

CONSTRUCTION DRAWINGS

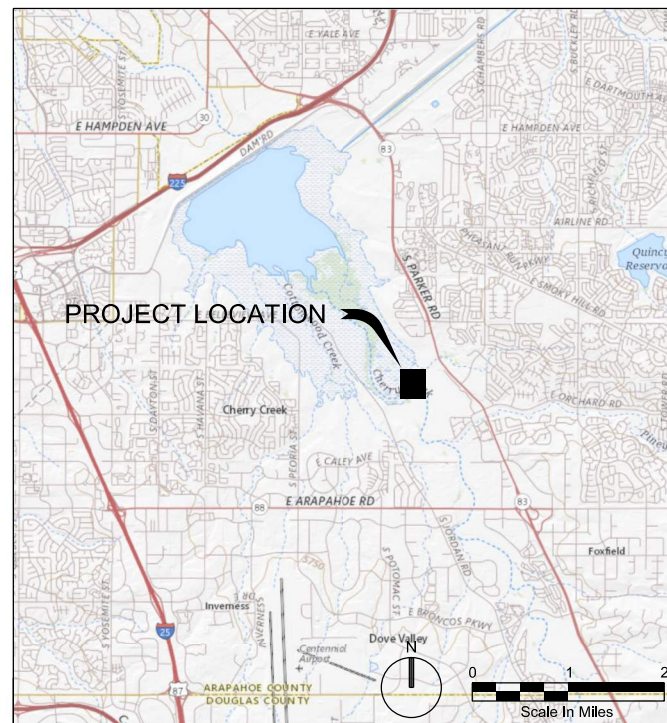
CHERRY CREEK BASIN WATER QUALITY AUTHORITY

CHERRY CREEK STREAM RECLAMATION

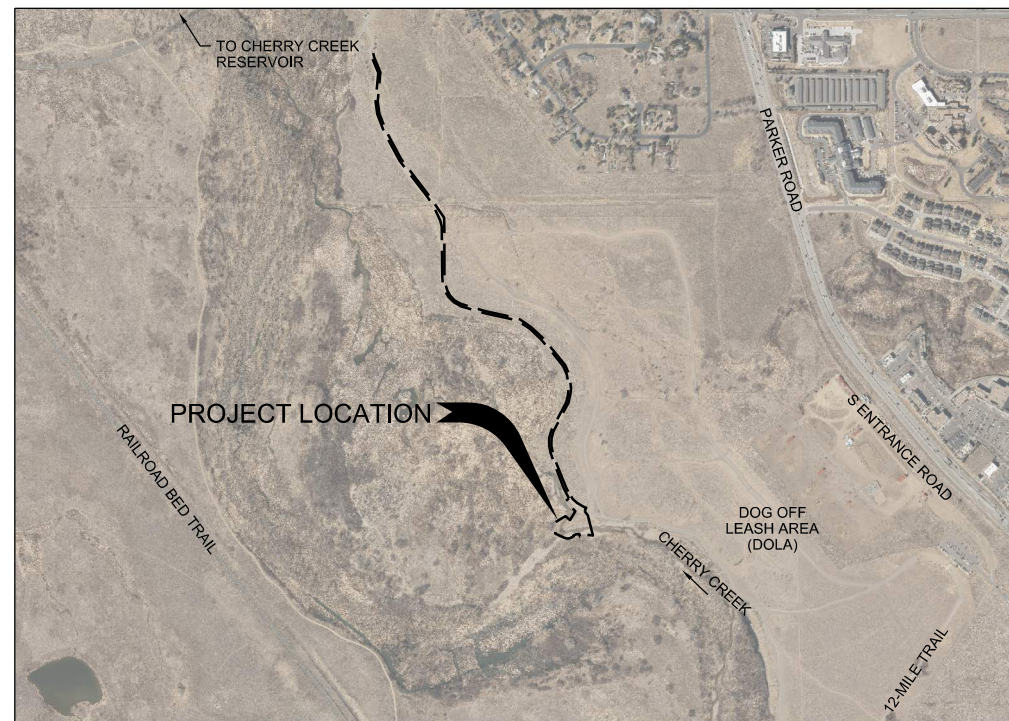
AT 12-MILE PARK

PHASE III

DECEMBER 2021



VICINITY MAP, ARAPAHOE COUNTY, CO



LOCATION MAP, ARAPAHOE COUNTY, CO
NTS

SHEET INDEX		
SHEET NO	DWG NO	SHEET TITLE
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7 OF 9	DT-01	CIVIL DETAILS 1
8 OF 9	LS-01	LANDSCAPING NOTES AND PLANTING SCHEDULE
9 OF 9	LS-02	LANDSCAPING PLAN AND DETAILS

PREPARED BY:

JACOBS ENGINEERING GROUP INC.
9191 S JAMAICA ST
ENGLEWOOD, CO 80012
PHONE: (720) 286 4510
CONTACT: AARON COOK, P.E.

PREPARED FOR:

CHERRY CREEK BASIN WATER QUALITY AUTHORITY
P.O. BOX 3166
CENTENNIAL, CO 80161
PHONE: (303) 968 9089
CONTACT: CHUCK REID

I HEREBY AFFIRM THAT THESE CONSTRUCTION DRAWINGS FOR THE CHERRY CREEK STREAM RECLAMATION AT 12-MILE PARK, PHASE III; WERE PREPARED BY ME (OR UNDER MY DIRECT SUPERVISION) IN ACCORDANCE WITH THE REQUIREMENTS OF THE INFRASTRUCTURE DESIGN AND CONSTRUCTION STANDARDS AND THE ARAPAHOE COUNTY STORMWATER MANAGEMENT MANUAL.

NAME OF ENGINEER: AARON C. COOK
PE NUMBER: 45916 (CO)
ENGINEERING FIRM: JACOBS ENGINEERING GROUP INC.

RECORD DRAWINGS

Revisions Drawn By C LAMB Date 07/13/2022

THESE RECORD DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS.



JACOBS

12-MILE PARK - PHASE III
COVER SHEET

9191 S JAMAICA ST
ENGLEWOOD CO 80112

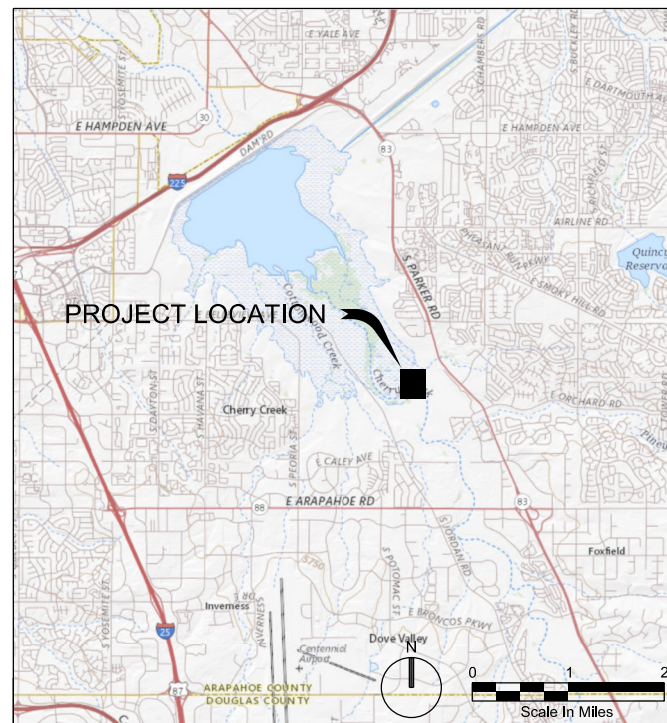


VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	DECEMBER 2021
PROJ	D3150300
DWG	G-01
SHEET	1 of 9

RECORD DRAWINGS

NO.	DATE	REVISION	BY
1	2022/07/13	RECORD DRAWINGS	A COOK
		CHK	J JURON
		DR	A COOK
		C LAMB	

CONSTRUCTION DRAWINGS CHERRY CREEK BASIN WATER QUALITY AUTHORITY CHERRY CREEK STREAM RECLAMATION AT 12-MILE PARK PHASE III DECEMBER 2021



VICINITY MAP, ARAPAHOE COUNTY, CO



LOCATION MAP, ARAPAHOE COUNTY, CO
NTS

IMAGERY SOURCE: DENVER REGIONAL AERIAL PHOTOGRAPHY PROJECT (DRCOG), 2018.
<https://drcoq.org/services-and-resources/data-maps-and-modeling/denver-regional-aerial-photography-project>



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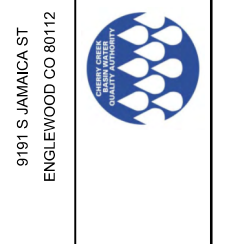
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NAME OF ENGINEER: AARON C. COOK
PE NUMBER: 45916 (CO)
ENGINEERING FIRM: JACOBS ENGINEERING GROUP INC.

