



Vicinity Map
NOT TO SCALE



Location Map
NOT TO SCALE

FINAL DESIGN PLANS FOR SANTA ANA WATERSHED PROJECT AUTHORITY

Santa Ana Sucker Habitat Protection
and
Beneficial Use Enhancement Project

Riverside, CA

May 2018



Conservation Team



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Final Design

	By	Date
Designed	NS	7/15/2017
Drawn	NS	10/23/2017
Revised	NS	5/9/2018

SAWPA
Santa Ana Sucker Habitat Protection and
Beneficial Use Enhancement Project

Cover Sheet

May 9, 2018

Sheet No.

G 01

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General Notes

- 1) ALL WORK AND MATERIALS SHALL CONFORM TO THE PROJECT SPECIFICATIONS/PLANS, AND THE LATEST EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, UNLESS NOTED OTHERWISE.
- 2) THE CONTRACTOR SHALL HAVE A COPY OF THE PROJECT SPECIFICATIONS AND CONSTRUCTION PLANS ON THE JOB SITE AT ALL TIMES.
- 3) A PRECONSTRUCTION CONFERENCE OF REPRESENTATIVES FROM THE OWNER AND THE CONTRACTOR SHALL BE HELD PRIOR TO START OF WORK. THE OWNER or OWNER'S REPRESENTATIVE SHALL BE NOTIFIED AT LEAST FIVE (5) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION OR ANY REQUIRED OBSERVATION. CONSTRUCTION WORK AT THE SANTA ANA RIVER SITE WILL BEGIN ON OR AFTER SEPTEMBER 15, 2018.
- 4) THE CONTRACTOR PERFORMING WORK ON THIS PROJECT SHALL FAMILIARIZE HIMSELF WITH THIS SITE AND SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES RESULTING FROM HIS OPERATIONS.
- 5) ALL WORK PERFORMED SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE REQUIREMENTS OF THE OWNER. BEDDING AND BACKFILL MATERIALS SHALL BE COMPACTED TO 95% RELATIVE DENSITY, UNLESS NOTED OTHERWISE.
- 6) THE CONTRACTOR SHALL CALL UNDERGROUND SERVICES ALERT (DIG ALERT) BY DIALING 811 A MINIMUM OF TWO WORKING DAYS PRIOR TO ANY EXCAVATION.
- 7) THESE DOCUMENTS HAVE BEEN PREPARED FOR THIS SPECIFIC PROJECT AND SHALL NEITHER BE ALTERED NOR REUSED FOR ANY OTHER PURPOSE.
- 8) CONTRACTOR SHALL MAINTAIN THE WORK AREA IN A NEAT, SAFE, CLEAN AND SANITARY CONDITION AT ALL TIMES AND TO THE SATISFACTION OF THE OWNER. STREETS SHALL BE KEPT CLEAN OF DEBRIS, WITH DUST AND OTHER NUISANCE BEING CONTROLLED AT ALL TIMES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY AND ALL CLEAN-UP ON ADJACENT STREETS AFFECTED BY HIS CONSTRUCTION.
- 9) ALL APPROACHES TO PRIVATE DRIVEWAYS, DRIVEWAYS AND INTERSECTING STREETS SHALL BE KEPT OPEN TO TRAFFIC AT ALL TIMES. CONTRACTOR SHALL GAIN PRIOR APPROVAL FROM PROJECT OWNER AND INFORM ALL PROPERTY OWNERS OR BUSINESSES A MINIMUM OF FORTY-EIGHT HOURS PRIOR TO PERFORMING ANY CONSTRUCTION WHICH WILL IMPEDE THE NORMAL ACCESS TO THEIR PROPERTY OR BUSINESS.
- 10) THE EXISTING UNDERGROUND UTILITIES ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION AND ELEVATION IN THE FIELD (POTHOLE) OF ALL UTILITIES IN CONFLICT.
- 11) ACTUAL FIELD CONDITIONS MAY VARY FROM THOSE SHOWN ON THE PLANS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ACTUAL ABOVE GROUND CONDITIONS PRIOR TO SUBMITTAL OF BID.
- 12) CONSTRUCTION SITES SHALL BE MAINTAINED IN SUCH A CONDITION THAT ANY STORM DOES NOT CARRY WASTES OR POLLUTANTS OUT OF WORK AREAS OR OFF THE SITE.
- 13) SUCH "DISCHARGES" OF MATERIAL OTHER THAN STORMWATER ARE ALLOWED ONLY WHEN NECESSARY FOR PERFORMANCE AND COMPLETION OF CONSTRUCTION PRACTICES AND WHERE THEY DO NOT: CAUSE OR CONTRIBUTE TO A VIOLATION OF ANY WATER QUALITY STANDARD; CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR NUISANCE; OR CONTAIN A HAZARDOUS SUBSTANCE IN A QUANTITY REPORTABLE UNDER FEDERAL REGULATION 40CFR PARTS 117 AND 302.
 - a. MATERIALS WHICH MAY HAVE EFFECTS OF POLLUTION INCLUDE BUT ARE NOT LIMITED TO: SOLID OR LIQUID CHEMICAL SPILLS; WASTES FROM PAINTS, STAINS, SEALANTS, HYDRAULIC, RADIATOR OR BATTERY FLUIDS; FERTILIZERS, VEHICLE EQUIPMENT WASH WATER AND CONCRETE WASH WATER; CONCRETE DETERGENT OR FLOATABLE WASTES; WASTES FROM ANY ENGINE EQUIPMENT STEAM CLEANING OR CHEMICAL DEGREASING, AND SUPER CHLORINATED WATER LINE FLUSHINGS.
 - b. DURING CONSTRUCTION, DISPOSAL OF SUCH MATERIALS SHOULD OCCUR IN A SPECIFIED AND CONTROLLED TEMPORARY AREA ON SITE PHYSICALLY SEPARATED FROM POTENTIAL STORMWATER RUN-OFF, WITH ULTIMATE DISPOSAL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.
- 14) CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICES (BMP'S). SAND BAGS AND FABRIC SHALL BE PLACED OVER ANY STORM DRAINS IN CLOSE PROXIMITY TO THE PROJECT SITE. SILT FENCE WILL BE PLACED TO CONTROL ALL SEDIMENT FROM LEAVING THE SITE AS NEEDED OR DIRECTED BY THE OWNER OR ENGINEER.
- 15) THE CONTRACTOR WILL BE RESPONSIBLE FOR MEETING ALL PERMIT REQUIREMENTS, MITIGATION MEASURES AND BMPs IDENTIFIED IN THE PROJECT SPECIFICATIONS.
- 16) THE CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ANY AND ALL TRAFFIC CONTROL PERMITS AND HAUL PERMITS TO COMPLETE THE WORK. THE CONTRACTOR WILL UTILIZE CITY AND COUNTY APPROVED HAUL ROUTES TO PERFORM THE WORK.

