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Riley Purgatory Bluff Creek Watershed District Permit Application Review

Permit No: 2024-078

Considered at Board of Managers Meeting: January 8, 2025

Received complete: October 31, 2024 (application-review timeline extended by 60 days to February 28, 2025, by the Board of Managers on December 11)

Applicant: Level 7 Development LLC, Bahram Akradi

Consultant: Landform Professional Services, Steve Sabraski

Project: Avienda Regional Stormwater Plan– the applicant proposes a regional stormwater management plan for 3 catchment areas within the Avienda project in Chanhassen. The applicant is seeking approval of the regional plan to provide stormwater management for the later build-out of the future; the applicant proposes to construction a portion of the plan under this application phases of the development. The proposed stormwater management plan includes two underground detention systems, tree installation, two wet detention ponds, rainwater harvest and reuse systems, a manufactured treatment device, along with modifications to existing onsite stormwater facilities, all to provide runoff volume abstraction, water quality treatment, rate control, and floodplain compensatory storage.

Location: SW corner of Powers and Lyman Boulevard Chanhassen, Minnesota

Reviewer: Scott Sobiech, PE, Barr Engineering

Potential Board Variance Action

Manager _____ moved and Manager _____ seconded adoption of the following resolution based on the permit report that follows, the presentation of the matter at the January 8, 2025, meeting of the managers and the managers' findings, as well as the factual findings in the permit report that follows:

Resolved that the variance request for Permit 2024-078 from compliance with Rule B, subsection 3.2b is approved, based on the facts and analysis provided by the RPBCWD engineer below and placed in the record at the January 8, 2025 meeting of the managers, and the managers' findings in the record of the January 8, 2025 meeting, and subject to the following conditions: 1. [CONDITION(S)],

Resolved that the variance request for Permit 2024-078 from compliance with Rule J, subsection 4 is approved, based on the facts and analysis provided by the RPBCWD engineer below and placed in the record at the January 8, 2025 meeting of the managers, and the managers' findings in the record of the January 8, 2025 meeting, and subject to the following conditions: 1. [CONDITION(S)],

Proposed Board Action

Manager _____ moved and Manager _____ seconded adoption of the following resolutions based on the permit report that follows and the presentation of the matter at the January 8, 2025 meeting of the managers:

Resolved that the application for Permit 2024-078 is approved, subject to the conditions and stipulations set forth in the Recommendations section of the attached report;

Resolved that on determination by the RPBCWD administrator that the conditions of approval of the permit have been affirmatively resolved, the RPBCWD president or administrator is authorized and directed to sign and deliver Permit 2024-078 to the applicant, on behalf of RPBCWD.

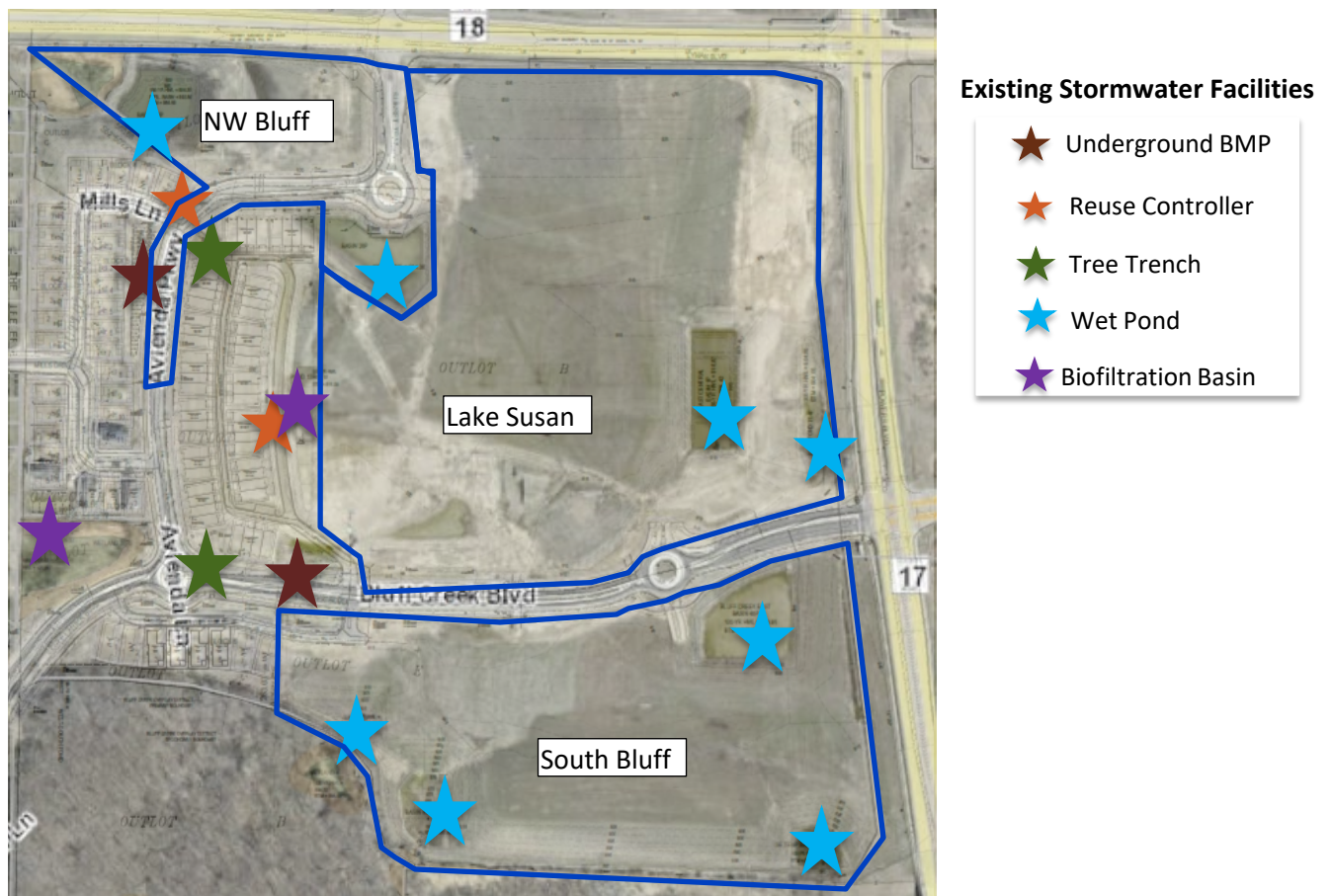
Upon vote, the resolutions were adopted, _____ [VOTE TALLY].

Applicable Rule Conformance Summary

Rule	Issue	Conforms to RBPCWD Rules?	Comments	
B	Floodplain Management and Drainage Alterations	No	See Rule K Variance discussion for compensatory storage not being provided within the floodplain of the same waterbody.	
C	Erosion Control Plan	See comment	See rule-specific permit condition C1 related to identifying erosion prevention on the erosion control plan.	
D	Wetland and Creek Buffers	N/A		
J	Stormwater Management	Regional Stormwater Management		
		Rate	Yes	
		Volume	No	See Rule K Variance discussion for restricted s abstraction for regional stormwater management.
		Water Quality	Yes	
		Low Floor Elev.	N/A	Not proposing construction of buildings with this permit application
		Maintenance	See comment	See rule-specific permit condition J1 related to recordation of stormwater facilities maintenance declaration and modification of existing declarations.
		Chloride Management	N/A	Not proposing construction of buildings or impervious surface with this permit application
		Wetland Protection	Yes	
L	Permit Fee Deposit	Yes	\$3,000 deposit fee and \$2,000 variance fee received October 31, 2024. The applicant must replenish the permit fee deposit to the original amount due before the permit will be issued. As of December 31, 2024, the amount due is \$14,948	
M	Financial Assurance	See Comment	The financial assurance is calculated at \$3,322,933	

Background

The area for which the applicant has submitted the proposed stormwater-management plan is 63.77 acres at the southwest corners of Lyman Boulevard (County Road 18) and Powers Boulevard (County Road 17) north of U.S. Highway 212 in Chanhassen. The site was mass graded consistent with RPBCWD permit 2018-016 – Avienda and subsequent permit modification (May 4, 2022), and stormwater facilities providing treatment for the mass graded areas and other portions of the Avienda project were constructed, but no impervious surface has been constructed on the property that is the site of the current regional-stormwater proposal. To facilitate the applicant’s future development of the site – which will include mixed residential use and commercial use with private roads, utilities, and stormwater management facilities -- the applicant is seeking approval of a regional stormwater management plan for three (3) catchment areas (see areas outlined in blue in the below figure). Because the subsequent full build-out of the site is anticipated to take several years and will involve construction of private roads and utilities, residential uses, and commercial uses, the applicant is proposing to construct the regional stormwater facilities shown in the regional plan concurrently with the development (i.e., a treat as the area develops approach).











The applicant is seeking approval now of the regional stormwater plan. In addition, the applicant intends to undertake under the term of the permit, if approved, land-disturbing activity to construct certain elements of the regional system (described below), including the stormwater storage for the rainwater-harvest and -

reuse systems, the enlarging of the existing wet ponds, the replacement of an existing wet pond with an underground system, the elimination of three existing wet ponds and the installation of a manufactured treatment device. The installation and connection of irrigation devices to the rainwater-reuse system and the planting of trees will take place as individual properties with the region subject to the plan are developed. No development work (e.g., construction of buildings or paving of impervious surfaces) will be authorized by this permit, if issued.

As individual subdivided parcels within the Avienda regional stormwater management catchment areas are developed, the property owner/developer must submit separate applications with necessary supporting materials showing construction of stormwater-management facilities consistent with the regional plan and construction of impervious area materially consistent with the presumed developed on which the regional plan is based, in addition to showing compliance of the proposed work with applicable RPBCWD regulatory requirements in effect at the time of the application. To utilize the regional plan (if approved), the applicant(s) for subsequent permits will also include an accounting of the treatment capacity created (concurrent with the projects) and used by the projects, pervious/impervious coverage, irrigation area, and tree planting consistent with the regional stormwater management plan.

The regional stormwater management plan being proposed includes the following features to provide runoff volume abstraction, water quality treatment, and rate control. The existing stormwater facilities on the site provide stormwater management in accordance with previously approved permits for the overall Avienda project. In addition, runoff from prior approved development will continue to flow through the proposed regional stormwater facilities to provide continued stormwater management compliant with prior approvals. Also important: As proposed, the regional stormwater facilities will not be made operational until elements of the system are installed as part of the build-out of individual properties (i.e., constructed concurrently with the development for a treat as the area develops approach).



-  Installing two rainwater harvest and reuse systems
-  Connecting to existing rainwater harvest and reuse system
-  Enlarging two existing wet ponds
-  Replacing one existing wet pond with underground system
-  Using two existing wet ponds with enhancements to one
-  One manufactured treatment device
-  Install 797 trees (throughout area)
-  Eliminating three existing wet ponds

Under previously approved Permit 2018-016 the applicant established wetland buffers conforming to the criteria identified in Rule D and no changes are proposed to the established buffers. As discussed in more detail below, there is one on-site wetland and two downgradient wetlands that receive runoff from the site.

The project site information is summarized in the following table.

Project site information

Site Information	Current Permit 2024-078 Project Area	Conceptual Full Build-Out Used for Regional Stormwater Planning
Total Site Area (acres)	63.77	63.77
Existing Site Impervious Area (acres)	0.46 ¹	0.46 ¹
Post Project Site Impervious (acres)	0.0	37.25
New (increase) in Site Impervious Area (acres)	0.0	36.79
Percent increase in Impervious Surface	0%	>100%
Disturbed Site Impervious Area (acres)	0.46 ¹	0.46 ¹
Percent Disturbance of Existing Impervious Surface	100%	100%
Regulated impervious area (acres)	0.0	37.25
Total Disturbed Area (acres)	15.5	61.08

¹ The existing impervious surface was eliminated by the grading performed as part of previously approved permit 2018-016.

Exhibits:

1. Permit application dated September 25, 2024 (Notified applicant on October 9, 2024 that submittal was incomplete, fee deposit completing the application received October 31, 2024)
2. Stormwater Management Plan dated September 25, 2024 (revised October 24, 2024, November 27, 2024, December 11, 2024, and December 20, 2024)
3. Geotechnical Evaluation Report dated April 12, 2017
4. Double Ring Infiltrometer testing results dated October 8, 2021 (Braun Intertec)
5. Avienda Regional Stormwater Plans dated September 25, 2024 (revised October 24, 2024)
6. Proposed electronic HydroCAD Model received September 25, 2024 (revised October 25, 2025)
7. Proposed conditions MIDS Model results report received September 25, 2024 (revised October 25, 2024 and December 20, 2024)
8. Pre-project conditions MIDS Model results report received November 27, 2024 (revised December 11, 2023)
9. P8 water quality model of pre-project wetland received December 11, 2024
10. Review Responses dated October
11. Engineer’s Estimate of Probable Construction Cost spreadsheet received October 25, 2025
12. Variance request received October 25, 2024 (revised December 17, 2024).
13. Floodplain compensatory storage spreadsheet received October 25, 2024.
14. Stormwater abstraction credit spreadsheets for trees received October 25, 2024.

Rule Specific Permit Conditions

Rule B: Floodplain Management and Drainage Alterations

Because implementation of the proposed regional stormwater plan involves the placement of 20,401 cubic yards of fill below the 100-year flood elevations of four existing stormwater facilities (Ponds 1, 28, and 54 and Basin 48) and reconfiguring two other ponds (Ponds 11.4 and 41.3) into a larger wet detention basins altering surface flows, the project activities must conform to the RPBCWD’s Floodplain Management and Drainage Alterations rule (Rule B).

As the site is built-out, all buildings must be constructed such that each lowest floor is at least two feet above the 100-year high-water elevation or one foot above the natural overflow of a waterbody in accordance with Rule J, Subsection 3.6a. (Rule B subsection 3.1.)

Placement of fill below the 100-year flood elevation is prohibited unless fully compensatory flood storage is provided within the same floodplain and at or below the same elevation for fill in the floodplain of a water basin (Rule B, Subsection 3.2b). The supporting materials summarized in the following table demonstrate, and the RPBCWD Engineer concurs, that compensatory storage will be created by converting stormwater facility 11.4 into a larger detention facility (Pond 14), constructing the underground stormwater facility (28), and converting Pond 41.3 into a larger detention facility (Pond 40), providing a net increase in the floodplain storage. Because the compensatory storage for the fill in the existing stormwater facilities will not be provided by the proposed underground system, which is not within the floodplain of the same stormwater facility as the fill, the applicant as requested a variance from this requirement of Rule B, Subsection 3.2. See the Rule K discussion for additional information on the variance request.

Drainage Area	Stormwater Facility	100-Year Elevation (feet)	Existing Floodplain Storage (CY)	Proposed Fill (CY)	Proposed Feature Providing Compensatory Storage	Proposed Floodplain Storage (CY)	Net Increase in Floodplain Storage (CY)
Lake Susan	Pond 1	910.87	9,424	9,424	Pond 14	19,939	8,436
	Pond 11.4	905.39	2,079	0			
	Total		11,503	9,424		19,939	
Bluff Creek	Pond 28P	914.31	2,337	2,337	Underground System (28)	2,233	1,891
	Basin 48	899.91	4,448	4,448	Pond 40	14,443	
	Pond 41.3	880.38	3,808	0			
	Pond 54	883.91	4,192	4,192			
	Total		14,785	10,977		16,676	

Because filling in existing stormwater facilities and reconfiguration of existing facilities to facilitate site development and providing alternative compensatory storage areas will alter the timing and duration of flows leaving the site, the applicant must demonstrate that the alterations will not have an adverse offsite

impact and will not adversely affect flood risk, basin or channel stability, groundwater hydrology, stream baseflow, water quality, or aquatic or riparian habitat (Rule B subsection 3.3). The RPBCWD engineer concurs with the applicant's use of Board of Water and Soil Resources' Recommended Wetland Management Standards: Minnesota Routine Assessment Method for Evaluating Wetland Functions, Version 3.0 to demonstrate the change in hydrology will not adversely impact the downstream wetlands. These are the same criteria listed in Table J1 of the stormwater rule for wetland protection. The analysis presented under the Wetland Protection section of the Rule J analysis shows the project aligns with BWSR's recommended wetland management standard and RPBCWD wetland protection criteria, thus the applicant has demonstrated the project will not adversely impact the downstream wetlands.

The applicant also provided pre- and post-project water quality modeling to demonstrate no adverse impact to water quality. The modeling results show the total suspended solids and total phosphorus load leaving the site after the development will be less than the existing load leaving the site (see Water Quality section of the Rule J analysis). In addition, the applicant's modeling indicates the peak discharge rates leaving the site are less under proposed conditions than for existing conditions. These also support the engineer's determination that the project is not reasonably likely to adversely affect flood risk, basin or channel stability, or stream baseflow, thus meeting the requirements of Rule B, subsection 3.3.

Because no watercourses exist on the site, Rule B, Subsection 3.4 does not impose requirements on the project. See Rule C analysis of the applicant's submitted erosion control plan to demonstrate conformance with Rule B, Subsection 3.5. A note on the plans indicates that activities must be conducted to minimize the potential transfer of aquatic invasive species conforming to Rule B, Subsection 3.6.

With the exception of compensatory storage within the floodplain of the same waterbody (subsection 3.2), which is the subject of the applicant's variance request, the proposed project conforms to the floodplain management and drainage alteration requirements of Rule B.

Rule C: Erosion Prevention and Sediment Control

Because the applicant proposes 15.5 acres of land-disturbing activities, the project must conform to the erosion prevention and sediment control requirements established in Rule C.

The erosion control plan prepared by Landform Professional Services includes installation of perimeter control (silt fence or sediment control logs), a stabilized rock construction entrance, inlet protection, weekly inspection, staging areas, placement of a minimum of 6 inches of topsoil (at 5% organic matter), and decompaction of areas compacted during construction. To conform to RPBCWD Rule C requirements, the following revisions are needed:

- C1. The Applicant must provide the name and contact information of the individual responsible for erosion control at the site. RPBCWD must be notified if the responsible individual changes during the permit term.

Rule D: Wetland and Creek Buffers

Because the requested regional stormwater management does not impact the previously approved and established wetland buffers under permit 2018-016, Rule D does not impose any new requirements on the project and the project remains in conformance with Rule D.

Rule J: Stormwater Management

The applicant is requesting approval of a regional stormwater management plan under Rule J, subsection 4 to provide stormwater for 3 catchment areas covering a combined 63.77 acres of property (i.e., the areas within the blue outlines on the adjacent image), which are both adjacent to and overlapping (in part) areas that were the subject of prior applications and approvals. Subsection 4 of the stormwater management rule allows an applicant to comply with the criteria in subsection 3.1 (rate, volume and water quality controls) for all parcels within a catchment area or areas through a regional or subwatershed plan. A regional plan must provide for the following:



- The stormwater management must meet or exceed the criteria in subsection 3.1 (i.e., rate control, abstraction, and water quality treatment)
- Provide for an annual accounting of the treatment capacity created and used as development occurs.
- The regional stormwater systems are not reasonable likely to result in adverse impacts
- The plan incorporate on-site BMPs where necessary to where necessary to mitigate impacts and provide local benefits not provided by the regional facilities.
- Because the proposed regional stormwater management features impact existing stormwater facilities constructed under prior permit approvals, the applicant must submit draft amendments to the existing stormwater-facility maintenance declaration for review and approval of the RPBWD administrator, then provide documentation of recordation after approval.

