

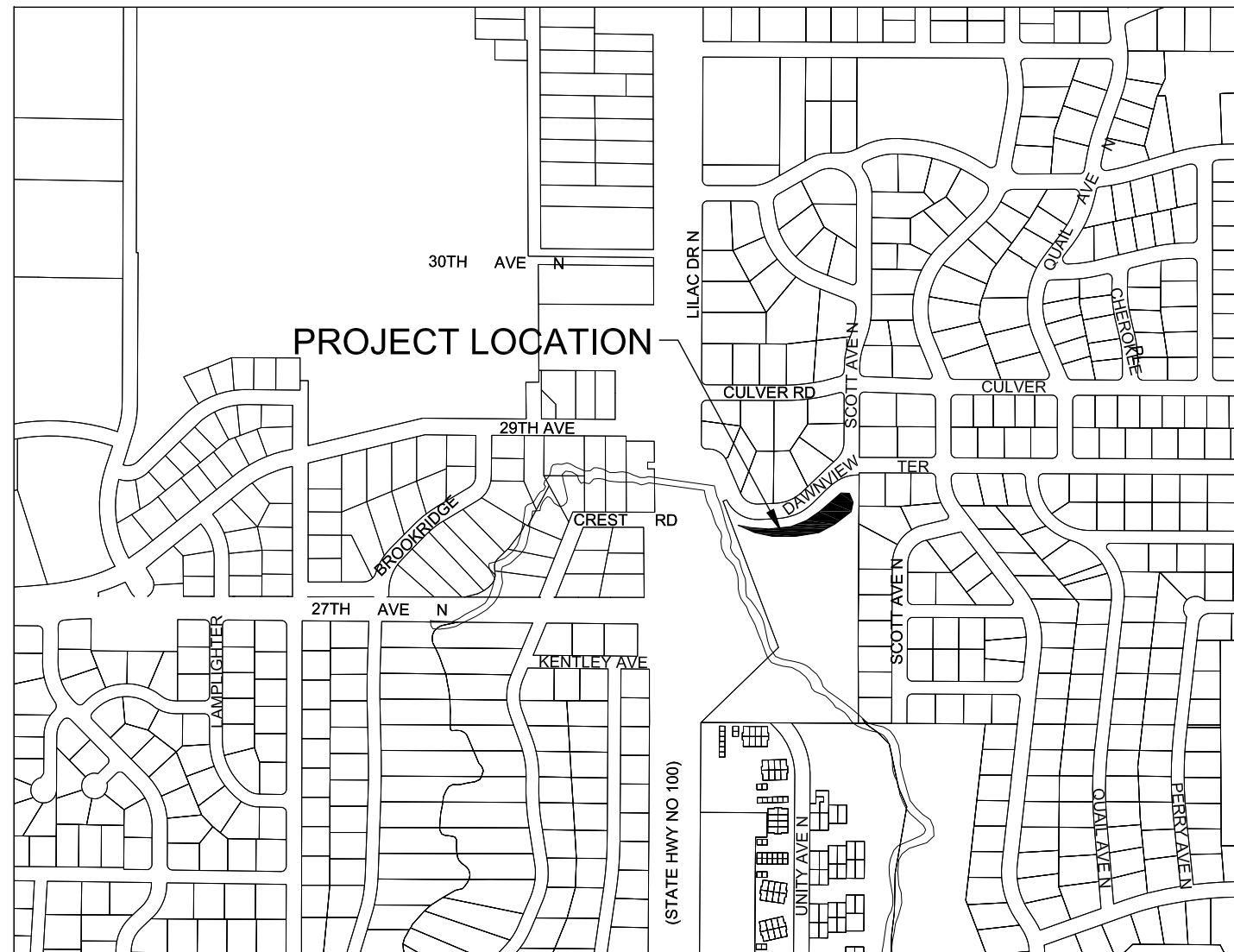
# BRIARWOOD NATURE AREA WATER QUALITY IMPROVEMENT PROJECT

## FOR THE

# CITY OF GOLDEN VALLEY

CREATION OF A STORMWATER POND, IRON AND SAND FILTRATION SYSTEM,  
CONSTRUCTION PLAN FOR: STORM SEWER, AND VEGETATION RESTORATION

LOCATED AT: SOUTH OF DAWNVIEW TERRACE AND EAST OF UNITY AVENUE



### GOVERNING SPECIFICATIONS

DAWNVIEW NATURAL AREA  
CITY OF GOLDEN VALLEY  
CEAM STANDARD  
THE 2005 EDITION  
SPECIFICATIONS FOR CONSTRUCTION."

**Item 5A**  
**BCWMC 3-20-14**

PROJECT SPECIAL PROVISIONS  
PROJECT PLANS  
OF TRANSPORTATION "STANDARD

ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL COMFORM TO THE MN MUTCD INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS, DATED JANUARY, 2004. ALL TRAFFIC CONTROL DEVICES SHALL HAVE RETROREFLECTIVE SHEETING.

STORM SEWER SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY ENGINEERS ASSOCIATION OF MINNESOTA STANDARD UTILITIES SPECIFICATIONS.

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	EXISTING CONDITIONS PLAN
3	GRADING PLAN
4	STORM SEWER PLAN
5-6	DETAILS
7-10	SWPPP
11	EROSION & SEDIMENT CONTROL/STAGING PLAN

ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.



701 Xenia Avenue South, Suite 300  
Minneapolis, MN 55416  
www.wsbeng.com

763-541-4800 • Fax 763-541-1700  
INFRASTRUCTURE ■ ENGINEERING ■ PLANNING ■ CONSTRUCTION

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.

ENGR. \_\_\_\_\_ PETER R. WILLENBRING  
DATE 02/18/2014 LIC. NO. 15998

PLAN REVIEW:  
02/18/2014 CITY COMMENTS

Prepared for:

City of Golden Valley  
7800 Golden Valley Road  
Golden Valley, Minnesota 55427  
(763)-593-8000

### PLAN SYMBOLS

STATE LINE	----
COUNTY LINE	-----
TOWNSHIP OR RANGE LINE	-----
SECTION LINE	-----
QUARTER LINE	-----
SIXTEENTH LINE	-----
RIGHT-OF-WAY LINE	-----
SLOPE EASEMENT	SE
PRESENT RIGHT-OF-WAY	-----
CONTROL OF ACCESS LINE	-----
PROPERTY LINES (EXCEPT LAND LINES)	-----
VACATED PLATTED PROPERTY	-----
CORPORATE OR CITY LIMITS	-----
TRUNK HIGHWAY CENTER LINE	-----
RETAINING WALL	-----
RAILROAD	-----
RAILROAD RIGHT-OF-WAY	-----
RIVER OR CREEK	NAME
DRY RUN	SIZE
DRAINAGE DITCH	-----
DRAIN TILE	-----
CULVERT	-----
DROP INLET	-----
GUARD RAIL	-----
BARBED WIRE FENCE	-----
WOVEN WIRE FENCE	-----
CHAIN LINK FENCE	-----
RAILROAD SNOW FENCE	-----
STONE WALL OR FENCE	-----
HEDGE	-----
RAILROAD CROSSING SIGN	-----
RAILROAD CROSSING BELL	-----
ELECTRIC WARNING SIGN	-----
CROSSING GATE	-----
MEANDER CORNER	-----
SPRINGS	-----
MARSH	-----
TIMBER	(TIMBER)
ORCHARD	-----
BRUSH	-----
NURSERY	-----
CATCH BASIN	CB
FIRE HYDRANT	-----
CATTLE GUARD	-----
OVERPASS (HIGHWAY OVER)	-----
UNDERPASS (HIGHWAY UNDER)	-----
BRIDGE	-----
BUILDING (ONE STORY FRAME)	1-S-F
F - FRAME	C - CONCRETE
S - STONE	T - TILE
B - BRICK	ST - STUCCO
IRON ROD OR PIPE	-----
MONUMENT (STONE, CONCRETE, OR METAL)	-----
WOODEN HUB	-----
GRAVEL PIT	-----
SAND PIT	-----
BORROW PIT	-----
ROCK QUARRY	-----

