

Monday, October 26, 2020

Village Board
7:00 PM

McFarland Municipal Center
Community Room

AGENDA

You are invited to this meeting through a Zoom webinar. The Public is strongly encouraged to watch and participate in these meetings remotely through either the webinar or telephone options listed below.

PLEASE CLICK THE LINK BELOW TO JOIN THE ZOOM WEBINAR:

<https://us02web.zoom.us/j/84915697513>

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

Webinar ID: 849 1569 7513

1. CALL TO ORDER.
2. ATTENDANCE/ROLL CALL.
3. PUBLIC ANNOUNCEMENTS AND COMMUNICATIONS.
 - a. Public Announcements
 - 1) Final January 1, 2020 Population Estimates
 - 2) Absentee Voting for November 3, 2020 Election
 - 3) November 3, 2020 Presidential Election
 - b. Public Communications
4. CONSENT AGENDA.
 - a. Motion to approve the minutes of the October 8, 2020 special meeting.
 - b. Motion to approve the minutes of the October 12, 2020 Village Board meeting.
 - c. Motion to approve the minutes of the October 15, 2020 Special Village Board meeting.
 - d. Motion to approve Check #77924-78006 in the amount of \$786,431.00.
 - e. Motion to approve appointing Sean Chislom to serve on the Communications and Technology Committee for a term ending April 30, 2021.

- f. Motion to approve appointing Ellen Daniels, Keri Berling, Robert Bresette, Allison Hudack, Jessika Kasten, Barry Kasten, Gwen Murphy, Andrew Schwartz, Larisa Roberts, Lisa Abler, Benetta Jones, Mark Emmrich, Carol Sam, Susan Kaye, Clair Mance, Kelly Reagan to serve as an Election Inspector for the 2020-2021 term.

5. PUBLIC APPEARANCES.

- a. This is an opportunity for members of the public to address the Village Board. Please remember this is a virtual meeting conducted through the Zoom online meeting platform. Zoom meeting attendees wishing to address the board may do so using the Question and Answer feature within the Zoom online meeting platform. You may state your name, address, and provide your comments to the board for their consideration. 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. Members of the public may speak during public appearances or during their selected agenda item as they designate on the public comment form. Please adhere to the 3-minute time limit. Additionally, you may send your public comments to cassandra.suettinger@mcfarland.wi.us to be included as part of the meeting.

6. BUSINESS.

- a. Discussion and action on request from the Lake Waubesa Conservation Association to support a water quality monitoring station at Swan Creek.
- b. Discussion and action regarding confirmation of Village President appointments to the Diversity, Equity, and Inclusion Subcommittee.
- c. Public Safety Committee (Trustees Kryzenske & Brassington)
Plan Commission (President Czebotar & Trustee Rupert)
 - 1) Discussion and action to change the licensed premise for Aruba0204 LLC D/B/A Angelo's McFarland, 4706 Farwell St., to add an addition and change the outdoor seating area.
- d. Plan Commission (President Czebotar & Trustee Rupert)
Parks, Recreation, and Natural Resources Committee (Trustees Clow & Utter)
Public Utilities Committee (Trustees Kryzenske & Clow)
Public Works Committee (Trustees Clow & Rupert)
 - 1) Discussion and action on a request by Veridian Homes Rosewood Fields LLC regarding approval for Rosewood Fields Subdivision located west of CTH AB in the Village of McFarland including Final Plat; Development Agreement; Declaration of Covenants, Conditions, & Restrictions (CCRs), and Park Plan.
- e. Parks, Recreation, and Natural Resources Committee (Trustees Clow & Utter)
 - 1) Discussion and action regarding the acceptance for the grant and purchase of playground equipment at the Ridgeview Tot Lot Park.
- f. Discussion and action to approve filling the vacancy for Interim Police Chief within the Police Department and adopt salary range for the interim position.

- g. Discussion and action to approve filling the vacancy for Public Works Crewperson within the Public Works Department.
- h. Discussion and action on acceptance of the Center for Tech and Civic Life COVID19 grant.
- i. Discussion and review of the 2021 Budget including the following sections:
 - 1) Changes since the last distribution.
 - 2) Utility Fund (600).
 - 3) Stormwater Utility Fund (605).
 - 4) Solid Waste Fund (610).
 - 5) Retiree Fund (700).
 - 6) Review schedule for future meetings.
- j. Authority, Board, Commission, and Committee agenda item requests, referrals, and updates.

7. ADJOURNMENT.

This meeting notice constitutes an official meeting of the above referenced group and was posted in accordance with all applicable laws related to Open Meetings Law. It is possible that members of and possibly a quorum of members of other governmental bodies of the municipality may be in attendance at the above stated meeting to gather information. No action will be taken by any governmental body at the above stated meeting other than the governmental body specifically referred to above in this notice. Upon reasonable notice, efforts will be made to accommodate the needs of disabled individuals. For additional information or to request this service, contact the McFarland Municipal Center at (608) 838-3153 or cassandra.suettinger@mcfarland.wi.us

Cassandra Suettinger

From: DIR Demographic Services <DIR_Demo@wi.gov>
Sent: Friday, October 9, 2020 6:07 AM
To: Cassandra Suettinger
Subject: Final Estimate of the January 1, 2020 Population for the Village of McFarland in Dane County

Dear Municipal Clerk:

The final estimate of the January 1, 2020 population for the Village of McFarland in Dane County is 8,952.

Approximately 6,632 of the estimated population for the Village of McFarland are of voting age. This approximation is a courtesy estimate that helps you comply with Wisconsin Statute 5.66, which requires municipal clerks to approximate the number of electors prior to elections. The voting age population was calculated by applying the 2010 Census proportion of persons age 18 and over to the final January 1 estimate, and then multiplying the result by a state-wide factor to account for the general aging of the population. Please note that, if you have an adult correctional facility in your municipality, its population is included in this voting-age estimate.

Demographic Services Center
Division of Intergovernmental Relations
WI Dept. of Administration
<https://doa.wi.gov/demographics>



VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Monday, October 26, 2020

SECTION: Public Announcements & Communications

DEPARTMENT: Administration

CONTACT: Cassandra Suettinger, Village Clerk/Treasurer

AGENDA ITEM: Absentee Voting for November 3, 2020 Election

PREVIOUS ACTION:

ISSUE SUMMARY:

In-Person absentee voting continues in the Administration offices. The

Saturday October 24th - 9 a.m. to Noon

Monday October 26th - 8 a.m. to 4:30 p.m.

Tuesday October 27th - 6 a.m. to 6 p.m.

Wednesday October 28th - 8 a.m. to 4:30 p.m.

Thursday October 29th - 6 a.m. to 6 p.m.

Friday October 30th - 8 a.m. to 5 p.m. - **FRIDAY OCT30th AT 5 PM IS THE DEADLINE FOR REGISTERING TO VOTE IN ADVANCE OF THE ELECTION.**

Saturday October 31st - 9 a.m. to Noon

For those who are unwilling or unable to enter Village Hall, but still want to cast a ballot by in-person absentee voting, can do so via curbside. To request this service either contact us before you leave, or contact us in the parking lot at 608-838-3153.

By mail absentee requests for the November 3, 2020 must be made by Thursday October 29th. Voters who wish to received a ballot by mail, but don't have the means or technology to upload their photo ID, can receive a free copy of their photo ID from One Community Bank. For more information voters should check out the [Village's Contactless Voting Process!](#)

Absentee Voting Statistics(as of 10/24/2020 at 3 p.m.):

Current Number of Registered Voters: 6460

Number of Absentee Ballots issued: 4189 (64.85% of registered voters)

Number of Absentee Ballots Returned: 3554 (84.84% Returned) (837 in-person, 2717 by-mail)

All Ballots must be RECEIVED by 8 p.m. to be counted. Ballots can be returned by USPS Mail,



the 24/7 Dropbox located in the Municipal Center Parking Lot, or in person at Village Hall by ringing the curbside bell.

Any voting related questions can be directed to 608-838-3153 or village.administration@mcfarland.wi.us

FINANCIAL/BUDGET IMPACT:

VILLAGE PLAN REFERENCE:

ORDINANCE REFERENCE:

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

ATTACHMENTS:

None



VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Monday, October 26, 2020

SECTION: Public Announcements & Communications

DEPARTMENT: Administration

CONTACT: Cassandra Suettinger, Village Clerk/Treasurer

AGENDA ITEM: November 3, 2020 Presidential Election

PREVIOUS ACTION:

ISSUE SUMMARY:

November 3, 2020 Presidential Election

Polling Hours: 7:00am - 8:00pm (Voters in line at 8:00pm will be allowed to cast a ballot)

Polling Location: McFarland Municipal Center, 5915 Milwaukee Street

Voter Registration - All voters must be registered to vote to cast a ballot. To confirm your registration status visit [My Vote Wisconsin](#).

Voters may register to vote on Election Day. Recent State Law changes require you have resided in the Village for 28 days as of November 3, 2020 to vote here. Please remember to bring a valid form of proof of residence with you. Common forms include an unexpired WI Driver's License or ID Card, Utility Bill or Bank statement. For a full list please [click here](#).

Photo ID - All Voters must have a valid photo ID to cast a ballot on election day. Common forms include a WI Driver's or ID card or US Passport that has not expired before 11/06/18. For a full list of acceptable photo IDs [click here](#).

Don't have a valid Photo ID? You can get a free ID through the WI DMV for the purpose of voting for more information [click here](#) or call the voting ID hotline at 844-588-1069.

COVID19 Protocols - We will be enforcing social distancing requirements within the polls. We ask that the public be patient with poll workers and staff as they get people in and out as quickly as possible. We ask that all members of the public wear a facial covering when voting on Election Day. For a video on our COVID19 Protocols, please [click here](#).

Observers - Wisconsin State Law provides that anyone who is not a candidate on the ballot may be present at the polls to observe on Election Day. Often times with General Elections, we see a



lot of interest in observing at the polls. The Village will accommodate observers as much as possible, within the limited space we have and social distancing requirements.

FINANCIAL/BUDGET IMPACT:

VILLAGE PLAN REFERENCE:

ORDINANCE REFERENCE:

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

ATTACHMENTS:

None

VILLAGE OF MCFARLAND

Village Board Minutes

Thursday, October 8, 2020 - 6:00 PM

1. CALL TO ORDER.

Village President Czebotar 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. ATTENDANCE/ROLL CALL.

Village Board members present: Village Trustee Stephanie Brassington, Village Trustee Carolyn Clow, Village President Brad Czebotar, Village Trustee Michael Flaherty, Village Trustee Eric Kryzenske, Village Trustee Justin Rupert, Village Trustee Clair Utter.

Village Board members not present: None.

Staff Present: Administrator Matt Schuenke, Clerk/Treasurer Cassandra Suettinger, Police Chief Craig Sherven, Community and Economic Development Director Andrew Bremer, Public Works Director Jim Hessling, Outreach Director Lori Andersen, Fire/EMS Director Chris Dennis, and Communications & Technology Director Stephanie Miller.

3. PUBLIC APPEARANCES.

- a. *This is an opportunity for members of the public to address the Village Board. Please remember this is a virtual meeting conducted through the Zoom online meeting platform. Zoom meeting attendees wishing to address the board may do so using the Question and Answer feature within the Zoom online meeting platform. You may state your name, address, and provide your comments to the board for their consideration. 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. Members of the public may speak during public appearances or during their selected agenda item as they designate on the public comment form. Please adhere to the 3-minute time limit. Additionally, you may send your public comments to cassandra.suettinger@mcfarland.wi.us to be included as part of the meeting.*

None.

4. BUSINESS.

- a. *Discussion and review of the 2021 Budget including the following sections:*

- 1) *Changes since the last distribution.*

Village Administrator Matt Schuenke provided an overview of changes since the last distribution including benefit changes and state revenues.

- 2) *General Fund (100).*

Village Administrator Schuenke and Department Heads presented draft submittals of their department budgets within the 100 General Fund.

3) Communications and Technology Fund (200).

Communications & Technology Director Stephanie Miller presented an overview of the draft submittal of the 2021 Communications and Technology Fund (200).

4) Library Fund (205).

Library Director Heidi Cox presented an overview of the draft 2021 submittal of the Library Fund (205).

5) Debt Service Fund (300).

Item postponed.

6) Tax Increment District #3 Fund (305).

Item postponed.

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

Item postponed.

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

Item postponed.

9) Retiree Fund (700).

Item postponed.

10) Canine Fund (800).

Police Chief Sherven presented an overview of the draft 2021 budget submittal for the Canine Fund (800).

11) Review schedule for future meetings.

Village Administrator Schuenke noted the next review of the draft 2021 budget will occur on October 12, 2020 at the regular meeting of the Village Board starting at 7 p.m.

5. ADJOURNMENT.

Motion by Village Trustee Stephanie Brassington, second by Village Trustee Justin Rupert, to adjourn at 8:55 p.m.

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

Respectfully submitted,
Cassandra Suettinger
Village Clerk/Treasurer

VILLAGE OF MCFARLAND

Village Board Minutes

Monday, October 12, 2020 - 7:00 PM

1. CALL TO ORDER.

Village President Czebotar 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. ATTENDANCE/ROLL CALL.

Village Board members present: Village Trustee Stephanie Brassington, Village Trustee Carolyn Clow, Village President Brad Czebotar, Village Trustee Eric Kryzenske, Village Trustee Justin Rupert, Village Trustee Michael Flaherty, Village Trustee Clair Utter.

Village Board members not present: None.

Staff Present: Administrator Matt Schuenke, Clerk/Treasurer Cassandra Suettinger, Police Chief Craig Sherven, Parks Superintendent Sayer Larson, Public Works Director Jim Hessling, Fire/EMS Director Chris Dennis, and Communications & Technology Director Stephanie Miller.

3. PUBLIC ANNOUNCEMENTS AND COMMUNICATIONS.

a. Public Announcements

1) In-Person Absentee Voting to Begins October 20th

2) Cutoff for Online/Mail Registration - Wednesday October 21st

3) Trick or Treating on Halloween - Saturday, October 31, 2020

b. Public Communications

4. CONSENT AGENDA.

a. Motion to approve the minutes of the September 28, 2020 meeting.

b. Motion to approve Check #'s 77815-77923 in the amount of \$863,631.73.

Motion by Village President Brad Czebotar, second by Village Trustee Carolyn Clow, to approve the consent agenda as presented. Motion carries 7 - 0 - 0 by acclamation.

5. PUBLIC APPEARANCES.

- a. This is an opportunity for members of the public to address the Village Board. Please remember this is a virtual meeting conducted through the Zoom online meeting platform. Zoom meeting attendees wishing to address the board may do so using the Question and Answer feature within the Zoom online meeting platform. You may state your name, address, and provide your comments to the board for their consideration. 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. Members of the public may speak during public appearances or during their selected agenda item as they designate on the public comment form. Please adhere to the 3-minute time limit. Additionally, you may send your public comments to cassandra.suettinger@mcfarland.wi.us to be included as part of the meeting.
- Tamara Knickmeier, 4346 Jordan Drive, spoke to request the Board consider supporting a water quality monitoring station to be placed at Swan Creek.

6. BUSINESS.

- a. Presentation by the McFarland Youth Center regarding prior year's operations.
- President of the McFarland Youth Center Shawn Miller presented on the 2020 operations to date. He provided details on how the Youth Center is handling COVID-19 and challenges they have faced in 2020. He also requested the Board consider a new MOU with the Youth Center, and funding consideration for 2021. He also discussed a desire for the youth center to be part of the discussion on how to advance a community center within the Village.
- b. Personnel Committee (President Czebotar & Trustee Utter)
- 1) Discussion and action regarding the revision of Chapter 25 (Workers Compensation) and creation of Chapter 36 (Light Duty) within the Personnel Policy Manual.
- Motion by Village President Brad Czebotar, second by Village Trustee Stephanie Brassington, to approve revision of Chapter 25 (Workers Compensation) and creation of Chapter 36 (Light Duty) within the Personnel Policy Manual. Motion carries 7- 0 - 0 by acclamation.
- 2) Discussion and action regarding the appointment of the Village Forester and corresponding change to the Parks Superintendent position description.
- Motion by Village President Brad Czebotar, second by Village Trustee Carolyn Clow, to approve appointment of the Village Forester and corresponding change to the Parks Superintendent position description. Motion carries 6 - 1 - 0 by acclamation with Trustee Utter voting nay.
- c. Sustainable McFarland Ad-Hoc Committee (Chair Freedman & Vice-Chair Tiboris)

1) Discussion and regarding selection of a consultant for the McFarland Sustainability Plan.

Community Development Director Andrew Bremer provided an overview of the recommendation from the Ad-Hoc Sustainability Committee, as well as, the RFP process including the evaluation team and selecting of a consultant.

The Board discussed the consultant and whether the scope within the RFP process was sufficient.

Motion by Trustee Carolyn Clow, second by Trustee Eric Kryzenske, to postpone the item to the next meeting as it is not noticed properly. Motion fails 3 - 4 - 0 with President Brad Czebatar, and Trustees Mike Flaherty, Stephanie Brassington, and Justin Rupert voting nay.

Motion by President Brad Czebatar, second by Trustee Mike Flaherty, to select MSA Professional services to work with the Ad-Hoc Sustainability Committee to create a McFarland Sustainability Plan. Motion carries 5 - 2 - 0 with Trustee Carolyn Clow and Trustee Clair Utter voting nay.

d. Discussion and action to oppose Dane County 2020 RES-200 that would change the size of the Dane County Board from 37 to 35 members.

The Board discussed Dane County 2020 RES-200 which would change the size of the Dane County Board from 37 members to 35 members. The Board expressed concerns with the proposed reduction and the potential it would cause for lack of inclusion and voices for rural communities.

Motion by Trustee Carolyn Clow, second by Trustee Mike Flaherty, to approve sending a letter to Patrick Miles, County Chair Eicher, and County Executive Joe Parisi, opposing 2020 RES-200 and reducing Dane County Board of Supervisors from 37 to 35. Motion carries 7 - 0 - 0 by acclamation.

e. Update on Diversity, Equity, and Inclusion Subcommittee and other elements.

Village Administrator Schuenke reported Committee appointments for the Diversity, Equity and Inclusion Subcommittee are scheduled for October 26th, and then the Village will look to start scheduling the first meeting of the Committee.

f. Discussion and review of the 2021 Budget including the following sections:

1) Changes since the last distribution.

Village Administrator Schuenke did not have any changes to report since the last Village Board meeting.

2) Youth Center Fund (210).

Village Administrator Schuenke presented the draft Youth Center Fund Budget.

3) Capital Projects Fund (400).

The Board postponed review of the Capital Projects Fund to Thursday October 15th Special Village Board meeting.

4) Parks Fund (405).

The Board postponed review of the Parks Fund to Thursday October 15th.

5) Tax Increment District #3 Fund (305).

Community Development Director Andrew Bremer provided an overview of the draft Tax Increment District #3 (305).

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

Community Development Director Andrew Bremer provided an overview of the draft Tax Increment District #4 (310).

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

Community Development Director Andrew Bremer provided an overview of the draft Tax Increment District #5 (315).

8) Review schedule for future meetings.

Village Administrator Schuenke reported the next meeting of the draft 2021 budget would be on Thursday October 15th at 6 p.m.

g. Authority, Board, Commission, and Committee agenda item requests, referrals, and updates.

Trustee Clow requested the Lake Waubesa Conservation Association come back at a future meeting to provide a full presentation and answer questions regarding the request for a water quality monitoring station at Swan Creek.

7. CLOSED SESSION.

a. Discussion and action to convene in Closed session in accordance with Wis. Stats. 19.85(1)(g) to confer with legal counsel for the governmental body who is rendering oral or written advice concerning strategy to be adopted by the body with respect to litigation in which it is or is likely to become involved, specifically regarding a claim for damages to private property at 5206 Ridge Road as a result of stormwater damage.

Motion by Village President Brad Czebotar, second by Village Trustee Carolyn Clow, to enter into Closed Session in accordance with Wis. Stats. 19.85(1)(g) to confer with legal counsel for the governmental body who is rendering oral or written advice concerning strategy to be adopted by the body with respect to litigation in which it is or is likely to become involved, specifically regarding a claim for damages to private property at 5206 Ridge Road as a result of stormwater damage at 9:32 p.m.. Motion carries 6 - 1 - 0 by acclamation with Trustee Clair Utter voting nay.

b. Discussion and action to reconvene into Open Session.

Motion by Village President Brad Czebotar, second by Village Trustee Justin Rupert, to reconvene into Open Session at 9:53 p.m. Motion carries 7 - 0 - 0 by acclamation.

c. Discussion and action regarding a claim for damages to private property at 5206 Ridge Road as a result of stormwater damage.

Motion by Village President Brad Czebotar, second by Village Trustee Justin Rupert, to approve disallowance of a claim for damages to private property at 5206 Ridge Road as a result of stormwater damage. Motion carries 7 - 0 - 0 by acclamation.

8. ADJOURNMENT.

Motion by Village Trustee Stephanie Brassington, second by Village Trustee Michael Flaherty, to adjourn at 9:55 p.m.

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

Respectfully submitted,
Cassandra Suettinger
Village Clerk/Treasurer

VILLAGE OF MCFARLAND

Village Board Minutes

Thursday, October 15, 2020 - 6:00 PM

1. CALL TO ORDER.

President Czebotar called the special meeting of the Village Board to order at 6:00 PM in the Community Room.

2. ATTENDANCE/ROLL CALL.

Village Board members present: Village Trustee Stephanie Brassington, Village Trustee Carolyn Clow, Village President Brad Czebotar, Village Trustee Michael Flaherty(arrived at 6:06 p.m), Village Trustee Eric Kryzenske, Village Trustee Justin Rupert, Village Trustee Clair Utter.

Village Board members not present: None.

Staff Present: Administrator Matt Schuenke, Clerk/Treasurer Cassandra Suettinger, Police Chief Craig Sherven, Community and Economic Development Director Andrew Bremer, Public Works Director Jim Hessling, Streets/Utilities Superintendent Lee Igl, Outreach Director Lori Andersen, Fire/EMS Director Chris Dennis, and Communications & Technology Director Stephanie Miller.

3. PUBLIC APPEARANCES.

- a. *This is an opportunity for members of the public to address the Village Board. Please remember this is a virtual meeting conducted through the Zoom online meeting platform. Zoom meeting attendees wishing to address the board may do so using the Question and Answer feature within the Zoom online meeting platform. You may state your name, address, and provide your comments to the board for their consideration. 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. Members of the public may speak during public appearances or during their selected agenda item as they designate on the public comment form. Please adhere to the 3-minute time limit. Additionally, you may send your public comments to cassandra.suettinger@mcfarland.wi.us to be included as part of the meeting.*
- None.

4. BUSINESS.

- a. *Discussion and review of the 2021 Budget including the following sections:*
- 1) *Changes since the last distribution.*
Village Administrator Matt Schuenke did not have any changes to report since the last budget meeting.
- 2) *Debt Service Fund (300).*
Village Administrator Matt Schuenke provided an overview of the Debt Service Fund (300).

3) Capital Projects Fund (400).

Village Administrator Schuenke provided an overview of the Capital Projects Fund including an overview of funding sources. Department Heads then presented their respective Department requests within the Capital Projects Fund.

4) Parks Fund (405).

Village Administrator Schuenke and Public Works Director Jim Hessling presented the draft 2021 Parks Fund submittal.

5) Utility Fund (600).

The Board postponed review of the Utility Fund (600) to the next budget review meeting.

6) Stormwater Utility Fund (605).

The Board postponed review of the Stormwater Utility Fund (605) to the next budget review meeting.

7) Solid Waste Fund (610).

The Board postponed review of the Solid Waste Fund (610) to the next budget review meeting.

8) Retiree Fund (700).

The Board postponed review of the Retiree Fund (700) to the next budget review meeting.

9) Review schedule for future meetings.

Village Administrator Schuenke reviewed the process for upcoming 2021 budget meeting.

5. ADJOURNMENT.

Motion by Village Trustee Justin Rupert, second by Village Trustee Michael Flaherty, to adjourn at 8:15 p.m.

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

Respectfully submitted,
Cassandra Suettinger
Village Clerk/Treasurer

Pay Period Date	Journal Code	Check Issue Date	Check Number	Payee	Payee ID	Amount
10/09/2020	PC	10/15/2020	77924	SINGLETARY, ANDREA R.	621	512.08
10/10/2020	PC	10/16/2020	77925	ANDERSON, ROBERT	228	88.05
10/10/2020	CDPT	10/16/2020	77926	WI AFSCME COUNCIL 32	7	48.14
10/10/2020	CDPT	10/16/2020	77927	WI SCTF	5	207.89
10/10/2020	CDPT	10/16/2020	77928	WPPA TREASURER	6	482.00

PAYROLL RELATED

\$1,317.96

Report Criteria:

Report type: GL detail

GL Period	Check Issue Date	Check Number	Vendor Number	Payee		Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
10/20	10/23/2020	77699	16782	MADISON	EMERGENCY PHYSI	MEDICAL DIRECTION AUGUST	MCFARLAN	1	100-52200-211-000	700.00- V
10/20	10/23/2020	77699	16782	MADISON	EMERGENCY PHYSI	MEDICAL DIRECTION SEPTEMBER	MCFARLAN	1	100-52200-211-000	700.00- V
Total 77699:										1,400.00-
10/20	10/16/2020	77929	30	ALLIANT ENERGY/WP&L		MUNICIPAL CENTER	100920	1	100-51600-220-000	2,394.98
10/20	10/16/2020	77929	30	ALLIANT ENERGY/WP&L		LIBRARY	100920	2	205-55110-220-000	1,633.99
10/20	10/16/2020	77929	30	ALLIANT ENERGY/WP&L		WELL #4	100920	3	600-53716-220-000	1,639.78
10/20	10/16/2020	77929	30	ALLIANT ENERGY/WP&L		SOCCER BUILDING - 4820 MARSH	100920	4	100-55200-220-000	25.54
Total 77929:										5,694.29
10/20	10/16/2020	77930	158	CHARTER COMMUNICATIONS		CHARTER CABLE	00032611001	1	200-55600-221-000	99.20
Total 77930:										99.20
10/20	10/16/2020	77931	16247	CITY TREASURER		STORMWATER FEES	07100600-10	1	605-53440-530-000	22.39
Total 77931:										22.39
10/20	10/16/2020	77932	1989	CORPORATE	BUSINESS SYSTE	PW COPIER	27966685	1	605-53440-310-000	14.00
10/20	10/16/2020	77932	1989	CORPORATE	BUSINESS SYSTE	PW COPIER	27966685	2	600-53710-310-000	14.00
10/20	10/16/2020	77932	1989	CORPORATE	BUSINESS SYSTE	PW COPIER	27966685	3	600-53610-310-000	14.00
10/20	10/16/2020	77932	1989	CORPORATE	BUSINESS SYSTE	PW COPIER	27966685	4	100-53000-310-000	51.36
Total 77932:										93.36
10/20	10/16/2020	77933	640	MGE		STREET LIGHT	11299443-10	1	100-53000-291-000	731.05
Total 77933:										731.05
10/20	10/16/2020	77934	748	PURCHASE POWER		REFILL OF POSTAGE	101120	1	100-1622	5,000.00
10/20	10/16/2020	77934	748	PURCHASE POWER		REFILL CHARGE	101120	2	100-51420-311-000	50.00
10/20	10/16/2020	77934	748	PURCHASE POWER		METER RENTAL	101120	3	100-51420-311-000	180.00

M = Manual Check, V = Void Check

GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
Total 77934:									5,230.00
10/20	10/23/2020	77935	1397	ALL COMFORT SERVICES	YOUTH CENTER REPAIR	616809	1	100-51600-242-000	275.00
Total 77935:									275.00
10/20	10/23/2020	77936	17084	AMAZON CAPITAL SERVICES	BOOKS	13QY-9KGJ-	1	205-55110-344-000	46.91
10/20	10/23/2020	77936	17084	AMAZON CAPITAL SERVICES	ELECTION SUPPLY REFUND	14JJ-694M-6	1	100-51440-340-000	55.97-
10/20	10/23/2020	77936	17084	AMAZON CAPITAL SERVICES	PROGRAM SUPPLIES	1CGG-LRD1-	1	205-55110-391-000	23.19
10/20	10/23/2020	77936	17084	AMAZON CAPITAL SERVICES	PROGRAM SUPPLIES	1CWG-JPRC	1	205-55110-391-000	120.76
10/20	10/23/2020	77936	17084	AMAZON CAPITAL SERVICES	DOG PARK BAGS--PARK SUPPLIES	1G6G-YR39-	1	100-55200-340-000	171.96
10/20	10/23/2020	77936	17084	AMAZON CAPITAL SERVICES	DVDS & CDS	1G6G-YR39-	1	205-55110-345-000	13.98
10/20	10/23/2020	77936	17084	AMAZON CAPITAL SERVICES	CURBSIDE WINTERSUPPLIES	1L7L-R6KN-	1	205-55110-242-000	117.83
10/20	10/23/2020	77936	17084	AMAZON CAPITAL SERVICES	CURBSIDE WINTER GEAR	1QNN-D4VG	1	205-55110-242-000	29.97
10/20	10/23/2020	77936	17084	AMAZON CAPITAL SERVICES	CONTROL ROOM PC PARTS	1WCC-R9Y3-	1	200-55600-342-000	209.09
10/20	10/23/2020	77936	17084	AMAZON CAPITAL SERVICES	DVDS & CDS	1YJ4-3DMT-	1	205-55110-345-000	29.96
Total 77936:									707.68
10/20	10/23/2020	77937	17052	BADGER LAUNDRY MACHINER	WASHER REPAIR	401114	1	100-52200-240-000	573.80
Total 77937:									573.80
10/20	10/23/2020	77938	74	BAKER & TAYLOR BOOKS	CREDIT MEMO	0003219881	1	205-55110-344-000	11.73-
10/20	10/23/2020	77938	74	BAKER & TAYLOR BOOKS	ADULT BOOKS	2035526111	1	205-55110-344-000	393.92
10/20	10/23/2020	77938	74	BAKER & TAYLOR BOOKS	ADULT BOOKS	2035531588	1	205-55110-344-000	194.22
10/20	10/23/2020	77938	74	BAKER & TAYLOR BOOKS	JUVENILE BOOKS	2035535210	1	205-55110-344-000	155.01
10/20	10/23/2020	77938	74	BAKER & TAYLOR BOOKS	ADULT BOOKS	2035545835	1	205-55110-344-000	335.01
10/20	10/23/2020	77938	74	BAKER & TAYLOR BOOKS	ADULT BOOKS	5016186494	1	205-55110-344-000	31.92
10/20	10/23/2020	77938	74	BAKER & TAYLOR BOOKS	HIGHLIGHTS RP	NS20090440	1	205-55110-342-000	1,350.00
Total 77938:									2,448.35
10/20	10/23/2020	77939	17420	BIG RIVER MAGAZINE	MAGAZINE SUBSCRIPTION	100620	1	205-55110-344-000	36.00
Total 77939:									36.00
10/20	10/23/2020	77940	1256	BOUND TREE MEDICAL, LLC	EMS - SUPPLIES	83802952	1	100-52200-340-000	137.99

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GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
Total 77940:									137.99
10/20	10/23/2020	77941	17422	BUENZLI, CORRINE	REFUND DUP PMT ON UTILITY ACCT	102020	1	001-1115	114.69
Total 77941:									114.69
10/20	10/23/2020	77942	17418	CARLSON, DOREEN	REFUND DUPLICATE FINAL PAYMENT	101220	1	001-1115	68.64
Total 77942:									68.64
10/20	10/23/2020	77943	1909	CATERPILLAR FINANCIAL SERV	LOADER LEASE	30199868	1	400-57310-811-102	796.50
10/20	10/23/2020	77943	1909	CATERPILLAR FINANCIAL SERV	LOADER LEASE	30199868	2	600-53612-390-000	265.50
10/20	10/23/2020	77943	1909	CATERPILLAR FINANCIAL SERV	LOADER LEASE	30199868	3	600-53712-390-000	265.50
10/20	10/23/2020	77943	1909	CATERPILLAR FINANCIAL SERV	LOADER LEASE	30199868	4	605-53440-240-000	265.50
Total 77943:									1,593.00
10/20	10/23/2020	77944	194	CONCENTRA	CONCENTRA PHYSICAL	103250251	1	100-52200-210-000	227.00
10/20	10/23/2020	77944	194	CONCENTRA	RANDOM DRUG / ALCOHOL TEST	103250477	1	100-53000-211-000	145.50
Total 77944:									372.50
10/20	10/23/2020	77945	1989	CORPORATE BUSINESS SYSTE	COPIER LEASE	27974801	1	205-55110-240-000	142.30
Total 77945:									142.30
10/20	10/23/2020	77946	267	DEMCO INC	LIBRARY SUPPLIES	6856566	1	205-55110-310-000	99.87
Total 77946:									99.87
10/20	10/23/2020	77947	288	DNR-SS/7	D POSPYHALLA WASTEWATER RENEWAL	101520	1	600-53610-330-000	22.50
10/20	10/23/2020	77947	288	DNR-SS/7	D POSPYHALLA WASTEWATER RENEWAL	101520	2	600-53610-331-000	22.50
Total 77947:									45.00
10/20	10/23/2020	77948	324	ELECTION SYSTEMS & SOFTW	ANNUAL MAINTENANCE AGREEMENT	1163998	1	100-51440-240-000	685.00

GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
Total 77948:									685.00
10/20	10/23/2020	77949	17362	ELEVITY	COURT	1204	1	100-51200-210-000	82.21
10/20	10/23/2020	77949	17362	ELEVITY	GEN ADMIN	1204	2	100-51450-210-000	328.86
10/20	10/23/2020	77949	17362	ELEVITY	POLICE	1204	3	100-52100-210-000	845.47
10/20	10/23/2020	77949	17362	ELEVITY	FIRE/EMS	1204	4	100-52200-240-000	360.39
10/20	10/23/2020	77949	17362	ELEVITY	OUTREACH	1204	5	100-54600-210-000	109.71
10/20	10/23/2020	77949	17362	ELEVITY	COMM DEV	1204	6	100-52400-210-000	82.21
10/20	10/23/2020	77949	17362	ELEVITY	PUBLIC WORKS	1204	7	100-53000-210-000	112.11
10/20	10/23/2020	77949	17362	ELEVITY	WATER	1204	8	600-53710-210-000	44.79
10/20	10/23/2020	77949	17362	ELEVITY	SEWER	1204	9	600-53610-210-000	44.79
10/20	10/23/2020	77949	17362	ELEVITY	STORMWATER	1204	10	605-53440-210-000	44.68
10/20	10/23/2020	77949	17362	ELEVITY	EM MGT	1204	11	100-52500-221-000	27.40
10/20	10/23/2020	77949	17362	ELEVITY	FAMILY FESTIVAL	1204	12	100-51450-210-000	27.40
10/20	10/23/2020	77949	17362	ELEVITY	SERVER & BACKUP	1204	13	605-53440-210-000	617.88
10/20	10/23/2020	77949	17362	ELEVITY	SERVER & BACKUP	1204	14	100-51450-210-000	1,667.97
10/20	10/23/2020	77949	17362	ELEVITY	SERVER & BACKUP	1204	15	600-53710-210-000	617.52
10/20	10/23/2020	77949	17362	ELEVITY	SERVER & BACKUP	1204	16	600-53610-210-000	617.88
10/20	10/23/2020	77949	17362	ELEVITY	SERVER & BACKUP	1204	17	610-53620-340-000	185.33
Total 77949:									5,816.60
10/20	10/23/2020	77950	366	FOREMOST PROMOTIONS	FIRE PREVENTION MATERIALS	518971	1	100-52200-391-000	604.88
Total 77950:									604.88
10/20	10/23/2020	77951	17092	GENERAL ENGINEERING COMP	BUILDING INSPECTION SERVICES	20	1	100-52400-211-000	7,997.96
Total 77951:									7,997.96
10/20	10/23/2020	77952	17376	GFL ENVIRONMENTAL SERVIC	WASTE OIL PICK-UP	LQ00412148	1	100-53000-340-000	86.60
10/20	10/23/2020	77952	17376	GFL ENVIRONMENTAL SERVIC	WASTE OIL PICK-UP	LQ00412148	2	600-53616-340-000	23.61
10/20	10/23/2020	77952	17376	GFL ENVIRONMENTAL SERVIC	WASTE OIL PICK-UP	LQ00412148	3	600-53716-340-000	23.61
10/20	10/23/2020	77952	17376	GFL ENVIRONMENTAL SERVIC	WASTE OIL PICK-UP	LQ00412148	4	605-53440-340-000	23.61
Total 77952:									157.43
10/20	10/23/2020	77953	16876	G-PRO EXCAVATING LLC	2018 STREET/WATERMAIN IMP MC129 PAYA	032720	1	400-57310-820-102	12,872.59

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Total 77953:									12,872.59
10/20	10/23/2020	77954	1323	HARKER HEATING & COOLING	FALL MAINTENANCE	1019028	1	205-55110-242-000	1,967.00
Total 77954:									1,967.00
10/20	10/23/2020	77955	1694	HEARTLAND LITHO	WATER CRAFT PERMIT STICKERS	65641	1	100-55200-340-000	214.61
Total 77955:									214.61
10/20	10/23/2020	77956	1904	HUMPHREY SERVICE PARTS IN	VEHICLE PARTS	1223905	1	600-53718-241-000	7.38
10/20	10/23/2020	77956	1904	HUMPHREY SERVICE PARTS IN	VEHICLE PARTS	1223905	2	600-53616-241-000	7.38
10/20	10/23/2020	77956	1904	HUMPHREY SERVICE PARTS IN	VEHICLE PARTS	1223905	3	600-53616-241-000	7.38
10/20	10/23/2020	77956	1904	HUMPHREY SERVICE PARTS IN	VEHICLE PARTS	1223905	4	100-53000-241-000	27.07
10/20	10/23/2020	77956	1904	HUMPHREY SERVICE PARTS IN	SHOP SUPPLIES	1224388	1	600-53616-340-000	22.28
10/20	10/23/2020	77956	1904	HUMPHREY SERVICE PARTS IN	SHOP SUPPLIES	1224388	2	600-53716-340-000	22.28
10/20	10/23/2020	77956	1904	HUMPHREY SERVICE PARTS IN	SHOP SUPPLIES	1224388	3	605-53440-340-000	22.28
10/20	10/23/2020	77956	1904	HUMPHREY SERVICE PARTS IN	SHOP SUPPLIES	1224388	4	100-53000-340-000	81.66
Total 77956:									197.71
10/20	10/23/2020	77957	452	HYDRITE CHEMICAL	WATER CHEMICALS	02403318	1	600-53717-340-000	1,182.12
Total 77957:									1,182.12
10/20	10/23/2020	77958	469	ITRON INC	ITRON SERVICES	570233	1	600-53611-210-000	337.20
10/20	10/23/2020	77958	469	ITRON INC	ITRON SERVICES	570233	2	600-53711-210-000	337.21
Total 77958:									674.41
10/20	10/23/2020	77959	478	JENSEN EQUIPMENT CO INC	AIR COMP FOR PARKS	J-676950	1	100-55200-340-000	85.00
Total 77959:									85.00
10/20	10/23/2020	77960	345	JFTCO, INC	LIFT RENTAL	RIMR000061	1	205-55110-242-000	561.50
Total 77960:									561.50

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GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
10/20	10/23/2020	77961	2121	LAKESIDE INTERNATIONAL LLC	VEHICLE MAINTENANCE	8209353P	1	605-53440-241-000	7.46
10/20	10/23/2020	77961	2121	LAKESIDE INTERNATIONAL LLC	VEHICLE MAINTENANCE	8209353P	2	600-53616-241-000	7.46
10/20	10/23/2020	77961	2121	LAKESIDE INTERNATIONAL LLC	VEHICLE MAINTENANCE	8209353P	3	600-53718-241-000	7.46
10/20	10/23/2020	77961	2121	LAKESIDE INTERNATIONAL LLC	VEHICLE MAINTENANCE	8209353P	4	100-53000-241-000	27.36
10/20	10/23/2020	77961	2121	LAKESIDE INTERNATIONAL LLC	VEHICLE MAINTENANCE	8209696P	1	605-53440-241-000	16.42
10/20	10/23/2020	77961	2121	LAKESIDE INTERNATIONAL LLC	VEHICLE MAINTENANCE	8209696P	2	600-53616-241-000	16.42
10/20	10/23/2020	77961	2121	LAKESIDE INTERNATIONAL LLC	VEHICLE MAINTENANCE	8209696P	3	600-53718-241-000	16.42
10/20	10/23/2020	77961	2121	LAKESIDE INTERNATIONAL LLC	VEHICLE MAINTENANCE	8209696P	4	100-53000-241-000	60.19
10/20	10/23/2020	77961	2121	LAKESIDE INTERNATIONAL LLC	VEHICLE MAINTENANCE	8209791P	1	605-53440-241-000	28.07
10/20	10/23/2020	77961	2121	LAKESIDE INTERNATIONAL LLC	VEHICLE MAINTENANCE	8209791P	2	600-53616-241-000	28.07
10/20	10/23/2020	77961	2121	LAKESIDE INTERNATIONAL LLC	VEHICLE MAINTENANCE	8209791P	3	600-53718-241-000	28.07
10/20	10/23/2020	77961	2121	LAKESIDE INTERNATIONAL LLC	VEHICLE MAINTENANCE	8209791P	4	100-53000-241-000	102.90
Total 77961:									346.30
10/20	10/23/2020	77962	17379	LEARNING LANDSCAPES DESI	SPECIAL NEEDS PARK PLANNING	20012.5	1	400-57620-211-000	4,442.10
Total 77962:									4,442.10
10/20	10/23/2020	77963	765	LEGAL SHIELD	LEGAL SHIELD	0108629-OC	1	100-2156	399.75
Total 77963:									399.75
10/20	10/23/2020	77964	16712	LIFE-ASSIST, INC	EMS MEDICAL SUPPLIES	1040280	1	100-52200-340-000	149.30
Total 77964:									149.30
10/20	10/23/2020	77965	556	LIQUI SYSTEMS INC	WATER CHEM PP REPAIR	202475	1	600-53716-340-000	80.00
Total 77965:									80.00
10/20	10/23/2020	77966	563	LW ALLEN LLC	SCADA	104789	1	600-53710-210-000	7,790.00
Total 77966:									7,790.00
10/20	10/23/2020	77967	581	MADISON TRUCK EQUIPMENT I	TRUCK PARTS	10-93393	1	605-53440-241-000	24.26
10/20	10/23/2020	77967	581	MADISON TRUCK EQUIPMENT I	TRUCK PARTS	10-93393	2	600-53616-241-000	24.26
10/20	10/23/2020	77967	581	MADISON TRUCK EQUIPMENT I	TRUCK PARTS	10-93393	3	600-53718-241-000	24.26
10/20	10/23/2020	77967	581	MADISON TRUCK EQUIPMENT I	TRUCK PARTS	10-93393	4	100-53000-241-000	88.96

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GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
10/20	10/23/2020	77967	581	MADISON TRUCK EQUIPMENT I	TRUCK PARTS	10-93446	1	605-53440-241-000	74.21
10/20	10/23/2020	77967	581	MADISON TRUCK EQUIPMENT I	TRUCK PARTS	10-93446	2	600-53616-241-000	74.21
10/20	10/23/2020	77967	581	MADISON TRUCK EQUIPMENT I	TRUCK PARTS	10-93446	3	600-53718-241-000	74.21
10/20	10/23/2020	77967	581	MADISON TRUCK EQUIPMENT I	TRUCK PARTS	10-93446	4	100-53000-241-000	272.09
Total 77967:									656.46
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	LIBRARY SUPPLIES	95094-09302	1	205-55110-242-000	270.47
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	OUTREACH	95094-09302	2	100-54600-390-000	21.65
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	GLUE	95094-09302	3	100-52200-340-000	6.90
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	BATTERIES	95094-09302	4	100-52200-340-000	12.59
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	LUBE	95094-09302	5	100-52200-340-000	4.31
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	BATTERIES	95094-09302	6	100-52200-340-000	15.29
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	BATTERIES	95094-09302	7	100-52200-340-000	19.78
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	CF LAMPS	95094-09302	8	100-52200-242-000	35.07
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	PW SUPPLIES	95094-09302	9	100-51600-242-000	63.10
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	PW SUPPLIES	95094-09302	10	100-53000-241-000	17.49
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	PW SUPPLIES	95094-09302	11	100-53000-340-000	65.13
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	PW SUPPLIES	95094-09302	12	100-53000-370-000	90.41
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	PW SUPPLIES	95094-09302	13	100-55200-210-000	5.66
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	PW SUPPLIES	95094-09302	14	100-55200-242-000	2.20
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	PW SUPPLIES	95094-09302	15	100-55200-340-000	44.68
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	PW SUPPLIES	95094-09302	16	600-53616-241-000	4.76
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	PW SUPPLIES	95094-09302	17	600-53616-242-000	17.20
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	PW SUPPLIES	95094-09302	18	600-53616-340-000	17.77
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	PW SUPPLIES	95094-09302	19	600-53715-340-000	5.92
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	PW SUPPLIES	95094-09302	20	600-53716-242-000	17.20
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	PW SUPPLIES	95094-09302	21	600-53716-340-000	17.77
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	PW SUPPLIES	95094-09302	22	600-53718-241-000	4.76
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	PW SUPPLIES	95094-09302	23	600-53718-822-102	31.48
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	PW SUPPLIES	95094-09302	24	605-53440-241-000	4.76
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	PW SUPPLIES	95094-09302	25	605-53440-242-000	17.20
10/20	10/23/2020	77968	618	MCFARLAND TRUE VALUE	PW SUPPLIES	95094-09302	26	605-53440-340-000	29.48
Total 77968:									843.03
10/20	10/23/2020	77969	16248	MEDIA CONTROL SYSTEMS, LL	VIDEO SERVER UPGRADE	00003406	1	400-57150-811-101	11,235.00

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Total 77969:									11,235.00
10/20	10/23/2020	77970	634	MENARDS - MONONA	PARK SUPPLIES	1908	1	100-55200-340-000	42.68
Total 77970:									42.68
10/20	10/23/2020	77971	4	MIDDLETON FORD	FORD PICKUP TRUCK PURCHASE	101620-3332	1	400-57310-812-101	37,156.55
10/20	10/23/2020	77971	4	MIDDLETON FORD	FORD PICKUP TRUCK PURCHASE	101620-3332	1	400-57310-812-101	37,156.55- V
10/20	10/23/2020	77971	4	MIDDLETON FORD	UTILITY VAN PURCHASE	101620-3339	1	400-57310-812-103	40,155.28
10/20	10/23/2020	77971	4	MIDDLETON FORD	UTILITY VAN PURCHASE	101620-3339	1	400-57310-812-103	40,155.28- V
10/20	10/23/2020	77971	4	MIDDLETON FORD	VEHICLE PARTS	148057	1	605-53440-241-000	1.21
10/20	10/23/2020	77971	4	MIDDLETON FORD	VEHICLE PARTS	148057	1	605-53440-241-000	1.21- V
10/20	10/23/2020	77971	4	MIDDLETON FORD	VEHICLE PARTS	148057	2	600-53616-241-000	1.21
10/20	10/23/2020	77971	4	MIDDLETON FORD	VEHICLE PARTS	148057	2	600-53616-241-000	1.21- V
10/20	10/23/2020	77971	4	MIDDLETON FORD	VEHICLE PARTS	148057	3	600-53718-241-000	1.21
10/20	10/23/2020	77971	4	MIDDLETON FORD	VEHICLE PARTS	148057	3	600-53718-241-000	1.21- V
10/20	10/23/2020	77971	4	MIDDLETON FORD	VEHICLE PARTS	148057	4	100-53000-241-000	4.41
10/20	10/23/2020	77971	4	MIDDLETON FORD	VEHICLE PARTS	148057	4	100-53000-241-000	4.41- V
10/20	10/23/2020	77971	4	MIDDLETON FORD	M5 MAINTENANCE	148091	1	100-52100-241-000	534.46
10/20	10/23/2020	77971	4	MIDDLETON FORD	M5 MAINTENANCE	148091	1	100-52100-241-000	534.46- V
10/20	10/23/2020	77971	4	MIDDLETON FORD	VEHICLE PARTS	148106	1	100-52200-241-000	99.00
10/20	10/23/2020	77971	4	MIDDLETON FORD	VEHICLE PARTS	148106	1	100-52200-241-000	99.00- V
10/20	10/23/2020	77971	4	MIDDLETON FORD	VEHICLE PARTS	148131	1	100-53000-241-000	68.70
10/20	10/23/2020	77971	4	MIDDLETON FORD	VEHICLE PARTS	148131	1	100-53000-241-000	68.70- V
10/20	10/23/2020	77971	4	MIDDLETON FORD	VEHICLE PARTS	148131	2	600-53718-241-000	18.73
10/20	10/23/2020	77971	4	MIDDLETON FORD	VEHICLE PARTS	148131	2	600-53718-241-000	18.73- V
10/20	10/23/2020	77971	4	MIDDLETON FORD	VEHICLE PARTS	148131	3	600-53616-241-000	18.73
10/20	10/23/2020	77971	4	MIDDLETON FORD	VEHICLE PARTS	148131	3	600-53616-241-000	18.73- V
10/20	10/23/2020	77971	4	MIDDLETON FORD	VEHICLE PARTS	148131	4	605-53440-241-000	18.74
10/20	10/23/2020	77971	4	MIDDLETON FORD	VEHICLE PARTS	148131	4	605-53440-241-000	18.74- V
10/20	10/23/2020	77971	4	MIDDLETON FORD	VEHICLE PARTS	CM148106	1	100-52200-241-000	30.20-
10/20	10/23/2020	77971	4	MIDDLETON FORD	VEHICLE PARTS	CM148106	1	100-52200-241-000	30.20 V
Total 77971:									.00
10/20	10/23/2020	77972	1896	NAPA AUTO PARTS	PW SHOP GENERATOR	742603	1	605-53440-241-000	20.04
10/20	10/23/2020	77972	1896	NAPA AUTO PARTS	PW SHOP GENERATOR	742603	2	600-53616-241-000	20.04
10/20	10/23/2020	77972	1896	NAPA AUTO PARTS	PW SHOP GENERATOR	742603	3	600-53718-241-000	20.04

M = Manual Check, V = Void Check

GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
10/20	10/23/2020	77972	1896	NAPA AUTO PARTS	PW SHOP GENERATOR	742603	4	100-53000-241-000	73.49
10/20	10/23/2020	77972	1896	NAPA AUTO PARTS	CORE CREDIT	742749	1	100-52100-241-000	10.00-
Total 77972:									123.61
10/20	10/23/2020	77973	17381	NEWCOMB CONSTRUCTION C	PUBLIC WORKS CENTER RENOVATION PAY	2647	1	400-57140-825-101	212,350.75
Total 77973:									212,350.75
10/20	10/23/2020	77974	17413	POBLOCKI PAVING CORP	PAVEMENT REPAIR	105366	1	605-53440-340-000	101.25
10/20	10/23/2020	77974	17413	POBLOCKI PAVING CORP	PAVEMENT REPAIR	105366	2	600-53616-340-000	101.25
10/20	10/23/2020	77974	17413	POBLOCKI PAVING CORP	PAVEMENT REPAIR	105366	3	600-53716-340-000	101.25
10/20	10/23/2020	77974	17413	POBLOCKI PAVING CORP	PAVEMENT REPAIR	105366	4	100-53000-340-000	371.25
Total 77974:									675.00
10/20	10/23/2020	77975	764	PREMIER PAINT & WALLPAPER	LIBRARY PAINT SUPPLIES	61638	1	205-55110-242-000	109.57
10/20	10/23/2020	77975	764	PREMIER PAINT & WALLPAPER	LIBRARY PAINT SUPPLIES	61689	1	205-55110-242-000	66.38
10/20	10/23/2020	77975	764	PREMIER PAINT & WALLPAPER	LIBRARY PAINT SUPPLIES	61699	1	205-55110-242-000	10.39
10/20	10/23/2020	77975	764	PREMIER PAINT & WALLPAPER	LIBRARY PAINT SUPPLIES	61711	1	205-55110-242-000	47.99
Total 77975:									234.33
10/20	10/23/2020	77976	1245	PROFESSIONAL PEST CONTRO	MC PEST CONTROL	485171	1	605-53440-210-000	6.90
10/20	10/23/2020	77976	1245	PROFESSIONAL PEST CONTRO	MC PEST CONTROL	485171	2	600-53616-242-000	6.90
10/20	10/23/2020	77976	1245	PROFESSIONAL PEST CONTRO	MC PEST CONTROL	485171	3	600-53716-242-000	6.90
10/20	10/23/2020	77976	1245	PROFESSIONAL PEST CONTRO	MC PEST CONTROL	485171	4	100-51600-242-000	25.30
Total 77976:									46.00
10/20	10/23/2020	77977	17284	SCHEDULESPLUS	RSVP MEAL DELIVERY FORM	1718	1	100-54600-390-000	180.00
Total 77977:									180.00
10/20	10/23/2020	77978	16683	SERGENIAN'S FLOOR COVERI	CARPET	CS005928	1	205-55110-242-000	545.00
Total 77978:									545.00
10/20	10/23/2020	77979	879	SOUTH CENTRAL LIBRARY SYS	CURBSIDE DELIVERY SOFTWARE	20-547	1	205-55110-342-000	499.00

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GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
10/20	10/23/2020	77979	879	SOUTH CENTRAL LIBRARY SYS	PRESSREADER SIP	20-559	1	205-55110-342-000	600.00
Total 77979:									1,099.00
10/20	10/23/2020	77980	906	STOUGHTON HOSPITAL	BLOODWORK - 285648	100720	1	100-52100-210-000	126.00
Total 77980:									126.00
10/20	10/23/2020	77981	16857	STRAND ASSOCIATES	DPW FACILITY	0164750	1	400-57140-825-101	5,365.14
Total 77981:									5,365.14
10/20	10/23/2020	77982	17156	STRUTZ, CURT	PROGRAMMING	308	1	205-55110-391-000	300.00
Total 77982:									300.00
10/20	10/23/2020	77983	17179	SUN PRAIRIE LIBRARY	LOST BOOK PAYMENT	100SUN	1	205-55110-344-000	25.00
Total 77983:									25.00
10/20	10/23/2020	77984	957	TOM'S AUTO CENTER INC	UNMARKED CHIEFS CAR	0048392	1	100-52100-241-000	328.48
10/20	10/23/2020	77984	957	TOM'S AUTO CENTER INC	VEHICLE MAINT	0048405	1	100-52100-241-000	30.00
Total 77984:									358.48
10/20	10/23/2020	77985	16640	TOP PACK DEFENSE LLC	UNIFORM ALLOWANCE - WALLACE	4890	1	100-52100-142-000	137.48
Total 77985:									137.48
10/20	10/23/2020	77986	958	TOWN & COUNTRY ENGINEER	EXCHANGE ST PRELIM - MC134	22100	1	400-57310-821-000	220.00
10/20	10/23/2020	77986	958	TOWN & COUNTRY ENGINEER	JUNIPER RIDGE - MC140	22101	1	100-2640	398.75
10/20	10/23/2020	77986	958	TOWN & COUNTRY ENGINEER	2020 STREET & UTILITY IMPROVEMENTS -	22102	1	400-57310-821-000	10,154.45
10/20	10/23/2020	77986	958	TOWN & COUNTRY ENGINEER	ELVEHJEM PATH IMP - MC160	22103	1	400-57310-824-000	4,467.10
10/20	10/23/2020	77986	958	TOWN & COUNTRY ENGINEER	2020 SUMP PUMP - MC167	22104	1	605-53440-823-000	1,916.80
10/20	10/23/2020	77986	958	TOWN & COUNTRY ENGINEER	EAST SIDE SEWER EXTENSION - MC168	22105	1	600-53710-210-000	7,563.05
10/20	10/23/2020	77986	958	TOWN & COUNTRY ENGINEER	ROSEWOOD/VERIDIAN - MC171	22106	1	100-2640	1,015.00
10/20	10/23/2020	77986	958	TOWN & COUNTRY ENGINEER	2021 BROADHEAD/CTH MN PHASE 4- MC174	22107	1	400-57310-211-000	1,063.75
10/20	10/23/2020	77986	958	TOWN & COUNTRY ENGINEER	2020 DOG PARK - MC175	22108	1	400-57620-827-116	392.50
10/20	10/23/2020	77986	958	TOWN & COUNTRY ENGINEER	NORTHPOINT - MC179	22109	1	100-2640	181.25

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GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
10/20	10/23/2020	77986	958	TOWN & COUNTRY ENGINEER	CF INVESTMENTS - MC180	22110	1	100-2640	253.75
Total 77986:									27,626.40
10/20	10/23/2020	77987	2270	UNITY POINT HEALTH	BLOODWORK	100520	1	100-52100-210-000	37.97
Total 77987:									37.97
10/20	10/23/2020	77988	16686	WARRENBURG, SPENCER	BOOTS	SW100820	1	100-53000-142-000	174.08
Total 77988:									174.08
10/20	10/23/2020	77989	1054	WI DEPT JUSTICE - TIME	TIME ACCESS - QUARTERLY	455TIME-000	1	100-52100-210-000	354.00
Total 77989:									354.00
10/20	10/23/2020	77990	16241	WI DEPT OF JUSTICE	BACKGROUND CHECKS	L1373T-0831	1	100-51420-310-000	14.00
10/20	10/23/2020	77990	16241	WI DEPT OF JUSTICE	HIRING BACKGROUND CHECKS	L1373T-0930	1	100-51420-211-000	35.00
10/20	10/23/2020	77990	16241	WI DEPT OF JUSTICE	BACKGROUND CHECKS	L1373T-0930	2	100-51420-310-000	21.00
Total 77990:									70.00
10/20	10/23/2020	77991	17419	WORK TRUCK STUFF	UTILITY VAN PURCHASE	41653	1	400-57310-812-102	12,729.00
Total 77991:									12,729.00
10/20	10/23/2020	77992	1910	ZURBUCHEN OIL INC	DYED DIESEL FUEL	246929	1	100-53000-341-000	222.50
Total 77992:									222.50
10/20	10/23/2020	77993	30	ALLIANT ENERGY/WP&L	2860 HIDDEN FARM FLOOD LIGHT	102320	1	100-55200-220-000	27.61
10/20	10/23/2020	77993	30	ALLIANT ENERGY/WP&L	3234 CTY RD AB	102320	2	100-55200-220-000	17.85
Total 77993:									45.46
10/20	10/23/2020	77994	172	CITY OF MADISON TREASURE	SIGNS	30689	1	100-53000-340-000	689.47
Total 77994:									689.47

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GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
10/20	10/23/2020	77995	408	GRAINGER INC	HAND CLEANER	9688779405	1	100-52200-340-000	90.52
Total 77995:									90.52
10/20	10/23/2020	77996	476	JEFFERSON FIRE & SAFETY IN	TURNOUT GEAR	IN122565	1	400-57220-811-103	16,800.00
10/20	10/23/2020	77996	476	JEFFERSON FIRE & SAFETY IN	FIRE HELMET	IN122859	1	100-52200-343-000	598.00
10/20	10/23/2020	77996	476	JEFFERSON FIRE & SAFETY IN	AURA RESPIRATOR	IN122865	1	100-52200-340-000	550.00
Total 77996:									17,948.00
10/20	10/23/2020	77997	575	MADISON MET SEWERAGE DIS	DOG PARK SHELTER ADDITION TO USA	2020-113	1	400-57620-827-116	2,318.29
Total 77997:									2,318.29
10/20	10/23/2020	77998	4	MIDDLETON FORD	VEHICLE PARTS	148057	1	605-53440-241-000	1.21
10/20	10/23/2020	77998	4	MIDDLETON FORD	VEHICLE PARTS	148057	2	600-53616-241-000	1.21
10/20	10/23/2020	77998	4	MIDDLETON FORD	VEHICLE PARTS	148057	3	600-53718-241-000	1.21
10/20	10/23/2020	77998	4	MIDDLETON FORD	VEHICLE PARTS	148057	4	100-53000-241-000	4.41
10/20	10/23/2020	77998	4	MIDDLETON FORD	M5 MAINTENANCE	148091	1	100-52100-241-000	534.46
10/20	10/23/2020	77998	4	MIDDLETON FORD	VEHICLE PARTS	148106	1	100-52200-241-000	99.00
10/20	10/23/2020	77998	4	MIDDLETON FORD	VEHICLE PARTS	148131	1	100-53000-241-000	68.70
10/20	10/23/2020	77998	4	MIDDLETON FORD	VEHICLE PARTS	148131	2	600-53718-241-000	18.73
10/20	10/23/2020	77998	4	MIDDLETON FORD	VEHICLE PARTS	148131	3	600-53616-241-000	18.73
10/20	10/23/2020	77998	4	MIDDLETON FORD	VEHICLE PARTS	148131	4	605-53440-241-000	18.74
10/20	10/23/2020	77998	4	MIDDLETON FORD	VEHICLE PARTS	CM148106	1	100-52200-241-000	30.20-
Total 77998:									736.20
10/20	10/23/2020	77999	16398	POSPYHALLA, DAVID	SAFETY BOOTS	DP101920	1	100-53000-142-000	156.14
Total 77999:									156.14
10/20	10/23/2020	78000	17318	TDS	PW INTERNET/TV	102220	1	100-53000-221-000	109.94
10/20	10/23/2020	78000	17318	TDS	PW INTERNET/TV	102220	2	600-53610-340-000	29.98
10/20	10/23/2020	78000	17318	TDS	PW INTERNET/TV	102220	3	600-53710-340-000	29.98
10/20	10/23/2020	78000	17318	TDS	PW INTERNET/TV	102220	4	605-53440-340-000	29.98
10/20	10/23/2020	78000	17318	TDS	ADMIN INTERNET/PHONE	102220-VOM	1	100-51420-221-000	45.07
10/20	10/23/2020	78000	17318	TDS	COMM&TECH INTERNET/TV/PHONE	102220-VOM	2	200-55600-221-000	60.69
10/20	10/23/2020	78000	17318	TDS	FIRE/EMS TV/INTERNET/PHONE	102220-VOM	3	100-52200-221-000	275.11

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GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
10/20	10/23/2020	78000	17318	TDS	PD TV/INTERNET/PHONE	102220-VOM	4	100-52100-221-000	126.83
10/20	10/23/2020	78000	17318	TDS	PW INTERNET/PHONE (INC LONG DISTANC	102220-VOM	5	100-53000-221-000	45.07
10/20	10/23/2020	78000	17318	TDS	OUTREACH INTERNET/PHONE	102220-VOM	6	100-54600-221-000	45.07
10/20	10/23/2020	78000	17318	TDS	COMMDEV INTERNET/PHONE	102220-VOM	7	100-52400-221-000	45.07
10/20	10/23/2020	78000	17318	TDS	WATER INTERNET/PHONE	102220-VOM	8	600-53710-221-000	106.62
10/20	10/23/2020	78000	17318	TDS	SEWER INTERNET/PHONE	102220-VOM	9	600-53610-221-000	106.62
10/20	10/23/2020	78000	17318	TDS	STORMWATER INTERNET/PHONE	102220-VOM	10	605-53440-221-000	61.86
10/20	10/23/2020	78000	17318	TDS	LIBRARY INTERNET/PHONE	102220-VOM	11	205-55110-221-000	45.07
Total 78000:									1,162.96
10/20	10/23/2020	78001	9141	VERMEER WISCONSIN INC	CHIPPER REPAIR	40023693	1	100-53000-241-000	823.18
10/20	10/23/2020	78001	9141	VERMEER WISCONSIN INC	CHIPPER REPAIR	40023693	2	600-53718-241-000	224.50
10/20	10/23/2020	78001	9141	VERMEER WISCONSIN INC	CHIPPER REPAIR	40023693	3	600-53616-241-000	224.50
10/20	10/23/2020	78001	9141	VERMEER WISCONSIN INC	CHIPPER REPAIR	40023693	4	605-53440-241-000	224.51
Total 78001:									1,496.69
10/20	10/23/2020	78002	4	MIDDLETON FORD	FORD PICKUP TRUCK PURCHASE	101620-3332	1	400-57310-812-101	37,156.55
Total 78002:									37,156.55
10/20	10/23/2020	78003	4	MIDDLETON FORD	UTILITY VAN PURCHASE	101620-3339	1	400-57310-812-103	40,155.28
Total 78003:									40,155.28
10/20	10/23/2020	78004	16782	MADISON EMERGENCY PHYSI	MEDICAL DIRECTION AUGUST	MCFARLAN	1	100-52200-211-000	700.00
10/20	10/23/2020	78004	16782	MADISON EMERGENCY PHYSI	MEDICAL DIRECTION SEPTEMBER	MCFARLAN	1	100-52200-211-000	700.00
Total 78004:									1,400.00
10/20	10/23/2020	78005	575	MADISON MET SEWERAGE DIS	3RD QUARTER CHARGES	IN000016620	1	600-53615-210-000	194,398.65
Total 78005:									194,398.65
10/20	10/23/2020	78006	17423	US VET GENERAL CONTRACTI	2020 PARK FACILITY PROJECTS	3491-093020	1	400-57620-827-112	74,246.28
10/20	10/23/2020	78006	17423	US VET GENERAL CONTRACTI	2020 PARK FACILITY PROJECTS	3491-093020	2	400-57620-827-116	74,246.27

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GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
Total 78006:									148,492.55
Grand Totals:									785,113.04

Summary by General Ledger Account Number

GL Account	Debit	Credit	Proof
001-1115	183.33	.00	183.33
001-2120	.00	183.33-	183.33-
100-1622	5,000.00	.00	5,000.00
100-2120	2,232.94	35,405.75-	33,172.81-
100-2156	399.75	.00	399.75
100-2640	1,848.75	.00	1,848.75
100-51200-210-000	82.21	.00	82.21
100-51420-211-000	35.00	.00	35.00
100-51420-221-000	45.07	.00	45.07
100-51420-310-000	35.00	.00	35.00
100-51420-311-000	230.00	.00	230.00
100-51440-240-000	685.00	.00	685.00
100-51440-340-000	.00	55.97-	55.97-
100-51450-210-000	2,024.23	.00	2,024.23
100-51600-220-000	2,394.98	.00	2,394.98
100-51600-242-000	363.40	.00	363.40
100-52100-142-000	137.48	.00	137.48
100-52100-210-000	1,363.44	.00	1,363.44
100-52100-221-000	126.83	.00	126.83
100-52100-241-000	1,427.40	544.46-	882.94
100-52200-210-000	227.00	.00	227.00
100-52200-211-000	1,400.00	1,400.00-	.00
100-52200-221-000	275.11	.00	275.11
100-52200-240-000	934.19	.00	934.19
100-52200-241-000	228.20	159.40-	68.80
100-52200-242-000	35.07	.00	35.07
100-52200-340-000	986.68	.00	986.68
100-52200-343-000	598.00	.00	598.00

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GL Account	Debit	Credit	Proof
100-52200-391-000	604.88	.00	604.88
100-52400-210-000	82.21	.00	82.21
100-52400-211-000	7,997.96	.00	7,997.96
100-52400-221-000	45.07	.00	45.07
100-52500-221-000	27.40	.00	27.40
100-53000-142-000	330.22	.00	330.22
100-53000-210-000	112.11	.00	112.11
100-53000-211-000	145.50	.00	145.50
100-53000-221-000	155.01	.00	155.01
100-53000-241-000	1,638.95	73.11-	1,565.84
100-53000-291-000	731.05	.00	731.05
100-53000-310-000	51.36	.00	51.36
100-53000-340-000	1,294.11	.00	1,294.11
100-53000-341-000	222.50	.00	222.50
100-53000-370-000	90.41	.00	90.41
100-54600-210-000	109.71	.00	109.71
100-54600-221-000	45.07	.00	45.07
100-54600-390-000	201.65	.00	201.65
100-55200-210-000	5.66	.00	5.66
100-55200-220-000	71.00	.00	71.00
100-55200-242-000	2.20	.00	2.20
100-55200-340-000	558.93	.00	558.93
200-2120	.00	368.98-	368.98-
200-55600-221-000	159.89	.00	159.89
200-55600-342-000	209.09	.00	209.09
205-2120	11.73	9,802.21-	9,790.48-
205-55110-220-000	1,633.99	.00	1,633.99
205-55110-221-000	45.07	.00	45.07
205-55110-240-000	142.30	.00	142.30
205-55110-242-000	3,726.10	.00	3,726.10
205-55110-310-000	99.87	.00	99.87
205-55110-342-000	2,449.00	.00	2,449.00
205-55110-344-000	1,217.99	11.73-	1,206.26
205-55110-345-000	43.94	.00	43.94
205-55110-391-000	443.95	.00	443.95
400-2120	77,311.83	598,323.38-	521,011.55-
400-57140-825-101	217,715.89	.00	217,715.89
400-57150-811-101	11,235.00	.00	11,235.00
400-57220-811-103	16,800.00	.00	16,800.00
400-57310-211-000	1,063.75	.00	1,063.75

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GL Account	Debit	Credit	Proof
400-57310-811-102	796.50	.00	796.50
400-57310-812-101	74,313.10	37,156.55-	37,156.55
400-57310-812-102	12,729.00	.00	12,729.00
400-57310-812-103	80,310.56	40,155.28-	40,155.28
400-57310-820-102	12,872.59	.00	12,872.59
400-57310-821-000	10,374.45	.00	10,374.45
400-57310-824-000	4,467.10	.00	4,467.10
400-57620-211-000	4,442.10	.00	4,442.10
400-57620-827-112	74,246.28	.00	74,246.28
400-57620-827-116	76,957.06	.00	76,957.06
600-2120	39.88	216,846.95-	216,807.07-
600-53610-210-000	662.67	.00	662.67
600-53610-221-000	106.62	.00	106.62
600-53610-310-000	14.00	.00	14.00
600-53610-330-000	22.50	.00	22.50
600-53610-331-000	22.50	.00	22.50
600-53610-340-000	29.98	.00	29.98
600-53611-210-000	337.20	.00	337.20
600-53612-390-000	265.50	.00	265.50
600-53615-210-000	194,398.65	.00	194,398.65
600-53616-241-000	454.36	19.94-	434.42
600-53616-242-000	24.10	.00	24.10
600-53616-340-000	164.91	.00	164.91
600-53710-210-000	16,015.36	.00	16,015.36
600-53710-221-000	106.62	.00	106.62
600-53710-310-000	14.00	.00	14.00
600-53710-340-000	29.98	.00	29.98
600-53711-210-000	337.21	.00	337.21
600-53712-390-000	265.50	.00	265.50
600-53715-340-000	5.92	.00	5.92
600-53716-220-000	1,639.78	.00	1,639.78
600-53716-242-000	24.10	.00	24.10
600-53716-340-000	244.91	.00	244.91
600-53717-340-000	1,182.12	.00	1,182.12
600-53718-241-000	446.98	19.94-	427.04
600-53718-822-102	31.48	.00	31.48
605-2120	19.95	3,613.44-	3,593.49-
605-53440-210-000	669.46	.00	669.46
605-53440-221-000	61.86	.00	61.86
605-53440-240-000	265.50	.00	265.50

M = Manual Check, V = Void Check

GL Account	Debit	Credit	Proof
605-53440-241-000	439.63	19.95-	419.68
605-53440-242-000	17.20	.00	17.20
605-53440-310-000	14.00	.00	14.00
605-53440-340-000	206.60	.00	206.60
605-53440-530-000	22.39	.00	22.39
605-53440-823-000	1,916.80	.00	1,916.80
610-2120	.00	185.33-	185.33-
610-53620-340-000	185.33	.00	185.33
Grand Totals:	944,345.70	944,345.70-	.00

Report Criteria:
Report type: GL detail

Matt Schuenke

To: Tanya O'Malley
Cc: Cassandra Suettinger
Subject: RE: Committee

From: Sean Chislom <seanachislom@ymail.com>
Sent: Friday, October 9, 2020 10:03 AM
To: Admin <Village.Administration@mcfarland.wi.us>
Subject: Committee

Hello my name is Sean Chislom, I graduated from McFarland High School in 2015, I then went on to school in Illinois and then Georgia! I am interested in the technology committee and I think it would be beneficial for myself and for the committee because I recently received my degree in business marketing and this would help me get some experience. I also think that it would help the committee to gain some perspective from a POC here in the community who is also driven to learn, work and impact this community. I am also very interested in the Diversity, Inclusion and Subcommittee and I am interested in this because of my status as a minority here in McFarland and then having siblings who are currently attending and will attend. I would also love to help with perspective as to a former student, with siblings who were also former students and can speak to the environment around the school and the community overall. I look forward to hearing about my potential slots in these committees and below I will attach my resume!

Sean Chislom

5119 Farwell Street | McFarland WI, 53558
(608) 213-2045 | seanachislom@ymail.com

EDUCATION

Bachelor of Business Administration in Marketing

December 2019

Dalton State College

Dalton, GA

- Relevant Coursework: Principles of Marketing, Sports Marketing, and Business Communication.
- Scholarship Recipient for Basketball

RELEVANT EXPERIENCE

Sales Associate/E-Commerce Analyst

May 2018 – Current

Premier Paint

Madison, WI

- Monitored and supported Amazon Marketplace into the workplace which resulted in \$1,000,000 of sales within three years
- Analyzed selling patterns of e-commerce products in order to create personalized marketing schemes and plans
- Created standardized practices for shipping products direct-to-consumer which resulted in a 20% decrease in shipping errors and damages
- Tracked year to year sales and seasonality to determine which products were best suited for JIT inventory
- Provided excellent customer service and ensured all inquiries were answered properly and efficiently.

Cashier/Utility Clerk/Stocker

June 2013 – May 2016

Pick N Save

McFarland, WI

- Increased customer satisfaction numbers by 12% over the first year
- Optimized freezer stock layout to reduce waste of expiring products
- Adjusted produce layout to increase turnover efficiency and reduce waste

Marketer

February 2013 – May 2013

Weed Man Lawn Care

Middleton, WI

- Increased group sales by 20-25% in one month by recognizing selling opportunities and capitalizing on past mistakes
- Provided expert lawn care advice and developed professional business communication

VOLUNTEER & COMMUNITY OUTREACH

-
- | | |
|---|------|
| • Volunteer , <i>Mashburn Move-in Day</i> at DSC | 2018 |
| • Volunteer , <i>Miracle League Baseball</i> in Dalton | 2018 |
| • Volunteer , <i>NAIA Golf Tournament</i> in Dalton | 2018 |

LEADERSHIP & CAMPUS INVOLVEMENT

-
- | | |
|---|-----------|
| • Member , <i>Basketball Team</i> at McFarland High School | 2011-2014 |
| • Captain , <i>Basketball Team</i> at Sauk Valley Junior College | 2016 |
| • Coach , <i>Local basketball leagues</i> in McFarland Summers | 2017-2018 |

SKILLS & ABILITIES

-
- | | |
|------------------------------|-----------------------|
| • Microsoft Office | • Team-building |
| • Professional communication | • Hootsuite Certified |
| • Leadership | • Analytical |

References available upon request.



VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Monday, October 26, 2020

SECTION: Consent Agenda

DEPARTMENT: Administration

CONTACT: Cassandra Suettinger, Village Clerk/Treasurer

AGENDA ITEM: Motion to approve appointing Ellen Daniels, Keri Berling, Robert Bresette, Allison Hudack, Jessika Kasten, Barry Kasten, Gwen Murphy, Andrew Schwartz, Larisa Roberts, Lisa Abler, Benetta Jones, Mark Emmrich, Carol Sam, Susan Kaye, Clair Mance, Kelly Reagan to serve as an Election Inspector for the 2020-2021 term.

PREVIOUS ACTION:

ISSUE SUMMARY:

While the Village already has approximately 70 Election Inspector's scheduled and prepared for Election Day, the final 15 appointments are to give the Clerk's Office a good cushion of standby Election Inspectors should they be necessary in the event those currently scheduled are unable to work or additional assistance is needed.

FINANCIAL/BUDGET IMPACT:

N/A

VILLAGE PLAN REFERENCE:

N/A

ORDINANCE REFERENCE:

N/A

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Recommended for approval of appointment.

ATTACHMENTS:

None



VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Monday, October 26, 2020

SECTION: Business

DEPARTMENT: Administration

CONTACT:

AGENDA ITEM: Discussion and action on request from the Lake Waubesa Conservation Association to support a water quality monitoring station at Swan Creek.

PREVIOUS ACTION:

ISSUE SUMMARY:

The Lake Waubesa Conservation Association is requesting the Village support a water quality monitoring station at Swan Creek. Attached is the letter from LWCA and an outlining of the costs of the proposed water quality monitoring station.

FINANCIAL/BUDGET IMPACT:

VILLAGE PLAN REFERENCE:

ORDINANCE REFERENCE:

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

ATTACHMENTS:

1. Water Quality Monitoring Station
2. Specifics for monitoring station

Cassandra Suettinger

From: Tamara Knickmeier <tknickmeier@gmail.com>
Sent: Friday, October 9, 2020 12:36 PM
To: Cassandra Suettinger; Kelsey Shepperd; Cathy Hasslinger
Cc: Barry Ottmann; George Keeler
Subject: Fwd: Action Needed - Time sensitive information on water quality for Lake Waubesa

Hi Cassandra, Cathy and Kelsey,

I am forwarding this email that LWCA has sent its members to make them aware of an important need for a water quality monitoring station at Swan Creek. I know the Town of Dunn is in support of this monitoring station and has committed financial support to make this happen. LWCA is looking into what we commit financially to the effort as well.

Cassandra,

Could you bring this to the attention of the Village board to see if they would be in support of this effort? Please let me know if you have any questions or would like additional information on this effort.

Thank you all for your ongoing support of Lake Waubesa.
Tamara Knickmeier - LWCA President

----- Forwarded message -----

From: Lake Waubesa Conservation Assoc <waubesa.org@gmail.com>
Date: Fri, Oct 9, 2020 at 11:42 AM
Subject: Action Needed - Time sensitive information on water quality for Lake Waubesa
To: Tamara Knickmeier <tknickmeier@gmail.com>

Notice to members of Lake Waubesa Conservation Association,

We need your voice to help protect the water quality of Lake Waubesa.

The LWCA board would like to bring your attention to the need for a water quality monitoring station for Swan Creek at the northwest end of the Waubesa wetlands. The reason this monitoring station is so important is to understand the impact of the substantial development occurring in the Swan Creek watershed in the City of Fitchburg. This development may have an impact on Lake Waubesa and the sooner a monitoring station is operational, the greater understanding we will have about the water quality and impacts (positive or negative) from current and future development.

In 2018 a group of UW graduate students did a study on the Waubesa Wetlands. They monitored streamflow and water quality (sediments, phosphorus, and nitrogen) in Swan Creek and recommended installing an auto-sampling station for long-term sampling. With the conclusion of their work in 2018, the auto-sampler was removed. The student report recommended installing a permanent water monitoring station where Swan Creek

intersects Lalor Road. LWCA in partnership with Friends of Waubesa Wetlands and are working to encourage the City of Fitchburg to include funds in their 2021 budget to install the monitoring station, a one time cost of around \$15,000 plus cover annual monitoring costs of \$20,000 per year. **We need your help to make that happen**--we're not asking for money but for your advocacy.

Here's why: Waubesa Wetlands could be negatively affected by urbanization upstream in Fitchburg, because rain events cause excess water, nutrients and sediments to flow down Swan Creek, where aggressive weeds displace native plants in the Waubesa Wetlands. While we can't prevent the current development, we can document any changes in pollutant loads that the water carries toward Waubesa Wetlands and into Lake Waubesa. As of 2018, WDNR has proposed to add Swan Creek to the impaired waters list of Section 303(d) of the Federal Clean Water Act due to high levels of nutrients (phosphorus) and sediment loads detected. [1]

What you can do on or before the October 13 Fitchburg City Council meeting:

Email - Send your email to Council&Mayor@fitchburgwi.gov

Send an email to the City Council and Mayor stating your support for the Swan Creek Monitoring station and that Fitchburg as an environmentally conscious city should financially support the monitoring station to ensure the City's growth plan is not negatively impacting the wetlands.

Attend the meeting via Zoom – contact aaron.richardson@fitchburgwi.gov before October 13th and indicate you wish to speak on adding the operating cost to USGS to the City budget.

Attend the meeting in person - You can appear at the meeting at the City Hall Council Chamber (main floor at 5620 Lacy Road) between 7:00 and 7:30 pm on October 13th and register to speak.

LWCA is partnering with Friends of Waubesa Wetlands, Yahara Lakes Association and the Town of Dunn on this effort and to get this important information out to you.

Make your voice heard in support of our lake.

LWCA Board

[1] You can view a summary of the UW study at <https://www.carpwaterqualityplan.org/waubesa-wetlands/project/>. The full report is available at <https://nelson.wisc.edu/docs/wrm-2018-report.pdf>.

Specifics for the Swan Creek monitoring station:

The monitoring station would be placed in Swan Creek at Lalor Road. The cost for the equipment is \$15,000 and the monitoring is a cost of \$20,000 per year.

Here is what the station will monitor

Todd Stuntebeck with the USGS provided the following overview of what constituents they would be sampling for the \$20K.

Currently for the \$20K, we would get about 80 samples for total suspended sediments and total phosphorus, plus we would get 15 samples for chloride and another 15 samples for dissolved phosphorus. In addition, we would get continuous monitoring for temperature, electrical conductivity and flow. Sampling would be activated when water level in the sampler reaches a certain level (i.e. higher flows in the creek).

With the chloride and electrical conductivity (EC) data, they would develop a relationship between the two by using a linear equation used to estimate the concentration of chlorides in with the water to the electrical conductivity in the sample. Using this relationship, they then can estimate water continuous chloride concentrations would be for the sampling year based upon the continuous EC data.

I think this data set would be a good start for understanding sediment and chloride loadings to the creek, particularly as changes occur in the watershed. He also reinforced that USGS would kick in the 25% for the installation and the sampling. Also, they would be responsible for taking care of the equipment and collecting the samples for analysis.

Our goal

To advocate for the City of Fitchburg to include the costs for the installation and monitoring in their 2021 budget. The groups that are supporting this include: Town of Dunn, LWCA, YLA, Friends of Waubesa Wetlands and CARPC. We would like the Village of McFarland to join us in support of this effort.

Several of these groups (Town of Dunn, LWCA and Friends of Waubesa Wetlands) are prepared to contribute funding in 2021 to make this happen. Would the Village of McFarland consider helping financially?



VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Monday, October 26, 2020

SECTION: Business

DEPARTMENT: Administration

CONTACT: Matt Schuenke, Village Administrator

AGENDA ITEM: Discussion and action regarding confirmation of Village President appointments to the Diversity, Equity, and Inclusion Subcommittee.

PREVIOUS ACTION:

The Village Board took action at its meeting on September 14, 2020 to adopt Resolution #2020-19 to create the Diversity, Equity, and Inclusion Subcommittee. This resolution is included in the packet for reference.

ISSUE SUMMARY:

The Village President has appointed Bridget Bell, Carrie Nelson, Dave Pagenkopf, Hilary Brandt, Laetitia Hollard, Mona Nelson, Monica Bruce, Patrick Miles, and Sean Chislom to the Diversity, Equity, and Inclusion Subcommittee. Additionally, the Village President has selected Patrick Miles as Chair for the Subcommittee with Carrie Nelson as Vice-Chair. This will require the confirmation by the Village Board through an affirmative vote. All letters of interest are included within your packet as background, there were 12 total applications to the group.

Once the appointments are confirmed, we will work with the members to find an agreeable date to hold their first meeting in November.

FINANCIAL/BUDGET IMPACT:

None.

VILLAGE PLAN REFERENCE:

None.

ORDINANCE REFERENCE:

None.

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Nine appointments from the Village President presented for action by the Village Board to confirm their inclusion on the subcommittee.

ATTACHMENTS:

1. Patrick Miles CHAIR



2. Carrie Nelson VICE CHAIR
3. Bridget Bell
4. Dave Pagenkopf
5. Hilary Brandt
6. Laetitia Hollard
7. Mona Nelson
8. Monica Bruce
9. Sean Chislom
10. 2020-19 To Create a Special Committee to Advance Racial Equity, Social Justice, Diversity, and Inclusion in the Village of McFarland

From: [Tanya O'Malley](#)
To: [Matt Schuenke](#)
Subject: FW: Application to serve on the diversity, equity and inclusion committee
Date: Thursday, October 22, 2020 8:08:35 AM
Attachments: [image001.png](#)

Tanya O'Malley, WCPC
Deputy Clerk
Village of McFarland
5915 Milwaukee Street
McFarland, WI 53558
608.838.3153



From: Patrick Miles <nisei5@gmail.com>
Sent: Thursday, October 1, 2020 6:21 PM
To: Admin <Village.Administration@mcfarland.wi.us>
Subject: Application to serve on the diversity, equity and inclusion committee

Hello,

I'm writing as an interested resident (thus the email from my personal email rather than my County Board email) in the diversity, equity and inclusion committee. I see the Village Board authorized the creation of the committee at its meeting on September 14th. I would like to serve on this committee. I bring the perspective of a bi-racial person raised by an immigrant mother. Also, I have been through multicultural literacy workshops and have been active in the County Board's efforts to address racial disparity concerns throughout county government.

For your information as a meeting day is considered, my most flexible days are Tuesdays, Wednesdays, and the 2nd and 4th Thursdays. However, from mid-October through mid-November my calendar fills up until we adopt the budget.

Thank you for your consideration.

Regards,
Patrick

Patrick Miles
5410 North Pass

McFarland, WI 53558

M: [\(608\) 206-6462](tel:(608)206-6462)

E: nisei5@gmail.com

From: [Tanya O'Malley](#)
To: [Matt Schuenke](#)
Subject: FW: Volunteering for new Village DEI Subcommittee
Date: Thursday, October 22, 2020 8:07:15 AM
Attachments: [image001.png](#)

Tanya O'Malley, WCPC
Deputy Clerk
Village of McFarland
5915 Milwaukee Street
McFarland, WI 53558
608.838.3153



From: Carrie Nelson <carrieanne.nelson@gmail.com>
Sent: Wednesday, September 23, 2020 12:46 PM
To: Admin <Village.Administration@mcfarland.wi.us>; Brad Czebotar <Brad.Czebotar@mcfarland.wi.us>
Cc: laetitia hollard <laetitia.hollard31@gmail.com>; mona.nelson@rocketmail.com
Subject: Volunteering for new Village DEI Subcommittee

Hi Brad and Matt.

I'd like to volunteer for the new Village DEI Subcommittee. I've become very invested in this work over the last few months and have made many connections with other McFarlanders that will help me be an effective voice on this subcommittee.

I've participated in numerous short and long-term committees including many as part of my job at the UW-Madison Libraries, some university governance groups, and as a church trustee. I'll bring everything I've learned from those experiences about being a constructive and supportive team member to this subcommittee.

I also serve on an active equity and diversity committee for the university libraries which has provided me training and context that can inform my contributions.

I hope I'll have the opportunity to work with you both on this important effort. Please let me know if you need any additional information.

Best wishes,
Carrie

Carrie Nelson
5211 North Autumn Lane
608-354-8508
carrieanne.nelson@gmail.com

From: [Tanya O'Malley](#)
To: [Matt Schuenke](#)
Subject: FW: Diversity and Inclusion Group in McFarland
Date: Thursday, October 22, 2020 8:07:40 AM
Attachments: [image001.png](#)

Tanya O'Malley, WCPC
Deputy Clerk
Village of McFarland
5915 Milwaukee Street
McFarland, WI 53558
608.838.3153



From: Matt Schuenke <Matt.Schuenke@mcfarland.wi.us>
Sent: Thursday, September 24, 2020 9:52 AM
To: Bridget Bell <bridget.bell@nordicwi.com>
Cc: Brad Czebotar <Brad.Czebotar@mcfarland.wi.us>; Cassandra Suettinger <Cassandra.Suettinger@mcfarland.wi.us>; Tanya O'Malley <tanya.omalley@mcfarland.wi.us>
Subject: RE: Diversity and Inclusion Group in McFarland

Bridget,

We are in receipt of your request to serve on the Diversity, Equity, and Inclusion Subcommittee. Thank you for your interest and desire to want to serve on this Committee. Staff is in the process of marketing this new Subcommittee to the Community to gauge additional interest from residents wishing to also serve. We hope to release this information in the near future to begin that process. Once that has been released and you wanted to submit additional information as part of your request to be on the Committee, you are certainly free to do so. In the meantime, Administration Staff will hold your application on file to be considered by the Village President for appointment likely next month.

Please let me know if you have any additional questions.

Thanks,
Matt

From: Brad Czebotar <Brad.Czebotar@mcfarland.wi.us>
Sent: Thursday, September 24, 2020 9:44 AM

To: Matt Schuenke <Matt.Schuenke@mcfarland.wi.us>
Subject: Fw: Diversity and Inclusion Group in McFarland

From: Bridget Bell <bridgetb82@gmail.com>
Sent: Monday, September 21, 2020 7:08 PM
To: Brad Czebotar <Brad.Czebotar@mcfarland.wi.us>
Subject: Diversity and Inclusion Group in McFarland

Good evening Brad,
I hope this email finds you well. I learned from a community member that McFarland is working to establish a Diversity and Inclusion group. I would like to express my interest in joining this group.

I am currently serving on a couple similar groups within my employer.

I am a Portuguese (Latina, but not Hispanic), gay woman residing here in McFarland.

I am passionate about improving our community for ALL, in aiding to establish what being an ally means in the community, and in working toward better identification of our biases, and in working toward less division and more unity.

Please let me know if I can provide more information, or if you would like to connect.

Thank you for your consideration.

Best,
Bridget Bell
5608 N Peninsula Way
McFarland, WI 53558

From: [Tanya O'Malley](#)
To: [Matt Schuenke](#)
Subject: FW: DEI Subcommittee application
Date: Thursday, October 22, 2020 8:09:06 AM
Attachments: [image001.png](#)

Tanya O'Malley, WCPC
Deputy Clerk
Village of McFarland
5915 Milwaukee Street
McFarland, WI 53558
608.838.3153



From: Dave Pagenkopf <dlpagenkopf@gmail.com>
Sent: Thursday, October 15, 2020 3:03 PM
To: Admin <Village.Administration@mcfarland.wi.us>
Cc: David Pagenkopf <dlpagenkopf@gmail.com>
Subject: DEI Subcommittee application

Good afternoon,

I would like to participate on the diversity, equity, and inclusion subcommittee in the village of McFarland. I'm a 26 year resident of McFarland and had two children progress through McFarland schools. I hold a bachelor's and master's degrees in Engineering from UW-Madison. I have more than 30 years of professional work experience in a variety of companies (big, small, private, public) and I'm currently working at UW-Madison as the Deputy Chief Information Officer responsible for more than 300 employees supporting IT systems for more than 45,000 students and 20,000 employees.

I'm also the co-sponsor of the Equity and Diversity Committee for the Division of Information Technology where I co-sponsor programs, book readings, speakers, surveys, educational programs, etc. to improve equity, diversity, and inclusion within our division of more than 600 employees. We regularly engage with the campus community to tie our efforts into larger diversity efforts.

So, why me? As Robin DiAngelo says in her book **White Fragility** that everyone must engage in this effort including middle-aged white males in a position of power who have sat on the sidelines far too long. That's me.

I care immensely about diversity, equity, and inclusion in our village.

If you want to talk further, then here is my contact information:

Dave Pagenkopf

5804 Leanne Ln

McFarland, WI 53558

Mobile: 608-516-7522

Email: dlpagenkopf@gmail.com (preferred)

From: [Tanya O'Malley](#)
To: [Matt Schuenke](#)
Subject: FW: DEI Membership Letter of Interest
Date: Thursday, October 22, 2020 8:09:17 AM
Attachments: [image001.png](#)

Tanya O'Malley, WCPC
Deputy Clerk
Village of McFarland
5915 Milwaukee Street
McFarland, WI 53558
608.838.3153



From: Hilary Brandt <hilarykbrandt@gmail.com>
Sent: Friday, October 16, 2020 12:35 PM
To: Admin <Village.Administration@mcfarland.wi.us>
Cc: laetitia hollard <laetitia.hollard31@gmail.com>; carrieanne.nelson@gmail.com
Subject: DEI Membership Letter of Interest

Dear McFarland Village Board Members,

I am writing in hopes to be considered as a committee member for your newly created DEI Subcommittee. I have been a resident of McFarland for five years and currently reside at 6057 Prairie Wood Drive. As a parent of a child of color in the McFarland community and a former educator of 15 years, I find that my being a member adds a valued perspective. Prior to becoming a stay-at-home parent, I was a middle level educator for the Middleton-Cross Plains Area School District. While teaching for MCPASD, racial equity was a main focus initiative for many years. This invaluable training opened my eyes to the significant damage of the white racial frame.

Throughout my learning, I noticed many things becoming clearer, almost as if metaphorically curtains were being lifted to unveil our country's white-washed history, its racist systems, deeply rooted white fragility, along with microaggressions that white people use as weapons against people of color. Looking back, I still do not understand how I was ignorantly unaware of the physical, emotional, and psychological damage that was being done to our Black brothers and sisters.

After starting this unending daily journey of becoming an anti-racist, a co-worker of mine's daughter in college had become pregnant. My co-worker, who happens to be a woman of color, reached out to me and my husband asking if we had ever given adoption a thought. We had, but had never taken any formal steps towards it. I believe this to be the highest honor I could have and believe will ever

receive in my lifetime. At this point, I now began to invest my time researching transracial adoption which allowed me an even deeper perspective into racism and the country we live in.

Being a transracial family has allowed me to see another viewpoint of our community, its members, friends, family members, neighbors, etc. We have a very open adoption in which research has proven to provide many benefits for our son, his birth mother and birth father. Throughout this open adoption, we believe that our son's birth families have truly adopted us. Because of our beautiful family dynamic, we have had the pleasure of creating true authentic relationships with people of color. Unfortunately, due to redlining, segregation, racial homeownership gaps, and an exuberant number of other structural racisms, we believe we have not had many opportunities to develop such authentic relationships and wish to see this change. This racial divide in our country, state, and local communities must end. I hope to see McFarland make the necessary changes needed to bring us together as one united front.

I appreciate you taking time to consider me for this volunteer position. I am truly dedicated to making this world a better place and believe it starts in the home and at the community level. I want my beautiful brown three year old son, Harrison, his birth father and birth mother along with all of their family members to feel accepted, welcomed, respected, celebrated, and loved when they are in our village supporting local businesses, attending school functions, and cheering our son on in extracurriculars. I want them to know that their birth son, grandson, and nephew is not only being well-cared-for by his adoptive parents, but living in a safe and loving community that would protect his precious life at all costs.

Thank you for your time and commitment to positive change in our community.

Sincerely,

Hilary Brandt

From: [Tanya O'Malley](#)
To: [Matt Schuenke](#)
Subject: FW: New Village DEI Subcommittee
Date: Thursday, October 22, 2020 8:07:55 AM
Attachments: [image001.png](#)

Tanya O'Malley, WCPC
Deputy Clerk
Village of McFarland
5915 Milwaukee Street
McFarland, WI 53558
608.838.3153



From: laetitia hollard <laetitia.hollard31@gmail.com>
Sent: Thursday, September 24, 2020 5:10 PM
To: Brad Czebotar <Brad.Czebotar@mcfarland.wi.us>; Admin
<Village.Administration@mcfarland.wi.us>
Cc: Carrie Nelson <carrieanne.nelson@gmail.com>; Mona Nelson <mona.nelson@rocketmail.com>
Subject: New Village DEI Subcommittee

Hello Brad and Matt,

I'm emailing you because I would like to volunteer for the new Village DEI Subcommittee. I have been a resident in McFarland --residing at 6309 Mourning Dove Dr.-- for the last 16 years. I've attended all grades in the McFarland School District, and I'm now completing my last year of high school.

I hope you consider me for this committee. I think I bring a lot of experience that could prove beneficial. I'm currently the president of the Black Student Union at McFarland High School; I founded two new associations, McFarlanders for Racial Equity and Justice in McFarland and the BIPOC Coalition in Madison; and I've been part of the creation of three resolutions towards diversity, equity, and inclusion.

The biggest thing I bring to the community; however, is representation. Representation of people of color, youth, and women. I am here to highlight the strength of the voices of young women of color. I hope to be able to work with you further. I am excited to see how McFarland can be a model for other small local governments.

Let me know if there is any other information that you need.

Kind regards,
Laetitia

From: [Tanya O'Malley](#)
To: [Matt Schuenke](#)
Subject: FW: Volunteering for new Village DEI Subcommittee
Date: Thursday, October 22, 2020 8:07:21 AM
Attachments: [image001.png](#)

Tanya O'Malley, WCPC
Deputy Clerk
Village of McFarland
5915 Milwaukee Street
McFarland, WI 53558
608.838.3153



From: Mona Nelson <mona.nelson@rocketmail.com>
Sent: Wednesday, September 23, 2020 8:58 PM
To: Admin <Village.Administration@mcfarland.wi.us>; Brad Czebotar <Brad.Czebotar@mcfarland.wi.us>
Cc: 'Carrie Nelson' <carrieanne.nelson@gmail.com>; 'laetitia hollard' <laetitia.hollard31@gmail.com>
Subject: Volunteering for new Village DEI Subcommittee

Brad and Matt.

I'd like to volunteer for the new Village DEI Subcommittee. I have resided in McFarland for the past 16 years at 6309 Mourning Dove drive. I raised 3 kids here and my youngest is a senior at the high school. As a black women, I want to bring the perspective of a person of color who is also a parent to the village.

I've been following the racial justice movement in McFarland since June, and I'm one of the members of the new group that was created since: McFarlanders for Racial Equity and Justice. I think there are a lot of opportunities to continue McFarland's development while being inclusive to all its residents, and I want to bring a positive and constructive voice when discussing new projects in the village. I hope to have the opportunity to work with you on this effort and am looking forward to hearing back from you.

Do not hesitate to reach out if you need additional information.

Respectfully,
Mona

Mona Nelson
(608)207-6207
mona.nelson@rocketmail.com

From: [Tanya O'Malley](#)
To: [Matt Schuenke](#)
Subject: FW: Village DEI SUBCOMMITTEE
Date: Thursday, October 22, 2020 8:08:22 AM

Tanya O'Malley, WCPC
Deputy Clerk
Village of McFarland
5915 Milwaukee Street
McFarland, WI 53558
608.838.3153

-----Original Message-----

From: Monica <mbruce98@hotmail.com>
Sent: Thursday, September 24, 2020 7:36 PM
To: Admin <Village.Administration@mcfarland.wi.us>; Brad Czebotar <Brad.Czebotar@mcfarland.wi.us>
Subject: Village DEI SUBCOMMITTEE

Good evening,

I am writing to express interest in the new DEI committee that is being formed. My family and I reside at 5020 Farwell St. We moved to McFarland in 2014. Our oldest son is a McFarland HS graduate. We currently have 2 high school juniors in the district.

Our family has been active in sports and music programs since moving to the district. I am an active member of the McFarland Music Boosters. In the past, I served 1 year on the school board of a small private school in Northern Illinois. I continue to hold a leadership position at our church. I also serve in a leadership position professionally.

As a family, we settled in the school district for the educational opportunities that were offered. We quickly realized that there were very few families who looked like us. While the majority of the people in the village were accepting of us, it was evident that their experiences with diversity were sorely lacking. The time is now upon us to begin the process of formally bringing every race, ethnicity, socioeconomic class, gender, and ability to the proverbial table. Representation matters and can only make us a more inclusive village. I am willing to help make that happen.

Thanks for your time and attention.

Monica Bruce

Sent from my iPad

From: [Tanya O'Malley](#)
To: [Matt Schuenke](#)
Subject: FW: Committee
Date: Thursday, October 22, 2020 8:08:56 AM
Attachments: [Official Resume.pdf](#)
[image001.png](#)

Tanya O'Malley, WCPC
Deputy Clerk
Village of McFarland
5915 Milwaukee Street
McFarland, WI 53558
608.838.3153



From: Sean Chislom <seanachislom@ymail.com>
Sent: Friday, October 9, 2020 10:03 AM
To: Admin <Village.Administration@mcfarland.wi.us>
Subject: Committee

Hello my name is Sean Chislom, I graduated from McFarland High School in 2015, I then went on to school in Illinois and then Georgia! I am interested in the technology committee and I think it would be beneficial for myself and for the committee because I recently received my degree in business marketing and this would help me get some experience. I also think that it would help the committee to gain some perspective from a POC here in the community who is also driven to learn, work and impact this community. I am also very interested in the Diversity, Inclusion and Subcommittee and I am interested in this because of my status as a minority here in McFarland and then having siblings who are currently attending and will attend. I would also love to help with perspective as to a former student, with siblings who were also former students and can speak to the environment around the school and the community overall. I look forward to hearing about my potential slots in these committees and below I will attach my resume!

Sean Chislom

5119 Farwell Street | McFarland WI, 53558
(608) 213-2045 | seanachislom@ymail.com

EDUCATION

Bachelor of Business Administration in Marketing

December 2019

Dalton State College

Dalton, GA

- Relevant Coursework: Principles of Marketing, Sports Marketing, and Business Communication.
- Scholarship Recipient for Basketball

RELEVANT EXPERIENCE

Sales Associate/E-Commerce Analyst

May 2018 – Current

Premier Paint

Madison, WI

- Monitored and supported Amazon Marketplace into the workplace which resulted in \$1,000,000 of sales within three years
- Analyzed selling patterns of e-commerce products in order to create personalized marketing schemes and plans
- Created standardized practices for shipping products direct-to-consumer which resulted in a 20% decrease in shipping errors and damages
- Tracked year to year sales and seasonality to determine which products were best suited for JIT inventory
- Provided excellent customer service and ensured all inquiries were answered properly and efficiently.

Cashier/Utility Clerk/Stocker

June 2013 – May 2016

Pick N Save

McFarland, WI

- Increased customer satisfaction numbers by 12% over the first year
- Optimized freezer stock layout to reduce waste of expiring products
- Adjusted produce layout to increase turnover efficiency and reduce waste

Marketer

February 2013 – May 2013

Weed Man Lawn Care

Middleton, WI

- Increased group sales by 20-25% in one month by recognizing selling opportunities and capitalizing on past mistakes
- Provided expert lawn care advice and developed professional business communication

VOLUNTEER & COMMUNITY OUTREACH

-
- | | |
|--|------|
| • Volunteer, Mashburn Move-in Day at DSC | 2018 |
| • Volunteer, Miracle League Baseball in Dalton | 2018 |
| • Volunteer, NAIA Golf Tournament in Dalton | 2018 |

LEADERSHIP & CAMPUS INVOLVEMENT

-
- | | |
|--|-----------|
| • Member, Basketball Team at McFarland High School | 2011-2014 |
| • Captain, Basketball Team at Sauk Valley Junior College | 2016 |
| • Coach, Local basketball leagues in McFarland Summers | 2017-2018 |

SKILLS & ABILITIES

-
- | | |
|------------------------------|-----------------------|
| • Microsoft Office | • Team-building |
| • Professional communication | • Hootsuite Certified |
| • Leadership | • Analytical |

References available upon request.

RESOLUTION #2020-19

A RESOLUTION TO CREATE A SPECIAL COMMITTEE TO ADVANCE RACIAL EQUITY, SOCIAL JUSTICE, DIVERSITY, AND INCLUSION IN THE VILLAGE OF MCFARLAND

WHEREAS, the Village of McFarland through the Village Board, Village Staff, members of boards, commissions, and committees are committed to advancing racial equity, social justice, diversity, and inclusion within our Community and encouraging all residents to do the same;

WHEREAS, the Village Board for the Village of McFarland has previously adopted Resolution #2020-14 which is its commitment to the included action plan prepared by the Community to effectuate change;

WHEREAS, Resolution #2020-14 identified a commitment by the Village Board to “create a diversity and inclusion committee or special committee”; and

WHEREAS, the Village Board desires to create such a special committee to reaffirm its commitment to the Community in order to advance racial equity, social justice, diversity, and inclusion.

NOW, THEREFORE BE IT RESOLVED, that the Village Board of the Village of McFarland, Dane County, Wisconsin, does hereby create the Diversity, Equity, and Inclusion Subcommittee (“DEI Subcommittee”) under the requirements of Section 2-481(b) of the McFarland Municipal Code as follows:

1. Membership of the Subcommittee will be made up entirely of Residents of the Village of McFarland. Prospective Members shall be appointed by the Village President subject to confirmation by the Village Board. Additionally, the Village President shall appoint the Chairperson and Vice-Chairperson of the DEI Subcommittee subject to confirmation by the Village Board. Total membership of the Subcommittee shall not exceed 9 individuals.
2. The charge of the DEI Subcommittee shall be to:
 - a. Review and provide feedback on Village practices, policies, procedures, objectives, and goals as related to diversity, equity, and inclusion.
 - b. Identify ways to encourage all Village elected/appointed officials, resident appointees, and Community members at large to learn about diversity, equity, and inclusion.
 - c. Promote the engagement of all voices of the Community.
 - d. Identify initiatives for how the Village can work towards advancing racial equity, social justice, diversity, and inclusion while also reflecting these values within our Community.

e. Make a recommendation to the Village Board regarding the DEI Subcommittee being established within the McFarland Village Code of Ordinances as a Standing Committee.

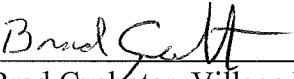
3. The DEI Subcommittee will be advisory in nature and serve under the direct supervision and discretion of the Village Board.

4. The DEI Subcommittee will make its recommendation by November, 2021 unless otherwise decided or extended by the Village Board. Further, the Subcommittee will make progress reports at least every 3 months following the scheduling of its first meeting.

5. The DEI Subcommittee will be supported by the Village Administrator with assistance and full cooperation from all Village Department Heads and Staff as directed by the Administrator.

The above and foregoing Resolution was duly adopted at a regular meeting of the McFarland Village Board on September 14, 2020.

APPROVED:


Brad Czebotar, Village President

ATTEST:


Cassandra Suettinger, Village Clerk/Treasurer

RESOLUTION # 2020-19	
MOTION	SECOND
Flaherty	Czebotar
ACTION	DATE
Adopted	09/14/2020
Referred	
Tabled	
Withdrawn	
Defeated	
Published	
INDIVIDUAL VOTING RECORD	
Brassington – Aye	Kryzenske – Aye
Clow – Aye	Rupert – Aye
Czebotar – Aye	Utter – Aye
Flaherty – Aye	
VOTING RESULTS	
Motion Carried	7 – 0 – 0
Motion Defeated:	



PUBLIC SAFETY COMMITTEE SUMMARY SHEET

MEETING DATE: Monday, October 26, 2020

SECTION: Business

DEPARTMENT: Administration

CONTACT: Cassandra Suettinger, Village Clerk/Treasurer, Craig Sherven, Police Chief, Andrew Bremer, Comm & Eco Dev Director, Chris Dennis, Fire/Rescue Chief

AGENDA ITEM: Discussion and action to change the licensed premise for Aruba0204 LLC D/B/A Angelo's McFarland, 4706 Farwell St., to add an addition and change the outdoor seating area.

PREVIOUS ACTION:

The Public Safety Committee reviewed this at their meeting on October 14, 2020 and recommended approval with conditions 1-2 noted under Board Recommendation.

Additionally, Plan Commission conducted site design review at their meeting on October 19th and approved the site plan with conditions with the same conditions as the Public Safety Committee and the additional conditions that:

- Obtain all necessary building permits related to the building addition, revised site signage, and new patio fencing.
- Removal of the proposed ground mounted building accent lighting.

ISSUE SUMMARY:

Angelo's is applying to expand their licensed premise for alcohol consumption. The proposal would add 1,116 SF to the ground floor and reconfigure and reduce the existing outdoor consumption patio area to 420 SF. A staff report and feedback is attached.

FINANCIAL/BUDGET IMPACT:

The project will increase the assessed value of the property which will benefit future TID #5 increment collection.

VILLAGE PLAN REFERENCE:

Property is identified as Mixed Use/Flex Commercial in the Village's Comprehensive Plan. One of the goals of the plan is to increase and ease opportunities for businesses to grow in McFarland and expand dining. Improving business retention and expanding commercial development are also two of the strategies identified in the Village's 2020-2030 Strategic Plan. In addition, evaluation of ways to become more business friendly and flexible for economic growth is included as in objective of the 2019-2020 Village Board Goals.

ORDINANCE REFERENCE:



Sec. 11-64, Conditions on License
Sec. 62-71, Commercial District Permitted Use
Sec. 62-72, Commercial District Bulk Standards
Sec. 62-310, Site/Design Review

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Recommended for approval of the expansion of premise for Angelo's LLC, 4706 Farwell St, to add approximately 1,116 square feet to the restaurant/bar area and reconfigure the outdoor consumption area to be approximately 420 square feet with the conditions that:

1. A second emergency exit be incorporated into the new fence per 2015 IBC 1006.2.1,
2. Providing either protective bollards, concrete planters, or concrete/masonry columns in the area of the fence in front of the two parking stalls.
3. Obtain all necessary building permits related to the building addition, revised site signage, and new patio fencing.
4. Removal of the proposed ground mounted building accent lighting

ATTACHMENTS:

1. Application - Change of Lic. Premise-2
2. 10.19.20 PC - 4706 Farwell Street - Site Design Application (9.8.20)
3. Review and Recommendation - Angelo's - Expansion
4. Fire & EMS Recommendations
5. 4706 Farwell Street_C&ED Memo_10.08.20
6. PD Letter of Approval Angelo's 2020



Application for an Outdoor Consumption Area

Pursuant to Village Ordinance Chapter 11

***Any physical change to a licensed premise requires Village board approval.**

No Fee

1. Applicant Information

Name of Individual, Partnership, LLC, or Corporation that holds the current Alcohol Beverage License:
Aruba0204 LLC

DBA:
Angelo's McFarland

Address of establishment:
4706 Farwell St

City, State and Zip Code:
McFarland, WI 53558

Contact Name:
Rick Hubanks

Contact Telephone Number:
608-577-0453

2. Premise information

Gross floor area of the indoor licensed premise within a permanent building:

Current – 2310 SF, Proposed addition – 1116 SF, Proposed total – 3426 SF

Proposed Square Footage of Outdoor Area:
420 SF

**Outdoor area may not be larger than 50% of the gross floor area of the licensed premise within a permanent building without a variance granted by the Village Board. To request a variance, please see section 8 of the application.*

3. Outdoor Consumption Section

Is the proposed outdoor consumption area within 50 feet of the lot line of a parcel zoned, or used for residential purposes?*

☒ - No ☐ - Yes, see section 8 of application to request a variance

**This prohibition shall not apply to an outdoor area where an accessory apartment exists on the same parcel as the licensed premise.*

Will the outdoor area have amplified sound including but not limited to live music, loud speakers, call systems, etc.?

