

CONTRACT DOCUMENTS
FOR CONSTRUCTION OF
CHERRY CREEK RESERVOIR EAST BOAT RAMP SHORELINE STABILIZATION PHASE 2

Prepared for:

CHERRY CREEK BASIN WATER QUALITY AUTHORITY

MAY 2022

CONTRACT DOCUMENTS APPROVALS

CHERRY CREEK RESERVOIR EAST BOAT RAMP SHORELINE STABILIZATION PHASE 2

Prepared for and approved by:

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TABLE OF CONTENTS

00 11 16 INVITATION TO BID.....1

00 21 13 INSTRUCTIONS TO BIDDERS3

SECTION 00 30 00 AVAILABLE PROJECT INFORMATION7

 00 31 32 HISTORIC WATER SURFACE ELEVATIONS8

 00 31 32 GEOTECHNICAL DATA.....9

SECTION 00 40 00 PROCUREMENT FORMS10

 00 41 00 BID FORM11

 00 41 43 UNIT PRICE BID SCHEDULE13

 00 43 13 BID E-BOND.....16

SECTION 00 50 00 CONTRACTING FORMS17

 00 51 00 NOTICE OF AWARD.....18

 00 52 00 AGREEMENT19

 00 55 00 NOTICE TO PROCEED22

SECTION 00 60 00 PROJECT FORMS23

 00 61 13 PAYMENT BOND24

 00 61 14 PERFORMANCE BOND.....26

 00 62 13 LETTER OF DAMAGE GUARANTEE.....28

 00 62 16 INSURANCE CERTIFICATES29

 00 63 36 FIELD ORDER FORM30

 00 63 63 CHANGE ORDER FORM31

 00 65 11 LETTER OF FINAL ACCEPTANCE.....32

 00 65 23 CONTRACTOR STATEMENT CONCERNING CLAIMS.....33

 00 65 25 WITHDRAWAL OF STATEMENT OF CLAIM34

 00 65 33 NOTICE OF FINAL PAYMENT35

 00 65 36 FINAL RECEIPT.....36

SECTION 00 72 00 GENERAL CONDITIONS.....37

 01 SCOPE.....37

 02 DEFINITIONS37

 03 THE CONTRACT, DRAWINGS, AND SPECIFICATIONS40

 04 AUTHORITY OF THE MANAGER.....42

 05 ENGINEER42

 06 CONSTRUCTION MANAGER.....43

 07 LAND AND RIGHTS-OF-WAY.....43

 08 SUGGESTIONS TO CONTRACTOR43

 09 GENERAL SERVICE AND FACILITIES REQUIREMENTS43

 10 SAFETY OF PUBLIC AND WORKERS45

 11 SUBCONTRACTING.....46

 12 PROGRESS PAYMENTS TO CONTRACTOR46

 13 ADDITIONAL WITHHOLDING OF PROGRESS PAYMENTS47

 14 PARTIAL ACCEPTANCE OF WORK.....47

 15 INSURANCE48

 16 CONTRACT SECURITY (PAYMENT AND PERFORMANCE BONDS)50

 17 ASSIGNMENTS50

18 INDEMNIFICATION	50
19 COMPLIANCE WITH ENVIRONMENTAL PROTECTION, ENERGY CONSERVATION, AND HEALTH/SAFETY RULES AND REGULATIONS.....	51
20 TAXES and FEES	52
21 LIQUIDATED DAMAGES.....	52
22 TERMINATION OF CONTRACT BY OWNER.....	52
23 NO WAIVER OF RIGHTS.....	54
24 NO DISCRIMINATION IN EMPLOYMENT	54
25 WORKERS WITHOUT AUTHORIZATION.....	54
26 HAZARDOUS ENVIRONMENTAL CONDITION ON SITE	54
27 DIFFERING SUBSURFACE OR PHYSICAL CONDITIONS.....	55
28 UNDERGROUND FACILITIES.....	56
29 APPLICABLE LAWS	57
SECTION 00 73 00 SUPPLEMENTARY CONDITIONS.....	58
90 PERMITS.....	61
SECTION 00 73 91 SUMMARY OF WORK.....	63
SECTION 00 73 92 PROJECT UTILITIES	64
SECTION 00 73 93 PROJECT MEETINGS.....	66
SECTION 00 73 94 SPECIAL PROJECT PROCEDURES.....	68
SECTION 00 73 95 REFERENCE STANDARDS	69
SECTION 00 73 96 INSPECTION AND MATERIALS TESTING	73
SECTION 00 73 97 OWNER FIELD OFFICES.....	77
SECTION 00 73 98 TRAFFIC CONTROL	81
SECTION 00 73 99 PRODUCT DELIVERY, STORAGE, AND HANDLING	85
SECTION 00 90 00 REVISIONS AND MODIFICATIONS.....	87
00 91 13 ADDENDA.....	88

<u>ITEM</u>	<u>SUB-SECTION OR ARTICLE</u>
<i>DIVISION 01: GENERAL REQUIREMENTS¹</i>	
SITE CONDITIONS	01 13 00
USE OF SITE	01 14 19
SUBSTITUTION PROCEDURES	01 25 00
CONTRACT MODIFICATION PROCEDURES	01 26 00
PAYMENT PROCEDURES	01 29 00
CONSTRUCTION PROGRESS DOCUMENTATION	01 32 00
SCHEDULING OF WORK	01 32 13
SUBMITTAL PROCEDURES	01 33 00
TEMPORARY TREE AND PLANT PROTECTION	01 56 39
TEMPORARY ENVIRONMENTAL CONTROLS	01 57 19
PROJECT SIGN	01 58 00
MOBILIZATION	01 71 13
FIELD ENGINEERING AND SURVEYING	01 71 23
CLOSEOUT PROCEDURES	01 77 00

¹ Current versions of Divisions 01 to 33 of the Standard Technical Specifications can be downloaded from the Mile High Flood District’s website at www.mhfd.org.

<u>ITEM</u>	<u>SUB-SECTION OR ARTICLE</u>
<i>DIVISION 02: EXISTING CONDITIONS</i>	
SELECTIVE SITE DEMOLITION	02 41 13
<i>DIVISION 03: CONCRETE</i>	
CONCRETE FORMING	03 11 00
CONSTRUCTION JOINTS	03 15 00
<i>DIVISION 03: CONCRETE (CONTINUED)</i>	
WATERSTOPS	03 15 13
REINFORCING STEEL	03 21 00
STRUCTURAL CONCRETE	03 31 00
SCULPTED CONCRETE	03 31 01
CONCRETE FINISHING	03 35 00
CONCRETE CURING	03 39 00
GROUTING	03 60 00
<i>DIVISION 05: METALS</i>	
METAL RAILINGS	05 52 00
<i>DIVISION 07: THERMAL AND MOISTURE PROTECTION</i>	
CONCRETE WATER REPELLENT	07 19 00
MANHOLE PREFORMED JOINT SEALS	07 91 00
SEALANTS	07 92 00
<i>DIVISION 09: FINISHES</i>	
STRUCTURAL CONCRETE COATING	09 91 00
<i>DIVISION 31: EARTHWORK</i>	
CLEARING AND GRUBBING	31 11 00
TOPSOIL & WETLAND TOPSOIL STRIPPING & STOCKPILING	31 14 13
EXCAVATION AND FILL	31 23 00
DEWATERING	31 23 19
FLOWABLE FILL	31 23 23
TRENCHING AND BACKFILLING	31 23 33
EROSION AND SEDIMENT CONTROLS	31 25 00
RIPRAP, BOULDERS, AND BEDDING	31 37 00
GROUTED BOULDERS	31 37 19
STEEL SHEET PILES	31 62 16
<i>DIVISION 32: EXTERIOR IMPROVEMENTS</i>	
AGGREGATE BASE COURSE	32 11 23
CRUSHER FINES SURFACING	32 15 40
STABILIZED CRUSHER FINES SURFACING	32 15 41
SIDEWALKS, CURBS AND GUTTERS	32 16 00
FENCES AND GATES	32 31 00
PEDESTRIAN AND LIGHT VEHICLE BRIDGES	32 34 00
IRRIGATION	32 80 00
TOPSOIL AND WETLAND TOPSOIL	32 91 13
SEEDING	32 92 19
LANDSCAPE PLANTING	32 93 00
SOIL BIOENGINEERING OR SHORELINE STABILIZATION	32 93 43

ITEM

SUB-SECTION
OR ARTICLE

DIVISION 33: UTILITIES

MANHOLES	33 05 13
REINFORCED CONCRETE PIPE	33 41 00
HIGH DENSITY POLYETHYLENE PIPE	33 41 01
SPIRAL RIBBED ALUMINIZED STEEL PIPE	33 41 02
POLYVINYL CHLORIDE PIPE	33 41 03
SUBDRAINAGE	33 46 00

00 11 16
INVITATION TO BID

CHERRY CREEK RESERVOIR EAST BOAT RAMP SHORELINE STABILIZATION PHASE 2

Date: May 5, 2022

Electronic bids for the above-referenced PROJECT will be received by Cherry Creek Basin Water Quality Authority by 1:30 PM on June 8, 2022 and will be opened and recorded (BID OPENING). Any BID(s) received after the above-specified time and date will not be considered. Bids will be submitted through the Rocky Mountain E-Purchasing website (<https://www.bidnetdirect.com/colorado>; "BidNet") as more specifically defined below.

CONTRACT DOCUMENTS, complete with construction DRAWINGS and SPECIFICATIONS, will be available on <https://www.bidnetdirect.com/colorado/cherrycreekwat>. Bidders that have registered with BidNet for this PROJECT (the "plan holder list") will receive project addenda and other communication via BidNet. Acknowledgement of all addenda is required to submit a responsive bid.

BID(s) will be rejected if the CONTRACTOR's name is not on BidNet's plan holders list, which verifies the purchase of CONTRACT DOCUMENTS.

No BIDDER prequalification is required for this PROJECT. However, upon evaluation of BID(s), the apparent low BIDDER must be prepared to demonstrate BIDDER's qualifications by submitting evidence to OWNER such as financial data, previous experience, authority to conduct business in the jurisdiction where the PROJECT is located, and other requirements as may be specified in the CONTRACT DOCUMENTS.

The required security, 5% of the bid, must be submitted electronically on BidNet. E-bond and electronic funds transfer (EFT) submissions are accepted by CCBWQA through BidNet. The Bid Bond must be executed by a surety acceptable to CCBWQA.

BIDDER(s) are invited to attend a pre-bid conference virtually at

https://teams.microsoft.com/l/meetup-join/19%3ameeting_ZGIyNThiMmMtZWRhZi00OTZmLWFmNjYtOTQwYTgzMDEyMzly%40thread.v2/0?context=%7b%22Tid%22%3a%22adbdb320-7cf1-4f9a-b9bb-c49de1af7797%22%2c%22Oid%22%3a%22571c755b-0718-4aa9-b44e-961a5aa52670%22%7d

on May 25, 2022 at 1:00 PM. If you would like the appointment and link for the pre-bid conference sent to you, send request via e-mail to Val Endyk at val.endyk@ccbwwqa.org.

As its best interests may appear, OWNER reserves the right to reject any or all BID(s) and to waive informalities in the BID(s).

For public notice purposes documents are also on CCBWQA's website <https://www.cherrycreekbasin.org>.

A general statement of WORK is as follows:

Description of WORK:

The primary work to be performed under this contract includes construction of shoreline stabilization improvements to Cherry Creek Reservoir. Construction includes, but is not limited to mobilization, clearing and grubbing, traffic control, water control, erosion and sediment control items, , re-vegetation, concrete removal, tree removals, soil preparation, grading, topsoil placement, riprap placement, earthwork, and willow staking.

Location: Cherry Creek State Park at the East Boat Ramp

Estimated Construction Cost Range: \$80,000 to \$90,000.

OWNER:

Cherry Creek Basin Water Quality Authority

By: *William P. Ruzzo*
William P. Ruzzo (May 5, 2022 12:39 MDT)
(Signature)

Name: William P. Ruzzo

Title: Co-Manager

Publication Dates: May 13, 2022
May 20, 2022
Published In: The Greenwood Villager
The Douglas County News Press

00 21 13
INSTRUCTIONS TO BIDDERS

These instructions constitute a part of the CONTRACT DOCUMENTS and are given for the purpose of guiding the BIDDER(s) in properly preparing the BID. BIDDER(s) must prepare the BID in strict compliance with all of the requirements of the CONTRACT DOCUMENTS and in accordance with the following instructions:

201 BID

Each BID must include and be made on the forms provided in SECTION 00 40 00, PROCUREMENT FORMS. CCBWQA, Cherry Creek State Park, nor the Project Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets on CONTRACT DOCUMENTS, including PROCUREMENT FORMS.

202 QUALIFICATIONS OF BIDDER

If at the option of OWNER, BIDDER is required to demonstrate BIDDER's qualifications for the PROJECT, then BIDDER must be prepared to submit, within five (5) days of OWNER's request, written evidence such as financial data, previous experience, written evidence that BIDDER will be able to obtain the bonds and insurance as required by the CONTRACT DOCUMENTS, and evidence of authority to conduct business in the jurisdiction where the PROJECT is located.

203 COMPLETION AND SIGNING OF BID

BID must be legibly written in ink or typeface, and must cover all of the items of WORK called for therein and no others. All of the blank spaces in the BID must be properly completed. BIDDER must sign the BID with BIDDER's usual signature and give a complete business address. BID(s) by corporations must be signed with the name of the corporation followed by the signatures and designations of the President and Secretary (or other person authorized to bind it in the matter) and must have the corporate seal affixed thereto.

204 ADDENDA

BIDDER must acknowledge the receipt of all ADDENDA on the BID, in the place provided, and include it with the BID. There will be at least one ADDENDUM, which will include the Prebid Conference minutes.

205 ACCEPTABILITY OF BID

No BID will be accepted from and no CONTRACT will be awarded to any person, firm or corporation that is in arrears to OWNER upon any debt or CONTRACT or that is a defaulter, as surety or otherwise, upon any obligation to OWNER, or that is deemed irresponsible or unreliable by OWNER or PROJECT co-sponsors as defined in the CONTRACT DOCUMENTS.

206 INFORMAL AND UNBALANCED BID

Any alteration, insertion, or erasure by BIDDER in the form of the CONTRACT DOCUMENTS, as originally prepared by ENGINEER or OWNER and attached hereto, will render the accompanying BID informal and may constitute cause for rejection. Any BID that, in the opinion of OWNER, is unbalanced so that each item does not reasonably carry its own proportion of cost, or that contains inadequate or unreasonable prices for any item, may be rejected.

207 ONLY ONE BID ACCEPTED

OWNER shall accept only one (1) BID for the same WORK from any one BIDDER. This includes BID(s) that may be submitted under different names by one firm or corporation.

208 BID SECURITY

Each BID must, as a guarantee of good faith on the part of BIDDER, be accompanied by a BID SECURITY. The required security must be submitted on BidNet. E-bond and Electronic Funds Transfer submissions are accepted by CCBWQA through BidNet. The BID BOND Form included as SECTION 00 43 13 may be used. If the BID of a BIDDER is accepted and a CONTRACT awarded and said BIDDER fails to enter into a CONTRACT in the form prescribed and to furnish a PERFORMANCE BOND with a legally responsible and approved surety within thirty (30) days after such award is made by OWNER, said BID SECURITY will be forfeited to OWNER as liquidated damages.

209 RETURN OF BID SECURITY

As soon as BID prices have been compared, the BID SECURITY of all except the three lowest BIDDER(s) will be returned within thirty (30) days after the BID OPENING. When a CONTRACT is awarded and the successful BIDDER executes the AGREEMENT and submits satisfactory BOND(s), the BID SECURITY of all BIDDER(s) will be returned to them within thirty (30) days from date the AGREEMENT is executed, unless otherwise specified in the CONTRACT DOCUMENTS.

210 SITE INSPECTION AND INVESTIGATIONS

Prior to submitting a BID, BIDDER(s) must inspect the WORK Site and its surroundings. It will be conclusively presumed that the inspection of the Site has been made by the submittal of a BID.

DRAWINGS and SPECIFICATIONS, defining the WORK, were prepared on the basis of interpretation by ENGINEER of information derived from investigations of the WORK Site. Such information and data are subject to sampling errors, and the interpretation of the information and data depends to a degree on the judgment of ENGINEER. In view of this, BIDDER is invited to make additional investigations. Information about the degree of difficulty of the WORK to be done cannot totally be derived from either the DRAWINGS and SPECIFICATIONS or from ENGINEER or ENGINEER's representatives.

Subject to the provisions of SECTION 01 13 00, SITE CONDITIONS, since the BID information cannot be guaranteed, BIDDER will have assumed the risks attendant to successful performance of the WORK at the amount of the BID and will never make claim for additional payments or time extensions on the grounds that the nature or amount of WORK to be done was not understood by BIDDER when submitting the BID.

211 INCONSISTENCIES AND INTERPRETATIONS

Any inconsistencies between different provisions of the CONTRACT DOCUMENTS or any point requiring explanation must be inquired into by BIDDER, in writing, to OWNER at least five (5) days, excluding Saturdays, Sundays, and holidays, prior to the time set for the opening of the BID. A copy of the decision or interpretation will be distributed only to those who have registered their contact information with OWNER. After BID(s) are opened, all BIDDER(s) must abide by the decision of OWNER as to such interpretation.

If the decision or interpretation requires that ADDENDA to the CONTRACT DOCUMENTS be issued, such ADDENDA will be distributed only to those who have registered their contact information with OWNER. Each BIDDER must acknowledge the ADDENDA in the BID.

Only those interpretations, clarifications, and explanations issued in writing by OWNER, either by ADDENDA or by a formal written decision, will be binding. Oral or other interpretations, clarifications, or explanations will be without legal effect.

212 WITHDRAWAL OF BID

A BID may be withdrawn by BIDDER at any time prior to the published date and time of BID OPENING as set forth in the INVITATION TO BID. After the BID opening, no BID can be withdrawn or modified. Security provided by the withdrawn BIDDER will be returned based on the schedule in Section 209, above.

213 BID OPENING

OWNER will open and record all BID(s) submitted in accordance with these Contract Documents on the date identified in the Invitation to Bid.

214 AWARD OF CONTRACT

OWNER reserves the right to award the CONTRACT at any time within sixty (60) days from the date of the opening of BID(s) unless otherwise specified in the CONTRACT DOCUMENTS. OWNER further reserves the right to reject any and all BID(s) and waive any and all informalities, and the right to disregard all non-conforming or conditional BID(s) or counter BID(s).

In evaluating the BID, OWNER may consider the qualifications of BIDDER and shall consider whether or not the BID complies with the prescribed requirements, and alternates and unit prices if requested in the BID. OWNER may also consider the qualifications and experience of SUBCONTRACTOR(s) and other persons and organizations (including those who are to furnish the principal items of material or equipment) proposed for those portions of the WORK as to which the identity of SUBCONTRACTOR(s) and other persons and organizations must be submitted as specified on the BID. OWNER shall conduct such investigations, as it deems necessary to establish the responsibility, qualifications, and financial ability of BIDDER, SUBCONTRACTOR(s) and other persons and organizations to do the WORK in accordance with the CONTRACT DOCUMENTS to OWNER's satisfaction within the prescribed time. OWNER reserves the right to reject the BID of any BIDDER who does not pass any such evaluation to OWNER's satisfaction.

If a CONTRACT is to be awarded, it will be awarded to the lowest responsible BIDDER whose evaluation by OWNER indicates to OWNER that the award will be in the best interests of the PROJECT. If the CONTRACT is to be awarded, OWNER shall give the apparent successful BIDDER a NOTICE OF AWARD within sixty (60) days after the day of the BID OPENING.

215 TAXES and FEES

All sales of construction and building materials to CONTRACTOR(s) and SUBCONTRACTOR(s) for use in the PROJECT are exempt from applicable State and local sales and use taxes.

Fees imposed by applicable entities with jurisdiction within the OWNER's boundary shall be paid and may be reimbursed by OWNER, with no mark-up by the CONTRACTOR or SUBCONTRACTOR.

216 REJECTION OF BID

If, at a minimum, any of the below-listed items are encountered, then the BID may be deemed an unacceptable BID and may be rejected by OWNER.

1. BIDDER(s) name is not on the plan holders list;
2. BID is missing any of the pages in SECTION 00 40 00; PROCUREMENT,
3. BID not signed by an authorized person of the corporation or company;
4. Receipt of ADDENDA not acknowledged by BIDDER on the BID;
5. BID not accompanied by acceptable BID SECURITY;
6. BID submitted by a CONTRACTOR currently prohibited from bidding on OWNER's projects.

END OF SECTION

SECTION 00 30 00
AVAILABLE PROJECT INFORMATION

Including:

- 00 31 32 HISTORIC WATER SURFACE ELEVATIONS
- 00 31 32 GEOTECHNICAL DATA

00 31 32

HISTORIC WATER SURFACE ELEVATIONS

Historic water surface data in Cherry Creek Reservoir is available on the State of Colorado Department of Water Resources website (<https://dwr.state.co.us/Tools/Stations>). The Station ID for Cherry Creek Reservoir is CHRRESCO. CONTRACTOR may rely upon the general accuracy of the data, but the data itself is not a part of the CONTRACT DOCUMENTS. Except for such reliance on data, CONTRACTOR may not rely upon the data nor make any claim against OWNER, ENGINEER, or any of ENGINEER's agents, employees, or consultants with respect to information or direction.

END OF SECTION

00 31 32
GEOTECHNICAL DATA

No geotechnical investigation report is available for this project.

END OF SECTION

**SECTION 00 40 00
PROCUREMENT FORMS**

Including:

00 41 00	BID FORM
00 41 43	UNIT PRICE BID SCHEDULE
00 43 13	BID BOND

**00 41 00
BID FORM**

CHERRY CREEK RESERVOIR EAST BOAT RAMP SHORELINE STABILIZATION PHASE 2

BID of _____ (hereinafter called "BIDDER"), organized and existing under the laws of the State of _____, doing business as _____, (Corporation, Partnership, Individual).

In conformity with the CONTRACT DOCUMENTS, listed in Paragraph 5 of the AGREEMENT between OWNER and CONTRACTOR:

(I)(We) hereby certify that this BID is made and submitted without fraud or collusion with any other person, firm, or corporation whatsoever; that an examination has been made of the Site of the WORK and the CONTRACT form, together with the CONTRACT DOCUMENTS for the improvement.

(I)(We) understand that the quantities of WORK shown herein are approximate only and are subject to increase or decrease; are to be performed at the unit prices shown on the attached schedule; and that, at the time of opening BID(s) comparison of BID(s) will be based on the correct summation of item totals obtained from the unit prices BID.

(I)(We) understand Proposals must be received electronically on BidNet no later than the Bid Deadline. Proposals will be time-stamped by BidNet upon receipt. CCBWQA will only accept proposals submitted on BidNet and will not accept hardcopy proposals, or proposals submitted by any other means.

(I)(We) understand that questions about BidNet should be directed to BidNet support at 800-835-4603 or at <https://www.bidnetdirect.com/> and that after uploading proposal documents to BidNet, you must click the SUBMIT button. CCBWQA will not accept uploads that are "saved" but not "submitted". To verify that your proposal was submitted successfully, you may contact BidNet support or verify via the Bid Management tab in your account that the documents are not in "draft" status. No proposal will be considered which has not been received by the Bid Deadline set forth in the invitation to bid, as determined by CCBWQA. CCBWQA is not responsible for delays occasioned by any means of delivery employed or technical difficulties caused by BidNet or any other entity or source.

(I)(We) propose to furnish all necessary machinery, equipment, tools, labor, and other means of construction and to furnish all materials specified, in the manner and at the time prescribed, all in accordance with the terms of the CONTRACT DOCUMENTS.

(I)(We) further propose to do all extra work that may be required to complete the contemplated improvement, at unit prices, lump sums, or time and materials to be agreed upon in writing prior to starting such WORK.

(I)(We) further propose to execute the AGREEMENT and BOND(s) within ten (10) days after receiving written NOTICE OF AWARD.

(I)(We) further propose to perform all WORK in accordance with the CONTRACT DOCUMENTS and in a good and workmanlike manner, and to renew or repair any WORK that may be rejected due to defective materials or workmanship, prior to final completion and acceptance of the PROJECT by OWNER.

BIDDER hereby agrees to commence WORK under this CONTRACT on or before a date to be specified in the NOTICE TO PROCEED and to fully complete the WORK required of it in the CONTRACT DOCUMENTS

within the **PROJECT TIME identified in the CONTRACT DOCUMENTS**, unless the period for completion is extended otherwise by an ADDENDUM or CHANGE ORDER.


BIDDER acknowledges receipt of the following ADDENDA:

No. _____, dated _____, 20____	No. _____, dated _____, 20____
No. _____, dated _____, 20____	No. _____, dated _____, 20____
No. _____, dated _____, 20____	No. _____, dated _____, 20____

BIDDER agrees to perform all the WORK described in the CONTRACT DOCUMENTS for the following unit prices or lump sum:

END OF SECTION

00 41 43
UNIT PRICE BID SCHEDULE

East Boat Ramp - Shoreline Stabilization						
Engineer's Opinion of Probable Construction Cost						
Date:	4/13/2022					
						RIFFLES TO RIPPLES
Bid Item No.	Bid Item Code	Bid Item	Bid Quantity	Unit	Unit Price	Extension
General						
	GN-02-001	Mobilization	1	EA		
	GN-01-001	Clearing and Grubbing	0.1	AC		
	GN-04-001	Surveying	1	LS		
	GN-05-001	Traffic Control#	1	LS		
	GN-06-001	Water Control	1	LS		
GESC						
	ESC-10-001	Rock Sock / Curb Sock	6	LF		
	ESC-13-001	Sediment Control Log	140	LF		
	ESC-17-002	Stabilized Staging Area	1	LS		
	ESC-20-001	Vehicle Tracking Control*	1	LS		
		Silt Curtain	150	LF		
	FN-01-004	Construction Fence	170	LF		
	LS-02-002	Erosion Control Blanket, Coconut (Coir Mat W/ 2x4 Wedge Stakes)	135	SY		
	LS-02-004	Erosion Control Blanket, Straw / Coconut Mix (SC-150 W/ Biodegradable Netting and 12" Eco Stakes)	35	SY		
	LS-07-001	Mulch, Broadcast Straw (Under Coir Mat)	0.1	AC		
	LS-07-002	Mulch, Crimped Straw	0.1	AC		
	LS-10-005	Seeding, Upland, Broadcast	0.1	AC		
Demo						
	RR-06-005	Remove Temporary Bank Protection (Concrete and Wood use for Bank Protection)	1	LS		
	RR-08-001	Remove, Store, and Reset Sign	3	EA		
	RR-06-018	Remove Tree	5	EA		
Construction						
	LS-12-001	Soil Preparation and Fine Grading	0.1	AC		
	ESP-08-001	Topsoil, Imported, Upland	25	CY		
	RW-11-003	Riprap, Void-Filled, Type M	90	CY		
	RW-10-003	Riprap with Bedding, Type M	65	CY		
	ESP-02-002	Earthwork, Excavation and Haul Offsite	170	CY		
	ESP-02-001	Earthwork, Excavation and Fill On-Site	12	CY		
	LS-14-004	Willow Stakes	66	EA		
					Total =	
# Includes signage and cones to close off existing paved area for access, vehicle tracking, and staging						
* Uses existing pavement, cost to clean up only.						

TOTAL OF BASE BID: \$ _____
(Numbers)

_____ Dollars
(Words)

BIDDER STATES THAT:

1. MAJOR MATERIAL AND EQUIPMENT SUPPLIERS ARE:

MATERIAL THEY WILL SUPPLY:

2. MAJOR SUBCONTRACTORS ARE:

WORK THEY WILL PERFORM:

ATTEST:

By: _____
(Signature)

Name: _____
(Print)

CONTRACTOR:

Company Name (Print)

By: _____
(Signature)

Name: _____
(Print)

Title: _____

Address: _____

Date: _____

END OF SECTION

**00 43 13
BID E-BOND**

CHERRY CREEK RESERVOIR EAST BOAT RAMP SHORELINE STABILIZATION PHASE 2

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____

_____ as BIDDER, and
(Name and Address of BIDDER)

_____ as Surety, are hereby
(Name and Address of Surety)

held and firmly bound unto OWNER in the sum of five percent (5%) of BIDDER(s)'s total BID price, which sum it is specifically agreed is to be forfeited as liquidated damages in the event BIDDER(s) defaults in BIDDER's obligation as herein specified, for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors, and assigns.

The Condition of the above obligation is such that whereas BIDDER(s) has submitted to OWNER a certain BID, attached hereto and hereby made a part hereof to enter a CONTRACT in writing, for the construction of the above-referenced PROJECT.

NOW, THEREFORE,

- (a) If said BID will be rejected, or
- (b) If said BID will be accepted and BIDDER(s) will execute and deliver a CONTRACT in the Form of Contract attached hereto (properly completed in accordance with said BID) and will furnish a BOND for faithful performance of said CONTRACT, and for the payment of all persons performing labor or furnishing materials in connection therewith, all within ten (10) calendar days of OWNER's NOTICE OF AWARD to BIDDER(s), and will in all other respects perform the AGREEMENT created by the acceptance of said BID,

then this obligation will be void, otherwise the same will remain in force and effect; it being expressly understood and agreed that this liability will be subject to forfeiture upon demand as liquidated damages.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND will be in no way impaired or affected by an extension of the time within which OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the _____ day of _____, 20_____.

BIDDER:

By: _____

Name: _____
(Print)

Title: _____

SURETY:

By: _____
Attorney-in-Fact

Name: _____
(Print)

Title: _____

IMPORTANT -- Surety companies executing BOND(s) must appear on the United States Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Colorado.

**SECTION 00 50 00
CONTRACTING FORMS**

Including:

00 51 00	NOTICE OF AWARD
00 52 00	AGREEMENT
00 55 00	NOTICE TO PROCEED

**00 51 00
NOTICE OF AWARD**

CHERRY CREEK RESERVOIR EAST BOAT RAMP SHORELINE STABILIZATION PHASE 2

TO: _____
(CONTRACTOR)

You are hereby notified that your BID has been accepted for the BASE BID and Alternate(s) _____, in the amount of _____ Dollars (\$ _____).

You are required by the "INSTRUCTIONS TO BIDDERS" to execute the AGREEMENT and furnish the required CONTRACTOR's PAYMENT AND PERFORMANCE BOND(s) and INSURANCE CERTIFICATES within ten (10) calendar days from the date of execution and delivery of this notice to you.

If you fail to execute said AGREEMENT and to furnish said BOND(s) within ten (10) days from the date of execution and delivery of this notice to you, said OWNER shall be entitled to consider all your rights arising out of OWNER's acceptance of your BID as abandoned and as a forfeiture of your BID BOND. OWNER shall be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to OWNER within three business days from its receipt by you.

Dated this _____ day of _____, 20_____.

OWNER:

Cherry Creek Basin Water Quality Authority _____

By: _____
(Signature)

Name: _____

Title: _____

ACCEPTANCE OF NOTICE

Receipt of this NOTICE OF AWARD is hereby acknowledged this the _____ day of _____, 20_____.