The proposed regional stormwater-management plan includes installation of 797 trees, two regional rainwater harvest and reuse systems, and a manufactured treatment device, and is also proposing modification of existing stormwater facilities and connecting to an existing reuse system to provide runoff volume abstraction, water quality treatment, and rate control (beyond or in addition to the stormwater-management capacity required for compliance with the prior RPBCWD permits). Because the stormwater management criteria refer to stormwater leaving the site, the engineer concurs with the applicant’s approach of incorporating development and stormwater facilities from previously approved permits in the regional stormwater analysis to demonstrate the proposed regional system will achieve rate control and water quality treatment for the impervious area in the amount and configuration shown in the conceptual project drawings. This approach also demonstrates the proposed regional facilities will not reduce the abstraction amounts associated with prior permit approvals.

The following table summarizes the proposed stormwater facilities within each catchment as well as proposed modifications to existing stormwater facilities.

Catchment ID	Regional Stormwater Management System
Lake Susan	<ul style="list-style-type: none"> • Install rainwater harvest and reuse system • Enlarge existing wet pond to facilitate development and mitigate existing storage/treatment capacity of an existing wet pond being filled • Install trees (throughout area) • Install One manufactured treatment device (MTD)
NW Bluff	<ul style="list-style-type: none"> • Connect to existing rainwater harvest and reuse system • Replace one existing wet pond with underground system • Modify an existing wet pond to storage additional runoff for reuse • Install trees (throughout area)
South Bluff	<ul style="list-style-type: none"> • Install rainwater harvest and reuse systems • Enlarging existing wet pond to facilitate development and mitigate existing storage/treatment capacity of two existing wet ponds being filled • Replacing one existing wet pond with underground system • Using existing wet pond • Install trees (throughout area)

Notably, the proposed regional stormwater management will not be fully constructed under this permit, if approved, because the applicant proposes to complete the regional stormwater management needed for individual parcels on a case-by-case basis as the parcels are built-out. Because in the interim the parcel will remain in a pervious condition, RPBCWD Rule J, Subsection 3.1 does not impose requirements on the project for rate control, water quality treatment, and abstraction of runoff.

As required by Rule J, subsection 4, the following analysis summarizes the simulated performance of the regional stormwater management facilities relative to the rate control, volume abstraction, and water quality management requirements in subsection 3.1 for the impervious area in the amount and configuration imagined in the conceptual project drawings. *Because the proposed regional stormwater management facilities will have capacity to achieve the rate control, water quality pollutant reductions, water quality nondegradation, and wetland protection criteria (as summarized below), the engineer finds that proposed regional stormwater management plan is not reasonably likely to have adverse impacts to natural resources (Rule J, Subsection 4.1.a) for impervious area in the amount and configuration imagined in the conceptual project drawings provided by the applicant.*

Rate Control

To meet the rate control criteria listed in Subsection 3.1.a, the 2-, 10-, and 100-year post development peak runoff rates must be equal to or less than the existing discharge rates at all locations where stormwater leaves the site. The applicant used a HydroCAD hydrologic model to simulate runoff rates for existing and post-development conditions for the 2-, 10-, and 100-year frequency storm events using a nested rainfall distribution, and a 100-year frequency, 10-day snowmelt event. The existing and proposed 2-, 10-, and 100-year frequency discharges from the site are summarized in the table below. The proposed stormwater management plan will provide rate control in compliance with the RPBCWD requirements for the 2-, 10-, and 100-year events for impervious area in the amount and configuration imagined in the conceptual project drawings provided by the applicant. The proposed project will meet the rate control requirements in Rule J, Subsection 3.1a, for such impervious area; rate-control compliance for future applications for actual build-out within the catchments that are the subject of the application will need to be determined on a case-by-case basis and will depend on submission by the property owner of plans in substantial conformity with the conceptual drawings submitted for this application.

Existing and Proposed Peak Runoff Rates

Catchment	Discharge Location	2-Year Discharge (cfs)		10-Year Discharge (cfs)		100-Year Discharge (cfs)		10-Day Snowmelt (cfs)	
		Ex	Prop	Ex	Prop	Ex	Prop	Ex	Prop
Lake Susan	Powers Blvd	5.9	5.6	22.7	8.2	62.3	59.2	6.1	4.9
NW Bluff	Wetland 6	2.4	1.9	4.6	4.4	12.9	11.8	1.8	1.8
South Bluff	South	5.3	4.2	20.9	17.9	55.8	52.0	4.4	4.4
	Southeast	1.6	0.9	3.5	3.4	7.2	5.8	1.3	0.4

Volume Abstraction

Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from the impervious surface of the parcel. An abstraction volume of 148,739 cubic feet is required from the 37.25 acres of impervious area shown in the conceptual plans submitted by the applicant. Soil borings performed by

Braun Intertec show that soils in the project area are predominately clay soils. Hydraulic conductivity testing by Bruan Intertec revealed infiltration rates of 0.0-0.02 in/hr beneath the proposed stormwater management features, indicating that infiltration is not feasible on this site. Because the RPBCWD engineer concurs that the soil boring information and infiltration testing support that the abstraction standard in subsection 3.1b of Rule J cannot practicably be met, the site is considered restricted and stormwater runoff volume must be managed in accordance with subsection 3.3 of Rule J. Because the site is restricted and the full 1.1 inches of runoff from the regulated impervious surface cannot be provided as is required under section 4 of Rule J for a regional stormwater management plan, the applicant is requesting a variance to allow regional stormwater management on the restricted site (see Rule K variance discussion).

Water Quality Management

Subsection 3.1.c of Rule J requires the Applicant to provide volume abstraction in accordance with 3.1b or least 60 percent annual removal efficiency for total phosphorus (TP), and at least 90 percent annual removal efficiency for total suspended solids (TSS) from site runoff, and no net increase in TSS or TP loading leaving the site from existing conditions. MIDS water quality models were developed to estimate the TP and TSS loading from the subwatersheds and the removal capacity of the proposed BMPs. The results of this modeling are summarized in the following tables. The results show the proposed project will remove sufficient TSS and TP to achieve an overall pollutant reduction in accordance with the required annual removals (Rule J, Subsection 3.2c) for impervious area in the amount and configuration imagined in the conceptual project drawings provided by the applicant.

Annual TSS and TP removal summary

Resource	Pollutant of Interest	Regulated Site Loading (lbs/yr)	Required Load Removal (lbs/yr)	Provided Load Reduction (lbs/yr)
Lake Susan	Total Suspended Solids (TSS)	8,520	7,668 (90%)	8,174 (95.9%)
	Total Phosphorus (TP)	46.9	28.1 (60%)	37.4 (79.7%)
NW Bluff	Total Suspended Solids (TSS)	2,782	2,504 (90%)	2,652 (95.3%)
	Total Phosphorus (TP)	15.3	9.2 (60%)	13.6 (88.9%)
South Bluff	Total Suspended Solids (TSS)	5,917	5,325 (90%)	5,502 (93%)
	Total Phosphorus (TP)	32.57	19.5 (60%)	26.5 (81.2%)

Summary of net change in TSS and TP leaving the site

Resource	Pollutant of Interest	Existing Site Loading (lbs/yr)	Proposed Site Load after Treatment (lbs/yr)	Change (lbs/yr)
Lake Susan	Total Suspended Solids (TSS)	1,893	550	-1,343
	Total Phosphorus (TP)	16.21	7.76	-8.45
NW Bluff	Total Suspended Solids (TSS)	2,170	1,080	-1,090
	Total Phosphorus (TP)	10.12	6.85	-3.27
South Bluff	Total Suspended Solids (TSS)	2,438	448	-1,990
	Total Phosphorus (TP)	11.38	7.58	-3.8

Low floor Elevation

Because the applicant proposes no new structures as part of the regional stormwater management plan, Rule J, Subsection 3.6 does not impose requirements on the project. Plans submitted by applicant(s) for approval of specific build-out of parcels within the regional must comply with RPBCWD’s low-floor requirements.

Maintenance

Subsection 3.7 of Rule J requires the submission of maintenance plan. All stormwater management structures and facilities must be designed for maintenance access and properly maintained in perpetuity to assure that they continue to function as designed. The following revisions are needed:

- J1. Permit applicant must submit a draft maintenance and inspection declaration to incorporate the facilities proposed under this application, including the appropriate permit number, pre-treatment facilities, reuse systems, underground stormwater management facility, trees, proprietary stormwater device (a Jellyfish), and the modified existing stormwater facilities. Stormwater reuse rates and protection of greenspace to be irrigated must be included. In addition, previously recorded declaration(s) for stormwater facilities impacted by the project must be amended and recorded as necessary to reflect the changes to the actual constructed facilities to ensure compliance with prior approvals. A maintenance declaration template is available on the permits page of the RPBCWD website. (<http://www.rpbcwd.org/permits/>). A draft declaration must be provided for District review and approval prior to recording.

Chloride Management

Because the applicant proposes no buildings or impervious surface, Subsection 3.8 of Rule J does not impose requirements on the project. Plans submitted by applicant(s) for approval of specific build-out of parcels within the regional must comply with RPBCWD’s chloride management plan requirement.

Wetland Protection

Because the proposed activities discharge to on-site and downstream wetlands and alter the discharge the wetlands receive from the site, the proposed activities must conform to RPBCWD wetland

protection criteria (Rule J, subsection 3.10). The applicant provided and the Engineer concurs with the below analysis of potential wetland impacts based on Table J1 of RPBCWD Rule J.

An onsite, medium value wetland (Wetland 6) will receive runoff from the proposed conceptual development presented by the applicant in the NW Bluff catchment area. Two medium-value wetlands (MNDOT M09 and MNDOT M10), are located off but adjacent to the project site and receive direct runoff from the South Bluff catchment area. The following table summarizes the allowable change in bounce and inundation duration from Table J1 of RPBCWD Rule J and the analysis for wetland protection and the potential impacts on the wetlands. The project meets the Bounce and Inundation criterion and is in conformance with Rule J, subsection 3.10a for impervious area in the amount and configuration imagined in the conceptual project drawings provided by the applicant.

Wetland	RPBCWD Wetland Value	Change in Bounce for, 10-Year Event (feet)	1-year change in Inundation Period (days)	2-year change in Inundation Period (days)	10-year change in Inundation Period (days)	Runout Control Elevation ¹
Rule J, Table J1 Criteria	Medium	Existing +/- 1.0 feet	Existing+2 days	Existing+2 days	Existing +14 days	0 to 1.0 ft above existing runout
MNDOT M09	Medium	0.02	<0.1	<0.1	<0.1	No change
MNDOT M10	Medium	0.02	<0.1	<0.1	<0.1	No change
Wetland 6	Medium	-0.08	0.8	0.8	0.7	No change

Rule J, Subsection 3.10b requires that any discharge to a medium-value wetland be treated to the water quality treatment criteria in Rule J, subsection 3.1c. The applicant provided MID's modeling as summarized in the table below demonstrating the runoff from the disturbed areas tributary to wetlands will be treated in conformance with Rule J, Subsection 3.10b for impervious area in the amount and configuration imagined in the conceptual project drawings provided by the applicant.

Catchment	Wetland	Wetland Value	TSS Removal	TP Removal
			90.0% Required	60.0% Required
Lake Susan	MNDOT M10	Medium	95.9%	79.7%
NW Bluff	Wetland 6	Medium	95.3%	88.9%
South Bluff	MNDOT M09	Medium	93.0%	81.2%

Rule K: Variances and Exceptions

The applicant requested the following two variances.

- Providing compensatory storage within the same floodplain of the existing stormwater facilities being filled (Rule B, subsection 3.2).

- Approving regional stormwater management to provide less abstraction than the full 1.1 inches of abstraction off the impervious surface (Rule J, subsection 4). In essence, allowing regional stormwater management on a restricted site.

The attached variance request letter submitted on behalf of the applicant cites several facts related to the development in support of the request. Rule K requires the Board of Managers to find that because of unique conditions inherent to the subject property the application of rule provisions will impose a practical difficulty on the Applicant. Assessment of practical difficulty is conducted against the following criteria:

1. how substantial the variation is from the rule provision;
2. the effect of the variance on government services;
3. whether the variance will substantially change the character of or cause material adverse effect to water resources, flood levels, drainage or the general welfare in the District, or be a substantial detriment to neighboring properties;
4. whether the practical difficulty can be alleviated by a technically and economically feasible method other than a variance. Economic hardship alone may not serve as grounds for issuing a variance if any reasonable use of the property exists under the terms of the District rules;
5. how the practical difficulty occurred, including whether the landowner, the landowner's agent or representative, or a contractor, created the need for the variance; and
6. in light of all of the above factors, whether allowing the variance will serve the interests of justice.

It is the applicant’s obligation to address these criteria to support a variance request (see attached variance memo).

Variance Request #1

Following is the RPBCWD engineer’s assessment of information received relevant to the applicant’s variance request from Rule B subsection 3.2 requiring compensatory flood storage within the floodplain of the same stormwater facility:

- Related to variance criterion 1 – The project will involve 20,401 cubic yards of fill below the 100-year flood elevations of four existing stormwater facilities (Ponds 1, 28, and 54 and Basin 48), thus eliminating the four basins, the compensatory storage cannot be provided in the same floodplain, thus representing a significant shortfall from the requirement. However, the applicant proposes a net increase in floodplain storage (8,436 cubic yards in the area tributary to Lake Susan of and 1,891 cubic yard in the tributary area to Bluff Creek) by enlarging two existing pond and constructing an underground detention facility (see the following table). This flood storage is also used for stormwater management on the site.

Drainage Area	Stormwater Facility	100-Year Elevation (feet)	Existing Floodplain Storage (CY)	Proposed Fill (CY)	Compensatory Storage within Floodplain (CY)	Shortfall	Compensatory Storage within Floodplain (CY)	Proposed Feature Providing Compensatory Storage	Proposed Floodplain Storage (CY)
Lake Susan	Pond 1	910.87	9,424	9,424	0	100%	0	Pond 14	19,939
	Pond 11.4	905.39	2,079	0	17,860	NA	17,860		
	Total		11,503	9,424					19,939

Drainage Area	Stormwater Facility	100-Year Elevation (feet)	Existing Floodplain Storage (CY)	Proposed Fill (CY)	Compensatory Storage within Floodplain (CY)	Shortfall	Compensatory Storage within Floodplain (CY)	Proposed Feature Providing Compensatory Storage	Proposed Floodplain Storage (CY)
Bluff Creek	Pond 28P	914.31	2,337	2,337	2,233	4%	2,233	Underground System (28)	2,233
	Basin 48	899.91	4,448	4,448	0	100%	0	Pond 40	14,443
	Pond 41.3	880.38	3,808	0	5,803	NA	5,803		
	Pond 54	883.91	4,192	4,192	0	100%	0		
	Total		14,785	10,977					16,676

- With regard to variance criteria 2 and 3 – Because the proposed project will reduce the site discharge rate leaving the site relative to existing conditions, as discussed in the Rule J analysis, the proposed project is not reasonably likely to cause off-site adverse impacts as long as subsequent applicants construct impervious areas in the amount and materially consistent with the configuration shown in the applicant’s conceptual plans. Because the overall project would result in a net increase of storage used for stormwater management and a reduction in peak discharge rate leaving the conceptually developed site compared against the site with existing stormwater management facilities, the proposed alterations are not likely to adversely affect offsite governmental services, water resources, flood levels, or neighboring properties. Notably, the proposed regional stormwater management will not be fully constructed under this permit, if approved, because the applicant proposes to implement the regional stormwater management needed for individual parcels on a case-by-case basis as the parcels are built-out. Because in the interim the parcel will remain in a pervious condition, the interim runoff rates and volumes would not increase and thus are not reasonably likely to cause off-site impacts. The proposed variance only impacts the applicant’s property.
- Technical measures incorporated into the project plan to alleviate the practical difficulty (variance criterion 4) include creation of compensatory flood storage volume in the underground detention facility and enlarging two existing detention basins to comply with RPBCWD regulatory requirements, but not within the same floodplain. The applicant’s proposed routing of developed site runoff to the proposed stormwater management facilities will allow the runoff to be stored in the facilities resulting in reduced site discharge as summarized in the rate control analysis of Rule J above.
- With regard to variance criterion 5, the applicant has created the circumstances leading to the variance by replacing the existing stormwater ponds with enlarged detention facilities and an underground stormwater feature to facilitate the proposed development.

Because the proposed project will change stormwater routing on the site, results in a net increase flood storage, and only impacts the applicant property, the engineer finds there is an adequate technical basis for the managers to rely on to grant the requested variance.

Variance Request #2

The applicant requested a variance to allow regional stormwater management on a restricted site to provide less abstraction than the required volume based on subsection 3.1.b, 148,739 cubic feet for the conceptual amount and a configuration of impervious area materially consistent with that shown in plans submitted for the regional plan by the applicant. For purposes of the Board of Managers' consideration, the following factors were analyzed based on Rule K.

- Related to variance criterion 1 - Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from all impervious surface on the site. An abstraction volume of 149,631 cubic feet is required from the 37.47 acres of the conceptual amount and configuration of impervious area proposed by the applicant. For restricted sites, subsection 3.3 of Rule J requires rate control in accordance with subsection 3.1.a and that abstraction and water quality protection be provided in accordance with the following sequence:
 - (a) Abstraction of 0.55 inches of runoff from site impervious surface determined in accordance with paragraphs 2.3, 3.1 or 3.2, as applicable, and treatment of all runoff to the standard in paragraph 3.1c; or
 - (b) Abstraction of runoff onsite to the maximum extent practicable and treatment of all runoff to the standard in paragraph 3.1c; or
 - (c) Off-site abstraction and treatment in the watershed to the standards in paragraph 3.1b and 3.1c.

Based on the in-situ infiltration testing results and clay soils, the applicant is proposing a regional rainwater harvest and reuse systems to irrigate available green space to provide volume abstraction. The applicant is proposing to construct a piping system to distribute the irrigation water to the individual parcels as the properties develop. The abstraction volume provided by the proposed reuse systems proposed in the regional plan is 39,021 cubic feet while the combined abstraction provided by the proposed 797 trees is 14,607, thus providing abstraction to the maximum extent practicable (Rule J, Subsection 3.3.b) – but only if and when construction on individual parcels within the site is undertaken and the irrigation systems are completed and made operational. The designed abstraction performance for the project site is summarized in the table below representing a 64% shortfall from the required 1.1 inch of abstraction off impervious surface and a 28% shortfall from the 0.55 inches for a restricted site.

Volume Abstraction Summary

Catchment	Regulated Impervious Surface (acres)	Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Depth (inches)	Provided Abstraction Volume (cubic feet)	Irrigation Area (acres)	Irrigation Rate (in/week)
Lake Susan	24.24	1.1	96,804	0.18	15,837	8.78	1.16
NW Bluff	2.07	1.1	8,265	0.21	1,554	0.9	1.11
South Bluff	11.16	1.1	44,562	0.47	18,900	13.12	0.93
797 Trees					14,607	NA	NA
Total	37.47	1.1	149,631	0.37	50,898	22.8	

Because the proposed stormwater reuse systems require consistent use at a specified rate over the 23.71 acres of green space conceptually proposed to meet District requirements, performance monitoring for the site will be required to ensure that the project provides the proposed volume abstraction.

