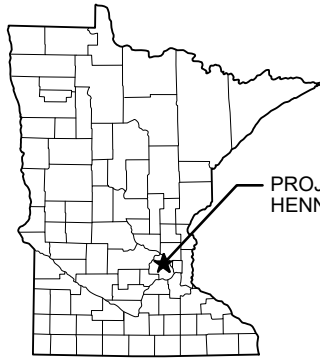


SEA SCHOOL & WILDWOOD PARK FLOOD MITIGATION PROJECT

CITY OF GOLDEN VALLEY PROJECT 20-27
GOLDEN VALLEY, MN

Item 5A.
BCWMC 10-20-22

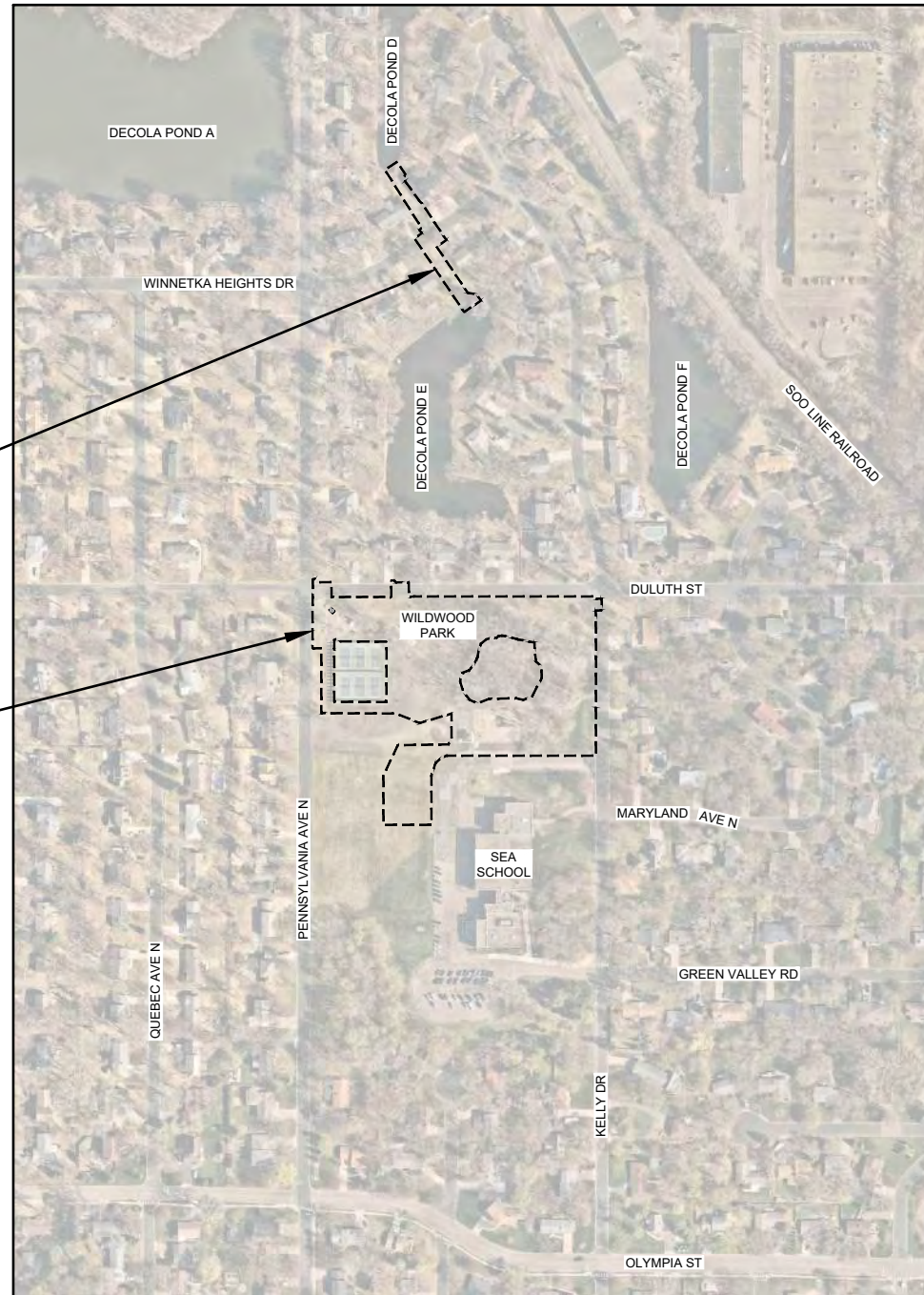


PROJECT LOCATION
HENNEPIN COUNTY

LOCATION MAP

PROJECT LOCATION
DECOLA POND 'D' OUTLET

PROJECT LOCATION
SEA SCHOOL &
WILDWOOD PARK



VICINITY MAP

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- L-09 ... LANDSCAPE PLAN - PLANTING DETAILS

PROJECT CONTACTS:

ENGINEER:
BARR ENGINEERING CO.
4300 MARKETPOINTE DRIVE
MINNEAPOLIS, MN 55435
FAX: 952-832-2601

CONTACT: PATRICK BROCKAMP, PE
EMAIL: PBROCKAMP@BARR.COM
PH: 952-842-3593

CONTACT: JEN KOEHLER, PE
EMAIL: JKOEHLER@BARR.COM
PH: 952-832-2750

OWNER:
CITY OF GOLDEN VALLEY
7800 GOLDEN VALLEY ROAD
GOLDEN VALLEY, MN. 55427

JEFF OLIVER, PE
CITY ENGINEER
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ERIC ECKMAN
ENVIRONMENTAL RESOURCES MANAGER
EMAIL: EECKMAN@GOLDENVALLEYMN.GOV
PH: 763-593-8084

COORDINATE SYSTEM: HENNEPIN COUNTY
HORIZONTAL DATUM: NAD83 (2011)
VERTICAL DATUM: NAVD88
DATE OF SURVEY: NOVEMBER 2020



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

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

JEFF OLIVER, PE, CITY ENGINEER
DATE _____ REG. NO. 23110

CADD USER: PATRICK E. BROCKAMP FILE: M:\DESIGN\23271900_001\23271900_001.DWG PLOT SCALE: 1:2,500 PLOT DATE: 10/10/2022 5:28 PM

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| NO. | | BY | CHK | APP. | DATE | REVISION DESCRIPTION | 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 # _____ | | CLIENT AGENCY BID CONSTRUCTION RECORD RELEASED TO/FOR DATE RELEASED | 04/28/22 08/23/22 09/16/22 A B C 0 1 2 3 | Project Office: BARR BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com | Scale: AS SHOWN Date: 09/16/2022 Drawn: EPF Checked: PEB Designed: BARR Approved: JAK2 | city of golden valley | SEA SCHOOL & WILDWOOD PARK FLOOD MITIGATION PROJECT TITLE SHEET & SITE LOCATION MAP | BARR PROJECT No. 23/27-1900.00 CLIENT PROJECT No. 20-27 DWG. No. G-01 REV. No. C |
|-----|--|----|-----|------|------|----------------------|---|--|---|---|---|---|-----------------------|---|---|

STATEMENT OF ESTIMATED QUANTITIES

| CAT. NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY |
|----------|--|------|--------------------|
| A | Mobilization/Demobilization | LS | 1 |
| B | Traffic and Pedestrian Safety Control Measures | LS | 1 |
| C | Rock Construction Entrance | Ea | 2 |
| D | Inlet Protection | Ea | 13 |
| E | Silt Fence | LF | 90 |
| F | Silt Curtain | LF | 80 |
| G | Sediment Log | LF | 1,520 |
| H | Utility Coordination (Allowance) | ALW | 1 |
| I | Clearing and Grubbing | LS | 1 |
| J | Transplant Tree | EA | 22 |
| K | Construction Fencing | LF | 1,220 |
| L | Remove and Dispose Bituminous Pavement | SY | 982 |
| M | Remove and Dispose of Concrete Pavement | SY | 56 |
| N | Remove and Dispose of Curb & Gutter | LF | 527 |
| O | Sawcut Bituminous Pavement (Full Depth) | LF | 1,288 |
| P | Remove and Salvage Boulder Wall | LS | 0 |
| Q | Remove and Dispose Sewer Pipe (12" RCP) | LF | 0 |
| R | Remove and Dispose Sewer Pipe (15" RCP) | LF | 0 |
| S | Remove and Dispose Sewer Pipe (10" PVC) | LF | 0 |
| T | Remove and Dispose Sewer Pipe (27" RCP) | LF | 137 |
| U | Remove and Dispose Sewer Pipe (30" RCP) | LF | 177 |
| V | Remove Existing Manhole | EA | 2 |
| W | Remove Hydrant | EA | 2 |
| X | Remove Gate Valve and Box (6") | EA | 2 |
| Y | Remove Watermain Piping (6") | LF | 40 |
| Z | Salvage and Reinstall Topsoil | CY | 1,900 |
| AA | Topsoil Import | CY | 500 |
| BB | Common Excavation | CY | 22,943 |
| CC | Common Excavation (Debris-Impacted) | TON | 1,932 |
| DD | Aggregate Base (CV), Class 5 | TON | 168 |
| EE | Bituminous Trail (Typ) | SY | 1,600 |
| FF | Bituminous Driveway (Typ) | SY | 0 |
| GG | Concrete Driveway | SY | 0 |
| HH | Concrete Pad - Pickleball Courts | SY | 220 |
| II | Curb & Gutter | LF | 234 |
| JJ | 8" PVC Pipe Sewer | LF | 60 |
| KK | Special Grate for 15" CPEP FES (0.5" Openings) | EA | 1 |
| LL | 15" Inline Check Valve | EA | 1 |
| MM | 12" RCP Pipe Sewer | LF | 153 |
| NN | 12" RCP FES | EA | 5 |
| OO | 15" RCP Pipe Sewer | LF | 77 |
| PP | 24" RCP Pipe Sewer | LF | 202 |
| QQ | 24" RCP FES | EA | 3 |
| RR | 24" RCP Trash Rack | EA | 1 |
| SS | 48" RCP Pipe Sewer | LF | 305 |
| TT | 48" RCP FES | EA | 2 |
| UU | 48" FES Trash Rack | EA | 1 |
| VV | 12" Area Drain | EA | 2 |
| WW | 48" Diameter RC Drainage Structure, Complete | EA | 2 |
| XX | 60" Diameter RC Drainage Structure, Complete | EA | 1 |
| YY | 72" Diameter RC Drainage Structure, Complete | EA | 4 |
| ZZ | 72" Diameter RC Drainage Structure with Weir, Complete | EA | 2 |
| AAA | Hydrant | EA | 2 |
| BBB | Gate Valve, Box and Riser (6") | EA | 2 |
| CCC | Watermain Fitting (6" DIP, 45 degree) | EA | 8 |
| DDD | Watermain Piping (6" DIP) | LF | 40 |
| EEE | Random Riprap, Class III with Filter Fabric | TON | 50 |
| FFF | Subsoiling - Deep Soil Ripping | AC | 2 |
| GGG | Soil Bed Prep | AC | 2 |
| HHH | Low Maintenance Turf (MnDOT 25-131) | LB | 225 |
| III | Wet Meadow (MnDOT 33-261) | LB | 22 |
| JJJ | Upland Mesic Prairie (MnDOT 35-641) | LB | 8 |
| KKK | Prairie Restoration Savanna Wild Flower Seed Mix | LB | 7 |
| LLL | Prairie plug plantings | EA | 1,500 |

STATEMENT OF ESTIMATED QUANTITIES

| CAT. NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY |
|----------|---|------|--------------------|
| MMM | Filtration Basin Plantings | LS | 1 |
| NNN | Residential Landscape Repair | LS | 1 |
| OOO | Tree Plantings | EA | 60 |
| PPP | Erosion Control Blanket (Category 3N2S) | SY | 8,000 |
| QQQ | Clean Washed Sand with 5 percent iron filings | CY | 100 |
| RRR | Small Splash Block Assembly (Pipe Discharge) | EA | 2 |
| SSS | 6" Perf Dual Wall HDPE Drantile Pipe and Fittings (no sock) | LF | 280 |
| TTT | 6" PVC Storm Sewer Pipe and Fittings | LF | 20 |
| UUU | 6" Drantile Cleanout and Cover Unit | EA | 2 |
| VVV | Planting Soil (75% sand, 25% Compost - MnDOT Grade II) | CY | 240 |
| WWW | Hydrodynamic Separator | Each | 1 |
| XXX | Use of Salvage Logs from Onsite Trees | EA | 20 |
| YYY | Gathering/Viewing Area (Wet Meadow North) | LS | 1 |
| ZZZ | Intermittent Stream (Salvage & reinstall boulders) | LS | 1 |
| AAAA | Nature Play/Outdoor Classroom (Prairie Area) | LS | 1 |
| BBBB | Pickleball Appurtanances (Gates, Shade Structures) | LS | 1 |

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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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|-----------------|----------|----------|---|---|---|---|---|
| CLIENT | 04/28/22 | 08/18/22 | | | | | |
| AGENCY | | 08/23/22 | | | | | |
| BID | | | | | | | |
| CONSTRUCTION | | | | | | | |
| RECORD | | | | | | | |
| RELEASED TO/FOR | A | B | C | 0 | 1 | 2 | 3 |
| DATE RELEASED | | | | | | | |

Project Office:
BARR ENGINEERING CO.
4300 MARKETPOINTE DRIVE
Suite 200
MINNEAPOLIS, MN 55435

BARR

Corporate Headquarters:
Minneapolis, Minnesota
Ph: 1-800-632-2277
Ph: 1-800-632-2277

| | |
|----------|------------|
| Scale | AS SHOWN |
| Date | 09/16/2022 |
| Drawn | EPF |
| Checked | PEB |
| Designed | BARR |
| Approved | JAK2 |



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| SEA SCHOOL & WILDWOOD PARK FLOOD MITIGATION PROJECT | |
| STATEMENT OF ESTIMATED QUANTITIES | |

| | |
|-----------------------------------|---------------|
| BARR PROJECT No. 23/27-1900.00 | |
| CLIENT PROJECT No. 20-27 | |
| DWG. No. G-02 | REV. No. C |

1.0 GENERAL CONSTRUCTION ACTIVITY INFORMATION:

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 WITHIN SEA SCHOOL EASEMENT AREA AND PENNSYLVANIA WOODS NATURE RESERVE SURROUNDING DECOLA PONDS D AND E. THE APPROXIMATE CENTROID OF THE PROJECT HAS A LATITUDE OF 44.99962 AND A LONGITUDE OF -93.37401.

THIS PROJECT INVOLVES EROSION CONTROL, REMOVAL AND REPLACEMENT OF CURB AND GUTTER, BITUMINOUS TRAILS, CONCRETE PAVING, ROADS, STORM SEWER REMOVALS AND INSTALLATION, WATERMAIN MODIFICATIONS, EXCAVATION AND GRADING, CONSTRUCTION OF FILTRATION BASINS AND RAIN GARDENS, LANDSCAPING INCLUDING TREE REMOVAL AND REPLACEMENT, AND UPLAND AND WETLAND RESTORATION. THE PROJECT, AS PROPOSED, HAS A TOTAL DISTURBANCE AREA OF AS SHOWN BELOW. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES ARE REQUIRED TO MINIMIZE SEDIMENT FROM BEING TRANSPORTED INTO DOWNSTREAM BASSETT CREEK AND UPSTREAM DECOLA POND D, WHICH ARE MDNR IDENTIFIED WATER BODIES. REFER TO PROJECT DRAWINGS FOR FURTHER DETAILS. (CSW PERMIT PART III.A.1)

1.1 PROJECT SIZE AND CUMULATIVE IMPERVIOUS SURFACE:

- THE ANTICIPATED AREA OF DISTURBANCE IS APPROXIMATELY 4.22 ACRES.
- THE TOTAL AREA OF PRE-CONSTRUCTION IMPERVIOUS AREA IS APPROXIMATELY 0.27 ACRES.
- THE TOTAL AREA OF POST-CONSTRUCTION IMPERVIOUS AREA IS APPROXIMATELY 0.46 ACRES.
- THE TOTAL NEW IMPERVIOUS AREA IS APPROXIMATELY 0.19 ACRES.

1.2 DATES OF CONSTRUCTION:

- ANTICIPATED START DATE: FALL 2022
- ANTICIPATED END DATE: SUMMER 2023

1.3 CONTACT INFORMATION:

OWNER: THE CITY OF GOLDEN VALLEY
 MAILING ADDRESS: 7800 GOLDEN VALLEY ROAD, GOLDEN VALLEY, MN 55427
 CONTACT PERSON: JEFF OLIVER, PE TITLE: CITY ENGINEER
 PHONE NUMBER: 763-593-8034 EMAIL ADDRESS: JOLIVER@GOLDENVALLEYMN.GOV
 ALTERNATE CONTACT PERSON: ERIC ECKMAN TITLE: ENVIRONMENTAL RESOURCES SUPERVISOR
 PHONE NUMBER: 763-593-8084 EMAIL ADDRESS: EECKMAN@GOLDENVALLEYMN.GOV

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

PARTY RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PERMANENT STORMWATER MANAGEMENT SYSTEM:
 CITY OF GOLDEN VALLEY
 MAILING ADDRESS: 7800 GOLDEN VALLEY ROAD, GOLDEN VALLEY, MN 55427
 CONTACT PERSON: JEFF OLIVER, PE TITLE: CITY ENGINEER
 PHONE NUMBER: 763-593-8043 EMAIL ADDRESS: JOLIVER@GOLDENVALLEYMN.GOV

2.0 RECEIVING WATERS:

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

| NAME OF WATER BODY | TYPE ⁽¹⁾ | WATER BODY ID ⁽²⁾ | SPECIAL WATER? ⁽³⁾ | IMPAIRED WATER? ⁽³⁾ | DNR PUBLIC WATER WITH WORK IN WATER RESTRICTIONS? |
|--------------------|---------------------|------------------------------|-------------------------------|--------------------------------|---|
| DECOLA POND D | POND/WETLAND | - | NO | NO | NO |
| DECOLA POND E | POND/WETLAND | - | NO | NO | NO |
| HONEYWELL POND | POND | - | NO | NO | NO |
| BASSETT CREEK | STREAM | 07010206-538 | NO | YES | NO |

- (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. NO WATERBODIES WITHIN ONE MILE HAVE AN EPA-APPROVED IMPAIRMENT. BASSETT CREEK, WHICH IS LOCATED FURTHER DOWNSTREAM THAN ONE MILE (AERIAL RADIUS), HAS EPA-APPROVED IMPAIRMENTS FOR CHLORIDES, FECAL COLIFORM, AND FISHES 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)

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

2.2 PUBLIC WATERS WITH WORK IN WATER RESTRICTIONS: THIS PROJECT DOES NOT INCLUDE WORK IN PUBLIC WATERS. (CSW PERMIT ITEM 5.11)

2.3 WETLAND IMPACTS: THIS PROJECT MAY HAVE TEMPORARY ADVERSE IMPACTS TO WETLANDS, INCLUDING: EXCAVATION, DEGRADATION OF WATER QUALITY, DRAINING, FILLING, PERMANENT INUNDATION OR FLOODING. PERIMETER SEDIMENT CONTROLS WILL BE INSTALLED DURING CONSTRUCTION TO HELP MITIGATE WATER QUALITY DEGRADATION. THE PROJECT WILL RESULT IN A NET INCREASE IN WETLAND AREA. (CSW PERMIT ITEMS 2.4 AND 2.10, AND SECTION 22)

2.4 ENVIRONMENTAL REVIEW AND OTHER REQUIRED REVIEWS: STORMWATER MITIGATION MEASURES ARE NOT REQUIRED AS A RESULT OF AN ENVIRONMENTAL REVIEW (E.G., EAW OR EIS), ENDANGERED OR THREATENED SPECIES REVIEW, ARCHEOLOGICAL SITE REVIEW, OR OTHER LOCAL, STATE, OR FEDERAL REVIEW CONDUCTED FOR THE PROJECT. (CSW PERMIT ITEMS 2.8, 2.9, AND 5.16)

2.5 KARST AREAS OR DRINKING WATER SUPPLY MANAGEMENT AREAS: PROPOSED CONSTRUCTION ACTIVITIES DO NOT FALL WITHIN KARST AREAS OR DRINKING WATER SUPPLY MANAGEMENT AREAS. (CSW PERMIT ITEMS 16.19, 16.20, AND 18.10)

3.0 PROJECT PLANS AND SPECIFICATIONS:

REQUIRED FEATURE

- PROJECT LOCATION AND CONSTRUCTION LIMITS
- 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
- SOIL TYPES AT THE SITE
- LOCATIONS OF IMPERVIOUS SURFACES
- LOCATIONS OF AREAS NOT TO BE DISTURBED (E.G., BUFFER ZONES, WETLANDS, ETC.)
- LOCATIONS OF AREAS OF STEEP SLOPES
- LOCATIONS OF AREAS WHERE CONSTRUCTION WILL BE PHASED TO MINIMIZE DURATION OF EXPOSED SOILS
- LOCATIONS OF ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL BMPs AS REQUIRED IN PERMIT SECTIONS 8 THROUGH 10 AND 14 THROUGH 19
- BUFFER ZONES AS REQUIRED IN PERMIT ITEMS 9.17 AND 23.11
- LOCATIONS OF POTENTIAL POLLUTION-GENERATING ACTIVITIES IDENTIFIED IN PERMIT SECTION 12
- STANDARD DETAILS FOR EROSION AND SEDIMENT CONTROL BMPs TO BE INSTALLED AT THE SITE

SHEET NUMBER

- G-01
- C-05, C-06
- G-03
- C-01, C-02
- C-03, C-04
- C-03, C-04
- N/A
- C-03, C-04
- N/A
- N/A
- G-05

4.0 BEST MANAGEMENT PRACTICES (BMPs):

4.1 EROSION PREVENTION PRACTICES:

- METHODS OF TEMPORARILY STABILIZING SOILS AND SOIL STOCKPILES (E.G., MULCHES, HYDRAULIC TACKIFIERS, EROSION BLANKETS, ETC.): (CSW PERMIT ITEMS 8.4, 8.5, AND 23.9)
 - AREAS OF EXPOSED SOIL WILL BE STABILIZED WITH ONE OF THE FOLLOWING: EROSION CONTROL BLANKET, PRESERVATION OF MATURE VEGETATION, MULCH, VEGETATIVE SLASH, ETC.
 - IF PRESENT, SOIL STOCKPILES WILL BE STABILIZED WITH ONE OF THE FOLLOWING MATERIALS: MULCH (SUCH AS STRAW MULCH, SLASH MULCH, WOOD CHIP, OR OTHER APPROPRIATE MULCH) (IF SLOPES ≤3H:1V), COVER MATERIAL SUCH AS TARPS OR PLASTIC SHEETING, ETC.
 - 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.
- TIMELINE FOR STABILIZATION OF EXPOSED SOILS: WHERE REQUIRED, STABILIZATION OF EXPOSED SOIL AREAS (INCLUDING STOCKPILES) MUST 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. 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
 - SEEDING OR PLANTING THE EXPOSED AREA
 - FINALIZING ARRANGEMENTS TO HAVE STABILIZATION PRODUCT FULLY INSTALLED
- METHODS TO BE USED FOR STABILIZATION OF DITCH AND SWALE WETTED PERIMETERS (NOTE THAT MULCH, HYDRAULIC SOIL TACKIFIERS, HYDROMULCHES, ETC. ARE NOT ACCEPTABLE SOIL STABILIZATION METHODS FOR ANY PART OF A DRAINAGE DITCH OR SWALE WITH A CONTINUOUS SLOPE OF GREATER THAN 2 PERCENT). (CSW PERMIT ITEMS 8.6 THROUGH 8.8)
 - IN THE EVENT SOILS WITHIN EXISTING STORMWATER DITCHES OR SWALES ARE DISTURBED, THEY WILL BE STABILIZED USING ONE OR MORE OF THE FOLLOWING METHODS: CHANNEL EROSION CONTROL BLANKET, RIPRAP, TURF REINFORCEMENT MAT, ETC.
 - MULCH, HYDROMULCH, TACKIFIER, POLYACRYLAMIDE, OR SIMILAR EROSION PREVENTION PRACTICES WILL NOT BE USED TO STABILIZE ANY PART OF AN EXISTING STORMWATER DITCH OR SWALE.
 - TIMELINE FOR STABILIZATION OF STORMWATER DITCHES AND SWALES: 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. STABILIZATION OF THE REMAINING PORTIONS OF ANY TEMPORARY OR PERMANENT DITCHES OR SWALES WILL BE COMPLETED WITHIN 14 CALENDAR DAYS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE AND CONSTRUCTION IN THAT PORTION OF THE DITCH HAS TEMPORARILY OR PERMANENTLY CEASED.
- METHODS TO BE USED FOR ENERGY DISSIPATION AT PIPE OUTLETS (E.G., RIP RAP, SPLASH PADS, GABIONS, ETC.). (CSW PERMIT ITEM 8.9)
- DESCRIBE TIMELINES TO BE IMPLEMENTED AT THIS SITE FOR COMPLETING THE INSTALLATION OF THE EROSION PREVENTION. (CSW PERMIT ITEMS 5.4, 8.4 THROUGH 8.6, AND 23.9)
 - IF APPLICABLE, INCLUDE THE TIMELINE FOR COMPLETING SOIL STABILIZATION FOR AREAS WITHIN 200 FEET OF A PUBLIC WATER WITH WORK IN WATER RESTRICTIONS DUE TO FISH SPAWNING TIME FRAMES
 - SOIL STABILIZATION TIMELINES FOR PORTIONS OF THE SITE THAT DRAIN TO SPECIAL OR IMPAIRED WATERS.
 - BEFORE LAND DISTURBING ACTIVITIES BEGIN, THE LIMITS OF THE AREAS TO BE DISTURBED DURING CONSTRUCTION WILL BE DELINEATED (E.G., WITH FLAGS, STAKES, SIGNS, SILT FENCE, ETC.).
- DESCRIBE ADDITIONAL EROSION PREVENTION MEASURES THAT WILL BE IMPLEMENTED AT THE SITE DURING CONSTRUCTION (E.G., CONSTRUCTION PHASING, MINIMIZING SOIL DISTURBANCE, VEGETATIVE BUFFERS, HORIZONTAL SLOPE GRADING, SLOPE DRAINING/TERRACING, ETC.). (CSW PERMIT ITEMS 8.2, 8.3, AND 8.10)
 - CONSTRUCTION PHASING WILL BE UTILIZED TO MINIMIZE THE AREA OF SOIL EXPOSED AT ANY ONE TIME.
 - SOIL DISTURBANCE WILL BE MINIMIZED WHEREVER POSSIBLE TO AID IN EROSION PREVENTION.
 - EXISTING VEGETATION WILL BE PRESERVED WHERE POSSIBLE TO LIMIT EXPOSED SOIL AND THUS WILL SERVE AS NATURAL VEGETATIVE BUFFERS.
 - EXPOSED SOIL ON STEEP SLOPES (≤3H:1V) WILL BE STABILIZED.
- IF APPLICABLE, DESCRIBE ADDITIONAL EROSION PREVENTION BMPs TO BE IMPLEMENTED AT THE SITE TO PROTECT PLANNED INFILTRATION AREAS. (CSW PERMIT ITEMS 16.4 AND 16.5)

4.2 SEDIMENT CONTROL PRACTICES:

- METHODS TO BE USED FOR DOWNGRADIENT PERIMETER CONTROL. (CSW PERMIT ITEMS 9.2 THROUGH 9.6)
 - SEDIMENT CONTROL PRACTICES SHALL BE ESTABLISHED ON ALL DOWNGRADIENT PERIMETERS AND LOCATED UPGRADIENT OF ANY BUFFER ZONES. PERIMETER SEDIMENT CONTROLS THAT MAY BE USED IN AREAS OF SHEET FLOW INCLUDE: SILT FENCING, SEDIMENT CONTROL LOGS / BIOROLLS (FILLED WITH COMPOST, WOOD CHIPS, ROCK, ETC.), VEGETATIVE SLASH BARRIERS, OTHER NATIVE MATERIAL BARRIERS, VEGETATIVE BUFFERS (RETAIN EXISTING VEGETATION WHERE POSSIBLE), EARTHEN BERMS, ROCK CHECKS, ETC.
 - PERIMETER SEDIMENT CONTROL PRACTICES MUST BE INSTALLED BEFORE ANY UPGRADIENT LAND-DISTURBING ACTIVITIES BEGIN AND REMAIN IN PLACE UNTIL PERMANENT COVER HAS BEEN ESTABLISHED.
 - 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.
 - IF THE DOWNGRADIENT 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.
- METHODS TO BE USED TO CONTAIN SOIL STOCKPILES. (CSW PERMIT ITEMS 9.9 AND 9.10)
 - ANY TEMPORARY SOIL STOCKPILES SHALL BE SURROUNDED BY SILT FENCING OR BIOROLLS (OR OTHER EFFECTIVE SEDIMENT CONTROLS) AND SHALL NOT BE PLACED IN ANY NATURAL BUFFERS OR SURFACE WATERS.
- METHODS TO BE USED FOR STORM DRAIN INLET PROTECTION. (CSW PERMIT ITEMS 9.7 AND 9.8)
 - IF STORM DRAINS ARE PRESENT, INLET PROTECTION BMPs WILL BE INSTALLED AROUND ALL STORM DRAIN INLETS DOWNGRADIENT OF CONSTRUCTION ACTIVITIES. STORM DRAIN INLETS WILL BE PROTECTED UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLET HAVE BEEN STABILIZED. INLET PROTECTION BMPs THAT MAY BE USED INCLUDE: SEDIMENT CONTROL LOG, FILTER SACK, ROCK WITH FILTER FABRIC, FILTER FENCE BOX, ETC.
- METHODS TO MINIMIZE VEHICLE TRACKING AT CONSTRUCTION EXITS AND STREET SWEEPING ACTIVITIES. (CSW PERMIT ITEMS 9.11 AND 9.12)
 - A VEHICLE TRACKING BMP (SUCH AS A ROCK PADS, MUD MATS, SLASH MULCH, CONCRETE OR STEEL WASH RACKS, OR AN EQUIVALENT SYSTEM) SHALL BE INSTALLED TO MINIMIZE THE TRACKING OUT OF SEDIMENT FROM THE CONSTRUCTION AREA.
 - 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.
- IF APPLICABLE, 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)
- DESCRIBE METHODS TO BE USED TO MINIMIZE SOIL COMPACTION AND PRESERVE TOP SOIL (UNLESS INFEASIBLE) AT THIS SITE. (CSW PERMIT ITEMS 5.24, 9.14, AND 9.15)
- METHODS TO BE USED TO PROMOTE INFILTRATION AND SEDIMENT REMOVAL ON THE SITE PRIOR TO OFFSITE DISCHARGE, UNLESS INFEASIBLE. (CSW PERMIT ITEM 9.16)
 - 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.
 - DESCRIBE PLANS TO PRESERVE A 50-FOOT NATURAL BUFFER BETWEEN THE PROJECT'S SOIL DISTURBANCE AND A SURFACE WATER OR PLANS FOR REDUNDANT SEDIMENT CONTROLS IF A BUFFER IS INFEASIBLE. (CSW PERMIT ITEM 9.17)
 - IN WETLANDS AND NON-SPECIAL WATERS, A 50-FOOT NATURAL BUFFER SHALL BE PRESERVED. WHEN A SURFACE WATER 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 SHALL BE PROVIDED. REDUNDANT PERIMETER CONTROLS WILL BE INSTALLED AT LEAST 5 FEET APART UNLESS LIMITED BY LACK OF AVAILABLE SPACE.
 - A 100-FOOT NATURAL BUFFER SHALL BE PRESERVED IN CONSTRUCTION AREAS DISCHARGING TO SPECIAL WATERS OR, IF A BUFFER IS INFEASIBLE, REDUNDANT SEDIMENT CONTROLS SHALL BE PROVIDED, WHEN A SPECIAL WATER IS LOCATED WITHIN 100 FEET OF THE PROJECT'S EARTH DISTURBANCES AND STORMWATER FLOWS TO THE SURFACE WATER.
- DESCRIBE PLANS FOR USE OF SEDIMENTATION TREATMENT CHEMICALS (E.G., POLYMERS, FLOCCULANTS, ETC.). (CSW PERMIT ITEMS 5.22 AND 9.18)
- IF REQUIRED TO INSTALL A TEMPORARY SEDIMENT BASIN DUE TO 10 OR MORE ACRES DRAINING TO A COMMON LOCATION OR 5 ACRES OR MORE IF THE SITE IS WITHIN 1 MILE OF A SPECIAL OR IMPAIRED WATER, DESCRIBE (OR ATTACH PLANS) SHOWING HOW THE BASIN WILL BE DESIGNED AND CONSTRUCTED. (CSW PERMIT ITEMS 5.6, 9.13, AND 23.10 AND SECTION 14)

4.3 DEWATERING AND BASIN DRAINING: (CSW PERMIT SECTION 10 AND ITEM 10.5)

- THE FOLLOWING WILL BE USED TO TREAT/DISPOSE OF TURBID OR SEDIMENT-LADEN WATER DURING DEWATERING OR BASIN DRAINING: DEWATERING FILTER BAGS OR EQUIVALENT MEASURES.
- THE FOLLOWING WILL BE USED TO PREVENT EROSION OR SCOUR OF DISCHARGE POINTS DURING DEWATERING OR BASIN DRAINING: TEMPORARY DRAINAGE CHANNELS AND SEDIMENT BASINS OR EQUIVALENT MEASURES.
- FILTERS FOR BACKWASH WATER WILL BE MANAGED ON THE SITE AND CONSISTENTLY INSPECTED FOR DAMAGE AND PROPERLY DISPOSED OF OFFSITE WHEN PUMPING IS COMPLETED OR IF SIGNS OF DAMAGE ARE FOUND.

4.4 BMP DESIGN FACTORS: THE FOLLOWING BMP DESIGN FACTORS HAVE BEEN CONSIDERED IN DESIGNING THE TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL BMPs:

- EXPECTED AMOUNT, FREQUENCY, INTENSITY, AND DURATION OF PRECIPITATION.
- NATURE OF STORMWATER RUNOFF AND RUN-ON AT THE SITE, INCLUDING FACTORS SUCH AS EXPECTED FLOW FROM IMPERVIOUS SURFACES, SLOPES, AND SITE DRAINAGE FEATURES.
- 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.
- RANGE OF SOIL PARTICLE SIZES EXPECTED TO BE PRESENT.

