RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

18681 Lake Drive East
Chanhassen, MN 55317
952-607-6512
www.rpbcwd.org

Riley Purgatory Bluff Creek Watershed District Permit Application Review

Permit No: 2023-007

Considered at Board of Managers Meeting: May 3, 2023

Received complete: March 20, 2023

Applicant: Southwest Transit Commission, Matt Fyten

Representative: Westwood Professional Services, Gretchen Shroeder

Project: Southwest Village Retail - The applicant proposes the construction of a retail building, associated drive-thru lane, landscaping, underground cistern for irrigation reuse, underground stormwater management facility, and a propriety stormwater device to provide water quality and rate control.

Location: 680 Southwest Village Dr, Chanhassen, Minnesota, 55317

Reviewer: Scott Sobiech, PE & Dallen Webster, E.I.T.; Barr Engineering Co.

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 May 3, 2023 meeting of the managers:

Resolved that the application for Permit 2023-007 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 2023-007 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
C	**Erosion Control Plan**		See comment	See rule-specific permit condition C1 related to name of individual responsible for on-site erosion control.
J	**Stormwater Management**	Rate	Yes	
		Volume	See comment	See stipulation #5 related to measured infiltration capacity of the soils at the bottom of the infiltration system
		Water Quality	Yes	
		Low Floor Elev.	Yes	
		Maintenance	See comment	See rule-specific permit condition J1 related to recordation of stormwater facilities maintenance declaration.

Rule	Issue		Conforms to RBPCWD Rules?	Comments
		Chloride Management	See comment	See stipulation #4 related to providing an executed chloride management plan prior to permit close-out.
		Wetland Protection	NA	
L	**Permit Fee Deposit**		NA	Governmental Entity
M	**Financial Assurance**		NA	Governmental Entity

Background

The proposed development will include the construction of a retail building, associated drive-thru lane, landscaping, underground cistern for irrigation reuse, underground stormwater management facility, and a propriety stormwater device (a Jellyfish filter) to provide water quality and rate control. The project site information is summarized in Table 1.

Table 1. Project site information

Site Information	Project Area
Total Site Area (acres)	2.35
Existing Site Impervious Area (acres)	1.20
Post Construction Site Impervious (acres)	1.69
New (increase) in Site Impervious Area (acres)	0.49
Percent increase in Impervious Surface	40.8%
Disturbed Site Impervious Area (acres)	0.13
Percent Disturbance of Existing Impervious Surface	10.8%
Exempt Site Impervious Area (acres)[1]	0.04
Total Disturbed Area (acres)	1.09

[1] Exempt sidewalk area per Rule J, subsection 2.2.d

Exhibits:

1. Permit application dated February 17, 2023 (Notified applicant on March 6, 2023 that submittal was incomplete, revised materials completing the application received March 20, 2023 and April 7, 2023)
2. Project Plan set (9 pages) dated February 17, 2023 (revised March 20, 2023)
3. Stormwater Report memo dated February 17, 2023 (revised March 20, 2023)
4. Existing and Proposed HydroCAD Models received February 17, 2023 (revised March 20, 2023)
5. Existing and Proposed MIDS Model received February 17, 2023 (revised March 20, 2023 and April 7, 2023)
6. P8 Model results received April 7, 2023
7. Geotechnical borings by American Engineering Testing received March 20, 2023 (dated February 10, 2023)
8. Engineer's Estimate of Probable Costs for Stormwater Management Facilities dated March 20, 2023

9. Response to RPBCWD Comments from Westwood Professional Services received March 20, 2023

Rule Specific Permit Conditions

Rule C: Erosion Prevention and Sediment Control

Because the project will involve the alteration of 1.09 acres of land-surface area, the project must conform to the erosion prevention and sediment control requirements established in Rule C.

The erosion control plan prepared by Westwood Professional Services includes installation of perimeter control (silt fence), a stabilized construction entrance (Mud Mat), inlet protection, daily inspection, staging areas, placement of a minimum of 6 inches of topsoil (at 5% organic matter), decompaction of areas compacted during construction, and retention of native topsoil onsite to the greatest extent possible. To conform to RPBCWD Rule C requirements, the following revisions are needed:

C1. The applicant must provide the name, address and phone number of the individual who will remain responsible for performance under this rule and maintenance of erosion and sediment-control measures from the time the permitted activities commence until vegetative cover is established.

Rule J: Stormwater Management

Because the project will disturb 1.09 acres of land-surface area, the project must meet the criteria of RPBCWD's Stormwater Management rule (Rule J, Subsection 2.1). The criteria listed in Subsection 3.1 will apply to the new and disturbed impervious surface only on the site because the proposed project increases the imperviousness of the entire site by 40.8 percent (less than 50%) and disturbs 10.8 percent (less than 50%) of the existing impervious area (Rule J, Subsection 2.3).

The applicant proposes an underground stormwater management facility and a Jellyfish proprietary filter cartridge system to provide water quality and rate control. Pretreatment for runoff entering the underground stormwater facility is being provided by manholes with sumps.

Rate Control

In order 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 pre- 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 table below. The proposed project conforms to RPBCWD Rule J, Subsection 3.1.a.

Table 2. Existing and Proposed Peak Runoff Rates

Modeled 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
Crossroads Blvd (north)	2.7	2.5	5.1	5.0	9.7	9.2	0.3	0.3

Volume Abstraction

Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from the 0.58 acres of regulated impervious surface of the site. An abstraction volume of 2,316 cubic feet is required from the regulated site impervious area on the project for volume retention. The Applicant proposes an underground stormwater management facility with elevated driantile to promote infiltration and reuse system to provide volume abstraction. Plans indicate pretreatment for runoff entering the underground system is provided by sump manholes, thus the proposed project conforms with RPBCWD Rule J, Subsection 3.1b.1.

The two soil borings (B-1 and B-4) that were performed by American Engineering Testing, Inc. adjacent to the proposed underground stormwater management System show that soils in the project area are primarily sandy lean clays. Groundwater was not observed at the soil borings adjacent to the footprint area of the proposed underground stormwater management System (B-1 and B-4). The subsurface investigation information is summarized in the following table and shows that groundwater is at least 3 feet below the bottom of the proposed Underground Stormwater Management System (Rule J, Subsection 3.1.b.2.a).

Table 3. Groundwater Separation Analysis

Proposed BMP	Nearest Subsurface Investigation	Boring is within footprint?	Groundwater Elevation (feet)	BMP Bottom Elevation (feet)	Separation (feet)
Underground Stormwater Management System	B-1	No	No groundwater observed at boring bottom (approx. el 910.5)	920.0	9.5
Underground Stormwater Management System	B-4	No	No groundwater observed at boring bottom (approx. el 907.5)	920.0	12.5

Because the engineer concurs with the applicant's assertion that the soil boring information supports that the abstraction standard in Subsection 3.1 of Rule J cannot practicably be met, thus the site is considered a restricted site and stormwater runoff volume must be managed in accordance with Subsection 3.3 of Rule J. For restricted sites, Subsection 3.3 of Rule J requires rate control in accordance with Subsection 3.1a 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.

The application materials submitted by applicant show an abstraction of at least 0.55 inches of runoff from site impervious surface in accordance Subsection 3.3a of Rule J using an underground cistern for irrigation reuse and underground stormwater management facility to provide 922 cubic feet and 320 cubic feet of abstraction volume, respectfully. The designed abstraction performance for the project site is summarized in the table below.

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Depth (inches)	Provided Abstraction Volume (cubic feet)
0.55	1,158	0.59	1,242

The engineer concurs with the applicant's design infiltration rates of 0.06 inches per hour for sandy lean clays based on the guidelines provided in the MN Stormwater Manual. Based on the design infiltration rate, the engineer concurs that the basins will draw down within 48 hours (Rule J, subsection 3.1b.3). Because of the winter conditions and frozen soils, subsurface investigation and infiltration testing was not performed at that BMP location and the geotechnical report does not contain infiltration or hydraulic conductivity testing results at the underground stormwater management facility as required by Rule J, subsection 3.1.b.ii.C. To confirm the design presumptions and ensure the applicant has incorporated abstraction in accordance with Rule J, subsection 3.3a, supporting information in the form of infiltration or hydraulic conductivity testing at the proposed rain gardens must be provided before the proposed BMPs are constructed. If infiltration capacity is less than needed to conform with the volume abstraction requirement in subsection 3.3a for the proposed rain gardens or there is less than three feet of separation to groundwater, design modifications to achieve compliance with RPBCWD requirements to maximize the abstraction will need to be submitted (in the form of an application for a permit modification or new permit). With the conditions noted above, the engineer concurs with the submitted information and finds that the proposed project will conform with Rule J, Subsection 3.3.a.

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. The applicant proposes to use an underground stormwater management facility, underground cistern for irrigation reuse, and Jellyfish filter manufactured treatment device to achieve the required TP and TSS removals and sump manholes for pretreatment. MIDS and P8 water quality models were used to estimate the TP and TSS removal capacity of the proposed BMPs. Model

results are summarized in the table below. The engineer concurs with the modeling and finds that the proposed project is in conformance with Rule J, Subsection 3.1.c.

Annual TSS and TP removal summary:

Pollutant of Interest	Regulated Site Loading (lbs/yr)	Required Load Removal (lbs/yr)	Provided Load Reduction (lbs/yr)
Total Suspended Solids (TSS)	233	210 (90%)	212 (91.0%)
Total Phosphorus (TP)	1.26	0.76 (60%)	0.86 (68.3%)

Summary of net change in TSS and TP leaving the site

Pollutant of Interest	Existing Site Loading (lbs/yr)	Proposed Site Load after Treatment (lbs/yr)	Change (lbs/yr)
Total Suspended Solids (TSS)	185	79	-106
Total Phosphorus (TP)	1.02	0.74	-0.28

Low floor Elevation

All new buildings must be constructed such that the lowest floor is at least two feet above the 100-year high-water elevation or one foot above the emergency overflow of a stormwater-management facility according to Rule J, Subsection 3.6a. In addition, a stormwater-management facility must be constructed at an elevation that ensures that no adjacent habitable building will be brought into noncompliance with this requirement, according to Rule J, Subsection 3.6b. The low-floor elevation of the proposed building and the 100-year event flood elevation in the proposed underground system is summarized below. The RPBCWD Engineer concurs that the proposed project is in conformance with Rule J, Subsection 3.6.

Location	Low Floor Elevation of Building (feet)	100-year Event Flood Elevation (feet)	Freeboard (feet)
Underground Stormwater-Management Facility	925.20	922.19	3.01

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.

J1. Permit applicant must submit a draft maintenance and inspection agreement to incorporate the facilities proposed under this application, including the appropriate permit number, pre-treatment facilities, reuse systems, irrigation area, and the subsurface stormwater management system. The draft agreement must be reviewed and approved by RPBCWD prior to execution as a condition.

Chloride Management

Subsection 3.8 of Rule J requires the submission of 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. To close out the permit, the permit applicant must provide a 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.

Wetland Protection

Because runoff from this site is directly tributary to a downstream stormwater pond, the proposed project does not trigger analysis under Rule J, subsection 3.10.

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 does not relieve the permittee of any responsibility to obtain approval of any other regulatory body with authority.
5. The issuance of this permit does not convey any rights to either real or personal property, or any exclusive privileges, nor does 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 issue this permit 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 application includes the information necessary, plan sheets and erosion control plan for review.
2. The proposed project will conform to Rules C, and J if the Rule Specific Permit Conditions listed below are met.

Recommendation:

Approval of the permit contingent upon:

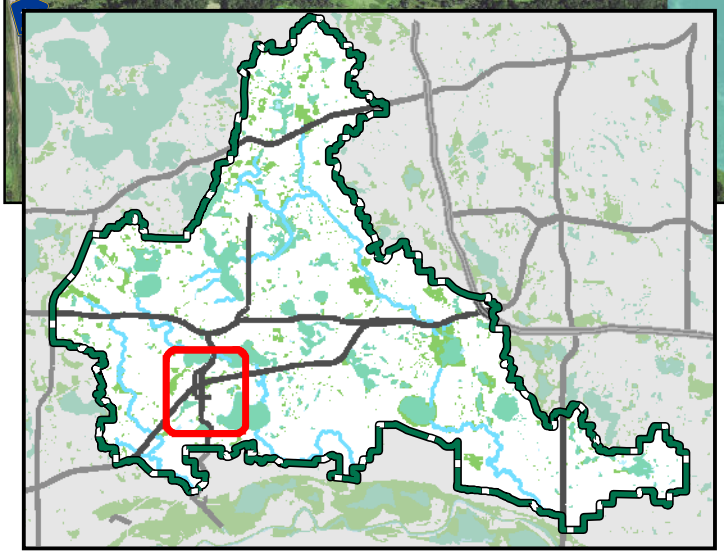
1. Permit applicant must provide the name and contact information of the general contractor responsible for the site. RPBCWD must be notified if the responsible party changes during the permit term.

2. Permit applicant must submit a draft maintenance and inspection agreement to incorporate the facilities proposed under this application, including the appropriate permit number, pre-treatment facilities, reuse system, underground stormwater management facility, and propriety stormwater device. The agreement must also include 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. The draft agreement must be reviewed and approved by RPBCWD prior to execution as a condition of issuance of the permit.

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

1. Continued compliance with General Requirements.
2. Per Rule J Subsection 5.6, upon completion of the site work, the permittee must submit as-built drawings demonstrating that at the time of final stabilization, the stormwater facilities conform to design specifications and function 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. Providing the following additional close-out materials:
    a) Documentation that constructed filtration facilities perform as designed. This may include filtration testing, flood testing, or other with prior approval from RPBCWD
    b) Documentation that disturbed pervious areas remaining pervious have been decompacted per Rule C.2c criteria
4. To close out the permit, the permit applicant must provide a 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.