- With regard to variance criteria 2 and 3 – Because the proposed project will reduce the site discharge rate and pollutants leaving the site relative to existing conditions, as discussed in the Rule J analysis, the proposed project is not reasonably likely to cause off-site adverse impacts. Because the project involves a net increase of flood storage used for stormwater management and a reduction in peak discharge rate leaving the site, the proposed alterations are not likely to adversely affect offsite governmental services, water resources, flood levels, or neighboring properties. The proposed variance only impacts the applicant’s property.
- Technical measures incorporated into the project plan to alleviate the practical difficulty (variance criterion 4) include three regional rainwater harvest and reuse systems to irrigate 22.8 acres of pervious area as well as proposing to install 797 medium sized broadleaf deciduous trees. The applicant’s proposed routing of developed site runoff to the proposed regional stormwater management facilities will allow the runoff to be stored in the facilities resulting in a reduced site discharge when compared to existing conditions (summarized in the rate control analysis of Rule J above) and predeveloped conditions as summarized below.

Catchment	100-Year Discharge (cfs)		
	Predevelopment	Conceptual Full Build-out with Regional Facilities Proposed	Percent Reduction
Lake Susan	128.9	60.6	53%
NW Bluff	81.6	12.9	84%
South Bluff	174.5	63.3	64%

- With regard to variance criterion 5, while the applicant is developing the site in compliance with allowable land coverage established by the City of Chanhassen, the applicant is creating the circumstances leading to the variance by planning build-out of the site and regional stormwater management in a manner that does not allow for full compliance with RPBCWD's stormwater requirements.

It is also important to consider that if the applicant were able to build all the impervious surface as a single project, the site would be considered restricted for abstraction and potentially allowed to implement similar stormwater management without the need for a variance.

Because implementing the regional stormwater management plan as opposed to individual stormwater-management systems on restricted sites affords the ability to establish and memorialize the pervious area available for irrigation, it will maximize the overall abstraction provided on the overall 63 acre restricted site, given the presently conceptualized amount and configuration of impervious area to be constructed. The implementation of regional reuse system also simplifies the on-going maintenance of the regional reuse system pumps and distribution piping over having each parcel operating its own reuse pumping system. Because each future subdivided parcel developed on the 63-acre site would qualify for restricted site determinations due to predominately clay soils with limited infiltration capacity, the engineer finds there is an adequate technical basis for the managers to rely on to grant the requested variance.

Rule L: Permit Fee

The RPBCWD permit fee schedule adopted in February 2020 requires permit applicants to deposit \$3,000 to be held in escrow and applied to cover the \$10 permit-processing fee and reimburse RPBCWD for permit review and inspection-related costs and when a permit application is approved, the deposit must be replenished to the applicable deposit amount by the applicant before the permit will be issued to cover actual costs incurred to monitor compliance with permit conditions and the RPBCWD Rules. A permit fee deposit of \$3,000 deposit fee and \$2,000 variance fee was received October 31, 2024. The applicant must replenish the permit fee deposit to the original amount due before the permit will be issued. Subsequently, if the costs of review, administration, inspections and closeout-related or other regulatory activities exceed the fee deposit amount, the applicant will be required to replenish the deposit to the original amount or such lesser amount as the RPBCWD administrator deems sufficient within 30 days of receiving notice that such deposit is due. The administrator will close out the relevant application or permit and revoke prior approvals, if any, if the permit-fee deposit is not timely replenished.

- L1. The applicant must replenish the permit fee deposit to the original amount due before the permit will be issued. As of December 31, 2024 the amount due is \$14,948.

Rule M: Financial Assurance

	Unit	Unit Cost	# of Units	Total
Rules C: Silt fence:	LF	\$2.50	8,003	\$20,008
Inlet protection	EA	\$100	89	\$8,900
Rock Entrance	EA	\$250	3	\$750
Restoration	Ac	\$2,500	61.08	\$152,700
Rules J: Chloride Management	LS	\$5,000	1	\$5,000
Rules J: Stormwater Management: 125% of engineer's opinion of cost (\$2,266,793*1.25)	EA	125% OPC	1	\$2,833,491
Contingency (10%)		10%		\$302,085
Total Financial Assurance				\$3,322,933

Applicable General Requirements:

1. The RPBCWD Administrator and Engineer shall be notified at least three days prior to commencement of work.
2. Construction shall be consistent with the plans and specifications approved by the District as a part of the permitting process. The date of the approved plans and specifications is listed on the permit.
3. Construction must be consistent with the plans, specifications, and models that were submitted by the applicant that were the basis of permit approval. The date(s) of the approved plans, specifications, and modeling are listed on the permit. The grant of the permit does not in any way relieve the permittee, its engineer, or other professional consultants of responsibility for the permitted work.
4. The grant of the permit will not relieve the permittee of any responsibility to obtain approval of any other regulatory body with authority.
5. The issuance of this permit will not convey any rights to either real or personal property, or any exclusive privileges, nor will it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
6. In all cases where the doing by the permittee of anything authorized by this permit involves the taking, using or damaging of any property, rights or interests of any other person or persons, or of any publicly owned lands or improvements or interests, the permittee, before proceeding therewith, must acquire all necessary property rights and interest.
7. RPBCWD's determination to approve the permit application was made in reliance on the information provided by the applicant. Any substantive change in the work affecting the nature and extent of applicability of RPBCWD regulatory requirements or substantive changes in the methods or means of compliance with RPBCWD regulatory requirements must be the subject of an application for a permit modification to the RPBCWD.
8. If the conditions herein are met and the permit is issued by RPBCWD, the applicant, by accepting the permit, grants access to the site of the work at all reasonable times during and after construction to authorized representatives of the RPBCWD for inspection of the work.

Findings

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.
2. The proposed project conforms to Rule B except the applicant has requested a variance from compliance with the Rule B criteria related to compensatory storage within the same floodplain.
3. The proposed project will conform to Rule C if the Rule Specific Permit Conditions listed above are met.
4. If the managers authorize a variance to allow a regional stormwater plan on a restricted-site basis, the proposed project will conform to Rule J if the Rule Specific Permit Conditions listed above are met

Recommendation:

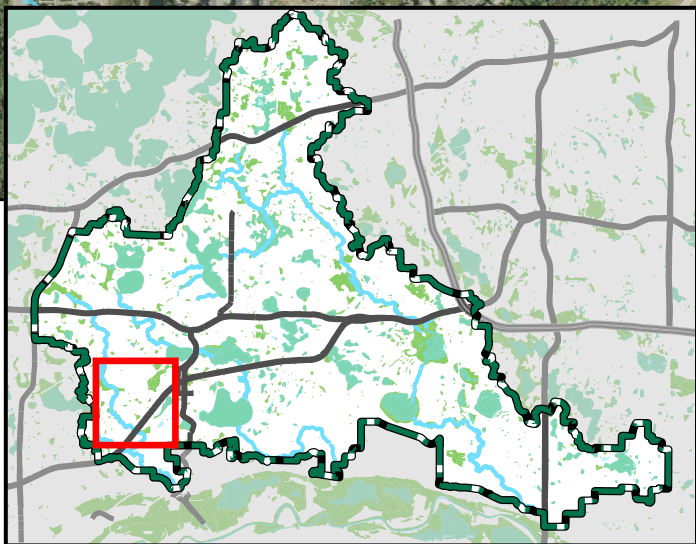
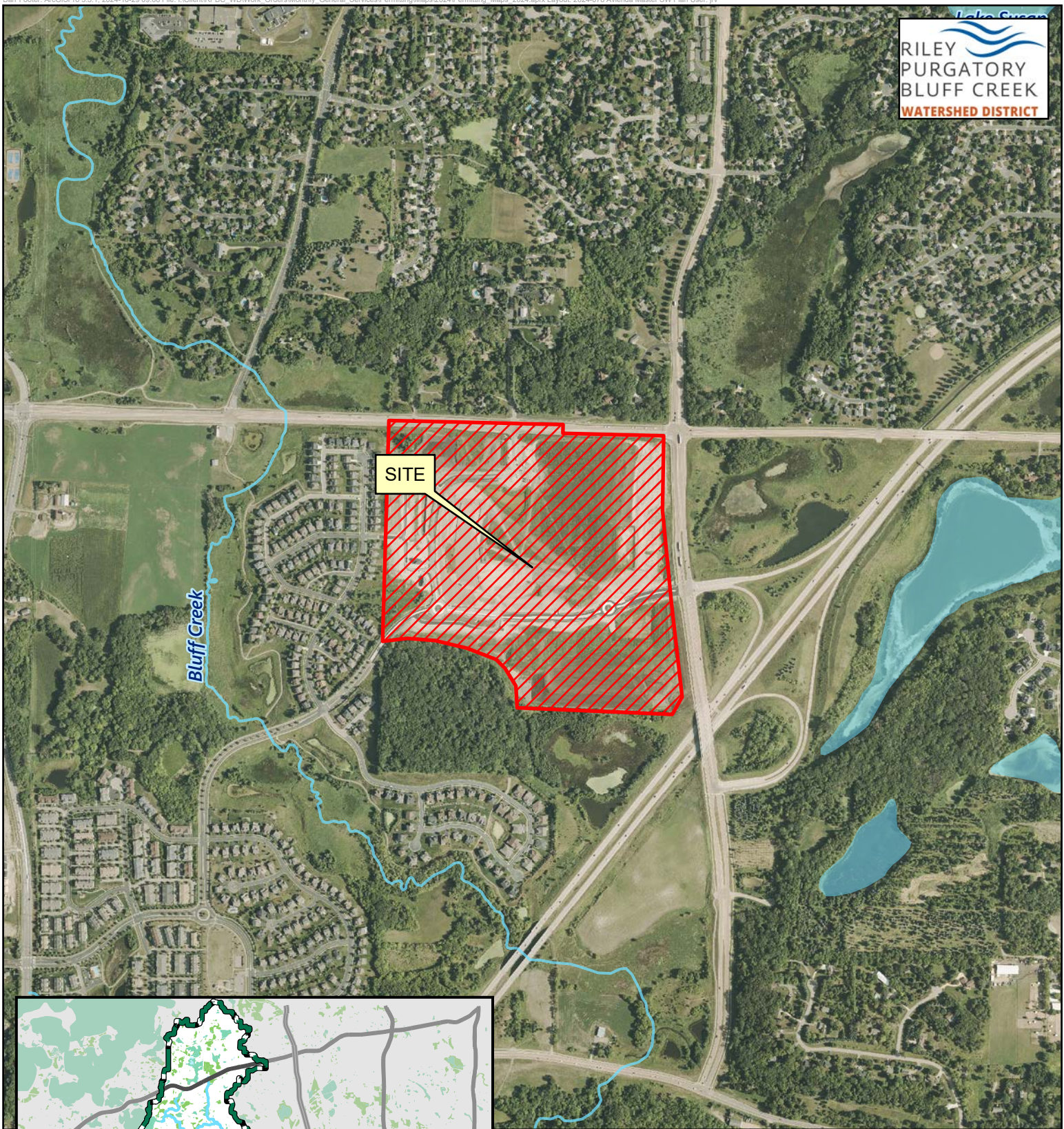
If the managers grant the variances (with such conditions as the managers may impose), the engineer recommends approval of the permit with a three-year term, contingent upon:

1. Financial Assurance in the amount of \$3,322,933.
2. Permit applicant must provide the name and contact information of the general contractor responsible for the site. RPBCWD must be notified if the responsible party changes during the permit term.
3. Permit applicant must submit a draft maintenance and inspection declaration to incorporate the facilities proposed under this application, including the appropriate permit number, pre-treatment facilities, 2 two underground detention systems, tree installation, two wet detention ponds, rainwater harvest and reuse systems, a manufactured treatment device, along with modifications to existing onsite stormwater facilities. The agreement must also include a maintenance and replacement plans as well as a stormwater reuse monitoring and reporting plan that includes protection of the greenspace to be irrigated and metering of the volume of reuse, as well as maintenance specifics provided by the manufacturer(s) or installer(s) for the proprietary system and be consistent with the Minnesota Pollution Control Agency's manufactured treatment device maintenance provisions in the MN Stormwater Manual. In addition, the previously recorded declaration for stormwater facilities impacted by the project must be amended and recorded to reflect modifications to the existing stormwater facilities and eliminate other facilities. The draft agreement must be reviewed and approved by RPBCWD prior to execution as a condition of issuance of the permit.
4. The applicant must replenish the permit fee deposit to the original amount due before the permit will be issued. The amount needed to replenish the permit fee deposit is \$14,948 as of December 31, 2024.

By accepting the permit, when issued, the applicant agrees to the following stipulations:

1. Continued compliance with General Requirements.

2. Per Rule J Subsection 4.5, upon completion of the site work, the permittee must submit as-built drawings demonstrating that at the time of final stabilization the stormwater management facilities conforms to design specifications and functions as intended and approved by the District. As-built/record drawings must be signed by a professional engineer licensed in Minnesota and include, but not limited to:
 - a) the surveyed bottom elevations, water levels, and general topography of all facilities;
 - b) the size, type, and surveyed invert elevations of all stormwater facility inlets and outlets;
 - c) the surveyed elevations of all emergency overflows including stormwater facility, street, and other;
 - d) other important features to show that the project was constructed as approved by the Managers and protects the public health, welfare, and safety.
3. To close out the permit and release the \$5,000 in financial assurance held for the purpose of the chloride management, the permit applicant must provide an executed chloride management plan that designates the individual authorized to implement the chloride management plan and the MPCA-certified salt applicator engaged in implementing the plan at the site.
4. The work on the Avienda Development under the terms of permit 2024-078, if issued, must have an impervious surface area and configuration materially consistent with the approved plans. Design that differs materially from the approved plans (e.g., in terms of total impervious area) will need to be the subject of a request for a permit modification or new permit, which will be subject to review for compliance with all applicable regulatory requirements.
5. As individual future subdivided parcels within the Avienda regional stormwater management catchment areas are developed, the property owner/developer must submit separate applications with necessary supporting materials showing compliance of the proposed work with the approved regional stormwater management plan and applicable RPBCWD regulatory requirements in effect at the time of the application. This would also include an accounting of the treatment capacity created (prior to and concurrent with the projects) and used by the projects, pervious/impervious coverage, irrigation area, tree planting, and floodplain storage consistent with the regional stormwater management plan.
6. By creating stormwater-management capacity in accordance with the regional plan concurrently with the build-out of the subject area and utilizing management capacity at the same time, the applicant may exhaust the stormwater-management capacity of the regional system before the area is fully built out. In such circumstances, further construction of impervious surfaces on the area may trigger the need to construct additional stormwater-management capacity.
7. At no point during construction of the regional stormwater management facilities or build-out of individual parcels can the existing stormwater facilities providing rate control, abstraction, or treatment for already approved and constructed elements of the overall Avienda development be eliminated (i.e., made nonfunctioning) prior to a replacement facility being constructed and made operational.



Feet



Permit Location Map

AVIENDA MASTER
STORMWATER PLAN

Permit 2024-078

Riley Purgatory Bluff Creek
Watershed District



Avienda Regional Plan
Watershed Variance Request
Narrative

Prepared for:

Level 7 Development, LLC

October 24, 2024

Revised December 16, 2024



PREPARED FOR
Level 7 Development, LLC
4600 Kings Point Rd
Minnetrista, MN 55331



PREPARED BY
Landform Professional Services,
LLC
105 5th Ave S, Suite 513
Minneapolis, MN 55401

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Introduction

On behalf of Level 7 Development, LLC, Landform is pleased to submit this application for two variances from Riley Purgatory Bluff Creek Watershed District (RPBCWD) Rule B, Subsection 2.1. Approval of the variances will allow the development to proceed in accordance with preliminary plat and PUD approvals granted by the City of Chanhassen. We are excited about the improvements proposed for this site.

Variations

Variance Request #1

We are requesting Watershed approval for a variance from Rule B, Subsection 2.1 which requires the project to provide compensatory storage within +/- one foot of the fill. This requirement cannot be practicably met within each increment of elevation for this site. The Avienda Regional project will provide a cumulative compensatory storage which greatly exceeds the total existing storage for this phase. The overall site will provide 1,182,384 c.f. or 27.14 acre-feet of additional stormwater storage over the predevelopment site. Refer to Table 17 in the Stormwater Management Plan for additional information regarding compensatory storage.

The requested variance meets the standards outlined in the rules as follows:

- How substantial the variation is from the rule provision.*

The variation from the rule provision is insignificant. Specifically, the storage volume exceeds the existing total storage for both Phases 1 and 2. The intent of the rule is met for compensatory storage as shown in Table 17.
- The effect of the variance on government services.*

There will be no effect of the variance on government services. The site conditions provide adequate compensatory storage on site and will be managed by the developer.
- Whether the variance will substantially change the character of or cause material adverse effect to water resources, flood levels, drainage or the general welfare in the District, or be a substantial detriment to neighboring properties.*

There will be no material adverse effect to water resources, flood levels, drainage or general welfare in the District nor any substantial detriment to neighboring properties. As noted in Table 17, the cumulative compensatory storage greatly exceeds the existing storage for this phase.
- Whether the practical difficulty can be alleviated by a technically and economically feasible method other than a variance. Economic hardship alone may not serve as grounds for issuing a variance if any reasonable use of the property exists under the terms of the District rules.*

There is no technically or economically feasible alternative to the variance.
- How the practical difficulty occurred, including whether the landowner, the landowner's agent or representative, or a contractor, created the need for the variance.*

The practical difficulty is not created by the landowner or their agent but is a result of the conflicts between the watershed rules and other agency requirements.
- In light of all the above factors, whether allowing the variance will serve the interests of justice.*

Allowing the variance will serve the interests of justice by allowing the project to proceed forward as approved by the City of Chanhassen and providing compensatory storage that exceeds the total existing storage for Phases 1 through 3.

Variance Request #2

We are requesting Watershed approval for a variance from Rule B, Subsection 2.1 which requires the project to provide compensatory storage within the same waterbody. The waterbodies as defined by the RPBCWD consist of stormwater management basins approved by the watershed in Phases 1 and 2. Providing compensatory storage within these waterbodies is not possible.

The requested variance meets the standards outlined in the rules as follows:

1. *How substantial the variation is from the rule provision.*

The variation from the rule provision is insignificant. The waterbodies in question are stormwater management basins approved by the watershed in Phases 1 through 3. The revised/added basins will provide similar or better flood protection and therefore this is a minimal change.
2. *The effect of the variance on government services*

There will be no effect of the variance on government services.
3. *Whether the variance will substantially change the character of or cause material adverse effect to water resources, flood levels, drainage or the general welfare in the District, or be a substantial detriment to neighboring properties.*

There will be no material adverse effect to water resources, flood levels, drainage or general welfare in the District nor any substantial detriment to neighboring properties. As noted in Table 17, the cumulative compensatory storage greatly exceeds the existing storage for this phase of development and will be provided on site.
4. *Whether the practical difficulty can be alleviated by a technically and economically feasible method other than a variance. Economic hardship alone may not serve as grounds for issuing a variance if any reasonable use of the property exists under the terms of the District rules.*

There is no technically or economically feasible alternative to the variance. The preliminary plat and PUD has been approved by the municipality and it is not technically possible to comply with the rule.
5. *How the practical difficulty occurred, including whether the landowner, the landowner's agent or representative, or a contractor, created the need for the variance.*

The practical difficulty is not created by the landowner or their agent.
6. *In light of all the above factors, whether allowing the variance will serve the interests of justice.*

Allowing the variance will serve the interests of justice by allowing the project to proceed forward as approved by the City of Chanhassen. The compensatory storage will be provided on site in compliance with all other watershed rules.