CONTRACTOR:

Company Name (Print)

By: _____
(Signature)

Name: _____
(Print)

Title: _____

END OF SECTION

Acct. No.:	
Acct No.	
Amount:	

**00 52 00
AGREEMENT**

CHERRY CREEK RESERVOIR EAST BOAT RAMP SHORELINE STABILIZATION PHASE 2

THIS AGREEMENT, made this _____ day of _____, 20____, by and between CHERRY CREEK BASIN WATER QUALITY AUTHORITY (hereinafter called "OWNER") and

_____, doing business as
(Name of CONTRACTOR)

_____, (hereinafter called "CONTRACTOR") and
(Corporation, Partnership, or Individual)

collectively known as "PARTIES."

WITNESSETH:

That for and in consideration of the payments and AGREEMENT(s) hereinafter mentioned:

1. CONTRACTOR shall commence and complete the improvements to the above-referenced PROJECT.
2. CONTRACTOR shall furnish all of the material, supplies, tools, equipment, labor, and other services necessary for the construction and completion of the PROJECT described herein.
3. CONTRACTOR shall commence the WORK required by the CONTRACT DOCUMENTS within ten (10) calendar days after the date of the NOTICE TO PROCEED and shall complete the same within sixty (60) calendar days from the date of the NOTICE TO PROCEED unless the period for completion is extended otherwise by an ADDENDUM or CHANGE ORDER.
4. CONTRACTOR agrees to perform all of the WORK, which includes the BASE BID, described in the CONTRACT DOCUMENTS and comply with the terms therein for the sum of _____ Dollars (\$_____).
5. The term "CONTRACT DOCUMENTS" and/or "CONTRACT" means and includes the following:
 - SECTION 00 11 16 INVITATION TO BID
 - SECTION 00 21 13 INSTRUCTIONS TO BIDDERS
 - SECTION 00 30 00 AVAILABLE PROJECT INFORMATION
 - SECTION 00 40 00 PROCUREMENT FORMS
 - SECTION 00 50 00 CONTRACTING FORMS

SECTION 00 60 00	PROJECT FORMS
SECTION 00 72 00	GENERAL CONDITIONS
SECTION 00 73 00	SUPPLEMENTARY CONDITIONS
SECTION 00 90 00	REVISIONS AND MODIFICATIONS
DIVISION 01	GENERAL REQUIREMENTS
DIVISION 02	EXISTING CONDITIONS
DIVISION 03	CONCRETE
DIVISION 05	METALS
DIVISION 07	THERMAL AND MOISTURE PROTECTION
DIVISION 09	FINISHES
DIVISION 31	EARTHWORK
DIVISION 32	EXTERIOR IMPROVEMENTS
DIVISION 33	UTILITIES

DIVISIONS 02-05, 07, 09, 31-33 are Standard Technical Specifications and are to be downloaded from the Mile High Flood District's website at www.udfd.org. The Standard Technical Specifications included in this AGREEMENT represent the most current revision of each DIVISION as of the date on the signed AGREEMENT.

DRAWINGS (may also be referred to as PLANS)

6. OWNER shall pay to CONTRACTOR in the manner and at such times as set forth in the GENERAL CONDITIONS such amounts as required by the CONTRACT DOCUMENTS. OWNER represents that monies appropriated for the improvements are equal to or in excess of the CONTRACT PRICE.
7. Should CONTRACTOR fail to complete all WORK within the CONTRACT TIME, CONTRACTOR shall be liable to OWNER for liquidated damages at the rate of Three Hundred Dollars (\$300) per day as specified in Article 21 of the GENERAL CONDITIONS.
8. This AGREEMENT will be binding upon all PARTIES hereto and their respective heirs, executors, administrators, successors, and assigns.

OWNER:

Cherry Creek Basin Water Quality Authority

By: _____
(Signature)

Name _____

Title: _____

CONTRACTOR:

Company Name (Print)

By: _____
(Signature)

Name: _____
(Print)

Title: _____

City/County License No.: _____

Expiration Date: _____

Address: _____

END OF SECTION

**00 55 00
NOTICE TO PROCEED**

CHERRY CREEK RESERVOIR EAST BOAT RAMP SHORELINE STABILIZATION PHASE 2

TO: _____
(CONTRACTOR)

In accordance with the AGREEMENT dated _____, 20_____, you are hereby authorized to proceed with the WORK on _____, 20_____.

You are to complete the WORK within sixty (60) consecutive calendar days thereafter. Therefore, the date of completion of all WORK is _____, 20_____.

You are required to return an acknowledged copy of this NOTICE OF PROCEED to OWNER within three business days from its receipt by you.

OWNER:

Cherry Creek Basin Water Quality Authority

By: _____
(Signature)

Name: _____

Title: _____

ACCEPTANCE OF NOTICE

Receipt of this NOTICE TO PROCEED is hereby acknowledged this the _____ day of _____, 20_____.

CONTRACTOR:

Company Name (Print)

By: _____
(Signature)

Name: _____
(Print)

Title: _____

END OF SECTION

**SECTION 00 60 00
PROJECT FORMS**

Including:

00 61 13	PAYMENT BOND
00 61 14	PERFORMANCE BOND
00 62 13	LETTER OF DAMAGE GUARANTEE
00 62 16	INSURANCE CERTIFICATES
00 63 36	FIELD ORDER FORM
00 63 63	CHANGE ORDER FORM
00 65 11	LETTER OF FINAL ACCEPTANCE
00 65 23	CONTRACTOR STATEMENT CONCERNING CLAIMS
00 65 25	WITHDRAWAL OF STATEMENT OF CLAIM
00 65 33	NOTICE OF FINAL PAYMENT
00 65 36	FINAL RECEIPT

**00 61 13
PAYMENT BOND**

CHERRY CREEK RESERVOIR EAST BOAT RAMP SHORELINE STABILIZATION PHASE 2

KNOW ALL MEN BY THESE PRESENTS: that

(Name of CONTRACTOR)

(Address of CONTRACTOR)

a _____, hereinafter called CONTRACTOR, and
(Corporation, Partnership, or Individual)

(Name of Surety)

(Address of Surety)

duly organized and doing business under and by virtue of the laws of the State of _____, or regulated to do business within the State of Colorado, and duly licensed for the purpose of making, guaranteeing, or becoming sole surety upon bonds or undertakings required or authorized by the State of Colorado, hereinafter called Surety, are held and firmly bound unto

Cherry Creek Basin Water Quality Authority
P.O. Box 3166
Centennial, Colorado 80161

hereinafter called OWNER in the penal sum of _____ Dollars (\$ _____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, CONTRACTOR entered into a certain AGREEMENT with OWNER, dated the _____ day of _____, 20____, a copy of which is hereto attached and made a part hereof for the construction of the above-referenced PROJECT.

NOW, THEREFORE, if CONTRACTOR shall promptly make payment to all persons, firms, SUBCONTRACTOR(s), and corporations furnishing material for or performing labor in the prosecution of the WORK provided for in such AGREEMENT, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said WORK, and for all labor, performed in such WORK, whether by SUBCONTRACTOR(s) or otherwise, then this obligation will be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the AGREEMENT or to the WORK to be performed thereunder or the CONTRACT DOCUMENTS accompanying the same will in any way affect its obligation on

this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the AGREEMENT or to the WORK or to the CONTRACT DOCUMENTS.

PROVIDED, FURTHER, that no final settlement between OWNER and CONTRACTOR will abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in one (1) part, which will be deemed the original, this the _____ day of _____, 20_____.

(SEAL)

CONTRACTOR:

Company Name (Print)

ATTEST:

By: _____
(Signature)

By: _____
(Signature)

Name: _____
(Print)

Name: _____
(Print)

Title: _____

(SEAL)

SURETY:

Company Name (Print)

ATTEST:

By: _____
Surety Secretary (Signature)

By: _____
Attorney-in-Fact (Signature)

Name: _____
(Print)

Name: _____
(Print)

Title: _____

NOTE: Date of BOND must not be prior to date of AGREEMENT. If CONTRACTOR is Partnership, all partners should execute BOND.

Accompany this BOND with Attorney-in-Fact's authority from the Surety to execute the BOND, certified to include the date of the BOND.

END OF SECTION

00 61 14
PERFORMANCE BOND

CHERRY CREEK RESERVOIR EAST BOAT RAMP SHORELINE STABILIZATION PHASE 2

KNOW ALL MEN BY THESE PRESENTS: that

(Name of CONTRACTOR)

(Address of CONTRACTOR)

a _____, hereinafter called CONTRACTOR, and
(Corporation, Partnership, or Individual)

(Name of Surety)

(Address of Surety)

duly organized and doing business under and by virtue of the laws of the State of _____, or registered to do business within the State of Colorado, and duly licensed for the purpose of making, guaranteeing, or becoming sole surety upon bonds or undertaking required or authorized by the State of Colorado, hereinafter called Surety, are held and firmly bound unto

Cherry Creek Basin Water Quality Authority
P.O. Box 3166
Centennial, Colorado 80161

hereinafter called OWNER, in the penal sum of _____ Dollars (\$ _____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, CONTRACTOR entered into a certain AGREEMENT with OWNER, dated the _____ day of _____, 20____, a copy of which is hereto attached and made a part hereof for the construction of the above-referenced PROJECT.

NOW, THEREFORE, if CONTRACTOR shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said AGREEMENT during the original term thereof, and any extensions thereof which may be granted by OWNER, with or without notice to the Surety and during the one-year guaranty period, and if CONTRACTOR shall satisfy all claims and demands incurred under such AGREEMENT, and shall fully indemnify and save harmless OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay OWNER all outlay and expense which OWNER may incur in making good any default, then this obligation will be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the AGREEMENT or to WORK to be performed thereunder or the CONTRACT DOCUMENTS accompanying the same will in any way affect its obligation on

this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the AGREEMENT or to the WORK or to the CONTRACT DOCUMENTS.

PROVIDED, FURTHER, that no final settlement between OWNER and CONTRACTOR will abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in one (1) part, which will be deemed the original, this the _____ day of _____, 20_____.

(SEAL)

CONTRACTOR:

Company Name (Print)

ATTEST:

By: _____
(Signature)

By: _____
(Signature)

Name: _____
(Print)

Name: _____
(Print)

Title: _____

(SEAL)

SURETY:

Company Name (Print)

ATTEST:

By: _____
Surety Secretary (Signature)

By: _____
Attorney-in-Fact (Signature)

Name: _____
(Print)

Name: _____
(Print)

Title: _____

NOTE: Date of BOND must not be prior to date of AGREEMENT. If CONTRACTOR is Partnership, all partners should execute BOND.

Accompany this BOND with Attorney-in-Fact's authority from the Surety to execute the BOND, certified to include the date of the BOND.

END OF SECTION

00 62 13
LETTER OF DAMAGE GUARANTEE

CHERRY CREEK RESERVOIR EAST BOAT RAMP SHORELINE STABILIZATION PHASE 2

TO: Cherry Creek Basin Water Quality Authority
P.O. Box 3166
Centennial, Colorado 80161

Date: _____, 20_____

In compliance with Article 15.04 of the GENERAL CONDITIONS, I (we) guarantee(s) that, until the WORK is accepted by OWNER under DIVISION 01: GENERAL REQUIREMENTS, SECTION 01 77 00, CLOSEOUT PROCEDURES, any WORK which is damaged in any way by any cause, including but not limited to damage due to floods, will be replaced at my (our) sole cost. This includes the entire above-referenced PROJECT, which is the subject of the CONTRACT and includes completed WORK and WORK in progress.

CONTRACTOR:

Company Name (Print)

By: _____
(Signature)

Name: _____
(Print)

Title: _____

END OF SECTION

00 62 16
INSURANCE CERTIFICATES

(To Be Attached)

**00 63 63
CHANGE ORDER FORM**

CHERRY CREEK RESERVOIR EAST BOAT RAMP SHORELINE STABILIZATION PHASE 2

Change Order No.: _____
Change Order Date: _____
Account No.: 00-00-00000
File No.: _____

CONTRACTOR: _____

It is hereby mutually agreed that when this CHANGE ORDER has been signed by the contracting parties, the following described changes shall be executed by CONTRACTOR without changing the terms of the CONTRACT, except as herein stipulated and agreed. OWNER represents that monies appropriated for the improvements are equal to or in excess of the CONTRACT PRICE including this CHANGE ORDER.

Description of change (use attachment if necessary) made to the CONTRACT:

CONTRACTOR agrees this CHANGE ORDER represents the full and final adjustment of CONTRACT TIME and/or CONTRACT PRICE for this change. CONTRACTOR also agrees to furnish all materials and labor and to perform all WORK required to complete the above described changes in accordance with the requirements for similar WORK covered by the CONTRACT, except as otherwise stipulated herein, for the following considerations:

01 Change to CONTRACT PRICE

Original CONTRACT PRICE \$ _____
Current CONTRACT PRICE adjusted by CHANGE ORDERS ___ through ___ \$ _____
The CONTRACT PRICE due to this CHANGE ORDER will be increased
(decreased) by \$ _____
The new CONTRACT PRICE including this CHANGE ORDER will be \$ _____

02 Change to CONTRACT TIME

Current CONTRACT Completion Date _____
The CONTRACT TIME will be increased (decreased) by _____ Calendar Days
The date for completion of all WORK will be _____

Approvals:

_____ (ENGINEER)	_____ DATE	_____ (OWNER)	_____ DATE
_____ (CONTRACTOR)	_____ DATE	_____ (OWNER)	_____ DATE
_____ (OWNER)	_____ DATE	_____ (OWNER)	_____ DATE

00 65 33
NOTICE OF FINAL PAYMENT

CHERRY CREEK RESERVOIR EAST BOAT RAMP SHORELINE STABILIZATION PHASE 2

Notice is hereby given that at _____ (a.m./p.m.) on _____, 20_____,
pursuant to C.R.S. § 38-26-107, Cherry Creek Basin Water Quality Authority shall make final payment to

(CONTRACTOR's name and address)

in connection with full payment for all services rendered, materials furnished and for all labor performed in and for the above-referenced PROJECT.

1. Any person, co-partnership, association of persons, company or corporation that has an unpaid claim against the said PROJECT for or on account of the furnishing of labor, materials, team hire, sustenance, provisions, provender or other supplies used or consumed by such CONTRACTOR or any SUBCONTRACTOR in or about the performance of said WORK contracted to be done or that supplies rental machinery, tools, or equipment to the extent used in the prosecution of the WORK whose claim therefore has not been paid by the CONTRACTOR or the SUBCONTRACTOR may at any time up to and including said time of such final settlement file a verified statement of the amount due and unpaid on account of such claim.
2. All such claims will be filed with Cherry Creek Basin Water Quality Authority, P.O. Box 3166, Centennial, Colorado 80161, on or before the above-mentioned date and time of final settlement.
3. Failure on the part of a creditor to file such statement prior to such final settlement will relieve Cherry Creek Basin Water Quality Authority from any and all liability for such claim.

First Publication: _____
Last Publication: _____
Published in: The Greenwood Villager
The Douglas County News Press

OWNER:

Cherry Creek Basin Water Quality Authority _____

By: _____
(Signature)

Name: _____

Title: _____

END OF SECTION

**00 65 36
FINAL RECEIPT**

CHERRY CREEK RESERVOIR EAST BOAT RAMP SHORELINE STABILIZATION PHASE 2

Date: _____, 20____

Received this date from OWNER, as full and final payment of the cost of the improvements provided for in the CONTRACT DOCUMENTS for the above-referenced PROJECT in the amount of

_____ Dollars

(\$ _____) in cash, being the remainder of the full amount accrued to the undersigned by virtue of said CONTRACT; including full payment for the cost of all extra work and material furnished by the undersigned in the construction of said improvements, and all incidentals thereto.

The undersigned waives any existing or future claims, demands, controversies, actions, and causes of action, obligations, damages, liabilities, costs, including attorneys' fees, which it has or may have against the OWNER, which arise or may arise in connection with the PROJECT or the CONTRACT DOCUMENTS.

The undersigned understands and agrees that it is hereby fully and finally releasing the OWNER from all unknown and/or unanticipated injuries, losses, or damages, arising out of the matters relating to the CONTRACT DOCUMENTS or the PROJECT as well as from those now known or disclosed, and the undersigned hereby waives all rights and benefits which it now has or in the future may have.

And these presents are to certify that all persons doing work upon or furnishing materials for said improvements under the foregoing CONTRACT have been paid in full.

CONTRACTOR:

Company Name (Print)

By: _____
(Signature)

Name: _____
(Print)

Title: _____

END OF SECTION

**SECTION 00 72 00
GENERAL CONDITIONS**

01 SCOPE

These GENERAL CONDITIONS consist of general items of information and requirements needed for the many and varied construction contracts of OWNER. The intent of this part of the CONTRACT DOCUMENTS is to provide for a body of information and directions to CONTRACTOR, which will decrease the chances for misunderstanding between CONTRACTOR and OWNER.

02 DEFINITIONS

Wherever used in the CONTRACT DOCUMENTS, the following terms will have the meanings indicated which will be applicable to both the singular and plural thereof:

- AGREEMENT - the legal contract between CONTRACTOR and OWNER.
- BID(s) - The offer or BID of BIDDER(s) submitted on the prescribed form setting forth the prices for the WORK to be performed.
- BIDDER(s) - Any person, firm, or corporation submitting a BID for the WORK.
- ADDENDA - That part of the CONTRACT DOCUMENTS, which contains instructions, issued to clarify, revise, add, or delete bidding terms and requirements. The ADDENDA is issued during bidding.
- BID SECURITY – Either an E-Bond or electronic fund transfer, pursuant to the requirements stated in the INVITATION TO BID.
- BOND(s) – BID, PERFORMANCE BOND, PAYMENT BOND, and other instruments of security, furnished by CONTRACTOR and the surety in accordance with the CONTRACT DOCUMENTS.
- CHANGE ORDER - A written order to CONTRACTOR authorizing an addition, deletion, or revision in the WORK the general scope of the CONTRACT DOCUMENTS, or authorizing an adjustment in the CONTRACT PRICE and/or CONTRACT TIME.
- CONTRACT DOCUMENTS and/or CONTRACT and/or DRAWINGS and SPECIFICATIONS - The entire CONTRACT consists of several documents and instruments, some of which may be bound separately or which are incorporated by reference. The CONTRACT DOCUMENTS consist of, but are not necessarily limited to:
 - INVITATION TO BID
 - INSTRUCTIONS TO BIDDERS
 - AVAILABLE PROJECT INFORMATION
 - BID FORM
 - BID BOND
 - NOTICE OF AWARD
 - AGREEMENT
 - NOTICE TO PROCEED
 - EMPLOYMENT OF ILLEGAL ALIENS
 - PAYMENT BOND
 - PERFORMANCE BOND
 - LETTER OF DAMAGE GUARANTEE

- INSURANCE CERTIFICATES
- FIELD ORDER FORM
- CHANGE ORDER FORM
- LETTER OF FINAL ACCEPTANCE
- CONTRACTOR STATEMENT CONCERNING CLAIMS
- WITHDRAWAL OF STATEMENT OF CLAIM
- NOTICE OF FINAL PAYMENT
- FINAL RECEIPT
- GENERAL CONDITIONS
- SUPPLEMENTARY CONDITIONS
- PERMITS
- REVISIONS AND MODIFICATIONS
- ADDENDA
- DRAWINGS (may also be referred to as PLANS)
- OTHER DOCUMENTS AS MAY BE INCLUDED BY REFERENCE

The CONTRACT DOCUMENTS may not necessarily be assembled in the order listed above. All of said instruments, DRAWINGS, and documents taken together as a whole constitute the entire set of CONTRACT DOCUMENTS.

- REVISIONS AND MODIFICATIONS - That part of the CONTRACT DOCUMENTS, which contains instructions issued to clarify, revise, add, or delete contracting requirements issued either before or after the execution of the AGREEMENT, but after the bidding.
- CCBWQA – Cherry Creek Basin Water Quality Authority.
- CONTRACT PRICE - The total monies payable to CONTRACTOR under the terms and conditions of the CONTRACT DOCUMENTS.
- CONTRACT TIME - The number of consecutive calendar days stated in the CONTRACT DOCUMENTS for the completion of the WORK.
- CONTRACTOR - The person, firm, partnership, corporation, or joint venture with which OWNER has executed the AGREEMENT.
- DRAWINGS - The part of the CONTRACT DOCUMENTS that show the characteristics and scope of the WORK to be performed and which have been prepared or approved by ENGINEER and/or OWNER. May also be referred to as PLANS.
- DISTRICT – Mile High Flood District.
- ENGINEER - The person, firm, or corporation named as such in the CONTRACT DOCUMENTS and acting as an authorized representative of OWNER.
- MANAGER - The person in charge of the administrative and contractual functions of CCBWQA.
- FIELD ORDER - A written order effecting a change in the WORK not involving an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, issued to CONTRACTOR during construction.

- GENERAL CONDITIONS - That part of the CONTRACT DOCUMENTS which defines and describes the rights, responsibilities, and relationships of the parties to a construction contract; and outlines the duties and limits of authority for the design professional or construction manager in performance of contract administration.
- HAZARDOUS ENVIRONMENTAL CONDITION - The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
- HAZARDOUS WASTE - The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
- AVAILABLE PROJECT INFORMATION - Information available, which is not contained within the CONTRACT DOCUMENTS, but may be available at OWNER's or ENGINEER's office as defined.
- NOTICE OF AWARD - The WRITTEN NOTICE of the acceptance of the BID from OWNER to the successful BIDDER.
- NOTICE TO PROCEED - Written communication issued by OWNER authorizing CONTRACTOR to proceed with the WORK, establishing the date of commencement of the WORK, and establishing the date of completion of the WORK.
- OWNER - The CCBWQA or another public or quasi-public body, authority or governmental entity identified in the CONTACT DOCUMENTS.
- PLANS - See DRAWINGS.
- PROJECT - The undertaking to be performed as provided in the CONTRACT DOCUMENTS.
- RESIDENT ENGINEER and/or RESIDENT PROJECT REPRESENTATIVE - The authorized representative of OWNER who is assigned to the PROJECT SITE or any part thereof.
- SHOP DRAWINGS - Supplemental DRAWINGS, diagrams, layouts, schematic or descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by CONTRACTOR, a SUBCONTRACTOR, manufacturer, SUPPLIER or distributor, which illustrate in detail specific portions of the WORK.
- SPECIFICATIONS - A part of the CONTRACT DOCUMENTS consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards, and workmanship.
- STANDARD TECHNICAL SPECIFICATIONS - A part of the CONTRACT DOCUMENTS consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards, and workmanship developed and approved by the CCBWQA for use on all projects. Current versions of the Standard Technical Specifications can be downloaded from the Mile High Flood District's website at www.udfcd.org.
- SUBCONTRACTOR - An individual, firm, or corporation having a direct contract with CONTRACTOR or with any other SUBCONTRACTOR for the performance of a part of the WORK at the Site.
- SUPPLEMENTARY CONDITIONS (Federal-State-Local Regulations) - That part of the CONTRACT DOCUMENTS which contains modifications to GENERAL CONDITIONS required by a Federal agency for participation in the PROJECT, or such requirements that may be imposed by applicable state or local laws, codes, ordinances or regulations. Requirements unique to a specific project are also found in this section.

- SUPPLIER - Any person or organization who supplies materials or equipment for the WORK, including that fabricated to a special design, but who does not perform labor at the SITE.
- WORK - All labor necessary to produce the construction required by the CONTRACT DOCUMENTS, and all materials and equipment incorporated or to be incorporated in the PROJECT.
- WRITTEN NOTICE - Any notice to any party of the AGREEMENT relative to any part of this AGREEMENT in writing and considered delivered and the service thereof completed, when mailed by certified or registered mail to the said party or last given address, or delivered in person to said party or an authorized representative on the WORK.

03 THE CONTRACT, DRAWINGS, AND SPECIFICATIONS

The AGREEMENT between CONTRACTOR and OWNER will be deemed to have been made in the State of Colorado and will be governed, interpreted and construed in accordance with the laws of the State of Colorado. Thus, CONTRACTOR shall at all times comply with the provisions of the Charters, Ordinances, Rules and Regulations of the local jurisdiction authority where the WORK is to be performed as well as those of the State of Colorado, and those Federal Laws, Rules and Regulations which in any manner limit, control, or apply to the actions or operations of CONTRACTOR, its SUBCONTRACTOR(s), or their employees, agents or servants engaged upon the WORK or affecting the materials supplied to or by them.

- .01 **General.** DRAWINGS and SPECIFICATIONS are integral parts of the CONTRACT. These are intended to provide details adequate to permit full understanding between CONTRACTOR and OWNER of WORK to be performed under the CONTRACT. The DRAWINGS and SPECIFICATIONS are intended to be complementary and must be interpreted in that sense.

If in the opinion of CONTRACTOR, any discrepancies are found between the DRAWINGS, SPECIFICATIONS, and SITE conditions or any inconsistencies or ambiguities are found in the DRAWINGS or SPECIFICATIONS; CONTRACTOR shall immediately report them to ENGINEER and/or OWNER in writing. ENGINEER and/or OWNER shall promptly review such reported discrepancies, inconsistencies, or ambiguities and determine if they exist. If ENGINEER determines a discrepancy, inconsistency or ambiguity exists, a CHANGE ORDER or FIELD ORDER will be issued as specified in DIVISION 01: GENERAL REQUIREMENTS, SECTION 01 26 00, CONTRACT MODIFICATION PROCEDURES. WORK done by CONTRACTOR prior to issuance of a CHANGE ORDER or FIELD ORDER will be done at CONTRACTOR's risk.

If WORK, although not described by the DRAWINGS and SPECIFICATIONS, appears to be necessary for the successful completion of the CONTRACT and if the necessity for such WORK can reasonably be implied from the CONTRACT DOCUMENTS, CONTRACTOR shall perform that WORK as if it were specified.

In case of conflict between the DRAWINGS and SPECIFICATIONS, the SPECIFICATIONS will govern. Figure dimensions on DRAWINGS will govern over scale dimensions, and detailed DRAWINGS will govern over general DRAWINGS.

- .02 **SPECIFICATIONS Designations.** Whenever reference is made in the CONTRACT DOCUMENTS to specifications, methods of testing materials, codes, practices and requirements, it will be understood that the latest edition or revision in effect as of the date of the BID OPENING will govern unless a specific revision is referred to.

- .03 **“Approved Equal” Clause.** Whenever a specific material, equipment, process, or product is referred to by a proprietary name, brand name or by the name of its manufacturer, it will be understood that such designation is further qualified by the phrase “or approved equal,” whether or not such phrase actually appears with the material, equipment, process or product being specified. Such specification is not intended to limit the material and equipment selection process but rather to indicate a standard of quality and capability that will be acceptable. If CONTRACTOR desires to provide a specific material, equipment, process, or product as “equal” to the designated name, product, brand, or manufacturer, CONTRACTOR shall receive prior written approval of CCBWQA, which shall not be unreasonably withheld.
- .04 **Ownership of DRAWINGS and SPECIFICATIONS.** Neither CONTRACTOR nor any SUBCONTRACTOR, manufacturer, fabricator, SUPPLIER or distributor shall have or acquire any title to or ownership rights in any of the DRAWINGS, SPECIFICATIONS or other documents (or copies of any thereof) prepared by or bearing the seal of ENGINEER; and they shall not reuse any of them on extensions of the PROJECT or any other project without written consent of OWNER and ENGINEER and specific written verification or adaptation by ENGINEER.
- .05 **DRAWINGS and SPECIFICATIONS Issued to CONTRACTOR.** Upon receiving NOTICE OF AWARD, CONTRACTOR may request as many additional copies of the DRAWINGS and SPECIFICATIONS as CONTRACTOR may desire. These will normally be available at the place where the BID documents were issued. Up to six (6) sets of these DRAWINGS and SPECIFICATIONS will be issued at no cost to CONTRACTOR. At OWNER’s discretion, and based upon the availability thereof, additional sets of DRAWINGS and SPECIFICATIONS may be made available to CONTRACTOR in excess of six (6) sets at no cost, however, OWNER may require CONTRACTOR to purchase sets of DRAWINGS and SPECIFICATIONS in excess of six (6) sets at the price stated in the INVITATION TO BID, if OWNER so chooses.

Of the six (6) sets of DRAWINGS and SPECIFICATIONS issued free to CONTRACTOR, one (1) set must be maintained in good condition at the WORK SITE for the purpose of recording “as-built” conditions as necessary to develop an “As Constructed Record.” On this set of DRAWINGS and SPECIFICATIONS, CONTRACTOR shall record all changes and deviations in a neat and legible manner. Any deviation between the DRAWINGS and SPECIFICATIONS and the WORK actually done, no matter how insignificant, must be recorded. Of special concern is that all underground utility structures encountered in the process of doing the WORK be correctly located on the DRAWINGS. When the WORK is completed, CONTRACTOR shall deliver this single set of DRAWINGS and SPECIFICATIONS to OWNER or ENGINEER. These DRAWINGS must be submitted to OWNER or ENGINEER before final payment will be made.

- .06 **Supplemental DRAWINGS and SPECIFICATIONS.** DRAWINGS and SPECIFICATIONS, which were provided by OWNER at the time of bidding, will, when needed, be supplemented by CONTRACTOR who shall provide SHOP DRAWINGS, equipment setting drawings, reinforcement steel placement drawings, erection schedules, material samples, performance charges, manufacturer’s brochures, and other needed information. If any of the above mentioned information is required, CONTRACTOR shall, as soon as the WORK begins, prepare a schedule for its submission to ENGINEER. The purpose of the schedule is to establish at an early date the needs and dates of needs so that the approval process does not delay the WORK. No WORK based on such supplemental DRAWINGS and SPECIFICATIONS will be performed until such supplemental DRAWINGS and SPECIFICATIONS have been reviewed as herein provided.

Since this supplemental data may be needed to evaluate whether ENGINEER’s concepts, as expressed by the DRAWINGS and SPECIFICATIONS are correctly interpreted and that the final WORK product

satisfied the design intent, review of the supplemental data will be the responsibility of ENGINEER. Submittal of this data will follow the normal channels of communication. CONTRACTOR must endorse all submittals, regardless of sources.

Reviews of supplemental DRAWINGS and SPECIFICATIONS are based only on whether or not these indicate that the subject of the supplemental data satisfies the basic design concept and intent. Such review by ENGINEER will never be used by CONTRACTOR to claim relief from CONTRACTOR's ultimate responsibility of providing to OWNER the end product for which it contracted. When submitted for review, SHOP DRAWINGS will bear CONTRACTOR's certification that CONTRACTOR has reviewed, checked, and approved the SHOP DRAWINGS and that they are in conformance with the requirements of the CONTRACT DOCUMENTS.

- .07 **Additional Instructions and Detail DRAWINGS Issued by ENGINEER or OWNER.** CONTRACTOR may be furnished additional instructions and detail DRAWINGS, by ENGINEER and/or OWNER as necessary to carry out the WORK required by the CONTRACT DOCUMENTS.

The additional DRAWINGS and instruction thus supplied will become a part of the CONTRACT DOCUMENTS. CONTRACTOR shall carry out the WORK in accordance with the additional detail DRAWINGS and instructions.

