#### **CITY OF SAUSALITO**

420 Litho Street, Sausalito, CA 94965

#### Addendum No. 1

Issued December 20, 2023

#### **North Street Steps Slope Repair**

Page 1 of 8

#### NOTICE TO ALL PLAN HOLDERS SUBMITTING BIDS FOR THIS WORK:

You are hereby notified of the following information, changes, clarifications or modifications to the original Contract Documents, Project Manual, Drawings, Specifications and subsequent Addenda. This Addendum shall supersede the original Contract Documents and previous Addenda wherein it contradicts the same and shall take precedence over anything to the contrary therein. All other conditions remain, UNCHANGED.

This Addendum is hereby made a part of the Contract Documents to the same extent as though it were originally included therein.

**Revisions:** 

**Plans** 

Sheets 1 through 7 are replaced with the attached labeled "Addendum 1 12/20/23"

**END OF ADDENDUM NO. 1** 

Issued By: City of Sausalito

Andrew Davidson Senior Engineer

**ACKNOWLEDGED** 

\_\_\_\_

**Bidder's Signature** 

A signed copy of this addendum is to be submitted as a part of the bid package for the subject project. Failure to do so may subject the Bidder to Disqualification.

Addendum 1 12/20/23

# CITY OF SAUSALITO DEPARTMENT OF PUBLIC WORKS NORTH STEPS SLOPE REPAIR

# SHEET INDEX

SHEET 1: TITLE SHEET

SHEET 2: NOTES & SPECIFICATIONS

SHEET 3: SLOPE REPAIR PLAN

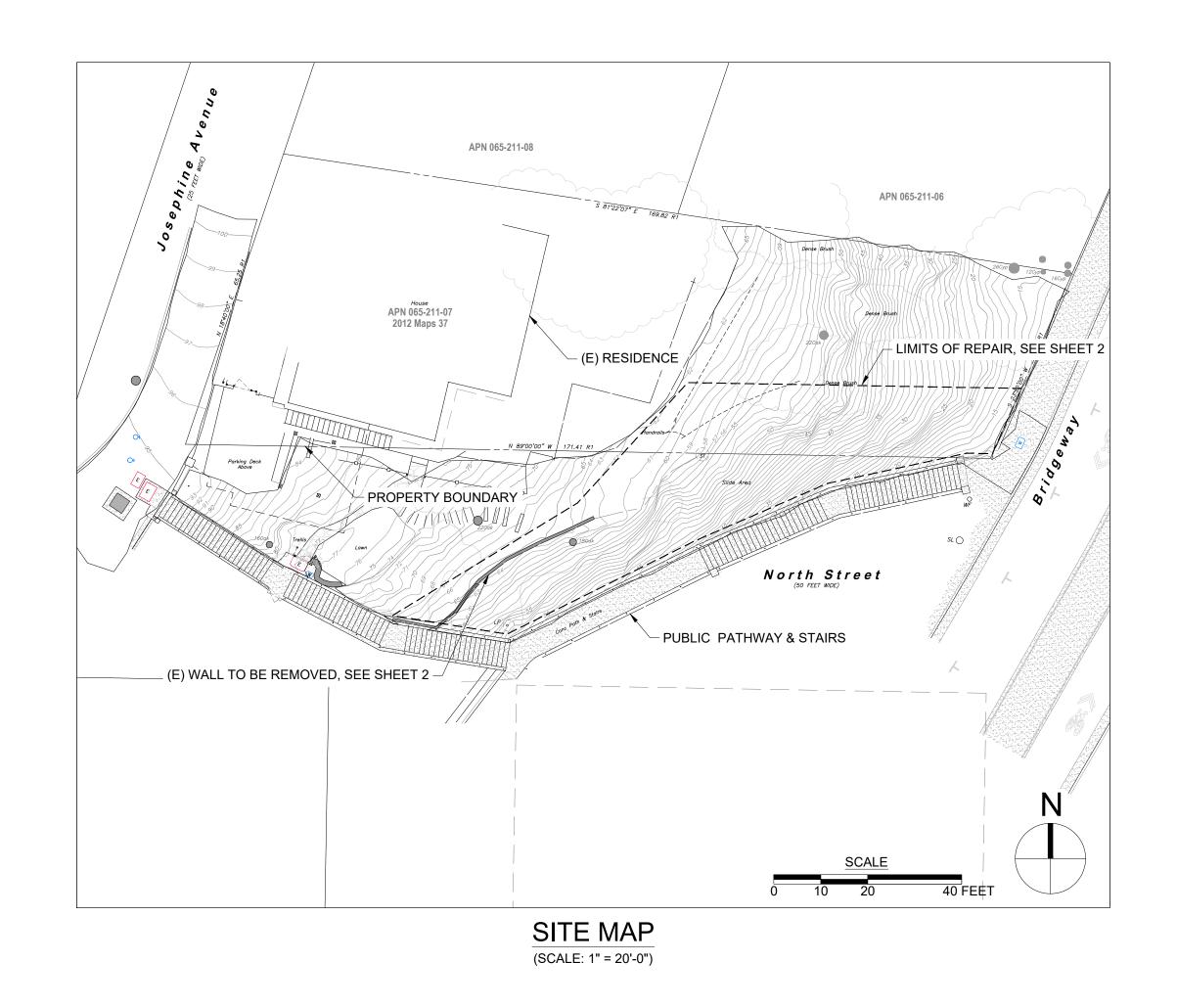
SHEET 4: SECTIONS & GROUND ANCHOR DETAILS

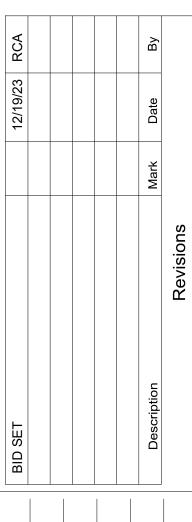
SHEET 5: GEOBRUGG TECCO MESH DETAILS

SHEET 6: BORING LOGS

SHEET 7: EROSION & SEDIMENT CONTROL







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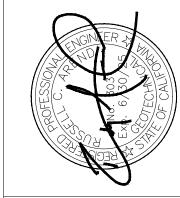
ENGINEER PACIFICATION © 2023 ALL RIGHTS RESERV



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y of Sausalito teps Slope Repair

City of S North Steps Sausalito



#### **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.
- 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.
- . 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**

- . 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:

 ${\sf AL\ (0.05\ DL),\,0.25\ DL,\,0.50\ DL,\,0.75\ DL,\,1.00\ DL,\,1.33\ DL\ (CREEP\ TEST\ LOAD)}.$ 

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.