NO.	DATE	DSGN	CHK	DR	BY
					A. COOK
					J. JURON
					C. LAMB
					A. COOK



JACOBS

12-MILE PARK - PHASE III
COVER SHEET

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	DECEMBER 2021
PROJ	D3150300
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SHEET	1 of 9

GENERAL NOTES

- 1. IT IS THE INTENT OF THESE PLANS TO SHOW ALL EXISTING UTILITIES, HOWEVER IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION...
2. EXISTING FACILITIES AND UTILITIES NOT INDICATED TO BE REMOVED SHALL BE PROTECTED IN PLACE OR REMOVED AND REPLACED IN KIND...
3. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY CCBWQA AND/OR ITS AUTHORIZED REPRESENTATIVES...
4. THE CONTRACTOR SHALL NOTIFY CCBWQA 48 HOURS PRIOR TO STARTING CONSTRUCTION...
5. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE CONSTRUCTION AND GESC PLANS (ACCEPTED BY CCBWQA), AND ONE (1) COPY OF ALL REQUIRED PERMITS AT THE JOB SITE AT ALL TIMES...
6. THE FINAL FILL AND EXCAVATION SLOPES, LINES AND GRADES SHOWN ON THE DRAWINGS ARE THE NEAT LINES FOR PAY PURPOSES...
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF ALL SURFACE DRAINAGE FROM ADJACENT AREAS THAT MAY REACH THE CONSTRUCTION AREA...
8. THE CONTRACTOR IS ADVISED THAT THE STOCKPILING AND USE OF MATERIAL AND/OR EQUIPMENT WITHIN THE CHANNEL CREATES THE POTENTIAL FOR FLOW OBSTRUCTIONS...
9. THE CONTRACTOR SHALL PROVIDE PEDESTRIAN AND VEHICULAR SIGNAGE THAT CLEARLY IDENTIFIES THE CONSTRUCTION ZONE THROUGHOUT PROJECT...
10. THE CONTRACTOR SHALL PROTECT ALL EXISTING CURB, GUTTER, ASPHALT AND PAVEMENT AT ALL ACCESS POINTS...
11. NATIVE FILL SHALL BE COMPACTED TO 95% STD PROCTOR...
12. CONSTRUCTION STAKING AND SURVEY SHALL BE PROVIDED BY THE CONTRACTOR...
13. CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FOR THIS PROJECT, EXCEPT FOR THE 404 PERMIT...
14. CONTRACTOR SHALL BE LICENSED TO PERFORM WORK IN ARAPAHOE COUNTY...
15. SITE ACCESS AND STAGING SHALL BE AS NOTED IN THE CONSTRUCTION DOCUMENTS...
16. SEE PROJECT SPECIFICATIONS FOR REQUIRED SUBMITTALS AND MEASUREMENT AND PAYMENT REQUIREMENTS...
17. THE FOLLOWING TREATMENTS SHOULD BE USED TO PREVENT TRANSFER OF INVASIVE AQUATIC SPECIES TO THE PROJECT AREA...
a. DIALKYL DIMETHYL AMMONIUM CHLORIDE (5-10% BY WEIGHT);
b. ALKYL DIEMETHYL BENZYL AMMONIUM CHLORIDE (5-10% BY WEIGHT);
c. NONYL PHENOL ETHOXYLATE (5-10% BY WEIGHT);
d. SODIUM SESQUICARBONATE (1-5%) AND,
e. TETRASODIUM ETHYLENE DIAMINETETRAACETATE (1-15%)

THE EQUIPMENT SHOULD BE KEPT MOIST FOR AT LEAST 10 MINUTES, AND RINSATE SHOULD BE MANAGED AS A SOLID WASTE IN ACCORDANCE WITH LOCAL, COUNTY, STATE, OR FEDERAL REGULATIONS. SMALL EQUIPMENT, HAND TOOLS, BOOTS AND ANY OTHER EQUIPMENT THAT WAS PREVIOUSLY USED IN A RIVER, STREAM, LAKE, POND, OR WETLAND PRIOR TO MOVING THE EQUIPMENT TO ANOTHER WATER BODY MAY BE DISINFECTED USING THE FOLLOWING METHODS

- a. SPRAY/SOAK EQUIPMENT WITH WATER GREATER THAN 140 DEGREES FAHRENHEIT FOR AT LEAST 10 INUTES.
b. SANITIZE WATER SUCTION HOSES AND WATER TRANSPORTATION TANKS (USING METHODS DESCRIBED ABOVE) AND DISCARD RINSE WATER AT AN APPROPRIATELY PERMITTED DISPOSAL FACILITY.

CONSTRUCTION SEQUENCING

- 1. CONTRACTOR SHALL EXPOSE EXISTING SHEET-PILE AND CONFIRM PROPOSED SHEET-PILE ELEVATION TIE-IN MATCHES FIELD CONDITIONS.
2. CONTRACTOR SHALL REMOVE, CLEAN AND SALVAGE EXISTING BOULDERS. CCBWQA OR ENGINEER WILL INSPECT SALVAGED MATERIALS AND APPROVE FOR REUSE.
3. CONTRACTOR SHALL INSTALL PROPOSED SHEET-PILE AND RECEIVE OWNER OR ENGINEER'S APPROVAL BEFORE RE-INSTALLING BOULDER EDGING.
4. CONTRACTOR SHALL REPLACE EXST BOULDER EDGING WHERE NOTED. AND INSTALL CROSS-VANE PER THE CONSTRUCTION DRAWINGS.
5. CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION FENCING DURING CONSTRUCTION.

CULTURAL AND HISTORICAL FINDINGS

- 1. IF ANY SUSPECTED CULTURAL OR HISTORIC FINDINGS ARE UNCOVERED DURING CONSTRUCTION, CONTRACTOR MUST STOP CONSTRUCTION ACTIVITIES IMMEDIATELY AND NOTIFY THE ENGINEER AND CCWQBA.

SITE ACCESS AND STAGING

- 1. CONTRACTOR SHALL COORDINATE SITE ACCESS AND ANY STAGING EFFORTS WITH THE CHERRY CREEK BASIN WATER QUALITY AUTHORITY (CCBWQA) AND CHERRY CREEK STATE PARKS (CCSP) PRIOR TO MOBILIZATION.
2. CONTRACTOR MUST NOTIFY OWNER AT LEAST 10 DAYS PRIOR TO ACCESSING SITE TO ALLOW FOR PROPERTY OWNER NOTIFICATION.
3. ORANGE CONSTRUCTION FENCING (CF) AND CONSTRUCTION MARKERS (CM) SHALL BE INSTALLED PER THE CONSTRUCTION DRAWINGS.

SHEET PILE

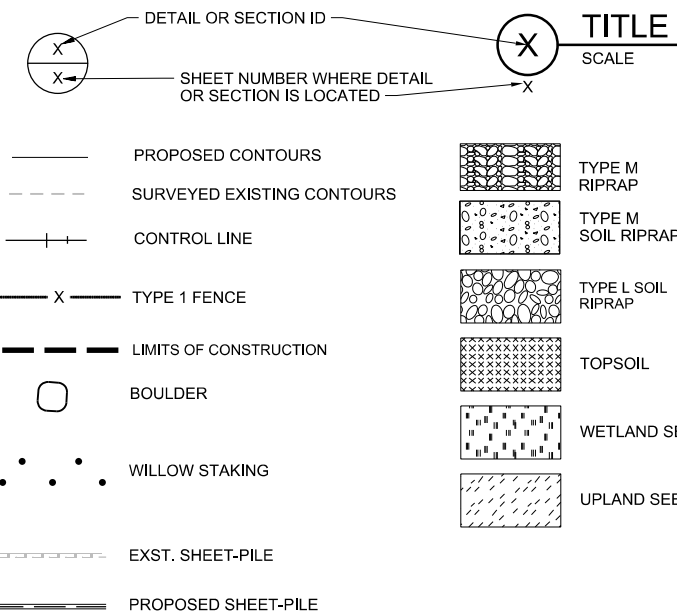
- 1. SHEET PILE SHALL BE PZ-22 WITH STEEL CAP PER (DT-01)
2. FOLLOW MANUFACTURER'S INSTALLATION PROCEDURES APPROPRIATE FOR THE SOIL CONDITIONS PRESENT ON SITE.
3. SHEET PILE PROFILE SHALL BE MANUFACTURED WITH AN INTERLOCKING FEATURE THAT ENSURES ADJACENT PANELS MAINTAIN ALIGNMENT.