Special Construction Notes

- 1) By accepting award of the contract, the contractor acknowledges and agrees to the risk to materials, equipment and personnel associated with working in an active river and flood plain.
- 2) The contractor will be solely responsible for all contractor materials, equipment and personnel at the jobsite for the duration of the project.
- 3) The contractor will be responsible for the design, construction and maintenance of any and all temporary berms, dewatering and other flow management techniques. The samples provided in this drawing set are for illustrative purposes only. Techniques, material and equipment used to control flow will be subject to approval by the owner. However, owner review and approval does in no way transfer liability, cost or risk to the owner.
- 4) Flows in the Santa Ana River will fluctuate during construction.
- 5) Rock materials imported for the project will be supplied by San Bernardino Valley Municipal Water District. The rock material is located at Source Material Site 1 (34°4'52.70"N and 117°7'53.52"W) and the boulders at Source Material Site 2 (34°6'4.52"N and 117°7'7.97"W) and all costs to sort, load and transport the material to the jobsite will be the responsibility of the contractor.
- 6) The project will result in a zero net volume increase at the project site. Each cubic yard of material imported will be offset by exporting the equivalent volume of material off site. The contractor will assume responsibility for all costs associated with the zero net volume increase. The location and type of material exported from the site will be approved by the owner.
- 7) Any and all areas disturbed by the contractor will be left in as-good or better condition at the end of the project. The contractor will provide pre-construction videos and photographs of the site prior to starting any work. The contractor will also provide post-construction video and photos prior to final demobilization. All topography and grades will be restored to the pre-project condition unless otherwise approved by the owner.
- 8) Work hours will be Monday through Friday between the hours of 7:00 am to 5:00 pm. No work will be allowed on weekends or SAWPA observed holidays.
- 9) The contractor will be required to move personnel, equipment and materials out of the river channel and river overbank areas prior to a storm event or when flows are expected to exceed controls put in-place by the contractor.

Coordination Requirements

- 1) Biological monitoring will be provided by the owner. The contractor will provide a minimum of 5 working days written notice to the owner for scheduling the biological monitor.**
- 2) All work areas must be inspected and cleared EACH DAY by the biological monitor prior to starting any work.**
- 3) The contractor will be responsible for coordinating with the City of Jurupa Valley (and or Riverside) and will be responsible for all costs associated with abiding by all City of Jurupa Valley (and or Riverside) requirements.**



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Final Design			SAWPA Santa Ana Sucker Habitat Protection and Beneficial Use Enhancement Project	Sheet No.
				G 02
	By	Date	Project Notes	
Designed	NS	7/15/2017		
Drawn	NS	10/23/2017		
Revised	NS	5/9/2018		
			May 9, 2018	Sheet 2 of 9

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G-02	Project Notes
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C-09	Restoration Plan

Standard Symbols

	Detail Number Detail Sheet Number
	Native Sand
	Cut Faces
	Gradation 1
	Gradation 2
	Gradation 3
	Rip Rap or Gradation 3