Addendum 1 12/20/23

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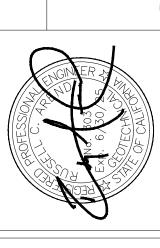
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SPECIFICATION

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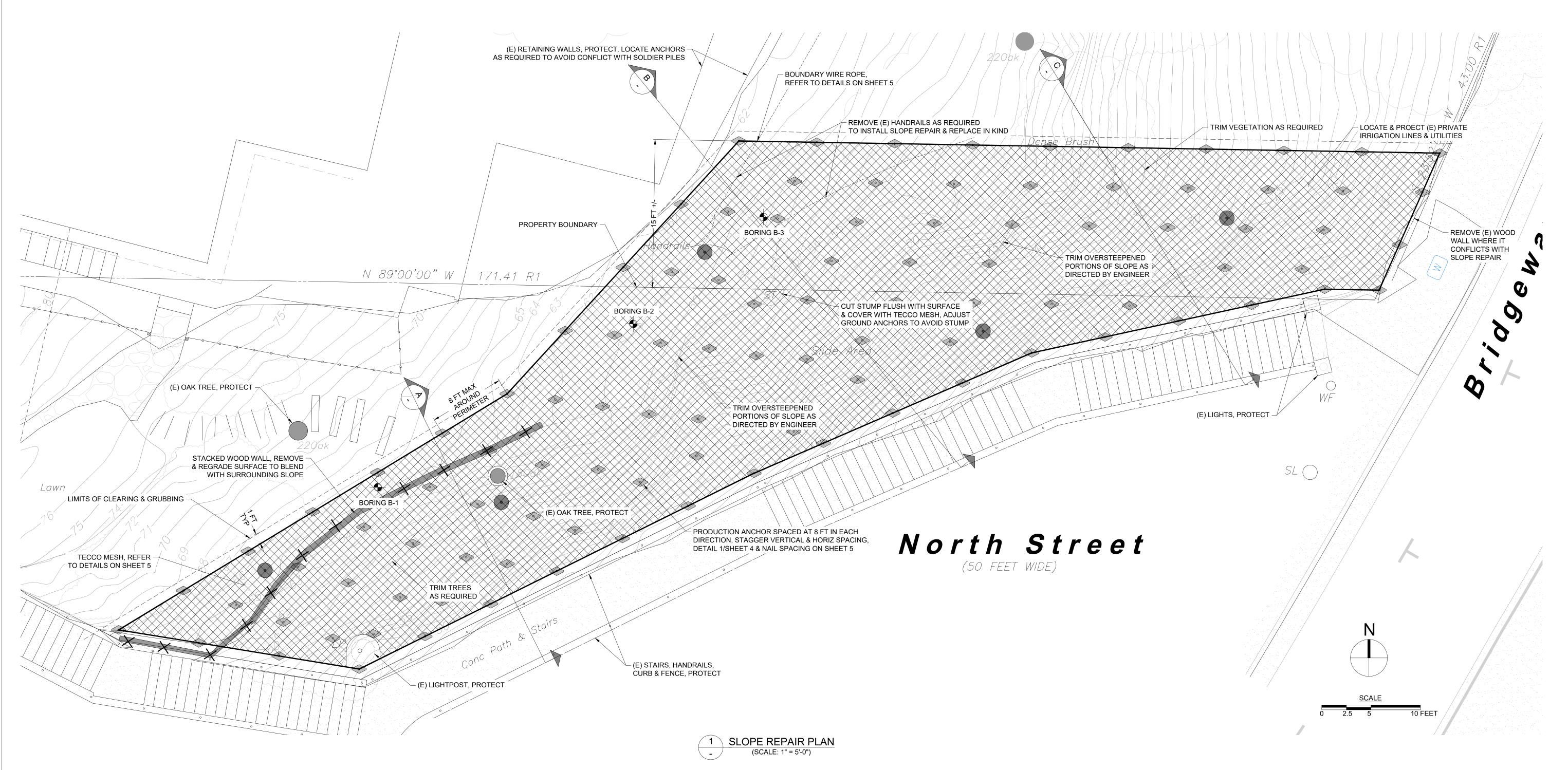
City of Sausalito lorth Steps Slope Repair Sausalito, California



