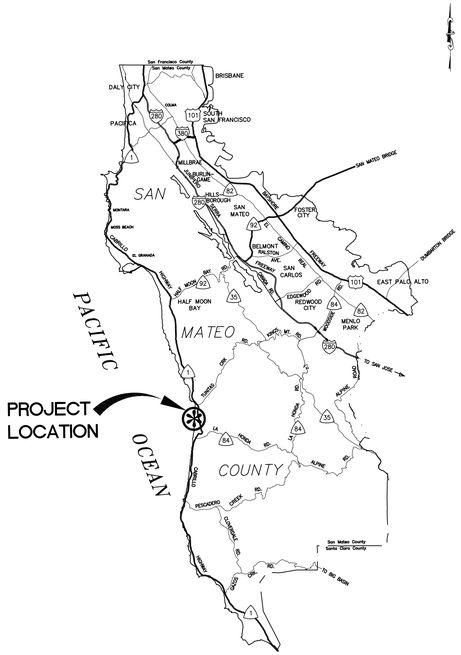
COUNTY OF SAN MATEO
CALIFORNIA

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
TOTAL PROJECT LENGTH, APPROXIMATELY 0.28 MILE(S)

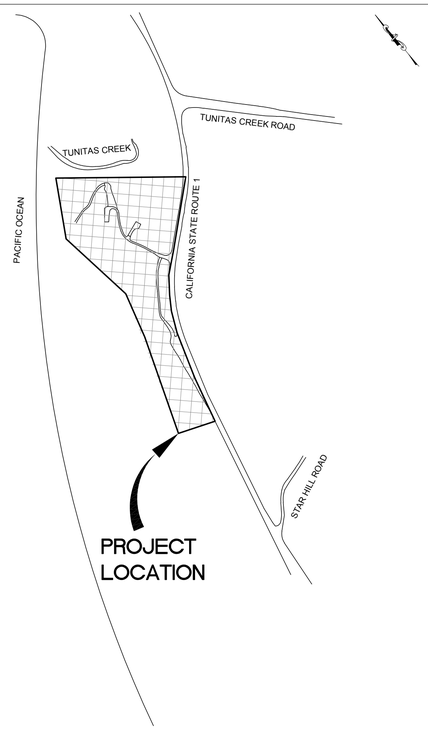
APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



VICINITY MAP
NO SCALE



LOCATION MAP
NO SCALE

LINETYPES

EXISTING		PROPOSED
	BOUNDARY LINE	
	CALTRANS LEASE AREA	
	CENTERLINE	
30	CONTOUR - MAJOR	30
	CONTOUR - MINOR	
	EDGE OF SHOULDER	
	FENCE	
	FLOWLINE / SWALE	
	GRADE BREAK	
	GUARDRAIL	
JT	JOINT TRENCH	JT
N/A	LIMIT OF DISTURBED AREA	
N/A	LIMIT OF GRADING	
OH OH	OVERHEAD UTILITY	OH OH
	PROPERTY / LOT LINE	
	RAILING	
	LANDSCAPE WALL	
	RIGHT OF WAY	
	STORM DRAIN	
	TOE OF BANK	
	TOP OF BANK	
	WHITE STRIPING	
	LEVEL LANDING	
	ALL WEATHER SURFACE	
	PAVEMENT	
	PAVEMENT (TYPE 2)	
	RIPRAP	
	OLD LANDSLIDE AREA	
	RECENT LANDSLIDE AREA	
	ACTIVE LANDSLIDE AREA	
	BIORETENTION AREA	

SYMBOLS

EXISTING		PROPOSED
	BOLLARD	
	SIGN	
	TREE / TREE TO BE REMOVED	
	LIGHT - POST MOUNTED	
	STREETLIGHT	
	STORM DRAINAGE – TURNING STRUCTURE	
	STORM DRAINAGE – DROP INLET	
PP	POWER POLE	PP

ABBREVIATIONS:

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJUSTED
APPROX	APPROXIMATE
BS	BOTTOM OF STEP
BLDG	BUILDING
CL	CENTER LINE
CLR	CLEARANCE
CONC	CONCRETE
C&G	CURB & GUTTER
CMP	CORRUGATED METAL PIPE
DI	DROP INLET
DIA	DIAMETER
DG	DECOMPOSED GRANITE
DMA	DRAINAGE MANAGEMENT AREA
DWY	DRIVE WAY
(E)	EXISTING
EG	EXISTING GRADE
ELEV	ELEVATION
EMB	EMBANKMENT
EV	ELECTRIC VEHICLE
ETW	EDGE OF TRAVEL WAY
EW	EACH WAY
EX	EXISTING
FF	FINISHED FLOOR
FG	FINISHED GRADE
FL	FLOWLINE
FS	FINISH SURFACE
FT	FEET
GALV	GALVANIZED
GB	GRADE BREAK
GIE	GUTTER INLET ELEVATION
GRVL	GRAVEL
H	HORIZONTAL
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HP	HIGH POINT
HR	HOUR
HT	HEIGHT
HWY	HIGHWAY
INV	INVERT
LA	LANDSCAPE AREA
LF	LINEAR FEET
LT	LEFT
MAX	MAXIMUM
MGS	MIDWEST GUARDRAIL SYSTEM
MIN	MINIMUM
(N)	NEW
NTS	NOT TO SCALE
OC	ON-CENTER
PA	PLANTER AREA
PVC	POLYVINYL CHLORIDE PIPE
PEF	PERFORATED
PERM	PERMEABLE ROCK BASE
PM	POSTMILE MARKER
PP	POLYPROPYLENE PIPE
PR	PROPOSED
PVMT	PAVEMENT
R	RADIUS
RC	REINFORCED CONCRETE
RD	ROAD
RSP	REVISED STANDARD PLAN
RT	RIGHT
S	SLOPE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SF	SQUARE FEET
SHT	SHEET
STA	STATION
TC	TOP OF CURB
TG	TOP OF GRATE
TS	TURNING STRUCTURE
TS	TOP OF STEP
TW	TOP OF WALL
tw	TOE OF WALL
TYP	TYPICAL
V	VERTICAL
VERT	VERTICAL
VIF	VERIFY IN FIELD

SHEET INDEX:

PAGE	SHEET NO.	TITLE
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2	C1.1	GENERAL NOTES
3	C2.0	KEY MAP
4	C3.1	EXISTING CONDITIONS & DEMOLITION PLANS – APPROACH
5	C3.2	EXISTING CONDITIONS & DEMOLITION PLANS – PARKING LOT
6	C3.3	EXISTING CONDITIONS & DEMOLITION PLANS – EXIT
7	C3.4	EXISTING CONDITIONS & DEMOLITION PLANS – TRAIL
8	C3.5	EXISTING CONDITIONS & DEMOLITION PLANS – MIDBLUFF
9	C4.1	LAYOUT PLAN ENLARGEMENT – APPROACH
10	C4.2	LAYOUT PLAN ENLARGEMENT – PARKING LOT
11	C4.3	LAYOUT PLAN ENLARGEMENT – EXIT
12	C4.4	LAYOUT PLAN ENLARGEMENT – TRAIL
13	C4.5	LAYOUT PLAN ENLARGEMENT – MIDBLUFF
14	C5.0	MASS GRADING PLAN
15	C5.1	GRADING & DRAINAGE PLAN ENLARGEMENT – APPROACH
16	C5.2	GRADING & DRAINAGE PLAN ENLARGEMENT – PARKING LOT
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18	C5.4	GRADING & DRAINAGE PLAN ENLARGEMENT – TRAIL
19	C5.5	GRADING & DRAINAGE PLAN ENLARGEMENT – MIDBLUFF
20	C5.6	GRADING & DRAINAGE PLAN ENLARGEMENT – DECKS
21	C6.0	SECTION PLAN
22	C6.1	SECTIONS
23	C6.2	SECTIONS
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26	C6.5	SECTIONS
27	C6.6	SECTIONS
28	C7.1	TRAIL PLAN & PROFILE – STA: 1+00 TO STA: 4+40
29	C7.2	TRAIL PLAN & PROFILE – STA: 4+25 TO STA: 7+50
30	C7.3	TRAIL PLAN & PROFILE – STA: 7+50 TO STA: 11+25
31	C7.4	TRAIL PLAN & PROFILE – STA: 11+25 TO STA: 14+75
32	C7.5	TRAIL PLAN & PROFILE – STA: 14+75 TO STA: 17+25
33	C7.6	TRAIL PLAN & PROFILE – STA: 17+25 TO STA: 19+85
34	C8.1	TRAIL SECTIONS – STA: 1+00 TO STA: 10+50
35	C8.2	TRAIL SECTIONS – STA: 11+00 TO STA: 19+57
36	C9.1	BEACH ACCESS ROAD PLAN & PROFILE – STA: 1+00 TO STA: 2+50
37	C9.2	BEACH ACCESS ROAD PLAN & PROFILE – STA: 2+50 TO STA: 4+61.10
38	C10.1	BEACH ACCESS ROAD SECTIONS
39	C10.2	BEACH ACCESS ROAD SECTIONS
40	C11.1	MITIGATION SECTIONS
41	C11.2	MITIGATION SECTIONS
42	C11.3	MITIGATION SECTIONS
43	C11.4	MITIGATION DETAILS
44	C12.1	DETAILS
45	C12.2	DETAILS
46	C12.3	DETAILS
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48	C13.0	BAT HOUSE PLAN
49	C14.0	UTILITY PLAN
50	C15.0	STORMWATER CONTROL PLAN
51	C15.1	STORMWATER CONTROL – NOTES & DETAILS
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53	EC1.1	EROSION CONTROL PLAN ENLARGMENT – APPROACH
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55	EC1.3	EROSION CONTROL PLAN ENLARGMENT – EXIT
56	EC1.4	EROSION CONTROL PLAN ENLARGMENT – TRAIL
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59	S-1	STRUCTURAL DETAILS

JOINT TRENCH PLANS

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LANDSCAPE PLANS

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66	L-110	MATERIAL NOTES AND LEGEND
67	L-111	MATERIALS PLAN 1
68	L-112	MATERIALS PLAN 2
69	L-113	MATERIALS PLAN 3
70	L-114	MATERIALS PLAN 4
71	L-115	MATERIALS PLAN 5
72	L-116	MATERIALS PLAN 6
73	L-117	MATERIALS PLAN 7
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77	L-123	PLANTING PLAN 3
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85	L-203	ENLARGEMENT PLANS
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87	L-302	SECTIONS
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89	L-502	AMPHITHEATER DETAILS
90	L-503	AMPHITHEATER DETAILS
91	L-504	MID-BLUFF OVERLOOK DETAILS
92	L-505	REST STOPS DETAILS
93	L-506	TOP OF BLUFF OVERLOOK DETAILS
94	L-507	PEDESTRIAN PATH DETAILS
95	L-508	PEDESTRIAN PATH STAIR DETAILS
96	L-509	SITE FURNISHINGS
97	L-510	SITE FURNISHINGS
98	L-511	SIGNAGE DETAILS
99	L-512	SIGNAGE DETAILS
100	L-513	GUARDRAIL DETAILS
101	L-601	PLANTING DETAILS

ELECTRICAL PLANS (FOR REFERENCE ONLY)

PAGE	SHEET NO.	TITLE
102	E0.1	SYMBOLS, ABBREVIATIONS, LIGHT FIXTURE SCHEDULE, CODES, STANDARDS, NOTES & SHEET INDEX
103	E0.2	TITLE24 (BUILDING EXTERIOR)
104	E1.1	ELECTRICAL SINGLE LINE DIAGRAM & PANELBOARD SCHEDULES
105	E2.1	ELECTRICAL OVERALL SITE PLAN
106	E2.2	ELECTRICAL PARTIAL SITE PLAN AREA-1
107	E2.3	ELECTRICAL PARTIAL SITE PLAN AREA-2
108	E6.1	ELECTRICAL DETAILS AND PANELBOARD SCHEDULES
109	E7.1	ELECTRICAL SPECIFICATIONS

BUILDING PLANS – RESTROOM

PAGE	SHEET NO.	TITLE
110	A1-1	TITLE PAGE SPECIFICATIONS
111	A1-2A	FLOOR PLAN SPECIFICATIONS
112	A1-2B	ELEVATION SPECIFICATIONS
113	A1-3	STRUCTURAL CMU PLAN & DETAIL SPECIFICATIONS
114	A1-4	FOUDATION PLAN & DETAIL SPECIFICATIONS

BUILDING PLANS – RANGER SHED

PAGE	SHEET NO.	TITLE
115	A2-1	TITLE PAGE SPECIFICATIONS
116	A2-2A	FLOOR PLAN SPECIFICATIONS
117	A2-2B	ELEVATION SPECIFICATIONS
118	A2-3	STRUCTURAL CMU PLAN & DETAIL SPECIFICATIONS
119	A2-4	FOUNDATION PLAN & DETAIL SPECIFICATIONS

TRAFFIC CONTROL PLANS

PAGE	SHEET NO.	TITLE
120	TCP1.0	TRAFFIC CONTROL PLAN ENLARGEMENT – APPROACH
121	TCP1.1	TRAFFIC CONTROL PLAN ENLARGEMENT – APPROACH
122	TCP1.2	TRAFFIC CONTROL PLAN ENLARGEMENT – PARKING LOT
123	TCP1.3	TRAFFIC CONTROL PLAN ENLARGEMENT – EXIT
124	TCP1.4	TRAFFIC CONTROL PLAN ENLARGEMENT – LOOP TRAIL

BASIS OF TOPOGRAPHY:

BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON PREPARED BY IFLAND SURVEY DATED MARCH 2, 2017. SUPPLEMENTAL TOPOGRAPHIC INFORMATION IS BASED ON FIELD SURVEYS PERFORMED ON 6/1/2020 AND 7/21/2021 AND AN AERIAL SURVEY PERFORMED ON 6/1/2020 PREPARED BY CSW/ST2.

BENCHMARKS:

THE VERTICAL DATUM IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 PER OPUS SOLUTIONS ON 6/1/2020.

BASIS OF BEARINGS:

THE HORIZONTAL DATUM IS CALIFORNIA COORDINATE SYSTEM OF 1983, ZONE III (2010.00).

APPLICABLE CALTRANS STANDARD PLANS: (2018 OR 2022)

A20A
A77P
A88A

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Civil & Structural Engineers | Surveying & Mapping | Environmental Planning
Land Planning | Construction Management
504 Redwood Blvd, Suite 310
Novato, CA 94947
http://www.csw2.com
tel: 415.883.9850
fax: 415.883.9835

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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	CHECKED BY: CSW/ST2 (JAH)	DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
COVER SHEET
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C1.0
SHEET 1 OF 124

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REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

NOTES:

1. CONTRACTOR SHALL CONFINE HIS OPERATIONS AND ACTIVITIES WITHIN THE PROJECT LIMITS, CONSISTING OF ROAD RIGHT-OF-WAY, RIGHTS OF ENTRY AND/OR PROJECT CONFORMS, AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER.

2. CONTINUOUS DUST CONTROL SHALL BE PROVIDED AS REQUIRED BY THE SPECIAL PROVISIONS AND AS DIRECTED BY THE ENGINEER.

3. LOCATIONS AND DEPTHS OF EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE UTILITIES TO DETERMINE EXACT LOCATIONS AND DEPTHS. CONTRACTOR SHALL CALL USA NORTH 811 (USA) UNDERGROUND SERVICE ALERT A MINIMUM OF FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY EXCAVATION OR TRENCHING WORK. USA MAY BE CONTACTED EITHER ON-LINE AT USANORTH811.ORG OR BY PHONE BY DIALING (800) 227-2600 OR 811. WHEN CALLING, BE PREPARED TO GIVE LOCATION AND NATURE OF WORK, START DATE, COMPANY NAME, ADDRESS AND TELEPHONE NUMBER.

4. PLANS MAY NOT SHOW ALL EXISTING WATER, GAS OR SANITARY SEWER LATERALS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION AND PRESERVATION OF ALL SUCH FACILITIES WHICH ARE NOT TO BE RELOCATED.

5. CONTRACTOR IS ADVISED THAT EXCAVATION MAY CONFLICT WITH SANITARY SEWER LATERALS, GAS LINES, WATER LINES AND OTHER UNDERGROUND UTILITIES. ANY DAMAGE TO EXISTING FACILITIES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

6. DRIVEWAY OPENINGS AND CONFORM LOCATIONS SHOWN ARE APPROXIMATE ONLY. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER. SURFACED SHOULDER CONFORM LIMITS ARE AS INDICATED AT 3 FEET FROM OUTSIDE EDGE OF THE GUTTER, UNLESS DIRECTED OTHERWISE BY THE ENGINEER OR OTHERWISE NOTED ON THE PLANS.

7. NO TREES, VEGETATION OR IMPROVEMENTS (INCLUDING FENCES) SHALL BE REMOVED WITHOUT THE PRIOR WRITTEN CONSENT AND APPROVAL OF THE ENGINEER. VEGETATION AND IMPROVEMENTS WHICH ARE DESIGNATED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. REFER TO PROJECT SPECIAL PROVISIONS SECTION 16 REGARDING REQUIREMENTS FOR ADVANCE NOTIFICATION OF PROPERTY OWNERS.

8. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE STANDARD SPECIFICATIONS. THE SURVEY AND ASSOCIATED STAKING SHALL BE IN CONFORMANCE WITH THE SPECIFICATIONS, CONSTRUCTION STAKING AND LAYOUT OF THE SPECIAL PROVISIONS.

9. WHEN DIRECTED BY THE ENGINEER, CUT AND FILL SLOPE RATIOS SHALL BE VARIED TO AVOID TREES OR OTHER EXISTING IMPROVEMENTS.

10. CONTRACTOR SHALL EXERCISE CARE WHEN EXCAVATING NEAR TREES AND ROOTS OF TREES TO REMAIN. SEE SPECIFICATIONS.

11. ANY DAMAGE, AS A RESULT OF THE CONTRACTOR'S OPERATION, TO PAVEMENT AND BASE MATERIAL THAT IS TO REMAIN SHALL BE REPAIRED, OR REMOVED AND REPLACED WITH SAME TYPE OF MATERIAL OR APPROVED EQUAL, AS DIRECTED BY THE ENGINEER, AND AT THE SOLE EXPENSE OF THE CONTRACTOR. THE ENGINEER SHALL BE THE SOLE JUDGE OF THE ADEQUACY OF THE COMPLETED REMEDIAL WORK.

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504 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.9850
fax: 415.883.9835
http://www.csw2.com

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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	GENERAL NOTES
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C1.1
SHEET 2 OF 124

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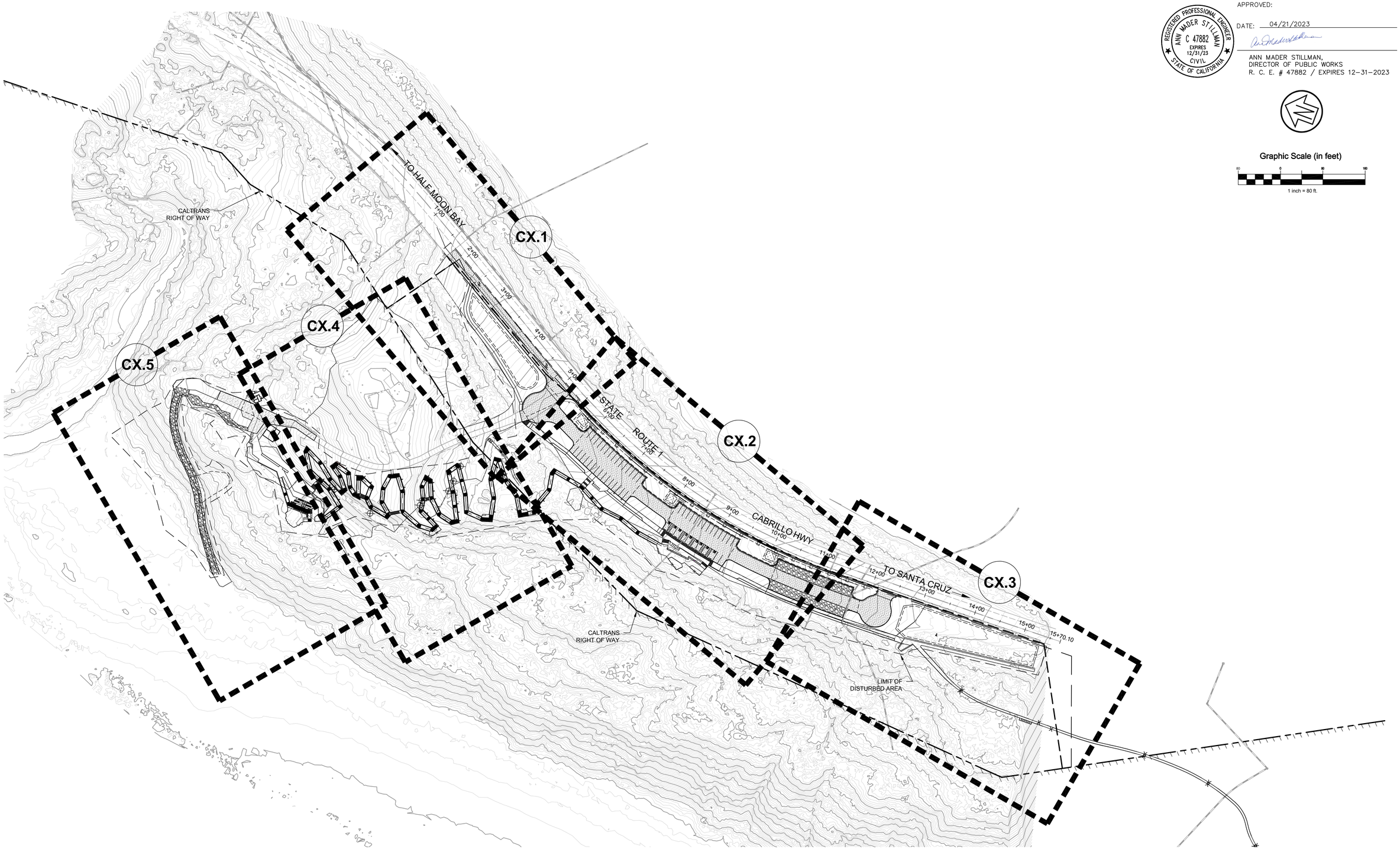

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

Graphic Scale (in feet)

80 0 80 160

1 inch = 80 ft.

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C2.0 - Key Map.dwg 04/20/2023 - 05:40 PM brenda 1:3.5602

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No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	OVERALL KEY MAP
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 80'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C2.0
SHEET 3 OF 124

APPROVED:

DATE: 04/21/2023

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R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
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STATE OF CALIFORNIA

Graphic Scale (in feet)
20 0 20 40
1 inch = 20 ft.

TO HALF MOON BAY

STATE ROUTE 1

CABRILLO HWY

TO SANTA CRUZ

EX. BRIDGE APPROACH START

S30°30'38"W
48.23'

S31°29'26"W
59.89'

S30°45'24"W
105.43'

S30°25'41"W
58.06'

S31°15'28"W
54.76'

S30°13'29"W
59.12'

S30°05'39"W
54.70'

S26°02'09"W
48.87'

EXISTING EDGE OF PAVEMENT

REMOVE EX. CENTERLINE
STA: 4+80.36
0 RT
START

REMOVE EX. CENTERLINE STRIPING
STA: 5+22.43
0 RT
END

SAWCUT EX. PAVEMENT

SAWCUT EXISTING PAVEMENT
STA: 1+73.96
13.00 RT
START

EX. RETAINING WALL
STA: 1+34.15
33.55 RT
END

EX. RETAINING WALL

REMOVE EX. CURB
STA: 1+73.96
32.75 RT
START

PM 20.7

TIE-IN
FOUND MAG & SHINER
STA: 1+90.72
29.274 RT
1957391.6290 N°
6010107.2810 E°

REMOVE EX. CURB
STA: 4+28.56
19.71 RT
END

REMOVE & REPLACE EX. PAVEMENT

SAWCUT EX. PAVEMENT

TIE IN
FOUND MAG & SHINER
STA: 5+19.02
64.435 RT
1957126.2450 N°
6009909.0990 E°

REMOVE EX. CURB
STA: 5+18.46
70.29 RT
START

LIMIT OF DISTURBED AREA

CONFORM TO EX. PVMT

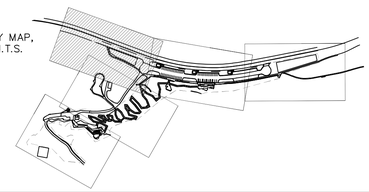
CALTRANS RIGHT OF WAY

EX. DRIVEWAY

MATCHLINE - SEE SHEET C3.2

MATCHLINE - SEE SHEET C3.4

KEY MAP,
N.T.S.



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		CHECKED BY: CSW/ST2 (JAH)	EXISTING CONDITIONS & DEMOLITION PLANS - APPROACH
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

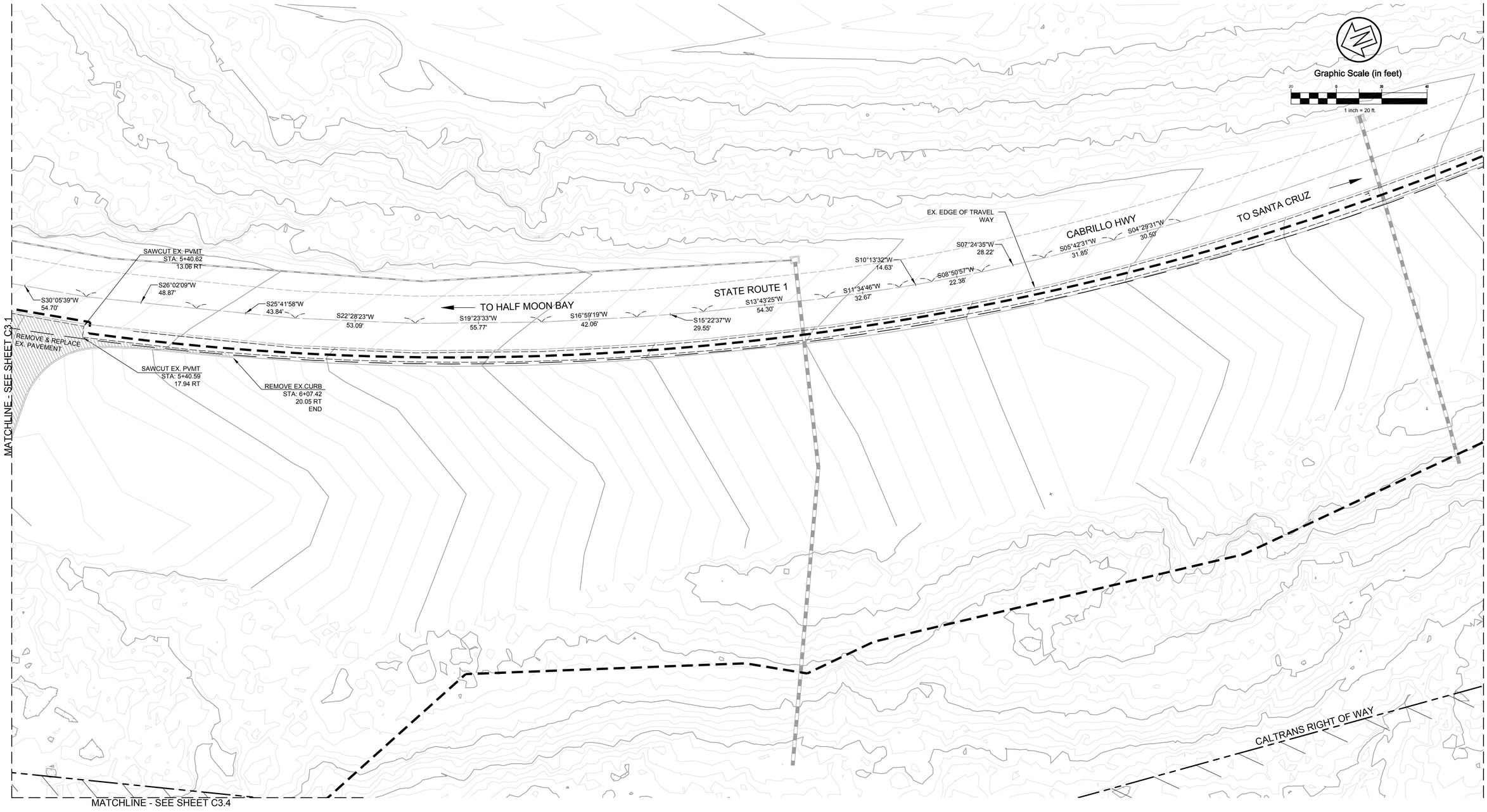
C3.1
SHEET 4 OF 127

F:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvement\dDWG\Sheets\County\C3.1 - Existing Conditions and Demo Plan - Approach.dwg 04/20/2023 - 04:14 PM brenda 1:3.5602

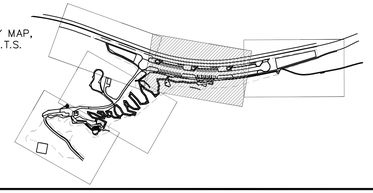
APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



KEY MAP, N.T.S.



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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
EXISTING CONDITIONS &
DEMOLITION PLANS - PARKING LOT
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C3.2
SHEET 5 OF 124

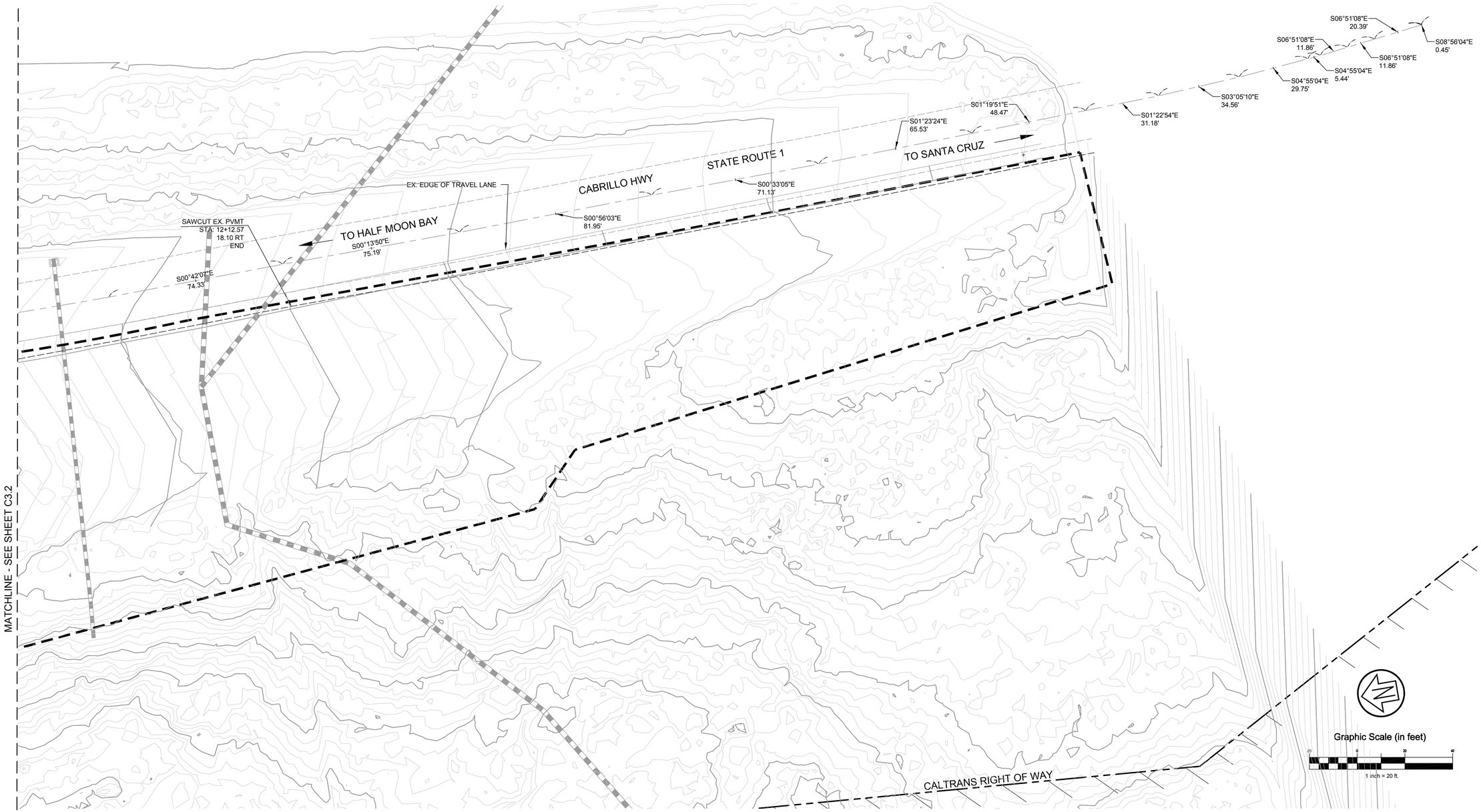
P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C3.2 - Existing Conditions and Demo Plan - Parking Lot.dwg 04/27/2023 - 10:25 AM brenda 1:3.5602

APPROVED:

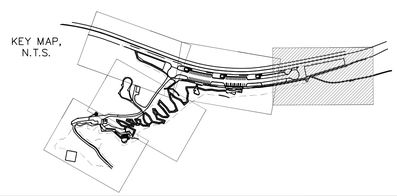
DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA



KEY MAP,
N.T.S.



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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT EXISTING CONDITIONS & DEMOLITION PLANS - EXIT SAN MATEO COUNTY PARKS
		CHECKED BY: CSW/ST2 (JAH)	
		DRAWN BY: MTM	
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS
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C3.3
SHEET 6 OF 124

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C3.3 - Existing Conditions and Demo Plan - Exit.dwg 04/27/2023 - 10:29 AM brenda 1:3.9902

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

MATCHLINE
SEE SHEET C3.1

MATCHLINE

MATCHLINE
SEE SHEET C3.2

CALTRANS RIGHT OF WAY

EX. GATE
(TO BE REMOVED)

EX. FENCE
(TO BE REMOVED)

EX. TREE (TYP)
(TO REMAIN)

EX. TREE STUMP (TYP)
(TO BE REMOVED)

EX. DRIVEWAY
(PROTECT IN PLACE)

CONFORM TO EX.
PVMT

EX. DISCONNECTED POLE
(TO BE REMOVED)

REMOVE & REPLACE EX.
PVMT

REMOVE EX. PVMT

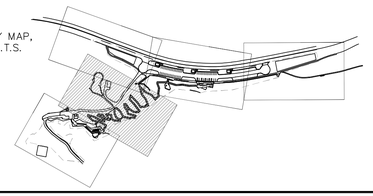
MATCHLINE - SEE SHEET C3.5

Graphic Scale (in feet)

20 0 20 40

1 inch = 20 ft.

KEY MAP,
N.T.S.



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Novato, CA 94947
http://www.cswst2.com

tel: 415.883.9850
fax: 415.883.9835

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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	
		CHECKED BY: CSW/ST2 (JAH)	
		DRAWN BY: MTM	

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
EXISTING CONDITIONS &
DEMOLITION PLANS - TRAIL
SAN MATEO COUNTY PARKS

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C3.4
SHEET 7 OF 127

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C3.4 - Existing Conditions and Demo Plan - Trail.dwg 04/26/2023 - 04:19 PM brenda 1:3.5602

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

MATCHLINE
SEE SHEET C3.4

EX. AC DRIVEWAY
(REMOVE & REPLACE)

EX. AC DRIVEWAY
(TO BE REMOVED)

EX. GRAVEL
(SEE NOTE 1)

EX. GRAVEL
(TO BE REMOVED)

EX. DISCONNECTED LIGHT
(TO BE REMOVED)

CONFORM TO
EX. GRAVEL

EX. GATE
(TO BE REMOVED)

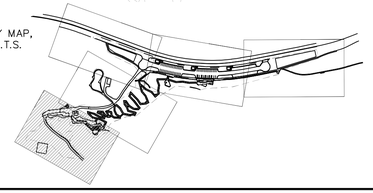
EX. BEACH ACCESS ROAD
(TO BE REPLACED)

Graphic Scale (in feet)

20 0 20 40

1 inch = 20 ft.

KEY MAP,
N.T.S.



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R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
EXISTING CONDITIONS &
DEMOLITION PLANS - MIDBLUFF
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C3.5
SHEET 8 OF 124

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvement\DWG\Sheets\County\C3.5 - Existing Conditions and Demo Plan - Midbluff.dwg 04/26/2023 - 04:22 PM brenda t1

KEYNOTES

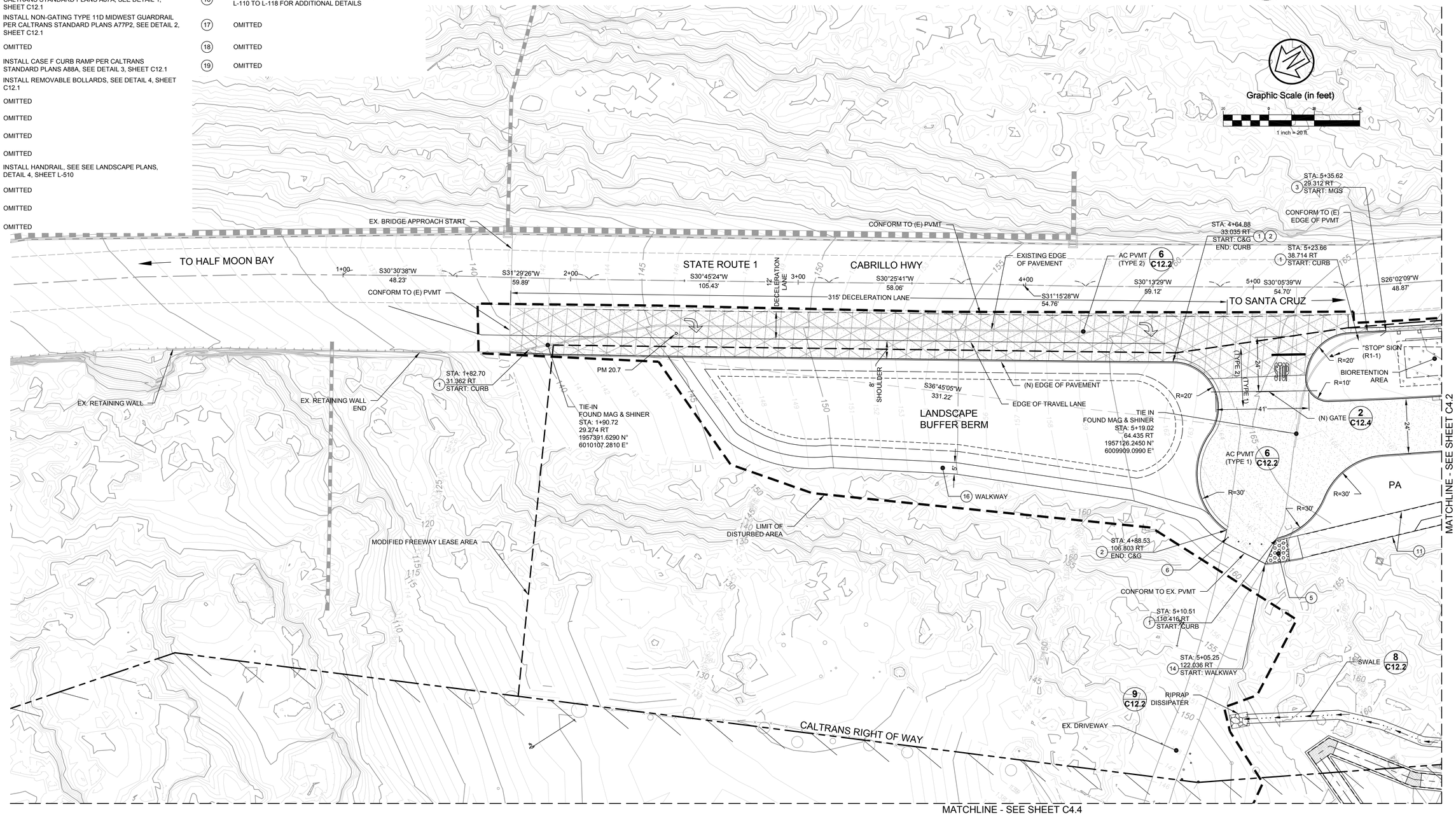
1. INSTALL TYPE A1-6 CURB PER CALTRANS STANDARD PLANS A87A, SEE DETAIL 1, SHEET C12.1
2. INSTALL TYPE A2-6 CURB AND GUTTER (C&G) PER CALTRANS STANDARD PLANS A87A, SEE DETAIL 1, SHEET C12.1
3. INSTALL NON-GATING TYPE 11D MIDWEST GUARDRAIL PER CALTRANS STANDARD PLANS A77P2, SEE DETAIL 2, SHEET C12.1
4. OMITTED
5. INSTALL CASE F CURB RAMP PER CALTRANS STANDARD PLANS A88A, SEE DETAIL 3, SHEET C12.1
6. INSTALL REMOVABLE BOLLARDS, SEE DETAIL 4, SHEET C12.1
7. OMITTED
8. OMITTED
9. OMITTED
10. OMITTED
11. INSTALL HANDRAIL, SEE SEE LANDSCAPE PLANS, DETAIL 4, SHEET L-510
12. OMITTED
13. OMITTED
14. OMITTED
15. OMITTED
16. INSTALL WALKWAY, SEE LANDSCAPE PLANS, SHEETS L-110 TO L-118 FOR ADDITIONAL DETAILS
17. OMITTED
18. OMITTED
19. OMITTED

APPROVED:

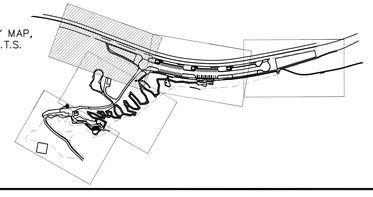
DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA



KEY MAP, N.T.S.



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R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	LAYOUT PLAN ENLARGEMENT - APPROACH
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

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C4.1
SHEET 9 OF 124

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C4.1 - Layout Plan - Approach.dwg 04/27/2023 - 09:35 AM BRBER 13.5602

KEYNOTES

1. INSTALL TYPE A1-6 CURB PER CALTRANS STANDARD PLANS A87A, SEE DETAIL 1, SHEET C12.1
2. INSTALL TYPE A2-6 CURB AND GUTTER (C&G) PER CALTRANS STANDARD PLANS A87A, SEE DETAIL 1, SHEET C12.1
3. INSTALL NON-GATING TYPE 11D MIDWEST GUARDRAIL PER CALTRANS STANDARD PLANS A77P2, SEE DETAIL 2, SHEET C12.1
4. OMITTED
5. INSTALL CASE F CURB RAMP PER CALTRANS STANDARD PLANS A88A, SEE DETAIL 3, SHEET C12.1
6. OMITTED
7. INSTALL RETAINING CURB, SEE DETAIL 1, SHEET C12.2
8. INSTALL FLUSH CURB, SEE DETAIL 2, SHEET C12.2
9. INSTALL EXTENDED CURB & GUTTER, SEE DETAIL 3, SHEET C12.2
10. OMITTED
11. INSTALL HANDRAIL, SEE LANDSCAPE PLANS, DETAIL 4, SHEET L-510
12. INSTALL ELECTRICAL CHARGING STATION, SEE SHEET ELECTRICAL PLANS FOR DETAILS
13. INSTALL CURB OPENINGS, SEE DETAIL 1, SHEET C12.4
14. INSTALL ACCESSIBLE TRAIL, SEE L-507 FOR ADDITIONAL DETAILS
15. INSTALL BIKE PARKING, SEE SHEETS L-509 FOR ADDITIONAL DETAILS
16. INSTALL WALKWAY, SEE LANDSCAPE PLANS, SHEETS L-110 TO L-118 FOR ADDITIONAL DETAILS
17. INSTALL STAIRS, SEE SHEETS L-508 FOR ADDITIONAL DETAILS
18. INSTALL GUARDRAIL, SEE LANDSCAPE PLANS, SHEET L-513 FOR ADDITIONAL DETAILS
19. INSTALL WHEEL STOP, SEE DETAIL 4, SHEET C12.2

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

Graphic Scale (in feet)
1 inch = 20 ft.

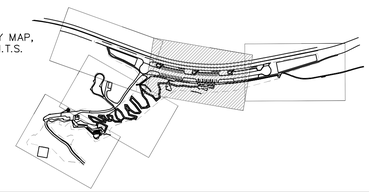
MATCHLINE - SEE SHEET C4.1

MATCHLINE - SEE SHEET C4.3

MATCHLINE SEE SHEET C4.4

CONFORM TO (E) EDGE OF PVMT
S30°05'39"W 54.70'
"STOP" SIGN (R1-1)
STA: 5+54.36 22.420 RT START: MGS (3)
S26°02'09"W 48.87'
STA: 5+23.66 38.714 RT START: CURB (1)
S25°41'58"W 43.84'
BIORETENTION AREA 1 (1) C15.1
STA: 6+07.26 24.972 RT END: CURB (7)
S22°28'23"W 53.09'
STA: 6+82.14 24.061 RT START: CURB (7)
AC PVMT (TYPE 2) (6) C12.2
TO HALF MOON BAY
7+00
S19°23'33"W 55.77'
STA: 7+37.87 24.038 RT END: CURB (7)
8+00
S16°59'19"W 42.06'
STA: 7+82.05 24.094 RT START: CURB (7)
PM 20.6
S15°22'37"W 29.55'
STA: 8+17.14 24.188 RT END: CURB (7)
(N) MIDWEST GUARDRAIL SYSTEM
(E) EDGE OF PAVEMENT
S13°43'25"W 54.30'
STA: 8+87.85 24.044 RT START: CURB (7)
STATE ROUTE 1
9+00
S11°34'46"W 32.67'
S10°13'32"W 14.63'
S08°50'57"W 22.38'
STA: 9+45.67 23.992 RT END: CURB (7)
CONFORM TO EX. PVMT
S07°24'35"W 28.22'
EX. EDGE OF TRAVEL WAY
CABRILLO HWY
10+00
S04°29'31"W 30.50'
S05°42'31"W 31.85'
BIORETENTION AREA (1) C15.1
AC PVMT (TYPE 2) (6) C12.2
STA: 9+91.59 23.997 RT START: CURB (7)
STA: 10+28.63 23.649 RT END: CURB (7)
TO SANTA CRUZ
11+00
OVERFLOW PARKING (ALL WEATHER SURFACE) (7) C12.2
STA: 10+09.11 50.573 RT END: C&G (2)(9)(13) START: EXTENDED C&G W/ CURB CUT
STA: 10+28.64 32.457 RT END: EXTENDED C&G (2)(9)(13) W/ CURB CUT START: C&G
AC Pvmt (TYPE 1) (6) C12.2
STA: 8+16.88 32.737 RT END: EXTENDED C&G (2)(9)(13) W/ CURB CUT START: C&G
AC Pvmt (TYPE 1) (6) C12.2
STA: 7+98.11 50.587 RT END: C&G (13)(9)(2) START: EXTENDED C&G W/ CURB CUT
STA: 6+78.26 51.296 RT END: CURB (1)(9)(13) START: EXTENDED C&G W/ CURB CUT
STA: 6+07.41 32.872 RT END: EXTENDED C&G (2)(9)(13) W/ CURB CUT START: C&G
AC Pvmt (TYPE 1) (6) C12.2
STA: 5+65.20 25.002 RT START: CURB (7)
R=20'
R=10'
R=10' (TYP.)
R=30'
PA
BIORETENTION AREA (1) C15.1
R=10' (TYP.)
VAN ADA STALL
(19) TYP.
(11)
OVERFLOW PARKING (ALL WEATHER SURFACE) (7) C12.2
WALKWAY (16)
STA: 9+12.75 91.923 RT END: FLUSH CURB (1)(8) START: CURB
STA: 8+17.67 92.620 RT END: CURB (1)(8) START: FLUSH CURB
STANDARD PARKING, TYP (11)
STANDARD EV PARKING, TYP (11)
ENTRANCE KIOSK SEE DETAIL 3, SHEET C12.4
S09°04'25"W 56.30'
19+86.23
DETECTABLE WARNING SURFACE (10) C12.2
LIMIT OF DISTURBED AREA
S10°32'58"W 55.86'
S28°00'10"W 50.06'
S06°56'02"W 41.00'
S19°55'30"W 41.00'
1874 LF ACCESSIBLE TRAIL. (SEE SHEET L-507 FOR ADDITIONAL DETAILS. FOR TRAIL PLAN, PROFILE & SECTIONS, SEE SHEETS C7.1-C8.2)
STA: 8+16.13 117.226 RT END: TRAIL (14)
S69°49'24"E 7.00'
S19°05'43"W 9.96'
RESTSTOP, SEE SHEET L-202 FOR ADDITIONAL DETAILS
S08°57'19"E 31.00'
SWALE (8) C12.2
S69°57'51"E 31.00'
S85°18'48"E 21.00'
LEVEL LANDING (TYP.)
ACCESSIBLE OVERLOOK WITH SEATING, SEE SHEET L-203 FOR ADDITIONAL DETAILS
ADA PARKING, TYP (11) C12.2
CALTRANS RIGHT OF WAY

KEY MAP, N.T.S.



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APPROVED DATE:

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R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
LAYOUT PLAN - PARKING LOT
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C4.2
SHEET 10 OF 124

F:\Shared\Projects\Legacy\Novato\Projects\2015-20-006 Tunitas Creek Beach Improvement\DWG\Sheets\County\C4.2 - Layout Plan - Parking Lot.dwg 04/27/2023 - 09:21 AM BRBR 13.5602

KEYNOTES

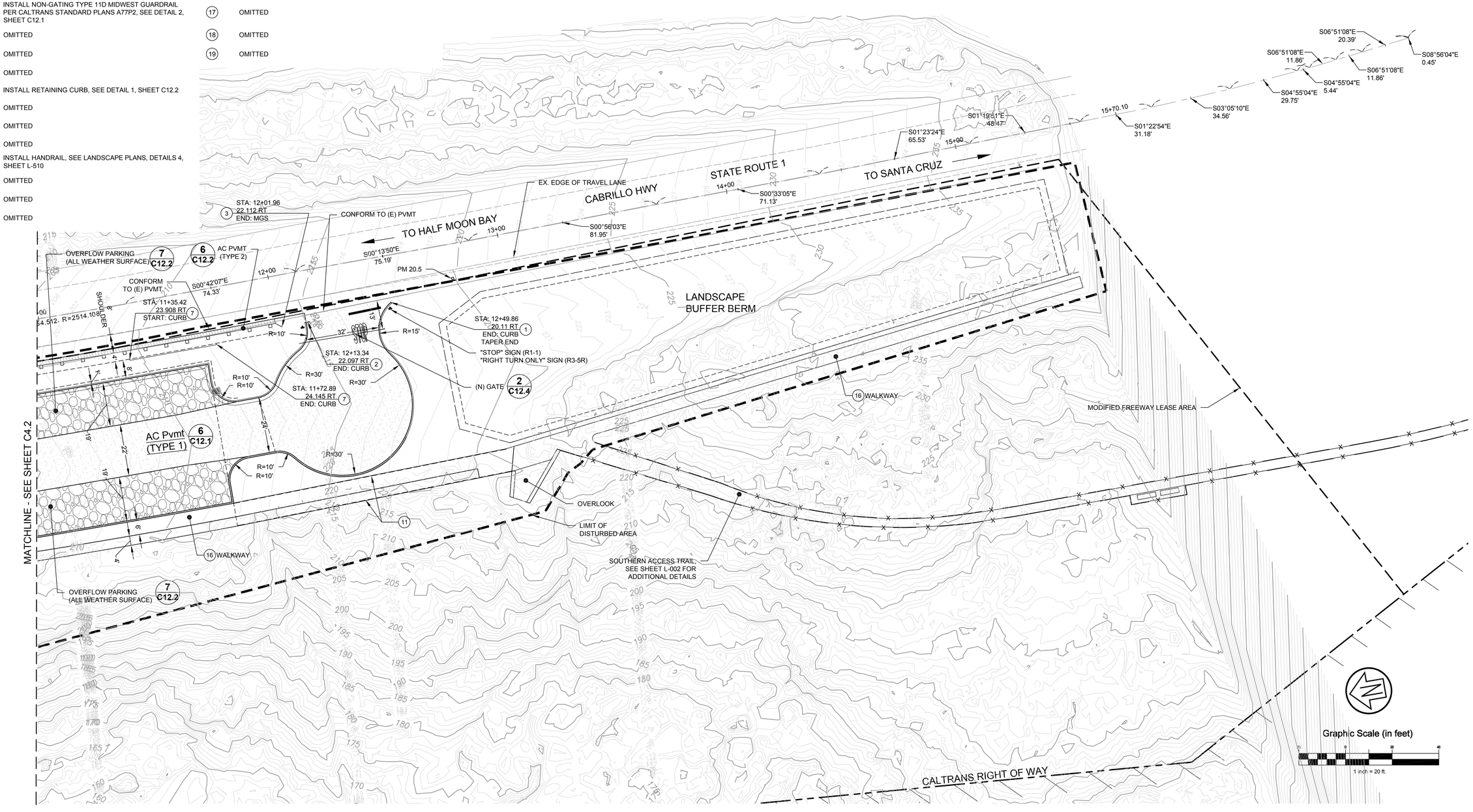
1. INSTALL TYPE A1-6 CURB PER CALTRANS STANDARD PLANS A87A, SEE DETAIL 1, SHEET C12.1
2. INSTALL TYPE A2-6 CURB AND GUTTER (C&G) PER CALTRANS STANDARD PLANS A87A, SEE DETAIL 1, SHEET C12.1
3. INSTALL NON-GATING TYPE 11D MIDWEST GUARDRAIL PER CALTRANS STANDARD PLANS A77P2, SEE DETAIL 2, SHEET C12.1
4. OMITTED
5. OMITTED
6. OMITTED
7. INSTALL RETAINING CURB, SEE DETAIL 1, SHEET C12.2
8. OMITTED
9. OMITTED
10. OMITTED
11. INSTALL HANDRAIL, SEE LANDSCAPE PLANS, DETAILS 4, SHEET L-510
12. OMITTED
13. OMITTED
14. OMITTED
15. OMITTED
16. INSTALL WALKWAY, SEE LANDSCAPE PLAN SHEETS L-110 TO L-118 FOR MATERIALS AND DETAILS
17. OMITTED
18. OMITTED
19. OMITTED

APPROVED:

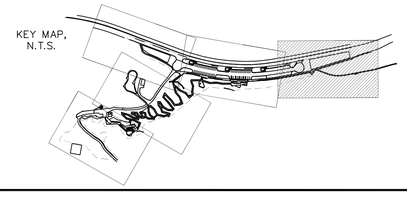
DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA



KEY MAP, N.T.S.



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504 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.9850
fax: 415.883.9835
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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	LAYOUT PLAN - EXIT
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C4.3
SHEET 11 OF 124

P:\Shared Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C4.3 - Layout Plan - Exit.ust.dwg 04/27/2023 - 09:25 AM BRBR 13.5602

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

MATCHLINE
SEE SHEET C4.1

MATCHLINE

MATCHLINE
SEE SHEET C4.2

CAL TRANS RIGHT OF WAY

9 C12.1 RIPRAP DISSIPATER

STA: 14+97.61
34.20 LT
END: SWALE

8 C12.1 SWALE

STA: 15+604.38
14.60 LT
SWALE AP
(N) INLET

TRAIL ALIGNMENT TIE-IN
MON. BRASS PIN
STA: 14+97.61
NORTHING: 6009798.1350
EASTING: 1957240.0230

N16°59'28"E
53.80'

STA: 15+65.85
17.387 LT
START: SWALE

S51°43'23"W
39.91'

S35°45'53"W
36.00'

STA: 15+641.31
17.01 LT
SWALE AP

S05°07'02"E
6.54'

STA: 15+21.86
17.00 LT
SWALE AP

N62°27'43"E
36.00'

N79°41'15"E
41.00'

S85°18'48"E
21.00'

S29°54'26"E
26.00'

REST STOP, SEE SHEET
L-202 FOR MATERIALS AND
DETAILS

1874 LF ACCESSIBLE TRAIL
(SEE NOTE 1)

S58°45'25"W
36.00'

Graphic Scale (in feet)
20 0 20 40
1 inch = 20 ft.

S16°54'07"E
15.00'

REST STOP, SEE SHEET
L-202 FOR MATERIALS
AND DETAILS

LEVEL LANDING (2%
MAX SLOPE ANY
DIRECTION, TYP)

S56°00'11"W
97.00'

S55°13'36"E
22.00'

S66°19'33"W
33.00'

S03°55'54"W
33.00'

(N) RETAINING WALL (TYP) 1 S-1

N57°19'02"E
38.45'

N62°45'09"E
55.63'

(E) TREE (TO REMAIN)

S12°52'35"W
9.35'

S33°55'51"E
10.00'

S66°54'48"W
33.00'

S43°52'38"W
34.01'

S84°46'15"E
18.00'

S13°00'57"W
28.00'

N63°40'40"E
23.89'

S63°56'04"E
10.00'

N81°39'47"E
22.79'

N25°22'51"E
41.00'

(N) STAIRS,
SEE SHEET L-508
FOR MATERIALS
AND DETAILS

S53°07'02"W
31.00'

S07°05'57"E
26.00'

S25°43'00"E
15.00'

S10°14'16"W
36.00'

S20°48'53"W
47.00'

REST STOP, SEE SHEET
L-202 & L-505 FOR
MATERIALS AND DETAILS

LIMIT OF
DISTURBED AREA

EX. DWY

S87°27'00"E
25.00'

N75°41'32"E
26.00'

N89°32'42"W
23.00'

N40°37'15"E
26.00'

LIMIT OF DISTURBED AREA

(N) STAIRS,
SEE SHEET L-508 FOR
MATERIALS AND DETAILS

S17°53'22"E
5.00'

TRAIL ALIGNMENT TIE-IN
MAG
STA: 4+62.63/ 31.38SLT
NORTHING: 1957442.2180
EASTING: 6009694.9240

S23°38'14"W
24.90'

S10°20'58"W
34.65'

S70°06'11"E
5.00'

N72°06'38"E
30.00'

CONFORM TO
EXISTING
PAVEMENT

(E) ACCESS ROAD

S18°08'33"W
29.00'

S62°45'01"W
26.00'

S43°33'57"W
18.00'

S07°35'09"W
8.00'

S55°43'59"E
7.00'

N34°16'01"E
23.00'

N51°00'51"E
26.54'

S38°12'03"W
16.00'

(N) STAIRS,
SEE SHEET L-508
FOR MATERIALS
AND DETAILS

S61°42'25"E
7.00'

S27°59'10"W
33.00'

S38°28'35"W
36.00'

S26°17'31"W
36.00'

(E) TREES (TO REMAIN)

N39°38'25"E
39.11'

N57°00'42"E
36.00'

N23°19'05"E
29.00'

S27°01'58"E
43.35'

6 C12.2 AC PVMT
(TYPE 1)

R=30'

4'

11'

21'

23'

42'

45.5'

STA: 2+74.53

25.22'

S83°23'03"E
5.00'

(N) RESTROOM

N64°31'10"E

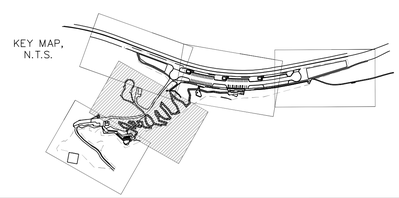
N11°04'53"W

(N) STAIRS,
SEE SHEET L-508
FOR MATERIALS
AND DETAILS

MATCHLINE - SEE SHEET C4.5

NOTES:
1. SEE SHEET L-508 FOR ADDITIONAL TRAIL DETAILS.
2. SEE SHEETS C7.1-C8.2 FOR TRAIL PLAN, PROFILE & SECTIONS.

KEY MAP,
N.T.S.



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fax: 415.883.9835

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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	LAYOUT PLAN - TRAIL
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C4.4
SHEET 12 OF 124

P:\Shared\Projects\Layouts\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C4.4 - Layout Plan - Trail.dwg 04/27/2023 - 09:08 AM BRBR 13.5602

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

MATCHLINE - SEE SHEET C4.4

(N) RESTROOM, SEE BUILDING PLANS

(N) RANGER SHED, SEE BUILDING PLANS

STA: 2+22.14/ 5.76 LT AP, GB

STA: 3+22.21/ 26.98 LT AP

STA: 2+48.97/ 13.67LT AP

MIDBLUFF ALIGNMENT TIE-IN
STA: 3+17.34/ 13.44 LT
NORTHING: 1957597.3750
EASTING: 6009652.2050

STA: 4+48.56/ 44.40 LT AP

STA: 4+48.23/ 37.76 LT AP

6 C12.2 AC PVMT (TYPE 1)

STA: 3+46.63/ 20.13 LT AP

STA: 3+59.70/ 10.81 LT AP

(N) STAIRS, SEE SHEET L-508 FOR ADDITIONAL DETAILS

MIDBLUFF ALIGNMENT

STA: 2+75.67/ 9.16LT AP

STA: 2+98.88/ 3.45LT AP

TRAIL ALIGNMENT,
STA: 1+00/ 0.00
MIDBLUFF ALIGNMENT
STA: 4+80.22/ 21.41 LT

1+00 S40°12'45"W 212.93' 2+00

3+00 S27°51'19"W 59.42'

4+00 S49°12'45"W 120.95' 4+93.30

STA: 3+72.35/ 0.00 AP

BIKE PARKING, SEE SHEET L-509 FOR DETAILS

STA: 3+13.08/ 0.00 AP

STA: 3+17.19/ 12.02 RT AP

STA: 3+69.35/ 8.27 RT START: PED. RAMP

STA: 4+66.80/ 22.20 LT START: DECK

MIDBLUFF ALIGNMENT TIE-IN
1/2" IP
STA: 1+27.94/ 34.60 RT
NORTHING: 1957771.1660
EASTING: 6009735.3920

STA: 1+71.39/ 9.80 RT
END: AC PVMT
START: EX. GRAVEL CONFORM

CONFORM TO EX. GRAVEL

STA: 3+57.03/ 2.63 RT AP

STA: 4+53.55/ 29.22 LT AP

EX. GRAVEL (SEE NOTE 1)

PA

STA: 3+04.78/ 16.98 RT AP

STA: 4+23.74/ 20.09 RT PED. RAMP AP

STA: 4+64.75/ 0.59 LT PED. RAMP AP

GRAVEL WALKWAY

5 C12.2

STA: 2+89.59/ 7.16 RT AP

STA: 4+60.99/ 6.45 RT END: PED. RAMP

STA: 3+01.70/ 30.09 RT AP

STA: 4+55.09/ 5.36 LT PED. RAMP AP

STA: 2+62.34/ 3.18 RT AP
EDGE OF PVMT
EDGE OF GRAVEL

STA: 2+81.93/ 10.84 RT AP

LIMIT OF DISTURBED AREA

STA: 1+40.37/ 59.80 RT
END: EX. GRAVEL CONFORM
START: BEACH ACCESS ROAD

CONFORM TO EX. GRAVEL

MIDBLUFF, SEE SHEETS L-504 FOR ADDITIONAL DETAILS

STA: 1+45.86/ 64.44 RT
END: GRAVEL WALKWAY
START: BEACH ACCESS

BEACH ACCESS ALIGNMENT
STA: 1+00
MIDBLUFF ALIGNMENT
STA: 1+30.82/ 77.08 RT

10' BEACH ACCESS ROAD 7 C12.2

BEACH ACCESS ALIGNMENT, SEE SHEET C9.1-C10.2 FOR PLAN, PROFILE AND SECTIONS

4+64.26

60'

60'

TEMPORARY STOCKPILE
(20' HT MAX)

Graphic Scale (in feet)
20 0 20
1 inch = 20 ft.

NOTES:
1. EXISTING GRAVEL TO BE SALVAGED. SEE SPECIFICATIONS.

KEY MAP, N.T.S.

CSW | ST2
CSW/Stuber-Stroeh Engineering Group, Inc.
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Novato, CA 94947
tel: 415.883.9850
fax: 415.883.9835
http://www.csw2.com

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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	LAYOUT PLAN - MIDBLUFF
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C4.5
SHEET 130F 124

P:\Shared\Projects\.egov\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvement\DWG\Sheets\County\C4.5 - Layout Plan - Midbluff.dwg 04/27/2023 - 09:26 AM BRBR 13.5602

APPROVED:

DATE: 04/21/2023

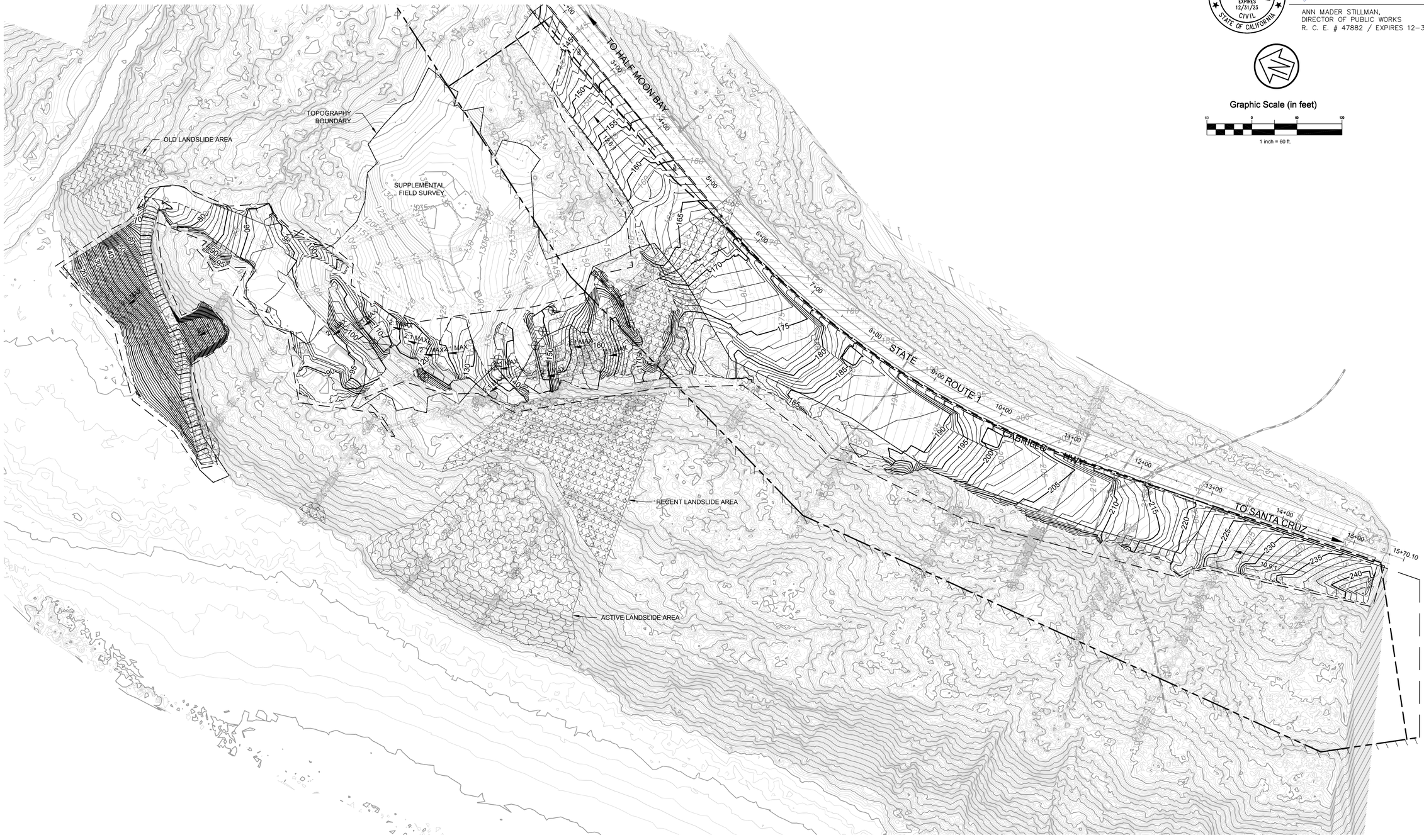
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

Graphic Scale (in feet)

60 0 60 120

1 inch = 60 ft.



P:\Shared\Projects\Landgate\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C5.0 - Mass Grading Plan.dwg 04/27/2023 - 12:42 AM BRBR 13.5602

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http://www.csw2.com

tel: 415.883.9350
fax: 415.883.9835

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APPROVED DATE:

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R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT	SCALE: 1" = 60'
		CHECKED BY: CSW/ST2 (JAH)	MASS GRADING PLAN	DATE: 04/21/2023
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS	FILE NO.: E4995
			ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

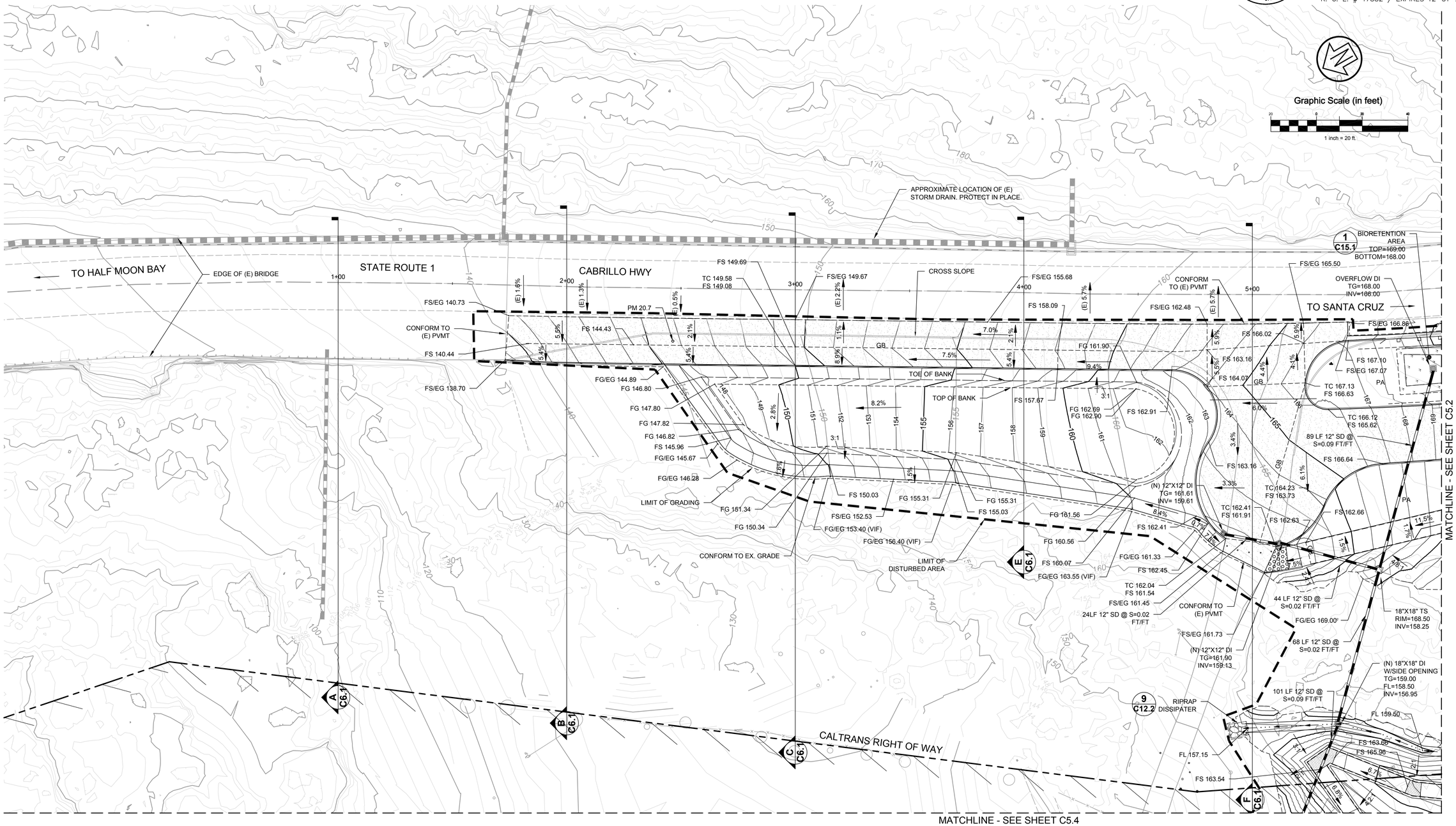
C5.0
SHEET 14 OF 124

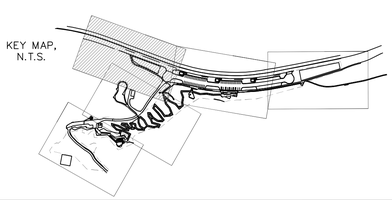
APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA





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R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
GRADING & DRAINAGE PLAN
ENLARGEMENT - APPROACH
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

C5.1
SHEET 15 OF 124

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C5.1 - Grading & Drainage Plan Enlargement - Approach.dwg 04/27/2023 - 10:45 AM brenda 1:3.5602

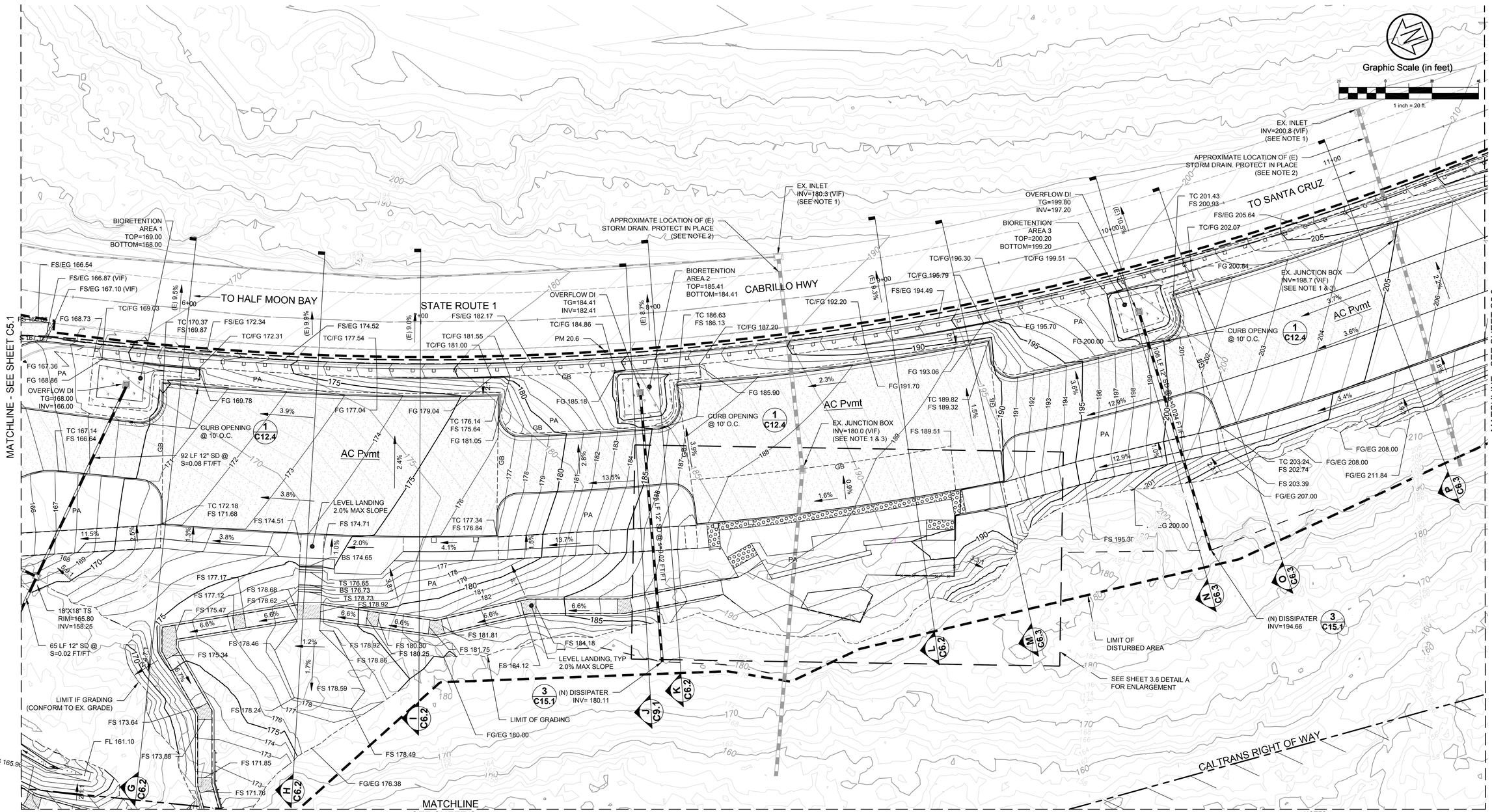
APPROVED:

DATE: 04/21/2023

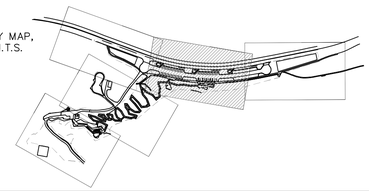
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

Graphic Scale (in feet)
20 0 20 40
1 inch = 20 ft.



