



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

Riley Purgatory Bluff Creek Watershed District Permit Application Review

Permit No: 2022-070

Considered at Board of Managers Meeting: December 7, 2022 (RPBCWD extended the permit review timeline on October 26, 2022 by 60 days pursuant to Minnesota Statutes section 15.99)

Received complete: September 23, 2022

Applicant: Marty Schutrop

Consultant: Civil Methods , Inc., Kent Brander

Project: Schutrop Addition: Proposed redevelopment of an existing single-family home parcel into two single-family residential lots with homes. The existing home will remain, with construction of a new home on the second lot. Proposed stormwater feature includes one rain garden.

Location: 1441 Lake Lucy Road, Chanhassen, MN 55317

Reviewer: Scott Sobiech, P.E., Barr Engineering

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 December 7, 2022 meeting of the managers:

Resolved that the application for Permit 2022-070 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 have been affirmatively resolved, the RPBCWD president or administrator is authorized and directed to sign and deliver Permit 2022-070 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	Yes		
J	Stormwater Management	Rate	Yes.	
		Volume	Yes	
		Water Quality	Yes.	
		Low Floor Elev.	Yes	
		Maintenance	See comment.	See rule-specific permit condition J1 related to recordation of stormwater facility maintenance declaration.
		Chloride Management	Yes.	
		Wetland Protection	Yes.	
L	Permit Fee	Yes.	\$3,000 received February 8, 2022. The applicant must replenish the permit fee deposit to the original amount due before the permit will be issued. As of November 8, 2022 the amount due is \$1,962.	
M	Financial Assurance	See comment.	The financial assurance is calculated at \$7,535	

Background

The applicant is proposing a lot split subdividing an existing single residential lot into two lots. The existing home will remain, with construction of a new home on the second lot. A rain garden is proposed to provide stormwater quantity, volume and quality control. There is a wetland in the northeast corner of the site which is not downgradient from and will not be disturbed by the land-disturbing activities. In addition, surface runoff from the land disturbing activities drains via overland flow to an off-site, downgradient wetland that is more than 80 feet from the parcel line, such that even the maximum buffer would not reach the applicant’s parcel. As such Rule D does not impose any buffer requirements for this project. However, the treated runoff leaving the site from the stormwater management system is conveyed via a channel to the off-site wetland, thus requiring conformance with the wetland protection criteria in Rule J, subsection 3.10.

The project site information is summarized below:

Project Site Information	Area (acres)
Total Site Area	1.18
Existing Site Impervious	0.15
Disturbed Site Impervious Area	0.07 (48.9%)
Disturbed Impervious Area Restored with Pervious Surface	0.03

Project Site Information	Area (acres)
Proposed Site Impervious Area	0.19
Change in Site Impervious Area	0.04 (23.7% increase)
Regulated Impervious Surface	0.1
Total Disturbed Area	0.59

The following materials were reviewed in support of the permit request:

1. Application received September 7, 2022 (Incomplete notice was sent on September 12, 2022; materials submitted to complete application on September 23, 2022)
2. Grading & Drainage plan by Civil Methods, Inc. dated August 29, 2022
3. Schutrop Addition plan set (5 sheets) by Civil Methods, Inc. dated September 23, 2022
4. Subsurface Soil Investigation memo by Interstate Geotechnical Engineering, Inc. dated August 17, 2022
5. Stormwater Management Report by Civil Methods, Inc. dated August 30, 2022
6. Electronic HydroCAD models received on September 23, 2022
7. Electronic HydroCAD models received on October 21, 2022
8. Infiltration testing results received on October 25, 2022
9. Minnesota Wetland Conservation Act Notice of Decision dated August 8, 2022
10. Engineers' opinion of probable cost dated September 29, 2022.
11. Response to RPBCWD review comments received September 23, 2022

Rule C: Erosion and Sediment Control

Because the project will involve 0.59 acres of land-disturbing activity, the project must conform to the requirements in the RPBCWD Erosion and Sediment Control rule (Rule C, Subsection 2.1). The erosion control plan prepared by Civil Methods, Inc. includes installation of perimeter control (silt fence or sediment control logs), a stabilized rock construction entrance, inlet protection, daily inspection, 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 liable to the District 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 redevelopment project will disturb 0.59 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 only to the disturbed portion of the project site and additional impervious area because the project will disturb only 48.9 percent of the existing impervious surface and will increase

the imperviousness of the entire site by only 23.7 percent (i.e., less than 50 percent; Rule J, Subsection 2.3).

The developer is proposing construction of one rain garden to provide rate control, volume abstraction and water quality management on the site.

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 disturbed site area are summarized in the table below. The proposed project is in conformance with RPBCWD Rule J, Subsection 3.1.a.

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
West	1.3	1.3	2.6	2.6	5.7	5.7	0.1	0.1

Volume Abstraction

Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from all new or disturbed impervious surface of the parcel. An abstraction volume of 414 cubic feet is required from the 0.1 acres (4,518 square feet) of regulated impervious area on the site for abstraction. The Applicant proposes one rain garden to provide volume abstraction. Pretreatment is provided by a grass filter strips between the impervious surfaces and the rain garden (Rule J, Subsection 3.1.b.1).

