ESTIMATED TREE REMOVALS: 320 AND 3 TREES OVER 42".
DO NOT DISTURB 35 TREES ALONG DAWNVIEW TERRACE.
IESF is a type of subcut drain described in 2502.1(b). The typical IESF includes perforated drain tile, nonperforated pipe, appurtenant pipe fittings, nonwoven filter fabric, common excavation, common borrow, fine filter aggregate, course filter aggregate, and iron filings.

IESF-Low is a low profile sand filter subcut drain. IESF-Low includes perforated drain tile, nonperforated pipe, appurtenant pipe fittings, Tenax TNT (or equal) drainage geotextile, common excavation, common borrow, fine filter aggregate, course filter aggregate, and 2400 grams per meter square weight iron wool.

2052.2 - MATERIALS
Perforated pipe is used in the rock media above and below the IESF and nonperforated pipe is used outside of the rock media. Iron filings shall be Connelly GPM ETI - CC - 1004 (-8+50) or approved equal. Filtration medium shall consist of a blend of 5% iron filings with 95% select granular borrow.

2052.3 - CONSTRUCTION REQUIREMENTS
Trench width and various material depth is provided on IESF detail. Iron/Sand, Sand and Course Filter aggregate dimensions can vary. Construction sequence is described on detail. Discharge pipe connects to storm sewer system.

2052.4 - METHOD OF MEASUREMENT
Granular material shall be measured by compacted volume (CV) using the trench dimensions shown on the detail.
STORMWATER POLLUTION PREVENTION PLAN (SWPPP) NARRATIVE

PROJECT SITE EVALUATION, ASSESSMENT, AND PLANNING

This narrative is to serve as a guidance plan and must be amended and modified as site conditions change during construction.

PROJECT LOCATION/DESCRIPTION

PROJECT/SITE NAME: BRIARWOOD WATER QUALITY IMPROVEMENT PROJECT

PROJECT NUMBER: 2023-26

PROJECT LOCATION: Atwood Hamlin Terrace City of Golden Valley County- Hennepin State- Minnesota Zip- 55447

LOCATION/CONSIDERATION: 65-0506/53-3471 SECTION 7 TOWNSHIP 28 RANGE 24

CONTACT INFORMATION/RESPONSIBLE PARTIES

The city of Golden Valley owns the land, driveway road, and easement areas associated with the project. The city of Golden Valley is the owner permitting applying for permit coverage and will be responsible for developing this SWPPP and ensuring the long-term maintenance of the post-construction permanent stormwater management system, as specified in the SWPPP. The city of Golden Valley will ensure that the described work in the SWPPP is being completed by the primary contractor.

OWNER/PERMITTEE: CITY OF GOLDEN VALLEY (JPEF OLIVER, CITY ENGINEER)

7800 Golden Valley Road
Golden Valley, MN 55422
763-593-8500/GOLDENVILLENEMN.GOV

The primary contractor will enter into a contract with the city of Golden Valley to complete the required work for this project. The primary contractor will become (under contract) a co-permittee on the storm water permit issued by the city of Golden Valley. The primary contractor will be responsible for developing a GRI responsible prior to starting construction (refer to storm water section). The storm water permit must be submitted to the MPCA after the project is awarded to the primary contractor. Prior to letting the project.

The primary contractor will ensure that individual contractors are reviewing and understanding the SWPPP have been identified by the city and the GRI must be available upon request. This includes any sub-contractors that the primary contractor employs under separate contract. The primary contractor will provide the information for the site construction/project, base, and sub-permits. The primary contractor will perform a pre-construction visit to address any areas of concern pertaining to environmental compliance. The primary contractor will implement and maintain BMP for the duration of construction. The primary contractor will complete the required site inspections to remain in compliance with storm water permit requirements (Part II, III, B, C, II, C, III, B, I, B, F, F, IV, V, and applicable construction activity requirements found in Appendix A, Part B).

CONTRACTORS/PERMITTEE: (TO BE DETERMINED THROUGH TRANSFER OF HEGEMON PREMISES)

WEB & ASSOCIATES has been contracted by the city of Golden Valley for the SWPPP for this project. This SWPPP was prepared by an individual that has been approved to adhere to the requirements of the MPCA and the city of Golden Valley. Certification cards are available upon request. WEB & ASSOCIATES will offer assistance for compliance with the storm water permit before, during, and after construction of the project.

SWPPP DEVELOPERS: WATER RESOURCES ENGINEER

WEB & ASSOCIATES, INC.

