Addendum 1
12/20/23

CITY OF SAUSALITO
DEPARTMENT OF PUBLIC WORKS
NORTH STEPS SLOPE REPAIR

SHEET INDEX

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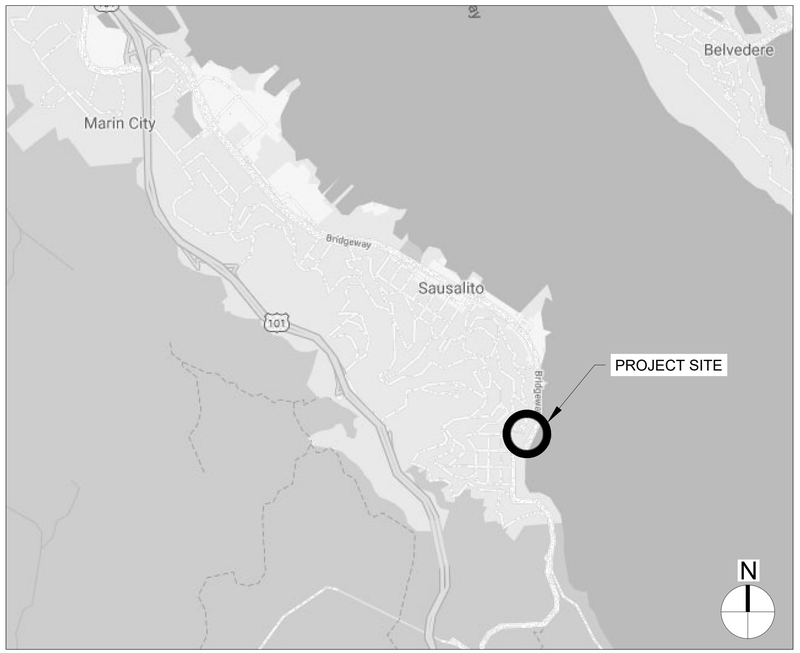
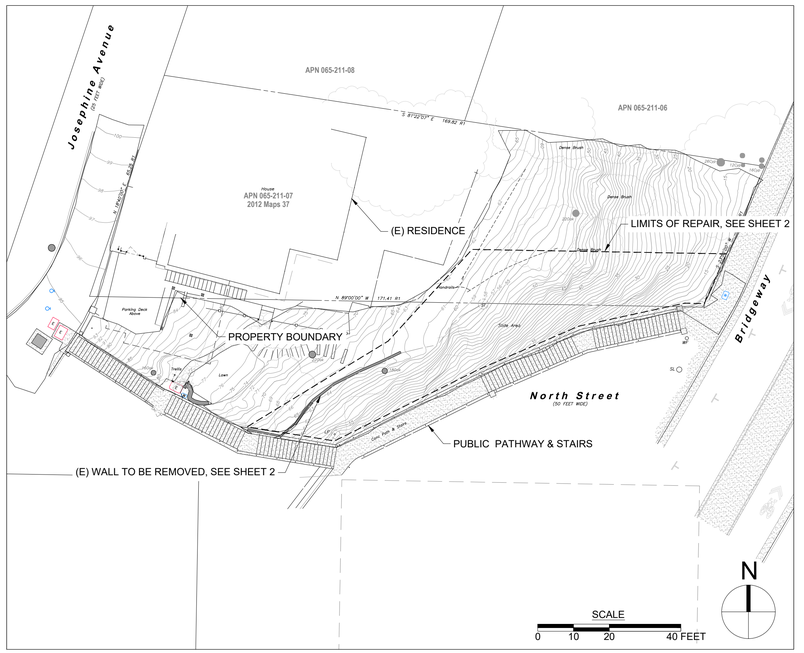


LOCATION MAP
(NO SCALE)



SITE MAP
(SCALE: 1" = 20'-0")

Revisions			
Description	Date	Mark	By
BID SET	12/19/23		RCA

504 Redwood Blvd.
Suite 220
Novato, CA 94947
T 415 / 382-3444
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www.millerpac.com

MILLER PACIFIC ENGINEERING GROUP

FILE: 264.057 Design Drawings, Bid Set.dwg

TITLE SHEET

Designed RCA
Drawn PHA
Checked SAS

City of Sausalito
North Steps Slope Repair
Sausalito, California
Project No. 264.057

SHEET
1

GENERAL

1. ALL CONDITIONS AND DIMENSIONS SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR. ANY DISCREPANCIES THAT REQUIRE CLARIFICATION OR REVISIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE STARTING WORK.
2. THE CONTRACTOR SHALL POSSES A CLASS "A" LICENSE.
3. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, SAFETY, AND SEQUENCE.
4. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT PRIOR TO START OF ANY CONSTRUCTION. CONTRACTOR SHALL NOTIFY ALL PUBLIC OR PRIVATE UTILITY COMPANIES IN ACCORDANCE WITH ALL APPLICABLE LAWS PRIOR TO COMMENCEMENT OF WORK NEAR EXISTING UTILITY LINES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF ALL EXISTING UTILITIES IN THE FIELD. ANY UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
6. CITY OF SAUSALITO ENCROACHMENT PERMIT IS REQUIRED FOR ALL WORK, INCLUDING STAGING OF MATERIALS AND EQUIPMENT IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AN ENCROACHMENT PERMIT IN ACCORDANCE WITH THE PERMIT REQUIREMENTS.
7. THE CONTRACTOR SHALL COORDINATE WITH MILLER PACIFIC TO ESTABLISH THE GROUND ANCHOR AND TECCO MESH REPAIR LAYOUT PRIOR TO DRILLING AND GROUND ANCHOR INSTALLATION.
8. THE CONTRACTOR SHALL HAUL AWAY ALL UNUSED/EXCESS EXCAVATED MATERIAL OFF SITE FOR LEGAL DISPOSAL.
9. NO CONSTRUCTION MATERIALS, EQUIPMENT, DEBRIS OR WASTE SHALL BE PLACED OR STORED WHERE IT MAY BE SUBJECT TO WIND OR RAIN EROSION AND DISPERSION.
10. WORKMANSHIP TO BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS ALONG WITH 2018 CALTRANS STANDARD SPECIFICATIONS, MARIN COUNTY AND CITY OF SAUSALITO STANDARDS AND GENERALLY ACCEPTED CONSTRUCTION PRACTICES.

SURVEY NOTES

1. TOPOGRAPHY BASED ON A FIELD SURVEY PERFORMED BY 1031 SURVEY INC. IN MAY 2023 USING TERRESTRIAL LIDAR.
2. VERTICAL DATUM: CITY OF SAUSALITO BENCHMARK RM11 LOCATED ON THE WEST SIDE OF BRIDGEWAY WHERE BRIDGEWAY TURNS WESTERLY AND BECOMES RICHARDSON STREET, ONE FOOT SOUTHERLY OF THE STREETLIGHT, ELEVATION = 9.84 NGVD29 DATUM. ADD 2.73 TO ACHIEVE NAVD 88 DATUM (VERTCON).
3. AREAS LABELED "DENSE BRUSH" HAVE OBSCURED THE GROUND, CONTOURS IN THESE AREAS SHOULD BE USED WITH CAUTION.