### UTILITY SYMBOLS

POWER POLE LINE	-----
TELEPHONE OR TELEGRAPH POLE LINE	-----
JOINT TELEPHONE AND POWER ON POWER POLE	-----
ON TELEPHONE POLES	-----
ANCHOR	-----
STREET LIGHT	-----
PEDESTAL (TELEPHONE CABLE TERMINAL)	-----
GAS MAIN	G
WATER MAIN	-----
CONDUIT	-----
TELEPHONE CABLE IN CONDUIT	T
ELECTRIC CABLE IN CONDUIT	P
TELEPHONE MANHOLE	-----
ELECTRIC MANHOLE	-----
BURIED TELEPHONE CABLE	T-BUR
BURIED ELECTRIC CABLE	P-BUR
AERIAL TELEPHONE CABLE	T-AE
SEWER (SANITARY OR STORM)	-----
SEWER MANHOLE	-----

### SCALES

INDEX MAP	0 500 1000
PLAN	0 30 60
PROFILE	HORIZ. 0 30 60
	VERT. 0 5 10

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF PRIVATE UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS TO DETERMINE THE TYPE AND LOCATION OF PRIVATE UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-2, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEDICATION OF EXISTING SUBSURFACE UTILITY DATA."

### EXCAVATION NOTICE SYSTEM

A CALL TO GOPHER STATE ONE (651-454-0002) IS REQUIRED A MINIMUM OF 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION.

WSB PROJECT 2032-08  
CITY PROJECT NO. 12-26

SHEET NO. 1 OF 11 SHEETS

HWY 100

UNITY AVE

BASSETT CREEK

DAWNVIEW TERRACE

WETLAND LINE

EXISTING HOUSE  
FFE: 846.78

ESTIMATED TREE REMOVALS: 320 AND 3 TREES OVER 42"  
DO NOT DISTURB 35 TREES ALONG DAWNVIEW TERRACE

CITY PROJECT NUMBER 12-26  
PROJECT NUMBER 2032-08

EXISTING CONDITIONS SHEET 2 OF 11 SHEETS



4150 Olson Memorial Highway  
Suite 300  
Minneapolis, MN 55422  
763-541-4800  
FAX 763-541-1700

INFRASTRUCTURE ENGINEERS PLANNERS

BRIARWOOD WATER QUALITY  
IMPROVEMENT PROJECT  
CITY OF GOLDEN VALLEY

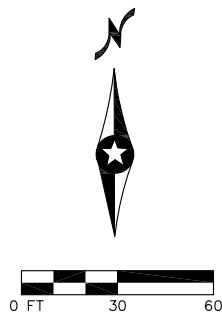
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WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION  
AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER  
UNDER THE LAWS OF THE STATE OF MINNESOTA

ENGINEER  
DATE: 02/18/2014 LIC. NO.: 15998

SCALE: AS NOTED  
PLAN BY: CSF  
DESIGN BY: CSF  
CHECKED BY: ET  
PROJECT NO.: 2032-08  
RECORD COPY BY: DATE

REGION NO.  
DATE

EXPLANATION



CITY PROJECT NUMBER 12-26  
PROJECT NUMBER 2032-08

GRADING PLAN | SHEET 3 OF 11 SHEETS

**BRIARWOOD WATER QUALITY  
IMPROVEMENT PROJECT  
CITY OF GOLDEN VALLEY**

4150 Olson Memorial Highway  
Suite 300  
Minneapolis, MN 55422

763-541-4800  
FAX 763-541-1700

**ENGINEERS ▲ PLANNERS**



**WSB**  
& Associates, Inc.  
INFRASTRUCTURE

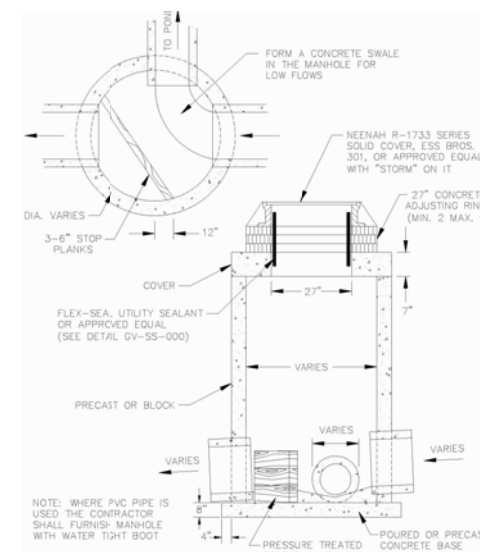
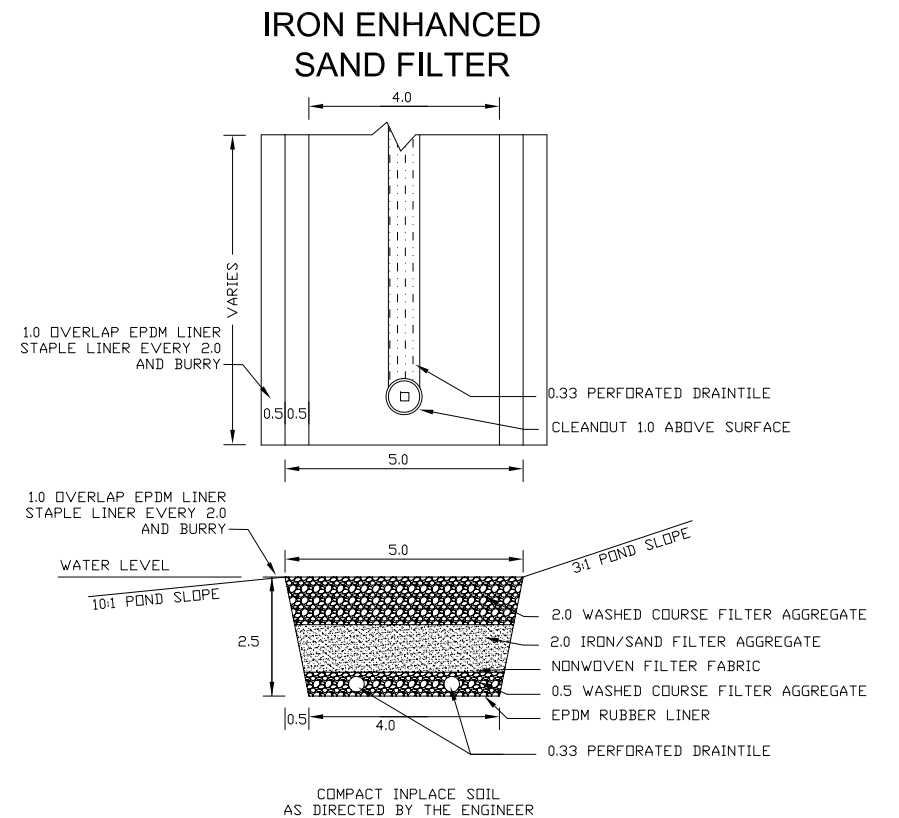
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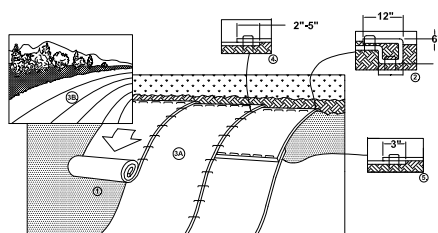
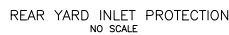
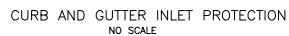
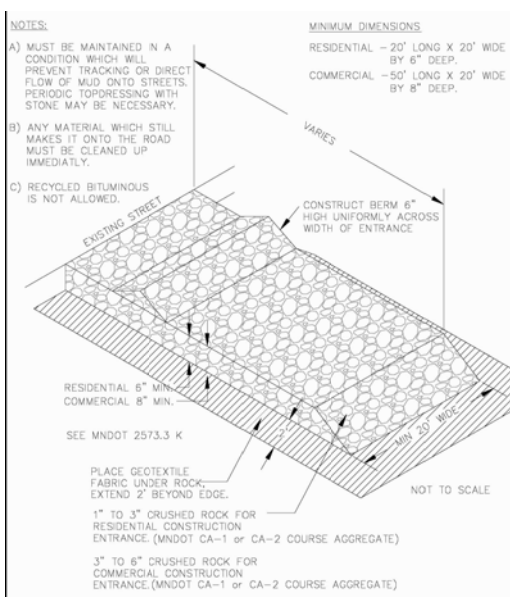
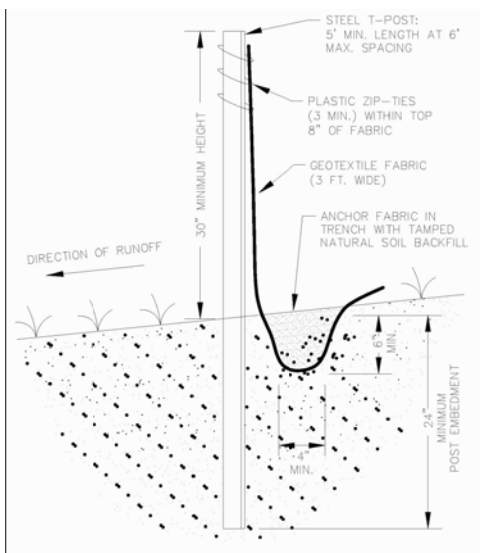
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EY	2032-08
RECORD COPY BY:	DATE

