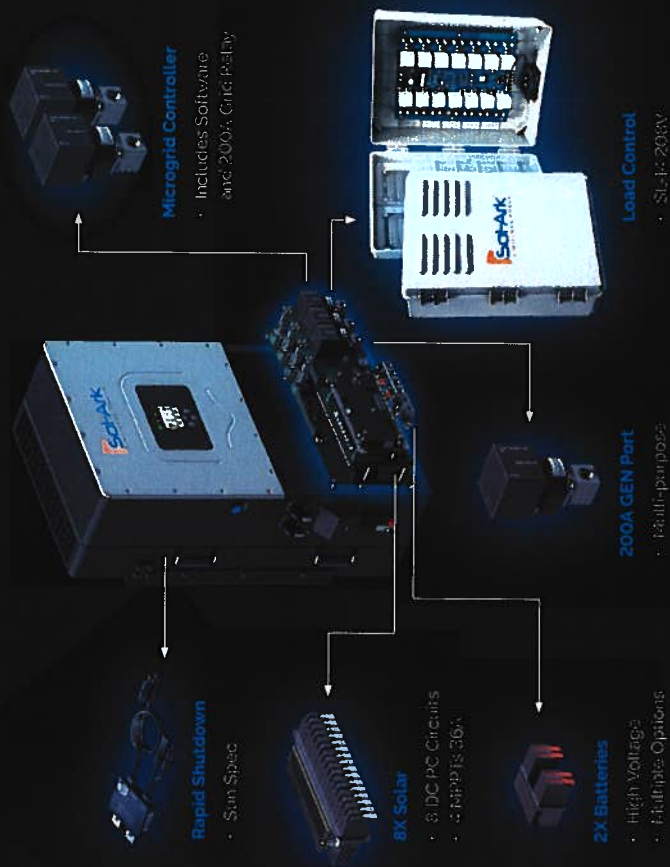
DC-couple to the inverters and use the included GEN port for easy and controlled EV-charging interconnectivity

Seamless UPS Modular Architecture Battery Agnostic



Flexible Hardware for Every Job Site

Whether it's new construction, solar retrofit, site expansion, electric vehicles, or batteries only, Sol-Ark provides hardware solutions for your entire fleet.



AC Coupling

Easily retrofit very large solar arrays and add batteries with no change to existing solar strategy.



DC Coupling

Connect solar directly using the GEN port for EV charging or gas generator controls.



Battery Only

Target electric bill savings, provide short duration backup, and expand site capability.

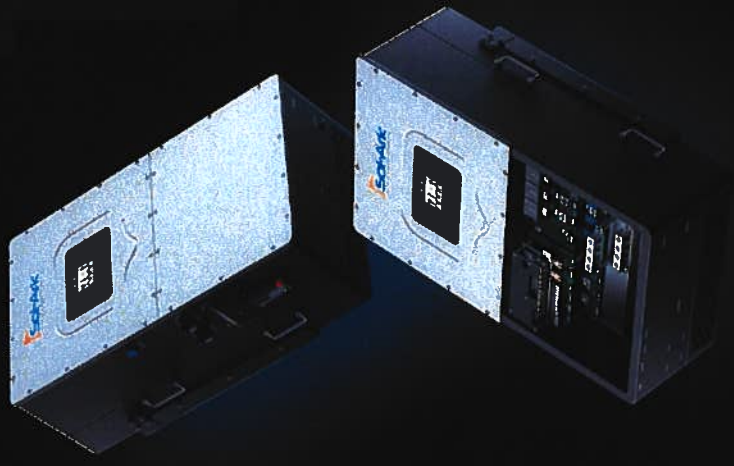


Driving Commercial Energy Resilience

Commercial & Industrial			
Product Suite	30K-3P-208V, 60K-3P-480V		
Max. PV Power to Battery	30,000W (30K) – 60,000W (60K)		
CEC Efficiency	96.5%		
Standard Warranty	10 Years		

Sol-Ark revolutionary commercial hybrid inverters simplify adding storage to commercial buildings. The Sol-Ark 30K provides native 208V three-phase electricity out-of-box, and the Sol-Ark 60K is 480V. Both include a microgrid controller, allowing savings to be optimized when grid connected and automatically isolated during power outages.

Both the 30K and 60K are stackable to 12 units of high voltage battery bank options, increasing project size and site flexibility. A multi-use port provides flexible interconnect to a variety of devices, including AC coupling, EV chargers, generator, or outdoor service panels.