7417 E. 7TH ST., SUITE 200
MINNEAPOLIS, MN 55414

763-322-5400/WEB@WEBandASSOCIATES.COM

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<tr>
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<td>SHEET 3</td>
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<tr>
<td>EROSION CONTROL</td>
<td>SHEET 8</td>
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EXISTING SITE CONDITIONS, SOILS, AND EXPECTED PRECIPITATION

SOILS AND NATIVE TOPOGRAPHY: NATIVE TOPOGRAPHY WILL BE STRIPED AND STOCKPILED FOR FINAL GRADE OPERATIONS, WHERE INDICATED IN THE CONSTRUCTION PLANS AND SPECIFICATIONS. METHODS AND EQUIPMENT TO MINIMIZE SOIL COMPACTION (IN PROPOSED EAVEMENT AREAS, DRAINAGE LINES OF TRAFFIC TO BE PRESERVED). ETC.) SHALL BE DETERMINED BY THE CONTRACTOR’S SWPPP AMMENDMENT. THE FOLLOWING USDA-RESCN MAPS SOILS ARE SHOWN AS “NOT EASILY ERODIBLE,” POTENTIALLY HIGHLY ERODIBLE, AND HIGHLY ERODIBLE ON THE SWPPP SITE MAP.

USDA-RESCN MAPPED SOIL SURVEY UNIT NO., NAME, TEXTURE, APPROPRIATE PARTICLE SIZE RANGES (MU)

<table>
<thead>
<tr>
<th>MU</th>
<th>SAND</th>
<th>Silt</th>
<th>Clay</th>
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<tbody>
<tr>
<td>43</td>
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PROJECT DESCRIPTION & SCHEDULE

This project consists of the excavation of an approximately 8,500 cubic yard water quality pond on the downstream end of a 182 acres field that currently has no treatment. Water enter into basin area. In addition, this pond will be incorporating an iron enhanced sand filter to provide additional phosphorus removal.
EXPERIMENTAL FREQUENCY, INTENSITY, AND DURATION OF PRECIPITATION. THE NOAA ATLAS 14 POINT PRECIPITATION FREQUENCY ESTIMATES FOR THE PROJECT LOCATION ARE SHOWN BELOW. THIS INFORMATION IS TO BE USED FOR ANTIQUATED INPERIOD FREQUENCY AND ESTIMATING CONSTRUCTION ACTIVITIES. THIS INFORMATION DOES NOT NECESSARILY REFLECT ANY DESIGN CRITERIA.

DESCRIPTION OF RECEIVING WATERS: THIS WAS PROJECT WILL DISCHARGE DIRECTLY INTO BASEET CREEK.

DESCRIPTION OF IMPACT FREQUENCY, INTENSITY, AND DURATION OF PRECIPITATION. THE NOAA ATLAS 14 POINT PRECIPITATION FREQUENCY ESTIMATES FOR THE PROJECT LOCATION ARE SHOWN BELOW. THIS INFORMATION IS TO BE USED FOR ANTIQUATED INPERIOD FREQUENCY AND ESTIMATING CONSTRUCTION ACTIVITIES. THIS INFORMATION DOES NOT NECESSARILY REFLECT ANY DESIGN CRITERIA.

HIDROLOGIC AND WATER QUALITY MODELING DATA IS AVAILABLE UPON REQUEST.

ADDITIONAL BMPS FOR SPECIAL OR IMPAISED WATERS DURING CONSTRUCTION ACTIVITY (APPENDIX A)

C.1.A FLOWING WATERS: CONTRACTOR SHALL EMULATE ALL RECOMMENDATION BMPS WITHIN 11 DAYS AFTER THE CONSTRUCTION ACTIVITY THAT INCREASE OR POTENTIALLY DAMAGE TO FLOWING WATERS ARE SHOWN ORIGINAL (APPENDIX A). C.1.B TEMPORARY BASINS, CONTRACTOR DOES NOT NEED TO ADHERE TO THE REQUIREMENTS DESCRIBED IN PAR T III.1. 1-6 OF THE INCREASED CONSTRUCTION SITE FOR COMMON DELAY LOCATIONS BECAUSE THE PROJECT WILL NOT DISTURB 2 ACRES AND THE PROJECT 10 TO DEVELOP A FUTURE TREATMENT FUND THAT WILL SERVE AN AREA.

C.4 BIRDS (MIGRATION): THE PERMANENT STORMWATER MANAGEMENT SYSTEM MUST BE DESIGNED SUCH THAT THE PRE- AND POST-PROJECT RUNOFF RATE AND VOLUME FROM THE 1 AND 2-YEAR 24-HOUR PRECIPITATION EVENTS REMAIN THE SAME OR ARE REDUCED.

BRIARWOOD WATER QUALITY IMPROVEMENT PROJECT

CITY OF GOLDEN VALLEY

POTENTIAL COMPLICATIONS PROPERTIES

<table>
<thead>
<tr>
<th>SITE</th>
<th>CLASSIFICATION</th>
<th>ENVIRONMENTAL CONCERN</th>
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<tbody>
<tr>
<td>1</td>
<td>LOW</td>
<td>MISCELLANEOUS MILL</td>
</tr>
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MAKING/STAGING AREAS NOT TO BE DISTURBED

THE RESERVED AREAS OF EXISTING VEGETATION WILL BE IDENTIFIED ON THE TOP SHEETS AS "DO NOT DISTURB AREAS." NO CONSTRUCTION STAGING OR STAGING DEFINED BY THE OWNERS FOR THIS PROJECT. THE SCHEDULE FOR INSTALLING TEMPORARY BMPS SHALL BE INTEGRATED INTO THE CONTRACTOR'S SCHEDULE FOR EACH CONSTRUCTION STAGE AND PRESENTED TO THE OWNER'S REPRESENTATIVE. THE PROJECT'S CONSTRUCTION STAGING AND SHELTER IS DEFINED BY THE "CONSTRUCTION STAGING & TRAFFIC CONTROL PLAN" AND PROJECT SPECIFICATIONS.