DATE	EXPLANATION









1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN A TRENCH THAT IS 6" (15cm) DEEP, 6" (15cm) WIDE, AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE AND STAKE INSTALLATION AND STAPLING SYSTEM. STAPLES/STAKES MUST BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5cm-12.5cm) OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SINGLE STAPLE) WITH AN APPROXIMATE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE BLANKET WIDTH.

**NOTE:**  
"IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

I HEREBY CERTIFY THAT THIS PLAN SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA		SCALE: PLAN BY: ESF CHECKED BY: EY RECORD COPY BY:		AS NOTED DESIGN BY: ESF PROJECT NO: 2032-08 DATE		REVISION NO. DATE	EXPLANATION
DATE: 02/18/2014		ENGINEER		LIC. NO: 15998			

**BRIARWOOD WATER QUALITY  
IMPROVEMENT PROJECT**

**CITY OF GOLDEN VALLEY**

4150 Olson Memorial Highway  
Suite 300  
Minneapolis, MN 55422  
763-541-4800  
FAX 763-541-1700



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 NATURE AREA WATER QUALITY IMPROVEMENT PROJECT
PROJECT NUMBERS: CITY NO 12-26 WSB 2032-08
PROJECT LOCATION: STREET: DAWNVIEW TERRACE CITY/TOWNSHIP: GOLDEN VALLEY COUNTY: HENNEPIN
STATE: MINNESOTA ZIP: 55367
LATITUDE/LONGITUDE: 45.0084/-93.3471 SECTION: 7 TOWNSHIP: 29 RANGE: 24

CONTACT INFORMATION/RESPONSIBLE PARTIES

THE CITY OF GOLDEN VALLEY OWNS THE LAND, ADJACENT ROADS, AND EASEMENT AREAS ASSOCIATED WITH THE PROJECT. THE CITY OF GOLDEN VALLEY IS THE OWNER PERMITTEE 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 (JEFF OLIVER, CITY ENGINEER)
7800 GOLDEN VALLEY ROAD
GOLDEN VALLEY, MN 55427
763-593-8000/JOLIVER@GOLDENVALLEYMN.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 NPDES PERMIT (THROUGH EXECUTION OF A NPDES PERMIT MODIFICATION FORM), AND THEREBY AGREE TO IMPLEMENT THIS SWPPP IN COOPERATION WITH THE CITY OF GOLDEN VALLEY. THE PRIMARY CONTRACTOR IS RESPONSIBLE FOR DEVELOPING A CHAIN OF RESPONSIBILITY PRIOR TO STARTING CONSTRUCTION (REFER TO SWPPP AMENDMENT SECTION). THE NPDES PERMIT MODIFICATION FORM SHALL 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 INDIVIDUALS OVERSEEING OR IMPLEMENTING THE SWPPP HAVE BEEN PROPERLY TRAINED AND THAT CERTIFICATIONS WILL BE MADE AVAILABLE UPON REQUEST. THIS INCLUDES ANY SUB-CONTRACTORS THAT THE PRIMARY CONTRACTOR EMPLOYS UNDER SEPARATE CONTRACT. THE PRIMARY CONTRACTOR WILL PROVIDE THE CONTACT INFORMATION FOR THE SITE SUPERINTENDENT/FOREMAN, ESC SUPERVISOR, AND BMP INSTALLERS.

THE PRIMARY CONTRACTOR WILL PERFORM A PRECONSTRUCTION SITE VISIT TO ADDRESS ANY AREAS OF CONCERN PERTAINING TO ENVIRONMENTAL COMPLIANCE. THE PRIMARY CONTRACTOR WILL IMPLEMENT AND MAINTAIN BMPS FOR THE DURATION OF CONSTRUCTION PROJECT. THE PRIMARY CONTRACTOR WILL COMPLETE THE REQUIRED SITE INSPECTIONS TO REMAIN IN COMPLIANCE WITH NPDES PERMIT REQUIREMENTS PART II.B, II.C, III.B-F, IV, V, AND APPLICABLE CONSTRUCTION ACTIVITY REQUIREMENTS FOUND IN APPENDIX A, PART C.

CONTRACTOR/PERMITTEE: (TO BE DETERMINED THROUGH TRANSFER OF NPDES-CSW PERMIT)

WSB & ASSOCIATES HAS BEEN CONTRACTED BY THE CITY OF GOLDEN VALLEY TO DEVELOP THE SWPPP PLAN FOR THIS PROJECT. THIS SWPPP WAS PREPARED BY AN INDIVIDUAL THAT HAS BEEN PROPERLY TRAINED TO ADHERE TO THE REQUIREMENTS OF THE MPCA AND THE NPDES PERMIT. CERTIFICATION CARDS ARE AVAILABLE UPON REQUEST. WSB & ASSOCIATES WILL OFFER GUIDANCE FOR COMPLIANCE WITH THE NPDES PERMIT BEFORE, DURING, AND AFTER CONSTRUCTION OF THE PROJECT.