AI-Powered Smart Load Management

- 14 x 100A Channels, up to 600V
- Ensure Quality Performance with Backup Circuit Prioritization
- Enhances Inverter Power by 2X and Battery by 30%
- Smart, In-Platform Software powered by Sol-Ark
- Convenient Installation Next to Existing Load Panel
- Advanced State-of-Charge and Time Shift Controls



Limitless Lithium™

Battery Energy Storage System

IP55 Outdoor: L3 30K-HV-60-IP55 and L3 60K-HV-60-IP55

Features/Innovations



Fully integrated energy storage solution – hybrid inverter, battery and fleet management



Built-in dual fire suppression including cabinet and packs



Integrated air conditioner for temperature control



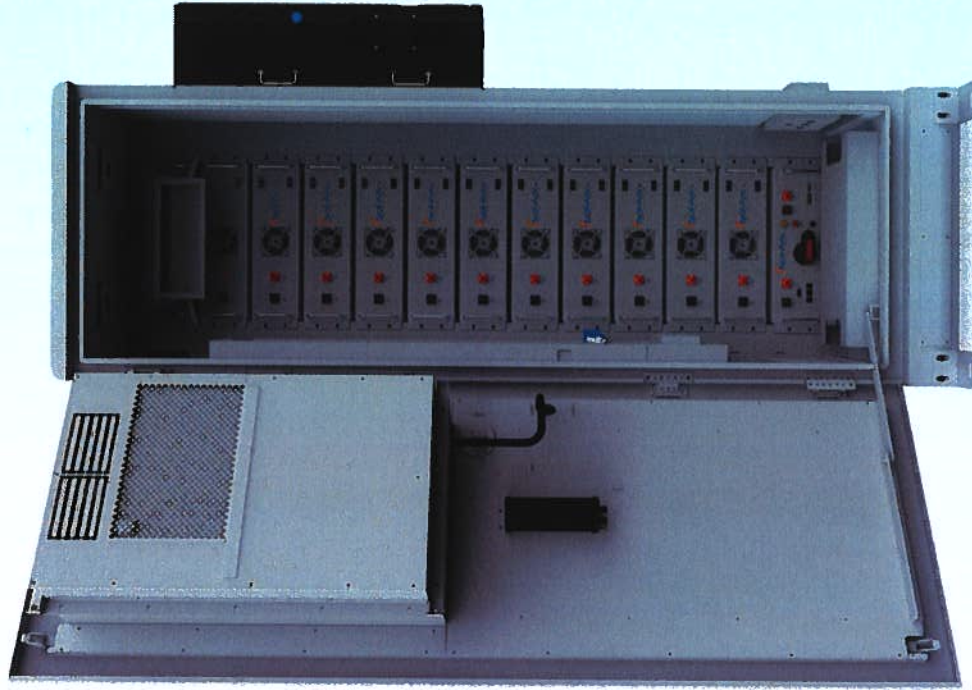
Intelligent EMS, BMS and hybrid inverter technology



Supports up to 6 battery cabinets per inverter



10-Year Warranty

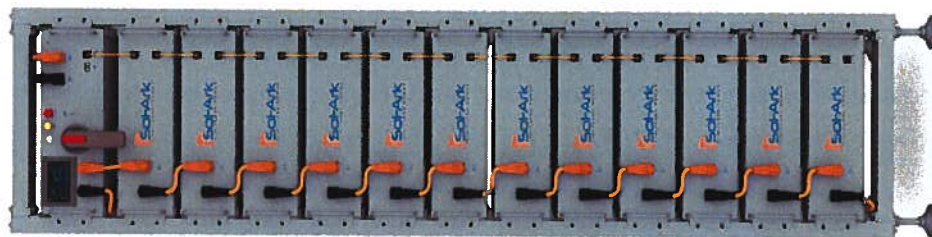


Limitless Lithium™

Battery Energy Storage System

IP20 Indoor: L3 30K-HV-40-IP20 and L3 60K-HV-60-IP20

Features/Innovations



Prismatic cells offer maximum reliability, efficiency, and safety



Automatic configuration of batteries and BMS



5kW packs include built-in fire suppression



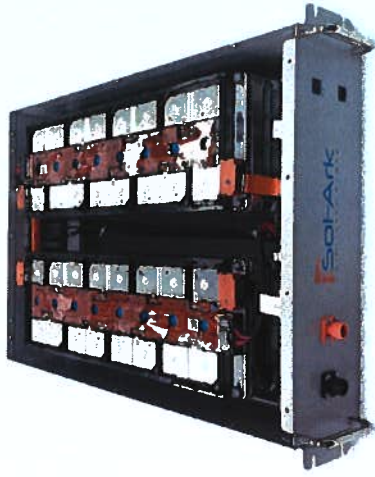
Supports USB and wifi upgrade (optional), remote upgrade



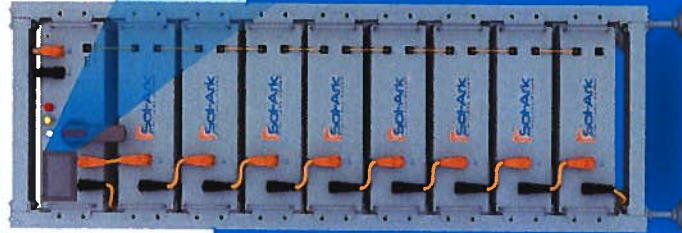
Modular batteries can easily be connected in parallel or series to increase capacity or voltage