ARAPAHOE COUNTY GENERAL NOTES

- 1. THE COUNTY ENGINEER STAMP AND SIGNATURE AFFIXED TO THIS DOCUMENT INDICATES THE DEPARTMENT OF PUBLIC WORKS AND DEVELOPMENT HAS REVIEWED THE DOCUMENT AND FOUND IT IN GENERAL CONFORMANCE WITH THE ARAPAHOE COUNTY SUBDIVISION REGULATIONS OR APPROVED VARIANCES TO THOSE REGULATIONS.
2. ALL ROADWAY CONSTRUCTION SHALL CONFORM TO THE ARAPAHOE COUNTY INFRASTRUCTURE DESIGN AND CONSTRUCTION STANDARDS.
3. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE ARAPAHOE COUNTY DEPARTMENT OF PUBLIC WORKS AND DEVELOPMENT.
4. THE CONTRACTOR SHALL NOTIFY THE ARAPAHOE COUNTY DEPARTMENT OF PUBLIC WORKS AND DEVELOPMENT INSPECTIONS SECTION AT 720-874-6500.
5. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES PRIOR TO ACTUAL CONSTRUCTION.
6. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE PLANS (APPROVED BY THE DEPARTMENT OF PUBLIC WORKS AND DEVELOPMENT) AND ONE (1) COPY OF THE INFRASTRUCTURE DESIGN AND CONSTRUCTION STANDARDS AT THE JOB SITE AT ALL TIMES.
7. A PLAN FOR TRAFFIC CONTROL DURING CONSTRUCTION SHALL BE SUBMITTED TO ARAPAHOE COUNTY FOR APPROVAL WITH THE PERMIT APPLICATION.
8. THESE CONSTRUCTION PLANS SHALL BE CONSIDERED VALID FOR A PERIOD OF TWO (2) YEARS FROM THE DATE OF COUNTY ACCEPTANCE.
9. CONTRACTOR SHALL NOTIFY THE ARAPAHOE COUNTY ENGINEER INSPECTION SECTION WHEN WORKING OUTSIDE OF THE PUBLIC RIGHT-OF-WAY ON A FACILITY.
10. THE CONTRACTOR SHALL COORDINATE WITH THE RESPECTIVE UTILITY COMPANIES PRIOR TO REMOVAL AND/OR RELOCATION OF UTILITIES.
11. THE CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE OWNER AND THE DESIGN ENGINEER.
12. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF ALL PERSONNEL, ALL SITE VISITORS, AND THE GENERAL PUBLIC WHO MAY BE AFFECTED BY THE CONSTRUCTION.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGED TO IMPROVEMENTS AND LANDSCAPING CAUSED BY THE CONSTRUCTION ACTIVITIES.
14. THE CONTRACTOR SHALL PRESERVE ALL LANDSCAPING NOT TO BE REMOVED FOR CONSTRUCTION.
15. AS-BUILD DRAWINGS ARE REQUIRED AFTER PROBATIONARY ACCEPTANCE BY THE COUNTY.

LEGEND

TYPICAL SECTIONS AND DETAIL CALLOUTS FOLLOW THE GENERAL FORMAT SHOWN BELOW. DETAILS ARE IDENTIFIED WITH NUMBERS AND CROSS SECTION CUTS ARE IDENTIFIED BY LETTERS. SEE GESC SHEETS FOR ASSOCIATED SYMBOLOLOGY.



ABBREVIATIONS

Table listing abbreviations such as B & B (BAG AND BURLAP), CCBWQA (CHERRY CREEK BASIN WATER QUALITY AUTHORITY), CCSP (CHERRY CREEK STATE PARK), CDOT (COLORADO DEPARTMENT OF TRANSPORTATION), CMP (CORRUGATED METAL PIPE), CONC (CONCRETE), CP (CONTROL POINT), CLR (CLEAR), DIA (DIAMETER), DOLA (DOG OFF LEASH AREA), DWG (DRAWING), E (EASTING), EA (EACH), EFC (EROSION CONTROL), EF (EACH FACE), ELEV (ELEVATION), EW (EACH WAY), EWEF (EACH WAY EACH FACE), EXST (EXISTING), FES (FLARED END SECTION), FT (FOOT), GESC (GRADING, EROSION, AND SEDIMENT CONTROL), H (HORIZONTAL), INV (INVERT), LBS (POUNDS), MAX (MAXIMUM), MIN (MINIMUM), N (NORTHING), NAVD (NORTH AMERICAN VERTICAL DATUM), NGVD (NATIONAL GEODETIC VERTICAL DATUM), NTS (NOT TO SCALE), OC (ON CENTER), PJF (PREMOLDED JOINT FILLER), REINF (REINFORCING), S (SLOPE), SST (STAINLESS STEEL), STA (STATION), STD (STANDARD), TYP (TYPICAL), UDFCD (URBAN DRAINAGE AND FLOOD CONTROL DISTRICT), V (VERTICAL), VPI (VERTICAL POINT OF INTERSECTION).

LANDSCAPING

- 1. AVOID CLEARING AND GRUBBING WOODY VEGETATION WITHIN THE LIMITS OF DISTURBANCE. IF NECESSARY, PRUNE WOODY VEGETATION TO GROUND LEVEL SO THAT IT MAY GROW BACK FOLLOWING CONSTRUCTION.
2. AVOID THE UNNECESSARY REMOVAL OF TREES OR SHRUBS; FOR EXAMPLE; PRUNE THE AERIAL PORTIONS OF TREES AND SHRUBS THAT HANG OVER A PROJECT AND INTERFERE WITH EQUIPMENT.
3. SEE DWG LS-01 FOR ADDITIONAL LANDSCAPING NOTES.

RECORD DRAWINGS

Revisions Drawn By CLAMB Date 07/13/2022

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Table with fields: VERIFY SCALE, DATE (DECEMBER 2021), PROJ (D3150300), DWG (G-02), SHEET (2 of 9)

SURVEY CONTROL

1. GROUND SURVEY PERFORMED BY TOPOGRAPHIC LAND SURVEYORS INC.
2. DATE OF SURVEY: FEBRUARY, 2019.
3. HORIZONTAL DATUM: COLORADO COORDINATE SYSTEM OF 1983 (NAD83) CENTRAL ZONE 502 (ARTICLE 52 OF TITLE 38, C.R.S.)
4. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
5. COMBINED SCALE FACTOR (GRID TO GROUND) = 1.000289002
6. UNITS: US SURVEY FEET

SURVEY CONTROL POINTS:

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP 1	1649468.87	31900036.02	5600.32	2" ALUMINUM CAP
CP 2	1649586.02	3190038.74	5600.1	2" ALUMINUM CAP

SURVEY NOTES:

1. SITE BENCHMARKS ARE 2" ALUMINUM CAP, AS SHOWN HEREON.
2. THIS IS A TOPOGRAPHIC SURVEY AND NOT A BOUNDARY SURVEY. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY THE SURVEYOR OF THE PROPERTY SHOWN AND DESCRIBED HEREON TO DETERMINE:
 - A. OWNERSHIP OF THE TRACT OF LAND.
 - B. COMPATIBILITY OF THIS DESCRIPTION WITH THOSE OF ADJACENT TRACTS OF LAND.
 - C. RIGHTS OF WAY, EASEMENTS AND ENCUMBRANCES OF RECORD AFFECTING THIS TRACT OF LAND.
3. UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON BEST PHYSICAL EVIDENCE AS FOUND IN THE FIELD AND MAY NOT BE ACCURATE OR COMPLETE. ALL UTILITIES ARE TO BE FIELD LOCATED AND VERIFIED BY THE PROPER ENTITY.