ENGINEERING OBSERVATION DURING CONSTRUCTION

1. PERIODIC GEOTECHNICAL OBSERVATION AND TESTING SHALL BE PERFORMED BY MILLER PACIFIC DURING CONSTRUCTION TO CONFIRM THE INTENT OF THEIR DESIGN IS INCORPORATED, INCLUDING THE FOLLOWING:

1.1 *GROUND ANCHORS*: INTERMITTENT OBSERVATION OF DRILLING, ANCHOR INSTALLATION, GROUTING AND LOAD TESTING. FINISHED GROUND ANCHOR EXCAVATIONS SHALL BE OBSERVED PRIOR TO INSTALLING ANCHOR BAR. ANCHOR BAR SHALL BE OBSERVED PRIOR TO PLACEMENT IN DRILLED HOLE.

1.2 *HYDROSEEDING*: INTERMITTENT OBSERVATION OF HYDROSEEDING. UPON COMPLETION OF HYDROSEEDING, ALL AREAS THAT ARE HYDROSEEDED SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACING EROSION CONTROL MATS AND TECCO MESH.

1.3 *EROSION CONTROL MATS*: INTERMITTENT OBSERVATION OF EROSION CONTROL MAT INSTALLATION. UPON COMPLETION OF EROSION CONTROL MAT INSTALLATION, ALL AREAS COVERED BY EROSION CONTROL MATS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACING TECCO MESH.

1.4 *TECCO MESH*: INTERMITTENT OBSERVATION OF TECCO MESH INSTALLATION AND RELATED COMPONENTS. UPON COMPLETION OF TECCO MESH INSTALLATION, THE ENGINEER SHALL BE PRESENT TO OBSERVE THE TENSIONING OF THE BOUNDARY ROPE.

SPECIAL INSPECTIONS

1. SPECIAL INSPACTION SHALL BE PERFORMED BY MILLER PACIFIC OR A QUALIFIED TESTING AND INSPECTION AGENCY DURING CONSTRUCTION, INCLUDING THE FOLLOWING:

1.1 GROUT: INTERMITTENT OBSERVATION DURING PLACEMENT IN DRILLED HOLES FOR ROCK ANCHORS. GROUT SHALL BE SAMPLED AND CYLINDERS SHALL BE CAST FOR STRENGTH TESTING IN CONFORMANCE WITH ASTM C39. A MINIMUM OF 1 CYLINDER SHALL BE TESTED AT 3 DAYS AND A MINIMUM OF 3 CYLINDERS SHALL BE TESTED AT 28 DAYS.

TECCO MESH

1. REFER TO TECHNICAL SPECIFICATION SECTION 2340 FOR TECCO MESH REQUIREMENTS.
2. CONTRACTOR SHALL CONTACT THE ENGINEER TO REVIEW THE TECCO MESH LAYOUT PRIOR TO DRILLING AND GROUND ANCHOR INSTALLATION.
3. TECCO MESH & COMPONENTS SHALL CONFORM TO THE FOLLOWING PRODUCTS MANUFACTURED BY GEOBRUGG OR APPROVED EQUALS:

   MESH: HIGH-TENSILE STEEL WIRE MESH TECCO G65/3

   ANCHOR PLATES: SPIKE PLATE P33/40 N

   CONNECTION CLIPS: TYPE T3

   PRESS CLAWS: TYPE 2

   BOUNDARY ROPE: STEEL WIRE ROPE WITH 12-MM-DIAMETER AND MINIMUM BREAKING FORCE OF 91 kN.

   WIRE ROPE ANCHORS: "FLEXHEAD" TYPE

GROUND ANCHORS

1. REFER TO TECHNICAL SPECIFICATION SECTION 2340 FOR GROUND ANCHOR REQUIREMENTS.
2. CONTRACTOR SHALL CONTACT THE ENGINEER TO REVIEW THE GROUND ANCHOR LAYOUT PRIOR TO DRILLING AND INSTALLATION.
3. GROUND ANCHOR BARS SHALL BE ASTM A615, GR 75, THREADED BAR.
4. CEMENT GROUT SHALL BE MADE OF TYPE II/V PORTLAND CEMENT CONFORMING TO ASTM C150 WITH A WATER-TO-CEMENT RATIO BETWEEN 0.4 AND 0.5 AND A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
5. VERIFICATION LOAD TESTS

   PERFORM A MINIMUM OF 5 VERIFICATION TESTS ON SACRIFICIAL GROUND ANCHORS INSTALLED AT THE APPROXIMATE LOCATIONS SHOWN ON THE PLANS. THE LOADING SEQUENCE FOR VERIFICATION TESTS SHALL BE AS FOLLOWS:

   AL (0.05 X DESIGN LOAD), 0.25 DL, 0.50 DL, 0.75 DL, 1.00 DL, 1.25 DL, 1.50 DL (CREEP TEST LOAD), 1.75 DL, 2.00 DL

   HOLD LOAD AT EACH INCREMENT FOR A MINIMUM OF 10 MINUTES OR UNTIL DISPLACEMENT CEASES. THE FINAL DISPLACEMENT SHALL BE RECORDED AT EACH LOAD INTERVAL. THE CREEP TEST LOAD SHALL BE HELD FOR A MINIMUM OF 60 MINUTES WITH DISPLACEMENT MEASUREMENTS TAKEN AT 1, 2, 3, 4, 5, 6, 10, 20, 30, 45 AND 60 MINUTES. THE TOTAL MOVEMENT FROM 6 TO 60 MINUTES SHALL NOT EXCEED 0.08 IN.
6. PROOF LOAD TESTS:

   PERFORM PROOF TESTING ON A MINIMUM OF 5 PERCENT OF THE PRODUCTION GROUND ANCHORS AT LOCATIONS SELECTED BY THE ENGINEER. THE LOADING SEQUENCE FOR PROOF TESTS SHALL BE AS FOLLOWS:

   AL (0.05 DL), 0.25 DL, 0.50 DL, 0.75 DL, 1.00 DL, 1.33 DL (CREEP TEST LOAD).

   HOLD CREEP TEST LOAD FOR 10 MINUTES WITH DISPLACEMENT MEASUREMENTS AT 1, 2, 3, 4, 5, 6 AND 10 MINUTES. IF THE TOTAL MOVEMENT BETWEEN 1 AND 10 MINUTES EXCEEDS 0.04 IN, THE TEST LOAD SHALL BE HELD FOR AN ADDITIONAL 50 MINUTES WITH FURTHER DISPLACEMENT READINGS MADE AT 15, 20, 25, 30, 45 AND 60 MINUTES. THE TOTAL MOVEMENT FROM 6 TO 60 MINUTES SHALL NOT EXCEED 0.08 IN.
7. GROUND ANCHOR DISPLACEMENT SHALL BE MEASURED DURING LOAD TESTING USING A DIAL GUAGE CAPABLE OF ACCURATELY MEASURING DISPLACEMENT TO THE NEAREST 0.001 IN.