SHEET

2

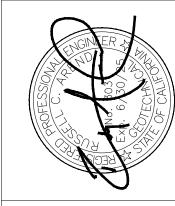
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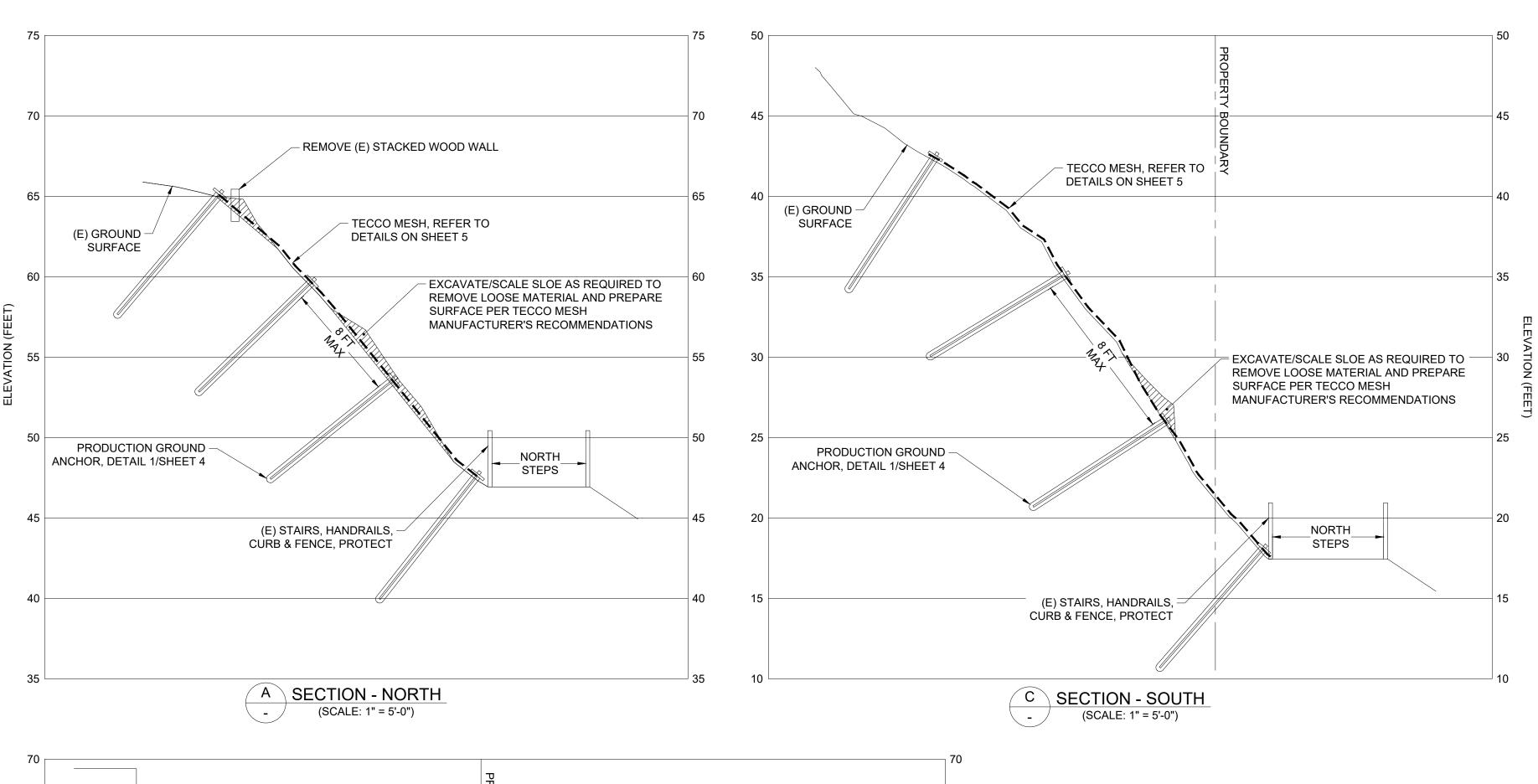


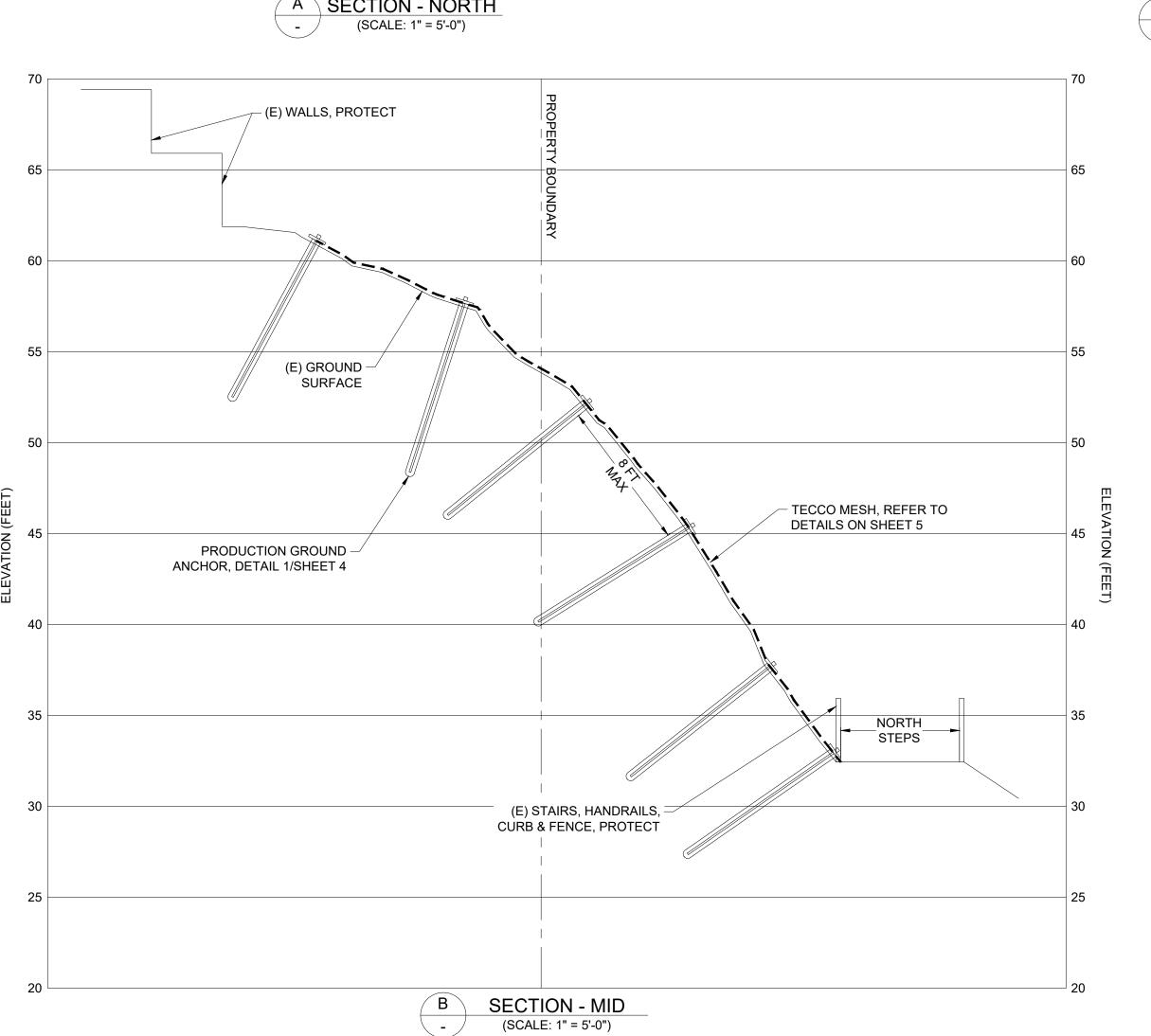
LEGEND:

APPROXIMATE LOCATION OF PRODUCTION GROUND ANCHOR PER DETAIL 1/SHEET 4.