5. Per Rule J, Subsection 3.1.b.ii measured infiltration capacity of the soils at the bottom of the underground stormwater management system must be provided. The applicant must submit documentation verifying the infiltration capacity of the soils and that the volume control capacity is calculated using the measured infiltration rate. If infiltration capacity is less than needed to conform with the volume abstraction requirement in subsection 3.1b, design modifications to achieve compliance with RPBCWD requirements will need to be submitted (in the form of an application for a permit modification or new permit).



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Feet

0 1,000

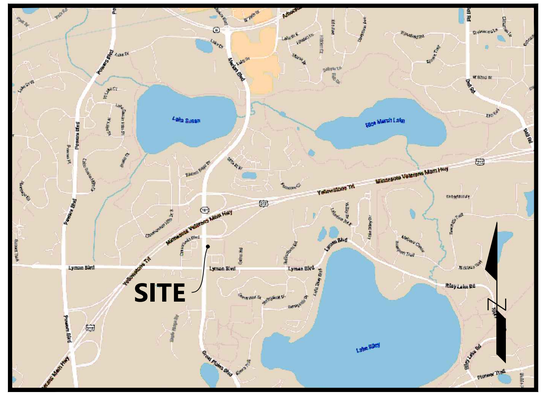
Permit Location Map

SOUTHWEST VILLAGE RETAIL

Permit 2023-007

Riley Purgatory Bluff Creek Watershed District

PRELIMINARY SITE DEVELOPMENT PLANS



Vicinity Map
(NOT TO SCALE)

FOR

SOUTHWEST VILLAGE
CHANHASSEN, MN

PREPARED FOR:

SOUTHWEST TRANSIT
14405 W 62ND ST
EDEN PRAIRIE, MN 55346
CONTACT: LEN SIMICH
PHONE: 952-486-1898
EMAIL: LSIMICH@SWTRANSIT.ORG

PREPARED BY:

Westwood

Phone (952) 937-5150
Fax (952) 937-5822
Toll Free (888) 937-5150
12701 Whitewater Drive, Suite #300
Minnetonka, MN 55343
westwoodps.com

Westwood Professional Services, Inc.

PROJECT NUMBER: 0041990.00
CONTACT: GRETCHEN A. SCHROEDER

SHEET INDEX

NO.	DATE	REVISION	SHEETS
1	03/20/2023	WATERSHED COMMENTS	C2.0, C3.0, C5.0
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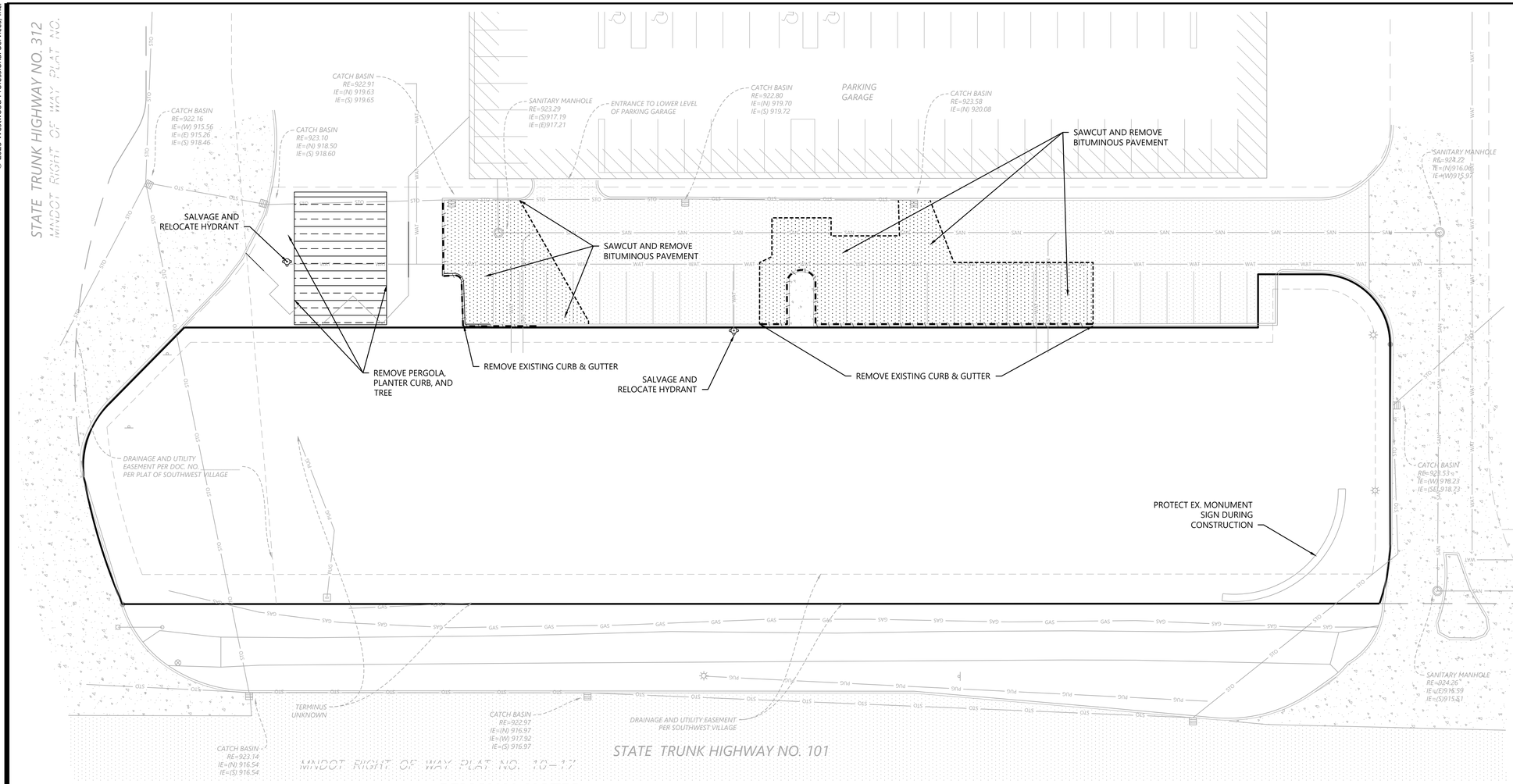
PRELIMINARY SITE DEVELOPMENT PLANS
FOR
SOUTHWEST VILLAGE
CHANHASSEN, MN

INITIAL SUBMITTAL DATE: 02/17/2023 SHEET: C0.1



Call 48 Hours before digging:

811 or call811.com

Common Ground Alliance

REMOVAL LEGEND

EXISTING	PROPOSED	
		PROPERTY LINE
		SAW CUT PAVEMENT
EXISTING	**REMOVALS**	
		CURB & GUTTER
SAN		SANITARY SEWER
WAT		WATER MAIN
WAT		HYDRANT
STO		STORM SEWER
GAS		GAS
PUG		UNDERGROUND ELECTRIC
POH		OVERHEAD ELECTRIC
TUG		UNDERGROUND TELEPHONE
TOH		OVERHEAD TELEPHONE
FO		TELEPHONE FIBER OPTIC
CTV		CABLE TELEVISION
		RETAINING WALL
X		FENCE
		CONCRETE
		BITUMINOUS
		BUILDING
		TREE
		LIGHT POLE
		TRAFFIC SIGN
SB-19		CONSTRUCTION BARRICADE
		SOIL BORING LOCATION
		TREE LINE

REMOVAL NOTES

1. LOCATIONS AND ELEVATIONS OF EXISTING TOPOGRAPHY AND UTILITIES AS SHOWN ON THIS PLAN ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY SITE CONDITIONS AND UTILITY LOCATIONS PRIOR TO EXCAVATION/CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND.
2. CONTRACTOR SHALL COORDINATE LIMITS OF REMOVALS WITH PROPOSED IMPROVEMENTS AND FIELD VERIFY CONDITION OF EXISTING APPURTENANCES TO REMAIN. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING OR REPLACING MISCELLANEOUS ITEMS (SUCH AS FENCES, SIGNS, IRRIGATION HEADS, ETC.) THAT MAY BE DAMAGED BY CONSTRUCTION.
3. CONTRACTOR SHALL PLACE ALL NECESSARY EROSION CONTROL MEASURES REQUIRED TO MAINTAIN SITE STABILITY PRIOR TO EXECUTING ANY SITE REMOVALS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH UTILITY PROVIDERS FOR REMOVAL AND/OR RELOCATION OF EXISTING UTILITIES AFFECTED BY SITE DEVELOPMENT. ALL PERMITS, APPLICATIONS AND FEES ARE THE RESPONSIBILITY OF THE CONTRACTOR.

LEGEND

SANITARY MANHOLE	BOUNDARY LINE
STORM MANHOLE	RIGHT-OF-WAY LINE
CATCH BASIN	LOT LINE
HYDRANT	EASEMENT LINE
GATE VALVE	SECTION LINE
ELECTRIC BOX	GAS LINE
ELECTRIC METER	POWER UNDERGROUND
STREET LIGHT	SANITARY SEWER
MAST ARM W/ LIGHT	STORM SEWER
STEEL/WOOD POST	WATERMAIN
SIGN	CURB & GUTTER
HANDICAPPED STALL	CONCRETE SURFACE
SOIL BORING	BITUMINOUS SURFACE
BUSH/SHRUB	FOUND MONUMENT (SEE LABEL)
CONIFEROUS TREE	SET MONUMENT (SEE LABEL)
DECIDUOUS TREE	

1" = 20'

0' 20' 40' 60'

NOT FOR CONSTRUCTION

DESIGNED:
CHECKED:
DRAWN:
HORIZONTAL SCALE: 20'
VERTICAL SCALE: 4' or 2'

INITIAL ISSUE: 02/17/2023
REVISIONS:
1 03/20/2023 WATERSHED COMMENTS
2
3
4
5

PREPARED FOR:
SOUTHWEST TRANSIT
14405 W 62ND ST
EDEN PRAIRIE, MN 55346

I HEREBY CERTIFY THAT THIS PLAN 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

GRETCHEN A. SCHROEDER
03/20/2023 LICENSE NO. 43019

SOUTHWEST VILLAGE
CHANHASSEN, MN

Westwood
Phone (952) 937-5150
Fax (952) 937-5822
Toll Free (888) 937-5150
1270 Whitewater Drive, Suite #300
Minnetonka, MN 55343
Westwoodps.com
Westwood Professional Services, Inc.

EXISTING CONDITIONS & REMOVALS PLAN

SHEET NUMBER:
C1.0

DATE: 03/20/2023

PROJECT NUMBER: 0041990.00

SOUTHWEST VILLAGE

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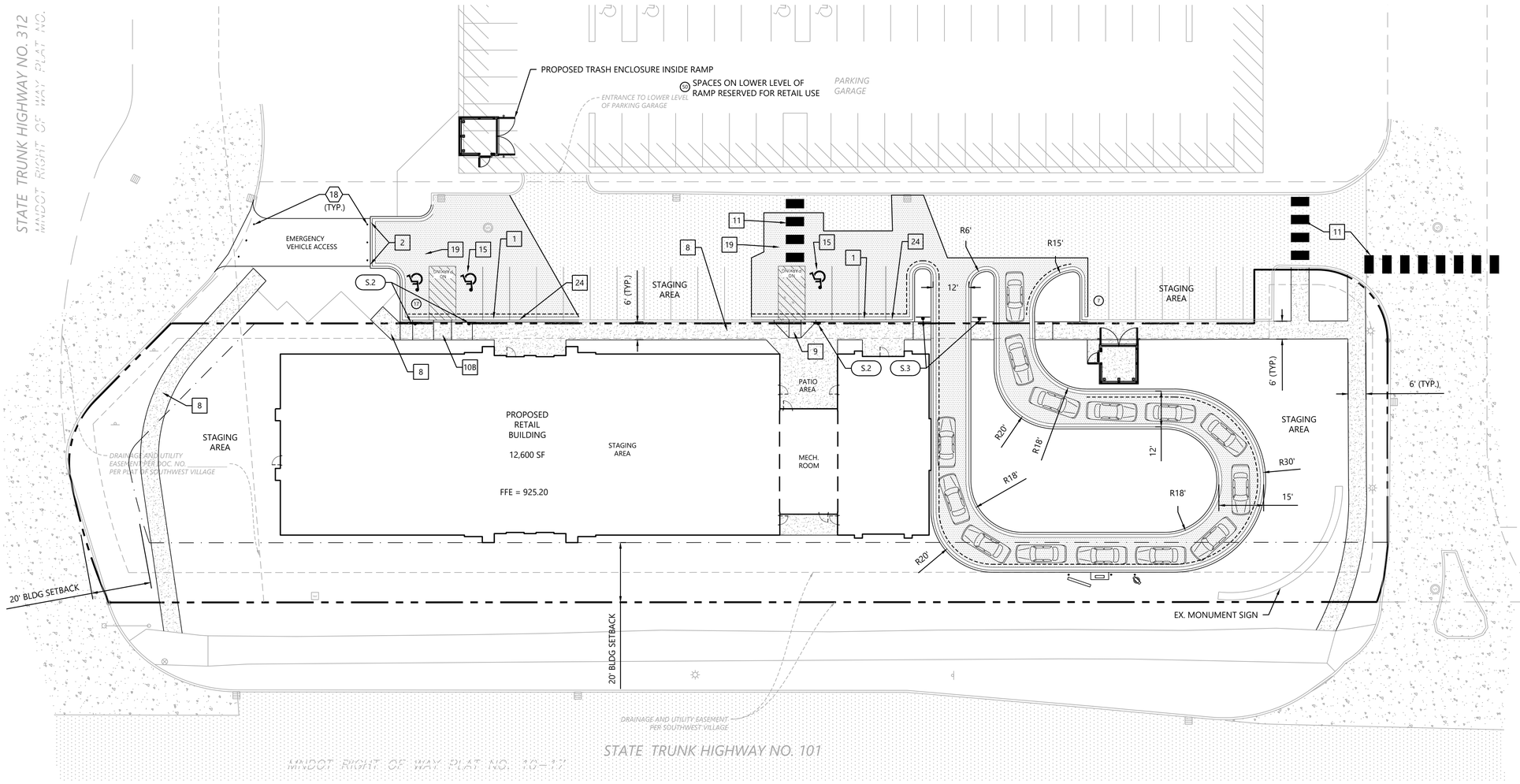