EROSION & SEDIMENT CONTROL

1. EROSION AND SEDIMENT CONTROL MEASURES SHALL COMPLY WITH ALL REQUIREMENTS OUTLINED IN THE MARIN COUNTY STORMWATER POLLUTION PREVENTION PROGRAM (MCSTOPPP) MINIMUM CONTROL MEASURES FOR SMALL CONSTRUCTION PROJECTS AS OUTLINED IN THE MCSTOPPP CONSTRUCTION EROSION AND SEDIMENT CONTROL PLAN APPLICANT PACKAGE.
2. ANY AREAS IN WHICH GROUND SURFACE AND VEGETATIVE COVER HAS BEEN DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE COVERED WITH A PRE-APPROVED SEED MIX AND BIODEGRADABLE EROSION CONTROL MATS UPON COMPLETION OF CONSTRUCTION.
3. EROSION CONTROL MATS SHALL BE NORTH AMERICAN GREEN SC150BN OR APPROVED EQUAL.

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12/20/23

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NOTES & SPECIFICATIONS

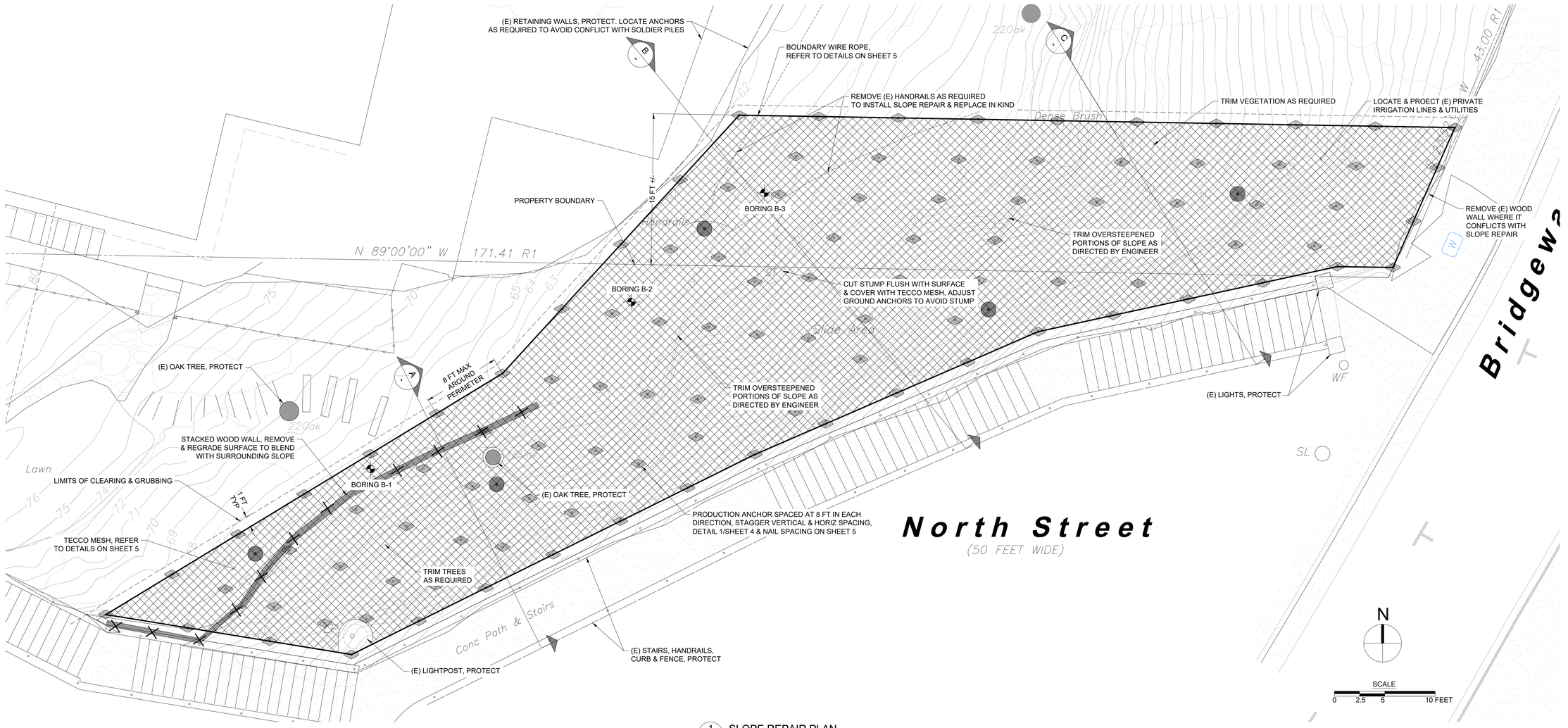
Designed RCA
Drawn PHA
Checked SAS

City of Sausalito
North Steps Slope Repair
Sausalito, California

Project No. 264.057

SHEET
2

Addendum 1
12/20/23



1 SLOPE REPAIR PLAN
(SCALE: 1" = 5'-0")

LEGEND:

- APPROXIMATE LOCATION OF PRODUCTION GROUND ANCHOR PER DETAIL 1/SHEET 4.
- APPROXIMATE LOCATION OF SACRIFICIAL VERIFICATION GROUND ANCHOR PER DETAIL 2/SHEET 4.

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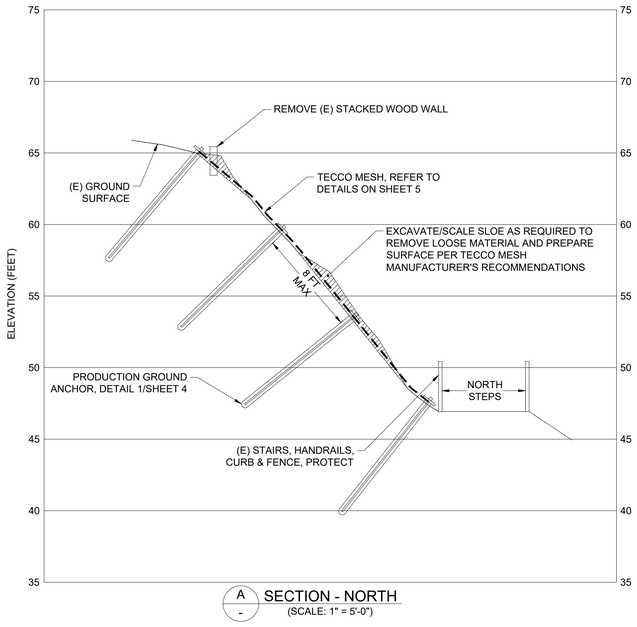
SLOPE REPAIR PLAN