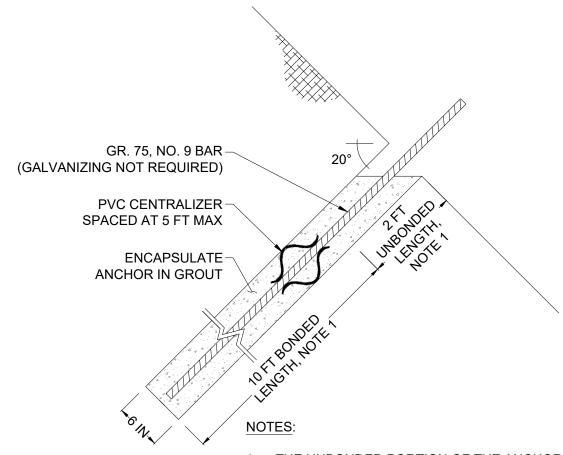
APPROXIMATE LOCATION OF SACRIFICIAL VERIFICATION GROUND ANCHOR PER DETAIL 2/SHEET 4.



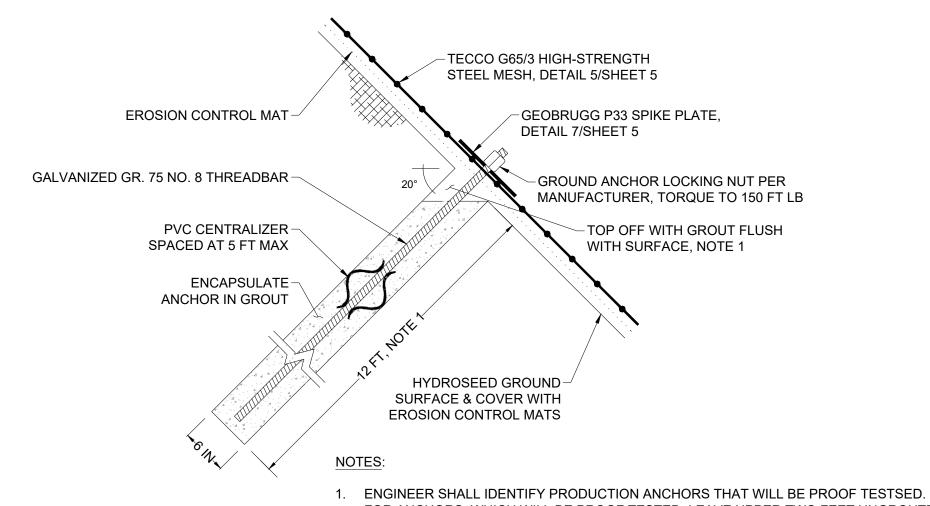




Addendum 1 12/20/23



- 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)



- 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)

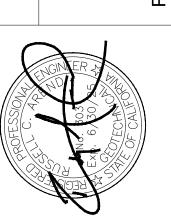
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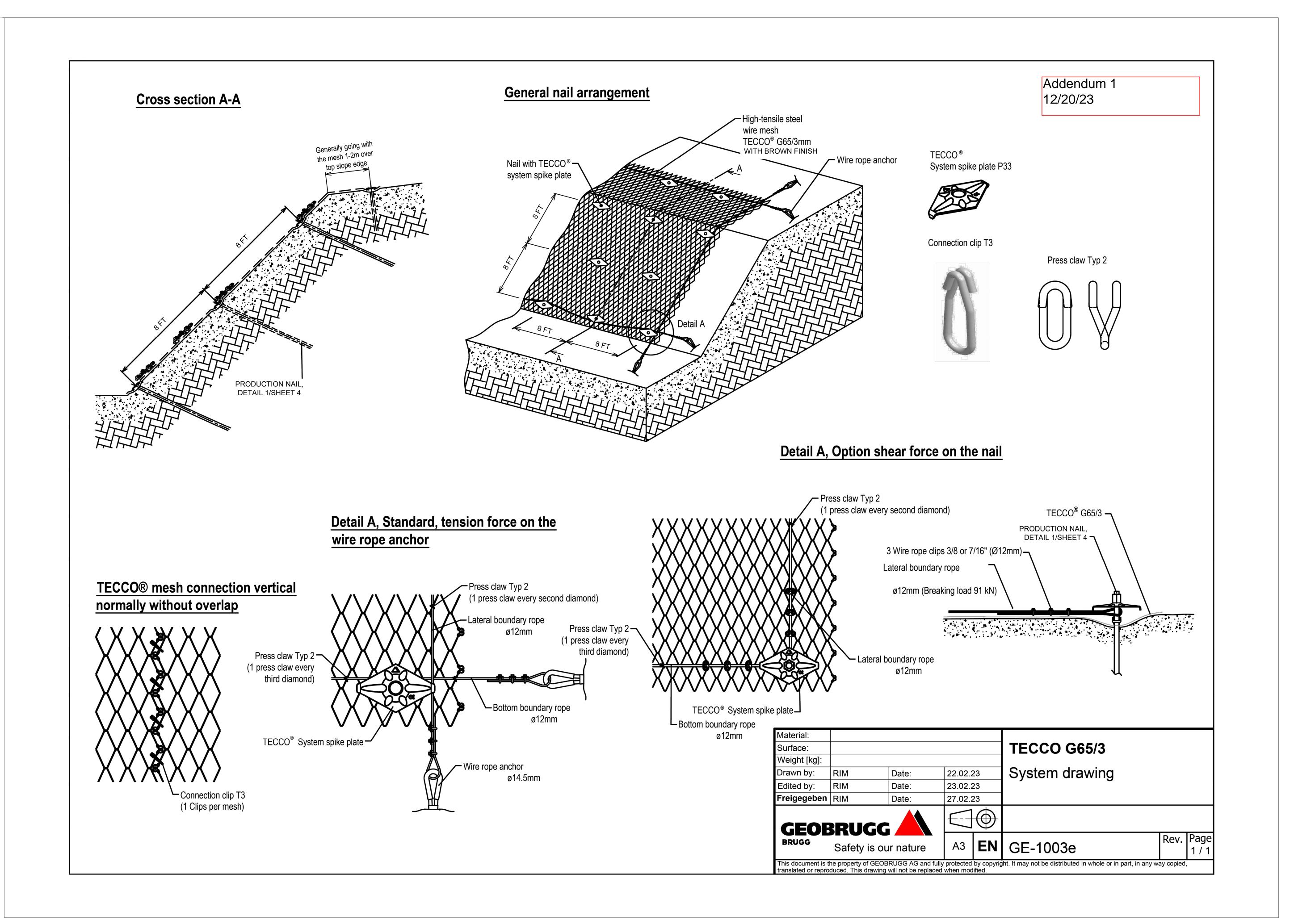
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GROUND ANCHOR City of Sausalito
North Steps Slope Repair
Sausalito, California







