

RECLAMATION PLAN

AN AMENDMENT TO THE OCTOBER 29, 2015 RECLAMATION PLAN APPROVED BY THE SANTA CLARA COUNTY ARCHITECTURE AND SITE APPROVAL COMMITTEE

SERPA QUARRY - OLD CALAVERAS RD. FOR GOKULAM LLC

LOCATION MAP

Address: 2425 Old Calaveras Rd., Milpitas CA 95035



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Serpa Quarry Reclamation For Lands of Raisch

General Notes

A. EXISTING OPERATIONS & CONDITIONS

The Serpa Quarry is a long-standing operation, the presence of which predates the creation of the State's Surface Mining and Reclamation Act.

a. **APPROVED RECLAMATION PLAN.** The quarry is currently subject to the provisions of a Reclamation Plan approved by Santa Clara County and dated March 5, 1984 and the Minor Reclamation Plan Permit September 9, 2009 amendment. Upon approval by Santa Clara County, this proposed Reclamation Plan will supersede the 1984 plan and 2009 amendment.

b. **STATUS OF MINING OPERATION.** Mining of the site has been discontinued because the cost of production is higher than the market value of the aggregate; given the quarry location and proximity to other suppliers. Reclamation of the site in accordance with the current County-approved Reclamation Plan is underway, pursuant to approval of this proposed Reclamation Plan Amendment.

B. NATURE OF PLANNED RECLAMATION

The reclamation will utilize approximately 1.5 million tons (1.0 million cubic yards) of imported material. This material will be utilized to achieve finished grades shown. Existing access roads and deep gullies that have resulted from past mining activity will be filled and re-contoured to provide, to the extent possible, more natural appearing topographic conditions in the more visible hillside areas. In the lower, less visible areas of the site, one gently sloping meadow area will remain following removal of existing mining facilities and completion of final grading. In the lowest area of the site, two existing sedimentation ponds will remain for possible future use as livestock watering ponds. The final aspect of reclamation will be placing of native and imported topsoil and hydro-seeding of all areas of the site denuded of native vegetation.

C. IMPORTED MATERIALS MANAGEMENT

All imported soils will require testing and certification that they are free of hazardous materials. Testing methodology will be CAM 17 and TPH analysis.

a. **TOPSOIL.** Imported topsoil, if required, will be visually inspected upon arrival at the site. It will then be dumped at designated stockpile areas. Stockpile areas will be designated at various locations of the site where they will not disrupt ongoing reclamation activities and where the topsoil will be in relatively close proximity to where it will ultimately be utilized in the reclamation process.

b. **FILL.** Imported fill will be visually and sensor inspected for hazardous materials upon arrival at the site. Written certification of hazmat testing of each load must also be provided prior to dumping. Fill material will then be hauled to designated fill areas and dumped for final placement (see EARTHWORK).

c. **CRUSHED BOTTLE GLASS.** Previously imported crushed bottle glass will be mixed into fill materials at a content not exceeding 10 percent by volume as recommended by the project geotechnical consultant, Cleary Consultants, Inc. As further recommended, the glass fragments should be uniformly blended into the fill materials before the fill is compacted, and should not be placed within 3" of the finished fill grades. All such work will be observed and, prior to grading completion, be reported by the geotechnical consultants in a Construction Observation Letter that verifies compliance with the Cleary recommendations.

D. EARTHWORK

a. **Clearing and Site Preparation.** Prior to earthwork operations, the proposed construction areas should be cleared of all deleterious materials and obstructions including pavements, concrete pavements, concrete slabs, foundations, buried utilities and loose or compressible backfill materials. Holes resulting from the removal of underground obstructions that extend below the planned subgrade levels should be cleaned out and backfilled with suitable material and compacted to the requirements for engineered fill.

Any remaining vegetation within areas to be graded should be stripped to sufficient depths to remove all surface vegetation and organic laden topsoil. Any pockets of loose, soft or debris laden materials should be removed from the site or stockpiled for later use in landscaped areas.

b. **Subgrade Preparation.** After the construction areas have been cleared, stripped and excavated to the required grades, the exposed soil should be scarified and moisture conditioned and re-compacted to the requirements for engineered fill. The subgrade soil should be scarified to a depth of 8 inches, moisture conditioned to at least 1 percent above the laboratory established optimum moisture content and then be compacted to the requirements of engineered fill. Additional on-site soil and imported fill can then be placed and compacted.

In order to achieve satisfactory compaction in the subgrade and fill soils, it may be necessary to adjust the soil moisture content at the time of construction. This may require that water be added and thoroughly mixed into any soil that is too dry or that scarification and aeration be performed in any soil that is too wet.

c. **Fill Placement and Compaction.** The on-site soil having an organic content of less than 3 percent by weight together with the imported soil can be used as fill. Fill material should not contain rocks or lumps greater than 6 inches in greatest dimension and have no more than 15 percent larger than 2.5 inches.

Engineered fill should be compacted to at least 90 percent relative compaction. Fill material should be spread and compacted in lifts not exceeding 8 inches in un-compacted thickness.

Newly graded fill slopes and cut slopes are to be planted with erosion resistant vegetation prior to the winter following construction.

d. **Placement of Fill on Slopes.** Fill materials to be placed on slopes steeper than 4:1 (horizontal to vertical) should be continuously keyed into firm, undisturbed material with a series of horizontal benches. In addition, lifts greater than 5 feet in height should be constructed with a keyway along the toe of the fill slope. The keyway should be at least one equipment width wide and should be inclined at 5 percent inward. The extent of the required keyway construction should be determined in the field by the geotechnical engineer's representative. A subdrain should be placed within the keyway of the designated fill slopes to minimize the buildup of hydrostatic pressures within the fill. The extent of the subdrain installations should be determined in the field during construction.