10-Year Warranty

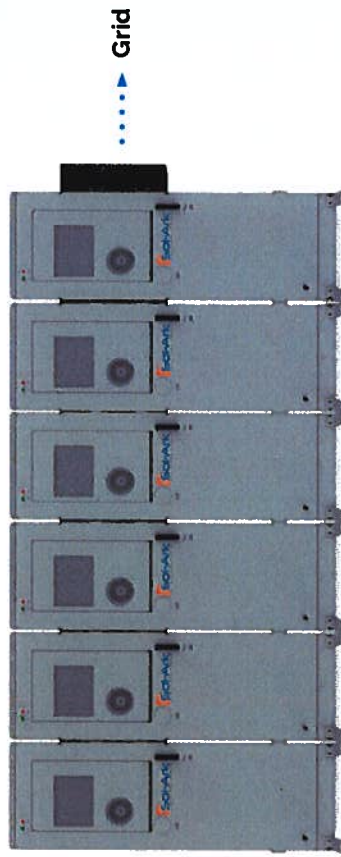


Inside of the battery

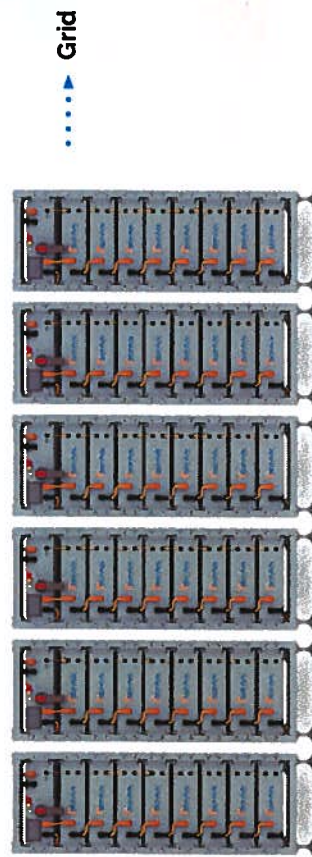


BMS touch screen offers real-time intelligent monitoring and diagnostics

Modular Outdoor and Indoor Solutions



IP55 Outdoor: Up to 6 inverters / 36 battery cabinets
30k: 180kWac / 22 MWH / 235kWdc – 325kWac PV
60k: 360kWac / 22 MWH / 470kWdc – 750kWac PV



IP20 Indoor: Up to 12 inverters / 72 battery cabinets
30k: 360kWac / 4.3 MWH / 470kWdc – 650kWac PV
60k: 720kWac / 4.3 MWH / 940kWdc – 1.5MWHac PV



Technical Specifications: 208V Outdoor and Indoor

Battery Model: L3 30K-HV-60-IP55 L3 30K-HV-40-IP20

System Data			
Compatible Inverter	Sol-Ark 30K-3P-208V-N	Indoor	
Environmental Rating	Outdoor	Lithium Iron Phosphate	
Cell Chemistry			
Battery Cabinet Capacity	61.44kWh		40.96kWh
System Usable Energy ¹	55.30kWh		36.86kWh
Inverter Grid/Gen/Load OCPD Rating		200A	
Backup Capability Per Inverter		30 kW/ac	
Max DC-Coupled Solar Per Inverter		39 kW/ac	
Max AC-Coupled Solar Per Inverter		54 kW/ac	
Max Battery Cabinets Per Inverter		6	
Min Battery Cabinets Per Inverter		1	
Inverter Stacks in Parallel	6 ²		8
Recommend Depth of Discharge		90%	
System Nominal Voltage	307V		410V
System Operating Voltage	249.6V-350.4V		332.8V-467.2V
Charge/Discharge Current ³			
• Recommend	100A	100A	50A
• Nominal/Continuous			
• Peak Discharge (2 mins, 25°C)		125A	125A
Combined Battery • Inverter Efficiency		90% (25C, 0.5C)	
Dimension (feet)	2.5W/3.5D/7.4H		1.9W/1.9D/5.3H
Weight	2095lbs		1384lbs
Operating Temperature ⁴	-22°F to 131°F		-4°F to 131°F
Humidity		5%-85%RH	
Altitude		±2000m	
Storage Temperature		-4°F to 95°F	
Seismic Zone		4	
Communication Port		CAN2.0/RS485	
Battery Module Specifications			
Battery Modules in Series Per Cabinet	6±2p		8
Battery Module Energy		512kWh	
Battery Module Nominal Voltage		51.2V	
Battery Module Nominal Capacity		100Ah	
Battery Module Qty Per Cabinet			
Warranty and Certification			
Cycle Life	>6000 Cycles (77°F±7°F 0.5C/0.5C, EOL70%)		
Warranty ⁵		10 Years	
Certification			
	UL9540, UL9540a, UN38.3, CEC, JA12, IEC62477, IEC62619, VDE-AR-N 4105, IEC62109, VDE2510-50		

1. DC usable energy, test conditions 90% DOD, 0.3C charge and discharge at 25°C. System usable energy may vary due to system configuration parameters.
2. For larger outdoor installations, use the Sol-Ark Mega Ark.
3. The current is affected by temperature and SOC.
4. Charging disconnects below 32°F. Derating occurs above 113°F. Ambient temperature may exceed operating range on IP55 model if using included climate controls. See Sol-Ark technical sales for planning sites outside of operating temperature range.
5. Battery warranty expires at 6000 cycles or 10-year term, whichever occurs first. 5-year extended warranty option available for inverter only.