04 AUTHORITY OF THE MANAGER

The Manager of CCBWQA is charged with duties of administering the official policies and directives of its Board of Directors. In this capacity, the MANAGER is vested with full authority to contract for and administer the construction of certain public improvements on behalf of CCBWQA. The MANAGER shall decide any differences between ENGINEER and CONTRACTOR.

When CCBWQA is jointly involved with another public agency on a PROJECT, it will be stipulated in the SUPPLEMENTARY CONDITIONS as to which agency will administer the PROJECT and the administrative extent.

The SUPPLEMENTARY CONDITIONS may designate an onsite MANAGER's representative who has been delegated the duties of the MANAGER to administer the construction of the PROJECT. In the absence of such delegation, the MANAGER shall administer the construction of the PROJECT.

05 ENGINEER

- .01 **General.** If OWNER retains an ENGINEER to design a facility and to describe that design by the preparation of DRAWINGS and SPECIFICATIONS, the SUPPLEMENTARY CONDITIONS will name that ENGINEER. ENGINEER shall participate in CONTRACT administration. This participation will include the interpretation of DRAWINGS and SPECIFICATIONS and approval of supplemental DRAWINGS and SPECIFICATIONS. ENGINEER shall participate in the preparation and approval of progress and final payment estimates and shall participate in inspections while the WORK is in progress and especially prior to final acceptance by OWNER.
- .02 **Authority of ENGINEER.** ENGINEER shall act as OWNER's representative during the construction period for only the limited matters described in the CONTRACT DOCUMENTS. ENGINEER shall decide questions that may arise as to quality and acceptability of materials furnished and WORK performed. ENGINEER shall interpret the intent of the CONTRACT DOCUMENTS in a fair and unbiased manner. ENGINEER shall make visits to the SITE and to determine if the WORK is proceeding generally in accordance with the CONTRACT DOCUMENTS.

CONTRACTOR shall be held strictly to the intent of the CONTRACT DOCUMENTS in regard to the quality of materials, workmanship, and execution of the WORK. Inspections may be made at the factory or fabrication plant of the source of material supply.

ENGINEER shall not be responsible for the construction means, methods, controls, techniques, sequences, procedures, or construction safety.

ENGINEER shall promptly make decisions relative to interpretation of the CONTRACT DOCUMENTS when requests are directed to ENGINEER in writing.

- .03 **Approval by ENGINEER.** Approval by ENGINEER of any drawing, specification, material, equipment, product or process will only be construed to mean approval in accordance with the overall design concept and the intent of the DRAWINGS and SPECIFICATIONS and will not relieve CONTRACTOR of the responsibility to ensure that all dimensions, grades, and the quality and compatibility of any material, equipment, process or product furnished are suitable for the purpose intended and are in compliance with all requirements of the CONTRACT DOCUMENTS.

06 CONSTRUCTION MANAGER

CCBWQA may choose to contract with a Construction Manager, as identified in the SUPPLEMENTARY CONDITIONS as the entity retained by OWNER to supplement ENGINEER's design and construction administration capabilities. If a Construction Manager is employed, the degree of participation in the administration of the CONTRACT will be specified in the SUPPLEMENTARY CONDITIONS.

07 LAND AND RIGHTS-OF-WAY

Prior to issuance of NOTICE TO PROCEED, OWNER shall obtain all land and rights-of-way necessary for carrying out and for the completion of the WORK to be performed pursuant to the CONTRACT DOCUMENTS, unless otherwise stated in the SUPPLEMENTARY CONDITIONS.

OWNER shall provide to CONTRACTOR information that delineates and describes the lands owned and rights-of-way acquired.

CONTRACTOR will provide at CONTRACTOR's own expense and without liability to OWNER or ENGINEER, any additional land and access hereto that CONTRACTOR may desire for temporary construction facilities, or for storage of materials. Copies of any separate agreements between CONTRACTOR, municipal agencies, cities and private landowners, will be furnished to OWNER together with subsequent releases.

08 SUGGESTIONS TO CONTRACTOR

Any plan of action, method of WORK or construction procedure suggested to CONTRACTOR by ENGINEER or OWNER or any of their representatives, whether orally or in writing, if adopted or followed by CONTRACTOR in whole or in part, will be at the sole risk and responsibility of CONTRACTOR.

09 GENERAL SERVICE AND FACILITIES REQUIREMENTS

- .01 **General.** Except as may be modified otherwise in the SUPPLEMENTARY CONDITIONS, CONTRACTOR shall provide and pay for all PERMITS and licenses, materials, labor, tools, equipment, water, sanitary, facilities, heat, light, power, transportation, supervision, field office facilities, telephone and other related services and facilities of whatsoever nature necessary to execute and complete the WORK in accordance with the CONTRACT DOCUMENTS.

.02 **Regulations.** CONTRACTOR shall give all notices and comply with all laws, ordinances, codes, rules, and regulations bearing on the conduct of the WORK. If CONTRACTOR observes that any DRAWINGS or SPECIFICATIONS are at variance therewith, or if CONTRACTOR performs any WORK under any circumstances where CONTRACTOR knows or should have known it to be contrary to any such laws, ordinances, codes, rules, or regulations, and without giving such notice to ENGINEER and/or OWNER, CONTRACTOR shall bear all costs arising there from. However, it will not be CONTRACTOR's primary responsibility to make certain that the DRAWINGS and SPECIFICATIONS are in accordance with such laws, ordinances, rules, and regulations.

.03 **Public Relations.** CONTRACTOR shall carry on the WORK in such manner as to minimize inconvenience to the public, particularly occupants of property adjacent to the PROJECT, as is consistent with good workmanship.

CONTRACTOR shall notify all affected persons at least forty-eight (48) hours before starting WORK, which may block entrances, or otherwise cause undue difficulty to occupants of property affected and shall restore such entrances to a usable condition as soon as possible. CONTRACTOR, SUBCONTRACTOR(s) and employees shall be courteous at all times to the public during the performance of the WORK.

.04 **PERMITS and Licenses.** All PERMITS, licenses, and approvals required in the prosecution of the WORK will be obtained and paid for by CONTRACTOR. CONTRACTOR shall also be responsible for the payment of any applicable taxes, tap fees, development fees, or other charges and fees imposed by utility companies or governmental agencies responsible for imposing such fees or taxes and/or providing such services to the facility or facilities to be constructed hereunder. If CONTRACTOR fails to obtain all PERMITS, licenses, and approvals required in the prosecution of the WORK, CONTRACTOR shall defend, indemnify and hold harmless OWNER and any and all PROJECT partners of OWNER.

.05 **Temporary Construction and Security Facilities.** CONTRACTOR shall provide all materials, tools, equipment, and labor necessary for dewatering, water control, temporary pumping facilities, bypassing of sewage, traffic control, pedestrian and vehicular barricades, detours, signing, temporary fencing, and all other related temporary construction and security facilities necessary to perform the WORK in accordance with CONTRACT DOCUMENTS.

.06 **Supervision by CONTRACTOR.** CONTRACTOR shall supervise and direct the WORK and manage any SUBCONTRACTOR's work, if any. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but CONTRACTOR shall not be solely responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence, or procedure of construction, which is indicated in and required by the CONTRACT DOCUMENTS. CONTRACTOR shall employ and maintain, on the PROJECT WORK, a qualified supervisor or superintendent who will have been designated in writing to ENGINEER by CONTRACTOR as CONTRACTOR's representative at the SITE. The supervisor will have full authority to act on behalf of CONTRACTOR and all communications given to the supervisor will be as binding as if given to CONTRACTOR. The supervisor will be present on the SITE at all times as required to perform adequate supervision and coordination of the WORK and shall be able to communicate in fluent English with the ENGINEER and all other OWNER's representatives. CONTRACTOR's supervisor or superintendent will be able to execute any change in WORK documents that affect either changes in the WORK or CONTRACT costs.

.07 **Construction Staffing.** CONTRACTOR shall assign an adequate number of persons to each task so that an optimum rate of progress is maintained. The number of assigned personnel is especially critical

whenever an operation is begun which requires that the activity be pursued at a rate needed to avoid the manufacture of an inferior product.

- .08 **Construction Machines.** CONTRACTOR shall have available for use when needed all necessary construction machinery and equipment that is safe, in good working condition, and adequate for the task and in numbers needed to maintain an optimum rate of progress.
- .09 **Costs.** Except as may be otherwise provided for in the BID, no separate payment will be made for any of the items or requirements set forth under the GENERAL CONDITIONS and all costs incurred will be considered to be included in the BID.
- .10 **Asphalt.** CONTRACTOR shall be responsible for repairing or replacing all pavement disturbed or removed during construction of the PROJECT. Contractor shall patch or replace asphalt pavement utilizing asphalt pavement and asphalt patching details and specifications per the details and specifications of the local jurisdiction in which the PROJECT resides.
- .11 **Striping:** CONTRACTOR shall be responsible for repainting all pavement striping and marking disturbed or removed during construction of the PROJECT. CONTRACTOR shall replace marking paint and striping per the details and specifications of the local jurisdiction in which the PROJECT resides.

10 SAFETY OF PUBLIC AND WORKERS

CONTRACTOR shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the WORK. CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to all employees on the WORK and other persons who may be affected thereby, all the WORK and all materials or equipment to be incorporated therein, whether in storage on or off the SITE, and other property at the SITE or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

CONTRACTOR shall comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction. CONTRACTOR shall erect and maintain, as required by the conditions and progress of the WORK, all necessary safeguards for safety and protection of persons and property. CONTRACTOR shall notify owners of adjacent utilities when prosecution of the WORK may affect them. CONTRACTOR shall remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by CONTRACTOR, any SUBCONTRACTOR or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, except damage or loss to the extent attributable to the fault of the CONTRACT DOCUMENTS or to the extent attributable to acts or omissions of OWNER or ENGINEER or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR.

In emergencies affecting the safety of persons or the WORK or property at the SITE or adjacent thereto, CONTRACTOR without special instruction or authorization from ENGINEER or OWNER, shall and is obligated to act to prevent threatened damage, injury or loss. CONTRACTOR shall give ENGINEER or OWNER prompt WRITTEN NOTICE of any significant changes in the WORK or deviations from the CONTRACT DOCUMENTS caused thereby. If OWNER or its representatives notify CONTRACTOR, in writing, of possible threatened damage, injury, or loss, CONTRACTOR shall take immediate measures to prevent a possible damage, injury, or loss, to OWNER's satisfaction. Any additional compensation claimed by CONTRACTOR on account of emergency WORK will be provided in DIVISION 01: GENERAL REQUIREMENTS, SECTION 01 26 00, CONTRACT MODIFICATION PROCEDURES.

11 SUBCONTRACTING

CONTRACTOR may utilize the services of specialty SUBCONTRACTOR(s) on those portions of the WORK which, under normal contracting practices, are performed by specialty SUBCONTRACTOR(s). Those SUBCONTRACTOR(s) must be identified on the BID and if not identified in the BID, approved in writing by OWNER prior to commencement of services by the SUBCONTRACTOR. CONTRACTOR shall not award WORK to SUBCONTRACTOR(s), in excess of fifty percent (50%) of the CONTRACT PRICE, without prior written approval of OWNER.

CONTRACTOR shall be fully responsible to OWNER for the acts and omissions of SUBCONTRACTOR(s), and of persons either directly or indirectly employed by them, as CONTRACTOR is for the acts and omissions of the persons directly employed by CONTRACTOR.

CONTRACTOR shall cause appropriate provisions to be inserted in all subcontracts relative to the WORK to bind SUBCONTRACTOR(s) to CONTRACTOR by the terms of the CONTRACT DOCUMENTS insofar as applicable to the WORK of SUBCONTRACTOR(s) and to give CONTRACTOR the same power as regards terminating any subcontract that OWNER may exercise over CONTRACTOR under any provision of the CONTRACT DOCUMENTS.

Nothing contained in this CONTRACT will create any contractual relation between any SUBCONTRACTOR and OWNER.

12 PROGRESS PAYMENTS TO CONTRACTOR

On the twenty fifth (25th) day of each month that the progress payment falls due (but not more often than once a month), CONTRACTOR shall submit to ENGINEER a partial payment estimate filled out and signed by CONTRACTOR covering the WORK performed during the period covered by the partial payment estimate and supported by such data as ENGINEER may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the WORK but delivered and suitably stored at or near the SITE, the partial payment estimate will also be accompanied by such supporting data, satisfactory to OWNER, as will establish OWNER's title to the material and equipment and protect OWNER interest therein. ENGINEER shall either indicate in writing the approval of payment and present the partial payment estimate to OWNER or return the partial payment estimate to CONTRACTOR indicating in writing the reasons for refusing to approve payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the partial payment estimate. In any case, the partial payment will be submitted to OWNER by the first (1st) day of the following month. OWNER shall, within thirty (30) days of submittal of an approved partial payment estimate, pay CONTRACTOR a progress payment on the basis of the approved partial payment estimate, if the CONTRACTOR is satisfactorily performing the WORK.

OWNER shall retain monies from progress payments until final payment is due, under the following terms and conditions:

- .01 Retention of five percent (5%) of the calculated value of the satisfactorily WORK.
- .02 Beginning with the second partial payment estimate, each partial payment estimate thereafter shall include an affidavit of CONTRACTOR stating that all previous progress payments received on account of the WORK have been applied on account to discharge CONTRACTOR's obligations associated with prior partial payment estimates. If requested, CONTRACTOR shall forward to OWNER statements from all SUPPLIER(s) and SUBCONTRACTOR(s) affirming that payments owed them by CONTRACTOR, as of the date of the statement, had been received.

.03 CONTRACTOR may substitute acceptable securities, as defined below for the whole or any portion of the retainage. Acceptable securities are limited to Federal securities, Colorado state and political general obligations bonds, certificates of deposit insured by the FDIC or the FSLIC, or similar negotiable securities.

13 ADDITIONAL WITHHOLDING OF PROGRESS PAYMENTS

OWNER may, at its sole discretion, withhold additional sums from progress payment monies due CONTRACTOR. Such additional withholding can be made for but is not limited to any of the following described reasons; and whenever the reasons for such withholding no longer exist, OWNER shall make payment of the sums withheld for these reasons.

- .01 **Failure to Repair Defective Work.** If the estimated cost of repairing or replacing defective WORK appears to exceed the sums of money normally withheld, OWNER may retain as many additional sums as it believes necessary to ensure that the defective WORK is repaired or replaced.
- .02 **Claims Against CONTRACTOR.** If claims in connection with the WORK have been filed against CONTRACTOR and the CONTRACTOR has not resolved such claim, OWNER shall withhold sufficient sums in addition to applicable retainage to satisfy such claims in accordance with applicable law.
- .03 **Failure to Obtain PERMITS and Licenses.** Should CONTRACTOR fail to satisfy all requirements for licensing and/or fail to satisfy all requirements for PERMITS, OWNER may withhold sufficient funds to fully compensate OWNER for any damages, fines, penalties, or assessments that might be levied against OWNER or its PROJECT partners as a result of such CONTRACTOR failures.
- .04 **Failure to Comply with Applicable Laws.** If CONTRACTOR has failed to comply with all applicable laws, ordinances, rules, and regulations, OWNER may withhold sufficient funds to fully compensate OWNER for any damages, fines, penalties, or assessments that might be levied against OWNER or its PROJECT partners as a result of such CONTRACTOR failures.
- .05 **Failure to Satisfactorily Replace and/or Repair Property Destroyed or Damaged During the Progress of the WORK.**
- .06 **Retesting or Resurvey** as described under DIVISION 01: GENERAL REQUIREMENTS, SECTION 00 73 96, INSPECTION MATERIALS AND TESTING, or SECTION 01 71 23, FIELD ENGINEERING AND SURVEYING.
- .07 **Liquidated Damages accruing under Article 21.**

14 PARTIAL ACCEPTANCE OF WORK

OWNER, at OWNER's sole discretion, may place into service segments or a part of the WORK before the entire WORK has been completed. Because of the difficulty of determining when CONTRACTOR's responsibility for the various parts of the WORK might cease when that WORK is partly used by OWNER, CONTRACTOR agrees that, except as qualified below, CONTRACTOR's responsibility for the entire WORK will not diminish until OWNER accepts the entire and completed WORK.

If such early use or occupancy by OWNER exposes defects, the components or elements of the WORK with the defects will be replaced or repaired by CONTRACTOR. Other damages or wear resulting from OWNER's use will be at OWNER's expense.

When OWNER partially occupies a facility, it shall share with CONTRACTOR the costs of energy to heat and light the facility and the costs of water and sanitary sewer service. OWNER's share of these costs will be determined by OWNER on an equitable basis, and CONTRACTOR shall be reimbursed by a CHANGE ORDER.

15 INSURANCE

- .01 **General.** CONTRACTOR shall not commence or continue to perform any WORK unless CONTRACTOR, at CONTRACTOR's own expense, has in full force and effect all required insurance. CONTRACTOR shall not permit any SUBCONTRACTOR to perform WORK on this PROJECT unless such SUBCONTRACTOR has complied with the Workers' Compensation Insurance requirements.

The types of insurance CONTRACTOR shall obtain and maintain are Workers' Compensation Insurance, Employer's Liability Insurance and Liability Insurance. CONTRACTOR shall execute the LETTER OF DAMAGE GUARANTEE provided in SECTION 00 62 13 of the CONTRACT.

Workers' Compensation Insurance and Liability Insurance will be maintained in effect for the full guarantee period.

Insurers must be authorized to do business and have an agent for service of process in Colorado. Excepting only the State Compensation Insurance Fund in reference to Workers' Compensation Insurance, insurers must have an "A" policyholder's rating and a financial rating of at least Class XI in accordance with the most current Best's Rating.

As evidence of specified insurance coverage, CONTRACTOR shall provide INSURANCE CERTIFICATES and endorsements as a part of the CONTRACT DOCUMENTS.

- .02 **Workers' Compensation Insurance and Employer's Liability Insurance.** Upon acceptance of the AGREEMENT, CONTRACTOR shall provide INSURANCE CERTIFICATES certifying that CONTRACTOR has obtained full Workers' Compensation Insurance, and Employer's Liability Insurance coverage for no less than the statutory limits for all persons whom CONTRACTOR employs or may employ in carrying out the WORK under the CONTRACT. At the same time, CONTRACTOR shall provide the insurance endorsements as part of the CONTRACT DOCUMENTS. This insurance will be in strict accordance with the requirements of the most current and applicable state Workers' Compensation Insurance laws.

- .03 **Liability Insurance.** Upon execution of the AGREEMENT, CONTRACTOR shall provide INSURANCE CERTIFICATES showing that CONTRACTOR has Liability Insurance coverage in limits not less than the amounts set forth in Articles 15.06 through 15.08. At the same time, CONTRACTOR shall provide the insurance endorsement(s) as a part of the CONTRACT DOCUMENTS. These *Certificates of Insurance* shall delete the printed notice of cancellation provision and substitute the following: "The coverage afforded under the above described policies shall not be cancelled or allowed to expire until at least thirty (30) days prior WRITTEN NOTICE has been given to the Owner."

Included in such insurance will be contractual coverage sufficiently broad to insure the matters set forth in Article 18 INDEMNIFICATION.

Included in such insurance will be a "Cross Liability" or "Severability of Interest" clause.

The Liability Insurance coverage will include each of the following types of insurance:

- A. General Liability
 - 1. Comprehensive Form
 - 2. Premises-Operations
 - 3. Explosion and Collapse Hazard
 - 4. Underground Hazard
 - 5. Products/Completed Operations Hazards
 - 6. Contractual Insurance
 - 7. Broad Form Property Damages, including Completed Operations
 - 8. Independent Contractors
 - 9. Personal Injury

- B. Automobile Liability
 - 1. Comprehensive Form, including Loading and Unloading
 - 2. Owned
 - 3. Hired
 - 4. Non-owned

The Liability Insurance will include as additional insured: OWNER, ENGINEER, OWNER's Representative, and each of their directors, officers, agents, and employees and any other entities specified in the SUPPLEMENTARY CONDITIONS. The insurance afforded to these additional insured will be primary insurance. If the additional insured have, other insurance that might be applicable to any loss, the amount of the insurance provided under this article or liability insurance will not be reduced or prorated by the existence of such other insurance.

- .04 **Letter of Damage Guarantee.** Upon execution of the AGREEMENT, CONTRACTOR shall execute and provide the LETTER OF DAMAGE GUARANTEE provided in the CONTRACT (SECTION 00 62 13) indicating the CONTRACTOR will, at the CONTRACTOR's expense, replace any WORK which is damaged in any way by any cause, including but not limited to damage due to floods. This includes the entire PROJECT that is the subject of the CONTRACT and includes completed WORK and WORK in progress.

- .05 **CONTRACTOR's Liability not Limited by Insurance.** Nothing contained in these insurance requirements is to be construed as limiting the liability of CONTRACTOR or CONTRACTOR's sureties.

- .06 **General Liability Insurance.** Bodily injury coverage will be for not less than \$2,000,000 for each occurrence \$2,000,000 aggregate.

Property damages coverage will be for not less than \$1,000,000 each occurrence and \$2,000,000 aggregate.

Personal injury coverage will be for not less than \$2,000,000 aggregate.

or

Bodily injury, personal injury, and property damage coverage will be in a combined single limit of not less than \$2,000,000 each occurrence and \$3,000,000 aggregate.

- .07 **Automobile Liability.** Bodily injury coverage will be for not less than \$1,000,000 for each person and not less than \$2,000,000 for each accident, per each occurrence.

Property damage coverage will be for not less than \$1,000,000 for each occurrence.

or

Bodily injury and property damage coverage will be in a combined single limit of not less than \$2,000,000 for each occurrence and \$3,000,000 aggregate.

- .08 **Employer's Liability Insurance.** Bodily injury coverage by accident will be for not less than statutory limits for each employee and statutory limits for each accident.

Bodily Injury coverage by disease will be for not less than statutory limits for each employee and statutory limits for each aggregate disease.

- .09 **Loss of Insurance.** WRITTEN NOTICE by CONTRACTOR's insurance company(s) of failure to renew or cancellation of CONTRACTOR's insurance (Articles 15.02, 15.04, 15.06, 15.07 and 15.08) will be deemed as a notice and request by CONTRACTOR of suspension of all WORK in accordance with the SUPPLEMENTARY CONDITIONS, Article 20, Suspension of Work Delays: . All WORK relative to these documents will cease immediately until such time as adequate insurance is obtained. Loss of insurance will not otherwise relieve CONTRACTOR of CONTRACTOR's responsibilities under this AGREEMENT.

16 CONTRACT SECURITY (PAYMENT AND PERFORMANCE BONDS)

CONTRACTOR shall within ten (10) days after the receipt of the NOTICE OF AWARD furnish CCBWQA with PAYMENT AND PERFORMANCE BOND(s) in penal sums equal to the amount of the CONTRACT PRICE, conditioned upon the performance by CONTRACTOR of all undertakings, covenants, terms, conditions and agreements of the CONTRACT DOCUMENTS, and upon the prompt payment by CONTRACTOR to all persons supplying labor and materials in the prosecution of the WORK provided by the CONTRACT DOCUMENTS. Such BOND(s) will be executed by CONTRACTOR and a corporate bonding company licensed to transact such business in the State of Colorado in which the WORK is to be performed and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasure Department Circular Number 570. Further, said bonding company will be subject to the approval of OWNER, which approval will not be unreasonably withheld. The expense of these BOND(s) will be borne by CONTRACTOR. If at any time a surety on any such BOND is declared bankrupt or loses its right to do business in the state in which the WORK is to be performed or is removed from the list of "Surety Companies Acceptable on Federal Bonds", CONTRACTOR shall within ten (10) days thereafter substitute an acceptable BOND(s) in such form and sum and signed by such other surety or sureties as may be satisfactory to OWNER. WRITTEN NOTICE by bonding company of failure to renew or cancellation of CONTRACTOR's BOND(s) will be deemed a notice and request by CONTRACTOR of suspension of all WORK in accordance with the SUPPLEMENTARY CONDITIONS, Article 20, Suspension of Work Delays. All WORK relative to the CONTRACT DOCUMENTS will cease until such time as adequate BOND(s) are obtained. The premiums on such BOND(s) shall be paid by CONTRACTOR. No further payments will be deemed due nor will be made until the new surety or sureties have furnished an acceptable BOND(s) to OWNER. Loss of bonding and cessation of WORK until adequate bonding is obtained will not otherwise relieve CONTRACTOR of CONTRACTOR's responsibilities under the AGREEMENT.

17 ASSIGNMENTS

Neither CONTRACTOR nor OWNER shall sell, transfer, assign or otherwise dispose of the CONTRACT or any portion thereof, or of its right, title or interest therein, or its obligations thereunder, without written consent of the other party.

18 INDEMNIFICATION

To the fullest extent permitted by law, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, OWNER's Representative, and each of their directors, officers, agents, and employees from and against all claims, damages, losses, expenses, and other costs, including costs of defense and attorneys' fees, arising out of or resulting from or in connection with the performance of the WORK, both on and off the JOB SITE, provided that any of the foregoing: (1) is attributable to personal injury, bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the WORK itself), including the loss of use resulting therefrom, and (2) is caused in whole or in part by any act or omission of CONTRACTOR, any SUBCONTRACTOR, any SUPPLIER, anyone directly or indirectly employed by any of them or anyone for whose acts or omissions any of them may be liable, regardless of whether or not caused in part by any act or omission, (active, passive or comparative negligence included, excepting the negligence of OWNER), or a party indemnified hereunder.

In any and all claims against the indemnified parties by any employee of CONTRACTOR, any SUBCONTRACTOR, any SUPPLIER, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this section will not be limited in any way or any limitation on the amount or type of damages, compensation, or benefits payable, by or for CONTRACTOR; or any SUBCONTRACTOR, or any SUPPLIER, or other persons under workers' compensation acts, disability benefit acts, or other employee acts.

The obligations of CONTRACTOR under the first and fourth paragraphs in this section will not extend to the liability of ENGINEER, OWNER's Representative, and each of their directors, officers, employees, and agents, arising out of or resulting from or in connection with the preparation or approval of maps, DRAWINGS, opinions, reports, surveys, designs or SPECIFICATIONS, providing that the foregoing was the sole and exclusive cause of the loss, damages, or injury.

CONTRACTOR shall also indemnify and hold harmless OWNER, ENGINEER, OWNER's Representative, and each of their directors, officers, employees, and agents from and against all losses, expenses, damages including damages in the WORK itself, attorneys' fees, and other costs, including all costs of defense, which any of them may incur with respect to the failure, neglect, or refusal of CONTRACTOR to faithfully perform the WORK and all of CONTRACTOR's obligation under the CONTRACT. Such costs, expenses, and damages will include all cost, including attorneys' fees, incurred by the indemnified parties in any lawsuit in which they are a party.

19 COMPLIANCE WITH ENVIRONMENTAL PROTECTION, ENERGY CONSERVATION, AND HEALTH/SAFETY RULES AND REGULATIONS

CONTRACTOR shall at all times comply with all environmental protection, energy conservation, occupational health and safety and all other similar rules and regulations of any city, county, state or United States agency which may have jurisdiction. Failure to comply may be cause for suspension of WORK or termination of CONTRACT.

CONTRACTOR is responsible for meeting all Occupational Safety and Health Administration (OSHA) requirements including having competent personnel onsite responsible for determining and implementing appropriate safety measures for trenching and/or excavations.

CONTRACTOR shall provide fueling and equipment maintenance areas that are no less than one hundred (100) feet from the water's edge of any body of water. Further, CONTRACTOR shall keep on hand absorbent materials and barriers that can be dispatched rapidly during a fueling or leakage incident.

20 TAXES and FEES

All sales of construction and building materials to contractors and subcontractors for use in the building, erection, alteration or repair of pollution abatement projects, structures and other public works owned and used by OWNER are exempt from State and RTD sales and use taxes.

Fees imposed by applicable entities with jurisdiction over the OWNER's boundary shall be paid and may be reimbursed by OWNER, with no mark-up by the CONTRACTOR or SUBCONTRACTOR.

Prior to issuance of "NOTICE TO PROCEED" and start of WORK, CONTRACTOR shall deliver to OWNER one (1) copy of the completed and executed "Application for Exemption Certificate" with the approval of the Department of Revenue, State of Colorado, affixed. This certificate will serve as an indication to OWNER that CONTRACTOR has acquired the necessary exemption. CONTRACTOR also agrees to make the same requirement, as contained above, of the SUBCONTRACTOR(s) on this PROJECT.

21 LIQUIDATED DAMAGES

Time is of the essence in the CONTRACT. In the event CONTRACTOR fails in the performance of the WORK or any part thereof specified and required to be performed within the time limit or limits set forth in the CONTRACT, after due allowance for any extension, or extensions of time made in accordance with provisions herein set forth, CONTRACTOR shall be liable to OWNER for liquidated damages, and not as a penalty, in the amount stipulated therefore in the CONTRACT Form or in the other CONTRACT DOCUMENTS for each and every calendar day that CONTRACTOR shall be in default of completion as established by said time limit or limits. OWNER shall have the right to deduct said liquidated damages from any amount due, or that may become due CONTRACTOR, or to collect such liquidated damages from CONTRACTOR or CONTRACTOR's surety.

Liquidated damages in the amount stipulated do not include any sums of money to reimburse OWNER for extra costs, which it may become obligated to pay on other contracts, which were delayed or extended because of CONTRACTOR's failure to complete the WORK within the CONTRACT TIME. Should OWNER incur additional costs because of delays or extensions to other contractors resulting from CONTRACTOR's failure of timely performance, OWNER shall assess these extra costs against CONTRACTOR and these assessments will be in addition to the stipulated liquidated damages.

22 TERMINATION OF CONTRACT BY OWNER

OWNER may serve WRITTEN NOTICE upon CONTRACTOR and CONTRACTOR's surety of OWNER's intent to terminate the CONTRACT if:

- the WORK to be performed under the CONTRACT is assigned by CONTRACTOR without written permission of OWNER;
- CONTRACTOR shall be adjudged bankrupt;
- a general assignment of CONTRACTOR's assets are to be made for the benefit of CONTRACTOR's creditors;
- a receiver should be appointed for CONTRACTOR of any of CONTRACTOR's property;
- at any time ENGINEER certifies, in writing, to OWNER that the performance of the WORK under the CONTRACT is being unnecessarily delayed or that CONTRACTOR is willfully violating any of the conditions, provisions, or covenants of the CONTRACT DOCUMENTS, or that CONTRACTOR is executing the same in bad faith or otherwise not in accordance with terms of the CONTRACT;

- the WORK or any part thereof be not fully completed within the time or times named for its completion, or submitted under DIVISION 01: GENERAL REQUIREMENTS, SECTION 01 32 00, CONSTRUCTION PROGRESS DOCUMENTATION, and SECTION 01 32 13, SCHEDULING OF WORK or within the time to which such completion date or dates may be extended;
- CONTRACTOR files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or similar laws;
- CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment;
- CONTRACTOR fails to make prompt payments to SUBCONTRACTOR(s) or for labor, materials or equipment;
- CONTRACTOR disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction;
- CONTRACTOR disregards the authority of ENGINEER; or other just causes exist;

This notice will give CONTRACTOR ten (10) days to remove the causes for termination, or commence to remove the causes if such cannot be fully accomplished within ten (10) days, and if CONTRACTOR does not, prior to the effective date of termination set forth in such notice, take or commence to take such measures as will, in the judgment of OWNER, ensure the satisfactory performance of the WORK, OWNER may declare the CONTRACT terminated on the effective date specified in the notice or on any other date thereafter. In the event of such termination, OWNER shall notify CONTRACTOR and CONTRACTOR's surety to discontinue all WORK under the CONTRACT and CONTRACTOR shall immediately respect such notice, stop WORK, and cease to have any right to the possession of the WORK SITE and shall forfeit the CONTRACT. Upon such termination, OWNER may take possession of all materials, equipment, tools, and plant as may be on the SITE of the WORK and required or necessary for completion of the WORK and take over the WORK and prosecute the same to completion by contract or otherwise for the account and at the expense of CONTRACTOR. CONTRACTOR and CONTRACTOR's surety shall be liable to OWNER for any and all costs and expenses in excess of the CONTRACT PRICE or PRICES sustained by OWNER by reason of such prosecution and completion, which costs will include all administrative costs.