Call 48 Hours before digging:
811 or call811.com
Common Ground Alliance

SITE LEGEND

EXISTING	PROPOSED	
		PROPERTY LINE
		LOT LINE
		SETBACK LINE
		EASEMENT LINE
		CURB AND GUTTER
		TIP-OUT CURB AND GUTTER
		POND NORMAL WATER LEVEL
		RETAINING WALL
x	x	FENCE
		CONCRETE PAVEMENT
		CONCRETE SIDEWALK
		HEAVY DUTY BITUMINOUS PAVEMENT
		NORMAL DUTY BITUMINOUS PAVEMENT
		NUMBER OF PARKING STALLS
	T	TRANSFORMER
		SITE LIGHTING
		TRAFFIC SIGN
	T	POWER POLE
		BOLLARD / POST

SITE DEVELOPMENT SUMMARY

• ZONING:	SOUTHWEST VILLAGE PUD
• PARCEL DESCRIPTION:	LOT 2 , BLOCK 1, SOUTHWEST VILLAGE
• PROPERTY AREA:	41,053 SF (0.94 AC)
• EXISTING IMPERVIOUS SURFACE:	0 SF (0%)
• PROPOSED IMPERVIOUS SURFACE:	21,212 SF (51.7%)
• BUILDING GROSS SIZE:	12,600 SF
• BUILDING SETBACK PER CODE:	20'=TO ROW
• BUILDING SITE COVERAGE	30.7%
• BUILDING HEIGHT	21'-6" MAIN PARAPET (1 STORY) 24' & 27' AT ENTRY/ACCENT PARAPETS
• PARKING RATIO REQUIREMENT RETAIL	SOUTHWEST VILLAGE PUD 1 SPACE / 200 SF OF BLDG
TOTAL SPACES REQUIRED:	64 SPACES
• PARKING PROVIDED:	74 SPACES (INCLUDING 3 ADA SPACES)
• DRIVE THRU STACKING REQUIRED PROVIDED	 13 VEHICLES 14 VEHICLES

S.10 SIGN LEGEND

REFERENCE		SIZE	MnDOT DESIGNATION
S.2	HANDICAP ACCESSIBLE	12" X 18"	R7-8M
S.3	DO NOT ENTER	30" X 30"	R5-1

GENERAL SITE NOTES

1. BACKGROUND INFORMATION FOR THIS PROJECT PROVIDED BY WESTWOOD PROFESSIONAL SERVICES, 1/9/23.
2. LOCATIONS AND ELEVATIONS OF EXISTING TOPOGRAPHY AND UTILITIES AS SHOWN ON THIS PLAN ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY SITE CONDITIONS AND UTILITY LOCATIONS PRIOR TO EXCAVATION/CONSTRUCTION. IF ANY DISCREPANCIES ARE FOUND, THE ENGINEER SHOULD BE NOTIFIED IMMEDIATELY.
3. REFER TO BOUNDARY SURVEY FOR LOT BEARINGS, DIMENSIONS AND AREAS.
4. ALL DIMENSIONS ARE TO FACE OF CURB OR EXTERIOR FACE OF BUILDING UNLESS OTHERWISE NOTED.
5. REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS AND LOCATIONS OF EXITS, RAMPS, AND TRUCK DOCKS.
6. ALL CURB RADII ARE SHALL BE 3.0 FEET (TO FACE OF CURB) UNLESS OTHERWISE NOTED.
7. ALL CURB AND GUTTER SHALL BE B612 UNLESS OTHERWISE NOTED.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING TRAFFIC CONTROL DEVICES SUCH AS BARRICADES, WARNING SIGNS, DIRECTIONAL SIGNS, FLAGGERS AND LIGHTS TO CONTROL THE MOVEMENT OF TRAFFIC WHERE NECESSARY. PLACEMENT OF THESE DEVICES SHALL BE APPROVED BY THE CITY AND ENGINEER PRIOR TO PLACEMENT. TRAFFIC CONTROL DEVICES SHALL CONFORM TO APPROPRIATE MNDOT STANDARDS.
9. BITUMINOUS PAVEMENT AND CONCRETE SECTIONS TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
10. CONTRACTOR SHALL MAINTAIN FULL ACCESS TO ADJACENT PROPERTIES DURING CONSTRUCTION AND TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES.
11. SITE LIGHTING SHOWN ON PLAN IS FOR REFERENCE ONLY. REFER TO LIGHTING PLAN PREPARED BY OTHERS FOR SITE LIGHTING DETAILS AND PHOTOMETRICS.

1 SITE DETAILS (SI-0XX)

1	B612 CURB AND GUTTER
2	FLSUH CURB AND GUTTER
8	PRIVATE CONCRETE SIDEWALK
9	PRIVATE PEDESTRIAN CURB RAMP
10B	PRIVATE PARALLEL PEDESTRIAN CURB RAMP
11	CROSS WALK STRIPING
15	HANDICAP ACCESSIBLE SIGNAGE AND STRIPING
18	BOLLARD
19	PAVEMENT SECTIONS
24	CONCRETE CURB AT SIDEWALK

1" = 20'

0' 20' 40' 60'

NOT FOR CONSTRUCTION

DESIGNED:
CHECKED:
DRAWN:
HORIZONTAL SCALE: 20'
VERTICAL SCALE: 4' or 2'

INITIAL ISSUE: 02/17/2023
REVISIONS:
1. 03/20/2023 WATERSHED COMMENTS
2.
3.
4.
5.

PREPARED FOR:
SOUTHWEST TRANSIT
14405 W 62ND ST
EDEN PRAIRIE, MN 55346

I HEREBY CERTIFY THAT THIS PLAN 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
GRETCHEN A. SCHROEDER
03/20/2023 LICENSE NO. 43019

SOUTHWEST VILLAGE
CHANHASSEN, MN

Westwood
Phone (952) 937-5150
Fax (952) 937-5822
Toll Free (888) 937-5150
12701 Whitewater Drive, Suite #300
Minnetonka, MN 55343
Westwoodps.com
Westwood Professional Services, Inc.

SITE PLAN

SHEET NUMBER:
C2.0

DATE: 03/20/2023
PROJECT NUMBER: 0041990.00

SOUTHWEST VILLAGE

N:\0041990.00\DWG\CIVIL\0041990SP01.DWG

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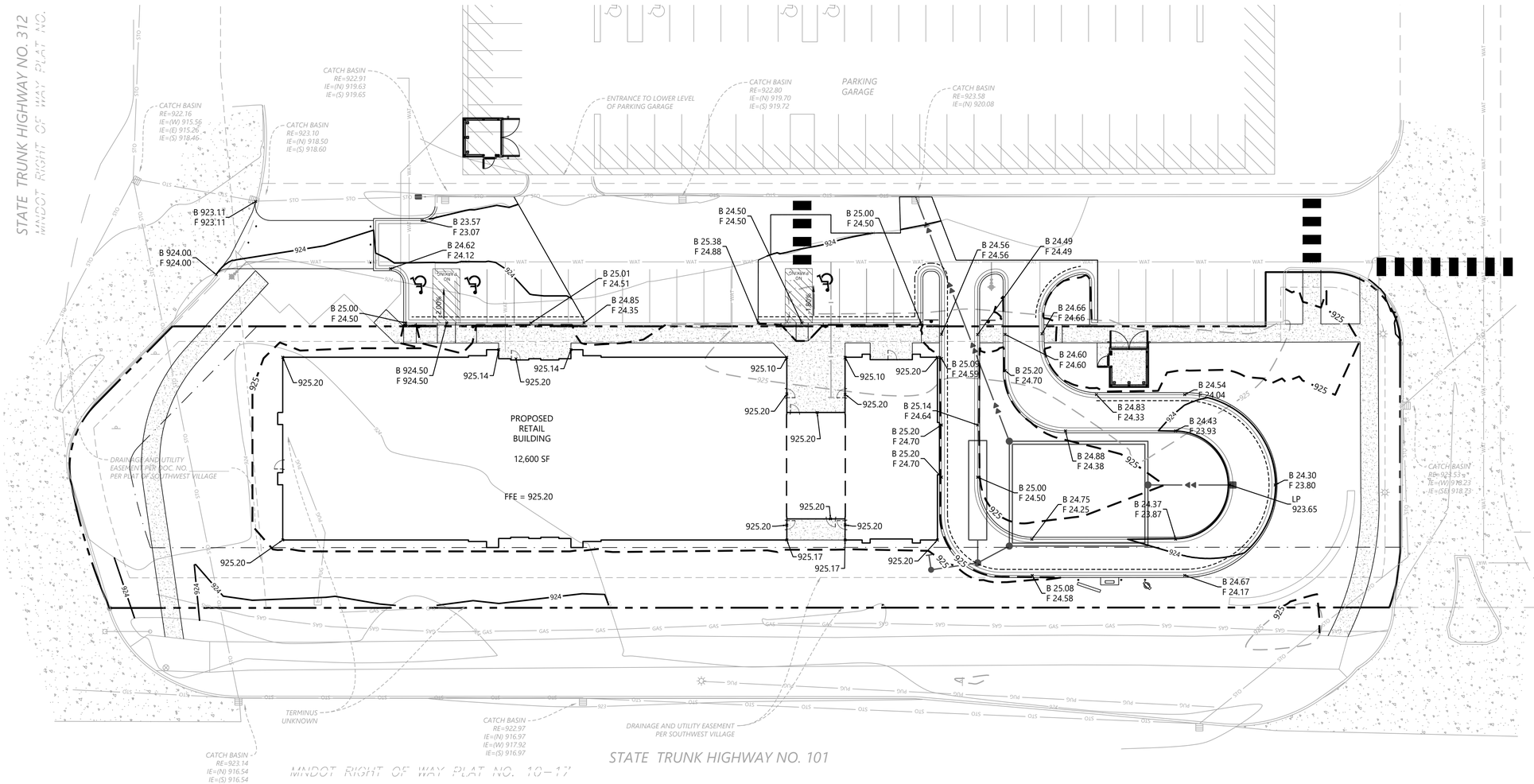

GRADING LEGEND

EXISTING	PROPOSED	
		PROPERTY LINE
980	980	INDEX CONTOUR
982	982	INTERVAL CONTOUR
		CURB AND GUTTER
		POND NORMAL WATER LEVEL
STO		STORM SEWER
		FLARED END SECTION (WITH RIPRAP)
WAT		WATER MAIN
SAN		SANITARY SEWER
		RETAINING WALL
		DRAIN TILE
		RIDGE LINE
	GL	GRADING LIMITS
× 900.00	× 900.00	SPOT ELEVATION
	0.00%	FLOW DIRECTION
	TW=XXX.XX BW=XXX.XX	TOP AND BOTTOM OF RETAINING WALL
	E.O.F.	EMERGENCY OVERFLOW
SB-19	SB-19	SOIL BORING LOCATION