SUBSURFACE UTILITIES

1. NO SUBSURFACE UTILITIES WERE IDENTIFIED WITHIN THE PROJECT SITE. UTILITIES WERE INVESTIGATED IN COMPLIANCE WITH SENATE BILL 18-167, THE STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF SUBSURFACE UTILITY DATA.
2. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION OF ANY EXISTING ON-SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION.

9191 S JAMAICA ST
ENGLEWOOD CO 80112



JACOBS

12-MILE PARK - PHASE III
GENERAL NOTES AND
SURVEY CONTROL

RECORD DRAWINGS

Revisions Drawn By C LAMB Date 07/13/2022

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VERIFY SCALE

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0 1"

DATE DECEMBER 2021

PROJ D3150300

DWG G-03

SHEET 3 of 9

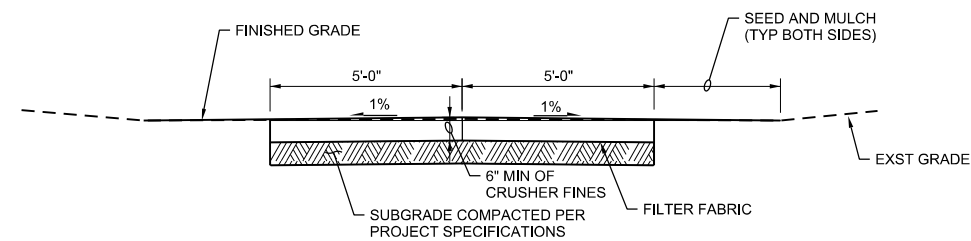
NO.	DATE	REVISION	BY	APVD
1	2022/07/13	RECORD DRAWINGS	J JURON	A COOK
			C LAMB	
			DR	
			CHK	
			APVD	

NOTES:

1. THE CONTRACTOR SHALL PROVIDE A PEDESTRIAN AND TRAFFIC CONTROL PLAN FOR THE AREAS WHERE PARK ROADS WILL BE USED FOR VEHICLE CROSSING FOR THE DURATION OF THE CONSTRUCTION ACTIVITIES.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY DAMAGE DONE TO THE PARK INFRASTRUCTURE INCLUDING BUT NOT LIMITED TO: CONCRETE FLAT WORK, ASPHALT ROADS, FENCES, GATES, OR ANY OTHER IMPROVEMENTS OUTSIDE THE LIMITS OF THE PROJECT AT THE CONTRACTOR'S OWN EXPENSE.
3. THE CONTRACTOR SHALL ACCESS THE SITE BY UTILIZING THE 12-MILE TRAIL. THIS TRAIL SHALL BE RESTORED FOLLOWING THE SECTION DETAIL INCLUDED ON THIS SHEET.
4. ANY DISTURBED VEGETATED AREAS BEYOND THE LIMITS OF CONSTRUCTION MUST BE RE-SEEDED TO RESTORE THE SITE TO EXISTING CONDITIONS. THIS WORK IS THE RESPONSIBILITY OF THE CONTRACTOR AND IS CONSIDERED A NON-PAY ITEM.
5. A PORTION OF THE DOLA FENCE MAY BE REMOVED TO ALLOW CONSTRUCTION VEHICLE ACCESS. THE FENCE MUST BE REPLACED IMMEDIATELY AFTER CONSTRUCTION IS COMPLETE. THE CONTRACTOR SHALL NOT DAMAGE THE DOLA BULLPEN. THIS WORK IS CONSIDERED INCIDENTAL TO MOBILIZATION AND WILL NOT BE PAID SEPARATELY.



IMAGERY SOURCE: DENVER REGIONAL AERIAL PHOTOGRAPHY PROJECT (DRCOG), 2018.



NOTES:

1. STAKE/FLAG ACCESS LOCATION WITH OWNER AND ENGINEER PRIOR TO MOBILIZATION.
2. UPON COMPLETION OF ALL CONSTRUCTION ACTIVITIES, GRADE ACCESS ROAD TO REESTABLISH 10' WIDE ACCESS ROAD WITH 1% CROWN TO PROMOTE POSITIVE DRAINAGE.

ACCESS ROAD RESTORATION SECTION

RECORD DRAWINGS

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ENLARGED PLAN

9191 S JAMAICA ST
ENGLEWOOD CO 80112



JACOBS

12-MILE PARK - PHASE III
CONSTRUCTION SITE ACCESS

RECORD DRAWINGS

VERIFY SCALE

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DWG G-04

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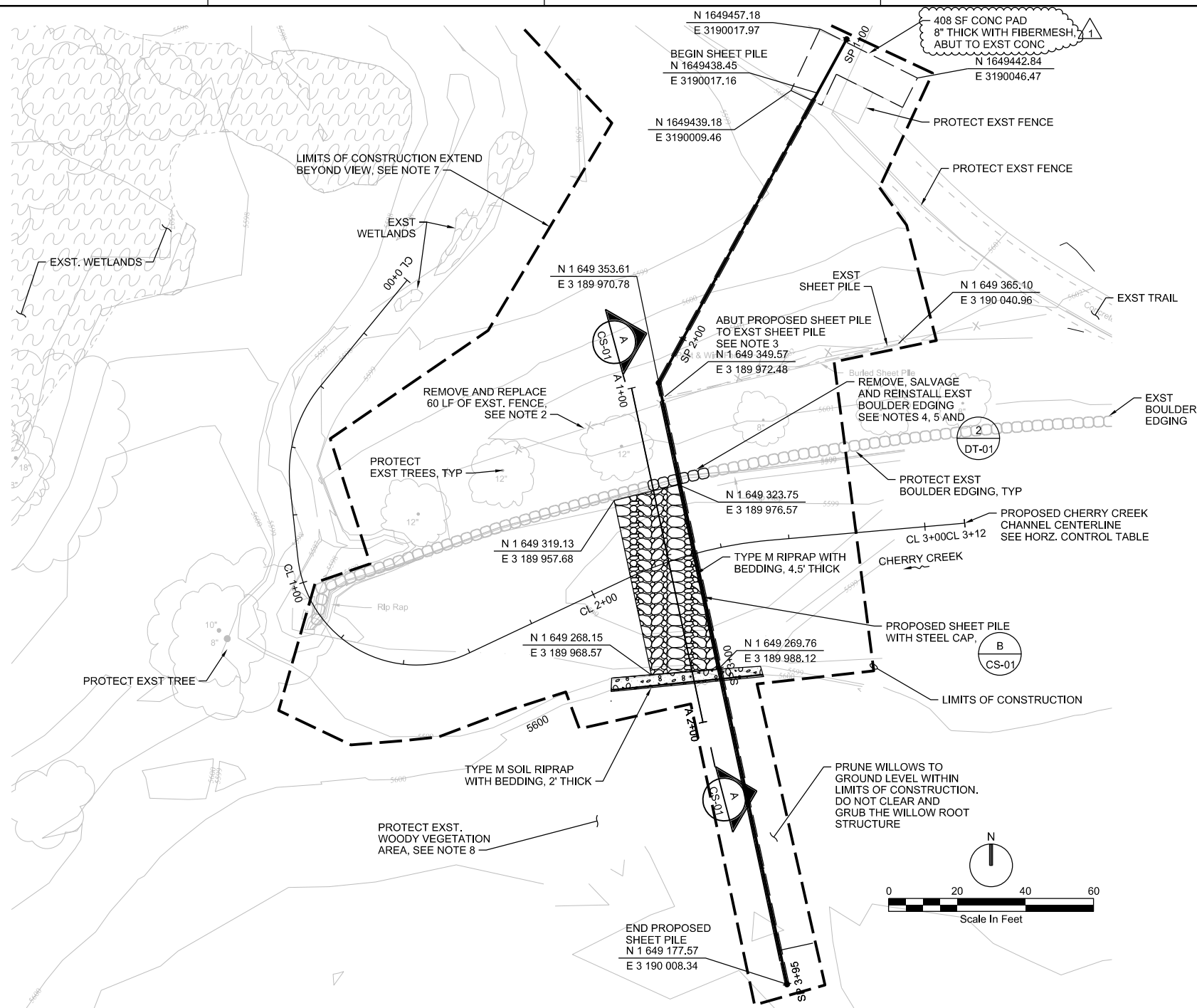
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RECORD DRAWINGS