Variance Request #3

We are requesting Watershed approval for a variance from Rule J, Subsection 4.0 which requires the project to provide stormwater management that meets or exceeds the criteria in subsection 3.1. Specifically, this would require abstraction of the full 1.1-inches. Since the site has already been declared restricted, we request that subsection 3.3 be allowed for this regional plan. The proposed onsite irrigation reuse system will reduce groundwater drawdown by using stormwater runoff (indirectly aiding groundwater recharge).

Regional management of stormwater runoff will also greatly reduce peak runoff rates. Peak discharge rates from the site's six outlet points will range from under 15% to under 58% of predevelopment peak rates. This will greatly enhance flood protection downstream.

All stormwater ponding basins have defined emergency overflow locations and routes for rainfall events that exceed the 100-year (7.41-inch) return frequency storm. These overflows are designed to direct runoff from larger events away from buildings and safely pass them downstream.

As mentioned in Variance Request #1, additional flood plain storage over and above the predeveloped condition has been or will be added to the site.

Phasing of BMP components will be part of the Regional Stormwater Management system. Phasing will be intended to be in the following order.

1. The ponds will be modified per plan as parcels are developed.
2. When the first parcel is split off, the irrigation reuse system will be installed and irrigation mainline extended to the vicinity of the parcel.
3. As more parcels are developed the irrigation mainline will be extended until full buildout when the system will look similar to that shown on the Overall Utilities sheet.

We feel that better stormwater management will be achieved with a regional approach and managed by the developer rather than separate parcels attempting to meet the district's requirements individually.

The requested variance meets the standards outlined in the rules as follows:

1. *How substantial the variation is from the rule provision.*
The variation from the rule provision is insignificant. The site has been determined to be restricted and therefore if the individual parcels sought permits, the results would be similar.
2. *The effect of the variance on government services.*
There will be no effect of the variance on government services.
3. *Whether the variance will substantially change the character of or cause material adverse effect to water resources, flood levels, drainage or the general welfare in the District, or be a substantial detriment to neighboring properties.*
There will be no material adverse effect to water resources, flood levels, drainage or general welfare in the District nor any substantial detriment to neighboring properties. Rate control and water quality treatment will still meet the District's requirements. Also, having consolidated reuse systems should provide better abstraction.
4. *Whether the practical difficulty can be alleviated by a technically and economically feasible method other than a variance. Economic hardship alone may not serve as grounds for issuing a variance if any reasonable use of the property exists under the terms of the District rules.*
While there technically is an alternative to the variance, District staff and consultants feel this option would provide the best management of stormwater runoff from the site. Consolidated reuse systems should provide better abstraction than separate ones for each subsequent parcel that is developed. Additionally, the number of annual use and maintenance reports to the District would be significantly reduced.
5. *How the practical difficulty occurred, including whether the landowner, the landowner's agent or representative, or a contractor, created the need for the variance.*
The practical difficulty is not created by the landowner or their agent. The Regional Stormwater Management subsection of the rule was recommended by District staff and consultants.
6. *In light of all the above factors, whether allowing the variance will serve the interests of justice.*
Allowing the variance will serve the interests of justice by allowing the project to proceed forward as approved by the City of Chanhassen. Abstraction will be the same or better than if provided by individual parcels.

Summary

We respectfully request approval of the two variances to allow construction of the **Avienda Regional Plan** at the northeast corner of the intersection of Bluff Creek Boulevard and Avienda Parkway in Chanhassen.

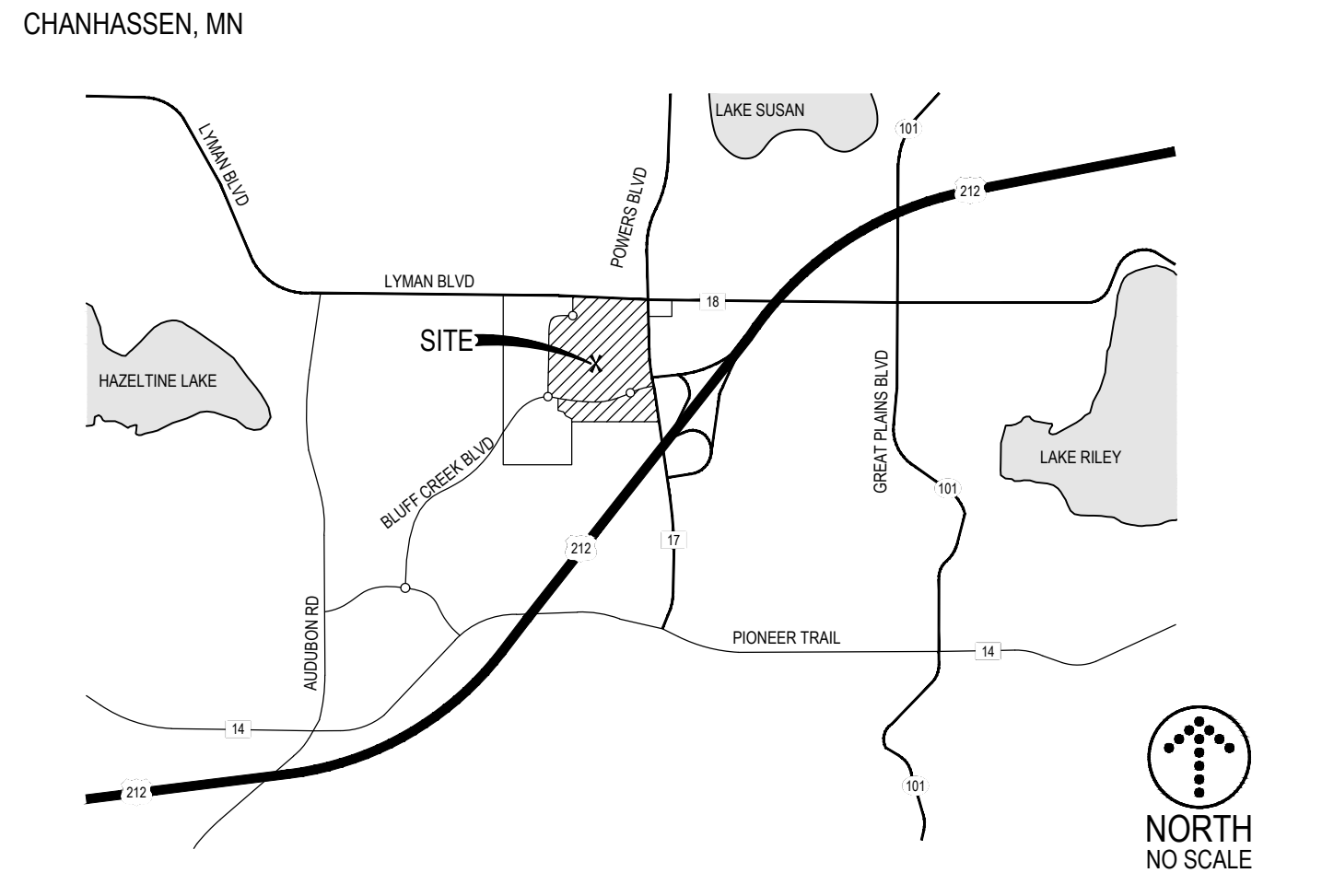
Contact Information

This document was prepared by:

Steve Sabraski
Landform
105 South Fifth Avenue, Suite 513
Minneapolis, MN 55401

Any additional questions regarding this application can be directed to Steve Sabraski at ssabraski@landform.net or 612.638.0243.

AREA LOCATION MAP



AVIENDA REGIONAL STORMWATER PLAN

CHANHASSEN, MINNESOTA

DEVELOPER

LEVEL 7 DEVELOPMENT, LLC
4600 KINGS POINT RD
MINNETRISTA, MN 55331

MUNICIPALITY



PROJECT

AVIENDA REGIONAL STORMWATER PLAN
CHANHASSEN, MN

ISSUE / REVISION HISTORY

DATE	ISSUE / REVISION	REVIEW
25 SEP 2024	WATERSHED SUBMITTAL	SES
24 OCT 2024	WATERSHED RESUBMITTAL	CNC

OWNER

LEVEL 7 DEVELOPMENT, LLC
4600 KINGS POINT RD
MINNETRISTA, MN 55331
TEL 612-812-7020
EMAIL: mmordland@nordlandpartners.com
CONTACT: MARK NORDLAND

PROJECT CONTACTS

CIVIL ENGINEER LANDFORM
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CONTACT: STEVE SABRASKI

SURVEYOR LANDFORM
105 SOUTH FIFTH AVENUE, SUITE 513
MINNEAPOLIS, MN 55401
TEL 612-252-9070
CONTACT: LARRY HUHN

LANDSCAPE ARCHITECT LANDFORM

105 SOUTH FIFTH AVENUE, SUITE 513
MINNEAPOLIS, MN 55401
TEL 612-252-9070
CONTACT: JOSH POPEHN

CIVIL / LANDSCAPE SHEET INDEX & REVISION MATRIX

SHEET NO.	DESCRIPTION	ISSUED	REVISED
C0.1	CIVIL & LANDSCAPE TITLE SHEET	X	X
C1.1	EXISTING CONDITIONS	X	X
C2.1	SITE PLAN	X	X
C3.1	OVERALL FINAL GRADING, DRAINAGE, PAVING & EROSION CONTROL	X	X
C3.2	NORTH FINAL GRADING, DRAINAGE, PAVING & EROSION CONTROL	X	X
C3.3	SOUTH FINAL GRADING, DRAINAGE, PAVING & EROSION CONTROL	X	X
C3.4	SWPPP	X	X
C3.5	POND CROSS - SECTIONS	X	X
C3.5A	POND CROSS - SECTIONS	X	X
C3.5B	POND CROSS - SECTIONS	X	X
C3.5C	POND CROSS - SECTIONS	X	X
C4.0	CONCEPTUAL UTILITIES LAYOUT	X	X
C7.1	CIVIL CONSTRUCTION DETAILS	X	X
C7.2	CIVIL CONSTRUCTION DETAILS	X	X
L2.1	LANDSCAPE PLAN	X	X

CERTIFICATION

CERTIFICATIONS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

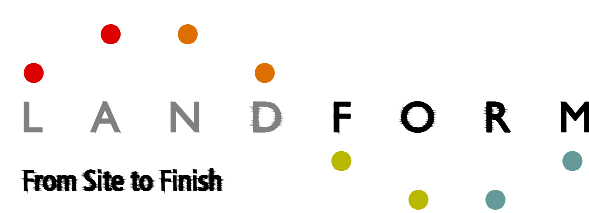
STEVE SABRASKI, P.E.
LICENSE NUMBER: 47165
DATE: 24 OCTOBER, 2024

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

JOSH POPEHN, RLA
LICENSE NUMBER: 44803
DATE: 24 OCTOBER, 2024

WATERSHED RESUBMITTAL

OCTOBER 24, 2024



105 South Fifth Avenue
Suite 513
Minneapolis, MN 55401

Tel: 612-252-9070
Fax: 612-252-9077
Web: landform.net

FILE NAME: C001SCD004
PROJECT NO.: SCD14001.005

CIVIL & LANDSCAPE TITLESHEET
C0.1

ABBREVIATIONS

D	Angle	LB	Pound	LB	Local Government Unit
&	And	LGU	Local Government Unit	LB	Pound
@	At	LT	Longitudinal	LB	Pound
100 YR.	100 Year Flood Elevation	LT	Light / Lighting	LT	Maintenance
A.B.	Anchor Bolt	MAINT.	Maintenance	MAS	Masonry
A.D.	Area Drain	MAS	Masonry	MATL	Material
AC	Air Conditioning Unit	MATL	Material	MAX	Maximum
ADD.	Addendum	MECH	Mechanical	MED	Medium
ADDL.	Additional	MFR	Manufacturer	MH	Manhole
ADJ.	Adjacent / Adjust	MH	Manhole	MIN	Minimum / Minute
AHJ	Air Handling Unit	MISC	Miscellaneous	MINDOT	Minnesota Department Of Transportation
ALT.	Alternate	MOD.	Module / Modular	MUL	Mulch
ALUM.	Aluminum	MUL	Mulch	N	North
ANOD.	Anodized	N	North	N.I.C.	Not In Contract
APPROX.	Approximate	NO. OR #	Number	NOM	Nominal
ARCH	Architect / Architectural	NTS	Not to Scale	NTS	Not to Scale
AUTO.	Automatic	NWE	Normal Water Elevation	NWL	Normal Water Level
AVG.	Average	O.F.	On Center	O.G.	Outside Dimension
BACK	Back of Curb	O.G.	Outside Dimension	O.H.	Overhead Electric
B.C.	Bottom of Curb	O.H.	Overhead	O.H.WL	Ordinary High Water Level
BW	Bottom of Wall	OPNG.	Opening	ORIG.	Original
BFE	Basement Floor Elevation	OE	Overhead Electric </td <td>P.I.</td> <td>Point of Intersection</td>	P.I.	Point of Intersection
BIT	Bituminous (Asphaltic)	UT	Underground Telephone	P.I.	Post Indicator Valve
BLDG	Building	FO	Underground Fiber Optic	P.V. OR P.L.	Property Line
BM	Benchmark	UE	Underground Electric	P.O.B.	Point of Beginning
BSMT.	Basement	G	Gas Line	P.S.F.	Pounds Per Square Foot
C.F.	Cubic Feet			P.S.I.	Pounds Per Square Inch
C.F.S.	Cubic Feet Per Second			P.T.	Point of Tangency
C.G.	Corner Guard			P.V.C.	Point of Vertical Curvature
C.J.	Control Joint			P.V.I.	Point of Vertical Intersection
C.L.	Centerline			P.V.T.	Point of Vertical Tangency
C.M.U.	Concrete Masonry Unit			PE	Polyethylene
C.O.	Cleanout			PEDEST.	Pedestal / Pedestrian
C.O.E.	U.S. Army Corps Of Engineers			PERF.	Perforated
C.Y.	Cubic Yards			PREP.	Preparation
CBMH	Catch Basin Manhole			PROP.	Proposed
CEM.	Cement			PROP.	Proposed
CIP	Cast Iron Pipe			P.V.C.	Poly-Vinyl Chloride (Piping)
OMP	Corrugated Metal Pipe			P.V.M.T.	Pavement
CONC.	Concrete (Portland)			QTR.	Quarter
CONN.	Connection			QTY.	Quantity
CONST.	Construction			R	Radius
CONT.	Continuous			RAD.	Radius
CONTR.	Contractor			RE	Rim Elevation (Casting)
COP.	Copper			R.D.	Roof Drain
CU.	Cubic			R.E.	Remove Existing
D.S.	Down Spout			R.O.	Rough Opening
DEG.	Degree			R.P.	Radius Point
DEMO.	Demolition / Demolish			RC	Reinforced Concrete Pipe
DEPT.	Department			R.S.	Rough Slab
DET.	Detail			RSD	Roof Storm Drain
DIA.	Diameter			RE	Regarding
DIAG.	Diagonal			REINF.	Reinforced
DIM.	Dimension			REQD.	Required
DIP	Ductile Iron Pipe			REVIS.	Revision / Revised
DN	Down			RGU	Regulatory Government Unit
DWG.	Drawing			ROW OR RW	Right of Way
E	East			S.	South
E.J.	Expansion Joint			S.F.	Square Feet
E.O.	Emergency Overflow			SAN	Sanitary Sewer
E.O.S.	Emergency Overflow Swale			SECT.	Section
E.A.	Each Elevation			SE	Split Entry / Side Exit
ELEC.	Electrical			SEWO	Split Entry Walk Out / Side Exit Walk Out
ELEV.	Elevation			SHT.	Sheet
EMER.	Emergency			SM.	Similar
ENGR.	Engineer			SINT.	Sealant
ENTR.	Entrance			SPEC.	Specification
EQ.	Equal			SQ.	Square
EQUIP.	Equipment			SSD	Subsurface drain
EQUIV.	Equivalent			STMH	Storm Sewer Manhole
EXIST.	Existing			STD.	Standard
EXP.	Expansion			STRUC.	Structural
F & I	Furnish and Install			SYM.	Symmetrical
F.B.O.	Furnished by Others			T	Thickness
F.C.	Face of Curb			T/R	Top of Rim
F.D.	Floor Drain			T/W	Top of Wall
F.D.C.	Fire Department Connection			TEMP.	Temporary
F.V.	Field Verify			THK	Thick / Thickness
FB	Full Basement			T.J.	Tooled Joint
FBWO	Full Basement Walk Out			TNH	Top Nut Hydrant
FBLO	Full Basement Lock Out			TYP.	Typical
FDN.	Foundation			UN.O.	Unless Noted Otherwise
FES	Flared End Section			V.B.	Vapor Barrier
F.FE	Finished Floor Elevation			V.C.	Vertical Curve
FLR	Floor			V.I.F.	Verify In Field
FT. OR ()	Foot			VER.	Vertical
FUT.	Future			VEST.	Vestibule
G.B.	Grade Break			W	With
G.C.	General Contractor			W.P.T.	Working Point
GAL.	Gallon			W.W.F.	Welded Wire Fabric
GALV.	Galvanized			W/	With
GFE	Garage Floor Elevation			W/O	Without
GL.	Glass			W/O	Walk Out
GR.	Grade			WEL.	Weld
H.	Height			WETL.	Waterproof
H.P.	High Point			WGT.	Weight
HDPEP	High Density Polyethylene Pipe			YD.	Yard
HGT.	Height			YR.	Year
HORIZ.	Horizontal				
HVAC	Heating, Ventilation, Air Conditioning				
HYD	Hydrant				
I.D.	Inside Dimension OR Identification				
I.E. or IE	Invert Elevation				
IN. OR ()	Inches				
INFO.	Information				
INL.	Inlet Elevation				
INSUL.	Insulation				
INV.	Invert Elevation				
JT.	Joint				
L.F.	Linear Feet				
L.P.	Low Point / Liquid Petroleum				