GRADING NOTES

1. LOCATIONS AND ELEVATIONS OF EXISTING TOPOGRAPHY AND UTILITIES AS SHOWN ON THIS PLAN ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY SITE CONDITIONS AND UTILITY LOCATIONS PRIOR TO EXCAVATION/CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND.
2. CONTRACTORS SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULE, SLOPED PAVEMENT, EXIT PORCHES, RAMPS, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS, EXACT BUILDING UTILITY ENTRANCE LOCATIONS, AND EXACT LOCATIONS AND NUMBER OF DOWNSPOUTS.
3. ALL EXCAVATION SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF "STANDARD SPECIFICATIONS FOR TRENCH EXCAVATION AND BACKFILL/SURFACE RESTORATION" AS PREPARED BY THE CITY ENGINEERS ASSOCIATION OF MINNESOTA.
4. ALL DISTURBED UNPAVED AREAS ARE TO RECEIVE SIX INCHES OF TOPSOIL AND SOD OR SEED. THESE AREAS SHALL BE WATERED UNTIL A HEALTHY STAND OF GRASS IS OBTAINED. SEE LANDSCAPE PLAN FOR PLANTING AND TURF ESTABLISHMENT.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING TRAFFIC CONTROL DEVICES SUCH AS BARRICADES, WARNING SIGNS, DIRECTIONAL SIGNS, FLAGMEN AND LIGHTS TO CONTROL THE MOVEMENT OF TRAFFIC WHERE NECESSARY. PLACEMENT OF THESE DEVICES SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT. TRAFFIC CONTROL DEVICES SHALL CONFORM TO APPROPRIATE MNDOT STANDARDS.
6. ALL SLOPES SHALL BE GRADED TO 3:1 OR FLATTER, UNLESS OTHERWISE INDICATED ON THIS SHEET.
7. CONTRACTOR SHALL UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING AND PROVIDE A SMOOTH FINISHED SURFACE WITH UNIFORM SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE SHOWN OR BETWEEN SUCH POINTS AND EXISTING GRADES.
8. **SPOT ELEVATIONS SHOWN INDICATE FINISHED PAVEMENT ELEVATIONS & GUTTER FLOW LINE UNLESS OTHERWISE NOTED. PROPOSED CONTOURS ARE TO FINISHED SURFACE GRADE.**
9. SEE SOILS REPORT FOR PAVEMENT THICKNESSES AND HOLD DOWNS.
10. CONTRACTOR SHALL DISPOSE OF ANY EXCESS SOIL MATERIAL THAT EXISTS AFTER THE SITE GRADING AND UTILITY CONSTRUCTION IS COMPLETED. THE CONTRACTOR SHALL DISPOSE OF ALL EXCESS SOIL MATERIAL IN A MANNER ACCEPTABLE TO THE OWNER AND THE REGULATING AGENCIES.
11. CONTRACTOR SHALL PROVIDE A STRUCTURAL RETAINING WALL DESIGN CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER.
12. ALL CONSTRUCTION SHALL CONFORM TO LOCAL, STATE AND FEDERAL RULES INCLUDING THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS.
13. PRIOR TO PLACEMENT OF ANY STRUCTURE OR PAVEMENT, A PROOF ROLL, AT MINIMUM, WILL BE REQUIRED ON THE SUBGRADE. PROOF ROLLING SHALL BE ACCOMPLISHED BY MAKING MINIMUM OF 2 COMPLETE PASSES WITH FULLY-LOADED TANDEM-AXLE DUMP TRUCK, OR APPROVED EQUAL, IN EACH OF 2 PERPENDICULAR DIRECTIONS WHILE UNDER SUPERVISION AND DIRECTION OF THE INDEPENDENT TESTING LABORATORY. AREAS OF FAILURE SHALL BE EXCAVATED AND RE-COMPACTED AS SPECIFIED HEREIN.
14. EMBANKMENT MATERIAL PLACED BENEATH BUILDINGS AND STREET OR PARKING AREAS SHALL BE COMPACTED IN ACCORDANCE WITH THE SPECIFIED DENSITY METHOD AS OUTLINED IN MNDOT 2105.3F1 AND THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER.
15. EMBANKMENT MATERIAL NOT PLACED IN THE BUILDING PAD, STREETS OR PARKING AREA, SHALL BE COMPACTED IN ACCORDANCE WITH REQUIREMENTS OF THE ORDINARY COMPACTION METHOD AS OUTLINED IN MNDOT 2105.3F2.
16. ALL SOILS AND MATERIALS TESTING SHALL BE COMPLETED BY AN INDEPENDENT GEOTECHNICAL ENGINEER. EXCAVATION FOR THE PURPOSE OF REMOVING UNSTABLE OR UNSUITABLE SOILS SHALL BE COMPLETED AS REQUIRED BY THE GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOILS TESTS AND INSPECTIONS WITH THE GEOTECHNICAL ENGINEER.
18. STAKING OFF AND MARKING OF PROPOSED INFILTRATION FACILITIES TO PREVENT SOIL COMPACTION BY HEAVY EQUIPMENT, STOCKPILING OF MATERIALS, AND TRAFFIC. IF INFILTRATION FACILITIES ARE IN PLACE DURING CONSTRUCTION ACTIVITIES, BEST PRACTICES MUST BE DEPLOYED TO PREVENT SEDIMENT AND OTHER MATERIAL FROM ENTERING THE PRACTICE(S). INFILTRATION FACILITIES MUST NOT BE EXCAVATED TO WITHIN 3 FEET FINAL GRADE UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN CONSTRUCTED AND FULLY STABILIZED. ANY ACCUMULATED SEDIMENT IN AN INFILTRATION FACILITY MUST BE REMOVED IN MANNER THAT PREVENTS COMPACTION OF THE FACILITY BOTTOM. TO PROVIDE A WELL-AERATED, HIGHLY POROUS SURFACE, THE SOILS BELOW AN INFILTRATION PRACTICE MUST BE LOOSENED TO A MINIMUM DEPTH OF 18 INCHES PRIOR TO INSTALLATION OR PLANTING.
19. CONSTRUCTION SHOULD INCLUDE MINIMIZATION OF THE DISTURBANCE INTENSITY AND DURATION, INCLUDING PHASING OF DISTURBANCE TO MINIMIZE QUANTITY OF DISTURBED AREA AT ANY ONE TIME.
20. SOIL SURFACES COMPACTED DURING CONSTRUCTION AND REMAINING PERVIOUS UPON COMPLETION OF CONSTRUCTION MUST BE DECOMPACTED TO ACHIEVE:
    - A SOIL COMPACTION TESTING PRESSURE OF LESS THAN 1,400 KILOPASCALS OR 200 POUNDS PER SQUARE INCH IN THE UPPER 12 INCHES OF SOIL, OR
    - 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.

1" = 20'
0' 20' 40' 60'

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GRADING PLAN

SHEET NUMBER:
C3.0
DATE: 03/20/2023

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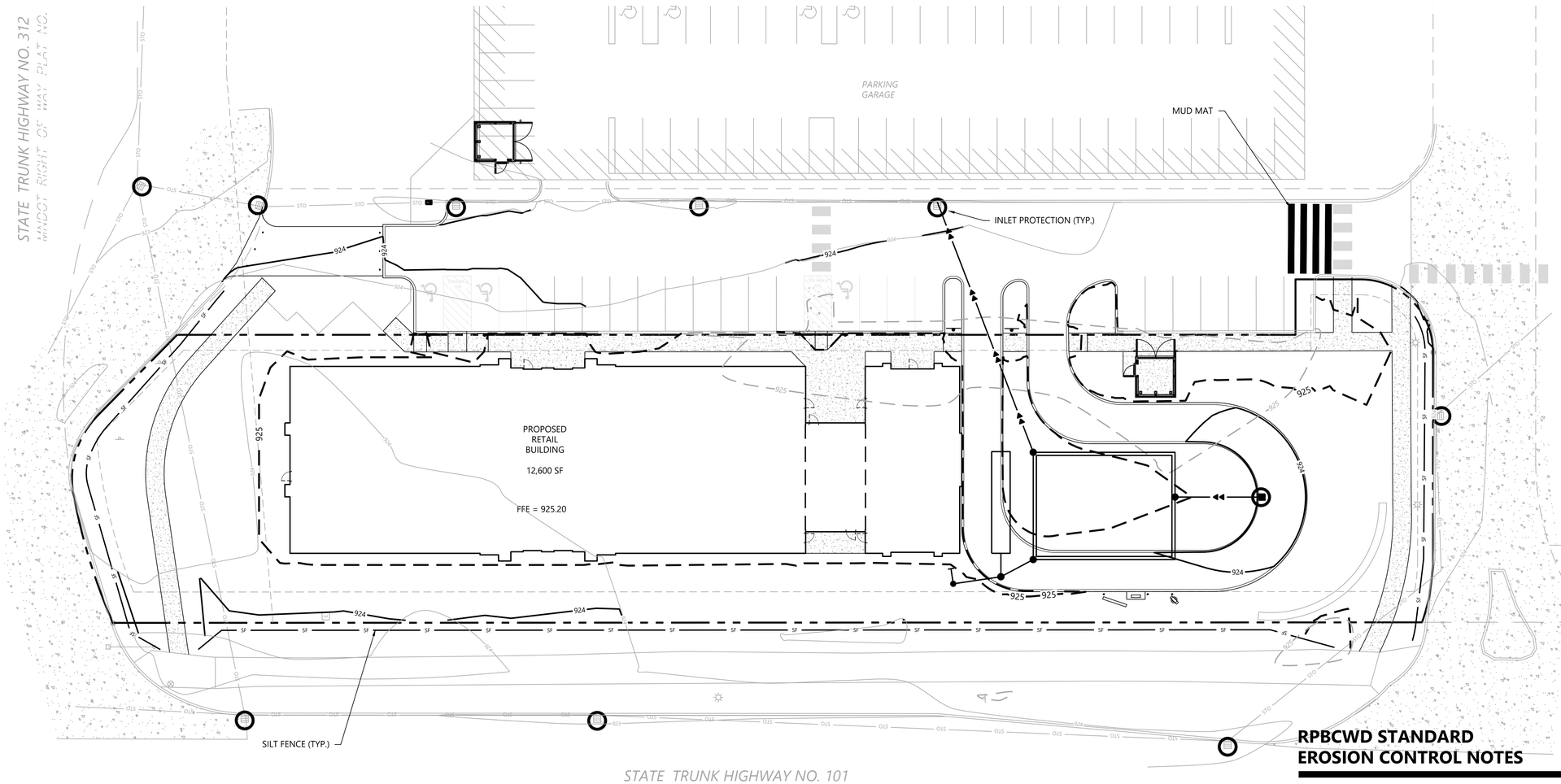
N:\0041990.00\DWG\CIVIL\0041990GD01.DWG

SOUTHWEST VILLAGE



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Common Ground Alliance

EROSION CONTROL LEGEND

EXISTING	PROPOSED	
		PROPERTY LINE
980	980	INDEX CONTOUR
982	982	INTERVAL CONTOUR
		CURB AND GUTTER
		POND NORMAL WATER LEVEL
	SF	SILT FENCE
	HDSF	HEAVY DUTY SILT FENCE
	RSC	REDUNDANT SILT CONTROL
STO		STORM SEWER
		FLARED END SECTION (WITH RIPRAP)
WAT		WATER MAIN
SAN		SANITARY SEWER
		RETAINING WALL
		DRAIN TILE
	GL	GRADING LIMITS
		ROCK CONSTRUCTION ENTRANCE
		EROSION CONTROL BLANKET
		TURF REINFORCEMENT MAT
	E.O.F.	EMERGENCY OVERFLOW
SB-19	SB-19	SOIL BORING LOCATION
		INLET PROTECTION

GENERAL EROSION CONTROL NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND LIMITED MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION SHALL NOT BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY THE OWNER OR ENGINEER OF DISCREPANCIES.
2. ALL SILT FENCE AND OTHER EROSION CONTROL FEATURES SHALL BE IN-PLACE PRIOR TO ANY EXCAVATION/CONSTRUCTION AND SHALL BE MAINTAINED UNTIL VIABLE TURF OR GROUND COVER HAS BEEN ESTABLISHED. EXISTING SILT FENCE ON-SITE SHALL BE MAINTAINED AND OR REMOVED AND SHALL BE CONSIDERED INCIDENTAL TO THE GRADING CONTRACT. IT IS OF EXTREME IMPORTANCE TO BE AWARE OF CURRENT FIELD CONDITIONS WITH RESPECT TO EROSION CONTROL. TEMPORARY PONDING, DIKES, HAYBALES, ETC., REQUIRED BY THE CITY SHALL BE INCIDENTAL TO THE GRADING CONTRACT.
3. EROSION AND SILTATION CONTROL (ESC): THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION OF THE PROJECT AREA. THE CONTRACTOR SHALL USE WHATEVER MEANS NECESSARY TO CONTROL THE EROSION AND SILTATION INCLUDING BUT NOT LIMITED TO: CATCH BASIN INSERTS, CONSTRUCTION ENTRANCES, EROSION CONTROL BLANKET, AND SILT FENCE. ESC SHALL COMMENCE WITH GRADING AND CONTINUE THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER. THE CONTRACTOR'S RESPONSIBILITY INCLUDES ALL IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF SILT. THE OWNER MAY DIRECT THE CONTRACTOR'S METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS. ANY DEPOSITION OF SILT OR MUD ON NEW OR EXISTING PAVEMENT OR IN EXISTING STORM SEWERS OR SWALES SHALL BE REMOVED AFTER EACH RAIN EVENT. AFFECTED AREAS SHALL BE CLEANED TO THE SATISFACTION OF THE OWNER, ALL AT THE EXPENSE OF THE CONTRACTOR. ALL TEMPORARY EROSION CONTROL SHALL BE REMOVED BY THE CONTRACTOR AFTER THE TURF IS ESTABLISHED.
4. ALL STREETS DISTURBED DURING WORKING HOURS MUST BE CLEANED AT THE END OF EACH WORKING DAY. A CONSTRUCTION ENTRANCE TO THE SITE MUST BE PROVIDED ACCORDING TO DETAILS TO REDUCE TRACKING OF DIRT ONTO PUBLIC STREETS.
5. PROPOSED PONDS SHALL BE EXCAVATED FIRST AND USED AS TEMPORARY PONDING DURING CONSTRUCTION.
6. WHEN INSTALLING END-OF-LINE FLARED END SECTIONS, BRING THE SILT FENCE UP & OVER THE FLARED END SECTIONS & COVER DISTURBED AREAS WITH RIP RAP. THE UPSTREAM FLARED END SECTIONS SHALL HAVE WOOD FIBER BLANKET INSTALLED ON THE DISTURBED SOILS.
7. ALL UNPAVED AREAS ALTERED DUE TO CONSTRUCTION ACTIVITIES MUST BE RESTORED WITH SEED AND MULCH, SOD, EROSION CONTROL BLANKET OR BE HARD SURFACE WITHIN 2 WEEKS OF COMPLETION OF CONSTRUCTION.
8. THE SITE MUST BE STABILIZED PER THE REQUIREMENTS OF THE MPCA, NPDES, MNDOT, AND CITY.
   - A. TEMPORARY (GREATER THAN 1-YEAR) SEED SHALL BE MNDOT SEED MIX 22-111 AT 30.5-POUNDS PER ACRE.
   - B. TEMPORARY (LESS THAN 1-YEAR) SEED SHALL BE MNDOT SEED MIX 21-112 (FALL) OR 21-111 (SPRING/SUMMER) AT 100-POUNDS PER ACRE
   - C. INFILTRATION/FILTRATION BASIN SHALL BE MNDOT SEED MIX 34-262 AT 14.5-POUNDS PER ACRE.
   - D. POND SLOPES SHALL BE MNDOT SEED MIX 33-261 AT 35-POUNDS PER ACRE.
   - E. GENERAL SEEDING SHALL BE MNDOT SEED MIX 25-151 AT 70-POUNDS PER ACRE.
   - F. MULCH SHALL BE MNDOT TYPE 1 APPLIED AT 2-TONS PER ACRE.
9. FOR AREAS WITH SLOPE OF 3:1 OR GREATER, RESTORATION WITH SOD OR EROSION CONTROL BLANKET IS REQUIRED.
10. ALL TEMPORARY STOCKPILES MUST HAVE SILT FENCE INSTALLED AROUND THEM TO TRAP SEDIMENT.
11. ALL PERMANENT PONDS USED AS TEMPORARY SEDIMENT BASINS DURING CONSTRUCTION SHALL BE DREDGED AFTER THE SITE HAS BEEN STABILIZED TO RESTORE THE POND TO THE PROPOSED BOTTOM ELEVATION.
12. ALL CONSTRUCTION SHALL CONFORM TO LOCAL AND STATE RULES INCLUDING THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS.
13. THE SITE MUST BE KEPT IN A WELL-DRAINED CONDITION AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY DITCHES, PIPING OR OTHER MEANS REQUIRED TO INSURE PROPER DRAINAGE DURING CONSTRUCTION. LOW POINTS IN ROADWAYS OR BUILDING PADS MUST BE PROVIDED WITH A POSITIVE OUTFLOW.
14. PUBLIC STREETS USED FOR HAULING SHALL BE KEPT FREE OF SOIL AND DEBRIS. STREET SWEEPING SHALL BE CONCURRENT WITH SITE WORK.