In the event that OWNER is prohibited from completing the PROJECT because of conditions or circumstance beyond the control of either OWNER or CONTRACTOR such as, but not limited to, an Executive Order of the President of the United States of America with respect to the prosecution of war or in the interest of national defense or an order of any state or federal court permanently prohibiting the construction of the PROJECT, OWNER may terminate the CONTRACT or portion thereof by giving at least ten (10) day's WRITTEN NOTICE to CONTRACTOR. When the CONTRACT is terminated before completion of all items of WORK in the CONTRACT, payment will be made for the actual number of units or items of WORK satisfactorily completed at the CONTRACT PRICE.

On items or units that are only partially completed, payment will be made in proportion to which the satisfactorily completed WORK bears to the total BID price. Acceptable materials, obtained or ordered by CONTRACTOR for the PROJECT but not yet incorporated in the WORK at the time of such termination, will, at the option of OWNER be purchased from CONTRACTOR at actual cost as shown by receipts and actual cost records at the point of delivery. The intent of this provision is to provide a method of equitable settlement with CONTRACTOR in the event of termination of the CONTRACT because of conditions or circumstances beyond the control of either party. Payment by OWNER for loss of anticipated profits will not be the final settlement. It is also intended that a settlement for the WORK performed will not relieve CONTRACTOR or CONTRACTOR's surety from

responsibility for defective WORK and/or materials on the completed portion of the WORK nor for labor and materials as guaranteed by the surety BOND(s).

OWNER or OWNER's authorized representative shall be given full access to all books, correspondence, and papers of CONTRACTOR relating to this CONTRACT in order to determine the amounts to be paid on account of the termination of the CONTRACT.

23 NO WAIVER OF RIGHTS

No assent by OWNER, expressed or implied to any breach of any one (1) or more of the covenants, provisions, and agreements of the CONTRACT DOCUMENTS will be deemed or taken to be a waiver of any succeeding breach.

24 NO DISCRIMINATION IN EMPLOYMENT

CONTRACTOR agrees not to refuse to hire, discharge, promote or demote, or to discriminate in matters of compensation against any person otherwise qualified on the basis of race, color, ancestry, creed, religion, national origin, gender, age, military status, sexual orientation, marital status, or physical or mental disability and further agrees to insert the foregoing provision in all subcontracts hereunder.

25 WORKERS WITHOUT AUTHORIZATION.

CONTRACTOR certifies that CONTRACTOR shall comply with the provisions of Section 8-17.5-101 et seq., C.R.S. CONTRACTOR shall not knowingly employ or contract with a worker without authorization to perform work under this Agreement or enter into an agreement with a subcontractor that knowingly employs or contracts with a worker without authorization. CONTRACTOR represents, warrants and agrees that it (i) has confirmed the employment eligibility of all employees who are newly hired for employment to perform work under this Agreement through participation in either the E-Verify Program or the Department Program described in Section 8-17.5-101, C.R.S. CONTRACTOR shall not use either the E-Verify Program or the Department Program procedures to undertake pre-employment screening of job applicants while the public contract for services is being performed. If CONTRACTOR obtains actual knowledge that a subcontractor performing work under this Contract knowingly employs or contracts with a worker without authorization, CONTRACTOR shall: (i) notify the subcontractor and OWNER within three (3) days that CONTRACTOR has actual knowledge that the subcontractor is employing or contracting with a worker without authorization; and (ii) terminate the subcontract with the subcontractor if within three (3) days of receiving such notice, the subcontractor does not stop employing or contracting with the worker without authorization, unless the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with a worker without authorization. CONTRACTOR shall comply with all reasonable requests made in the course of an investigation by the Colorado Department of Labor and Employment. If CONTRACTOR fails to comply with any requirement of Section 8-17.5-102(2), C.R.S., OWNER may terminate this Contract for breach, and CONTRACTOR shall be liable for actual and consequential damages to OWNER. If CONTRACTOR participates in the Department Program, CONTRACTOR shall provide the affirmation required under Section 8-17.5-102(5)(c)(II), C.R.S., to OWNER.

26 HAZARDOUS ENVIRONMENTAL CONDITION ON SITE

CONTRACTOR will not be responsible for any Hazardous Environmental Condition encountered at the Site that was not identified in the Contract Documents to be within the scope of the Work. CONTRACTOR shall be responsible for materials creating a Hazardous Environmental Condition created by any materials brought to the Site by CONTRACTOR, Subcontractors, Suppliers or anyone else for whom CONTRACTOR is responsible.

If CONTRACTOR encounters a Hazardous Environmental Condition, CONTRACTOR shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Construction in connection with such condition and in any area affected thereby except in an emergency; and (iii) notify Owner (and thereafter confirm such notice in writing). Owner shall promptly determine the necessity of retaining a qualified expert to evaluate such condition or take corrective action, if any.

CONTRACTOR shall not be required to resume Construction in connection with such Hazardous Environmental Condition or in any such affected area until after Owner has obtained any required permits related thereto and delivered to CONTRACTOR WRITTEN NOTICE (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Construction, or (ii) specifying any special conditions under which such Construction may be resumed safely. If Owner and CONTRACTOR cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in Contract Price or Contract Times as a result of such Construction stoppage or such special conditions under which Construction is agreed to be resumed by CONTRACTOR, either party may make a Claim.

If after receipt of such special WRITTEN NOTICE CONTRACTOR does not agree to resume Construction based on a reasonable belief it is unsafe, or does not agree to resume such Construction under such special conditions, then Owner may order such portion of the Work that is related to such Hazardous Environmental Condition to be deleted from the Work. If Owner and CONTRACTOR cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 22.

To the fullest extent permitted by Laws or Regulations, CONTRACTOR shall indemnify and hold harmless Owner, Owner's Consultant and the officers, directors, partners, employees, agents, other consultants and subcontractors of each and any of them from and against all claims, costs, losses and damages (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) arising out of or resulting from such Hazardous Environmental Condition created by CONTRACTOR or anyone for whom CONTRACTOR is responsible. Nothing in this Paragraph shall obligate CONTRACTOR to indemnify any individual or entity from and against the consequences of that individual's or entities own negligence.

27 DIFFERING SUBSURFACE OR PHYSICAL CONDITIONS

Notice: If CONTRACTOR believes that any subsurface or physical condition that is uncovered or revealed either:

- is of such a nature as to require a change in the CONTRACT; or
- differs materially from that shown or indicated in the CONTRACT; or
- is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any WORK in connection therewith except in an emergency, notify OWNER and ENGINEER in writing about such condition. CONTRACTOR shall not further disturb such condition or perform any WORK in connection therewith (except as previously mentioned) until receipt of written order to do so.

ENGINEER's Review: After receipt of WRITTEN NOTICE, ENGINEER will promptly review the pertinent condition, determine the necessity of OWNER's obtaining additional exploration or tests with respect thereto, and advise OWNER in writing of ENGINEER's findings and conclusions.

Possible Price and Times Adjustments:

The CONTRACT Price or the CONTRACT Times, or both, subject to approval of a Change Order in accordance with the requirements of the CONTRACT DOCUMENTS, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in CONTRACTOR's cost of, or time required for, performance of the WORK; subject, however, to such condition meeting any one or more of the categories described above

CONTRACTOR shall not be entitled to any adjustment in the CONTRACT Price or CONTRACT Times if:

- CONTRACTOR knew of the existence of such conditions at the time CONTRACTOR submitted CONTRACTOR's BID; or
- the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the SITE and contiguous areas required by the Bidding Requirements or CONTRACT DOCUMENTS to be conducted by or for CONTRACTOR prior to CONTRACTOR's BID;

If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the CONTRACT Price or CONTRACT Times, or both, a CLAIM may be made therefor. However, neither OWNER or ENGINEER, or any of their officers, directors, members, partners, employees, agents, consultants, or SUBCONTRACTORS shall be liable to CONTRACTOR for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by CONTRACTOR on or in connection with the PROJECT.

28 UNDERGROUND FACILITIES

Shown or Indicated: The information and data shown or indicated in the CONTRACT DOCUMENTS with respect to existing underground facilities at or contiguous to the SITE is based on information and data furnished to OWNER or ENGINEER by the owners of such underground facilities, including OWNER, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

OWNER and ENGINEER shall not be responsible for the accuracy or completeness of any such information or data provided by others; and the cost of all of the following will be included in the CONTRACT Price, and CONTRACTOR shall have full responsibility for:

- Reviewing and checking all such information and data;
- Locating all underground facilities shown or indicated in the CONTRACT DOCUMENTS;
- Coordination of the WORK with the owners of such underground facilities, including OWNER, during construction; and
- The safety and protection of all such underground facilities and repairing any damage thereto resulting from the Work.

Not Shown or Indicated:

If an underground facility is uncovered or revealed at or contiguous to the SITE which was not shown or indicated, or not shown or indicated with reasonable accuracy in the CONTRACT DOCUMENTS, CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing conditions affected

thereby or performing any WORK in connection therewith except in an emergency, identify the owner of such underground facility and give WRITTEN NOTICE to that owner and to OWNER and ENGINEER. ENGINEER will promptly review the underground facility and determine the extent, if any, to which a change is required in the CONTRACT DOCUMENTS to reflect and document the consequences of the existence or location of the underground facility. During such time, CONTRACTOR shall be responsible for the safety and protection of such underground facility.

If ENGINEER concludes that a change in the CONTRACT DOCUMENTS is required, a FIELD ORDER or CHANGE ORDER will be issued to reflect and document such consequences. An equitable adjustment shall be made in the CONTRACT Price or CONTRACT Times, or both, to the extent that they are attributable to the existence or location of any underground facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the CONTRACT DOCUMENTS and that CONTRACTOR did not know of and could not reasonably have been expected to be aware of or to have anticipated. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in CONTRACT Price or CONTRACT Times, OWNER or CONTRACTOR may make a CLAIM.

29 APPLICABLE LAWS

This Agreement shall be governed by and construed in accordance with the laws of the State of Colorado. Jurisdiction for any and all legal actions regarding this Agreement shall be in the State of Colorado and venue for the same shall lie in the County where the Project is located.

30 WARRANTIES AND GUARANTEES

CONTRACTOR hereby represents, warrants and guarantees to OWNER all workmanship, equipment and materials on or made a part of the Project, and its structures for a period of one (1) year following final completion of the Project. Such warranty and guarantee shall be construed to include, but is not limited to, representations that all workmanship, equipment, and materials are of good quality, free of any defects or irregularities, and in strict conformity with the Contract Documents. If any defect in workmanship, equipment or materials arises, CONTRACTOR shall remedy or otherwise correct such defects without cost to the OWNER within such reasonable period of time as specified by OWNER in writing. If CONTRACTOR fails to repair such defect within such period of time as specified by the OWNER, OWNER may repair such defect or contract for such repairs at the expense of CONTRACTOR and its Surety. The performance bond specified in Section 00 61 14 shall remain in full force and effect during the period of this Warranty and Guarantee, including any period necessary to remedy or otherwise correct any defects. CONTRACTOR shall provide such warranty and guarantee on OWNER's behalf separate and apart from other warranties, guarantees and surety agreements entered into independently between OWNER and any manufacturer or supplier.

END OF SECTION

**SECTION 00 73 00
SUPPLEMENTARY CONDITIONS**

- 01 GENERAL CONDITIONS Article 02 will be modified as follows: ENGINEER for this PROJECT is **R2R Engineers, Inc.**
- 02 CONTRACTOR's Liability Insurance: CONTRACTOR's Liability Insurance will also include **Cherry Creek Basin Water Quality Authority, Arapahoe County, United States of America, and Colorado Parks and Wildlife** as additional insured per GENERAL CONDITIONS Article 15.
- 03 Indemnification: In addition to those specified in GENERAL CONDITIONS Article 18 **Cherry Creek Basin Water Quality Authority, Arapahoe County, United States of America, and Colorado Parks and Wildlife** shall also be indemnified and held harmless.
- 04 CCBWQA is this project's lead and managing agency. CCBWQA's representative for this PROJECT is: **Richard Borchardt.**
- 05 N/A
- 06 N/A
- 07 It is CONTRACTOR's responsibility to maintain these stakes. Survey control for the construction staking has been provided on the DRAWINGS.
- 08 Representatives of OWNER, **Arapahoe County, Colorado Parks and Wildlife**, State of Colorado, Applicable Federal Agencies, or the United States Army Corps of Engineers (USACE) may inspect the PROJECT at any time.
- 09 CONTRACTOR shall forward the following submittals to OWNER for review and acceptance prior to any construction:
- .01 A detailed construction schedule as specified in DIVISION 01: GENERAL REQUIREMENTS, SECTION 01 32 00, CONSTRUCTION PROGRESS DOCUMENTATION, and SECTION 01 32 13, SCHEDULING OF WORK, submitted at the pre-construction conference.
 - .02 A Water Control Plan, if required, submitted at the pre-construction conference.
 - .03 Certificates of Insurance of the types and limits as specified in GENERAL CONDITIONS, Article 15, provided prior to start of WORK.
 - .04 Executed "Letter of Damage Guarantee."
 - .05 PERFORMANCE and PAYMENT BONDS, provided within ten (10) days after receipt of NOTICE OF AWARD.
 - .06 All materials submittals, including riprap, **erosion control blanket, seed, mulch**, and any other materials to be used in the construction. The cost of the submittals will not be measured and paid for separately but will be included in the cost of the WORK.
- 10 The anticipated start date for this PROJECT is **July 18, 2022.**

- 11 CONTRACTOR shall provide OWNER with a red-lined set of as-constructed DRAWINGS for the PROJECT, showing those items of WORK that were modified during construction.
- 14 Should CONTRACTOR fail to complete all WORK within the CONTRACT TIME, CONTRACTOR shall be liable to OWNER for liquidated damages at the rate of Three Hundred Dollars (\$300) per day as specified in Article 21 of the GENERAL CONDITIONS.
- 15 An OWNER FIELD OFFICE is not required for this project.

.01 N/A

16 REVISION TO SECTION 00 73 92 PROJECT UTILITIES: Paragraph 3.04 is deleted.

17 REVISION TO SECTION 01 29 00 PAYMENT PROCEDURES

Bid Item GN-06-001: Water Control is hereby modified to include the following:

- 11) Implementing measures to control surface water and groundwater not paid for under Bid Item UC-01-001 Silt Curtain.

Bid Item ESC-10-001: Rock Sock / Curb Sock is hereby modified to include the following:

- 5) Maintenance and replacement of geotextile socks as necessary through the duration of the project.

Bid Item ESC-13-001: Sediment Control Log is hereby modified to include the following:

- 4) Maintenance and replacement of materials as necessary through the duration of the project.

Bid Item ESC-17-002: Stabilized Staging Area is hereby removed and replaced with the following:

Bid Item ESC-17-002: Stabilized Staging Area

- a. No separate measurement for payment will be made for any labor, equipment, and materials required for this item. The lump sum price will include all the CONTRACTOR's costs This BID item includes, but is not limited to:

- 1) Installing necessary signage
- 2) Restoring area to pre-project or finished grades and conditions
- 3) Furnishing and placing fencing and screen as shown on the DRAWINGS
- 4) Providing all other related and necessary labor, equipment, and materials to complete the WORK

- b. Payment will be based on units completed and accepted.

Bid Item	Pay Unit
Stabilized Staging Area	LS

Bid Item ESC-20-001 Vehicle Tracking Control is hereby removed and replaced with the following:

Bid Item ESC-20-001: Vehicle Tracking Control

- a. No separate measurement for payment will be made for any labor, equipment, and materials required for this item. The lump sum price will include all the CONTRACTOR’s costs. This BID item includes, but is not limited to:
 - 1) Cleaning all paved surfaces from tracked materials on a daily basis
 - 2) Furnishing, transporting and storing any equipment necessary to complete WORK
 - 3) Restoring the access area once WORK is complete.
 - 4) Restoring area to pre-project or finished grades and conditions
 - 5) Providing all other related and necessary labor, equipment, and materials to complete the WORK

- b. Payment will be based on the percentage of completed and accepted WORK.

Bid Item	Pay Unit
Vehicle Tracking Control	LS

Bid Item RR-06-005: Remove Concrete Structure is hereby removed and replaced with the following:

Bid Item RR-06-005 Remove Temporary Bank Protection (Concrete and Wood used for Bank Protection)

- a. No separate measurement for payment will be made for any labor, equipment, and materials required for this item. The lump sum price will include all the CONTRACTOR’s costs. This BID item includes, but is not limited to:
 - 1) Removing, hauling, and disposing of structures and obstructions including, but not limited to, existing pipe, culverts, inlets, concrete, asphalt, and any structures and obstructions that interfere with the WORK
 - 2) Backfilling and compacting after removal of structures and obstructions.
 - 3) Moisture conditioning of suitable backfill material
 - 4) Restoring area, as required
 - 5) Providing all other related and necessary labor, equipment, and materials to complete the WORK

- b. Payment will be based on the percentage of completed and accepted WORK.

Bid Item	Pay Unit
Remove Temporary Bank Protection (Concrete and Wood used for Bank Protection)	LS

Bid Item LS-02-002: Erosion Control Blanket, Coconut (Coir Mat W/ 2x4 Wedge Stakes) is hereby modified to include the following:

- 6) Furnishing and installing 2x4 wedge stakes in accordance with DRAWINGS.

Bid Item LS-02-004: Erosion Control Blanket, Straw / Coconut Mix (SC-150 W/ Biodegradable Netting and 12" Eco Stakes) is hereby modified to include the following:

- 6) Furnishing and installing 12" Eco Stakes in accordance with DRAWINGS.

Bid Item LS-07-001: Mulch, Broadcast Straw (under Coir Mat) is hereby modified to include the following:

- 4) Broadcasting straw mulch under Coir Mat immediately prior to staking and securing the matting.

90 PERMITS

All WORK must be performed in accordance with all attached regulatory permits. CONTRACTOR is responsible for obtaining any additional federal, state, and local permits as necessary.

01. **USACE 404 and/or 408 Permit.** OWNER has applied for and received authorization from the USACE with a Section 404 and/or 408 Permit for this WORK. A copy of this permit is included in this section, and made part of this WORK. **CONTRACTOR must have a copy of this permit on SITE at all times.** Full compliance with the terms of all permits is required. CONTRACTOR shall comply with all permit provisions and be fully responsible for any violations of any permit condition.
02. N/A
03. **Groundwater Discharge (401) Permit, if applicable.**
03. **General Permit for Stormwater Discharges Associated with Construction Activity, if applicable.**

When a PROJECT is subject to a State of Colorado or Federal Stormwater Discharge Permit, it is CONTRACTOR's responsibility to obtain and comply with all the conditions stated in said permit(s). If CONTRACTOR anticipates, or if construction activities result in any change or noncompliance with conditions stated in the permit(s), then CONTRACTOR shall detail the anticipated changes or noncompliance in a written report to OWNER. The submission of the report will be within five (5) days from the time CONTRACTOR becomes aware of change or noncompliance. Within ten (10) days after receipt of the report, OWNER shall approve or disapprove the request for change, or detail the course of action after noncompliance.

CONTRACTOR will be held responsible and liable for any legal action taken against CONTRACTOR or OWNER due to CONTRACTOR's noncompliance with any of the conditions stated in the Stormwater Discharge Permit(s). Such responsibility shall include the defense, indemnification and holding the OWNER and all of its PROJECT partners harmless in regard to such noncompliance. CONTRACTOR shall be solely and completely liable for all fines, fees and all other charges that are assessed against CONTRACTOR or OWNER and OWNER's PROJECT partners as a result of CONTRACTOR's noncompliance with the terms and conditions of the Stormwater Discharge Permit(s).

If a monetary fine is assessed against OWNER due to CONTRACTOR's noncompliance with any of the conditions stated in the Stormwater Discharge Permit(s), the fine will be subtracted from any money due to CONTRACTOR as set forth in Article 13 ADDITIONAL WITHHOLDING OF PROGRESS

PAYMENTS. If such fine is in excess of all the money due to CONTRACTOR, then CONTRACTOR shall be liable and agrees to pay to OWNER the amount of such excess.

CONTRACTOR shall obtain the following permits, if applicable, prior to beginning the WORK:

01. **General Permit for Stormwater Discharges Associated with Construction Activities**
02. N/A
03. N/A
04. N/A
05. **Groundwater Discharge (401) Permit from the Colorado State Health Department**
06. N/A
07. **Traffic Control Permit**
08. **Grading, Erosion and Sediment Control (GESC) permit.** The GESC plans have been reviewed and approved by Arapahoe County.

END OF SECTION



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
DENVER REGULATORY OFFICE, 9307 SOUTH WADSWORTH BOULEVARD
LITTLETON, COLORADO 80128-6901

January 13, 2021

SUBJECT: Regional General Permit Verification – Corps File No. NWO-2020-00982-DEN, Cherry Creek Basin Water Quality Authority, Cherry Creek Reservoir Shoreline Stabilization

Chuck Reid
Cherry Creek Basin Water Quality Authority
PO Box 3166
Centennial, Colorado 80122

Dear Mr. Reid:

This letter is in reference to the above-mentioned proposed project located at approximately latitude 39.639778, longitude -104.843577, in Arapahoe County, Colorado. The work as described in your submittal will consist of stabilization along approximately 130 linear feet of Cherry Creek Reservoir shoreline. The shoreline will be graded and void-filled riprap will be installed. Total permanent impacts will occur within 0.022 acre of Cherry Creek Reservoir and 0.005 acre of abutting wetlands. Total temporary impacts will occur within 0.002 acre of wetland abutting Cherry Creek Reservoir.

Based on the information that has been provided, this project meets the criteria established for **Regional General Permit (RGP) 37 for Stream Stabilization Projects in Colorado**. Accordingly, for purposes of Section 404 of the Clean Water Act (33 USC 1344) and in accordance with 33 CFR 325.5(c) (1), the project is authorized provided the stipulations, conditions, mitigation requirements and other criteria of RGP 37 are satisfied. Please note that both a mitigation report for each project authorized under RGP 37 and an annual accounting of all projects authorized under the Permit are required to be submitted at the end of each calendar year. **RGP 37 is valid until October 20, 2022.**

Although an Individual Department of the Army permit will not be required for this work, this does not eliminate the requirement that any other applicable Federal, state, tribal or local permits be obtained as required. Please be advised that deviations from the original plans and specifications of this project could require additional authorization from this office.

The applicant is responsible for all work accomplished in accordance with the terms and conditions of the Regional General Permit. If a contractor or other authorized representative will be accomplishing the work authorized by the Regional General Permit on behalf of the applicant, it is strongly recommended that they be provided a copy of this letter and the attached conditions so that they are aware of the limitations of the Regional General Permit. Any activity which fails to comply with all the terms and conditions of the Regional General Permit will be considered unauthorized and subject to appropriate enforcement action.

If there are any questions please feel free to contact Ellison Koonce at (303) 979-4120 or by e-mail at Ellison.A.Koonce@usace.army.mil, and reference **Corps File No. NWO-2020-00982-DEN**.

Sincerely,

A handwritten signature in black ink, appearing to read "Ellison Koonce", written in a cursive style.

Ellison Koonce
Project Manager, Denver Regulatory Office

Enclosure(s)

Copies Furnished:

U.S. Fish and Wildlife Service
Colorado Department of Public Health and Environment
Environmental Protection Agency
Colorado Parks and Wildlife

Jenelle Kreutzer
ERO Resources Corporation
1842 Clarkson St.
Denver, CO 80218



**REPLY TO
ATTENTION OF
REAL ESTATE DIVISION**

**DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
1616 CAPITOL AVENUE
OMAHA NE 68102-4901**

December 14, 2020

SUBJECT: Cherry Creek Lake Project, Colorado, Lease No. DACW45-1-03-6004, State of Colorado

State of Colorado
Parks and Wildlife
ATTN: Mr. Jason Trujilo, Project Manager
4201 S. Parker Road
Aurora, CO 80014

Dear Mr. Trujilo:

By direction of the District Commander and in accordance with the provisions of subject lease, the request from State of Colorado Parks and Wildlife to stabilize 128 feet of eroded shoreline along the reservoir and reduce future shoreline erosion and repair existing erosion along the shoreline near the East Boat Ramp at Cherry Creek State Park in Cherry Creek Basin, is approved.

If you have any questions, please write to me at the above address or telephone Katie Bullard of my staff at (402) 995-2838 or by email Katelyn.M.Bullard@usace.army.mil.

Sincerely,

Rick L. Noel

Rick L. Noel
Chief, Civil Branch, Real Estate Division
Real Estate Contracting Officer

**SECTION 00 73 91
SUMMARY OF WORK**

1 PART 1 GENERAL

1.01 SECTION INCLUDES

- A. This section covers the WORK to be covered by the CONTRACT DOCUMENTS and requirements for the completion of the WORK.

.01 Work covered by CONTRACT DOCUMENTS

A. **The completed WORK will provide OWNER with the following:**

1. Grading, Erosion and Sediment Control (GESC) measures
2. Water control and dewatering, surveying, traffic control, clearing and grubbing, and mobilization.
3. Remove and dispose of existing temporary bank protection. Tree removal.
4. Earthwork, excavation, and haul off-site. Topsoil import and placement.
5. Riprap with bedding and void filled riprap placement
6. Seeding, erosion control blanket, mulch, soil preparation and fine grading.

- B. CONTRACTOR shall obtain NOTICE TO PROCEED from OWNER approving WORK covered by CONTRACT DOCUMENTS prior to start of WORK.

.02 WORK SEQUENCE

- A. CONTRACTOR shall submit the WORK Sequence as part of the construction schedule required in SECTION 01 32 00, CONSTRUCTION PROGRESS DOCUMENTATION. Construction may begin immediately on the date of NOTICE TO PROCEED.

- B. N/A

.03 Work not covered by contract documents

- C. N/A

.04 Provisions for future work

- D. N/A

2 PART 2 PRODUCTS (Not Applicable)

3 PART 3 EXECUTION (Not Applicable)

END OF SECTION

**SECTION 00 73 92
PROJECT UTILITIES**

1 PART 1 GENERAL

1.01 SECTION INCLUDES

- A. The size and location of existing underground utilities, if noted on the DRAWINGS, is from the best information available as established from actual field observations and study of existing records. These are noted for informational purposes only and are believed to be correct. However, CONTRACTOR shall take sole responsibility for damage to any utility line encountered, whether or not shown on the DRAWINGS and whether or not actually located in the field as shown on the DRAWINGS.

2 PART 2 PRODUCTS (Not Applicable)

3 PART 3 EXECUTION

3.01 Examination

- A. CONTRACTOR shall locate, expose, and provide temporary support for all existing underground utilities within WORK limits.
- B. CONTRACTOR shall determine the actual location of all existing utilities prior to starting any WORK that may cause damage to such utilities. If the exact location and depth of existing underground utilities are unknown, CONTRACTOR, prior to beginning construction, shall perform all necessary exploratory excavation to locate these facilities which may affect the WORK.
- C. CONTRACTOR shall notify ENGINEER immediately of any utility discrepancies.
- D. CONTRACTOR shall inform ENGINEER of existing utility installations that need relocation.
- E. CONTRACTOR shall contact all utilities seventy-two (72) hours prior to beginning excavation and/or grading. CONTRACTOR shall contact the Utility Notification Center of Colorado at 811.

3.02 relocation

- A. If CONTRACTOR requests that utility companies relocate their utilities for CONTRACTOR's convenience in construction of any portion of the WORK, the cost of such shall be at CONTRACTOR's expense.

3.03 utility impacts

- A. Where CONTRACTOR's operations may cause damage or inconvenience to railway, communications, telephone, television, oil, gas, electricity, water, sewer, irrigation, or any other utilities or services, CONTRACTOR's operations shall be suspended until all arrangements necessary for the protection of these utilities and services have been made by CONTRACTOR.
- B. CONTRACTOR shall protect all utility poles from damage. If interfering utility poles, guy wires, or anchors are encountered, CONTRACTOR shall notify ENGINEER and the appropriate utility provider at least 48 hours in advance of construction operations to permit the necessary arrangements for protection or relocation of the interfering structure.
- C. In the event of interruption to domestic water, sewer, storm drain, irrigation, or other utility services as a result of accidental breakage due to construction operations, CONTRACTOR shall promptly notify the utility provider, ENGINEER, and OWNER. CONTRACTOR shall cooperate with said provider in the restoration of service as promptly as possible and bear all costs of repair.

- D. CONTRACTOR shall replace, at CONTRACTOR's sole expense, any and all other existing utilities or structures removed or damaged during construction, unless otherwise provided for in these CONTRACT DOCUMENTS or ordered by ENGINEER.
- E. CONTRACT TIME will not be extended to account for repair of utilities damaged by CONTRACTOR's negligence.
- F. CONTRACTOR shall be solely and directly responsible to the providers of such utilities and services for any damage, injury, expense, loss, inconvenience, delay, suits, actions, or claims of any character brought because of any injuries or damage, which may result from the construction operations under this CONTRACT.
- G. Neither OWNER nor its officers or agents shall be responsible for damages as a result of CONTRACTOR's failure to protect utilities encountered in the WORK.
- H. Full compensation for compliance and cooperation, as required by this section, is considered to be subsidiary to other WORK items and no additional compensation will be allowed.

3.04 Utility NOTIFICATION

- A. **Names and telephone numbers of known affected agencies and utilities in the area are listed below for CONTRACTOR's convenience. CONTRACTOR assumes all responsibility for determining the agencies and utilities encountered in WORK limits and for contacting these agencies and verification of telephone numbers.**

Utility Type	Agency	Contact	Phone No.
One-Call Utility Locates			(800) 922-1987

END OF SECTION

**SECTION 00 73 93
PROJECT MEETINGS**

1 PART 1 GENERAL

1.01 SECTION INCLUDES

- A. This section covers the requirements for attendance at meetings needed for coordination of the PROJECT.