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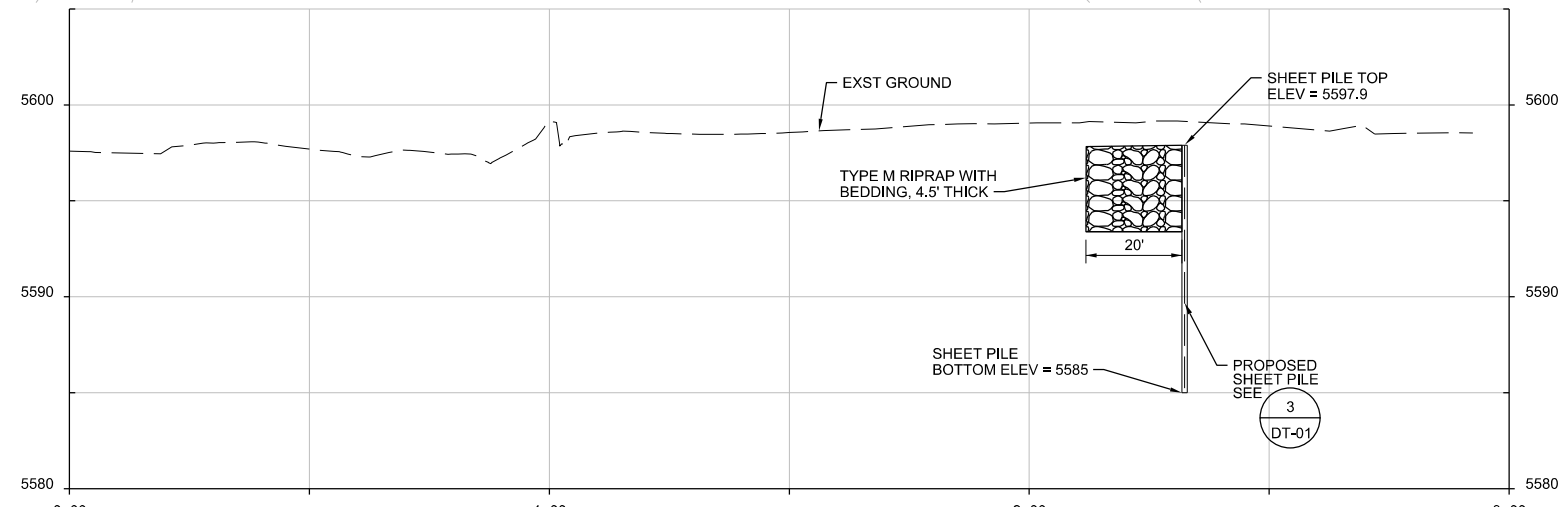
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NO.	DATE	REVISION	BY
1	20220713	RECORD DRAWINGS	APVD
DSGN		CHK	APVD
DR		C LAMB	J JURON
A COOK		A COOK	



NOTES:

- CONTRACTOR MUST AVOID OR MINIMIZE IMPACTS TO EXST PARK IMPROVEMENTS OR EXST VEGETATION NOT MARKED FOR REMOVAL OR BEYOND THE DESIGNATED LIMITS OF CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY DAMAGED FEATURES AND FOR RESTORING ANY EXST VEGETATION THAT MAY BE IMPACTED.
- CONTRACTOR TO REMOVE APPROXIMATELY 60 LF OF EXST FENCE TO ALLOW FOR EXPOSURE OF EXST SHEET PILE AND INSTALLATION OF PROPOSED SHEET PILE. IF ADDITIONAL FENCE REMOVAL IS REQUIRED TO CONSTRUCT PROPOSED IMPROVEMENTS, THE CONTRACTOR MUST NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH REMOVAL.
- APPROXIMATE COORDINATES FOR EXISTING SHEET PILE ARE PROVIDED. THE CONTRACTOR IS RESPONSIBLE FOR EXPOSING THE WESTERN MOST END OF THE EXST SHEET PILE TO CONFIRM PROPOSED SHEET PILE TIE-IN LOCATION.
- CONTRACTOR WILL BE REQUIRED TO REMOVE EXISTING BOULDER EDGING TO ALLOW FOR INSTALLATION OF PROPOSED SHEET PILE. ADDITIONAL BOULDER EDGING REMOVAL MAY BE REQUIRED TO CONSTRUCT PROPOSED IMPROVEMENTS. THE CONTRACTOR MUST NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH REMOVAL.
- CONTRACTOR MUST SALVAGE ALL REMOVED BOULDERS; THE OWNER OR OWNER'S REPRESENTATIVE WILL INSPECT REMOVED BOULDERS AND REQUEST THE CONTRACTOR TO REUSE APPROVED BOULDERS TO CONSTRUCT PROPOSED IMPROVEMENTS.
- CONTRACTOR MUST ENSURE THAT THE PROPOSED SHEET PILE WITH STEEL CAP IS NOT EXPOSED BY CHANNEL GRADING OPERATIONS.
- FOR FULL LIMITS OF CONSTRUCTION REFER TO THE GESC DRAWINGS.
- CONTRACTOR SHALL PROTECT EXISTING WILLOW / WOODY VEGETATION AREA.
- CONTRACTOR SHALL RESTORE IMPACTED EXISTING GROUND AND WILLOW / WETLAND AREAS TO PRE PROJECT CONDITIONS AND MINIMIZE AREA OF DISTURBANCE WHILE CONSTRUCTING BURIED SHEET PILE.



CHERRY CREEK CHANNEL CENTERLINE - PROFILE VIEW

CHERRY CREEK CHANNEL CENTERLINE HORIZONTAL CONTROL TABLE

POINT TYPE	STATION	NORTHING	EASTING	RADIUS	LENGTH	TANGENT
POB	0+00.00	1649383.68	3189897.06			
PC	0+40.20	1649352.57	3189871.60			
PI	0+57.07	1649339.51	3189860.91	40.00	31.93	16.87
PT	0+72.13	1649322.75	3189862.80			
PC	0+92.90	1649302.11	3189865.13			
PI	1+41.77	1649253.54	3189870.60	35.00	66.45	48.87
PT	1+59.35	1649274.36	3189914.82			
PC	2+10.34	1649296.08	3189960.95			
PI	2+32.62	1649305.57	3189981.10	125.00	44.09	22.28
PT	2+54.43	1649307.52	3190003.30			
POE	3+11.68	1649312.51	3190060.33			

9191 S JAMAICA ST
ENGLEWOOD CO 80112



JACOBS
12-MILE PARK - PHASE III

GRADING PLAN AND PROFILE

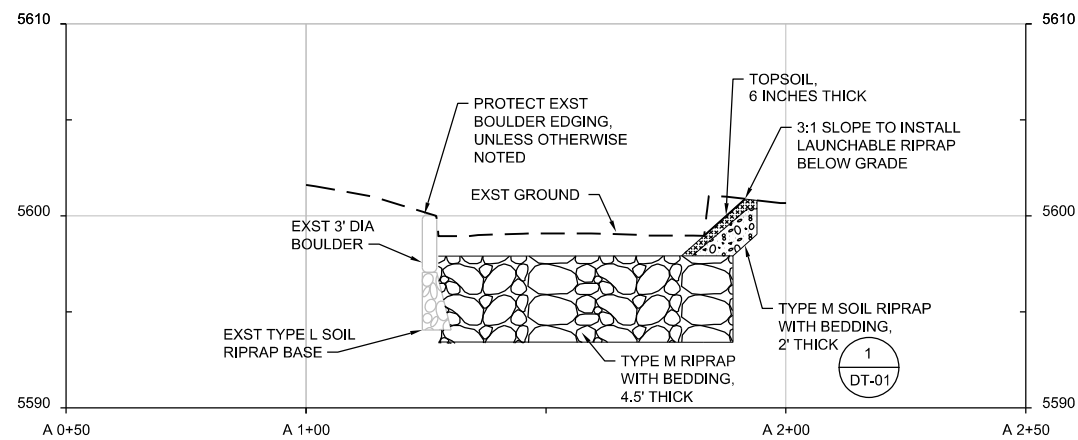
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RECORD DRAWINGS