RPBCWD STANDARD EROSION CONTROL NOTES

1. NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ONSITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE.
2. 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.
3. 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.
4. CONSTRUCTION SITE WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER AND SANITARY WASTE MUST BE PROPERLY MANAGED.
5. 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.
6. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPS MUST BE REMOVED UPON FINAL STABILIZATION.
7. SOIL SURFACES COMPACTED DURING CONSTRUCTION AND REMAINING PERVIOUS UPON COMPLETION OF CONSTRUCTION MUST BE DECOMPACTED TO ACHIEVE A SOIL COMPACTION TESTING PRESSURE OF LESS THAN 1,400 KILOPASCALS OR 200 POUNDS PER SQUARE INCH IN THE UPPER 12 INCHES OF THE SOIL PROFILE WHILE TAKING CARE TO PROTECT UTILITIES, TREE ROOTS, AND OTHER EXISTING VEGETATION.
8. 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, WITHIN 14 DAYS ELSEWHERE.
9. THE PERMITTEE MUST, AT A MINIMUM, INSPECT, MAINTAIN AND REPAIR ALL DISTURBED SURFACES AND ALL EROSION AND SEDIMENT CONTROL FACILITIES AND SOIL STABILIZATION MEASURES EVERY DAY WORK IS PERFORMED ON THE SITE AND AT LEAST WEEKLY UNTIL LAND-DISTURBING ACTIVITY HAS CEASED. THEREAFTER, THE PERMITTEE MUST PERFORM THESE RESPONSIBILITIES AT LEAST WEEKLY UNTIL VEGETATIVE COVER IS ESTABLISHED. THE PERMITTEE WILL MAINTAIN A LOG OF ACTIVITIES UNDER THIS SECTION FOR INSPECTION BY THE DISTRICT ON REQUEST.
10. TOPSOIL TO BE INSTALLED AS PART OF THE SITE RESTORATION SHALL CONTAIN AT LEAST 5% ORGANIC CONTENT CONSISTENT WITH THE WATERSHED DISTRICT'S TOPSOIL DEFINITION.

1" = 20'

0' 20' 40' 60'

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EROSION CONTROL PLAN

SHEET NUMBER:
C4.0

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SOUTHWEST VILLAGE

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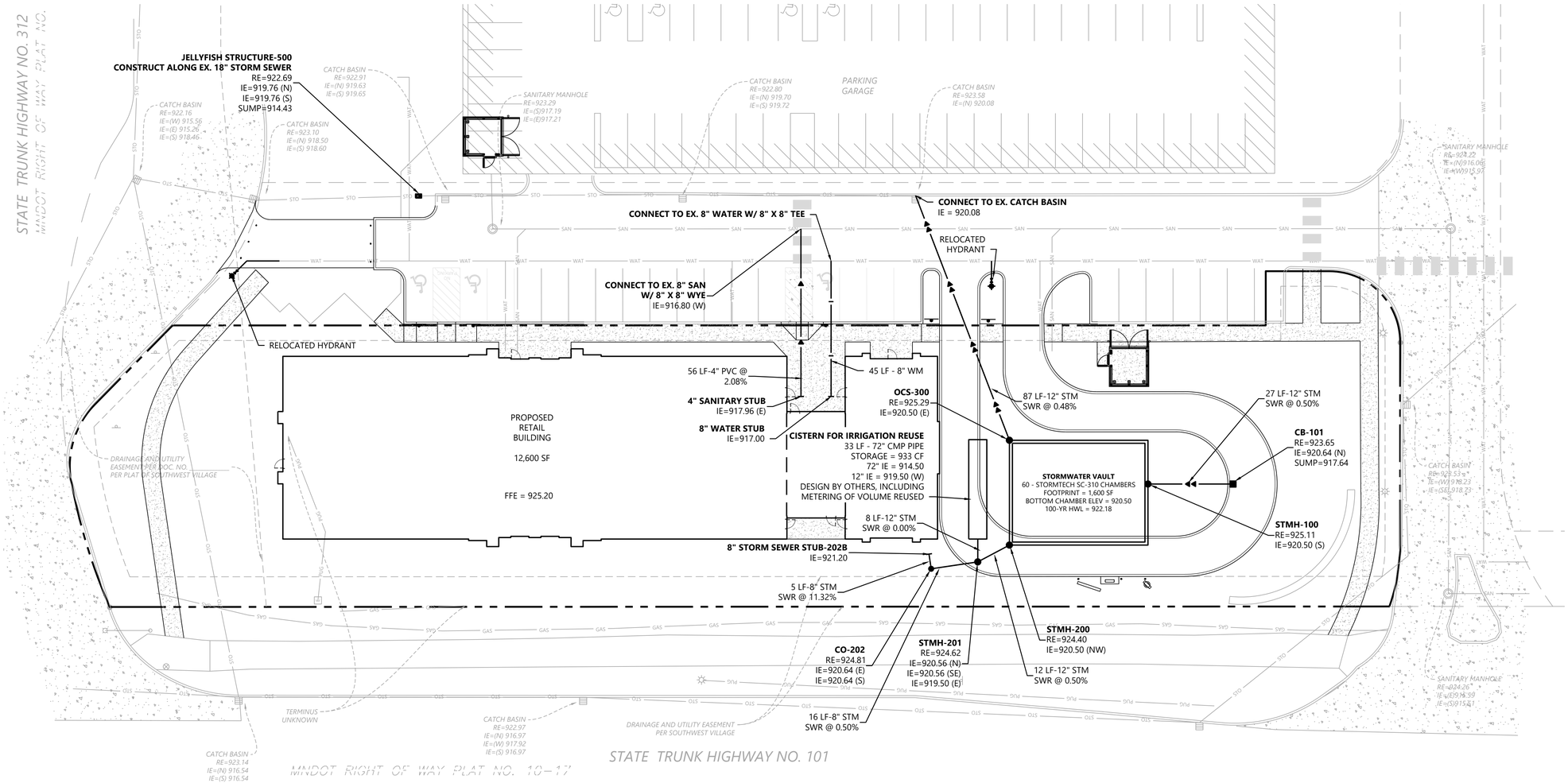

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UTILITY LEGEND

EXISTING	PROPOSED	
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		EASEMENT LINE
		CURB AND GUTTER
SAN	SAN	SANITARY SEWER
FM	FM	SANITARY SEWER FORCE MAIN
STO	STO	STORM SEWER
WAT	WAT	WATER MAIN
WAT	WAT	HYDRANT
GAS	GAS	GAS
PUG	PUG	UNDERGROUND ELECTRIC
POH	POH	OVERHEAD ELECTRIC
TUG	TOH	UNDERGROUND TELEPHONE
TOH	TOH	OVERHEAD TELEPHONE
FO	FO	TELEPHONE FIBER OPTIC
CTV	CTV	CABLE TELEVISION
DT		DRAIN TILE
		GATE VALVE
		FLARED END SECTION (WITH RIPRAP)
		LIGHT POLE

GENERAL UTILITY NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND LIMITED MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION SHALL NOT BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY THE OWNER OR ENGINEER OF DISCREPANCIES.
2. ALL SANITARY SEWER, STORM SEWER AND WATER MAIN MATERIAL AND INSTALLATIONS SHALL BE PER CITY REQUIREMENTS, MINNESOTA PLUMBING CODE, AND IN ACCORDANCE WITH THE CURRENT EDITION OF "STANDARD SPECIFICATIONS FOR WATER MAIN AND SERVICE LINE INSTALLATION AND SANITARY SEWER AND STORM SEWER INSTALLATION" AS PREPARED BY THE CITY ENGINEERS ASSOCIATION OF MINNESOTA.
3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN THE NECESSARY FEDERAL, STATE AND LOCAL PERMITS FOR THE PROPOSED WORK OR VERIFY WITH THE OWNER OR ENGINEER THAT PERMITS HAVE BEEN OBTAINED. PERMIT FEES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR UNLESS OTHERWISE ARRANGED WITH THE OWNER.
4. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND DIMENSIONS OF DOORWAYS, RAMPS, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY CONNECTION LOCATIONS.
5. ALL PRIVATE UTILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE APPROPRIATE UTILITY COMPANY. THE CONTRACTOR SHALL COORDINATE THE SERVICE LINE CONSTRUCTION WITH THE UTILITY COMPANIES.
6. CONTRACTOR SHALL OBTAIN ALL NECESSARY CITY PERMITS FOR UTILITY CONNECTIONS, AND UTILITIES SHALL BE INSPECTED AND APPROVED BY THE CITY. THE CITY SHALL BE NOTIFIED 48-HOURS PRIOR TO COMMENCING WITH THE UTILITY CONSTRUCTION OR ANY REQUIRED TESTING. CONTRACTOR SHALL NOT OPERATE, INTERFERE WITH, CONNECT ANY PIPE OR HOSE TO, OR TAP ANY WATER MAIN BELONGING TO THE CITY UNLESS DULY AUTHORIZED TO DO SO BY THE CITY. ANY ADVERSE CONSEQUENCES OF SCHEDULED OR UNSCHEDULED DISRUPTIONS OF SERVICE TO THE PUBLIC ARE TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
7. WATER MAIN LENGTHS AS SHOWN ARE APPROXIMATE HORIZONTAL LENGTHS. ALLOW FOR ADDITIONAL PIPE WHEN INSTALLING ON SLOPES OR WHEN DEFLECTIONS ARE REQUIRED. THE JOINT DEFLECTIONS SHALL NOT EXCEED THE MAXIMUM RECOMMENDED BY THE PIPE MANUFACTURER OR BY LOCAL GOVERNING SPECIFICATIONS. FITTINGS REQUIRED TO CONSTRUCT WATER MAIN SHALL BE INCLUDED IN WATER MAIN CONSTRUCTION.
8. PROVIDE WATER MAIN THRUST RESTRAINTS PER CITY STANDARD REQUIREMENTS.
9. A MINIMUM VERTICAL SEPARATION OF 18 INCHES IS REQUIRED AT ALL WATER LINE CROSSINGS WITH SANITARY SEWER OR STORM SEWER. THE WATER LINE SHALL NOT HAVE JOINTS OR CONNECTION WITHIN 10-FEET OF THE CROSSING. INSULATE CROSSINGS WITH STORM SEWER.
10. UTILITY SERVICES TYPICALLY TERMINATE 5' OUTSIDE BUILDING WALL UNLESS OTHERWISE SHOWN OR NOTED.
11. DUCTILE IRON WATER LINES SHALL BE CLASS 52, PER AWWA C115 OR C151. COPPER WATER LINES SHALL BE TYPE K PER ASTM B88. PVC WATER LINES SHALL BE PER AWWA C900 AND INSTALLED PER AWWA C605 IF ALLOWED BY CITY.
12. ALL WATER LINES SHALL HAVE 7.5' MINIMUM COVER. INSULATE WATER MAIN IF LESS THAN 8' OF COVER. INSULATION SHALL BE DOW STYROFOAM HI BRAND 35 OR EQUIVALENT, WITH 4 INCHES OF THICKNESS.
13. SANITARY SEWER PIPE OUTSIDE THE BUILDING ENVELOPE SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35 OR 26. SDR 26 IS REQUIRED FOR DEPTHS GREATER THAN 15 FEET. SANITARY SEWER PIPE WITHIN 5 FEET OF THE BUILDING AND UNDER FOOTINGS SHALL BE SCHEDULE 40 PER ASTM D2665. ALL PLASTIC SANITARY SEWER SHALL BE INSTALLED PER D2321. SOLVENT WELD JOINTS MUST INCLUDE USE OF A PRIMER WHICH IS OF A CONTRASTING COLOR TO THE PIPE AND CEMENT. ALL SANITARY SEWER SHALL BE TESTED ACCORDING TO MINNESOTA PLUMBING CODE, PART 712.0.
14. STORM SEWER PIPE:
    A. RCP AND HDPE PIPE MAY BE INSTALLED WITH APPROVAL OF LOCAL GOVERNING AGENCY.
    B. REINFORCED CONCRETE PIPE SHALL BE CLASS 5 FOR PIPE DIAMETERS 18" AND SMALLER, CLASS 3 FOR PIPE DIAMETERS 21" AND LARGER UNLESS OTHERWISE NOTED, PER ASTM C76, WITH GASKETS PER ASTM C443.
    C. HDPE STORM PIPE 4- TO 10-INCHES IN DIAMETER SHALL MEET REQUIREMENTS OF AASHTO M252. HDPE STORM PIPE 12- TO 60-INCHES IN DIAMETER SHALL MEET REQUIREMENTS OF ASTM F2306. FITTINGS SHALL BE PER ASTM D3212 AND INSTALLED PER ASTM D2321.
    D. PVC STORM SEWER PIPE AND FITTINGS SHALL BE SCHEDULE 40 PIPE PER ASTM D2665 AND INSTALLED PER ASTM D2321.
    E. CORRUGATED METAL PIPE (CMP) FOR SIZES 18- TO 120-INCH AND MUST MEET ASTM A760 OR ASTM A796 AND BE INSTALLED PER ASTM A798. CMP MAY NOT BE INSTALLED WITHIN 10-FEET OF A WATERMAIN, WATER SERVICE, OR A BUILDING.
    F. ALL STORM SEWER JOINTS AND STRUCTURE CONNECTIONS SHALL BE GASTIGHT OR WATERTIGHT AS REQUIRED BY MINNESOTA PLUMBING CODE, PART 707.3. STORM SEWER LOCATED WITHIN 10-FEET OF A BUILDING AND/OR WATER LINE SHALL BE TESTED PER MINNESOTA PLUMBING CODE, PART 712.
15. ALL NONCONDUCTIVE PIPE SHALL BE INSTALLED WITH A LOCATE (TRACER) WIRE PER MINNESOTA RULES, PART 7560.0150.
16. POST INDICATOR VALVES SHALL BE CLOW F-5750 (OR EQUIVALENT) MEETING AWWA STANDARD C509 AND CITY STANDARDS. VALVE TO BE MECHANICAL JOINT RESILIENT WEDGE GATE VALVE. POST TO BE ADJUSTABLE FOR 8 FEET WATER MAIN DEPTH. THE ELECTRICAL ALARM SWITCH SHALL BE PART NO. PCVS2 (OR EQUIVALENT).
17. AFTER CONSTRUCTION IS COMPLETED, THE CONTRACTOR SHALL PROVIDE THE OWNER WITH AN AS-BUILT RECORD OF UTILITY CONSTRUCTION. THE AS-BUILT SHALL INCLUDE LOCATION AND LENGTH DEVIATIONS OR CHANGES TO THE PLAN. CONTRACTOR TO VERIFY WITH OWNER OR ENGINEER WHETHER A PLAN WITH POST-CONSTRUCTION ELEVATIONS IS REQUIRED.
18. ALL MANHOLE CASTINGS IN PAVED AREAS SHALL BE SUMPED 0.05 FEET. RIM ELEVATIONS ON PLAN REFLECT THE SUMPED ELEVATIONS.
19. ALL CATCH BASIN CASTINGS IN CURB SHALL BE SUMPED 0.15 FEET AND MANHOLE CASTINGS IN PAVED AREAS SHALL BE SUMPED 0.05 FEET. RIM ELEVATIONS ON PLAN REFLECT THE SUMPED ELEVATIONS.