16

Technical Specifications: 480V Outdoor and Indoor

Battery Model: L3 60K-HV-60-IP55 L3 60K-HV-60-IP20

System Data			
Compatible Inverter	Sol-Ark 60K-3P-480V-N	Indoor	
Environmental Rating	Outdoor	Lithium Iron Phosphate	
Cell Chemistry			
Battery Cabinet Capacity	61.44kWh		
System Usable Energy ¹	55.30kWh		200A
Inverter Grid/Gen/Load OCPD Rating			
Backup Capability Per Inverter		60 kW/ac	
Max DC-Coupled Solar Per Inverter		78 kW/ac	
Max AC-Coupled Solar Per Inverter		125 kW/ac	
Max Battery Cabinets Per Inverter		6	
Min Battery Cabinets Per Inverter		1	
Inverter Stacks in Parallel	6 ²		12
Recommend Depth of Discharge		90%	
System Nominal Voltage		614.4V	
System Operating Voltage		499.2V-700V	
Charge/Discharge Current ³			
• Recommend		50A	
• Nominal/Continuous		100A	
• Peak Discharge (2 mins, 25°C)		125A	
Combined Battery • Inverter Efficiency		90% (25C, 0.5C)	
Dimension (feet)	2.5W/3.5D/7.4H		1.9W/1.9D/7.4H
Weight	2095lbs		1705lbs
Operating Temperature ⁴	-22°F to 131°F		-4°F to 131°F
Humidity		5%-85%RH	
Altitude		±2000m	
Storage Temperature		-4°F to 95°F	
Seismic Zone		4	
Communication Port		CAN2.0/RS485	
Battery Module Specifications			
Battery Modules in Series Per Cabinet			12
Battery Module Energy		512kWh	
Battery Module Nominal Voltage		51.2V	
Battery Module Nominal Capacity		100Ah	
Battery Module Qty Per Cabinet			
Warranty and Certification			
Cycle Life	>6000 Cycles (77°F±7°F 0.5C/0.5C, EOL70%)		
Warranty ⁵		10 Years	
Certification			
	UL9540, UL9540a, UN38.3, CEC, JA12, IEC62477, IEC62619, VDE-AR-N 4105, IEC62109, VDE2510-50		

1. DC usable energy, test conditions 90% DOD, 0.3C charge and discharge at 25°C. System usable energy may vary due to system configuration parameters.
2. For larger outdoor installations, use the Sol-Ark Mega Ark.
3. The current is affected by temperature and SOC.
4. Charging disconnects below 32°F. Derating occurs above 113°F. Ambient temperature may exceed operating range on IP55 model if using included climate controls. See Sol-Ark technical sales for planning sites outside of operating temperature range.
5. Battery warranty expires at 6000 cycles or 10-year term, whichever occurs first. 5-year extended warranty option available for inverter only.

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Mega Ark

500kW+ Turnkey Containerized Solutions

To be released mid-year 2024



Features/Innovations

Pre-Engineered

Designed with precise equipment selection to maximize efficiency, reliability and lifespan



Factory Tested

Factory built solution integrates comprehensive safety features



Plug-and-Play

Includes all batteries, power conversion, coupling transformer, safety features, cooling, and protection and controls



