



CITY OF FITCHBURG

Planning Department

5520 Lacy Road
Fitchburg, WI 53711-5318

Phone: (608) 270-4256 ■ Fax: (608) 270-4275

www.fitchburgwi.gov

**NOTICE
PUBLIC HEARING
August 20, 2024**

PLEASE TAKE NOTICE that the Plan Commission of the City of Fitchburg, Dane County, Wisconsin will hold a public hearing on **Tuesday, August 20th, 2024 at 6:30 p.m.** in the Fitchburg City Hall, 5520 Lacy Road, Fitchburg, WI 53711 on Conditional Use request CU-2563-24 by Wade Wyse, Agent for Tim O'Brien, to obtain a Drinking Places and Restaurant conditional use permit in association with an athletic facility, specifically pickleball, on property associated with 2747 S Seminole Highway, fully described as:

Part of Lot 2 of CSM 8023

At the above indicated time, all interested persons will be given an opportunity to speak.

July 24, 2024
Date

Zack Jones
Associate Planner

For publication in the Wisconsin State Journal legals on Tuesday, August 6, 2024 and Tuesday, August 13, 2024.



City of Fitchburg
 Planning/Zoning Department
 5520 Lacy Road
 Fitchburg, WI 53711
 (608-270-4200)

ARCHITECTURAL & DESIGN REVIEW APPLICATION

Applicant/Contact Person: Pam Hegg

Address: _____ **Phone Number of Contact Person:** 608-628-0058

City, State, Zip Code: _____ **Email of Contact Person:** pam.hegg2@gmail.com

Project Address: 2747 S Seminole Highway **Lot:** _____ **Subdivision:** _____

Project Type: _____ **Multi-Family** **Commercial** _____ **Industrial** _____ **Other**
 _____ **New** _____ **Addition**

Impervious Surface Ratio (ISR): 52% (City Standard: maximum 65% ISR)

All items listed below must be included with the application to be considered complete. If an item is not included with the application, the applicant must provide in writing the basis for not including it. Building and site plans submitted to the Fitchburg Plan Commission for architectural and design review shall contain the following information:

Site Data:

- 1. Lot or property dimensions.
- 2. Orientation (to north).
- 3. Adjacent highways, roads, drive, etc.
- 4. Existing natural features (rivers, ponds, wetlands).
- 5. Existing buildings and/or improvements.
- 6. Existing and proposed site drainage.
- 7. Utility plans, including main/lateral sizes and existing fire hydrants on site or within 300 feet of the site
- 8. ISR shall be indicated on all plans.
- 9. Stormwater management plans and details, including grading plan.
- 10. Lighting plan in footcandles and light fixture cut sheets.

Building:

- 1. Building size, configuration and orientation.
- 2. Distance from lot lines.
- 3. Distance from other buildings, improvements and natural features.
- 4. Location of well, septic tank, drainfield, etc. (if applicable)
- 5. Additional proposed additions or new structures, including trash/recycling enclosure(s).
- 6. Construction type (wood frame, structural steel, etc.).
- 7. Foundation type (full basement, slab on grade, etc.).
- 8. Number of levels.
- 9. Siding/exterior covering type, color, texture, etc.
- 10. Roof type (gable, hip, shed, flat, etc.) and pitch.
- 11. Roofing material type, color, texture, etc.
- 12. Exterior door and window location, size, type, etc.
- 13. Fire protection sprinklers or fire alarm systems.

Ingress, Egress, Parking:

- 1. Location of highway and road access points.
- 2. Location, size, configuration of drivers and walks.
- 3. Number, size, location of parking spaces.
- 4. Location of handicapped parking and accessible building entrances.
- 5. Bicycle rack(s).

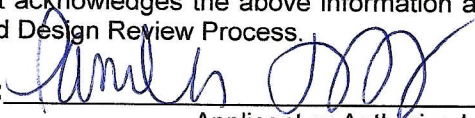
Landscaping:

- 1. Location, species, size of existing trees, shrubs, and plantings.
- 2. Location, species, size of proposed plantings.
- 3. Location and size of all paved, seeded/sodded and gravelled areas.
- 4. Location of all retaining walls, fences, berms and other landscape features.

***It is highly recommended that an applicant hold at least one neighborhood meeting prior to submitting an ADR application to identify any concerns or issues of surrounding residents.**

The preceding information is considered to be the minimum information for submission, and the City may require additional information for its review. Any interpretations provided by city officials as the result of submitting the attached information are based on the submitted plans, and any plan changes, may affect the interpretations.

It is the responsibility of the owner/applicant to insure compliance with all local and state requirements. The below signed applicant acknowledges the above information and hereby submits the attached information for the City's Architectural and Design Review Process.

Signed:  Date: 7/22/24
Applicant or Authorized Agent

***** Application shall be accompanied by one (1) sets of full-size plans, two (2) sets no larger than 11"x17", and one (1) pdf document of the complete submittal to planning@fitchburgwi.gov. Applications are due at least 4 weeks prior to the desired Plan Commission Meeting. The time frame assumes a complete set of plans is provided, and if it is not provided the Plan Commission date will be adjusted.**

FOR CITY USE ONLY

Date Received: _____ Plan Commission Date: _____

Comments:

Letter of Intent
June 18, 2024

New CSM and Zoning Change Proposal

Proposed and prepared by

Gus Newcomb
999 Fourier Drive
Madison, WI 53717

(608) 833 5220

Civil Engineer / Surveyor

Wyser Engineering
300 E. Front St.
Mount Horeb WI 53572

STATEMENT OF RATIONALE

The property, commonly known now as 2747 South Seminole Highway, Fitchburg, WI is currently zoned AG and designated as future commercial in Fitchburg's comprehensive plan. We are proposing a zoning change to BG that would allow for the operation of a roughly 34,000 square foot pickle ball recreation facility and a 3-story mixed use building with roughly 5,000 square feet of commercial space and 36 apartment units.

Pickleball is played on a court smaller than a tennis court and with a ball that travels slower than a tennis ball. These, along with other factors make the sport accessible and contribute to the growth of the sport. The increase in pickleball popularity has caused the formation of indoor recreation facilities across the United States. This pickleball recreation facility will come equipped with a restaurant and aims to host tournaments and rent court space.

PROJECT DESCRIPTION

The indoor pickleball facility will sit on roughly two (2) acres and feature 13 pickle ball courts, a restaurant bar, and men's & women's locker rooms inside the 33,554 square foot facility. One parking stall will be built for every ~550 square feet of building space, totaling 61 stalls.

FLAG LOT

The shape of the property, along with other unique characteristics make the pickleball lot a strong candidate for a flag lot. Due to the positioning of the Badger State Trail bike path which runs along the west side of the property, we cannot do a public through drive street giving the pickleball building street frontage. We will situate the pickleball facility on a flag lot to give them the required public street frontage.

OUTDOOR SPACE

We are constructing an outdoor patio of 1200 square feet. The patio area will be accessible by garage door extending outside from the bar area. The patio will be equipped with furniture, sunshades, and gas fire pits.

The commercial space in the mixed use building will feature a small patio on the southern side of the building to serve as outdoor seating for a restaurant.

HOURS OF OPERATION / NUMBER OF EMPLOYEES

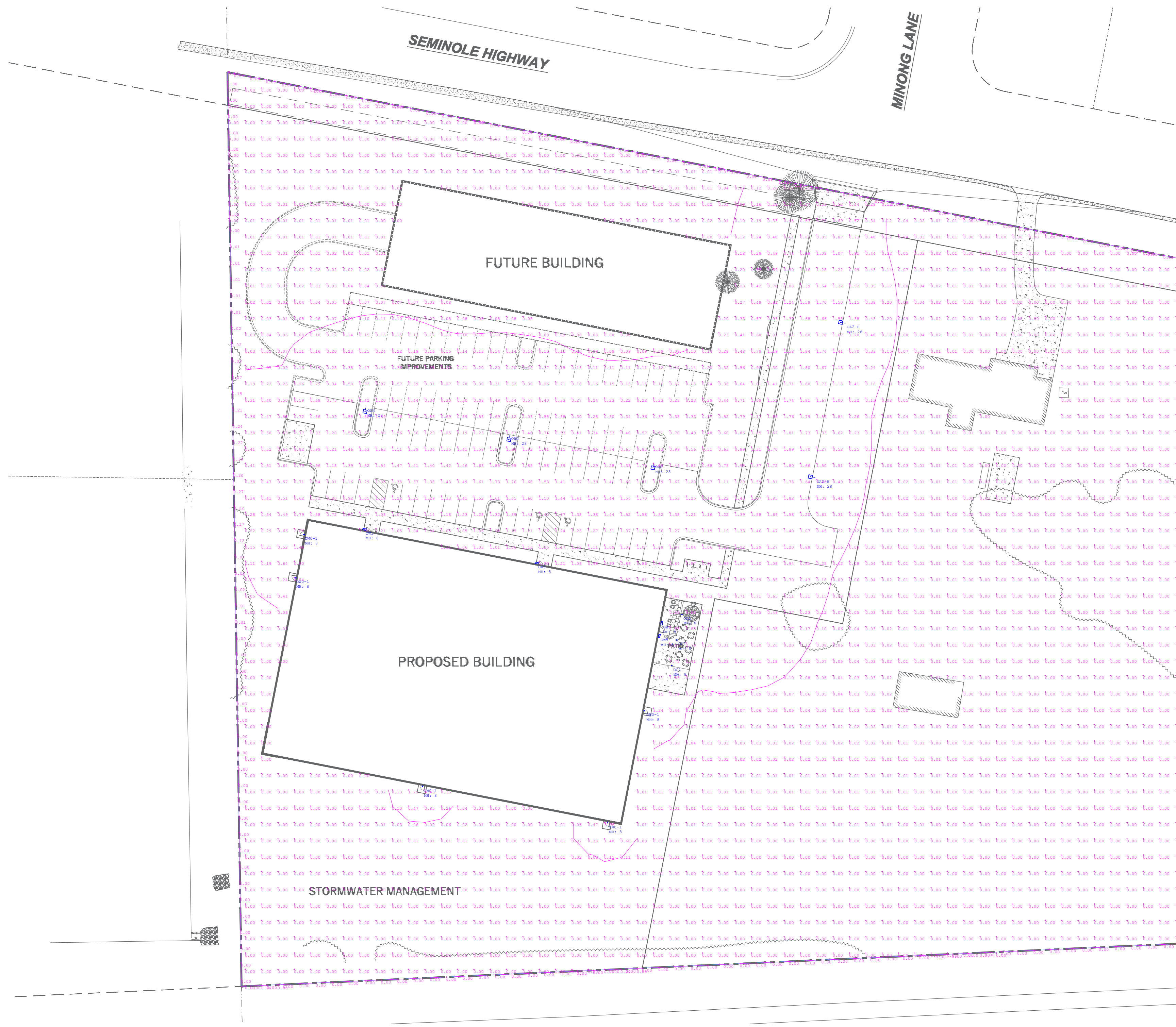
The pickleball business will operate with 10 to 20 part-time and full-time employees. Normal business hours will be from 7am to 10pm each day.

CONSTRUCTION TIMELINE

We will begin construction of the pickleball facility in October 2024 with completion in October 2025.

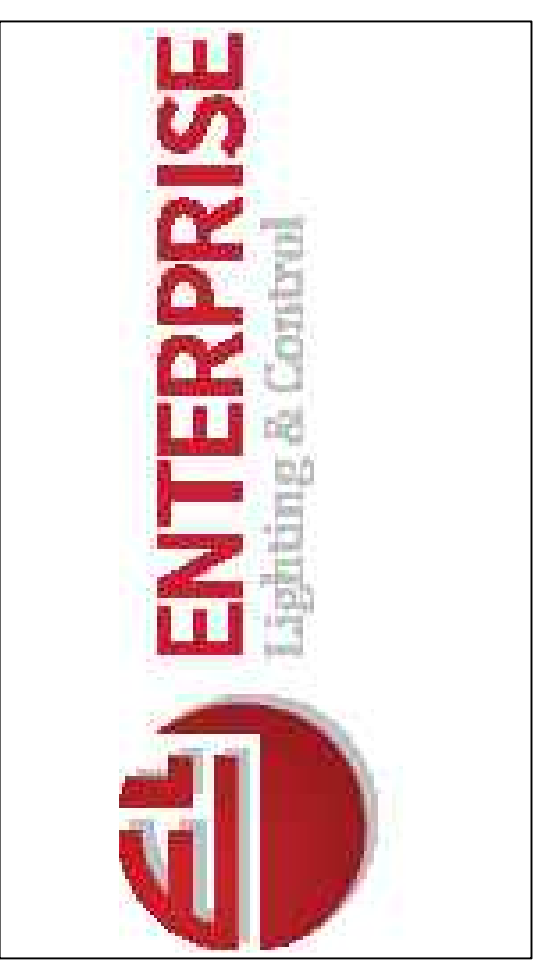
NOTES:

- Customers are responsible for confirming mounting heights, fixture suspension types/ lengths, color temperature, CRI, linear fixture lengths, pole lengths, and bollard heights/ lengths prior to ordering.
- Mounting height (MH) is measured from the bottom of the fixture to the floor.
- This Lighting layout assumes the following unless values are specified and must be confirmed by the customer prior to ordering.
 - Color Temperature is 4000K
 - Room reflectance of 80, 50, 20 for standard ceilings and 50, 50, 20 for exposed ceilings
 - Wall sconces are mounted at 7 feet for calculations.



Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
PROPERTY LINE	illuminance	Fc	0.03	0.37	0.00	N.A.	N.A.
SITE	illuminance	Fc	0.26	9.83	0.00	N.A.	N.A.
DRIVES	illuminance	Fc	1.45	1.9	0.6	2.42	3.17
PARKING LOT	illuminance	Fc	1.36	1.9	0.6	2.27	3.17
PATIO	illuminance	Fc	3.08	9.8	0.4	7.70	24.50

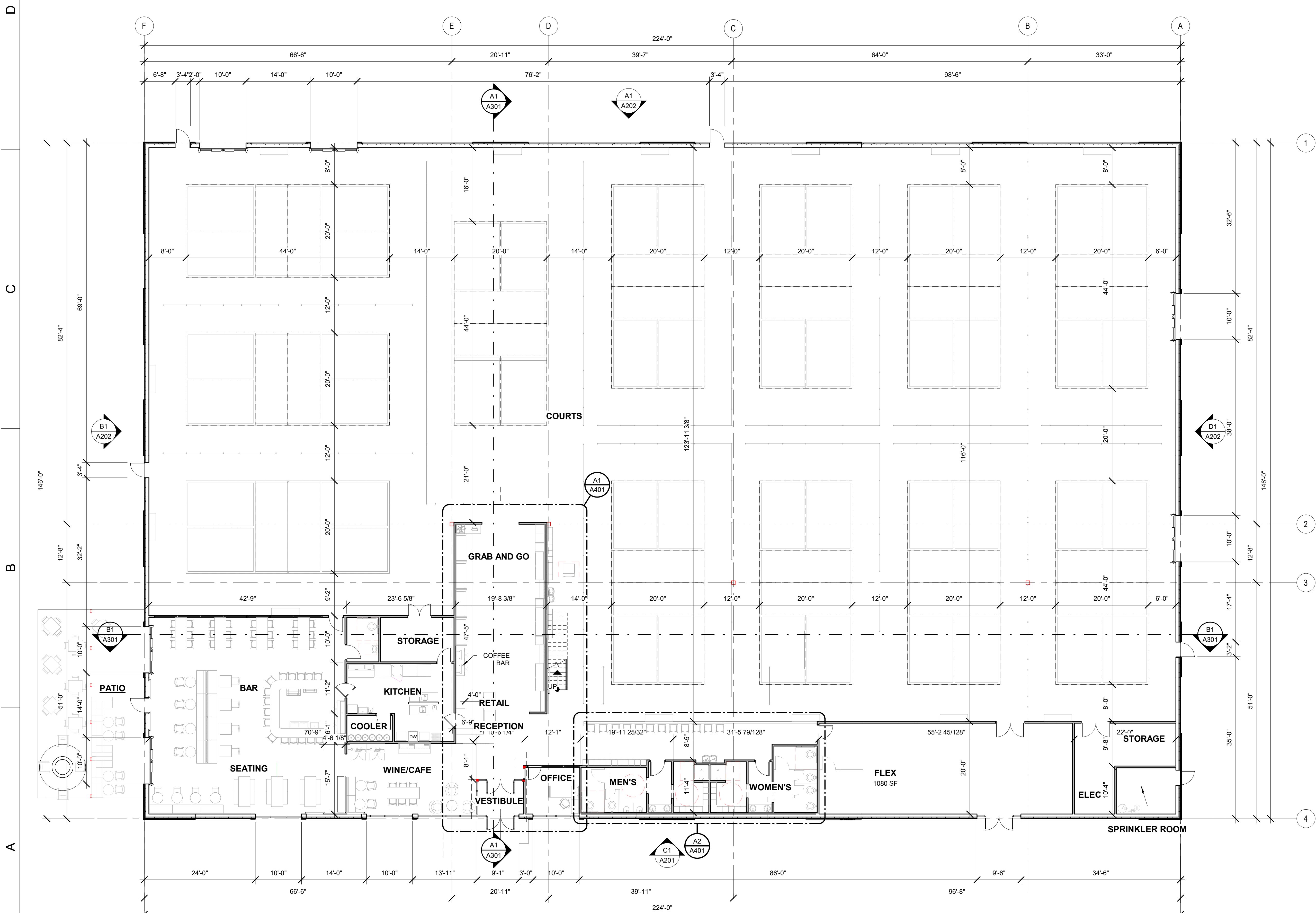
Qty	Label	Arrangement	LLF	MFR	Description	Lum. Watts	Total Watts	Lum. Lumens
2	OA2-H	SINGLE	0.950	LITHONIA	DSX1 LED P3 xXK 70CRI T2M (Voltage) (Mounting) HS (Finish) -25FT POLE -3FT BASE	102.17	204.34	11804
3	OA4	SINGLE	0.950	LITHONIA	DSX1 LED P3 xXK 70CRI T4M (Voltage) (Mounting) (Finish) -25FT POLE -3FT BASE	102.17	306.51	13967
3	OC1	SINGLE	0.950	FC OUTDOOR	FCC400-10-SF-90x-10L-(Finish)-72-LD	11.58	34.74	1035
5	OWD-1	SINGLE	0.950	LITHONIA	WPX0 LED ALO-1 SWW2 MV/OLT PE DDBXD	6.0096	30.048	829
4	OW5	SINGLE	0.950	G-LIGHTING	GL-6550-E4-(Finish)	13	78	489



#	DATE	COMMENTS
REVISIONS		

DRAWN BY : DC
 DATE : JULY 23, 2024
 SCALE : 1" = 40'-0"

COURT AND CORK PICKLEBALL
 FITCHBURG, WISCONSIN
 SITE LIGHTING PLAN



A1 FIRST FLOOR PLAN
3/32" = 1'-0"

COURT AND CORK PICKLEBALL
NEW FACILITY
2747 SEMINOLE HWY
FITCHBURG, WI

Project Status

PROJ. #	24001-01
© SKETCHWORKS ARCHITECTURE 2024	
PLAN NORTH	
TRUE NORTH ROTATION	
0' 4' 8' 16'	
0' 3/16" 3/4" 1 1/2"	
SCALE: 3/32" = 1'-0"	

PROJ. #	24001-01
© SKETCHWORKS ARCHITECTURE 2024	
PLAN NORTH	
TRUE NORTH ROTATION	
0' 4' 8' 16'	
0' 3/16" 3/4" 1 1/2"	
SCALE: 3/32" = 1'-0"	

FIRST FLOOR PLAN

A101

7/23/2024 8:42:23 AM Autodesk Docs\Courts and Cork Pickleball\Courts and Cork Pickleball.rvt



Conditional Use - Owner or Authorized Agent Acknowledgement

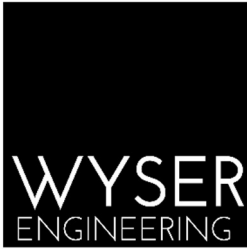
** It is highly recommended that an applicant hold at least one neighborhood meeting prior to submitting a CUP application to identify any concerns or issues of surrounding residents.