SYMBOLS

EXISTING	DESCRIPTION	NEW	DESCRIPTION
120	MAJOR CONTOUR	120	MAJOR CONTOUR
123	MINOR CONTOUR	123	MINOR CONTOUR
x 234.5	SPOT ELEVATION	x 234.5	SPOT ELEVATION
[Symbol]	BUILDING	[Symbol]	BUILDING
[Symbol]	CANOPY / OVERHANG	[Symbol]	CANOPY / OVERHANG
[Symbol]	CONCRETE	[Symbol]	CONCRETE
[Symbol]	BITUMINOUS	[Symbol]	UNDERGROUND STRUCTURE
[Symbol]	LANDSCAPING	[Symbol]	CONCRETE CURB
[Symbol]	GRAVEL	[Symbol]	EDGE OF PAVEMENT
[Symbol]	PAVING BLOCK	[Symbol]	FENCING
[Symbol]	PAVING BLOCK	[Symbol]	GUARD RAIL
[Symbol]	STORM SEWER LINE	[Symbol]	CONCRETE RETAINING WALL
[Symbol]	SANITARY SEWER LINE	[Symbol]	MODULAR RETAINING WALL
[Symbol]	WATER MAIN	[Symbol]	FIELDSTONE RETAINING WALL
[Symbol]	OVERHEAD ELECTRIC	[Symbol]	EXIT LOCATION
[Symbol]	UNDERGROUND TELEPHONE	[Symbol]	LIGHT STANDARD
[Symbol]	UNDERGROUND FIBER OPTIC	[Symbol]	POWER POLE
[Symbol]	UNDERGROUND ELECTRIC	[Symbol]	SLOPE DIRECTION
[Symbol]	GAS LINE	[Symbol]	CATCH BASIN
[Symbol]	CONCRETE CURB	[Symbol]	MANHOLE
[Symbol]	FENCING	[Symbol]	BOLLARD
[Symbol]	RETAINING WALL	[Symbol]	STORM SEWER
[Symbol]	SET 1/2" X 14" IRON PIPE	[Symbol]	SANITARY SEWER-WASTE
[Symbol]	IRON MONUMENT FOUND	[Symbol]	FORCE MAIN
[Symbol]	SURVEY DISK (BENCHMARK)	[Symbol]	ROOF DRAIN SYSTEM
[Symbol]	POWERPOLE	[Symbol]	WATERMAIN
[Symbol]	GUY WIRE	[Symbol]	FIRE LINE (IF SEPARATE)
[Symbol]	GUARD POST	[Symbol]	FIRE DEPT. CONNECTION
[Symbol]	GAS METER	[Symbol]	SOIL SUBDRAIN
[Symbol]	TRANSFORMER	[Symbol]	GAS LINE-UNDERGROUND
[Symbol]	WATER SHUT-OFF VALVE	[Symbol]	ELECTRIC-UNDERGROUND
[Symbol]	TRAFFIC SIGN	[Symbol]	TELEPHONE-UNDERGROUND
[Symbol]	FLAG POLE	[Symbol]	UNDERGROUND CABLETV
[Symbol]	LIGHT POLE	[Symbol]	LAWN SPRINKLER SLEEVE
[Symbol]	TREES	[Symbol]	
[Symbol]	TREE LINE	[Symbol]	
[Symbol]	STORM MANHOLE	[Symbol]	
[Symbol]	SANITARY MANHOLE	[Symbol]	
[Symbol]	CATCH BASIN	[Symbol]	
[Symbol]	FIRE HYDRANT	[Symbol]	
[Symbol]	WATER VALVE	[Symbol]	
[Symbol]	FLARED END SECTION	[Symbol]	
[Symbol]	MAILBOX	[Symbol]	
[Symbol]	NOTE NUMBER	[Symbol]	
(M)	MEASURED DISTANCE	[Symbol]	
(P)	DISTANCE PER RECORDED PLAT	[Symbol]	
[Symbol]	SOIL BORING	[Symbol]	

EROSION CONTROL SYMBOLS

SYMBOL	DESCRIPTION
[Symbol]	SILT FENCE
[Symbol]	COMPOST/BIO LOG
[Symbol]	INLET PROTECTION
[Symbol]	EROSION CONTROL BLANKET
[Symbol]	NOTE REFERENCE
[Symbol]	PARKING STALL COUNT
[Symbol]	LARGE SHEET DETAIL
[Symbol]	COORDINATE POINT
[Symbol]	REVISION - ADDENDUM, BULLETIN, ETC.
[Symbol]	REVISED AREA (THIS ISSUE)

LEGAL DESCRIPTION

Outlots B, D, E, and G, Avienda, Carver County, Minnesota.

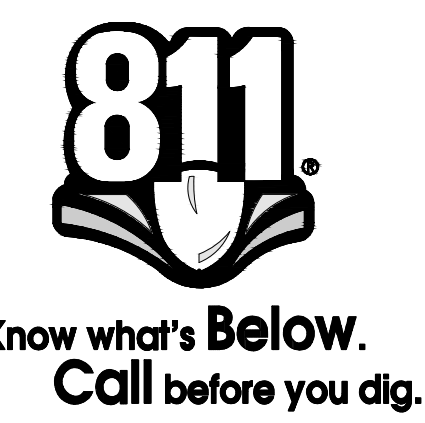
BENCHMARK

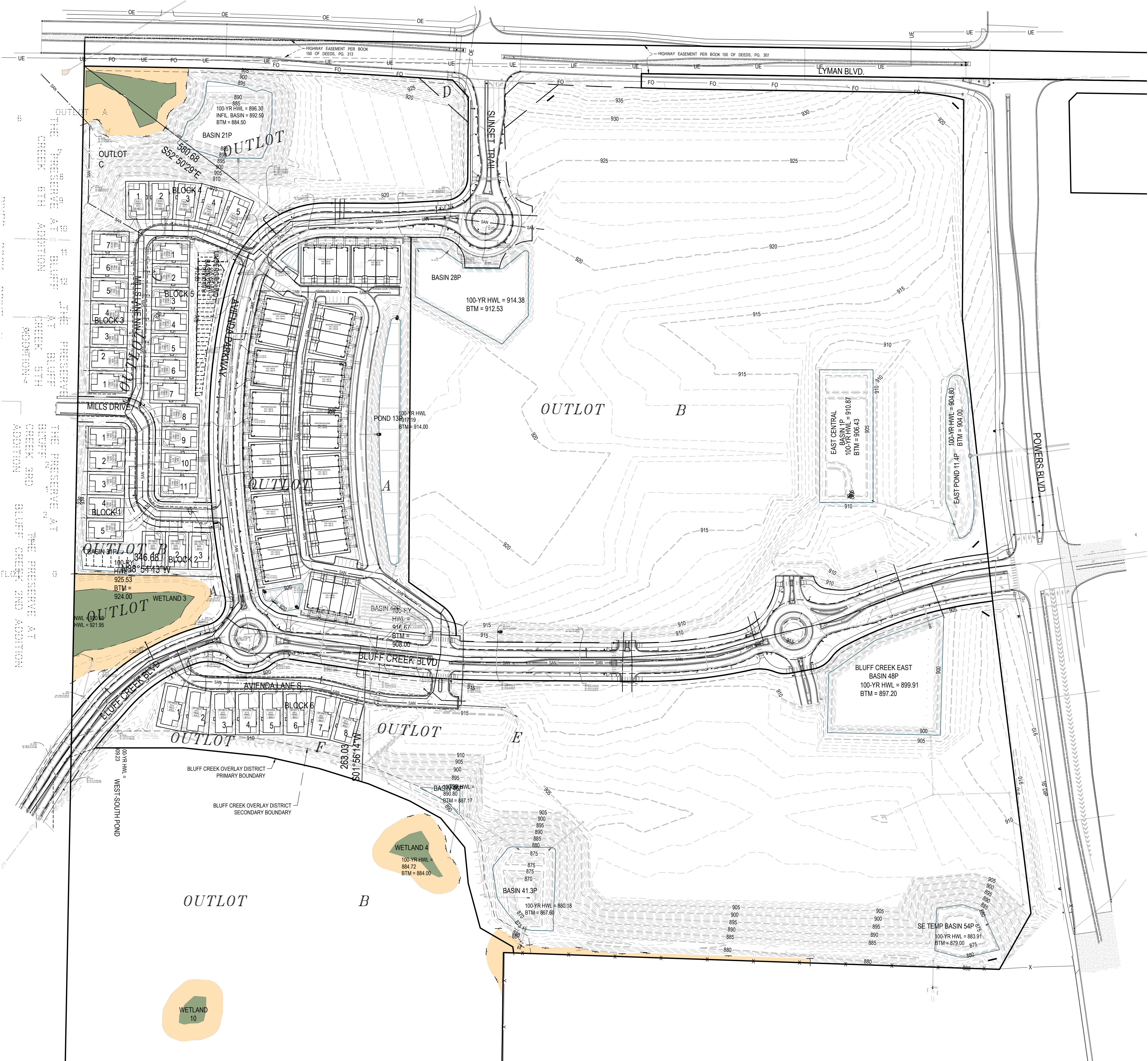
SITE BENCHMARK:
BM-1: TOP NUT OF HYDRANT
LOCATION: SOUTHEAST QUADRANT OF POWERS BLVD. & LYMAN BLVD.
ELEVATION = 921.32

BM-2: TOP NUT OF HYDRANT
LOCATION: WESTERLY SIDE OF POWERS BLVD. 1960 FT ± SOUTH OF LYMAN BLVD.
ELEVATION = 913.82

SITE / UTILITY CONTACTS

GAS CENTERPOINT ENERGY 700 LINDEN AVE W. MINNEAPOLIS, MN 55403 TEL: 800-342-4166 FAX: [Redacted]	ELECTRIC XCEL ENERGY 404 NICOLLET MALL MINNEAPOLIS, MN 55401 TEL: 612-330-5500 FAX: [Redacted]	TELEPHONE CENTURYLINK 200 S 5TH ST. MINNEAPOLIS, MN 55402 TEL: 866-642-0444 FAX: [Redacted]
CITY PLANNER CITY OF CHANHASSEN 7700 MARKET BLVD. P.O. BOX 147 CHANHASSEN, MN 55317 ERIC MAASS emass@ci.chanhassen.mn.us TEL: 952-227-1190 FAX: 952-227-1110	CITY ENGINEER CITY OF CHANHASSEN 7700 MARKET BLVD. P.O. BOX 147 CHANHASSEN, MN 55317 CHARLES HOWLEY chowley@ci.chanhassen.mn.us TEL: 952-227-1160 FAX: 952-227-1170	BUILDING OFFICIAL CITY OF CHANHASSEN 7700 MARKET BLVD. P.O. BOX 147 CHANHASSEN, MN 55317 ERIC TESSMAN etessman@ci.chanhassen.mn.us TEL: 952-227-1180 FAX: 952-227-1190
CITY INSPECTOR KIMLEY-HORN 767 EUSTIS STREET, SUITE 100 ST. PAUL, MN 55114 BOB SCHMIDT bob.schmidt@kimley-horn.com TEL: 651-643-0413 FAX: [Redacted]		





EXISTING CONDITIONS

- Background information shown is from survey by Landform, Minneapolis, MN, expressly for this project. City of Chanhassen, MN record drawings, and utility service providers, Landform offers no warranty, expressed or written, for information provided by others. Existing project conditions shall be verified prior to beginning construction. Errors, inconsistencies, or omissions discovered shall be reported to the Engineer IMMEDIATELY.
- Existing conditions represent the anticipated site after phase 1, 2, and 3 have been completed.

DEVELOPER

LEVEL 7 DEVELOPMENT, LLC
 4600 KINGS POINT RD
 MINNETRISTA, MN 55331

MUNICIPALITY



PROJECT

**AVIENDA REGIONAL
 STORMWATER PLAN
 CHANHASSEN, MN**

ISSUE / REVISION HISTORY

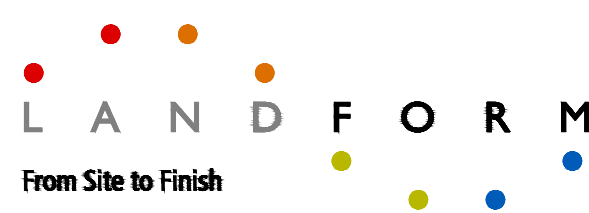
DATE	ISSUE / REVISION	REVIEW
25 SEP 2024	WATERSHED SUBMITTAL	SES
24 OCT 2024	WATERSHED RESUBMITTAL	CNC

CERTIFICATION

**PRELIMINARY
 NOT FOR
 CONSTRUCTION**

IF THE SIGNATURE, SEAL OR FOUR LINES DIRECTLY ABOVE ARE NOT VISIBLE, THIS SHEET HAS BEEN REPRODUCED BEYOND INTENDED READABILITY AND IS NO LONGER A VALID DOCUMENT. PLEASE CONTACT THE ENGINEER TO REQUEST ADDITIONAL DOCUMENTS. THIS PLAN IS INTENDED TO BE PRINTED / VIEWED IN COLOR.

**WATERSHED RESUBMITTAL
 OCTOBER 24, 2024**

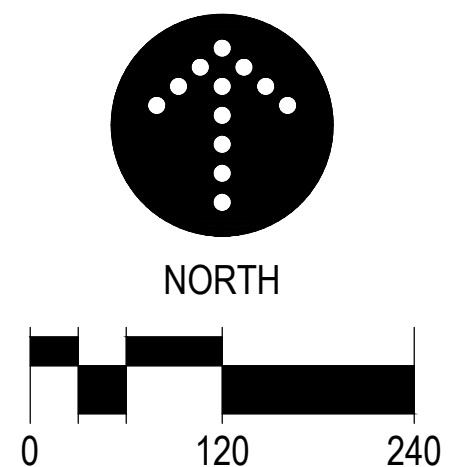


105 South Fifth Avenue
 Suite 513
 Minneapolis, MN 55401

Tel: 612-252-9070
 Fax: 612-252-9077
 Web: landform.net

FILE NAME: C101SCD005
 PROJECT NO.: SCD14001.005

EXISTING CONDITIONS
C1.1





GENERAL NOTES

- For construction staking and surveying services contact Landform at 612.252.9070.

SITE PLAN NOTES

- Obtain all necessary permits for construction within, or use of, public right-of-way.
- The digital file, which can be obtained from the Engineer, shall be used for staking. Discrepancies between the drawings and the digital file shall be reported to the Engineer. The building footprint, as shown on these drawings, and the digital file, shall be compared to the structural drawings prior to staking.
- Building layout angles are parallel with or perpendicular to the property line at the location indicated.
- Dimensions shown are to face of curb and exterior face of building unless noted otherwise.
- Delineate parking stalls with a 4-inch wide white painted stripe. Delineate access aisles with 4-inch wide white painted stripes 18 inches on center and at 45 degree angle to direction of travel.
- Development signs.

ZONING AND SETBACK SUMMARY

The Property is Zoned PUD - Regional Lifestyle

Building Setback Information is as follows:
 Front Yard = 5 ft.
 Rear = 5 ft.
 Residential = 30 ft.
 PUD Exterior = 30 ft.
 Bluff Creek = 40 ft.

Parking Setback Information is as follows:
 Front Yard = 10 ft.
 Rear = 10 ft.
 Side = 10 ft.
 Residential = 20 ft.

Lot Coverage Information is as follows:
 Lot Area Minimum = 10,000 s.f. = 0.23 ac.
 Lot Width Minimum = 100 ft.

AREA SUMMARY - OUTLOT B

Category	Area (s.f.)	Area (ac.)	Percentage
Existing:			
Pervious	1,536,874	35.28	99.98%
Impervious	322	0.01	0.02%
Total	1,537,196	35.29	100.0%
Proposed:			
Pervious	529,087	12.15	34.4%
Impervious	1,008,109	23.14	65.6%
Total	1,537,196	35.29	100.0%

AREA SUMMARY - OUTLOT D

Category	Area (s.f.)	Area (ac.)	Percentage
Existing:			
Pervious	207,588	4.77	100.0%
Impervious	0	0	0.0%
Total	207,588	4.77	100.0%
Proposed:			
Pervious	129,508	2.97	62.4%
Impervious	78,080	1.80	37.6%
Total	207,588	4.77	100.0%

AREA SUMMARY - OUTLOT E

Category	Area (s.f.)	Area (ac.)	Percentage
Existing:			
Pervious	980,628	22.51	98.8%
Impervious	11,505	0.27	1.2%
Total	992,133	22.78	100.0%
Proposed:			
Pervious	372,382	8.55	37.5%
Impervious	619,751	14.23	62.5%
Total	992,133	22.78	100.0%

LEGEND

Green Space (Landscape Area)

DEVELOPER

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PROJECT

**AVIENDA REGIONAL
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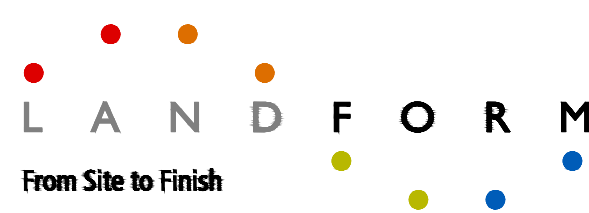
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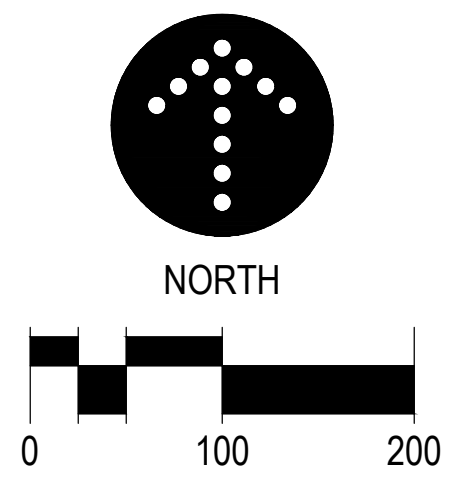
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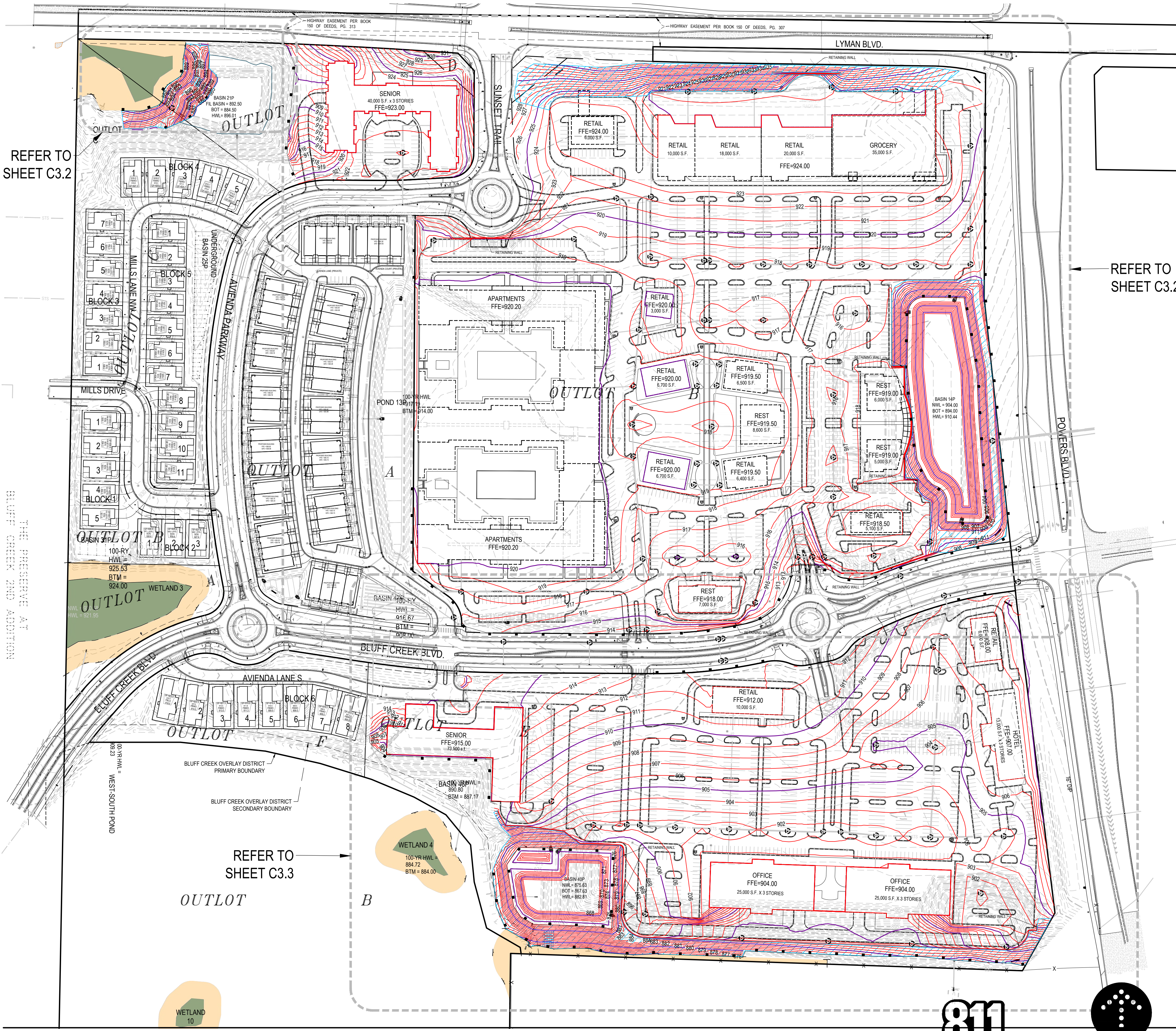
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FILE NAME: C201SCD005
 PROJECT NO.: SCD14001.005