City of Sausalito
North Steps Slope Repair
Sausalito, California

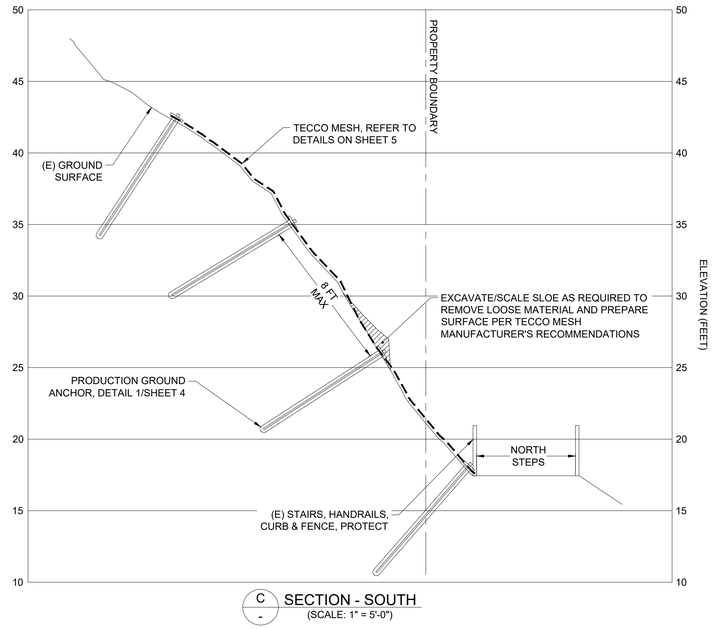
Project No. 264.057

SHEET
3

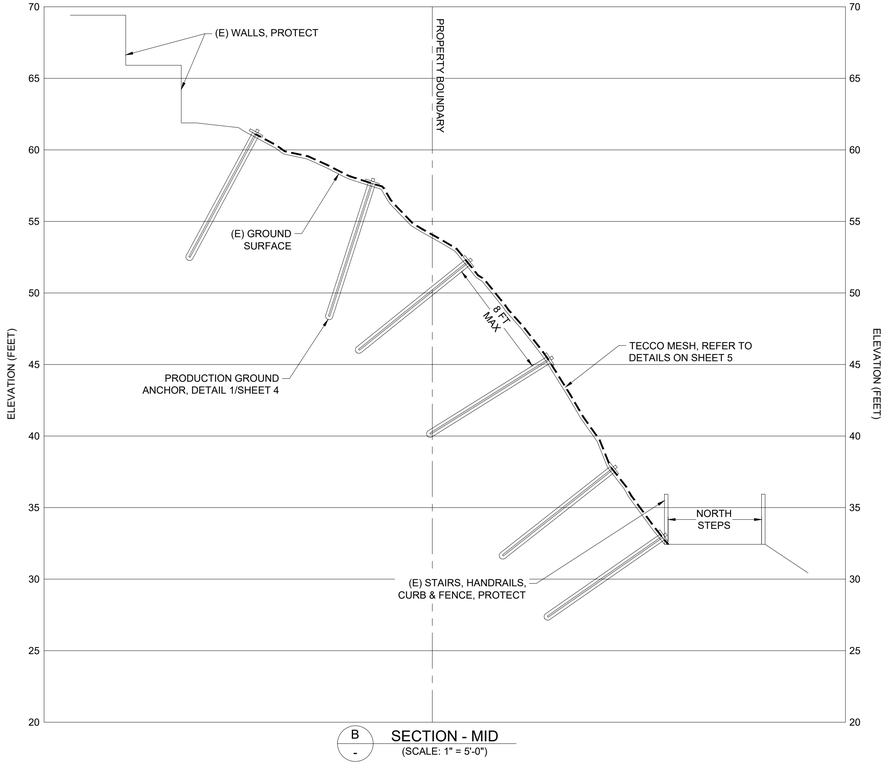
Addendum 1
12/20/23



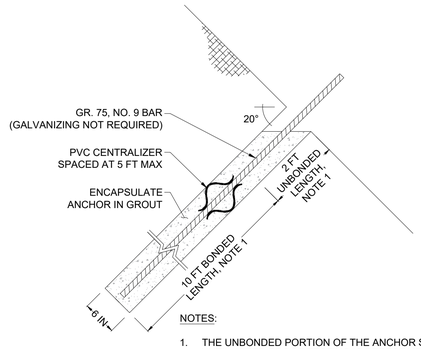
A - SECTION - NORTH
(SCALE: 1" = 5'-0")



C - SECTION - SOUTH
(SCALE: 1" = 5'-0")



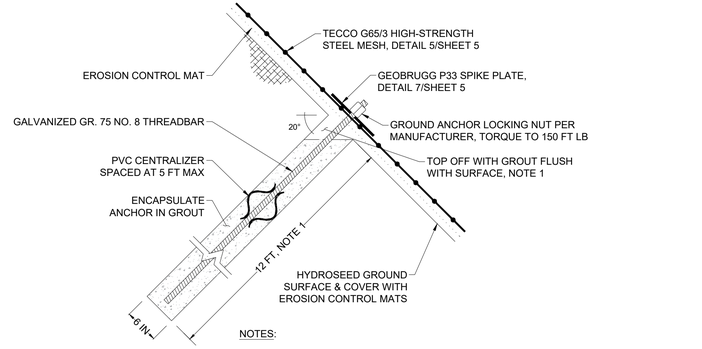
B - SECTION - MID
(SCALE: 1" = 5'-0")



NOTES:

1. THE UNBONDED PORTION OF THE ANCHOR SHALL BE SLEEVED OR LEFT UNGROUTED UNTIL AFTER PROOF TESTING IS PERFORMED. UPON COMPLETION OF TESTING, TRIM ANCHOR HEAD BELOW GRADE AND GROUT REMAINDER OF DRILLED HOLE.
2. GROUND ANCHORS USED FOR VERIFICATION TESTING SHALL BE INSTALLED AND TESTED PRIOR TO INSTALLATION OF PRODUCTION GROUND ANCHORS.
3. DESIGN LOAD = 27 KIPS

2 - VERIFICATION GROUND ANCHOR
(NO SCALE)



NOTES:

1. ENGINEER SHALL IDENTIFY PRODUCTION ANCHORS THAT WILL BE PROOF TESTSED. FOR ANCHORS WHICH WILL BE PROOF TESTED, LEAVE UPPER TWO FEET UNGROUTED UNTIL AFTER PROOF TESTING IS PERFORMED. GROUT REMAINDER OF DRILLED HOLE AFTER PROOF TESTING IS COMPLETE.
2. DESIGN LOAD = 27 KIPS

1 - PRODUCTION GROUND ANCHOR
(NO SCALE)

Revisions

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SECTIONS & GROUND ANCHOR DETAILS