PLEASE NOTE - Applicants shall be responsible for legal or outside consultant costs incurred by the City. Submissions shall be made at least four (4) weeks prior to desired plan commission meeting.

By signing below, I certify that the information included with this Conditional Use application is true and correct, to the best of my knowledge. Any agent signing below verifies that he/she has the consent of the owner to file the application.

Owner's or Authorized Agent's Signature

Date (DD/MM/YYYY)



STORMWATER MANAGEMENT REPORT & EROSION CONTROL PLAN

Court and Cork Pickleball

July 23, 2024

Prepared For: Newcomb

Wyser Engineering Project No.: 24-1243

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5.0	Erosion Control Analysis / Design
6.0	Conclusion

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Appendix C	Proposed Construction Plans
Appendix D	Pre-development Hydrologic Modeling
Appendix E	Post Development Hydrologic Modeling
Appendix F	Water Quality and Infiltration Modeling
Appendix G	Universal Soils Loss Equation Worksheet(s)
Appendix H	Declaration of Conditions, Covenants and Restrictions for Maintenance of Stormwater Management Measures
Appendix I	Stormwater Management and Erosion Control Best Management Practice Preliminary Opinion of Probable Construction Costs

Future questions and comments can be directed to:

Kate Meagher, P.E.
Water Resource Engineer
kate.meagher@wyserengineering.com
(608) 437-1865

Wyser Engineering, LLC
300 E. Front Street
Mount Horeb, WI 53572

1.0 Introduction

New commercial developments are being proposed at the northwest corner of Lacy Road and Seminole Highway in the City of Fitchburg. A CSM is being proposed with the development to split the existing agricultural farmstead into 3 lots. This stormwater management report is intended to cover the development for the two most northern lots (Lot 1 and Lot 2). A pickleball complex is being proposed on Lot 1. The use for Lot 2 has not been finalized and will be developed in the future. The development of Lot 1 and 2 will create approximately 95,000 square feet of new impervious area. The project is required to meet new development standards for applicable City of Fitchburg and WDNR permitting.

A bioretention basin is proposed to meet new development standards. The bioretention basin provides water quality treatment, runoff rate control and infiltration. The basin will discharge to the northwest corner of the site to an existing swale between the property and Badger State Trail. The site ultimately drains to a wet pond to the northwest of the site, which is an internally draining watershed.

2.0 Existing Conditions

The existing conditions of the proposed development area is an agricultural farmstead. The entire existing parcel is bordered by Seminole Highway to the east, Lacy Road to the south, Badger State Trail to the west, and commercial developments to the north. The existing parcel is being split into three lots. Only the development of Lot 1 and 2 are included in this stormwater management report. Lots 1 and 2 are on the north and the existing site drains to the northwest corner. The commercial lot to the north was developed in 2020. A swale was created on the west side of the development to route offsite runoff around the site. A storm sewer headwall existing in the northwest corner of the lot to capture runoff from the swale and discharge to the public storm sewer along Sub-Zero Parkway. The public storm sewer discharges to a wet pond to the west. The wet pond is an internally draining watershed. Please refer to **Appendix A** for graphical representation of the site.

The original native onsite soils are classified as Plano silt loam (PoA and PoB). The PoA and PoB soils have a Hydrologic Soil Group (HSG) classification 'B'. HSG C soils have been assumed for post-development conditions. Test pits were completed June 14, 2024. The test pits on the northern half of the parcel indicated silty loam and silty clay loam over fine sand / loam fine sand. A design infiltration rate of 0.5 in/hr has been used for the infiltration facilities. Please refer to **Appendix B**.

3.0 Design Criteria

Wisconsin Administrative Code
Department of Natural Resources (WDNR)
Chapter NR 151 & NR 216

Fitchburg, WI – City Code of Ordinances
Title III, Chapter 30, Article II

4.0 Stormwater Management Analysis / Design

The proposed improvements for Lot 1 and Lot 2 include two buildings, a shared parking lot, a driveway from Seminole Highway, and sidewalk around both buildings. The improvements include approximately 95,000 square feet of impervious area. Please refer to **Appendix C** for the proposed plan set. The site will be treated to meet new development standards.

A bioretention basin is proposed in the northwest corner of the site. The western building has a sloped roof to the west to drain towards the bioretention basin. Storm sewer is proposed to convey runoff the rest of the site to the bioretention basin. The bioretention basin will provide water quality, infiltration, and runoff rate control. The basin discharges to a sedimentation basin with level spreader to the northeast. The sedimentation basin and level spreader disperse the concentrated discharge from the bioretention basin before discharging to bypass swale on the west side of the property to the north.

The maintenance agreement for the site stormwater management features can be found within **Appendix H**. Specifically, please note the following:

Stormwater Management Plan Requirements: Fitchburg, WI – City Code of Ordinances, Chapter 30 – 30-28(a)

This plan was completed and sealed under the direction of Kathleen L Meagher, Professional Engineer E-101102. The preliminary opinion of probable construction costs for use in determining the financial security instrument for the project can be found within **Appendix I** but will be provided separately by the owner prior to construction.

4.1 Water Quality

Sediment Control: Fitchburg, WI – City Code of Ordinances, Chapter 30 – 30-28(b)(1)a.i.

WinSLAMM (Version 10.4.1) has been used to analyze the water quality for this site. WinSLAMM is an approved model to run a continuous average annual rainfall for Madison (MSN 1981) using the NURP partial distribution.

The required total suspended solids treatment is based on 80% reduction from the proposed development. The model predicts the proposed development will produce 890.37 pounds of suspended solids, which requires 712.30 pounds of treatment.

With the proposed treatment facility, the model predicts a TSS reduction of 874.72 pounds (98.24% reduction). Please refer to **Appendix F** for WinSLAMM modeling output and summary.



Oil and Grease Control: Fitchburg, WI – City Code of Ordinances, Chapter 30 – 30-28(b)(2)

The oil and grease control is provided by the bioretention basin. The basin captures the first 0.5 in rainfall and has engineered soil, which to provide oil and grease control.

4.2 Storm Water Discharge Quantity

Runoff Rate Control; Hydrologic Calculations: Fitchburg, WI – City Code of Ordinances, Chapter 30 – 30-28(b)(3)

The predevelopment site is was modeled as agricultural, HSG B, which has a curve number of 68. The existing shed and other impervious area has a curve number of 98. The soil classification has been increased to HSG C for post development conditions.

Runoff Rate Control; Design Standards: Fitchburg, WI – City Code of Ordinances, Chapter 30 – 30-28(b)(4)

HydroCAD model version 10.20-2g was used to analyze the existing and proposed runoff rate for the site. The bioretention basins have been designed to maintain predevelopment peak runoff rates for the 1-, 2-, 10-, 100-, and 200-year 24-hour storm events. Please refer to **Table 1** for the existing versus proposed predicted runoff rates and **Appendix D & E** for the HydroCAD output.

Table 1. Existing vs. Proposed peak runoff rates for select storm events.

	Weighted CN	Tc	Rainfall for 24-hour storm event (inches)				
			1-year	2-year	10-year	100-year	200-year
			2.49	2.84	4.09	6.66	7.53
Existing-Development peak discharge rate (cfs)	69	12.1	1.25	1.92	4.88	12.40	15.17
Post-Development peak discharge rate (cfs)							
Watershed A - N Basin	93	6.0	8.26	9.60	14.46	24.66	28.15
Watershed B - No Treatment	86	6.0	0.09	0.10	0.17	0.32	0.37
Post-Development peak discharge rate without detention(cfs)			8.35	9.70	14.63	24.99	28.52
Post-Development peak discharge rate with detention (cfs)			0.96	1.09	1.57	10.18	15.16
Difference: Post-construction peak flow rates with detention vs. pre-existing peak flow rates (cfs)			-0.29	-0.83	-3.31	-2.22	-0.01

Outlets: Fitchburg, WI – City Code of Ordinances, Chapter 30 – 30-28(b)(5)

The storm sewer system has been designed per the SPS ‘Area method’ as described within SPS 382.36(5)(a)1. Please refer to **Appendix E** for analysis results. The basin elevations are set by the elevation for free discharge of the underdrain in the northwest corner of the site. To reduce the amount of fill the site requires, a gooseneck outlet is required at the discharge of the site storm sewer into the bioretention basin. A sediment basin with a level spreader is located at the discharge of the bioretention basin to disperse the runoff from the basin before discharging north to the neighboring property. All discharge points will be protected with riprap. It is assumed that the downstream discharge points have protection from outlet erosion.

Infiltration: Fitchburg, WI – City Code of Ordinances, Chapter 30 – 30-28(b)(6)

The infiltration volume for the site was analyzed using WinSLAMM to determine pre- and post-development stay-on. Because the site is located in an internally drained watershed, the development is required to infiltrate as close to 100 percents as practicable of the average annual pre-development infiltration volume, regardless of the effective area of the infiltration system. The pre-development volume tool in WinSLAMM was used to estimate the pre-development runoff volume of 9,433 cubic feet, which is 310,838 cubic feet of stay-on. With the bioretention basin, the proposed development creates 5,903 cubic feet of runoff, which is 314,368 cubic feet of stay-on. Please refer to **Appendix F** for WinSLAMM output information.

Thermal Control Reduction: Fitchburg, WI – City Code of Ordinances, Chapter 30 – 30-28(b)(7)

The site is not located in a thermally sensitive watershed.

5.0 Erosion Control Analysis / Design

Erosion control measures proposed for the project site have been designed in accordance with the WDNR and City of Fitchburg requirements. Best Management Practices (BMP's) for the site include stone tracking pad, silt fencing, check dams, seeding, mulching, erosion mat, etc. Construction sequencing, as follows, has been documented in accordance with soil loss rate calculations for the construction period per the Universal Soil Loss Equation included as **Appendix G**:

10/01/2024	Pre-development construction meeting. Install Perimeter BMP's (silt fence, stone tracking pad, etc.)
10/01/2024	Mass Grading / Subgrade preparation (note all 4:1 or greater slopes must be stabilized as soon as practicable and, at a minimum, within 2 months (60 days) of finishing the grading). Basin and sediment basin to act as sediment trap.
05/15/2024	Temporary stabilization to be completed for areas that do not drain to the sediment trap with temporary seed with mulch or erosion mat.
07/10/2026	Final landscaping adjustments.
08/01/2026	Final site stabilization with seed, mulch and erosion matting where required.
08/15/2026	Install bioretention systems. Install Bioretention Vegetation Plan in accordance with WDNR Technical Standard 1004. Fix any landscaping issues including bioretention and areas.
10/01/2026	Provide City with a post-development as-built survey of all stormwater management facilities.

For additional information relative to erosion control, please refer to the Grading & Erosion Control Plan found in **Appendix C**.

6.0 Conclusion

Construction and Post Development BMP's for erosion control and stormwater management have been designed in accordance with applicable requirements of the City of Fitchburg Code of Ordinance and Wisconsin Administrative Code. A bioretention basin is proposed to meet applicable new development requirements. Erosion control practices have been designed to limit the soil loss rate to less than 5.0 tons per acre per year, regulating soil transportation within the boundaries of the project site.



APPENDIX A

Existing Conditions Survey

PREPARED BY:
WYSER ENGINEERING
MOUNT HOREB, WI 53572
www.wyserengineering.com

PREPARED FOR:
NEWCOMB CONSTRUCTION
COMPANY, INC.
MADISON, WI 53717

SURVEYED BY: MAL/DZ
DRAWN BY: AL/AMS
APPROVED BY: ZNR

2747 S SEMINOLE HWY
FITCHBURG, WI 53711

PART OF LOT 2 OF CSM NO. 8023
PART OF THE SE 1/4 OF THE SW 1/4
SEC. 08 T-06-N, R-09-E
CITY OF FITCHBURG, DANE COUNTY, WI

Revisions table with columns: No., Date, Description

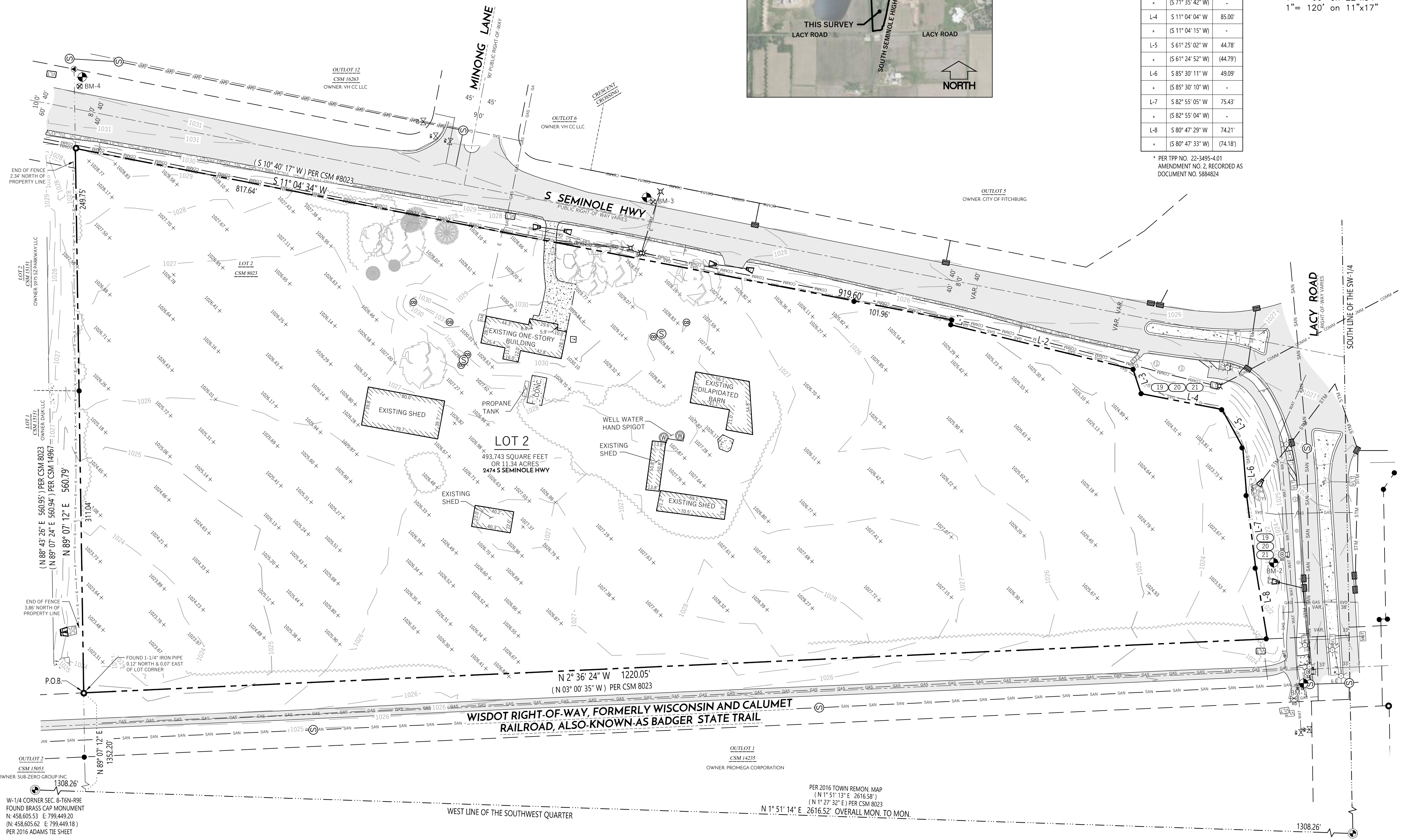
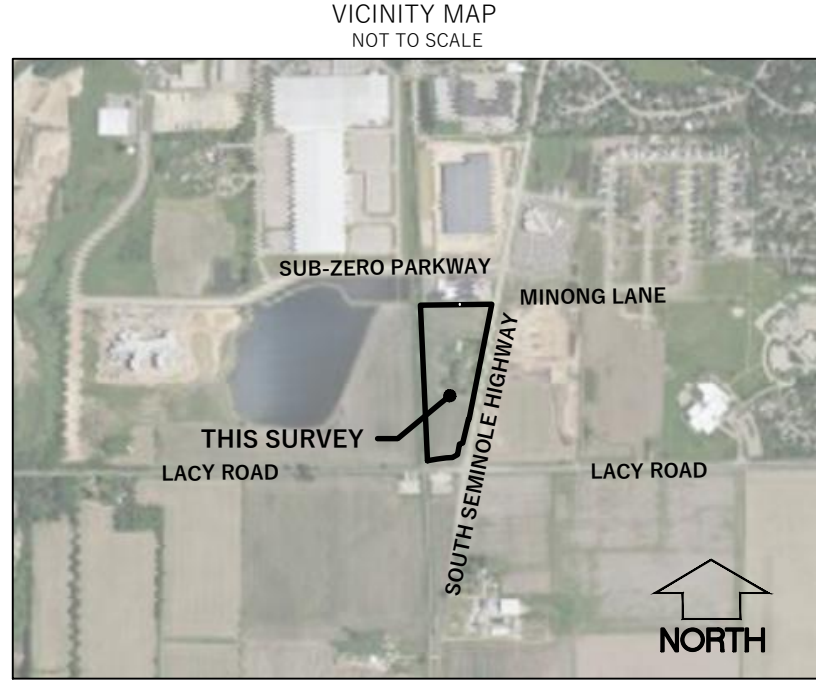
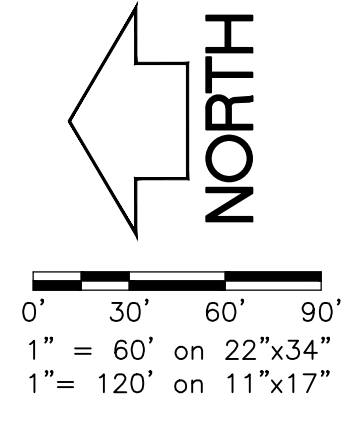
Graphic Scale, Wyser Number (24-1243), Set Type (SURVEY), Date Issued (07/10/2024), Sheet Number (V-001)