1" = 20'

0' 20' 40' 60'

NOT FOR CONSTRUCTION

DESIGNED:
CHECKED:
DRAWN:
HORIZONTAL SCALE: 20'
VERTICAL SCALE: 4' or 2'

INITIAL ISSUE: 02/17/2023
REVISIONS:
1 03/20/2023 WATERSHED COMMENTS
2
3
4
5

PREPARED FOR:
SOUTHWEST TRANSIT
14405 W 62ND ST
EDEN PRAIRIE, MN 55346

I HEREBY CERTIFY THAT THIS PLAN 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
Signature
GRETCHEN A. SCHROEDER
03/20/2023 LICENSE NO. 43019

SOUTHWEST VILLAGE
CHANHASSEN, MN

Westwood
Phone (952) 937-5150
Fax (952) 937-5822
Toll Free (888) 937-5150
12701 Whitewater Drive, Suite #300
Minnetonka, MN 55343
westwoodps.com
Westwood Professional Services, Inc.

UTILITY PLAN

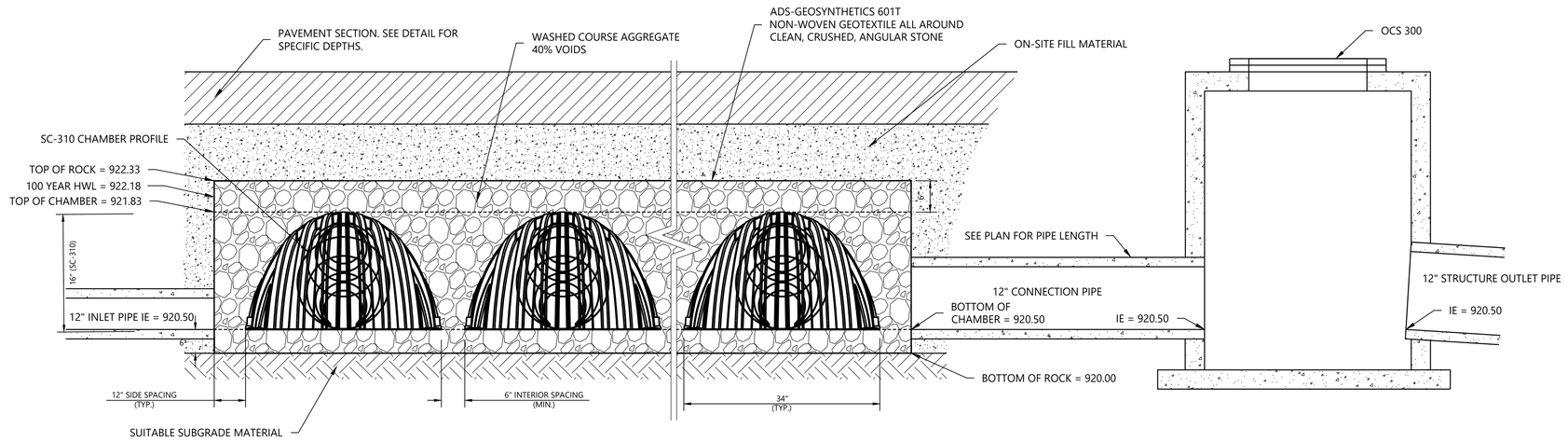
SHEET NUMBER:
C5.0

DATE: 03/20/2023

PROJECT NUMBER: 0041990.00

SOUTHWEST VILLAGE

N:\0041990.00\DWG\CIVIL\0041990UT01.DWG



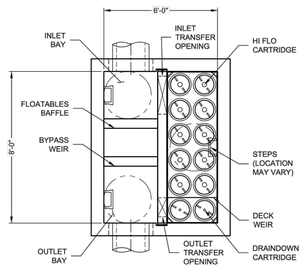
DETAIL IS SCHEMATIC FOR HYDRAULIC MODELING AND PERMITTING ONLY. SEE FINAL PLANS AND DETAILS BY STORMWATER VENDOR FOR CONSTRUCTION.

N.T.S.

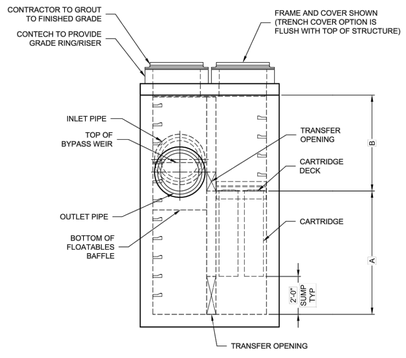
Westwood

UNDERGROUND STORMWATER STORAGE

LAST REVISED: 02/17/2023



PLAN VIEW
(TOP SLAB NOT SHOWN FOR CLARITY)



ELEVATION VIEW

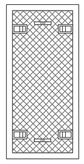
JELLYFISH DESIGN NOTES

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 CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD

CARTRIDGE SELECTION

CARTRIDGE LENGTH	54"	40"	27"	15"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-6"	5'-4"	4'-3"	3'-3"
FLOW RATE HI-FLO / DRAINDOWN (CFS) (PER CART)	0.178 / 0.089	0.133 / 0.067	0.089 / 0.045	0.049 / 0.025
MAX. TREATMENT (CFS)	1.96	1.47	0.98	0.54
DECK TO INSIDE TOP (MIN) (B)	5.00	4.00	4.00	4.00

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



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

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	*
WATER QUALITY FLOW RATE (cfs)	*
PEAK FLOW RATE (cfs)	*
RETURN PERIOD OF PEAK FLOW (yrs)	*
# OF CARTRIDGES REQUIRED (HF / DD)	*
CARTRIDGE LENGTH	*

PIPE DATA:	I.E.	MAT'L	DIA	SLOPE %	HGL
INLET #1	*	*	*	*	*
INLET #2	*	*	*	*	*
OUTLET	*	*	*	*	*

SEE GENERAL NOTES 6-7 FOR INLET AND OUTLET HYDRAULIC AND SIZING REQUIREMENTS.

RIM ELEVATION	*

ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
	*	*

NOTES/SPECIAL REQUIREMENTS:

* PER ENGINEER OF RECORD

GENERAL NOTES:
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
3. 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.
4. STRUCTURE SHALL MEET AASHTO HS-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. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918, AND AASHTO LOAD FACTOR DESIGN METHOD.
6. OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.
7. THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS RECOMMENDED TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE AT EQUAL OR GREATER SLOPE.
8. 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
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE.
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT).
D. 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 NO. 8,287,726; 8,221,618; US 8,123,930; OTHER INTERNATIONAL PATENTS PENDING

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

JELLYFISH JFPD0806
STANDARD DETAIL
PEAK DIVERSION CONFIGURATION

I:\COMMON\CAD\TREATMENT\13 JELLYFISH FILTER\HD STANDARD DRAWINGS\JFPD0806\DTL NEW.DWG 12/20/2018 10:38 AM

NOT FOR CONSTRUCTION

N:\0041990.00\DWG\CIVIL\0041990DT01.DWG

DESIGNED:
CHECKED:
DRAWN:
HORIZONTAL SCALE##
VERTICAL SCALE## OF ##

INITIAL ISSUE: 02/17/2023
REVISIONS:
03/20/2023 WATERSHED COMMENTS

PREPARED FOR:
SOUTHWEST TRANSIT
14405 W 62ND ST
EDEN PRAIRIE, MN 55346

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GRETCHEN A. SCHROEDER
03/20/2023 LICENSE NO. 43019

SOUTHWEST VILLAGE
CHANHASSEN, MN

Westwood
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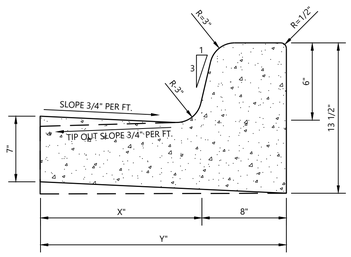
Fax (952) 937-5822
Toll Free (888) 937-5150
12701 Whitewater Drive, Suite #300
Minnetonka, MN 55343
westwoodps.com
Westwood Professional Services, Inc.

UTILITY DETAILS

SHEET NUMBER:
C5.1
DATE: 03/20/2023

PROJECT NUMBER: 0041990.00

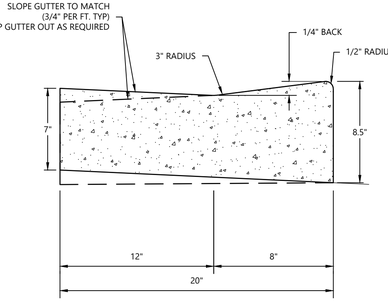
SOUTHWEST VILLAGE



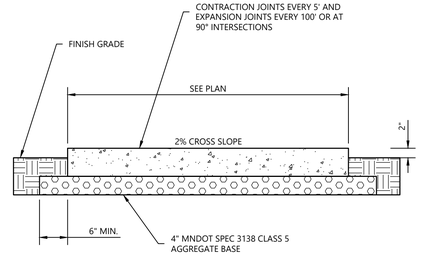
Curb Type	X	Y
B612	12"	20"
B618	18"	26"
B624	24"	32"

NOTES:
1. EXPANSION JOINT SPACING IS 100'
2. MIN. 3" CL. 5 UNDER C.&G.
3. CURB SHALL BE PER MnDOT SPEC 2531

Westwood | B6 STYLE CURB AND GUTTER | LAST REVISED: 01/09/20 | SI01

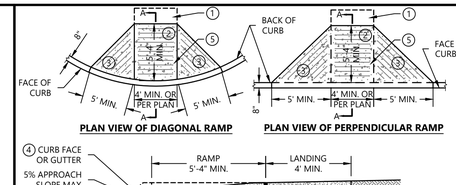


Westwood | FLUSH CURB AND GUTTER | LAST REVISED: 11/29/18 | SI02-D

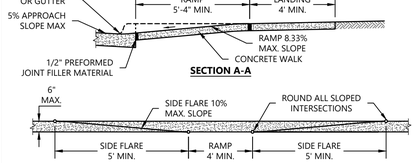


NOTES:
1. SEE ARCHITECTURAL PLANS FOR WALK SCORING AND JOINT LAYOUT.
2. WALK SHALL BE PER MnDOT SPEC 2521 MIX NO. 3A32 WITH A 28-DAY DESIGN STRENGTH OF 3900-PSI.