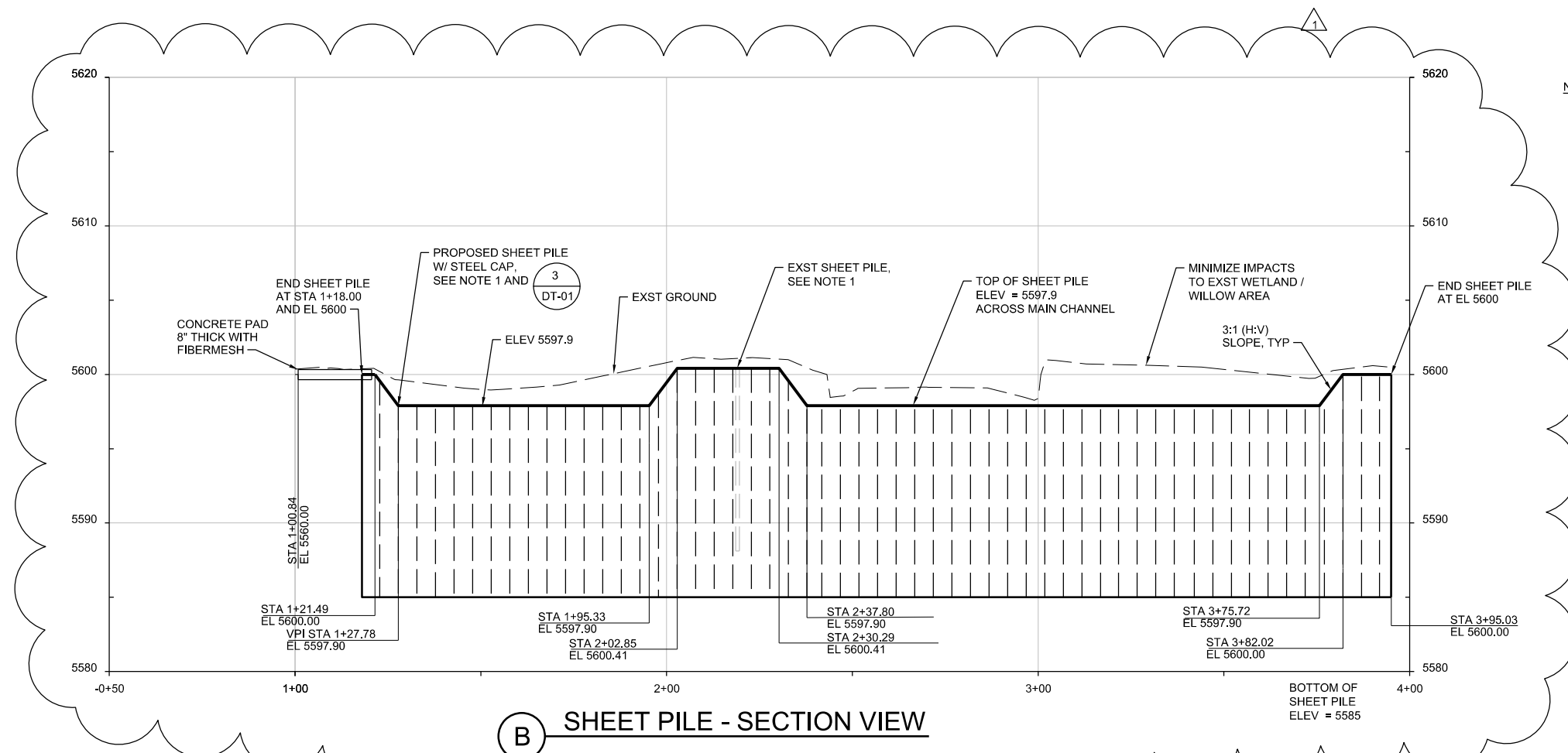
RECORD DRAWINGS

Revisions Drawn By C LAMB Date 07/13/2022

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A LAUNCHABLE RIPRAP - SECTION VIEW



B SHEET PILE - SECTION VIEW

NOTES:

- CONTRACTOR TO EXPOSE EXISTING SHEET PILE PRIOR TO STARTING EXCAVATION OF PROPOSED SHEET PILE TRENCH. CONTRACTOR TO MATCH TOP OF PROPOSED SHEET PILE TO ACTUAL TOP ELEV. OF EXST SHEET PILE.
- CONTRACTOR TO EXTEND PROPOSED SHEET PILE BEYOND CHERRY CREEK MAIN CHANNEL EXTENTS AS SHOWN.
- CONTRACTOR MUST AVOID CONFLICTS BETWEEN PROPOSED SHEET PILE AND OTHER PROPOSED IMPROVEMENTS SUCH AS BOULDERS OR RIPRAP WHEN TRANSITIONING TOP OF SHEET PILE.

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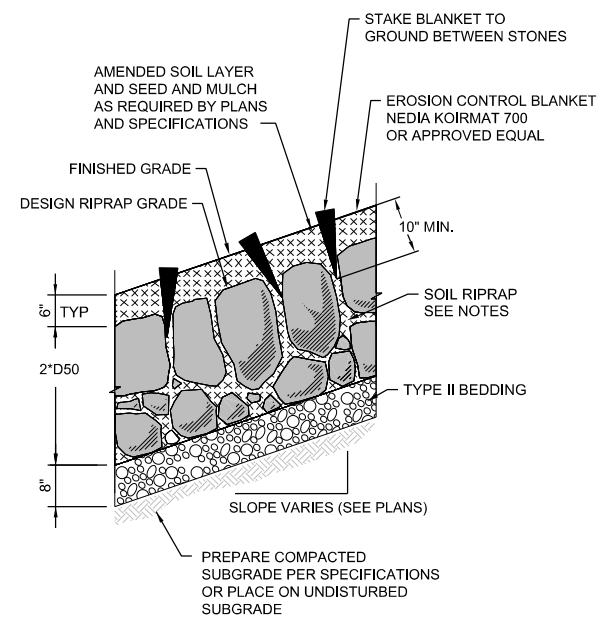


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12-MILE PARK - PHASE III
CIVIL SECTIONS

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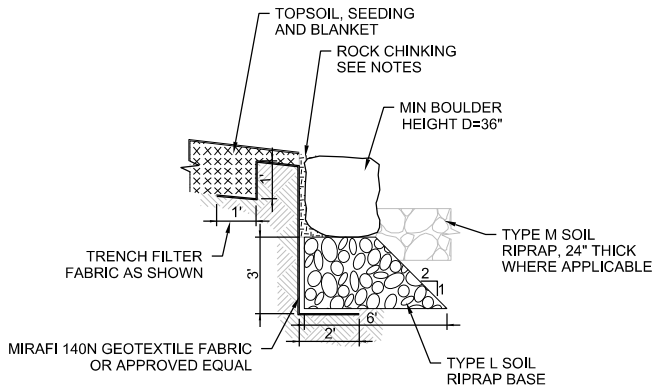


EROSION CONTROL BLANKET SECTION

NOTES:

1. SOIL RIPRAP DETAILS ARE APPLICABLE TO SLOPED AREAS. REFER TO THE SITE PLAN ACTUAL LOCATION AND LIMITS.
2. MIX UNIFORMLY 65% RIPRAP BY VOLUME WITH 35% OF APPROVED SOIL BY VOLUME PRIOR TO PLACEMENT.
3. PLACE STONE-SOIL MIX TO RESULT IN SECURELY INTERLOCKED ROCK AT THE DESIGN THICKNESS AND GRADE. COMPACT AND LEVEL TO ELIMINATE ALL VOIDS AND ROCKS PROJECTING ABOVE DESIGN RIPRAP TOP GRADE.
4. CRIMP OR TACKIFY MULCH OR USE APPROVED HYDROMULCH AS CALLED FOR IN THE PLANS AND SPECIFICATIONS AS DIRECTED BY OWNER OR ENGINEER.
5. USE 2' x 4' WOOD STAKES IN ALL TRENCHES AND RIPRAP AREAS. 12" ECO STAKES MAY BE USED TO SECURE THE BODY OF THE BLANKET OUTSIDE OF RIPRAP AREAS.