SWPPP DEVELOPER: WSB & ASSOCIATES, INC. (ERICK FRANCIS)
701 XENIA AVE. SOUTH, SUITE 300
MINNEAPOLIS, MN 55416
763-512-5251/EFRANCIS@WSBENG.COM
WATER RESOURCE ENGINEER: WSB & ASSOCIATES, INC. (PETE WILLENBRING)
701 XENIA AVE. SOUTH, SUITE 300
MINNEAPOLIS, MN 55416
763-287-7188/PWILLENBRING@WSBENG.COM

Table with 4 columns: AGENCY, PERMIT, NAME, PHONE NUMBER/E-MAIL. Rows include MPCA (EMERGENCY), MPCA, ACOE, DNR, BASSETT CREEK WSC, and WATERSHED DISTRICT.

PROJECT DESCRIPTION & SCHEDULE

THIS PROJECT CONSISTS OF THE EXCAVATION OF AN APPROXIMATELY 8,000 CUBIC YARD WATER QUALITY POND ON THE DOWNSTREAM END OF AN 182 ACRE WATERSHED THAT CURRENTLY HAS NO PRETREATMENT WHEN IT DISCHARGES INTO BASSETT CREEK. IN ADDITION, THIS POND WILL BE INCORPORATING AN IRON ENHANCED SAND FILTER TO PROVIDE ADDITIONAL PHOSPHORUS REMOVAL.

Table with 2 columns: CONSTRUCTION ACTIVITIES, ESTIMATED DATES OF SOIL DISTURBANCE ACTIVITIES. Rows include CLEARING AND GRUBBING OPERATIONS, POND EXCAVATION, STORM SEWER INSTALLATION, and VEGETATION ESTABLISHMENT AND LANDSCAPING.

PRE-CONSTRUCTION IMPERVIOUS SURFACE AND DISTURBED AREA CALCULATIONS

TOTAL AREA TO BE DISTURBED = 1.05 ACRES
IMPERVIOUS AREA: PRE-CONSTRUCTION = 0.0
NET INCREASE OF IMPERVIOUS AREA = 0.0

Table with 3 columns: DESCRIPTION, TITLE, LOCATION. Rows include SWPPP NARRATIVE, SITE CONDITIONS, SITE MAP, CONSTRUCTION PHASING/STAGING & AREAS NOT TO BE DISTURBED, DIRECTION OF FLOW (PRE- & POST- CONSTRUCTION), TEMPORARY EROSION & SEDIMENT CONTROL BMPS, PERMANENT EROSION CONTROL BMPS, STORM SEWER, GRADING, ESTIMATED BMP QUANTITIES, BMP DETAILS, and HYDROLOGIC/WATER QUALITY MODELING.

EXISTING SITE CONDITIONS, SOILS, & EXPECTED PRECIPITATION

SOILS AND NATIVE TOPSOIL: NATIVE TOPSOIL WILL BE STRIPPED AND STOCKPILED FOR FINAL GRADING OPERATIONS, WHERE INDICATED IN THE CONSTRUCTION PLANS AND SPECIFICATIONS. METHODS AND EQUIPMENT TO MINIMIZE SOIL COMPACTION (IN PROPOSED INFILTRATION AREAS, DRIP LINE OF TREES TO BE PRESERVED, ETC.) SHALL BE DETERMINED BY THE CONTRACTOR'S SWPPP AMENDMENT. THE FOLLOWING USDA-NRCS MAPPED SOILS ARE SHOWN AS "NOT HIGHLY ERODIBLE", POTENTIALLY HIGHLY ERODIBLE, AND HIGHLY ERODIBLE" ON THE SWPPP SITE MAP.

Table with 4 columns: USDA-NRCS MAPPED SOIL SURVEY UNIT NO., NAME, TEXTURE, APPROXIMATE PARTICLE SIZE RANGE (MM). Rows include U1A URBAN LAND and U2A UDORTHENTS.

Professional Engineer Seal and Project Information for Briarwood Water Quality Improvement Project, City of Golden Valley. Includes WSB & Associates, Inc. logo and contact details.

The figure consists of two side-by-side line graphs. Both graphs have 'Average recurrence interval (years)' on the x-axis, with a logarithmic scale ranging from 1 to 1000. The y-axis for both is 'Precipitation depth (in)'.  
 The left graph's y-axis ranges from 0 to 25 inches. It contains multiple curves representing different precipitation durations: 5 min, 10 min, 15 min, 30 min, 60 min, 3 hr, 6 hr, 12 hr, 24 hr, 2 day, 3 day, 4 day, 7 day, 10 day, 20 day, 30 day, 45 day, and 60 day. The curves show that for a given recurrence interval, the precipitation depth increases with the duration of the event.  
 The right graph's y-axis ranges from 0 to 25 inches. It contains multiple curves representing different average recurrence intervals: 1, 2, 5, 10, 25, 50, 100, 200, 500, and 1000 years. The curves show that for a given precipitation depth, the average recurrence interval increases with the depth.

HYDROLOGIC AND WATER QUALITY MODELING DATA IS AVAILABLE UPON REQUEST.

ADDITIONAL BMPs FOR SPECIAL OR IMPAIRED WATERS DURING CONSTRUCTION ACTIVITY (APPENDIX A)

C.1.A EXPOSED SOILS: CONTRACTOR SHALL STABILIZE ALL EXPOSED SOIL AREAS WITHIN (7) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED (APPENDIX A.C.1.A).

C.4 ENHANCED RUNOFF CONTROLS: 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.

[illegible]

THE PRESERVED AREAS OF EXISTING VEGETATION WILL BE IDENTIFIED ON THE PLAN SHEETS AS "DO NOT DISTURB AREA". THERE IS NO CONSTRUCTION PHASING OR STAGING DEFINED BY THE OWNER FOR THIS PROJECT. THE SCHEDULE FOR INSTALLING TEMPORARY BMPs SHALL BE INCORPORATED INTO THE CONTRACTOR'S SCHEDULE FOR EACH CONSTRUCTION STAGE AND PRESENTED TO THE OWNER'S REPRESENTATIVE. THE PROJECT'S CONSTRUCTION PHASING AND STAGING IS DEFINED BY THE "CONSTRUCTION STAGING & TRAFFIC CONTROL PLAN" AND PROJECT SPECIFICATIONS.

STEEP SLOPES: EXISTING AND PROPOSED SLOPES 1 IN 3 (33.33% AND STEEPER) THAT ARE PROPOSED TO BE DISTURBED ARE ILLUSTRATED ON THE GRADING PLAN. STEEP SLOPES MAYBE TEMPORARILY CREATED DURING GRADING OPERATIONS, AT WHICH TIME TEMPORARY BMPs MUST BE IMPLEMENTED BY THE CONTRACTOR (THROUGH AN APPROVED SWPPP AMENDMENT) WITHIN 14 DAYS OF NO LONGER WORKING THE STEEP SLOPE.

STORMWATER POLLUTION MITIGATION MEASURES (AS IDENTIFIED FROM ENVIRONMENTAL REVIEW): NO FORMAL ENVIRONMENTAL REVIEW WAS REQUIRED FOR THIS PROJECT, THEREFORE, NO ADDITIONAL STORMWATER RELATED MITIGATION MEASURES APPLY.

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

FISH EXCLUSION DATES: CONTRACTOR IS PROHIBITED FROM CONDUCTING IN-STREAM WORK DURING THE FISH SPawning AND MIGRATION DATES OF APRIL 15 TO JUNE 30 FOR NON-TROUT WATERS. IF WORK MUST BE CONDUCTING DURING THIS TIMEFRAME, CONTRACTOR SHALL CONTACT THE LOCAL DNR FISERIES MANAGER FOR WRITTEN APPROVAL PRIOR TO CONDUCTING THE IN-STREAM WORK.