1.02 PreConstruction Conference

- A. A Preconstruction Conference will be held after NOTICE OF AWARD and before the NOTICE TO PROCEED; the date, time, and location will be determined after NOTICE OF AWARD.
- B. The conference shall be attended by:**
1. **CONTRACTOR and CONTRACTOR's Superintendent.**
 2. **CONTRACTOR's SUBCONTRACTORS.**
 3. **ENGINEER.**
 4. **OWNER.**
 5. **Affected Utility Companies.**
 6. **Others as requested by CONTRACTOR, OWNER, or ENGINEER.**
 7. **Colorado Parks and Wildlife.**
- C. Unless previously submitted to OWNER, CONTRACTOR shall bring the construction schedule, SHOP DRAWINGS, and other submittals required by the CONTRACT DOCUMENTS.
- D. The purpose of the Preconstruction Conference is to designate responsible personnel and establish working relationships. Matters requiring coordination will be discussed and procedures for handling such matters established. The agenda will include, but not be limited to, discussion on:
1. **CONTRACTOR's schedule.**
 2. **Permit applications, including but not limited to, 401 Permit, Erosion and Sediment Control Plan, Erosion and Sediment Control Permit, Traffic Control Plan, Traffic Control Permit, and Groundwater Discharge Permit.**
 3. **Status of Bonds, insurance, and CONTRACT DOCUMENTS.**
 4. **Transmittal, review, and distribution of CONTRACTOR's submittals.**
 5. **Processing applications for payment.**
 6. **Maintaining record documents.**

7. **Critical work sequencing.**
8. **Public Notice Process.**
9. **Utility Coordination and Schedule Impacts.**
10. **Suppliers and Subcontractors.**
11. **Surveying.**
12. **Material Testing.**
13. **Personnel Responsibilities and Communications.**
14. **Initial Traffic Control Plans.**
15. **Storm Water Management Plan (SWMP).**
16. **FIELD ORDERS and CHANGE ORDERS.**
17. **Use of premises, office and storage areas, staging area, security, housekeeping, and OWNER's needs.**
18. **Major product delivery and priorities.**
19. **CONTRACTOR's safety and first aid plan and representative.**

1.03 CONSTRUCTION PROGRESS MEETINGS

- A. **Progress meetings will be conducted weekly or at some other frequency, as determined by ENGINEER. These meetings shall be attended by OWNER, ENGINEER, Local Government Representatives, CONTRACTOR's representative and any others invited by these people.**
- B. ENGINEER will conduct the meeting and arrange for keeping the minutes and distributing the minutes to all persons in attendance.
- C. The agenda will include discussion on construction progress, schedule updates, the status of submittal reviews, the status of requests for information, critical work sequencing, review of strategies for connections into existing facilities, status of FIELD ORDERS and CHANGE ORDERS, and any general business.

1.04 Other meetings

- A. In accordance with CONTRACT DOCUMENTS and as may be required by OWNER or ENGINEER.

2 PART 2 PRODUCTS (Not Applicable)

3 PART 3 EXECUTION (Not Applicable)

END OF SECTION

**SECTION 00 73 94
SPECIAL PROJECT PROCEDURES**

1 PART 1 GENERAL

1.01 SECTION INCLUDES

- A. **The project is required to maintain reservoir storage capacity for the Cherry Creek Reservoir. For all material imported to the site, an equal or greater volume of material is required to be exported from the site.**
- B. The CONTRACTOR will access the site and stage within the existing asphalt parking lot. The parking lot must be kept clean during construction and restored to its pre-project condition once the project is complete.
- C. The CONTRACTOR is responsible for repairing or replacing any damage done to the park infrastructure including but not limited to concrete flatwork, asphalt roads, fences, gates, or any other improvements outside the limits of construction at the CONTRACTOR's expense.
- D. 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.
- E. Avoid the unnecessary removal of trees or shrubs; for example, prune the aerial portions of trees and shrubs that hang within the WORK area and interfere with equipment.

1.02 RELATED SECTIONS

- A. **Section 00 73 00 SUPPLEMENTARY CONDITIONS**
- B. **Section 00 73 91 SUMMARY OF WORK**

2 PART 2 PRODUCTS (Not Applicable)

3 PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 00 73 95
REFERENCE STANDARDS

1 PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Reference to standards, SPECIFICATIONS, manuals, or codes of any technical society, organization, or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, will mean the latest standard specification, manual, code, or laws or regulations in effect at the time of opening of BID(s), except as may be otherwise specifically stated.
- B. No provision of any referenced standard, specification, manual, or code (whether or not specially incorporated by reference in the CONTACT DOCUMENTS) will be effective to change the duties and responsibilities of OWNER, CONTRACTOR, or ENGINEER, or any of their consultants, agents or employees from those set forth in the CONTRACT DOCUMENTS, nor will it be effective to assign to ENGINEER, or any of ENGINEER's consultants, agents, or employees, any duty or authority to supervise or direct the furnishing or performance of the WORK.

1.02 ABBREVIATIONS

- A. Whenever used in the CONTRACT DOCUMENTS, the following abbreviations will have the meanings listed:
 - 1. **AAR: Association of American Railroads.**
 - 2. **AASHTO: American Association of State Highway and Transportation Officials.**
 - 3. **ACI: American Concrete Institute.**
 - 4. **ACPA: American Concrete Pipe Association.**
 - 5. **ACPPA: American Concrete Pressure Pipe Association.**
 - 6. **AFA: American Fence Association.**
 - 7. **AGA: American Gas Association.**
 - 8. **AGC: The Association of General Contractors of America.**
 - 9. **AISC: American Institute of Steel Construction.**
 - 10. **AISI: American Iron and Steel Institute.**
 - 11. **AITC: American Institute of Timber Construction.**
 - 12. **ANLA: American Nursery and Landscape Association.**
 - 13. **ANSI: American National Standards Institute.**

14. **APA: American Planning Association.**
15. **AREMA: American Railway Engineering and Maintenance-of-Way Association.**
16. **ASCE: American Society of Civil Engineers.**
17. **ASME: American Society of Mechanical Engineers.**
18. **ASQC: American Society of Quality Control.**
19. **ASSE: American Society of Sanitary Engineering.**
20. **ASTM: ASTM International.**
21. **ATSSA: American Traffic Safety Services Association.**
22. **AWS: American Welding Society.**
23. **AWWA: American Water Works Association.**
24. **BHMA: Builders Hardware Manufacturers Association.**
25. **BIA: Brick Institute of America.**
26. **BOCA: Building Officials and Code Administrators (See ICC).**
27. **BSI: Building Stone Institute.**
28. **CCBWQA: Cherry Creek Basin Water Quality Authority**
29. **CDPHE: Colorado Department of Public Health and Environment.**
30. **CDOT: Colorado Department of Transportation.**
31. **CGA: Compressed Gas Association.**
32. **CISPI: Cast Iron Soil Pipe Institute.**
33. **CLFMI: Chain Link Fence Manufactures Institute.**
34. **CPMB: Concrete Plant Manufactures Bureau.**
35. **CRSI: Concrete Reinforcing Steel Institute.**
36. **CSI: Construction Specifications Institute.**
37. **DIPRA: Ductile Iron Pipe Research Association.**
38. **EPA: Environmental Protection Agency.**
39. **ETL: ETL Testing Laboratories Inc.**

40. **FEDSPEC: Federal Specifications.**
41. **FEDSTDS: Federal Standards (See FEDSPEC).**
42. **FEMA: Federal Emergency Management Agency.**
43. **FHWA: Federal Highway Administration.**
44. **ICBO: International Conference of Building Officials (See ICC).**
45. **HI: Hydraulic Institute.**
46. **ICC: International Code Council (Includes BOCA, ICBO, and SBCCI).**
47. **ICEA: Insulated Cable Engineers Association Inc.**
48. **IEEE: Institute of Electrical and Electronics Engineers.**
49. **IES: Illuminating Engineering Society.**
50. **IMSA: International Municipal Signal Association.**
51. **ITE: Institute of Traffic Engineers.**
52. **MHFD: Mile High Flood District**
53. **MSS: Manufactures Standardization Society of the Valve and Fittings Industry.**
54. **MS4: Municipal Separate Storm Sewer System**
55. **MILSPEC: Military Specifications.**
56. **MUTCD: Manual of Uniform Traffic Control Devices.**
57. **NBS: National Bureau of Standards (See NIST).**
58. **NCHRP: National Cooperative Highway Research Program.**
59. **NEC: National Electrical Code (See NFPA).**
60. **NEMA: National Electrical Manufacturers Association.**
61. **NFPA: National Fire Protection Association.**
62. **NIST: National Institute of Standards and Technology.**
63. **NPC: National Plumbing Code.**
64. **NSC: National Safety Council.**
65. **NSF: National Sanitation Foundation.**

66. **OSHA: Occupational Safety and Health Act (both Federal and State).**
67. **PCA: Portland Cement Association.**
68. **PCI: Precast/Prestressed Concrete Institute.**
69. **PPI: Plastic Pipe Institute.**
70. **PS: Products Standard—U.S. Department of Commerce.**
71. **RMA: Rubber Manufactures Association, Inc.**
72. **SBCCI: Southern Building Code Congress International (See ICC).**
73. **SSPC: The Society of Protective Coatings.**
74. **SSPWC: Standard Specifications for Public Works Construction.**
75. **SWRI: Sealant, Waterproofing and Restoration Institute.**
76. **TCA: Title Council of America.**
77. **UBC: Uniform Building Code.**
78. **UDFCD: Urban Drainage and Flood Control District.**
79. **UBC: The Uniform Building Code (See ICC).**
80. **UL: Underwriters Laboratories Inc.**
81. **UMC: Uniform Mechanical Code.**
82. **UPC: Uniform Plumbing Code.**
83. **USACE: United States Army Corps of Engineers.**
84. **USBR: United States Bureau of Reclamation.**
85. **USDCM: Urban Storm Drainage Criteria Manual.**
86. **USDOT: United States Department of Transportation.**

2 PART 2 PRODUCTS (Not Applicable)

3 PART 3 EXECUTION (Not Applicable)

END OF SECTION

**SECTION 00 73 96
INSPECTION AND MATERIALS TESTING**

1 PART 1 GENERAL

1.01 SECTION INCLUDES

- A. CONTRACTOR shall provide such equipment and facilities as are required for conducting field tests and for collecting and forwarding samples. No materials or equipment represented by samples are to be used until tests, if required, have been made and the materials or equipment are found to be acceptable. Any product which becomes unfit for use after approval thereof shall not be incorporated into the WORK.

1.02 OWNER'S RESPONSIBILITIES

- A. OWNER will provide any inspection and testing services not provided by the CONTRACTOR as required by the CONTRACT DOCUMENTS.
- B. Testing:
1. Tests will be made by an accredited testing laboratory selected by OWNER.
 2. Except as otherwise provided, sampling and testing of all materials and the laboratory methods and testing equipment will be in accordance with the latest standards and methods of the ASTM and the AASHTO.
- C. **OWNER will be responsible for and will pay costs in connection with the following testing of materials in place:**
1. **Soils compaction.**
 2. **Trench backfill.**
 3. **Pipe and structural bedding.**
 4. **Materials delivered to the site, not otherwise required by the SPECIFICATIONS.**
 5. **Concrete and grout.**
 6. **Pavement.**

1.03 CONTRACTOR'S RESPONSIBILITIES

- A. CONTRACTOR shall provide, at CONTRACTOR'S expense, the testing and inspection services required by the CONTRACT DOCUMENTS.
- B. **CONTRACTOR shall be responsible for and shall pay all costs in connection with testing required for the following materials:**
1. **Concrete manholes.**
 2. **Concrete materials and mix designs.**

3. **Design of asphalt mixtures.**
 4. **Gradation for embedment, fill, and backfill materials.**
 5. **All performance and field testing specifically called for by the SPECIFICATIONS.**
- C. Retesting for WORK or materials found defective or unsatisfactory, including tests covered in section above entitled "OWNER's Responsibilities".

1.04 SUBMITTALS

- A. Written reports of tests and engineering data furnished by CONTRACTOR for ENGINEER's review of materials and equipment proposed to be used in the WORK shall be submitted as specified for SHOP DRAWINGS.
- B. The testing laboratory retained by OWNER will furnish three (3) copies of a written report of each test performed by laboratory personnel in the field or laboratory.
1. Two (2) copies of each test report will be transmitted to ENGINEER and one (1) copy to CONTRACTOR within ten (10) days after each test is completed.

1.05 INSPECTION AND TESTING

- A. General:
1. OWNER, through its assigned RESIDENT ENGINEER and/or ENGINEER will inspect the WORK as the WORK progresses.
 2. The purpose of the inspection activity is to determine on an on-going basis whether or not CONTRACTOR's WORK is adequate to provide the product as well as the quality of product for OWNER.
 3. WORK will be compared to DRAWINGS and SPECIFICATIONS and supplemental DRAWINGS and SPECIFICATIONS to determine whether WORK or any part of WORK is defective. WORK will also be measured against the standard of quality implied by CONTRACTOR's warranty. Should the appearance and performance of any element of the WORK fail to conform to standards of the trade for such WORK, that WORK may be declared defective.
 4. All materials and equipment used in the construction of the PROJECT shall be subject to adequate inspection and testing in accordance with generally accepted standards, as required and defined in the CONTRACT DOCUMENTS.
 5. Where additional or specific information concerning testing methods, sample sizes, etc., is required, such information is included under the applicable sections of the SPECIFICATIONS. Any modification of, or elaboration on, these test procedures which may be included for specific materials under their respective sections in the SPECIFICATIONS shall take precedence over the procedures contained within this SPECIFICATION.

6. If the CONTRACT DOCUMENTS, laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction require any WORK specifically to be inspected, tested, or approved by someone other than CONTRACTOR, CONTRACTOR shall give OWNER timely notice of readiness. CONTRACTOR shall then furnish OWNER the required certificates of inspection, testing, or approval.
7. Inspections, tests, or approvals shall not relieve CONTRACTOR from its obligation to perform the WORK in accordance with the requirements of the CONTRACT DOCUMENTS and to also inspect CONTRACTOR's own WORK.

B. Access to WORK:

1. OWNER, ENGINEER, and their representatives shall at all times have access to the WORK.
2. Authorized representatives and agents of any participating Federal, State, or Local agency shall be permitted to inspect all WORK, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records. CONTRACTOR shall provide proper facilities for such access and observation of the WORK and also for any inspection, or testing thereof.
3. If any WORK is covered contrary to the written instructions of ENGINEER or OWNER it shall, if requested by ENGINEER or OWNER, be uncovered for observation and replaced at CONTRACTOR's expense.
4. Covered Work:
5. If ENGINEER or OWNER considers it necessary or advisable that covered WORK be inspected or tested by others, CONTRACTOR, at ENGINEER's or OWNER's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing, as ENGINEER or OWNER may require, that portion of the WORK in question, furnishing all necessary labor, materials, tools, and equipment.
6. If it is found that such WORK is defective, CONTRACTOR shall bear all the expenses of such uncovering, exposure, observation, inspection and testing, and of satisfactory reconstruction.
7. If such WORK is not found to be defective, CONTRACTOR shall be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, and reconstruction; and an appropriate CHANGE ORDER shall be issued.

C. Observable Defects:

1. Observable defects are those that are discoverable by routine testing and inspection procedures or by implementing special tests as required or implied by the SPECIFICATIONS.
2. Defects discovered by this inspection process shall be repaired or removed by CONTRACTOR as these are identified.

D. Latent Defects:

1. Materials and equipment incorporated into the WORK may have, or as a result of the construction process, may develop hidden defects known as latent defects.
2. CONTRACTOR shall guarantee that such latent defects, when discovered, shall be remedied at no extra cost to OWNER.

E. Correction of WORK:

1. Retest:
2. Should the WORK fail to meet the requirements of any SPECIFICATION, as determined by testing performed by OWNER, CONTRACTOR shall take steps to meet the requirements and OWNER will then retest to determine compliance with the SPECIFICATIONS.
3. CONTRACTOR shall be responsible for the cost of the retest and such cost shall be deducted from progress payment to CONTRACTOR.
4. CONTRACTOR shall promptly remove from the premises all WORK rejected by ENGINEER or OWNER for failure to comply with the CONTRACT DOCUMENTS, whether incorporated in the construction or not, and CONTRACTOR shall promptly replace and re-execute the WORK in accordance with the CONTRACT DOCUMENTS and without expense to OWNER and shall bear the expense of making good all WORK of other contractors destroyed or damaged by such removal or replacement.
5. All removal and replacement WORK shall be done at CONTRACTOR's expense. If CONTRACTOR does not take action to remove such rejected WORK within ten (10) days after receipt of WRITTEN NOTICE, OWNER may remove such WORK and store the materials at the expense of CONTRACTOR.

2 PART 2 PRODUCTS (Not Applicable)

3 PART 3 EXECUTION (Not Applicable)

END OF SECTION

**SECTION 00 73 97
OWNER FIELD OFFICES**

1 PART 1 GENERAL

1.01 SECTION INCLUDES

- A. CONTRACTOR shall furnish, install, and maintain a temporary field office for OWNER on the PROJECT site during construction. This temporary field office shall be separate from CONTRACTOR's facilities. CONTRACTOR shall determine the location of the temporary field office and storage facilities, subject to OWNER's approval.

2 PART 2 PRODUCTS

2.01 General

- A. At CONTRACTOR's option, portable or mobile buildings or trailers may be used if tied down adequately and modified properly for office use subject to OWNER's approval.
- B. Materials used for the field office may be new or used, but shall be serviceable, adequate for the required purpose, and shall not violate applicable codes or regulations.
- C. Ownership of equipment furnished, unless otherwise specified by the OWNER, will be that of CONTRACTOR.

2.02 Field Office Requirements

- A. The minimum requirements are as follows:
 - 1. Minimum of three hundred thirty (330) square feet in plan with a ninety (90)-inch or higher ceiling.
 - 2. Shall be of weather-tight construction and structurally sound.
 - 3. Shall have floors raised above ground.
 - 4. Insulation shall be compatible with occupancy and storage requirements.
 - 5. At least two (2) latchable windows with security guard screens and blinds or drapes on not fewer than two (2) sides and one (1) solid core entrance door complete with cylinder lock and three (3) keys shall be built into the walls, with railed steps and landings provided at the entrance door.
 - 6. Automatic heating and air conditioning equipment as approved by OWNER to maintain comfort conditions of 70 degrees F properly sized for PROJECT locale and conditions.
 - 7. Minimum of four (4) electrical outlet boxes. Ample electric power to operate installed systems.
 - 8. Exterior lighting at the entrance door.
 - 9. Sanitary and personnel facilities.

10. Office Equipment:
11. Two (2) suitable office desks with drawers and locks.
12. Two (2) suitable office tables not less than three (3) feet by five (5) feet.
13. Three (3) office chairs.
14. One (1) plan rack with drawing hangers.
15. One (1) plan table.
16. Two (2) waste baskets.
17. One (1) supply cabinet with not less than ten (10) square feet of shelving.
18. One (1) metal filing cabinet eighteen (18) by thirty two (32) with four lockable drawers.
19. Two (2) telephones with two (2) separate private lines.
20. Capability for facsimile (fax) machine connection.
21. Drinking water dispensed with an acceptable cooler capable of producing hot and cold water and paper cup dispensers with cups.
22. Paper towel dispenser with towels.
23. One (1) First-aid kit.
24. One (1) Tri-Class (ABC), dry chemical fire extinguisher, 10-pound.
25. Two (2) wastepaper baskets.
26. One (1) ten (10)-inch outdoor-type thermometer, mounted at a convenient location, not in direct sunlight.

3 PART 3 EXECUTION

3.01 INSTALLATION

- A. CONTRACTOR shall construct on proper foundation and on a site which has been filled and graded to provide surface drainage away from the field office.
- B. Provide minimum 100 square feet of gravel or crushed rock base, minimum depth of 4 inches, at each entrance.
- C. Make available for use prior to start of the WORK.
- D. Maintenance and Cleaning:
 1. CONTRACTOR shall provide maintenance and cleaning at least weekly.

2. The maintenance entrance area must be kept dry and free of mud and debris.
- E. Maintain in good repair and appearance, and provide cleaning service and replenishment of supplies as required.
- F. Removal:
 1. CONTRACTOR shall remove the temporary field office, contents, and services at a time they are no longer needed as determined by OWNER.
 2. This includes removing foundations and debris, grading the site to required elevations, and cleaning the areas and restoring the site to the original condition or better.

3.02 TEMPORARY UTILITIES

- A. CONTRACTOR shall be responsible for providing and paying for utility hook-up, including but not limited to:
 1. Power: Determine type and amount available and make arrangements for obtaining temporary electric power service, metering equipment, and pay all costs for electric power used during CONTRACT period, except for portions of WORK designated in writing by OWNER as substantially complete.
 2. Lighting: Provide temporary lighting to meet applicable safety requirements to allow construction, application, or installation of materials and equipment, and observation or inspection of the WORK.
 3. Telephone Service: Arrange and provide onsite telephone service for use during construction. Pay costs of installation and monthly bills.
 4. Heating, Cooling, and Ventilation:
 5. Provide automatic heating and air conditioning equipment to maintain comfort conditions of 70 degrees F as approved by OWNER.
 6. Provide to protect materials, equipment, and finishes from damage because of temperature or humidity.
 7. Provide adequate forced air ventilation of enclosed areas to cure installed materials, to dispense humidity, and to prevent hazardous accumulations of dust, fumes, vapors, or gases.
 8. Pay all costs of installation, maintenance, operation, removal, and fuel consumed.
 9. Provide portable unit heaters, if required by OWNER, complete with controls and suitably vented to outside as required for protection of health and property.
 10. Drinking Water: Provide temporary facilities and piping as approved by OWNER required to bring water to point of use and remove when no longer needed. Install an acceptable metering device and pay for water used at OWNER's current rate.
 11. Sanitary and Personnel Facilities:

12. Provide and service, clean, and maintain facilities for onsite use.
13. Provide facilities in compliance with state and local health authorities.
14. Fire Protection:
15. Furnish and maintain onsite adequate firefighting equipment capable of extinguishing incipient fires.
16. Comply with applicable parts of NFPA 241.

END OF SECTION

**SECTION 00 73 98
TRAFFIC CONTROL**

1 PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Section covers requirements for traffic control during construction of the PROJECT.

1.02 REFERENCES

- A. The following is a list of standards which may be referenced in this section:
1. AASHTO Guide for the Design of Bicycle Facilities, Current Edition.
 2. AASHTO Roadside Design Guide, Current Edition.
 3. American Traffic Safety Services Association (ATSSA).
 4. Colorado Department of Transportation (CDOT), Standard Specifications for Road and Bridge Construction, Current Edition.
 5. Federal Highway Administration. Standard Highway Signs.
 6. NCHRP – Report 350 Recommended Procedures for the Safety Performance Evaluation of Highway Features.
 7. U.S. Department of Transportation, Federal Highway Administration (USDOT): Manual of Uniform Traffic Control Devices (MUTCD).
 8. U.S. Department of Transportation, Federal Highway Administration: Design Guidance: Accommodating Bicycle and Pedestrian Travel: A Recommended Approach.

1.03 SUBMITTALS

- A. Traffic Control Plan developed by CONTRACTOR in accordance with guidance provided in CONTRACT DOCUMENTS.
1. Submit the initial phase Traffic Control Plan at the preconstruction conference. Submit plans for future phases of construction a minimum of 28 days before start of that construction phase to allow review and resubmittal, if necessary, and public notification. Meet with the OWNER, Local Jurisdictions, and other affected agencies having jurisdiction to review the Traffic Control Plans for each phase of construction. Do not begin construction on any given phase before receiving written acceptance.
 2. Failure to submit the Traffic Control Plans within the specified time frames will not be justification for additional working days. Failure to adequately address comments in any required resubmittal also will not justify additional working days.
- B. Administrative Submittals: Copies of permits, licenses, and approvals for construction as required by Laws and Regulations and governing agencies.

1. CONTRACTOR shall be responsible for securing any necessary permits or approvals related to Traffic Control activities. Application for permits and governing agency approvals shall only be made after acceptance of plan by OWNER.

C. Parking area plans.

D. Product Data: Warning signs and barricades.

1.04 VEHICULAR TRAFFIC

A. Traffic Control Plan:

1. If a Traffic Control Plan is provided in the DRAWINGS and SPECIFICATIONS it shall be used by CONTRACTOR as guideline only. The CONTRACTOR shall be responsible for the development and implementation of the Traffic Control Plan.
2. CONTRACTOR shall submit a Traffic Control Plan for approval by OWNER in accordance with the submittal requirements defined in these SPECIFICATIONS. Adjustments to the approved plan may be required by OWNER based on actual traffic operations. Changes to the plan shall only be made with the written approval of the OWNER.

2 PART 2 PRODUCTS

2.01 SAFETY DEVICES AND SYSTEMS

- A. CONTRACTOR shall use devices and systems which meet NCHRP-350 Report crash test requirements as defined by the Federal Highway Administration unless exceptions are granted by the OWNER.

2.02 TRAFFIC CONTROL SIGNING AND DEVICES

- A. Signs: Comply with the requirements of the Traffic Control Plan, other requirements defined in this section and any applicable requirements defined in the reference documents, including CDOT Standard Specifications.
- B. Channelizing Devices:
1. Comply with the requirements of the Traffic Control Plan, other requirements defined in this section and any applicable requirements defined in the reference documents, including CDOT Standard Specifications.
 2. Use construction orange tubular markers and cones during daylight hours only.
- C. Barricades:
1. Comply with the requirements of the Traffic Control Plan, other requirements defined in this section and any applicable requirements defined in the reference documents, including CDOT Standard Specifications.

2. Do not use rocks, asphalt, or concrete pieces, construction materials, and other debris as weighting devices for barricades. Sand bags will be permitted as long as a low center of gravity is maintained as approved.

D. Precast Concrete Barrier:

1. Comply with the requirements of the Traffic Control Plan, other requirements defined in this section and any applicable requirements defined in the reference documents, including CDOT Standard Specifications.
2. Use an approved construction zone attenuator or permanent style end sections, as listed in CDOT Guidelines for Attenuators and End Section.
3. Use a construction zone attenuator when approach ends of temporary precast barrier are within AASHTO clear zone.
4. Use AASHTO Roadside Design Guide to determine proper clear zone distance requirements.

3 PART 3 EXECUTION

3.01 VEHICULAR TRAFFIC

A. CONTRACTOR shall:

1. Conform to the USDOT MUTCD or applicable statutory requirements of authority having jurisdiction and the accepted Traffic Control Plan.
2. Allow emergency vehicles immediate passage.
3. Recognize that Local Government requirements take precedence over the MUTCD. Operations on or about traffic areas and provisions for regulating traffic shall additionally be subject to the regulation of other governmental agencies having jurisdiction over the affected areas.
4. Keep traffic areas free of excavated material, construction equipment, pipe, and other materials and equipment.
5. Keep fire hydrants and water control valves free from obstruction and available for use at all times.
6. Conduct operations in a manner to avoid unnecessary interference with public and private roads and drives and provide and maintain temporary access for businesses and residences. Provide and maintain suitable and safe bridges, detours, or other temporary expedients for accommodation of public and private travel. When access to private driveways must be temporarily denied due to construction operations, notify the property owner or responsible party of such closure not less than 24 hours in advance of closure. Give notification in writing and include the estimated duration of the closure.
7. Minimum lane width shall be 10 feet, unless noted otherwise. Where cones are used to separate traffic lane from construction zone, do not use traffic lane for accessing

construction zone, and do not store materials or equipment on or near shoulder of traffic lane side of roadway.

8. In making street crossings, do not block more than one-half the street at a time. Maintain one lane of traffic at all times. Ensure access for traffic in both directions.
 9. Notify the fire department, police/sheriff department, highway patrol, ambulance service, local school district, and transit 14 days before closing roadway or portion thereof. Notify said departments or agencies when streets are again passable for vehicles. Conduct operations with the least interference to fire equipment access, and at no time prevent such access. Furnish CONTRACTOR's night emergency telephone numbers to the police or sheriff's department.
 10. Pedestrian and bicycle access along sidewalks and streets will be kept open and safe from construction activities and traffic lanes.
- B. Flaggers: May be required to provide for public safety or the regulation of traffic, or by jurisdictional authorities; and if used, shall be properly equipped and certified by ATSSA.

3.02 PROTECTION OF WORK AND PROPERTY

A. **Warning Signs and Barricades:**

1. **Provide warning signs and barricades for the following:**
2. **Open trenches and other excavations.**
3. **Obstructions, such as material piles, equipment (moving or parked), and piled embankment.**
4. **Protection of roads and driveways.**
5. **Warning signs and barricades shall be illuminated by means of warning lights from sunset to sunrise.**

3.03 PARKING

- A. CONTRACTOR, with the approval of OWNER, shall designate parking areas for the use of all construction workers and others performing WORK or furnishing services in connection with the PROJECT so as avoid interference with public traffic, OWNER's operations, or construction activities.

3.04 ROADWAY USAGE BETWEEN OPERATIONS

- A. At all times when WORK is not actually in progress, CONTRACTOR shall make passable and shall open to traffic such portions of the PROJECT and temporary roadways or portions thereof as may be agreed upon between CONTRACTOR and OWNER and all authorities having jurisdiction over any properties involved.

END OF SECTION

SECTION 00 73 99
PRODUCT DELIVERY, STORAGE, AND HANDLING

1 PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Section covers requirements for delivery, storage, and handling of products used in construction of the PROJECT.

1.02 GENERAL

- A. Equipment, materials, and supplies shall be shipped, handled, and stored in ways which shall prevent damage to the items.
- B. Pipe and appurtenances shall be handled and stored as recommended by the manufacturer.
 - 1. Pipes with paint, tape coatings, linings or the like shall be stored to protect the coating or lining from physical damage or other deterioration.
 - 2. Pipe shipped with interior bracing shall have the bracing removed only when recommended by the pipe manufacturer.
- C. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to assure that products are maintained under manufacturer's specified conditions, and free from damage or deterioration.
- D. Store fabricated products above ground on blocking or skids, and prevent soiling or staining. Store loose granular materials in well-drained area on solid surface to prevent mixing with foreign matter. Cover products that are subject to deterioration with impervious sheet coverings' provide adequate ventilation to avoid condensation.

2 PART 2 PRODUCTS

2.01 MATERIALS

- A. Equipment, materials, and supplies to be incorporated in the WORK shall be new, unless otherwise specified.
- B. Equipment, materials, and supplies shall be produced in a good and workmanlike manner.
- C. When the quality of a material, process, or article is not specifically set forth in the DRAWINGS and SPECIFICATIONS, the best available quality of the material, process, or article shall be provided.

3 PART 3 EXECUTION

3.01 GENERAL

- A. Equipment, materials, and supplies shall be installed in ways that shall prevent damage to the items.
- B. Pipe and appurtenances shall be installed as recommended by the manufacturer.
- C. Damaged items shall not be permitted as part of the WORK except in cases of minor damage that have been satisfactorily repaired and are acceptable to the ENGINEER.