E. NATIVE TOPSOIL MANAGEMENT

a. The amount of top soil is non-existing. Therefore, upon completion of quarry operations and prior to the start of Revegetation, a soil analysis will be performed. Fertilization rates shall be amended as needed to bring into conformance with the soil analysis report recommendations.

e. **Slope Gradients.** New cut slopes in soil and fill slopes should be no steeper than 3:1 (horizontal to vertical). All fill slopes should be overbuilt and trimmed back to the final design grade +/- 1.0'. Cut slopes should be rounded at the top to reduce sloughing within the near surface soils. Some sloughing and erosion should be expected on the newly graded slopes during the first few winters and revegetation of such areas should be provided.

f. **Surface Drainage.** Ponding of surface water should not be permitted adjacent to the slopes. Positive surface gradients should be provided away from the top of all cut slopes and fill slopes or surface swales should be installed to divert water away from the face of the slope.

g. **Exploratory Borings.** All borings shall be abandoned in accordance with applicable laws.

F. REVEGETATION

a. All areas to be re-vegetated shall have final slopes graded to fairly uniform grades to prevent excessive furrowing. Some furrows parallel to contours should be provided to assist in seed germination and establishment.

b. All pads, slopes and other disturbed areas where topsoil has been placed shall be hydroseeded. Incorporated into the hydroseed mix shall be some shrub seeds to provide for future succession growth.

c. Hydroseed shall be placed on all disturbed slopes by October 15 as follows:

Dryland Pasture Mix 60 Lbs/Acre	
% of Mix/Acre	Seed
15.00	Trifolium subterraneum, Galbreth
Subclover	
15.00	Trifolium subterraneum, Antas Subclover
15.00	Dactylis glomerata, Paiute Orchardgrass
15.00	Trifolium hirtum, Rose Clover
10.00	Phalaris tuberosa, Holdfast Hardinggrass
5.00	Trifolium subterraneum, Gosse Subclover
15.00	Trifolium glandulosum, Prima Gland
Clover	
5.00	Trifolium resupinatum, PK Nitro Persian
Clover	
5.00	Lolium multiflorum, Tetraploid Annual
Ryegrass	
SEED MIX	SHOWN ABOVE
GRO-POWER PLUS 5-3-1	500
GRO-POWER CONTROLLED RELEASE 12-8-8	500
WOOD CELLULOSE FIBER MULCH	2000
M-BINDER ORGANIC STABILIZER	80

d. Seeded area, if damaged will be repaired and re-seeded.

e. Success Criteria for Vegetation:

- Grasslands: 90% cover of grasses and forbs, with at least 3 species per 100 m² (1,076 sq. ft.).
- Weed Cover: should amount to no more than 5% in any 100 m² area (1,076 sq. ft.).

G. DRAINAGE AND EROSION CONTROL

a. The Mining operation is under the State Regional Water Control Board (SRWCB) NPDES General Permit No. CAS000001. An approved Storm Water Pollution Prevention Plan (SWPPP), is in effect under WQID 2-431022-674.

b. The erosion control measures are to be operable during the rainy season, October 1 - April 15. Erosion control facilities and planting are to be complete by October 1.

c. Erosion control measures shall be maintained until disturbed areas are stabilized. Changes to this plan shall be made as required to meet field conditions or as required by the governing agency. All changes shall be approved by the governing agency prior to the commencement of work.

d. During the rainy season, paved areas shall be kept clear of earth materials and debris. The site shall be maintained so as to minimize sediment laden runoff to any storm drain system and to Tularitos Creek.

e. The existing detention pond and sediment basin will remain as permanent facilities on the site to act as long-term protection of downstream water quality. These will be maintained by the quarry operator until final reclamation of the site has been accomplished and accepted as complete by Santa Clara County. After that time, the property owner will assume responsibility for the maintenance of the facilities.

f. Drainage of the site will be accomplished by providing contoured drainage swales in the final grading and by construction of a new drainage ditch as shown on Sheet 4 of this Reclamation Plan. The new drainage ditch will connect to an existing drainage ditch that discharges water into the existing detention pond and sediment basin. Sediment-free waters are then discharged into the existing Calaveras Creek via an underground pipeline.

g. The proposed drainage ditch will be per EC-9 of the California Storm Water BMP Handbook, Nov. 2009.

h. Fiberrolls will be placed at on level contours spaced as follows per SE-5 of the California Storm Water BMP Handbook, Nov. 2009:

- h.a.a. Slope Inclination 4:1 (H/V) or flatter: Fiber Rolls will be placed at a maximum interval of 20 ft.
- h.a.b. Slope Inclination between 4:1 to 2:1 (H/V): Fiber Rolls will be placed at a maximum interval of 15 ft.
- h.a.c. Slope Inclination 2:1 (H/V) or greater: Fiber Rolls will be placed at a maximum interval of 10 ft.
- h.a.d. Fiber Rolls will also be placed along property boundaries where the existing vegetation has been disturbed.

i. Surface roughening will occur prior to hydroseeding per EC-15 of the California Storm Water BMP Handbook, Nov. 2009.

j. See Section F of the notes for applicable hydro-seeding requirements.

k. An east slope drainage vault will be installed as shown on sheet 5a at such time as earthwork progress at this location permits its construction.

l. Should further subsurface springs be discovered in the course of reclamation earthwork activities, operator shall notify the project geotechnical engineer. The geotechnical engineer shall inspect the site conditions and make recommendations for any necessary subsurface drains or other mitigation. The quarry operator shall then implement those recommendations as part of the reclamation program.