4.5 BMP QUANTITIES: ANTICIPATED EROSION PREVENTION AND SEDIMENT CONTROL BMP QUANTITIES NEEDED FOR THE LIFE OF THE PROJECT:

- INLET PROTECTION (EA): 13
- SILT FENCE (LF): 90
- SILT CURTAIN (LF): 80
- SEDIMENT LOG (LF): 1,520
- EROSION CONTROL BLANKET (SY): 13,100
- ORANGE CONSTRUCTION FENCING (LF): 720
- STABILIZED CONSTRUCTION ENTRANCE (EA): 1

(SEE PAGE 2 OF 2)

90% DESIGN REVIEW
NOT FOR CONSTRUCTION

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|---|----|---|------|--|----------------------|---|--|-----------------------|--|--|--|--|--|
| 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. | | CLIENT: 04/28/22 09/18/22 AGENCY: 08/23/22 BID: _____ CONSTRUCTION: _____ RECORD: _____ | | Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Ph: 1-800-632-2277 www.barr.com | | Scale: AS SHOWN Date: 09/16/2022 Drawn: EPF Checked: PEB Designed: BARR Approved: JAK2 | | city of golden valley | | SEA SCHOOL & WILDWOOD PARK FLOOD MITIGATION PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP) | | BARR PROJECT No. 23/27-1900.00 CLIENT PROJECT No. 20-27 DWG. No. G-03 REV. No. C | |
| NO. | BY | CHK | APP. | DATE | REVISION DESCRIPTION | | | | | | | | |

5.0 PERMANENT STORMWATER MANAGEMENT SYSTEM:

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 CUMULATIVE NEW IMPERVIOUS SURFACES IN TOTAL OR IF THE PROJECT IS PART OF A LARGER PLAN OF DEVELOPMENT. (CSW PERMIT ITEM 15.3)

5.1 A WATER QUALITY VOLUME OF ONE INCH OF RUNOFF FROM THE NET INCREASE IN CUMULATIVE NEW IMPERVIOUS SURFACES CREATED BY THE PROJECT MUST BE RETAINED ON-SITE THROUGH VOLUME REDUCTION PRACTICES (E.G., INFILTRATION OR OTHER) UNLESS PROHIBITED DUE TO ONE OF THE REASONS IN PERMIT ITEMS 16.14 THROUGH 16.21. IF INFILTRATION IS PROHIBITED, IDENTIFY OTHER METHOD(S) TO TREAT THE WATER QUALITY VOLUME (E.G., WET SEDIMENTATION BASIN, FILTRATION BASIN, REGIONAL POND, OR EQUIVALENT METHOD). (CSW PERMIT ITEMS 5.15, 15.4 THROUGH 15.9, AND 23.14)

5.2 FOR LINEAR PROJECTS WITH LACK OF RIGHT OF WAY TO INSTALL TREATMENT SYSTEMS CAPABLE OF TREATING THE ENTIRE WATER QUALITY VOLUME, IDENTIFY OTHER METHOD(S) FOR PROVIDING TREATMENT OF RUNOFF PRIOR TO DISCHARGE (E.G., GRASSED SWALES, FILTRATION SYSTEMS, SMALLER PONDS OR GRIT CHAMBERS, ETC.). (CSW PERMIT ITEM 15.9)

5.3 THIS PROJECT DOES NOT DISCHARGE TO A TROUT STREAM (OR A TRIBUTARY TO A TROUT STREAM). (CSW PERMIT ITEM 23.12)

6.0 INSPECTION AND MAINTENANCE ACTIVITIES:

6.1 PERSONS WITH REQUIRED TRAINING: TRAINED INDIVIDUALS INCLUDE THOSE PARTIES RESPONSIBLE FOR INSTALLING, SUPERVISING, REPAIRING, INSPECTING, AND MAINTAINING EROSION PREVENTION AND SEDIMENT CONTROL BMPs AT THE SITE. TRAINED INDIVIDUALS ARE ALSO RESPONSIBLE FOR IMPLEMENTATION OF THE SWPPP AND COMPLIANCE WITH THE GENERAL PERMIT UNTIL THE CONSTRUCTION ACTIVITIES ARE COMPLETE, PERMANENT COVER HAS BEEN ESTABLISHED, AND A NOTICE OF TERMINATION (NOT) HAS BEEN SUBMITTED. (CSW PERMIT ITEMS 5.20, 5.21, AND 11.9 AND SECTION 21)

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.

BELOW IS A LIST OF PEOPLE RESPONSIBLE FOR THIS PROJECT WHO ARE KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION PREVENTION AND SEDIMENT CONTROL BMPs.

| TRAINED INDIVIDUAL | RESPONSIBILITY | TRAINING ENTITY* | TRAINING DATE |
|--------------------|---|-------------------------|---------------|
| ERIC FITZGERALD | PREPARATION OF THE SWPPP | UNIVERSITY OF MINNESOTA | MARCH 2022 |
| TBD | OVERSIGHT OF SWPPP IMPLEMENTATION, REVISION, AND AMMENDMENT | TBD | TBD |
| TBD | PERFORMANCE OF SWPPP INSPECTIONS | TBD | TBD |
| TBD | PERFORMANCE OR SUPERVISION OF INSTALLATION, MAINTENANCE, AND REPAIR OF BMPs | TBD | TBD |

*TRAINING DOCUMENTATION AVAILABLE UPON REQUEST.

6.2 FREQUENCY OF INSPECTIONS: A TRAINED PERSON WILL ROUTINELY INSPECT THE ENTIRE CONSTRUCTION SITE. (CSW PERMIT ITEMS 11.2, 11.10, AND 23.13)

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

INSPECTION FREQUENCY MAY BE ADJUSTED UNDER THE FOLLOWING CIRCUMSTANCES:

- 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.

6.3 INSPECTION REQUIREMENTS: EACH CONSTRUCTION STORMWATER SITE INSPECTION SHALL INCLUDE INSPECTION OF THE FOLLOWING AREAS. (CSW PERMIT ITEMS 11.3 THROUGH 11.8)

- 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 OFF SITE SEDIMENT TRACKING
- STREETS AND OTHER AREAS ADJACENT TO THE PROJECT FOR EVIDENCE OF OFF SITE ACCUMULATIONS OF SEDIMENT

6.4 MAINTENANCE REQUIREMENTS: MAINTENANCE OF THE FOLLOWING AREAS AND BMPs SHALL BE PERFORMED AS FOLLOWS: (CSW PERMIT ITEMS 11.3 THROUGH 11.8)

- 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.

6.5 RECORDKEEPING REQUIREMENTS: (CSW PERMIT ITEMS 11.11 AND 24.5 AND SECTIONS 6 AND 20)

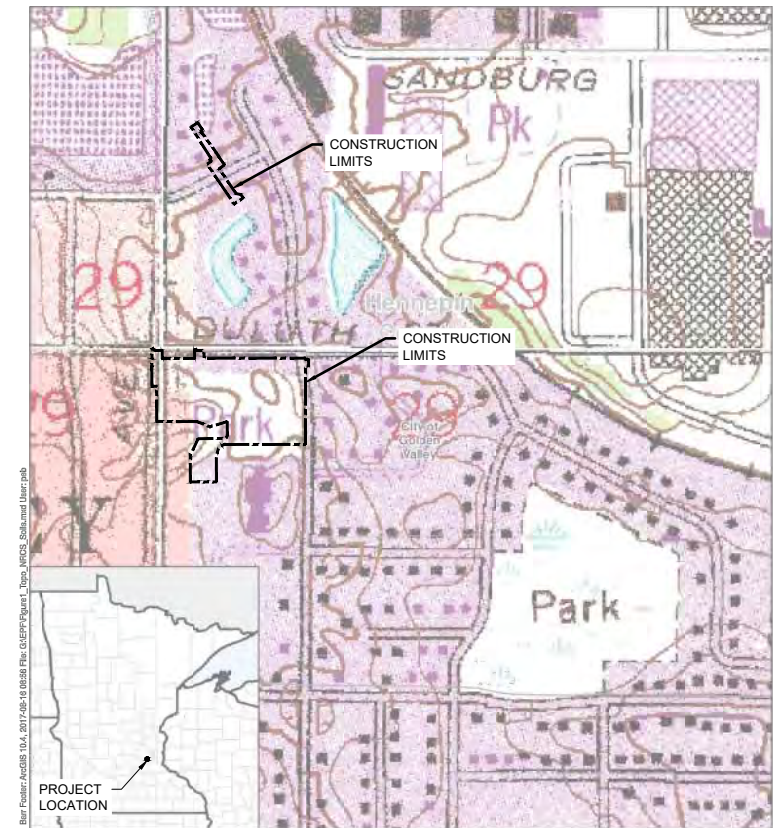
1. ALL INSPECTIONS AND MAINTENANCE ACTIVITIES MUST BE RECORDED IN WRITING WITHIN 24 HOURS OF BEING CONDUCTED AND THESE RECORDS MUST BE RETAINED WITH THE SWPPP. RECORDS OF EACH INSPECTION AND MAINTENANCE ACTIVITY SHALL INCLUDE THE DATE AND TIME; NAME OF INSPECTOR(S); FINDINGS OF INSPECTIONS; CORRECTIVE 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, DOCUMENT THE LOCATION AND APPEARANCE OF THE DISCHARGE (I.E., COLOR, ODOR, SETTLED OR SUSPENDED SOLIDS, OIL SHEEN, AND OTHER OBVIOUS INDICATORS OF POLLUTANTS), AND A PHOTOGRAPH OF THE DISCHARGE.
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 MUST BE KEPT AT THE SITE DURING CONSTRUCTION BY THE PERMITTEE 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 PERMITTEES MUST 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 NOT.

7.0 POLLUTION PREVENTION MEASURES:

1. ANY CONSTRUCTION PRODUCTS AND LANDSCAPE MATERIALS THAT HAVE THE POTENTIAL TO LEACH POLLUTANTS SHALL 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) SHALL BE STORED AND DISPOSED OF IN COMPLIANCE WITH MINNESOTA RULES CHAPTER 7045, INCLUDING SECONDARY CONTAINMENT (AS APPLICABLE). HAZARDOUS MATERIALS SHALL 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 SHALL 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 WILL BE 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 RESULT IN CONCRETE OR OTHER WASHOUT ACTIVITIES. IF NECESSARY, A DESCRIPTION OF THE STORAGE AND DISPOSAL OF CONCRETE AND OTHER WASHOUT WASTES SO THAT WASTES DO NOT CONTACT THE GROUND WILL BE ADDED. (CSW PERMIT ITEMS 2.3 AND 12.9)
 - a. THE CONTRACTOR WILL SET UP A CONCRETE WASHOUT STATION. EXAMPLES OF APPROPRIATE CONCRETE WASHOUT PRACTICES INCLUDES, BUT ARE NOT LIMITED TO:
 - PUTTING ALL WASHOUT WATER BACK INTO CONCRETE TRUCKS FOR CONCRETE VENDOR TO MANAGE AT THEIR FACILITY.
 - BRINGING IN A PORTABLE CONCRETE WASHOUT TUB AND MANAGING ALL RECOVERED WASHOUT WATER APPROPRIATELY. THE PERIMETER MUST BE PROTECTED WITH SILT FENCE.
 - MAKE A RING OF HAY BALES AND PUT A POLY LINER IN THE MIDDLE TO CREATE AN IMPERMEABLE CONTAINMENT SO THAT CONCRETE WASHOUT DOES NOT CONTACT THE GROUND. ALL MATERIALS SHALL BE REMOVED WHEN DRY.
 - BUILDING A LINED PIT USING AN IMPERMEABLE LINER. THE PIT MUST BE SIZED FOR THE AMOUNT OF EXPECTED CONCRETE WASHOUT NEEDED. THE PIT MUST BE BERMED TO PREVENT RUN-IN OF STORMWATER DURING A PRECIPITATION EVENT.
 - CONCRETE WASHOUT AREAS SHALL BE LABELED "CONCRETE WASHOUT AREA" AND "CONTRACTORS MUST UTILIZE PROPER FACILITIES FOR DISPOSAL OF CONCRETE"
 - b. THE CONCRETE WASHOUT AREA CONCRETE WASHOUT WATER FOR CONCRETE TRUCK CHUTE AND TOOLS WILL ALSO NOT TOUCH THE GROUND. THIS PAIL OF WASH WATER CAN BE PUT BACK INTO THE CONCRETE TRUCK.

8.0 PERMANENT COVER AND PERMIT TERMINATION CONDITIONS:

1. THE AREAS DISTURBED DURING CONSTRUCTION WILL BE STABILIZED WITH PERMANENT COVER UPON COMPLETION OF WORK. PERMANENT COVER MAY BE VEGETATIVE OR NON-VEGETATIVE, AS APPROPRIATE. ESTABLISHMENT OF PERMANENT COVER MAY INCLUDE THE FOLLOWING ACTIVITIES: PLACEMENT OF EROSION CONTROL BLANKET, PLACEMENT OF TURF REINFORCING MAT, UPLAND ZONE SEED MIXES AND PLUGS, WETLAND MEADOW SEED MIXES AND PLUGS, AND BITUMINOUS SURFACES. (CSW PERMIT ITEM 5.17)
2. FOR A CONSTRUCTION-SITE TO ACHIEVE "PERMANENT COVER", THE FOLLOWING REQUIREMENTS MUST BE COMPLETED PRIOR TO TERMINATION OF PERMIT COVERAGE (CSW PERMIT SECTIONS 4 AND 13):
 - a. ALL SOIL DISTURBING CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED AND PERMANENT COVER HAS BEEN INSTALLED OVER ALL AREAS. VEGETATIVE COVER CONSISTS OF A UNIFORM PERENNIAL VEGETATION WITH A DENSITY OF 70% OF ITS EXPECTED FINAL GROWTH. VEGETATION IS NOT REQUIRED WHERE THE FUNCTION OF A SPECIFIC AREA DICTATES NO VEGETATION (SUCH AS IMPERVIOUS SURFACES OR THE BASE OF A SAND FILTER).
 - b. ALL SEDIMENT HAS BEEN REMOVED FROM CONVEYANCE SYSTEMS, INCLUDING CULVERTS.
 - c. ALL TEMPORARY SYNTHETIC EROSION PREVENTION AND SEDIMENT CONTROL BMPs HAVE BEEN REMOVED. BMPs DESIGNED TO DECOMPOSE ON-SITE MAY BE LEFT IN PLACE.
3. SUBMIT A NOTICE OF TERMINATION (NOT) FORM TO THE MPCA WITHIN 30 DAYS AFTER THE TERMINATION CONDITIONS ARE COMPLETE.



CADD USER: PATRICK.E. BROCKAMP FILE: M:\DESIGN\23271900_001\23271900_00_04.DWG PLOT SCALE: 1:2,500 PLOT DATE: 10/10/2022 5:28 PM

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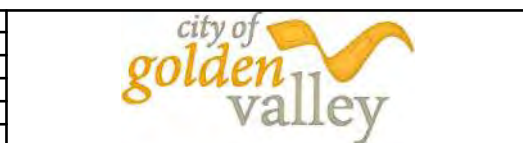
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| CONSTRUCTION RECORD | | | | | | | |
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Project Office:
BARR ENGINEERING CO.
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 www.barr.com

| Scale | AS SHOWN |
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| Date | 09/16/2022 |
| Drawn | EPF |
| Checked | PEB |
| Designed | BARR |
| Approved | JAK2 |

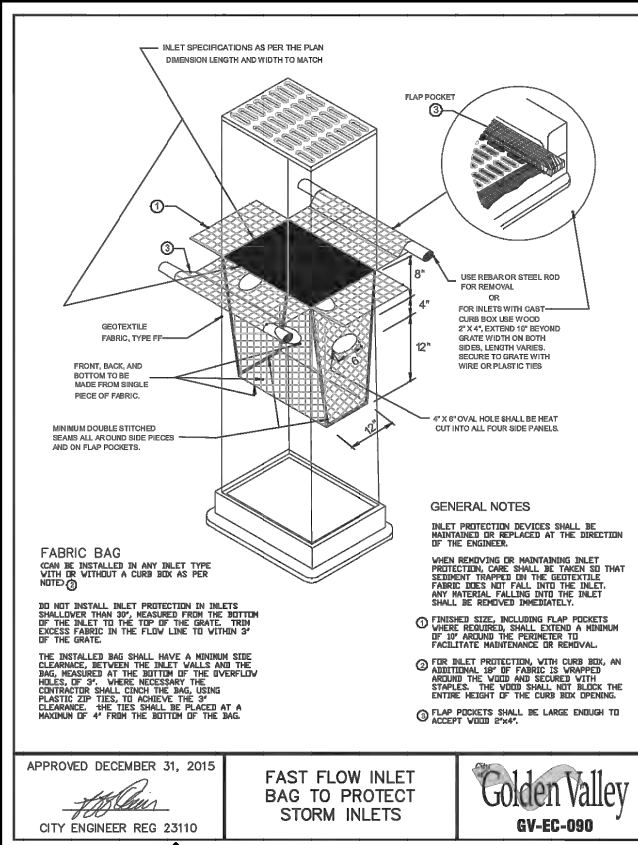


**SEA SCHOOL & WILDWOOD PARK
 FLOOD MITIGATION PROJECT**

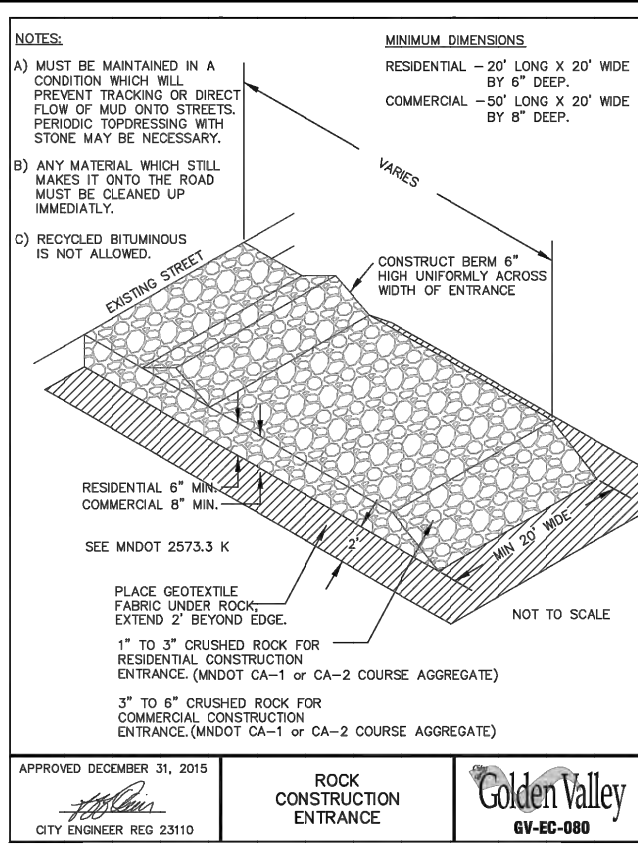
**STORMWATER POLLUTION PREVENTION PLAN
 (SWPPP)**

| | |
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| BARR PROJECT No. 23/27-1900.00 | |
| CLIENT PROJECT No. 20-27 | |
| DWG. No. G-04 | REV. No. C |

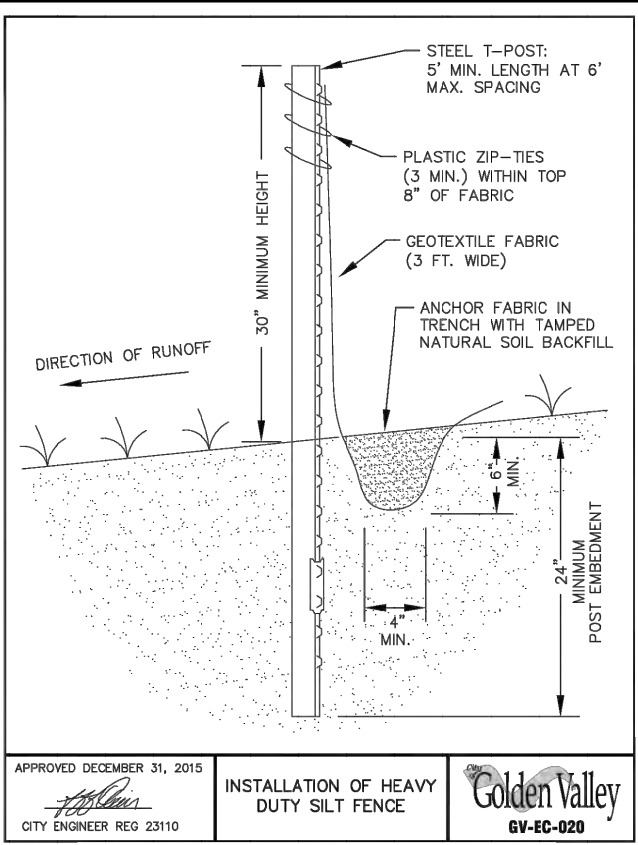
**90% DESIGN REVIEW
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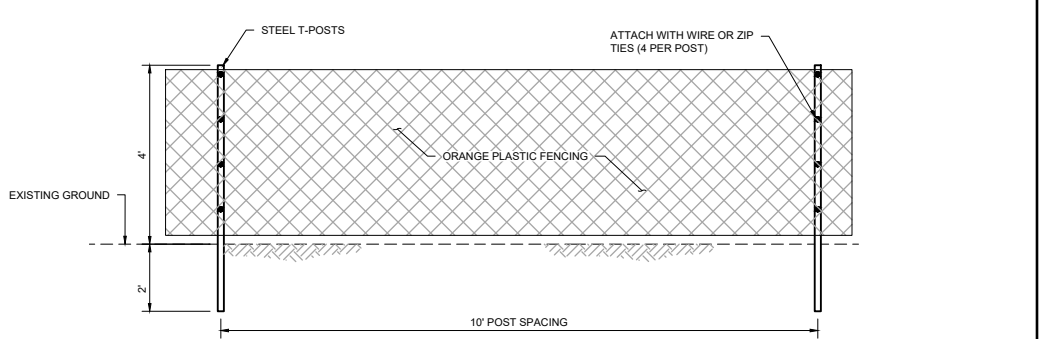
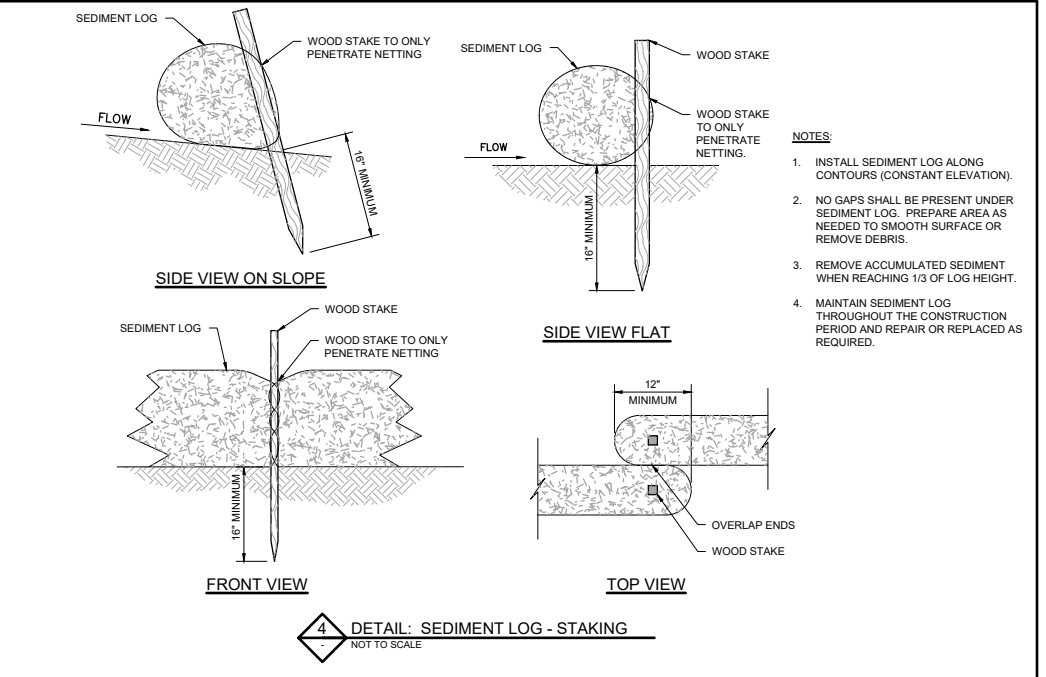
APPROVED DECEMBER 31, 2015
FAST FLOW INLET BAG TO PROTECT STORM INLETS
Golden Valley
GV-EC-090



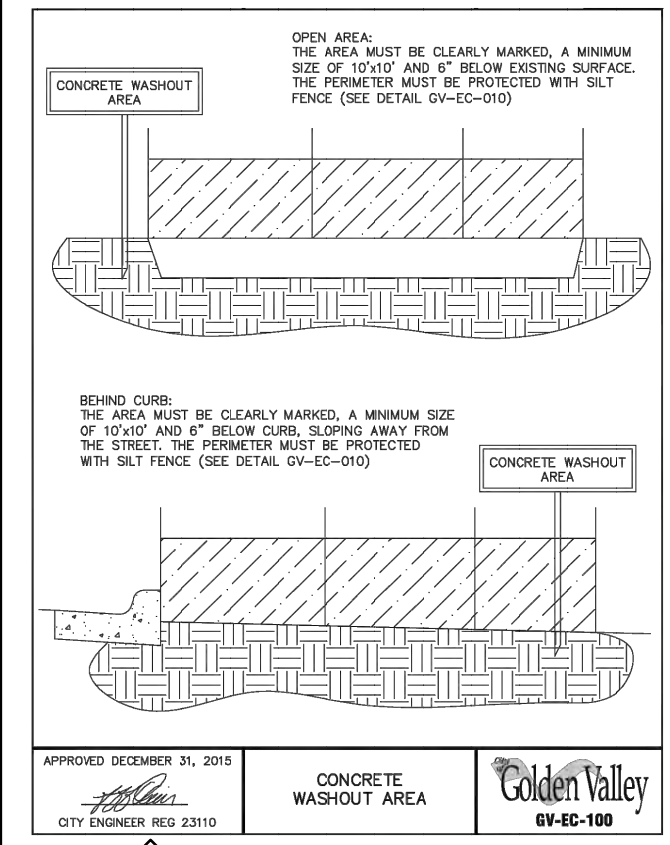
APPROVED DECEMBER 31, 2015
ROCK CONSTRUCTION ENTRANCE
Golden Valley
GV-EC-080



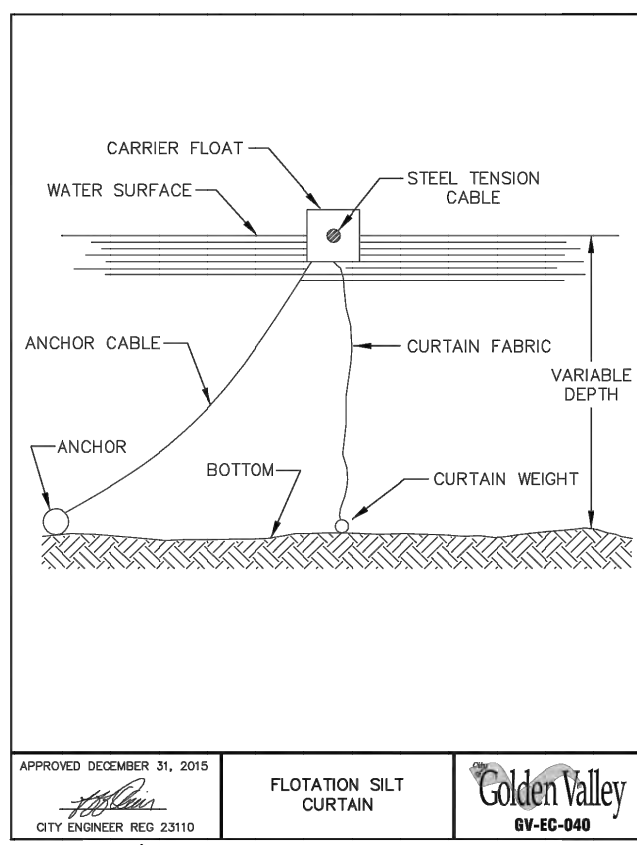
APPROVED DECEMBER 31, 2015
INSTALLATION OF HEAVY DUTY SILT FENCE
Golden Valley
GV-EC-020



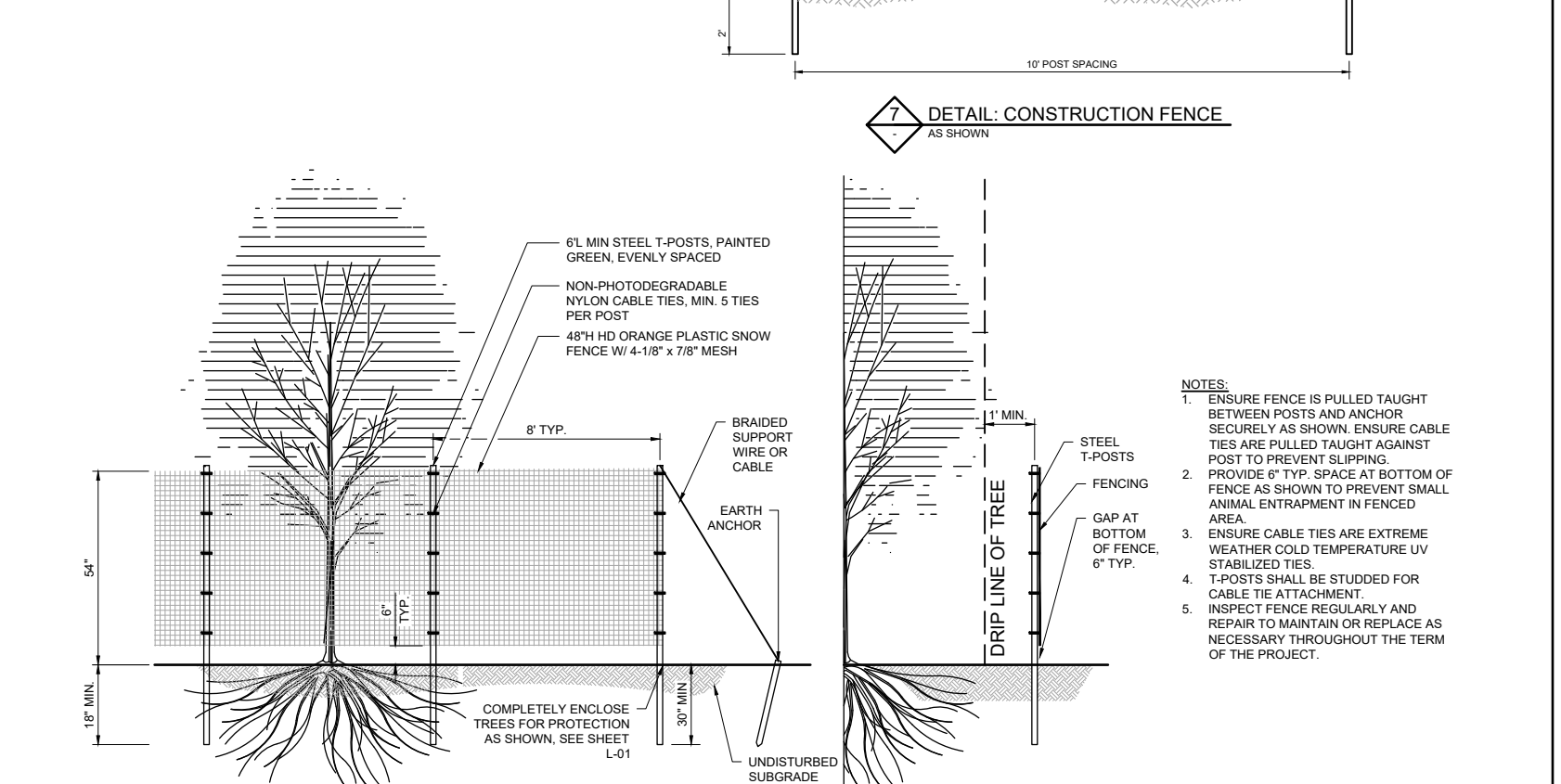
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CONSTRUCTION FENCE
Golden Valley
GV-EC-010



APPROVED DECEMBER 31, 2015
CONCRETE WASHOUT AREA
Golden Valley
GV-EC-100



APPROVED DECEMBER 31, 2015
FLOTATION SILT CURTAIN
Golden Valley
GV-EC-040



APPROVED DECEMBER 31, 2015
TREE PROTECTION FENCE
Golden Valley
GV-EC-040

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| Date | 09/16/2022 |
| Drawn | EPF |
| Checked | PEB |
| Designed | BARR |
| Approved | JAK2 |

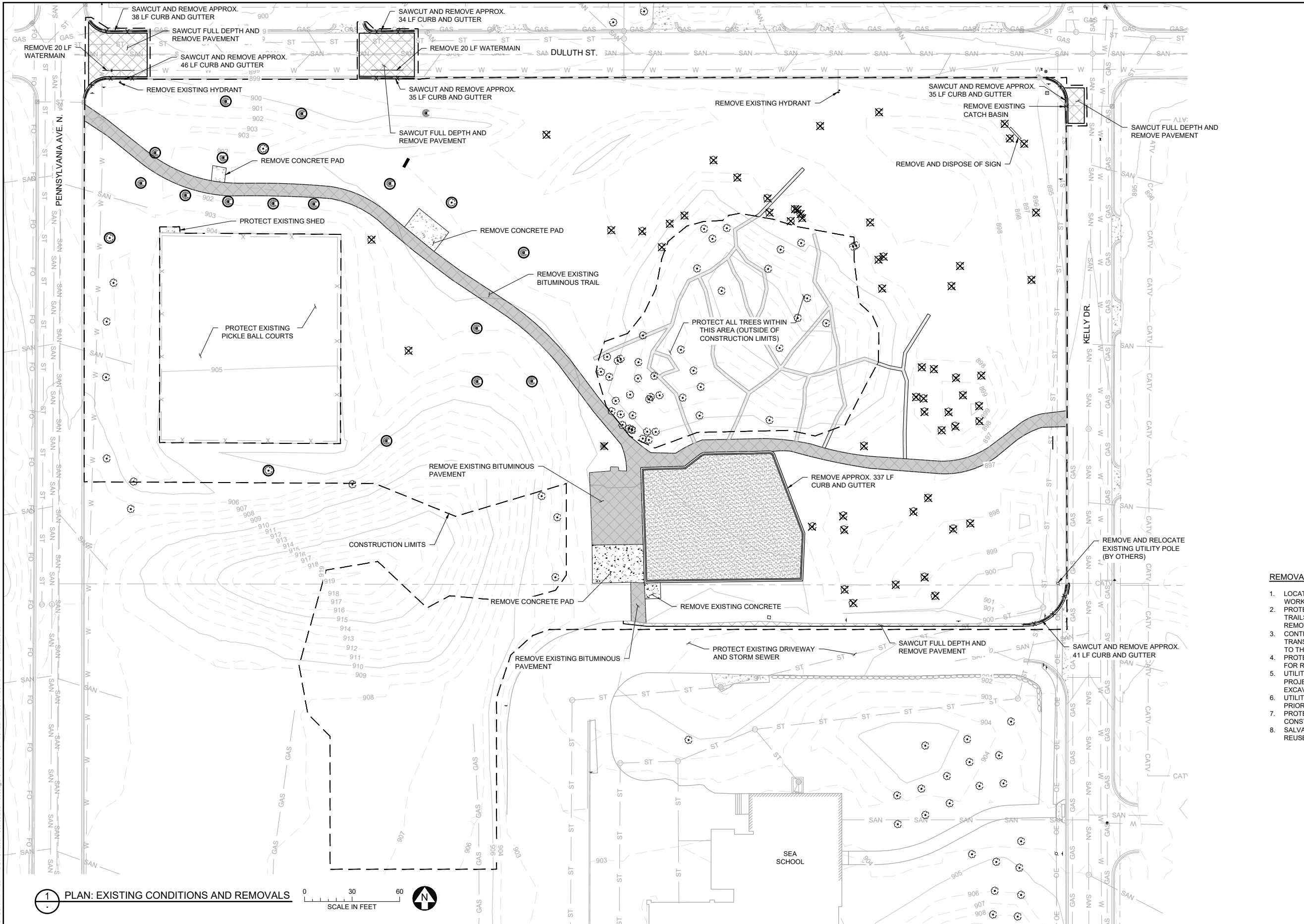


**SEA SCHOOL & WILDWOOD PARK
 FLOOD MITIGATION PROJECT**

EROSION & SEDIMENT CONTROL DETAILS

BARR PROJECT No. 23/27-1900.00
 CLIENT PROJECT No. 20-27
 DWG. No. G-05
 REV. No. C

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| SYMBOL AND PATTERN LEGEND | |
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| | EXISTING 5' CONTOUR |
| | EXISTING 1' CONTOUR |
| | EXISTING PROPERTY LINE |
| | EXISTING DRAINAGE/UTILITY EASEMENT |
| | EXISTING STORM SEWER |
| | EXISTING SANITARY SEWER |
| | EXISTING GAS LINE |
| | EXISTING WATERMAIN |
| | EXISTING FENCE |
| | EXISTING FOOTPATHS |
| | CONSTRUCTION LIMITS |
| | STORM SEWER REMOVAL |
| | AREA OF PAVEMENT SAWCUT AND REMOVAL |
| | CURB AND GUTTER REMOVAL |
| | EXISTING DECIDUOUS TREE (PROTECT) |
| | EXISTING DECIDUOUS TREE (REMOVE) |
| | EXISTING DECIDUOUS TREE (SALVAGE AND REINSTALL) |
| | EXISTING CONIFEROUS TREE (PROTECT) |
| | EXISTING CONIFEROUS TREE (REMOVE) |
| | EXISTING CONIFEROUS TREE (SALVAGE AND REINSTALL) |

- REMOVAL NOTES:**
- LOCATE AND FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO WORK. NOTIFY CITY OF ANY DISCREPANCIES.
 - PROTECT ALL EXISTING ROADS, CURBS, DRIVES, PARKING LOTS, TRAILS, FENCES, SIGNS, OR SIMILAR NOT CALLED OUT FOR REMOVAL DURING CONSTRUCTION.
 - CONTRACTOR SHALL TAKE PRECAUTIONS TO MINIMIZE THE TRANSFER OF AQUATIC AND TERRESTRIAL INVASIVE SPECIES TO THE MAXIMUM EXTENT POSSIBLE.
 - PROTECT TREES DURING CONSTRUCTION, UNLESS IDENTIFIED FOR REMOVAL OR DIRECTED BY OWNER.
 - UTILITY LOCATIONS ARE APPROXIMATE. ALL UTILITIES IN THE PROJECT AREA SHOULD BE MARKED AND POTHOLED PRIOR TO EXCAVATION.
 - UTILITY RELOCATION TO BE COORDINATED BY CONTRACTOR PRIOR TO CONSTRUCTION.
 - PROTECT ALL EXISTING UTILITIES DURING DEMOLITION AND CONSTRUCTION.
 - SALVAGE AND STOCKPILE TREES AS MARKED BY ENGINEER FOR REUSE ON SITE.