END OF SECTION

SECTION 00 90 00
REVISIONS AND MODIFICATIONS

**00 91 13
ADDENDA**

CHERRY CREEK RESERVOIR EAST BOAT RAMP SHORELINE STABILIZATION PHASE 2

Cherry Creek Basin Water Quality Authority
P.O. Box 3166
Centennial, Colorado 80161

Addendum No.: _____

Addendum Date: _____

The following revisions will be incorporated into the CONTRACT DOCUMENTS, for the above-referenced PROJECT:

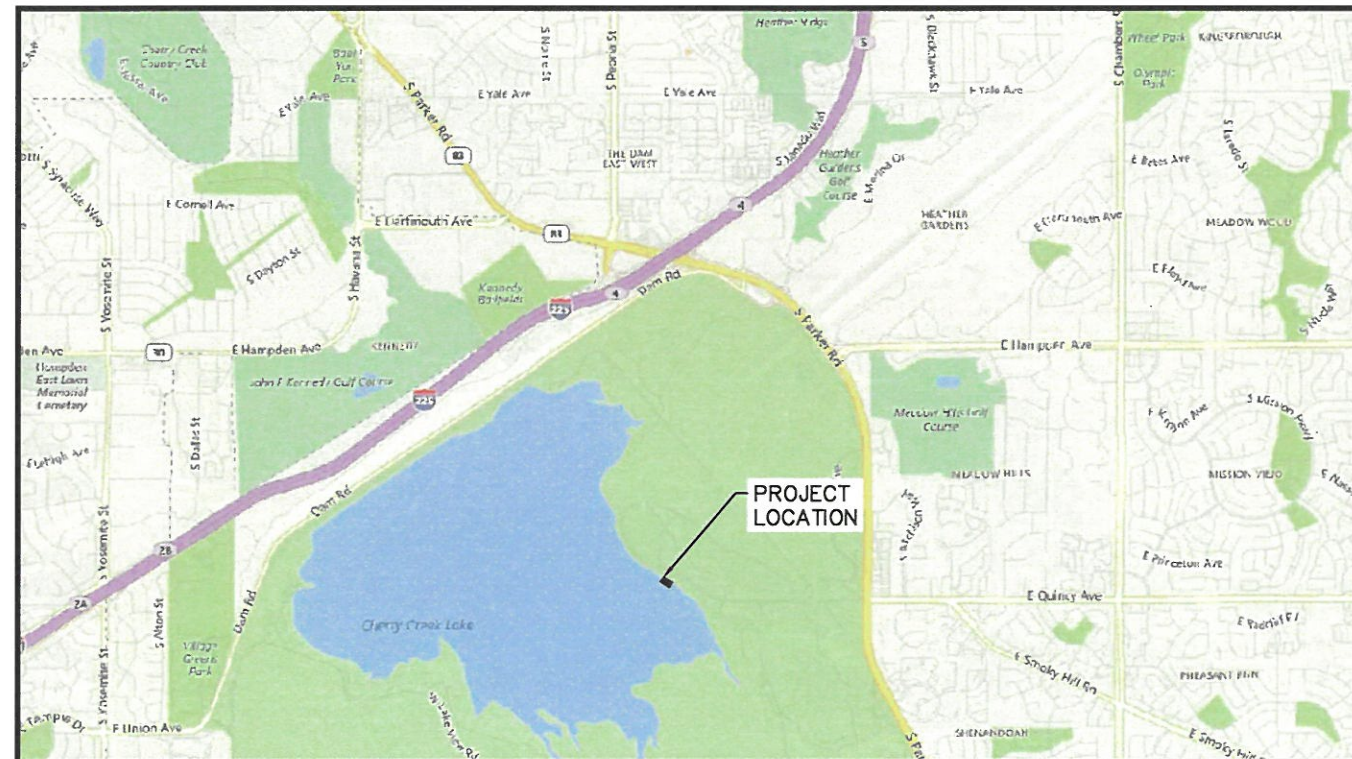
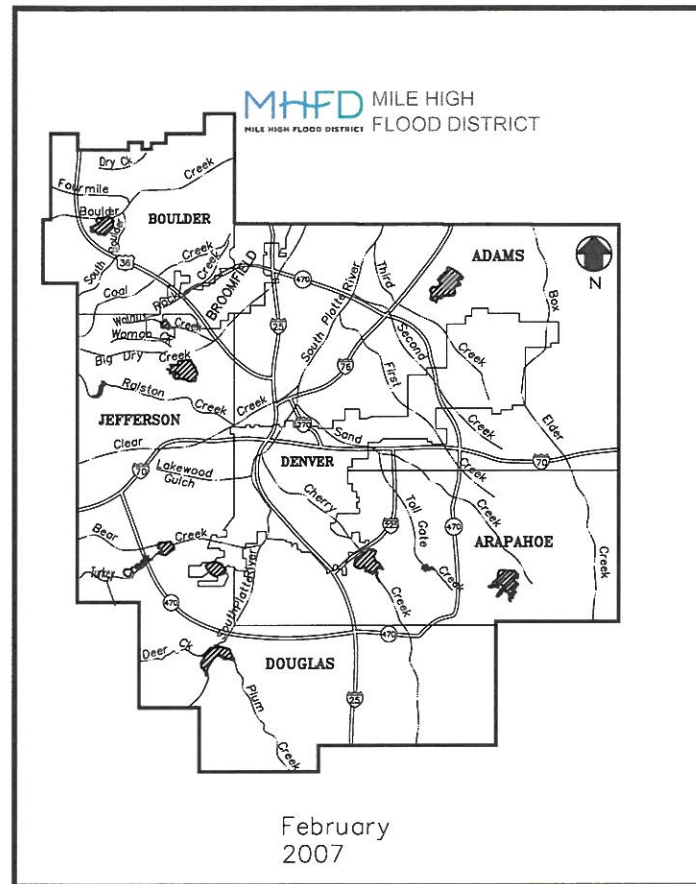
The BID date is/remains _____ 20_____, _____ a.m./p.m., MST/MDT

All other terms and conditions of the CONTRACT DOCUMENTS will remain unchanged. BIDDER must acknowledge receipt of this ADDENDUM in the space provided in the BID. Failure to acknowledge receipt of an ADDENDUM may be cause for rejection of the BID.

END OF SECTION

CHERRY CREEK BASIN WATER QUALITY ASSOCIATION

EAST BOAT RAMP SHORELINE STABILIZATION PHASE 2 CONSTRUCTION DRAWINGS



Sheet List Table	
Sheet Number	Sheet Title
1	COVER SHEET
2	GENERAL NOTES & DETAILS
3	PLAN VIEW
4	CROSS SECTION-STATION 2+73
5	CROSS SECTIONS-STATIONS 2+43 & 2+57
6	CROSS SECTIONS-STATIONS 1+99 & 2+22
7	CROSS SECTIONS- STATIONS 1+68 & 1+83
GESC 1	GESC COVER
GESC 2	GESC Initial Interim
GESC 3	GESC Final
GESC 4	BMP DETAILS
GESC 5	BMP DETAILS 2

— APPROVALS —

CHERRY CREEK BASIN WATER QUALITY AUTHORITY

John McCarty
John McCarty, CC BWQA Co-Manager
DATE 1/4/22

COLORADO PARKS AND WILDLIFE

Jason Trujillo
JASON TRUJILLO, PARK MANAGER
DATE 1/4/22

LOCATION MAP
NOT TO SCALE

DECEMBER 2021



FOR AND ON BEHALF OF
CHERRY CREEK BASIN WATER QUALITY AUTHORITY

Richard Borchardt
RICHARD BORCHARDT, POLLUTION ABATEMENT PROJECT MANAGER

1/4/2022
DATE



Know what's below.
Call before you dig.

GENERAL NOTES

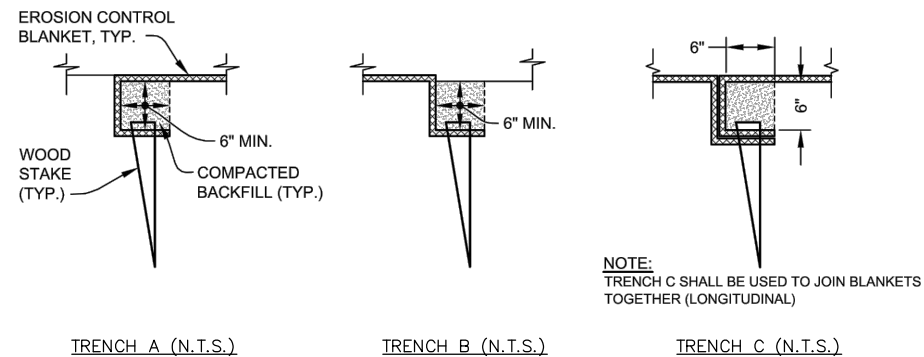
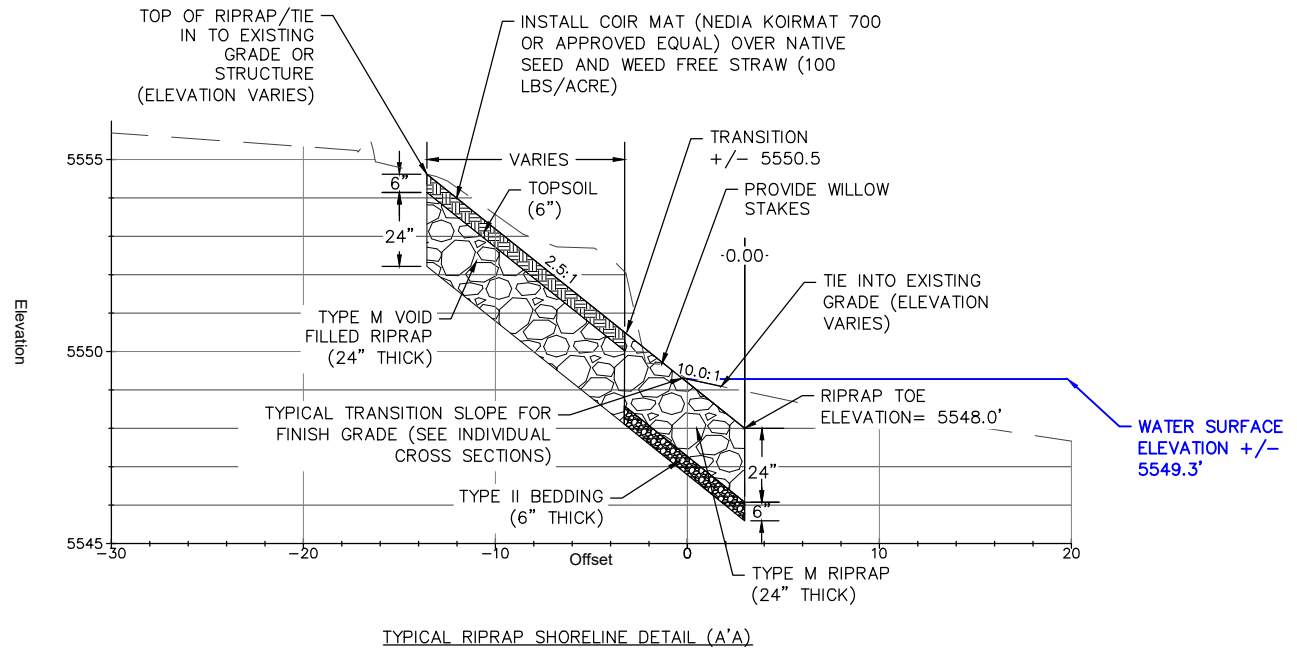
1. LOCATIONS OF UTILITIES MEET AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD GUIDELINE FOR COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA (ASCE 38) QUALITY LEVEL C. LOCATIONS REPRESENT THE BEST-KNOWN LOCATIONS AT THE TIME OF PREPARATION OF DRAWINGS. UTILITIES SHOWN ON PLANS ARE LOCATED OUTSIDE OF AREA OF EXCAVATION NEEDED FOR PROJECT. THE CONTRACTOR SHALL FIELD-LOCATE ALL UTILITIES IN ADVANCE OF EXCAVATION. AFTER LOCATION, IF ANY UTILITY IS WITHIN 18 INCHES OF THE EXCAVATION AREA, THE CONTRACTOR SHALL CONTACT THE OWNER AND ENGINEER IMMEDIATELY. EXCAVATION AREA MAY BE ALTERED TO AVOID UTILITY OR UTILITY POTHOLED TO DETERMINE LOCATION BEFORE EXCAVATION BEGINS. ALL UTILITIES SHALL BE PROTECTED BY THE CONTRACTOR IN PLACE.
2. PROJECT FACILITIES ARE TO BE LOCATED BASED ON THE SURVEY COORDINATES, ELEVATIONS, DIMENSIONS, AND/OR GEOMETRIC DESIGN DATA PROVIDED ON THE DRAWINGS. WHERE SUCH INFORMATION IS NOT INDICATED ON THE DRAWINGS, FINISHED GRADES AND FACILITY LOCATIONS ARE TO BE DERIVED FROM PLAN VIEW LAYOUT LINES AND CONTOURS.
3. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING STABLE EXCAVATIONS AND TEMPORARY SLOPES AND FOR SATISFYING ALL APPLICABLE OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS. TEMPORARY EXCAVATIONS SHALL PROVIDE, AT MINIMUM, THE TRENCH DIMENSIONS AND CLEARANCES SHOWN OR SPECIFIED. TEMPORARY CONSTRUCTION SLOPES SHALL BE SLOPED, SHORED, SHEETED, AND/OR BRACED IN ACCORDANCE WITH STABILITY REQUIREMENTS AND APPLICABLE REGULATIONS, AND SHALL BE NO STEEPER THAN THE SLOPES SHOWN OR SPECIFIED WITHOUT THE APPROVAL OF THE ENGINEER. ANY SUCH APPROVALS BY THE ENGINEER WILL NOT RELIEVE THE CONTRACTOR FROM SOLE RESPONSIBILITY FOR PROVIDING STABLE EXCAVATIONS AND TEMPORARY SLOPES.
4. THE WORK WILL TAKE PLACE IN AND AROUND A BODY OF WATER, SUBJECT TO PERIODIC FLOODING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF SURFACE AND SUBSURFACE WATER DURING THE COURSE OF THE WORK. ANY DAMAGE TO THE WORK RESULTING FROM SUBSURFACE, BASE FLOWS OR FLOOD FLOWS, INCLUDING BOUYANCY FORCES ON PIPELINES AND OTHER FACILITIES, SHALL BE CORRECTED BY THE CONTRACTOR AT THE CONTRACTOR'S SOLE COST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND SATISFYING THE REQUIREMENTS OF ANY APPLICABLE PERMITS PERTAINING TO WATER AND EROSION CONTROL. THE OWNER HAS OBTAINED THE 404 PERMIT AND WILL PROVIDE IT TO THE CONTRACTOR.
5. THE CONSTRUCTION WORK IS LIMITED TO THE PUBLIC RIGHT OF WAY AND THE CONSTRUCTION LIMITS SHOWN ON THE DRAWINGS.
6. EXISTING FACILITIES NOT INDICATED TO BE REMOVED SHALL BE PROTECTED IN PLACE OR REMOVED AND REPLACED IN KIND, AS APPROVED BY THE ENGINEER.
7. SCALES SHOWN ARE FOR FULL SIZE (22"x34") SHEETS AND REQUIRE ADJUSTMENT FOR HALF SIZE (11"x17") SHEETS.
8. TOPOGRAPHIC MAPPING ON THE DRAWINGS WAS PREPARED BY DALEY LAND SURVEYING. BASED ON A TOPOGRAPHIC SURVEY CONDUCTED IN 2019.

PROJECT INFORMATION

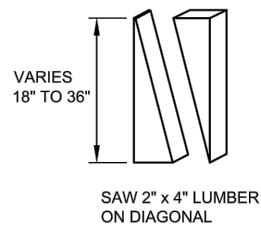
COORDINATE SYSTEM:
 NAME: US STATE PLAN 1983
 DATUM: NAD 1983 (CONUS)
 ZONE: COLORADO CENTRAL 0502
 GEOID: COLO G12A
 VERTICAL DATUM: MODIFIED NGVD29

NGS BENCHMARK PROJECT/SITE USACE ELEVATION 0.954 FEET ABOVE NGVD 29, ELEVATION 5702.734 FEET. STAINLESS STEEL ROD IN SLEEVE PUBLISHED NGVD ELEVATION 5701.78 FEET.

STATION DESCRIPTION DESCRIBED BY NATIONAL GEODETIC SURVEY 1984 IN AURORA. IN AURORA, AT THE INTERSECTION OF EAST HAMPDEN AVENUE AND EAST HAMPDEN CIRCLE, 11.7 METERS (38.4 FT) SOUTH OF THE CENTERLINE OF THE EAST BOUND LANES OF THE AVENUE, 8.4 METERS (27.6 FT) EAST OF THE CENTER OF THE NORTH BOUND LANES OF THE CIRCLE, AND 4.3 METERS (14.1 FT) SOUTH OF A STREET LIGHT POLE NUMBER 9419. NOTE=ACCESS TO THE DATUM POINT IS THROUGH A 5-INCH LOGO CAP. THE MARK IS 0.3 METERS N FROM A WITNESS POST. THE MARK IS 1.0 M ABOVE THE AVENUE. STATION RECOVERY (2006) RECOVERY NOTE BY US POWER SQUADRON 2006 (PDF) MARK NOT FOUND. OBTAINED BY LANDSCAPING. STATION RECOVERY (2012) RECOVERY NOTE BY CITY OF AURORA COLORADO 2012 (DMR) RECOVERD AS DESCRIBED, STATION RECOVERY (2018) RECOVERY NOTE BY WOOLPERT CONSULTANTS 2018 (ZJH) INTERSECTION HAS BEEN REBUILT. MARK IS ABOUT 5 FT (1.5 M) SOUTH OF THE EDGE OF A SIDEWALK, 4.5 FT (1.4 M) SOUTHEAST OF A STEEL TRAFFIC SIGNAL POLE, 1.5 FT (0.5 M) SOUTHEAST OF A SMALL ELECTRICAL VAULT AND 1 FT (0.3 M) NORTH OF A CARSONITE WITNESS POST.



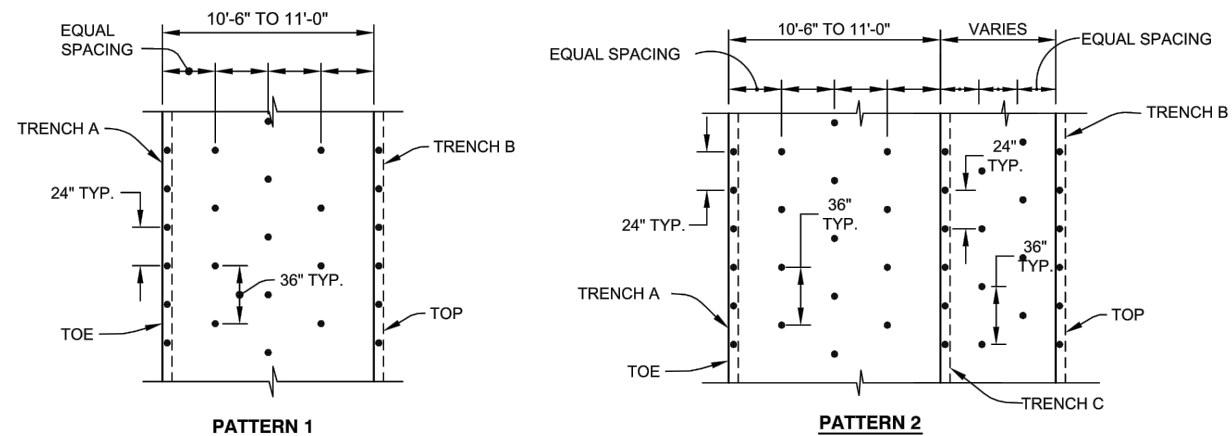
ANCHOR TRENCH DETAILS FOR EROSION CONTROL BLANKETS



WOOD STAKE DETAIL (N.T.S.)

NOTES:

1. SEED AND MULCH PRIOR TO INSTALLING JUTE. JUTE TOTAL WIDTH SHALL BE 13', BUT ONLY 10'-6" TO 11' OF WIDTH WILL BE EXPOSED ON SLOPE. STAKE JUTE BETWEEN ANCHORED ENDS WITH 3 ROWS OF 18" LONG WOOD STAKES @ 36" O.C. (SEE STAKING PATTERN 1 AND 3).
2. POSITION ROW STAKES IN AN ALTERNATING STAGGER PATTERN SO THAT STAKES FOR THE ROW ARE POSITIONED IN BETWEEN STAKES FOR ADJACENT ROWS.
3. CONTRACTOR SHALL USE STEEL PENETRATION RODS OR OTHER MEANS AS NECESSARY TO PENETRATE RIPRAP LAYER WITH WOOD STAKES.



STAKING PATTERNS FOR EROSION CONTROL BLANKETS (N.T.S.)

NOTE:
 INSTALL WOOD STAKES SUCH THAT ONLY 1" IS EXPOSED ABOVE GROUND.



VERIFY SCALE:
 BAR IS ONE INCH ON ORIGINAL DRAWINGS



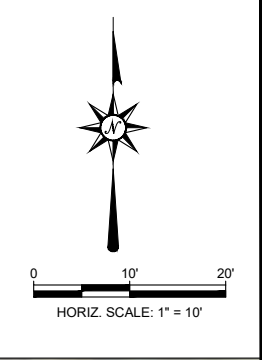
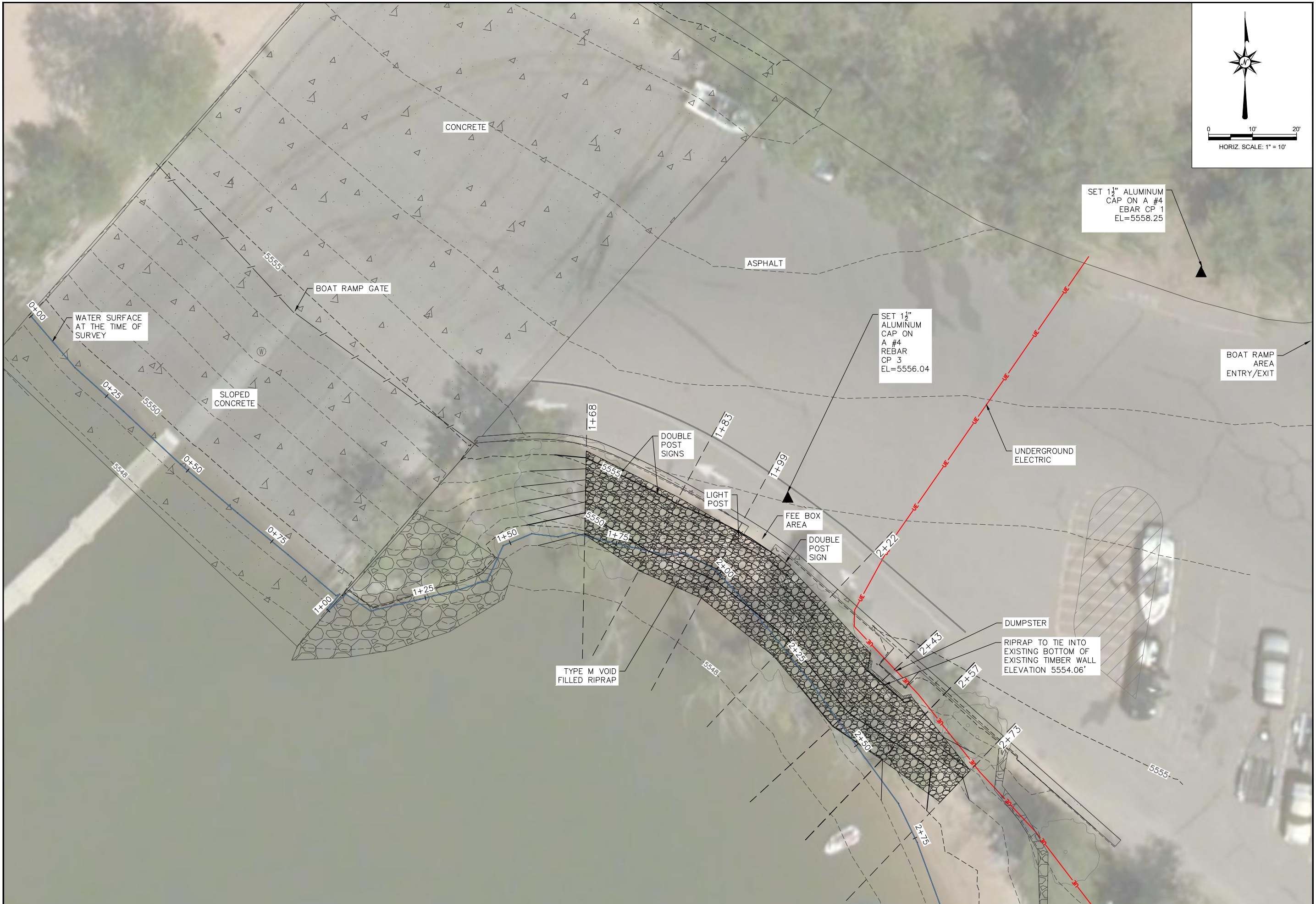
Know what's below.
 Call before you dig.

CHERRY CREEK STATE PARK
 EAST BOAT RAMP SHORELINE STABILIZATION
 GENERAL NOTES & DETAILS

#	DATE	DESCRIPTION	INITIALS

DATE
 DEC 2021

SHEET
 2

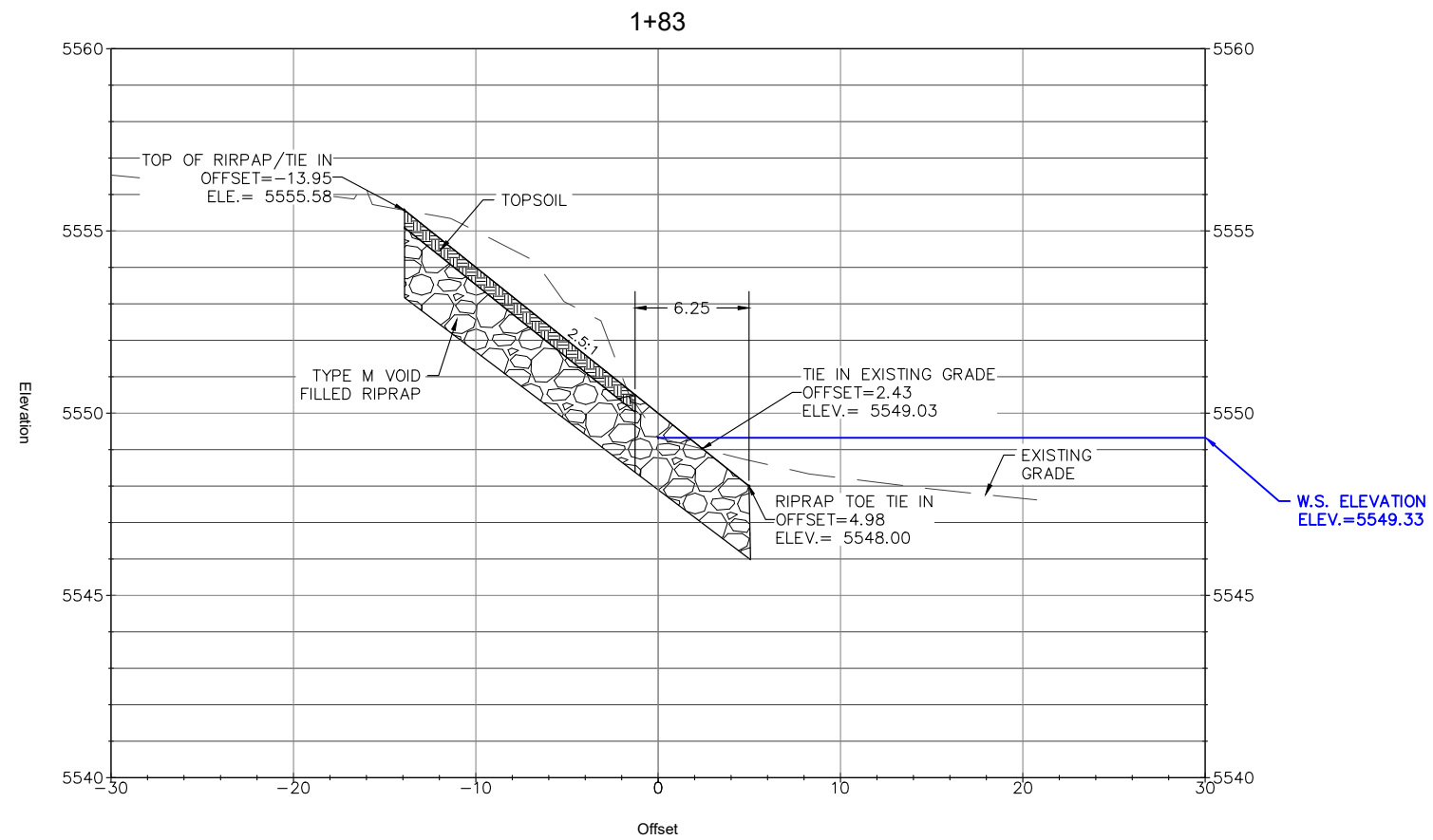
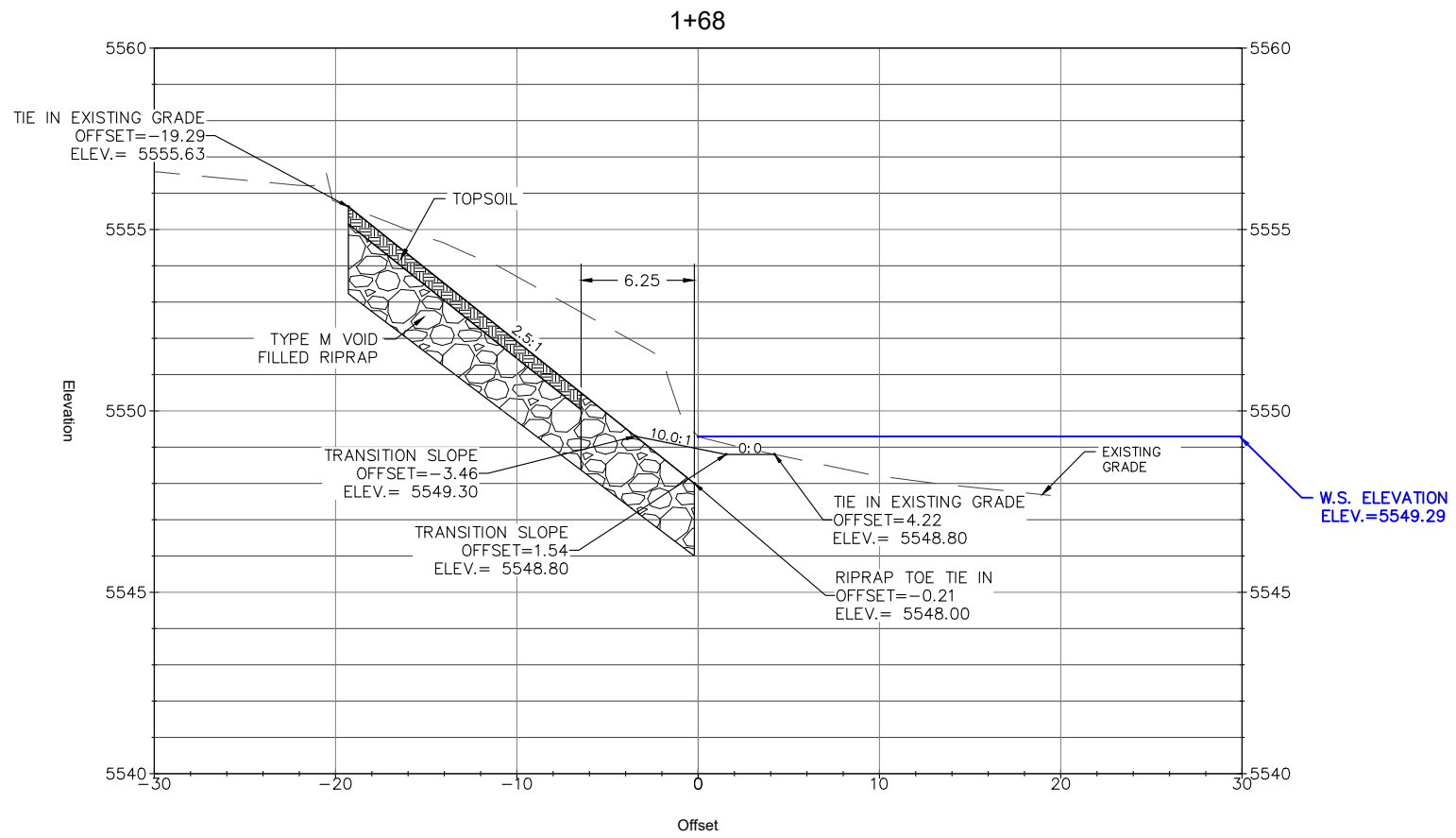