H. REMOVAL OF IMPROVEMENTS, MATERIALS & EQUIPMENT

a. **IMPROVEMENTS.** All existing improvements installed by and utilized in the mining operation will be removed from the site prior to final re-vegetation. These improvements include certain, buildings, lighting and communication poles and wiring, asphalt and concrete paved surfaces, and security fencing and gates. Except as shown on the plans to remain.

b. **MATERIALS.** All surplus materials and debris shall be removed from the site prior to final re-vegetation and disposed of in a manner appropriate to the materials and consistent with local, state and federal statutes.

c. **EQUIPMENT.** All equipment used in the mining and reclamation operations shall be removed from the site prior to or upon completion for the final phase of re-vegetation.

d. **TERMINATION DATE:** December 31, 2019

I. END USE PLAN

a. **IMMEDIATE END USE:** The mining site will be reclaimed in a manner that anticipates an end use of private open space/grazing and single-family residences as permitted under existing Santa Clara County zoning regulations as subject to future approvals.

b. **OWNER ACKNOWLEDGEMENT:** The undersigned owner of the subject property, by the signature below, acknowledges full knowledge and understanding of the proposed end use of said property.



OWNER:

GOKULAM LLC

REV	DATE	REVISION
1	04/23/2011	Pavex Proposal 1
2	08/10/2011	Incorporate City Comments 08/08/11
3	03/13/2015	Minor Grade Revisions as clouded

03/14/2018 Partial closure; Minor grading revisions

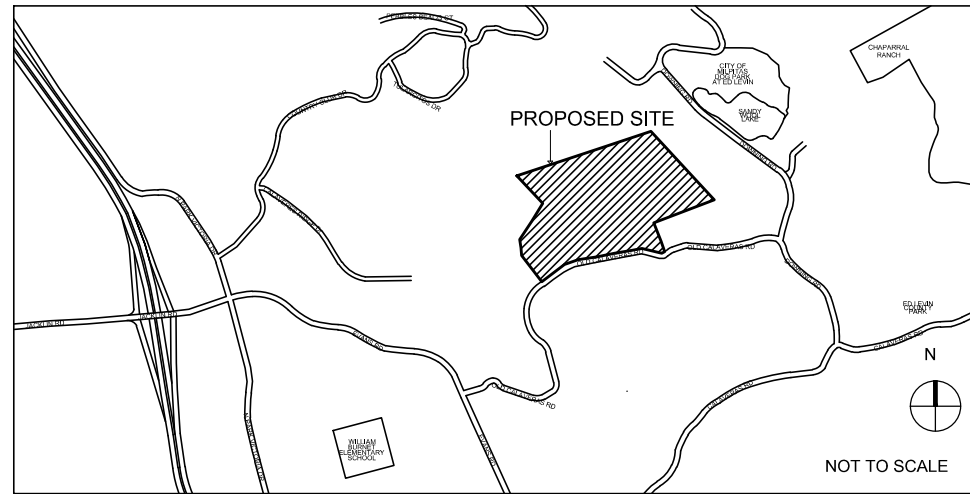
AJAY GOYAL
748 BLUESTONE CIRCLE, FOLSOM, CA 95630 | 916-294-5337

DRAWN D.C. CHECKED APPROVED	DATE 11/29/2011 SCALE NTS
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LOCATION:
Serpa Quarry
APN: 29-34-04

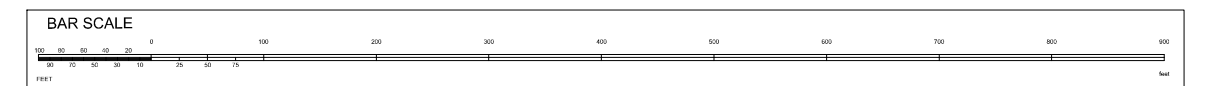
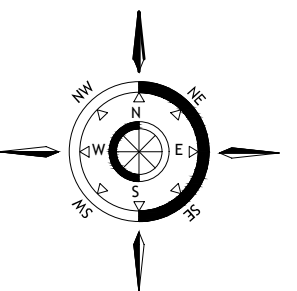
SUBJECT:
General Notes

