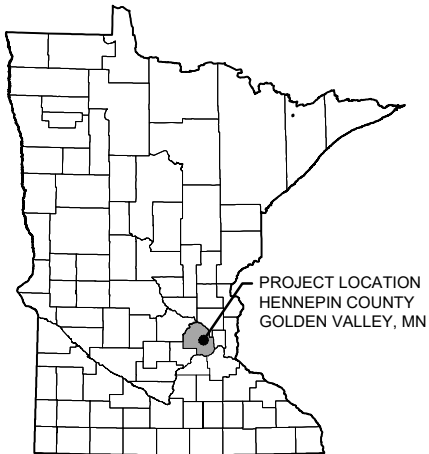


BASSETT CREEK MAIN STEM RESTORATION – PHASE 1  
BASSETT CREEK WATERSHED MANAGEMENT COMMISSION



MINNESOTA COUNTY MAP

CONTACTS:

ENGINEER CONTACT:

Jessica Olson  
Barr Engineering Co.  
325 South Lake Avenue  
Duluth, MN 55802  
218-259-7118  
jolson@barr.com

OWNER'S REPRESENTATIVE CONTACT:

Laura Jester  
Bassett Creek Watershed Management Commission  
P.O. Box 270825  
Golden Valley, MN 55427  
952-270-1990  
laura.jester@keystonewaters.com

PROPERTY OWNER'S REPRESENTATIVE:

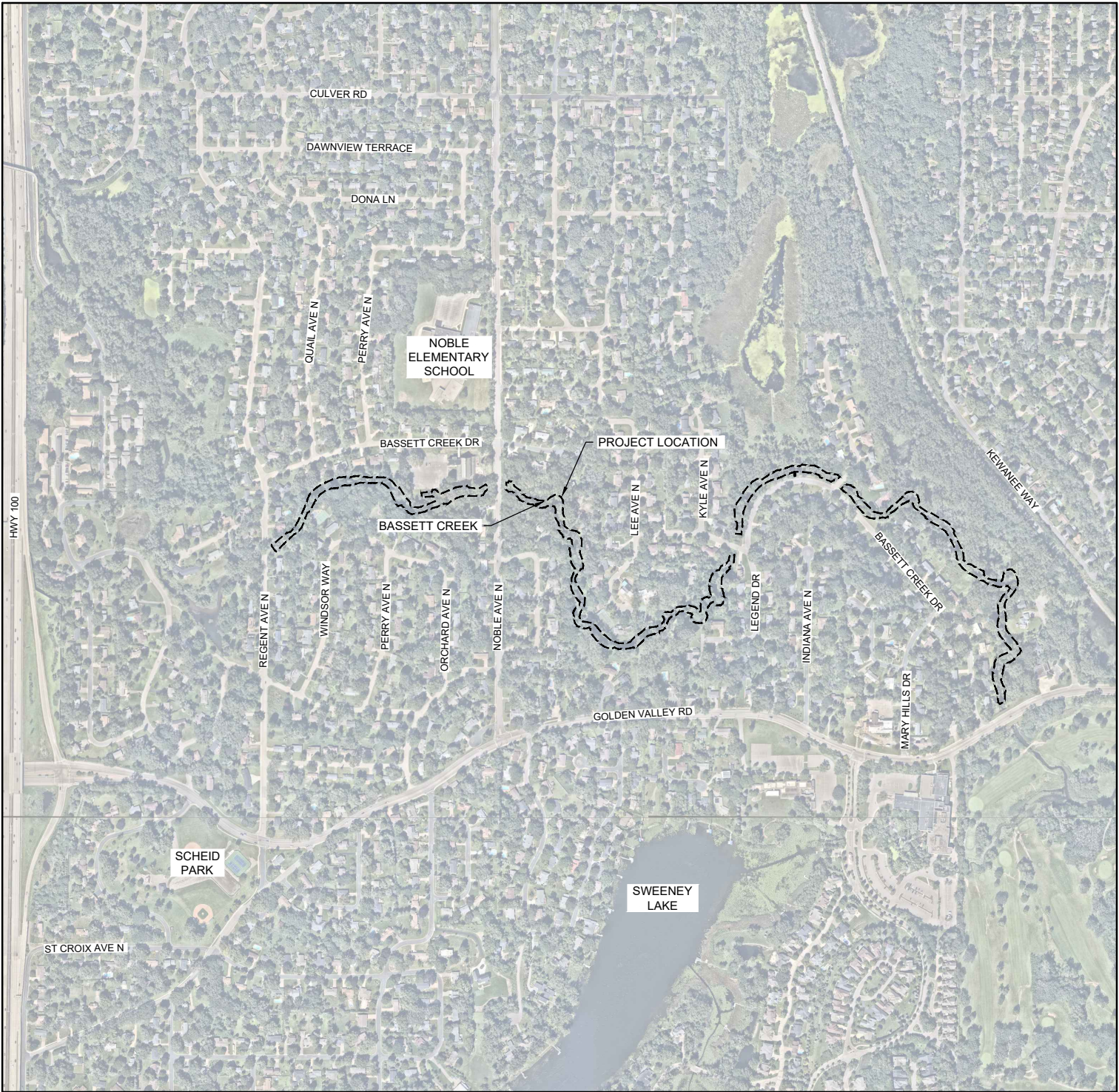
Emma Rakestraw  
City of Golden Valley  
7800 Golden Valley Road  
Golden Valley, MN 55427  
763-593-8084  
erakestraw@goldenvalleymn.gov

GENERAL NOTES:

1. CONTOUR DATA SHOWN IN THIS PLAN SET IS BASED ON SURVEY PERFORMED BY BARR ENGINEERING IN MARCH 2025 (LIDAR DRONE) AND APRIL 2025 (SURVEY-GRADE GPS).
2. IMAGERY: NEARMAP PICTOMETRY LTD, AUGUST 2024.
3. HORIZONTAL DATUM AND COORDINATE SYSTEM: HENNEPIN COUNTY COORDINATES, NAD83, US SURVEY FEET.
4. VERTICAL DATUM: NAVD88.



GOPHER STATE ONE CALL:  
CALL BEFORE YOU DIG.  
1-800-252-1166

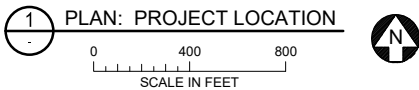


INDEX OF SHEETS

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G-09 . . . . EXISTING CONDITIONS, REMOVALS, TREE PROTECTION & EROSION CONTROL PLAN (STA. 36+00 - 45+00)  
G-10 . . . . EXISTING CONDITIONS, REMOVALS, TREE PROTECTION & EROSION CONTROL PLAN (STA. 45+00 - 54+00)  
G-11 . . . . EXISTING CONDITIONS, REMOVALS, TREE PROTECTION & EROSION CONTROL PLAN (STA. 54+00 - 63+00)  
G-12 . . . . EXISTING CONDITIONS, REMOVALS, TREE PROTECTION & EROSION CONTROL PLAN (STA. 63+00 - 72+00)  
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D-05 . . . . STREAM STABILIZATION DETAILS



BARR ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
SUITE 200  
MINNEAPOLIS, MN 55435  
PH: 1-800-632-2277  
WWW.BARR.COM  
MINNESOTA ENGINEERING FIRM  
NUMBER 1010411545

BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

BASSETT CREEK MAIN STEM RESTORATION - PHASE 1  
GOLDEN VALLEY, MINNESOTA  
TITLE SHEET, PROJECT LOCATION,  
AND SHEET INDEX

100% DESIGN  
ISSUED FOR REVIEW  
NOT FOR CONSTRUCTION

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.

PRINTED NAME: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_  
DATE: \_\_\_\_\_ LICENSE #: \_\_\_\_\_

-	-	-	-	-	-	
-	-	-	-	-	-	
-	-	-	-	-	-	
C	EPF	JCO	JCO	12/15/2025	ISSUED FOR REVIEW	
B	EPF	ADB2	JCO	11/13/2025	ISSUED FOR REVIEW	
A	EPF	JCO	JCO	06/20/2025	ISSUED FOR REVIEW	
#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION	

BARR PROJECT # 23272114.00	
CLIENT PROJECT # 24-02	
DWG # G-01	REV # C



GENERAL NOTES:

TOPO AND CONTROL GROUND SURVEY CONDUCTED BY BARR ENGINEERING IN MARCH AND APRIL 2025 IN HENNEPIN COUNTY FEET PROJECTION.

IMAGERY: NEARMAP PICTOMETRY LTD, 2024.

1. CONTRACTOR IS RESPONSIBLE TO LOCATE AND FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO WORK.
2. MINIMIZE DISTURBANCE OF EXISTING VEGETATION, WITH THE EXCEPTION OF AREAS OF VEGETATION REMOVAL AS INDICATED ON THE DRAWINGS.
3. DO NOT DISTURB TREES AND SHRUBS NOT MARKED FOR REMOVAL, INCLUDING MINIMIZING DISTURBANCE OF SOILS WITHIN THE TREE DRIPLINE. DO NOT STOCKPILE MATERIALS OR DRIVE VEHICLES/EQUIPMENT WITHIN TREE DRIPLINE(S) UNLESS APPROVED BY ENGINEER.
4. AVOID OR MINIMIZE DISTURBANCE THROUGH ALL CONSTRUCTION ACCESS ROUTES. COORDINATE WITH CITY AND ADJACENT PROPERTY OWNERS TO FLAG SPECIFIC LANDSCAPING FOR PROTECTION.
5. ALL EXISTING ROADS, PARKING LOTS, TRAILS, FENCES, SIGNS, OR SIMILAR SHALL BE PROTECTED DURING CONSTRUCTION, EXCEPT WHERE SHOWN ON PLANS FOR REMOVAL. CONTRACTOR RESPONSIBLE TO COORDINATE SURVEYS WITH THE CITY AND/OR OWNER TO DOCUMENT PRE-CONSTRUCTION EXISTING CONDITION ISSUES.
6. CONTRACTOR SHALL INSTALL AND MAINTAIN ALL EROSION CONTROL BMPS PRIOR TO COMMENCEMENT OF GRADING FOR EACH LOCATION DURING CONSTRUCTION. EROSION CONTROL PLANS ARE PROVIDED INSIDE THE PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
7. ALL GROUND DISTURBANCE GENERATED FROM GRADING ACTIVITIES SHALL BE STABILIZED AND RESTORED WITH TOPSOIL, SEED W/COVER CROP AND EROSION CONTROL BLANKET OR STRAW MULCH.
8. CONTRACTOR TO MAINTAIN EXISTING STREAM BOTTOM WIDTH SO AS NOT TO DECREASE CREEK CROSS SECTIONAL AREA DURING RIPRAP INSTALLATION.
9. CONSTRUCTION LIMITS AS SHOWN ARE APPROXIMATE. FINAL CONSTRUCTION LIMITS TO BE COORDINATED WITH THE OWNER AND/OR ENGINEER AND STAKED IN THE FIELD.
10. STREAM FEATURE LOCATIONS MAY BE FIELD FIT AS DIRECTED BY ENGINEER.
11. SWEEP PAVEMENT DAILY, OR AS REQUIRED TO KEEP FROM TRACKING MATERIALS OFFSITE.
12. REPAIR OR REPLACE ITEMS THAT ARE DAMAGED TO A CONDITION AT LEAST EQUAL TO THAT WHICH EXIST PRIOR TO THE START OF WORK.
13. OBTAIN ANY REQUIRED PERMITS, NOT PROVIDED BY THE ENGINEER, BEFORE PERFORMING WORK.

TREE REMOVAL/PROTECTION NOTES:

1. ADDITIONAL TREE REMOVALS MAY BE REQUESTED AND APPROVED AT TIME OF CONSTRUCTION.
2. ASH TREES MUST BE REMOVED BETWEEN OCTOBER 1ST AND APRIL 15TH AND TAKEN TO AN APPROVED SITE FOR DISPOSAL. CONTRACTOR MUST PROVIDE ASSURANCE THAT ASH TREES DO NOT LEAVE QUARANTINED AREA.
3. CONTRACTOR SHALL FOLLOW ALL ROAD RESTRICTION REGULATIONS WHEN REMOVING TREES.
4. LANDSCAPE ARCHITECT SHALL MARK ALL TREES FOR REMOVAL PRIOR TO ANY CONSTRUCTION ACTIVITY. COORDINATE WITH LANDSCAPE ARCHITECT TWO (2) WEEKS PRIOR TO CONSTRUCTION.
5. REMOVE AND DISPOSE OF ALL WOOD AND DEBRIS IN ACCORDANCE WITH ALL LOCAL RULES AND REGULATIONS.
6. CONTRACTOR TO VERIFY AND RECORD QUANTITY OF TREES REMOVED WITH DIAMETER GREATER THAN 6".
7. ALL TREES NOT MARKED FOR REMOVAL SHALL BE AVOIDED AND ANY GRADING OR COMPACTION WITHIN THE DRIPLINE SHALL BE MINIMIZED.
8. CONSTRUCTION MATERIALS, STOCKPILES, EQUIPMENT, AND TEMPORARY FACILITIES SHALL NOT BE STORED OR OPERATED WITHIN THE TREE PROTECTION ZONE (EQUAL TO DRIPLINE).
9. ROOTS OUTSIDE OF THE TREE PROTECTION ZONE EXPOSED OR DAMAGED DURING EXCAVATION OR OTHER CONSTRUCTION ACTIVITY SHALL BE CLEANLY CUT AS DIRECTED BY THE CITY FORESTER.
10. ADDITIONAL TREE PROTECTION MEASURES MAY BE REQUIRED.
11. ALL SELECT ON-SITE TREES REMOVED SHALL BE RE-USED FOR ROOT WAD AND TOE WOOD INSTALLATION, AS DIRECTED BY ENGINEER.

EROSION & SEDIMENT CONTROL NOTES:

1. INSTALL PERIMETER EROSION CONTROL AT THE LOCATIONS SHOWN ON THE PLANS PRIOR TO THE COMMENCEMENT OF ANY UPSLOPE LAND DISTURBANCE OR CONSTRUCTION ACTIVITIES.
2. BEFORE BEGINNING CONSTRUCTION, INSTALL A TEMPORARY ROCK CONSTRUCTION ENTRANCE AT EACH POINT WHERE VEHICLES ENTER OR EXIT THE CONSTRUCTION SITE.
3. INSTALL INLET PROTECTION AT ALL PUBLIC AND PRIVATE CATCH BASIN INLETS WHICH RECEIVE RUNOFF FROM THE DISTURBED AREAS. CONTRACTOR SHALL CLEAN, REMOVE SEDIMENT, OR REPLACE STORM DRAIN INLET PROTECTION DEVICES ON A ROUTINE BASIS SUCH THAT THE DEVICES ARE FULLY FUNCTIONAL FOR THE NEXT RAIN EVENT. SEDIMENT DEPOSITED IN AND/OR PLUGGING DRAINAGE SYSTEMS IS THE RESPONSIBILITY OF THE CONTRACTOR. HAY BALES OR FILTER FABRIC WRAPPED GRATES ARE NOT ALLOWED FOR INLET PROTECTION.
4. LOCATE SOIL OR DIRT STOCKPILES NO LESS THAN 25 FEET FROM ANY PUBLIC OR PRIVATE ROADWAY OR DRAINAGE CHANNEL. IF REMAINING FOR MORE THAN SEVEN DAYS, STABILIZE THE STOCKPILES BY MULCHING, VEGETATIVE COVER, TARPS, OR OTHER MEANS. CONTROL EROSION FROM ALL STOCKPILES BY PLACING SILT BARRIERS AROUND THE PILES. TEMPORARY STOCKPILES LOCATED ON PAVED SURFACES MUST BE NO LESS THAN TWO FEET FROM THE DRAINAGE/GUTTER LINE AND SHALL BE COVERED IF LEFT MORE THAN 24 HOURS.
5. NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ONSITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE.
6. ADDITIONAL MEASURES, SUCH AS HYDRAULIC MULCHING AND OTHER PRACTICES AS SPECIFIED BY THE WATERSHED MANAGEMENT COMMISSION MUST BE USED ON SLOPES OF 3:1 (H:V) OR STEEPER TO PROVIDE ADEQUATE STABILIZATION.
7. CONSTRUCTION SITE WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER AND SANITARY WASTE MUST BE PROPERLY MANAGED.
8. 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 WATERSHED MANAGEMENT COMMISSION, AND ALL FINAL STABILIZATION REQUIREMENTS ARE ACHIEVED.
9. 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.
10. 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.
11. CHANGES TO APPROVED EROSION CONTROL PLAN MUST BE APPROVED BY THE EROSION CONTROL INSPECTOR PRIOR TO IMPLEMENTATION. CONTRACTOR TO PROVIDE INSTALLATION AND DETAILS FOR ALL PROPOSED ALTERNATE TYPE DEVICES.
12. IF DEWATERING OR PUMPING OF WATER IS NECESSARY, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND/OR APPROVALS PRIOR TO DISCHARGE OF ANY WATER FROM THE SITE. IF THE DISCHARGE FROM THE DEWATERING OR PUMPING PROCESS IS TURBID OR CONTAINS SEDIMENT LADEN WATER, IT MUST BE TREATED THROUGH THE USE OF SEDIMENT TRAPS, VEGETATIVE FILTER STRIPS, OR OTHER SEDIMENT REDUCING MEASURES SUCH THAT THE DISCHARGE IS NOT VISIBLY DIFFERENT FROM THE RECEIVING WATER. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AT THE DISCHARGE POINT TO PREVENT SCOUR EROSION.
13. ACTIVITIES MUST BE CONDUCTED SO AS TO MINIMIZE THE POTENTIAL TRANSFER OF AQUATIC INVASIVE SPECIES (E.G., ZEBRA MUSSELS, EURASIAN WATERMILFOIL, ETC.) TO THE MAXIMUM EXTENT POSSIBLE. SEE SECTION 4.6 OF THE SWPPP (SHEET G-03) FOR FURTHER DETAIL.
14. WHEREVER CONSTRUCTION ACCESS ROUTE CROSSES EXISTING TRAILS, PROTECT WITH MATTING OR ENGINEER-APPROVED ALTERNATIVE.

STATEMENT OF ESTIMATED QUANTITIES

Item	Unit	Quantity
MOBILIZATION/DEMOBILIZATION	LS	1
CONTROL OF WATER	LS	1
TRAFFIC CONTROL	LS	1
CONSTRUCTION ENTRANCE	EA	19
SILT FENCE	LF	2,616
SEDIMENT CONTROL LOG	LF	3,193
INLET PROTECTION	EA	13
TEMPORARY STREAM CROSSING	EA	5
HERBICIDE APPLICATION	AC	6.4
CLEARING AND GRUBBING TREES/SHRUBS LESS THAN 8" DIAMETER (MEDIUM DENSITY)	AC	6.4
SELECT TREE REMOVAL AND SALVAGE WITH ROOT WAD (<12")	EA	75
SELECT TREE REMOVAL AND SALVAGE WITH ROOT WAD (>12")	EA	61
COMMON EXCAVATION - EXCAVATE, HAUL, AND DISPOSE OFFSITE	CY	2,673
GRADING (P)	SY	4,229
FURNISH AND INSTALL GRANULAR FILTER	TON	663
FURNISH AND INSTALL FIELDSTONE RIPRAP	TON	2654
FURNISH AND INSTALL BOULDER CROSS VANE (P)	LF	675
FURNISH AND INSTALL J-HOOK BOULDER VANE	EA	42
FURNISH AND INSTALL LIVE FASCINES	LF	490
FURNISH AND INSTALL COIR LOGS	LF	0
FURNISH AND INSTALL TOE WOOD (INCLUDES 173 ROOT WADS)	LF	1610
FURNISH AND INSTALL ROOTWAD FROM OFF-SITE SOURCE	EA	88
INSTALL ROOTWAD FROM ON-SITE SOURCE	EA	136
FURNISH AND INSTALL VRSS LIFTS	LF	3,200
FURNISH AND INSTALL BOULDER STEPS	EA	6

MASTER LEGEND

- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING GAS LINE
- EXISTING OVERHEAD ELECTRIC
- EXISTING WATERMAIN
- EXISTING UNDERGROUND FIBER OPTIC
- EXISTING FENCE
- EXISTING WETLAND DELINEATION
- OHWL
- 100-YEAR HWL
- CONSTRUCTION LIMITS
- EXISTING LIGHT POLE
- EXISTING UTILITY POLE
- EXISTING HYDRANT
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING TREE
- EXISTING TREE REMOVAL
- EXISTING TREE PROTECTION
- PROPOSED 5' CONTOUR  
(NOT INCLUDED IN 50% PLANS)
- PROPOSED 1' CONTOUR  
(NOT INCLUDED IN 50% PLANS)
- PROPOSED TREE PROTECTION FENCING
- TREE IDENTIFICATION NUMBER,  
SEE TABLE FOR TREE SURVEY  
AND TREE REMOVAL SUMMARY
- RIPRAP
- TOE WOOD
- VRSS
- GRADING AREA
- ROOT WAD
- BOULDER CROSS VANE
- J-HOOK BOULDER VANE
- COIR LOGS
- FASCINES
- SILT FENCE
- SEDIMENT CONTROL LOGS
- CONSTRUCTION ACCESS
- INLET PROTECTION

100% DESIGN  
ISSUED FOR REVIEW  
NOT FOR CONSTRUCTION

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.

PRINTED NAME -  
SIGNATURE  
DATE - LICENSE # -

-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
C	EPF	JCO	JCO	12/15/2025	ISSUED FOR REVIEW
B	EPF	ADB2	JCO	11/13/2025	ISSUED FOR REVIEW
A	EPF	JCO	JCO	06/20/2025	ISSUED FOR REVIEW

#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION
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BARR ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
SUITE 200  
MINNEAPOLIS, MN 55435

PH: 1-800-632-2277  
WWW.BARR.COM  
MINNESOTA ENGINEERING FIRM  
NUMBER 10104111545

BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

BASSETT CREEK MAIN STEM RESTORATION - PHASE 1  
GOLDEN VALLEY, MINNESOTA  
ESTIMATED QUANTITIES, GENERAL NOTES, AND LEGEND

BARR PROJECT # 23272114.00	
CLIENT PROJECT # 24-02	
DWG # G-02	REV # C

THIS STORMWATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN PREPARED IN COMPLIANCE WITH THE MINNESOTA GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY NO. MNR100001 (GENERAL PERMIT), AS REQUIRED BY THE MINNESOTA POLLUTION CONTROL AGENCY (MPCA) UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM/STATE DISPOSAL SYSTEM (NPDES/SDS) PROGRAM.

THE PROJECT IS LOCATED IN THE CITY OF GOLDEN VALLEY, HENNEPIN COUNTY, MINNESOTA. PROPOSED CONSTRUCTION ACTIVITIES WILL TAKE PLACE ALONG BASSETT CREEK BETWEEN THE CULVERT OUTLET AT REGENT AVE N AND THE CULVERT INLET AT GOLDEN VALLEY RD. THE APPROXIMATE CENTROID OF THE PROJECT HAS A LATITUDE OF 45.002886 AND A LONGITUDE OF -93.337206.

THE PROJECT WORK INVOLVES THE RESTORATION AND STABILIZATION OF STREAM BANKS ALONG BASSET CREEK FROM THE CULVERT OUTLET AT REGENT AVENUE TO THE CULVERT INLET AT GOLDEN VALLEY RD. CONSTRUCTION WILL CONSIST OF TREE REMOVAL AND CLEARING/GRUBBING, EXCAVATION OF STREAM BANKS, INSTALLATION OF CROSS VANES, TOE WOOD, VRSS, RIPRAP, AND OTHER STREAM RESTORATION MEASURES, AND SITE RESTORATION. THE PROJECT IS NOT PART OF A LARGER COMMON PLAN OF DEVELOPMENT. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES ARE REQUIRED TO MINIMIZE SEDIMENT FROM BEING TRANSPORTED TO BASSETT CREEK, AN EPA - APPROVED IMPAIRED WATER. REFER TO PROJECT DRAWINGS FOR FURTHER DETAILS. (CSW PERMIT PART III.A.1)

- THE ANTICIPATED AREA OF DISTURBANCE IS APPROXIMATELY 11.39 ACRES.
- THE TOTAL AREA OF PRE-CONSTRUCTION IMPERVIOUS AREA IS APPROXIMATELY 0.00 ACRES.
- THE TOTAL AREA OF POST-CONSTRUCTION IMPERVIOUS AREA IS APPROXIMATELY 0.00 ACRES
- THE TOTAL NEW IMPERVIOUS AREA IS APPROXIMATELY 0.00 ACRES.

- ANTICIPATED START DATE: JULY 2026

ANTICIPATED END DATE: NOVEMBER 2026

ORGANIZATION	CONTACT NAME	ADDRESS	EMAIL	PHONE
CITY OF GOLDEN VALLEY	EMMA RAKESTRAW	7800 GOLDEN VALLEY RD, GOLDEN VALLEY, MN 55427	ERAKESTRAW@GOLDENVALLEYMN.GOV	(763) 593-8084
ASSETT CREEK WATERSHED MANAGEMENT COMMISSION	LAURA JESTER	16145 HILLCREST LANE, EDEN PRAIRIE, MN 55346	LAURA.JESTER@KEYSTONEWATERS.COM	(952) 270-1990
METROPOLITAN COUNCIL	MANKING LEE	390 ROBERT ST, NORTH SAINT PAUL, MN 55101-1805	VSANNES@MINNEHAHACREEK.ORG	(651) 602-1000
BARR ENGINEERING	JESSICA OLSON	4300 MARKET POINTE DR, SUITE 200, MINNEAPOLIS, MN 55435	JOLSON@BARR.COM	(218) 529-7118
BARR ENGINEERING	JIM HERBERT	4300 MARKET POINTE DR, SUITE 200, MINNEAPOLIS, MN 55435	JHERBERT@BARR.COM	(612) 834-1060

OPERATOR / GENERAL CONTRACTOR (WILL OVERSEE IMPLEMENTATION OF THE SWPPP): TBD  
MAILING ADDRESS: TBD  
CONTACT PERSON: TBD TITLE: TBD  
PHONE NUMBER: TBD EMAIL ADDRESS: TBD

WATERS WITHIN ONE MILE (NEAREST STRAIGHT LINE DISTANCE) THAT ARE LIKELY TO RECEIVE STORMWATER RUNOFF FROM THE PROJECT SITE (CSW PERMIT ITEM 5.10) INCLUDE:

- (1) TYPE EXAMPLES: DITCH, POND, WETLAND, CALCAREOUS FEN, LAKE, STREAM, RIVER
- (2) WATER BODY IDENTIFICATION (ID) MIGHT NOT BE AVAILABLE FOR ALL WATER BODIES. USE THE SPECIAL AND IMPAIRED WATERS SEARCH TOOL AT: [HTTPS://WWW.PCA.STATE.MN.US/WATER/STORMWATER-SPECIAL-AND-IMPAIRED-WATERS-SEARCH](https://www.pca.state.mn.us/water/stormwater-special-and-impaired-waters-search)
- (3) REFER TO CSW PERMIT SECTION 23. IMPAIRED WATER FOR THE FOLLOWING POLLUTANT(S) OR STRESSOR(S): PHOSPHORUS (NUTRIENT EUTROPHICATION BIOLOGICAL INDICATORS), TURBIDITY, TOTAL SUSPENDED SOLIDS (TSS), DISSOLVED OXYGEN, OR AQUATIC BIOTA (FISH BIOASSESSMENT, AQUATIC PLANT BIOASSESSMENT, AND AQUATIC MACROINVERTEBRATE BIOASSESSMENT)

2.1 SPECIAL AND IMPAIRED WATERS: THE MPCA'S SPECIAL AND IMPAIRED WATERS SEARCH TOOL WAS USED TO LOCATE SPECIAL AND IMPAIRED WATERS WITHIN ONE MILE (AERIAL RADIUS MEASUREMENT) OF THE PROJECT SITE. BASSETT CREEK HAS EPA-APPROVED IMPAIRMENTS FOR FISH BIOASSESSMENTS AND BENTHIC MACROINVERTEBRATES BIOASSESSMENTS. THESE IMPAIRMENTS ARE CONSIDERED NON-CONSTRUCTION RELATED AND DO NOT REQUIRE ADDITIONAL BEST MANAGEMENT PRACTICES (BMPs) OR PLAN REVIEW FOR COMPLIANCE WITH THE GENERAL PERMIT. (CSW PERMIT ITEM 2.7 AND SECTION 23)

THIS PROJECT DOES NOT INCLUDE ANY ADDITIONAL BMPs OR OTHER SPECIFIC CONSTRUCTION RELATED IMPLEMENTATION ACTIVITIES IDENTIFIED IN AN APPROVED TOTAL MAXIMUM DAILY LOAD (TMDL). (CSW PERMIT ITEM 5.19)

2.2 PUBLIC WATERS WITH WORK IN WATER RESTRICTIONS: BASSETT CREEK IS IDENTIFIED BY THE DNR AS A PUBLIC WATER. WORK IS RESTRICTED FOR NON-TROUT STREAMS IN MINNEAPOLIS MINNESOTA BETWEEN MARCH 15 - JUNE 15. DURING THE RESPECTIVE RESTRICTION PERIODS, ALL EXPOSED SOILS WITHIN 200 FEET OF THE WATER'S EDGE WILL HAVE EROSION PREVENTION STABILIZATION ACTIVITIES INITIATED IMMEDIATELY AFTER CONSTRUCTION ACTIVITY HAS CEASED (AND COMPLETED WITHIN 24 HOURS). (CSW PERMIT ITEM 5.11)

**2.3 WETLAND IMPACTS:** THIS PROJECT WILL NOT REQUIRE EXCAVATION AND FILL IN WETLANDS AS PART OF PROJECT CONSTRUCTION. (CSW PERMIT ITEMS 2.4 AND 2.10, AND SECTION 22)

**2.4 ENVIRONMENTAL REVIEW AND OTHER REQUIRED REVIEWS:** NO FEDERAL, STATE, OR LOCAL ENVIRONMENTAL REVIEWS OR ASSOCIATED ENVIRONMENTAL APPROVALS FOR THE PROJECT REQUIRE STORMWATER MITIGATION MEASURE. (CSW PERMIT ITEMS 2.8, 2.9, AND 5.16)

2.5 KARST AREAS OR DRINKING WATER SUPPLY MANAGEMENT AREAS: THIS PROJECT DOES NOT INCLUDE ANY KARST OR DRINKING WATER SUPPLY MANAGEMENT AREAS. (CSW PERMIT ITEMS 16.19, 16.20, AND 18.10)

PROJECT LOCATION AND CONSTRUCTION LIMITS	G-01, C-01
EXISTING AND FINAL GRADES, INCLUDING DRAINAGE AREA BOUNDARIES, DIRECTIONS OF FLOW AND ALL DISCHARGE POINTS WHERE STORMWATER IS LEAVING THE SITE OR ENTERING A SURFACE WATER	C-02 THRU C-09
SOIL TYPES AT THE SITE	G-04
LOCATIONS OF IMPERVIOUS SURFACES	C-02 THRU C-09
LOCATIONS OF AREAS NOT BE BE DISTURBED (E.G., BUFFER ZONES, WETLANDS, ETC.)	C-02 THRU C-09
LOCATIONS OF AREAS OF STEEP SLOPES	C-02 THRU C-09
LOCATIONS OF AREAS WHERE CONSTRUCTION WILL BE PHASED TO MINIMIZE DURATION OF EXPOSED SOILS	NA
PORTIONS OF THE SITE THAT DRAIN TO A PUBLIC WATER WITH DNR WORK IN WATER RESTRICTIONS FOR FISH SPAWNING TIMEFRAMES	NA
LOCATIONS OF ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL BMPs AS REQUIRED IN PERMIT SECTIONS 8 THROUGH 10 AND 14 THROUGH 19	G-05 THRU G-12
BUFFER ZONES AS REQUIRED IN PERMIT ITEMS 9.17 AND 23.11	NA
LOCATIONS OF POTENTIAL POLLUTION-GENERATING ACTIVITIES IDENTIFIED IN PERMIT SECTION 12	NA
STANDARD DETAIL PLATES FOR EROSION AND SEDIMENT CONTROL BMPs TO BE INSTALLED AT THE SITE	G-13, G-14

1. BEFORE LAND DISTURBING ACTIVITIES BEGIN, THE LIMITS OF THE AREAS TO BE DISTURBED DURING CONSTRUCTION WILL BE DELINEATED WITH FLAGS, STAKES, SIGNS, SILT FENCE, ETC.
2. TEMPORARY STABILIZATION OF SOILS AND SOIL STOCKPILES: (CSW PERMIT ITEMS 8.4, 8.5, AND 23.9)
  - a. AREAS OF EXPOSED SOIL WILL BE STABILIZED WITH EROSION CONTROL BLANKET, PRESERVATION OF MATURE VEGETATION, MULCH OR EQUIVALENT MEASURES.
  - b. IF PRESENT, SOIL STOCKPILES WILL BE STABILIZED WITH MULCH (SUCH AS STRAW MULCH, EROSION CONTROL BLANKETS OR EQUIVALENT MEASURES.
  - c. TEMPORARY STOCKPILES WITHOUT SIGNIFICANT SILT, CLAY, OR ORGANIC COMPONENTS (E.G., CLEAN AGGREGATE STOCKPILES, DEMOLITION CONCRETE STOCKPILES, SAND STOCKPILES) AND THE CONSTRUCTED BASE COMPONENTS OF ROADS, PARKING LOTS, AND SIMILAR SURFACES ARE EXEMPT FROM THESE STABILIZATION REQUIREMENTS.
2. STABILIZATION OF DITCH AND SWALE WETTED PERIMETERS: (CSW PERMIT ITEMS 8.6 THROUGH 8.8)
  - a. IF SOILS WITHIN EXISTING STORMWATER DITCHES OR SWALES ARE DISTURBED, THEY WILL BE STABILIZED WITH CHANNEL EROSION CONTROL BLANKET, RIPRAP, TURF REINFORCEMENT MAT OR EQUIVALENT MEASURES.
  - b. MULCH, HYDROMULCH, TACKIFIER, POLYACRYLAMIDE, OR SIMILAR EROSION PREVENTION PRACTICES WILL NOT BE USED TO STABILIZE ANY PART OF AN EXISTING STORMWATER DITCH OR SWALE WITH A CONTINUOUS SLOPE OF GREATER THAN 2 PERCENT.
  - c. THE LAST 200 LINEAL FEET OF LENGTH OF THE NORMAL WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DITCH OR SWALE THAT DRAINS WATER FROM ANY PORTION OF THE CONSTRUCTION SITE, OR DIVERTS WATER AROUND THE SITE, WITHIN 200 LINEAL FEET FROM THE PROPERTY EDGE, OR FROM THE POINT OF DISCHARGE INTO ANY SURFACE WATER WILL BE STABILIZED WITHIN 24 HOURS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE.
  - d. STABILIZATION OF THE REMAINING PORTIONS OF ANY TEMPORARY OR PERMANENT DITCHES OR SWALES WILL BE COMPLETED WITHIN 7 CALENDAR DAYS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE AND CONSTRUCTION IN THAT PORTION OF THE DITCH HAS TEMPORARILY OR PERMANENTLY CEASED.
3. ENERGY DISSIPATION AT PIPE OUTLETS: ENERGY DISSIPATION AT PIPE OUTLETS WILL BE PROVIDED WITH ONE OR MORE OF THE FOLLOW METHODS: RIP RAP, SPLASH PADS, GABIONS, OR EQUIVALENT MEASURES. (CSW PERMIT ITEM 8.9)
4. EROSION PREVENTION IMPLEMENTATION TIMELINES: (CSW PERMIT ITEMS 5.4, 8.4 THROUGH 8.6, AND 23.9)
  - a. STABILIZATION OF EXPOSED SOIL AREAS (INCLUDING STOCKPILES) WILL BE INITIATED IMMEDIATELY TO LIMIT SOIL EROSION WHENEVER ANY CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS.
  - b. IF THE EXPOSED SOIL AREAS DRAIN TO A DISCHARGE POINT THAT IS WITHIN ONE MILE (AERIAL RADIUS MEASUREMENT) OF A SPECIAL OR IMPAIRED WATER (SEE SECTION 2.0), STABILIZATION OF EXPOSED SOIL AREAS (INCLUDING STOCKPILES) WILL BE INITIATED IMMEDIATELY TO LIMIT SOIL EROSION WHENEVER ANY CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 7 CALENDAR DAYS.
  - c. THE FOLLOWING ACTIVITIES CAN BE TAKEN TO INITIATE STABILIZATION: PREPPING THE SOIL FOR VEGETATIVE OR NON-VEGETATIVE STABILIZATION, APPLYING MULCH OR OTHER NON-VEGETATIVE PRODUCT TO THE EXPOSED SOIL AREA, OR SEEDING OR PLANTING THE EXPOSED AREA.
5. ADDITIONAL EROSION PREVENTION MEASURES: THE FOLLOWING ADDITIONAL EROSION PREVENTION METHODS WILL BE IMPLEMENTED AT THE SITE DURING CONSTRUCTION: (CSW PERMIT ITEMS 8.2, 8.3, AND 8.10)
  - a. SOIL DISTURBANCE WILL BE MINIMIZED WHEREVER POSSIBLE TO AID IN EROSION PREVENTION.
  - b. EXISTING VEGETATION WILL BE PRESERVED WHEREVER POSSIBLE TO LIMIT EXPOSED SOIL AND THUS WILL SERVE AS NATURAL VEGETATIVE BUFFERS.
  - c. EXPOSED SOIL ON STEEP SLOPES ( $\leq 3H:1V$ ) WILL BE STABILIZED USING EROSION CONTROL BLANKETS AND SEEDING.
  - d. HORIZONTAL SLOPE GRADING WILL BE UTILIZED TO MINIMIZE EROSION POTENTIAL.
  - e. TERRACING WILL BE USED TO MINIMIZED EROSION POTENTIAL.