☐ - No ☒ - Yes.

Hours of operation for an outdoor consumption area shall be limited to Sunday through Thursday 11:00 a.m. to 10:00 p.m., and Friday and Saturday 11:00 a.m. to 11:00 p.m. Will the proposed outdoor consumption area meet this standard? ☒ - Yes ☐ - No, see section 8 of application to request a variance

Is the proposed outdoor area directly connected to the indoor licensed premise?

☒ - Yes ☐ - No

If no, please attach a security plan that explains how alcohol will be served, and how alcohol consumption will be monitored. Provide specific details on how you intend to prevent consumption outside of the licensed premise and how you will prevent underage alcohol consumption.

4. Outdoor Sporting Activity Section

Will the proposed expansion involve an outdoor sporting activity area:? ☐ - Yes ☒ - No If yes, you will need an outdoor sporting activity application in addition to this application.	
5. Attachments/Requirements The following must be submitted with your application: ☒ - Site Plan or drawings demonstrating the size, location, surface, and building materials, fencing (not less than 4 ft in height), signage including proposed use of the outdoor area. ☒ - Picture of proposed fencing/fencing material.	
6. Certification I certify that the information contained in this application is true and accurate to the best of my knowledge and belief. I agree to comply with all requirements of the Village Code of Ordinances and State Law.	
Signature of Applicant: Rick Hubanks	Date: 9/11/2020

7. Standards for Outdoor Consumption Area a. The perimeter of any outdoor portion of a licensed premises shall be enclosed by a permanent, secure fence not less than four feet in height. Such fence shall be constructed of wood, plastic or metal and erected and maintained in accordance with all applicable Village Ordinance. If the outdoor portion of a licensed premises is an outdoor sports area, the enclosure may instead be made by temporary netting not less than ten feet high during the applicable sports season. Such netting shall not be installed sooner than 14 days prior to, and shall be removed no later than 14 days after, the season or the period established under Section 11-69(f)(6)c., whichever is shorter. The outdoor area shall comply with all applicable building code requirements including the provision of readily distinguishable means of egress for fire and emergency purposes. b. Hours of outdoor consumption are restricted to 11:00 a.m. to 10 p.m. Sunday through Thursday, and 11:00 a.m. to 11:00 p.m. on Friday and Saturday. c. Amplified music, speakers, microphones, televisions and other audio video devices shall be subject to Chapter 20, Article III of the Village Code of Ordinances regarding Noise and section 11-69(f) if applicable. Commercial zoned shall be limited to 70 db at all times. Noise is measured at the property line. Outdoor amplification of noise is not allowed after 10 p.m. d. A conspicuous notice shall be posted at each fire exit stating: "No Beer, Liquor or Wine May Be Carried in an Open Container Beyond this Point." e. No bar/counter service shall be permitted in outdoor areas, however, wait staff may serve in the outdoor area. f. Except for outdoor sports activities permitted under Section 11-69, the outdoor area shall not be used for any activities other than service and consumption of food and/or drink. Smoking may be permitted in accordance with applicable State and local regulations. g. The outdoor area shall be accessible to the disabled, and the license holder shall at all times comply with all applicable federal, state and village laws, ordinances and regulation concerning accessibility.
--

h. Containers for refuse disposal and regular cleanup shall be placed inside of the outdoor area.

i. If the outdoor area is used for outdoor sports activities as permitted under Section 11-69 and persons under the age of 21 are allowed to be present on the licensed premises, all persons 21 years of age or older who intend to consume alcohol beverages in the outdoor area, shall be issued a wristband that is bright in color which shall be issued only upon showing valid identification proving the person is 21 years of age or older.

j. The outdoor area shall not have an undue adverse impact upon nearby property, the character of the neighborhood, traffic conditions, parking or other matter affecting the public health, safety, welfare, or convenience.

8. Variance – ONLY COMPLETE SECTION IF YOU ARE REQUESTING A VARIANCE FROM THE MINIMUM STANDARDS IN SECTION 7.

- The above noted standards in section 7 shall be the minimum conditions of all outdoor licensed areas unless the Village Board makes a specific finding that the condition is not necessary to protect the public health, safety or welfare.

Please identify any variances requested from the minimum standards that you would like considered by the Village Board.

I am requesting a variance from the following standard(s):

1. Outdoor areas are prohibited within 50 feet of the lot line of a parcel zoned, or lawfully used for residential purposes.

Proposed distance from residential lot line: _____

Explanation as to why the variance is needed/requested and why it will not cause a nuisance or concern for public health, safety and welfare:

2. The hours during which consumption may be permitted are 11:00 a.m. to 10:00 p.m. Sunday through Thursday, and Saturday and Sunday from 11:00 a.m. to 11:00 p.m.

Proposed Hours of Outdoor consumption area:

Explanation as to why the variance is needed/requested and why it will not cause a nuisance or concern for public health, safety and welfare:

3. The perimeter of any outdoor portion of a licensed premise shall be enclosed by a permanent, secure fence not less than four feet in height. Such fence shall be constructed of wood, plastic, or metal and erected and maintained in accordance with all Village Ordinances.

*Proposed fence height and materials:*_____

Explanation as to why the variance is needed/requested and why it will not cause a nuisance or concern for public health, safety and welfare:

4. Amplified music, speakers, microphones, televisions, and other audio/video devices shall be subject to Chapter 20 regarding noise, which shall limit noise on all commercial properties to 70db, and no noise allowed between the hours of 10 p.m. and 7:00 a.m.

*Variance requested:*_____

Explanation as to why the variance is needed/requested and why it will not cause a nuisance or concern for public health, safety and welfare:

5. The size of the outdoor area shall be not larger than 50 percent of the gross floor area of the licensed premise within a permanent building.

*Proposed size of outdoor area:*_____ *Percentage of gross floor area:*_____

Explanation as to why the variance is needed/requested and why it will not cause a nuisance or concern for public health, safety and welfare:

Village of McFarland
Community Development Department

RECEIVED

SEP 08 2020

VILLAGE OF MCFARLAND

Plan Commission Application – 2020

~Application must be completed in full~

Applicant - Owner	<i>Rick + Susan Hebanks</i>	Applicant's Agent	
	<i>Angelo's McFarland</i>	Name	
Address	<i>4706 Farwell St</i>	Address	
Email	<i>AngelosMcFarland@yahoo.com</i>	Email	
Phone #	<i>(608) 577-0453</i>	Phone #	
Fax #		Fax #	

Parcel No(s). *LOT 1 C.S.M. # 2949* 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	\$370+F	☐ Annexation	At cost
☐ Preliminary Plat (reapplication)	\$500+BF	☐ Rezoning (map)	\$405+	☐ Dev. Agreement Including Addendums	\$400 F
☐ Certified Survey Map	\$300+FG	☐ Zoning Amendment (text)	\$405 +F	☐ Final Plat	\$500 +CF
☐ Condominium	\$300+EF	☐ Variance-Board of Zoning Appeals	\$380+F	☐ 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 or/ 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
☐ Commercial Site/Design Review (5,000 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. (Attach additional paper if needed)

*Addition to Angelo's McFarland 4706 Farwell St.
see Attached P&E Legal description*

What action is the applicant requesting of the Plan Commission?

Appeal of proposed addition to Angelo's McFarland

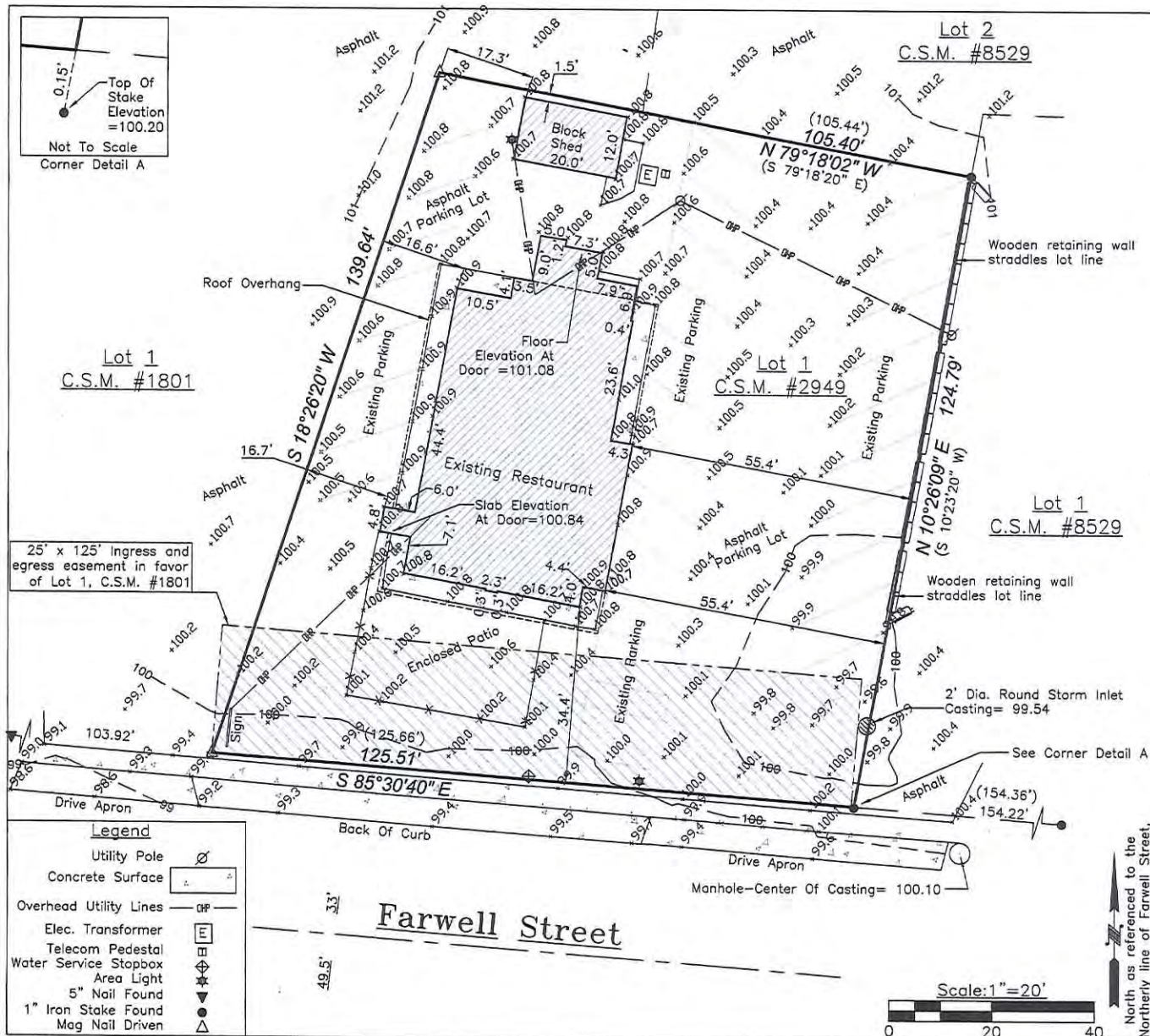
Has this specific proposal been previously discussed or acted upon by the Plan Commission?

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

PLEASE READ AND SIGN AT THE BOTTOM ON THE REVERSE SIDE

Village of McFarland Plan Commission 2020 Schedule

9-3-20



TOPOGRAPHIC SURVEY AND PLAT OF SURVEY

Lot 1 of Certified Survey Map # 2949, being a part of the SW 1/4 of the NW 1/4 of Section 3, T 6 N, R 10 E, Village of McFarland, Dane County, Wisconsin.

Surveyor's Certificate

I, Timothy G. Radl, Professional Land Surveyor S-2959, hereby certify I have surveyed, mapped, and monumented the lands described herein; that such map correctly represents all exterior boundaries of the land surveyed; and that this survey is correct to the best of my knowledge and belief. Dated this 24th day of August, 2020.

Timothy G. Radl
8/24/2020
WISCONSIN
TIMOTHY G. RADL
S-2959
MADISON
LAND SURVEYOR

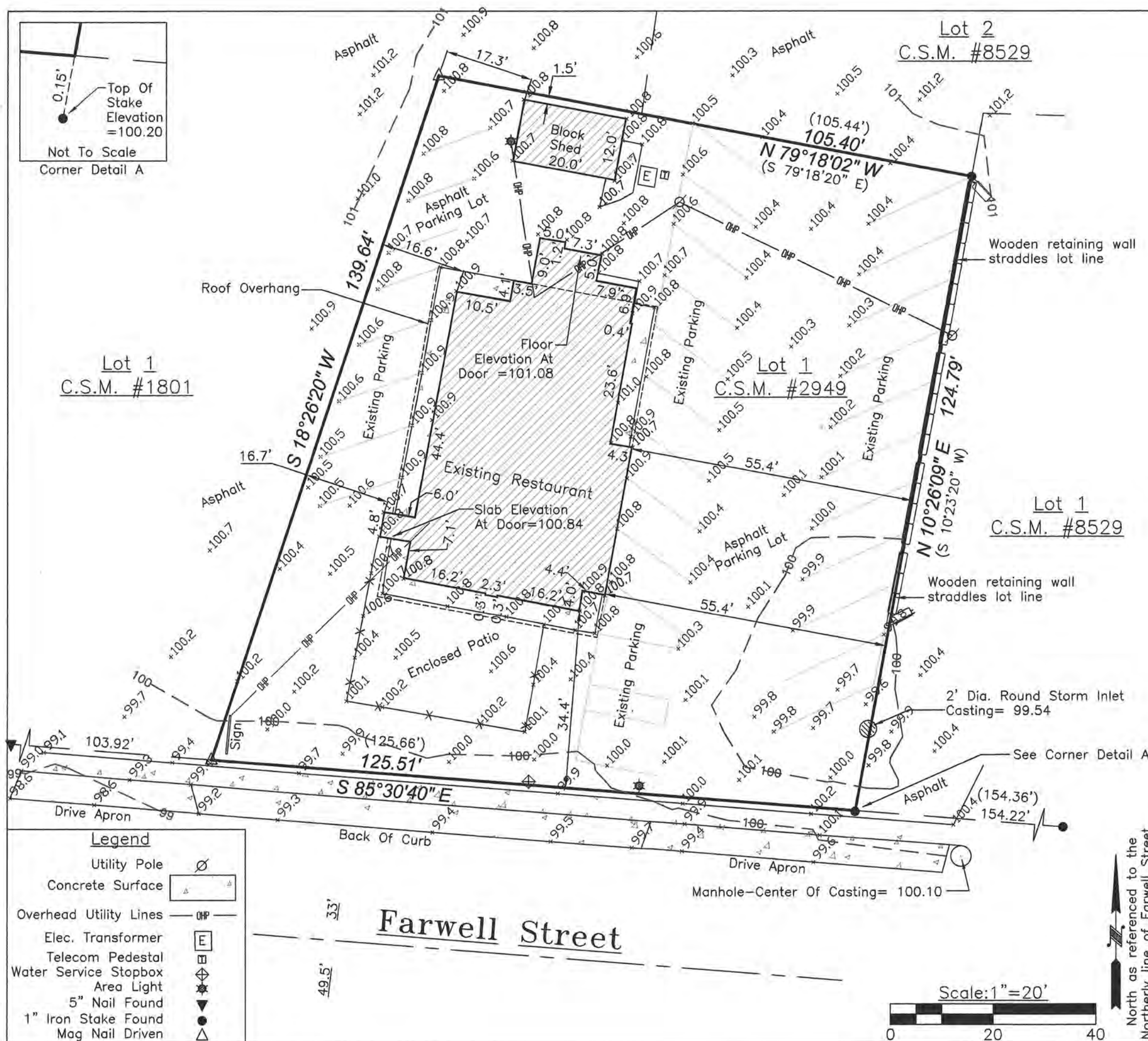
Timothy G. Radl S-2959 Professional Land Surveyor

Notes: Lot Area = 15,081 Sq.Ft.
Vertical Datum Assumed.
Contour Interval: 1 Foot.
Fieldwork performed August 21st, 2020.
Building offsets are to siding or concrete block.
No title report was furnished for this survey.
Only above-ground features have been located.
Previously recorded dimensions enclosed in parenthesis.
Wetlands or flood zones, if present, have not been delineated.
This survey subject to all agreements and easements recorded and unrecorded.

Red Oak Land Surveying LLC

313 Waverly Pl. Madison, WI 53705 (608)233-3142 redoakls.com

DRAWN	DATE	Prepared for:
TGR	8/21/2020	Rick Hubanks
APPROVED	DATE	4706 Farwell St.
TGR	8/23/2020	McFarland, WI 53558
SCALE	SHEET	PROJECT NO.
1" = 20'	1 of 1	2020077



TOPOGRAPHIC SURVEY AND PLAT OF SURVEY

Lot 1 of Certified Survey Map # 2949,
being a part of the SW 1/4 of the
NW 1/4 of Section 3, T 6 N, R 10 E,
Village of McFarland, Dane County,
Wisconsin.

Surveyor's Certificate
I, Timothy G. Radl, Professional Land Surveyor S-2959, hereby
certify I have surveyed, mapped, and monumented the lands
described herein; that such map correctly represents all
exterior boundaries of the land surveyed; and that this survey
is correct to the best of my knowledge and belief.
Dated this 28th day
of September, 2020.

[Signature]
9-28-2020
TIMOTHY G. RADL
S-2959
MADISON
WIS.
LAND SURVEYOR

Timothy G. Radl S-2959 Professional Land Surveyor
Revised 9/28/2020 to remove access easement in favor of
Lot 1 Certified Survey Map #1801, the following having now
been removed via Document #5639243.
Notes: Lot Area= 15,081 Sq.Ft.
Vertical Datum Assumed.
Contour Interval: 1 Foot.
Fieldwork performed August 21st, 2020.
Building offsets are to siding or concrete block.
No title report was furnished for this survey.
Only above-ground features have been located.
Previously recorded dimensions enclosed in parenthesis.
Wetlands or flood zones, if present, have not been delineated.
This survey subject to all agreements and easements recorded
and unrecorded.

Red Oak Land Surveying LLC
313 Waverly Pl. Madison, WI 53705 (608)233-3142 redoakls.com

DRAWN TGR	DATE 8/21/2020	Prepared for: Rick Hubanks 4706 Farwell St. McFarland, WI 53558
APPROVED TGR	DATE 8/23/2020	
SCALE 1"=20'	SHEET 1 of 1	PROJECT NO. 2020077

FARWELL STREET

BIKES

BENCH

21

10'
SETBACK

DINING

ADDITION

EXISTING

DINING

M

W

MECH

BAR

KITCHEN

PATIO
14 x 30

ENTRY

FLOOR PLAN
1/8" = 1'-0"

RECEIVED

SEP 08 2020

VILLAGE OF MCFARLAND

Project: Angelo's McFarland
Susan & Rick Hubanks
4706 Farwell Street
McFarland, WI 53558

Designer: Chucky Geurink
2354 Hwy AB
McFarland, WI 53558
(608)345-4333
cggeurink@charter.net

Issued: 8/28/20

Sheet: 2 of 3
Page 74 of 492



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SEP 08 2020
VILLAGE OF MCFARLAND

Project: Angelo's McFarland
Susan & Rick Hubanks
4706 Farwell Street
McFarland, WI 53558

Designer: Chuck Geurink
2354 Hwy AB
McFarland, WI 53558
(608)345-4333
cggeurink@charter.net

Issued: 9/8/20

Sheet: 1 of 3
Page 75 of 492

Angelo's McFarland
Seating Capacities

	Existing		Proposed	
	Pre/ COVID	COVID	COVID	Post/ COVID
Bar	28	18	30	34
Dining	55	24	42	48
Patio	35	48		24
Totals	118	90	72	106

RECEIVED

SEP 08 2020

VILLAGE OF McFARLAND

Landscaping

All shaded area to be edged with Raffinato edging and filled with black/gray river rock. Holmstrup Arborvitae to be planted along the west and south corner walls. Fill in the rest of the area with bushes and grasses as needed to fill.
see attached for specs

Lighting

Variable lumen output low voltage 35 degree flood beam lighting to be placed behind arborvitae for up lighting on the west and south stone feature wall. Vertical LED light bars to be installed On the upper stone corners on the south east corner and next to the patio door.
see attached for specs

Signage

Eliminate current pedestal sign. Proposed 2 LED backlit dimensional letter signs on the south and west corner of the stone feature wall.

Exterior finishes

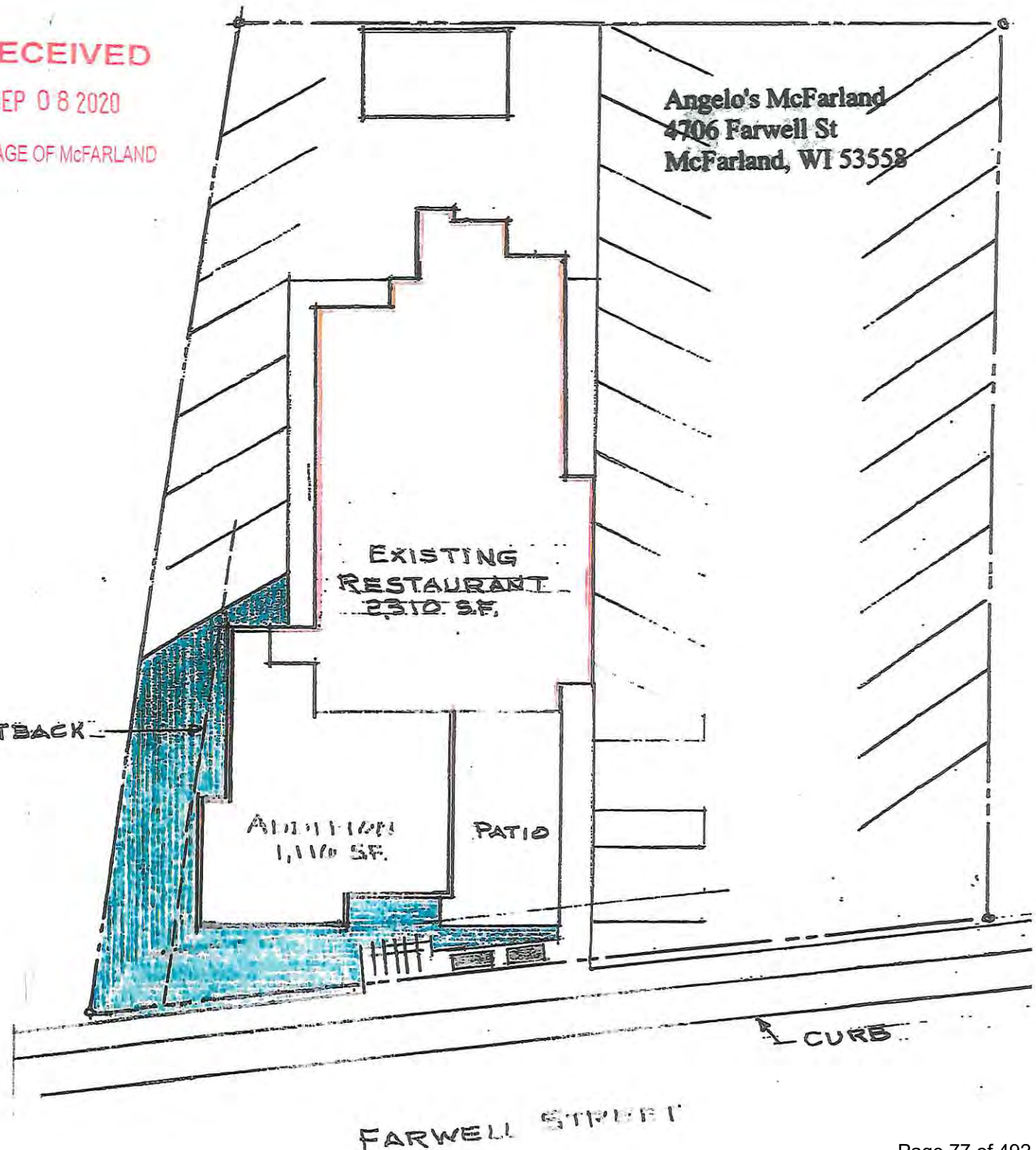
South and west feature corner walls and lower patio area walls to be dark stone veneer (similar to as spec) Upper patio area walls to be light larger format veneer stone. Remainder of proposed addition and existing structure to be E.F.I.S. Stucco finish (still working on final color) Windows and exterior doors to be dark extruded aluminum cladding.

RECEIVED

SEP 08 2020

VILLAGE OF MCFARLAND

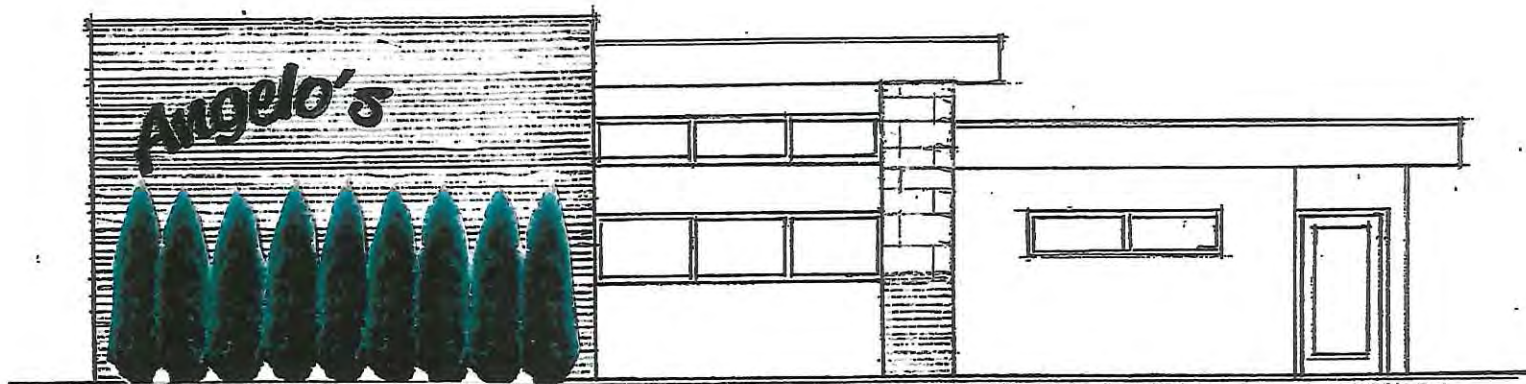
Angelo's McFarland
4706 Farwell St
McFarland, WI 53558



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SEP 08 2020

VILLAGE OF McFARLAND



SOUTH ELEVATION

$1/2" = 1'-0"$

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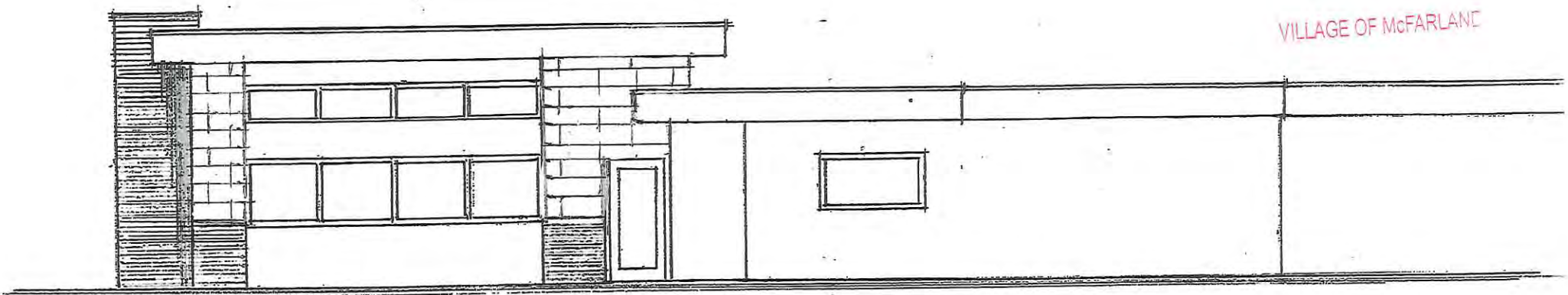


WEST ELEVATION
1/8" = 1'-0"

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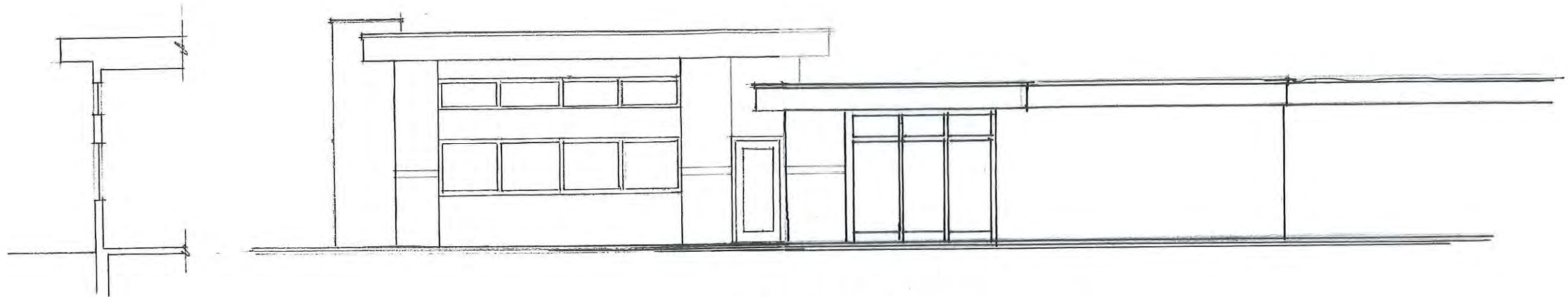
SEP 08 2020

VILLAGE OF McFARLAND

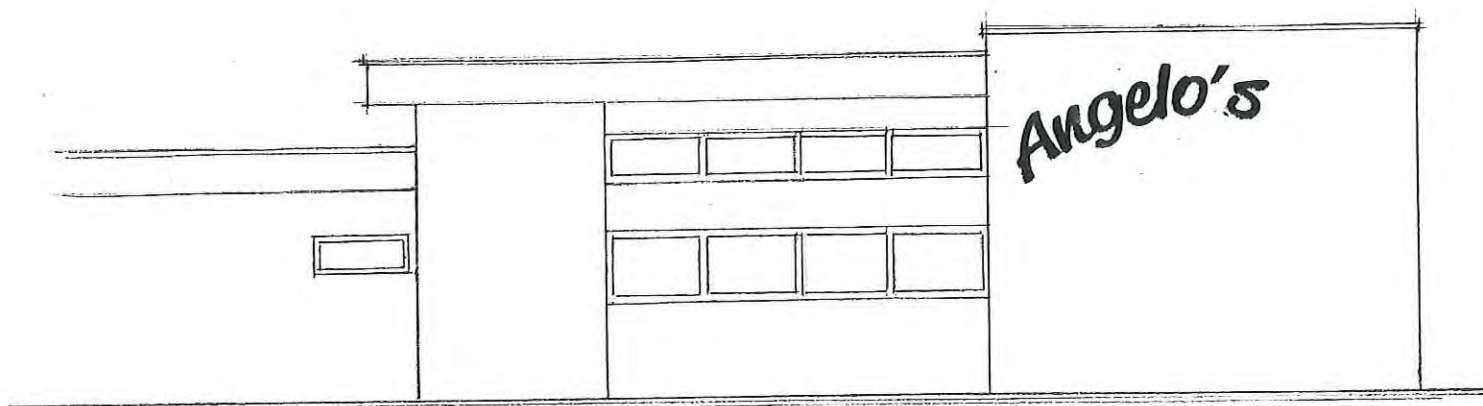


EAST ELEVATION

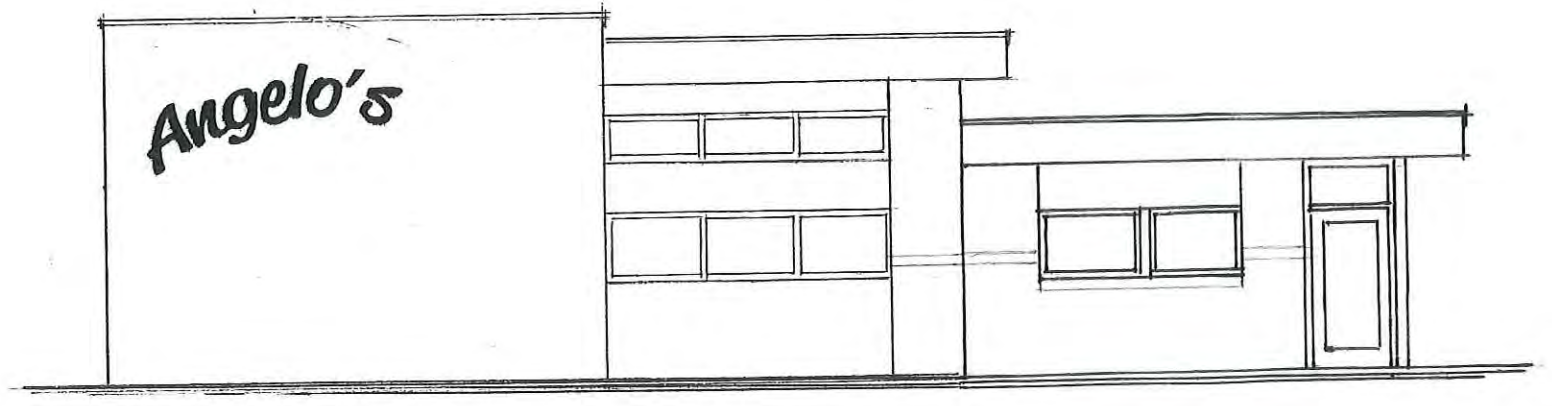
$1/8" = 1'-0"$



EAST ELEVATION
1/8" = 1'-0"



WEST ELEVATION
1/8" = 1'-0"



SOUTH ELEVATION
1/8" = 1'-0"

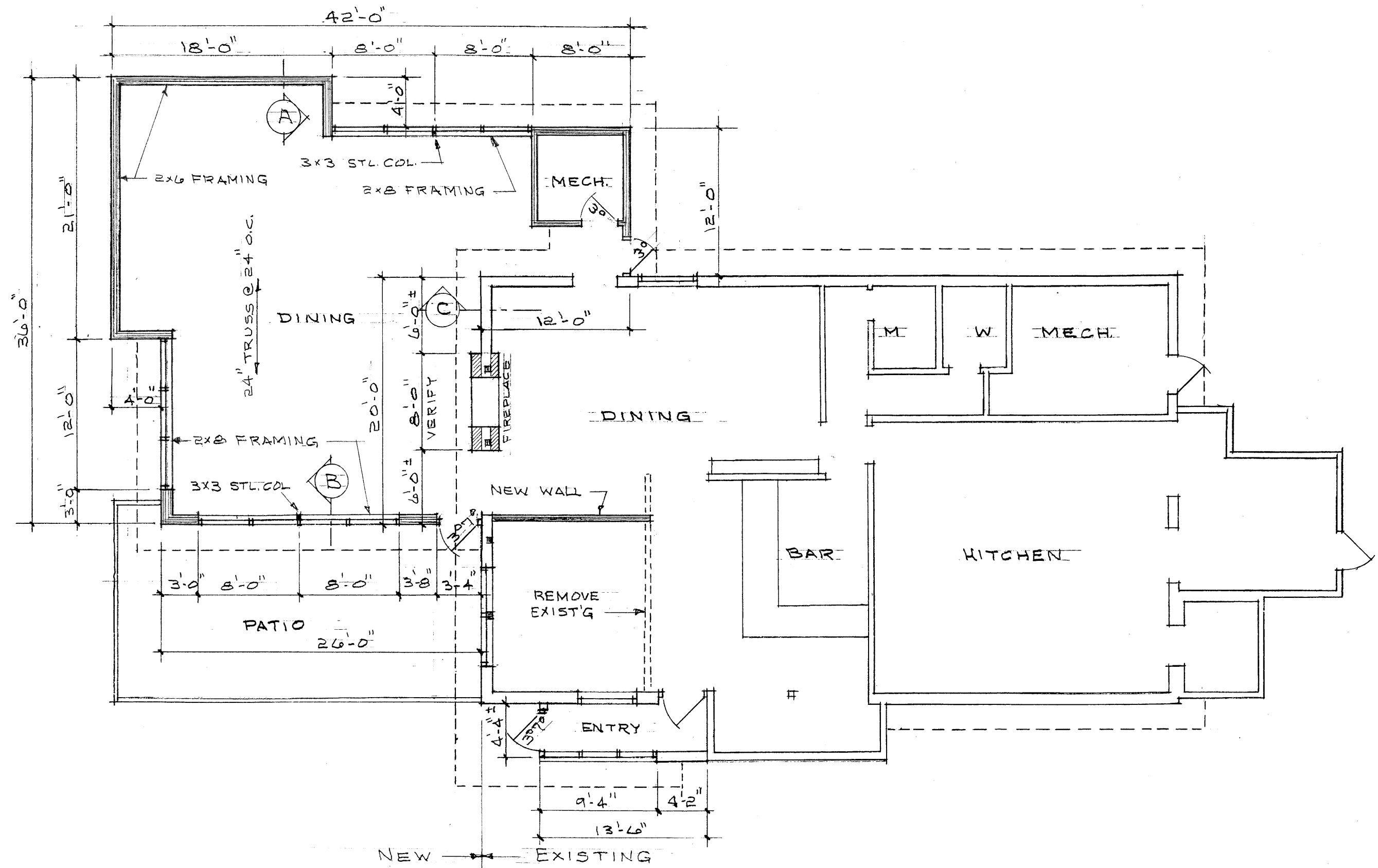
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SEP 08 2020
VILLAGE OF MCFARLAND

Project: Angelo's McFarland
Susan & Rick Hubanks
4706 Farwell Street
McFarland, WI 53558

Designer: Chuck Geurink
2354 Hwy AB
McFarland, WI 53558
(608)345-4333
cggeurink@charter.net

Issued: 9/8/20

Sheet: 3 Page 3 of 492



FLOOR PLAN

1/8" = 1'-0"

Note: Architectural layout plans only. Mechanical and structural engineering components to be verified by others.

Project: Angelo's McFarland
Susan & Rick Hubanks
4706 Farwell Street
McFarland, WI 53558

REV. - 9/18/20
Issued: 9/17/20

Designer: Chuck Geurink
2354 Hwy AB
McFarland, WI 53558
(608)345-4333
cggeurink@charter.net

Sheet: 3 of 5



Holmstrup Arborvitae



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VILLAGE OF McFARLAND

Photo credit: [Gammon Landscape Nursery](#)

The Holmstrup Arborvitae is an introduction from Denmark. It's a very compact, slow growing, pyramid with rich-green foliage. This evergreen does well in light shade and poor drainage. It's an excellent plant for smaller landscapes. Great year round color. Mature size is around 6-8' tall x 3-4' wide.

Holmstrup Arborvitae Quick Facts:

Color:	<i>Green</i>
Plant Size:	<i>Around 6-8' tall x 3-4' wide</i>
Sunlight:	<i>Full Sun to Partial Shade</i>
Soil Conditions:	<i>Normal, Sandy, Clay, Acidic, Wet</i>



Plant Addicts

Winecraft Black® Smokebush



Hirt's Gardens

Black Dragon Mondo Grass Plants - Ophiopogon nigrescens...



Bountiful Gardens

Carex (Japanese Sedge Grass) 'Ice Dance' | bountifulgarden

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RAFFINATO 180 mm

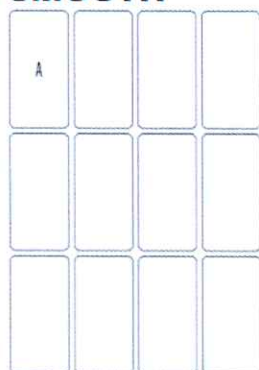
DESCRIPTION: Edges **TEXTURE:** Smooth or Polished

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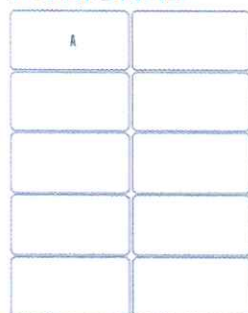
SEP 08 2020

VILLAGE OF McFARLAND

PALLET OVERVIEW - 180 mm SMOOTH



PALLET OVERVIEW - 180 mm POLISHED



Specifications per pallet		Imperial	Metric
180 mm SMOOTH	Cubing	24 units	24 units
	Approx. Weight	1 529 lbs	694 kg
	Number of rows	2	



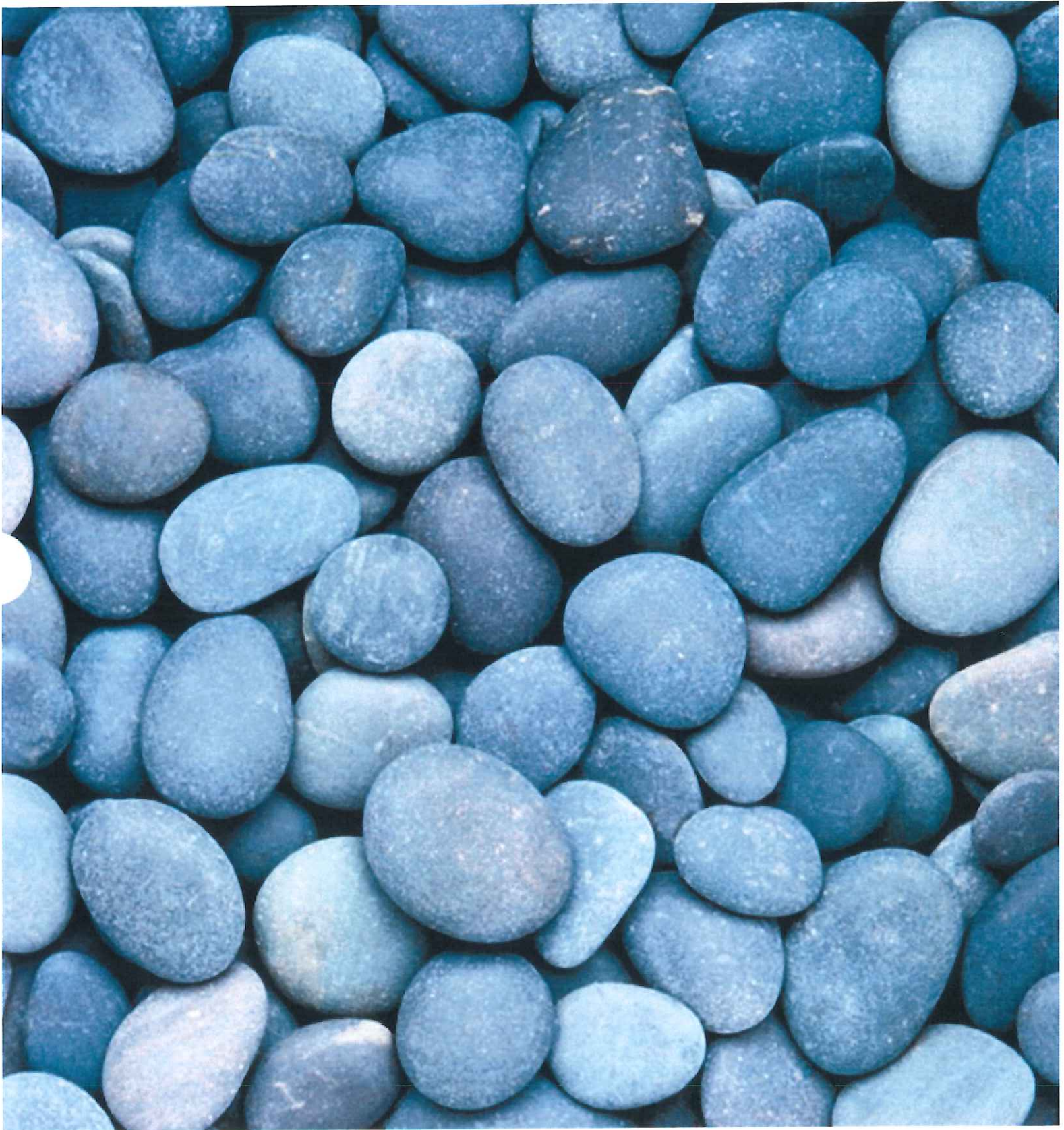
Unit dimensions	in	mm	Units/pallet
Height	7 1/16	180	24 units
Depth	9 13/16	249	
Length	14 1/8	359	

Specifications per pallet		Imperial	Metric
180 mm POLISHED	Cubing	20 units	20 units
	Approx. Weight	1 557 lbs	706 kg
	Number of rows	2	



Unit dimensions	in	mm	Units/pallet
Height	7 1/16	180	20 units
Depth	9 3/4	248	
Length	14 1/16	357	





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Is Bulbs Included: Yes

Finish: Polished Chrome

Certification: CCC

Certification: ce

Protection Level: IP65

Voltage: 85-265V

Item Type: Wall Lamps

Warranty: 3 years

Body Material: Aluminum

Power Source: AC

Style: Contemporary

Light Source: LED Bulbs

Usage: Industrial

Base Type: Wedge

Is Dimmable: Yes

Diffuser: Aluminum Alloy

30cm: 8W

60cm: 16W

80cm: 32W

120cm: 48W

150cm: 60W

170cm: 70W

200cm: 80W

240cm: 90W



- 3 3/4" high x 2" wide x 4 1/2" deep. Weighs 1 lbs.
- Built-in non-dimmable 8 watt LED module. 3000K color temperature. 80 CRI.
- Variable Lumen Output (VLO) allows to easily switch between 100, 200 or 300 lumen without mechanically adjusting the settings on the fixture.
- VLO adjustable lumen energy-efficient LED landscape accent flood light from Kichler.
- Textured black finish over aluminum construction. Tempered glass lens.
- LED averages 50,000 hours at 3 hours per day.
- 35-degree flood beam angle.
- Advanced optics provide superb center to edge uniformity.
- Complete sealed system for improved reliability.
- Advanced ESD surge protection (6 kV).
- Low voltage - 12V.

RECEIVED

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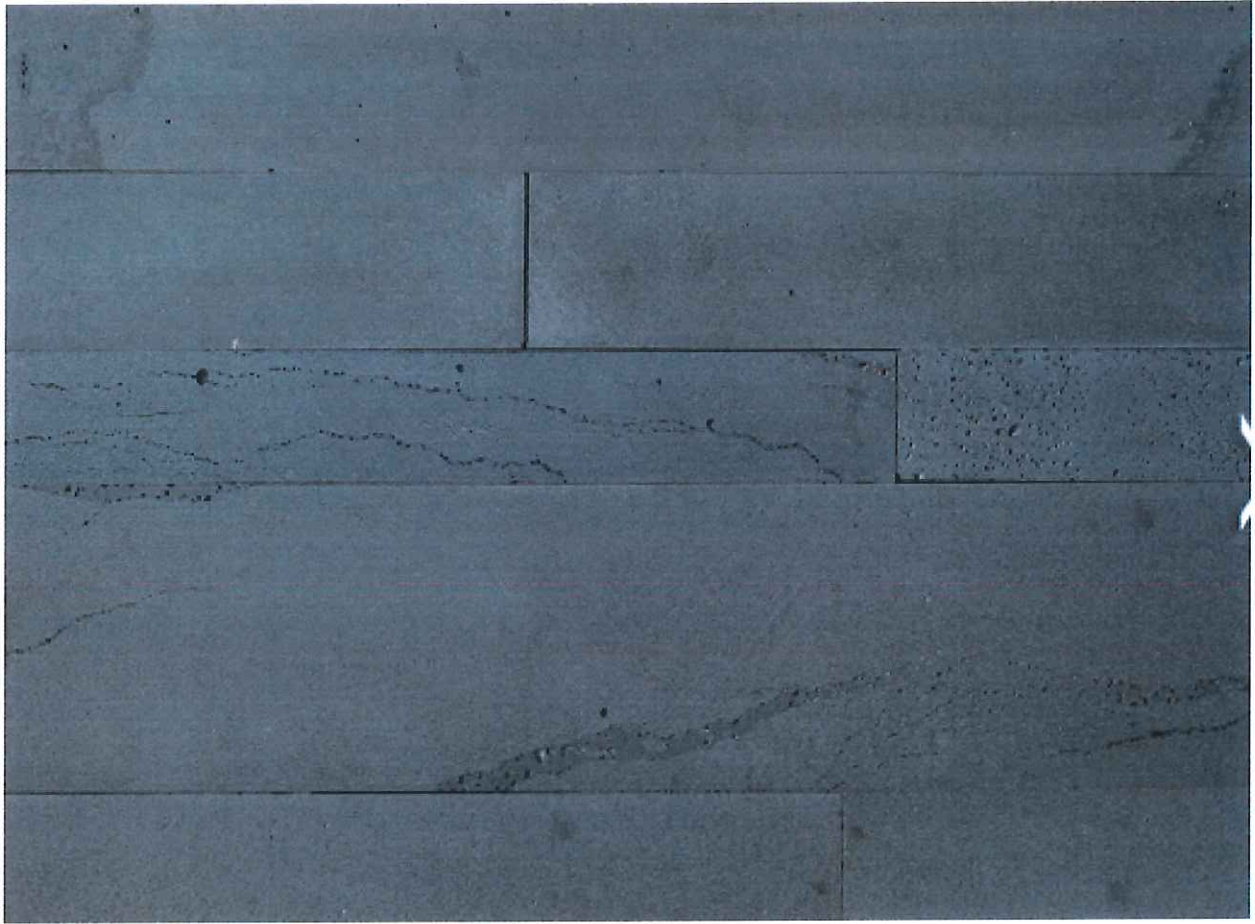
Norstone Graphite PLANCTM



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MEMORANDUM

To: Public Safety Committee and Village Board

From: Cassandra Suettinger, Village Clerk/Treasurer

Date: October 7, 2020

RE: Expansion of Premise of Angelo's, 4706 Farwell St.

Background: The current licensed premise for Angelo's is the restaurant/bar area and a 774 square foot outdoor patio at 4706 Farwell St.

Proposal: Angelo's is proposing to add a 1116 square floor addition on to the restaurant/bar and reconfigure the outdoor consumption area to be 420 Square Feet.

Review: Village Ordinance 11-64 outlines the conditions and requirements for a premise and outdoor consumption areas within the Village. Below is a review of the proposal and its compliance with the required conditions.

There are two parts to this premise expansion, one is an expansion of the current restaurant bar area and the other is a reconfiguration of the outdoor consumption area. 11-64 outlines conditions and requirements for licensed premise, most of them are regulatory in nature and just requirements the applicant must meet and are not actual standards. These include consent to entry, employment of minors, licensed operator on premise, among a variety of other things. The only actual standard that might apply is the requirement that the main entrance not be within 300 feet of an established public school, parochial school, hospital or house of worship. Angelo's meets this requirement and there are no issues identified with the expansion of the restaurant/bar area.

Any application for a new license, the renewal of an existing license or a change in the description of licensed premises which seeks to include an outdoor area within the licensed premises' description shall require notice to each person owning property within 500 feet of the proposed licensed premises. The applicant shall prepay the cost of sending such notice before the notices are sent. The notice shall include a copy of the application and the date, time and location of any public hearings or other public meetings at which the application is scheduled to be considered.

On September 28, 2020, a notice was sent to all property owners within 500 feet of the proposed licensed premise notifying them of the dates and times of the Public Safety and Village Board meetings along with a copy of the proposed site plan.

The application shall be accompanied by detailed plans or drawings demonstrating the size, location, surface and building materials, and use of the outdoor area, including fencing and signage, and any other information necessary to determine compliance with this Subsection.

The outdoor consumption application, along with associated plans and drawings, shall be reviewed for a recommendation by the Public Safety Committee and a final decision made by the Village Board.

Attached are the detailed plans outlining all the required items for the review and recommendation of the Public Safety Committee.

In addition to any specific conditions imposed under Subsections (2) and (3), the following shall be minimum conditions of all licenses with respect to outdoor areas unless the Village Board makes a specific finding that the condition is not necessary to protect the public health, safety or welfare:

a. Outdoor areas are prohibited within 50 feet of the lot line of a parcel zoned, or lawfully used for residential purposes. This prohibition shall not apply to prohibit an outdoor area where an accessory apartment exists on the same parcel as the licensed premises.

Compliant.

b. The hours during which alcohol consumption may be permitted within the outdoor area is restricted to 11:00 a.m. to 10:00 p.m. Sunday through Thursday; and 11:00 a.m. to 11:00 p.m. on Friday and Saturday.

Compliant.

c. The perimeter of any outdoor portion of a licensed premises shall be enclosed by a permanent, secure fence not less than four feet in height. Such fence shall be constructed of wood, plastic, or metal and erected and maintained in accordance with all applicable Village ordinances. If the outdoor portion of a licensed premises is an outdoor sports area, the enclosure may instead be made by temporary netting not less than ten feet high during the applicable sports season. Such netting shall not be installed sooner than 14 days prior to, and shall be removed no later than 14 days after, the season or the period established under Section 11-69(f)(6)c., whichever is shorter. The outdoor area shall comply with all applicable building code requirements including the provision of readily distinguishable means of egress for fire and emergency purposes.

Compliant.

Comments:

1. Fire Inspector – It is the recommendation of the McFarland Fire & Rescue Department that the application be approved based on a second emergency exit being incorporated into the new fence, per 2015 IBC:1006.2.1
2. Police Chief – Note that while the fencing proposed appears to be in technical compliance with ordinance requirements in terms of physical construction requirements related to height and material, it is in my opinion of questionable

sufficiency to prevent the passage of alcoholic beverages to individuals on the outside due to open construction. Applicant should be aware that this type of fencing will increase the ability to pass beverages to individuals outside the area and increased visual supervision of the area would be prudent and highly recommended.

3. Community Development Director - Fencing. The applicant proposes to reuse the existing fencing material that was previously approved by the Village this summer as part of a prior Outdoor Consumption Area Application to expand the outdoor patio area to its present configuration. The Department is supportive of this improvement as the proposed materials and design meet applicable zoning and building code requirements and provide increased visibility to and from the outdoor dining space. The addition of a second emergency only gate is recommended, presumably to be located on the east side adjacent to the building. The revised patio fencing will need a building permit from the Building Inspector and the owner will need to securely mount to the concrete all fence posts.

d. Amplified music, speakers, microphones, televisions or other audio or video devices shall be subject to Chapter 20, Article III of the Village Code of Ordinances regarding Noise and Section 11-69(f) if applicable.

Compliant. Applicant is aware of requirement.

e. The outdoor area shall not have an undue adverse impact upon nearby property, the character of the neighborhood, traffic conditions, parking or other matter affecting the public health, safety, welfare, or convenience.

Compliant. The Police Chief emphasizes this point in his letter as a reminder to the applicant.

f. The size of the outdoor area may not be larger than 50 percent of the gross floor area of the licensed premises within a permanent building. Interior building capacity shall not be increased as a result of the addition of the outdoor area. The playing area of any outdoor sports area permitted under Section 11-69 shall not be included for purposes of determining compliance with this subparagraph so long as the playing area is not permitted to be occupied by persons not participating in the sporting activity for which the playing area is designed.

Compliant. The total proposed gross floor area of the indoor licensed The one story indoor licensed premise is listed in the assessment records as 2,108 square feet. The proposed addition to the outdoor seating area would take the size of the patio to 774 square feet. This is well within the 50% threshold provided in the ordinance.

g. A conspicuous notice shall be posted at each fire exit stating: "No Beer, Liquor or Wine May Be Carried in an Open Container Beyond this Point."

Compliant. Applicant is aware of requirement and current outdoor patio order includes the posted sign.

h. No bar/counter service shall be permitted in outdoor areas, however, wait staff may serve in the outdoor area.

Complaint. Applicant is aware of requirement.

i Except for outdoor sports activities permitted under Section 11-69, the outdoor area shall not be used for any activities other than service and consumption of food and/or drink. Smoking may be permitted in accordance with applicable State and local regulations.

Compliant. Applicant is aware of requirement.

j. The outdoor area shall be accessible to the disabled, and the license holder shall at all times comply with all applicable federal, state and village laws, ordinances and regulation concerning accessibility.

Compliant. Both the Fire Inspector and Building Inspector reviewed the proposed plan and provided approval with the condition noted regarding the second exit.

k. Containers for refuse disposal and regular cleanup shall be placed inside of the outdoor area.

Compliant, applicant is aware of requirement.

l. If the outdoor area is used for outdoor sports activities as permitted under Section 11-69 and persons under the age of 21 are allowed to be present on the licensed premises, all persons 21 years of age or older who intend to consume alcohol beverages in the outdoor area, shall be issued a wristband that is bright in color which shall be issued only upon showing valid identification proving the person is 21 years of age or older.

Not applicable. No sports activities proposed.

Recommendation: Staff is recommending approval of the expansion of premise for Angelo's LLC, 4706 Farwell St, to add approximately 1,116 square feet to the restaurant/bar area and reconfigure the outdoor consumption area to be approximately 420 square feet with the condition that a second emergency exit be incorporated into the new fence per 2015 IBC 1006.2.1.

The Village Board may impose conditions specific to any outdoor areas of the licensed premises as deemed necessary to prevent undue adverse impacts on neighboring property, the character of the surrounding neighborhood, traffic conditions, parking or any other matter to protect the public health, safety, welfare or convenience, including, but not limited to:

- a. Restricting the hours during which alcohol consumption may be permitted within the outdoor area;
- b. Requiring additional parking beyond the minimum required by the Zoning Code;
- c. Regulation of lighting and screening;
- d. Any conditions recommended by the Public Safety Committee;

e. Any conditions imposed by the Plan Commission as part of its required site plan review under Section 62-310 of this Code.



McFarland Fire & Rescue Department

5915 Milwaukee Street • PO Box 110 • McFarland, WI 53558-0110

(608) 838-3278 • Fax: (608) 838-3619

Emergency: 911

October 1, 2020

To: Public Safety Committee

From: Mitchell Sutter, Fire Inspector/Public Education Specialist

RE: Site Plan Review for Angelo's McFarland

I have reviewed the proposed change in the outdoor fenced area requested by Angelo's McFarland on September 8, 2020. The combined occupancy load of the current fenced-in area and the proposed addition, based on the square footage provided, would have a 102 person seating arrangement assuming adjustable seating.

It is the recommendation of the McFarland Fire & Rescue Department that the application be approved based on a second emergency exit be incorporated into the new fence, per the 2015 IBC:1006.2.1 **Egress based on occupant load and common path of egress travel distance.**

If you have any questions regarding the above, please contact me via phone at 608-838-3278 or via email at mitchell.sutter@mcfarland.wi.us

Sincerely,

A handwritten signature in black ink that reads "Mitchell Sutter".

Mitchell Sutter

Fire Inspector/Public Education Specialist

Cc: Chris Dennis, Fire & EMS Chief (McFarland Fire & Rescue Department)

Memorandum

To: Public Safety Committee

From: Andrew Bremer, AICP, Community & Economic Development Director

Date: October 8, 2020

Re: **4706 Farwell Street – Angelo’s Restaurant, Outdoor Consumption Area Application**

On October 19, 2020, the Plan Commission will review Angelo’s Restaurant’s Site/Design Application to expand their indoor dining area and revise their existing outdoor patio. The following memo addresses those aspects of the proposed project most relevant to public safety and Sec. 11-64(n) related to outdoor consumption areas.

1. Proximity to Residential Uses. The property is zoned Commercial General (C-G). The outdoor patio area is not within 50 feet of the lot line of a parcel zoned for residential purposes.
2. Fencing. The applicant proposes to reuse the existing fencing material that was previously approved by the Village this summer as part of a prior Outdoor Consumption Area Application to expand the outdoor patio area to its present configuration. The Department is supportive of this improvement as the proposed materials and design meet applicable zoning and building code requirements and provide increased visibility to and from the outdoor dining space. The addition of a second emergency only gate is recommended, presumably to be located on the east side adjacent to the building. The revised patio fencing will need a building permit from the Building Inspector and the owner will need to securely mount to the concrete all fence posts.
3. Protective Bollards. Unlike the recent application by the Maple Tree Restaurant, the Department is less concerned about the need for protective bollards around the entire perimeter of the redesigned outdoor patio. As opposed to the Maple Tree site, this location does not have any drive aisles immediately adjacent to the redesigned outdoor patio. There are two parking stalls perpendicular to the outdoor area, so it is possible a driver could slip and hit the gas coming into a stall or mistakenly put their vehicle in drive instead of reverse when leaving a stall. To provide additional safety precautions, either one bollard or one wheel-stop could be placed in front of each parking stall. If bollards are used, they should be no taller than the height of the fence and located immediately adjacent to the fence, as opposed to at the end of the parking stall where wheel-stops would be placed that allow for vehicle overhang. The Department is not inclined to recommend bollards are warranted in front of the patio as traffic is parallel and more distant to the patio, there is an existing curb barrier, and there will be benches/bicycle racks in front of the patio. Also, bollards located in front of the patio will be aesthetically less pleasing and this site is more visible from the street than Maple Tree’s location. A more aesthetically pleasing approach to the bollards would be the construction of stone/masonry columns integrated into the fence perimeter. The applicant is indicated they are open to this design consideration.
4. Ingress/Egress and Parking. There are no proposed changes to site ingress or egress to the parking lot. While the remodeled building will be closer to the front lot line it will still be setback 7-9 feet from the front lot line and 17-19 feet from the back of curb providing for visibility for vehicles entering or exiting

the site and adjacent properties. The applicant is also proposing to remove the existing freestanding sign which will also improve ingress/egress visibility at the adjacent Culver's driveway. The Zoning Code requires off-street parking spaces equal to 30% of the capacity in persons for taverns and restaurants, plus 4 additional spaces per 1,000 SF of gross leasable floor area. The applicant has indicated with the proposed improvements seating capacity of 106 persons (non-COVID impacts), which requires 32 parking spaces, plus 14 spaces for the GLFA. The current site has 30 parking stalls. When considering the off-street parking needs it is important to note the following:

- a. The proposed expansion does not remove any existing parking spaces and is largely comprised of areas already dedicated for outdoor patio dining. There is no viable location on the property to add additional parking.
- b. One of the reasons the applicant is seeking this expansion is to allow additional indoor seating to remain economically viable, particularly through the Wisconsin winters, as the business copes with the impacts of the COVID pandemic and the Dane County Health Department's required reduction in seating capacity.
- c. There is on-street parking available adjacent to the property in front of the car wash. Approximately four spaces are available, and unlikely to be needed for use by patrons of the car wash business. Additional on-street parking is available further east along Farwell Street. On-street parking can supplement peak demand parking. In addition, shared parking is encouraged in the TID #5 design guidelines.
- d. Not all patrons arrive by vehicle. The applicant has agreed to install bike racks in front of the patio. The completion of the Atwater mixed-use building across the street will provide an additional 47 residential units near the restaurant, in addition to those residential properties already within walking distance of the restaurant.
- a. Providing an overabundance of parking is also not desirable aesthetically and sustainably (e.g. increase impervious surface and creating heat islands). The Village's parking regulations may be considered outdated with modern urban planning principals. Many communities are opting to revise parking standards to both lower minimum requirements and establish maximum requirements to address aesthetic and sustainable site development objectives. For example, restaurant uses in the City of Madison require minimum parking spaces equal to 15% of capacity of persons and a maximum of 40% capacity of persons.

The Department has no objections to the site parking.

5. Lighting & Screening. The applicant proposes to use vertical LED light bars on the upper stone corners on the southeast corner of the building next to the patio. The applicant also proposes to provide arborvitaes around the patio and building addition to soften the hardscape and provide some screening. The Department has no objections to these features.



Village of McFarland Police Department

5915 Milwaukee St. • P.O. Box 110 • McFarland, WI 53558 • 608/838-3151 • Fax 608/838-7954

Craig J. Sherven • Chief of Police

09-17-20

Having reviewed the proposed outdoor expansion, I offer the below comments and cautions relating to the use of outdoor amplification as well as requirements relating to lighting and fencing, and occupant protection measures related to vehicular traffic in the adjacent parking areas.

My comments are reflective only of those related to law enforcement related security, and not of fire safety, zoning, construction, lot line requirements, etc. Other staff will comment from those standpoints.

- **Regarding section 11-64 (N) of Village Ordinances:**
 - **(4)(C)** – Note that while the fencing proposed appears to be in technical compliance with ordinance requirements in terms of physical construction requirements related to height and material, it is in my opinion of questionable sufficiency to prevent the passage of alcoholic beverages to individuals on the outside due to open construction. Applicant should be aware that this type of fencing will increase the ability to pass beverages to individuals outside the area and increased visual supervision of the area would be prudent and highly recommended.
 - **(4)(D)** – Applicant should be aware that Village ordinance restricts and/or prohibits sound or noise as follows:
 - “tending to unreasonably disturb the peace and quiet of persons in the vicinity thereof unless the making and continuing of the same cannot be prevented and is necessary for the protection or preservation of property or of the health, safety, life, or limb of some person.”
 - “The using, operating or permitting to be played, used or operated of any radio receiving set, musical instrument, phonograph, loudspeaker, sound amplifier or other machine or device for the producing or reproducing of sound, which is cast upon the public streets for the purpose of commercial advertising or attracting attention of the public

to any building or structure. Announcements over loudspeakers can only be made by the announcer in person and without the aid of any mechanical device.”

- It’s important to understand that tolerance levels of other individuals vary greatly. What is reasonable to one may be completely unreasonable to another, thus it would be prudent to utilize any outdoor amplification cautiously and prudently.
- **(4)(E)** – As an additional caution relating to relating to restrictions on noise and general character of the business, this section provides “The outdoor area shall not have an undue adverse impact upon nearby property, the character of the neighborhood, traffic conditions, parking or other matter affecting the public health, safety, welfare, or convenience”.
- **(3)(C) Lighting** – Applicant should be required to install adequate lighting so as to clearly monitor the area for compliance with statute and ordinance.
- Additionally, the exterior perimeter of the area must be protected by traffic bollards or other devices intended to be used to prevent vehicles from penetrating the exterior perimeter. They shall be spaced at sufficient intervals so as to prevent a motor vehicle from getting between them and shall be of sufficient height so as to prevent a motor vehicle from travelling over them.

Craig J. Sherven
Chief of Police



PLAN COMMISSION SUMMARY SHEET

MEETING DATE: Monday, October 26, 2020

SECTION: Business

DEPARTMENT: Community Development

CONTACT: Andrew Bremer, Comm & Eco Dev Director

AGENDA ITEM: Discussion and action on a request by Veridian Homes Rosewood Fields LLC regarding approval for Rosewood Fields Subdivision located west of CTH AB in the Village of McFarland including Final Plat; Development Agreement; Declaration of Covenants, Conditions, & Restrictions (CCRs), and Park Plan.

PREVIOUS ACTION:

May 20th, 2020, the Village Board conditionally approved the Preliminary Plat and Rosewood Fields Planned Development General & Detailed Plan.

September 15th, 2020, the Public Utilities Committee recommended approval of the final plat.

October 13, 2020, the Public Works Committee recommended approval of the final plat.

October 19, 2020, the Plan Commission recommended approval of the final plat, development agreement, and declaration of covenants, conditions and restrictions.

October 22, 2020, the Parks Committee recommended approval of the final plat and Utterback Park Plan.

Committee recommended conditions of approval are identified under the Board recommendation portion of the staff report.

ISSUE SUMMARY:

Background and Meeting Purpose

Veridian Homes (VH Rosewood Fields LLC) has petitioned the Village for approval of a Final Plat for the proposed Rosewood Fields subdivision. The plat is approximately 36.29 acres in size and is located along the west side of CTH AB, north of the railroad. Veridian has an option to purchase the property from Utterback Limited Partnership. Included with the final plat review is a draft copy of the Development Agreement and Declaration of Protective Covenants, Conditions, and Restrictions. Regarding the latter two documents, Village Staff and the Village Attorney have been working through a number of draft revisions with the developer to modify and add language to the document to ensure our interests are fully identified and described appropriately. The packet includes a marked up copy of these documents identifying a few of the remaining items under review for acceptance.

Summary of Proposed Development

The packet includes a copy of the Final Plat, which consists of 117 residential lots, of which 107 will be for single family units and 10 will be for twin units (two attached dwellings separated by zero lot line). Twenty four (24) of the single family lots would have their driveways accessed by a private alley (Outlot 2) to be maintained by the Rosewood Fields Homeowners Association.



The final plat includes 138,198 square feet (3.17 acres) of land dedicated as public park space (Outlot 3). There is an additional 8.2 acres of wetland, stormwater, and passive open space in Outlots 1, 4 & 5. A proposed off-road trail would run through Outlots 1, 3, and 4, from Prairie Wood Drive to the railroad crossing at CTH AB. Future development of lands south of the railroad would provide continued off-road connections to the Lower Yahara River Trail. The proposed neighborhood park and trail will be developed as part of Phase 1 of the subdivision development. Build-out of all lots is anticipated to occur over a 5-6 year period based on market conditions. The packet includes a copy of Exhibits G and M which illustrate the master land use and phasing plan for the subdivision.

The final plat is generally consistent with the prior approved preliminary plat and General/Detailed Implementation Plan. There is a new private outlot proposed, Outlot 6, which consists of one-half of a 50-foot wide gas pipeline easement near lots 107-117. The preliminary plat had shown this area as an easement rather than an outlot.

Consistency with Village Subdivision Ordinances (Parkland Dedication)

The packet includes Exhibit C of the draft Development Agreement for the proposed development. The Developer is requesting the Village include portions (16,507 total square feet) of the recreational trail in Outlots 1 & 4 to be counted toward the development's parkland dedication requirement in addition to the lands in Outlot 3 (Utterback Park). This was recommended for acceptance by the Parks Committee at their October 22 meeting. The remaining deficit in parkland dedication would be payable by the Developer to the Village as a parkland impact fee. This fee would be paid on a per phase basis prior to the commencement of construction on such phase at the rate in effect as of the date on which an amendment to the Development Agreement is entered into for the phase in question. By way of example for 2020, the total parkland impact fee would be \$158,527.44 with inclusion of trail dedication in Outlots 1 & 4.

Park Development Plan (Utterback Park)

Enclosed within your packet is the conceptual site plan for the park development proposed within the Rosewood Fields Subdivision. The park improvements would be constructed by the Developer during Phase 1 of their development. The Developer has been working with the Parks Committee on the design of this park, including various surfacing options. At its October 22nd meeting, the Parks Committee recommended the proposed park plan with a hybrid surface material of poured in place and wood mulch.

Consistency with Village Subdivision Ordinances (Transportation Facilities)

Section 56-139(w) of the Village's Subdivision Ordinance requires right-of-way widths for collector streets of 70 feet, local streets of 60 feet, and alleys of 24 feet. The final plat increased the ROW along CTH AB from the preliminary plat, per the conditions of approval, by an additional two (2) feet to provide 35 feet from the highway centerline. The local roads are planned with a 60-foot ROW and the alley with a 26-foot ROW, both of which meet the Village subdivision ordinance requirements. Exhibit J and K of the Rosewood Fields Zoning Submittal.pdf includes a map of the ROW widths and cross section of the ROW designs for the proposed alley and local roadways, including the provision of 5-foot sidewalks along both sides of all local roads.



Consistency with Village Subdivision Ordinances (Utilities)

The packet includes a copy of the Engineering Plans, Storm Water Management Report, and Storm Sewer Sizing Report. The Village Engineer has reviewed these documents and provided a letter outlining recommended conditions of approval to address compliance with Village requirements, best management practices, and conditions of approval from the prior preliminary plat review. The developer has also provided a surface water analysis for a 150-year storm event assuming street stormsewers are plugged per the conditions of preliminary plat approval.

FINANCIAL/BUDGET IMPACT:

Coinciding with the development of this plat, the Village has been working on the design of a sewer interceptor to extend from Devils Lake Way through adjacent lands south of the railroad to and through this proposed subdivision to serve additional developable lands. This project and associated costs are still being finalized for Village Board approval. The developer will be responsible for those portions of this project that benefit their property. The developer will also be responsible for paying for other utility, street, trail, and park improvements within the development. Assuming at least an average assessment value of \$325,000 for each lot would yield approximately \$250K in annual property tax payments to the Village upon full build-out of the plat. Additional revenue from park impact fees, library impact fees, and public water impact fees would be payable to the Village as well. Specific requirements will be addressed as part of a development agreement to be recorded with the final plat.

VILLAGE PLAN REFERENCE:

Consistency with Village Land Use Plan

Included in the packet is a copy of the Village's East Side Neighborhood Growth Area Concept Development Plan, marked Exhibit C. This plan was adopted in 2008 and incorporated into the Village's 2017 Comprehensive Plan. The area of the final plat is outlined on the map. The ESNGA plan as developed in 2008, and identified the property for Traditional Residential Development, with a minimum of 4 units per acre; proposed net density is 4.7 units per acre. The neighborhood plan further identified the continuation of Tuscobia Trail to CTH AB, connectivity of new local streets to connect to undeveloped adjacent lands to the north, and the provision of park and stormwater management areas along the south side of Tuscobia Trail and on the west side of the property adjacent to the existing Park View Estates subdivision. The final plat is generally consistent with the Village's ESNGA plan.

ORDINANCE REFERENCE:

Chapter 56, Subdivisions

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Recommend approval of the Final Plat for Rosewood Fields, including the Development Agreement, Declaration of Protective Covenants, Conditions & Restrictions and Park Plan, with the following conditions:

1. Addressing those conditions as provided in the Village Engineer's Rosewood Fields Development - Zoning Submittal Review letter dated September 11, 2020.
2. Work with Village staff on final landscaping design for the plat outlots. Developer to submit a landscaping plan for the plat subject to final Village staff approval, showing the locations, age, caliper,



species and time of planting of required grasses, vines, shrubs, and trees.

3. Work with the Fire Chief and the Village planning staff with regards to phasing of the project and ability to move fire trucks through the development. Developer to construct that portion of Prairie Wood Drive shown in Phase 4 on Exhibit M of the Detailed Implementation Plan in either Phase 1 or Phase 3 to avoid the gap in the roadway between construction phases.
4. Final staff approval of a park plan for Outlot 3 to include a hybrid surface consisting of wood mulch and poured in place similar to Option 3 as submitted in the packet, further conditioned on extending poured surface to the mid-point of the swing set, both paths planned for construction in Phase 1, and two benches. That portion of the actual costs to improve the park that is in excess of the park improvement impact fees to be deducted from the parkland impact fees payable by the Developer.
5. Final staff approval, including the Village Attorney and Village Engineer, of the Development Agreement and Declaration of Protective Covenants, Conditions and Restrictions.

ATTACHMENTS:

1. Rosewood Fields Final Plat Village Engineer Ltr_09.11.2020
2. Utterback-Veridian Development Fire & Rescue Dept Postion Ltr_10.12.20
3. Exhibit G, Rosewood Fields Master Plan (August 25, 2020)
4. Exhibit J, Rosewood Fields ROW (August 25, 2020)
5. Exhibit K, Rosewood Fields Street Cross Sections (August 25, 2020)
6. Exhibit M, Rosewood Fields Phasing Plan (August 25, 2020)
7. 02 - Utterback Park Concept 2020-10-15
8. 03 - Utterback Park Surface Options 1 - 3
9. 01 - Rosewood Fields Final Plat Submittal
10. 04 - Utterback Park Draft Budget (10-14-20)
11. 02 - RF Plan Commission Application 2020.08.24
12. 03 - RF Final Plat - Village Submittal 2020.08.24
13. 04 - RF - CCRs 2020.08.25 (Village staff comments 10.23.20)
14. 05 - Title Committment
15. 06 - RF Engineering Plan Set 2020.08.25
16. 07 - RF SWMP report 2020.08.25
17. 08 - RF Storm Sewer Sizing 2020.08.25
18. Rosewood 150yr stormwater analysis 2020.10.09
19. DEVELOPMENT AGREEMENT FOR ROSEWOOD FIELDS (Village staff comments 10.23.20)

September 11, 2020

Mr. Andrew Bremer, AICP
Community & Economic Development Director
Village of McFarland
5915 Milwaukee Street
P.O. Box 110
McFarland, WI 53558

Subject: Rosewood Fields Development – Final Plat Submittal Review (updated)

Dear Andrew:

We have received the set of documents included in the August 27, 2020 Final Plat Submittal for proposed new residential development slightly south of CTH MN, north of the railroad tracks and west of CTH AB for a project called Rosewood Fields. The 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.

General Items

Previous reviews have already discussed the desire to bring a sanitary sewer interceptor and transmission water main through the project to accommodate future development. The Village has typically reimbursed the developer for the invoiced costs of incremental upsizing in materials, and we would recommend that here.

Engineering Plans

Sheet 2

- There are several areas with overlapping contour labels. These should be spread out to make it easier to read.
- There have been resident concerns about the existing tress along the west property line of Outlot 1. The woodline is now shown, but it should more clearly identify which areas will require removal.

Sheet 3

- The proposed right-of-way width is 60 feet, consistent with Village minimum standards and also recent residential streets. This will allow for on-street parking on both sides of the street and ample (7.5 foot) terrace space for tree plantings, if desired.

Sheet 4

- The invert elevations of the existing culverts under the railroad and CTH AB should be labelled to ensure adequate drainage to those locations.
- The proposed sanitary sewer interceptor is shown. Depending on the Village's (and developer's) desired schedule, the Village may need to construct the interceptor prior to the developer's phasing.

Sheet 5

- The proposed path alignment between Lots 10 and 11 could be tough to snow plow. We recommend the path continue more generally north-south, with an additional connection to Drangonfly Way.

Sheet 6

- Some water main along the CTH AB corridor is shown, running from Tuscobia Trail to the south. However, none is shown north of Tuscobia Trail. Village practice has been to extend sewer and water mains along new development frontage. This is not as critical along this section of CTH AB because the east side is wetland (and undevelopable), however there are some parcels to the north. We recommend either an 8-inch line be extended north, or some escrow be created to fund future construction.

Sheet 8 through 26

- At mid-block lowpoints, we recommend two stormwater inlets on each side of the street along with depressing the sidewalk to minimize ponding depth when the inlets are plugged or overwhelmed.
- Sewer Manholes shown at 10 feet deep should be lowered 1 foot (to 11 feet deep) to better allow for basement drains.
- The actual inverts of the 12-inch interceptor sewer may need adjusting as the Village's sewer plans evolve. We will keep in touch with the developer on this.
- Manhole 29 should be shifted west to allow the Rosewood Drive watermain to better avoid the inlet.
- Sewer manholes should all be placed at the road centerline.
- The 10-inch sewer coming from Tuscobia Trail and going up Dragonfly Way should be constructed at minimum slopes to maximize depth for future needs.
- The intersection at CTH AB will need to be reviewed and approved by Dane County Highway Department. This will likely require bypass/acceleration/deceleration lanes and bike lanes.

Sheet 7 and 14

- Temporary street dead-ends should include a hammerhead turnaround and the temporary fire hydrants should utilize a 90 degree bend and be placed to the side for the roadway.

Certified Survey Map & Preliminary Plat

An easement to the Village is included on the west side CTH AB up to Tuscobia Trail. This will accommodate both the interceptor sewer route coming from Devil's Lake Way, and a path for recreation and future sewer maintenance. We will need to confirm that the overlapping easement (with Wisconsin Power and Light for a gas main) does not create any issues.

As mentioned above, additional dedication along CTH AB may be required by the Dane County Highway Department to accommodate the necessary turn/acceleration/deceleration lanes.

We recommend that mailbox locations be shown as easements on private properties. This eliminates the need for the Village to become involved in lawn mowing, snow removal, or future replacement of the boxes or concrete slabs underneath.

On Sheet 2 Prairie Wood Drive is mislabeled as Vintage Birch Way.

The label for Outlot 5 should also include "public bike path easement over the entire lot", similar to Outlots 1 & 4, along with "Village Utilities" to allow for potential water main there.

The note about lowest building opening elevations should be expanded to include all parcels that abut stormwater conveyance and management areas. Instead of referring to the approved stormwater management plan, the actual elevations for each affected lot should be shown on the plat itself to make it easier for future homeowners (and the Village) to confirm openings.

The Public Drainage Easement Detail refers to an incorrect note. This can be cleared up with note that states: "There shall be no changes in drainage or elevations with the easements for drainage purposes without the written approval of the Village of McFarland."

Stormwater Management Plan

The stormwater management design as proposed will meet the Village, County, and State performance standards. The previously requested cross-sections of the bypass channel have been provided. There are some outstanding items that are still needed prior to recommending Village approval:

- Inlet 204.2 and 300.3 are shown to have very high flow rates with significant flow bypassing it. The developer should confirm these are correct, or add additional inlets.
- An exhibit showing the extent of overland water flow during a 100-year storm and 150-year storm (as discussed at Village Committee meetings) with all storm sewers plugged must be provided to ensure water does not enter private properties.

- Lowest building opening elevations must be calculated for each lot adjacent to stormwater conveyance and management areas based on the 100-year storm water level, plus 2 feet of freeboard.

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. Jim Hessling, Director of Public Works, Village of McFarland (5915 Milwaukee Street, P.O. Box 110, McFarland, WI 53558)

Mr. Matthew Schuenke, Administrator, Village of McFarland (5915 Milwaukee Street, P.O. Box 110, McFarland, WI 53558)

Mr. Dan Day, Donofrio, Kottke & Associates, Inc. (7530 Westward Way, Madison, WI 53717)

BRB:brb

J:\JOB#S\McFarland\MC-171-M6 Veridian-Utterback Development\Admin\Review Letter 2.docx



McFarland Fire & Rescue Department

5915 Milwaukee Street • PO Box 110 • McFarland, WI 53558-0110

(608) 838-3278 • Fax: (608) 838-3619

Emergency: 911

October 12, 2020

Andrew Bremer
Village of McFarland Community Development
5915 Milwaukee St.
McFarland, WI 53558

RE: 20201001 submitted Site Plan Review for proposed Rosewood Fields - Veridian development

Dear Andrew,

We have reviewed the proposed Utterback-Veridian development on the east side of the Village of McFarland submitted on October 1, 2020. We found no additional issues. While we still would recommend home sprinklers too be installed in any home, understand the market in not allowing that. We did meet with Veridian and discussed the cost and possibility of installing home sprinkler systems. The pricing that Veridian received from their contractors was \$3.50 per square foot on average. To help encourage homebuyers, Veridian has agreed to market the home sprinklers by installing in the model home and providing marketing information to install home sprinkler systems. The marketing information will include the cost over a 30-year mortgage and the typical offsetting hazard insurance savings.

We reviewed the conceptual phasing plan dated 8/25/20 for the development. We do not recommend the phasing as submitted. The submitted phasing creates two sections of the same street. In the submitted phasing, the southeast end of Prairie Wood would be completed during phase 2, while the section of Prairie Wood Drive at Rosewood Drive would not be completed until phase 4. We experience delayed responses when roads are split into two sections. The situation occurred during the Juniper Ridge development with North Peninsula Way.

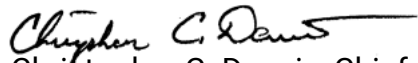
The McFarland Fire & Rescue Department does not observe any additional concerns with the proposed development. If you have any questions regarding the above, please contact me via phone at 608-838-3278 or via email at mitchell.sutter@mcfarland.wi.us

Sincerely,

A handwritten signature in black ink that reads "Mitchell Sutter". The script is cursive and fluid.

Mitchell Sutter

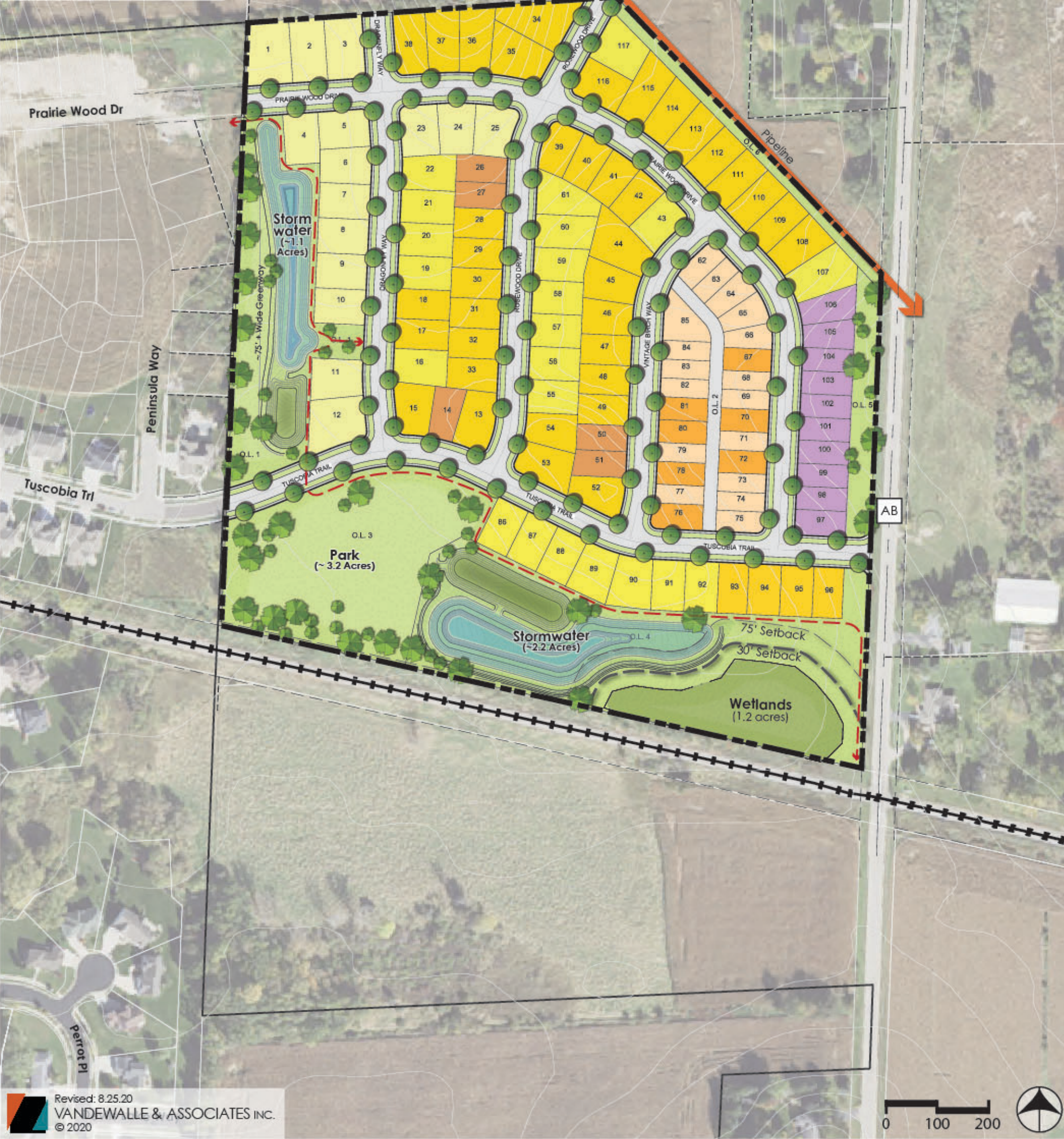
Fire Inspector/Public Education Specialist

A handwritten signature in black ink that reads "Christopher C. Dennis". The script is cursive and includes a long horizontal flourish at the end.

Christopher C. Dennis, Chief

LOT TYPE	UNITS	%
Proposed SF Units		
COTTAGE - 37	17	14.6%
VILLAGE - 45	7	6.0%
MEADOW - 51	5	4.3%
TERRACE - 59	41	35.0%
MANOR - 65	22	18.8%
ESTATE - 69	15	12.8%
TOTAL	107	91.5%
TWINS	10	8.5%
TOTAL UNITS	117	100%

PARK DEDICATION		
DEDICATED PARKS	~3.2 ACRES	
STORMWATER MANAGEMENT	~3.3 ACRES	



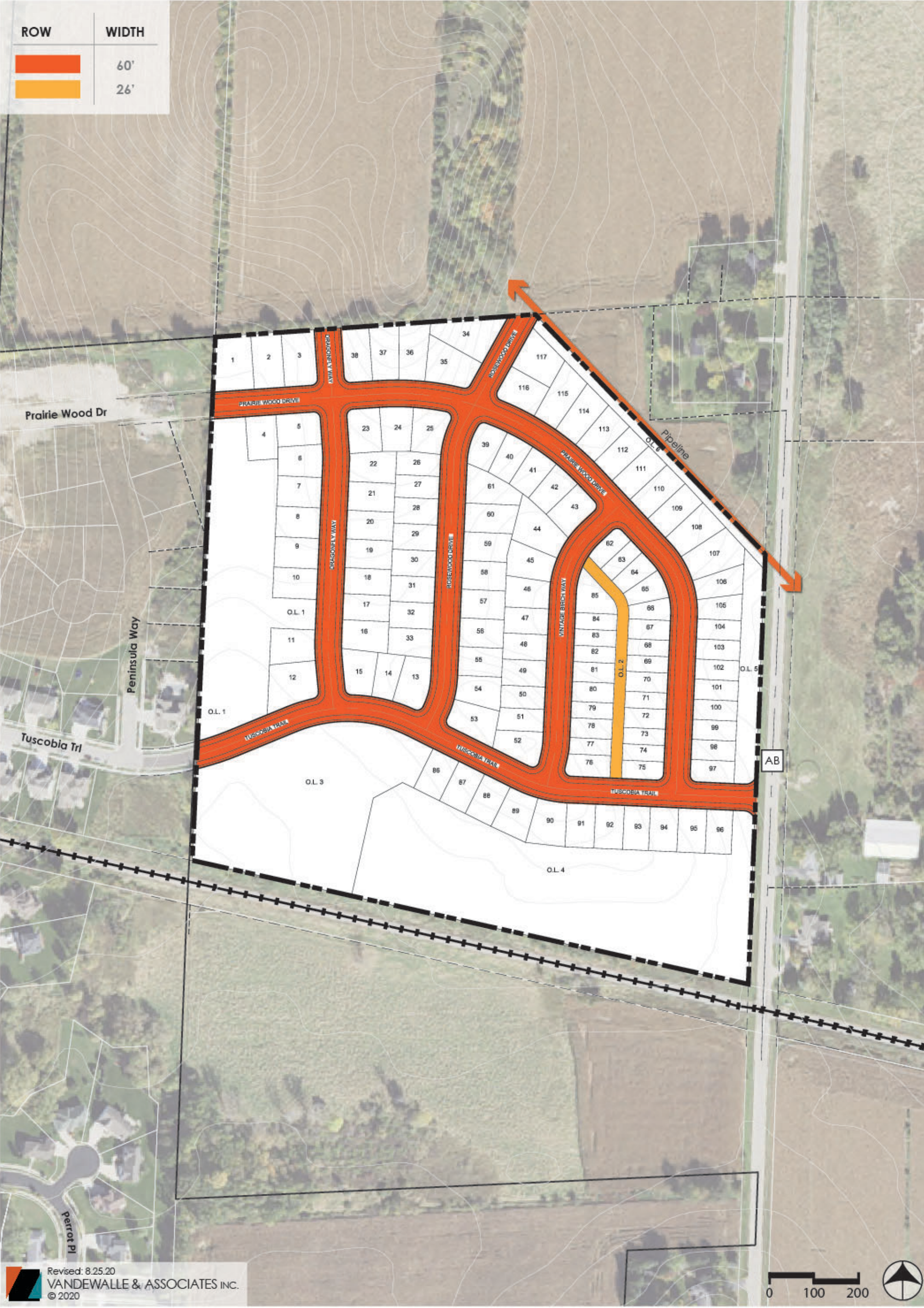
Revised: 8.25.20
 VANDEWALLE & ASSOCIATES INC.
 © 2020

EXHIBIT G:
MASTER
PLAN

ROSEWOOD FIELDS

MCFARLAND, WISCONSIN

VERIDIAN
HOMES

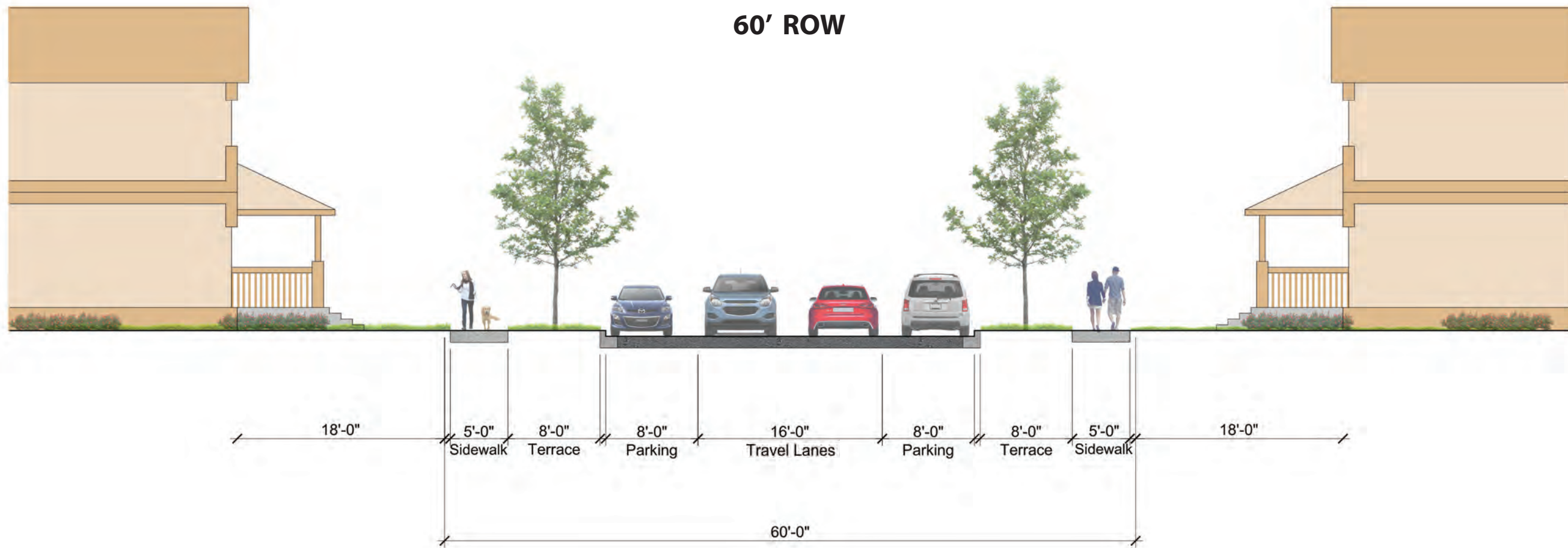
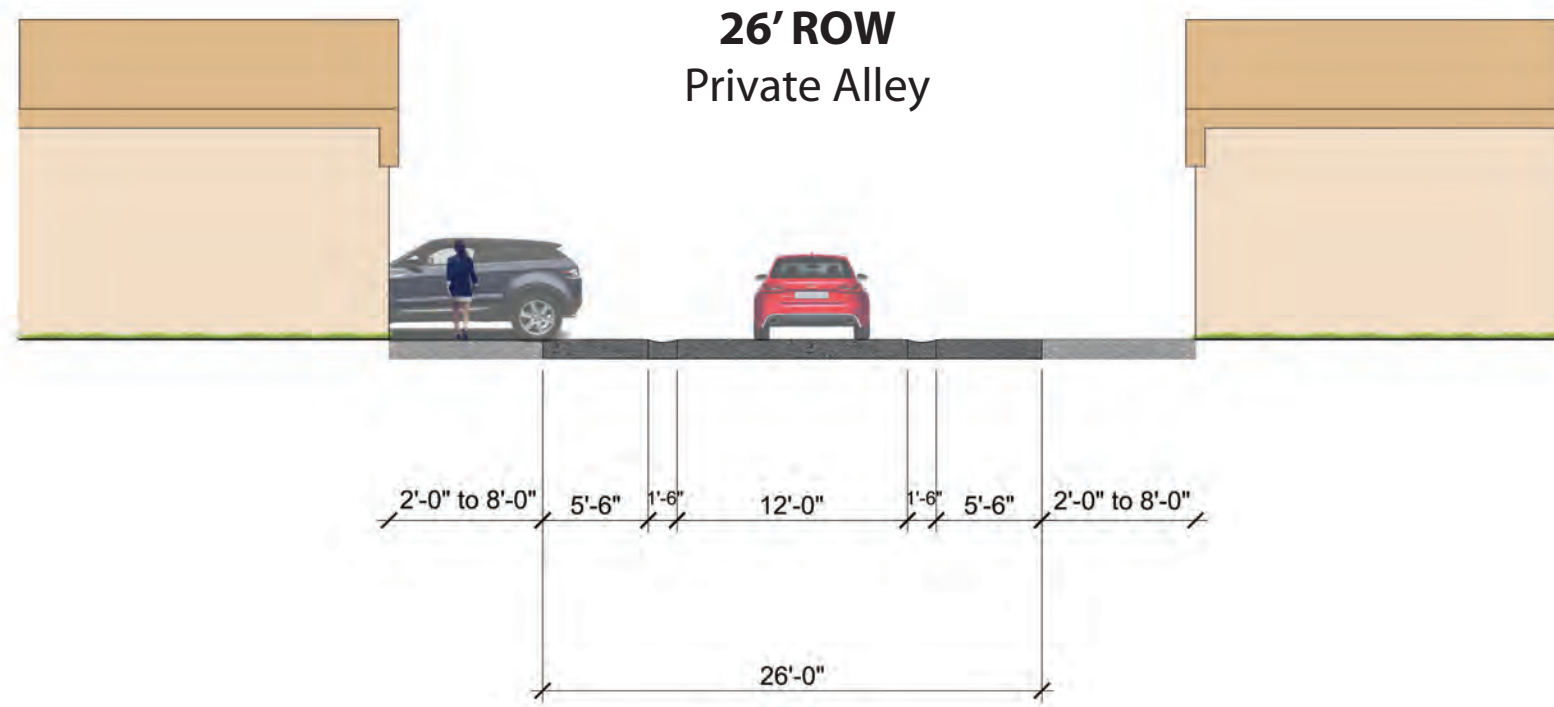


Revised: 8.25.20
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EXHIBIT J:
STREET
RIGHT-OF-WAY
WIDTH MAP

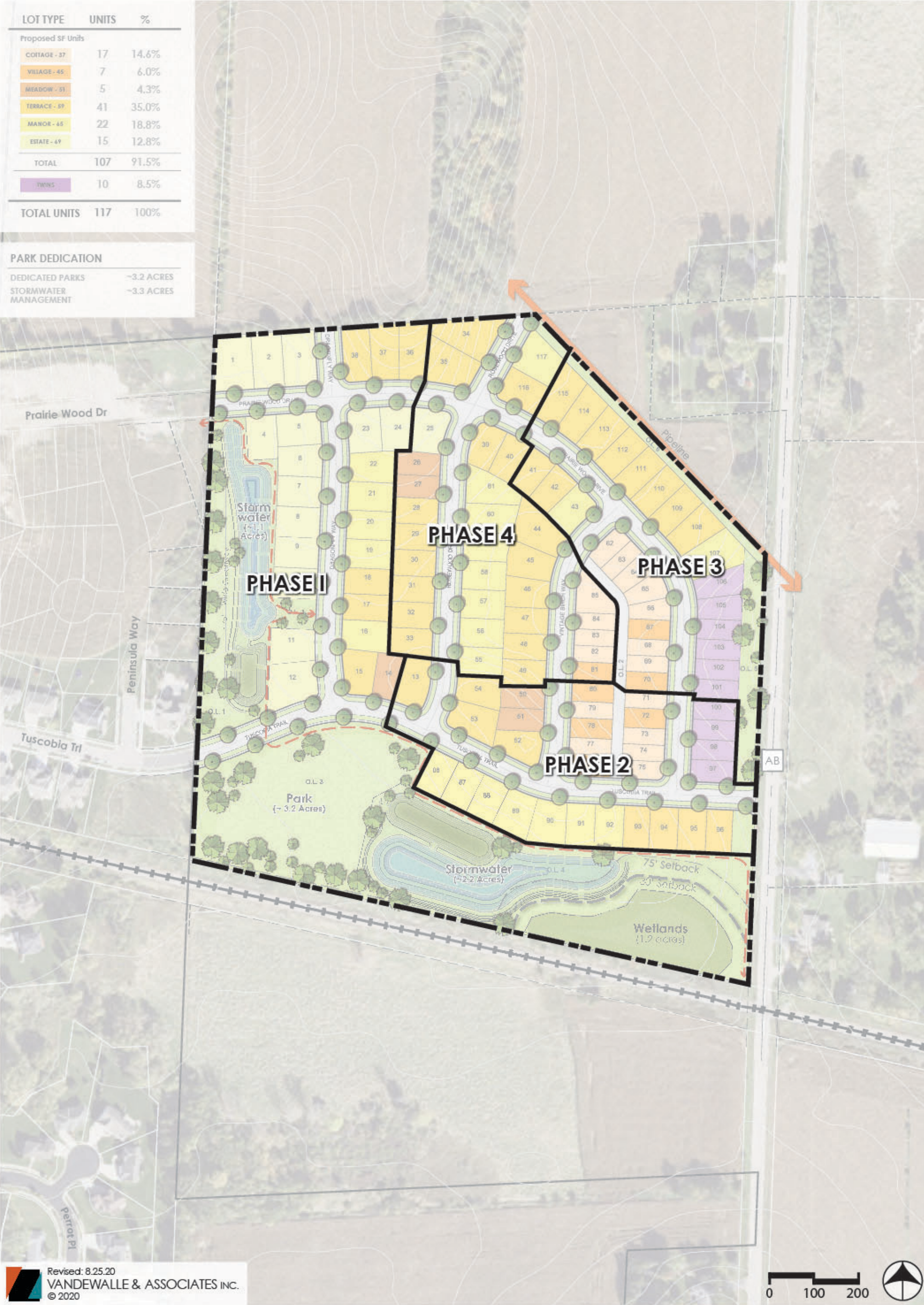
ROSEWOOD FIELDS
MCFARLAND, WISCONSIN





LOT TYPE	UNITS	%
Proposed SF Units		
COITAGE - 37	17	14.6%
VILLAGE - 45	7	6.0%
MEADOW - 51	5	4.3%
TERRACE - 59	41	35.0%
MANOR - 45	22	18.8%
ESTATE - 49	15	12.8%
TOTAL	107	91.5%
TWINS	10	8.5%
TOTAL UNITS	117	100%

PARK DEDICATION	
DEDICATED PARKS	~3.2 ACRES
STORMWATER MANAGEMENT	~3.3 ACRES



Revised: 8.25.20
 VANDEWALLE & ASSOCIATES INC.
 © 2020



D'ONOFRIO KOTTKE AND ASSOCIATES, INC.
7530 Westward Way, Madison, WI 53717
Phone: 608.833.7530 • Fax: 608.833.1089
YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

PRELIMINARY OVERALL SITE PLAN

**ROSEWOOD FIELDS
UTTERBACK PARK**

VILLAGE OF WALUNAKEE, DANE COUNTY, WISCONSIN

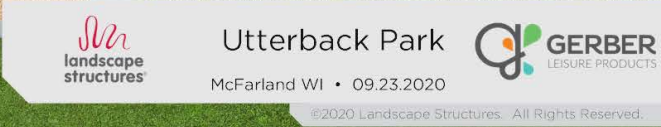
DATE: 09-17-20
REVISED: 10-15-2020

DRAWN BY: MS

FN: 19-07-114

Sheet Number:
L100

Option #1 - View 1



Option #1 - View 2



Utterback Park

McFarland WI • 09.23.2020



Option #2 - View 1



Utterback Park
PIP Surfacing • 09.28.2020



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Option #2 - View 2



Utterback Park
PIP Surfacing • 09.28.2020



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Option #3 - View 1



Option #3 - View 2



August 25, 2020

Andrew Bremer
Village of McFarland
5915 Milwaukee Street
McFarland, WI 53558

RE: Rosewood Fields
Final Plat Submittal

Dear Andrew:

We are pleased to submit the following information for the final plat of Rosewood Fields.

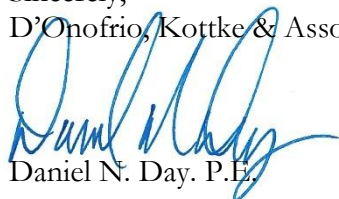
- Plan Commission Application
- Final Plat (20 copies – 22" x 30" and 1 copy – 11" x 17")
- Declaration of Protective Covenants, Conditions and Restrictions (1 copy)
- Title Work for the property (1 copy)
- Engineering Plans (12 copies – 11 x 17)
- Storm Water Management Report (pdf only)
- Storm Sewer Design Report (pdf only)
- Check in the amount of \$6,650.00 for application fees will be mailed separately from Veridian Homes to your mailing address

The updated General Development Plan will be submitted separately by Vandewalle Associates that reflects the details of the final plat and revisions required by the conditions of approval of the zoning.

The Final Plat and related documents are in substantial conformance with the Preliminary Plat and reflect the conditions of approval of the preliminary plat and zoning.

We look forward to working with the Village on the final approvals of this project. Please let us know if you have any questions or need further information.

Sincerely,
D'Onofrio, Kottke & Associates, Inc.



Daniel N. Day, P.E.

cc: Chris Ehlers, Veridian Homes
Brian Munson, Vandewalle Associates

U:\User\1907114\Surveying\Final Plat Submittal (8-25-20)\Rosewood Fields Final Plat Submittal.docx

Utterback Preliminary Budget**Option #1 (Wood Mulch)**

Item No.	Description	Est. Quantity	Unit	Unit Price	Amount
Paths					
1	Paved - 8' Wide (Within park limits)	570	LF	\$30	\$17,100
Play Equipment					
2	Play Equipment (Sugar Maple Park)	1	LS	\$47,500	\$47,500
3	Play Equipment Installation	1	LS	\$15,200	\$15,200
4	Wood Mulch	1	LS	\$9,535	\$9,535
5	Concrete Border	1	LS	\$5,775	\$5,775
Landscape					
6	Trees	30	EA	\$750	\$22,500
7	Miscellaneous Landscaping	1	LS	\$15,000	\$15,000
SUB-TOTAL					\$132,610
Design and Construction Services					
13	Design and Construction Services - 8%	1	LS	\$10,609	\$11,000
TOTAL					\$143,610

Option #2 (Play Area all Poured-in-Place)

Item No.	Description	Est. Quantity	Unit	Unit Price	Amount
Paths					
1	Paved - 8' Wide (Within park limits)	570	LF	\$30	\$17,100
Play Equipment					
2	Play Equipment (Sugar Maple Park)	1	LS	\$47,500	\$47,500
3	Play Equipment Installation	1	LS	\$15,200	\$15,200
4	Poured-in-Place Surfacing	1	LS	\$69,700	\$69,700
5	Concrete Border	1	LS	\$5,775	\$5,775
Landscape					
6	Trees	30	EA	\$750	\$22,500
7	Miscellaneous Landscaping	1	LS	\$15,000	\$15,000
SUB-TOTAL					\$192,775
Design and Construction Services					
13	Design and Construction Services - 8%	1	LS	\$15,422	\$15,000
TOTAL					\$207,775

Option #3 (Combination of Play Area Poured-in-Place & Wood Mulch)

Item No.	Description	Est. Quantity	Unit	Unit Price	Amount
Paths					
1	Paved - 8' Wide (Within park limits)	570	LF	\$30	\$17,100
Play Equipment					
2	Play Equipment (Sugar Maple Park)	1	LS	\$47,500	\$47,500
3	Play Equipment Installation	1	LS	\$15,200	\$15,200
4	Poured-in-Place & Wood Mulch Surfacing	1	LS	\$22,000	\$22,000
5	Concrete Border	1	LS	\$5,775	\$5,775
Landscape					
6	Trees	30	EA	\$750	\$22,500
7	Miscellaneous Landscaping	1	LS	\$15,000	\$15,000
SUB-TOTAL					\$145,075
Design and Construction Services					
13	Design and Construction Services - 8%	1	LS	\$11,606	\$12,000
TOTAL					\$157,075

**Village of McFarland
Community Development Department**

Plan Commission Application – 2020

~Application must be completed in full~

Applicant - Owner	VH Rosewood Fields LLC	Applicant's Agent	D'Onofrio Kottke & Assoc. Vandewalle Associates
	c/o Chris Ehlers	Name	c/o Dan Day c/o Brian Munson
Address	6801 South Towne Drive, Madison, WI	Address	7530 Westward Way Madison, WI 120 East Lakeside St. Madison, WI
Email	cehlers@veridianhomes.com	Email	dday@donofrio.cc bmunson@vandewalle.com
Phone #	608-226-3100	Phone #	608-833-7530 608-255-3988
Fax #		Fax #	

Parcel No(s). 0610-024-8070-0 **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	\$370+F	☐ Annexation	At cost
☐ Preliminary Plat (reapplication)	\$500+BF	☐ Rezoning (map)	\$405+	☐ Dev. Agreement Including Addendums	\$400 F
☐ Certified Survey Map	\$300+FG	☐ Zoning Amendment (text)	\$405 +F	☒ Final Plat	\$500 +CF
☐ Condominium	\$300+EF	☐ Variance-Board of Zoning Appeals	\$380+F	☐ Final Plat (reapplication)	\$400 +DF
☐ Comprehensive Plan Amendment	\$500+F			☐ Site/Design Review	\$400 + F

+ = Plus publication and notification charges Fee: \$500.00 + \$50.00(122) + \$405= \$7,005.00

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 or/ 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
☐ Commercial Site/Design Review (5,000 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. (Attach additional paper if needed)

Residential development of Rosewood Fields. See attached final plat.

What action is the applicant requesting of the Plan Commission?

Approval of final plat

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.)