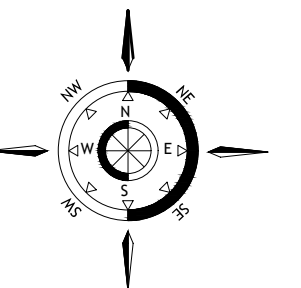
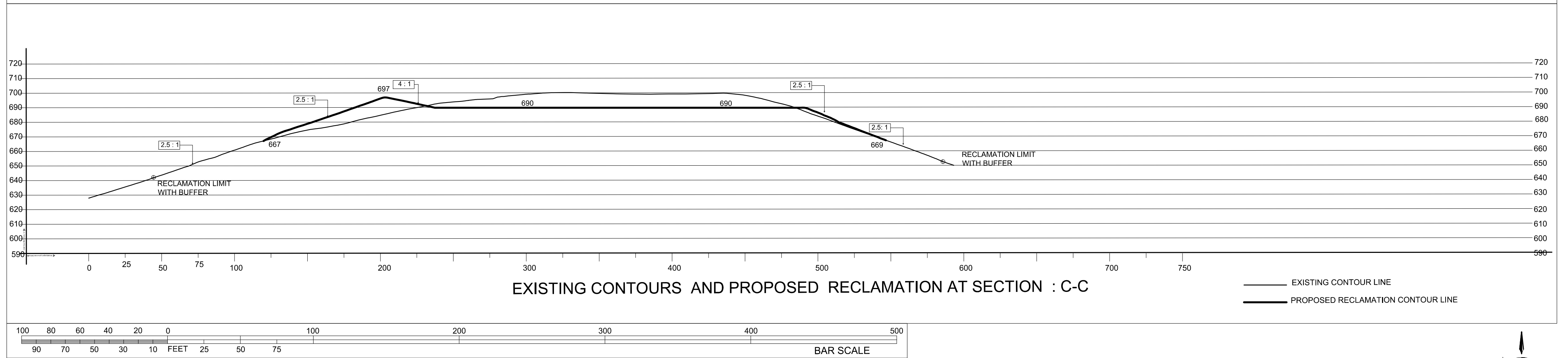
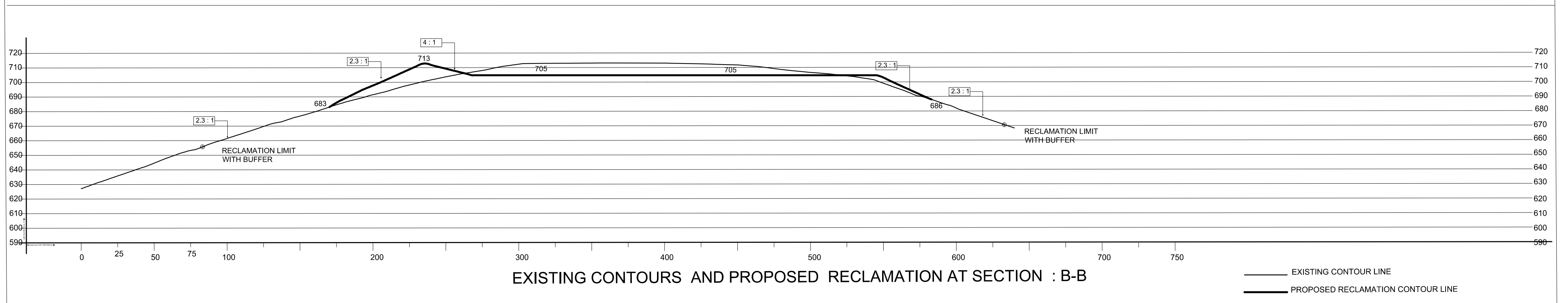
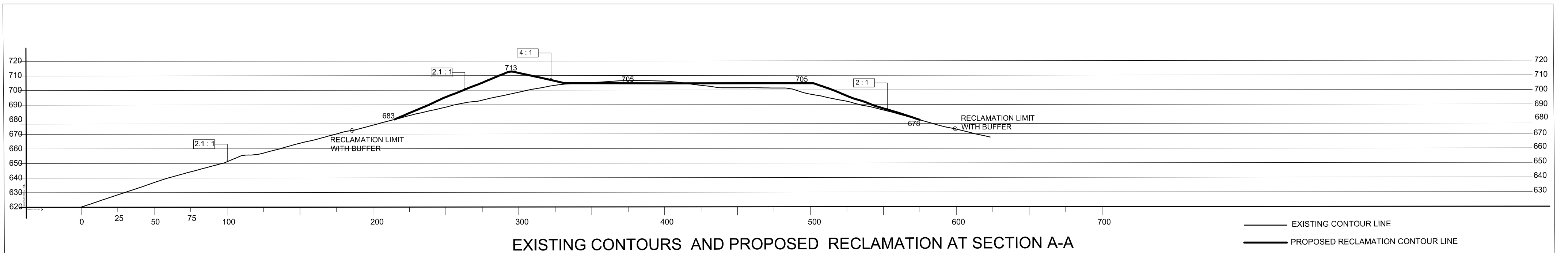
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Sheet 2 of 6

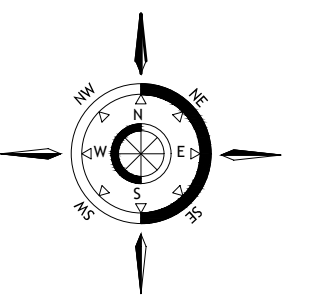
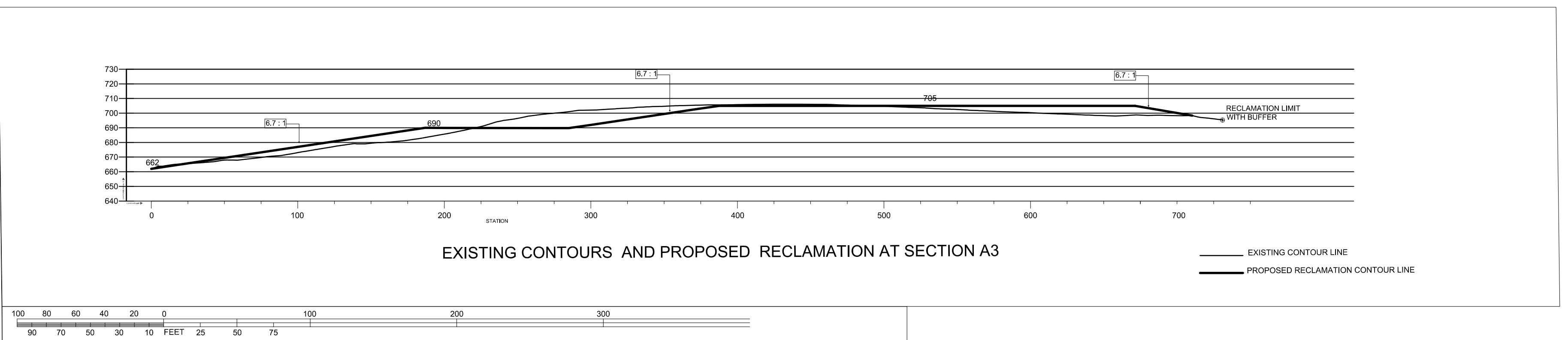
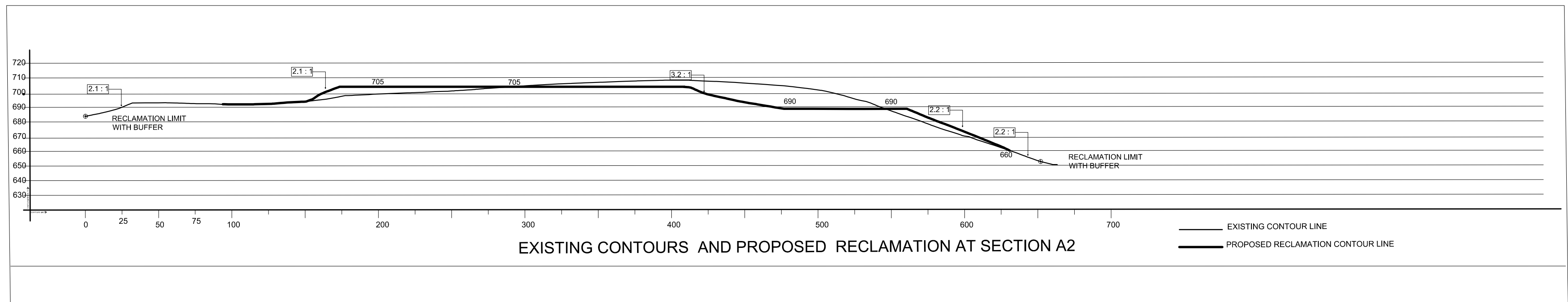