PROFESSION SOLVEN SOLVE

SHEET

5

MAJ	OR DIVISIONS	SYI	MBOL			DESCRIPTION						
	CLEAN GRAVEL	GW			Well-graded gravel	ls or gravel-s	and mixtures, little or no fi	nes				
SOILS	CLEAN GRAVEL	GP	600		Poorly-graded grav	els or gravel	-sand mixtures, little or no	fines				
D SC d gra	GRAVEL	GM			Silty gravels, grave	el-sand-silt mi	ixtures					
GRAINED sand and	with fines	GC			Clayey gravels, gra	avel-sand-cla	y mixtures					
GR/ 6 sar	OL FANLOAND	SW	000000000000000000000000000000000000000	00000	Well-graded sands	or gravelly s	ands, little or no fines					
RSE 50%	CLEAN SAND	SP			Poorly-graded san	ds or gravelly	sands, little or no fines					
COARSE Over 50%	SAND	SM			Silty sands, sand-s	silt mixtures						
	with fines	SC			Clayey sands, sand	d-clay mixture	es					
LS a	SILT AND CLAY	ML			Inorganic silts and with slight plasticity		ds, rock flour, silty or claye	ey fine sands o	r clayey silts			
SOILS nd clay	liquid limit <50%	CL			Inorganic clays of l lean clays	ow to mediur	n plasticity, gravely clays,	sandy clays, si	Ity clays,			
INED silt a		OL			Organic silts and o	rganic silt-cla	ays of low plasticity					
GRAINED SOILS 50% silt and clay	SILT AND CLAY	МН			Inorganic silts, mic	aceous or dia	atomaceous fine sands or	silts, elastic silt	s			
FINE	liquid limit >50%	СН			Inorganic clays of h	nigh plasticity	, fat clays					
ш -		ОН			Organic clays of m	edium to high	h plasticity					
HIGHL	Y ORGANIC SOILS	PT			Peat, muck, and ot	ther highly or	ganic soils					
ROCK					Undifferentiated as	to type or co	omposition					
		KEY	ТО ВС	R	ING AND TE	EST PIT	SYMBOLS					
CLA	SSIFICATION TESTS					STRENGTH	I TESTS					
PI	PLASTICITY INDEX					UC	LABORATORY UNCONF	INED COMPRE	SSION			
LL	LIQUID LIMIT					TXCU	CONSOLIDATED UNDRA	AINED TRIAXIAL	-			
SA	SIEVE ANALYSIS					TXUU	UNCONSOLIDATED UND	RAINED TRIAX	(IAL			
HYD	HYDROMETER ANAL	LYSIS					UC, CU, UU = 1/2 Deviato					
P200	PERCENT PASSING	NO. 200	SIEVE			DS (2.0)	DRAINED DIRECT SHEA	R (NORMAL PR	RESSURE, ksf)			
P4	PERCENT PASSING	NO. 4 SIE	EVE			SAMPLER [	DRIVING RESISTANCE					
SAM	IPLER TYPE					Modified C	alifornia and Standard P	enetration Tes	st samplers are			
	MODIFIED CALIFORNIA			HAN	ND SAMPLER	driven 18 i blow. Blov	nches with a 140-pound vs for the initial 6-inch dri Il 12-inch drive are record	hammer falling ive seat the sa	g 30 inches per ampler. Blows			
/	STANDARD PENETRATION	TEST	X	RO	CK CORE		lefined as 50 blows durin ds are as follows:	ıg a 6-inch dri\	e. Examples of			
	THIN-WALLED / FIXED PISTO	)N	X	DIS.	TURBED OR	25	sampler driven 12 ind initial 6-inch drive	ches with 25 b	lows after			
				BUL	K SAMPLE	85/	7" sampler driven 7 inch initial 6-inch drive	nes with 85 blo	ws after			
NOTE:	Test boring and test pit logs ar at the excavation location durin soil or water conditions may va and with the passage of time. descriptions are approximate a	ng the time ary in differ Boundarie	e of exploration of the office	tion. ns wi diffe	Subsurface rock, thin the project site ring soil or rock	50/	<ul><li>(3) sampler driven 3 inch initial 6-inch drive or I drive</li></ul>		•			
			504 Podu	and E	Nud							
		-	504 Redwo	000 E	nvu.	SOIL	CLASSIFICATION	CHART				
		-	Novato, CA	A 949	47	City of S	ausalito					
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	CORPORATION, © 2023, ALL RIGHTS RES 057 Design Drawings, Bid Set.dwg	SERVED -	www.mille		—		California  Date: 12/19/2023		FIGURE			
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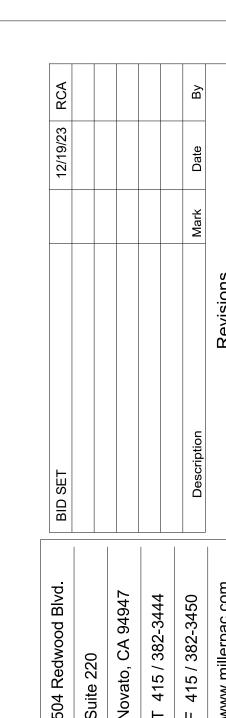
meters DEPTH feet	SAMPLE	SYMBOL (4)	BORING 2  EQUIPMENT: Portable Hydraulic Drill Rig with 4-inch Solid Flight Auger  DATE: 06/30/23  ELEVATION: 61 feet*  *REFERENCE: Topographic Survey by 1031 Survey, Inc. Dated 6/13/23	BLOWS / FOOT (1)	DRY UNIT WEIGHT pcf (2)	MOISTURE CONTENT (%)	SHEAR STRENGTH psf (3)	OTHER TEST DATA	DRILL RATE (MIN/FT
-0 - 0 - - - - - 1			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	
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 - -				50/5"		5.6			2.0
·3 <sub>10</sub> -				89		6.9			_\ _\
- 4 - -				52		15.7			2.0 _ <b>†</b>
15- - 5 - -			Boring terminated at 14.5 ft below ground surface No groundwater encountered during drilling						
=			countered during drilling NOTES: (1) UNCORRECTED FIELD (2) METRIC EQUIVALENT IS (3) METRIC EQUIVALENT IS (4) GRAPHIC SYMBOLS AF	ORY UNIT V STRENGTH	VEIGHT kN   (kPa) = 0.0	0479 x STR	71 x DRY L RENGTH (p	JNIT WEIGI	HT (pcf)
			504 Redwood Blvd. Suite 220  Novato, CA 94947  T 415 / 382-3444  F 415 / 382-3450  Trawings, Bid Set.dwg  Solve, © 2023, ALL RIGHTS RESERVED  F 415 / 382-3450  www.millerpac.com  Www.millerpac.com  Project No. 264.057	usalito ope Re alifornia		Drawn P	HA	<b>A</b> -	- <b>4</b>