Integrated air conditioner for temperature control



Built-in dual fire suppression including cabinet and packs

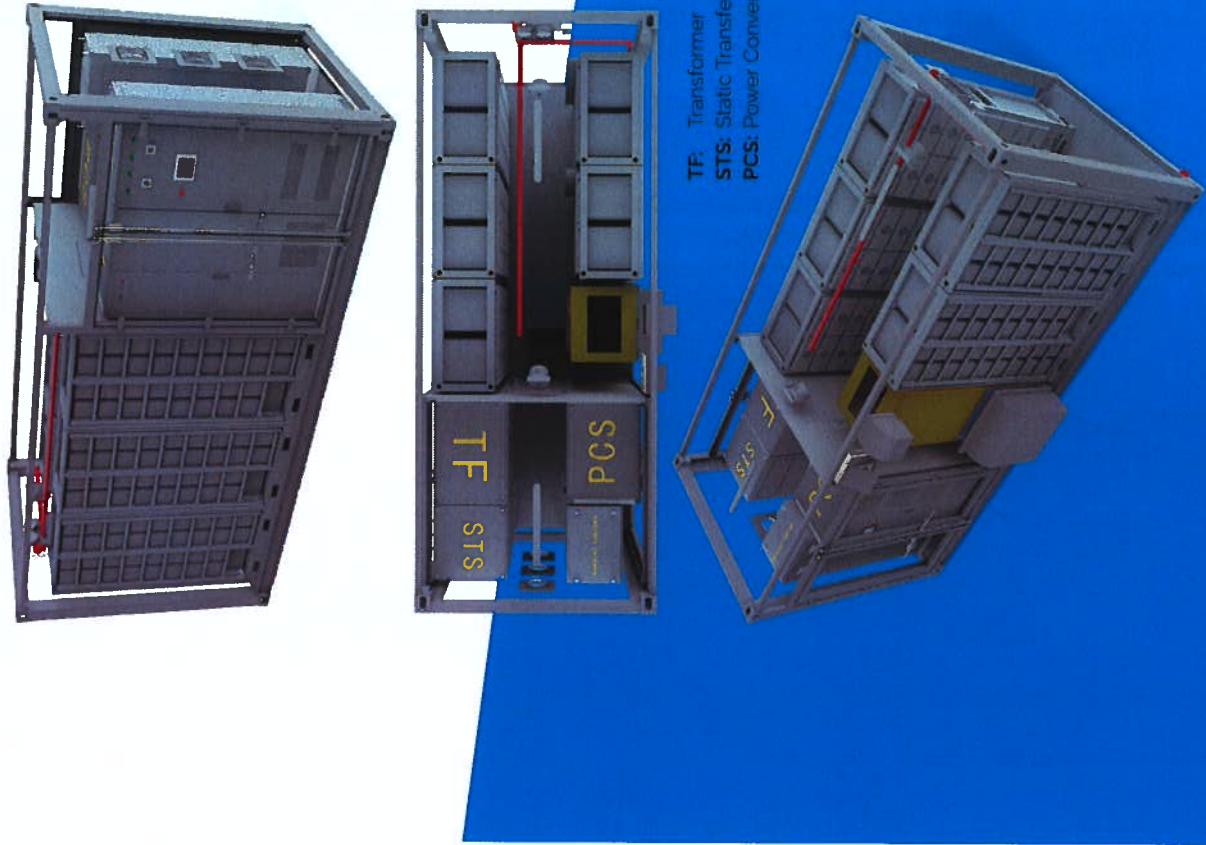


Energy Efficiency.
Independence
and Resilience.
Delivered.

Peak Shaving
Grid Support
Intermittent Power Generation
Charging Infrastructure
Islanding Options
Time of Use
Multi-Use Applications

Technical Specifications: Mega Ark

System Specification	
AC Output/Input Power	500kW
AC Output Frequency and Voltage	50/60Hz: 480Vac
Grid Type	3W Custom Transformer
THD	<3%
Power Factor	-1 to +1
System Communication	ETH
Black Start	Yes
Fire Detection	Heat and Smoke Detection and Extinguishment
Fire Alarm	Alarm Panel, Strobes and Horns with UPS Backup
Aux Load	10kW
Auxiliary Power Interface	208Vac, 3W+N+PE
Auxiliary Power Back Up	30 mins (Important Load)
Local Emergency Stop	Yes
Remote Stop/Shut-off	Yes
Battery Technical Specification	
Energy Configuration	1060kWh
Battery Operating Voltage	642V-868V
Battery Communication	CAN, RS485
Pack Configuration	1P14S (14 Cells)
Rack Configuration	1P238S (17 Packs)
Stack Configuration	5*1P238S (5 Packs)
Other Technical Specification	
Dimension (feet)	199W/8D/9.5H
Weight Approximate	18.2 tons
IP Rating of Enclosure	IP54
Seismic Parameter	Zone 4
Noise @1m Distance	≤75 dB
Operating Temperature Range	-22°F to 140°F (≤ 113°F Derating)
Relative Humidity	≤95% (Non Condensing)



Monitor and Manage Your Energy from Anywhere

Maximize energy performance of every circuit with smart load management

Automate business backup

Optimize demand response with Peak Shaving

Analyze how much energy was made, used, stored and sold back to the grid

Check the health of the battery

Remote commissioning and settings adjustment



Future Proof. Battery Technology for Today and Tomorrow.

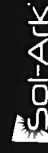
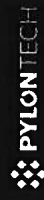
Battery technology is constantly evolving. Sol-Ark's industry leading software architecture enables pairing the best battery for the solution — today and in the future.

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A Selection of
Our Industry Leading
Battery Partners



HOMEGRID



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Our Industry Solutions



Data Center



Telecommunications



Oil & Gas



Military



Pharmaceutical



Industrial Automation



Big Box Retail



Financial Institutions



Pharmacies



Gas Stations



Restaurants



Education



Agriculture



Disaster Relief



Wineries

We're innovators...

who solve the most critical energy storage challenges every day

About Sol-Ark

A global energy technology leader

Deep engineering expertise in smart energy solutions

A track record of results. For over a decade, Sol-Ark has been solving complex energy challenges with innovation and technology

Powered by a vast ecosystem including thousands of distributors, installers, EPCs, integrators, and battery manufacturers

Trusted by global Fortune 500 companies in telecommunications, retail, big tech, restaurants, and the largest space agency in the world



Tom Brennan, CEO and CTO of Sol-Ark, is a 2023 winner of the E&Y Entrepreneur of the Year®, the world's most prestigious business award for entrepreneurs



sol-ark.com

REDCLOUD ENERGY MANAGEMENT SYSTEM



by  muGrid Analytics

We close the gap between modeled and actual economic performance of battery storage, microgrids, EV charging, and controllable loads.