1. DOWNGRADIANT PERIMETER CONTROLS: (CSW PERMIT ITEMS 9.2 THROUGH 9.6)
  - a. SEDIMENT CONTROL PRACTICES MUST BE ESTABLISHED ON ALL DOWNGRADIANT PERIMETERS AND LOCATED UPGRADIENT OF ANY BUFFER ZONES. PERIMETER SEDIMENT CONTROLS WILL INCLUDE: SILT FENCE, SEDIMENT CONTROL LOGS / BIOROLLS (FILLED WITH COMPOST, WOOD CHIPS, ROCK, ETC.), VEGETATIVE BUFFERS (RETAIN EXISTING VEGETATION WHERE POSSIBLE), OR EQUIVALENT MEASURES.
  - b. PERIMETER SEDIMENT CONTROL PRACTICES MUST BE INSTALLED BEFORE ANY UPGRADIENT LAND-DISTURBING ACTIVITIES BEGIN AND REMAIN IN PLACE UNTIL PERMANENT COVER HAS BEEN ESTABLISHED.
  - c. IF SEDIMENT CONTROL PRACTICES HAVE BEEN ADJUSTED OR REMOVED TO ACCOMMODATE SHORT-TERM ACTIVITIES (SUCH AS CLEARING, GRUBBING, OR PASSAGE OF VEHICLES), THE CONTROLS MUST BE RE-INSTALLED IMMEDIATELY AFTER THE SHORT-TERM ACTIVITY HAS BEEN COMPLETED. SEDIMENT CONTROL PRACTICES MUST BE RE-INSTALLED BEFORE THE NEXT PRECIPITATION EVENT, EVEN IF THE SHORT-TERM ACTIVITY IS NOT COMPLETE.
  - d. IF THE DOWNGRADIANT SEDIMENT CONTROLS ARE OVERLOADED (BASED ON FREQUENT FAILURE OR EXCESSIVE MAINTENANCE REQUIREMENT), INSTALL ADDITIONAL UPGRADIENT SEDIMENT CONTROL PRACTICES OR REDUNDANT BMPs TO ELIMINATE THE OVERLOADING AND AMEND THE SWPPP TO IDENTIFY THESE ADDITIONAL PRACTICES.
2. SOIL STOCKPILE PERIMETER CONTROLS: TEMPORARY SOIL STOCKPILES WILL BE SURROUNDED BY: DOUBLE ROWS OF SILT FENCE, SEDIMENT CONTROL LOGS OR EQUIVALENT MEASURES, AND SHALL NOT BE PLACED IN ANY NATURAL BUFFERS OR SURFACE WATERS. (CSW PERMIT ITEMS 9.9 AND 9.10)
3. STORM DRAIN INLET PROTECTION: (CSW PERMIT ITEMS 9.7 AND 9.8)
  - a. INLET PROTECTION BMPs WILL BE INSTALLED AROUND ALL STORM DRAIN INLETS DOWNGRADIANT OF CONSTRUCTION ACTIVITIES.
  - b. STORM DRAIN INLETS WILL BE PROTECTED UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLET HAVE BEEN STABILIZED.
  - c. INLET PROTECTION BMPs WILL BE: SEDIMENT CONTROL LOG, FILTER SACKS, OR EQUIVALENT MEASURES.
4. VEHICLE TRACKING BMPs: (CSW PERMIT ITEMS 9.11 AND 9.12)
  - a. VEHICLE TRACKING BMPs WILL BE INSTALLED TO MINIMIZE THE TRACKING OUT OF SEDIMENT FROM THE CONSTRUCTION AREA AND WILL INCLUDE: ROCK PADS AND MUD MATS OR AN EQUIVALENT SYSTEM.
  - b. IF SUCH VEHICLE TRACKING BMPs ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED ONTO THE PAVED ROAD, STREET SWEEPING WILL ALSO BE EMPLOYED. SEDIMENT WILL BE REMOVED BY SWEEPING WITHIN 24 HOURS.
5. PROTECTION OF INFILTRATION AREAS: IF NECESSARY, ADDITIONAL SEDIMENT CONTROLS (E.G., DIVERSION BERMS) WILL BE INSTALLED TO KEEP RUNOFF AWAY FROM PLANNED INFILTRATION AREAS WHEN EXCAVATED PRIOR TO ESTABLISHING PERMANENT COVER WITHIN THE CONTRIBUTING DRAINAGE AREA. (CSW PERMIT ITEMS 16.4 AND 16.5)
6. MINIMIZATION OF SOIL COMPACTION AND PRESERVATION OF TOPSOIL: SOIL COMPACTION WILL BE MINIMIZED AND TOPSOIL WILL BE PRESERVED WHERE POSSIBLE. (CSW PERMIT ITEMS 5.24, 9.14, AND 9.15)
7. PRIORITIZATION OF ONSITE INFILTRATION AND SEDIMENT REMOVAL: (CSW PERMIT ITEM 9.16)
  - a. PRIOR TO OFFSITE DISCHARGE, INFILTRATION AND SEDIMENT REMOVAL WILL BE IMPLEMENTED ONSITE WHERE POSSIBLE.
  - b. DISCHARGES FROM BMPs WILL BE DIRECTED TO VEGETATED AREAS OF THE SITE (INCLUDING ANY NATURAL BUFFERS) IN ORDER TO INCREASE SEDIMENT REMOVAL AND MAXIMIZE STORMWATER INFILTRATION. IF EROSION IS NOTED TO OCCUR AS THE RESULT OF SUCH A DISCHARGE, VELOCITY DISSIPATION BMPs WILL BE CONSIDERED AND INSTALLED AS NECESSARY TO PREVENT EROSION.
8. BUFFER ZONE OR REDUNDANT SEDIMENT CONTROLS TO PROTECT SURFACE WATERS: (CSW PERMIT ITEM 9.17)
  - a. A 50-FOOT NATURAL BUFFER WILL BE PRESERVED IN CONSTRUCTION AREAS DISCHARGING TO A NON-SPECIAL/NON-IMPAIRED SURFACE WATER OR WETLAND. IF A NON-SPECIAL/NON-IMPAIRED SURFACE WATER OR WETLAND IS LOCATED WITHIN 50 FEET OF THE PROJECT'S EARTH DISTURBANCES AND STORMWATER FLOWS TO THE SURFACE WATER, OR WHEN A BUFFER IS INFEASIBLE, REDUNDANT SEDIMENT CONTROLS WILL BE PROVIDED.
  - b. A 100-FOOT NATURAL BUFFER WILL BE PRESERVED IN CONSTRUCTION AREAS DISCHARGING TO A SPECIAL OR IMPAIRED SURFACE WATER. IF A SPECIAL OR IMPAIRED SURFACE WATER IS LOCATED WITHIN 100 FEET OF THE PROJECT'S EARTH DISTURBANCES AND STORMWATER FLOWS TO THE SURFACE WATER, OR WHEN A BUFFER IS INFEASIBLE, REDUNDANT SEDIMENT CONTROLS WILL BE PROVIDED.
  - c. REDUNDANT PERIMETER CONTROLS WILL BE INSTALLED AT LEAST 5 FEET APART UNLESS LIMITED BY LACK OF AVAILABLE SPACE.
9. USE OF SEDIMENTATION TREATMENT CHEMICALS (E.G., POLYMERS, FLOCCULANTS, ETC.) IS NOT ANTICIPATED AS PART OF THE PROJECT. (CSW PERMIT ITEMS 5.22 AND 9.18)
10. THE PROJECT WILL NOT INCLUDE 10 OR MORE ACRES OF DISTURBED SOIL DRAINING TO A COMMON LOCATION OR 5 OR MORE ACRES DRAINING TO A COMMON LOCATION WITHIN 1 MILE OR A SPECIAL OR IMPAIRED WATER THEREFORE TEMPORARY SEDIMENT BASINS ARE NOT REQUIRED. (CSW PERMIT ITEMS 5.6, 9.13, AND 23.10 AND SECTION 14)

1. THE FOLLOWING WILL BE USED TO TREAT/DISPOSE OF TURBID OR SEDIMENT-LADEN WATER DURING DEWATERING OR BASIN DRAINING: TEMPORARY OR PERMANENT SEDIMENT BASINS OR EQUIVALENT MEASURES.
2. THE FOLLOWING WILL BE USED TO PREVENT EROSION OR SCOUR OF DISCHARGE POINTS DURING DEWATERING OR BASIN DRAINING: RIPRAP OR EQUIVALENT MEASURES.
3. FILTERS FOR BACKWASH WATER WILL BE MANAGED ON THE SITE OR PROPERLY DISPOSED OF BY: INCORPORATING BACKWASH WATER INTO TEMPORARY OR PERMANENT SEDIMENT BASINS OR EQUIVALENT MEASURES.

1. EXPECTED AMOUNT, FREQUENCY, INTENSITY, AND DURATION OF PRECIPITATION.
2. NATURE OF STORMWATER RUNOFF AND RUN-ON AT THE SITE, INCLUDING FACTORS SUCH AS EXPECTED FLOW FROM IMPERVIOUS SURFACES, SLOPES, AND SITE DRAINAGE FEATURES.
3. STORMWATER VOLUME, VELOCITY, AND PEAK FLOW RATES TO MINIMIZE DISCHARGE OF POLLUTANTS IN STORMWATER AND TO MINIMIZE CHANNEL AND STREAMBANK EROSION AND SCOUR IN THE IMMEDIATE VICINITY OF DISCHARGE POINTS.
4. RANGE OF SOIL PARTICLE SIZES EXPECTED TO BE PRESENT.

100% DESIGN  
ISSUED FOR REVIEW  
NOT FOR CONSTRUCTION

(SEE PAGE 2 OF 2)

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.  PRINTED NAME _____  SIGNATURE _____  DATE _____ LICENSE # _____	-	-	-	-	-	-	<div><div>BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE SUITE 200 MINNEAPOLIS, MN 55435</div><div>PH: 1-800-632-2277 WWW.BARR.COM MINNESOTA ENGINEERING FIRM NUMBER 1010411545</div></div>	BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  GOLDEN VALLEY, MINNESOTA	BASSETT CREEK MAIN STEM RESTORATION - PHASE 1 GOLDEN VALLEY, MINNESOTA  STORMWATER POLLUTION PREVENTION PLAN (SWPPP)	BARR PROJECT # 23272114-00	CLIENT PROJECT # 24-02	DWG # G-03	REV # C
	C	EPF	JCO	JCO	12/15/2025	ISSUED FOR REVIEW							
	B	EPF	ADB2	JCO	11/13/2025	ISSUED FOR REVIEW							
	A	EPF	JCO	JCO	06/20/2025	ISSUED FOR REVIEW							
	#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION							

ORIGINAL DRAWING SIZE: ANSI FULL BLEED B (11.00 X 17.00 INCHES) PLOT SCALE: 1:2 PLOT DATE: 12/18/2025 11:52 AM  
CADD USER: ERIC P. FITZGERALD FILE: M:\DESIGN\23272114\_00\23272114\_G-03.DWG



A PERMANENT STORMWATER MANAGEMENT SYSTEM IS REQUIRED IF THE PROJECT RESULTS IN ONE ACRE OR MORE OF NEW IMPERVIOUS SURFACES OR RESULTS IN A NET INCREASE OF ONE OR MORE ACRES OF CUMMULATIVE NEW IMPERVIOUS SURFACES IN TOTAL OR IF THE PROJECT IS PART OF A LARGER PLAN OF DEVELOPMENT. (CSW PERMIT ITEM 15.3)

5.2 THIS IS NOT A LINEAR PROJECT WITH LACK OF RIGHT OF WAY. (CSW PERMIT ITEM 15.9)

## 6.0 INSPECTION AND MAINTENANCE ACTIVITIES:

THESE INDIVIDUALS WILL BE TRAINED IN ACCORDANCE WITH THE REQUIREMENTS OF THE GENERAL PERMIT, INCLUDING THE REQUIREMENT THAT THE CONTENT AND EXTENT OF TRAINING WILL BE COMMENSURATE WITH THE INDIVIDUAL'S JOB DUTIES AND RESPONSIBILITIES.

TRAINED INDIVIDUAL	RESPONSIBILITY	TRAINING ENTITY*	TRAINING DATE
ERIC FITZGERALD	PREPARATION OF THE SWPPP	UNIVERSITY OF MINNESOTA	MAY 2025
TBD	OVERSIGHT OF SWPPP IMPLEMENTATION, REVISION, AND AMENDMENT	TBD	TBD
TBD	PERFORMANCE OF SWPPP INSPECTIONS	TBD	TBD
TBD	PERFORMANCE OR SUPERVISION OF INSTALLATION, MAINTENANCE, AND REPAIR OF BMPs	TBD	TBD

- AT LEAST ONCE EVERY 7 DAYS DURING ACTIVE CONSTRUCTION
- WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS

- WHERE PARTS OF THE CONSTRUCTION AREAS HAVE PERMANENT COVER, BUT WORK REMAINS ON OTHER PARTS OF THE SITE, INSPECTIONS OF THE AREAS WITH PERMANENT COVER MAY BE REDUCED TO ONCE PER MONTH.
- WHERE CONSTRUCTION AREAS HAVE PERMANENT COVER AND NO CONSTRUCTION ACTIVITY IS OCCURRING ON THE SITE, INSPECTIONS CAN BE REDUCED TO ONCE PER MONTH AND, AFTER 12 MONTHS, MAY BE SUSPENDED COMPLETELY UNTIL CONSTRUCTION ACTIVITY RESUMES.
- WHERE CONSTRUCTION ACTIVITY HAS BEEN SUSPENDED DUE TO FROZEN GROUND CONDITIONS, THE INSPECTIONS MAY BE SUSPENDED. THE REQUIRED INSPECTIONS AND MAINTENANCE SCHEDULE MUST BEGIN WITHIN 24 HOURS AFTER RUNOFF OCCURS AT THE SITE OR UPON RESUMING CONSTRUCTION, WHICHEVER COMES FIRST.

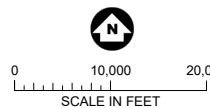
- ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPs AND POLLUTION PREVENTION MANAGEMENT MEASURES
- SURFACE WATERS FOR EVIDENCE OF EROSION AND SEDIMENT DEPOSITION
- CONSTRUCTION SITE VEHICLE EXIT LOCATIONS FOR EVIDENCE OF OFFSITE SEDIMENT TRACKING
- STREETS AND OTHER AREAS ADJACENT TO THE PROJECT FOR EVIDENCE OF OFF SITE ACCUMULATIONS OF SEDIMENT

- NONFUNCTIONAL BMPs WILL 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.
- PERIMETER CONTROL DEVICES WILL BE REPAIRED, REPLACED, OR SUPPLEMENTED WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES 1/2 OF THE HEIGHT OF THE DEVICE.
- TEMPORARY AND PERMANENT SEDIMENTATION BASINS WILL BE DRAINED AND THE SEDIMENT REMOVED WHEN THE DEPTH OF SEDIMENT COLLECTED IN THE BASIN REACHES 1/2 THE STORAGE VOLUME.
- DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS WILL BE REMOVED, AND THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOIL WILL BE RE-STABILIZED. THE REMOVAL AND STABILIZATION WILL BE COMPLETED WITHIN 7 CALENDAR DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. IF PRECLUDED DUE TO ACCESS CONSTRAINTS, REASONABLE EFFORTS TO OBTAIN ACCESS WILL BE USED. REMOVAL AND STABILIZATION WILL TAKE PLACE WITHIN 7 CALENDAR DAYS OF OBTAINING ACCESS.
- TRACKED SEDIMENT ON PAVED SURFACES WILL BE REMOVED WITHIN 1 CALENDAR DAY OF DISCOVERY.
- AREAS UNDERGOING STABILIZATION WILL BE RE-STABILIZED AS NECESSARY TO ACHIEVE REQUIRED COVER.




1. ALL INSPECTIONS AND MAINTENANCE ACTIVITIES WILL BE RECORDED IN WRITING WITHIN 24 HOURS OF BEING CONDUCTED AND THESE RECORDS WILL BE RETAINED WITH THE SWPPP. RECORDS OF EACH INSPECTION AND MAINTENANCE ACTIVITY WILL INCLUDE THE DATE AND TIME; NAME OF INSPECTOR(S); FINDINGS OF INSPECTIONS; CORRECTIVE ACTIONS (INCLUDING DATES, TIMES, AND PARTY COMPLETING MAINTENANCE ACTIVITIES); AND DATE OF ALL RAINFALL EVENTS GREATER THAN 0.5 INCHES IN 24 HOURS AND THE AMOUNT OF RAINFALL FOR EACH EVENT.
  - a. IF ANY DISCHARGE IS OBSERVED DURING THE INSPECTION, THE LOCATION AND APPEARANCE OF THE DISCHARGE (I.E., COLOR, ODOR, SETTLED OR SUSPENDED SOLIDS, OIL SHEEN, AND OTHER OBVIOUS INDICATORS OF POLLUTANTS) WILL BE DOCUMENTED AND A PHOTOGRAPH WILL BE TAKEN.
2. THE SWPPP WILL BE AMENDED TO INCLUDE ADDITIONAL OR MODIFIED BMPs TO CORRECT PROBLEMS OR ADDRESS SITUATIONS WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE, WEATHER, OR SEASONAL CONDITIONS THAT HAS A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER.
  - a. THE SWPPP WILL BE AMENDED WHEN INSPECTIONS OR INVESTIGATIONS BY THE SITE OWNER, OPERATOR, OR CONTRACTORS OR BY USEPA/MPCA OFFICIALS INDICATE THAT THE SWPPP IS NOT EFFECTIVE IN ELIMINATING OR MINIMIZING THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER; THE DISCHARGES ARE CAUSING WATER QUALITY STANDARD EXCEEDANCES; OR THE SWPPP IS NOT CONSISTENT WITH A USEPA APPROVED TMDL.
  - b. ANY AMENDMENTS TO THE SWPPP PROPOSED AS A RESULT OF THE INSPECTION WILL BE DOCUMENTED AS REQUIRED WITHIN 7 CALENDAR DAYS.
  - c. AMENDMENTS WILL BE COMPLETED BY AN APPROPRIATELY TRAINED INDIVIDUAL. CHANGES INVOLVING THE USE OF A LESS STRINGENT BMP WILL INCLUDE A JUSTIFICATION DESCRIBING HOW THE REPLACEMENT BMP IS EFFECTIVE FOR THE SITE CHARACTERISTICS.
3. RECORDS RETENTION: THE SWPPP, INCLUDING ALL CHANGES TO IT, AND INSPECTION AND MAINTENANCE RECORDS WILL BE KEPT AT THE SITE DURING CONSTRUCTION BY THE PERMITEE WHO HAS OPERATIONAL CONTROL OF THE SITE. THE SWPPP CAN BE KEPT IN EITHER A FIELD OFFICE OR IN AN ON SITE VEHICLE DURING NORMAL WORKING HOURS.
4. RECORD AVAILABILITY: THE PERMITEES WILL MAKE THE SWPPP, INCLUDING INSPECTION REPORTS, MAINTENANCE RECORDS, AND TRAINING RECORDS, AVAILABLE TO FEDERAL, STATE, AND LOCAL OFFICIALS WITHIN THREE DAYS UPON REQUEST FOR THE DURATION OF THE PERMIT COVERAGE AND FOR THREE YEARS FOLLOWING THE NOTICE OF TERMINATION.

1. ANY CONSTRUCTION PRODUCTS AND LANDSCAPE MATERIALS THAT HAVE THE POTENTIAL TO LEACH POLLUTANTS WILL BE STORED UNDER COVER (E.G., PLASTIC SHEETING OR TEMPORARY ROOFS) TO PREVENT DISCHARGE OF POLLUTANTS THROUGH MINIMIZATION OF CONTACT WITH STORMWATER. STORAGE OF SUCH MATERIALS WITHIN THE PROJECT AREA WILL BE MINIMIZED TO THE EXTENT POSSIBLE. (CSW PERMIT ITEM 12.2)
2. PESTICIDES, FERTILIZERS, AND TREATMENT CHEMICALS WILL BE STORED UNDER COVER (E.G., PLASTIC SHEETING, TEMPORARY ROOFS, WITHIN A BUILDING, OR IN WEATHER-PROOF CONTAINERS) TO PREVENT DISCHARGE OF POLLUTANTS THROUGH MINIMIZATION OF CONTACT WITH STORMWATER. STORAGE OF SUCH MATERIALS WITHIN THE PROJECT AREA WILL BE MINIMIZED TO THE EXTENT POSSIBLE. (CSW PERMIT ITEM 12.3)
3. HAZARDOUS MATERIALS AND TOXIC WASTE (E.G., OIL, DIESEL FUEL, GASOLINE, HYDRAULIC FLUIDS, PAINT SOLVENTS, PETROLEUM-BASED PRODUCTS, WOOD PRESERVATIVES, ADDITIVES, CURING COMPOUNDS, AND ACIDS) WILL BE STORED AND DISPOSED OF IN COMPLIANCE WITH MINNESOTA RULES CHAPTER 7045, INCLUDING SECONDARY CONTAINMENT (AS APPLICABLE). HAZARDOUS MATERIALS WILL BE PROPERLY STORED IN SEALED CONTAINERS TO PREVENT SPILLS, LEAKS, OR OTHER DISCHARGES AND PREVENT PRECIPITATION FROM FALLING ONTO THE CONTAINERS OR STORED HAZARDOUS MATERIALS. (CSW PERMIT ITEMS 2.3 AND 12.4)
4. SOLID WASTE WILL BE COLLECTED, STORED, AND DISPOSED OF PROPERLY IN COMPLIANCE WITH MINNESOTA RULES CHAPTER 7035. THIS INCLUDES STORAGE WITHIN COVERED TRASH CONTAINERS AND DAILY REMOVAL OF LITTER AND DEBRIS. STORAGE OF SOLID WASTE WITHIN THE PROJECT AREA WILL BE MINIMIZED TO THE EXTENT POSSIBLE. (CSW PERMIT ITEM 12.5)
5. PORTABLE TOILETS WILL BE LOCATED AWAY FROM SURFACE WATERS AND POSITIONED AND SECURED TO THE GROUND SO THEY WILL NOT BE TIPPED OR KNOCKED OVER. SANITARY WASTE WILL BE DISPOSED OF IN ACCORDANCE WITH MINNESOTA RULES, CHAPTER 7041. PORTABLE TOILETS WILL BE PERIODICALLY EMPTIED AND THE WASTE HAULED OFF-SITE BY A LICENSED HAULER. (CSW PERMIT ITEM 12.6)
6. VEHICLE FUELING WILL ONLY OCCUR IN DESIGNATED AREAS. SPILL KITS SIZED APPROPRIATELY FOR THE AMOUNT OF REFUELING TAKING PLACE WILL BE LOCATED. SPILL KITS WILL BE CLEARLY LABELED AND CONTAIN MATERIALS TO ASSIST IN SPILL CLEANUP INCLUDING ABSORBENT PADS, BOOMS FOR CONTAINING SPILLS, AND HEAVY-DUTY PROTECTIVE GLOVES. SPILLS WILL BE REPORTED TO THE MINNESOTA DUTY OFFICER AS REQUIRED BY MINNESOTA STATUTES, SECTION 115.061. (CSW PERMIT ITEMS 2.3 AND 12.7)
  - a. ANY FUEL TANKS BROUGHT ON-SITE WILL HAVE PROPERLY SIZED CONTAINMENT AND WILL NOT BE TOPPED OFF TO AVOID SPILLS FROM OVERFILLING. FUEL TANKS WILL MEET INDUSTRY STANDARDS (DESIGNED TO HOLD FUEL TYPE, PROPERLY MAINTAINED, NOT ILLEGALLY MODIFIED, NOT MISSING LEAK INDICATOR FLOATS FOR DOUBLE WALLED TANKS, SIGHT GAUGES NOT USED, ETC.) OR BE REMOVED FROM THE WORK AREA.
  - b. GUIDELINES FOR SPILL PREVENTION AND RESPONSE INCLUDE:
    - TAKE REASONABLE STEPS TO PREVENT THE DISCHARGE OF SPILLED OR LEAKED CHEMICALS, INCLUDING FUEL, FROM ANY AREA WHERE CHEMICALS OR FUEL WILL BE LOADED OR UNLOADED, INCLUDING THE USE OF DRIP PANS OR ABSORBENTS UNLESS INFEASIBLE;
    - PERFORM REGULAR PREVENTATIVE MAINTENANCE ON TANKS AND FUEL LINES;
    - INSPECT PUMPS, CYLINDERS, HOSES, VALVES, AND OTHER MECHANICAL EQUIPMENT ON-SITE FOR DAMAGE OR DETERIORATION;
    - DO NOT WASH OR RINSE FUELING AREAS WITH WATER;
    - MAINTAIN ADEQUATE SUPPLIES TO CLEAN UP DISCHARGED MATERIALS AND PROVIDE AN APPROPRIATE DISPOSAL METHOD FOR RECOVERED SPILLED MATERIALS;
    - REPORT AND CLEAN UP SPILLS IMMEDIATELY AS REQUIRED BY MINNESOTA STATUTES, SECTION 115.061, USING DRY CLEAN UP MEASURES WHERE POSSIBLE; AND
    - MAINTAIN COPIES OF SAFETY DATA SHEETS (SDSS) FOR HAZARDOUS MATERIALS ON-SITE IN LOCATIONS READILY AVAILABLE TO EMERGENCY RESPONDERS.
7. IF VEHICLE AND EQUIPMENT WASHING IS NECESSARY, A VEHICLE WASH STATION WILL BE LOCATED IN A DESIGNATED AREA. RUNOFF FROM THE WASHING AREA WILL BE CONTAINED IN A SEDIMENT BASIN AND WASTE FROM THE WASHING ACTIVITY WILL BE PROPERLY DISPOSED OF. ANY SOAPS, DETERGENTS, OR SOLVENTS WILL BE PROPERLY USED AND STORED. ANY DETERGENTS AND OTHER CLEANERS NOT PERMITTED FOR DISCHARGE WILL NOT BE USED. (CSW PERMIT ITEMS 2.3 AND 12.8)
8. THE PROJECT WILL NOT RESULT IN CONCRETE OR OTHER WASHOUT ACTIVITIES. NO CONCRETE WASHOUT WILL BE ALLOWED ON SITE. (CSW PERMIT ITEMS 2.3 AND 12.9)

WITHIN 30 DAYS AFTER THE TERMINATION CONDITIONS ARE COMPLETE, A NOTICE OF TERMINATION (NOT) FORM WILL BE SUBMITTED TO THE MPCA.



TOPOGRAPHIC MAP WITH  
SURFACE WATERS AND SOIL TYPES  
Stormwater Pollution Prevention Plan  
Hennepin County, Minnesota

-  Survey Area Status Map  
 Statewide SSURGO Data  
 County Boundary

(SEE PAGE 2 OF 2)

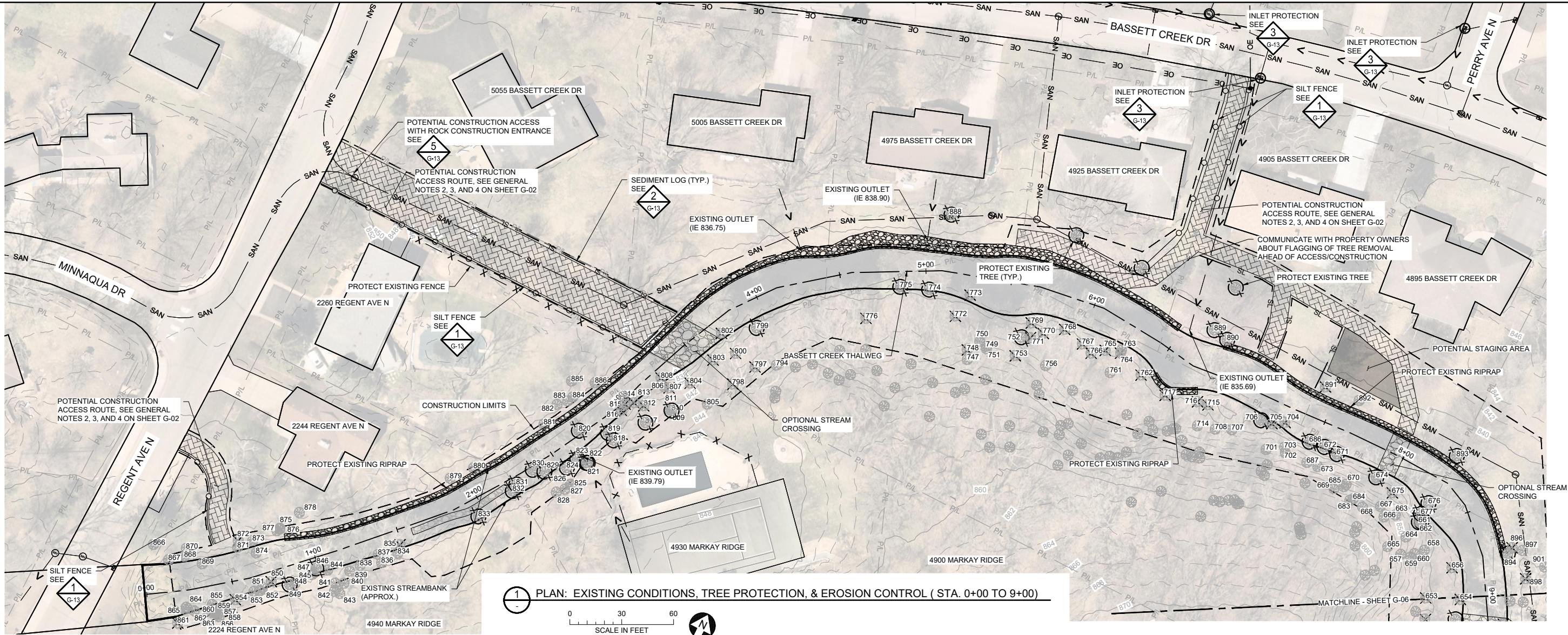
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PRINTED NAME: _____					C EPF JCO JCO 12/15/2025 ISSUED FOR REVIEW B EPF ADB2 JCO 11/13/2025 ISSUED FOR REVIEW A EPF JCO JCO 06/20/2025 ISSUED FOR REVIEW					CLIENT PROJECT # 24-02					DWG # G-04						
SIGNATURE: _____															REV # C						
DATE: ____ LICENSE #: ____																					
					# BY CHK APP DATE RELEASE/REVISION DESCRIPTION																

ORIGINAL DRAWING SIZE: ANSI FULL BLEED B (11.00 X 17.00 INCHES) PLOT SCALE: 1:2 PLOT DATE: 12/15/2025 2:05 PM  
CADD USER: ERIC P. FITZGERALD FILE: M:\DESIGN\23272114.00\23272114\_G-03.DWG



ORIGINAL DRAWING SIZE: ANSI FULL BLEED 8 (11.00 X 17.00 INCHES) PLOT SCALE: 1/2" = 10' DATE: 12/15/2023 2:09 PM  
CADD USER: ERIC P. FITZGERALD FILE: M:\DESIGN\2372114\_0002372114\_G-05.DWG



TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)
653	Ash/Green	12	Dead	X
654	Box Elder	16	Dead	X
656	Box Elder	8	Dead	X
657	Basswood/American	20	Healthy	
658	Basswood/American	23	Healthy	
659	Basswood/American	8	Healthy	
660	Ironwood	5	Healthy	
661	Basswood/American	18	Healthy	P
662	Basswood/American	23	Healthy	P
663	Basswood/American	8	Healthy	
664	Basswood/American	13	Healthy	
665	Ironwood	4	Healthy	
666	Oak/Bur	23	Healthy	
667	Ironwood	4	Healthy	
668	Ironwood	5	Healthy	
669	Ironwood	8	Healthy	
670	Ironwood	7	Healthy	
671	Ironwood	7	Healthy	P
672	Birch/Paper	13	Healthy	P
673	Ironwood	5	Healthy	
674	Ironwood	4	Healthy	P
675	Buckthorn	4	Healthy	X
676	Basswood/American	17	Healthy	P
677	Basswood/American	8	Healthy	P
683	Ash/Green	12	Dead	

TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)
684	Ironwood	9	Healthy	
685	Ironwood	8	Healthy	
686	Ironwood	4	Healthy	P
687	Ironwood	5	Healthy	
701	Basswood/American	25	Healthy	
702	Ironwood	9	Healthy	
703	Ironwood	6	Healthy	
704	Ash/Green	17	Dead	X
705	Buckthorn	6	Healthy	X
706	Basswood/American	21	Healthy	P
707	Basswood/American	25	Healthy	
708	Basswood/American	22	Healthy	
714	Ironwood	5	Healthy	
715	Kentucky Coffeetree	5	Healthy	X
716	Box Elder	18	Healthy	X
717	Buckthorn	5	Healthy	X
747	Basswood/American	25	Healthy	
748	Basswood/American	24	Dead	X
749	Ironwood	5	Healthy	
750	Ironwood	4	Healthy	
751	Elm/American	12	Healthy	
752	Oak/Bur	15	Healthy	
753	Oak/Bur	18	Dead	X
756	Oak/Bur	23	Healthy	
761	Box Elder	10	Healthy	

TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)
762	Box Elder	13	Healthy	X
763	Ash/Black	6	Healthy	
764	Buckthorn	4	Healthy	X
765	Buckthorn	4	Healthy	X
766	Buckthorn	7	Healthy	X
767	Box Elder	10	Healthy	X
768	Ash/Green	7	Healthy	X
769	Buckthorn	6	Healthy	X
770	Buckthorn	4	Healthy	X
771	Ash/White	11	Dead	X
772	Basswood/American	8	Healthy	X
773	Ash/Green	14	Dead	X
774	Basswood/American	23	Healthy	P
775	Cedar/White	11	Healthy	P
776	Box Elder	15	Healthy	X
794	Box Elder	14	Healthy	
797	Buckthorn	5	Healthy	X
798	Oak/Bur	26	Dead	X
799	Hackberry	12	Healthy	P
800	Buckthorn	4	Healthy	X
802	Box Elder	13	Healthy	X
803	Box Elder	4	Healthy	X
804	Box Elder	12	Healthy	X
805	Maple/Red	13	Healthy	
806	Box Elder	15	Healthy	

TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)
807	Box Elder	5	Healthy	X
808	Elm/American	4	Healthy	X
809	Birch/River	12	Healthy	P
810	Birch/River	11	Healthy	P
811	Birch/River	11	Healthy	P
812	Mulberry	5	Healthy	X
813	Elm/American	5	Healthy	X
814	Ash/Green	6	Healthy	X
815	Ash/Green	6	Healthy	X
816	Ash/Green	13	Healthy	X
817	Maple/Silver	15	Healthy	P
818	Maple/Silver	13	Healthy	P
819	Ash/Green	6	Healthy	P
820	Elm/American	9	Healthy	P
821	Maple/Silver	16	Healthy	
822	Maple/Silver	13	Healthy	P
823	Maple/Silver	10	Healthy	P
824	Maple/Silver	16	Healthy	P
825	Birch/River	16	Healthy	
826	Birch/River	10	Healthy	
827	Birch/River	15	Healthy	
828	Birch/River	9	Healthy	
829	Box Elder	10	Healthy	P
830	Mulberry	8	Healthy	P
831	Mulberry	14	Healthy	P

TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)
832	Mulberry	16	Healthy	P
833	Elm/American	4	Healthy	P
834	Maple/Silver	26	Healthy	
835	Box Elder	8	Healthy	X
836	Ash/Green	5	Healthy	
837	Maple/Silver	23	Healthy	
838	Maple/Silver	14	Healthy	
839	Maple/Red	7	Healthy	
840	Cottonwood	11	Healthy	
841	Cottonwood	28	Healthy	
842	Maple/Silver	13	Healthy	
843	Maple/Silver	13	Healthy	
844	Ash/Green	4	Healthy	
845	Ash/Green	10	Healthy	
846	Elm/American	15	Healthy	P
847	Ash/White	4	Dead	
848	Elm/American	11	Healthy	
849	Maple/Silver	12	Healthy	P
850	Ash/Green	4	Dying	X
851	Elm/American	5	Healthy	
852	Elm/American	4	Healthy	
853	Elm/American	5	Healthy	
854	Ash/Green	12	Dying	X
855	Elm/American	12	Healthy	
856	Ash/Green	14	Healthy	

TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)
857	Ash/Green	4	Healthy	
858	Ash/Green	4	Healthy	
859	Elm/American	6	Healthy	
860	Elm/American	4	Healthy	
861	Ash/Green	14	Dying	X
862	Elm/American	5	Healthy	
863	Ash/Green	17	Dying	X
864	Ash/Green	16	Healthy	
865	Willow/Black	35	Healthy	
866	Pine/Austrian	16	Healthy	
867	Mulberry	11	Healthy	
868	Elm/American	5	Healthy	
869	Elm/American	6	Healthy	
870	Pine/Austrian	16	Healthy	
871	Elm/American	11	Healthy	
872	Buckthorn	4	Healthy	X
873	Elm/American	12	Healthy	
874	Elm/American	7	Healthy	
875	Elm/American	13	Healthy	
876	Ash/Green	8	Healthy	
877	Elm/American	5	Healthy	
878	Elm/American	17	Healthy	
879	Mulberry	5	Healthy	
880	Elm/American	4	Healthy	
881	Box Elder	10	Healthy	

TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)
882	Spruce/Black	8	Healthy	
883	Maple/Silver	13	Healthy	
884	Maple/Silver	17	Healthy	
885	Spruce/Black	15	Healthy	
886	Box Elder	5	Healthy	
888	Birch/River	25	Healthy	P
889	Mulberry	7	Healthy	P
890	Maple/Silver	26	Healthy	P
891	Box Elder	25	Healthy	X
892	Elm/American	5	Healthy	
893	Oak/Pin	25	Healthy	
894	Elm/American	23	Healthy	P
896	Buckthorn	5	Healthy	X
897	Elm/American	16	Healthy	
898	Buckthorn	5	Healthy	X
901	Elm/American	11	Healthy	

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PRINTED NAME: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_ LICENSE # \_\_\_\_\_

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-	-	-	-	-	-
C	EPF	JCO	JCO	12/15/2025	ISSUED FOR REVIEW
B	EPF	ADB2	JCO	11/13/2025	ISSUED FOR REVIEW
A	EPF	JCO	JCO	06/20/2025	ISSUED FOR REVIEW
#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION

**BARR**

BARR ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
SUITE 200  
MINNEAPOLIS, MN 55435

PH: 1-800-632-2277  
WWW.BARR.COM  
MINNESOTA ENGINEERING FIRM  
NUMBER 1010411545

BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

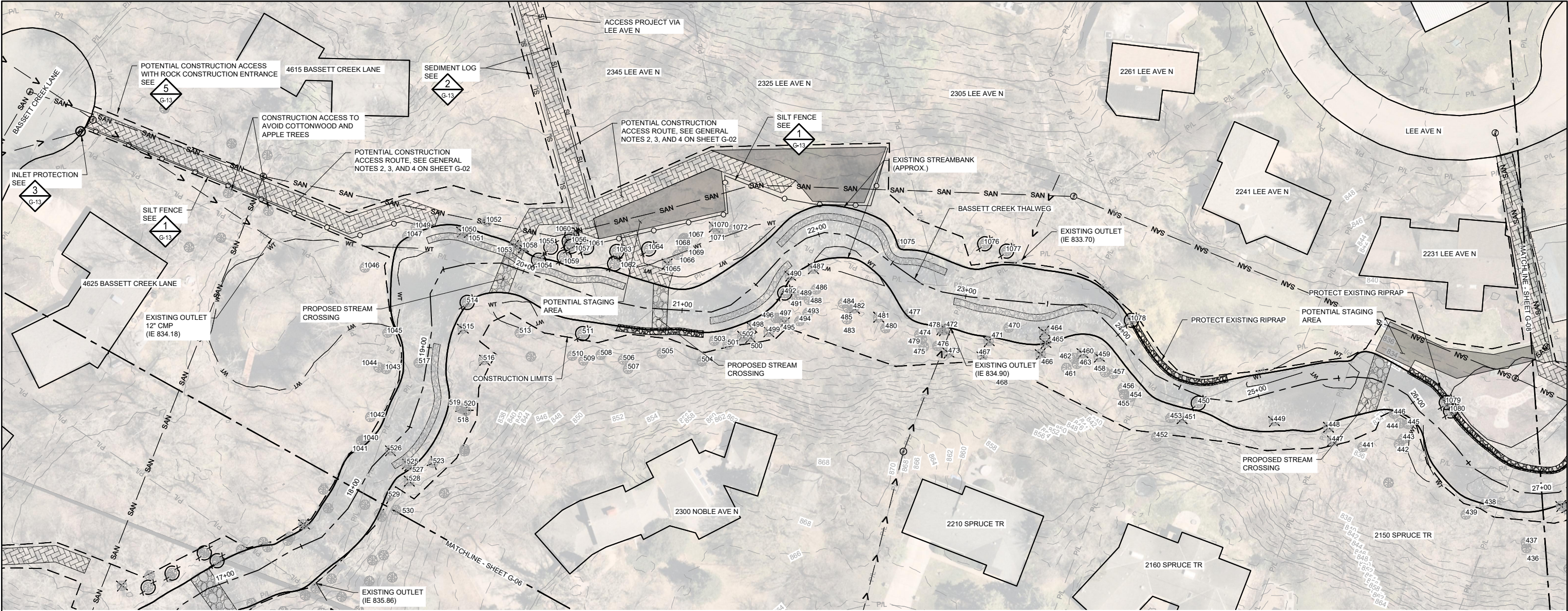
BASSETT CREEK MAIN STEM RESTORATION - PHASE 1  
GOLDEN VALLEY, MINNESOTA  
EXISTING CONDITIONS, REMOVALS, TREE PROTECTION  
& EROSION CONTROL PLAN  
(STA. 0+00 TO 9+00)

BARR PROJECT #	23272114.00
CLIENT PROJECT #	24-02
DWG #	G-05
REV #	C









1 PLAN: EXISTING CONDITIONS, TREE PROTECTION, & EROSION CONTROL ( STA. 18+00 TO 27+00)



TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)	TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)	TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)	TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)	TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)	TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)	TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)
436	Box Elder	13	Healthy		457	Hackberry	11	Healthy		477	Basswood/American	10	Healthy		497	Box Elder	20	Healthy		518	Maple/Silver	32	Healthy		1051	Buckthorn	6	Healthy	X	1071	Box Elder	4	Healthy	
437	Box Elder	15	Healthy		458	Hackberry	13	Healthy		478	Hackberry	10	Healthy	X	498	Buckthorn	4	Healthy	X	519	Box Elder	6	Healthy		1052	Box Elder	20	Healthy		1072	Mulberry	12	Healthy	
438	Elm/American	15	Healthy		459	Box Elder	8	Dead	X	479	Basswood/American	4	Healthy		499	Buckthorn	4	Healthy	X	520	Ash/Green	4	Healthy		1053	Box Elder	10	Healthy	X	1075	Ash/Green	14	Healthy	
439	Ash/Green	10	Healthy		460	Box Elder	5	Dead	X	480	Walnut/Black	8	Healthy		500	Buckthorn	4	Healthy	X	523	Box Elder	6	Healthy		1054	Cottonwood	31	Healthy	P	1076	Maple/Silver	33	Healthy	P
441	Box Elder	15	Healthy		461	Cherry/Sp	5	Healthy		481	Box Elder	19	Dead	X	501	Box Elder	7	Healthy		525	Buckthorn	4	Healthy	X	1055	Cottonwood	31	Healthy	P	1077	Maple/Silver	33	Healthy	P
442	Box Elder	11	Healthy		462	Box Elder	20	Healthy		482	Box Elder	18	Dying	X	502	Basswood/American	23	Dead	X	526	Buckthorn	5	Healthy	X	1056	Cottonwood	36	Healthy	P	1078	Willow/Black	32	Healthy	P
443	Box Elder	13	Healthy		463	Cherry/Black	5	Healthy		483	Cherry/Sp	6	Healthy		503	Box Elder	4	Healthy		527	Buckthorn	4	Healthy	X	1057	Elm/American	31	Healthy	P	1079	Birch/River	10	Healthy	P
444	Box Elder	14	Healthy		464	Cherry/Black	8	Healthy	X	484	Cherry/Sp	10	Healthy		504	Basswood/American	18	Healthy		528	Buckthorn	4	Healthy	X	1058	Box Elder	10	Healthy	X	1080	Ash/Green	18	Healthy	P
445	Elm/Siberian	5	Healthy		465	Cherry/Sp	7	Healthy	X	485	Box Elder	9	Healthy		505	Basswood/American	21	Healthy		529	Ironwood	7	Healthy		1059	Box Elder	12	Healthy	P					
446	Box Elder	12	Healthy		466	Box Elder	7	Healthy	X	486	Canada Plum	4	Healthy		506	Ash/White	10	Healthy		530	Box Elder	9	Healthy		1060	Box Elder	9	Healthy	P					
447	Buckthorn	6	Healthy	X	467	Box Elder	13	Dead	X	487	Buckthorn	7	Healthy	X	507	Ash/Green	15	Healthy		1040	Ash/Green	5	Healthy		1061	Box Elder	13	Healthy	P					
448	Buckthorn	5	Healthy	X	468	Cherry/Sp	8	Healthy		488	Cherry/Sp	7	Healthy		508	Box Elder	13	Healthy		1041	Ash/Green	8	Healthy		1062	Box Elder	12	Healthy	P					
449	Mulberry	7	Healthy	X	469	Box Elder	14	Healthy		489	Cherry/Sp	6	Healthy		509	Basswood/American	14	Healthy		1042	Maple/Silver	16	Healthy		1063	Ash/Green	4	Healthy	P					
450	Elm/American	13	Healthy	P	470	Basswood/American	6	Healthy		490	Box Elder	11	Healthy	X	510	Basswood/American	10	Healthy		1043	Hackberry	11	Healthy		1064	Box Elder	5	Healthy	P					
451	Buckthorn	4	Healthy	X	471	Basswood/American	15	Healthy	X	491	Maple/Silver	15	Healthy		511	Oak/Bur	22	Healthy	P	1044	Ash/Green	11	Healthy		1065	Box Elder	7	Healthy						
452	Basswood/American	12	Healthy		472	Ash/Green	11	Dead	X	492	Maple/Silver	10	Healthy	P	513	Elm/American	8	Healthy		1045	Maple/Silver	27	Healthy		1066	Buckthorn	9	Healthy	X					
453	Box Elder	13	Healthy		473	Ash/Green	15	Dead	X	493	Cherry/Sp	9	Healthy		514	Hackberry	9	Healthy	P	1046	Ash/Green	18	Healthy		1067	Cottonwood	32	Healthy						
454	Hackberry	10	Healthy		474	Cherry/Sp	5	Healthy		494	Cherry/Sp	10	Healthy		515	Ash/Green	10	Dead	X	1047	Ash/Green	4	Healthy		1068	Ash/Green	10	Healthy						
455	Hackberry	7	Healthy		475	Basswood/American	18	Healthy		495	Buckthorn	5	Healthy	X	516	Buckthorn	5	Healthy	X	1049	Ash/Green	9	Healthy		1069	Elm/American	10	Healthy						
456	Hackberry	4	Healthy		476	Basswood/American	8	Healthy		496	Hackberry	4	Healthy		517	Box Elder	11	Healthy		1050	Box Elder	5	Healthy	X	1070	Buckthorn	6	Healthy	X					

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SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_ LICENSE #: \_\_\_\_\_

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-	-	-	-	-	-
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C	EPF	JCO	JCO	12/15/2025	ISSUED FOR REVIEW
B	EPF	ADB2	JCO	11/13/2025	ISSUED FOR REVIEW
A	EPF	JCO	JCO	06/20/2025	ISSUED FOR REVIEW
#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION



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BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

BASSETT CREEK MAIN STEM RESTORATION - PHASE 1  
GOLDEN VALLEY, MINNESOTA  
EXISTING CONDITIONS, REMOVALS, TREE PROTECTION  
& EROSION CONTROL PLAN  
(STA. 18+00 TO 27+00)

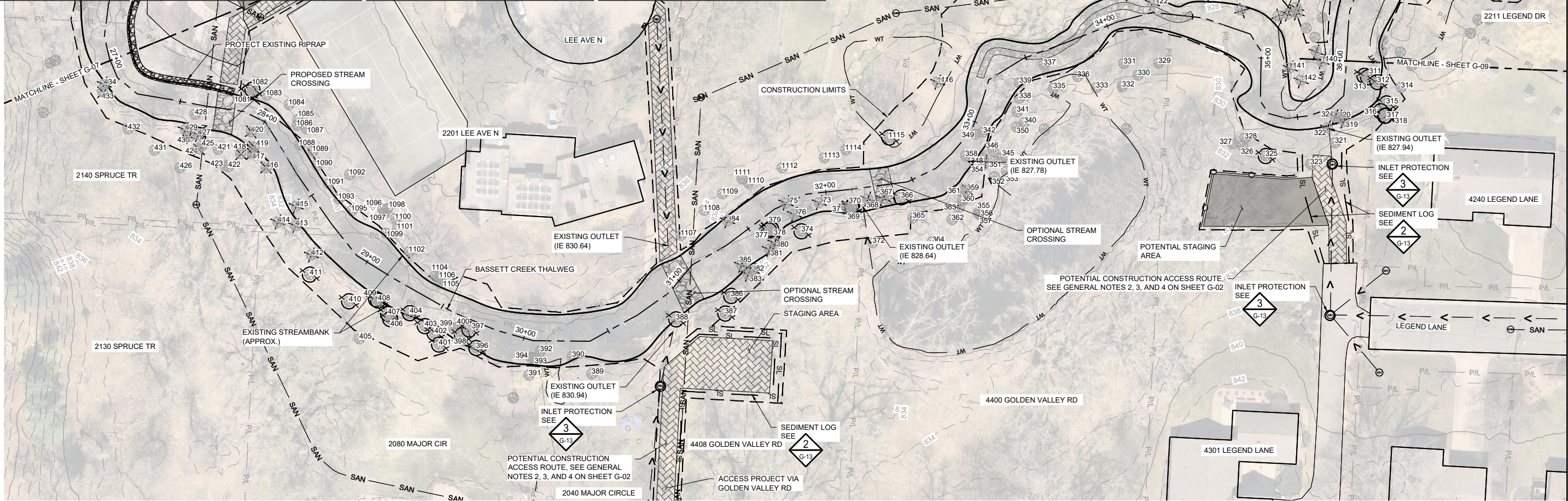
BARR PROJECT # 23272114.00	
CLIENT PROJECT # 24-02	
DWG # G-07	REV # C

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CADD USER: ERIC P. FITZGERALD FILE: MIDSGN23272114.000232714\_G-06.DWG



TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)	TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)	TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)	TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)	TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)
307	Maple/Silver	16	Healthy		345	Cottonwood	22	Healthy		378	Maple/Silver	10	Healthy	P	412	Box Elder	5	Healthy	X	1091	Ash/Green	12	Healthy	
311	Basswood/American	9	Healthy	P	346	Cottonwood	25	Healthy		379	Maple/Silver	10	Healthy	P	413	Walnut/Black	4	Healthy	X	1092	Box Elder	5	Healthy	
312	Basswood/American	8	Healthy	P	347	Box Elder	5	Healthy		380	Box Elder	9	Healthy	X	414	Box Elder	13	Healthy	X	1093	Ash/Green	17	Healthy	
313	Basswood/American	6	Healthy		348	Cottonwood	23	Healthy		381	Box Elder	5	Healthy	X	415	Box Elder	11	Healthy	X	1095	Ash/Green	10	Healthy	
314	Basswood/American	4	Healthy		349	Elm/Siberian	8	Healthy		382	Box Elder	10	Healthy	X	416	Ash/Green	15	Dead	X	1096	Ash/Green	7	Healthy	
315	Birch/River	8	Healthy	P	350	Box Elder	5	Healthy		383	Box Elder	8	Healthy	X	417	Box Elder	7	Dead	X	1097	Ash/Green	9	Healthy	
316	Birch/River	6	Healthy	P	351	Box Elder	4	Healthy		384	Box Elder	6	Healthy	X	418	Buckthorn	5	Healthy	X	1098	Box Elder	7	Healthy	
317	Birch/River	5	Healthy	P	352	Maple/Silver	6	Healthy		385	Box Elder	8	Healthy	X	419	Box Elder	11	Dead	X	1099	Ash/Green	7	Healthy	
318	Birch/River	4	Healthy	P	353	Maple/Silver	8	Healthy		386	Box Elder	18	Healthy	P	420	Box Elder	9	Healthy	X	1100	Box Elder	7	Healthy	
319	Box Elder	7	Healthy	X	354	Cottonwood	23	Healthy		387	Spruce/Black	11	Healthy	P	421	Box Elder	15	Healthy		1101	Box Elder	8	Healthy	
320	Box Elder	8	Healthy	X	355	Box Elder	8	Healthy		388	Spruce/Black	15	Healthy	P	422	Cottonwood	23	Healthy		1102	Oak/Bur	25	Healthy	
321	Ash/Green	11	Healthy		356	Box Elder	8	Healthy		389	Apple	18	Healthy		423	Box Elder	12	Healthy		1104	Ash/Green	4	Healthy	
322	Ash/Green	7	Healthy	X	357	Box Elder	5	Healthy		390	Basswood/American	18	Healthy		424	Buckthorn	5	Healthy	X	1105	Ash/Green	8	Healthy	
323	Buckeye	10	Healthy		358	Box Elder	6	Healthy		391	Willow/Black	29	Healthy		425	Box Elder	6	Healthy		1106	Ash/Green	9	Healthy	
324	Box Elder	10	Healthy	X	359	Buckthorn	4	Healthy	X	392	Box Elder	4	Healthy		426	Box Elder	11	Healthy		1107	Hackberry	10	Healthy	
325	Apple	12	Healthy	P	360	Walnut/Black	5	Healthy		393	Box Elder	8	Healthy		427	Cottonwood	22	Healthy	X	1108	Hackberry	9	Healthy	
326	Apple	13	Healthy		361	Cottonwood	23	Healthy		394	Box Elder	9	Healthy		428	Cottonwood	22	Healthy		1109	Hackberry	4	Healthy	
327	Box Elder	7	Healthy		362	Cottonwood	23	Healthy		396	Birch/River	8	Healthy	P	429	Box Elder	12	Healthy	X	1110	Box Elder	4	Healthy	
328	Box Elder	7	Healthy		363	Birch/Paper	12	Healthy		397	Birch/River	9	Healthy	P	430	Box Elder	15	Healthy	X	1111	Hackberry	4	Healthy	
329	Box Elder	7	Healthy		364	Cottonwood	30	Healthy		398	Birch/River	9	Healthy		431	Box Elder	15	Healthy		1112	Elm/American	6	Healthy	
330	Box Elder	4	Healthy		365	Cottonwood	22	Healthy		399	Box Elder	9	Healthy		432	Box Elder	14	Healthy		1113	Elm/American	5	Healthy	
331	Apple	4	Healthy		366	Elm/American	8	Healthy	P	400	Elm/Siberian	11	Healthy		433	Buckthorn	8	Healthy	X	1114	Elm/American	13	Healthy	
332	Elm/American	23	Healthy		367	Box Elder	12	Healthy	X	401	Birch/River	6	Healthy	P	434	Box Elder	15	Healthy	X	1115	Buckeye	20	Healthy	P
333	Box Elder	8	Healthy		368	Box Elder	5	Healthy	X	402	Birch/River	9	Healthy	P	1081	Elm/American	16	Healthy	P	1116	Box Elder	8	Healthy	X
335	Box Elder	4	Healthy		369	Ash/Green	10	Healthy	P	403	Cottonwood	23	Healthy	P	1082	Elm/American	10	Healthy	P	1121	Box Elder	11	Healthy	X
336	Elm/Siberian	4	Healthy		370	Apple	7	Healthy	P	404	Box Elder	5	Healthy	P	1083	Ash/Green	15	Healthy		1122	Box Elder	13	Healthy	X
337	Elm/Siberian	4	Healthy		371	Ash/Green	10	Healthy	X	405	Ash/Green	15	Healthy		1084	Box Elder	5	Healthy		1140	Box Elder	7	Healthy	X
338	Box Elder	7	Healthy		372	Walnut/Black	11	Healthy		406	Box Elder	7	Healthy	P	1085	Box Elder	4	Healthy		1141	Maple/Silver	11	Healthy	X
339	Box Elder	4	Healthy		373	Box Elder	10	Healthy	X	407	Box Elder	10	Healthy	P	1086	Box Elder	8	Healthy		1142	Maple/Silver	9	Healthy	X
340	Box Elder	6	Healthy		374	Apple	6	Healthy	P	408	Buckeye	7	Healthy	P	1087	Ash/Green	19	Healthy						
341	Apple	6	Healthy		375	Maple/Silver	6	Healthy	X	409	Box Elder	10	Healthy	P	1088	Box Elder	4	Healthy						
342	Cottonwood	18	Healthy		376	Maple/Silver	7	Healthy	X	410	Maple/Red	8	Healthy	P	1089	Box Elder	6	Healthy						
344	Cottonwood	24	Healthy		377	Maple/Silver	15	Healthy	P	411	Hackberry	11	Healthy	P	1090	Ash/Green	16	Healthy						



1 PLAN: EXISTING CONDITIONS, TREE PROTECTION, & EROSION CONTROL ( STA. 27+00 TO 35+00)



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.

PRINTED NAME: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_ LICENSE #: \_\_\_\_\_

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C	EPF	JCO	JCO	12/15/2025	ISSUED FOR REVIEW
B	EPF	ADB2	JCO	11/13/2025	ISSUED FOR REVIEW
A	EPF	JCO	JCO	06/20/2025	ISSUED FOR REVIEW
#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION



BARR ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
SUITE 200  
MINNEAPOLIS, MN 55435

PH: 1-800-632-2277  
WWW.BARR.COM  
MINNESOTA ENGINEERING FIRM  
NUMBER 1010411545

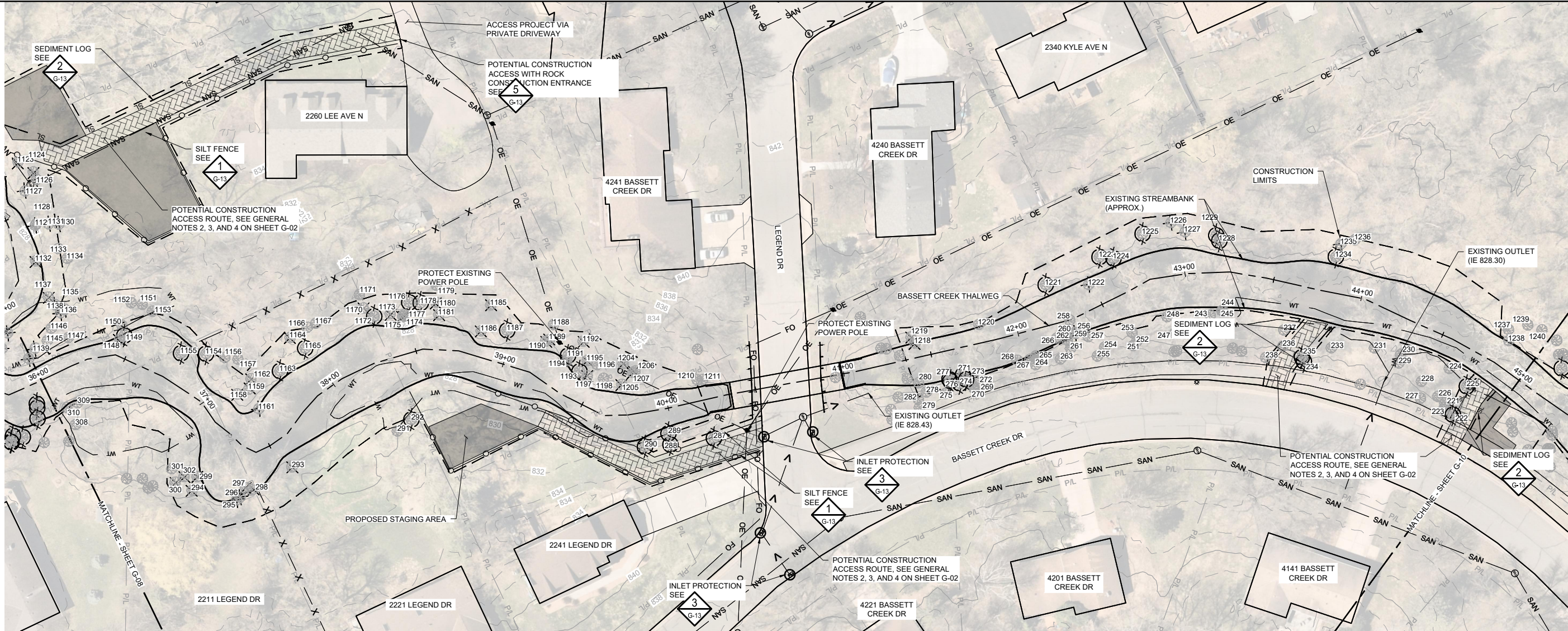
BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

BASSETT CREEK MAIN STEM RESTORATION - PHASE I  
GOLDEN VALLEY, MINNESOTA  
EXISTING CONDITIONS, REMOVALS, TREE PROTECTION  
& EROSION CONTROL PLAN  
(STA. 27+00 TO 36+00)

BARR PROJECT #	23272114.00
CLIENT PROJECT #	24-02
DWG #	G-08
REV #	C

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1 PLAN: EXISTING CONDITIONS, TREE PROTECTION, & EROSION CONTROL ( STA. 36+00 TO 45+00)



TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)
221	Box Elder	21	Healthy	
222	Hackberry	4	Healthy	P
223	Ash/Green	4	Healthy	
224	Elm/Siberian	5	Healthy	
225	Box Elder	13	Healthy	P
226	Box Elder	16	Healthy	
227	Box Elder	8	Healthy	
228	Box Elder	15	Healthy	
229	Maple/Silver	13	Healthy	
230	Maple/Silver	28	Healthy	
231	Box Elder	13	Healthy	
233	Box Elder	11	Healthy	
234	Walnut/Black	6	Healthy	P
235	Box Elder	23	Healthy	P
236	Ash/Green	4	Healthy	
237	Maple/Silver	5	Healthy	
238	Ash/Green	5	Healthy	
243	Walnut/Black	4	Healthy	
244	Maple/Silver	5	Healthy	
245	Maple/Silver	6	Healthy	
246	Box Elder	15	Healthy	
247	Cottonwood	23	Healthy	
248	Maple/Silver	4	Healthy	
251	Box Elder	9	Healthy	
252	Elm/American	17	Healthy	

TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)
253	Box Elder	10	Healthy	
254	Box Elder	13	Healthy	
255	Elm/American	9	Healthy	
256	Ash/Green	11	Dead	X
257	Basswood/American	15	Healthy	
258	Basswood/American	5	Healthy	
259	Box Elder	10	Healthy	
260	Apple	4	Healthy	
261	Elm/American	5	Healthy	
262	Cherry/Sp	6	Healthy	
263	Box Elder	14	Healthy	
264	Apple	5	Healthy	
265	Apple	10	Healthy	
266	Apple	5	Healthy	
267	Box Elder	12	Healthy	
268	Box Elder	13	Healthy	
269	Box Elder	8	Healthy	
270	Elm/American	14	Healthy	
271	Elm/Siberian	14	Healthy	P
272	Elm/Siberian	5	Healthy	
273	Box Elder	7	Healthy	
274	Box Elder	11	Healthy	P
275	Elm/American	15	Healthy	
276	Elm/American	13	Healthy	P
277	Elm/American	8	Healthy	P

TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)
278	Elm/American	4	Healthy	
279	Maple/Red	5	Healthy	
280	Maple/Silver	5	Healthy	
282	Maple/Silver	4	Healthy	
287	Elm/Siberian	4	Healthy	P
288	Elm/Siberian	5	Healthy	P
289	Elm/Siberian	4	Healthy	P
290	Maple/Silver	4	Healthy	P
291	Box Elder	14	Healthy	
292	Box Elder	12	Healthy	P
293	Buckthorn	5	Healthy	X
294	Box Elder	5	Healthy	X
295	Box Elder	15	Healthy	X
296	Box Elder	18	Healthy	X
297	Box Elder	13	Dead	X
298	Buckthorn	6	Healthy	X
299	Buckthorn	4	Healthy	X
300	Buckthorn	4	Healthy	X
301	Elm/American	20	Healthy	
302	Elm/American	6	Healthy	X
308	Maple/Silver	11	Healthy	
309	Box Elder	12	Healthy	
310	Box Elder	13	Healthy	
1123	Buckthorn	5	Healthy	X
1124	Buckthorn	4	Healthy	X

TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)
1126	Box Elder	4	Healthy	X
1127	Elm/American	15	Healthy	
1128	Hackberry	16	Healthy	
1129	Box Elder	13	Healthy	X
1130	Box Elder	17	Healthy	X
1131	Box Elder	6	Healthy	X
1132	Buckthorn	6	Healthy	X
1133	Ash/Green	18	Healthy	
1134	Box Elder	9	Healthy	
1135	Box Elder	8	Healthy	X
1136	Box Elder	4	Healthy	X
1137	Buckthorn	4	Healthy	X
1138	Box Elder	17	Healthy	X
1139	Box Elder	6	Dead	X
1145	Box Elder	7	Dead	X
1146	Box Elder	7	Healthy	
1147	Maple/Silver	21	Healthy	
1148	Maple/Silver	22	Healthy	
1149	Maple/Silver	10	Healthy	P
1150	Oak/Bur	18	Dead	X
1151	Elm/American	22	Healthy	
1152	Elm/American	10	Healthy	
1153	Box Elder	15	Healthy	
1154	Hackberry	7	Healthy	P
1155	Hackberry	9	Healthy	P

TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)
1156	Maple/Silver	26	Healthy	
1157	Apple	6	Healthy	
1158	Buckthorn	7	Healthy	X
1159	Buckthorn	5	Healthy	X
1161	Ash/Green	7	Healthy	X
1162	Buckthorn	7	Healthy	X
1163	Catalpa	19	Healthy	P
1164	Buckthorn	6	Healthy	X
1165	Box Elder	13	Healthy	P
1166	Hackberry	22	Healthy	
1167	Box Elder	11	Healthy	
1170	Buckthorn	6	Healthy	X
1171	Box Elder	20	Healthy	
1172	Box Elder	12	Healthy	P
1173	Buckthorn	4	Healthy	X
1174	Box Elder	11	Healthy	
1175	Buckthorn	5	Healthy	X
1176	Buckthorn	4	Healthy	X
1177	Hackberry	25	Healthy	P
1178	Box Elder	9	Healthy	P
1179	Box Elder	12	Healthy	
1180	Buckthorn	5	Healthy	X
1181	Buckthorn	4	Healthy	X
1185	Buckthorn	7	Healthy	X
1186	Buckthorn	6	Healthy	X

TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)
1187	Ash/White	18	Healthy	P
1188	Hackberry	14	Healthy	
1189	Ash/Green	5	Healthy	X
1190	Buckthorn	6	Healthy	X
1191	Maple/Red	12	Healthy	P
1192	Buckthorn	6	Healthy	X
1193	Box Elder	12	Healthy	P
1194	Buckthorn	6	Healthy	X
1195	Buckthorn	8	Healthy	X
1196	Ash/Green	18	Healthy	
1197	Buckthorn	5	Healthy	X
1198	Canada Plum	6	Healthy	
1204	Buckthorn	4	Healthy	X
1205	Buckthorn	5	Healthy	X
1206	Buckthorn	5	Healthy	X
1207	Buckthorn	6	Healthy	X
1210	Maple/Silver	5	Healthy	
1211	Maple/Silver	4	Healthy	
1218	Buckthorn	4	Healthy	X
1219	Buckthorn	4	Healthy	X
1220	Box Elder	20	Healthy	
1221	Box Elder	12	Healthy	P
1222	Box Elder	20	Dying	X
1223	Box Elder	20	Healthy	P
1224	Box Elder	20	Healthy	P

TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)
1225	Box Elder	13	Healthy	P
1226	Box Elder	12	Dying	X
1227	Willow/Black	26	Dying	X
1228	Box Elder	23	Healthy	P
1229	Box Elder	23	Healthy	P
1234	Buckeye	4	Healthy	P
1235	Box Elder	20	Dead	X
1236	Ash/Green	18	Healthy	
1237	Box Elder	19	Healthy	
1238	Box Elder	13	Healthy	
1239	Box Elder	15	Healthy	
1240	Cottonwood	26	Healthy	

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PRINTED NAME: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_ LICENSE # \_\_\_\_\_

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C	EPF	JCO	JCO	12/15/2025	ISSUED FOR REVIEW
B	EPF	ADB2	JCO	11/13/2025	ISSUED FOR REVIEW
A	EPF	JCO	JCO	06/20/2025	ISSUED FOR REVIEW

#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION



**BARR**

BARR ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
SUITE 200  
MINNEAPOLIS, MN 55435

PH: 1-800-632-2277  
WWW.BARR.COM  
MINNESOTA ENGINEERING FIRM  
NUMBER 1010411545

BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

BASSETT CREEK MAIN STEM RESTORATION - PHASE I  
GOLDEN VALLEY, MINNESOTA  
EXISTING CONDITIONS, REMOVALS, TREE PROTECTION  
& EROSION CONTROL PLAN  
(STA. 36+00 TO 45+00)

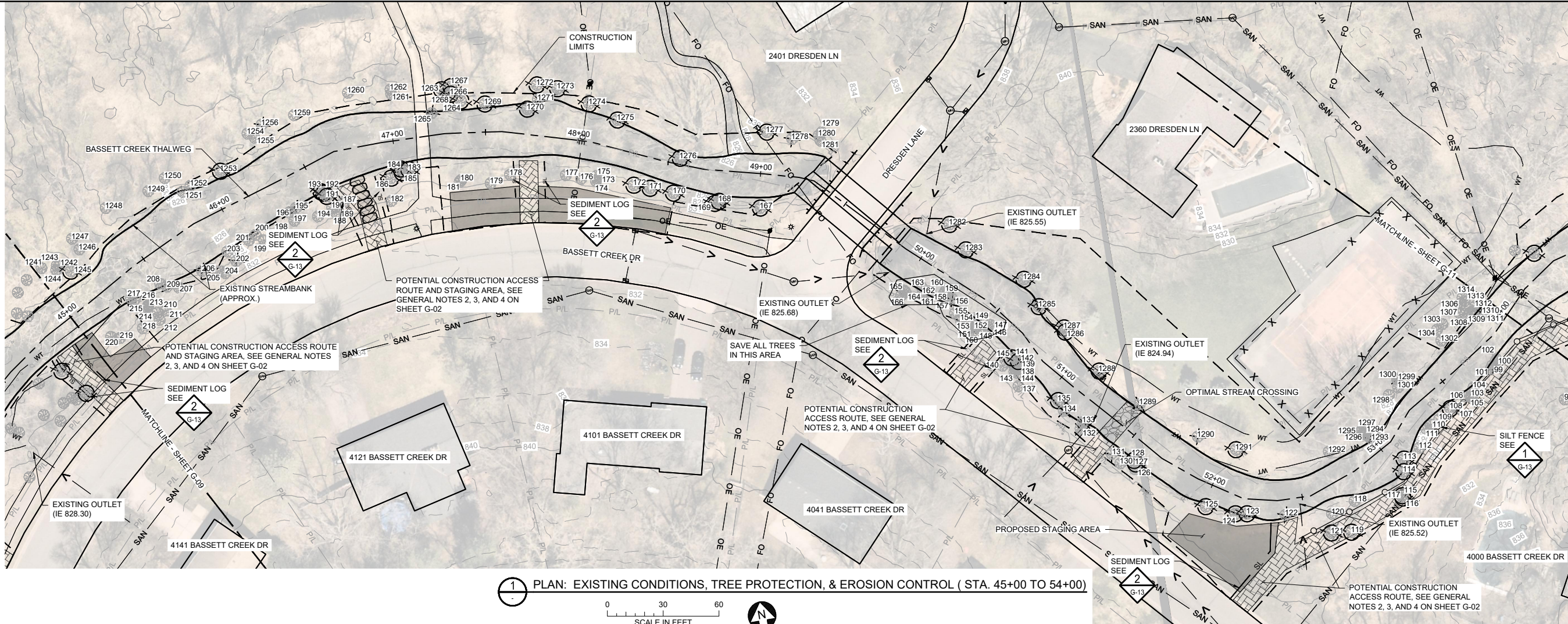
BARR PROJECT # 23272114.00	
CLIENT PROJECT # 24-02	
DWG # G-09	REV # C

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ORIGINAL DRAWING SIZE: ANSI FULL BLEED 8 (11.00 X 17.00 INCHES) PLOT SCALE: 1/2" = 1' PLOT DATE: 12/15/2023 2:16 PM  
CADD USER: ERIC P. FITZGERALD FILE: M:\DESIGN\23272114\_00\23272114\_G-09.DWG



ORIGINAL DRAWING SIZE: ANSI FULL BLEED 8 (11.00 X 17.00 INCHES) PLOT SCALE: 1/2" PLOT DATE: 12/15/2023 2:15 PM  
CADD USER: ERIC P. FITZGERALD FILE: MDESIGN232714.000232714\_G-05.DWG



1 PLAN: EXISTING CONDITIONS, TREE PROTECTION, & EROSION CONTROL ( STA. 45+00 TO 54+00)

TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)	TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)	TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)	TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)	TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)	TREE ID#	TREE SPECIES	DBH (INCHES)	TREE HEALTH	REMOVE (X) PROTECT (P)
98	Basswood/American	23	Healthy		126	Box Elder	15	Healthy		156	Maple/Silver	9	Dead	X	212	Cottonwood	25	Healthy		1262	Box Elder	18	Healthy		1290	Ash/Green	10	Healthy	X
99	Maple/Silver	16	Healthy		127	Box Elder	12	Healthy	P	157	Maple/Silver	7	Healthy		213	Box Elder	12	Healthy		1263	Box Elder	11	Healthy	P	1291	Ash/Green	15	Healthy	P
100	Maple/Silver	6	Healthy		128	Box Elder	12	Healthy	P	158	Maple/Silver	11	Healthy		214	Cottonwood	22	Healthy		1264	Ash/Green	15	Healthy	P	1292	Maple/Silver	14	Healthy	
101	Maple/Silver	6	Healthy		130	Box Elder	7	Healthy		159	Maple/Silver	7	Healthy		215	Cottonwood	9	Healthy		1265	Box Elder	12	Dead	X	1293	Maple/Silver	16	Dying	X
102	Maple/Silver	9	Healthy		131	Box Elder	6	Healthy	X	160	Maple/Silver	5	Healthy		216	Maple/Silver	10	Healthy		1266	Ash/Green	12	Healthy	P	1294	Maple/Silver	18	Healthy	
103	Maple/Silver	7	Healthy		132	Buckthorn	8	Healthy	X	161	Maple/Silver	15	Healthy		217	Maple/Silver	11	Healthy		1267	Ash/Green	13	Healthy	P	1295	Maple/Silver	19	Healthy	
104	Maple/Silver	10	Healthy		133	Buckthorn	8	Healthy	X	162	Maple/Silver	9	Healthy		218	Cottonwood	22	Healthy		1268	Box Elder	13	Healthy	P	1296	Maple/Silver	30	Healthy	
105	Box Elder	5	Healthy		134	Buckthorn	6	Healthy	X	163	Box Elder	14	Healthy		219	Cottonwood	24	Healthy		1269	Box Elder	19	Healthy	P	1297	Maple/Silver	9	Healthy	
106	Maple/Silver	8	Healthy		135	Walnut/Black	6	Healthy	P	164	Ash/Green	10	Healthy		220	Box Elder	5	Healthy		1270	Box Elder	14	Healthy	P	1298	Maple/Silver	6	Healthy	
107	Maple/Silver	5	Healthy		137	Buckeye	5	Healthy		165	Ash/Green	8	Healthy		1241	Box Elder	4	Healthy		1271	Buckthorn	4	Healthy	X	1299	Mulberry	7	Healthy	
108	Maple/Silver	12	Healthy	P	138	Ash/Green	6	Healthy		166	Ash/Green	10	Healthy		1242	Box Elder	6	Healthy		1272	Box Elder	22	Healthy	P	1300	Buckthorn	7	Healthy	X
109	Box Elder	14	Healthy		139	Ash/Green	6	Healthy		167	Hackberry	4	Healthy	P	1243	Willow/Black	23	Healthy		1273	Box Elder	24	Healthy	P	1301	Maple/Silver	4	Healthy	
110	Box Elder	8	Healthy		140	Ash/Green	6	Healthy		168	Box Elder	16	Healthy	P	1244	Willow/Black	23	Healthy		1274	Walnut/Black	4	Healthy	P	1302	Maple/Silver	16	Healthy	
111	Maple/Silver	10	Healthy		141	Maple/Silver	11	Healthy	P	169	Elm/American	15	Healthy	P	1245	Box Elder	13	Healthy	P	1275	Box Elder	16	Healthy	P	1303	Maple/Silver	13	Healthy	
112	Box Elder	4	Healthy		142	Maple/Silver	12	Healthy	P	170	Box Elder	16	Healthy	P	1246	Box Elder	7	Healthy		1276	Maple/Silver	45	Healthy	P	1304	Maple/Silver	7	Healthy	
113	Maple/Silver	13	Healthy	P	143	Maple/Silver	5	Healthy		171	Box Elder	15	Healthy	P	1247	Box Elder	10	Healthy		1277	Box Elder	10	Healthy	P	1306	Maple/Silver	11	Healthy	
114	Maple/Silver	7	Healthy	P	144	Maple/Silver	5	Healthy		172	Box Elder	13	Healthy	P	1248	Box Elder	13	Healthy		1278	Ash/Green	10	Healthy	X	1307	Maple/Silver	15	Healthy	
115	Box Elder	9	Healthy	P	145	Maple/Silver	12	Healthy	P	173	Elm/Siberian	12	Healthy		1249	Box Elder	12	Healthy		1279	Hackberry	5	Healthy		1308	Maple/Silver	8	Healthy	
116	Maple/Sugar	17	Healthy	P	146	Maple/Silver	4	Healthy		174	Hackberry	9	Healthy		1250	Box Elder	13	Healthy		1280	Hackberry	4	Healthy		1309	Maple/Silver	6	Healthy	
117	Maple/Silver	12	Healthy	P	147	Maple/Silver	15	Healthy		175	Hackberry	9	Dying	X	1251	Box Elder	9	Healthy		1281	Maple/Red	4	Healthy		1310	Maple/Silver	13	Healthy	
118	Maple/Silver	16	Healthy		148	Maple/Silver	13	Healthy		176	Hackberry	5	Healthy		1252	Box Elder	18	Healthy		1282	Honeylocust	9	Healthy	P	1311	Maple/Silver	6	Healthy	
119	Box Elder	12	Healthy	P	149	Maple/Silver	8	Healthy		177	Box Elder	12	Healthy		1253	Box Elder	14	Healthy	P	1283	Apple	11	Healthy	P	1312	Maple/Silver	5	Healthy	
120	Maple/Silver	23	Healthy		150	Ash/Green	7	Healthy		178	Walnut/Black	4	Healthy		1254	Box Elder	12	Healthy		1284	Spruce Sp.	8	Healthy	P	1313	Maple/Silver	9	Healthy	
121	Box Elder	11	Healthy	P	151	Maple/Silver	6	Healthy		179	Elm/American	14	Healthy		1255	Box Elder	10	Healthy		1285	Ash/Green	25	Healthy	P	1314	Maple/Silver	10	Healthy	
122	Box Elder	6	Healthy	X	152	Maple/Silver	13	Healthy		180	Box Elder	6	Healthy		1256	Box Elder	17	Dead	X	1286	Box Elder	5	Healthy	P					
123	Walnut/Black	6	Healthy	P	153	Maple/Silver	10	Healthy		181	Box Elder	5	Healthy		1259	Box Elder	12	Healthy		1287	Box Elder	6	Healthy	P					
124	Box Elder	13	Healthy	P	154	Elm/American	13	Healthy		182	Box Elder	5	Healthy		1260	Box Elder	22	Healthy		1288	Maple/Silver	15	Healthy	P					
125	Walnut/Black	9	Healthy	P	155	Maple/Silver	8	Healthy		183	Maple/Silver	11	Healthy	P	1261	Box Elder	15	Healthy		1289	Mulberry	17	Healthy	X					

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.

PRINTED NAME: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_ LICENSE #: \_\_\_\_\_

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C	EPF	JCO	JCO	12/15/2025	ISSUED FOR REVIEW
B	EPF	ADB2	JCO	11/13/2025	ISSUED FOR REVIEW
A	EPF	JCO	JCO	06/20/2025	ISSUED FOR REVIEW

#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION

**BARR**

BARR ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
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PH: 1-800-632-2277  
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MINNESOTA ENGINEERING FIRM  
NUMBER 1010411545

BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

BASSETT CREEK MAIN STEM RESTORATION - PHASE I  
GOLDEN VALLEY, MINNESOTA  
EXISTING CONDITIONS, REMOVALS, TREE PROTECTION  
& EROSION CONTROL PLAN  
(STA. 45+00 TO 54+00)

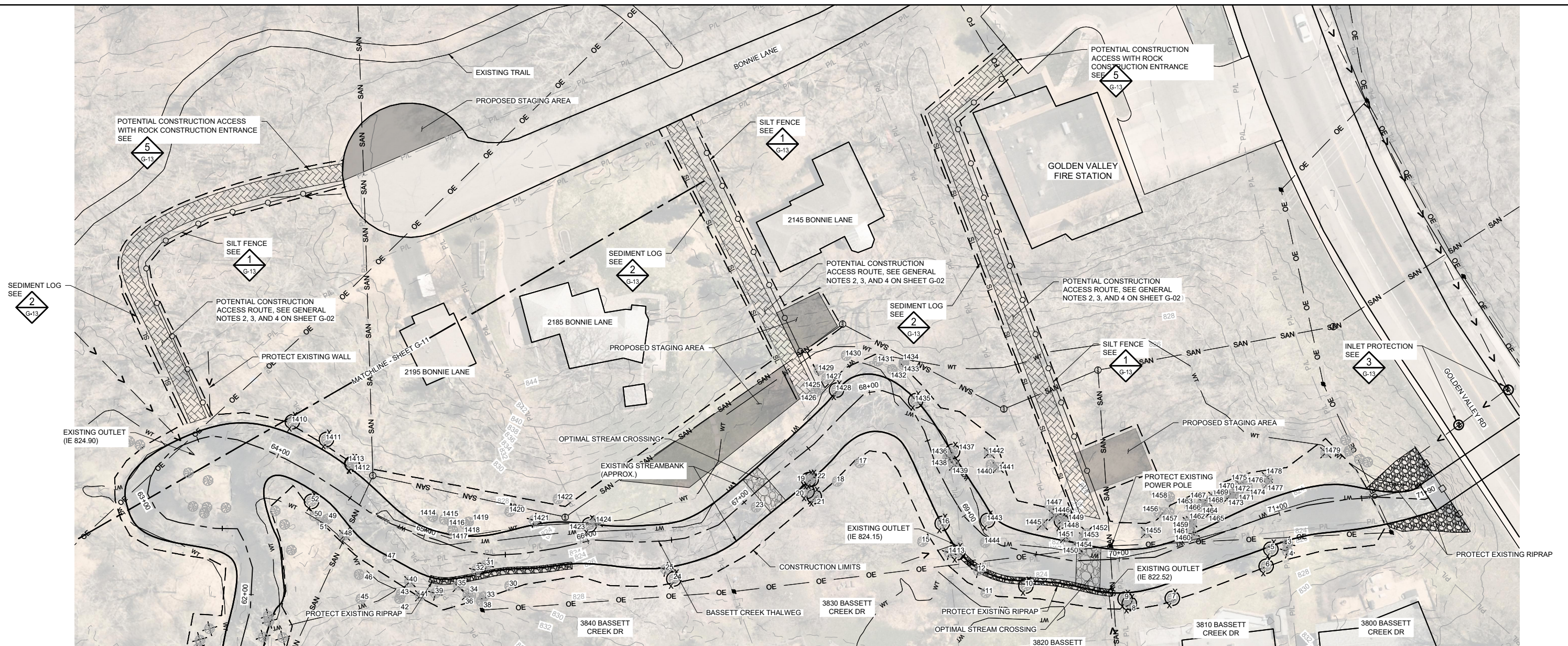
BARR PROJECT #	23272114.00
CLIENT PROJECT #	24-02
DWG #	DRAWING
REV #	C

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NOT FOR CONSTRUCTION









1 PLAN: EXISTING CONDITIONS, TREE PROTECTION, & EROSION CONTROL ( STA. 63+00 TO 72+00)



3	Box Elder	7	Healthy	X	23	Ash/Green	20	Healthy		49	Box Elder	8	Healthy		1426	Maple/Silver	14	Healthy		1446	Box Elder	12	Dead	X	1466	Buckthorn	4	Healthy	X
4	Ash/Green	5	Healthy	X	24	Maple/Silver	33	Healthy		50	Ash/Green	10	Healthy		1427	Maple/Silver	18	Healthy		1447	Ash/Green	10	Healthy		1467	Buckthorn	4	Healthy	X
5	Hackberry	4	Healthy		25	Ash/Green	4	Healthy	X	51	Ash/Green	11	Healthy		1428	Maple/Silver	18	Healthy		1448	Buckthorn	7	Healthy	X	1468	Buckthorn	4	Healthy	X
6	Cedar/White	11	Healthy		30	Box Elder	11	Healthy		52	Box Elder	12	Healthy		1429	Maple/Silver	18	Healthy		1449	Ash/Green	18	Healthy		1469	Buckthorn	4	Healthy	X
7	Maple/Silver	23	Healthy		31	Box Elder	4	Dying	X	1410	Box Elder	16	Healthy		1430	Box Elder	13	Healthy		1450	Buckthorn	7	Healthy	X	1470	Buckthorn	4	Healthy	X
8	Maple/Silver	21	Healthy		32	Box Elder	9	Healthy	X	1411	Box Elder	11	Healthy		1431	Hackberry	14	Healthy		1451	Ash/Green	15	Healthy		1471	Buckthorn	4	Healthy	X
9	Maple/Silver	16	Healthy		33	Box Elder	4	Healthy		1412	Cottonwood	26	Healthy		1432	Hackberry	14	Healthy		1452	Buckthorn	5	Healthy	X	1472	Buckthorn	5	Healthy	X
10	Oak/Swamp White	10	Healthy		34	Ash/Green	25	Healthy		1413	Cottonwood	24	Healthy		1433	Hackberry	15	Healthy		1453	Buckthorn	4	Healthy	X	1473	Buckthorn	5	Healthy	X
11	Basswood/American	23	Healthy		35	Buckthorn	4	Healthy	X	1414	Cottonwood	26	Healthy		1434	Hackberry	10	Healthy		1454	Buckthorn	4	Healthy	X	1474	Basswood/American	16	Dead	X
12	Ash/Green	5	Healthy	X	36	Buckthorn	5	Healthy	X	1415	Cottonwood	24	Healthy		1435	Cottonwood	30	Healthy		1455	Box Elder	8	Healthy	X	1475	Buckthorn	7	Healthy	X
13	Maple/Red	7	Healthy		38	Hackberry	5	Healthy		1416	Ash/Green	5	Healthy		1436	Ash/Green	10	Healthy		1456	Box Elder	14	Healthy		1476	Ash/Black	13	Healthy	
14	Ash/Green	5	Healthy	X	39	Ash/Green	14	Dead	X	1417	Ash/White	4	Healthy		1437	Maple/Amur	6	Healthy	P	1457	Box Elder	5	Healthy		1477	Buckthorn	5	Healthy	X
15	Ash/Green	5	Healthy		40	Buckthorn	6	Healthy	X	1418	Cottonwood	33	Healthy		1438	Ash/Green	14	Healthy	X	1458	Box Elder	13	Healthy		1478	Buckthorn	5	Healthy	X
16	Box Elder	7	Healthy		41	Box Elder	5	Dead	X	1419	Box Elder	4	Healthy		1439	Buckthorn	7	Healthy	X	1459	Buckthorn	4	Healthy	X	1479	Buckthorn	4	Healthy	X
17	Maple/Sugar	16	Healthy		42	Box Elder	4	Healthy		1420	Hackberry	8	Healthy		1440	Box Elder	6	Healthy		1460	Ash/Green	4	Healthy	X					
18	Cottonwood	33	Healthy		43	Box Elder	9	Healthy		1421	Box Elder	9	Healthy	X	1441	Buckthorn	9	Healthy	X	1461	Buckthorn	4	Healthy	X					
19	Box Elder	4	Healthy		45	Hackberry	4	Healthy		1422	Box Elder	12	Healthy		1442	Buckthorn	8	Healthy	X	1462	Buckthorn	5	Healthy	X					
20	Box Elder	5	Healthy		46	Box Elder	4	Healthy		1423	Maple/Silver	24	Healthy		1443	Walnut/Black	4	Healthy		1463	Box Elder	6	Healthy						
21	Box Elder	5	Healthy		47	Ash/Green	4	Healthy		1424	Buckthorn	4	Healthy	X	1444	Maple/Silver	4	Healthy		1464	Willow/Black	39	Healthy						
22	Maple/Silver	14	Healthy		48	Buckthorn	4	Healthy	X	1425	Maple/Silver	12	Healthy		1445	Buckthorn	10	Healthy	X	1465	Buckthorn	8	Healthy	X					

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STATE OF MINNESOTA.

PRINTED NAME \_\_\_\_\_

SIGNATURE \_\_\_\_\_

DATE \_\_\_\_\_ LICENSE # \_\_\_\_\_

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C	EPF	JCO	JCO	12/15/2025	ISSUED FOR REVIEW
B	EPF	ADB2	JCO	11/13/2025	ISSUED FOR REVIEW
A	EPF	JCO	JCO	06/20/2025	ISSUED FOR REVIEW
#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION

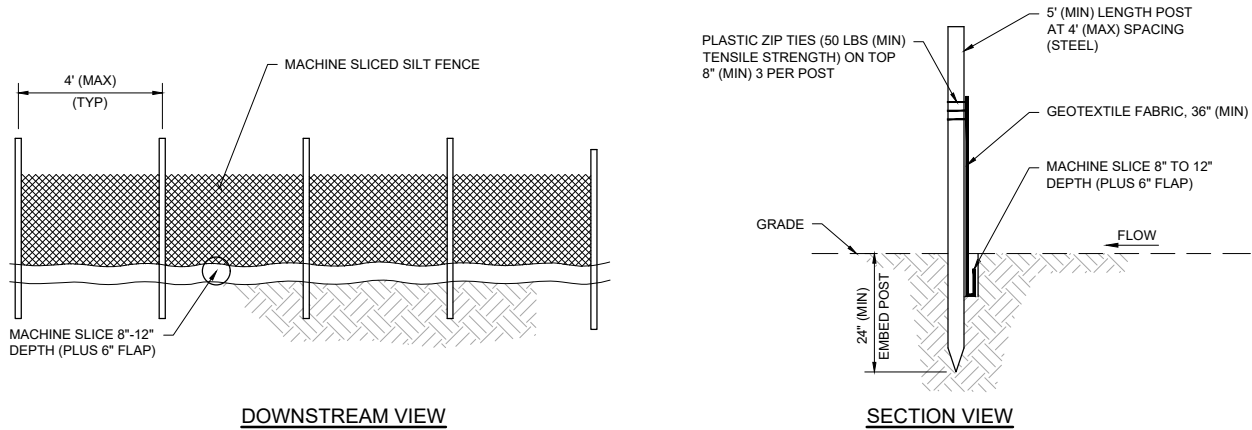


BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

BASSETT CREEK MAIN STEM RESTORATION - PHASE I  
GOLDEN VALLEY, MINNESOTA  
EXISTING CONDITIONS, REMOVALS, TREE PROTECTION  
& EROSION CONTROL PLAN  
(STA. 63+00 TO 72+00)

BARR PROJECT #	
23272114.00	
CLIENT PROJECT #	
24-02	
DWG #	REV #
G-12	C

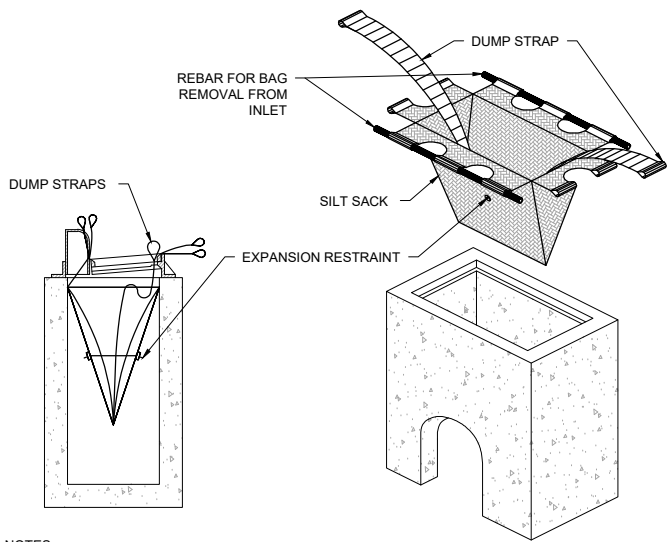




NOTES:

1. INSTALL SILT FENCE PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED AND MAINTAIN THROUGHOUT THE CONSTRUCTION PERIOD. REMOVE SILT FENCE AND ANY ACCUMULATED SEDIMENT IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
2. NO HOLES OR GAPS SHALL BE PRESENT IN/UNDER SILT FENCE. PREPARE AREA AS NEEDED TO SMOOTH SURFACE OR REMOVE DEBRIS.
3. REMOVE ACCUMULATED SEDIMENT WHEN BUILD UP REACHES 1/2 OF FENCE HEIGHT. OR INSTALL A SECOND SILT FENCE DOWNSTREAM OF THE ORIGINAL FENCE AT A SUITABLE DISTANCE.
4. WHEN SPLICES ARE NECESSARY MAKE SPLICE AT POST ACCORDING TO SPLICE DETAIL. PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE. ROTATE BOTH POSTS TOGETHER AT LEAST 180 DEGREES TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL. CUT THE FABRIC NEAR THE BOTTOM OF THE POSTS TO ACCOMMODATE THE 6 INCH FLAP, THEN DRIVE BOTH POSTS AND BURY THE FLAP AND COMPACT BACKFILL.

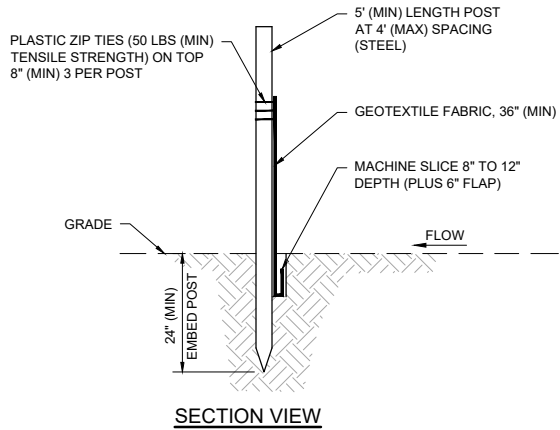
**1** **DETAIL: SILT FENCE - MACHINE SLICED**  
NOT TO SCALE



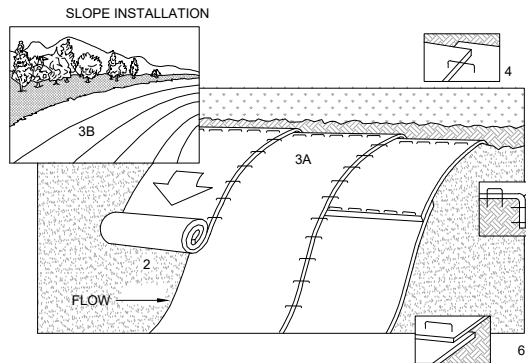
NOTES:

1. INSTALL INLET PROTECTION PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED OR IMMEDIATELY FOLLOWING ANY CATCHBASIN INSTALLATION AND MAINTAIN THROUGHOUT THE CONSTRUCTION PERIOD.
2. MATERIALS SHALL BE SUFFICIENT TO ALLOW FLOW WHILE BLOCKING SEDIMENT. NO HOLES OR GAPS SHALL BE PRESENT IN/AROUND FILTER SACK.
3. CLEAN FILTER SACK AND REMOVE ACCUMULATED SEDIMENT AS REQUIRED TO ALLOW FLOW INTO THE CATCHBASIN AND PREVENT SEDIMENT FROM LEAVING THE DEVICE.
4. REMOVE DEVICE AND ANY ACCUMULATED SEDIMENT IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.

**3** **DETAIL: INLET PROTECTION, FILTER SACK TYPE**  
NOT TO SCALE



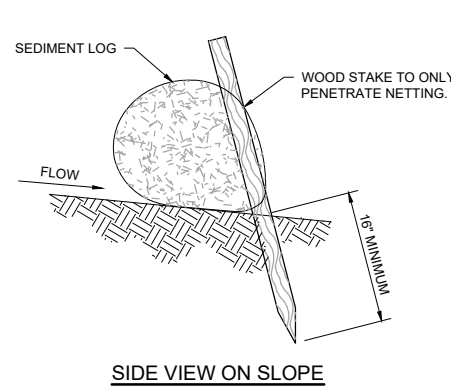
**SECTION VIEW**



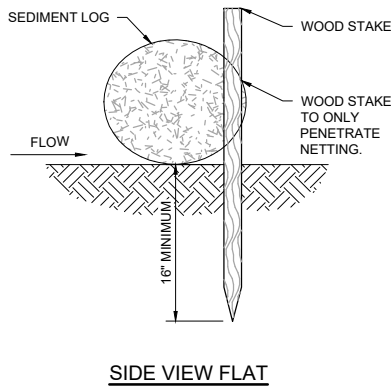
NOTES:

1. REFER TO MANUFACTURER RECOMMENDATIONS FOR STAPLE PATTERNS FOR SLOPE INSTALLATIONS.
2. PREPARE SOIL BY LOOSENING TOP 1-2 INCHES AND APPLY SEED (AND FERTILIZER WHERE REQUIRED) PRIOR TO INSTALLING BLANKETS. GROUND SHOULD BE SMOOTH AND FREE OF DEBRIS.
3. BEGIN (A) AT THE TOP OF THE SLOPE AND ROLL THE BLANKETS DOWN OR (B) AT ONE END OF THE SLOPE AND ROLL THE BLANKETS HORIZONTALLY ACROSS THE SLOPE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 6" OVERLAP, WITH THE UPHILL BLANKET ON TOP.
5. WHEN BLANKETS MUST BE SPICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 6" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.
6. BLANKET MATERIALS SHALL BE AS SPECIFIED OR AS APPROVED BY ENGINEER.

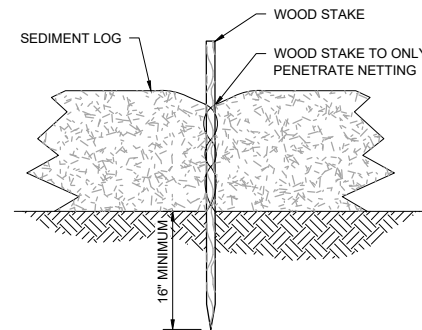
**4** **DETAIL: EROSION CONTROL BLANKET - INSTALLATION**  
NOT TO SCALE



**SIDE VIEW ON SLOPE**



**SIDE VIEW FLAT**

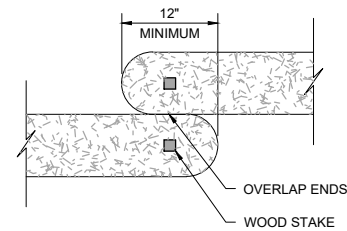


**FRONT VIEW**

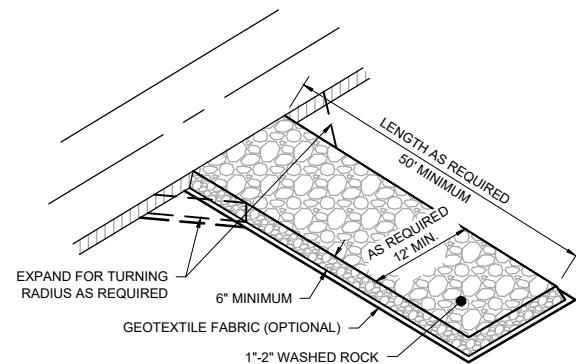
NOTES:

1. INSTALL SEDIMENT LOG ALONG CONTOURS (CONSTANT ELEVATION).
2. NO GAPS SHALL BE PRESENT UNDER SEDIMENT LOG. PREPARE AREA AS NEEDED TO SMOOTH SURFACE OR REMOVE DEBRIS.
3. REMOVE ACCUMULATED SEDIMENT WHEN REACHING 1/3 OF LOG HEIGHT.
4. MAINTAIN SEDIMENT LOG THROUGHOUT THE CONSTRUCTION PERIOD AND REPAIR OR REPLACED AS REQUIRED.

**2** **DETAIL: SEDIMENT LOG - STAKING**  
NOT TO SCALE



**TOP VIEW**



NOTES:

1. MAINTAIN ENTRANCE THROUGHOUT THE CONSTRUCTION PERIOD AND REPAIR OR REPLACE AS REQUIRED TO PREVENT TRACKING OFFSITE.
2. REMOVE ENTRANCE IN CONJUNCTION WITH FINAL GRADING AND SITE STABILIZATION.
3. INCLUDE WASH-OFF BERM WITH A MINIMUM HEIGHT OF 2 FEET ABOVE THE ADJACENT ROADWAY AND WITH MAXIMUM SIDE SLOPES OF 4:1.
4. IF CONSTRUCTION ENTRANCE IS LESS THAN 50 FT, ALTERNATIVE EQUIVALENT MEASURES MUST BE TAKEN AND APPROVED BY ENGINEER PRIOR TO INSTALLATION.