Westwood | PRIVATE CONCRETE SIDEWALK | LAST REVISED: 08/15/17 | SI08



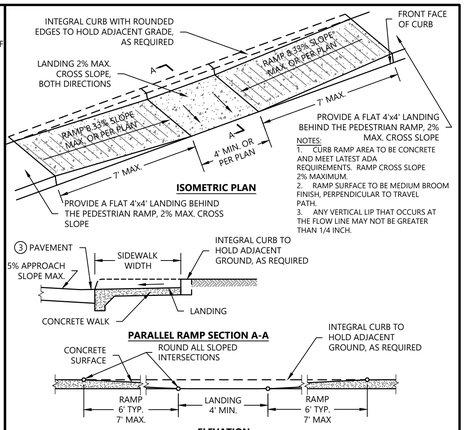
PLAN VIEW OF DIAGONAL RAMP | PLAN VIEW OF PERPENDICULAR RAMP



SECTION A-A | ELEVATION OF RAMP

NOTES:
1. PROVIDE A RELATIVELY FLAT MINIMUM 4'x4' LANDING BEHIND THE PEDESTRIAN RAMP, 2% MAXIMUM CROSS SLOPE BOTH DIRECTIONS.
2. CURB RAMP AREA TO BE CONCRETE AND MEET LATEST ADA REQUIREMENTS. RAMP CROSS SLOPE 2% MAXIMUM. BACK-TO-BACK PEDESTRIAN RAMPS SHALL HAVE MINIMUM 48" LANDING BETWEEN, OR PROVIDE AT-GRADE CROSSING.
3. SIDE FLARES TO BE CONCRETE AND IMPLEMENTED WHERE ADJACENT TO PAVED AREAS. FLARED SLOPE TO BE 10% MAXIMUM. EXISTING CURB RAMP ALTERATIONS, WITH NO LANDING, SHALL BE 8.33% MAXIMUM. PROVIDE 10% MAXIMUM SLOPE, UNLESS NOTED OTHERWISE.
4. ANY VERTICAL LIP THAT OCCURS AT THE FLOW LINE MAY NOT BE GREATER THAN 1/4 INCH.
5. RAMP AND FLARED SIDE SURFACE TO BE MEDIUM BROOM FINISH, PERPENDICULAR TO TRAVEL PATH.
6. WALK SHALL BE PER MnDOT SPEC 2521 MIX NO. 3A32 WITH A 28-DAY DESIGN STRENGTH OF 3900-PSI.

Westwood | PRIVATE PEDESTRIAN CURB RAMP | LAST REVISED: 08/15/17 | SI09

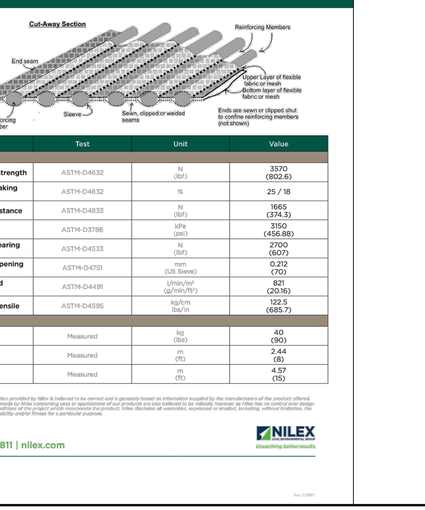


ISOMETRIC PLAN | PARALLEL RAMP SECTION A-A | ELEVATION

Westwood | PRIVATE PARALLEL PEDESTRIAN CURB RAMP | LAST REVISED: 08/15/17 | SI10B

NOTES:
1. TAPED AREAS TO BE CENTERED AND ALIGNED ON CENTER LINE AND LANE LINES. MAKE ADJUSTMENTS IN CENTER MEDIAN AREA.
2. ZEBRA CROSSWALKS SHALL BE WHITE POLYMER-PREFORMED TAPE OR AN ACCEPTABLE EQUIVALENT APPROVED BY THE ENGINEER.
3. A MINIMUM OF 1.5 FT. CLEAR DISTANCE MUST BE LEFT ADJACENT TO CURB. IF LAST STRIPED AREA FALLS INTO THIS DISTANCE, IT MUST BE OMITTED.
4. REMOVE ALL CONFLICTING PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.
5. AT SKEWED CROSSWALKS, THE TAPED AREAS ARE TO REMAIN PARALLEL TO THE LANE LINES.
6. WHERE PAVEMENT MARKINGS CAN NOT BE INLAYED INTO THE HOT MAT, PAVEMENT SHALL BE GROOVED FOR THE INSTALLATION OF THE POLYMER-PREFORMED MARKINGS. SEE Mn/DOT STANDARD SPECIFICATION 2564.

Westwood | CROSS WALK STRIPING | LAST REVISED: 08/15/17 | SI11



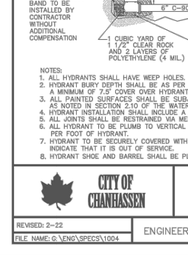
HANDICAP SIGN

HANDICAP PARKING

NOTE: BOTTOM OF SIGNS TO BE MOUNTED 60"-66" FROM PARKING GRADE, SEE SIGN POST INSTALLATION DETAIL

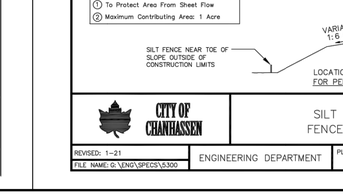
HANDICAP SYMBOL

Westwood | HANDICAP ACCESSIBLE SIGNAGE AND STRIPING | LAST REVISED: 08/15/17 | SI15



NOTES:
1. 4" DIAMETER STD. STL. PIPE CONCRETE FILLED @ DRIVE-THRU ONLY, 6" @ ALL OTHER LOCATIONS INCLUDING UTILITIES, TRASH ENCLOSURE, AND SPRINKLER RISERS. PROVIDE 1/4" WELDED CLOSURE PLATE AT BOTTOM. PAINT EXPOSED PIPE YELLOW, SECURITY BOLLARDS TO RECEIVE POLYETHYLENE COVER.
2. 24" DIAMETER CONCRETE FOUNDATION. USE SONOTUBE FORM.
3. 3/8" DIAMETER WELDED HOOPS. 18" DIAMETER TOP, BOTTOM AND CENTER.
4. SOLID UNDISTURBED SOIL.
5. PROVIDE PITCH, SMOOTH CONCRETE FINISH.

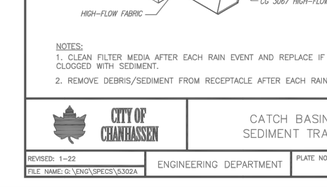
Westwood | BOLLARD | LAST REVISED: 08/15/17 | SI18



BITUMINOUS PAVEMENT (STANDARD DUTY)

PAVEMENT SECTIONS SHOWN ARE FOR PLANNING PURPOSES ONLY. REFER TO GEOTECHNICAL REPORT FOR FINAL PAVEMENT SECTIONS.

Westwood | PAVEMENT SECTIONS | LAST REVISED: 08/15/17 | SI19



NOTE: SEE STRUCTURAL PLANS FOR WALK SCORING AND JOINT LAYOUT.

Westwood | CONCRETE CURB AT SIDEWALK | LAST REVISED: 08/15/17 | SI24

NOT FOR CONSTRUCTION

Mud Mats

Property	Test	Unit	Value
Mechanical			
Grab Tensile Strength	ASTM-D4632	N (lbf)	3570 (802.6)
Apparent Breaking Elongation	ASTM-D4632	%	25 / 18
Puncture Resistance	ASTM-D4833	N (lbf)	1665 (374.3)
Mullen Burst	ASTM-D3786	kPa (psi)	3150 (456.88)
Trapezoidal Tearing Strength	ASTM-D4533	N (lbf)	2700 (607)
Apparent Opening Size	ASTM-D4751	mm (US Sieve)	0.212 (70)
Constant Head Permitivity	ASTM-D4491	l/min/m² (gal/min/ft²)	821 (20.16)
Wide Width Tensile	ASTM-D4595	kg/cm lbs/in	122.5 (685.7)
Packaging			
Roll Weight	Measured	kg (lbs)	40 (90)
Roll Width	Measured	m (ft)	2.44 (8)
Roll Length	Measured	m (ft)	4.57 (15)

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1.800.667.4811 | nilex.com

NOTES:
1. ALL HYDRANTS SHALL HAVE WEEP HOLES.
2. HYDRANT BURY DEPTH SHALL BE AS PER MANUFACTURES RECOMMENDATION WITH A MINIMUM OF 7.5' COVER OVER HYDRANT LEAD.
3. ALL PAINTED SURFACES SHALL BE SUBJECT TO TWO YEAR WARRANTY PERIOD AS NOTED IN SECTION 2.10 OF THE WATERMAIN SPECIFICATIONS.
4. HYDRANT INSTALLATION SHALL INCLUDE A HYDRANT MARKER.
5. ALL JOINTS SHALL BE RESTRAINED VIA MEGA–LUGS MECHANICAL JOINT RESTRAINT.
6. ALL HYDRANT TO BE PLUMB TO VERTICAL AXIS, MAXIMUM ALLOWABLE TO BE 1/2" PER FOOT OF HYDRANT.
7. HYDRANT TO BE SECURELY COVERED WITH PLASTIC WRAP OR BAG TO INDICATE THAT IT IS OUT OF SERVICE.
8. HYDRANT SHOE AND BARREL SHALL BE PLASTIC WRAPPED PER SPECIFICATION 2.03A

CITY OF CHANHASSEN | TYPICAL HYDRANT INSTALLATION
REVISED: 2–22 | FILE NAME: G:\ENG\SPECS\1004 | ENGINEERING DEPARTMENT | PLATE NO.: 1004

CITY OF CHANHASSEN | SILT FENCE
REVISED: 1–21 | FILE NAME: G:\ENG\SPECS\5300 | ENGINEERING DEPARTMENT | PLATE NO.: 5300

NOTES:
1. CLEAN FILTER MEDIA AFTER EACH RAIN EVENT AND REPLACE IF FILTER IS CLOGGED WITH SEDIMENT.
2. REMOVE DEBRIS/SEDIMENT FROM RECEPTACLE AFTER EACH RAIN EVENT.

CITY OF CHANHASSEN | CATCH BASIN SEDIMENT TRAP
REVISED: 1–22 | FILE NAME: G:\ENG\SPECS\5302A | ENGINEERING DEPARTMENT | PLATE NO.: 5302A

N:\0041990.00\DWG\CIVIL\0041990DT01.DWG

DESIGNED: - | CHECKED: - | DRAWN: - | HORIZONTAL SCALE: ## | VERTICAL SCALE: ## or ##

INITIAL ISSUE: 02/17/2023
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EDEN PRAIRIE, MN 55346

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GRETCHEN A. SCHROEDER
03/20/2023 | LICENSE NO. 43019