KEY MAP, N.T.S.



NOTES:
1. PRIOR TO CONSTRUCTION, VERIFY LOCATION AND CONDITION OF EXISTING STORM DRAIN INLET.
2. PRIOR TO CONSTRUCTION, VERIFY LOCATION AND CONDITION OF EXISTING STORM DRAIN PIPE.
3. EXISTING INLET TO BE CAPPED AND STORM DRAIN PROTECTED IN PLACE.

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STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	
		CHECKED BY: CSW/ST2 (JAH)	
		DRAWN BY: MTM	
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
GRADING & DRAINAGE PLAN
ENLARGEMENT - PARKING LOT
SAN MATEO COUNTY PARKS

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C5.2
SHEET 16 OF 124

P:\Shared\Projects\ sgpw\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C5.2 - Grading & Drainage Plan Enlargement - Parking Lot.dwg 04/27/2023 - 10:49 AM brenda 1:3.5602

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
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EXPIRES 12/31/23
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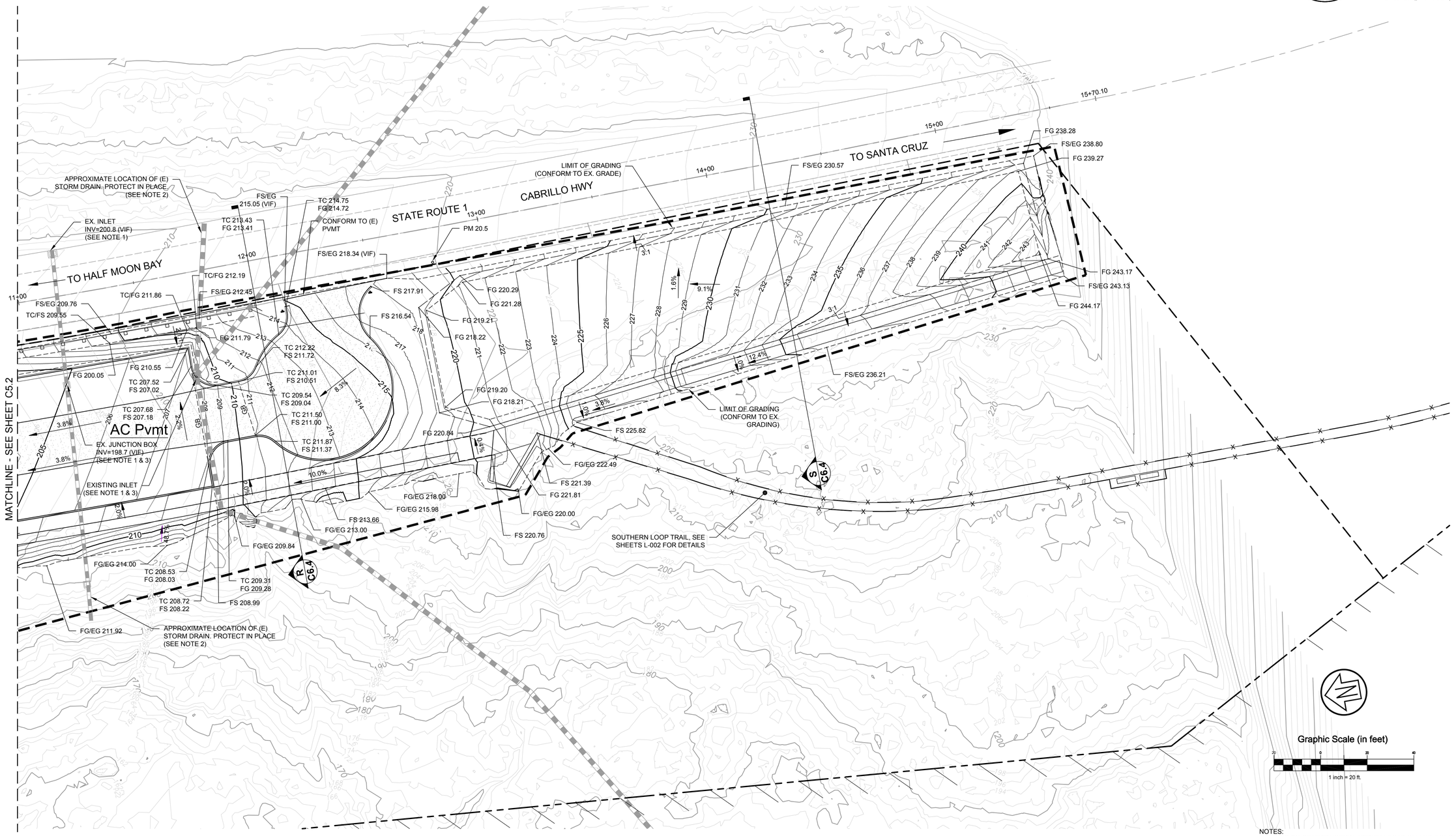
STATE OF CALIFORNIA



Graphic Scale (in feet)

20 0 20 40

1 inch = 20 ft.

KEY MAP, N.T.S.

NOTES:
1. PRIOR TO CONSTRUCTION, VERIFY LOCATION AND CONDITION OF EXISTING STORM DRAIN INLET.
2. PRIOR TO CONSTRUCTION, VERIFY LOCATION AND CONDITION OF EXISTING STORM DRAIN PIPE.
3. EXISTING INLET TO BE CAPPED AND STORM DRAIN PROTECTED IN PLACE.

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CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT GRADING & DRAINAGE PLAN ENLARGEMENT - EXIT SAN MATEO COUNTY PARKS
		CHECKED BY: CSW/ST2 (JAH)	
		DRAWN BY: MTM	
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C5.3
SHEET 17 OF 124

P:\Shared\Projects\Legacy\Novato\Projects\2015-07-006 Tunitas Creek Beach Improvement\DWG\Sheets\County\C5.3 - Grading & Drainage Plan Enlargement - Exit.dwg 04/27/2023 - 10:51 AM tsousa 1:3.5602

MATCHLINE
SEE SHEET C5.1

MATCHLINE
SEE SHEET C5.2

MATCHLINE

9
C12.2

RIPRAP DISSIPATER

FL 157.15

(N) 18"X18" DI
W/SIDE OPENING
TG=159.00
FL=158.50
INV=156.95

FS 163.54

CALTRANS RIGHT OF WAY

LIMIT OF GRADING
(CONFORM TO EX.
GRADE)

FS 150.37

FS 150.28

(N) 18"X18" TS
TG=150.16
INV=148.00

FS 149.51

FS 149.41

LIMIT OF
DISTURBED
AREA

LIMIT OF GRADING

FS 139.50

FS 139.31

FS 137.58

FS 128.36

FS 126.68

FS 126.47

(N) 18"X18" TS
TG=126.57
INV=124.50

FS 125.11

FS 118.45

FS 117.29

FS 117.15

FS 113.43

FS 110.88

FS 112.02

FS 111.86

FS 105.85

FS/EG 107.17

FS/EG 107.50(VIF)

CONFORM TO
EXISTING
PAVEMENT

FG/EG 99.66

LIMIT OF GRADING
(CONFORM TO EX.
GRADE)

FG/EG 102.06

FS 104.04

FG/EG 98.00

FS 103.85

LIMIT OF GRADING
(CONFORM TO EX.
GRADE)

FG'/EG 95.31

BS 98.53

FL 159.50

FL 162.00

FL 159.00

FS 163.66

FS 170.12

FS 165.99

FS 169.76

FS 161.29

FS 159.20

FS 168.09

LIMIT OF GRADING
(CONFORM TO EX.
GRADE)

FS 157.19

FS 153.27

FS 151.81

FS 156.92

ACCESSIBLE TRAIL
ALIGNMENT, SEE
SHEETS C7.1 TO C7.8
FOR PLAN & PROFILE

FS 155.11

FS 147.41

FS 145.94

FS 144.47

FS 141.00

TS 140.99

FS 141.07

FS 144.31

FS 142.63

FS 135.44

FS 134.42

SEE ENLARGEMENT C, SHEET
C5.6 FOR DECK GRADING
ENLARGEMENT

FS 134.26

FS 132.91

FS 130.56

FS 130.50

TS 129.85

BS 122.34

FS 122.36

FS 122.25

FS 120.40

LIMIT OF GRADING
(CONFORM TO EX.
GRADE)

FS 119.59

TS 119.50

BS 115.83

FS 115.57

FS 115.41

FS 114.76

FS 109.56

FS 107.80

FS 109.41

FS 97.26

FS 100.57

TS 100.53

TS 98.42

FS 99.50

FS 95.03

BS 95.06

126LF 12" SD @ S=0.19 FT/FT

135LF 12" SD @ S=0.22 FT/FT

40LF 12" SD @ S=0.09 FT/FT

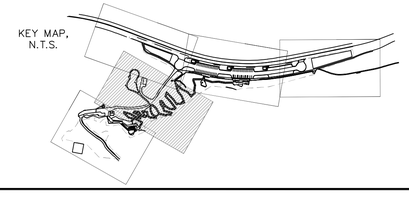
Graphic Scale (in feet)

20 0 20 40

1 inch = 20 ft.

MATCHLINE - SEE SHEET C5.5

KEY MAP,
N.T.S.



APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

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Novato, CA 94947

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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT GRADING & DRAINAGE PLAN ENLARGEMENT - TRAIL SAN MATEO COUNTY PARKS
		CHECKED BY: CSW/ST2 (JAH)	
		DRAWN BY: MTM	
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C5.4
SHEET 18 OF 124

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C5.4 - Grading & Drainage Plan Enlargement - Trail.dwg 04/27/2023 - 02:27 AM BRBR 13.5602

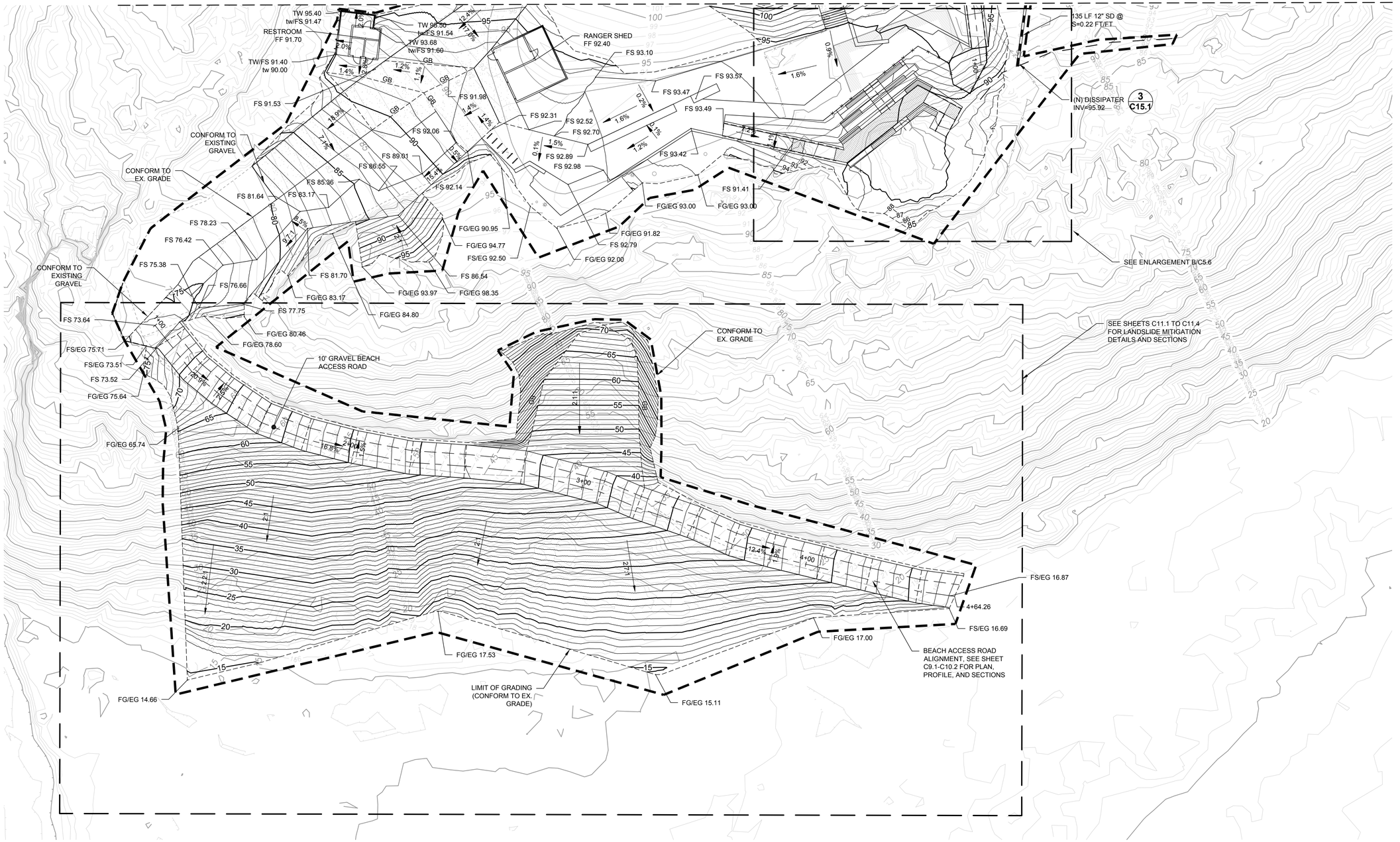
APPROVED:

DATE: 04/21/2023

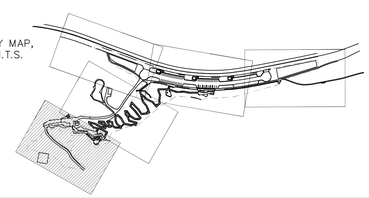
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

MATCHLINE - SEE SHEET C5.4



KEY MAP,
N.T.S.



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tel: 415.883.9850
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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT	SCALE: 1" = 20'
		CHECKED BY: CSW/ST2 (JAH)	GRADING & DRAINAGE PLAN	DATE: 04/21/2023
		DRAWN BY: MTM	ENLARGEMENT - MIDBLUFF	FILE NO.: E4995
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	SAN MATEO COUNTY PARKS	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

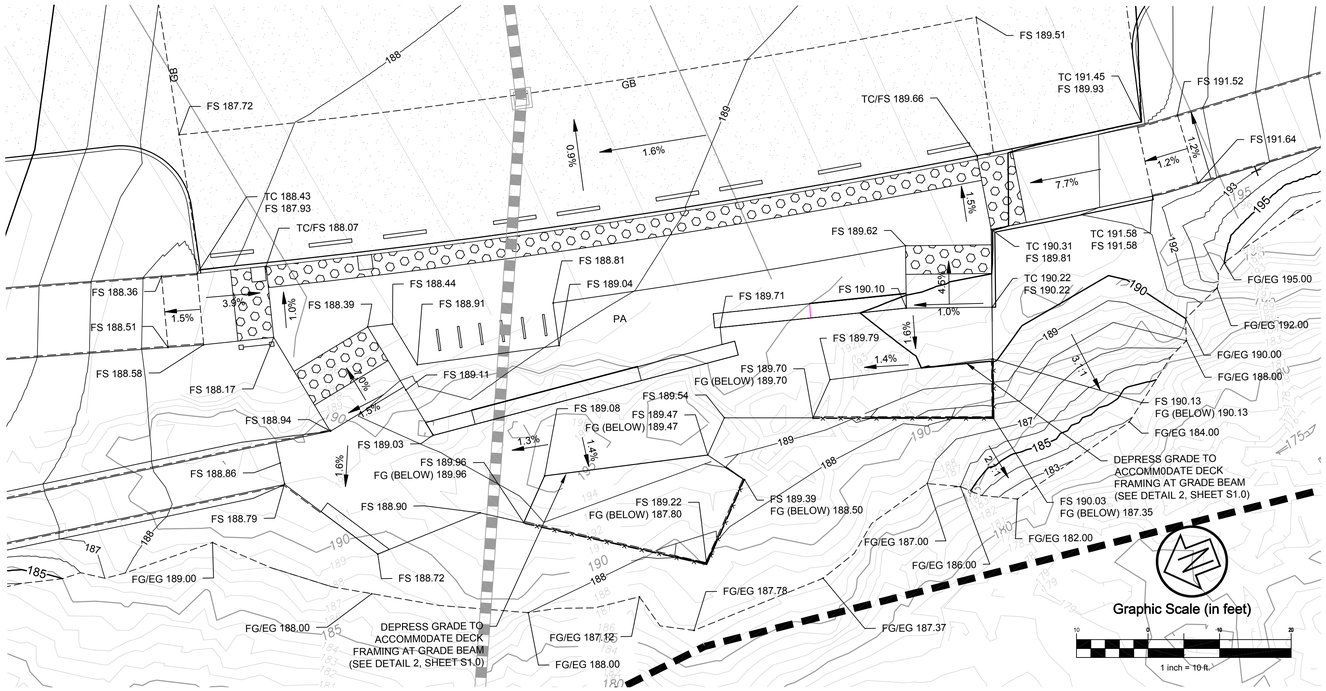
C5.5
SHEET 19 OF 124

F:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvement\dDWG\Sheets\County\C5.5 - Grading & Drainage Plan Enlargement - Midbluff.dwg 04/27/2023 - 10:55 AM brenda 13.5802

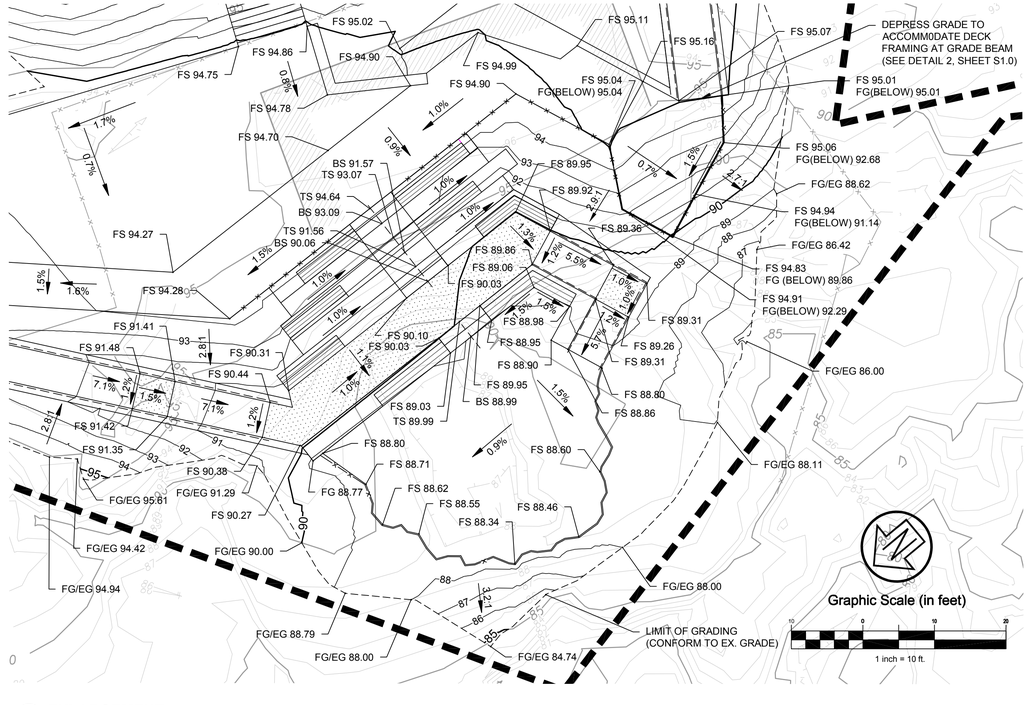
APPROVED:

DATE: 04/21/2023

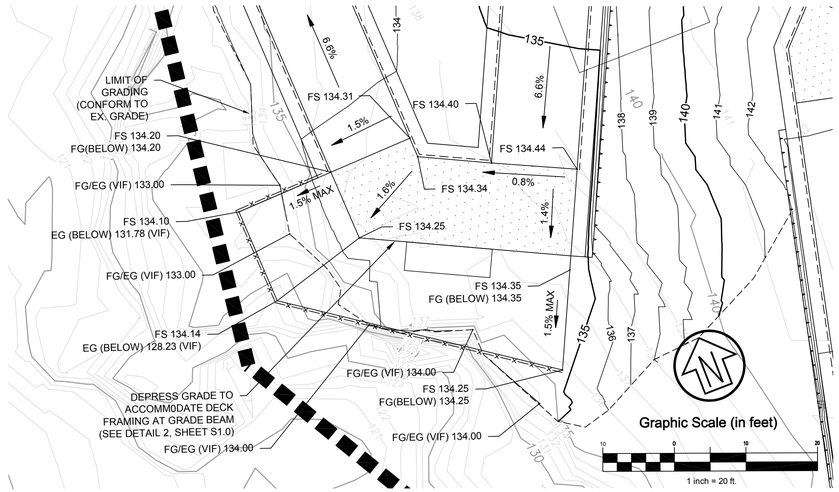
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



A ENLARGEMENT
SCALE: 1" = 10'



B ENLARGEMENT
SCALE: 1" = 10'



C ENLARGEMENT
SCALE: 1" = 20'

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C5.6 - Grading & Drainage Plan Enlargement.dwg 04/27/2023 - 02:37 AM BRBR 13.5602

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Novato, CA 94947
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fax: 415.883.9835
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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT GRADING & DRAINAGE PLAN ENLARGEMENT - DECKS SAN MATEO COUNTY PARKS
		CHECKED BY: CSW/ST2 (JAH)	
		DRAWN BY: MTM	
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

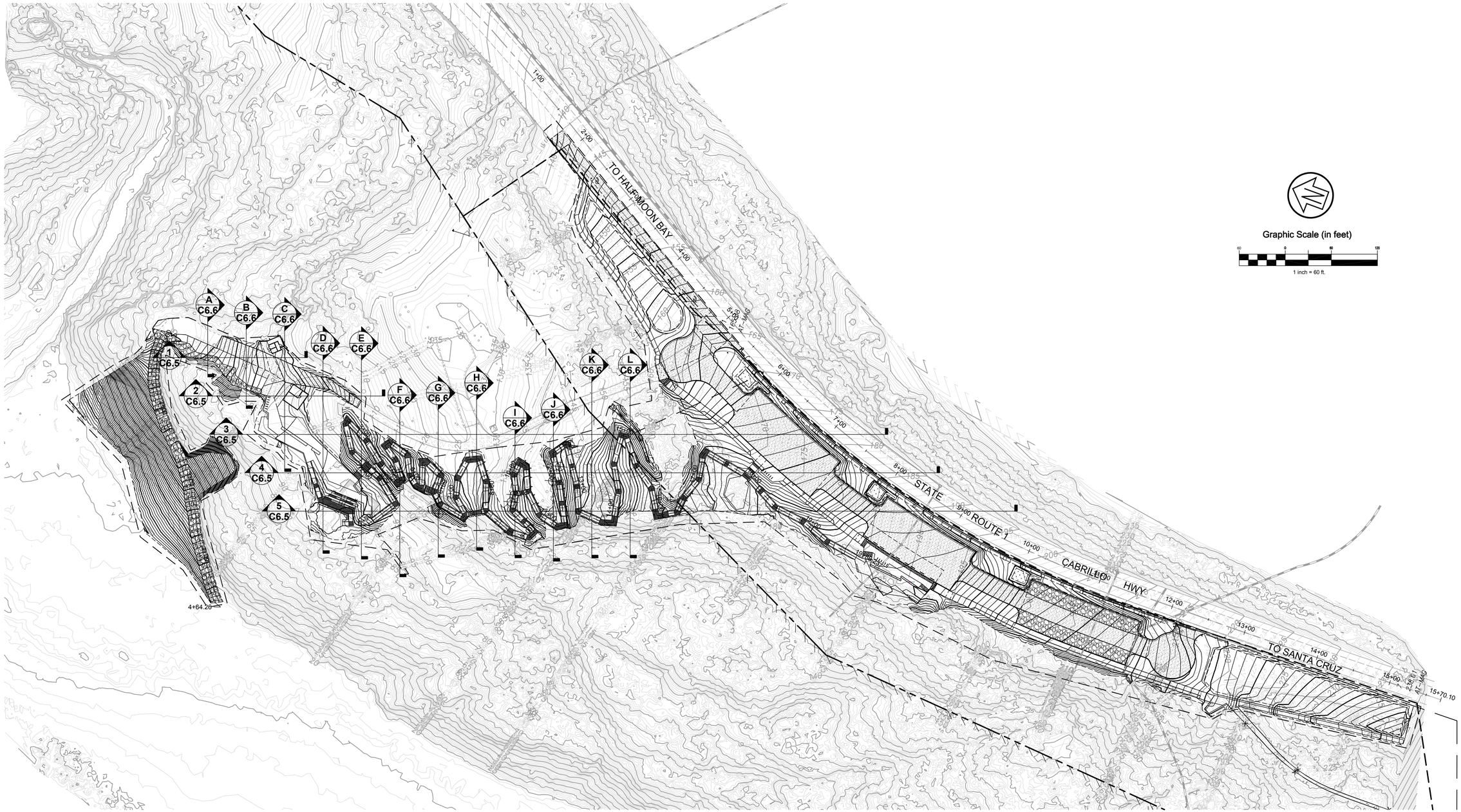
C5.6
SHEET 20 OF 124

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA



Graphic Scale (in feet)

60 0 60 120

1 inch = 60 ft.

P:\Shared\Projects\Legacy\Novato\Projects\2019-20\006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C6.0-SECTION PLAN.dwg 04/27/2023 - 10:49 AM BRBR 1:3.5602

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Novato, CA 94947

tel: 415.883.9850
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R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

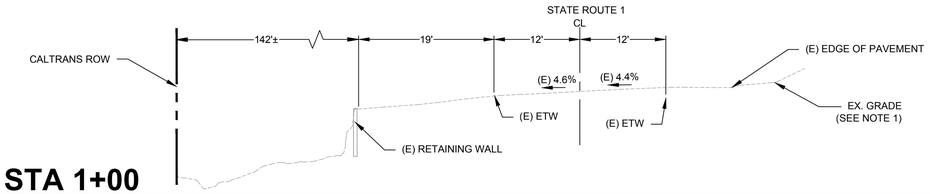
COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	TRAIL SECTION PLAN
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 60'
DATE: 04/21/2023
FILE NO.: E4995

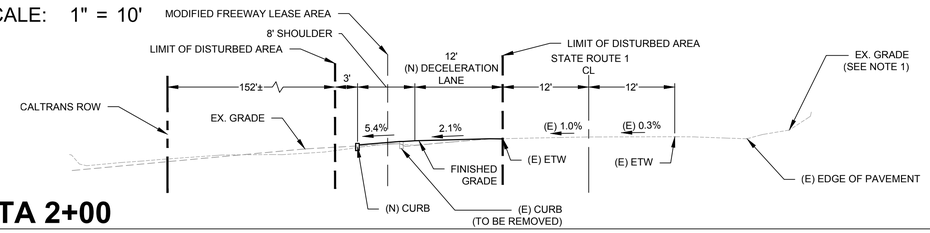
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C6.0
SHEET 21 OF 124



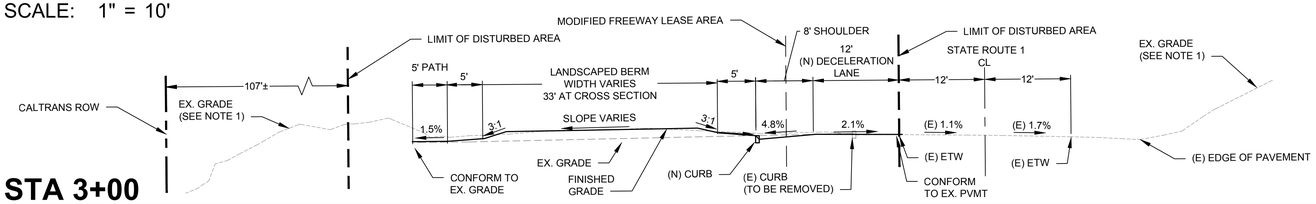
A STA 1+00

SCALE: 1" = 10'



B STA 2+00

SCALE: 1" = 10'



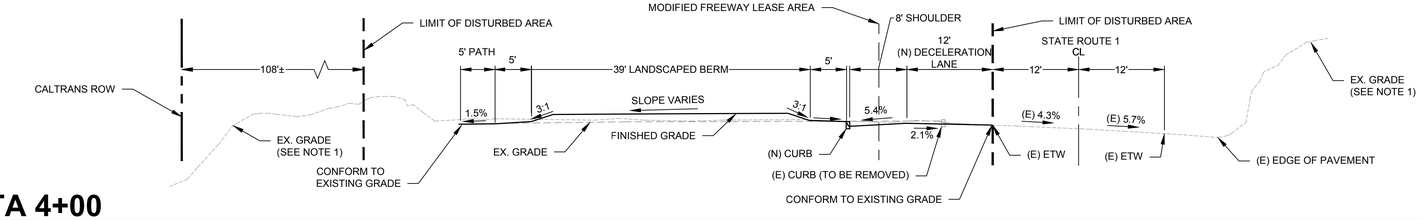
C STA 3+00

SCALE: 1" = 10'

OMITTED

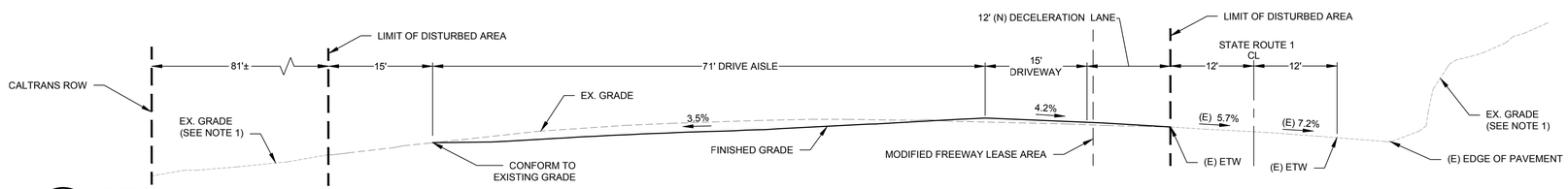
D OMITTED

SCALE: 1" = 10'



E STA 4+00

SCALE: 1" = 10'



F STA 5+00

SCALE: 1" = 10'

NOTES:
1. EXISTING GRADE TO BE VERIFIED IN FIELD. OBSCURED BY VEGETATION
2. SEE SHEETS 110-L118 FOR ADDITIONAL DETAILS

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

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Novato, CA 94947
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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
SECTIONS
SAN MATEO COUNTY PARKS

SCALE: AS SHOWN
DATE: 04/21/2023
FILE NO.: E4995

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

C6.1
SHEET 22 OF 124

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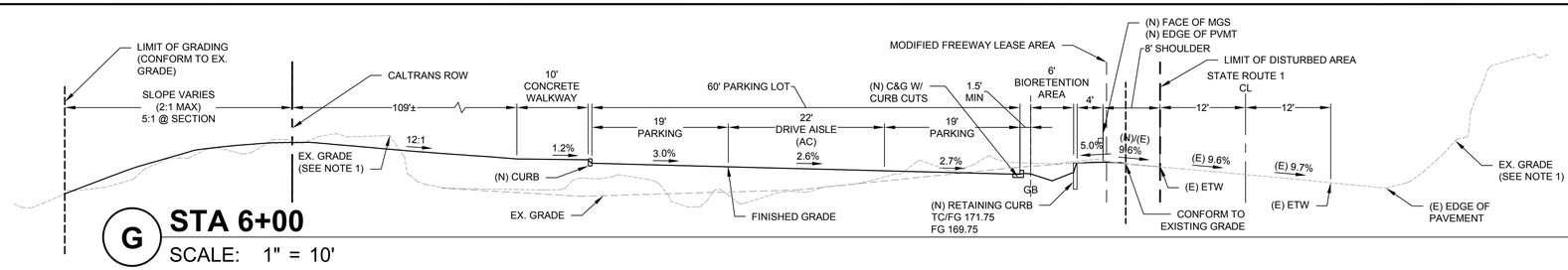
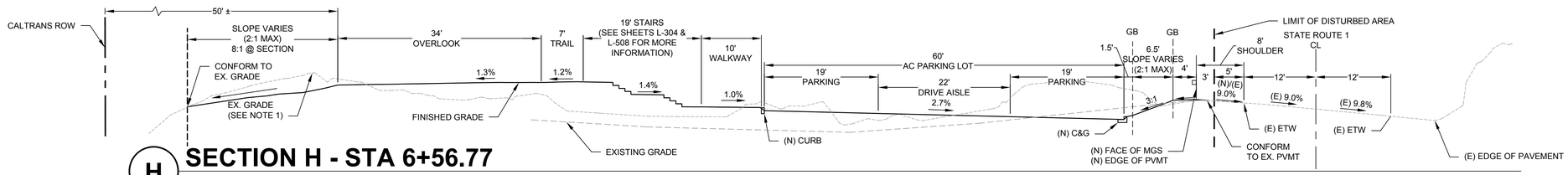


G STA 6+00

SCALE: 1" = 10'



H SECTION H - STA 6+56.77

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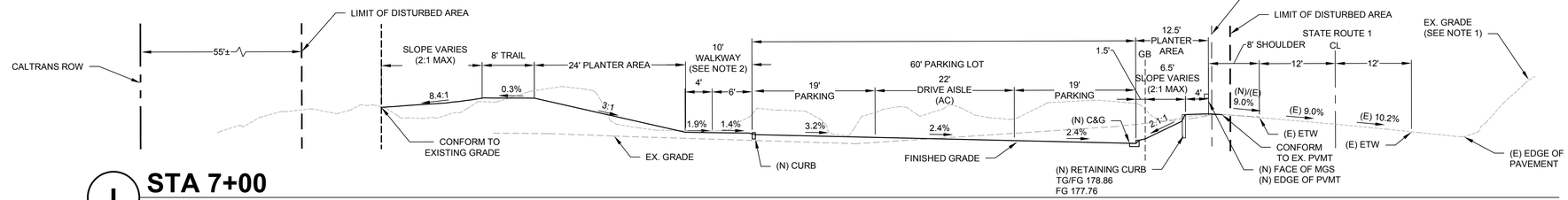


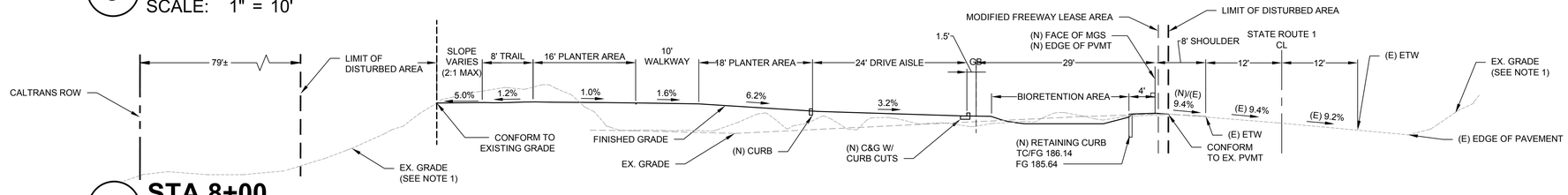
I STA 7+00

SCALE: 1" = 10'

OMITTED

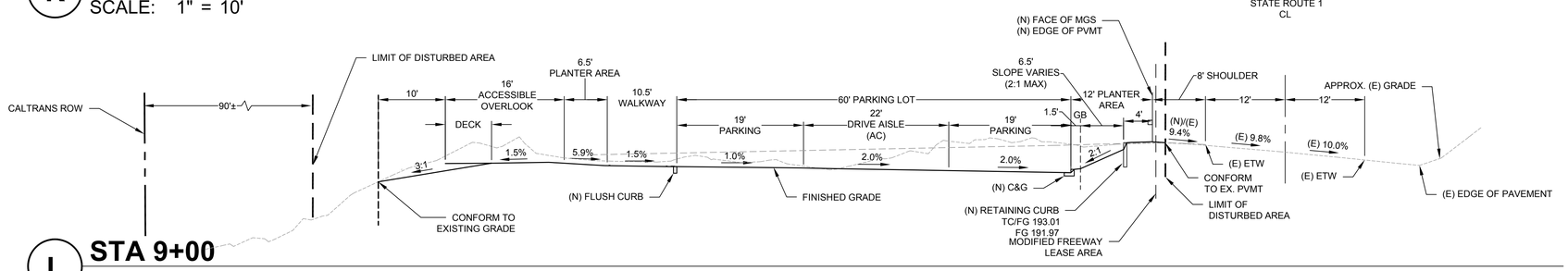
J OMITTED

SCALE: 1" = 10'



K STA 8+00

SCALE: 1" = 10'



L STA 9+00

SCALE: 1" = 10'

NOTES:
1. EXISTING GRADE TO BE VERIFIED IN FIELD. OBSCURED BY VEGETATION
2. SEE SHEETS 110-L118 FOR ADDITIONAL DETAILS

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
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504 Redwood Blvd, Suite 310
Novato, CA 94947
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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

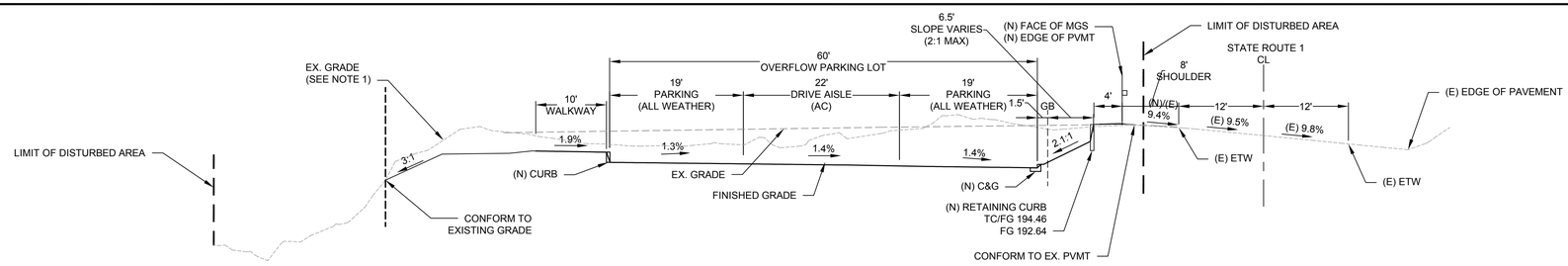
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT SECTIONS SAN MATEO COUNTY PARKS
		CHECKED BY: CSW/ST2 (JAH)	
		DRAWN BY: MTM	
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS, COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR, REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

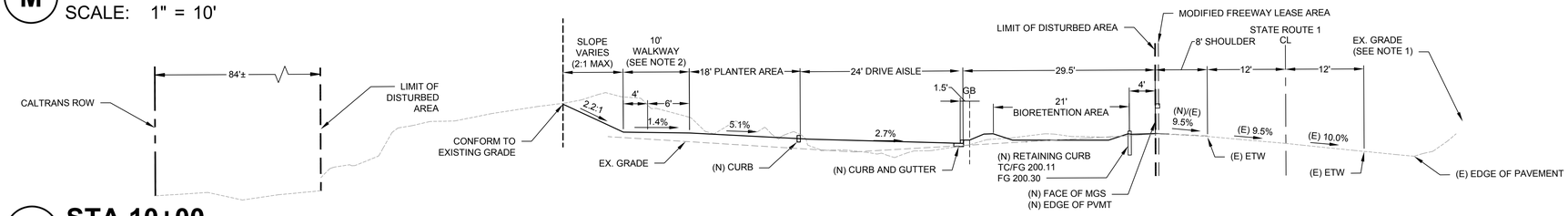
C6.2
SHEET 23 OF 124

P:\Shared Projects\Logjon\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C30-C35 Sections.dwg 04/27/2023 09:11 AM brenda 1:3.5902



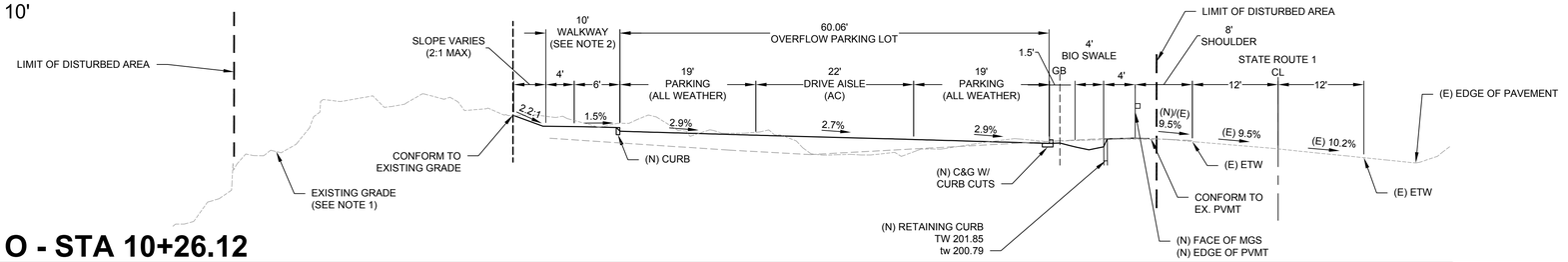
M SECTION M - STA 9+30.28

SCALE: 1" = 10'



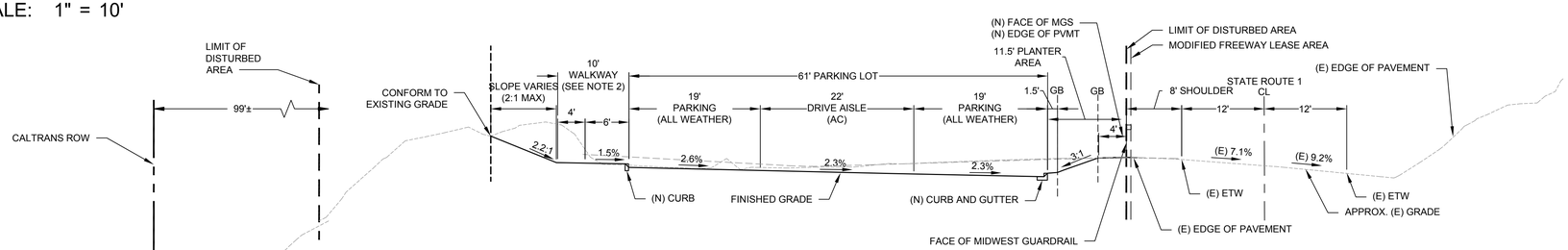
N STA 10+00

SCALE: 1" = 10'



O SECTION O - STA 10+26.12

SCALE: 1" = 10'



P STA 11+00

SCALE: 1" = 10'

NOTES:
1. EXISTING GRADE TO BE VERIFIED IN FIELD. OBSCURED BY VEGETATION
2. SEE SHEETS L110-L118 FOR ADDITIONAL DETAILS

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

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504 Redwood Blvd, Suite 310
Novato, CA 94947
http://www.cswst2.com

tel: 415.883.9850
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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

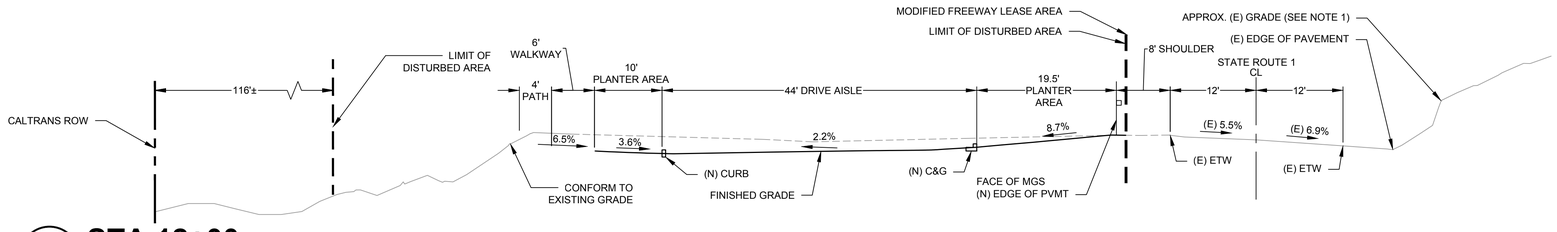
COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT	SCALE: AS SHOWN
		CHECKED BY: CSW/ST2 (JAH)	SECTIONS	DATE: 04/21/2023
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS	FILE NO.: E4995
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

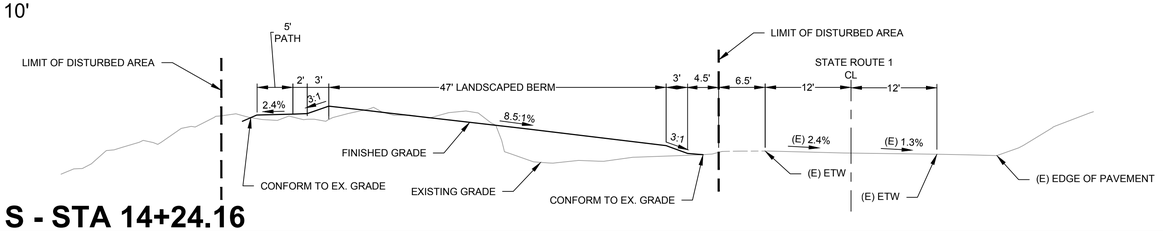
C6.3
SHEET 24 OF 124

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C6.0-C6.5 - Sections.dwg 04/27/2023 - 10:10 AM brenda 1:3.9602



R STA 12+00

SCALE: 1" = 10'



S SECTION S - STA 14+24.16

SCALE: 1" = 10'

NOTES:
1. EXISTING GRADE TO BE VERIFIED IN FIELD. OBSCURED BY VEGETATION
2. SEE SHEETS L110-L118 FOR ADDITIONAL DETAILS

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER ANN MADER STILLMAN C 47882 EXPIRES 12/31/23 CIVIL STATE OF CALIFORNIA

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REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

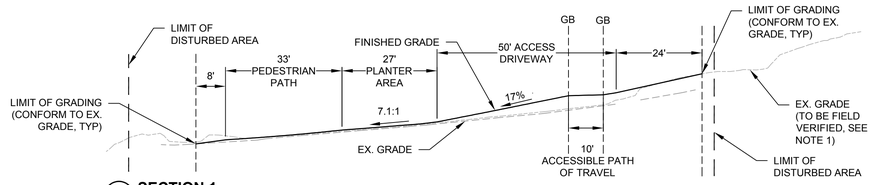
REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	SECTIONS
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 04/21/2023
FILE NO.: E4995

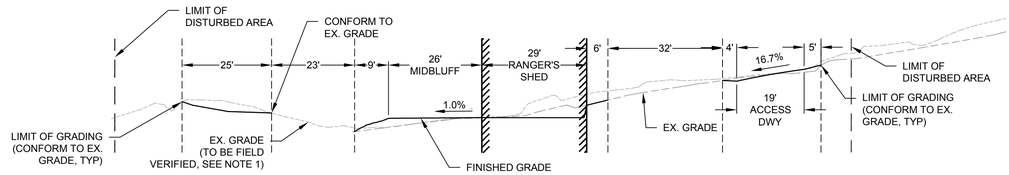
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C6.4
SHEET 25 OF 124

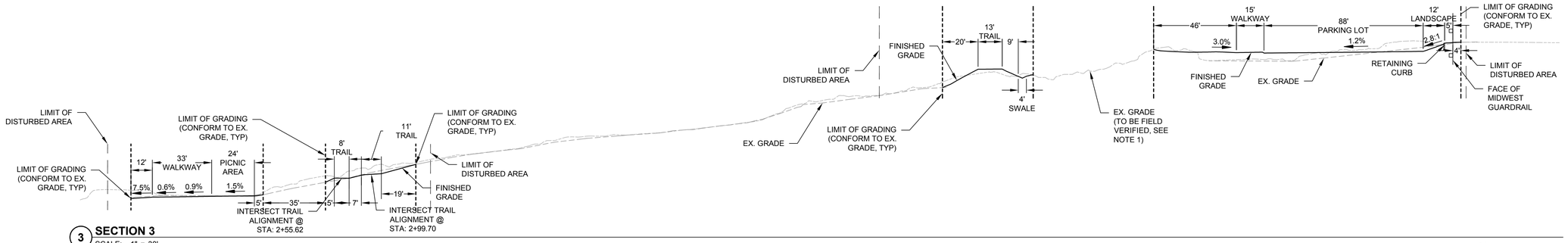
C:\Users\brenda\appdata\local\temp\AcPublish_16316\C6.0-C6.5 - Sections.dwg 04/27/2023 - 8:50 AM brenda 13.5602



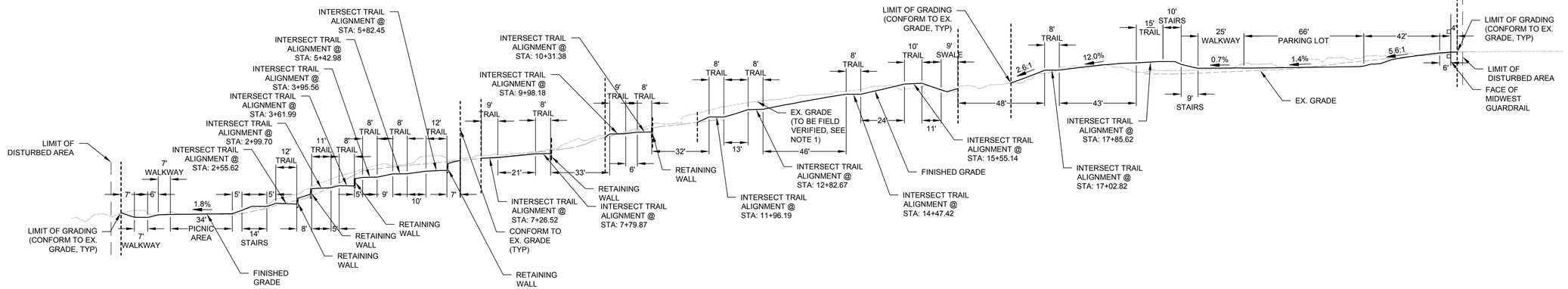
1 **SECTION 1**
SCALE: 1" = 20'



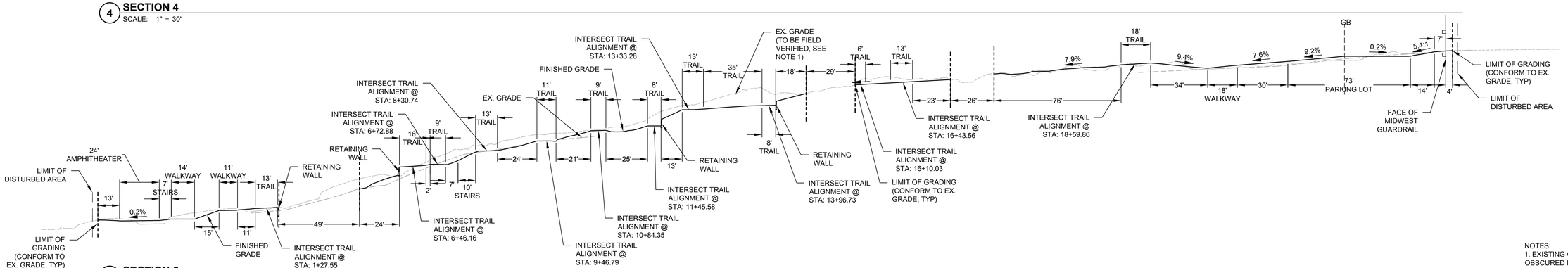
2 **SECTION 2**
SCALE: 1" = 20'



3 **SECTION 3**
SCALE: 1" = 30'



4 **SECTION 4**
SCALE: 1" = 30'



5 **SECTION 5**
SCALE: 1" = 30'

NOTES:
1. EXISTING GRADE TO BE VERIFIED IN FIELD. OBSCURED BY VEGETATION

APPROVED:
DATE: 04/21/2023
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

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R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	TRAIL SECTIONS
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C6.5
SHEET 26 OF 124

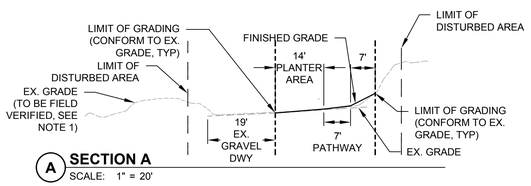
P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvement\DWG\Sheets\County\C6.0 SECTION PLAN.dwg 04/27/2023 - 11:00 AM BRBR 13.5602

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA



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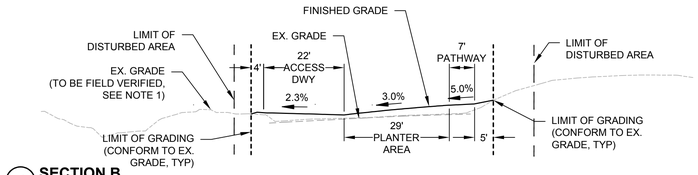

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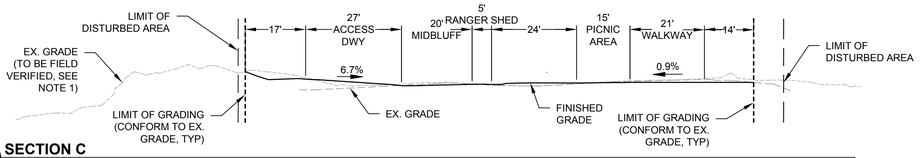
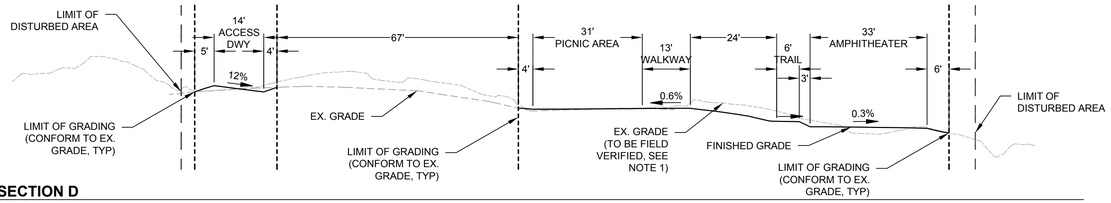


C SECTION C
SCALE: 1" = 20'



D SECTION D
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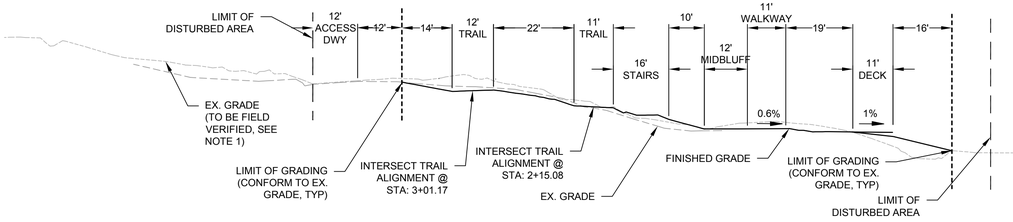
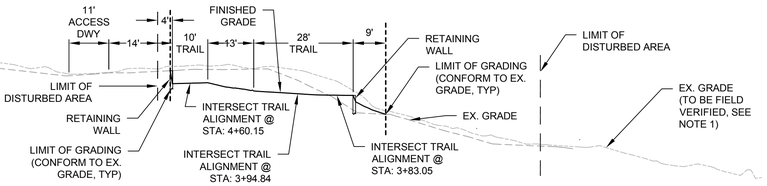
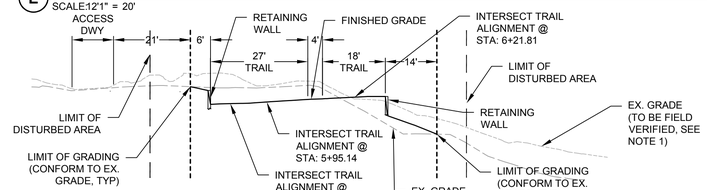


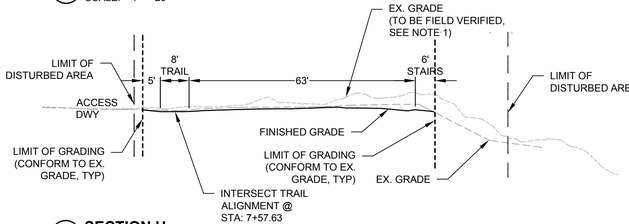
E SECTION E
SCALE:12'1" = 20'



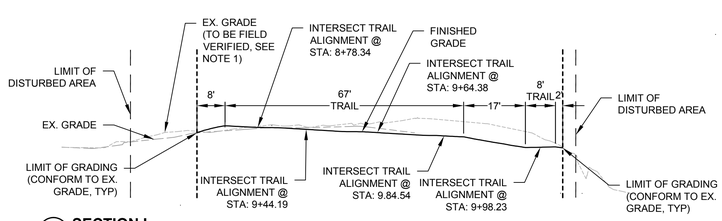
F SECTION F
SCALE: 1" = 20'



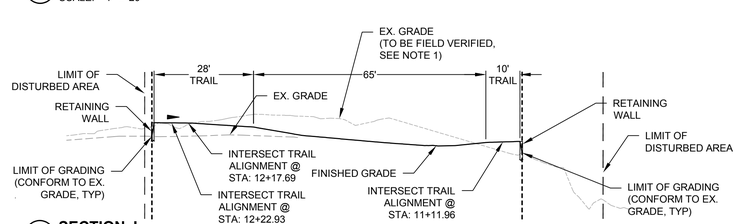
G SECTION G
SCALE: 1" = 20'



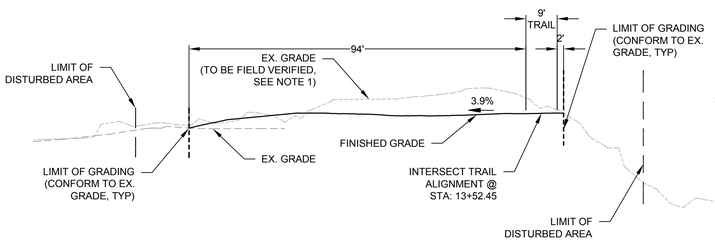
H SECTION H
SCALE: 1" = 20'



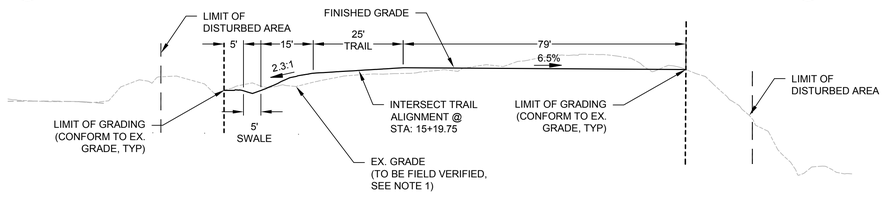
I SECTION I
SCALE: 1" = 20'



J SECTION J
SCALE: 1" = 20'



K SECTION K
SCALE: 1" = 20'



L SECTION L
SCALE: 1" = 20'

NOTES:
1. EXISTING GRADE TO BE VERIFIED IN FIELD. OBSCURED BY VEGETATION

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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	TRAIL SECTIONS
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C6.6
SHEET 27 OF 124

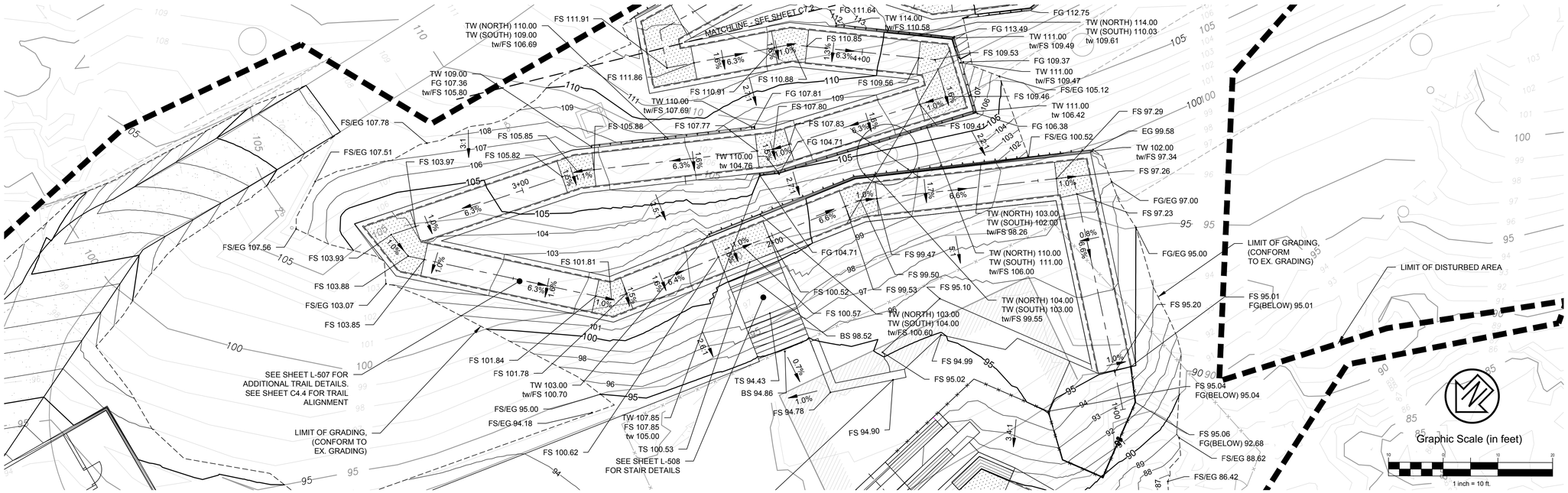
P:\Shared Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C6.0-SECTION PLAN.dwg 04/27/2023 - 10:55 AM BRBR - 13.5602

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA



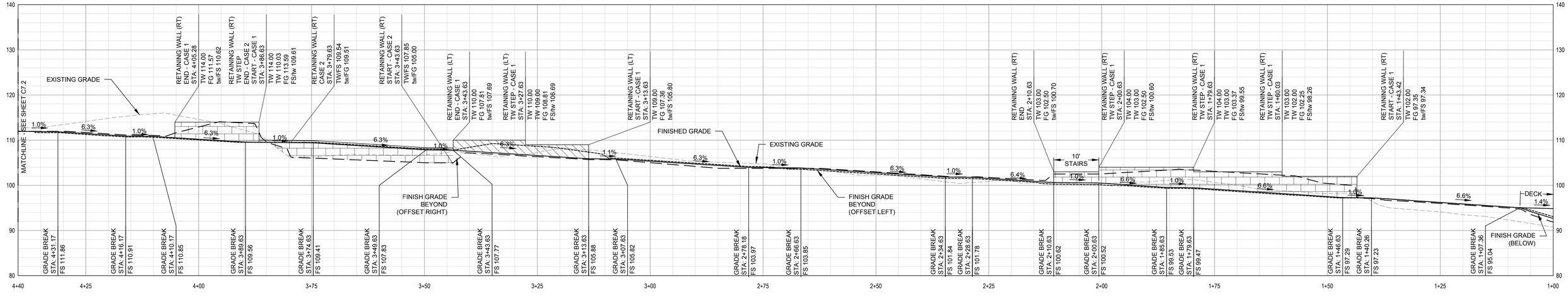
TRAIL PLAN - STA: 1+00 TO STA: 4+40

SCALE: 1" = 10'

LEGEND

WALL TO OFFSET RIGHT

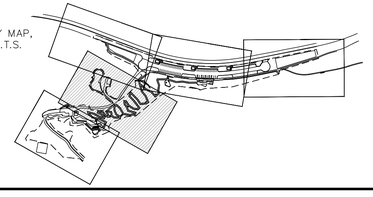
WALL TO OFFSET LEFT



TRAIL PROFILE - STA: 1+00 TO STA: 4+40

SCALE: HOR. 1" = 10' VERT. 1" = 10'

KEY MAP,
N.T.S.



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ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

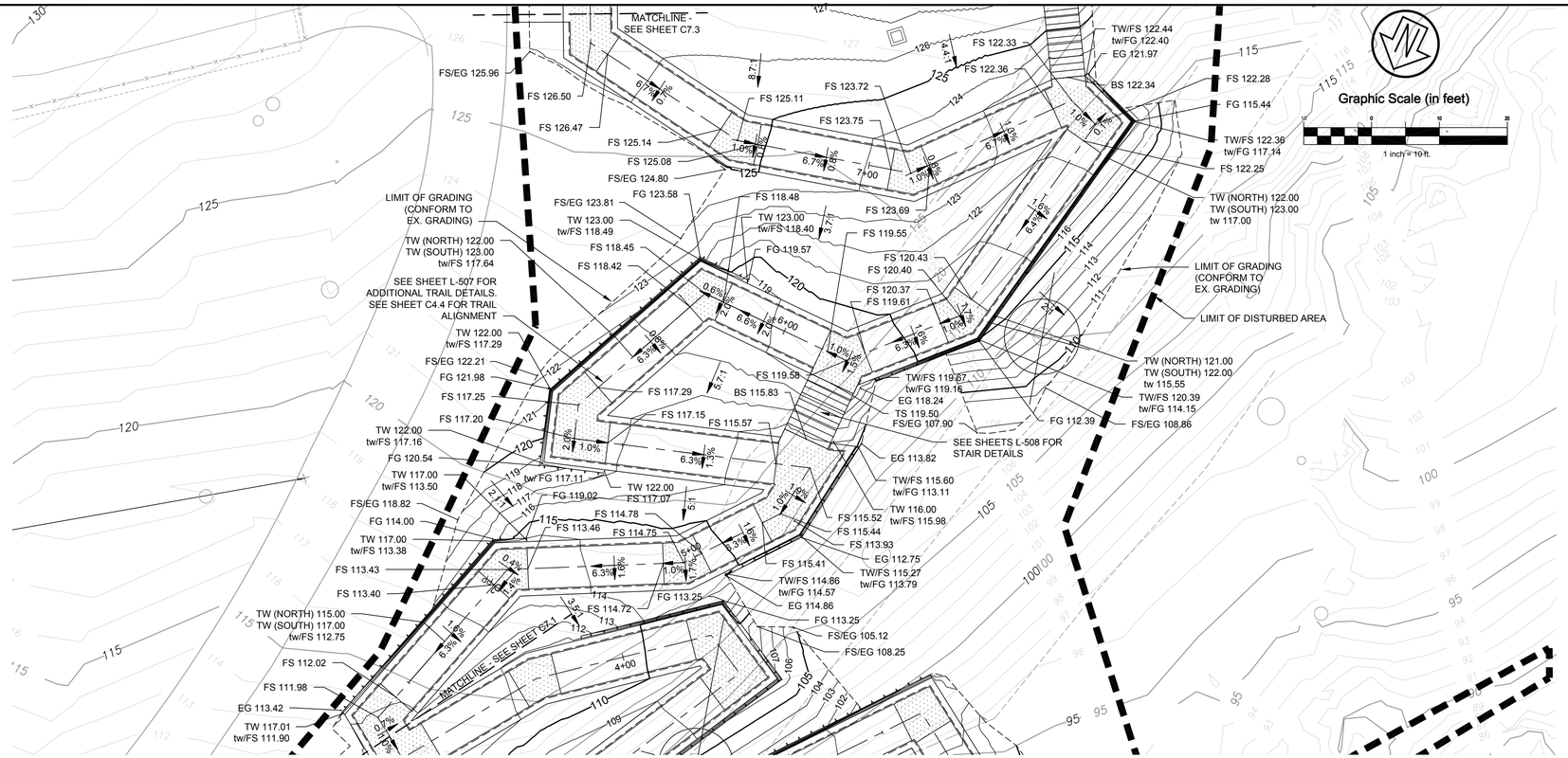
REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT TRAIL PLAN & PROFILE - STA: 1+00 TO STA: 4+40 SAN MATEO COUNTY PARKS
		CHECKED BY: CSW/ST2 (JAH)	
		DRAWN BY: MTM	
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C7.1
SHEET 28 OF 124

P:\Shared Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C7.0-C7.6- Trail Plan & Profile.dwg 04/27/2023 - 09:48 AM brenda 1:3.5602

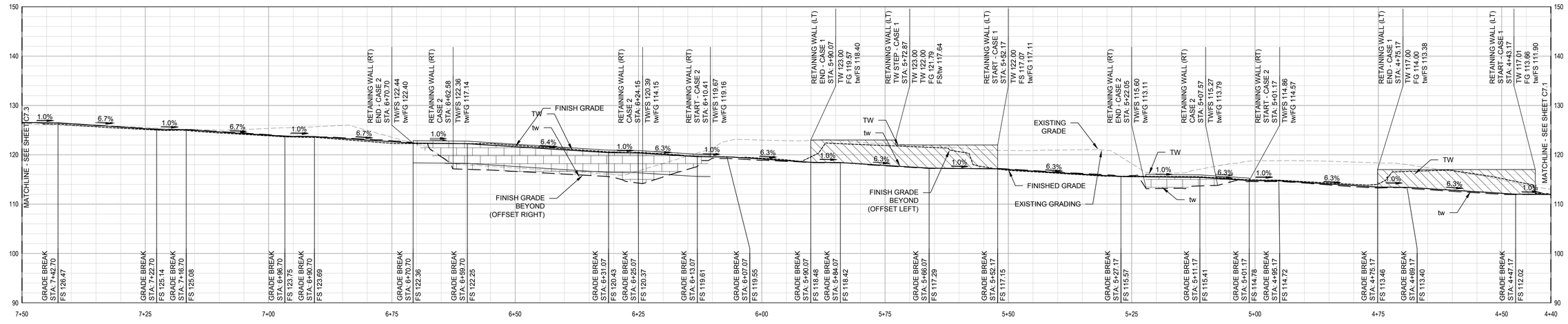


TRAIL PLAN - STA: 4+40 TO STA: 7+50
SCALE: 1" = 10'

LEGEND

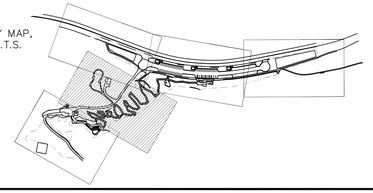
WALL TO OFFSET RIGHT

WALL TO OFFSET LEFT



TRAIL PROFILE - STA: 4+40 TO STA: 7+50
SCALE: HOR. 1" = 10' VERT. 1" = 10'

KEY MAP,
N.T.S.



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ANN MADER STILLMAN,
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REGISTERED PROFESSIONAL ENGINEER
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EXPIRES
12/31/23
CIVIL
STATE OF CALIFORNIA

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	TRAIL PLAN & PROFILE -
		DRAWN BY: MTM	STA: 4+25 TO STA: 7+50
			SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C7.2
SHEET 29 OF 124

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C7.0-C7.6 - Trail Plan & Profile.dwg 04/27/2023 - 09:58 AM brenda 1.3.6502

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
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R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
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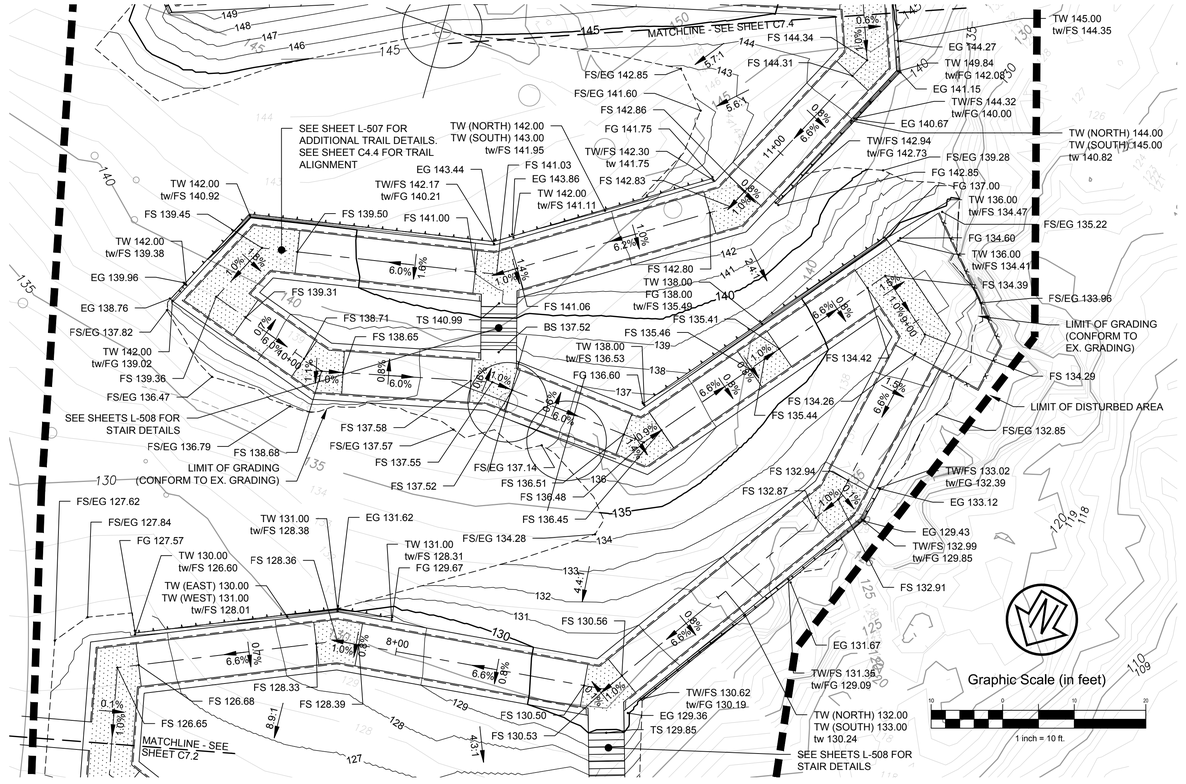
STATE OF CALIFORNIA



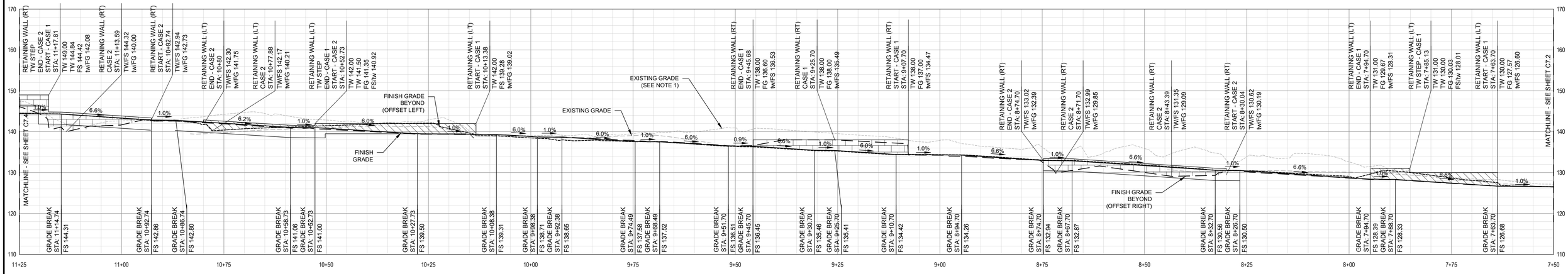
TRAIL PLAN - STA: 7+50 TO STA: 11+25

SCALE: 1" = 10'

LEGEND

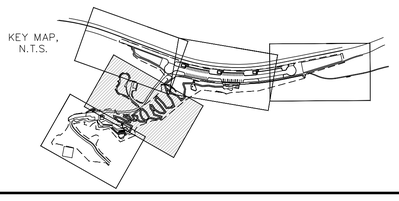
WALL TO OFFSET RIGHT

WALL TO OFFSET LEFT



TRAIL PROFILE -STA: 7+50 TO 11+25

SCALE: HOR. 1" = 10' VERT. 1" = 10'



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Novato, CA 94947
tel: 415.883.9850
fax: 415.883.9835
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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	CHECKED BY: CSW/ST2 (JAH)	DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
TRAIL PLAN & PROFILE -
STA: 7+50 TO STA: 11+25
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

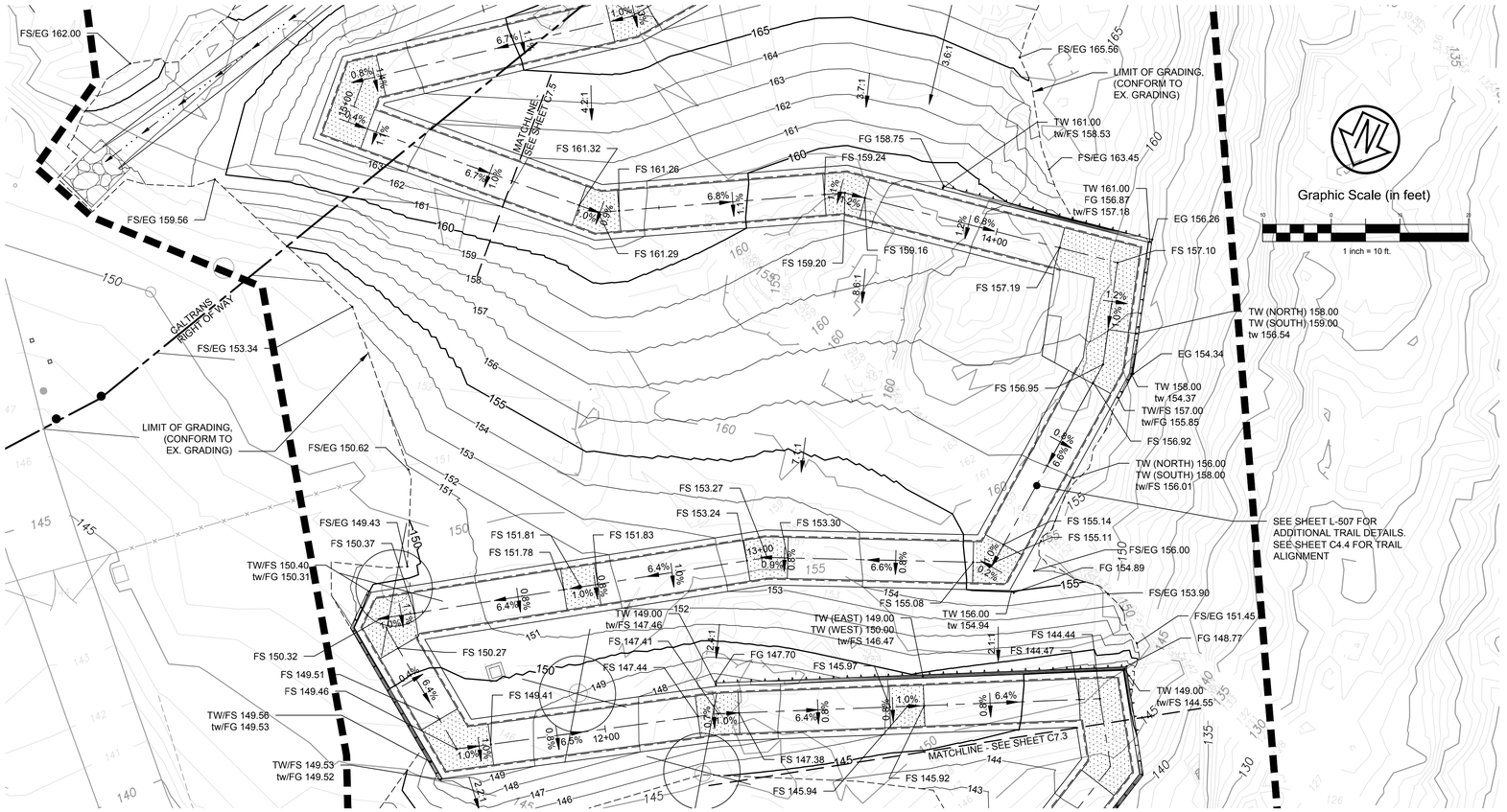
555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

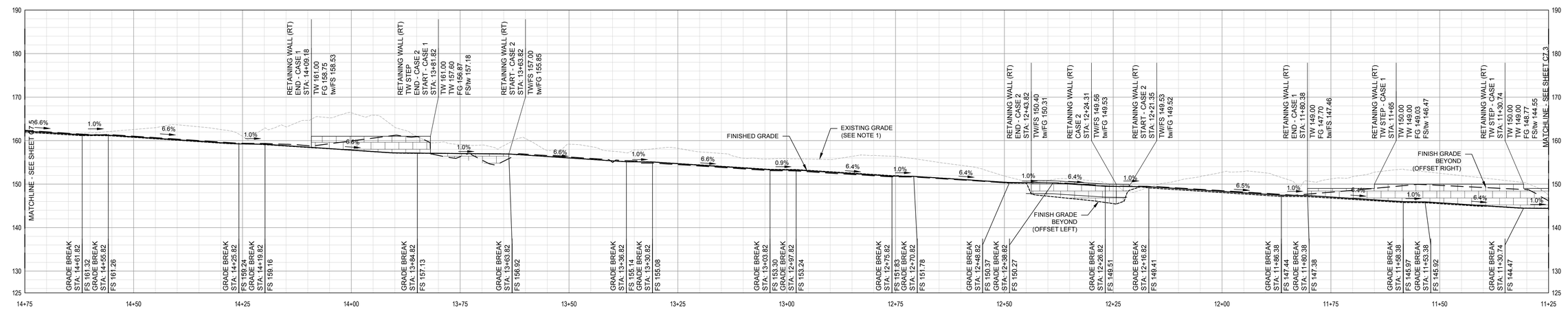
C7.3
SHEET 30 OF 124

P:\Shared Projects\Logan\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C7.5-C7.6 - Trail Plan & Profile.dwg 04/27/2023 - 09:49 AM brenda 1.3.5602



TRAIL PLAN - STA: 11+25 TO STA: 14+75

SCALE: 1" = 10'



TRAIL PROFILE - STA: 11+25 TO STA: 14+75

SCALE: HOR. 1" = 10' VERT. 1" = 10'

LEGEND

WALL TO OFFSET RIGHT

WALL TO OFFSET LEFT

KEY MAP, N.T.S.