LEGEND

Legend table listing symbols for FOUND PLSS MON. TYPE NOTED, FOUND 1" IRON PIPE, FOUND 3/4" REBAR, FOUND PK NAIL, FOUND CUT CROSS, SIGN, SANITARY MANHOLE, SEWER CLEANOUT, GAS VALVE, FIRE HYDRANT, WATER VALVE, WELL, COMMUNICATION PEDESTAL, APRON END WALL, INLETS, LIGHTPOLE, ELECTRICAL METER, CONIFEROUS TREE, DECIDUOUS TREE, UNDERGROUND UTILITY VAULT, VERTICAL BENCHMARK, RECORDED AS, PROPERTY LINE, PLATTED LINE, RIGHT-OF-WAY LINE, CENTERLINE, SECTION LINE, BUILDING FOOTPRINT, EDGE OF CONCRETE, EDGE OF ASPHALT, SANITARY SEWER, WATER MAIN, STORM SEWER, NATURAL GAS LINE, COMMUNICATION LINE, ELECTRIC LINE, GRAVEL/RIP RAP, ASPHALT PAVEMENT, CONCRETE PAVEMENT, CONTOUR MAJOR, CONTOUR MINOR, FENCE LINE, TREE LINE

LINE TABLE with columns: LINE #, DIRECTION, LENGTH. Lists lines L-1 through L-8 with bearings and distances.



LEGAL DESCRIPTION AS FURNISHED

PER FIRST AMERICAN TITLE LLC, TITLE COMMITMENT, FILE NO. NCS-122007-MAD DATED: MAY 29, 2024 AT 7:30 A.M.

LOT 2 OF CERTIFIED SURVEY MAP NO. 8023 RECORDED IN THE OFFICE OF THE REGISTER OF DEEDS FOR DANE COUNTY, WISCONSIN ON NOVEMBER 16, 1995, IN VOLUME 42 OF CERTIFIED SURVEY MAPS, PAGES 313-316 AS DOCUMENT NO. 2719369, SAID CERTIFIED SURVEY MAP BEING PART OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 08, TOWNSHIP 06 NORTH, RANGE 09 EAST, IN THE CITY OF FITCHBURG, DANE COUNTY, WISCONSIN.

EXCEPTING THEREFROM THE LAND DESCRIBED IN AWARD OF DAMAGES RECORDED FEBRUARY 25, 2013 AS DOCUMENT NO. 4964304.

FURTHER EXCEPTING THEREFROM THE LAND DESCRIBED IN AWARD OF DAMAGES RECORDED DECEMBER 28, 2022 AS DOCUMENT NO. 5879973.

LEGAL DESCRIPTION AS SURVEYED

PART OF LOT 2 OF CERTIFIED SURVEY MAP NO. 8023 RECORDED IN VOLUME 42 OF CERTIFIED SURVEY MAPS OF DANE COUNTY ON PAGES 313-316 AS DOCUMENT NO. 2719369 (CSM 8023), LOCATED IN THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 8, TOWNSHIP 6 NORTH, RANGE 9 EAST, CITY OF FITCHBURG, DANE COUNTY, WISCONSIN, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE WEST QUARTER CORNER OF AFORESAID SECTION 8; THENCE, ALONG THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 8, SOUTH 01 DEGREES 51 MINUTES 14 SECONDS EAST, 1308.26 FEET TO THE NORTHWEST CORNER OF THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SAID SECTION 8; THENCE ALONG THE NORTH LINE OF SAID SOUTH HALF, NORTH 89 DEGREES 07 MINUTES 12 SECONDS EAST, 1352.20 FEET TO THE NORTHWEST CORNER OF AFORESAID LOT 2 OF CSM 8023, AND THE POINT OF BEGINNING; THENCE, CONTINUING ALONG SAID NORTH LINE OF THE SOUTH HALF, AND ALSO ALONG THE NORTH LINE OF SAID LOT 2, NORTH 89 DEGREES 07 MINUTES 12 SECONDS EAST, 560.79 FEET TO THE NORTHEAST CORNER OF SAID LOT 2, AND ALSO BEING A POINT ON THE WESTERLY RIGHT-OF-WAY OF SOUTH SEMINOLE HIGHWAY; THENCE, ALONG THE EAST LINE OF SAID LOT 2, AND ALONG SAID WESTERLY RIGHT-OF-WAY, SOUTH 11 DEGREES 04 MINUTES 34 SECONDS WEST, 919.60 FEET; THENCE, CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY, NORTH 78 DEGREES 55 MINUTES 25 SECONDS WEST, 5.01 FEET; THENCE, CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY, SOUTH 13 DEGREES 44 MINUTES 29 SECONDS WEST, 193.21 FEET; THENCE, CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY, SOUTH 71 DEGREES 35 MINUTES 42 SECONDS WEST, 26.42 FEET; THENCE, CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY, SOUTH 11 DEGREES 04 MINUTES 04 SECONDS WEST, 85.00 FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY OF LACY ROAD; THENCE, CONTINUING ALONG SAID NORTHERLY RIGHT-OF-WAY, SOUTH 61 DEGREES 25 MINUTES 02 SECONDS EAST, 44.78 FEET; THENCE, CONTINUING ALONG SAID NORTHERLY RIGHT-OF-WAY, SOUTH 82 DEGREES 55 MINUTES 05 SECONDS WEST, 75.43 FEET; THENCE, CONTINUING ALONG SAID NORTHERLY RIGHT-OF-WAY, SOUTH 80 DEGREES 47 MINUTES 29 SECONDS WEST, 74.21 FEET TO A POINT ON THE WESTERLY LINE OF AFORESAID LOT 2 OF CSM 8023; THENCE, ALONG SAID WESTERLY LINE, NORTH 02 DEGREES 36 MINUTES 24 SECONDS WEST, 1220.05 FEET BACK TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINS 493,619 SQUARE FEET OR 11.33 ACRES.

GENERAL NOTES

- 1. FIELD WORK PERFORMED BY WYSER ENGINEERING, LLC. ON THE WEEK OF, JUNE 5, 2024.
2. NORTH REFERENCE FOR THIS EXISTING CONDITIONS SURVEY AND MAP ARE BASED ON THE WISCONSIN COORDINATE REFERENCE SYSTEM, NAD 83 (2011) WISCONSIN DANE, GRID NORTH. THE WEST LINE OF THE SOUTHWEST QUARTER OF SECTION 08, T06N, R09E, BEARS N 01°51'14" E.
3. ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
4. SUBSURFACE UTILITIES AND FIXTURES SHOWN ON THIS MAP HAVE BEEN APPROXIMATED BY LOCATING SURFACE FEATURES AND ACCESSORIES, DIGGERS HOTLINE FIELD MARKINGS AND EXISTING MAPS AND RECORDS.
5. BEFORE EXCAVATION, APPROPRIATE UTILITY COMPANIES SHOULD BE CONTACTED, FOR EXACT LOCATION OF UNDERGROUND UTILITIES, CONTACT DIGGERS HOTLINE, AT 1.800.242.8511 OR 811
6. THIS PARCEL IS SUBJECT TO ALL EASEMENTS AND AGREEMENTS, BOTH RECORDED AND UNRECORDED.
7. FEATURES HAVE BEEN LOCATED BY SURVEYOR IN FIELD THAT MAY HAVE ADVERSE TITLE ELEMENTS, AS TO WHICH ELEMENT ENCROACHMENT, CLAIM OF UNRECORDED EASEMENT, PRESCRIPTIVE EASEMENT, AND SO FORTH CAN NOT BE DETERMINED BY SURVEYOR.

SURVEYORS CERTIFICATE

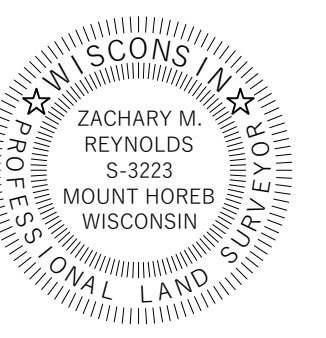
TO: NEWCOMB CONSTRUCTION COMPANY INC. BUFFALO DEVELOPMENT, LLC A WISCONSIN LIMITED LIABILITY COMPANY ANNA M. O'BRIEN FIRST AMERICAN TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 6(A), 7(A), 9, 11(A), 13, 14, 16, AND 19 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED WEEK OF JUNE 5TH, 2024.

DATE OF PLAT OR MAP: JULY 10, 2024.

IN ACCORDANCE WITH SECTION 3.8 OF THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, ADDITIONAL CERTIFICATION BELOW TO FULFILL WISCONSIN ADMINISTRATIVE CODE, A-E 7 - MINIMUM STANDARDS FOR PROPERTY SURVEYS IN WISCONSIN. ITEM A-E 7.05 (8)

I, ZACHARY M. REYNOLDS, WISCONSIN PROFESSIONAL LAND SURVEYOR S-3223, DO HEREBY CERTIFY THAT THIS SURVEY AND MAP IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF WITH THE INFORMATION PROVIDED, BY THE ORDER OF THOSE LISTED HEREON, AND THAT THIS SURVEY COMPLIES WITH A-E 7 OF THE WISCONSIN ADMINISTRATIVE CODE.



ZACHARY M. REYNOLDS, S-3223 WISCONSIN PROFESSIONAL LAND SURVEYOR

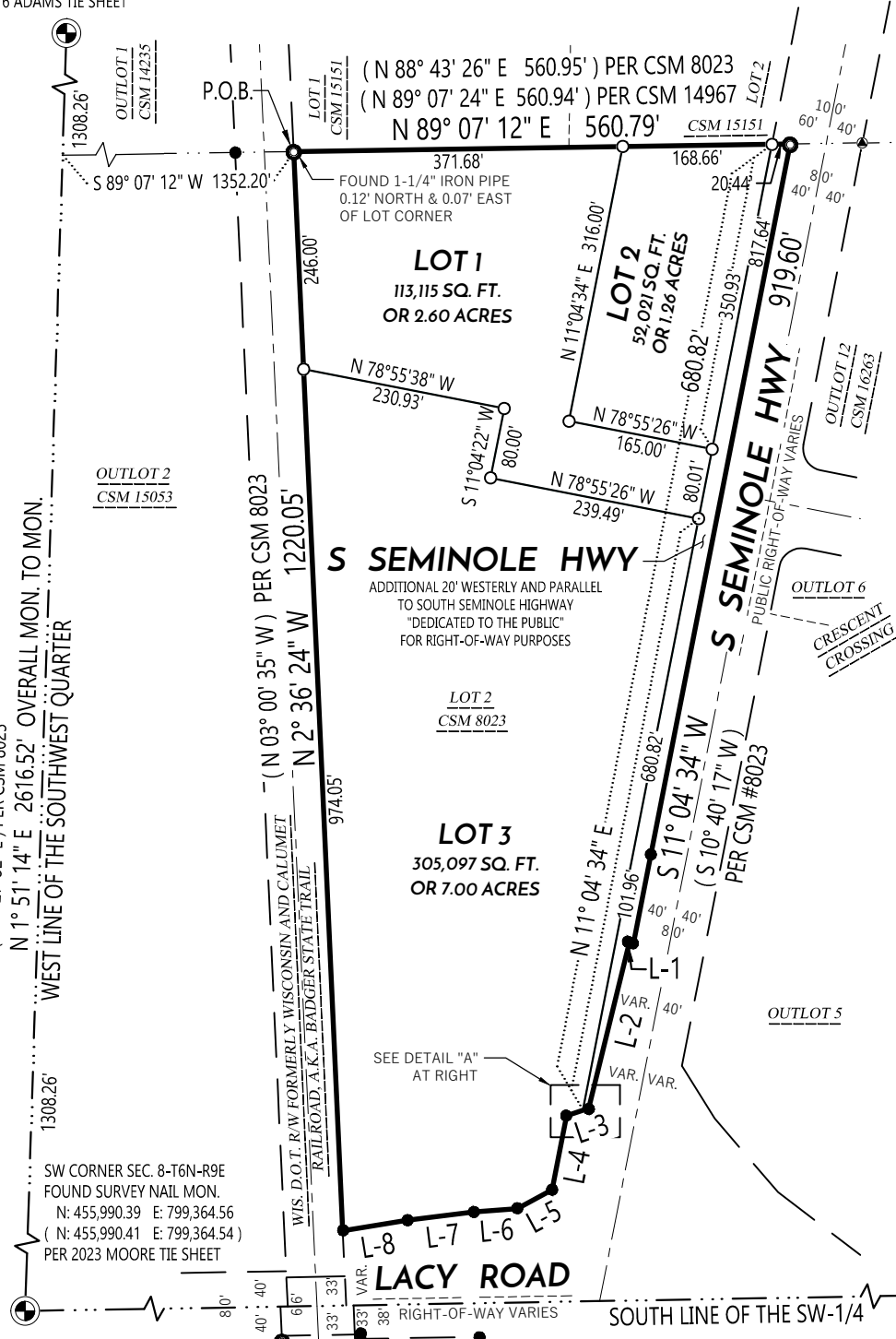
BENCHMARK TABLE with columns: BM - #, ELEVATION, DESCRIPTION. Lists benchmarks BM-1 through BM-4 with elevations and descriptions.

File: W:\2024\241243_AltA.dwg Layout: Survey 22x34 User: Zach Plotter: Jul 19, 2024 - 2:32pm

CERTIFIED SURVEY MAP NO. _____

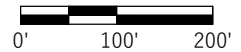
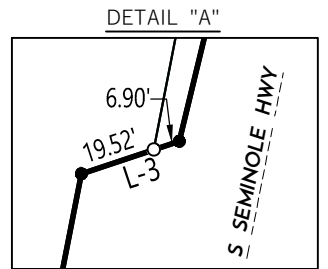
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W-1/4 CORNER SEC. 8-T6N-R9E
 FOUND BRASS CAP MONUMENT
 N: 458,605.53 E: 799,449.20
 (N: 458,605.62 E: 799,449.18)
 PER 2016 ADAMS TIE SHEET



LINE TABLE		
LINE #	DIRECTION	LENGTH
L-1	N 78° 55' 26" W	5.01'
*	(N 78° 55' 45" W)	(5.00')
L-2	S 13° 44' 29" W	193.21'
*	(S 13° 44' 26" W)	-
L-3	S 71° 35' 45" W	26.42'
*	(S 71° 35' 42" W)	-
L-4	S 11° 04' 04" W	85.00'
*	(S 11° 04' 15" W)	-
L-5	S 61° 25' 02" W	44.78'
*	(S 61° 24' 52" W)	(44.79')
L-6	S 85° 30' 11" W	49.09'
*	(S 85° 30' 10" W)	-
L-7	S 82° 55' 05" W	75.43'
*	(S 82° 55' 04" W)	-
L-8	S 80° 47' 29" W	74.21'
*	(S 80° 47' 33" W)	(74.18')

* PER TPP NO. 22-3495-4.01
 AMENDMENT NO. 2, RECORDED AS
 DOCUMENT NO. 5884824



PER 2016 TOWN REMON. MAP
 (N 1° 51' 13" E 2616.58')
 (N 1° 27' 32" E) PER CSM 8023
 N 1° 51' 14" E 2616.52' OVERALL MON. TO MON.
 WEST LINE OF THE SOUTHWEST QUARTER

SW CORNER SEC. 8-T6N-R9E
 FOUND SURVEY NAIL MON.
 N: 455,990.39 E: 799,364.56
 (N: 455,990.41 E: 799,364.54)
 PER 2023 MOORE TIE SHEET

LEGEND

- SECTION CORNER FOUND / RECOVERED
- MAG NAIL FOUND
- 3/4" REBAR FOUND
- 1" IRON PIPE FOUND
- 2" IRON PIPE FOUND
- 3/4" REBAR SET 1.50 LB/FT
- CSM BOUNDARY
- RIGHT-OF-WAY LINE
- CENTERLINE
- SECTION/QUARTER LINE
- QUARTER/QUARTER LINE
- PLATTED LINE
- () RECORDED INFORMATION

NOTES:

- FIELD WORK PERFORMED BY WYSER ENGINEERING, LLC. ON THE WEEKS OF JUNE 5TH, AND 6TH, 2024.
- NORTH REFERENCE FOR THIS CERTIFIED SURVEY AND MAP ARE BASED ON THE WISCONSIN COORDINATE REFERENCE SYSTEM, WISCRS DANE, NAD 83 (2011), GRID NORTH. THE WEST LINE OF THE SOUTHWEST QUARTER OF SECTION 8, T6N, R9E, BEARS N 01°51' 14" E
- THIS PARCEL IS SUBJECT TO ALL EASEMENTS AND AGREEMENTS, BOTH RECORDED AND UNRECORDED.
- SEE SHEETS 2 OF 4 FOR FURTHER DETAILS ON OVERALL CSM BOUNDARY, AND EASEMENTS.