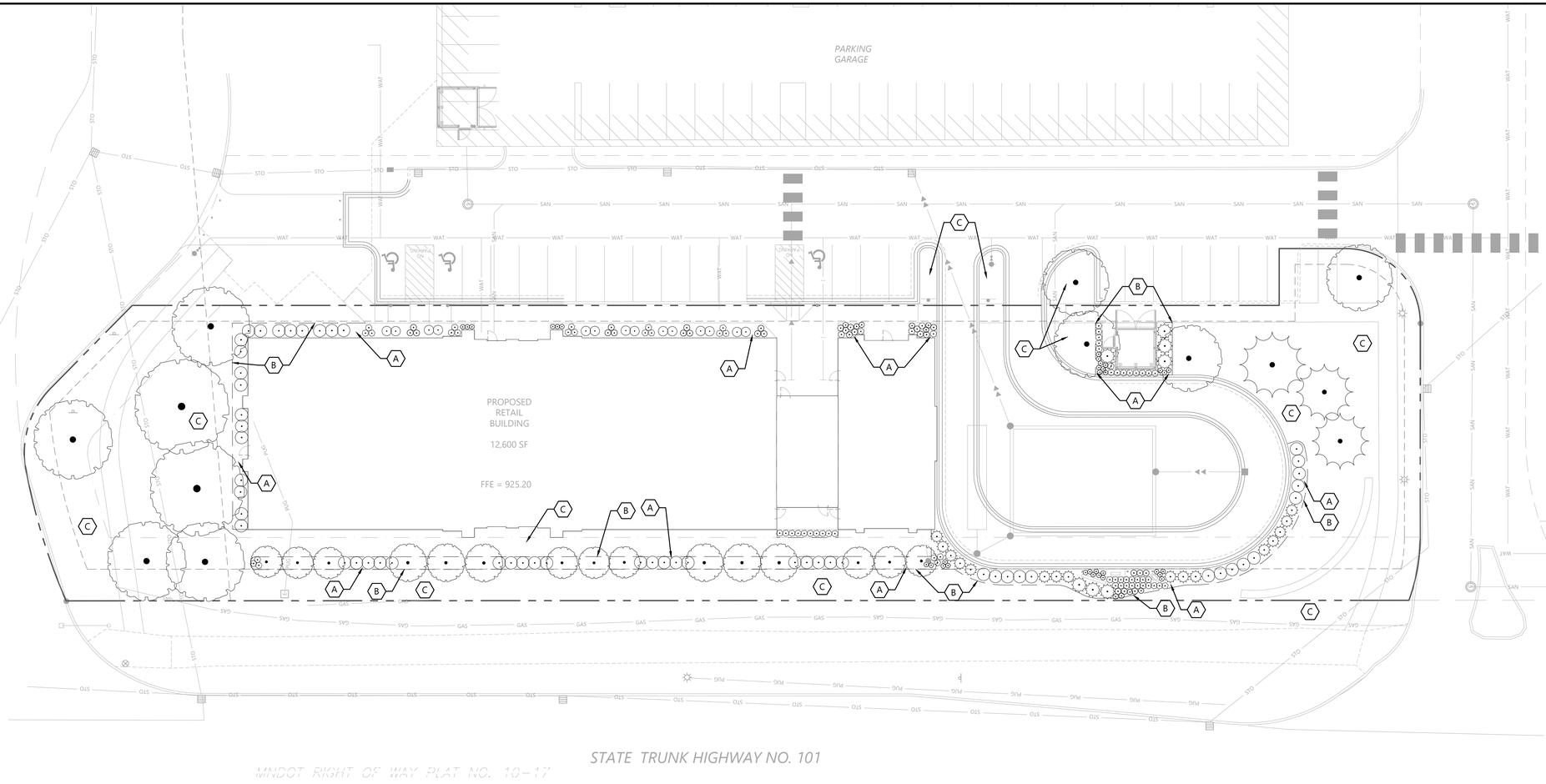
SOUTHWEST VILLAGE
CHANHASSEN, MN

DETAILS

SHEET NUMBER: C6.0
DATE: 03/20/2023
PROJECT NUMBER: 0041990.00

Westwood
Phone (952) 937-5150
Fax (952) 937-5822
Toll Free (888) 937-5150
12701 Whitewater Drive, Suite #300
Minnetonka, MN 55343
www.westwoodps.com
Westwood Professional Services, Inc.

SOUTHWEST VILLAGE



Call 48 Hours before digging:
811 or call811.com
Common Ground Alliance

PLANT SCHEDULE

CONIFEROUS TREES	**3**	COMMON / BOTANICAL NAME	SIZE	SPACING O.C.
BHS		BLACK HILLS WHITE SPRUCE / PICEA GLAUCA 'DENSATA'	8' HT B&B	AS SHOWN
SCP		SCOTCH PINE / PINUS SYLVESTRIS	8' HT B&B	AS SHOWN
DECIDUOUS TREES	**10**	COMMON / BOTANICAL NAME	SIZE	SPACING O.C.
SGM		SIENNA GLEN® MAPLE / ACER X FREEMANII 'SIENNA'	2.5" CAL	AS SHOWN
SKH		SKYLINE® HONEY LOCUST / GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE'	2.5" CAL	AS SHOWN
JAE		JEFFERSON AMERICAN ELM / ULMUS AMERICANA 'JEFFERSON'	2.5" CAL	AS SHOWN
ORNAMENTAL TREES	**15**	COMMON / BOTANICAL NAME	SIZE	SPACING O.C.
DPB		DAKOTA PINNACLE® BIRCH / BETULA PLATYPHYLLA 'FARGO'	2.5" CAL	AS SHOWN
CSO		CRIMSON SPIRE™ OAK / QUERCUS ROBUR X ALBA 'CRIMSCHMIDT'	2.5" CAL	AS SHOWN
CONIFEROUS SHRUBS	**19**	COMMON / BOTANICAL NAME	SIZE	SPACING O.C.
MJJ		MINT JULEP® JUNIPER / JUNIPERUS CHINENSIS 'MONLEP'	#5 CONT.	4'-0" O.C.
BNS		BIRD'S NEST NORWAY SPRUCE / PICEA ABIES 'NIDIFORMIS'	#5 CONT.	4'-0" O.C.
HMA		HOLMSTRUP ARBORVITAE / THUJA OCCIDENTALIS 'HOLMSTRUP'	#5 CONT.	5'-0" O.C.
DECIDUOUS SHRUB	**68**	COMMON / BOTANICAL NAME	SIZE	SPACING O.C.
AFD		ARCTIC FIRE® RED TWIG DOGWOOD / CORNUS SERICEA 'FARROW'	#5 CONT.	4'-0" O.C.
DBH		DWARF BUSH HONEYSUCKLE / DIERVILLA LONICERA	#5 CONT.	3'-0" O.C.
GCF		GOLD CLUSTER™ FORSYTHIA / FORSYTHIA X INTERMEDIA 'COURTANEUR'	#5 CONT.	4'-0" O.C.
DEC		DWARF EUROPEAN CRANBERRYBUSH / VIBURNUM OPULUS 'NANUM'	#5 CONT.	3'-0" O.C.
ANNUALS/PERENNIALS	**69**	COMMON / BOTANICAL NAME	SIZE	SPACING O.C.
PUC		PURPLE CONEFLOWER / ECHINACEA PURPUREA	#1 CONT.	18" O.C.
PWW		POWWOW® WILD BERRY CONEFLOWER / ECHINACEA PURPUREA 'PAS702917'	#1 CONT.	18" O.C.
ICD		ICE CARNIVAL DAYLILY / HEMEROCALLIS X 'ICE CARNIVAL'	#1 CONT.	24" O.C.
BES		BLACK-EYED SUSAN / RUDBECKIA HIRTA	#1 CONT.	18" O.C.
MNS		MAY NIGHT SALVIA / SALVIA NEMOROSA 'MAY NIGHT'	#1 CONT.	18" O.C.
AFS		AUTUMN FIRE SEDUM / SEDUM X 'AUTUMN FIRE'	#1 CONT.	18" O.C.
GRASSES		COMMON / BOTANICAL NAME	SIZE	SPACING O.C.
KFG		KARL FOERSTER FEATHER REED GRASS / CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	#1 CONT.	24" O.C.
PDS		PRAIRIE DROPSEED / SPOROBOLUS HETEROLEPIS	#1 CONT.	24" O.C.

ABBREVIATIONS: B&B = BALLED AND BURLAPPED CAL. = CALIPER HT. = HEIGHT MIN. =MINIMUM O.C. = ON CENTER SP. = SPREAD QTY .= QUANTITY CONT. = CONTAINER
NOTE: QUANTITIES ON PLAN SUPERSEDE LIST QUANTITIES IN THE EVENT OF A DISCREPANCY.

LANDSCAPE LEGEND

OVERSTORY DECIDUOUS TREE
ORNAMENTAL TREE
SHRUBS
OVERSTORY CONIFEROUS TREE
PERENNIALS
EDGER

LANDSCAPE KEYNOTES (A)

A SHREDDED HARDWOOD MULCH (TYP.)
B EDGER (TYP.)
C SOD (TYP.)

LANDSCAPE SUMMARY

CANOPY/ EVERGREEN TREE REQUIREMENT

1 CANOPY/ EVERGREEN TREE PER 30 LF OF SITE PERIMETER (533/30= 17.67 TREES)

TREES REQUIRED= 18

TREES PROVIDED= 18
(3 PROPOSED CONIFEROUS TREES + 10 PROPOSED DECIDUOUS TREES+ 15 PROPOSED ORNAMENTAL TREES (EQUAL TO 5 OVERSTORY))

*TREES HAVING A MATURE SPREAD OF LESS THAN 15 FT (ORNAMENTAL TREES) MAY BE SUBSTITUTED BY GROUPING THE SAME SO AS TO CREATE THE EQUIVALENT OF A 15 FOOT CROWN SPREAD.

*COMPLIMENT OF TREES- NO MORE THAN 10% OF THE TREES MAY BE FROM ANY ONE TREE SPECIES, NO MORE THAN 20% OF THE TREES MAY BE FROM ONE GENUS, AND NO MORE THAN 30% OF TREES FROM ANY ONE FAMILY.

REQUIRED BUFFER YARD

PROPOSED COMMERCIAL DEVELOPMENTS AND ADJACENT PARCELS REQUIRE A BUFFER YARD.

PER CITY CODE BUFFERYARD B REQUIRED.

BUFFERYARD B PLANT UNITS REQUIRED PER 100' = 2 CANOPY TREES, 4 UNDERSTORY TREES, 6 SHRUBS

1" = 20'
0' 20' 40' 60'

NOT FOR CONSTRUCTION

DESIGNED:
CHECKED:
DRAWN:
HORIZONTAL SCALE: 20'
VERTICAL SCALE: 4' or 2'

INITIAL ISSUE: 02/17/2023
REVISIONS:
1 03/20/2023 WATERSHED COMMENTS
2
3
4
5

PREPARED FOR:
SOUTHWEST TRANSIT
14405 W 62ND ST
EDEN PRAIRIE, MN 55346

I HEREBY CERTIFY THAT THIS PLAN 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
JEFF R. WESTENDORF
03/20/2023 LICENSE NO. 44018

SOUTHWEST VILLAGE
CHANHASSEN, MN

Westwood
Phone (952) 937-5150
(952) 937-5822
Toll Free (888) 937-5150
12701 Whitewater Drive, Suite #300
Minnetonka, MN 55343
www.westwoodps.com
Westwood Professional Services, Inc.

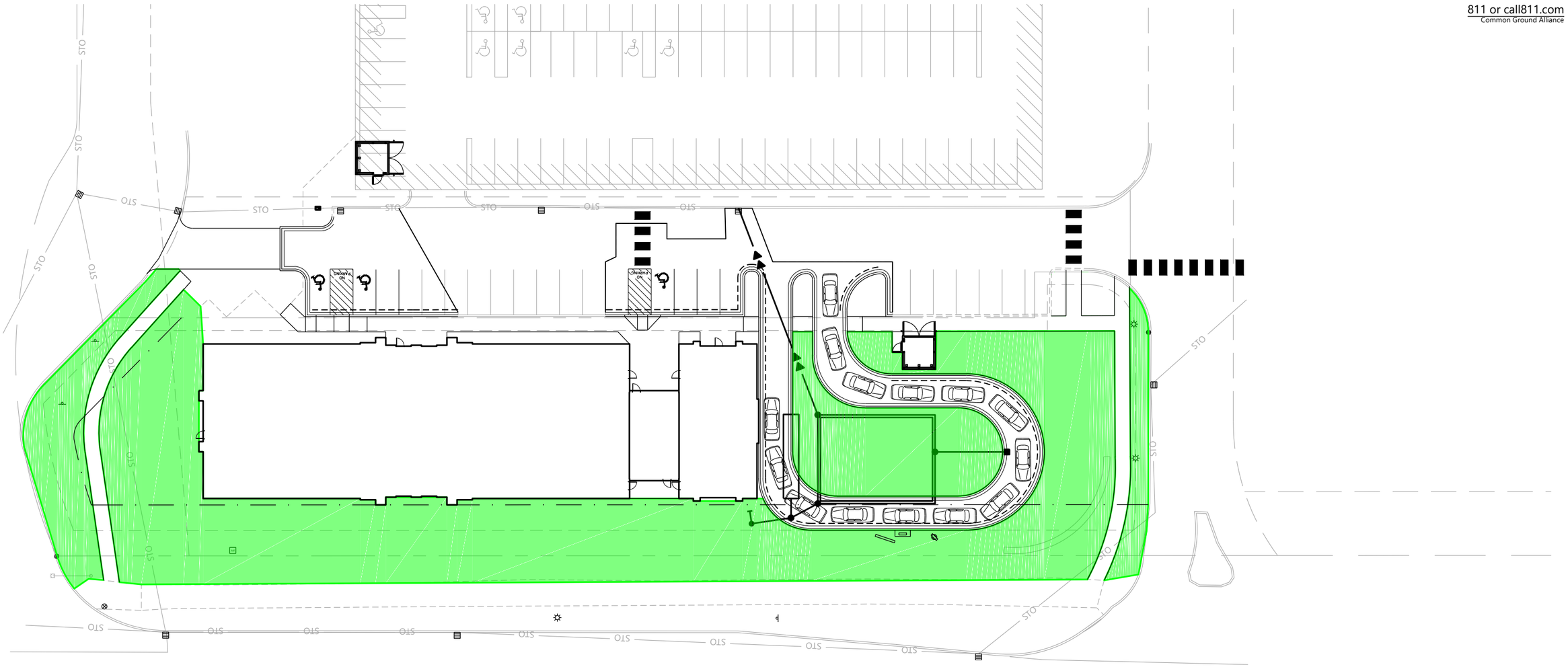
LANDSCAPE PLAN

SHEET NUMBER:
L1.0
DATE: 03/20/2023
PROJECT NUMBER: 0041990.00

SOUTHWEST VILLAGE

N:\0041990.00\DWG\CIVIL\0041990LP01.DWG

Call 48 Hours before digging:
811 or call811.com
Common Ground Alliance



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SOUTHWEST VILLAGE

DESIGNED: .
CHECKED: .
DRAWN: .
FIELD CREW: .
FIELD WORK DATE: .

PREPARED FOR:

SOUTHWEST TRANSIT
14405 W 62ND ST
EDEN PRAIRIE, MN 55346

SOUTHWEST VILLAGE
CHANHASSEN, MN

Westwood
Phone (952) 937-5150 12701 Whitewater Drive, Suite #300
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Toll Free (888) 937-5150 westwoodps.com
Westwood Professional Services, Inc.

IRRIGATION AREA EXHIBIT

PROJECT NUMBER: 0041990.00

SHEET NUMBER: 1 OF 1

DATE: 02/17/2023