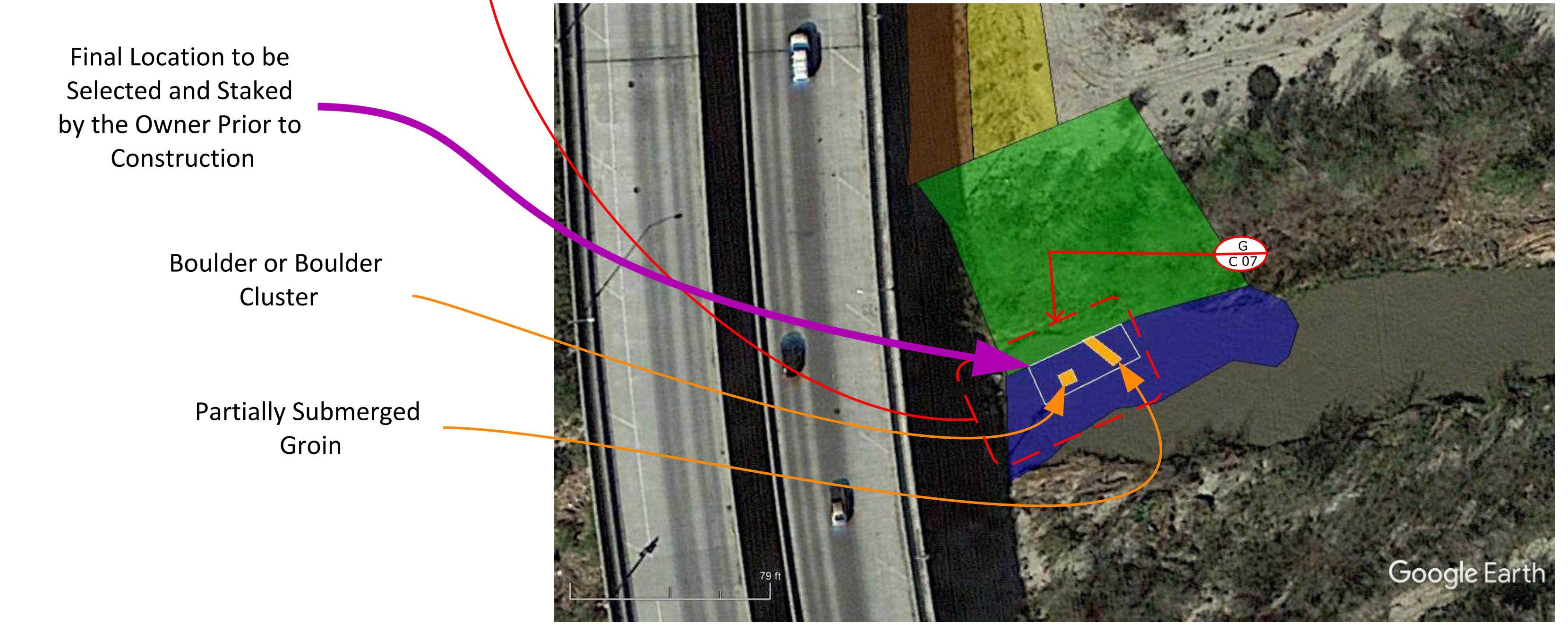
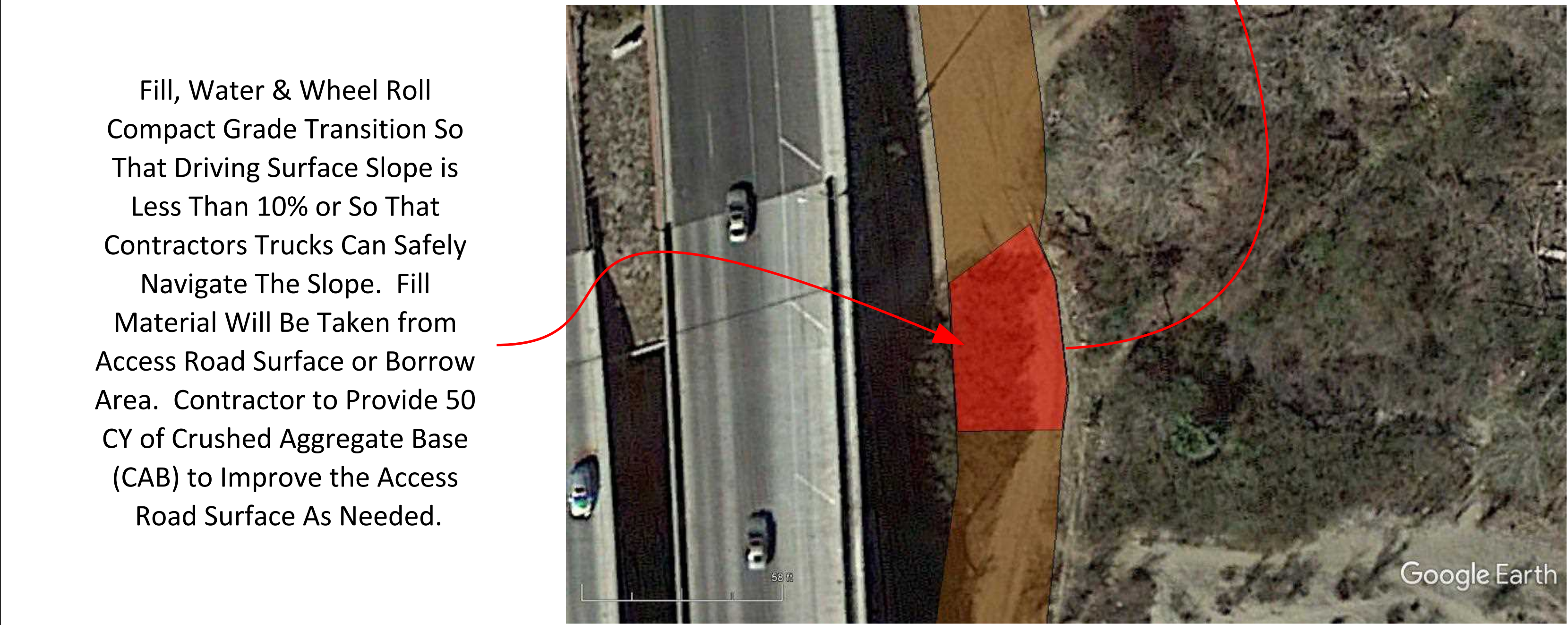
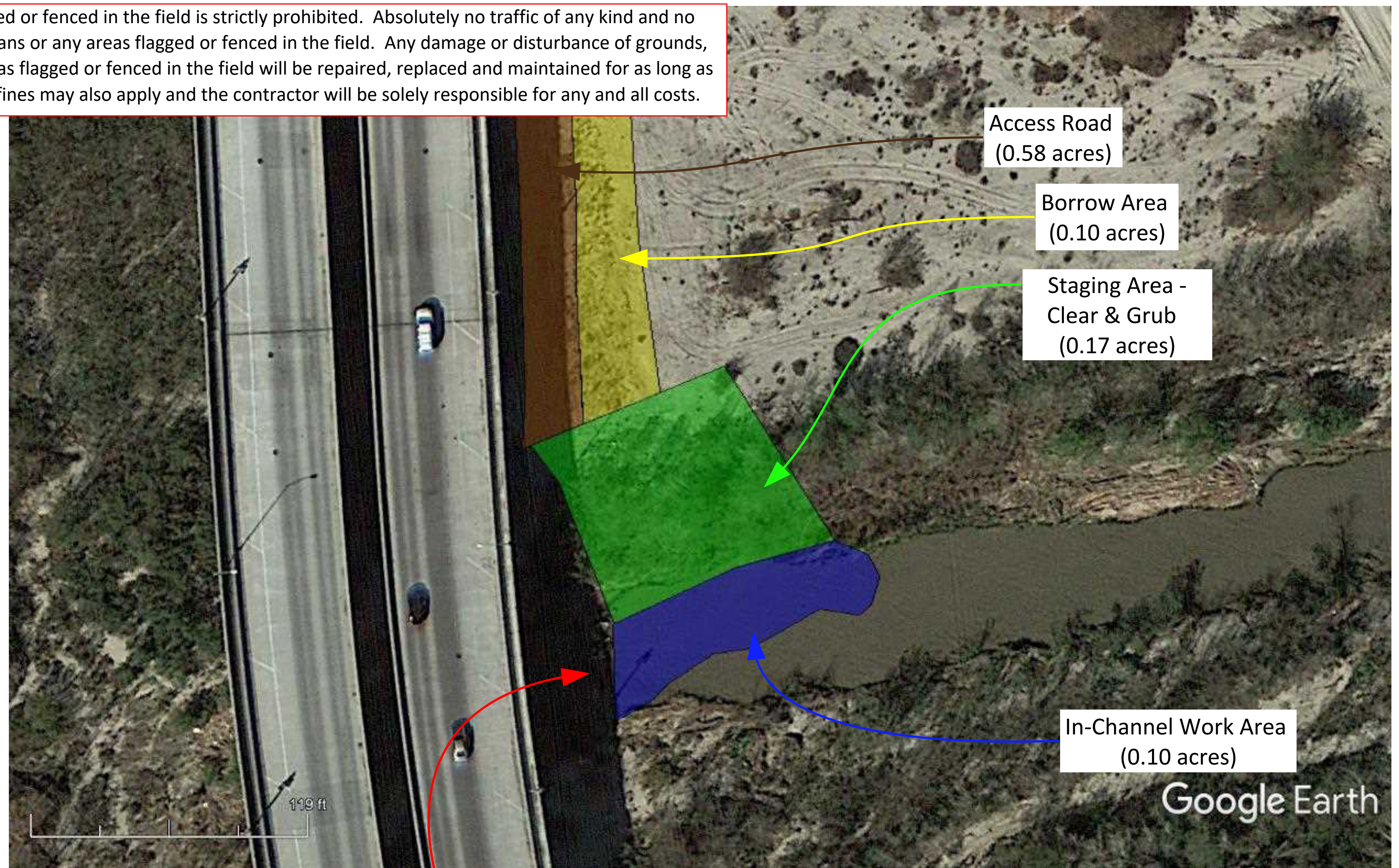
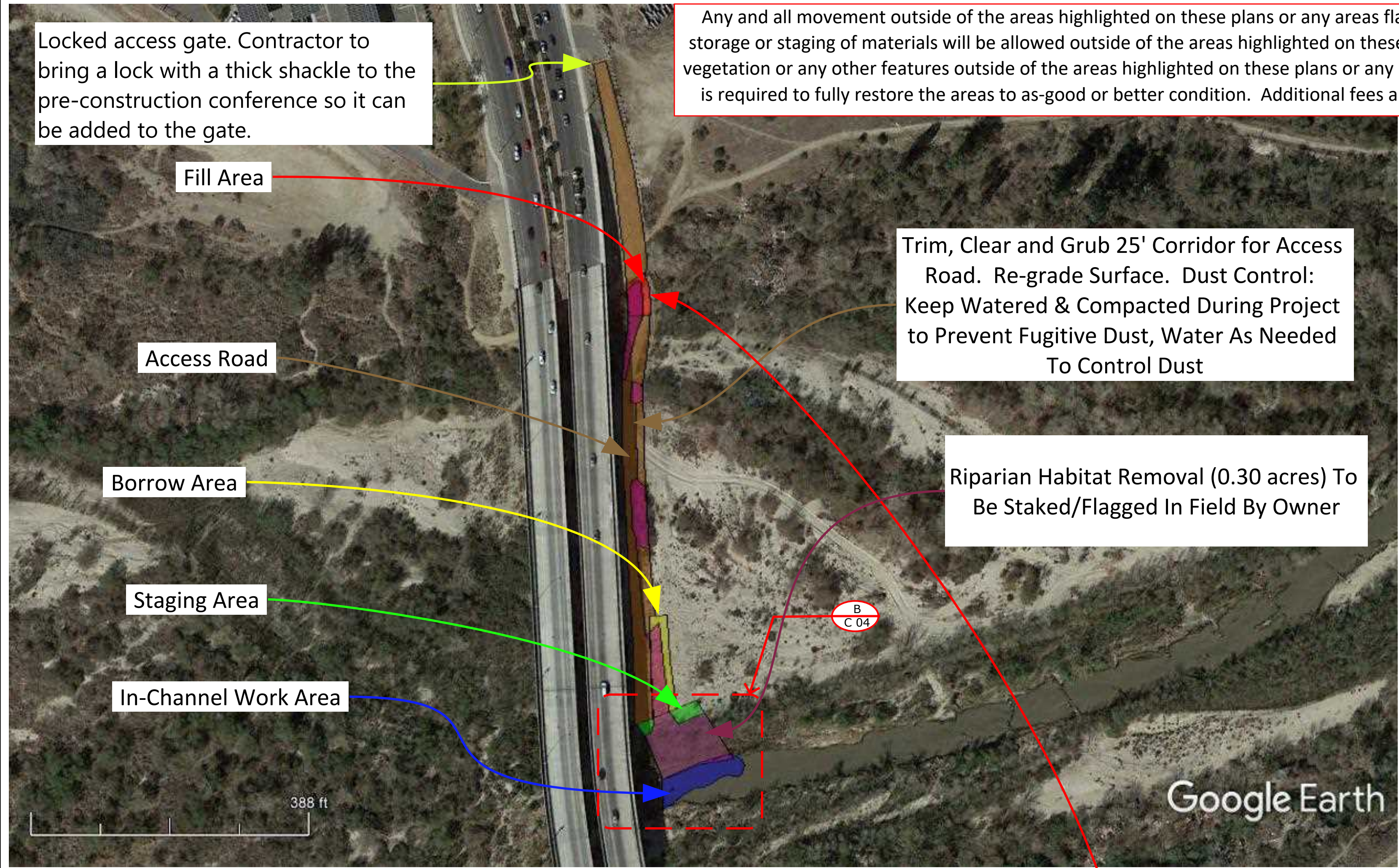
Abbreviations