SITE PLAN

C2.1





REFER TO SHEET C3.2

REFER TO SHEET C3.2

REFER TO SHEET C3.3

GENERAL NOTES

- FOR CONSTRUCTION STAKING AND SURVEYING SERVICES CONTACT LANDFORM AT 612.252.9070.
- INSTALL PERIMETER SEDIMENT CONTROLS PRIOR TO BEGINNING WORK AND MAINTAIN FOR DURATION OF CONSTRUCTION. INSTALL POND / BASIN PROTECTION SEDIMENT CONTROLS WITHIN 7 DAYS OF COMPLETION OF BASIN GRADING. REMOVE PERIMETER CONTROLS AFTER AREAS CONTRIBUTING RUNOFF ARE PERMANENTLY STABILIZED AND DISPOSE OF OFF SITE.
- LIMIT SOIL DISTURBANCE TO THE GRADING LIMITS SHOWN. SCHEDULE OPERATIONS TO MINIMIZE LENGTH OF EXPOSURE OF DISTURBED AREAS.
- MANAGEMENT PRACTICES SHOWN ARE THE MINIMUM REQUIREMENT. INSTALL AND MAINTAIN ADDITIONAL CONTROLS AS WORK PROCEEDS TO PREVENT EROSION AND CONTROL SEDIMENT CARRIED BY WIND OR WATER.
- REFER TO SWPPP NOTES ON SHEET C3.5 FOR ADDITIONAL REQUIREMENTS.
- EXCAVATE TEMPORARY SEDIMENTATION BASINS EARLY IN THE CONSTRUCTION SEQUENCE. REMOVE SEDIMENT FROM BASINS PERIODICALLY AND AFTER AREAS CONTRIBUTING RUNOFF ARE PERMANENTLY STABILIZED.
- ALL EXPOSED SOILS AREAS SHALL BE STABILIZED IMMEDIATELY TO LIMIT SOIL EROSION IN THAT PORTION OF THE SITE WHERE CONSTRUCTION HAS TEMPORARILY OR PERMANENTLY CEASED.
- MASS-GRADING SEED, SOIL, MULCH AND FERTILIZER SHALL MEET THE FOLLOWING SPECIFICATIONS, AS MODIFIED.

ITEM	SPECIFICATION NUMBER	ESTIMATED QUANTITY	S.Y.
SOIL	MNDOT 3878	0	
SEED	MNDOT 3876	2,840	S.Y.
	MN TYPE 22-111 @ 30.5 LB/AC - TEMPORARY EROSION CONTROL		
	MN TYPE 25-141 @ 120 LB/AC - PERMANENT TURF	11,160	LB.
	MN TYPE 33-261 @ 35 LB/AC - PERMANENT WETLAND BUFFER (IF DISTURBED)	2.1	LB.
MULCH	MNDOT 3882	186	TON
	(MNDOT TYPE 1 @ 2 TON/AC, DISC ANCHORED)		
FERTILIZER (FOR PERMANENT TURF ONLY)	MNDOT 3881		
GENERAL PLACEMENT	MNDOT 2575		
- SEDIMENT ON PAVED SURFACES (E.G. TRACKED FROM VEHICLES) MUST BE REMOVED WITHIN ONE CALENDAR DAY OF DISCOVERY.

GRADING NOTES

- CONTACT UTILITY SERVICE PROVIDERS FOR FIELD LOCATION OF SERVICES 72 HOURS PRIOR TO BEGINNING GRADING.
- REFER TO THE GEOTECHNICAL REPORT PREPARED BY BRAUN INTEREC, DATED APRIL 12, 2017, FOR ADDITIONAL INFORMATION ON BACKFILL MATERIAL AND GROUNDWATER CONDITIONS.
- REMOVE TOPSOIL FROM GRADING AREAS AND STOCKPILE SUFFICIENT QUANTITY FOR REUSE. MAINTAIN STOCKPILES WITH MAXIMUM 1V:2H SLOPES.
- REMOVE SURFACE AND GROUND WATER FROM EXCAVATIONS. PROVIDE INITIAL LIFTS OF STABLE FOUNDATION MATERIAL IF EXPOSED SOILS ARE WET AND UNSTABLE.
- AN INDEPENDENT TESTING FIRM SHALL VERIFY THE REMOVAL OF ORGANIC AND UNSUITABLE SOILS. SOIL CORRECTION, AND COMPACTION AND PROVIDE PERIODIC REPORTS TO THE OWNER.
- PLACE AND COMPACT FILL USING LIFT THICKNESSES MATCHED TO SOIL TYPE AND COMPACTION EQUIPMENT TO OBTAIN SPECIFIED COMPACTION THROUGHOUT THE LIFT.
- COMPACT COHESIVE SOILS IN PAVED AREAS TO 95% OF MAXIMUM DRY DENSITY. STANDARD PROCTOR (ASTM D698) EXCEPT THE TOP 3 FEET WHICH SHALL BE COMPACTED TO 100%. COMPACT TO 98% DENSITY WHERE FILL DEPTH EXCEEDS 10 FEET. THE SOILS SHALL BE WITHIN 3% OF OPTIMUM MOISTURE CONTENT. IN GRANULAR SOILS ALL PORTIONS OF THE EMBANKMENT SHALL BE COMPACTED TO NOT LESS THAN 95% OF MODIFIED PROCTOR DENSITY (ASTM D1557).
- ALL DISTURBED SOIL SURFACE AREAS SHALL BE DECOMPACTED TO A DEPTH OF 18-INCHES AND COVERED WITH SIX INCHES OF TOPSOIL. REFER TO RPB/CWD STANDARD EROSION CONTROL NOTES FOR ADDITIONAL REQUIREMENTS.
- RESERVED.
- RESERVED.

RPB/CWD STANDARD EROSION CONTROL NOTES (CONT.)

- NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ON SITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE.
- ADDITIONAL MEASURES, SUCH AS HYDRAULIC MULCHING AND OTHER PRACTICES AS SPECIFIED BY THE DISTRICT MUST BE USED ON SLOPES OF 3:1 (H:V) OR STEEPER TO PROVIDE ADEQUATE STABILIZATION.
- FINAL SITE STABILIZATION MEASURES MUST SPECIFY THAT AT LEAST SIX INCHES OF TOPSOIL OR ORGANIC MATTER BE SPREAD AND INCORPORATED INTO THE UNDERLYING SOIL DURING FINAL SITE TREATMENT WHEREVER TOPSOIL HAS BEEN REMOVED.
- CONSTRUCTION SITE WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER AND SANITARY WASTE MUST BE PROPERLY MANAGED.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPs MUST BE MAINTAINED UNTIL COMPLETION OF CONSTRUCTION AND VEGETATION IS ESTABLISHED SUFFICIENTLY TO ENSURE STABILITY OF THE SITE, AS DETERMINED BY THE DISTRICT.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPs MUST BE REMOVED UPON FINAL STABILIZATION.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 7 CALENDAR DAYS AFTER LAND-DISTURBING WORK HAS TEMPORARILY OR PERMANENTLY CEASED ON A PROPERTY THAT DRAINS TO AN IMPAIRED WATER.
- SOIL SURFACES COMPACTED DURING CONSTRUCTION AND REMAINING PEROUSIOUS UPON COMPLETION OF CONSTRUCTION MUST BE DECOMPACTED TO ACHIEVE:
 - A) A SOIL COMPACTION TESTING PRESSURE OF NOT LESS THAN 1,400 KILOPASCALS OR 200 POUNDS PER SQUARE INCH IN THE UPPER 12 INCHES OF SOIL OR
 - B) A BULK DENSITY OF LESS THAN 1.4 GRAMS PER CUBIC CENTIMETER OR 87 POUNDS PER CUBIC FOOT IN THE UPPER 12 INCHES OF SOIL
- IN ADDITION, UTILITIES, TREE ROOTS AND OTHER EXISTING VEGETATION MUST BE PROTECTED UNTIL FINAL REVEGETATION OR OTHER STABILIZATION OF THE SITE. REFER TO SHEET C3.5 FOR DECOMPACTION AREAS.
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	INLET PROTECTION	89 EACH
	SILT FENCE	8,003 FEET
	VEHICLE TRACKING PAD	3 EACH
	EROSION CONTROL BLANKET (MNDOT CATEGORY 4N OR 4P)	189,905 S.F.
	ENKAMAT 7010 OR EQUAL	1,990 S.F.
	BIO LOG	55 L.F.

DEVELOPER

LEVEL 7 DEVELOPMENT, LLC
4600 KINGS POINT RD
MINNETRISTA, MN 55331

MUNICIPALITY



PROJECT

AVIENDA REGIONAL STORMWATER PLAN
CHANHASSEN, MN

ISSUE / REVISION HISTORY

DATE	ISSUE / REVISION	REVIEW
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24 OCT 2024	WATERSHED RESUBMITTAL	CNC

CERTIFICATION

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WATERSHED RESUBMITTAL

OCTOBER 24, 2024



105 South Fifth Avenue Tel: 612-252-9070
Suite 513 Fax: 612-252-9077
Minneapolis, MN 55401 Web: landform.net

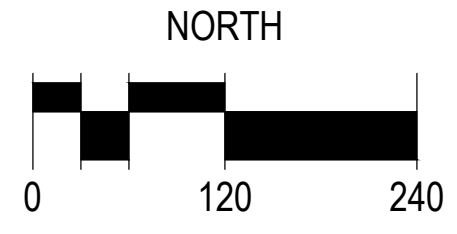
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PROJECT NO. SCD14001.005

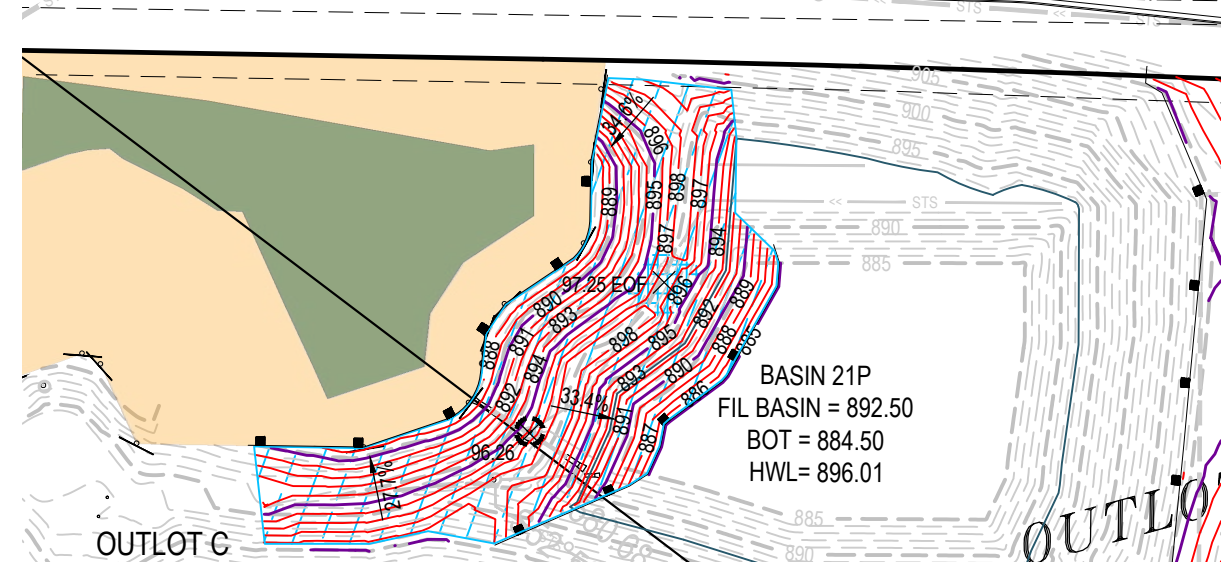
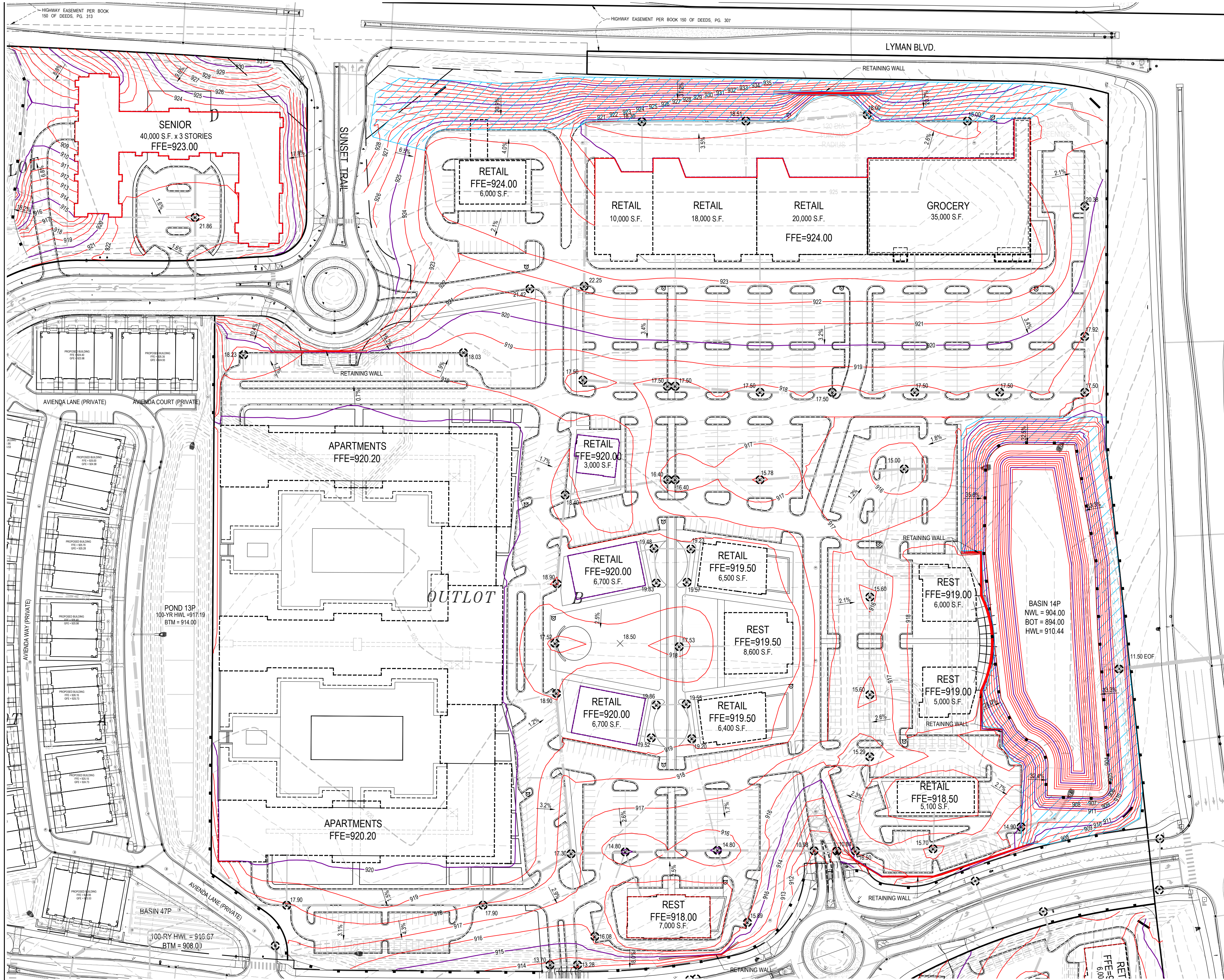
OVERALL FINAL GRADING, DRAINAGE, PAVING & EROSION CONTROL

C3.1



Know what's Below.
Call before you dig.





GENERAL NOTES

- FOR CONSTRUCTION STAKING AND SURVEYING SERVICES CONTACT LANDFORM AT 612.252.9070.
- INSTALL PERIMETER SEDIMENT CONTROLS PRIOR TO BEGINNING WORK AND MAINTAIN FOR DURATION OF CONSTRUCTION. INSTALL POND / BASIN PROTECTION SEDIMENT CONTROLS WITHIN 7 DAYS OF COMPLETION OF BASIN GRADING. REMOVE PERIMETER CONTROLS AFTER AREAS CONTRIBUTING RUNOFF ARE PERMANENTLY STABILIZED AND DISPOSE OF OFF SITE.
- LIMIT SOIL DISTURBANCE TO THE GRADING LIMITS SHOWN. SCHEDULE OPERATIONS TO MINIMIZE LENGTH OF EXPOSURE OF DISTURBED AREAS.
- MANAGEMENT PRACTICES SHOWN ARE THE MINIMUM REQUIREMENT. INSTALL AND MAINTAIN ADDITIONAL CONTROLS AS WORK PROCEEDS TO PREVENT EROSION AND CONTROL SEDIMENT CARRIED BY WIND OR WATER.
- REFER TO SWPPP NOTES ON SHEET C3.5 FOR ADDITIONAL REQUIREMENTS.
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- ALL EXPOSED SOILS AREAS SHALL BE STABILIZED IMMEDIATELY TO LIMIT SOIL EROSION IN THAT PORTION OF THE SITE WHERE CONSTRUCTION HAS TEMPORARILY OR PERMANENTLY CEASED.
- MASS-GRADING SEED, SOIL, MULCH AND FERTILIZER SHALL MEET THE FOLLOWING SPECIFICATIONS, AS MODIFIED:

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- CONTACT UTILITY SERVICE PROVIDERS FOR FIELD LOCATION OF SERVICES 72 HOURS PRIOR TO BEGINNING GRADING.
- REFER TO THE GEOTECHNICAL REPORT PREPARED BY BRAUN INTERTEC, DATED APRIL 12, 2017, FOR ADDITIONAL INFORMATION ON BACKFILL MATERIAL AND GROUNDWATER CONDITIONS.
- REMOVE TOPSOIL FROM GRADING AREAS AND STOCKPILE SUFFICIENT QUANTITY FOR REUSE. MAINTAIN STOCKPILES WITH MAXIMUM 1V/2H SLOPES.
- REMOVE SURFACE AND GROUND WATER FROM EXCAVATIONS. PROVIDE INITIAL LIFTS OF STABLE FOUNDATION MATERIAL IF EXPOSED SOILS ARE WET AND UNSTABLE.
- AN INDEPENDENT TESTING FIRM SHALL VERIFY THE REMOVAL OF ORGANIC AND UNSUITABLE SOILS. SOIL CORRECTION, AND COMPACTION AND PROVIDE PERIODIC REPORTS TO THE OWNER.
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- COMPACT COHESIVE SOILS IN PAVED AREAS TO 95% OF MAXIMUM DRY DENSITY. STANDARD PROCTOR (ASTM D698) EXCEPT THE TOP 3 FEET WHICH SHALL BE COMPACTED TO 100%. COMPACT TO 98% DENSITY WHERE FILL DEPTH EXCEEDS 10 FEET. THE SOILS SHALL BE WITHIN 3% OF OPTIMUM MOISTURE CONTENT. IN GRANULAR SOILS ALL PORTIONS OF THE EMBANKMENT SHALL BE COMPACTED TO NOT LESS THAN 95% OF MODIFIED PROCTOR DENSITY (ASTM D1557).
- ALL DISTURBED SOIL SURFACE AREAS SHALL BE DECOMPACTED TO A DEPTH OF 18-INCHES AND COVERED WITH SIX INCHES OF TOPSOIL. REFER TO RPB/CWD STANDARD EROSION CONTROL NOTES FOR ADDITIONAL REQUIREMENTS.
- RESERVED.
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RPB/CWD STANDARD EROSION CONTROL NOTES (CONT.)

- NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ONSITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE.
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MUNICIPALITY



PROJECT

AVIENDA REGIONAL STORMWATER PLAN
CHANHASSEN, MN

ISSUE / REVISION HISTORY

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WATERSHED RESUBMITTAL

OCTOBER 24, 2024



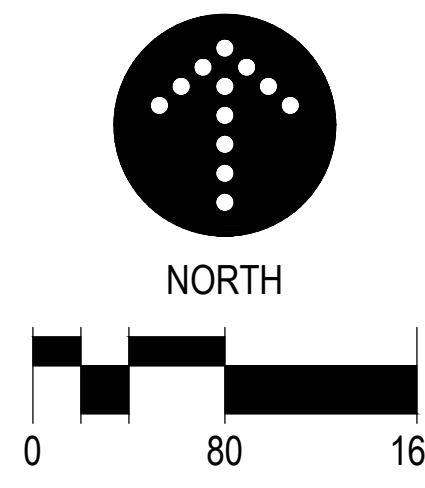
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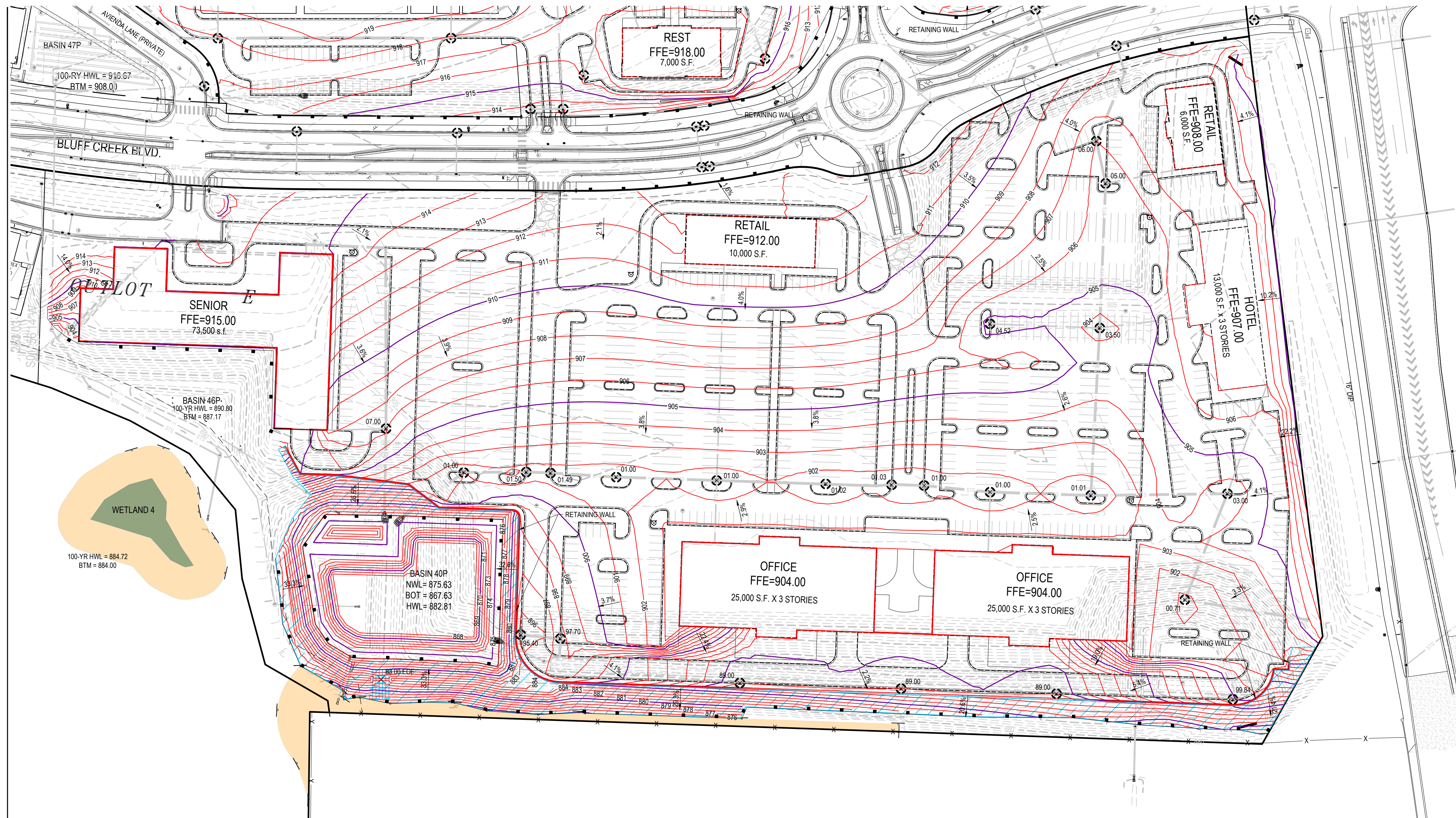
Tel: 612-252-9070
Fax: 612-252-9077
Web: landform.net

FILE NAME: C301SCD005
PROJECT NO.: SCD14001.005

NORTH FINAL GRADING, DRAINAGE, PAVING & EROSION CONTROL

C3.2





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ITEM	MINDOT NUMBER	SPECIFICATION NUMBER	ESTIMATED QUANTITY
SOIL	MINDOT 3878		0 S.Y.
SEED	MINDOT 3876		2,840 S.Y.
		MN TYPE 22-111 @ 30.5 LB/AC - TEMPORARY EROSION CONTROL	11,160 LB.
		MN TYPE 25-141 @ 120 LB/AC - PERMANENT TURF	2.1 LB.
		MN TYPE 33-261 @ 35 LB/AC - PERMANENT WETLAND BUFFER (IF DISTURBED)	186 TON
MULCH		(MINDOT TYPE 1 @ 2 TON/AC, DISC ANCHORED)	
FERTILIZER (FOR PERMANENT TURF ONLY)	MINDOT 3881		
GENERAL PLACEMENT	MINDOT 2575		
- SEDIMENT ON PAVED SURFACES (E.G. TRACKED FROM VEHICLES) MUST BE REMOVED WITHIN ONE CALENDAR DAY OF DISCOVERY.

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RPB/CWD STANDARD EROSION CONTROL NOTES (CONT.)

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DEVELOPER

LEVEL 7 DEVELOPMENT, LLC
 4600 KINGS POINT RD
 MINNETRISTA, MN 55331

MUNICIPALITY



PROJECT

**AVIENDA REGIONAL
 STORMWATER PLAN
 CHANHASSEN, MN**

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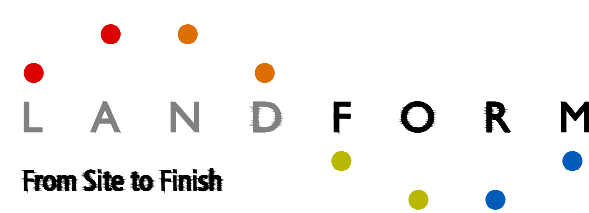
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WATERSHED RESUBMITTAL

OCTOBER 24, 2024

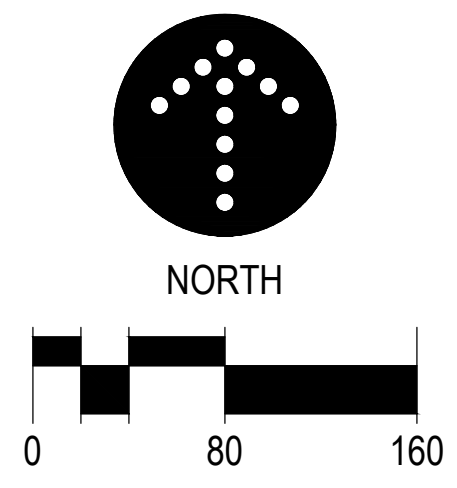


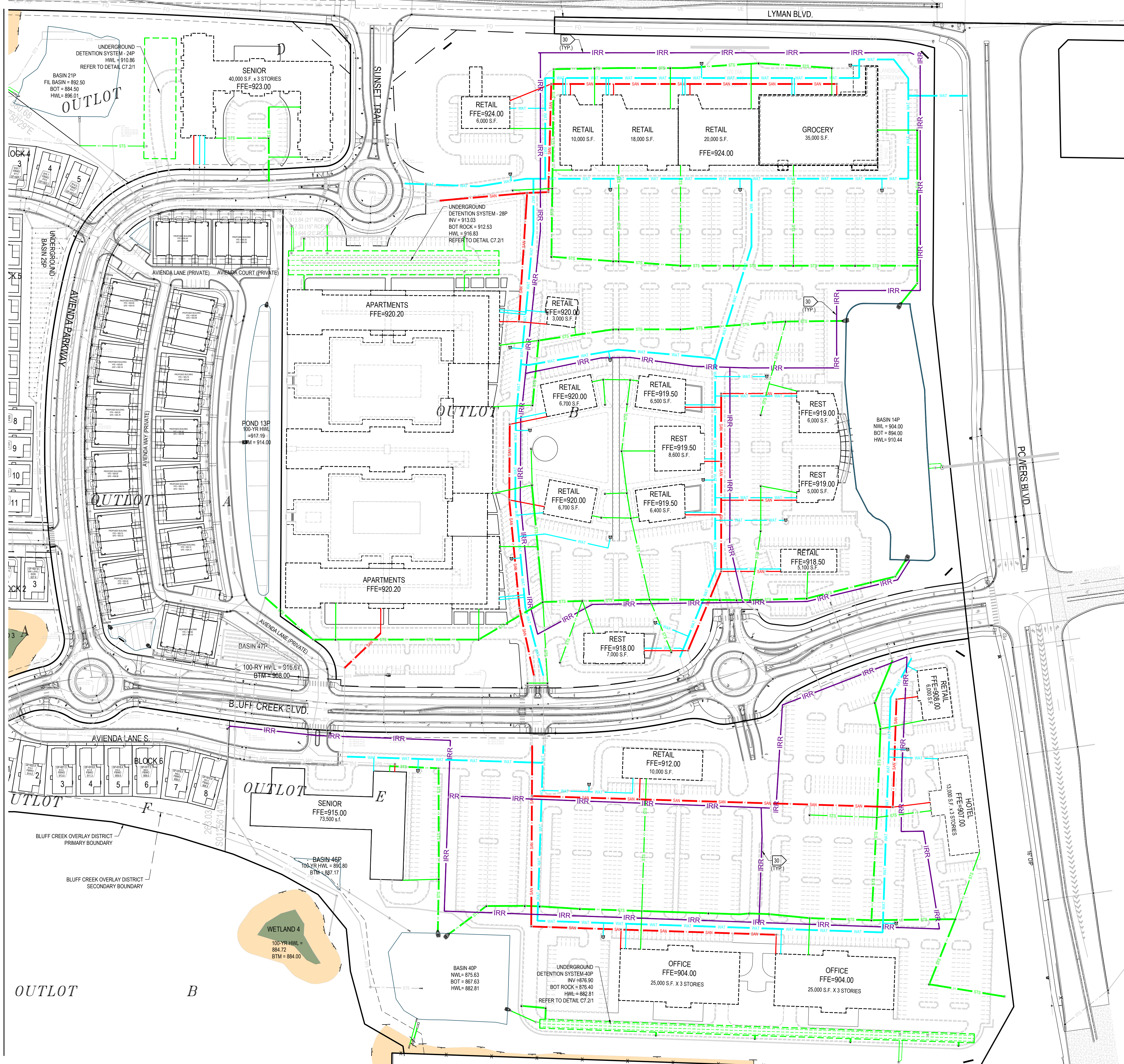
105 South Fifth Avenue Tet: 612-252-9070
 Suite 513 Fax: 612-252-9077
 Minneapolis, MN 55401 Web: landform.net

FILE NAME C301SCD005
 PROJECT NO. SCD14001.005

**SOUTH FINAL GRADING, DRAINAGE,
 PAVING & EROSION CONTROL**

C3.3





GENERAL NOTES

- For construction staking and surveying services contact Landform at 612.252.9070.
- Pipe Materials
 - Watermain: C900 PVC
 - Water Service: Copper Type K (ASTM B88)
 - Public Sanitary Sewer: PVC SDR 35 (ASTM D3034, F477, & F891)
 - Private Sanitary Sewer: PVC Schedule 40 (ASTM D1785, D2665, F891, F1488 & F1760)
 - Storm Sewer: PVC Schedule 40 (ASTM D1785, D2665, F891, F1488 & F1760)
 - Drain Tile: HDPE - Corrugated, Smooth Interior, Water Tight (ASTM D3350, ASTM D4976, ASTM F2396; AASHTO M252)
 - HDPE - Corrugated & Perforated (ASTM F405 & F667)
- Contact utility service providers for field location of services 72 hours prior to beginning.
- Contractor to field verify location and elevation of all utility points of connection prior to construction of any proposed utilities. Contractor to notify Engineer immediately if there is any discrepancy.
- Contractor to pothole all utility crossings prior to construction of new utilities to verify depths of existing lines. Contact Engineer immediately if any conflicts are discovered.
- Provide means and measures to protect adjacent property from damage during utility installation.
- Pipe lengths shown are from center of structure to center of structure or end of end section.
- Install tracer wire with all non-conductive utilities in accordance with City of Chanhassen Standards.
- Connect to City utilities in accordance with City of Chanhassen Standards.
- Contact City of Chanhassen Public Work Department at 952-227-1300 for flushing, pressure test, and wet tap inspection.
- Maintain 7.5 feet of cover on water.
- Deflect water to maintain 18-inch minimum outside separation at sewer crossings. Center pipe lengths to provide greatest separation between joints.
- The water distribution system shall be disinfected per Minnesota Rules, Chapter 4714.
- The sanitary sewer system shall be tested per Minnesota Rules, Chapter 4714, Section 712.0.
- Provide 4-inch rigid foam (ASTM D1621) insulation on sanitary sewer less than 6 feet deep.
- Reserved.
- All portions of the storm sewer system, located within 10 feet of the building or water service line must be tested in accordance with Minnesota Rules, Part 4714.
- All joints and connections in the storm sewer system shall be gas-tight or water-tight. Approved resilient rubber joints must be used to make water-tight connections to manholes, catch basins, and other structures.
- Rock media in infiltration or filtration systems shall be angular, non-calcareous rock.
- Irrigation sleeve to be 4 inch Schedule 80 PVC buried 24" below grade. Extend sleeves 3-feet beyond the edge of pavement. Mark each end of sleeve with 3/4-inch rebar 12 inches below finish grade. (Coordinate with irrigation contractor.)
- Coordinate with Private Utilities to provide electric, natural gas, and communications services to building.
- Reserved.
- See site lighting plan for additional information.
- Reserved.
- Reserved.
- Provide conduits for cable television and other electronic communication.
- Reserved.
- Compact cohesive soils in paved areas to 95% of maximum dry density, Standard Proctor (ASTM D698) except the top 3 feet which shall be compacted to 100%, compact to 98% density where fill depth exceeds 10 feet. The soils shall be within 3% of optimum moisture content. In granular soils all portions of the embankment shall be compacted to not less than 95% of Modified Proctor Density (ASTM D1557).
- Adjust structures to final grade where disturbed. Comply with requirements of Utility. Meet requirements for traffic loading in paved areas.

30 Irrigation main lines to be designed by the design-build contractor.

DEVELOPER

LEVEL 7 DEVELOPMENT, LLC
 4600 KINGS POINT RD
 MINNETRISTA, MN 55331

MUNICIPALITY



PROJECT

**AVIENDA REGIONAL
 STORMWATER PLAN
 CHANHASSEN, MN**

ISSUE / REVISION HISTORY

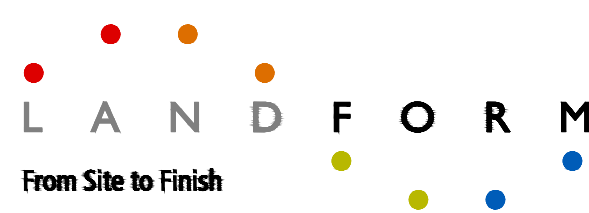
DATE	ISSUE / REVISION	REVIEW
25 SEP 2024	WATERSHED SUBMITTAL	SES
24 OCT 2024	WATERSHED RESUBMITTAL	CNC

CERTIFICATION

**PRELIMINARY
 NOT FOR
 CONSTRUCTION**

IF THE SIGNATURE, SEAL OR FOUR LINES DIRECTLY ABOVE ARE NOT VISIBLE, THIS SHEET HAS BEEN REPRODUCED BEYOND INTENDED READABILITY AND IS NO LONGER A VALID DOCUMENT. PLEASE CONTACT THE ENGINEER TO REQUEST ADDITIONAL DOCUMENTS. THIS PLAN IS INTENDED TO BE PRINTED IN COLOR.