1 PLAN: EXISTING CONDITIONS AND REMOVALS

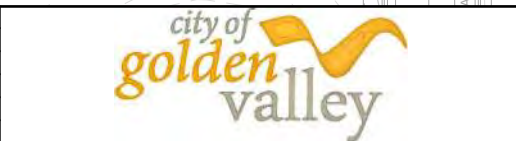


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| Drawn | EPF |
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| Designed | BARR |
| Approved | JAK2 |



**SEA SCHOOL & WILDWOOD PARK
 FLOOD MITIGATION PROJECT**
 EXISTING CONDITIONS AND REMOVALS
 SEA SCHOOL & WILDWOOD PARK

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| BARR PROJECT No. | 23/27-1900.00 |
| CLIENT PROJECT No. | 20-27 |
| DWG. No. | C-01 |
| REV. No. | C |

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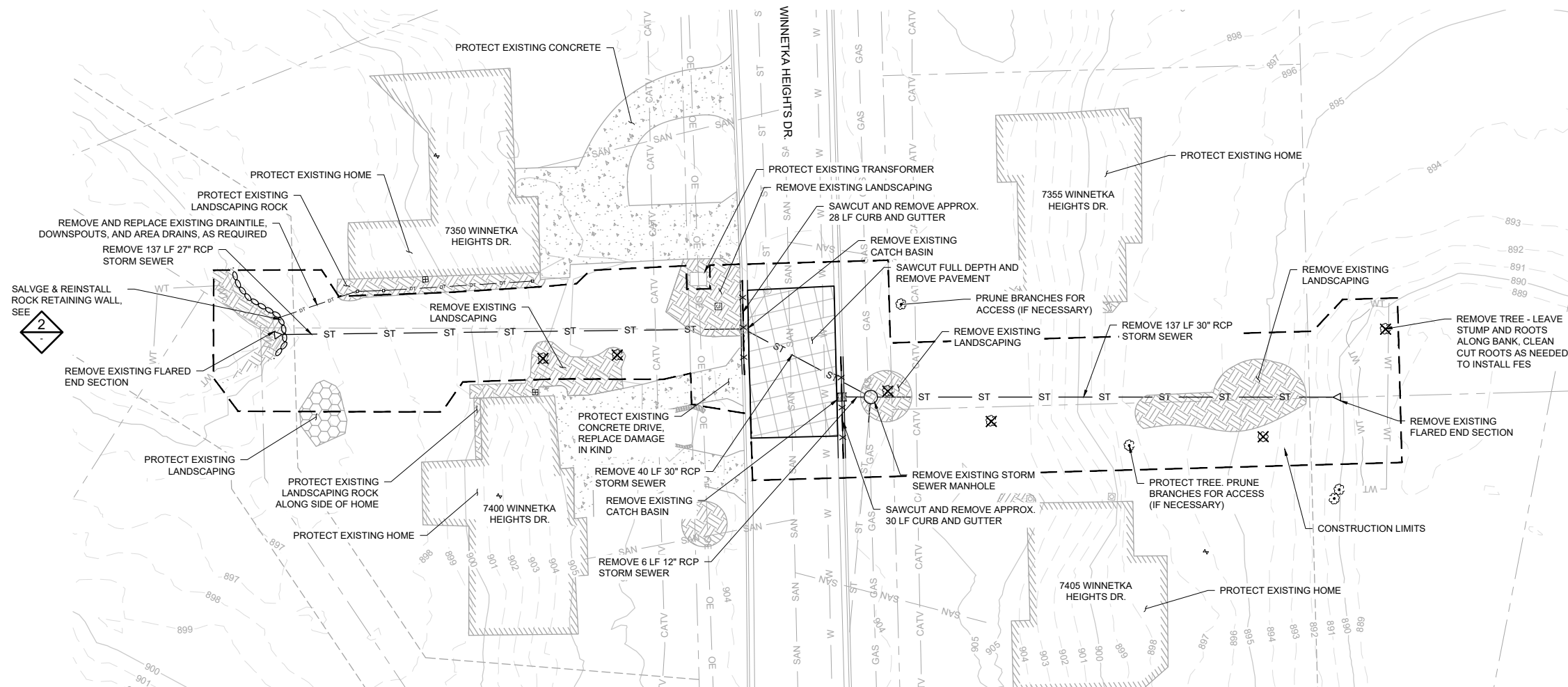
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SYMBOL AND PATTERN LEGEND

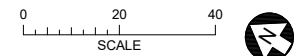
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| —995— | EXISTING 5' CONTOUR |
| —994— | EXISTING 1' CONTOUR |
| --- | EXISTING PROPERTY LINE |
| ---- | EXISTING DRAINAGE/UTILITY EASEMENT |
| WT | EXISTING WETLAND DELINEATION |
| ST | EXISTING STORM SEWER |
| SAN | EXISTING SANITARY SEWER |
| GAS | EXISTING GAS LINE |
| W | EXISTING WATERMAIN |
| UE | EXISTING UNDERGROUND ELECTRIC |
| X X | EXISTING FENCE |
| --- | CONSTRUCTION LIMITS |
| | AREA OF PAVEMENT SAWCUT AND REMOVAL |
| | CURB AND GUTTER REMOVAL |
| | EXISTING DECIDUOUS TREE (PROTECT) |
| | EXISTING DECIDUOUS TREE (REMOVE) |
| | EXISTING CONIFEROUS TREE (PROTECT) |
| | EXISTING CONIFEROUS TREE (REMOVE) |

REMOVAL NOTES:

- LOCATE AND FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO WORK. NOTIFY CITY OF ANY DISCREPANCIES.
- PROTECT ALL EXISTING ROADS, CURBS, DRIVES, PARKING LOTS, TRAILS, FENCES, SIGNS, OR SIMILAR NOT CALLED OUT FOR REMOVAL DURING CONSTRUCTION.
- CONTRACTOR SHALL TAKE PRECAUTIONS TO MINIMIZE THE TRANSFER OF AQUATIC AND TERRESTRIAL INVASIVE SPECIES TO THE MAXIMUM EXTENT POSSIBLE.
- PROTECT TREES DURING CONSTRUCTION, UNLESS IDENTIFIED FOR REMOVAL OR DIRECTED BY OWNER.
- UTILITY LOCATIONS ARE APPROXIMATE. ALL UTILITIES IN THE PROJECT AREA SHOULD BE MARKED AND POTHOLED PRIOR TO EXCAVATION.
- UTILITY RELOCATION TO BE COORDINATED BY CONTRACTOR PRIOR TO CONSTRUCTION.
- PROTECT ALL EXISTING UTILITIES DURING DEMOLITION AND CONSTRUCTION.
- DAMAGE TO TURF INCIDENTAL TO WORK SHOWN ON THIS SHEET SHALL BE REPLACED BY CONTRACTOR. MINIMIZE EXISTING TURF IMPACTS WHERE FEASIBLE. REFER TO SHEET L-02 FOR LANDSCAPE RESTORATION INFORMATION.



1 PLAN: EXISTING CONDITIONS AND REMOVALS



2 DETAIL: EXISTING ROCK RETAINING WALL
NOT TO SCALE

CADD USER: PATRICK.E. BROCKAMP FILE: M:\DESIGN\23271900_001\23271900_00_C-02.DWG PLOT SCALE: 12.5849 PLOT DATE: 10/10/2022 5:28 PM

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| LICENSE # | _____ | | | |

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| CLIENT | 04/28/22 | 08/18/22 | | | | |
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| CONSTRUCTION | | | | | | |
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| Approved | JAK2 |

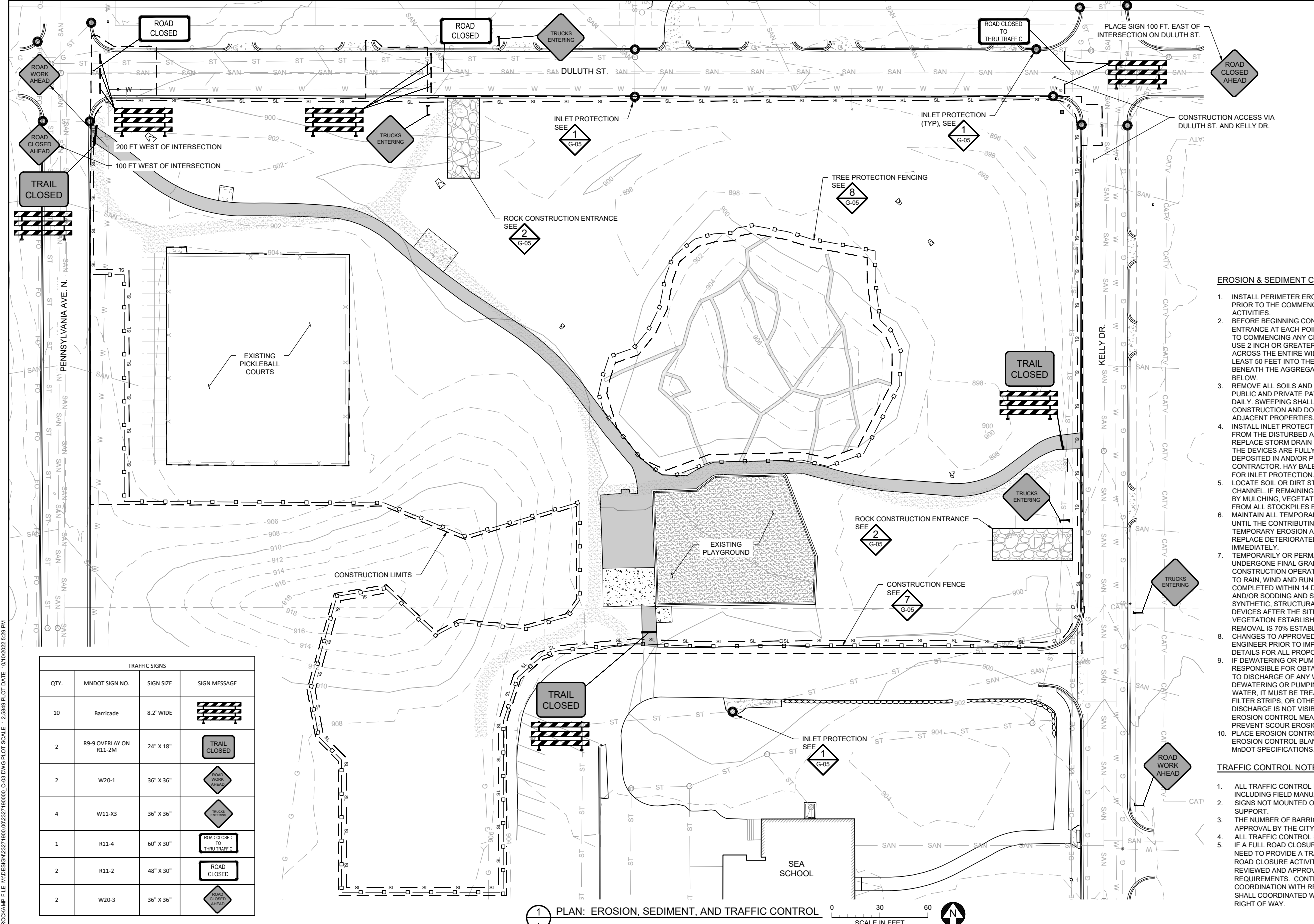


**SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT**
**EXISTING CONDITIONS AND REMOVALS
DECOLA POND D OUTLET**

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| BARR PROJECT No. 23/27-1900.00 | |
| CLIENT PROJECT No. 20-27 | |
| DWG. No. C-02 | REV. No. C |

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| SYMBOL AND PATTERN LEGEND | |
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| | EXISTING 10' CONTOUR |
| | EXISTING 2' CONTOUR |
| | EXISTING PROPERTY LINE |
| | EXISTING DRAINAGE/UTILITY EASEMENT |
| | EXISTING STORM SEWER |
| | EXISTING SANITARY SEWER |
| | EXISTING GAS LINE |
| | EXISTING WATERMAIN |
| | EXISTING FENCE |
| | CONSTRUCTION LIMITS |
| | SILT FENCE |
| | SEDIMENT CONTROL LOG |
| | CONSTRUCTION FENCE |
| | INLET PROTECTION |

- EROSION & SEDIMENT CONTROL NOTES:**
- INSTALL PERIMETER EROSION CONTROL AT THE LOCATIONS SHOWN ON THE PLANS PRIOR TO THE COMMENCEMENT OF ANY LAND DISTURBANCE OR CONSTRUCTION ACTIVITIES.
 - BEFORE BEGINNING CONSTRUCTION, INSTALL A TEMPORARY ROCK CONSTRUCTION ENTRANCE AT EACH POINT WHERE VEHICLES EXIT THE CONSTRUCTION SITE PRIOR TO COMMENCING ANY CLEARING/GRUBBING, REMOVAL, OR EARTHWORK ACTIVITIES. USE 2 INCH OR GREATER DIAMETER ROCK IN A LAYER AT LEAST 6 INCHES THICK ACROSS THE ENTIRE WIDTH OF THE ENTRANCE. EXTEND THE ROCK ENTRANCE AT LEAST 50 FEET INTO THE CONSTRUCTION ZONE USING A GEO-TEXTILE FABRIC BENEATH THE AGGREGATE TO PREVENT MIGRATION OF SOIL INTO THE ROCK FROM BELOW.
 - REMOVE ALL SOILS AND SEDIMENTS TRACKED OR OTHERWISE DEPOSITED ONTO PUBLIC AND PRIVATE PAVEMENT AREAS. AT A MINIMUM REMOVAL SHALL BE ONCE DAILY. SWEEPING SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE CONSTRUCTION AND DONE IN A MANNER TO PREVENT DUST BEING BLOWN TO ADJACENT PROPERTIES.
 - INSTALL INLET PROTECTION AT ALL 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.
 - LOCATE SOIL OR DIRT STOCKPILES NO LESS THAN 25 FEET FROM ANY 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.
 - MAINTAIN ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES IN PLACE UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED. INSPECT TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES ON A DAILY BASIS AND REPLACE DETERIORATED, DAMAGED, OR ROTTED EROSION CONTROL DEVICES IMMEDIATELY.
 - TEMPORARILY OR PERMANENTLY STABILIZE ALL CONSTRUCTION AREAS WHICH HAVE UNDERGONE FINAL GRADING, AND ALL AREAS IN WHICH GRADING OR SITE BUILDING CONSTRUCTION OPERATIONS ARE NOT ACTIVELY UNDERWAY AGAINST EROSION DUE TO RAIN, WIND AND RUNNING WATER. STABILIZATION TO BEGIN IMMEDIATELY AND BE COMPLETED WITHIN 14 DAYS. USE SEED AND MULCH, EROSION CONTROL MATTING, AND/OR SODDING AND STAKING IN GREEN SPACE AREAS. REMOVE ALL TEMPORARY SYNTHETIC, STRUCTURAL, NON-BIODEGRADABLE EROSION AND SEDIMENT CONTROL DEVICES AFTER THE SITE HAS UNDERGONE FINAL STABILIZATION WITH PERMANENT VEGETATION ESTABLISHMENT. FINAL STABILIZATION FOR PURPOSES OF THIS REMOVAL IS 70% ESTABLISHED COVER OVER DENUDED AREA.
 - CHANGES TO APPROVED EROSION CONTROL PLAN MUST BE APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION. CONTRACTOR TO PROVIDE INSTALLATION AND DETAILS FOR ALL PROPOSED ALTERNATE TYPE DEVICES.
 - IF DEWATERING OR PUMPING OF WATER IS NECESSARY, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY 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.
 - PLACE EROSION CONTROL BLANKET ON ALL DISTURBED SLOPES 4H:1V AND STEEPER. EROSION CONTROL BLANKET MUST BE 2-SIDED WITH NATURAL NETTING, MEETING MNDOT SPECIFICATIONS.

- TRAFFIC CONTROL NOTES:**
- ALL TRAFFIC CONTROL DEVICES AND SIGNAGE SHALL CONFORM TO THE MN MUTCD, INCLUDING FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
 - SIGNS NOT MOUNTED ON BARRICADES SHALL BE MOUNTED ON A TEMPORARY SUPPORT.
 - THE NUMBER OF BARRICADES REQUIRED AND PLACEMENT WILL BE SUBJECT TO APPROVAL BY THE CITY.
 - ALL TRAFFIC CONTROL SIGNS SHALL BE PLACED AND MAINTAINED BY CONTRACTOR. IF A FULL ROAD CLOSURE IS NECESSARY TO COMPLETE WORK, CONTRACTOR WILL NEED TO PROVIDE A TRAFFIC CONTROL PLAN INCLUDING A SCHEDULE/DATES FOR ROAD CLOSURE ACTIVITIES AND DETOUR ROUTES, AND EXTRA SIGNAGE TO BE REVIEWED AND APPROVED BY CITY. SIGNAGE MUST MEET MN MUTCD REQUIREMENTS. CONTRACTOR SHALL COORDINATE WITH CITY REGARDING COORDINATION WITH RESIDENTS/NOTIFICATIONS. ADDITIONALLY, CONTRACTOR SHALL COORDINATE WITH MNDOT/COUNTY IF THEY ARE PROPOSING SIGNS IN THEIR RIGHT OF WAY.

| TRAFFIC SIGNS | | | |
|---------------|------------------------|-----------|--------------|
| QTY. | MNDOT SIGN NO. | SIGN SIZE | SIGN MESSAGE |
| 10 | Barricade | 8.2' WIDE | |
| 2 | R9-9 OVERLAY ON R11-2M | 24" X 18" | |
| 2 | W20-1 | 36" X 36" | |
| 4 | W11-X3 | 36" X 36" | |
| 1 | R11-4 | 60" X 30" | |
| 2 | R11-2 | 48" X 30" | |
| 2 | W20-3 | 36" X 36" | |

1 PLAN: EROSION, SEDIMENT, AND TRAFFIC CONTROL

SCALE IN FEET

0 30 60

| NO. | BY | CHK | APP. | DATE | REVISION DESCRIPTION |
|-----|----|-----|------|------|----------------------|
| | | | | | |

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 # _____

| CLIENT AGENCY | 04/28/22 | 08/18/22 | | | | |
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| BID | 08/23/22 | | | | | |
| CONSTRUCTION RECORD | | | | | | |
| RELEASED TO/FOR | A | B | C | 0 | 1 | 2 |
| DATE RELEASED | | | | | | |

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

Project Office:
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 Ph: 1-800-632-2277
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 www.barr.com

| Scale | AS SHOWN |
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| Date | 09/16/2022 |
| Drawn | EPF |
| Checked | PEB |
| Designed | BARR |
| Approved | JAK2 |



| | | |
|--|----------------------|--|
| SEA SCHOOL & WILDWOOD PARK FLOOD MITIGATION PROJECT | | BARR PROJECT No. 23/27-1900.00 |
| EROSION, SEDIMENT, AND TRAFFIC CONTROL SEA SCHOOL & WILDWOOD PARK | | CLIENT PROJECT No. 20-27 |
| DWG. No. C-03 | REV. No. C | |

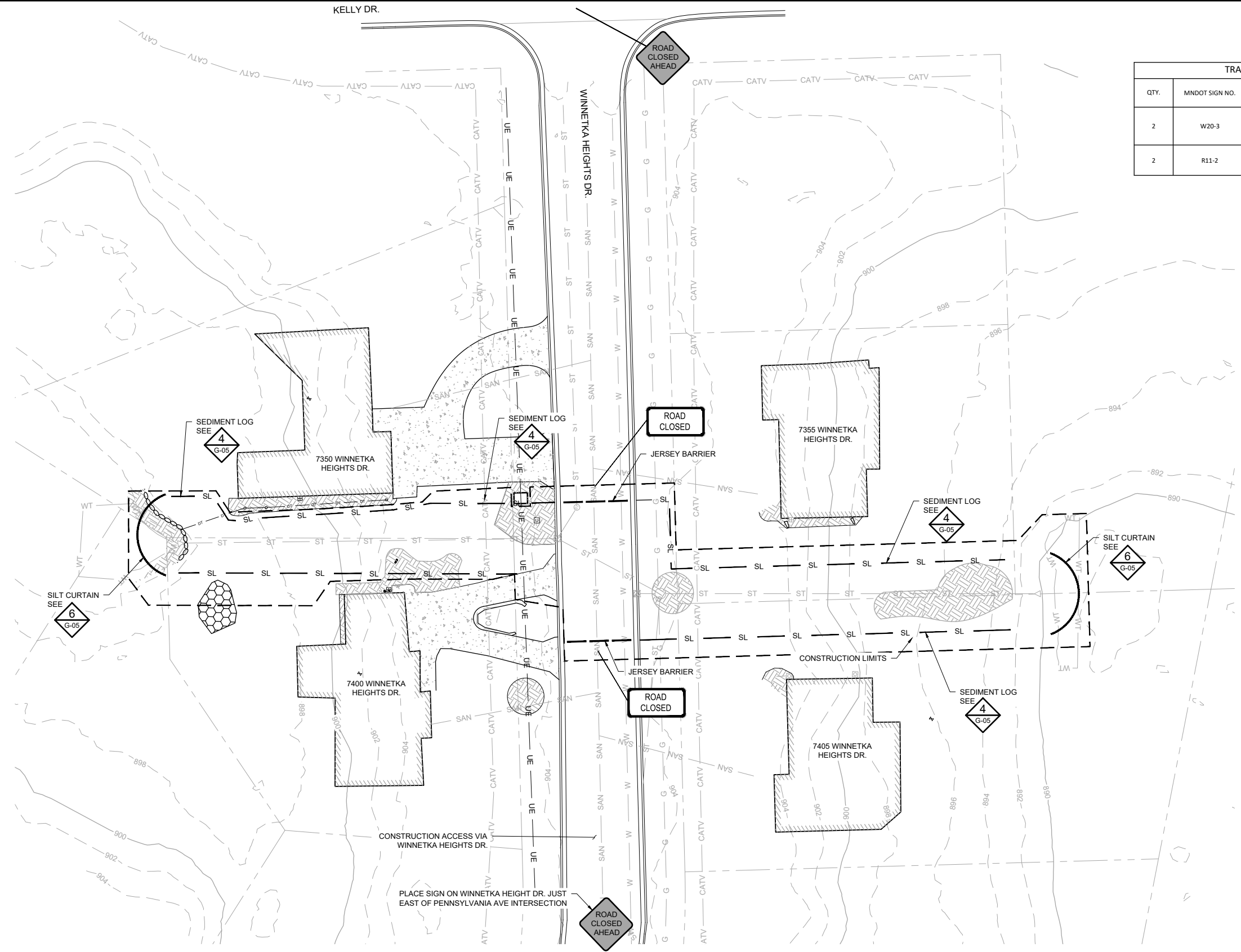
**90% DESIGN REVIEW
NOT FOR CONSTRUCTION**

KELLY DR.

SYMBOL AND PATTERN LEGEND

| | | |
|-----|-----|------------------------------------|
| --- | 996 | EXISTING 10' CONTOUR |
| --- | 994 | EXISTING 2' CONTOUR |
| --- | | EXISTING PROPERTY LINE |
| --- | | EXISTING DRAINAGE/UTILITY EASEMENT |
| WT | | EXISTING WETLAND DELINEATION |
| SS | | EXISTING STORM SEWER |
| SAN | | EXISTING SANITARY SEWER |
| GAS | | EXISTING GAS LINE |
| W | | EXISTING WATERMAIN |
| X-X | | EXISTING FENCE |
| --- | | CONSTRUCTION LIMITS |
| ○ | | SILT FENCE |
| — | SL | SEDIMENT CONTROL LOG |

| TRAFFIC SIGNS | | | |
|---------------|----------------|-----------|--------------|
| QTY. | MNDOT SIGN NO. | SIGN SIZE | SIGN MESSAGE |
| 2 | W20-3 | 36" X 36" | |
| 2 | R11-2 | 60" X 30" | |



EROSION & SEDIMENT CONTROL NOTES:

- INSTALL PERIMETER EROSION CONTROL AT THE LOCATIONS SHOWN ON THE PLANS PRIOR TO THE COMMENCEMENT OF ANY LAND DISTURBANCE OR CONSTRUCTION ACTIVITIES.
- BEFORE BEGINNING CONSTRUCTION, INSTALL A TEMPORARY ROCK CONSTRUCTION ENTRANCE AT EACH POINT WHERE VEHICLES EXIT THE CONSTRUCTION SITE PRIOR TO COMMENCING ANY CLEARING/GRUBBING, REMOVAL, OR EARTHWORK ACTIVITIES. USE 2 INCH OR GREATER DIAMETER ROCK IN A LAYER AT LEAST 6 INCHES THICK ACROSS THE ENTIRE WIDTH OF THE ENTRANCE. EXTEND THE ROCK ENTRANCE AT LEAST 50 FEET INTO THE CONSTRUCTION ZONE USING A GEO-TEXTILE FABRIC BENEATH THE AGGREGATE TO PREVENT MIGRATION OF SOIL INTO THE ROCK FROM BELOW.
- REMOVE ALL SOILS AND SEDIMENTS TRACKED OR OTHERWISE DEPOSITED ONTO PUBLIC AND PRIVATE PAVEMENT AREAS. AT A MINIMUM REMOVAL SHALL BE ONCE DAILY. SWEEPING SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE CONSTRUCTION AND DONE IN A MANNER TO PREVENT DUST BEING BLOWN TO ADJACENT PROPERTIES.
- INSTALL INLET PROTECTION AT ALL 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.
- LOCATE SOIL OR DIRT STOCKPILES NO LESS THAN 25 FEET FROM ANY 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.
- MAINTAIN ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES IN PLACE UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED. INSPECT TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES ON A DAILY BASIS AND REPLACE DETERIORATED, DAMAGED, OR ROTTED EROSION CONTROL DEVICES IMMEDIATELY.
- TEMPORARILY OR PERMANENTLY STABILIZE ALL CONSTRUCTION AREAS WHICH HAVE UNDERGONE FINAL GRADING, AND ALL AREAS IN WHICH GRADING OR SITE BUILDING CONSTRUCTION OPERATIONS ARE NOT ACTIVELY UNDERWAY AGAINST EROSION DUE TO RAIN, WIND AND RUNNING WATER. STABILIZATION TO BEGIN IMMEDIATELY AND BE COMPLETED WITHIN 14 DAYS. USE SEED AND MULCH, EROSION CONTROL MATTING, AND/OR SODDING AND STAKING IN GREEN SPACE AREAS. REMOVE ALL TEMPORARY SYNTHETIC, STRUCTURAL, NON-BIODEGRADABLE EROSION AND SEDIMENT CONTROL DEVICES AFTER THE SITE HAS UNDERGONE FINAL STABILIZATION WITH PERMANENT VEGETATION ESTABLISHMENT. FINAL STABILIZATION FOR PURPOSES OF THIS REMOVAL IS 70% ESTABLISHED COVER OVER DENUDEED AREA.
- CHANGES TO APPROVED EROSION CONTROL PLAN MUST BE APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION. CONTRACTOR TO PROVIDE INSTALLATION AND DETAILS FOR ALL PROPOSED ALTERNATE TYPE DEVICES.
- IF DEWATERING OR PUMPING OF WATER IS NECESSARY, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY 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.
- PLACE EROSION CONTROL BLANKET ON ALL DISTURBED SLOPES 4H:1V AND STEEPER. EROSION CONTROL BLANKET MUST BE 2-SIDED WITH NATURAL NETTING, MEETING MNDOT SPECIFICATIONS.

TRAFFIC CONTROL NOTES:

- ALL TRAFFIC CONTROL DEVICES AND SIGNAGE SHALL CONFORM TO THE MN MUTCD, INCLUDING FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
- SIGNS NOT MOUNTED ON BARRICADES SHALL BE MOUNTED ON A TEMPORARY SUPPORT.
- THE NUMBER OF BARRICADES REQUIRED AND PLACEMENT WILL BE SUBJECT TO APPROVAL BY THE CITY.
- ALL TRAFFIC CONTROL SIGNS SHALL BE PLACED AND MAINTAINED BY CONTRACTOR.
- IF A FULL ROAD CLOSURE IS NECESSARY TO COMPLETE WORK, CONTRACTOR WILL NEED TO PROVIDE A TRAFFIC CONTROL PLAN INCLUDING A SCHEDULE/DATES FOR ROAD CLOSURE ACTIVITIES AND DETOUR ROUTES, AND AND EXTRA SIGNAGE TO BE REVIEWED AND APPROVED BY CITY. SIGNAGE MUST MEET MN MUTCD REQUIREMENTS. CONTRACTOR SHALL COORDINATED WITH CITY REGARDING COORDINATION WITH RESIDENTS/NOTIFICATIONS. ADDITIONALLY, CONTRACTOR SHALL COORDINATED WITH MNDOT/COUNTY IF THEY ARE PROPOSING SIGNS IN THEIR RIGHT OF WAY.