Village Committees and Board approved in April and May the preliminary plat and zoning for the project

PLEASE READ AND SIGN AT THE BOTTOM ON THE REVERSE SIDE

Village of McFarland Plan Commission 2020 Schedule

Page 129 of 492

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



ROSEWOOD FIELDS

LOT 2, CERTIFIED SURVEY MAP NO. _____

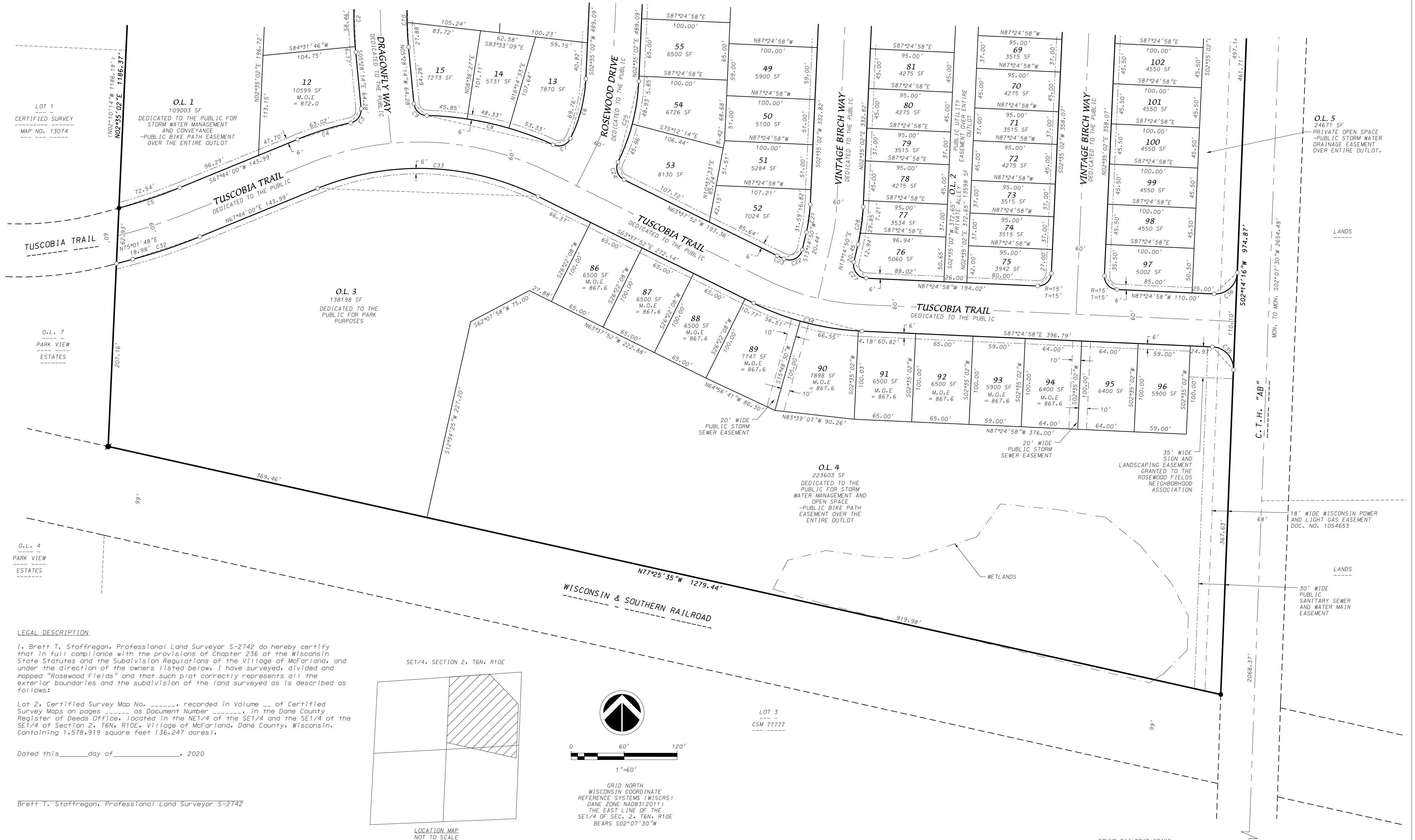
LOCATED IN NORTHEAST QUARTER OF THE SOUTHEAST QUARTER AND THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE
SECTION 2, TOWNSHIP 6 NORTH, RANGE 10 EAST, VILLAGE OF MCFARLAND, DANE COUNTY, WISCONSIN

Found 1-1/4" rebar
Found 1" iron pipe
Found 3/4" rebar

Placed 1-1/4" x 18" solid round iron rebar stakes, weighing
4.30 lbs/ft. All other lot and outlot corners are marked
with 3/4" x 18" solid round iron rebar stakes, weighing 1.50 lbs/ft.

Public utility easement (5' wide unless otherwise dimensioned).
Utility easements as herein set forth are for the use of PUBLIC
BODIES and PRIVATE UTILITIES having the right to serve the area.

Recorded as information



D'ONOFRIO KOTTKE AND ASSOCIATES, INC.

7530 Westward Way, Madison, WI 53717

Phone: 608.833.7530 • Fax: 608.833.1089

YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

FN:19-07-114

SHEET 2 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



ROSEWOOD FIELDS

LOT 2, CERTIFIED SURVEY MAP NO. _____

LOCATED IN NORTHEAST QUARTER OF THE SOUTHEAST QUARTER AND THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF
SECTION 2, TOWNSHIP 6 NORTH, RANGE 10 EAST, VILLAGE OF MCFARLAND, DANE COUNTY, WISCONSIN

OWNER'S CERTIFICATE

VH Rosewood Fields, 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 limited liability company caused the land described on this plat to be surveyed, divided, mapped and dedicated as represented on this plat.

VH Rosewood Fields, LLC does further certify that this plat is required by S236.10 or S236.12 Wisconsin Statutes to be submitted to the following agencies for approval or objection:

Department of Administration
Village Board, Village of McFarland
Dane County Zoning and Land Regulation Committee

In witness whereof, VH Rosewood Fields, LLC has caused these presents to be signed by its official member(s) of said limited liability company at Madison, Wisconsin this _____ day of _____, 2020.

VH Rosewood Fields, LLC

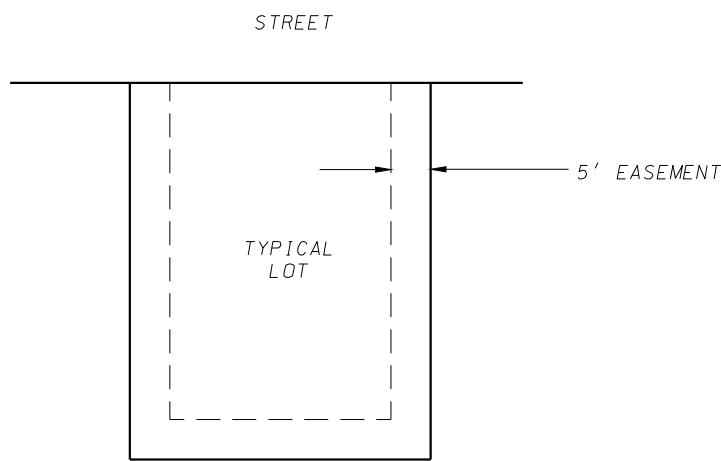
STATE OF WISCONSIN)
COUNTY OF DANE) S.S

Personally came before me this _____ day of _____, 2020, the above named member(s) of the above named MREC VH Juniper Ridge, LLC to me known to be the person(s) who executed the foregoing instrument and acknowledged the same.

My Commission expires _____ Notary Public, Dane County, Wisconsin

NOTES

- Lots 7-12 and 86-94 are subject to minimum unprotected building foundation opening elevations (M.O.E.). Said elevation is 2 feet above the peak water elevation during the 100-year storm event, based on the approved stormwater management plan.
- Lots 1-117 within this plat are subject to public easements for drainage purposes which shall be a minimum of 5 feet in width measured from the property line to the interior of each lot except that the easements shall be 12 feet in width on the perimeter of the plat. The common side lots line of Lots 97/98, 99/100, 101/102, 103/104 and 105/106 shall not be subject to said drainage easements. Easements shall not be required on property lines shared with greenways, alleys or public streets. No buildings, driveways, or retaining walls shall be placed in any easement for drainage purposes. Fences may be placed in the easement only if they do not impede the anticipated flow of water.
- Distances shown along curves are chord lengths.



- Easements are not required on lines shared with streets, alleys or greenways.

PUBLIC DRAINAGE EASEMENT DETAIL
NOT TO SCALE
SEE NOTE 1

VILLAGE BOARD RESOLUTION

Resolved that the plat of "Rosewood Fields" located in the Village of McFarland, Dane County, Wisconsin, having been approved by the Village Board, is hereby approved and that said resolution further provided for acceptance of those lands and rights dedicated by said "Rosewood Fields" to the Village for public use.

Cassandra Suettinger, Clerk, Village of McFarland, Dane County, Wisconsin

VILLAGE OF MCFARLAND TREASURER'S CERTIFICATE

I, Eric C. Rindfleisch, being the duly appointed, qualified, and acting Treasurer of the Village of McFarland, Dane County, Wisconsin, do hereby certify that, in accordance with the records in my office, there are no unpaid taxes or unpaid special assessments as of this _____ day of _____, 2020 on any of the lands included in the plat of "Rosewood Fields".

Cassandra Suettinger, Treasurer, Village of McFarland, Dane County, Wisconsin

COUNTY TREASURER'S CERTIFICATE

I, Adam Gallagher, being the duly elected, qualified, and acting treasurer of the County of Dane, do hereby certify that in accordance with the records in my office, there are no unpaid taxes or special assessments as of this _____ day of _____, 2015 affecting the land included in "Rosewood Fields".

Adam Gallagher, Treasurer, Dane County, Wisconsin

REGISTER OF DEEDS CERTIFICATE

Received for recording this _____ day of _____, 2020 at

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

Document Number _____.

Kristi Chlebowski, Dane County Register of Deeds

CURVE TABLE							
CURVE NUMBER	LOT	RADIUS (FEET)	CHORD (FEET)	ARC (FEET)	CHORD BEARING	CENTRAL ANGLE	TANGENT BEARING
1		170.00	19.48	19.80	S00°42'05"W	06°34'14"	
2		460.00	64.61	64.67	S01°26'36"E	08°03'16"	
3		15.00	19.91	21.77	S36°06'41"W	83°09'50"	OUT-S77°41'36"W
4		363.00	63.02	63.10	S72°42'48"W	09°57'36"	
5		570.00	72.55	72.60	S71°22'55"W	07°17'48"	OUT-S75°01'50"W
6		170.00	69.76	70.26	S14°25'28"W	23°40'52"	OUT-S26°15'54"W
7		15.00	20.92	23.14	S70°27'59"W	88°24'10"	OUT-N65°19'56"W
8		363.00	146.61	147.63	N76°58'58"W	23°18'04"	OUT-N88°38'00"W
13		363.00	53.33	53.38	N69°32'42"W	08°25'32"	
14		363.00	48.33	48.37	N77°34'50"W	07°38'04"	
15		363.00	53.33	53.38	N69°32'42"W	08°25'32"	
9		15.00	19.91	21.77	N47°03'07"W	83°09'46"	
10		400.00	56.18	56.23	N01°26'36"W	08°03'16"	
15		400.00	27.88	27.89	N03°28'23"W	03°59'42"	
16		400.00	28.33	28.34	N00°33'15"W	04°03'34"	
11		230.00	26.36	26.38	N00°42'05"W	06°34'14"	
22		230.00	21.49	21.49	N00°05'35"W	05°21'14"	
23		230.00	4.88	4.88	N03°22'42"W	01°13'00"	
12		570.00	151.17	151.62	S86°21'59"E	15°14'26"	OUT-S78°44'46"E
23		570.00	0.31	0.31	S86°01'44"E	00°01'52"	
24		570.00	77.12	77.18	S89°55'24"E	07°45'28"	
25		570.00	74.08	74.13	S82°28'19"E	07°27'06"	
13		15.00	23.73	27.37	S26°28'16"E	104°33'00"	OUT-S25°48'14"E
14		230.00	92.57	93.21	S14°11'38"W	23°13'12"	
25		230.00	79.11	79.50	S15°54'04"W	19°48'20"	
26		230.00	13.70	13.71	S04°17'28"W	03°24'52"	
15		15.00	18.20	19.56	S66°25'17"W	74°41'46"	OUT-N76°13'50"W
16		630.00	172.70	173.25	N86°06'31"W	15°45'22"	
35		630.00	87.97	88.04	N80°14'02"W	08°00'24"	
36		630.00	59.00	59.02	N86°55'16"W	05°22'04"	
37		630.00	48.17	48.18	S88°12'15"W	04°22'54"	
17		170.00	85.19	86.10	N17°05'37"E	27°01'10"	OUT-N31°36'12"E
18		15.00	19.12	20.73	N71°11'24"E	79°10'24"	OUT-S69°13'24"E
19		570.00	257.25	259.48	S56°10'55"E	26°04'58"	
39		570.00	52.57	52.59	S60°37'16"E	05°17'10"	
40		570.00	65.94	65.98	S60°37'16"E	06°37'56"	
41		570.00	65.94	65.98	S53°59'20"E	06°37'56"	
42		570.00	65.94	65.98	S47°21'24"E	06°37'56"	
43		570.00	8.95	8.95	S43°35'26"E	00°54'00"	
20		230.00	173.34	177.73	S24°43'18"W	44°16'32"	
43		230.00	45.62	45.70	S41°10'03"W	11°23'02"	
44		230.00	52.00	52.11	S28°59'05"W	12°58'54"	
45		230.00	56.00	56.14	S18°30'05"W	13°59'06"	
46		230.00	23.77	23.78	S05°32'47"W	05°55'30"	
21		170.00	31.59	31.64	S07°54'56"W	10°39'48"	
22		15.00	23.18	26.49	S63°50'21"W	101°11'02"	OUT-N65°34'08"W
23		247.00	8.50	8.50	N64°35'00"W	01°58'16"	
24		15.00	21.19	23.53	N18°41'01"W	89°53'42"	OUT-N26°15'50"E
25		230.00	94.38	95.06	N14°25'26"E	23°40'48"	
53		230.00	45.96	46.03	N20°31'48"E	11°28'04"	
54		230.00	48.93	49.02	N08°41'24"E	12°12'44"	
26		170.00	132.10	135.67	S20°16'42"E	45°43'28"	
64		170.00	26.25	26.27	S38°42'46"E	08°51'20"	
65		170.00	67.56	67.56	S22°56'00"E	22°42'12"	
66		170.00	41.92	42.03	S04°29'56"E	14°09'56"	
27		15.00	23.09	26.35	N37°05'04"W	100°39'48"	
28		230.00	42.74	42.81	N07°54'56"E	10°39'48"	
76		230.00	12.94	12.94	N11°38'09"E	03°13'22"	
77		230.00	29.85	29.87	N06°18'15"E	07°26'26"	
29		170.00	128.12	131.37	N24°43'18"E	44°16'32"	
85		170.00	62.85	63.22	N13°14'14"E	21°18'24"	
OL2		170.00	27.39	27.42	N28°30'41"E	09°14'30"	
62		170.00	40.63	40.73	N39°59'45"E	13°43'38"	
30		76.00	59.05	60.65	N20°16'42"W	45°43'28"	
66		76.00	18.90	18.95	N04°33'38"W	14°17'20"	
65		76.00	29.50	29.69	N22°22'56"W	22°22'56"	
64		76.00	12.00	12.01	N38°36'50"W	09°03'12"	
31		50.00	38.85	39.90	S20°16'42"E	45°43'28"	
32		630.00	80.18	80.23	N71°22'54"E	07°17'48"	
33		303.00	249.55	257.20	S87°56'56"E	48°38'08"	
34		307.00	126.53	127.44	S75°31'25"E	23°47'06"	
89		307.00	56.51	56.59	S68°54'41"E	10°33'38"	
90		307.00	66.55	66.68	S80°24'49"E	12°26'38"	
91		307.00	4.18	4.18	S87°01'33"E	00°46'50"	
35		25.00	35.25	39.12	S42°35'21"E	89°39'14"	
36		25.00	35.46	39.42	S47°24'39"W	90°20'46"	
37		230.00	178.72	183.55	N20°16'42"W	45°43'28"	
105		230.00	38.91	38.95	N02°16'05"W	09°42'14"	
106		230.00	44.18	44.24	N12°37'51"W	11°01'18"	
107		230.00	59.80	59.97	N25°36'41"W	14°56'22"	
108		230.00	40.33	40.38	N38°06'39"W	10°03'34"	
38		630.00	271.99	274.14	N55°36'24"W	24°55'56"	OUT-N68°04'22"W
112		630.00	19.33	19.33	N44°01'11"W	01°45'30"	
113		630.00	57.19	57.21	N47°30'01"W	05°12'10"	
114		630.00	57.19	57.21	N52°42'11"W	05°12'10"	
115		630.00	57.04	57.05	N57°53'56"W	05°11'20"	
116		630.00	83.28	83.34	N64°16'59"W	07°34'46"	
39		15.00	22.49	25.43	N19°29'59"W	97°08'46"	

D'ONOFRIO KOTTKE AND ASSOCIATES, INC.

7530 Westward Way, Madison, WI 53717
Phone: 608.833.7530 • Fax: 608.833.1089

YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

FN:19-07-114

SHEET 3 OF 3

Document No.

**ROSEWOOD FIELDS
DECLARATION OF PROTECTIVE COVENANTS,
CONDITIONS AND RESTRICTIONS**

**VILLAGE OF MCFARLAND,
DANE COUNTY, WI.**

PREAMBLE

Return to:
**Angie Christensen
Veridian Homes
6801 South Towne Drive
Madison, WI 53713**

**See Exhibit "B"
(Parcel Identification Numbers)**

This Declaration of Protective Covenants, Conditions and Restrictions (the "**Declaration**") made this _____ day of _____, 20__, by VH Rosewood Fields LLC, a Wisconsin Limited Liability Company (collectively, hereinafter referred to as the "**Declarant**") and/or its successors and assigns.

WHEREAS, Declarant is the owner of real property legally described as the plat of Rosewood Fields (the "**Plat**") located in the Village of McFarland, Dane County, Wisconsin, more particularly described and depicted in Exhibit "A" attached hereto and incorporated herein by reference, and desires to build thereon a planned development with housing units (the "**Development**"); and

WHEREAS, Declarant desires to provide for the maintenance and enhancement of property values and amenities in said Development, and for the preservation of the properties and improvements thereon, as well as, for the preservation of said Development's distinctive style, and to prevent the erection, or maintenance of poorly designed or constructed improvements; and

WHEREAS, to the above end, Declarant desires to subject said real property, to the covenants, restrictions, easements, charges and liens hereinafter set forth, each and all of which is and are for the benefit of said property and each owner thereof; and

WHEREAS, Declarant has thought it desirable for the efficient maintenance and preservation of the values of said Development to create an Association to which should be delegated and assigned the powers of

owning, maintaining and administering the Common Property and facilities, as set forth below, and administering and enforcing the covenants and restrictions, and collecting and disbursing the Assessments and charges as hereinafter or in the future created or established, and promoting the health, welfare and recreation of the Development's residents. Declarant will incorporate the Rosewood Fields Homeowners Association, Inc. a non-profit, non-stock corporation, under the laws of the State of Wisconsin (the "**Association**") for such purposes;

NOW, THEREFORE, the Declarant declares that the following real property legally described and depicted in Exhibit "A", attached hereto and incorporated herein by reference, will and shall be sold, transferred and conveyed subject to the easements, covenants, restrictions, assessments, charges and liens hereinafter set forth.

PART A

ASSOCIATION MATTERS

A-1) Definitions.

A) "Association" shall mean and refer to as Rosewood Fields Homeowners Association, Inc., and its successors and assigns.

B) "Common Property" shall mean those areas located in the Development which are not contained within a Lot and which the Declarant or the Association, as the case may be, shall be required to maintain in accordance with agreements between Declarant and the Village of McFarland, or pursuant to applicable Village of McFarland rules, regulations and ordinances, until such time as maintenance of such areas is turned over to the Village of McFarland and the Village of McFarland accepts such maintenance. Areas within the Development which will initially constitute Common Property include, but are not limited to, storm water management and park areas.

C) "Declarant" shall mean and refer to VH Rosewood Fields LLC; a Wisconsin Limited Liability Company and/or their successors and assigns.

D) "Lot" shall mean and refer to the lands described as Rosewood Fields as described and depicted in Exhibit "A", now owned by Declarant, but which Declarant in the future intends to convey to purchasers who shall thereupon become members of the Association. The term "Property" or "Properties" shall be synonymous with the term Lot.

E) "Owner" shall mean and refer to the record owner, whether one or more persons or entities, of the fee simple title to any of the Properties described in Exhibit "A". A purchaser of any of said Properties by land contract shall be referred to as "Owner" instead of the land contract vendor.

F) "Occupant" shall mean and refer to the occupant of any of the Properties who shall either be an Owner or a lessee who holds a written lease having an initial term of twelve months or more.

G) "Subdivision" shall refer to the lands described in Exhibit "A". The term "Subdivision" is synonymous with the term "Development".

A-2) Membership and Voting Rights.

A) Members. Declarant will incorporate the Association. Each Owner of a Lot shall automatically become a member of the Association. By acceptance of the Deed or other instrument of conveyance, the Owner(s) of each Lot consent to such Owner's membership in the Association whether or not specified on the deed to the Owner. Membership in the Association is appurtenant to each Lot. Each Owner of a Lot shall automatically be entitled to the benefits and subject to the burdens relating to such membership in the Association. The Association shall have authority to manage the Common Property. Persons or entities, including a land contract vendor, who hold an interest merely as security for the performance of an obligation, shall not be members of the Association. Tenants of Properties who are not Owners shall not be members of the Association. To the extent that Declarant owns any Lot, Declarant shall be a member of the Association until such ownership terminates.

B) Voting Rights.

1) Each member shall be entitled to one vote for each Lot owned except as set forth in A-2(B) (2) below.

2) When there is more than one Owner of a Lot, said Owners shall only be entitled to one collective vote for each Lot. There shall be no fractional votes or voting. When there is more than one Owner of any Lot, the vote attributable to such ownership must be cast unanimously by all the Owners of that Lot, or it shall not be considered for any purpose.

C) Proxies. Any Member may vote by proxy. All proxies shall be in writing and signed by the Owner or in cases where there is more than one Owner, by all Owners of the Lot.

D) Articles of Incorporation and By-Laws. The purposes and powers of the Association and the rights and obligations with respect to the members thereof, shall be governed by the Articles of Incorporation and By-Laws of the Association; provided, however, that such Articles of Incorporation and By-Laws shall be subject to, and shall not contravene, the terms, conditions, benefits and burdens set forth in this Declaration.

E) First Year's Operating Expenses. Commencing on the date established for the payment of assessments under Section A-4(B)(1), Declarant shall pay to the Association an amount equal to the estimated operating expenses of the Association for a period of one (1) year, less assessments on Lots owned by Declarant actually paid to the Association for the one (1) year period of time. Said payment may be made in a lump sum or in twelve (12) monthly installments, at Declarant's option. Prior to said date, Declarant shall be solely responsible for payment of all maintenance expenses.

A-3) Description.

A) Responsibility for Assessments. Declarant shall turn over to the Association, at the time control is turned over to the Members, any surplus received by the Association of income over expenses. Assessments shall be based on the number of assessment units (an "**Assessment Unit**"), which are assigned to Lots in the Development based upon their intended use at the present time. The number of Assessment Units for a particular Lot will be divided by the total number of Assessment Units in the Development to arrive at a particular Lot's percentage share ("**Percentage Interest**") of assessments for common area maintenance and other expenses, which the Association is permitted to assess to members

under the Declaration. The Declarant shall be responsible for payment of assessments on Lots owned by Declarant, only at such time as a Declarant owned Lot has been improved with street, utilities and such other improvements as are necessary to permit commencement of construction on such Lot. For the purposes of the following table, a single family residence shall be deemed a Dwelling Unit.

<u>Use</u>	<u>Number of Assessment Units</u>
1) Single Family:	One (1) per Dwelling Unit.
2) Twins (2 unit residential)	One (1) per Dwelling Unit (each side defined as a dwelling unit)

B) Association Management. The Association is required to retain a professional property management company with the experience necessary to perform the duties of the Association (the "**Management Company**"). The Association shall enter into a management contract (the "**Management Contract**") with the Management Company on such terms and conditions as the Association and the Management Company shall agree. The initial Management Company is DSI Real Estate Group, Inc., a Wisconsin Corporation, which is affiliated with the Declarant by reason of common ownership. The Management Contract between DSI Real Estate Group, Inc. and the Association has not been negotiated on an arm's length basis.

C) General Fund. As used herein, the term "**Surplus**" shall mean the amount by which assessments collected by the Management Company on behalf of the Association to pay for common expenses relating to the Property exceed the common expenses for the fiscal year in question. The Management Company shall deposit and hold any Surplus in the Association's operating account maintained by the Management Company. The Surplus, in the discretion of the Association working in conjunction with the Management Company, may be applied to future Association expenses as they become due, but there shall be no obligation on either the Association's or the Management Company's part to return the Surplus to lot owners.

D) Percentage Interest for Condemnation or Insurance Proceeds. For the purposes of establishing an Owner's percentage of insurance proceeds or condemnation awards in the event any portion of the Common Property is completely destroyed or taken by eminent domain and is not reconstructed, each Owner shall have a percentage interest in the insurance or condemnation proceeds equal to the Percentage Interest of such Owner in the Common Property.

E) Conveyance, Lease or Encumbrance of Percentage Interest. Any deed, mortgage, lease or other instrument purporting to convey, encumber or lease for a period of time in excess of one (1) year (a "**Lease**") any Lot shall be deemed to include the Owner's Percentage Interest in the Common Property and in the insurance proceeds or condemnation awards even though such interest is not expressly described or referred to therein. The conveyance, encumbrance or Lease of an Owner's Percentage Interest in the Common Property independent of the appurtenant Lot and the conveyance, encumbrance or Lease of an appurtenant Lot independent of the Owner's Percentage Interest in the Common Property shall be prohibited.

F) Ownership. The Common Property is dedicated to the Village of McFarland for the purposes described in the Plat

G) Damage or Destruction of Common Property by Owner. In the event any Common Property is damaged or destroyed by an Owner or any of his guests, lessees, tenants, licensees, agents or member(s) of his family, including pets, said Owner does hereby irrevocably authorize the Association to

repair said damage. The Association shall repair and restore any damaged area to its former condition. The amount necessary for said repair shall become a special assessment upon the Property of said Owner.

A-4) Maintenance of Common Property

A) Maintenance Requirements.

1) **Responsible Party.** The Declarant or the Association shall provide for the care, operation, management, maintenance and repair of the Common Property, until maintenance obligations are assumed by the Village of McFarland. The Common Property shall be maintained in good and safe condition, in accordance with the agreements between Declarant and the Village, as well as applicable Village ordinances, rules and regulations.

2) **General Responsibilities.** Maintenance shall include, but not be limited to, responsibility for landscaping and lawn care, trash, snow removal including shoveling with particular attention being paid to cross walk ramps and islands, improvements to common areas, upkeep of storm water management facilities which may include detention basins and drainage swales, common property lighting and/or other common property utility charges and any special street design features or traffic calming features.

3) **Specific Responsibilities.** Certain streets within the Property may include special traffic islands and traffic calming measures within the public right-of-way. The Association shall be responsible, at the Association's sole cost and expense, for the maintenance and upkeep of such physical traffic measures. Such maintenance and upkeep shall be performed at the discretion of the Association except to the extent required by the Village of McFarland, and shall include landscaping, snow and ice removal. If the special street design features or landscaping are not maintained, the Village of McFarland will give notice to the Association that it is not being maintained. If the Association does not respond to the notice within sixty (60) days, the Village may modify the physical traffic measures to minimize maintenance needs; including replacing landscaped surfaces with asphalt. The Association and persons involved with the maintenance and upkeep of the special traffic measures shall indemnify and hold harmless the Village of McFarland and its boards and commissions, and their officers, agents and employees from and against all claims, demands, loss or liability of any kind, type or description, related to the maintenance and upkeep of the special traffic measures.

4) In order to carry out its maintenance obligations, the Association may enter into a contract with a reputable property management company ("**Management Company**"), pursuant to which contract the Management Company shall assume the maintenance obligations of the Association as provided herein.

5) Any and all expenses incurred by the Management Company, on behalf of and pursuant to its contract with the Association, in connection with the management and maintenance of the Common Property and administration of the Association shall be deemed to be common expenses ("**Common Expenses**"), including, without limitation, expenses incurred for: landscaping and lawn care; snow shoveling and plowing; improvements to the Common Property; common grounds security lighting; municipal utility services for Common Property enforcement of this Declaration (including attorneys' fees); and maintenance and management salaries and wages.

B) Assessments.

1) The Association, or the Management Company, on its behalf, shall levy annual general assessments (“**General Assessments**”) against each Lot beginning January 1, 2016 or the purpose of maintaining a fund from which Common Expenses may be paid. The General Assessments against each Lot shall be assessed according to their Percentage Interests in the Common Property. General Assessments shall be due in advance on the first day of each year, or in such other manner as the Association may set forth in the Bylaws. Any General Assessment not paid when due shall bear annual interest at a rate of ten percent (10%) until paid and, together with interest, collection costs, and reasonable attorneys’ fees, shall constitute a lien on the Lot on which it is assessed.

2) The Association, or the Management Company, on behalf of and pursuant to its contract with the Association, may, whenever necessary or appropriate, levy special assessments (“**Special Assessments**”) against the Lots for deficiencies in the case of destruction or condemnation, for defraying the cost of improvements to the Common Property or for any other purpose for which the Association and/or the Management Company may determine a Special Assessment is necessary or appropriate for the improvement or benefit of the Subdivision. Special Assessments shall be paid at such time and in such manner as the Association or the Management Company may determine. Any Special Assessment or installment not paid when due shall bear annual interest at a rate of ten percent (10%) until paid and, together with the interest, collection costs and reasonable attorneys' fees, shall constitute a lien on the Lot on which it is assessed.

3) The Association, or the Management Company, on behalf of and pursuant to its contract with the Association, shall have the right to collect all General and Special Assessments and such sums shall constitute a lien on such Lot. The Owner of a Lot, or any portion thereof, shall be personally obligated to pay such charges which were assessed or accrued upon the land owned during the period of Ownership. The Association or the Management Company, on behalf of and pursuant to its contract with the Association, may commence an action against any Owner personally obligated to pay the charges or to foreclose the lien for such charge against any Lots. Any such foreclosure action may be brought at the Association election, either in the same manner as an action to foreclose a real estate mortgage, or as a proceeding to enforce a statutory maintenance lien as provided in Section 779.70, Wis. Stats., to the extent said Section is applicable. Any lien in favor of the Association/Management Company securing unpaid charges arising by virtue of this Declaration shall be subject and subordinate to the lien of any mortgage whether the mortgage is executed or recorded prior to or after the creation of such lien.

C) Subordination of the Lien to Mortgages. The lien of the assessments provided for herein shall be subordinate to the lien of any first mortgage. Sale or transfer of any Property shall not release the assessment lien. However, the sale or transfer of any Property pursuant to mortgage foreclosure or any proceeding in lieu thereof shall extinguish the lien of such assessment(s) as to payments which become due prior to such sale or transfer. No sale or transfer pursuant to foreclosure or proceedings in lieu thereof shall relieve such Property from liability from any assessments thereafter becoming due or from the lien thereof.

D) Joint and Several Liabilities of Grantor and Grantee. Upon a voluntary conveyance, the grantee of a Property shall be jointly and severally liable with the grantor for all unpaid assessments against the grantor as provided in this Declaration up to the time of conveyance, without prejudice to the grantee's right to recover from the grantor the amount paid by the grantee therefore. However, any such grantee shall be entitled to a statement from the Association setting forth the amount of such unpaid assessment and any such grantee shall not be liable for, nor shall the Property conveyed be subject to a lien for,

any unpaid assessments against the grantor pursuant to this Declaration in excess of the amount therein set forth.

PART B

CONDITIONS, COVENANTS AND RESTRICTIONS

B-1) Applicability. The following provisions in this Part B shall apply to all Lots and Outlots, as described in Exhibit “A” and such other Lots or Outlots as may, in the future, be subjected to this Declaration, as the same may be amended from time to time, by Declarant in the sole exercise of Declarant’s discretion.

B-2) Land Use And Building Type. Only the following designated uses for all private Lots and Outlot 3 shall be permitted. The remaining Outlots are dedicated to the Village and uses are noted for informational purposes only.

A) Lots 1-96 and 107-117 shall be used for single family residential purposes. No building shall be erected, altered, placed or permitted to remain on any Lot other than one detached single family dwelling unit not to exceed two and one-half stories in height. Each dwelling unit shall have an attached or detached garage of a size to be approved by the Committee, as that term is defined below. The size of a dwelling unit to be constructed on specific Lots shall not be less than the minimum size to be established hereinafter.

B) Lots 97-106 shall be used for twin single family homes.

C) Outlots 1 is dedicated to the public for stormwater management and conveyance..

D) Outlot 2 shall be for private alley purposes and shall be maintained by the Association.

E) Outlot 3 is dedicated to the public for park purposes

F) Outlot 4 is dedicated to the public for storm water management and open space.

G) Outlot 5 and 6 are dedicated for private open space and shall be maintained by the Association.

H) Lease Requirements.

1) *Lease Requirements.* An Owner may rent its dwelling by written Lease (a “Lease”), provided that

a) The term of any such Lease shall not be less than six (6) months;

b) The Owner has obtained the prior written approval of the Association to the proposed tenant and the terms of the proposed Lease, and the written approval for any proposed extension of the Lease; and

- c) The Lease contains a statement obligating all tenants to abide by this Declaration, the Articles, the Bylaws, and the Rules and Regulations, providing that the Lease is subject and subordinate to those instruments; and
- d) The Lease provides that any default arising out of the tenant's failure to abide by the Declaration, the Articles, the Bylaws, and the Rules and Regulations shall be enforceable by the Association as a third-party beneficiary to the Lease and that the Association shall have, in addition to all rights and remedies provided under the Declaration, the Articles, the Bylaws and the Rules and Regulations, the right to evict the tenant and/or terminate the Lease should any such violation continue for a period of ten (10) days following delivery of written notice to the Owner and the tenant specifying the violation.

2) *Standard for Approval of Lease and Tenant.* The Association may withhold approval on any reasonable basis, including, but not limited to: the failure of the Lease terms to comply with all provisions of this Declaration, the Articles, the Bylaws, and the Rules and Regulations; the past failure of the Owner, the tenant or tenant's guests to abide by all provisions of this Declaration, the Articles, the Bylaws, and the Rules and Regulations; and the past use by Owner, the tenant or its invitees or guests of any part of the Lot in a manner offensive or objectionable to the Association or other occupants of the Property by reason of noise, odors, vibrations, or nuisance.

3) *Violations / Remedies.*

a) During the term of any Lease of all or any part of a Lot, each Owner of such Lot shall remain liable for the compliance of the Lot, such Owner and all tenants of the Lot with all provisions of this Declaration, the Bylaws, and the Rules and Regulations of the Association, and shall be responsible for securing such compliance from the tenants of the Lot. The Association may require that a copy of each Lease of all or any part of a Lot be filed with the Association.

b) In the event that an Owner leases out its dwelling or any portion of its Lot in violation of this provision, the Association may impose a daily fine up to the greater of (i) an amount equal to the daily rental amount being charged by Owner to its tenant and (ii) \$100 (this daily fine shall be adjusted up every five years by 5%).

In addition to any fines imposed under this Section, the Owner shall reimburse the Association for all costs incurred by the Association, including attorneys' fees, incurred to enforce this Section, any action the Association takes under this Section B-2)G) against Owner or Owner's tenant, and to collect any outstanding amounts owed by Owner to the Association."

Uses, other than the uses set forth in this section B-2, shall not be permitted on the Lots or Outlots, as applicable, without the prior written approval of the Declarant and Committee (defined in Section B-3 below), as appropriate. After Declarant control of the Association has terminated, approval from the Association and the Committee shall be required.

Except as otherwise provided herein, no buildings, signs or other structures incidental to the use of any Outlot, which have been approved in advance by the Committee, may be constructed on any Outlot.

All rights-of-way noted on the Plat shall be dedicated as permanent public streets and rights-of-way and shall be improved in accordance with agreements entered into between the Declarant and the municipality in which the Development is located.

B-3) Architectural Control. No building shall be erected, placed or altered on any Lot until the construction plans and specifications and a plan showing the location of the structure have been approved by a majority of the Architectural Control Committee (the “**Committee**”) as to quality of workmanship and materials, harmony of external design with existing structures, and as to location with respect to topography and finish grade elevation. There shall be a variation in building elevations on adjacent Lots. Approval shall be as provided below.

B-4) Dwellings and Landscaping. The landscaping to be installed on all Lots must meet or exceed the minimum number of points for foundation planting and cumulative total landscaping points, including foundation planting points as set forth hereafter as described in Exhibit “C”, attached hereto and incorporated herein by reference and further described in the Design Guidelines. The number of points attributable to various elements of the landscaping to be installed shall be determined by reference to Exhibit “D”, attached hereto and incorporated herein by reference and further referenced in the Design Guidelines. The structure and the minimum landscaping requirements shall be completed within nine (9) months after issuance of a building permit. Landscape installed by the Declarant may or may not meet the minimum number of required points. All driveways shall be of concrete and shall be installed within nine (9) months after substantial completion of the structure. No outbuilding or accessory building of any nature shall be erected on any Lot with the exception of detached garages approved by the Committee in advance of construction. No above-ground swimming pools shall be permitted. All Lot areas not used as a building site, or under cultivation as a family garden, shall be planted with grass seed or shall be sodded, and shall be maintained on a regular seasonal basis, including mowing of a frequency of not less than once every fourteen (14) days during the lawn growing season. Maintenance of all improvements on a Lot shall be performed by the Owner. Maintenance shall include, but not be limited to, watering, pruning and routine fertilizing and mulching of all plantings and plant beds, replacement of dead, dying and/or diseased trees and shrubs, prompt removal of weeds, trash and debris from plant beds and areas adjacent to shrubs and trees so as to keep said landscaping in a healthy, attractive and neat condition.

If the Owner of any Lot, after reasonable notice, fails or refuses to install landscaping as described herein, or maintain it as required above, the Committee, through its duly authorized agents or employees, shall have the right to enter upon said Lot at reasonable hours to perform said landscaping and/or maintenance. The costs of the materials and labor to perform such landscaping and/or maintenance shall be assessed against said Lot in accordance with the terms of Section A-4 (B)(2) above, which assessment may be foreclosed or collected in accordance with the terms hereof or collected as provided herein.

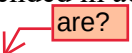
B-5) Vehicle and/or Equipment Storage. No inoperable, dilapidated or junk vehicles of any nature may be kept upon any Lot except in a fully enclosed garage. The exterior storage of boats, trailers, travel trailers, campers, motorcycles, recreational vehicles, automobiles or trucks, portable moving and storage containers, mini storage or on-site storage containers (collectively, without limitation by reason of enumeration “**Equipment**”), of any nature is prohibited whether or not screened from public view. No Equipment shall be parked or stored on lawns. The temporary storage of vehicles in a drive area for the purpose of loading or unloading for a period not to exceed twelve (12) hours is permitted. No commercial vehicles, including trucks, semi-trailers, trailers, may be stored or parked overnight on or in front of said Lots except in an enclosed garage

B-6) Construction On Adjoining Lots. Nothing contained herein shall be construed to prohibit the construction of a residential dwelling or private garage partially on one Lot and partially on an adjoining Lot without regard to side yards between adjoining Lots, provided that all such Lots are owned by the same person or persons.

B-7) Easements.

A) No structure, planting, or other materials shall be placed or permitted to remain within any easement of record (an **"Easement"**) if any, which may damage or interfere with the installation and maintenance of utilities, or which may change, obstruct or retard the flow of water or the direction of such flow through the Easement or through such other drainage channels or swales that may have been created by the Plat or otherwise. The Easements located on each Lot and all improvements therein shall be maintained continuously by the owner of the Lot, except for those improvements for which a public authority or utility company is responsible.

B) The Intra-block drainage Easement shall be graded with the construction of each principal structure in accordance with the approved Stormwater Drainage Plan on file with the Village Engineer and the Zoning Administration, as amended in accordance with the Village Ordinances.

C) Public utility easements  six feet (6') wide (unless otherwise noted on the Plat). Utility easements as herein set forth on the Plat are for the use of public and private utilities having the right-of-way to serve the area.

D) All lots within this plat are subject to a non-exclusive easement for drainage purposes which shall be a minimum of six feet (6') in width measured from the property line to the interior of each lot except that the easement shall be twelve feet (12') in width on the perimeter of the Plat. Easements shall not be required on the property lines shared with greenways or public streets.

E) Temporary Construction Easement. Each Lot which has been made subject to this Declaration (for the purposes of this paragraph each Lot described herein shall be referred to as the **"Primary Lot"**) is hereby made subject to a temporary, non-exclusive easement over, under, upon, across and through so much of the side yards of the Primary Lot as may be necessary for the safe and code compliant construction of a basement, including but not limited to footings, foundation and basement walls, on the adjoining Lot (the **"Adjoining Lot"**). The purpose of this Temporary Construction Easement is to permit Declarant to adequately slope and provide lateral support to the walls of the basement excavation in question so as to protect against cave-ins and loss of lateral support, and it shall be broadly construed to effectuate such purpose. This Temporary Construction Easement shall remain in effect for so long as it is needed to permit construction of the basement on the Adjoining Lot in a safe and code compliant manner. After completion, Declarant shall backfill the excavated area, compact such backfill in accordance with good construction practices, and restore the area affected by this easement to the condition existing immediately preceding the excavation, including replacement of sod, trees, shrubs and other landscaping, at no expense to the Owner of the Adjoining Lot (collectively **"Restoration"**). This Temporary Construction Easement shall, without further notice, terminate upon completion of said Restoration.

F) Lots 97-106 shall be subject to a Declaration of Party Wall Agreement. The Lots described are proposed twin homes which are two homes that share a party wall and roof with each other.

G) Certain Lots will feature groped mailboxes (CBU – cluster box units) on each Lot and will have a recorded Multi-User Mailbox Easement for these Lots. The selected Lots for the CBU's will be determined by each constructed phase and will be noted in the Neighborhood Disclosure Addendum A for Buyer's notification at the time the Sales Contract is signed.

H) Outlots 1 and 4 are subject to a public bike path easement over the entire outlot.

I) Outlot 4 will be subject to a Sign and Landscaping Easement and will be maintained by the Association.

J) Outlot 5 is subject to a public stormwater easement over the entire outlot.

K) Outlot 6 will be subject to a 25 foot (25') wide gas pipeline easement in conjunction with a 25' foot (25') wide gas pipeline easement on the adjacent property.

L) Lots 89-90 and 94-95 will be subject to a 20 foot (20') wide (10' on each Lot) public storm sewer easement.

B-8) Slope and Swale Areas.

A) The graded slopes and swales as established by Declarant shall remain as permanent. Within these slopes and swales, no structure, planting or other material shall be placed or permitted to remain, or other activities undertaken which may damage or interfere with established slope and swale ratios, create erosion or sliding problems or which may change the direction of flow of drainage channels or obstruct or retard the flow of water through drainage channels. The slopes and swales of each Lot and all improvements in them shall be maintained continuously by the Owner of a Lot, at the Owner's sole expense, except for those improvements for which a public authority or utility company is responsible.

B) In order to control run off, all down spouts and down spout extenders are to drain into a permeable area such as grass or a planting bed.

C) Declarant and the Village of McFarland have agreed to a certain Storm Water Management Plan. In the event of conflict between any plans and such Storm Water Management Plan, the Storm Water Management Plan shall control. Declarant and the Association shall each have the right to enter upon any Lot at any time for the purpose of inspection, maintenance or correction of any drainage condition and the Lot Owner shall be responsible for the cost thereof.

D) Any disputes relating to drainage swales, drainage or other surface water issues, shall be resolved by the Board of Directors of the Association, which may seek the advice of the Village Engineer of the Village of McFarland. The Association shall establish procedures by which such decisions can be heard by the Board of Directors and decided by said Board.

B-9) Nuisances. No noxious or offensive activity shall be carried on upon any Lot, nor shall anything be done thereon which may be or may become an annoyance or nuisance to the neighborhood or which may have a detrimental effect on the value of other Lots and/or improvements.

B-10) Temporary Structures. No structure of a temporary character, trailer, basement, tent, shack, garage, barn or other outbuilding shall be used on any Lot at any time as a residence, either temporarily or permanently.

B-11) Signs. No sign of any kind shall be displayed to the public view on any Lot except, one professional sign of not more than one square foot, one sign of not more than six square feet advertising the property for sale or rent or signs without regard to size used by the Declarant, a builder or licensed real estate broker to advertise the property during the construction and sales period or to identify the subdivision and/or its Declarant.

B-12) Entrance Sign. It is contemplated there will be an entrance monument sign and associated easement in Outlot 4 of the Plat. The sign and easement associated with the sign will be owned by the Association. The Association will be responsible for the maintenance of said sign to include watering, mowing and basic landscape requirements. The Association is responsible for determining whether said signs shall remain in place and assess all owners in the neighborhood of any future replacement cost after Declarant turns over control of the Association to the Owners

B-13) Animals. No animals, livestock or poultry of any kind shall be raised, bred or kept on any Lot, except that dogs, cats or other household pets may be kept, provided that they are not kept, bred or maintained for any commercial purpose. No animal enclosure, house, pen or fences or similar device shall be placed on any Lot without the prior written approval of the Committee which may require special landscaping and screening.

B-14) Garbage and Refuse Disposal. No Lot shall be used or maintained as a dumping ground for rubbish. Trash, garbage or other waste shall not be kept except in sanitary containers. No incinerators shall be permitted. Other equipment for the storage or disposal of such material shall be kept in a clean and sanitary condition. No trash, building materials, debris, leaves, lawn clippings, rocks or earth shall be placed in any Outlot.

B-15) Sight Distance at Intersections. No fence, wall, hedge or shrub planting which obstructs sight lines at elevations between 30" and 72" above the roadways shall be placed or permitted to remain on any corner Lot within the triangular area formed by the street property lines and a line connecting them at points twenty five (25) feet from the intersection of the street lines, or in the case of a rounded property corner, from the intersection of the street property lines extended. The same sight-line limitations shall apply on any Lot within ten (10) feet from the intersection of a street property line with the edge of a driveway. No tree shall be permitted to remain within such distances of such intersections unless the foliage line is maintained at sufficient height to prevent obstruction of such sight lines.

B-16) Mailboxes and posts. Based on new, recently adopted requirements of the United States Postal Service, the Rosewood Fields platted lots will receive mail by using CBU's (cluster box units) instead of curb side mailboxes on newly constructed homesites. These new requirements will phase out curb side mailboxes nationwide solely at the Postal Service's discretion.

B-17) Notices to Owners. The following information is being put of record in order to give record notice to all Owners, mortgagees and other persons and entities having an interest in the Property:

A) Private: Private Alleys (collectively, "Alleys") are shown on the Plat as Outlots. Said Alley will be dedicated to the Association. The cost of the maintenance of the Alleys shall be the

responsibility of the Association. Certain Lots in the Development border Alleys, which are intended to serve as the access to such Lots. Restrictions on the Alleys are summarized as follows:

1) There will be no public trash, leaf or recycled material pick-up service in said Alleys, but instead, there will be one or more trash pick-up collection points designated by the Declarant to be used by Owners of a Lot bordering the Alleys in question. Trash pick-up may initially be provided by the Association and charged as an expense of the Association, but such arrangement may be changed to provide for public or some other method of trash pick-up at a future time as determined by the Declarant or the Association. All trash receptacles to include recycling receptacles must be removed from the Alleys within 24 hours after trash or recycled material pick-up.

2) Mailboxes for homes located on the Alleys may be clustered at one end of the Alleys in question or clustered at various locations along the public street. Location and placement of the mailboxes is the sole discretion of the United States Postal Service.

3) Snow removal, repair and replacement of Alleys will be the responsibility of the Association.

4) Homes with garage access to a private alley are required to have two (2) “coach” lights on each side of the garage door, which will be wired to a photo electric eye for automatic use from dusk to dawn. The lights have been pre-selected by Declarant. There are four (4) selections available. It is the Buyer’s responsibility to maintain the lights so that they are always operational.

B) Plantings, flower beds, and entry signs (including utility installations connected therewith) constructed and installed by Declarant, if any, shall be deemed a part of the Common Property. The Association is obligated to maintain any entry feature; maintenance shall include electrical charges (if any), sign repair and maintenance of the landscaping including mowing of all lawns and grass areas. The cost of maintenance of said Common Property shall be an assessment against all of the Property in the subdivision in accordance with the Declaration, for so long as such maintenance is necessary or required adversely affects the natural flow of surface or underground waters with in the area permitted.

C) Notice is hereby given that as of the date hereof there is an active railroad on certain lands in close proximity to the subdivision, and that the foregoing railroad operation may have an effect on the use, enjoyment and market value of Lots in the subdivision, and in particular, those Lots located in close proximity to the railroad. Each buyer should familiarize themselves with the location of their Lot and its proximity to the railroad operation.

B-18) Improvements Within Easements. Any improvements (for example, fences, landscaping) located within any part of a Lot which is subject to a utility easement is subject to removal at the Owner’s expense for utility maintenance and other reasons as determined by the party benefitted by the easement. Reinstallation of any improvement would be at the Owner’s cost and would also be subject to the discretion of the party benefitted by the easement and is subject to terms and conditions as set forth on the final plat.

PART C
ARCHITECTURAL CONTROL COMMITTEE

C-1) Membership. Declarant shall establish an Architectural Control Committee (the “Committee”) consisting of three (3) members. So long as Declarant has title to any Lot subject to this Declaration, the Committee shall be appointed by Declarant. After Declarant no longer has title to any Lot within the Development or at such earlier time as determined by the Declarant, the initial members of the Committee shall resign and the Association shall elect three (3) Owners to serve on the Committee. At any time, Declarant may elect to surrender the selection of the members of the Committee to the Association.

A majority of the Committee may designate a representative to act for it. In the event of the death or resignation of any member of the Committee, the remaining members shall have full authority to designate a successor.

The Committee appointed hereunder shall serve for the time period specified in paragraph C-10, below. Any Committee member may resign prior to said date. Such resignation shall be effective upon receipt. If a resignation shall occur, prior to turning over control of the Committee, then the remaining members of the Committee may appoint a replacement.

C-2) Architectural Control. No structure, whether residence, accessory building, tennis or sport court, swimming pool, decks, patios, antenna (whether located on a structure or on a Lot), flag pole, wall, fence, landscaping, recreational equipment or other improvements, including exterior colors and materials to be applied to said improvements, shall be constructed, maintained or performed upon any Lot and no alteration or repainting of the exterior of a structure shall be made unless complete Architectural Review Application (“Application”) Plans, specification and plot plans therefore shall have been submitted to and approved in writing by a majority of the Committee. Approval shall also be required for location of improvements with respect to topography and finish grade elevation. Said Application, plans, specifications and plot plans shall show the exterior design, height, building materials and color scheme thereof, the location of the structure plotted horizontally and vertically, the location and size of driveways, the plans for required landscaping, and the grading plan. A copy of such Application, plan specifications and plot plans as finally approved shall be deposited with the Committee. The Application can be found on the Veridian Homes website www.veridianhomes.com. Select Homeowner Resources (located on the top toolbar), select Architectural Control Committee and select the appropriate application for your request.

C-3) Plan Review. The Committee shall review said Application, plans and specifications as to quality of workmanship and materials, harmony of external design with existing or proposed structures and as to location with respect to topography and finish grade elevation. The Committee shall use the guidelines set forth in this Declaration as an aid in exercising its architectural control responsibilities hereunder, but nothing contained herein or therein shall limit the Committee’s discretion to grant variances from or make changes to, the guidelines, as they shall determine in the sole exercise of their discretion.

C-4) Procedure.

A) Neither the members of the Committee nor its designated representative shall be entitled to any compensation for services performed pursuant to this covenant for the initial approval of a residential structure. Thereafter, said Committee may charge a “request for action” or “approval” fee not to exceed Fifty and no/100 Dollars (\$50.00) for each such request or approval. The Committee’s approval

or disapproval, as required in these Covenants, shall be in writing. In the event the Committee fails to provide, in writing, approval or disapproval within thirty (30) days after application, plans and specifications or any other matters requiring approval have been submitted to it, the request shall be deemed denied.

B) A submission will not be complete, and the thirty (30)-day approval time, as applicable, set forth above shall not commence until all documents required herein have been submitted. All such submissions shall be made to the Committee at the address set forth in this Declaration or to such other address that the Committee may designate.

C) The Committee shall have the sole right to reject any Application and plans which, in the judgment and sole opinion of a majority of its members are not in conformity with this Declaration; or are not desirable for aesthetic reasons; or are not in harmony with buildings located on the surrounding Lots; or are not in conformity with the general purposes of this Declaration.

D) The Committee shall exercise its sole approval authority and discretion in good faith and each Owner, by acceptance of a deed to, or any other interest in, a Lot, agrees to hold the Committee harmless from any perceived discrepancies in the Committee's good-faith performance of its duties. Refusal of approval of plans by the Committee may be based on any grounds, including purely aesthetic grounds, which in the sole discretion of the Committee shall be deemed sufficient.

E) The Committee may set its own operating procedures consistent with this Declaration and any limitations hereafter imposed by the Association. The costs of operating the Committee shall be assessed by the Association as Common Property expenses, except as permitted below. The Committee may engage consultants (e.g., architects, engineers or attorneys) either on a general or on a case-by-case basis, and the costs thereof may be charged to an applicant. The members of the Committee shall not draw any compensation for serving thereon but may be reimbursed for expenses incurred in performing their duties. All funds relating to the Committee shall be handled by the Association.

C-5) Separate Village Approval. Matters which require approval of the Committee may also require approval of the Village of McFarland. Obtaining approval from the Committee and the Village of McFarland is solely the responsibility of the Owner desiring approval. Approval of Plans by the Committee shall not be deemed approval by the Village of McFarland and approval by the Village of McFarland shall not be deemed approval by the Committee.

C-6) Records. Until such time as a replacement Committee is designated, all plans, applications and requests shall be submitted to said Committee at the following address:

Rosewood Fields Homeowners Association, Inc.
Architectural Control Committee
6801 South Towne Drive
Madison, Wisconsin 53713

C-7) Committee Liability. Neither the Committee nor any member thereof shall be liable for damages to any person submitting request for approval or to any Owner of any Lot by reason of any action, failure to act, approval, disapproval or failure to approve or disapprove with regard to such requests. The Committee is not responsible for ensuring that the application and plans submitted by an Owner are in compliance with applicable laws, rules, regulations, ordinances or customary and typical building practices. The Committee does not review plans for structural design.

C-8) Indemnification. Each member or former member of the Committee, together with the personal representatives and heirs of each such person, shall be indemnified by the Association against all loss, costs, damages and expenses, including reasonable attorney's fees, asserted against, incurred by or imposed in connection with or resulting from any claim, action, suit or proceeding, including criminal proceedings, to which such person is made or threatened to be made a party by reason of service as a member thereof, except as to matters resulting in a final determination of gross negligence or willful misconduct on the part of such member. In the event of settlement of such proceeding, indemnification shall be provided only in connection with such matters covered by the settlement as to which the Association is advised by counsel that the person to be indemnified has not been guilty of gross negligence or willful misconduct in the performance of such person as a member in the matter involved. This right of indemnification shall be in addition to all other rights and defenses. All liabilities, losses, damages, costs and expenses incurred or suffered by the Association in connection with this indemnification shall be a Common Property expense. Nothing in this Section C-8 shall be deemed an indemnification of such person with respect to such person's status as an Owner, occupant or otherwise.

C-9) Variance. The Committee shall have the power and absolute discretion to authorize a variance from any of the requirements of this Declaration if it finds that the strict application thereof would, in its sole discretion and opinion, result in difficulties or undue hardship to the Lot owner or in the event the architecture of the proposed Lot improvement is such as to present, in its opinion, a particularly pleasing appearance compatible with other houses in the development.

C-10) Successor to Committee. Declarant may turn over control of the Committee to the Members of the Association at any time, and shall turn over control when Declarant no longer has any ownership interest in the Property. At such time as Declarant turns over Committee control, the Association's Board of Directors shall designate not less than three (3) or more than five (5) Members of the Association to serve and act as the Committee for all purposes hereunder.

PART D **DESIGN GUIDELINES**

D-1) Single Family Dwelling Units.

, provided, however, that no variance to the terms of Sections A-4(A)(1-3), B-7, B-8, B-14, B-15, B-18, C-5, E-1 or E-9 shall be effective unless also approved in writing by the Village of McFarland. No building shall be constructed with a door, window or other opening that is lower than the minimum opening elevation shown on the plat without the approval of the Village of McFarland.

A) Architectural Character. Architecture within the Development will be developed with a variety of American vernacular architectural styles in mind. These architectural styles, while not a comprehensive list, will offer a unique mixture of styles for the development, and will be applied with proportions and character in mind. The overall character of the development will be created so that the architectural styles are compatible and the overall cohesion of styles will help foster a unique setting without stifling the architectural creativity on the individual building level, creating a varied but integrated community. Identical floor plans with the same elevation style shall not be located within 7 sites to assure this variety. The following are examples of styles permitted:

Cottage	Craftsman	Four Square	Farmhouse	Salt Box
Prairie	Shingle	Traditional	Victorian	Southern Traditional

The requirements as itemized in the following section will be used as applicable to the context of the specific architectural style. Declarant reserves the right to grant variances in its sole discretion. Where Village zoning is more restrictive, such requirements will govern.

B) Front Porch. Usable front porches are encouraged as both visual and functional design elements.

1) A usable open front porch is defined as having a minimum depth of 6'-0", and a minimum width of 8'-0".

2) Porch post style should be consistent with the overall architectural style of the home. Minimum standard porch design details include the following; porch posts or alternate per plan, porch balustrades, when provided, of nominal 2" x 2" square wood at a maximum of six inches (6") on center; and newel posts that are compatible with the design of the column posts. Porch columns and railings shall be painted to match the trim color of the house.

C) Garage.

1) There shall be a minimum of a two (2) car, 20' x 20' garage per dwelling unit.

2) The maximum garage width exposed on the front elevation shall be no greater than fifty percent (50%) of the overall building width.

3) On homes with a front-entry garage face must be set back a minimum of 2'-0" from the front elevation unless applicable zoning ordinances require a greater setback.

4) Tandem, split or side entry garages are encouraged for three (3) or four (4) car garages. For three (3) car front entry garages, the third stall must have a minimum setback of the greater of 2' from the two-car garage line or as required by compatible roof design. Garage width must comply with zoning and the design guideline standards of 50% of overall building width.

5) The garage door shall be a raised panel design painted to match the siding on the home. The use of windows in the door, appropriate to the architectural style, is encouraged. The maximum single garage door size is 8' x 18".

D) Ornamental Design Elements.

1) Ornamental design elements, such as dormers, shutters, window wrap window grids, gable vents, pilasters, pediments, etc., shall be used in a manner consistent with the overall architectural style of the home and with emphasis on elevations exposed to public space.

2) Window wrap or shutters and window grids are required on front and other primary elevations facing a public space. Gable vents, 5" horizontal vinyl trim, and/or eyebrow roofs are required on front elevation gables greater than 10'-0" in width and are encouraged on other gables as deemed appropriate by the Architectural Control Committee.

3) The shutters shall be wood or polystyrene with colors as approved by the Architectural Control Committee or of other material or color as deemed acceptable by the Architectural Control Committee. Panel or louver design shutters shall be used as appropriate to home materials & style.

4) The window wrap and corner trim shall be a minimum 3½" vinyl or composite material as approved by the Architectural Control Committee and used with box outs or when part of the standard plan.

5) Gable vents shall be the NuWood triangle or peaked series or equivalent for the front elevation, and side elevations facing a public street, or other design approval by the Architectural Control Committee. Other gable ornamentation as appropriate to architectural style may be allowed or required by the Architectural Control Committee.

E) Roof/Facias/Soffits/Eaves.

1) Roof Standards:

- a) Roof design must be consistent with the overall architectural style of the home. Roof forms and pitches as established on individual styles may not be altered without approval by the Architectural Control Committee.
- b) Roof material shall be Owens Corning Oakridge 30 architectural shingle or equal and in colors as approved by the Architectural Control Committee.
- c) Use of an eyebrow roof or projecting gable is required at brick walls not extending into a gable and are encouraged, as appropriate, at double gable returns and porch column caps.
- d) Hip roof design, porches or other elements deemed appropriate by the Architectural Control Committee may be used in lieu of specific gable requirements.

2) Fascia, Soffit and Eave Standards:

- a) Facia shall be 6" minimum aluminum with colors as approved by the Architectural Control Committee, wood or composite material may be used when appropriate to the architectural style.
- b) Aluminum soffit and eave color shall match facia.
- c) A minimum 12" overhang is required at typical eaves and gable ends. However, 6" is allowable with projections less than 6'-0" in width, such as the fireplace chase and a small bay window, and beyond structure line at open porches. Larger overhangs may be required as appropriate to the architectural style.

F) Exterior Wall Surfaces.

1) Siding material shall be premium vinyl or composite material as approved by the Architectural Control Committee. Shingle or vertical board and batten siding is encouraged for accent areas appropriate to the style of the home. Colors shall be approved by the Architectural Control Committee.

2) Windows may be vinyl; vinyl clad, aluminum clad or wood with colors as approved by the Architectural Control Committee.

3) Variation of wall planes on primary elevations is encouraged as appropriate

to overall building style and massing.

4) Any elevations facing public streets or spaces shall have a minimum of three (3) windows with wrap trim or shutters and window grills as appropriate and one (1) gable vent at all gable ends.

5) The use of brick or stone is encouraged as appropriate to architectural style. When brick is used, it shall be on full wall surfaces from foundation to eaves or on a two-story elevation at least to the second floor windowsill line. When brick is used, a soldier course window heads and rowlock sills are required. Additional details (i.e. projecting belt course and projecting corner accents) are encouraged as appropriate. Stone may be used as full wall surfaces or as a base course to first floor sill line. Brick or stone facing must return a minimum of 2'-4" when terminated at an outside corner.

6) Brick or stone material and color selections shall be as approved by the Committee and harmonious with overall neighborhood palette, as well as with the specific home design.

D-2) Other Improvements.

A) **Fences** All fencing must receive prior written approval of the Committee and shall comply with any requirements set out below. The Committee may also require the installation and maintenance of landscape materials for screening and aesthetic purposes. All fence material shall be constructed of vinyl. Zoning approval and/or building permit from the Village of McFarland may be required to construct fencing. Committee approval does not supercede the need for any municipal approvals or permits.

1) Fencing may consist of vinyl. The fence style permitted is the PlyGem Stratford Vinyl, depicted in Exhibit "E".

- a) All fencing shall be erected finish side out (i.e. pickets on the outside of the rail facing the street or neighboring lot).
- b) Posts shall be spaced a minimum of 72" and a maximum of 96" on center. Rails shall be discontinuous and abut into the posts.
- c) Gates are permitted and shall be consistent with the fencing style. All gates shall open into the lot. Gates may be required for access to utility easements and access easements that are dedicated on the plat.
- d) Fencing color by PlyGem Fence/Railing of White is the only color allowed for vinyl material.

2) Appropriate uses of fencing:

- a) Fencing shall be limited to rear and side yards only.
- b) Fencing shall meet up with the corners of the home or garage and may not project past the front face of home or garage.

- c) Only one fence is permitted along adjoining properties. Corners of adjoining properties fencing shall intersect at common corners.
 - d) Fencing at side yards of corner lots shall be placed a minimum of 6 inches from the property line (approximately 1 foot from sidewalk) for all zoning classifications.
- 3) Inappropriate use of fencing:
- a) Fencing in front yards shall not be permitted.
 - b) Fencing shall not occur in freestanding segments or be placed arbitrarily.
 - c) Fencing shall not meet porch or deck corners.
 - d) Fencing shall not interfere with utility equipment. Your utility companies shall be consulted for current requirements and the most restrictive shall apply.

B) Decks. All decks must receive prior written approval of the Committee and shall comply with any requirements set out below. The Committee may also require the installation and maintenance of landscape materials for screening and aesthetic purposes. A zoning approval or building permit from the Village of McFarland may be required to construct a deck. Committee approval does not supercede the need for any municipal approvals or permits.

- 1) Appropriate deck design shall incorporate the following criteria:
 - a) Deck(s) shall be proportionate in size to the footprint of the dwelling
 - b) Deck(s) shall be proportionate in length and width
 - c) Deck(s) shall not project past the rear or side yard setbacks
 - d) Deck(s) at side yards of corner lots may not project past the corner of the home or garage for that side facing the street.
 - e) Deck(s) must be stained or painted
- 2) Inappropriate deck design:
 - a) Deck(s) in front yards shall not be permitted.
 - b) Deck(s) shall not occur in freestanding segments or be placed arbitrarily on the lot.
 - c) Deck(s) shall not interfere with utility equipment. Your utility companies shall be consulted for current requirements and the most restrictive shall apply.

C) Outbuildings. No outbuilding, shed or accessory building of any nature shall be erected on any Lot, with the exception of a detached garage that is the only garage on the lot and is

approved by the Committee prior to construction. Secondary units (granny flats) above detached garages may be allowed with prior written approval from the ACC.

D) Antennae/Wind Powered Electric Generators. No wind powered electric generators, exterior television, radio receiving or transmission antennae, satellite signal receiving station or dish shall be placed or maintained upon any portion of a Lot without prior written approval of the Committee.

1) Appropriate antennae or satellite dish placement:

a) Only one antennae or satellite dish shall be allowed per lot.

b) The location of the satellite dish can be any of the following and shall not be visible from the curb directly in front of the home:

i. On a pole in the backyard and located close to the home.

ii. Attached to the deck.

iii. On the rear roof line of the home.

1. A satellite dish shall not project past the uppermost roof ridgeline. This method is not recommended by the Committee as you may have water infiltration issues if the dish is not properly installed and roof repairs may not be covered under the applicable roof warranty.

2) Inappropriate antennae or satellite dish placement:

a) Antennae or satellite dish in front or side yards shall not be permitted.

b) Antennae or satellite dish shall not interfere with utility equipment.

E) Firewood Storage. No firewood or woodpile shall be kept on any lot unless it is neatly stacked, placed in the rear yard and screened from street view by plantings or a fence first approved in writing by the Committee.

F) Solar Collectors. No active solar collector or apparatus may be installed on any Lot unless such installation is first approved in writing by the Committee, which shall consider the aesthetic and sun reflection effects on neighboring structures. Solar collectors or apparatus installed flat against or parallel to the plane of the roof shall be preferred.

G) Lighting. Exterior lighting installed on any Lot shall either by indirect or of such controlled focus and intensity that such lighting will not disturb the residents of adjacent Lots.

H) Landscaping Requirements. Pursuant to Section B-4 of the Declaration of Conditions, Covenants and Restrictions, Developer hereby imposes upon all Lots described in Exhibit "A", attached hereto and incorporated herein by reference, the requirement that the Owners thereof install landscaping on such Lots which meets or exceeds the minimum number of points for landscaping set forth

in Exhibit “C”. The number of points attributable to various elements of the landscaping to be installed shall be determined by reference to Exhibit “D”, attached hereto and incorporated herein by reference. All terms, covenants and conditions of Section B-4 of the Declaration of Conditions, Covenants and Restrictions, as amended herein, shall be applicable to the landscaping to be installed pursuant to the terms of this paragraph. Landscape installed by the Declarant may or may not meet the minimum number required.

PART E

GENERAL PROVISIONS

In addition, the Village of McFarland shall have the same rights with respect to enforcement of the provisions of Sections A-4(A) (1-3), B-7, B-8, B-14, B-15, B-18, C-5, E-1 and E-9. No building shall be constructed with a door, window, or other opening that is lower than the minimum opening elevation shown on the plat without the approval of the Village of McFarland.

E-1) Term. This Declaration shall run with the Property and Common Property, and shall be binding on Declarant and all Members and their successors and assigns, and all persons claiming under them for a period of twenty-five (25) years from the date recorded, after which time said Declaration shall be extended automatically for successive periods of five (5) years each unless an instrument signed by a majority of the Members agreeing to change said Covenants in whole or in part or to terminate the same.

E-2) Enforcement. The Declarant (or either one of them if more than one), Architectural Control Committee or any Owner shall have the right to enforce by any proceedings at law or in equity all restrictions, conditions and covenants created or imposed herein, against any person or persons violating or attempting to violate any covenant, by any action to either restrain violation or to recover damages, or both including reasonable attorney fees. Failure to enforce any covenant, condition or restriction herein shall in no event be deemed a waiver of the right to do so thereafter. In the event of a violation of this Declaration the Committee shall have the right to assess and collect from the violating party a fine for such violation equal to the greater of (i) the actual damages suffered on account of the violation, or (ii) the sum of \$100.00 per day for each day the violation remains outstanding plus (iii) all costs of collection and enforcement, including actual attorney fees.

E-3) Severability. Invalidity of any one of these covenants by judgment or court order shall in no way affect any of the other provisions which shall remain in full force and effect.

E-4) Model Homes. So long as Declarant shall own any Lot in the Development, Declarant shall be permitted to maintain model homes in the Development, including therein a sales office for the purpose of sales and marketing of its homes.

E-5) Parade of Homes. So long as Developer shall own any Lots in the Development, or condominium units in any condominium located within the Development (collectively a “Lot/Unit”). Developer reserves the right to submit some or all of said Lots/Units as a site for the Parade of Home and/or the Parade of Condominiums of the Madison Area Builders Association (the “Parade”). In the event that some or all of said Lots/Units are selected as a site for a Parade, this Declaration of Protective Covenants, Conditions and Restrictions shall, as to the Lots/Units enrolled in the Parade, for a limited period of time ending 48 hours after the conclusion of the Parade, be deemed temporarily altered and modified, to the extent necessary, to permit the Madison Area Builders Association to hold its Parade in this Development pursuant to the then current Parade Rules and Checklist of the Madison Area Builders Association. All purchasers of Lots/Units, and/or their successors and assigns, shall take title subject to this specific reservation by the Developer and shall waive all rights to object to violations of this Declaration of Protective Covenants, Conditions and Restrictions by the Developer, the Madison Area Builders Association, or any of the builders or participants in the Parade for the period of the Parade as set forth above, including the closing of any public or private streets in the Parade area. All Lot/Unit owners

appoint the Developer their attorney-in-fact to execute all necessary petitions; applications and consents to facilitate said street closings for the Parade.

E-6) Governing Law. This Declaration shall be construed and enforced in accordance with the terms of the laws of the State of Wisconsin. The terms of this Declaration are not intended to replace or affect any applicable laws, ordinances, rules or regulations of the Village of McFarland.

E-7) Wet Basins. Wet Basins within the dedicated storm water management facilities may not permanently contain water due to weather conditions and will not be filled by the Village.

E-8) Notices.

A) Notices to Declarant shall be given to Declarant at the following address: 6801 South Towne Drive, Madison, WI 53713.

B) Notices to an Owner of any Lot within the Development shall be given in care of the street address of the Lot.

C) Any party may change its address by written notice given to the other parties. Party, its successors and/or assigns, may change said addresses by notice properly given hereunder.

E-9) Amendment and Release. At any time until Declarant conveys all of the Lots which comprise the entire Property, or turns control of the Association over to its Members, whichever occurs first, Declarant may modify, amend, alter and grant variances to this Declaration without the consent of any Member, Owner or Occupant, their Mortgagees or any other party, including the Association and its Board of Directors. These restrictions or any part thereof may be cancelled, released or amended in writing as to the entire Plat or any part thereof by the Declarant at any time until Declarant conveys all of the Lots or until the Declarant turns over control to the Committee, whichever comes first. After the Declarant has sold all of the Lots or otherwise released or assigned his right to enforce the Declaration, then this Declaration or any part thereof may be released, cancelled, amended or waived hereof. Notwithstanding the foregoing or anything else set forth herein, amendments to the following sections of this Declaration shall also require the approval of the Village of McFarland as restrictions for public benefit pursuant to §236.293 Wis. Stats., in order to be effective: Sections B-7, B-8, B-14, B-17, C-5, E-1 and this Section E-9.

A-4(A)(1-3), B-15, B-18

C-2

E-10) No Waiver. Whenever a waiver, consent or approval is required or permitted herein, it must be express and in writing; no waiver, consent or approval shall be implied. Failure to enforce any provision of this Declaration shall not operate as a waiver of any such provision or any other provision of this Declaration.

E-11) Number and Gender. Whenever used herein, unless the context shall otherwise provide, the singular shall include the plural, the plural shall include the singular, and the use of any gender shall include all genders.

E-12) Including. Whenever used herein, the term “including” preceding a list of one or more items shall indicate that the list contains examples of a general principle and is not intended as an exhaustive listing.

E-13) Captions. The captions and article and section headings in this Declaration are intended for convenience and reference only and in no way define or limit the scope or intent of the various provisions hereof.

E-14) Remedies. All remedies herein are cumulative.

[Signature Page Follows]

IN WITNESS WHEREOF, the said VH Rosewood Fields LLC Wisconsin Limited Liability Companies
has caused these presents to be signed and sealed this day of , 20 .

VH Rosewood Fields LLC
By: VH Holdings, LLC, Its Sole Member

By: _____
Chris Ehlers, Authorized Signatory

ACKNOWLEDGMENT

STATE OF WISCONSIN)
) ss
COUNTY OF DANE)

Personally came before me this _____ day of _____, 20____, Chris Ehlers the Authorized Signatory of VH Rosewood Fields LLC a Wisconsin Limited Liability Company, to me know to be such persons and officers who executed the foregoing instrument and acknowledged that they executed the same as such officers, by its authority for the purposes therein contained.

Notary Public
Dane County, Wisconsin
My Commission Expires: _____, 20____

**CONSENT TO DECLARATION OF
COVENANTS AND RESTRICTIONS**

The undersigned, _____ Bank, hereby consents to the forgoing Declaration of Conditions, Covenants and Restrictions for the plat Rosewood Fields. This consent does not limit, restrict or affect in any way Mortgagee's rights, interest and remedies regarding Mortgagee's interest in the Property.

Dated at Madison, Wisconsin this _____ day of _____, 20__.

By: _____

ACKNOWLEDGMENT

STATE OF WISCONSIN)
) ss.
COUNTY OF DANE)

Personally came before me this _____ day of _____, 20__, the above named _____, to me known to be the person(s) who executed the foregoing instrument and acknowledged the same.

Notary Public
County of Dane, State of Wisconsin
My Commission Expires: _____

Exhibit “A”

Description of Rosewood Fields Lots

Lots 1-117, Outlots 1-6, Rosewood Fields, Village of McFarland, Dane County, Wisconsin

Exhibit “B”

PINs:

EXHIBIT “C”

Total Minimum Points for Landscaping

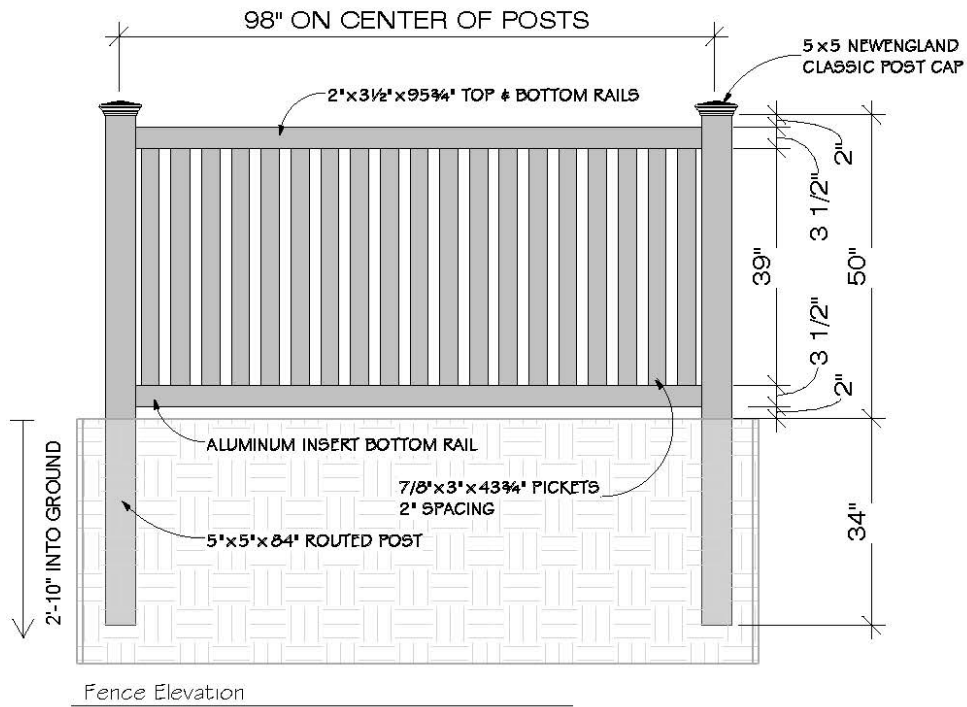
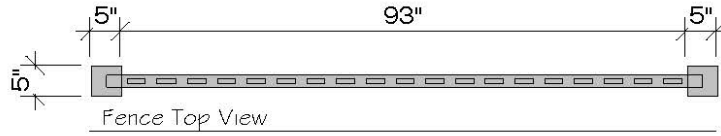
Lot(s)	Minimum Points for Foundation Plantings	Total Minimum Points for Landscaping
13, 15, 17-18, 28-42, 44-49, 52-54, 93-96, 108-116	350	500
1-12, 16, 19-25, 43, 55-61, 86-92, 107, 117	400	550

EXHIBIT "D"
Landscaping Elements

Elements	Point Schedule
A) <i>Small Shade Trees (balled and burlaped)</i> (1.5"-2" caliper at 6" from the roots)	50
B) <i>Medium Shade Trees (balled and burlaped)</i> (2"-3" caliper at 6" from the roots)	100
C) <i>Large Shade Trees (balled and burlaped)</i> (3"-4" caliper at 6" from the roots)	150
D) <i>Extra-Large Shade Trees (balled and burlaped)</i> (4" + caliper at 6" from the roots)	200
E) <i>Ornamental Trees (balled and burlaped)</i> (1.5"-2" caliper at 6" from the roots)	50
F) <i>Small Evergreen Trees</i> (3' to 4.5' when planted)	25
G) <i>Medium Evergree Trees</i> (5' to 6.5' when planted)	50
H) <i>Large Evergreen Trees</i> (7' + when planted)	100
I) <i>Evergreen Shrubs</i> (18" minimum diameter)	20
J) <i>Small Deciduous Shrubs</i> (18" to 35" in diameter)	10
K) <i>Medium Deciduous Shrubs</i> (35" to 60" in diameter)	15
L) <i>Large Deciduous Shrubs (balled and burlaped)</i> (60" or greater in diameter)	25
M) <i>Decorative Retaining Walls</i> (Points are per face foot. Boulders, timbers, and stones only – no concrete walls included.)	10
N) <i>Paver Stone Walks, Paths or Patios</i> (Points per square foot – no driveways included.)	1
O) <i>Planting Beds</i> (Points per square foot – must be decorative stone or mulch.)	1

The final point totals must consist of a balanced variety of the listed elements acceptable to the Architectural Control Committee. Existing vegetation, trees and shrubs may be included in the point totals if they are properly protected and maintained during the construction process and located as such on the landscape plans submitted to the Architectural Control Committee for approval.

STRATFORD



NOTE:

MANDATORY REQUIREMENTS (NO VARIANCE WILL BE ALLOWED)

- FENCE MUST BE VINYL
- VINYL COLOR: WHITE
- FENCE STYLE IS A PLYGEM PRODUCT (STRATFORD)

- CUSTOM BUILT ON THE JOBSITE
- INSTALLED WITH METAL BRACKETS THAT ATTACH TO POST AND SCREW INTO STRINGERS



6801 South Towne Drive
Madison, WI 53713
Phone 608.226.3100
Fax 608.226.0600

COMMITMENT FOR TITLE INSURANCE

Issued By
OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY

Transaction Identification Data for reference only:

Issuing Agent: Preferred Title, LLC
Issuing Office: 2728 Coho Street, Madison, WI 53713
ALTA® Universal ID:
Commitment No.: 119120204
Issuing Office File No.: 119120204
Property Address: Highway AB (Vacant Land 2-6-10), McFarland, WI 53558

SCHEDULE A

1. Commitment Date: **December 9, 2019 at 7:44 AM**
2. Policy to be issued:
 - a. ALTA Owner's Policy (6/17/06)
Proposed Insured: **VH Acquisitions LLC**
Proposed Policy Amount: **\$1,715,543.89**
3. The estate or interest in the Land described or referred to in this Commitment is **Fee Simple**.
4. The Title is, at the Commitment Date, vested in:

Utterback Limited Partnership

5. The Land is described as follows:

The East 1/2 of the Southeast 1/4 of Section 2, Township 6 North, Range 10 East, in the Town of Dunn, Dane County, Wisconsin; EXCEPT that parcel described as: Commencing at the Southeast corner thereof; thence West 80 rods to the 1/16 Section corner; thence North 38 rods; thence East to the Section line; thence South to the place of beginning and FURTHER EXCEPT that parcel described as : Beginning at the Northeast corner thereof; thence South 240 feet along the East line thereof; thence West 267 feet; thence North 240 feet; thence East 267 feet along the North line thereof to the place of beginning and ALSO EXCEPTING that part conveyed in Warranty Deed recorded as #4021154 and ALSO FURTHER EXCEPTING that part annexed to the Village of McFarland as contained in Ordinance 2019-20 recorded as #5537194 AND EXCEPTING all that part of the captioned premises lying within the Wisconsin and Southern Railroad right of way.

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OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY

Old Republic National Title Insurance Company



By: Raymond J. Abrams, Authorized Signatory

The tax parcel identification number(s) listed are provided solely for informational purposes, without warranty as to accuracy or completeness and are not hereby insured.

028-0610-024-8070-0
028-0610-024-9501-0

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SCHEDULE B, PART I Requirements

All of the following Requirements must be met:

1. The Proposed Insured must notify the Company in writing of the name of any party not referred to in this Commitment who will obtain an interest in the Land or who will make a loan on the Land. The Company may then make additional Requirements or Exceptions.
2. Pay the agreed amount for the estate or interest to be insured.
3. Pay the premiums, fees, and charges for the Policy to the Company.
4. Documents satisfactory to the Company that convey the Title or create the Mortgage to be insured, or both, must be properly authorized, executed, delivered, and recorded in the Public Records.

Warranty Deed from Utterback Limited Partnership to VH Acquisitions LLC; together with evidence that those who sign on behalf of the partnership are authorized to do so.

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SCHEDULE B, PART II Exceptions

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

The Policy will not insure against loss or damage resulting from the terms and provisions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

1. **Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I - Requirements are met.**
2. **Special taxes or assessments, if any, payable with the taxes levied or to be levied for the current and subsequent years.**
3. **Liens, hook-up charges or fees, deferred charges, reserve capacity assessments, impact fees, or other charges or fees due payable on the development or improvement of the Land, whether assessed or charged before or after the Date of Policy.**
4. **Any lien, or right to a lien, for services, labor, or material heretofore or hereafter furnished, imposed by law and not shown by the public records.**
5. **Rights or claims of parties in possession not shown by the public records.**
6. **Any encroachment, encumbrance, violation or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the land.**
7. **Easements, claims of easements or encumbrances not shown by the public records.**
8. **Any claim of adverse possession or prescriptive easement.**

=====

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COMMITMENT FOR TITLE INSURANCE

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9. Taxes for 2019, payable in the amount of \$171.71. Payment cannot be determined at this time.
(Parcel #028-0610-024-8070-0)
Taxes for 2019, payable in the amount of \$79.63. Payment cannot be determined at this time.
(Underlying Retired Parcel #028-0610-024-9500-6)
Taxes for 2020, not yet due and payable.
10. Public or private rights in that part of the insured premises which may be laid out or used for highway purposes or rights of way.
11. The rights, if any, of the railroads and others in the sidetracks, switchgear, and related equipment which may be installed on the insured premises.
12. Conveyance of Land for Highway Purposes recorded in Vol. 246 of Misc., page 200, as #831822.
13. Easement to Wisconsin Power and Light Company recorded in Vol. 261 of Misc., page 161, as #859102.
14. Right of Way to Badger Pipe Line Company recorded in Vol. 267 of Misc., page 271, as #870241.
15. Easement to Wisconsin Power and Light Company recorded in Vol. 380 of Misc., page 99, as #1054653.

Note: The 2019 tax amount is \$171.71. (Parcel #028-0610-024-8070-0)
The 2019 tax amount is \$79.63. (Underlying Retired Parcel #028-0610-024-9500-6)

Note: The paragraph titled "ARBITRATION" in the Conditions of this Commitment/Policy are hereby deleted.

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COMMITMENT FOR TITLE INSURANCE

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NOTICE

IMPORTANT - READ CAREFULLY: THIS COMMITMENT IS AN OFFER TO ISSUE ONE OR MORE TITLE INSURANCE POLICIES. ALL CLAIMS OR REMEDIES SOUGHT AGAINST THE COMPANY INVOLVING THE CONTENT OF THIS COMMITMENT OR THE POLICY MUST BE BASED SOLELY IN CONTRACT.

THIS COMMITMENT IS NOT AN ABSTRACT OF TITLE, REPORT OF THE CONDITION OF TITLE, LEGAL OPINION, OPINION OF TITLE, OR OTHER REPRESENTATION OF THE STATUS OF TITLE. THE PROCEDURES USED BY THE COMPANY TO DETERMINE INSURABILITY OF THE TITLE, INCLUDING ANY SEARCH AND EXAMINATION, ARE PROPRIETARY TO THE COMPANY, WERE PERFORMED SOLELY FOR THE BENEFIT OF THE COMPANY, AND CREATE NO EXTRACONTRACTUAL LIABILITY TO ANY PERSON, INCLUDING A PROPOSED INSURED.

THE COMPANY'S OBLIGATION UNDER THIS COMMITMENT IS TO ISSUE A POLICY TO A PROPOSED INSURED IDENTIFIED IN SCHEDULE A IN ACCORDANCE WITH THE TERMS AND PROVISIONS OF THIS COMMITMENT. THE COMPANY HAS NO LIABILITY OR OBLIGATION INVOLVING THE CONTENT OF THIS COMMITMENT TO ANY OTHER PERSON.

COMMITMENT TO ISSUE POLICY

Subject to the Notice; Schedule B, Part I - Requirements; Schedule B, Part II - Exceptions; and the Commitment Conditions, Old Republic National Title Insurance Company, a(n) Florida corporation (the "Company"), commits to issue the Policy according to the terms and provisions of this Commitment. This Commitment is effective as of the Commitment Date shown in Schedule A for each Policy described in Schedule A, only when the Company has entered in Schedule A both the specified dollar amount as the Proposed Policy Amount and the name of the Proposed Insured.

If all of the Schedule B, Part I - Requirements have not been met within 180 days after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

COMMITMENT CONDITIONS

1. DEFINITIONS

- (a) "Knowledge" or "Known": Actual or imputed knowledge, but not constructive notice imparted by the Public Records.
- (b) "Land": The land described in Schedule A and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.
- (c) "Mortgage": A mortgage, deed of trust, or other security instrument, including one evidenced by electronic means authorized by law.
- (d) "Policy": Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.
- (e) "Proposed Insured": Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.
- (f) "Proposed Policy Amount": Each dollar amount specified in Schedule A as the Proposed Policy Amount of each Policy to be issued pursuant to this Commitment.
- (g) "Public Records": Records established under state statutes at the Commitment Date for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge.

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Old Republic National Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I - Requirements; and Schedule B, Part II - Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

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COMMITMENT FOR TITLE INSURANCE

Issued By
OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY

(h) "Title": The estate or interest described in Schedule A.

2. If all of the Schedule B, Part I - Requirements have not been met within the time period specified in the Commitment to Issue Policy, this Commitment terminates and the Company's liability and obligation end.
3. The Company's liability and obligation is limited by and this Commitment is not valid without:
 - (a) the Notice;
 - (b) the Commitment to Issue Policy;
 - (c) the Commitment Conditions;
 - (d) Schedule A;
 - (e) Schedule B, Part I - Requirements; and
 - (f) Schedule B, Part II - Exceptions; and
 - (g) a counter-signature by the Company or its issuing agent that may be in electronic form.

4. COMPANY'S RIGHT TO AMEND

The Company may amend this Commitment at any time. If the Company amends this Commitment to add a defect, lien, encumbrance, adverse claim, or other matter recorded in the Public Records prior to the Commitment Date, any liability of the Company is limited by Commitment Condition 5. The Company shall not be liable for any other amendment to this Commitment.

5. LIMITATIONS OF LIABILITY

- (a) The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:
 - (i) comply with the Schedule B, Part I - Requirements;
 - (ii) eliminate, with the Company's written consent, any Schedule B, Part II - Exceptions; or
 - (iii) acquire the Title or create the Mortgage covered by this Commitment.
- (b) The Company shall not be liable under Commitment Condition 5(a) if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.
- (c) The Company will only have liability under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.
- (d) The Company's liability shall not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Conditions 5(a)(i) through 5(a)(iii) or the Proposed Policy Amount.
- (e) The Company shall not be liable for the content of the Transaction Identification Data, if any.
- (f) In no event shall the Company be obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I - Requirements have been met to the satisfaction of the Company.
- (g) In any event, the Company's liability is limited by the terms and provisions of the Policy.

6. LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT

- (a) Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.
- (b) Any claim must be based in contract and must be restricted solely to the terms and provisions of this Commitment.
- (c) Until the Policy is issued, this Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.
- (d) The deletion or modification of any Schedule B, Part II - Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.

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COMMITMENT FOR TITLE INSURANCE

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- (e) Any amendment or endorsement to this Commitment must be in writing [and authenticated by a person authorized by the Company].
- (f) When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.

7. IF THIS COMMITMENT HAS BEEN ISSUED BY AN ISSUING AGENT

The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for the purpose of providing closing or settlement services.

8. PRO-FORMA POLICY

The Company may provide, at the request of a Proposed Insured, a pro-forma policy illustrating the coverage that the Company may provide. A pro-forma policy neither reflects the status of Title at the time that the pro-forma policy is delivered to a Proposed Insured, nor is it a commitment to insure.

9. ARBITRATION

The Policy contains an arbitration clause. All arbitrable matters when the Proposed Policy Amount is \$2,000,000 or less shall be arbitrated at the option of either the Company or the Proposed Insured as the exclusive remedy of the parties. A Proposed Insured may review a copy of the arbitration rules at <http://www.alta.org/arbitration>.

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ROSEWOOD FIELDS
ENGINEERING PLANS
VILLAGE OF MCFARLAND
DANE COUNTY, WISCONSIN



PROJECT LOCATION



D'ONOFRIO KOTTKE AND ASSOCIATES, INC.
7530 Westward Way, Madison, WI 53717
Phone: 608.833.7530 • Fax: 608.833.1089
YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

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Sheet Number	Sheet Title
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NOT FOR CONSTRUCTION

FN: 20-05-132

ISSUE DATE: 08-25-20

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YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

COVER SHEET

ROSEWOOD FIELDS

VILLAGE OF MCFARLAND, DANE COUNTY, WISCONSIN

DATE: 08-25-20

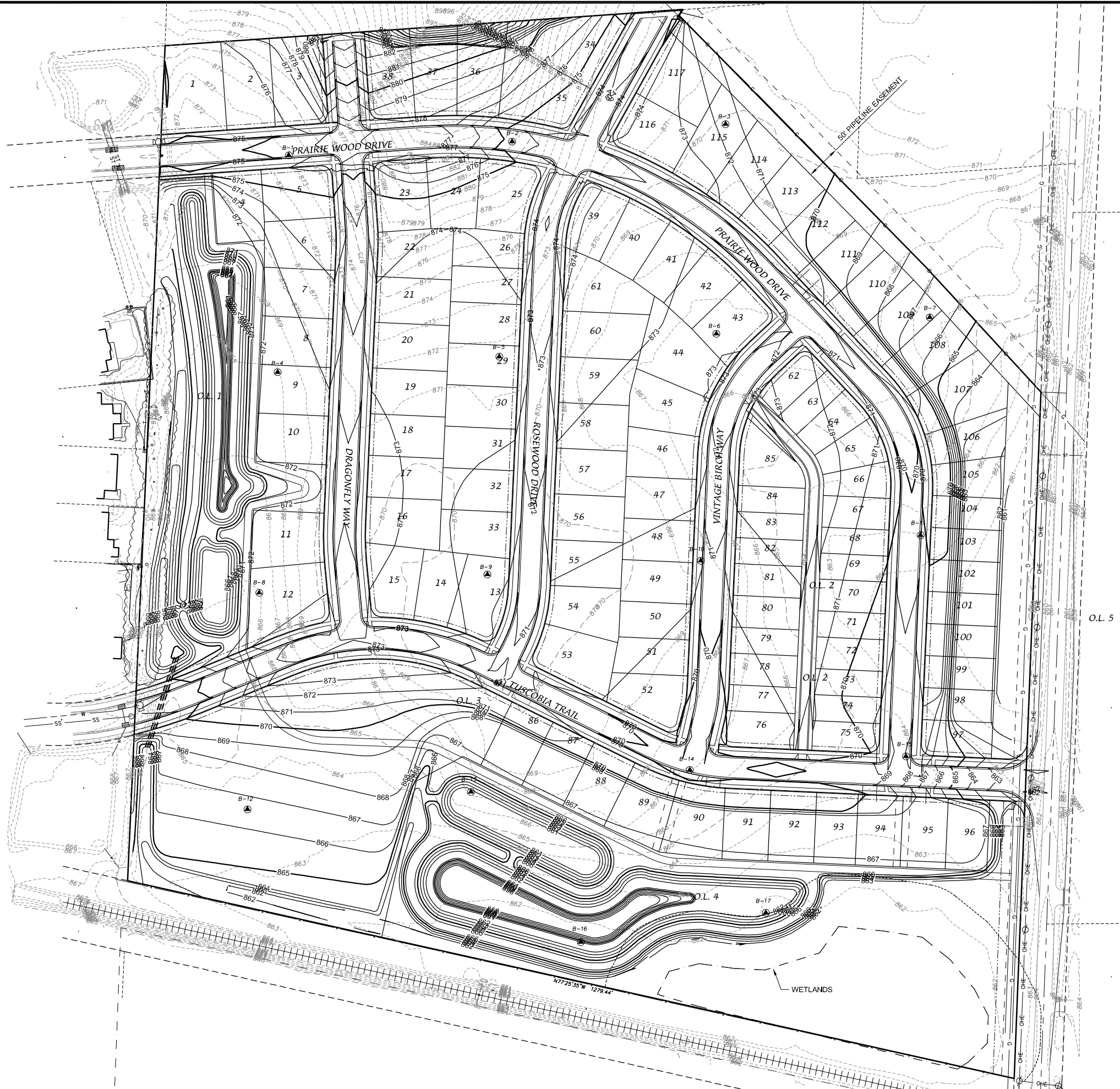
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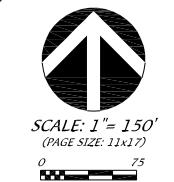
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OVERALL GRADING PLAN
ROSEWOOD FIELDS
VILLAGE OF MCARLAND, DANE COUNTY, WISCONSIN



SCALE: 1" = 150'
(PAGE SIZE: 11x17)

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GRADING & EROSION CONTROL NOTES

1. INSTALL EROSION CONTROL MEASURES PRIOR TO ANY SITE WORK, INCLUDING GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIALS AS SHOWN ON PLAN.
2. EROSION CONTROL MEASURES SHALL BE INSTALLED PER THE VILLAGE OF MCFARLAND STANDARD SPECIFICATIONS.
3. EROSION CONTROL IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. EROSION CONTROL MEASURES AS SHOWN ON THE APPROVED PLAN SHALL BE CONSIDERED MINIMUM PRECAUTIONS THAT WILL BE ALLOWED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECOGNIZING AND CORRECTING EROSION PROBLEMS THAT ARE A RESULT OF CONSTRUCTION ACTIVITIES.
4. INSPECTIONS, REPORTING AND MAINTENANCE OF ALL EROSION CONTROL MEASURES SHALL BE PER THE VILLAGE OF MCFARLAND REQUIREMENTS TO ENSURE PROPER FUNCTION OF EROSION CONTROLS AT ALL TIMES. EROSION CONTROL MEASURES ARE TO BE IN WORKING ORDER AT THE END OF EACH WORK DAY.
5. INSPECT EROSION CONTROL MEASURES AFTER EACH 1/2" OR GREATER RAINFALL. REPAIR ANY DAMAGE OBSERVED DURING THE INSPECTION.
6. NO SITE GRADING OUTSIDE OF THE LIMITS OF DISTURBANCE OR DOWNSTREAM OF SILT FENCE.
7. EROSION CONTROL MEASURES SHALL BE REMOVED ONLY AFTER SITE CONSTRUCTION IS COMPLETE WITH ALL SOIL SURFACES HAVING AN ESTABLISHED VEGETATIVE COVER
8. INSTALL INLET PROTECTION IN ALL STORM SEWER INLETS AND CATCH BASINS THAT MAY RECEIVE RUNOFF FROM DISTURBED AREAS.
9. CUT AND FILL SLOPES SHALL BE NO GREATER THAN 3:1
10. SLOPES EXCEEDING 4:1 SHALL BE STABILIZED WITH CLASS I, TYPE B EROSION MATTING AND ALL DRAINAGE SWALES SHALL BE STABILIZED WITH CLASS II, TYPE B EROSION MATTING.
11. ALL INCIDENTAL MUD TRACKING OFF-SITE ONTO ADJACENT PUBLIC THOROUGHFARES SHALL BE CLEANED UP AND REMOVED BY THE END OF EACH WORKING DAY USING PROPER DISPOSAL METHODS.
12. PREVENT EXCESSIVE DUST FROM LEAVING THE CONSTRUCTION SITE IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS.
13. INSTALL EROSION CONTROLS ON THE DOWNSTREAM SIDE OF STOCKPILES.
14. VELOCITY CHECKS SHALL BE PLACED AS SHOWN WHEN THE ROAD SUBGRADE IS ESTABLISHED. CHECKS SHALL BE BUILT PER DETAIL PROVIDED AND MAINTAINED THROUGH STABILIZATION. NUMBER AND LOCATION OF CHECKS SHOWN ON PLANS IS MINIMUM REQUIRED. FIELD CONDITIONS MAY WARRANT ADDITIONAL VELOCITY CHECKS AS REQUIRED BY VILLAGE INSPECTOR OR ENGINEER.
15. ALL DISTURBED AREAS SHALL RECEIVE A MINIMUM OF 6" OF TOPSOIL, FERTILIZER, SEED AND MULCH. SEED MIXTURE SHALL BE WISCONSIN DOT SEED MIX #40 OR EQUIVALENT APPLIED AT A RATE OF 5 POUNDS PER 1000 SQFT ON ALL DISTURBED AREAS. ANNUAL RYEGRASS AT A RATE OF 1 1/2 POUNDS PER 1000 SQFT SHALL BE ADDED TO THE MIXTURE. FERTILIZER SHALL BE PLACED PER A SOIL TEST. THE INFILTRATION AREA SHALL BE SEEDDED WITH A SEED MIX TOLERANT OF FLUCTUATING WATER CONDITIONS.
16. DEWATERING, IF APPLICABLE, SHALL BE CONDUCTED PER WDNR STORM WATER MANAGEMENT TECHNICAL STANDARD 1061.
17. ADDITIONAL EROSION CONTROL MEASURES AS REQUESTED BY THE DNR, VILLAGE ENGINEER OR THE OWNERS REPRESENTATIVE SHALL BE INSTALLED WITHIN 24 HRS.
18. ANY CHANGES TO THIS EROSION CONTROL PLAN MUST BE APPROVED BY THE VILLAGE OF MCFARLAND.

LEGEND

	2020 GRADING LIMITS		PROPOSED STORM SEWER
	PHASE LIMITS		SILT FENCE
	PLAT LIMITS		VELOCITY CHECK
	RIGHT-OF-WAY		EARTHEN BERM
	LOT LINE		STONE WEEPER
	EXISTING FENCE		EROSION MAT
	PROPOSED CONCRETE CURB & GUTTER		INLET PROTECTION
	EXISTING PAVEMENT		
	EXISTING INDEX CONTOUR		
	EXISTING INTERMEDIATE CONTOUR		
	PROPOSED INDEX CONTOUR		
	PROPOSED INTERMEDIATE CONTOUR		

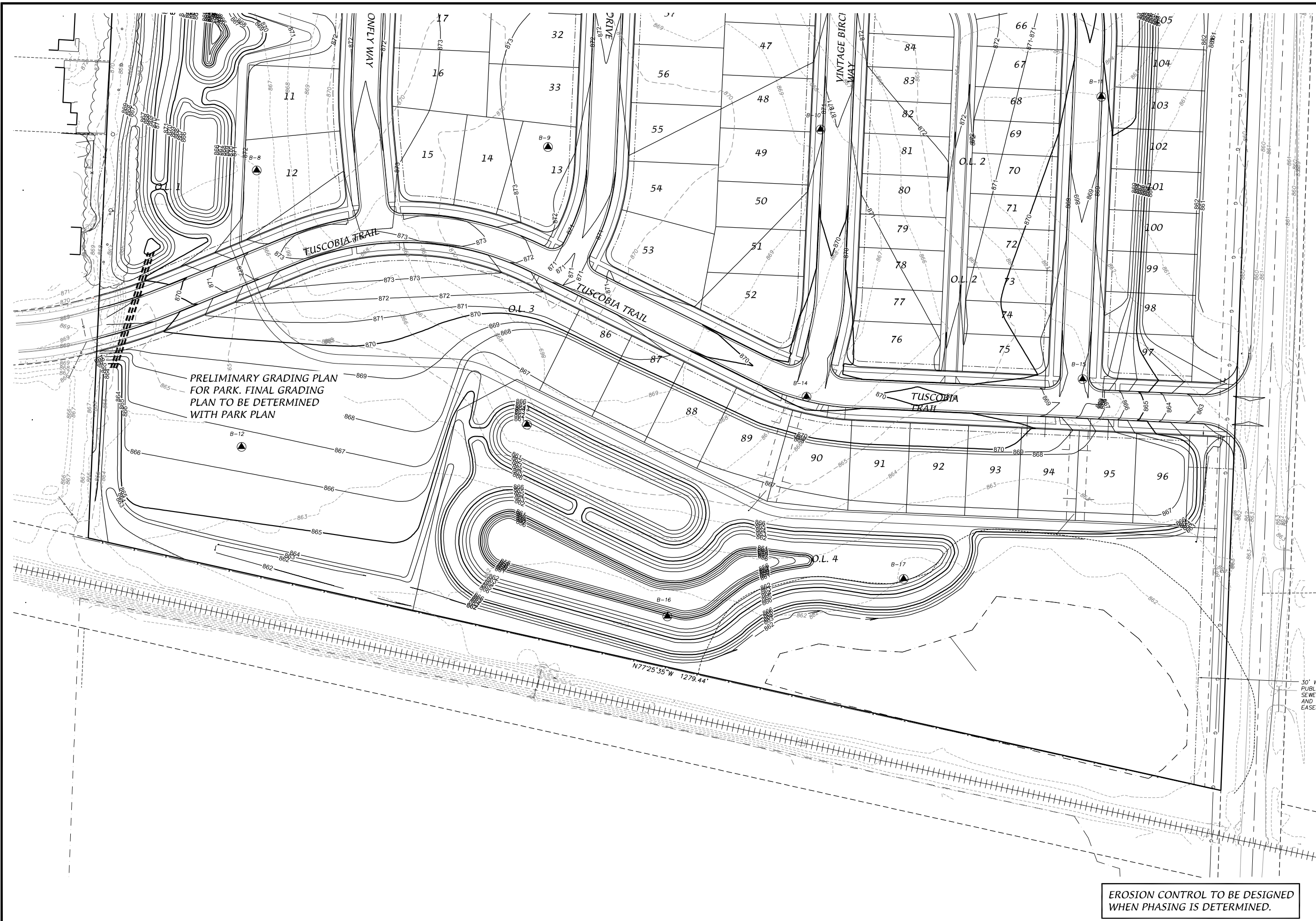
EROSION CONTROL TO BE DESIGNED WHEN PHASING IS DETERMINED.

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ROSEWOOD FIELDS

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DATE: 08-25-20
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PRELIMINARY GRADING PLAN
FOR PARK. FINAL GRADING
PLAN TO BE DETERMINED
WITH PARK PLAN

EROSION CONTROL TO BE DESIGNED
WHEN PHASING IS DETERMINED.