Crushed Intensely fractured Closely fractured Closely fractured Closely fractured Closely fractured Closely fractured Closely fractured 2-1/2 to 8 inches Medium bedded Thinly bedded Thinly bedded Widely fractured 2 to 6 feet Thickly bedded Widely fractured 2 to 6 feet Thickly bedded Wery widely fractured Thickly bedded Thickly bedded Wery widely fractured Thickly bedded Wery widely fractured Thickly bedded Wery widely fractured Thickly bedded Thickly bedded Wery widely fractured Thickly bedded Wery widely fractured Thickly bedded Wery widely bedded Thickly bedded Thickly bedded Thickly bedded Wery widely bedded Thickly bedded Thickly bedded Thickly bedded Wery widely bedded Thickly bedded Thickly bedded Thickly bedded Wery widely bedded Thickly bedded Thickly bedded Thickly bedded Wery widely bedded Thickly bedded Wery widely bedded	Fracture Classification		Specina	Padding Classification
Carved or gouged with a knife Hard Moderate Hard Very hard  STRENGTH  Friable Weak Crumbles by rubbing with fingers Weak Moderate Strong Very strong  Withstands few heavy hammer blows, yields large fragments Withstands many heavy hammer blows, yields dust, small fragments  WEATHERING  Complete High Rock decomposition, thorough discoloration, all fractures are extensively coated with clay, oxides or carbonates Slight A few stained fractures, slight discoloration, 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 and with the passage of time.	Crushed Intensely fractured Closely fractured Moderately fractured Widely fractured		3/4 to 2-1/2 inches 2-1/2 to 8 inches 8 to 24 inches 2 to 6 feet	Very thinly bedded Thinly bedded Medium bedded Thickly bedded
Moderate Hard Difficult to scratch, knife scratch leaves dust trace 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 Wery strong Withstands many heavy hammer blows, yields dust, small fragments  WEATHERING  Complete High Rock decomposed to soil, but fabric and structure preserved High Rock decomposition, thorough discoloration, all fractures are extensively coated with clay, oxides or carbonates  Moderate 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.			HARDNESS	
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 Wery 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 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.	Moderate Hard		Easily scratched wi Difficult to scratch, l	th a knife, friable knife scratch leaves dust trace
Weak Moderate Strong Very strong  Withstands few heavy hammer blows, yields large fragments Withstands many heavy hammer blows, yields dust, small fragments  WEATHERING  Complete High Rock decomposition, thorough discoloration, all fractures are extensively coated with clay, oxides or carbonates  Moderate 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.		S	STRENGTH	
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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 of the 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.		WE	EATHERING	
Subsurface rock, soil and water conditions may differ in other locations and with the passage of time.  504 Redwood Blvd.	High Rock deconstruction Coate  Moderate Slight A few stain on affi	omposition, thoro d with clay, oxide surfaces coated w ned fractures, sli ect on cementation	rugh discoloration, all fractures or carbonates with weathering minerals, mo ght discoloration, no minera on	res are extensively oderate or localized discoloration I decomposition,
Suite 220  Novato, CA 94947  ROCK CLASSIFICATION CHART  City of Sausalito		<del></del>	ROCK CLAS	SIFICATION CHART

		BORING 3	(1)			(3)	АТА	(MIN/FT
ers DEPTH	SAMPLE SYMBOL (4)	EQUIPMENT: Portable Hydraulic Drill Rig with 4-inch Solid Flight Auger DATE: 06/30/23 ELEVATION: 58 feet*	BLOWS / FOOT (1)	DRY UNIT WEIGHT pcf (2)	MOISTURE CONTENT (%)	SHEAR STRENGTH psf (3)	OTHER TEST DATA	DRILL RATE (MI
o feet	SYN	*REFERENCE: Topographic Survey by 1031 Survey, Inc. Dated 6/13/23	BL(	DR	CO	SH	ОТ	DR
-		SILT with Sand (ML) dark brown, dry to slightly moist, soft, low to medium plasticity [Fill/Colluvium]  Sandy CLAY (CL)	5	88	26.5	600 UC		
-1 -  -		orange mottled white and tan, moist, soft, low to medium plasticity [Colluvium/Residual Soil] SANDSTONE				1125		
5-		orange and tan, intensley fractured, low hardness, friable, highly weathered, fine to coarse sand [Bedrock] grades orange-brown	32	125	11.3	UC		
-		grades drange-brown	97/10"	131	8.8	1525 UC		3.0
·3 10- - -	]	grades hard, strong	30		10.1			<b>-</b>
- <sub>4</sub> – – 15– [	7							- 0.0 -
- 5   -		Boring terminated at 16.5 ft below ground surface No groundwater encountered during drilling	65		8.6			
-6 20-								
Ξ		countered during drilling  NOTES: (1) UNCORRECTED FIELD (2) METRIC EQUIVALENT (3) METRIC EQUIVALENT (4) GRAPHIC SYMBOLS AF	DRY UNIT V STRENGTH	VEIGHT kN (kPa) = 0.0	0479 x STF	71 x DRY U RENGTH (ps	NIT WEIG sf)	HT (pcf)
		504 Redwood Blvd. Suite 220		ING LC	)G	-		
			lope Re		Drawn P Checked	PHA	A-	-5