1 PLAN: EROSION, SEDIMENT, AND TRAFFIC CONTROL
SCALE IN FEET

CADD USER: PATRICK.E. BROCKAMP FILE: M:\DESIGN\23271900_001\23271900_001.DWG PLOT SCALE: 12.5849 PLOT DATE: 10/10/2022 5:29 PM

90% DESIGN REVIEW
NOT FOR CONSTRUCTION

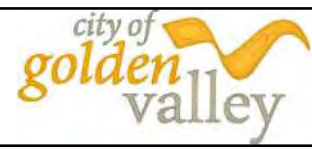
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| I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. | | | | |
| PRINTED NAME | | | | |
| SIGNATURE | | | | |
| DATE | LICENSE # | | | |

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| CLIENT | 04/28/22 | 08/18/22 | | | | |
| AGENCY | | 08/23/22 | | | | |
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| RECORD | | | | | | |
| RELEASED TO/FOR | A | B | C | 0 | 1 | 2 |
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Project Office:
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Suite 200
MINNEAPOLIS, MN 55435

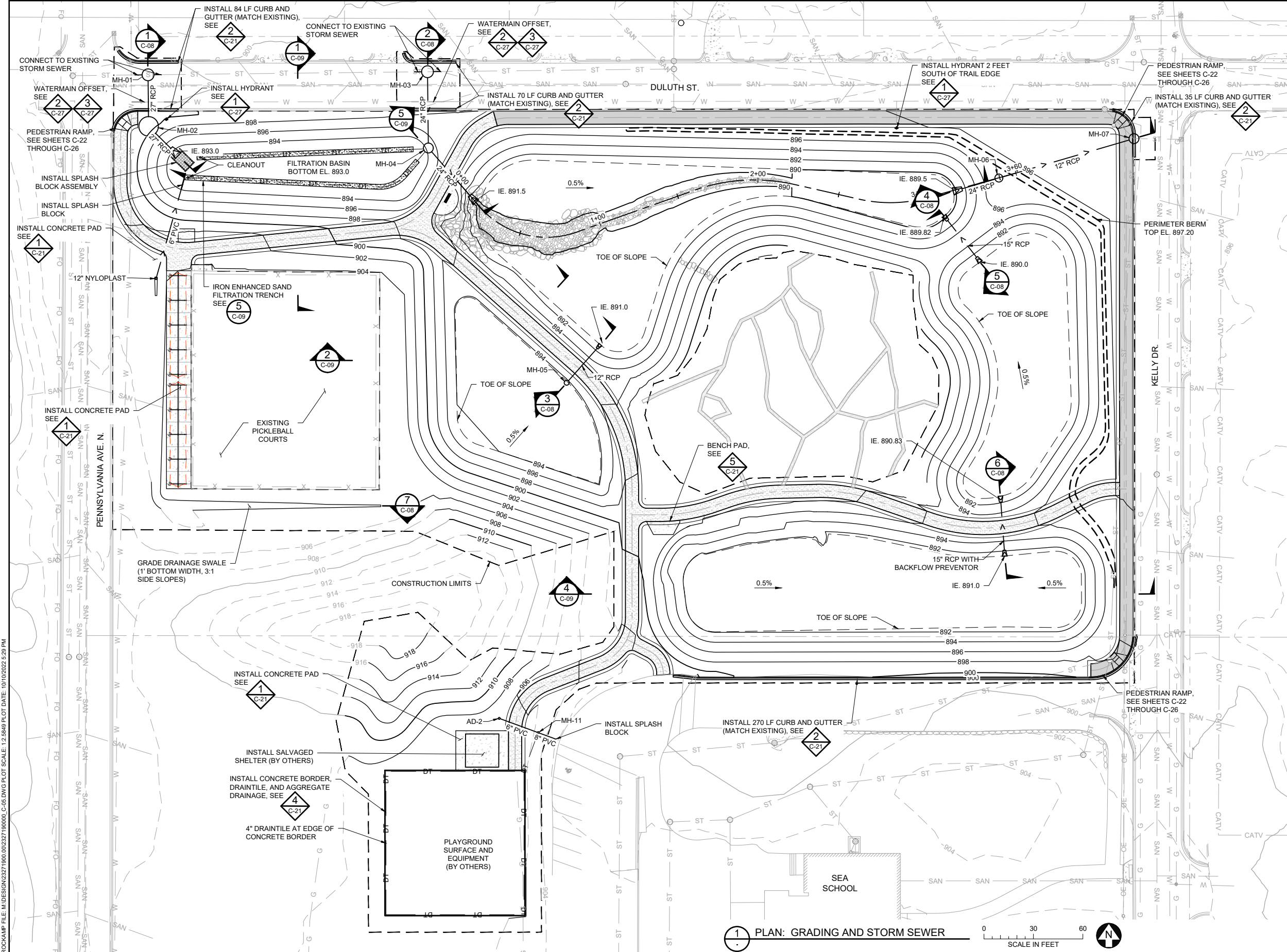
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| Date | 09/16/2022 |
| Drawn | EPF |
| Checked | PEB |
| Designed | BARR |
| Approved | JAK2 |



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| SEA SCHOOL / WILDWOOD PARK FLOOD MITIGATION PROJECT | |
| EROSION, SEDIMENT, AND TRAFFIC CONTROL DECOLA POND D OUTLET | |

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|--------------------|---------------|
| BARR PROJECT No. | 23/27-1900.00 |
| CLIENT PROJECT No. | 20-27 |
| DWG. No. | C-04 |
| REV. No. | C |



SYMBOL AND PATTERN LEGEND

| | |
|-----|-------------------------|
| --- | EXISTING 10' CONTOUR |
| --- | EXISTING 2' CONTOUR |
| --- | EXISTING PROPERTY LINE |
| ST | EXISTING STORM SEWER |
| SAN | EXISTING SANITARY SEWER |
| GAS | EXISTING GAS LINE |
| W | EXISTING WATERMAIN |
| X-X | EXISTING FENCE |
| --- | CONSTRUCTION LIMITS |
| --- | PROPOSED 10' CONTOUR |
| --- | PROPOSED 2' CONTOUR |
| > | PROPOSED STORM SEWER |

- NOTES:**
1. CONTRACTOR IS RESPONSIBLE TO LOCATE AND FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO WORK.
 2. ALL EXISTING ROADS, PARKING LOTS, TRAILS, FENCES, SIGNS, OR SIMILAR SHALL BE PROTECTED DURING CONSTRUCTION. CONTRACTOR RESPONSIBLE TO COORDINATE SURVEYS WITH OWNER TO DOCUMENT PRE-CONSTRUCTION EXISTING CONDITION ISSUES.
 3. CONSTRUCTION LIMITS AS SHOWN ARE APPROXIMATE FINAL CONSTRUCTION LIMITS TO BE COORDINATED WITH THE OWNER AND STAKED IN THE FIELD.
 4. SOIL SURFACES COMPACTED DURING CONSTRUCTION MUST BE DECOMPACTED TO A SOIL COMPACTING PRESSURE OF LESS THAN 1400 KILOPASCALS OR 200 POUNDS PER SQUARE INCH IN THE UPPER 1 INCH OF SOIL.
 5. SEE SHEET L-01 FOR PLANTING SCHEDULE AND SITE RESTORATION DETAILS.

1 PLAN: GRADING AND STORM SEWER
SCALE IN FEET

90% DESIGN REVIEW
NOT FOR CONSTRUCTION

| NO. | BY | CHK | APP. | DATE | REVISION DESCRIPTION |
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SIGNATURE: _____
DATE: _____ LICENSE # _____

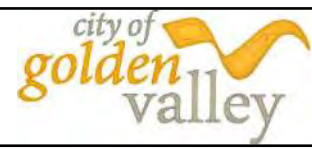
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| CLIENT | 04/28/22 | 08/18/22 | | | | | |
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| DATE RELEASED | | | | | | | |

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BARR

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| Scale | AS SHOWN |
| Date | 09/16/2022 |
| Drawn | EPF |
| Checked | PEB |
| Designed | BARR |
| Approved | JAK2 |



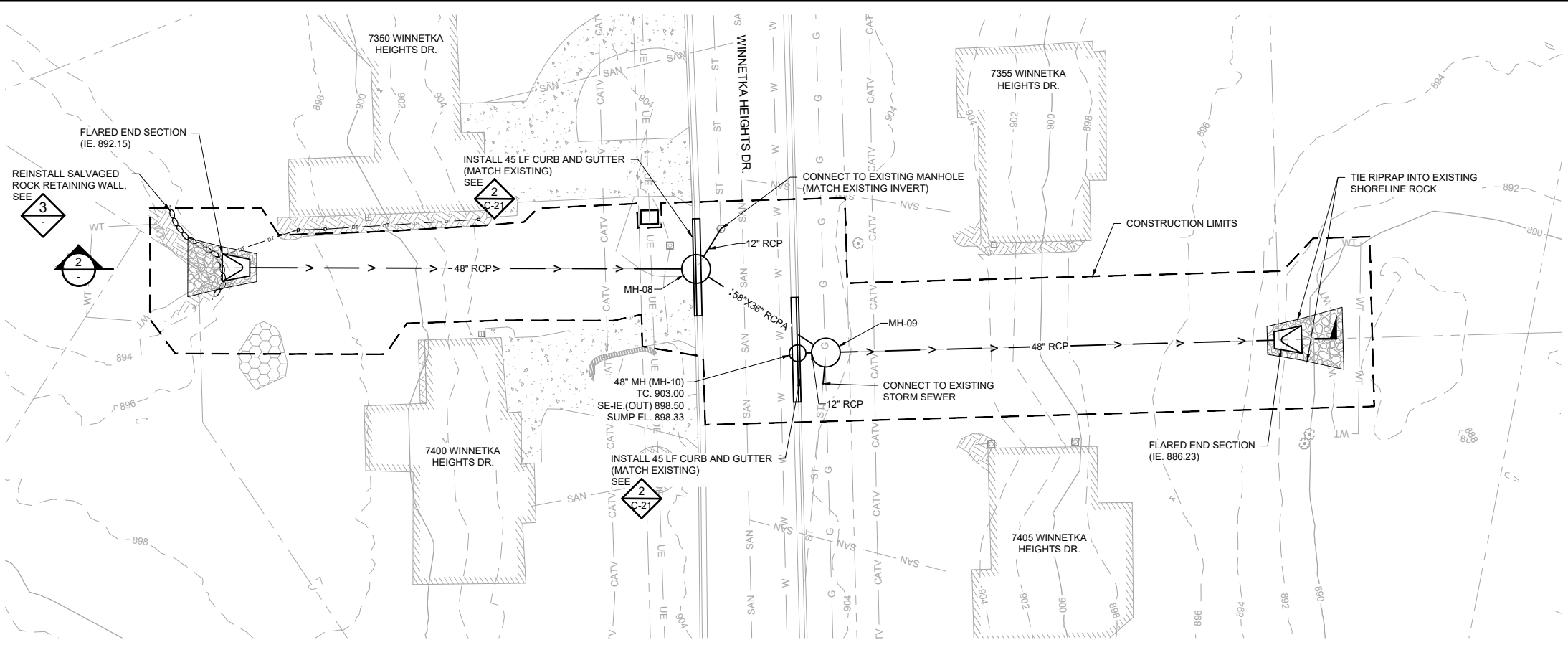
SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

GRADING, STORM SEWER, AND UTILITIES PLAN
SEA SCHOOL & WILDWOOD PARK

| | |
|--------------------|---------------|
| BARR PROJECT No. | 23/27-1900.00 |
| CLIENT PROJECT No. | 20-27 |
| DWG. No. | C-05 |
| REV. No. | C |

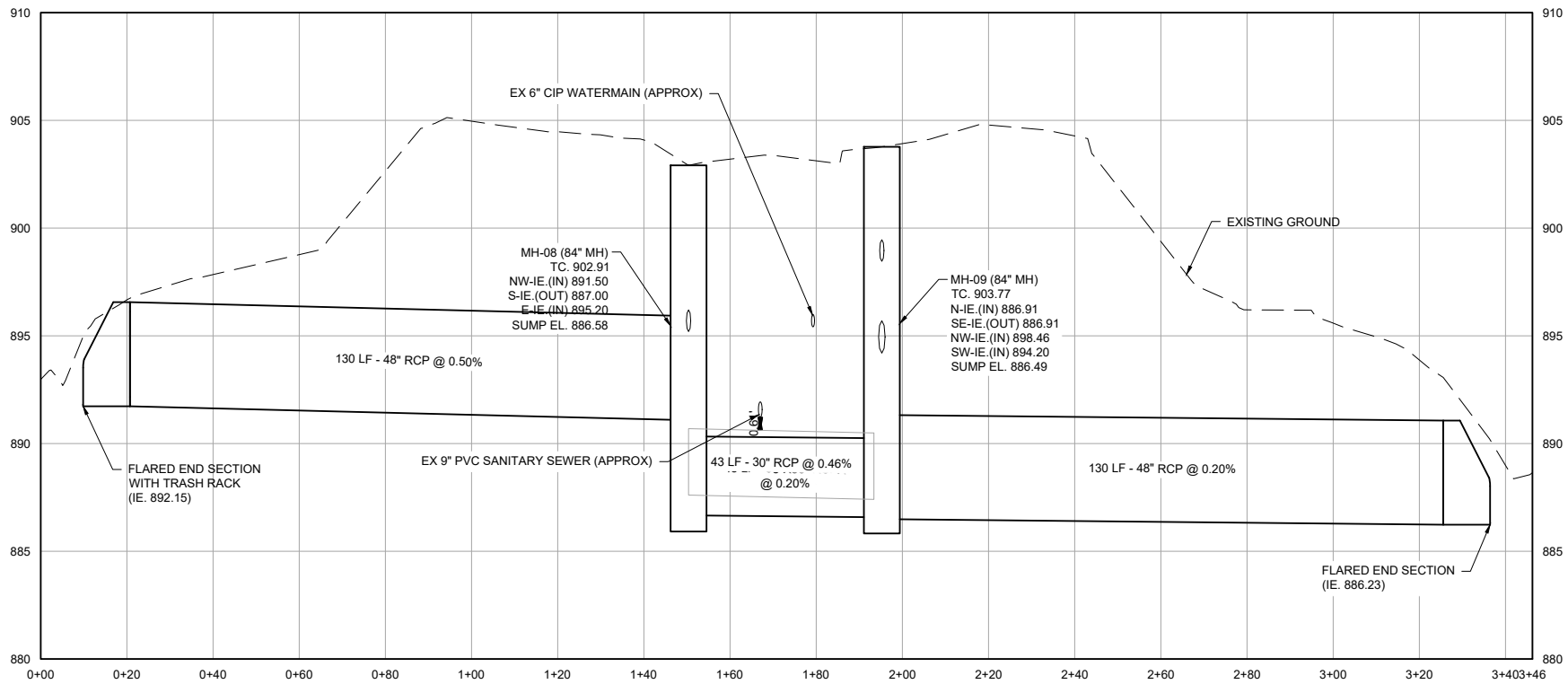
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| SYMBOL AND PATTERN LEGEND | |
|---------------------------|------------------------------|
| —996— | EXISTING 10' CONTOUR |
| —994— | EXISTING 2' CONTOUR |
| - - - - | EXISTING PROPERTY LINE |
| WT | EXISTING WETLAND DELINEATION |
| SS | EXISTING STORM SEWER |
| SAN | EXISTING SANITARY SEWER |
| GAS | EXISTING GAS LINE |
| W | EXISTING WATERMAIN |
| X - X | EXISTING FENCE |
| - - - - | CONSTRUCTION LIMITS |
| —996— | PROPOSED 10' CONTOUR |
| —994— | PROPOSED 2' CONTOUR |
| ->->- | PROPOSED STORM SEWER |



1 PLAN: GRADING AND STORM SEWER

- NOTES:
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 - SEE SHEET L-02 FOR PLANTING SCHEDULE AND SITE RESTORATION DETAILS.



2 PROFILE: DECOLA POND D OUTLET



3 DETAIL: EXISTING ROCK RETAINING WALL NOT TO SCALE

90% DESIGN REVIEW
NOT FOR CONSTRUCTION

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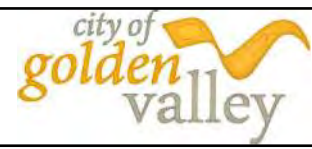
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| CONSTRUCTION | | | | | |
| RECORD | | | | | |
| RELEASED TO/FOR | A | B | C | 0 | 1 |
| DATE RELEASED | | | | | |

Project Office:
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4300 MARKETPOINTE DRIVE
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MINNEAPOLIS, MN 55435

BARR

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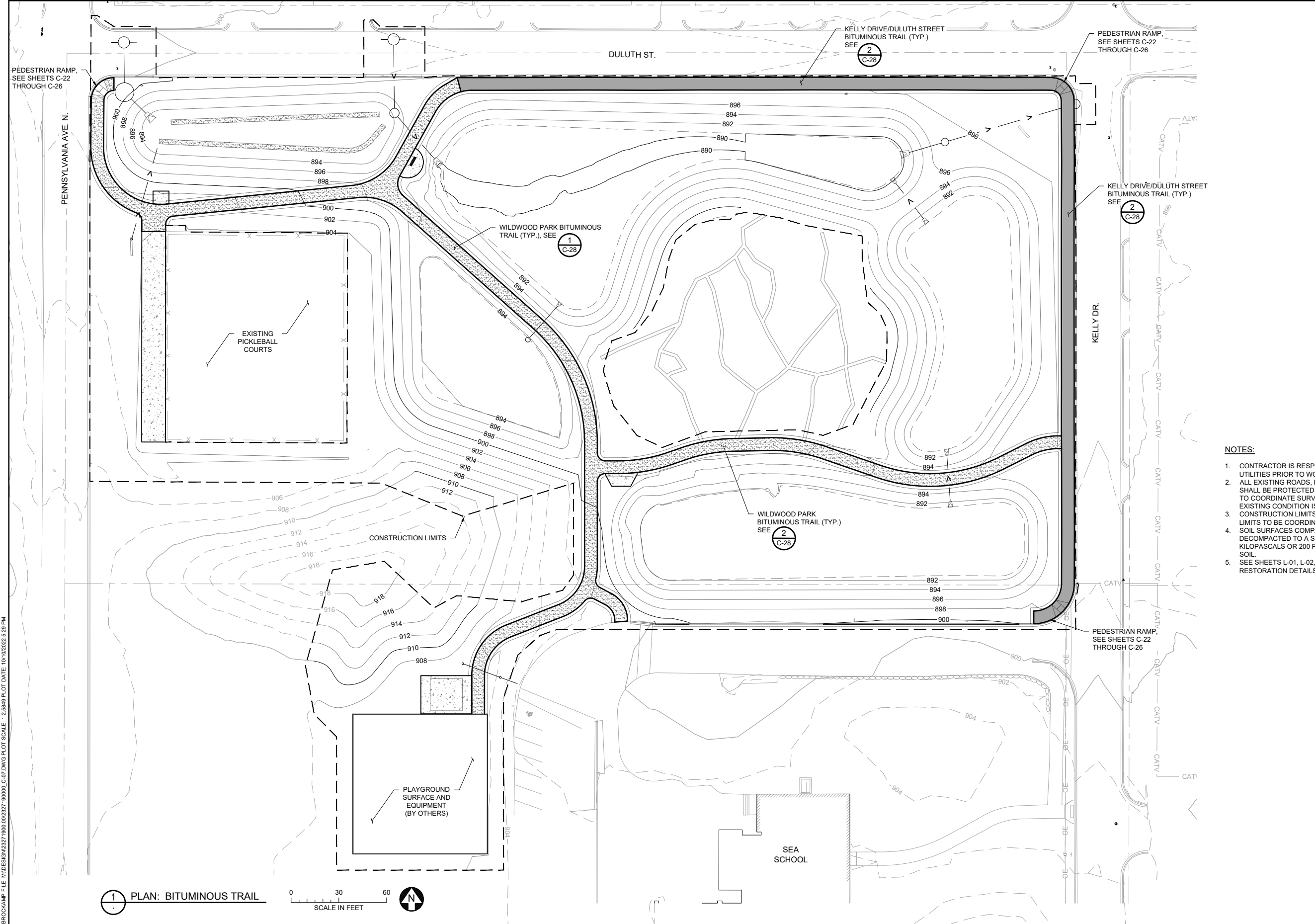
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| Checked | PEB |
| Designed | BARR |
| Approved | JAK2 |



SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

GRADING AND STORM SEWER PLAN
DECOLA POND D OUTLET

| | |
|--------------------|---------------|
| BARR PROJECT No. | 23/27-1900.00 |
| CLIENT PROJECT No. | 20-27 |
| DWG. No. | C-06 |
| REV. No. | C |



SYMBOL AND PATTERN LEGEND

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| | EXISTING 10' CONTOUR |
| | EXISTING 2' CONTOUR |
| | EXISTING PROPERTY LINE |
| | EXISTING STORM SEWER |
| | EXISTING SANITARY SEWER |
| | EXISTING GAS LINE |
| | EXISTING WATERMAIN |
| | EXISTING FENCE |
| | CONSTRUCTION LIMITS |
| | PROPOSED 10' CONTOUR |
| | PROPOSED 2' CONTOUR |
| | PROPOSED STORM SEWER |
| | PROPOSED KELLY DRIVE/DULUTH STREET BITUMINOUS TRAIL |
| | PROPOSED WILDWOOD PARK BITUMINOUS TRAIL |
| | PROPOSED CONCRETE PAD |
| | PROPOSED PEDESTRIAN RAMP |

- NOTES:**
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 - SEE SHEETS L-01, L-02, AND L-03 FOR PLANTING SCHEDULE AND SITE RESTORATION DETAILS.

1 PLAN: BITUMINOUS TRAIL

0 30 60
SCALE IN FEET

CADD USER: PATRICK E. BROCKAMP FILE: M:\DESIGN\23271900_00\23271900_00_C-07.DWG PLOT SCALE: 1/2"=8'-0" PLOT DATE: 10/10/2022 5:28 PM

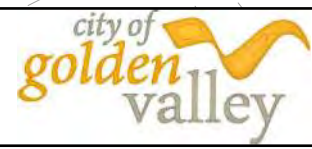
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| PRINTED NAME | SIGNATURE | DATE | LICENSE # | |

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| CLIENT | 04/28/22 | 08/18/22 | | | | |
| AGENCY | | 08/23/22 | | | | |
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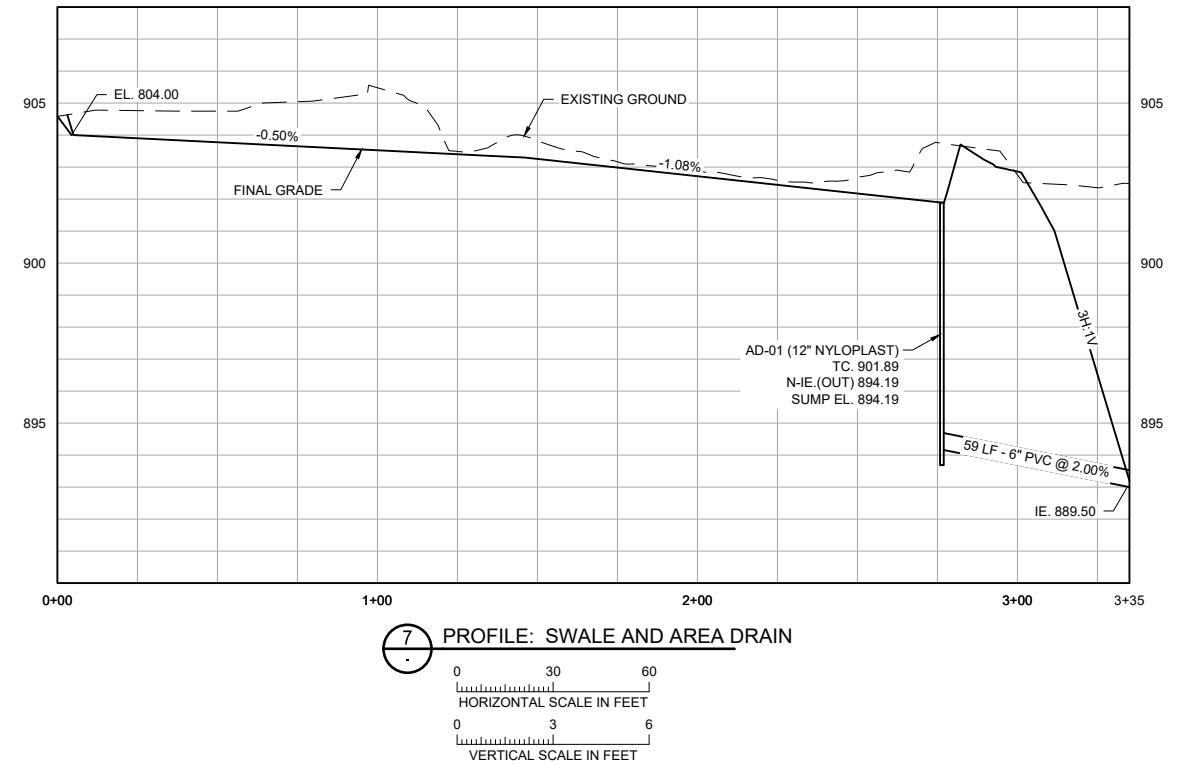
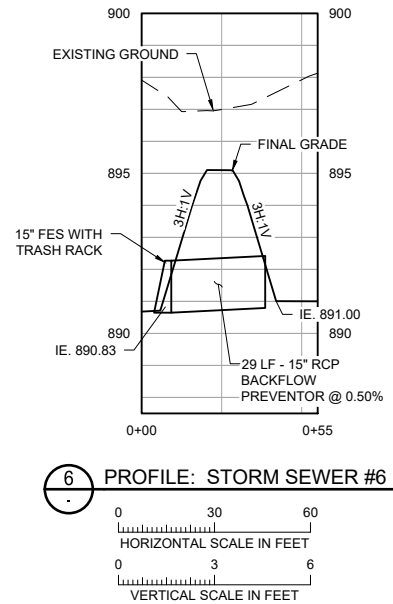
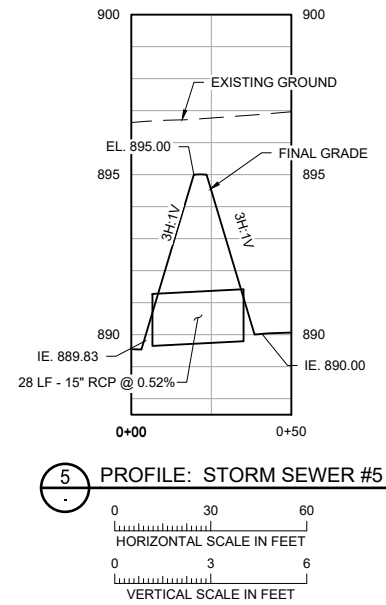
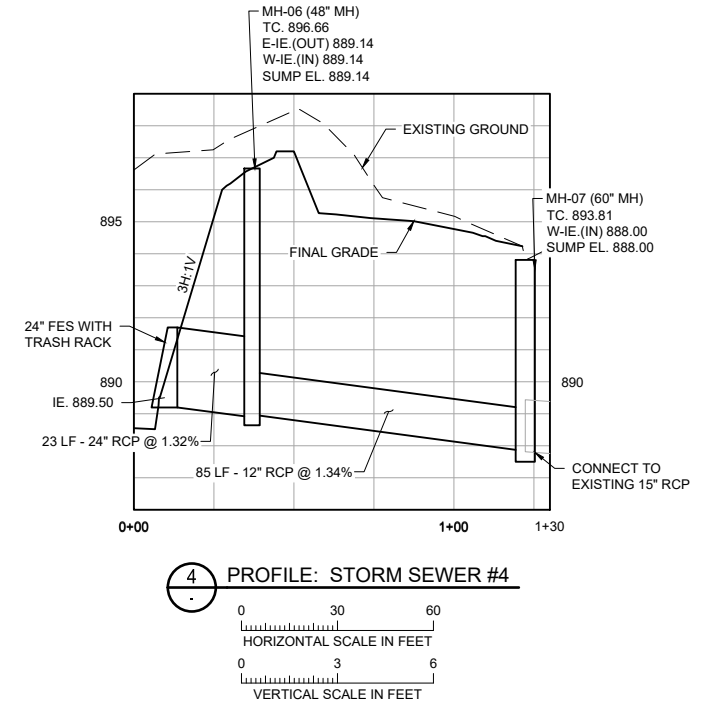
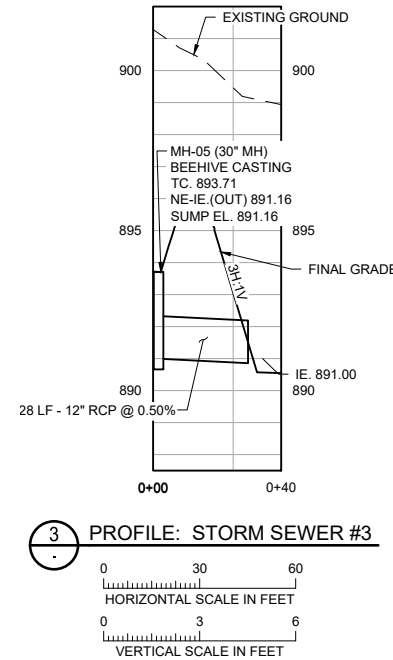
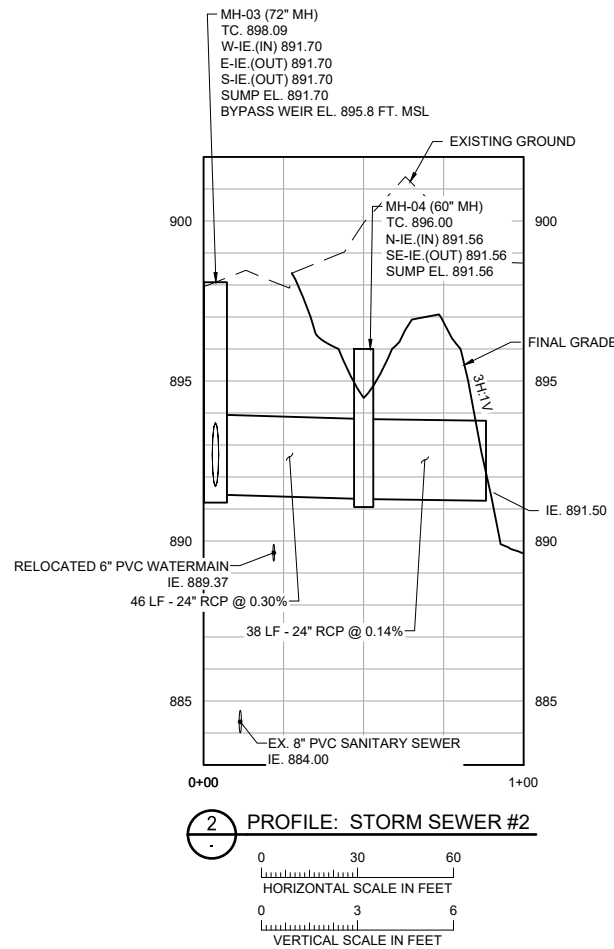
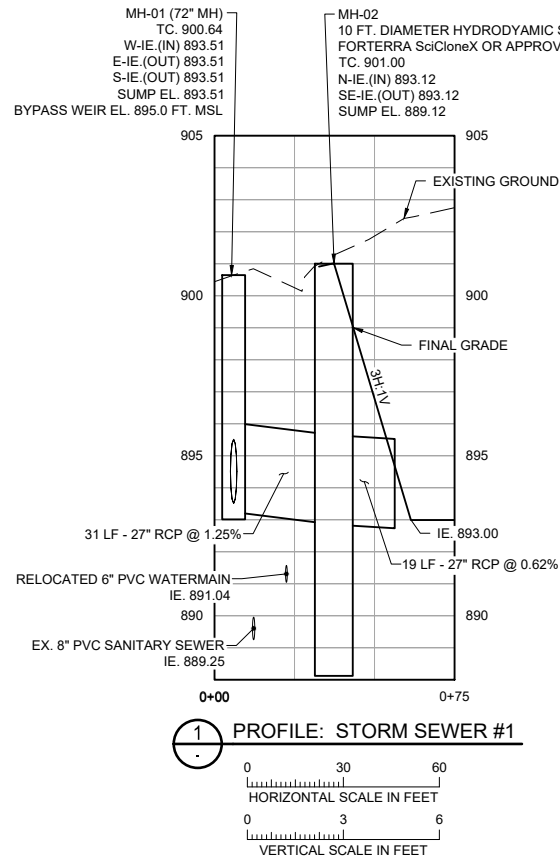
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| Date | 09/16/2022 |
| Drawn | EPF |
| Checked | PEB |
| Designed | BARR |
| Approved | JAK2 |



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| 90% DESIGN REVIEW NOT FOR CONSTRUCTION | |
| SEA SCHOOL & WILDWOOD PARK FLOOD MITIGATION PROJECT | |
| BITUMINOUS TRAIL PLAN SEA SCHOOL & WILDWOOD PARK | |
| BARR PROJECT No. 23/27-1900.00 | CLIENT PROJECT No. 20-27 |
| DWG. No. C-07 | REV. No. C |



CADD USER: PATRICK.E. BROCKAMP FILE: M:\DESIGN\23271900_C-08.DWG PLOT SCALE: 12.5849 PLOT DATE: 10/10/2022 5:30 PM

90% DESIGN REVIEW
NOT FOR CONSTRUCTION

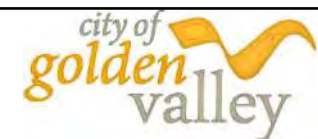
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| AGENCY | | 08/23/22 | | | | | |
| BID | | | | | | | |
| CONSTRUCTION | | | | | | | |
| RECORD | | | | | | | |
| RELEASED TO/FOR | A | B | C | 0 | 1 | 2 | 3 |
| DATE RELEASED | | | | | | | |

Project Office:
BARR ENGINEERING CO.
4300 MARKETPOINTE DRIVE
Suite 200
MINNEAPOLIS, MN 55435

Corporate Headquarters:
Minneapolis, Minnesota
Ph: 1-800-632-2277
Ph: 1-800-632-2277

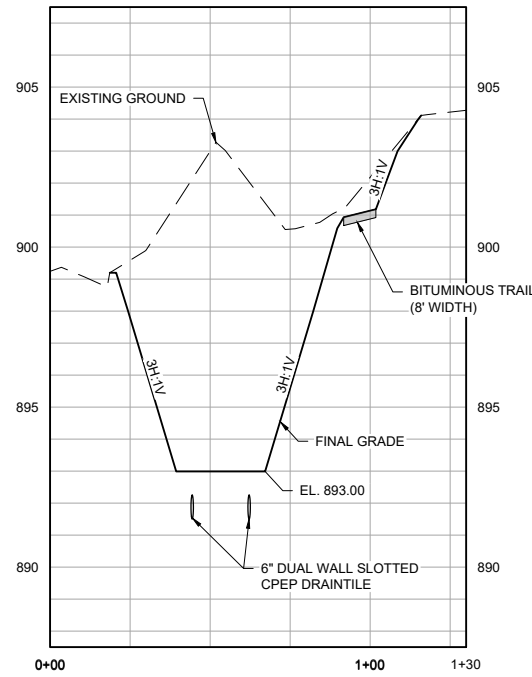
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| Scale | AS SHOWN |
| Date | 09/16/2022 |
| Drawn | EPF |
| Checked | PEB |
| Designed | BARR |
| Approved | JAK2 |