WETLANDS

### POTENTIAL SOURCES OF POLLUTION

CONSTRUCTION ACTIVITIES ASSOCIATED WITH POTENTIAL POLLUTANTS		
(CHECK IF POLLUTANT APPLIES TO SITE.)		
ACTIVITY TYPE	POLLUTANT	VISUALLY OBSERVABLE
<b>SOIL DISTURBANCE</b>		
<input checked="" type="checkbox"/> INSTALLATION OF STABILIZED EXITS, TURBID WATER, CLOUDY AIR SEDIMENT AND EROSION CONTROL BMPs	SEDIMENT AND ORGANICS, FUGITIVE DUST	
<input checked="" type="checkbox"/> CLEAR/GRUB	SEDIMENT AND ORGANICS, FUGITIVE DUST	TURBID WATER, CLOUDY AIR
<input checked="" type="checkbox"/> IMPORT/EXPORT OPERATIONS	SEDIMENT, FUGITIVE DUST	TURBID WATER, CLOUDY AIR





TEMPORARY/PERMANENT DRAINAGE DITCHES & SWALES: THE NORMAL WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DRAINAGE DITCH, CHANNEL, OR SWALE THAT DRAINS WATER FROM ANY PORTION OF THE CONSTRUCTION SITE, OR DIVERTS WATER AROUND THE SITE, MUST BE STABILIZED WITHIN THE LAST 200 LINEAL FEET FROM THE PROPERTY EDGE, OR FROM THE POINT OF DISCHARGE INTO ANY SURFACE WATER WITHIN 24 HOURS OF CONNECTION. STABILIZATION REMAINING OF THE REMAINING PORTIONS OF THE CHANNEL MUST BE STABILIZED WITHIN 14 DAYS. ALL STORMWATER CONVEYANCE CHANNELS MUST USE EROSION CONTROL AND VELOCITY DISSIPATION DEVICES WITHIN AND ALONG THE LENGTH OF THE CHANNEL AND AT ANY OUTLETS. TEMPORARY OR PERMANENT DITCHES OR SWALES THAT ARE BEING USED AS A TEMPORARY SEDIMENT CONTAINMENT SYSTEM (WITH PROPERLY DESIGNED ROCK DITCH CHECKS, BIO ROLLS, SILT DIKES ETC.) DO NOT NEED TO BE STABILIZED. THESE AREAS MUST BE STABILIZED WITHIN 24 HOURS AFTER NO LONGER BEING USED AS A SEDIMENT CONTAINMENT SYSTEM. MULCH, HYDROMULCH, TACKIFIER, OR POLYACRYLAMIDE BELOW THE WETTED PERIMETER OF A DITCH, SWALE, OR OTHER SURFACE WATER CONVEYANCE IS NOT ACCEPTABLE STABILIZATION. RAPID STABILIZATION METHOD #3 (WOOD FIBER, NATURAL NET ONLY) IS AN ACCEPTABLE BMP FOR THESE AREAS.

DUST CONTROL: DUST FROM THE SITE WILL BE CONTROLLED BY USING A MOBILE PRESSURE-TYPE DISTRIBUTOR TRUCK TO APPLY POTABLE WATER TO DISTURBED AREAS. THE MOBILE UNIT WILL APPLY WATER AT A RATE NECESSARY TO PREVENT RUNOFF AND PONDING.

TEMPORARY WINTER COVER: AREAS OF EXPOSED SOILS THAT ARE NOT COMPLETED BEFORE THE WINTER WILL BE STABILIZED WITH TYPE #3 (CERTIFIED AS WEED FREE) ADJACENT TO WETLAND OR STORMWATER PONDS. ALL OTHER DISTURBED AREAS SHALL BE STABILIZED WITH TYPE #1 MULCH, UNLESS ALTERNATIVE MORE PROTECTIVE BMPs ARE SPECIFIC WITHIN THE SWPPP. THE PROJECT AREA WILL POTENTIALLY BE STILL ACTIVE OVER THE 2014-2015 WINTER SEASON. ALL EXPOSED SOILS SHALL BE STABILIZED BEFORE CONSTRUCTION IS COMPLETED FOR THE 2014 SEASON.

### PERMANENT BEST MANAGEMENT PRACTICES

HYDRO-MULCH TYPE #5: HYDRAULIC SOIL STABILIZER IN COMBINATION WITH A TACKIFIER WILL BE INSTALLED PER MANUFACTURES SPECIFICATIONS TO EXPOSED SOILS AREAS TO PROVIDE PERMANENT COVER FOR VEGETATION ESTABLISHMENT.

EROSION CONTROL BLANKETS/MATS. CONTRACTOR SHALL VERIFY DURING REGULAR INSPECTIONS THAT NO GULLIES, RILLS, OR SCOUR HOLES HAVE FORMED UNDER EROSION CONTROL BLANKETS AND MATS. ALL REPAIRS MUST BE COMPLETED WITHIN 24 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS

STORM SEWER OUTLETS: PIPE OUTLETS MUST HAVE TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS AFTER HYDRAULIC CONNECTION TO A RECEIVING SURFACE WATER.

## SEDIMENT CONTROL PRACTICES & PROCEDURES

THE CONTRACTOR/SITE OPERATOR ARE RESPONSIBLE FOR THE INSTALLATION, OPERATION, AND CONTINUED MAINTENANCE OF ALL TEMPORARY AND PERMANENT WATER QUALITY MANAGEMENT BMPs, AS WELL AS ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPs, FOR THE DURATION OF THE CONSTRUCTION WORK AT THE SITE, UNTIL FINAL STABILIZATION IS ACHIEVED. ALL BMPs MUST BE ADEQUATELY LOCATED, DESIGNED, INSTALLED, AND MAINTAINED TO PREVENT EROSION FROM A MINIMUM 0.5 INCH TOTAL RAINFALL EVENT WITHIN 24 HOURS.

ALL NONFUNCTIONAL BMPs MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WITH FUNCTIONAL BMPs BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS UNLESS ANOTHER TIME FRAME IS SPECIFIED IN THE SWPPP. ALL ERODED MATERIAL THAT LEAVES THE SITE SHALL BE COLLECTED BY THE CONTRACTOR AND RETURNED TO THE SITE AT THE CONTRACTOR'S EXPENSE AND INCIDENTAL TO THE PROJECT COST.

DOWN GRADIENT SYSTEMS: IF THE DOWN GRADIENT TREATMENT SYSTEM IS OVERLOADED, ADDITIONAL UP GRADIENT SEDIMENT CONTROL PRACTICES OR REDUNDANT BMPs MUST BE INSTALLED TO ELIMINATE THE OVERLOADING, AND THE SWPPP MUST BE AMENDED TO IDENTIFY THESE ADDITIONAL PRACTICES.