**5** **DETAIL: CONSTRUCTION ENTRANCE - ROCK**  
NOT TO SCALE

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PRINTED NAME: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_  
DATE: \_\_\_\_\_ LICENSE #: \_\_\_\_\_

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C	EPF	JCO	JCO	12/15/2025	ISSUED FOR REVIEW	
B	EPF	ADB2	JCO	11/13/2025	ISSUED FOR REVIEW	
A	EPF	JCO	JCO	06/20/2025	ISSUED FOR REVIEW	
#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION	

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4300 MARKETPOINTE DRIVE  
SUITE 200  
MINNEAPOLIS, MN 55435  
PH: 1-800-632-2277  
WWW.BARR.COM  
MINNESOTA ENGINEERING FIRM  
NUMBER 1010411545

BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

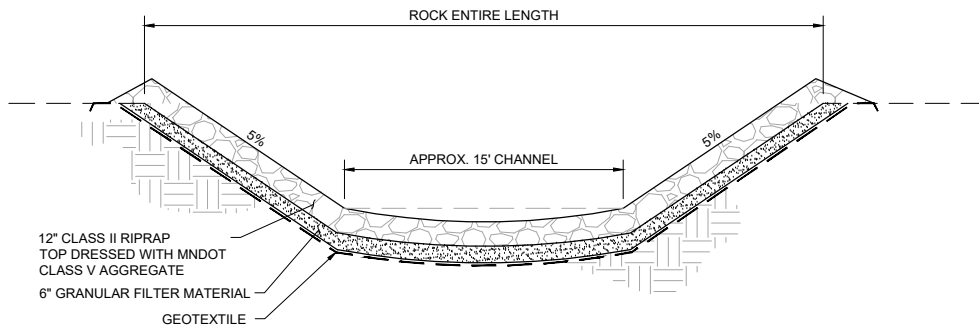
BASSETT CREEK MAIN STEM RESTORATION - PHASE 1  
GOLDEN VALLEY, MINNESOTA  
EROSION CONTROL DETAILS

BARR PROJECT # 23272114.00	
CLIENT PROJECT # 24-02	
DWG # G-13	REV # C

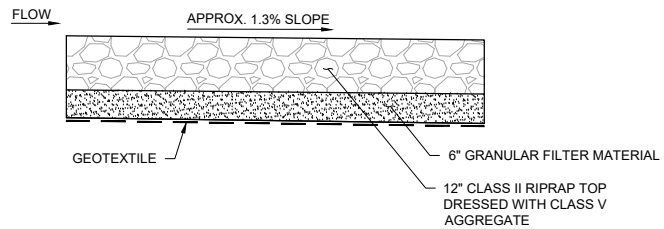
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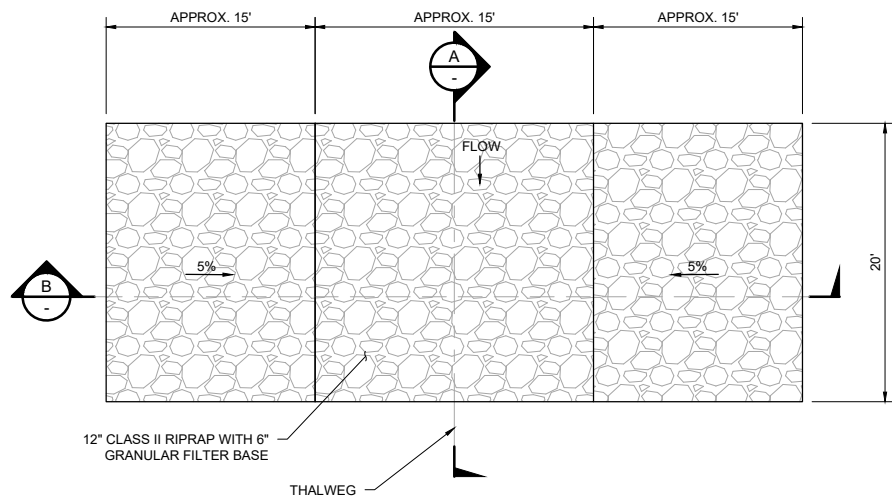
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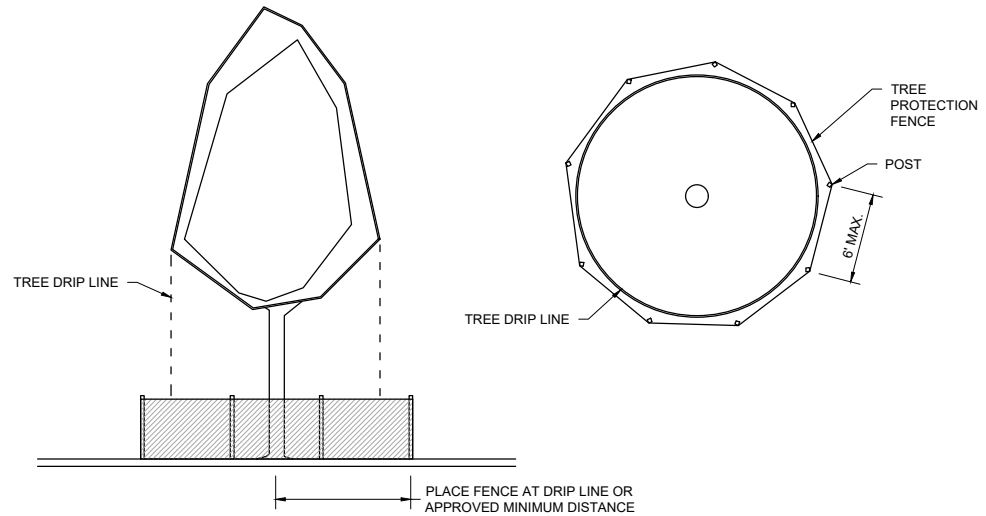
**B** SECTION: TEMPORARY CREEK CROSSING OPTION  
NOT TO SCALE



**A** SECTION: TEMPORARY CREEK CROSSING OPTION  
NOT TO SCALE

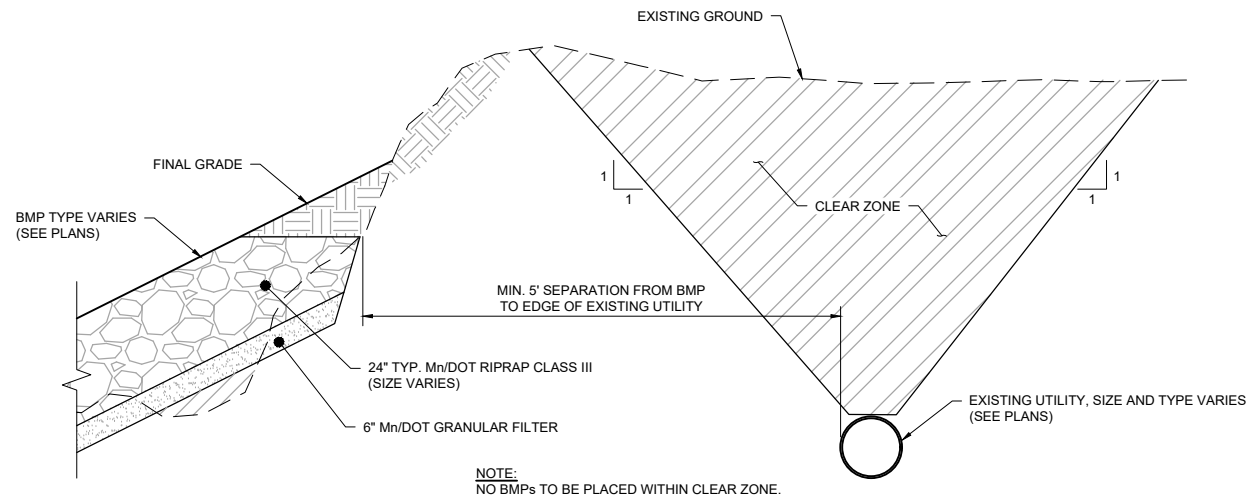


**1** DETAIL: TEMPORARY CREEK CROSSING OPTION  
NOT TO SCALE



- NOTES:**
1. TREE PROTECTION FENCING SHALL BE INSTALLED ACCORDING TO PLAN PRIOR TO DEMOLITION OR OTHER SITE WORK. ANY RELOCATION OF THE TREE PROTECTION FENCING TO BE APPROVED BY CITY FORESTER (651.632.5129). TREE PROTECTION FENCING SHALL BE MAINTAINED FOR THE DURATION OF THE CONSTRUCTION PROCESS.
  2. CONSTRUCTION MATERIALS, STOCKPILES, EQUIPMENT, VEHICLES, AND TEMPORARY FACILITIES SHALL NOT BE STORED OR OPERATED WITHIN THE TREE PROTECTION ZONE.
  3. ROOTS OUTSIDE OF THE TREE PROTECTION ZONE EXPOSED OR DAMAGED DURING EXCAVATION OR OTHER CONSTRUCTION ACTIVITY SHALL BE CLEANLY CUT AS DIRECTED BY THE CITY FORESTER.
  4. ADDITIONAL TREE PROTECTION MEASURES MAY BE REQUIRED.

**2** DETAIL: TREE PROTECTION FENCING  
NOT TO SCALE



**3** DETAIL: UTILITY PROTECTION  
NOT TO SCALE

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C	EPF	JCO	JCO	12/15/2025	ISSUED FOR REVIEW	
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A	EPF	JCO	JCO	06/20/2025	ISSUED FOR REVIEW	
#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION	



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4300 MARKETPOINTE DRIVE  
SUITE 200  
MINNEAPOLIS, MN 55435

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MINNESOTA ENGINEERING FIRM  
NUMBER 10104111545

BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

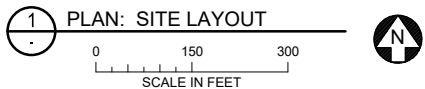
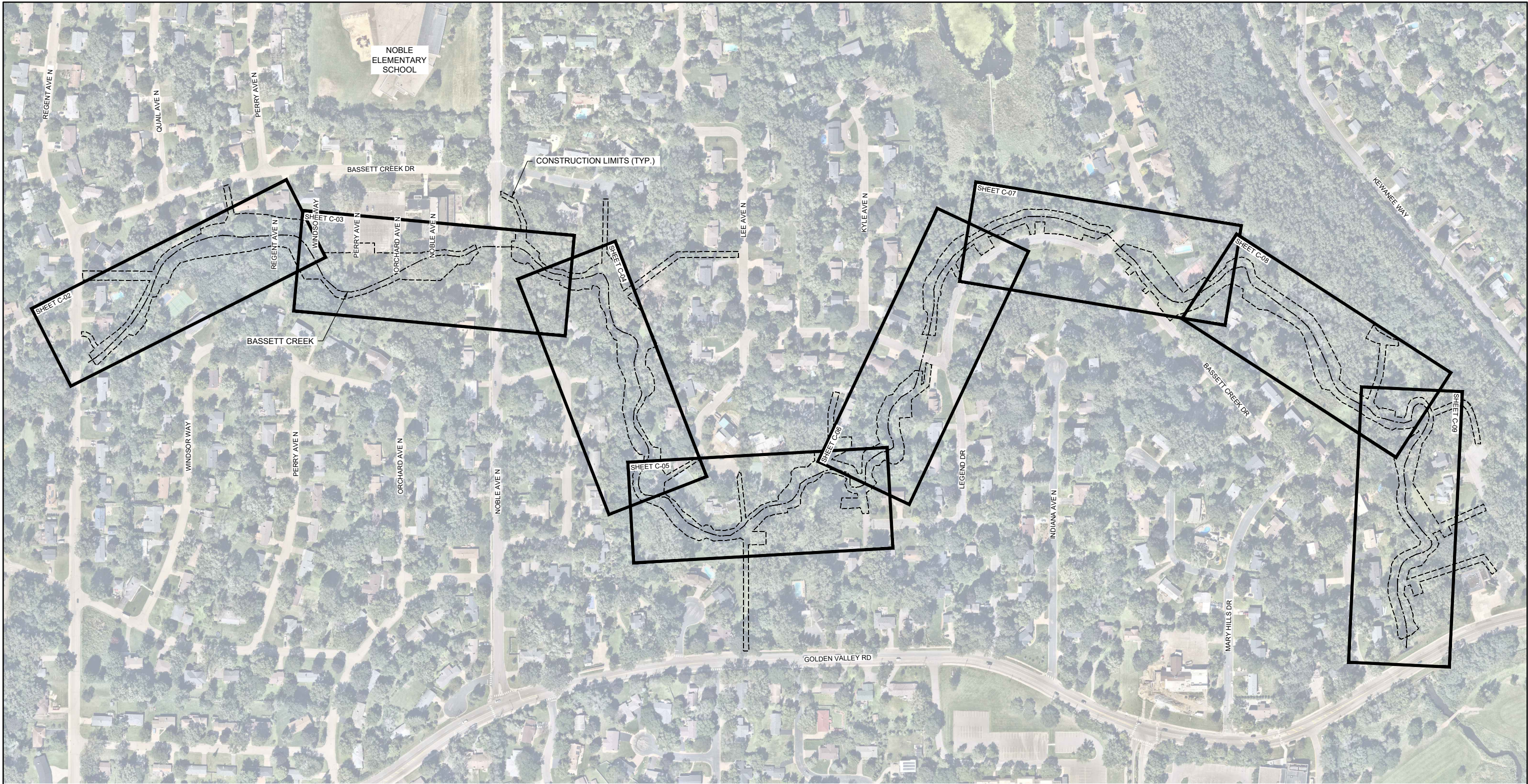
BASSETT CREEK MAIN STEM RESTORATION - PHASE 1  
GOLDEN VALLEY, MINNESOTA  
EROSION CONTROL DETAILS

BARR PROJECT # 23272114.00	
CLIENT PROJECT # 24-02	
DWG # G-14	REV # C

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ORIGINAL DRAWING SIZE: ANSI FULL BLEED B (11.00 X 17.00 INCHES) PLOT SCALE: 1/2 PLOT DATE: 12/16/2025 10:20 AM  
CADD USER: ERIC P. FITZGERALD FILE: M:\DESIGN\2372114\_000\2372114\_C-01.DWG



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BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

BASSETT CREEK MAIN STEM RESTORATION - PHASE 1  
GOLDEN VALLEY, MINNESOTA

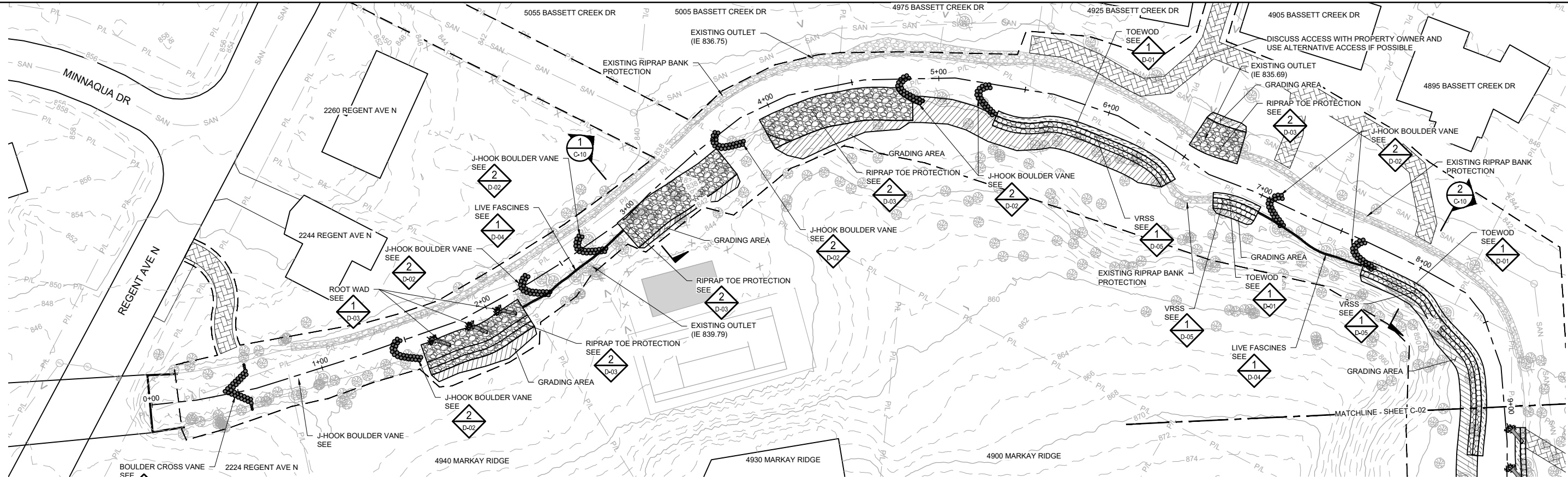
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BARR PROJECT # 23272114.00	
CLIENT PROJECT # 24-02	
DWG # C-01	REV # C

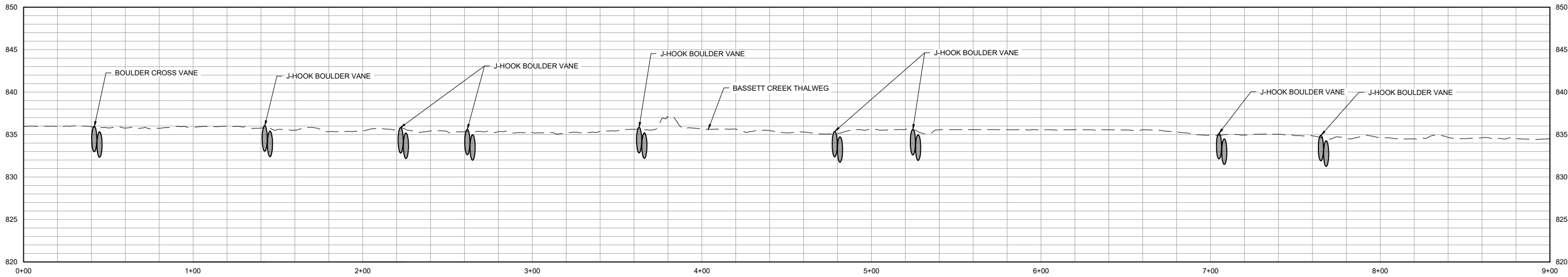


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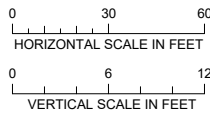


NOTES:  
1. GRADE CHANNEL BED AS DIRECTED BY ENGINEER  
TO CREATE OR ENHANCE LOW-FLOW CHANNEL.

1 PLAN: STREAM RESTORATION (0+00 TO 9+00)



2 PROFILE: STREAM RESTORATION (0+00 TO 9+00)



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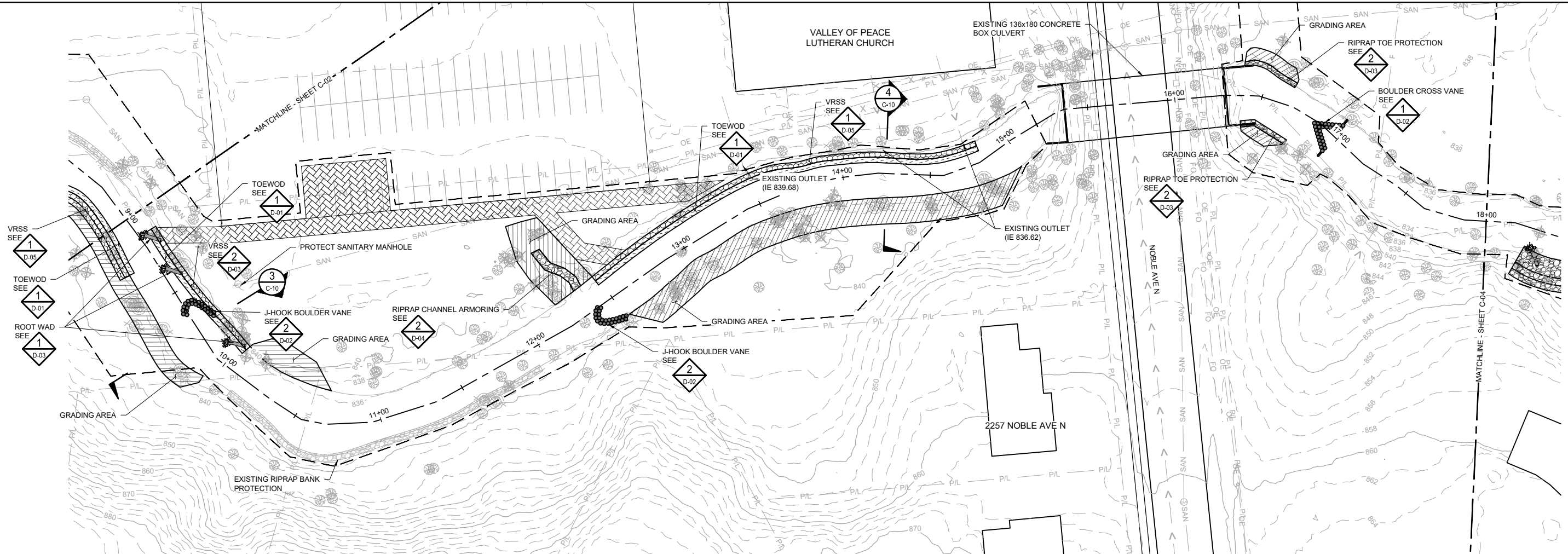
BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

BASSETT CREEK MAIN STEM RESTORATION - PHASE 1  
GOLDEN VALLEY, MINNESOTA  
STREAM RESTORATION  
PLAN & PROFILE  
(STA. 0+00 TO 9+00)

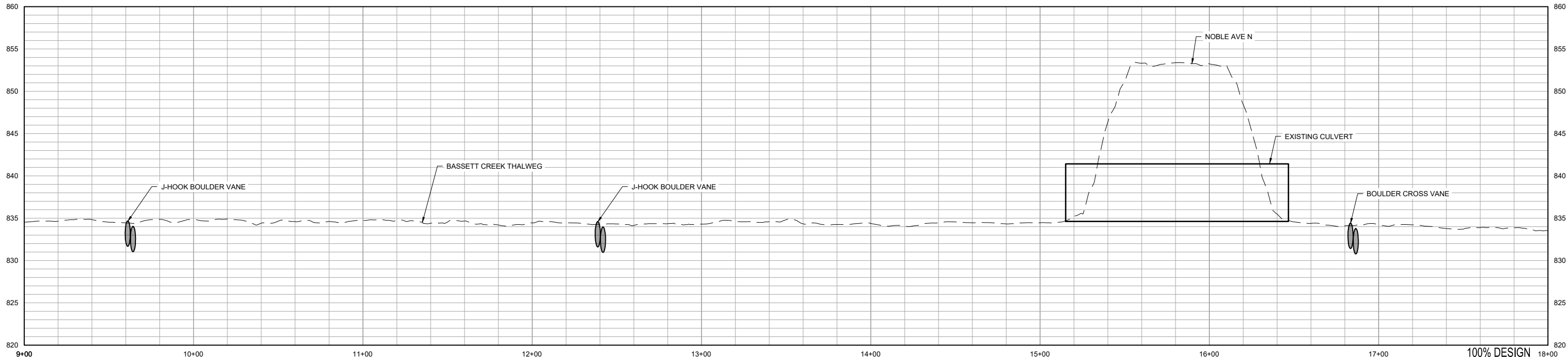
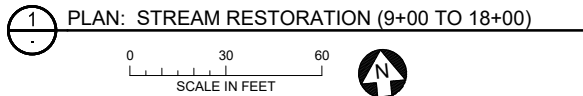
BARR PROJECT # 23272114.00	
CLIENT PROJECT # 24-02	
DWG # C-02	REV # C



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NOTES:  
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4300 MARKETPOINTE DRIVE  
SUITE 200  
MINNEAPOLIS, MN 55435

PH: 1-800-632-2277  
WWW.BARR.COM  
MINNESOTA ENGINEERING FIRM  
NUMBER 10104111545

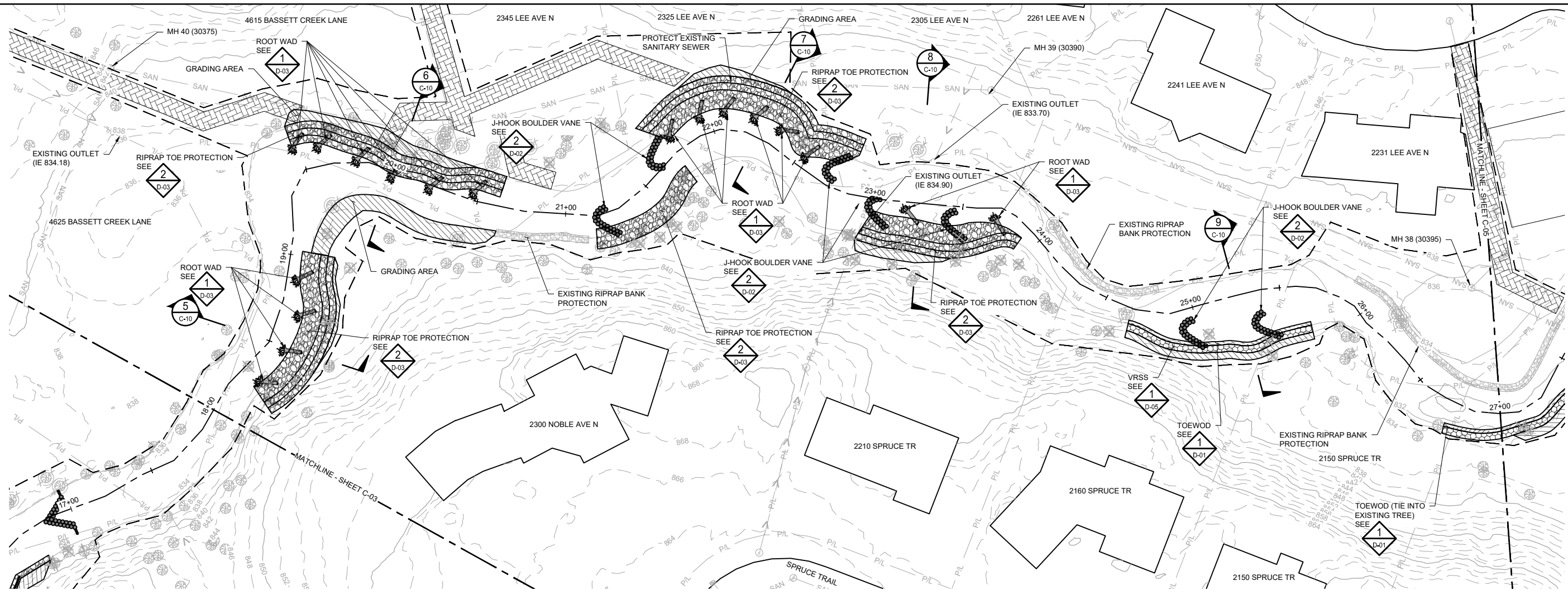
BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

BASSETT CREEK MAIN STEM RESTORATION - PHASE 1  
GOLDEN VALLEY, MINNESOTA  
STREAM RESTORATION  
PLAN & PROFILE  
(STA. 9+00 TO 18+00)

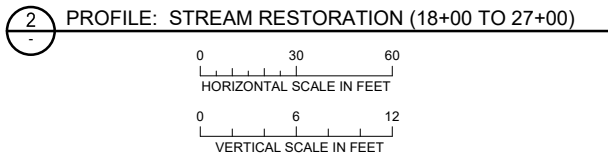
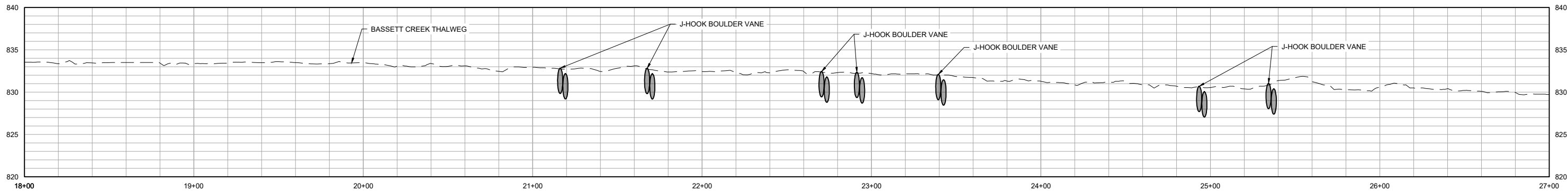
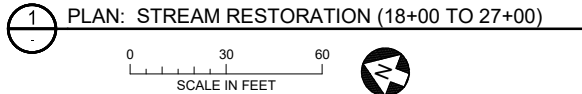
BARR PROJECT #	23272114.00
CLIENT PROJECT #	24-02
DWG #	C-03
REV #	C



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CADD USER: ERIC P. FITZGERALD FILE: MDESIGN23272114\_00023272114\_C-02.DWG



NOTES:  
1. GRADE CHANNEL BED AS DIRECTED BY ENGINEER  
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SUPERVISION AND THAT I AM A DULY LICENSED  
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STATE OF MINNESOTA.

PRINTED NAME: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_  
DATE: \_\_\_\_\_ LICENSE #: \_\_\_\_\_

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-	-	-	-	-	-
C	EPF	JCO	JCO	12/15/2025	ISSUED FOR REVIEW
B	EPF	ADB2	JCO	11/13/2025	ISSUED FOR REVIEW
A	EPF	JCO	JCO	06/20/2025	ISSUED FOR REVIEW
#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION



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MINNEAPOLIS, MN 55435

PH: 1-800-632-2277  
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MINNESOTA ENGINEERING FIRM  
NUMBER 10104111545

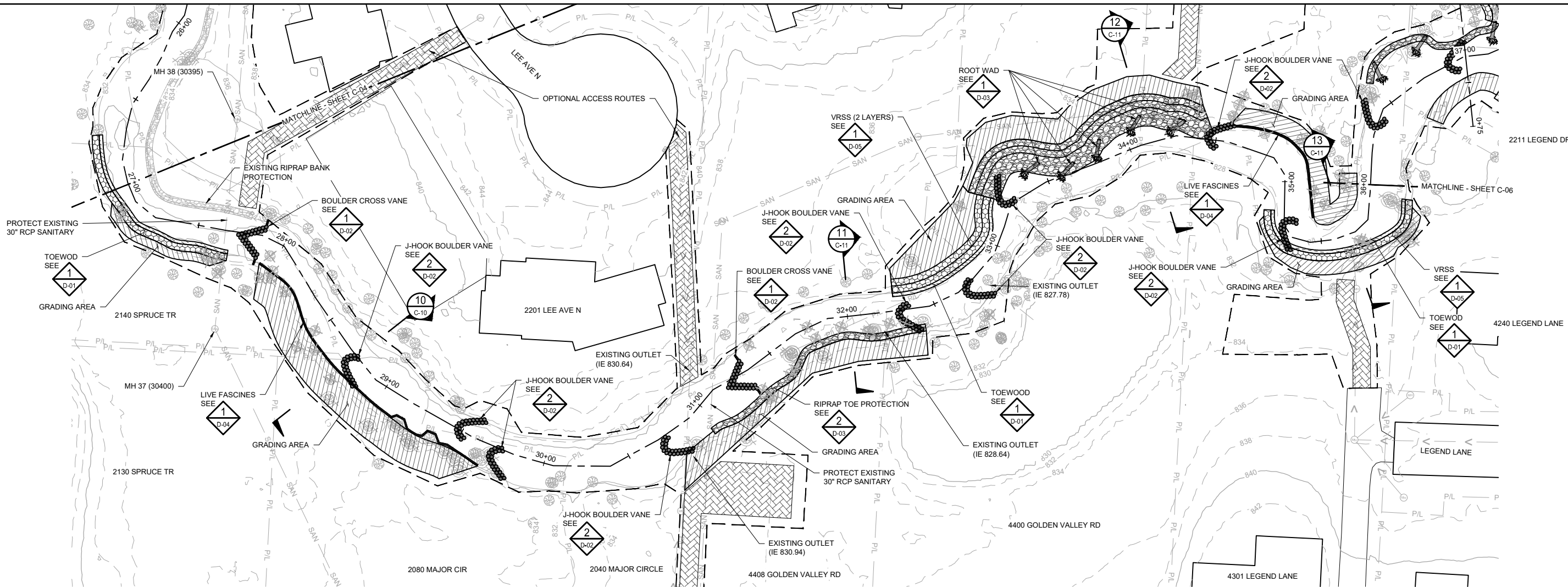
BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

BASSETT CREEK MAIN STEM RESTORATION- PHASE 1  
GOLDEN VALLEY, MINNESOTA  
STREAM RESTORATION  
PLAN & PROFILE  
(STA. 18+00 TO 27+00)

BARR PROJECT # 23272114.00	
CLIENT PROJECT # 24-02	
DWG # C-04	REV # C

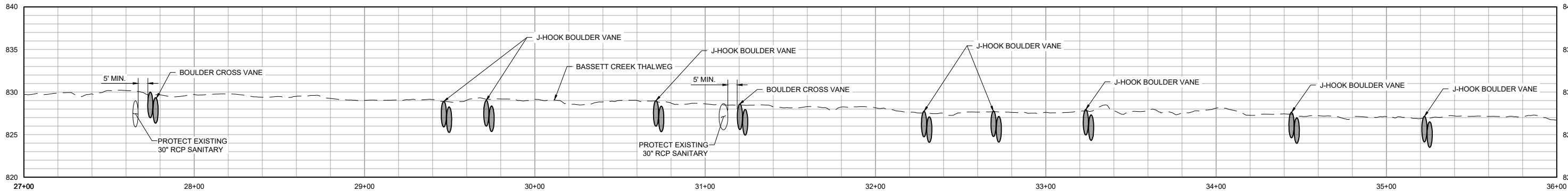


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CADD USER: ERIC P. FITZGERALD FILE: MDESIGN2372114\_002372114\_C-02.DWG

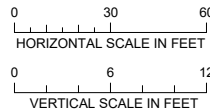


NOTES:  
1. GRADE CHANNEL BED AS DIRECTED BY ENGINEER  
TO CREATE OR ENHANCE LOW-FLOW CHANNEL.

1 PLAN: STREAM RESTORATION (27+00 TO 36+00)



2 PROFILE: STREAM RESTORATION (27+00 TO 36+00)



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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.