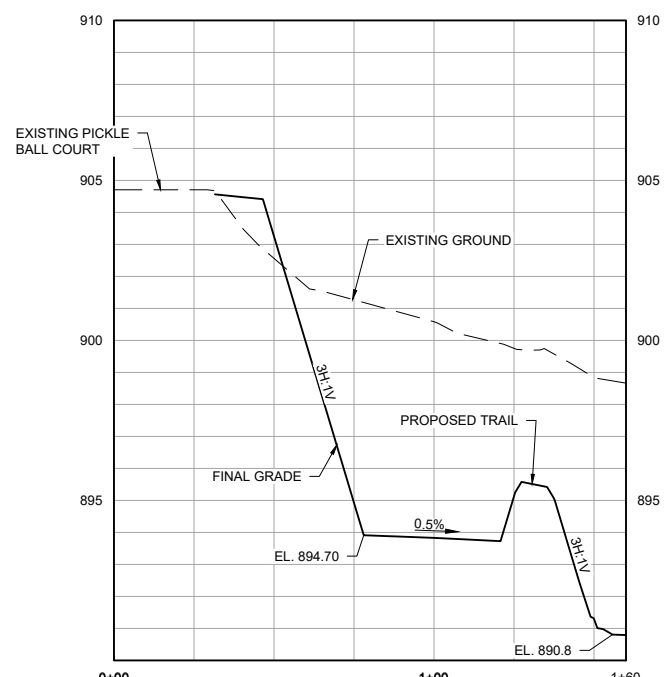
SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

STORM SEWER PROFILES

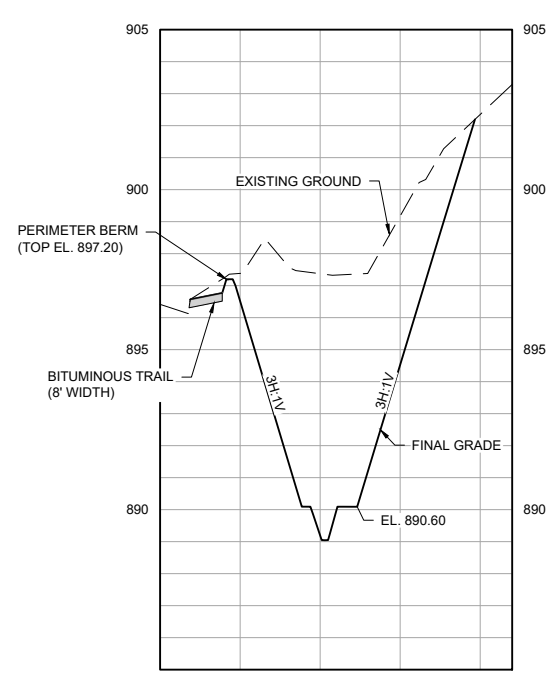
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| BARR PROJECT No. | 23/27-1900.00 |
| CLIENT PROJECT No. | 20-27 |
| DWG. No. | C-08 |
| REV. No. | C |



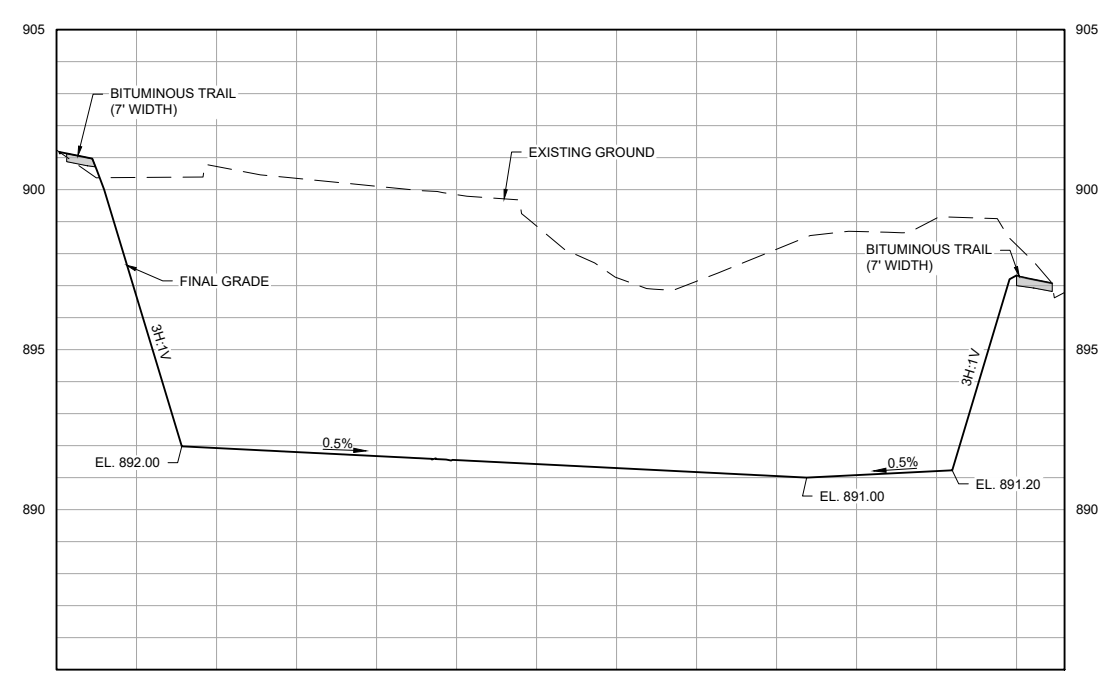
1 SECTION: FILTRATION BASIN (TYP.)
 HORIZONTAL SCALE IN FEET: 0, 30, 60
 VERTICAL SCALE IN FEET: 0, 3, 6



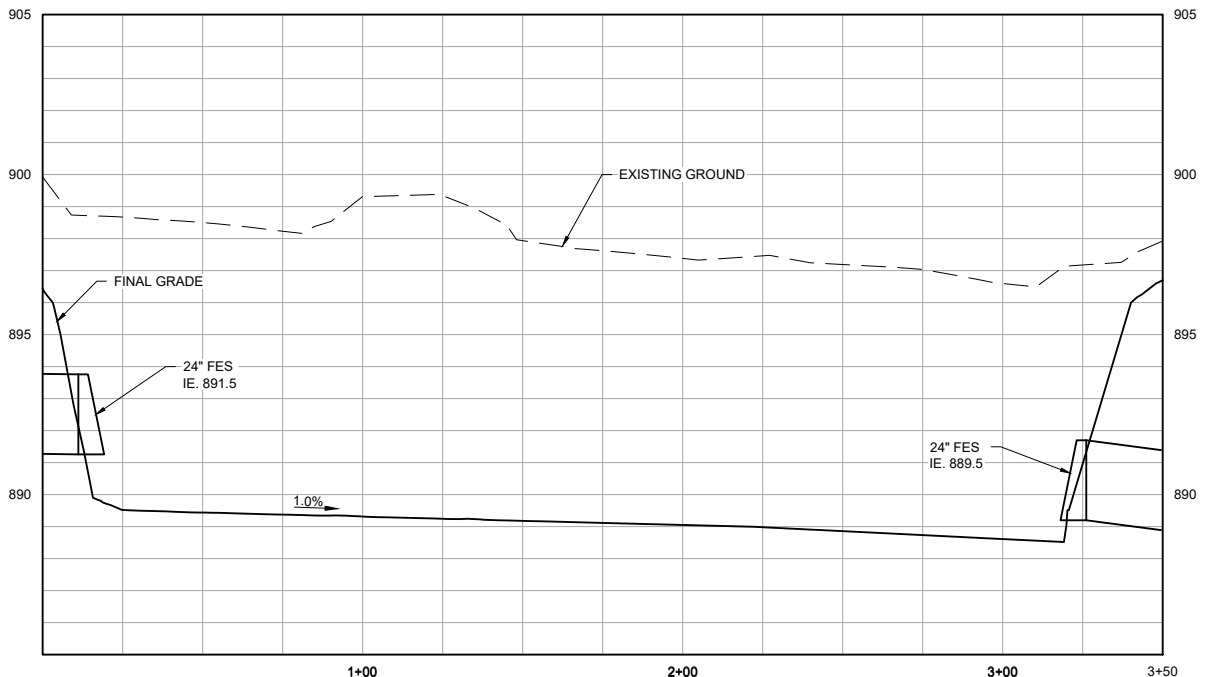
2 SECTION: PICKLEBALL PAD TO TURF (TYP.)
 HORIZONTAL SCALE IN FEET: 0, 30, 60
 VERTICAL SCALE IN FEET: 0, 3, 6



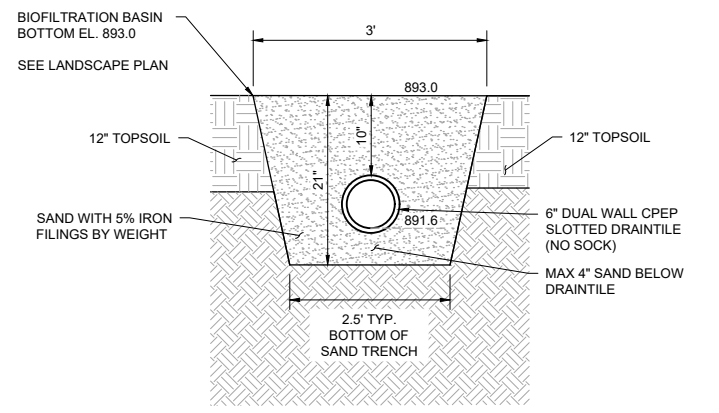
3 SECTION: NORTH WET MEADOW (TYP.)
 HORIZONTAL SCALE IN FEET: 0, 30, 60
 VERTICAL SCALE IN FEET: 0, 3, 6



4 SECTION: SOUTH BASIN (TYP.)
 HORIZONTAL SCALE IN FEET: 0, 30, 60
 VERTICAL SCALE IN FEET: 0, 3, 6



5 PROFILE: INTERMITTENT STREAM
 HORIZONTAL SCALE IN FEET: 0, 30, 60
 VERTICAL SCALE IN FEET: 0, 3, 6



6 SECTION: IRON ENHANCED SAND FILTER TRENCH (TYP.)
 NOT TO SCALE

CADD USER: PATRICK.E. BROCKAMP FILE: M:\DESIGN\23271900_00\23271900_00.DWG PLOT SCALE: 1:2.5849 PLOT DATE: 10/10/2022 5:30 PM

| NO. | BY | CHK | APP. | DATE | REVISION DESCRIPTION |
|-----|----|-----|------|------|----------------------|
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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.

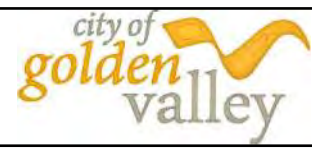
PRINTED NAME: _____
 SIGNATURE: _____
 DATE: _____ LICENSE #: _____

| AGENCY | 04/28/22 | 08/18/22 | | | | |
|-----------------|----------|----------|---|---|---|---|
| BID | 08/23/22 | | | | | |
| CONSTRUCTION | | | | | | |
| RECORD | | | | | | |
| RELEASED TO/FOR | A | B | C | 0 | 1 | 2 |
| DATE RELEASED | | | | | | |

Project Office:
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 4300 MARKETPOINTE DRIVE
 Suite 200
 MINNEAPOLIS, MN 55435

Corporate Headquarters:
 Minneapolis, Minnesota
 Ph: 1-800-632-2277
 Ph: 1-800-632-2277

| Scale | AS SHOWN |
|----------|------------|
| Date | 09/16/2022 |
| Drawn | EPF |
| Checked | PEB |
| Designed | BARR |
| Approved | JAK2 |

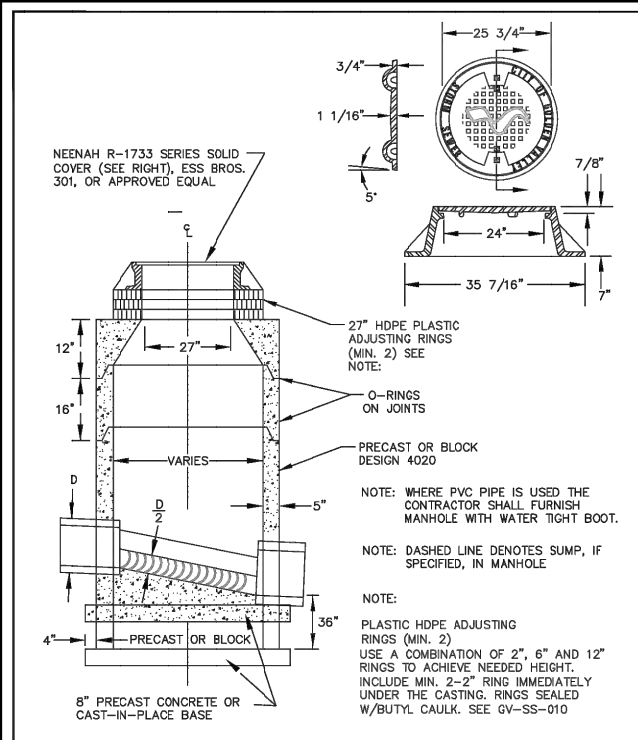


**SEA SCHOOL & WILDWOOD PARK
 FLOOD MITIGATION PROJECT**

TYPICAL SECTIONS

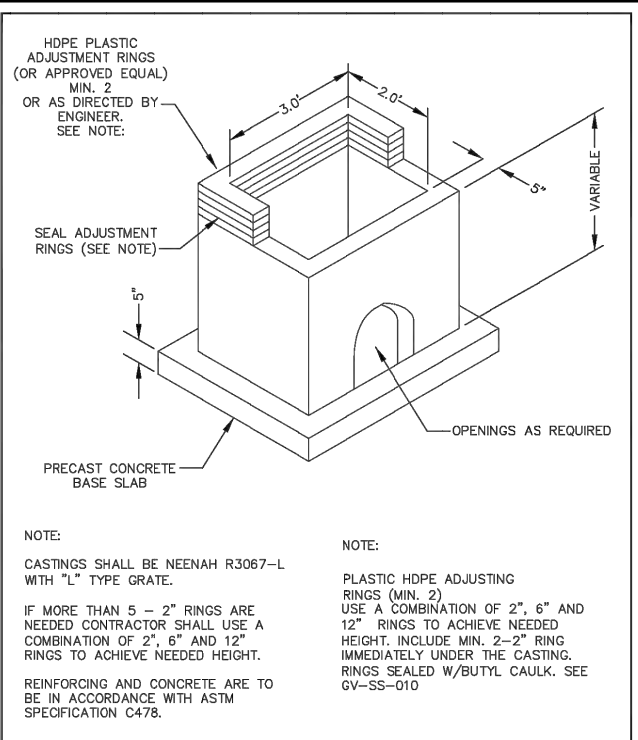
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|-----------------------------------|---------------|
| BARR PROJECT No. 23/27-1900.00 | |
| CLIENT PROJECT No. 20-27 | |
| DWG. No. C-09 | REV. No. C |

90% DESIGN REVIEW
 NOT FOR CONSTRUCTION



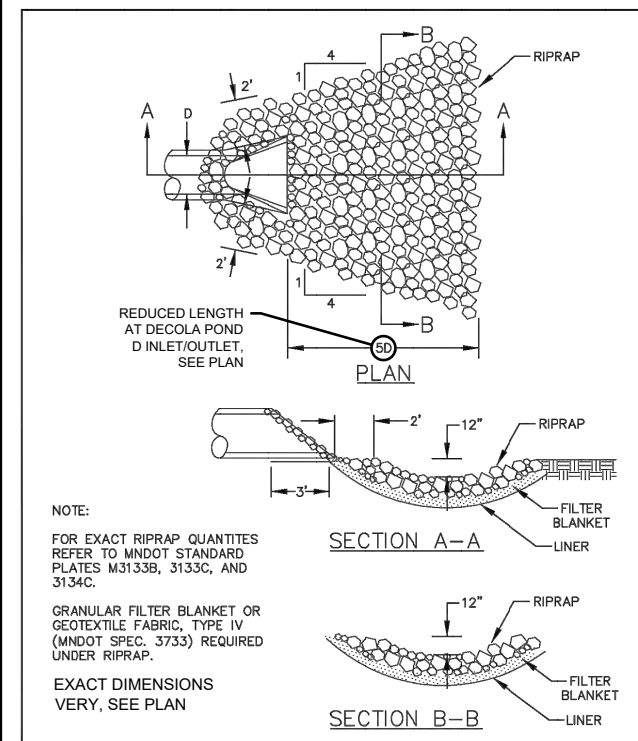
APPROVED JANUARY 1, 2018
STANDARD STORM SEWER MANHOLE DES 4020 WITH CASTING & COVER
 Golden Valley
 GV-ST-010
 CITY ENGINEER REG 23110

1 DETAIL: STORM MANHOLE
 NOT TO SCALE



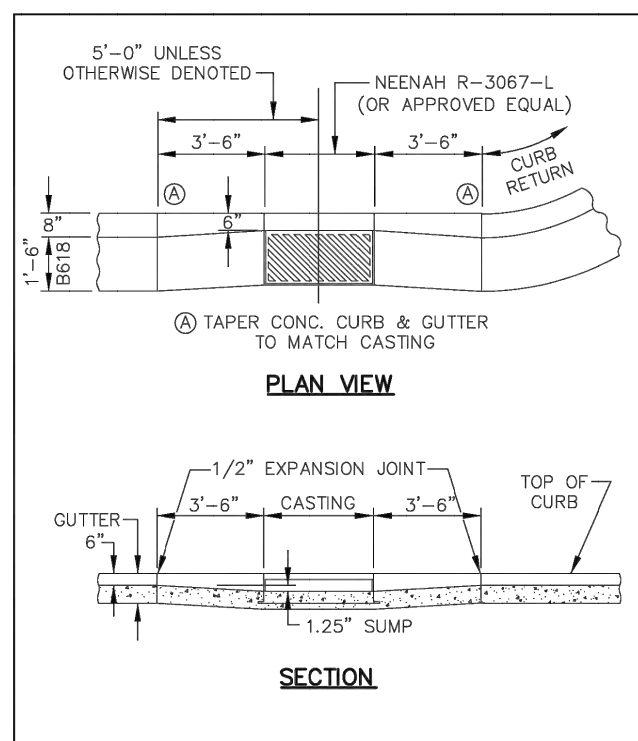
APPROVED JANUARY 1, 2018
CATCH BASIN DESIGN K
 Golden Valley
 GV-ST-020
 CITY ENGINEER REG 23110

2 DETAIL: CATCH BASIN
 NOT TO SCALE



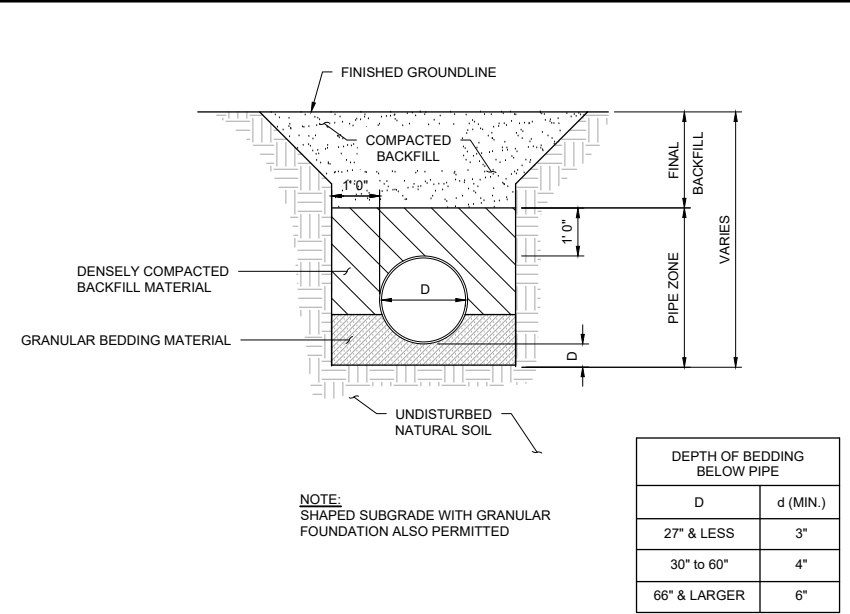
APPROVED DECEMBER 31, 2015
RIPRAP AT OUTLETS
 Golden Valley
 GV-EC-070
 CITY ENGINEER REG 23110

3 DETAIL: RIPRAP AT OUTLETS
 NOT TO SCALE



APPROVED JANUARY 1, 2018
CATCH BASIN INSTALLATION FOR B618 CURB & GUTTER
 Golden Valley
 GV-STRT-070
 CITY ENGINEER REG 23110

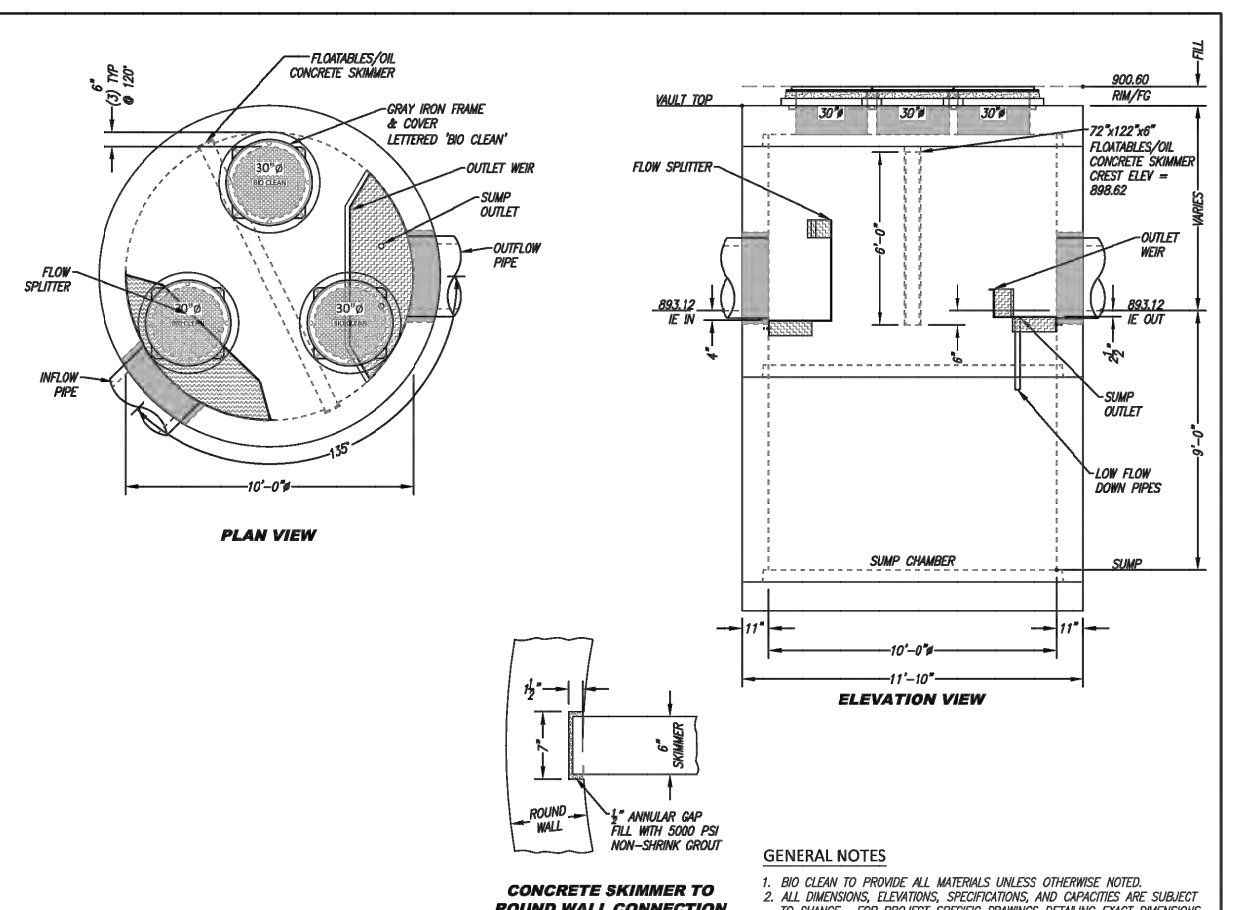
4 DETAIL: CATCH BASIN INSTALLATION (B618 CURB & GUTTER)
 NOT TO SCALE



5 DETAIL: RCP STORM SEWER TRENCH
 NOT TO SCALE

| DEPTH OF BEDDING BELOW PIPE | |
|-----------------------------|----------|
| D | d (MIN.) |
| 27" & LESS | 3" |
| 30" to 60" | 4" |
| 66" & LARGER | 6" |

| SITE SPECIFIC DATA* | | | |
|--|------------------------------|-------------|------------|
| PROJECT NUMBER | 14854 | | |
| PROJECT NAME | SEA SCHOOL AND WILDWOOD PARK | | |
| PROJECT LOCATION | GOLDEN VALLEY, MN | | |
| STRUCTURE ID | SCX-10 | | |
| WATER QUALITY FLOW RATE (CFS) | 10.37 | | |
| PEAK FLOW RATE (CFS) | 33 | | |
| PEAK STORM DURATION (YEARS) | 100 | | |
| PIPE DATA | I.E. | MATERIAL | DIAMETER |
| INFLOW PIPE 1 | 893.12 | RCP | 27" |
| OUTFLOW PIPE 1 | 893.12 | RCP | 27" |
| RIM ELEVATION | 900.80 | | |
| SUMP ELEVATION | 884.12 | | |
| SURFACE LOADING REQUIREMENT | HS20 | | |
| FRAME AND COVER | (3) #30" | | |
| SKIMMER WALL HEIGHT | STANDARD | | |
| KNOWN GROUNDWATER ELEVATION | NA | | |
| NOTES: CONCEPT ONLY. NOT FOR CONSTRUCTION. | | | |
| *PER ENGINEER OF RECORD | | | |
| PERFORMANCE DATA | | | |
| TREATMENT FLOW RATE (CFS) | 10.37 | | |
| TSS REMOVAL EFFICIENCY | 80% | | |
| SUMP CHAMBER CAPACITY | | | |
| DIAMETER (FT) | AREA (SQ) | HEIGHT (FT) | TOTAL (CF) |
| 10 | 78.50 | 9.00 | 706.5 |



6 DETAIL: HYDRODYNAMIC SEPARATOR
 NOT TO SCALE

- INSTALLATION NOTES**
- CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SKIMMER UNIT AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURER'S SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
 - MANUFACTURER RECOMMENDS A 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT ENGINEER'S RECOMMENDED BASE SPECIFICATIONS.
 - ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE (PIPES CANNOT INTRUDE BEYOND FLUSH).
 - ALL GAPS AROUND PIPES SHALL BE SEALED WATER TIGHT WITH A NON-SHRINK GROUT PER MANUFACTURER'S STANDARD CONNECTION DETAIL AND SHALL MEET OR EXCEED REGIONAL PIPE CONNECTION STANDARDS.
 - CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL RISERS AND MANHOLES. ALL COVERS SHALL BE SHIPPED LOOSE. CONTRACTOR TO USE GROUT AND/OR BRICKS TO MATCH COVERS WITH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.

CONCRETE SKIMMER TO ROUND WALL CONNECTION
 1:10 SCALE

GENERAL NOTES

- BIO CLEAN TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS, AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS, AND ACCESSORIES PLEASE CONTACT BIO CLEAN.

Bio Clean
 A Forterra Company

SCICLONE SCX-10
 HYDRODYNAMIC SEPARATOR
 STANDARD DETAIL
 OR APPROVED EQUAL

CADD USER: PATRICK.E. BROCKAMP FILE: M:\DESIGN\23271900_001\23271900_00_20.DWG PLOT SCALE: 1:2,5846 PLOT DATE: 10/10/2022 5:30 PM

| NO. | BY | CHK | APP. | DATE | REVISION DESCRIPTION |
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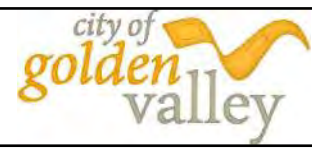
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINTED NAME: _____
 SIGNATURE: _____
 DATE: _____ LICENSE # _____

| CLIENT | 01/11/22 | 08/18/22 | | | | |
|-----------------|----------|----------|---|---|---|---|
| AGENCY | | | | | | |
| BID | | | | | | |
| CONSTRUCTION | | | | | | |
| RECORD | | | | | | |
| RELEASED TO/FOR | A | B | C | 0 | 1 | 2 |
| DATE RELEASED | | | | | | |

BARR
 Project Office:
 BARR ENGINEERING CO.
 4300 MARKETPOINTE DRIVE
 SUITE 200
 MINNEAPOLIS, MN 55435
 Corporate Headquarters:
 Minneapolis, Minnesota
 Ph: 1-800-632-2277
 Fax: (952) 832-2601
 www.barr.com

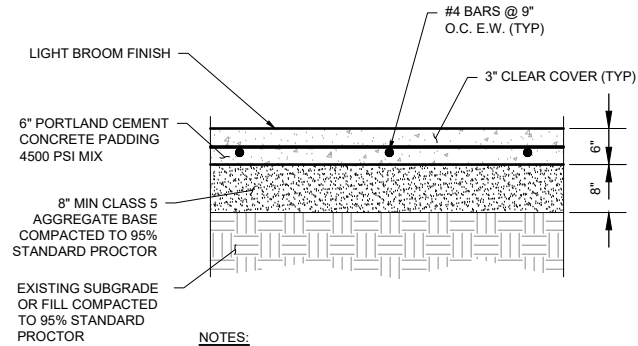
| Scale | AS SHOWN |
|----------|------------|
| Date | 09/16/2022 |
| Drawn | EPF |
| Checked | PEB |
| Designed | BARR |
| Approved | JAK2 |



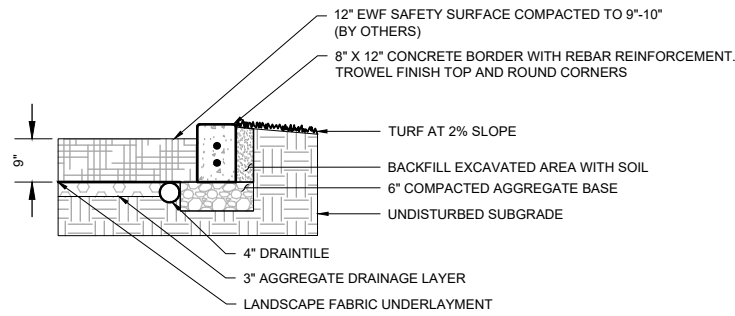
SEA SCHOOL & WILDWOOD PARK
 FLOOD MITIGATION PROJECT
 DETAILS
 STORM SEWER

| | |
|--------------------|---------------|
| BARR PROJECT No. | 23/27-1900.00 |
| CLIENT PROJECT No. | 20-27 |
| DWG. No. | C-20 |
| REV. No. | C |

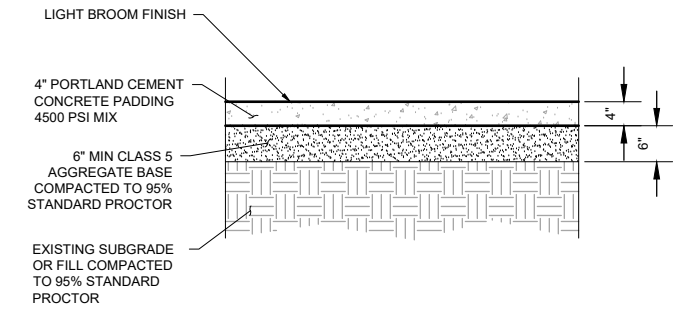
90% DESIGN REVIEW
 NOT FOR CONSTRUCTION



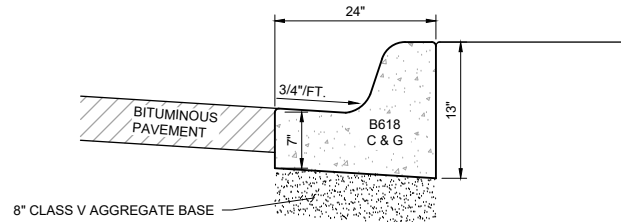
1 DETAIL: PICKLEBALL CONCRETE PAD
NOT TO SCALE



4 DETAIL: PLAYGROUND CONTAINER CONCRETE AND TURF
NOT TO SCALE

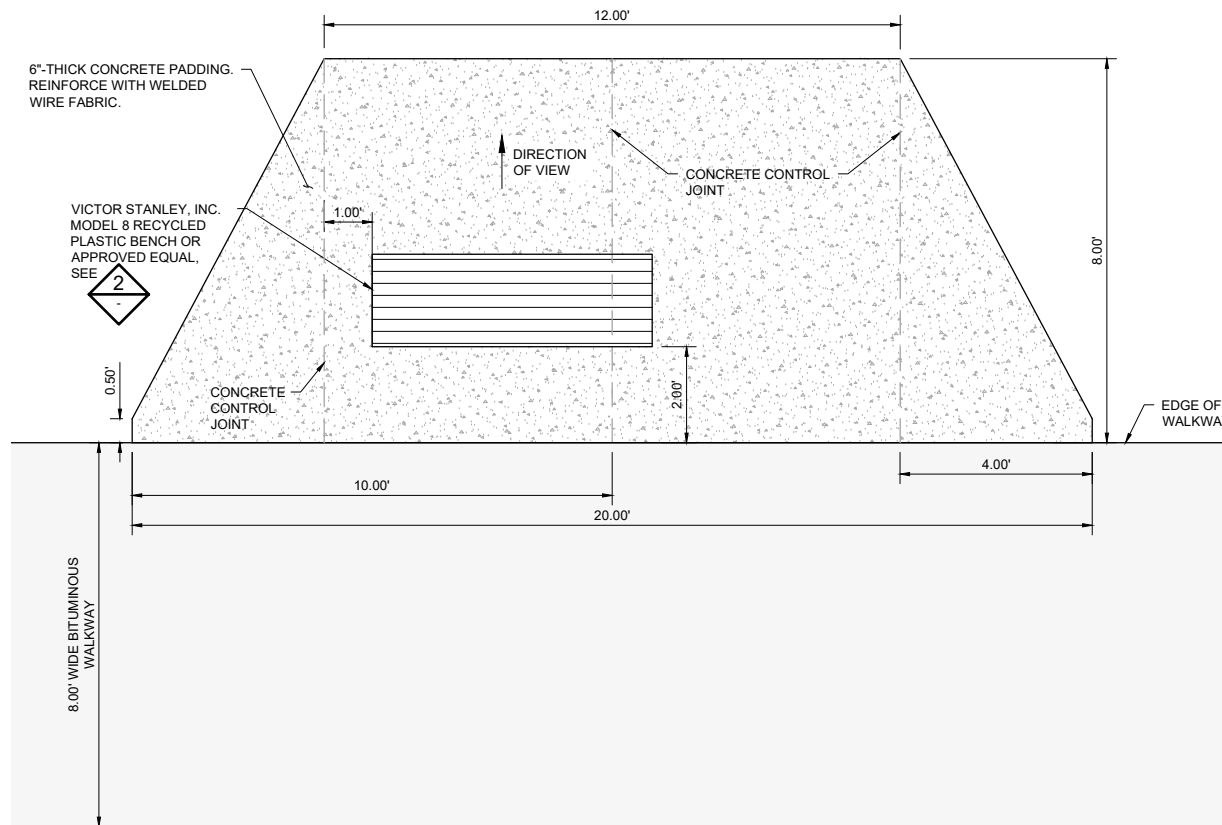


7 DETAIL: PORTA-POTTY CONCRETE PAD
NOT TO SCALE

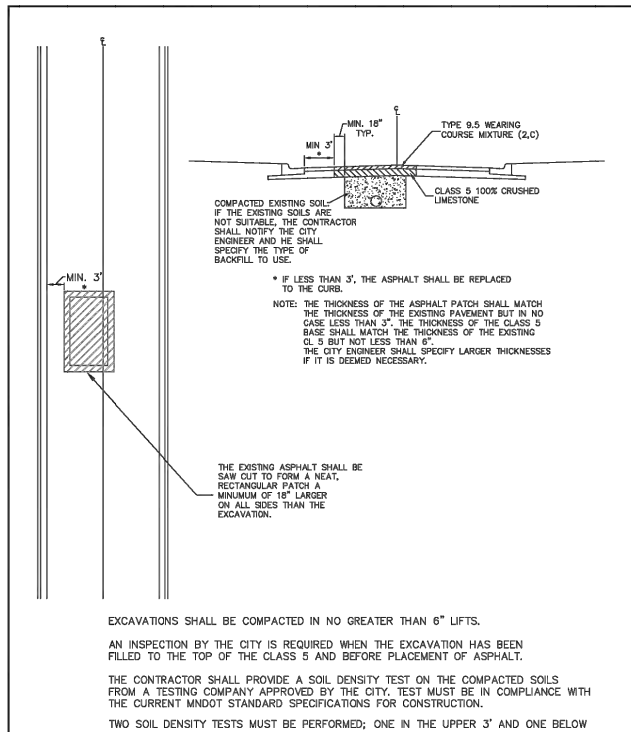


2 DETAIL: B618 CURB AND GUTTER
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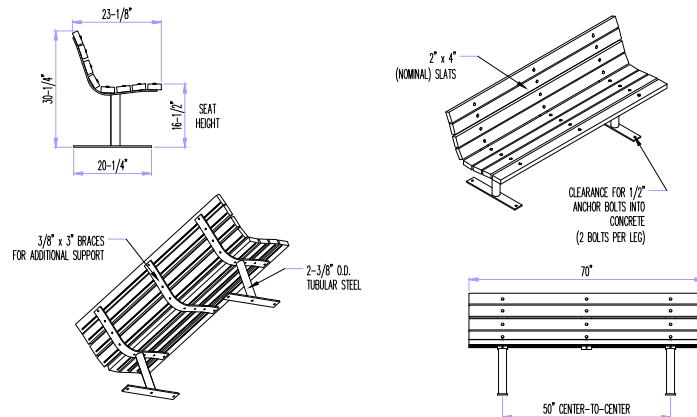
- NOTES:**
- BROOM FINISH ALL EXPOSED SURFACES.
 - DIMENSIONS MATCH MNDOT DETAIL, UNLESS SHOWN OTHERWISE.
 - COMPACT UPPER 3" OF EXISTING SUBGRADE TO MIN. 100% STANDARD PROCTOR DENSITY (ASTM D698).