1 SOIL RIPRAP AND BLANKET
NTS

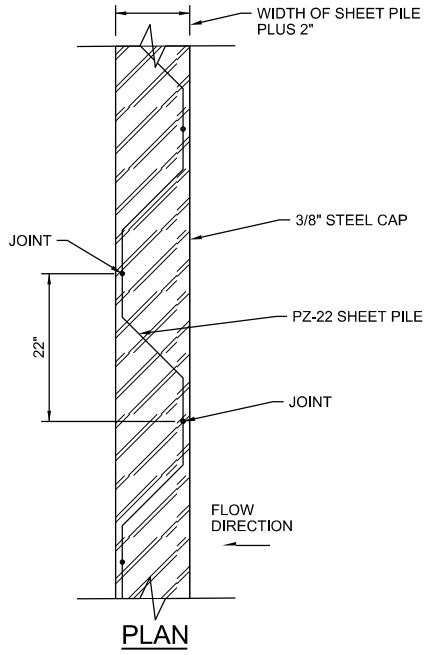
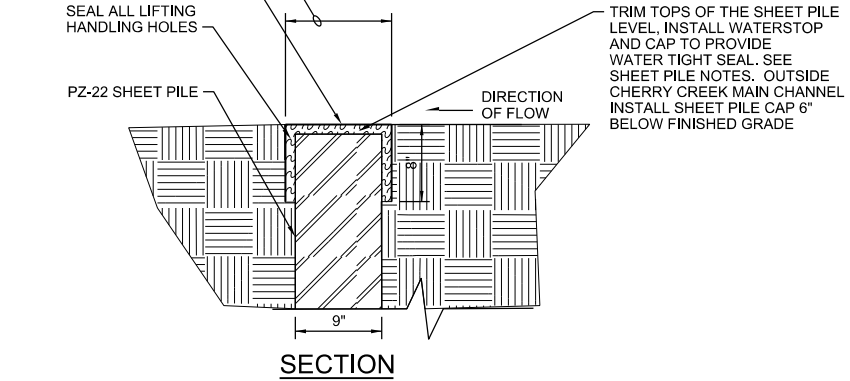


INSTALLATION NOTES

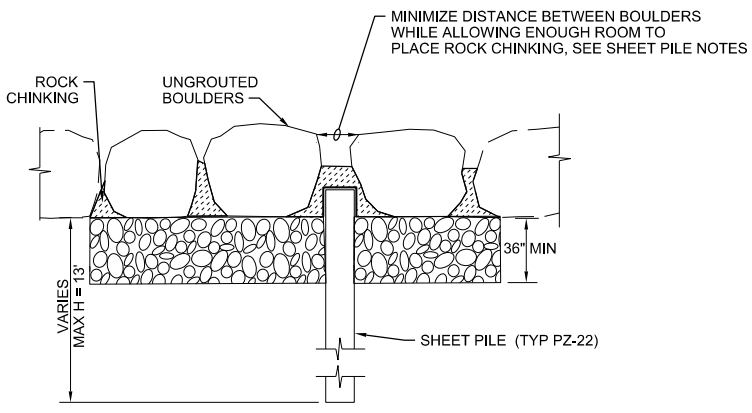
1. EXCAVATE TRENCH FOR MATERIAL AND COMPACT SUBGRADE
2. LAY DOWN FILTER FABRIC
3. INSTALL TYPE L SOIL RIPRAP BASE
4. PLACE BOULDERS
5. TRENCH FILTER FABRIC
6. PLACE TOPSOIL, SEED AND BLANKET
7. INSTALL ROCK CHINKING BEHIND BOULDERS AND BETWEEN BOULDERS
8. INSTALL TYPE M SOIL RIPRAP BEYOND BOULDERS

2 BOULDER EDGING DETAIL
NTS

- SHEET PILE NOTES:**
1. CONTRACTOR TO COORDINATE WITH OWNER OR ENGINEER PRIOR TO TRIMMING SHEET PILE TOP AT THE LOCATION WHERE THE SHEET PILE CROSSES THE PROPOSED BOULDER EDGING.
 2. CHINKING BETWEEN BOULDER EDGING AND SHEET PILE MUST BE APPROVED BY THE OWNER/ENGINEER PRIOR TO COMPLETING STABILIZATION



3 STEEL CAP FOR SHEET PILE
NTS



3.a SHEET PILE CONNECTION BETWEEN BOULDERS
NTS

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1	202207/13	RECORD DRAWINGS	A COOK
DR		CHK	J JURON
APVD			A COOK

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JACOBS
 12-MILE PARK - PHASE III
 CIVIL DETAILS 01

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LANDSCAPING NOTES :

1. AVOID THE UNNECESSARY REMOVAL OF TREES OR SHRUBS; FOR EXAMPLE, PRUNE THE AERIAL PORTIONS OF TREES AND SHRUBS THAT HANG OVER A PROJECT AREA AND INTERFERE WITH EQUIPMENT.
2. SOIL AMENDMENTS AND FERTILIZERS SHALL BE APPLIED TO AREAS WITH THE UPLAND SEED MIX ACCORDING TO MHFD SPECIFICATION SECTION 32 93 19 SEEDING AND SECTION 32 93 00 LANDSCAPE PLANTING.
3. APPLY UPLAND SEED MIX IN ALL AREAS DISTURBED DURING CONSTRUCTION EXCEPT WHERE WETLAND SEED MIX IS APPLIED, AND IN ACCORDANCE WITH MHFD SPECIFICATION SECTION 32 93 19 SEEDING. NO SUBSTITUTIONS SHALL BE ALLOWED, INCLUDING ADDITION OF A COVER CROP, WITHOUT WRITTEN PERMISSION OF THE ECOLOGIST. OVERLAP THE SEED MIXES A MINIMUM OF 2 FEET. SEED TAGS MUST BE SUBMITTED TO ECOLOGIST.
4. LIVE SANDBAR WILLOW (SALIX EXIGUA) OR APPROVED EQUAL CUTTINGS MUST BE COLLECTED AND INSTALLED IN DORMANT CONDITION (USUALLY BEFORE APRIL 15). CUTTINGS SHOULD BE A MINIMUM OF 3 FEET LONG FOR STAKES AND 5 FEET LONG FOR BRUSH LAYERING. WILLOWS SHOULD BE HARVESTED FROM ONSITE OR A NEARBY LOCATION WITHIN THE SAME WATERSHED OR AS DIRECTED BY THE PLANT ECOLOGIST. CUTTINGS WILL BE USED FOR STAKES AND BRUSH LAYERING MATERIAL. LEAVE THE SIDE BRANCHES INTACT FOR THE BRUSH LAYERING MATERIAL.
5. NO SUBSTITUTIONS WILL BE PERMITTED WITHOUT APPROVAL OF ECOLOGIST. NO SUBSTITUTIONS SHALL BE MADE UNLESS SPECIFIED PLANT MATERIALS ARE UNAVAILABLE. CONTRACTOR MUST NOTIFY ECOLOGIST IF MATERIALS ARE UNAVAILABLE, AND LIST PROPOSED SUBSTITUTIONS. ECOLOGIST MUST APPROVE ALL SUBSTITUTIONS.
6. ECOLOGIST WILL INSPECT ALL PLANT MATERIALS AND MAY REJECT PLANT MATERIALS THEY DEEM TO BE OF INSUFFICIENT QUALITY. THE ECOLOGIST MAY RE-INSPECT THE PLANTS AT ANY TIME DURING THE PLANTING PROCESS, AND MAY REJECT PLANT MATERIALS AT ANY TIME. PLANTS WITH DRY, BROKEN, OR CRUMBLING ROOTS SHALL NOT BE ACCEPTED FOR PLANTING.

UPLAND AREA SEED MIX – SANDY SOIL

COMMON NAME	SCIENTIFIC NAME	GROWTH	GROWTH	% MIX	LB/AC (PLS1)
GRASSES					
SWITCHGRASS	PANICUM VIRGATUM	WARM	SOD/BUNCH	15	2.3
PRAIRIE SANDREED	CALAMOVILFA LONGIFOLIA	WARM	SOD	10	2.2
SIDEOATS GRAMA	BOUTELOUA CURTIPENDULA	WARM	SOD	10	3.1
BLUE GRAMA	BOUTELOUA GRACILIS	WARM	SOD	10	0.7
INDIAN RICEGRASS	ORYZOPSIS HYMENOIDES	COOL	BUNCH	10	4.3
WESTERN WHEATGRASS	PASCOPYRUM SMITHII	COOL	SOD	10	5.5
LITTLE BLUESTEM	SCHIZACHYRIUM SCOPARIUM	WARM	BUNCH	10	2.3
SAND DROPSEED	SPOROBOLUS CRYPTANDRUS	WARM	BUNCH	10	0.1
GREEN NEEDLEGRASS	STIPA VIRIDULA	COOL	BUNCH	10	3.3
HERBACEOUS/WILDFLOWERS					
PASTURE SAGE	ARTEMISIA FRIGIDA			1	0.1
BLANKET FLOWER	GALLARDIA ARISTATA			2	0.9
TANSY ASTER	MACERANTHA TANACETIFOLIA			2	0.2
TOTAL PLS POUNDS/ACRE				100	25