PRINTED NAME: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_  
DATE: \_\_\_\_\_ LICENSE #: \_\_\_\_\_

-	-	-	-	-	-	-
-	-	-	-	-	-	-
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C	EPF	JCO	JCO	12/15/2025	ISSUED FOR REVIEW	
B	EPF	ADB2	JCO	11/13/2025	ISSUED FOR REVIEW	
A	EPF	JCO	JCO	06/20/2025	ISSUED FOR REVIEW	
#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION	



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MINNEAPOLIS, MN 55435

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MINNESOTA ENGINEERING FIRM  
NUMBER 10104111545

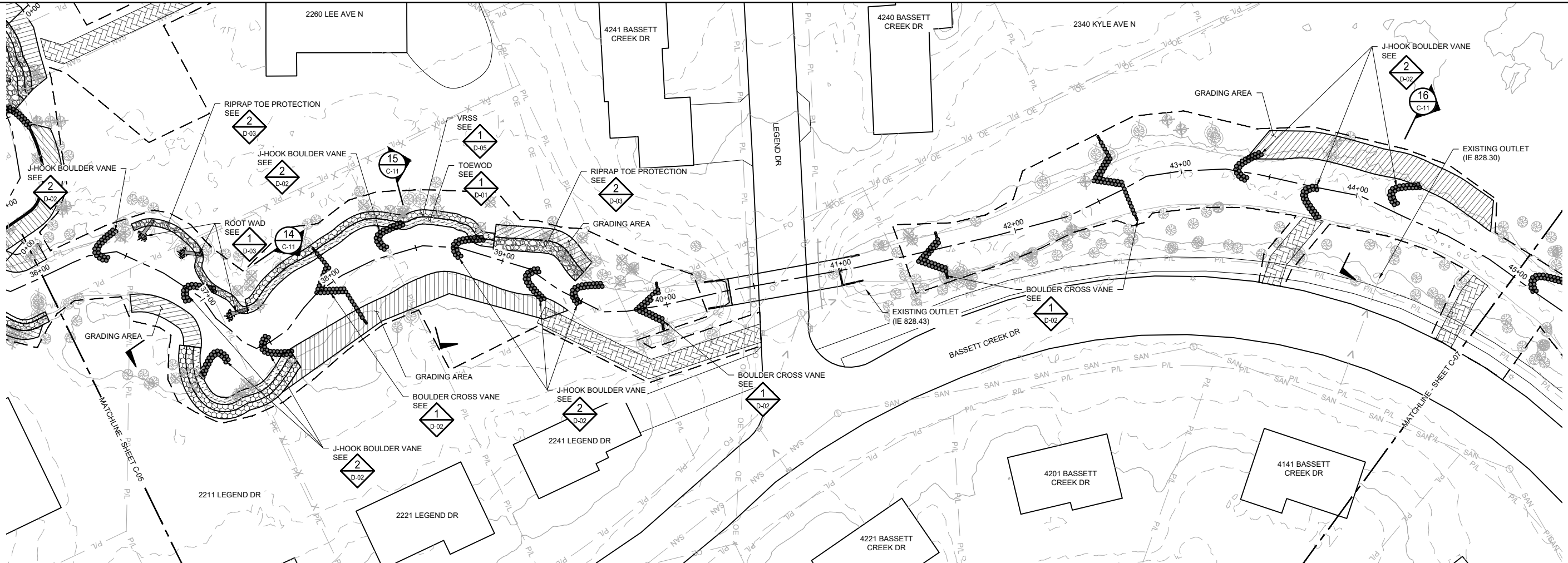
BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

BASSETT CREEK MAIN STEM RESTORATION - PHASE 1  
GOLDEN VALLEY, MINNESOTA  
STREAM RESTORATION  
PLAN & PROFILE  
(STA. 27+00 TO 36+00)

BARR PROJECT #	23272114.00
CLIENT PROJECT #	24-02
DWG # CLIENT PROJECT #	C-05
REV #	C

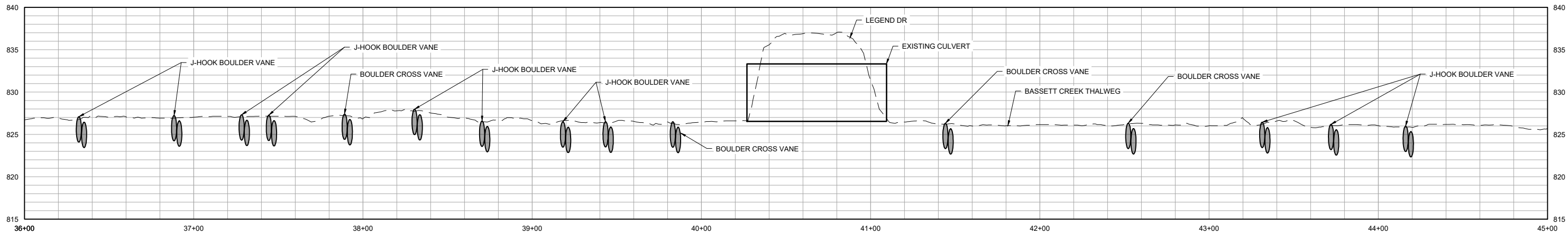


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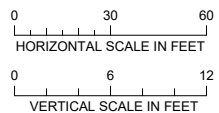


NOTES:  
1. GRADE CHANNEL BED AS DIRECTED BY ENGINEER  
TO CREATE OR ENHANCE LOW-FLOW CHANNEL.

1 PLAN: STREAM RESTORATION (36+00 TO 45+00)



2 PROFILE: STREAM RESTORATION (36+00 TO 45+00)



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NOT FOR CONSTRUCTION

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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.

PRINTED NAME: -  
SIGNATURE: -  
DATE: - LICENSE #: -

-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
C	EPF	JCO	JCO	12/15/2025	ISSUED FOR REVIEW
B	EPF	ADB2	JCO	11/13/2025	ISSUED FOR REVIEW
A	EPF	JCO	JCO	06/20/2025	ISSUED FOR REVIEW
#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION

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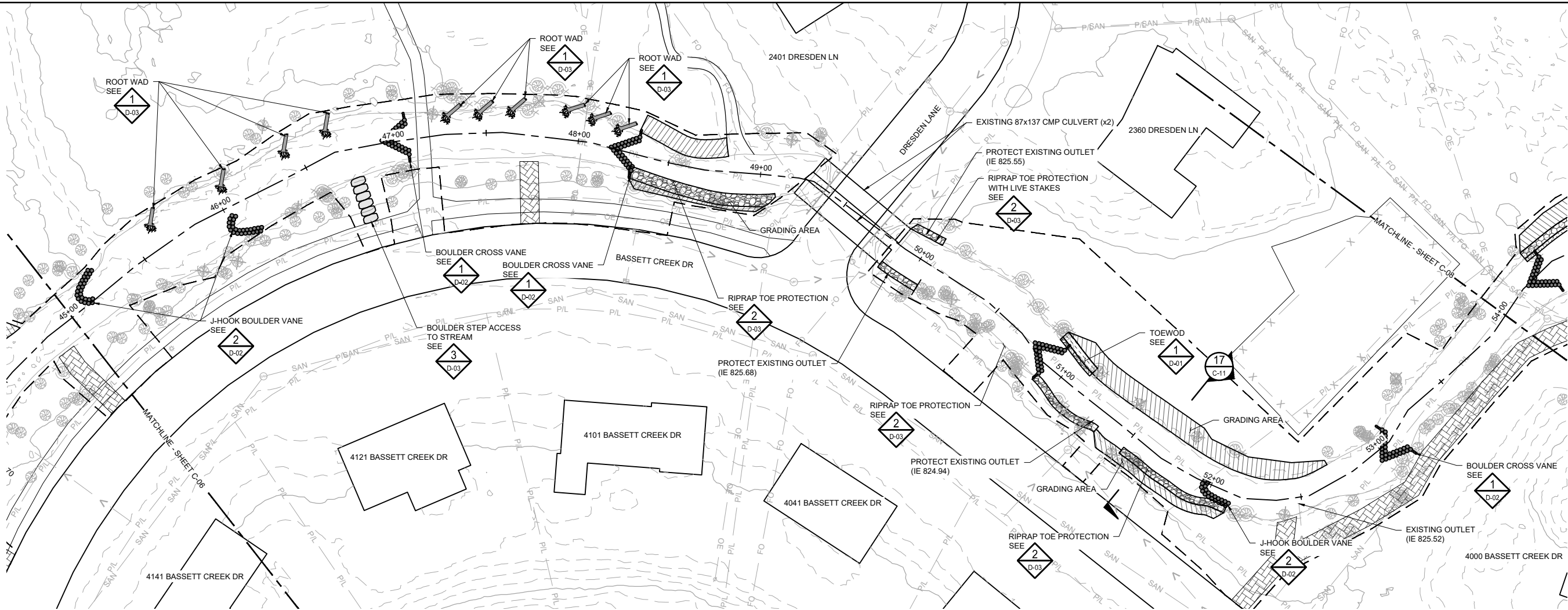
PH: 1-800-632-2277  
WWW.BARR.COM  
MINNESOTA ENGINEERING FIRM  
NUMBER 1010411545

BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
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BASSETT CREEK MAIN STEM RESTORATION - PHASE 1  
GOLDEN VALLEY, MINNESOTA  
STREAM RESTORATION  
PLAN & PROFILE  
(STA. 36+00 TO 45+00)

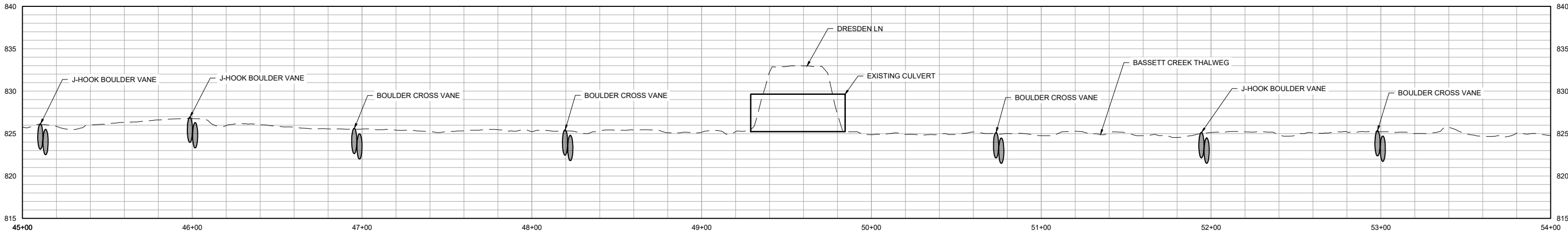
BARR PROJECT #	23272114.00
CLIENT PROJECT #	24-02
DWG #	C-07
REV #	C



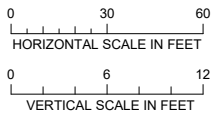


NOTES:  
1. GRADE CHANNEL BED AS DIRECTED BY ENGINEER  
TO CREATE OR ENHANCE LOW-FLOW CHANNEL.

1 PLAN: STREAM RESTORATION (45+00 TO 54+00)



2 PROFILE: STREAM RESTORATION (45+00 TO 54+00)



ORIGINAL DRAWING SIZE: ANSI FULL BLEED B (11.00 X 17.00 INCHES) PLOT SCALE: 1/2 PLOT DATE: 12/16/2023 10:44 AM  
CADD USER: ERIC P. FITZGERALD FILE: MDESIGN2372114.002372114\_C-02.DWG

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SUPERVISION AND THAT I AM A DULY LICENSED  
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STATE OF MINNESOTA.

PRINTED NAME: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_  
DATE: \_\_\_\_\_ LICENSE #: \_\_\_\_\_

-	-	-	-	-	-	
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C	EPF	JCO	JCO	12/15/2025	ISSUED FOR REVIEW	
B	EPF	ADB2	JCO	11/13/2025	ISSUED FOR REVIEW	
A	EPF	JCO	JCO	06/20/2025	ISSUED FOR REVIEW	
#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION	



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MINNESOTA ENGINEERING FIRM  
NUMBER 10104111545

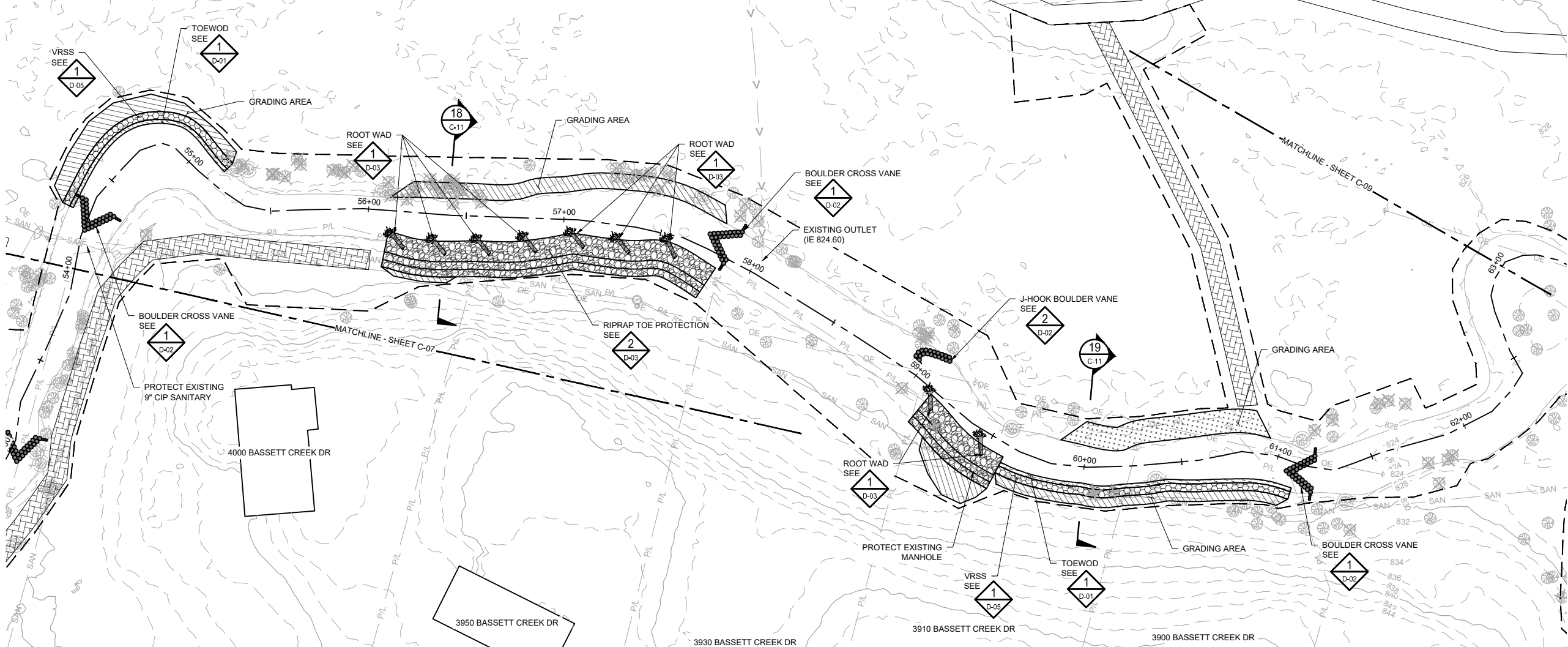
BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

BASSETT CREEK MAIN STEM RESTORATION - PHASE 1  
GOLDEN VALLEY, MINNESOTA  
STREAM RESTORATION  
PLAN & PROFILE  
(STA. 45+00 TO 54+00)

BARR PROJECT # 23272114.00	
CLIENT PROJECT # 24-02	
DWG # C-07	REV # C

100% DESIGN  
ISSUED FOR REVIEW  
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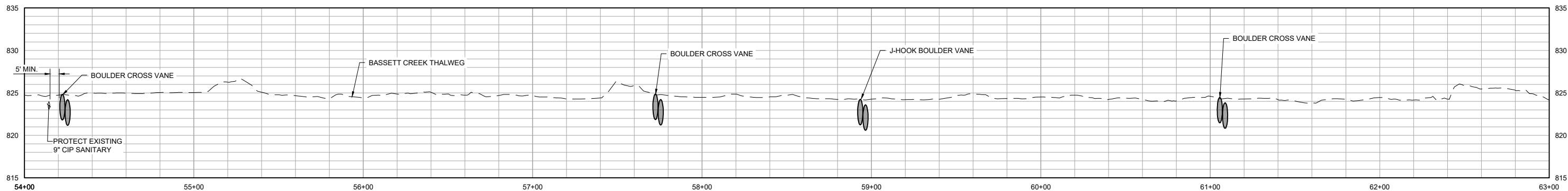




NOTES:  
1. GRADE CHANNEL BED AS DIRECTED BY ENGINEER TO CREATE OR ENHANCE LOW-FLOW CHANNEL.

1 PLAN: STREAM RESTORATION (54+00 TO 63+00)

0 30 60  
SCALE IN FEET



2 PROFILE: STREAM RESTORATION (54+00 TO 63+00)

0 30 60  
HORIZONTAL SCALE IN FEET

0 6 12  
VERTICAL SCALE IN FEET

ORIGINAL DRAWING SIZE: ANSI FULL BLEED B (11.00 X 17.00 INCHES) PLOT SCALE: 1/2" = 100' PLOT DATE: 12/16/2025 10:48 AM  
CADD USER: ERIC P. FITZGERALD FILE: M:\DESIGN\23272114\_00023272114\_C-02.DWG

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PRINTED NAME: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_  
DATE: \_\_\_\_\_ LICENSE #: \_\_\_\_\_

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C	EPF	JCO	JCO	12/15/2025	ISSUED FOR REVIEW
B	EPF	ADB2	JCO	11/13/2025	ISSUED FOR REVIEW
A	EPF	JCO	JCO	06/20/2025	ISSUED FOR REVIEW
#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION



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MINNESOTA ENGINEERING FIRM  
NUMBER 10104111545

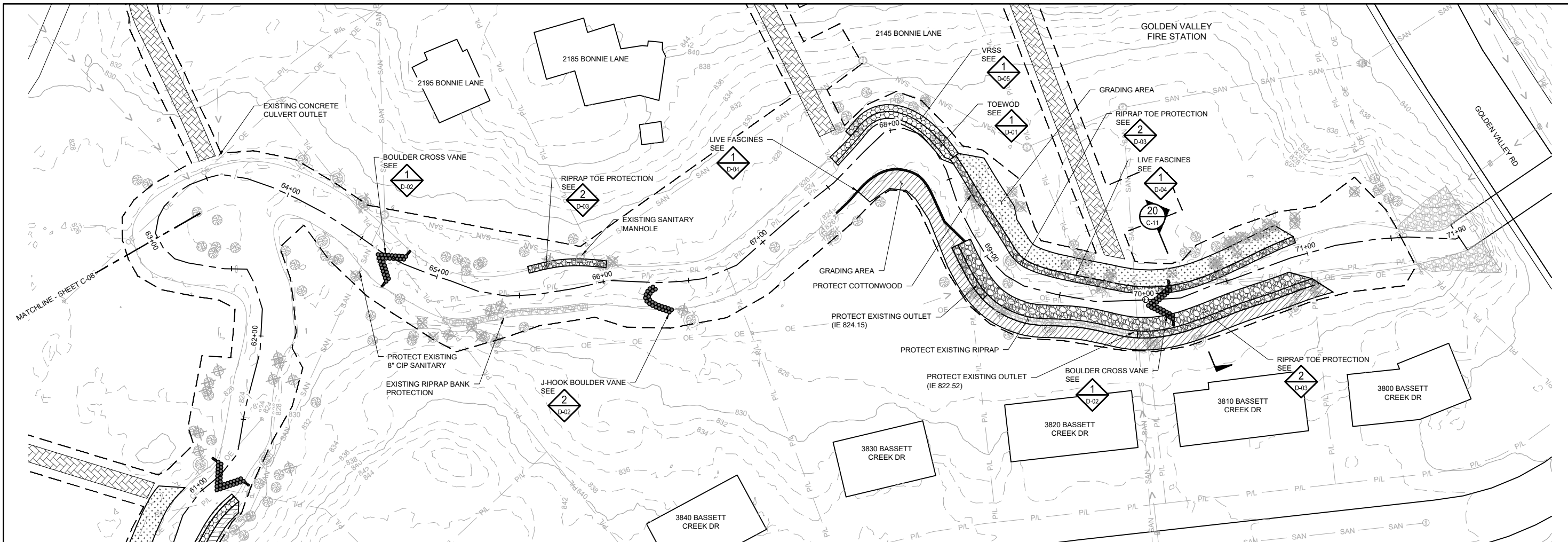
BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

BASSETT CREEK MAIN STEM RESTORATION - PHASE 1  
GOLDEN VALLEY, MINNESOTA  
STREAM RESTORATION  
PLAN & PROFILE  
(STA. 54+00 TO 63+00)

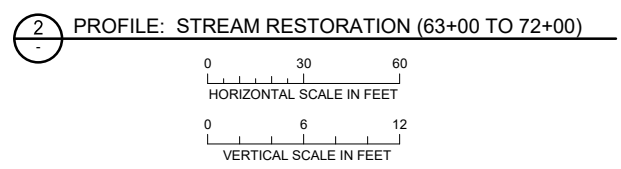
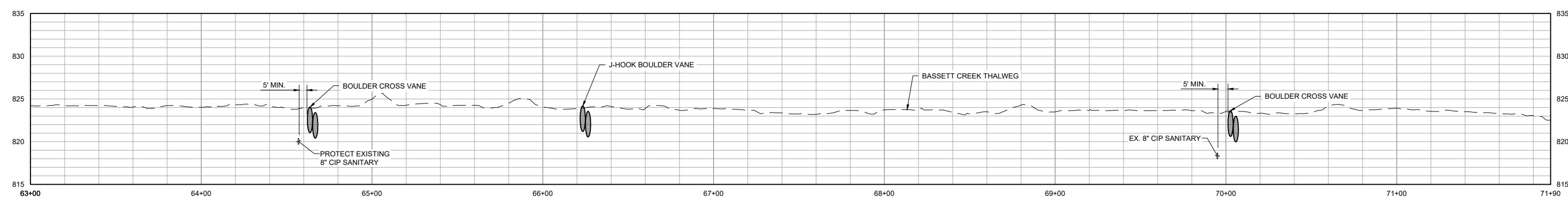
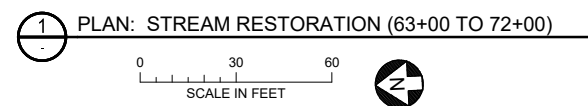
BARR PROJECT # 23272114.00	
CLIENT PROJECT # 24-02	
DWG # C-08	REV # C

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NOTES:  
1. GRADE CHANNEL BED AS DIRECTED BY ENGINEER TO CREATE OR ENHANCE LOW-FLOW CHANNEL.



ORIGINAL DRAWING SIZE: ANSI FULL BLEED B (11.00 X 17.00 INCHES) PLOT SCALE: 1/2" = 10' PLOT DATE: 12/16/2023 10:48 AM  
CADD USER: ERIC P. FITZGERALD FILE: MDESIGN23272114.00023272114\_C-02.DWG

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PRINTED NAME: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_  
DATE: \_\_\_\_\_ LICENSE #: \_\_\_\_\_

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-	-	-	-	-	-	-
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C	EPF	JCO	JCO	12/15/2025	ISSUED FOR REVIEW	
B	EPF	ADB2	JCO	11/13/2025	ISSUED FOR REVIEW	
A	EPF	JCO	JCO	06/20/2025	ISSUED FOR REVIEW	
#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION	



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MINNESOTA ENGINEERING FIRM  
NUMBER 10104111545

BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

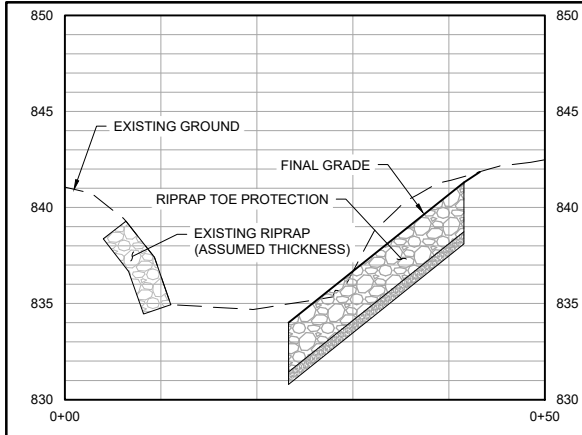
BASSETT CREEK MAIN STEM RESTORATION - PHASE 1  
GOLDEN VALLEY, MINNESOTA  
STREAM RESTORATION  
PLAN & PROFILE  
(STA. 63+00 TO 72+00)

BARR PROJECT # 23272114.00	
CLIENT PROJECT # 24-02	
DWG # C-09	REV # C

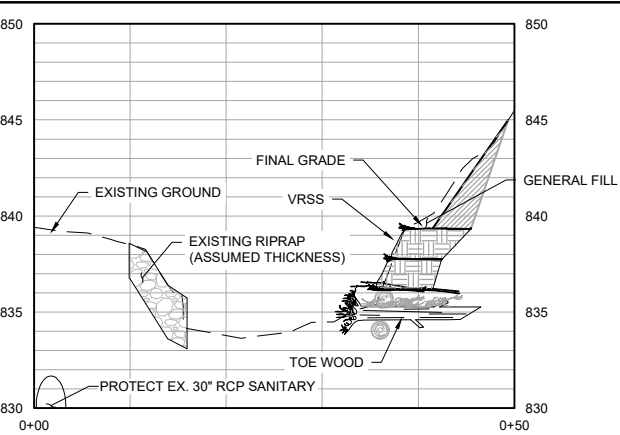
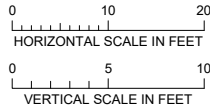
100% DESIGN  
ISSUED FOR REVIEW  
NOT FOR CONSTRUCTION



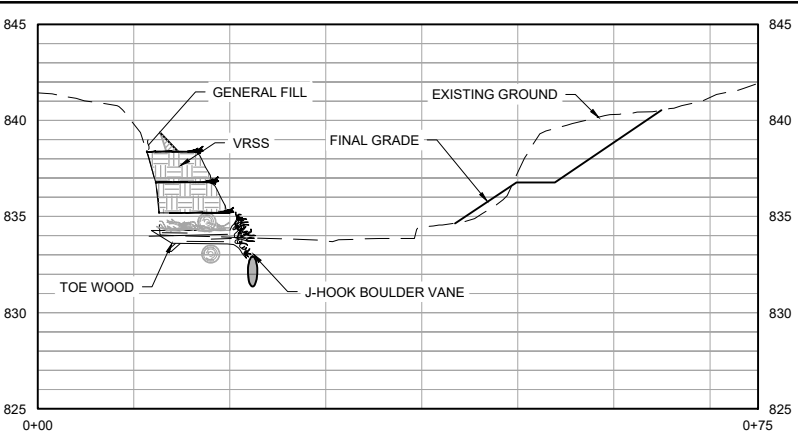
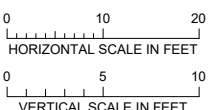
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CADD USER: ERIC P. FITZGERALD FILE: M:\DESIGN\23272114\_00\23272114\_C-02.DWG



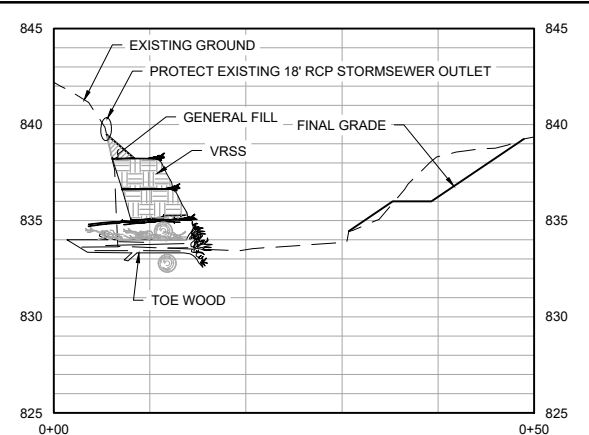
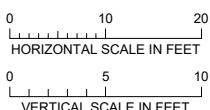
1 SECTION: STREAM RESTORATION (STA. 3+00)



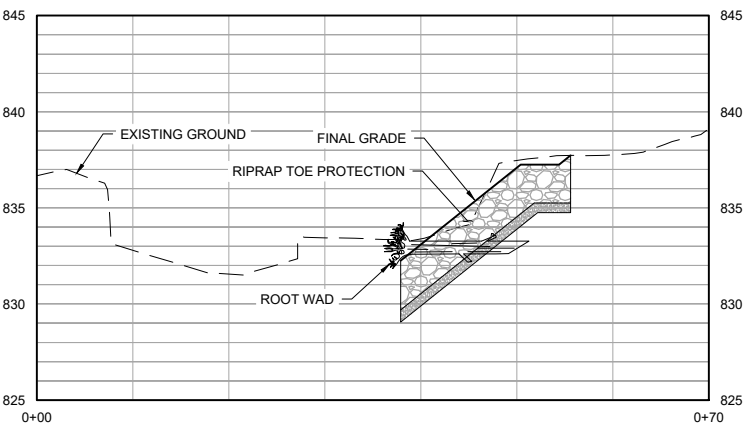
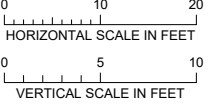
2 SECTION: STREAM RESTORATION (STA. 8+00)



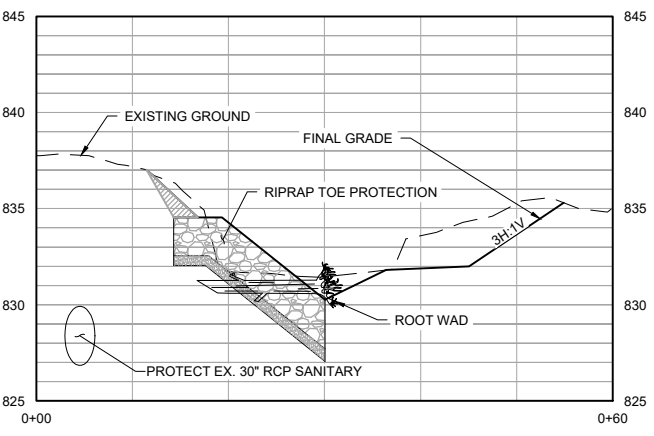
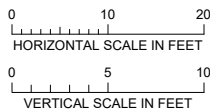
3 SECTION: STREAM RESTORATION (STA. 9+75)



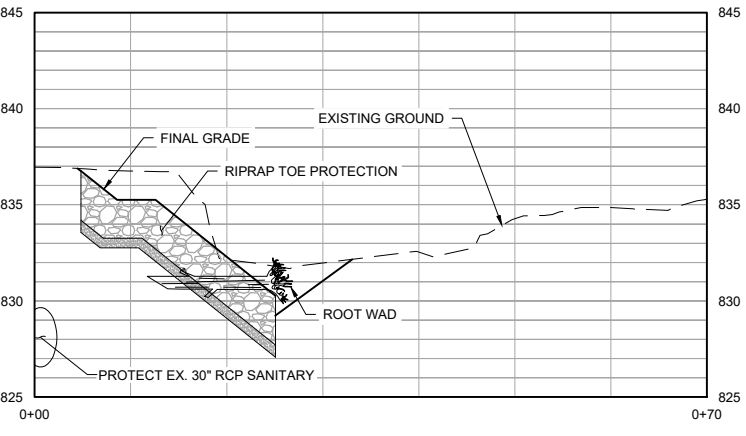
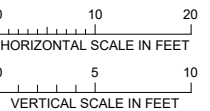
4 SECTION: STREAM RESTORATION (STA. 14+25)



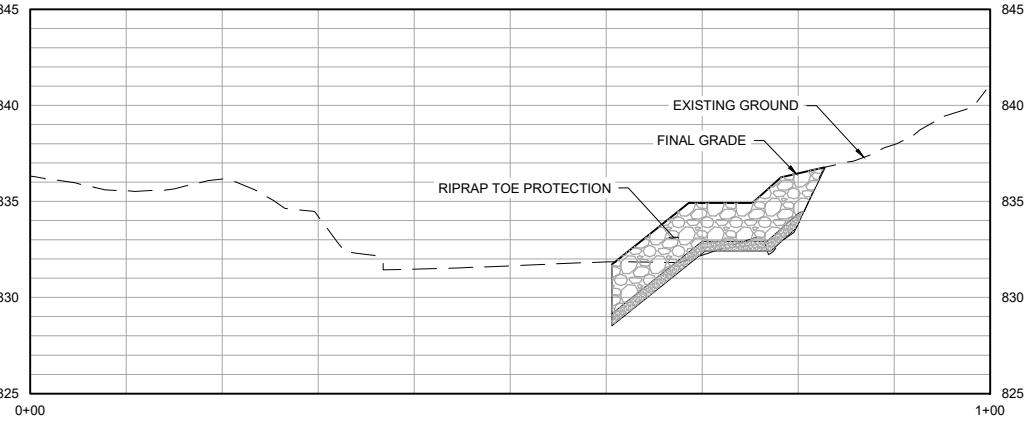
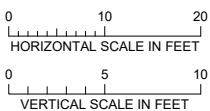
5 SECTION: STREAM RESTORATION (STA. 18+50)



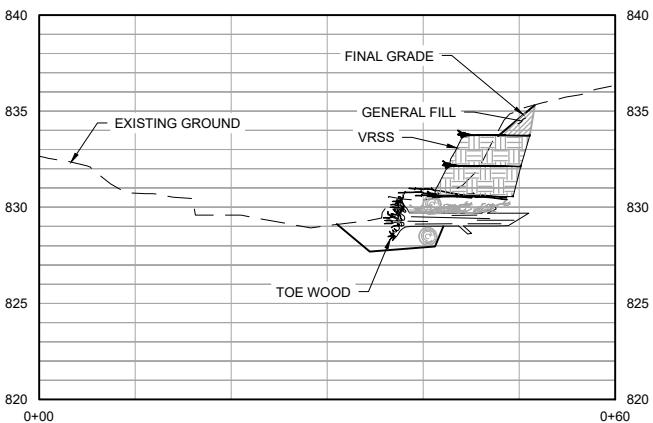
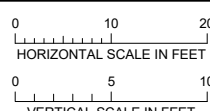
6 SECTION: STREAM RESTORATION (STA. 20+00)



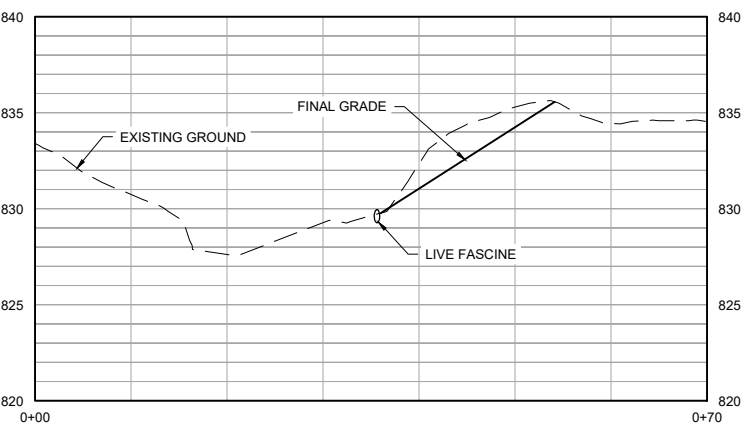
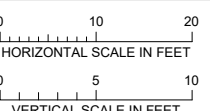
7 SECTION: STREAM RESTORATION (STA. 22+25)



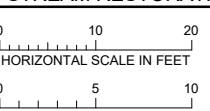
8 SECTION: STREAM RESTORATION (STA. 23+25)



9 SECTION: STREAM RESTORATION (STA. 25+25)



10 SECTION: STREAM RESTORATION (STA. 28+75)



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PRINTED NAME: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_  
DATE: \_\_\_\_\_ LICENSE #: \_\_\_\_\_