ENVIRONMENTAL SENSITIVE AREAS

STEEL SLOPES: EXISTING EXISTING STEEL SLOPES 1 IN 3 (10.3% AND STEEPER) THAT ARE PROPOSED TO BE DISTURBED ARE LISTED IN THE SHEET. STEEL SLOPES ARE TEMPORARILY CREATED DURING GRADING OPERATIONS. AT WHICH TIME TEMPORARY STEPS MUST BE IMPLEMENTED BY THE CONTRACTOR (THROUGH AN APPROVED SWPPP AMENDMENT) WITHIN 14 DAYS OF NO LIVABLE WORKING THE STEEL SLOPES.

CONTRIBUTED PROPERTIES: THE MPRA "CODE" IN THE NEIGHBORHOOD DATABASES (PCA-G0305.PCELNP-3.00/01/nwmg/INwmg/index.html) WAS REVISED ON 01/22/2016. THE RESULTS OF THIS REVISED SHOW NO KNOWN CONTRIBUTED PROPERTIES OR LINE SOURCES LOCATED WITHIN AND ADJACENT TO THE PROJECT LIMITS. NO PRE-EXISTING HAZARDOUS MATERIALS OR WASTES ARE ANTICIPATED TO BE IMPACTED BY THE PROJECT.

STORMWATER POLLUTION PREVENTION MEASURES [AS IDENTIFIED THROUGH ENVIRONMENTAL REVIEW]: NO FORMAL ENVIRONMENTAL REVIEW WAS REQUIRED FOR THIS PROJECT. THEREFORE, NO ADDITIONAL STORMWATER RELATED POLLUTION MEASURES APPLY.

EARTH AREAS: THERE ARE NO KNOWN EARTH AREAS WITHIN OR ADJACENT TO THE PROJECT LIMIT.

SITE PLAN REQUIRED AREAS: NO AREAS OF "HIGH ENVIRONMENTAL RISK" ARE KNOWN TO BE LOCATED WITHIN OR IMMEDIATELY ADJACENT TO THE PROJECT LIMIT.

FLOOD CONTINGENCY PLAN: A FLOOD PROJECT ACTIVITIES ARE LOCATED WITHIN A 100-YEAR FLOODPLAIN OR FLOODWAY, THEREFORE, A FLOOD CONTINGENCY PLAN IS REQUIRED. THE PROJECT ENGINEER (AS TYPICALLY DESIGNED) WILL REQUIRE A FLOOD PROTECTION PLAN FOR SPECIFIC PROJECT ACTIVITIES AND AREAS THAT ARE NOT LOCATED IN A 100-YEAR FLOODPLAIN OR FLOODWAY.

FIRE EXCLUSION AREAS: CONTRACTOR IS PROHIBITED FROM CONSTRUCTING IN-SHARE WORK DURING THE FIRE SEASON AND WINTER (JANUARY TO JUNE 30 FOR NON-HOT WATER). IF WORK MUST BE CONDUCTED DURING THIS PERIOD, CONTRACTOR SHALL CONTACT THE LOCAL FIRE PROTECTION MANAGER FOR WRITTEN APPROVAL PRIOR TO CONDUCTING THE IN-SHARE WORK.

AQUATIC INVASIVE SPECIES: THERE ARE NO KNOWN ENDANGERED SPECIES WITHIN THE PROJECT AREA. IF AN ENDANGERED SPECIES ARE ENCOUNTERED THE CONTRACTOR WILL CEASE OPERATIONS AND WILL DEVELOP AN ALTERNATE PLAN TO PROTECT THE SPECIFIC ENDANGERED SPECIES.

WETLANDS: THERE ARE WETLANDS ON THE SOUTHERN PROJECT BOUNDARY AND MUST BE PROTECTED TO THE MAXIMUM EXTENT POSSIBLE. WETLAND IMPACTS ARE NOT ANTICIPATED AS PART OF THIS PROJECT.

POSSIBLE SOURCES OF POLLUTION

| CONSTRUCTION ACTIVITIES ASSOCIATED WITH POTENTIAL POLLUTANTS |
| CHECK 29 POLLUANT APPLIES TO SITE |

<table>
<thead>
<tr>
<th>ACTIVITY TYPE</th>
<th>POLLUTANT</th>
<th>VISIBLY OBSERVABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOLID DISTURBANCE</td>
<td>INSTALLATION OF STABILIZED EYES, TURFED WATER, CLOVER, SEDGE, EMERSON TRENCH, BMS, SEDGE, EMERSON TRENCH, BMS</td>
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<tr>
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<td>SEDIMENT AND ORGANICS, POSITIVE DUST</td>
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