WETLAND SEED MIX – LOAMY TO SANDY SOILS

COMMON NAME	SCIENTIFIC NAME	GROWTH SEASON	GROWTH FORM	% MIX	WETLAND INDICATOR*	LB/AC (PLS1)
GRASSES AND HERBACEOUS SPECIES						
AMERICAN SLOUGHGRASS	BECKMANNIA SYZIGACHNE	COOL	SOD	15	OBL	0.8
PRAIRIE CORDGRASS	SPARTINA PECTINATA	WARM	SOD	15	FACW	4.6
SWITCHGRASS	PANICUM VIRGATUM	WARM	SOD/BUNCH	15	FAC	2.3
WESTERN WHEATGRASS	PASCOPYRUM SMITHII	COOL	SOD	10	FACU	5.5
FOWL MANNAGRASS	GLYCERIA STRIATA	COOL	SOD	10	OBL	3.3
HARDSTEM BULRUSH	SCIRPUS ACUTUS			10	OBL	1.6
BALTIC RUSH	JUNCUS BALTICUS			10	OBL	0.1
CREEPING SPIKERUSH	ELEOCHARIS PALUSTRIS			10	OBL	1
WILDFLOWERS						
BLUE VERVAIN	VERBENA HASTATA			2.5	FACW	0.1
NUTTALL'S SUNFLOWER	HELIANTHUS NUTTALLII			2.5	FAC	0.5
TOTAL PLS POUNDS/ACRE				100		19.8

*PLS = PURE LIVE SEED – IF BROADCAST SEEDING, DOUBLE THE RATE

PLANTING QUANTITIES

COMMON NAME	LATIN NAME	QUANTITY	PLANTING CODE	SIZE
SANDBAR WILLOW STAKES	SALIX EXIGUA	84 EACH	SEE DWG LS-02	3 FEET MIN.

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JACOBS
12-MILE PARK - PHASE III
LANDSCAPING NOTES AND
PLANTING SCHEDULE

A COOK

J. JURON

C. LAMB

DR

A COOK

NO. DATE

REVISION

CHK

BY APVD

BY APVD

BY APVD

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


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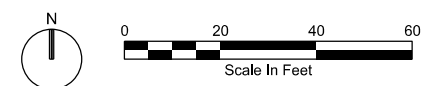
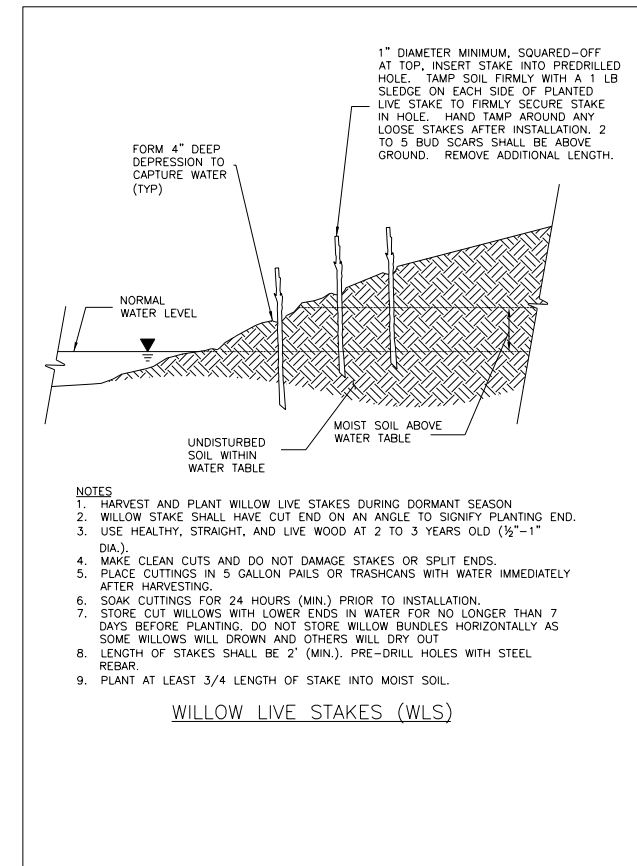
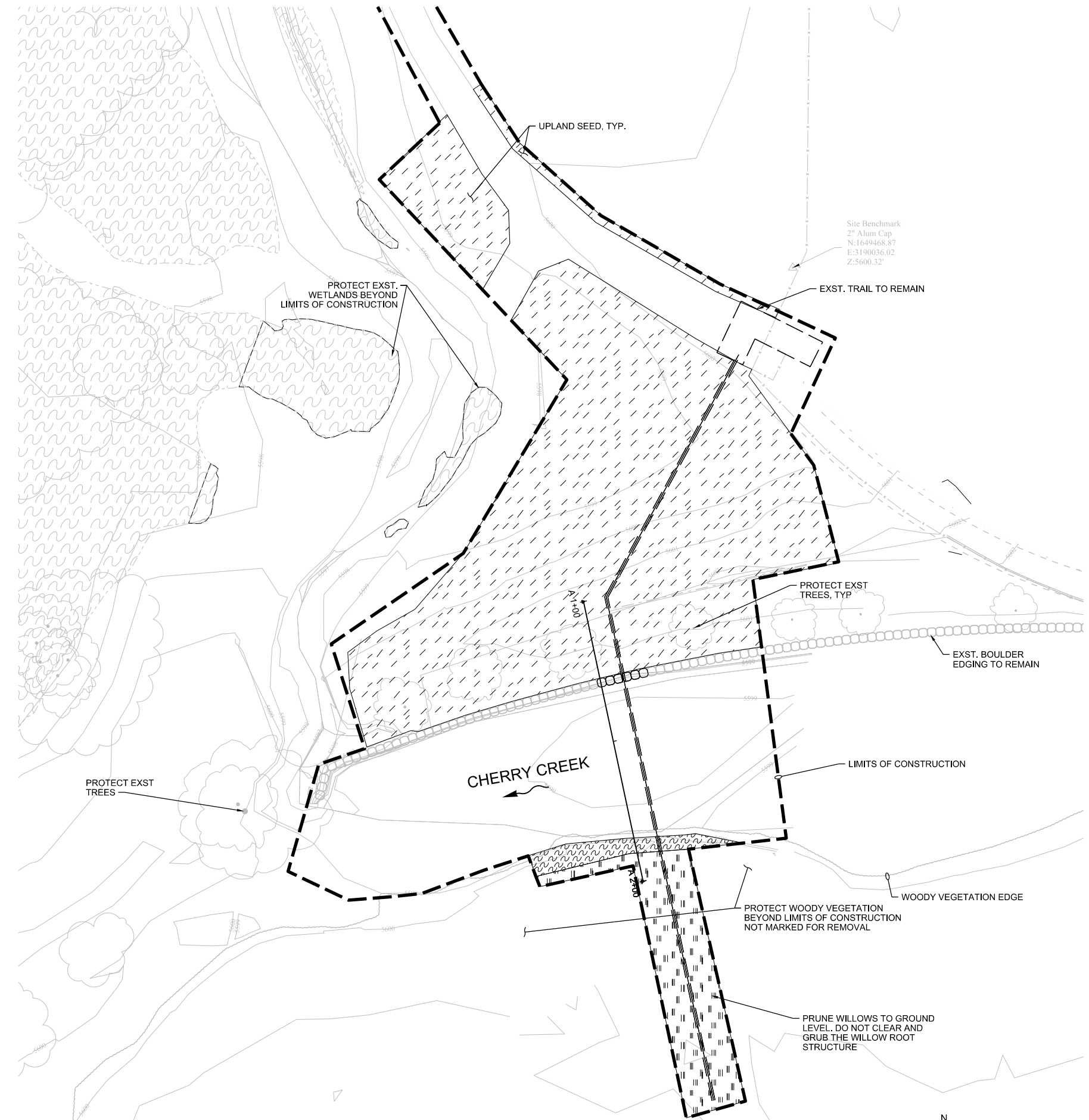
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PLANTING SYMBOL LEGEND

-  UPLAND SEED MIX
-  WETLAND SEED MIX
-  WETLAND SEED MIX WITH WILLOW STAKES



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DSGN			DR	A COOK		A COOK
			CHK	J JURON		J JURON
			DR	C LAMB		C LAMB

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JACOBS

12-MILE PARK - PHASE III

LANDSCAPING PLAN AND DETAILS

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