			BORING 1	(1)			(3)	ATA	N/FT
meters DEPTH feet	SAMPLE	SYMBOL (4)	EQUIPMENT: Portable Hydraulic Drill Rig with 4-inch Solid Flight Auger  DATE: 06/30/23  ELEVATION: 65 feet*  *REFERENCE: Topographic Survey by 1031	BLOWS / FOOT (1)	DRY UNIT WEIGHT pcf (2)	MOISTURE CONTENT (%)	SHEAR STRENGTH psf (3)	OTHER TEST DATA	DRILL RATE (MIN/F
-0-0-	S.	Ś	Survey, Inc. Dated 6/13/23 SILT with Sand (ML)	<u> </u>		20	တတ		
-			dark brown, dry to slightly moist, medium stiff, low to medium plasticity [Fill]	- 13	99	17.2	2025		
- -1			Sandy CLAY (CL) orange-tan and mottled black, moist, medium stiff to stiff, low plasticity [Colluvium/Residual Soil]				UC		
- 5-			SANDSTONE	45	118	14.3	6650 UC		
- -2 -			orange with white and tan, low hardness, weak to moderate strength, moderately weathered, fine to coarse sand with angular quartz inclusions [Bedrock]	0.4/4.01	110				3.0
_				61/10"	113	9.9			2.0—
<sup>-3</sup> 10-	N		grades hard, strong, less weathered	50/2"		5.2			
_									0.6
-4 - -	Δ		Boring terminated at 13.5 ft below ground surface No groundwater encountered during drilling	- 50/3"		4.8			
15-									
- -5 -									
- -									
<sup>-6</sup> 20-									
=			countered during drilling  NOTES: (1) UNCORRECTED FIELD (2) METRIC EQUIVALENT (3) METRIC EQUIVALENT (4) GRAPHIC SYMBOLS AI	DRY UNIT V STRENGTH	VEIGHT kN ⊢(kPa) = 0.	0479 x STF	71 x DRY U RENGTH (ps	NIT WEIG sf)	HT (pcf
				BOR	ING LC	)G			
			Novato, CA 94947	lope Re		Drawn F	PHA	A-	-3

Addendum 1 12/20/23



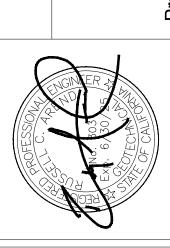
MILLER PACIFIC ENGINEERING GROUP

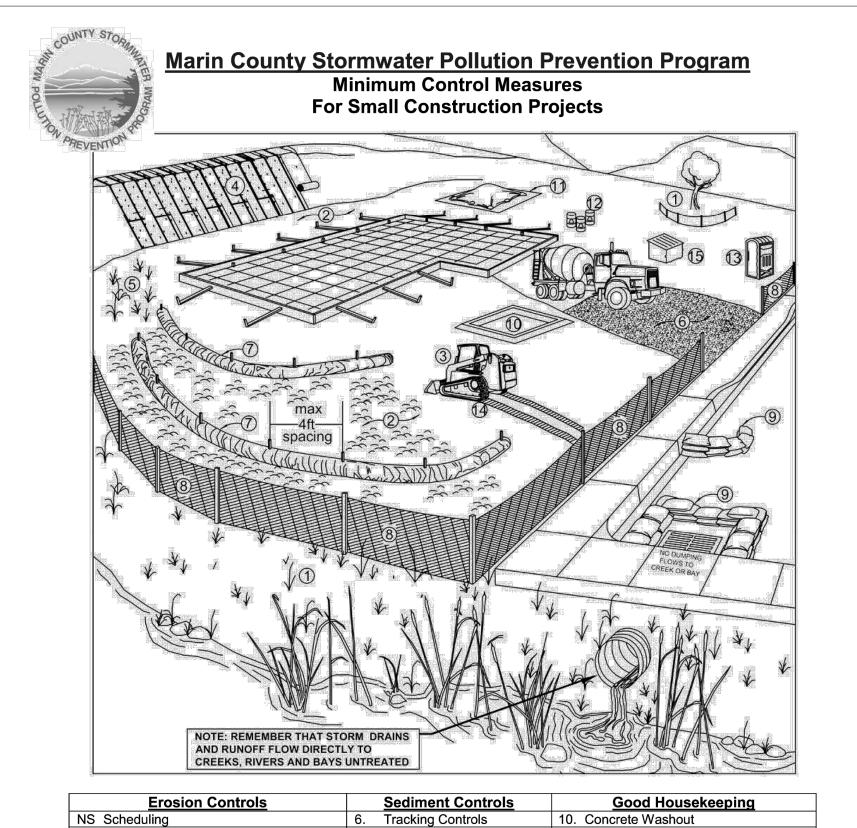
**BORING LOGS** 

City of Sausalito

North Steps Slope Repair

Sausalito, California





. Silt Fence

9. Drain Inlet Protection

Note: Select an effective combination of control measures from each category, Erosion Control, Sediment Control, and

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,

If you require materials in alternative formats, please contact: 415-473-4381 voice/TTY or <a href="mailto:disabilityaccess@co.marin.ca.us">disabilityaccess@co.marin.ca.us</a>

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

Visit www.mcstoppp.org for more information on construction site management and Erosion and Sediment Control Plans.

in the Construction Site BMP Manual March 2003 at http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm.