Three soil borings performed by Interstate Geotechnical Engineering, Inc. during August 2022 show that soils in the project area are primarily clay loam with granular soils (loamy sand) at intermediate depths. Groundwater was observed in the soil boring located at the rain garden (boring #2 at elevation 980.5 feet and redoximorphic soils where noted on the boring log at elevation 985.5 feet. The following table demonstrates that the proposed design provided adequate separation between the bottom of the stormwater facilities and the groundwater (Rule J, Subsection 3.1.b.2.a).

Groundwater Separation Analysis

Proposed BMP	Nearest Subsurface Investigation	Boring is within footprint?	Groundwater Elevation/Redoximorphic Soils (feet)	BMP Bottom Elevation (feet)	Separation (feet)
Rain Garden	SB-02	Yes	985.5	988.6	3.1'

Double ring infiltrometer testing results show an average infiltration rate of 0.52 inches per hour (in/hr) beneath the proposed stormwater management feature. The engineer concurs with the applicant’s design infiltration rates of 0.3 inches per hour. The proposed stormwater facility provides adequate surface area to drawdown the abstraction volumes within the required 48-hour period, thus conforming with Rule J, Subsection 3.1.b.3. The table below summarizes the volume abstraction required and the volume abstraction achieved by the proposed stormwater management facilities on site. The engineer concurs with the submitted information and finds that the proposed project will conform with Rule J, Subsection 3.1.b.

Volume Abstraction Summary

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Depth (inches)	Provided Abstraction Volume (cubic feet)
1.1	414	1.2	451

Water Quality Management

Subsection 3.1.c of Rule J requires the Applicant 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. Because the BMP proposed by the applicant provides more volume abstraction than is require by 3.1b, the engineer finds that the proposed project is in conformance with Rule J, Subsection 3.1.c.

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 home and the adjacent stormwater management feature is summarized below and shows the proposed project is in conformance with Rule J, Subsection 3.6a.

Lot Riparian to Stormwater Facility	Low Floor Elevation of Building (feet)	Adjacent Stormwater Facility	100-year Event Flood Elevation of Adjacent Stormwater Facility (feet)	Freeboard to 100-year Event (feet)
Proposed House	994.8	Rain Garden	990.67	4.13
Proposed House	994.8	Existing conveyance channel	992.8	2.0
Existing House	995.5	Rain Garden	990.67	4.83

Maintenance

Subsection 3.7 of Rule J requires the submission of a 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 Applicant provided a draft maintenance and inspection declaration for review that provides the maintenance and inspection required by Rule J, Subsection 3.7.

- J1. Permit applicant must provide a proof of recordation of the maintenance and inspection declaration as a condition of issuance of the permit. A draft of the declaration must be provided for District review and approval prior to recordation as a condition of issuance of the permit.

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. The RPBCWD chloride-management plan requirement applies to the streets and common areas of the project site, but not the individual single-family homes. Because there are no street or common areas, Rule J, subsection 3.8 does not impose requirements on this project.

Wetland Protection

Because runoff from this site is directly tributary to a downstream, off-site medium value wetland, the project must comply with the wetland protection criteria in Rule J, Subsection 3.10

In accordance with Rule J, subsection 3.10a, there is no proposed activity subject to Rule J that will alter the site in a manner that increases the bounce in water level, duration of inundation, or change the runoff elevation in the subwatershed for the wetland receiving runoff from the land disturbing activities. Because the applicant's HydroCAD model results demonstrate, and the engineer concurs, that the proposed flow rate and volumes flowing towards the off-site wetland are less than the under existing conditions, the bounce and inundation will not increase, thus the project meets the Bounce and Inundation criterion.

Rule J, Subsection 3.10b requires that treatment of runoff to medium value wetland meet the water quality treatment criteria in Rule J, subsection 3.1c. Because the proposed the rain garden provides the water quality treatment required in accordance with 3.1c.i, the engineer finds that the proposed project is in conformance with Rule J, Subsection 3.10b.

Rule L: Permit Fee Deposit:

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 was received on September 7, 2022. 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. The amount needed to replenish the permit fee deposit is \$1,962 as of November 8, 2022.

Rule M: Financial Assurance:

	Unit	Unit Cost	# of Units	Total
Rules C: Silt fence:	LF	\$2.50	520	\$1,300
Inlet protection	EA	\$100	2	\$200
Rock Entrance	EA	\$250	1	\$250
Restoration	Ac	\$2,500	0.59	\$1,475
Rules J: Stormwater Management	EA	125% OPC	1	\$3,625
Rain Garden: 125% of engineer’s opinion of cost (\$2900)				
Contingency (10%)		10%		\$685
Total Financial Assurance				\$7,535

Applicable General Requirements:

1. The RPBCWD Administrator and Engineer shall be notified at least three days prior to commencement of work.
2. 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 above and on the permit.
3. The grant of the permit does not relieve the permittee of any responsibility to obtain approval of any other regulatory body with authority.
4. 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.
5. 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.
6. 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.

7. 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 will conform to Rules C and J if the Rule Specific Permit Conditions listed above are met.