City of Sausalito
North Steps Slope Repair
Sausalito, California

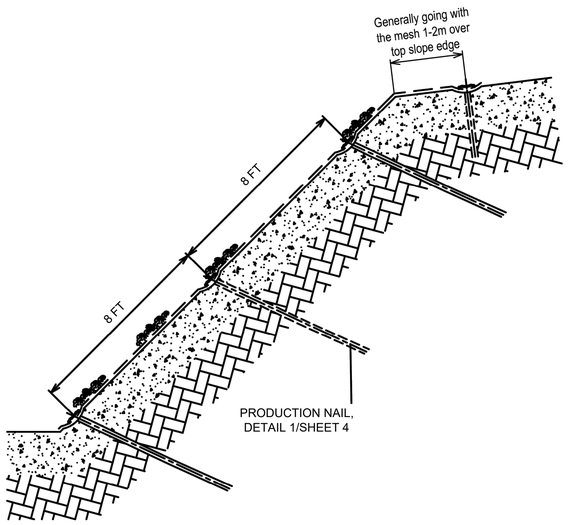
Project No. 264.057

Designed
Drawn PHA
Checked SAS

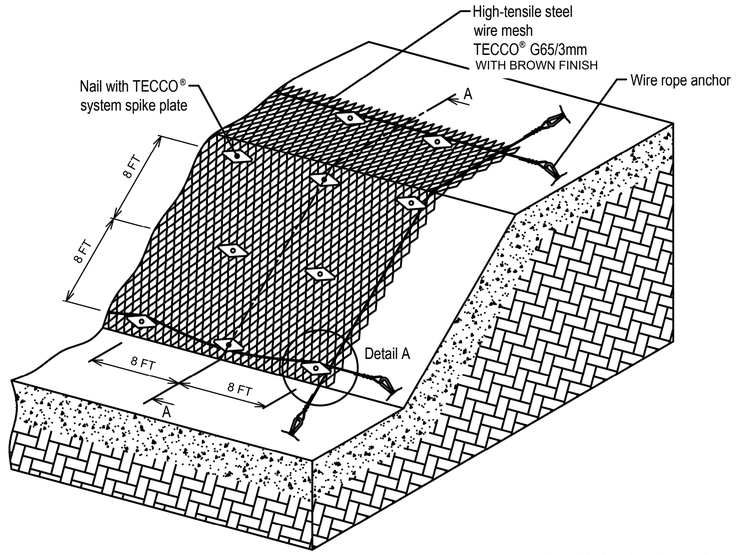
SHEET
4

Addendum 1
12/20/23

Cross section A-A



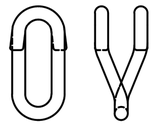
General nail arrangement



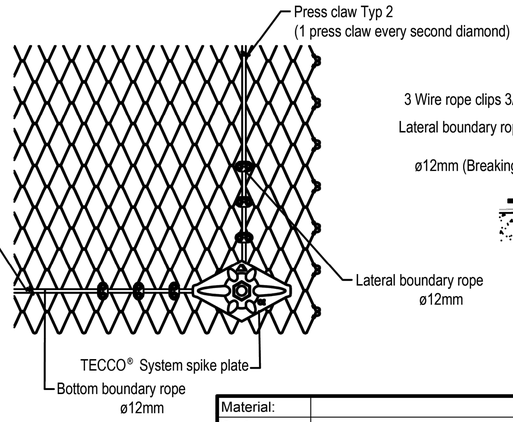
TECCO ®
System spike plate P33

Connection clip T3

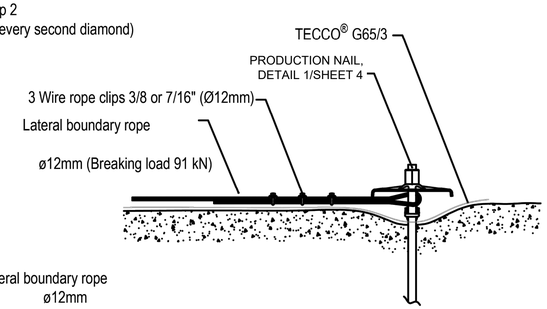
Press claw Typ 2



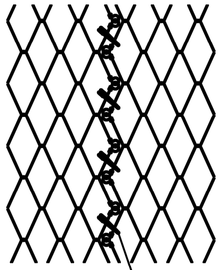
Detail A, Option shear force on the nail



Detail A, Standard, tension force on the wire rope anchor



TECCO® mesh connection vertical normally without overlap



Material:			
Surface:			
Weight [kg]:			
Drawn by:	RIM	Date:	22.02.23
Edited by:	RIM	Date:	23.02.23
Freigegeben	RIM	Date:	27.02.23

TECCO G65/3
System drawing

GEOBRUGG
BRUGG
Safety is our nature

A3 | **EN** | GE-1003e | Rev. | Page 1 / 1

Mark	Date	By	Description
	12/19/23	RCA	BID SET

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GEOBRUGG TECCO MESH DETAILS

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SHEET
5

MAJOR DIVISIONS		SYMBOL	DESCRIPTION
COARSE GRAINED SOILS over 50% sand and gravel	CLEAN GRAVEL	GW	Well-graded gravels or gravel-sand mixtures, little or no fines
		GP	Poorly-graded gravels or gravel-sand mixtures, little or no fines
	GRAVEL with fines	GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
	CLEAN SAND	SW	Well-graded sands or gravelly sands, little or no fines
		SP	Poorly-graded sands or gravelly sands, little or no fines
	SAND with fines	SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
FINE GRAINED SOILS over 50% silt and clay	SILT AND CLAY liquid limit <50%	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		CL	Inorganic clays of low to medium plasticity, gravely clays, sandy clays, silty clays, lean clays
		OL	Organic silts and organic silt-clays of low plasticity
	SILT AND CLAY liquid limit >50%	MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic clays of medium to high plasticity
HIGHLY ORGANIC SOILS		PT	Peat, muck, and other highly organic soils
ROCK			Undifferentiated as to type or composition

KEY TO BORING AND TEST PIT SYMBOLS

CLASSIFICATION TESTS

PI	PLASTICITY INDEX
LL	LIQUID LIMIT
SA	SIEVE ANALYSIS
HYD	HYDROMETER ANALYSIS
P200	PERCENT PASSING NO. 200 SIEVE
P4	PERCENT PASSING NO. 4 SIEVE

SAMPLER TYPE

- MODIFIED CALIFORNIA
- STANDARD PENETRATION TEST
- THIN-WALLED / FIXED PISTON
- HAND SAMPLER
- ROCK CORE
- X DISTURBED OR BULK SAMPLE

STRENGTH TESTS

UC	LABORATORY UNCONFINED COMPRESSION
TXCU	CONSOLIDATED UNDRAINED TRIAXIAL
TXUU	UNCONSOLIDATED UNDRAINED TRIAXIAL
	UC, CU, UU = 1/2 Deviator Stress
DS (2.0)	DRAINED DIRECT SHEAR (NORMAL PRESSURE, ksf)