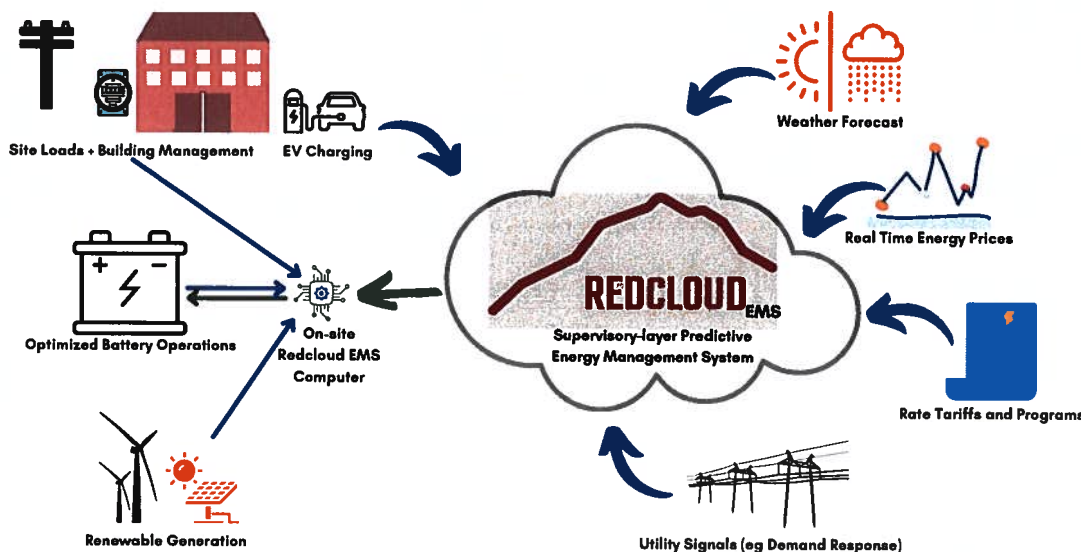
With Redcloud EMS, your project will unlock utility bill savings that were estimated during design, optimize operations of your energy equipment, and use predictive analytics to anticipate what your system needs to do next. This allows energy assets to realize their full capabilities and enables stakeholders to finally achieve the project economics they expect, without having to become energy experts themselves.



When it comes to economic performance as an energy goal, simple rules-based control is insufficient for systems with multiple stacked revenue streams. Programming an operating strategy for microgrids requires intelligent control. Redcloud EMS intelligent operation uses machine learning and predictive analytics to save you money and reach your energy goals, with monitoring insights that are far more detailed than anything currently on the market. Detailed monitoring & verification analytics allows nuanced insight into system performance and economic benefits, along with rapid adaptivity and flexibility. This is performed in an operational, forward-looking environment, delivering exceptional financial returns compared to currently available control solutions.

FEATURES

- Fully managed "autopilot" operations - no need to make changes
- Fully customized model predictive control maximizes return for your site
- Revenue stacking of multiple opportunities including: demand management, energy arbitrage, solar self-consumption, and market participation
- Enables utility bill reconciliation and economic performance verification
- Islanding for resilient backup power
- Track and visualize data trends



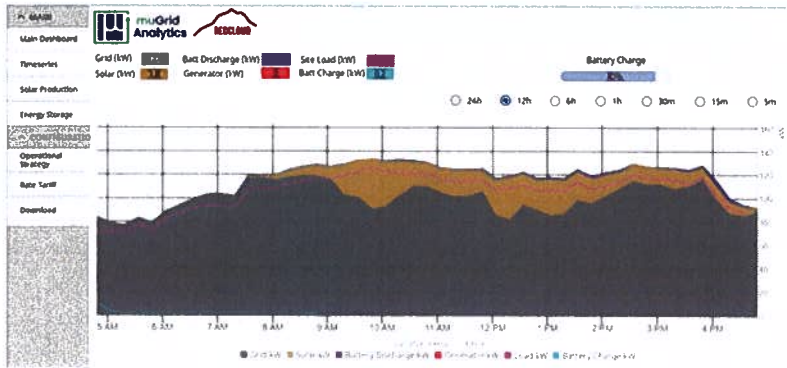
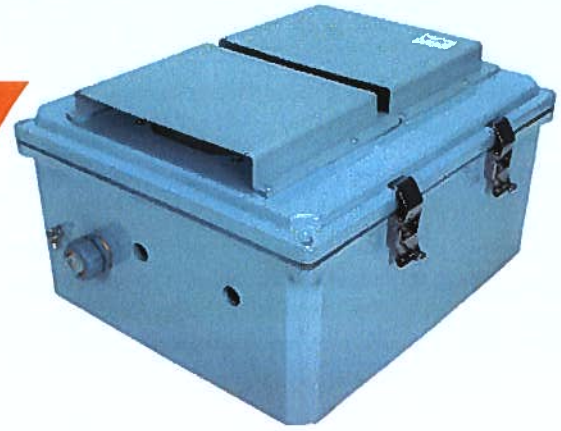
HELLO@MUGRID.COM