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SITE GRADING PLAN

ROSEWOOD FIELDS

VILLAGE OF MC FARLAND, DANE COUNTY, WISCONSIN



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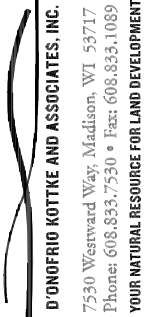


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ROSEWOOD FIELDS

VILLAGE OF MCFARLAND, DANE COUNTY, WISCONSIN



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UTILITY SCHEMATIC

ROSEWOOD FIELDS

VILLAGE OF MCARLAND, DANE COUNTY, WISCONSIN



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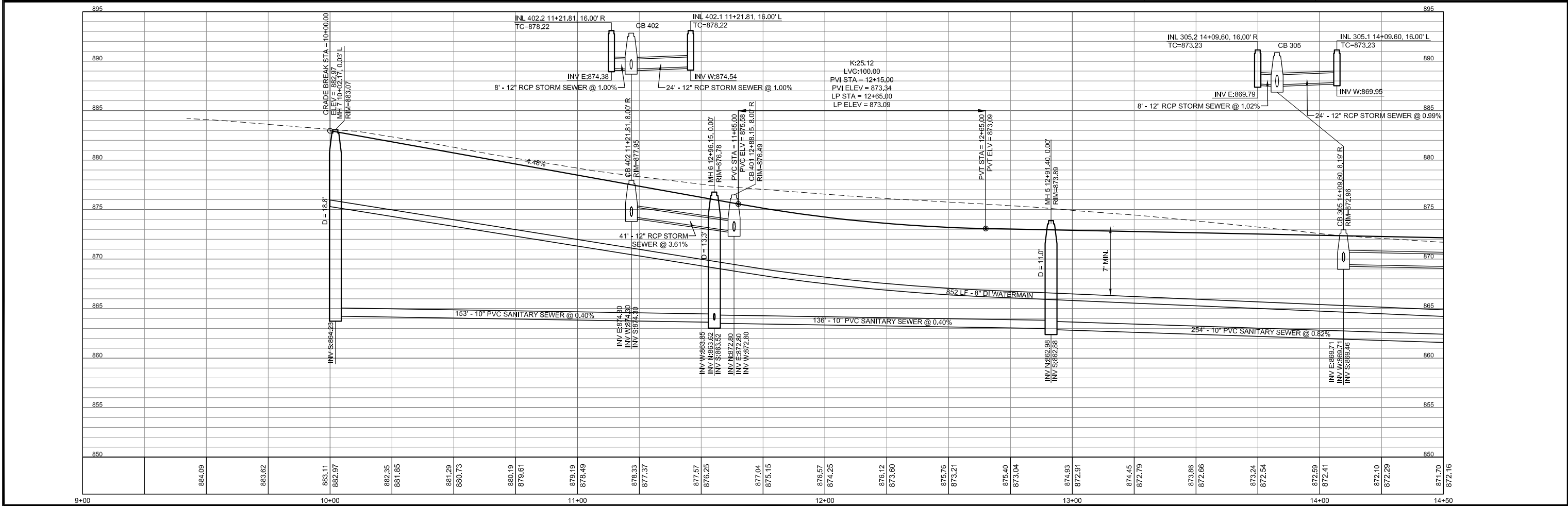
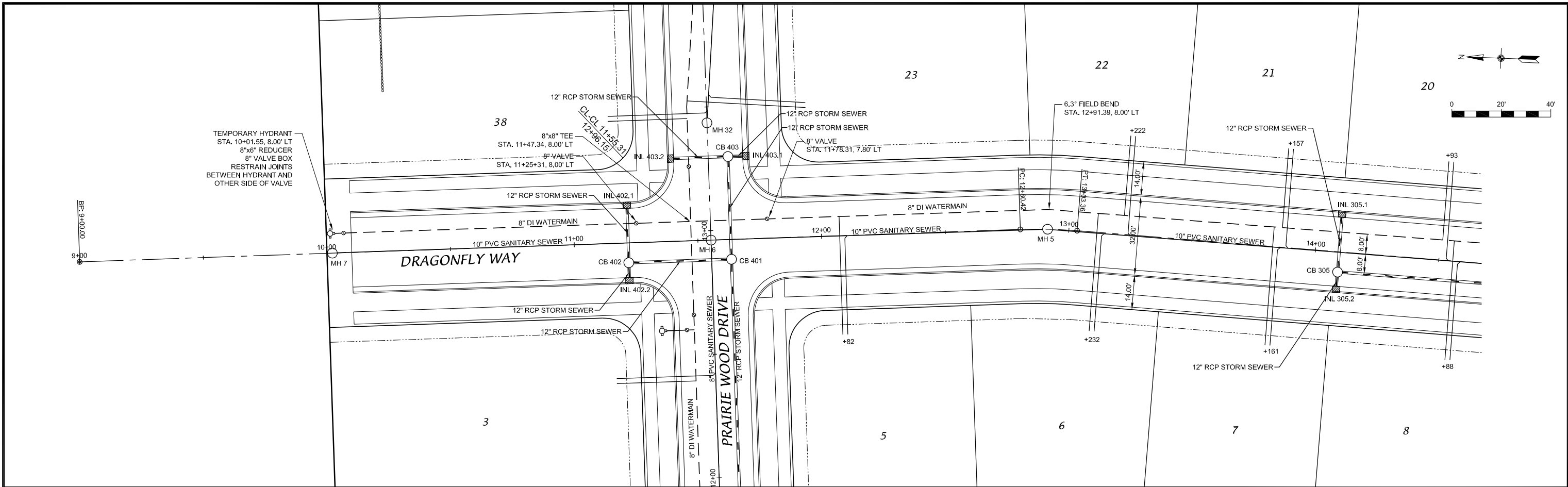


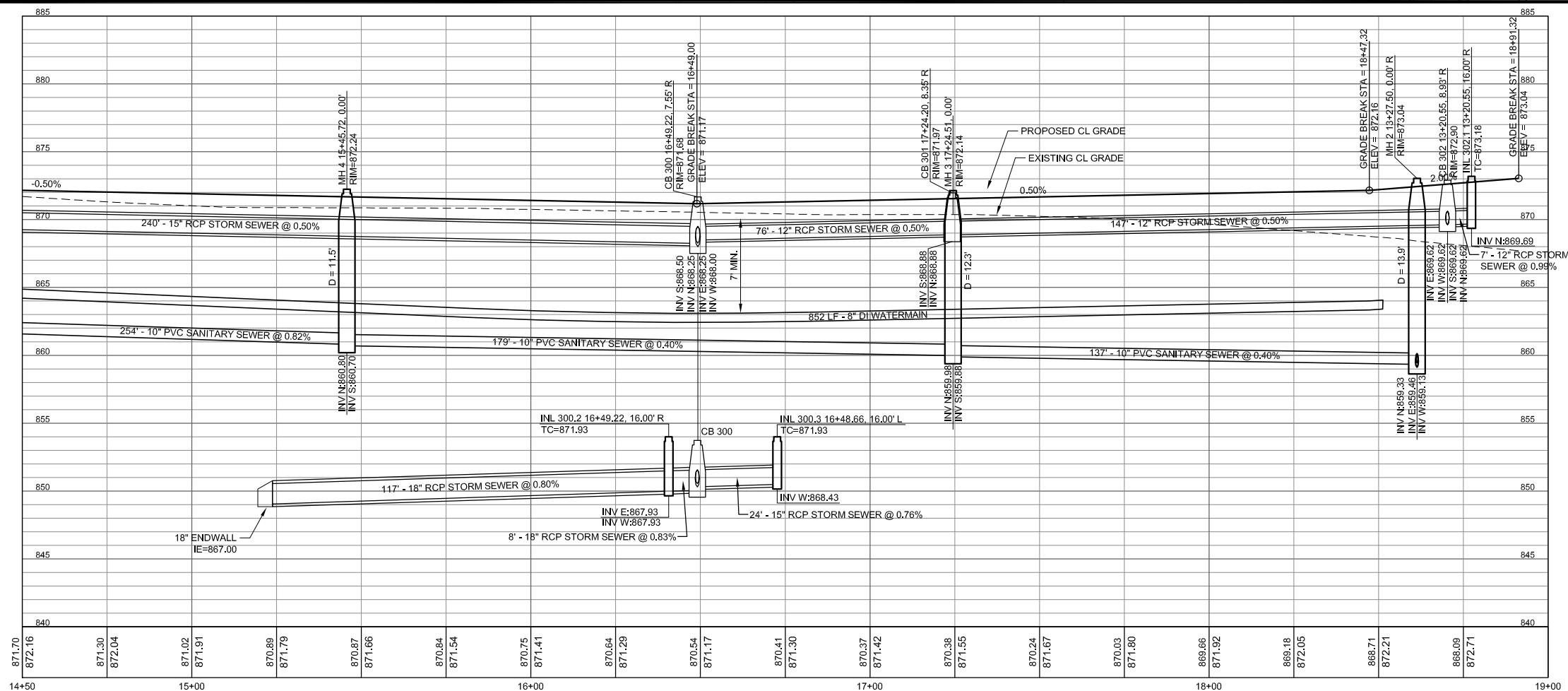
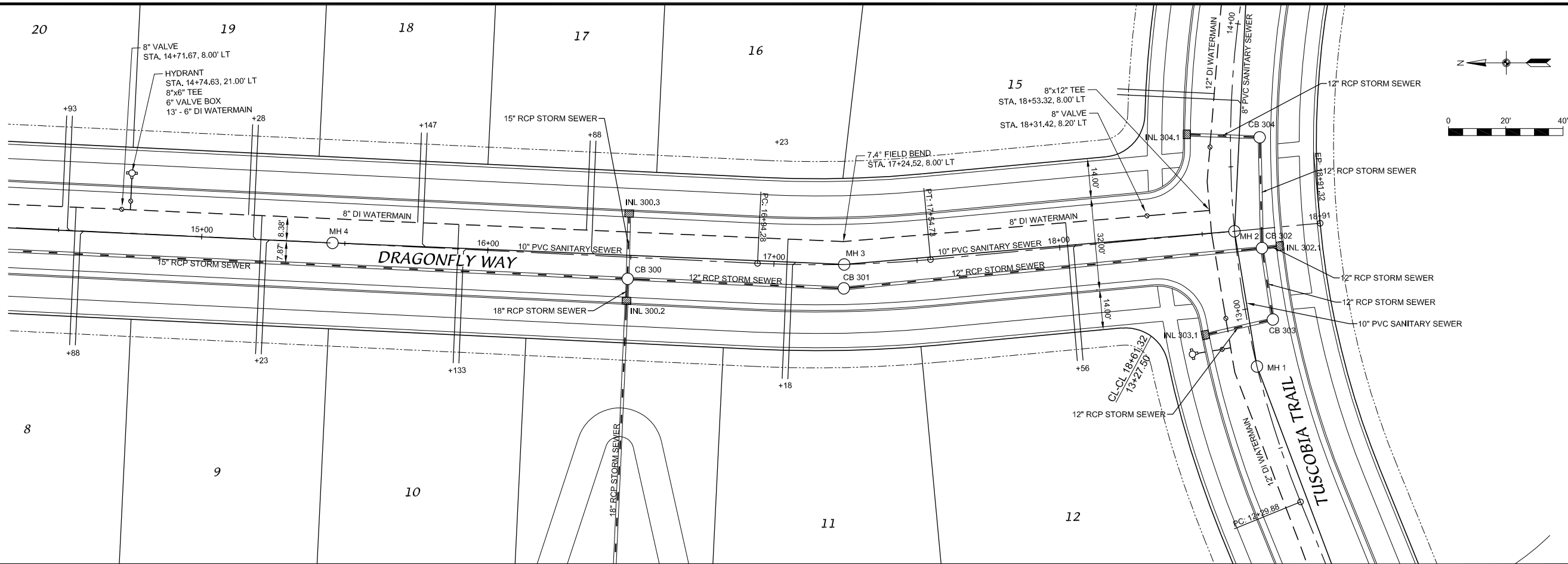
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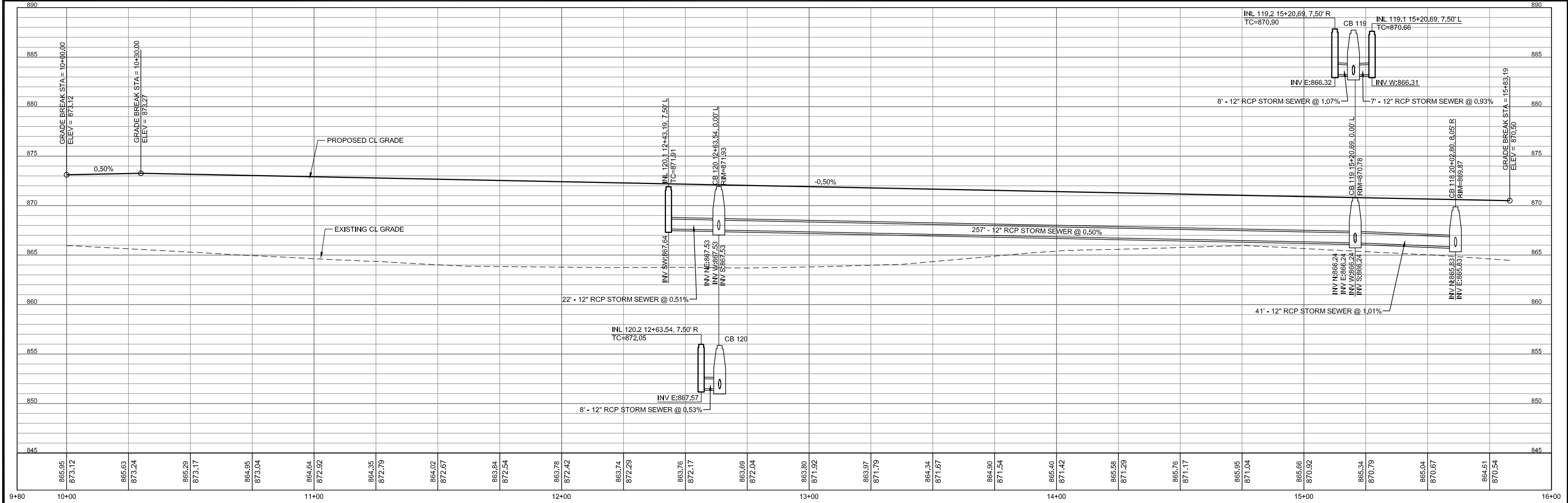
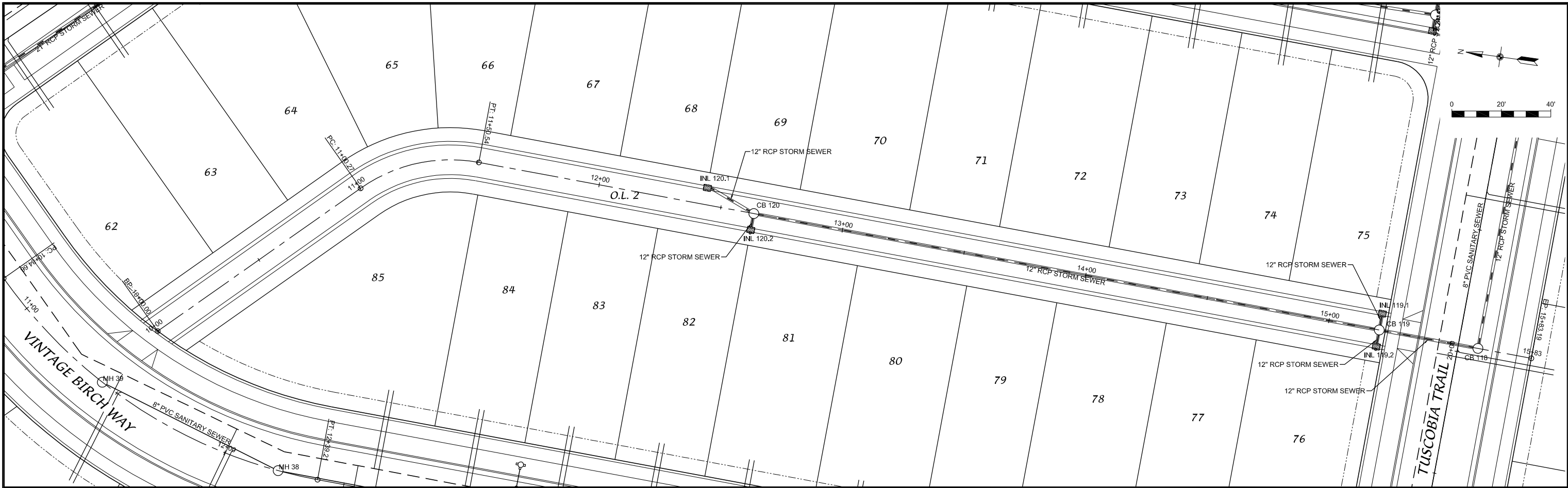
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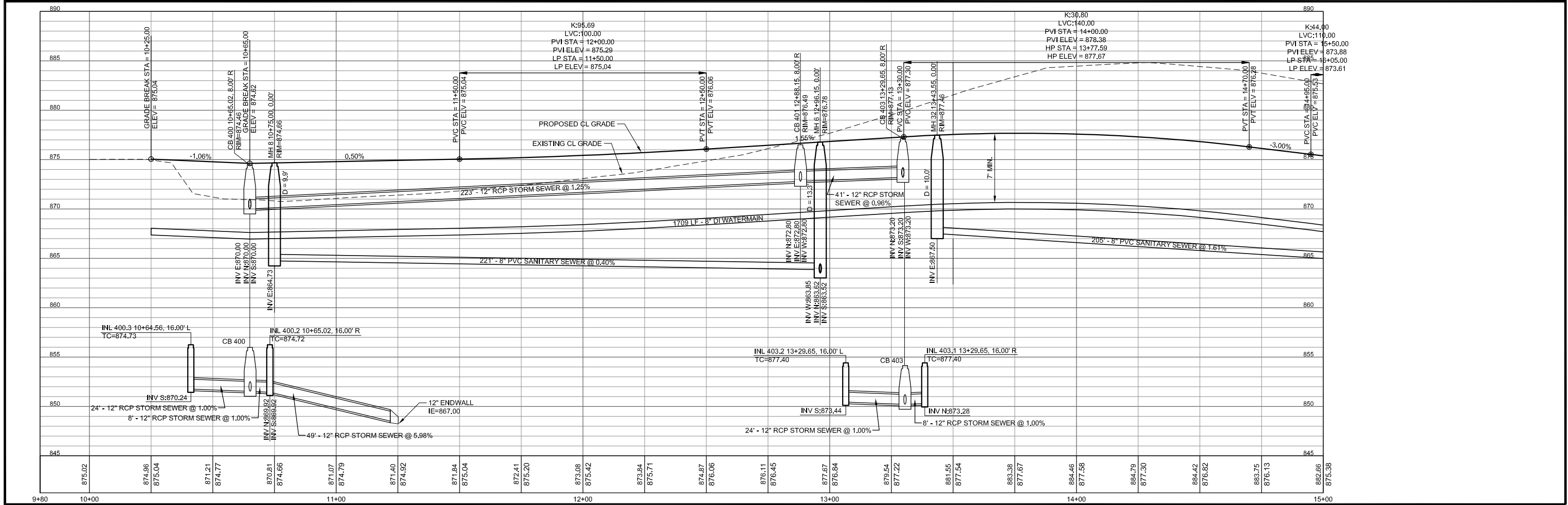
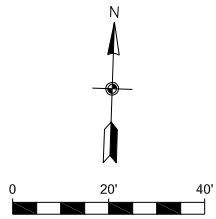
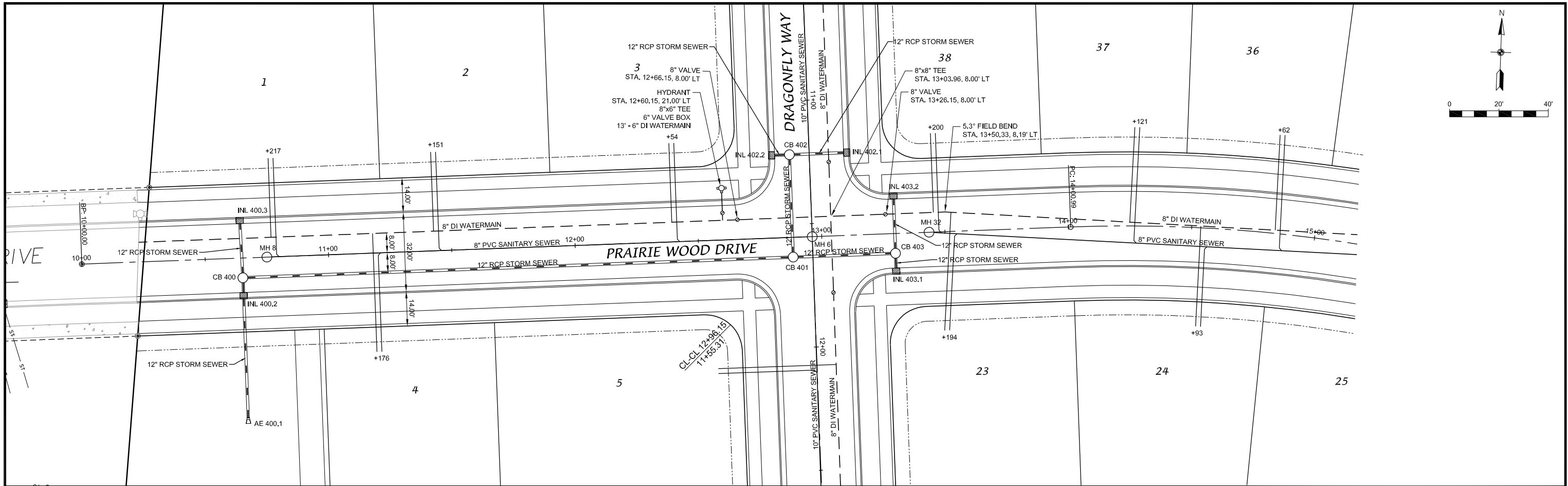
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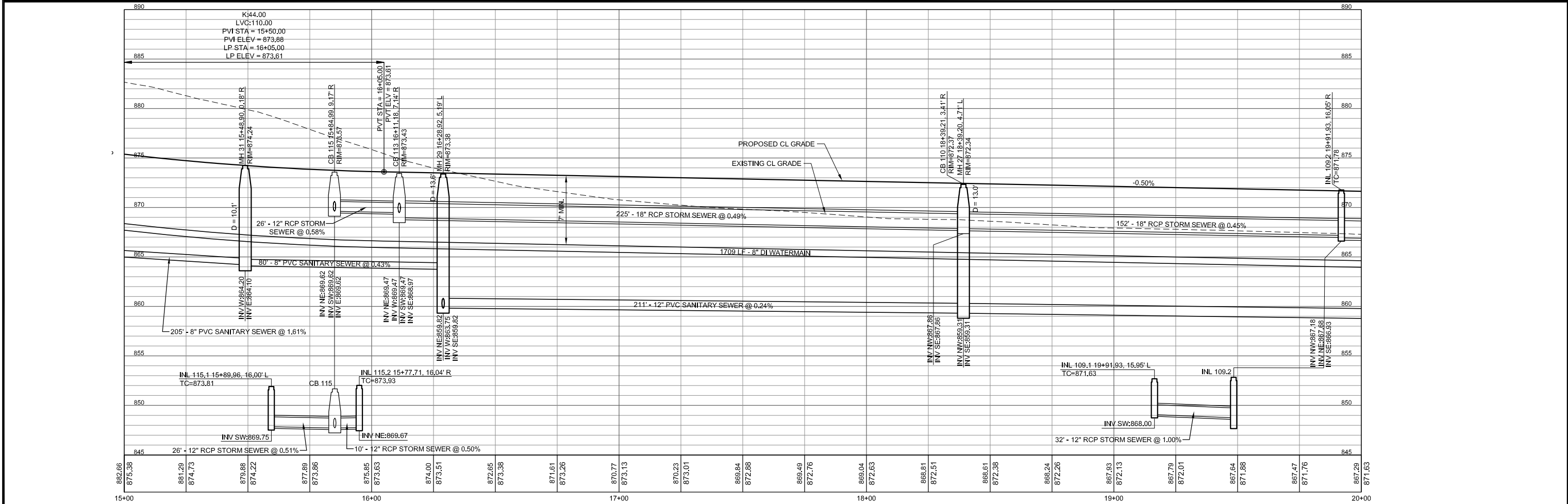
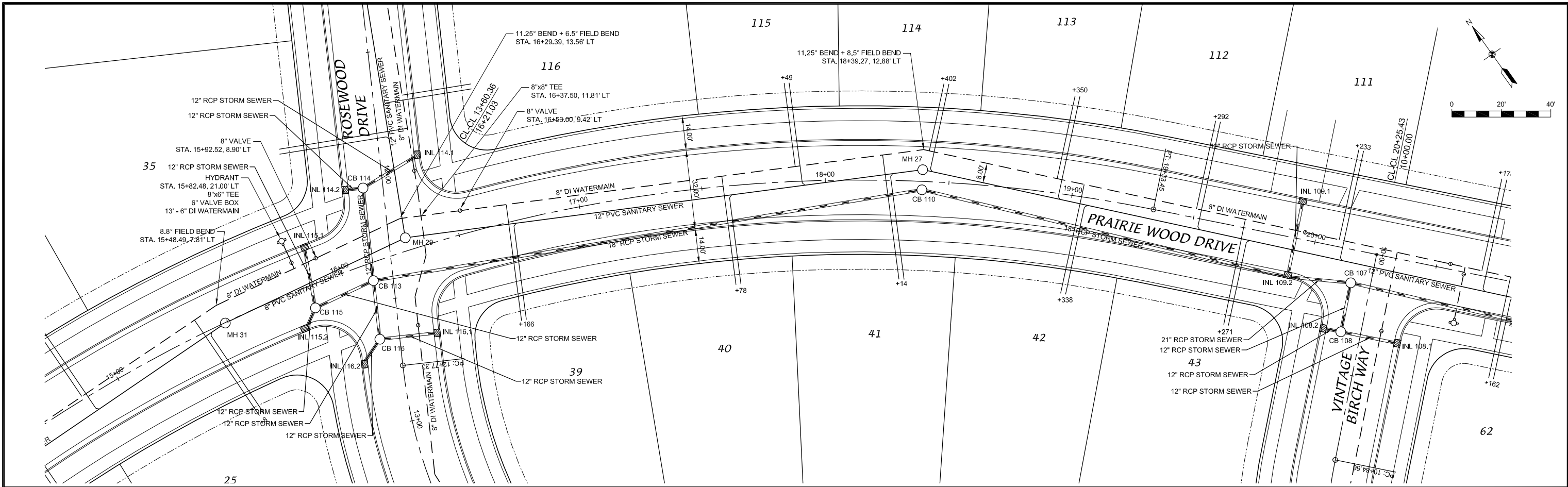
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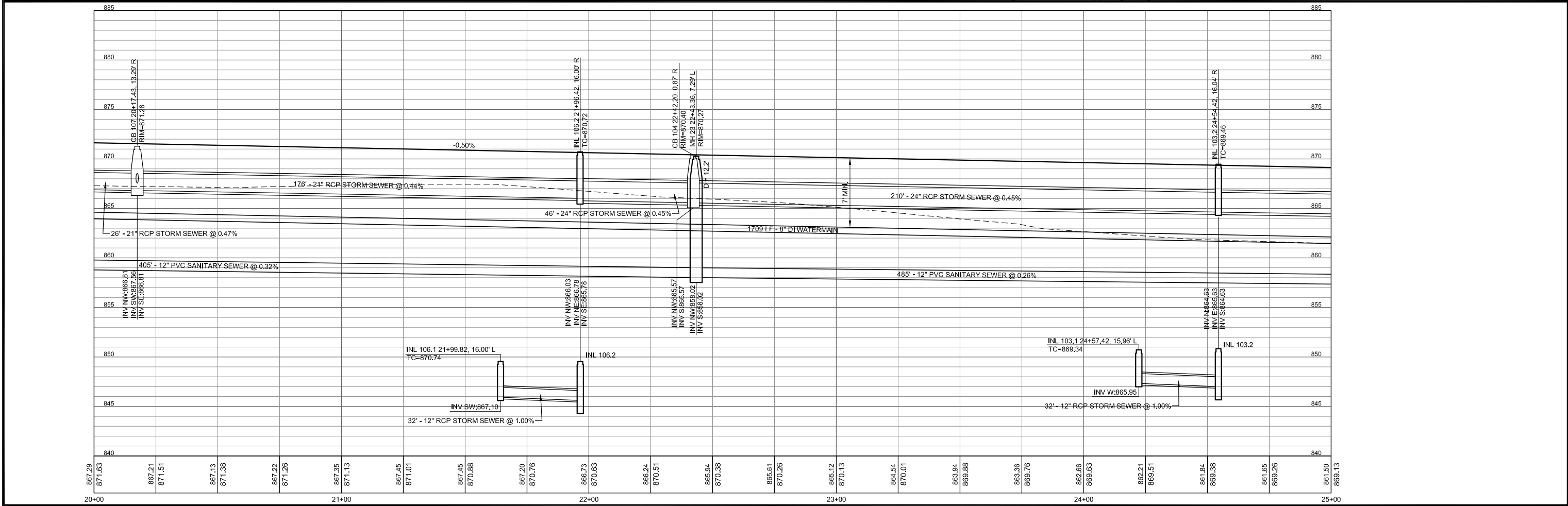
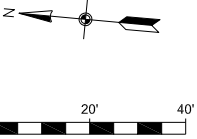
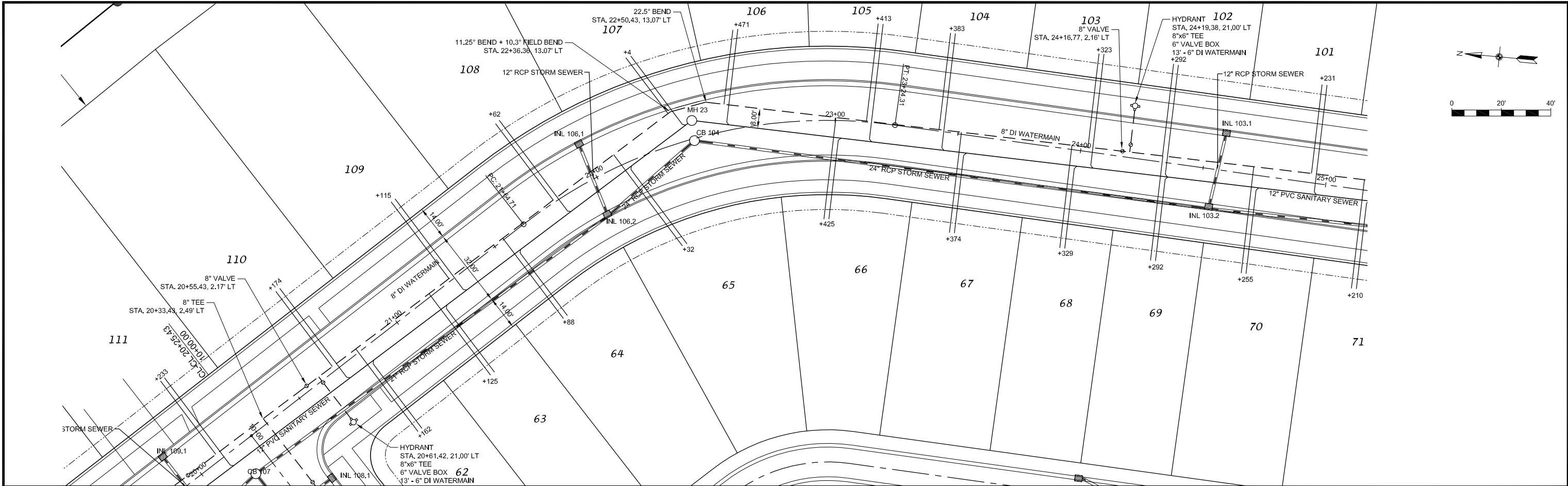


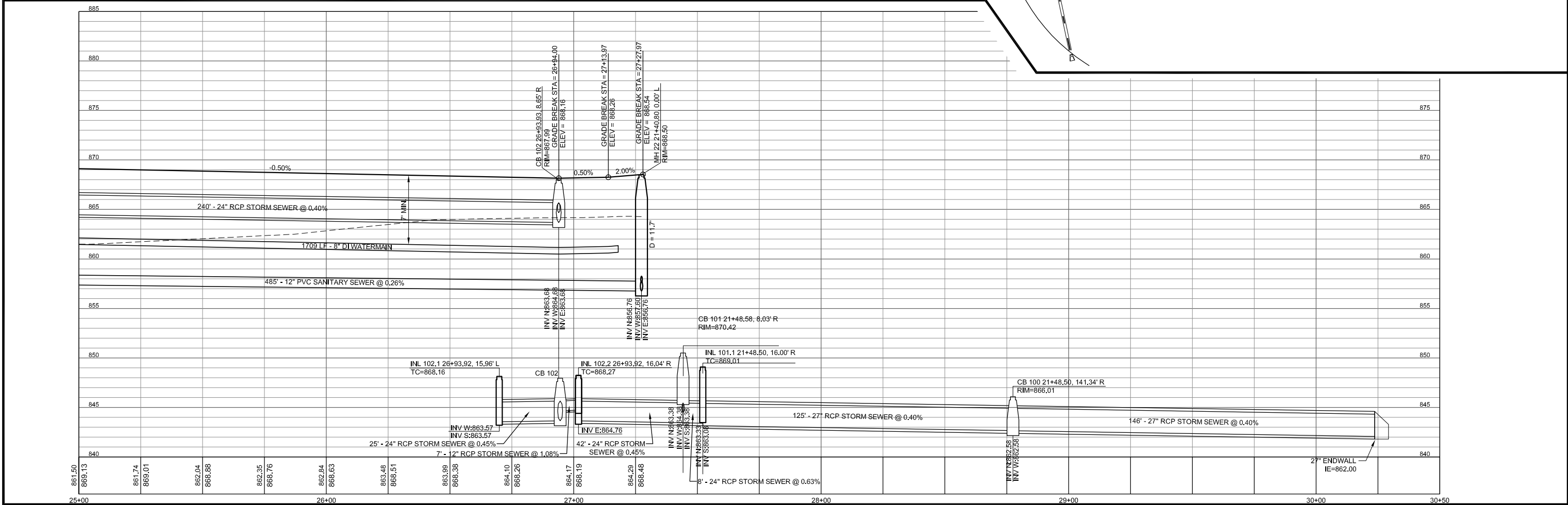
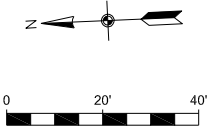
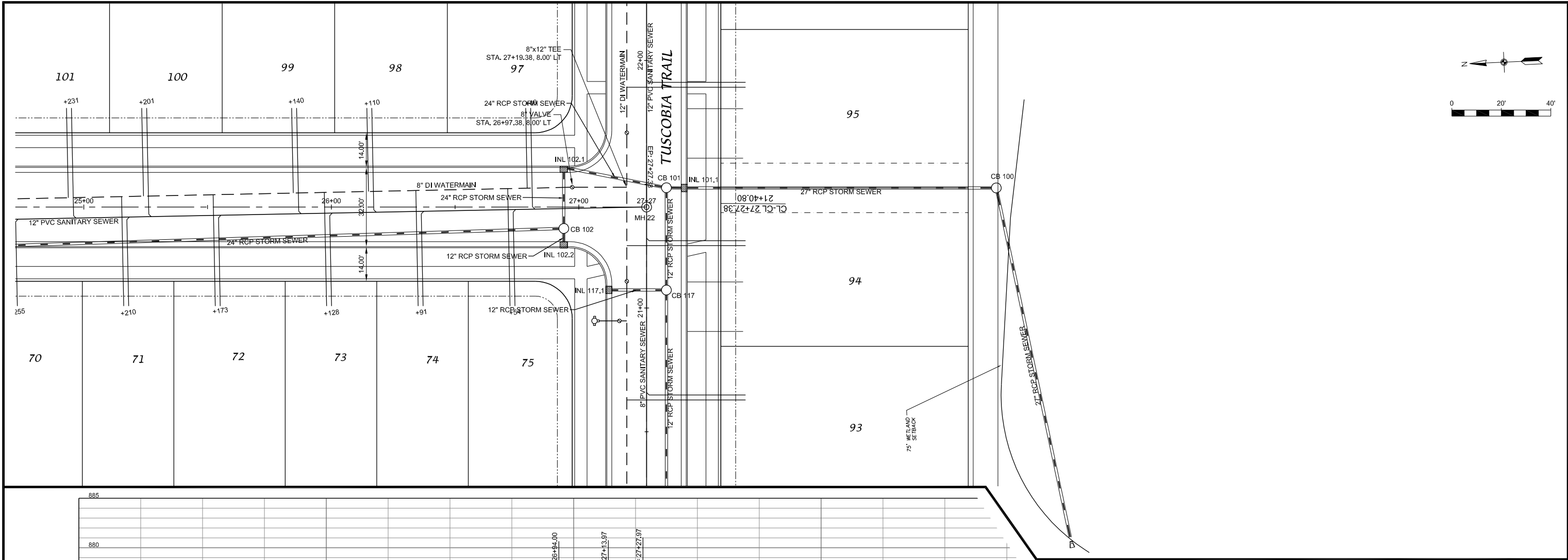


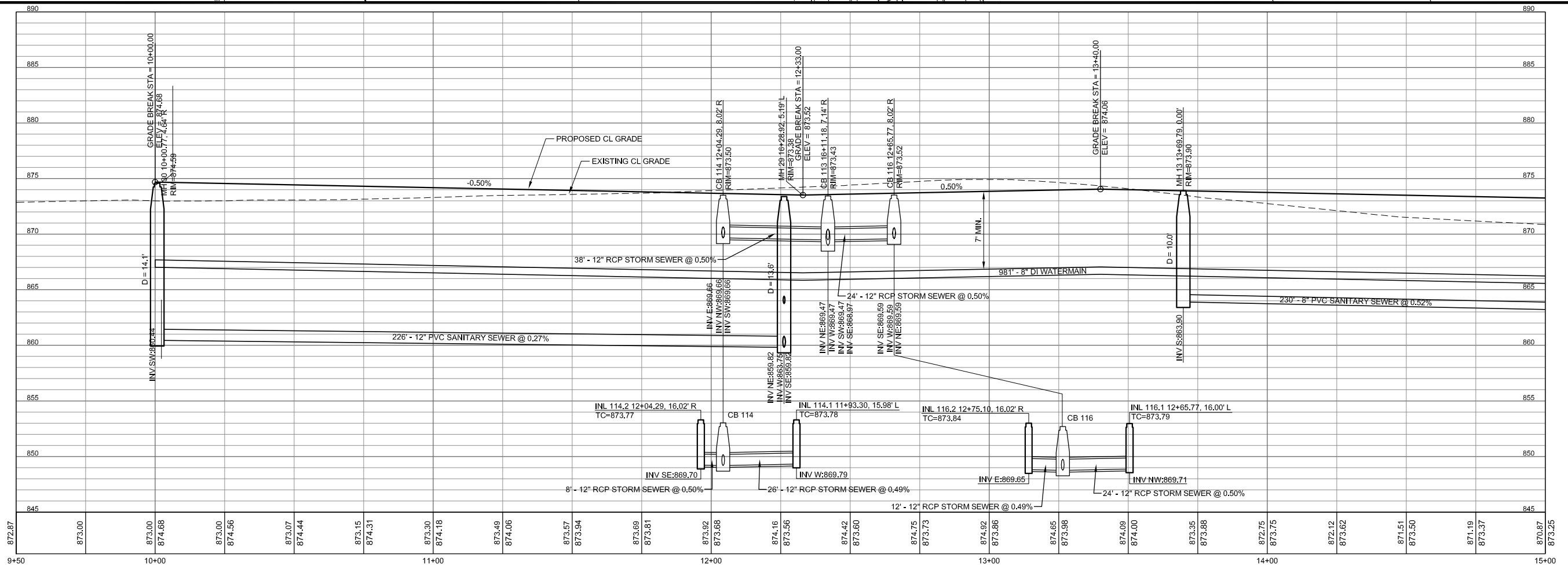
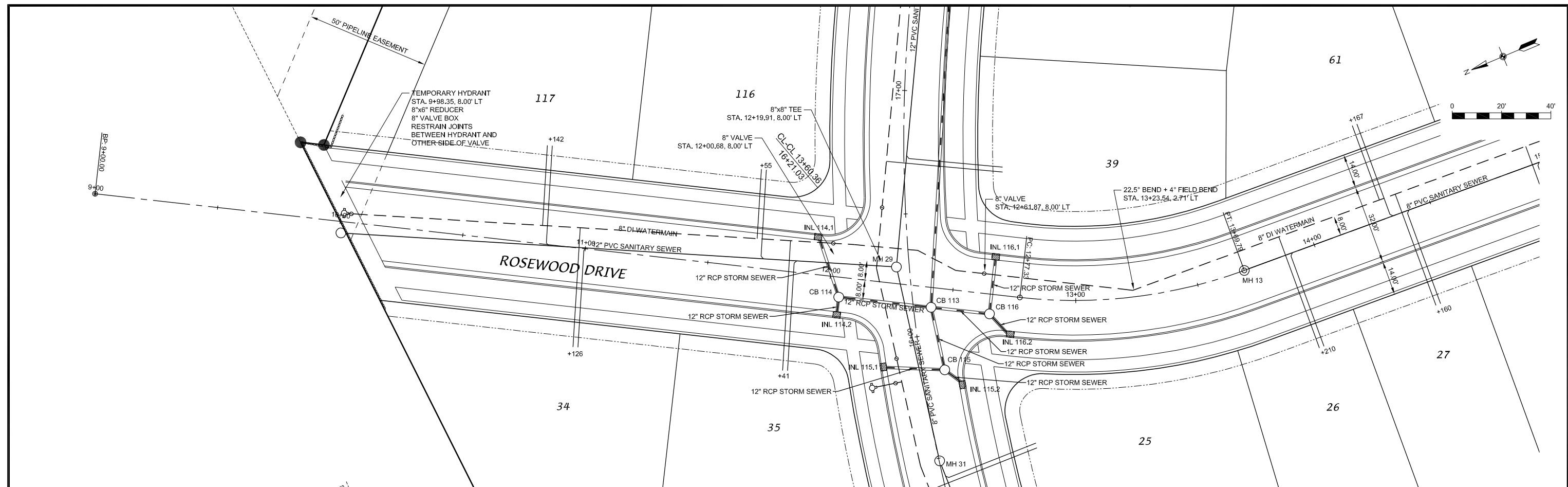


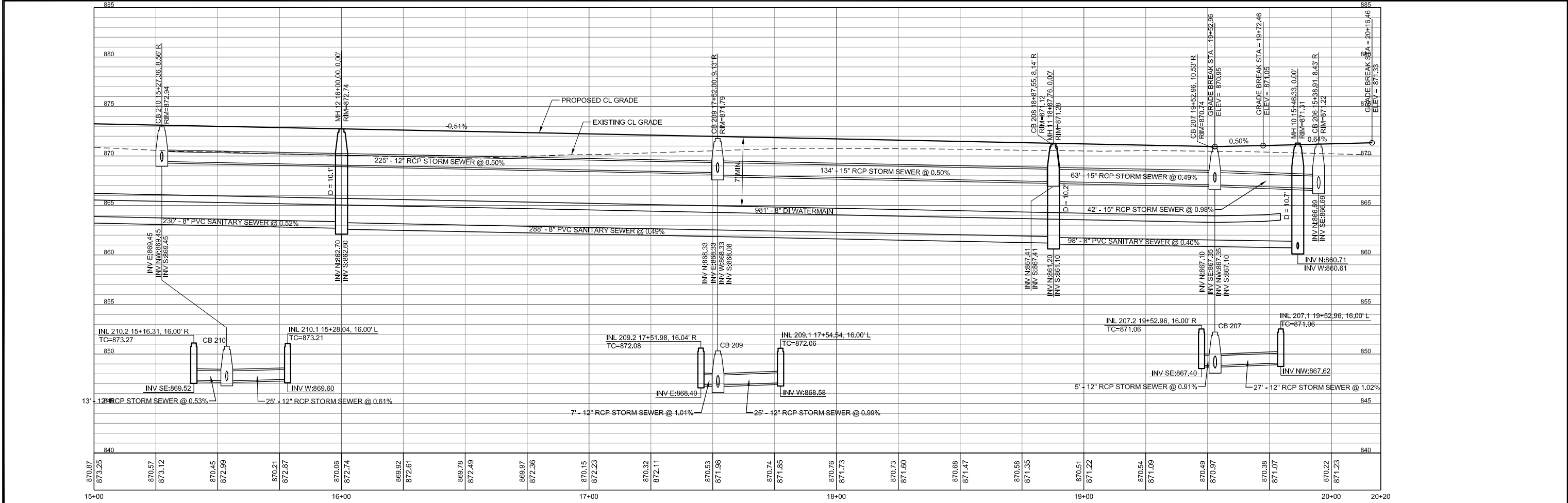
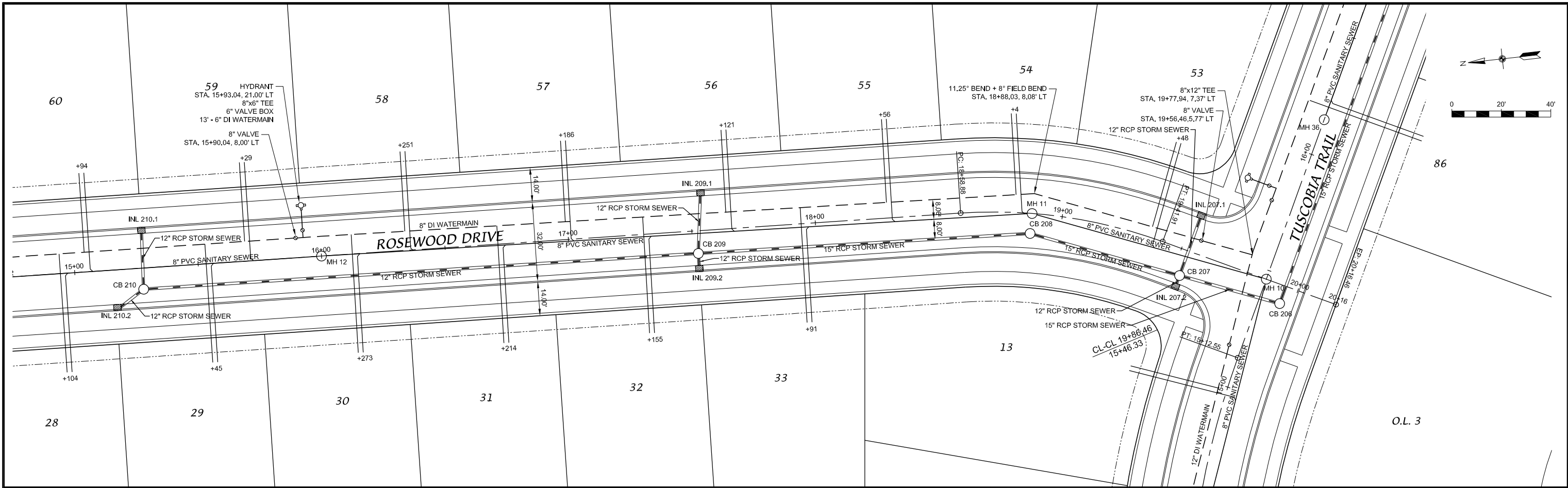


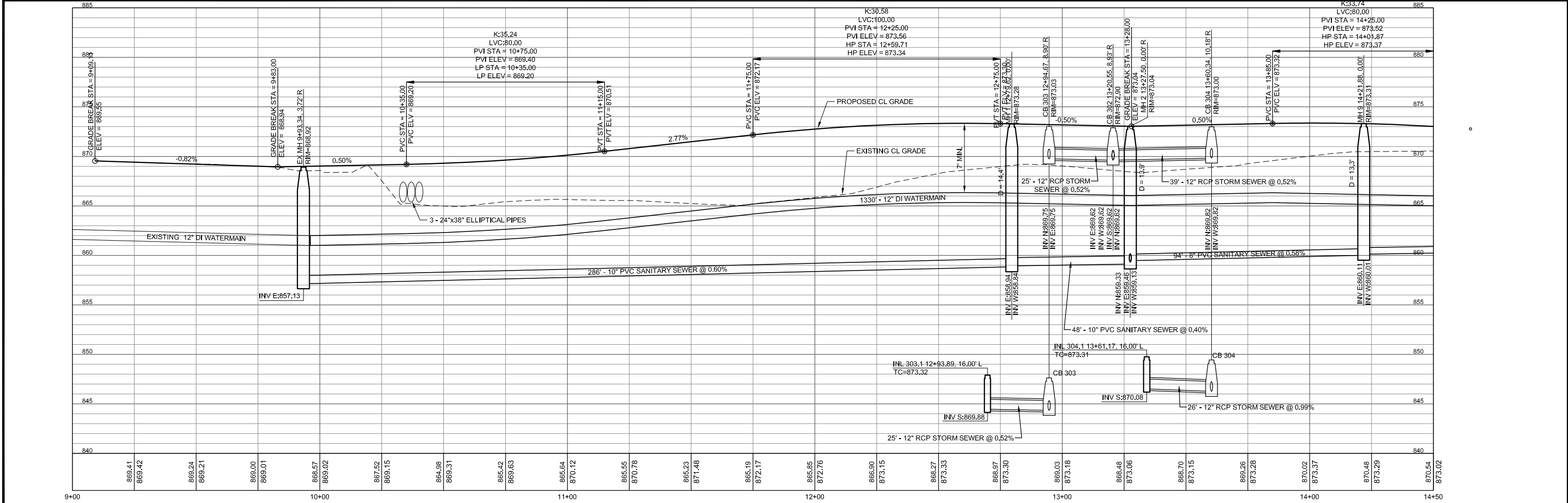
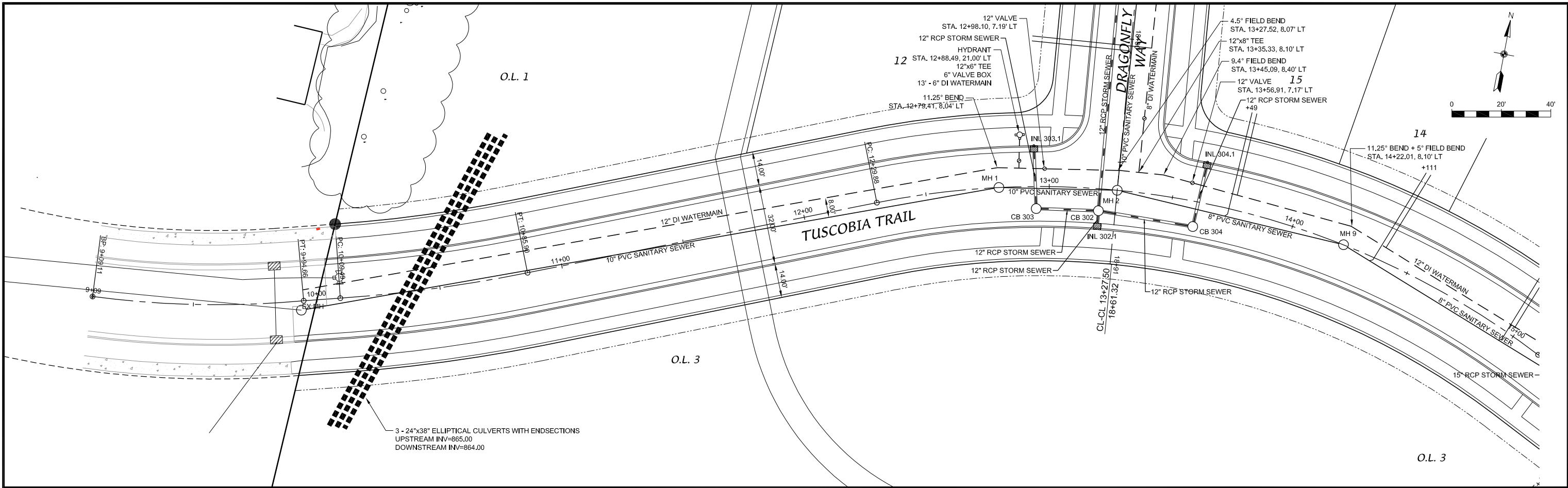


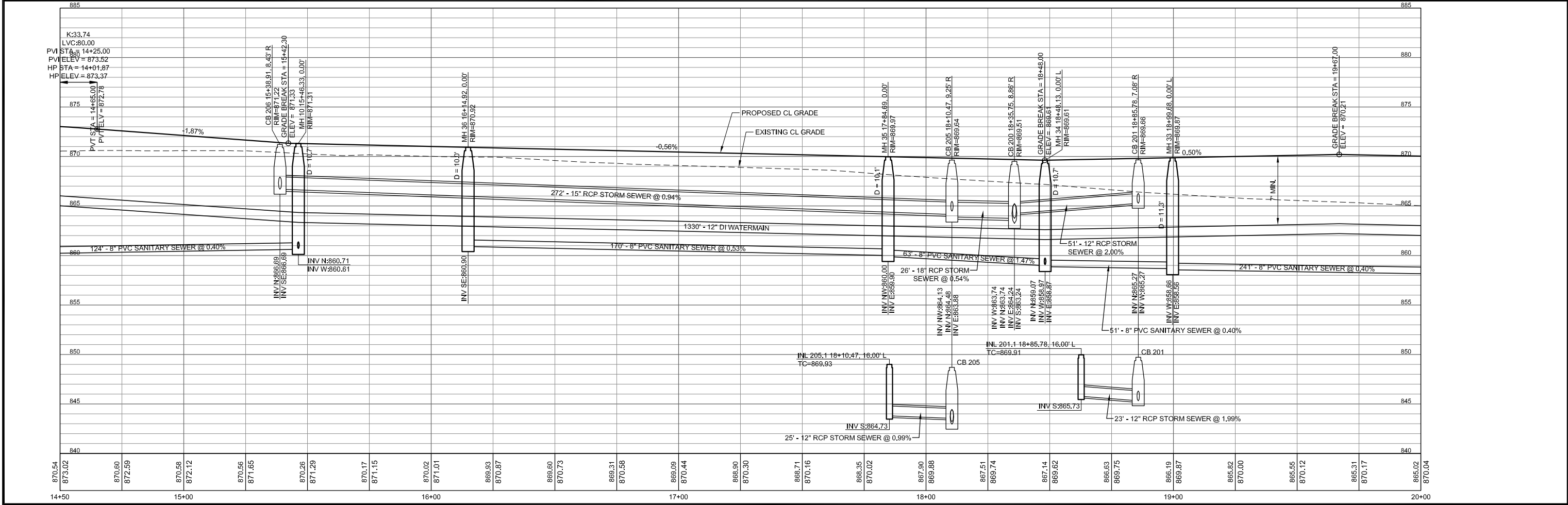
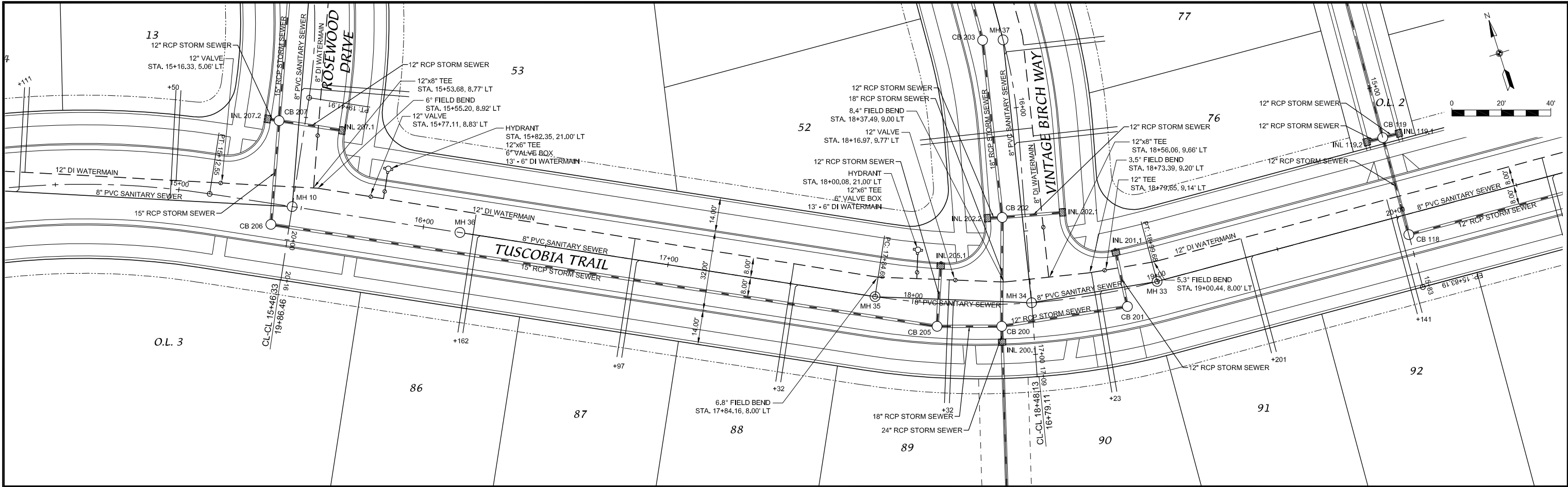


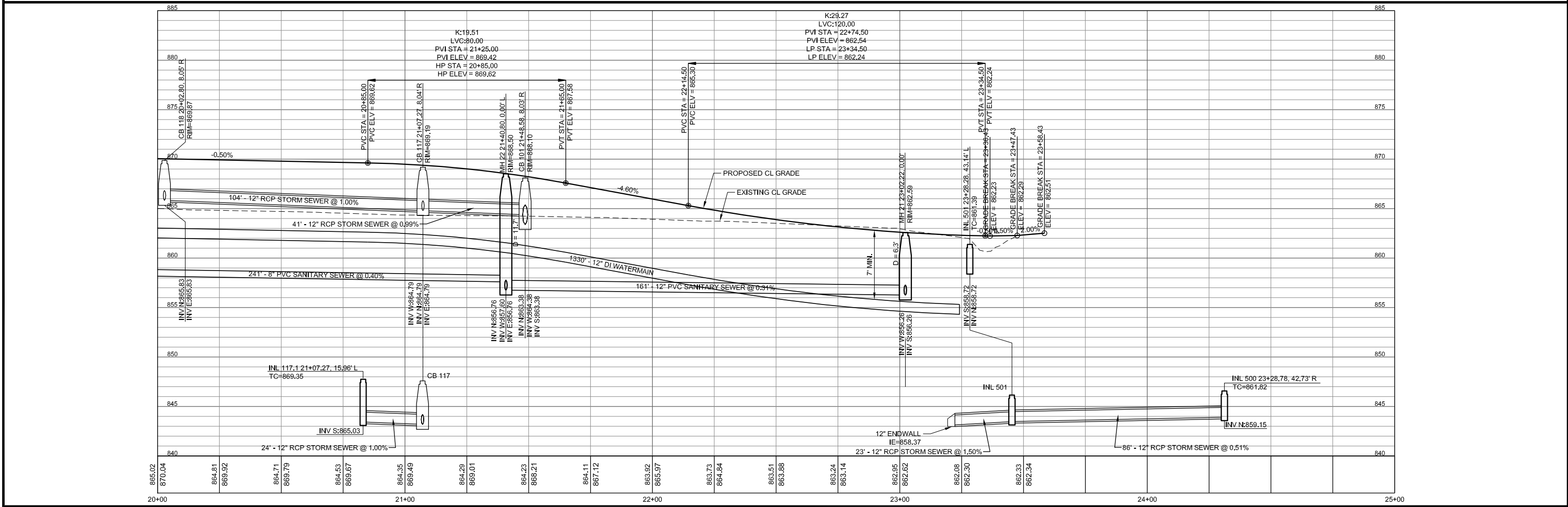
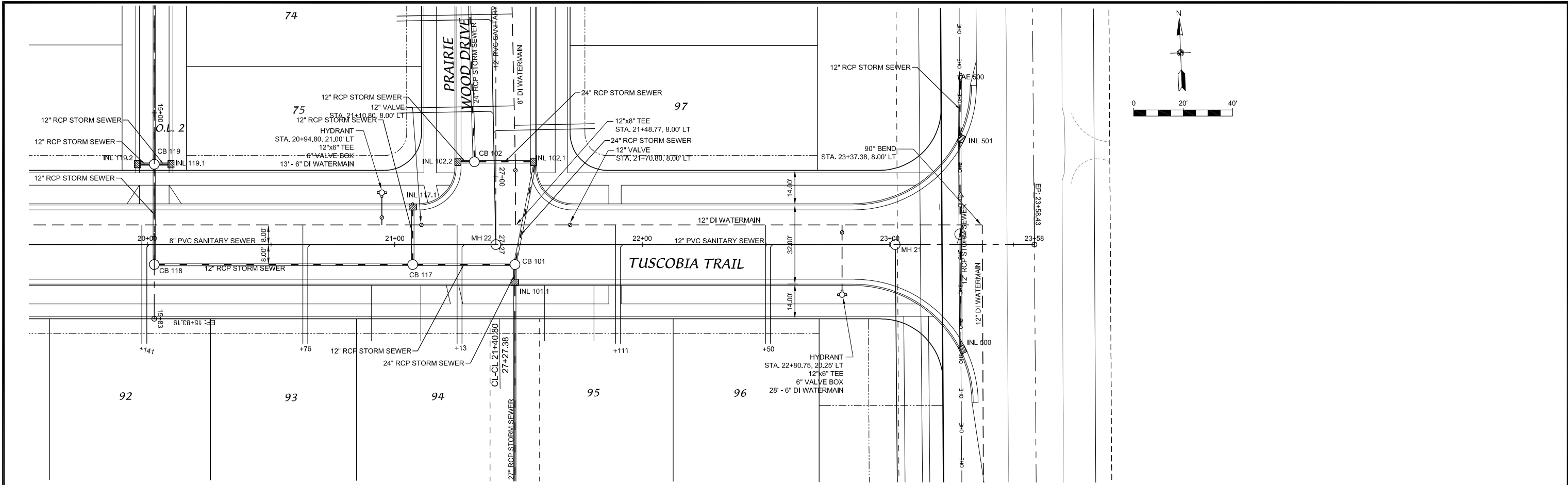


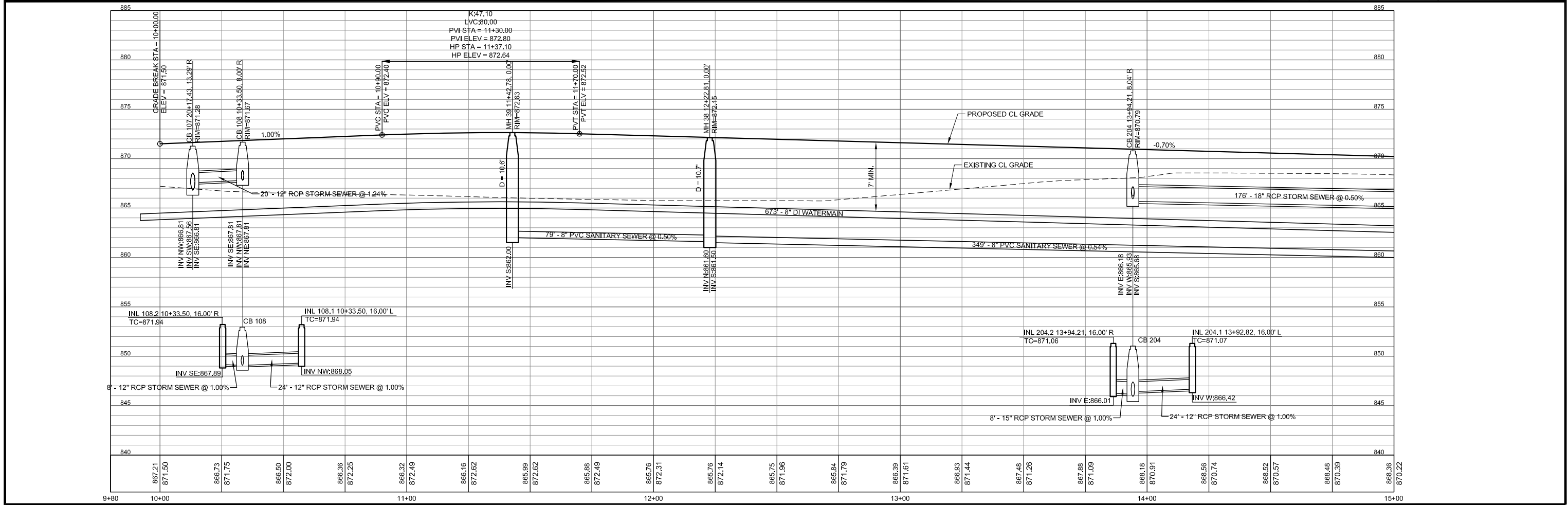
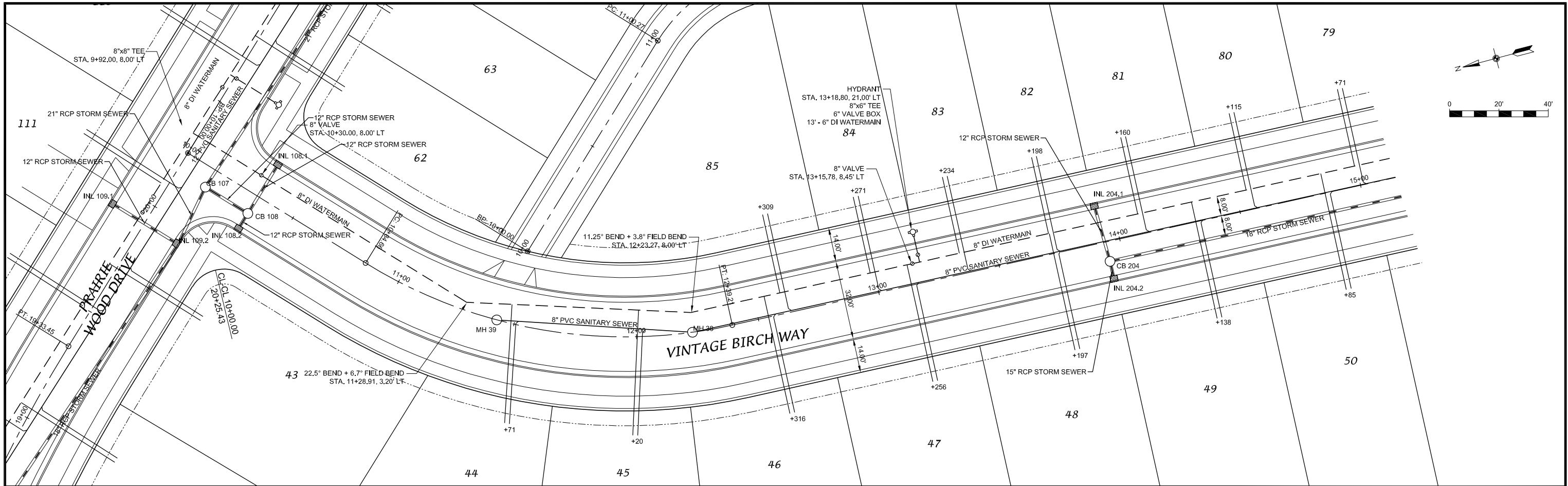


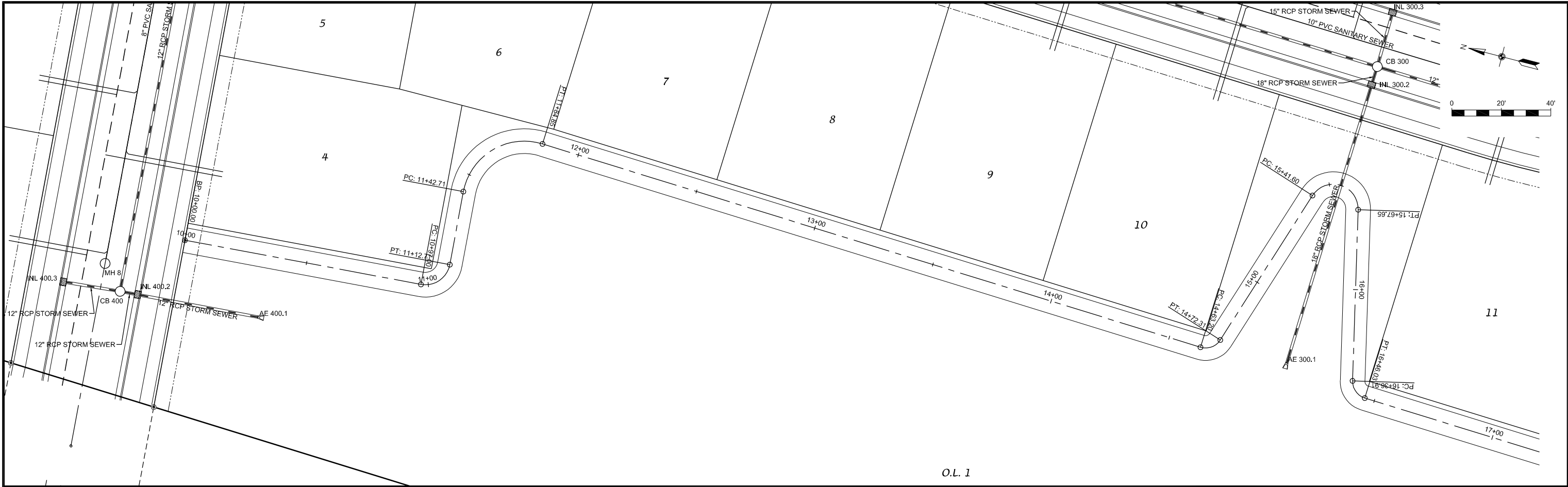




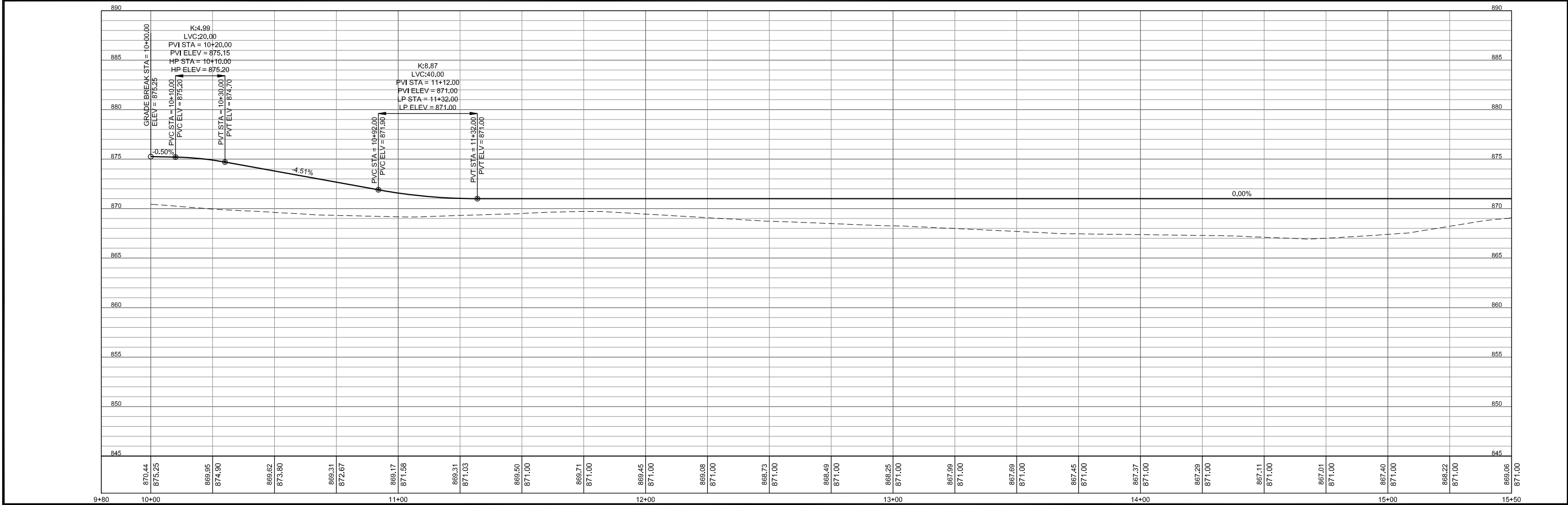


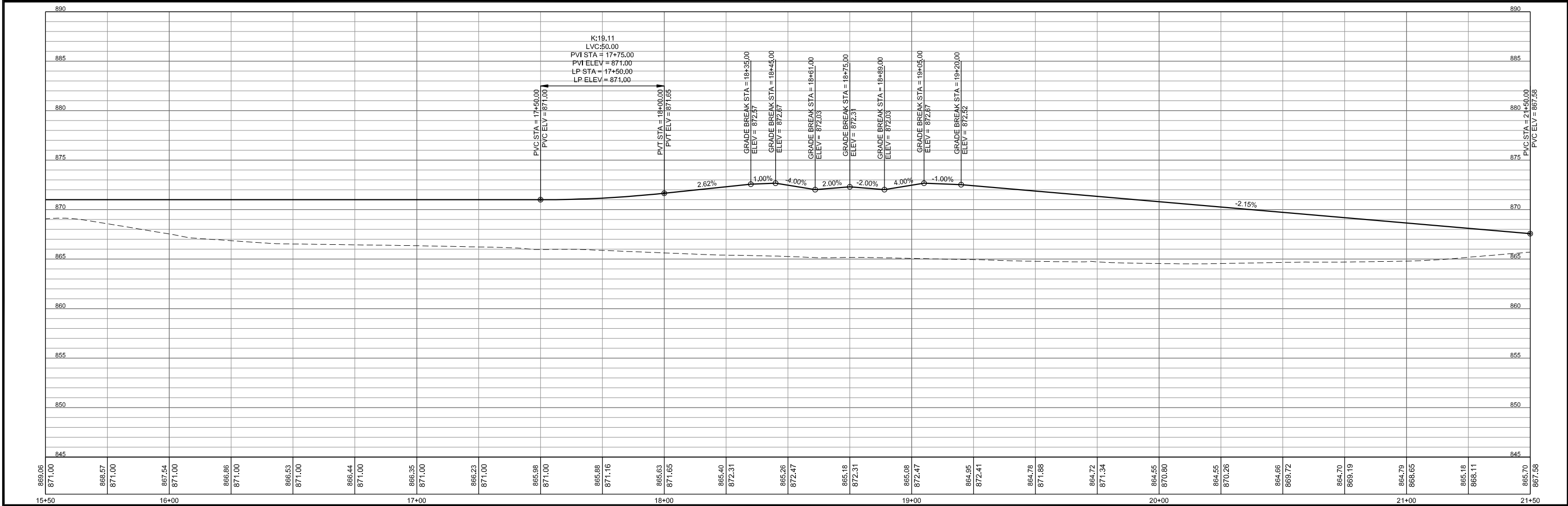
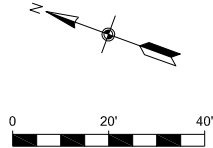
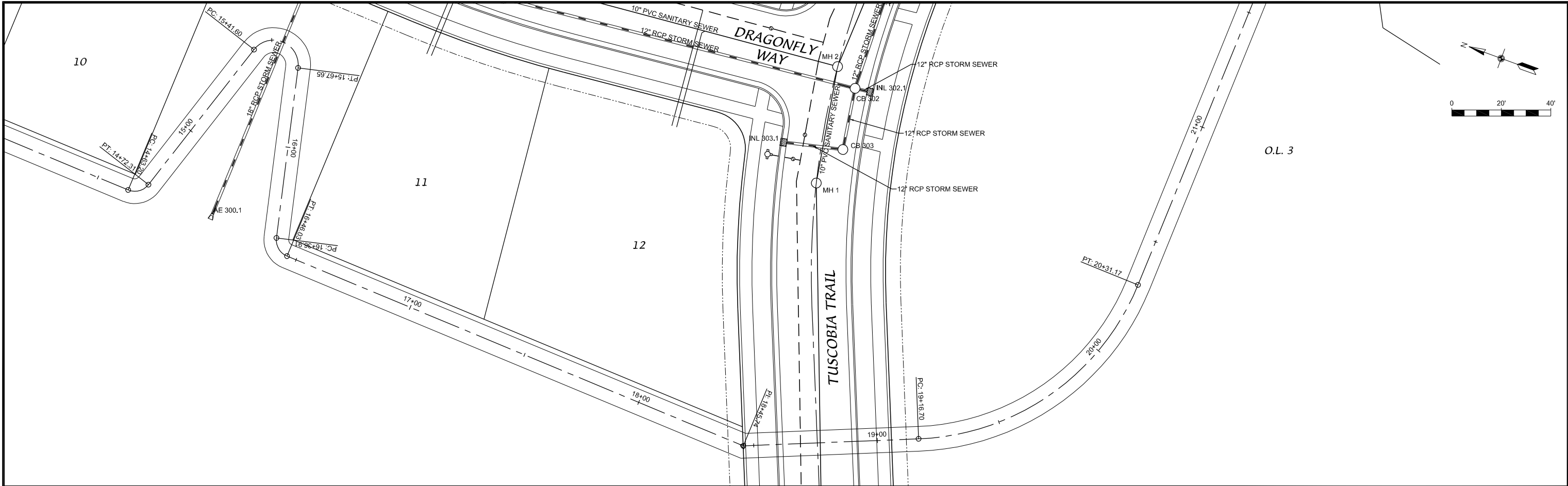


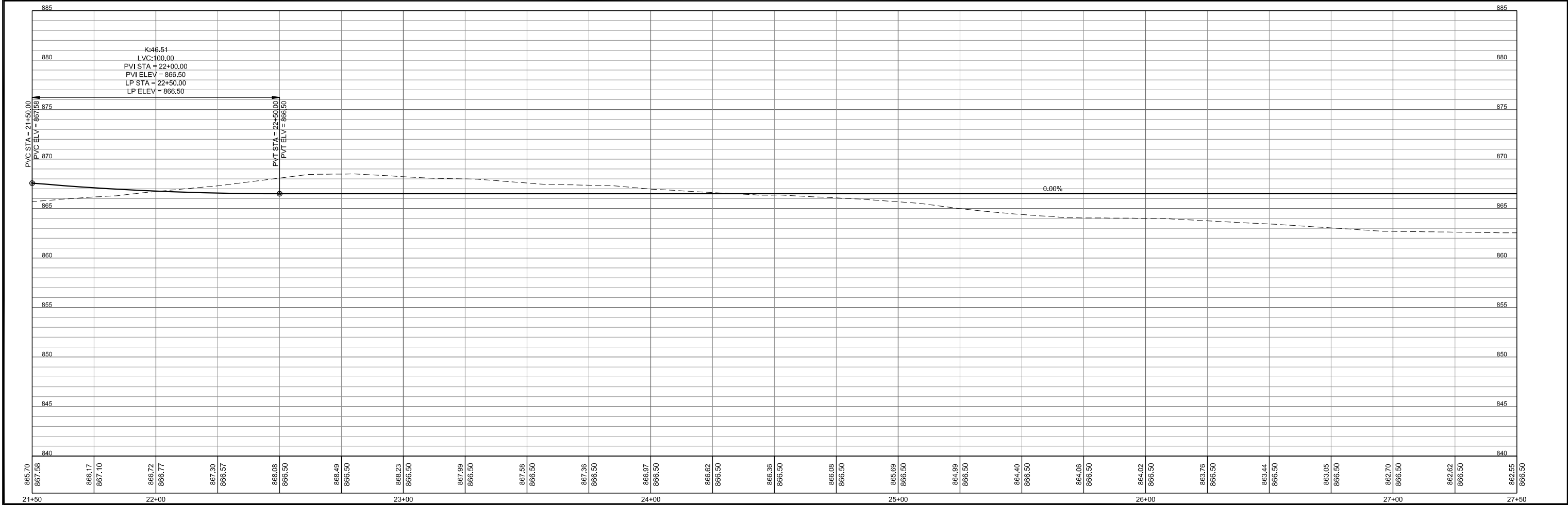
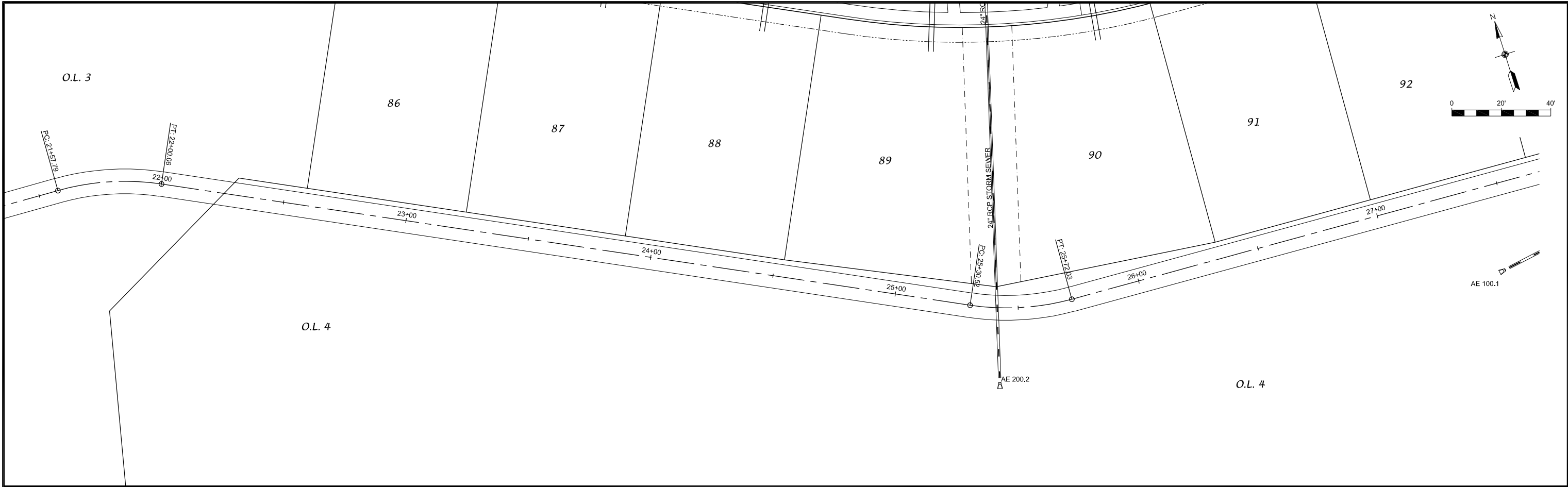




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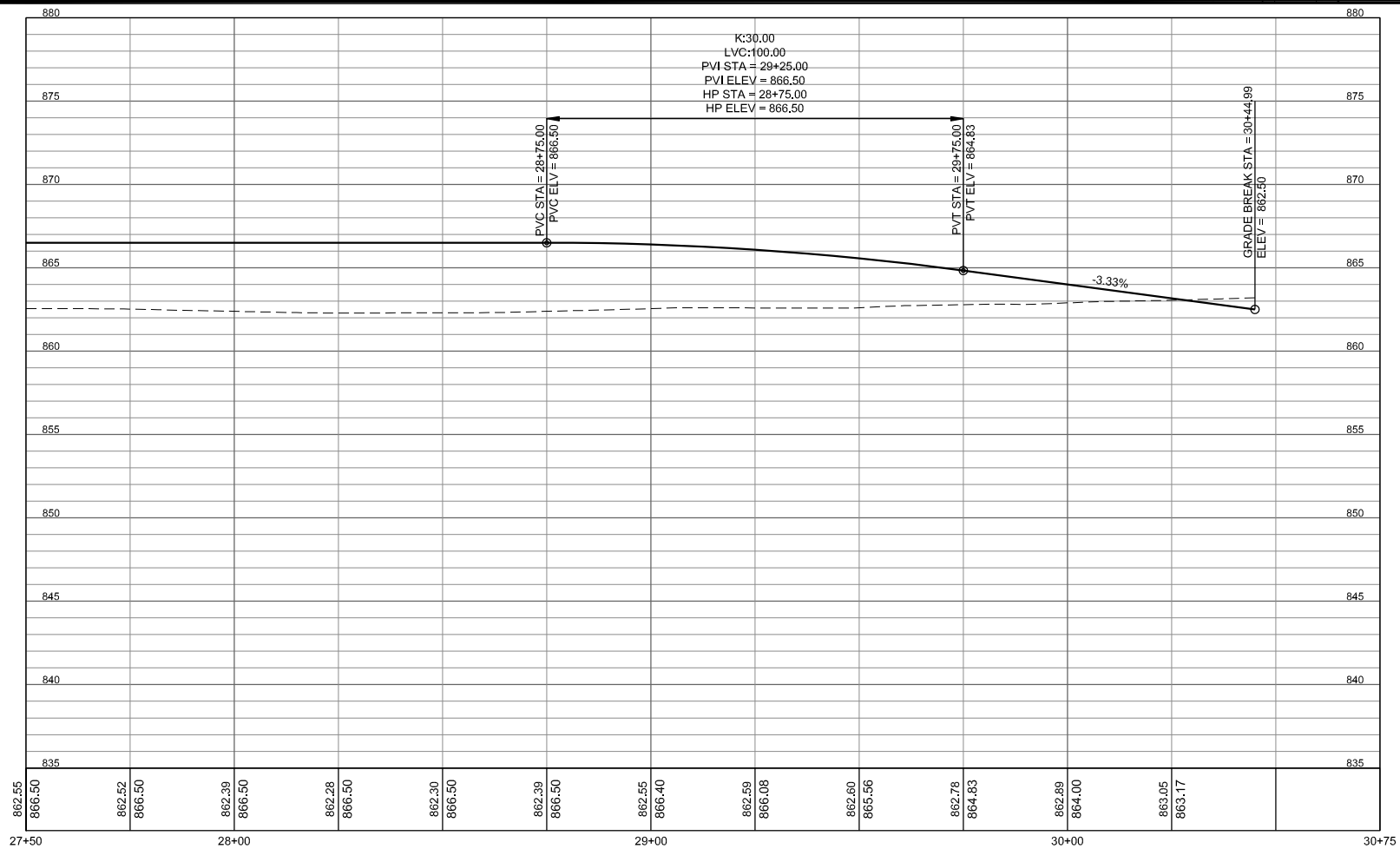
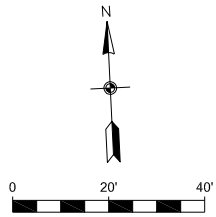
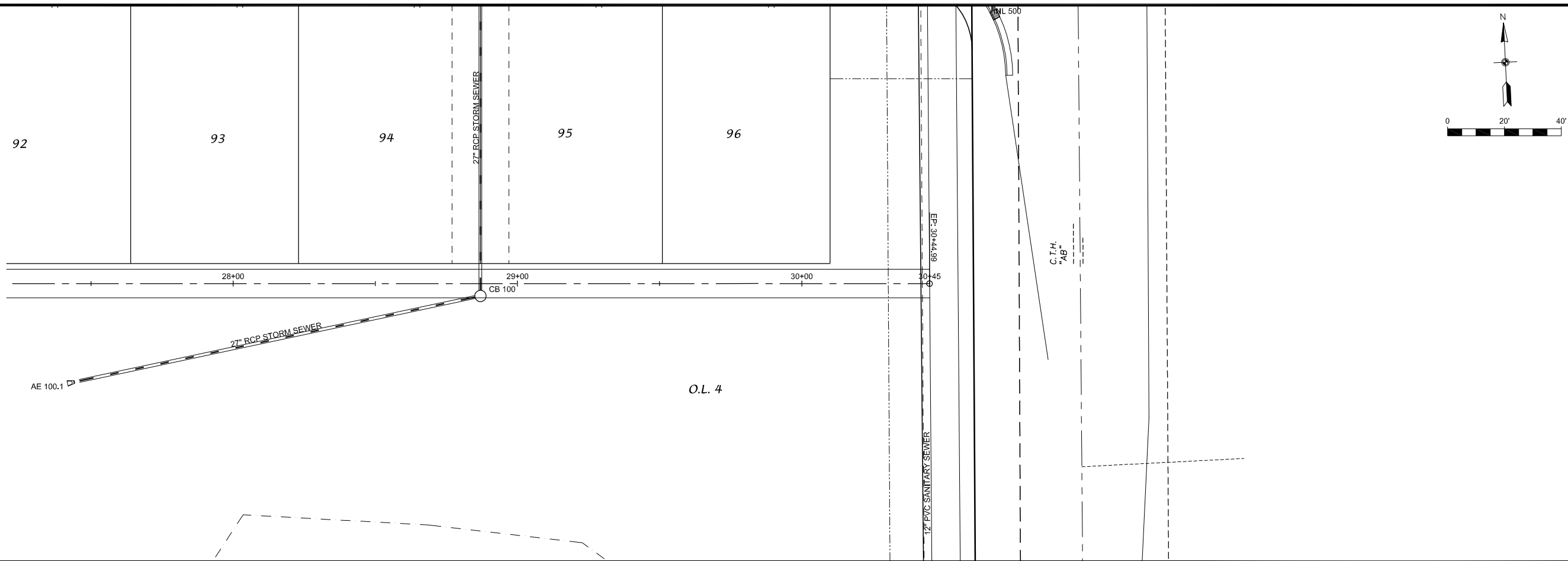


Diagram illustrating the construction details of a stone retaining wall:

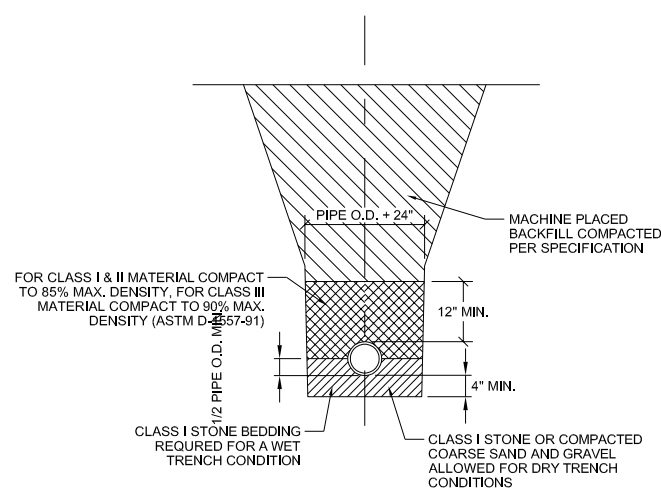
- LIMESTONE BOULDERS**: The main structure of the wall.
- 8" MIN.**: Minimum top width of the wall.
- 6°**: Slope angle of the wall face.
- 12'**: Wall height.
- GRADE**: Ground surface line.
- ¾" CLEAR LIMESTONE BACKFILL, DO NOT BACKFILL W/ LIMESTONE LOWER THAN FINISHED GRADE AT FRONT OF WALL**: Backfill material behind the wall.
- 4" DRAINAGE TILE (DAYLIGHT OR CONNECT TO DRAINAGE SYSTEM)**: Drainage system at the base.
- WOVEN FILTER FABRIC (TYP)**: Filter fabric at the base of the backfill.
- VARIES (2.5' MIN.)**: Variable base width of the wall.

NOT TO SCALE

CLASS I MATERIAL: ANGULAR 1/4" TO 3/4" GRADED STONE

CLASS II MATERIAL: COARSE SANDS AND GRAVELS

CLASS III MATERIAL: FINE SAND AND CLAYEY GRAVELS,
INCLUDING FINE SANDS, SAND-CLAY MIXTURES AND
GRAVEL-CLAY MIXTURES

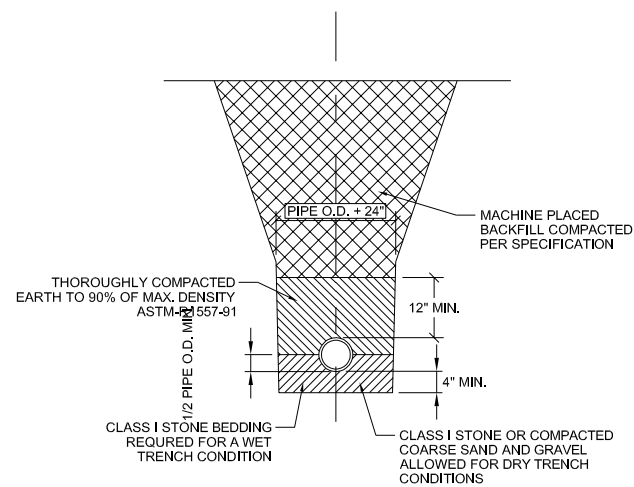


FLEXIBLE PIPE - PVC, ABS, HDPE. - ASTM D-3321
NOT TO SCALE

CLASS I MATERIAL: ANGULAR 1/4" TO 3/4" GRADED STONE

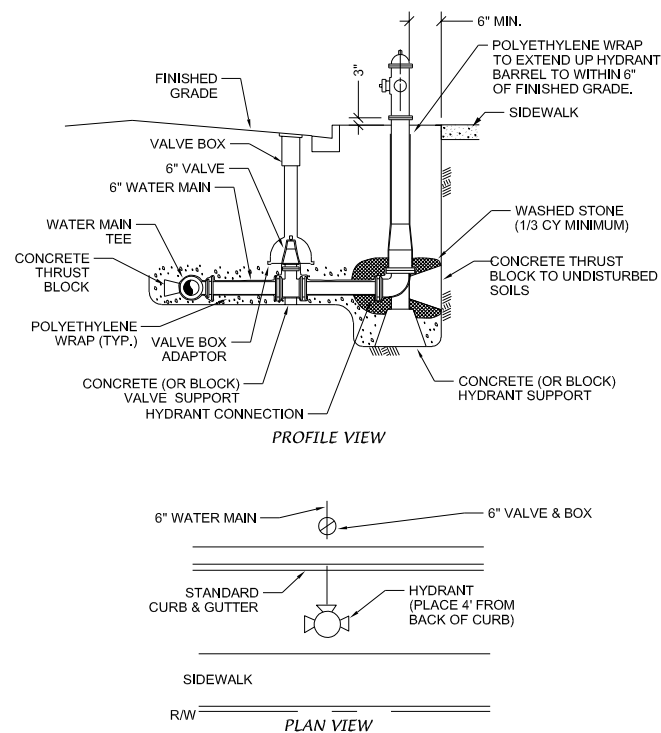
CLASS II MATERIAL: COARSE SANDS AND GRAVELS

CLASS III MATERIAL: FINE SAND AND CLAYEY GRAVELS,
INCLUDING FINE SANDS, SAND-CLAY MIXTURES AND
GRAVEL-CLAY MIXTURES

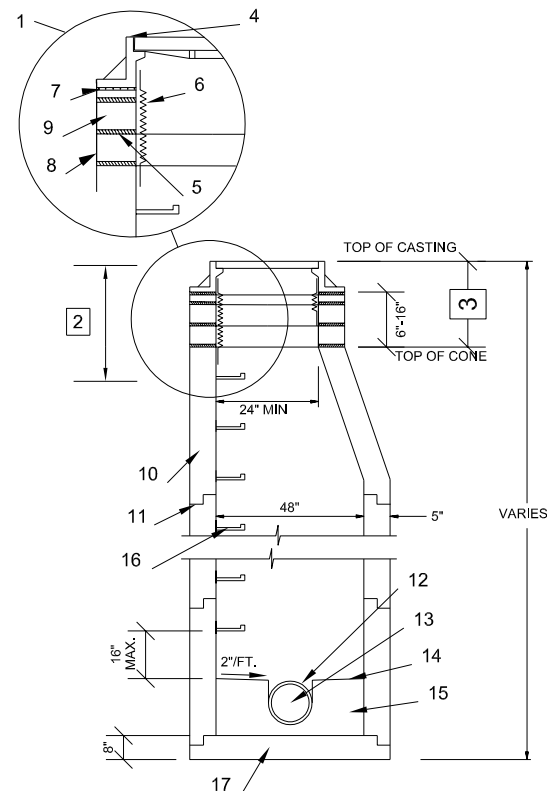


RIGID WALL PIPE - RCP, D.I., ETC. - ASTM C-12
NOT TO SCALE

1. HYDRANT SHALL BE WATEROUS PACER MODEL WB-67 OR MUELLER SUPER CENTURIAN A423.
2. HYDRANT BURY TO BE 7'-0".
3. HYDRANT TO BE LOCATED 4' FROM BACK OF CURB.
4. ALL JOINTS BETWEEN THE HYDRANT CONNECTION & WATER MAIN TEE TO BE RESTRAINED WITH MEGA-LUGS OR LOCKING GASKETS. HYDRANT CONNECTION TO BE MEGA LUGGED TO WATER MAIN.

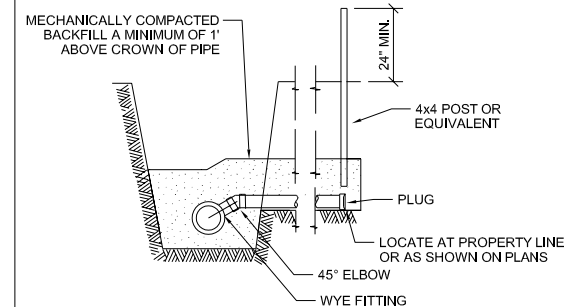


NOT TO SCALE



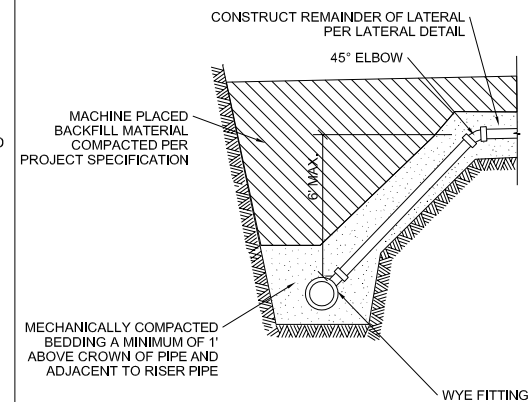
NOT TO SCALE

1. SEWER LATERAL TO BE PLACED AT 1/8 TO 1/4 INCH PER FOOT SLOPE.
2. SEWER LATERAL MATERIAL TO BE THE SAME AS THE MAIN LINE MATERIAL.
3. RISERS ARE REQUIRED WHERE SEWER LATERAL IS GREATER THAN 10 FEET DEEP.
4. TRACE WIRE IS REQUIRED. TRACE WIRE TO TERMINATE IN TRACE WIRE TERMINAL BOX LOCATED AT THE 4x4 TIMBER POST.



NOT TO SCALE

1. SEWER LATERAL WYE TO BE PLACED AT A 45° ANGLE FROM HORIZONTAL.
2. RISER TO BE CONSTRUCTED AT 45° ANGLE FROM HORIZONTAL TO THE PROPOSED ELEVATION OF THE SEWER LATERAL.
3. SEWER RISER MATERIAL TO BE THE SAME AS THE MAIN LINE MATERIAL.
4. TRACE WIRE IS REQUIRED. TRACE WIRE TO TERMINATE IN TRACE WIRE TERMINAL BOX LOCATED AT TEH 4X4 TIMBER POST.



NOT TO SCALE

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DETAILS

ROSEWOOD FIELDS

VILLAGE OF MCFARLAND, DANE COUNTY, WISCONSIN

DATE: 08-25-20
REVISED:

DRAWN BY: KWB

FN: 20-05-132

Sheet Number:

26 of 26

**ROSEWOOD FIELDS
VILLAGE OF MCFARLAND
COUNTY HWY AB
DANE COUNTY, WISCONSIN**

STORM WATER MANAGEMENT REPORT

OWNER

**VH Rosewood Fields, LLC
c/o Chris Ehlers
6801 South Towne Drive
Madison, WI 53713**

August 24, 2020

PREPARED BY

**D'Onofrio, Kottke & Associates, Inc.
7530 Westward Way
Madison, Wisconsin 53717
608.833.7530**

FN: 19-04-113

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EXHIBITS

1. Site Location Map
2. Site Soils Map
3. Existing Drainage Plan
4. Proposed Drainage Plan
5. Detention/Infiltration Basin Layout
6. Aerial Photo
7. USGS Map
8. Wetland Indicator Map
9. West Detention Basin & Bypass Channel Cross-Section Exhibit

APPENDICES

- A. Detention Pond & Infiltration Basin Details
- B. Sediment Reduction Calculations
- C. Infiltration Design
- D. Hydrocad Output
- E. Soils Report
- F. Wetland Report
- G. Draft Maintenance Agreement

INTRODUCTION

The intent of this report is to provide details on how the proposed “Rosewood Fields” residential plat will be developed so that it is constructed in accordance with applicable storm water management standards.

The proposed development is approximately a 36 acre residential plat located in the Village of McFarland. The site is located to the east of the Park View Estates plat, north of the Wisconsin and Southern railroad tracks and west of County Hwy AB in the NE $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 2 Township 06N, Range 10E. More specifically parcel number 0610-024-8070-0. A project location map can be found in Exhibit #1.

The existing layout of the site consists mostly of agricultural tilled land with surface water generally draining to the south and east sides of the site and eventually out of the plat. The drainage is split by a ridge running through the middle of the site from the north to south. In developed conditions the plat will create single family lots, 2-stormwater outlots and open space/parkland. The runoff from the plat will mostly be routed to wet detention/infiltration basin systems for stormwater treatment prior to leaving the site. The soil conditions on site consist of hydrologic soil group type B soils, with some type C soils. A site soils map can be found in Exhibit #2.

The proposed future improvements for this plat require land disturbing activity in excess of one acre and the future cumulative addition of 20,000 square feet of impervious surface area. Therefore, according to the Village of McFarland and State of Wisconsin ordinances, the site requires storm water management approvals and permits.

STANDARDS & RESULTS

The proposed development requires the following storm water management performance standards.

Sediment Control

Standard: Reduce, to the maximum extent practical, total suspended solids load leaving the site by eighty percent (80%) based on the average annual rainfall.

Design Results: Sediment from the site will be reduced by 80% by routing the site runoff through two wet detention basin/infiltration basin systems prior to leaving the site. A minimum of 60% of the sediment will be removed by the wet detention basins prior to entering the infiltration basins. WinSLAMM was used to model the sediment load reduction. The basin system was sized to compensate for any stormwater that drains directly offsite. See appendix B for sediment reduction calculations.

Temperature Control

Standard: For development of sites within thermally sensitive areas, provisions and practices to reduce the temperature of the storm water runoff shall be included.

Design Results: The proposed site does not fall within a defined thermally sensitive area.

Runoff Rate Control

Standard: For new developments, storm water management practices shall be designed and implemented to maintain post-development peak runoff discharge rates at predevelopment rates for the 1, 2, 10, 25 and 100 year-24 hour design storm events.

Design Results: The proposed detention basin system was designed to maintain the development's existing peak runoff rates for the 1, 2, 10, 25 and 100 year- 24 hour storm events. The peak flow comparison chart for the site can be found in the stormwater management measures section of this report and the HydroCAD output can be found within Appendix D. The soil curve number for the post development lawn areas has been dropped by a soil class to 71.

The existing and proposed runoff curve numbers used for this development are as follows:

Description	CN
Existing Type B Soil	58
Existing Type C Soil	71
Impervious Area	98
Proposed 60% Impervious Residential	87
Proposed 70% Impervious Residential	90
Proposed Park Area/ Assumed 10% Impervious	74
Proposed 10% Impervious Lightly Disturbed Areas	62

Along with analyzing the plat drainage information, the offsite stormwater draining through and around the site was also included in the model.

Infiltration

Standard: For new developments, design practices to infiltrate sufficient runoff volume so the post-development infiltration volume shall be at least 90% of the predevelopment infiltration volume.

Design Results: The proposed development was designed to meet the 90% stayon requirement for the plat through two infiltration basins. The infiltration basins were sized using WinSLAMM modeling software. A minimum of 60% sediment reduction will occur in the proposed wet detention basin cells prior to entering the designed infiltration basins. The basin system was sized to compensate for any stormwater that drains directly offsite. The infiltration design calculations can be found in Appendix C.

STORM WATER MANAGEMENT MEASURES

The proposed plat was modeled as five drainage areas in developed conditions and as two drainage areas in pre-developed conditions. The stormwater from the site will be treated by routing runoff to two wet detention/infiltration basin systems located at the west and southeast sides of the plat. Peak flow, sediment reduction, and stayon requirements will be met for the entire plat with this system.

HydroCAD Stormwater Modeling software has been used to analyze the stormwater runoff characteristics for the development. HydroCAD uses the TR-55 methodology for determining peak discharge rates. The model output shows the runoff leaving the site in existing and proposed conditions. The site was designed to utilize two combination wet detention basin and infiltration basin systems prior to leaving the site in proposed conditions. In these systems, the wet detention chamber in each basin will limit flow into the infiltration basin chamber for the 1yr-24hr storm event to remove sediment before entering the infiltration basin. During larger storms, the two chambers in the basin systems will act as one basin to limit peak flow from the site (see basin details in Appendix A). The detention and infiltration basins were modeled dynamically to better represent the elevations of the two chambers working together. The peak flow results from the stormwater modeling and basin design are shown in the chart on the next page. The chart shows the proposed results from each individual drainage area along with a comparison of the overall existing and proposed peak flows leaving at the edge of the site. The detention basin system will maintain the combined existing peak runoff rates leaving the plat on south, east and overall for the 1, 2, 10, 25 and 100 year- 24 hour storm events.

The offsite west, northeast and north drainage areas were also included in this model to show how the offsite water will be routed through the site. A bypass channel was sized to route this offsite water around the west side of the site, through three culverts under Tuscobia Trail and eventually to the south where it flows in existing conditions. The west drainage was analyzed to show that stormwater elevation draining through the bypass channel and across Tuscobia Trail will be 2' lower than the existing window sill openings along the western properties for a 100 year event. See exhibit 9 for cross-section information for this area.

Infiltration modeling for the site was calculated using WinSLAMM software and meets the 90% predevelopment standard per the ordinance. The infiltration basins will be implemented when at a minimum 75% of the plat area draining to the basin is complete. WinSLAMM was also used to perform the sediment reduction calculations for the proposed basin system. Appendix B contains the calculation results. The stormwater management system will provide 80% sediment removal for the plat.

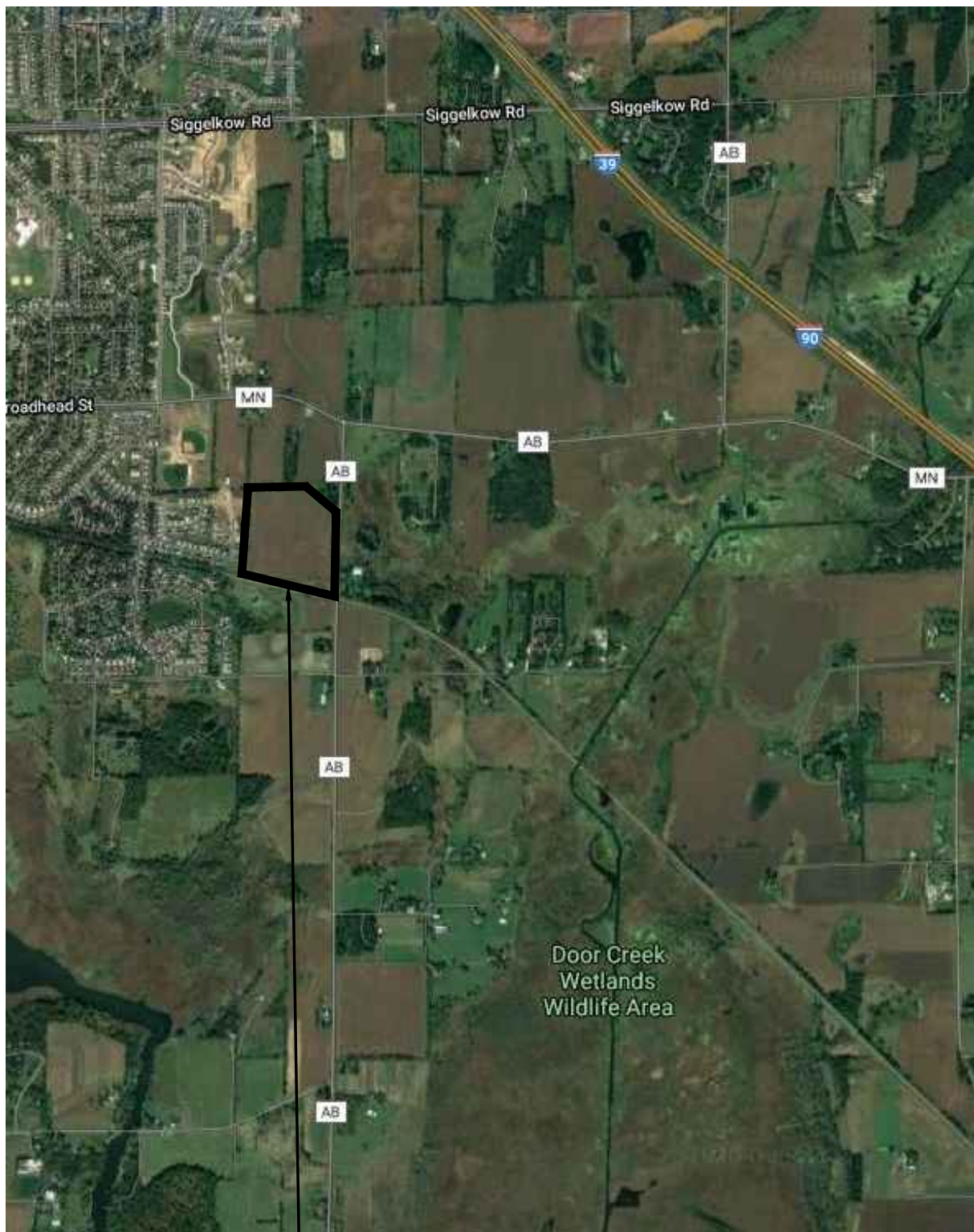
PEAK FLOW COMPARISION CHART

24-HR STORM EVENT (PEAK FLOW IN CFS)-PEAK FLOW COMPARISION					
	1YR	2YR	10YR	25YR	100YR
TOTAL EXISTING COMBINED FLOW THOUGH SITE	4.35	9.71	45.73	83.98	166.65
TOTAL PROPOSED COMBINED FLOW WITH BASIN TREATMENT	2.78	6.08	32.03	64.48	127.06
TOTAL PROPOSED COMBINED FLOW WITHOUT DETENTION	47.07	58.98	109.30	153.43	241.31
TOTAL EXISTING FLOW LEAVING SOUTH SIDE OF SITE	3.09	7.09	34.57	64.14	128.47
TOTAL PROPOSED/TREATED FLOW LEAVING SOUTH SIDE OF SITE	2.29	5.10	28.85	58.68	116.15
TOTAL EXISTING FLOW LEAVING EAST SIDE OF SITE	1.53	3.22	13.70	24.07	45.72
TOTAL PROPOSED FLOW LEAVING EAST SIDE OF SITE	1.07	2.09	7.66	12.86	23.52
OFFSITE FLOWS					
EXISTING WEST OFFSITE DRAINAGE	0.40	0.97	5.42	10.27	20.81
EXISTING NW OFFSITE DRAINAGE	1.34	3.20	16.34	30.61	61.96
EXISTING N OFFSITE DRAINAGE	0.59	1.00	2.96	4.70	8.21
EXISTING NE OFFSITE DRAINAGE	0.86	1.72	6.22	10.39	18.89
FLOW TO WEST BYPASS CHANNEL	1.68	4.02	20.37	38.23	77.65
PRO FLOWS DIRECTLY OFFSITE					
PRO SOUTH DIRECTLY OFFSITE	0.66	1.22	4.24	7.11	13.05
PRO EAST DIRECTLY OFFSITE	0.29	0.55	1.94	3.24	5.94
WEST WET DETENTION BASIN: OUTLET = 867.0, TOP OF BERM = 871.0					
PROPOSED FLOW INTO DETENTION	13.72	17.15	30.36	40.49	58.97
ROUTED DETENTION	0.44	0.50	4.06	11.60	22.34
ELEVATION	868.26	868.58	869.19	869.44	870.06
WEST INFILTRATION BASIN: BOTTOM = 866.0, OUTLET = 867.0, TOP OF BERM = 871.0					
ROUTED INFILTRATION OFFSITE	0.41	0.47	2.84	6.11	9.14
ELEVATION	867.27	867.30	867.88	868.74	869.97
TUSCOBIA TRAIL STREET CROSSING: STREET OVERFLOW LOW POINT= 869.55, 3-38"X24" CULVERTS INV = 865.00					
ROUTED THROUGH STREET CROSSING	1.77	4.10	20.61	42.99	85.20
ELEVATION	865.26	865.40	865.95	866.45	867.43
EAST WET DETENTION BASIN: OUTLET = 862.0, TOP OF BERM = 866.0					
PROPOSED FLOW INTO DETENTION	33.13	40.59	67.99	88.35	124.79
ROUTED DETENTION	1.85	2.11	16.76	25.39	58.85
ELEVATION	863.55	863.90	864.50	864.97	865.63
EAST INFILTRATION BASIN: BOTTOM = 861.0, OUTLET = 862.0, TOP OF BERM = 866.0					
ROUTED INFILTRATION OFFSITE	1.56	1.82	8.24	10.85	19.36
ELEVATION	862.54	862.60	863.64	864.35	865.58

CONCLUSIONS

As the results indicate, the storm water management system for the proposed development meets the Village of McFarland and State of Wisconsin Ordinances. The peak flow, sediment control and infiltration requirements will be met for this site at the time of development.

EXHIBITS



PROJECT LOCATION

LOCATION MAP

ROSEWOOD FIELDS

VILLAGE OF MCFARLAND, WISCONSIN

D'ONOFRIO KOTTKE AND ASSOCIATES, INC.