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER ANN MADER STILLMAN C 47882 EXPIRES 12/31/23 CIVIL STATE OF CALIFORNIA

APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

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REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	CHECKED BY: CSW/ST2 (JAH)	DRAWN BY: MTM
		TUNITAS CREEK BEACH IMPROVEMENT PROJECT TRAIL PLAN & PROFILE - STA: 11+25 TO STA: 14+75 SAN MATEO COUNTY PARKS		
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C7.4
SHEET 31 OF 124

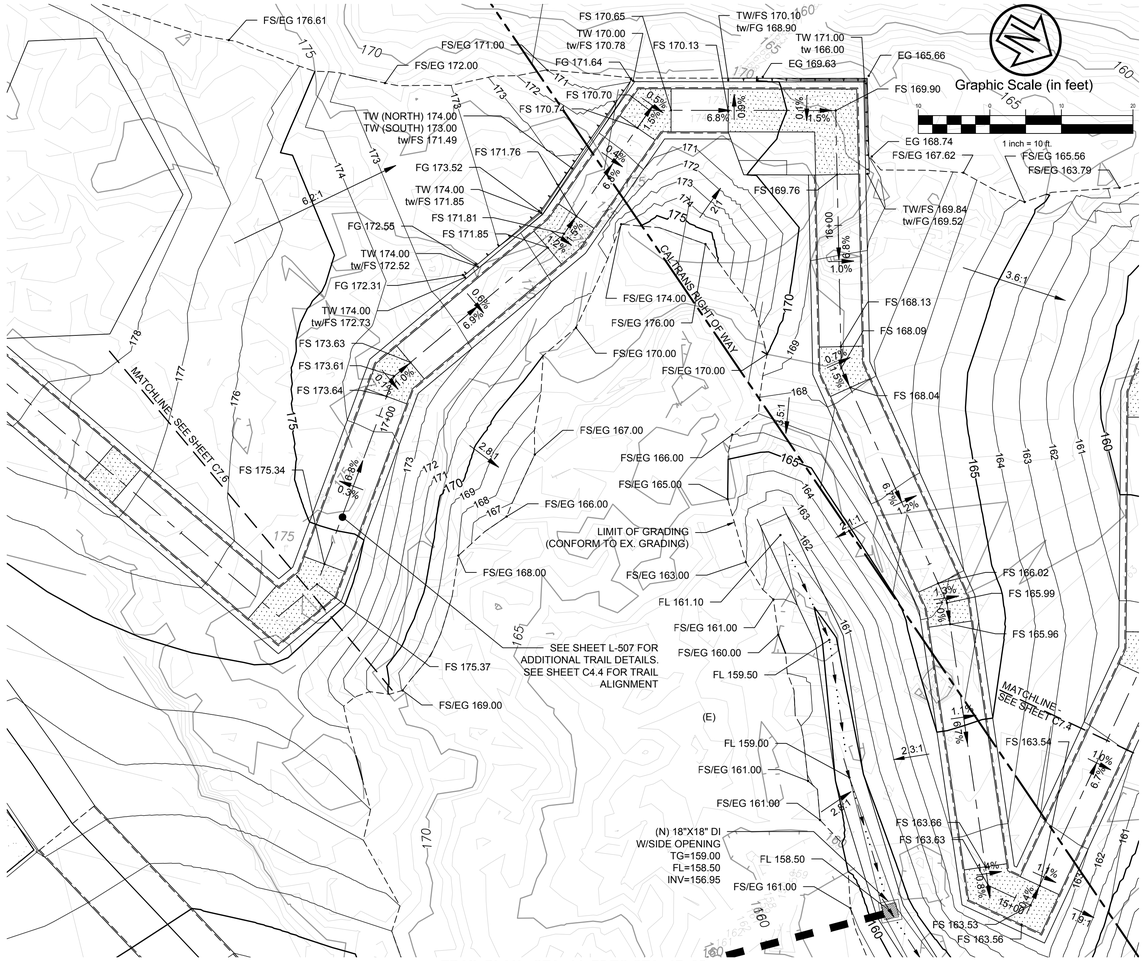
P:\Shared Projects\Legacy\Novato\Projects\2019-20\006 Tunitas Creek Beach Improvement\DWG\Sheet\County\C7.0-C7.6 - Trail Plan & Profile.dwg 04/27/2023 - 09:50 AM brenda 13.5602

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA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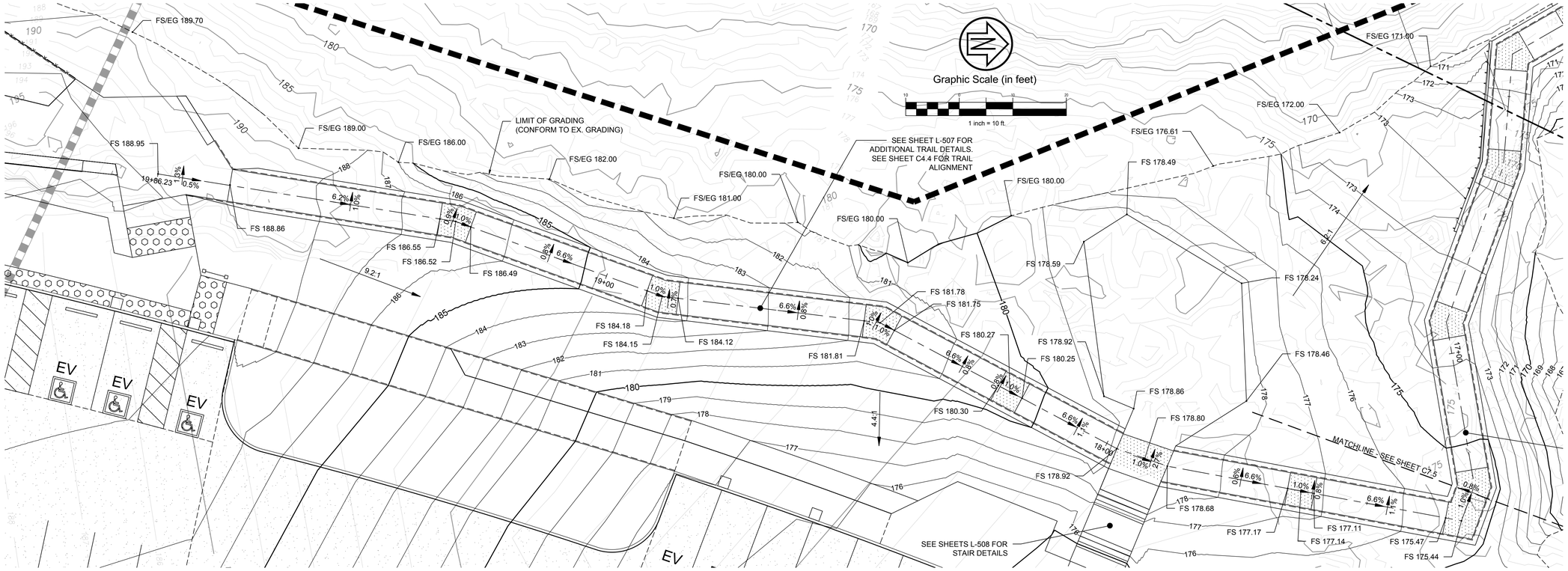
1 inch = 10 ft.
FS/EG 176.61
FS/EG 171.00
FS/EG 172.00
FS 170.65
TW 170.00
tw/FS 170.78
FS 170.13
TW/FS 170.10
tw/FG 168.90
TW 171.00
tw 166.00
EG 169.63
EG 165.66
FS 169.90
FG 171.64
FS 170.70
FS 170.74
TW (NORTH) 174.00
TW (SOUTH) 173.00
tw/FS 171.49
FS 171.76
FG 173.52
TW 174.00
tw/FS 171.85
FS 171.81
FS 171.85
FG 172.55
TW 174.00
tw/FS 172.52
FG 172.31
TW 174.00
tw/FS 172.73
FS 173.63
FS 173.61
FS 173.64
FS 175.34
FS 175.37
FS/EG 169.00
FS/EG 168.00
FS/EG 167.00
FS/EG 166.00
FS/EG 165.00
FS/EG 166.00
LIMIT OF GRADING
(CONFORM TO EX. GRADING)
FS/EG 163.00
FL 161.10
FS/EG 161.00
FS/EG 160.00
FL 159.50
SEE SHEET L-507 FOR
ADDITIONAL TRAIL DETAILS.
SEE SHEET C4.4 FOR TRAIL
ALIGNMENT
(E)
FL 159.00
FS/EG 161.00
FS/EG 161.00
(N) 18"X18" DI
W/SIDE OPENING
TG=159.00
FL=158.50
INV=156.95
FL 158.50
FS/EG 161.00
FS 163.66
FS 163.63
FS 163.53
FS 163.56
FS 163.54
FS 166.02
FS 165.99
FS 165.96
FS/EG 165.56
FS/EG 163.79
FS/EG 167.62
EG 168.74
TW/FS 169.84
tw/FG 169.52
FS 169.76
FS/EG 174.00
FS/EG 176.00
FS/EG 170.00
FS/EG 170.00
FS 168.13
FS 168.09
FS 168.04
CALTRANS RIGHT OF WAY
MATCHLINE - SEE SHEET C7.6
MATCHLINE - SEE SHEET C7.4
6.8%
0.5%
0.8%
0.1%
11.5%
0.4%
6.9%
1.5%
1.5%
0.8%
6.9%
1.0%
0.3%
16.8%
1.0%
1.5%
1.5%
1.5

APPROVED:

DATE: 04/21/2023

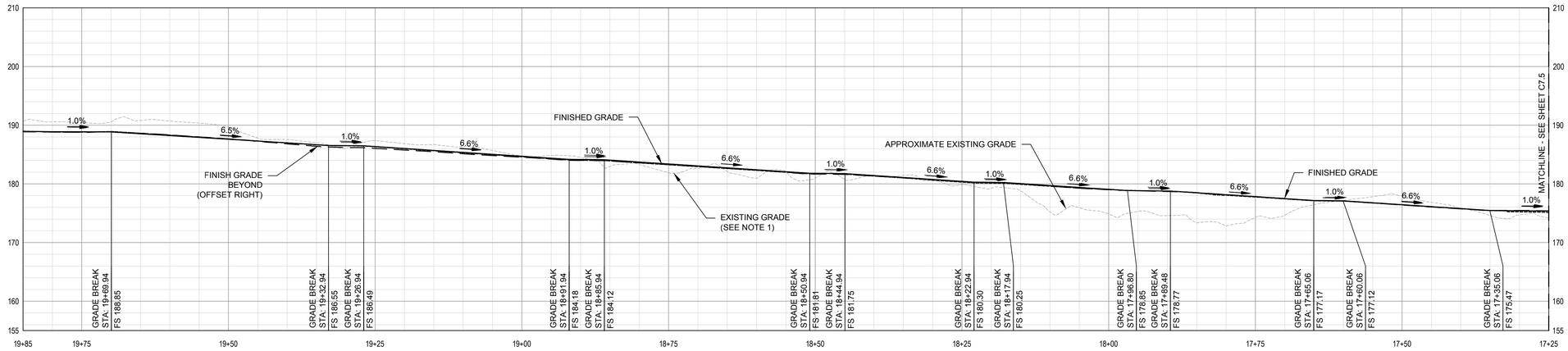
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA



TRAIL PLAN - STA: 17+25 TO STA: 19+85

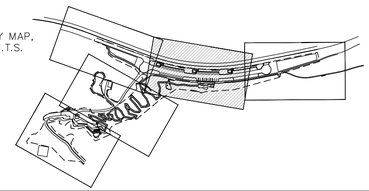
SCALE: 1" = 10'



TRAIL PROFILE - STA: 17+25 TO STA: 19+85

SCALE: HOR. 1" = 10' VERT. 1" = 10'

KEY MAP,
N.T.S.



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APPROVED DATE:

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R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
TRAIL PLAN & PROFILE -
STA: 17+25 TO STA: 19+85
SAN MATEO COUNTY PARKS

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C7.6
SHEET 33 OF 124

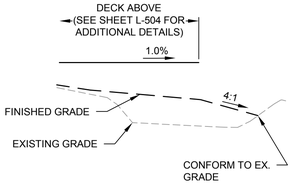
P:\Shared\Projects\Legacy\Novato\Projects\2019-20\006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C7.0-C7.6 - Trail Plan & Profile.dwg 04/27/2023 - 09:51 AM brenda 1:3.5602

APPROVED:

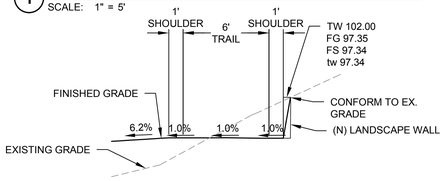
DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA



1 SECTION STA 1+00
SCALE: 1" = 5'



2 SECTION STA 1+50
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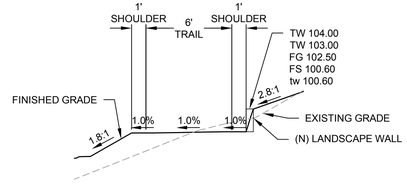

3 SECTION STA 2+00
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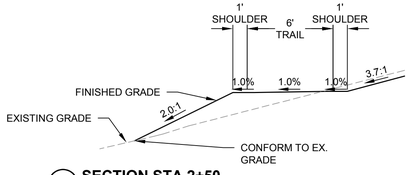

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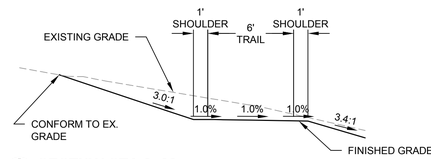

5 SECTION STA 3+00
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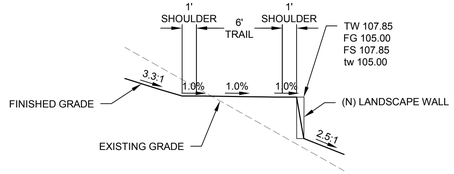

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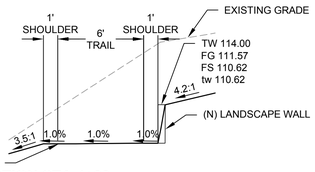

7 SECTION STA 4+00
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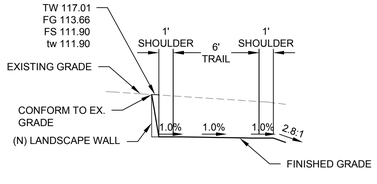

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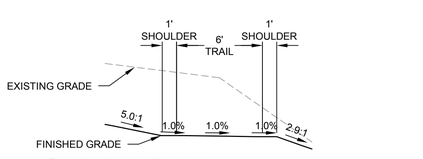

9 SECTION STA 5+00
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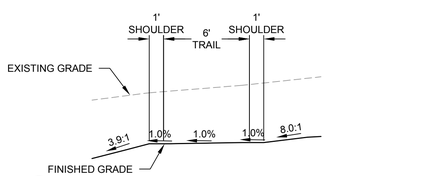

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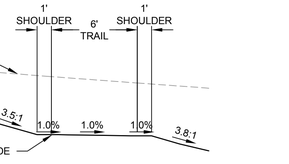

11 SECTION STA 6+00
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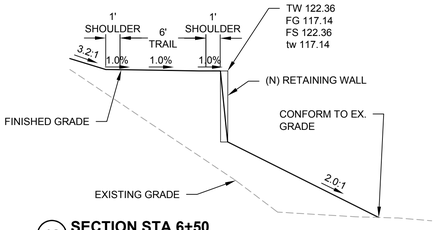

12 SECTION STA 6+50
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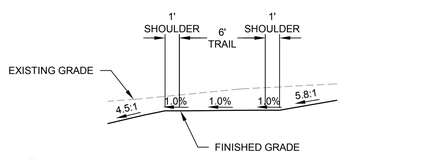
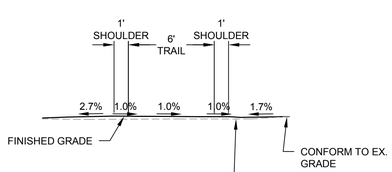


13 SECTION STA 7+00
SCALE: 1" = 5'



14 SECTION STA 7+50
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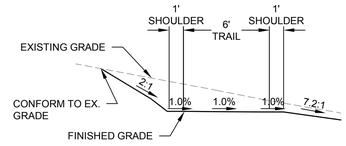

15 SECTION STA 8+00
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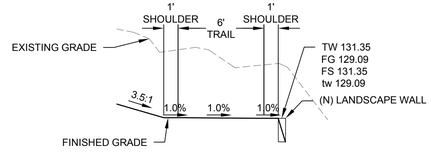

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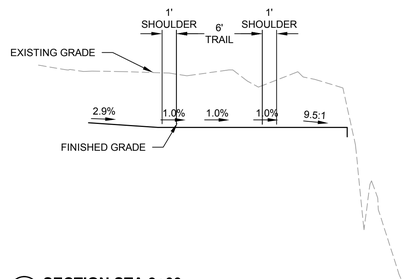

17 SECTION STA 9+00
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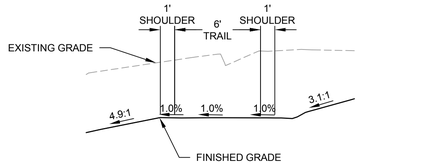

18 SECTION STA 9+50
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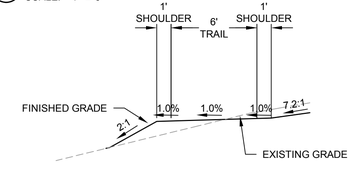

19 SECTION STA 10+00
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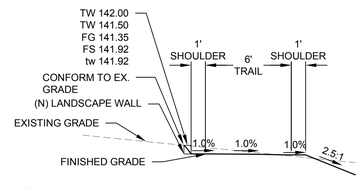

20 SECTION STA 10+50
SCALE: 1" = 5'

P:\Shared Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C7.7 - Trail Sections.dwg 04/27/2023 - 10:05 AM brenda 13.5602

CSW | ST2
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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	CHECKED BY: CSW/ST2 (JAH)	DRAWN BY: MTM
		TUNITAS CREEK BEACH IMPROVEMENT PROJECT TRAIL SECTIONS - STA 1+00 TO STA 10+50 SAN MATEO COUNTY PARKS		
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	

SCALE: AS SHOWN
DATE: 04/21/2023
FILE NO.: E4995

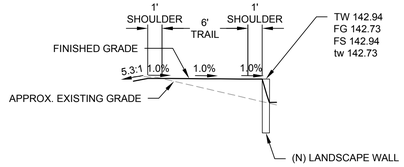
FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C8.1
SHEET 34 OF 124

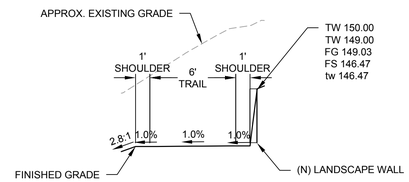
APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



21 SECTION STA 11+00
SCALE: 1" = 5'



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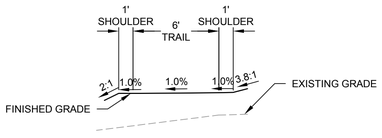

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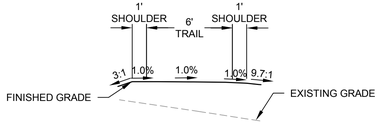
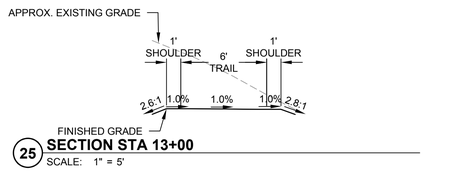


24 SECTION STA 12+50
SCALE: 1" = 5'



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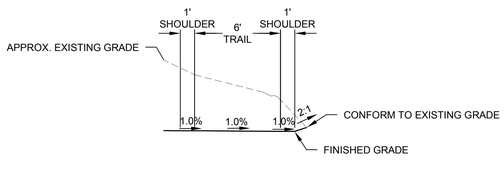

26 SECTION STA 13+50
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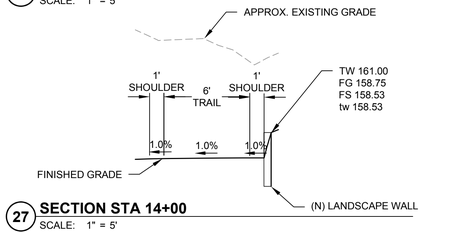

27 SECTION STA 14+00
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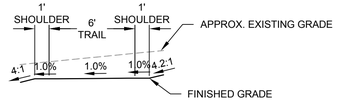

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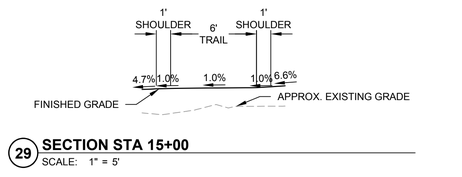

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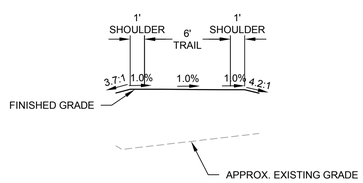

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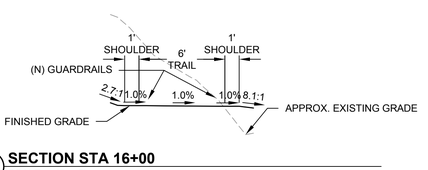

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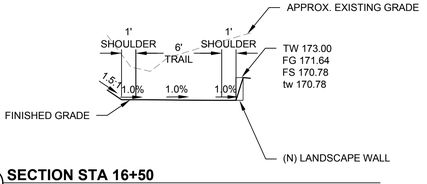

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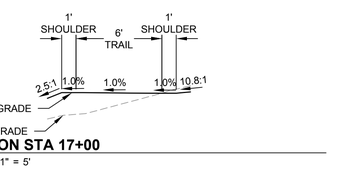

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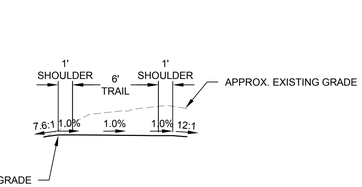

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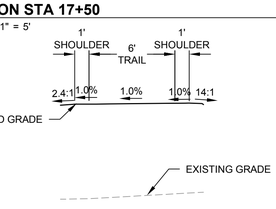

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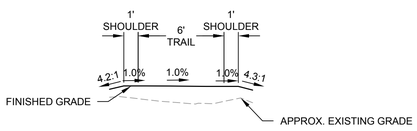

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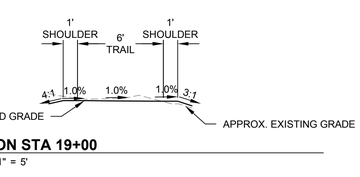
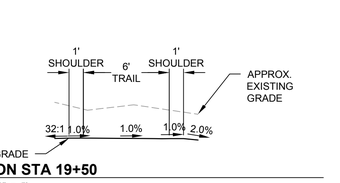
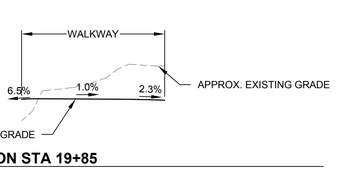


38 SECTION STA 19+50
SCALE: 1" = 5'



37 SECTION STA 19+00
SCALE: 1" = 5'



39 SECTION STA 19+85
SCALE: 1" = 5'

P:\Shared Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C7.8 - Trail Sections.dwg 04/27/2023 - 10:02 AM brenda 1:3.5602

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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT TRAIL SECTIONS - STA 11+00 TO 19+57 SAN MATEO COUNTY PARKS	SCALE: AS SHOWN
		CHECKED BY: CSW/ST2 (JAH)		DATE: 04/21/2023
		DRAWN BY: MTM		FILE NO.: E4995
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	

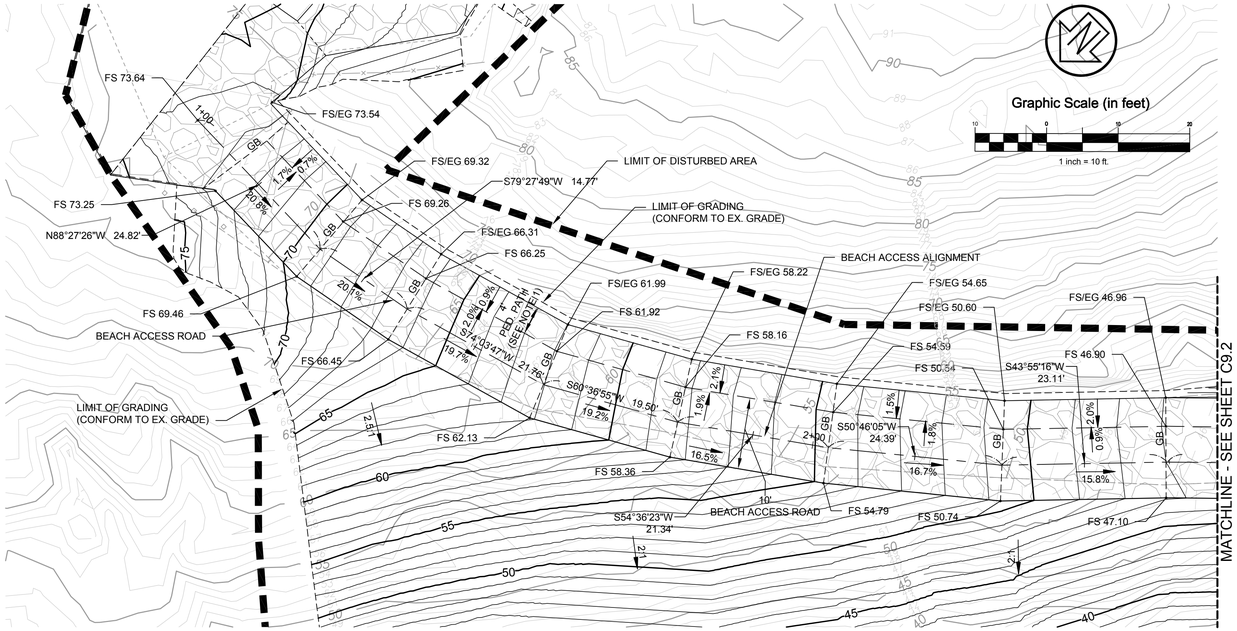
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C8.2
SHEET 35 OF 124

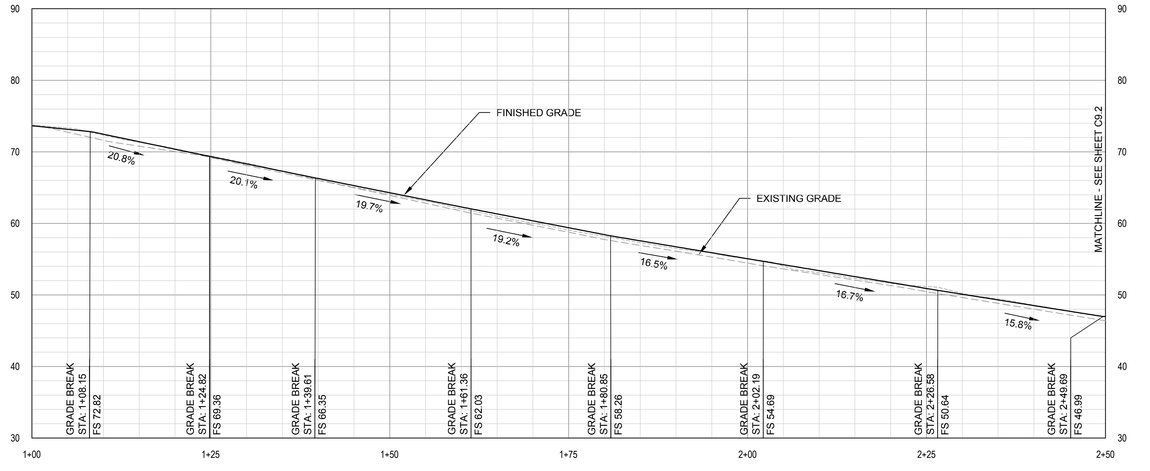
APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



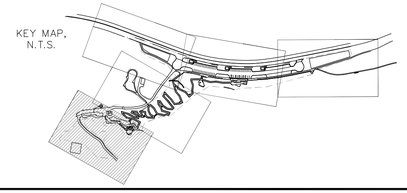
TRAIL PLAN - STA: 1+00 TO STA: 2+50
SCALE: 1" = 10'



BEACH ACCESS ALIGNMENT PROFILE STA:1+00 TO STA: 2+50
SCALE: HOR. 1" = 10' VERT. 1" = 10'

NOTES:
1. SEE SPECIFICATIONS FOR WOOD STEP PLACEMENT.

KEY MAP,
N.T.S.



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ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

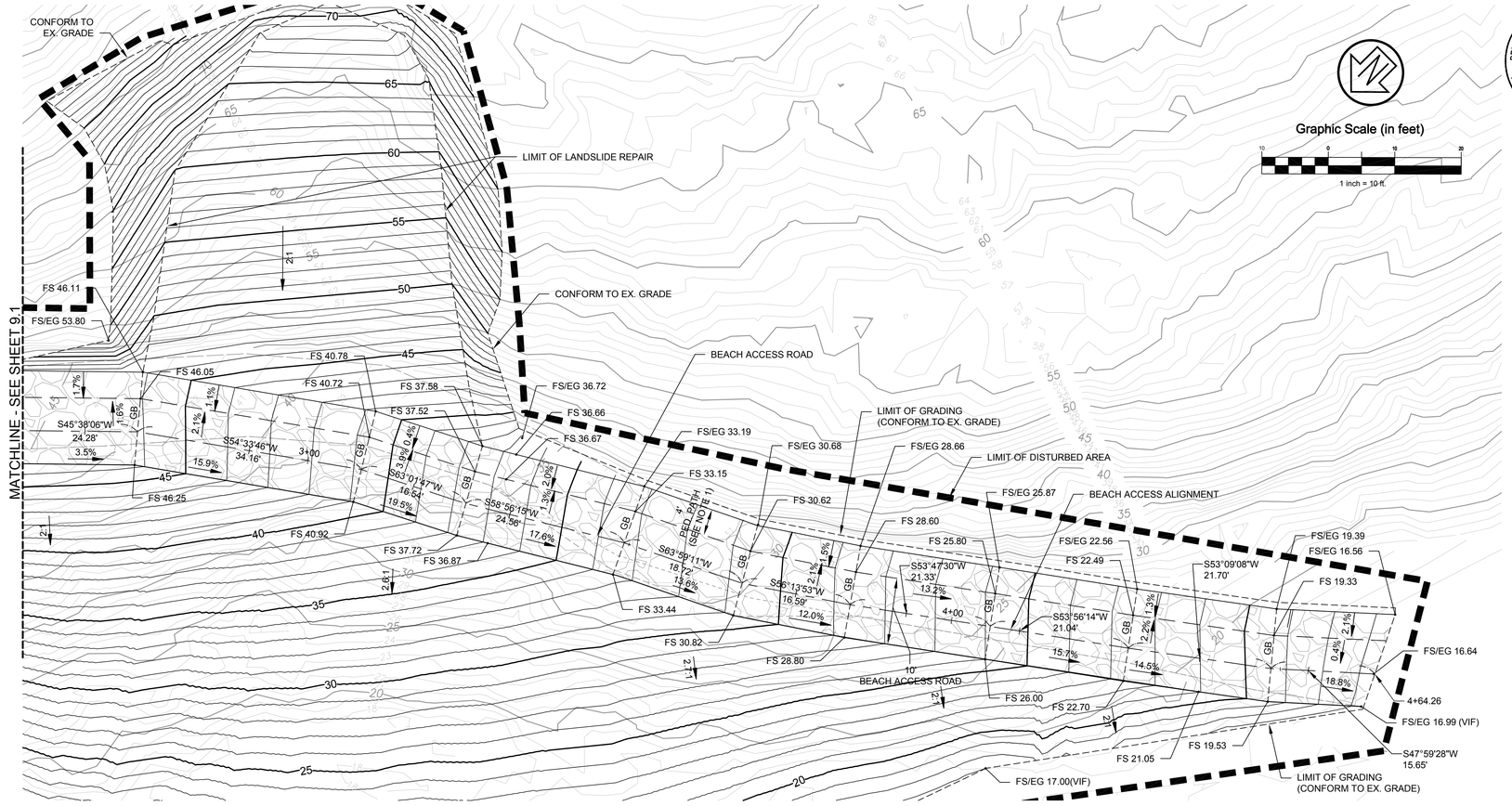
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT BEACH ACCESS ROAD PLAN & PROFILE - STA: 1+00 TO STA: 2+50 SAN MATEO COUNTY PARKS
		CHECKED BY: CSW/ST2 (JAH)	
		DRAWN BY: MTM	
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

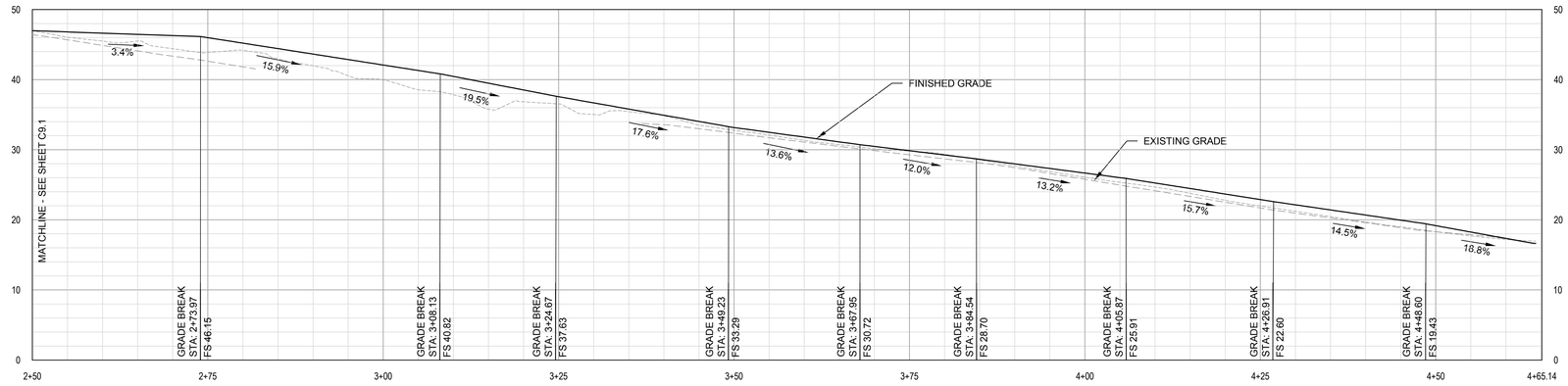
FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C9.1
SHEET 36OF 124

P:\Shared\Projects\Legacy\Novato\Projects\2019-20.006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C9.1-2 - C10.1-2 - Beach Access Road Plan & Profile AND Sections.dwg 04/26/2023 - 06:52 PM brenda 1:3.5602

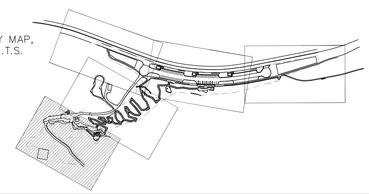


TRAIL PLAN - STA: 2+50 TO STA: 4+61.10
SCALE: 1" = 10'



BEACH ACCESS ALIGNMENT PROFILE STA: 2+50 TO STA: 4+65.14
SCALE: HOR. 1" = 10' VERT. 1" = 10'

KEY MAP, N.T.S.



APPROVED:
DATE: 04/21/2023
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER — ANN MADER STILLMAN — C 47882 EXPIRES 12/31/23 CIVIL — STATE OF CALIFORNIA

NOTES:
1. SEE SPECIFICATIONS FOR WOOD STEP PLACEMENT.

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ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER — ROBERT C. STEVENS — No. C 058660 — CIVIL — STATE OF CALIFORNIA

COUNTY OF SAN MATEO — PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT BEACH ACCESS ROAD PLAN & PROFILE - STA: 2+50.25 TO STA: 4+61.10 SAN MATEO COUNTY PARKS
		CHECKED BY: CSW/ST2 (JAH)	
		DRAWN BY: MTM	

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

C9.2
SHEET 37 OF 124

P:\Shared Projects\d Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C9.1-2 - C10.1-2 - Beach Access Road Plan & Profile AND Sections.dwg 04/27/2023 - 11:02 AM brenda 1:3.5602

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DATE: 04/21/2023

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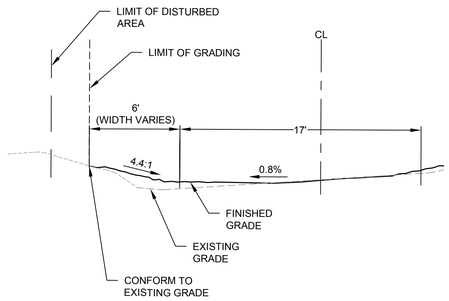
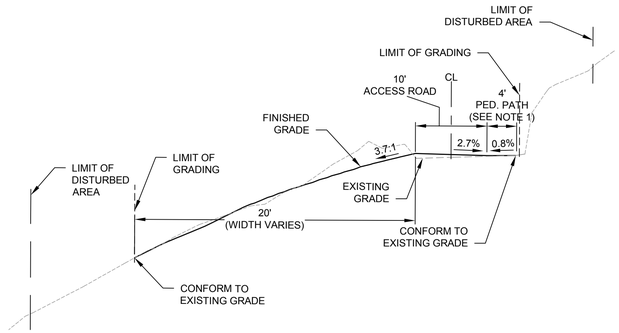
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



1 BEACH ACCESS ROAD STA: 1+00
SCALE: 1" = 5'



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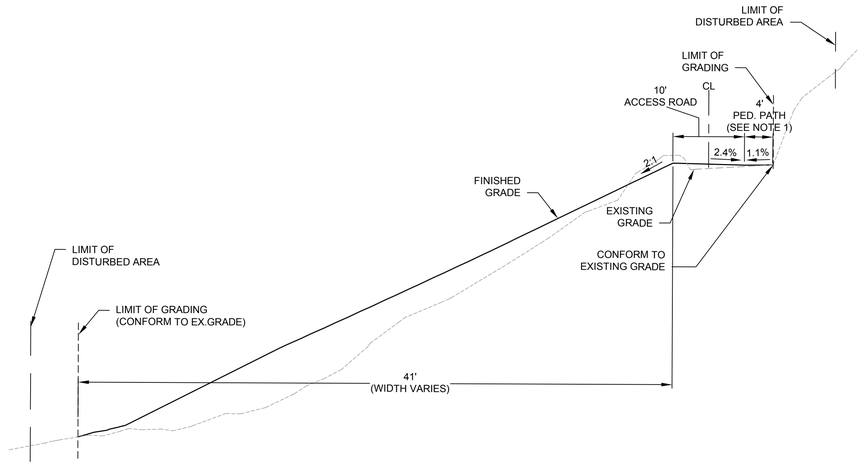
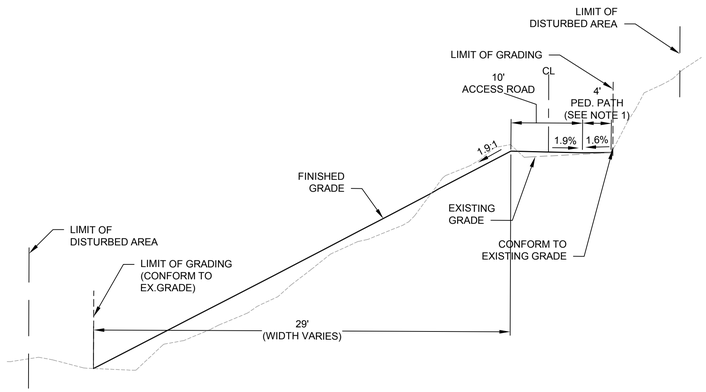


3 BEACH ACCESS ROAD STA: 2+00
SCALE: 1" = 10'



4 BEACH ACCESS ROAD STA: 2+50
SCALE: 1" = 10'

NOTES:
1. SEE SPECIFICATIONS FOR WOOD STEP PLACEMENT.

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		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	BEACH ACCESS ROAD SECTIONS
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

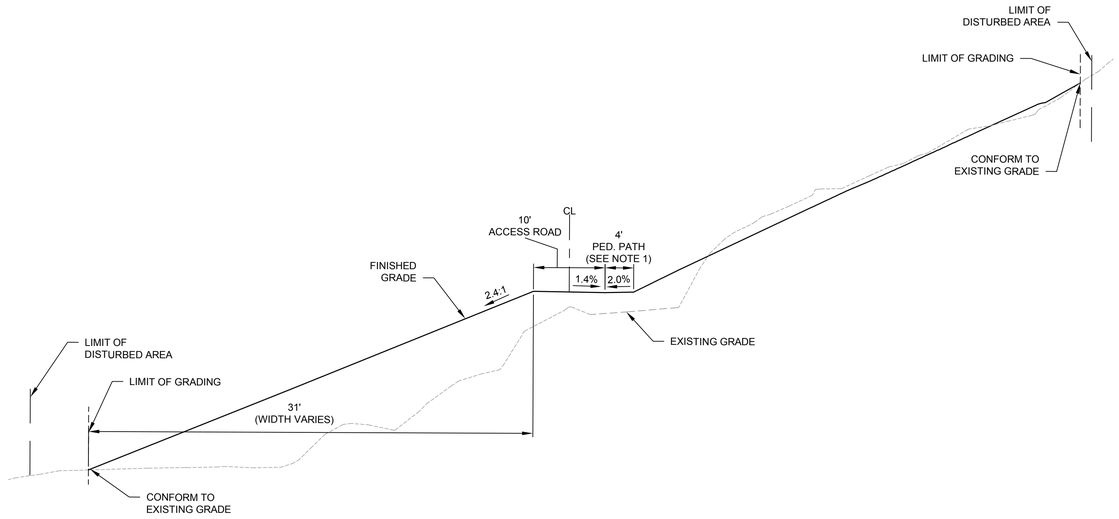
C10.1
SHEET 38 OF 124

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C10.1-2 - C10.1-2 - Beach Access Road Plan & Profile AND Sections.dwg 04/26/2023 - 06:12 PM brenda 1:3.5602

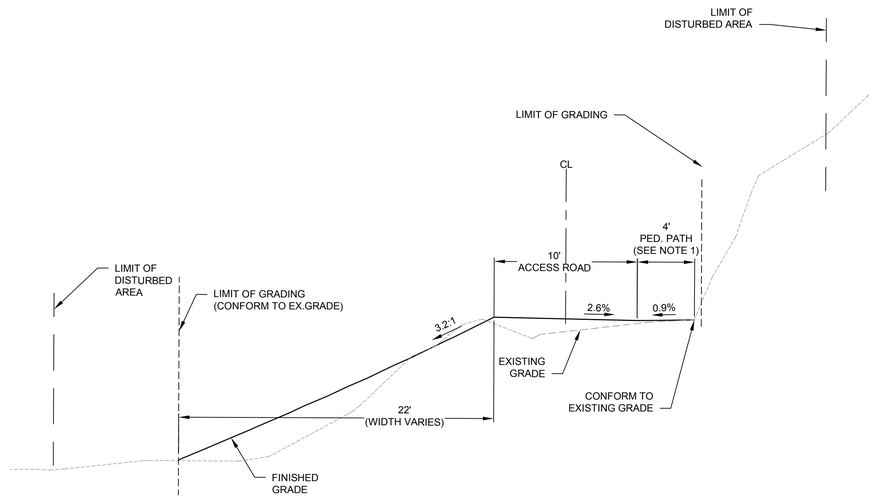
APPROVED:

DATE: 04/21/2023

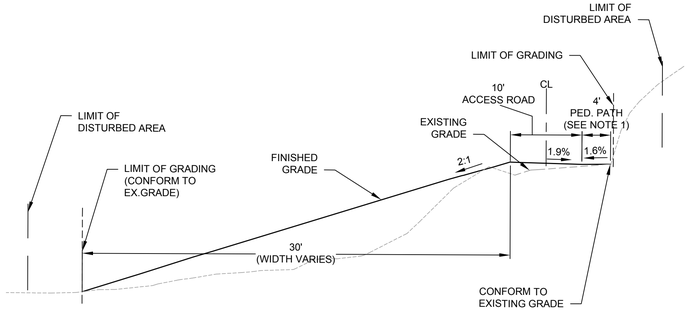
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



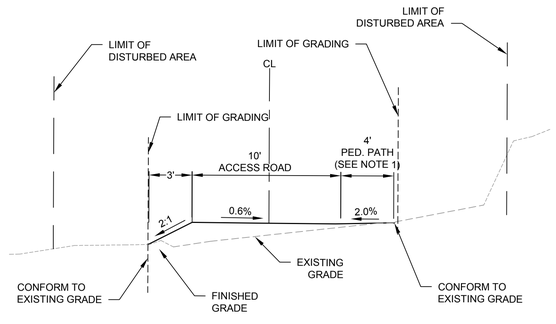
5 BEACH ACCESS ROAD STA: 3+00
SCALE: 1" = 10'



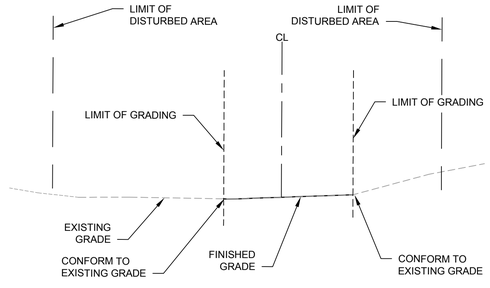
7 BEACH ACCESS ROAD STA: 4+00
SCALE: 1" = 5'



6 BEACH ACCESS ROAD STA:3+50
SCALE: 1" = 10'



8 BEACH ACCESS ROAD STA: 4+50
SCALE: 1" = 5'



9 BEACH ACCESS ROAD STA: 4+63.72
SCALE: 1" = 5'

NOTES:
1. SEE SPECIFICATIONS FOR WOOD STEP PLACEMENT.

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R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	BEACH ACCESS ROAD SECTIONS
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

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C10.2
SHEET 39 OF 124

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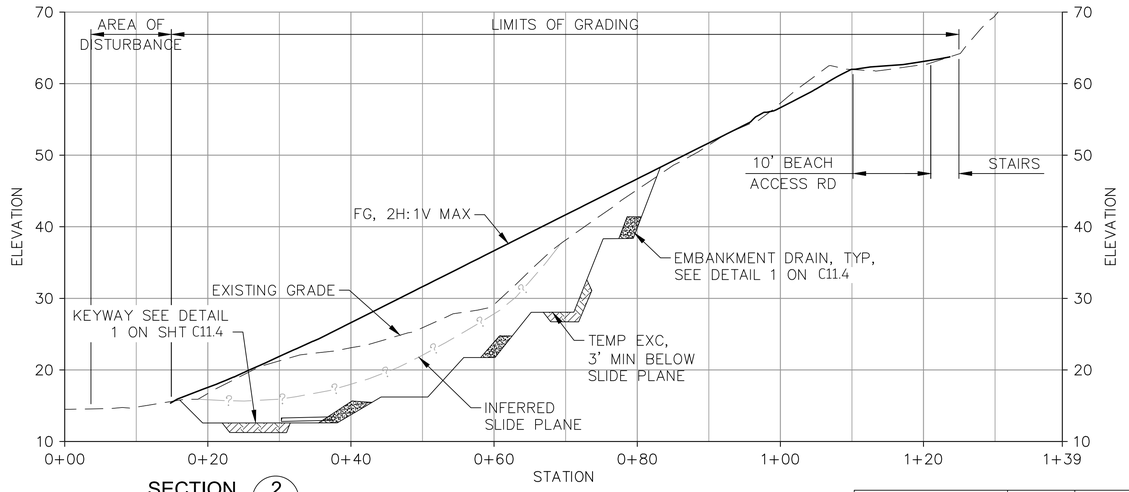
PLAN 1 — SCALE 1" = 10'



SECTION 2 — SCALE 1" = 10'

NOTES:

1. EXCAVATION CONFIGURATION SHOWN IS PRELIMINARY. FINAL CONFIGURATION SHALL KEY ENGINEERED FILL 3 FEET INTO COMPETENT BEDROCK. THE DEPTH TO COMPETENT BEDROCK SHALL BE DETERMINED DURING CONSTRUCTION BY THE PROJECT GEOTECHNICAL ENGINEER OR GEOLOGIST.
2. FACE OF KEYWAY TO BE EMBEDDED 3 FEET MINIMUM INTO COMPETENT BEDROCK ON THE DOWNHILL SIDE AS DETERMINED BY THE PROJECT GEOTECHNICAL ENGINEER OR GEOLOGIST.
3. SEEPAGE ZONES ENCOUNTERED DURING EXCAVATION FOR THE LANDSLIDE MITIGATION SHALL BE EXCAVATED IN CONFORMANCE WITH NOTE 1 AND A SUBDRAIN INSTALLED AS OUTLINED ON DETAIL 1 ON SHEET C8.5 "EMBANKMENT DRAIN." ALL IDENTIFIED SEEPAGE ZONES SHALL RECEIVE 100 PERCENT COVERAGE OF A 2 FOOT THICK LAYER OF CALTRANS CLASS 2 PERMEABLE MATERIAL. THE PERFORATED SUBDRAIN PIPE SHALL BE CONNECTED TO THE SUBDRAIN OUTFALL SYSTEM.

REGISTERED PROFESSIONAL ENGINEER — ANN MADER STILLMAN — C 47882 — EXPIRES 12/31/23 — CIVIL — STATE OF CALIFORNIA

APPROVED:

DATE: 4/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

APPROVED DATE:

ELIJAH ZANE, P.E., G.E.
R.C.E. # C73284 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER — ELIJAH D. ZANE — No. Geo GE 3035 — No. Civil C 73284 — GEOTECHNICAL — STATE OF CALIFORNIA

COUNTY OF SAN MATEO • PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CE&G (EDZ)	DRAWN BY: EDZ	CHECKED BY: CE&G (CRN)

MITIGATION SECTIONS

TUNITAS CREEK BEACH IMPROVEMENT

SCALE: AS SHOWN
DATE: 04/21/2023
FILE NO.:2019-20-006

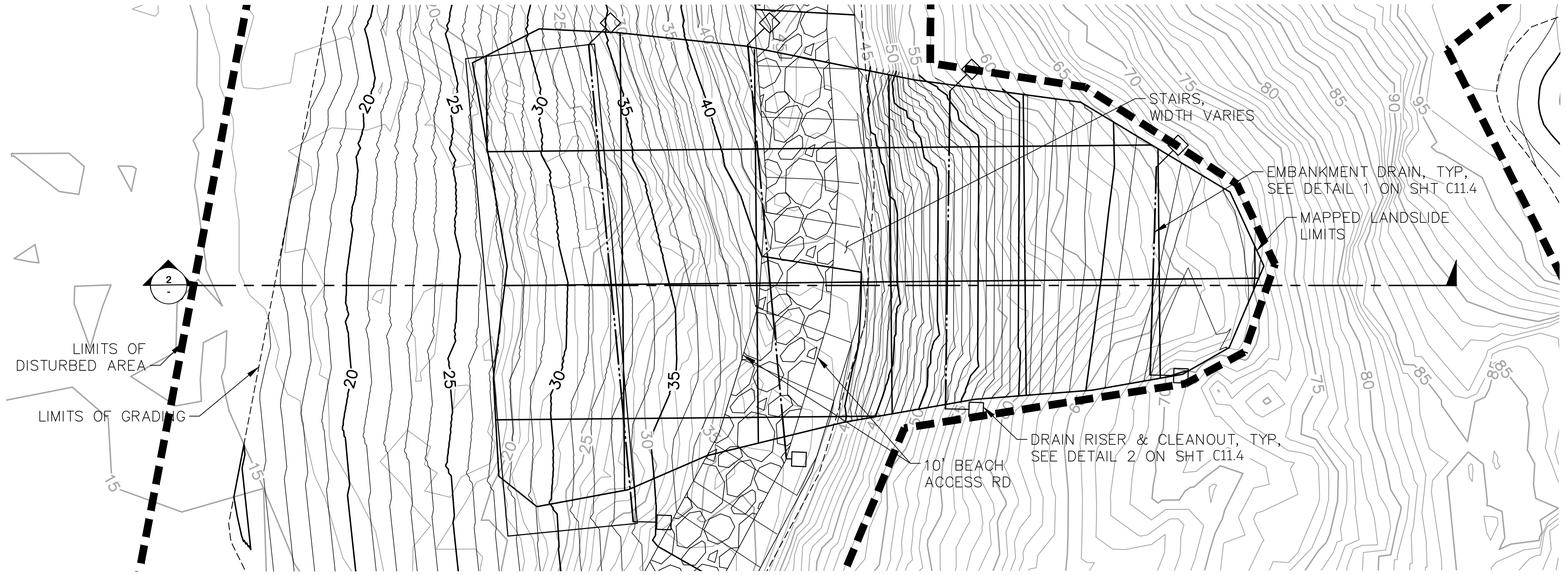
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

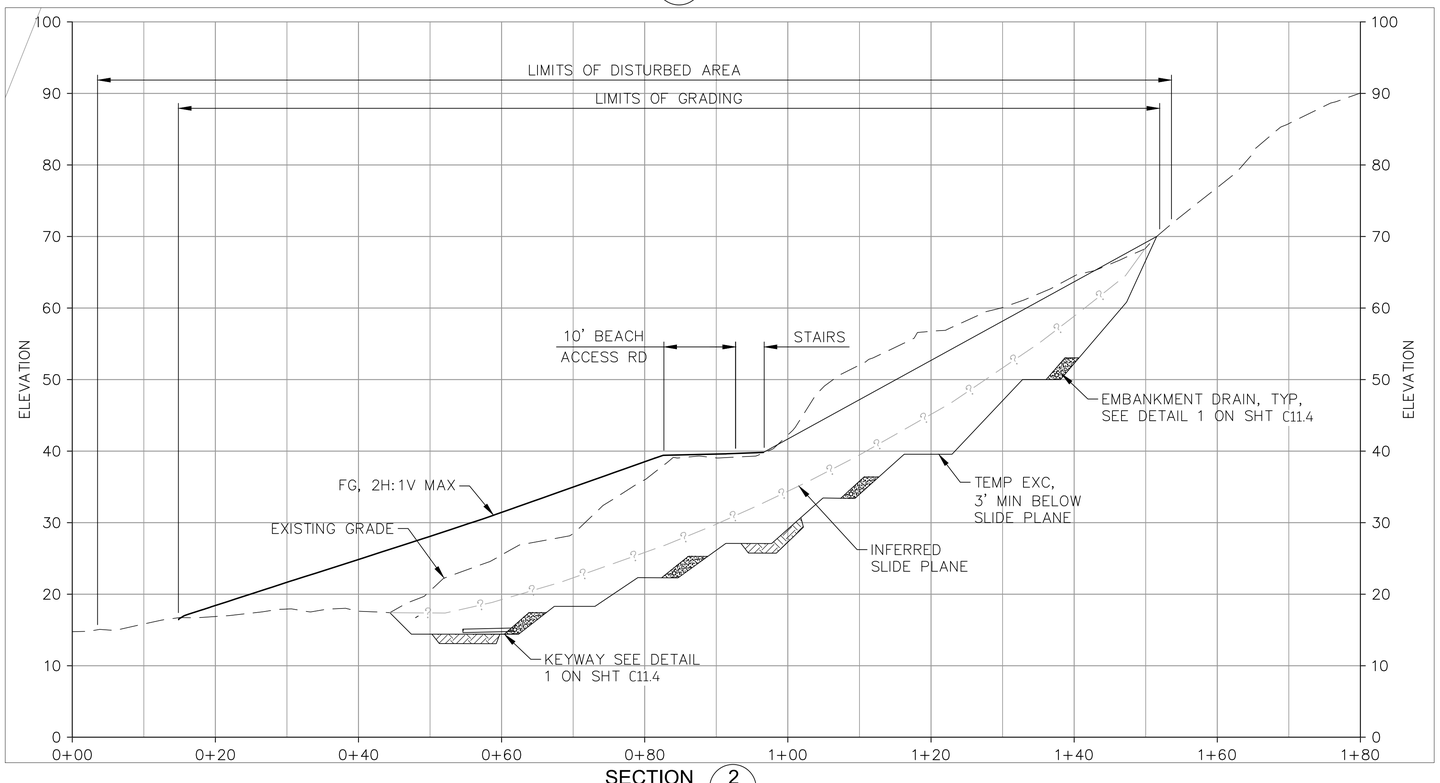
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C11.1
SHEET 40 OF 124

\\Valleyandsh.com\share\grantle\2019\19060-CSW-ST2-TunitasCreekBeach\Geotech\AutoCAD\Sheets\C30-C34-LANDSLIDE-MITIGATION-PLAN-SECTIONS.dwg 04/17/2023 - 07:49 AM ezane 1:10



PLAN (1/-)
SCALE 1" = 10'



SECTION (2/-)
SCALE 1" = 10'

NOTES:

1. EXCAVATION CONFIGURATION SHOWN IS PRELIMINARY. FINAL CONFIGURATION SHALL KEY ENGINEERED FILL 3 FEET INTO COMPETENT BEDROCK. THE DEPTH TO COMPETENT BEDROCK SHALL BE DETERMINED DURING CONSTRUCTION BY THE PROJECT GEOTECHNICAL ENGINEER OR GEOLOGIST.
2. FACE OF KEYWAY TO BE EMBEDDED 3 FEET MINIMUM INTO COMPETENT BEDROCK ON THE DOWNHILL SIDE AS DETERMINED BY THE PROJECT GEOTECHNICAL ENGINEER OR GEOLOGIST.
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REGISTERED PROFESSIONAL ENGINEER ANN MADER STILLMAN C 47882 EXPIRES 12/31/23 CIVIL STATE OF CALIFORNIA

APPROVED:
DATE: 4/21/2023
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

APPROVED DATE:
ELIJAH ZANE, P.E., G.E.
R.C.E. # C73284 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ELIJAH D. ZANE No. Geo GE 3035 No. Civil C 73284 CIVIL-GEOTECHNICAL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CE&G (EDZ)	MITIGATION SECTIONS
		CHECKED BY: CE&G (CRN)	TUNITAS CREEK BEACH IMPROVEMENT
		DRAWN BY: EDZ	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS, COUNTY SAN MATEO
			555 COUNTY CENTER, 5th FLOOR, REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 04/21/2023
FILE NO.:2019-20-006

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C11.2
SHEET 41 OF 124

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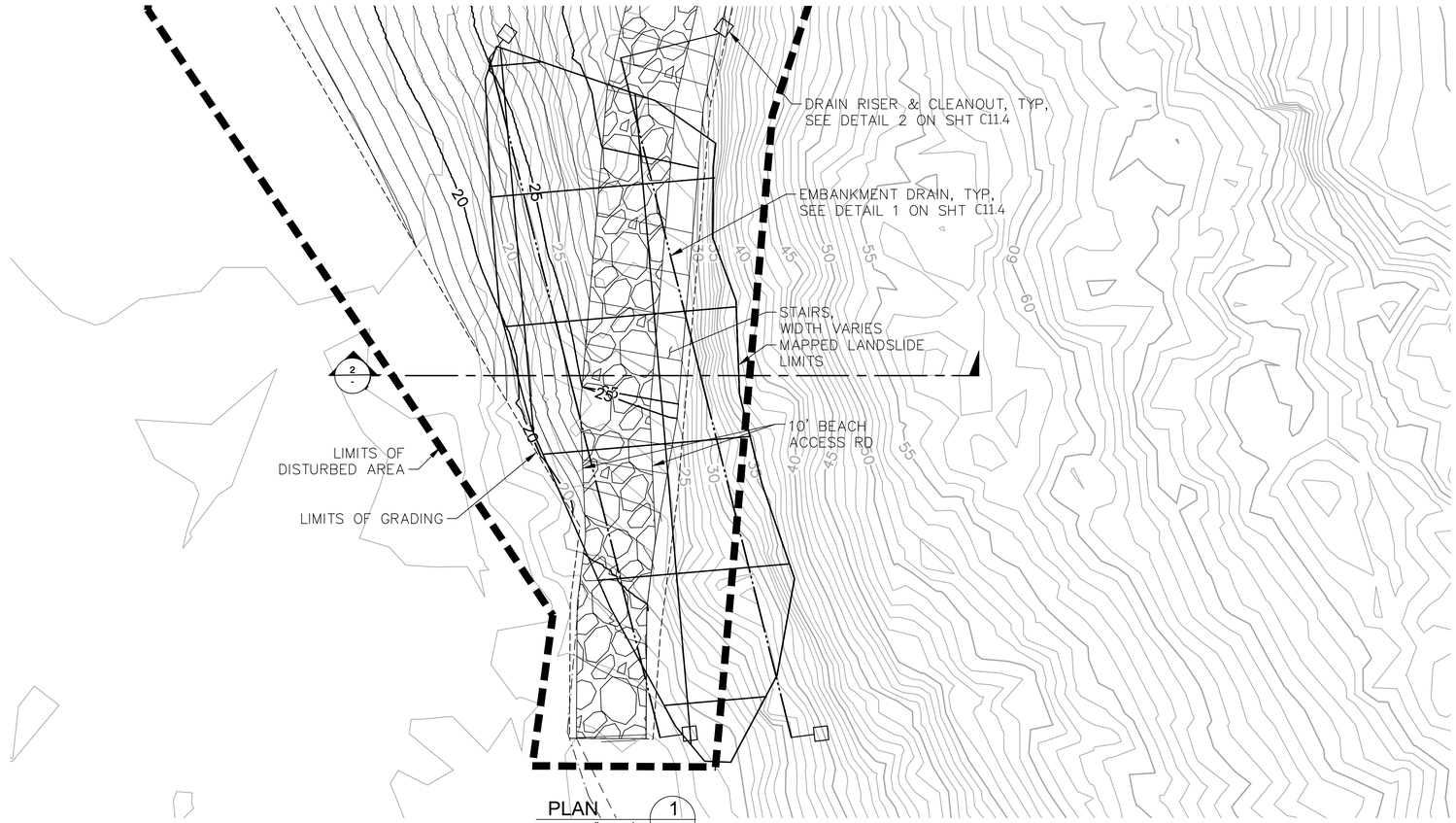
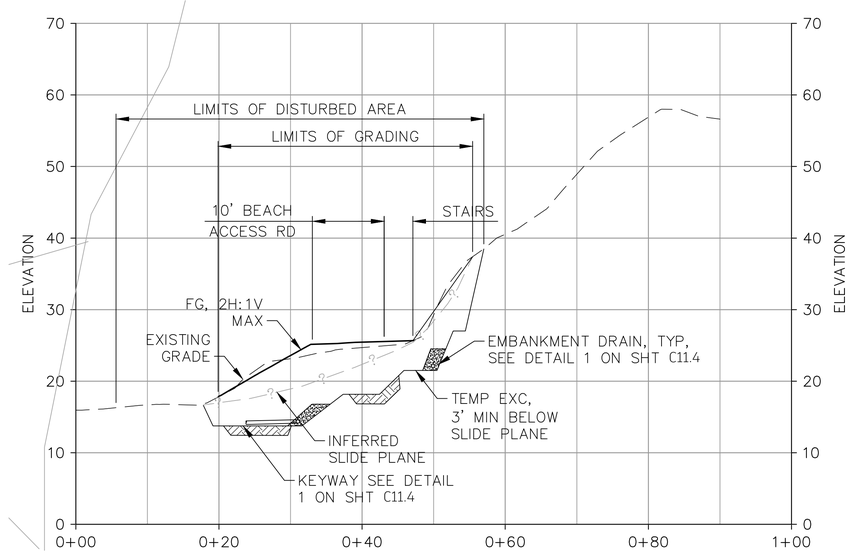


PLAN 1
SCALE 1" = 10'



SECTION 2
SCALE 1" = 10'

NOTES:

1. EXCAVATION CONFIGURATION SHOWN IS PRELIMINARY. FINAL CONFIGURATION SHALL KEY ENGINEERED FILL 3 FEET INTO COMPETENT BEDROCK. THE DEPTH TO COMPETENT BEDROCK SHALL BE DETERMINED DURING CONSTRUCTION BY THE PROJECT GEOTECHNICAL ENGINEER OR GEOLOGIST.
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APPROVED:
DATE: 4/21/2023
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER ANN MADER STILLMAN C 47882 EXPIRES 12/31/23 CIVIL STATE OF CALIFORNIA

APPROVED DATE:
ELIJAH ZANE, P.E., G.E.
R.C.E. # C73284 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ELIJAH D. ZANE No. Geo GE 3035 No. Civil C 73284 CIVIL-GEOTECHNICAL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CE&G (EDZ)
CHECKED BY: CE&G (CRN)
DRAWN BY: EDZ

MITIGATION SECTIONS
TUNITAS CREEK BEACH IMPROVEMENT

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

SCALE: AS SHOWN
DATE: 04/21/2023
FILE NO.:2019-20-006

C11.3
SHEET 42 OF 124

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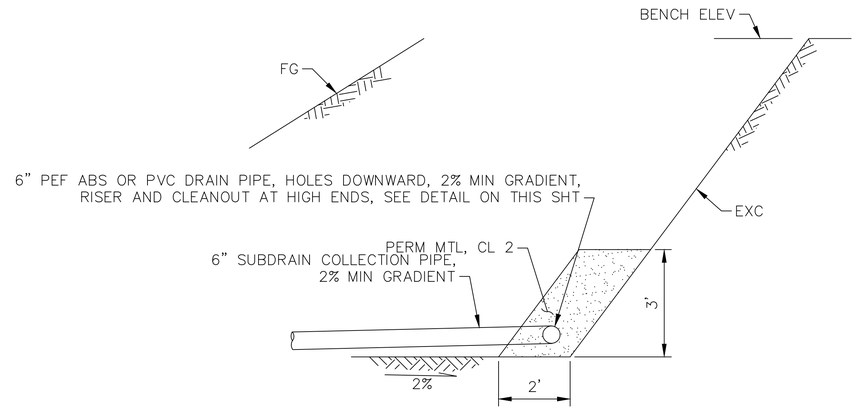
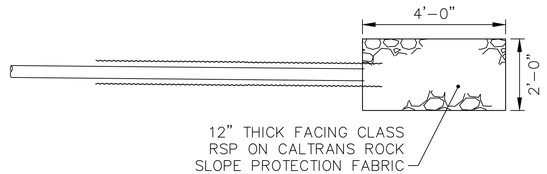
APPROVED:

DATE: 4/21/2023

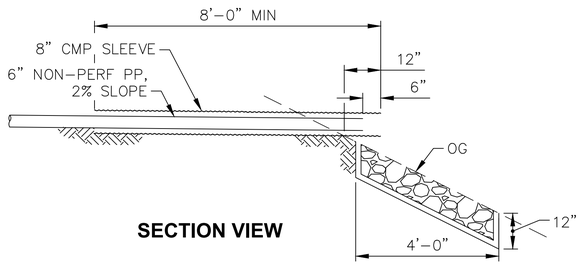
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



EMBANKMENT DRAIN 1/—
NOT TO SCALE

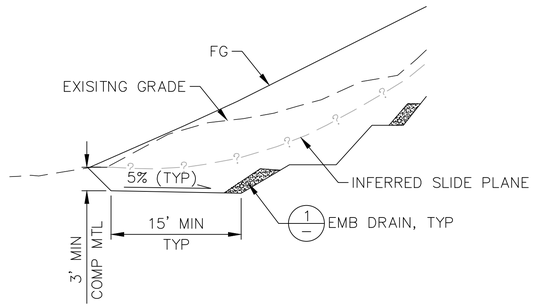


PLAN VIEW



SECTION VIEW

OUTFALL DETAIL 3/—
NO SCALE



TYPICAL KEYWAY 4/—
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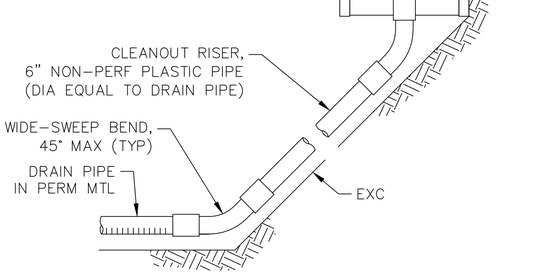

DRAIN RISER AND CLEAN OUT 2/—
NOT TO SCALE

APPROVED DATE:

ELIJAH ZANE, P.E., G.E.
R.C.E. # C73284 EXPIRES 12/31/2024

DESIGNED BY: CE&G (EDZ)
CHECKED BY: CE&G (CRN)
DRAWN BY: EDZ

MITIGATION DETAILS

TUNITAS CREEK BEACH IMPROVEMENT

SCALE: AS SHOWN
DATE: 04/21/2023
FILE NO.:2019-20-006

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

REVISION DATE

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C11.4
SHEET 43 OF 124

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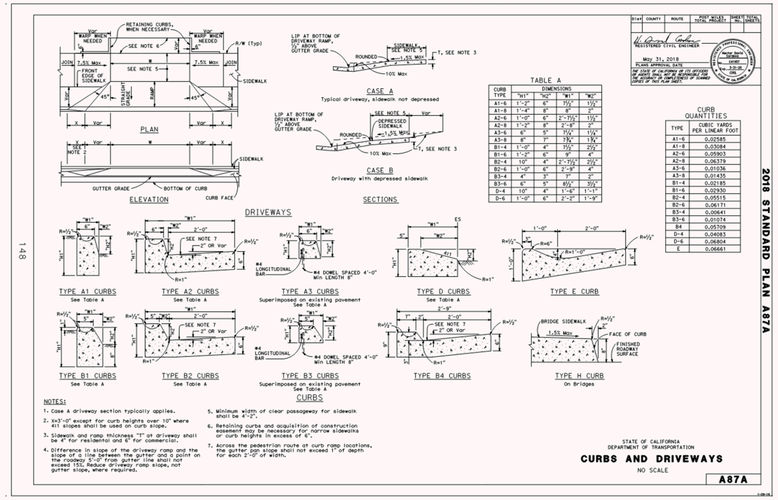

Return to Table of Contents

1 CALTRANS STANDARD CURBS
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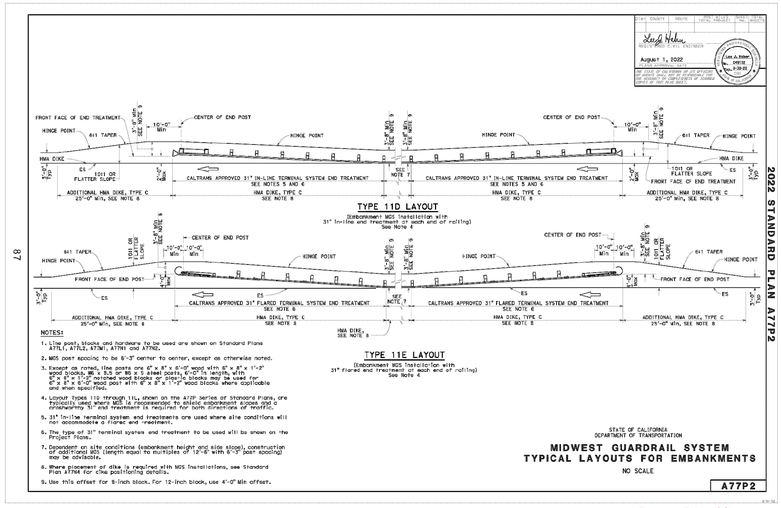

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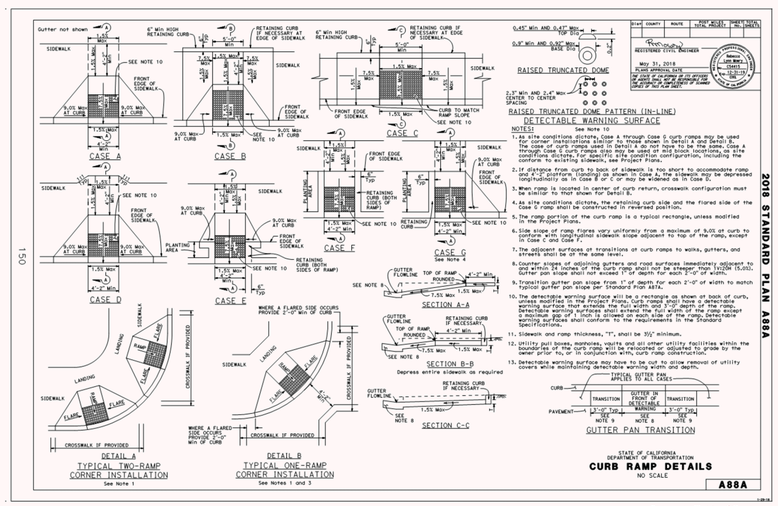

Return to Table of Contents

3 CALTRANS STANDARD CURB RAMPS
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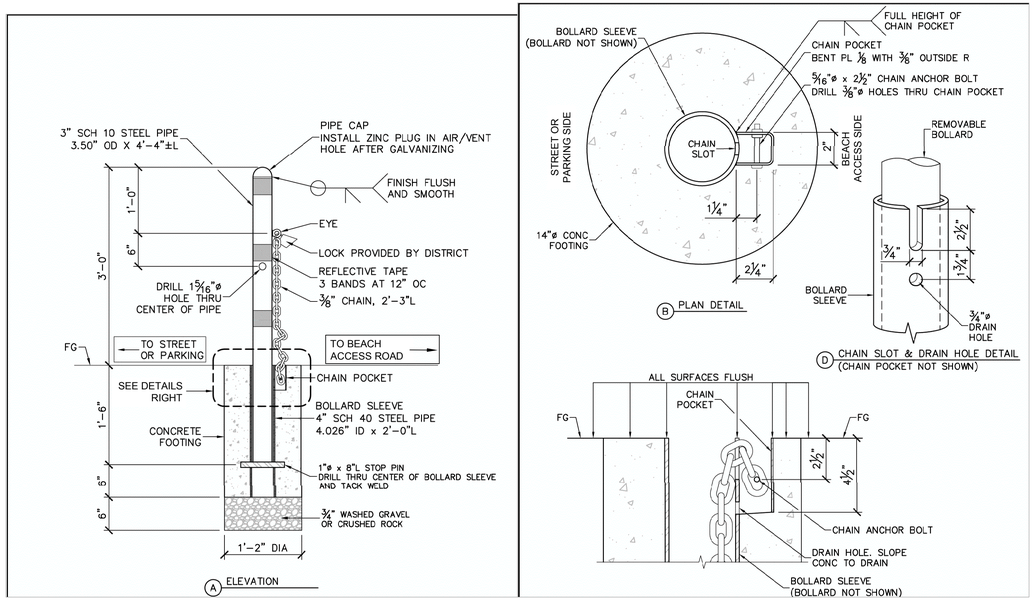


4 REMOVABLE BOLLARD
SCALE: N.T.S.

APPROVED:
DATE: 04/21/2023
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER ANN MADER STILLMAN No. C 47882 EXPIRES 12/31/23 CIVIL STATE OF CALIFORNIA

CSW/Stuber-Stroeh Engineering Group, Inc.
Civil & Structural Engineers | Surveying & Mapping | Environmental Planning
Land Planning | Construction Management
504 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.9850
fax: 415.883.9835
http://www.csw-st2.com
©2013

APPROVED DATE:
ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	CHECKED BY: CSW/ST2 (JAH)	DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
DETAILS
SAN MATEO COUNTY PARKS

SCALE: AS SHOWN
DATE: 04/21/2023
FILE NO.: E4995

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C12.1
SHEET 44 OF 124

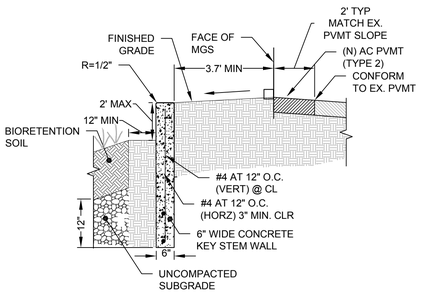
P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C12.0 - Details.dwg 04/20/2023 - 05:52 PM brenda 1:3.5602

APPROVED:

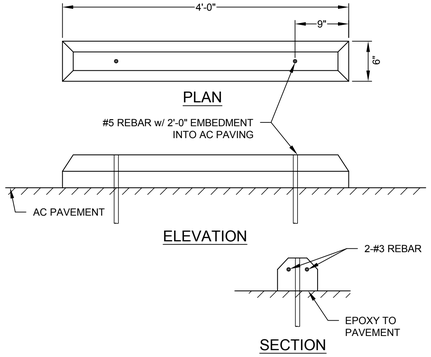
DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

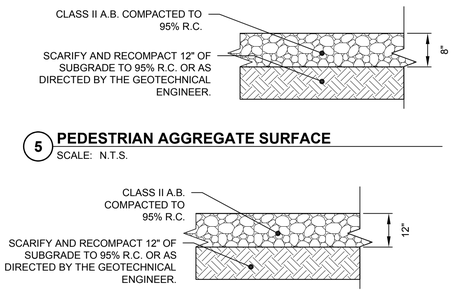
REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA



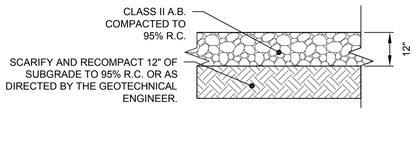
1 RETAINING CURB DETAIL
SCALE: N.T.S.