WWW.MUGRID.COM



GROUNDING IN OPTIMIZATION, POWERED BY PREDICTIVE ANALYTICS

The Redcloud suite ensures reliable economic performance from feasibility through operations and flexibly adapts to changing conditions.



APPLICATIONS

Behind-the-meter Battery Storage

Operating on a single building with a single meter, these projects are installed with the primary goal of economic return. Battery storage may be combined with solar PV or other on-site renewable generation or may stand alone.

Grid-connected Microgrids

These microgrids may comprise one or multiple buildings and they add an additional design requirement: resilience. Resilience is the ability to stay up when the grid goes down. Grid-connected microgrids provide economic benefits when the grid is functional and backup power in the event of an outage.

Off-grid Microgrids

Off-grid microgrids are islanded 100% of the time, but they still require optimized operations in variable conditions to achieve performance goals.

Utility Scale Energy Storage

Utility scale storage must operate against real-time market conditions.

Cabinet Data

External Dimensions (HxWxD)	14.6" x 12.6" x 7.4" 370mm x 320mm x 188mm
Weight	16.9 lbs / 6.67 kg
Ratings	NEMA 3R / IP24

Power Supply

Voltage	100-240 Vac
Frequency	50/60 Hz
Current Requirement	2.5A

Climate

Temperature Range	32°F to 120°F 0°C to 50°C
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Communication

Internet Connection	Ethernet WiFi Cellular
Communication Interfaces	MODBUS/RS485 MODBUS/TCP CANbus Third-party API
Cybersecurity	Firewall included

BIDDER'S PROOF OF RESPONSIBILITY

-Confidential to the Extent Permitted by Laws and Regulations-

The Bidder's Proof of Responsibility must be filed with the Owner five days prior to the bid deadline. The Bidder must submit this statement, full and complete, sworn to before an officer authorized to administer oaths.

The purpose of this document is to enable the Owner to decide if the bidder has the financial ability, the equipment and the experience to perform the contract in a manner consistent with protection of the Owner's and the general welfare. It is not intended to discourage beginning contractors nor to make it difficult for qualified contractors to bid.

The Owner reserves the right to require additional information before awarding the contract in order to determine a prospective contractor's qualifications for the project. If the Owner determines that the answers to the questionnaire and the financial statement are insufficient or demonstrate that the bidder is not qualified the Owner may reject the bid.

Statement of Bidder's Qualifications

1. Name of Bidder All Energy Solar Inc.
2. Bidder's address 5 Marsh Court, Madison, WI 53718
3. Contact person Samuel Wood, Business Development
4. Telephone number 320-493-9338
5. When organized 2009
6. When incorporated 2009 in Wisconsin
(if Sole Proprietorship or Partnership, so indicate)
7. Years in business under present name 16 Years
8. Licenses (type and license number) Electrical Contractor License # 1197754
9. Certifications (check those that apply):
 - a. Disadvantaged Business Enterprise _____
 - b. Minority Business Enterprise _____
 - c. Woman-Owned Business Enterprise _____
 - d. Small Business Enterprise _____
10. Contracts on hand
(Attach a list of present uncompleted contracts, a schedule of their completion dates, % completed as of this date, and gross amount of each contract.)

11. General character of work typically performed by your firm _____
Full service electrical renewable energy systems provider (solar, BESS, EV chargers).
12. Has your firm or a firm for which a corporate officer of your firm was working ever defaulted on a contract or failed to complete any work awarded it?
Yes _____ No X _____
(If yes, attach a statement setting forth when this occurred, where and why.)
13. Are there any judgments, claims, disputes or litigation pending or outstanding against your firm? Yes _____ No X _____
(If yes, attach a statement setting forth when this occurred, where and why.)
14. Attach a list of major equipment now owned or leased full-time by your firm.
15. Attach a list of principal employees of your firm, including the officers, and a short resume of the background and experience of these principal employees.
16. Attach a list of credit references, showing credit available. Banks or other financial institutions are preferred references.
17. Financial statement:
Condition at the close of business on September 29th, 2025 .
- Assets:
- a. Cash _____
- b. Accounts receivable _____
- c. Work in progress _____
- d. Real estate equity _____
- e. Materials in stock _____
- f. Book value of equipment _____
- g. Book value of furniture and fixtures _____
- h. Other assets _____
- Liabilities:
- a. Accounts, notes and interest payable _____
- b. Other liabilities _____

Net Worth:

(A standard financial statement may be submitted, if desired.)