7530 Westward Way, Madison, WI 53717

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DRAWN BY: GVP

EXHIBIT 1



SOILS MAP

ROSEWOOD FIELDS

VILLAGE OF MCFARLAND, WISCONSIN

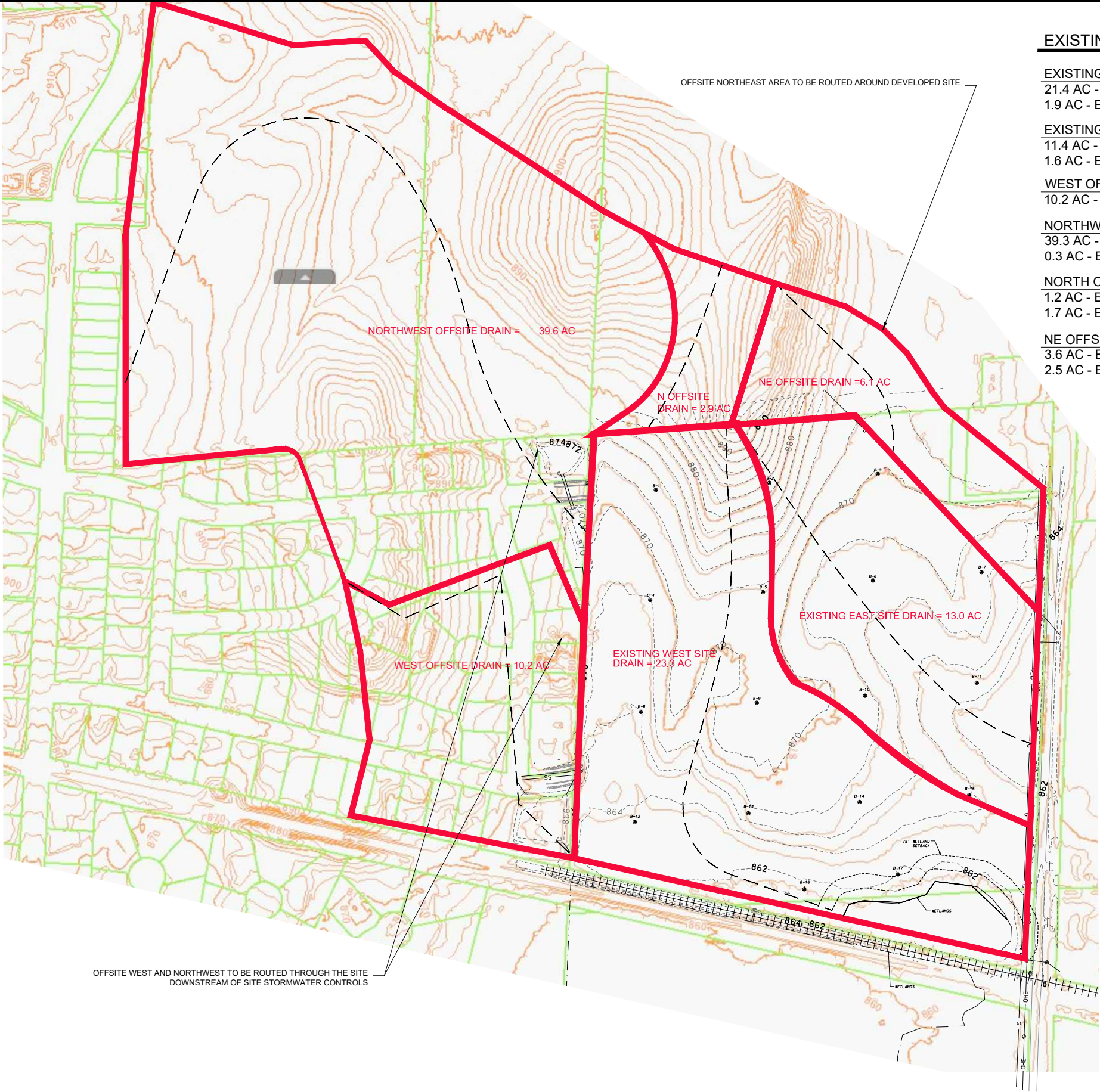
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EXHIBIT 2

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EXISTING DRAINAGE BASIN INFORMATION

EXISTING WEST SITE DRAINAGE AREA = 23.3 AC	
21.4 AC - EXISTING TYPE B=	CN 58
1.9 AC - EXISTING TYPE C=	CN 71
EXISTING EAST SITE DRAINAGE AREA = 13.0 AC	
11.4 AC - EXISTING TYPE B=	CN 58
1.6 AC - EXISTING TYPE C=	CN 71
WEST OFFSITE DRAINAGE AREA = 10.2 AC	
10.2 AC - EXISTING TYPE B=	CN 58
NORTHWEST OFFSITE DRAINAGE AREA = 39.6 AC	
39.3 AC - EXISTING TYPE B=	CN 58
0.3 AC - EXISTING TYPE C=	CN 71
NORTH OFFSITE DRAINAGE AREA = 2.9 AC	
1.2 AC - EXISTING TYPE B=	CN 58
1.7 AC - EXISTING TYPE C=	CN 71
NE OFFSITE DRAINAGE AREA = 6.1 AC	
3.6 AC - EXISTING TYPE B=	CN 58
2.5 AC - EXISTING TYPE C=	CN 71

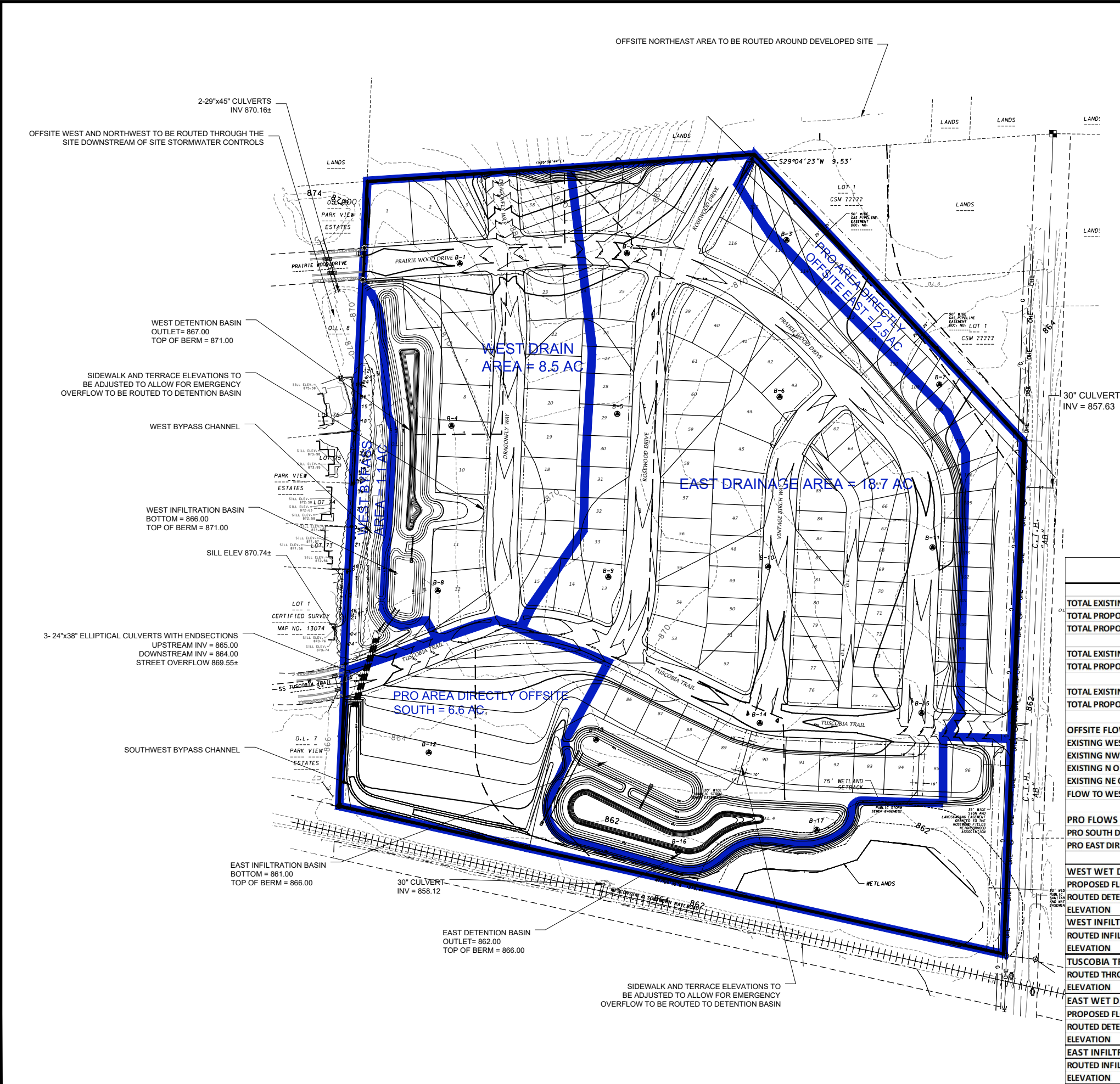
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EXISTING REGIONAL DRAINAGE PLAN
ROSEWOOD FIELDS
COUNTY HWY AB
VILLAGE OF MCFARLAND, WISCONSIN



DATE: 08/24/20
REVISED:

DRAWN BY: GVP
FN: 19-04-114
Sheet Number:
Exhibit 3



EXISTING SITE DRAINAGE BASIN INFORMATION

EXISTING DRAINAGE AREA = 36.3 AC
32.8 AC - EXISTING TYPE B= CN 58
3.5 AC - EXISTING TYPE C= CN 71

PROPOSED SITE DRAINAGE BASIN INFORMATION

PROPOSED WEST DRAINAGE AREA = 7.4 AC.
6.0 AC - 60% IMPERVIOUS RESIDENTIAL = CN 87
1.2 AC - OUTLOT AREA (10% IMP) = CN 74
0.2 AC - WET BASIN = CN 98

PROPOSED WEST BYPASS AREA = 1.1 AC.
1.1 AC - OUTLOT AREA (10% IMP) = CN 74

PROPOSED EAST DRAINAGE AREA = 18.7 AC.
12.9 AC - 60% IMPERVIOUS RESIDENTIAL = CN 87
3.6 AC - 70% IMPERVIOUS ALLEY RESIDENTIAL = CN 90
1.5 AC - OUTLOT AREA (10% IMP) = CN 74
0.7 AC - WEST BASIN = CN 98

PROPOSED AREA DIRECTLY OFFSITE EAST = 2.5 AC.
2.4 AC - 10% IMP (LIGHTLY DISTURBED/DEEP TILL)= CN 62
0.1 AC - 70% IMP ROW AREA = CN 90

PROPOSED AREA DIRECTLY OFFSITE SOUTH = 6.6 AC.
6.2 AC - ASSUME 10% IMP (LIGHTLY DISTURBED)= CN 62
0.2 AC - 40% IMP YARD AREA= CN 82
0.2 AC - 70% IMP ROW AREA = CN 90

24-HR STORM EVENT (PEAK FLOW IN CFS)-PEAK FLOW COMPARISON					
	1YR	2YR	10YR	25YR	100YR
TOTAL EXISTING COMBINED FLOW THOUGH SITE	4.35	9.71	45.73	83.98	166.65
TOTAL PROPOSED COMBINED FLOW WITH BASIN TREATMENT	2.78	6.08	32.03	64.48	127.06
TOTAL PROPOSED COMBINED FLOW WITHOUT DETENTION	47.07	58.98	109.30	153.43	241.31
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TOTAL PROPOSED/TREATED FLOW LEAVING SOUTH SIDE OF SITE	2.29	5.10	28.85	58.68	116.15
TOTAL EXISTING FLOW LEAVING EAST SIDE OF SITE	1.53	3.22	13.70	24.07	45.72
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EXISTING NE OFFSITE DRAINAGE	0.86	1.72	6.22	10.39	18.89
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PRO FLOWS DIRECTLY OFFSITE					
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PRO EAST DIRECTLY OFFSITE	0.29	0.55	1.94	3.24	5.94
WEST WET DETENTION BASIN: OUTLET = 867.0, TOP OF BERM = 871.0					
PROPOSED FLOW INTO DETENTION	13.72	17.15	30.36	40.49	58.97
ROUTED DETENTION	0.44	0.50	4.06	11.60	22.34
ELEVATION	868.26	868.58	869.19	869.44	870.06
WEST INFILTRATION BASIN: BOTTOM = 866.0, OUTLET = 867.0, TOP OF BERM = 871.0					
ROUTED INFILTRATION OFFSITE	0.41	0.47	2.84	6.11	9.14
ELEVATION	867.27	867.30	867.88	868.74	869.97
TUSCUMBIA TRAIL STREET CROSSING: STREET OVERFLOW LOW POINT= 869.55, 3-38"X24" CULVERTS INV = 865.00					
ROUTED THROUGH STREET CROSSING	1.77	4.10	20.61	42.99	85.20
ELEVATION	865.26	865.40	865.95	866.45	867.43
EAST WET DETENTION BASIN: OUTLET = 862.0, TOP OF BERM = 866.0					
PROPOSED FLOW INTO DETENTION	33.13	40.59	67.99	88.35	124.79
ROUTED DETENTION	1.85	2.11	16.76	25.39	58.85
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EAST INFILTRATION BASIN: BOTTOM = 861.0, OUTLET = 862.0, TOP OF BERM = 866.0					
ROUTED INFILTRATION OFFSITE	1.56	1.82	8.24	10.85	19.36
ELEVATION	862.54	862.60	863.64	864.35	865.58

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PROPOSED SITE DRAINAGE PLAN
ROSEWOOD FIELDS
COUNTY HWY AB
VILLAGE OF MCFAIRLAND, WISCONSIN



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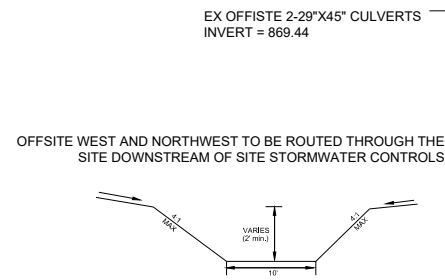
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FN: 19-04-113

Sheet Number:

Exhibit 4



WEST BYPASS CHANNEL
SECTION @ 0.75%
NOT TO SCALE

WEST BYPASS CHANNEL

PROPOSED WEST DETENTION BASIN

TOP OF POND BERM - 871.00, AREA = 32,596 SQFT
TOP OF WET POND/OUTLET - 867.00, AREA = 15,467 SQFT
BOTTOM OF WET POND - 861.00

WEST DETENTION BASIN OUTLET STRUCTURES
ROUTED TO INFILTRATION BASIN:
48" STANDPIPE
RIM = 869.00
W/4" ORIFICE @ 867.00
18" OUTLET PIPE @ 866.00

30" EQUALIZATION BERM @ 869.75

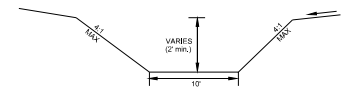
SIDEWALK AND TERRACE ELEVATIONS TO
BE ADJUSTED TO ALLOW FOR EMERGENCY
OVERFLOW TO BE ROUTED TO DETENTION BASIN

WEST INFILTRATION BASIN OUTLET STRUCTURES:
1-15" CULVERTS @ 867.00
5' OVERFLOW WEIR @ 870.00
8" CAPPED EMERGENCY DRAIN(DAYLIGHT) @ 866.00

PROPOSED WEST INFILTRATION BASIN W/ 12"
DEPRESSION ZONE

3,624 SQFT @ 866.00
10,466 SQFT (TOP OF BERM) @ 871.00

3- 24"x38" ELLIPTICAL CULVERTS WITH ENDSECTIONS
UPSTREAM INV = 865.00
DOWNSTREAM INV = 864.00
STREET OVERFLOW 869.55±
(100YR WATER ELEV (6.66" IN 24HRS) = 867.43)
(150 YR OVERFLOW ELEV (7.10 IN 24HRS) = 867.82)



SOUTHWEST BYPASS CHANNEL
SECTION @ 0.75%
NOT TO SCALE

SOUTHWEST BYPASS CHANNEL

EX OFFISTE 24" CULVERT
INV = 864.80

PROPOSED EAST INFILTRATION BASIN W/ 12"
DEPRESSION ZONE

8,400 SQFT @ 861.00
19,855 SQFT (TOP OF BERM) @ 866.00

INFILTRATION BASIN OUTLET STRUCTURES:
1-18" CULVERTS @ 862.00
8" CAPPED EMERGENCY DRAIN(DAYLIGHT) @ 861.00

4' OVERFLOW WEIR @ 865.00

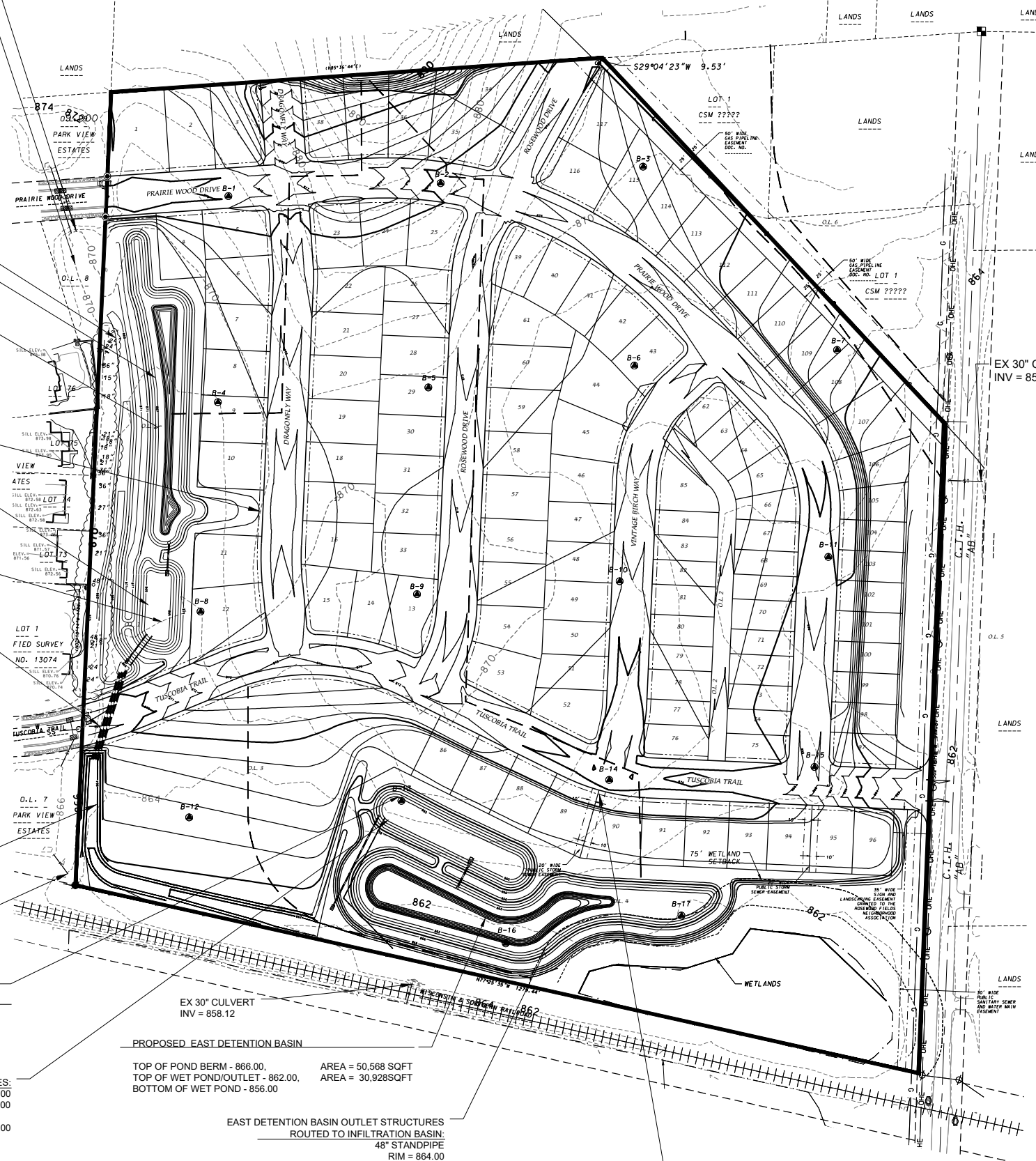
PROPOSED EAST DETENTION BASIN

TOP OF POND BERM - 866.00, AREA = 50,568 SQFT
TOP OF WET POND/OUTLET - 862.00, AREA = 30,928SQFT
BOTTOM OF WET POND - 856.00

EAST DETENTION BASIN OUTLET STRUCTURES
ROUTED TO INFILTRATION BASIN:
48" STANDPIPE
RIM = 864.00
W/8" ORIFICE @ 862.00
24" OUTLET PIPE @ 861.00

20" EQUALIZATION BERM @ 864.75

SIDEWALK AND TERRACE ELEVATIONS TO
BE ADJUSTED TO ALLOW FOR EMERGENCY
OVERFLOW TO BE ROUTED TO DETENTION BASIN



EX 30" CULVERT
INV = 857.63

DETENTION/INFILTRATION BASIN LAYOUT

ROSEWOOD FIELDS
COUNTY HWY AB

VILLAGE OF MCFARLAND, WISCONSIN



0 100

DATE: 08/24/20
REVISED:

DRAWN BY: GVP

FN: 19-04-113

Sheet Number:

Exhibit 5



AERIAL MAP

UTTERBACK PROPERTY

VILLAGE OF MCFARLAND, WISCONSIN

D'ONOFRIO KOTTKE AND ASSOCIATES, INC.

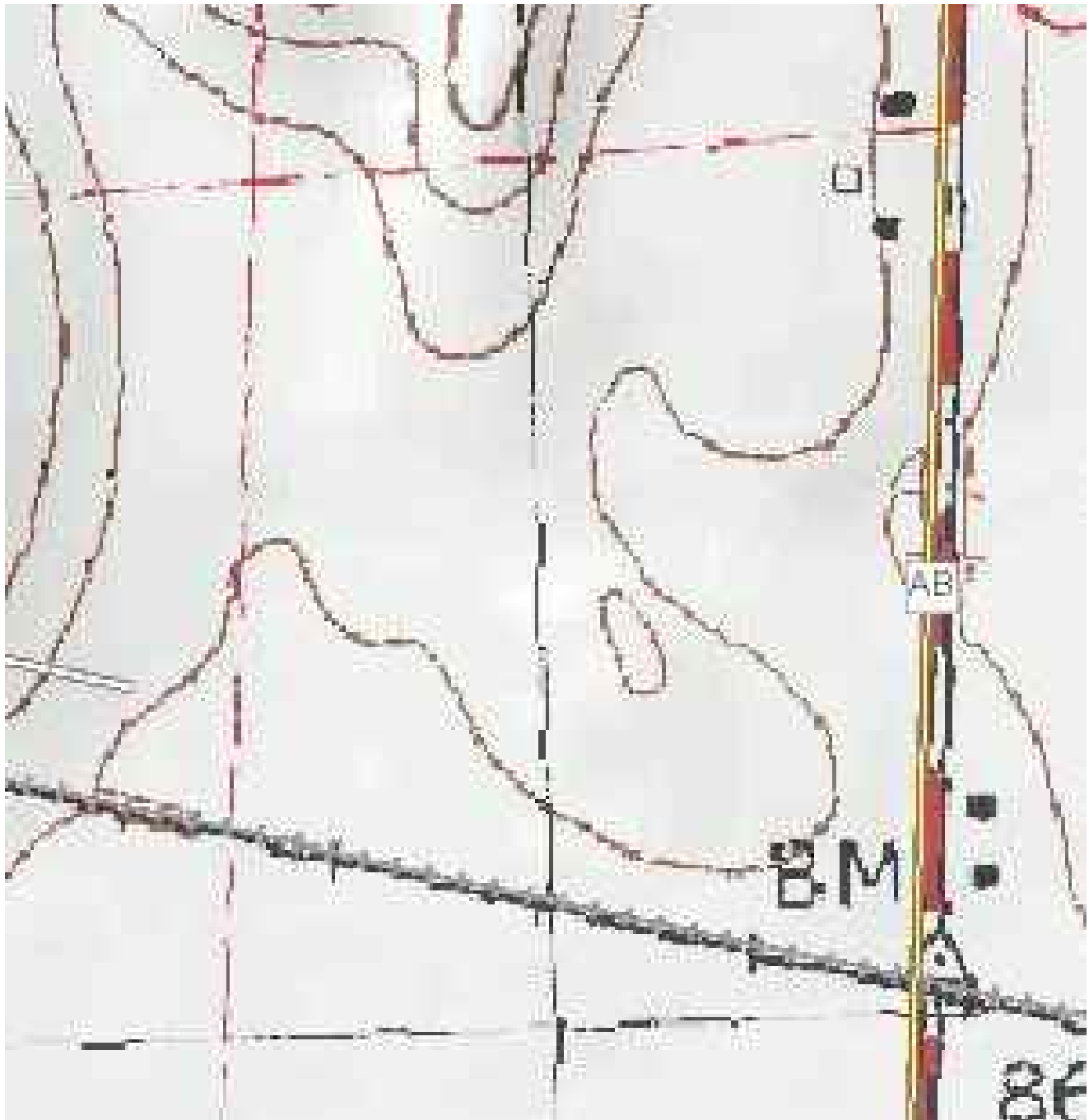
7530 Westward Way, Madison, WI 53717

Phone: 608.833.7530 • Fax: 608.833.1089

YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

DRAWN BY: GVP

EXHIBIT 6



USGS MAP

ROSEWOOD FIELDS

VILLAGE OF MCFARLAND, WISCONSIN

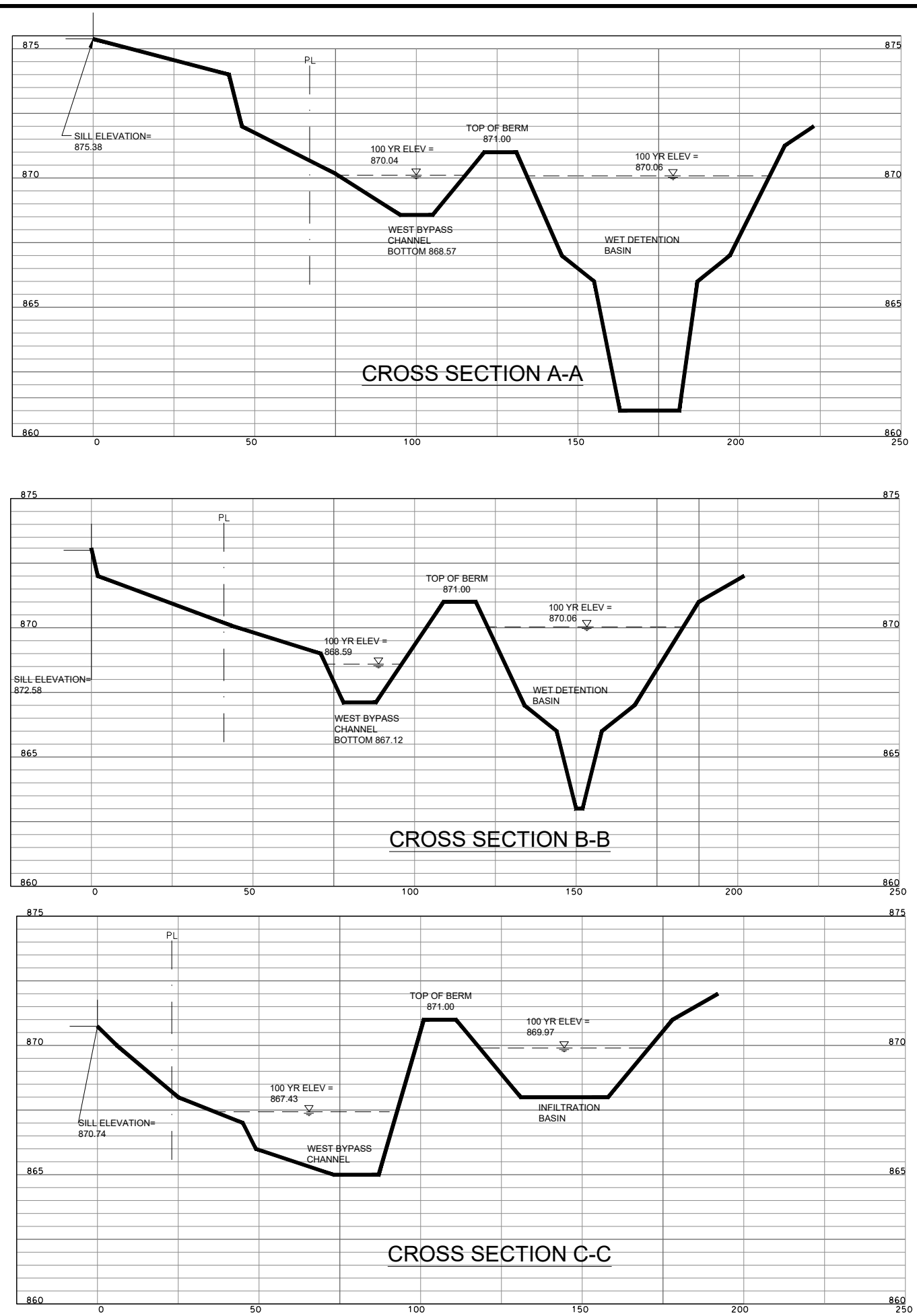
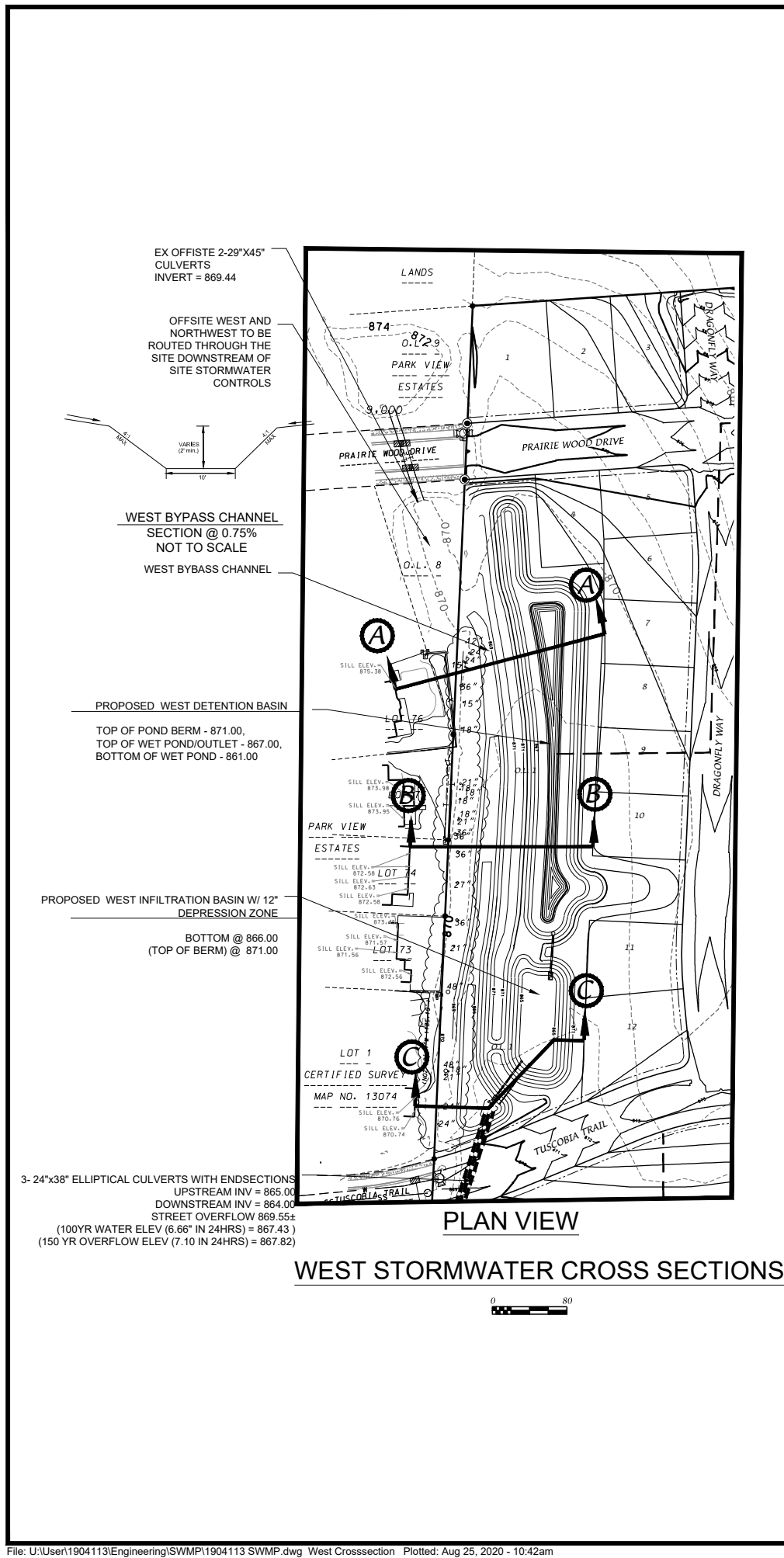
D'ONOFRIO KOTTKE AND ASSOCIATES, INC.

7530 Westward Way, Madison, WI 53717
Phone: 608.833.7530 • Fax: 608.833.1089

YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

DRAWN BY: GVP

EXHIBIT 7



WEST DETENTION BASIN & BYPASS CHANNEL CROSS-SECTION EXHIBIT

ROSEWOOD FIELDS
COUNTY HWY AB

VILLAGE OF MCFARLAND, WISCONSIN



DATE: 08/24/20
REVISED:

DRAWN BY: GVP

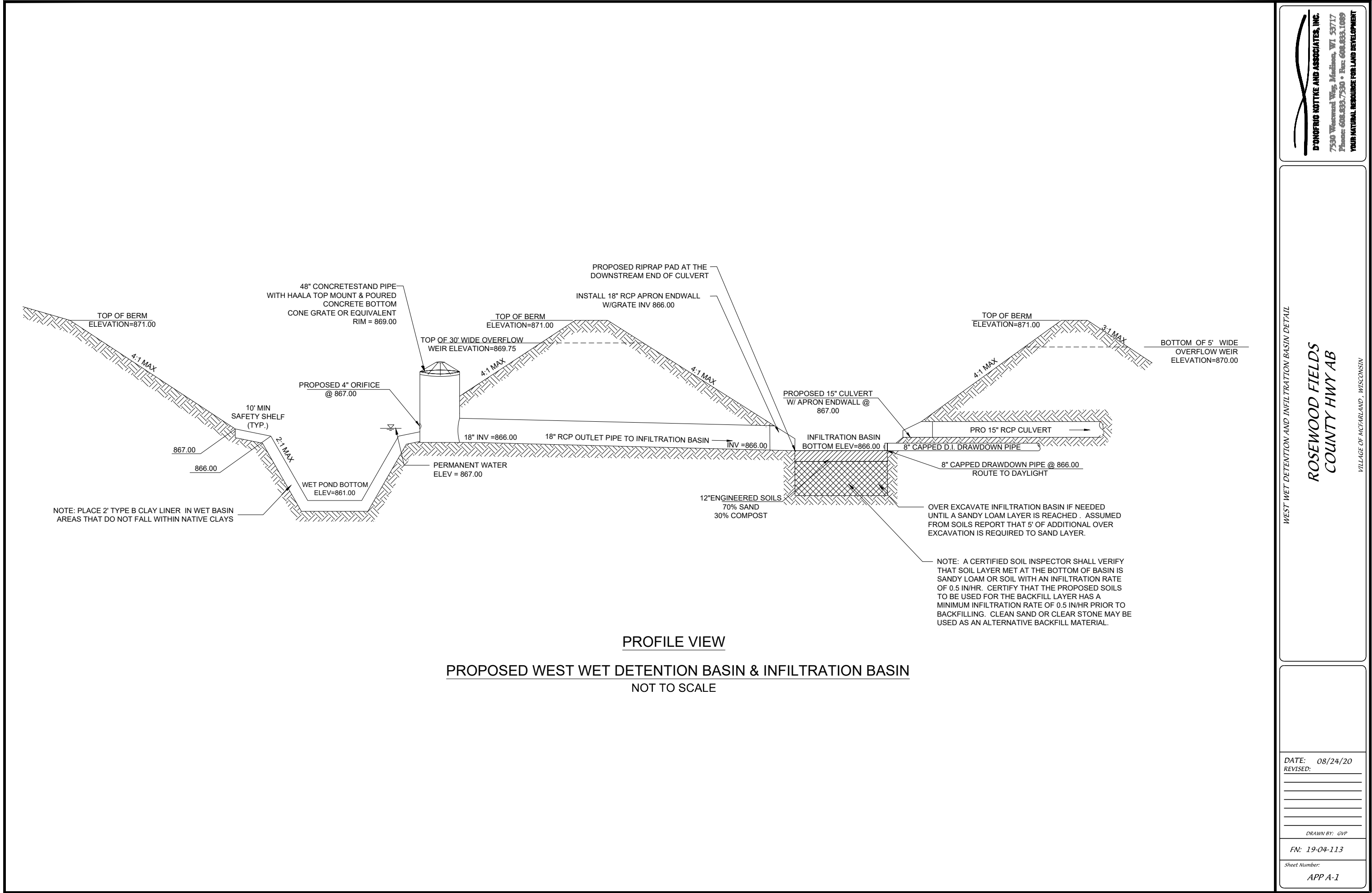
FN: 19-04-113

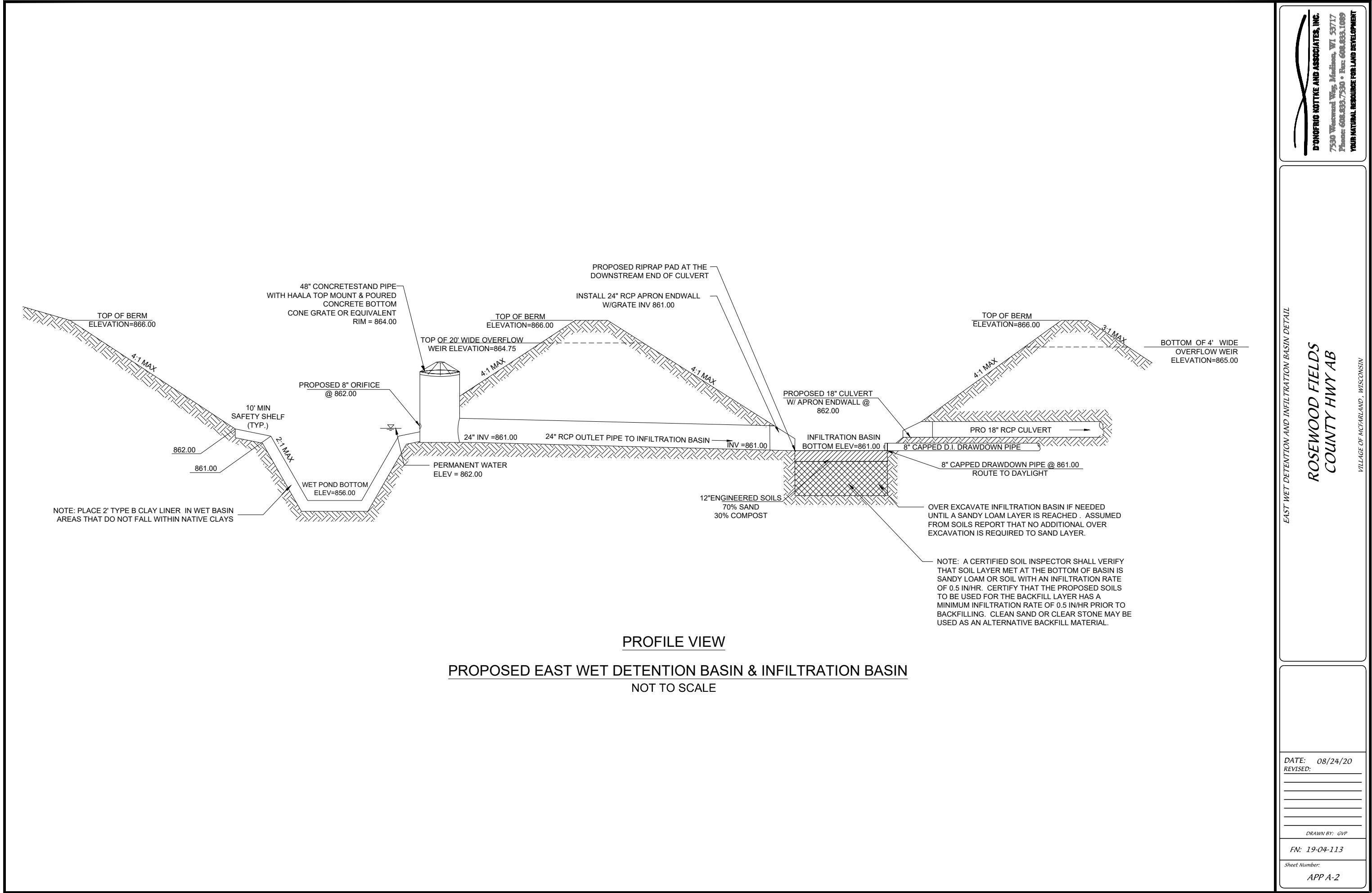
Sheet Number:

Exhibit 9

APPENDIX A

DETENTION POND & INFILTRATION BASIN DETAILS





APPENDIX B

SEDIMENT REDUCTION CALCULATIONS

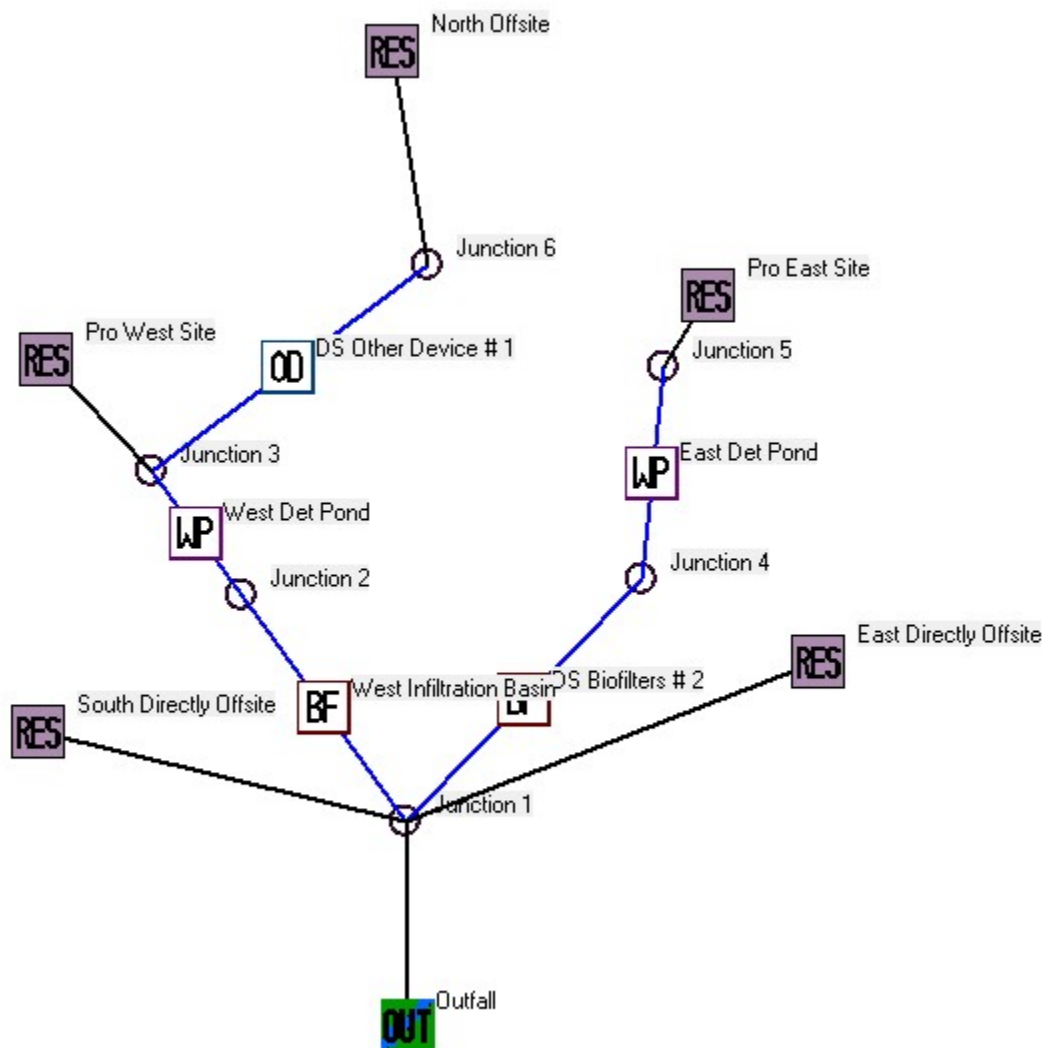
DETENTION BASIN SEDIMENTATION REDUCTION CALCULATIONS (WINSLAMM)

WinSlamm Design

The following WinSlamm design shows that 80% of sediment is being removed from the proposed site

Total site sediment reduction in developed conditions = 83.56%

Model Schematic:



Model Input Information:

Data file name: U:\User\1904113\Engineering\SWMP\Sed Pro Utterback Slamm.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: 08-24-2020 Time: 16:48:39
Site information:

LU# 1 - Residential: Pro West Site Total area (ac): 8.500
1 - Roofs 1: 1.190 ac. Pitched Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
2 - Roofs 2: 0.610 ac. Pitched Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
25 - Driveways 1: 0.790 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
31 - Sidewalks 1: 0.230 ac. Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
37 - Streets 1: 1.010 ac. Intermediate Street Length = 0.768 curb-mi Street Width (assuming two curb-mi per street mile) = 21.69922 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 4.180 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
70 - Water Body Areas: 0.490 ac. Source Area PSD File:

LU# 2 - Residential: Pro East Site Total area (ac): 18.700
1 - Roofs 1: 3.390 ac. Pitched Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
2 - Roofs 2: 1.740 ac. Pitched Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
25 - Driveways 1: 2.260 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
31 - Sidewalks 1: 0.150 ac. Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
37 - Streets 1: 2.870 ac. Intermediate Street Length = 1.713 curb-mi Street Width (assuming two curb-mi per street mile) = 27.64448 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 7.390 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
70 - Water Body Areas: 0.900 ac. Source Area PSD File:

LU# 3 - Residential: South Directly Offsite Total area (ac): 6.600
1 - Roofs 1: 0.050 ac. Pitched Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
2 - Roofs 2: 0.030 ac. Pitched Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
31 - Sidewalks 1: 0.620 ac. Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
37 - Streets 1: 0.040 ac. Intermediate Street Length = 0.044 curb-mi Street Width (assuming two curb-mi per street mile) = 15 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 5.860 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 4 - Residential: East Directly Offsite Total area (ac): 2.500
31 - Sidewalks 1: 0.240 ac. Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
37 - Streets 1: 0.070 ac. Intermediate Street Length = 0.044 curb-mi Street Width (assuming two curb-mi per street mile) = 26.25 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 2.190 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 5 - Residential: North Offsite Total area (ac): 2.900
45 - Large Landscaped Areas 1: 2.900 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Wet Detention Pond CP# 1 (DS) - West Det 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): 0.33
2. Number of orifices: 1
3. Invert elevation above datum (ft): 6

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 30
2. Weir crest width (ft): 10
3. Height from datum to bottom of weir opening: 7.75

Outlet type: Vertical Stand Pipe

1. Stand pipe diameter (ft): 4
2. Stand pipe height above datum (ft): 7

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	0.10	0.0195	0.00	0.00
2	1.00	0.0344	0.00	0.00
3	2.00	0.0569	0.00	0.00
4	3.00	0.0894	0.00	0.00
5	4.00	0.1220	0.00	0.00
6	5.00	0.1560	0.00	0.00
7	6.00	0.3550	0.00	0.00
8	7.00	0.4490	0.00	0.00
9	8.00	0.5470	0.00	0.00
10	9.00	0.6460	0.00	0.00
11	10.00	0.7480	0.00	0.00

Control Practice 2: Biofilter CP# 1 (DS) - West Infiltration Basin

1. Top area (square feet) = 10466
2. Bottom area (square feet) = 3624
3. Depth (ft): 5
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0.5
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 0.1
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
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): 5
2. Weir crest width (ft): 10
3. Height of datum to bottom of weir opening: 4

Outlet type: Surface Discharge Pipe

1. Surface discharge pipe outlet diameter (ft): 1.25
2. Pipe invert elevation above datum (ft): 1
3. Number of surface pipe outlets: 1

Control Practice 3: Wet Detention Pond CP# 2 (DS) - East Det 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): 0.67
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: 8.75

Outlet type: Vertical Stand Pipe

1. Stand pipe diameter (ft): 4
2. Stand pipe height above datum (ft): 8

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	0.10	0.2030	0.00	0.00
2	1.00	0.2380	0.00	0.00
3	2.00	0.2750	0.00	0.00
4	3.00	0.3130	0.00	0.00
5	4.00	0.3520	0.00	0.00
6	5.00	0.3900	0.00	0.00
7	6.00	0.7100	0.00	0.00
8	7.00	0.8190	0.00	0.00
9	8.00	0.9310	0.00	0.00
10	9.00	1.0440	0.00	0.00
11	10.00	1.1610	0.00	0.00

Control Practice 4: Biofilter CP# 2 (DS) - DS Biofilters # 2

1. Top area (square feet) = 19855
2. Bottom area (square feet) = 8400
3. Depth (ft): 5
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0.5
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 1
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
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): 10
2. Weir crest width (ft): 10
3. Height of datum to bottom of weir opening: 4

Outlet type: Surface Discharge Pipe

1. Surface discharge pipe outlet diameter (ft): 1.5
2. Pipe invert elevation above datum (ft): 1
3. Number of surface pipe outlets: 1

Control Practice 5: 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 = 0.00
 Runoff volume reduction fraction = 0

Output Sediment Reduction:

File Name:
U:\User\1904113\Engineering\SWMP\Sed Pro Utterback Slamm.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	1.130E+06		0.25	132.2 (1)	9330 (1)	
Outfall Total with Controls	488981	56.73 %	0.11	51.62	1576	83.11 %

Current File Output: Annualized Total After Outfall Controls: 490324 Years in Model Run: 1.00 1580

(1) Values reduced to remove off-site loadings due to setting Other Control Device Concentration Reduction values to 1.

Total Area Modeled: 39.200

Total Control Practice

Capital Cost	N/A
Land Cost	N/A
Annual Maintenance	N/A
Present Value of All Costs	N/A
Annualized Value of All	N/A

Receiving Water Impacts Due To (CWP Impervious Cover Model)

	Calculated Rv	Approximate Urban Stream
Without Controls	0.25	Poor
With Controls	0.11	Good

Total site sediment reduction in developed conditions = 83.11%

Data File: U:\User\1904113\Eng\slamm.mdb							
Rain File: WisReg - Madison WI							
Date: 08-24-20 Time: 4:50:26 PM							
Site Description:							
Col. #:	2	4	5	6	7	8	9
Control Practice No.	Control Practice Type	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	310884	311720	-0.269	2521	332.0	86.83
2	Biofilter	311720	115685	62.89	332.0	152.1	54.19
3	Wet Detention Pond	750693	752823	-0.284	5899	1091	81.51
4	Biofilter	752823	304609	59.54	1091	513.1	52.97
5	Other Device	18203	18203	0	258.0	0	100.0

The chart above shows that over 60% sediment reduction will occur prior to the infiltration basins.

APPENDIX C

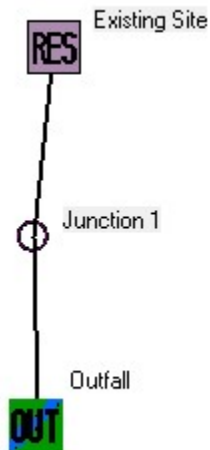
INFILTRATION DESIGN

INFILTRATION SIZING FOR THE PROPOSED PLAT

Methodology: To meet infiltration requirements, the following will show that the infiltration design will meet stayon requirements for the site. To establish the infiltration requirements, the site was modeled using WinSLAMM in existing conditions to establish an existing stayon value first. A target stayon value was established as 90% of the existing value per the ordinance. As shown in the following calculations; The site will meet the required infiltration performance standard in developed conditions

WinSLAMM Model to Establish Stayon Requirements

Model Schematic:



Model Input Information:

Data file name: U:\User\1904113\Engineering\SWMP\Ex Utterback Slamm.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.ppdpx
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
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: 04-02-2020 Time: 16:48:49
Site information:

LU# 1 - Residential: Existing Site Total area (ac): 36.300
45 - Large Landscaped Areas 1: 36.300 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Output Existing Stayon From Plat:

Data File: U:\User\1904113\Engineering\SW\MP\Ex Utterback Slamm.mdb					
Rain File: WisReg - Madison WI 1981.RAN					
Date: 04-02-20 Time: 4:50:34 PM					
Site Description:					
Runoff Volume Total (cf) at the Outfall					
Rain Number	Start Date	Rain Total (in)	Outfall Total (cf)	Rv	Total Losses (in.)
73	08/28/81	0.04	0	0.000	0.04
74	08/31/81	0.03	0	0.000	0.03
75	08/31/81	1.52	10760	0.054	1.44
76	09/07/81	0.89	5048	0.043	0.85
77	09/11/81	0.08	0	0.000	0.08
78	09/16/81	0.03	0	0.000	0.03
79	09/21/81	0.45	1398	0.024	0.44
80	09/24/81	0.90	5117	0.043	0.86
81	09/26/81	0.12	0	0.000	0.12
82	09/28/81	0.10	0	0.000	0.10
83	09/29/81	0.16	0	0.000	0.16
84	09/30/81	0.36	825.6	0.017	0.35
85	10/01/81	0.01	0	0.000	0.01
86	10/04/81	0.15	0	0.000	0.15
87	10/05/81	0.04	0	0.000	0.04
88	10/05/81	0.02	0	0.000	0.02
89	10/09/81	0.14	0	0.000	0.14
90	10/13/81	1.20	8238	0.052	1.14
91	10/15/81	0.02	0	0.000	0.02
92	10/17/81	0.95	5464	0.044	0.91
93	10/18/81	0.06	0	0.000	0.06
94	10/21/81	0.06	0	0.000	0.06
95	10/21/81	0.01	0	0.000	0.01
96	10/24/81	0.01	0	0.000	0.01
97	10/31/81	0.01	0	0.000	0.01
98	11/05/81	0.04	0	0.000	0.04
99	11/15/81	0.07	0	0.000	0.07
100	11/18/81	0.05	0	0.000	0.05
101	11/19/81	0.26	230.8	0.007	0.26
102	11/23/81	0.18	0	0.000	0.18
103	11/25/81	0.89	5048	0.043	0.85
104	11/30/81	0.37	900.6	0.018	0.36
105	12/03/81	-	-	-	-
106	12/14/81	-	-	-	-
107	12/20/81	-	-	-	-
108	12/26/81	-	-	-	-
109	12/31/81	-	-	-	-
Minimum:		0.00	0	0.000	0.01
Maximum:		2.59	68256	0.200	2.07
Average:		0.26	2090	0.012	0.25
Total:		28.81	227858		27.09

The plat has **27.09** inches of stayon in existing conditions. 90% of 27.09 inches = **24.4 inches of stayon required** to meet stayon requirements for the plat.

Proposed Infiltration Design:

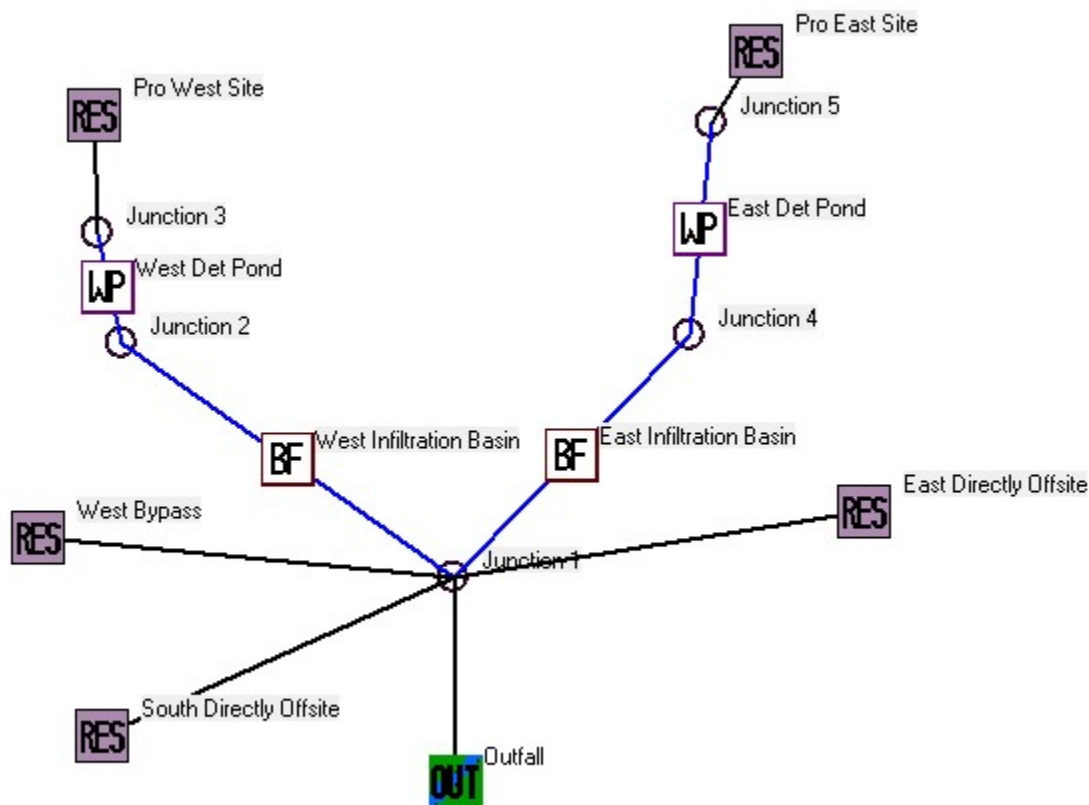
Proposed Site Infiltration Design:

Stayon Required = 24.4 inches

Note: Assume 0.5 in/hr infiltration can be attained

WinSlamm Design

Model Schematic:



Model Input Information:

Data file name: U:\User\1904113\Engineering\SWMP\Pro Utterback Slamm.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:

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: 04-02-2020 Time: 16:56:40
 Site information:

LU# 1 - Residential: Pro West Site Total area (ac): 7.400
 1 - Roofs 1: 1.190 ac. Pitched Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 2 - Roofs 2: 0.610 ac. Pitched Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 25 - Driveways 1: 0.790 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 31 - Sidewalks 1: 0.120 ac. Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 37 - Streets 1: 1.010 ac. Intermediate Street Length = 0.768 curb-mi Street Width (assuming two curb-mi per street mile) = 21.69922 ft
 Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 45 - Large Landscaped Areas 1: 3.190 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 70 - Water Body Areas: 0.490 ac. Source Area PSD File:

LU# 2 - Residential: Pro East Site Total area (ac): 18.700
 1 - Roofs 1: 3.390 ac. Pitched Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 2 - Roofs 2: 1.740 ac. Pitched Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 25 - Driveways 1: 2.260 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 31 - Sidewalks 1: 0.150 ac. Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 37 - Streets 1: 2.870 ac. Intermediate Street Length = 1.713 curb-mi Street Width (assuming two curb-mi per street mile) = 27.64448 ft
 Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 45 - Large Landscaped Areas 1: 7.390 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 70 - Water Body Areas: 0.900 ac. Source Area PSD File:

LU# 3 - Residential: South Directly Offsite Total area (ac): 6.600
 1 - Roofs 1: 0.050 ac. Pitched Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 2 - Roofs 2: 0.030 ac. Pitched Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 31 - Sidewalks 1: 0.620 ac. Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 37 - Streets 1: 0.040 ac. Intermediate Street Length = 0.044 curb-mi Street Width (assuming two curb-mi per street mile) = 15 ft
 Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 45 - Large Landscaped Areas 1: 5.860 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 4 - Residential: East Directly Offsite Total area (ac): 2.500
 31 - Sidewalks 1: 0.240 ac. Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 37 - Streets 1: 0.070 ac. Intermediate Street Length = 0.044 curb-mi Street Width (assuming two curb-mi per street mile) = 26.25 ft
 Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 45 - Large Landscaped Areas 1: 2.190 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 5 - Residential: West Bypass Total area (ac): 1.100
 31 - Sidewalks 1: 0.110 ac. Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 45 - Large Landscaped Areas 1: 0.990 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Wet Detention Pond CP# 1 (DS) - West Det 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): 0.33
2. Number of orifices: 1
3. Invert elevation above datum (ft): 6

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 30
2. Weir crest width (ft): 10
3. Height from datum to bottom of weir opening: 7.75

Outlet type: Vertical Stand Pipe

1. Stand pipe diameter (ft): 4
2. Stand pipe height above datum (ft): 7

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	0.10	0.0190	0.00	0.00
2	1.00	0.0340	0.00	0.00

3	2.00	0.0560	0.00	0.00
4	3.00	0.0890	0.00	0.00
5	4.00	0.1220	0.00	0.00
6	5.00	0.1560	0.00	0.00
7	6.00	0.3550	0.00	0.00
8	7.00	0.4490	0.00	0.00
9	8.00	0.5470	0.00	0.00
10	9.00	0.6460	0.00	0.00
11	10.00	0.7480	0.00	0.00

Control Practice 2: Biofilter CP# 1 (DS) - West Infiltration Basin

1. Top area (square feet) = 10466
2. Bottom area (square feet) = 3624
3. Depth (ft): 5
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0.5
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 0.1
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
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): 5
2. Weir crest width (ft): 10
3. Height of datum to bottom of weir opening: 4

Outlet type: Surface Discharge Pipe

1. Surface discharge pipe outlet diameter (ft): 1.25
2. Pipe invert elevation above datum (ft): 1
3. Number of surface pipe outlets: 1

Control Practice 3: Wet Detention Pond CP# 2 (DS) - East Det 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): 0.67
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: 8.75

Outlet type: Vertical Stand Pipe

1. Stand pipe diameter (ft): 4
2. Stand pipe height above datum (ft): 8

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	0.10	0.2030	0.00	0.00
2	1.00	0.2380	0.00	0.00
3	2.00	0.2750	0.00	0.00
4	3.00	0.3130	0.00	0.00
5	4.00	0.3520	0.00	0.00
6	5.00	0.3900	0.00	0.00
7	6.00	0.7100	0.00	0.00
8	7.00	0.8190	0.00	0.00
9	8.00	0.9310	0.00	0.00
10	9.00	1.0440	0.00	0.00
11	10.00	1.1610	0.00	0.00

Control Practice 4: Biofilter CP# 2 (DS) - East Infiltration Basin

1. Top area (square feet) = 19855
2. Bottom area (square feet) = 8400
3. Depth (ft): 5
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0.5
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 1
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
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): 10
2. Weir crest width (ft): 10
3. Height of datum to bottom of weir opening: 4

Outlet type: Surface Discharge Pipe

1. Surface discharge pipe outlet diameter (ft): 1.5
2. Pipe invert elevation above datum (ft): 1
3. Number of surface pipe outlets: 1

Proposed Infiltration Design:

Data File: U:\User\1904113\Engineering\SWMP\Pro Utterback Slamm.mdb					
Rain File: WisReg - Madison WI 1981.RAN					
Date: 04-02-20 Time: 4:59:15 PM					
Site Description:					
Runoff Volume Total (cf) at the Outfall					
Rain Number	Start Date	Rain Total (in)	Outfall Total (cf)	Rv	Total Losses (in.)
73	08/28/81	0.04	99.17	0.019	0.04
74	08/31/81	0.03	0.6224	0.000	0.03
75	08/31/81	1.52	34950	0.174	1.25
76	09/07/81	0.89	11971	0.102	0.80
77	09/11/81	0.08	21.02	0.002	0.08
78	09/16/81	0.03	0.6224	0.000	0.03
79	09/21/81	0.45	575.2	0.010	0.45
80	09/24/81	0.90	7729	0.065	0.84
81	09/26/81	0.12	40.53	0.003	0.12
82	09/28/81	0.10	30.18	0.002	0.10
83	09/29/81	0.16	55.90	0.003	0.16
84	09/30/81	0.36	370.6	0.008	0.36
85	10/01/81	0.01	0.06915	0.000	0.01
86	10/04/81	0.15	51.97	0.003	0.15
87	10/05/81	0.04	7.682	0.001	0.04
88	10/05/81	0.02	0.2766	0.000	0.02
89	10/09/81	0.14	48.10	0.003	0.14
90	10/13/81	1.20	27507	0.174	0.99
91	10/15/81	0.02	0.2766	0.000	0.02
92	10/17/81	0.95	19095	0.153	0.81
93	10/18/81	0.06	526.3	0.067	0.06
94	10/21/81	0.06	13.64	0.002	0.06
95	10/21/81	0.01	0.06915	0.000	0.01
96	10/24/81	0.01	0.06915	0.000	0.01
97	10/31/81	0.01	0.06915	0.000	0.01
98	11/05/81	0.04	7.682	0.001	0.04
99	11/15/81	0.07	17.14	0.002	0.07
100	11/18/81	0.05	10.48	0.002	0.05
101	11/19/81	0.26	161.0	0.005	0.26
102	11/23/81	0.18	63.94	0.003	0.18
103	11/25/81	0.89	7125	0.061	0.84
104	11/30/81	0.37	396.0	0.008	0.37
105	12/03/81	-	-	-	-
106	12/14/81	-	-	-	-
107	12/20/81	-	-	-	-
108	12/26/81	-	-	-	-
109	12/31/81	-	-	-	-
Minimum:		0.00	0	0.000	0.01
Maximum:		2.59	114005	0.334	1.72
Average:		0.26	4344	0.026	0.23
Total:		28.81	473485		25.23

25.2 inches of stayon attained on the site in proposed conditions. This exceeds 24.4 inches required in developed conditions

Note: DNR conservation practice standard 1003 states that ponding depth must infiltrate within the maximum allowable draw down period of 24 hours. From the DNR's technical note for sizing infiltration basins, drawdown time is calculated as a function of depression zone vs. infiltration rate.

Depth/kd = Drawdown Time

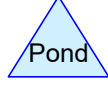
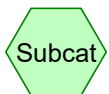
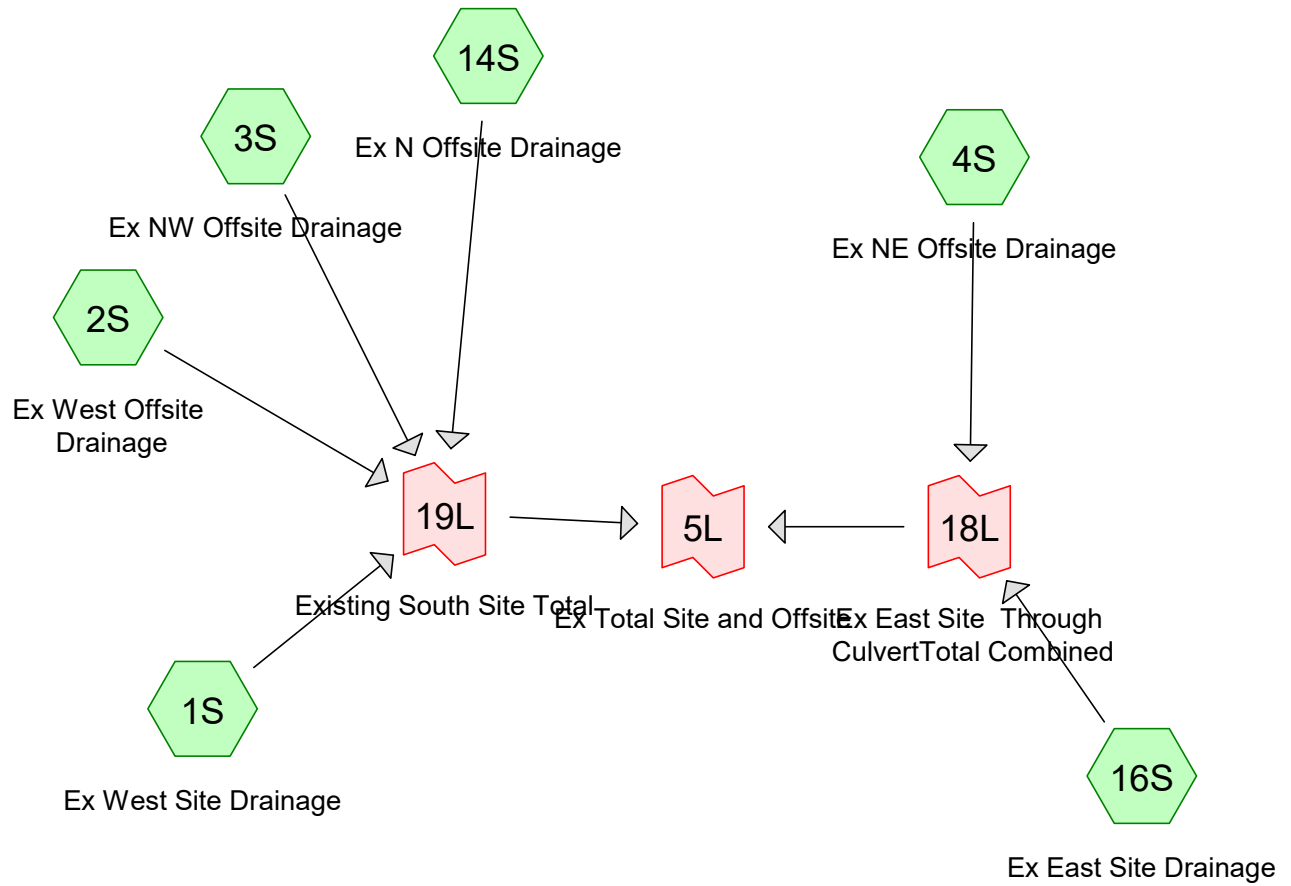
12" is maximum depression zone, and 0.5in/hr is the minimum infiltration rate within the infiltration basin.

12" depression zone/0.50 in/hr = 24 hours is the maximum drawdown after rainfall event.

APPENDIX D

HYDROCAD OUTPUT

Existing Hydrocad



Routing Diagram for 1904113 SWMP
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1904113 SWMP

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MSE 24-hr 4 1yr 24hr Rainfall=2.49"

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Summary for Subcatchment 1S: Ex West Site Drainage

Runoff = 1.12 cfs @ 12.65 hrs, Volume= 0.292 af, Depth= 0.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 21.400	58	Type B Soils
* 1.900	71	Type C Soils
23.300	59	Weighted Average
23.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
9.4	1,000	0.0140	1.77		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
1.1	300	0.0100	4.71	94.24	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
24.9	1,600	Total			

Summary for Subcatchment 2S: Ex West Offsite Drainage

Runoff = 0.40 cfs @ 12.62 hrs, Volume= 0.111 af, Depth= 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 10.200	58	Type B Soils
10.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.4	400	0.0350	2.81		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
3.9	1,100	0.0100	4.71	94.24	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.7	1,800	Total			

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MSE 24-hr 4 1yr 24hr Rainfall=2.49"

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Summary for Subcatchment 3S: Ex NW Offsite Drainage

Runoff = 1.34 cfs @ 12.85 hrs, Volume= 0.432 af, Depth= 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 39.300	58	Type B Soils
* 0.300	71	Type C Soils
39.600	58	Weighted Average
39.600		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	300	0.0167	0.21		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
8.3	1,000	0.0180	2.01		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
1.0	1,100	0.0100	18.85	376.98	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.010
33.3	2,400	Total			

Summary for Subcatchment 4S: Ex NE Offsite Drainage

Runoff = 0.86 cfs @ 12.31 hrs, Volume= 0.122 af, Depth= 0.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 3.600	58	Type B Soils
* 2.500	71	Type C Soils
6.100	63	Weighted Average
6.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	300	0.1000	0.43		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.2	200	0.0100	1.50		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
13.9	500	Total			

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MSE 24-hr 4 1yr 24hr Rainfall=2.49"

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Summary for Subcatchment 14S: Ex N Offsite Drainage

Runoff = 0.59 cfs @ 12.40 hrs, Volume= 0.078 af, Depth= 0.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 1.200	58	Type B Soils
* 1.700	71	Type C Soils
2.900	66	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	300	0.0267	0.25		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
1.1	200	0.0400	3.00		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
21.0	500	Total			

Summary for Subcatchment 16S: Ex East Site Drainage

Runoff = 0.84 cfs @ 12.54 hrs, Volume= 0.185 af, Depth= 0.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 11.400	58	Type B Soils
* 1.600	71	Type C Soils
13.000	60	Weighted Average
13.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.3	300	0.0733	0.38		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
6.6	700	0.0140	1.77		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
0.7	200	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.6	1,200	Total			

Summary for Link 5L: Ex Total Site and Offsite

Inflow Area = 95.100 ac, 0.00% Impervious, Inflow Depth = 0.15" for 1yr 24hr event
Inflow = 4.35 cfs @ 12.63 hrs, Volume= 1.221 af
Primary = 4.35 cfs @ 12.63 hrs, Volume= 1.221 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 18L: Ex East Site Through CulvertTotal Combined

Inflow Area = 19.100 ac, 0.00% Impervious, Inflow Depth = 0.19" for 1yr 24hr event
Inflow = 1.53 cfs @ 12.45 hrs, Volume= 0.308 af
Primary = 1.53 cfs @ 12.45 hrs, Volume= 0.308 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 19L: Existing South Site Total

Inflow Area = 76.000 ac, 0.00% Impervious, Inflow Depth = 0.14" for 1yr 24hr event
Inflow = 3.09 cfs @ 12.71 hrs, Volume= 0.914 af
Primary = 3.09 cfs @ 12.71 hrs, Volume= 0.914 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

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MSE 24-hr 4 2yr 24hr Rainfall=2.84"

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Summary for Subcatchment 1S: Ex West Site Drainage

Runoff = 2.56 cfs @ 12.53 hrs, Volume= 0.486 af, Depth= 0.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 21.400	58	Type B Soils
* 1.900	71	Type C Soils
23.300	59	Weighted Average
23.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
9.4	1,000	0.0140	1.77		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
1.1	300	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
24.9	1,600	Total			

Summary for Subcatchment 2S: Ex West Offsite Drainage

Runoff = 0.97 cfs @ 12.49 hrs, Volume= 0.191 af, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 10.200	58	Type B Soils
10.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.4	400	0.0350	2.81		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
3.9	1,100	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.7	1,800	Total			

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MSE 24-hr 4 2yr 24hr Rainfall=2.84"

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Summary for Subcatchment 3S: Ex NW Offsite Drainage

Runoff = 3.20 cfs @ 12.70 hrs, Volume= 0.740 af, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 39.300	58	Type B Soils
* 0.300	71	Type C Soils
39.600	58	Weighted Average
39.600		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	300	0.0167	0.21		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
8.3	1,000	0.0180	2.01		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
1.0	1,100	0.0100	18.85	376.98	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.010
33.3	2,400	Total			

Summary for Subcatchment 4S: Ex NE Offsite Drainage

Runoff = 1.72 cfs @ 12.28 hrs, Volume= 0.187 af, Depth= 0.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 3.600	58	Type B Soils
* 2.500	71	Type C Soils
6.100	63	Weighted Average
6.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	300	0.1000	0.43		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.2	200	0.0100	1.50		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
13.9	500	Total			

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MSE 24-hr 4 2yr 24hr Rainfall=2.84"

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Summary for Subcatchment 14S: Ex N Offsite Drainage

Runoff = 1.00 cfs @ 12.37 hrs, Volume= 0.114 af, Depth= 0.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 1.200	58	Type B Soils
* 1.700	71	Type C Soils
2.900	66	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	300	0.0267	0.25		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
1.1	200	0.0400	3.00		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
21.0	500	Total			

Summary for Subcatchment 16S: Ex East Site Drainage

Runoff = 1.85 cfs @ 12.43 hrs, Volume= 0.301 af, Depth= 0.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 11.400	58	Type B Soils
* 1.600	71	Type C Soils
13.000	60	Weighted Average
13.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.3	300	0.0733	0.38		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
6.6	700	0.0140	1.77		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
0.7	200	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.6	1,200	Total			

Summary for Link 5L: Ex Total Site and Offsite

Inflow Area = 95.100 ac, 0.00% Impervious, Inflow Depth = 0.25" for 2yr 24hr event
Inflow = 9.71 cfs @ 12.54 hrs, Volume= 2.019 af
Primary = 9.71 cfs @ 12.54 hrs, Volume= 2.019 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 18L: Ex East Site Through CulvertTotal Combined

Inflow Area = 19.100 ac, 0.00% Impervious, Inflow Depth = 0.31" for 2yr 24hr event
Inflow = 3.22 cfs @ 12.37 hrs, Volume= 0.488 af
Primary = 3.22 cfs @ 12.37 hrs, Volume= 0.488 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 19L: Existing South Site Total

Inflow Area = 76.000 ac, 0.00% Impervious, Inflow Depth = 0.24" for 2yr 24hr event
Inflow = 7.09 cfs @ 12.60 hrs, Volume= 1.531 af
Primary = 7.09 cfs @ 12.60 hrs, Volume= 1.531 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

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MSE 24-hr 4 10yr 24hr Rainfall=4.09"

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Summary for Subcatchment 1S: Ex West Site Drainage

Runoff = 12.44 cfs @ 12.42 hrs, Volume= 1.467 af, Depth= 0.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 21.400	58	Type B Soils
* 1.900	71	Type C Soils
23.300	59	Weighted Average
23.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
9.4	1,000	0.0140	1.77		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
1.1	300	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
24.9	1,600	Total			

Summary for Subcatchment 2S: Ex West Offsite Drainage

Runoff = 5.42 cfs @ 12.36 hrs, Volume= 0.600 af, Depth= 0.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 10.200	58	Type B Soils
10.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.4	400	0.0350	2.81		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
3.9	1,100	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.7	1,800	Total			

Summary for Subcatchment 3S: Ex NW Offsite Drainage

Runoff = 16.34 cfs @ 12.56 hrs, Volume= 2.330 af, Depth= 0.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 39.300	58	Type B Soils
* 0.300	71	Type C Soils
39.600	58	Weighted Average
39.600		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	300	0.0167	0.21		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
8.3	1,000	0.0180	2.01		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
1.0	1,100	0.0100	18.85	376.98	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.010
33.3	2,400	Total			

Summary for Subcatchment 4S: Ex NE Offsite Drainage

Runoff = 6.22 cfs @ 12.24 hrs, Volume= 0.492 af, Depth= 0.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 3.600	58	Type B Soils
* 2.500	71	Type C Soils
6.100	63	Weighted Average
6.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	300	0.1000	0.43		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.2	200	0.0100	1.50		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
13.9	500	Total			

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MSE 24-hr 4 10yr 24hr Rainfall=4.09"

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Summary for Subcatchment 14S: Ex N Offsite Drainage

Runoff = 2.96 cfs @ 12.34 hrs, Volume= 0.276 af, Depth= 1.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 1.200	58	Type B Soils
* 1.700	71	Type C Soils
2.900	66	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	300	0.0267	0.25		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
1.1	200	0.0400	3.00		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
21.0	500	Total			

Summary for Subcatchment 16S: Ex East Site Drainage

Runoff = 8.43 cfs @ 12.35 hrs, Volume= 0.874 af, Depth= 0.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 11.400	58	Type B Soils
* 1.600	71	Type C Soils
13.000	60	Weighted Average
13.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.3	300	0.0733	0.38		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
6.6	700	0.0140	1.77		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
0.7	200	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.6	1,200	Total			

Summary for Link 5L: Ex Total Site and Offsite

Inflow Area = 95.100 ac, 0.00% Impervious, Inflow Depth = 0.76" for 10yr 24hr event
Inflow = 45.73 cfs @ 12.42 hrs, Volume= 6.038 af
Primary = 45.73 cfs @ 12.42 hrs, Volume= 6.038 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 18L: Ex East Site Through CulvertTotal Combined

Inflow Area = 19.100 ac, 0.00% Impervious, Inflow Depth = 0.86" for 10yr 24hr event
Inflow = 13.70 cfs @ 12.30 hrs, Volume= 1.365 af
Primary = 13.70 cfs @ 12.30 hrs, Volume= 1.365 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 19L: Existing South Site Total

Inflow Area = 76.000 ac, 0.00% Impervious, Inflow Depth = 0.74" for 10yr 24hr event
Inflow = 34.57 cfs @ 12.46 hrs, Volume= 4.673 af
Primary = 34.57 cfs @ 12.46 hrs, Volume= 4.673 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

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MSE 24-hr 4 25yr 24hr Rainfall=5.01"

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Summary for Subcatchment 1S: Ex West Site Drainage

Runoff = 22.79 cfs @ 12.40 hrs, Volume= 2.408 af, Depth= 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 21.400	58	Type B Soils
* 1.900	71	Type C Soils
23.300	59	Weighted Average
23.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
9.4	1,000	0.0140	1.77		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
1.1	300	0.0100	4.71	94.24	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
24.9	1,600	Total			

Summary for Subcatchment 2S: Ex West Offsite Drainage

Runoff = 10.27 cfs @ 12.34 hrs, Volume= 0.998 af, Depth= 1.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 10.200	58	Type B Soils
10.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.4	400	0.0350	2.81		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
3.9	1,100	0.0100	4.71	94.24	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.7	1,800	Total			

Summary for Subcatchment 3S: Ex NW Offsite Drainage

Runoff = 30.61 cfs @ 12.53 hrs, Volume= 3.875 af, Depth= 1.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 39.300	58	Type B Soils
* 0.300	71	Type C Soils
39.600	58	Weighted Average
39.600		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	300	0.0167	0.21		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
8.3	1,000	0.0180	2.01		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
1.0	1,100	0.0100	18.85	376.98	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.010
33.3	2,400	Total			

Summary for Subcatchment 4S: Ex NE Offsite Drainage

Runoff = 10.39 cfs @ 12.23 hrs, Volume= 0.770 af, Depth= 1.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 3.600	58	Type B Soils
* 2.500	71	Type C Soils
6.100	63	Weighted Average
6.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	300	0.1000	0.43		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.2	200	0.0100	1.50		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
13.9	500	Total			

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MSE 24-hr 4 25yr 24hr Rainfall=5.01"

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Summary for Subcatchment 14S: Ex N Offsite Drainage

Runoff = 4.70 cfs @ 12.33 hrs, Volume= 0.419 af, Depth= 1.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 1.200	58	Type B Soils
* 1.700	71	Type C Soils
2.900	66	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	300	0.0267	0.25		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
1.1	200	0.0400	3.00		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
21.0	500	Total			

Summary for Subcatchment 16S: Ex East Site Drainage

Runoff = 15.08 cfs @ 12.33 hrs, Volume= 1.416 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 11.400	58	Type B Soils
* 1.600	71	Type C Soils
13.000	60	Weighted Average
13.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.3	300	0.0733	0.38		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
6.6	700	0.0140	1.77		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
0.7	200	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.6	1,200	Total			

Summary for Link 5L: Ex Total Site and Offsite

Inflow Area = 95.100 ac, 0.00% Impervious, Inflow Depth = 1.25" for 25yr 24hr event
Inflow = 83.98 cfs @ 12.40 hrs, Volume= 9.886 af
Primary = 83.98 cfs @ 12.40 hrs, Volume= 9.886 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 18L: Ex East Site Through CulvertTotal Combined

Inflow Area = 19.100 ac, 0.00% Impervious, Inflow Depth = 1.37" for 25yr 24hr event
Inflow = 24.07 cfs @ 12.29 hrs, Volume= 2.186 af
Primary = 24.07 cfs @ 12.29 hrs, Volume= 2.186 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 19L: Existing South Site Total

Inflow Area = 76.000 ac, 0.00% Impervious, Inflow Depth = 1.22" for 25yr 24hr event
Inflow = 64.14 cfs @ 12.43 hrs, Volume= 7.700 af
Primary = 64.14 cfs @ 12.43 hrs, Volume= 7.700 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

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MSE 24-hr 4 100yr 24hr Rainfall=6.66"

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Summary for Subcatchment 1S: Ex West Site Drainage

Runoff = 45.16 cfs @ 12.38 hrs, Volume= 4.413 af, Depth= 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 21.400	58	Type B Soils
* 1.900	71	Type C Soils
23.300	59	Weighted Average
23.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
9.4	1,000	0.0140	1.77		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
1.1	300	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
24.9	1,600	Total			

Summary for Subcatchment 2S: Ex West Offsite Drainage

Runoff = 20.81 cfs @ 12.32 hrs, Volume= 1.854 af, Depth= 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 10.200	58	Type B Soils
10.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.4	400	0.0350	2.81		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
3.9	1,100	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.7	1,800	Total			

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MSE 24-hr 4 100yr 24hr Rainfall=6.66"

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Summary for Subcatchment 3S: Ex NW Offsite Drainage

Runoff = 61.96 cfs @ 12.50 hrs, Volume= 7.198 af, Depth= 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 39.300	58	Type B Soils
* 0.300	71	Type C Soils
39.600	58	Weighted Average
39.600		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	300	0.0167	0.21		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
8.3	1,000	0.0180	2.01		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
1.0	1,100	0.0100	18.85	376.98	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.010
33.3	2,400	Total			

Summary for Subcatchment 4S: Ex NE Offsite Drainage

Runoff = 18.89 cfs @ 12.23 hrs, Volume= 1.347 af, Depth= 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 3.600	58	Type B Soils
* 2.500	71	Type C Soils
6.100	63	Weighted Average
6.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	300	0.1000	0.43		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.2	200	0.0100	1.50		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
13.9	500	Total			

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MSE 24-hr 4 100yr 24hr Rainfall=6.66"

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Summary for Subcatchment 14S: Ex N Offsite Drainage

Runoff = 8.21 cfs @ 12.32 hrs, Volume= 0.710 af, Depth= 2.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 1.200	58	Type B Soils
* 1.700	71	Type C Soils
2.900	66	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	300	0.0267	0.25		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
1.1	200	0.0400	3.00		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
21.0	500	Total			

Summary for Subcatchment 16S: Ex East Site Drainage

Runoff = 29.14 cfs @ 12.32 hrs, Volume= 2.563 af, Depth= 2.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 11.400	58	Type B Soils
* 1.600	71	Type C Soils
13.000	60	Weighted Average
13.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.3	300	0.0733	0.38		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
6.6	700	0.0140	1.77		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
0.7	200	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.6	1,200	Total			

Summary for Link 5L: Ex Total Site and Offsite

Inflow Area = 95.100 ac, 0.00% Impervious, Inflow Depth = 2.28" for 100yr 24hr event
Inflow = 166.65 cfs @ 12.38 hrs, Volume= 18.085 af
Primary = 166.65 cfs @ 12.38 hrs, Volume= 18.085 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 18L: Ex East Site Through CulvertTotal Combined

Inflow Area = 19.100 ac, 0.00% Impervious, Inflow Depth = 2.46" for 100yr 24hr event
Inflow = 45.72 cfs @ 12.28 hrs, Volume= 3.910 af
Primary = 45.72 cfs @ 12.28 hrs, Volume= 3.910 af, Atten= 0%, Lag= 0.0 min

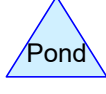
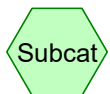
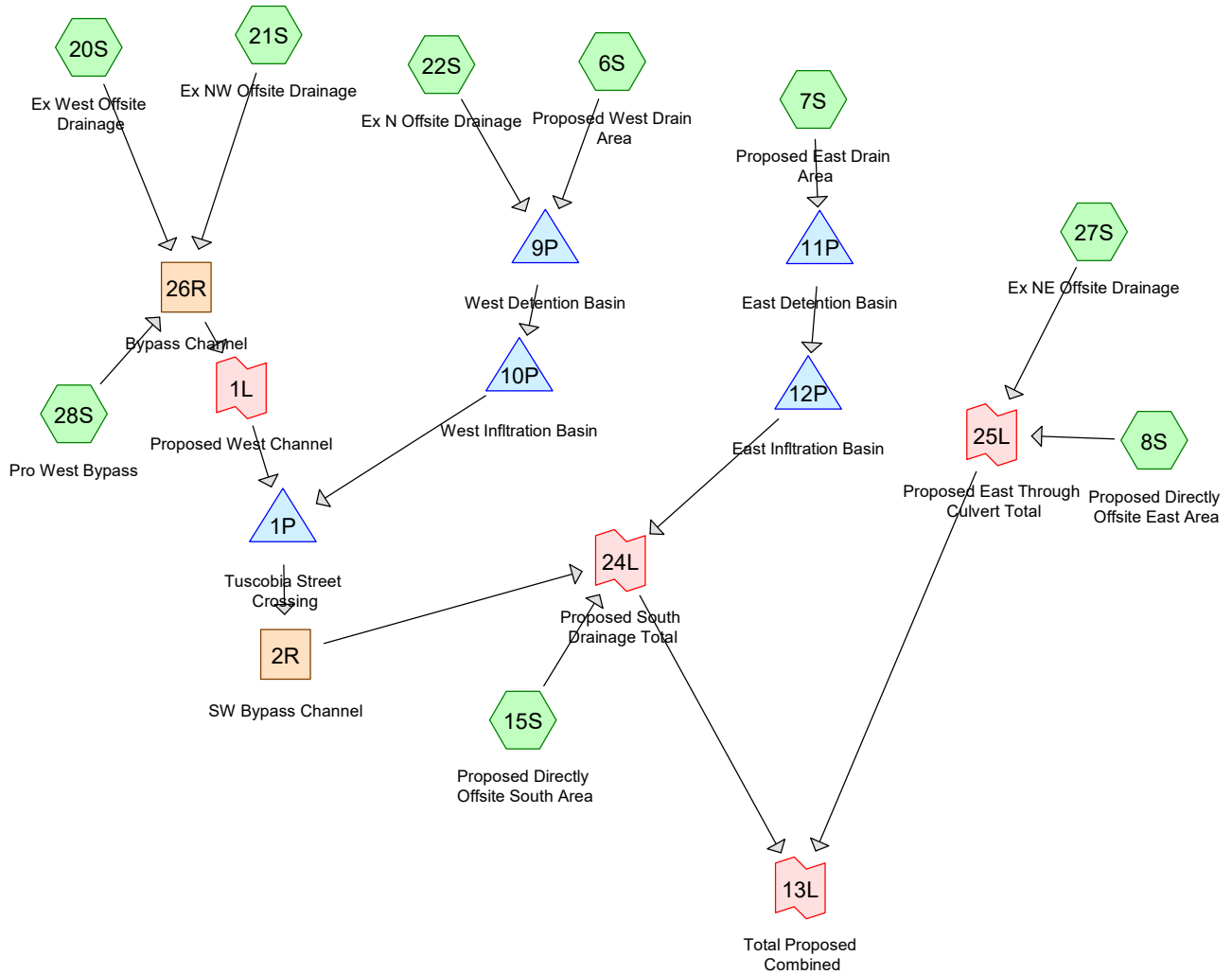
Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 19L: Existing South Site Total

Inflow Area = 76.000 ac, 0.00% Impervious, Inflow Depth = 2.24" for 100yr 24hr event
Inflow = 128.47 cfs @ 12.41 hrs, Volume= 14.176 af
Primary = 128.47 cfs @ 12.41 hrs, Volume= 14.176 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Proposed Hydrocad



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Summary for Subcatchment 6S: Proposed West Drain Area

Runoff = 13.63 cfs @ 12.14 hrs, Volume= 0.722 af, Depth= 1.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 6.000	87	60% Impervious Residential
* 1.200	74	10% Impervious OL Area
* 0.200	98	Wet Basin
7.400	85	Weighted Average
7.200		97.30% Pervious Area
0.200		2.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	100	0.0800	0.31		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
0.3	100	0.0600	4.97		Shallow Concentrated Flow, Shallow
					Paved Kv= 20.3 fps
0.9	550	0.0180	9.66	30.35	Pipe Channel, Pipe
					24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'
					n= 0.013
6.5	750	Total			

Summary for Subcatchment 7S: Proposed East Drain Area

Runoff = 33.13 cfs @ 12.18 hrs, Volume= 2.030 af, Depth= 1.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 12.900	87	60% Impervious Residential
* 3.600	90	70% Impervious Residential
* 1.500	74	10% Impervious OL
* 0.700	98	Wet Basin
18.700	87	Weighted Average
18.000		96.26% Pervious Area
0.700		3.74% Impervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.4	150	0.0800	0.34		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
0.3	100	0.0600	4.97		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
2.3	1,200	0.0150	8.82	27.71	Pipe Channel, Pipe 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
10.0	1,450	Total			

Summary for Subcatchment 8S: Proposed Directly Offsite East Area

Runoff = 0.29 cfs @ 12.49 hrs, Volume= 0.050 af, Depth= 0.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 2.400	62	10% Impervious Lightly Disturbed/Restored
* 0.100	90	70% Imp ROW area
2.500	63	Weighted Average
2.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	200	0.0100	0.16		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.3	400	0.0200	2.87		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
23.6	600	Total			

Summary for Subcatchment 15S: Proposed Directly Offsite South Area

Runoff = 0.66 cfs @ 12.64 hrs, Volume= 0.132 af, Depth= 0.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 6.200	62	10% Impervious Lightly Disturbed/Restored
* 0.200	82	40% Imp yard area
* 0.200	90	70% Imp ROW area
6.600	63	Weighted Average
6.600		100.00% Pervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.5	300	0.0100	0.17		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
3.3	400	0.0100	2.03		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
32.8	700	Total			

Summary for Subcatchment 20S: Ex West Offsite Drainage

Runoff = 0.40 cfs @ 12.62 hrs, Volume= 0.111 af, Depth= 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 10.200	58	Type B Soils
10.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.4	400	0.0350	2.81		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
3.9	1,100	0.0100	4.71	94.24	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.7	1,800	Total			

Summary for Subcatchment 21S: Ex NW Offsite Drainage

Runoff = 1.34 cfs @ 12.85 hrs, Volume= 0.432 af, Depth= 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 39.300	58	Type B Soils
* 0.300	71	Type C Soils
39.600	58	Weighted Average
39.600		100.00% Pervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	300	0.0167	0.21		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
8.3	1,000	0.0180	2.01		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
1.0	1,100	0.0100	18.85	376.98	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.010
33.3	2,400	Total			

Summary for Subcatchment 22S: Ex N Offsite Drainage

Runoff = 0.59 cfs @ 12.40 hrs, Volume= 0.078 af, Depth= 0.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 1.200	58	Type B Soils
* 1.700	71	Type C Soils
2.900	66	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	300	0.0267	0.25		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
1.1	200	0.0400	3.00		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
21.0	500	Total			

Summary for Subcatchment 27S: Ex NE Offsite Drainage

Runoff = 0.86 cfs @ 12.31 hrs, Volume= 0.122 af, Depth= 0.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 3.600	58	Type B Soils
* 2.500	71	Type C Soils
6.100	63	Weighted Average
6.100		100.00% Pervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	300	0.1000	0.43		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.2	200	0.0100	1.50		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
13.9	500	Total			

Summary for Subcatchment 28S: Pro West Bypass

Runoff = 1.00 cfs @ 12.14 hrs, Volume= 0.055 af, Depth= 0.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 1.100	74	OL Area 10% Imp
1.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TC

Summary for Reach 2R: SW Bypass ChannelInflow Area = 61.200 ac, 0.33% Impervious, Inflow Depth = 0.21" for 1yr 24hr event
Inflow = 1.77 cfs @ 12.97 hrs, Volume= 1.063 af
Outflow = 1.76 cfs @ 13.04 hrs, Volume= 1.063 af, Atten= 1%, Lag= 4.3 minRouting by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
Max. Velocity= 0.96 fps, Min. Travel Time= 5.3 min
Avg. Velocity = 0.47 fps, Avg. Travel Time= 10.9 min

Peak Storage= 562 cf @ 13.04 hrs

Average Depth at Peak Storage= 0.17', Surface Width= 11.38'

Bank-Full Depth= 2.00' Flow Area= 36.0 sf, Capacity= 142.48 cfs

10.00' x 2.00' deep channel, n= 0.040

Side Slope Z-value= 4.0 '/' Top Width= 26.00'

Length= 305.0' Slope= 0.0075 '/'

Inlet Invert= 864.00', Outlet Invert= 861.70'



Summary for Reach 26R: Bypass Channel

Inflow Area = 50.900 ac, 0.00% Impervious, Inflow Depth = 0.14" for 1yr 24hr event
 Inflow = 1.82 cfs @ 12.81 hrs, Volume= 0.599 af
 Outflow = 1.77 cfs @ 12.95 hrs, Volume= 0.599 af, Atten= 3%, Lag= 8.5 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Max. Velocity= 0.96 fps, Min. Travel Time= 9.2 min
 Avg. Velocity= 0.49 fps, Avg. Travel Time= 18.1 min

Peak Storage= 980 cf @ 12.95 hrs
 Average Depth at Peak Storage= 0.17' , Surface Width= 11.38'
 Bank-Full Depth= 2.00' Flow Area= 36.0 sf, Capacity= 142.54 cfs

10.00' x 2.00' deep channel, n= 0.040
 Side Slope Z-value= 4.0 ' / ' Top Width= 26.00'
 Length= 530.0' Slope= 0.0075 ' / '
 Inlet Invert= 869.00', Outlet Invert= 865.00'

**Summary for Pond 1P: Tuscobia Street Crossing**

Inflow Area = 61.200 ac, 0.33% Impervious, Inflow Depth = 0.21" for 1yr 24hr event
 Inflow = 1.77 cfs @ 12.95 hrs, Volume= 1.063 af
 Outflow = 1.77 cfs @ 12.97 hrs, Volume= 1.063 af, Atten= 0%, Lag= 1.1 min
 Primary = 1.77 cfs @ 12.97 hrs, Volume= 1.063 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 865.26' @ 12.97 hrs Surf.Area= 789 sf Storage= 129 cf

Plug-Flow detention time= 1.7 min calculated for 1.063 af (100% of inflow)
 Center-of-Mass det. time= 1.7 min (1,233.1 - 1,231.5)

Volume	Invert	Avail.Storage	Storage Description
#1	865.00'	51,515 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
865.00	194	0	0
866.00	2,455	1,325	1,325
867.00	5,342	3,899	5,223
868.00	9,972	7,657	12,880
869.00	15,610	12,791	25,671
870.00	36,077	25,844	51,515

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Device	Routing	Invert	Outlet Devices
#1	Primary	865.00'	38.0" W x 24.0" H, R=31.2" Elliptical RCP_Elliptical 38x24 X 3.00 L= 135.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 865.00' / 864.00' S= 0.0074 '/' Cc= 0.900 n= 0.013, Flow Area= 5.10 sf
#2	Primary	869.55'	Asymmetrical Weir, C= 3.27 Offset (feet) 0.00 25.00 50.00 75.00 100.00 125.00 168.00 Elev. (feet) 870.14 869.96 869.75 869.55 869.56 869.69 870.14

Primary OutFlow Max=1.77 cfs @ 12.97 hrs HW=865.26' TW=864.17' (Dynamic Tailwater)

1=RCP_Elliptical 38x24 (Inlet Controls 1.77 cfs @ 1.46 fps)

2=Asymmetrical Weir (Controls 0.00 cfs)

Summary for Pond 9P: West Detention Basin

Inflow Area = 10.300 ac, 1.94% Impervious, Inflow Depth = 0.93" for 1yr 24hr event
 Inflow = 13.72 cfs @ 12.14 hrs, Volume= 0.800 af
 Outflow = 0.44 cfs @ 15.14 hrs, Volume= 0.756 af, Atten= 97%, Lag= 180.2 min
 Primary = 0.44 cfs @ 15.14 hrs, Volume= 0.756 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2

Peak Elev= 868.26' @ 15.14 hrs Surf.Area= 20,686 sf Storage= 22,708 cf

Plug-Flow detention time= 669.3 min calculated for 0.756 af (94% of inflow)

Center-of-Mass det. time= 642.1 min (1,473.4 - 831.3)

Volume	Invert	Avail.Storage	Storage Description
#1	867.00'	95,625 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
867.00	15,467	0	0
868.00	19,599	17,533	17,533
869.00	23,831	21,715	39,248
870.00	28,163	25,997	65,245
871.00	32,596	30,380	95,625

Device	Routing	Invert	Outlet Devices
#1	Primary	866.00'	18.0" Round Culvert L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 866.00' / 866.00' S= 0.0000 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	867.00'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	869.00'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Primary	869.75'	30.0' 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=0.44 cfs @ 15.14 hrs HW=868.26' TW=866.96' (Dynamic Tailwater)

- 1=Culvert (Passes 0.44 cfs of 7.94 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.44 cfs @ 5.03 fps)
- 3=Orifice/Grate (Controls 0.00 cfs)
- 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 10P: West Infiltration Basin

Inflow Area = 10.300 ac, 1.94% Impervious, Inflow Depth > 0.88" for 1yr 24hr event
 Inflow = 0.44 cfs @ 15.14 hrs, Volume= 0.756 af
 Outflow = 0.41 cfs @ 18.56 hrs, Volume= 0.661 af, Atten= 8%, Lag= 205.4 min
 Discarded = 0.07 cfs @ 18.56 hrs, Volume= 0.197 af
 Primary = 0.34 cfs @ 18.56 hrs, Volume= 0.464 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 867.27' @ 18.56 hrs Surf.Area= 5,085 sf Storage= 5,517 cf

Plug-Flow detention time= 288.3 min calculated for 0.661 af (87% of inflow)
 Center-of-Mass det. time= 155.9 min (1,629.3 - 1,473.4)

Volume	Invert	Avail.Storage	Storage Description
#1	866.00'	34,052 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
866.00	3,624	0	0
867.00	4,745	4,185	4,185
868.00	6,000	5,373	9,557
869.00	7,386	6,693	16,250
870.00	8,876	8,131	24,381
871.00	10,466	9,671	34,052

Device	Routing	Invert	Outlet Devices
#1	Discarded	866.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 860.00'
#2	Primary	867.00'	15.0" Round Culvert L= 50.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 867.00' / 866.50' S= 0.0100 ' / Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#3	Primary	870.00'	5.0' 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

Discarded OutFlow Max=0.07 cfs @ 18.56 hrs HW=867.27' (Free Discharge)

- 1=Exfiltration (Controls 0.07 cfs)

Primary OutFlow Max=0.34 cfs @ 18.56 hrs HW=867.27' TW=865.18' (Dynamic Tailwater)

- 2=Culvert (Barrel Controls 0.34 cfs @ 2.59 fps)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 11P: East Detention Basin

Inflow Area = 18.700 ac, 3.74% Impervious, Inflow Depth = 1.30" for 1yr 24hr event
 Inflow = 33.13 cfs @ 12.18 hrs, Volume= 2.030 af
 Outflow = 1.85 cfs @ 13.66 hrs, Volume= 1.953 af, Atten= 94%, Lag= 89.0 min
 Primary = 1.85 cfs @ 13.66 hrs, Volume= 1.953 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 863.55' @ 13.66 hrs Surf.Area= 38,370 sf Storage= 53,718 cf

Plug-Flow detention time= 447.3 min calculated for 1.953 af (96% of inflow)
 Center-of-Mass det. time= 427.0 min (1,246.9 - 819.9)

Volume	Invert	Avail.Storage	Storage Description
#1	862.00'	162,500 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
862.00	30,928	0	0
863.00	35,693	33,311	33,311
864.00	40,550	38,122	71,432
865.00	45,509	43,030	114,462
866.00	50,568	48,039	162,500

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	24.0" Round Culvert L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 861.00' S= 0.0000 ' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#2	Device 1	862.00'	8.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	864.00'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Primary	864.75'	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=1.85 cfs @ 13.66 hrs HW=863.55' TW=861.97' (Dynamic Tailwater)

1=Culvert (Passes 1.85 cfs of 13.93 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 1.85 cfs @ 5.31 fps)
 3=Orifice/Grate (Controls 0.00 cfs)
 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 12P: East Infiltration Basin

Inflow Area = 18.700 ac, 3.74% Impervious, Inflow Depth > 1.25" for 1yr 24hr event
 Inflow = 1.85 cfs @ 13.66 hrs, Volume= 1.953 af
 Outflow = 1.56 cfs @ 16.50 hrs, Volume= 1.778 af, Atten= 16%, Lag= 170.3 min
 Discarded = 0.16 cfs @ 16.50 hrs, Volume= 0.447 af
 Primary = 1.39 cfs @ 16.50 hrs, Volume= 1.331 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2

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Peak Elev= 862.54' @ 16.50 hrs Surf.Area= 11,691 sf Storage= 15,484 cf

Plug-Flow detention time= 254.6 min calculated for 1.777 af (91% of inflow)

Center-of-Mass det. time= 161.8 min (1,408.7 - 1,246.9)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	69,661 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	8,400	0	0
862.00	10,501	9,451	9,451
863.00	12,689	11,595	21,046
864.00	14,977	13,833	34,879
865.00	17,366	16,172	51,050
866.00	19,855	18,611	69,661

Device	Routing	Invert	Outlet Devices
#1	Discarded	861.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 855.00'
#2	Primary	862.00'	18.0" Round Culvert L= 50.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 862.00' / 861.50' S= 0.0100 ' / Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#3	Primary	865.00'	4.0' 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

Discarded OutFlow Max=0.16 cfs @ 16.50 hrs HW=862.54' (Free Discharge)↑ **1=Exfiltration** (Controls 0.16 cfs)**Primary OutFlow** Max=1.39 cfs @ 16.50 hrs HW=862.54' TW=0.00' (Dynamic Tailwater)↑ **2=Culvert** (Barrel Controls 1.39 cfs @ 3.58 fps)↑ **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)**Summary for Link 1L: Proposed West Channel**

Inflow Area = 50.900 ac, 0.00% Impervious, Inflow Depth = 0.14" for 1yr 24hr event
 Inflow = 1.77 cfs @ 12.95 hrs, Volume= 0.599 af
 Primary = 1.77 cfs @ 12.95 hrs, Volume= 0.599 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 13L: Total Proposed Combined

Inflow Area = 95.100 ac, 0.95% Impervious, Inflow Depth = 0.34" for 1yr 24hr event
 Inflow = 2.78 cfs @ 12.91 hrs, Volume= 2.699 af
 Primary = 2.78 cfs @ 12.91 hrs, Volume= 2.699 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 24L: Proposed South Drainage Total

Inflow Area = 86.500 ac, 1.04% Impervious, Inflow Depth = 0.35" for 1yr 24hr event
Inflow = 2.29 cfs @ 17.08 hrs, Volume= 2.526 af
Primary = 2.29 cfs @ 17.08 hrs, Volume= 2.526 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 25L: Proposed East Through Culvert Total

Inflow Area = 8.600 ac, 0.00% Impervious, Inflow Depth = 0.24" for 1yr 24hr event
Inflow = 1.07 cfs @ 12.35 hrs, Volume= 0.173 af
Primary = 1.07 cfs @ 12.35 hrs, Volume= 0.173 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

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MSE 24-hr 4 2yr 24hr Rainfall=2.84"

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Summary for Subcatchment 6S: Proposed West Drain Area

Runoff = 16.92 cfs @ 12.14 hrs, Volume= 0.897 af, Depth= 1.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 6.000	87	60% Impervious Residential
* 1.200	74	10% Impervious OL Area
* 0.200	98	Wet Basin
7.400	85	Weighted Average
7.200		97.30% Pervious Area
0.200		2.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	100	0.0800	0.31		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
0.3	100	0.0600	4.97		Shallow Concentrated Flow, Shallow
					Paved Kv= 20.3 fps
0.9	550	0.0180	9.66	30.35	Pipe Channel, Pipe
					24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'
					n= 0.013
6.5	750	Total			

Summary for Subcatchment 7S: Proposed East Drain Area

Runoff = 40.59 cfs @ 12.18 hrs, Volume= 2.494 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 12.900	87	60% Impervious Residential
* 3.600	90	70% Impervious Residential
* 1.500	74	10% Impervious OL
* 0.700	98	Wet Basin
18.700	87	Weighted Average
18.000		96.26% Pervious Area
0.700		3.74% Impervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.4	150	0.0800	0.34		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
0.3	100	0.0600	4.97		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
2.3	1,200	0.0150	8.82	27.71	Pipe Channel, Pipe 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
10.0	1,450	Total			

Summary for Subcatchment 8S: Proposed Directly Offsite East Area

Runoff = 0.55 cfs @ 12.44 hrs, Volume= 0.077 af, Depth= 0.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 2.400	62	10% Impervious Lightly Disturbed/Restored
* 0.100	90	70% Imp ROW area
2.500	63	Weighted Average
2.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	200	0.0100	0.16		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.3	400	0.0200	2.87		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
23.6	600	Total			

Summary for Subcatchment 15S: Proposed Directly Offsite South Area

Runoff = 1.22 cfs @ 12.59 hrs, Volume= 0.202 af, Depth= 0.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 6.200	62	10% Impervious Lightly Disturbed/Restored
* 0.200	82	40% Imp yard area
* 0.200	90	70% Imp ROW area
6.600	63	Weighted Average
6.600		100.00% Pervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.5	300	0.0100	0.17		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
3.3	400	0.0100	2.03		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
32.8	700	Total			

Summary for Subcatchment 20S: Ex West Offsite Drainage

Runoff = 0.97 cfs @ 12.49 hrs, Volume= 0.191 af, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 10.200	58	Type B Soils
10.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.4	400	0.0350	2.81		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
3.9	1,100	0.0100	4.71	94.24	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.7	1,800	Total			

Summary for Subcatchment 21S: Ex NW Offsite Drainage

Runoff = 3.20 cfs @ 12.70 hrs, Volume= 0.740 af, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 39.300	58	Type B Soils
* 0.300	71	Type C Soils
39.600	58	Weighted Average
39.600		100.00% Pervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	300	0.0167	0.21		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
8.3	1,000	0.0180	2.01		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
1.0	1,100	0.0100	18.85	376.98	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.010
33.3	2,400	Total			

Summary for Subcatchment 22S: Ex N Offsite Drainage

Runoff = 1.00 cfs @ 12.37 hrs, Volume= 0.114 af, Depth= 0.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 1.200	58	Type B Soils
* 1.700	71	Type C Soils
2.900	66	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	300	0.0267	0.25		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
1.1	200	0.0400	3.00		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
21.0	500	Total			

Summary for Subcatchment 27S: Ex NE Offsite Drainage

Runoff = 1.72 cfs @ 12.28 hrs, Volume= 0.187 af, Depth= 0.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 3.600	58	Type B Soils
* 2.500	71	Type C Soils
6.100	63	Weighted Average
6.100		100.00% Pervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	300	0.1000	0.43		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.2	200	0.0100	1.50		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
13.9	500	Total			

Summary for Subcatchment 28S: Pro West Bypass

Runoff = 1.38 cfs @ 12.14 hrs, Volume= 0.074 af, Depth= 0.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 1.100	74	OL Area 10% Imp
1.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TC

Summary for Reach 2R: SW Bypass ChannelInflow Area = 61.200 ac, 0.33% Impervious, Inflow Depth > 0.32" for 2yr 24hr event
Inflow = 4.10 cfs @ 12.76 hrs, Volume= 1.650 af
Outflow = 4.07 cfs @ 12.81 hrs, Volume= 1.650 af, Atten= 1%, Lag= 2.8 minRouting by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
Max. Velocity= 1.30 fps, Min. Travel Time= 3.9 min
Avg. Velocity= 0.54 fps, Avg. Travel Time= 9.5 min

Peak Storage= 958 cf @ 12.81 hrs

Average Depth at Peak Storage= 0.28', Surface Width= 12.26'

Bank-Full Depth= 2.00' Flow Area= 36.0 sf, Capacity= 142.48 cfs

10.00' x 2.00' deep channel, n= 0.040

Side Slope Z-value= 4.0 '/' Top Width= 26.00'

Length= 305.0' Slope= 0.0075 '/'

Inlet Invert= 864.00', Outlet Invert= 861.70'



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Summary for Reach 26R: Bypass Channel

Inflow Area = 50.900 ac, 0.00% Impervious, Inflow Depth = 0.24" for 2yr 24hr event
 Inflow = 4.22 cfs @ 12.66 hrs, Volume= 1.005 af
 Outflow = 4.11 cfs @ 12.74 hrs, Volume= 1.005 af, Atten= 3%, Lag= 4.7 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2

Max. Velocity= 1.30 fps, Min. Travel Time= 6.8 min

Avg. Velocity= 0.56 fps, Avg. Travel Time= 15.7 min

Peak Storage= 1,673 cf @ 12.74 hrs

Average Depth at Peak Storage= 0.28' , Surface Width= 12.27'

Bank-Full Depth= 2.00' Flow Area= 36.0 sf, Capacity= 142.54 cfs

10.00' x 2.00' deep channel, n= 0.040

Side Slope Z-value= 4.0 ' / ' Top Width= 26.00'