Recommendation:

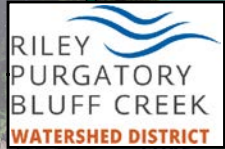
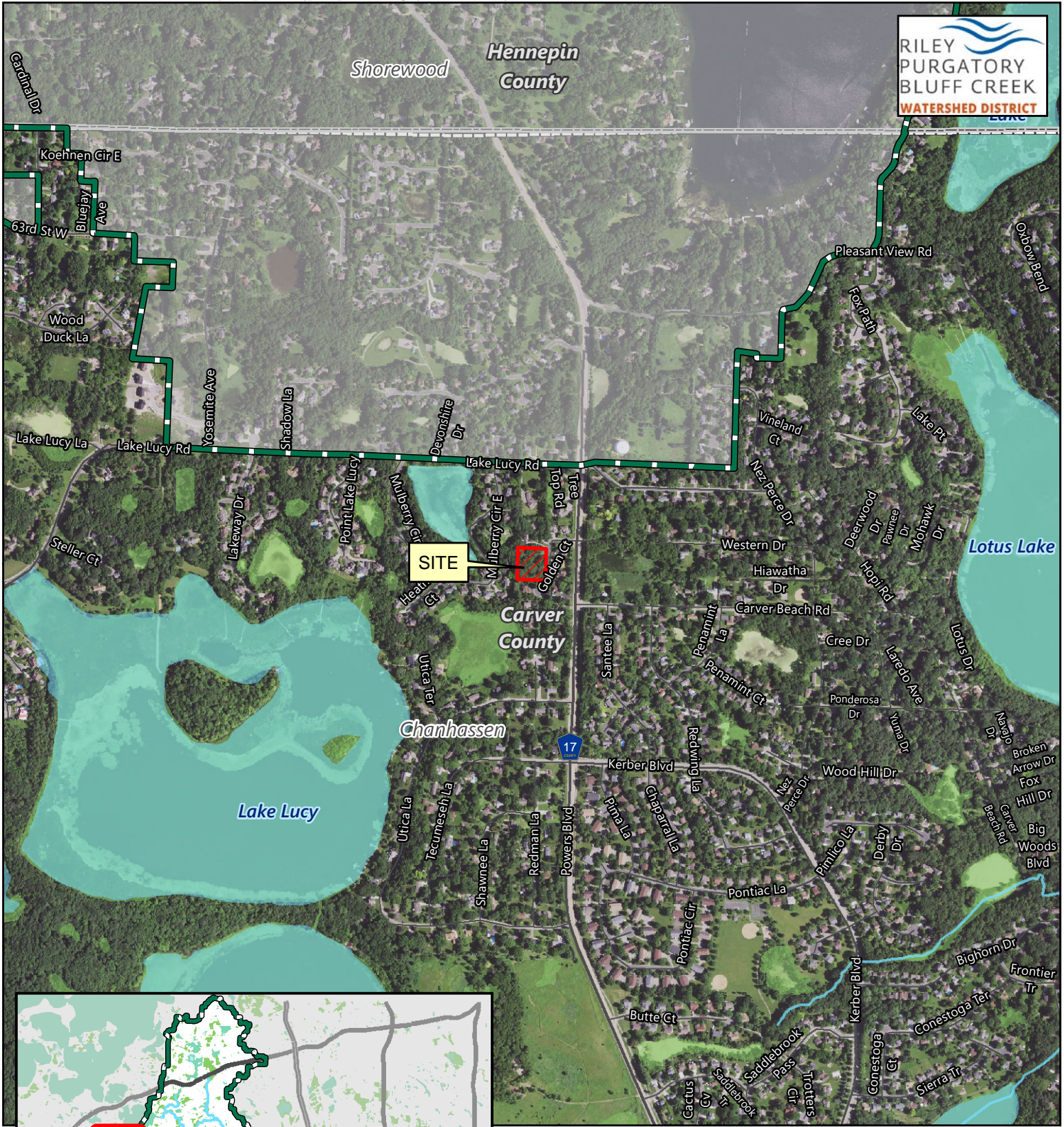
Approval of the permit issuance contingent upon:

1. Financial Assurance in the amount of \$7,535.
2. Receipt of the name, address and phone number of the individual who will remain liable to the District 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.
3. Receipt showing recordation of the maintenance declaration for the stormwater management facilities. Drafts of any and all documents to be recorded must be reviewed and approved by the District prior to recordation. Permit applicant must provide a proof of recordation 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 \$1,962 as of November 8, 2022.

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 facility 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.
 - e) photographic evidence of buffer marker locations indicated by permanent, free-standing markers in accordance with Rule D, Subsection 3.4 criteria.
3. Providing the following additional close-out materials:
 - a) Documentation that constructed infiltration facility performs as designed. This may include infiltration 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. The work under the terms of permit 2022-070, 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.



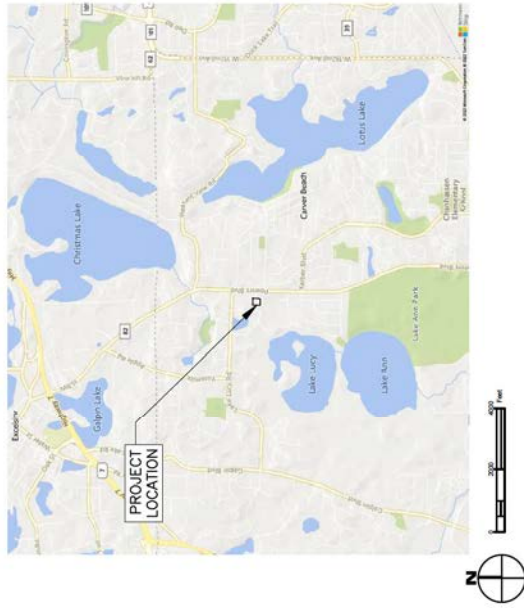
Permit Location Map

SCHUTROP ADDITION
Permit 2022-070
 Riley Purgatory Bluff Creek
 Watershed District