Date at close of business this September 29th day of 2025 Name of Organization All Energy Solar Inc.By Samuel D. WoodTitle Business DevelopmentState of Wisconsin, County of Dane,hereby certifies that the answers to all the foregoing questions and the other information provided are true and correct.

(signature)

Subscribed and sworn to before me this 29th day ofSeptember, 20 25Sara Hyland Notary PublicCity/Village Saint Paul County RamseyMy commission expires on January 31, 2028

(Attachments consist of _____ sheets.)



**VILLAGE OF MCFARLAND
AFFIDAVIT OF QUALIFICATIONS**

Samuel Wood (“Affiant”), a duly authorized representative of All Energy Solar Inc, a potential contractor or subcontractor (hereinafter the “Contractor”), on a project for the Village of McFarland, swears on behalf of said Contractor, under oath and penalty of perjury, as follows:

1. Contractor’s permanent place of business is located at:

5 Marsh Court, Madison, WI 53718

2. The Contractor is authorized or registered to transact business in the state by the Department of Financial Institutions in compliance with Wis. Stat. chs. 178, 179, 180, 181, or 183.

3. Neither the Contractor, nor agent, partner or officer of the Contractor, nor any employee who will perform any work on the project, is debarred, suspended, proposed for debarment or declared ineligible from contracting with any unit of federal, state or local government.

4. The Contractor is in compliance with provisions of Section 2000e of Chapter 21, Title 42 of the United States Code and Federal Executive Order No. 11246 as amended by Executive Order No. 11375 (known as the Equal Opportunity Employer provisions).

5. The Contractor has general liability, workers’ compensation, unemployment, and automobile insurance at levels sufficient to protect the Village including those liability coverage limits specified in the contract documents.

6. The Contractor has complied with all provisions of Wisconsin prevailing wage law and federal Davis-Bacon related Acts, and all rules and regulations therein, for projects undertaken by the Contractor that are covered by these laws, for the past five (5) years.

7. The Contractor has 230 employees. The Contractor (does / ~~does not~~) [STRIKE ONE] participant in an Apprenticeship program.

8. The Contractor has a written substance abuse prevention program meeting the requirements of Wis. Stat. § 103.503. As required by Wis. Stat. § 103.503, all employees are subject to drug and alcohol testing before commencing work on the public works project, except that testing of an employee before commencing work on a project is not required if the employee has been participating in a random testing program during the 90 days preceding the date on which the employee commences work on the public construction project.

9. Affiant represents and warrants that all employees who will perform work on the project are properly classified as employees or independent contractors under all applicable state and federal laws.

10. The Contractor (~~has~~ / has not) [STRIKE ONE] been the subject of any investigation, order or judgment from any state or federal agency or court concerning an employment practice, including but not limited to, classification of employees, unemployment insurance, or discrimination. Copies of any investigation, order or judgment are attached. [STRIKE IF NOT APPLICABLE]

11. The Contractor's employees who will perform work on the project are:

- a. Covered under a current workers' compensation policy; and
- b. Properly classified under such policy.

12. The Contractor is in compliance with all applicable requirements of the federal Affordable Care Act.

13. The Contractor possesses all applicable professional and trade licenses required for performing the public works.

14. The Contractor has adequate financial resources to complete the public construction contract, as well as all other work the bidder is presently under contract to complete.

15. The Contractor is bondable for the terms of the proposed public construction contract.

16. The Contractor has satisfactorily completing the following five projects of similar size and complexity to the proposed public construction project within the last five years.

a. Project 1:

CuisinArt Resort Solar + Storage
Rendezvous Bay, Anguilla, 2640,
Anguilla (British Virgin Islands)

Jinko Eagle CS 500kW Battery

b. Project 2: Trystar LLC

15765 Acorn Trail
Faribault, MN 55021

BESS : BYD-Chess 120/248
Storage kW Continuous Power 120.0
Storage kWh Usable Capacity 248.0

c. Project 3:

Marten Transport - Jurupa Valley
11033 Harrel St
Mira Loma, CA 91752

BESS : BYD-Chess 120/248
Storage kW Continuous Power 120.0
Storage kWh Usable Capacity 248.0

d. Project 4:

e. Project 5:

17. The Contractor has, and diligently maintains, a written safety program.

18. The Contractor has not been determined to have committed a Serious, Willful or Repeated violation (as defined by OSHA) of OSHA safety standards in the last 10 years.

19. The person signing below has the authority to sign on behalf of, and bind, the Contractor.

20. The Contractor understands that failing to submit the required affidavit, or providing incorrect, false, or misleading information, shall automatically disqualify the Contractor from be awarded the public construction contract and/or performing work on the project.

Project: Village of McFarland - Public Safety Microgrid Ready Energy Storage System

Signature:  _____

Date: 9/29/25

Name: Samuel D. Wood

Title: Business Development