4 CONCRETE WHEEL STOP
SCALE: N.T.S.



5 PEDESTRIAN AGGREGATE SURFACE
SCALE: N.T.S.



7 VEHICULAR AGGREGATE SURFACE
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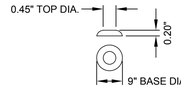
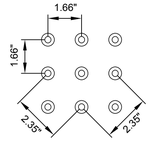
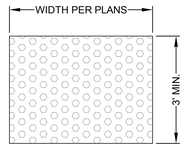


RAISED TRUNCATED DOME

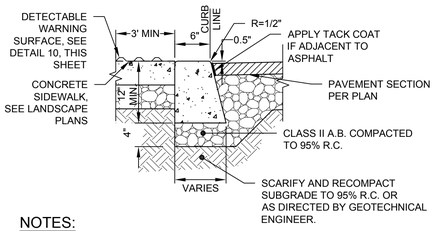


RAISED TRUNCATED DOME PATTERN (IN-LINE) DETECTABLE WARNING SURFACE



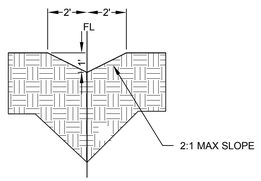
NOTES:
1. CURB RAMPS SHALL HAVE A DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL WIDTH AND 3'-0" DEPTH OF THE RAMP.
2. DETECTABLE WARNING SURFACES TO BE YELLOW UNLESS OTHERWISE NOTED IN PLANS OR SPECIFICATIONS.
3. THE EDGE OF THE DETECTABLE WARNING SURFACE NEAREST THE STREET SHALL BE BETWEEN 6" AND 8" FROM THE GUTTER FLOWLINE.

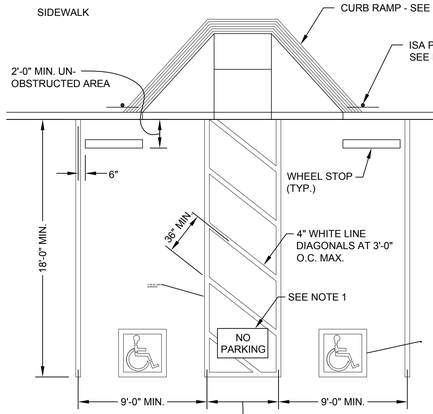
10 DETECTABLE WARNING SURFACE
SCALE: NTS



NOTES:
1. WHERE CONCRETE WALK IS ADJACENT TO CURB, PROVIDE ISOLATION JOINT BETWEEN WALK AND BACK OF CURB.
2. CONTROL JOINTS CONSISTING OF 1" DEEP SCORES SHALL BE PLACED AT 10' INTERVALS O.C. - ALL SIDES EXCEPT BOTTOM.
3. WHERE WALK IS ADJACENT TO CURB, THE JOINTS SHALL ALIGN WITH THE JOINTS IN THE CURB.
4. GEOTECHNICAL ENGINEER TO OBSERVE SOIL CONDITIONS PRIOR TO THE POURING OF CONCRETE.

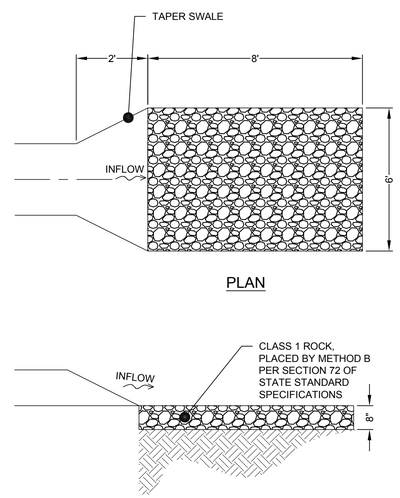
2 FLUSH CONCRETE CURB
SCALE: 1" = 1'

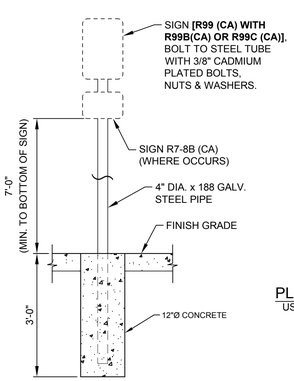




NOTES:
1. THE WORDS "NO PARKING", SHALL BE PAINTED IN WHITE LETTERS NO LESS THAN 1'-0" HIGH AND LOCATED SO THAT VISIBLE TO TRAFFIC ENFORCEMENT OFFICIALS. SEE REVISED CALTRANS STD. PLAN RSP A90B FOR DETAILS OF THE "NO PARKING" PAVEMENT MARKING.
2. WHERE A VAN ACCESSIBLE PARKING SPACE IS PROVIDED, THE LOADING AND UNLOADING ACCESS AISLE SHALL BE 8'-0" WIDE MINIMUM, AND SHALL BE ON THE PASSENGER SIDE OF THE VEHICLE AS THE VEHICLE IS GOING FORWARD INTO THE PARKING SPACE.
3. WHERE A SINGLE (NON-VAN) ACCESSIBLE PARKING SPACE IS PROVIDED, THE LOADING AND UNLOADING ACCESS AISLE SHALL BE ON THE PASSENGER SIDE OF THE VEHICLE AS THE VEHICLE IS GOING FORWARD INTO THE PARKING SPACE.
4. A R100B (CA) SIGN SHALL BE POSTED IN A CONSPICUOUS PLACE AT EACH ENTRANCE TO OFF-STREET PARKING FACILITIES OR IMMEDIATELY ADJACENT TO AND VISIBLE FROM EACH STALL. THE SIGN SHALL INCLUDE THE ADDRESS WHERE THE TOWED VEHICLE MAY BE RECLAIMED AND THE TELEPHONE NUMBER OF THE LOCAL TRAFFIC LAW ENFORCEMENT AGENCY. (SEE PLAN FOR LOCATION)
5. ISA = INTERNATIONAL SYMBOL OF ACCESSIBILITY

8 TYPICAL EARTHEN SWALE
SCALE: 1" = 10'





SIGN INSTALLATION DETAIL
(NTS)

SIGN R99 (CA)
(NTS)

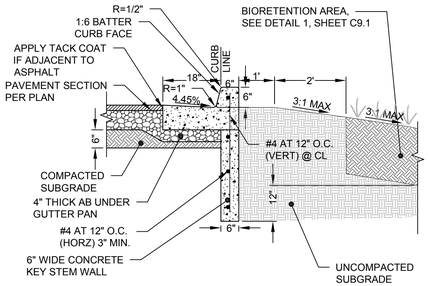
PLAQUE R99B (CA)
USE WITH SIGN R99 (CA)

SIGN R7-8B (CA)
(NTS)

SIGN R99C (CA)
(NTS)

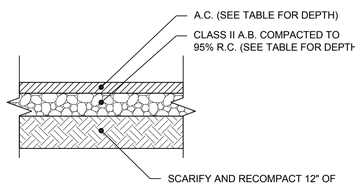
SIGN R100B (CA)
(NTS)

11 DOUBLE ACCESSIBLE PARKING STALL
SCALE: 1" = 5'



NOTES:
1. CONTROL JOINTS CONSISTING OF 1" DEEP SCORES SHALL BE PLACED AT 10' INTERVALS O.C. - ALL SIDES EXCEPT BOTTOM.
2. GEOTECHNICAL ENGINEER TO OBSERVE SOIL CONDITIONS PRIOR TO THE POURING OF CONCRETE.
3. SET BOTTOM OF CURB PER GEOTECHNICAL REPORT TO AVOID WATER INFILTRATION UNDER PAVEMENT

3 EXTENDED CURB & GUTTER SECTION
SCALE: NTS



PAVEMENT TYPE	T.I.	A.C. THICKNESS (INCHES)	A.B. THICKNESS (INCHES)
TYPE 1	5	3	8
TYPE 2	8	5	8

NOTES:
1. PAVEMENT SECTIONS ARE BASED ON THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. ADJUST DIMENSIONS PER FIELD CONDITIONS AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
2. SEE SPECIAL PROVISIONS FOR SUBGRADE PREPARATION.

6 STANDARD ASPHALT PAVEMENT SECTION
SCALE: 1" = 1'

9 8'X6' ROCK RIP RAP DISSIPATOR
SCALE: 1" = 1'

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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	CHECKED BY: CSW/ST2 (JAH)	DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
DETAILS
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

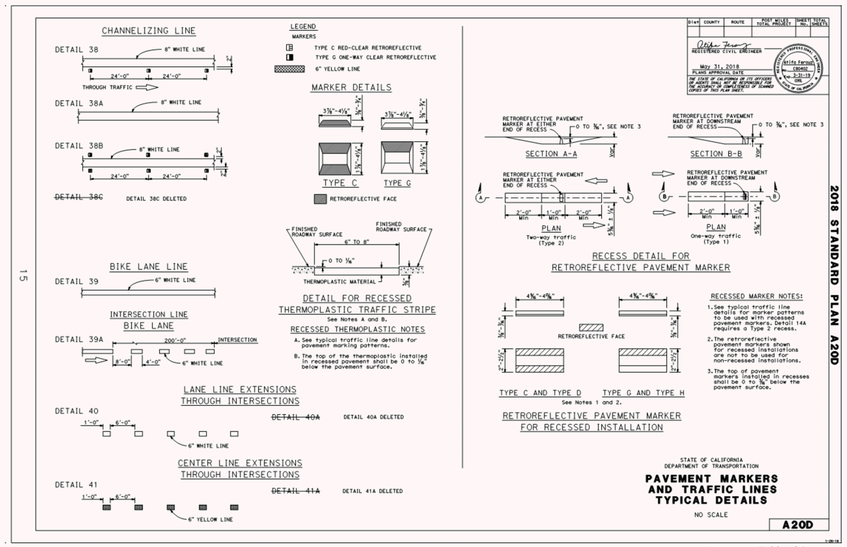
555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

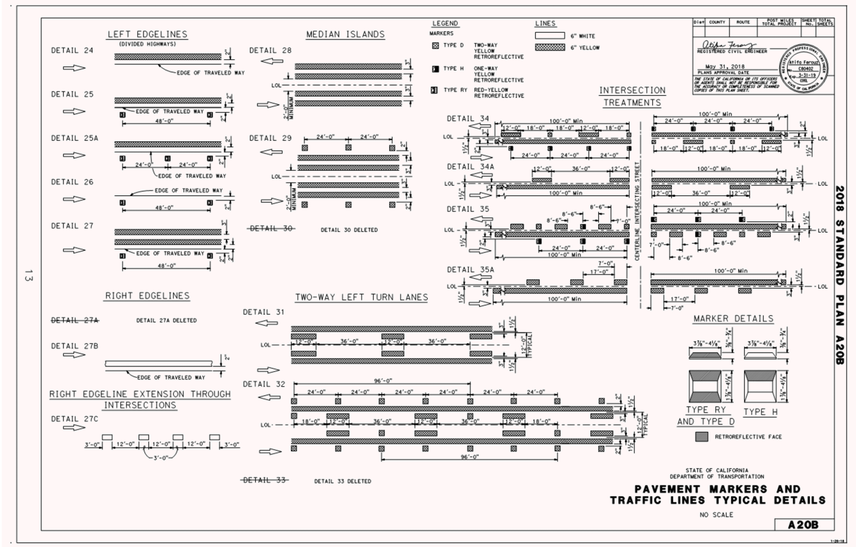
C12.2
SHEET 45 OF 124

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C12.1- Details.dwg 04/26/2023 - 06:22 PM brenda 1:1.5602



Return to Table of Contents

1 CALTRANS DETAIL 38A PAVEMENT MARKERS AND TRAFFIC LINES
SCALE: N.T.S.



Return to Table of Contents

2 CALTRANS DETAIL 27B PAVEMENT MARKERS AND TRAFFIC LINES
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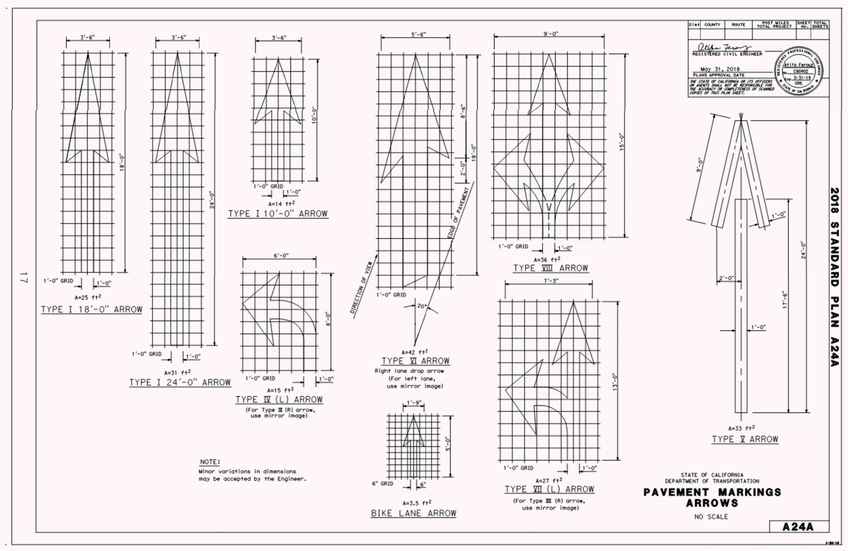

Return to Table of Contents

3 CALTRANS TYPE IV (R) RIGHT ARROW
SCALE: N.T.S.

APPROVED:
DATE: 04/21/2023
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

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Civil & Structural Engineers | Surveying & Mapping | Environmental Planning
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504 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.9850
fax: 415.883.9835
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ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	DETAILS
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

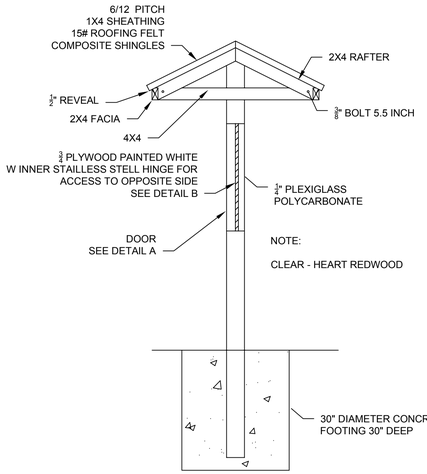
C12.3
SHEET 46 OF 124

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C12.2 - Details.dwg 04/20/2023 - 05:38 PM brenda 13.5602

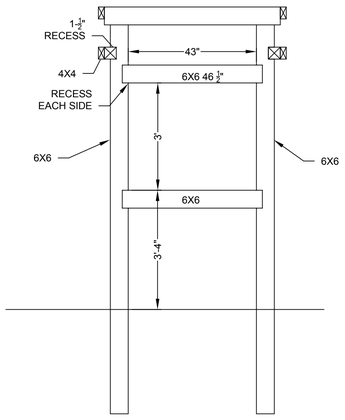
APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



SECTION



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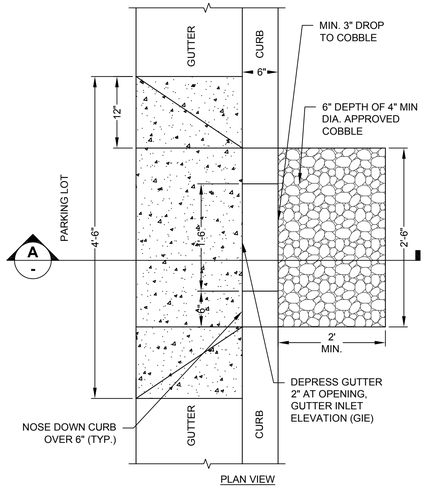
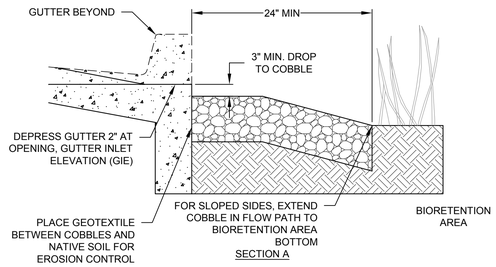


PLAN VIEW

NOTE:
SET BOTTOM OF CURB PER GEOTECHNICAL REPORT
TO AVOID WATER INFILTRATION UNDER PAVEMENT

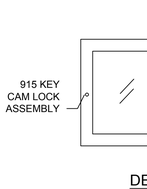


SECTION A

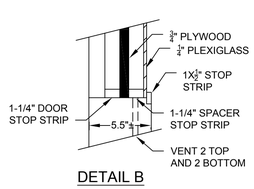
CONSTRUCTION NOTES
1. AFTER CONSTRUCTION PLACE SAND BAGS AT GUTTER OPENINGS TO KEEP STORM FLOWS FROM ENTERING FACILITY UNTIL VEGETATION IS ESTABLISHED

1 CURB CUT INLET WITH GRAVEL ENERGY DISSIPATION

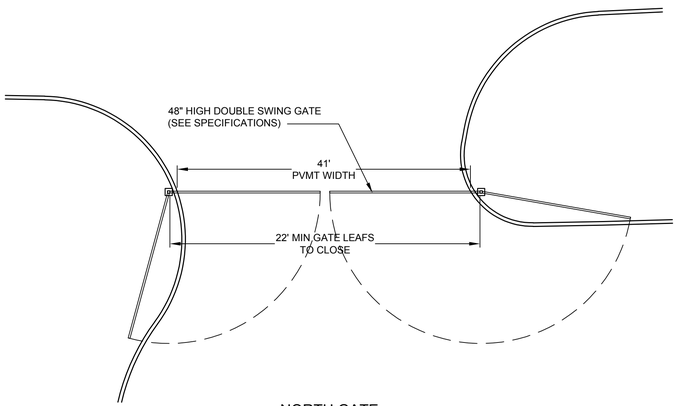
SCALE: 1" = 1'



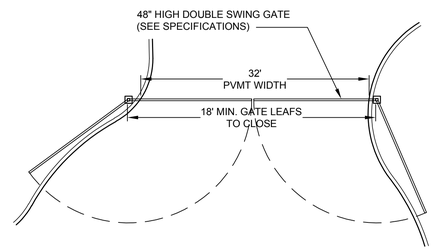
DETAIL A



DETAIL B



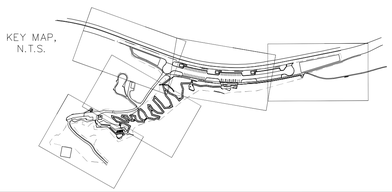
NORTH GATE



SOUTH GATE

3 ENTRANCE KIOSK

SCALE: NOT TO SCALE



2 GATE DETAIL

SCALE: NOT TO SCALE

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504 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.9850
fax: 415.883.9835
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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	DETAILS
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C12.4
SHEET 47 OF 124

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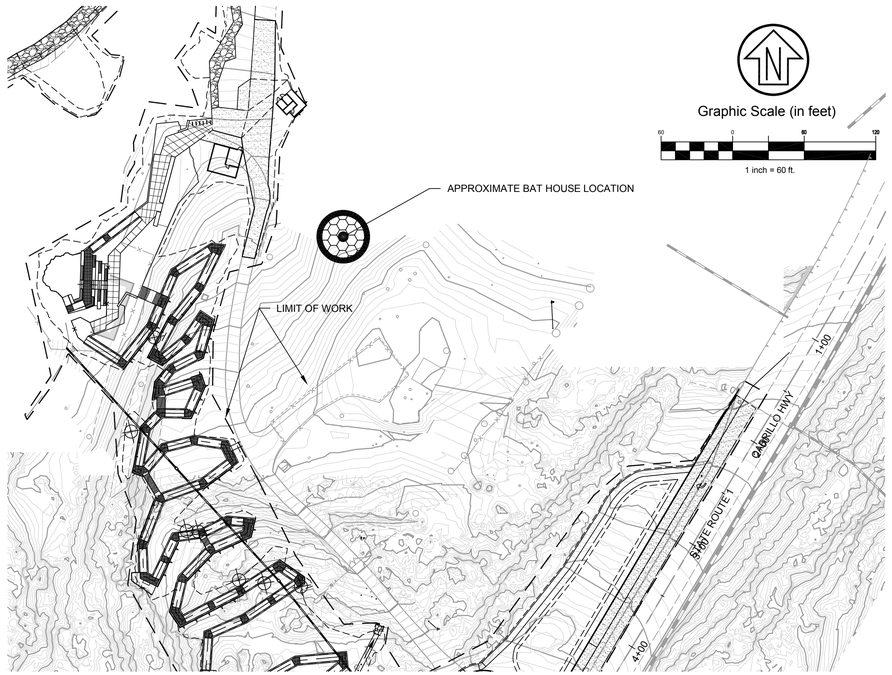
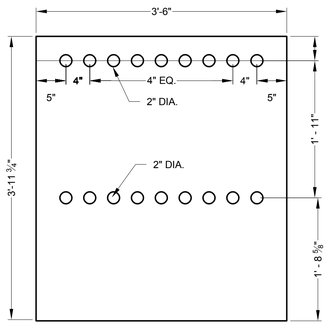
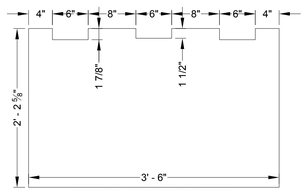


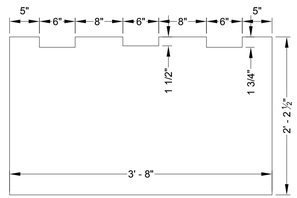
PROJECT LOCATION MAP



PART NO. 7: 5/8" CDX PLYWOOD

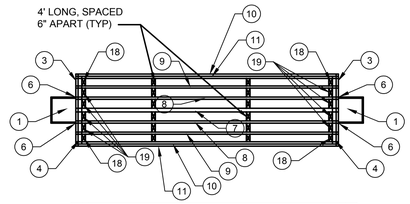


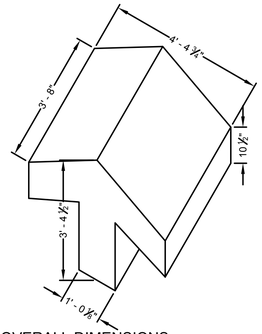
PART NO. 10: 3/8" CDX PLYWOOD



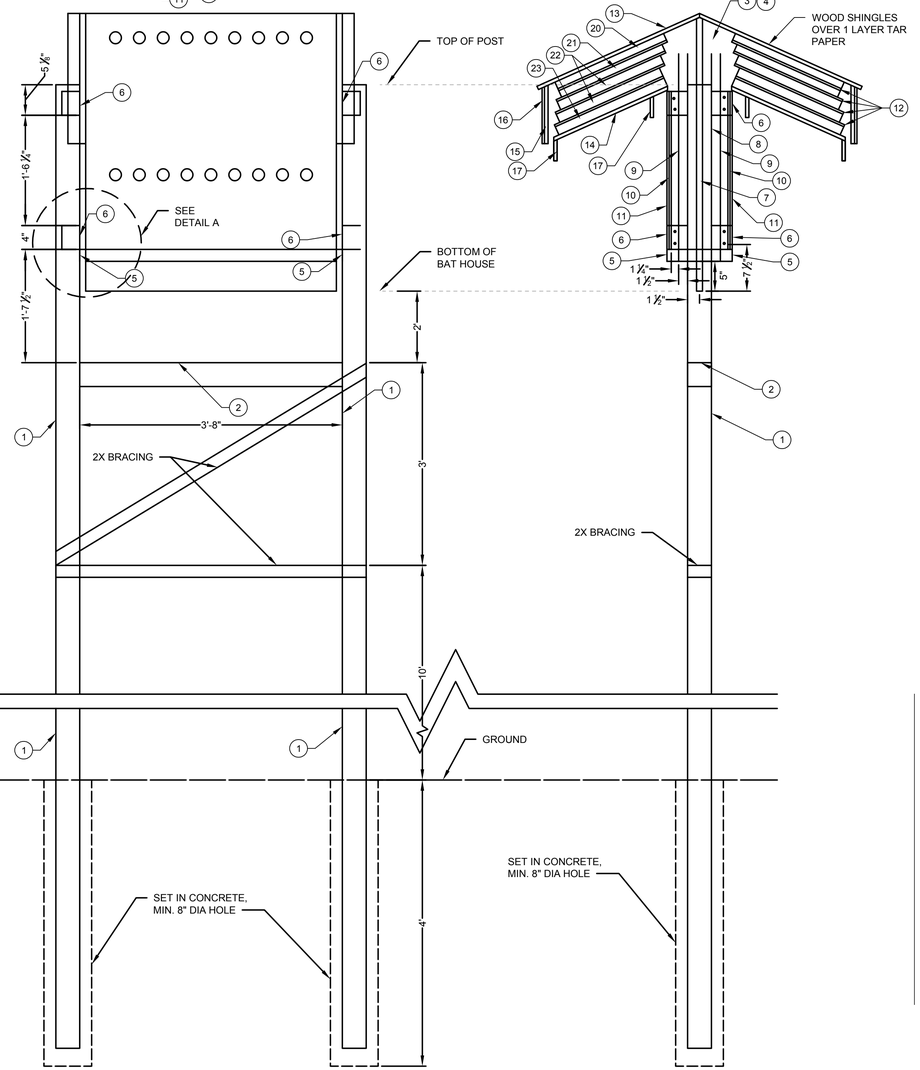
PART NO. 11: 3/8" SIDING

PARTS TABLE			
PART NO.	DESCRIPTION	SIZE (L X W)	SURFACING NOTES
1	4" x 4" POST		
2	4" SQUARE STEEL TUBING (0.250" THICK)	3'-8"	
3	3/8" SIDING		
4	5/8" CDX PLYWOOD		EPOXY COATED WITH LAPIS SAND (INSIDE SURFACE)
5	4" x 2" STEEL ANGLE IRON (0.125" THICK)	1' - 1/8"	
6	3" x 4" x 1/4" ANGLE		
7	5/8" CDX PLYWOOD	3'-6" x 3'-11 3/4"	EPOXY COATED WITH LAPIS SAND (ALL SURFACES)
8	3/8" CDX PLYWOOD	3'-6" x 3'-1 1/4"	EPOXY COATED WITH LAPIS SAND (ALL SURFACES)
9	3/8" CDX PLYWOOD	3'-6" x 2'-10 3/4"	EPOXY COATED WITH LAPIS SAND (ALL SURFACES)
10	3/8" CDX PLYWOOD	3'-6" x 2'-2 5/8"	EPOXY COATED WITH LAPIS SAND (INSIDE SURFACE)
11	3/8" SIDING	3'-8" x 2'-2 1/2"	
12	3/8" CDX PLYWOOD	3'-6" x 1'- 8 1/8"	EPOXY COATED WITH LAPIS SAND (ALL SURFACES)
13	5/8" CDX PLYWOOD	4'-0" x 2'-6 1/2"	EPOXY COATED WITH LAPIS SAND (INSIDE SURFACE)
14	5/8" CDX PLYWOOD	3'-6" x 1'-9 1/4"	EPOXY COATED WITH LAPIS SAND (INSIDE SURFACE)
15	5/8" CDX PLYWOOD	3'-7" x 10 7/8"	EPOXY COATED WITH LAPIS SAND (INSIDE SURFACE)
16	3/8" SIDING	3'-8" x 10 1/2"	
17	5/8" CDX PLYWOOD	3'-6" x 4 3/8"	EPOXY COATED WITH LAPIS SAND (ALL SURFACES)
18	5/8" CDX PLYWOOD	2' x 1 1/4"	
19	5/8" CDX PLYWOOD	2' x 1 1/2"	
20	5/8" CDX PLYWOOD	1'-8 1/8" x 1 1/4"	
21	5/8" CDX PLYWOOD	1'- 7 1/4" x 1 1/4"	
22	5/8" CDX PLYWOOD	1'-7 1/8" x 1 1/2"	
23	5/8" CDX PLYWOOD	1'-8 1/8" x 1 1/2"	



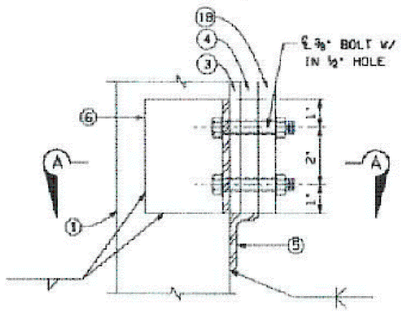


OVERALL DIMENSIONS

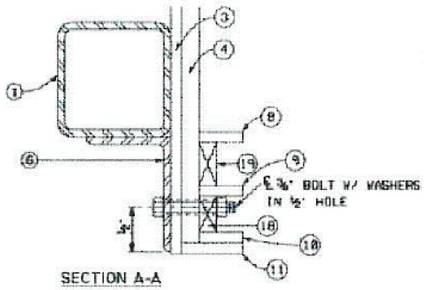


FRONT VIEW

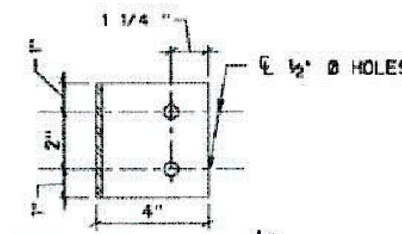
SIDE VIEW



DETAIL A
SCALE: 3"-1'



SECTION A-A
SCALE: 3"-1'



PART No. 6 : 3 X 4 X ¼" ANGLE
SCALE: 4"-1'

APPROVED:
DATE: 04/21/2023
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
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REGISTERED PROFESSIONAL ENGINEER
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No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	BAT HOUSE PLANS
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C13.0
SHEET 48 OF 124

APPROVED:

DATE: 04/21/2023

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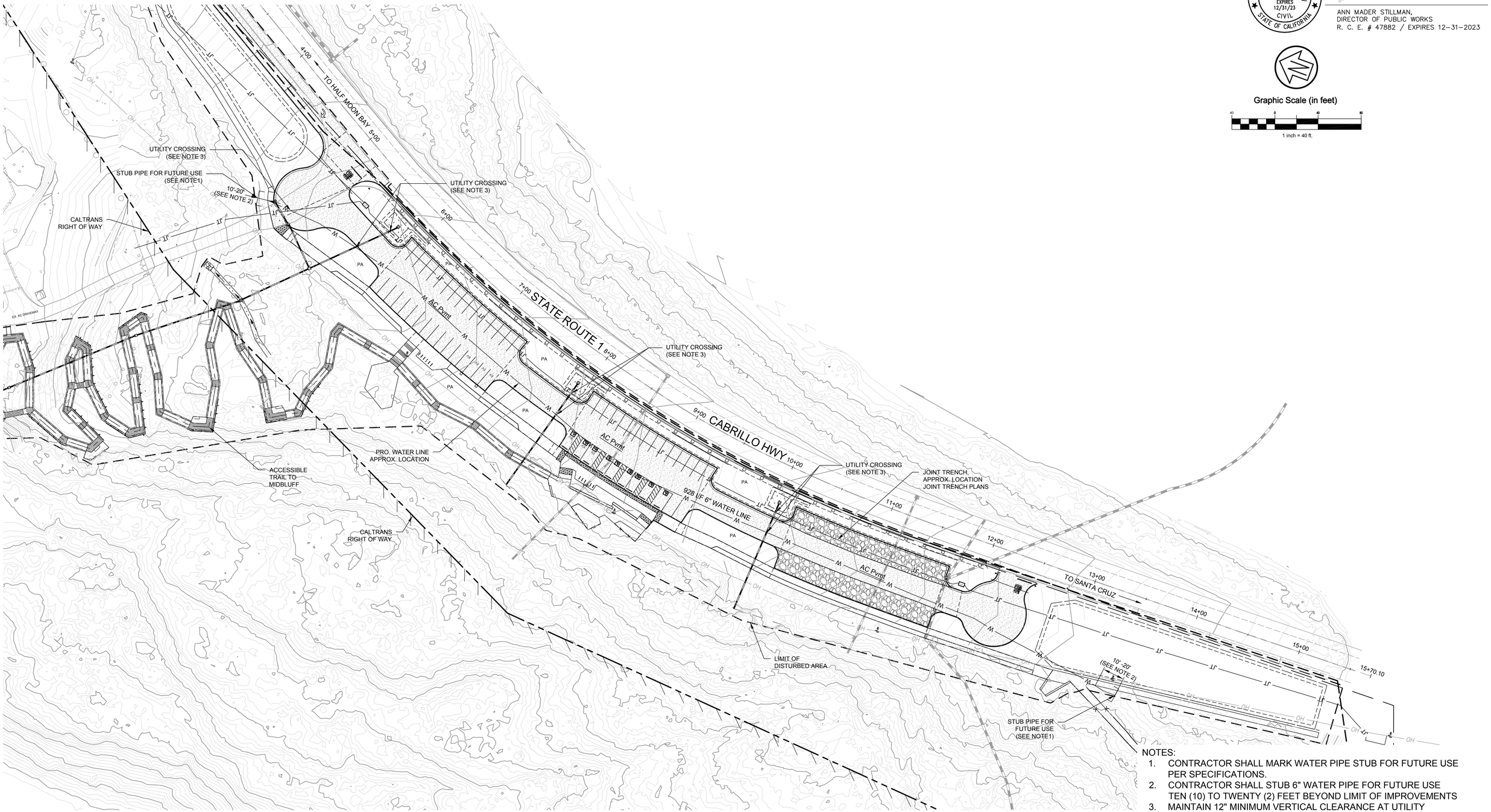
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

Graphic Scale (in feet)

40 0 40 80

1 inch = 40 ft.



NOTES:

1. CONTRACTOR SHALL MARK WATER PIPE STUB FOR FUTURE USE PER SPECIFICATIONS.
2. CONTRACTOR SHALL STUB 6" WATER PIPE FOR FUTURE USE TEN (10) TO TWENTY (2) FEET BEYOND LIMIT OF IMPROVEMENTS
3. MAINTAIN 12" MINIMUM VERTICAL CLEARANCE AT UTILITY CROSSING.

CSW/Stuber-Stroeh Engineering Group, Inc.
Civil & Structural Engineers | Surveying & Mapping | Environmental Planning
Land Planning | Construction Management
504 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.9850
fax: 415.883.9835
http://www.cswst2.com

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APPROVED DATE:

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R.C.E. # 058660 EXPIRES 12/31/2024

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		CHECKED BY: CSW/ST2 (JAH)	UTILITY PLAN
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C14.0
SHEET 49 OF 124

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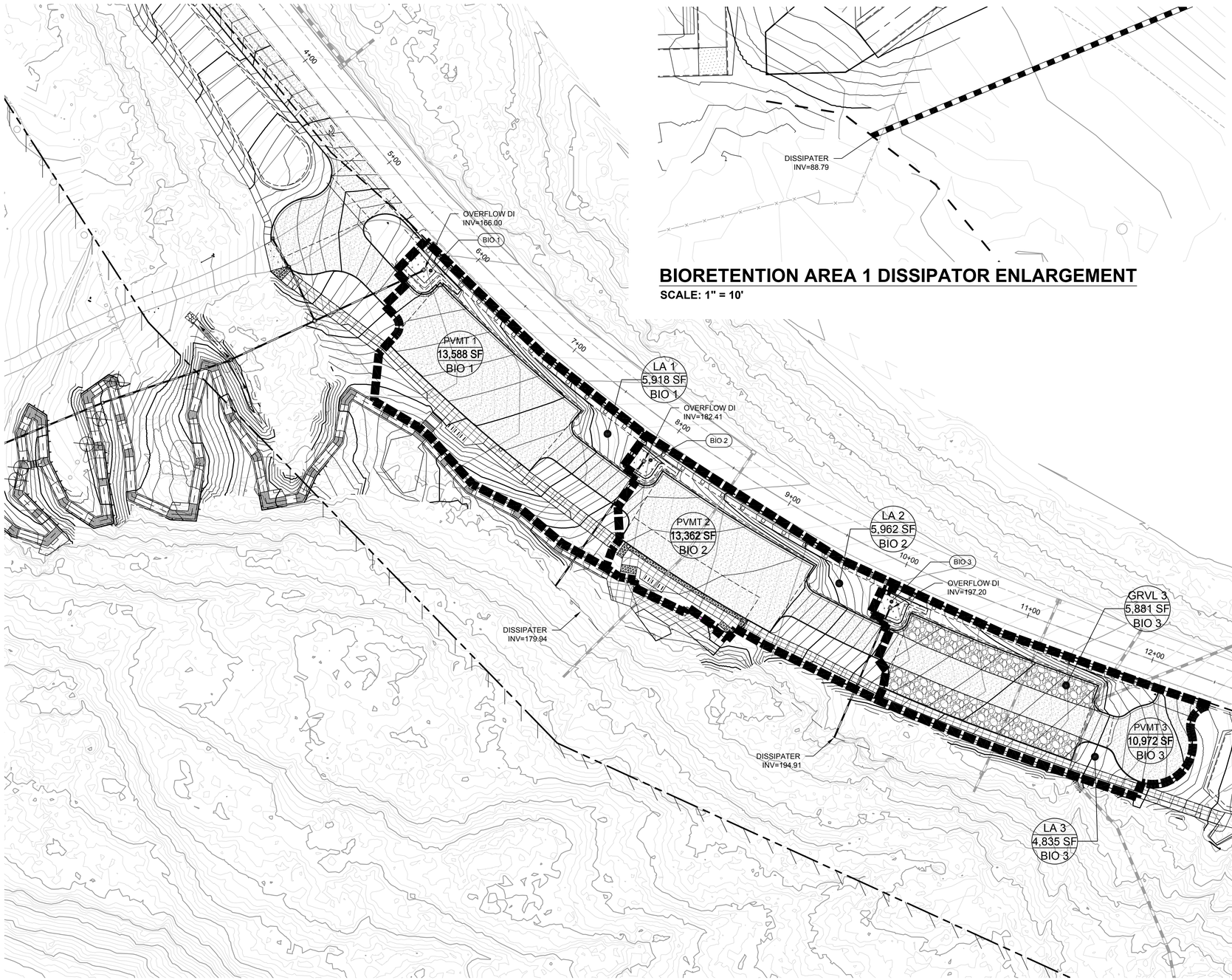
APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



BIORETENTION AREA 1 DISSIPATOR ENLARGEMENT

SCALE: 1" = 10'

LINETYPES

EXISTING		PROPOSED
30	CONTOUR - MAJOR	30
	CONTOUR - MINOR	
	FENCE	
	PROPERTY / LOT LINE	
	STORM DRAIN (PERFORATED SUBDRAIN)	

SYMBOLS

EXISTING		PROPOSED
	STORM DRAINAGE - DROP INLET	
	ASPHALT CONCRETE	
	ALL WEATHER SURFACE	
	LANDSCAPE AREA	

LEGEND

DMA X / XXX / BIO X	DRAINAGE MANAGMENT AREA (DMA) I.D.
	DMA AREA IN SQUARE FEET
	INTEGRATED MANAGEMENT PRACTICE (IMP) TREATING DMA
	PROJECT BOUNDARY
	DMA BOUNDARY
	BIORETENTION AREA (IMP), SEE DETAIL 1, SHEET C10.1

NOTE:
1. SEE SHEET C10.1-STORMWATER CONTROL DETAILS FOR IMP SIZING CALCULATIONS.

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C15.0 - Stormwater Control Plan.dwg 04/27/2023 - 11:21 AM brenda 1:3.5602

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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
STORMWATER CONTROL PLAN
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 40'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

C15.0
SHEET 50 OF 124

APPROVED:

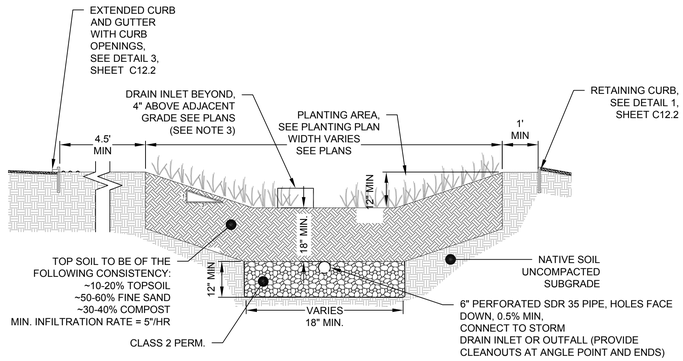
DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

DMA NAME	DMA AREA (SF)	POST- PROJECT SURFACE TYPE	DMA RUNOFF FACTOR	DMA AREA X RUNOFF FACTOR	SOIL TYPE		
					C		
PVMT 1	13,588	IMPERVIOUS	1.0	13,588	IMP SIZING FACTOR	MIN. FACILITY AREA (SF)	PRO. FACILITY AREA (SF)
LA 1	5,918	PERVIOUS	0.1	592			
			TOTAL >	14,180			
					0.04	567	615

DMA NAME	DMA AREA (SF)	POST- PROJECT SURFACE TYPE	DMA RUNOFF FACTOR	DMA AREA X RUNOFF FACTOR	SOIL TYPE		
					C		
PVMT 2	13,362	IMPERVIOUS	1.0	13,362	IMP SIZING FACTOR	MIN. FACILITY AREA (SF)	PRO. FACILITY AREA (SF)
LA 2	5,962	PERVIOUS	0.1	596			
			TOTAL >	13,958			
					0.04	558	565

DMA NAME	DMA AREA (SF)	POST- PROJECT SURFACE TYPE	DMA RUNOFF FACTOR	DMA AREA X RUNOFF FACTOR	SOIL TYPE		
					C		
PVMT 3	10,972	IMPERVIOUS	1.0	10,972	IMP SIZING FACTOR	MIN. FACILITY AREA (SF)	PRO. FACILITY AREA (SF)
LA 3	4,835	PERVIOUS	0.1	484			
GRVL 3	5,881	PERVIOUS	0.1	588			
			TOTAL >	12,044			
					0.04	482	565

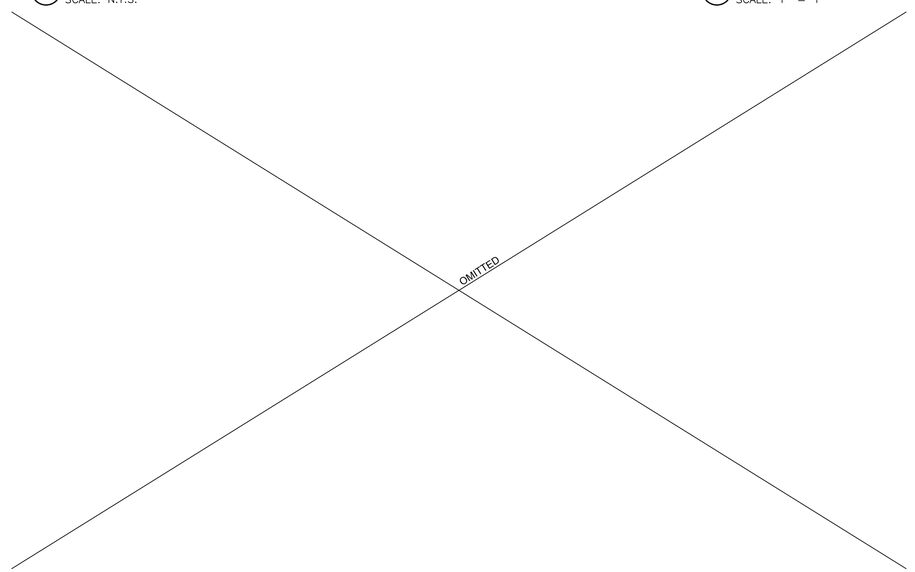


BIORETENTION AREA CONSTRUCTION NOTES

1. SCARIFY SUBGRADE BEFORE INSTALLING BIORETENTION AREA AGGREGATE AND BIORETNETION SOIL MEDIA.
2. INSTALL UNDERDRAIN WITH HOLES FACING DOWN. UNDERDRAIN DISCHARGE ELEVATION SHALL BE NEAR TOP OF AGGREGATE LAYER. UNDERDRAIN SLOPE MAY BE FLAT.
3. COMPACT EACH 6" LIFT OF BIORETENTION SOIL MEDIA WITH LANDSCAPE ROLLER OR BY LIGHTLY WETTING. IF WETTING, LET DRY OVERNIGHT BEFORE PLANTING.
4. NEVER WORK WITHIN BIORETENTION AREA LIMITS DURING RAIN OR UNDER WET CONDITIONS.
5. KEEP ALL HEAVY MACHINERY OUTSIDE BIORETENTION AREA LIMITS.
6. CONTRACTOR SHALL PROVIDE SUBMITTALS CERTIFYING CLASS 2 PERM MEETS CALTRANS SPECIFICATION 68-2.02F(3) AND BIORETENTION SOIL MEET REQUIREMENTS OF BASMAA POST-CONSTRUCTION MANUAL.
7. CONTRACTOR SHALL NOTIFY CIVIL ENGINEER 48 HOURS PRIOR TO INSTALLATION OF CLASS 2 PERM AND BIORETENTION SOIL FOR INSPECTION.

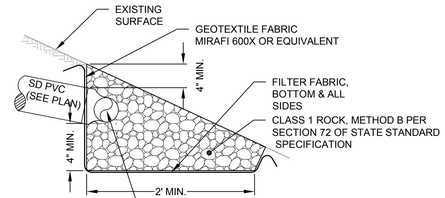
1 TYPICAL BIORETENTION AREA DETAIL

SCALE: N.T.S.



2 OMITTED

SCALE: 1" = 1'



NOTE:
1. PROVIDE THREADED PLUG AT EACH END TO ALLOW FLUSHING OF DEBRIS.
2. 8" PERFORATED PIPE SHALL HAVE THREE (3) TO ONE (1) INCH DIAMETER HOLES PER ROW SPACED EVERY 6".
3. THE 8" PERFORATED PIPE LENGTH FOR BIORETENTION AREA 1 STORM DRAIN DISSIPATER IS 90', FOR BIO 2 IS 90', AND FOR BIO 3 IS 110'.

3 DRAIN DISSIPATER

SCALE: 1" = 1'

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Novato, CA 94947
http://www.cswst2.com
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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	STORMWATER CONTROL DETAILS
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C15.1
SHEET 51 OF 124

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\C15.1 - Stormwater Control Notes & Details.dwg 04/27/2023 - 09:13 AM brenda 13.5602

KEYNOTES

1. NEW TRAVEL LANE STRIPING, DETAIL 38A PER CALTRANS STANDARD PLANS A20D
2. NEW EDGE OF LANE STRIPING, DETAIL 27B PER CALTRANS STANDARD PLAN A20B
3. NEW TYPE IV (R) RIGHT ARROW PER CALTRANS STANDARD PLAN A24A
4. OMITTED
5. NEW LIMIT LINE PER CALTRANS REVISED STANDARD PLAN A24G
6. NEW "STOP" PAVEMENT MARKINGS PER CALTRANS STANDARD PLAN A24D

APPROVED:

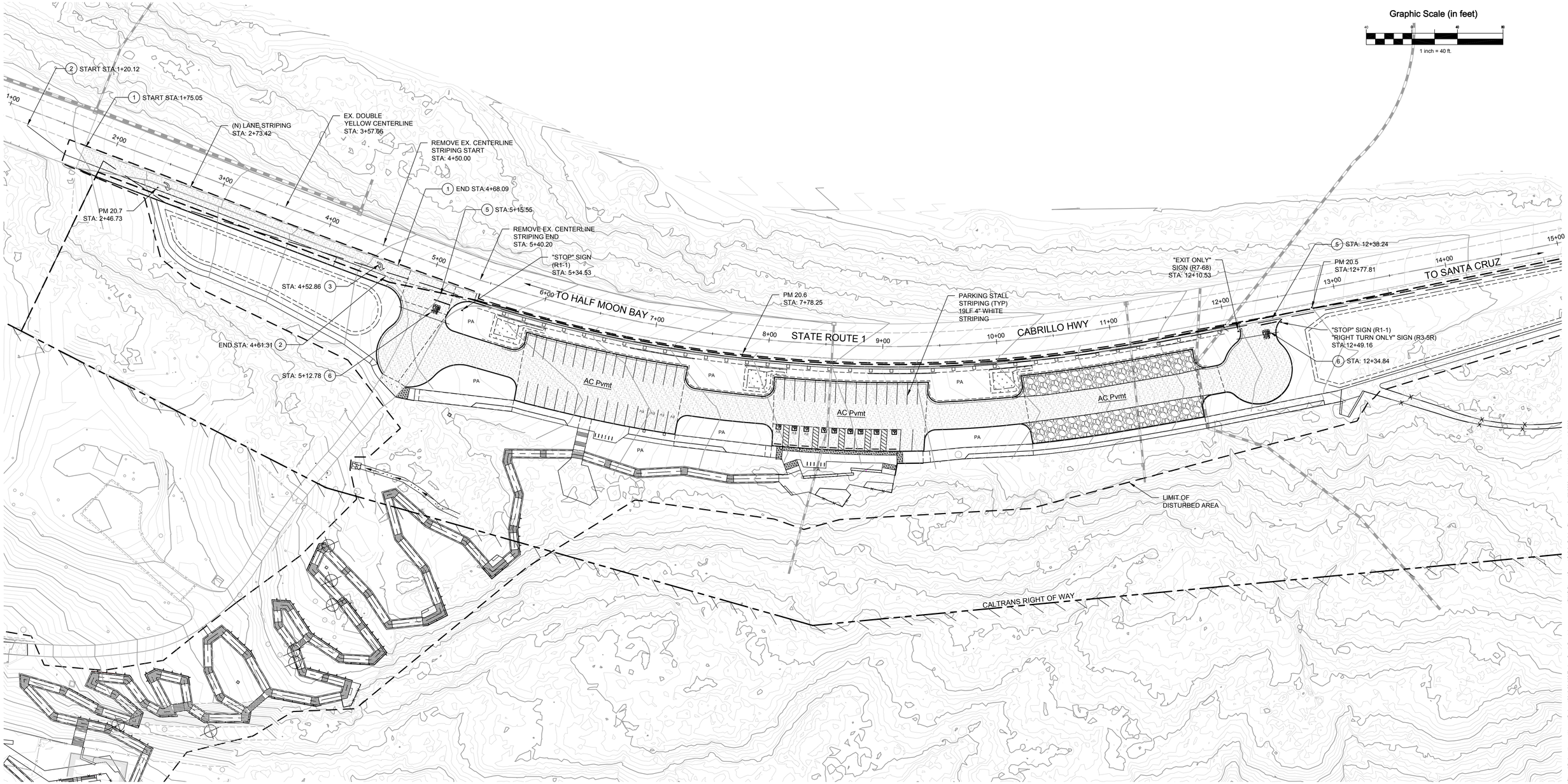
DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

Graphic Scale (in feet)

40 20 0 40 80

1 inch = 40 ft.



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R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
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REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	STRIPING PLAN
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 40'
DATE: 04/21/2023
FILE NO.: E4995

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C16.0
SHEET 52 OF 124

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ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
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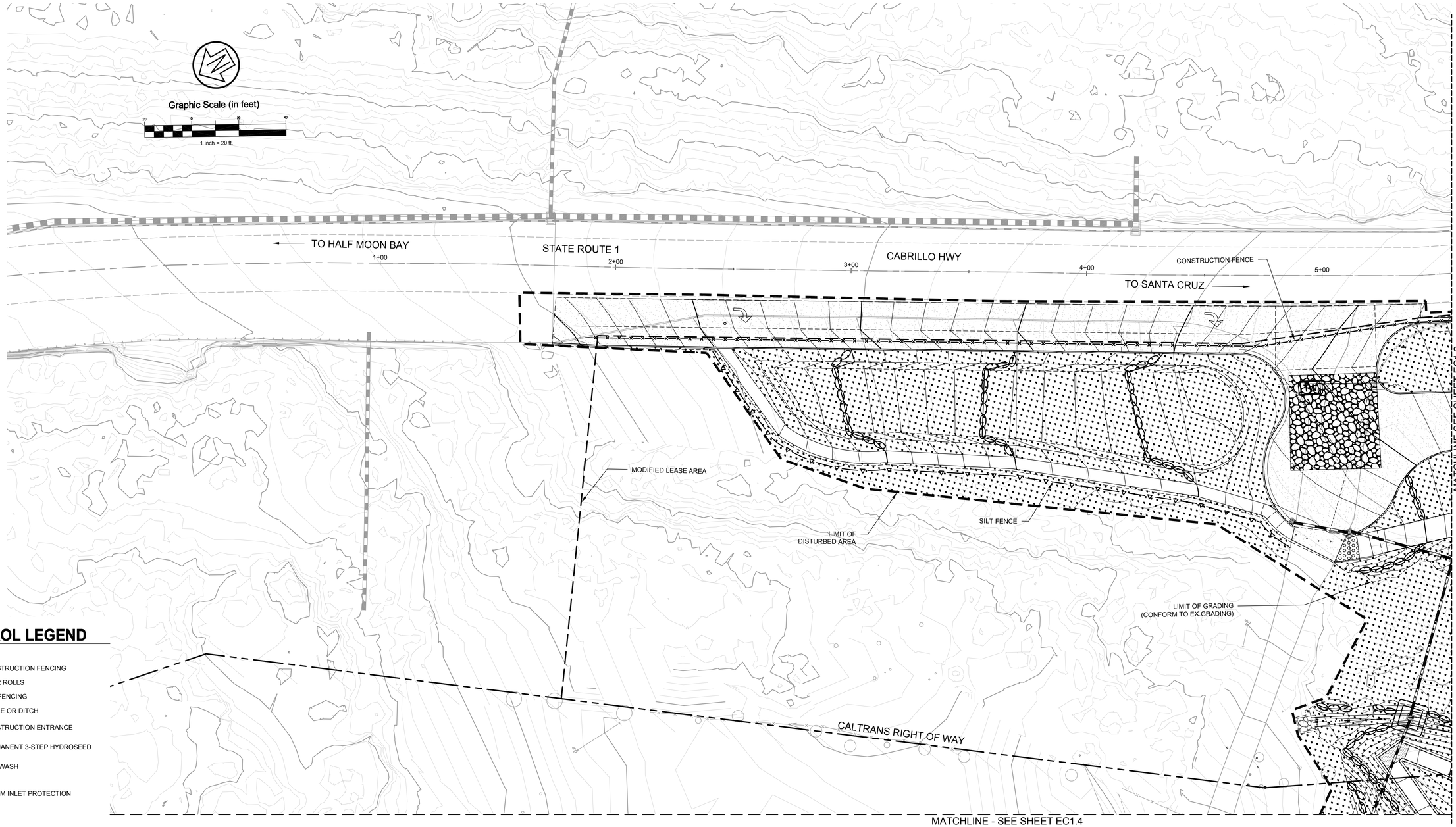
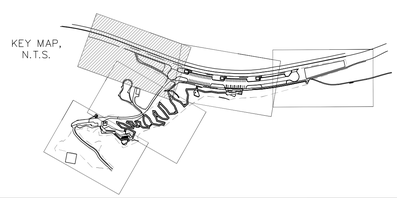


EROSION CONTROL LEGEND

EXISTING

- CONSTRUCTION FENCING
- FIBER ROLLS
- SILT FENCING
- SWALE OR DITCH
- CONSTRUCTION ENTRANCE
- PERMANENT 3-STEP HYDROSEED
- TW — TIRE WASH
- STORM INLET PROTECTION

KEY MAP,
N.T.S.



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fax: 415.883.9835
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R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT EROSION CONTROL PLAN ENLARGEMENT - APPROACH SAN MATEO COUNTY PARKS
		CHECKED BY: CSW/ST2 (JAH)	
		DRAWN BY: MTM	
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS,
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

EC1.1
SHEET 53 OF 124

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvement\DWG\Sheets\County\EC1.1 - Erosion Control Plan - Approach.dwg 04/26/2023 - 05:01 PM brenda 13.5602

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

Graphic Scale (in feet)
20 0 20 40
1 inch = 20 ft.

TO HALF MOON BAY

STATE ROUTE 1

CABRILLO HWY

TO SANTA CRUZ

6+00 7+00 8+00 9+00 10+00 11+00

CONSTRUCTION FENCE

INLET PROTECTION, TYP.

D S VS-FUEL PT

SILT FENCE

LIMIT OF GRADING
(CONFORM TO EX.GRADING)

LIMIT OF
DISTURBED AREA

CALTRANS RIGHT OF WAY

MATCHLINE SEE SHEET EC1.1

MATCHLINE SEE SHEET EC1.3

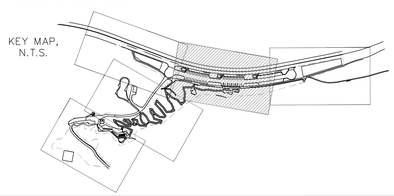
MATCHLINE
SEE SHEET EC1.4

EROSION CONTROL LEGEND

EXISTING

- CONSTRUCTION FENCING
- FIBER ROLLS
- SILT FENCING
- SWALE OR DITCH
- PERMANENT 3-STEP HYDROSEED
- D — DELIVERY AREA
- S — NON HAZARDOUS STORAGE
- STORM INLET PROTECTION
- PT — PORTABLE TOILET WITH LINER
- VS-FUEL — VEHICLE FUEL STORAGE

KEY MAP,
N.T.S.



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R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	CHECKED BY: CSW/ST2 (JAH)	DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
EROSION CONTROL PLAN
ENLARGEMENT - PARKING LOT
SAN MATEO COUNTY PARKS

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

EC1.2
SHEET 54 OF 124

P:\Shared\Projects\Legacy\Novato\Projects\2019-20\006 Tunitas Creek Beach Improvements\DWG\Sheets\County\EC1.2 - Erosion Control Plan - Parking Lot.dwg 04/26/2023 - 04:52 PM brenda 1:1.5602

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
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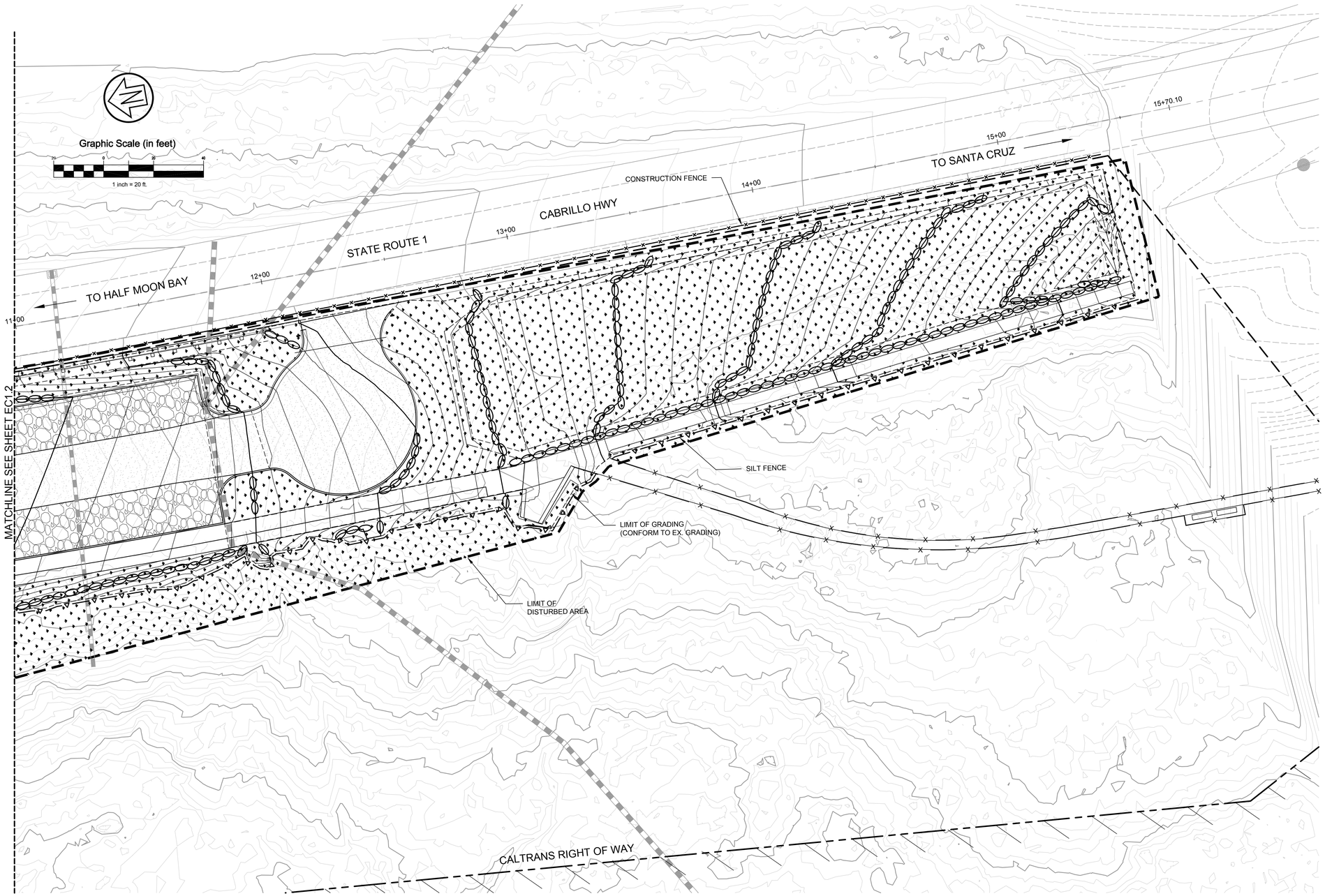
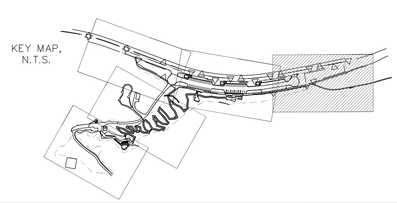


EROSION CONTROL LEGEND

EXISTING

- CONSTRUCTION FENCING
- FIBER ROLLS
- SILT FENCING
- PERMANENT 3-STEP HYDROSEED

KEY MAP,
N.T.S.



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ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT EROSION CONTROL PLAN ENLARGEMENT - EXIT SAN MATEO COUNTY PARKS	SCALE: 1" = 20'
		CHECKED BY: CSW/ST2 (JAH)		DATE: 04/21/2023
		DRAWN BY: MTM		FILE NO.: E4995
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	

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ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

EC1.3
SHEET 55 OF 124

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DATE: 04/21/2023

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DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

MATCHLINE

MATCHLINE
SEE SHEET EC1.1

MATCHLINE SEE SHEET EC1.2

CALTRANS RIGHT OF WAY

LIMIT OF GRADING
(CONFORM TO EX. GRADING)

CONSTRUCTION FENCE

INLET
PROTECTION, TYP.

LIMIT OF DISTURBED AREA

LIMIT OF DISTURBED AREA

LIMIT OF GRADING
(CONFORM TO EX. GRADING)

CONSTRUCTION FENCE

MATCHLINE - SEE SHEET EC1.5

Graphic Scale (in feet)

20 0 20 40

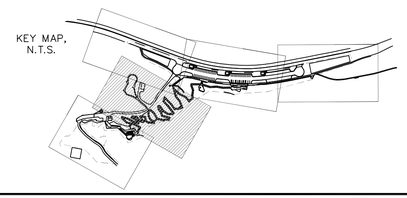
1 inch = 20 ft.

EROSION CONTROL LEGEND

EXISTING

- CONSTRUCTION FENCING
- FIBER ROLLS
- PERMANENT 3-STEP HYDROSEED
- STORM INLET PROTECTION

KEY MAP,
N.T.S.



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ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT EROSION CONTROL PLAN ENLARGEMENT - TRAIL SAN MATEO COUNTY PARKS
		CHECKED BY: CSW/ST2 (JAH)	
		DRAWN BY: MTM	
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

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ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

EC1.4
SHEET 56 OF 124

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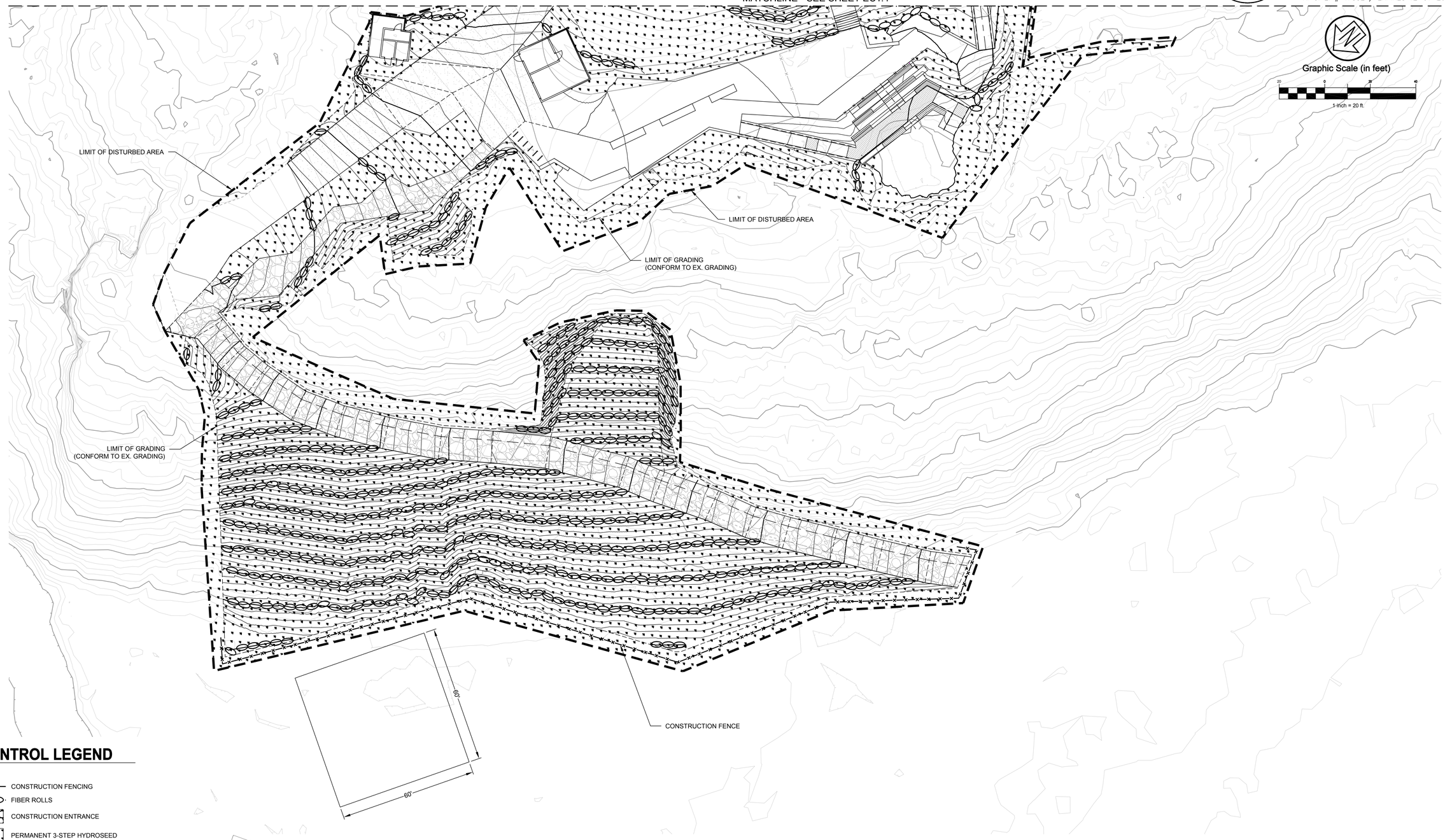
APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

MATCHLINE - SEE SHEET EC1.4



Graphic Scale (in feet)

20 0 20 40

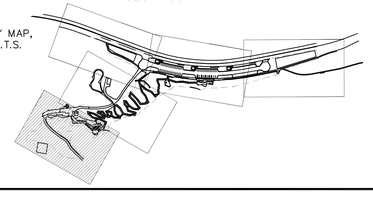
1 inch = 20 ft.

EROSION CONTROL LEGEND

EXISTING

- CONSTRUCTION FENCING
- FIBER ROLLS
- CONSTRUCTION ENTRANCE
- PERMANENT 3-STEP HYDROSEED

KEY MAP,
N.T.S.



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CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	EROSION CONTROL PLAN
		DRAWN BY: MTM	ENLARGEMENT - MIDBLUFF
			SAN MATEO COUNTY PARKS

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

ANN MADER STILLMAN,
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COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS
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EC1.5
SHEET 57 OF 124

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APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

GENERAL NOTES:

1. THESE PLANS PROVIDE THE INITIAL CONCEPT FOR EROSION AND SEDIMENT CONTROL FOR THE PROJECT AND ARE MINIMUM REQUIREMENTS. AS THE PROJECT PROGRESSES, EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MONITORED FOR EFFECTIVENESS AND ADJUSTED AS NECESSARY TO PREVENT SIGNIFICANT QUANTITIES OF POLLUTANTS FROM ENTERING SITE RUNOFF OR FROM BEING DISCHARGED FROM THE SITE, INCLUDING, BUT NOT LIMITED TO, BY WIND.
2. THE COUNTY ENGINEER OR COUNTY STORMWATER INSPECTOR ARE AUTHORIZED TO REQUIRE ADDITIONAL BMP'S TO PREVENT NON-STORMWATER DISCHARGES. THE CONTRACTOR SHALL ADJUST, MODIFY OR ADD ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES AT THE DIRECTION OF THE PROJECT'S QUALIFIED SWPPP PRACTITIONER (QSP), THE COUNTY ENGINEER OR STORMWATER INSPECTOR, OR AS NEEDED TO RESPOND TO NON-STORMWATER DISCHARGES DUE TO UNANTICIPATED CIRCUMSTANCES.
3. ALL EMPLOYEES, CONTRACTORS, AND SUBCONTRACTORS ARE RESPONSIBLE FOR CONFORMING TO THE ELEMENTS SHOWN ON THIS PLAN OR RELATED DOCUMENTS. ANY CONTRACTOR PLANNING TO DO WORK ON-SITE SHALL BE RESPONSIBLE FOR OBTAINING AND REVIEWING ALL SWPPP INFORMATION FROM OWNER PRIOR TO START OF WORK AND EDUCATING ALL OF THEIR EMPLOYEES OR SUBCONTRACTORS AS TO THE CONTENTS OF THIS SWPPP.
4. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND FILING ALL PLANS WITH RELATED AGENCIES ASSOCIATED WITH THEIR WORK. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, PERMITS FOR STORAGE OF HAZARDOUS MATERIALS, BUSINESS PLANS, PERMITS FOR STORAGE OF FLAMMABLE LIQUIDS, GRADING PERMITS, OR OTHER PLANS OR PERMITS REQUIRED BY SAN MATEO COUNTY, THE CITY OF HALF MOON BAY, OR OTHER AGENCIES. ALL PROPERTY OWNERS, CONTRACTORS, OR SUBCONTRACTORS WORKING ON-SITE ARE INDIVIDUALLY RESPONSIBLE FOR OBTAINING AND SUBMITTING ANY BUSINESS PLANS OR PERMITS REQUIRED BY CITY, STATE OR LOCAL AGENCIES.