Length= 530.0' Slope= 0.0075 ' / '

Inlet Invert= 869.00', Outlet Invert= 865.00'

**Summary for Pond 1P: Tuscobia Street Crossing**

Inflow Area = 61.200 ac, 0.33% Impervious, Inflow Depth > 0.32" for 2yr 24hr event
 Inflow = 4.11 cfs @ 12.74 hrs, Volume= 1.651 af
 Outflow = 4.10 cfs @ 12.76 hrs, Volume= 1.650 af, Atten= 0%, Lag= 1.0 min
 Primary = 4.10 cfs @ 12.76 hrs, Volume= 1.650 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2

Peak Elev= 865.40' @ 12.76 hrs Surf.Area= 1,105 sf Storage= 262 cf

Plug-Flow detention time= 1.5 min calculated for 1.650 af (100% of inflow)

Center-of-Mass det. time= 1.3 min (1,216.8 - 1,215.4)

Volume	Invert	Avail.Storage	Storage Description
#1	865.00'	51,515 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
865.00	194	0	0
866.00	2,455	1,325	1,325
867.00	5,342	3,899	5,223
868.00	9,972	7,657	12,880
869.00	15,610	12,791	25,671
870.00	36,077	25,844	51,515

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Device	Routing	Invert	Outlet Devices
#1	Primary	865.00'	38.0" W x 24.0" H, R=31.2" Elliptical RCP_Elliptical 38x24 X 3.00 L= 135.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 865.00' / 864.00' S= 0.0074 '/' Cc= 0.900 n= 0.013, Flow Area= 5.10 sf
#2	Primary	869.55'	Asymmetrical Weir, C= 3.27 Offset (feet) 0.00 25.00 50.00 75.00 100.00 125.00 168.00 Elev. (feet) 870.14 869.96 869.75 869.55 869.56 869.69 870.14

Primary OutFlow Max=4.10 cfs @ 12.76 hrs HW=865.40' TW=864.28' (Dynamic Tailwater)

1=RCP_Elliptical 38x24 (Inlet Controls 4.10 cfs @ 1.82 fps)

2=Asymmetrical Weir (Controls 0.00 cfs)

Summary for Pond 9P: West Detention Basin

Inflow Area = 10.300 ac, 1.94% Impervious, Inflow Depth = 1.18" for 2yr 24hr event
 Inflow = 17.15 cfs @ 12.14 hrs, Volume= 1.011 af
 Outflow = 0.50 cfs @ 15.21 hrs, Volume= 0.950 af, Atten= 97%, Lag= 184.5 min
 Primary = 0.50 cfs @ 15.21 hrs, Volume= 0.950 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2

Peak Elev= 868.58' @ 15.21 hrs Surf.Area= 22,045 sf Storage= 29,569 cf

Plug-Flow detention time= 742.3 min calculated for 0.950 af (94% of inflow)

Center-of-Mass det. time= 711.9 min (1,538.3 - 826.4)

Volume	Invert	Avail.Storage	Storage Description
#1	867.00'	95,625 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
867.00	15,467	0	0
868.00	19,599	17,533	17,533
869.00	23,831	21,715	39,248
870.00	28,163	25,997	65,245
871.00	32,596	30,380	95,625

Device	Routing	Invert	Outlet Devices
#1	Primary	866.00'	18.0" Round Culvert L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 866.00' / 866.00' S= 0.0000 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	867.00'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	869.00'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Primary	869.75'	30.0' 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=0.50 cfs @ 15.21 hrs HW=868.58' TW=867.12' (Dynamic Tailwater)

- 1=Culvert (Passes 0.50 cfs of 9.48 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.50 cfs @ 5.72 fps)
- 3=Orifice/Grate (Controls 0.00 cfs)
- 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 10P: West Infiltration Basin

Inflow Area = 10.300 ac, 1.94% Impervious, Inflow Depth > 1.11" for 2yr 24hr event
 Inflow = 0.50 cfs @ 15.21 hrs, Volume= 0.950 af
 Outflow = 0.47 cfs @ 18.20 hrs, Volume= 0.847 af, Atten= 6%, Lag= 179.1 min
 Discarded = 0.07 cfs @ 18.20 hrs, Volume= 0.201 af
 Primary = 0.40 cfs @ 18.20 hrs, Volume= 0.645 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 867.30' @ 18.20 hrs Surf.Area= 5,117 sf Storage= 5,645 cf

Plug-Flow detention time= 250.6 min calculated for 0.846 af (89% of inflow)
 Center-of-Mass det. time= 129.0 min (1,667.3 - 1,538.3)

Volume	Invert	Avail.Storage	Storage Description
#1	866.00'	34,052 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
866.00	3,624	0	0
867.00	4,745	4,185	4,185
868.00	6,000	5,373	9,557
869.00	7,386	6,693	16,250
870.00	8,876	8,131	24,381
871.00	10,466	9,671	34,052

Device	Routing	Invert	Outlet Devices
#1	Discarded	866.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 860.00'
#2	Primary	867.00'	15.0" Round Culvert L= 50.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 867.00' / 866.50' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#3	Primary	870.00'	5.0' 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

Discarded OutFlow Max=0.07 cfs @ 18.20 hrs HW=867.30' (Free Discharge)

- 1=Exfiltration (Controls 0.07 cfs)

Primary OutFlow Max=0.40 cfs @ 18.20 hrs HW=867.30' TW=865.21' (Dynamic Tailwater)

- 2=Culvert (Barrel Controls 0.40 cfs @ 2.71 fps)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 11P: East Detention Basin

Inflow Area = 18.700 ac, 3.74% Impervious, Inflow Depth = 1.60" for 2yr 24hr event
 Inflow = 40.59 cfs @ 12.18 hrs, Volume= 2.494 af
 Outflow = 2.11 cfs @ 13.68 hrs, Volume= 2.409 af, Atten= 95%, Lag= 90.3 min
 Primary = 2.11 cfs @ 13.68 hrs, Volume= 2.409 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 863.90' @ 13.68 hrs Surf.Area= 40,085 sf Storage= 67,574 cf

Plug-Flow detention time= 476.8 min calculated for 2.407 af (97% of inflow)
 Center-of-Mass det. time= 459.0 min (1,274.0 - 815.0)

Volume	Invert	Avail.Storage	Storage Description
#1	862.00'	162,500 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
862.00	30,928	0	0
863.00	35,693	33,311	33,311
864.00	40,550	38,122	71,432
865.00	45,509	43,030	114,462
866.00	50,568	48,039	162,500

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	24.0" Round Culvert L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 861.00' S= 0.0000 ' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#2	Device 1	862.00'	8.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	864.00'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Primary	864.75'	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=2.11 cfs @ 13.68 hrs HW=863.90' TW=862.15' (Dynamic Tailwater)

1=Culvert (Passes 2.11 cfs of 16.45 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 2.11 cfs @ 6.03 fps)
 3=Orifice/Grate (Controls 0.00 cfs)
 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 12P: East Infiltration Basin

Inflow Area = 18.700 ac, 3.74% Impervious, Inflow Depth > 1.55" for 2yr 24hr event
 Inflow = 2.11 cfs @ 13.68 hrs, Volume= 2.409 af
 Outflow = 1.82 cfs @ 16.32 hrs, Volume= 2.216 af, Atten= 14%, Lag= 158.3 min
 Discarded = 0.17 cfs @ 16.32 hrs, Volume= 0.458 af
 Primary = 1.65 cfs @ 16.32 hrs, Volume= 1.759 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2

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MSE 24-hr 4 2yr 24hr Rainfall=2.84"

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Peak Elev= 862.60' @ 16.32 hrs Surf.Area= 11,811 sf Storage= 16,128 cf

Plug-Flow detention time= 219.2 min calculated for 2.215 af (92% of inflow)

Center-of-Mass det. time= 135.0 min (1,409.0 - 1,274.0)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	69,661 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	8,400	0	0
862.00	10,501	9,451	9,451
863.00	12,689	11,595	21,046
864.00	14,977	13,833	34,879
865.00	17,366	16,172	51,050
866.00	19,855	18,611	69,661

Device	Routing	Invert	Outlet Devices
#1	Discarded	861.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 855.00'
#2	Primary	862.00'	18.0" Round Culvert L= 50.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 862.00' / 861.50' S= 0.0100 ' / Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#3	Primary	865.00'	4.0' 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

Discarded OutFlow Max=0.17 cfs @ 16.32 hrs HW=862.60' (Free Discharge)↑ **1=Exfiltration** (Controls 0.17 cfs)**Primary OutFlow** Max=1.65 cfs @ 16.32 hrs HW=862.60' TW=0.00' (Dynamic Tailwater)↑ **2=Culvert** (Barrel Controls 1.65 cfs @ 3.72 fps)↑ **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)**Summary for Link 1L: Proposed West Channel**

Inflow Area = 50.900 ac, 0.00% Impervious, Inflow Depth = 0.24" for 2yr 24hr event
 Inflow = 4.11 cfs @ 12.74 hrs, Volume= 1.005 af
 Primary = 4.11 cfs @ 12.74 hrs, Volume= 1.005 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 13L: Total Proposed Combined

Inflow Area = 95.100 ac, 0.95% Impervious, Inflow Depth > 0.49" for 2yr 24hr event
 Inflow = 6.08 cfs @ 12.72 hrs, Volume= 3.874 af
 Primary = 6.08 cfs @ 12.72 hrs, Volume= 3.874 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 24L: Proposed South Drainage Total

Inflow Area = 86.500 ac, 1.04% Impervious, Inflow Depth > 0.50" for 2yr 24hr event
Inflow = 5.10 cfs @ 12.77 hrs, Volume= 3.611 af
Primary = 5.10 cfs @ 12.77 hrs, Volume= 3.611 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 25L: Proposed East Through Culvert Total

Inflow Area = 8.600 ac, 0.00% Impervious, Inflow Depth = 0.37" for 2yr 24hr event
Inflow = 2.09 cfs @ 12.30 hrs, Volume= 0.264 af
Primary = 2.09 cfs @ 12.30 hrs, Volume= 0.264 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Subcatchment 6S: Proposed West Drain Area

Runoff = 29.12 cfs @ 12.14 hrs, Volume= 1.565 af, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 6.000	87	60% Impervious Residential
* 1.200	74	10% Impervious OL Area
* 0.200	98	Wet Basin
7.400	85	Weighted Average
7.200		97.30% Pervious Area
0.200		2.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	100	0.0800	0.31		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
0.3	100	0.0600	4.97		Shallow Concentrated Flow, Shallow
					Paved Kv= 20.3 fps
0.9	550	0.0180	9.66	30.35	Pipe Channel, Pipe
					24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'
					n= 0.013
6.5	750	Total			

Summary for Subcatchment 7S: Proposed East Drain Area

Runoff = 67.99 cfs @ 12.17 hrs, Volume= 4.238 af, Depth= 2.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 12.900	87	60% Impervious Residential
* 3.600	90	70% Impervious Residential
* 1.500	74	10% Impervious OL
* 0.700	98	Wet Basin
18.700	87	Weighted Average
18.000		96.26% Pervious Area
0.700		3.74% Impervious Area

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MSE 24-hr 4 10yr 24hr Rainfall=4.09"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.4	150	0.0800	0.34		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
0.3	100	0.0600	4.97		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
2.3	1,200	0.0150	8.82	27.71	Pipe Channel, Pipe 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
10.0	1,450	Total			

Summary for Subcatchment 8S: Proposed Directly Offsite East Area

Runoff = 1.94 cfs @ 12.38 hrs, Volume= 0.201 af, Depth= 0.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 2.400	62	10% Impervious Lightly Disturbed/Restored
* 0.100	90	70% Imp ROW area
2.500	63	Weighted Average
2.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	200	0.0100	0.16		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.3	400	0.0200	2.87		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
23.6	600	Total			

Summary for Subcatchment 15S: Proposed Directly Offsite South Area

Runoff = 4.24 cfs @ 12.51 hrs, Volume= 0.532 af, Depth= 0.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 6.200	62	10% Impervious Lightly Disturbed/Restored
* 0.200	82	40% Imp yard area
* 0.200	90	70% Imp ROW area
6.600	63	Weighted Average
6.600		100.00% Pervious Area

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MSE 24-hr 4 10yr 24hr Rainfall=4.09"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.5	300	0.0100	0.17		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
3.3	400	0.0100	2.03		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
32.8	700	Total			

Summary for Subcatchment 20S: Ex West Offsite Drainage

Runoff = 5.42 cfs @ 12.36 hrs, Volume= 0.600 af, Depth= 0.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 10.200	58	Type B Soils
10.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.4	400	0.0350	2.81		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
3.9	1,100	0.0100	4.71	94.24	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.7	1,800	Total			

Summary for Subcatchment 21S: Ex NW Offsite Drainage

Runoff = 16.34 cfs @ 12.56 hrs, Volume= 2.330 af, Depth= 0.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 39.300	58	Type B Soils
* 0.300	71	Type C Soils
39.600	58	Weighted Average
39.600		100.00% Pervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	300	0.0167	0.21		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
8.3	1,000	0.0180	2.01		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
1.0	1,100	0.0100	18.85	376.98	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.010
33.3	2,400	Total			

Summary for Subcatchment 22S: Ex N Offsite Drainage

Runoff = 2.96 cfs @ 12.34 hrs, Volume= 0.276 af, Depth= 1.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 1.200	58	Type B Soils
* 1.700	71	Type C Soils
2.900	66	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	300	0.0267	0.25		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
1.1	200	0.0400	3.00		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
21.0	500	Total			

Summary for Subcatchment 27S: Ex NE Offsite Drainage

Runoff = 6.22 cfs @ 12.24 hrs, Volume= 0.492 af, Depth= 0.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 3.600	58	Type B Soils
* 2.500	71	Type C Soils
6.100	63	Weighted Average
6.100		100.00% Pervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	300	0.1000	0.43		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.2	200	0.0100	1.50		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
13.9	500	Total			

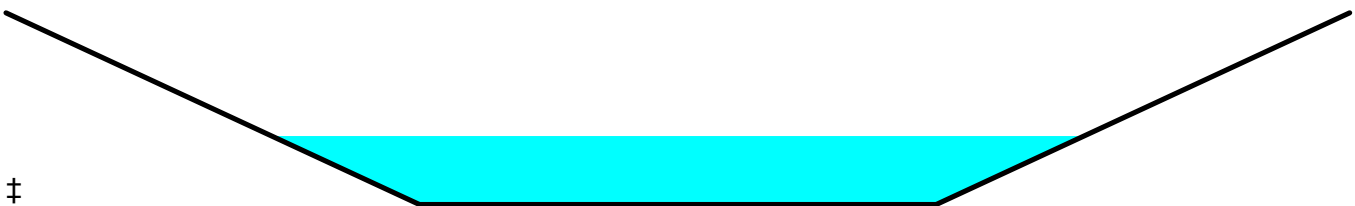
Summary for Subcatchment 28S: Pro West Bypass

Runoff = 2.94 cfs @ 12.13 hrs, Volume= 0.152 af, Depth= 1.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 1.100	74	OL Area 10% Imp
1.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TC

Summary for Reach 2R: SW Bypass ChannelInflow Area = 61.200 ac, 0.33% Impervious, Inflow Depth > 0.88" for 10yr 24hr event
Inflow = 20.61 cfs @ 12.59 hrs, Volume= 4.472 af
Outflow = 20.52 cfs @ 12.61 hrs, Volume= 4.470 af, Atten= 0%, Lag= 1.6 minRouting by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
Max. Velocity= 2.24 fps, Min. Travel Time= 2.3 min
Avg. Velocity= 0.69 fps, Avg. Travel Time= 7.3 minPeak Storage= 2,798 cf @ 12.61 hrs
Average Depth at Peak Storage= 0.71', Surface Width= 15.71'
Bank-Full Depth= 2.00' Flow Area= 36.0 sf, Capacity= 142.48 cfs10.00' x 2.00' deep channel, n= 0.040
Side Slope Z-value= 4.0 '/' Top Width= 26.00'
Length= 305.0' Slope= 0.0075 '/'
Inlet Invert= 864.00', Outlet Invert= 861.70'

Summary for Reach 26R: Bypass Channel

Inflow Area = 50.900 ac, 0.00% Impervious, Inflow Depth = 0.73" for 10yr 24hr event
 Inflow = 20.89 cfs @ 12.52 hrs, Volume= 3.083 af
 Outflow = 20.64 cfs @ 12.57 hrs, Volume= 3.083 af, Atten= 1%, Lag= 2.7 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Max. Velocity= 2.24 fps, Min. Travel Time= 3.9 min
 Avg. Velocity = 0.74 fps, Avg. Travel Time= 11.9 min

Peak Storage= 4,880 cf @ 12.57 hrs
 Average Depth at Peak Storage= 0.72' , Surface Width= 15.73'
 Bank-Full Depth= 2.00' Flow Area= 36.0 sf, Capacity= 142.54 cfs

10.00' x 2.00' deep channel, n= 0.040
 Side Slope Z-value= 4.0 ' / ' Top Width= 26.00'
 Length= 530.0' Slope= 0.0075 ' / '
 Inlet Invert= 869.00', Outlet Invert= 865.00'

**Summary for Pond 1P: Tuscobia Street Crossing**

Inflow Area = 61.200 ac, 0.33% Impervious, Inflow Depth > 0.88" for 10yr 24hr event
 Inflow = 20.64 cfs @ 12.57 hrs, Volume= 4.473 af
 Outflow = 20.61 cfs @ 12.59 hrs, Volume= 4.472 af, Atten= 0%, Lag= 1.0 min
 Primary = 20.61 cfs @ 12.59 hrs, Volume= 4.472 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 865.95' @ 12.59 hrs Surf.Area= 2,341 sf Storage= 1,203 cf

Plug-Flow detention time= 1.2 min calculated for 4.469 af (100% of inflow)
 Center-of-Mass det. time= 1.0 min (1,064.9 - 1,063.9)

Volume	Invert	Avail.Storage	Storage Description
#1	865.00'	51,515 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
865.00	194	0	0
866.00	2,455	1,325	1,325
867.00	5,342	3,899	5,223
868.00	9,972	7,657	12,880
869.00	15,610	12,791	25,671
870.00	36,077	25,844	51,515

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Device	Routing	Invert	Outlet Devices
#1	Primary	865.00'	38.0" W x 24.0" H, R=31.2" Elliptical RCP_Elliptical 38x24 X 3.00 L= 135.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 865.00' / 864.00' S= 0.0074 '/' Cc= 0.900 n= 0.013, Flow Area= 5.10 sf
#2	Primary	869.55'	Asymmetrical Weir, C= 3.27 Offset (feet) 0.00 25.00 50.00 75.00 100.00 125.00 168.00 Elev. (feet) 870.14 869.96 869.75 869.55 869.56 869.69 870.14

Primary OutFlow Max=20.59 cfs @ 12.59 hrs HW=865.95' TW=864.71' (Dynamic Tailwater)

↑ **1=RCP_Elliptical 38x24** (Inlet Controls 20.59 cfs @ 2.87 fps)

↓ **2=Asymmetrical Weir** (Controls 0.00 cfs)

Summary for Pond 9P: West Detention Basin

Inflow Area = 10.300 ac, 1.94% Impervious, Inflow Depth = 2.14" for 10yr 24hr event
 Inflow = 30.36 cfs @ 12.14 hrs, Volume= 1.841 af
 Outflow = 4.06 cfs @ 12.77 hrs, Volume= 1.718 af, Atten= 87%, Lag= 37.8 min
 Primary = 4.06 cfs @ 12.77 hrs, Volume= 1.718 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2

Peak Elev= 869.19' @ 12.78 hrs Surf.Area= 24,665 sf Storage= 43,914 cf

Plug-Flow detention time= 615.8 min calculated for 1.716 af (93% of inflow)

Center-of-Mass det. time= 583.2 min (1,397.0 - 813.8)

Volume	Invert	Avail.Storage	Storage Description
#1	867.00'	95,625 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
867.00	15,467	0	0
868.00	19,599	17,533	17,533
869.00	23,831	21,715	39,248
870.00	28,163	25,997	65,245
871.00	32,596	30,380	95,625

Device	Routing	Invert	Outlet Devices
#1	Primary	866.00'	18.0" Round Culvert L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 866.00' / 866.00' S= 0.0000 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	867.00'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	869.00'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Primary	869.75'	30.0' 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=4.06 cfs @ 12.77 hrs HW=869.19' TW=867.17' (Dynamic Tailwater)

- 1=Culvert (Passes 4.06 cfs of 11.87 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.60 cfs @ 6.84 fps)
- 3=Orifice/Grate (Weir Controls 3.47 cfs @ 1.43 fps)
- 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 10P: West Infiltration Basin

Inflow Area = 10.300 ac, 1.94% Impervious, Inflow Depth > 2.00" for 10yr 24hr event
 Inflow = 4.06 cfs @ 12.77 hrs, Volume= 1.718 af
 Outflow = 2.84 cfs @ 13.46 hrs, Volume= 1.604 af, Atten= 30%, Lag= 41.7 min
 Discarded = 0.08 cfs @ 13.46 hrs, Volume= 0.214 af
 Primary = 2.75 cfs @ 13.46 hrs, Volume= 1.390 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 867.88' @ 13.46 hrs Surf.Area= 5,846 sf Storage= 8,830 cf

Plug-Flow detention time= 159.9 min calculated for 1.604 af (93% of inflow)
 Center-of-Mass det. time= 68.7 min (1,465.7 - 1,397.0)

Volume	Invert	Avail.Storage	Storage Description
#1	866.00'	34,052 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
866.00	3,624	0	0
867.00	4,745	4,185	4,185
868.00	6,000	5,373	9,557
869.00	7,386	6,693	16,250
870.00	8,876	8,131	24,381
871.00	10,466	9,671	34,052

Device	Routing	Invert	Outlet Devices
#1	Discarded	866.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 860.00'
#2	Primary	867.00'	15.0" Round Culvert L= 50.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 867.00' / 866.50' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#3	Primary	870.00'	5.0' 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

Discarded OutFlow Max=0.08 cfs @ 13.46 hrs HW=867.88' (Free Discharge)

- 1=Exfiltration (Controls 0.08 cfs)

Primary OutFlow Max=2.75 cfs @ 13.46 hrs HW=867.88' TW=865.66' (Dynamic Tailwater)

- 2=Culvert (Barrel Controls 2.75 cfs @ 4.21 fps)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 11P: East Detention Basin

Inflow Area = 18.700 ac, 3.74% Impervious, Inflow Depth = 2.72" for 10yr 24hr event
 Inflow = 67.99 cfs @ 12.17 hrs, Volume= 4.238 af
 Outflow = 16.76 cfs @ 12.49 hrs, Volume= 4.142 af, Atten= 75%, Lag= 18.8 min
 Primary = 16.76 cfs @ 12.49 hrs, Volume= 4.142 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 864.50' @ 12.50 hrs Surf.Area= 43,015 sf Storage= 92,201 cf

Plug-Flow detention time= 360.7 min calculated for 4.139 af (98% of inflow)
 Center-of-Mass det. time= 348.4 min (1,150.9 - 802.5)

Volume	Invert	Avail.Storage	Storage Description
#1	862.00'	162,500 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
862.00	30,928	0	0
863.00	35,693	33,311	33,311
864.00	40,550	38,122	71,432
865.00	45,509	43,030	114,462
866.00	50,568	48,039	162,500

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	24.0" Round Culvert L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 861.00' S= 0.0000 ' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#2	Device 1	862.00'	8.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	864.00'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Primary	864.75'	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=16.75 cfs @ 12.49 hrs HW=864.50' TW=862.49' (Dynamic Tailwater)

1=Culvert (Passes 16.75 cfs of 21.17 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 2.38 cfs @ 6.81 fps)
 3=Orifice/Grate (Weir Controls 14.37 cfs @ 2.30 fps)
 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 12P: East Infiltration Basin

Inflow Area = 18.700 ac, 3.74% Impervious, Inflow Depth > 2.66" for 10yr 24hr event
 Inflow = 16.76 cfs @ 12.49 hrs, Volume= 4.142 af
 Outflow = 8.24 cfs @ 13.21 hrs, Volume= 3.934 af, Atten= 51%, Lag= 43.4 min
 Discarded = 0.22 cfs @ 13.21 hrs, Volume= 0.489 af
 Primary = 8.02 cfs @ 13.21 hrs, Volume= 3.445 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2

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MSE 24-hr 4 10yr 24hr Rainfall=4.09"

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Peak Elev= 863.64' @ 13.21 hrs Surf.Area= 14,163 sf Storage= 29,692 cf

Plug-Flow detention time= 147.0 min calculated for 3.934 af (95% of inflow)

Center-of-Mass det. time= 85.2 min (1,236.1 - 1,150.9)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	69,661 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	8,400	0	0
862.00	10,501	9,451	9,451
863.00	12,689	11,595	21,046
864.00	14,977	13,833	34,879
865.00	17,366	16,172	51,050
866.00	19,855	18,611	69,661

Device	Routing	Invert	Outlet Devices
#1	Discarded	861.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 855.00'
#2	Primary	862.00'	18.0" Round Culvert L= 50.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 862.00' / 861.50' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#3	Primary	865.00'	4.0' 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

Discarded OutFlow Max=0.22 cfs @ 13.21 hrs HW=863.64' (Free Discharge)↑ **1=Exfiltration** (Controls 0.22 cfs)**Primary OutFlow** Max=8.02 cfs @ 13.21 hrs HW=863.64' TW=0.00' (Dynamic Tailwater)↑ **2=Culvert** (Barrel Controls 8.02 cfs @ 5.16 fps)↑ **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)**Summary for Link 1L: Proposed West Channel**

Inflow Area = 50.900 ac, 0.00% Impervious, Inflow Depth = 0.73" for 10yr 24hr event
 Inflow = 20.64 cfs @ 12.57 hrs, Volume= 3.083 af
 Primary = 20.64 cfs @ 12.57 hrs, Volume= 3.083 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 13L: Total Proposed Combined

Inflow Area = 95.100 ac, 0.95% Impervious, Inflow Depth > 1.15" for 10yr 24hr event
 Inflow = 32.03 cfs @ 12.63 hrs, Volume= 9.139 af
 Primary = 32.03 cfs @ 12.63 hrs, Volume= 9.139 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 24L: Proposed South Drainage Total

Inflow Area = 86.500 ac, 1.04% Impervious, Inflow Depth > 1.17" for 10yr 24hr event
Inflow = 28.85 cfs @ 12.66 hrs, Volume= 8.446 af
Primary = 28.85 cfs @ 12.66 hrs, Volume= 8.446 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 25L: Proposed East Through Culvert Total

Inflow Area = 8.600 ac, 0.00% Impervious, Inflow Depth = 0.97" for 10yr 24hr event
Inflow = 7.66 cfs @ 12.26 hrs, Volume= 0.693 af
Primary = 7.66 cfs @ 12.26 hrs, Volume= 0.693 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Subcatchment 6S: Proposed West Drain Area

Runoff = 38.28 cfs @ 12.13 hrs, Volume= 2.083 af, Depth= 3.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 6.000	87	60% Impervious Residential
* 1.200	74	10% Impervious OL Area
* 0.200	98	Wet Basin
7.400	85	Weighted Average
7.200		97.30% Pervious Area
0.200		2.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	100	0.0800	0.31		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
0.3	100	0.0600	4.97		Shallow Concentrated Flow, Shallow
					Paved Kv= 20.3 fps
0.9	550	0.0180	9.66	30.35	Pipe Channel, Pipe
					24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'
					n= 0.013
6.5	750	Total			

Summary for Subcatchment 7S: Proposed East Drain Area

Runoff = 88.35 cfs @ 12.17 hrs, Volume= 5.574 af, Depth= 3.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 12.900	87	60% Impervious Residential
* 3.600	90	70% Impervious Residential
* 1.500	74	10% Impervious OL
* 0.700	98	Wet Basin
18.700	87	Weighted Average
18.000		96.26% Pervious Area
0.700		3.74% Impervious Area

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MSE 24-hr 4 25yr 24hr Rainfall=5.01"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.4	150	0.0800	0.34		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
0.3	100	0.0600	4.97		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
2.3	1,200	0.0150	8.82	27.71	Pipe Channel, Pipe 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
10.0	1,450	Total			

Summary for Subcatchment 8S: Proposed Directly Offsite East Area

Runoff = 3.24 cfs @ 12.37 hrs, Volume= 0.316 af, Depth= 1.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 2.400	62	10% Impervious Lightly Disturbed/Restored
* 0.100	90	70% Imp ROW area
2.500	63	Weighted Average
2.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	200	0.0100	0.16		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.3	400	0.0200	2.87		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
23.6	600	Total			

Summary for Subcatchment 15S: Proposed Directly Offsite South Area

Runoff = 7.11 cfs @ 12.50 hrs, Volume= 0.833 af, Depth= 1.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 6.200	62	10% Impervious Lightly Disturbed/Restored
* 0.200	82	40% Imp yard area
* 0.200	90	70% Imp ROW area
6.600	63	Weighted Average
6.600		100.00% Pervious Area

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MSE 24-hr 4 25yr 24hr Rainfall=5.01"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.5	300	0.0100	0.17		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
3.3	400	0.0100	2.03		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
32.8	700	Total			

Summary for Subcatchment 20S: Ex West Offsite Drainage

Runoff = 10.27 cfs @ 12.34 hrs, Volume= 0.998 af, Depth= 1.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 10.200	58	Type B Soils
10.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.4	400	0.0350	2.81		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
3.9	1,100	0.0100	4.71	94.24	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.7	1,800	Total			

Summary for Subcatchment 21S: Ex NW Offsite Drainage

Runoff = 30.61 cfs @ 12.53 hrs, Volume= 3.875 af, Depth= 1.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 39.300	58	Type B Soils
* 0.300	71	Type C Soils
39.600	58	Weighted Average
39.600		100.00% Pervious Area

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MSE 24-hr 4 25yr 24hr Rainfall=5.01"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	300	0.0167	0.21		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
8.3	1,000	0.0180	2.01		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
1.0	1,100	0.0100	18.85	376.98	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.010
33.3	2,400	Total			

Summary for Subcatchment 22S: Ex N Offsite Drainage

Runoff = 4.70 cfs @ 12.33 hrs, Volume= 0.419 af, Depth= 1.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 1.200	58	Type B Soils
* 1.700	71	Type C Soils
2.900	66	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	300	0.0267	0.25		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
1.1	200	0.0400	3.00		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
21.0	500	Total			

Summary for Subcatchment 27S: Ex NE Offsite Drainage

Runoff = 10.39 cfs @ 12.23 hrs, Volume= 0.770 af, Depth= 1.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 3.600	58	Type B Soils
* 2.500	71	Type C Soils
6.100	63	Weighted Average
6.100		100.00% Pervious Area

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MSE 24-hr 4 25yr 24hr Rainfall=5.01"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	300	0.1000	0.43		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.2	200	0.0100	1.50		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
13.9	500	Total			

Summary for Subcatchment 28S: Pro West Bypass

Runoff = 4.21 cfs @ 12.13 hrs, Volume= 0.217 af, Depth= 2.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 1.100	74	OL Area 10% Imp
1.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TC

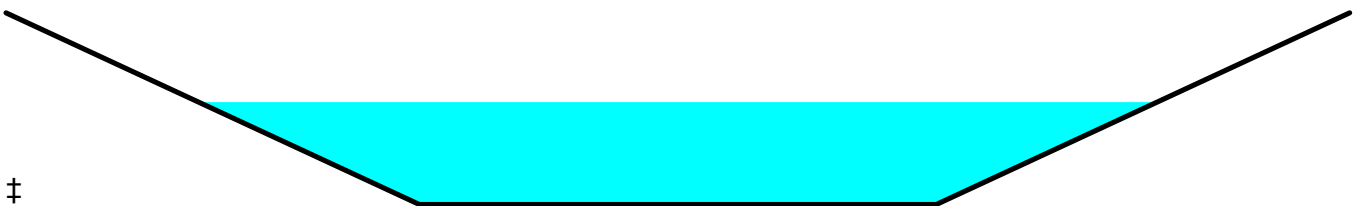
Summary for Reach 2R: SW Bypass Channel

Inflow Area = 61.200 ac, 0.33% Impervious, Inflow Depth > 1.40" for 25yr 24hr event
 Inflow = 42.99 cfs @ 12.57 hrs, Volume= 7.121 af
 Outflow = 42.88 cfs @ 12.59 hrs, Volume= 7.118 af, Atten= 0%, Lag= 1.3 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Max. Velocity= 2.81 fps, Min. Travel Time= 1.8 min
 Avg. Velocity= 0.75 fps, Avg. Travel Time= 6.8 min

Peak Storage= 4,659 cf @ 12.59 hrs
 Average Depth at Peak Storage= 1.07', Surface Width= 18.56'
 Bank-Full Depth= 2.00' Flow Area= 36.0 sf, Capacity= 142.48 cfs

10.00' x 2.00' deep channel, n= 0.040
 Side Slope Z-value= 4.0 '/' Top Width= 26.00'
 Length= 305.0' Slope= 0.0075 '/'
 Inlet Invert= 864.00', Outlet Invert= 861.70'



Summary for Reach 26R: Bypass Channel

Inflow Area = 50.900 ac, 0.00% Impervious, Inflow Depth = 1.20" for 25yr 24hr event
 Inflow = 39.04 cfs @ 12.48 hrs, Volume= 5.091 af
 Outflow = 38.68 cfs @ 12.52 hrs, Volume= 5.091 af, Atten= 1%, Lag= 2.8 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Max. Velocity= 2.72 fps, Min. Travel Time= 3.2 min
 Avg. Velocity= 0.83 fps, Avg. Travel Time= 10.6 min

Peak Storage= 7,530 cf @ 12.52 hrs
 Average Depth at Peak Storage= 1.01', Surface Width= 18.09'
 Bank-Full Depth= 2.00' Flow Area= 36.0 sf, Capacity= 142.54 cfs

10.00' x 2.00' deep channel, n= 0.040
 Side Slope Z-value= 4.0 ' / ' Top Width= 26.00'
 Length= 530.0' Slope= 0.0075 ' / '
 Inlet Invert= 869.00', Outlet Invert= 865.00'

**Summary for Pond 1P: Tuscobia Street Crossing**

Inflow Area = 61.200 ac, 0.33% Impervious, Inflow Depth > 1.40" for 25yr 24hr event
 Inflow = 43.11 cfs @ 12.55 hrs, Volume= 7.121 af
 Outflow = 42.99 cfs @ 12.57 hrs, Volume= 7.121 af, Atten= 0%, Lag= 1.3 min
 Primary = 42.99 cfs @ 12.57 hrs, Volume= 7.121 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 866.45' @ 12.57 hrs Surf.Area= 3,744 sf Storage= 2,709 cf

Plug-Flow detention time= 1.1 min calculated for 7.116 af (100% of inflow)
 Center-of-Mass det. time= 1.0 min (990.6 - 989.6)

Volume	Invert	Avail.Storage	Storage Description
#1	865.00'	51,515 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
865.00	194	0	0
866.00	2,455	1,325	1,325
867.00	5,342	3,899	5,223
868.00	9,972	7,657	12,880
869.00	15,610	12,791	25,671
870.00	36,077	25,844	51,515

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MSE 24-hr 4 25yr 24hr Rainfall=5.01"

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Device	Routing	Invert	Outlet Devices
#1	Primary	865.00'	38.0" W x 24.0" H, R=31.2" Elliptical RCP_Elliptical 38x24 X 3.00 L= 135.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 865.00' / 864.00' S= 0.0074 '/' Cc= 0.900 n= 0.013, Flow Area= 5.10 sf
#2	Primary	869.55'	Asymmetrical Weir, C= 3.27 Offset (feet) 0.00 25.00 50.00 75.00 100.00 125.00 168.00 Elev. (feet) 870.14 869.96 869.75 869.55 869.56 869.69 870.14

Primary OutFlow Max=42.95 cfs @ 12.57 hrs HW=866.45' TW=865.07' (Dynamic Tailwater)

↑ **1=RCP_Elliptical 38x24** (Inlet Controls 42.95 cfs @ 3.65 fps)

↓ **2=Asymmetrical Weir** (Controls 0.00 cfs)

Summary for Pond 9P: West Detention Basin

Inflow Area = 10.300 ac, 1.94% Impervious, Inflow Depth = 2.91" for 25yr 24hr event
 Inflow = 40.49 cfs @ 12.14 hrs, Volume= 2.502 af
 Outflow = 11.60 cfs @ 12.38 hrs, Volume= 2.367 af, Atten= 71%, Lag= 14.6 min
 Primary = 11.60 cfs @ 12.38 hrs, Volume= 2.367 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 869.44' @ 12.51 hrs Surf.Area= 25,732 sf Storage= 50,125 cf

Plug-Flow detention time= 467.3 min calculated for 2.367 af (95% of inflow)

Center-of-Mass det. time= 439.6 min (1,246.9 - 807.3)

Volume	Invert	Avail.Storage	Storage Description
#1	867.00'	95,625 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
867.00	15,467	0	0
868.00	19,599	17,533	17,533
869.00	23,831	21,715	39,248
870.00	28,163	25,997	65,245
871.00	32,596	30,380	95,625

Device	Routing	Invert	Outlet Devices
#1	Primary	866.00'	18.0" Round Culvert L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 866.00' / 866.00' S= 0.0000 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	867.00'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	869.00'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Primary	869.75'	30.0' 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=11.68 cfs @ 12.38 hrs HW=869.42' TW=867.48' (Dynamic Tailwater)

- 1=Culvert (Passes 11.68 cfs of 11.85 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.59 cfs @ 6.71 fps)
- 3=Orifice/Grate (Weir Controls 11.10 cfs @ 2.11 fps)
- 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 10P: West Infiltration Basin

Inflow Area = 10.300 ac, 1.94% Impervious, Inflow Depth > 2.76" for 25yr 24hr event
 Inflow = 11.60 cfs @ 12.38 hrs, Volume= 2.367 af
 Outflow = 6.11 cfs @ 13.14 hrs, Volume= 2.252 af, Atten= 47%, Lag= 45.5 min
 Discarded = 0.11 cfs @ 13.14 hrs, Volume= 0.222 af
 Primary = 6.00 cfs @ 13.14 hrs, Volume= 2.031 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 868.74' @ 13.14 hrs Surf.Area= 7,026 sf Storage= 14,377 cf

Plug-Flow detention time= 122.1 min calculated for 2.251 af (95% of inflow)
 Center-of-Mass det. time= 48.8 min (1,295.7 - 1,246.9)

Volume	Invert	Avail.Storage	Storage Description
#1	866.00'	34,052 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
866.00	3,624	0	0
867.00	4,745	4,185	4,185
868.00	6,000	5,373	9,557
869.00	7,386	6,693	16,250
870.00	8,876	8,131	24,381
871.00	10,466	9,671	34,052

Device	Routing	Invert	Outlet Devices
#1	Discarded	866.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 860.00'
#2	Primary	867.00'	15.0" Round Culvert L= 50.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 867.00' / 866.50' S= 0.0100 ' / ' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#3	Primary	870.00'	5.0' 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

Discarded OutFlow Max=0.11 cfs @ 13.14 hrs HW=868.74' (Free Discharge)

- 1=Exfiltration (Controls 0.11 cfs)

Primary OutFlow Max=6.00 cfs @ 13.14 hrs HW=868.74' TW=866.00' (Dynamic Tailwater)

- 2=Culvert (Barrel Controls 6.00 cfs @ 4.89 fps)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 11P: East Detention Basin

Inflow Area = 18.700 ac, 3.74% Impervious, Inflow Depth = 3.58" for 25yr 24hr event
 Inflow = 88.35 cfs @ 12.17 hrs, Volume= 5.574 af
 Outflow = 25.39 cfs @ 12.36 hrs, Volume= 5.472 af, Atten= 71%, Lag= 11.1 min
 Primary = 25.39 cfs @ 12.36 hrs, Volume= 5.472 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 864.97' @ 12.47 hrs Surf.Area= 45,376 sf Storage= 113,247 cf

Plug-Flow detention time= 308.2 min calculated for 5.472 af (98% of inflow)
 Center-of-Mass det. time= 297.5 min (1,093.5 - 796.0)

Volume	Invert	Avail.Storage	Storage Description
#1	862.00'	162,500 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
862.00	30,928	0	0
863.00	35,693	33,311	33,311
864.00	40,550	38,122	71,432
865.00	45,509	43,030	114,462
866.00	50,568	48,039	162,500

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	24.0" Round Culvert L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 861.00' S= 0.0000 ' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#2	Device 1	862.00'	8.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	864.00'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Primary	864.75'	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=25.38 cfs @ 12.36 hrs HW=864.93' TW=862.91' (Dynamic Tailwater)

1=Culvert (Inlet Controls 21.53 cfs @ 6.85 fps)
 2=Orifice/Grate (Passes < 2.39 cfs potential flow)
 3=Orifice/Grate (Passes < 36.93 cfs potential flow)
 4=Broad-Crested Rectangular Weir (Weir Controls 3.84 cfs @ 1.06 fps)

Summary for Pond 12P: East Infiltration Basin

Inflow Area = 18.700 ac, 3.74% Impervious, Inflow Depth > 3.51" for 25yr 24hr event
 Inflow = 25.39 cfs @ 12.36 hrs, Volume= 5.472 af
 Outflow = 10.85 cfs @ 13.10 hrs, Volume= 5.259 af, Atten= 57%, Lag= 44.7 min
 Discarded = 0.26 cfs @ 13.10 hrs, Volume= 0.511 af
 Primary = 10.59 cfs @ 13.10 hrs, Volume= 4.748 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2

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Peak Elev= 864.35' @ 13.10 hrs Surf.Area= 15,806 sf Storage= 40,219 cf

Plug-Flow detention time= 122.9 min calculated for 5.255 af (96% of inflow)

Center-of-Mass det. time= 72.3 min (1,165.8 - 1,093.5)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	69,661 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	8,400	0	0
862.00	10,501	9,451	9,451
863.00	12,689	11,595	21,046
864.00	14,977	13,833	34,879
865.00	17,366	16,172	51,050
866.00	19,855	18,611	69,661

Device	Routing	Invert	Outlet Devices
#1	Discarded	861.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 855.00'
#2	Primary	862.00'	18.0" Round Culvert L= 50.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 862.00' / 861.50' S= 0.0100 ' / Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#3	Primary	865.00'	4.0' 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

Discarded OutFlow Max=0.26 cfs @ 13.10 hrs HW=864.35' (Free Discharge)↑ **1=Exfiltration** (Controls 0.26 cfs)**Primary OutFlow** Max=10.59 cfs @ 13.10 hrs HW=864.35' TW=0.00' (Dynamic Tailwater)↑ **2=Culvert** (Barrel Controls 10.59 cfs @ 5.99 fps)↑ **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)**Summary for Link 1L: Proposed West Channel**

Inflow Area = 50.900 ac, 0.00% Impervious, Inflow Depth = 1.20" for 25yr 24hr event
 Inflow = 38.68 cfs @ 12.52 hrs, Volume= 5.091 af
 Primary = 38.68 cfs @ 12.52 hrs, Volume= 5.091 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 13L: Total Proposed Combined

Inflow Area = 95.100 ac, 0.95% Impervious, Inflow Depth > 1.74" for 25yr 24hr event
 Inflow = 64.48 cfs @ 12.57 hrs, Volume= 13.786 af
 Primary = 64.48 cfs @ 12.57 hrs, Volume= 13.786 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 24L: Proposed South Drainage Total

Inflow Area = 86.500 ac, 1.04% Impervious, Inflow Depth > 1.76" for 25yr 24hr event
Inflow = 58.68 cfs @ 12.59 hrs, Volume= 12.700 af
Primary = 58.68 cfs @ 12.59 hrs, Volume= 12.700 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 25L: Proposed East Through Culvert Total

Inflow Area = 8.600 ac, 0.00% Impervious, Inflow Depth = 1.52" for 25yr 24hr event
Inflow = 12.86 cfs @ 12.25 hrs, Volume= 1.086 af
Primary = 12.86 cfs @ 12.25 hrs, Volume= 1.086 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Subcatchment 6S: Proposed West Drain Area

Runoff = 54.75 cfs @ 12.13 hrs, Volume= 3.039 af, Depth= 4.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 6.000	87	60% Impervious Residential
* 1.200	74	10% Impervious OL Area
* 0.200	98	Wet Basin
7.400	85	Weighted Average
7.200		97.30% Pervious Area
0.200		2.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	100	0.0800	0.31		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
0.3	100	0.0600	4.97		Shallow Concentrated Flow, Shallow
					Paved Kv= 20.3 fps
0.9	550	0.0180	9.66	30.35	Pipe Channel, Pipe
					24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'
					n= 0.013
6.5	750	Total			

Summary for Subcatchment 7S: Proposed East Drain Area

Runoff = 124.79 cfs @ 12.17 hrs, Volume= 8.027 af, Depth= 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 12.900	87	60% Impervious Residential
* 3.600	90	70% Impervious Residential
* 1.500	74	10% Impervious OL
* 0.700	98	Wet Basin
18.700	87	Weighted Average
18.000		96.26% Pervious Area
0.700		3.74% Impervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.4	150	0.0800	0.34		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
0.3	100	0.0600	4.97		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
2.3	1,200	0.0150	8.82	27.71	Pipe Channel, Pipe 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
10.0	1,450	Total			

Summary for Subcatchment 8S: Proposed Directly Offsite East Area

Runoff = 5.94 cfs @ 12.35 hrs, Volume= 0.552 af, Depth= 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 2.400	62	10% Impervious Lightly Disturbed/Restored
* 0.100	90	70% Imp ROW area
2.500	63	Weighted Average
2.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	200	0.0100	0.16		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.3	400	0.0200	2.87		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
23.6	600	Total			

Summary for Subcatchment 15S: Proposed Directly Offsite South Area

Runoff = 13.05 cfs @ 12.48 hrs, Volume= 1.457 af, Depth= 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 6.200	62	10% Impervious Lightly Disturbed/Restored
* 0.200	82	40% Imp yard area
* 0.200	90	70% Imp ROW area
6.600	63	Weighted Average
6.600		100.00% Pervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.5	300	0.0100	0.17		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
3.3	400	0.0100	2.03		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
32.8	700	Total			

Summary for Subcatchment 20S: Ex West Offsite Drainage

Runoff = 20.81 cfs @ 12.32 hrs, Volume= 1.854 af, Depth= 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 10.200	58	Type B Soils
10.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.4	400	0.0350	2.81		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
3.9	1,100	0.0100	4.71	94.24	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.7	1,800	Total			

Summary for Subcatchment 21S: Ex NW Offsite Drainage

Runoff = 61.96 cfs @ 12.50 hrs, Volume= 7.198 af, Depth= 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 39.300	58	Type B Soils
* 0.300	71	Type C Soils
39.600	58	Weighted Average
39.600		100.00% Pervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	300	0.0167	0.21		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
8.3	1,000	0.0180	2.01		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
1.0	1,100	0.0100	18.85	376.98	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.010
33.3	2,400	Total			

Summary for Subcatchment 22S: Ex N Offsite Drainage

Runoff = 8.21 cfs @ 12.32 hrs, Volume= 0.710 af, Depth= 2.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 1.200	58	Type B Soils
* 1.700	71	Type C Soils
2.900	66	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	300	0.0267	0.25		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
1.1	200	0.0400	3.00		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
21.0	500	Total			

Summary for Subcatchment 27S: Ex NE Offsite Drainage

Runoff = 18.89 cfs @ 12.23 hrs, Volume= 1.347 af, Depth= 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 3.600	58	Type B Soils
* 2.500	71	Type C Soils
6.100	63	Weighted Average
6.100		100.00% Pervious Area

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MSE 24-hr 4 100yr 24hr Rainfall=6.66"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	300	0.1000	0.43		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.2	200	0.0100	1.50		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
13.9	500	Total			

Summary for Subcatchment 28S: Pro West Bypass

Runoff = 6.60 cfs @ 12.13 hrs, Volume= 0.343 af, Depth= 3.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 1.100	74	OL Area 10% Imp
1.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TC

Summary for Reach 2R: SW Bypass Channel

Inflow Area = 61.200 ac, 0.33% Impervious, Inflow Depth > 2.48" for 100yr 24hr event

Inflow = 85.20 cfs @ 12.55 hrs, Volume= 12.646 af

Outflow = 85.08 cfs @ 12.57 hrs, Volume= 12.643 af, Atten= 0%, Lag= 1.1 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2

Max. Velocity= 3.43 fps, Min. Travel Time= 1.5 min

Avg. Velocity = 0.83 fps, Avg. Travel Time= 6.1 min

Peak Storage= 7,572 cf @ 12.57 hrs

Average Depth at Peak Storage= 1.54', Surface Width= 22.30'

Bank-Full Depth= 2.00' Flow Area= 36.0 sf, Capacity= 142.48 cfs

10.00' x 2.00' deep channel, n= 0.040

Side Slope Z-value= 4.0 '/' Top Width= 26.00'

Length= 305.0' Slope= 0.0075 '/'

Inlet Invert= 864.00', Outlet Invert= 861.70'



Summary for Reach 26R: Bypass Channel

Inflow Area = 50.900 ac, 0.00% Impervious, Inflow Depth = 2.21" for 100yr 24hr event
 Inflow = 78.97 cfs @ 12.45 hrs, Volume= 9.395 af
 Outflow = 78.38 cfs @ 12.49 hrs, Volume= 9.395 af, Atten= 1%, Lag= 2.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2

Max. Velocity= 3.35 fps, Min. Travel Time= 2.6 min

Avg. Velocity = 0.95 fps, Avg. Travel Time= 9.3 min

Peak Storage= 12,405 cf @ 12.49 hrs

Average Depth at Peak Storage= 1.47', Surface Width= 21.78'

Bank-Full Depth= 2.00' Flow Area= 36.0 sf, Capacity= 142.54 cfs

10.00' x 2.00' deep channel, n= 0.040

Side Slope Z-value= 4.0 ' / ' Top Width= 26.00'

Length= 530.0' Slope= 0.0075 ' / '

Inlet Invert= 869.00', Outlet Invert= 865.00'

**Summary for Pond 1P: Tuscobia Street Crossing**

Inflow Area = 61.200 ac, 0.33% Impervious, Inflow Depth > 2.48" for 100yr 24hr event
 Inflow = 86.83 cfs @ 12.49 hrs, Volume= 12.646 af
 Outflow = 85.20 cfs @ 12.55 hrs, Volume= 12.646 af, Atten= 2%, Lag= 3.5 min
 Primary = 85.20 cfs @ 12.55 hrs, Volume= 12.646 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2

Peak Elev= 867.43' @ 12.55 hrs Surf.Area= 7,315 sf Storage= 7,919 cf

Plug-Flow detention time= 1.2 min calculated for 12.646 af (100% of inflow)

Center-of-Mass det. time= 1.1 min (932.9 - 931.8)

Volume	Invert	Avail.Storage	Storage Description
#1	865.00'	51,515 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
865.00	194	0	0
866.00	2,455	1,325	1,325
867.00	5,342	3,899	5,223
868.00	9,972	7,657	12,880
869.00	15,610	12,791	25,671
870.00	36,077	25,844	51,515

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Device	Routing	Invert	Outlet Devices
#1	Primary	865.00'	38.0" W x 24.0" H, R=31.2" Elliptical RCP_Elliptical 38x24 X 3.00 L= 135.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 865.00' / 864.00' S= 0.0074 '/' Cc= 0.900 n= 0.013, Flow Area= 5.10 sf
#2	Primary	869.55'	Asymmetrical Weir, C= 3.27 Offset (feet) 0.00 25.00 50.00 75.00 100.00 125.00 168.00 Elev. (feet) 870.14 869.96 869.75 869.55 869.56 869.69 870.14

Primary OutFlow Max=85.18 cfs @ 12.55 hrs HW=867.43' TW=865.54' (Dynamic Tailwater)

1=RCP_Elliptical 38x24 (Inlet Controls 85.18 cfs @ 5.57 fps)

2=Asymmetrical Weir (Controls 0.00 cfs)

Summary for Pond 9P: West Detention Basin

Inflow Area = 10.300 ac, 1.94% Impervious, Inflow Depth = 4.37" for 100yr 24hr event
 Inflow = 58.97 cfs @ 12.14 hrs, Volume= 3.749 af
 Outflow = 22.34 cfs @ 12.31 hrs, Volume= 3.603 af, Atten= 62%, Lag= 10.6 min
 Primary = 22.34 cfs @ 12.31 hrs, Volume= 3.603 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2

Peak Elev= 870.06' @ 12.38 hrs Surf.Area= 28,435 sf Storage= 66,980 cf

Plug-Flow detention time= 335.8 min calculated for 3.603 af (96% of inflow)

Center-of-Mass det. time= 314.7 min (1,113.5 - 798.8)

Volume	Invert	Avail.Storage	Storage Description
#1	867.00'	95,625 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
867.00	15,467	0	0
868.00	19,599	17,533	17,533
869.00	23,831	21,715	39,248
870.00	28,163	25,997	65,245
871.00	32,596	30,380	95,625

Device	Routing	Invert	Outlet Devices
#1	Primary	866.00'	18.0" Round Culvert L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 866.00' / 866.00' S= 0.0000 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	867.00'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	869.00'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Primary	869.75'	30.0' 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=22.34 cfs @ 12.31 hrs HW=870.05' TW=868.65' (Dynamic Tailwater)

- 1=Culvert (Inlet Controls 10.05 cfs @ 5.69 fps)
- 2=Orifice/Grate (Passes < 0.50 cfs potential flow)
- 3=Orifice/Grate (Passes < 44.06 cfs potential flow)
- 4=Broad-Crested Rectangular Weir (Weir Controls 12.30 cfs @ 1.38 fps)

Summary for Pond 10P: West Infiltration Basin

Inflow Area = 10.300 ac, 1.94% Impervious, Inflow Depth > 4.20" for 100yr 24hr event
 Inflow = 22.34 cfs @ 12.31 hrs, Volume= 3.603 af
 Outflow = 9.14 cfs @ 12.73 hrs, Volume= 3.488 af, Atten= 59%, Lag= 25.0 min
 Discarded = 0.15 cfs @ 12.73 hrs, Volume= 0.237 af
 Primary = 9.00 cfs @ 12.73 hrs, Volume= 3.251 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 869.97' @ 12.73 hrs Surf.Area= 8,838 sf Storage= 24,158 cf

Plug-Flow detention time= 91.7 min calculated for 3.486 af (97% of inflow)
 Center-of-Mass det. time= 39.4 min (1,153.0 - 1,113.5)

Volume	Invert	Avail.Storage	Storage Description
#1	866.00'	34,052 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
866.00	3,624	0	0
867.00	4,745	4,185	4,185
868.00	6,000	5,373	9,557
869.00	7,386	6,693	16,250
870.00	8,876	8,131	24,381
871.00	10,466	9,671	34,052

Device	Routing	Invert	Outlet Devices
#1	Discarded	866.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 860.00'
#2	Primary	867.00'	15.0" Round Culvert L= 50.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 867.00' / 866.50' S= 0.0100 ' / ' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#3	Primary	870.00'	5.0' 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

Discarded OutFlow Max=0.15 cfs @ 12.73 hrs HW=869.97' (Free Discharge)

- 1=Exfiltration (Controls 0.15 cfs)

Primary OutFlow Max=9.00 cfs @ 12.73 hrs HW=869.97' TW=867.08' (Dynamic Tailwater)

- 2=Culvert (Barrel Controls 9.00 cfs @ 7.33 fps)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 11P: East Detention Basin

Inflow Area = 18.700 ac, 3.74% Impervious, Inflow Depth = 5.15" for 100yr 24hr event
 Inflow = 124.79 cfs @ 12.17 hrs, Volume= 8.027 af
 Outflow = 58.85 cfs @ 12.29 hrs, Volume= 7.919 af, Atten= 53%, Lag= 7.3 min
 Primary = 58.85 cfs @ 12.29 hrs, Volume= 7.919 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 865.63' @ 12.62 hrs Surf.Area= 48,684 sf Storage= 144,018 cf

Plug-Flow detention time= 253.7 min calculated for 7.919 af (99% of inflow)
 Center-of-Mass det. time= 245.5 min (1,033.0 - 787.5)

Volume	Invert	Avail.Storage	Storage Description
#1	862.00'	162,500 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
862.00	30,928	0	0
863.00	35,693	33,311	33,311
864.00	40,550	38,122	71,432
865.00	45,509	43,030	114,462
866.00	50,568	48,039	162,500

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	24.0" Round Culvert L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 861.00' S= 0.0000 ' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#2	Device 1	862.00'	8.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	864.00'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Primary	864.75'	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=58.59 cfs @ 12.29 hrs HW=865.58' TW=864.21' (Dynamic Tailwater)

1=Culvert (Inlet Controls 17.69 cfs @ 5.63 fps)
 2=Orifice/Grate (Passes < 1.97 cfs potential flow)
 3=Orifice/Grate (Passes < 70.78 cfs potential flow)
 4=Broad-Crested Rectangular Weir (Weir Controls 40.89 cfs @ 2.45 fps)

Summary for Pond 12P: East Infiltration Basin

Inflow Area = 18.700 ac, 3.74% Impervious, Inflow Depth > 5.08" for 100yr 24hr event
 Inflow = 58.85 cfs @ 12.29 hrs, Volume= 7.919 af
 Outflow = 19.36 cfs @ 12.67 hrs, Volume= 7.699 af, Atten= 67%, Lag= 22.4 min
 Discarded = 0.33 cfs @ 12.67 hrs, Volume= 0.550 af
 Primary = 19.04 cfs @ 12.67 hrs, Volume= 7.149 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2

1904113 SWMP

Prepared by HP Inc.

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MSE 24-hr 4 100yr 24hr Rainfall=6.66"

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Peak Elev= 865.58' @ 12.67 hrs Surf.Area= 18,806 sf Storage= 61,513 cf

Plug-Flow detention time= 101.8 min calculated for 7.699 af (97% of inflow)

Center-of-Mass det. time= 63.1 min (1,096.2 - 1,033.0)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	69,661 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	8,400	0	0
862.00	10,501	9,451	9,451
863.00	12,689	11,595	21,046
864.00	14,977	13,833	34,879
865.00	17,366	16,172	51,050
866.00	19,855	18,611	69,661

Device	Routing	Invert	Outlet Devices
#1	Discarded	861.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 855.00'
#2	Primary	862.00'	18.0" Round Culvert L= 50.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 862.00' / 861.50' S= 0.0100 ' / Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#3	Primary	865.00'	4.0' 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

Discarded OutFlow Max=0.33 cfs @ 12.67 hrs HW=865.58' (Free Discharge)↑ **1=Exfiltration** (Controls 0.33 cfs)**Primary OutFlow** Max=19.03 cfs @ 12.67 hrs HW=865.58' TW=0.00' (Dynamic Tailwater)↑ **2=Culvert** (Inlet Controls 14.31 cfs @ 8.10 fps)↑ **3=Broad-Crested Rectangular Weir** (Weir Controls 4.72 cfs @ 2.04 fps)**Summary for Link 1L: Proposed West Channel**

Inflow Area = 50.900 ac, 0.00% Impervious, Inflow Depth = 2.21" for 100yr 24hr event
 Inflow = 78.38 cfs @ 12.49 hrs, Volume= 9.395 af
 Primary = 78.38 cfs @ 12.49 hrs, Volume= 9.395 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 13L: Total Proposed Combined

Inflow Area = 95.100 ac, 0.95% Impervious, Inflow Depth > 2.92" for 100yr 24hr event
 Inflow = 127.06 cfs @ 12.53 hrs, Volume= 23.147 af
 Primary = 127.06 cfs @ 12.53 hrs, Volume= 23.147 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 24L: Proposed South Drainage Total

Inflow Area = 86.500 ac, 1.04% Impervious, Inflow Depth > 2.95" for 100yr 24hr event
Inflow = 116.15 cfs @ 12.56 hrs, Volume= 21.249 af
Primary = 116.15 cfs @ 12.56 hrs, Volume= 21.249 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 25L: Proposed East Through Culvert Total

Inflow Area = 8.600 ac, 0.00% Impervious, Inflow Depth = 2.65" for 100yr 24hr event
Inflow = 23.52 cfs @ 12.24 hrs, Volume= 1.899 af
Primary = 23.52 cfs @ 12.24 hrs, Volume= 1.899 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

APPENDIX E

SOILS REPORT



Construction • Geotechnical
Consulting Engineering/Testing

January 6, 2020
C19482

Mr. Chris Ehlers
VH Acquisitions, LLC
6801 South Towne Drive
Madison, WI 53713

Re: Geotechnical Exploration Report
Proposed Residential Development
Utterback Property – CTH AB
Town of Dunn, Dane County, Wisconsin

Dear Mr. Ehlers:

Construction • Geotechnical Consultants, Inc. (CGC) has completed the subsurface exploration program for the above-referenced project. The purpose of this exploration program was to evaluate the subsurface conditions within proposed roadways and stormwater management areas and to provide geotechnical recommendations regarding site preparation, utility and pavement design/construction. Preliminary stormwater and residential foundation design recommendations are also included. We are sending you an electronic copy of this report, and we can mail a paper copy upon request. An electronic copy is also being sent to Mr. Dan Day at D'Onofrio Kottke and Associates.

PROJECT AND SITE DESCRIPTIONS

We understand a residential development is proposed for an approximately 54-acre site on the west side of CTH AB, about 1,500 ft south of the intersection with CTH MN, in the Town of Dunn, Dane County, Wisconsin. The project area, which is currently farmland, is to be annexed into the Village of McFarland. Based on publicly-available topographic data (DCiMap, 1-ft contour lines), existing site grades generally slope from north-central parts of the site down towards the southeast, with current ground surface elevations ranging from about EL 896 to 862 ft. The site is bounded by railroad tracks to the south, and a lowland area is present to the south of the tracks, with lowest ground surface elevations in that area near EL 859 to 860 ft, based on DCiMap 1-ft contour lines.

Although in the early planning stages, we understand the project will include the construction of roads, utilities, stormwater management areas and, ultimately, single family homes. Proposed site grading information was not available at the time of this evaluation.

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SUBSURFACE CONDITIONS

Subsurface conditions for this study were explored by drilling 17 Standard Penetration Test (SPT) soil borings to planned depths between 15 and 20 ft below current site grades at locations selected and field-staked by D'Onofrio Kottke personnel, who also surveyed the ground surface elevations at the boring locations. The borings were conducted on December 11 and 12, 2019 by GeoServe (under subcontract to CGC), using a track-mounted (ATV) Geoprobe 7822DT rotary drill rig equipped with hollow stem augers and an automatic SPT hammer. Note that auger and split-spoon refusal occurred in Boring 15 at about 12.5 ft below the ground surface on apparent bedrock. The specific procedures used for drilling and sampling are described in Appendix A, and the boring locations are shown in plan on the Soil Boring Location Exhibit presented in Appendix B.

The subsurface profiles at the boring locations varied to some degree across the site, but the following strata were generally encountered (in descending order):

- About 12 to 36 in. of **topsoil**; followed by
- About 2 to 5.5 ft of generally stiff to very stiff **lean clay** and **sandy lean clay**, typically softening somewhat with depth or grading to loose to medium dense **clayey sand**; over
- Very loose to very dense **sand and gravel** strata, containing variable amounts of fines and scattered cobbles/boulders, to the maximum depths explored in the majority of the borings; except where
- Loose to medium dense **silt** and **silty to clayey sand** or medium stiff to very stiff **lean to silty clay** layers were present towards the bottom of Borings 5, 15, 16 and 17; underlain by
- Very dense, **probable highly weathered to weathered sandy dolomite bedrock** to the level of auger/split-spoon refusal in Boring 15.

Natural moisture contents in representative samples from the shallow lean clay layers ranged from 22.9% to 29.8%, while sandier lean clay specimens were determined to have natural moisture contents of 12.0% to 18.2%. A sample obtained from the deeper cohesive/fine-grained soils encountered in Boring 15 was tested for its liquid and plastic (Atterberg) limits to aid in its classification, with a liquid limit of 17% and a plasticity index of 1 corresponding to USCS classification of low-plasticity silt (ML). Based on natural moisture contents, pocket penetrometer readings (q_p ; an estimate of the unconfined compressive strength of cohesive soils) and SPT blow counts (N -values), the on-site cohesive and fine-grained soils should generally be considered slightly to moderately compressible.

In addition, particle size distribution (gradation) was determined on a sand sample from Boring 13. With a P200 ('fines') content of 3.5%, the sample classifies as poorly-graded sand (SP) and fine sand (FS) per the USCS and USDA classification systems, respectively.

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Note that occasional organic seams were found to be interbedded with the sand soils in Borings 15 and 17.

As mentioned above, probable highly weathered to weathered sandy dolomite bedrock was encountered below a depth of about 10.5 ft in Boring 15 (corresponding to approximately EL 853.6 ft), extending to the level of auger and split-spoon refusal on probable harder/more competent bedrock at about 12.5 ft below the ground surface (corresponding to approximately EL 851.6 ft). In addition, the clay soils encountered in Boring 5 below a depth of about 19 ft and the clayey/silty sand below about 13 ft in Boring 17 were classified as possible highly weathered/decomposed bedrock. It must be noted that the sampling procedure can disturb/degrade weathered bedrock, making it difficult to determine the depth to bedrock in some areas.

Groundwater was encountered in the majority of the borings during and upon the completion of drilling at depths between about 4 and 13 ft, corresponding to approximately EL 855 to 863 ft, with the average groundwater level at about EL 859 ft. Groundwater levels were also measured in Borings 13, 16 and 17 about one day after the completion of drilling, at which point the water was observed about 2.0 to 6.0 ft below current site grades, corresponding to approximately EL 859.2 to 861.3 ft. Note that the average groundwater level observed during drilling and the longer-term groundwater readings in Borings 13, 16 and 17 correspond fairly well with ground surface elevations in the lowland area south of the railroad tracks. Water levels can be expected to fluctuate based on seasonal variations in precipitation, infiltration, evapotranspiration, the levels in nearby waterbodies, as well as other factors. A more detailed description of the site soil and groundwater conditions is presented on the boring logs attached in Appendix B, which also contain the laboratory test results (including Particle Size Distribution Test Report), and on the WDSPS Soil and Site Evaluation – Storm form contained in Appendix F.

According to the United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS) *Web Soil Survey*, eight soil series are identified within the development area. Two major soil series, which constitute about three-quarters of the site, are Kegonsa silt loam (KeB; approximately 42% of area) and Plano silt loam (PoB; approximately 33% of area). Minor soils include Dodge silt loam (DnB) in the north and northeast, Grays silt loam (GsB) in the east, Kidder soils (KrD2) in the north-central portions (near the high point), Sable silty clay loam (SaA) and Elburn silty loam (EgA) in the south to southwest as well as Colwood silt loam (Co) in an isolated area at the eastern perimeter of the development area.

The vast majority of the site's soils (Kegonsa, Plano, Dodge and Kidder) are described as well-drained soils that formed from loess over loamy and/or gravelly/sandy outwash on outwash plains, or from glacial till or loess over loamy till on drumlins and moraines. A typical profile involves finer-grained soils, such as clay loam, silty clay loam, sandy clay loam, silt loam and loam, followed by coarser-grained soils like sandy loam, gravelly sandy loam, stratified gravelly sand and gravelly coarse sand. As an exception, the soil series Grays silt loam, formed from silty alluvium over stratified silt and fine sand lacustrine deposits on lake plains, typically involves silt loam and silty

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clay loam over very fine sandy loam to silt loam. In areas mapped as Kegonsa silt loam, Plano silt loam, Dodge silt loam, Grays silt loam and Kidder soils, the seasonally high groundwater table is expected to remain more than 80 in. below the ground surface.

In contrast to the soils described in the previous paragraph, the soil series Sable silty clay loam, Elburn silt loam and Colwood silt loam, mapped in small southern to southwestern and eastern sections of the site, are described as somewhat poorly-drained to poorly-drained soils that formed from loess on swales, loess over sandy and gravelly outwash on till plains, and from loamy glaciolacustrine deposits over stratified silt and fine sand glaciolacustrine deposits on lakebeds. Fairly deep finer-grained deposits (silty clay loam and silt loam) are common in areas mapped as Sable silty clay loam, with silty clay loam, sandy clay loam and silt loam over stratified very fine sand to silt, sandy loam and very gravelly coarse sand typically encountered in areas mapped as Elburn silt loam and Colwood silt loam. Where Sable silty clay loam, Elburn silt loam and Colwood silt loam are present, the seasonally high groundwater table should generally be expected within 0 to 12 in. of the ground surface, and frequent ponding may occur in areas mapped as Sable silty clay loam and Colwood silt loam.

The Soil Map for this site, which was generated by the USDA-NRCS *Web Soil Survey*, is attached in Appendix B. The soil profiles in the borings were in general agreement with the profiles from the soil mapping.

DISCUSSION AND RECOMMENDATIONS

Subject to the limitations discussed below and based on the subsurface exploration program, it is our opinion that this site is generally suitable for construction. However, some excavation below subgrade (EBS or undercutting/replacement) will likely be required during site grading and roadway construction, based on the presence of near-surface clay soils. In addition, some undercutting/replacement of marginal clay and/or clayey sand may be required below residential floor slabs and foundations, as well as utility inverts/structures in some portions of the site depending on structure and utility grades. Furthermore, bedrock excavation could potentially also be required during utility construction and building excavations in isolated portions of the site depending on utility and structure grades. Additionally, shallow groundwater and/or perched zones may impact utility and basement excavations in portions of the site, and groundwater levels should be considered when establishing basement grades.

Our recommendations for site preparation, roadway and utility design/construction are presented in the following subsections, along with preliminary stormwater infiltration and residential building design and construction considerations. Additional information regarding the conclusions and recommendations presented in this report is discussed in Appendix C.

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1. Site Preparation

We recommend that topsoil and vegetation be stripped at least 10 ft beyond the construction limits in areas to receive fill and where building and roadway construction is planned. The topsoil can be stockpiled on-site and later re-used as fill in landscape areas. Topsoil thicknesses typically ranged between 12 and 36 in. in the borings, but variable topsoil thicknesses should be expected between and beyond boring locations due to past agricultural activities. Trees and root zones should be removed in conjunction with topsoil stripping.

After topsoil removal, the exposed soils are generally expected to consist of stiff to very stiff clay. Granular soils exposed in areas at-grade or requiring fill (if any) should be recompacted with a vibratory smooth-drum roller, and cohesive/fine-grained subgrade soils should be statically compacted (without vibration) and then proof-rolled with a piece of heavy rubber-tire construction equipment, such as a loaded scraper or tri-axle dump truck, to check for soft/yielding areas. If soft/unstable clay soils are encountered, an attempt could be made to dry/recompact the cohesive soils to develop a stable subgrade, which will likely be the most economical alternative to improve marginal subgrade soils, but this approach will likely require more time than other alternatives and is also highly weather dependent. Several cycles of discing, drying and recompaction may be required during extended periods of favorable weather (i.e., dry, warm and windy conditions) before a firm subgrade is developed. If drying/recompaction is not effective or the construction schedule or weather does not allow for drying/recompaction, the unsuitable soils can be undercut and replaced with suitable backfill compacted to at least 95% compaction based on modified Proctor methods (ASTM D1557). As an alternative, soft subgrade soils could be stabilized using coarse aggregate (e.g., 3-in. dense graded base, select crushed material, etc.) that is compacted into the subgrade until deflection ceases. Similarly, loose sands that do not improve with compaction should be undercut and replaced with suitable granular backfill. Note that some of the shallow clay soils encountered in the borings exhibited fairly high natural moisture contents, and zones of lower- to moderate strength clay and clayey sand were also encountered, so we anticipate that some undercutting/stabilization or discing/recompacting will be required, which could be fairly widespread depending on the time of the year when grading occurs. *We therefore recommend that the project budget include a generous contingency for undercutting/stabilization or discing/recompacting during site preparation (or roadway subgrade preparation if not addressed earlier in the project).*

After a stable subgrade has been developed, fill placement to establish site grades may then proceed. To the extent practical, we recommend using granular soils (i.e., sand and/or gravel, including on-site materials if selectively excavated and stockpiled) as fill in building areas, as well as within the upper several feet of roadways as these soils are generally easier to place and compact compared to cohesive/fine-grained soils, particularly in adverse weather conditions. It is our opinion that clay and silt soils excavated on-site are best used in landscaping, or potentially in lower portions of roadway embankments assuming that moisture conditioning will be completed to facilitate proper compaction. Moisture conditioning (drying) may require several cycles of discing and recompaction in order to develop adequate compaction, which could delay construction progress. Fill/backfill

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should be placed in accordance with the Recommended Compacted Fill Specifications presented in Appendix D. *Where placement of several feet of fill will be required to establish site grades (i.e., more than about 5 ft above existing), a time delay between fill placement and beginning roadway and/or residential construction should be considered to allow the slightly to moderately compressible cohesive and fine-grained soils generally encountered on this site to consolidate and settle under the weight of the new fill, with a delay time of about one to three months typically being adequate.* We can provide additional details once the grading plan is developed, if needed.

As discussed above, possible/probable bedrock was encountered in isolated borings, and the depth and consistency of bedrock should be expected to vary across the site. As a general “rule of thumb”, it has been our experience that excavation to the level of auger refusal in soil borings can typically be accomplished using conventional earthwork equipment and techniques, including a narrow bucket and ripping tooth. Excavations that extend below the level of auger refusal typically require special bedrock removal techniques, such as chiseling with an excavator-mounted rock chipper, blasting, etc. Rock excavation considerations are contained in Appendix E. *We recommend that a unit rate for rock excavation be established in the bidding documents. Note that rock excavation should be clearly defined in the project specifications.* It should also be noted that mass excavation with scrapers may not be able to extend into weathered bedrock to the same extent as using a large excavator (with appropriate bucket) and haul trucks. *Supplemental test pits are recommended to further explore the depth and consistency of the bedrock where deeper cuts are anticipated and the soil borings indicate the presence of bedrock.*

2. Roadway Pavement Design

The shallow cohesive soils encountered across the site are expected to control the pavement design, as we anticipate that the pavement subgrades (near existing site grades) will generally consist of stiff to very stiff clay soils, which could potentially also be used to raised site grades in some areas. Standard earthwork-related techniques that should be used during roadway construction after topsoil stripping include proof-rolling, undercutting/stabilization (excavation below subgrade – EBS) and compaction control of fill/backfill, as discussed in the Site Preparation section of this report.

Based on the borings, the shallow soil conditions in the borings generally appear suitable for pavement support. *However, because of the potential for shallow marginal clays (to clayey sands) at or below existing site grades/pavement subgrade levels, especially in southern, lower portions of the site, we recommend including a generous contingency for undercutting and stabilization with 3-in. dense graded base (or other coarse aggregate) in the project budget.* If long, continuous sections of soft/unstable soils are encountered, biaxial geogrid (e.g., Tensar Type 1 (BX 1100) or equivalent) or woven geotextile fabric (e.g., Mirafi 600X or equivalent) can be used to reduce the undercut depth and provide additional stabilization. It has been our experience that clay or silt soils with pocket penetrometer readings of less than about 1.5 tsf will likely require undercutting after proof-rolling, as described above. If roadway grades will be raised above existing grade, and well-compacted fill is

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placed above a firm subgrade during general site grading, the need for undercutting/stabilization will likely be reduced.

Based on the soil conditions encountered in the borings and assuming that on-site clays may be used to raise grade in some roadway areas, the pavement design will be controlled by the cohesive soils, and the following parameters should be used to develop the design pavement sections, which are based on a firm or adequately stabilized subgrade being developed:

USCS Soil Classification	CL
AASHTO Classification	A-6
Frost Group Index	F-3
Design Group Index	12
Soil Support Value	4.2
Subgrade Modulus, k (pci)	150

These design parameters are based on the following assumptions:

1. The subgrade has been closely monitored.
 2. The subgrade has been thoroughly and adequately compacted.
 3. Wet zones have been dried, drained or removed.
 4. Pockets of dissimilar material have been removed, replaced or mixed to achieve a homogeneous subgrade.
 5. Adequate subgrade drainage has been achieved.
- (Reference: WisDOT *Geotechnical Manual*)

Assuming traffic volumes of up to 100 cars and less than 5 trucks per day per design lane (i.e., Traffic Class II according to Wisconsin Asphalt Pavement Association (WAPA) recommendations for low-volume roadways and subdivision streets), a typical pavement section per WDOT Standard Specifications and following WAPA recommendations is 3.5 to 4.0 in. of asphalt pavement over 8 to 12 in. of compacted aggregate base course. Alternative pavement designs for different traffic count data (e.g., if high truck traffic loads are expected) are also acceptable provided they are based on the given design parameters. *Note that if the upper (surface) asphalt layer will not be installed immediately after the lower (binder) asphalt layer and construction traffic will travel on only the lower layer, consideration should be given to increasing the lower asphalt layer thickness to improve the durability of the lower layer.*

3. Utility Construction

Based on the available soil and groundwater information, it appears that utility construction can proceed using traditional open-cut methods. Dewatering may be required in some portions of the site, especially where shallow groundwater was encountered in the borings (predominantly southern, lower parts of the site) and the soil mapping indicates that the seasonal high water table may be

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within 1 ft of the ground surface during wet periods (southern/southwestern and eastern areas). Rock excavation may potentially also be required in some areas, depending on utility locations and depths. It is expected that excavation sidewalls will be sloped back for relatively shallow installations (i.e., less than 4 ft in depth) and that a trench shield and/or internal bracing will be used for deeper excavations. The following are our recommendations regarding trench excavation, dewatering, and backfilling:

- Excavation: Open cuts should be sloped and/or braced in accordance with OSHA guidelines. The softer clays, sand and gravel with low “fines” content (denoted as SP/SP-SM and GP/GP-GM on the boring logs), as well as loose sands with higher silt content (SM and SC) are generally classified as OSHA “Type C” soils, and slopes of 1.5H:1V or flatter are expected to be at least temporarily stable. At least medium stiff clays and denser silty to clayey sand soils above the water table are generally classified as OSHA “Type B” soils where slopes of 1H:1V are expected to be temporarily stable. Note that flatter side slopes may also be required where perched water is present that destabilizes the side slopes. *The appropriate utility trench excavation side slopes should be determined by a competent person completing the earthwork in accordance with OSHA slope guidelines.* Due to the presence of weak and marginal clays, clayey to silty sand and sand strata in some of the borings, a stone stabilization layer consisting of 6 to 12 in. of compacted crushed stone may be required below the bedding layer in some areas to adequately support utility piping, depending on utility grades.
- Dewatering: Groundwater was encountered at depths between about 2 and 13 ft below existing site grades. In addition, the soil mapping indicates that seasonally elevated groundwater may be within 1 ft of the ground surface in some portions of the site. Therefore, depending on the location and depth of the utility, as well as the time of year construction occurs, some dewatering may be required. In general, groundwater drawdowns of less than about 1 to 2 ft can typically be achieved using submersible pumps operating from filtered sump pits, which can also be used to remove seepage or precipitation. If groundwater drawdowns exceed about 2 ft, dewatering with vacuum well points or deep wells may be required. Dewatering means and methods are the responsibility of the utility contractor.
- Rock Removal: Possible/probable bedrock was encountered in isolated borings, as previously discussed. The depth to bedrock should be expected to vary across the site. Although rock excavation considerations were included in the Site Preparation section of this report, bedrock removal in narrow utility trenches will likely be more difficult than in mass cut areas, as it may be more difficult to locate and exploit fractures and weak zones in the bedrock. Rock excavation considerations are contained in Appendix E, and we recommend that a unit rate for rock excavation be established in the bidding documents for utility excavations. Supplemental test pits

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are recommended to further explore the depth and consistency of the bedrock along proposed utility alignments where possible/probable bedrock was encountered in the soil borings.

- **Backfilling:** Excavation backfilling may proceed using the following guidelines:
 - Although clayey and silty excavation spoils may be used to backfill the utility trenches above the pipe and associated granular bedding material, to the extent possible, we recommend that granular soils be used as backfill below paved areas because sand/gravel soils are relatively easy to place and compact in most weather conditions compared to cohesive soils. Silt and clay soils will likely require moisture conditioning prior to placement and compaction, which could delay construction progress. Granular soils containing cobbles and boulders should not be used in direct contact with utility lines.
 - Backfill material should be placed in accordance with Appendix D guidelines or applicable municipal requirements.
 - Compaction recommendations:
 - Within 10 ft of buildings: 95% modified Proctor (ASTM D1557);
 - Depths greater than 3 ft below grade in pavement areas: 90% modified Proctor;
 - Final 3 ft in pavement areas: 95% modified Proctor; and
 - Landscape areas: 85% modified Proctor.

4. Preliminary Stormwater Infiltration Potential

We understand that stormwater management areas are currently being considered in southern portions of the site near Borings 13, 16 and 17.

The subsurface conditions encountered in the southernmost Borings B-16 and B-17 were fairly consistent and included about 12 in. of topsoil, followed by lower-permeability clay loam and sandy clay loam strata, which were underlain, below a depth of about 6.5 ft, by more permeable fine sand and sand layers. However, groundwater was encountered during drilling at the bottom of the lower-permeability soils, and the shallow clay soils generally exhibited redoximorphic features (redox or mottling) and low-chroma/high-value (gray) dominant color, indicating the level of past saturation from perched water, periodically infiltrating surface water or seasonally elevated groundwater. About one day after the completion of Borings B-16 and B-17, the groundwater had stabilized at about 2.0 to 2.5 ft below current site grades in these boreholes. Therefore, it is our opinion that the area near Borings B-16 and B-17 is not suitable for infiltrating significant quantities of stormwater.

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In Boring B-13, performed slightly further north and at a higher elevation, the shallow topsoil was underlain by lower-permeability sandy clay loam to a depth of about 3 ft, followed by more permeable granular strata to the maximum depth explored. Groundwater in this boring was encountered at a depth of about 8 ft during drilling and about 6 ft below the ground surface upon the completion of drilling. Provided the bottom of the infiltration system near B-13 extends through the lower-permeability soils (or lower-permeability soils are undercut below the bottom of the infiltration system and replaced with appropriate sandier soils) and adequate separation from groundwater can be achieved, it is our opinion that some stormwater infiltration in this area may potentially be feasible.

A gradation performed on a representative sand sample obtained above the apparent groundwater table in Boring B-13 showed a P200 content of 3.5%, and the particle size distribution test report is included in Appendix B. Per NR151, it may be necessary to include at least a 3-ft soil layer with a minimum of 20% fines or a 5-ft thick layer with a minimum of 10% fines below the bottom of the infiltration system to act as a filtering layer before the infiltrating stormwater reaches the groundwater table. *The inclusion of a filtering layer with higher fines content may control the infiltration rate of the infiltration system.*

As the soil conditions vary across the site, the Boring Logs and WDSPS Soil and Site Evaluation – Storm form attached in Appendices B and F, respectively, should be consulted for a description of the soil conditions at each boring location. Variability in the soil conditions should be expected across the site and within stormwater basins that could result in a wide range of undercut depths to reach soil suitable for the design infiltration rate.

Infiltration Potential: The following is a *preliminary* summary of the estimated infiltration rates for the soils encountered in Borings B-13, B-16 and B-17, per Table 2 of the WDNR Conservation Practice Standard 1002, *Site Evaluation for Storm Water Infiltration*. The estimated infiltration rates are as follows:

• Clay loam (CL)	0.03 in./hr
• Silty clay loam (SiCL)	0.04 in./hr
• Sandy clay loam (SCL)	0.11 in./hr
• Silt loam (SiL)	0.13 in./hr
• Fine sandy loam (FSL)	0.50 in./hr
• Gravelly sandy loam (GRSL)	0.50 in./hr
• Fine sand (FS)	0.50 in./hr
• Sand (S)	3.60 in./hr
• Extremely gravelly sand (XGRS)	3.60 in./hr

Note that the infiltration rates should be considered very approximate since they are merely based on soil texture and do not account for in-place soil density and other factors, which will affect the infiltration rate. We recommend that the soils at and

Mr. Chris Ehlers
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several feet below the bottom of stormwater management systems be checked by a geotechnical engineer or certified soil tester *in conjunction with the basin designer* to document that the soils are appropriate for the design infiltration rate or recommend remedial measures, if necessary. The Wisconsin Department of Safety and Professional Services Soil and Site Evaluation – Storm form for Borings B-13, B-16 and B-17 is contained in Appendix F.

It must be cautioned that the results of the soil borings have limitations with regard to the evaluation of the on-site stormwater infiltration potential as actual soil horizon transitions may vary from those shown on the boring logs and infiltration form. The reviewing agency may require test pits be excavated at a later date prior to finalizing the stormwater design. *The results of the test pits may require revisions to the stormwater management design if the design has been based solely on the soil borings.*

Groundwater: Groundwater was encountered in the southernmost Stormwater Borings B-16 and B-17, about one day after the completion of drilling, at about 2.0 to 2.5 ft. In addition, the soil mapping indicates that the seasonally high groundwater table may be within 1 ft of the ground surface in southern to southwestern (and isolated eastern) portions of the site. Furthermore, redoximorphic features and low-chroma/high-value dominant color, which are indicative of the level of previous saturation from perched water, periodically infiltrating surface water or seasonally elevated groundwater, were generally noted in the cohesive soils. Slightly deeper groundwater levels were observed in Boring B-13, performed further north and at a higher ground surface elevation compared to B-16 and B-17. At the completion of B-13, the groundwater level was observed at about 6 ft below the ground surface.

Bedrock: Apparent bedrock was not encountered in the Stormwater Borings B-13 and B-16, but the soils below a depth of about 13 ft in B-17 were classified as possible highly weathered bedrock, and possible/probable bedrock was also encountered in isolated other borings performed on this site. The depth of bedrock should therefore be expected to vary across the site.

During construction, appropriate erosion control should be provided to prevent eroded soil from contaminating the stormwater management areas. Where appropriate, the stormwater system design should include pretreatment to remove fine-grained soils (silt/clay) and clogging materials (oils/greases) from stormwater prior to entering the infiltration areas. Additionally, a regular maintenance plan should be developed to remove silt/clay soils and clogging materials that may accumulate in the bottom of the stormwater management area over time. Failure to adequately control fine-grained soils and clogging materials from entering the infiltration area or failure to regularly remove fine-grained soils and clogging materials that accumulate at the base of the stormwater infiltration system will likely cause the stormwater management system to fail.

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Additionally, it is important that the soils in the bottom of the infiltration systems do not become compacted during construction or measures are taken to mitigate soils that are compacted during construction. Refer to WDNR Conservation Practice Standards 1002, 1003 and 1004, as well as NR151 for additional information.

5. Preliminary Foundation Design

Depending on building elevations, a combination of cohesive, fine-grained and granular soils could be encountered at foundation grades. If site grades are raised, footings may also bear on compacted granular fill, in which case it is important that the existing soils be carefully checked (including shallow test pits) to document the existing soils are suitable for building support prior to new fill placement. Bedrock excavation may potentially also be required for footing and basement excavations in isolated locations, depending on building grades.

It is our opinion that residential structures can generally be supported on conventional spread footing foundations bearing on suitable natural soils and engineered fill. Based on the range of soil conditions encountered, a bearing pressure in the range of 1,000 psf to 3,000 psf appears to be applicable over most of the site. However, depending on building locations and grades, some undercutting below footings (and floor slabs) due to lower-strength and marginal soils should generally be expected. The soil conditions in southern portions of the site generally appear to be the weakest and most compressible, which may potentially be problematic for building support, but fairly shallow undercutting will likely also be required in other portions of the site to develop suitable foundation and floor slab subgrades. There were also areas where denser sand/silt and harder clay were encountered, and higher bearing pressures could potentially be used.

Since residential structure loads are generally light, for preliminary design purposes, we recommend assuming an allowable bearing pressure of 1,500 psf, with the understanding that undercutting below footings could be required in various locations, depending on building and foundation grades. *Note that dewatering may potentially be required during basement, undercutting and backfilling operations, depending on building location and elevations, as well as the time of year construction occurs. We recommend that careful consideration be given to establishing basement grades where groundwater was encountered. Longer-term water level readings in monitoring wells may prove helpful in this determination. To the extent possible, we recommend establishing basement grade several feet above the seasonal high groundwater level to reduce the potential for dewatering being required below basements.*

The following parameters should be used for *preliminary* foundation design:

- Maximum net allowable bearing pressure: 1,500 psf
- Minimum foundation widths:
 - Continuous wall footings: 18 in.

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Page 13

- Column pad footings: 30 in.
- Minimum footing depths:
 - Exterior/perimeter footings: 4 ft
 - Interior footings: no minimum requirement

Undercutting below footing grade will be required where loose or disturbed sand/silt soils or clay with q_p -readings of less than 0.75 tsf are encountered at or slightly below footing grade. As discussed above, some undercutting below footing grade should be expected, and an allowance for this operation should be included in the project budget. *Where medium stiff clays (i.e., pocket penetrometer readings of less than 1 tsf) are encountered that are especially susceptible to disturbance from construction traffic or weather, we recommend placing a 6-in. layer of clear stone below the footings immediately after excavation to act as a working platform.* Where undercutting is required, the base of the undercut excavation should be widened beyond the footing edges at least 0.5 ft in each direction for each foot of undercut depth for stress distribution purposes. Foundation grades above the water table can be restored with granular backfill compacted to at least 95% compaction (modified Proctor – ASTM D1557) or 3-in. dense graded base that is placed in maximum loose lifts of 12 in. and thoroughly compacted with a large vibratory compactor until deflection ceases. Below the water table, undercut excavations should be backfilled with crushed clear stone that is placed in loose lifts of 12 in. or less, which are subsequently compacted with a large vibratory plate compactor or excavator-mounted hoe-pack until deflection ceases. Where the total clear stone layer thickness exceeds 12 in., the clear stone should be wrapped in non-woven geotextile fabric (e.g. Mirafi 160N or equivalent) to prevent migration of fines into the void spaces of the clear stone.

Since the subsurface conditions vary across the site, CGC should be present during footing excavations to check whether subgrades are satisfactory for the design bearing pressure and to advise on corrective measures, where necessary. We recommend using a smooth-edged backhoe bucket for footing and undercut excavations in soil. A bucket with teeth is acceptable where excavation occurs in weathered bedrock, provided loosened rock is removed from the bottom of the excavation. Additionally, granular soils exposed at footing grade that are above the water table and not susceptible to disturbance from vibrations should be recompacted with a large vibratory plate compactor or an excavator-mounted hoe-pack prior to formwork/concrete placement to densify soils loosened during the excavation process. Soils potentially susceptible to disturbance from compaction (e.g., silty or clayey soils or granular soils close to or below the water table) should be hand trimmed and/or stabilized with clear stone, as appropriate. Provided the foundation design/construction recommendations discussed above are followed, we estimate that total and differential settlements should be on the order of 1.0 and 0.5 in., respectively.

Based on groundwater observations in the soil borings and indications in the soil mapping that shallow groundwater may be encountered in some portions of the site, a sub-floor dewatering system with sump pump may potentially be required for some residential structures to prevent groundwater

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from entering the lower level depending on the location and elevation. Depending on basement grades, seasonal dewatering could be fairly significant, and we recommend that careful consideration be given to establishing basement grades where groundwater was encountered. To the extent possible, we recommend establishing basement grade several feet above the seasonal high groundwater level to reduce the potential for dewatering being required below basements. Longer-term water level readings in monitoring wells may prove helpful in determining seasonally high groundwater levels, and we can provide additional information and recommendations if needed.

CONSTRUCTION CONSIDERATIONS

Due to variations in weather, construction methods and other factors, specific construction problems are difficult to predict. Soil related difficulties that could be encountered on the site are discussed below:

- Earthwork construction during the late fall through early spring could be complicated as a result of wet weather and freezing temperatures. During cold weather, exposed subgrades should be protected from freezing before and after footing construction. Fill should never be placed while frozen or on frozen ground.
- If the construction schedule requires that construction proceed during adverse weather, typically encountered during fall through spring, the contingency for undercutting disturbed soils should be increased.
- To the extent practical, traffic should be avoided on prepared subgrades to minimize further disturbance.
- Excavations extending greater than 4 ft in depth below the existing ground surface should be sloped or braced in accordance with current OSHA standards.
- Based on the soil mapping and water observations in the soil borings, groundwater infiltration into some utility, basement and footing excavations may occur, especially during wet seasons. Dewatering using submersible pumps operating from filtered sump pits, vacuum well points or deep wells may be required for groundwater control, as previously discussed, which should be evaluated by the contractor.
- The depth to bedrock is expected to vary across the site. In addition to potential bedrock removal during building excavations, some bedrock excavation may be required during utility construction. Supplemental test pits can be excavated to better determine if bedrock excavation may be required. See the Site Preparation and Utility Construction sections of the report, as well as Appendix E for additional information regarding rock excavation.

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RECOMMENDED CONSTRUCTION MONITORING

The quality of the residential building pads and pavement subgrades will largely be determined by the level of care exercised during site development. To check that earthwork and foundation construction proceeds in accordance with our recommendations, the following operations should be monitored by CGC:

- Topsoil stripping/removal and subgrade proof-rolling;
- Fill/backfill placement and compaction;
- Foundation excavation and subgrade preparation; and
- Concrete placement.

FOLLOW-UP EXPLORATION PROGRAMS

The exploration program described in this report is preliminary in nature and is not intended to provide sufficient detail on subsurface conditions for each individual lot or stormwater management area. Due to the variability in soil and bedrock conditions, especially the potential for undercutting of soft/loose soils below footing grade of some residential structures, shallow groundwater as well as possible bedrock excavation during utility and residential building construction, follow-up exploration by test pits or borings is recommended to provide lot-specific geotechnical recommendations. *Note that stormwater infiltration potential estimations based on soil borings are considered preliminary, and test pits will likely need to be performed in proposed stormwater management areas to develop final design infiltration rates. If the stormwater design is based on the soil borings performed during the subsurface exploration program summarized in this report, revisions to the design may be required depending on the findings in the test pits.* We can provide specific recommendations and a proposal for the additional geotechnical work at the appropriate time.

* * * * *



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VH Acquisitions, LLC
January 6, 2020
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It has been a pleasure to serve you on this project. If you have any questions or need additional consultation, please contact us.

Sincerely,

CGC, Inc.

A blue ink signature of Tim F. Gassenheimer, written in a cursive style.

Tim F. Gassenheimer, EIT, CST
Staff Engineer

A blue ink signature of Ryan J. Portman, written in a cursive style.

Ryan J. Portman, PE, CST
Consulting Professional

Encl: Appendix A - Field Exploration
Appendix B - Soil Boring Location Exhibit
Logs of Test Borings (17)
Particle Size Distribution Test Report (1)
Log of Test Boring-General Notes
Unified Soil Classification System
Web Soil Survey Map and Legend (3 Pages)
Appendix C - Document Qualifications
Appendix D - Recommended Compacted Fill Specifications
Appendix E - Rock Excavation Considerations
Appendix F - WDSPS Soil and Site Evaluation – Storm Forms (3 Borings)

Cc: Mr. Dan Day, D'Onofrio Kottke and Associates

APPENDIX A
FIELD EXPLORATION

APPENDIX A

FIELD EXPLORATION

Subsurface conditions for this study were explored by drilling 17 Standard Penetration Test (SPT) soil borings to planned depths between 15 and 20 ft below current site grades at locations selected and field-staked by D’Onofrio Kottke personnel, who also surveyed the ground surface elevations at the boring locations. The borings were conducted on December 11 and 12, 2019 by GeoServe (under subcontract to CGC), using a track-mounted (ATV) Geoprobe 7822DT rotary drill rig equipped with hollow stem augers and an automatic SPT hammer. Note that auger and split-spoon refusal occurred in Boring 15 at about 12.5 ft below the ground surface on apparent bedrock.

Soil samples were generally obtained at 2.5-foot intervals to a depth of 10 ft and at 5-ft intervals thereafter. As an exception, the borings located in or near proposed stormwater management areas were sampled at 2.5-foot intervals to the final depth. The soil samples were obtained in general accordance with specifications for standard penetration testing, ASTM D 1586. The specific procedures used for drilling and sampling are described below.

1. Boring Procedures between Samples

The boring is extended downward, between samples, by a hollow stem auger.

2. Standard Penetration Test and Split-Barrel Sampling of Soils
(ASTM Designation: D 1586)

This method consists of driving a 2-inch outside diameter split-barrel sampler using a 140-pound weight falling freely through a distance of 30 inches. The sampler is first seated 6 inches into the material to be sampled and then driven 12 inches. The number of blows required to drive the sampler the final 12 inches is recorded on the log of borings and is known as the Standard Penetration Resistance. Recovered samples are first classified as to texture by the driller.

During the field exploration, the driller visually classified the soil and prepared a field log. *Field screening of the soil samples for possible environmental contaminants was not conducted by the driller, as environmental site assessment activities is beyond CGC's work scope.* Water level observations were made in each boring during and after drilling and are shown at the bottom of each boring log. Upon completion of drilling, the boreholes were backfilled in accordance with WDNR regulations, and the soil samples were delivered to our laboratory for visual classification and laboratory testing. The soils were visually classified by a geotechnical engineer using the Unified Soil Classification System. The final logs prepared by the engineer, including the laboratory test results, along with a Soil Boring Location Exhibit and a description of the Unified Soil Classification System are presented in Appendix B.

APPENDIX B

SOIL BORING LOCATION EXHIBIT

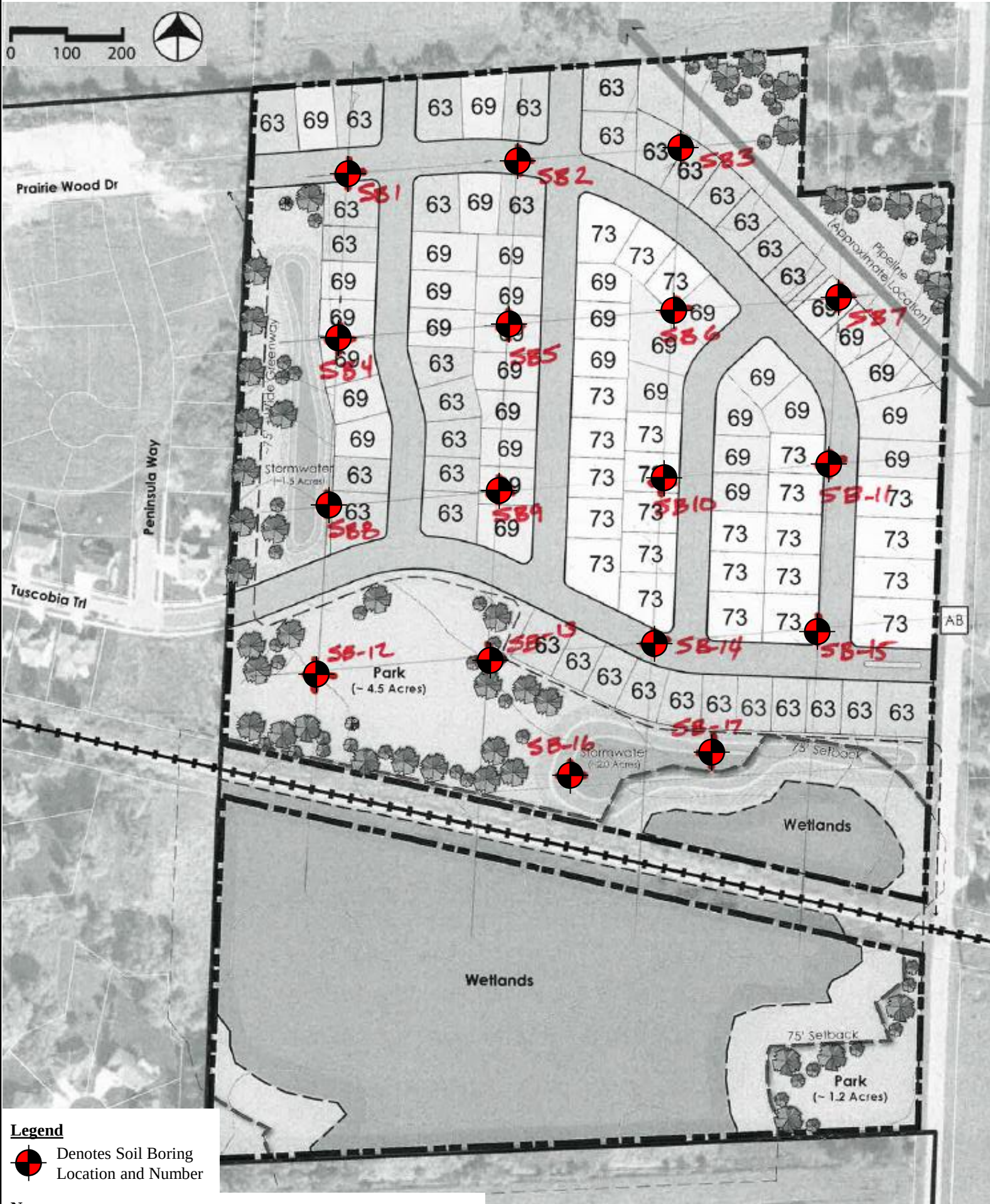
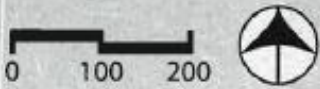
LOGS OF TEST BORINGS (17)

PARTICLE SIZE DISTRIBUTION TEST REPORT (1)

LOG OF TEST BORING-GENERAL NOTES

UNIFIED SOIL CLASSIFICATION SYSTEM

WEB SOIL SURVEY MAP AND LEGEND (3 PAGES)



Legend

-  Denotes Soil Boring Location and Number

Notes

1. Borings were drilled by GeoServe on December 11 and 12, 2019.
2. Boring locations are approximate.
3. Base map was prepared by D'Onofrio Kottke and Associates.

Job No.:
C19482

Date:
12/2019

CGC, Inc.