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C	EPF	JCO	JCO	12/15/2025	ISSUED FOR REVIEW
B	EPF	ADB2	JCO	11/13/2025	ISSUED FOR REVIEW
A	EPF	JCO	JCO	06/20/2025	ISSUED FOR REVIEW
#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION



**BARR**

BARR ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
SUITE 200  
MINNEAPOLIS, MN 55435

PH: 1-800-632-2277  
WWW.BARR.COM  
MINNESOTA ENGINEERING FIRM  
NUMBER 10104111545

BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

BASSETT CREEK MAIN STEM RESTORATION - PHASE 1  
GOLDEN VALLEY, MINNESOTA

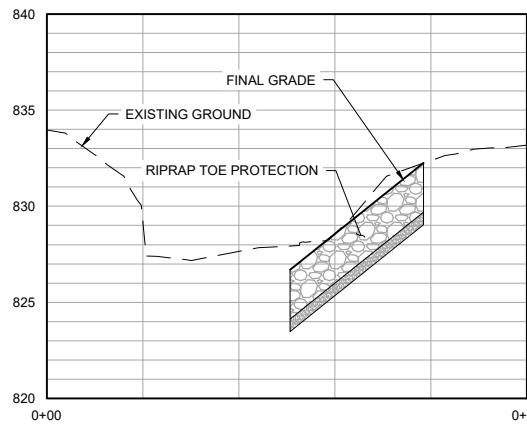
STREAM SECTIONS

BARR PROJECT # 23272114.00	
CLIENT PROJECT # 24-02	
DWG # C-10	REV # C

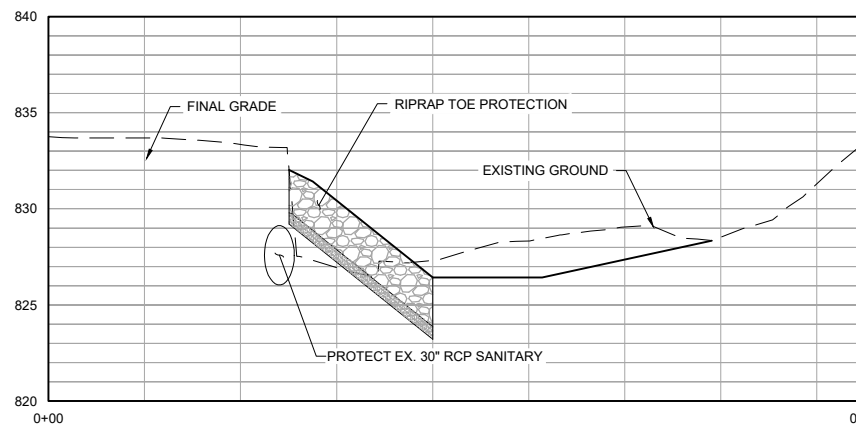
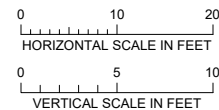
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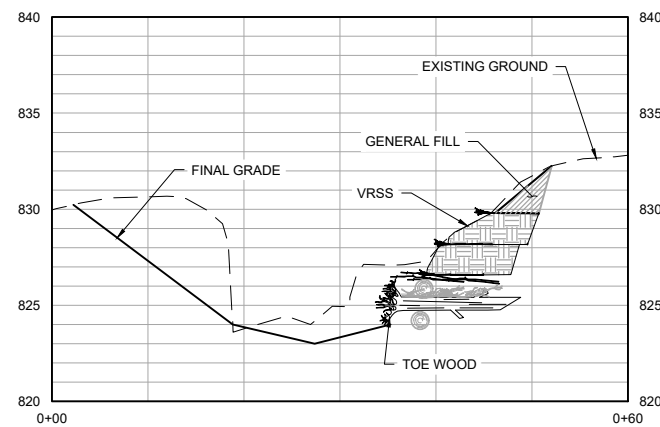
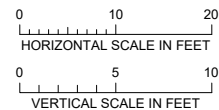
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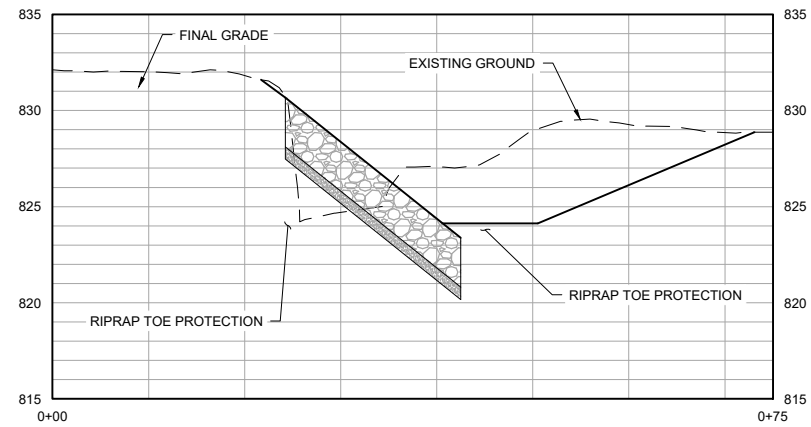
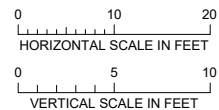
11 SECTION: STREAM RESTORATION (STA. 32+00)



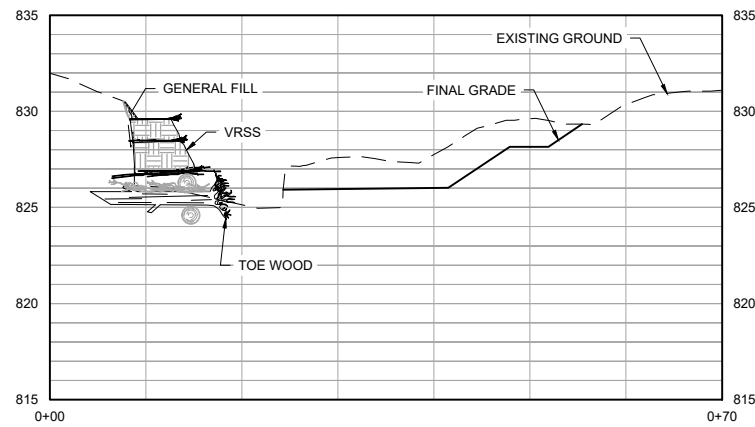
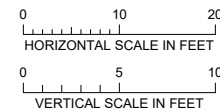
12 SECTION: STREAM RESTORATION (STA. 34+10)



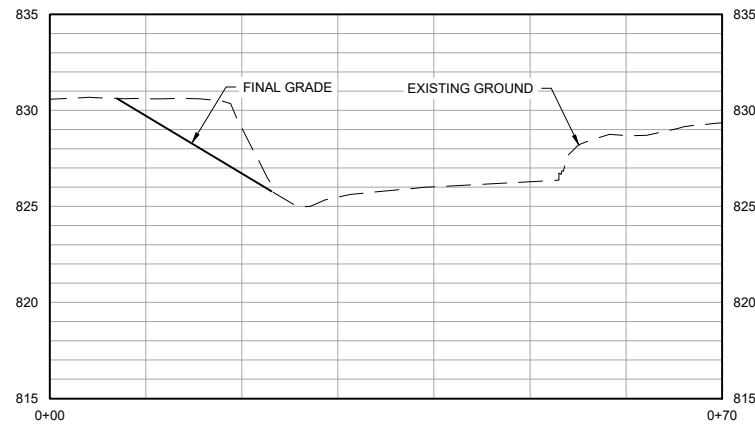
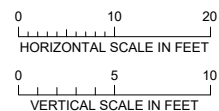
13 SECTION: STREAM RESTORATION (STA. 35+60)



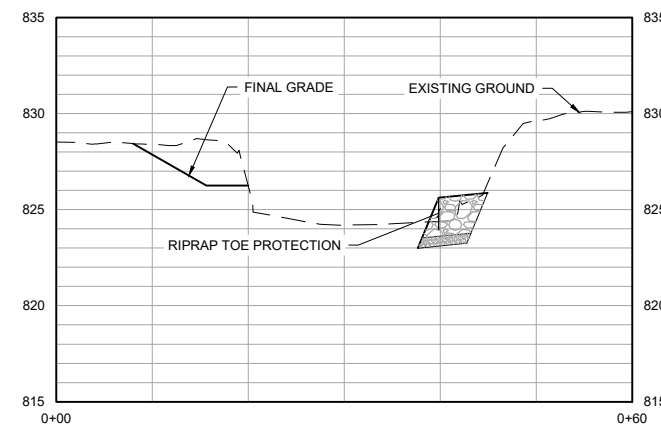
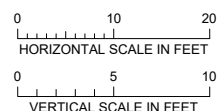
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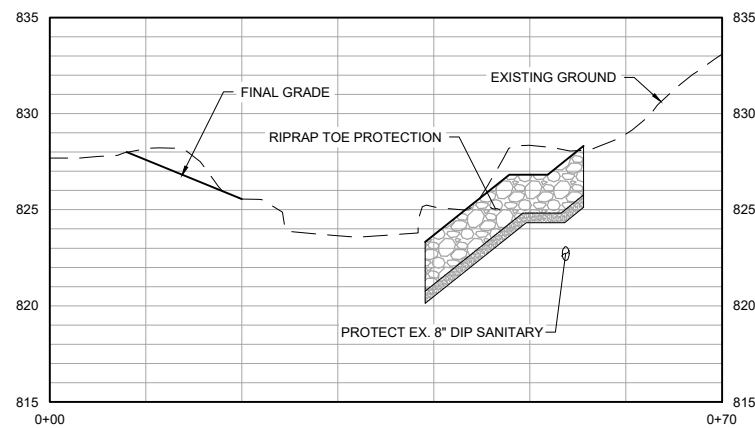
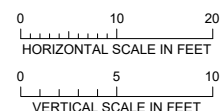
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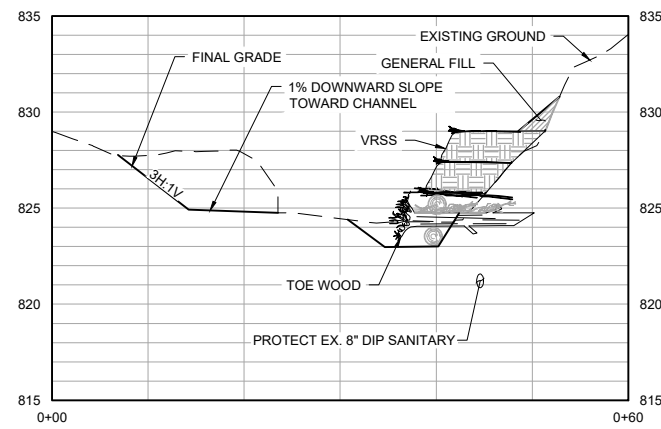
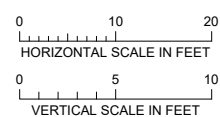
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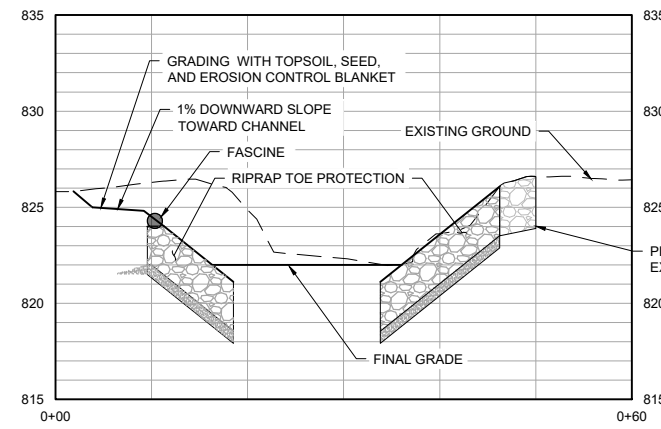
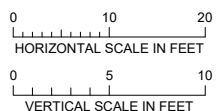
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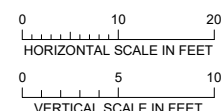
18 SECTION: STREAM RESTORATION (STA. 56+40)



19 SECTION: STREAM RESTORATION (STA. 60+00)



20 SECTION: STREAM RESTORATION (STA. 70+25)



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C	EPF	JCO	JCO	12/15/2025	ISSUED FOR REVIEW
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#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION

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MINNESOTA ENGINEERING FIRM  
NUMBER 1010411545

BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

BASSETT CREEK MAIN STEM RESTORATION - PHASE 1  
GOLDEN VALLEY, MINNESOTA

STREAM SECTIONS

BARR PROJECT #	23272114.00
CLIENT PROJECT #	24-02
DWG #	C-11
REV #	C

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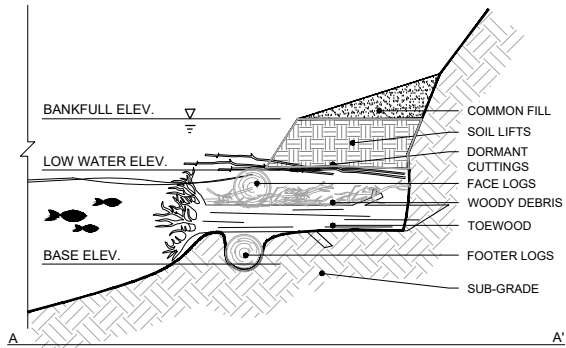


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### 1. INSTALLATION SUMMARY

ENGINEER OR OWNER'S REPRESENTATIVE MUST BE PRESENT FOR INSTALLATION OF TOEWOOD BENCH.

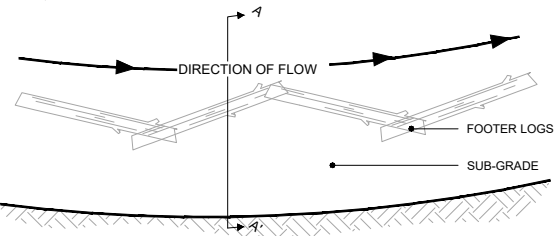
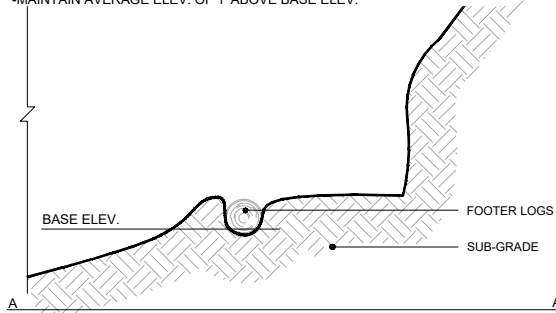
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### 2. SUBGRADE AND FOOTER LOGS

SPECIFICATION:  
-8" TO 1" DIAMETER  
-LIMBS REMOVED  
-APPROX 10' LENGTH

PLACEMENT:  
-EXCAVATE TO BASE ELEVATION - CONTRACTOR SHALL MAKE EFFORT TO SEPARATE GRANULAR AND FINE FILL NATIVE MATERIAL FOR USE IN STEPS 4 AND 6.  
-PLACE FOOTER LOGS 30 DEGREES FROM PARALLEL TO STREAM FLOW WITH ENDS STACKED CREATING A ZIG ZAG PATTERN (PLAN VIEW BELOW)  
-MAINTAIN AVERAGE ELEV. OF 1' ABOVE BASE ELEV.

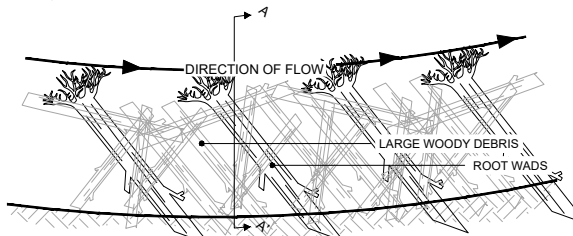
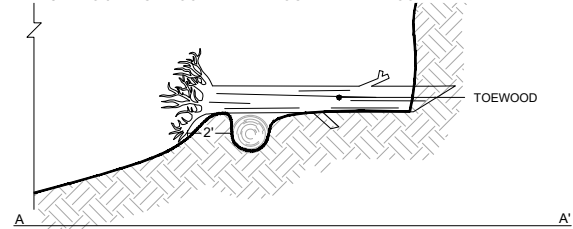


### 3. ROOT WADS & LRG WOODY DEBRIS

ROOT WAD SPECIFICATION:  
-8" MIN DIAMETER  
-LENGTH INDICATED IN DESIGN CROSS SECTION OR 8' MIN.  
-LIMBS REMOVED  
-ROOT WADS LEFT INTACT  
-ENDS SHARPENED TO A POINT

LARGE WOODY DEBRIS SPECIFICATION:  
-4" MIN DIAMETER

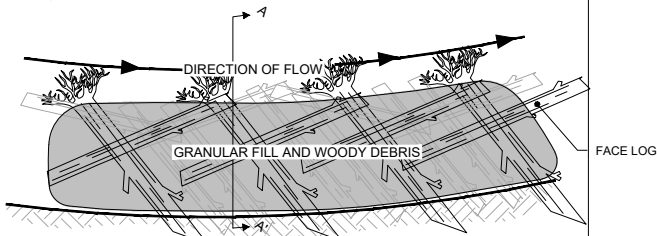
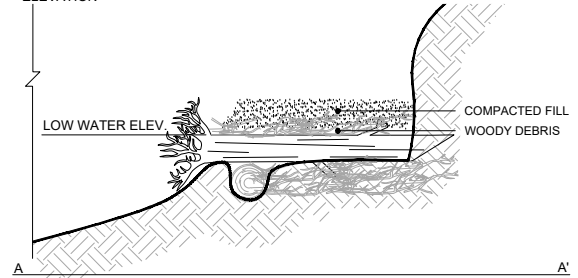
PLACEMENT:  
-PLACE ROOT WADS HORIZONTALLY ON TOP OF FOOTER LOGS, OVERHANG ROOT WAD LOGS 2'  
-ANGLE ROOTWADS UPSTREAM  
-DRIVE SHARPENED TRUNKS MIN. 3' INTO BANK OR DIG IN.  
-PLACE 1 ROOT WAD PER FOOTER LOG  
-PLACE 1 TO 3 LARGE WOODY DEBRIS LOGS BETWEEN ROOT WADS



### 4. WOODY DEBRIS & GRANULAR FILL

SPECIFICATION:  
-WOODY MATERIAL (COMPOSED OF SMALL LIMBS AND BRANCHES, APPROX. 4" MAX DIAMETER AND SMALLER)  
-DO NOT USE ROTTEN WOODY MATERIAL  
-NATIVE GRANULAR FILL

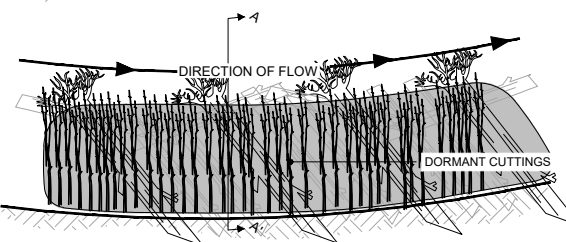
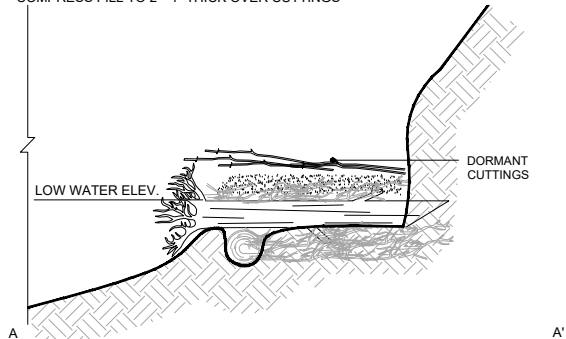
PLACEMENT:  
-FILL BETWEEN FOOTER LOGS AND TOEWOOD WITH WOODY DEBRIS  
-STACK WOODY DEBRIS TO LOW WATER ELEVATION  
-LAYER NATIVE GRANULAR FILL ON TOP OF WOODY DEBRIS  
-COMPACT SO THAT SETTLING OF FILL IS MINIMIZED BUT DEBRIS IS NOT DISPLACED, REPEAT LAYERING OF WOODY DEBRIS AND NATIVE GRANULAR FILL  
-WOOD DEBRIS AND COMPACTED FILL WILL EXTEND 8"-12" ABOVE LOW WATER ELEVATION



### 5. DORMANT CUTTINGS

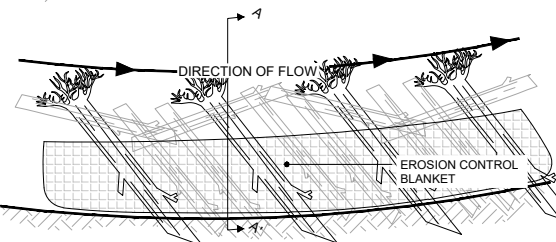
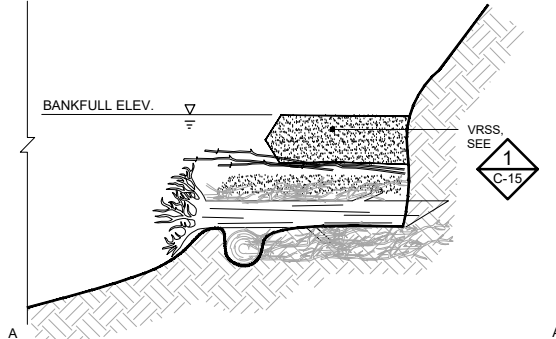
SPECIFICATION:  
-LIVE OR DORMANT CUTTINGS (DORMANT CUTTINGS PREFERRED), 4'-6' LONG, EVENLY SPACED, APPROX. 3 CUTTINGS PER LINEAL FOOT.

PLACEMENT:  
-LAY CUTTINGS WITH A DENSITY OF 3 CUTTINGS PER LINEAL FOOT  
-TOPS OF CUTTING WILL POINT TOWARD CHANNEL  
-TRIM EXPOSED ENDS OF CUTTINGS, LEAVE NO MORE THAN 6" EXPOSED  
-DEPOSIT NATIVE FILL OVER CUTTINGS AND WATER LIBERALLY, COMPRESS FILL TO 2"-4" THICK OVER CUTTINGS



### 6. UPPER BANK STABILIZATION (VARIES, SEE PLANS)

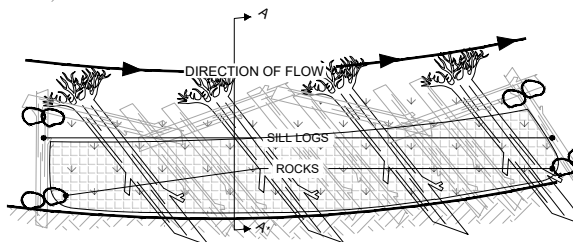
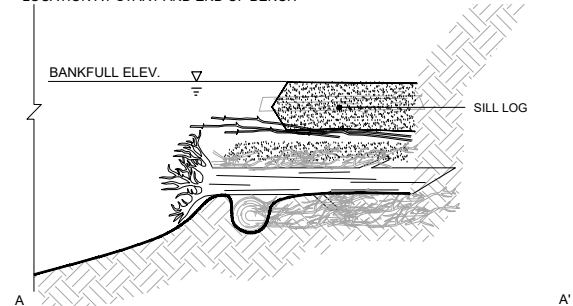
STABILIZE UPPER BANK AS SPECIFIED:  
-SEE VRSS DETAIL  
-SEE LANDSCAPE PLANS



### 7. SILL LOGS & TERMINATION

SPECIFICATION:  
-10" MIN DIAMETER  
-LIMBS REMOVED  
-LENGTH DETERMINED BY WIDTH OF TOEWOOD BENCH

PLACEMENT:  
-PLACE ONE SILL LOG AT THE START AND END OF THE TOEWOOD BENCH PERPENDICULAR TO THE DIRECTION OF FLOW.  
-PLACE LARGE ROCKS ON TOP OF SILL LOG, TOP OF ROCK WILL MEET BANKFULL ELEVATION  
-TRANSITION BANKFULL ELEVATION TO EXISTING GRADE AT DETERMINED LOCATION AT START AND END OF BENCH



1  
-  
DETAIL: TOE WOOD  
NOT TO SCALE

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BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

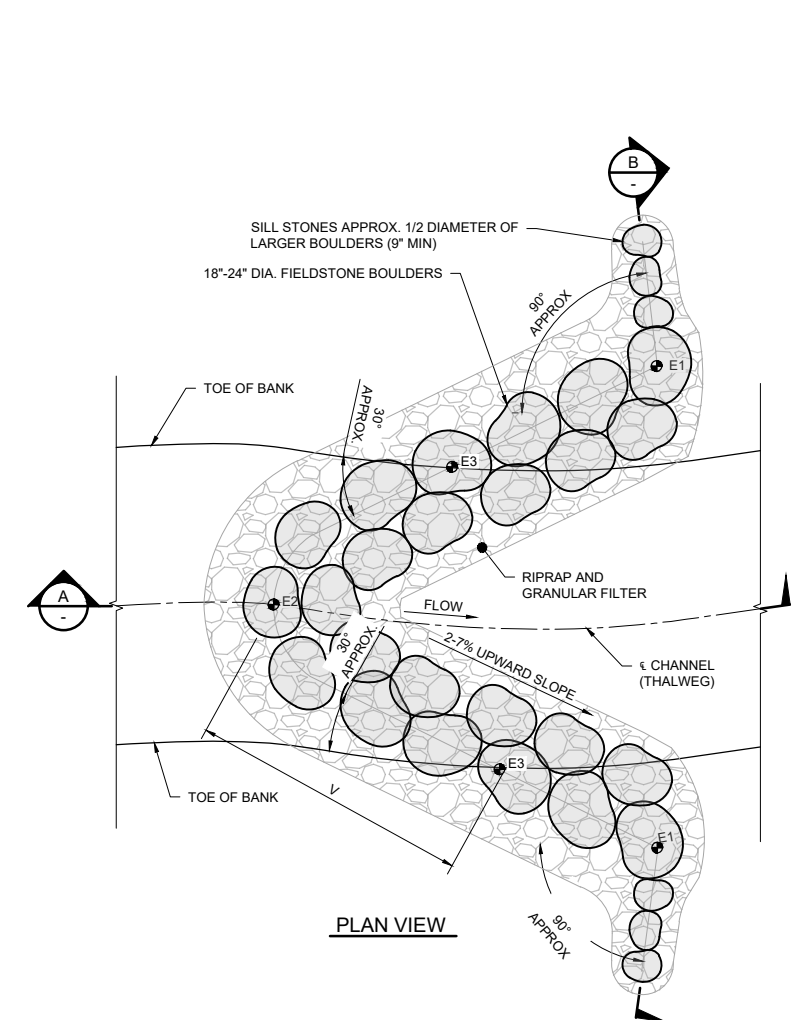
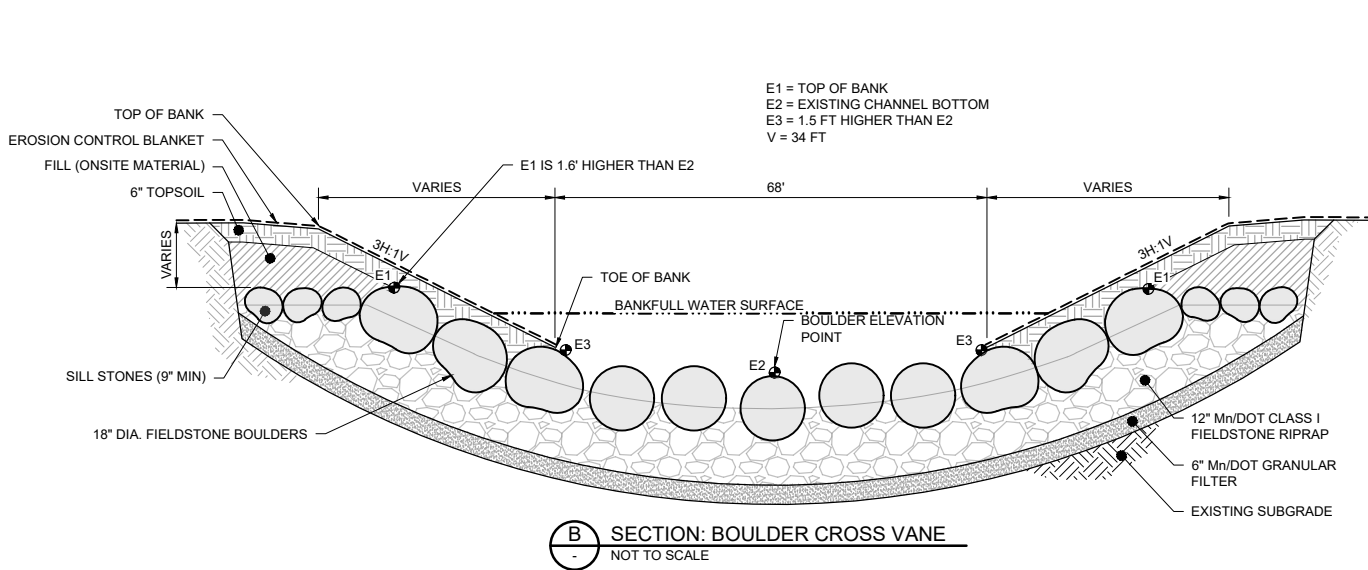
BASSETT CREEK MAIN STEM RESTORATION - PHASE 1  
GOLDEN VALLEY, MINNESOTA  
STREAM STABILIZATION DETAILS

BARR PROJECT # 23272114.00	
CLIENT PROJECT # 24-02	
DWG # D-01	REV # C

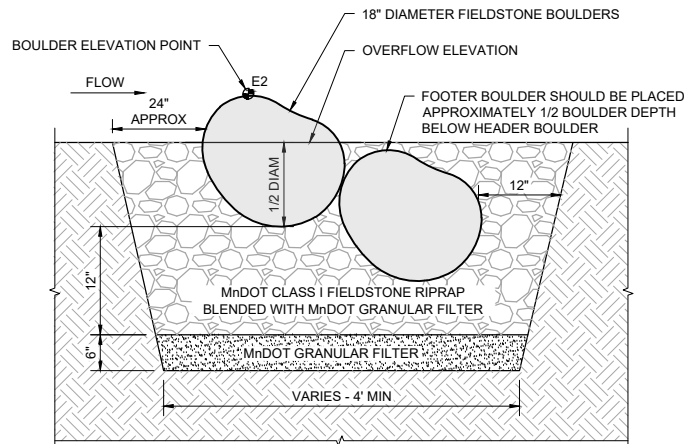
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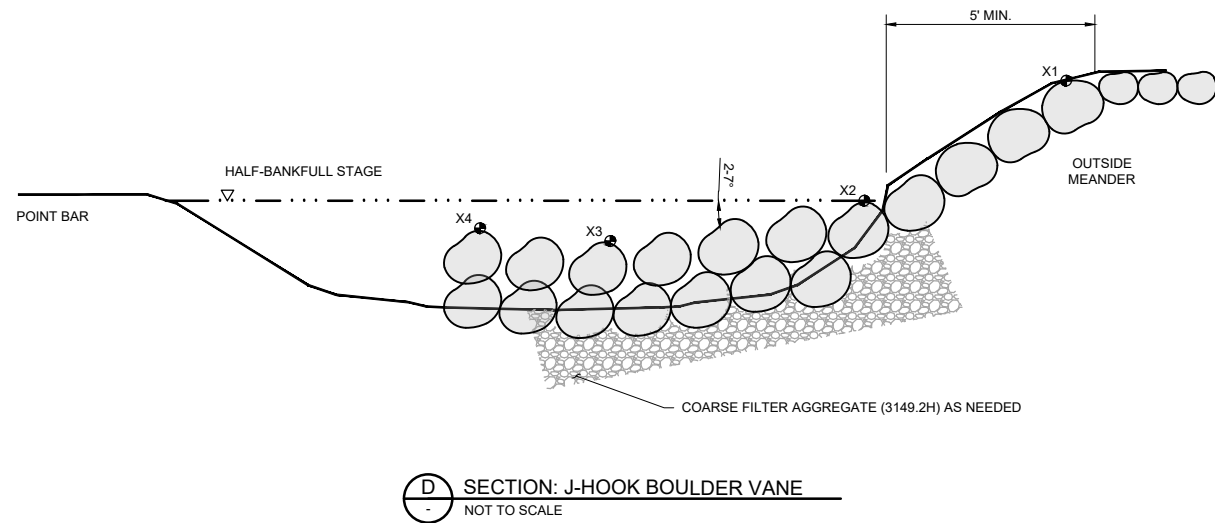
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DETAIL: BOULDER CROSS VANE  
NOT TO SCALE



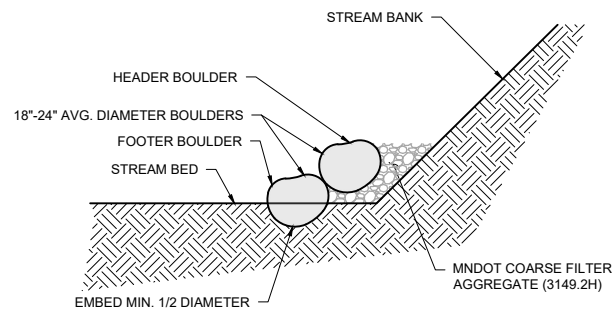
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SECTION: BOULDER CROSS VANE  
NOT TO SCALE

NOTES:

- CROSS VANE LOCATIONS AND ELEVATIONS ARE APPROXIMATE AND MAY BE MODIFIED IN THE FIELD BY THE ENGINEER.
- FINAL BOULDER PLACEMENT TO BE APPROVED BY THE ENGINEER IN THE FIELD. CONTRACTOR MAY BE REQUIRED TO ADJUST BOULDER ELEVATIONS AND ROTATION.
- THERE SHALL BE NO SIGNIFICANT GAPS BETWEEN BOULDERS EXCEPT WHERE SHOWN IN THE DETAILS BETWEEN THE HEADER BOULDERS AT THE UPSTREAM END OF THE VANE. Mn/DOT CLASS I FIELDSTONE RIPRAP BLENDED WITH Mn/DOT GRANULAR FILTER SHALL BE PLACED ON THE UPSTREAM SIDE OF THE BOULDERS TO PLUG SMALL GAPS (MAY REQUIRE HAND PLACEMENT).
- BOULDERS OF AN UNSUITABLE SHAPE MAY BE RE-LOCATED OR REJECTED.
- INSTALL EROSION CONTROL BLANKET ON DISTURBED BANKS.