POLLUTION CONTROL NOTES:

1. AS NEEDED, THE PROJECT SHALL BE GRADED IN ACCORDANCE WITH THE RESTORATION PLAN PREPARED BY CSW/ST2. GRADING SHALL DIRECT ALL STORM WATER RUNOFF TO A DIRECTION AND IN A MANNER WHICH MATCHES THE PRE-PROJECT CONDITION AND ULTIMATELY TO THE PACIFIC OCEAN
2. IF SIGNIFICANT SEDIMENT OR OTHER VISUAL SYMPTOMS OF IMPURITIES ARE NOTICED IN THE STORM WATER, CONTACT THE QSP AND CIVIL ENGINEER IMMEDIATELY.
3. CONTRACTOR IS RESPONSIBLE FOR INSPECTION AND RESTORATION OF ALL ASPECTS OF THIS PLAN. SEDIMENT ON SIDEWALKS AND GUTTERS SHALL BE REMOVED BY SHOVEL OR BROOM AND PLACED IN DESIGNATED STOCKPILES.
4. CATCH BASIN TOPS, IF INSTALLED, SHALL BE STAMPED TO READ, "NO DUMPING - FLOWS TO OCEAN".
5. ALL DUMPSTERS OR OTHER TRASH STORAGE ENCLOSURES SHALL BE UTILIZED SOLELY FOR NON-HAZARDOUS MATERIALS.
6. CONTRACTOR MAY RELOCATE STORAGE, DELIVERY, OR WASH-OUT AREAS, TO SUIT THEIR OPERATIONS. RELOCATED LOCATION TO BE SHOWN ON PLANS MAINTAINED AT JOBSITE. CONTACT CIVIL ENGINEER FOR ANY PLAN REVISIONS. PLAN REVISIONS SHALL BE SUBMITTED TO HALF MOON BAY IF REQUESTED. CONTRACTOR TO MAINTAIN SECONDARY CONTAINMENT AS NECESSARY TO PROHIBIT POLLUTION AND TOXIC MATERIALS FROM ENTERING SITE RUNOFF.
7. AFTER COMPLETION OF CURB, GUTTER, PAVING, OR CONCRETE V-DITCHES THE SILT FILTERS SHALL BE MODIFIED TO BURLAP SACKS FILLED WITH 3/4" DRAIN ROCK OR OTHER ACCEPTED BMP POSITIONED SURROUNDING EACH CATCH BASIN.

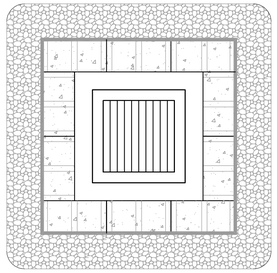
THIS PLAN TO BE USED IN CONJUNCTION WITH THE WRITTEN REPORT OF STORM WATER POLLUTION PREVENTION.

EROSION CONTROL NOTES:

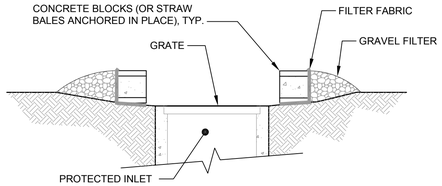
1. NO VEHICLES SHALL BE ALLOWED TO TRACK OR SPREAD SOIL FROM THE CONSTRUCTION AREAS ONTO EXISTING PAVED PUBLIC STREETS. ANY VEHICLE OPERATING WITHIN THE PROJECT AREA AND OFF THE PAVED STREET SHALL CROSS A CONSTRUCTION ENTRANCE AS SHOWN HEREIN. THE ENTRANCE MAY BE MODIFIED BY THE CONTRACTOR TO FACILITATE HIS OPERATIONS.
2. THE EROSION AND SEDIMENT CONTROL MEASURES WILL BE OPERABLE CONTINUOUSLY, THROUGHOUT THE YEAR. NO GRADING WILL OCCUR BETWEEN OCTOBER 1ST AND APRIL 15TH, UNLESS AUTHORIZED BY THE DIRECTOR OF PUBLIC WORKS.
3. CHANGES TO THIS STORM WATER POLLUTION PREVENTION PLAN TO MEET FIELD CONDITIONS WILL BE MADE ONLY WITH THE APPROVAL OF, OR AT THE DIRECTION OF THE OWNER. CHANGES MADE TO SUIT FIELD CONDITIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE QSP, CIVIL ENGINEER AND THE COUNTY ENGINEER.
4. DURING THE RAINY SEASON, ALL PAVED AREAS WILL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE WILL BE MAINTAINED SO THAT A MINIMUM OF SEDIMENT-LADEN RUNOFF IS DISCHARGED FROM THE PROJECT AREA. THESE PLANS SHALL REMAIN IN EFFECT UNTIL THE IMPROVEMENTS ARE ACCEPTED BY THE COUNTY, AND ALL SLOPES ARE STABILIZED FROM EROSION.
5. STRAW AND TACKIFIER WILL BE APPLIED BY CONTINUOUSLY, THROUGHOUT THE YEAR, TO ALL DISTURBED AREAS WHICH WILL BE INACTIVE FOR 14 OR MORE DAYS. ALL EXPOSED SLOPES ADJACENT TO PUBLIC RIGHTS OF WAY SHALL ALSO RECEIVE STRAW AND TACKIFIER. STRAW AND TACKIFIER TO BE APPLIED PER MANUFACTURER'S SPECIFICATIONS AND SHALL BE APPLIED AT A RATE OF 2 TONS PER ACRE MINIMUM.
6. ROUGH GRADED DITCHES SHALL BE LINED WITH EROSION CONTROL BLANKETS AND THEN HYDROSEEDED.
7. AFTER INSTALLATION OF CONCRETE IN DITCHES, INSTALL ONE SACKED ROCK FILTER DAM AT INLET UNTIL SLOPES ARE STABILIZED FROM EROSION.
8. PRIOR TO START OF ANY CONSTRUCTION OR DEMOLITION, INSTALL PERIMETER FIBER ROLL AND/OR PERIMETER SILT FENCE.
9. THIS PLAN ASSUMES THE COMPLETION OF GRADING AND RUNOFF CONVEYANCE FACILITIES.. IF FACILITIES ARE NOT COMPLETED, CONTACT THE CIVIL ENGINEER FOR PLAN REVISIONS.
10. ALL BANKS AND ALL GRADED AREAS SHALL BE HYDROSEEDED TO CONTROL EROSION BY OCTOBER 1ST OR AT COMPLETION OF GRADING WHEN THE LOCATION WILL BE INACTIVE FOR 14 DAYS OR LONGER..

URBAN RUNOFF POLLUTION NOTES:

1. STABILIZE ALL DENUDED AREAS AND MAINTAIN EROSION CONTROL MEASURES CONTINUOUSLY THROUGHOUT THE YEAR.
2. REMOVE SPOILS PROMPTLY AND AVOID STOCKPILING OF FILL MATERIALS WHEN RAIN IS FORECAST. IF RAIN THREATENS OR AT THE REQUEST OF THE QSP, STOCK- PILED SOILS AND OTHER MATERIALS SHALL BE TARPED.
3. STORE, HANDLE AND DISPOSE OF CONSTRUCTION MATERIALS AND WASTES SO AS TO PREVENT THEIR ENTRY TO THE STORM DRAIN SYSTEM. CONTRACTOR MUST NOT ALLOW CONCRETE, WASHWATERS, SLURRIES, PAINT OR OTHER MATERIALS TO ENTER CATCH BASINS OR TO ENTER SITE RUNOFF.
4. USE FILTRATION OR OTHER MEASURES TO REMOVE SEDIMENT FROM DEWATERING EFFLUENT.
5. NO CLEANING, FUELING OR MAINTAINING VEHICLES ON SITE SHALL BE PERMITTED IN ANY MANNER THAT ALLOWS DELETERIOUS MATERIALS TO ENTER SITE RUNOFF.
6. USE OF PESTICIDES AND/ OR FERTILIZERS SHALL BE APPLIED AND CONTROLLED TO PREVENT POLLUTION RUNOFF.
7. IN THE EVENT GRADING OPERATIONS ARE SUSPENDED BY WEATHER CONDITIONS AND IF THE RUNOFF CONVEYANCE FACILITIES ARE INCOMPLETE, INSTALL ADDITIONAL ROCK FILTERS AND OTHER FACILITIES AS DIRECTED BY THE QSP OR COUNTY ENGINEER.
8. CONTRACTOR TO RELOCATE CONCRETE WASHDOWN, VEHICLE STORAGE, DELIVERY, AND NON HAZARDOUS WASTE AREAS AS NECESSARY TO FACILITATE THEIR OPERATION AND PROMOTE POLLUTION CONTROL.



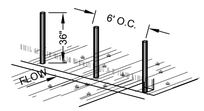
TOP



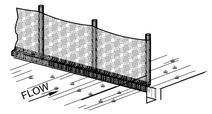
SECTION

1 INLET PROTECTION DETAIL
SCALE: NTS

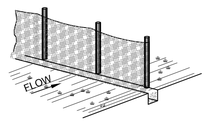
1. SET 4"Ø WOOD OR 1.33 PLF STEEL POSTS 5' IN LENGTH. EXCAVATE A 4"X4" TRENCH UPSLOPE ALONG THE LINE OF POSTS.



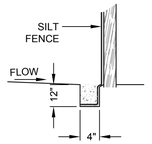
2. ATTACH SILT FENCE TO POSTS AND EXTEND IT INTO THE TRENCH.



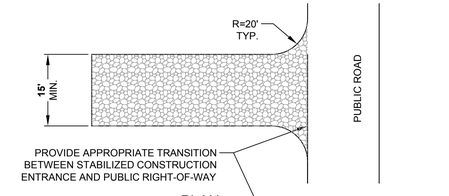
3. BACKFILL AND COMPACT THE EXCAVATED SOIL.



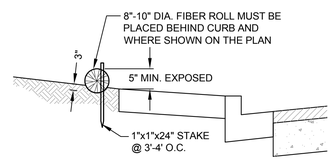
4. EXTENSION OF FABRIC INTO THE TRENCH.

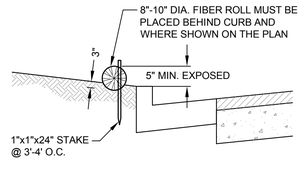


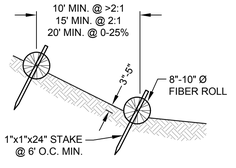
2 SILT FENCE DETAIL
SCALE: NTS



3 TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
SCALE: NTS



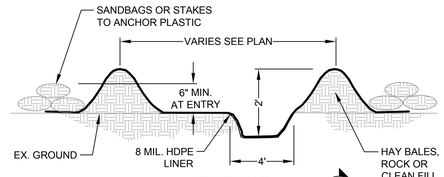




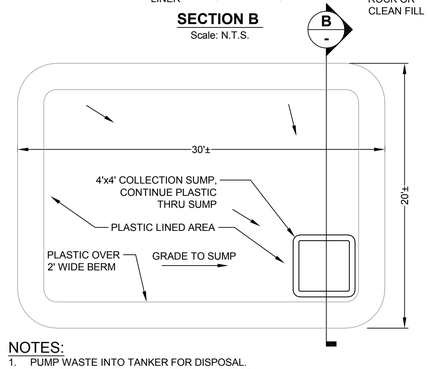
NOTES

1. FIBER ROLLS TO BE LAID ALONG CONTOUR.

4 FIBER ROLL INSTALLATION DETAILS
SCALE: NTS



SECTION B
Scale: N.T.S.



NOTES:
1. PUMP WASTE INTO TANKER FOR DISPOSAL.
2. DEPRESS ENDS TO ALLOW VEHICLE ACCESS.
3. VARY SIZE OF AREA TO FIT CONTRACTOR REQUIREMENTS.

5 VEHICLE & EQUIPMENT SERVICE FUELING AREA
SCALE: NTS

CSW/Stuber-Stroeh Engineering Group, Inc.
Civil & Structural Engineers | Surveying & Mapping | Environmental Planning
Land Planning | Construction Management
504 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.9850
fax: 415.883.9835
http://www.csw2.com

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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	EROSION CONTROL DETAILS
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

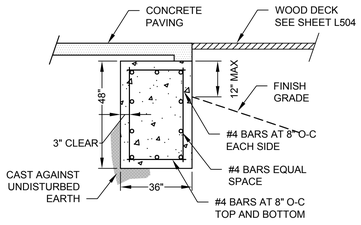
EC1.6
SHEET 58 OF 124

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\County\EC1.6 Erosion Control Notes and Details.dwg 04/27/2023 - 08:36 AM bonda 1:3.5602

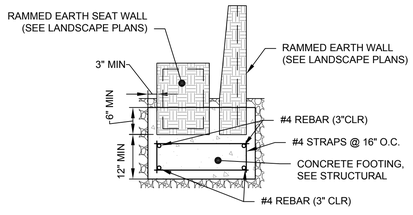
APPROVED:

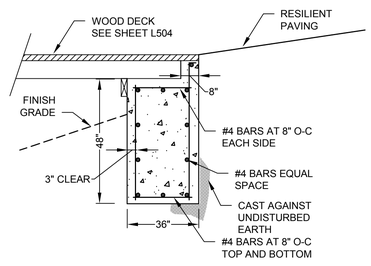
DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

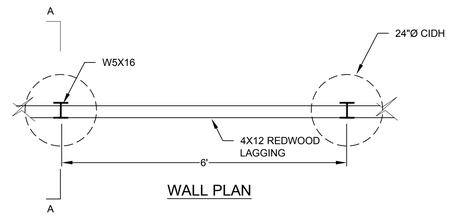


GRADE BEAM A

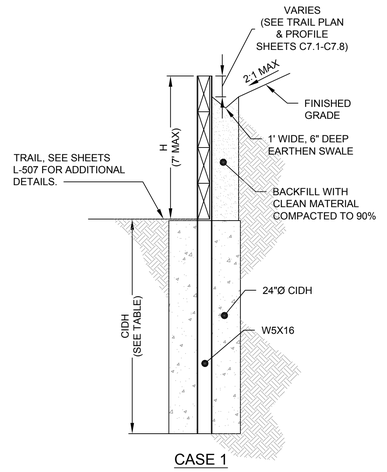




GRADE BEAM B

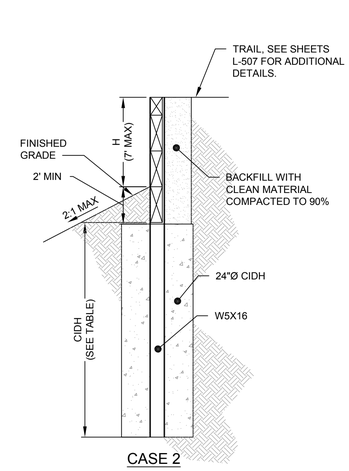


WALL PLAN



CASE 1

SECTION A-A



CASE 2

SECTION A-A

EMBEDMENT TABLE	
HEIGHT	**CIDH DEPTH**
H < 4'	8'
4' ≤ H ≤ 7'	16'

3 RAMMED EARTH CONCRETE FOOTING
SCALE: NTS

2 GRADE BEAM
SCALE: 1/2" = 1'

1 RETAINING WALL
SCALE: 1/2" = 1'

CSW/Stuber-Stroeh Engineering Group, Inc.
Civil & Structural Engineers | Surveying & Mapping | Environmental Planning
Land Planning | Construction Management
504 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.9850
fax: 415.883.9835
http://www.csw2.com

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APPROVED DATE:

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REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	CHECKED BY: CSW/ST2 (JAH)	DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
STRUCTURAL DETAILS
SAN MATEO COUNTY PARKS

SCALE: AS SHOWN
DATE: 04/21/2023
FILE NO.: E4995

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

S-1
SHEET 59 OF 124

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvement\DWG\Sheets\County\S-1 - Structural Details.dwg 04/20/2023 - 05:04 PM brenda 13.5602

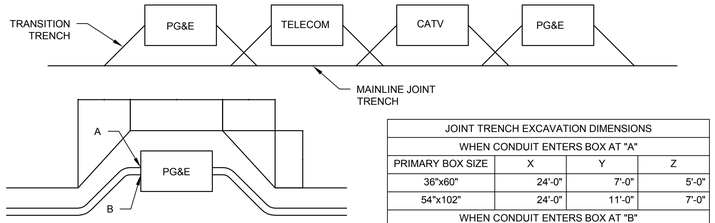
JOINT TRENCH

	PG&E	CATV	TELECOM	CONTRACTOR
TRENCHING:				
EXCAVATE, BACKFILL AND COMPACT:	□	□	□	■
GAS MATERIAL:				
SUPPLY:	□	□	□	■
INSTALL:	□	□	□	■
ELECTRIC CABLE:				
SUPPLY:	■	□	□	□
INSTALL:	■	□	□	□
ELECTRIC CONDUIT:				
SUPPLY:	□	□	□	■
INSTALL:	□	□	□	■
ELECTRIC SPLICE BOXES:				
EXCAVATE:	□	□	□	■
SUPPLY:	□	□	□	■
INSTALL:	□	□	□	■
ELECTRIC TRANSFORMER ENCLOSURE:				
EXCAVATE:	□	□	□	■
SUPPLY:	□	□	□	■
INSTALL:	□	□	□	■
ELECTRIC TRANSFORMER PADS:				
GRADE:	□	□	□	■
SUPPLY:	□	□	□	■
INSTALL:	□	□	□	■
TELEPHONE CONDUIT:				
SUPPLY:	□	□	□	■
INSTALL:	□	□	□	■
TELEPHONE CABLE:				
SUPPLY:	□	■	□	□
INSTALL:	□	■	□	□
TELEPHONE SPLICE BOX:				
EXCAVATE:	□	□	□	■
SUPPLY:	□	□	□	■
INSTALL:	□	□	□	■
CATV CONDUITS:				
SUPPLY:	□	□	■	□
INSTALL:	□	□	■	□
CATV SPLICE BOX:				
EXCAVATE:	□	□	□	■
SUPPLY:	□	□	□	■
INSTALL:	□	□	□	■

= DESIGNATES THE WORK TO BE PERFORMED BY THE CONTRACTOR AND EACH UTILITY COMPANY

UTILITY LEGEND

- 7 — 4'6" X 8'6" (#7) ELECTRIC ENCLOSURE
- T4 — 30" X 48" X 36" (T4) TELEPHONE BOX
- T9 — 30" X 60" X 36" (T9) TELEPHONE BOX
- RISER
- 5" RISER — RISER QUADRANT



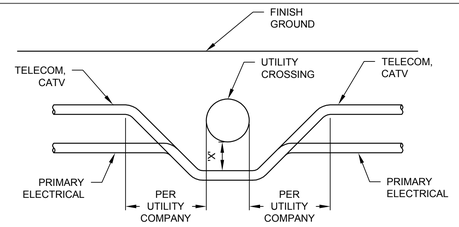
JOINT TRENCH EXCAVATION DIMENSIONS			
WHEN CONDUIT ENTERS BOX AT "A"			
PRIMARY BOX SIZE	X	Y	Z
36"x60"	24'-0"	7'-0"	5'-0"
54"x102"	24'-0"	11'-0"	7'-0"
WHEN CONDUIT ENTERS BOX AT "B"			
PRIMARY BOX SIZE	X	Y	Z
36"x60"	32'-0"	7'-0"	5'-0"
54"x102"	32'-0"	11'-0"	7'-0"

NOTES:

1. CONTRACTOR TO EXCAVATE TRANSITIONS FROM MAINLINE TRENCH TO VAULTS AS REQUIRED BY EACH UTILITY.
2. CONTRACTOR TO INCLUDE COST OF TRANSITIONS IN VAULT EXCAVATION COST.

TYPICAL JOINT TRENCH TRANSITIONS

NOT TO SCALE



NOTES:

1. DIMENSION "X" SHALL BE A MINIMUM OF 21" OVER OR UNDER PETROLEUM PIPELINES, AND A MINIMUM OF 12" OVER OR UNDER ALL OTHER UTILITIES.
2. TRENCHING CONTRACTOR SHALL NOT ASSUME THAT EITHER OF THE ABOVE DETAILS WILL BE ACCEPTABLE TO PG&E. CONTRACTOR IS REQUIRED TO CONTACT THE LOCAL PG&E ENGINEERING OFFICE WITH ANY ISSUES RELATING TO THE COVERS LESS THAN MINIMUM OR COVERS REQUIRING SHORING. CONCRETE CAPPINGS IS ONLY ACCEPTABLE WHERE NO OTHER SOLUTION IS POSSIBLE AND ONLY WHEN CERTAIN CRITERIA ARE MET AND ONLY WITH PG&E APPROVAL.

PROFILE UNDER CROSSING UTILITY

MINIMUM COVER AND SEPARATION REQUIREMENTS								
		MINIMUM CLEARANCE (INCHES)						MINIMUM COVER (INCHES)
CODE	UTILITY	6"P	4"P	P(V)	S	C	T	
6" P	PRIMARY ELECTRICAL 6"	6	3	6	3	12	12	36
4" P	PRIMARY ELECTRICAL 4"	3	3	3	3	12	12	36
P (V)	PRIMARY ELECTRICAL (VACANT)	6	3	3	3	12	12	36
S	SECONDARY ELECTRICAL	3	3	3	3	12	12	36
C	CABLE TV	12	12	12	12	-	3	24
T	TELECOM	12	12	12	12	3	-	24

NOTES:

1. TRENCH COVER AND CLEARANCES SHOWN HERE ARE MINIMUM DIMENSIONS.
2. IT IS RECOMMENDED THAT ALL FACILITIES BE INSTALLED 12" BELOW THE DEPTH OF SUBBASE DISTURBANCE

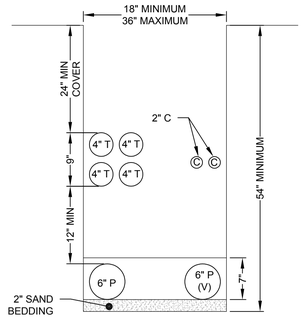
APPROVED:

DATE: 04/21/2023

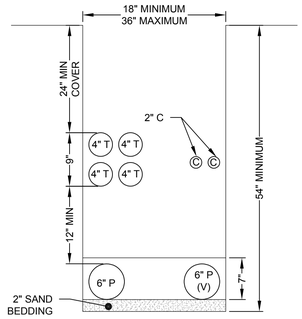
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER — ANN MADER STILLMAN — C 47882 — EXPIRES 12/31/23 — CIVIL — STATE OF CALIFORNIA

JOINT TRENCH SECTIONS



SECTION - A



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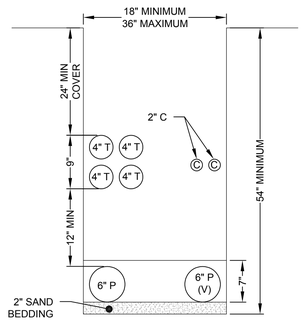

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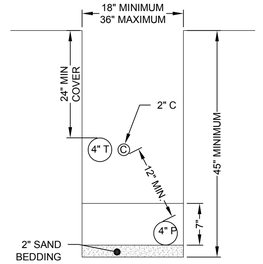

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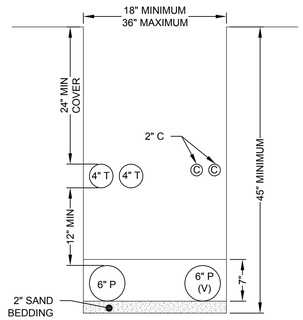
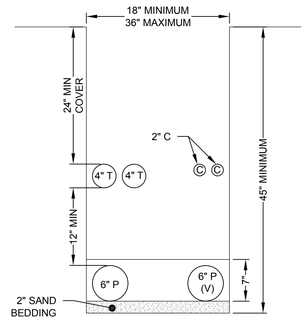


SECTION - E



SECTION - F

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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER — ROBERT C. STEVENS — No. C 058660 — CIVIL — STATE OF CALIFORNIA

COUNTY OF SAN MATEO — PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT JOINT TRENCH PLAN NOTES & DETAILS SAN MATEO COUNTY PARKS	SCALE: AS SHOWN
		CHECKED BY: CSW/ST2 (JAH)		DATE: 04/21/2023
		DRAWN BY: MTM		FILE NO.: E4995
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

JT00
SHEET 60 OF 124

APPROVED:

DATE: 04/21/2023

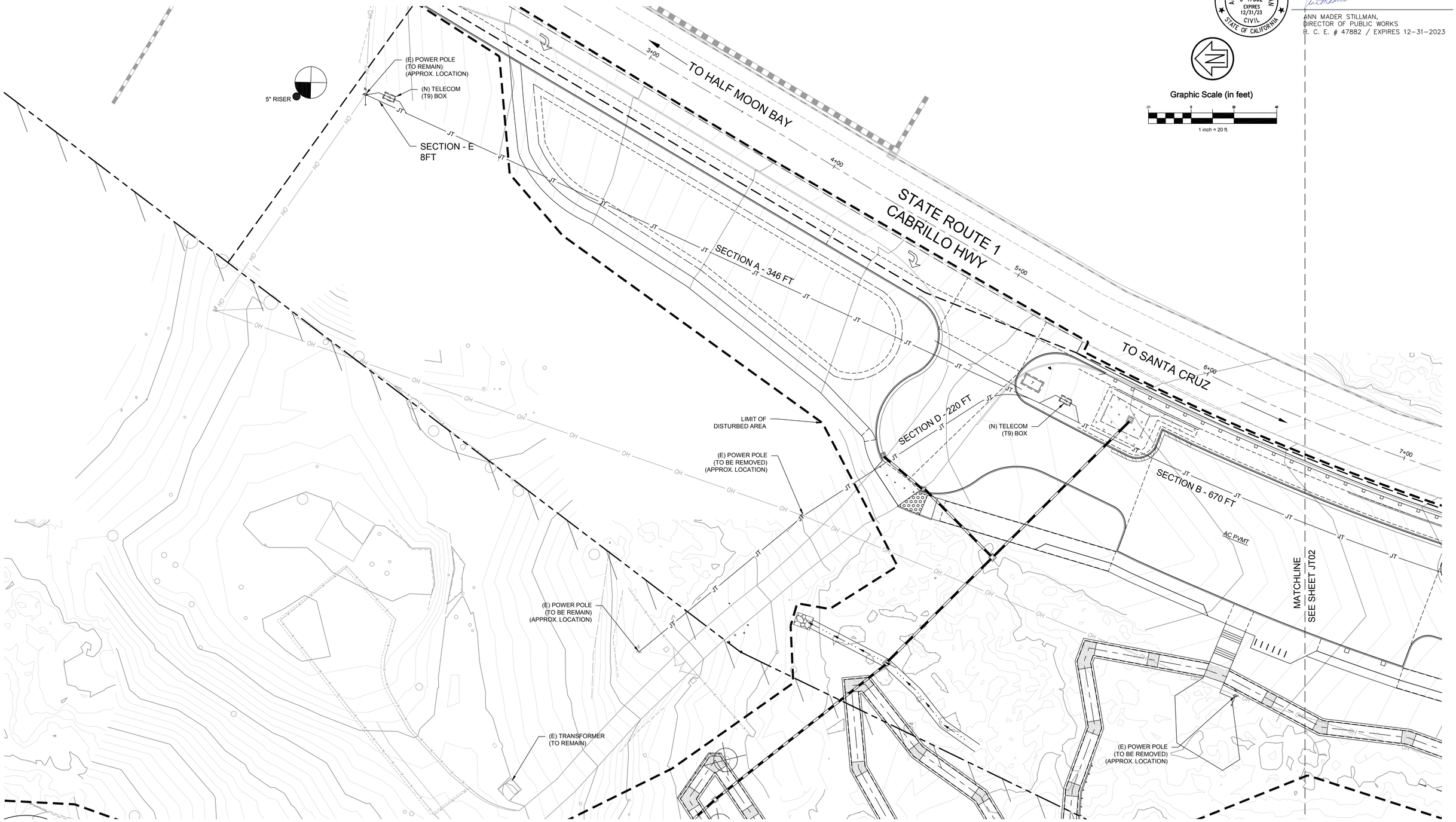
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

Graphic Scale (in feet)

20 0 20 40

1 inch = 20 ft.



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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	JOINT TRENCH PLAN
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

JT01
SHEET 61 OF 124

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

Graphic Scale (in feet)

20 0 20 40

1 inch = 20 ft.

TO HALF MOON BAY

STATE ROUTE 1
CABRILLO HWY

TO SANTA CRUZ

6+00 7+00 8+00 9+00 10+00 11+00 12+00

JT

AC PVMT

SECTION B - 670 FT

MATCHLINE
SEE SHEET JT01

MATCHLINE
SEE SHEET JT03

OH

(E) POWER POLE
(TO BE REMOVED)
(APPROX. LOCATION)

(E) POWER POLE
(TO BE REMOVED)
(APPROX. LOCATION)

LIMIT OF
DISTURBED AREA

P:\Shared\Projects4.eqpc\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\Joint Trench Plans\JT01.dwg 04/26/2023 - 08:01 PM BRBR 1:3.5602

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REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	JOINT TRENCH PLAN
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS
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JT02
SHEET 62 OF 124

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R.C.E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

Graphic Scale (in feet)

20 0 20 40

1 inch = 20 ft.

TO HALF MOON BAY

STATE ROUTE 1
CABRILLO HWY

TO SANTA CRUZ

11+00 12+00 13+00 14+00 15+00 15+70.10

SECTION B - 670 FT

SECTION C - 397 FT

SECTION - F
8FT

JT

OH

AC PVMT

MATCHLINE
SEE SHEET JT02

(N) TELECOM
(T9) BOX

(E) POWER POLE
(TO BE REMOVED)
(APPROX. LOCATION)

(N) TELECOM
(T9) BOX

(E) POWER POLE
(TO REMAIN)
(APPROX. LOCATION)

5" RISER

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ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
JOINT TRENCH PLAN
SAN MATEO COUNTY PARKS

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS
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SHEET 63 OF 124

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

NOTE:
DECOMMISSIONING SOCIAL TRAILS:
1. SCARIFY THE SOIL ALONG THE SOCIAL TRAIL
2. RAKE IN LOCAL SEED FROM THE IMMEDIATELY ADJOINING AREA, WHEN AVAILABLE
3. DROP NEW SEED ALONG THE TRAIL
4. COVER WITH STRAW, RICE STRAW PREFERRED.
5. INSTALL "AREA CLOSED", "HABITAT RESTORATION", AND SIMILAR SIGNAGE.
6. FOR MINOR TRAILS, SIMPLE SCARING AND BRUSHING SEEMS TO BE ADEQUATE.

SOUTHERN ACCESS TRAIL ALIGNMENT TO BE DETERMINED IN THE FIELD, SEE CIVIL CONTINUOUS FOR LENGTH OF TRAIL, BOTH SIDES

N:\8000\8337 tunitas creek beach improvement project\4-ACAD\5-construction documentation\Sheet\L-001 SITE PLAN.dwg 04/27/2023 - 10:14 AM jzou 1:3.56021

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APPROVED DATE:

JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT
JOHN R. GIBBS
4417
SIGNATURE
DATE
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
SITE PLAN
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
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L-001
SHEET 64 OF 124

APPROVED:

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

DATE: 04/21/2023

ANN MADER STILLMAN,
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R. C. E. # 47882 / EXPIRES 12-31-2023

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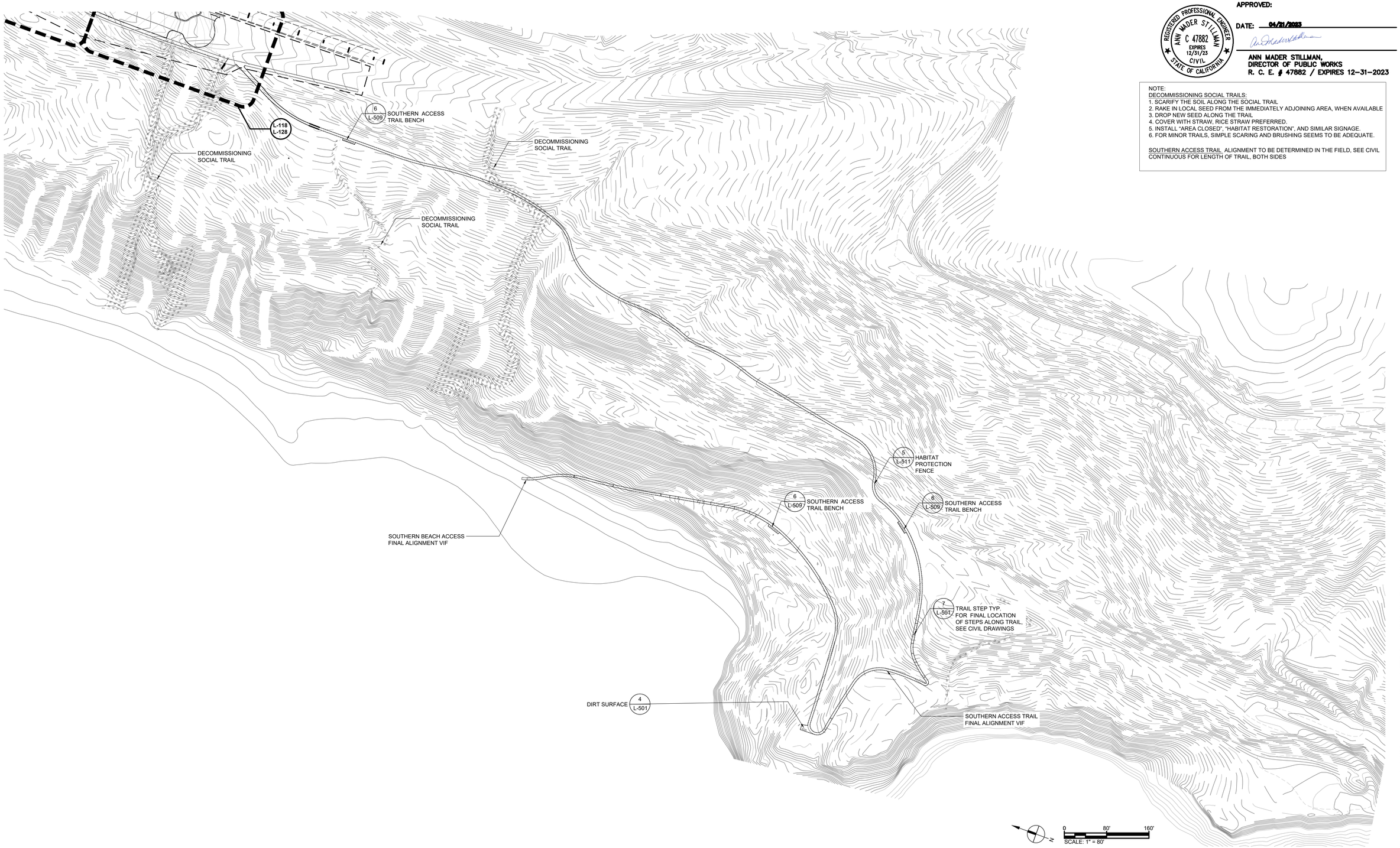

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APPROVED DATE:

JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT
JOHN R. GIBBS
4417
SIGNATURE
DATE
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	SITE PLAN
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

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L-002
SHEET65 OF 124

MATERIAL SCHEDULE

DETAIL	SYMBOL	TYPE	DESCRIPTION
1/L-501		C.I.P. CONCRETE-TYPE A	MEDIUM BROOM FINISH; SAW CUT JOINTS WITH DAVIS COLOR, INTEGRAL, MESA BUFF, 5447
1/L-501		C.I.P. CONCRETE-TYPE B	EXPOSED AGGREGATE FINISH; SAW CUT JOINTS, DAVIS COLOR, INTEGRAL, MESA BUFF, 5447 CHEMICAL RETARDER (TOPCAST OR EQUAL) "MEDIUM" #25
2/L-501	EJ	C.I.P. CONCRETE PAVEMENT JOINT	
3/L-501		ADMIXTURE - BOUND DECOMPOSED GRANITE PAVING	GRANITECRETE OR EQUAL
4/L-501		NATIVE SOIL TRAIL	COMPACTED NATIVE SOIL. SMOOTH, UNIFORM FINISH, ROCKS LARGER THAN 1" REMOVED, COMPACTED TO 90% RD.
L-504 - L-508		WOOD DECKING	REDWOOD, ROUGH SAWN, CONSTRUCTION HEART. STRUCTURE BELOW DECKING SHALL BE AS SPECIFIED.
5/L-501		STABILIZED DECOMPOSED GRANITE	GRAVEL FINES. LYNGSO TAFFY FINES OR EQUAL WITH STABILIZER SOLUTIONS STABILIZER, OR EQUAL
SEE CIVIL		CLASS 2 AGGREGATE BASE	SCD
		MULCH	SHREDDED HARDWOOD MULCH. LYGSO WOOD CHIPS OR EQUAL, 1/2" -1" LIGHT COLORED, MIX OF REDWOOD AND FIR.

EDGING, RAILING, FENCE

6/L-501		STEEL EDGING	1/4" THICK EDGING. WEATHERING STEEL, 5" DEEP, SURE-LOC OR EQUAL.
2/L-504		BENT STEEL PLATE AT DECK	1/4" THICK EDGING.WEATHERING STEEL
1,6/L-514		GUARDRAIL	STAINLESS STEEL FRAMING SS WIRE MESH INFILL PANELS
5 /L-502		HANDRAIL AT AMPHITHEATER	STAINLESS STEEL
2/L-509		HANDRAIL AT PEDESTRIAN STAIR	GALVANIZED STEEL
4/L-511		HANDRAIL AT PEDESTRIAN PATH	GALVANIZED STEEL
7/L-511	G	GUARDRAIL AT PEDESTRIAN PATH	GALVANIZED STEEL
7/L-514	T	TOE RAIL	SALVAGED REDWOOD
5/L-511		HABITAT PROTECTION FENCE	MANILA ROPE 3/8" TWISTED, ROPE STAKES 1/4" STEEL ROD WITH CLOSED 1 1/4" ID LOOP, EMBED MIN 12", INSTALL 6' OC MAX AT UNIFORM HEIGHT, TIE ROPE EVERY 3 STAKES, 3/8" STEEL ROD
1/L-508		RETAINING WALL	SCD, SHEETS-1, DETAIL1

FURNISHING SCHEDULE

1/L-510		MID-BLUFF TIMBER BENCH	6X8 TIMBER, CIP CONCRETE,BROOM FINISH
2 /L-510		TOP OF BLUFF SEATWALL, TYPE A	CIP CONCRETE, EXPOSED AGGREGATE FINISH
3/L-510		TOP OF BLUFF SEATWALL, TYPE B	CIP CONCRETE, EXPOSED AGGREGATE FINISH, TIMBER SEAT BACK
4/L-510		STRATA BENCH	LANDSCAPEFORMS, STRATA BEAM BENCH,80" BACKED, NATURAL ECRU, MELDSTONE, IPE, NATURAL ECRU, SILVER POWERDERCOATED METAL
5/L-510		RAMMED EARTH BENCH	RAMMED EARTH BENCH
6/L-510		SOUTHERN ACCESS TRAIL BENCH	QCP, Q2CAL72B, CALIFORNIA, LATTE COLOR, STRATA FINISH, STANDARD,REINFORCED CONCRETE
7/L-510		BIKE RACK	MMCITE, STE510,, BICYCLE RACK, STAINLESS STEEL
1/L-511		PICNIC TABLE, TYPE A	QCP, QSTD90PTADA, STANDARD PICNIC(ADA), LATTE COLOR, STRATA FINISH, STANDARD REINFORCED CONCRETE
2/L-511		PICNIC TABLE, TYPE B	QCP, QSTD90PTADA, STANDARD PICNIC(ADA), LATTE COLOR, STRATA FINISH, STANDARD REINFORCED CONCRETE
3/L-511		LOGS	LARGE FORMAT LOGS
2/L-512		INTERPRETIVE SIGNAGE PANEL	TIMBER, ALUMINUM
3/L-512		ENTRANCE KIOSK	TIMBER, GALVANIZED STEEL
7/L-501		TIMBER CURB STOP	6X6 TIMBER
6/L-511		BIKE REPAIR STATION	FIXIT-PLUS PER MANUFACTURER

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

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REGISTERED LANDSCAPE ARCHITECT
JOHN R. GIBBS
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SIGNATURE
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STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	MATERIAL NOTES AND LEGEND
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

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L-110
SHEET66 OF 124

N:\80008337 tunitas creek beach improvement project\4-ACAD\5-construction documentation\Sheet\L-110 MATERIAL NOTES AND LEGEND.dwg 04/27/2023 - 10:15 AM jpou 1:1

LEGEND

- C.I.P. CONCRETE - TYPE A BROOM FINISH 1 / L-501
- C.I.P. CONCRETE - TYPE B EXPOSED AGGREGATE FINISH 1 / L-501
- ADMIXTURE - BOUND DECOMPOSED GRANITE PAVING 3 / L-501
- NATIVE SOIL TRAIL 4 / L-501
- WOOD DECKING L-504
- STABILIZED DECOMPOSED GRANITE 5 / L-501
- CLASS 2 AGGREGATE BASE SEE CIVIL
- MULCH

	STEEL EDGING
	BENT STEEL PLATE AT DECK
	GUARDRAIL
	HANDRAIL AT AMPHITHEATER
	HANDRAIL AT PEDESTRIAN STAIR
	HANDRAIL AT PEDESTRIAN PATH
G	GUARDRAIL AT PEDESTRIAN PATH
T	TOE RAIL
	HABITAT PROTECTION FENCE
	RETAINING WALL

REGISTERED PROFESSIONAL ENGINEER ANN MADER STILLMAN C. 47882 EXPIRES 12/31/23 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

LIMIT OF DISTURBANCE
LIMIT OF GRADING
EXISTING GRAVEL
PUBLIC RESTROOM, SEE CIVIL DRAWINGS
PA
MATCHLINE SEE L-111
MATCHLINE SEE L-113
EMERGENCY AND RANGER VEHICLE ACCESS
PAVEMENT SEE CIVIL
STRATA BENCH TYP
4 L-509
RANGER STORAGE AND OFFICE SPACE, SEE CIVIL DRAWINGS
BEACH ACCESS TRAIL, SEE CIVIL
LOG FEATURE AREA
INTERPRETIVE AREA
EJ

N:\800\8337 tunitas creek beach improvement project\4-ACAD\5-construction documentation\Sheets-110 MATERIALS PLAN.dwg 04/27/2023 - 10:17 AM josu 1:1

0 10' 20'
SCALE: 1" = 10'

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SAN FRANCISCO, CA 94103
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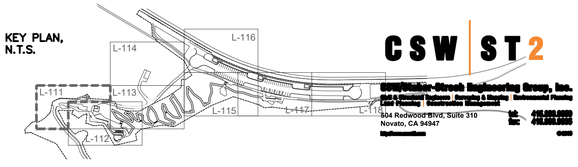
415.575.4722

KEY PLAN, N.T.S.



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Carlile Stolzer Strock Engineering Group, Inc.
Civil & Structural Engineers · Surveying & Mapping · Environmental Planning
804 Redwood Blvd, Suite 310
Novato, CA 94947
tel 415.883.0220
fax 415.883.0221
www.cswst2.com

APPROVED DATE:

JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT JOHN R. GIBBS 4417 SIGNATURE DATE STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	MATERIALS PLAN 1
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

L-111
SHEET67 OF 124

MATCHLINE SEE L-111

MATCHLINE SEE L-113

EMERGENCY AND RANGER VEHICLE ACCESS

PAVEMENT SEE CIVIL

LIMIT OF GRADING

(E) SERVICE ROAD TO REMAIN

LIMIT OF DISTURBANCE

PA

4 L-509 STRATA BENCH TYP

PEDESTRIAN PATH TO BEACH

7 L-509 (5)BIKE RACKS

RANGER STORAGE AND OFFICE SPACE, SEE CIVIL DRAWINGS

5 L-510 HABITAT PROTECTION FENCE, LANDSCAPE ARCHITECT TO VERIFY FINAL EXTENTS IN FIELD

3 L-510 LOGS, ENGINEER TO APPROVE FINAL SIZE, SELECTION, LOCATION, EMBEDMENT

5 L-509 RAMMED EARTH SEATWALL, TYP.

LOG FEATURE AREA

1 L-509 MID-BLUFF TIMBER BENCH

1 L-511 INTERPRETIVE SIGNAGE PANEL FIELD LOCATE PER ENGINEER'S DIRECTION

5 L-501 STABILIZED DECOMPOSED GRANITE

INTERPRETIVE AREA

EJ

1 L-510 PICNIC TABLE TYPE A

2 L-510 PICNIC TABLE, TYPE B

PICNIC AREA

ADA

1,4 L-508 PEDESTRIAN STAIR

PEDESTRIAN RAMP TO MID-BLUFF 1 L-507

1 L-509 MID-BLUFF TIMBER BENCH

2B L-512 DONOR RECOGNITION SIGNAGE

2A L-512 DONOR RECOGNITION SIGNAGE

1 L-302

2 L-302

G

RETAINING WALL, TYP. SEE CIVIL

HANDRAIL AT AMPHITHEATER

MID-BLUFF OVERLOOK

TIERED SEATING AND MID-BLUFF OVERLOOK

1 L-301

2 L-301

1 L-201 AMPHITHEATER ENLARGEMENT PLAN

LEGEND

C.I.P. CONCRETE - TYPE A BROOM FINISH 1 / L-501	WOOD DECKING L-504
C.I.P. CONCRETE - TYPE B EXPOSED AGGREGATE FINISH 1 / L-501	STABILIZED DECOMPOSED GRANITE 5 / L-501
ADMIXTURE - BOUND DECOMPOSED GRANITE PAVING 3 / L-501	CLASS 2 AGGREGATE BASE SEE CIVIL
NATIVE SOIL TRAIL 4 / L-501	MULCH

	STEEL EDGING
	BENT STEEL PLATE AT DECK
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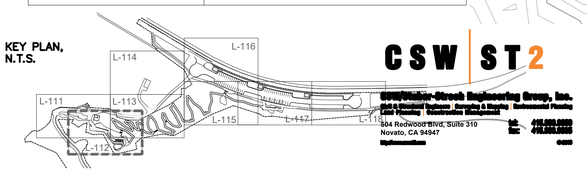
	HANDRAIL AT PEDESTRIAN PATH
G	GUARDRAIL AT PEDESTRIAN PATH
T	TOE RAIL
	HABITAT PROTECTION FENCE
	RETAINING WALL

0 10' 20'
SCALE: 1" = 10'

KEY PLAN, N.T.S.



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Carlson, Barbee & Gibson, Inc.
804 Redwood Blvd, Suite 310
Novato, CA 94947

APPROVED DATE:

JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT JOHN B. GIBBS 4417 SIGNATURE DATE 06-30-24 STATE OF CALIFORNIA

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER ANN MADER STILLMAN C 47882 EXPIRES 12/31/23 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	MATERIALS PLAN 2
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

L-112
SHEET68 OF 124

N:\8000\8337 tunitas creek beach improvement project\4-ACAD\5-construction documentation\Sheet\L-110 MATERIALS PLAN.dwg 04/27/2023 - 10:17 AM jpau 1:1

LEGEND

C.I.P. CONCRETE - TYPE A BROOM FINISH 1 / L-501	WOOD DECKING L-504
C.I.P. CONCRETE - TYPE B EXPOSED AGGREGATE FINISH 1 / L-501	STABILIZED DECOMPOSED GRANITE 5 / L-501
ADMIXTURE - BOUND DECOMPOSED GRANITE PAVING 3 / L-501	CLASS 2 AGGREGATE BASE SEE CIVIL
NATIVE SOIL TRAIL 4 / L-501	MULCH

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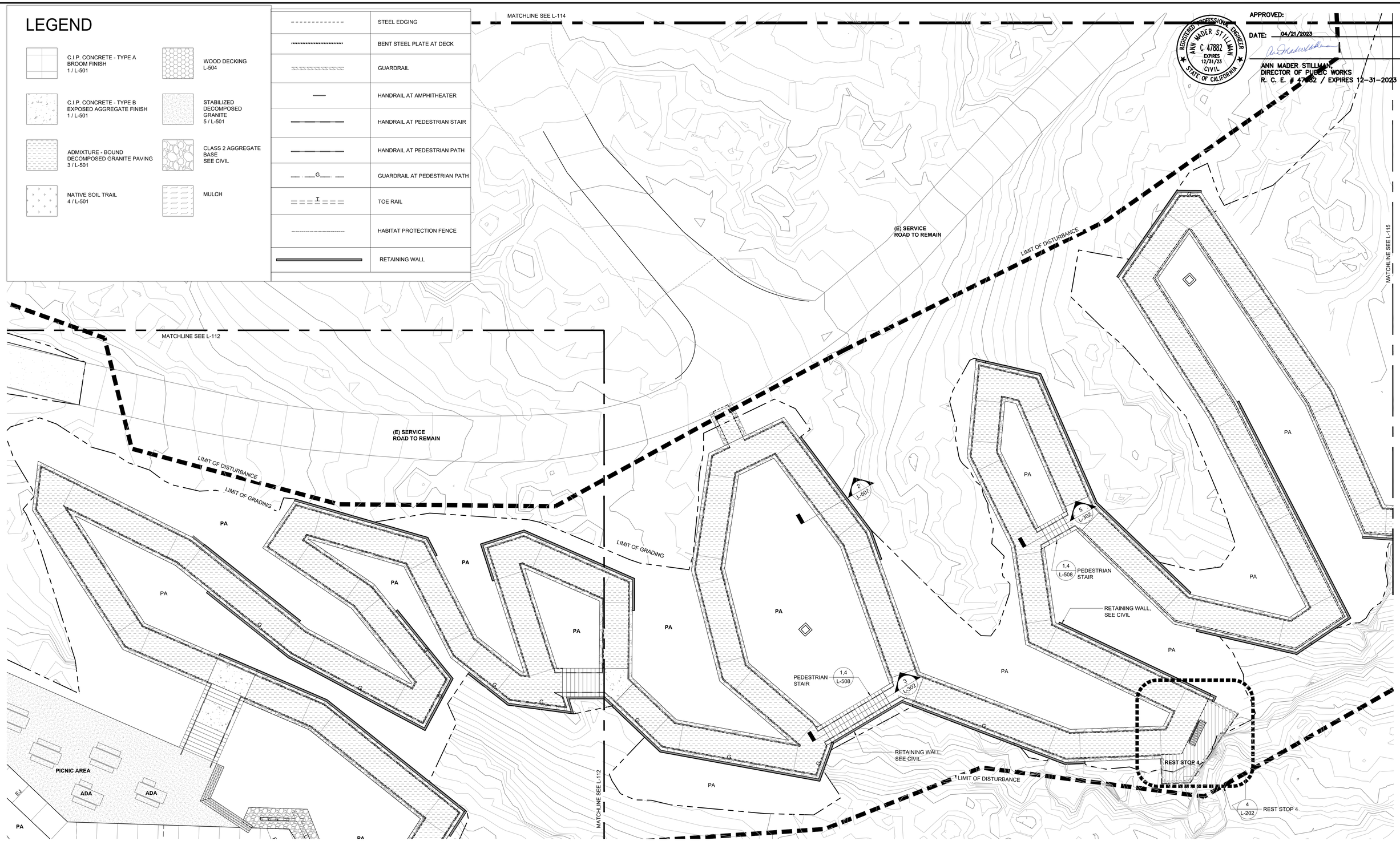
	HABITAT PROTECTION FENCE
	RETAINING WALL



APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER ANN MADER STILLMAN C 47882 EXPIRES 12/31/23 CIVIL STATE OF CALIFORNIA

0 10' 20'
SCALE: 1" = 10'

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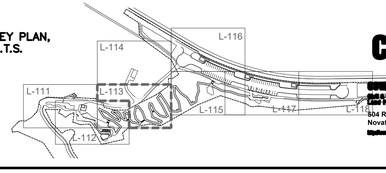
KEY PLAN, N.T.S.



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Novato, CA 94947
Tel: 415.883.0000
Fax: 415.883.0005
Mp@csw-st2.com

APPROVED DATE:

JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT JOHN R. GIBBS 4417 SIGNATURE DATE STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
MATERIALS PLAN 3
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

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DATE: 04/21/2023
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L-113
SHEET69 OF 124

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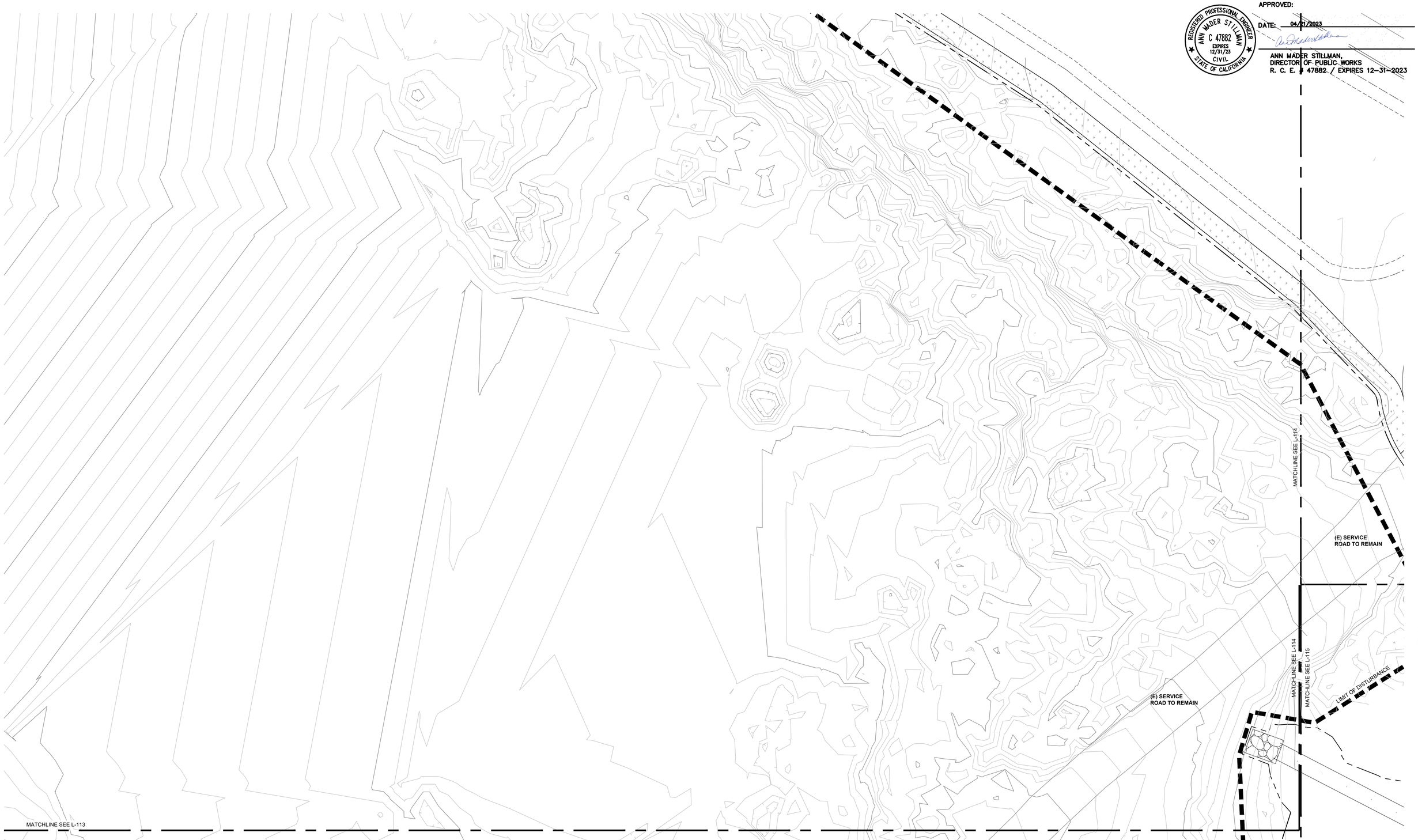

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DATE: 04/21/2023

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R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

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0 10' 20'
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SAN FRANCISCO, CA 94103
WRTDESIGN.COM
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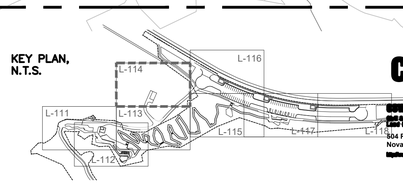
KEY PLAN,
N.T.S.



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tel: 415.883.9000
fax: 415.883.9005
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www.csw-st2.com

APPROVED DATE:

JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT
JOHN R. GIBBS
4417
SIGNATURE
DATE
FOR 06/30/24
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
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DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
MATERIAL PLAN 4
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

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ORIGINAL SCALE IS IN INCHES
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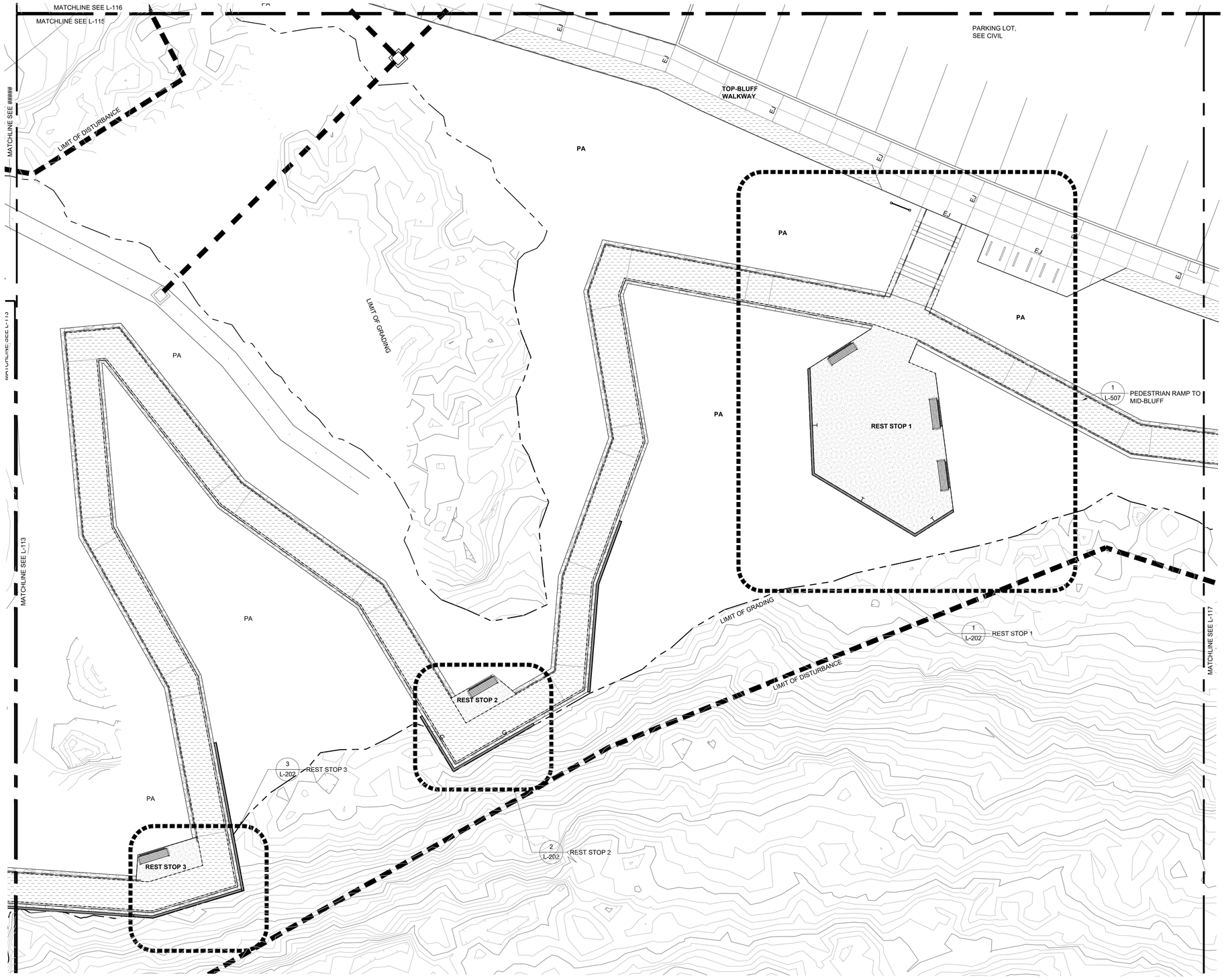
L-114
SHEET70 OF 124



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DATE: 04/21/2023

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R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER ANN MADER STILLMAN C 47882 EXPIRES 12/31/23 CIVIL STATE OF CALIFORNIA

LEGEND

C.I.P. CONCRETE - TYPE A BROOM FINISH 1 / L-501	WOOD DECKING L-504
C.I.P. CONCRETE - TYPE B EXPOSED AGGREGATE FINISH 1 / L-501	STABILIZED DECOMPOSED GRANITE 5 / L-501
ADMIXTURE - BOUND DECOMPOSED GRANITE PAVING 3 / L-501	CLASS 2 AGGREGATE BASE SEE CIVIL
NATIVE SOIL TRAIL 4 / L-501	MULCH

	STEEL EDGING
	BENT STEEL PLATE AT DECK
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	HANDRAIL AT PEDESTRIAN PATH
G	GUARDRAIL AT PEDESTRIAN PATH
T	TOE RAIL
	HABITAT PROTECTION FENCE
	RETAINING WALL

N 0 10' 20'
SCALE: 1" = 10'

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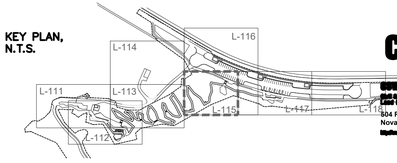
KEY PLAN, N.T.S.



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JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT JOHN R. GIBBS 4417 SIGNATURE DATE STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
MATERIALS PLAN 5
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

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L-115
SHEET71 OF 124

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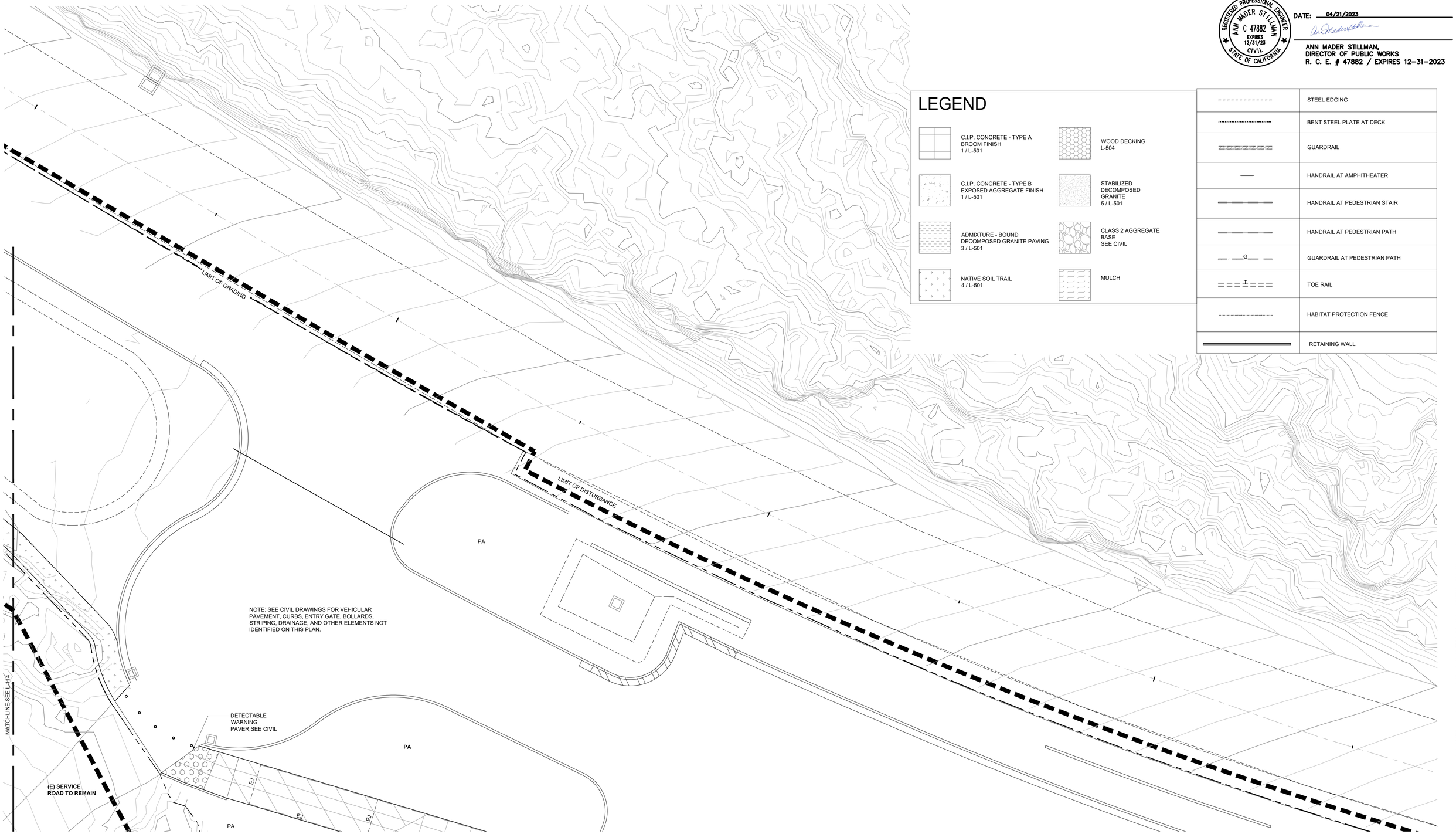
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA



LEGEND

C.I.P. CONCRETE - TYPE A BROOM FINISH 1 / L-501	WOOD DECKING L-504
C.I.P. CONCRETE - TYPE B EXPOSED AGGREGATE FINISH 1 / L-501	STABILIZED DECOMPOSED GRANITE 5 / L-501
ADMIXTURE - BOUND DECOMPOSED GRANITE PAVING 3 / L-501	CLASS 2 AGGREGATE BASE SEE CIVIL
NATIVE SOIL TRAIL 4 / L-501	MULCH

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G	GUARDRAIL AT PEDESTRIAN PATH
T	TOE RAIL
	HABITAT PROTECTION FENCE
	RETAINING WALL

N

0 10' 20'
SCALE: 1" = 10'

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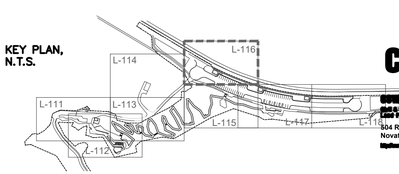
SAN FRANCISCO, CA 94103
WRTDESIGN.COM
415.575.4722

KEY PLAN, N.T.S.



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APPROVED DATE:

JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT
JOHN R. GIBBS
4417
SIGNATURE
DATE
EXP. 06-30-24
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
MATERIALS PLAN 6
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

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L-116
SHEET72 OF 124

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LEGEND

C.I.P. CONCRETE - TYPE A BROOM FINISH 1 / L-501	WOOD DECKING L-504
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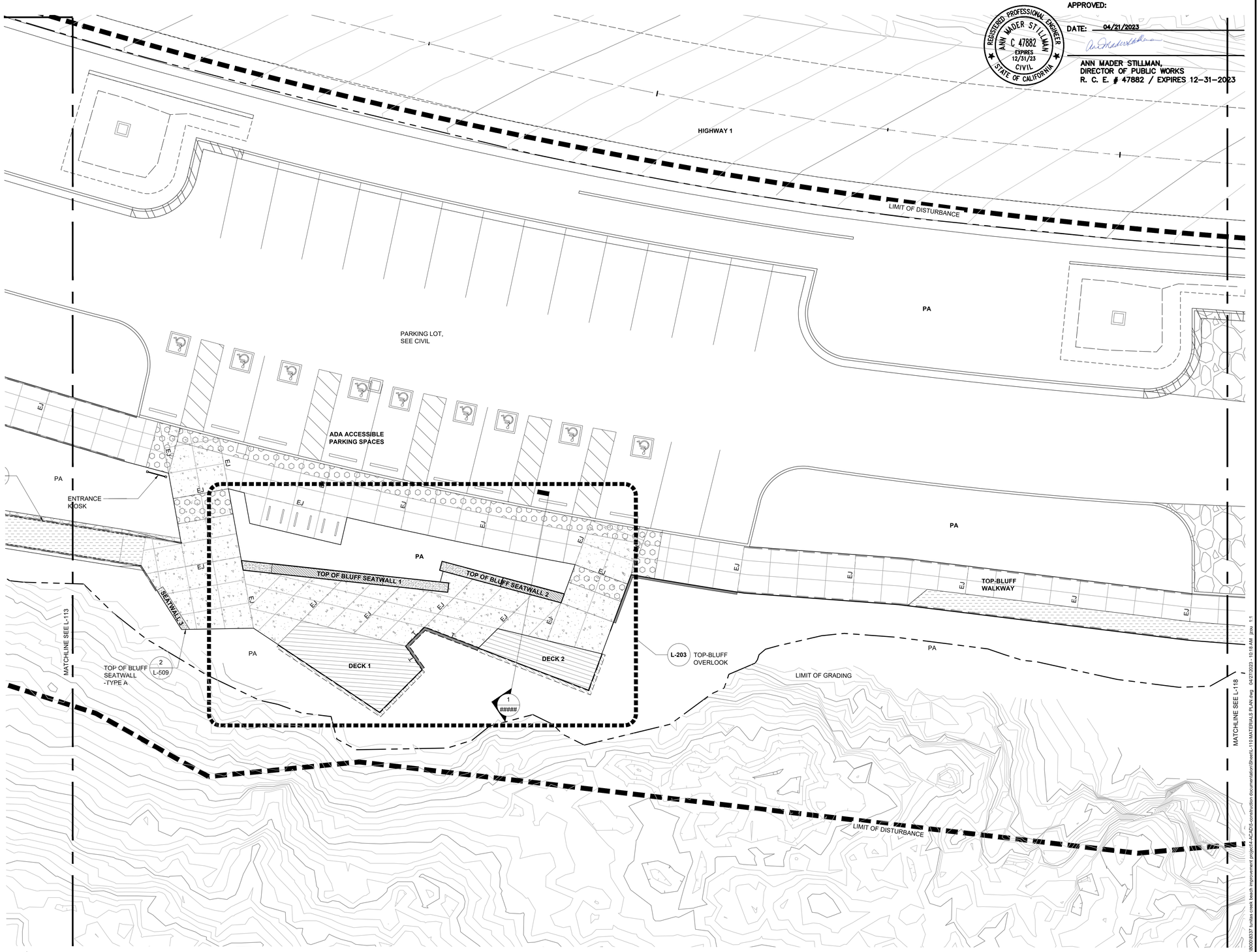

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER ANN MADER STILLMAN C 47882 EXPIRES 12/31/23 CIVIL STATE OF CALIFORNIA

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0 10' 20'
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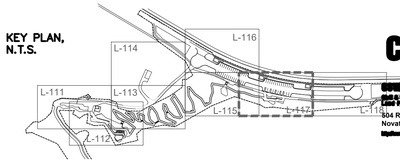
KEY PLAN, N.T.S.



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JOHN GIBBS
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COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
MATERIALS PLAN 7
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

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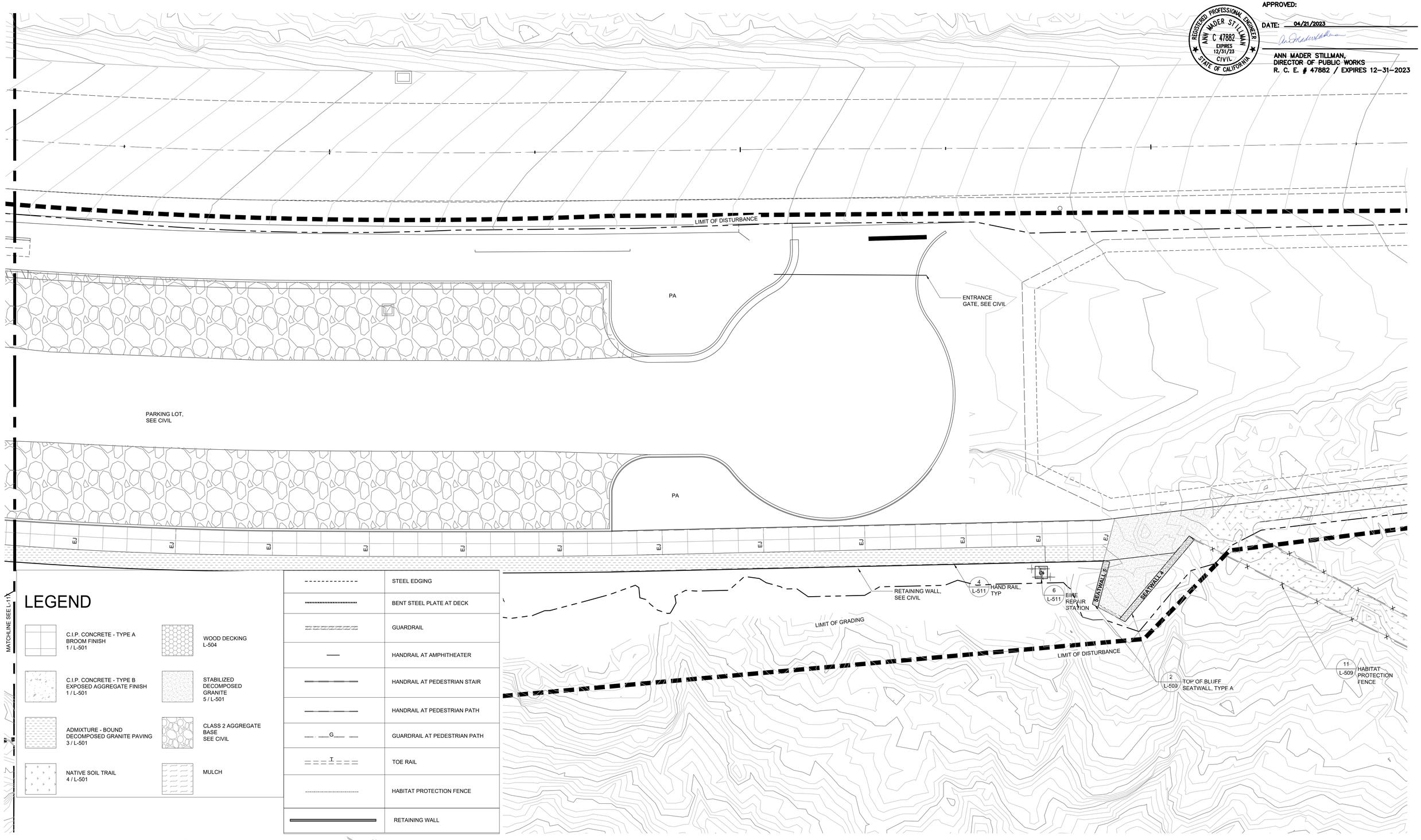
L-117
SHEET73 OF 124

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



LEGEND

C.I.P. CONCRETE - TYPE A BROOM FINISH 1 / L-501	WOOD DECKING L-504
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	RETAINING WALL

N

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SCALE: 1" = 10'

WRT
478 TEHAMA STREET, SUITE 2B
SAN FRANCISCO, CA 94103
WRTDESIGN.COM
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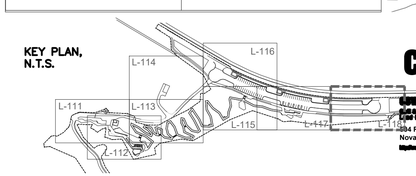
KEY PLAN, N.T.S.



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Novato, CA 94947
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Fax: 415.883.0005
Mgmt@cswst2.com
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APPROVED DATE:

JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT
JOHN R. GIBBS
4417
SIGNATURE
DATE
EXP. 06-30-24
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
MATERIALS PLAN 8
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
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SHEET74 OF 124

N:\8000\8337 tunitas creek beach improvement project\4-ACAD\5-construction documentation\Sheet\L-110 MATERIALS PLAN.dwg 04/27/2023 - 10:19 AM jzou 1:1

PLANTING NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING HIM/HERSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES AND STRUCTURES. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COST INCURRED DUE TO DAMAGE OF SAID UTILITIES.

2. CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS AS REQUIRED TO ACCOMPLISH PLANTING OPERATIONS.

4. SEE SPECIFICATIONS FOR PLANTING REQUIREMENTS, MATERIALS, EXECUTION, MAINTENANCE, AND ADDITIONAL INFO.

5. SEE DETAILS AND SPECIFICATIONS FOR PLANTING STAKING METHOD AND PLANTING SOIL REQUIREMENTS.

6. IF CONFLICTS ARISE BETWEEN SIZE OF AREAS AND PLANS, CONTRACTOR SHALL CONTACT ENGINEER FOR RESOLUTION. FAILURE TO MAKE SUCH CONFLICTS KNOWN WILL RESULT IN CONTRACTOR'S LIABILITY FOR MATERIALS RELOCATION.

7. GROUNDCOVERS SHALL BE SPACED PER DETAILS. SHRUBS, PERENNIALS AND GRASSES SHALL BE SPACED PER PLAN OR PER DETAIL AS REQUIRED.

8. TREE LOCATIONS SHALL BE STAKED BY CONTRACTOR AND REVIEWED IN THE FIELD BY LANDSCAPE ARCHITECT. CONTRACTOR SHALL ANTICIPATE ADJUSTMENTS TO LOCATIONS.