5 DETAIL: OVERLOOK BENCH AND CONCRETE PADDING
NOT TO SCALE



3 DETAIL: TYPE A UTILITY PATCH
NOT TO SCALE



6 DETAIL: VICTOR STANLEY, INC. MODEL 8 BENCH
NOT TO SCALE

- NOTES:**
- BENCH TYPE
 - VICTOR STANLEY, INC. MODEL 8 (HOMESTEAD COLLECTION) OR APPROVED EQUAL
 - STANDARD 6-FOOT LENGTH
 - STANDARD 2ND SITE SYSTEMS SLATS (RECYCLED PLASTIC)
 - SLATS COLOR: MAPLE
 - STANDARD SURFACE MOUNT
 - NO ARM RESTS
 - WINTER SALTING CONSIDERATIONS
 - METAL COMPONENTS OF THE BENCH SHOULD BE TREATED FOR HIGH SALT ABUSE. HOT-DIP GALVANIZING BEFORE POWDER COATING IS AVAILABLE AND PERFORMED FOR VICTOR STANLEY, INC. BY AN EXPERIENCED QUALIFIED FIRM. CONTRACTOR TO CONTACT MANUFACTURER FOR DETAILS.
 - INSTALL BENCH PER MANUFACTURER'S RECOMMENDATIONS.

8 DETAIL: SHADE STRUCTURE CONCRETE PAD
NOT TO SCALE

PLACEHOLDER

90% DESIGN REVIEW
NOT FOR CONSTRUCTION

CADD USER: PATRICK.E. BROCKAMP FILE: M:\DESIGN\23271900\C-21.DWG PLOT SCALE: 1:2.5849 PLOT DATE: 10/10/2022 5:30 PM

APPROVED JANUARY 1, 2018

 CITY ENGINEER REG 23110

TYPE A UTILITY PATCH IMPROVED STREET

Golden Valley
 GV-STRT-080

3 DETAIL: TYPE A UTILITY PATCH
NOT TO SCALE

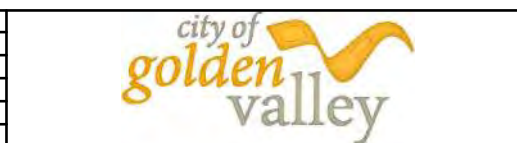
| NO. | BY | CHK. | APP. | DATE | REVISION DESCRIPTION |
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| CLIENT | 01/11/22 | 08/16/22 | | | |
| AGENCY | | 08/23/22 | | | |
| BID | | | | | |
| CONSTRUCTION | | | | | |
| RECORD | | | | | |
| RELEASED TO/FOR | A | B | C | 0 | 1 |
| DATE RELEASED | | | | | |

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 4300 MARKETPOINTE DRIVE
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 www.barr.com

Scale: AS SHOWN
 Date: 09/16/2022
 Drawn: EPF
 Checked: PEB
 Designed: BARR
 Approved: JAK2

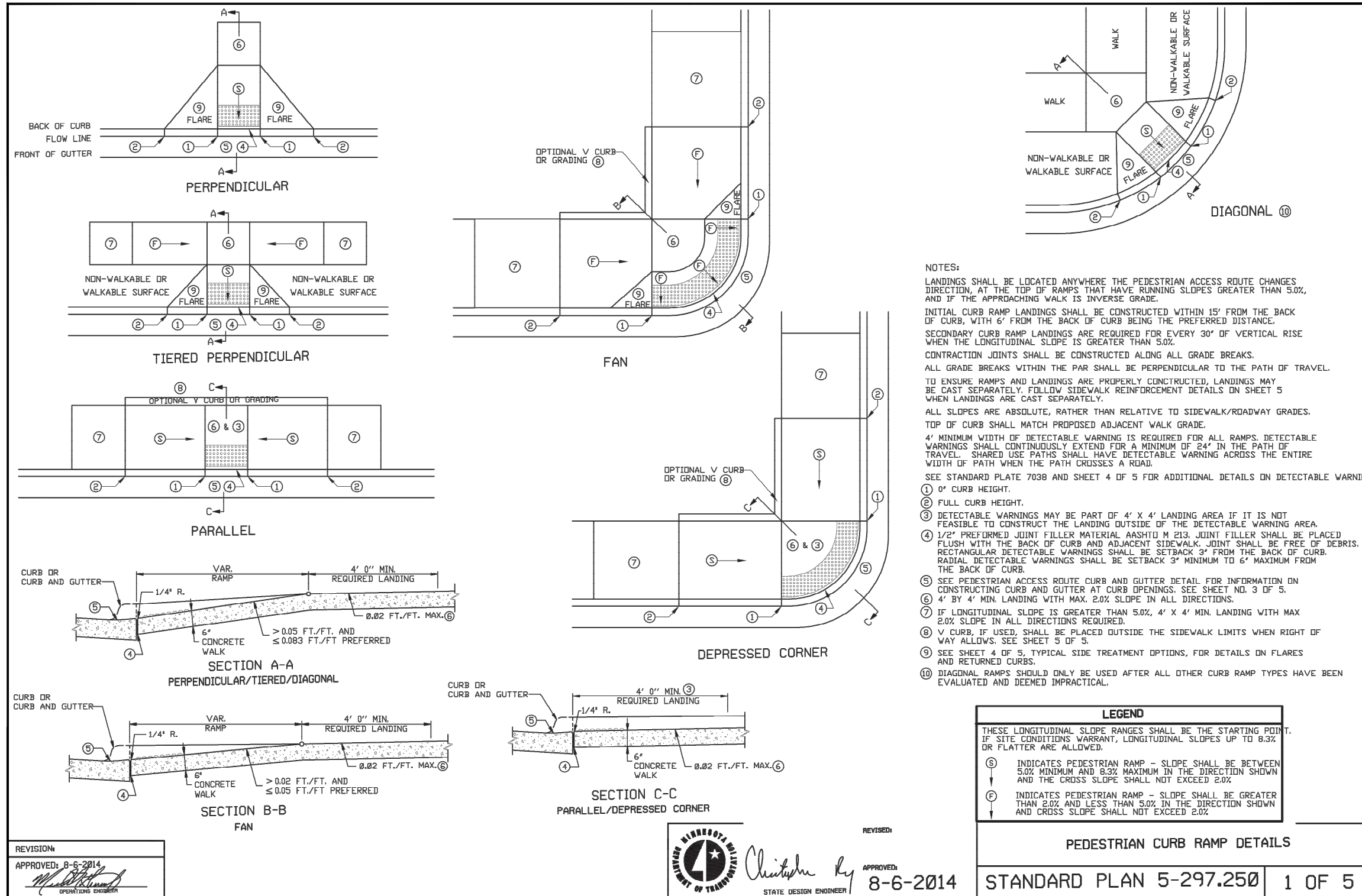


**SEA SCHOOL & WILDWOOD PARK
 FLOOD MITIGATION PROJECT**

DETAILS
 CURB & PAVING

| | |
|--------------------|---------------|
| BARR PROJECT No. | 23/27-1900.00 |
| CLIENT PROJECT No. | 20-27 |
| DWG. No. | C-21 |
| REV. No. | C |

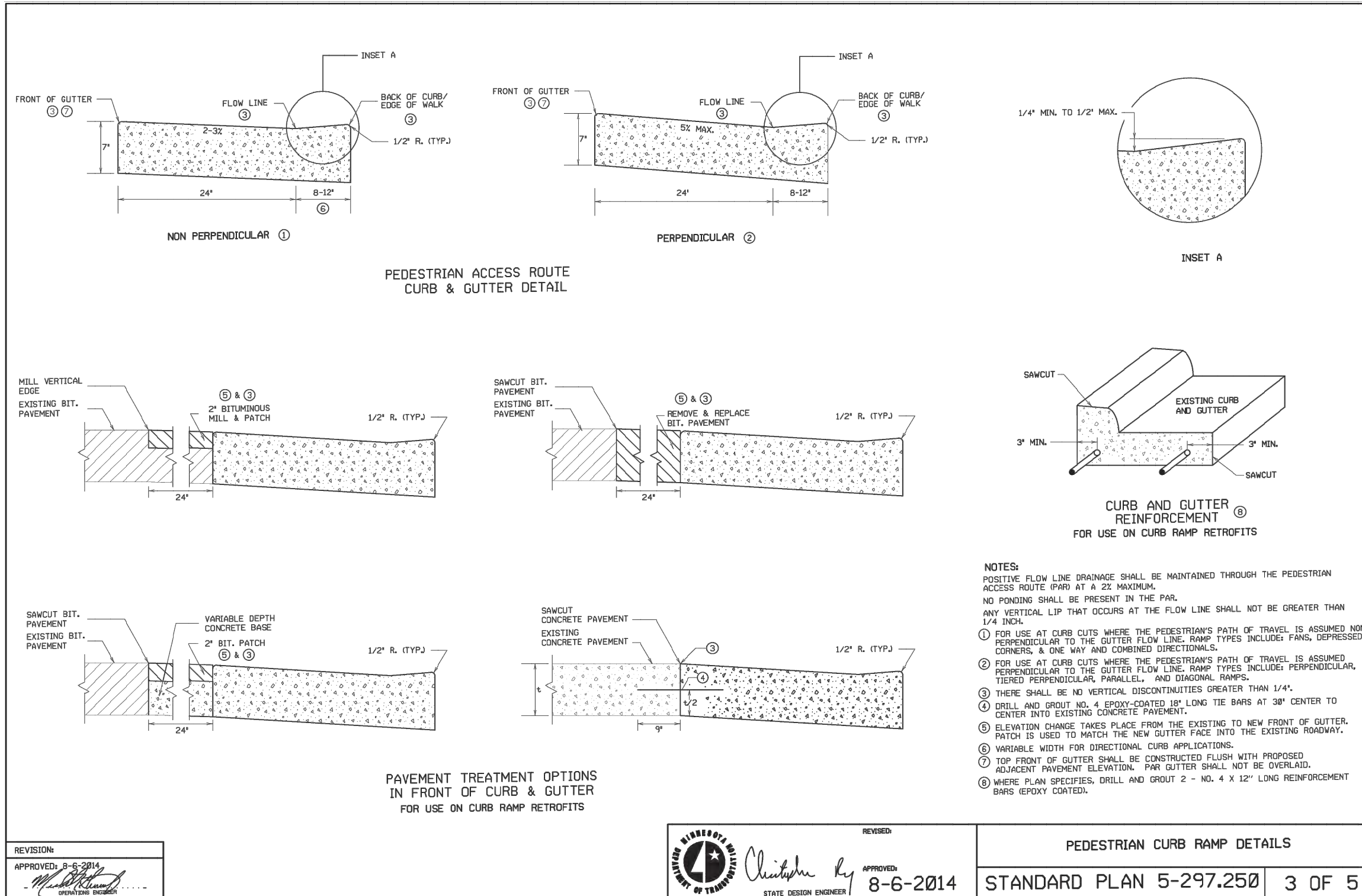
CADD USER: PATRICK E. BROCKAMP FILE: M:\DESIGN\23271900_C-22.DWG PLOT SCALE: 1/2"=8'-0" PLOT DATE: 10/10/2022 5:31 PM



1 DETAIL: PEDESTRIAN CURB RAMP (SHEET 1)
NOT TO SCALE

90% DESIGN REVIEW
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| | | | | | | |
|---|----|---|--|---|--|---|
| 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. | | CLIENT: BARR ENGINEERING CO. AGENCY: 4300 MARKETPOINTE DRIVE, SUITE 200, MINNEAPOLIS, MN 55435 BID: _____ CONSTRUCTION: _____ RECORD: _____ | Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com | Scale: AS SHOWN Date: 09/16/2022 Drawn: EPF Checked: PEB Designed: BARR Approved: JAK2 | SEA SCHOOL & WILDWOOD PARK FLOOD MITIGATION PROJECT DETAILS CURB & DRIVEWAY | BARR PROJECT No. 23/27-1900.00 CLIENT PROJECT No. 20-27 DWG. No. C-22 REV. No. C |
| NO. | BY | CHK. | APP. | DATE | REVISION DESCRIPTION | |



| | |
|-----------------------|---------------------|
| REVISIONS: | |
| APPROVED: 8-6-2014 | |
| <i>Michael R. ...</i> | OPERATIONS ENGINEER |

REVISOR: _____

APPROVED: *Christopher ...* 8-6-2014
STATE DESIGN ENGINEER

| | |
|------------------------------|--------|
| PEDESTRIAN CURB RAMP DETAILS | |
| STANDARD PLAN 5-297.250 | 3 OF 5 |

1 DETAIL: PEDESTRIAN CURB RAMP (SHEET 3)
NOT TO SCALE

90% DESIGN REVIEW
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CADD USER: PATRICK.E. BROCKAMP FILE: M:\DESIGN\23271900_001\23271900_001.DWG PLOT SCALE: 1/2"=1'-0" PLOT DATE: 10/10/2022 5:31 PM

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| NO. | BY | CHK | APP. | DATE | REVISION DESCRIPTION |
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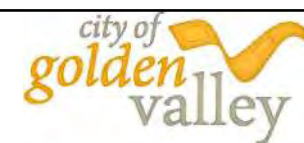
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| CLIENT | 01/11/22 | 08/18/22 | | | | | |
| AGENCY | | 08/23/22 | | | | | |
| BID | | | | | | | |
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| DATE RELEASED | | | | | | | |

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

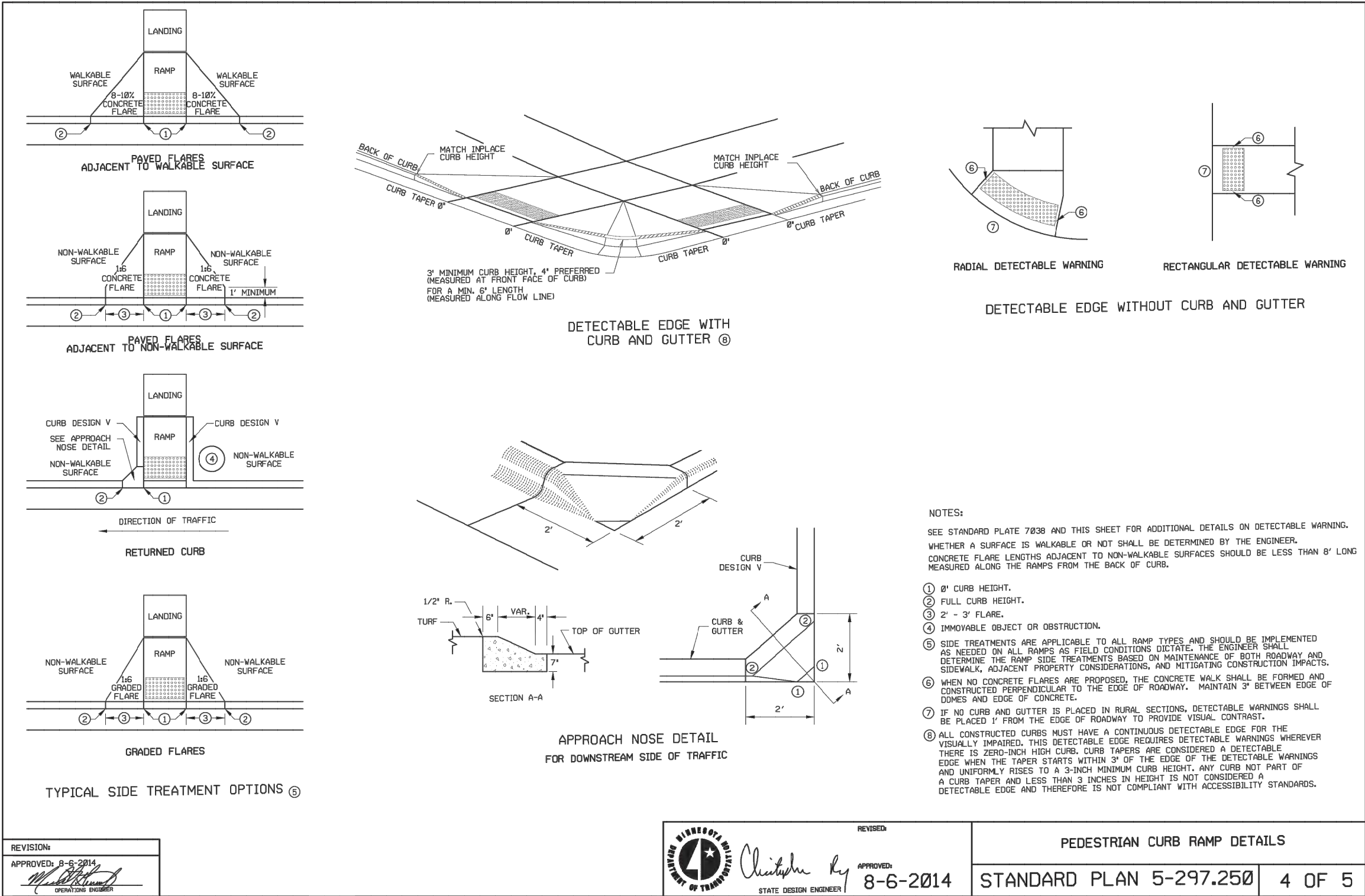
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| Date | 09/16/2022 |
| Drawn | EPF |
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| Designed | BARR |
| Approved | JAK2 |



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| SEA SCHOOL & WILDWOOD PARK FLOOD MITIGATION PROJECT | | BARR PROJECT No. 23/27-1900.00 |
| DETAILS CURB & DRIVEWAY | | CLIENT PROJECT No. 20-27 |
| DWG. No. C-24 | REV. No. C | |



CADD USER: PATRICK.E. BROCKAMP FILE: M:\DESIGN\23271900_091237190000_C-25.DWG PLOT SCALE: 1/2"=8'-0" PLOT DATE: 10/10/2012 5:31 PM

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|---------------------|
| REVISION: |
| APPROVED: 8-6-2014 |
| <i>[Signature]</i> |
| OPERATIONS ENGINEER |

REVISION:

Christopher Ky APPROVED: 8-6-2014

STATE DESIGN ENGINEER

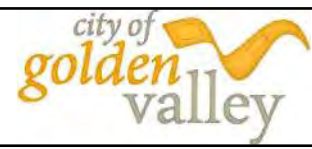
| | |
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| PEDESTRIAN CURB RAMP DETAILS | |
| STANDARD PLAN 5-297.250 | 4 OF 5 |

1 DETAIL: PEDESTRIAN CURB RAMP (SHEET 4)

NOT TO SCALE

90% DESIGN REVIEW
NOT FOR CONSTRUCTION

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|--|--|--|--|---|--|--|--|--|--|--|--|------------------|--|--|--|---|--|--|--|--------------------------------|--|--|--|
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| | | | | PRINTED NAME: _____ | | | | RECORDED: _____ | | | | Date: 09/16/2012 | | | | CLIENT PROJECT No. 20-27 | | | | | | | |
| | | | | SIGNATURE: _____ | | | | RELEASED TO/FOR: _____ | | | | Drawn: EPF | | | | DWG. No. C-25 | | | | | | | |
| | | | | DATE: _____ | | | | DATE RELEASED: _____ | | | | Checked: PEB | | | | REV. No. C | | | | | | | |
| | | | | LICENSE # _____ | | | | | | | | Designed: BARR | | | | | | | | | | | |
| | | | | | | | | | | | | Approved: JAK2 | | | | | | | | | | | |



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CADD USER: PATRICK.E. BROCKAMP FILE: M:\DESIGN\23271900_001\23271900_00_26.DWG PLOT SCALE: 1/2"=8'-0" PLOT DATE: 10/10/2022 5:31 PM

LANDING
36" MAX.
12"
3"

LANDING
36" MAX.
12"
3"

LANDING
36" MAX.
12"
3"

LANDING
36" MAX.
12"
3"

6" CONCRETE WALK
3" MINIMUM CLASS 5 AGGREGATE BASE

TYPICAL SIDEWALK SECTION WITHIN INTERSECTION CORNER

V CURB ADJACENT TO LANDSCAPE CURB WITHIN SIDEWALK LIMITS

V CURB INTERSECTION

V CURB ADJACENT TO LANDSCAPE CURB OUTSIDE SIDEWALK LIMITS

V CURB ADJACENT TO BUILDING OR BARRIER

| CONCRETE CURB DESIGN V | |
|------------------------|--------------|
| CURB HEIGHT H | CURB WIDTH W |
| < 6" | 4" |
| ≥ 6" | 6" |

PLACE DETECTABLE WARNINGS ENTIRE WALK/PATH WIDTH

DETECTABLE WARNINGS 2'

NEAREST RAIL

4' 8.5"

PEDESTRIAN GATE ARM

DETECTABLE WARNINGS 2'

RAILROAD CROSSING PLAN VIEW

NON-WALKABLE SURFACE

1' MIN.

SIGNAL POLE FOUNDATION

PEDESTRIAN PUSH BUTTON STATION BASE

LANDING

RAMP

NON-WALKABLE SURFACE

CONCRETE WALK EDGES ADJACENT TO CONCRETE STRUCTURES

NOTES:

- ALL V CURB CONTRACTION JOINTS SHALL MATCH CONCRETE WALK JOINTS. WHERE RIGHT-OF-WAY ALLOWS, USE OF V CURB SHOULD BE MINIMIZED. GRADING ADJACENT TURF OR SLOPING ADJACENT PAVEMENT IS PREFERRED.
- V CURB SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. V CURB NEXT TO BUILDING SHALL BE A 4" WIDTH AND SHALL MATCH PREVIOUS TOP OF SIDEWALK ELEVATIONS.
- END TAPERS AT TRANSITION SECTION SHALL MATCH INPLACE SIDEWALK GRADES.
- ALL V CURB SHALL MATCH BOTTOM OF ADJACENT WALK.
- EDGE BETWEEN NEW V CURB AND INPLACE STRUCTURE SHALL BE SEALED AND BOND BREAKER SHALL BE USED BETWEEN EXISTING STRUCTURE AND PLACED V-CURB.
- NEAREST EDGE OF DETECTABLE WARNING SURFACES SHALL BE PLACED 12" MINIMUM TO 15" MAXIMUM FROM THE NEAREST RAIL. FOR SKEWED RAILWAYS IN NO INSTANCE SHALL THE DETECTABLE WARNING BE CLOSER THAN 12' MEASURED PERPENDICULAR TO THE NEAREST RAIL.
- WHEN PEDESTRIAN GATES ARE PROVIDED, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE SIDE OF THE GATES OPPOSITE THE RAIL, 2' FROM THE APPROACHING SIDE OF THE GATE ARM.
- WHEN PLAN SPECIFIES, DRILL AND GROUT NO. 4 12' LONG REINFORCEMENT BARS AT 36" MAX. CENTER TO CENTER (EPOXY COATED).
- TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS MAY BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON THIS SHEET WHEN LANDINGS ARE CAST SEPARATELY.

REVISION:

APPROVED: 2-9-2015

OPERATIONS ENGINEER

MINNESOTA DEPARTMENT OF TRANSPORTATION

REVISOR: *Christine Ky*

APPROVED: 2-9-2015

STATE DESIGN ENGINEER

PEDESTRIAN CURB RAMP DETAILS

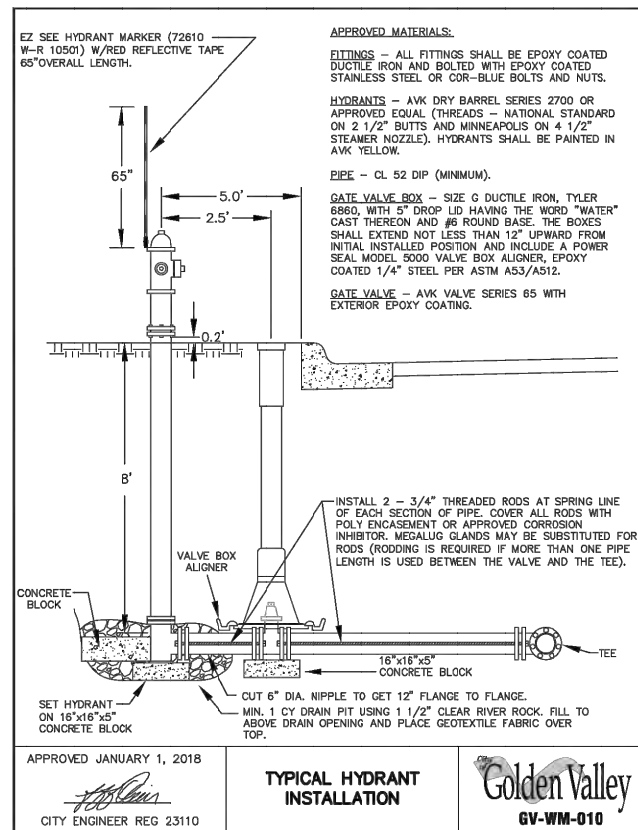
STANDARD PLAN 5-297.250 5 OF 5

1 DETAIL: PEDESTRIAN CURB RAMP (SHEET 5)
NOT TO SCALE

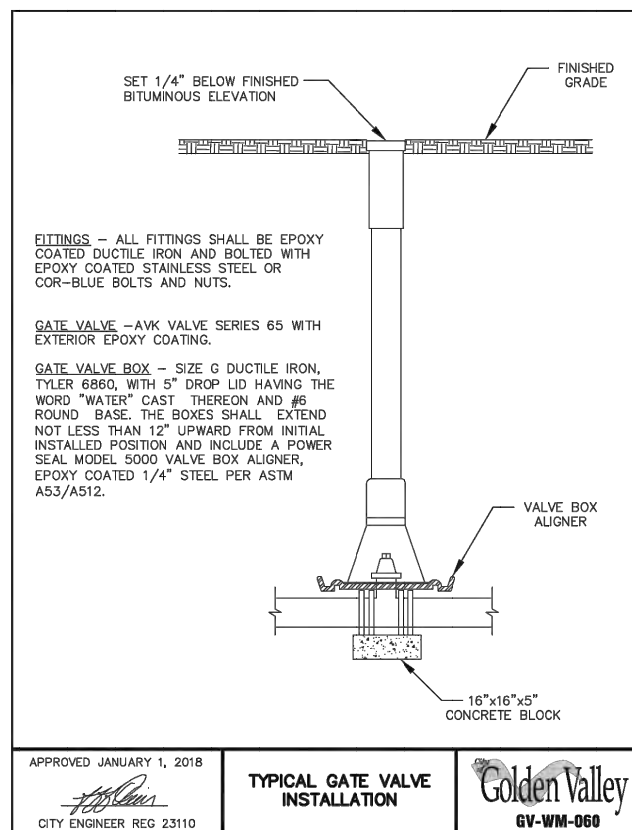
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| NO. | | BY | CHK. | APP. | DATE | REVISION DESCRIPTION | I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. | | CLIENT AGENCY BID CONSTRUCTION RECORD | 01/11/22 08/23/22 | 08/18/22 08/23/22 | A B C 0 1 2 3 | RELEASED TO/FOR DATE RELEASED | BARR Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 Ph: 1-800-632-2277 www.barr.com | Scale AS SHOWN Date 09/16/2022 Drawn EPF Checked PEB Designed BARR Approved JAK2 | city of golden valley | SEA SCHOOL & WILDWOOD PARK FLOOD MITIGATION PROJECT DETAILS CURB & DRIVEWAY | BARR PROJECT No. 23/27-1900.00 CLIENT PROJECT No. 20-27 DWG. No. C-26 REV. No. C |
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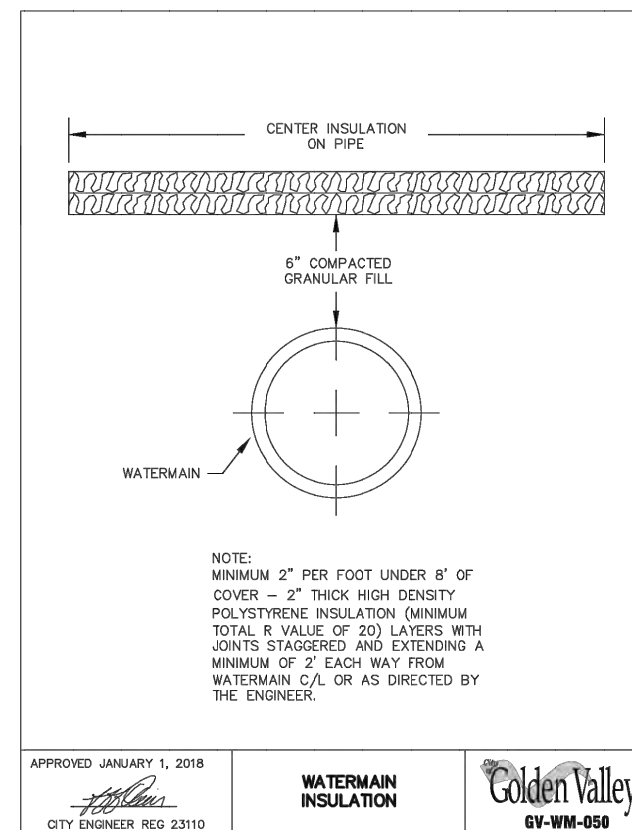
CADD USER: PATRICK.E. BROCKAMP FILE: M:\DESIGN\23271900_00\23271900_00_C-27.DWG PLOT SCALE: 1:2.5849 PLOT DATE: 10/10/2022 5:31 PM



1 DETAIL: WATER HYDRANT
 NOT TO SCALE



2 DETAIL: GATE VALVE
 NOT TO SCALE



3 DETAIL: WATERMAIN INSULATION
 NOT TO SCALE

90% DESIGN REVIEW
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| CLIENT | 01/11/22 | 08/18/22 | | | | | |
| AGENCY | | 08/23/22 | | | | | |
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| RECORD | | | | | | | |
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| DATE RELEASED | | | | | | | |

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| Date | 09/16/2022 |
| Drawn | EPF |
| Checked | PEB |
| Designed | BARR |
| Approved | JAK2 |



SEA SCHOOL & WILDWOOD PARK
 FLOOD MITIGATION PROJECT


DETAILS
 WATERMAIN

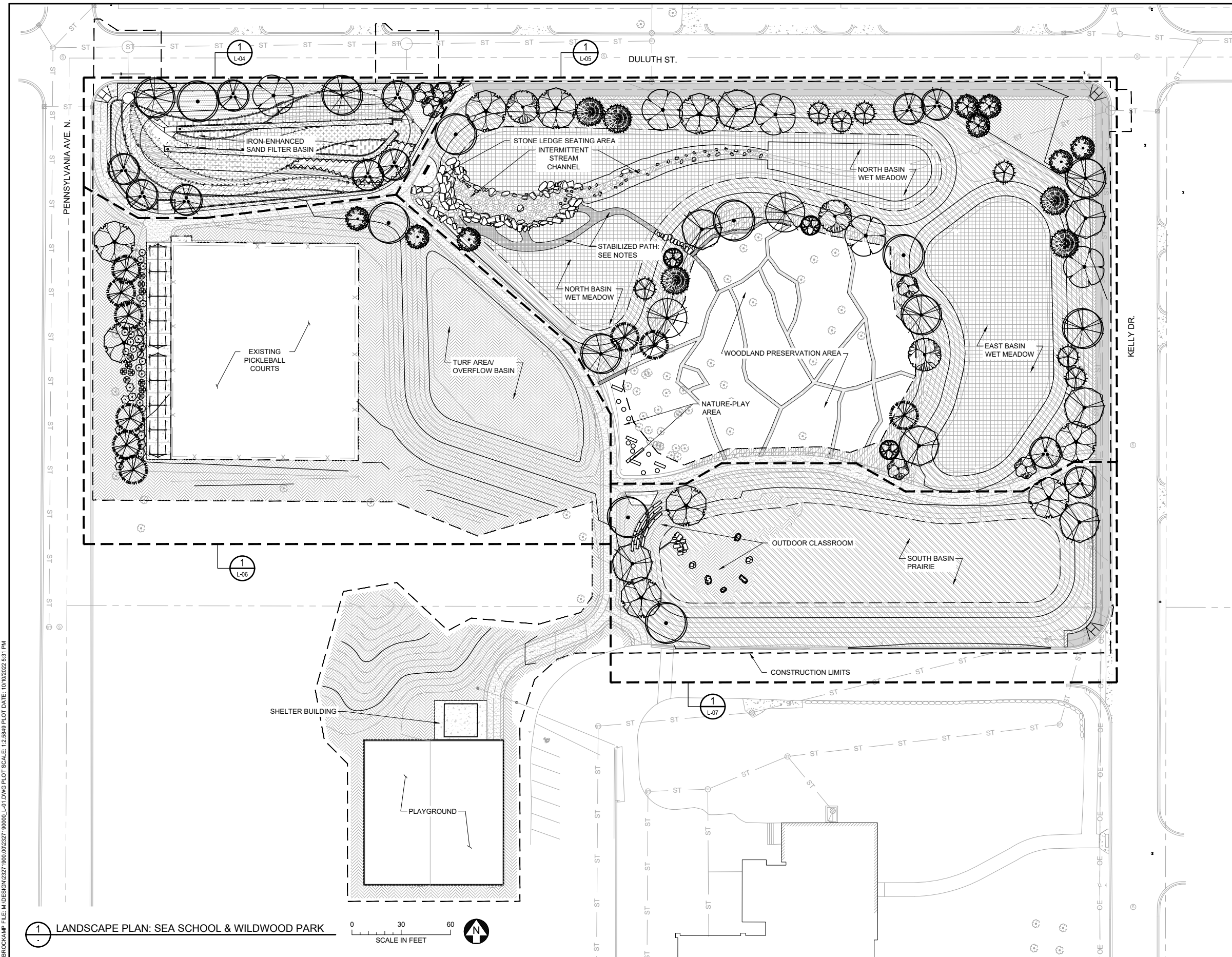
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| BARR PROJECT No. | 23/27-1900.00 |
| CLIENT PROJECT No. | 20-27 |
| DWG. No. | C-27 |
| REV. No. | C |

RESTORATION PLAN LEGEND

- 995— EXISTING 5' CONTOUR
- 994— EXISTING 1' CONTOUR
- 995— PROPOSED 5' CONTOUR
- 994— PROPOSED 1' CONTOUR
- - - - EXISTING PROPERTY LINE
- ST — EXISTING STORM SEWER
- W — EXISTING WATERMAIN
- X — X — EXISTING FENCE
- - - - CONSTRUCTION LIMITS

SHEET NOTES:

1. SEE SHEET L-03 FOR SEEDING INFORMATION
2. SEE SHEET L-11 FOR TREE AND SHRUB PLANTING DETAILS.
3. SEE  FOR SPECIAL SOIL PREP REQUIREMENTS
4. LOCATE UNDERGROUND UTILITIES PRIOR TO TREE AND SHRUB PLANTING. NOTIFY ENGINEER OF CONFLICTS WITH UTILITIES. TREE AND SHRUB LOCATIONS WILL BE ADJUSTED IN THE FIELD.
5. TOPOGRAPHIC CONTOURS NOT SHOWN FOR CLARITY.
6. CONTRACTOR SHALL REPLACE IN KIND ANY TURF DAMAGED DURING CONSTRUCTION BEYOND THE EXTENTS SHOWN ON THE PLAN.
7. STABILIZED PATH: 4" DEEP DECOMPOSED GRANITE, OR APPROVED EQUAL MATERIAL.