SOIL BORING LOCATION EXHIBIT
Proposed Residential Development
Utterback Property – CTH AB
Town of Dunn, Dane County, Wisconsin



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **1**
Surface Elevation (ft) **872.72**
Job No. **C19482**
Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
							12± in. TOPSOIL (OL)					
1		18	M	7			Very Stiff, Brown/Gray (Lightly Mottled) Lean CLAY, Trace Sand (CL)	(2.5-3.25)	24.3			
2		18	M	4			Stiff, Brown Lean CLAY, Trace Sand (CL)	(1.0-1.75)	29.8			
					5							
3		18	M	29			Medium Dense to Very Dense, Tan Fine to Coarse SAND and GRAVEL, Trace to Little Silt, Scattered Cobbles/Boulders (SP/SP-SM/GP/GP-GM)					
4		18	M	60			Possible Cobble/Boulder near 9 ft					
					10							
							Medium Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles/Boulders (SM)					
5		8	W	16								
					15		End of Boring at 15 ft					
							Borehole Backfilled with Bentonite Chips					
					20							

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ☒ 13.0' Upon Completion of Drilling _____
Time After Drilling _____ 10 mins. _____
Depth to Water _____ NW ☒
Depth to Cave in _____ 11.0'

Start 12/12/19 End 12/12/19
Driller GeoServe Chief Eddie Rig Geoprobe
Logger Matt Editor TFG 7822DT
Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **2**
Surface Elevation (ft) **881.14**
Job No. **C19482**
Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
							12± in. TOPSOIL (OL)					
1		18	M	8			Very Stiff, Brown/Gray (Lightly Mottled) Lean CLAY, Trace Sand (CL)	(2.5-4.0)	25.8			
2		4	M	10			Very Stiff, Brown Lean CLAY, Trace Sand (CL)	(2.5)				
					5		Medium Dense, Tan Fine to Coarse SAND and GRAVEL, Trace to Little Silt, Scattered Cobbles/Boulders (SP/SP-SM/GP/GP-GM)					
3		18	M	12			Medium Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles/Boulders (SM)					
4		4	M	24								
					10							
							Medium Dense to Very Dense, Tan Fine to Medium SAND, Little to Some Gravel, Little Silt, Scattered Cobbles/Boulders (SP-SM)					
5		18	M	27								
					15							
6		12	M	102								
					20							
End of Boring at 20 ft												
Borehole Backfilled with Bentonite Chips												

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ☒ NW Upon Completion of Drilling _____
Time After Drilling _____ 10 mins. _____
Depth to Water _____ NW ☒
Depth to Cave in _____ 17.0'

Start 12/12/19 End 12/12/19
Driller GeoServe Chief Eddie Rig Geoprobe
Logger Matt Editor TFG 7822DT
Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **3**
Surface Elevation (ft) **869.74**
Job No. **C19482**
Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES						
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI	
							12± in. TOPSOIL (OL)						
1		18	M	10			Very Stiff, Brown/Gray (Lightly Mottled) Lean CLAY, Trace Sand (CL)	(3.0-3.25)	25.7				
2		18	M	6			Medium Stiff, Brown Sandy Lean CLAY, Trace Gravel (CL)	(0.75-1.0)	18.2				
3		12	M/W	7	▽		Loose to Medium Dense, Tan Fine to Coarse SAND and GRAVEL, Trace to Little Silt, Scattered Cobbles/Boulders (SP/SP-SM/GP/GP-GM)						
				▼									
4		16	W	28									
5		10	W	13									
End of Boring at 15 ft													
Borehole Backfilled with Bentonite Chips													

WATER LEVEL OBSERVATIONS

While Drilling ∇ **6.5'** Upon Completion of Drilling _____
Time After Drilling _____ **10 mins.**
Depth to Water _____ **8.0'** ∇
Depth to Cave in _____ **9.0'**

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/12/19** End **12/12/19**
Driller **GeoServe Chief** **Eddie** Rig **Geoprobe**
Logger **Matt** Editor **TFG** **7822DT**
Drill Method **2.25" HSA; Autohammer**



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **4**
Surface Elevation (ft) **867.88**
Job No. **C19482**
Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL
						 12± in. TOPSOIL (OL)					
1		16	M	6		 Very Stiff, Brown Lean CLAY, Trace Sand (CL)	(2.5-2.75)	24.4			
2		18	M	20		 Medium Dense, Tan Fine to Coarse SAND and GRAVEL, Trace to Little Silt, Scattered Cobbles/Boulders (SP/SP-SM/GP/GP-GM)					
3		18	W	22	▽	 Medium Dense, Tan Fine to Coarse SAND, Little Gravel, Trace Silt (SP)					
				▼							
4		12	W	18		 Medium Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles/Boulders (SM)					
						 Medium Dense, Tan/Reddish Brown (Laminated) Silty Fine SAND to Sandy SILT (SM/ML)					
5		16	W	16							
15						End of Boring at 15 ft					
						Borehole Backfilled with Bentonite Chips					

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling 6.5' Upon Completion of Drilling 10 mins.
Time After Drilling 8.0'
Depth to Water 8.0'
Depth to Cave in 8.0'

Start 12/12/19 End 12/12/19
Driller GeoServe Chief Eddie Rig Geoprobe
Logger Matt Editor TFG 7822DT
Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **5**
Surface Elevation (ft) **871.59**
Job No. **C19482**
Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
							12± in. TOPSOIL (OL)					
1		18	M	7			Very Stiff, Brown Lean CLAY, Trace Sand (CL)	(2.5-2.75)	23.3			
							Stiff, Brown Sandy Lean CLAY, Little Gravel (CL)	(1.0-2.0)				
2		18	M	6			Loose, Brown Fine to Medium SAND, Little to Some Silt, Trace Gravel (SP-SM/SM)					
					5		Medium Dense, Tan Fine to Coarse SAND and GRAVEL, Trace to Little Silt, Scattered Cobbles/Boulders (SP/SP-SM/GP/GP-GM)					
3		12	M	24			Loose to Very Dense, Brown Fine to Medium SAND, Some Silt, Little to Some Gravel, Scattered Cobbles/Boulders (SM)					
												
4		12	W	7								
					10							
												
5		16	W	81			Probable Cobble/Boulder near 14 ft					
					15							
							Medium Dense to Very Dense, Tan Fine SAND, Trace to Little Silt (SP/SP-SM)					
6		18	W	95			Very Stiff, Reddish Brown Lean to Silty CLAY, Trace Gravel (CL/CL-ML - Possible Highly Weathered/Decomposed Bedrock)	(2.75-3.5)				
					20		End of Boring at 20 ft					
							Borehole Backfilled with Bentonite Chips					

WATER LEVEL OBSERVATIONS

While Drilling ∇ **8.5'** Upon Completion of Drilling _____
Time After Drilling _____ **10 mins.**
Depth to Water _____ **11.0'** ∇
Depth to Cave in _____ **14.0'**

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/12/19** End **12/12/19**
Driller **GeoServe Chief** **Eddie** Rig **Geoprobe**
Logger **Matt** Editor **TFG** **7822DT**
Drill Method **2.25" HSA; Autohammer**



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
 Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **6**
 Surface Elevation (ft) **866.29**
 Job No. **C19482**
 Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
							12± in. TOPSOIL (OL)					
1		12	M	6			Very Stiff, Brown Lean CLAY, Trace Sand (CL)	(2.0-2.5)	23.0			
2		16	M/W	3			Very Loose, Brown Fine to Medium SAND, Some Silt, Trace Gravel (SM)					
					5							
3		18	W	12			Medium Dense, Tan Fine to Coarse SAND, Little Gravel, Trace Silt (SP)					
4		18	W	6			Loose, Brown Fine to Medium SAND, Trace Silt and Gravel (SP)					
					10							
							Medium Dense, Grayish Brown Fine to Coarse SAND, Little Gravel, Trace Silt (SP)					
5		18	W	12								
					15							
							End of Boring at 15 ft					
							Borehole Backfilled with Bentonite Chips					
					20							
					</							

WATER LEVEL OBSERVATIONS

While Drilling ∇ **6.5'** Upon Completion of Drilling _____
 Time After Drilling _____ **10 mins.**
 Depth to Water _____ **6.0'** ∇
 Depth to Cave in _____ **7.0'**

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/12/19** End **12/12/19**
 Driller **GeoServe Chief** **Eddie** Rig **Geoprobe**
 Logger **Matt** Editor **TFG** **7822DT**
 Drill Method **2.25" HSA; Autohammer**



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
 Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **7**
 Surface Elevation (ft) **866.34**
 Job No. **C19482**
 Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL
						 12± in. TOPSOIL (OL)					
1		16	M	6		 Very Stiff, Brown Lean CLAY, Trace Sand (CL)	(2.25-2.5)	24.0			
2		10	M/W	4		 Soft, Brown Sandy Lean CLAY, Trace Gravel (CL)	(0.25-0.5)	17.5			
3		12	W	3		 Very Loose, Brown Fine to Medium SAND, Little Silt, Trace Gravel (SP-SM)					
4		12	W	5		 Loose, Tan Fine SAND, Little to Some Silt (SP-SM/SM)					
						 Medium Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles/Boulders (SM)					
5		12	W	24							
						End of Boring at 15 ft					
						Borehole Backfilled with Bentonite Chips					

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling 6.5' Upon Completion of Drilling 10 mins.
 Time After Drilling 6.0'
 Depth to Water 7.0'
 Depth to Cave in

Start 12/11/19 End 12/11/19
 Driller GeoServe Chief Eddie Rig Geoprobe
 Logger Matt Editor TFG 7822DT
 Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **8**
Surface Elevation (ft) **865.92**
Job No. **C19482**
Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
							12± in. TOPSOIL (OL)					
1		12	M	4			Stiff to Very Stiff, Brown Lean CLAY, Trace Sand (CL)	(2.0)	25.9			
2		16	M	5			Stiff to Very Stiff, Gray/Brown (Mottled) Lean CLAY, Trace Sand (CL)	(1.75-3.0)	26.7			
					5							
3		12	W	20			Medium Dense, Tan Gravelly Fine to Coarse SAND, Trace Silt, Scattered Cobbles/Boulders (SP)					
												
4		12	W	15			Medium Dense, Tan Fine to Medium SAND, Some Gravel, Trace to Little Silt (SP/SP-SM)					
					10							
												
5		16	W	12			Medium Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles/Boulders (SM)					
					15							
End of Boring at 15 ft												
Borehole Backfilled with Bentonite Chips												
					20							

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ☒ **6.5'** Upon Completion of Drilling **10 mins.**
Time After Drilling _____
Depth to Water _____ **6.0'** ☒
Depth to Cave in _____ **7.0'**

Start **12/12/19** End **12/12/19**
Driller **GeoServe Chief** **Eddie** Rig **Geoprobe**
Logger **Matt** Editor **TFG** **7822DT**
Drill Method **2.25" HSA; Autohammer**

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
 Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **9**
 Surface Elevation (ft) **870.51**
 Job No. **C19482**
 Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
							12± in. TOPSOIL (OL)					
1		16	M	7			Very Stiff, Brown Lean CLAY, Trace Sand (CL)	(3.25-3.5)	23.4			
2		18	M	18			Medium Dense, Tan Fine to Coarse SAND, Some Gravel, Trace Silt, Scattered Cobbles/Boulders (SP)					
3		18	M	90	5		Dense to Very Dense, Tan Fine to Coarse SAND and GRAVEL, Trace to Little Silt, Scattered to Numerous Cobbles/Boulders (SP/SP-SM/GP/GP-GM) Probable Cobble/Boulder near 6.5 ft					
4		0	M	34	10		No Recovery from 8.5 to 10 ft (Sample 4) - Sample Collected from Drill Cuttings					
5		12	W	10	15		Medium Dense to Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles/Boulders (SM)					
6		18	W	45	20		Possible Cobble/Boulder near 19 ft					
						End of Boring at 20 ft						
						Borehole Backfilled with Bentonite Chips						

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ☒ 13.0' Upon Completion of Drilling _____
 Time After Drilling _____ 10 mins.
 Depth to Water _____ 11.0' ☒
 Depth to Cave in _____ 11.0'

Start 12/12/19 End 12/12/19
 Driller GeoServe Chief Eddie Rig Geoprobe
 Logger Matt Editor TFG 7822DT
 Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **10**
Surface Elevation (ft) **868.32**
Job No. **C19482**
Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
							12± in. TOPSOIL (OL)					
1		18	M	8			Very Stiff, Brown Lean CLAY, Trace Sand (CL)	(2.75-3.0)	23.7			
2		18	M	9								
					5		Loose, Tan Fine to Coarse SAND, Some Gravel, Trace Silt, Scattered Cobbles/Boulders (SP)					
3		18	M	40			Medium Dense to Dense, Tan Fine to Coarse SAND and GRAVEL, Trace to Little Silt, Scattered Cobbles/Boulders (SP/SP-SM/GP/GP-GM) Possible Cobble/Boulder near 6.5 ft					
					▼							
4		18	W	18								
					10							
							Loose to Medium Dense, Tan Fine to Coarse SAND, Trace Silt and Gravel (SP)					
5		12	W	10								
					15							
							End of Boring at 15 ft					
							Borehole Backfilled with Bentonite Chips					
					20							

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ☒ 8.0' Upon Completion of Drilling _____
Time After Drilling _____ 10 mins. _____
Depth to Water _____ 8.0' ☒
Depth to Cave in _____ 8.0' _____

Start 12/12/19 End 12/12/19
Driller GeoServe Chief Eddie Rig Geoprobe
Logger Matt Editor TFG 7822DT
Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **11**
Surface Elevation (ft) **862.88**
Job No. **C19482**
Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
							12± in. TOPSOIL (OL)					
1		6	M	6			Stiff, Brown/Gray (Lightly Mottled) Sandy Lean CLAY (CL)	(1.75-2.0)	12.0			
							Loose to Medium Dense, Brown Clayey Fine to Medium SAND (SC)					
2		12	M/W	18								
							Medium Dense, Tan Fine to Coarse SAND, Little Gravel, Trace Silt (SP)					
					5							
3		16	W	17			Medium Dense, Grayish Brown Gravelly Fine to Coarse SAND, Trace to Little Silt, Scattered Cobbles/Boulders (SP/SP-SM)					
							Loose, Gray to Brown Fine to Coarse SAND, Little Gravel, Trace Silt (SP)					
4		10	W	10								
					10							
5		18	W	9								
					15							
							End of Boring at 15 ft					
							Borehole Backfilled with Bentonite Chips					
					20							

WATER LEVEL OBSERVATIONS

While Drilling ☒ 6.0' Upon Completion of Drilling _____
Time After Drilling _____ 10 mins. _____
Depth to Water _____ 6.0' ☒
Depth to Cave in _____ 6.0' _____

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 12/11/19 End 12/11/19
Driller GeoServe Chief Eddie Rig Geoprobe
Logger Matt Editor TFG 7822DT
Drill Method 2.25" HSA; Autohammer



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
 Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **12**
 Surface Elevation (ft) **863.41**
 Job No. **C19482**
 Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL
						18± in. TOPSOIL (OL)					
1		18	M	5		Stiff, Gray/Brown (Lightly Mottled) Lean CLAY, Trace to Little Sand (CL)	(1.0-1.25)	28.2			
2		18	M	7	▼	Stiff, Light Gray/Brown (Mottled) Lean CLAY, Little Sand (CL)	(1.25-1.75)				
3		18	W	4	▽	Loose, Brown Fine to Medium SAND, Trace Silt and Gravel (SP)					
4		18	W	36		Dense, Grayish Brown Gravelly Fine to Coarse SAND, Little Silt, Scattered Cobbles/Boulders (SP-SM)					
5		12	W	19		Medium Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles/Boulders (SM)					
						End of Boring at 15 ft					
						Borehole Backfilled with Bentonite Chips					

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ∇ **6.5'** Upon Completion of Drilling _____
 Time After Drilling _____ **10 mins.**
 Depth to Water _____ **4.0'** ∇
 Depth to Cave in _____ **8.0'**

Start **12/11/19** End **12/11/19**
 Driller **GeoServe Chief** **Eddie** Rig **Geoprobe**
 Logger **Matt** Editor **TFG** **7822DT**
 Drill Method **2.25" HSA; Autohammer**

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

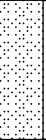


LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **13**
Surface Elevation (ft) **867.25**
Job No. **C19482**
Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL
						 12± in. TOPSOIL (OL)					
1		12	M	5		 Stiff/Loose, Brown to Yellowish Brown Sandy Lean CLAY to Clayey Fine SAND, Trace Gravel (CL/SC) <i>USDA: 10YR 5/3, 5/4 Sandy Clay Loam</i>	(1.0-1.5)	14.7			
2		16	M	12		 Medium Dense, Very Pale Brown Fine to Medium SAND, Trace Silt and Gravel (SP) <i>USDA: 10YR 7/3 Fine Sand</i>		4.5			
					5	P200 (Sample 2 - 3.5 to 5 ft): 3.5%					
3		18	M/W	19		 Medium Dense, Pale Brown Sandy Fine to Coarse GRAVEL, Trace Silt, Scattered Cobbles/Boulders (GP) <i>USDA: 10YR 6/3 Extremely Gravelly Sand</i>					
4		16	W	4		 Very Loose to Loose, Pale Brown Fine to Medium SAND, Little Gravel, Trace Silt (SP) <i>USDA: 10YR 6/3 Sand</i>					
					10						
5		18	W	11		 Medium Dense, Pale Brown Silty Fine SAND, Trace Gravel (SM) <i>USDA: 10YR 6/3 Fine Sandy Loam</i>					
6		18	W	15		 Medium Dense, Pale Brown Fine Sand, Trace Silt and Gravel, Scattered Silt Seams (SP) <i>USDA: 10YR 6/3 Fine Sand, Silt Loam Seams</i>					
					15						
						End of Boring at 15 ft					
						Borehole Backfilled with Bentonite Chips					
					20						

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ☒ 8.0' Upon Completion of Drilling _____
Time After Drilling _____ 1 Day _____ 10 mins. _____
Depth to Water _____ NW _____ 6.0' ☒
Depth to Cave in _____ 6.0' _____ 6.0' _____

Start 12/11/19 End 12/11/19
Driller GeoServe Chief Eddie Rig Geoprobe
Logger Matt Editor TFG 7822DT
Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

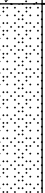


LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
 Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **14**
 Surface Elevation (ft) **866.81**
 Job No. **C19482**
 Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
							12± in. TOPSOIL (OL)					
1		14	M	7			Very Stiff, Brown Lean CLAY, Trace Sand (CL)	(2.75-3.0)	24.0			
2		18	M/W	3			Very Loose, Brown Fine to Medium SAND, Little to Some Silt, Trace Gravel (SP-SM/SM)					
					5							
3		12	W	5			Loose, Grayish Brown Gravelly Fine to Coarse SAND, Little Silt, Scattered Cobbles/Boulders (SP-SM)					
4		12	W	3			Very Loose, Brown Fine to Medium SAND, Trace Silt and Gravel (SP)					
					10							
							Loose to Medium Dense, Tan Silty Fine SAND, Scattered Lean Clay Seams (SM)					
5		18	W	10								
					15							
							End of Boring at 15 ft					
							Borehole Backfilled with Bentonite Chips					
					20							

WATER LEVEL OBSERVATIONS

While Drilling ☒ **7.0'** Upon Completion of Drilling _____
 Time After Drilling _____ **10 mins.**
 Depth to Water _____ **6.0'** ▼
 Depth to Cave in _____ **6.0'**

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/11/19** End **12/11/19**
 Driller **GeoServe Chief** **Eddie** Rig **Geoprobe**
 Logger **Matt** Editor **TFG** **7822DT**
 Drill Method **2.25" HSA; Autohammer**



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **15**
Surface Elevation (ft) **864.13**
Job No. **C19482**
Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
							12± in. TOPSOIL (OL)					
1		18	M	6			Stiff, Brown Lean CLAY, Trace Sand (CL)	(1.75-2.0)	25.6			
2		12	M	4			Soft, Gray/Brown (Mottled) Lean CLAY to Sandy Lean CLAY, Trace Gravel (CL)	(0.25-0.5)	22.9			
					5							
3		18	M/W	23			Medium Dense, Tan Fine to Medium SAND, Little Gravel, Trace Silt, Scattered Organic Seams (SP)					
4		18	W	5			Loose, Brown SILT to Clayey SILT, Trace to Little Sand (ML)	(0.5-1.5)	21.3	17	16	
					10							
5		4	W	99/4"			Very Dense, Brown to Gray Clayey to Silty Fine to Coarse SAND, Some Gravel (SC/SM - Probable Highly Weathered to Weathered Sandy Dolomite Bedrock)					
6		0	-	99/0"			End of Boring/Auger and Split-Spoon Refusal on Apparent Sandy Dolomite Bedrock at 12.5 ft					
							Borehole Backfilled with Bentonite Chips					
					15							
					20							

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ☒ 7.0' Upon Completion of Drilling _____
Time After Drilling _____ 10 mins. _____
Depth to Water _____ 6.0' ☒
Depth to Cave in _____ 6.0' _____

Start 12/11/19 End 12/11/19
Driller GeoServe Chief Eddie Rig Geoprobe
Logger Matt Editor TFG 7822DT
Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
 Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **16**
 Surface Elevation (ft) **861.45**
 Job No. **C19482**
 Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
							12± in. TOPSOIL (OL)					
1		12	M/W	3	▼		Medium Stiff to Stiff, Black to Very Dark Grayish Brown Organic to Silty CLAY, Little to Some Sand (OL/CL-ML - Probable Lower Horizon Topsoil in Upper Part of Layer)	(0.75-1.25)				
2		18	M	6			USDA: 10YR 2/1 to 3/2 Clay Loam Stiff, Gray/Light Olive Brown (Mottled) Sandy Lean CLAY, Trace Gravel (CL) USDA: 2.5Y 5/1 (Redox: c2d 2.5Y 5/3) Sandy Clay Loam	(1.5-1.75)				
3		18	W	12	▽		Medium Dense, Pale Brown Fine to Medium SAND, Little Gravel, Trace Silt (SP) USDA: 10YR 6/3 Sand					
4		18	W	18			Medium Dense, Pale Brown Fine Sand, Trace Silt and Gravel (SP) USDA: 10YR 6/3 Fine Sand					
5		18	W	11			Medium Dense, Fine Layers of Light Yellowish Brown Silty Fine SAND, Light Brown SILT and Brown Lean CLAY (SM/ML/CL) USDA: Stratified 10YR 6/4 Fine Sandy Loam, 7.5YR 6/3 Silt Loam and 7.5YR 5/4 Silty Clay Loam					
6		18	W	11			Medium Stiff to Very Stiff, Light Brown Lean to Silty CLAY, Trace Sand (CL/CL-ML) USDA: 7.5YR 6/3 Silty Clay Loam	(0.75-2.5)				
							End of Boring at 15 ft					
							Borehole Backfilled with Bentonite Chips					

WATER LEVEL OBSERVATIONS					GENERAL NOTES				
While Drilling	▽	6.5'	Upon Completion of Drilling		Start	12/11/19	End	12/11/19	
Time After Drilling			1 Day	10 mins.	Driller	GeoServe Chief	Eddie	Rig	Geopro
Depth to Water			2.0'	6.0'	Logger	Matt	Editor	TFG	7822DT
Depth to Cave in			4.0'	6.0'	Drill Method	2.25" HSA; Autohammer			
The stratification lines represent the approximate boundary between soil types and the transition may be gradual.									



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **17**
Surface Elevation (ft) **861.70**
Job No. **C19482**
Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N		qu (qa) (tsf)	W	LL	PL	LI
					12± in. TOPSOIL (OL)					
1		18	M	5	Stiff, Gray/Brown (Lightly Mottled) Sandy Lean CLAY, Trace Gravel (CL) USDA: 10YR 5/1 (Redox: c1f 10YR 5/3) Sandy Clay Loam	(1.25-1.5)				
2		18	M	4	Medium Stiff to Stiff, Gray/Yellowish Brown (Mottled) Lean CLAY, Trace to Little Sand (CL) USDA: 5Y 6/1 (Redox: c2d 10YR 5/4) Clay Loam	(0.75-1.5)				
3		18	W	11	Medium Dense, Pale Brown Fine Sand, Trace Silt and Gravel, Scattered Silt and Organic to Silty Clay Seams (SP) USDA: 10YR 6/3 Fine Sand, Silt Loam and Silty Clay Loam Seams					
4		18	W	17	Stiff to Very Stiff, Light Brown/Brown (Laminated) Lean to Silty CLAY, Trace Sand (CL/CL-ML) USDA: 7.5YR 6/3, 5/4 Silty Clay Loam	(1.25-2.5)				
5		18	W	5	Very Dense, Gray Clayey to Silty Fine to Coarse SAND, Some Gravel, Scattered Cobbles/Boulders (SC/SM - Possible Highly Weathered Bedrock) USDA: 7.5YR 6/1 Gravelly Sandy Loam					
6		8	W	50/2"	Probable Cobble/Boulder near 14 ft End of Boring at 15 ft Borehole Backfilled with Bentonite Chips					

WATER LEVEL OBSERVATIONS

While Drilling ∇ **6.5'** Upon Completion of Drilling _____
Time After Drilling **1 Day** **10 mins.**
Depth to Water **2.5'** **6.0'** ∇
Depth to Cave in **5.0'** **7.0'**

GENERAL NOTES

Start **12/11/19** End **12/11/19**
Driller **GeoServe Chief** **Eddie** Rig **Geoprobe**
Logger **Matt** Editor **TFG** **7822DT**
Drill Method **2.25" HSA; Autohammer**

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.5	0.9	5.3	89.8	3.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8	100.0		
#4	99.5		
#8	98.8		
#10	98.6		
#16	97.9		
#30	96.7		
#40	93.3		
#50	77.8		
#80	16.4		
#100	8.0		
#200	3.5		

* (no specification provided)

Material Description
Brown Fine to Medium Sand, Trace Silt and Gravel

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₉₀= 0.3687 D₈₅= 0.3303 D₆₀= 0.2573
 D₅₀= 0.2391 D₃₀= 0.2057 D₁₅= 0.1764
 D₁₀= 0.1599 C_u= 1.61 C_c= 1.03

Classification
 USCS= SP AASHTO=

Remarks
 USDA: Fine Sand

Sample Number: Boring 13

Depth: 3.5 to 5 ft

Date: 12/27/19



Client: VH Acquisitions, LLC
 Project: Utterback Property Residential Development

Project No: C19482

Figure

Tested By: DRW

Checked By: TFG

LOG OF TEST BORING General Notes

DESCRIPTIVE SOIL CLASSIFICATION

Grain Size Terminology

Soil Fraction	Particle Size	U.S. Standard Sieve Size
Boulders	Larger than 12"	Larger than 12"
Cobbles	3" to 12"	3" to 12"
Gravel: Coarse.....	¾" to 3"	¾" to 3"
Fine	4.76 mm to ¾"	#4 to ¾"
Sand: Coarse.....	2.00 mm to 4.76 mm.....	#10 to #4
Medium	0.42 to mm to 2.00 mm	#40 to #10
Fine	0.074 mm to 0.42 mm.....	#200 to #40
Silt.....	0.005 mm to 0.074 mm.....	Smaller than #200
Clay.....	Smaller than 0.005 mm.....	Smaller than #200

Plasticity characteristics differentiate between silt and clay.

General Terminology

Physical Characteristics
Color, moisture, grain shape, fineness, etc.
Major Constituents
Clay, silt, sand, gravel
Structure
Laminated, varved, fibrous, stratified,
cemented, fissured, etc.
Geologic Origin
Glacial, alluvial, eolian, residual, etc.

Relative Density

Term	"N" Value
Very Loose.....	0 - 4
Loose.....	4 - 10
Medium Dense.....	10 - 30
Dense.....	30 - 50
Very Dense.....	Over 50

Relative Proportions Of Cohesionless Soils

Proportional Term	Defining Range by Percentage of Weight
Trace.....	0% - 5%
Little	5% - 12%
Some.....	12% - 35%
And	35% - 50%

Consistency

Term	q _u -tons/sq. ft
Very Soft.....	0.0 to 0.25
Soft.....	0.25 to 0.50
Medium.....	0.50 to 1.0
Stiff.....	1.0 to 2.0
Very Stiff.....	2.0 to 4.0
Hard.....	Over 4.0

Organic Content by Combustion Method

Soil Description	Loss on Ignition
Non Organic.....	Less than 4%
Organic Silt/Clay.....	4 - 12%
Sedimentary Peat.....	12% - 50%
Fibrous and Woody Peat...	More than 50%

Plasticity

Term	Plastic Index
None to Slight.....	0 - 4
Slight.....	5 - 7
Medium.....	8 - 22
High to Very High ..	Over 22

The penetration resistance, N, is the summation of the number of blows required to effect two successive 6" penetrations of the 2" split-barrel sampler. The sampler is driven with a 140 lb. weight falling 30" and is seated to a depth of 6" before commencing the standard penetration test.

SYMBOLS

Drilling and Sampling

CS – Continuous Sampling
RC – Rock Coring: Size AW, BW, NW, 2"W
RQD – Rock Quality Designation
RB – Rock Bit/Roller Bit
FT – Fish Tail
DC – Drove Casing
C – Casing: Size 2 ½", NW, 4", HW
CW – Clear Water
DM – Drilling Mud
HSA – Hollow Stem Auger
FA – Flight Auger
HA – Hand Auger
COA – Clean-Out Auger
SS - 2" Dia. Split-Barrel Sample
2ST – 2" Dia. Thin-Walled Tube Sample
3ST – 3" Dia. Thin-Walled Tube Sample
PT – 3" Dia. Piston Tube Sample
AS – Auger Sample
WS – Wash Sample
PTS – Peat Sample
PS – Pitcher Sample
NR – No Recovery
S – Sounding
PMT – Borehole Pressuremeter Test
VS – Vane Shear Test
WPT – Water Pressure Test

Laboratory Tests

q_a – Penetrometer Reading, tons/sq ft
q_a – Unconfined Strength, tons/sq ft
W – Moisture Content, %
LL – Liquid Limit, %
PL – Plastic Limit, %
SL – Shrinkage Limit, %
LI – Loss on Ignition
D – Dry Unit Weight, lbs/cu ft
pH – Measure of Soil Alkalinity or Acidity
FS – Free Swell, %

Water Level Measurement

▽ - Water Level at Time Shown
NW – No Water Encountered
WD – While Drilling
BCR – Before Casing Removal
ACR – After Casing Removal
CW – Cave and Wet
CM – Caved and Moist

Note: Water level measurements shown on the boring logs represent conditions at the time indicated and may not reflect static levels, especially in cohesive soils.

CGC, Inc.

Madison - Milwaukee

Unified Soil Classification System

UNIFIED SOIL CLASSIFICATION AND SYMBOL CHART

COARSE-GRAINED SOILS

(more than 50% of material is larger than No. 200 sieve size)

GRAVELS More than 50% of coarse fraction larger than No. 4 sieve size		Clean Gravels (Less than 5% fines)	
	GW	Well-graded gravels, gravel-sand mixtures, little or no fines	
	GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines	
		Gravels with fines (More than 12% fines)	
	GM	Silty gravels, gravel-sand-silt mixtures	
	GC	Clayey gravels, gravel-sand-clay mixtures	
		Clean Sands (Less than 5% fines)	
	SW	Well-graded sands, gravelly sands, little or no fines	
	SP	Poorly graded sands, gravelly sands, little or no fines	
		Sands with fines (More than 12% fines)	
	SM	Silty sands, sand-silt mixtures	
	SC	Clayey sands, sand-clay mixtures	

FINE-GRAINED SOILS

(50% or more of material is smaller than No. 200 sieve size.)

SILTS AND CLAYS Liquid limit less than 50%		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		OL	Organic silts and organic silty clays of low plasticity
SILTS AND CLAYS Liquid limit 50% or greater		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic clays of medium to high plasticity, organic silts
HIGHLY ORGANIC SOILS		PT	Peat and other highly organic soils

LABORATORY CLASSIFICATION CRITERIA

GW $C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \frac{D_{30}}{D_{10} \times D_{60}}$ between 1 and 3

GP Not meeting all gradation requirements for GW

GM Atterberg limits below "A" line or P.I. less than 4
 GC Atterberg limits above "A" line or P.I. greater than 7
 Above "A" line with P.I. between 4 and 7 are borderline cases requiring use of dual symbols

SW $C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \frac{D_{30}}{D_{10} \times D_{60}}$ between 1 and 3

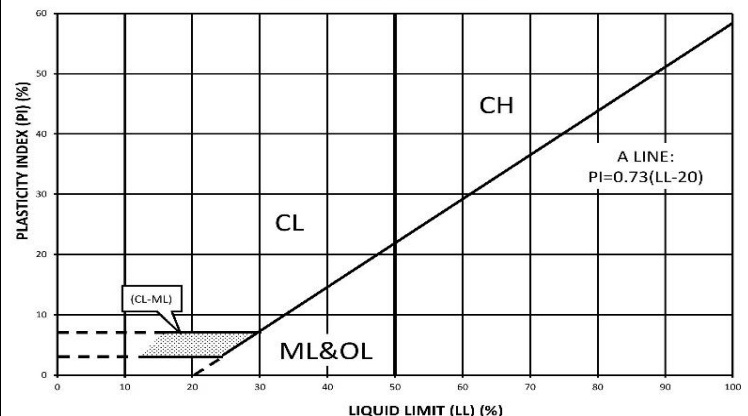
SP Not meeting all gradation requirements for GW

SM Atterberg limits below "A" line or P.I. less than 4
 SC Atterberg limits above "A" line with P.I. greater than 7
 Limits plotting in shaded zone with P.I. between 4 and 7 are borderline cases requiring use of dual symbols

Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows:

Less than 5 percent GW, GP, SW, SP
 More than 12 percent GM, GC, SM, SC
 5 to 12 percent Borderline cases requiring dual symbols

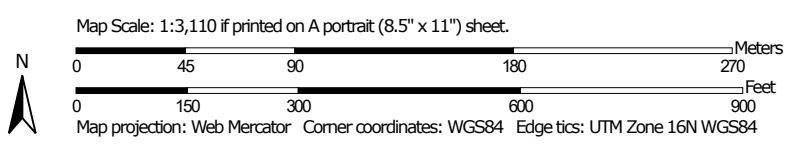
PLASTICITY CHART



Soil Map—Dane County, Wisconsin
(Utterback Property)



Soil Map may not be valid at this scale.



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

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 18, Sep 10, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Co	Colwood silt loam, 0 to 2 percent slopes	0.1	0.2%
DnB	Dodge silt loam, 2 to 6 percent slopes	4.4	11.3%
EgA	Elburn silt loam, gravelly substratum, 0 to 3 percent slopes	0.3	0.9%
GsB	Grays silt loam, 2 to 6 percent slopes	3.4	8.7%
KeB	Kegonsa silt loam, 2 to 6 percent slopes	16.7	42.3%
KrD2	Kidder soils, 10 to 20 percent slopes, eroded	0.8	2.0%
PoB	Plano silt loam, gravelly substratum, 2 to 6 percent slopes	13.0	33.1%
SaA	Sable silty clay loam, 0 to 2 percent slopes	0.6	1.6%
Totals for Area of Interest		39.4	100.0%

APPENDIX C

DOCUMENT QUALIFICATIONS

APPENDIX C

DOCUMENT QUALIFICATIONS

I. GENERAL RECOMMENDATIONS/LIMITATIONS

CGC, Inc. should be provided the opportunity for a general review of the final design and specifications to confirm that earthwork and foundation requirements have been properly interpreted in the design and specifications. CGC should be retained to provide soil engineering services during excavation and subgrade preparation. This will allow us to observe that construction proceeds in compliance with the design concepts, specifications and recommendations, and also will allow design changes to be made in the event that subsurface conditions differ from those anticipated prior to the start of construction. CGC does not assume responsibility for compliance with the recommendations in this report unless we are retained to provide construction testing and observation services.

This report has been prepared in accordance with generally accepted soil and foundation engineering practices and no other warranties are expressed or implied. The opinions and recommendations submitted in this report are based on interpretation of the subsurface information revealed by the test borings indicated on the location plan. The report does not reflect potential variations in subsurface conditions between or beyond these borings. Therefore, variations in soil conditions can be expected between the boring locations and fluctuations of groundwater levels may occur with time. The nature and extent of the variations may not become evident until construction.

II. IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL ENGINEERING REPORT

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes. While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared *solely* for the client. *No one except you* should rely on your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one - not even you* - should apply the report for any purpose or project except the one originally contemplated.

READ THE FULL REPORT

Serious problems have occurred because those relying on a geotechnical engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

A GEOTECHNICAL ENGINEERING REPORT IS BASED ON A UNIQUE SET OF PROJECT-SPECIFIC FACTORS

Geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, *do not rely on a geotechnical engineering report* that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light industrial plant to a refrigerated warehouse,
- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes - even minor ones - and request an assessment of their impact. *CGC cannot accept responsibility or liability for problems that occur because our reports do not consider developments of which we were not informed.*

SUBSURFACE CONDITIONS CAN CHANGE

A geotechnical engineering report is based on conditions that existed at the time the geotechnical engineer performed the study. *Do not rely on a geotechnical engineering report* whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. *Always* contact the geotechnical engineer before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

MOST GEOTECHNICAL FINDINGS ARE PROFESSIONAL OPINION

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgement to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ - sometimes significantly - from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide construction observation is the most

effective method of managing the risks associated with unanticipated conditions.

A REPORT'S RECOMMENDATIONS ARE NOT FINAL

Do not over-rely on the confirmation-dependent recommendations included in your report. *Those confirmation-dependent recommendations are not final*, because geotechnical engineers develop them principally from judgement and opinion. Geotechnical engineers can finalize their recommendations *only* by observing actual subsurface conditions revealed during construction. *CGC cannot assume responsibility or liability for the report's confirmation-dependent recommendations if we do not perform the geotechnical-construction observation required to confirm the recommendations' applicability.*

A GEOTECHNICAL ENGINEERING REPORT IS SUBJECT TO MISINTERPRETATION

Other design team members' misinterpretation of geotechnical engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Constructors can also misinterpret a geotechnical engineering report. Confront that risk by having CGC participate in prebid and preconstruction conferences, and by providing geotechnical construction observation.

DO NOT REDRAW THE ENGINEER'S LOGS

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

GIVE CONSTRUCTORS A COMPLETE REPORT AND GUIDANCE

Some owners and design professionals mistakenly believe they can make constructors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give constructors the complete geotechnical engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise constructors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure constructors have sufficient time to perform additional study.* Only then might you be in a position to give constructors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

READ RESPONSIBILITY PROVISIONS CLOSELY

Some clients, design professionals, and constructors do not recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic

expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineer's responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

ENVIRONMENTAL CONCERNS ARE NOT COVERED

The equipment, techniques, and personnel used to perform an *environmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

OBTAIN PROFESSIONAL ASSISTANCE TO DEAL WITH MOLD

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, many mold prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; ***none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention.*** ***Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.***

RELY ON YOUR GEOTECHNICAL ENGINEER FOR ADDITIONAL ASSISTANCE

Membership in the Geotechnical Business Council (GBC) of Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk confrontation techniques that can be of genuine benefit for everyone involved with a construction project. Confer with CGC, a member of GBC, for more information.

Modified and reprinted with permission from:

Geotechnical Business Council
of the Geoprofessional Business Association
8811 Colesville Road, Suite G 106
Silver Spring, MD 20910

APPENDIX D

RECOMMENDED COMPACTED FILL SPECIFICATIONS

APPENDIX D

CGC, INC.

RECOMMENDED COMPACTED FILL SPECIFICATIONS

General Fill Materials

Proposed fill shall contain no vegetation, roots, topsoil, peat, ash, wood or any other non-soil material which by decomposition might cause settlement. Also, fill shall never be placed while frozen or on frozen surfaces. Rock, stone or broken concrete greater than 6 in. in the largest dimension shall not be placed within 10 ft of the building area. Fill used greater than 10 ft beyond the building limits shall not contain rock, boulders or concrete pieces greater than a 2 sq ft area and shall not be placed within the final 2 ft of finish subgrade or in designated utility construction areas. Fill containing rock, boulders or concrete pieces should include sufficient finer material to fill voids among the larger fragments.

Special Fill Materials

In certain cases, special fill materials may be required for specific purposes, such as stabilizing subgrades, backfilling undercut excavations or filling behind retaining walls. For reference, WisDOT gradation specifications for various types of granular fill are attached in Table 1.

Placement Method

The approved fill shall be placed, spread and leveled in layers generally not exceeding 10 in. in thickness before compaction. The fill shall be placed at moisture content capable of achieving the desired compaction level. For clay soils or granular soils containing an appreciable amount of cohesive fines, moisture conditioning will likely be required.

It is the Contractor's responsibility to provide all necessary compaction equipment and other grading equipment that may be required to attain the specified compaction. Hand-guided vibratory or tamping compactors will be required whenever fill is placed adjacent to walls, footings, columns or in confined areas.

Compaction Specifications

Maximum dry density and optimum moisture content of the fill soil shall be determined in accordance with modified Proctor methods (ASTM D1557). The recommended field compaction as a percentage of the maximum dry density is shown in Table 2. Note that these compaction guidelines would generally not apply to coarse gravel/stone fill. Instead, a method specification would apply (e.g., compact in thin lifts with a vibratory compactor until no further consolidation is evident).

Testing Procedures

Representative samples of proposed fill shall be submitted to CGC, Inc. for optimum moisture-maximum density determination (ASTM D1557) prior to the start of fill placement. The sample size should be approximately 50 lb.

CGC, Inc. shall be retained to perform field density tests to determine the level of compaction being achieved in the fill. The tests shall generally be conducted on each lift at the beginning of fill placement and at a frequency mutually agreed upon by the project team for the remainder of the project.

Table 1
Gradation of Special Fill Materials

Material	WisDOT Section 311	WisDOT Section 312	WisDOT Section 305			WisDOT Section 209		WisDOT Section 210
	Breaker Run	Select Crushed Material	3-in. Dense Graded Base	1 1/4-in. Dense Graded Base	3/4-in. Dense Graded Base	Grade 1 Granular Backfill	Grade 2 Granular Backfill	Structure Backfill
Sieve Size	Percent Passing by Weight							
6 in.	100							
5 in.		90-100						
3 in.			90-100					100
1 1/2 in.		20-50	60-85					
1 1/4 in.				95-100				
1 in.					100			
3/4 in.			40-65	70-93	95-100			
3/8 in.				42-80	50-90			
No. 4			15-40	25-63	35-70	100 (2)	100 (2)	25-100
No. 10		0-10	10-30	16-48	15-55			
No. 40			5-20	8-28	10-35	75 (2)		
No. 100						15 (2)	30 (2)	
No. 200			2-12	2-12	5-15	8 (2)	15 (2)	15 (2)

Notes:

1. Reference: Wisconsin Department of Transportation *Standard Specifications for Highway and Structure Construction*.
2. Percentage applies to the material passing the No. 4 sieve, not the entire sample.
3. Per WisDOT specifications, both breaker run and select crushed material can include concrete that is 'substantially free of steel, building materials and other deleterious material'.

Table 2
Compaction Guidelines

Area	Percent Compaction (1)	
	Clay/Silt	Sand/Gravel
<u>Within 10 ft of building lines</u>		
Footing bearing soils	93 - 95	95
Under floors, steps and walks		
- Lightly loaded floor slab	90	90
- Heavily loaded floor slab and thicker fill zones	92	95
<u>Beyond 10 ft of building lines</u>		
Under walks and pavements		
- Less than 2 ft below subgrade	92	95
- Greater than 2 ft below subgrade	90	90
Landscaping	85	90

Notes:

1. Based on Modified Proctor Dry Density (ASTM D 1557)

APPENDIX E

ROCK EXCAVATION CONSIDERATIONS

APPENDIX E

ROCK EXCAVATION CONSIDERATIONS

In order to minimize probable "rock" excavation expenses during construction, we suggest that project specifications incorporate the following:

- A. It is assumed that all excavations to levels and dimensions required by the Contract Documents are earth excavation. Earth excavation includes removal and disposal of all materials encountered except rock/sound bedrock which is defined as natural materials which:
 - 1. Cannot be excavated with a minimum 3/4 cubic yard capacity backhoe without drilling and blasting;
 - 2. Cannot be economically removed with a one-tooth ripper on a D8 cat (or equivalent);
 - 3. Requires the use of special equipment such as a pneumatic hammer;
 - 4. Requires the use of explosives (after obtaining written permission of the owner).
- B. Examples of material classified as rock are boulders 1/2 cubic yard or more in volume, bedrock, rock in ledges, and rock-hard cementitious aggregate deposits.
- C. Do not proceed with rock excavation work until architect, engineer and/or testing firm (i.e., CGC) has taken the necessary measures to determine quantity of rock excavation required to complete the work. Measurements will be taken after properly stripped of earth by the contractor. Contractor will be paid the difference between the cost of rock and earth excavation based on an agreed upon unit price established prior to starting rock excavation.

A statement should also be included in the specifications to the effect that: "Stated models of earth excavation equipment are merely for purposes of defining the various excavation categories and are not intended to indicate the brand or type of equipment that is to be used."

APPENDIX F

WISCONSIN DEPARTMENT OF SAFETY & PROFESSIONAL SERVICES SOIL AND SITE EVALUATION – STORM FORM (3 BORINGS)



Attachment 2:

SOIL AND SITE EVALUATION - STORM

In accordance with SPS 382.365, 385, Wis. Adm. Code, and WDNR Standard 1002

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	Dane
	Parcel I.D.	028/0610-024-8070-0
	Reviewed by:	
Date:		

Property Owner Utterback LTD Partnership c/o Wayne Utterback		Property Location Govt. Lot NE 1/4 SE 1/4 S 02 T N 06 R 10 E			
Property Owner's Mail Address 4627 Prairie Fire Ct.		Lot #	Block#	Subd. Name or CSM #	
City DeForest	State WI	Zip Code 53532	Phone Number	☐ City ☐ Village ☒ Town Dunn	Nearest Road CTH AB
Drainage area _____ ☐ sq ft ☐ acres		Hydraulic Application Test Method		Soil Moisture Date of soil borings: _____ USDA-NRCS WETS Value: ☐ Dry = 1; ☐ Normal = 2; ☐ Wet = 3.	
Test site suitable for (check all that apply): ☐ Site not suitable;		☒ Morphological Evaluation			
☐ Bioretention; ☐ Subsurface Dispersal System;		☐ Double Ring Infiltrometer			
☐ Reuse; ☐ Irrigation; ☐ Other _____		☐ Other: (specify) _____			

B-13	#OBS.	☐ Pit	☒ Boring	Ground surface elevation	867.3 ft.	Elevation of limiting factor	861.3 ft. (Groundwater)			
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	Topsoil (not sampled)								
2	12-36	10YR 5/3, 5/4	none	SCL	2mabk	mfi		<5		0.11
3	36-66	10YR 7/3	none	FS	0sg	ml		1	4	0.50
4	66-96	10YR 6/3	none	XGRS	0sg	ml		65-75		3.60
5	96-126	10YR 6/3	none	S	0sg	ml		<10		3.60
6	126-156	10YR 6/3	none	FSL	2msbk	mfr		<5		0.50
7	156-180	10YR 6/3	none	FS, SiL	0sg	ml		<5		0.13-0.50
Comments: Groundwater was encountered at about 8 ft during drilling and at about 6 ft shortly after the completion of drilling. About one day after the completion of drilling, the borehole had caved-in at about 6 ft, with no groundwater present above this depth. Infiltration potential appears limited based on fairly shallow groundwater.										

B-16	#OBS.	☐ Pit	☒ Boring	Ground surface elevation	861.5 ft.	Elevation of limiting factor	859.5 ft. (Groundwater)			
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	Topsoil (not sampled)								
2	12-36	10YR 2/1 to 3/2	none	CL	0m	mfi		<5		0.03
3	36-78	2.5Y 5/1	c2d 2.5Y 5/3	SCL	0m	mfi		<5		0.11
4	78-102	10YR 6/3	none	S	0sg	ml		<10		3.60
5	102-126	10YR 6/3	none	FS	0sg	ml		<5		0.50
6	126-156	10YR 6/4, 7.5YR 6/3, 7.5YR 5/4	none	Strat. FSL, SiL, SiCL	variable			<5		0.04
7	156-180	7.5YR 6/3	none	SiCL	0m	mvfi		<5		0.04
Comments: Groundwater was encountered at about 6.5 ft during drilling and at about 6 ft shortly after the completion of drilling. About one day after the completion of drilling, the borehole had caved-in at about 4 ft, with groundwater observed at about 2 ft. Infiltration potential appears very limited based on shallow groundwater.										

Name (Please Print)	Tim F. Gassenheimer	Signature		Credential Number	SP-011900004
Address	129 Milky Way, Madison, WI 53718	Date Evaluation Conducted	December 11, 2019	Telephone Number	(608) 288-4100

B-17

#OBS.

☐ Pit☒ BoringGround surface elevation 861.7 ft.Elevation of limiting factor 860.7 ft. (Redox)
859.2 ft. (Groundwater)

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	Topsoil (not sampled)								
2	12-36	10YR 5/1	c1f 10YR 5/3	SCL	0m	mfi		<5		0.11
3	36-78	5Y 6/1	c2d 10YR 5/4	CL	0m	mfi		<5		0.03
4	78-126	10YR 6/3	none	FS, SiL/SiCL	0sg	ml		<5		0.04-0.50
5	126-156	7.5YR 6/3, 5/4	none	SiCL	0m	mvfi		<5		0.04
6	156-180	7.5YR 6/1	none	GRSL ⁽¹⁾	1cabk	mfr		20-30		0.50

Comments: Groundwater was encountered at about 6.5 ft during drilling and at about 6 ft shortly after the completion of drilling. About one day after the completion of drilling, the borehole had caved-in at about 5 ft, with groundwater observed at about 2.5 ft.

Infiltration potential appears very limited based on shallow low-chroma/high-value dominant color and redox, as well as groundwater.

⁽¹⁾ Horizon 6 was classified as possible bedrock.

Overall Site Comments: See Comments above and Stormwater Infiltration Potential section in Geotechnical Exploration Report.

APPENDIX F

WETLAND REPORT

APPENDIX G

DRAFT MAINTENANCE AGREEMENT

Maintenance provisions:

Detention Basin

Visual inspection of the detention basin and outlet structure shall be performed, at a minimum annually. The inspections shall include checking for potential problems such as: subsidence, erosion, tree growth in and around the embankment and outfall structure, sediment accumulation, clogging of outfall structure, and damage to the emergency spillway. Problems identified by the inspections shall be repaired as soon as practicable.

Sediment accumulations shall be removed by dredging when two (2) foot of siltation has occurred or as directed by the Village of Waunakee. The dredged material shall be removed and disposed of in accordance with NR 347.

The detention basin shall be mowed a minimum of twice per year. Mowing shall maintain a minimum grass height of 6 to 8 inches. Areas of sparse vegetation shall be reseeded. Additional fertilizer shall be applied as needed, per the results of a soil test.

Separate and distinct records shall be maintained by the owner to record the specific activities and costs thereof for the maintenance plan implementation. The records shall include the dates of maintenance visits and the specific work performed. Records shall be kept as required by local, state or federal law.

Infiltration Basin

Visual Inspection of the Infiltration Basin shall be performed, at a minimum, annually.

Maintenance shall be required when system shows standing water beyond 24 hours of rain event. Cleaning shall consist of removal of sediment, two (2) foot undercut, undercut replacement with material consisting of 15-30% compost and 70-85% sand and restoration in-kind.

Restoration of plant material shall be with native plugs or seed mixture tolerant of fluctuating water conditions. If a seed mixture is used steps shall be taken to assure vegetation establishes

**ROSEWOOD FIELDS
VILLAGE OF MCFARLAND
DANE COUNTY, WISCONSIN**

STORM SEWER SIZING REPORT

PREPARED BY
D'Onofrio, Kottke & Associates, Inc.
7530 Westward Way
Madison, Wisconsin 53717
608.833.7530

August 25, 2020

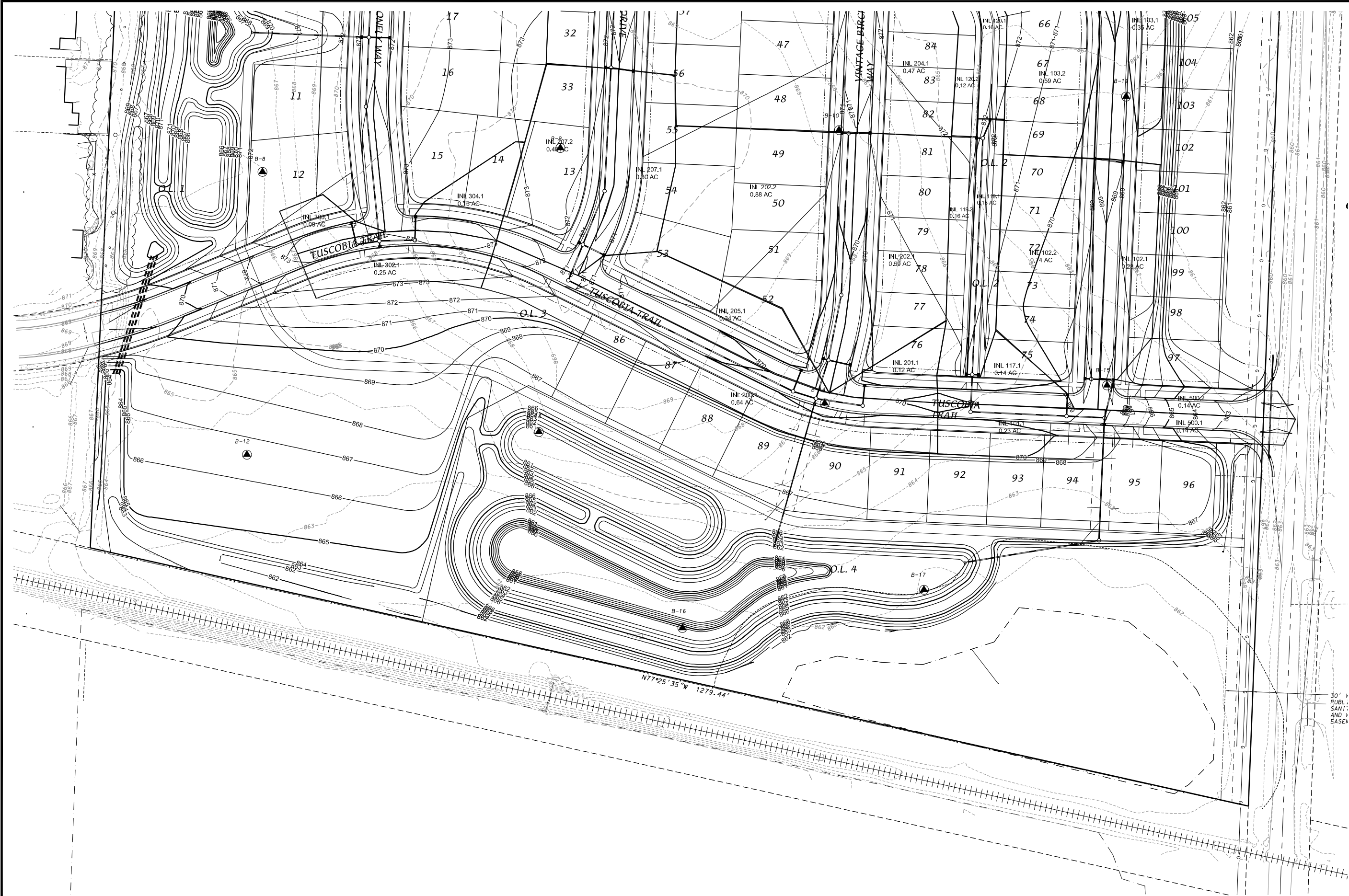
Storm sewer design calculations for Rosewood Fields were performed using the Hydraflow Storm Sewer Extensions software. Rainfall data was obtained from the NOAA Atlas 14 precipitations intensity data set. Drainage areas for each inlet are depicted in the attached storm sewer sizing maps.

Storm sewer pipes were designed to accommodate the 10-year storm event. The storm sewer network was modeled to keep the hydraulic grade line within the pipes for this event. The 100-year event is conveyed to the stormwater management ponds via the storm sewer system, roadway ROWs, and stormwater easements. Hydraflow output for storm sewer sizing using the 10-year storm event is attached.

Inlet and catch basin spacing was designed to meet the following criteria: For the 5-year storm event, maintain drive lanes in the center of the roadway. For the 25-year event, prevent stormwater from crossing the center line of the roadway. For the 100-year storm, contain the stormwater in the public ROW. Hydraflow outputs for inlet spread calculations for the 5-year, 25-year, and 100-year storms are attached.

The storm sewer system for Juniper Ridge is designed to meet the guidelines of the Village of McFarland. The attached calculations and exhibits support the storm sewer design.







D'ONOFRIO KOTKKE AND ASSOCIATES, INC.
7530 Westward Way, Madison, WI 53717
Phone: 608.833.7530 • Fax: 608.833.1089
YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

ROSEWOOD FIELDS

VILLAGE OF MC FARLAND, DANE COUNTY, WISCONSIN

STORM SEWER SIZING



SCALE: 1" = 100'
(PAGE SIZE: 11x17)



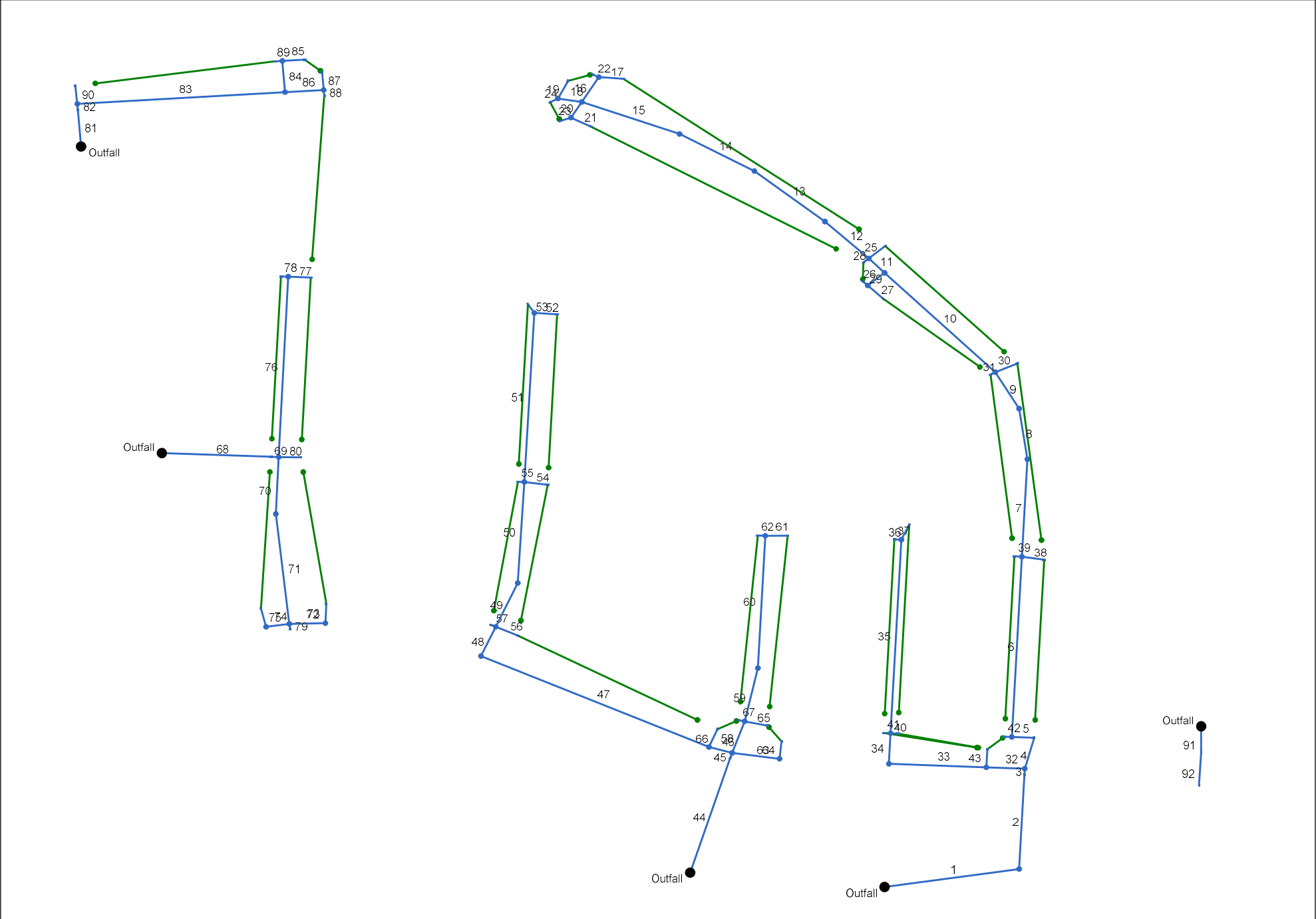
DATE: 08-25-20
REVISED:

DRAWN BY: KWB

FN: 20-05-132

Sheet Number:
2 OF 2

Hydraflow Storm Sewers Extension for Autodesk® AutoCAD® Civil 3D® Plan



Project File: Rosewood Storm Sewer.stm	Number of lines: 92	Date: 8/25/2020
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Structure Report

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
1	CB 100	Manhole	866.75	Cir	4.00	4.00	27	Cir	862.58	27	Cir	862.58
2	INL 101.1	Combination	869.01	Rect	3.00	2.00	27	Cir	863.08	24	Cir	863.33
3	CB 101	Manhole	870.42	Cir	4.00	4.00	24	Cir	863.38	24 12	Cir Cir	863.38 864.38
4	INL 102.1	Combination	869.50	Rect	3.00	2.00	24	Cir	863.57	24	Cir	863.57
5	CB 102	Manhole	868.74	Cir	4.00	4.00	24	Cir	863.68	24 12	Cir Cir	863.68 864.68
6	CB 103	Manhole	870.05	Cir	4.00	4.00	24	Cir	864.63	24 12 12	Cir Cir Cir	864.63 865.63 865.63
7	CB 104	Manhole	871.34	Cir	4.00	4.00	24	Cir	865.21	24	Cir	865.21
8	CB 105	Manhole	872.02	Cir	4.00	4.00	24	Cir	865.52	24	Cir	865.52
9	CB 106	Manhole	872.57	Cir	4.00	4.00	24	Cir	865.76	21 12 12	Cir Cir Cir	866.01 866.76 866.76
10	CB 107	Manhole	874.34	Cir	4.00	4.00	21	Cir	866.81	21 12	Cir Cir	866.81 867.56
11	CB 109	Manhole	874.59	Cir	4.00	4.00	21	Cir	866.93	18 12 12	Cir Cir Cir	867.18 867.68 867.68
12	CB 110	Manhole	875.28	Cir	4.00	4.00	18	Cir	867.49	18	Cir	867.49
13	CB 111	Manhole	875.75	Cir	4.00	4.00	18	Cir	867.94	18	Cir	867.94
14	CB 112	Manhole	876.69	Cir	4.00	4.00	18	Cir	868.41	18	Cir	868.41
15	CB 113	Manhole	877.82	Cir	4.00	4.00	18	Cir	868.97	12 12 12	Cir Cir Cir	869.47 869.47 869.47
16	CB 114	Manhole	878.19	Cir	4.00	4.00	12	Cir	869.66	12 12	Cir Cir	869.66 869.66
17	INL 114.1	Combination	879.46	Rect	3.00	2.00	12	Cir	869.79			
Project File: Rosewood Storm Sewer.stm							Number of Structures: 92			Run Date: 8/25/2020		

Structure Report

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
18	CB 115	Manhole	878.08	Cir	4.00	4.00	12	Cir	869.62	12 12	Cir Cir	869.62 869.62
19	INL 115.1	Combination	879.33	Rect	3.00	2.00	12	Cir	869.75			
20	CB 116	Manhole	878.05	Cir	4.00	4.00	12	Cir	869.59	12 12	Cir Cir	869.59 869.59
21	INL 116.1	Combination	879.30	Rect	3.00	2.00	12	Cir	869.71			
22	INL 114.2	Combination	879.44	Rect	3.00	2.00	12	Cir	869.70			
23	INL 116.2	Combination	879.18	Rect	3.00	2.00	12	Cir	869.65			
24	INL 115.2	Combination	879.18	Rect	3.00	2.00	12	Cir	869.67			
25	INL 109.1	Combination	875.30	Rect	3.00	2.00	12	Cir	867.92			
26	CB 108	Manhole	874.04	Cir	4.00	4.00	12	Cir	867.81	12 12	Cir Cir	867.81 867.81
27	INL 108.1	Combination	875.29	Rect	3.00	2.00	12	Cir	868.05			
28	INL 109.2	Combination	875.13	Rect	3.00	2.00	12	Cir	867.76			
29	INL 108.2	Combination	875.13	Rect	3.00	2.00	12	Cir	867.89			
30	INL 106.1	Combination	873.29	Rect	3.00	2.00	12	Cir	867.02			
31	INL 106.2	Combination	873.09	Rect	3.00	2.00	12	Cir	866.82			
32	CB 117	Manhole	869.19	Cir	4.00	4.00	12	Cir	864.79	12 12	Cir Cir	864.79 864.79
33	CB 118	Manhole	869.87	Cir	4.00	4.00	12	Cir	865.83	12	Cir	865.83
34	CB 119	Manhole	870.48	Cir	4.00	4.00	12	Cir	866.24	12 12 12	Cir Cir Cir	866.24 866.24 866.24
35	CB 120	Manhole	871.19	Cir	4.00	4.00	12	Cir	867.53	12 12	Cir Cir	867.53 867.53
36	INL 120.1	Combination	872.10	Rect	3.00	2.00	12	Cir	867.64			
Project File: Rosewood Storm Sewer.stm							Number of Structures: 92			Run Date: 8/25/2020		

Structure Report

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
37	INL 120.2	Combination	871.96	Rect	3.00	3.00	12	Cir	867.57			
38	INL 103.1	Combination	870.75	Rect	3.00	2.00	12	Cir	865.87			
39	INL 103.2	Combination	870.59	Rect	3.00	2.00	12	Cir	865.71			
40	INL 119.1	Combination	870.36	Rect	3.00	2.00	12	Cir	866.31			
41	INL 119.2	Combination	870.60	Rect	3.00	2.00	12	Cir	866.32			
42	INL 102.2	Combination	869.82	Rect	3.00	2.00	12	Cir	864.76			
43	INL 117.1	Combination	869.35	Rect	3.00	2.00	12	Cir	865.03			
44	INL 200.1	Combination	869.79	Rect	3.00	2.00	24	Cir	863.17	24	Cir	863.17
45	CB 200	Manhole	869.51	Cir	4.00	4.00	24	Cir	863.24	18 18 12	Cir Cir Cir	863.74 863.74 864.24
46	CB 205	Manhole	869.64	Cir	4.00	4.00	18	Cir	863.88	15 12	Cir Cir	864.13 864.48
47	CB 206	Manhole	871.21	Cir	4.00	4.00	15	Cir	866.69	15	Cir	866.69
48	CB 207	Manhole	870.74	Cir	4.00	4.00	15	Cir	867.10	15 12 12	Cir Cir Cir	867.10 867.35 867.35
49	CB 208	Manhole	871.12	Cir	4.00	4.00	15	Cir	867.41	15	Cir	867.41
50	CB 209	Manhole	871.79	Cir	4.00	4.00	15	Cir	868.08	12 12 12	Cir Cir Cir	868.33 868.33 868.33
51	CB 210	Manhole	872.95	Cir	4.00	4.00	12	Cir	869.45	12 12	Cir Cir	869.45 869.45
52	INL 210.1	Combination	874.20	Rect	3.00	2.00	12	Cir	869.60			
53	INL 210.2	Combination	874.09	Rect	3.00	2.00	12	Cir	869.52			
54	INL 209.1	Combination	872.06	Rect	3.00	2.00	12	Cir	868.58			
55	INL 209.2	Combination	872.08	Rect	3.00	2.00	12	Cir	868.40			
Project File: Rosewood Storm Sewer.stm							Number of Structures: 92			Run Date: 8/25/2020		

Structure Report

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
56	INL 207.1	Combination	871.06	Rect	3.00	2.00	12	Cir	867.62			
57	INL 207.2	Combination	871.06	Rect	3.00	2.00	12	Cir	867.40			
58	CB 202	Manhole	869.03	Cir	4.00	4.00	18	Cir	864.29	18 12 12	Cir Cir Cir	864.29 865.18 865.18
59	CB 203	Manhole	869.47	Cir	4.00	4.00	18	Cir	864.80	18	Cir	864.80
60	CB 204	Manhole	870.48	Cir	4.00	4.00	18	Cir	865.68	12 15	Cir Cir	866.18 865.93
61	INL 204.1	Combination	870.75	Rect	3.00	2.00	12	Cir	866.42			
62	INL 204.2	Combination	869.50	Rect	3.00	2.00	15	Cir	866.01			
63	CB 201	Manhole	869.66	Cir	4.00	4.00	12	Cir	865.27	12	Cir	865.27
64	INL 201.1	Combination	869.91	Rect	3.00	2.00	12	Cir	865.73			
65	INL 202.1	Combination	869.32	Rect	3.00	2.00	12	Cir	865.43			
66	INL 205.1	Combination	869.93	Rect	3.00	2.00	12	Cir	864.73			
67	INL 202.2	Combination	869.32	Rect	3.00	2.00	12	Cir	865.25			
68	INL 300.2	Combination	871.38	Rect	3.00	2.00	18	Cir	867.93	18	Cir	867.93
69	CB 300	Manhole	870.46	Cir	4.00	4.00	18	Cir	868.00	12 15 15	Cir Cir Cir	868.50 868.25 868.25
70	CB 301	Manhole	871.22	Cir	4.00	4.00	12	Cir	868.88	12	Cir	868.88
71	CB 302	Manhole	872.15	Cir	4.00	4.00	12	Cir	869.62	12 12 12	Cir Cir Cir	869.62 869.62 869.62
72	CB 304	Manhole	875.41	Cir	4.00	4.00	12	Cir	869.82	12	Cir	869.82
73	INL 304.1	Combination	874.34	Rect	3.00	2.00	12	Cir	870.08			
74	CB 303	Manhole	872.40	Cir	4.00	4.00	12	Cir	869.75	12	Cir	869.75
Project File: Rosewood Storm Sewer.stm							Number of Structures: 92			Run Date: 8/25/2020		

Structure Report

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
75	INL 303.1	Combination	873.65	Rect	3.00	2.00	12	Cir	869.88			
76	CB 305	Manhole	872.31	Cir	4.00	4.00	15	Cir	869.46	12 12	Cir Cir	869.71 869.71
77	INL 305.1	Combination	873.56	Rect	3.00	2.00	12	Cir	869.95			
78	INL 305.2	Combination	873.39	Rect	3.00	2.00	12	Cir	869.79			
79	INL 302.1	Combination	873.22	Rect	3.00	2.00	12	Cir	869.69			
80	INL 300.3	Combination	871.15	Rect	3.00	2.00	15	Cir	868.43			
81	INL 400.2	Combination	874.72	Rect	3.00	2.00	12	Cir	869.92	12	Cir	869.92
82	CB 400	Manhole	874.46	Cir	4.00	4.00	12	Cir	870.00	12 12	Cir Cir	870.00 870.00
83	CB 401	Manhole	876.49	Cir	4.00	4.00	12	Cir	872.80	12 12	Cir Cir	872.80 872.80
84	CB 402	Manhole	877.95	Cir	4.00	4.00	12	Cir	874.30	12 12	Cir Cir	874.30 874.30
85	INL 402.1	Combination	878.22	Rect	3.00	2.00	12	Cir	874.54			
86	CB 403	Manhole	877.13	Cir	4.00	4.00	12	Cir	873.20	12 12	Cir Cir	873.20 873.20
87	INL 403.2	Combination	877.40	Rect	3.00	2.00	12	Cir	873.44			
88	INL 403.1	Combination	877.40	Rect	3.00	2.00	12	Cir	873.28			
89	INL 402.2	Combination	878.22	Rect	3.00	2.00	12	Cir	874.38			
90	INL 400.3	Combination	874.73	Rect	3.00	2.00	12	Cir	870.24			
91	STRUCT-(139)	Combination	862.50	Rect	3.00	2.00	12	Cir	870.25	12	Cir	870.25
92	STRUCT-(138)	Combination	862.50	Rect	3.00	2.00	12	Cir	870.50			
Project File: Rosewood Storm Sewer.stm							Number of Structures: 92			Run Date: 8/25/2020		

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
1	CB 100	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
2	INL 101.1	0.74	0.00	0.70	0.03	Comb	4.0	3.00	0.00	3.00	2.00	0.034	2.00	0.050	0.020	0.013	0.13	3.58	0.04	0.84	0.0	Off
3	CB 101	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
4	INL 102.1	0.89	0.40	1.29	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.21	7.29	0.21	7.29	0.0	Off
5	CB 102	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
6	CB 103	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
7	CB 104	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
8	CB 105	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
9	CB 106	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
10	CB 107	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
11	CB 109	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
12	CB 110	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
13	CB 111	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
14	CB 112	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
15	CB 113	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
16	CB 114	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
17	INL 114.1	0.64	0.00	0.56	0.08	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.17	5.60	0.08	1.69	0.0	25
18	CB 115	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
19	INL 115.1	1.92	0.00	1.32	0.60	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.24	9.17	0.17	5.43	0.0	22
20	CB 116	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
21	INL 116.1	0.26	0.00	0.25	0.01	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.13	3.37	0.03	0.61	0.0	28
22	INL 114.2	1.76	0.60	2.36	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.28	11.14	0.28	11.14	0.0	Off
23	INL 116.2	0.99	0.09	1.08	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.19	6.43	0.19	6.43	0.0	Off

Project File: Rosewood Storm Sewer.stm

Number of lines: 92

Run Date: 8/25/2020

NOTES: Inlet N-Values = 0.016; Intensity = 22.59 / (Inlet time + 3.70) ^ 0.58; Return period = 10 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
24	INL 115.2	0.67	0.00	0.58	0.09	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.17	5.74	0.09	1.76	0.0	23
25	INL 109.1	1.69	0.08	1.25	0.53	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.24	8.88	0.16	5.11	0.0	30
26	CB 108	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
27	INL 108.1	0.32	0.00	0.31	0.01	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.14	3.87	0.04	0.84	0.0	31
28	INL 109.2	1.92	0.01	1.32	0.60	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.24	9.18	0.17	5.44	0.0	29
29	INL 108.2	1.82	0.60	2.42	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.29	11.36	0.29	11.36	0.0	Off
30	INL 106.1	0.86	0.53	1.04	0.36	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.22	8.01	0.14	4.14	0.0	38
31	INL 106.2	1.05	0.01	0.84	0.23	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.20	7.12	0.12	3.11	0.0	39
32	CB 117	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
33	CB 118	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
34	CB 119	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
35	CB 120	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
36	INL 120.1	0.51	0.00	0.46	0.05	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.16	5.01	0.07	1.39	0.0	40
37	INL 120.2	0.38	0.00	0.36	0.02	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.15	4.30	0.05	1.05	0.0	41
38	INL 103.1	1.12	0.36	1.08	0.40	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.22	8.21	0.15	4.37	0.0	4
39	INL 103.2	1.89	0.23	1.42	0.70	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.25	9.54	0.18	5.84	0.0	42
40	INL 119.1	0.58	0.05	0.55	0.08	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.17	5.54	0.08	1.66	0.0	43
41	INL 119.2	0.51	0.02	0.48	0.06	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.16	5.13	0.07	1.45	0.0	43
42	INL 102.2	2.36	0.75	3.11	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.33	13.50	0.33	13.50	0.0	Off
43	INL 117.1	0.45	0.14	0.53	0.05	Comb	4.0	3.00	0.00	3.00	2.00	0.010	2.00	0.050	0.020	0.013	0.15	4.47	0.06	1.23	0.0	42
44	INL 200.1	2.05	0.00	2.05	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.26	10.09	0.26	10.09	0.0	Off
45	CB 200	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
46	CB 205	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off

Project File: Rosewood Storm Sewer.stm

Number of lines: 92

Run Date: 8/25/2020

NOTES: Inlet N-Values = 0.016; Intensity = 22.59 / (Inlet time + 3.70) ^ 0.58; Return period = 10 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
47	CB 206	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
48	CB 207	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
49	CB 208	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
50	CB 209	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
51	CB 210	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
52	INL 210.1	0.77	0.00	0.65	0.12	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.18	6.12	0.10	1.94	0.0	54
53	INL 210.2	1.66	0.00	1.18	0.48	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.23	8.63	0.16	4.84	0.0	55
54	INL 209.1	0.99	0.12	0.87	0.24	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.20	7.25	0.13	3.27	0.0	56
55	INL 209.2	1.37	0.48	1.29	0.57	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.24	9.04	0.17	5.28	0.0	57
56	INL 207.1	0.96	0.24	0.92	0.28	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.21	7.50	0.13	3.57	0.0	66
57	INL 207.2	1.53	0.57	2.10	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.27	10.28	0.27	10.28	0.0	Off
58	CB 202	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
59	CB 203	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
60	CB 204	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
61	INL 204.1	1.50	0.00	1.10	0.40	Comb	4.0	3.00	0.00	3.00	2.00	0.006	2.00	0.050	0.020	0.013	0.22	7.95	0.14	4.19	0.0	65
62	INL 204.2	5.08	0.00	2.66	2.42	Comb	4.0	3.00	0.00	3.00	2.00	0.006	2.00	0.050	0.020	0.013	0.32	13.12	0.25	9.72	0.0	67
63	CB 201	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
64	INL 201.1	0.38	0.00	0.36	0.02	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.15	4.30	0.05	1.05	0.0	65
65	INL 202.1	1.89	0.43	2.31	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.28	10.99	0.28	10.99	0.0	Off
66	INL 205.1	1.09	0.28	1.02	0.35	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.22	7.93	0.14	4.07	0.0	67
67	INL 202.2	2.81	2.77	5.58	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.46	19.97	0.46	19.97	0.0	Off
68	INL 300.2	1.95	0.19	2.14	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.27	10.40	0.27	10.40	0.0	Off
69	CB 300	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off

Project File: Rosewood Storm Sewer.stm

Number of lines: 92

Run Date: 8/25/2020

NOTES: Inlet N-Values = 0.016; Intensity = 22.59 / (Inlet time + 3.70) ^ 0.58; Return period = 10 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
70	CB 301	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
71	CB 302	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
72	CB 304	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
73	INL 304.1	0.48	0.00	0.44	0.04	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.16	4.85	0.07	1.31	0.0	80
74	CB 303	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
75	INL 303.1	0.26	0.00	0.25	0.01	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.13	3.37	0.03	0.61	0.0	68
76	CB 305	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
77	INL 305.1	2.14	0.00	1.47	0.68	Comb	4.0	3.00	0.00	3.00	2.00	0.011	2.00	0.050	0.020	0.013	0.22	8.12	0.15	4.72	0.0	80
78	INL 305.2	1.02	0.00	0.84	0.18	Comb	4.0	3.00	0.00	3.00	2.00	0.011	2.00	0.050	0.020	0.013	0.18	5.81	0.10	1.94	0.0	68
79	INL 302.1	0.80	0.00	0.80	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.16	5.16	0.16	5.16	0.0	Off
80	INL 300.3	5.15	0.72	5.86	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.46	19.97	0.46	19.97	0.0	Off
81	INL 400.2	0.83	0.00	0.83	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.17	5.31	0.17	5.31	0.0	Off
82	CB 400	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
83	CB 401	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
84	CB 402	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
85	INL 402.1	0.48	0.00	0.48	0.00	Comb	4.0	3.00	0.00	3.00	2.00	0.040	2.00	0.050	0.020	0.013	0.11	2.50	0.01	0.24	0.0	87
86	CB 403	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
87	INL 403.2	0.58	0.00	0.58	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.14	4.06	0.14	4.06	0.0	Off
88	INL 403.1	0.13	0.00	0.13	0.00	Comb	4.0	3.00	0.00	3.00	2.00	0.015	2.00	0.050	0.020	0.013	0.08	1.61	0.00	0.00	0.0	77
89	INL 402.2	0.26	0.00	0.26	0.00	Comb	4.0	3.00	0.00	3.00	2.00	0.040	2.00	0.050	0.020	0.013	0.09	1.74	0.00	0.00	0.0	90
90	INL 400.3	2.72	0.00	2.72	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.31	12.29	0.31	12.29	0.0	Off
91	STRUCT-(139)	0.45	0.00	0.41	0.04	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.15	4.67	0.06	1.23	0.0	Off
92	STRUCT-(138)	0.45	0.00	0.41	0.04	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.15	4.67	0.06	1.23	0.0	Off

Project File: Rosewood Storm Sewer.stm

Number of lines: 92

Run Date: 8/25/2020

NOTES: Inlet N-Values = 0.016; Intensity = 22.59 / (Inlet time + 3.70) ^ 0.58; Return period = 10 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Pipes

Line No.	Line ID	Drng Area	i Inlet	Flow Rate	Capac Full	Line Length	Line Slope	Invert Dn	Invert Up	HGL Dn	HGL Up	Line Size	
		(ac)	(in/hr)	(cfs)	(cfs)	(ft)	(%)	(ft)	(ft)	(ft)	(ft)	(in)	
1	CB 100 TO AE 100.1	0.00	0.00	16.46	19.50	146.188	0.40	862.00	862.58	863.46	864.21	27	
2	INL 101.1 TO CB 100	0.23	6.39	16.77	19.56	125.345	0.40	862.58	863.08	864.65	864.93	27	
3	CB 101 TO INL 101.1	0.00	0.00	16.26	17.91	7.971	0.63	863.33	863.38	865.11	865.14	24	
4	INL 102.1 TO CB 101	0.28	6.39	14.60	15.16	42.294	0.45	863.38	863.57	865.62	865.79	24	
5	CB 102 TO INL 102.1	0.00	0.00	14.00	15.31	24.000	0.46	863.57	863.68	866.30	866.39	24	
6	CB 103 TO CB 102	0.00	0.00	12.76	14.24	239.500	0.40	863.68	864.63	866.70	867.46	24	
7	CB 104 TO CB 103	0.00	0.00	10.77	15.14	129.364	0.45	864.63	865.21	867.72	868.01	24	
8	CB 105 TO CB 104	0.00	0.00	10.92	15.29	67.855	0.46	865.21	865.52	868.05	868.21	24	
9	CB 106 TO CB 105	0.00	0.00	11.05	14.98	54.693	0.44	865.52	865.76	868.28	868.41	24	
10	CB 107 TO CB 106	0.00	0.00	9.83	10.64	177.385	0.45	866.01	866.81	868.61	869.29	21	
11	CB 109 TO CB 107	0.00	0.00	8.12	10.86	25.510	0.47	866.81	866.93	869.55	869.62	21	
12	CB 110 TO CB 109	0.00	0.00	5.24	7.10	67.780	0.46	867.18	867.49	869.79	869.96	18	
13	CB 111 TO CB 110	0.00	0.00	5.38	7.01	101.047	0.45	867.49	867.94	869.98	870.25	18	
14	CB 112 TO CB 111	0.00	0.00	5.51	7.42	94.114	0.50	867.94	868.41	870.28	870.54	18	
15	CB 113 TO CB 112	0.00	0.00	5.69	7.39	113.097	0.50	868.41	868.97	870.57	870.90	18	
16	CB 114 TO CB 113	0.00	0.00	2.31	2.53	37.697	0.50	869.47	869.66	871.06	871.22	12	
17	INL 114.1 TO CB 114	0.20	6.39	0.64	2.50	26.394	0.49	869.66	869.79	871.36	871.36	12	
18	CB 115 TO CB 113	0.00	0.00	2.56	2.71	25.906	0.58	869.47	869.62	871.06	871.19	12	
19	INL 115.1 TO CB 115	0.60	6.39	1.92	2.53	25.665	0.51	869.62	869.75	871.36	871.43	12	
20	CB 116 TO CB 113	0.00	0.00	1.15	2.53	23.787	0.50	869.47	869.59	871.06	871.09	12	
21	INL 116.1 TO CB 116	0.08	6.39	0.26	2.52	24.016	0.50	869.59	869.71	871.12	871.12	12	
22	INL 114.2 TO CB 114	0.55	6.39	1.76	2.52	8.000	0.50	869.66	869.70	871.36	871.37	12	
23	INL 116.2 TO CB 116	0.31	6.39	0.99	2.49	12.285	0.49	869.59	869.65	871.12	871.13	12	
Project File: Rosewood Storm Sewer.stm											Number of lines: 92		Date: 8/25/2020
NOTES: Intensity = 22.59 / (Inlet time + 3.70) ^ 0.58 -- Return period = 10 Yrs. ; ** Critical depth													

Pipes

Line No.	Line ID	Drng Area	i Inlet	Flow Rate	Capac Full	Line Length	Line Slope	Invert Dn	Invert Up	HGL Dn	HGL Up	Line Size	
		(ac)	(in/hr)	(cfs)	(cfs)	(ft)	(%)	(ft)	(ft)	(ft)	(ft)	(in)	
24	INL 115.2 TO CB 115	0.21	6.39	0.67	2.53	9.903	0.50	869.62	869.67	871.36	871.36	12	
25	INL 109.1 TO CB 109	0.53	6.39	1.69	3.55	24.188	0.99	867.68	867.92	869.79	869.85	12	
26	CB 108 TO CB 107	0.00	0.00	2.01	3.59	24.543	1.02	867.56	867.81	869.55	869.63	12	
27	INL 108.1 TO CB 108	0.10	6.39	0.32	3.56	24.000	1.00	867.81	868.05	869.73	869.73	12	
28	INL 109.2 TO CB 109	0.60	6.39	1.92	3.60	7.812	1.02	867.68	867.76	869.79	869.82	12	
29	INL 108.2 TO CB 108	0.57	6.39	1.82	3.56	8.000	1.00	867.81	867.89	869.73	869.75	12	
30	INL 106.1 TO CB 106	0.27	6.39	0.86	3.54	26.311	0.99	866.76	867.02	868.61	868.62	12	
31	INL 106.2 TO CB 106	0.33	6.39	1.05	3.59	5.904	1.02	866.76	866.82	868.61	868.61	12	
32	CB 117 TO CB 101	0.00	0.00	1.83	3.55	41.308	0.99	864.38	864.79	865.62	865.71	12	
33	CB 118 TO CB 117	0.00	0.00	1.54	3.55	104.464	1.00	864.79	865.83	865.80	866.36 j	12	
34	CB 119 TO CB 118	0.00	0.00	1.56	3.58	40.554	1.01	865.83	866.24	866.36	866.77	12	
35	CB 120 TO CB 119	0.00	0.00	0.86	2.52	257.148	0.50	866.24	867.53	866.77	867.92	12	
36	INL 120.1 TO CB 120	0.16	6.39	0.51	2.54	21.690	0.51	867.53	867.64	867.92	867.95	12	
37	INL 120.2 TO CB 120	0.12	6.39	0.38	2.60	7.500	0.53	867.53	867.57	867.92	867.92	12	
38	INL 103.1 TO CB 103	0.35	6.39	1.12	3.55	24.187	0.99	865.63	865.87	867.72	867.74	12	
39	INL 103.2 TO CB 103	0.59	6.39	1.89	3.56	8.000	1.00	865.63	865.71	867.72	867.74	12	
40	INL 119.1 TO CB 119	0.18	6.39	0.58	3.44	7.500	0.93	866.24	866.31	866.77	866.62	12	
41	INL 119.2 TO CB 119	0.16	6.39	0.51	3.68	7.500	1.07	866.24	866.32	866.77	866.62	12	
42	INL 102.2 TO CB 102	0.74	6.39	2.36	3.56	8.000	1.00	864.68	864.76	866.70	866.73	12	
43	INL 117.1 TO CB 117	0.14	6.39	0.45	3.56	24.000	1.00	864.79	865.03	865.80	865.81	12	
44	INL 200.1 TO AE 200.2	0.64	6.39	17.92	19.46	157.969	0.74	862.00	863.17	863.52	864.69	24	
45	CB 200 TO INL 200.1	0.00	0.00	16.28	22.39	7.142	0.98	863.17	863.24	864.69	864.69 j	24	
46	CB 205 TO CB 200	0.00	0.00	6.84	7.69	26.090	0.54	863.74	863.88	864.84	864.98	18	
Project File: Rosewood Storm Sewer.stm											Number of lines: 92		Date: 8/25/2020
NOTES: Intensity = 22.59 / (Inlet time + 3.70) ^ 0.58 -- Return period = 10 Yrs. ; ** Critical depth													

Pipes

Line No.	Line ID	Drng Area	i Inlet	Flow Rate	Capac Full	Line Length	Line Slope	Invert Dn	Invert Up	HGL Dn	HGL Up	Line Size	
		(ac)	(in/hr)	(cfs)	(cfs)	(ft)	(%)	(ft)	(ft)	(ft)	(ft)	(in)	
47	CB 206 TO CB 205	0.00	0.00	6.22	6.26	272.386	0.94	864.13	866.69	865.36	867.70 j	15	
48	CB 207 TO CB 206	0.00	0.00	6.27	6.38	42.042	0.98	866.69	867.10	868.23	868.63	15	
49	CB 208 TO CB 207	0.00	0.00	4.19	4.54	62.733	0.49	867.10	867.41	869.03	869.30	15	
50	CB 209 TO CB 208	0.00	0.00	4.33	4.56	134.287	0.50	867.41	868.08	869.37	869.97	15	
51	CB 210 TO CB 209	0.00	0.00	2.36	2.51	224.640	0.50	868.33	869.45	870.17	871.16	12	
52	INL 210.1 TO CB 210	0.24	6.39	0.77	2.78	24.568	0.61	869.45	869.60	871.30	871.31	12	
53	INL 210.2 TO CB 210	0.52	6.39	1.66	2.58	13.329	0.53	869.45	869.52	871.30	871.33	12	
54	INL 209.1 TO CB 209	0.31	6.39	0.99	3.54	25.263	0.99	868.33	868.58	870.17	870.19	12	
55	INL 209.2 TO CB 209	0.43	6.39	1.37	3.59	6.901	1.01	868.33	868.40	870.17	870.18	12	
56	INL 207.1 TO CB 207	0.30	6.39	0.96	3.59	26.533	1.02	867.35	867.62	869.03	869.05	12	
57	INL 207.2 TO CB 207	0.48	6.39	1.53	3.41	5.467	0.92	867.35	867.40	869.03	869.04	12	
58	CB 202 TO CB 200	0.00	0.00	10.37	11.74	44.015	1.25	863.74	864.29	864.84	865.53	18	
59	CB 203 TO CB 202	0.00	0.00	6.18	8.84	72.040	0.71	864.29	864.80	865.53	865.76 j	18	
60	CB 204 TO CB 203	0.00	0.00	6.49	7.43	175.860	0.50	864.80	865.68	865.89	866.77	18	
61	INL 204.1 TO CB 204	0.47	6.39	1.50	3.56	24.076	1.00	866.18	866.42	867.11	866.94	12	
62	INL 204.2 TO CB 204	1.59	6.39	5.08	6.47	7.965	1.00	865.93	866.01	867.11	866.92	15	
63	CB 201 TO CB 200	0.00	0.00	0.36	5.04	51.435	2.00	864.24	865.27	864.69	865.52 j	12	
64	INL 201.1 TO CB 201	0.12	6.39	0.38	5.03	23.075	1.99	865.27	865.73	865.52	865.99	12	
65	INL 202.1 TO CB 202	0.59	6.39	1.89	3.54	25.256	0.99	865.18	865.43	865.70	866.01	12	
66	INL 205.1 TO CB 205	0.34	6.39	1.09	3.54	25.246	0.99	864.48	864.73	865.36	865.17	12	
67	INL 202.2 TO CB 202	0.88	6.39	2.81	3.63	6.747	1.04	865.18	865.25	865.84	865.97	12	
68	INL 300.2 TO AE 300.1	0.61	6.39	9.21	9.37	116.877	0.80	867.00	867.93	868.17	869.17	18	
69	CB 300 TO INL 300.2	0.00	0.00	7.70	9.56	8.446	0.83	867.93	868.00	869.44	869.48	18	
Project File: Rosewood Storm Sewer.stm											Number of lines: 92		Date: 8/25/2020
NOTES: Intensity = 22.59 / (Inlet time + 3.70) ^ 0.58 -- Return period = 10 Yrs. ; ** Critical depth													

Pipes

Line No.	Line ID	Drng Area	i Inlet	Flow Rate	Capac Full	Line Length	Line Slope	Invert Dn	Invert Up	HGL Dn	HGL Up	Line Size	
		(ac)	(in/hr)	(cfs)	(cfs)	(ft)	(%)	(ft)	(ft)	(ft)	(ft)	(in)	
70	CB 301 TO CB 300	0.00	0.00	1.24	2.53	75.538	0.50	868.50	868.88	869.78	869.86	12	
71	CB 302 TO CB 301	0.00	0.00	1.32	2.53	146.689	0.50	868.88	869.62	869.87	870.17	12	
72	CB 304 TO CB 302	0.00	0.00	0.46	2.56	38.646	0.52	869.62	869.82	870.31	870.31	12	
73	INL 304.1 TO CB 304	0.15	6.39	0.48	3.55	26.198	0.99	869.82	870.08	870.33	870.37 j	12	
74	CB 303 TO CB 302	0.00	0.00	0.24	2.56	25.184	0.52	869.62	869.75	870.31	870.31	12	
75	INL 303.1 TO CB 303	0.08	6.39	0.26	2.57	24.911	0.52	869.75	869.88	870.31	870.31	12	
76	CB 305 TO CB 300	0.00	0.00	3.13	4.59	239.625	0.50	868.25	869.46	869.78	870.36	15	
77	INL 305.1 TO CB 305	0.67	6.39	2.14	3.55	24.191	0.99	869.71	869.95	870.53	870.57 j	12	
78	INL 305.2 TO CB 305	0.32	6.39	1.02	3.60	7.809	1.02	869.71	869.79	870.53	870.21	12	
79	INL 302.1 TO CB 302	0.25	6.39	0.80	3.54	7.069	0.99	869.62	869.69	870.31	870.06	12	
80	INL 300.3 TO CB 300	1.61	6.39	5.15	5.64	23.560	0.76	868.25	868.43	869.78	869.93	15	
81	INL 400.2 TO AE 400.1	0.26	6.39	4.05	8.71	48.815	5.98	867.00	869.92	867.81	870.77	12	
82	CB 400 TO INL 400.2	0.00	0.00	3.38	3.56	8.000	1.00	869.92	870.00	870.77	870.79	12	
83	CB 401 TO CB 400	0.00	0.00	1.30	3.99	223.129	1.25	870.00	872.80	870.79	873.28 j	12	
84	CB 402 TO CB 401	0.00	0.00	0.70	6.77	41.500	3.61	872.80	874.30	873.28	874.65 j	12	
85	INL 402.1 TO CB 402	0.15	6.39	0.48	3.56	24.000	1.00	874.30	874.54	874.65	874.83 j	12	
86	CB 403 TO CB 401	0.00	0.00	0.67	3.50	41.500	0.96	872.80	873.20	873.28	873.54 j	12	
87	INL 403.2 TO CB 403	0.18	6.39	0.58	3.56	24.000	1.00	873.20	873.44	873.54	873.75 j	12	
88	INL 403.1 TO CB 403	0.04	6.39	0.13	3.56	8.000	1.00	873.20	873.28	873.54	873.43	12	
89	INL 402.2 TO CB 402	0.08	6.39	0.26	3.56	8.000	1.00	874.30	874.38	874.65	874.59	12	
90	INL 400.3 TO CB 400	0.85	6.39	2.72	3.56	24.004	1.00	870.00	870.24	870.79	870.95 j	12	
91	CTH AB - 1	0.14	6.39	0.83	3.02	34.794	0.72	870.00	870.25	870.38	870.63	12	
92	CTH AB - 2	0.14	6.39	0.45	2.70	43.358	0.58	870.25	870.50	870.63	870.78	12	
Project File: Rosewood Storm Sewer.stm											Number of lines: 92		Date: 8/25/2020
NOTES: Intensity = 22.59 / (Inlet time + 3.70) ^ 0.58 -- Return period = 10 Yrs. ; ** Critical depth													

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
1	CB 100	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
2	INL 101.1	0.62	0.00	0.60	0.02	Comb	4.0	3.00	0.00	3.00	2.00	0.034	2.00	0.050	0.020	0.013	0.12	3.21	0.03	0.65	0.0	Off
3	CB 101	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
4	INL 102.1	0.76	0.28	1.03	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.18	6.21	0.18	6.21	0.0	Off
5	CB 102	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
6	CB 103	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
7	CB 104	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
8	CB 105	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
9	CB 106	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
10	CB 107	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
11	CB 109	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
12	CB 110	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
13	CB 111	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
14	CB 112	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
15	CB 113	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
16	CB 114	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
17	INL 114.1	0.54	0.00	0.48	0.06	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.16	5.15	0.07	1.46	0.0	25
18	CB 115	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
19	INL 115.1	1.62	0.00	1.16	0.46	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.23	8.53	0.15	4.73	0.0	22
20	CB 116	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
21	INL 116.1	0.22	0.00	0.21	0.00	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.12	3.00	0.02	0.43	0.0	28
22	INL 114.2	1.48	0.46	1.94	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.25	9.73	0.25	9.73	0.0	Off
23	INL 116.2	0.84	0.06	0.90	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.17	5.63	0.17	5.63	0.0	Off

Project File: Rosewood Storm Sewer.stm

Number of lines: 92

Run Date: 8/25/2020

NOTES: Inlet N-Values = 0.016; Intensity = 45.68 / (Inlet time + 10.90) ^ 0.77; Return period = 5 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
24	INL 115.2	0.57	0.00	0.50	0.06	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.17	5.28	0.08	1.53	0.0	23
25	INL 109.1	1.43	0.06	1.09	0.40	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.22	8.23	0.15	4.39	0.0	30
26	CB 108	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
27	INL 108.1	0.27	0.00	0.26	0.01	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.13	3.48	0.03	0.67	0.0	31
28	INL 109.2	1.62	0.00	1.16	0.46	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.23	8.54	0.15	4.74	0.0	29
29	INL 108.2	1.54	0.46	2.00	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.26	9.92	0.26	9.92	0.0	Off
30	INL 106.1	0.73	0.40	0.88	0.25	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.21	7.29	0.13	3.32	0.0	38
31	INL 106.2	0.89	0.01	0.73	0.16	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.19	6.58	0.11	2.45	0.0	39
32	CB 117	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
33	CB 118	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
34	CB 119	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
35	CB 120	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
36	INL 120.1	0.43	0.00	0.40	0.03	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.15	4.58	0.06	1.19	0.0	40
37	INL 120.2	0.32	0.00	0.31	0.01	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.14	3.90	0.04	0.86	0.0	41
38	INL 103.1	0.94	0.25	0.92	0.28	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.21	7.48	0.13	3.54	0.0	4
39	INL 103.2	1.59	0.16	1.23	0.52	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.24	8.83	0.16	5.06	0.0	42
40	INL 119.1	0.49	0.03	0.47	0.05	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.16	5.04	0.07	1.41	0.0	43
41	INL 119.2	0.43	0.01	0.41	0.04	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.15	4.66	0.06	1.22	0.0	43
42	INL 102.2	2.00	0.55	2.54	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.29	11.74	0.29	11.74	0.0	Off
43	INL 117.1	0.38	0.09	0.44	0.03	Comb	4.0	3.00	0.00	3.00	2.00	0.010	2.00	0.050	0.020	0.013	0.14	3.93	0.05	0.95	0.0	42
44	INL 200.1	1.73	0.00	1.73	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.24	8.96	0.24	8.96	0.0	Off
45	CB 200	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
46	CB 205	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off

Project File: Rosewood Storm Sewer.stm

Number of lines: 92

Run Date: 8/25/2020

NOTES: Inlet N-Values = 0.016; Intensity = 45.68 / (Inlet time + 10.90) ^ 0.77; Return period = 5 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
47	CB 206	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
48	CB 207	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
49	CB 208	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
50	CB 209	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
51	CB 210	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
52	INL 210.1	0.65	0.00	0.56	0.09	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.17	5.64	0.09	1.71	0.0	54
53	INL 210.2	1.40	0.00	1.04	0.36	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.22	8.02	0.14	4.17	0.0	55
54	INL 209.1	0.84	0.09	0.75	0.17	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.19	6.66	0.11	2.55	0.0	56
55	INL 209.2	1.16	0.36	1.11	0.42	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.23	8.31	0.15	4.49	0.0	57
56	INL 207.1	0.81	0.17	0.79	0.19	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.20	6.86	0.12	2.79	0.0	66
57	INL 207.2	1.29	0.42	1.71	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.24	8.90	0.24	8.90	0.0	Off
58	CB 202	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
59	CB 203	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
60	CB 204	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
61	INL 204.1	1.27	0.00	0.97	0.30	Comb	4.0	3.00	0.00	3.00	2.00	0.006	2.00	0.050	0.020	0.013	0.21	7.38	0.13	3.53	0.0	65
62	INL 204.2	4.29	0.00	2.36	1.92	Comb	4.0	3.00	0.00	3.00	2.00	0.006	2.00	0.050	0.020	0.013	0.31	12.26	0.24	8.83	0.0	67
63	CB 201	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
64	INL 201.1	0.32	0.00	0.31	0.01	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.14	3.90	0.04	0.86	0.0	65
65	INL 202.1	1.59	0.32	1.91	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.25	9.61	0.25	9.61	0.0	Off
66	INL 205.1	0.92	0.19	0.87	0.24	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.20	7.25	0.13	3.26	0.0	67
67	INL 202.2	2.37	2.17	4.54	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.41	17.51	0.41	17.51	0.0	Off
68	INL 300.2	1.65	0.13	1.77	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.24	9.13	0.24	9.13	0.0	Off
69	CB 300	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off

Project File: Rosewood Storm Sewer.stm

Number of lines: 92

Run Date: 8/25/2020

NOTES: Inlet N-Values = 0.016; Intensity = 45.68 / (Inlet time + 10.90) ^ 0.77; Return period = 5 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
70	CB 301	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
71	CB 302	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
72	CB 304	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
73	INL 304.1	0.40	0.00	0.38	0.03	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.15	4.43	0.06	1.11	0.0	80
74	CB 303	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
75	INL 303.1	0.22	0.00	0.21	0.00	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.12	3.00	0.02	0.43	0.0	68
76	CB 305	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
77	INL 305.1	1.81	0.00	1.30	0.51	Comb	4.0	3.00	0.00	3.00	2.00	0.011	2.00	0.050	0.020	0.013	0.21	7.55	0.14	4.04	0.0	80
78	INL 305.2	0.86	0.00	0.74	0.13	Comb	4.0	3.00	0.00	3.00	2.00	0.011	2.00	0.050	0.020	0.013	0.17	5.35	0.09	1.70	0.0	68
79	INL 302.1	0.67	0.00	0.67	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.15	4.56	0.15	4.56	0.0	Off
80	INL 300.3	4.34	0.54	4.88	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.43	18.40	0.43	18.40	0.0	Off
81	INL 400.2	0.70	0.00	0.70	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.15	4.69	0.15	4.69	0.0	Off
82	CB 400	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
83	CB 401	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
84	CB 402	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
85	INL 402.1	0.40	0.00	0.40	0.00	Comb	4.0	3.00	0.00	3.00	2.00	0.040	2.00	0.050	0.020	0.013	0.10	2.17	0.00	0.00	0.0	87
86	CB 403	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
87	INL 403.2	0.49	0.00	0.49	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.13	3.56	0.13	3.56	0.0	Off
88	INL 403.1	0.11	0.00	0.11	0.00	Comb	4.0	3.00	0.00	3.00	2.00	0.015	2.00	0.050	0.020	0.013	0.08	1.51	0.00	0.00	0.0	77
89	INL 402.2	0.22	0.00	0.22	0.00	Comb	4.0	3.00	0.00	3.00	2.00	0.040	2.00	0.050	0.020	0.013	0.08	1.63	0.00	0.00	0.0	90
90	INL 400.3	2.29	0.00	2.29	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.28	10.92	0.28	10.92	0.0	Off
91	STRUCT-(139)	0.38	0.00	0.36	0.02	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.15	4.26	0.05	1.03	0.0	Off
92	STRUCT-(138)	0.38	0.00	0.36	0.02	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.15	4.26	0.05	1.03	0.0	Off

Project File: Rosewood Storm Sewer.stm

Number of lines: 92

Run Date: 8/25/2020

NOTES: Inlet N-Values = 0.016; Intensity = 45.68 / (Inlet time + 10.90) ^ 0.77; Return period = 5 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
1	CB 100	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
2	INL 101.1	0.89	0.00	0.82	0.07	Comb	4.0	3.00	0.00	3.00	2.00	0.034	2.00	0.050	0.020	0.013	0.14	4.01	0.05	1.07	0.0	Off
3	CB 101	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
4	INL 102.1	1.08	0.58	1.65	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.23	8.69	0.23	8.69	0.0	Off
5	CB 102	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
6	CB 103	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
7	CB 104	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
8	CB 105	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
9	CB 106	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
10	CB 107	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
11	CB 109	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
12	CB 110	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
13	CB 111	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
14	CB 112	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
15	CB 113	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
16	CB 114	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
17	INL 114.1	0.77	0.00	0.65	0.12	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.18	6.13	0.10	1.95	0.0	25
18	CB 115	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
19	INL 115.1	2.31	0.00	1.51	0.79	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.26	9.90	0.18	6.22	0.0	22
20	CB 116	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
21	INL 116.1	0.31	0.00	0.30	0.01	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.14	3.78	0.04	0.80	0.0	28
22	INL 114.2	2.12	0.79	2.91	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.32	12.90	0.32	12.90	0.0	Off
23	INL 116.2	1.19	0.13	1.33	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.21	7.44	0.21	7.44	0.0	Off

Project File: Rosewood Storm Sewer.stm

Number of lines: 92

Run Date: 8/25/2020

NOTES: Inlet N-Values = 0.016; Intensity = 24.25 / (Inlet time + 2.80) ^ 0.56; Return period = 25 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
24	INL 115.2	0.81	0.00	0.67	0.13	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.19	6.27	0.10	2.06	0.0	23
25	INL 109.1	2.04	0.12	1.44	0.72	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.25	9.64	0.18	5.93	0.0	30
26	CB 108	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
27	INL 108.1	0.38	0.00	0.36	0.02	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.15	4.30	0.05	1.05	0.0	31
28	INL 109.2	2.31	0.01	1.52	0.80	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.26	9.92	0.18	6.24	0.0	29
29	INL 108.2	2.19	0.80	2.99	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.32	13.15	0.32	13.15	0.0	Off
30	INL 106.1	1.04	0.72	1.24	0.52	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.24	8.84	0.16	5.07	0.0	38
31	INL 106.2	1.27	0.02	0.98	0.32	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.21	7.75	0.14	3.85	0.0	39
32	CB 117	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
33	CB 118	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
34	CB 119	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
35	CB 120	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
36	INL 120.1	0.62	0.00	0.54	0.08	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.17	5.50	0.08	1.64	0.0	40
37	INL 120.2	0.46	0.00	0.42	0.04	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.16	4.75	0.06	1.27	0.0	41
38	INL 103.1	1.35	0.52	1.29	0.58	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.24	9.07	0.17	5.32	0.0	4
39	INL 103.2	2.27	0.32	1.65	0.94	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.27	10.38	0.19	6.72	0.0	42
40	INL 119.1	0.69	0.08	0.65	0.12	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.18	6.13	0.10	1.95	0.0	43
41	INL 119.2	0.62	0.04	0.57	0.09	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.17	5.67	0.09	1.72	0.0	43
42	INL 102.2	2.85	1.04	3.88	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.37	15.73	0.37	15.73	0.0	Off
43	INL 117.1	0.54	0.21	0.65	0.09	Comb	4.0	3.00	0.00	3.00	2.00	0.010	2.00	0.050	0.020	0.013	0.16	5.10	0.08	1.55	0.0	42
44	INL 200.1	2.46	0.00	2.46	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.29	11.49	0.29	11.49	0.0	Off
45	CB 200	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
46	CB 205	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off

Project File: Rosewood Storm Sewer.stm

Number of lines: 92

Run Date: 8/25/2020

NOTES: Inlet N-Values = 0.016; Intensity = 24.25 / (Inlet time + 2.80) ^ 0.56; Return period = 25 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
47	CB 206	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
48	CB 207	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
49	CB 208	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
50	CB 209	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
51	CB 210	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
52	INL 210.1	0.92	0.00	0.75	0.17	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.19	6.67	0.11	2.56	0.0	54
53	INL 210.2	2.00	0.00	1.36	0.64	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.25	9.33	0.17	5.61	0.0	55
54	INL 209.1	1.19	0.17	1.02	0.35	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.22	7.94	0.14	4.06	0.0	56
55	INL 209.2	1.65	0.64	1.51	0.79	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.26	9.88	0.18	6.19	0.0	57
56	INL 207.1	1.15	0.35	1.10	0.41	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.23	8.26	0.15	4.44	0.0	66
57	INL 207.2	1.85	0.79	2.63	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.30	12.03	0.30	12.03	0.0	Off
58	CB 202	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
59	CB 203	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
60	CB 204	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
61	INL 204.1	1.81	0.00	1.26	0.54	Comb	4.0	3.00	0.00	3.00	2.00	0.006	2.00	0.050	0.020	0.013	0.23	8.61	0.16	4.94	0.0	65
62	INL 204.2	6.12	0.00	3.03	3.09	Comb	4.0	3.00	0.00	3.00	2.00	0.006	2.00	0.050	0.020	0.013	0.34	14.12	0.28	10.75	0.0	67
63	CB 201	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
64	INL 201.1	0.46	0.00	0.42	0.04	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.16	4.75	0.06	1.27	0.0	65
65	INL 202.1	2.27	0.58	2.85	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.31	12.72	0.31	12.72	0.0	Off
66	INL 205.1	1.31	0.41	1.21	0.50	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.23	8.75	0.16	4.97	0.0	67
67	INL 202.2	3.39	3.59	6.98	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.46	19.97	0.46	19.97	0.0	Off
68	INL 300.2	2.35	0.27	2.62	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.30	11.98	0.30	11.98	0.0	Off
69	CB 300	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off

Project File: Rosewood Storm Sewer.stm

Number of lines: 92

Run Date: 8/25/2020

NOTES: Inlet N-Values = 0.016; Intensity = 24.25 / (Inlet time + 2.80) ^ 0.56; Return period = 25 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
70	CB 301	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
71	CB 302	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
72	CB 304	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
73	INL 304.1	0.58	0.00	0.51	0.07	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.17	5.33	0.08	1.55	0.0	80
74	CB 303	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
75	INL 303.1	0.31	0.00	0.30	0.01	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.14	3.78	0.04	0.80	0.0	68
76	CB 305	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
77	INL 305.1	2.58	0.00	1.68	0.90	Comb	4.0	3.00	0.00	3.00	2.00	0.011	2.00	0.050	0.020	0.013	0.24	8.80	0.17	5.47	0.0	80
78	INL 305.2	1.23	0.00	0.97	0.26	Comb	4.0	3.00	0.00	3.00	2.00	0.011	2.00	0.050	0.020	0.013	0.19	6.35	0.11	2.57	0.0	68
79	INL 302.1	0.96	0.00	0.96	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.18	5.91	0.18	5.91	0.0	Off
80	INL 300.3	6.20	0.97	7.17	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.46	19.97	0.46	19.97	0.0	Off
81	INL 400.2	1.00	0.00	1.00	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.18	6.08	0.18	6.08	0.0	Off
82	CB 400	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
83	CB 401	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
84	CB 402	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
85	INL 402.1	0.58	0.00	0.57	0.01	Comb	4.0	3.00	0.00	3.00	2.00	0.040	2.00	0.050	0.020	0.013	0.12	2.88	0.02	0.47	0.0	87
86	CB 403	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
87	INL 403.2	0.69	0.01	0.70	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.15	4.69	0.15	4.69	0.0	Off
88	INL 403.1	0.15	0.00	0.15	0.00	Comb	4.0	3.00	0.00	3.00	2.00	0.015	2.00	0.050	0.020	0.013	0.09	1.73	0.00	0.00	0.0	77
89	INL 402.2	0.31	0.00	0.31	0.00	Comb	4.0	3.00	0.00	3.00	2.00	0.040	2.00	0.050	0.020	0.013	0.09	1.87	0.00	0.00	0.0	90
90	INL 400.3	3.27	0.00	3.27	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.34	13.98	0.34	13.98	0.0	Off
91	STRUCT-(139)	0.54	0.00	0.48	0.06	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.16	5.15	0.07	1.46	0.0	Off
92	STRUCT-(138)	0.54	0.00	0.48	0.06	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.16	5.15	0.07	1.46	0.0	Off

Project File: Rosewood Storm Sewer.stm

Number of lines: 92

Run Date: 8/25/2020

NOTES: Inlet N-Values = 0.016; Intensity = 24.25 / (Inlet time + 2.80) ^ 0.56; Return period = 25 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
1	CB 100	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
2	INL 101.1	1.11	0.00	0.99	0.12	Comb	4.0	3.00	0.00	3.00	2.00	0.034	2.00	0.050	0.020	0.013	0.15	4.56	0.07	1.37	0.0	Off
3	CB 101	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
4	INL 102.1	1.35	0.90	2.25	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.28	10.78	0.28	10.78	0.0	Off
5	CB 102	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
6	CB 103	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
7	CB 104	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
8	CB 105	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
9	CB 106	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
10	CB 107	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
11	CB 109	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
12	CB 110	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
13	CB 111	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
14	CB 112	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
15	CB 113	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
16	CB 114	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
17	INL 114.1	0.97	0.00	0.78	0.19	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.20	6.81	0.11	2.74	0.0	25
18	CB 115	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
19	INL 115.1	2.90	0.00	1.79	1.11	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.28	10.88	0.20	7.25	0.0	22
20	CB 116	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
21	INL 116.1	0.39	0.00	0.36	0.02	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.15	4.32	0.05	1.06	0.0	28
22	INL 114.2	2.66	1.11	3.77	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.37	15.42	0.37	15.42	0.0	Off
23	INL 116.2	1.50	0.21	1.71	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.24	8.89	0.24	8.89	0.0	Off

Project File: Rosewood Storm Sewer.stm

Number of lines: 92

Run Date: 8/25/2020

NOTES: Inlet N-Values = 0.016; Intensity = 29.05 / (Inlet time + 2.40) ^ 0.55; Return period = 100 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
24	INL 115.2	1.02	0.00	0.81	0.21	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.20	6.96	0.12	2.92	0.0	23
25	INL 109.1	2.56	0.19	1.72	1.03	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.27	10.65	0.20	7.00	0.0	30
26	CB 108	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
27	INL 108.1	0.48	0.00	0.44	0.04	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.16	4.87	0.07	1.33	0.0	31
28	INL 109.2	2.90	0.02	1.80	1.12	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.28	10.91	0.21	7.28	0.0	29
29	INL 108.2	2.76	1.12	3.88	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.37	15.73	0.37	15.73	0.0	Off
30	INL 106.1	1.31	1.03	1.53	0.81	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.26	9.95	0.19	6.27	0.0	38
31	INL 106.2	1.60	0.04	1.17	0.47	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.23	8.58	0.16	4.79	0.0	39
32	CB 117	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
33	CB 118	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
34	CB 119	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
35	CB 120	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
36	INL 120.1	0.77	0.00	0.65	0.12	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.18	6.14	0.10	1.96	0.0	40
37	INL 120.2	0.58	0.00	0.51	0.07	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.17	5.34	0.08	1.56	0.0	41
38	INL 103.1	1.69	0.81	1.61	0.90	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.26	10.23	0.19	6.57	0.0	4
39	INL 103.2	2.85	0.47	1.98	1.35	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.29	11.48	0.22	7.88	0.0	42
40	INL 119.1	0.87	0.12	0.80	0.20	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.20	6.90	0.12	2.84	0.0	43
41	INL 119.2	0.77	0.07	0.70	0.15	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.19	6.39	0.10	2.21	0.0	43
42	INL 102.2	3.58	1.53	5.11	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.44	19.00	0.44	19.00	0.0	Off
43	INL 117.1	0.68	0.35	0.84	0.19	Comb	4.0	3.00	0.00	3.00	2.00	0.010	2.00	0.050	0.020	0.013	0.18	5.95	0.10	2.00	0.0	42
44	INL 200.1	3.10	0.00	3.10	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.33	13.46	0.33	13.46	0.0	Off
45	CB 200	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
46	CB 205	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off

Project File: Rosewood Storm Sewer.stm

Number of lines: 92

Run Date: 8/25/2020

NOTES: Inlet N-Values = 0.016; Intensity = 29.05 / (Inlet time + 2.40) ^ 0.55; Return period = 100 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
47	CB 206	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
48	CB 207	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
49	CB 208	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
50	CB 209	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
51	CB 210	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
52	INL 210.1	1.16	0.00	0.90	0.26	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.21	7.39	0.13	3.43	0.0	54
53	INL 210.2	2.52	0.00	1.61	0.90	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.27	10.26	0.19	6.60	0.0	55
54	INL 209.1	1.50	0.26	1.24	0.53	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.24	8.85	0.16	5.08	0.0	56
55	INL 209.2	2.08	0.90	1.83	1.16	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.28	10.99	0.21	7.37	0.0	57
56	INL 207.1	1.45	0.53	1.35	0.63	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.25	9.28	0.17	5.56	0.0	66
57	INL 207.2	2.32	1.16	3.48	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.35	14.58	0.35	14.58	0.0	Off
58	CB 202	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
59	CB 203	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
60	CB 204	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
61	INL 204.1	2.27	0.00	1.50	0.78	Comb	4.0	3.00	0.00	3.00	2.00	0.006	2.00	0.050	0.020	0.013	0.25	9.48	0.18	5.89	0.0	65
62	INL 204.2	7.69	0.00	3.55	4.15	Comb	4.0	3.00	0.00	3.00	2.00	0.006	2.00	0.050	0.020	0.013	0.37	15.45	0.30	12.10	0.0	67
63	CB 201	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
64	INL 201.1	0.58	0.00	0.51	0.07	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.17	5.34	0.08	1.56	0.0	65
65	INL 202.1	2.85	0.84	3.70	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.36	15.21	0.36	15.21	0.0	Off
66	INL 205.1	1.65	0.63	1.50	0.78	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.26	9.84	0.18	6.15	0.0	67
67	INL 202.2	4.26	4.92	9.18	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.49	21.69	0.49	21.69	0.0	Off
68	INL 300.2	2.95	0.42	3.37	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.35	14.26	0.35	14.26	0.0	Off
69	CB 300	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off

Project File: Rosewood Storm Sewer.stm

Number of lines: 92

Run Date: 8/25/2020

NOTES: Inlet N-Values = 0.016; Intensity = 29.05 / (Inlet time + 2.40) ^ 0.55; Return period = 100 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
70	CB 301	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
71	CB 302	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
72	CB 304	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
73	INL 304.1	0.73	0.00	0.62	0.11	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.18	5.96	0.09	1.87	0.0	80
74	CB 303	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
75	INL 303.1	0.39	0.00	0.36	0.02	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.15	4.32	0.05	1.06	0.0	68
76	CB 305	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
77	INL 305.1	3.24	0.00	1.97	1.27	Comb	4.0	3.00	0.00	3.00	2.00	0.011	2.00	0.050	0.020	0.013	0.25	9.68	0.19	6.44	0.0	80
78	INL 305.2	1.55	0.00	1.16	0.39	Comb	4.0	3.00	0.00	3.00	2.00	0.011	2.00	0.050	0.020	0.013	0.20	7.05	0.13	3.44	0.0	68
79	INL 302.1	1.21	0.00	1.21	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.20	6.96	0.20	6.96	0.0	Off
80	INL 300.3	7.79	1.38	9.17	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.49	21.63	0.49	21.63	0.0	Off
81	INL 400.2	1.26	0.00	1.26	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.20	7.16	0.20	7.16	0.0	Off
82	CB 400	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
83	CB 401	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
84	CB 402	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
85	INL 402.1	0.73	0.00	0.70	0.02	Comb	4.0	3.00	0.00	3.00	2.00	0.040	2.00	0.050	0.020	0.013	0.13	3.38	0.04	0.73	0.0	87
86	CB 403	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
87	INL 403.2	0.87	0.02	0.90	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.17	5.61	0.17	5.61	0.0	Off
88	INL 403.1	0.19	0.00	0.19	0.00	Comb	4.0	3.00	0.00	3.00	2.00	0.015	2.00	0.050	0.020	0.013	0.09	1.88	0.00	0.00	0.0	77
89	INL 402.2	0.39	0.00	0.39	0.00	Comb	4.0	3.00	0.00	3.00	2.00	0.040	2.00	0.050	0.020	0.013	0.10	2.08	0.00	0.00	0.0	90
90	INL 400.3	4.11	0.00	4.11	0.00	Comb	4.0	3.00	1.60	3.00	2.00	Sag	2.00	0.050	0.020	0.000	0.39	16.36	0.39	16.36	0.0	Off
91	STRUCT-(139)	0.68	0.00	0.58	0.09	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.18	5.76	0.09	1.77	0.0	Off
92	STRUCT-(138)	0.68	0.00	0.58	0.09	Comb	4.0	3.00	0.00	3.00	2.00	0.005	2.00	0.050	0.020	0.013	0.18	5.76	0.09	1.77	0.0	Off

Project File: Rosewood Storm Sewer.stm

Number of lines: 92

Run Date: 8/25/2020

NOTES: Inlet N-Values = 0.016; Intensity = 29.05 / (Inlet time + 2.40) ^ 0.55; Return period = 100 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

**ROSEWOOD FIELDS
VILLAGE OF MCFARLAND
COUNTY HWY AB
DANE COUNTY, WISCONSIN**

**150 YEAR WATER SURFACE ANALYSIS – ASSUMING STREET
STORMSEWER PLUGGED**

OWNER

**VH Rosewood Fields, LLC
c/o Chris Ehlers
6801 South Towne Drive
Madison, WI 53713**

October 09, 2020

PREPARED BY

**D'Onofrio, Kottke & Associates, Inc.
7530 Westward Way
Madison, Wisconsin 53717
608.833.7530**

FN: 19-04-113

Stormwater Supplement:

October 10, 2020

This summary is being submitted at the request of the Village to analyze the 150 year stormwater surface assuming that the proposed street stormsewer is completely plugged. This analysis addresses a worst case scenario for overland flow on the site. In normal working conditions a portion of the flow, shown on the street, would be continuously routed through stormsewer to the downstream ends of the developed site. The 150year stormwater was modeled using Hydrocad software.