9. ALL WORK TO BE PERFORMED BY LICENSED (C27) CONTRACTORS AND EXPERIENCED WORKERS.

10. ALL PLANTING AREAS SHALL RECEIVE WOOD MULCH PER SPECIFICATIONS.

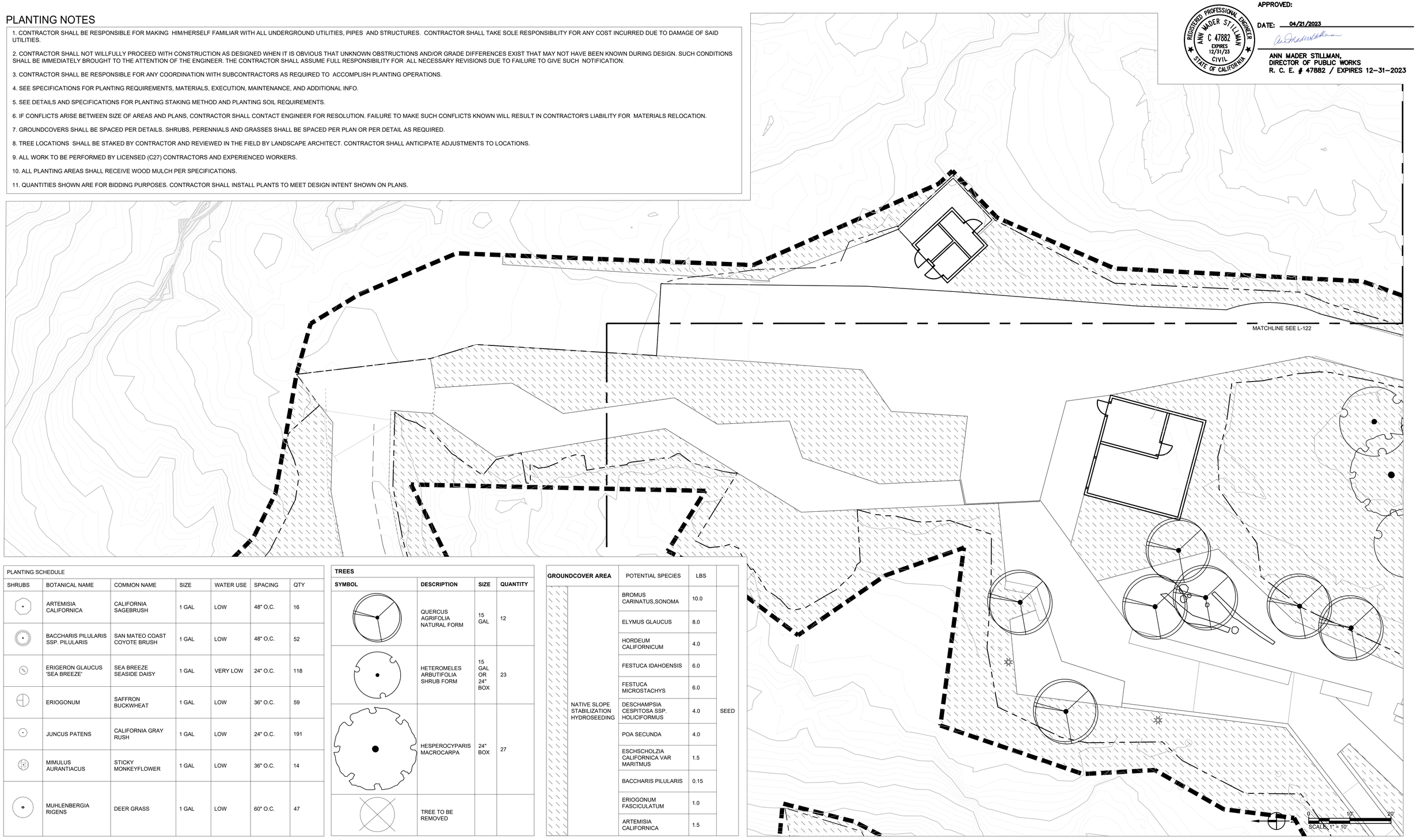
11. QUANTITIES SHOWN ARE FOR BIDDING PURPOSES. CONTRACTOR SHALL INSTALL PLANTS TO MEET DESIGN INTENT SHOWN ON PLANS.

REGISTERED PROFESSIONAL ENGINEER — ANN MADER STILLMAN — C 47882 EXPIRES 12/31/23 CIVIL — STATE OF CALIFORNIA

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



PLANTING SCHEDULE						
SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE	SPACING	QTY
	ARTEMISIA CALIFORNICA	CALIFORNIA SAGEBRUSH	1 GAL	LOW	48" O.C.	16
	BACCHARIS PILULARIS SSP. PILULARIS	SAN MATEO COAST COYOTE BRUSH	1 GAL	LOW	48" O.C.	52
	ERIGERON GLAUCUS 'SEA BREEZE'	SEA BREEZE SEASIDE DAISY	1 GAL	VERY LOW	24" O.C.	118
	ERIOGONUM	SAFFRON BUCKWHEAT	1 GAL	LOW	36" O.C.	59
	JUNCUS PATENS	CALIFORNIA GRAY RUSH	1 GAL	LOW	24" O.C.	191
	MIMULUS AURANTIACUS	STICKY MONKEYFLOWER	1 GAL	LOW	36" O.C.	14
	MUHLENBERGIA RIGENS	DEER GRASS	1 GAL	LOW	60" O.C.	47

TREES			
SYMBOL	DESCRIPTION	SIZE	QUANTITY
	QUERCUS AGRIFOLIA NATURAL FORM	15 GAL	12
	HETEROMELES ARBUTIFOLIA SHRUB FORM	15 GAL OR 24" BOX	23
	HESPEROCYPARIS MACROCARPA	24" BOX	27
	TREE TO BE REMOVED		

GROUNDCOVER AREA	POTENTIAL SPECIES	LBS	
NATIVE SLOPE STABILIZATION HYDROSEEDING	BROMUS CARINATUS,SONOMA	10.0	SEED
	ELYMUS GLAUCUS	8.0	
	HORDEUM CALIFORNICUM	4.0	
	FESTUCA IDAHOENSIS	6.0	
	FESTUCA MICROSTACHYS	6.0	
	DESCHAMPSIA CESPITOSA SSP. HOLICIFORMUS	4.0	
	POA SECUNDA	4.0	
	ESCHSCHOLZIA CALIFORNICA VAR MARITMUS	1.5	
	BACCHARIS PILULARIS	0.15	
	ERIOGONUM FASCICULATUM	1.0	
	ARTEMISIA CALIFORNICA	1.5	

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WRTDESIGN.COM
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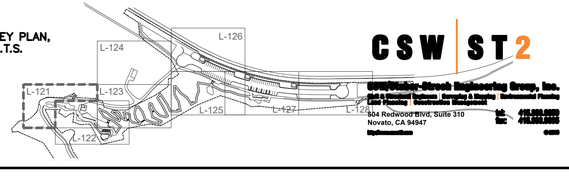
KEY PLAN, N.T.S.



CSW | ST2
504 Redwood Blvd, Suite 310
Novato, CA 94947

APPROVED DATE: JOHN R GIBBS

JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT — JOHN R. GIBBS — 4417 — SIGNATURE — DATE — STATE OF CALIFORNIA

COUNTY OF SAN MATEO — PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	PLANTING PLAN 1
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

L-121
SHEET 75 OF 124

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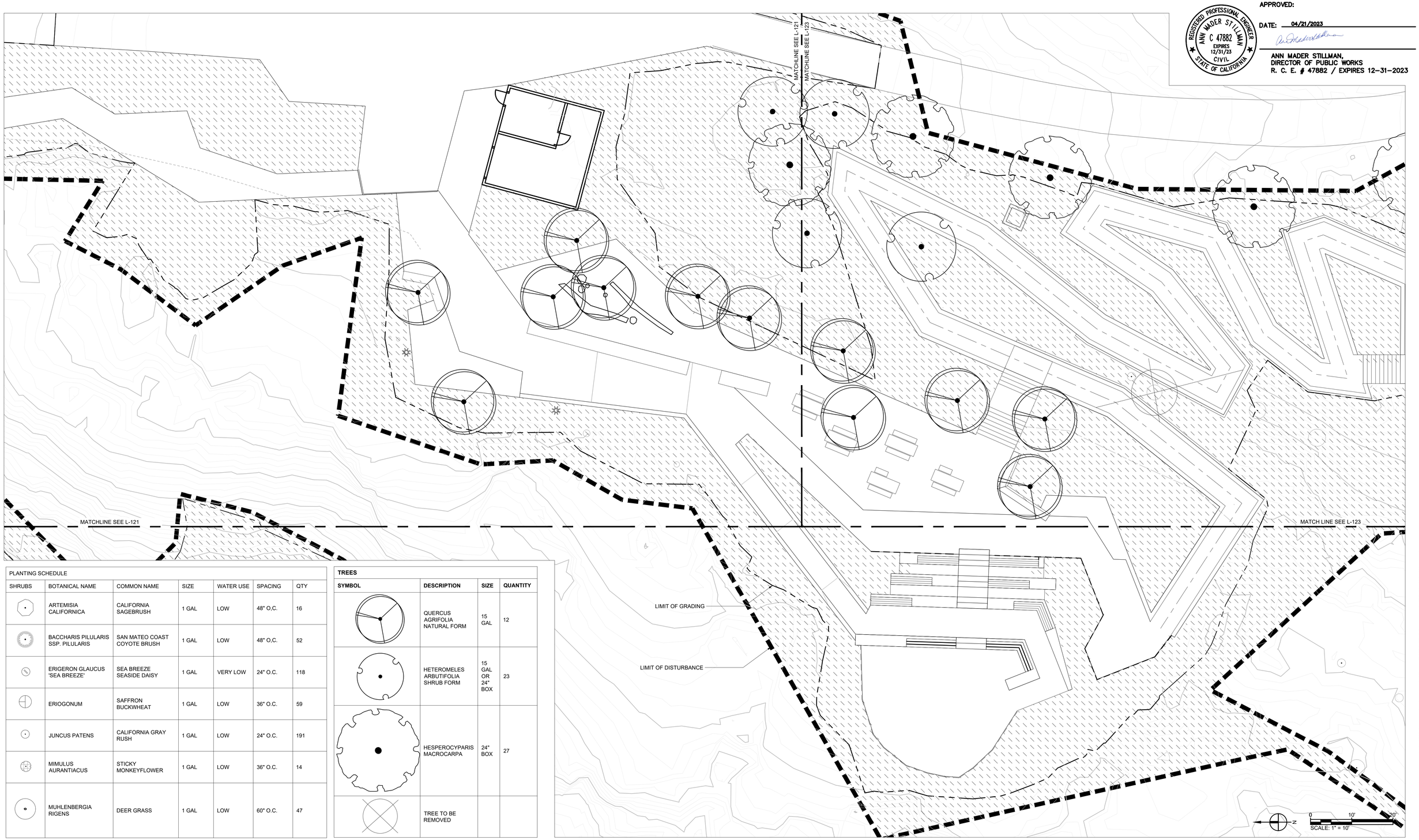
APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



PLANTING SCHEDULE

SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE	SPACING	QTY
	ARTEMISIA CALIFORNICA	CALIFORNIA SAGEBRUSH	1 GAL	LOW	48" O.C.	16
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	ERIOGONUM	SAFFRON BUCKWHEAT	1 GAL	LOW	36" O.C.	59
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	HESPEROCYPARIS MACROCARPA	24" BOX	27
	TREE TO BE REMOVED		

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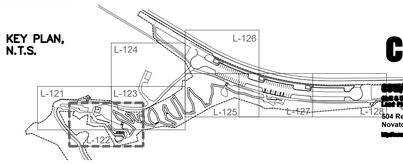
SAN FRANCISCO, CA 94103
WRTDESIGN.COM
415.575.4722

KEY PLAN, N.T.S.



CSW | ST2
CSW/Stuber-Stroh Engineering Group, Inc.
Civil & Structural Engineers | Surveying & Mapping | Environmental Planning
Land Planning | Construction Management
504 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.9000
fax: 415.883.9005
mail@cswstrohcom

APPROVED DATE:

JOHN GIBBS
4417 EXPIRES 06/30/2024

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
PLANTING PLAN 2
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

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SHEET76 OF 124

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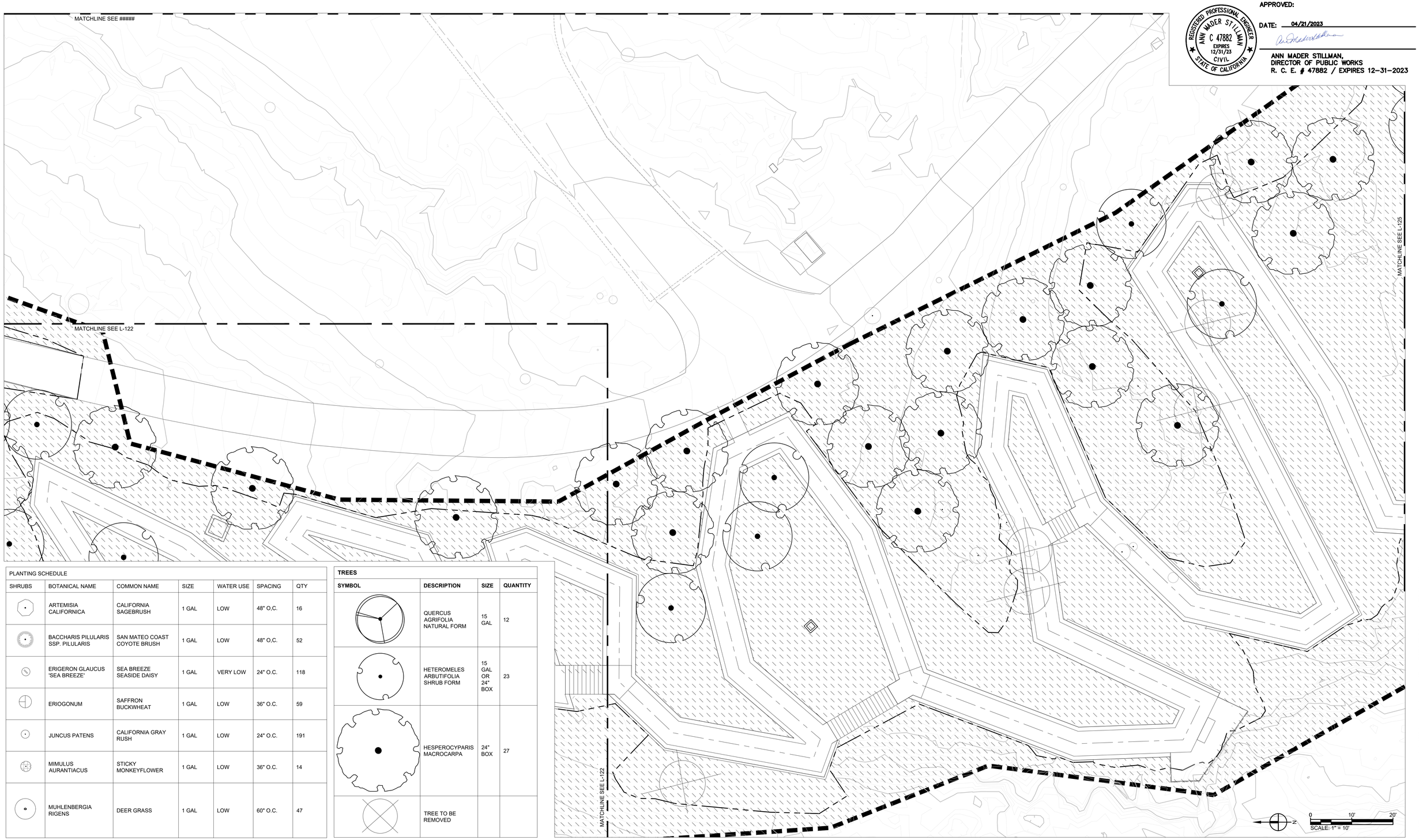
APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA



PLANTING SCHEDULE

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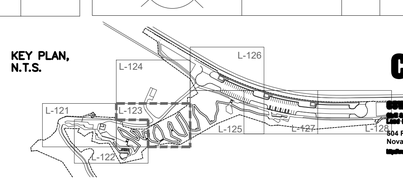
KEY PLAN, N.T.S.



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415.575.4722

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CSW/Stuber-Stroeh Engineering Group, Inc.
Civil & Structural Engineers | Surveying & Mapping | Environmental Planning
Land Planning | Construction Management
504 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.0000
fax: 415.883.0005
mp@cswstl.com
c-2020

APPROVED DATE:

JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT
JOHN R. GIBBS
4417
SIGNATURE
DATE
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
PLANTING PLAN 3
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

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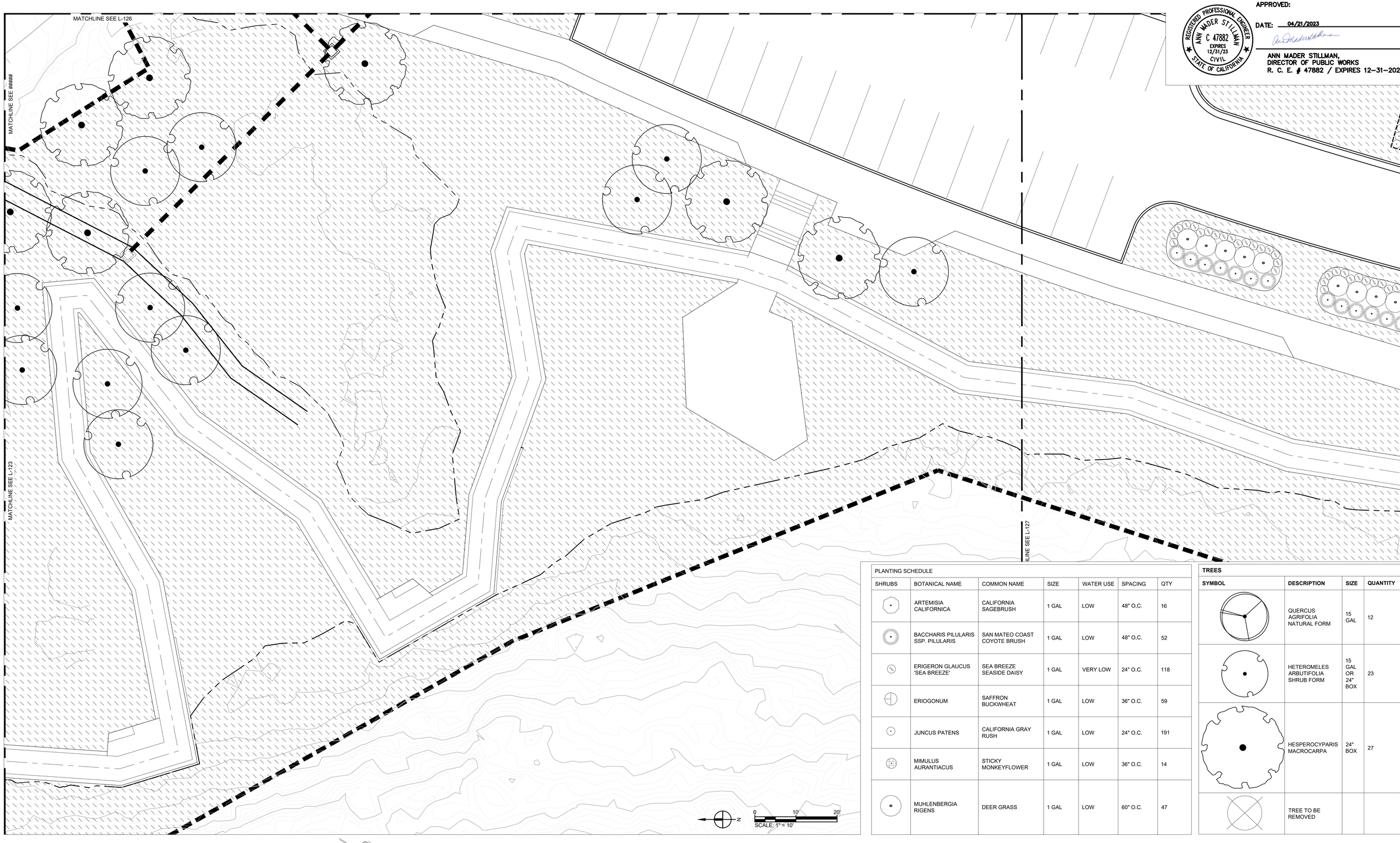

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

PLANTING SCHEDULE

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	TREE TO BE REMOVED		

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478 TEHAMA STREET, SUITE 2B
SAN FRANCISCO, CA 94103
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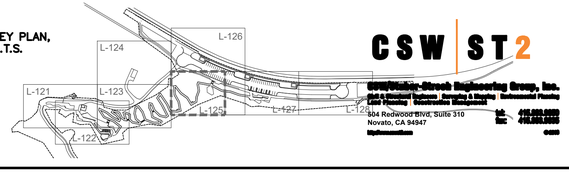
KEY PLAN,
N.T.S.



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504 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.0000
fax: 415.883.0005
www.cswst2.com

APPROVED DATE:

JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT
JOHN R. GIBBS
4417
SIGNATURE
DATE
EXP. 06-30-24
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
PLANTING PLAN 5
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

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ORIGINAL SCALE IS IN INCHES
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SHEET79 OF 124

PLANTING SCHEDULE						
SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE	SPACING	QTY
	ARTEMISIA CALIFORNICA	CALIFORNIA SAGEBRUSH	1 GAL	LOW	48" O.C.	16
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	ERIOGONUM	SAFFRON BUCKWHEAT	1 GAL	LOW	36" O.C.	59
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	TREE TO BE REMOVED		

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

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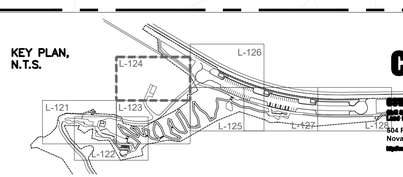
478 TEHAMA STREET, SUITE 2B
SAN FRANCISCO, CA 94103
WRTDESIGN.COM
415.575.4722

KEY PLAN, N.T.S.



CSW | ST2
CSW/Stuber-Stroh Engineering Group, Inc.
504 Redwood Blvd, Suite 310
Novato, CA 94947

APPROVED DATE:

JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT
JOHN R. GIBBS
4417
SIGNATURE
DATE
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
PLANTING PLAN 4
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

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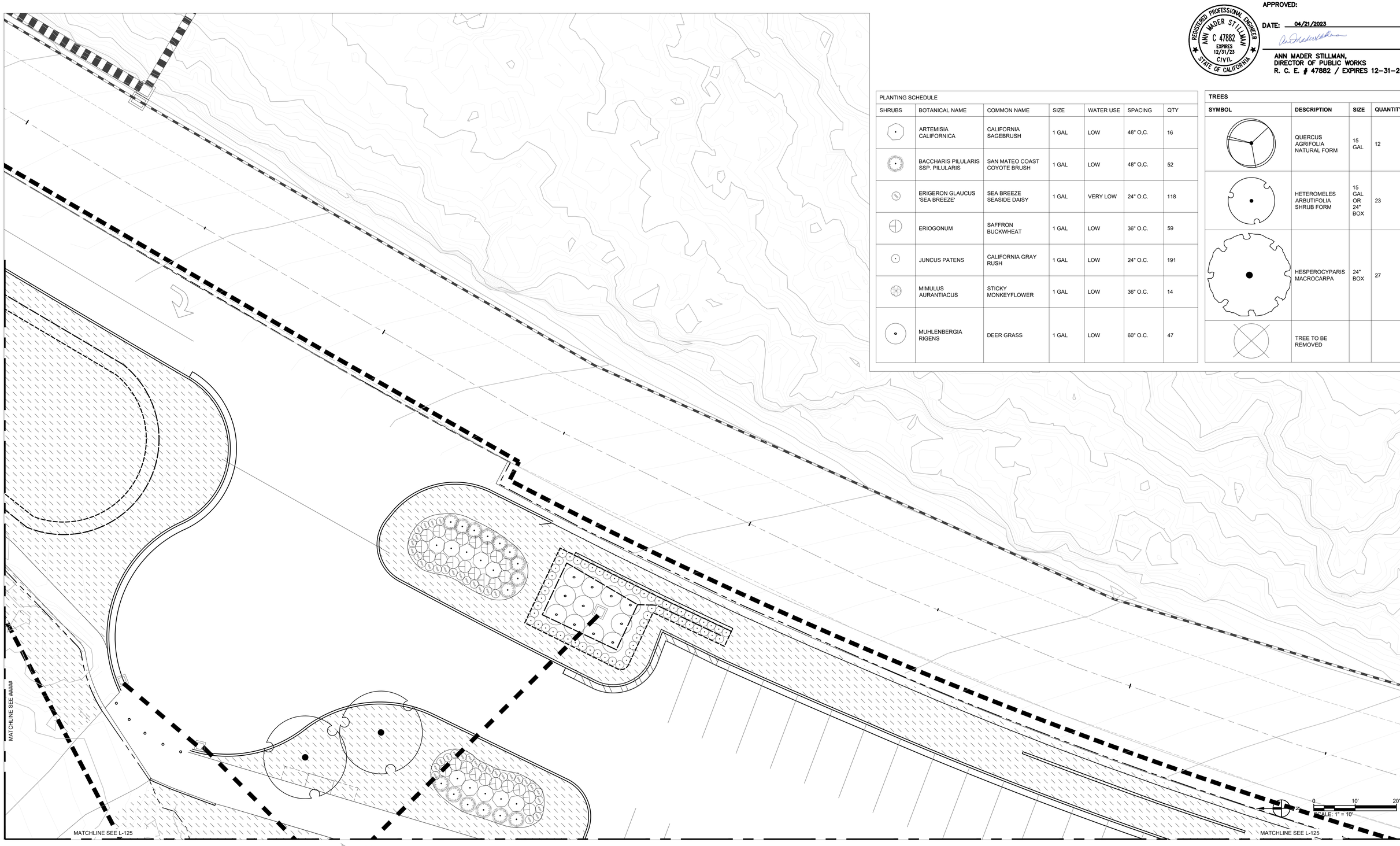
SHEET78 OF 124



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ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

PLANTING SCHEDULE

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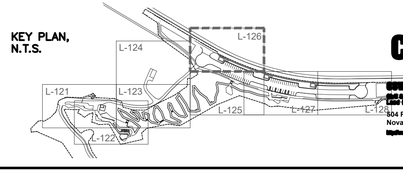
WRT

478 TEHAMA STREET, SUITE 2B
SAN FRANCISCO, CA 94103
WRTDESIGN.COM
415.575.4722

KEY PLAN,
N.T.S.



CSW | ST2

CSW/Stuber-Stroeh Engineering Group, Inc.
504 Redwood Blvd, Suite 310
Novato, CA 94947

APPROVED DATE:

JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT
JOHN R. GIBBS
4417
SIGNATURE
DATE
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
PLANTING PLAN 6
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
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SHEET80 OF 124

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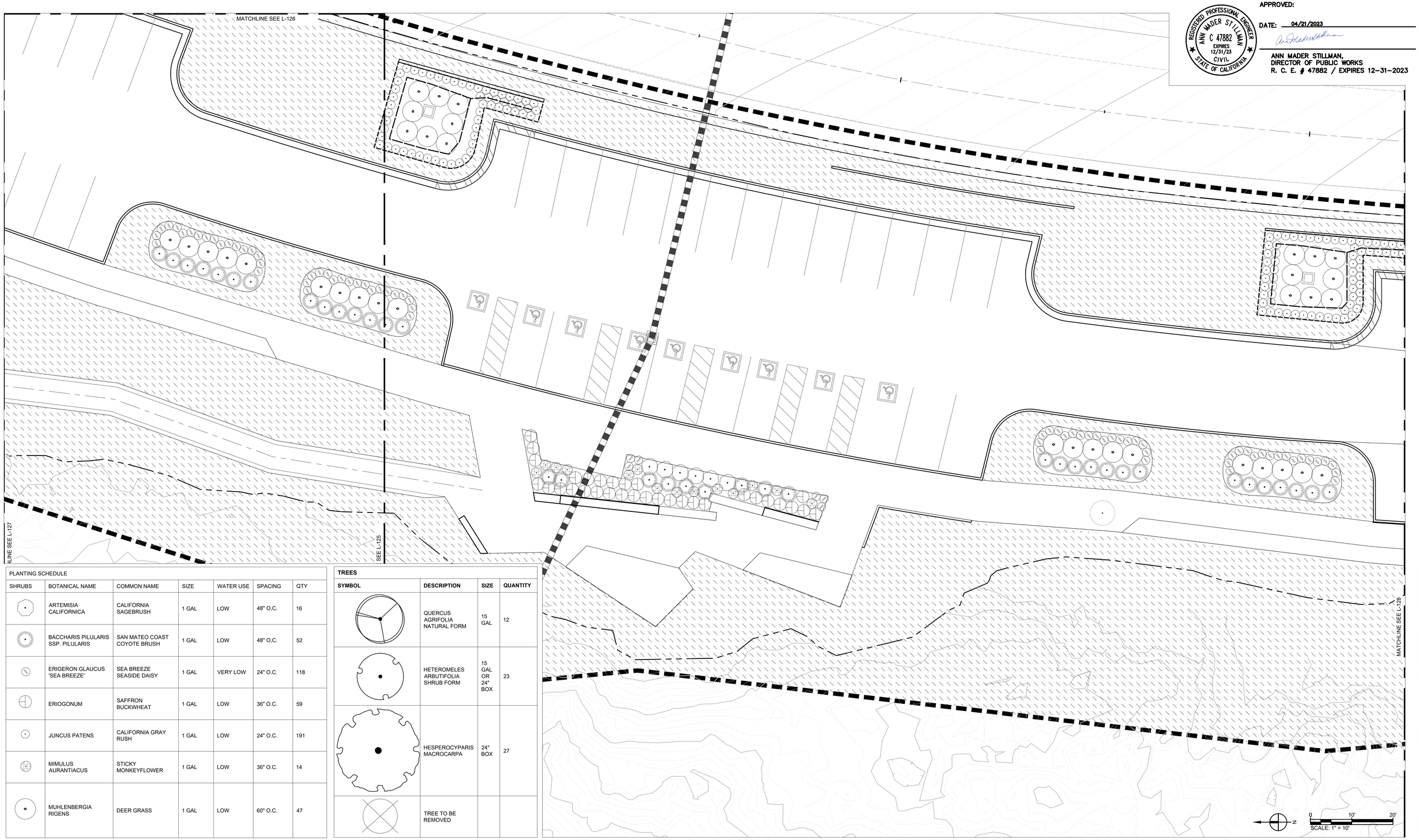

APPROVED:

DATE: 04/21/2023

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DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
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EXPIRES 12/31/23
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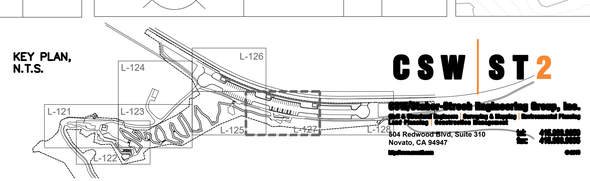
	ARTEMISIA CALIFORNICA	CALIFORNIA SAGEBRUSH	1 GAL	LOW	48" O.C.	16
	BACCHARIS PILULARIS SSP. PILULARIS	SAN MATEO COAST COYOTE BRUSH	1 GAL	LOW	48" O.C.	52
	ERIGERON GLAUCUS 'SEA BREEZE'	SEA BREEZE SEASIDE DAISY	1 GAL	VERY LOW	24" O.C.	118
	ERIOGONUM	SAFFRON BUCKWHEAT	1 GAL	LOW	36" O.C.	59
	JUNCUS PATENS	CALIFORNIA GRAY RUSH	1 GAL	LOW	24" O.C.	191
	MIMULUS AURANTIACUS	STICKY MONKEYFLOWER	1 GAL	LOW	36" O.C.	14
	MUHLENBERGIA RIGENS	DEER GRASS	1 GAL	LOW	60" O.C.	47

TREES

SYMBOL	DESCRIPTION	SIZE	QUANTITY
	QUERCUS AGRIFOLIA NATURAL FORM	15 GAL	12
	HETEROMELES ARBUTIFOLIA SHRUB FORM	15 GAL OR 24" BOX	23
	HESPEROCYPARIS MACROCARPA	24" BOX	27
	TREE TO BE REMOVED		

KEY PLAN, N.T.S.



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Novato, CA 94947

APPROVED DATE:

JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT
JOHN R. GIBBS
4417
SIGNATURE
DATE
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
PLANTING PLAN 7
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

L-127
SHEET81 OF 124

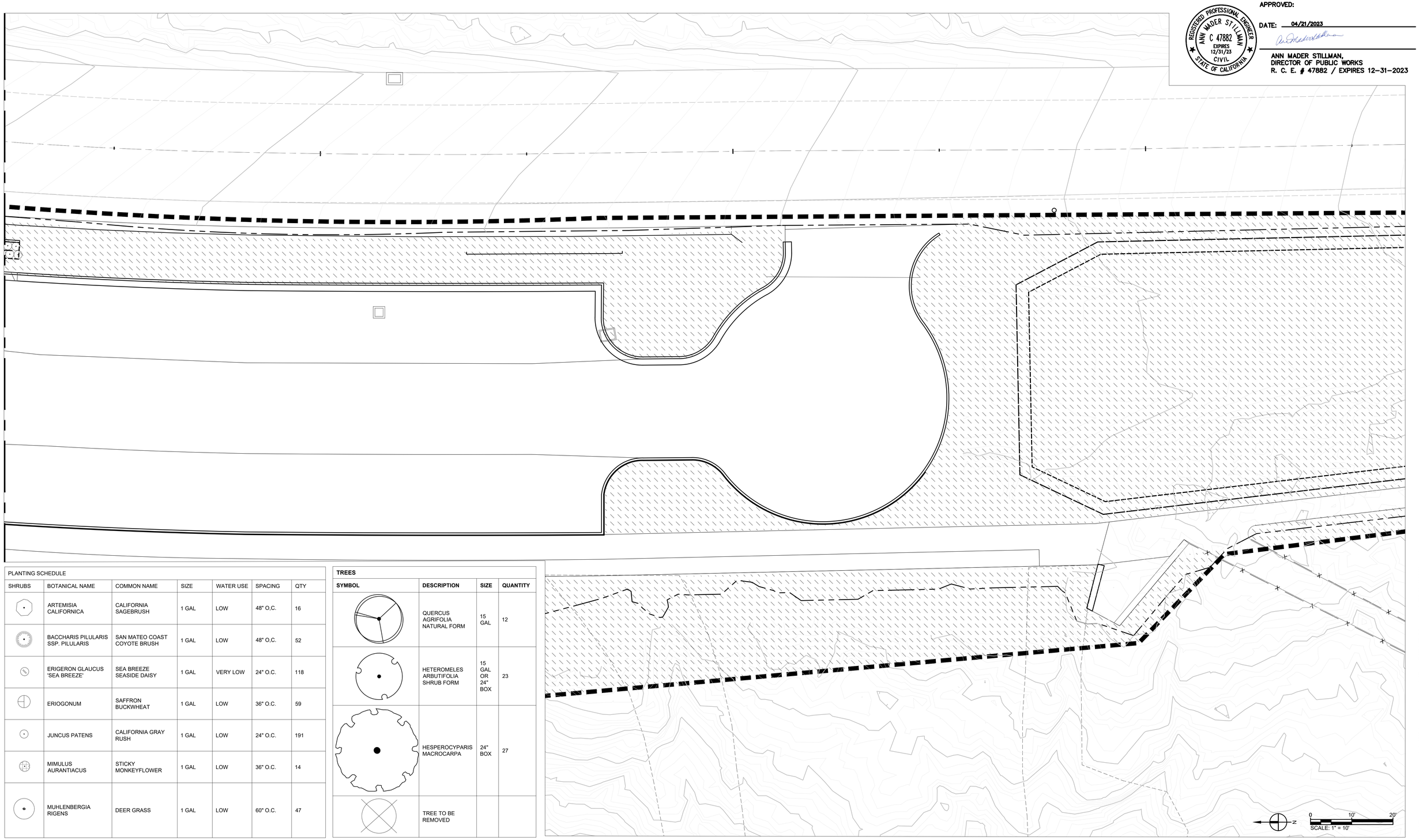
N:\8000\8337 tunitas creek beach improvement project\4-ACAD\5-construction documentation\Sheet\L-130 PLANTING PLAN.dwg 04/27/2023 - 10:21 AM jzou 1:1

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA



PLANTING SCHEDULE

SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE	SPACING	QTY
	ARTEMISIA CALIFORNICA	CALIFORNIA SAGEBRUSH	1 GAL	LOW	48" O.C.	16
	BACCHARIS PILULARIS SSP. PILULARIS	SAN MATEO COAST COYOTE BRUSH	1 GAL	LOW	48" O.C.	52
	ERIGERON GLAUCUS 'SEA BREEZE'	SEA BREEZE SEASIDE DAISY	1 GAL	VERY LOW	24" O.C.	118
	ERIOGONUM	SAFFRON BUCKWHEAT	1 GAL	LOW	36" O.C.	59
	JUNCUS PATENS	CALIFORNIA GRAY RUSH	1 GAL	LOW	24" O.C.	191
	MIMULUS AURANTIACUS	STICKY MONKEYFLOWER	1 GAL	LOW	36" O.C.	14
	MUHLENBERGIA RIGENS	DEER GRASS	1 GAL	LOW	60" O.C.	47

TREES

SYMBOL	DESCRIPTION	SIZE	QUANTITY
	QUERCUS AGRIFOLIA NATURAL FORM	15 GAL	12
	HETEROMELES ARBUTIFOLIA SHRUB FORM	15 GAL OR 24" BOX	23
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	TREE TO BE REMOVED		

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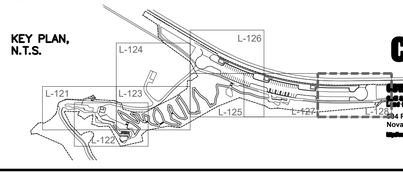
415.575.4722

KEY PLAN,
N.T.S.



CSW | ST2

Carlson, Strach Engineering Group, Inc.
Civil & Structural Engineers Surveying & Mapping Environmental Planning
Land Planning Construction Management
494 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.0000
fax: 415.883.0005
mail@csw-st2.com

APPROVED DATE:

JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT
JOHN R. GIBBS
4417
SIGNATURE
DATE
FEB 04-10-23
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
PLANTING PLAN 8
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

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ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

L-128
SHEET82 OF 124

N:\8000\8337 tunitas creek beach improvement project\4-ACAD\5-construction documentation\Sheet\L-130 PLANTING PLAN.dwg 04/27/2023 - 10:21 AM jzou 1:1

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DATE: 04/21/2023

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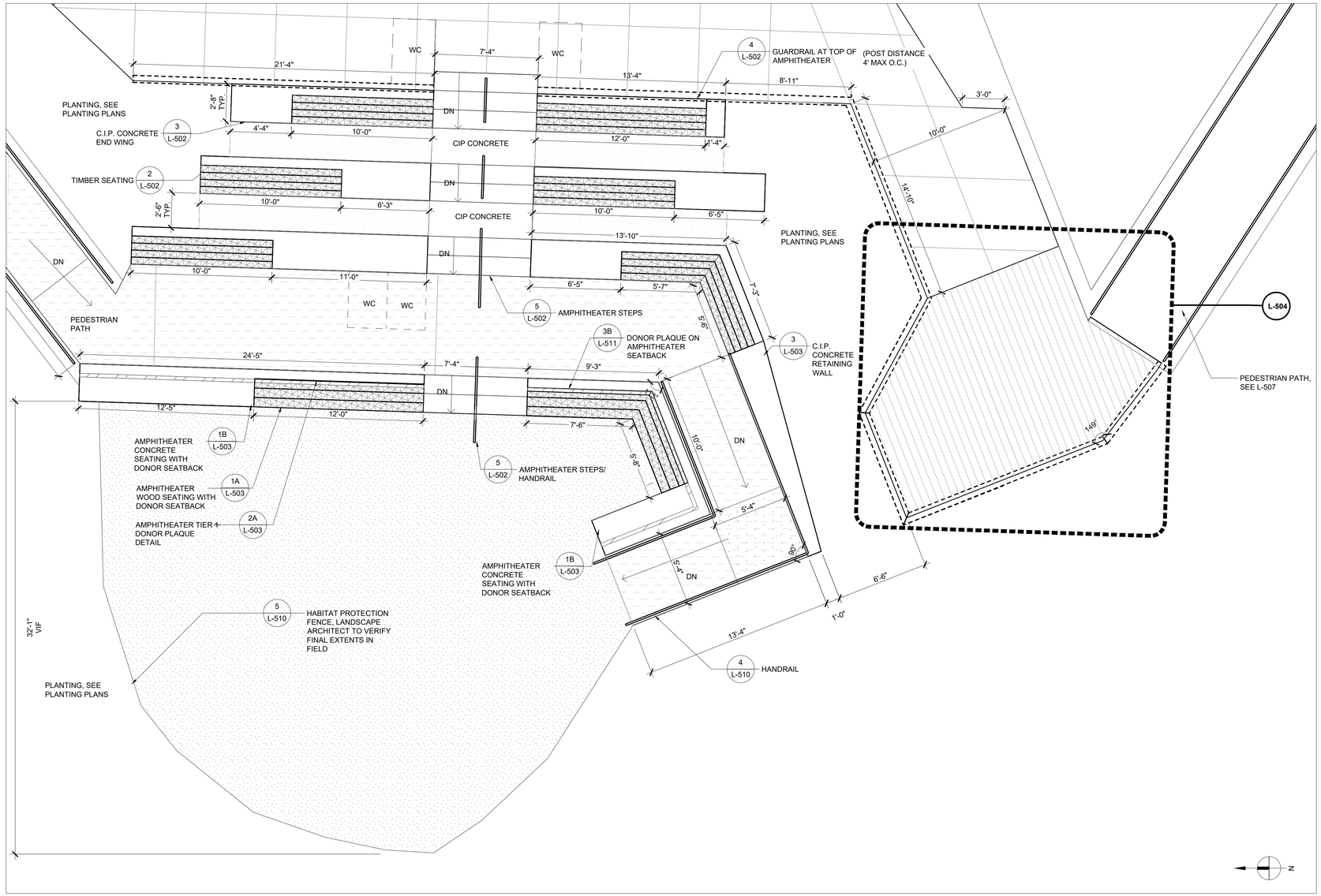
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



1 AMPHITHEATER PLAN
SCALE: 1/4" = 1'-0"

MATERIAL SCHEDULE

DETAIL	SYMBOL	TYPE
1/L-501		C.I.P. CONCRETE-TYPE A
1/L-501		C.I.P. CONCRETE-TYPE B
2/L-501	EJ	C.I.P. CONCRETE PAVEMENT JOINT
3/L-501		ADMIXTURE - BOUND DECOMPOSED GRANITE PAVING
4/L-501		NATIVE SOIL TRAIL
L-504 - L-508		WOOD DECKING
5/L-501		STABILIZED DECOMPOSED GRANITE
SEE CIVIL		CLASS 2 AGGREGATE BASE
		MULCH

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APPROVED DATE:

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4417 EXPIRES 06/30/2024

		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	ENLARGEMENT PLANS
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

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L-201
SHEET83 OF 124

N:\8000\8337 tunitas creek beach improvement project\04-ACAD\5-construction documentation\Sheet\L-200 ENLARGEMENT PLANS.dwg 04/27/2023 - 10:21 AM jpau 11

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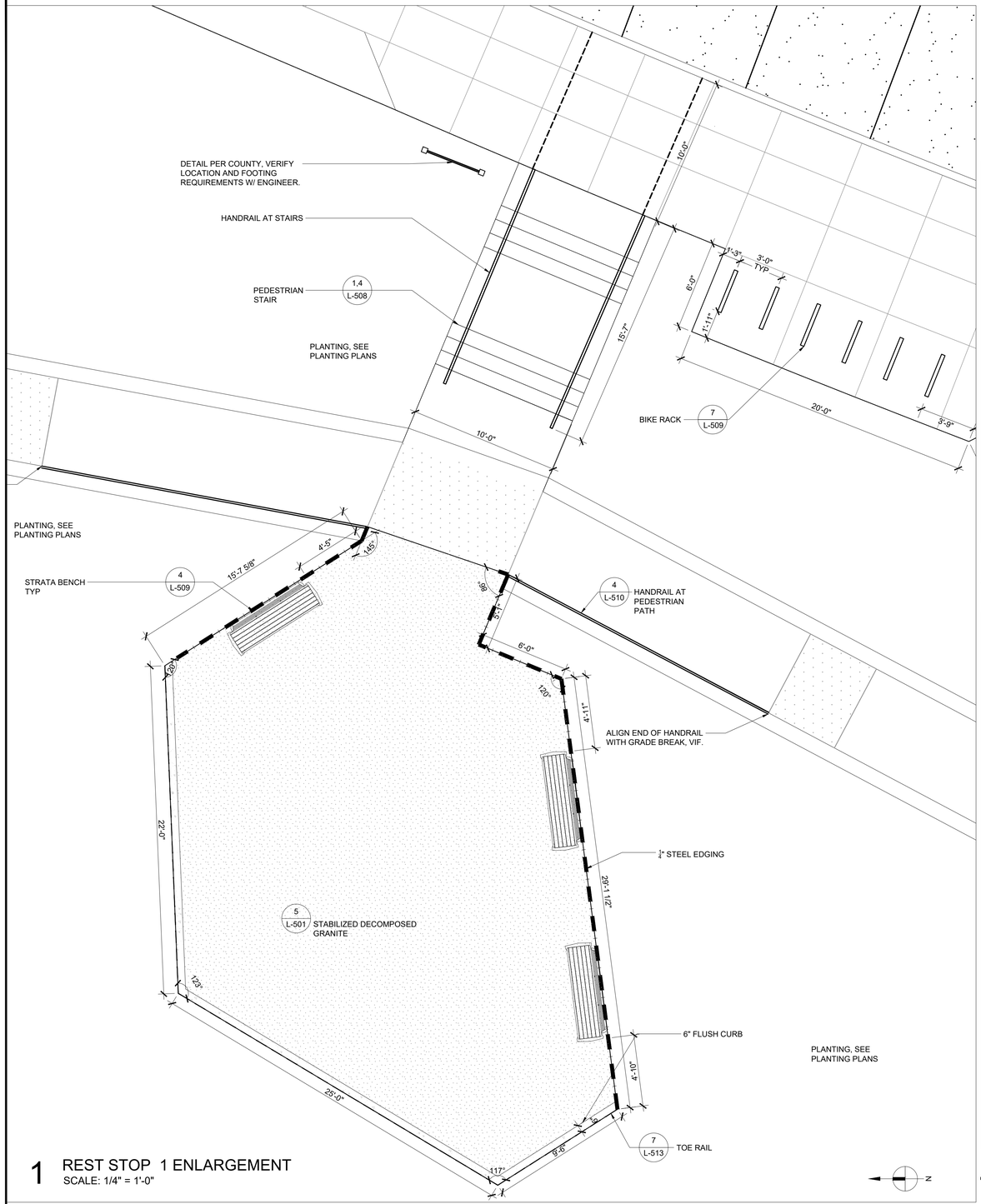

1 REST STOP 1 ENLARGEMENT
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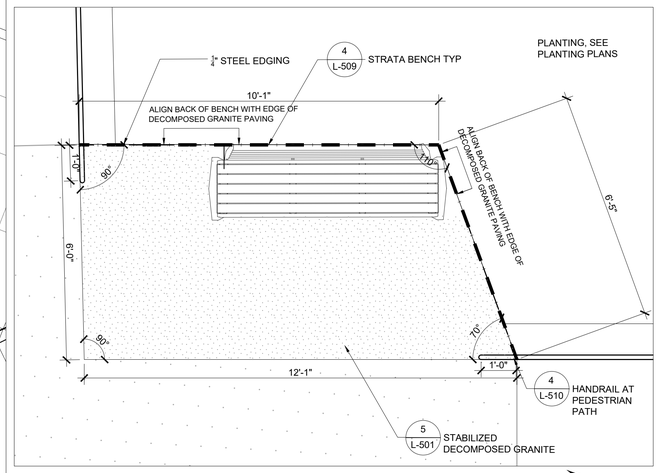

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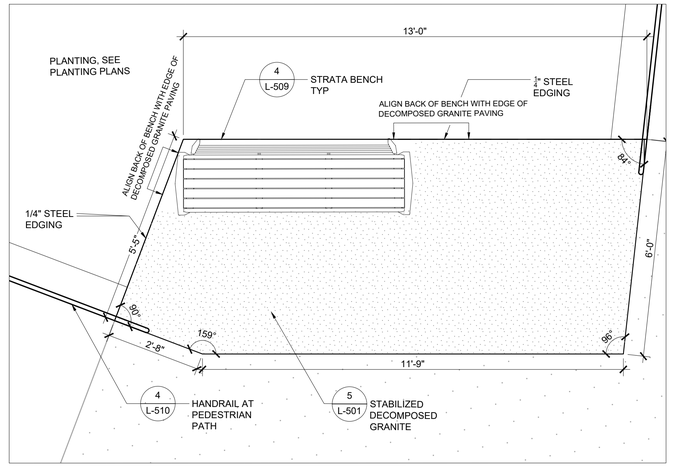

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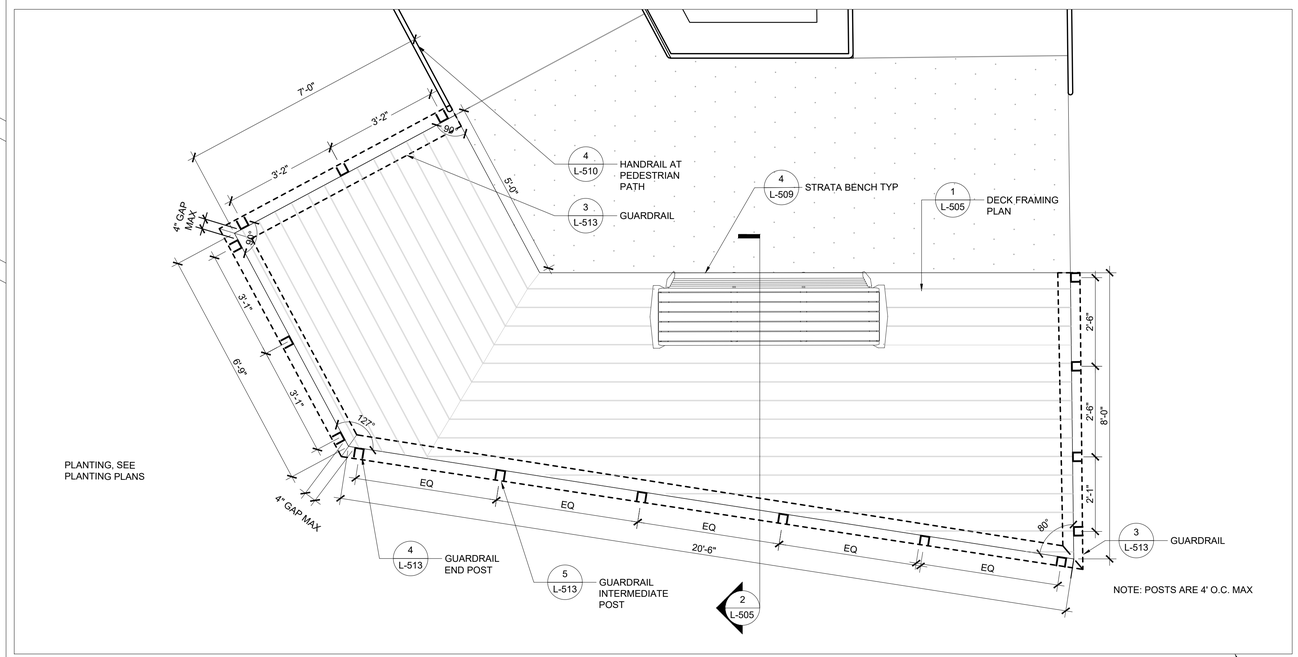

4 REST STOP 4 ENLARGEMENT
SCALE: 1/2" = 1'-0"

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Novato, CA 94947

APPROVED DATE:

JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT JOHN R. GIBBS 4417 SIGNATURE DATE STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT	SCALE:
		CHECKED BY: CSW/ST2 (JAH)	ENLARGEMENT PLANS	DATE: 04/21/2023
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS	FILE NO.: E4995
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO		555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

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L-202
SHEET84 OF 124

N:\8000\8537 tunitas creek beach improvement project\4-ACAD\5-construction documentation\Sheet_-200 ENLARGEMENT PLANS.dwg 04/27/2023 - 10:22 AM jpau 1:1

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DATE: 04/21/2023

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DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
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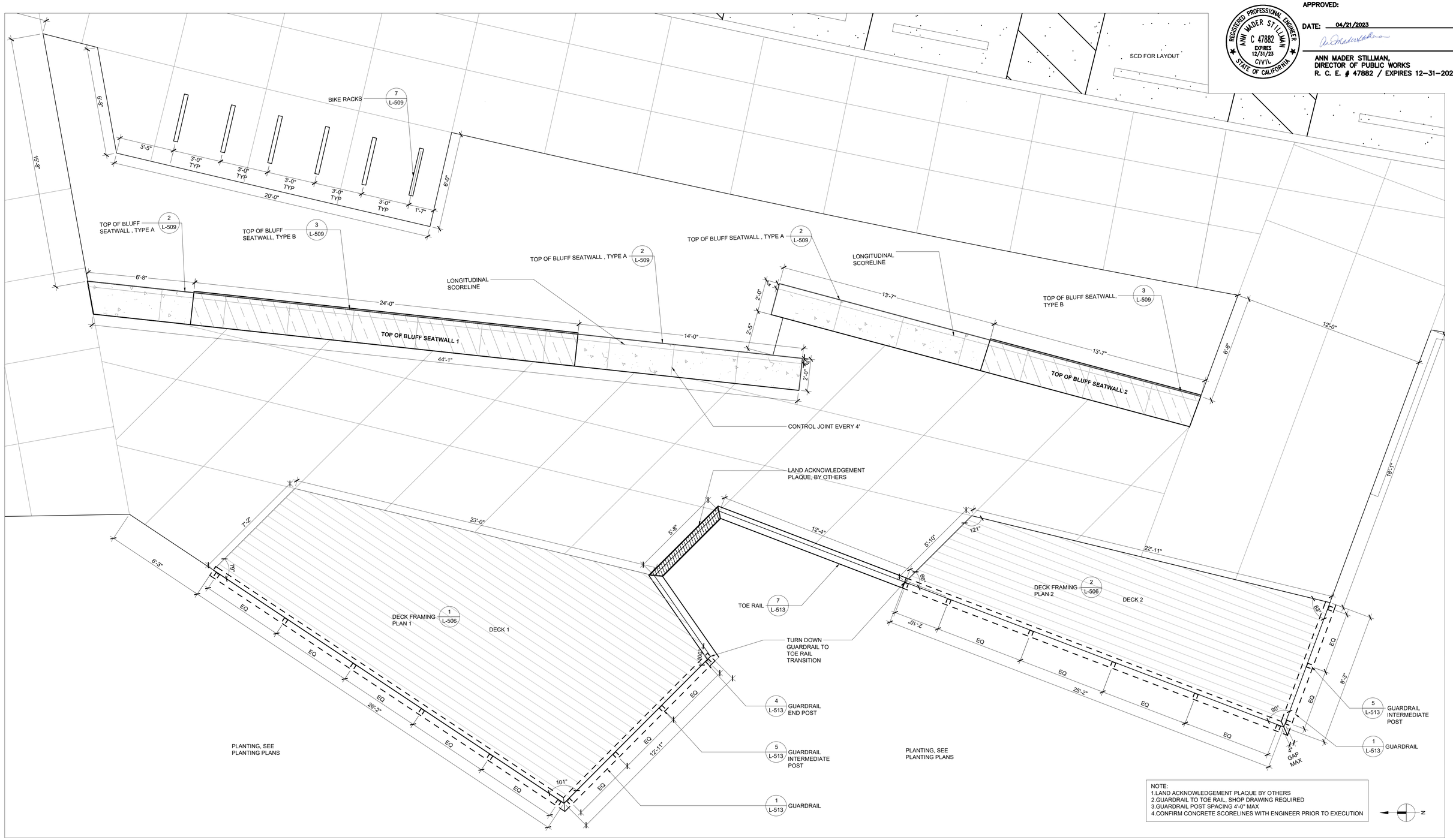
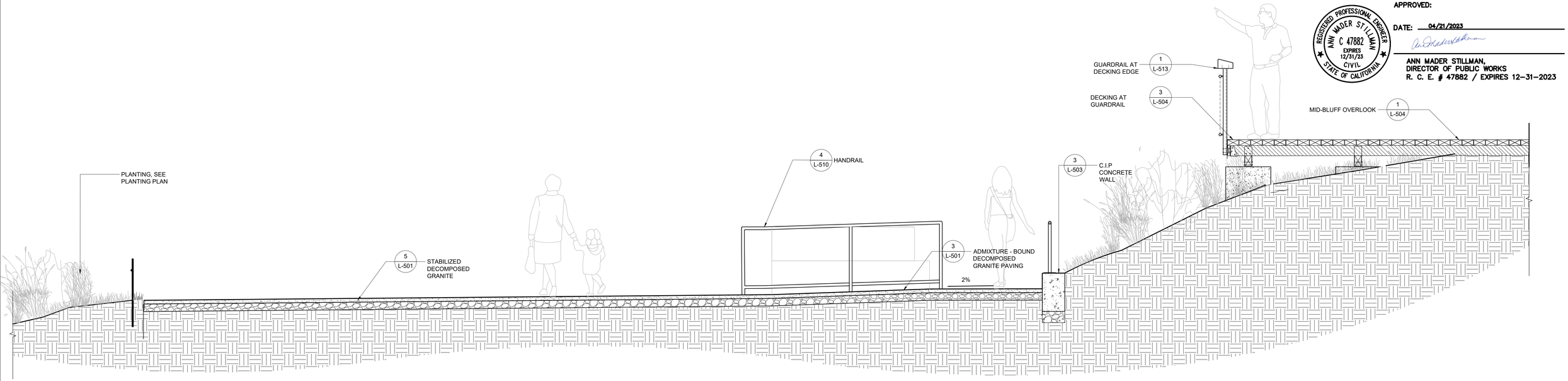
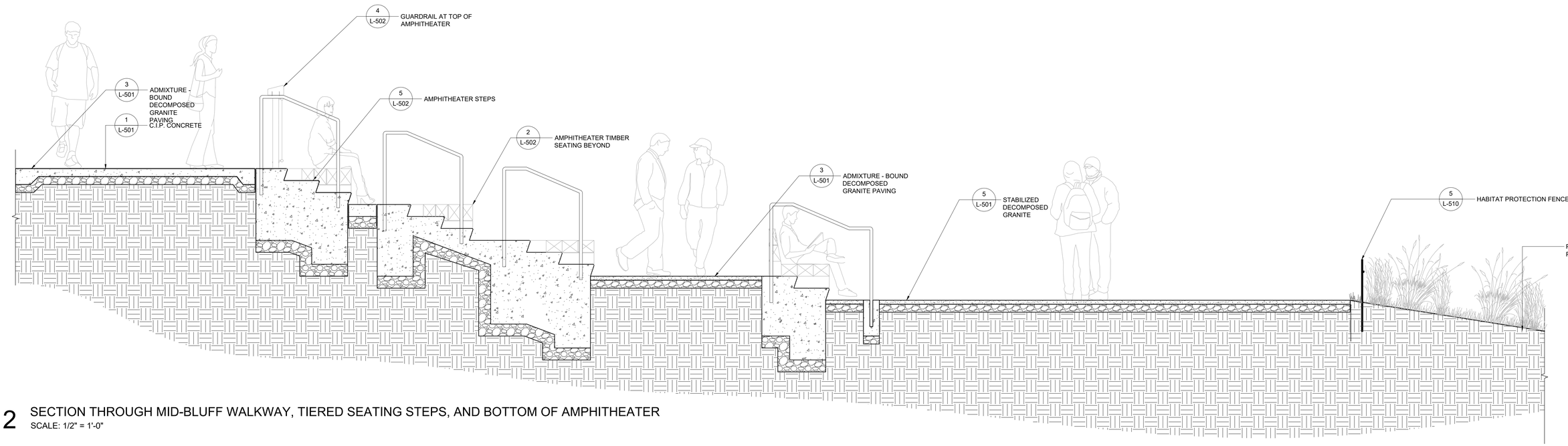

SCD FOR LAYOUT
BIKE RACKS
7
L-509
6'-8"
15'-8"
3'-5"
3'-0" TYP
3'-0" TYP
3'-0" TYP
3'-0" TYP
3'-0" TYP
3'-0" TYP
20'-0"
1'-7"
6'-0"
TOP OF BLUFF SEATWALL , TYPE A
2
L-509
TOP OF BLUFF SEATWALL, TYPE B
3
L-509
TOP OF BLUFF SEATWALL , TYPE A
2
L-509
TOP OF BLUFF SEATWALL , TYPE A
2
L-509
LONGITUDINAL SCORELINE
LONGITUDINAL SCORELINE
6'-8"
24'-0"
TOP OF BLUFF SEATWALL 1
44'-1"
14'-0"
2'-0"
4"
2'-5"
2'-0"
13'-7"
13'-7"
TOP OF BLUFF SEATWALL, TYPE B
3
L-509
TOP OF BLUFF SEATWALL 2
12'-0"
6'-8"
CONTROL JOINT EVERY 4'
LAND ACKNOWLEDGEMENT PLAQUE; BY OTHERS
7'-2"
6'-3"
79°
23'-0"
5'-8"
12'-4"
5'-10"
121°
22'-11"
99°
-2'-10"
TOE RAIL
7
L-513
DECK FRAMING PLAN 1
1
L-506
DECK 1
DECK FRAMING PLAN 2
2
L-506
DECK 2
89°
18'-1"
EQ
EQ
EQ
EQ
EQ
26'-2"
EQ
EQ
EQ
EQ
EQ
25'-2"
EQ
EQ
EQ
EQ
EQ



1 SECTION THROUGH MID-BLUFF WALKWAY AND AMPHITHEATER
SCALE: 1/2" = 1'-0"



2 SECTION THROUGH MID-BLUFF WALKWAY, TIERED SEATING STEPS, AND BOTTOM OF AMPHITHEATER
SCALE: 1/2" = 1'-0"

APPROVED:
DATE: 04/21/2023
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER · ANN MADER STILLMAN · C 47882 · EXPIRES 12/31/23 · CIVIL · STATE OF CALIFORNIA

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APPROVED DATE:
JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT · JOHN R. GIBBS · 4417 · SIGNATURE · DATE · STATE OF CALIFORNIA

COUNTY OF SAN MATEO · PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	SECTIONS
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

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L-301
SHEET 86 OF 124

N:\80008337 tunitas creek beach improvement project\4-ACAD\5-construction documentation\Sheet\L-300 SECTIONS.dwg 04/27/2023 - 10:22 AM jpau 1:1

SHEET NOTES:
1. FOR ADDITIONAL INFORMATION, SEE SHEET L-508
2. SHOP DRAWINGS REQUIRED

APPROVED:

DATE: 04/21/2023

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DIRECTOR OF PUBLIC WORKS
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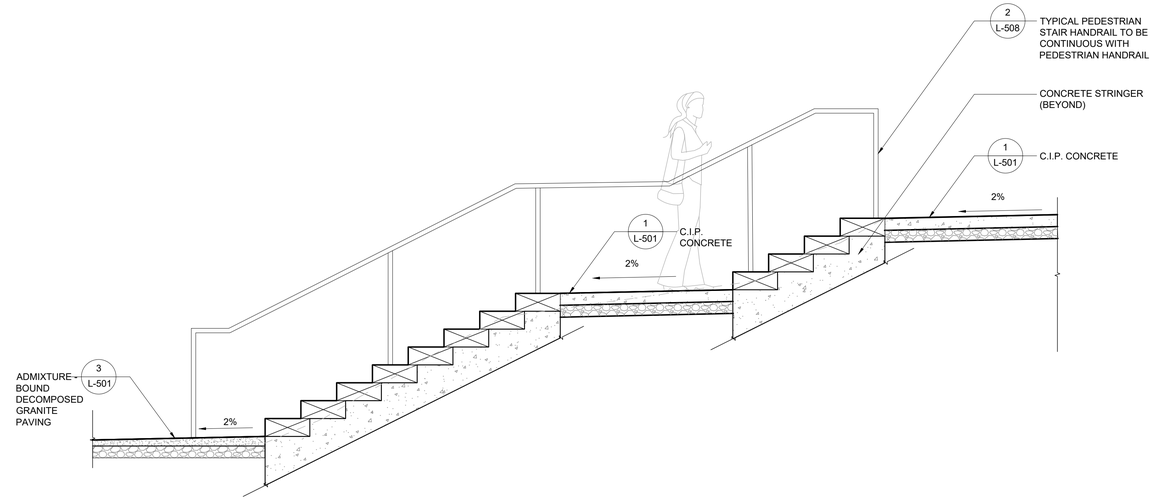

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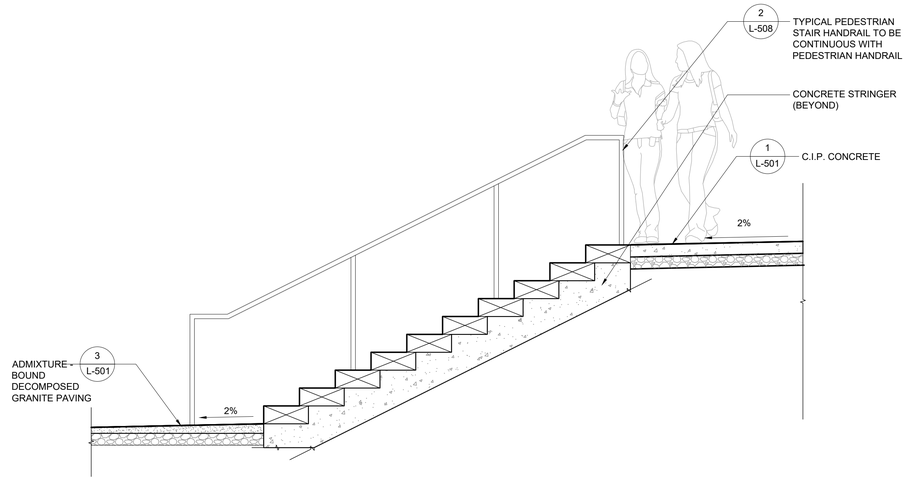

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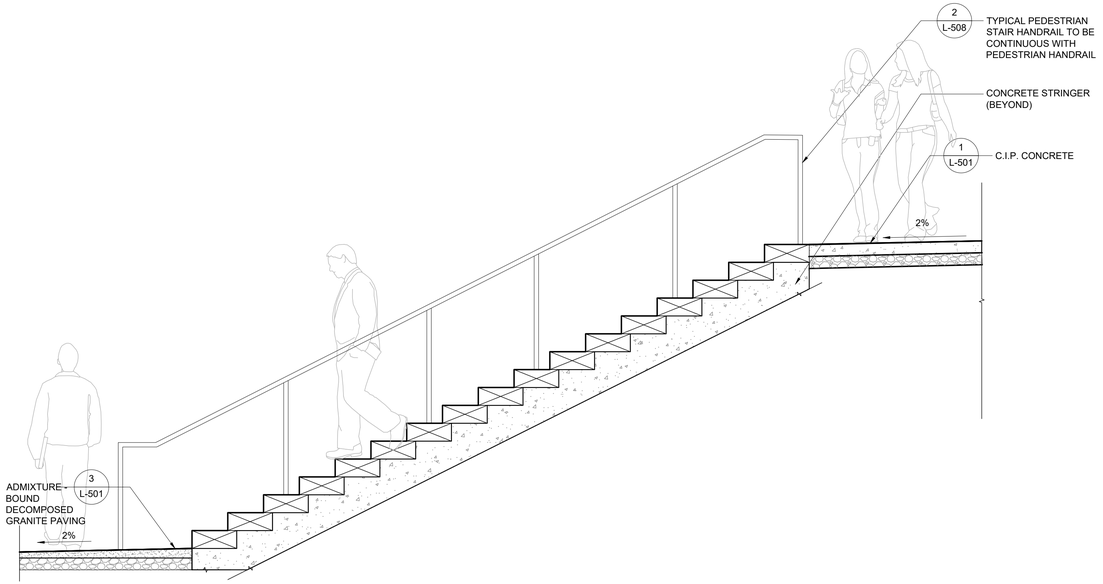

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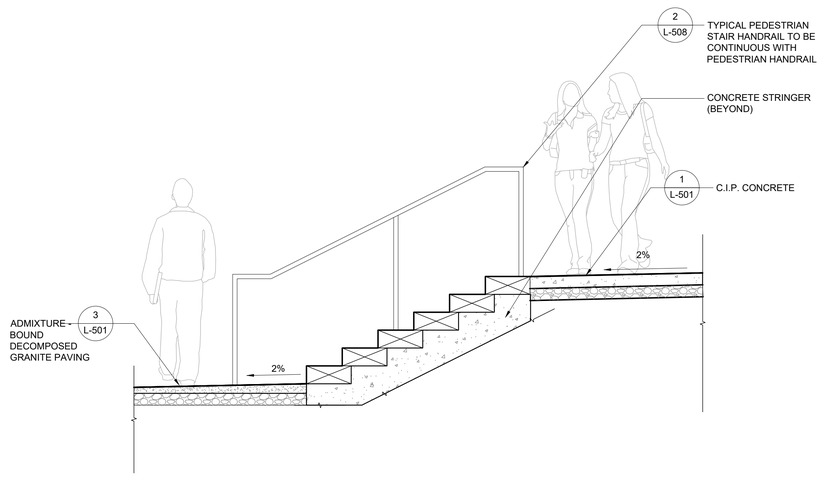

4 PEDESTRIAN STAIR SECTION 4
SCALE: 1/2"=1'-0"

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COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
SECTIONS
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
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ORIGINAL SCALE IS IN INCHES
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L-302
SHEET 87 OF 124

N:\800068337 tunitas creek beach improvement project\4-ACAD\5-construction documentation\Sheet\L-303 Sections.dwg 04/27/2023 - 10:22 AM jzou 1:1

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DATE: 04/21/2023

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DIRECTOR OF PUBLIC WORKS
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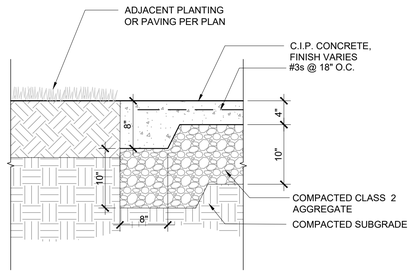

1 C.I.P. CONCRETE
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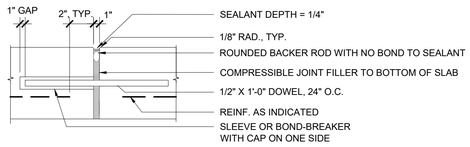
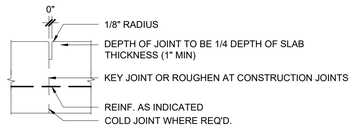


A. DOWELED EXPANSION JOINT



B. TOOLED CONTROL OR
CONSTRUCTION JOINT

2 C.I.P. CONCRETE PAVEMENT JOINTS
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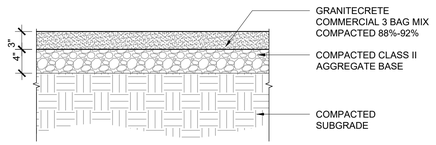

3 ADMIXTURE - BOUND DECOMPOSED GRANITE PAVING
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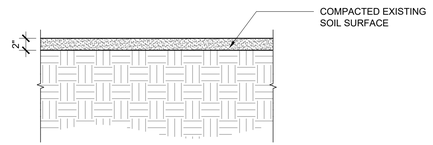

4 NATIVE SOIL TRAIL
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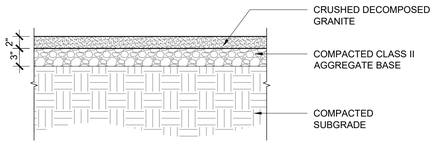

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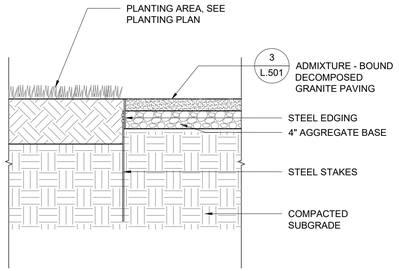
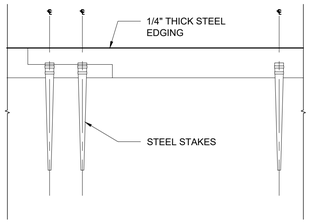
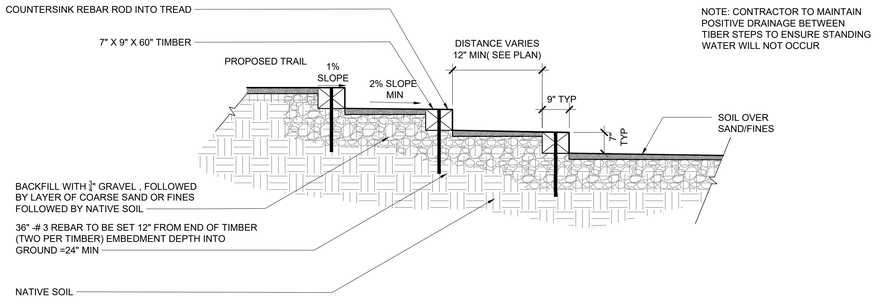


SECTION



ELEVATION

6 STEEL EDGING
SCALE: 1" = 1'-0"



NOTE: CONTRACTOR TO MAINTAIN
POSITIVE DRAINAGE BETWEEN
TIBER STEPS TO ENSURE STANDING
WATER WILL NOT OCCUR

7 BEACH ACCESS TIMBER STEPS
SCALE: 1/2" = 1'-0"

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Novato, CA 94947

APPROVED DATE:

JOHN GIBBS
4417 EXPIRES 06/30/2024

		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT	SCALE:
		CHECKED BY: CSW/ST2 (JAH)	PAVING DETAILS	DATE: 04/21/2023
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS	FILE NO.: E4995
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	
		FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4		L-501 SHEET 88 OF 124

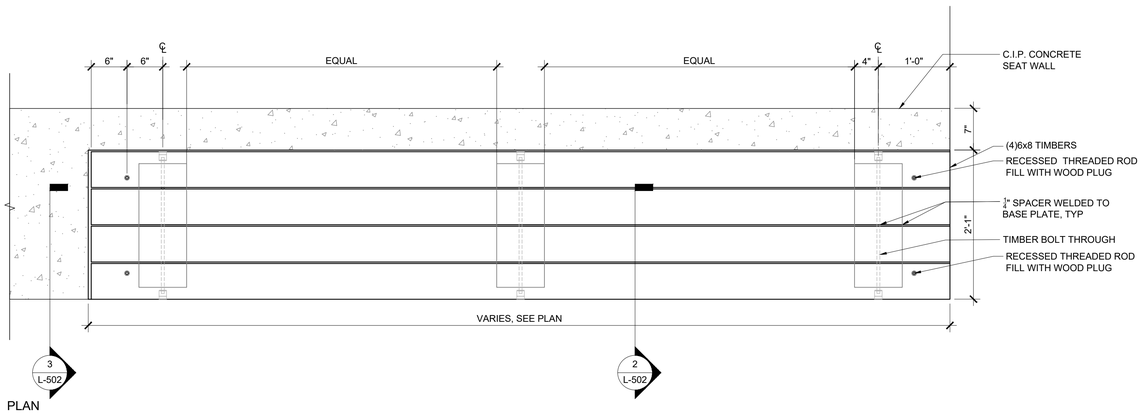
N:\8000\8337 tunitas creek beach improvement project\4-ACAD\5-construction documentation\Sheet\L-501 SITE DETAILS.dwg 04/27/2023 - 10:22 AM jpou 1:1

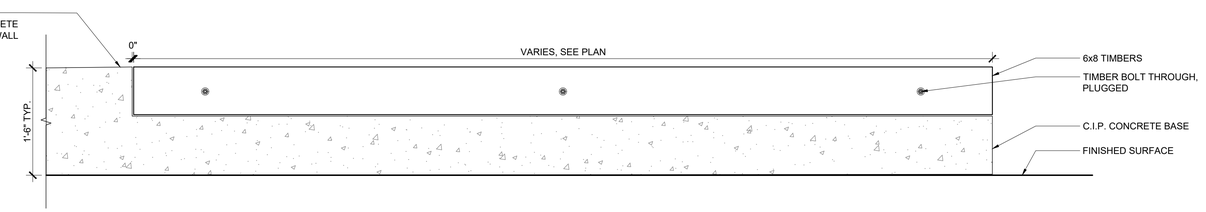
APPROVED:

DATE: 04/21/2023

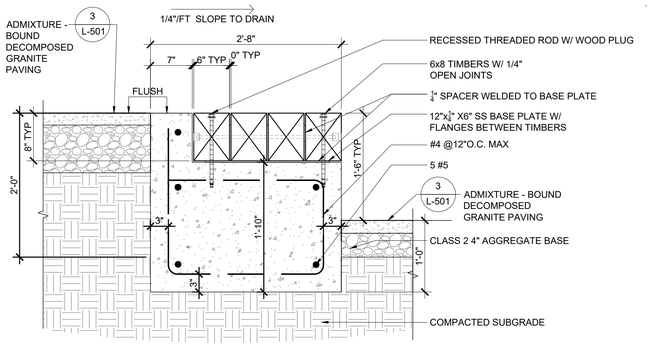
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER · ANN MADER STILLMAN · C 47882 · EXPIRES 12/31/23 · CIVIL · STATE OF CALIFORNIA





1 AMPHITHEATER TIMBER SEATING, TYP.
SCALE: 1" = 1'-0"



2 TIMBER SEATING
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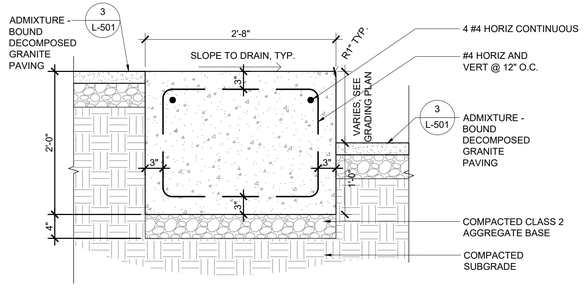
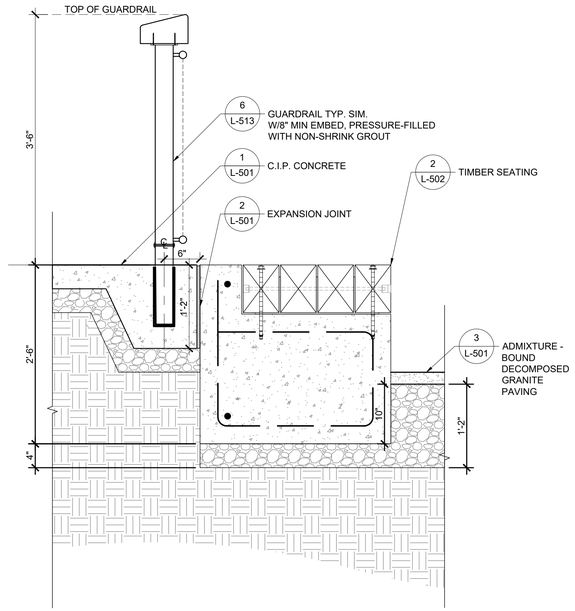
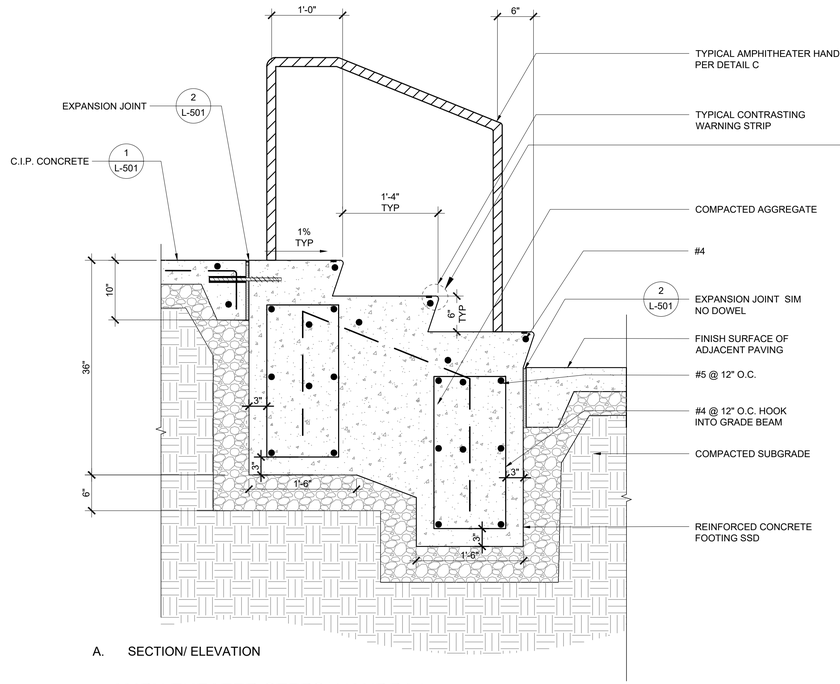


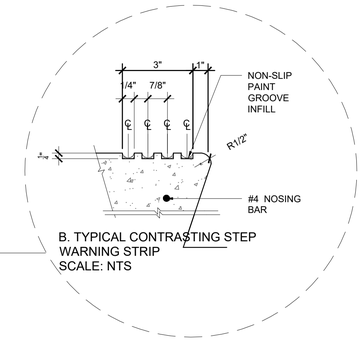
3 C.I.P. CONCRETE END WING
SCALE: 1" = 1'-0"



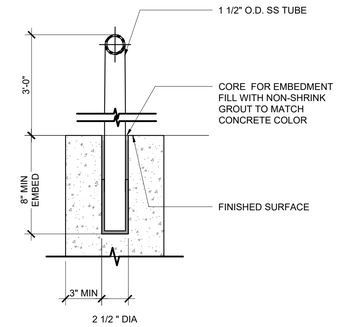
4 GUARDRAIL AT TOP OF AMPHITHEATER
SCALE: 1" = 1'-0"



A. SECTION/ ELEVATION



B. TYPICAL CONTRASTING STEP WARNING STRIP
SCALE: NTS



C.TYPICAL AMPHITHEATER HANDRAIL EMBEDMENT
SCALE 2" = 1'-0"

5 AMPHITHEATER STEPS/ HANDRAIL
SCALE: 1"=1'-0"

SHEET NOTES:
1. SHOP DRAWINGS REQUIRED

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csw

APPROVED DATE:
JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT · JOHN R. GIBBS · 4417 · SIGNATURE · DATE · STATE OF CALIFORNIA

COUNTY OF SAN MATEO · PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	CHECKED BY: CSW/ST2 (JAH)	DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
AMPHITHEATER DETAILS
SAN MATEO COUNTY PARKS

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

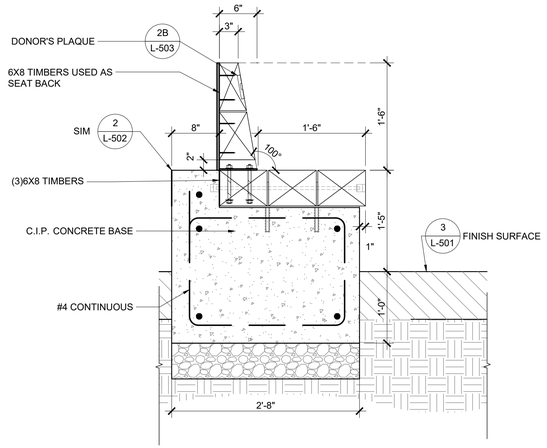
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

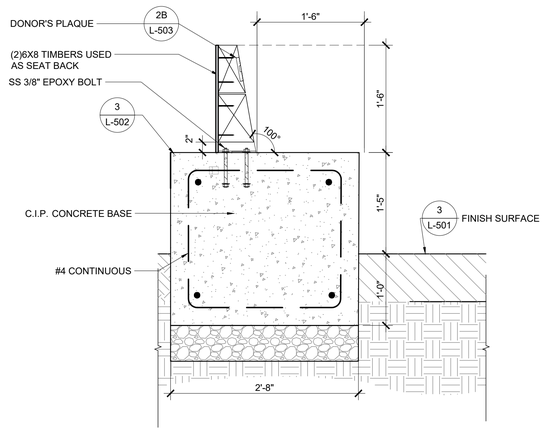
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

L-502
SHEET 89 OF 124

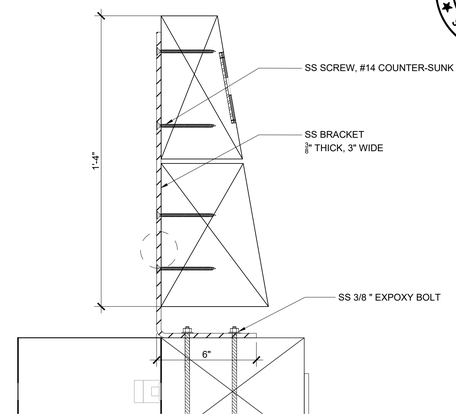
N:\80006337 tunitas creek improvement project\4-ACAD\5-construction documentation\Sheet\L-502 AMPHITHEATER DETAILS.dwg 04/27/2023 - 10:22 AM jzou 1:1

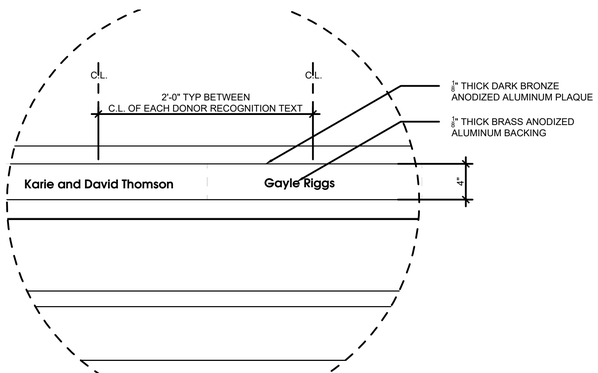


1A AMPHITHEATER WOOD SEATING WITH DONOR SEATBACK
SCALE: 1" = 1'-0"

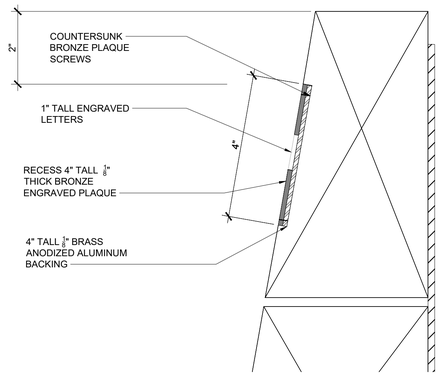


1B AMPHITHEATER CONCRETE SEATING WITH DONOR SEATBACK
SCALE: 1" = 1'-0"

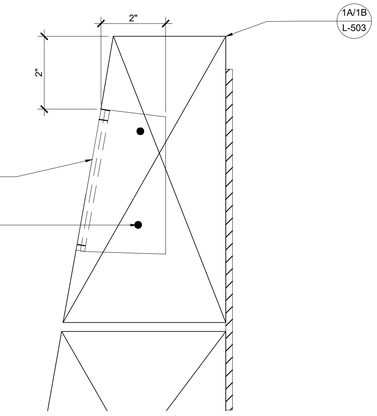




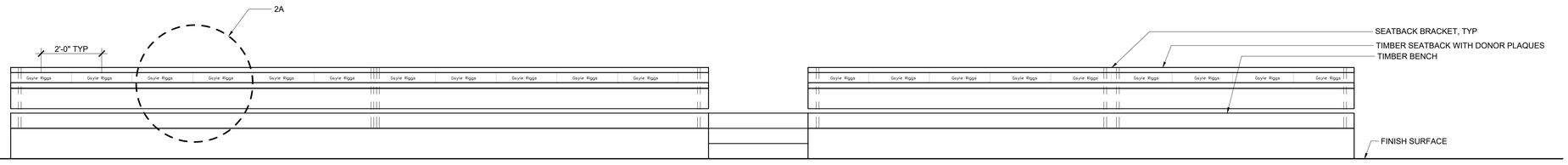
2A AMPHITHEATER TIER 1 DONOR PLAQUE DETAIL
SCALE: 1 1/2" = 1'-0"



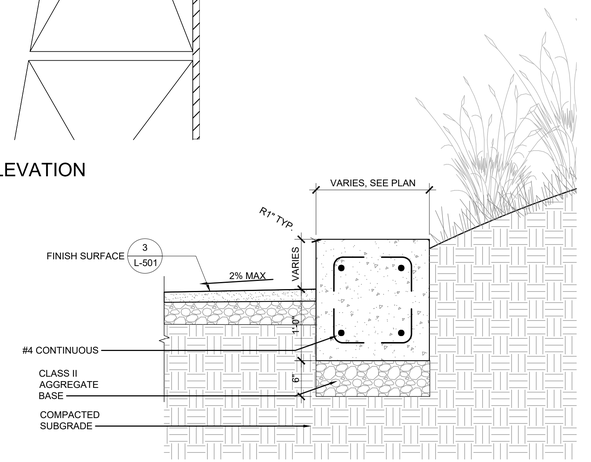
2B DONOR PLAQUE DETAIL-TIER 1
SCALE: 6" = 1'-0"



2D DONOR PLAQUE END ELEVATION
SCALE: 6" = 1'-0"



2C DONOR PLAQUE SEATBACK ELEVATION
SCALE: 1/2" = 1'-0"



3 CIP CONCRETE WALL
SCALE: 1" = 1'-0"

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Novato, CA 94947

APPROVED:
DATE: 04/21/2023
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

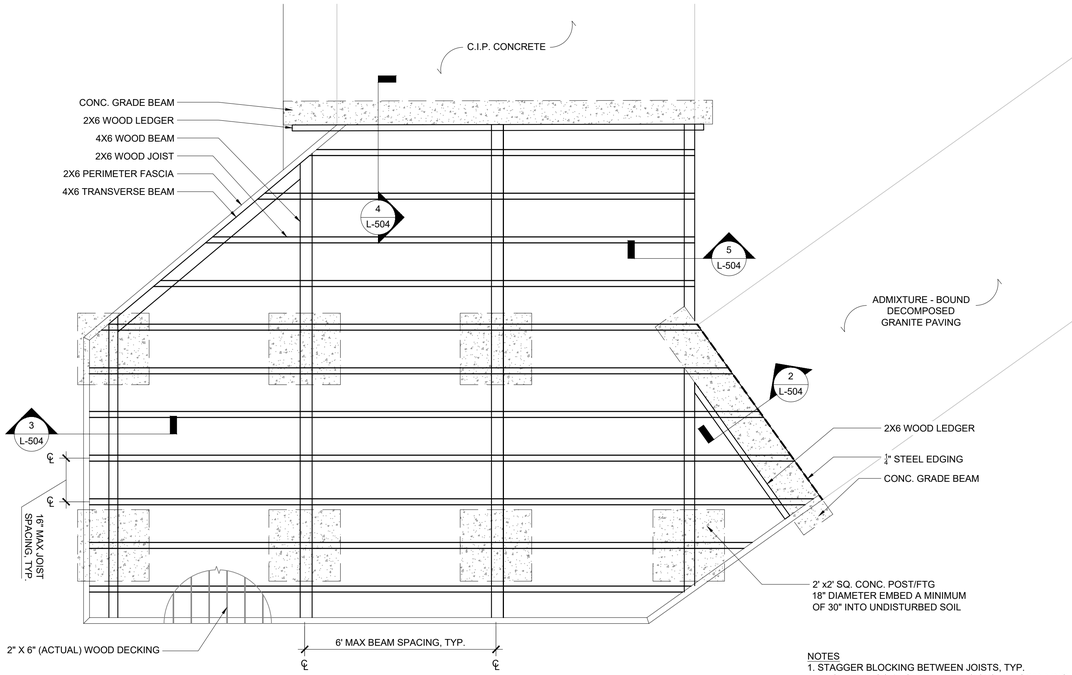
APPROVED DATE:
JOHN GIBBS
4417 EXPIRES 06/30/2024

		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT — SCALE:
		CHECKED BY: CSW/ST2 (JAH)	AMPHITHEATER DETAILS — DATE: 04/21/2023
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS — FILE NO.: E4995
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

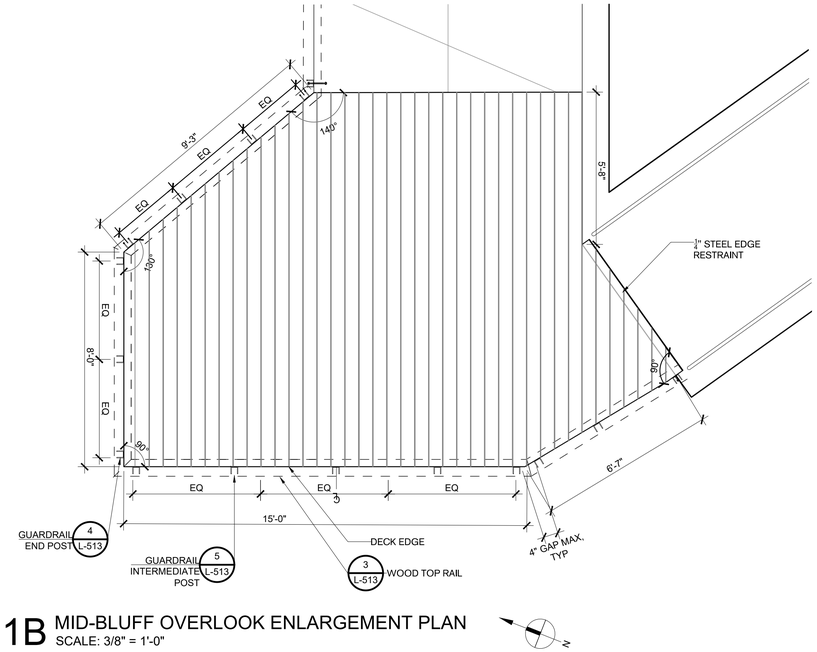
L-503
SHEET 90 OF 124

N:\8000\8337 tunitas creek beach improvement project\4-ACAD\5-construction documentation\Sheet\L-502 AMPHITHEATER DETAILS.dwg 04/27/2023 - 10:22 AM jpou 1:1

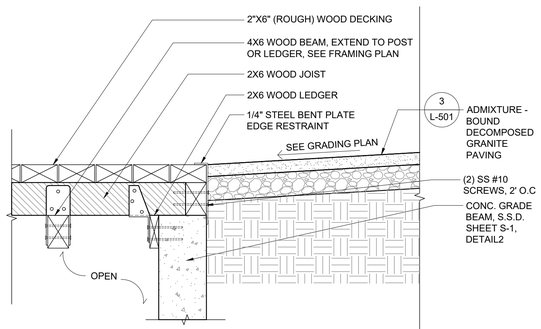


NOTES
1. STAGGER BLOCKING BETWEEN JOISTS, TYP.
2. PROVIDE BLOCKING BETWEEN JOISTS MID-SPANNING

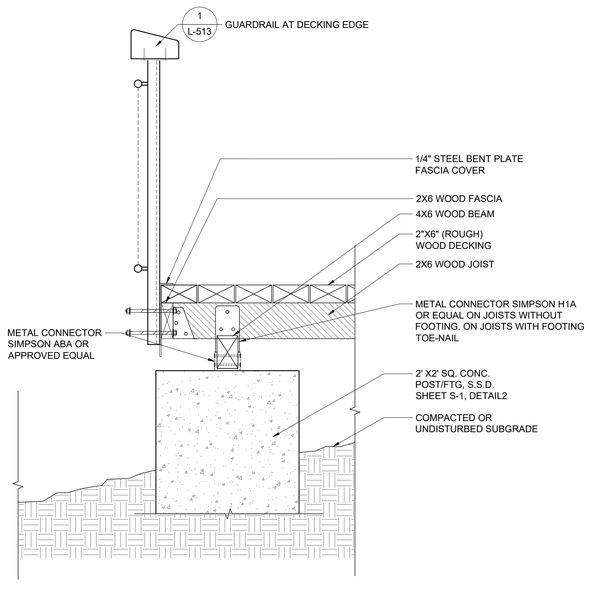
1A MID-BLUFF OVERLOOK FRAMING PLAN
SCALE: 1/2" = 1'-0"



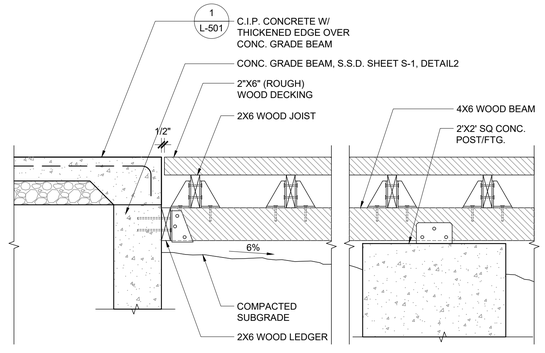
1B MID-BLUFF OVERLOOK ENLARGEMENT PLAN
SCALE: 3/8" = 1'-0"



2 DECKING AT PEDESTRIAN RAMP, TYP.
SCALE: 1" = 1'-0"



3 DECKING AT GUARDRAIL, TYP.
SCALE: 1" = 1'-0"



4 DECKING AT C.I.P. CONCRETE PAVING
SCALE: 1" = 1'-0"

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ANN MADER STILLMAN,
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R. C. E. # 47882 / EXPIRES 12-31-2023

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fax 415.883.0221
csw-st2.com

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JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT JOHN R. GIBBS 4417 SIGNATURE DATE STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	CHECKED BY: CSW/ST2 (JAH)	DRAWN BY: MTM
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO		

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
MID-BLUFF OVERLOOK DETAILS
SAN MATEO COUNTY PARKS

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

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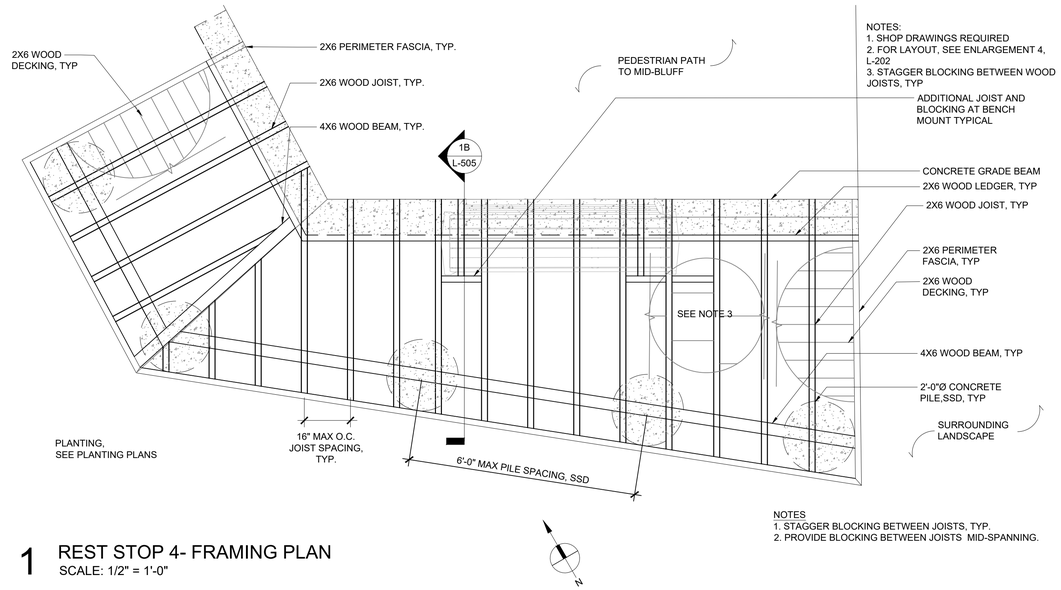
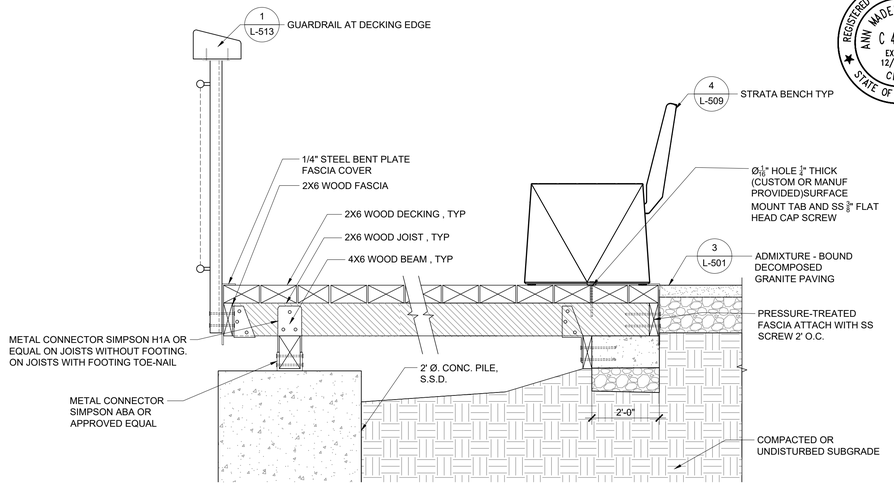
L-504
SHEET 91 OF 124

N:\8000\8337 tunitas creek beach improvement project\54-ACAD\5-construction documentation\Sheet\L-503 WOOD DECKING DETAILS.dwg 04/27/2023 - 10:23 AM jasu 1:1



1 REST STOP 4- FRAMING PLAN
SCALE: 1/2" = 1'-0"



2 REST STOP 4- SECTION
SCALE: 1" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

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JOHN R. GIBBS
4417
SIGNATURE
DATE
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
REST STOPS DETAILS
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
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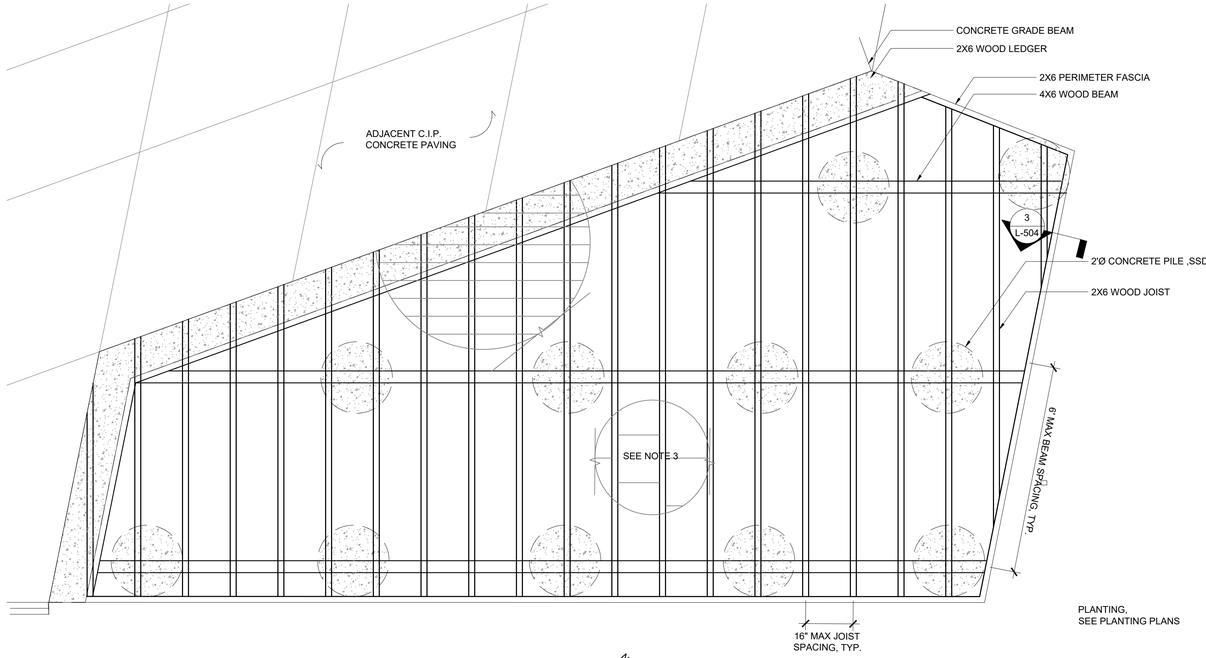
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

L-505
SHEET92 OF 124

N:\8000\8337 tunitas creek beach improvement project\4-ACAD\5-construction documentation\Sheets\L-501 WOOD DECKING DETAILS.dwg 04/27/2023 - 10:23 AM jasu 1:1



1 TOP-BLUFF OVERLOOK DECK 1- FRAMING PLAN 1
SCALE: 1/2" = 1'-0"

NOTES:
1. SHOP DRAWINGS REQUIRED
2. FOR LAYOUT, SEE OVERLOOK ENLARGEMENT, L-203
3. STAGGER BLOCKING BETWEEN WOOD JOISTS, TYP
4. PROVIDE BLOCKING BETWEEN JOISTS MID-SPANNING

APPROVED:

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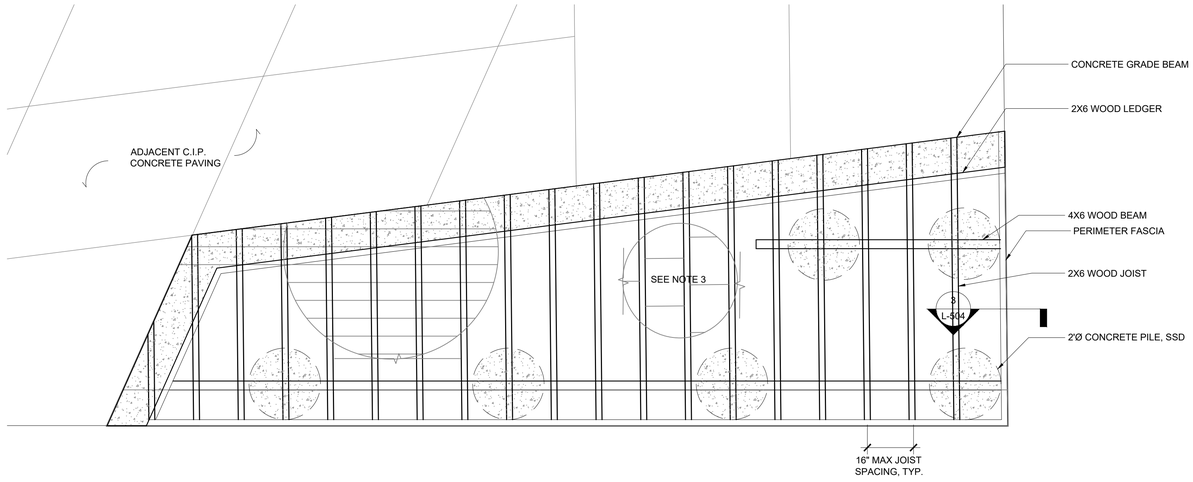
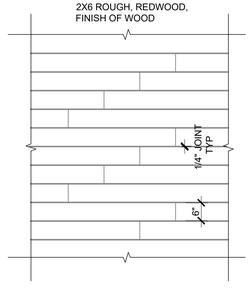
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



2 TOP-BLUFF OVERLOOK DECK 2- FRAMING PLAN 2
SCALE: 1/2" = 1'-0"



3 DECKING PLAN, TYP
SCALE: 1/2" = 1'-0"

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COUNTY OF SAN MATEO · PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	CHECKED BY: CSW/ST2 (JAH)	DRAWN BY: MTM
		TUNITAS CREEK BEACH IMPROVEMENT PROJECT	TOP-BLUFF OVERLOOK DETAILS	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	

SCALE:
DATE: 04/21/2023
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L-506
SHEET 93 OF 124

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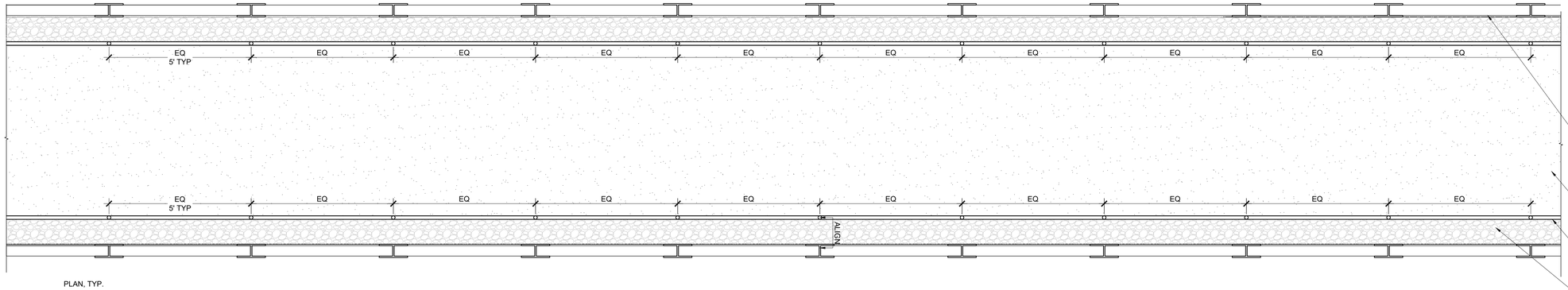
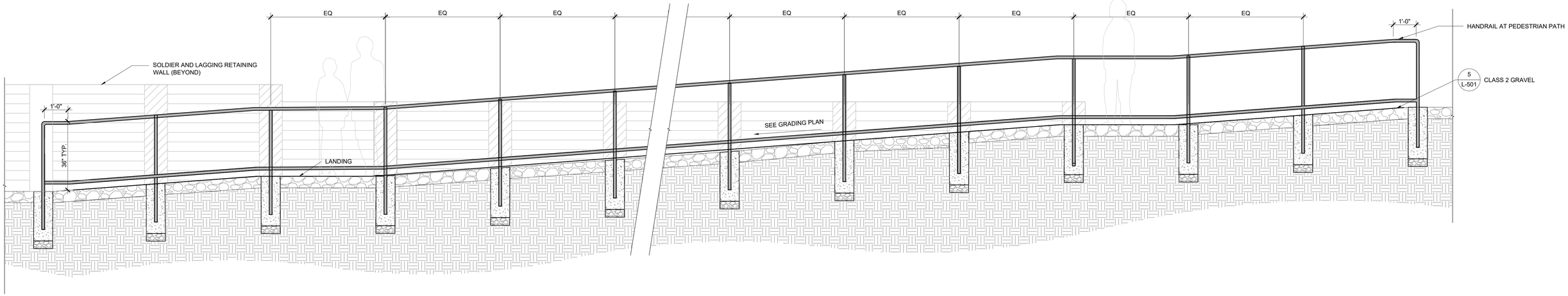
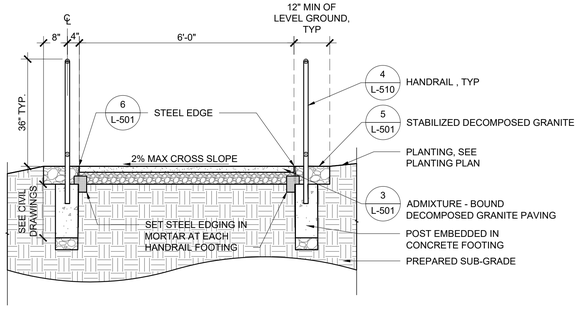


PLAN, TYP.

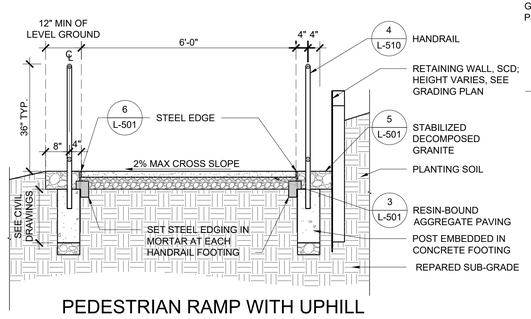


SECTION/ELEVATION, TYP.

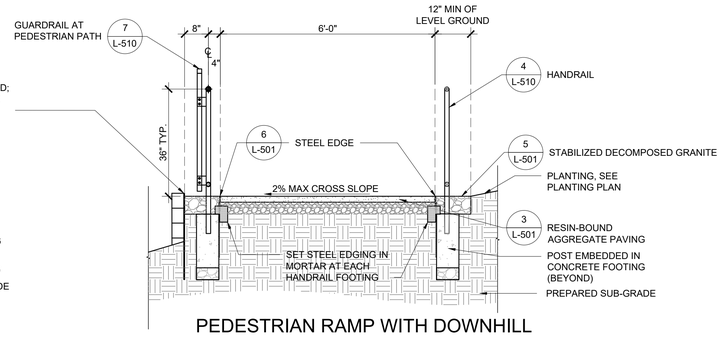
1 PEDESTRIAN RAMP, TYP.
SCALE: 1/2" = 1'-0"



2 PEDESTRIAN RAMP DETAIL, TYP.
SCALE: 1/2" = 1'-0"



3 PEDESTRIAN RAMP WITH UPHILL RETAINING WALL, TYP.
SCALE: 1/2" = 1'-0"



4 PEDESTRIAN RAMP WITH DOWNHILL RETAINING WALL, TYP.
SCALE: 1/2" = 1'-0"

NOTES:
1. SHOP DRAWINGS REQUIRED

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER — ANN MADER STILLMAN — C 47882 — EXPIRES 12/31/23 — CIVIL — STATE OF CALIFORNIA

WRT
478 TEHAMA STREET, SUITE 2B
SAN FRANCISCO, CA 94103
WRTDESIGN.COM
415.575.4722

CSW | ST2
CSW/Stuber-Stroeh Engineering Group, Inc.
504 Redwood Blvd, Suite 310
Novato, CA 94947

APPROVED DATE:

JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT — JOHN R. GIBBS — 4417 — SIGNATURE — DATE — STATE OF CALIFORNIA

COUNTY OF SAN MATEO — PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	CHECKED BY: CSW/ST2 (JAH)	DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
PEDESTRIAN PATH DETAILS
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

L-507
SHEET 94 OF 124

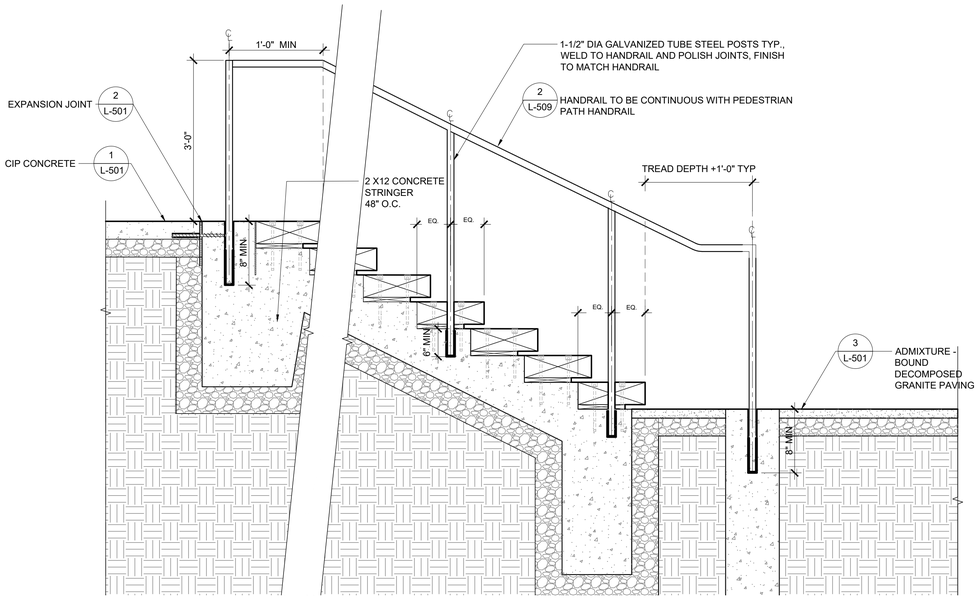
N:\E0005837 tunitas creek beach improvement project\s4-ACAD\5-construction documentation\Sheets\L-508 PEDESTRIAN PATH DETAILS 2.dwg 04/27/2023 - 10:23 AM jpau 1:1

APPROVED:

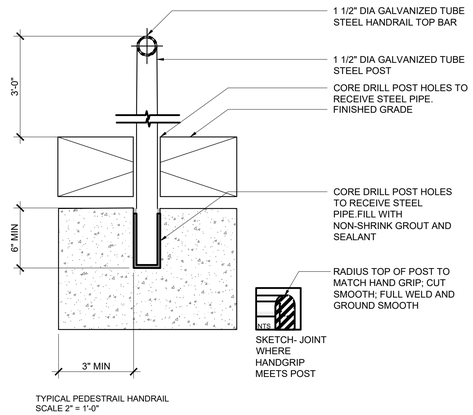
DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

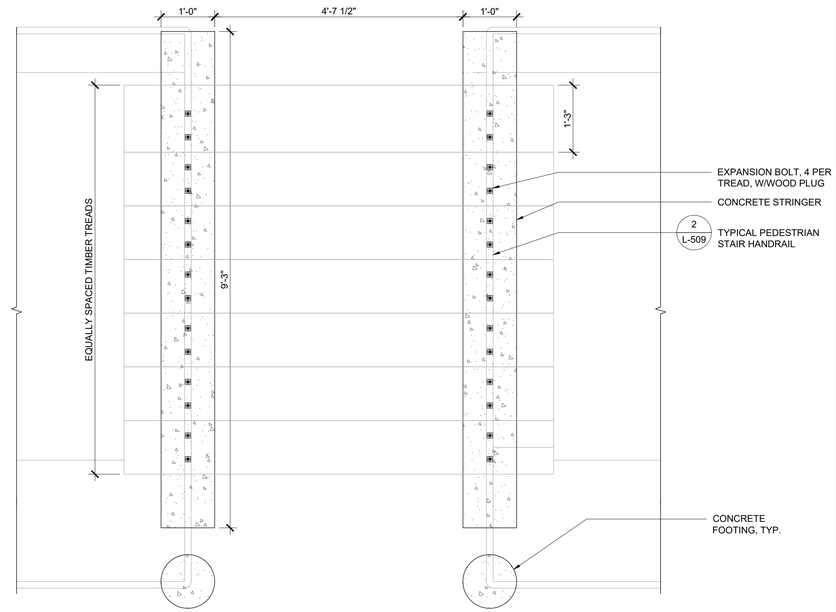


1 PEDESTRIAN STAIR HANDRAIL SECTION
SCALE: 3/4"=1'-0"

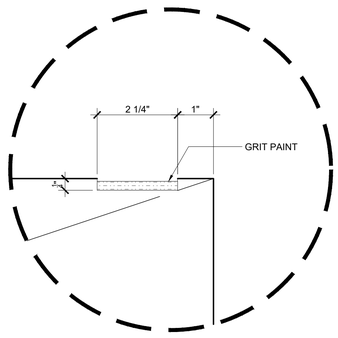


TYPICAL PEDESTRAIL HANDRAIL
SCALE 2" = 1'-0"

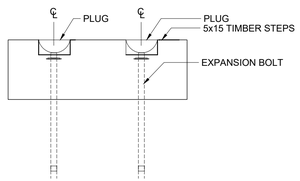
2 PEDESTRIAN STAIR HANDRAIL DETAIL
SCALE: 3/4"=1'-0"



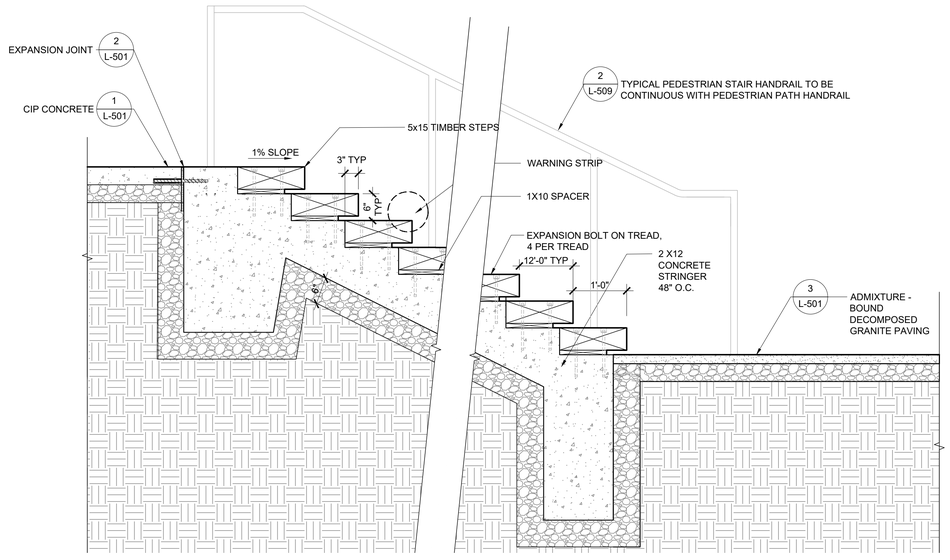
3 STAIR AND HAND RAIL FOUNDATION PLAN
SCALE:3/4"=1'-0"



WARNING STRIP WITH GRIT PAINT DETAIL
SCALE: 6"=1'-0"



EXPANSION BOLT ON TREAD DETAIL
SCALE: 2"=1'-0"



SHEET NOTES:
1. SHOP DRAWINGS REQUIRED

4 PEDESTRIAN STAIR SECTION, TYP.
SCALE: 3/4"=1'-0"

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478 TEHAMA STREET, SUITE 2B
SAN FRANCISCO, CA 94103
WRTDESIGN.COM
415.575.4722

CSW | ST2
504 Redwood Blvd, Suite 310
Novato, CA 94947

APPROVED DATE:
JOHN R GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT
JOHN R. GIBBS
4417
SIGNATURE
DATE
CALIFORNIA
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

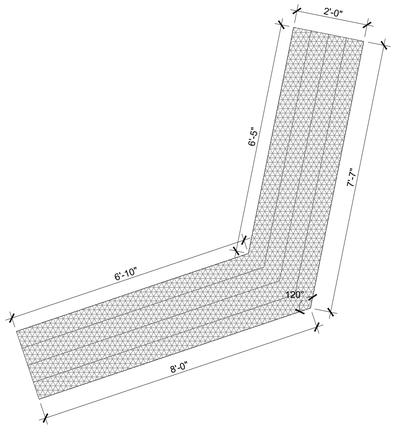
REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	PEDESTRIAN PATH STAIR DETAILS
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

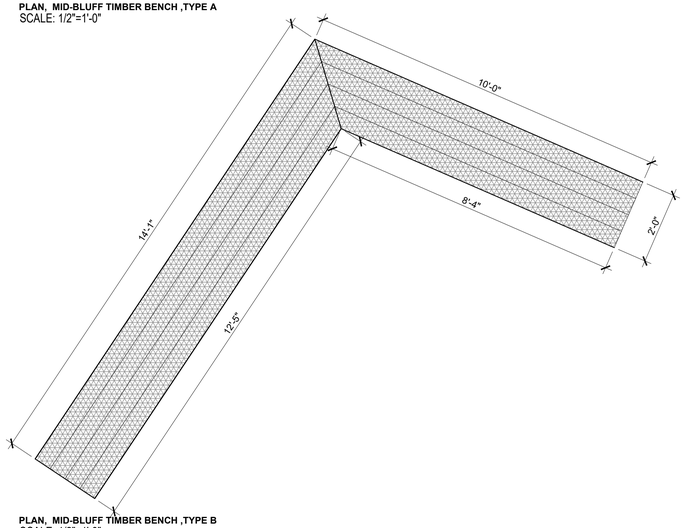
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

L-508
SHEET95 OF 124

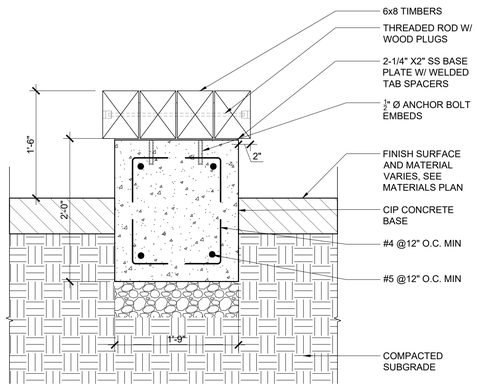
N:\800\8337 tunitas creek beach improvement project\54-ACAD\E-construction documentation\Sheet\L-509 PEDESTRIAN PATH DETAILS.dwg 04/27/2023 - 10:24 AM jpau 1:1



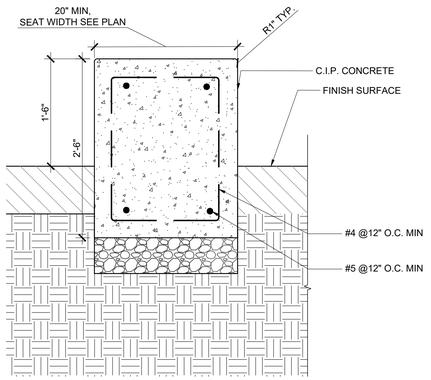
PLAN, MID-BLUFF TIMBER BENCH ,TYPE A
SCALE: 1/2"=1'-0"



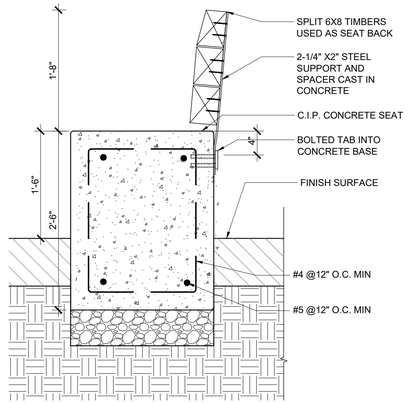
PLAN, MID-BLUFF TIMBER BENCH ,TYPE B
SCALE: 1/2"=1'-0"



SECTION
SCALE: 1"=1'-0"

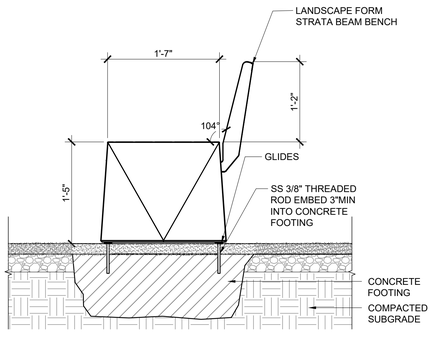


SECTION

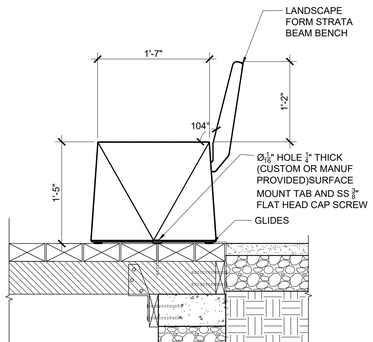


SECTION
SCALE: 1"=1'-0"

1 MID-BLUFF TIMBER BENCH



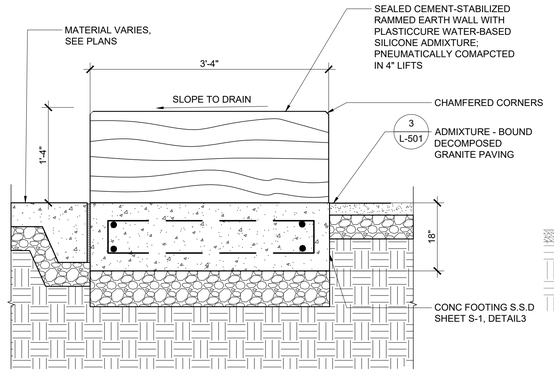
DETAIL SECTION
SCALE: 1"=1'-0"



DETAIL SECTION
SCALE: 1"=1'-0"

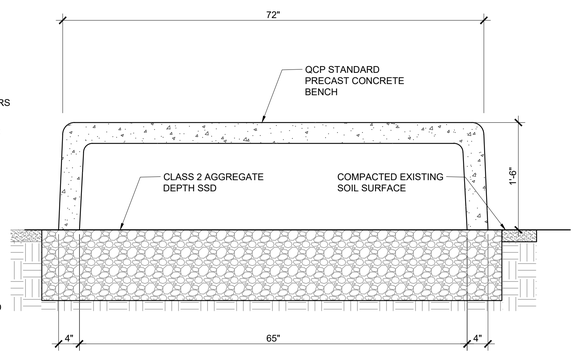
2 TOP OF BLUFF SEATWALL, TYPE A

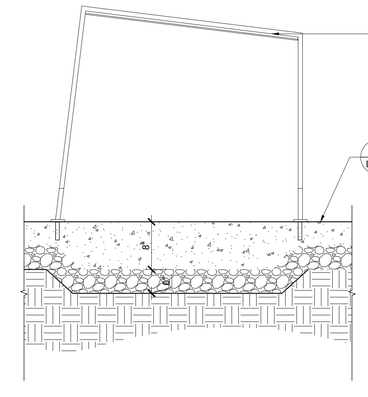
1"=1'-0"



3 TOP OF BLUFF SEATWALL, TYPE B

SCALE: 1" = 1'-0"





4A STRATA BENCH TYP BOLT IN AT DG

SCALE: 1" = 1'-0"

4B STRATA BENCH TYP SURFACE MOUNT AT DECKING

SCALE: 1" = 1'-0"

5 RAMMED EARTH SEATWALL

SCALE: 1" = 1'-0"

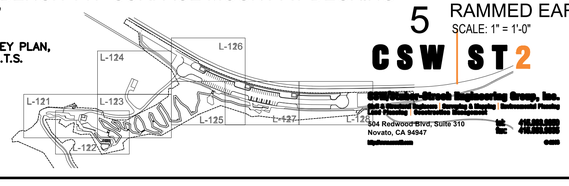
6 SOUTHERN ACCESS TRAIL BENCH DETAIL

SCALE: 1" = 1'-0"

7 BIKE RACK

SCALE: 1" = 1'-0"

KEY PLAN, N.T.S.



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SAN FRANCISCO, CA 94103
WRTDESIGN.COM
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Consulting Group, Inc.
304 Redwood Blvd, Suite 310
Novato, CA 94947

APPROVED:
DATE: 04/21/2023
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

APPROVED DATE:
JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT
JOHN R. GIBBS
4417
SIGNATURE
DATE
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	SITE FURNISHING
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

L-509
SHEET 96 OF 124

N:\800\08337 tunitas creek beach improvement project\4-ACAD\5-construction documentation\Sheet\L-509 SITE FURNISHINGS.dwg 04/21/2023 - 10:24 AM jmu 1:1

APPROVED:

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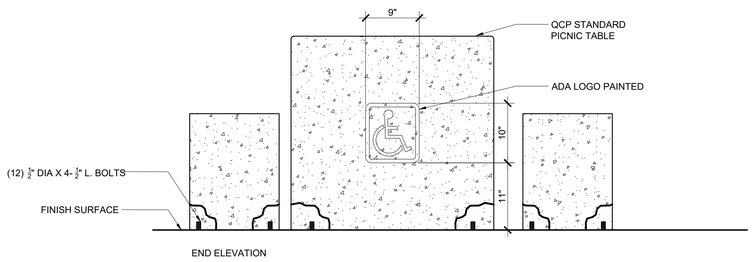
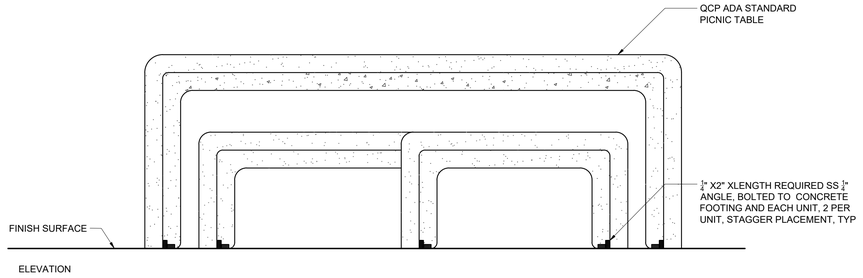
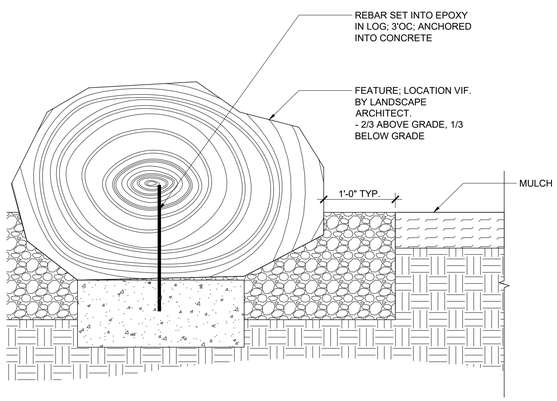
R. C. E. # 47882 / EXPIRES 12-31-2023

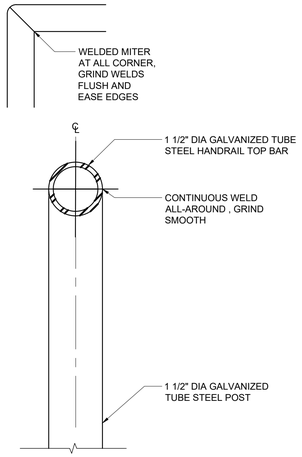




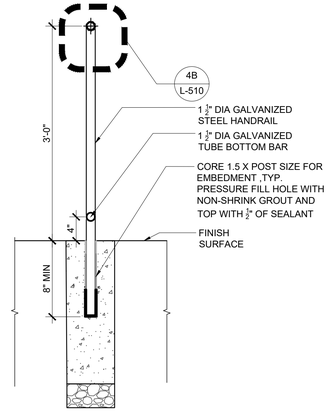
1 PICNIC TABLE, TYPE A
SCALE: 1" = 1'-0"



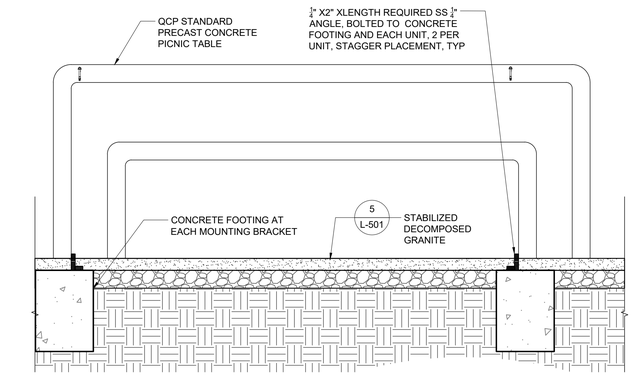
3 LOG
SCALE: 1"=1'-0"



4A TOP OF HANDRAIL
SCALE: 6"=1'-0"



4 HANDRAIL AT PEDESTRIAN PATH
SCALE: 1"=1'-0"



2 PICNIC TABLE, TYPE B
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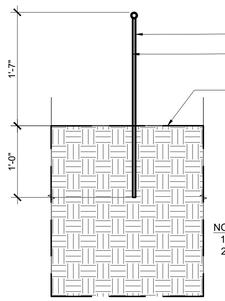
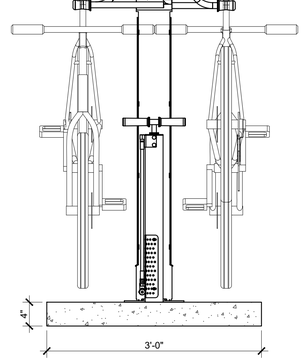
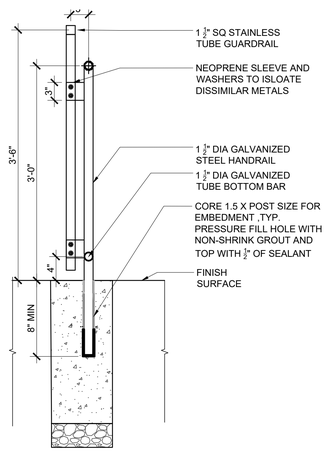


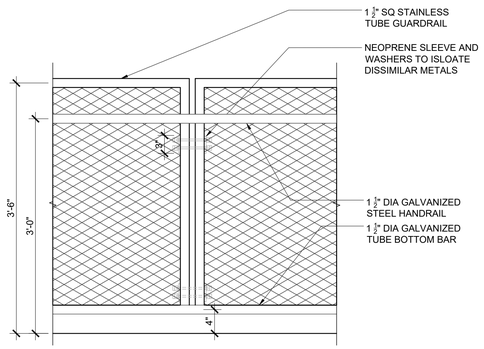
5 HABITAT PROTECTION FENCE
SCALE: 1"=1'-0"



6 BIKE REPAIR STATION
SCALE: 1" = 1'-0"



SECTION

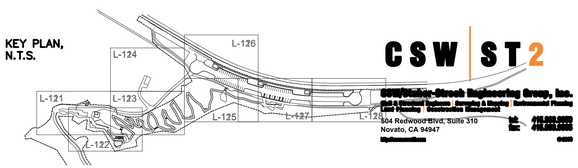


ELEVATION IN FRONT OF HANDRAIL

7 GUARDRAIL AT PEDESTRIAN PATH
SCALE: 1"=1'-0"

WRT
478 TEHAMA STREET, SUITE 2B
SAN FRANCISCO, CA 94103
WRTDESIGN.COM
415.575.4722

KEY PLAN,
N.T.S.



CSW | ST2
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		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	SITE FURNISHING
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

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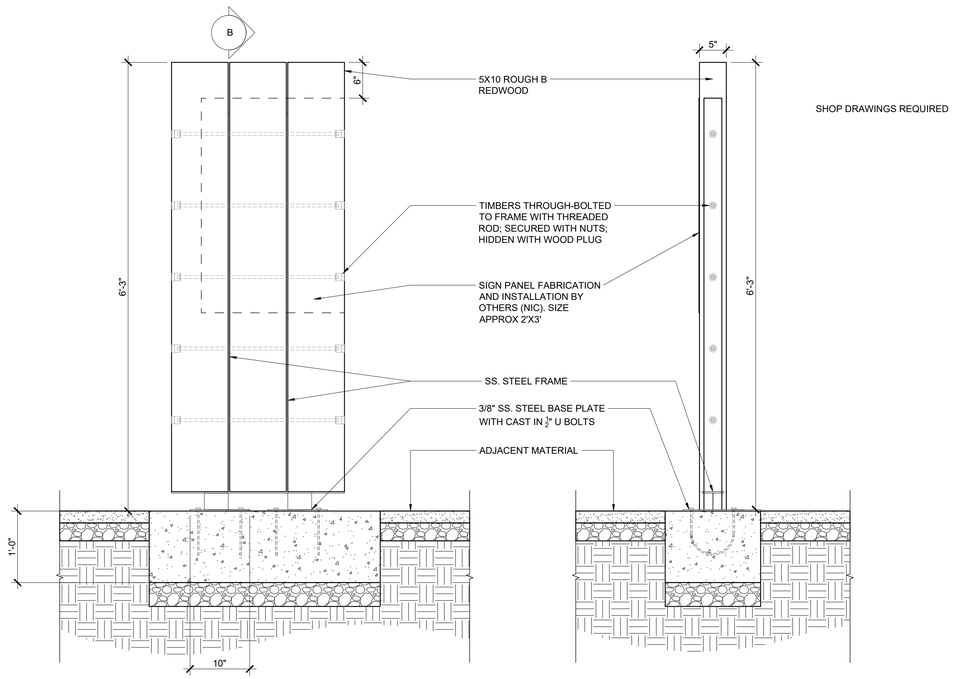
L-510
SHEET 97 OF 124

N:\E0008337 tunitas creek beach improvement project\4-ACAD\5-construction documentation\Sheet\L-509 SITE FURNISHINGS.dwg 04/27/2023 - 10:24 AM plot: 1:1



SHOP DRAWINGS REQUIRED

SECTION A

SECTION B

1 INTERPRETIVE SIGNAGE PANEL, TYP.
SCALE: 1" = 1'-0"

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

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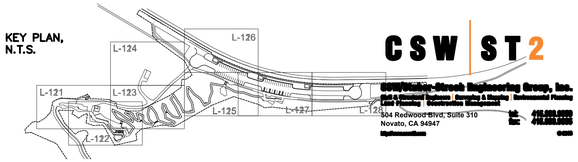
KEY PLAN,
N.T.S.



CSW | ST2
CSW/Stuber-Stroh Engineering Group, Inc.
304 Redwood Blvd, Suite 310
Novato, CA 94947

APPROVED DATE:

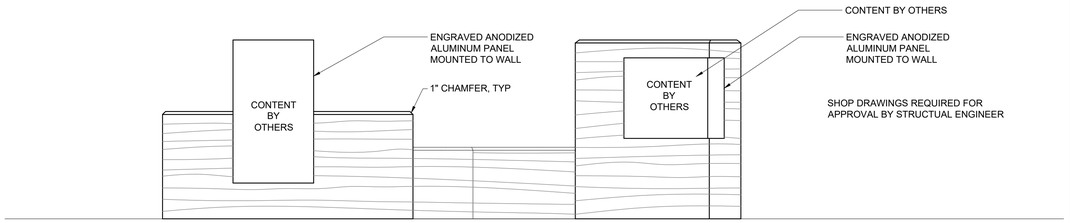
JOHN GIBBS
4417 EXPIRES 06/30/2024

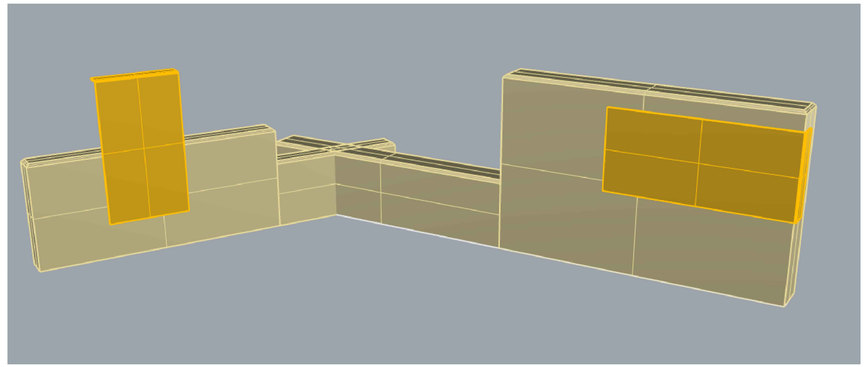
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT	SCALE:
		CHECKED BY: CSW/ST2 (JAH)	SIGNAGE DETAILS	DATE: 04/21/2023
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS	FILE NO.: E4995
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

L-511
SHEET 98 OF 124

N:\8000\8337 tunitas creek beach improvement project\54-ACADS-construction documentation\Sheet\L-501 SITE FURNISHINGS.dwg 04/27/2023 - 10:24 AM jpau 1:1



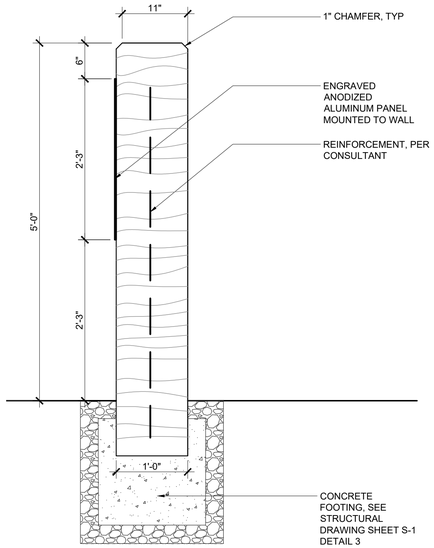


APPROVED:

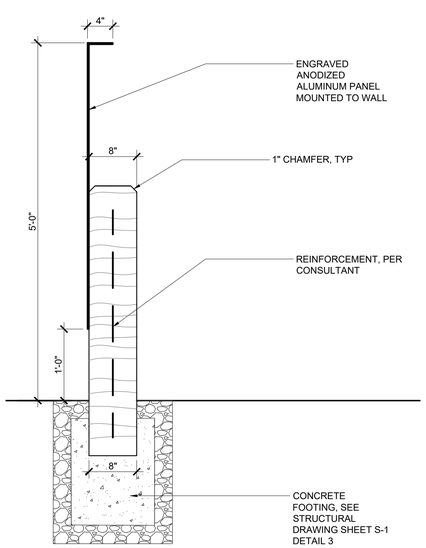
DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

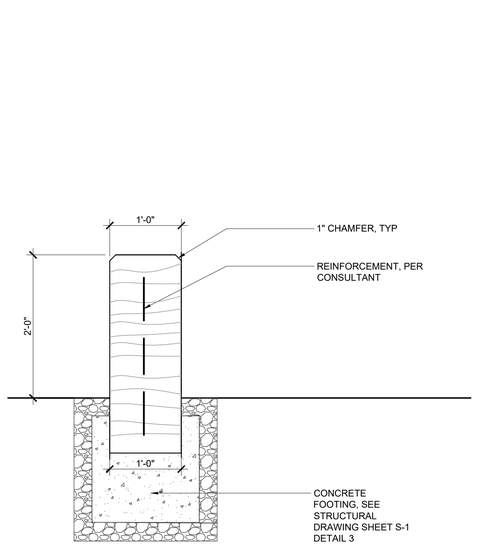
1 DONOR RECOGNITION FEATURE - ELEVATION
SCALE:1/2"=1'-0"



2A DONOR RECOGNITION WALL SECTION
SCALE: 1"=1'-0"



2B DONOR RECOGNITION WALL SECTION
SCALE: 1"=1'-0"



2C DONOR RECOGNITION WALL SECTION
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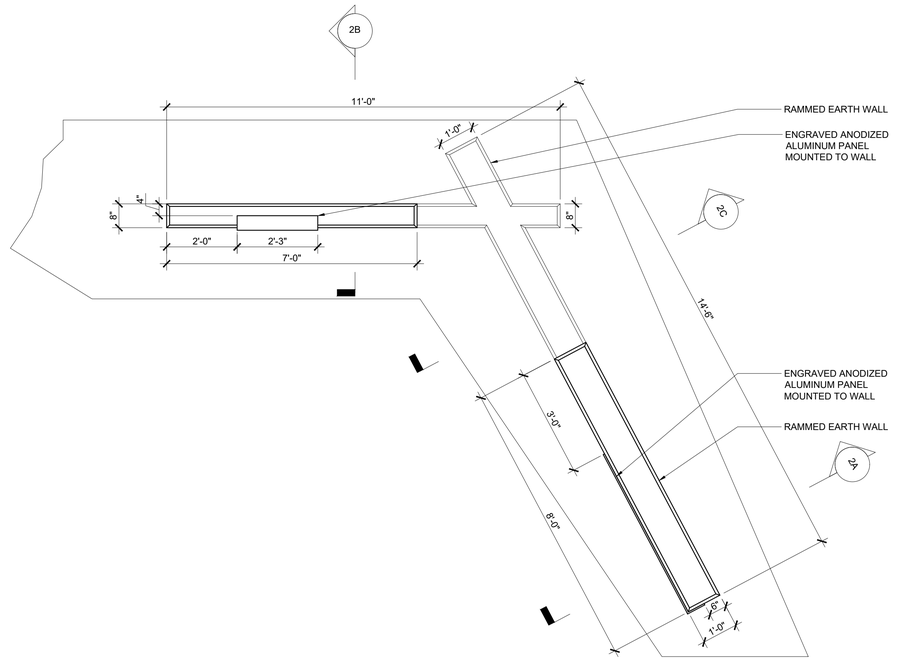
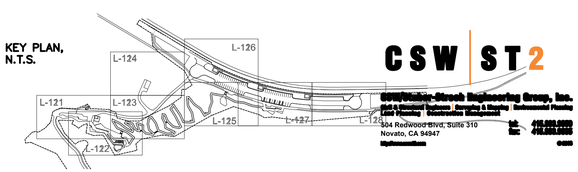


3 DONOR RECOGNITION WALL PLAN
SCALE: 1/2"=1'-0"

WRT
478 TEHAMA STREET, SUITE 2B
SAN FRANCISCO, CA 94103
WRTDESIGN.COM
415.575.4722

KEY PLAN,
N.T.S.