ft	feet
in	inches
lbs	pounds
oz	ounces
psi	pounds per square inch
sq yd	square yard
sq ft	square foot
OC	on center
OCEW	on center each way
EF	each face

Contact Index

SAWPA	(951) 354 - 4233
Scheevel Engineering	(714) 470 - 9045
Biological Monitor	(951) 757 - 0782
Dig Alert	811

Gradation Specifications		
1. Gradation 1	<u>Sieve Size</u>	<u>Percent Finer by Weight</u>
	6 in	100
	3 in	40 to 55
	1/4 in	10 to 20
	No. 200	0 to 5
2. Gradation 2	<u>Sieve Size</u>	<u>Percent Finer by Weight</u>
	6 in	100
	3 in	40 to 55
	1 in	10 to 20
	No. 200	0 to 5
3. Gradation 3	<u>Sieve Size</u>	<u>Percent Finer by Weight</u>
	2 foot	100
	1-foot	40 to 55
	6-in	5 to 10
	No. 200	0 to 3



Clearing & Grubbing Note #1:

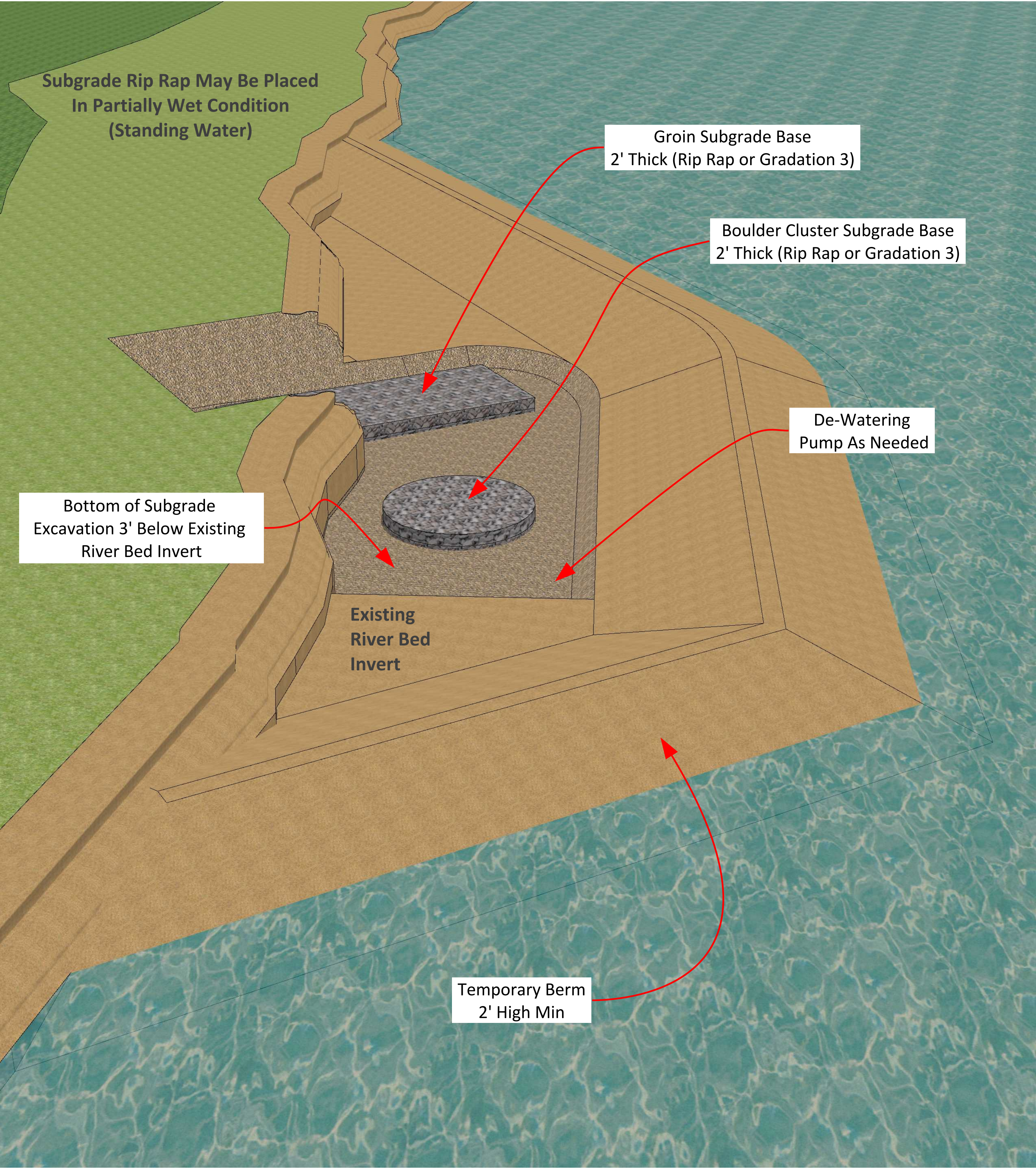
Vegetation growth will occur, and biomass export volume will increase, between bid time and construction. Contractor will assume that the removal and export volume of the biomass will be double (2X) of that observed during bid phase and include pricing /costs in their bid for the increased clearing, grubbing and export.

Clearing & Grubbing Note #2:

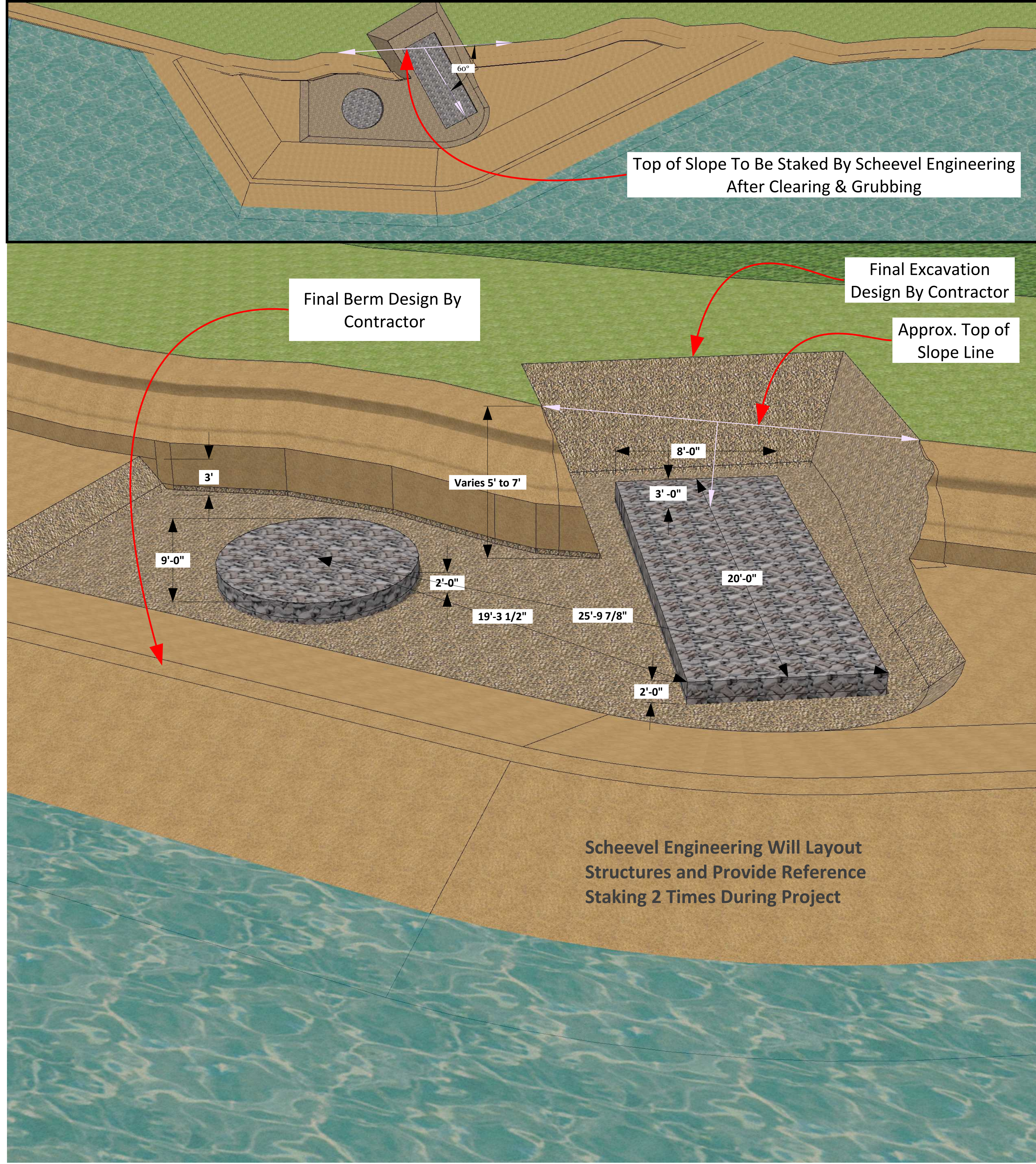
5 Select Branches Will Be Trimmed and Saved For Use In The Habitat Feature. The Contractor Will Perform This Work Under The Direction of the Owner. All Other Vegetation Will Be Removed and Disposed of By The Contractor