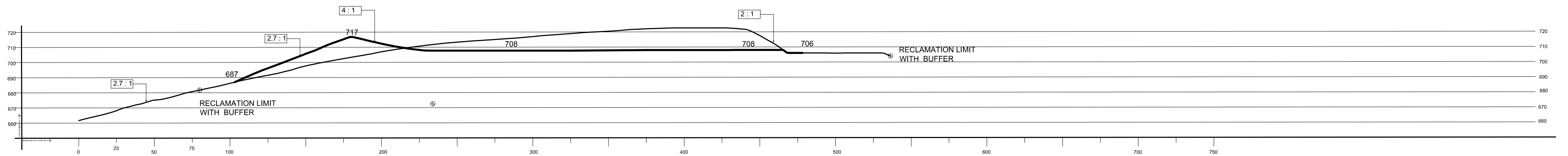
SITE LOCATION MAP

- EXISTING CONTOUR
- PROPOSED MODIFIED CONTOUR
- RECLAMATION DONE
- RECLAMATION NOT COMPLETE
- RECLAMATION LIMIT
- RECLAMATION AMENDMENT (NOT COMPLETE)
- EXISTING FIRE ACCESS ROAD
- PROPOSED FIRE ACCESS ROAD



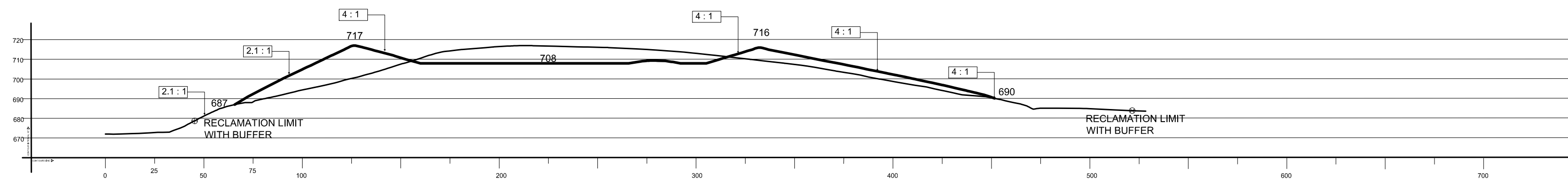






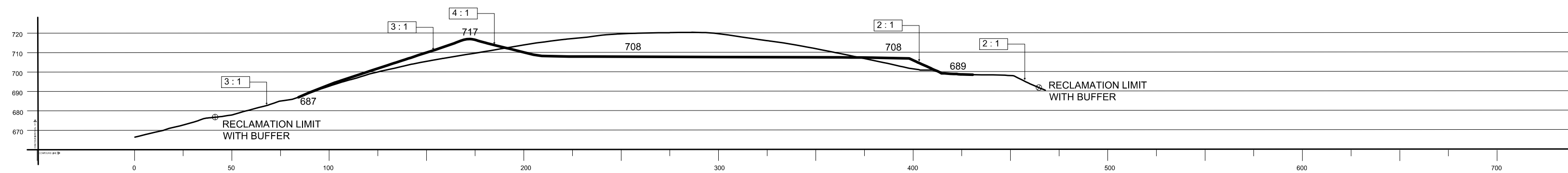
EXISTING CONTOURS AND PROPOSED RECLAMATION AT SECTION : D-D

— EXISTING CONTOUR LINE
 — PROPOSED RECLAMATION CONTOUR LINE



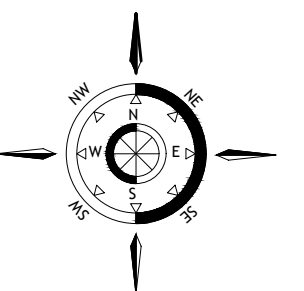
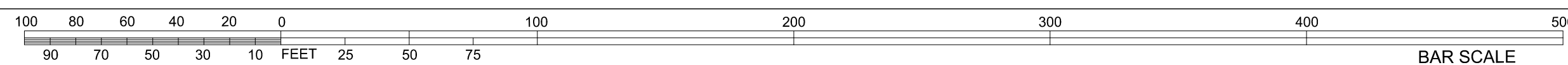
EXISTING CONTOURS AND PROPOSED RECLAMATION AT SECTION : E-E