PREPARED BY:
 WYSER ENGINEERING
 300 EAST FRONT STREET
 MOUNT HOREB, WI 53572
 www.wyserengineering.com

PREPARED FOR:
 NEWCOMB CONSTRUCTION
 COMPANY, INC.
 999 FOURIER DRIVE #102
 MADISON, WI 53717

SURVEYED BY: MAL/DZ
 DRAWN BY: AMS
 CHECKED BY: ZMR
 APPROVED BY: ZMR

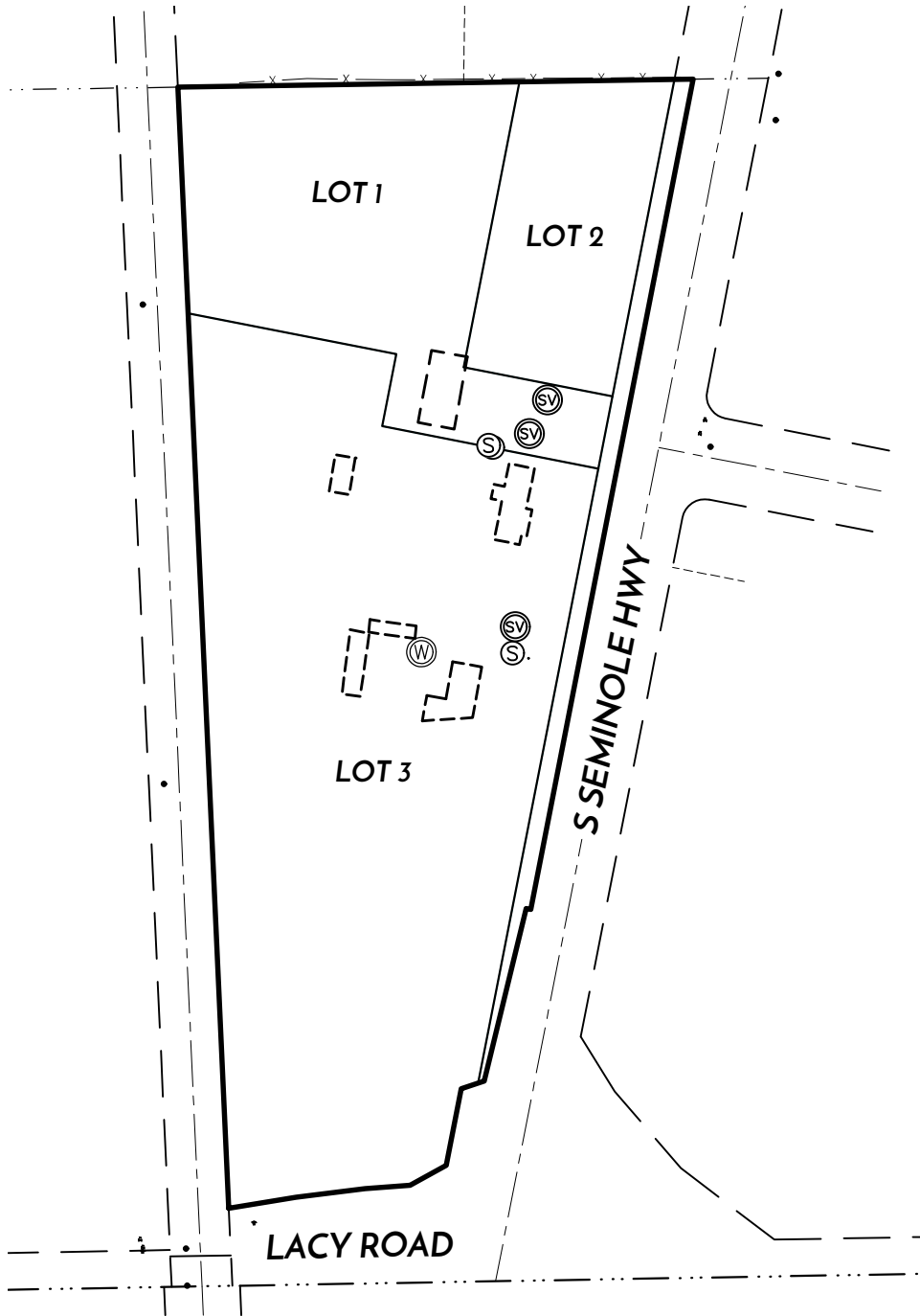
PROJECT NO: 24-1243
 SHEET NO: 1 of 4

VOL. _____ PAGE _____
 DOC. NO. _____
 C.S.M. NO. _____



CERTIFIED SURVEY MAP NO. _____

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LEGEND

- CSM BOUNDARY
- - - RIGHT-OF-WAY LINE
- CENTERLINE
- · - · - SECTION/QUARTER LINE
- · · - QUARTER/QUARTER LINE
- - - - - PLATTED LINE
- - - - - EXISTING EASEMENT
- - - - - EXISTING STRUCTURE
- x - x - FENCE LINE

NOTES:

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2. NORTH REFERENCE FOR THIS CERTIFIED SURVEY AND MAP ARE BASED ON THE WISCONSIN COORDINATE REFERENCE SYSTEM, WISCRS DANE, NAD 83 (2011). GRID NORTH. THE NORTH LINE OF THE SOUTHEAST QUARTER OF SECTION 6, T6N, R6E, BEARS S 89°38' 20" E
3. THIS PARCEL IS SUBJECT TO ALL EASEMENTS AND AGREEMENTS, BOTH RECORDED AND UNRECORDED.
4. SEE SHEETS 2 OF 4 FOR FURTHER DETAILS ON OVERALL CSM BOUNDARY, AND EASEMENTS.



File: W:\2024\241243_Newcomb - Seminole & Lacy Fitchburg\DWG\241243_CSM.dwg Layout: CSM 2 OF 4 User: Zach Plotted: Jun 18, 2024 - 4:50pm



PREPARED BY:
WYSER ENGINEERING
300 EAST FRONT STREET
MOUNT HOREB, WI 53572
www.wyserengineering.com

PREPARED FOR:
NEWCOMB CONSTRUCTION
COMPANY, INC.
999 FOURIER DRIVE #102
MADISON, WI 53717

SURVEYED BY: MAL/DZ
DRAWN BY: AMS
CHECKED BY: ZMR
APPROVED BY: ZMR

PROJECT NO: 24-1243
SHEET NO: 2 of 4

VOL. _____ PAGE _____
DOC. NO. _____
C.S.M. NO. _____

CERTIFIED SURVEY MAP NO. _____

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LEGAL DESCRIPTION

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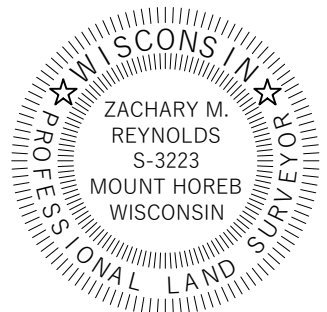
SAID PARCEL CONTAINS 493,619 SQUARE FEET OR 11.33 ACRES.

SURVEYOR'S CERTIFICATE

I, ZACHARY M. REYNOLDS, WISCONSIN PROFESSIONAL LAND SURVEYOR S-3223, DO HEREBY CERTIFY THAT BY DIRECTION OF NEWCOMB CONSTRUCTION COMPANY, INC. I HAVE SURVEYED, DIVIDED, AND MAPPED THE LANDS DESCRIBED HEREON AND THAT THE MAP IS A CORRECT REPRESENTATION IN ACCORDANCE WITH THE INFORMATION PROVIDED. I FURTHER CERTIFY THAT THIS CERTIFIED SURVEY MAP IS IN FULL COMPLIANCE WITH CHAPTER 236.34 OF THE WISCONSIN STATUTES AND THE SUBDIVISION REGULATIONS OF THE CITY OF FITCHBURG AND DANE COUNTY, WISCONSIN.

ZACHARY M. REYNOLDS, S-3223
WISCONSIN PROFESSIONAL LAND SURVEYOR

DATE



File: W:\2024\241243_Newcomb - Seminole & Lacy Fitchburg\DWG\241243_CSM.dwg Layout: CSM 3 OF 4 User: Zach Plotted: Jun 18, 2024 - 4:51pm



PREPARED BY:
WYSER ENGINEERING
300 EAST FRONT STREET
MOUNT HOREB, WI 53572
www.wyserengineering.com

PREPARED FOR:
NEWCOMB CONSTRUCTION
COMPANY, INC.
999 FOURIER DRIVE #102
MADISON, WI 53717

SURVEYED BY: MAL/DZ
DRAWN BY: AMS
CHECKED BY: ZMR
APPROVED BY: ZMR

PROJECT NO: 24-1243
SHEET NO: 3 of 4

VOL. _____ PAGE _____

DOC. NO. _____

C.S.M. NO. _____

CERTIFIED SURVEY MAP NO. _____

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OWNER'S CERTIFICATE

_____, LLC, AS OWNER, WE HEREBY CERTIFY THAT WE CAUSED THE LANDS DESCRIBED HEREON TO BE SURVEYED, DIVIDED MAPPED AND DEDICATED AS SHOWN. I ALSO CERTIFY THAT THIS CERTIFIED SURVEY MAP IS REQUIRED BY S. 236.34 OF THE WISCONSIN STATE STATUTES TO BE SUBMITTED TO THE CITY OF MADISON FOR APPROVAL.

BY: _____
GUS NEWCOMB, MANAGING MEMBER

_____ LLC

STATE OF WISCONSIN) SS
DANE COUNTY) SS

PERSONALLY CAME BEFORE ME THIS _____ DAY OF _____, 2024, THE ABOVE NAMED

MANAGING MEMBER FOR _____, LLC, GUS NEWCOMB, TO ME KNOWN TO BE THE PERSON WHO EXECUTED THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED THE SAME.

NOTARY PUBLIC, STATE OF WISCONSIN MY COMMISSION EXPIRES _____

CONSENT OF MORTGAGEE

_____, A BANKING ASSOCIATION DULY ORGANIZED AND EXISTING UNDER AND BY VIRTUE OF THE LAWS OF THE STATE OF WISCONSIN, MORTGAGEE OF THE ABOVE DESCRIBED LAND, DOES HEREBY CONSENT TO THE SURVEY, DIVIDING, MAPPING AND DEDICATION OF THE LAND DESCRIBED ON THIS CERTIFIED SURVEY MAP AND DOES HEREBY CONSENT TO THE OWNER'S CERTIFICATE.

BY: _____
AUTHORIZED OFFICER

STATE OF WISCONSIN) SS
DANE COUNTY) SS

PERSONALLY CAME BEFORE ME THIS _____ DAY OF _____, 2024, THE ABOVE

NAMED BANKING ASSOCIATION, _____ AUTHORIZED OFFICER

_____ TO ME KNOWN TO BE THE PERSON WHO EXECUTED THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED THE SAME.

NOTARY PUBLIC, STATE OF WISCONSIN MY COMMISSION EXPIRES _____

CITY OF FITCHBURG APPROVAL

THIS CERTIFIED SURVEY MAP, INCLUDING ANY DEDICATIONS SHOWN HEREON, HAS BEEN DULY FILED WITH AND APPROVED BY THE COMMON COUNCIL OF THE CITY OF FITCHBURG, DANE COUNTY, WISCONSIN.

DATED THIS _____ DAY OF _____, 2024.

TRACY OLDENBURG, CITY CLERK,
CITY OF FITCHBURG



OFFICE OF THE REGISTER OF DEEDS

COUNTY, WISCONSIN
RECEIVED FOR RECORD _____
20 ____ AT _____ O'CLOCK ____ M AS
DOCUMENT # _____
IN VOL. _____ OF CERTIFIED SURVEY
MAPS ON PAGE(S) _____

KRISTI CHLEBOWSKI, REGISTER OF DEEDS



PREPARED BY:
WYSER ENGINEERING
300 EAST FRONT STREET
MOUNT HOREB, WI 53572
www.wyserengineering.com

PREPARED FOR:
NEWCOMB CONSTRUCTION
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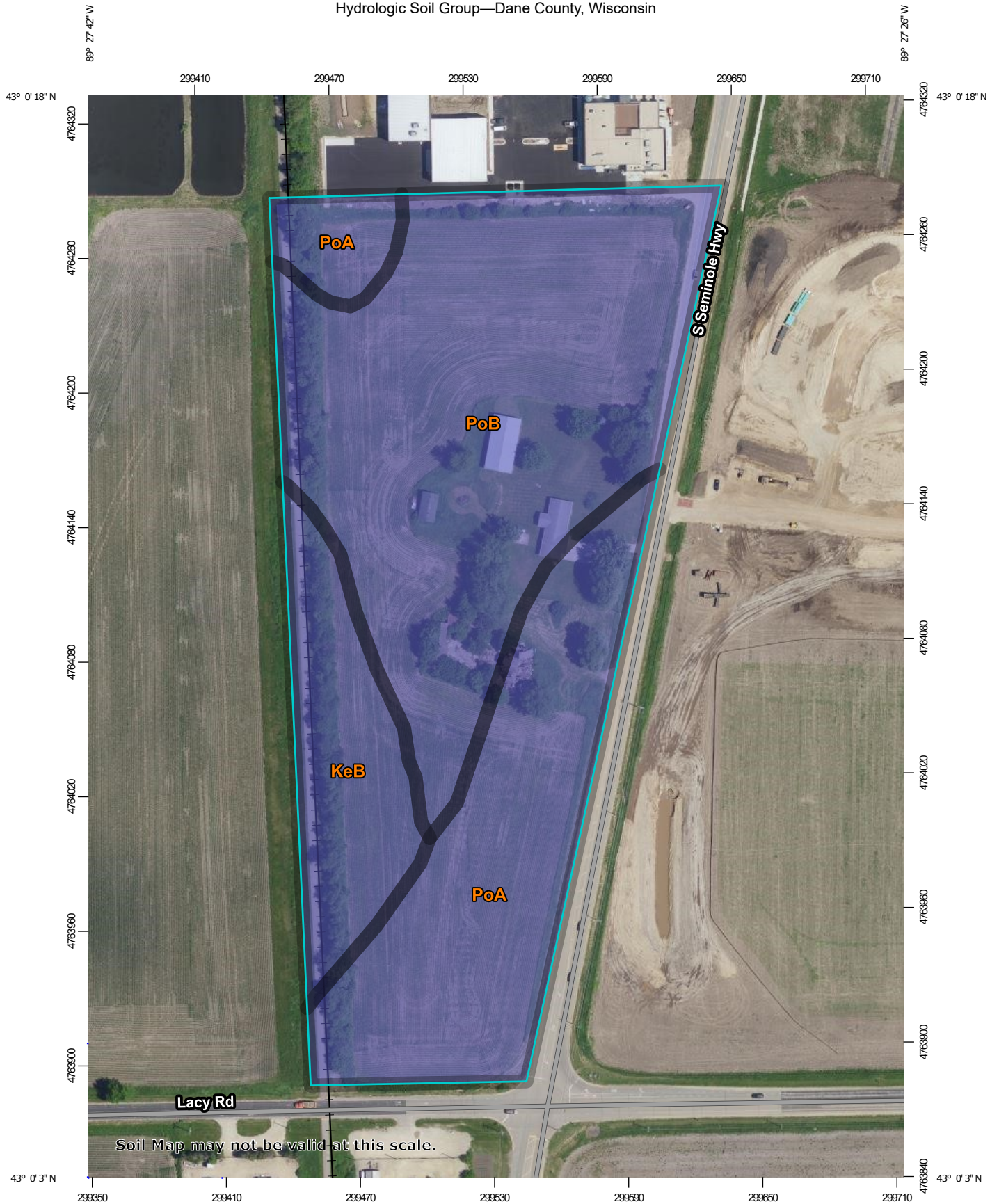
PROJECT NO: 24-1243
SHEET NO: 3 of 4



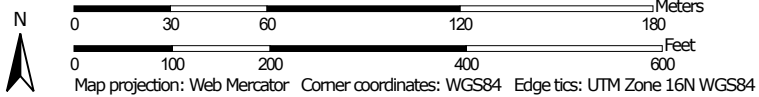
APPENDIX B

Soils Information

Hydrologic Soil Group—Dane County, Wisconsin




Map Scale: 1:2,350 if printed on A portrait (8.5" x 11") sheet.