A
C-04 Overall Site View
Not To Scale

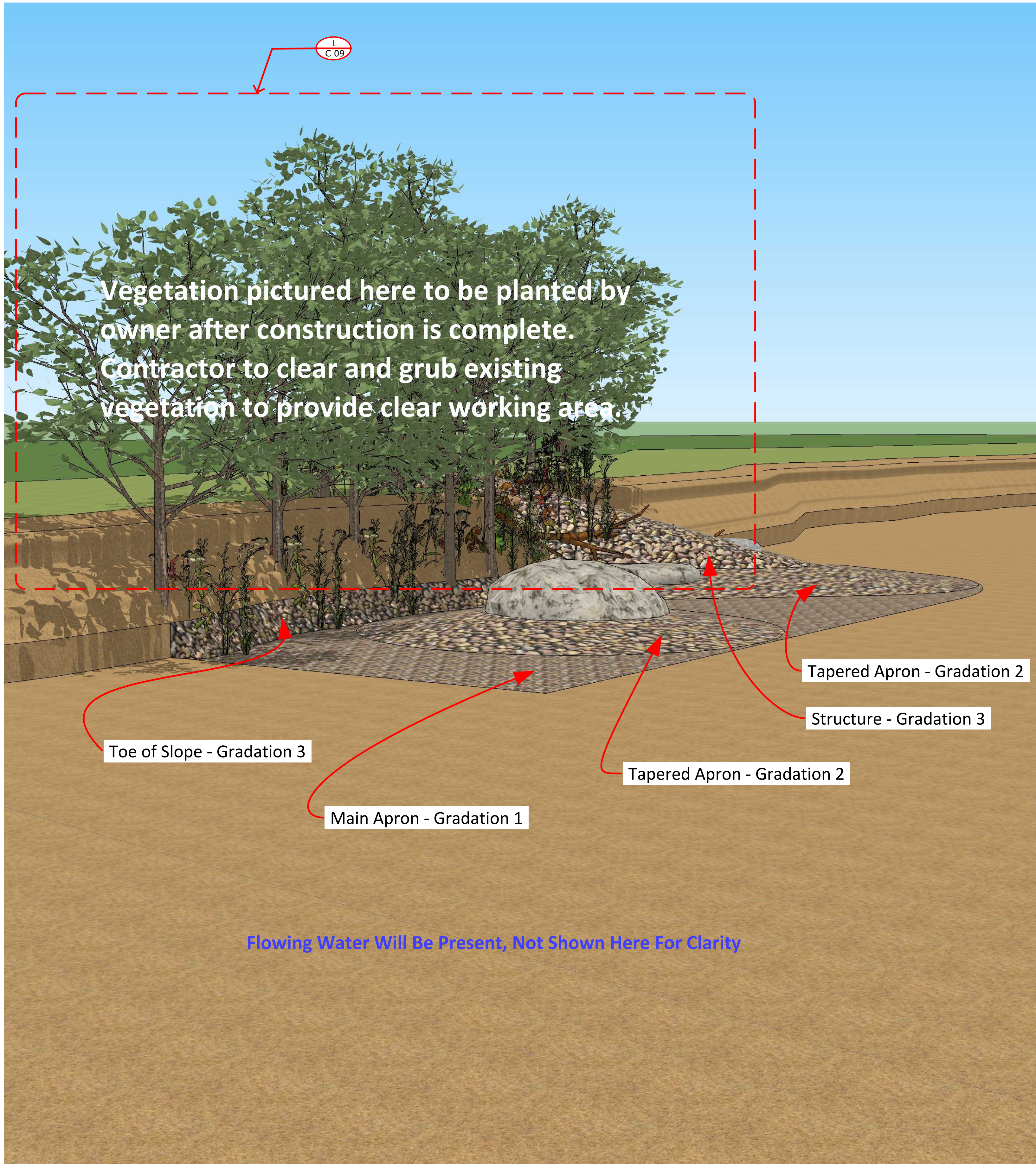
B
C-04 Work Area Plan View
Not To Scale



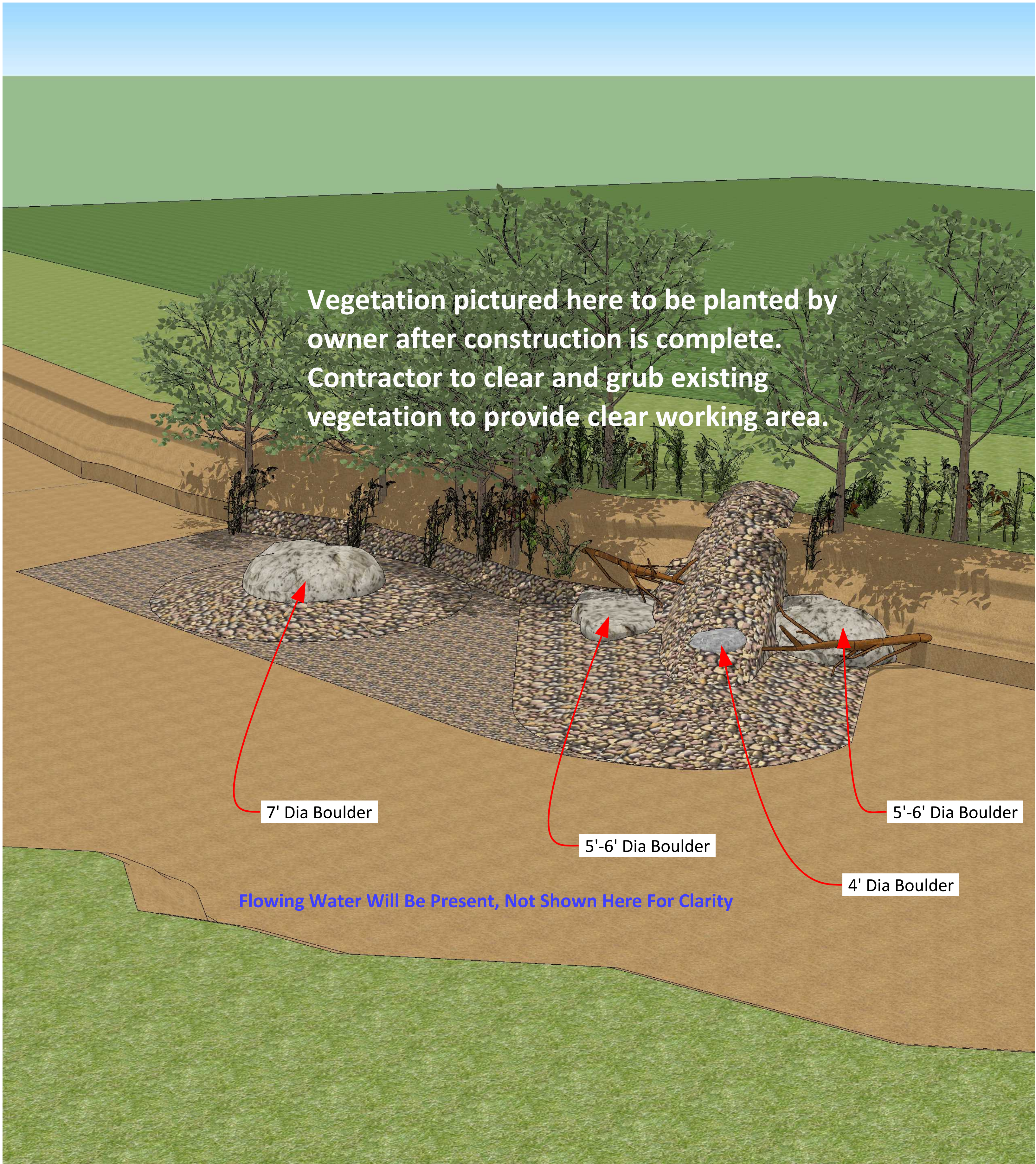
C Subgrade View
C-05 (Looking Upstream)