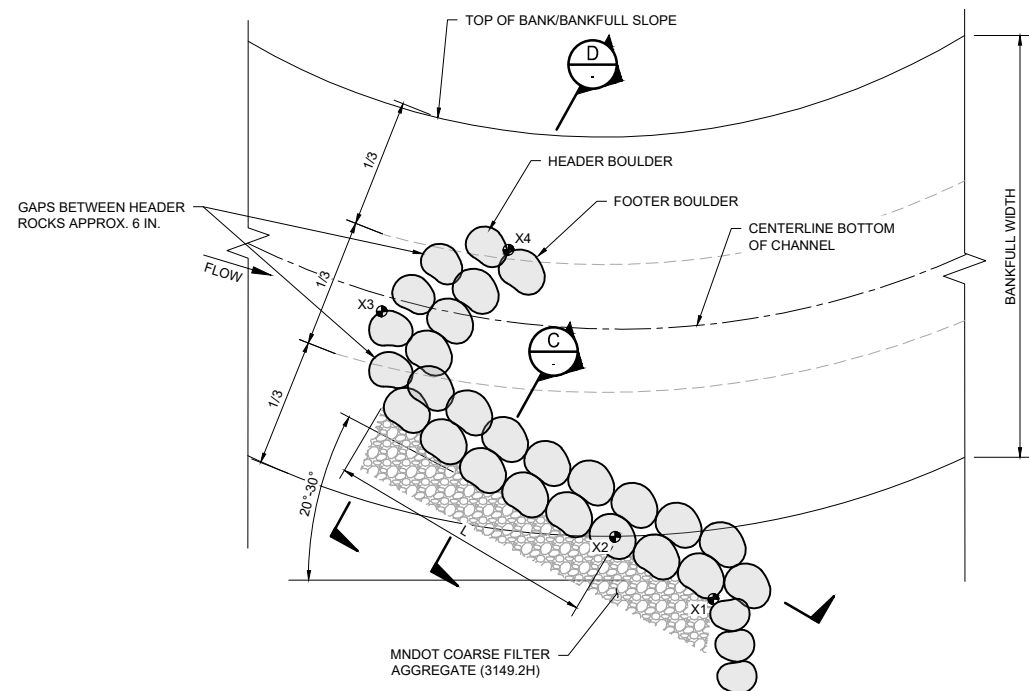
D  
SECTION: J-HOOK BOULDER VANE  
NOT TO SCALE



C  
SECTION: J-HOOK BOULDER VANE  
NOT TO SCALE

NOTES:

- COARSE BACKFILL (Mn/DOT 3149.2 COARSE FILTER AGGREGATE) SHALL BE PLACED TO A THICKNESS EQUAL TO THE DEPTH OF THE HEADER AND FOOTER BOULDERS AND SHALL EXTEND OUT FORM THE VANE ARMS TO THE STREAM BANK.
- THE VANE ARM OF THE BOULDER J-HOOK SHALL BE CONSTRUCTED FIRST, FOLLOWED BY THE HOOK.
- BOULDER J-HOOK VANES SHALL BE BUILT TYPICALLY AS FOLLOWS:
  - OVER EXCAVATE STREAM BED TO A DEPTH EQUAL TO THE TOTAL THICKNESS OF THE HEADER AND FOOTER BOULDERS.
  - PLACE FOOTER BOULDERS OF THE VANE ARM. THERE SHALL BE NO GAPS BETWEEN BOULDERS.
  - PLACE COARSE BACKFILL BEHIND THE FOOTER BOULDERS.
  - INSTALL HEADER BOULDERS ON THE VANE ARM ON TOP OF AND SET SLIGHTLY BACK FROM THE FOOTER BOULDERS (SUCH THAT PART OF THE HEADER BOULDER IS RESTING ON THE COARSE BACKFILL). HEADER BOULDERS SHALL SPAN THE SEAMS OF THE FOOTER BOULDERS. THERE SHALL BE NO GAPS BETWEEN BOULDERS.
  - PLACE COARSE BACKFILL BEHIND HEADER BOULDERS ENSURING THAT ANY VOIDS BETWEEN THE BOULDERS ARE FILLED.
  - PLACE EACH BOULDER TO FORM THE HOOK BY INSTALLING A FOOTER BOULDER, THEN A HEADER BOULDER. GAPS AS WIDE AS 1/4 TO 1/3 THE BOULDER DIAMETER SHALL BE LEFT BETWEEN THE HOOK BOULDERS.



2  
DETAIL: J-HOOK BOULDER VANE  
NOT TO SCALE

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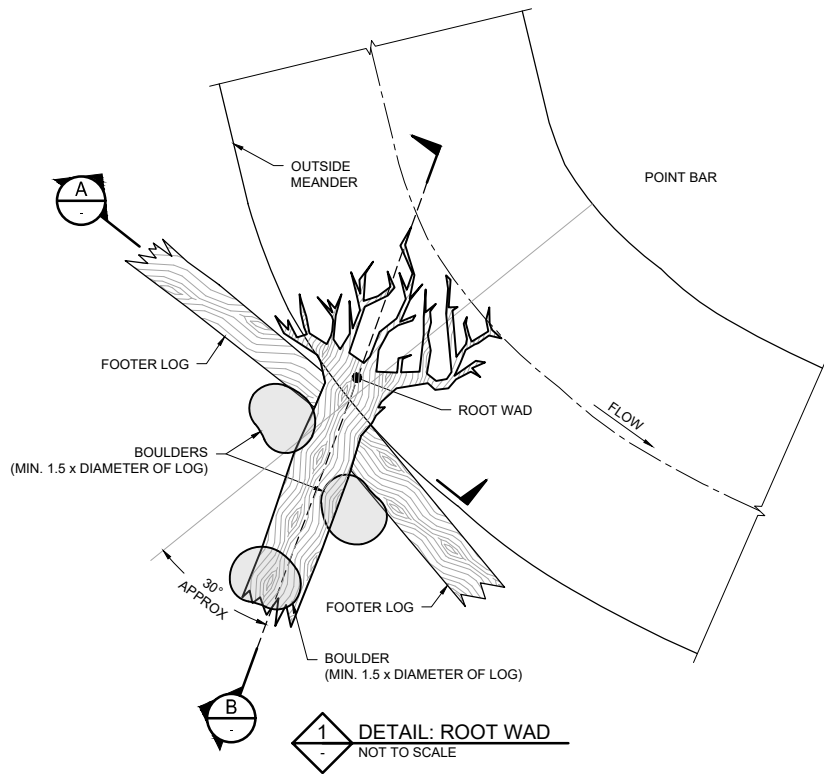
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STREAM STABILIZATION DETAILS

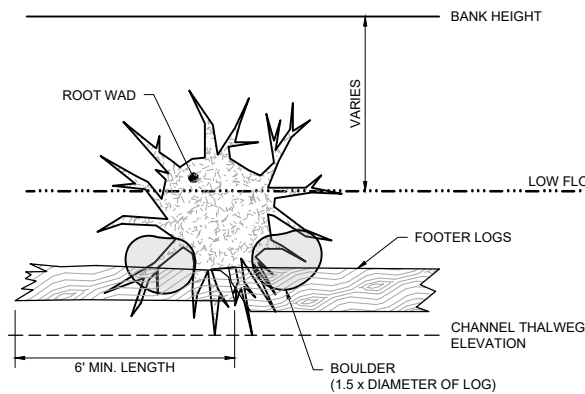
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CLIENT PROJECT # 24-02	
DWG # D-02	REV # C



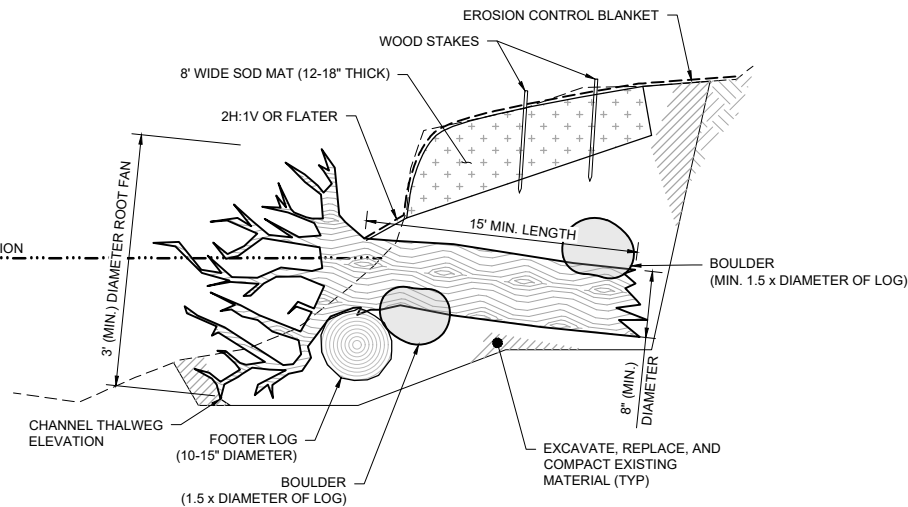
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DETAIL: ROOT WAD  
NOT TO SCALE



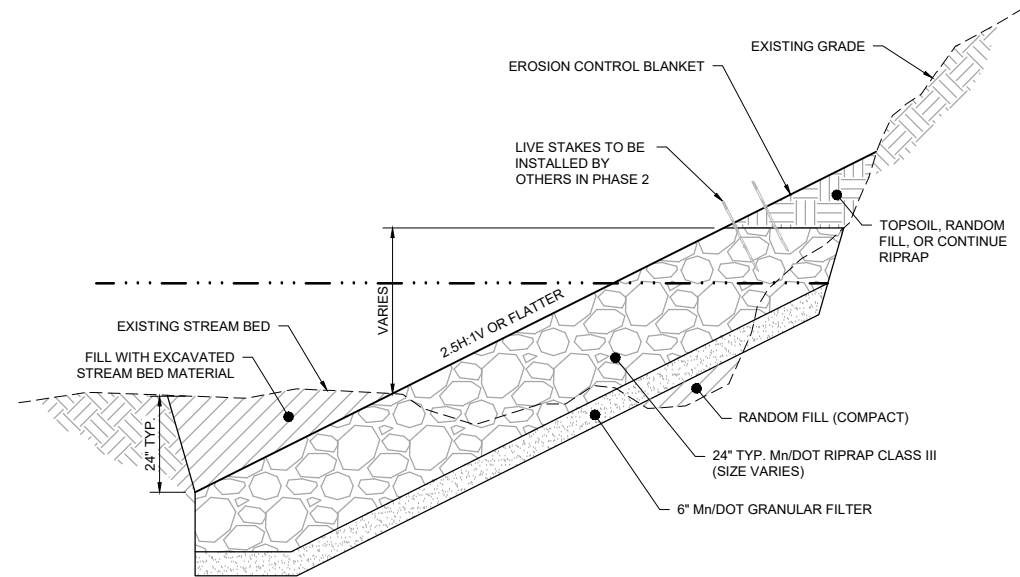
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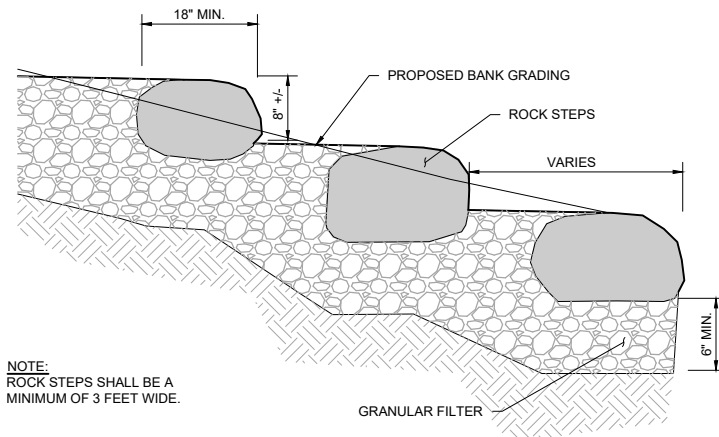
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SECTION: ROOT WAD  
NOT TO SCALE

GENERAL NOTES:

1. THE ENGINEER MUST BE NOTIFIED AT LEAST 3 DAYS PRIOR TO ROOT WAD INSTALLATION AND MUST BE ON SITE DURING INSTALLATION.
2. TO THE EXTENT POSSIBLE, ROOT WADS SHOULD BE CREATED FROM TREES THAT WILL BE REMOVED FROM THE SITES WITHIN THE PROJECT AREA.
3. CONSTRUCTION SHOULD PROCEED FROM DOWNSTREAM TO UPSTREAM IN AREAS WHERE MORE THAN ONE ROOT WAD WILL BE INSTALLED AS SHOWN ON THE DRAWINGS.
4. EXCAVATE A TRENCH ALONG THE STREAMBANK TOE FOR THE FOOTER LOGS.
5. PLACE THE FOOTER LOGS INTO THE TRENCH, WITH THE TOPS OF THE LOGS AT SPECIFIED ELEVATIONS FOR EACH SITE.
6. EXCAVATE A TRENCH IN WHICH TO PLACE THE ROOT WAD. IN SOFT SOILS IT MAY BE POSSIBLE TO DRIVE THE ROOT WAD INTO THE BANK WITH EQUIPMENT AFTER SHARPENING THE END TO A POINT. CARE SHALL BE TAKEN NOT TO DAMAGE THE ROOT WAD.
7. THE ROOT WAD MUST BE PLACED IN THE BANK SO THAT THE BACK OF THE ROOT FAN RESTS AGAINST THE FRONT OF THE FOOTER LOG.
8. THE ROOT FAN MUST BE PLACED SUCH THAT THE FAN IS ANGLED UPSTREAM AS SHOWN AND AS DIRECTED BY THE ENGINEER.
9. MOVING UPSTREAM, THE PROCESS IS REPEATED FOR EACH ADDITIONAL ROOT WAD AS SHOWN ON THE DRAWINGS.
10. LARGE BOULDERS ARE PLACED ON EITHER SIDE OF THE TRUNK OF EACH ROOTWAD.
11. PLACE BACK FILL OVER THE BOULDERS AS NECESSARY WITH A COARSE FILTER AGGREGATE (MN/DOT STANDARD SPECIFICATION 3142.2H) AND MATCH EXISTING GRADE WITH 6\"/>



2  
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DETAIL: RIPRAP TOE PROTECTION  
NOT TO SCALE



3  
-  
DETAIL: BOULDER STEPS  
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B	EPF	ADB2	JCO	11/13/2025	ISSUED FOR REVIEW	
A	EPF	JCO	JCO	06/20/2025	ISSUED FOR REVIEW	
#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION	



BARR ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
SUITE 200  
MINNEAPOLIS, MN 55435

PH: 1-800-632-2277  
WWW.BARR.COM  
MINNESOTA ENGINEERING FIRM  
NUMBER 10104111545

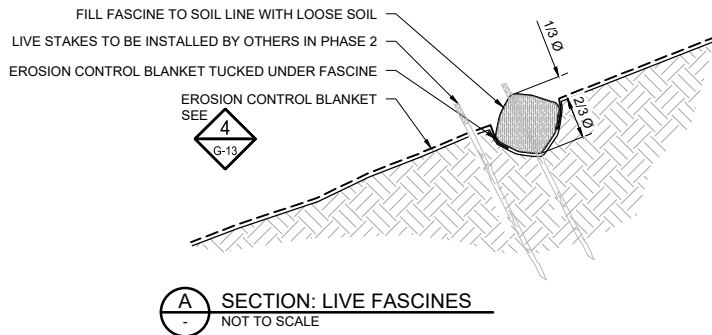
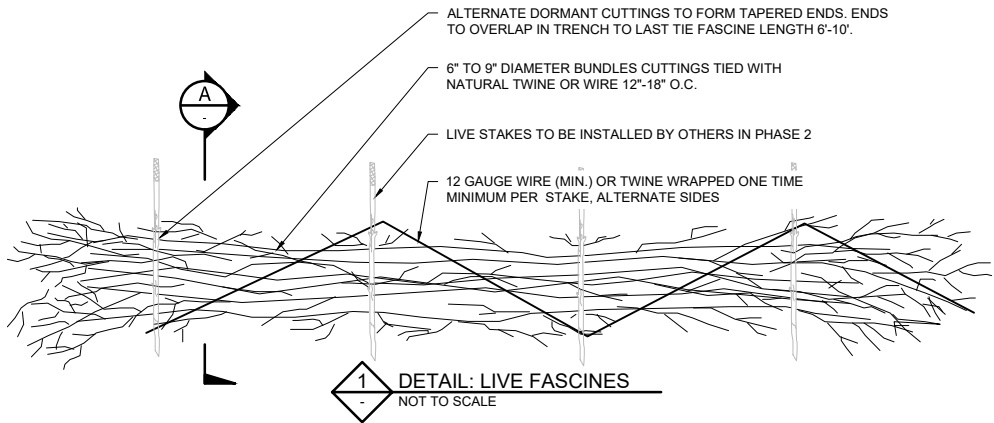
BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

BASSETT CREEK MAIN STEM RESTORATION - PHASE 1  
GOLDEN VALLEY, MINNESOTA  
STREAM STABILIZATION DETAILS

BARR PROJECT # 23272114.00	
CLIENT PROJECT # 24-02	
DWG # D-03	REV # C

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GENERAL

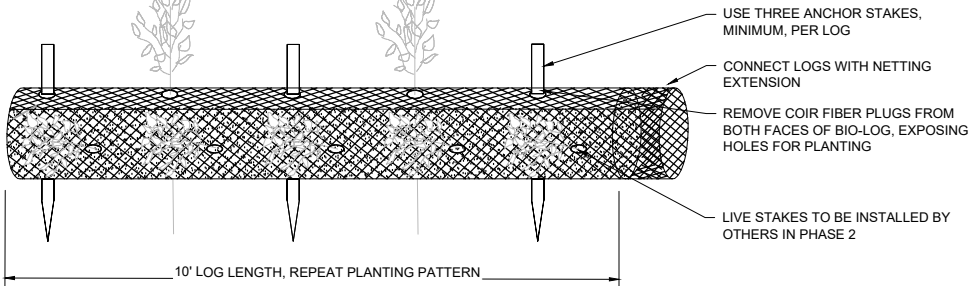
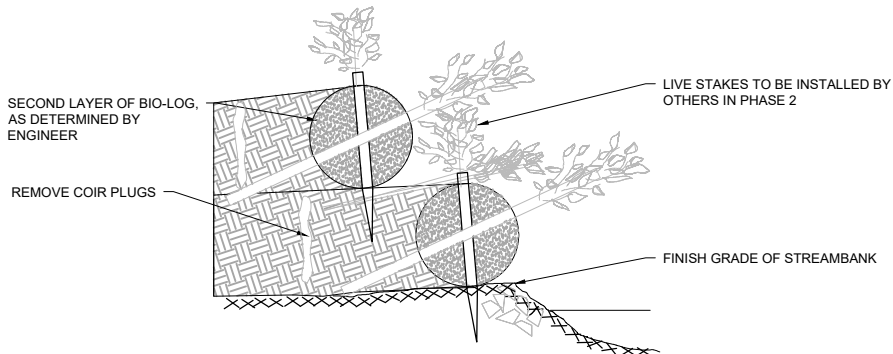
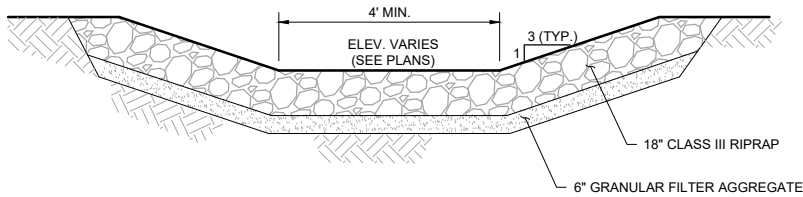
1. THE ENGINEER MUST BE NOTIFIED AT LEAST 3 DAYS PRIOR TO FASCINES INSTALLATION AND MUST BE ON SITE DURING INSTALLATION.
2. THE DORMANT CUTTINGS FOR FASCINES SHOULD ONLY BE INSTALLED DURING THE DORMANT SEASON, AFTER LEAF DROP IN THE FALL AND BEFORE BUD BREAK IN THE SPRING.
3. AT LEAST 50% OF DORMANT CUTTINGS SHOULD BE HARVESTED FROM TREE AND SHRUB SPECIES CAPABLE OF PROPAGATING FROM CUTTINGS, INCLUDING WILLOW, DOGWOOD, COTTONWOOD, ELDERBERRY, AND ALDER.

PREPARATION

4. DORMANT CUTTINGS FOR FASCINE SHALL BE ½"-2" MINIMUM BUTT DIAMETER.
5. ASSEMBLE THE FASCINE BY LAYING OUT DORMANT CUTTINGS WITH THE CUT ENDS PLACED IN OPPOSITE DIRECTIONS IN A LONG SAUSAGE-LIKE BUNDLE.
6. TIE BUNDLES WITH TWINE AT 12"-18" INCREMENTS. FINISHED BUNDLES SHOULD BE 6-9" IN DIAMETER.

PLACEMENT

7. CONSTRUCT FASCINES FROM LOWEST TO HIGHEST ELEVATION.
8. INSTALL FASCINES PARALLEL TO CONTOURS, UNLESS SPECIFIED OTHERWISE.
9. EXCAVATE A HORIZONTAL TRENCH ALONG THE SLOPE. THE TRENCH SHOULD BE ROUGHLY 2/3 THE DIAMETER OF THE FASCINE.
10. DISPOSE EXCAVATED SOIL ON-SITE ABOVE ORDINARY HIGH WATER LINE.
11. INSTALL EROSION CONTROL BLANKET ACROSS THE TRENCH AND CUT ALONG THE CENTERLINE OF THE TRENCH. STAKE ENDS OF BLANKET IN THE BOTTOM OF THE TRENCH. 6-8" OF THE BLANKET SHOULD BE TUCKED UNDER THE FASCINE.
12. PLACE BUNDLES IN TRENCH, BACKFILL, COMPACT, AND WATER.



3  
-  
DETAIL: COIR LOG WITH PLANTING HOLES  
NOT TO SCALE

ORIGINAL DRAWING SIZE: ANSI FULL BLEED B (11.00 X 17.00 INCHES) PLOT SCALE: 1/2 PLOT DATE: 12/15/2023 2:31 PM  
CADD USER: ERIC P. FITZGERALD FILE: M:\DESIGN\23272114\_00\23272114\_001.DWG

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.

PRINTED NAME: -  
SIGNATURE: -  
DATE: - LICENSE #: -

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BASSETT CREEK WATERSHED MANAGEMENT COMMISSION  
GOLDEN VALLEY, MINNESOTA

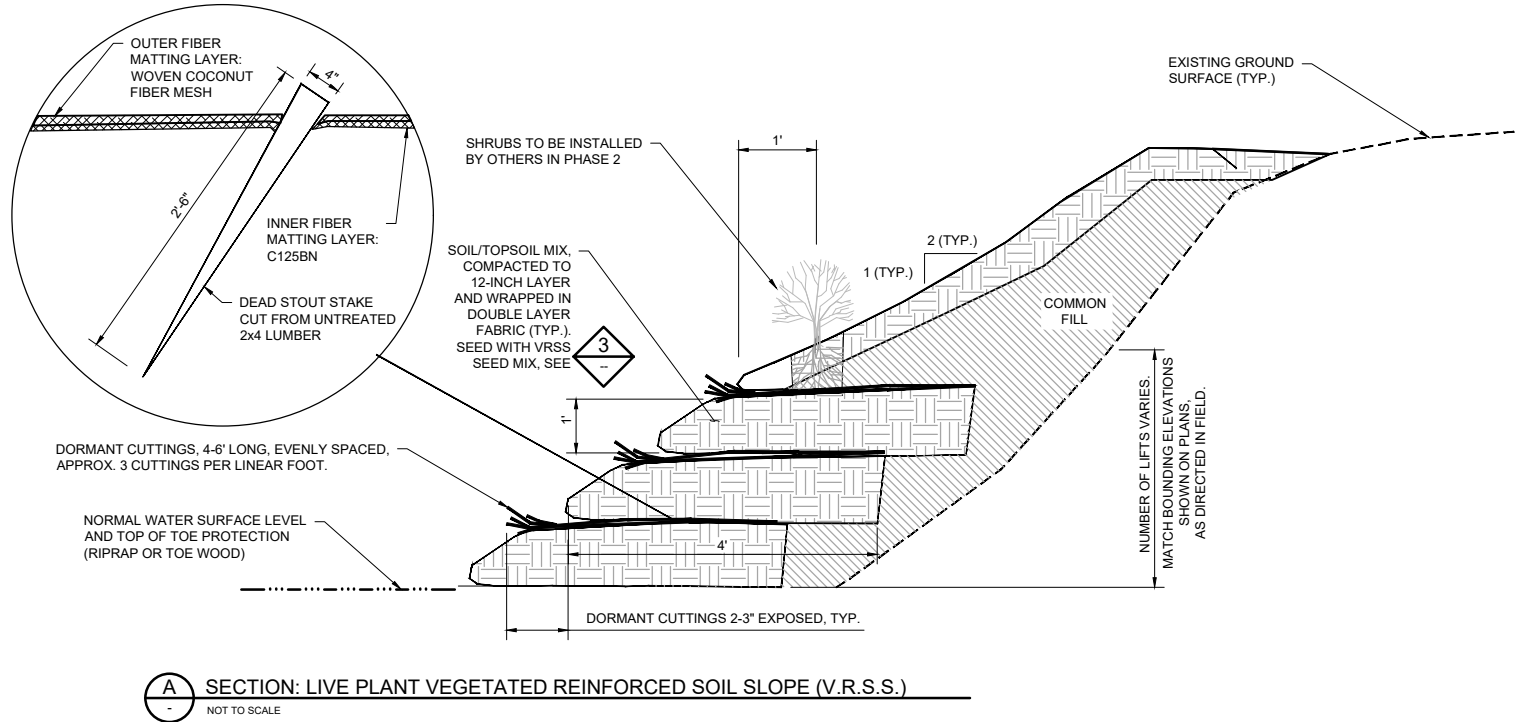
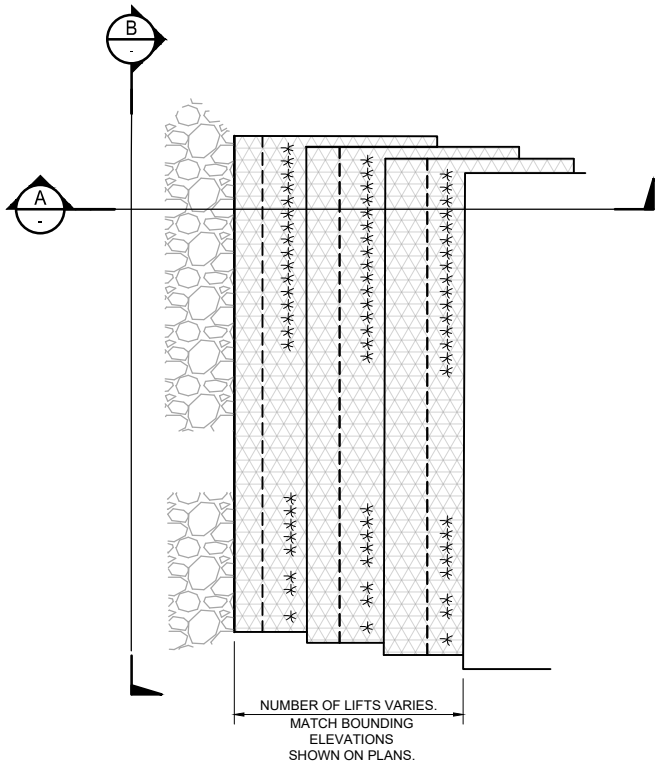
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STREAM STABILIZATION DETAILS

BARR PROJECT # 23272114.00	
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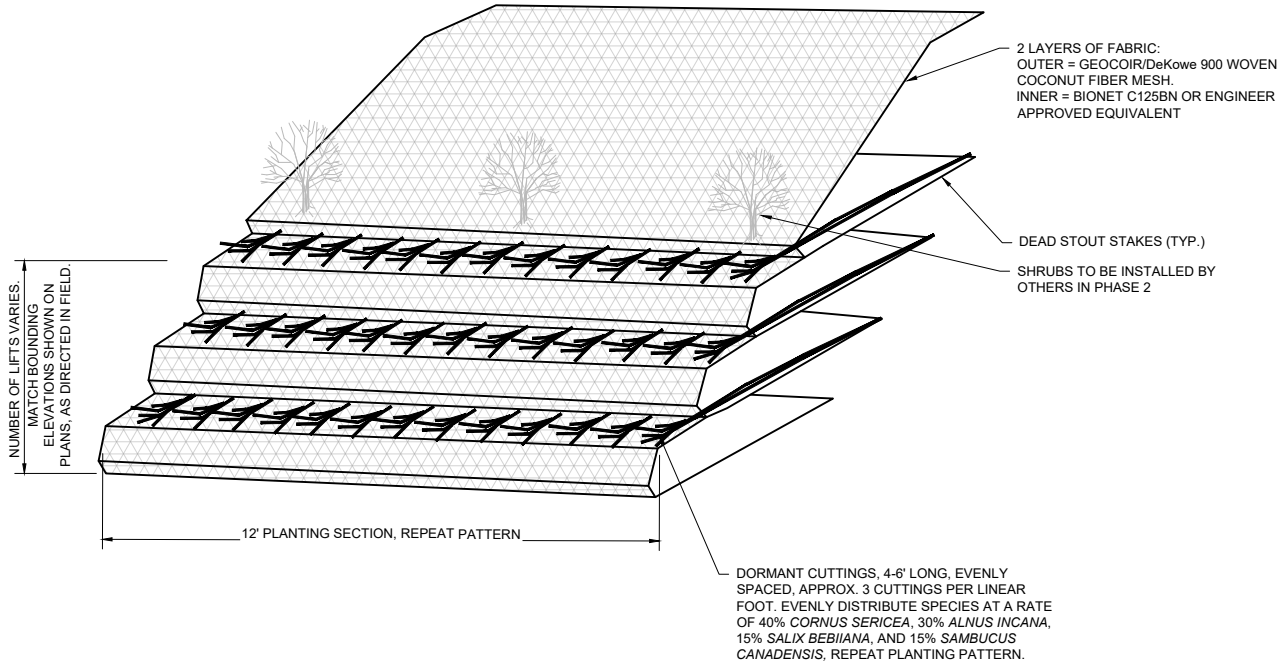


**A** SECTION: LIVE PLANT VEGETATED REINFORCED SOIL SLOPE (V.R.S.S.)  
NOT TO SCALE

**1** DETAIL: LIVE PLANT VEGETATED REINFORCED SOIL SLOPE (V.R.S.S.)  
NOT TO SCALE

**NOTES:**

1. THE ENGINEER MUST BE NOTIFIED AT LEAST 3 DAYS PRIOR TO VRSS INSTALLATION AND MUST BE ON SITE DURING INSTALLATION.
2. SOAK DORMANT CUTTINGS FOR A MINIMUM OF 24 HOURS IN FLOWING WATER BEFORE PLANTING. SOAKING FOR 5-7 DAYS IS CONSIDERED IDEAL. THE DORMANT CUTTINGS SHOULD ONLY BE INSTALLED DURING THE DORMANT SEASON, AFTER LEAF DROP IN THE FALL AND BEFORE BUD BREAK IN THE SPRING. DORMANT CUTTINGS STORED IN COLD STORAGE WITH NO VISIBLE SIGN OF BUD BREAK MAY BE USED INTO LATE SPRING.
3. INSTALL RIPRAP AND GRANULAR FILTER AGGREGATE AS SPECIFIED IN SECTION 02375 AND AS SHOWN ON THE DRAWINGS.
4. EXCAVATE THE EXISTING STREAMBANK SLOPE SHOREWARD FROM AND LEVEL WITH THE TOP OF THE RIPRAP TO FORM A STABLE, UNDISTURBED SURFACE. A FLAT BENCH SHOULD BE CREATED FROM THE TOE OF THE STABLE CUT SLOPE TO THE TOE OF THE PROPOSED STREAM BANK RIPRAP.
5. DORMANT CUTTINGS ARE TO BE PLACED ON TOP OF THE RIPRAP EXCAVATED BENCH AT 3 BRANCHES PER LINEAR FOOT; THE BASAL END OF THE CUTTINGS SHOULD EXTEND AT LEAST 2 FOOT PAST THE BACK OF THE RIPRAP. NO MORE THAN 6 INCHES OF THE BUDDING END OF THE LIVE BRANCH SHOULD EXTEND PAST THE FRONT OF THE RIPRAP. COVER THE DORMANT CUTTINGS WITH TOPSOIL TO CREATE AN EVEN SURFACE FOR THE CONSTRUCTION OF THE FIRST SOIL LIFT.
6. LAY NATURAL FIBER MATTING ON BOTTOM OF THE BENCH, OVERLAPPING ADJACENT MATTING BY 1 FOOT. THE OUTER EXPOSED FIBER MATTING LAYER OF EACH SOIL LIFT SHALL BE GEOCOIR/DEKOWE 900 WOVEN COCONUT FIBER MESH, BIOD-MAT 90, OR AN ENGINEER APPROVED EQUIVALENT.
7. THE INNER LAYER OF EACH SOIL LIFT SHALL BE BIONET C125BN OR AN ENGINEER APPROVED EQUIVALENT. LAY THE INNER LAYER OF BIONET ON TOP OF NATURAL FIBER MATTING OF EACH SOIL LIFT. FABRIC SHOULD BE INSTALLED SMOOTH WITH NO UNNECESSARY FOLDS OR WRINKLES. STAKE THE SHOREWARD END OF THE FIBER MATTING IN PLACE WITH WOODEN STAKES SPACED EVERY THREE FEET AS SHOWN ON THE DRAWINGS.
8. THE FIRST 6 TO 8 INCHES OF THE BOTTOM SOIL LIFT SHALL BE FILLED WITH GRAVEL AND SAND MATERIAL EXCAVATED FROM THE STREAM BED. THE TOP 6 TO 8 INCHES ON THE FRONT OF SURFACE LAYER SHOULD BE COMPRISED OF TOPSOIL MIX AS SHOWN ON THE DRAWINGS.
9. THE TOPSOIL LAYER SHALL BE SEEDED WITH THE VRSS SEED MIX AT 0.7 POUNDS PER 1,000 SQUARE FEET OF LIFT SURFACE AREA AS SHOWN ON THE DRAWINGS.
10. FOLD THE FIBER MATTING OVER THE FILL MATERIAL AND STAKE IN PLACE SO THE FABRIC IS TAUT AND SMOOTH WITH NO UNNECESSARY FOLDS OR WRINKLES. BACKFILL BEHIND THE BOTTOM SOIL LIFT WITH GRANULAR FILTER MATERIAL TO MEET THE EXISTING SLOPE AS SHOWN ON THE DRAWINGS.



**B** SECTION: LIVE PLANT VEGETATED REINFORCED SOIL SLOPE (V.R.S.S.)  
NOT TO SCALE

Common Name	Scientific Name	PLS Rate (lb/ac)	% of Mix (by weight)
Hairy Wood Chess	<i>Bromus pubescens</i>	0.4	7.41%
Canada Blue Joint Grass	<i>Calamagrostis canadensis</i>	0.75	13.89%
Silky Wild Rye	<i>Elymus villosus</i>	1.5	27.78%
Fowl Manna Grass	<i>Glyceria striata</i>	0.7	12.96%
Fowl Bluegrass	<i>Poa palustris</i>	0.75	13.89%
Prairie Cord Grass	<i>Spartina pectinata</i>	1	18.52%
Grasses Subtotal		5.10	94%
Bristly Sedge	<i>Carex comosa</i>	0.1	1.85%
Field Oval Sedge	<i>Carex molesta</i>	0.2	3.70%
Sedges Subtotal		0.30	6%
Natives Subtotal		5.40	100.00%

**2** VRSS SEED MIX  
NOT TO SCALE

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