MAP LEGEND

Area of Interest (AOI)









 Area of Interest (AOI)

Soils

Soil Rating Polygons





 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines


 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points






 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Dane County, Wisconsin
 Survey Area Data: Version 22, Sep 8, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 13, 2020—Jul 31, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
KeB	Kegonsa silt loam, 2 to 6 percent slopes	B	2.0	13.8%
PoA	Plano silt loam, gravelly substratum, 0 to 2 percent slopes	B	4.8	32.8%
PoB	Plano silt loam, gravelly substratum, 2 to 6 percent slopes	B	7.8	53.4%
Totals for Area of Interest			14.7	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Attach 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 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.	0609-083-9570-4
Reviewed by	Date

Property Owner Newcomb Construction Company, Inc.	Property Location Govt. Lot SE 1/4 SW 1/4 S 8 T 6 N R 9 E (or) W
Property Owner's Mailing Address 999 Fourier Drive #102	Lot # 2 Block # Subd. Name or CSM# CSM 8023
City State Zip Code Phone Number Madison, WI 53717 ()	<input checked="" type="checkbox"/> City <input type="checkbox"/> Village <input type="checkbox"/> Town Nearest Road Fitchburg 2747 S. Seminole Hwy


Drainage area _____ <input type="checkbox"/> sq. ft. <input type="checkbox"/> acres Optional: Test Site Suitable for (check all that apply) <input type="checkbox"/> Irrigation <input type="checkbox"/> Bioretention trench <input type="checkbox"/> Trench(es) <input type="checkbox"/> Rain garden <input type="checkbox"/> Grassed swale <input type="checkbox"/> Reuse <input type="checkbox"/> Infiltration trench <input type="checkbox"/> SDS (> 15' wide) <input type="checkbox"/> Other _____	Hydraulic Application Test Method: <input checked="" type="checkbox"/> Morphological Evaluation <input type="checkbox"/> Double-Ring Infiltrometer <input type="checkbox"/> Other (specify) _____
--	--

TP-1 Obs. # Boring Pit Ground surface elev. **1023.53** ft. Depth to limiting factor **>72** in.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	Hydraulic App. Rate
									Inches/Hr
A	0-13	10YR3/3	None	sil	1msbk	mfr	cs	0	0.13
B	13-57	10YR4/4	None	sicl	2msbk	mfr	cs	0	0.04
2C	57-72	10YR6/4	None	fs	0sg	ml		2	0.5

TP-2 Obs. # Boring Pit Ground surface elev. **1025.19** ft. Depth to limiting factor **>72** in.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	Hydraulic App. Rate
									Inches/Hr
A	0-13	10YR3/2	None	sil	1msbk	mfr	cs	0	0.13
B	13-51	10YR4/4	None	sicl	2fsbk	mfr	cs	0	0.04
2C	51-72	10YR6/4	None	fs	0sg	ml		2	0.5

CST/PSS Name (Please Print) Paul A. Hardy	Signature 	CST/PSS Number 225394
Address 7226 Timberwood Drive, Madison, WI 53719	Date Evaluation Conducted 6-14-2024	Telephone Number 608-848-4869

TP-3 Obs # Boring Pit **1025.38** Ground surface elev _____ ft Depth to limiting factor **>103** in

Horizon	Depth in	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh	Consistence	Boundary	% Rock Frag.	Hydraulic App. Rate
									Inches/Hr
A	0-8	10YR3/2	None	sil	2fsbk	mvfr	cs	0	0.13
B	8-58	10YR4/4	None	sicl	1msbk	mfi	gs	0	0.04
2C	58-103	10YR5/4	None	fs	0sg	ml		2	0.5

TP-4 Obs # Boring Pit **1024.00** Ground surface elev _____ ft Depth to limiting factor **>102*** in

Horizon	Depth in	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh	Consistence	Boundary	% Rock Frag.	Hydraulic App. Rate
									Inches/Hr
A	0-13	10YR3/2	None	sil	2fsbk	mvfr	cs	0	0.13
B	13-60	10YR4/3	m2d10YR5/8,6/2*	sicl	1msbk	mfi	cs	0	0.04
2C	60-102	10YR5/6	None	ifs	0sg	ml		1	0.5
		*Restricted drainage in B horizon; Free-draining below 60"							

TP-5 Obs # Boring Pit **1026.29** Ground surface elev _____ ft Depth to limiting factor **>60** in

Horizon	Depth in	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh	Consistence	Boundary	% Rock Frag.	Hydraulic App. Rate
									Inches/Hr
A	0-13	10YR2/2	None	sil	2fsbk	mvfr	cs	0	0.13
B	13-48	10YR4/3	None	sicl	1msbk	mfi	cs	0	0.04
2C	48-60	10YR5/4	None	fs	0sg	ml		15	0.5

Test Results and/or Summary Comments

TP-6 Obs. # Boring Pit Ground surface elev. **1026.27** ft. Depth to limiting factor **>78*** in.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	Hydraulic App. Rate
									Inches/Hr
A	0-14	10YR2/2	None	sil	2fsbk	mvfr	cs	0	0.13
B	14-58	10YR4/3	m2d10YR5/8,6/2*	sicl	1csbk	mfi	cs	0	0.04
2C	58-78	10YR6/4	None	fs	0sg	ml		10	0.5
*Restricted drainage in B horizon; Free-Draining below 58"									

Obs. # Boring Pit Ground surface elev. _____ ft. Depth to limiting factor _____ in.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	Hydraulic App. Rate
									Inches/Hr

Obs. # Boring Pit Ground surface elev. _____ ft. Depth to limiting factor _____ in.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	Hydraulic App. Rate
									Inches/Hr

Test Results and/or Summary Comments



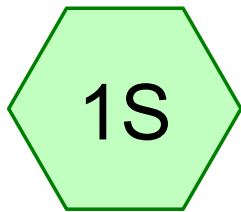
APPENDIX C

Proposed Construction Plans



APPENDIX D

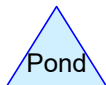
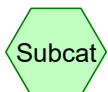
Pre Development Hydrologic Modeling



Existing



Pre-development



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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.990	68	Cropland, HSG B (1S)
0.073	98	Impervious (1S)
3.062	69	TOTAL AREA

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Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
2.990	HSG B	1S
0.000	HSG C	
0.000	HSG D	
0.073	Other	1S
3.062		TOTAL AREA

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Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	2.990	0.000	0.000	0.000	2.990	Cropland	1S
0.000	0.000	0.000	0.000	0.073	0.073	Impervious	1S
0.000	2.990	0.000	0.000	0.073	3.062	TOTAL AREA	

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MSE 24-hr 4 1-yr_NRCS Rainfall=2.49"

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Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 2
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Existing

Runoff Area=133,400 sf 2.38% Impervious Runoff Depth=0.43"
Flow Length=400' Tc=12.1 min CN=68/98 Runoff=1.25 cfs 0.109 af

Link Pre: Pre-development

Inflow=1.25 cfs 0.109 af
Primary=1.25 cfs 0.109 af

Total Runoff Area = 3.062 ac Runoff Volume = 0.109 af Average Runoff Depth = 0.43"
97.62% Pervious = 2.990 ac 2.38% Impervious = 0.073 ac

Summary for Subcatchment 1S: Existing

Runoff = 1.25 cfs @ 12.22 hrs, Volume= 0.109 af, Depth= 0.43"

Routed to Link Pre : Pre-development

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
 MSE 24-hr 4 1-yr_NRCS Rainfall=2.49"

	Area (sf)	CN	Description
*	3,175	98	Impervious
*	130,225	68	Cropland, HSG B
	133,400	69	Weighted Average
	130,225	68	97.62% Pervious Area
	3,175	98	2.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	100	0.0120	0.25		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.49"
5.6	300	0.0100	0.90		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
12.1	400	Total			

Summary for Link Pre: Pre-development

Inflow Area = 3.062 ac, 2.38% Impervious, Inflow Depth = 0.43" for 1-yr_NRCS event
Inflow = 1.25 cfs @ 12.22 hrs, Volume= 0.109 af
Primary = 1.25 cfs @ 12.22 hrs, Volume= 0.109 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

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MSE 24-hr 4 2-yr_NRCS Rainfall=2.84"

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Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 2
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Existing

Runoff Area=133,400 sf 2.38% Impervious Runoff Depth=0.60"
Flow Length=400' Tc=12.1 min CN=68/98 Runoff=1.92 cfs 0.152 af

Link Pre: Pre-development

Inflow=1.92 cfs 0.152 af
Primary=1.92 cfs 0.152 af

Total Runoff Area = 3.062 ac Runoff Volume = 0.152 af Average Runoff Depth = 0.60"
97.62% Pervious = 2.990 ac 2.38% Impervious = 0.073 ac

Summary for Subcatchment 1S: Existing

Runoff = 1.92 cfs @ 12.22 hrs, Volume= 0.152 af, Depth= 0.60"

Routed to Link Pre : Pre-development

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
 MSE 24-hr 4 2-yr_NRCS Rainfall=2.84"

Area (sf)	CN	Description
* 3,175	98	Impervious
* 130,225	68	Cropland, HSG B
133,400	69	Weighted Average
130,225	68	97.62% Pervious Area
3,175	98	2.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	100	0.0120	0.25		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.49"
5.6	300	0.0100	0.90		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
12.1	400	Total			

Summary for Link Pre: Pre-development

Inflow Area = 3.062 ac, 2.38% Impervious, Inflow Depth = 0.60" for 2-yr_NRCS event
Inflow = 1.92 cfs @ 12.22 hrs, Volume= 0.152 af
Primary = 1.92 cfs @ 12.22 hrs, Volume= 0.152 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

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MSE 24-hr 4 10-yr_NRCS Rainfall=4.09"

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Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 2
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Existing

Runoff Area=133,400 sf 2.38% Impervious Runoff Depth=1.32"
Flow Length=400' Tc=12.1 min CN=68/98 Runoff=4.88 cfs 0.338 af

Link Pre: Pre-development

Inflow=4.88 cfs 0.338 af
Primary=4.88 cfs 0.338 af

Total Runoff Area = 3.062 ac Runoff Volume = 0.338 af Average Runoff Depth = 1.32"
97.62% Pervious = 2.990 ac 2.38% Impervious = 0.073 ac

Summary for Subcatchment 1S: Existing

Runoff = 4.88 cfs @ 12.21 hrs, Volume= 0.338 af, Depth= 1.32"

Routed to Link Pre : Pre-development

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
 MSE 24-hr 4 10-yr_NRCS Rainfall=4.09"

	Area (sf)	CN	Description
*	3,175	98	Impervious
*	130,225	68	Cropland, HSG B
	133,400	69	Weighted Average
	130,225	68	97.62% Pervious Area
	3,175	98	2.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	100	0.0120	0.25		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.49"
5.6	300	0.0100	0.90		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
12.1	400	Total			

Summary for Link Pre: Pre-development

Inflow Area = 3.062 ac, 2.38% Impervious, Inflow Depth = 1.32" for 10-yr_NRCS event
Inflow = 4.88 cfs @ 12.21 hrs, Volume= 0.338 af
Primary = 4.88 cfs @ 12.21 hrs, Volume= 0.338 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

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MSE 24-hr 4 100-yr_NRCS Rainfall=6.66"

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Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 2
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Existing

Runoff Area=133,400 sf 2.38% Impervious Runoff Depth=3.22"
Flow Length=400' Tc=12.1 min CN=68/98 Runoff=12.40 cfs 0.821 af

Link Pre: Pre-development

Inflow=12.40 cfs 0.821 af
Primary=12.40 cfs 0.821 af

Total Runoff Area = 3.062 ac Runoff Volume = 0.821 af Average Runoff Depth = 3.22"
97.62% Pervious = 2.990 ac 2.38% Impervious = 0.073 ac

Summary for Subcatchment 1S: Existing

Runoff = 12.40 cfs @ 12.20 hrs, Volume= 0.821 af, Depth= 3.22"

Routed to Link Pre : Pre-development

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
 MSE 24-hr 4 100-yr_NRCS Rainfall=6.66"

	Area (sf)	CN	Description
*	3,175	98	Impervious
*	130,225	68	Cropland, HSG B
	133,400	69	Weighted Average
	130,225	68	97.62% Pervious Area
	3,175	98	2.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	100	0.0120	0.25		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.49"
5.6	300	0.0100	0.90		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
12.1	400	Total			

Summary for Link Pre: Pre-development

Inflow Area = 3.062 ac, 2.38% Impervious, Inflow Depth = 3.22" for 100-yr_NRCS event
Inflow = 12.40 cfs @ 12.20 hrs, Volume= 0.821 af
Primary = 12.40 cfs @ 12.20 hrs, Volume= 0.821 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

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MSE 24-hr 4 200-yr_NRCS Rainfall=7.53"

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Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 2
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Existing

Runoff Area=133,400 sf 2.38% Impervious Runoff Depth=3.93"
Flow Length=400' Tc=12.1 min CN=68/98 Runoff=15.17 cfs 1.002 af

Link Pre: Pre-development

Inflow=15.17 cfs 1.002 af
Primary=15.17 cfs 1.002 af

Total Runoff Area = 3.062 ac Runoff Volume = 1.002 af Average Runoff Depth = 3.93"
97.62% Pervious = 2.990 ac 2.38% Impervious = 0.073 ac

Summary for Subcatchment 1S: Existing

Runoff = 15.17 cfs @ 12.20 hrs, Volume= 1.002 af, Depth= 3.93"

Routed to Link Pre : Pre-development

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
 MSE 24-hr 4 200-yr_NRCS Rainfall=7.53"

	Area (sf)	CN	Description
*	3,175	98	Impervious
*	130,225	68	Cropland, HSG B
	133,400	69	Weighted Average
	130,225	68	97.62% Pervious Area
	3,175	98	2.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	100	0.0120	0.25		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 2.49"
5.6	300	0.0100	0.90		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
12.1	400	Total			

Summary for Link Pre: Pre-development

Inflow Area = 3.062 ac, 2.38% Impervious, Inflow Depth = 3.93" for 200-yr_NRCS event
Inflow = 15.17 cfs @ 12.20 hrs, Volume= 1.002 af
Primary = 15.17 cfs @ 12.20 hrs, Volume= 1.002 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

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- 4 Ground Covers (selected nodes)

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100-yr NRCS Event

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- 15 Subcat 1S: Existing
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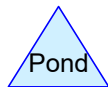
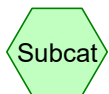
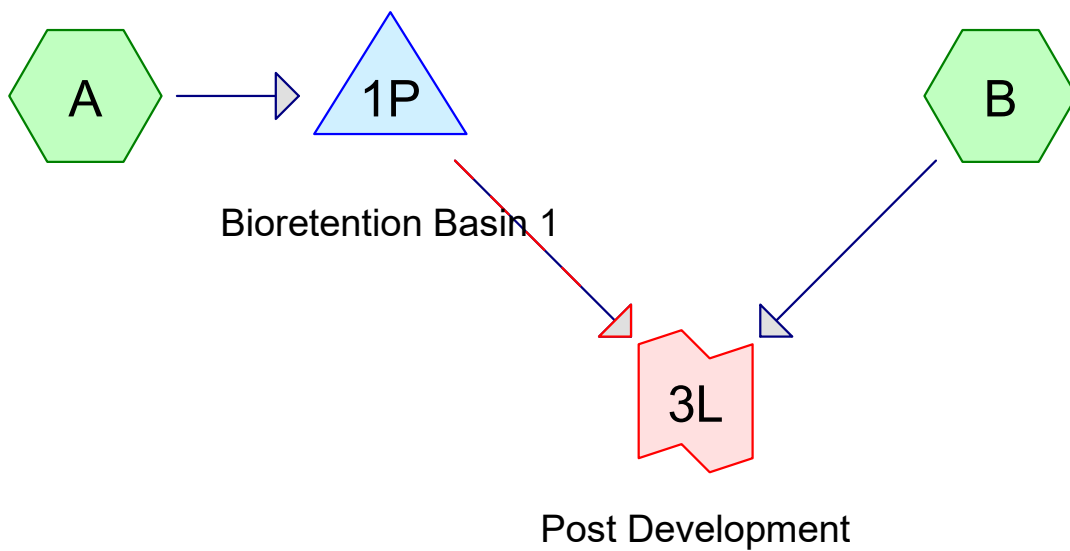
200-yr NRCS Event

- 17 Node Listing
- 18 Subcat 1S: Existing
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APPENDIX E

Post Development Hydrologic Modeling



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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.614	74	>75% Grass cover, Good, HSG C (A)
0.027	78	>75% Grass cover, Good, HSG D (B)
0.941	98	Parking (A, B)
1.057	98	Roofs, HSG C (A)
0.183	98	Sidewalk (A, B)
0.241	100	Water Surface, HSG C (A)
3.062	93	TOTAL AREA

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Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
1.912	HSG C	A
0.027	HSG D	B
1.124	Other	A, B
3.062		TOTAL AREA

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Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.614	0.027	0.000	0.640	>75% Grass cover, Good	A, B
0.000	0.000	0.000	0.000	0.941	0.941	Parking	A, B
0.000	0.000	1.057	0.000	0.000	1.057	Roofs	A
0.000	0.000	0.000	0.000	0.183	0.183	Sidewalk	A, B
0.000	0.000	0.241	0.000	0.000	0.241	Water Surface	A
0.000	0.000	1.912	0.027	1.124	3.062	TOTAL AREA	

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MSE 24-hr 4 1-yr_NRCS Rainfall=2.49"

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Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 2
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A: Runoff Area=131,505 sf 79.68% Impervious Runoff Depth=1.92"
Tc=6.0 min CN=74/98 Runoff=8.26 cfs 0.484 af

Subcatchment B: Runoff Area=1,895 sf 37.99% Impervious Runoff Depth=1.34"
Tc=6.0 min CN=78/98 Runoff=0.09 cfs 0.005 af

Pond 1P: Bioretention Basin 1 Peak Elev=1,026.65' Storage=7,137 cf Inflow=8.26 cfs 0.484 af
Primary=0.94 cfs 0.484 af Secondary=0.00 cfs 0.000 af Outflow=0.94 cfs 0.484 af

Link 3L: Post Development Inflow=0.96 cfs 0.489 af
Primary=0.96 cfs 0.489 af

Total Runoff Area = 3.062 ac Runoff Volume = 0.489 af Average Runoff Depth = 1.92"
20.91% Pervious = 0.640 ac 79.09% Impervious = 2.422 ac

Summary for Subcatchment A:

Runoff = 8.26 cfs @ 12.13 hrs, Volume= 0.484 af, Depth= 1.92"
 Routed to Pond 1P : Bioretention Basin 1

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
 MSE 24-hr 4 1-yr_NRCS Rainfall=2.49"

Area (sf)	CN	Description
46,050	98	Roofs, HSG C
* 40,550	98	Parking
* 7,680	98	Sidewalk
* 10,500	100	Water Surface, HSG C
26,725	74	>75% Grass cover, Good, HSG C
131,505	93	Weighted Average
26,725	74	20.32% Pervious Area
104,780	98	79.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B:

Runoff = 0.09 cfs @ 12.13 hrs, Volume= 0.005 af, Depth= 1.34"

Routed to Link 3L : Post Development

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
 MSE 24-hr 4 1-yr_NRCS Rainfall=2.49"

Area (sf)	CN	Description
0	98	Roofs, HSG C
* 450	98	Parking
* 270	98	Sidewalk
* 0	100	Water Surface, HSG C
* 1,175	78	>75% Grass cover, Good, HSG D
1,895	86	Weighted Average
1,175	78	62.01% Pervious Area
720	98	37.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Pond 1P: Bioretention Basin 1

Inflow Area = 3.019 ac, 79.68% Impervious, Inflow Depth = 1.92" for 1-yr_NRCS event
 Inflow = 8.26 cfs @ 12.13 hrs, Volume= 0.484 af
 Outflow = 0.94 cfs @ 12.60 hrs, Volume= 0.484 af, Atten= 89%, Lag= 28.5 min
 Primary = 0.94 cfs @ 12.60 hrs, Volume= 0.484 af
 Routed to Link 3L : Post Development
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 3L : Post Development

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 1,026.65' @ 12.60 hrs Surf.Area= 11,474 sf Storage= 7,137 cf