VERIFY SCALE:
BAR IS ONE INCH
ON ORIGINAL
DRAWINGS



CHERRY CREEK STATE PARK
EAST BOAT RAMP SHORELINE STABILIZATION
PLAN VIEW

#	DATE	DESCRIPTION	INITIALS



VERIFY SCALE:
BAR IS ONE INCH
ON ORIGINAL
DRAWINGS

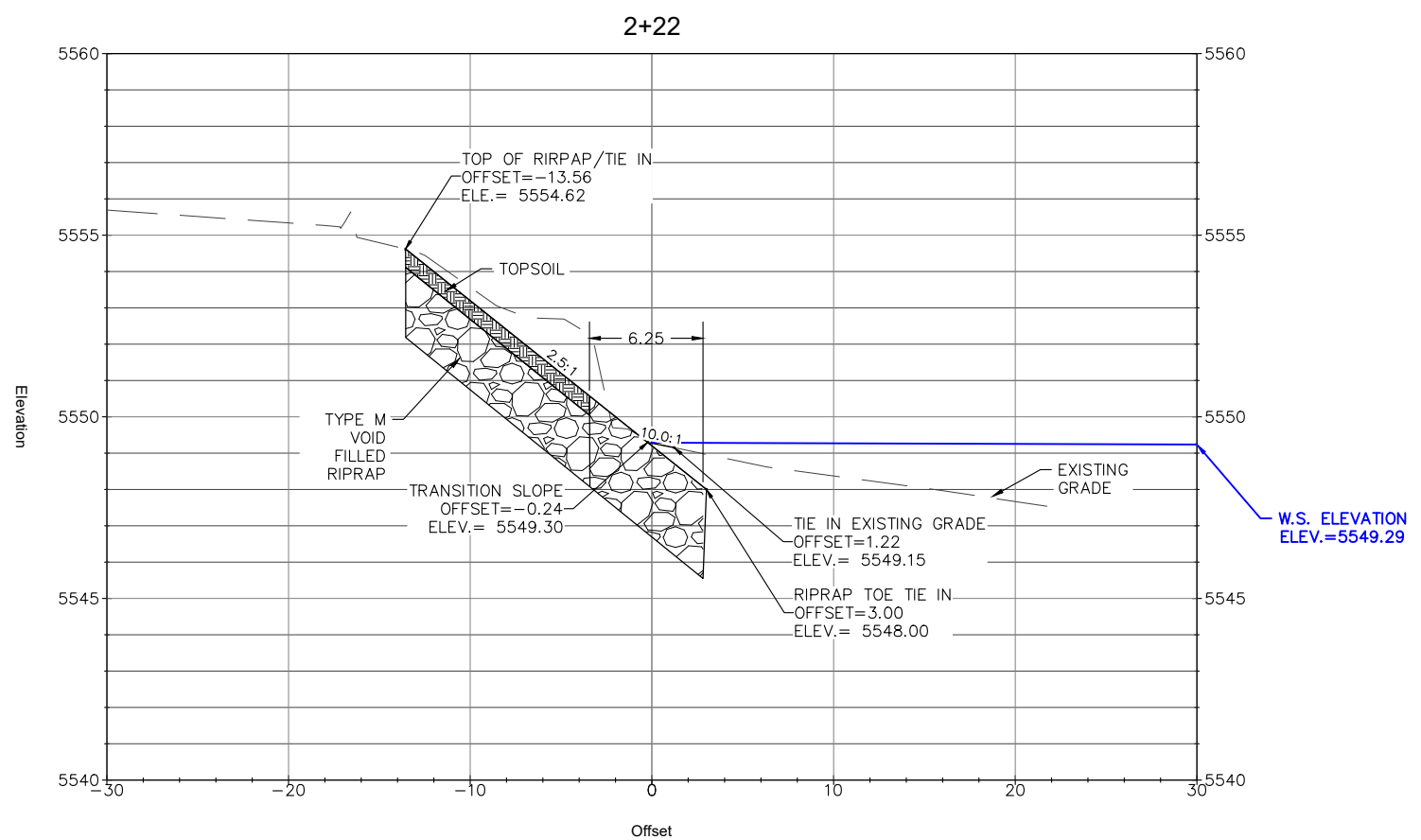
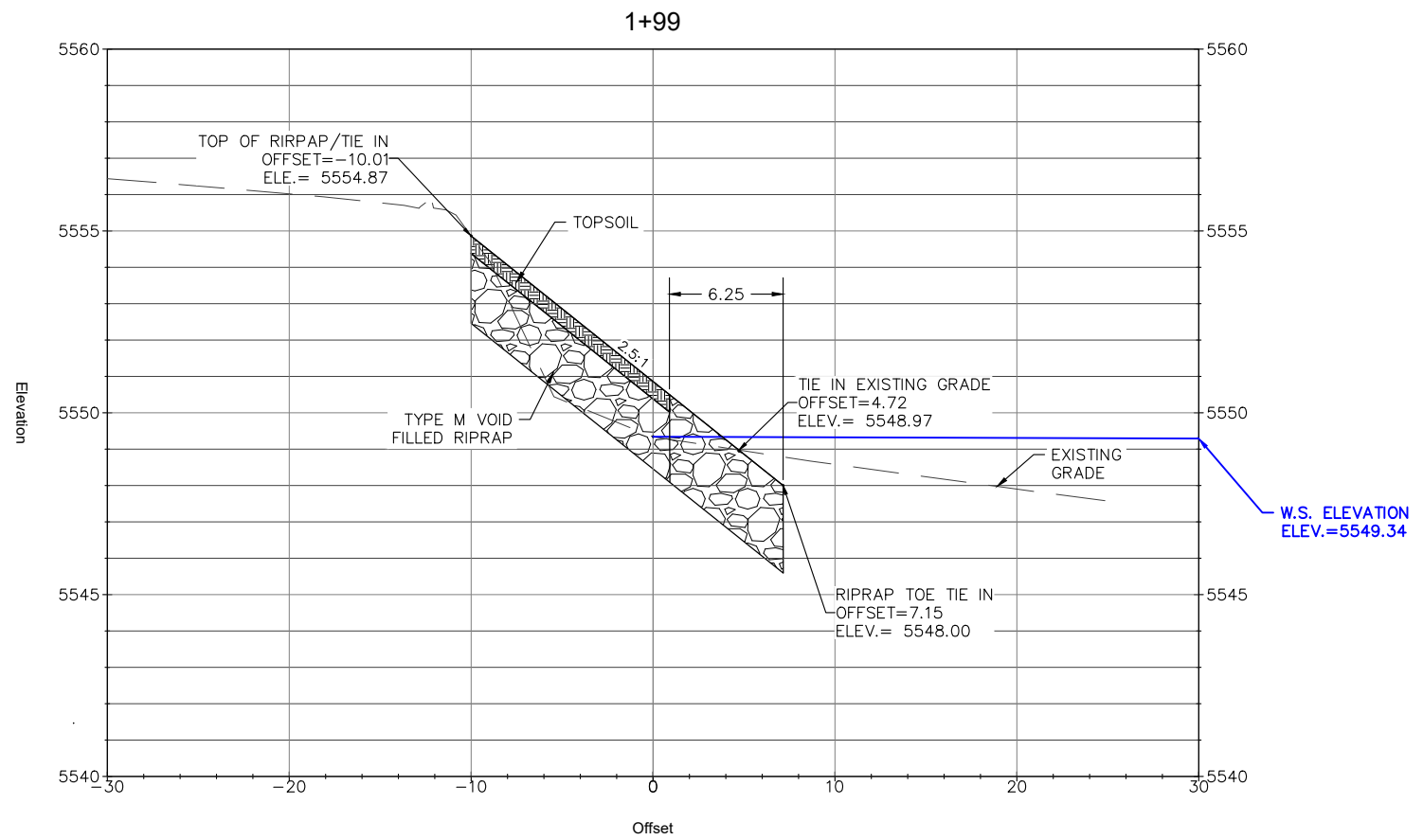


CHERRY CREEK STATE PARK
EAST BOAT RAMP SHORELINE STABILIZATION
CROSS SECTIONS
STATIONS 1+68 & 1+83

#	DATE	DESCRIPTION	INITIALS

DATE
DEC 2021

SHEET
4



VERIFY SCALE:
BAR IS ONE INCH
ON ORIGINAL
DRAWINGS



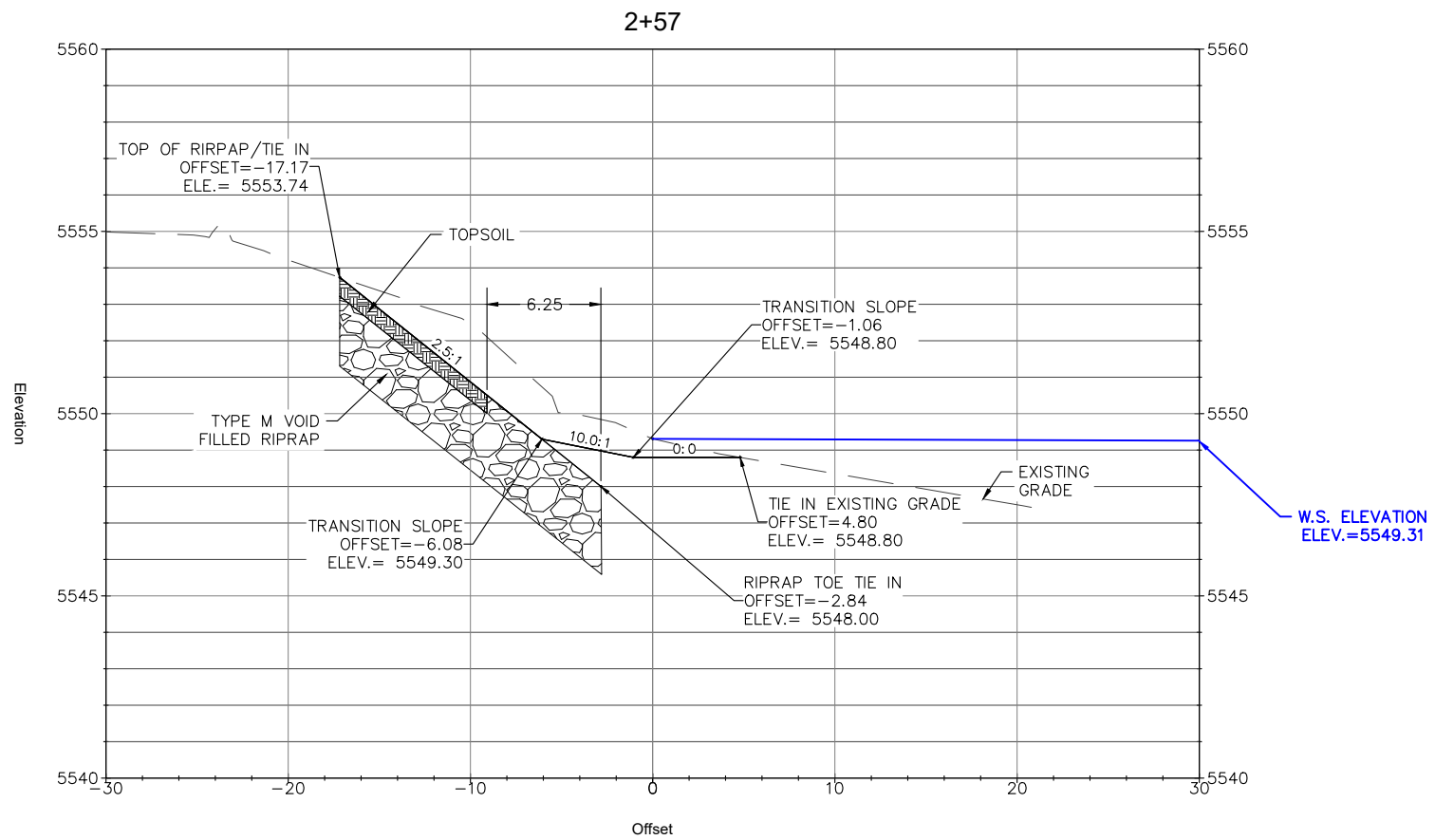
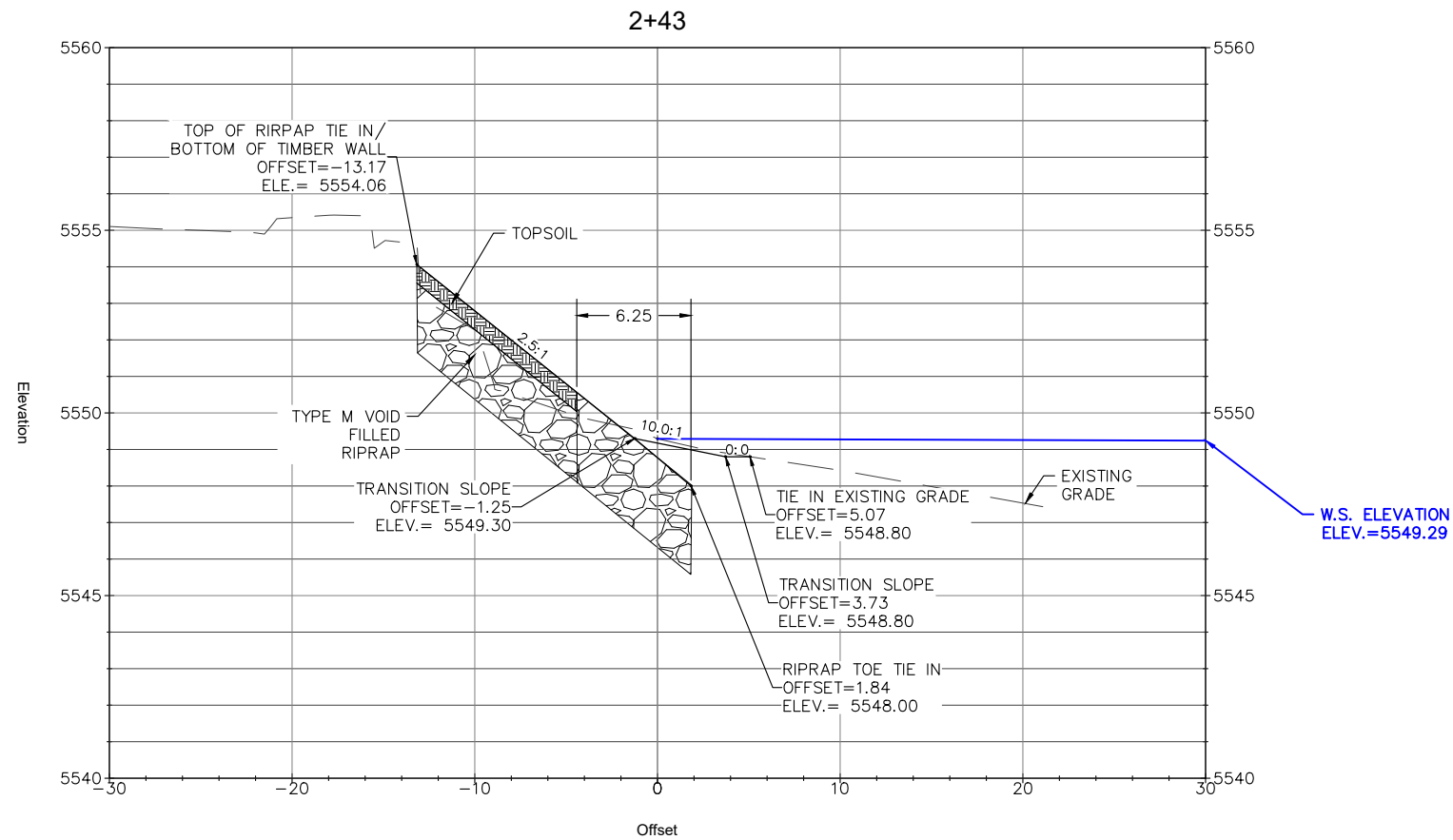
Know what's below.
Call before you dig.

CHERRY CREEK STATE PARK
 EAST BOAT RAMP SHORELINE STABILIZATION
 CROSS SECTIONS
 STATIONS 1+99 & 2+22

#	DATE	DESCRIPTION	INITIALS

DATE
DEC 2021

SHEET
5



VERIFY SCALE:
BAR IS ONE INCH
ON ORIGINAL
DRAWINGS



Know what's below.
Call before you dig.

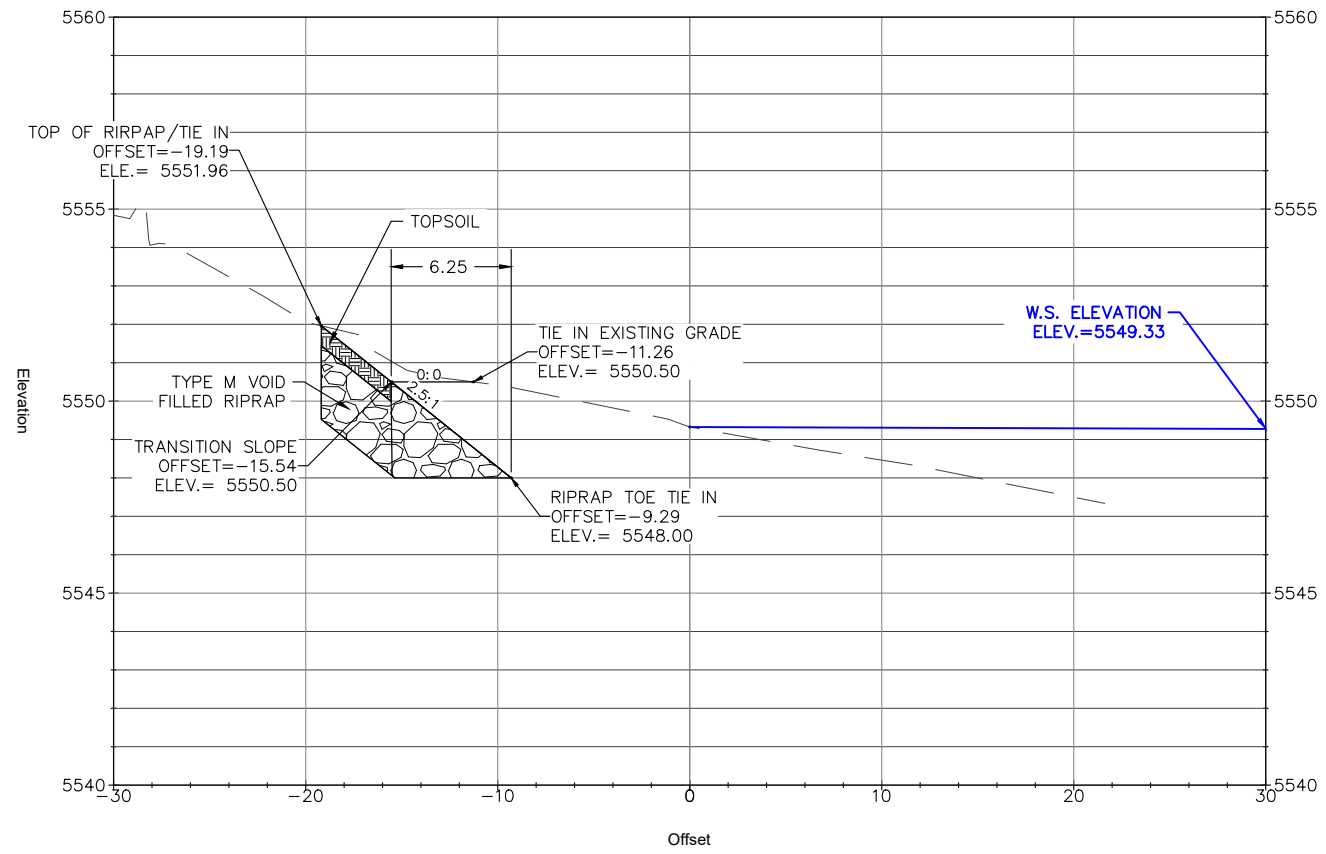
CHERRY CREEK STATE PARK
 EAST BOAT RAMP SHORELINE STABILIZATION
 CROSS SECTIONS
 STATIONS 2+43 & 2+57

#	DATE	DESCRIPTION	INITIALS

DATE
DEC 2021

SHEET
6

2+73



VERIFY SCALE:
BAR IS ONE INCH
ON ORIGINAL
DRAWINGS



Know what's below.
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CHERRY CREEK STATE PARK
EAST BOAT RAMP SHORELINE STABILIZATION
CROSS SECTION
STATION 2+73

#	DATE	DESCRIPTION	INITIALS

DATE
DEC 2021

SHEET
7

CHERRY CREEK BASIN WATER QUALITY AUTHORITY

STABILIZATION OF SHORELINE BANK ARAPAHOE COUNTY PROJECT No. - EE22-004

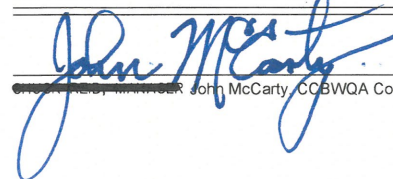


— APPROVALS —

"This Grading, Erosion and Sediment Control (GESC) document has been placed in the project file for this project and appears to fulfill the latest version of the Grading, Erosion and Sediment Control Manual. Additional grading, erosion and sediment Control Measures may be required of the owner or his/her agents, due to unforeseen erosion problems or if the submitted plan does not function as intended. The requirements of this GESC document shall run with the land and be the obligation of the land owner, or his/her designated representative(s) until such time as the plan is properly completed, modified or voided."

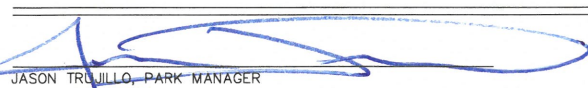
"I hereby certify that the Grading, Erosion, and Sediment Control Measures for Cherry Creek East Ramp Bank Stabilization shall be constructed according to the design presented in this document. I understand that additional erosion control, sediment control and water quality enhancing measures may be required of the owner and his or her agents due to unforeseen pollutant discharges or if the submitted plan does not function as intended. The requirements of the plan shall be the obligation of the land owner and/or his successors or heirs, until such time as the plan is properly completed, modified or voided."

CHERRY CREEK BASIN WATER QUALITY AUTHORITY

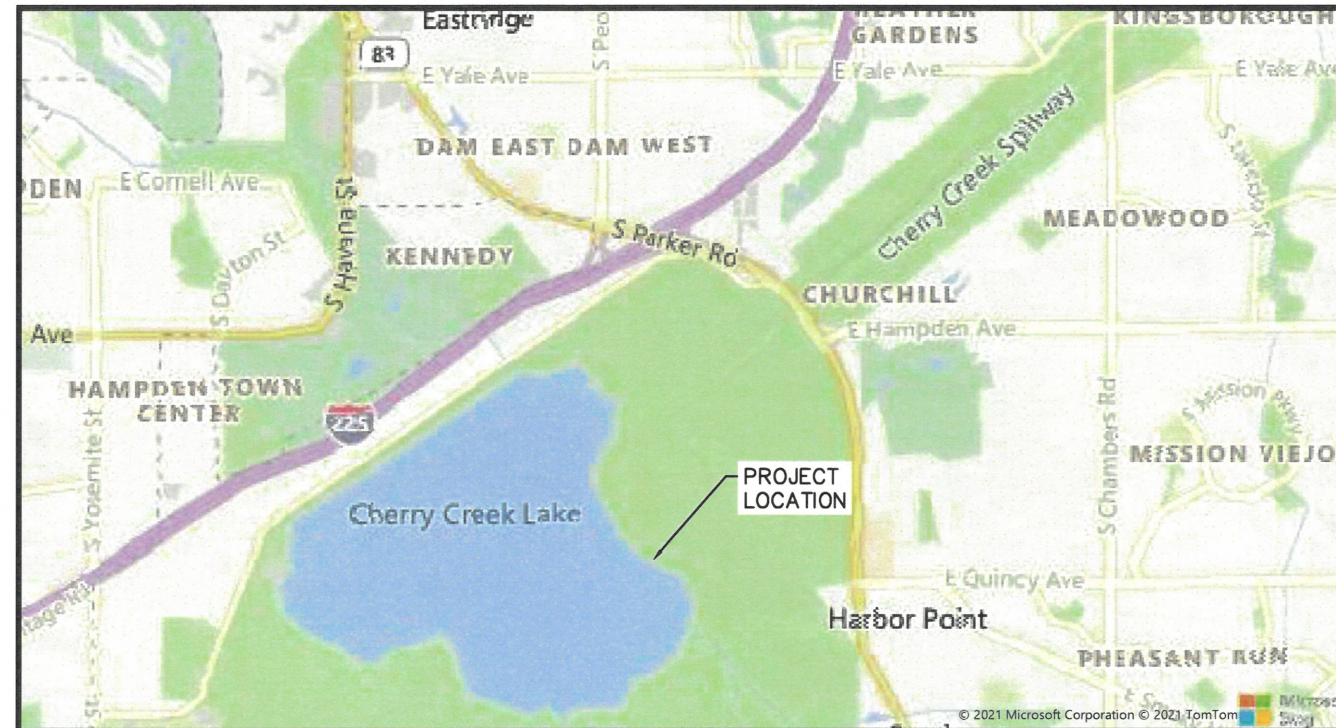

John McCarty, CCBWQA Co-Manager

1/4/22
DATE

COLORADO PARKS AND WILDLIFE


JASON TRUJILLO, PARK MANAGER

1/4/22
DATE



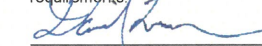
LOCATION MAP
NOT TO SCALE

DECEMBER 2021



FOR AND ON BEHALF OF
LOEWEN ENGINEERING, INC.

"I hereby attest that this Grading, Erosion, and Sediment Control (GESC) document for Cherry Creek Basin Water Quality Authority has been prepared by me or under my direct supervision, and to the best of my knowledge and ability has been prepared in accordance with the latest version of the GESC Manual. The signature and stamp affixed hereon certifies that this GESC document was prepared in accordance with the required regulations and criteria; however, the stamp and signature does not certify or guarantee future performance of the execution of the plan by the Contractor. The Contractor is responsible for executing the construction work according to the information set forth in the plan and in accordance with all applicable requirements."


PROJECT MANAGER: DANIEL LOEWEN, PE

1/3/22
DATE



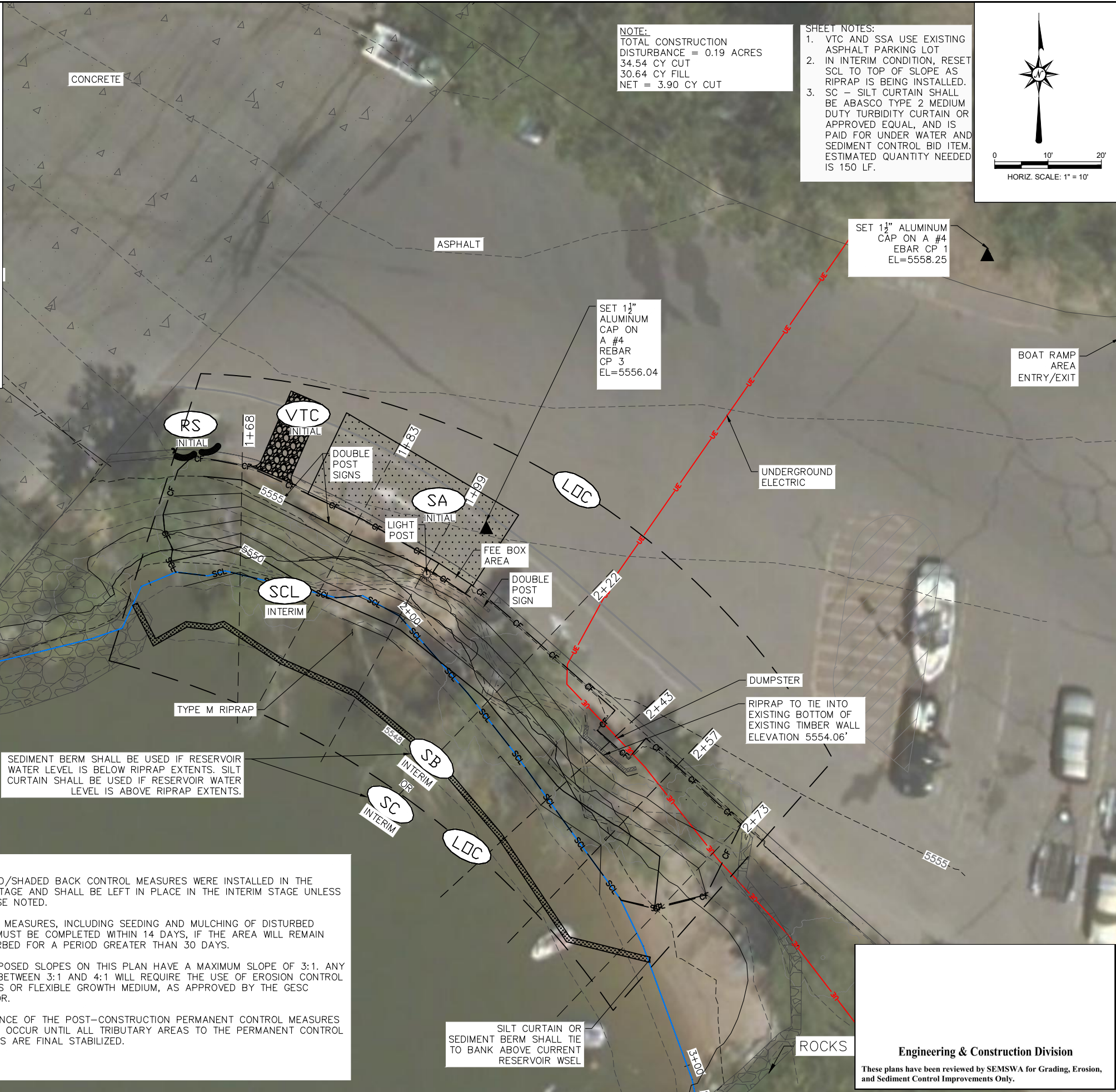
Know what's below.
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Engineering & Construction Division
These plans have been reviewed by SEMSWA for Grading, Erosion, and Sediment Control Improvements Only.