Good Housekeeping. Control measures shall be continually implemented and maintained throughout the project until

NS Trench Dewatering

11. Stockpile Management

12. Hazardous Material Management

14. Equipment and Vehicle Maintenance

13. Sanitary Waste Management

15. Litter and Waste Management

Preserve Vegetation & Creek Set Backs 7. Fiber Rolls

Soil Cover
 Soil Preparation/ Roughening

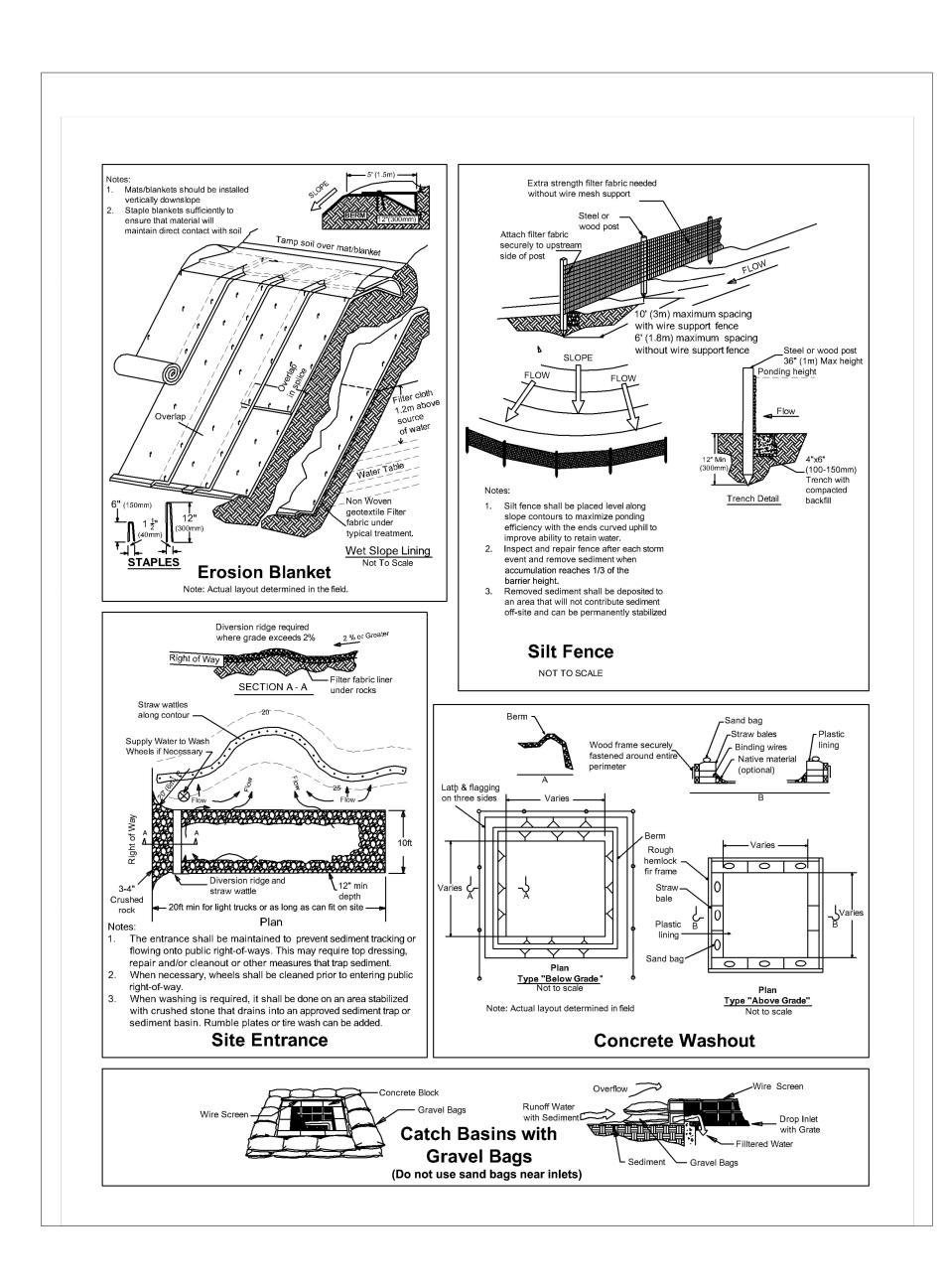
and as required by the local agency or state permit.

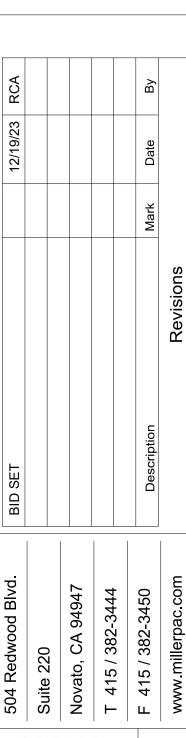
4. Erosion Control Blankets

Revegetation

NS=not shown on graphic

	rol Measure	General Description
	ion Control Best M	anagement Practices
N/A	Scheduling	Plan the project and develop a schedule showing each phase of construction. Schedule construction activit 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: ECor 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 a 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 factsheet 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 of fixed aperture netting. See: <a href="http://www.coastal.ca.gov/nps/Wildlife-Friendly_Products.pdf">http://www.coastal.ca.gov/nps/Wildlife-Friendly_Products.pdf</a> . 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.
Sedi	ment 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 fee wide with sufficient radii for turning in and out of the site. Rumble pads or rumble racks can be used in lieu or in conjunction with rock entrances. Wheel washes may be needed where space is limited or where the sentrance 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 eithe 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: <a href="http://www.coastal.ca.gov/nps/Wildlife-Friendly_Products.pdf">http://www.coastal.ca.gov/nps/Wildlife-Friendly_Products.pdf</a> . 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 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 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. <a href="http://www.marincounty.org/depts/pw/divisions/mcstoppp/development/~/media/Files/Departments/PW/mcstoppp/development/TrenchingSWReqMCSTOPPPFinal6-9.pdf">http://www.marincounty.org/depts/pw/divisions/mcstoppp/development/~/media/Files/Departments/PW/mcstoppp/development/TrenchingSWReqMCSTOPPPFinal6-9.pdf</a> . For more info see the following factsheets: CASQA: NS-2; or Caltrans: NS-2.
Good	d Housekeeping Be	st 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: Will 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 inlead 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. Immediat 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. Cove at the end of each work day and when it is raining or windy. Arrange for regular waste collection. Pick up si litter daily. For more info see the following factsheets: CASQA: WM-5; or Caltrans: WM-5.





CONTROL

City of Sausalito
North Steps Slope Repair
Sausalito, California SEDIMENT