Plug-Flow detention time= 52.9 min calculated for 0.484 af (100% of inflow)
 Center-of-Mass det. time= 52.8 min (818.0 - 765.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,026.00'	24,000 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,026.00	10,500	0	0
1,027.00	12,000	11,250	11,250
1,028.00	13,500	12,750	24,000

Device	Routing	Invert	Outlet Devices
#1	Primary	1,024.00'	8.0" Round Culvert L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,024.00' / 1,023.80' S= 0.0200 '/ Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.35 sf
#2	Primary	1,023.50'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 2	1,026.00'	3.600 in/hr Exfiltration over Surface area from 1,023.50' - 1,026.00' Excluded Surface area = 0 sf Phase-In= 0.01'
#4	Device 1	1,026.50'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Device 1	1,027.33'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#6	Secondary	1,027.50'	15.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=0.94 cfs @ 12.60 hrs HW=1,026.65' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 0.06 cfs of 2.02 cfs potential flow)
- 4=Orifice/Grate (Orifice Controls 0.06 cfs @ 1.32 fps)
- 5=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)
- 2=Orifice/Grate (Passes 0.87 cfs of 1.61 cfs potential flow)
- 3=Exfiltration (Exfiltration Controls 0.87 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,026.00' TW=0.00' (Dynamic Tailwater)

- 6=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Link 3L: Post Development

Inflow Area = 3.062 ac, 79.09% Impervious, Inflow Depth = 1.92" for 1-yr_NRCS event
Inflow = 0.96 cfs @ 12.13 hrs, Volume= 0.489 af
Primary = 0.96 cfs @ 12.13 hrs, Volume= 0.489 af, Atten= 0%, Lag= 0.0 min
Routed to nonexistent node Post

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

241243_Seminole Lacy

MSE 24-hr 4 2-yr_NRCS Rainfall=2.84"

Prepared by Wyser Engineering

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Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 2
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A: Runoff Area=131,505 sf 79.68% Impervious Runoff Depth=2.24"
Tc=6.0 min CN=74/98 Runoff=9.60 cfs 0.564 af

Subcatchment B: Runoff Area=1,895 sf 37.99% Impervious Runoff Depth=1.62"
Tc=6.0 min CN=78/98 Runoff=0.10 cfs 0.006 af

Pond 1P: Bioretention Basin 1 Peak Elev=1,026.78' Storage=8,655 cf Inflow=9.60 cfs 0.564 af
Primary=1.08 cfs 0.564 af Secondary=0.00 cfs 0.000 af Outflow=1.08 cfs 0.564 af

Link 3L: Post Development Inflow=1.09 cfs 0.570 af
Primary=1.09 cfs 0.570 af

Total Runoff Area = 3.062 ac Runoff Volume = 0.570 af Average Runoff Depth = 2.23"
20.91% Pervious = 0.640 ac 79.09% Impervious = 2.422 ac

Summary for Subcatchment A:

Runoff = 9.60 cfs @ 12.13 hrs, Volume= 0.564 af, Depth= 2.24"
 Routed to Pond 1P : Bioretention Basin 1

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
 MSE 24-hr 4 2-yr_NRCS Rainfall=2.84"

Area (sf)	CN	Description
46,050	98	Roofs, HSG C
* 40,550	98	Parking
* 7,680	98	Sidewalk
* 10,500	100	Water Surface, HSG C
26,725	74	>75% Grass cover, Good, HSG C
131,505	93	Weighted Average
26,725	74	20.32% Pervious Area
104,780	98	79.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B:

Runoff = 0.10 cfs @ 12.13 hrs, Volume= 0.006 af, Depth= 1.62"

Routed to Link 3L : Post Development

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
 MSE 24-hr 4 2-yr_NRCS Rainfall=2.84"

Area (sf)	CN	Description
0	98	Roofs, HSG C
* 450	98	Parking
* 270	98	Sidewalk
* 0	100	Water Surface, HSG C
* 1,175	78	>75% Grass cover, Good, HSG D
1,895	86	Weighted Average
1,175	78	62.01% Pervious Area
720	98	37.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Pond 1P: Bioretention Basin 1

Inflow Area = 3.019 ac, 79.68% Impervious, Inflow Depth = 2.24" for 2-yr_NRCS event
 Inflow = 9.60 cfs @ 12.13 hrs, Volume= 0.564 af
 Outflow = 1.08 cfs @ 12.61 hrs, Volume= 0.564 af, Atten= 89%, Lag= 28.7 min
 Primary = 1.08 cfs @ 12.61 hrs, Volume= 0.564 af
 Routed to Link 3L : Post Development
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 3L : Post Development

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 1,026.78' @ 12.61 hrs Surf.Area= 11,671 sf Storage= 8,655 cf

Plug-Flow detention time= 61.7 min calculated for 0.564 af (100% of inflow)
 Center-of-Mass det. time= 61.7 min (824.7 - 763.0)

Volume	Invert	Avail.Storage	Storage Description
#1	1,026.00'	24,000 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,026.00	10,500	0	0
1,027.00	12,000	11,250	11,250
1,028.00	13,500	12,750	24,000

Device	Routing	Invert	Outlet Devices
#1	Primary	1,024.00'	8.0" Round Culvert L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,024.00' / 1,023.80' S= 0.0200 '/ Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.35 sf
#2	Primary	1,023.50'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 2	1,026.00'	3.600 in/hr Exfiltration over Surface area from 1,023.50' - 1,026.00' Excluded Surface area = 0 sf Phase-In= 0.01'
#4	Device 1	1,026.50'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Device 1	1,027.33'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#6	Secondary	1,027.50'	15.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=1.08 cfs @ 12.61 hrs HW=1,026.78' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 0.20 cfs of 2.08 cfs potential flow)
- 4=Orifice/Grate (Orifice Controls 0.20 cfs @ 1.80 fps)
- 5=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)
- 2=Orifice/Grate (Passes 0.87 cfs of 1.65 cfs potential flow)
- 3=Exfiltration (Exfiltration Controls 0.87 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,026.00' TW=0.00' (Dynamic Tailwater)

- 6=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Link 3L: Post Development

Inflow Area = 3.062 ac, 79.09% Impervious, Inflow Depth = 2.23" for 2-yr_NRCS event
Inflow = 1.09 cfs @ 12.57 hrs, Volume= 0.570 af
Primary = 1.09 cfs @ 12.57 hrs, Volume= 0.570 af, Atten= 0%, Lag= 0.0 min
Routed to nonexistent node Post

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

241243_Seminole Lacy

MSE 24-hr 4 10-yr_NRCS Rainfall=4.09"

Prepared by Wyser Engineering

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Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 2
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A: Runoff Area=131,505 sf 79.68% Impervious Runoff Depth=3.41"
Tc=6.0 min CN=74/98 Runoff=14.46 cfs 0.858 af

Subcatchment B: Runoff Area=1,895 sf 37.99% Impervious Runoff Depth=2.68"
Tc=6.0 min CN=78/98 Runoff=0.17 cfs 0.010 af

Pond 1P: Bioretention Basin 1 Peak Elev=1,027.26' Storage=14,389 cf Inflow=14.46 cfs 0.858 af
Primary=1.55 cfs 0.858 af Secondary=0.00 cfs 0.000 af Outflow=1.55 cfs 0.858 af

Link 3L: Post Development Inflow=1.57 cfs 0.867 af
Primary=1.57 cfs 0.867 af

Total Runoff Area = 3.062 ac Runoff Volume = 0.867 af Average Runoff Depth = 3.40"
20.91% Pervious = 0.640 ac 79.09% Impervious = 2.422 ac

Summary for Subcatchment A:

Runoff = 14.46 cfs @ 12.13 hrs, Volume= 0.858 af, Depth= 3.41"
 Routed to Pond 1P : Bioretention Basin 1

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
 MSE 24-hr 4 10-yr_NRCS Rainfall=4.09"

Area (sf)	CN	Description
46,050	98	Roofs, HSG C
* 40,550	98	Parking
* 7,680	98	Sidewalk
* 10,500	100	Water Surface, HSG C
26,725	74	>75% Grass cover, Good, HSG C
131,505	93	Weighted Average
26,725	74	20.32% Pervious Area
104,780	98	79.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B:

Runoff = 0.17 cfs @ 12.13 hrs, Volume= 0.010 af, Depth= 2.68"

Routed to Link 3L : Post Development

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
 MSE 24-hr 4 10-yr_NRCS Rainfall=4.09"

Area (sf)	CN	Description
0	98	Roofs, HSG C
* 450	98	Parking
* 270	98	Sidewalk
* 0	100	Water Surface, HSG C
* 1,175	78	>75% Grass cover, Good, HSG D
1,895	86	Weighted Average
1,175	78	62.01% Pervious Area
720	98	37.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Pond 1P: Bioretention Basin 1

Inflow Area = 3.019 ac, 79.68% Impervious, Inflow Depth = 3.41" for 10-yr_NRCS event
 Inflow = 14.46 cfs @ 12.13 hrs, Volume= 0.858 af
 Outflow = 1.55 cfs @ 12.62 hrs, Volume= 0.858 af, Atten= 89%, Lag= 29.7 min
 Primary = 1.55 cfs @ 12.62 hrs, Volume= 0.858 af
 Routed to Link 3L : Post Development
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 3L : Post Development

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 1,027.26' @ 12.62 hrs Surf.Area= 12,386 sf Storage= 14,389 cf

Plug-Flow detention time= 83.5 min calculated for 0.858 af (100% of inflow)
 Center-of-Mass det. time= 83.5 min (841.2 - 757.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,026.00'	24,000 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,026.00	10,500	0	0
1,027.00	12,000	11,250	11,250
1,028.00	13,500	12,750	24,000

Device	Routing	Invert	Outlet Devices
#1	Primary	1,024.00'	8.0" Round Culvert L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,024.00' / 1,023.80' S= 0.0200 '/ Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.35 sf
#2	Primary	1,023.50'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 2	1,026.00'	3.600 in/hr Exfiltration over Surface area from 1,023.50' - 1,026.00' Excluded Surface area = 0 sf Phase-In= 0.01'
#4	Device 1	1,026.50'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Device 1	1,027.33'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#6	Secondary	1,027.50'	15.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=1.55 cfs @ 12.62 hrs HW=1,027.26' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 0.67 cfs of 2.27 cfs potential flow)
- 4=Orifice/Grate (Orifice Controls 0.67 cfs @ 3.43 fps)
- 5=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)
- 2=Orifice/Grate (Passes 0.87 cfs of 1.77 cfs potential flow)
- 3=Exfiltration (Exfiltration Controls 0.87 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,026.00' TW=0.00' (Dynamic Tailwater)

- 6=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Link 3L: Post Development

Inflow Area = 3.062 ac, 79.09% Impervious, Inflow Depth = 3.40" for 10-yr_NRCS event
Inflow = 1.57 cfs @ 12.55 hrs, Volume= 0.867 af
Primary = 1.57 cfs @ 12.55 hrs, Volume= 0.867 af, Atten= 0%, Lag= 0.0 min
Routed to nonexistent node Post

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

241243_Seminole Lacy

MSE 24-hr 4 100-yr_NRCS Rainfall=6.66"

Prepared by Wyser Engineering

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Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 2
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A: Runoff Area=131,505 sf 79.68% Impervious Runoff Depth=5.88"
Tc=6.0 min CN=74/98 Runoff=24.66 cfs 1.479 af

Subcatchment B: Runoff Area=1,895 sf 37.99% Impervious Runoff Depth=5.02"
Tc=6.0 min CN=78/98 Runoff=0.32 cfs 0.018 af

Pond 1P: Bioretention Basin 1 Peak Elev=1,027.82' Storage=21,606 cf Inflow=24.66 cfs 1.479 af
Primary=3.35 cfs 1.306 af Secondary=6.69 cfs 0.172 af Outflow=10.05 cfs 1.479 af

Link 3L: Post Development Inflow=10.18 cfs 1.497 af
Primary=10.18 cfs 1.497 af

Total Runoff Area = 3.062 ac Runoff Volume = 1.497 af Average Runoff Depth = 5.87"
20.91% Pervious = 0.640 ac 79.09% Impervious = 2.422 ac

Summary for Subcatchment A:

Runoff = 24.66 cfs @ 12.13 hrs, Volume= 1.479 af, Depth= 5.88"
 Routed to Pond 1P : Bioretention Basin 1

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
 MSE 24-hr 4 100-yr_NRCS Rainfall=6.66"

Area (sf)	CN	Description
46,050	98	Roofs, HSG C
* 40,550	98	Parking
* 7,680	98	Sidewalk
* 10,500	100	Water Surface, HSG C
26,725	74	>75% Grass cover, Good, HSG C
131,505	93	Weighted Average
26,725	74	20.32% Pervious Area
104,780	98	79.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B:

Runoff = 0.32 cfs @ 12.13 hrs, Volume= 0.018 af, Depth= 5.02"

Routed to Link 3L : Post Development

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
 MSE 24-hr 4 100-yr_NRCS Rainfall=6.66"

Area (sf)	CN	Description
0	98	Roofs, HSG C
* 450	98	Parking
* 270	98	Sidewalk
* 0	100	Water Surface, HSG C
* 1,175	78	>75% Grass cover, Good, HSG D
1,895	86	Weighted Average
1,175	78	62.01% Pervious Area
720	98	37.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Pond 1P: Bioretention Basin 1

Inflow Area = 3.019 ac, 79.68% Impervious, Inflow Depth = 5.88" for 100-yr_NRCS event
 Inflow = 24.66 cfs @ 12.13 hrs, Volume= 1.479 af
 Outflow = 10.05 cfs @ 12.25 hrs, Volume= 1.479 af, Atten= 59%, Lag= 7.2 min
 Primary = 3.35 cfs @ 12.25 hrs, Volume= 1.306 af
 Routed to Link 3L : Post Development
 Secondary = 6.69 cfs @ 12.25 hrs, Volume= 0.172 af
 Routed to Link 3L : Post Development

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 1,027.82' @ 12.25 hrs Surf.Area= 13,231 sf Storage= 21,606 cf

Plug-Flow detention time= 76.3 min calculated for 1.479 af (100% of inflow)
 Center-of-Mass det. time= 76.3 min (827.8 - 751.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,026.00'	24,000 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,026.00	10,500	0	0
1,027.00	12,000	11,250	11,250
1,028.00	13,500	12,750	24,000

Device	Routing	Invert	Outlet Devices
#1	Primary	1,024.00'	8.0" Round Culvert L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,024.00' / 1,023.80' S= 0.0200 '/ Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.35 sf
#2	Primary	1,023.50'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 2	1,026.00'	3.600 in/hr Exfiltration over Surface area from 1,023.50' - 1,026.00' Excluded Surface area = 0 sf Phase-In= 0.01'
#4	Device 1	1,026.50'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Device 1	1,027.33'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#6	Secondary	1,027.50'	15.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=3.35 cfs @ 12.25 hrs HW=1,027.82' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Inlet Controls 2.48 cfs @ 7.10 fps)
- 4=Orifice/Grate (Passes < 0.98 cfs potential flow)
- 5=Sharp-Crested Rectangular Weir (Passes < 4.39 cfs potential flow)
- 2=Orifice/Grate (Passes 0.87 cfs of 1.91 cfs potential flow)
- 3=Exfiltration (Exfiltration Controls 0.87 cfs)

Secondary OutFlow Max=6.69 cfs @ 12.25 hrs HW=1,027.82' TW=0.00' (Dynamic Tailwater)

- 6=Broad-Crested Rectangular Weir (Weir Controls 6.69 cfs @ 1.39 fps)

Summary for Link 3L: Post Development

Inflow Area = 3.062 ac, 79.09% Impervious, Inflow Depth = 5.87" for 100-yr_NRCS event
Inflow = 10.18 cfs @ 12.25 hrs, Volume= 1.497 af
Primary = 10.18 cfs @ 12.25 hrs, Volume= 1.497 af, Atten= 0%, Lag= 0.0 min
Routed to nonexistent node Post

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

241243_Seminole Lacy

MSE 24-hr 4 200-yr_NRCS Rainfall=7.53"

Prepared by Wyser Engineering

Printed 7/22/2024

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Page 25

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 2
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A: Runoff Area=131,505 sf 79.68% Impervious Runoff Depth=6.72"
Tc=6.0 min CN=74/98 Runoff=28.15 cfs 1.692 af

Subcatchment B: Runoff Area=1,895 sf 37.99% Impervious Runoff Depth=5.84"
Tc=6.0 min CN=78/98 Runoff=0.37 cfs 0.021 af

Pond 1P: Bioretention Basin 1 Peak Elev=1,027.95' Storage=23,321 cf Inflow=28.15 cfs 1.692 af
Primary=3.40 cfs 1.407 af Secondary=11.56 cfs 0.284 af Outflow=14.96 cfs 1.692 af

Link 3L: Post Development Inflow=15.16 cfs 1.713 af
Primary=15.16 cfs 1.713 af

Total Runoff Area = 3.062 ac Runoff Volume = 1.713 af Average Runoff Depth = 6.71"
20.91% Pervious = 0.640 ac 79.09% Impervious = 2.422 ac

Summary for Subcatchment A:

Runoff = 28.15 cfs @ 12.13 hrs, Volume= 1.692 af, Depth= 6.72"
 Routed to Pond 1P : Bioretention Basin 1

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
 MSE 24-hr 4 200-yr_NRCS Rainfall=7.53"

Area (sf)	CN	Description
46,050	98	Roofs, HSG C
* 40,550	98	Parking
* 7,680	98	Sidewalk
* 10,500	100	Water Surface, HSG C
26,725	74	>75% Grass cover, Good, HSG C
131,505	93	Weighted Average
26,725	74	20.32% Pervious Area
104,780	98	79.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment B:

Runoff = 0.37 cfs @ 12.13 hrs, Volume= 0.021 af, Depth= 5.84"

Routed to Link 3L : Post Development

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
 MSE 24-hr 4 200-yr_NRCS Rainfall=7.53"

Area (sf)	CN	Description
0	98	Roofs, HSG C
* 450	98	Parking
* 270	98	Sidewalk
* 0	100	Water Surface, HSG C
* 1,175	78	>75% Grass cover, Good, HSG D
1,895	86	Weighted Average
1,175	78	62.01% Pervious Area
720	98	37.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Pond 1P: Bioretention Basin 1