Feet





PRELIMINARY PLANS FOR
SCHUTROP ADDITION
 CHANHASSEN, MN
 SEPTEMBER 2022

VICINITY MAP

INDEX

PROJECT TITLE

NOTES

OWNER:
 Schutrop Homes, Inc.
 540 Lakota Lane
 Chaska, MN 55318
 Attn: Mary Schutrop
 Ph: (612) 840-8251
 schutropbidg@gmail.com

SURVEY:
 Demars Gabriel Land Surveyors, Inc.
 David E. Crook, PLS
 2317 W. 93rd Street
 Bloomington, MN 55431
 Attn: David E. Crook, PLS
 Ph: (763) 559-0908
 dec@qwestoffice.net

CITY/TOWNSHIP:
 City of Chanhasen
 7700 Market Blvd, PO Box 147
 Chanhasen, MN 55317
 Attn: Sharmeen Al-Jeff, Senior Planner
 Ph: (952) 227-1134
 sal-jeff@chanhasenmn.gov

WATERSHED DISTRICT:
 Riley-Purgatory-Bluff Creek WD
 18681 Lake Dr E
 Chanhasen, MN 55317
 Ph: (952) 607-6512
 Attn: Terry Jeffrey, Administrator
 tjeffery@rpbowd.org

SHEET NO.	DESCRIPTION
C001	COVER SHEET
C101	EXISTING CONDITIONS
C501	GRADING & DRAINAGE
C601	EROSION CONTROL
C701	DETAILS

LEGEND:

PROPERTY LINE	CURB & GUTTER	STORM SEWER / DRAINAGE	STORMWATER POND
EROSION CONTROL	STONE SEWER / DRAINAGE	ROCK BRUSH, RANDOM COURSED	EROSION CONTROL BLANKET
WETLAND	DRIVEWAY	TURF ENFORCEMENT MAT	GEORGIA OR ARTICULATED CONCRETE
CONTOUR	WETLAND	STABILIZED CONST. ENTRANCE	SLIT FENCE
SPOT ELEVATION	WETLAND BUFFER	SEEDING CONTROL LOG	INLET PROTECTION
DRAINAGE DIRECTION	WETLAND BUFFER	RETENTION / RETENTION	RETAINING WALL
RETAINING SURFACE	CONCRETE SURFACE	SEEDING CONTROL LOG	RETAINING WALL
CONCRETE SURFACE	CONCRETE SURFACE	SEEDING CONTROL LOG	RETAINING WALL

THE EXISTING UTILITY INFORMATION SHOWN IN THIS PLAN HAS BEEN OBTAINED FROM RECORD DRAWINGS, FIELD SURVEY AND STATE LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY 811 OR Gopher State One Call (1.800.252.1166).

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF C/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

PLAN REFERENCES:

- MINNESOTA DEPT. OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR CONSTRUCTION, LATEST EDITION.
- CITY ENGINEERS ASSOCIATION OF MINNESOTA STANDARD SPECIFICATIONS, LATEST EDITION.
- UNREINFORCED CONCRETE PER ACI 330R-08 AND ACI 330.1-03.



CIVIL METHODS, INC.
 P.O. Box 28038
 St. Paul, MN 55128
 01:763.210.5713 | www.civilmethods.com

RENT E BRANER
 DATE: 09-23-2022
 USER: 44579

DATE REVISION: 09-23-2022
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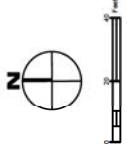
PROJECT:
 SCHUTROP ADDITION
 6730 GOLDEN CT, CHANHASSEN, MN
 SCHUTROP HOMES, INC.

SHEET NO:
C001

COVER SHEET

BENCHMARK
SEE SURVEY
DOCUMENTATION

- LEGEND:
- PROPERTY LINE
 - SETBACK
 - EASEMENT
 - WETLAND BOUNDARY
 - CONTOUR
 - DRAINAGE DIRECTION
 - IMPERVIOUS PAVEMENT
 - REMOVE IMPERVIOUS PAVEMENT
 - CONCRETE PAVEMENT
 - REMOVE TREX