SAMPLER DRIVING RESISTANCE

Modified California and Standard Penetration Test samplers are driven 18 inches with a 140-pound hammer falling 30 inches per blow. Blows for the initial 6-inch drive seat the sampler. Blows for the final 12-inch drive are recorded onto the logs. Sampler refusal is defined as 50 blows during a 6-inch drive. Examples of blow records are as follows:

- 25 sampler driven 12 inches with 25 blows after initial 6-inch drive
- 85/7" sampler driven 7 inches with 85 blows after initial 6-inch drive
- 50/3" sampler driven 3 inches with 50 blows during initial 6-inch drive or beginning of final 12-inch drive

NOTE: Test boring and test pit logs are an interpretation of conditions encountered at the excavation location during the time of exploration. Subsurface rock, soil or water conditions may vary in different locations within the project site and with the passage of time. Boundaries between differing soil or rock descriptions are approximate and may indicate a gradual transition.

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SOIL CLASSIFICATION CHART

City of Sausalito
North Steps Slope Repair
Sausalito, California

Drawn PHA
Checked

Project No. 264.057 Date: 12/19/2023

A-1 FIGURE

FILENAME: 264.057 Design Drawings, Bid Set.dwg

FRACTURING AND BEDDING

Fracture Classification	Spacing	Bedding Classification
Crushed	less than 3/4 inch	Laminated
Intensely fractured	3/4 to 2-1/2 inches	Very thinly bedded
Closely fractured	2-1/2 to 8 inches	Thinly bedded
Moderately fractured	8 to 24 inches	Medium bedded
Widely fractured	2 to 6 feet	Thickly bedded
Very widely fractured	greater than 6 feet	Very thickly bedded

HARDNESS

Low	Carved or gouged with a knife
Moderate	Easily scratched with a knife, friable
Hard	Difficult to scratch, knife scratch leaves dust trace
Very hard	Rock scratches metal

STRENGTH

Friable	Crumbles by rubbing with fingers
Weak	Crumbles under light hammer blows
Moderate	Indentations <1/8 inch with moderate blow with pick end of rock hammer
Strong	Withstands few heavy hammer blows, yields large fragments
Very strong	Withstands many heavy hammer blows, yields dust, small fragments

WEATHERING

Complete	Minerals decomposed to soil, but fabric and structure preserved
High	Rock decomposition, thorough discoloration, all fractures are extensively coated with clay, oxides or carbonates
Moderate	Fracture surfaces coated with weathering minerals, moderate or localized discoloration
Slight	A few stained fractures, slight discoloration, no mineral decomposition, no affect on cementation
Fresh	Rock unaffected by weathering, no change with depth, rings under hammer impact

NOTE: Test boring and test pit logs are an interpretation of conditions encountered at the location and time of exploration. Subsurface rock, soil and water conditions may differ in other locations and with the passage of time.

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ROCK CLASSIFICATION CHART

City of Sausalito
North Steps Slope Repair
Sausalito, California

Drawn PHA
Checked

Project No. 264.057 Date: 12/19/2023

A-2 FIGURE

FILENAME: 264.057 Design Drawings, Bid Set.dwg

BORING 1

EQUIPMENT: Portable Hydraulic Drill Rig with 4-inch Solid Flight Auger
DATE: 06/30/23
ELEVATION: 65 feet*
*REFERENCE: Topographic Survey by 1031 Survey, Inc. Dated 6/13/23

DEPTH meters / feet	SAMPLE	SYMBOL (4)		BLOWS / FOOT (1)	DRY UNIT WEIGHT pcf (2)	MOISTURE CONTENT (%)	SHEAR STRENGTH psf (3)	OTHER TEST DATA	DRILL RATE (MIN/FT)
0 / 0			SILT with Sand (ML) dark brown, dry to slightly moist, medium stiff, low to medium plasticity [Fill]						
1 / 5			Sandy CLAY (CL) orange-tan and mottled black, moist, medium stiff to stiff, low plasticity [Colluvium/Residual Soil]	13	99	17.2	2025 UC		
2 / 10			SANDSTONE orange with white and tan, low hardness, weak to moderate strength, moderately weathered, fine to coarse sand with angular quartz inclusions [Bedrock]	45	118	14.3	6650 UC		3.0
3 / 15				61/10"	113	9.9			2.0
4 / 20			grades hard, strong, less weathered	50/2"		5.2			9.0
5 / 25			Boring terminated at 13.5 ft below ground surface No groundwater encountered during drilling	50/3"		4.8			
6 / 30									

Water level encountered during drilling
Water level measured after drilling

NOTES: (1) UNCORRECTED FIELD BLOW COUNTS
(2) METRIC EQUIVALENT DRY UNIT WEIGHT kN/m³ = 0.1571 x DRY UNIT WEIGHT (pcf)
(3) METRIC EQUIVALENT STRENGTH (kPa) = 0.0479 x STRENGTH (psf)
(4) GRAPHIC SYMBOLS ARE ILLUSTRATIVE ONLY

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BORING LOG

City of Sausalito
North Steps Slope Repair
Sausalito, California

Drawn PHA
Checked

Project No. 264.057 Date: 12/19/2023

A-3 FIGURE

FILENAME: 264.057 Design Drawings, Bid Set.dwg

Addendum 1
12/20/23

BORING 2

EQUIPMENT: Portable Hydraulic Drill Rig with 4-inch Solid Flight Auger
DATE: 06/30/23
ELEVATION: 61 feet*
*REFERENCE: Topographic Survey by 1031 Survey, Inc. Dated 6/13/23

DEPTH meters / feet	SAMPLE	SYMBOL (4)		BLOWS / FOOT (1)	DRY UNIT WEIGHT pcf (2)	MOISTURE CONTENT (%)	SHEAR STRENGTH psf (3)	OTHER TEST DATA	DRILL RATE (MIN/FT)
0 / 0			Silty GRAVEL (GM) dark brown, moist, medium to low plasticity, subangular gravels up to 1 inch [Fill/Colluvium]	8	109	10.4		49.5% P200	
1 / 5			SANDSTONE orange with tan and white, intensley fractured, low hardness, weak, moderately to highly weathered, fine to coarse sand [Bedrock]	45	127	10.7			
2 / 10				50/5"		5.6			2.0
3 / 15				89		6.9			2.0
4 / 20				52		15.7			
5 / 25			Boring terminated at 14.5 ft below ground surface No groundwater encountered during drilling						
6 / 30									

Water level encountered during drilling
Water level measured after drilling

NOTES: (1) UNCORRECTED FIELD BLOW COUNTS
(2) METRIC EQUIVALENT DRY UNIT WEIGHT kN/m³ = 0.1571 x DRY UNIT WEIGHT (pcf)
(3) METRIC EQUIVALENT STRENGTH (kPa) = 0.0479 x STRENGTH (psf)
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BORING LOG