— EXISTING CONTOUR LINE
 — PROPOSED RECLAMATION CONTOUR LINE

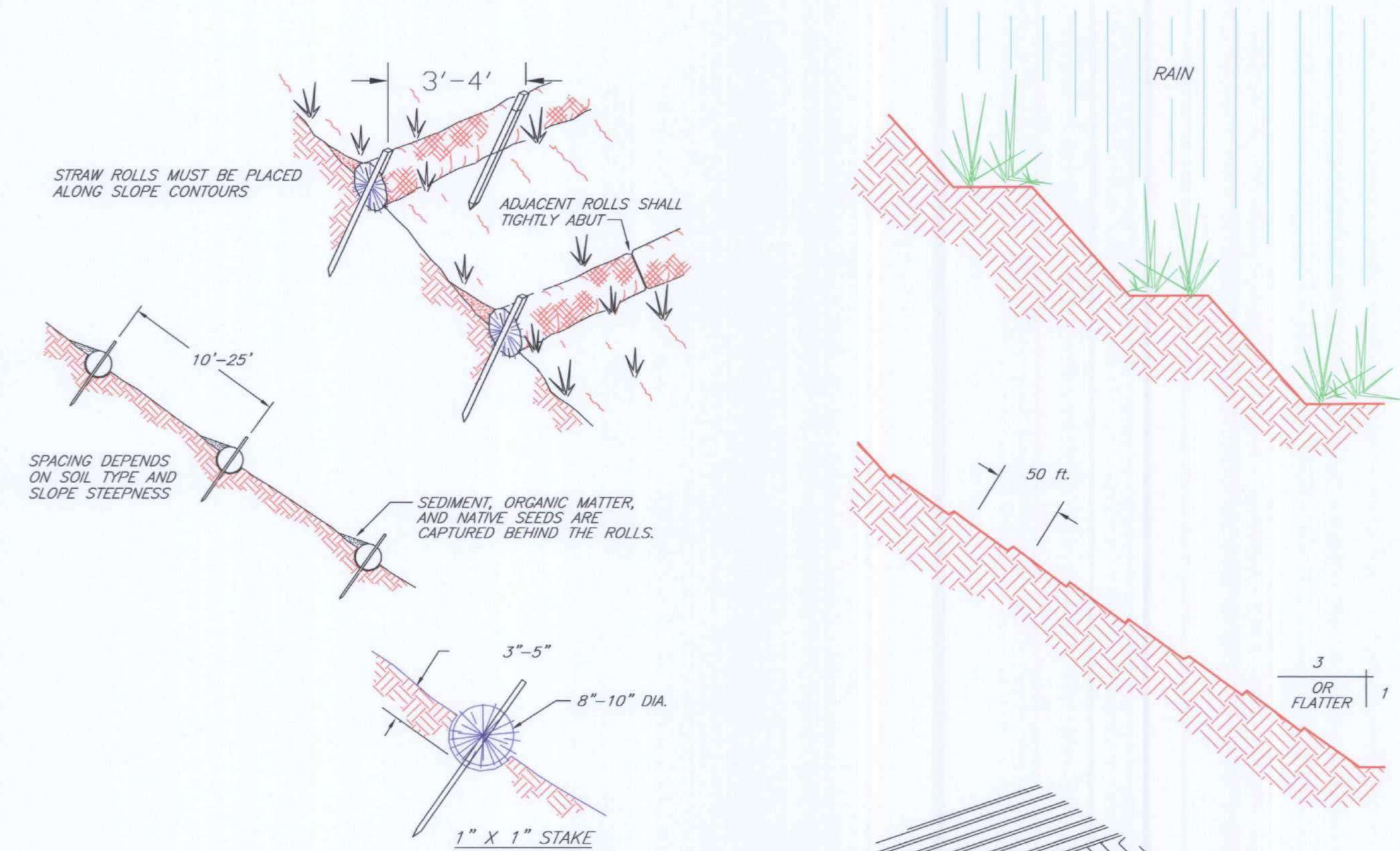


EXISTING CONTOURS AND PROPOSED RECLAMATION AT SECTION : F-F

— EXISTING CONTOUR LINE
 — PROPOSED RECLAMATION CONTOUR LINE



Drainage/Erosion Control Plan



NOTE:
1. FIBER ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3"-5" DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.