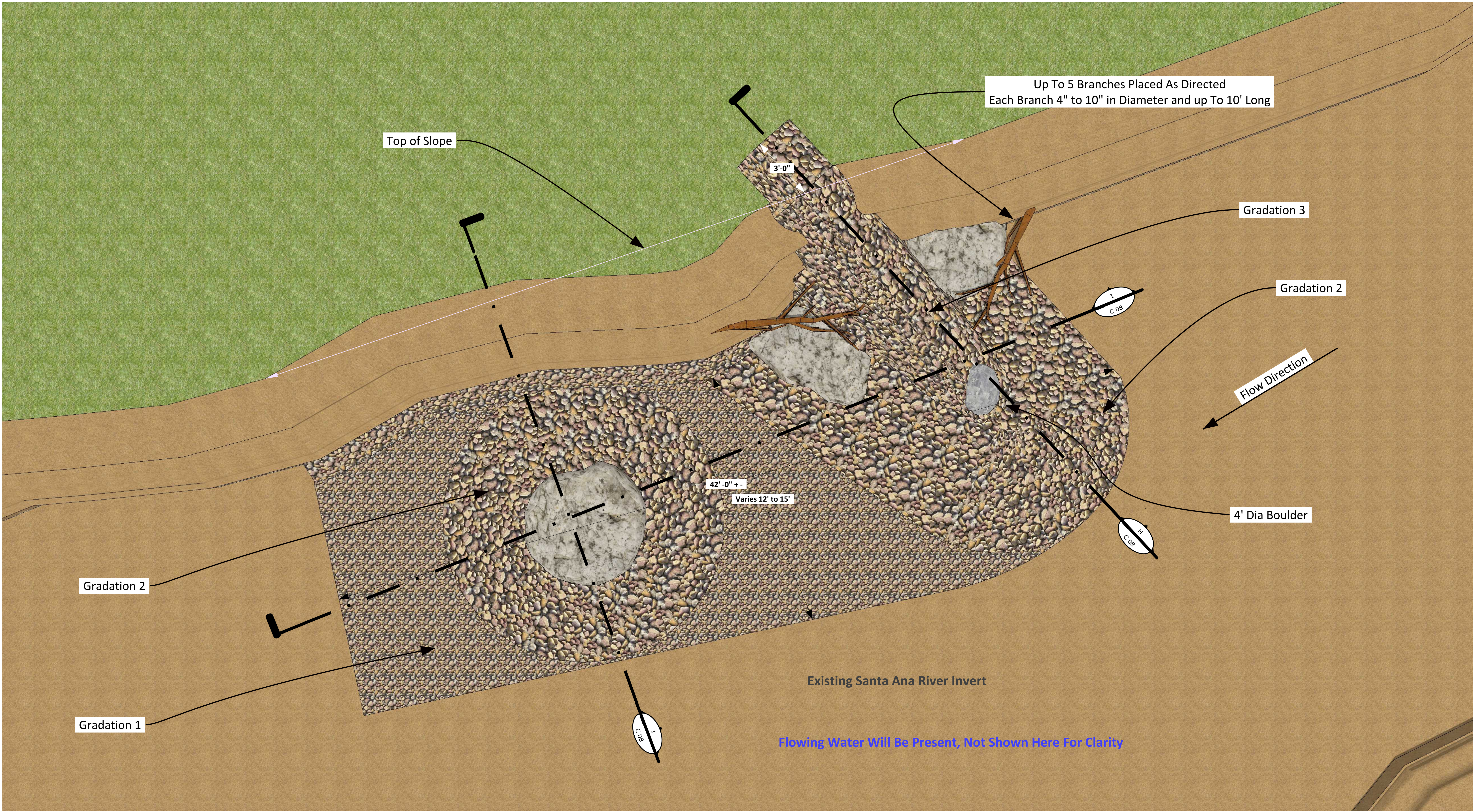
D Subgrade View
C-05 Looking North



E
C-06 Boulder View
Not To Scale



F
C-06 Isometric View
Not To Scale



G
C-07

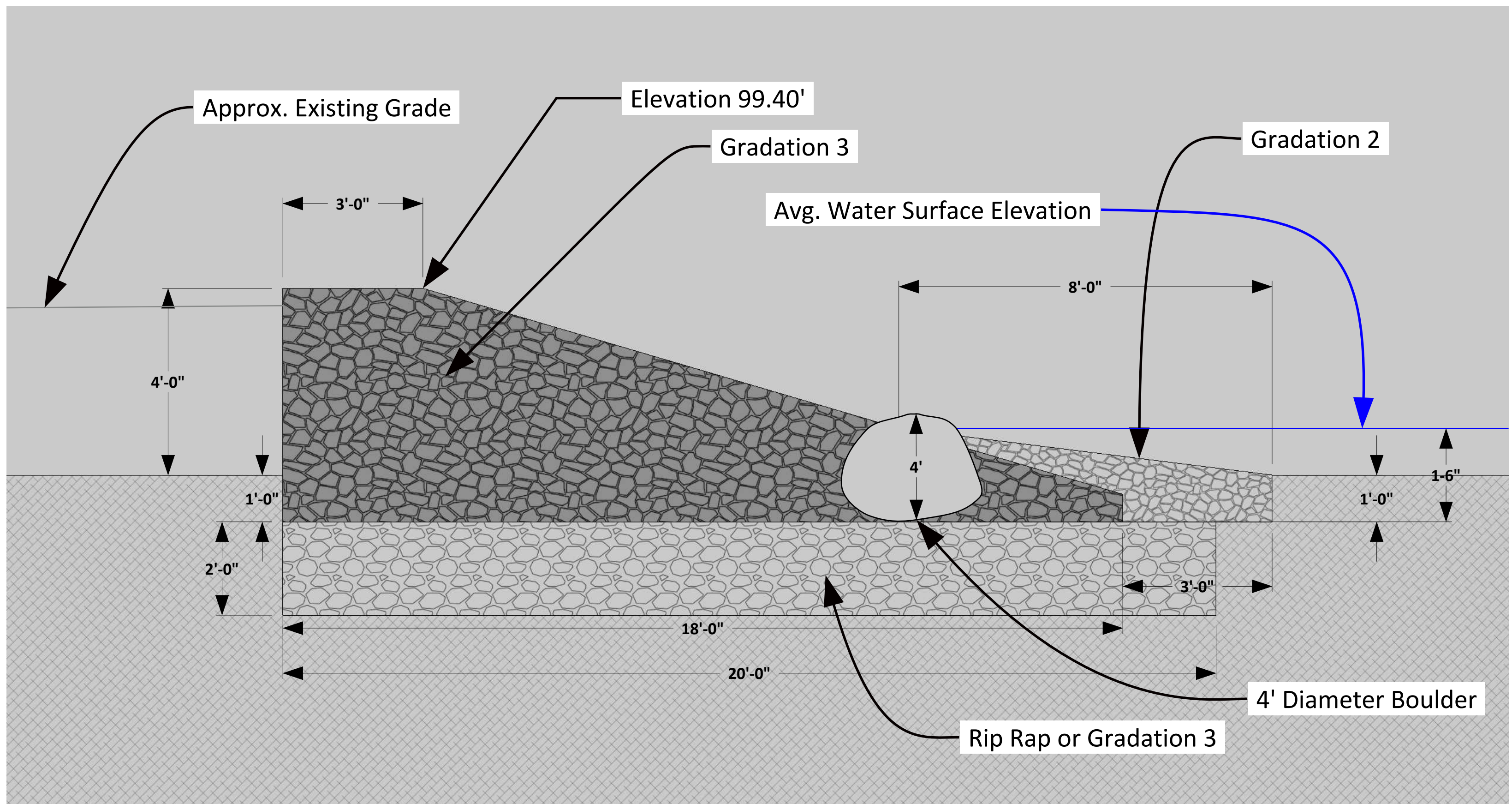
Plan View
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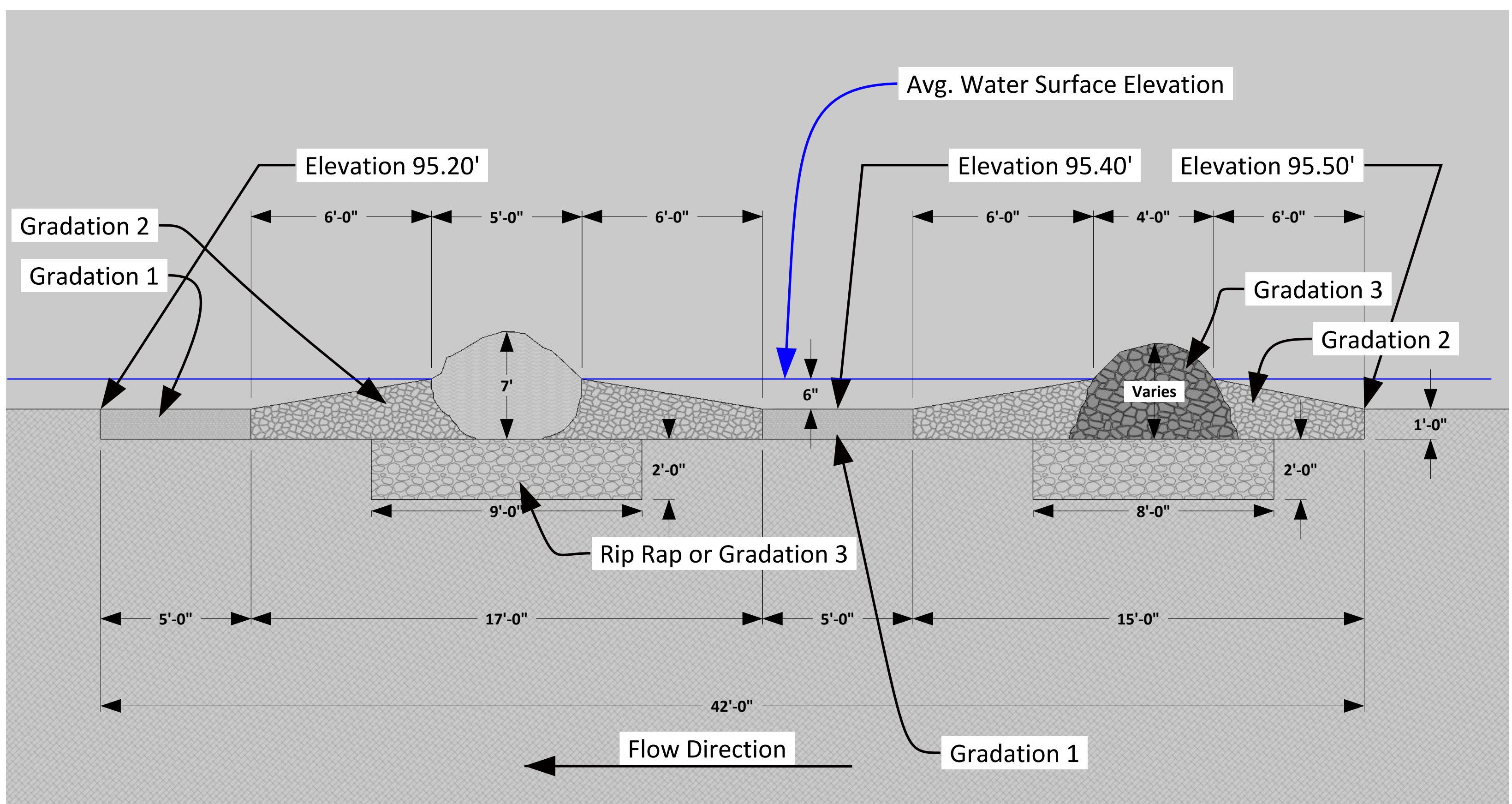
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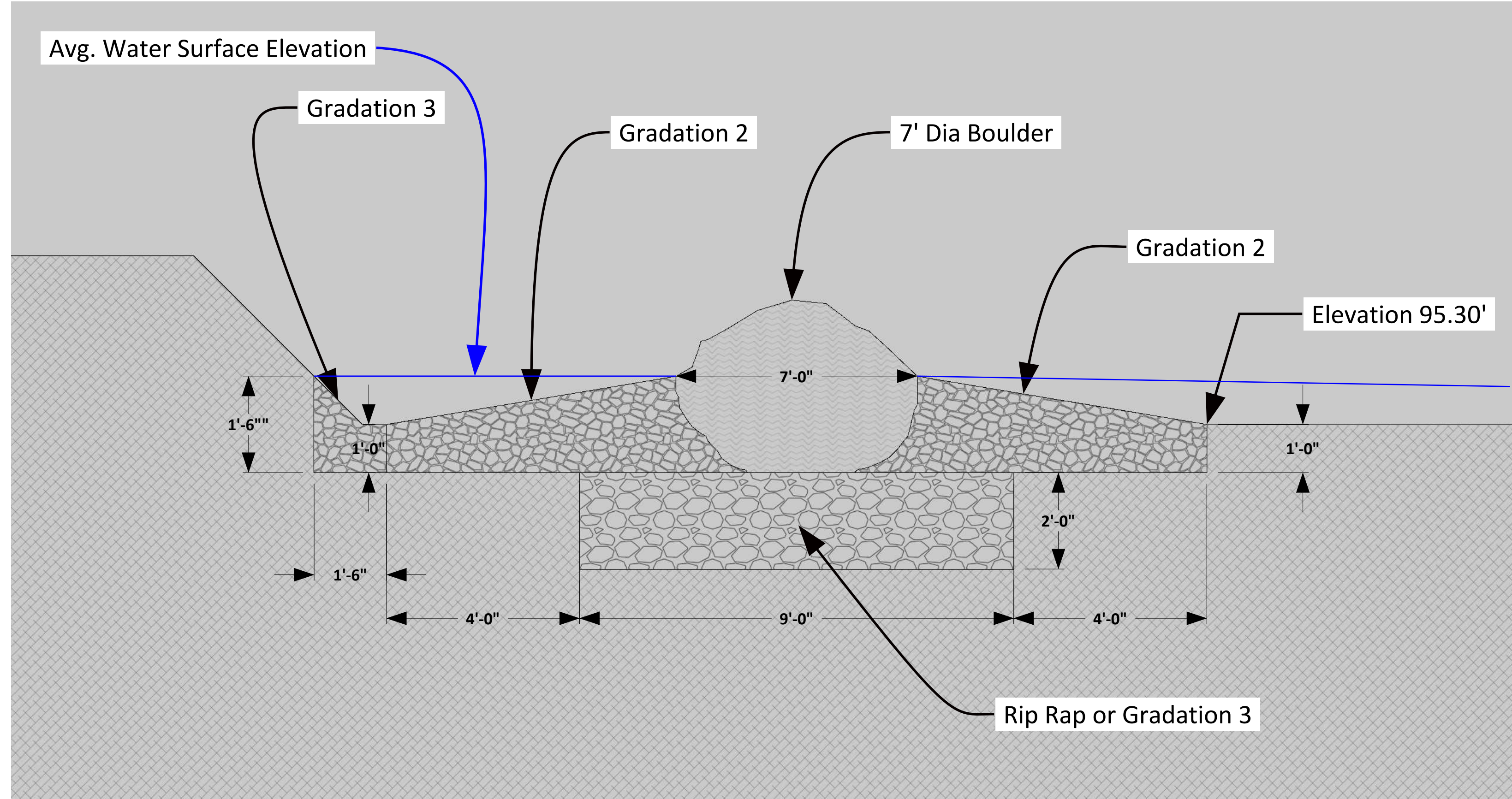
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Drawn	NS	10/23/2017			
Revised	NS	5/9/2018	May 9, 2018		Sheet 7 of 9