The methodology used in this analysis, was to look at the site at four critical locations. The locations were chosen at the downstream ends of the site. That is where the most stormwater would collect in each drainage area. Along with studying these areas for street flow, the curb overflow condition was also calculated. The elevation of the stormwater in the basin was taken from the model submitted with stormwater report for this site. The hydrocad model used for plugged street flow can found in the appendix. Exhibit 1 shows the drainage areas analyzed along with critical flows and elevations. Exhibit 2 shows the elevation of the 150 year flow from these calculations. Below is chart showing a breakdown of information from the critical locations analyzed in this summary.

Critical Area Breakdown Chart:

ROSEWOOD FIELDS -150 YEAR SITE PLUGGED FLOW ANALYSIS						
Area	Total 150 Year Flow	Street Section		Elevation at	Overflow Depth	Channel Depth
Description	(CFS)	Depth (FT)	Note	Curb Overflow	Above Curb (Ft)	to Basin (ft)
North Area	11.77	0.29 (A-A)	Within ROW	875.03	0.31	4:1 Slope
West Area	24.37	0.42 (B-B)	Within ROW	871.57	0.3	0.35
South Area	66.39	0.64 (C-C)	Within ROW	870.23	0.52	1.53
East Street Area	59.67	0.63 (D-D)	Within ROW	NA	NA	NA

EXHIBITS

1. 150 Year Drainage Plan With Plugged Street Stormsewer
2. 150 Year Stormwater Surface With Plugged Street Stormsewer

APPENDICES

- A. Hydrocad Output

EXHIBITS

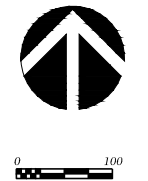


D'ONOFRIO KOTTKE AND ASSOCIATES, INC.
7550 Westwood Way, Madison, WI 53717
Phone: 608.833.7550 • Fax: 608.833.1089
YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

150 YEAR STORMWATER SURFACE WITH PLUGGED STREET STORMSEWER

ROSEWOOD FIELDS
COUNTY HWY AB

VILLAGE OF MCFARLAND, WISCONSIN

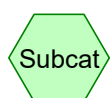
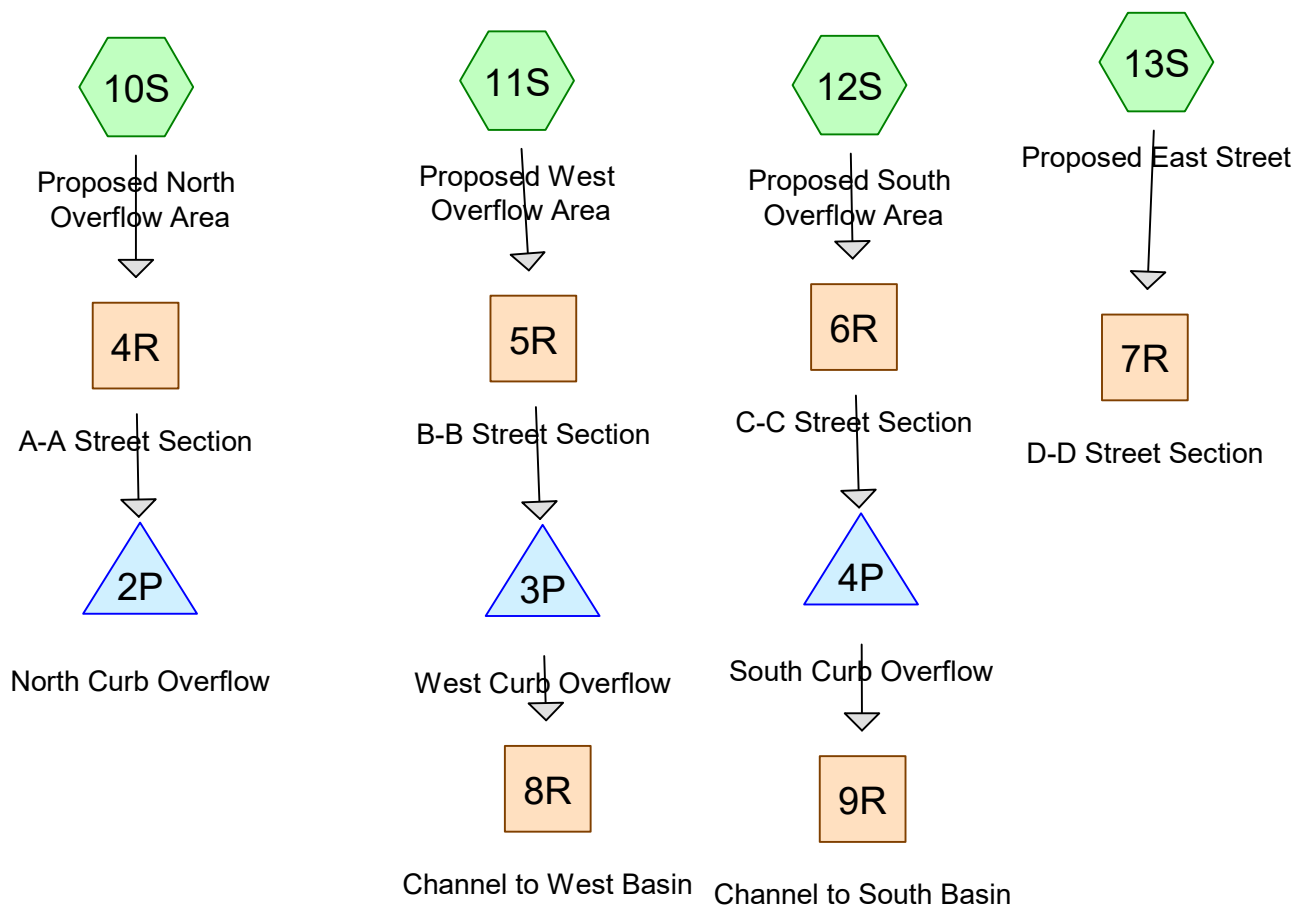


DATE: 10/08/20
REVISED:

DRAWN BY: GVP
FN: 19-04-113
Sheet Number:
EXHIBIT 2

APPENDIX A

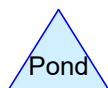
150 Year Plugged Street – Hydrocad Information



Subcat



Reach



Pond



Link

Routing Diagram for 150 yr check 1904113 SWMP

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150 yr check 1904113 SWMP

MSE 24-hr 4 150yr 24hr Rainfall=7.10"

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Summary for Subcatchment 10S: Proposed North Overflow Area

Runoff = 11.77 cfs @ 12.13 hrs, Volume= 0.651 af, Depth= 5.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 150yr 24hr Rainfall=7.10"

Area (ac)	CN	Description
* 1.400	87	60% Impervious Residential
1.400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TC

Summary for Subcatchment 11S: Proposed West Overflow Area

Runoff = 24.37 cfs @ 12.13 hrs, Volume= 1.348 af, Depth= 5.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 150yr 24hr Rainfall=7.10"

Area (ac)	CN	Description
* 2.900	87	60% Impervious Residential
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TC

Summary for Subcatchment 12S: Proposed South Overflow Area

Runoff = 66.39 cfs @ 12.13 hrs, Volume= 3.671 af, Depth= 5.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 150yr 24hr Rainfall=7.10"

Area (ac)	CN	Description
* 7.900	87	60% Impervious Residential
7.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TC

Summary for Subcatchment 13S: Proposed East Street

Runoff = 59.67 cfs @ 12.13 hrs, Volume= 3.299 af, Depth= 5.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 150yr 24hr Rainfall=7.10"

Area (ac)	CN	Description
* 7.100	87	60% Impervious Residential
7.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TC

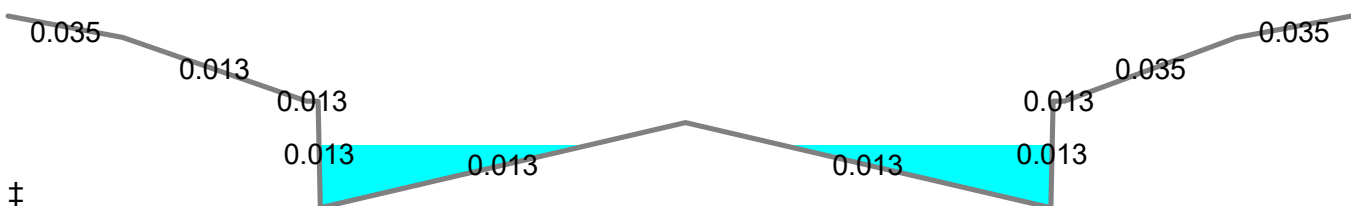
Summary for Reach 4R: A-A Street Section

Inflow Area = 1.400 ac, 0.00% Impervious, Inflow Depth = 5.58" for 150yr 24hr event
Inflow = 11.77 cfs @ 12.13 hrs, Volume= 0.651 af
Outflow = 11.67 cfs @ 12.13 hrs, Volume= 0.651 af, Atten= 1%, Lag= 0.4 min

Routing by Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
Max. Velocity= 3.38 fps, Min. Travel Time= 0.5 min
Avg. Velocity= 1.18 fps, Avg. Travel Time= 1.4 min

Peak Storage= 345 cf @ 12.13 hrs
Average Depth at Peak Storage= 0.29' , Surface Width= 23.48'
Bank-Full Depth= 0.90' Flow Area= 27.2 sf, Capacity= 218.45 cfs

Custom cross-section, Length= 100.0' Slope= 0.0116 '/'
Flow calculated by Manning's Subdivision method
Inlet Invert= 875.78', Outlet Invert= 874.62'



150 yr check 1904113 SWMP

MSE 24-hr 4 150yr 24hr Rainfall=7.10"

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Offset (feet)	Elevation (feet)	Chan.Depth (feet)	n	Description
0.00	876.68	0.00		
5.00	876.58	0.10	0.035	
13.00	876.28	0.40	0.013	
13.50	876.28	0.40	0.013	
13.60	875.78	0.90	0.013	
29.50	876.18	0.50	0.013	
45.40	875.78	0.90	0.013	
45.50	876.28	0.40	0.013	
46.00	876.28	0.40	0.013	
53.50	876.58	0.10	0.035	
58.50	876.68	0.00	0.035	

Depth (feet)	End Area (sq-ft)	Perim. (feet)	Width (feet)	Storage (cubic-feet)	Discharge (cfs)
0.00	0.0	0.0	0.0	0	0.00
0.40	6.4	32.6	31.8	639	26.65
0.50	9.6	33.8	32.7	959	51.36
0.80	21.8	49.3	48.5	2,182	160.81
0.90	27.2	59.3	58.5	2,716	218.45

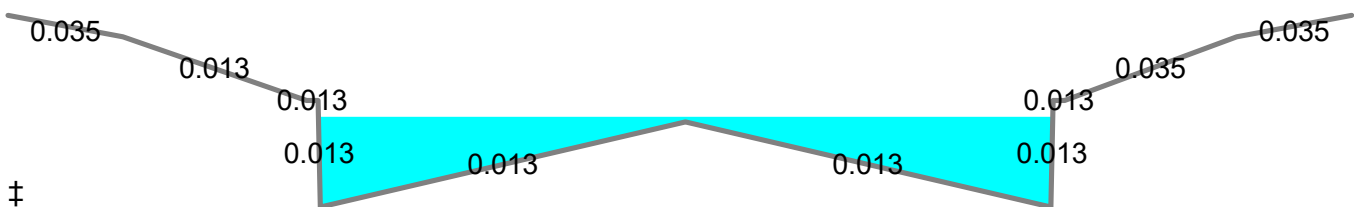
Summary for Reach 5R: B-B Street Section

Inflow Area = 2.900 ac, 0.00% Impervious, Inflow Depth = 5.58" for 150yr 24hr event
 Inflow = 24.37 cfs @ 12.13 hrs, Volume= 1.348 af
 Outflow = 24.28 cfs @ 12.13 hrs, Volume= 1.348 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
 Max. Velocity= 3.40 fps, Min. Travel Time= 0.5 min
 Avg. Velocity= 1.14 fps, Avg. Travel Time= 1.5 min

Peak Storage= 715 cf @ 12.13 hrs
 Average Depth at Peak Storage= 0.42', Surface Width= 31.97'
 Bank-Full Depth= 0.90' Flow Area= 27.2 sf, Capacity= 166.02 cfs

Custom cross-section, Length= 100.0' Slope= 0.0067 '/'
 Flow calculated by Manning's Subdivision method
 Inlet Invert= 871.84', Outlet Invert= 871.17'



150 yr check 1904113 SWMP

MSE 24-hr 4 150yr 24hr Rainfall=7.10"

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Offset (feet)	Elevation (feet)	Chan.Depth (feet)	n	Description
0.00	872.74	0.00		
5.00	872.64	0.10	0.035	
13.00	872.34	0.40	0.013	
13.50	872.34	0.40	0.013	
13.60	871.84	0.90	0.013	
29.50	872.24	0.50	0.013	
45.40	871.84	0.90	0.013	
45.50	872.34	0.40	0.013	
46.00	872.34	0.40	0.013	
53.50	872.64	0.10	0.035	
58.50	872.74	0.00	0.035	

Depth (feet)	End Area (sq-ft)	Perim. (feet)	Width (feet)	Storage (cubic-feet)	Discharge (cfs)
0.00	0.0	0.0	0.0	0	0.00
0.40	6.4	32.6	31.8	639	20.25
0.50	9.6	33.8	32.7	959	39.04
0.80	21.8	49.3	48.5	2,182	122.21
0.90	27.2	59.3	58.5	2,716	166.02

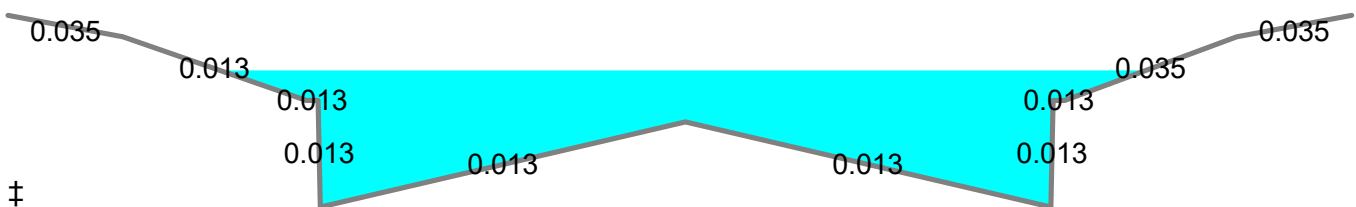
Summary for Reach 6R: C-C Street Section

Inflow Area = 7.900 ac, 0.00% Impervious, Inflow Depth = 5.58" for 150yr 24hr event
 Inflow = 66.39 cfs @ 12.13 hrs, Volume= 3.671 af
 Outflow = 66.06 cfs @ 12.13 hrs, Volume= 3.671 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
 Max. Velocity= 4.47 fps, Min. Travel Time= 0.4 min
 Avg. Velocity= 1.37 fps, Avg. Travel Time= 1.2 min

Peak Storage= 1,478 cf @ 12.13 hrs
 Average Depth at Peak Storage= 0.64', Surface Width= 40.31'
 Bank-Full Depth= 0.90' Flow Area= 27.2 sf, Capacity= 151.78 cfs

Custom cross-section, Length= 100.0' Slope= 0.0056 '/'
 Flow calculated by Manning's Subdivision method
 Inlet Invert= 870.17', Outlet Invert= 869.61'



150 yr check 1904113 SWMP

MSE 24-hr 4 150yr 24hr Rainfall=7.10"

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Offset (feet)	Elevation (feet)	Chan.Depth (feet)	n	Description
0.00	871.07	0.00		
5.00	870.97	0.10	0.035	
13.00	870.67	0.40	0.013	
13.50	870.67	0.40	0.013	
13.60	870.17	0.90	0.013	
29.50	870.57	0.50	0.013	
45.40	870.17	0.90	0.013	
45.50	870.67	0.40	0.013	
46.00	870.67	0.40	0.013	
53.50	870.97	0.10	0.035	
58.50	871.07	0.00	0.035	

Depth (feet)	End Area (sq-ft)	Perim. (feet)	Width (feet)	Storage (cubic-feet)	Discharge (cfs)
0.00	0.0	0.0	0.0	0	0.00
0.40	6.4	32.6	31.8	639	18.52
0.50	9.6	33.8	32.7	959	35.69
0.80	21.8	49.3	48.5	2,182	111.73
0.90	27.2	59.3	58.5	2,717	151.78

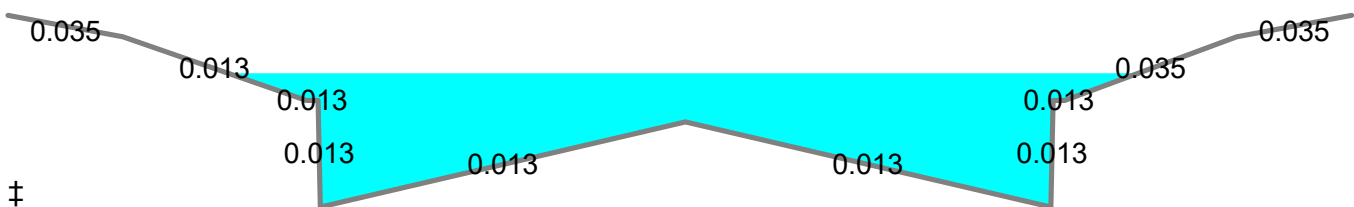
Summary for Reach 7R: D-D Street Section

Inflow Area = 7.100 ac, 0.00% Impervious, Inflow Depth = 5.58" for 150yr 24hr event
 Inflow = 59.67 cfs @ 12.13 hrs, Volume= 3.299 af
 Outflow = 59.34 cfs @ 12.13 hrs, Volume= 3.299 af, Atten= 1%, Lag= 0.3 min

Routing by Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
 Max. Velocity= 4.16 fps, Min. Travel Time= 0.4 min
 Avg. Velocity= 1.28 fps, Avg. Travel Time= 1.3 min

Peak Storage= 1,425 cf @ 12.13 hrs
 Average Depth at Peak Storage= 0.63', Surface Width= 39.63'
 Bank-Full Depth= 0.90' Flow Area= 27.2 sf, Capacity= 143.42 cfs

Custom cross-section, Length= 100.0' Slope= 0.0050 '/'
 Flow calculated by Manning's Subdivision method
 Inlet Invert= 99.60', Outlet Invert= 99.10'



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MSE 24-hr 4 150yr 24hr Rainfall=7.10"

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Offset (feet)	Elevation (feet)	Chan.Depth (feet)	n	Description
0.00	100.50	0.00		
5.00	100.40	0.10	0.035	
13.00	100.10	0.40	0.013	
13.50	100.10	0.40	0.013	
13.60	99.60	0.90	0.013	
29.50	100.00	0.50	0.013	
45.40	99.60	0.90	0.013	
45.50	100.10	0.40	0.013	
46.00	100.10	0.40	0.013	
53.50	100.40	0.10	0.035	
58.50	100.50	0.00	0.035	

Depth (feet)	End Area (sq-ft)	Perim. (feet)	Width (feet)	Storage (cubic-feet)	Discharge (cfs)
0.00	0.0	0.0	0.0	0	0.00
0.40	6.4	32.6	31.8	639	17.50
0.50	9.6	33.8	32.7	959	33.72
0.80	21.8	49.3	48.5	2,182	105.58
0.90	27.2	59.3	58.5	2,717	143.42

Summary for Reach 8R: Channel to West Basin

Inflow Area = 2.900 ac, 0.00% Impervious, Inflow Depth = 5.51" for 150yr 24hr event
 Inflow = 24.12 cfs @ 12.14 hrs, Volume= 1.332 af
 Outflow = 24.03 cfs @ 12.14 hrs, Volume= 1.332 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Max. Velocity= 3.22 fps, Min. Travel Time= 0.4 min

Avg. Velocity= 0.52 fps, Avg. Travel Time= 2.4 min

Peak Storage= 557 cf @ 12.14 hrs

Average Depth at Peak Storage= 0.35', Surface Width= 22.78'

Bank-Full Depth= 1.00' Flow Area= 24.0 sf, Capacity= 147.39 cfs

20.00' x 1.00' deep channel, n= 0.035

Side Slope Z-value= 4.0 '/' Top Width= 28.00'

Length= 75.0' Slope= 0.0260 '/'

Inlet Invert= 871.27', Outlet Invert= 869.32'



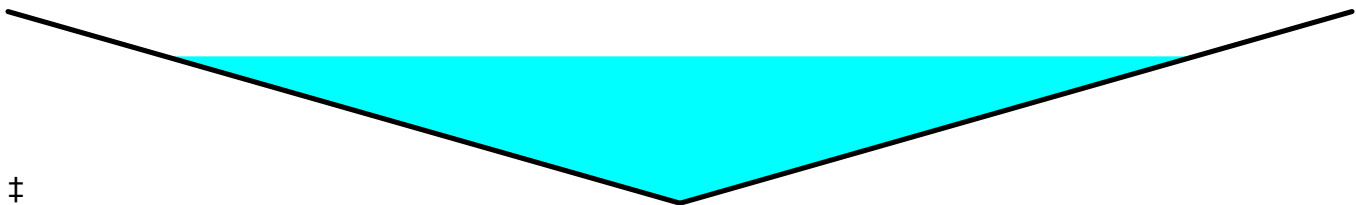
Summary for Reach 9R: Channel to South Basin

Inflow Area = 7.900 ac, 0.00% Impervious, Inflow Depth = 5.49" for 150yr 24hr event
 Inflow = 63.46 cfs @ 12.15 hrs, Volume= 3.616 af
 Outflow = 63.43 cfs @ 12.16 hrs, Volume= 3.616 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
 Max. Velocity= 6.74 fps, Min. Travel Time= 0.2 min
 Avg. Velocity = 1.46 fps, Avg. Travel Time= 0.9 min

Peak Storage= 752 cf @ 12.16 hrs
 Average Depth at Peak Storage= 1.53' , Surface Width= 12.26'
 Bank-Full Depth= 2.00' Flow Area= 16.0 sf, Capacity= 128.92 cfs

0.00' x 2.00' deep channel, n= 0.035
 Side Slope Z-value= 4.0 ' ' Top Width= 16.00'
 Length= 80.0' Slope= 0.0375 ' '
 Inlet Invert= 869.00', Outlet Invert= 866.00'



Summary for Pond 2P: North Curb Overflow

Inflow Area = 1.400 ac, 0.00% Impervious, Inflow Depth = 5.58" for 150yr 24hr event
 Inflow = 11.67 cfs @ 12.13 hrs, Volume= 0.651 af
 Outflow = 11.90 cfs @ 12.15 hrs, Volume= 0.619 af, Atten= 0%, Lag= 1.2 min
 Primary = 11.90 cfs @ 12.15 hrs, Volume= 0.619 af

Routing by Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
 Peak Elev= 875.03' @ 12.15 hrs Surf.Area= 8,593 sf Storage= 3,351 cf

Plug-Flow detention time= 52.7 min calculated for 0.618 af (95% of inflow)
 Center-of-Mass det. time= 27.7 min (810.6 - 782.9)

Volume	Invert	Avail.Storage	Storage Description
#1	874.22'	3,351 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
874.22	0	0	0
875.00	8,593	3,351	3,351

Device	Routing	Invert	Outlet Devices
#1	Primary	874.72'	Asymmetrical Weir, C= 3.27 Offset (feet) 0.00 26.00 52.00 Height (feet) 0.78 0.50 0.78

150 yr check 1904113 SWMP

MSE 24-hr 4 150yr 24hr Rainfall=7.10"

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Primary OutFlow Max=11.62 cfs @ 12.15 hrs HW=875.02' (Free Discharge)

↑1=Asymmetrical Weir (Weir Controls 11.62 cfs @ 0.80 fps)

Summary for Pond 3P: West Curb Overflow

Inflow Area = 2.900 ac, 0.00% Impervious, Inflow Depth = 5.58" for 150yr 24hr event
 Inflow = 24.28 cfs @ 12.13 hrs, Volume= 1.348 af
 Outflow = 24.12 cfs @ 12.14 hrs, Volume= 1.332 af, Atten= 1%, Lag= 0.4 min
 Primary = 24.12 cfs @ 12.14 hrs, Volume= 1.332 af

Routing by Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
 Peak Elev= 871.57' @ 12.14 hrs Surf.Area= 4,329 sf Storage= 1,722 cf

Plug-Flow detention time= 15.2 min calculated for 1.332 af (99% of inflow)
 Center-of-Mass det. time= 7.8 min (790.7 - 782.9)

Volume	Invert	Avail.Storage	Storage Description
#1	870.77'	4,117 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
870.77	0	0	0
872.00	6,695	4,117	4,117

Device	Routing	Invert	Outlet Devices
#1	Primary	871.27'	Asymmetrical Weir, C= 3.27 Offset (feet) 0.00 142.00 284.00 Height (feet) 1.23 0.50 1.23

Primary OutFlow Max=23.68 cfs @ 12.14 hrs HW=871.56' (Free Discharge)

↑1=Asymmetrical Weir (Weir Controls 23.68 cfs @ 0.71 fps)

Summary for Pond 4P: South Curb Overflow

Inflow Area = 7.900 ac, 0.00% Impervious, Inflow Depth = 5.58" for 150yr 24hr event
 Inflow = 66.06 cfs @ 12.13 hrs, Volume= 3.671 af
 Outflow = 63.46 cfs @ 12.15 hrs, Volume= 3.616 af, Atten= 4%, Lag= 1.2 min
 Primary = 63.46 cfs @ 12.15 hrs, Volume= 3.616 af

Routing by Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
 Peak Elev= 870.23' @ 12.15 hrs Surf.Area= 22,834 sf Storage= 10,366 cf

Plug-Flow detention time= 23.0 min calculated for 3.616 af (99% of inflow)
 Center-of-Mass det. time= 13.7 min (796.4 - 782.7)

Volume	Invert	Avail.Storage	Storage Description
#1	869.21'	17,643 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

150 yr check 1904113 SWMP

MSE 24-hr 4 150yr 24hr Rainfall=7.10"

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
869.21	0	0	0
870.00	15,055	5,947	5,947
870.50	31,729	11,696	17,643

Device	Routing	Invert	Outlet Devices
#1	Primary	869.71'	Asymmetrical Weir, C= 3.27 Offset (feet) 0.00 158.00 316.00 Height (feet) 1.79 0.50 1.79

Primary OutFlow Max=62.53 cfs @ 12.15 hrs HW=870.23' (Free Discharge)

↑1=Asymmetrical Weir (Weir Controls 62.53 cfs @ 0.94 fps)

DEVELOPMENT AGREEMENT FOR ROSEWOOD FIELDS

This Development Agreement for Rosewood Fields (the **"Agreement"**) is made as of the ____ day of _____, 2020, by and between the Village of McFarland, a Wisconsin Municipal Corporation (**"Village"**) and VH Rosewood Fields, 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 Rosewood Fields (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

Exhibit "F": Properties Subject to East Side Sanitary Sewer Interceptor
Assessments and Developer's Share

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 is 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 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 and Sidewalks.

1. The Developer shall install curb and gutter, storm sewer and inlets, sidewalks 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. The Developer shall construct and maintain suitable access to CTH AB for the use by construction vehicles and contractors throughout all Phases of the construction of the Development

3. 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.

4. 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 ~~Services-Works~~ to observe the proof rolling prior to the paving of the lower lift (binder).

5. The Developer shall pave ~~both the lower lift (binder) and the upper lift (surface)~~ of asphalt on all streets during the ~~same~~ construction season following the season during which the lower lift (binder) is installed, unless another schedule is approved or directed by the Village Director of Public Works. If an alternative schedule is approved, ~~d~~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.

6. The Developer shall erect Type III fixed barricades at the points of closure of all streets intended for future extension. "Road Closed" signs shall be mounted on the barricades. Barricade design shall comply with the Wisconsin and Federal Highway Administration's Manuals on Uniform Traffic Control Devices ("MUTCD"). In the event of conflict between a standard in the Wisconsin and Federal MUTCDs, the Wisconsin manual shall control. ~~Turn-arounds that are adequate for emergency vehicles as approved by the Village Fire Inspector~~ T-turn-arounds meeting specifications approved by the Director of Public Works shall be provided at ~~such all~~ temporary dead-end streets.

7. Initial construction plans for the Improvements described in subparagraph (A)(a), 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**") 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 the 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. 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. Sewer Interceptor. The Village at its cost will design and construct a sewer interceptor to the southeast corner of the Property north of the existing railroad tracks, to a point along Highway AB (the "**Sewer Interceptor**") on or before March 31, 2022. The Village may specially assess the cost of the Sewer Interceptor against benefitted properties, including the Property, attached hereto as Exhibit "F".

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 shall bill 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 CSM or by separate instruments for water distribution lines proposed outside of the 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.

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. 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.

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. The Village or its designee shall be present during the performance of all required acceptance tests. The Village or its 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;
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 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 and Parkland Improvement Fees.

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 Apartments = 1 Dwelling Unit per Apartment Unit
 Multi-Family Twin Home = 1 Dwelling Unit per Twin Unit or Condominium 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. In lieu of payment by Developer of Park Improvement Impact Fees for the initial ___ Lots receiving building permits, Developer shall provide improvements to the park planned for Outlot 3 of the Plat (the “**Park**”) which have a value of \$ _____. The proposed improvements shall be installed in their entirety with the first Phase of improvements in the Development and shall include such amenities and installations as recommended by the Village of McFarland Parks, Recreation and Natural Resource Committee and approved by the Village Board:

(i) Prior to construction Developer shall provide the Village with a detailed list of the planned improvements which Developer intends to install in the Parks, along with the estimated cost of all materials and installation relating to the planned improvements. Such costs shall be not less than \$ _____. Village shall be deemed to have approved the same unless on or before thirty (30) days after receipt of the foregoing the Village shall notify Developer in writing of disapproval, which notice shall specify the reasons for disapproval. If disapproved, Developer shall resubmit said information to the Village and the same procedure shall be thereafter followed;

(ii) Upon substantial completion of the improvements to the Park, Developer will furnish evidence to the Village of completion, including a copy of all bills paid with respect to the improvements; and

(iii) Upon satisfaction of the foregoing conditions, the Village will accept the improvements in lieu of charging Park Improvement Impact Fees on all but the final ___ lots to be improved in the Plat.

c) Library Improvement Impact Fees, and a Water System Impact Fee, 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 a 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 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 tee's, 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 100-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, 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, to promptly repair or replace any Improvements as required during the guarantee period, or pay any amounts required to be paid under this Agreement, 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. 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 Administrator 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.

F. Exhibit "E", attached hereto and incorporated herein by reference, describes the Public Improvement Costs secured by the Surety furnished by the Developer to the Village for Phase 1 of the Plat. A similar exhibit shall be provided by the Developer for each subsequent Phase of the Development.

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:

Chris Ehlers
VH Rosewood Fields, LLC
6801 South Towne Drive
Madison, WI 53713

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 Rosewood Fields 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]

VILLAGE OF MCFARLAND

By: _____

Print Name: _____

Print Title: _____

Attest: _____

Print Name: _____

Print Title:

STATE OF WISCONSIN)
)ss>
COUNTY OF DANE)

Personally came before me, _____, notary public for the above State and County, this ____ day of _____, 2020, 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:

By: _____
Chris Ehlers, Authorized Signatory

Personally came before me, _____, notary public for the above State and County, this ____ day of _____, 2020, the above named Chris Ehlers, 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: _____

EXHIBIT "A"

Page 1

Legal Description of Plat

Page 2

Phasing Plan

[To be determined.]

EXHIBIT “B”
ENGINEERING PLANS
[To be supplied.]

EXHIBIT “C”

Parkland Dedication and Fees in Lien of Dedication

1. Dedication requirement:

107 Single Family Dwelling Units (“SFDU”) @ 2,106 square feet/unit = 225,342 square feet

10 twin units (“MFDU”) @ 1,463 square feet/unit = 14,630 square feet

Total Required Dedication = 225,342 + 14,630 = 239,972 square feet or 5.51 acres

2. Dedication by plat:

Outlot 3 = 138,198 square feet

Outlot 1 (10 feet for path) = 8,460 square feet

Outlot 4 (10 feet for path) = 8,047 square feet

Total = 154,705 Square feet or 3.55 acres

3. Fee in lieu of dedication:

$239,972 - 154,705 = 85,267$ square feet

$85,267 / 239,972 = 35.53\%$

4. Fee in lieu of dedication by unit (by way of example for 2020):

SFDU: $.3553 \times \$3,915.46/\text{SFDU} = \$1391.16 / \text{SFDU}$

MFDU: $.3553 \times \$2,719.90/\text{MFDU} = \$966.38 / \text{MFDU}$

EXHIBIT “D”

RESTRICTION AS TO FUTURE SALE OF LOTS

See attached.

<i>Document Number</i>	Declaration of Conditions, Covenants and Restrictions Rosewood Fields, Village of McFarland, Dane County, WI <i>Title of Document</i>
------------------------	---

WHEREAS, VH Rosewood Fields, 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:

Gregory J. Paradise
Mohs Widder, Paradise
20 North Carroll Street
Madison, Wisconsin 53703

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 Rosewood Fields containing certain agreements of the parties with respect to construction and development of the Rosewood Fields 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_____.

VH ROSEWOOD FIELDS, 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:
Gregory J. Paradise

Exhibit "A" to Restriction

LOTS SUBJECT TO RESTRICTION

NOTE: To be supplied prior to recording Restriction

Exhibit “B” to Restriction

PHASE 1 LOTS

NOTE: To be supplied prior to recording Restriction.

EXHIBIT “E”

PUBLIC IMPROVEMENT COSTS SECURED BY SURETY

[To be attached.]

EXHIBIT “F”

**PROPERTIES SUBJECT TO EAST SIDE SANITARY SEWER INTERCEPTOR AND
DEVELOPER’S SHARE**

[To be attached.]



VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Monday, October 26, 2020

SECTION: Business

DEPARTMENT: Public Works

CONTACT: Sayer Larson, Parks Superintendent

AGENDA ITEM: Discussion and action regarding the acceptance for the grant and purchase of playground equipment at the Ridgeview Tot Lot Park.

PREVIOUS ACTION:

The grant was previously authorized for submittal in September by the Parks, Recreation, and Natural Resources Committee as well as Village Board.

The Parks, Recreation, and Natural Resources Committee met on October 22, 2020 and approved the purchase as presented with the inclusion of installation costs and wood chips.

ISSUE SUMMARY:

The Village applied for a playground equipment grant through GameTime Cares. We received notification as a 2020 grant recipient. The grant total towards the purchase of the selected equipment is \$13,411.00. The cost to the Village for the purchase and delivery of equipment is \$17,626.58. The grant acceptance is time sensitive. Payment must be made by 10/30/2020 to secure the grant funds.

The installation of the equipment is not included in the purchase price. We have received a quote for \$9850.00 to have Minnesota/Wisconsin Playground Equipment install the system. They require site preparation of installation site. Village staff will remove old equipment, playground surfacing and playground borders. Installation will take about three days. Village staff will reinstall playground surfacing and borders. We have also inquired about a community build option. This should be approved as part of the project costs but will not be expended until next year after we've reviewed all available options.

Additional costs to consider will be changing the current playground surfacing from sand to certified mulch fiber (wood chips).

If the committee chooses to move forward with the purchase of the playground equipment we will have to choose colors. I have attached a few color options from GameTime.

FINANCIAL/BUDGET IMPACT:

Cost to Village for purchase playground equipment with freight delivery	\$ 17,626.58
---	--------------



Cost to Village for Wisconsin/Minnesota Playground to install playground \$ 9,850.00

Total cost with install to Village \$ 27,476.58

Additional costs to consider:

Replace playground surfacing from sand to certified playground mulch. An estimated cost is \$500.00.

VILLAGE PLAN REFERENCE:

ORDINANCE REFERENCE:

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Recommended for approval to purchase the playground equipment at a cost of \$27,976.58.

ATTACHMENTS:

1. Village of McFarland- 2020 Grant Recipient Quote_192568_266511
2. Village of McFarland- Installation Quote_193161_267377
3. puddlepod
4. Playground Color Options



Minnesota / Wisconsin Playground
5101 Highway 55, Suite 6000
Golden Valley, Minnesota 55422
Ph. 800-622-5425 | 763-546-7787
Fax 763-546-5050 | tim@mnwplay.com

10/05/2020
Quote #100829-01-01

CONSULTANT: TIM NEWGARD

Village of McFarland- 2020 Grant Recipient

McFarland, Village of
Attn: Sayer Larson
5915 Milwaukee Street
McFarland, WI 53558
Phone: 608-838-7287
sayer.larson@mcfarland.wi.us

Ship to Zip 53558

Quantity	Part #	Description	Unit Price	Amount
1	178749	GameTime - Owner's Kit	\$58.00	\$58.00
1	RDU	GameTime - PS19017	\$29,189.00	\$29,189.00
			Sub Total	\$29,247.00
			Grant	(\$13,411.00)
			Freight	\$1,790.58
			Total	\$17,626.58

Indemnification: Owner/Owner's Representative will indemnify and hold Minnesota Playground, Inc., dba, Minnesota Wisconsin Playground (MWP), harmless for all claims, damages and related costs, including reasonable legal fees and costs, arising out of Owner/Owner's Representative's negligence or noncompliance with any of its commitments under this document. MWP will indemnify and hold Owner/Owner's Representative harmless for all claims, damages and related costs, including reasonable legal fees and costs, arising out of MWP's negligence or noncompliance with any of its commitments under this document.

This quotation is subject to policies in the current Gametime Park and Playground catalog and the following terms and conditions. Our quotation is based on shipment of all items at one time to a single destination, unless noted, and changes are subject to price adjustment. Purchases in excess of \$1,000.00 to be supported by your written purchase order made out to Gametime, c/o Minnesota/Wisconsin Playground.

Each quote is handled on a per order/project basis. Unless a long-term agreement is in place between purchaser and GameTime, terms and conditions of this quotation shall be as outlined herein with no other requirements applicable.

Pricing: f.o.b. factory, firm for 30 days from date of quotation or until the funds are depleted. A tax-exempt certificate is needed at time of order entry for all orders whether from tax-supported government agencies or not. Sales tax, if applicable, will be added at time of invoice unless a tax exempt certificate is provided at time of order entry.

Payment terms: per the requirements of the grant, payment in full, check submitted with order

Freight charges: Prepaid & added





Minnesota / Wisconsin Playground
5101 Highway 55, Suite 6000
Golden Valley, Minnesota 55422
Ph. 800-622-5425 | 763-546-7787
Fax 763-546-5050 | tim@mnwplay.com

10/05/2020
Quote #100829-01-01

CONSULTANT: TIM NEWGARD

Village of McFarland- 2020 Grant Recipient

Order Information:

Bill To: _____ Ship To: _____

Company: _____ Project Name: _____

Attn: _____ Attn: _____

Address: _____ Address: _____

City, State, Zip: _____ City, State, Zip: _____

Contact: _____ Contact: _____

Tel: _____ Tel: _____

Fax: _____ Fax: _____

Acceptance of quotation:

Accepted By (printed): _____ P.O. No: _____

Signature: _____ Date: _____

Title: _____ Phone: _____

Facsimile: _____ Purchase Amount: **\$17,626.58**





Minnesota / Wisconsin Playground
5101 Highway 55, Suite 6000
Golden Valley, Minnesota 55422
Ph. 800-622-5425 | 763-546-7787
Fax 763-546-5050 | tim@mnwplay.com

10/05/2020
Quote #100829-01-01

CONSULTANT: TIM NEWGARD

Village of McFarland- 2020 Grant Recipient

Equipment Color Selection

(Either write in selected play palette, or select colors individually for each component type)

Play Palette Color Scheme: _____
(or)

Component Color

Metal Posts & Arches: _____

Metal Accents: _____

Decks (PCV Coated): _____

Plastic: _____

Tubes: _____

Roofs: _____

MegaRock: _____

Dragon: _____

Rock Climber: _____

HDPE: _____

Playcurbs: _____

Free Standing Posts: _____

Free Standing Accents: _____

Free Standing Plastic: _____

Free Standing Decks: _____

Free Standing Rocks: _____

Other (multi-colors, components, etc.)

Component Color

Component Name: _____

Component Name: _____

Component Name: _____

Component Name: _____

Component Name: _____

Component Name: _____

Component Name: _____

Component Name: _____

Component Name: _____



Minnesota / Wisconsin Playground
5101 Highway 55, Suite 6000
Golden Valley, Minnesota 55422
Ph. 800-622-5425 | 763-546-7787
Fax 763-546-5050 | tim@mnwiplay.com

10/08/2020
Quote #100829-02-01

CONSULTANT: TIM NEWGARD

Village of McFarland- Installation

McFarland, Village of
Attn: Sayer Larson
5915 Milwaukee Street
McFarland, WI 53558
Phone: 608-838-7287
sayer.larson@mcfarland.wi.us

Ship to Zip 53558

Quantity	Part #	Description	Unit Price	Amount
1	INSTALL	Install -	\$9,850.00	\$9,850.00
			Sub Total	\$9,850.00
			Total	\$9,850.00

This quotation is subject to current Minnesota/Wisconsin Playground (MWP) policies as well as the following terms and conditions. Our quotation is based on shipment of all items at one time to a single destination, unless noted, and changes are subject to price adjustment. Purchases in excess of \$1,000.00 to be supported by your written purchase order made out to Minnesota/Wisconsin Playground.

Each quote is handled on a per order/project basis. Unless a long-term agreement is in place between purchaser and MWP, terms and conditions of this quotation shall be as outlined herein with no other requirements applicable.

Indemnification; Owner/Owner's Representative will indemnify and hold Minnesota Playground, Inc., dba, Minnesota Wisconsin Playground (MWP), harmless for all claims, damages and related costs, including reasonable legal fees and costs, arising out of Owner/Owner's Representative's negligence or noncompliance with any of its commitments under this document. MWP will indemnify and hold Owner/Owner's Representative harmless for all claims, damages and related costs, including reasonable legal fees and costs, arising out of MWP's negligence or noncompliance with any of its commitments under this document.

Pricing: f.o.b. factory, firm for 30 days from date of quotation. A tax-exempt certificate is needed at time of order entry for all orders whether from tax-supported government agencies or not. Sales tax, if applicable, will be added at time of invoice unless a tax exempt certificate is provided at time of order entry.

Payment terms: net 30 days for tax supported governmental agencies. Should this quotation be forwarded to an agency not listed on this quote, credit terms, as well as other terms and conditions herein, may be need to be altered. For instance, non-tax supported organization purchasing any or all products and/or services quoted herein may require full payment for that amount due at time of order entry. Remaining balance owed by tax supported agency, if any, shall still be net 30 days. A 1.5% per month finance charge will be imposed on all past due accounts. Equipment shall be invoiced separately from other services and shall be payable in advance of those services and project completion. Retainage not accepted.

Unless already on file, please include a tax exempt certificate upon order entry whether a tax supported government agency or other.

Installation: shall be by a Certified GameTime Installer. Customer shall be responsible for scheduling coordination and site preparation. Site should be level and permit installation equipment access. Purchaser shall be responsible for unknown conditions such as buried utilities, tree stumps, bedrock or any concealed materials or conditions that may result in additional labor or material costs.





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10/08/2020
Quote #100829-02-01

CONSULTANT: TIM NEWGARD

Village of McFarland- Installation

Project Scope:

Please note, installation is based on site being ready prior to our arrival to install play equipment as well as site conditions that have been conveyed to our organization by the owner/owner's representative and/or ideal conditions existing for a timely completion of your project as quoted. Unless addressed prior to the installation quote being issued or specifically mentioned herein, any issues that arise that impede the progress/completion of your project as quoted will result in additional charges.

Weather can change project scheduling in many ways. Take rain for an example. Day, or days, before rain... If weather forecasts show a high percentage chance for rain that will effect the site conditions, a postponement may be in order. Digging holes, laying certain surfacing materials, etc., are greatly affected by weather conditions and work may not begin/continue due to weather forecasts. There's the rain days themselves, which if heavy enough rainfall occurs, makes a site unworkable. Day, or days, after rain... Drying time will be needed after rain and the number of days needed will vary depending on amount of moisture received. One actual rain day may equal multiple delay days depending on work scheduled to be done.

+ INCLUSIONS +

- + One mobilization
- + Public utility locates only
- + Supply of equipment as outlined on quote # _____
- + Marking and digging of footings holes to accept direct embedment supports as needed
- + Unpacking of play equipment
- + Assembly of play equipment
- + Concrete for footings as needed
- + Pouring of concrete for footings
- + Construction tape/temporary bracing (as needed)
- + Standard insurance offerings
- + Standard warranty offerings
- + Standard industry accepted labor wages

- EXCLUSIONS -

- Clear access path up to and into play area for installation equipment (minimum of 8-foot wide, includes but not limited to gates, walkways, driveways, etc.)
- Staging area for materials and installation equipment, trailers, etc.
- Unobstructed space for maneuvering installation equipment as well as performing work
- Security fencing of any type
- If fencing is in place (by others), ability to unlock fencing is to be provided to our office a minimum of one week prior to our start
- Private utility locates such as, but not limited to, irrigation, fiber optics, private lighting, etc.
- Accepting, unloading and storage of order(s)/shipment(s) prior to installation
- Sitework of any kind such as, but not limited to, grading (play area to have max slope of 1%), site restoration, drainage, etc.
- Removal of existing play equipment, border, safety surfacing, etc.
- Backfill and compaction of backfill after removal of existing items (for footing holes as an example) that leave voids in area (marking and digging of new footing holes based on workable site)
- Digging in compacted sub-surfaces, rock, hard pan, tree roots, unstable soil conditions, etc.
- Restoration of compacted sub-surfaces for playground surfacings such as, but not limited to, poured-in-place rubber, rubber tiles, artificial turf, etc.
- Digging/maneuvering in sand, pea gravel, mud, etc.
- Offsite removal of spoils from footing holes (can be stockpiled near play area for owner/owner's representative removal or spread within play area)
- Disposal of packing material (can be deposited in owner/owner's representative onsite dumpster or stockpiled for removal by others)
- Border to help contain safety surfacing
- Removal of temporary braces, caution/construction tape, etc. (Can be removed and disposed of after concrete has cured.)
- Bonding of any type
- Permits of any kind
- Prevailing, Davis Bacon, Union, or similar, wages
- Restroom facilities, see below for specifics

Please provide access to restrooms whether within a building or portable style. Should use of site facilities not be available, additional charges will





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Ph. 800-622-5425 | 763-546-7787
Fax 763-546-5050 | tim@mnwplay.com

10/08/2020
Quote #100829-02-01

CONSULTANT: TIM NEWGARD

Village of McFarland- Installation

be required to bring on site temporary/portable restrooms. These temporary facilities will be removed once your project has been completed.

Should weekend work be necessary or non-standard hours be worked, please provide a site contact and the best telephone number to reach this person in case an urgent matter arises requiring immediate attention.

(Name) _____

(Cell) _____

(Other Telephone Number) _____

Wet Site Conditions: installation areas located near wetlands, where a high water table exists or in any environment that produces excessive moisture will require additional planning prior to installation of your project. Unless excessively wet conditions have been conveyed prior to installation quote and accounted for in some manner, your installation will not proceed. Ideal dry conditions need to be present to begin, and complete, your project as quoted.

Order Information:

Bill To: _____ Ship To: _____

Company: _____ Project Name: _____

Attn: _____ Attn: _____

Address: _____ Address: _____

City, State, Zip: _____ City, State, Zip: _____

Contact: _____ Contact: _____

Tel: _____ Tel: _____

Fax: _____ Fax: _____

Acceptance of quotation:

Accepted By (printed): _____ P.O. No: _____

Signature: _____ Date: _____

Title: _____ Phone: _____

Facsimile: _____ Purchase Amount: **\$9,850.00**



Puddle Pod

Model Number: PS19017

\$29,189

[Request a Quote](#)



FEATURES

PowerScape playground systems are constructed from heavy-duty materials, and are backed by the industry's leading warranty. PowerScape systems are designed to provide the highest capacity of any playground with an industry-leading 49" deck.

DOWNLOADS

SHARE



SPECIFICATIONS

Model:	PS19017
Age:	2 to 5 Years
Use Zone:	28' x 29'
Fall Height:	4'
Number of Children:	30-35

ADA ACCESSIBILITY

Accessible	6
Elevated	6

Playground Color Options

Malibu

Uprights Bronze	Plastic Spring Green	HDPE Spring Green
Metal Beige	Decks Brown	2 Color HDPE Spring Green/White



Atlantic

Uprights Metallic	Plastic Sky Blue	HDPE Sky Blue
Metal Spring Green	Decks Blue	2 Color HDPE Sky Blue/White

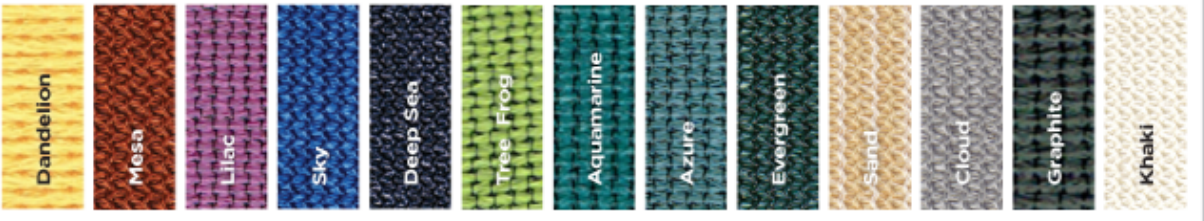


Jellybean

Uprights Burgundy	Plastic Blue	HDPE Blue
Metal Butterscotch	Decks Blue	2 Color HDPE Red/White



CANOPY & SHADE





VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Monday, October 26, 2020

SECTION: Business

DEPARTMENT: Police

CONTACT: Matt Schuenke, Village Administrator

AGENDA ITEM: Discussion and action to approve filling the vacancy for Interim Police Chief within the Police Department and adopt salary range for the interim position.

PREVIOUS ACTION:

None.

ISSUE SUMMARY:

Craig Sherven has provided his notice of retirement from the position of Chief within the McFarland Police Department. This notice was conveyed directly from the Chief to the Village Board and Police and Fire Commission on Friday, October 16th. Hiring of any sworn officer, let alone the top position in the Department is of course a complex undertaking. The Village Board's role in this is actually quite limited to two things: 1) authorizing the vacancy to be filled, and 2) appropriating necessary funds to staff the position.

The Police and Fire Commission hold the authority to make the final appointment to hire the individual that will fill the position. They do this in accordance with the Handbook for Wisconsin Police and Fire Commissioners issued by the League of Wisconsin Municipalities. [Please click on this link to view this manual.](#) Chapter 5 and 6 outline the details of the process for conducting the recruitment while Chapter 7 adds additional guidance on hiring a Chief. This is the process we will need to embark on as a Community to fill the position and will likely be completed over the course of the next 5 to 7 months. Included also for reference within the packet is the Job Description for the position which through the process will be reviewed and updated as appropriate.

A lot of this work remains in its infancy and will grow in details as the process flows through the steps outlined within the manual. The first action for the Village Board to consider is to approve the filling of the vacancy of Interim Police Chief within the Department and setting the salary range for such a position. Taking this action will allow the Police and Fire Commission to convene and consider appointment into the position as they deem necessary and appropriate. The filling of this position at least temporarily will provide some support within the main leadership position for the Department as it continues to provide service, interact with the Community, and work with other Departments. It is likely the Police and Fire Commission will



be meeting very soon after the Village Board meeting to start to consider the interim appointment and discuss the recruitment strategy overall.

Secondary to the interim appointment and not on the agenda for this meeting is the question as to whether or not to hire a recruiter to assist in filling the position. This was done in 2010 as part of the last recruitment and it is suggested that the PFC weigh in on this as part of their first meeting in order to make a recommendation to the Village Board if they wish to follow a similar format. The board then can consider this recommendation at its next meeting on November 9th.

FINANCIAL/BUDGET IMPACT:

The position is listed at Grade 23 within our Wage Grid which has a minimum salary of \$88,962 to a maximum of \$115,565 including a market rate of \$102,274. This range is of course subject to increase based upon how the 2021 Budget is set and Across the Board Rate established which would elevate the range by that amount. Currently that is proposed at 2% but not yet finalized.

VILLAGE PLAN REFERENCE:

McFarland Compensation and Benefits Manual

McFarland Personnel Policy Manual

Handbook for Wisconsin Police and Fire Commissioners

ORDINANCE REFERENCE:

Section 2-577 outline the duties of the Police Chief within our Municipal Code as is consistent with State law. When the job description is reviewed, we can further reconcile these code references to ensure consistency as appropriate.

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Village Staff recommends approving to fill the vacancy of Interim Police Chief within the Police Department and adopt the salary schedule from Grade 23 within the Village Wage Grid for the interim position.

ATTACHMENTS:

1. Police Chief Description updated 05.2014

POLICE CHIEF

POSITION DESCRIPTION

Position Title: Police Chief

Department: Police Department

Reports to: Administrator/Treasurer

FLSA: Exempt

Represented: No

Employment Category: Full Time

POSITION SUMMARY

Distinguishing Characteristics of the Class

This department head position is responsible for directing and administering the activities of the Police Department including patrol, traffic enforcement, investigations, court officer, and school crossing guard functions. The work involves: planning and coordinating the programs and services of the department; selecting, training, and supervising departmental employees; formulating departmental goals and short/long range plans; preparing and administering the departmental budget; and establishing standard operating policies and procedures for the department.

This position is appointed by the McFarland Police and Fire Commission (PFC).

Supervision Received

Performs under general policy direction from the Village Board and the Public Safety Committee, direction from the PFC on employee hiring and disciplinary matters, and administrative direction from the Administrator/Treasurer, but exercises considerable independent judgement in determining program and work priorities and the technical/operational objectives and practices of the department.

Supervision Exercised

Supervises sworn police officers through intermediate supervisors, investigative staff, school resource officer, administrative support staff, and school crossing guards.

DESCRIPTION OF WORK

Essential Duties and Responsibilities

- Plans, directs, and exercises general supervision over the work of the Police Department.
- Prepares and administers annual operating budget. Assures that assigned areas of responsibility are performed within budget; performs cost control activities; monitors revenues and expenditures in assigned area to assure sound fiscal control; assures effective and efficient use of budgeted funds, personnel, materials, facilities, and time.
- Recommends public policy, service levels, and municipal ordinances to the Village

Board.

- Establishes and enforces internal rules, policies, work methods, procedures and performance standards.
- Recommends the selection of sworn employees to the PFC, directs the training, and evaluates the performance of departmental employees. Works with the PFC on personnel disciplinary matters involving terminations, suspensions, and reductions in rank.
- Participates in collective bargaining negotiations with represented employees; administers collective bargaining agreement.
- Directs the maintenance of appropriate records, and the preparation of required reports to the Village Board, the Wisconsin Department of Justice, and the F.B.I.
- Oversees departmental purchasing, including the acquisition and maintenance of vehicles and equipment and the inventory of supplies.
- Ensures that local ordinances and traffic safety regulations and state and federal laws are enforced. Researches and interprets the effect of new or proposed laws on the department and the community.
- Organizes and conducts crime prevention and community outreach programs.
- Supervises crime scenes, investigations, and the collection of evidence; obtains search and arrest warrants used in the apprehension of suspects; ensures the secure storage of all confiscated, recovered, and found property.
- Provides back up to police officers and advises and assists officers in non-routine investigations.
- Maintains communications with, shares information, and cooperates with other law enforcement agencies in solving cases.
- Confers with the Village Attorney and the District Attorney on the disposition of cases and testifies in court.
- Processes and investigates citizen inquiries or complaints relating to police services and responds to requests for services.
- Assists in establishing emergency preparedness policies and procedures for the Village and directs departmental operations in the event of an emergency situation.
- Represents the department on matters requiring inter-departmental or inter-agency coordination.
- Performs other related duties as required.

Equipment Used

Police vehicle, radio, radar gun, handgun and other weapons as required, including impact weapons and chemical weapons, handcuffs, intoximeter, camera, first aid equipment; personal computer with various software applications, laser and inkjet printers, phone, copier, fax machine.

Work Environment and Working Conditions

Works in normal office setting with moderate noise levels; also works under uncontrolled field conditions; some hours beyond the normal work week and weekend work required; attendance at evening meetings required; subject to 24-hour emergency call-in; exposure to extreme weather conditions, armed and/or dangerous persons and life-threatening situations, individuals with contagious diseases, hazards associated with emergency driving and traffic control; may require heavy lifting and strenuous physical activity.

TECHNICAL REQUIREMENTS

Knowledge of

- * Current principles and practices of police science and police administration and the ability to keep abreast of future developments in the field.
- * Modern crime prevention and criminal investigation techniques.
- * Community policing philosophies, strategies, and techniques.
- * National Incident Management System response protocols and incident command structures and practices.
- * Pertinent federal and state laws, and municipal ordinances and the ability to interpret and apply them in a variety of situations.
- * The standards by which the efficiency, effectiveness, and quality of police services can be evaluated.
- * Criminal justice system practices.
- * The use of police records and their applications to the solutions of police problems.
- * Specialized data processing applications used in law enforcement operations.

Ability to

- † Plan, organize, direct, and evaluate the work of subordinate personnel.
- † Forecast the operational and capital needs of the department and formulate and administer the departmental budget.
- † Establish and enforce standard departmental policies and procedures.
- † Determine proper priorities and delegate work to accomplish departmental objectives.

- † Maintain necessary records and prepare required reports.
- † Direct the orientation, training, and professional development of police employees.
- † Assume command of an incident and manage emergency responses of multiple departments.
- † Exercise sound judgement in evaluating situations quickly and objectively and determine the proper course of action.
- † React calmly in highly stressful and life threatening situations.
- † Meet the physical fitness standards of the department and to physically perform the essential functions of a police officer.
- † Supervise crime scenes, collect and secure evidence, and conduct investigations.
- † Enforce laws and ordinances with firmness, tact, and diplomacy.
- † Command the respect of and establish and maintain high ethical standards among departmental employees.
- † Interpret and implement policy and procedural direction from the Village Board and the Administrator/Treasurer.
- † Establish and maintain effective working relationships with the Village Board, the PFC, the Administrator/Treasurer, other department heads, employees, the McFarland School District, other governmental agencies, and the general public.
- † Represent the Village in meetings, public presentations, and before the media.
- † Perform the duties of a police officer.
- † Maintain a valid Wisconsin driver's license.

GENERAL COMPETENCIES

In carrying out the duties of this job, the employee is required to accomplish all of the tasks routinely associated with the performance of office type functions.

The employee must frequently lift and/or move up to 25 pounds and occasionally is required to perform heavy lifting and strenuous physical activity. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and the ability to adjust focus.

In addition, the employee must be able to satisfy the following competency requirements.

- ◆ **ANALYTICAL SKILLS:** Identify problems and opportunities; review possible alternative courses of action before selecting one; utilize information resources available when making decisions.

- ◆ **COMMUNICATION SKILLS:** Communicate ideas and information both in written and oral form.
- ◆ **PROBLEM-SOLVING SKILLS:** Develop feasible, realistic solutions to problems and recommend actions designed to prevent problems from occurring.
- ◆ **PLANNING AND ORGANIZATIONAL SKILLS:** Develop long-range plans to solve complex problems or take advantage of opportunities; establish systematic methods of accomplishing goals.
- ◆ **READING ABILITY:** Effectively read and understand information contained in memoranda, reports, ordinances, statutes, technical manuals, bulletins.
- ◆ **TECHNICAL COMPREHENSION:** Ability to learn, adopt, and apply new technology, computer systems and software programs.
- ◆ **ABILITY TO COMPREHEND AND FOLLOW INSTRUCTIONS:** Effectively follow verbal or written instructions from supervisor.
- ◆ **MATHEMATICAL ABILITY:** Calculate basic arithmetic problems (addition, subtraction, multiplication, division) without aid of a calculator.
- ◆ **TIME MANAGEMENT SKILLS:** Set priorities in order to meet assignment deadlines.
- ◆ **ABILITY TO WORK IN STRESSFUL SITUATIONS:** Work under hazardous conditions and extreme pressure in life and death situations.

DESIRED QUALIFICATIONS

U.S. citizenship; a minimum of a Bachelor's Degree from an accredited institution in criminal justice or related field; Wisconsin Law Enforcement Standards Board certification, or ability to obtain such; a minimum of ten (10) years progressively responsible experience in the law enforcement field which demonstrates leadership and command qualities, with a minimum of five years supervisory or administrative experience in upper management positions in a law enforcement agency of similar or larger size and complexity; good physical conditioning; or any equivalent combination of education, training, and experience which provides the required knowledge, skills, and abilities. Must possess or be able to obtain a valid Wisconsin driver's license.

Updated
05.01.14

Village of McFarland

NOTES

1. *The job duties listed herein are intended only as illustrations of the types of work that may be*

performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related, or a logical assignment to the position.

- 2. The work environment characteristics and physical demands described herein are representative of those that the employee encounters or must meet while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.*
- 3. The job description does not constitute an employment agreement between the employer and employee and is subject to change by the employer as the needs of the employer and requirements of the job change.*

I hereby acknowledge that I have received a copy of and do understand the requirements of this position description. Dated this _____ day of _____, 20_____.

Employee Signature

Department Head Signature



VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Monday, October 26, 2020

SECTION: Business

DEPARTMENT: Public Works

CONTACT: Jim Hessling, Public Works Director, Matt Schuenke, Village Administrator

AGENDA ITEM: Discussion and action to approve filling the vacancy for Public Works Crewperson within the Public Works Department.

PREVIOUS ACTION:

None.

ISSUE SUMMARY:

Mike Schulte has resigned from this position to take a similar position with a different municipality. We thank Mike for his service to the Community and wish him well in his new job. The Public Works Department is requesting authorization from the Village Board to fill the vacancy as is required by policy. Included within your packets is the Job Description for the position which is not recommended to change. Upon receiving authorization, Village Staff will move forward with filling the position as is allowed by the Personnel Manual.

FINANCIAL/BUDGET IMPACT:

The Classification for the position is not presented for changes. The position remains at Grade 11 and will be advertised as such. This was updated from Grade 10 earlier in 2020 following the completion of a Market Study. The 2020 Budget as does the 2021 Budget includes funding for a full-time position for the duration of the full year.

VILLAGE PLAN REFERENCE:

McFarland Compensation and Benefits Manual
McFarland Personnel Policy Manual

ORDINANCE REFERENCE:

None.

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Presented for approval.

ATTACHMENTS:

1. Position Description - PW Crewperson 07312019

Public Works Crewperson

POSITION DESCRIPTION

Position Title:	Public Works Crewperson	FLSA:	Non-Exempt
Department:	Public Works	Represented:	No
Reports to:	Streets and Utilities Superintendent	Employment Status:	Full-Time

POSITION SUMMARY

Distinguishing Characteristics of the Class

This position is responsible for performing a wide variety of unskilled and semi-skilled work associated with the operation and maintenance of streets, storm sewers, and water and sewer utility systems and of Village owned facilities and parks. The work includes construction, operation, repair, maintenance, and replacement activities and involves the operation of a variety of different vehicles, machinery, and equipment.

Supervision Received

Performs under the direct supervision of the Streets and Utilities Superintendent and general supervision of the Public Works Director.

Supervision Exercised

None.

DESCRIPTION OF WORK

Essential Duties and Responsibilities

- Drives trucks and light utility vehicles of various sizes and weights in the loading, hauling, and unloading of various equipment and materials and in snow removal and ice control operations.
- Operates a variety of machinery and equipment, including tractors, backhoes, loaders, rollers, street sweepers, mowers, trimmers, pumps, compressors, generators, and related small engine equipment.
- Does general and trench excavation associated with the maintenance and repair of streets, sidewalks, storm sewers, water mains and services, hydrants, and sanitary sewer mains and services.
- Sweeps streets, patches potholes and street excavations, installs street signs, and paints street markings.
- Mows and trims grass and weeds, rakes and collects leaves, and trims trees and shrubs.

- Maintains and cleans parks, recreational facilities, playgrounds and equipment, natural areas, drainageways, and storm water management areas.
- Maintains Village owned or leased buildings, grounds, and parking lots.
- Services and repairs elevated water towers, water wells and related pumping and treatment equipment, and sanitary lift stations.
- Cleans and flushes water mains and hydrants and, as part of a crew, repairs or replaces broken mains, hydrants, and curb boxes.
- Inspects, tests, repairs, and replaces water meters and outside display readers; reads water meters and records the reading for utility billing purposes.
- Determines and marks the location of underground water and sanitary sewer lines for other contractors.
- Insures the proper maintenance of equipment and tools by cleaning and checking them after use.
- Performs other related duties as required.

Equipment Used

A variety of motorized vehicles and equipment, including dump trucks, utility vehicles, and construction equipment; mowers and trimmers; pumps, compressors, and generators; snow plows and snow blowers; compactor; saws; common hand and power tools; detection devices; telephone, mobile and portable radio, pager.

Work Environment and Working Conditions

Works in a normal shop setting and under uncontrolled field conditions. Some overtime required, including periodic weekend work. Subject to 24-hour emergency call-in and may be required to work extended periods at a time.

While performing the duties of this job, the employee frequently works near moving mechanical parts and in a work environment where the noise level is moderately noisy. The employee regularly works in outside weather conditions and may be exposed to extreme heat or cold, wet and/or humid conditions, or snow and/or ice conditions. The employee is occasionally exposed to fumes and toxic/caustic chemicals and is required to enter confined spaces with breathing apparatus.

As a CDL holder, the employee is subject to pre-employment reasonable suspicion, post-accident, and random drug and alcohol testing under the Omnibus Transportation Employee Testing Act of 1991.

TECHNICAL REQUIREMENTS

Knowledge of

- Methods, materials, tools, and equipment used in the construction, operation and maintenance of public works and utility infrastructure.
- Methods used in the general maintenance of facilities, grounds, parks, recreational facilities, playgrounds, natural areas, and storm water management areas.
- The operation of construction equipment and power tools.
- Occupational hazards and standard safety precautions common to this field of work.

Ability to

- Operate and care for a variety of vehicles, equipment, hand and power tools.
- Perform heavy manual tasks for extended periods of time.
- Interpret and work from charts, technical manuals, diagrams, and construction plans.
- Maintain accurate records and complete required reports.
- Establish and maintain effective working relationships with those contacted in the course of work.
- Maintain a valid Wisconsin driver's license with applicable CDL endorsements.

GENERAL COMPETENCIES

The employee must use power and hand tools, frequently lift and/or move up to 25 pounds, and occasionally lift and/or move up to 100 pounds. Specific vision abilities required by this job include close vision, color vision, and the ability to adjust focus. In addition, the employee must be able to satisfy the following competency requirements.

- ◆ **ANALYTICAL SKILLS:** Identify problems and opportunities; review possible alternative courses of action before selecting one; utilize information resources available when making decisions.
- ◆ **COMMUNICATION SKILLS:** Communicate ideas and information effectively in both written and oral form.
- ◆ **PROBLEM-SOLVING SKILLS:** Develop feasible, realistic solutions to problems; recommend actions designed to prevent problems from occurring; refer problems to supervisor when necessary.
- ◆ **ORGANIZATIONAL SKILLS:** Establish systematic methods of accomplishing goals.
- ◆ **READING ABILITY:** Effectively read and understand information contained in memoranda, reports, ordinances, codes, regulations, technical manuals, bulletins.

- ◆ TECHNICAL COMPREHENSION: Ability to learn, adopt, and apply new technology, computer systems and software programs.
- ◆ ABILITY TO COMPREHEND AND FOLLOW INSTRUCTIONS: Effectively follow verbal or written instructions from supervisor.
- ◆ MATHEMATICAL ABILITY: Calculate basic arithmetic problems (addition, subtraction, multiplication, division) without aid of a calculator.
- ◆ TIME MANAGEMENT SKILLS: Set priorities in order to meet assignment deadlines.

REQUIRED MINIMUM QUALIFICATIONS

Graduation from high school; five (5) years of related experience in the construction and maintenance of public works or utilities infrastructure and the operation of vehicles and equipment commonly used in this type of work; or any equivalent combination of training and experience which provides the required knowledge, skills, and abilities. Must possess or be able to obtain a valid Wisconsin drivers' license with applicable Commercial Driver's License endorsements.

NOTES

1. The job duties listed herein are intended only as illustrations of the types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related, or a logical assignment to the position.
2. The work environment characteristics and physical demands described herein are representative of those that the employee encounters or must meet while performing the essential functions of this job. In compliance with the Americans with Disabilities Act, the Village will provide reasonable accommodations to qualified individuals with disabilities. The Village is an Equal Opportunity Employer.
3. The job description does not constitute an employment agreement between the employer and employee, and is subject to change by the employer as the needs of the employer and requirements of the job change. The Village retains and reserves any and all rights to change, modify, amend, add to, or delete from any section of this position description.

I hereby acknowledge that I have received a copy of and do understand the requirements of this position description with the Village of McFarland.

Dated this ____ day of _____, 20__.

Employee Signature

Department Head Signature

Created: May 1, 2014

Amended: July 31, 2019



VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Monday, October 26, 2020

SECTION: Business

DEPARTMENT: Administration

CONTACT: Cassandra Suettinger, Village Clerk/Treasurer

AGENDA ITEM: Discussion and action on acceptance of the Center for Tech and Civic Life COVID19 grant.

PREVIOUS ACTION:

ISSUE SUMMARY:

In September of 2020, the County Clerk notified all Clerks in Dane County of a grant opportunity through Tech and Civic Life. The grant was available for the following purposes:

1. Ensure Safe, Efficient Election Administration
2. Expand Voter Education and Outreach Efforts
3. Launch Poll Worker Recruitment, Training & Safety Efforts
4. Support Early In-Person Voting and Vote by Mail

The Village applied for the grant for the purpose of temporary staffing, vote-by-mail/absentee voting equipment or supplies. On September 24, 2020 the Village was notified it had been approved for the grant in the amount of \$5,000. Staff is bringing the grant forward for discussion on acceptance or denial of the grant.

The CTCL grant award awarded to five larger cities including Milwaukee, Madison, Green Bay, Kenosha and Racine for a total of \$6.3 million dollars in the Spring of 2020. As a result, a group has filed a lawsuit and asked a federal judge block the grant. On October 14, 2020 the Court ruled denying the motion for preliminary relief because the plaintiff failed to show a reasonable likelihood of success on the merits.

The grant would be used to reimburse costs that the Village will incur regardless. In September alone the Village Spent \$4,220 on postage, and another \$620 on envelopes, and will easily spend at least another \$1000 in postage for the November Election.



FINANCIAL/BUDGET IMPACT:

An additional \$5,000 in Revenues.

VILLAGE PLAN REFERENCE:

N/A

ORDINANCE REFERENCE:

N/A

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Submitted for discussion and review.

ATTACHMENTS:

None



VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Monday, October 26, 2020

SECTION: Business

DEPARTMENT: Administration

CONTACT: Matt Schuenke, Village Administrator

AGENDA ITEM: Discussion and review of the 2021 Budget including the following sections:

PREVIOUS ACTION:

The Staff Submittal of the 2021 Budget was transmitted to the Village Board at their meeting on September 28, 2020.

The Village Board conducted its first review of the 2021 Budget at a special meeting held on October 8, 2020.

The Village Board conducted its second review of the 2021 Budget at its regular meeting held on October 12, 2020.

The Village Board conducted its third review of the 2021 Budget at its regular meeting held on October 15, 2020.

ISSUE SUMMARY:

The entire 2021 Budget as submitted by Village Staff was distributed to the Village Board for their review on September 28, 2020. An electronic version of the full budget can be downloaded from the Village Website at www.mcfarland.wi.us/budget. You will need this electronic version or your paper copy within the budget binder as we begin our review at this meeting. Each of the reviews to be conducted in this meeting are listed on the agenda.

On October 8th, the Village Board completed its review of the General Fund (100), Communications and Technology Fund (200), Library Fund (205), and Canine Fund (800).

On October 12th, the Village Board completed its review of the Youth Center Fund (210), TID #3 Fund (305), TID #4 Fund (310), and TID #5 Fund (315).

On October 15th, the Village Board completed its review of the Debt Service Fund (300), Capital Projects Fund (400), and Parks Fund (405).

All remaining budgets needed for review are listed on this agenda. The deadline for Village



Board members to submit changes is October 30th. These changes will be reviewed at your meeting on November 5th.

FINANCIAL/BUDGET IMPACT:

Each review meeting will cover several financial impacts of the budget and discuss their implications.

VILLAGE PLAN REFERENCE:

None.

ORDINANCE REFERENCE:

None.

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

No action is needed for the review as we will be discussing the information in order of how its presented on the agenda.

ATTACHMENTS:

None



VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Monday, October 26, 2020

SECTION: Business

DEPARTMENT: Administration

CONTACT:

AGENDA ITEM: Changes since the last distribution.

PREVIOUS ACTION:

ISSUE SUMMARY:

As we go through the process certain changes will pop up from time to time that are reported through the enclosed form. The Staff Submittal is essentially frozen as presented and changes are called out administratively through this form. Later additional changes will be proposed and considered by the Village Board, all of which upon approval will be incorporated together into one final document. Since the budget transmittal on September 28th, there are three material changes to report regarding highway aid and franchise fee aid from the State as well as in health insurance costs within a Department as a result of open enrollment. No new changes have developed since this information was presented on October 8th.

FINANCIAL/BUDGET IMPACT:

VILLAGE PLAN REFERENCE:

ORDINANCE REFERENCE:

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

ATTACHMENTS:

1. 10.02.2020 - 2021 Budget Review Changes

2021 Budget Changes Since Distribution

Administrative Changes

Change Date	Change Number	Fund	Name	Type	Page	Dept	Line Item Description	Line Item Number	Old	New	Rev & (Exp)	New Levy Increase or (Decrease)	Change from Draft	New Rate
10/02/2020	1	100	General	Rev	50	Inter Rev	State - Highway Aid	43530-000	311,500	361,750	50,250	(50,250)	-0.76%	(0.05)
10/02/2020	2	200	CT	Rev	90	Inter Rev	State - Cable Franchise Aid	43515-000	10,000	20,000	10,000	(60,250)	-0.91%	(0.06)
				Rev							0	(60,250)	-0.91%	(0.06)
10/02/2020	3	100	General	Exp	72	Fire and Rescue	Health Insurance	52200-130	110,500	125,750	0	(60,250)	-0.91%	(0.06)
				Exp							(15,250)	(45,000)	-0.68%	(0.04)
				Exp							0	(45,000)	-0.68%	(0.04)
											45,000	6,570,250	-0.68%	6.23

Notes Regarding Administrative Changes

Changes made October 2, 2020:

- 1 The State released the final payment information for General Transportation Aid in 2021 around October 1st. The Village realized a higher than expected share of these funds due in part to consistent local road investment, annexations, and county highway jurisdictional transfers.
- 2 The State released the final payment information for the Video Service Provider Aid in 2021 on October 2nd. The Village realized a higher than expected share of these funds based on the 2019 estimated gross receipts from video service providers.
- 3 The month of October is also Open Enrollment for Health Insurance through the State. As a result of this there are fluctuating costs as employees make decisions about their coverage. These changes will vary from Department to Department.

2021 Budget Changes Since Distribution

Original Submitted Budget Summary - September 28, 2020

	2020 Budget	2021 Budget	Difference vs. 2020	% Change vs. 2020
TOTAL ASSESSED VALUATION	1,023,417,995	1,105,320,549	81,902,554	8.00%
TID INCREMENT ASSESSED VALUATION	42,530,496	50,568,129	8,037,632	18.90%
ASSESSED VALUATION MINUS TID INCREMENT	980,887,499	1,054,752,420	73,864,922	7.53%
MUNICIPAL PROPERTY TAX LEVY	6,366,250	6,615,250	249,000	3.91%
MUNICIPAL TAX RATE	6.49	6.27	(0.22)	-3.37%

1/1/2019 Median Home Value \$ 279,050 \$ 1,811.12

1/1/2020 Median Home Value \$ 295,100 \$ 1,850.82 \$ 39.71

5.75% 2.19%

Amended Budget Summary following Village Board Review

	2020 Budget	2021 Budget	Change vs. 2020	% Change vs. 2020
TOTAL ASSESSED VALUATION	1,023,417,995	1,105,320,549	81,902,554	8.00%
TID INCREMENT ASSESSED VALUATION	42,530,496	50,568,129	8,037,632	18.90%
ASSESSED VALUATION MINUS TID INCREMENT	980,887,499	1,054,752,420	73,864,922	7.53%
MUNICIPAL PROPERTY TAX LEVY	6,366,250	6,570,250	204,000	3.20%
MUNICIPAL TAX RATE	6.49	6.23	-0.26	-4.02%

1/1/2019 Median Home Value \$ 279,050 \$ 1,811.12

1/1/2020 Median Home Value \$ 295,100 \$ 1,838.23 \$ 27.12

5.75% 1.50%



VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Monday, October 26, 2020

SECTION: Business

DEPARTMENT: Public Works

CONTACT: Matt Schuenke, Village Administrator

AGENDA ITEM: Utility Fund (600).

PREVIOUS ACTION:

The Public Utilities Committee took action to recommend approval to the Village Board the presented 2021 Budgets for the Utilities Fund (600) with the changes noted and Stormwater Utility Fund (605).

ISSUE SUMMARY:

Following Committee review, they made the following changes:

- **Water Revenue:**
 - Generally Rates (46450-101 thru 104) - The Committee is working on a rate increase that likely would take effect half way through 2021. The budget as presented showed a full year's worth of collection and this change reduces that to a half of year's worth of collection with the new rates.
 - Fund Balance Applied (49350) - Without the rate increase, the budget will continue to decline into deficit. The reduction in anticipated revenue will likely require some an increase in support from fund balance to at least balance the budget for the year.
 - **Water Expense**
 - Miscellaneous (53712-390) - Used as a contingency line item but has had limited activity over the years. Reduced to account for low utilization.
 - Programming (53712-391) - The Committee requested to include additional funds within this line item to market potential water conservation efforts.
 - **Sewer Revenue**
 - No changes recommended.
 - **Sewer Expense**
 - Miscellaneous (53612-390) - Used as a contingency line item but has had limited activity over the years. Reduced to account for low utilization.
 - Facility Reserve - Collection System (53614-590) - Increased by the amount



reduced from miscellaneous to further build up savings.

FINANCIAL/BUDGET IMPACT:

VILLAGE PLAN REFERENCE:

ORDINANCE REFERENCE:

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

ATTACHMENTS:

1. 2021 Budget Worksheet - Fund 600 UTIL DRAFT 10212020

Village of McFarland
2021 Utility Fund Operating Budget

SUMMARY of SEWER SERVICE

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
REVENUES							
42000	Special Assessments	376,801	150,000	52,918	150,000	140,000	-6.67%
43000	Intergovernmental Revenues	0	0	0	3,750	0	-----
46000	Public Charges for Services	1,118,009	1,147,750	501,625	1,172,500	1,353,750	17.95%
48000	Miscellaneous	40,904	40,250	9,403	12,750	10,250	-74.53%
49000	Other Financing Sources	0	68,500	0	68,500	766,250	1018.61%
	Total SEWER SERVICE Revenues	1,535,714	1,406,500	563,946	1,407,500	2,270,250	61.41%

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
EXPENSES							
53610	ADMINISTRATION	277,395	248,500	177,696	355,430	304,250	22.43%
53611	METER READING	6,013	32,000	1,342	27,500	33,250	3.91%
53612	MISCELLANEOUS	154,296	21,000	1,080	1,500	15,250	-27.38%
53613	DEBT SERVICE	22,750	194,500	9,725	194,450	195,750	0.64%
53614	CAPITAL PROJECTS	1,584	68,500	0	68,500	823,750	1102.55%
53615	TRANSPORTATION	718,822	747,750	195,768	750,000	784,000	4.85%
53616	SYSTEM MAINTENANCE	107,990	94,250	53,189	105,304	114,000	20.95%
	Total SEWER SERVICE Expenses	1,288,850	1,406,500	438,800	1,502,684	2,270,250	61.41%

Difference in SEWER Rev over Exp **246,864** **0** **125,146** **(95,184)** **0**

SUMMARY of WATER SERVICE

REVENUES							
42000	Special Assessments	301,603	130,000	57,487	130,000	115,000	-11.54%
46000	Public Charges for Services	1,095,676	1,069,500	535,104	1,078,000	1,190,000	11.27%
48000	Miscellaneous	40,706	40,250	9,612	12,750	10,250	-74.53%
49000	Other Financing Sources	0	710,000	0	988,000	325,500	-54.15%
	Total WATER SERVICE Revenues	1,437,985	1,949,750	602,203	2,208,750	1,640,750	-15.85%

EXPENSES							
53710	ADMINISTRATION	282,489	334,500	207,214	346,314	372,500	11.36%
53711	METER READING	8,425	27,500	2,121	26,500	33,250	20.91%
53712	MISCELLANEOUS	579,119	292,500	1,099	255,250	297,500	1.71%
53713	DEBT SERVICE	49,418	292,750	39,815	303,029	441,500	50.81%
53714	CAPITAL PROJECTS	21,299	766,000	0	988,000	233,500	-69.52%
53715	SUPPLY	23,171	5,000	3,572	6,250	5,250	5.00%
53716	PUMPING	75,068	74,500	34,361	71,582	76,000	2.01%
53717	TREATMENT	35,772	29,500	7,593	31,000	35,000	18.64%
53718	TRANSMISSION AND DISTRIBUTION	78,617	127,500	41,986	128,508	146,250	14.71%
	Total WATER SERVICE Expenses	1,153,378	1,949,750	337,760	2,156,433	1,640,750	-15.85%

Difference in WATER Rev over Exp **284,607** **0** **264,442** **52,317** **0**

SUMMARY of UTILITY FUND

Difference in UTILITY FUND Rev over Exp **531,471** **0** **389,588** **(42,867)** **0**

REVENUES

UTILITY FUND - FUND 600

Budget Summary

SEWER SERVICE

Special Assessments	
	42000

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
42104	Sewer: Contributed Cap Revenue	236,464	0	0	0	0	-----
42201	Sewer Impact Fees	0	0	0	0	0	-----
42202	Sewer Assessments (Holscher)	140,337	150,000	52,918	150,000	140,000	-6.67%
	Total SPECIAL ASSESSMENTS Rev	376,801	150,000	52,918	150,000	140,000	-6.67%

Intergovernmental Revenue	
	43000

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
43560	State - COVID Reimbursement	0	0	0	3,750	0	-----
	Total INTERGOV REVENUES Rev	0	0	0	3,750	0	-----

Public Charges for Services	
	46000

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
46410-101	Residential Use Charges	897,571	939,250	422,880	975,000	1,145,750	21.99%
46410-102	Commercial Use Charges	140,911	140,000	69,983	165,000	170,750	21.96%
46410-103	Multi-Family Use Charges	17,400	34,750	0	0	0	-100.00%
46410-104	Public Authority	24,402	26,000	7,799	27,000	31,750	22.12%
46410-105	Forfeited Discounts	7,760	5,500	627	5,500	5,500	0.00%
46410-106	Residential Fixed Charges	22,760	2,000	294	0	0	-100.00%
46410-107	Commercial Fixed Charges	7,205	250	43	0	0	-100.00%
	Total PUBLIC CHARGES Rev	1,118,009	1,147,750	501,625	1,172,500	1,353,750	17.95%

Miscellaneous Revenue	
	48000

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
48025	Miscellaneous Revenue	85	250	138	250	250	0.00%
48125	Interest	40,818	40,000	9,265	12,500	10,000	-75.00%
48325	Gain/Loss on Sale	0	0	0	0	0	-----
	Total MISC REVENUE Rev	40,904	40,250	9,403	12,750	10,250	-74.53%

Other Financing Sources	
	49000

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
49125	Borrowing Proceeds	0	0	0	0	766,250	-----
49225	Transfers from Other Funds	0	0	0	0	0	-----
49325	Fund Balance Applied	0	68,500	0	68,500	0	-100.00%
	Total OTHER FINAN SOURCES Rev	0	68,500	0	68,500	766,250	1018.61%

Total SEWER SERVICE Revenues	1,535,714	1,406,500	563,946	1,407,500	2,270,250	61.41%
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REVENUES

UTILITY FUND - FUND 600

Budget Summary

WATER SERVICE

Special Assessments
42000

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
42101	Water Impact Fees	53,300	60,000	27,302	60,000	55,000	-8.33%
42102	Water Assessments (Holscher)	58,071	70,000	30,185	70,000	60,000	-14.29%
42103	Water: Contributed Cap Revenue	190,232	0	0	0	0	-----
	Total SPECIAL ASSESSMENTS Rev	301,603	130,000	57,487	130,000	115,000	-11.54%

Public Charges for Services
46000

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
46450-101	Residential Use Charges	514,420	500,000	240,453	500,000	582,500	16.50%
46450-102	Commercial Use Charges	63,598	57,000	27,222	55,000	66,500	16.67%
46450-103	Multi-Family Use Charges	39,175	37,000	17,676	37,000	43,500	17.57%
46450-104	Public Authority	15,877	15,250	3,428	8,500	17,750	16.39%
46450-105	Forfeited Discounts	4,143	3,250	(271)	2,500	3,250	0.00%
46450-108	Public Fire Protection	325,092	335,000	167,500	325,000	325,000	-2.99%
46450-109	Private Fire Protection	35,527	30,000	17,554	32,000	34,000	13.33%
46450-110	Other Water Revenues	94,439	90,000	59,643	115,000	115,000	27.78%
46450-111	Unmetered Sales to Gen Cust	3,405	2,000	1,899	3,000	2,500	25.00%
	Total PUBLIC CHARGES Rev	1,095,676	1,069,500	535,104	1,078,000	1,190,000	11.27%

Miscellaneous Revenue
48000

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
48050	Miscellaneous Revenue	231	250	347	250	250	0.00%
48150	Interest	40,762	40,000	9,265	12,500	10,000	-75.00%
48350	Gain/Loss on Sale	(287)	0	0	0	0	-----
	Total MISC REVENUE Rev	40,706	40,250	9,612	12,750	10,250	-74.53%

Other Financing Sources
49000

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
49150	Borrowing Proceeds	0	710,000	0	645,000	0	-100.00%
49250	Transfers from Other Funds	0	0	0	0	0	-----
49350	Fund Balance Applied	0	0	0	343,000	325,500	-----
	Total OTHER FINAN SOURCES Rev	0	710,000	0	988,000	325,500	-54.15%

Total WATER SERVICE Revenues	1,437,985	1,949,750	602,203	2,208,750	1,640,750	-15.85%
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Total Budget Revenues	2,973,699	3,356,250	1,166,148	3,616,250	3,911,000	16.53%
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SEWER SERVICE

UTILITY FUND - FUND 600

MISSION STATEMENT:

To provide efficient and high quality sanitary sewer service to the Village Utility customers while holding costs and minimizing impacts to the residents.

PROGRAM DESCRIPTION:

The Sewer Service provides sanitary sewer services to residential and commercial properties within the Village. The sewer mains connect to nearly every building throughout the Village in order to convey the wastewater to the Madison Metropolitan Sewerage District for treatment. The Utility has 1/3 of the main lines cleaned and televised on a yearly basis with the intent of keeping the sewer lines clean and functional for all users.

PROGRAM OBJECTIVES:

- Continue to improve efficiency through billing and collection system in online program.
- Review and consider options for management and mitigation of wastewater treatment standards.

SEWER SERVICE BUDGET SUMMARY

REVENUES

	2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
Allocated Revenues	1,288,850	1,406,500	438,800	1,502,684	2,270,250	61.41%

Notes:

- 42202** Each time a building permit is taken out for new home construction in Juniper Ridge or Prairie Place Subdivision, an assessment is collected by the Village in order for each new home built to pay a share of the cost to reconstruct Holscher Road from a rural to urban cross section. New home construction has been very high the last several years which has increased collections during this time. The assessment also includes a share of the cost for a lift station that was constructed to support these developments.
- 46410** These are the main categories for user charges that customers of the utility pay for sanitary sewer service in order to treat wastewater. They are billed based upon water usage which increased in 2019. This budget is presented with the rate increase that was approved in 2020 as well.
- 101-103**
- 106, 107**
- 49325** Fund balance is suggested to cover the Sewer Service share of capital expenses in Fund 400. There are no large capital sewer projects and this would avoid the need to borrow for these funds or raise rates higher than is necessary next year.

SEWER SERVICE (continued)

UTILITY FUND - FUND 600

EXPENDITURES

ADMINISTRATION

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
	53610						
110	Salaries	88,046	60,750	49,424	90,000	100,000	64.61%
120	Part-Time	4,142	5,750	6,375	75,000	7,750	34.78%
130-135	Employee Pensions and Benefits	24,607	29,250	18,460	33,250	38,250	30.77%
210	Support Services	12,171	25,000	21,242	40,000	25,000	0.00%
211	Consultant Services	11,979	15,000	9,828	15,000	15,000	0.00%
221	Communication	0	0	421	1,200	1,500	-----
310	Office Supplies	5,533	6,500	2,245	4,000	5,000	-23.08%
311	Postage	2,590	2,750	1,606	2,750	2,750	0.00%
320	Dues and Subscriptions	0	500	175	500	500	0.00%
321	Printing/Publication	1,742	3,000	636	1,000	1,500	-50.00%
330	Meeting Expenses	126	500	(50)	250	500	0.00%
331	Training Expenses	1,395	1,250	(192)	250	1,500	20.00%
340	Operating Supplies	49	250	796	2,500	1,000	300.00%
510	Insurance	41,991	42,000	43,730	43,730	44,000	4.76%
515	Retiree Contribution	1,315	10,000	0	0	10,000	0.00%
530	Rent	81,707	46,000	23,000	46,000	50,000	8.70%
	Total ADMINISTRATION Exp	277,395	248,500	177,696	355,430	304,250	22.43%

Notes:

- 110-120** These include expenses generally applied from salaries from those positions that oversee general operations and administration of sanitary sewer services.
- 130-135** The proportionate rate of benefit costs are also applied to these line items including Health Insurance, Retirement, Social Security, and Other Fringe Benefits.
- 210** Includes funds for a share in the expenses of the network administration, accounting software, auditing, diggers hotline, equipment leases, attorney bills, PSN, and other similar service drive needs.
- 211** The funding for the engineer is included within this line item for assistance they provide on sanitary projects.
- 321** Printing charges associated with the preparation of utility bills and various subscriptions.
- 340** This account contains funding for the daily operations related to the sewer. Such items include nuts and bolts, wood, rentals, tool repairs, rags, degreasers, chemicals, floor dry and other miscellaneous supplies.

METER READING

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
	53611						
110	Salaries	4,303	8,500	0	7,000	10,000	17.65%
120	Part-Time	459	13,750	110	12,000	12,500	-9.09%
130-135	Employee Pensions and Benefits	690	1,500	8	5,000	7,250	383.33%
210	Support Services	25	6,500	0	1,500	1,500	-76.92%
311	Postage	536	1,500	494	1,000	1,000	-33.33%
340	Operating Expenses	0	250	731	1,000	1,000	300.00%
	Total METER READING Exp	6,013	32,000	1,342	27,500	33,250	3.91%

Notes:

- 110** Some funding from the Administration Department is allocated to this line to account for their assistance in the meter reading process including billing and collections.
- 120** A portion of the cost for the Utility Clerk and Meter reader are provided within this line item.

SEWER SERVICE (continued)

UTILITY FUND - FUND 600

EXPENDITURES (continued)

MISCELLANEOUS

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
	53612						
390	Miscellaneous	5,915	20,000	1,080	1,500	15,000	-25.00%
391	Programming	0	1,000	0	0	250	-75.00%
540	Depreciation	151,152	0	0	0	0	-----
541	Amortization	(2,771)	0	0	0	0	-----
	Total MISCELLANEOUS Exp	154,296	21,000	1,080	1,500	15,250	-27.38%

Notes:

390 Formerly referred to as the "Operating Contingency", this account is used to address expenses that were not expected or anticipated.

391 New for 2019, this line item is presented to provide some money for the Department to create programs, provide education, and otherwise interact with the public regarding the sewer service such as public events.

DEBT SERVICE

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
	53613						
610	Principal Payment	0	175,000	0	175,000	180,000	2.86%
620	Interest Payment	22,750	19,500	9,725	19,450	15,750	-19.23%
690	Other Debt Service	0	0	0	0	0	-----
	Total DEBT SERVICE Exp	22,750	194,500	9,725	194,450	195,750	0.64%

Notes:

610-620 There was no borrowing in 2018 and no borrowing is projected in 2019. This represents the Sewer's share of the current debt expense within the Utilities Fund.

CAPITAL PROJECTS

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
	53614						
590	Facility Reserve - Collection System	0	0	0	0	35,500	-----
593	Equipment Reserve - Replacement	0	0	0	0	22,000	-----
822	Capital - Sewer	1,584	68,500	0	68,500	766,250	1018.61%
	Total CAPITAL PROJECTS Exp	1,584	68,500	0	68,500	823,750	1102.55%

Notes:

590 Early in 2020 a rate increase was approved to also allow for reserve allocations to go towards future collection system replacements. The number targeted at the time was \$125,000 annually to be assigned for this purpose; however, what is projected in 2021 is short of that number based on the projected availability of funds and expenses. The creation and growth of this fund balance will help to limit future debt service.

593 The rate increase also provided an allocation for future equipment replacement savings. The number included in the budget is what was projected in the analysis. The creation and growth of this fund balance will help to limit future debt service.

822 The main capital project for 2021 includes the Eastside Interceptor Project that is scheduled to begin construction in January. Also includes funds for normal shares in applicable equipment and vehicles.

SEWER SERVICE (continued)

UTILITY FUND - FUND 600

EXPENDITURES (continued)

TRANSPORTATION

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
	53615						
130-135	Employee Pensions and Benefits	54	9,000	0	10,000	11,000	22.22%
210	Support Services	708,445	721,000	191,109	730,000	760,500	5.48%
220	Utilities	8,328	9,500	3,974	8,000	9,500	0.00%
240	Equipment Maintenance	414	1,500	175	250	1,000	-33.33%
340	Operating Supplies	268	750	18	250	500	-33.33%
341	Fuel	1,314	6,000	493	1,500	1,500	-75.00%
	Total TRANSPORTATION Exp	718,822	747,750	195,768	750,000	784,000	4.85%

Notes:

- 210** This represents the charges for treatment services paid to MMSD. They set the rates which are then passed on to our customers through the billing process. Their rates are projected to increase around 5.5% in 2021 with our projection slightly higher than that for the coming year.
- 240** This account covers such items as pump repairs and other services related to sewerage pumping.
- 340** Welding supplies, pump parts, oil/grease, nuts/bolts, and other items needed for maintenance.

SYSTEM MAINTENANCE

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
	53616						
110	Salaries	49,709	39,500	25,062	50,124	52,500	32.91%
124	Seasonal	0	1,750	0	1,500	1,500	-14.29%
130-135	Employee Pensions and Benefits	18,927	12,000	9,590	19,180	22,500	87.50%
220	Utilities	0	0	0	0	0	-----
241	Vehicle Maintenance	5,533	5,000	6,455	12,000	10,000	100.00%
242	Facility Maintenance	13,419	25,000	8,963	15,000	20,000	-20.00%
340	Operating Supplies	17,969	8,000	2,133	5,000	5,000	-37.50%
341	Fuel	2,434	3,000	987	2,500	2,500	-16.67%
	Total SYSTEM MAINTENANCE Exp	107,990	94,250	53,189	105,304	114,000	20.95%

Notes:

- 110** Maintenance is conducted by Village Staff for the infrastructure and equipment that moves the wastewater through the system. Time is spent to clean, check, monitor, and make adjustments in order to make sure the flow is consistent and steady to the treatment plant.
- 242** Charges to this account include cleaning supplies, HVAC work, light bulbs, minor repairs, roof repairs, plumbing, and other items needed to maintain facilities containing sanitary infrastructure.

Total SEWER SERVICE Expenses	1,288,850	1,406,500	438,800	1,502,684	2,270,250	61.41%
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WATER SERVICE

UTILITY FUND - FUND 600

MISSION STATEMENT:

To provide efficient and high quality water service to the Village Utility customers while holding costs and minimizing impacts to the residents.

PROGRAM DESCRIPTION:

The Water Utility provides drinking water service to the residents of the Village. The Utility tests the water on a daily, weekly, monthly, and yearly basis as required by the Department of Natural Resources. The water mains connect to nearly every building throughout the Village. The Utility flushes all water mains throughout the Village on a year basis, turns one third of all the water main valves annually, and monitors condition of the pipes in order to provide quality drinking water to its customers.

PROGRAM OBJECTIVES:

- Continue to improve efficiency through billing and collection system in online program.
- Limit or prevent all service outages as available and practicable through the capital improvement program and responsive service to main breaks.

WATER SERVICE BUDGET SUMMARY

REVENUES		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
	Allocated Revenues	1,153,378	1,949,750	337,760	2,156,433	1,640,750	-15.85%

Notes:

- 42101** The Water Service charges an impact fee on new home construction to help fund future water infrastructure needs including wells, mains, and water towers as applicable.
- 42102** Each time a building permit is taken out for new home construction in Juniper Ridge or Prairie Place Subdivision, an assessment is collected by the Village in order for each new home built to pay a share of the cost to reconstruct Holscher Road from a rural to urban cross section. New home construction has been very high the last several years which has increased collections during this time. The assessment also includes a share of the cost for a lift station that was constructed to support these developments.
- 46450** These are the main categories for user charges that customers of the utility pay for drinking water service. They are billed based upon water usage collected at the water meter which did increase in 2019. The Public Utilities Committee is in the middle of a full rate case of our water rates in late 2020 which will likely increase these numbers for 2021 based on when its implemented.

WATER SERVICE (continued)

UTILITY FUND - FUND 600

EXPENDITURES

ADMINISTRATION

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
	53710						
110	Salaries	82,531	60,750	44,074	88,149	100,000	64.61%
120	Part-Time	4,142	5,500	6,375	12,750	7,750	40.91%
130-135	Employee Pensions and Benefits	16,774	49,500	15,783	31,565	38,250	-22.73%
210	Support Services	30,860	50,000	27,831	50,000	42,500	-15.00%
211	Consultant Services	9,316	15,000	12,799	23,000	25,000	66.67%
221	Communication	0	500	421	1,000	1,500	200.00%
240	Equipment Maintenance	0	0	0	0	0	-----
310	Office Supplies	6,408	4,750	2,245	4,000	4,500	-5.26%
311	Postage	1,872	1,250	1,606	3,000	3,000	140.00%
320	Dues and Subscriptions	0	500	175	500	500	0.00%
321	Printing/Publication	5,750	7,500	3,145	5,500	6,000	-20.00%
330	Meeting Expenses	126	250	(50)	350	500	100.00%
331	Training Expenses	2,166	2,250	(192)	2,500	2,500	11.11%
340	Operating Supplies	49	250	814	2,500	2,500	900.00%
341	Fuel	2,533	7,500	987	2,500	3,000	-60.00%
510	Insurance	72,648	73,000	68,201	73,000	75,000	2.74%
515	Retiree Contribution	1,315	10,000	0	0	10,000	0.00%
530	Rent	46,000	46,000	23,000	46,000	50,000	8.70%
	Total ADMINISTRATION Exp	282,489	334,500	207,214	346,314	372,500	11.36%

Notes:

- 110-120** These include expenses generally applied from salaries from those positions that oversee general operations and administration of water services.
- 130-135** The proportionate rate of benefit costs are also applied to these line items including Health Insurance, Retirement, Social Security, and Other Fringe Benefits.
- 210** Includes funds for a share in the expenses of the network administration, accounting software, auditing, diggers hotline, equipment leases, attorney bills, PSN, and other similar service drive needs.
- 211** The funding for the engineer is included within this line item for assistance they provide on water projects.

METER READING

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
	53711						
110	Salaries	4,174	8,500	0	8,500	10,000	17.65%
120	Part-Time	2,084	13,750	721	12,500	12,500	-9.09%
124	Seasonal	0	0	0	0	0	-----
130-135	Employee Pensions and Benefits	1,477	2,000	176	2,000	7,250	262.50%
210	Support Services	25	1,500	0	1,500	1,500	0.00%
311	Postage	677	1,500	494	1,000	1,000	-33.33%
340	Operating Expenses	(12)	250	731	1,000	1,000	300.00%
	Total METER READING Exp	8,425	27,500	2,121	26,500	33,250	20.91%

Notes:

- 110** Some funding from the Administration Department is allocated to this line to account for their assistance in the meter reading process including billing and collections.
- 120** A portion of the cost for the Utility Clerk and Meter reader are provided within this line item.

WATER SERVICE (continued)

UTILITY FUND - FUND 600

EXPENDITURES (continued)

MISCELLANEOUS

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
	53712						
390	Miscellaneous	5,087	42,000	1,099	5,000	30,000	-28.57%
391	Programming	0	500	0	250	2,500	400.00%
540	Depreciation	314,832	0	0	0	0	-----
541	Amortization	(4,485)	0	0	0	0	-----
591	Tax Equivalency	263,685	250,000	0	250,000	265,000	6.00%
	Total MISCELLANEOUS Exp	579,119	292,500	1,099	255,250	297,500	1.71%

Notes:

- 390** Formerly referred to as the "Operating Contingency", this account is used to address expenses that were not expected or anticipated.
- 391** New for 2019, this line item is presented to provide some money for the Department to create programs, provide education, and otherwise interact with the public regarding the water service to promote proper waterworks operations and usage.
- 591** The Water Service pays a tax equivalency to the general fund which amounts to a payment in lieu of taxes for what the value of their land and improvements would be if they were not tax-exempt.

DEBT SERVICE

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
	53713						
610	Principal Payment	0	240,000	0	240,000	385,000	60.42%
620	Interest Payment	34,016	52,750	29,580	52,794	56,500	7.11%
690	Other Debt Service	15,402	0	10,235	10,235	0	-----
	Total DEBT SERVICE Exp	49,418	292,750	39,815	303,029	441,500	50.81%

Notes:

- 610-620** There is a borrowing anticipated in 2020 similar to what was borrowed in 2020. This represents the Water's share of the current debt expense within the Utilities Fund.

CAPITAL PROJECTS

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
	53714						
822	Capital - Water	21,299	766,000	0	988,000	233,500	-69.52%
	Total CAPITAL PROJECTS Exp	21,299	766,000	0	988,000	233,500	-69.52%

Notes:

- 822** There are 2 water main replacement projects completed in 2020. These costs also represent a share in equipment and vehicle purchases in 2020. Proposed to be offset with borrowed money and revenue generated within the operating year.

WATER SERVICE (continued)

UTILITY FUND - FUND 600

EXPENDITURES (continued)

SUPPLY

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
	53715						
110	Salaries	0	0	0	0	0	-----
130-135	Employee Pensions and Benefits	22,058	0	0	0	0	-----
210	Support Services	1,113	2,500	3,559	6,000	5,000	100.00%
340	Operating Supplies	0	2,500	13	250	250	-90.00%
	Total SUPPLY Exp	23,171	5,000	3,572	6,250	5,250	5.00%

Notes:

210 Expenses related to PSN charges and chemical testing.

340 Expenses mainly provided for various testing and monitoring of the water supply.

PUMPING

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
	53716						
110	Salaries	12,749	17,500	4,582	9,164	10,000	-42.86%
124	Seasonal	0	0	0	0	0	-----
130-135	Employee Pensions and Benefits	5,948	8,000	1,459	2,918	5,000	-37.50%
220	Utilities	37,807	40,000	21,154	45,000	45,000	12.50%
242	Facility Maintenance	4,334	3,500	2,755	6,000	6,000	71.43%
340	Operating Supplies	14,230	5,500	4,411	8,500	10,000	81.82%
	Total PUMPING Exp	75,068	74,500	34,361	71,582	76,000	2.01%

Notes:

110 Village Staff monitors and maintains pumping equipment to ensure water is distributed from the water supply to the piping system through the high capacity wells.

220 Associated energy costs to keep the wells operating non-stop for continuous water supply throughout the Village.

TREATMENT

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
	53717						
110	Salaries	16,475	7,500	0	7,500	11,500	53.33%
124	Seasonal	0	0	0	0	0	-----
130-135	Employee Pensions and Benefits	6,984	7,500	0	7,500	7,500	0.00%
242	Facility Maintenance	587	2,000	174	1,000	1,000	-50.00%
340	Operating Supplies	11,726	12,500	7,419	15,000	15,000	20.00%
	Total TREATMENT Exp	35,772	29,500	7,593	31,000	35,000	18.64%

Notes:

340 Supplies include chemicals added to the water by Village Staff as part of the distribution within the system.

WATER SERVICE (continued)

UTILITY FUND - FUND 600

EXPENDITURES (continued)

TRANSMISSION AND DISTRIBUTION

		2019 Actual	2020 Budget	YTD 6/30/2020	2020 Projected	2021 Budget	% Change vs. 2020
	53718						
110	Salaries	7,509	14,000	14,352	28,704	30,000	114.29%
124	Seasonal	0	3,250	0	0	0	-100.00%
130-135	Employee Pensions and Benefits	12,720	17,000	8,533	17,066	20,000	17.65%
241	Vehicle Maintenance	5,533	5,000	6,629	13,000	15,000	200.00%
340	Operating Supplies	1,265	4,000	1,017	2,000	2,500	-37.50%
341	Fuel	1,223	1,250	493	1,250	1,250	0.00%
590	Facility Reserve (Water Tower)	0	27,500	0	27,500	27,500	0.00%
822-101	Maintenance - Mains	28,315	30,000	2,963	5,925	30,000	0.00%
822-102	Maintenance - Services	8,359	5,000	2,158	4,316	5,000	0.00%
822-103	Maintenance - Meters	6,356	6,500	1,201	2,402	5,000	-23.08%
822-104	Maintenance - Hydrants	7,337	14,000	4,639	9,279	10,000	-28.57%
	Total TRANS & DISTR Exp	78,617	127,500	41,986	128,508	146,250	14.71%

Notes:

- 110** A bulk of the Village Staff time is devoted to making sure the water is delivered to the home. This line accounts for their time regarding responsibilities for transmission and distribution.
- 241** Funds to repair and maintain vehicles used in the operation of the water utility.
- 341** Fuel for the vehicles used in the operation of the transmission and distribution system.
- 590** Annually the Village reserves funds from its operating budget towards future replacement and/or maintenance of the water tower.
- 822** These are the expenses for specifically repairing, replacing, and generally maintaining the main infrastructure within the system including the mains, services, meters, and hydrants.
- 101-104**

Total WATER SERVICE Expenses	1,153,378	1,949,750	337,760	2,156,433	1,640,750	-15.85%
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