Inflow Area = 3.019 ac, 79.68% Impervious, Inflow Depth = 6.72" for 200-yr_NRCS event
 Inflow = 28.15 cfs @ 12.13 hrs, Volume= 1.692 af
 Outflow = 14.96 cfs @ 12.21 hrs, Volume= 1.692 af, Atten= 47%, Lag= 5.0 min
 Primary = 3.40 cfs @ 12.21 hrs, Volume= 1.407 af
 Routed to Link 3L : Post Development
 Secondary = 11.56 cfs @ 12.21 hrs, Volume= 0.284 af
 Routed to Link 3L : Post Development

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 1,027.95' @ 12.21 hrs Surf.Area= 13,424 sf Storage= 23,321 cf

Plug-Flow detention time= 72.3 min calculated for 1.692 af (100% of inflow)
 Center-of-Mass det. time= 72.3 min (822.4 - 750.0)

Volume	Invert	Avail.Storage	Storage Description
#1	1,026.00'	24,000 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,026.00	10,500	0	0
1,027.00	12,000	11,250	11,250
1,028.00	13,500	12,750	24,000

Device	Routing	Invert	Outlet Devices
#1	Primary	1,024.00'	8.0" Round Culvert L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,024.00' / 1,023.80' S= 0.0200 '/ Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.35 sf
#2	Primary	1,023.50'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 2	1,026.00'	3.600 in/hr Exfiltration over Surface area from 1,023.50' - 1,026.00' Excluded Surface area = 0 sf Phase-In= 0.01'
#4	Device 1	1,026.50'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Device 1	1,027.33'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#6	Secondary	1,027.50'	15.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=3.40 cfs @ 12.21 hrs HW=1,027.95' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Inlet Controls 2.52 cfs @ 7.23 fps)
- 4=Orifice/Grate (Passes < 1.04 cfs potential flow)
- 5=Sharp-Crested Rectangular Weir (Passes < 6.18 cfs potential flow)
- 2=Orifice/Grate (Passes 0.87 cfs of 1.94 cfs potential flow)
- 3=Exfiltration (Exfiltration Controls 0.87 cfs)

Secondary OutFlow Max=11.54 cfs @ 12.21 hrs HW=1,027.95' TW=0.00' (Dynamic Tailwater)

- 6=Broad-Crested Rectangular Weir (Weir Controls 11.54 cfs @ 1.71 fps)

Summary for Link 3L: Post Development

Inflow Area = 3.062 ac, 79.09% Impervious, Inflow Depth = 6.71" for 200-yr_NRCS event
Inflow = 15.16 cfs @ 12.21 hrs, Volume= 1.713 af
Primary = 15.16 cfs @ 12.21 hrs, Volume= 1.713 af, Atten= 0%, Lag= 0.0 min
Routed to nonexistent node Post

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

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Project Reports

- 1 Routing Diagram
- 2 Area Listing (selected nodes)
- 3 Soil Listing (selected nodes)
- 4 Ground Covers (selected nodes)

1-yr NRCS Event

- 5 Node Listing
- 6 Subcat A:
- 7 Subcat B:
- 8 Pond 1P: Bioretention Basin 1
- 9 Link 3L: Post Development

2-yr NRCS Event

- 10 Node Listing
- 11 Subcat A:
- 12 Subcat B:
- 13 Pond 1P: Bioretention Basin 1
- 14 Link 3L: Post Development

10-yr NRCS Event

- 15 Node Listing
- 16 Subcat A:
- 17 Subcat B:
- 18 Pond 1P: Bioretention Basin 1
- 19 Link 3L: Post Development

100-yr NRCS Event

- 20 Node Listing
- 21 Subcat A:
- 22 Subcat B:
- 23 Pond 1P: Bioretention Basin 1
- 24 Link 3L: Post Development

200-yr NRCS Event

- 25 Node Listing
- 26 Subcat A:
- 27 Subcat B:
- 28 Pond 1P: Bioretention Basin 1
- 29 Link 3L: Post Development

ENDWALL RIPRAP SIZING

Project: Court and Cork Pickleball
 Wyser Project #: 18-24-1243
 Designed By: KLM
 Date: 07/22/2024

HEC14 - EQUATION 10.4

$$D_{50} = 0.2D \{ Q / (v_g * D^{2.5}) \}^{4/3} * (D / TW)$$

g acceleration due to gravity 32.2 ft/sec²
 TW Tailwater Depth (Assumed) 0.4*D ft
 * Assumed Full Pipe Capacity
 STA Structure

Table 10.1. Example Riprap Classes and Apron Dimensions

Class	D ₅₀ (mm)	D ₅₀ (in)	Apron Length ¹	Apron Depth
1	125	5	4D	3.5D ₅₀
2	150	6	4D	3.3D ₅₀
3	250	10	5D	2.4D ₅₀
4	350	14	6D	2.2D ₅₀
5	500	20	7D	2.0D ₅₀
6	550	22	8D	2.0D ₅₀

¹D is the culvert rise.

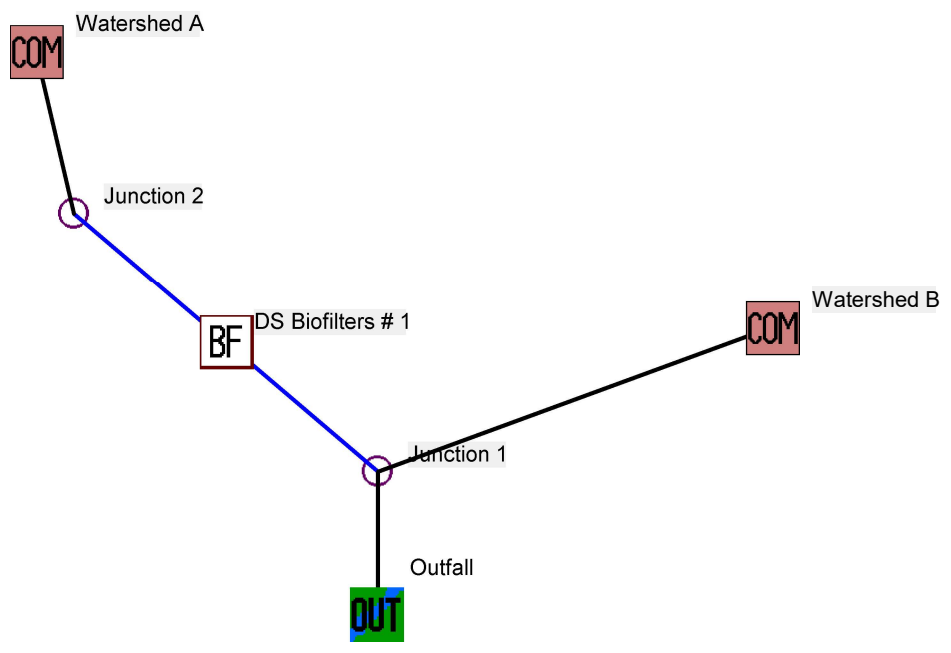
AES NO.	Pipe Diameter	Capacity Flow	Tailwater Depth	Riprap size	Riprap class	Apron Dimensions					
	D (ft)	Q (cfs)	TW (ft)	D50 (in)	(See Table 10.1) Type	D ₅₀	WisDOT*	(See Table 10.1)		Width	Width
								Length	Depth	@ End	@ Pipe
AES NO. 1	0.67	1.85	0.27	3.47	2	5	Light Riprap	2.67	1.5	3.8	2.0
AES NO. 4	1.25	4.95	0.50	2.97	2	5	Light Riprap	5.00	1.5	7.1	3.8
STM MH NO. 7	2.00	17.33	0.80	5.28	3	6	Light Riprap	8.00	1.7	11.3	6.0
AES NO. 30	1.25	3.23	0.50	1.68	2	5	Light Riprap	5.00	1.5	7.1	3.8

*Refer to Section 606 and 312 for material type.
 Select Crushed Material and Light Riprap require Type R geotextile Fabric
 Medium, Heavy and Extra-Heavy Riprap require Type HR geotextile Fabric



APPENDIX F

Water Quality and Infiltration Modeling



Data file name: \\WYSERSERVER2\Wyser Engineering\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\SWMP\WinSLAMM\241243_Seminole Lacy.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: 07-22-2024 Time: 22:01:05

Site information:

LU# 1 - Commercial: Watershed A Total area (ac): 3.019

1 - Roofs 1: 1.057 ac. Flat Connected PSD File: C:\WinSLAMM Files\NURP.cpz

13 - Paved Parking 1: 0.931 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz

31 - Sidewalks 1: 0.176 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz

45 - Large Landscaped Areas 1: 0.614 ac. Normal Clayey Low Density PSD File: C:\WinSLAMM Files\NURP.cpz

70 - Water Body Areas: 0.241 ac. PSD File:

LU# 2 - Commercial: Watershed B Total area (ac): 0.043

13 - Paved Parking 1: 0.010 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz

31 - Sidewalks 1: 0.006 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz

45 - Large Landscaped Areas 1: 0.027 ac. Normal Clayey Low Density PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Biofilter CP# 1 (DS) - DS Biofilters # 1

1. Top area (square feet) = 13500

2. Bottom area (square feet) = 10500

3. Depth (ft): 8

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) 4

10. Porosity of rock filled volume = 0.33

11. Engineered soil infiltration rate: 3.6

12. Engineered soil depth (ft) = 2

13. Engineered soil porosity = 0.27

14. Percent solids reduction due to flow through engineered soil = 80

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

User-Defined Soil Type 1.000

Biofilter Outlet/Discharge Characteristics:

Outlet type: Sharp Crested Weir

1. Weir length (ft): 4

2. Invert elevation above datum (ft): 7.33

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 10

2. Weir crest width (ft): 6

3. Height of datum to bottom of weir opening: 7.5

Outlet type: Surface Discharge Pipe

1. Surface discharge pipe outlet diameter (ft): 0.5

2. Pipe invert elevation above datum (ft): 6.5

3. Number of surface pipe outlets: 1

Outlet type: Drain Tile/Underdrain

1. Underdrain outlet diameter (ft): 0.5

2. Invert elevation above datum (ft): 3.5

3. Number of underdrain outlets: 1

Data file name: \\WYSERSERVER2\Wyser Engineering\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\SWMP\WinSLAMM\241243_Seminole Lacy.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
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppd
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
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

Model Run Start Date: 01/01/81 Model Run End Date: 12/31/81

Date of run: 07-22-2024 Time of run: 22:02:00

Total Area Modeled (acres): 3.062

Years in Model Run: 1.00

	Runoff Volume (cu ft)	Percent Runoff Volume Reduction	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of all Land Uses without Controls:	200271	-	71.21	890.4	-
Outfall Total with Controls:	5904	97.05%	42.45	15.64	98.24%
Annualized Total After Outfall Controls:	5920			15.69	

Data File: \\WYSERSERVER2\Wyser Engineering\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\SWMP\WinSLAMM\241243_Seminole Lacy.mdb

Rain File: WisReq - Madison WI 1981.RAN

Date: 07-22-24 Time: 11:17:16 AM

Site Description:

Col. #	2	3	4	5	6	7	8	9	10	11	12	13	14	15	18	19	27	28	29	30	31	32	33	34	35	39	54	61	
Control Practice No.	Control Practice Type	Control Practice Name or Location	Total Inflow Volume (cf)	Total Outflow Volume (cf)	Percent Volume Reduction	Total Influent Load (lbs)	Total Effluent Load (lbs)	Percent Load Reduction	Influent Conc (mg/L)	Flow Weighted Effluent Conc (mg/L)	Effluent Conc (mg/L)	Percent Conc. Reduction	Influent Median Part. Size (microns)	Effluent Median Part. Size (microns)	Notes	Maximum Stage (ft)	Hydraulic Volume Out (cf)	Ponding Time (hrs)	Maximum Surface Subsurface Ponding Time (hrs)	Volume Infiltrated (cf)	Underdrain Discharge Vol. (cf)	Evapo-Transpir. Vol. (cf)	Minimum Soil Moist. (frac)	Surface Discharge Bypass Vol. (cf)	Evap. Vol. (cf)	Volume Supplemental Irrig. (cf)	Surface Ponding Events >72 hrs (Cont)	Residence Time in Media (hrs)	Runoff Production Events / Ttl. Rains
1	Biofilter	DS Biofilters # 1	198845	4477	97.75	879.1	4.349	99.51	70.81	15.56	78.029	7.8	1.67	No Biofilter Overflows	6.45	4478	4.9	29.1	194903	4478				0			0	1.8	Jan-90

Data File: \\WYSERSERVER2\Wyser Engineering\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\SWMP\WinSLAMM\241243_Seminole Lacy.mdb
 Rain File: WisReg - Madison WI 1981.RAN
 Date: 07-22-24 Time: 11:17:17 AM
 Site Description:

Runoff Volume Total (cf) at the Outfall

Rain Number	Start Date	Rain Total	Outfall Tot Rv	Total Losses	Calculated Event	Peal Pre-Dev	Runoff Vol. (cf)
Minimum:		0	0	0	0.01	53.5	0
Maximum:		2.59	4666	0.162	2.17	99.5	0.606
Average:		0.26	54.16	0.004	0.26	68.7	0.481
Total:		28.81	5904		28.33		9433

* Note: NRCS does not recommend using CN method for rains < 0.5 in.
 See 'PreDevelopment Areas and CN' Help for more info.

TSS Calculations - WinSLAMM

Project: Court and Cork Pickleball

Modeled By: KLM

Date: 7/22/24



300 E. Front Street
Mt. Horeb, Wisconsin 53572
Ph: (608) 437-1980

Watershed	WinSLAMM Node	Area (Acres)	Particulate Solids Yield (lbs)	Treatment Required (%)	Post Development		Particulate Solids Treatment Provided (lbs)	Percent Reduction (%)
					Particulate Solids Treatment Required (lbs)	Particulate Solid Yield After Controls (lbs)		
Watershed A - N Basin	Watershed A	3.02	879.07	-	-	-	-	-
-	Basin 1	-	-	-	-	4.35	874.72	99.51%
Watershed B - No Treatment	Watershed B	0.04	11.30	-	-	11.30	0.00	0.00%
		3.06	890.37	80.00%	712.30	15.65	874.72	98.24%

Infiltration Calculations - WinSLAMM

Project: Court and Cork Pickleball

Modeled By: KLM

Date: 7/22/24



Watershed	WinSLAMM Node	Area (Acres) A	Postdevelopment Stay-on No Controls		Post Development Infiltration		Postdevelopment Stay-on with Controls		Runoff (cf) J (From SLAMM)
			(in) E = F / A	(cf) F = (28.81 * A) - G	Runoff (cf) G (From SLAMM)	(in) H = I / A	(cf) I = (28.12 * A) - J		
Watershed A - N Basin	Watershed A Basin 1	3.02	10.67	116,878	198,844	-	-	-	-
-	-	-	-	-	-	-	311,245	4,477	-
Watershed B - No Treatment	Watershed B	0.04	19.78	3,124	1,426	-	3,124	1,426	1,426
		3.06	10.79	120,001	200,270	28.28	314,368	5,903	

Predevelopment Stay-on - New Development - Infiltration Area (from WinSLAMM)					Post-Development Stay-on Provided (Entire Development)	
Predevelopment Stay-on	Runoff	Stay-on Required (100% Predevelopment Stay-on)	Stay-on Required (100% Predevelopment Stay-on)			
K = L / A (in)	L = (28.81 * A) - M (cf)	M (From SLAMM) (cf)	N = K * 100% (in)	O = L * 100% (cf)		S = I (cf)
27.96	310,838	9,433	27.96	310,838		314,368

APPENDIX G

Universal Soils Loss Equation Worksheet(s)



Soil Loss & Sediment Discharge Calculation Tool

for use on Construction Sites in the State of Wisconsin

WDNR Version 2.0 (06-29-2017)



YEAR 1

Developer: Newcomb
 Project: Court and Cork Pickleball
 Date: 07/23/24
 County: Dane

Version 1.0

Activity (1)	Begin Date (2)	End Date (3)	Period % R (4)	Annual R Factor (5)	Sub Soil Texture (6)	Soil Erodibility K Factor (7)	Slope (%) (8)	Slope Length (ft) (9)	LS Factor (10)	Land Cover C Factor (11)	Soil loss A (tons/acre) (12)	SDF (13)	Sediment Control Practice (14)	Sediment Discharge (t/ac) (15)
Bare Ground	10/01/24	04/01/25	12.9%	150	Silt Loam	0.43	1.2%	445	0.22	1.00	1.9	1.215	Silt Fence	1.4
Bare Ground	04/01/25	09/30/25	86.9%	150	Silt Loam	0.43	2.6%	74	0.23	1.00	12.8	1.004	Sediment Trap	2.6
End	09/30/25	-----	-----	-----	-----	-----	2.6%	74	0.23	-----	-----	0.000	Sediment Trap	0.0
		-----	-----	-----	-----	-----	2.6%	74	0.23	-----	-----	0.000	Sediment Trap	0.0
		-----	-----	-----	-----	-----	2.6%	0	-----	-----	-----	0.000		0.0
		-----	-----	-----	-----	-----	0.0%	0	-----	-----	-----	0.000		0.0
TOTAL											14.7		TOTAL	3.9
													% Reduction Required	NONE

Notes:

See Help Page for further descriptions of variables and items in drop-down boxes.
 The last land disturbing activity on each sheet must be 'End'. This is either 12 months from the start of construction or final stabilization.
 For periods of construction that exceed 12 months, please demonstrate that 5 tons/acre/year is not exceeded in any given 12 month period.

NOTE: THIS TOOL ONLY ADDRESSED SOIL EROSION DUE TO SHEET FLOW. MEASURES TO CONTROL CHANNEL EROSION MAY ALSO BE REQUIRED TO MEET SEDIMENT DISCHARGE REQUIREMENTS.