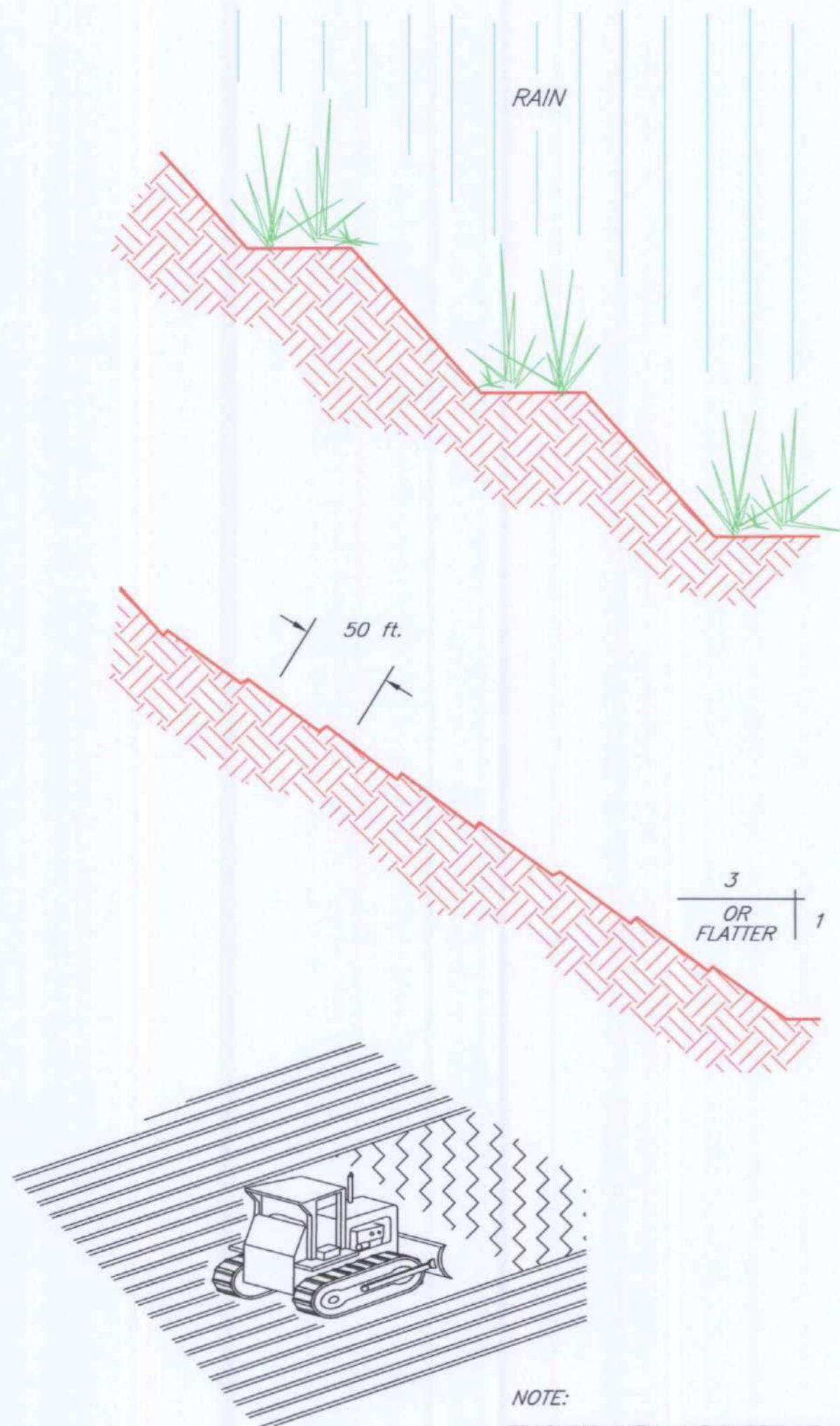
Fiber Rolls will be located on contours spaced as follows:

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- Slope Inclination between 4:1 to 2:1 (H:V): Fiber Rolls will be placed at a maximum interval of 15 ft.
- Slope Inclination 2:1 (H:V) or greater: Fiber Rolls will be placed at a maximum interval of 10 ft.
- Fiber Rolls will also be placed along property boundaries where the existing vegetation has been disturbed