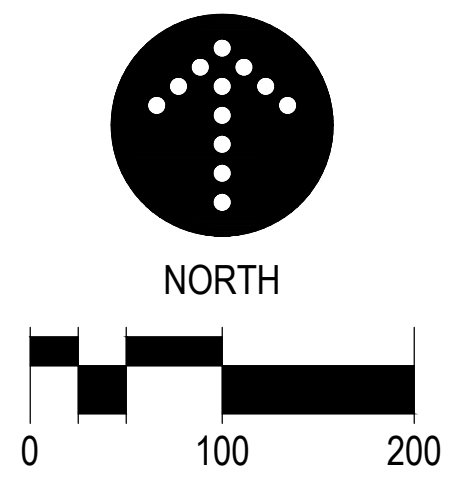
**WATERSHED RESUBMITTAL
 OCTOBER 24, 2024**



105 South Fifth Avenue Tel: 612-252-9070
 Suite 513 Fax: 612-252-9077
 Minneapolis, MN 55401 Web: landform.net

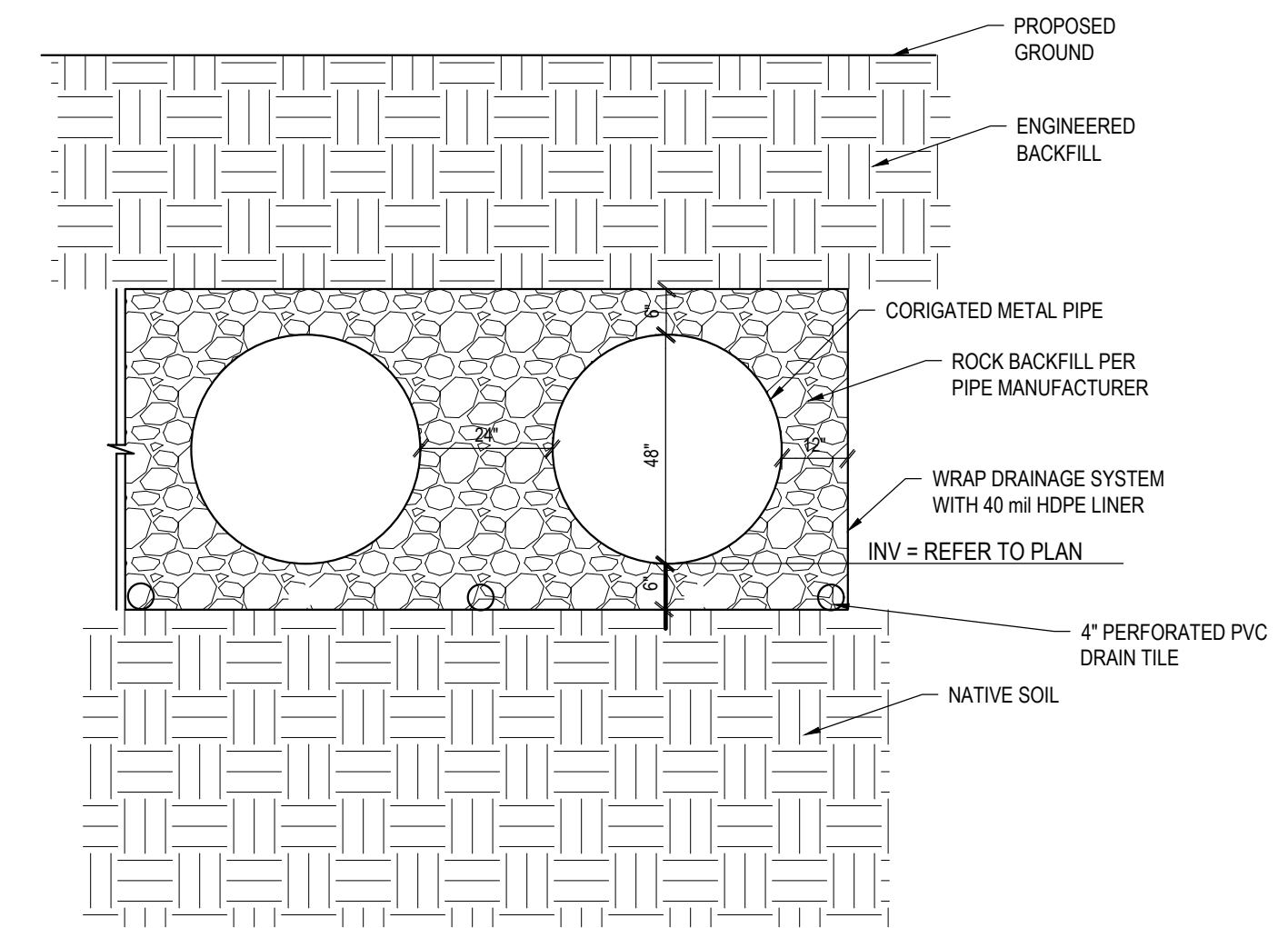
FILE NAME: C400SCD005
 PROJECT NO.: SCD14001.005

**CONCEPTUAL UTILITIES
 LAYOUT**
C4.0





DATE	ISSUE / REVISION	REVIEW
25 SEP 2024	WATERSHED SUBMITTAL	SES
24 OCT 2024	WATERSHED RESUBMITTAL	CNC



1 UNDERGROUND DETENTION SYSTEM
NO SCALE

PLAN VIEW
(TOP SLAB NOT SHOWN FOR CLARITY)

JELLYFISH DESIGN NOTES

JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD PEAK DIVERSION STYLE WITH PRECAST TOP SLAB IS SHOWN. ALTERNATE OFFLINE VAULT AND/OR SHALLOW ORIENTATIONS ARE AVAILABLE. PEAK CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD.

CARTRIDGE SELECTION	54"	40"	27"	15"
CARTRIDGE LENGTH	54"	40"	27"	15"
OUTLET INVERT TO STRUCTURE INVERT (A)	0.178 / 0.089	0.133 / 0.067	0.089 / 0.045	0.049 / 0.025
FLOW RATE HI-FLO / DRAINDOWN (GFS) (PER CART)	1.86	1.47	0.98	0.54
MAX. TREATMENT (GFS)	5.00	4.00	2.54	1.36
DECK TO INVERT TOP (MIN) (B)	5.00	4.00	2.54	1.36

ELEVATION VIEW

FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

24" TRENCH COVER
(LENGTH VARIES)
N.T.S.

GENERAL NOTES

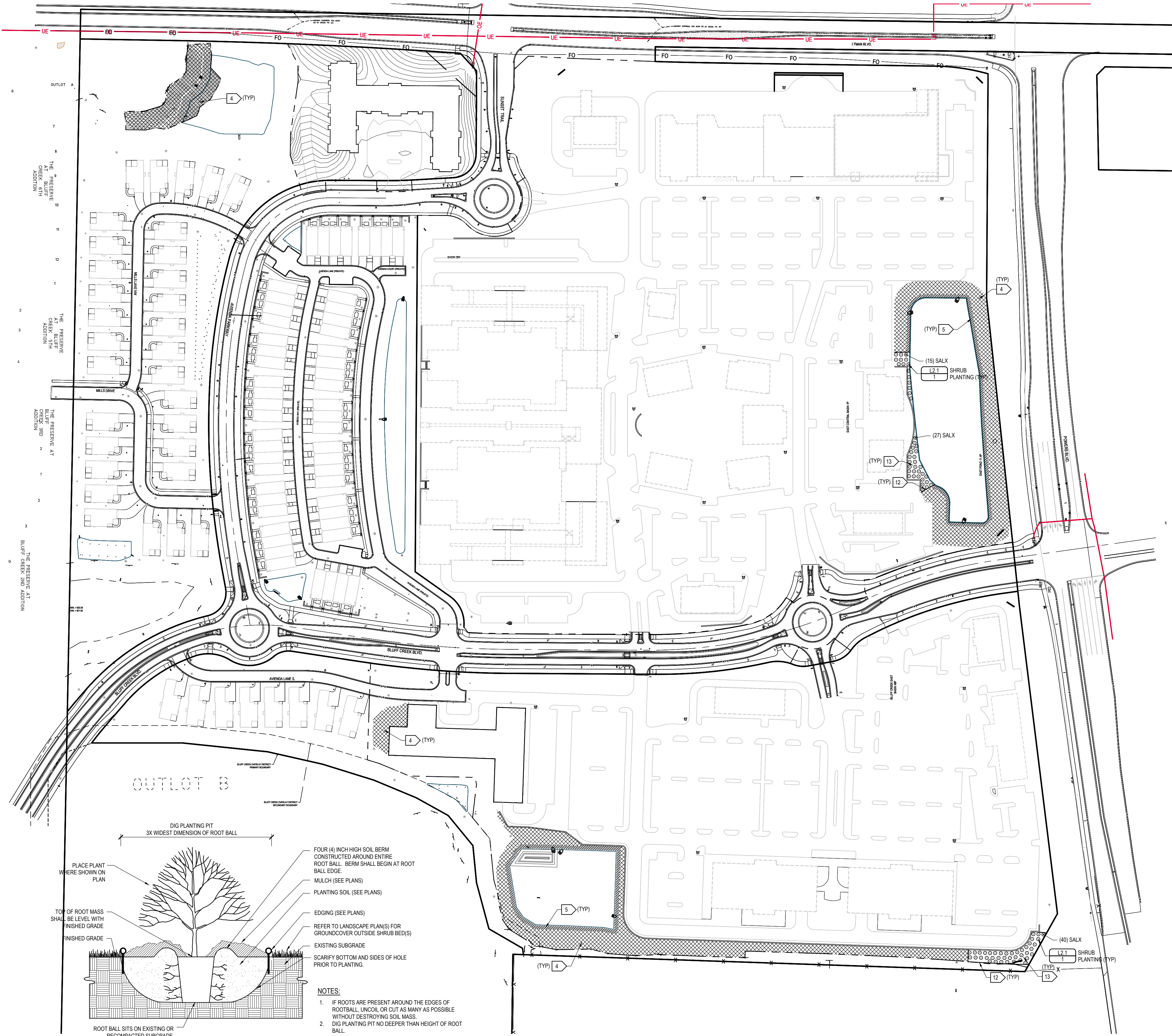
- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.contech.com
- JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
- STRUCTURE SHALL MEET AASHTO H19-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' - 10' AND GROUNDWATER ELEVATION AT OR BELOW THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CARTRIDGES SHALL MEET AASHTO LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
- STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-897, ASTM C-918, AND AASHTO LOAD FACTOR DESIGN METHOD.
- OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.
- THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS RECOMMENDED TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE AT EQUAL OR GREATER SLOPE.
- NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

INSTALLATION NOTES

- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE.
- CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS FROM SHOWN GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT.
- CARTRIDGE INSTALLATION BY CONTECH SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION.

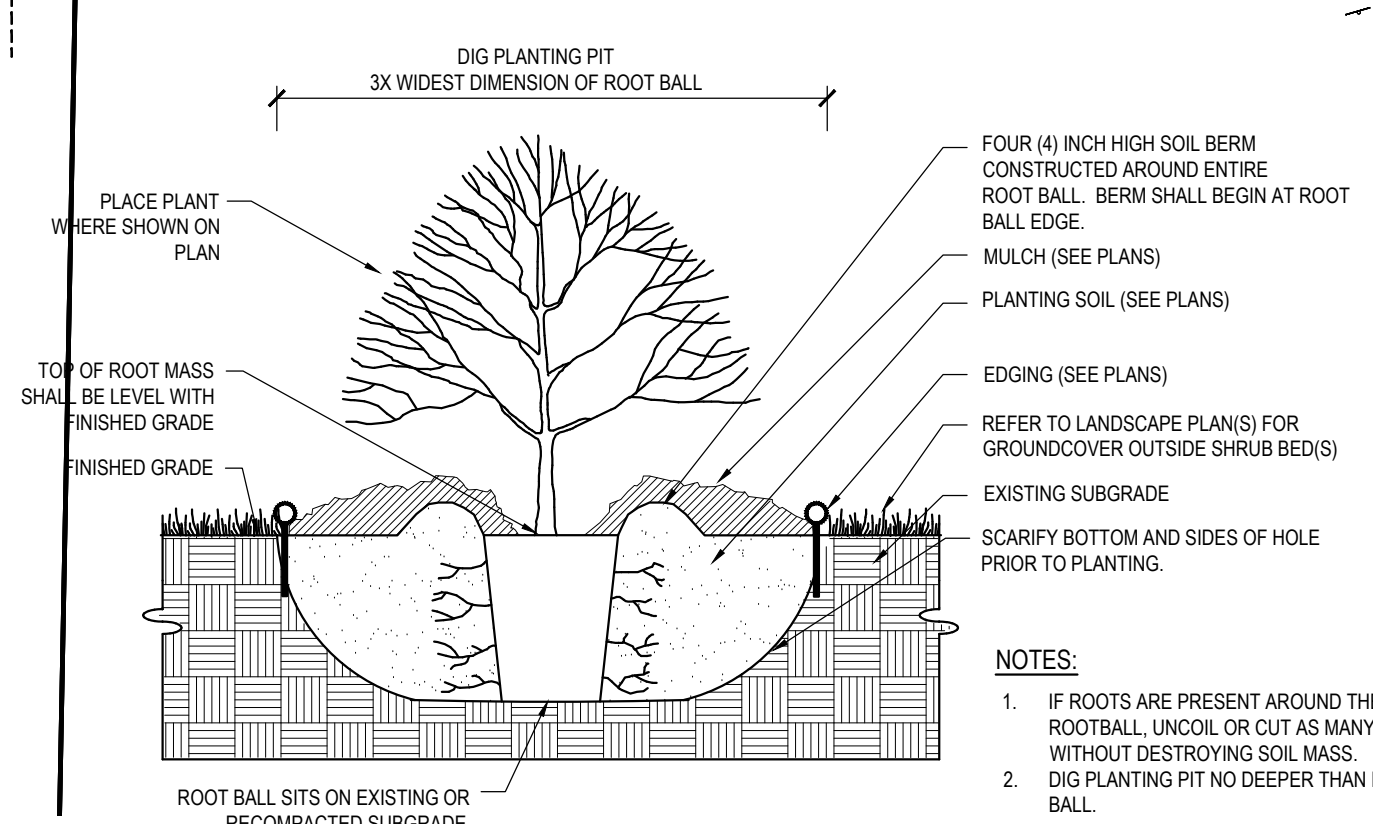
Jellyfish Filter

THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENT NOS. 8,287,726; 8,221,018; 8,154,155; 8,155,536; 8,155,537; 8,155,538; 8,155,539; 8,155,540; 8,155,541; 8,155,542; 8,155,543; 8,155,544; 8,155,545; 8,155,546; 8,155,547; 8,155,548; 8,155,549; 8,155,550; 8,155,551; 8,155,552; 8,155,553; 8,155,554; 8,155,555; 8,155,556; 8,155,557; 8,155,558; 8,155,559; 8,155,560; 8,155,561; 8,155,562; 8,155,563; 8,155,564; 8,155,565; 8,155,566; 8,155,567; 8,155,568; 8,155,569; 8,155,570; 8,155,571; 8,155,572; 8,155,573; 8,155,574; 8,155,575; 8,155,576; 8,155,577; 8,155,578; 8,155,579; 8,155,580; 8,155,581; 8,155,582; 8,155,583; 8,155,584; 8,155,585; 8,155,586; 8,155,587; 8,155,588; 8,155,589; 8,155,590; 8,155,591; 8,155,592; 8,155,593; 8,155,594; 8,155,595; 8,155,596; 8,155,597; 8,155,598; 8,155,599; 8,155,600; 8,155,601; 8,155,602; 8,155,603; 8,155,604; 8,155,605; 8,155,606; 8,155,607; 8,155,608; 8,155,609; 8,155,610; 8,155,611; 8,155,612; 8,155,613; 8,155,614; 8,155,615; 8,155,616; 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- GENERAL NOTES**
- For construction Staking and Surveying services contact Landform at 612.252.9070.
- LANDSCAPE NOTES**
- Contact Utility Service providers for field location of services 72 hours prior to beginning.
 - Coordinate installation with Contractors performing related work.
 - Mesic General Roadside seed mixture (MNDOT 25-141) as defined in the 2023 MNDOT Seeding Manual, or approved equal. Native Seeds shall be of Minnesota (or as specified) origin and certified by the Minnesota Crop Improvement Association (MCIA). Provide verifying documentation to the Owner 30 days minimum prior to installation.
 - Stormwater Edge seed mixture (BWSR 33-261) as defined in current BWSR Seeding Manual, or approved equal. Native Seeds shall be of Minnesota (or as specified) origin and certified by the Minnesota Crop Improvement Association (MCIA). Provide verifying documentation to the Owner 30 days minimum prior to installation.
 - Follow MNDOT Seeding Manual for planting instructions for establishment of native seed and provide coordination for required erosion prevention and sediment control.
 - Repair any and all areas disturbed beyond the project area. Repair with sod if existing area is manicured turf. Repair with seed if existing area is unmowed or unmanicured grass. Rake area to be repaired and add topsoil as defined in Note 7 prior to final sod or seed repair.
 - Planting soil shall consist of 4 parts topsoil to 1 part peat humus, with 3 pounds of commercial fertilizer added per cubic yard. See planting details for depth of planting soil.
 - Place plants according to layout with proper nominal spacing. Plants shown on Plant Schedule are total quantities for design. For discrepancy between the number of plants on the Schedule and the number shown on the Drawing, the Drawing shall govern.
 - Plant material shall conform to the American Association of Nurserymen Standards and be of hardy stock, free from disease, infestation, damage, and disfigurement. The Landscape Architect or designated representative reserves the right to reject any/all plant material not meeting these standards at the Contractor's cost.
 - Any substitutions of plant genus, species and/or variety, or planting size shall be approved by Landscape Architect of record prior to purchase and installation.
 - Edge planting beds with 6-inch Black Vinyl Edging (Black Diamond or approved equal) except where adjacent to curbing, walks or buildings.
 - Install 4 inch depth of triple-shredded hardwood mulch in Shrub Bed Areas.
 - Irrigation is required. Irrigation shall be designed by irrigation contractor. Contractor shall submit design plan and all shop drawings and system components to Landscape Architect for review, prior to purchase and installation. Contractor shall follow all applicable codes and obtain all necessary permits from local jurisdiction.
 - All plant material shall have a 2-year warranty. The warranty shall begin after the last plant has been installed and the Landscape Architect has approved the installation. Landscape contractor shall assume all costs to any replacements. All replacements shall be same species and sizes and equal or better vigor as original installation.
 - Seeding areas shall follow a 2-year establishment plan and maintenance plan as outlined in 2024 MNDOT Seeding Manual.

- LEGEND**
- Mesic General Roadside seed mix (MNDOT 25-141) or approved equal. Seed at rate of 59.0 lbs/acre. With MNDOT Type 30 erosion control blanket.
 - Stormwater Edge seed mix (BWSR 33-261) or approved equal. Seed at rate of 39.23 lbs/acre. With MNDOT Type 30 erosion control blanket.



- NOTES:**
- IF ROOTS ARE PRESENT AROUND THE EDGES OF ROOTBALL, UNCOIL OR CUT AS MANY AS POSSIBLE WITHOUT DESTROYING SOIL MASS.
 - DIG PLANTING PIT NO DEEPER THAN HEIGHT OF ROOT BALL.

SHRUB PLANTING

NO SCALE

DEVELOPER
LEVEL 7 DEVELOPMENT, LLC
 4600 KINGS POINT RD
 MINNETRISTA, MN 55331

MUNICIPALITY

PROJECT
AVIENDA REGIONAL STORMWATER PLAN
CHANHASSEN, MN

ISSUE / REVISION HISTORY

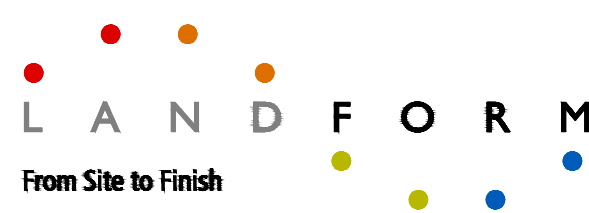
DATE	ISSUE / REVISION	REVIEW
25 SEP 2024	WATERSHED SUBMITTAL	SES
24 OCT 2024	WATERSHED RESUBMITTAL	CNC

CERTIFICATION

*PRELIMINARY
 NOT FOR
 CONSTRUCTION*

IF THE SIGNATURE, SEAL OR FOUR LINES DIRECTLY ABOVE ARE NOT VISIBLE, THIS SHEET HAS BEEN REPRODUCED BEYOND INTENDED READABILITY AND IS NO LONGER A VALID DOCUMENT. PLEASE CONTACT THE ENGINEER TO REQUEST ADDITIONAL DOCUMENTS. THIS PLAN IS INTENDED TO BE PRINTED IN COLOR.

WATERSHED RESUBMITTAL
 OCTOBER 24, 2024



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 Suite 513 Fax: 612-252-9077
 Minneapolis, MN 55401 Web: landform.net

FILE NAME L201SCD005.DWG
 PROJECT NO. SCD14001.005

LANDSCAPE PLAN

L2.1