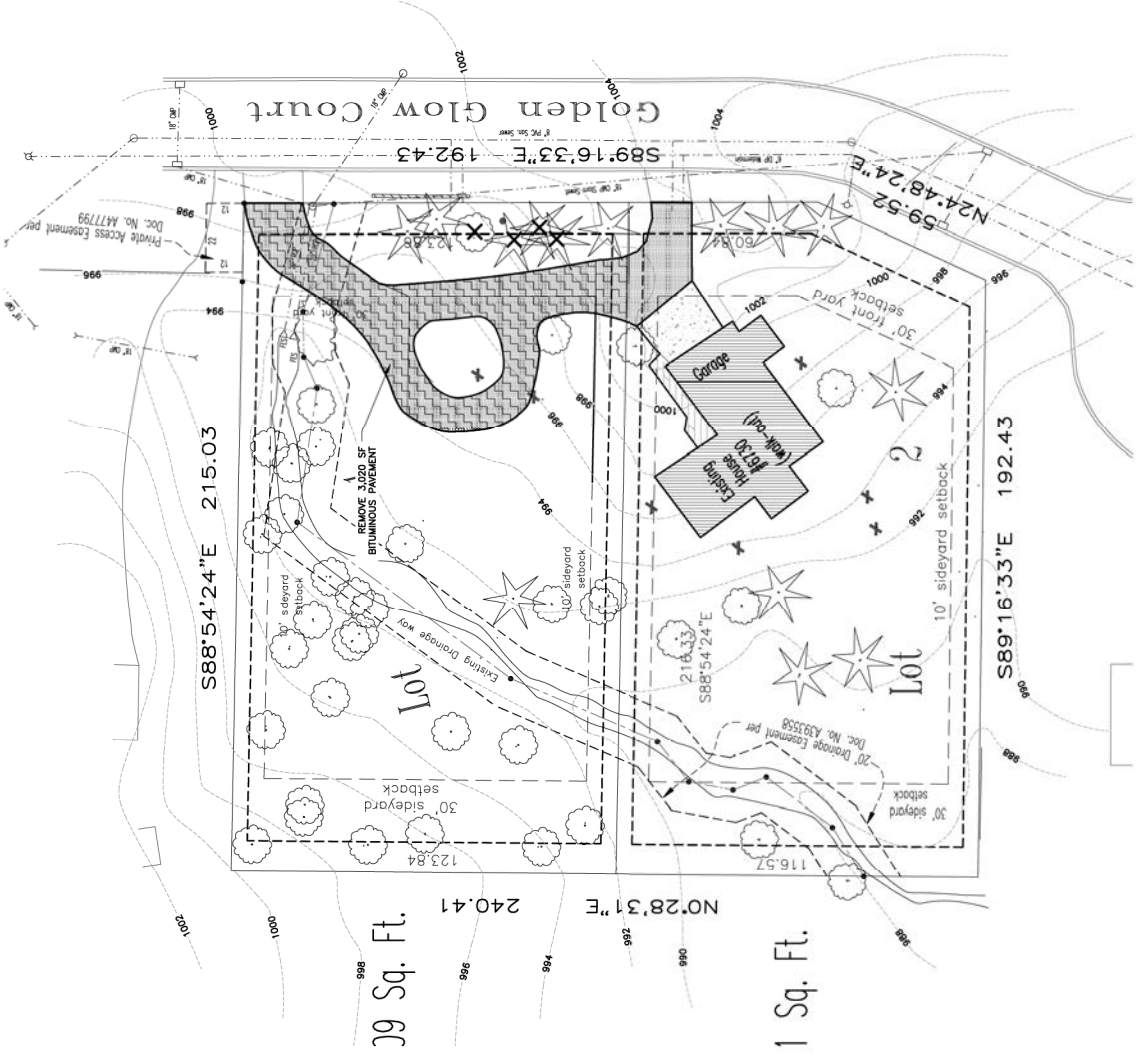


GENERAL NOTES:

1. As indicated on Sheet E-03, Section C-01, Level 1, this site is a utility quality level D. This utility quality level was determined according to the guidelines of C/AACE 38-02, "Guidelines for the Assessment of Utility Quality Level." The contractor shall be responsible for the removal of utility structures and utilities, as shown. Contractor is responsible for locating utilities prior to digging.
2. The subsurface utility location information in this plan is utility quality level D. This utility quality level was determined according to the guidelines of C/AACE 38-02, "Guidelines for the Assessment of Utility Quality Level." The contractor shall be responsible for the removal of utility structures and utilities, as shown. Contractor is responsible for locating utilities prior to digging.
3. Existing pavement shall be cut full-depth to provide a clean, uniform face for new concrete pavement.
4. Existing pavement shall be cut full-depth to provide a clean, uniform face for new concrete pavement.
5. Protect light poles and other existing utilities, signs, trees, etc. Relocation of any private utilities not directed on these plans shall be coordinated with the utility owner. The contractor shall be responsible for the relocation of any private utilities. Relocation of any existing utility shall be coordinated with the utility owner. Relocation of any existing utility shall be coordinated with the utility owner.
6. Damaged items or property shall be repaired or replaced at Contractor's expense.

SITE AREA DATA

REF	DESCRIPTION	VALUE
A	OVERALL PROPERTY (PARCEL) AREA	5130 SF
B	EXISTING DRIVEWAY APRON AREA (INCLUDE PARCEL)	334 SF
C	EXISTING DRIVEWAY APRON AREA (EXCLUDE PARCEL)	199 SF
D	EXISTING DRIVEWAY APRON TO BE REMOVED	135 SF
E	EXISTING DRIVEWAY APRON TO REMAIN IN PLACE	263 SF
F	ADDITIONAL PROPOSED DRIVEWAY APRON	3020 SF
G	BITUMINOUS REMOVAL WITHIN PARCEL	1521 SF
H	BITUMINOUS REMOVAL REPLACED WITH IMPERVIOUS SURFACE IN PARCEL	2499 SF
I	EXISTING SITE IMPERVIOUS AREA WITHIN PARCEL	6248 SF
J	ADDITIONAL PROPOSED SITE IMPERVIOUS AREA WITHIN PARCEL	5773 SF
K	TOTAL PROPOSED SITE IMPERVIOUS AREA (I+J+K)	8466 SF
L	NET INCREASE IN SITE IMPERVIOUS AREA (I+K)	1562 SF
M	PERCENT INCREASE IN SITE IMPERVIOUS AREA (L/M)	24%
N	PERCENT OF EXISTING IMPERVIOUS AREA (D+G)	3213 SF
O	PERCENT OF EXISTING IMPERVIOUS AREA (D+G)	49%
P	TOTAL DISTURBED AREA	25567 SF



CIVIL METHODS, INC.
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St. Paul, MN 55128
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SCHUTZTOP ADDITION
8730 GOLDEN CT, CHANHASSEN, MN
SCHUTZTOP HOMES, INC.