LANDSCAPE PLAN: SEA SCHOOL & WILDWOOD PARK

0 30 60
SCALE IN FEET



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| NO. | BY | CHK | APP. | DATE | REVISION DESCRIPTION |
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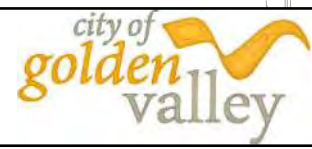
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| CLIENT AGENCY | 01/11/22 | 08/18/22 | | | | |
| BID CONSTRUCTION RECORD | 08/23/22 | | | | | |
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| DATE RELEASED | | | | | | |

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Minneapolis, Minnesota
Ph: 1-800-632-2277
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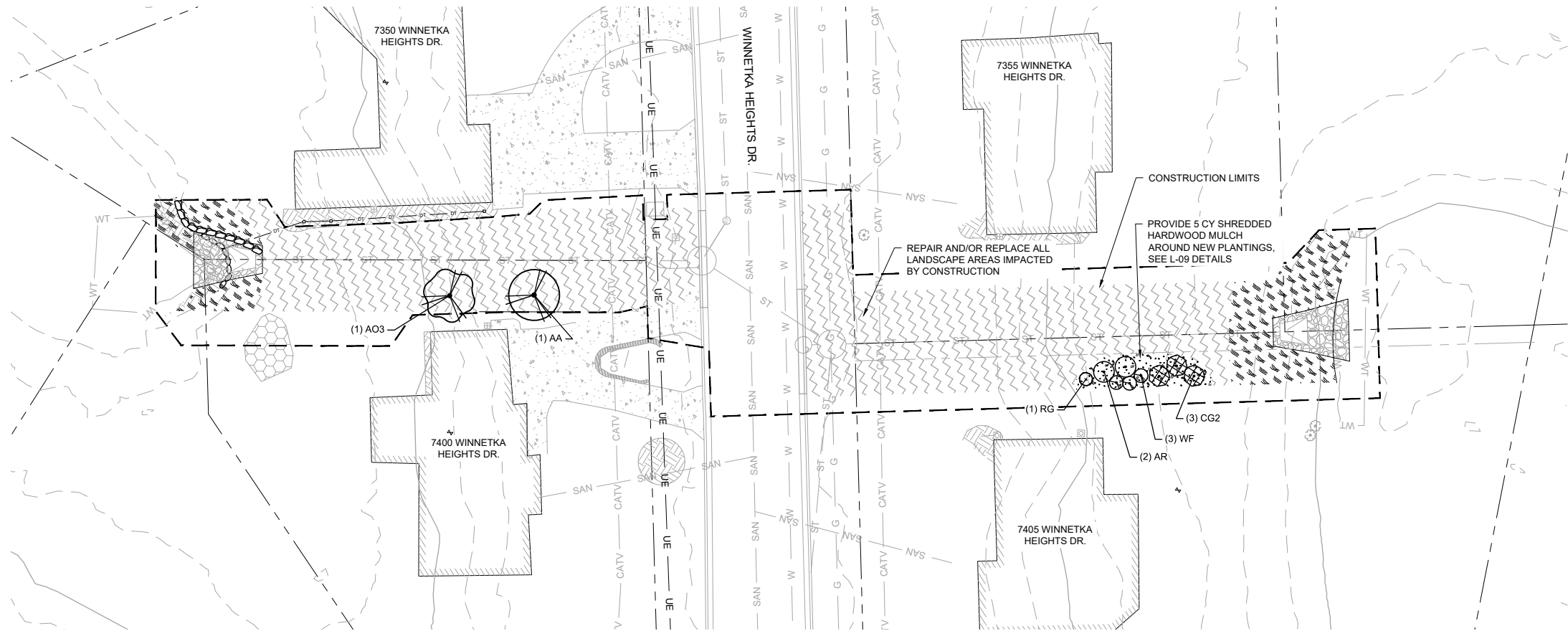
**SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT**

LANDSCAPE PLAN
SEA SCHOOL & WILDWOOD PARK - OVERALL

| | |
|--------------------|---------------|
| BARR PROJECT No. | 23/27-1900.00 |
| CLIENT PROJECT No. | 20-27 |
| DWG. No. | L-01 |
| REV. No. | C |

CADD USER: PATRICK E. BROCKAMP FILE: M:\DESIGN\23271900_00\2327190000_L-01.DWG PLOT SCALE: 12.5849 PLOT DATE: 10/10/2022 5:31 PM

| SYMBOL AND PATTERN LEGEND | |
|---------------------------|------------------------------|
| | EXISTING 10' CONTOUR |
| | EXISTING 2' CONTOUR |
| | EXISTING PROPERTY LINE |
| | EXISTING WETLAND DELINEATION |
| | EXISTING STORM SEWER |
| | EXISTING SANITARY SEWER |
| | EXISTING GAS LINE |
| | EXISTING WATERMAIN |
| | EXISTING FENCE |
| | CONSTRUCTION LIMITS |



- LOW MAINTENANCE TURF
 - EROSION CONTROL BLANKET
 - MnDOT 25-131 LOW MAINTENANCE TURF MIX, SEEDING RATE: 220 LBS./ACRE
- NATIVE BUFFER (SHORELINE)
 - EROSION CONTROL BLANKET
 - SHORELINE SEED MIX (W/ PLUGS)
 - SEE L-08 FOR SEED MIX DESIGN

- NOTES:**
- SEEDING MUST BE COMPLETED WHEN PONDS ARE AT NWL
 - SEE SHEET L-09 FOR TREE AND SHRUB PLANTING DETAILS.
 - SEE FOR SPECIAL SOIL PREP REQUIREMENTS
 - LOCATE UNDERGROUND UTILITIES PRIOR TO TREE AND SHRUB PLANTING. NOTIFY ENGINEER OF CONFLICTS WITH UTILITIES. TREE AND SHRUB LOCATIONS WILL BE ADJUSTED IN THE FIELD.
 - ALL TREES SHOWN ON THIS SHEET SHALL RECEIVE 1/3rd CY SHREDDED HARDWOOD MULCH, REFER TO L-09 PLANTING DETAILS FOR ADDITIONAL INFORMATION.
 - FINAL LOCATIONS OF PLANT MATERIAL SHOWN ON THIS SHEET SHALL BE DETERMINED IN FIELD BY LANDSCAPE ARCHITECT.

1 PLAN: LANDSCAPE - DECOLA POND D OUTLET

0 20 40
SCALE IN FEET

PLANT SCHEDULE DECOLA D

| TREES | BOTANICAL NAME | COMMON NAME | SIZE | CONTAINER | QTY |
|--------|--------------------------------|-----------------------------|------|-----------|-----|
| AA | ACER X FREEMANII 'JEFFERSRED' | AUTUMN BLAZE® FREEMAN MAPLE | #10 | CONT. | 1 |
| AO3 | AESCULUS GLABRA | OHIO BUCKEYE | #10 | CONT. | 1 |
| SHRUBS | BOTANICAL NAME | COMMON NAME | SIZE | CONTAINER | QTY |
| AR | AMELANCHIER ALNIFOLIA 'REGENT' | REGENT SERVICEBERRY | #2 | CONT. | 2 |
| CG2 | CORNUS RACEMOSA | GRAY DOGWOOD | #2 | CONT. | 3 |
| RG | RHUS AROMATICA 'GRO-LOW' | GRO-LOW FRAGRANT SUMAC | #2 | CONT. | 1 |
| WF | WEIGELA FLORIDA | WEIGELA (VARIETY TBD) | #2 | CONT. | 3 |

* FINAL PLANT MATERIAL TO BE DETERMINED BY HOMEOWNER. ARRANGEMENT SHOWN IS A SAMPLE FOR PLANT MATERIAL SIZING, QUANTITY, AND GENERAL LOCATION FOR BIDDING PURPOSES.

90% DESIGN REVIEW
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| PRINTED NAME | SIGNATURE | DATE | LICENSE # | |
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| AGENCY | | 08/23/22 | | | | | | |
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| CONSTRUCTION | | | | | | | | |
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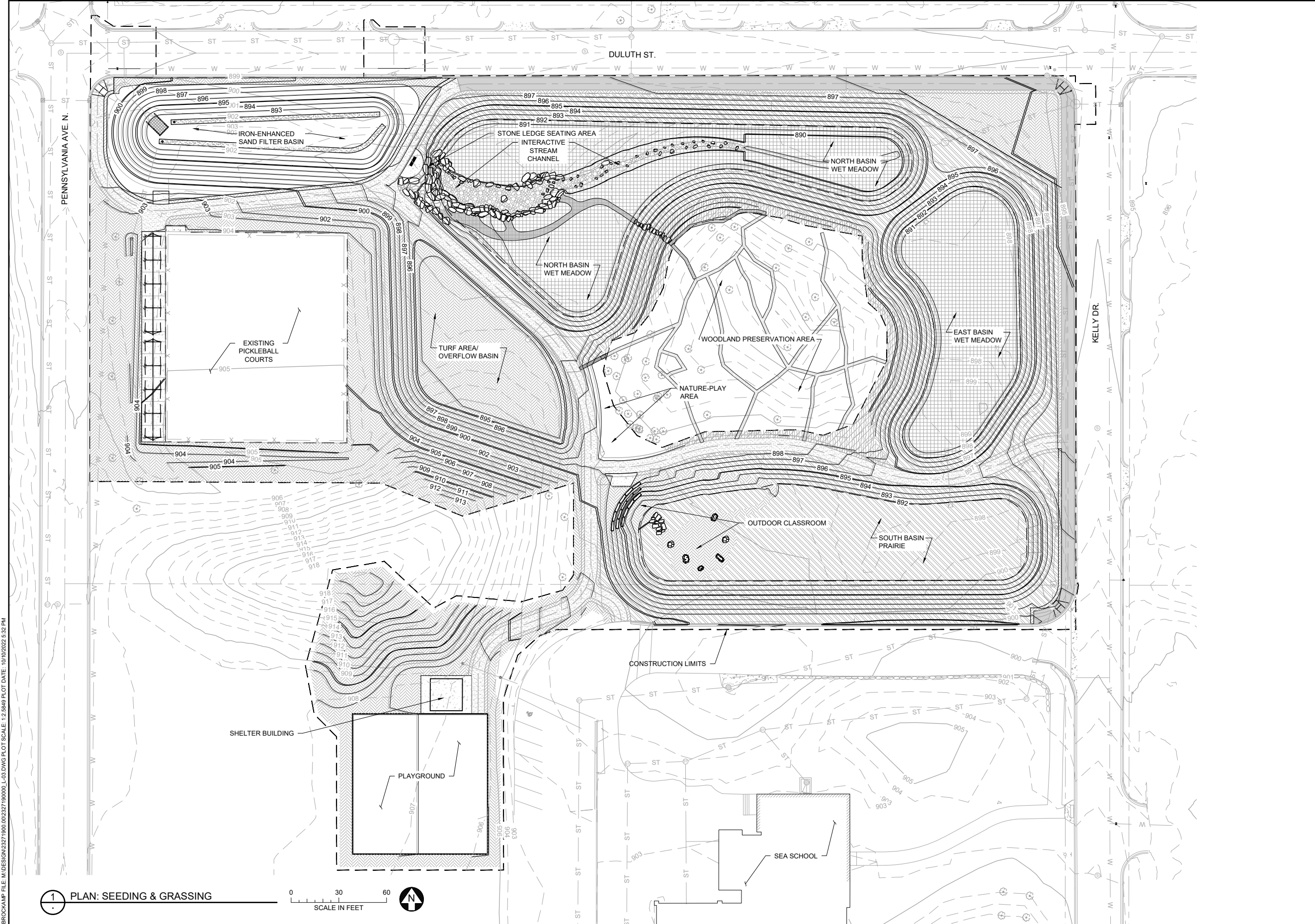
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| Designed | BARR |
| Approved | JAK2 |




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| SEA SCHOOL & WILDWOOD PARK FLOOD MITIGATION PROJECT | | BARR PROJECT No. 23/27-1900.00 | |
| LANDSCAPE PLAN DECOLA POND D OUTLET | | CLIENT PROJECT No. 20-27 | |
| DWG. No. | L-02 | REV. No. | C |



RESTORATION PLAN LEGEND

- 995 — EXISTING 5' CONTOUR
- 994 — EXISTING 1' CONTOUR
- 995 — PROPOSED 5' CONTOUR
- 994 — PROPOSED 1' CONTOUR
- - - - EXISTING PROPERTY LINE
- ST — EXISTING STORM SEWER
- W — EXISTING WATERMAIN
- X - X - EXISTING FENCE
- - - - CONSTRUCTION LIMITS

- SEEDING PLAN SHEET NOTES:**
- SEEDING MUST BE COMPLETED WHEN PONDS ARE AT NWL
 - SEE SHEET L-08 FOR TREE AND SHRUB PLANTING DETAILS. TREES & SHRUBS NOT SHOWN FOR CLARITY.
 - SEE  FOR SPECIAL SOIL PREP REQUIREMENTS
 - LOCATE UNDERGROUND UTILITIES PRIOR TO TREE AND SHRUB PLANTING. NOTIFY ENGINEER OF CONFLICTS WITH UTILITIES. TREE AND SHRUB LOCATIONS WILL BE ADJUSTED IN THE FIELD.

SEED MIX SCHEDULE

| | | |
|--|---|-----------|
| | WET MEADOW SEED MIX SEE L-08 FOR MIX DESIGN | 25,889 SF |
| | PRAIRIE SEED MIX SEE L-08 FOR MIX DESIGN | 47,821 SF |
| | WOODLAND EDGE SEED MIX SEE L-08 FOR MIX DESIGN | 3,902 SF |
| | SEA LAWN TURF SEED MIX SEE L-08 FOR MIX DESIGN | 52,639 SF |

1 PLAN: SEEDING & GRASSING



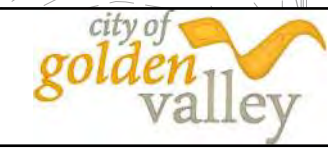
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| DATE | | RELEASED TO/FOR | A | B | C | 0 | 1 | 2 | 3 | |
| LICENSE # | | DATE RELEASED | | | | | | | | |

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|---|---|
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| Scale | AS SHOWN |
| Date | 09/16/2022 |
| Drawn | EPF |
| Checked | PEB |
| Designed | BARR |
| Approved | JAK2 |



SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT
LANDSCAPE PLAN
SEA SCHOOL & WILDWOOD PARK - GRASSING & SEEDING

| | |
|--------------------|---------------|
| BARR PROJECT No. | 23/27-1900.00 |
| CLIENT PROJECT No. | 20-27 |
| DWG. No. | L-03 |
| REV. No. | C |

PLANT SCHEDULE - IRON-ENHANCES SAND FILTER BASIN

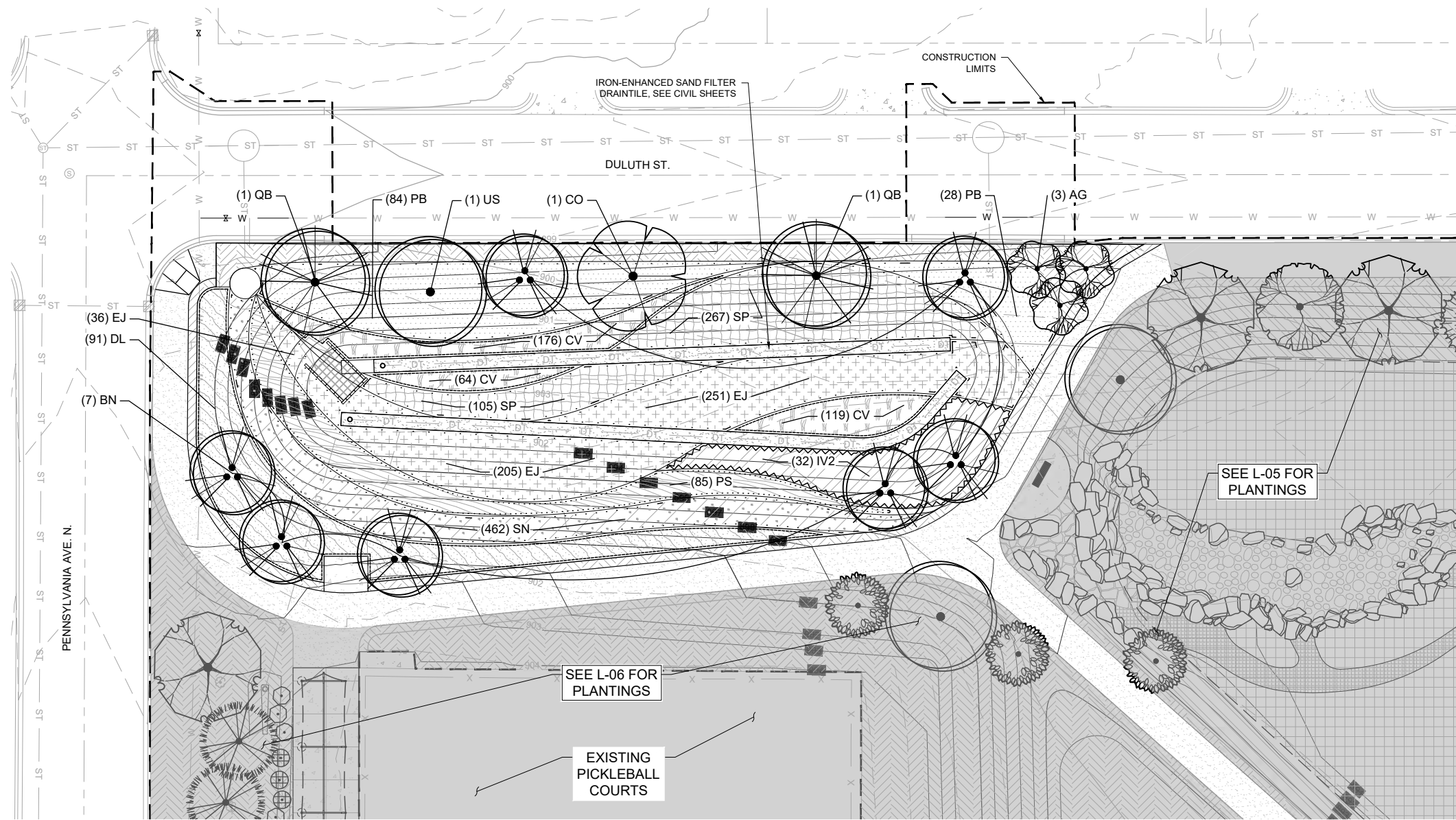
| TREES | BOTANICAL NAME | COMMON NAME | SIZE | CONTAINER | QTY |
|-------|---|--------------------------------------|------|-----------|-----|
| AG | AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' | AUTUMN BRILLIANCE APPLE SERVICEBERRY | #10 | CONT. | 3 |
| BN | BETULA NIGRA | RIVER BIRCH MULTI-TRUNK | #10 | CONT. | 7 |
| CO | CELTIS OCCIDENTALIS | COMMON HACKBERRY | #10 | CONT. | 1 |
| QB | QUERCUS BICOLOR | SWAMP WHITE OAK | #10 | CONT. | 2 |
| US | ULMUS AMERICANA 'ST. CROIX' TM | ST. CROIX AMERICAN ELM | #10 | CONT. | 1 |

SEE L-08 FOR PLANTING SCHEDULE OF PLANT MASSINGS WITHIN BASIN

RESTORATION PLAN LEGEND

- 995— EXISTING 5' CONTOUR
- 994— EXISTING 1' CONTOUR
- 995— PROPOSED 5' CONTOUR
- 994— PROPOSED 1' CONTOUR
- - - - EXISTING PROPERTY LINE
- ST — EXISTING STORM SEWER
- W — EXISTING WATERMAIN
- X — X — EXISTING FENCE
- - - - CONSTRUCTION LIMITS
- WET MEADOW SEED MIX
-SEE L-03 FOR LOCATIONS
- PRAIRIE SEED MIX
-SEE L-03 FOR LOCATIONS
- WOODLAND EDGE SEED MIX
-SEE L-03 FOR LOCATIONS
- BEE LAWN TURF SEED MIX
-SEE L-03 FOR LOCATIONS

- SHEET NOTES:**
- SEE SHEET L-03 FOR SEEDING INFORMATION
 - SEE SHEET L-09 FOR TREE AND SHRUB PLANTING DETAILS.
 - SEE FOR SPECIAL SOIL PREP REQUIREMENTS
 - LOCATE UNDERGROUND UTILITIES PRIOR TO TREE AND SHRUB PLANTING. NOTIFY ENGINEER OF CONFLICTS WITH UTILITIES. TREE AND SHRUB LOCATIONS WILL BE ADJUSTED IN THE FIELD.
 - CONTRACTOR SHALL REPLACE IN KIND ANY TURF DAMAGED DURING CONSTRUCTION BEYOND THE EXTENTS SHOWN ON THE PLAN.
 - STABILIZED PATH: 4" DEEP DECOMPOSED GRANITE, OR APPROVED EQUAL METHOD.



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1 PLAN: IRON ENHANCED SAND FILTER BASIN



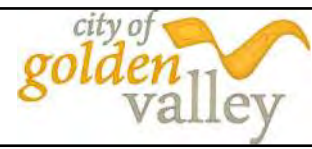
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| CLIENT | 01/11/22 | 08/18/22 | | | |
| AGENCY | 08/23/22 | | | | |
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| CONSTRUCTION | | | | | |
| RECORD | | | | | |
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| DATE RELEASED | | | | | |

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 Minneapolis, Minnesota
 Ph: 1-800-632-2277
 Fax: (952) 832-2601
 www.barr.com

| | |
|----------|------------|
| Scale | AS SHOWN |
| Date | 09/16/2022 |
| Drawn | EPF |
| Checked | PEB |
| Designed | BARR |
| Approved | JAK2 |

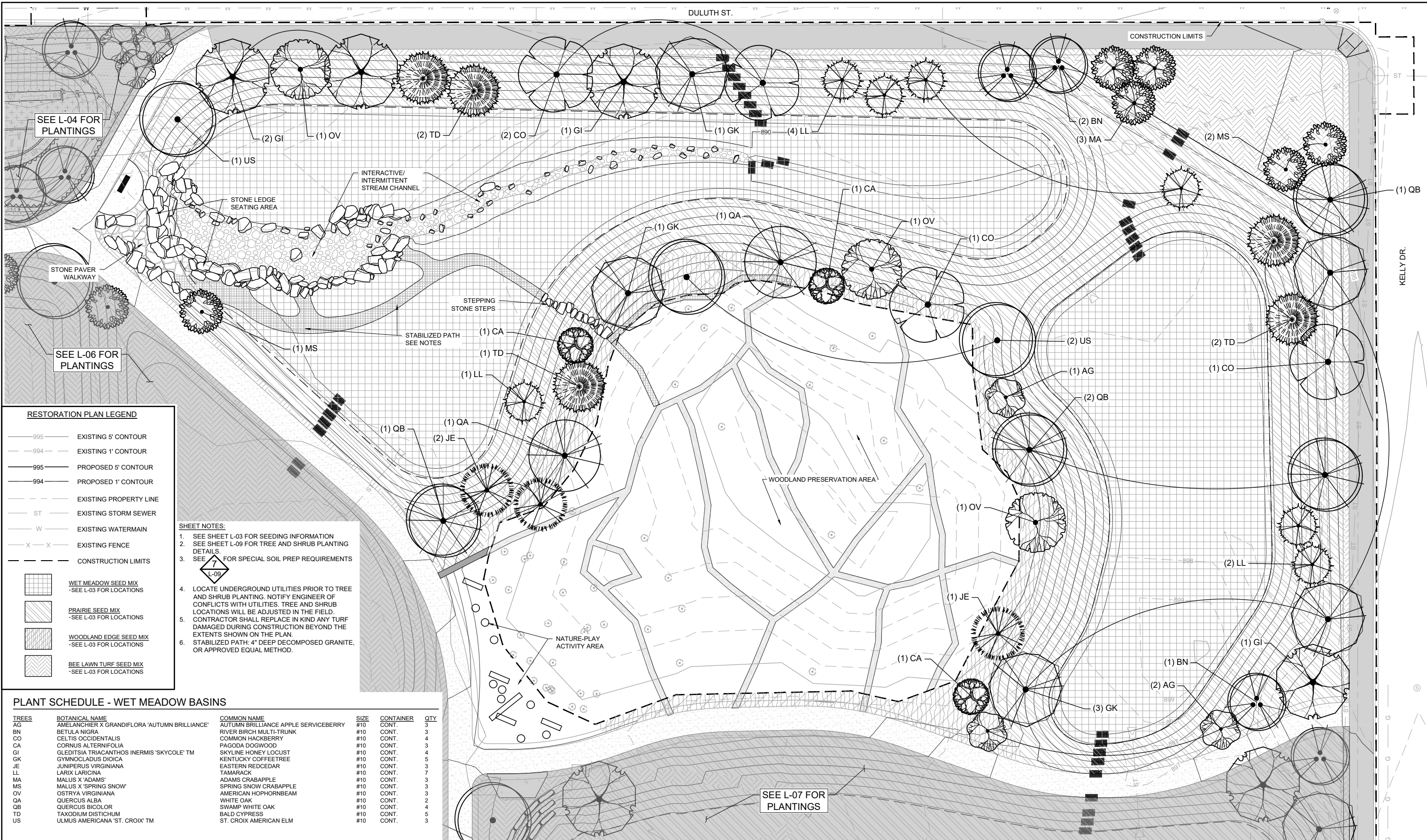


90% DESIGN REVIEW
 NOT FOR CONSTRUCTION

SEA SCHOOL & WILDWOOD PARK
 FLOOD MITIGATION PROJECT

LANDSCAPE PLAN
 SEA SCHOOL & WILDWOOD PARK - ENLARGEMENT 1

| | |
|--------------------|---------------|
| BARR PROJECT No. | 23/27-1900.00 |
| CLIENT PROJECT No. | 20-27 |
| DWG. No. | L-04 |
| REV. No. | C |



SEE L-04 FOR PLANTINGS

SEE L-06 FOR PLANTINGS

SEE L-07 FOR PLANTINGS

RESTORATION PLAN LEGEND

- 995 — EXISTING 5' CONTOUR
- 994 — EXISTING 1' CONTOUR
- 995 — PROPOSED 5' CONTOUR
- 994 — PROPOSED 1' CONTOUR
- — EXISTING PROPERTY LINE
- ST — EXISTING STORM SEWER
- W — EXISTING WATERMAIN
- X — X — EXISTING FENCE
- — — CONSTRUCTION LIMITS
- WET MEADOW SEED MIX
-SEE L-03 FOR LOCATIONS
- PRAIRIE SEED MIX
-SEE L-03 FOR LOCATIONS
- WOODLAND EDGE SEED MIX
-SEE L-03 FOR LOCATIONS
- BEE LAWN TURF SEED MIX
-SEE L-03 FOR LOCATIONS

SHEET NOTES:

1. SEE SHEET L-03 FOR SEEDING INFORMATION
2. SEE SHEET L-09 FOR TREE AND SHRUB PLANTING DETAILS
3. SEE FOR SPECIAL SOIL PREP REQUIREMENTS
4. LOCATE UNDERGROUND UTILITIES PRIOR TO TREE AND SHRUB PLANTING. NOTIFY ENGINEER OF CONFLICTS WITH UTILITIES. TREE AND SHRUB LOCATIONS WILL BE ADJUSTED IN THE FIELD. CONTRACTOR SHALL REPLACE IN KIND ANY TURF DAMAGED DURING CONSTRUCTION BEYOND THE EXTENTS SHOWN ON THE PLAN.
5. STABILIZED PATH: 4" DEEP DECOMPOSED GRANITE, OR APPROVED EQUAL METHOD.