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Drawn PHA
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Project No. 264.057 Date: 12/19/2023

A-4 FIGURE

FILENAME: 264.057 Design Drawings, Bid Set.dwg

BORING 3

EQUIPMENT: Portable Hydraulic Drill Rig with 4-inch Solid Flight Auger
DATE: 06/30/23
ELEVATION: 58 feet*
*REFERENCE: Topographic Survey by 1031 Survey, Inc. Dated 6/13/23

DEPTH meters / feet	SAMPLE	SYMBOL (4)		BLOWS / FOOT (1)	DRY UNIT WEIGHT pcf (2)	MOISTURE CONTENT (%)	SHEAR STRENGTH psf (3)	OTHER TEST DATA	DRILL RATE (MIN/FT)
0 / 0			SILT with Sand (ML) dark brown, dry to slightly moist, soft, low to medium plasticity [Fill/Colluvium]	5	88	26.5	600 UC		
1 / 5			Sandy CLAY (CL) orange mottled white and tan, moist, soft, low to medium plasticity [Colluvium/Residual Soil]						
2 / 10			SANDSTONE orange and tan, intensley fractured, low hardness, friable, highly weathered, fine to coarse sand [Bedrock]	32	125	11.3	1125 UC		
3 / 15			grades orange-brown	97/10"	131	8.8	1525 UC		3.0
4 / 20			grades hard, strong	30		10.1			2.0
5 / 25			Boring terminated at 16.5 ft below ground surface No groundwater encountered during drilling	65		8.6			
6 / 30									

Water level encountered during drilling
Water level measured after drilling

NOTES: (1) UNCORRECTED FIELD BLOW COUNTS
(2) METRIC EQUIVALENT DRY UNIT WEIGHT kN/m³ = 0.1571 x DRY UNIT WEIGHT (pcf)
(3) METRIC EQUIVALENT STRENGTH (kPa) = 0.0479 x STRENGTH (psf)
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BORING LOG

City of Sausalito
North Steps Slope Repair
Sausalito, California

Drawn PHA
Checked

Project No. 264.057 Date: 12/19/2023

A-5 FIGURE

FILENAME: 264.057 Design Drawings, Bid Set.dwg

Revisions

By	Date	Description
RCA	12/19/23	BID SET

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FILE: 264.057 Design Drawings, Bid Set.dwg

BORING LOGS

City of Sausalito
North Steps Slope Repair
Sausalito, California

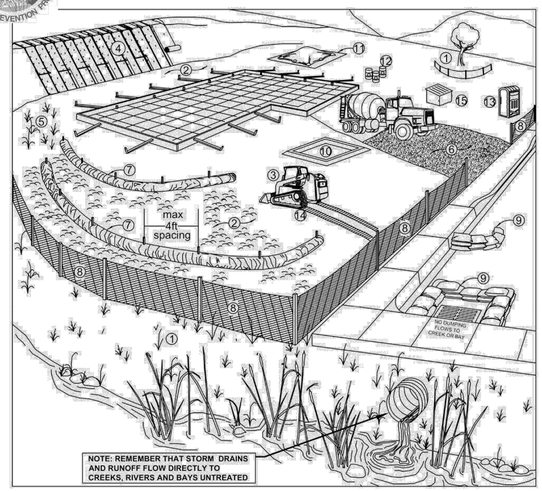
Project No. 264.057

Designed RCA
Drawn PHA
Checked SAS

SHEET 6

Addendum 1
12/20/23

Marin County Stormwater Pollution Prevention Program
Minimum Control Measures
For Small Construction Projects



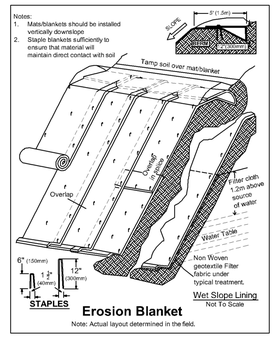
Erosion Controls	Sediment Controls	Good Housekeeping
NS Scheduling	6. Tracking Controls	10. Concrete Washout
1. Preserve Vegetation & Creek Set Backs	7. Fiber Rolls	11. Stockpile Management
2. Soil Cover	8. Silt Fence	12. Hazardous Material Management
3. Soil Preparation/ Roughening	9. Drain Inlet Protection	13. Sanitary Waste Management
4. Erosion Control Blankets	NS Trench Dewatering	14. Equipment and Vehicle Maintenance
5. Revegetation		15. Litter and Waste Management

NS=not shown on graphic

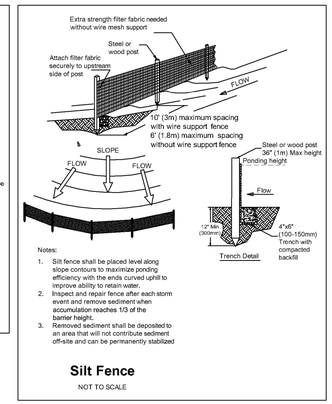
Note: Select an **effective combination of control measures from each category**, Erosion Control, Sediment Control, and Good Housekeeping. Control measures shall be **continually implemented and maintained throughout the project** until activities are complete, disturbed areas are stabilized with permanent erosion controls, and the local agency has signed off on permits that may have been required for the project. **Inspect and maintain the control measures** before and after rain events, and as required by the local agency or state permit.
More detailed information on the BMPs can be found in the related California Stormwater Quality Association (CASQA) and California Department of Transportation (Caltrans) BMP Factsheets. CASQA factsheets are available by subscription in the *California Best Management Practices Handbook Portal: Construction* at http://www.casqa.org. Caltrans factsheets are available in the *Construction Site BMP Manual March 2003* at http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm.
Visit www.mcstoppp.org for more information on construction site management and Erosion and Sediment Control Plans.

If you require materials in alternative formats, please contact:
415-473-4381 voice/TTY or disabilityaccess@co.marin.ca.us