PERIMETER CONTROL BMPs (SILT FENCES, CHIP SACKS, BIOROLLS, ETC.): PERIMETER CONTROL BMPs SHALL BE PLACED, AS CLOSE AS POSSIBLE TO FOLLOW A SINGLE CONTOUR ELEVATION. ALL SILT FENCES MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES 1/2 OF THE HEIGHT OF THE FENCE. ALL REPAIRS MUST BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS

TEMPORARY AND PERMANENT SEDIMENTATION BASINS: WHERE TEN (10) OR MORE ACRES OF DISTURBED SOIL DRAIN TO A COMMON LOCATION, A TEMPORARY (OR PERMANENT) SEDIMENT BASIN MUST BE PROVIDED PRIOR TO RUNOFF LEAVING THE CONSTRUCTION SITE OR ENTERING SURFACE WATERS. ALL TEMPORARY BASINS SHALL BE CONSTRUCTED AND OPERATIONAL PRIOR TO GRADING TEN (10) OR MORE ACRES PER THE PLANS AND SPECIFICATIONS, OR TO THE MINIMUM STANDARDS SPECIFIED IN PART III.C OF THE NPDES CONSTRUCTION PERMIT. BASINS MUST BE DRAINED AND SEDIMENT REMOVED WHEN THE DEPTH OF COLLECTED SEDIMENT IN THE BASIN REACHES 1/2 THE STORAGE VOLUME. DRAINAGE AND REMOVAL MUST BE COMPLETED WITHIN 72 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS (PART IV.E.4.B).

TEMPORARY STOCKPILES: ALL STOCKPILES MUST HAVE SILT FENCE OR EQUIVALENT PERIMETER SEDIMENT CONTROLS IMPLEMENTED AND MAINTAINED AT ALL TIMES. PILES CANNOT BE PLACED IN SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS, OR CONDUITS AND DITCHES UNLESS THERE IS A BYPASS IN PLACE TO PREVENT STORMWATER RUN-ON INTO THE STOCKPILE (PART IV.C.5).

CONSTRUCTION SITE ENTRANCE/VEHICLE TRACKING: CONTRACTOR MUST MINIMIZE SEDIMENT FROM LEAVING THE CONSTRUCTION SITE (OR ONTO STREETS WITHIN THE SITE) BY IMPLEMENTING BMPs SUCH AS ROCK PADS, SLASH MULCH, CONCRETE OR STEEL WASH RACKS, OR EQUIVALENT SYSTEMS. STREET SWEEPING MUST BE USED DAILY DURING CONSTRUCTION OPERATIONS IF SUCH BMPs ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED ONTO THE STREET. TRACKED SEDIMENT MUST BE REMOVED FROM ALL PAVED SURFACES (ON AND OFF-SITE) WITHIN 24 HOURS OF DISCOVERY, OR SOONER AS DIRECTED BY THE PROJECT OWNER TO COMPLY WITH PART IV.C.6 OF THE NDES CONSTRUCTION PERMIT. MULTIPLE STREET SWEEPINGS AT THE CONTRACTOR'S EXPENSE MAY BE REQUIRED ON ALL ENTRY/EXIT POINTS TO THE SITE AT THE DISCRETION OF THE PROJECT OWNER.

SURFACE WATERS: INCLUDING OFF-SITE AND DOWNSTREAM DRAINAGE DITCHES, CATCH BASINS, AND CONVEYANCE SYSTEMS, MUST BE INSPECTED FOR EVIDENCE OF EROSION AND SEDIMENT DEPOSITION. THE REMOVAL AND STABILIZATION OF EXPOSED SOILS MUST TAKE PLACE WITHIN SEVEN (7) DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. IF PRECLUDED, REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) CALENDAR DAYS OF OBTAINING ACCESS. THE

PERMITTEES ARE RESPONSIBLE FOR CONTACTING ALL LOCAL, REGIONAL, STATE AND FEDERAL AGENCIES AND RECEIVING ANY APPLICABLE PERMITS, PRIOR TO CONDUCTING ANY WORK (PART IV.E.5.C).

**INLET PROTECTION:** ALL STORM DRAIN INLETS (INCLUDING DOWN GRADIENT, OFF-SITE) MUST BE PROTECTED BY APPROPRIATE BMPs DURING CONSTRUCTION UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLET HAVE BEEN STABILIZED. SILT FENCE IS NOT AN ACCEPTABLE CATCH BASIN INLET PROTECTION BMP. CONTACTOR SHALL CLEAN, REMOVE AND DISPOSE OF SEDIMENT, AND/OR REPLACE STORM DRAIN INLET PROTECTION ON A ROUTINE BASIS TO ENSURE THE DEVICE IS FULLY FUNCTIONAL PRIOR TO THE NEXT FORECASTED PRECIPITATION EVENT (30% OR GREATER). INLET PROTECTION MAY BE REMOVED FOR A PARTICULAR INLET IF A SPECIFIC SAFETY CONCERN (STREET FLOODING/FREEZING) HAS BEEN IDENTIFIED AND THE PERMITTEE(S) HAVE RECEIVED WRITTEN CORRESPONDENCE FROM THE JURISDICTIONAL AUTHORITY (E.G. CITY/COUNTY/TOWNSHIP/MNDOT ENGINEER) VERIFYING THE NEED FOR REMOVAL. WRITTEN CORRESPONDENCE MUST BE DOCUMENTED IN THE SWPPP AND AVAILABLE WITHIN 72 HOURS UPON REQUEST. PERMISSION TO REMOVE INLET PROTECTION BASED ON A SPECIFIC SAFETY CONCERN MUST STILL BE OBTAINED FROM THE LOCAL JURISDICTIONAL AUTHORITY WITHIN 30 DAYS OF REMOVAL (PART IV.C.4).

CHEMICAL TREATMENTS: CONTRACTOR MUST AMEND THE SWPPP TO INCLUDE THE INTENDED USES AND LOCATIONS OF FLOCCULANTS, POLYMERS, AND OTHER SEDIMENTATION TREATMENT CHEMICALS. CHEMICAL TREATMENTS MAY ONLY BE APPLIED IN AREAS WHERE TREATED STORMWATER IS DIRECTED TO A RECEIVING SEDIMENT CONTROL SYSTEM (NOT DIRECTLY DISCHARGED TO NATURAL WATER BODIES). THIS INCLUDES DOCUMENTING THE EXPECTED SOIL TYPES, MANUFACTURER'S RECOMMENDED DOSING, APPLICATION RATES/QUANTITIES, AND MONITORING RESULTS (TURBIDITY, PH).

## DEWATERING, STREAM DIVERSION, AND BASIN DRAINING

DEWATERING, STREAM DIVERSION, OR BASIN DRAINING IS ANTICIPATED DURING CONSTRUCTION OF THIS PROJECT. DITCH REALIGNMENT, CULVERT CONSTRUCTION, AND NEW POND GRADING WILL REQUIRE SITE DEWATERING. WHEN DEWATERING OR BASIN DRAINING IS REQUIRED, THE CONTRACTOR SHALL SUBMIT A DEWATERING PLAN AND NARRATIVE TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO UNDERTAKING THESE ACTIVITIES. DEWATERING PLAN MUST INCLUDE BMP'S TO PREVENT SEDIMENT TRANSPORT, EROSION, AND ADVERSE IMPACTS TO DOWNSTREAM RECEIVING WATERS. THE DEWATERING PLAN MUST ALSO INCLUDE ANY SPECIFIC CHEMICAL TREATMENTS (FLOC, POLYMERS, ETC.) THAT WILL BE USED (REFER TO "SEDIMENT CONTROL PRACTICES & PROCEDURES"). IF AN APPROVED TMDL WASTE LOAD ALLOCATION IS ESTABLISHED FOR CONSTRUCTION ACTIVITIES ON A RECEIVING WATERBODY, THE CONTRACTOR MUST IMPLEMENT ALL NECESSARY BMP'S TO MEET THE ASSIGNED WLA. THE DEWATERING PLAN AND DNR APPROPRIATIONS PERMIT WILL BECOME PART OF THE SWPPP. WATER THAT IS TURBID OR HAS SEDIMENT MUST BE DISCHARGED TO A TEMPORARY OR PERMANENT SEDIMENTATION BASIN (AND/OR OTHER APPROPRIATE BMPs) ON THE PROJECT SITE WHENEVER POSSIBLE. DISCHARGE FROM THE TEMPORARY OR PERMANENT SEDIMENTATION BASIN MUST BE VISUALLY CHECKED TO ENSURE ADEQUATE TREATMENT IS OBTAINED IN THE BASIN AND THAT NUISANCE CONDITIONS (SEE MINN. R. 7050.0210, SUBP. 2), IMPACTS TO WETLANDS, AND EROSION IN RECEIVING CHANNELS OR ON DOWNSLOPE PROPERTIES WILL NOT RESULT FROM THE DISCHARGE. THE DISCHARGE MUST BE DISPERSED OVER NATURAL ROCK RIPRAP, SAND BAGS, PLASTIC SHEETING, OR OTHER ACCEPTED ENERGY DISSIPATION MEASURES. ADEQUATE SEDIMENTATION CONTROL MEASURES ARE REQUIRED FOR DISCHARGE WATER THAT CONTAINS SUSPENDED SOLIDS (PART IV.D.1).