DATE REVISION: 08/23/2022
PROJECT: 8730 GOLDEN CT, CHANHASSEN, MN
PROJ. LOCATION: 8730 GOLDEN CT, CHANHASSEN, MN
PROJ. OWNER: SCHUTZTOP HOMES, INC.

DATE: 08/23/2022
DRAWN: [Name]
CHECKED: [Name]
DATE: 08/23/2022
LIC. NO.: 44579

DATE: 08/23/2022
DRAWN: [Name]
CHECKED: [Name]
DATE: 08/23/2022
LIC. NO.: 44579

- LEGEND:**
- PROPERTY LINE
 - SETBACK
 - EASEMENT
 - CONTOUR
 - DRAINAGE DIRECTION
 - FINISHED SURFACE
 - CONCRETE SURFACE
 - ROCK/RETENTION/INFILTRATION BARRIERS
 - ROCK RIPRAP, RANDOM CRUSHED
 - EROSION CONTROL BLANKET
 - STABILIZED CONCRET. ENTRANCE
 - SET FORCE
 - SEEDING CONTROL LOG
 - INLET PROTECTION
 - SUBFACEDMENT NODE ID
 - BASIN NODE ID
 - SUBFACEDMENT DELINEATION



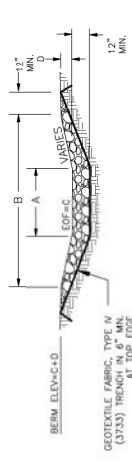
GENERAL NOTES:

- The subsurface utility location information in this plan is utility quality level D. This utility quality level was determined according to the guidelines of C/ASSE 38-02, titled "Standard Guidelines for the Collection and Deposition of Existing Subsurface Utility Information." The contractor shall be responsible for locating utilities prior to digging. Construction shall comply with all applicable governing codes. Contractor's expense.
- Contractor shall install demonstration trenching at property line as necessary.
- Contours shown are to final grade.

SITE GRADING & RAIN GARDEN NOTES

- Unless otherwise noted, all proposed grades and elevations shown are to finished grade surfaces. Include stippling symbol marking which indicates the area to be finished.
- Grading and construction shall be completed in one phase (0112).
- At locations where new work connects to existing work, field verify existing elevations and grades prior to beginning the new work. Match existing grades of 4" across material heated off as directed.
- Construction shall be completed in one phase (0112).
- Construction shall be completed in one phase (0112).
- Basin bottom shall be excavated to a depth of 12" prior to placement of engineered soil media.
- Engineered soil media shall consist of 1/4" (007) Filter Topsoil Borrow (3877.2.F)
- Excavate rain garden basin to final grade with light-weight equipment or from outside the basin footprint to minimize compaction to extent practical. No wheeled machines permitted in basin.

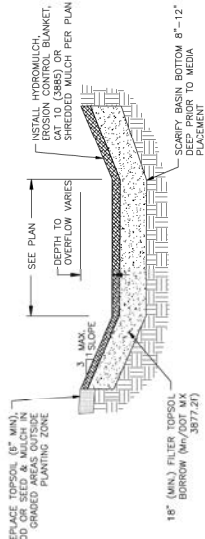
RAIN GARDEN	A	B	C	D
	0.3'	5.2'	989.8	1.0'