Recommended Permanent Seeding Dates:

4/1-5/15 and 8/7-8/29 Turf, introduced grasses and legumes
 Thaw-6/30 Native Grasses, forbs, and legumes

Designed By:	KLM
Date	7/23/2024



Soil Loss & Sediment Discharge Calculation Tool

for use on Construction Sites in the State of Wisconsin



WDNR Version 2.0 (06-29-2017)

YEAR 2

Developer: Newcomb
 Project: Court and Cork Pickleball
 Date: 7/23/2024
 County: Dane

Version 1.0

Activity (1)	Begin Date (2)	End Date (3)	Period % R (4)	Annual R Factor (5)	Sub Soil Texture (6)	Soil Erodibility K Factor (7)	Slope (%) (8)	Slope Length (ft) (9)	LS Factor (10)	Land Cover C Factor (11)	Soil loss A (tons/acre) (12)	SDF (13)	Sediment Control Practice (14)	Sediment Discharge (t/ac) (15)
Bare Ground	10/01/25	07/01/26	47.8%	150	Silt Loam	0.43	2.6%	74	0.23	1.00	7.1	1.004	Sediment Trap	1.4
Bare Ground	07/01/26	08/01/26	24.0%	150	Silt Loam	0.43	6.5%	15	0.29	1.00	4.5	0.923	Sediment Trap	0.8
Seed with Mulch or Er	08/01/26	09/30/26	27.8%	150	Silt Loam	0.43	6.5%	15	0.29	0.10	0.5	0.923	Sediment Trap	0.1
End	09/30/26	----	----	----	-----	----	6.5%	15	0.29	-----	----	0.000		0.0
		----	----	----	-----	----	6.5%	0	-----	-----	----	0.000		0.0
		----	----	----	-----	----	0.0%	0	-----	-----	----	0.000		0.0
TOTAL											12.1		TOTAL	2.3
													% Reduction Required	NONE

Notes:

See Help Page for further descriptions of variables and items in drop-down boxes.
 The last land disturbing activity on each sheet must be 'End'. This is either 12 months from the start of construction or final stabilization.
 For periods of construction that exceed 12 months, please demonstrate that 5 tons/acre/year is not exceeded in any given 12 month period.

NOTE: THIS TOOL ONLY ADDRESSED SOIL EROSION DUE TO SHEET FLOW. MEASURES TO CONTROL CHANNEL EROSION MAY ALSO BE REQUIRED TO MEET SEDIMENT DISCHARGE REQUIREMENTS.

Recommended Permanent Seeding Dates:

4/1-5/15 and 8/7-8/29 Turf, introduced grasses and legumes
 Thaw-6/30 Native Grasses, forbs, and legumes

Designed By:	KLM
Date	7/23/2024



Soil Loss & Sediment Discharge Calculation Tool

for use on Construction Sites in the State of Wisconsin

WDNR Version 2.0 (06-29-2017)



YEAR 1

Developer: Newcomb

Project: Court and Cork Pickleball

Date: 07/23/24

County: Dane

Version 1.0

Activity (1)	Begin Date (2)	End Date (3)	Period % R (4)	Annual R Factor (5)	Sub Soil Texture (6)	Soil Erodibility K Factor (7)	Slope (%) (8)	Slope Length (ft) (9)	LS Factor (10)	Land Cover C Factor (11)	Soil loss A (tons/acre) (12)	SDF (13)	Sediment Control Practice (14)	Sediment Discharge (t/ac) (15)
Bare Ground	10/01/24	04/01/25	12.9%	150	Silt Loam	0.43	1.2%	445	0.22	1.00	1.9	1.215	Silt Fence	1.4
Bare Ground	04/01/25	05/15/25	10.2%	150	Silt Loam	0.43	10.0%	30	0.76	1.00	5.0	0.645	Silt Fence	1.9
Seed with Mulch or Er	05/15/25	09/30/25	76.6%	150	Silt Loam	0.43	10.0%	30	0.76	0.10	3.7	0.645	Silt Fence	1.4
End	09/30/25	-----	-----	-----	-----	-----	10.0%	30	0.76	-----	-----	0.000	Silt Fence	0.0
		-----	-----	-----	-----	-----	10.0%	0	-----	-----	-----	0.000		0.0
		-----	-----	-----	-----	-----	0.0%	0	-----	-----	-----	0.000		0.0
TOTAL											10.6		TOTAL	4.7
													% Reduction Required	NONE

Notes:

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NOTE: THIS TOOL ONLY ADDRESSED SOIL EROSION DUE TO SHEET FLOW. MEASURES TO CONTROL CHANNEL EROSION MAY ALSO BE REQUIRED TO MEET SEDIMENT DISCHARGE REQUIREMENTS.

Recommended Permanent Seeding Dates:

4/1-5/15 and 8/7-8/29 Turf, introduced grasses and legumes
 Thaw-6/30 Native Grasses, forbs, and legumes

Designed By:	KLM
Date	7/23/2024



Soil Loss & Sediment Discharge Calculation Tool

for use on Construction Sites in the State of Wisconsin



WDNR Version 2.0 (06-29-2017)

YEAR 2

Developer: Newcomb
 Project: Court and Cork Pickleball
 Date: 7/23/2024
 County: Dane

Version 1.0

Activity (1)	Begin Date (2)	End Date (3)	Period % R (4)	Annual R Factor (5)	Sub Soil Texture (6)	Soil Erodibility K Factor (7)	Slope (%) (8)	Slope Length (ft) (9)	LS Factor (10)	Land Cover C Factor (11)	Soil loss A (tons/acre) (12)	SDF (13)	Sediment Control Practice (14)	Sediment Discharge (t/ac) (15)
Seed with Mulch or Er	10/01/25	07/10/26	56.1%	150	Silt Loam	0.43	10.0%	30	0.76	0.10	2.7	0.645	Silt Fence	1.1
Bare Ground	07/10/26	08/01/26	15.6%	150	Silt Loam	0.43	10.0%	30	0.76	1.00	7.6	0.645	Silt Fence	2.9
Seed with Mulch or Er	08/01/26	09/30/26	27.8%	150	Silt Loam	0.43	10.0%	30	0.76	0.10	1.4	0.645	Silt Fence	0.5
End	09/30/26	----	----	----	-----	----	10.0%	30	0.76	-----	----	0.000		0.0
		----	----	----	-----	----	10.0%	0	-----	-----	----	0.000		0.0
		----	----	----	-----	----	0.0%	0	-----	-----	----	0.000		0.0
TOTAL											11.7		TOTAL	4.5
													% Reduction Required	NONE

Notes:

See Help Page for further descriptions of variables and items in drop-down boxes.
 The last land disturbing activity on each sheet must be 'End'. This is either 12 months from the start of construction or final stabilization.
 For periods of construction that exceed 12 months, please demonstrate that 5 tons/acre/year is not exceeded in any given 12 month period.

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Recommended Permanent Seeding Dates:

4/1-5/15 and 8/7-8/29 Turf, introduced grasses and legumes
 Thaw-6/30 Native Grasses, forbs, and legumes

Designed By:	KLM
Date	7/23/2024

APPENDIX H

Declaration of Conditions, Covenants and Restrictions for
Maintenance of Stormwater Management Measures

DECLARATION OF CONDITIONS AND RESTRICTIONS FOR MAINTENANCE OF STORMWATER MANAGEMENT MEASURES

RECITALS:

- A. _____ (“Owner”) is the owner of _____ more particularly described on Exhibit A attached hereto (the “Property”).
- B. Owner desires to construct stormwater management measures on the Property in accordance with certain plans and specifications approved by the City of Fitchburg (the “City”).
- C. The City requires Owner to record this Declaration of Conditions and Restrictions for Maintenance of Stormwater Management Measures (this “Declaration”) regarding maintenance of certain stormwater management measures (“Stormwater Management Measures”) to be located on the Property all as more particularly described in Exhibit A and shown on Exhibit B. Owner agrees to maintain the Stormwater Management Measures and to grant to the City the rights set forth below.

NOW, THEREFORE, in consideration of the declarations herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the owner agrees as follows:

- 1. Maintenance. Owner and its successors and assigns shall be responsible to repair and maintain the Stormwater Management Measures located on the Property in good condition and in working order and such that the measures comply with approved plans on file with the City. Said maintenance shall be at the Owner’s sole cost and expense. Owner will conduct such maintenance or repair work in accordance with all applicable laws, codes, regulations, and similar requirements. *Specific maintenance tasks and their schedules shall be conducted in accordance with Exhibit A.*
- 2. Easement to City. If Owner fails to maintain the Stormwater Management Measures as required in Section 1, then the City shall have the right, after providing Owner with written notice of the maintenance issue (each, a “Maintenance Notice”) and thirty (30) days to comply with the City’s Maintenance Notice, to enter the Property in order to conduct the maintenance specified in the Maintenance Notice. The City will conduct such maintenance work in accordance with all applicable laws, codes, regulations, and similar requirements and will not unreasonably interfere with Owner’s use of Property. All costs and expenses incurred by the City in conducting such maintenance may be charged to Owner by placing the amount on the tax roll for the Property as a special assessment in accordance with Section 66.0703, Wis. Stats.
- 3. Term/Termination. The term of this Declaration shall commence on the date that this Declaration is filed of record with the Register of Deeds Office for Dane County, Wisconsin, and except as otherwise herein specifically provided, shall continue in perpetuity. Notwithstanding the foregoing, this Declaration may be terminated by recording with the Register of Deeds Office for Dane County, Wisconsin, a written instrument of termination signed by the City and all of the then-owners of the Property.
- 4. Miscellaneous.
 - (a) Notices. Any notice, request or demand required or permitted under this Declaration shall be in writing and shall be deemed given when personally served or three (3) days after the same has been deposited with the United States Post Office, registered or certified mail, return receipt requested, postage prepaid and addressed as follows:

If to Owner: _____

If to the City: City Engineering Division
5520 Lacy Road
Fitchburg, WI 53711
Attn: City Engineer

This space reserved for recording data

Return to:
City of Fitchburg
5520 Lacy Road
Fitchburg, WI 53711

PIN#:

EXHIBIT A
Stormwater Management Maintenance Measures

Legal Description of Property:
Lot 1 and Lot 2 CSM _____

Tax Parcel Numbers: _____

Stormwater Management Measures Included in this Agreement (as shown on the attached Erosion Control Plan, Grading Plan, and Utility Plan, hereby made a part of Exhibit B):

- All site storm sewer pipes and structures
- Bioretention Basin

Specific Maintenance Requirements:

Short Term Maintenance (during construction and/or restoration):

- The building construction contractor at the owner's expense or as agreed to by the owner and contractor shall perform inspection of all facilities during construction and until site stabilization.
- Inspections during construction shall be weekly and/or after a rainfall event of 0.5" or more.
- Repairs necessary to restore the facility to design performance will be made within 48 hours of the inspection.
- Deficiencies include, but are not limited to, rill erosion, sediment deposition in the infiltration pond or behind perimeter control, and deposition of sediment on the tracking pad.
- Tracking on the public right-of-way shall be inspected regularly during days that construction traffic is leaving the construction site. Any excessive sediment tracked onto the public right-of-way shall be scraped immediately. Thorough sweeping, with appropriate equipment that physically picks up and removes the sediment (vs. pushing it to other locations within the public right-of-way) shall be conducted at the end of each working day during construction activities.

Long Term Maintenance:

- Inspector qualifications for Long Term Maintenance: Inspectors under this item shall maintain a current Registered Professional Engineer License in the State of Wisconsin or possess an alternate certification approved by the **City of Fitchburg's** Public Works Department.
- All stormwater provisions constructed as part of this project are permanent in location and function over time. The constructed stormwater provisions such as infiltration ponds, inlet filters, and storm structures shall not be removed or significantly altered without written permission from the **City of Fitchburg's** Public Works Department. Owner shall maintain records of inspections and maintenance as described below in accordance with Chapter 30 – Article II of the **City of Fitchburg** Municipal Code of Ordinances. Inspections and maintenance reports shall be submitted to the **City of Fitchburg's** Public Works Department on an annual basis.
- An operation and maintenance plan shall be developed that is consistent with the purposes of the infiltration device, its intended life, safety requirements and the criteria for its design. The plan shall be developed for inspection, operation and maintenance of the device. The plan shall assign responsibility for activities and the qualifications of the personnel performing the work.

STORM SEWER

- Visual inspection of components shall be performed and debris removed from inlets and storm sewer manholes.
- Repair inlet/outlet areas that are damaged or show signs of erosion.
- Rip-rap shall be replaced as necessary.
- Repairs must restore the component to the specifications of the original plan.

BIORETENTION BASIN

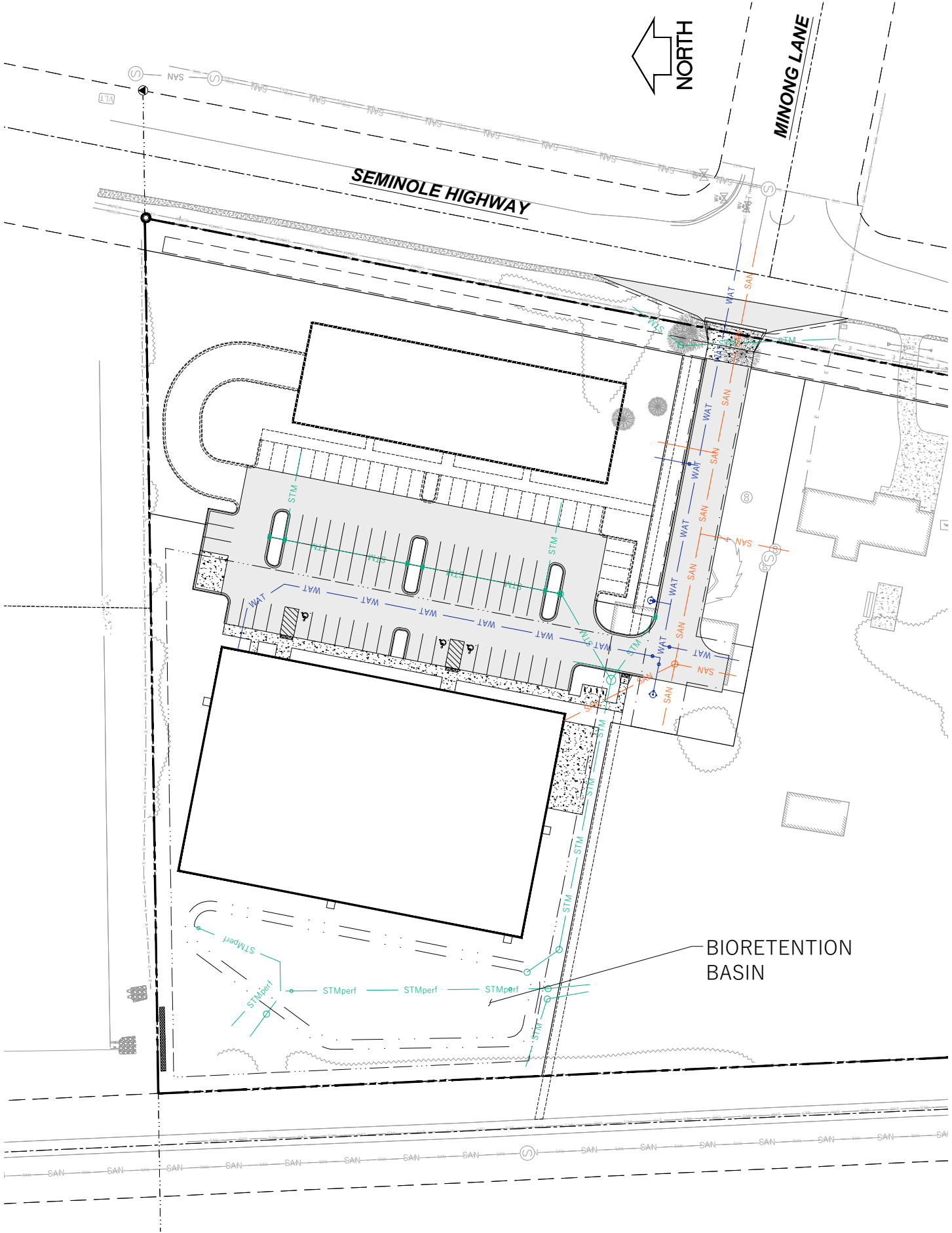
- The Owner is responsible for carrying out typical maintenance activities for bioretention areas and shall include details on these activities that are consistent with the following standards:
 - Inspect soil and repair eroded areas on a monthly basis;
 - Remove litter and debris on a monthly basis;
 - Add additional mulch on an annual basis;
 - Water plants accordingly during first growing season and as necessary during dry periods after first growing season;
 - Re-mulch void areas as needed;
 - Treat diseased trees and shrubs as needed.
- Snow shall not be dumped directly onto the conditioned planting bed.
- If the bioretention device receives runoff only from residential land uses other than streets, the mulch layer can be discontinued at maturity provided that a dense vegetation layer is formed.
- Visual Inspection of the bioretention basins shall be performed, at a minimum, monthly.
- Major maintenance shall be required when system shows standing water beyond 24 hours of rain event.
 - Cleaning shall consist of removal of sediment, one (1) foot undercut, undercut replacement with material as specified in WDNR Conservation Practice Standard #1004 and restoration in-kind.
 - Restoration of plant material shall be by plugging, not seeding alone.
 - Any repairs shall return the facility to the specifications in the approved plan.

EXHIBIT B
Figure(s) of Stormwater Management Maintenance Measures



MINONG LANE

SEMINOLE HIGHWAY



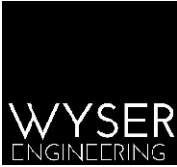
BIORETENTION
BASIN



APPENDIX I

Stormwater Management and Erosion Control Best Management Practice

Preliminary Opinion of Probable Construction Costs



**Stormwater Management and Erosion
Control Best Management Practice
Preliminary Opinion of Probable
Construction Costs**

Item	Quantity	Unit	Unit Cost	Total
Tracking Control Pad	1	EA	\$ 1,200.00	\$ 1,200.00
Silt Fence	1,335	LF	\$ 2.50	\$ 3,337.50
Erosion Mat	5,155	SY	\$ 1.75	\$ 9,021.25
Fertilizer, Seed & Mulch	11,300	SY	\$ 2.50	\$ 28,250.00
Ditch Checks	6	EA	\$ 500.00	\$ 3,000.00
Sediment Basin and Level Spreader	1	EA	\$ 2,000.00	\$ 2,000.00
RipRap Outfall	5	EA	\$ 500.00	\$ 2,500.00
Bioretention System	10,500	SF	\$ 12.00	\$ 126,000.00
Outlet Structures	1	EA	\$ 1,500.00	\$ 1,500.00
				\$ 176,808.75