PLANT SCHEDULE - WET MEADOW BASINS

| TREES | BOTANICAL NAME | COMMON NAME | SIZE | CONTAINER | QTY |
|-------|---|--------------------------------------|------|-----------|-----|
| AG | AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' | AUTUMN BRILLIANCE APPLE SERVICEBERRY | #10 | CONT. | 3 |
| BN | BETULA NIGRA | RIVER BIRCH MULTI-TRUNK | #10 | CONT. | 3 |
| CO | CELTIS OCCIDENTALIS | COMMON HACKBERRY | #10 | CONT. | 4 |
| CA | CORNUS ALTERNIFOLIA | PAGODA DOGWOOD | #10 | CONT. | 3 |
| GI | GLEDTISIA TRIACANTHOS INERMIS 'SKYCOLE'™ | SKYLINE HONEY LOCUST | #10 | CONT. | 4 |
| GK | GYMNOCLADUS DIOICA | KENTUCKY COFFEETREE | #10 | CONT. | 5 |
| JE | JUNIPERUS VIRGINIANA | EASTERN REDCEDAR | #10 | CONT. | 3 |
| LL | LARIX LARICINA | TAMARACK | #10 | CONT. | 7 |
| MA | MALUS X 'ADAMS' | ADAMS CRABAPPLE | #10 | CONT. | 3 |
| MS | MALUS X 'SPRING SNOW' | SPRING SNOW CRABAPPLE | #10 | CONT. | 3 |
| OV | OSTRYA VIRGINIANA | AMERICAN HOPHORNBEAM | #10 | CONT. | 3 |
| QA | QUERCUS ALBA | WHITE OAK | #10 | CONT. | 2 |
| QB | QUERCUS BICOLOR | SWAMP WHITE OAK | #10 | CONT. | 4 |
| TD | TAXODIUM DISTICHUM | BALD CYPRESS | #10 | CONT. | 5 |
| US | ULMUS AMERICANA 'ST. CROIX'™ | ST. CROIX AMERICAN ELM | #10 | CONT. | 3 |

1 PLAN: STREAM & WET MEADOW BASIN



90% DESIGN 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 #: _____ | | <table border="1"> <tr> <td>CLIENT</td> <td>01/11/22</td> <td>09/16/22</td> <td></td> <td></td> <td></td> </tr> <tr> <td>AGENCY</td> <td></td> <td>09/23/22</td> <td></td> <td></td> <td></td> </tr> <tr> <td>BID</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CONSTRUCTION</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>RECORD</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>RELEASED TO/FOR</td> <td>A</td> <td>B</td> <td>C</td> <td>0</td> <td>1 2 3</td> </tr> <tr> <td>DATE RELEASED</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> | | CLIENT | 01/11/22 | 09/16/22 | | | | AGENCY | | 09/23/22 | | | | BID | | | | | | CONSTRUCTION | | | | | | RECORD | | | | | | RELEASED TO/FOR | A | B | C | 0 | 1 2 3 | DATE RELEASED | | | | | | Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com | | <table border="1"> <tr> <td>Scale</td> <td>AS SHOWN</td> </tr> <tr> <td>Date</td> <td>09/16/2022</td> </tr> <tr> <td>Drawn</td> <td>EPF</td> </tr> <tr> <td>Checked</td> <td>PEB</td> </tr> <tr> <td>Designed</td> <td>BARR</td> </tr> <tr> <td>Approved</td> <td>JAK2</td> </tr> </table> | | Scale | AS SHOWN | Date | 09/16/2022 | Drawn | EPF | Checked | PEB | Designed | BARR | Approved | JAK2 | | | SEA SCHOOL & WILDWOOD PARK FLOOD MITIGATION PROJECT LANDSCAPE PLAN SEA SCHOOL & WILDWOOD PARK - ENLARGEMENT 2 | | BARR PROJECT No. 23/27-1900.00 CLIENT PROJECT No. 20-27 DWG. No. L-05 REV. No. C | |
| CLIENT | 01/11/22 | 09/16/22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AGENCY | | 09/23/22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BID | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CONSTRUCTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RECORD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| DATE RELEASED | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Scale | AS SHOWN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Date | 09/16/2022 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Drawn | EPF | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Checked | PEB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Designed | BARR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Approved | JAK2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

CADD USER: PATRICK.E. BROCKAMP FILE: M:\DESIGN\23271900_091622\L-04_LANDSCAPE ENLARGEMENTS.DWG PLOT SCALE: 1:2,500 PLOT DATE: 10/10/2022 9:33 PM

PLANT SCHEDULE - PICKLEBALL COURT

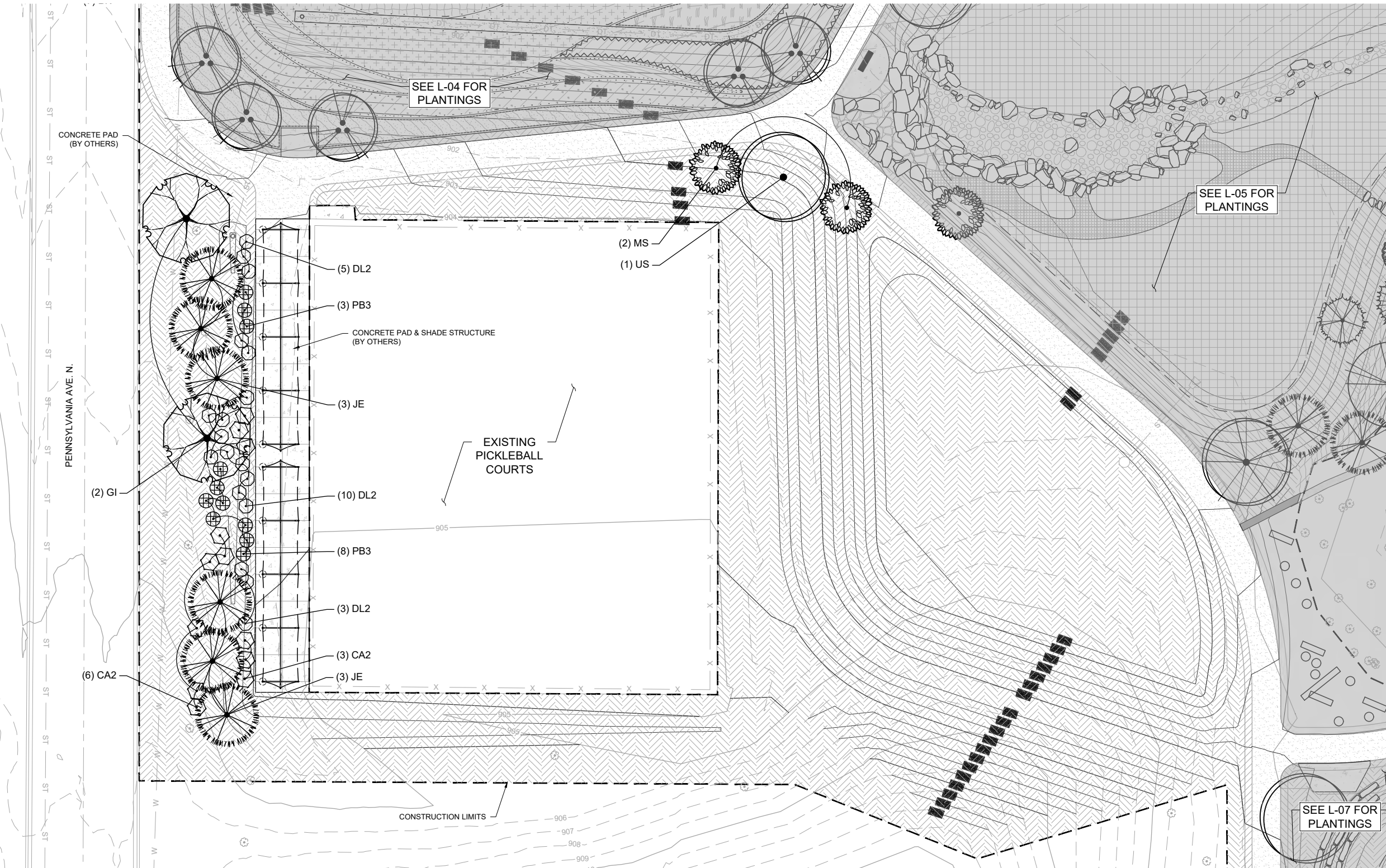
| TREES | BOTANICAL NAME | COMMON NAME | SIZE | CONTAINER | QTY |
|-------|--|------------------------|------|-----------|-----|
| GI | GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE' TM | SKYLINE HONEY LOCUST | #10 | CONT. | 2 |
| JE | JUNIPERUS VIRGINIANA | EASTERN REDCEDAR | #10 | CONT. | 6 |
| MS | MALLUS X 'SPRING SNOW' | SPRING SNOW CRABAPPLE | #10 | CONT. | 1 |
| US | ULMUS AMERICANA 'ST. CROIX' TM | ST. CROIX AMERICAN ELM | #10 | CONT. | 1 |

| SHRUBS | BOTANICAL NAME | COMMON NAME | SIZE | CONTAINER | QTY |
|--------|---------------------------------|------------------------|------|-----------|-----|
| CA2 | CORYLUS AMERICANA | AMERICAN HAZELNUT | #2 | CONT. | 12 |
| DL2 | DIERVILLA LONICERA | DWARF BUSH HONEYSUCKLE | #1 | CONT. | 18 |
| PB3 | PHYSOCARPUS OPULIFOLIUS 'MONLO' | DIABLO® NINEBARK | #2 | CONT. | 11 |

RESTORATION PLAN LEGEND

- 995— EXISTING 5' CONTOUR
- 994— EXISTING 1' CONTOUR
- 995— PROPOSED 5' CONTOUR
- 994— PROPOSED 1' CONTOUR
- - - - EXISTING PROPERTY LINE
- ST — EXISTING STORM SEWER
- W — EXISTING WATERMAIN
- X — X — EXISTING FENCE
- - - - CONSTRUCTION LIMITS
- [Grid Pattern] WET MEADOW SEED MIX
-SEE L-03 FOR LOCATIONS
- [Diagonal Lines] PRAIRIE SEED MIX
-SEE L-03 FOR LOCATIONS
- [Cross-hatch] WOODLAND EDGE SEED MIX
-SEE L-03 FOR LOCATIONS
- [Vertical Lines] BEE LAWN TURF SEED MIX
-SEE L-03 FOR LOCATIONS

- SHEET NOTES:**
- SEE SHEET L-03 FOR SEEDING INFORMATION
 - SEE SHEET L-09 FOR TREE AND SHRUB PLANTING DETAILS
 - SEE [Symbol] FOR SPECIAL SOIL PREP REQUIREMENTS
 - LOCATE UNDERGROUND UTILITIES PRIOR TO TREE AND SHRUB PLANTING. NOTIFY ENGINEER OF CONFLICTS WITH UTILITIES. TREE AND SHRUB LOCATIONS WILL BE ADJUSTED IN THE FIELD. CONTRACTOR SHALL REPLACE IN KIND ANY TURF DAMAGED DURING CONSTRUCTION BEYOND THE EXTENTS SHOWN ON THE PLAN.
 - STABILIZED PATH: 4" DEEP DECOMPOSED GRANITE, OR APPROVED EQUAL METHOD.



1 PLAN: PICKLEBALL COURT AREA



CADD USER: PATRICK E. BROCKAMP FILE: M:\DESIGN\23271900_001\2327190000_L-04_LANDSCAPE ENLARGEMENTS.DWG PLOT SCALE: 1:2,500 PLOT DATE: 10/10/2022 3:33 PM

| NO. | BY | CHK | APP. | DATE | REVISION DESCRIPTION |
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| CLIENT AGENCY | 01/11/22 | 09/16/22 | | | |
| BID | 09/23/22 | | | | |
| CONSTRUCTION RECORD | | | | | |
| RELEASED TO/FOR | A | B | C | 0 | 1 2 3 |
| DATE RELEASED | | | | | |

BARR ENGINEERING CO.
4300 MARKETPOINTE DRIVE
Suite 200
MINNEAPOLIS, MN 55435
Ph: 1-800-632-2277
Fax: (952) 832-2601
www.barr.com

| | |
|----------|------------|
| Scale | AS SHOWN |
| Date | 09/16/2022 |
| Drawn | DJS2 |
| Checked | MDB3 |
| Designed | BARR |
| Approved | JAK2 |



**SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT**

LANDSCAPING PLAN
SEA SCHOOL & WILDWOOD PARK - ENLARGEMENT 3

| | |
|--------------------|---------------|
| BARR PROJECT No. | 23/27-1900.00 |
| CLIENT PROJECT No. | 20-27 |
| DWG. No. | L-06 |
| REV. No. | C |

90% DESIGN REVIEW
NOT FOR CONSTRUCTION

PLANT SCHEDULE - PRAIRIE BASIN

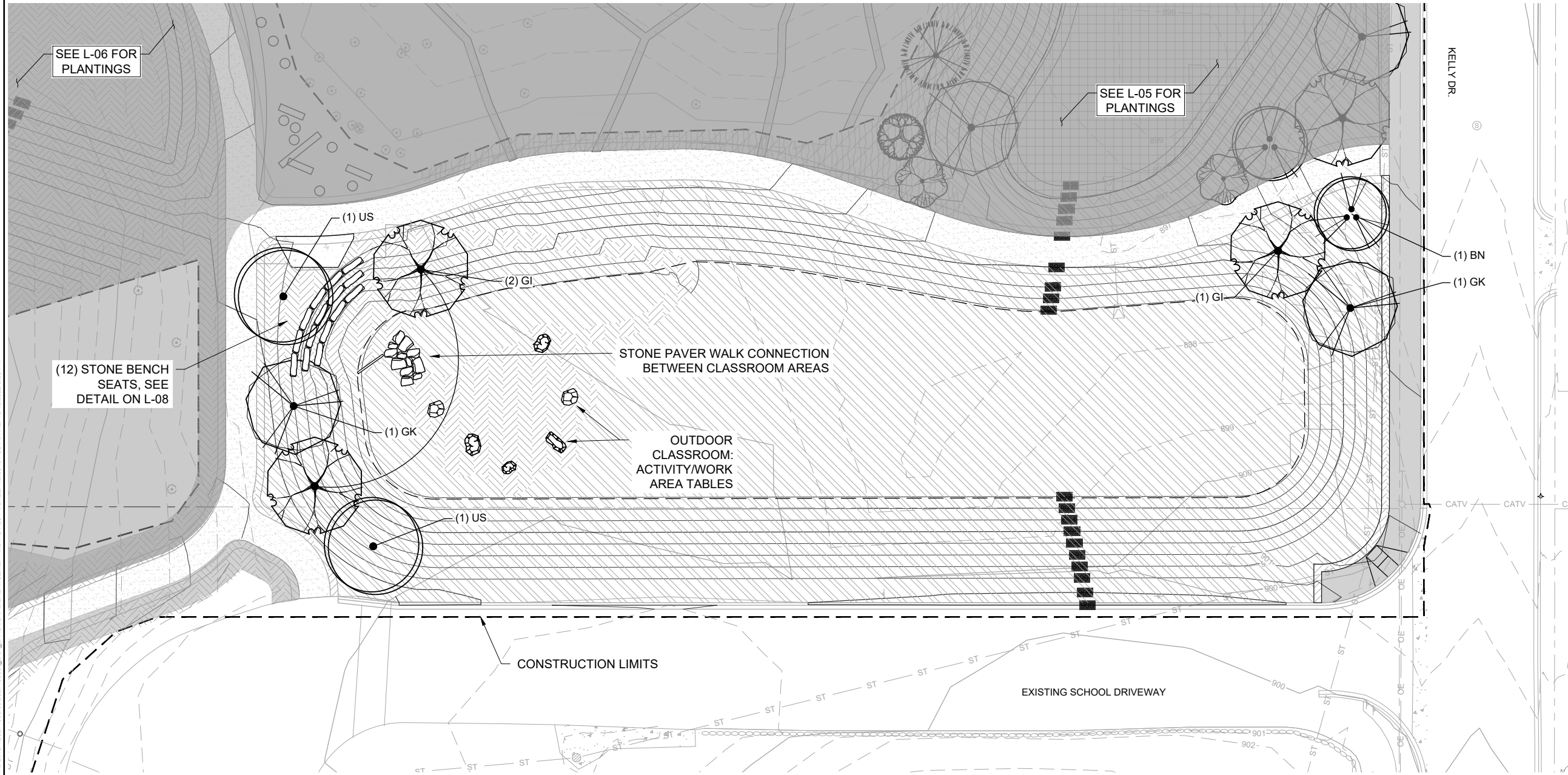
| TREES | BOTANICAL NAME | COMMON NAME | SIZE | CONTAINER | QTY |
|-------|--|-------------------------|------|-----------|-----|
| BN | BETULA NIGRA | RIVER BIRCH MULTI-TRUNK | #10 | CONT. | 1 |
| GI | GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE'™ | SKYLINE HONEY LOCUST | #10 | CONT. | 3 |
| GK | GYMNOCLADUS DIOICA | KENTUCKY COFFEETREE | #10 | CONT. | 2 |
| US | ULMUS AMERICANA 'ST. CROIX'™ | ST. CROIX AMERICAN ELM | #10 | CONT. | 2 |

RESTORATION PLAN LEGEND

- 995— EXISTING 5' CONTOUR
- 994— EXISTING 1' CONTOUR
- 995— PROPOSED 5' CONTOUR
- 994— PROPOSED 1' CONTOUR
- - - - EXISTING PROPERTY LINE
- ST — EXISTING STORM SEWER
- W — EXISTING WATERMAIN
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- WET MEADOW SEED MIX
-SEE L-03 FOR LOCATIONS
- PRAIRIE SEED MIX
-SEE L-03 FOR LOCATIONS
- WOODLAND EDGE SEED MIX
-SEE L-03 FOR LOCATIONS
- BEE LAWN TURF SEED MIX
-SEE L-03 FOR LOCATIONS

SHEET NOTES:

- SEE SHEET L-03 FOR SEEDING INFORMATION
- SEE SHEET L-09 FOR TREE AND SHRUB PLANTING DETAILS
- SEE FOR SPECIAL SOIL PREP REQUIREMENTS
- LOCATE UNDERGROUND UTILITIES PRIOR TO TREE AND SHRUB PLANTING. NOTIFY ENGINEER OF CONFLICTS WITH UTILITIES. TREE AND SHRUB LOCATIONS WILL BE ADJUSTED IN THE FIELD.
- CONTRACTOR SHALL REPLACE IN KIND ANY TURF DAMAGED DURING CONSTRUCTION BEYOND THE EXTENTS SHOWN ON THE PLAN.
- STABILIZED PATH: 4" DEEP DECOMPOSED GRANITE, OR APPROVED EQUAL METHOD.



1 PLAN: PRAIRIE BASIN

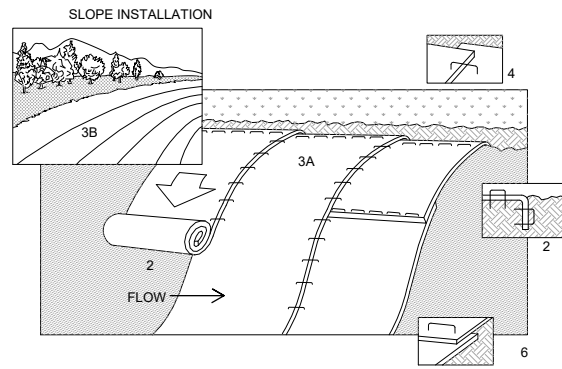
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SCALE IN FEET

90% DESIGN REVIEW
NOT FOR CONSTRUCTION

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|---|----|-----|------|--|----------------------|--|--|---|--|--|--|---|--|--|--|-----------------------|--|--|--|--|--|--|--|---|--|--|--|
| 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. | | | | CLIENT AGENCY: 01/11/22 BID: 08/23/22 CONSTRUCTION: RECORD: RELEASED TO/FOR: A B C 0 1 2 3 DATE RELEASED: | | | | Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com | | | | Scale: AS SHOWN Date: 09/16/2022 Drawn: DJS2 Checked: MDB3 Designed: BARR Approved: JAK2 | | | | city of golden valley | | | | SEA SCHOOL & WILDWOOD PARK FLOOD MITIGATION PROJECT LANDSCAPE PLAN SEA SCHOOL & WILDWOOD PARK - ENLARGEMENT 4 | | | | BARR PROJECT No. 23/27-1900.00 CLIENT PROJECT No. 20-27 DWG. No. L-07 REV. No. C | | | |
| NO. | BY | CHK | APP. | DATE | REVISION DESCRIPTION | | | | | | | | | | | | | | | | | | | | | | |

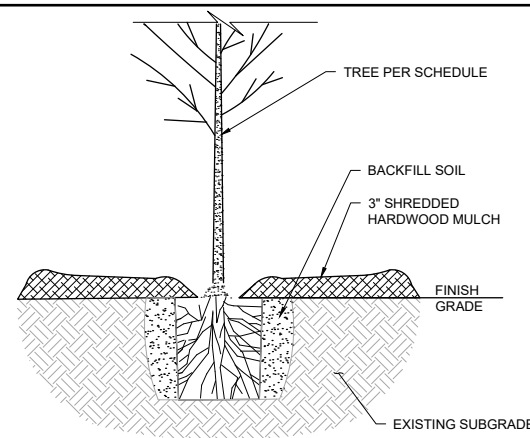
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NOTES:

- REFER TO MANUFACTURER RECOMMENDATIONS FOR STAPLE PATTERNS FOR SLOPE INSTALLATIONS.
- 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.
- 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.
- THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 6" OVERLAP, WITH THE UPHILL BLANKET ON TOP.
- 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.
- BLANKET MATERIALS SHALL BE AS SPECIFIED OR AS APPROVED BY ENGINEER.

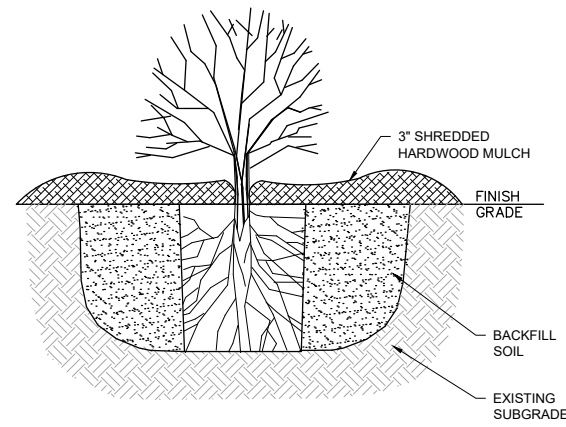
1 DETAIL: EROSION CONTROL BLANKET INSTALLATION
NOT TO SCALE



TREE PLANTING NOTES:

- PROVIDE AND INSTALL PLANTS PER SCHEDULE.
- REMOVE DEAD OR DAMAGED BRANCHES. RETAIN THE NATURAL FORM OF PLANT. DO NOT CUT THE LEADER.
- IF ROOT FLARE IS NOT EXPOSED WITHIN THE CONTAINER EXCAVATE SURFACE SOIL TO BASE OF ROOT FLARE.
- DIG PLANT HOLES 6" MIN. LARGER THAN ROOT MASS, ALL SIDES.
- SCARIFY BOTTOM AND SIDES OF HOLE PRIOR TO PLANTING.
- SET TREE ON LIGHTLY FIRMED BACKFILL SOIL SO ROOT FLARE IS EVEN WITH FINISH GRADE.
- REMOVE BURLAP AND ROPES FROM TOP 1/3 OF ROOT BALLS. CUT WIRE BASKET DOWN TO SECOND HORIZONTAL WIRE FROM BOTTOM, AND DISPOSE OF OFF-SITE.
- BACKFILL WITH PLANTING SOIL AND FIRM SOIL AROUND ROOT MASS TO MAINTAIN PLUMB AND ENSURE NO AIR GAPS AROUND ROOT MASS.
- CONSTRUCT 3" WATERING BASIN. THOROUGHLY WATER WITHIN 3 HOURS OF INSTALLATION.
- PLACE SHREDDED HARDWOOD MULCH (M/N/DOT SPEC 3882.2 TYPE 6 - WEED SEED FREE SHREDDED HARDWOOD.) TO A RADIUS OF 24" AND TO A DEPTH OF 3" AROUND TREE (SOIL PREPARED AS PER PLAN).
- NO MULCH TO BE IN CONTACT WITH BASE OF PLANT.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TREES IN A PLUMB POSITION THROUGHOUT THE WARRANTY PERIOD.

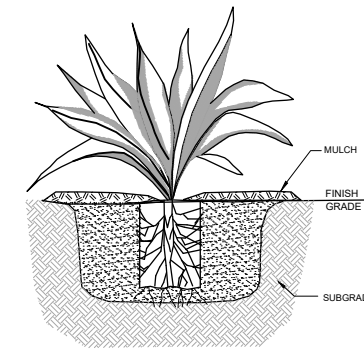
2 DETAIL: TREE PLANTING
NOT TO SCALE



SHRUB PLANTING NOTES:

- PROVIDE AND INSTALL PLANTS PER SCHEDULE.
- REMOVE DEAD OR DAMAGED BRANCHES. RETAIN THE NATURAL FORM OF PLANT.
- IF ROOT FLARE IS NOT EXPOSED WITHIN THE CONTAINER EXCAVATE SURFACE SOIL TO BASE OF ROOT FLARE.
- DIG PLANT HOLES 6" MIN. LARGER THAN ROOT MASS, ALL SIDES.
- SET SHRUB ON LIGHTLY FIRMED BACKFILL SOIL SO ROOT FLARE IS EVEN WITH FINISH GRADE.
- PLACE SHREDDED HARDWOOD MULCH (M/N/DOT SPEC 3882.2 TYPE 6 - WEED SEED FREE SHREDDED HARDWOOD.) TO A RADIUS OF 24" AND TO A DEPTH OF 3" AROUND PLANT.
- NO MULCH TO BE IN CONTACT WITH PLANT.

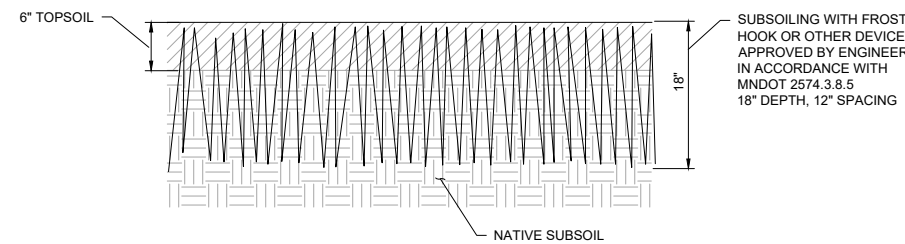
3 DETAIL: SHRUB PLANTING
NOT TO SCALE



HERBACEOUS PLUG PLANTING NOTES:

- PREPARE SOIL WITH COMPOST AMENDMENT PER PLAN.
- PROVIDE AND INSTALL PLANTS PER SCHEDULE.
- EXCAVATE HOLE 3 TIMES WIDTH OF ROOTBALL.
- BREAK BOTTOM OF ROOTBALL TO LOOSEN ROOTS.
- PLANT THROUGH MULCH ALIGNING ROOTBALL TOP EVEN WITH SOIL - DO NOT PLANT TOO DEEP OR TOO SHALLOW. FIRM SOIL TO ENSURE GOOD CONTACT WITH ROOTS.
- APPLY 3" DEPTH SHREDDED HARDWOOD MULCH TO ENTIRE PLANTING AREA (SOIL PREPARED AS PER SPECIFICATIONS).
- NO MULCH TO BE IN CONTACT WITH PLANT.
- WATER THOROUGHLY AFTER PLANTING.
- HERBACEOUS PLANTS SHALL BE GUARANTEED FOR 60 DAYS FROM TIME OF OWNER ACCEPTANCE. CONTRACTOR TO WATER AS NECESSARY TO MAINTAIN IN A HEALTHY CONDITION. AT THE END OF THIS PERIOD ANY DEAD PLANTS SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.

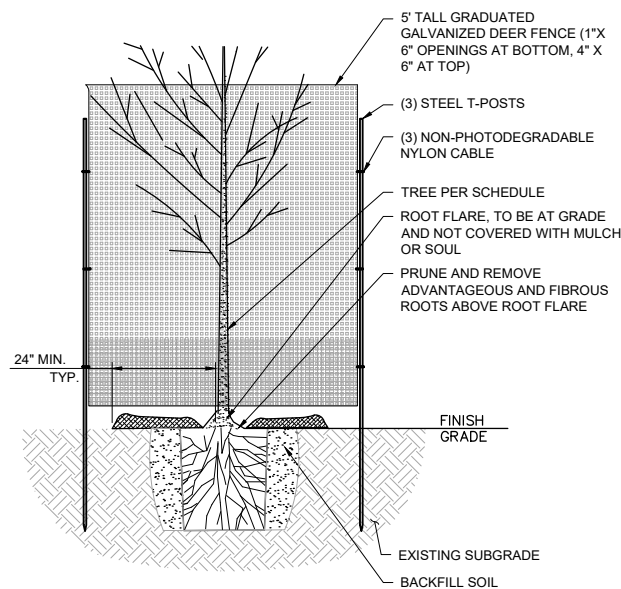
4 DETAIL: HERBACEOUS PLUG
NOT TO SCALE



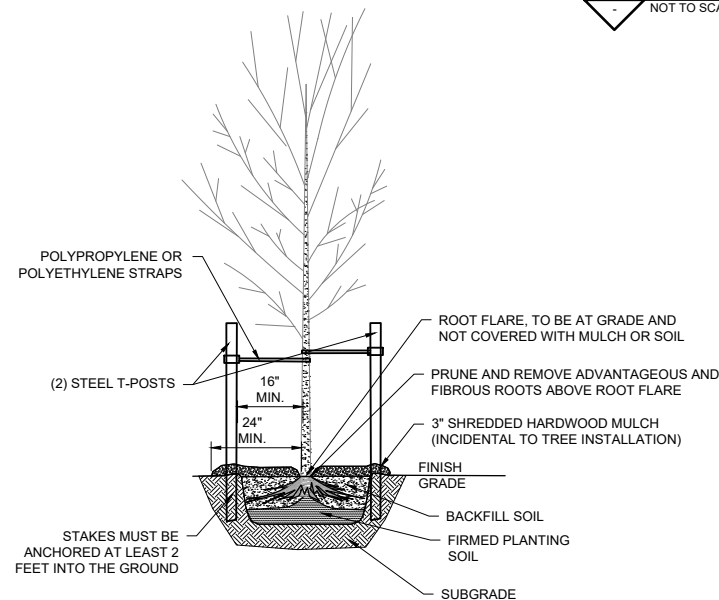
7 DETAIL: SUBSOILING
NOT TO SCALE

TREE PLANTING NOTES:

- PROVIDE AND INSTALL PLANTS PER SCHEDULE.
- ALL DECIDUOUS TREES SHALL BE ENCLOSED BY GALVANIZED DEER FENCING TO PROTECT FROM ANIMAL BROWSING. TREE PROTECTION SHALL BE CONSIDERED INCIDENTAL TO TREE PLANTING.
- REMOVE DEAD OR DAMAGED BRANCHES. RETAIN THE NATURAL FORM OF PLANT. DO NOT CUT THE LEADER.
- IF ROOT FLARE IS NOT EXPOSED WITHIN THE CONTAINER EXCAVATE SURFACE SOIL TO BASE OF ROOT FLARE.
- DIG PLANT HOLES 6" MIN. LARGER THAN ROOT MASS, ALL SIDES.
- SCARIFY BOTTOM AND SIDES OF HOLE PRIOR TO PLANTING.
- SET TREE ON LIGHTLY FIRMED BACKFILL SOIL SO ROOT FLARE IS EVEN WITH FINISH GRADE.
- BACKFILL WITH PLANTING SOIL AND FIRM SOIL AROUND ROOT MASS TO MAINTAIN PLUMB AND ENSURE NO AIR GAPS AROUND ROOT MASS.
- CONSTRUCT 3" WATERING BASIN. THOROUGHLY WATER WITHIN 3 HOURS OF INSTALLATION.
- PLACE SHREDDED HARDWOOD MULCH (M/N/DOT SPEC 3882.2 TYPE 6 - WEED SEED FREE SHREDDED HARDWOOD.) TO A RADIUS OF 24" AND TO A DEPTH OF 3" AROUND TREE (SOIL PREPARED AS PER PLAN).
- NO MULCH TO BE IN CONTACT WITH BASE OF PLANT.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TREES IN A PLUMB POSITION THROUGHOUT THE GUARANTEE PERIOD.
- CONTRACTOR TO WATER AS NECESSARY THROUGHOUT GUARANTEE PERIOD TO MAINTAIN IN A HEALTHY CONDITION. AT THE END OF THE GUARANTEE PERIOD ALL TREES THAT ARE DEAD OR DETERMINED UNHEALTHY OR UNSIGHTLY SHALL BE REPLACED AT CONTRACTOR'S EXPENSE. SEE HERBACEOUS PLANT ESTABLISHMENT SPECIFICATIONS FOR ADDITIONAL DETAIL.



5 DETAIL: TREE PLANTING WITH PROTECTION
NOT TO SCALE



6 DETAIL: BARE ROOT TREE PLANTING
NOT TO SCALE

BARE ROOT TREE PLANTING NOTES:

- INSTALL PLANT MATERIAL THAT MEETS SPECIFICATIONS.
- SOAK ROOTS IN WATER MINIMUM OF ONE HOUR PRIOR TO PLANTING.
- PLANTING HOLE DIMENSIONS FOR 8' TALL TREE: MIN. 54" WIDE, MIN. 14" DEEP.
- SCARIFY SIDES AND BOTTOM OF PLANTING HOLE PRIOR TO PLANTING.
- TRANSFER PLANT DIRECTLY FROM WATER TO HOLE, SET PLANT SO THE ROOT FLARE IS AT THE FINISHED SOIL ELEVATION. SPREAD ROOTS OUT EVENLY.
- SET PLUMB AND IMMEDIATELY BACKFILL WITH PLANTING SOIL. DO NOT LEAVE IN PLANTING HOLE UNCOVERED. LIGHTLY FIRM SOIL TO MAINTAIN PLUMB POSITION.
- WATER THOROUGHLY WITHIN 2 HOURS TO SETTLE PLANTS AND FILL VOIDS.
- BACK FILL VOIDS AND WATER A SECOND TIME.
- PLACE SHREDDED HARDWOOD MULCH (M/N/DOT SPEC 3882.2 TYPE 6 - WEED SEED FREE SHREDDED HARDWOOD.) TO A RADIUS OF 24" AND TO A DEPTH OF 3" AROUND TREE (SOIL PREPARED AS PER PLAN) WITHIN 48 HOURS OF THE SECOND WATERING UNLESS SOIL MOISTURE IS EXCESSIVE.
- PROTECT TREE AS SHOWN IN TREE PLANTING WITH PROTECTION DETAIL.
- ALL TREES SHALL BE STAKED AND TIED TO MAINTAIN VERTICALITY FOLLOWING PLANTING. TREE STAKING SHALL BE CONSIDERED INCIDENTAL TO TREE PLANTING.
- INSTALL TWO (2) 8" STEEL T-POSTS, ANCHORED 2' INTO THE GROUND ON EITHER SIDE OF THE TRUNK.
- INSTALL 16" LONG 40 MIL POLYPROPYLENE OR POLYETHYLENE STRAPS AROUND TRUNK AND AFFIX TO HOLES IN T-POSTS WITH 10 GAUGE WIRE.
- REMOVE THE TREE STAKING AFTER TWO (2) YEARS OF MAINTAINED PLUMB POSITION.

CADD USER: PATRICK.E. BROCKAMP FILE: M:\DESIGN\23271900_001\23271900_00_10 AND L-11.DWG PLOT SCALE: 1:2,500 PLOT DATE: 10/10/2022 5:33 PM

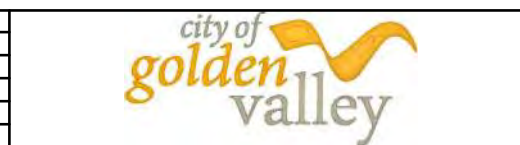
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|---|-----------|--|--|--|
| I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. | | | | |
| PRINTED NAME | | | | |
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| CLIENT | 01/11/22 | 08/18/22 | | | | |
| AGENCY | | 08/23/22 | | | | |
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| CONSTRUCTION | | | | | | |
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| DATE RELEASED | | | | | | |

Project Office:
BARR ENGINEERING CO.
 4300 MARKETPOINTE DRIVE
 Suite 200
 MINNEAPOLIS, MN 55435

Scale: AS SHOWN
 Date: 09/16/2022
 Drawn: DJS2
 Checked: MDB3
 Designed: BARR
 Approved: JAK2

Corporate Headquarters:
 Minneapolis, Minnesota
 Ph: 1-800-632-2277
 Fax: (952) 832-2601
 www.barr.com



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|--|--|-----------------------------------|----------|
| SEA SCHOOL & WILDWOOD PARK FLOOD MITIGATION PROJECT | | BARR PROJECT No. 23/27-1900.00 | |
| | | CLIENT PROJECT No. 20-27 | |
| LANDSCAPE PLAN PLANTING DETAILS | | DWG. No. | REV. No. |
| | | L-09 | C |

90% DESIGN REVIEW
NOT FOR CONSTRUCTION