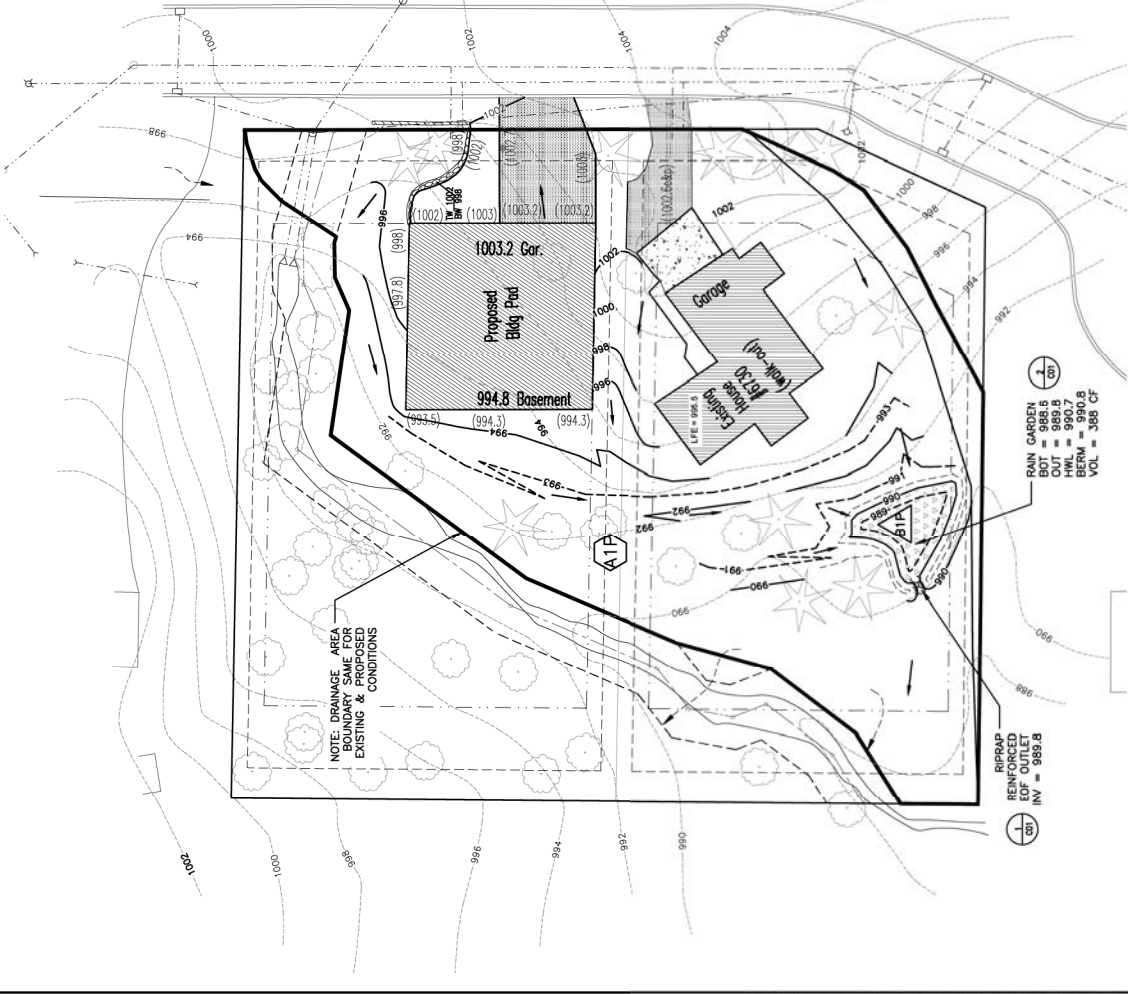
NOTE:
RIPRAP TO BE PLACED TO PROVIDE A DEFINED WEIR AREA. PROVIDE 18" (MIN.) FILTER TOPSOIL BORROW (3877.2.F) OVER WEIR AREA. PROVIDE 18" (MIN.) FILTER TOPSOIL BORROW (3877.2.F) OVER WEIR AREA.

1 REINFORCED EOF OUTLET

PLANTING: INSTALL NATIVE "RAIN GARDEN" PLANT PLUGS (SEE Z') SPACED PER SUPPLIER INSTRUCTIONS



2 RAIN GARDEN BASIN



CIVIL METHODS, INC.

P.O. Box 28038
St. Paul, MN 55128
01:763.210.5713 | www.civilmethods.com

DATE REVISION
09-23-2022
09-23-2022

PROJECT: SCHUTROP ADDITION
8730 GOLDEN CT., CHANHASSEN, MN
SCHUTROP HOMES, INC.

DESIGNED BY: KEB
DRAWN BY: KEB
CHECKED BY: KEB
DATE: 09-23-2022
LIC. NO.: 44578

PROJECT: SCHUTROP ADDITION
8730 GOLDEN CT., CHANHASSEN, MN
SCHUTROP HOMES, INC.

DATE REVISION
09-23-2022
09-23-2022

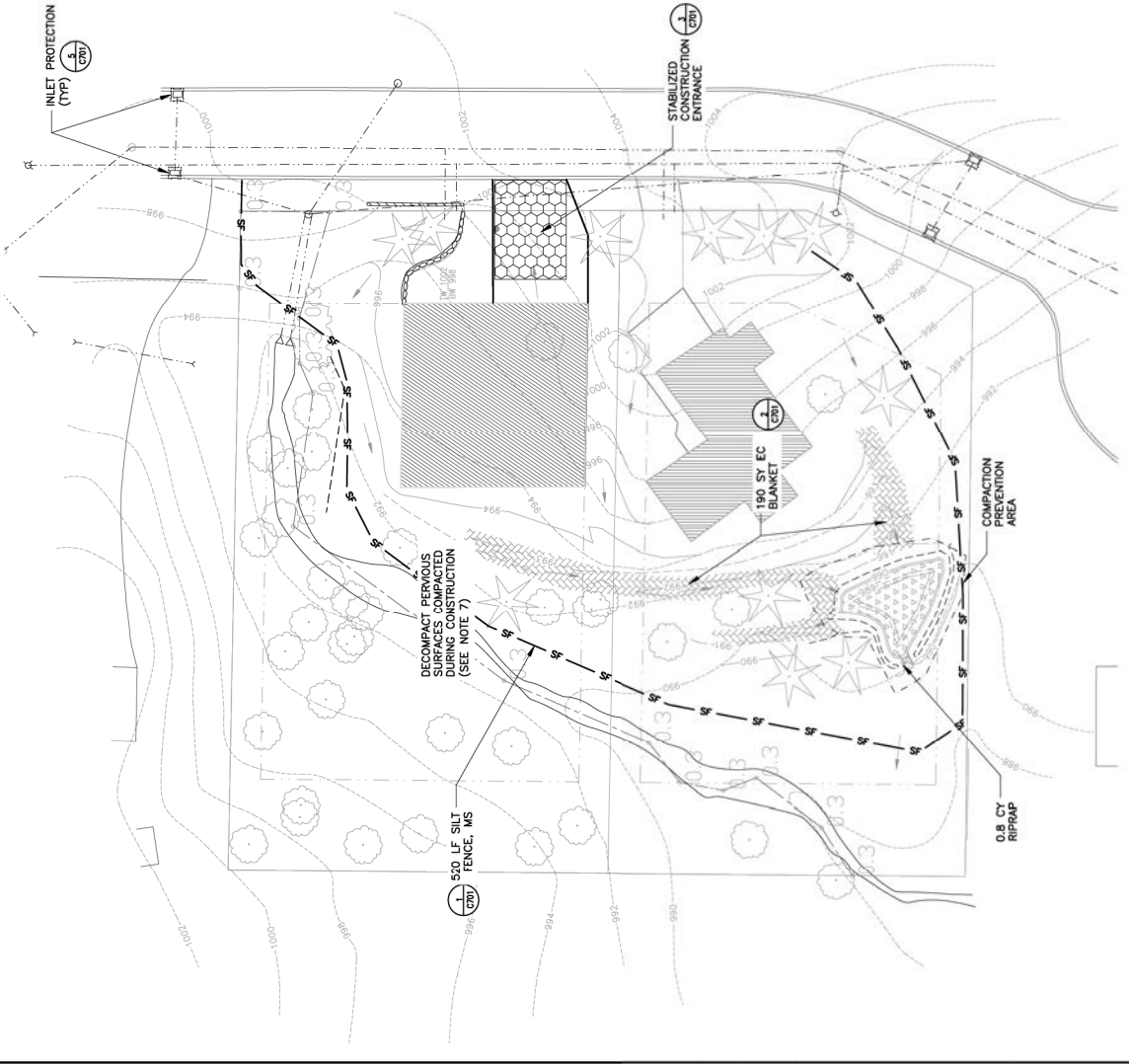
PROJECT: SCHUTROP ADDITION
8730 GOLDEN CT., CHANHASSEN, MN
SCHUTROP HOMES, INC.