TYP. ROUND HAY BALE DIKE

PER SE-5 CALIFORNIA STORM WATER BMP HANDBOOK, MAY 2011

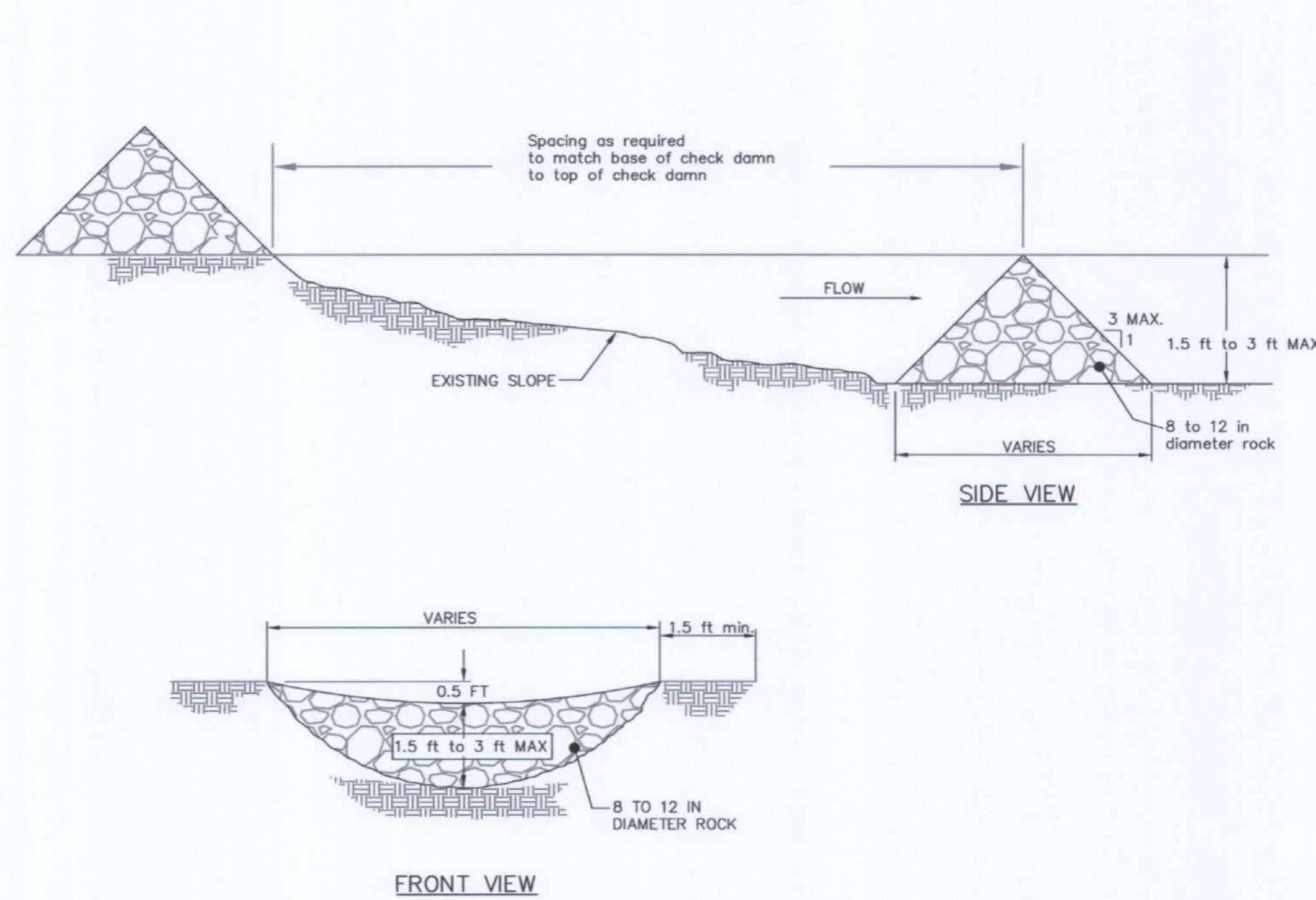
DETAIL 6
N.T.S. 4a



SOIL ROUGHENING

PER EC-15 CALIFORNIA STORM WATER BMP HANDBOOK, NOV 2009

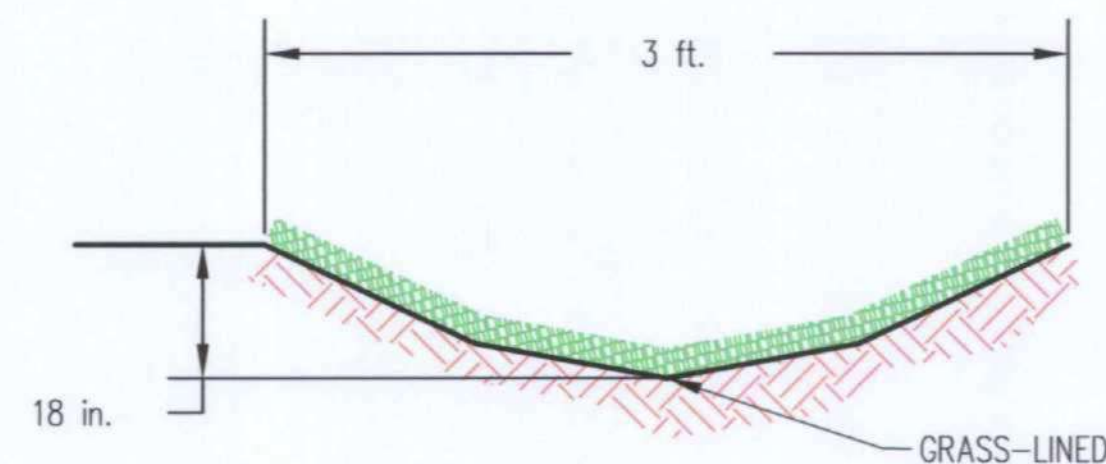
DETAIL 1
N.T.S. -



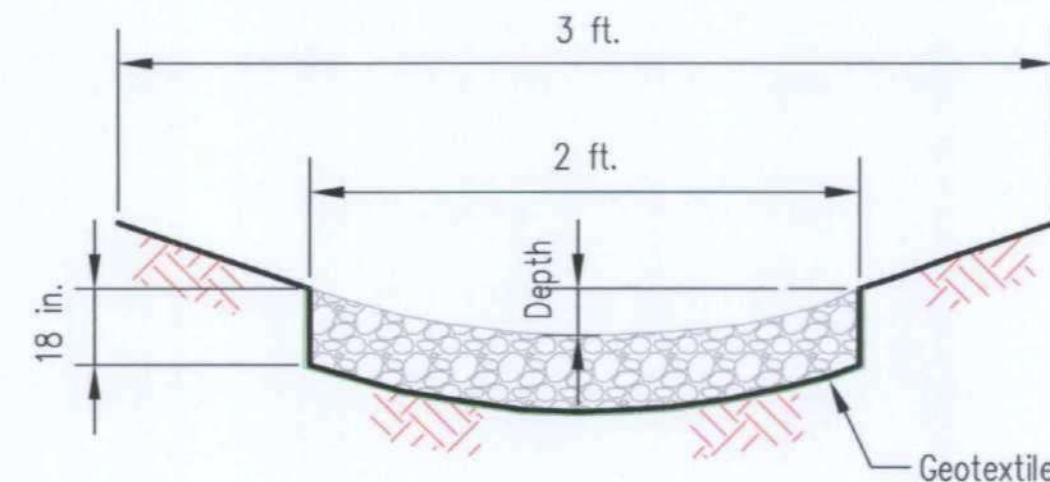
TYP. ROCK CHECK DAM

PER SE-4 CALIFORNIA STORM WATER BMP HANDBOOK, MAY 2011

DETAIL 3
N.T.S. 4a



GRASSLINED V-SHAPED CHANNEL CROSS SECTION



ROCKLINED V-SHAPED CHANNEL CROSS SECTION (Alternate)

DETAIL 5
N.T.S. 4a

EXISTING STORM WATER AUTHORITY:

STORM WATER PERMIT BY THE STATE WATER RESOURCES CONTROL BOARD (SWRCB)
UNDER NPDES GENERAL PERMIT No. CAS000001 (GENERAL PERMIT) FACILITY I.D. (WDID)
2-43102-2874 STORM WATER POLLUTION PREVENTION PLAN (SWPPP) ACTIVE

DE 5/23/2011	Pavex Proposal 1	DE 11/29/11	Incorporate City Comments 10/18/2011
DE 08/10/2011	Incorporate Cty Commts 08/08/11	03/14/2018	Partial closure; Minor grading revisions
NO.	BY	DATE	REVISION

AJAY GOYAL
748 BLUESTONE CIRCLE, FOLSOM, CA 95630 | 916-294-5337

DRAWN
D.E. CHECK Peter
APPR
DATE
11/29/2011
SCALE
NTS

LOCATION:
Serpa Quarry
APN: 29-34-04

SUBJECT:
Typical Details

DRAWING NO.
Sheet 6 of 6