H
C-08 Partially Submerged Gabion
Not To Scale



I
C-08 Boulder & Gabion Section
Not To Scale

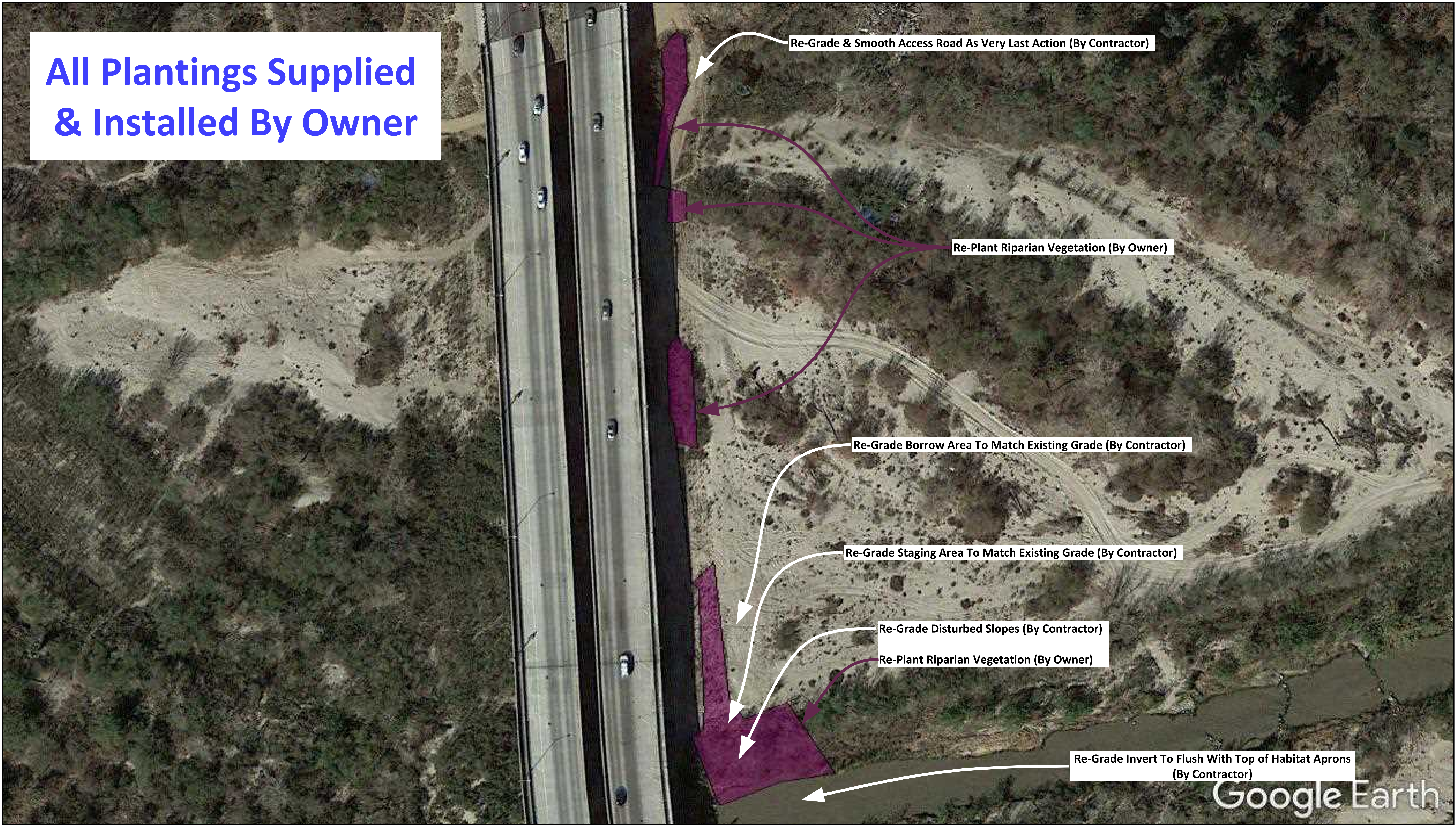


J
C-08 Boulder Section
Not To Scale

Note: All elevations based off temporary field benchmark with reference elevation in feet (not a true elevation) set at 100.00'. Scheevel Engineering to provide benchmark in field at time of construction.

K
C-08 NOT USED
Not To Scale

All Plantings Supplied
& Installed By Owner



L
C-09

Restoration Plan
Not To Scale



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