- LEGEND:
- PROPERTY LINE
 - SETBACK
 - EASEMENT
 - CONSTRUCTION PREVENTION AREA
 - WETLAND BOUNDARY
 - EXISTING CONTOUR
 - PROPOSED CONTOUR
 - DRAINAGE DIRECTION
 - ROCK RIPRAP, RANDOM CRUSHED
 - EROSION CONTROL BLANKET
 - STABILIZED CONST. ENTRANCE
 - SILT FENCE
 - SEMIOT CONTROL LOG
 - INLET PROTECTION
 - RETAINING WALL



EROSION CONTROL AND TURE RESTORATION NOTES:

1. Perimeter sediment controls shall be installed as indicated prior to site disturbance, and shall be installed to allow for high-flow bypass or overflow to prevent failure during significant rainfall. Devices shall not block water up on adjacent property.
2. Inlet protection shall be installed at City catch basins within 1 block of project site.
3. All tree protection fences around drip line of trees to be saved, including those in R.O.W.
4. Inlet protection shall be installed to prevent sediment from entering adjacent streets. Contractor shall sweep at the end of work days. Natural topography and the greatest extent possible, including retention onsite of native topsoil to the greatest extent possible.
5. Additional measures, such as hydraulic mulching and other practices as approved by the City, shall be used on slopes of 3:1 (H:V) or steeper to provide erosion stabilization.
6. Topsoil used on the project shall conform with the Ray-Purgatory-Bluff Creek riprap material's definition of topsoil, which requires a minimum of 5% organic matter.
7. Final site stabilization measures must specify that at least six inches of topsoil be placed over the riprap. Final site stabilization measures shall be installed during final site treatment whenever topsoil has been removed.
8. Construction site waste such as discarded building materials, concrete truck wash water, and other debris shall be removed from the site.
9. All temporary erosion and sediment control BMPs must be maintained until completion of construction and vegetation is established sufficiently to ensure erosion control.
10. All temporary erosion and sediment control BMPs must be removed upon final stabilization.
11. Compaction during construction and remaining various upon completion of construction must be decompacted to achieve a soil compaction in the presence of 15% less than 1400 pounds per square inch (PSI) in the top 12 inches of the subgrade. The contractor shall use a roller, tamper, and other suitable equipment to compact the subgrade. Low-stirring work has temporarily or permanently caused on a property that ensues to an impaired water, within 14 days elsewhere.
12. Erosion control measures shall be installed and maintained until final stabilization measures to ensure integrity and effectiveness. The permittee must repair, replace or supplement of nonfunctional BMPs with equivalent or better measures. Erosion control measures shall be installed and maintained until unless adverse conditions produce access to the relevant area of the site, in which case the repair must be completed as soon as conditions allow.
13. The permittee shall maintain a log of activities under this section.
14. Staking off and marking of proposed infiltration facilities to prevent soil compaction by heavy equipment, stacking of materials and built-up structures must be deployed to prevent sediment and other material from entering the infiltration facilities. Infiltration facilities must be installed within 3 feet of final stabilization. Any accumulated sediment in an infiltration facility must be removed immediately. The permittee shall ensure that the infiltration facility is properly stabilized. Highly porous surface of soil below on infiltration practice must be loosened to a minimum depth of 18 inches prior to installation or planting.



EROSION CONTROL SUPERVISOR:
PRIMARY: MARTY SCHUTROP Ph: (612) 840-8251

EROSION CONTROL

SCHUTROP ADDITION
6730 GOLDEN CT, CHANHASSEN, MN
SCHUTROP HOMES, INC.

PROJECT: PROJ. LOCATION: PROJ. OWNER:

DATE REVISION: 09-23-2022
REVISION: 09-23-2022
DRAWN: [blank]
CHECK: [blank]
DATE: 09-23-2022
LIC. NO.: 44579

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