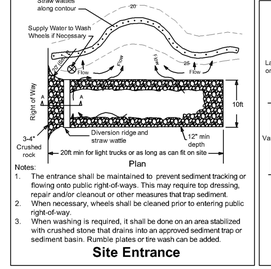
Control Measure		General Description
Erosion Control Best Management Practices		
N/A	Scheduling	Plan the project and develop a schedule showing each phase of construction. Schedule construction activities to reduce erosion potential, such as scheduling ground disturbing activities during the summer and phasing projects to minimize the amount of area disturbed. *For more info see the following factsheets: CASQA: EC-1; or Caltrans: SS-1.*
1	Preserve Existing Vegetation and Creek Setbacks	Preserve existing vegetation to the extent possible, especially along creek buffers. Show creek buffers on maps and identify areas to be preserved in the field with temporary fencing. Check with the local Planning and Public Works Departments for specific creek set back requirements. *For more info see the following factsheets: CASQA: EC-2; or Caltrans: SS-2.*
2	Soil Cover	Cover exposed soil with straw mulch and tackifier (or equivalent). *For more info see the following factsheets: CASQA: EC-3, EC-5, EC-6, EC-7, EC-8, EC-14, EC-16; or Caltrans: SS-2, SS-4, SS-5, SS-6, SS-7, SS-8.*
3	Soil Preparation/ Roughening	Soil preparation is essential to vegetation establishment and BMP installation. It includes soil testing and amendments to promote vegetation growth as well as roughening surface soils by mechanical methods (decompacting, scarifying, stair stepping, etc.). *For more info see the following factsheets: CASQA: EC-15.*
4	Erosion Control Blankets	Install erosion control blankets (or equivalent) on disturbed sites with 3:1 slopes or steeper. Use wildlife-friendly blankets made of biodegradable natural materials. Avoid using blankets made with plastic netting or fixed aperture netting. See: http://www.coastal.ca.gov/nps/Wildlife-Friendly_Products.pdf. *For more info see the following factsheets: CASQA: EC-7; or Caltrans: SS-7.*
5	Revegetation	Re-vegetate areas of disturbed soil or vegetation as soon as practical. *For more info see the following factsheets: CASQA: EC-4; or Caltrans: SS-4.*
Sediment Control Best Management Practices		
6	Tracking Controls	Stabilize site entrance to prevent tracking soil offsite. Inspect streets daily and sweep street as needed. Require vehicles and workers to use stabilized entrance. Place crushed rock 12-inches deep over a geotextile, using angular rock between 4 and 6-in. Make the entrance as long as can be accommodated on the site, ideally long enough for 2 revolutions of the maximum tire size (16-20 feet long for most light trucks). Make the entrance wide enough to accommodate the largest vehicle that will access the site, ideally 10 feet wide with sufficient radii for turning in and out of the site. Rumble pads or rumble racks can be used in lieu of or in conjunction with rock entrances. Wheel washes may be needed where space is limited or where the site entrance and sweeping is not effective. *For more info see the following factsheets: CASQA: TC-1; TC-3; or Caltrans: TC-1; TC-3.*
7	Fiber Rolls	Use fiber rolls as a perimeter control measure, along contours of slopes, and around soil stockpiles. On slopes space rolls 10 to 20 feet apart (using closer spacing on steeper slopes). Install parallel to contour. If more than one roll is used in a row overlap roll do not abut. J-hook end of roll upslope. Install rolls per either Type 1 (stake rolls into shallow trenches) or Type 2 (stake in front and behind roll and lash with rope). Use wildlife-friendly fiber rolls made of biodegradable natural materials. Avoid using fiber rolls made with plastic netting or fixed aperture netting. See: http://www.coastal.ca.gov/nps/Wildlife-Friendly_Products.pdf. Manufactured linear sediment control or compost socks can be used in lieu of fiber rolls. *For more info see the following factsheets: CASQA: SE-5 (Type 1); SE-12, SE-13; or Caltrans: SC-5 (Type 1 and Type 2).*
8	Silt Fence	Use silt fence as a perimeter control measure, and around soil stockpiles. Install silt fence along contours. Key silt fence into the soil and stake. Do not use silt fence for concentrated water flows. Install fence at least 3 feet back from the slope to allow for sediment storage. Wire backed fence can be used for extra strength. Avoid installing silt fence on slopes because they are hard to maintain. Manufactured linear sediment control can be used in lieu of silt fences. *For more info see the following factsheets: CASQA: SE-1; SE-12; or Caltrans: SC-1.*
9	Drain Inlet Protection	Use gravel bags, (or similar product) around drain inlets located both onsite and in gutter as a last line of defense. Bags should be made of a woven fabric resistant to photo-degradation filled with 0.5-1-in washed crushed rock. Do not use sand bags or silt fence fabric for drain inlet protection. *For more info see the following factsheets: CASQA: SE-10; or. Caltrans: SC-10.*
N/A	Trench Dewatering	Follow MCSTOPPP BMPs for trench dewatering. http://www.marincounty.org/depts/pw/divisions/mcstoppp/development/~/media/Files/Departments/PW/mcstoppp/development/TrenchingSWReqMCSTOPPPFinal6_09.pdf. *For more info see the following factsheets: CASQA: NS-2; or Caltrans: NS-2.*
Good Housekeeping Best Management Practices		
10	Concrete Washout	Construct a lined concrete washout site away from storm drains, waterbodies, or other drainages. Ideally, place adjacent to stabilized entrance. Clean as needed and remove at end of project. *For more info see the following factsheets: CASQA: WM-8; or .Caltrans: WM-8.*
11	Stockpile Management	Cover all stockpiles and landscape material and berm properly with fiber rolls or sand bags. Keep behind the site perimeter control and away from waterbodies. *For more info see the following factsheets: CASQA: WM-3 or Caltrans: WM-3.*
12	Hazardous Material Management	Hazardous materials must be kept in closed containers that are covered and within secondary containment; do not place containers directly on soil. *For more info see the following factsheets: CASQA: WM-6; or Caltrans: WM-6.*
13	Sanitary Waste Management	Place portable toilets near stabilized site entrance, behind the curb and away from gutters, storm drain inlets, and waterbodies. Tie or stake portable toilets to prevent tipping and equip units with overflow pan/tray (most vendors provide these). *For more info see the following factsheets: CASQA: WM-9; or Caltrans: WM-9.*
14	Equipment and Vehicle Maintenance	Prevent equipment fluid leaks onto ground by placing drip pans or plastic tarps under equipment. Immediately clean up any spills or drips. *For more info see the following factsheets: CASQA: NS-8, NS-9, and NS-10; or Caltrans: NS-8, NS-9, and NS-10.*
15	Litter and Waste Management	Designate waste collection areas on site. Use watertight dumpsters and trash cans; inspect for leaks. Cover at the end of each work day and when it is raining or windy. Arrange for regular waste collection. Pick up site litter daily. *For more info see the following factsheets: CASQA: WM-5; or Caltrans: WM-5.*



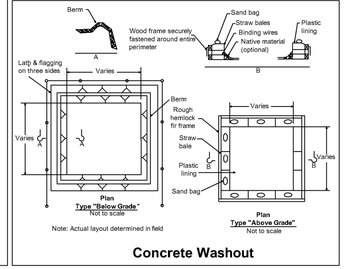
Erosion Blanket
Note: Actual layout determined in the field.



Silt Fence
NOT TO SCALE



Site Entrance



Note: Actual layout determined in field

Concrete Washout

Catch Basins with Gravel Bags
(Do not use sand bags near inlets)

Mark	Date	By	Description
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EROSION & SEDIMENT CONTROL

City of Sausalito
North Steps Slope Repair
Sausalito, California

Project No. 264.057

Designed RCA
Drawn PHA
Checked SAS

SHEET
7