## FINAL STABILIZATION

FINAL STABILIZATION IS ACHIEVED WHEN THE FOLLOWING THREE PARAMETERS ARE COMPLETED, PRIOR TO SUBMISSION OF THE PERMIT MODIFICATION FORM TO MPCA. SEE PERMANENT EROSION CONTROL PRACTICES FOR SPECIFIC METHODS AND APPLICATIONS.

1. 70% VEGETATIVE COVER: ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND ALL EXPOSED SOILS ARE STABILIZED BY A UNIFORM, LIVE PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OVER THE ENTIRE PREVIOUS SURFACE AREA, OR OTHER EQUIVALENT MEANS NECESSARY TO PREVENT SOIL FAILURE UNDER EROSION CONDITIONS.
2. FINAL CLEAN OUT OF PERMANENT STORMWATER MANAGEMENT SYSTEMS & CONVEYANCE SYSTEMS: ALL SEDIMENT MUST BE REMOVED FROM PERMANENT STORMWATER MANAGEMENT SYSTEMS, CONVEYANCE SYSTEMS, AND DITCHES MUST BE STABILIZED WITH PERMANENT COVER.
3. REMOVAL OF ALL TEMPORARY BMPs: PRIOR TO SUBMISSION OF THE NOT, ALL TEMPORARY SYNTHETIC AND STRUCTURAL EROSION PREVENTION AND SEDIMENT CONTROL BMPs (SUCH AS SILT FENCES) MUST BE REMOVED ON THE PORTIONS OF THE SITE FOR WHICH THE PERMITTEE IS RESPONSIBLE. BMPs DESIGNED TO DECOMPOSE ON SITE (SUCH AS SOME COMPOST LOGS) MAY BE LEFT IN PLACE.

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**ENGINEERS & PLANNERS**

**BRIARWOOD WATER QUALITY  
IMPROVEMENT PROJECT**

**CITY OF GOLDEN VALLEY**

DATE: 02/18/2014

IC NO: 1598B

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA		REVISION NO. DATE	EXPLANATION
SCALE	AS NOTED		
PLAN SHEET	DESIGN SHEET		
ECSF	ECSF		
CHECKED BY	PROJECT MANAGER		
ECSF	ECSF		
2012-08	2012-08		
RECORD COPY SHEET	DATE		

SEED MIX(S) PRAIRIE RESTORATION INC. (PRI) SHORELINE GRASS MIX OR SAVANNA GRASS MIX TO BE APPLIED AT @ 20 LBS/AC.

PRI SHORELINE SEED MIX, SEEDED AREAS TO BE STAKED IN THE FIELD.

PRI SAVANNA SEED MIX, SEEDED AREAS TO BE STAKED IN THE FIELD.

SPECIAL NOTE:

THE PLACEMENT OF THESE SEED MIXES WILL BE DIRECTED BY THE ENGINEER IN THE FIELD  
ADDITIONAL TEMPORARY SEED: WINTER WHEAT IS REQUIRED BE MIXED INTO PRI MIXES @ 50 LBS/AC TO PROVIDE A FAST GROWING VEGETATIVE COVER.

DISTURBED AREAS SHALL BE STABILIZED WITH CATEGORY III EROSION CONTROL BLANKET

SITE ACCESS

SITE ACCESS AND LIMITS OF CONSTRUCTION ARE IDENTIFIED ON THE PLANS. ACTUAL ACCESS ROUTES AND LIMITS OF CONSTRUCTION WILL BE STAKED IN THE FIELD BY THE ENGINEER. CONTRACTOR MAY OBTAIN ADDITIONAL ACCESS AT THEIR OWN EXPENSE.

GENERAL CONSTRUCTION NOTES

- CONTRACTOR IS RESPONSIBLE TO LOCATE AND FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO WORK.
- EXISTING ROADS, PARKING LOTS, TRAILS, FENCES SIGNS, UTILITIES, IRRIGATION SYSTEMS AND ALL OTHER ASSOCIATED AND EXISTING FACILITY SITE FEATURES SHALL BE PROTECTED DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE THAT OCCURS TO EXISTING FACILITIES.
- CONTRACTOR SHALL INSTALL ALL EROSION CONTROL BMPs PRIOR TO COMMENCEMENT OF GRADING.
- ALL TREES WITH A DIAMETER OF 4 INCHES OR LARGER SHALL BE MARKED FOR REMOVAL BY OWNER OR OWNER'S REPRESENTATIVE. TREES REMOVED THAT ARE NOT MARKED SHALL BE REPLACED IN KIND AT CONTRACTORS EXPENSE.
- ALL DISTURBED AREAS MUST BE TEMPORARILY STABILIZED WITHIN 7 DAYS OF INACTIVITY.
- ALL GROUND DISTURBANCE GENERATED BY GRADING ACTIVITIES SHALL BE STABILIZED AND RESTORED BY FINISH GRADING WITH TOPSOIL, APPLYING NATIVE SEED W/COVER CROP AND EROSION CONTROL BLANKET INCLUDING ACCESS ROUTES AND STOCKPILE.
- SEED BED SHALL BE PREPARED WITH A MINIMUM OF 4 INCHES OF TOPSOIL WITH NO EXTRANEUS MATERIAL OVER ¾ INCHES ON THE SURFACE.
- EROSION CONTROL BLANKET SHALL BE MNDOT CATEGORY III OR OTHERWISE AS SPECIFIED.
- VEGETATIVE AND BIOENGINEERING SOLUTIONS SHALL BE INCORPORATED WHEREVER APPROPRIATE AND FEASIBLE.

TREE AND STUMP REMOVAL NOTE

THE ENGINEER WILL SELECT THE TREES AND STUMPS THAT ARE TO BE REMOVED TO GAIN ACCESS TO AND TO PROVIDE THE REQUIRED MAINTENANCE AREAS. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE TREES, BRUSH, STUMPS, AND ROOTS FROM THE AREA DESIGNATED FOR CLEARING AND GRUBBING.