Sheet Number	Sheet Title
GESC 1	COVER
GESC 2	GESC Initial Interim
GESC 3	GESC Final
GESC 4	GESC DETAILS
GESC 5	GESC DETAILS 2

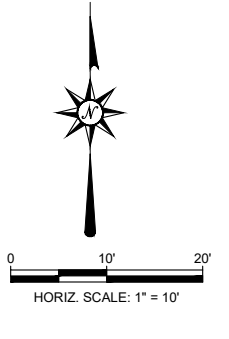
LEGEND

	VTC INITIAL	VEHICLE TRACKING CONTROL
	SA INITIAL	STAGING AREA
	SB INTERIM	SILT/SEDIMENT BERM
	CF INITIAL	CONSTRUCTION FENCE
	LDC INITIAL	LIMITS OF CONSTRUCTION
	SCL INTERIM	SEDIMENT CONTROL LOG
	SP INITIAL	STOCKPILE PROTECTION
	RS INITIAL	ROCK SOCK
	SC INTERIM	SILT CURTAIN



NOTE:
 TOTAL CONSTRUCTION DISTURBANCE = 0.19 ACRES
 34.54 CY CUT
 30.64 CY FILL
 NET = 3.90 CY CUT

SHEET NOTES:
 1. VTC AND SSA USE EXISTING ASPHALT PARKING LOT
 2. IN INTERIM CONDITION, RESET SCL TO TOP OF SLOPE AS RIPRAP IS BEING INSTALLED.
 3. SC - SILT CURTAIN SHALL BE ABASCO TYPE 2 MEDIUM DUTY TURBIDITY CURTAIN OR APPROVED EQUAL, AND IS PAID FOR UNDER WATER AND SEDIMENT CONTROL BID ITEM. ESTIMATED QUANTITY NEEDED IS 150 LF.



SET 1 1/2" ALUMINUM CAP ON A #4 REBAR CP 1 EL=5558.25

SET 1 1/2" ALUMINUM CAP ON A #4 REBAR CP 3 EL=5556.04

SEDIMENT BERM SHALL BE USED IF RESERVOIR WATER LEVEL IS BELOW RIPRAP EXTENTS. SILT CURTAIN SHALL BE USED IF RESERVOIR WATER LEVEL IS ABOVE RIPRAP EXTENTS.

NOTE:
 APPROPRIATE CONTROL MEASURES MUST BE IMPLEMENTED PRIOR TO THE START OF LAND DISTURBANCE ACTIVITY, MUST CONTROL POTENTIAL POLLUTANTS DURING EACH PHASE OF CONSTRUCTION, AND MUST BE CONTINUED THROUGH FINAL STABILIZATION. APPROPRIATE STRUCTURAL AND NON-STRUCTURAL CONTROL MEASURES MUST BE MAINTAINED IN OPERATIONAL CONDITION.
 SEE STANDARD NOTES AND DETAILS (SHEET 1) FOR LEGEND OF CONTROL MEASURES NAMES AND SYMBOLS.
 ANY CONTROL MEASURES SHOWN THAT REQUIRE GRADING, (E.G. SEDIMENT BASINS, SEDIMENT TRAPS, CONCRETE WASHOUT AREAS, ETC.), SHALL NOT BE PLACED UNTIL AFTER THE PRE-CONSTRUCTION MEETING AND ISSUANCE OF THE GESC PERMIT, BUT MUST BE FULLY FUNCTIONAL PRIOR TO ANY LARGE-SCALE GRADING. THE INITIAL PLAN ILLUSTRATES EXISTING CONDITIONS. NO PROPOSED INFRASTRUCTURE IS SHOWN.
 ALL INTERIM CONTROL MEASURES, INCLUDING SEEDING AND MULCHING OR DISTURBED AREAS, MUST BE COMPLETED WITHIN 14 DAYS IF THE AREAS WILL REMAIN UNDISTURBED FOR A PERIOD GREATER THAN 30 DAYS.

NOTE:
 SCREENED/SHADED BACK CONTROL MEASURES WERE INSTALLED IN THE INITIAL STAGE AND SHALL BE LEFT IN PLACE IN THE INTERIM STAGE UNLESS OTHERWISE NOTED.
 CONTROL MEASURES, INCLUDING SEEDING AND MULCHING OF DISTURBED AREAS, MUST BE COMPLETED WITHIN 14 DAYS, IF THE AREA WILL REMAIN UNDISTURBED FOR A PERIOD GREATER THAN 30 DAYS.
 ALL PROPOSED SLOPES ON THIS PLAN HAVE A MAXIMUM SLOPE OF 3:1. ANY SLOPES BETWEEN 3:1 AND 4:1 WILL REQUIRE THE USE OF EROSION CONTROL BLANKETS OR FLEXIBLE GROWTH MEDIUM, AS APPROVED BY THE GESC INSPECTOR.
 ACCEPTANCE OF THE POST-CONSTRUCTION PERMANENT CONTROL MEASURES WILL NOT OCCUR UNTIL ALL TRIBUTARY AREAS TO THE PERMANENT CONTROL MEASURES ARE FINAL STABILIZED.

SILT CURTAIN OR SEDIMENT BERM SHALL TIE TO BANK ABOVE CURRENT RESERVOIR WSEL

Engineering & Construction Division
 These plans have been reviewed by SEMSWA for Grading, Erosion, and Sediment Control Improvements Only.

R2R ENGINEERS
 RIFFLES TO RIPPLES


811
 Know what's below. Call before you dig.


CHERRY CREEK STATE PARK
EAST BOAT RAMP SHORELINE STABILIZATION
INITIAL / INTERIM GRADING EROSION, AND SEDIMENT CONTROL

#	DATE	DESCRIPTION	INITIALS

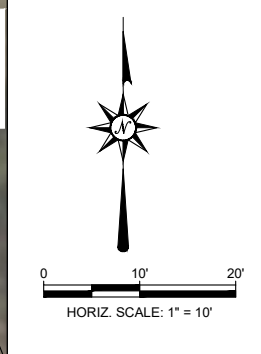
DATE: DEC 2021
 SHEET: GESC 2

LEGEND

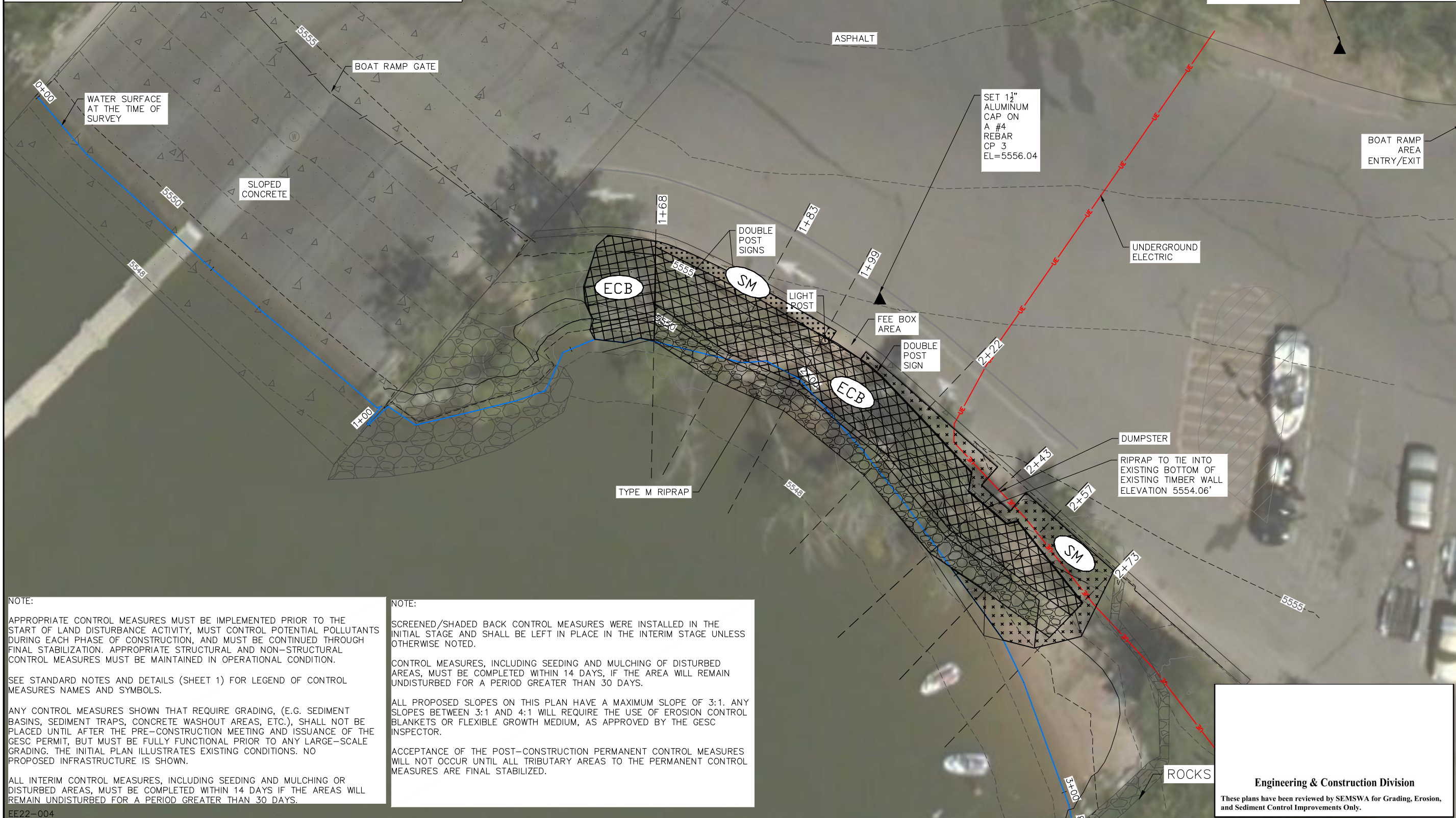
 **ECB** EROSION CONTROL BLANKET

 **SM** SEED/MULTCH

NOTE:
 TOTAL CONSTRUCTION
 DISTURBANCE = 0.19 ACRES
 34.54 CY CUT
 30.64 CY FILL
 NET = 3.90 CY CUT



HORIZ. SCALE: 1" = 10'



NOTE:
 APPROPRIATE CONTROL MEASURES MUST BE IMPLEMENTED PRIOR TO THE START OF LAND DISTURBANCE ACTIVITY, MUST CONTROL POTENTIAL POLLUTANTS DURING EACH PHASE OF CONSTRUCTION, AND MUST BE CONTINUED THROUGH FINAL STABILIZATION. APPROPRIATE STRUCTURAL AND NON-STRUCTURAL CONTROL MEASURES MUST BE MAINTAINED IN OPERATIONAL CONDITION.

SEE STANDARD NOTES AND DETAILS (SHEET 1) FOR LEGEND OF CONTROL MEASURES NAMES AND SYMBOLS.

ANY CONTROL MEASURES SHOWN THAT REQUIRE GRADING, (E.G. SEDIMENT BASINS, SEDIMENT TRAPS, CONCRETE WASHOUT AREAS, ETC.), SHALL NOT BE PLACED UNTIL AFTER THE PRE-CONSTRUCTION MEETING AND ISSUANCE OF THE GESC PERMIT, BUT MUST BE FULLY FUNCTIONAL PRIOR TO ANY LARGE-SCALE GRADING. THE INITIAL PLAN ILLUSTRATES EXISTING CONDITIONS. NO PROPOSED INFRASTRUCTURE IS SHOWN.

ALL INTERIM CONTROL MEASURES, INCLUDING SEEDING AND MULCHING OR DISTURBED AREAS, MUST BE COMPLETED WITHIN 14 DAYS IF THE AREAS WILL REMAIN UNDISTURBED FOR A PERIOD GREATER THAN 30 DAYS.

NOTE:
 SCREENED/SHADED BACK CONTROL MEASURES WERE INSTALLED IN THE INITIAL STAGE AND SHALL BE LEFT IN PLACE IN THE INTERIM STAGE UNLESS OTHERWISE NOTED.

CONTROL MEASURES, INCLUDING SEEDING AND MULCHING OF DISTURBED AREAS, MUST BE COMPLETED WITHIN 14 DAYS, IF THE AREA WILL REMAIN UNDISTURBED FOR A PERIOD GREATER THAN 30 DAYS.

ALL PROPOSED SLOPES ON THIS PLAN HAVE A MAXIMUM SLOPE OF 3:1. ANY SLOPES BETWEEN 3:1 AND 4:1 WILL REQUIRE THE USE OF EROSION CONTROL BLANKETS OR FLEXIBLE GROWTH MEDIUM, AS APPROVED BY THE GESC INSPECTOR.

ACCEPTANCE OF THE POST-CONSTRUCTION PERMANENT CONTROL MEASURES WILL NOT OCCUR UNTIL ALL TRIBUTARY AREAS TO THE PERMANENT CONTROL MEASURES ARE FINAL STABILIZED.

Engineering & Construction Division
 These plans have been reviewed by SEMSWA for Grading, Erosion, and Sediment Control Improvements Only.




VERIFY SCALE:
 BAR IS ONE INCH ON ORIGINAL DRAWINGS



Know what's below.
 Call before you dig.

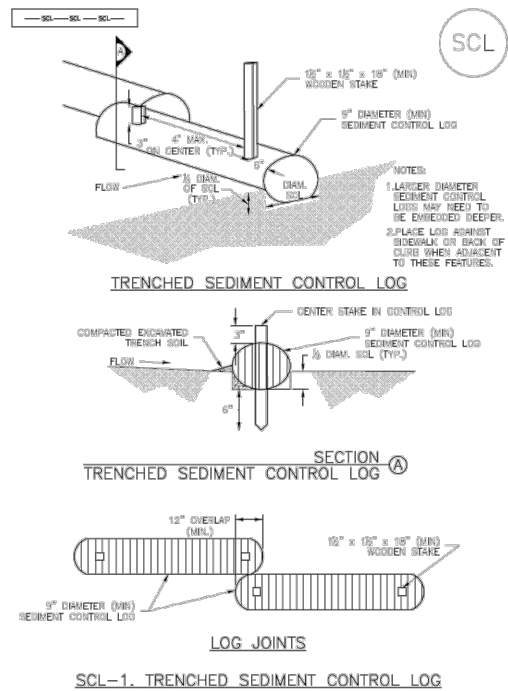
CHERRY CREEK STATE PARK
 EAST BOAT RAMP SHORELINE STABILIZATION
 FINAL GRADING, EROSION, AND
 SEDIMENT CONTROL

#	DATE	DESCRIPTION	INITIALS

DATE
 DEC 2021

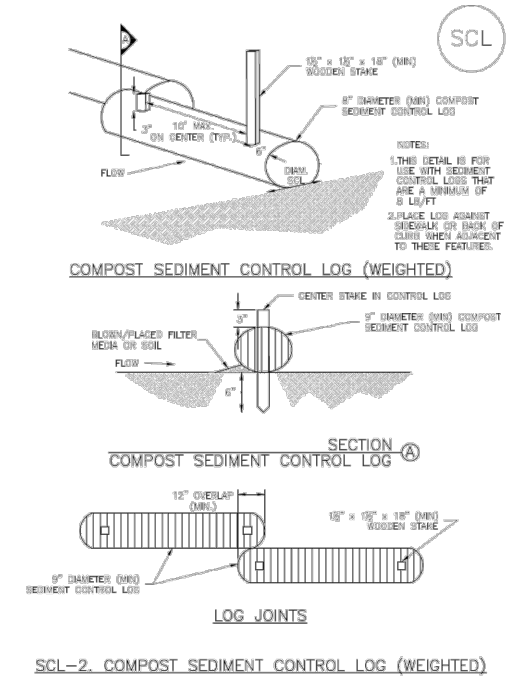
SHEET
 GESC 3

Sediment Control Log (SCL) SC-2



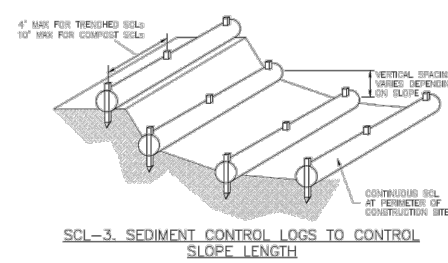
November 2015 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SCL-3

SC-2 Sediment Control Log (SCL)



SCL-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2015

Sediment Control Log (SCL) SC-2



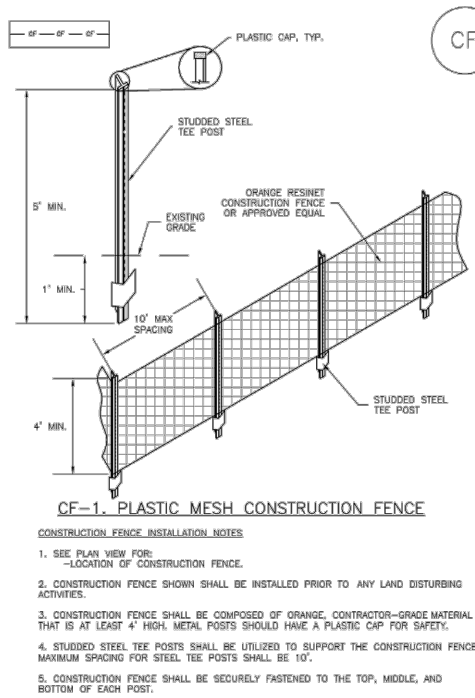
November 2015 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SCL-5

SC-2 Sediment Control Log (SCL)

- SEDIMENT CONTROL LOG INSTALLATION NOTES**
- SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.
 - SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADE/GRADING LAND-DISTURBING ACTIVITIES.
 - SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELOROR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND CRACKS WEAR.
 - SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.
 - IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY 1/3 OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.
 - THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.
 - FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER.
- SEDIMENT CONTROL LOG MAINTENANCE NOTES**
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
 - SEDIMENT CONTROL LOGS SHALL BE REMOVED AT THE END OF CONSTRUCTION. COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.
- (DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SCL-6 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2015

SM-3 Construction Fence (CF)



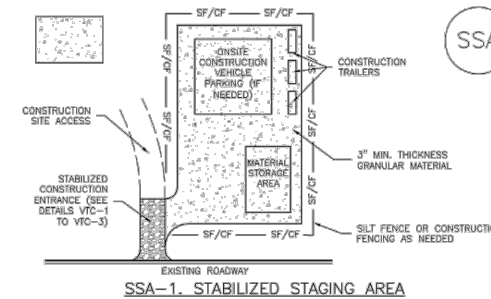
CF-2 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Construction Fence (CF) SM-3

- CONSTRUCTION FENCE MAINTENANCE NOTES**
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
 - WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 CF-3

Stabilized Staging Area (SSA) SM-6



- SSA-1. STABILIZED STAGING AREA**
- STABILIZED STAGING AREA INSTALLATION NOTES**
- SEE PLAN VIEW FOR -LOCATION OF STAGING AREA(S). -CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
 - STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
 - STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
 - THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
 - UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, ASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
 - ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.
- STABILIZED STAGING AREA MAINTENANCE NOTES**
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SSA-3

SM-6 Stabilized Staging Area (SSA)

- STABILIZED STAGING AREA MAINTENANCE NOTES**
- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
 - THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.
- NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

SSA-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010



VERIFY SCALE:
BAR IS ONE INCH ON ORIGINAL DRAWINGS

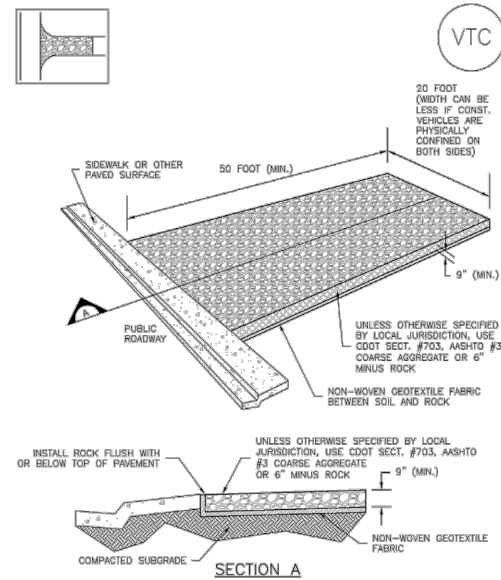


**CHERRY CREEK STATE PARK
EAST BOAT RAMP SHORELINE STABILIZATION
BMP DETAILS**

#	DATE	DESCRIPTION	INITIALS

DATE
DEC 2021
SHEET
GESG 4

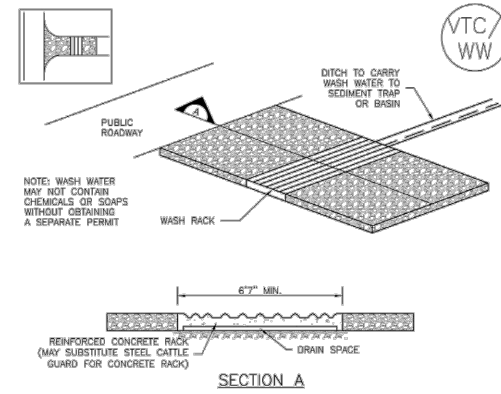
Vehicle Tracking Control (VTC) SM-4



VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 VTC-3

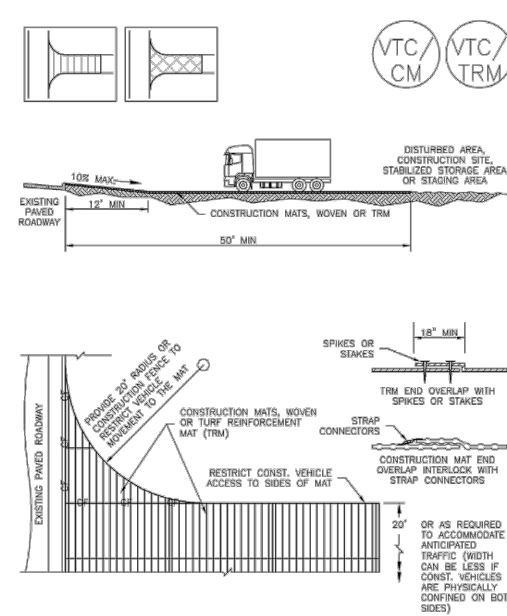
SM-4 Vehicle Tracking Control (VTC)



VTC-2. AGGREGATE VEHICLE TRACKING CONTROL WITH WASH RACK

VTC-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Vehicle Tracking Control (VTC) SM-4



VTC-3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 VTC-5

SM-4 Vehicle Tracking Control (VTC)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

- SEE PLAN VIEW FOR -LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S). -TYPE OF CONSTRUCTION ENTRANCE(S)/EXIT(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).
- CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.
- A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.
- STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.
- UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, ASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.
 - SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

VTC-6 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Compost Blanket and Filter Berm (CB) EC-5

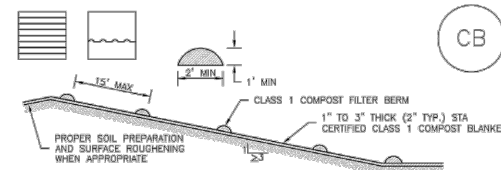


TABLE CB-1. CLASS 1 COMPOST	
PARAMETERS	CHARACTERISTIC
MINIMUM STABILITY INDICATOR	STABLE TO VERY STABLE
SOLUBLE SALTS	MAXIMUM 5 mmhos/cm
PH	6.0 - 8.0
AG INDEX	> 10
MATURITY INDICATOR EXPRESSED AS PERCENTAGE OF GERMINATION/VIGOR	80+/80+
MATURITY INDICATOR EXPRESSED AS AMMONIA N/ NITRATE N RATIO	< 4
MATURITY INDEX AS CARBON TO NITROGEN RATIO	20:1
TESTED FOR CLOPYRALID	YES/NEGATIVE RESULT
MOISTURE CONTENT	30-60%
ORGANIC MATTER CONTENT	25-45% OF DRY WEIGHT
PARTICLE SIZE DISTRIBUTION	3" (75mm) 100% PASSING
PRIMARY, SECONDARY NUTRIENTS; TRACE ELEMENTS	MUST BE REPORTED
TESTING AND TEST REPORT SUBMITTAL REQUIREMENTS	STA + CLOPYRALID
ORGANIC MATTER PER CUBIC YARD	MUST REPORT
CHEMICAL CONTAMINANTS	COMPLY WITH US EPA CLASS A STANDARD, 40 CFR 503.1 TABLES 1 & 3 LEVELS
MINIMUM MANUFACTURING/PRODUCTION REQUIREMENT	FULLY PERMITTED UNDER COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT HAZARDOUS MATERIALS AND WASTE MANAGEMENT DIVISION
RISK FACTOR RELATING TO PLANT GERMINATION AND HEALTH	LOW

CB-1. COMPOST BLANKET AND COMPOST FILTER BERM

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EC-5 Compost Blanket and Filter Berm (CB)

COMPOST FILTER BERM AND COMPOST BLANKET INSTALLATION NOTES

- SEE PLAN VIEW FOR -LOCATION OF COMPOST FILTER BERM(S). -LENGTH OF COMPOST FILTER BERM(S).
- COMPOST BERMS AND BLANKETS MAY BE USED IN PLACE OF STRAW MULCH OR GEOTEXTILE FABRIC IN AREAS WHERE ACCESS TO LANDSCAPING IS DIFFICULT DUE TO LANDSCAPING OR OTHER OBJECTS OR IN AREAS WHERE A SMOOTH TURF GRASS FINISH IS DESIRED.
- FILTER BERMS SHALL RUN PARALLEL TO THE CONTOUR.
- FILTER BERMS SHALL BE A MINIMUM OF 1 FEET HIGH AND 2 FEET WIDE.
- FILTER BERMS SHALL BE APPLIED BY PNEUMATIC BLOWER OR BY HAND.
- FILTER BERMS SHALL ONLY BE UTILIZED IN AREAS WHERE SHEET FLOW CONDITIONS PREVAIL AND NOT IN AREAS OF CONCENTRATED FLOW.
- COMPOST BLANKETS SHALL BE APPLIED AT A DEPTH OF 1-3 INCHES (TYPICALLY 2 INCHES). FOR AREAS WITH EXISTING VEGETATION THAT ARE TO BE SUPPLEMENTED BY COMPOST, A THIN 0.5-INCH LAYER MAY BE USED.
- SEEDING SHALL BE PERFORMED PRIOR TO THE APPLICATION OF COMPOST. ALTERNATIVELY, SEED MAY BE COMBINED WITH COMPOST AND BLOWN WITH THE PNEUMATIC BLOWER.
- WHEN TURF GRASS FINISH IS NOT DESIRED, SURFACE ROUGHENING ON SLOPES SHALL TAKE PLACE PRIOR TO COMPOST APPLICATION.
- COMPOST SHALL BE A CLASS 1 COMPOST AS DEFINED BY TABLE CB-1.

COMPOST FILTER BERM MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - COMPOST BERMS AND BLANKETS SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RILLING IN THE COMPOST SURFACE OCCURS.
- (DETAILS ADAPTED FROM ARAPAHO COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

CB-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

ABASCO Type 2 Medium Duty Turbidity Curtain

Depth Range: 2' - 65'

ABASCO Type 2 Medium Duty Turbidity Curtains include heavy duty tension members at the top and bottom of the curtain and quality 18 oz. PVC laminated fabric. They are ideal for silt and sediment control during dredging and marine construction activities in areas exposed to mild current, wind and wave activity.

Fabric: 18 oz/yd² PVC Laminated Polyester Fabric. Optional fabric in skirt.

Flotation: 6"-10" dia. (depending on skirt depth) EPS foam contained within individually sealed float pockets

Top Tension: 5/16" galvanized steel cable (9,800 lbs breaking strength) contained in a polyethylene tube

Bottom Tension & Ballast: 5/16" galvanized steel chain (7,600 lbs breaking strength, 0.93 lbs/ft)

End Connectors: High tensile strength aluminum "Universal" connector at float and top tension cable. ASTM 3/8" stainless steel locking pins. Grommets on reinforced fabric on lower skirt. Chain ends shackled section-to-section. Tool free connections. Aluminum stress plates at bottom corners.

Section Length: 50/100 ft.

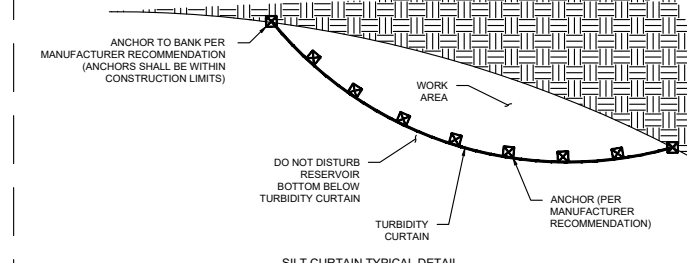
Skirt Depth: To 50 ft. Depth can be tapered to conform to bottom profile.

Furling Lines: Available on request

Accessories: Anchor Systems, Ropes, Marker Buoys, Solar Lights, Repair Kits



ABASCO LLC 8561 East North Belt, Humble, Texas 77396 Tel: 281-446-1500 Fax: 832-553-7498 www.abasco.com e-mail: sales@abasco.com



TURBIDITY CURTAIN SHOULD BE INSPECTED DAILY. EACH INSPECTION SHOULD INCLUDE:

- CONFIRM THAT DESIGN FREEBOARD IS BEING MAINTAINED. IF FREEBOARD IS REDUCED, INSPECT THE CURTAIN SKIRT FOR MARINE GROWTH, SEDIMENT OR DEBRIS THAT MIGHT CAUSE REDUCED FREEBOARD. CHECK FLOATS FOR DAMAGE.
- CONFIRM THAT THE CURTAIN IS MAINTAINING ITS ANCHORED PROFILE. IF THE CURTAIN OR A PORTION THEREOF APPEARS OUT OF PLACE, INSPECT THE ANCHORING SYSTEM AND PLACEMENT OF THE ANCHORS. ADJUST AND/OR REPAIR THE ANCHORING SYSTEM AS REQUIRED.
- ENSURE THE TURBIDITY CURTAIN HAS NOT MOVED INTO SHALLOWER WATER WHEREBY THE BOTTOM OF THE CURTAIN IS RESTING ON BOTTOM.

R2R ENGINEERS
RIPPLES TO RIFPLES

CHERRY CREEK QUALITY AUTHORITY

VERIFY SCALE:
BAR IS ONE INCH ON ORIGINAL DRAWINGS

811
Know what's below. Call before you dig.

**CHERRY CREEK STATE PARK
EAST BOAT RAMP SHORELINE STABILIZATION
BMP DETAILS 2**

#	DATE	DESCRIPTION	INITIALS

DATE: DEC 2021
SHEET: GESG 5