UTILITY COORDINATION AND CONFLICT:

UTILITY LOCATE INFORMATION IS LOCATED IN AN APPENDIX OF THE SPECIFICATIONS AND NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL SCHEDULE OR REDIRECT HIS/HER WORK TO ENSURE THAT UTILITY COMPANY RELOCATES, INSTALLATIONS AND/OR REMOVALS DO NOT IMPEDE PROGRESS OF THE PROJECT. THE CONTRACTOR SHALL ALSO COORDINATE ALL UNANTICIPATED UTILITY RELOCATIONS OR ADJUSTMENTS DETERMINED TO BE NECESSARY TO COMPLETE THE WORK. NO CLAIMS FOR EXTRA COMPENSATION TO PERFORM THE WORK IN ACCORDANCE WITH THE PLANS THAT ARE DUE TO CONFLICTS WITH IN-PLACE UTILITIES SHALL BE CONSIDERED.

CONTRACTOR RESPONSIBILITY

CONTRACTOR IS RESPONSIBLE TO PROTECT THE PROJECT AREA, INCLUDING AREAS THAT HAVE BEEN RESTORED AND AREAS THAT HAVE NOT BEEN COMPLETED, CONSTRUCTION EQUIPMENT, AND CONSTRUCTION MATERIALS DURING ADVERSE WEATHER CONDITIONS AND PERIODS OF HIGH FLOWS WITHIN THE CHANNEL AT ALL TIMES. NO COMPENSATION WILL BE MADE TO THE CONTRACTOR FOR ADDITIONAL COSTS INCURRED FOR REPAIR OR REPLACEMENT OF ANY DAMAGE THAT MAY OCCUR DUE TO ADVERSE WEATHER CONDITIONS.

EROSION AND SEDIMENT CONTROL NOTES

LOCATION OF SILT FENCE SHOWN ON THE PLAN IS APPROXIMATE AND WILL BE STAKED IN THE FIELD PRIOR TO CONSTRUCTION.

ACCESS ROUTES MUST BE REGULARLY MAINTAINED AND IF ARE NOT BEING ACTIVELY USED MUST BE STABILIZED WITHIN 48 HOURS WITH A TEMPORARY SEED MIX AND STRAW MULCH.

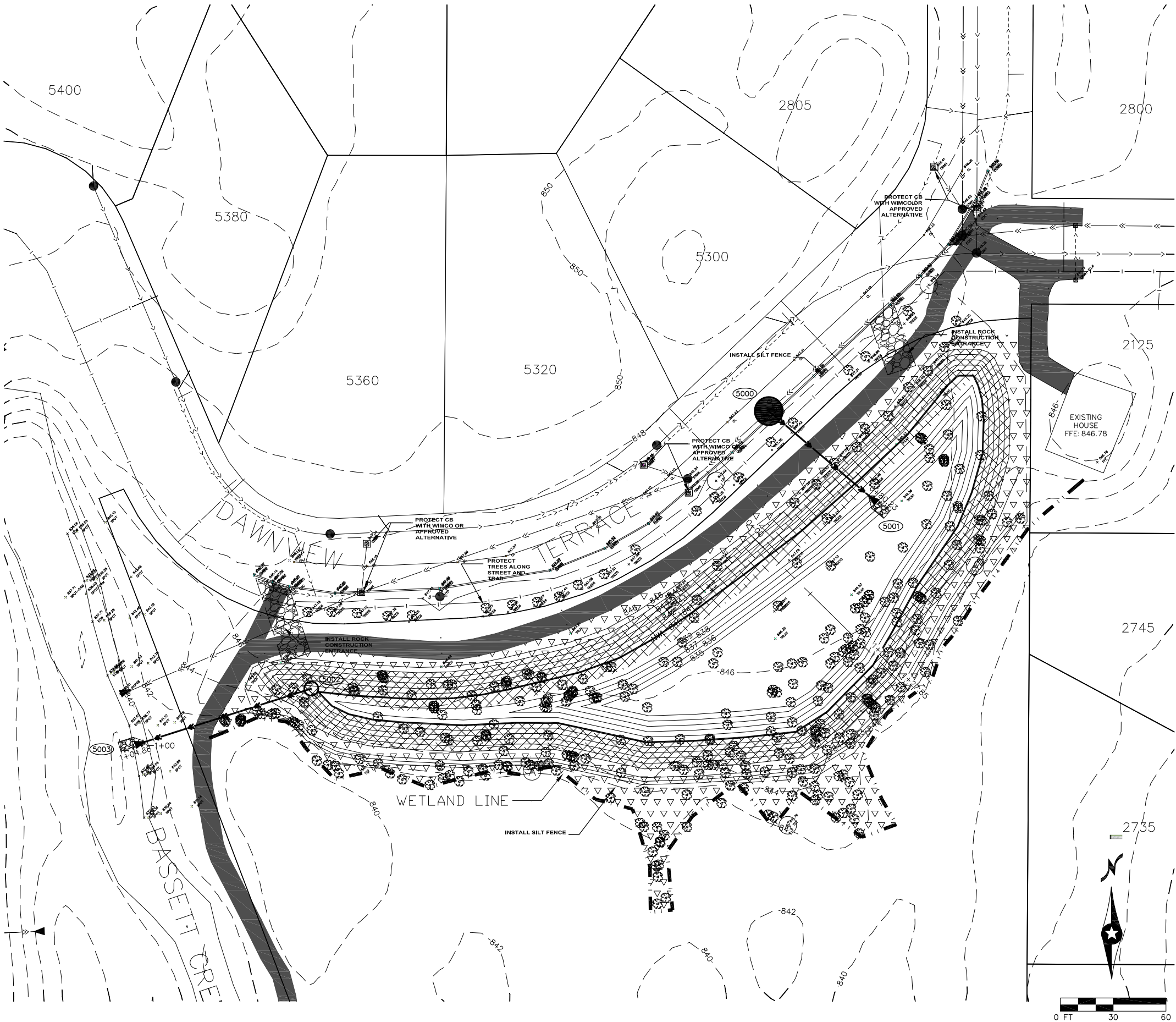
EXPOSED SOILS IMMEDIATELY ADJACENT TO THE CREEK, WHICH ARE NOT ACTIVELY BEING WORKED MUST TO BE STABILIZED WITHIN 48 HOURS WITH A TEMPORARY SEED MIX AND STRAW MULCH.

THE CONTRACTOR SHALL PROVIDE APPROPRIATE EROSION AND SEDIMENT CONTROL DEVICES FOR ALL STOCKPILES.

ROCK CONSTRUCTION ENTRANCES MUST BE INSTALLED AT EACH ACCESS POINT PRIOR TO COMMENCING WORK.

STREETS, DRIVEWAYS, AND PARKING LOTS IN AND ADJACENT TO THE PROJECT SHALL REMAIN CLEAN AND PASSABLE AT ALL TIMES. ANY SEDIMENT OR DEBRIS SHALL BE REMOVED WITHIN 24 HOURS, OR AS OFTEN TO ENSURE PUBLIC SAFETY.

DEWATERING WILL REQUIRE AN ADDITIONAL SITE PLAN.



CITY PROJECT NUMBER 12-26  
PROJECT NUMBER 2032-08

EROSION AND SEDIMENT CONTROL  
AND STAGING PLAN

SHEET 11 OF 11 SHEETS



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INFRASTRUCTURE ENGINEERS PLANNERS

BRIARWOOD WATER QUALITY  
IMPROVEMENT PROJECT  
CITY OF GOLDEN VALLEY

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT  
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AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER  
UNDER THE LAWS OF THE STATE OF MINNESOTA

ENGINEER  
DATE: 02/18/2014 LC. NO. 15998

SCALE: AS NOTED  
PLAN BY: ESF  
DESIGN BY: ESF  
CHECKED BY: EY  
PROJECT NO: 2032-08  
RECORD COPY BY: DATE

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