CSW | ST2
Consulting, Civil Engineering Group, Inc.
Civil & Structural Engineering | Surveying & Mapping | Environmental Planning
Land Planning | Construction Management
1304 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.0220
fax: 415.883.0221
www.csw-st2.com

APPROVED DATE:

JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT
JOHN R. GIBBS
4417
SIGNATURE
DATE
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	SIGNAGE DETAIL
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

L-512
SHEET99 OF 124

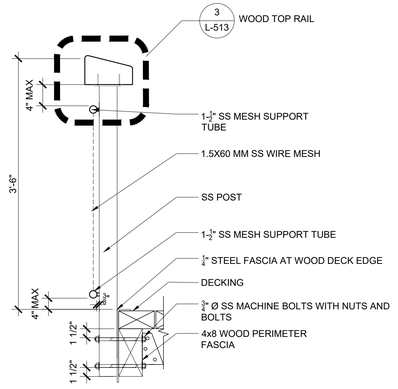
N:\80\0\0\5\37 tunitas creek beach improvement project\4.ACAD\5-construction documentation\Sheet\L-509 SITE FURNISHINGS.dwg 04/27/2023 - 10:38 AM jmu 1:3.5#0/21

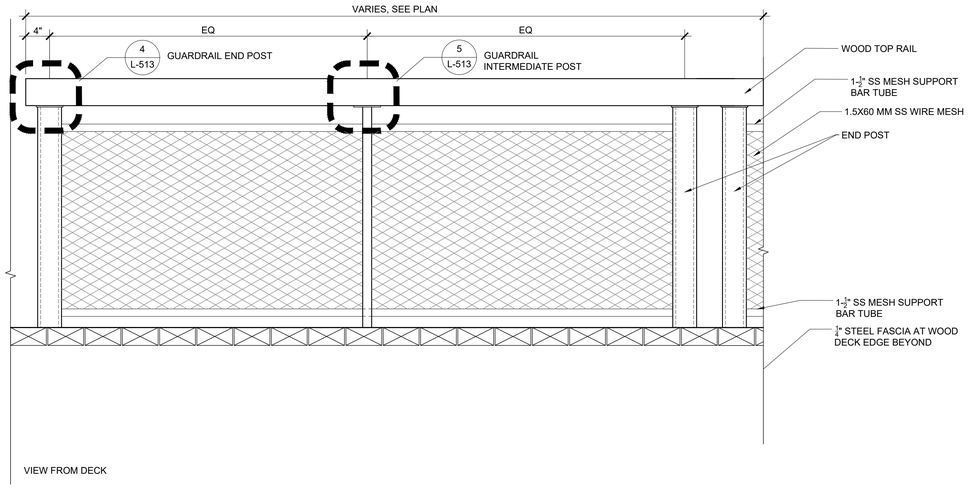
APPROVED:

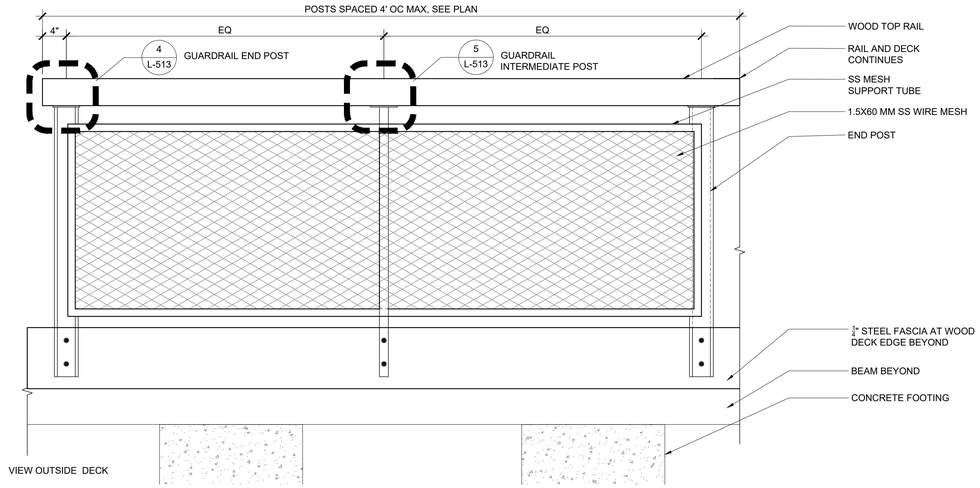
DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

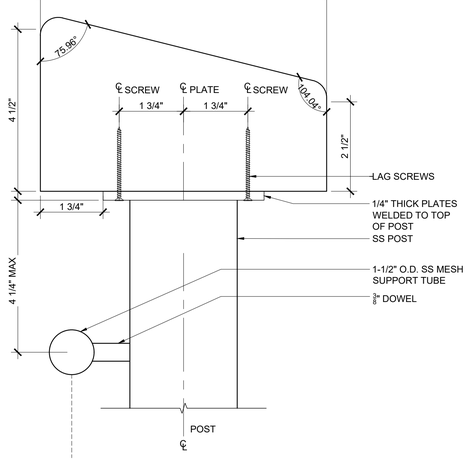




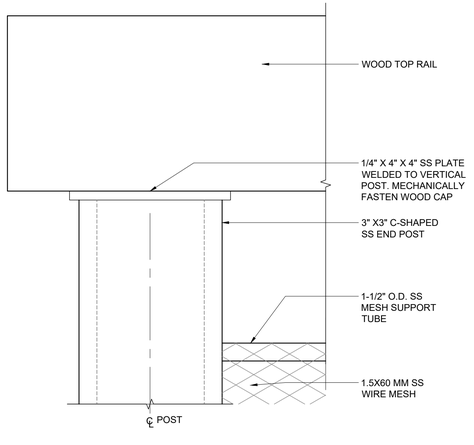


1 GUARDRAIL AT DECKING EDGE, TYP.
SCALE: 1" = 1'-0"

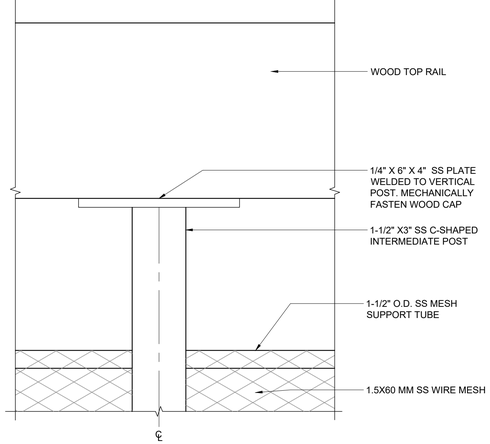
2 GUARDRAIL AT DECKING EDGE - TYPICAL SECTION ELEVATION
SCALE: 1" = 1'-0"



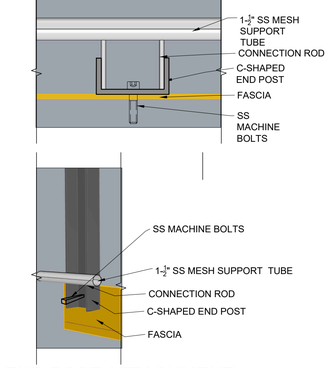
3 WOOD TOP RAIL
SCALE: 6" = 1'-0"



4 GUARDRAIL END POSTS - ELEVATION
SCALE: 6" = 1'-0"

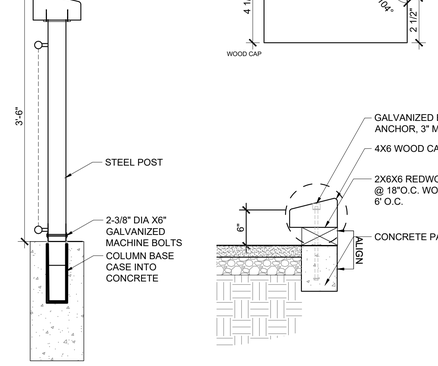


5 GUARDRAIL INTERMEDIATE POSTS - ELEVATION
SCALE: 6" = 1'-0"



END POST ATTACHMENT
SCALE: NTS

6 GUARDRAIL TYP.
SCALE: 1" = 1'-0"



7 TOE RAIL TYP.
N.T.S.

NOTES:
1. PROVIDE SHOP DRAWINGS. SPEC INFO. FOR STEEL, FASTENERS, WELDS, ETC.
2. GUARDRAIL STRUCTURAL DETAILS SEE SHEET S-1

WRT
478 TEHAMA STREET, SUITE 2B
SAN FRANCISCO, CA 94103
WRTDESIGN.COM
415.575.4722

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504 Redwood Blvd, Suite 310
Novato, CA 94947

APPROVED DATE:

JOHN GIBBS
4417 EXPIRES 06/30/2024

REGISTERED LANDSCAPE ARCHITECT
JOHN B. GIBBS
4417
SIGNATURE
DATE
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	GUARDRAIL DETAILS
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS. ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

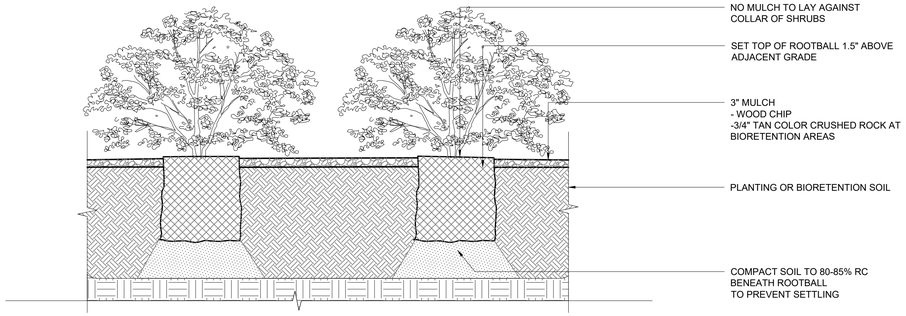
L-513
SHEET 1000F 124

N:\8000\8337 tunitas creek beach improvement project\4-ACAD\5-construction documentation\Sheet\L-503 WOOD DECKING DETAILS.dwg 04/27/2023 - 10:25 AM pzou 1:1

APPROVED:

DATE: 04/21/2023

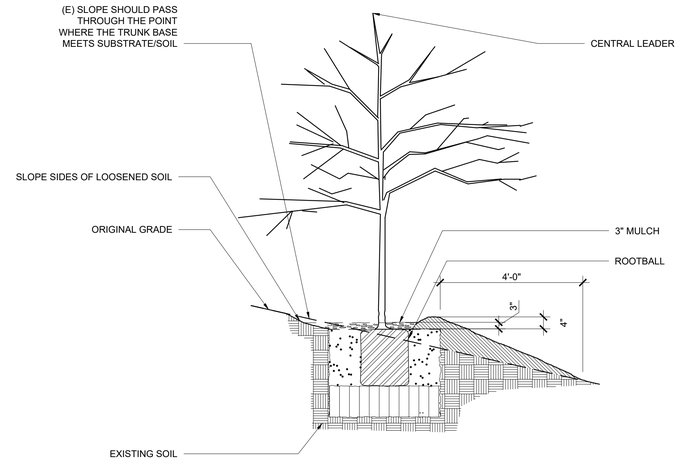
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



1 SHRUB PLANTING, TYP
SCALE: 1" = 1'-0"

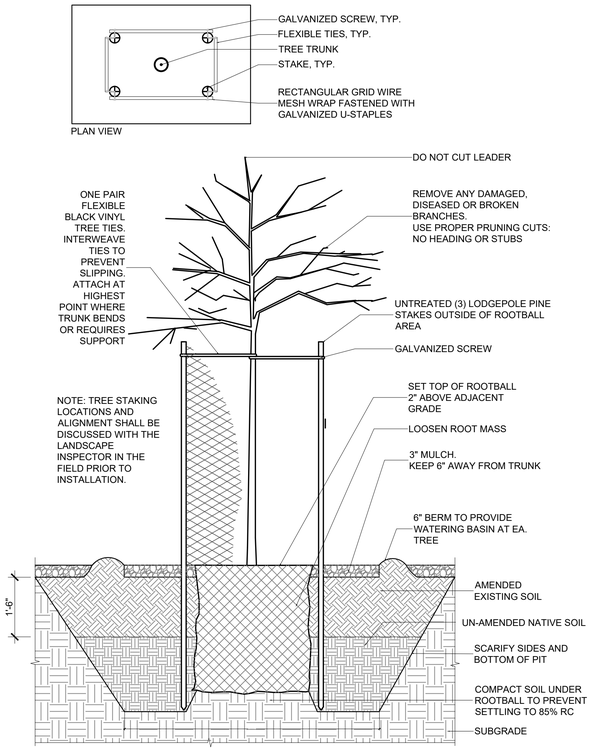
NOTES:
ADD 3' TALL RECTANGULAR GRID WIRE MESH AND STAKES TO ENCIRCLE NEW SHUB PLANTING AREAS DURING ESTABLISHMENT TO PROTECT FROM RODENTS IF DIRECTED BY ENGINEER.

PROVIDE CONTINUOUS 6" WATER RETENTION BERM AROUND PLANTING AREA



NOTES:
PROVIDE STAKING, IRE MESH, AMENDMENT, ROOTBALL PREPARATION, COMPACTION, AND WATER RETENTION BERM PER TREE PLANTING DETAIL 3 THIS SHEET.

2 TREE ON SLOPE
SCALE: 1/2" = 1'-0"



3 TREE PLANTING, TYP
SCALE: 1" = 1'-0"

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478 TEHAMA STREET, SUITE 2B
SAN FRANCISCO, CA 94103
WRTDESIGN.COM
415.575.4722

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REGISTERED LANDSCAPE ARCHITECT
JOHN R. GIBBS
4417
SIGNATURE
DATE
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
PLANTING DETAILS
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE:
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

L-601
SHEET 101 OF 124

N:\800\8337 tunitas creek beach improvement project\4-ACAD\5-construction documentation\Sheet\L-601 PLANTING DETAILS.dwg 04/27/2023 - 10:26 AM jzou 1:3.56021

GENERAL CONSTRUCTION NOTES

1. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS. MATERIALS AND EQUIPMENT SHALL BE U.L. LISTED AND LABELED FOR THE APPLICATION.
2. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, LICENSES AND INSPECTION FEES REQUIRED BY THIS CONTRACT WORK.
3. CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO BIDDING AND ALLOW FOR ALL FIELD CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ELECTRICAL WORK NOTED AND CALLED OUT ON ALL CONTRACT DOCUMENTS. THE CONTRACTOR SHALL OBTAIN INFORMATION AND BE FAMILIAR WITH ALL OTHER TRADES WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN OTHER TRADES ON PROJECT.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONS AND PROPERTY AND SHALL PROVIDE INSURANCE COVERAGE AS NECESSARY FOR LIABILITY AND PERSONAL, PROPERTY DAMAGE, TO FULLY PROTECT THE OWNER, ARCHITECT AND ENGINEER FROM ANY AND ALL CLAIMS RESULTING FROM THIS WORK.
5. CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS AT THE PROJECT SITE INDICATING ALL MODIFICATIONS TO ELECTRICAL SYSTEMS. THE CONTRACTOR SHALL AT THE CONCLUSION OF THE PROJECT PROVIDE ACCURATE "AS-BUILT" DRAWINGS ACCEPTABLE TO THE ARCHITECT.
6. ALL MATERIALS PROVIDED TO THE PROJECT SHALL BE NEW. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL ALL INCIDENTAL MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.
7. CONTRACTOR SHALL PROVIDE TO THE ARCHITECT A CONSTRUCTION SCHEDULE OF ELECTRICAL WORK. THE CONSTRUCTION SCHEDULE SHALL IDENTIFY ALL SIGNIFICANT MILESTONES WITH COMPLETION DATES.
8. CONTRACTOR SHALL PROVIDE ALL REQUIRED "CUTTING, PATCHING, EXCAVATION, BACKFILL AND REPAIRS" NECESSARY TO RESTORE DAMAGED SURFACES TO EQUAL OR BETTER THAN ORIGINAL CONDITIONS EXISTING AT START OF WORK.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR PAINTING ALL EXPOSED CONDUITS AND ELECTRICAL EQUIPMENT. REFER TO ARCHITECTS PAINTING SECTION FOR REQUIREMENTS.
10. ALL ELECTRICAL EQUIPMENT INSTALLED OUTDOORS SHALL BE WEATHERPROOF. EXTERIOR CONDUITS RUN INTO BUILDINGS SHALL BE INSTALLED WITH FLASHING, CAULKED AND SEALED. CONDUITS FOR EXTERIOR ELECTRICAL DEVICES SHALL BE RUN INSIDE BUILDING UNLESS OTHERWISE NOTED ON DRAWINGS.
11. ALL CONDUITS UNLESS OTHERWISE NOTED ON DRAWINGS SHALL HAVE AS A MINIMUM: TWO (2) #12s WITH ONE (1) #12 GROUND. "TICK" MARKS SHOWN ON CIRCUITRY ARE FOR ROUGH ESTIMATING ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WIRES AND WIRE SIZES REQUIRED BY LATEST CODE.
12. ALL BRANCH CIRCUITS SHALL HAVE INDIVIDUAL NEUTRALS. SHARED NEUTRALS ON MULTIWIRE CIRCUITS IS NOT ALLOWED.
13. COORDINATE ALL CONDUIT RUNS, ELECTRICAL EQUIPMENT AND PANELS WITH ALL OTHER WORK TO AVOID CONFLICTS.
14. SEE ARCHITECTURAL DOCUMENTS FOR EXACT PLACEMENT OF LIGHTING FIXTURES AND DEVICES. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF CEILING TYPES FROM ARCHITECTURAL DOCUMENTS AND PROVIDE AND INSTALL ALL REQUIRED FIXTURE MOUNTING HARDWARE. PROVIDE AND INSTALL U.L. LISTED FIRE STOP ENCLOSURES FOR ALL RECESSED FIXTURES IN FIRE RATED CEILINGS.
15. CONTRACTOR SHALL PROVIDE IN EVERY NEW EMPTY CONDUIT A DRAW STRING FOR USE IN FUTURE CONSTRUCTION.
16. WHERE IT IS NOT POSSIBLE TO REUSE EXISTING CONDUIT OR RUN NEW CONCEALED CONDUIT USE NON-METALLIC SURFACE RACEWAY AND BOXES. ROUTING OF ALL NON-METALLIC RACEWAYS SHALL BE APPROVED BY THE ARCHITECT OR OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.
17. EXTENSION RINGS OR RESET BOXES TO BE FLUSH WITH NEW WALL THICKNESS.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO EXISTING UNDERGROUND SYSTEMS (GAS, WATER, TELEPHONE, ELECTRICAL, SEWER, ETC.). THE CONTRACTOR SHALL REPAIR & PAY ALL EXPENSES FOR DAMAGE TO EXISTING UNDERGROUND SYSTEMS AS A RESULT OF NEW WORK. REPAIR TO DAMAGED UNDERGROUND SYSTEMS SHALL BE TO THE OWNERS SATISFACTION WITHOUT EXTRA EXPENSE TO THE OWNER.
19. CONTRACTOR SHALL COORDINATE WITH PG&E & PAY ALL CHARGES FOR TEMPORARY CONSTRUCTION POWER & TELEPHONE.
20. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES AND OBTAIN UTILITY COMPANY CONSTRUCTION DOCUMENTS. UTILITY COMPANY CHARGES SHALL BE PAID BY OWNER.

ELECTRICAL SYMBOLS & ABBREVIATIONS

SYMBOLS & ABBREVIATIONS SHOWN ARE FOR GENERAL USE. DISREGARD THOSE WHICH DO NOT APPEAR ON THE PLANS.

- FLUORESCENT OR LED LUMINAIRE - SEE SCHEDULE
- EMERGENCY OR NIGHT LIGHT
- STRIP FLUORESCENT OR LED LUMINAIRE - SEE SCHEDULE
- LUMINAIRE - RECESSED - SEE SCHEDULE
- RECESSED WALL WASHER
- LUMINAIRE - SURFACE MOUNTED - SEE SCHEDULE
- LUMINAIRE - POLE OR POST MOUNTED - SEE SCHEDULE
- LUMINAIRE - WALL MOUNTED SEE SCHEDULE
- BOLLARD OR PATH LIGHT - SEE SCHEDULE
- EXIT LIGHT - DIRECTIONAL ARROWS AS INDICATED - SEE SCHEDULE
- TRACK LIGHTING - SEE SCHEDULE
- EMERGENCY LIGHT
- DIGITAL DUAL TECHNOLOGY OCC. SENSOR
- LIGHTING CONTROL OCCUPANCY SENSOR CORNER MOUNTED
- DRC — DIMMER ROOM CONTROLLER
- PC — PLUG LOAD CONTROLLER
- RC — ROOM LIGHTING CONTROLLER
- LCP — LIGHTING CONTROL PANEL
- DL — DIGITAL DAYLIGHT SENSOR
- $ — SINGLE POLE SWITCH ★★
- $a — SINGLE POLE SWITCH, ★★ a = CIRCUIT CONTROLLED
- $3 — THREE WAY SWITCH★★
- $4 — FOUR WAY SWITCH★★
- $M — MANUAL MOTOR STARTER
- $K — KEY OPERATED SWITCH★★
- $D — LIGHTING DIMMER★★
- $ — DIGITAL ON/OFF SWITCH ★★
- $D — DIGITAL DIMMER SWITCH ★★
- $MW — DIGITAL MULTI SCENE LIGHTING SWITCH ★★
- $DS — DIGITAL DUAL TECHNOLOGY WALL OCC. SENSOR★★
- $P — WALL OCCUPANCY SENSOR ★★
- $P2 — DOUBLE SWITCHED WALL OCCUPANCY SENSOR ★★
- $DT — DIMMING DUAL TECHNOLOGY WALL SWITCH OCCUPANCY SENSOR ★★
- $DT2 — 2-BUTTON DIMMING DUAL TECHNOLOGY WALL SWITCH OCCUPANCY SENSOR ★★

- SECURITY DOOR CONTACTS
- MD — SECURITY MOTION DETECTOR
- SC — CCTV CAMERA
- KP — SECURITY SYSTEM KEYPAD
- DOOR BELL PUSHBUTTON
- CH — DOOR CHIME WITH LED
- RECEPTACLE - DUPLEX ★
- DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT
- GFCI CONVENIENCE RECEPTACLE - DUPLEX★
- GFCI CONVENIENCE DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT
- RECEPTACLE DOUBLE DUPLEX★
- HALF SWITCHED DUPLEX RECEPTACLE ★
- SINGLE RECEPTACLE★
- DUPLEX RECEPTACLE - CEILING MOUNTED
- HC — LETTER INDICATES DUPLEX HALF CONTROLLED RECEPTACLE ★
- C — LETTER INDICATES DUPLEX FULLY CONTROLLED RECEPTACLE ★
- FLOOR MOUNTED DUPLEX RECEPTACLE
- FLOOR MOUNTED BOX
- POWER OUTLET - SEE PLANS FOR NEMA TYPE★
- POWER POLE
- WALL TELEPHONE OUTLET ★★
- [#] — VOICE/DATA WALL OUTLET ★
- [#] — VOICE/DATA OUTLET MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT
- [#] — SURFACE MOUNTED VOICE/DATA WALL OUTLET ★
- [#] — SURFACE MOUNTED VOICE/DATA OUTLET MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT
- WIRELESS ACCESS POINT (WAP) - CEILING MOUNTED
- WIRELESS ACCESS POINT (WAP) - WALL MOUNTED - FIELD VERIFY HEIGHT
- [#] — VOICE/DATA OUTLET - FLOOR MOUNTED
- TV OUTLET ★
- [#] — VOICE/DATA OUTLET - CEILING MOUNTED
- S — INTERIOR SPEAKERS CEILING MOUNTED
- HS — INTERIOR SPEAKERS WALL MOUNTED
- HC — CLOCK +8'-0" AFF U.O.N. VERIFY BEFORE INSTALLATION

- PANELBOARD - FLUSH MOUNTED
- EQUIPMENT PANEL - FLUSH MOUNTED
- PANELBOARD - SURFACE MOUNTED
- EQUIPMENT PANEL - SURFACE MOUNTED
- M — METER W/ CURRENT TRANSFORMER
- J/J — JUNCTION BOX - CEILING OR WALL MOUNTED, SIZE PER CODE, TAPE AND TAG WIRES
- MOTOR CONNECTION
- NON-FUSED DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH; FUSED WITH DUAL-ELEMENT FUSES SIZED PER EQUIPMENT MFGR'S NAMEPLATE DATA
- COMBINATION STARTER/FUSED DISCONNECT SWITCH; FUSED DISCONNECT SWITCH ELEMENT FUSES SIZED PER EQUIPMENT MFGRS NAMEPLATE DATA
- MAGNETIC STARTER - NEMA SIZE INDICATED NEMA 3R ENCLOSURE UNLESS OTHERWISE SPECIFIED
- CIRCUIT BREAKER
- GROUND ROD WITH GROUNDWELL BOX
- GROUND ELECTRODE
- NORMALLY OPEN CONTACT
- NORMALLY CLOSED CONTACT
- TRANSFORMER - SEE SINGLE LINE FOR SIZE
- PULLBOX
- ERMS
- FLEX CONDUIT WITH CONNECTION
- CONDUIT - UP
- CONDUIT - DOWN
- E — CONDUIT EMERGENCY SYSTEM
- LV — LOW VOLTAGE WIRING
- SURFACE METAL OR NON-METALLIC RACEWAY
- CONDUIT - CONCEALED IN WALLS OR CEILING
- CONDUIT - EXISTING
- CONDUIT - BELOW SLAB OR UNDERGROUND: 3/4"MIN.
- E — CAPPED OR STUB-OUT CONDUIT
- CONDUIT CONTINUATION
- #10 — CONDUIT - HOME RUN TO PANEL TERMINAL CABINET, ETC. RUNS MARKED WITH CROSSHATCHES INDICATE NUMBER OF #12 AWG WIRES WHEN MORE THAN TWO. SIZE CONDUIT ACCORDING TO SPECIFICATIONS AND APPLICABLE CODE. CROSS HATCHES WITH NUMBER ADJACENT INDICATES WIRE SIZE OTHER THAN #12 AWG.
- 2 — SHEET NOTE REFERENCE SYMBOL; SEE ASSOCIATED NOTE ON SAME SHEET
- 3 — SCHEDULE SYMBOL; SEE ASSOCIATED NOTE ON SAME SHEET

- 2 — DETAIL NOTE REFERENCE SYMBOL SEE ASSOCIATED NOTE ON SAME DETAIL
- 1 / E3.0 — DETAIL NUMBER; DETAIL OR SECTION REFERENCE; SHEET NUMBER
- F301 — FEEDER DESIGNATION; SEE ASSOCIATED NOTE ON SAME DETAIL
- 1 — INDICATES QUANTITY OF TELEPHONE OUTLETS
- 2 — INDICATES QUANTITY OF DATA OUTLETS

ABBREVIATIONS

A	AMPERE	GFCI	GROUND FAULT	NTS	NOT TO SCALE
AFF	ABOVE FINISHED FLOOR	GFI	INTERRUPTING	OAH	OVERALL HEIGHT
ALUM/AL	ALUMINUM	GND, G	GROUND	OC	ON CENTER
ARCH	ARCHITECT	GRS	GALVANIZED RIGID STEEL	OH	OVERHEAD
AWG	AMERICAN WIRE GAUGE			OFCI	OWNER FURNACED CONTRACTOR INSTALLED
		HT	HEIGHT		
BKR	BREAKER	IC	INTERCOM	PA	PUBLIC ADDRESS
C	CONDUIT	IDF	INTERMEDIATE DISTRIBUTION FRAME	PB	PULL BOX
CATV	CABLE TV			PF	POWER FACTOR
CB	CIRCUIT BREAKER	INCAND	INCANDESCENT	PH	PHASE
CCTV	CLOSED CIRCUIT TV	JB	JUNCTION BOX	PIR	PASSIVE INFRARED
CKT	CIRCUIT	KV	KILOVOLT	PNL	PANEL
CL	CENTER LINE	KVA	KILOVOLT AMPERES	PV	PHOTOVOLTAIC
CLG	CEILING	KW	KILOWATT	PVC	POLYVINYL CHLORIDE
C.O.	CONDUIT ONLY	LCP	LIGHTING CONTROL PANEL		
CTR	CENTER			PWR	POWER
D	DIMMER	LTG	LIGHTING	(R)	EXISTING TO BE REMOVED
DIM	DIMENSION	LV	LOW VOLTAGE	(RP)	REMOVABLE POLE
DIST	DISTRIBUTION	KCM	THOUSAND CIRCULAR MILS	RECPT'S	RECEPTACLES
(E)	EXISTING			REQD	REQUIRED
EC	ELECTRICAL CONTRACTOR	M.B.	MAIN CIRCUIT BREAKER	REQMT'S	REQUIREMENT(S)
(EL)	EVENING LIGHT	MCA	MINIMUM CIRCUIT AMPS	SHT	SHEET
EM	EMERGENCY	MDF	MAIN DISTRIBUTION FRAME	SLD	SINGLE LINE DIAGRAM
EMT	ELECTRICAL METALLIC TUBING	MECH	MECHANICAL	STC	SYSTEMS TERMINATION CABINET
ERMS	ENERGY REDUCTION MAINTENANCE SWITCH	MH	METAL HALIDE	SW	SWITCH
		MLO	MAIN LUGS ONLY	SWBD	SWITCHBOARD
EQUIP	EQUIPMENT	MPOE	MAIN POINT OF ENTRANCE	TTB	TELEPHONE TERMINAL BACKBOARD
EV	ELECTRICAL VEHICLE	MTD	MOUNTED	TYP	TYPICAL
FA	FIRE ALARM	MTG	MOUNTING	UON	UNLESS OTHERWISE NOTED
FACP	FIRE ALARM CONTROL PANEL	MOCP	MAXIMUM OVER CURRENT PROTECTION	UG	UNDERGROUND
		(N)	NEW	V	VOLT
FC	FOOT CANDLE	NIC	NOT IN CONTRACT	VD	VOLTAGE DROP
FIN	FINISH	NIEC	NOT IN ELECTRICAL CONTRACT	W	WATT
FL	FLOOR			W/	WITH
FLA	FULL LOAD AMPS	(NL)	NIGHT LIGHT	WP	WEATHERPROOF
FLUOR	FLUORESCENT	NO.	NUMBER	XFMR	TRANSFORMER
(F)	FUTURE	NOM	NOMINAL		
GC	GENERAL CONTRACTOR				

★ +15" A.F.F. TO BOTTOM OF BOX, U.O.N.
★★ +48" A.F.F. TO TOP OF BOX, U.O.N.
[#] NUMBER IN BRACKETS DENOTES NUMBER OF CABLE DROPS WHEN MORE THAN (2).

LIGHT FIXTURE SCHEDULE

FIXTURE NOTES:

1. ALL LED LIGHT FIXTURE DRIVERS SHALL BE ELECTRONIC TYPE, 10% TOTAL HARMONIC DISTORTION MAXIMUM.
2. ALL LED LIGHT MODULES SHALL BE ENERGY SAVING 3500° K, 80 CRI MINIMUM, U.O.N. (SEE SPECIFICATIONS FOR MORE INFORMATION).
3. ALL LED DRIVERS (AND ASSOC. FIXTS.) SHALL HAVE MANUFACTURER'S CERTIFICATION OF COMPLIANCE WITH CALIFORNIA ENERGY COMMISSION STANDARDS AND REQUIREMENTS, WHERE SUCH ARE USED IN CONDITIONED SPACES.

TYPE	DESCRIPTION	LAMPS	MANUFACTURER
XA	HANDRAIL LIGHTING LED PODS, ALUMINUM BODY, ANODIZED COATING, ASYMMETRIC DISTRIBUTION, WET LOCATION RATED, CLEAR LENS, RAIL SIZE, THICKNESS AND BEZEL PER ARCHITECT. PRIMARY DRIVER: 110-277V, 96WATTS SECONDARY DRIVER: 500mA	LED 2W/POD 3000°K	KLIK USA KLIK LEDPod 40 DRIVER: LP096WPRITRNDIM DRIVER ENCLOSURE: LPNEMA4ENCLJR

APPLICABLE CODES & STANDARDS

CODES:

1. 2022 CALIFORNIA ADMINISTRATIVE CODE C.C.R., TITLE 24, PART 1.
2. 2022 CALIFORNIA BUILDING CODE (CBC) C.C.R., TITLE 24, VOL. 1 & 2 BASED ON THE 2021 INTERNATIONAL BUILDING CODE (IBC) WITH CALIFORNIA AMENDMENTS.
3. 2022 CALIFORNIA ELECTRICAL CODE (CEC) C.C.R., TITLE 24, PART 3 BASED ON THE 2020 NATIONAL ELECTRICAL CODE (NEC) WITH CALIFORNIA AMENDMENTS.
4. 2022 CALIFORNIA ENERGY CODE C.C.R., TITLE 24, PART 6.
5. 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE C.C.R., TITLE 24, PART 11.
6. 2022 CALIFORNIA REFERENCED STANDARDS CODE C.C.R., TITLE 24, PART 12.
7. TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.
8. CITY OF HALF MOON BAY ORDINANCES, CODES, AND REGULATIONS.

STANDARDS:

1. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
2. ELECTRONICS INDUSTRIES ASSOCIATION (EIA)
3. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
4. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
5. NATIONAL ELECTRICAL TESTING ASSOCIATION (NETA)
6. UNDERWRITER LABORATORIES (UL)
7. CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ACT STANDARDS (CAL/OSHA)

SHEET INDEX

E0.1	SYMBOLS, ABBREVIATIONS, LIGHT FIXTURE SCHEDULE, CODES, STANDARDS, NOTES & SHEET INDEX.
E0.2	CALIFORNIA ENERGY COMPLIANCE TITLE 24 (BUILDING EXTERIOR).
E1.1	ELECTRICAL SINGLE LINE DIAGRAM & PANELBOARD SCHEDULES.
E2.1	ELECTRICAL OVERALL SITE PLAN
E2.2	ELECTRICAL PARTIAL SITE PLAN AREA-1
E2.3	ELECTRICAL PARTIAL SITE PLAN AREA-2
E6.1	ELECTRICAL DETAILS AND PANELBOARD SCHEDULES
E6.2	ELECTRICAL DETAILS
E7.1	ELECTRICAL SPECIFICATIONS

REGISTERED PROFESSIONAL ENGINEER — ANN MADER STILLMAN — C 47882 — EXPIRES 12/31/23 — CIVIL — STATE OF CALIFORNIA

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER — NAI16 ANDREW RAMIREZ — No. E21043 — Exp. 3/31/25 — ELECTRICAL — STATE OF CALIFORNIA

FOR PLAN CHECK ONLY

AURUM CONSULTING ENGINEERS
MONTEREY BAY, INC.
Project No. 22-525.00
1798 Technology Dr. • Suite 242 • San Jose, CA 95110
T.831.646.3330 • F.831.646.3336 • www.acemb.com

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G:\Projects\2022\Jobs\22-525.00 Tunitas Creek Beach\Dwgs\01\22-525E0.1.dwg 04/27/2023 - 11:53 AM Jose L3.5602

CSW | ST2
CSW/Stuber-Stroh Engineering Group, Inc.
Civil & Structural Engineers · Surveying & Mapping · Environmental Planning
Land Planning · Construction Management
504 Redwood Blvd, Suite 310
Novato, CA 94947
tel 415.883.0220
fax 415.883.0535

APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER — ROBERT C. STEVENS — No. C 058660 — CIVIL — STATE OF CALIFORNIA

COUNTY OF SAN MATEO — PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
SYMBOLS, ABBREVIATIONS, LIGHT FIXTURE SCHEDULE, CODES, STANDARDS, NOTES & SHEET INDEX
SAN MATEO COUNTY PARKS

SCALE: As Noted
DATE: 04/21/2023
FILE NO.: E4995

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

E0.1
SHEET 102 OF 124

STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	Tunitas Creek Beach Improvement	Report Page: (Page 1 of 7)
Project Address:		Date Prepared: 2023-02-06T16:32:55-05:00

This document is used to demonstrate compliance with requirements in 110.9, 130.0, 130.2, 140.7, and 141.0(b)2L for outdoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e)6, 180.1(a) and 180.2(b)4Bv for outdoor lighting scopes using the prescriptive path for multifamily and mixed-use occupancies. Multifamily includes dormitory and senior living facilities.

A. GENERAL INFORMATION

01	Project Location (city)	Redwood City	04	Total Illuminated Hardscape Area (ft²)	10059
02	Climate Zone	3			
03	Outdoor Lighting Zone per Title 24 Part 1	10.114 or as designated by Authority Having Jurisdiction (AHJ):			
☐	LZ-0: Very Low - Undeveloped Parkland	☐ LZ-2: Moderate - Urban Clusters	☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval		
☐	LZ-1: Low - Rural Areas	☒ LZ-3: Moderately High - Urban Areas			
05	Occupancy Types within Project				

● Support Areas

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv for alterations.

My Project Consists of:

01	02
☒ New Lighting System	Must Comply with Allowances from 140.7 / 170.2(e)6
☐ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)? ○ Yes ○ No

03	04	05
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method
☐ < 10% ☐ >= 10% and < 50% ☐ >= 50%		

Please proceed to Table F. Outdoor Lighting Fixture Schedule to define the project's luminaires.

[1] *FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.*

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through N. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv													Compliance Results		
01		02		03		04		05		06		07		08	09
General Hardscape Allowance 140.7(d)1 / 170.2(e)6 (See Table I)	+	Per Application 140.7(d)2 / 170.2(e)6 (See Table J)	+	Sales Frontage 140.7(d)2 (See Table K)	+	Ornamental 140.7(d)2 / 170.2(e)6 (See Table L)	+	Per Specific Area 140.7(d)2 / 170.2(e)6 (See Table M)	OR	Existing Power Allowance 141.0(b)2L / 180.2(b)4Bv (See Table N)	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 must be >= 08**
1,278.44	+	---	+	---	+	---	+	---	OR	---	=	1,278.44	≥	684	COMPLIES
Shielding Compliance (See Table G for Details)															N/A
Controls Compliance (See Table H for Details)															COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

Selections made in Certificates of Installation Table have been changed by the permit applicant. See Table E. Additional Remarks for permit applicant's explanation.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

(NRCI-LTO-01-E Explanation) 1

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with 140.7 / 170.2(e)6 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per 141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included). Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

Designed Wattage:

01	02		03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description		Watts per luminaire[1,2]	How is Wattage determined	Total Number Luminaires[2]	Luminaire Status[3]	Excluded per 140.7(a) / 170.2(e)6A	Design Watts	Cutoff Req. > 6,200 initial lumen output 130.2(b) / 160.5(c)1[4]	Field Inspector	
										Pass	Fail
XA	Handrail Lighting LED Pods	☐ Linear	2	Mfr. Spec	342	New	☐	684	NA: < 6200 lumens	☐	☐
								Total Design Watts:	684		

* *NOTES: Selections with a "* require a note in the space below explaining how compliance is achieved.*
EX: Luminaire is lighting a statue; EXCEPTION 2 to 130.2(b)

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b)*
[2] *For linear luminaires, wattage should be indicated as W/ft instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*
[3] *Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.*
[4] *Compliance with mandatory shielding requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by 130.2(b)/ 160.5(c)*

G. SHIELDING REQUIREMENTS (BUG)

This section does not apply to this project.

H. OUTDOOR LIGHTING CONTROLS

This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
Outdoor lighting for nonresidential buildings, parking garages and common service areas in multifamily buildings must be documented separately from outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit

Mandatory Controls for Nonresidential Occupancies, Parking Garages & Common Areas in Multifamily Buildings

01	02	03	04	05	
Area Description	Shut-Off 130.2(c)1 / 160.5(c)	Auto-Schedule 130.2(c)2 / 160.5(c)	Motion Sensor 130.2(c)3 / 160.5(c)	Field Inspector	
				Pass	Fail
Ramp/ Stairs Railing: "XA"	Astronomical Timer	Provided	NA: Each Luminaire < 40 Watts	☐	☐

[1] *FOOTNOTE: Text has been abbreviated, please refer to Table 160.5-A to confirm compliance with the specific light source technologies listed.*
[2] *Authority having jurisdiction may ask for cutsheets or other documentation to confirm compliance of light source.*
[3] *Recessed luminaires marked for use in fire-rated installations, and recessed luminaires installed in non-insulated ceilings are excepted from ii and iii.*

I. LIGHTING POWER ALLOWANCE (per 140.7 / 170.2(e))

This table includes areas using allowance calculations per 140.7 / 170.2(e). General Hardscape Allowance is per Table 140.7-A/Table 170.2-R while "Use it or lose it" Allowances are per Table 140.7-B /Table 170.2-S. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.
Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

	01				
	"Use it or lose it" Allowance (select all that apply) (select all that apply)				
☒ General Hardscape Allowance Table I (below)	☐ Per Application Table J	☐ Sales Frontage Table K	☐ Ornamental Table L	☐ Per Specific Area Table M	

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A for Nonresidential & Hotel/Motel

02	03	04	05	06	07	08	09
Area Description	Area Wattage Allowance (AWA)			Linear Wattage Allowance (LWA)			Total General AWA + LWA (Watts)
	Illuminated Area (ft²)	Allowed Density (W/ft²)	Area Allowance (Watts)	Perimeter Length (lf)	Allowed Density (W/lf)	Linear Allowance (Watts)	
Ramp/ Stairs Railing	10059	0.021	211.24	4086	0.2	817.2	1028.44
Initial Wattage Allowance for Entire Site (Watts):							250
Instances of Initial Wattage Allowance (LZ 0 only)[1]							
Total General Hardscape Allowance (Watts):							1278.44

J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This section does not apply to this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Form/Title
NRCI-LTO-E - Must be submitted for all buildings

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls are added to <= 20 luminaires.	Ramp/ Stairs Railing: "XA"

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Eldridge O. Bell	Documentation Author Signature:
Company: Aurum Consulting Engineers, Monterey	Signature Date:
Address:	CEA/ HERS Certification Identification (if applicable):
City/State/Zip:	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Eldridge O. Bell	Responsible Designer Signature:
Company: Aurum Consulting Engineers, Monterey	Date Signed:
Address:	License:
City/State/Zip:	Phone:

APPROVED:
DATE: 04/21/2023
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER ANN MADER STILLMAN C 47882 EXPIRES 12/31/23 CIVIL STATE OF CALIFORNIA

FOR PLOT REVIEW ONLY
REGISTERED PROFESSIONAL ENGINEER NATIB ANWAR No. E21043 Exp. 3/31/25 ELECTRICAL STATE OF CALIFORNIA

AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.
Project No. 22-525.00
1798 Technology Dr. ● Suite 242 ● San Jose, CA 95110
T.831.646.3330 ● F.831.646.3336 ● www.acemb.com

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G:\Projects\2022\Jobs\22-525.00 Tunitas Creek Beach\Dwgs\0122-525E0.2.dwg 04/27/2023 - 11:53 AM Jose 13.5602

CSW|ST2
CSW/Stuber-Stroeh Engineering Group, Inc.
Civil | Structural Engineers | Surveying & Mapping | Environmental Planning
Land Planning | Construction Management
504 Redwood Blvd, Suite 310 Ph: 415.883.0220
Novato, CA 94947 Fax: 415.883.0280
sanfrancisco@csw-st2.com

APPROVED DATE:
ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	DRAWN BY: MTM	CHECKED BY: CSW/ST2 (JAH)
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO		

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
CALIFORNIA ENERGY COMPLIANCE
TITLE 24 (BUILDING EXTERIOR)
SAN MATEO COUNTY PARKS

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: As Noted
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

E0.2
SHEET 103 OF 124

APPROVED:

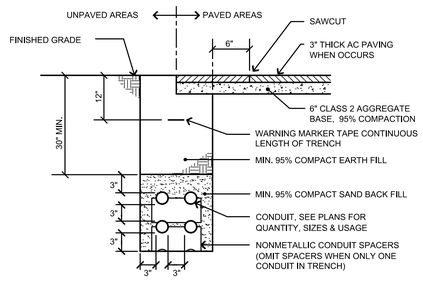
DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

GENERAL NOTES:

1. SAW CUT, TRENCH & BACKFILL FOR (N) CONDUITS. PATCH WALKWAY TO MATCH (E) SURROUNDING SURFACES. CARE SHALL BE TAKEN TO PROTECT EXISTING TREES. RESEED OR RESOD (E) DISTURBED PLANTED AREAS TO ARCHITECT'S SATISFACTION.
2. BASE MATERIAL TO BE REPLACED TO THE DEPTH OF EXISTING BASE AND COMPACTED TO A MIN. 95% RELATIVE COMPACTION. A.C. MAY BE SUBSTITUTED FOR BASE MATERIAL, WHEN USED AS BACKFILL, CLASS 100-E-100 P.C.C. MAY BE SUBSTITUTED FOR BASE MATERIAL

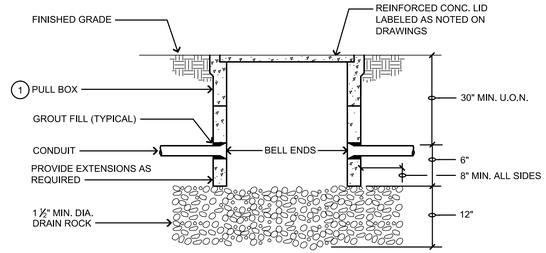


6 TYPICAL TRENCH SECTION

NO SCALE

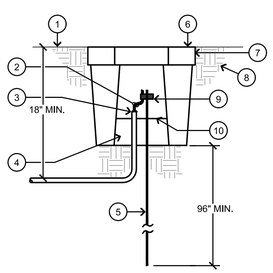
DETAIL NOTES:

1. SIZE(S) & MFGR. PER PULLBOX SCHEDULE SHOWN ON SHEET E2.2.



5 TYPICAL PULLBOX DETAIL

NO SCALE



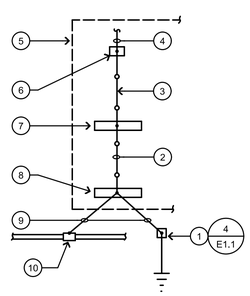
DETAIL NOTES:

1. FINISHED GRADE
2. GROUND CONDUCTOR
3. SEAL CONDUIT WATERTIGHT
4. GROUT BOTTOM MINIMUM 3"
5. ¾" x 10'-0" COPPER CLAD GROUND ROD
6. LID LABELED "GROUND ROD"
7. CHRISTY "F8" GROUND ROD BOX
8. UNDISTURBED EARTH
9. GROUND CLAMP
10. COAT ALL INSIDE SURFACES W/SEALANT

GENERAL NOTE:
WHERE METAL CONDUIT USED IN LIEU OF PVC, PROVIDE GROUND BUSHINGS & BONDS PER CODE.

4 GROUND ROD BOX DETAIL

NO SCALE



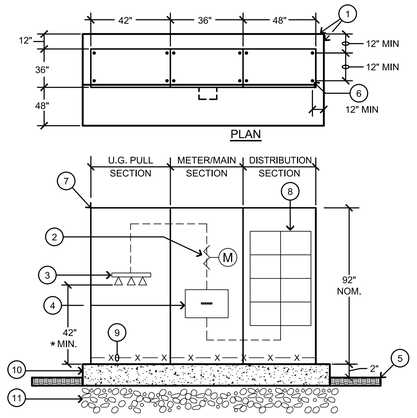
DETAIL NOTES:

1. SERVICE GROUND ROD
2. REMOVABLE LINK OR MAIN BONDING JUMPER FURNISHED WITH SWITCHBOARD & CONNECTED BY CONTRACTOR
3. REMOVABLE LINK
4. INCOMING NEUTRAL
5. SERVICE EQUIP.
6. SERVICE NEUTRAL LANDING LUG
7. NEUTRAL BUS
8. GROUND BUS
9. 1" PVC; #3/0 BARE COPPER GROUNDING ELECTRODE CONDUCTOR
10. COLD WATER PIPE IN BUILDING WITHIN 5 FEET OF ENTRANCE OF BUILDING THAT MEETS REQUIREMENT'S OF CEC 250-50

GENERAL NOTE:
IF AVAILABLE ON THE PREMISES AT EACH BUILDING OR STRUCTURE SERVED EACH OF THE FOLLOWING SHALL BE BONDED TOGETHER TO FORM THE GROUNDING ELECTRODE SYSTEM:
a. METAL UNDERGROUND WATER PIPE,
b. METAL FRAME OF BUILDING,
c. GROUND RING,
d. OTHER ELECTRODES PER CEC 250-50

3 ELECTRICAL SERVICE GROUND

NO SCALE



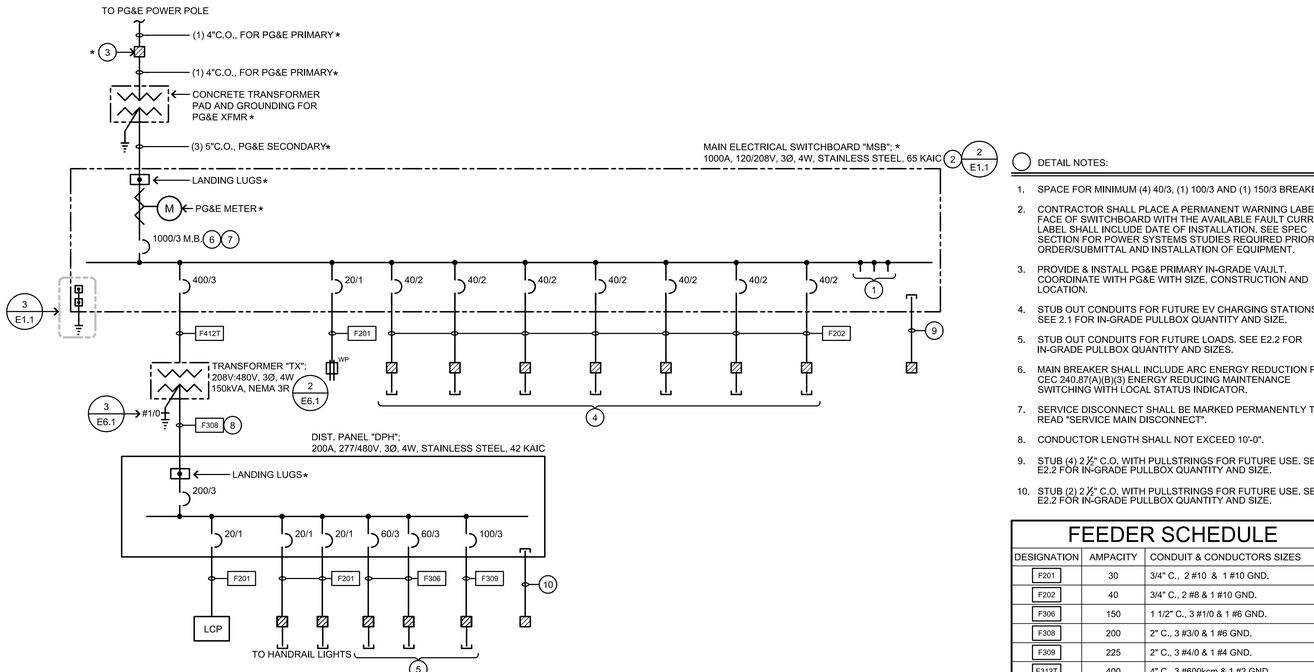
DETAIL NOTES:

1. 12" SIDES, 12" BACK AND 48" IN FRONT, PAD
2. METERING FACILITIES & C.T.'S *
3. LANDING LUGS *
4. MAIN BREAKER
5. TOP OF GRADE
6. ½" DIA. x 3¾" EMBED STAINLESS STEEL HILTI KB-TZ (ICC ESR-1917) AT EACH CORNER OF EACH SECTION.
7. STAINLESS STEEL ENCLOSURE OMITTED FOR CLARITY. MAX WEIGHT OF MSB: 2900 LBS. MAX HEIGHT TO CENTER OF GRAVITY = 4'-0"
8. FEEDER BREAKER (TYP.) (SEE SINGLE LINE FOR SIZES AND QUANTITIES)
9. FULL LENGTH CU. GND. BUS
10. 12" THICK CONC. PAD WITH #5 AT 12" O.C. EACH WAY AT 3" CLEAR FROM BOTTOM AND 2" CLEAR FROM TOP, 2500 PSI @ 28 DAY CONCRETE.
11. 1 1/2" MIN. DIA. BASE ROCK.

* PER PG&E RULES, REGULATIONS & STANDARDS.

2 MAIN SWITCHBOARD "MSB" ELEVATION

NO SCALE



DETAIL NOTES:

1. SPACE FOR MINIMUM (4) 40/3, (1) 100/3 AND (1) 150/3 BREAKERS.
2. CONTRACTOR SHALL PLACE A PERMANENT WARNING LABEL ON FACE OF SWITCHBOARD WITH THE AVAILABLE FAULT CURRENT. LABEL SHALL INCLUDE DATE OF INSTALLATION. SEE SPEC SECTION FOR POWER SYSTEMS STUDIES REQUIRED PRIOR TO ORDER/SUBMITTAL AND INSTALLATION OF EQUIPMENT.
3. PROVIDE & INSTALL PG&E PRIMARY IN-GRADE VAULT. COORDINATE WITH PG&E WITH SIZE, CONSTRUCTION AND LOCATION.
4. STUB OUT CONDUITS FOR FUTURE EV CHARGING STATIONS, SEE 2.1 FOR IN-GRADE PULLBOX QUANTITY AND SIZE.
5. STUB OUT CONDUITS FOR FUTURE LOADS. SEE E2.2 FOR IN-GRADE PULLBOX QUANTITY AND SIZES.
6. MAIN BREAKER SHALL INCLUDE ARC ENERGY REDUCTION PER CEC 240.87(A)(B)(3) ENERGY REDUCING MAINTENANCE SWITCHING WITH LOCAL STATUS INDICATOR.
7. SERVICE DISCONNECT SHALL BE MARKED PERMANENTLY TO READ "SERVICE MAIN DISCONNECT".
8. CONDUCTOR LENGTH SHALL NOT EXCEED 11'-0".
9. STUB (4) 2½" C.O. WITH PULLSTRINGS FOR FUTURE USE. SEE E2.2 FOR IN-GRADE PULLBOX QUANTITY AND SIZE.
10. STUB (2) 2½" C.O. WITH PULLSTRINGS FOR FUTURE USE. SEE E2.2 FOR IN-GRADE PULLBOX QUANTITY AND SIZE.

* PER PG&E RULES, REGULATIONS, AND STANDARDS

FEEDER SCHEDULE

DESIGNATION	AMPACITY	CONDUIT & CONDUCTORS SIZES
F201	30	3/4" C., 2 #10 & 1 #10 GND.
F202	40	3/4" C., 2 #8 & 1 #10 GND.
F306	150	1 1/2" C., 3 #1/0 & 1 #6 GND.
F308	200	2" C., 3 #3/0 & 1 #6 GND.
F309	225	2" C., 3 #4/0 & 1 #4 GND.
F312T	400	4" C., 3 #600kcm & 1 #2 GND.

1 SINGLE LINE DIAGRAM

NO SCALE

REGISTERED PROFESSIONAL ENGINEER
NAJIB ARAFEH
No. E31043
EXP. 3/31/25
ELECTRICAL
STATE OF CALIFORNIA

FOR PLAN CHECK ONLY

AURUM CONSULTING ENGINEERS
MONTEREY BAY, INC.

Project No. 22-525.00

1798 Technology Dr. • Suite 242 • San Jose, CA 95110
T.831.646.3330 • F.831.646.3336 • www.acemb.com

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CSW|ST2

CSW/Stuber-Stroeh Engineering Group, Inc.
Civil & Structural Engineers | Surveying & Mapping | Environmental Planning
Land Planning | Construction Management

504 Redwood Blvd, Suite 310
Novato, CA 94947
Sphinxmedium

Tel: 415.883.0990
Fax: 415.883.0995
csw

APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO • PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	CHECKED BY: CSW/ST2 (JAH)	DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
ELECTRICAL SINGLE LINE DIAGRAM, DETAILS & PANELBOARD SCHEDULES
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: As Noted
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

E1.1
SHEET 104 OF 124

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER ANN MADER STILLMAN C 47882 EXPIRES 12/31/23 CIVIL STATE OF CALIFORNIA

SHEET NOTES

1. EXISTING PG&E POWER POLE TO REMAIN IN PLACE. FIELD VERIFY EXACT LOCATION AND COORDINATE WITH UTILITY ENGINEERING DRAWINGS FOR INSTALLATION OF NEW RISER.
2. EXISTING POWER POLE AND BASE TO BE DEMOLISHED BY PG&E.
3. OVERHEAD PG&E LINES TO BE DEMOLISHED BY PG&E.
4. PROVIDE AND INSTALL (1) 4" C.O. FOR PG&E PRIMARY.
5. PROVIDE AND INSTALL PG&E PULLBOXES; SIZE AND INSTALL PER UTILITY'S DRAWINGS STANDARDS, RULES AND REGULATIONS. FIELD VERIFY EXACT LOCATION.
6. TO PG&E TRANSFORMER, SEE 1/E2.2 FOR CONTINUATION.

NOTES:

A. CONTRACTOR SHALL LOCATE ALL (E) UNDERGROUND UTILITIES PRIOR TO TRENCHING AND TAKE CAUTION TO AVOID DAMAGE DURING TRENCHING. HAND TRENCH IF NECESSARY. CONTRACTOR SHALL MAKE ALL REPAIRS TO DAMAGED UTILITIES AT NO CHARGE TO OWNER.

B. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES AND ARCHITECT FOR SCHEDULING OF UTILITY DEMOLITION WORK.

C. ALL UTILITIES (PG&E, AT&T AND CATV) ARE SHOWN IN SCHEMATIC FORM ONLY. CONTRACTOR SHALL VERIFY EXACT REQUIREMENTS WITH UTILITY COMPANY ENGINEERED DRAWINGS PRIOR TO START OF CONSTRUCTION AND PROVIDE FACILITIES ACCORDINGLY.

70' 0' 35' 70'
SCALE: 1"=70'-0"
NORTH

REGISTERED PROFESSIONAL ENGINEER NAJIB ARMARY No. E21043 EXP. 3/31/25 ELECTRICAL STATE OF CALIFORNIA
FOR PLAN CHECK ONLY

AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.

Project No. 22-525.00

1798 Technology Dr. • Suite 242 • San Jose, CA 95110
T.831.646.3330 • F.831.646.3336 • www.acemb.com

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CSW | ST2

CSW/Stuber-Stroeh Engineering Group, Inc.
Civil & Structural Engineers | Surveying & Mapping | Environmental Planning
Land Planning | Construction Management
504 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.9000
fax: 415.883.9005
mjstroeh.com

APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
ELECTRICAL OVERALL SITE PLAN
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: As Noted
DATE: 04/21/2023
FILE NO.: E4995

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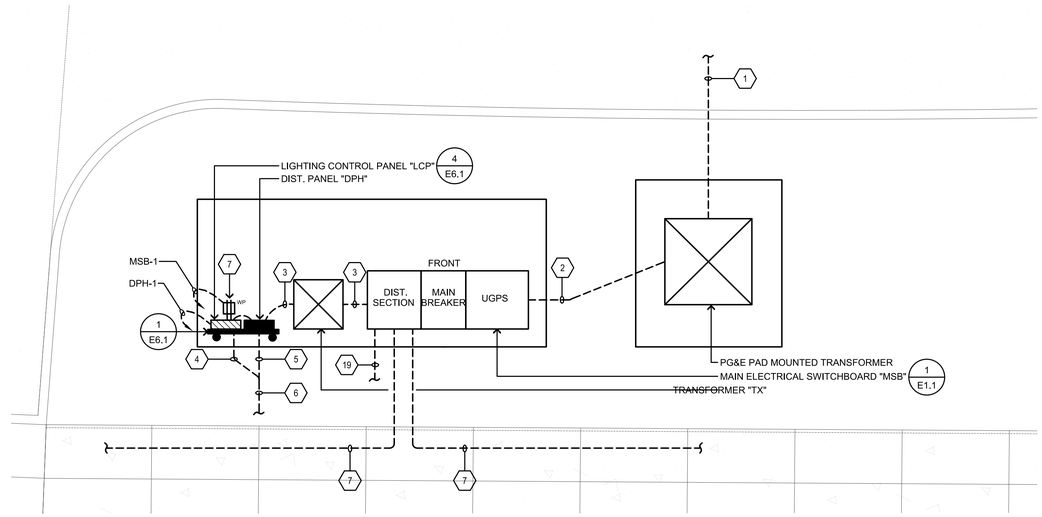
E2.1
SHEET 105 OF 124

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



2 ELECTRICAL EQUIPMENT PLAN

SCALE: 1/4"=1'-0"

4' 0' 1' 2' 3' 4'

NORTH

PULLBOX SCHEDULE

DWG ID.	DESCRIPTION	MFGR	LABEL
EV	22" x 35" HIGH DENSITY REINFORCED CONCRETE BOX AND BOLT DOWN REINFORCED CONCRETE LID.	CHRISTY N36	EV CHARGERS
P1	15" x 25" HIGH DENSITY REINFORCED CONCRETE BOX AND BOLT DOWN REINFORCED CONCRETE LID.	CHRISTY N16	ELECTRICAL
P2	18" x 27" HIGH DENSITY REINFORCED CONCRETE BOX AND BOLT DOWN REINFORCED CONCRETE LID.	CHRISTY N30	ELECTRICAL
P3	22" x 35" HIGH DENSITY REINFORCED CONCRETE BOX AND BOLT DOWN REINFORCED CONCRETE LID.	CHRISTY N36	ELECTRICAL
P4	34 3/4" x 52 1/2" HIGH DENSITY REINFORCED CONCRETE BOX AND BOLT DOWN REINFORCED CONCRETE LID.	CHRISTY N48	ELECTRICAL

SHEET NOTES

1. PG&E PRIMARY, SEE E2.1 FOR CONTINUATION AND E1.1 FOR FEEDER SIZE.
2. PG&E SECONDARY, SEE E1.1 FOR FEEDER SIZE.
3. SEE E1.1 FOR FEEDER SIZE.
4. ROUTE 3/4" C. 4 #10 & 1 #10 GND (CIRCUITS 1 & 3) TO THE HANDRAIL REMOTE DRIVERS.
5. PROVIDE AND INSTALL:
   - (2) 1 1/2"C., 3 #1/0 & 1 #6 GND. EACH FEEDER FOR STORAGE AND RESTROOMS.
   - (1) 2" C., 3 #4/0 & 1 #4 GND. FOR RANGER RESIDENCE.
   - (2) 2 1/2" C.O. FOR SPARE.
6. SEE 1/E2.2 FOR CONTINUATION.
7. FEEDER FOR EV CHARGING STATIONS, SEE 1/E1.1 FOR FEEDER SIZE AND 1/E2.2 FOR CONTINUATION.
8. ROUTE FEEDERS TO EACH EV PULLBOX, SEE 1/E1.1 FOR QUANTITY AND SIZE.
9. 3/4" C., 2 #10 & 1 #10 GND. FOR HANDRAIL LIGHTING.
10. CONTRACTOR SHALL INSTALL (1) REMOTE DRIVER INSIDE THE IN-GRADE PULL BOX PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
11. CONTRACTOR SHALL ROUTE 3/4" C. WITH (2) 24VDC UNDERGROUND RATED CABLES TO HANDRAIL LIGHTING.
12. PROVIDE AND INSTALL:
   - (2) 1 1/2" C., 3 #1/0 & 1 #6 GND. EACH FEEDER FOR STORAGE AND RESTROOMS.
   - (1) 2" C., 3 #4/0 & 1 #4 GND. FOR RANGER RESIDENCE.
   - (1) 3/4" C., 4 #10 & 1 #10 GND. FOR HANDRAIL LIGHTING (CIRCUITS 1 & 3)
13. 3/4" C., 4 #10 & 1 #10 GND. FOR HANDRAIL LIGHTING (CIRCUITS 1 & 3)
14. (2) 1 1/2"C., 3 #1/0 & 1 #6 GND. EACH FEEDER FOR STORAGE AND RESTROOMS.
15. 2" C., 3 #4/0 & 1 #4 GND. FOR RANGER RESIDENCE.
16. SEE E2.3 FOR CONTINUATION.
17. STUB OUT 2" C.O. WITH PULLSTRING WITHIN 3 FEET OF CONCRETE PULLBOX.
18. STUB OUT 3/4" C.O. WITH PULLSTRING WITHIN 3 FEET OF CONCRETE PULLBOX FOR EACH EV PULLBOX, TYPICAL.
19. (2) 2 1/2" C.O. FOR SPARE. SEE 1/E2.2 FOR CONTINUATION.

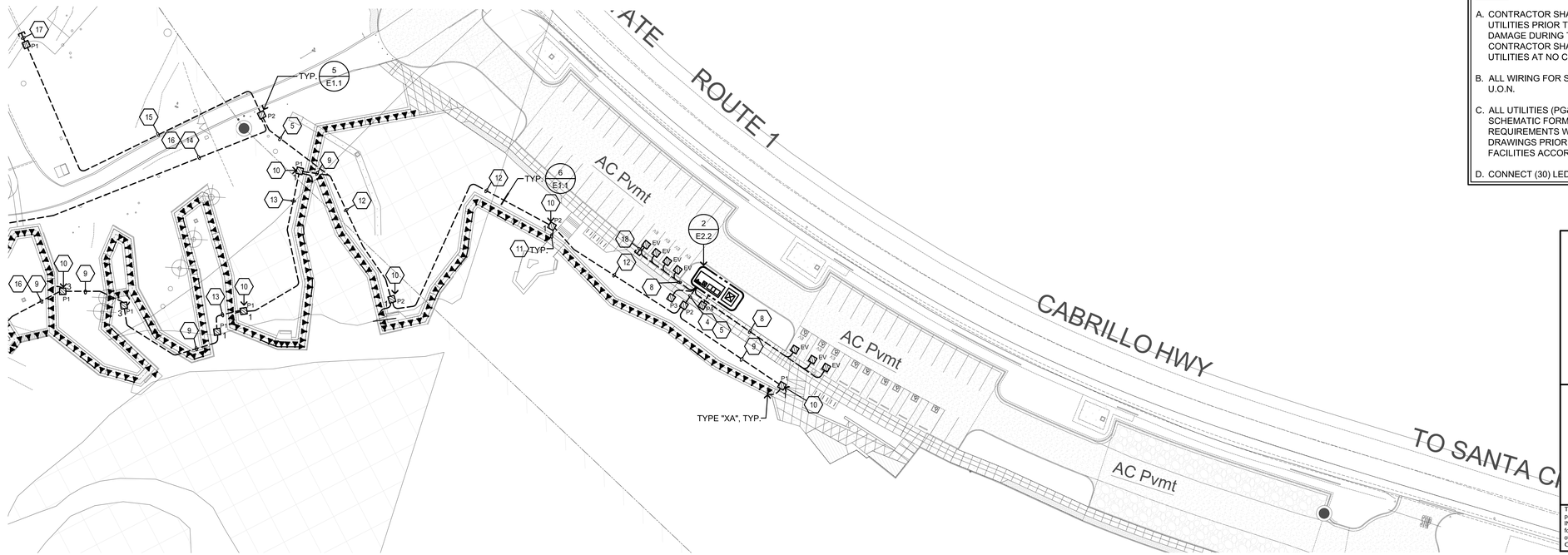
NOTES:

A. CONTRACTOR SHALL LOCATE ALL (E) UNDERGROUND UTILITIES PRIOR TO TRENCHING AND TAKE CAUTION TO AVOID DAMAGE DURING TRENCHING. HAND TRENCH IF NECESSARY. CONTRACTOR SHALL MAKE ALL REPAIRS TO DAMAGED UTILITIES AT NO CHARGE TO OWNER.

B. ALL WIRING FOR SITE LIGHTING SHALL BE #10 AWG MINIMUM, U.O.N.

C. ALL UTILITIES (PG&E, AT&T AND CATV) ARE SHOWN IN SCHEMATIC FORM ONLY. CONTRACTOR SHALL VERIFY EXACT REQUIREMENTS WITH UTILITY COMPANY ENGINEERED DRAWINGS PRIOR TO START OF CONSTRUCTION AND PROVIDE FACILITIES ACCORDINGLY.

D. CONNECT (30) LED PODS MAX TO EACH REMOTE DRIVER.



1 PARTIAL SITE PLAN

SCALE: 1"=40'-0"

40' 0' 20' 40'

NORTH

CSW | ST2
504 Redwood Blvd, Suite 310
Novato, CA 94947

APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO • PUBLIC WORKS •

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	ELECTRICAL PARTIAL SITE PLAN AREA-1
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: As Noted
DATE: 04/21/2023
FILE NO.: E4995

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E2.2
SHEET 106 OF 124

REGISTERED PROFESSIONAL ENGINEER NAJIB ARAJ No. E21043 Exp. 3/31/25 ELECTRICAL STATE OF CALIFORNIA

FOR PLAN CHECK ONLY

AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.

Project No. 22-525.00

1798 Technology Dr. • Suite 242 • San Jose, CA 95110
T.831.646.3330 • F.831.646.3336 • www.acemb.com

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APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

SHEET NOTES

1. (2) 1 1/2"C., 3 #1/0 & 1 #6 GND. EACH FEEDER FOR STORAGE AND RESTROOMS.
2. 3/4" C., 2 #10 & 1 #10 GND. FOR HANDRAIL LIGHTING.
3. CONTRACTOR SHALL INSTALL (1) REMOTE DRIVER INSIDE THE IN-GRADE PULL BOX PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
4. CONTRACTOR SHALL INSTALL (3) REMOTE DRIVER INSIDE THE IN-GRADE PULL BOX PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
5. CONTRACTOR SHALL ROUTE 3/4" C. WITH (2) 24VDC UNDERGROUND RATED CABLES TO HANDRAIL LIGHTING.
6. 1 1/2" C., 3 #1/0 & 1 #6 GND. FOR RESTROOMS.
7. STUB OUT 1 1/2" C.O. WITH PULLSTRING WITHIN 3 FEET OF CONCRETE PULLBOX.

NOTES:

A. CONTRACTOR SHALL LOCATE ALL (E) UNDERGROUND UTILITIES PRIOR TO TRENCHING AND TAKE CAUTION TO AVOID DAMAGE DURING TRENCHING. HAND TRENCH IF NECESSARY. CONTRACTOR SHALL MAKE ALL REPAIRS TO DAMAGED UTILITIES AT NO CHARGE TO OWNER.

B. ALL WIRING FOR SITE LIGHTING SHALL BE #10 AWG MINIMUM, U.O.N.

C. ALL UTILITIES (PG&E, AT&T AND CATV) ARE SHOWN IN SCHEMATIC FORM ONLY. CONTRACTOR SHALL VERIFY EXACT REQUIREMENTS WITH UTILITY COMPANY ENGINEERED DRAWINGS PRIOR TO START OF CONSTRUCTION AND PROVIDE FACILITIES ACCORDINGLY.

D. CONNECT (30) LED PODS MAX TO EACH REMOTE DRIVER.

E. SEE 1/E2.2 FOR IN-GRADE PULLBOX SCHEDULE.

40' 0' 20' 40'
SCALE: 1"=40'-0"

NORTH

REGISTERED PROFESSIONAL ENGINEER NATIB ANWARY No. E31043 Exp. 3/31/25 ELECTRICAL STATE OF CALIFORNIA

FOR PLAN CHECK

AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.

Project No. 22-525.00

1798 Technology Dr. • Suite 242 • San Jose, CA 95110
T.831.646.3330 • F.831.646.3336 • www.acemb.com

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CSW/Stuber-Stroh Engineering Group, Inc.
Civil & Structural Engineers • Surveying & Mapping • Environmental Planning
Land Planning • Construction Management

504 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.0220
fax: 415.883.0221
csw@stubersmith.com

APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO • PUBLIC WORKS •

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	ELECTRICAL PARTIAL SITE PLAN AREA - 2
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: As Noted
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

E2.3
SHEET 107 OF 124

PANELBOARD SCHEDULES

Voltage:	277/480V,3ø
Wire:	4W
Type:	STAINLESS STEEL
Mains:	200/3

[1] [2] DIST. PANEL DPH

Bussing:	200A
Feed:	BOTTOM
Mounting:	SURFACE
A.I.C.	42,000

Load	A	B	C	Bkr	Ck	abc	Ck	Bkr	A	B	C	Load
LIGHTING CONTROL PANEL LCP	100			20/1	1		2	20/1	600			HANDRAIL LIGHTS
SPARE					3		4	20/1		600		HANDRAIL LIGHTS
SPARE				100/3	5		6	20/1				SPARE
SPARE					7		8		11080			RANGER SHED
SPACE ONLY				-	9		10	60/3		11080		RANGER SHED
SPACE ONLY				-	11		12				11080	RANGER SHED
SPACE ONLY				-	13		14		11080			RANGER RESTROOM
SPACE ONLY				-	15		16	60/3		11080		RANGER RESTROOM
SPACE ONLY				-	17		18				11080	RANGER RESTROOM
SPACE ONLY				-	19		20		18005			RANGER RESIDENCE
SPACE ONLY				-	21		22	100/3		18005		RANGER RESIDENCE
SPACE ONLY				-	23		24				18005	RANGER RESIDENCE
SPACE ONLY				-	25		26	-				SPACE ONLY
SPACE ONLY				-	27		28	-				SPACE ONLY
SPACE ONLY				-	29		30	-				SPACE ONLY
SPACE ONLY				-	31		32	-				SPACE ONLY
SPACE ONLY				-	33		34	-				SPACE ONLY
SPACE ONLY				-	35		36	-				SPACE ONLY
SPACE ONLY				-	37		38	-				SPACE ONLY
SPACE ONLY				-	39		40	-				SPACE ONLY
SPACE ONLY				-	41		42	-				SPACE ONLY
	100	0	0						40765	40765	40165	

[1] SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
[2] LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	40.9
KVA Phase B	40.6
KVA Phase C	40.2

Total Connected Load KVA	121.8
Total Load Amperes	147

Voltage:	120/208V,3ø
Wire:	4W
Type:	STAINLESS STEEL
Mains:	1000/3

[1] [2] MSB

Bussing:	1200A
Feed:	BOTTOM
Mounting:	FREE STANDING
A.I.C.	65,000

Load	A	B	C	Bkr	Ck	abc	Ck	Bkr	A	B	C	Load
EV CHARGING STATION	3328			40/2	1		2	20/1	180			RECEPT
EV CHARGING STATION		3328			3		4	20/1				SPARE
EV CHARGING STATION			3328		5		6	20/1				SPARE
EV CHARGING STATION	3328			40/2	7		8		40865			TRANSFORMER TX
EV CHARGING STATION		3328			9		10	400/3		40765		TRANSFORMER TX
EV CHARGING STATION			3328		11		12				40165	TRANSFORMER TX
EV CHARGING STATION	3328			40/2	13		14	40/2				SPARE
EV CHARGING STATION		3328			15		16					SPARE
EV CHARGING STATION			3328	40/2	17		18	40/2				SPARE
EV CHARGING STATION	3328				19		20					SPARE
EV CHARGING STATION		3328		40/2	21		22	40/2				SPARE
EV CHARGING STATION			3328		23		24					SPARE
EV CHARGING STATION	3328			40/2	25		26	40/2				SPARE
EV CHARGING STATION		3328			27		28					SPARE
SPARE					29		30					SPARE
SPARE				100/3	31		32	150/3				SPARE
SPARE					33		34					SPARE
	16640	16640	13312						41045	40765	40165	

[1] SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
[2] LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

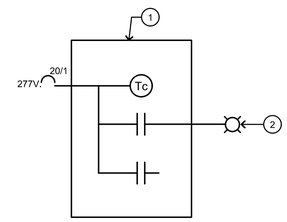
KVA Phase A	57.7
KVA Phase B	57.4
KVA Phase C	53.5

Total Connected Load KVA	168.6
Total Load Amperes	468

APPROVED:

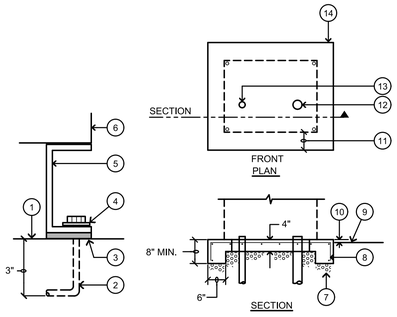
DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



DETAIL NOTES:

1. ASTRONOMIC TIMECLOCK, 2-CHANNEL 20A N.O. RATED CONTACTS, RESERVE POWER TORK DZS200BP, WITH NEMA 3R ENCLOSURE.
2. TO HANDRAIL LIGHTS REMOTE DRIVER.

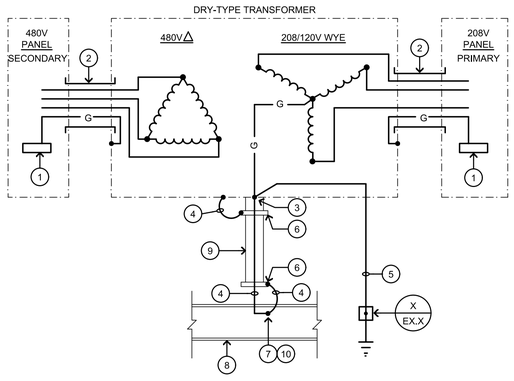


DETAIL NOTES

1. CONCRETE PAD
2. 1/2" DIA. ANCHOR BOLT
3. KORFUND ISOLATION PAD
4. LOCK WASHER
5. TRANSFORMER MOUNTING CHANNEL
6. TRANSFORMER HOUSING
7. CRUSHED BASE ROCK
8. #4 BAR @ 12" O.C. EA. WAY 2" BELOW TOP OF PAD
9. FINISHED GRADE
10. 2" MAX.
11. 4" TYP. ALL AROUND
12. SECONDARY CONDUIT
13. PRIMARY CONDUIT
14. REINFORCED CONCRETE PAD EXACT L&W AS REQUIRED FOR XFMR. SUPPLIED. (MIN. 2500 PSI AT 28 DAYS.)

4 LIGHTING TIME CLOCK

NO SCALE



DETAIL NOTES:

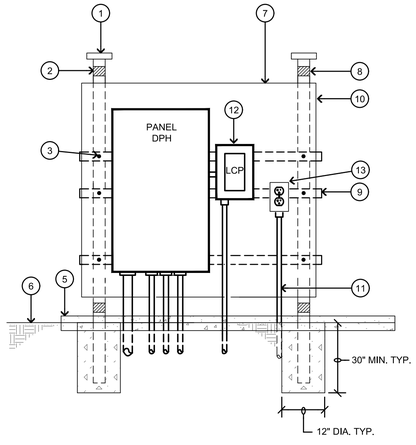
1. PANEL OR SWITCHBOARD EQUIPMENT GROUND BUS.
2. CONDUIT WITH SEAL-TITE FLEX CONNECTION TO TRANSFORMER.
3. TRANSFORMER CASE BOND.
4. BARE COPPER GROUND PER CEC 250-66
5. 1" SCHEDULE 80 PVC CONDUIT WITH BARE COPPER GROUNDING ELECTRODE CONDUCTOR, SEE SINGLE LINE DIAGRAM 1/E1.1 FOR REQUIREMENTS.
6. GROUNDING BUSHINGS.
7. BOLTED OR EXOTHERMIC WELD CONNECTION.
8. BUILDING STEEL STRUCTURE FRAMING.
9. ELECTRICAL METALLIC TUBING (EMT).
10. METAL COLD WATER PIPE PER CEC 250.30 OR OTHER ELECTRODES PER 250.50 IF BUILDING STEEL OR WATER PIPE ARE NOT AVAILABLE.

3 DRY TYPE TRANSFORMER GROUNDING DETAIL

NO SCALE

2 DRY TYPE TRANSFORMER MOUNTING DETAIL

NO SCALE



DETAIL NOTES:

1. MALLEABLE IRON THREADED CAP, TYP.
2. 3" REFLECTOR TAPE TOP & BOTTOM (TYP.).
3. 3/8"DIA THRU-BOLTED WITH GALVANIZED HARDWARE AT 9 PLACES.
4. NOTE NOT USED.
5. 12" THICK MIN. CONCRETE PAD WITH #5 REBAR AT 12" ON CENTER AT MID-DEPTH; CONCRETE SHALL BE DESIGNED TO ATTAIN A STRENGTH OF 2,500 POUNDS PER SQUARE INCH (PSI) AT 28 DAYS. SLUMP FOR CONCRETE PLACEMENT SHALL NOT EXCEED 3 INCHES. REINFORCING STEEL SHALL BE PER ASTM A615, GRADE 60 MINIMUM.
6. FINISHED GRADE.
7. 1" THK EXTERIOR GRADE PLYWOOD. SEAL BOTH SIDES & ALL EDGES. PAINT W/2 COATS GREY ENAMEL.
8. 3" DIA. SCH 40 GALV. STEEL PIPE, TYP.
9. UNISTRUT P1000 ACROSS BACK OF BACKBOARD (TYP. 3 PLACES).
10. FILE ENDS ROUND & SMOOTH (NOSHARP EDGES).
11. BRANCH CIRCUITS, SEE PLANS FOR QUANTITY (TYP).
12. LIGHTING TIMECLOCK "LCP"
13. GFCI RECEPTACLE INSTALLED WITH WEATHERPROOF IN-USE COVER.

1 PANELBOARD DPH AND TIMECLOCK LCP MOUNTING

NO SCALE

FOR PLAN CHECK ONLY

AURUM CONSULTING ENGINEERS
MONTEREY BAY, INC.

Project No. 22-525.00

1798 Technology Dr. • Suite 242 • San Jose, CA 95110
T.831.646.3330 • F.831.646.3336 • www.acemb.com

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CSW|ST2

CSW/Stuber-Stroeh Engineering Group, Inc.
Civil & Structural Engineers | Surveying & Mapping | Environmental Planning
Land Planning | Water Resources Engineering
504 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.0990
fax: 415.883.0995
cswst2.com

APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	ELECTRICAL DETAILS & PANELBOARD SCHEDULE
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: As Noted
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

E6.1
SHEET 108 OF 124

SECTION 26 05 00

GENERAL ELECTRICAL REQUIREMENTS

PART 1 - GENERAL

1.01 Description of Work:
A. Furnish and install all required in-place equipment, conduits, conductors, cables and any miscellaneous materials for the satisfactory interconnection and operation of all associated electrical systems.

1.02 Submittals:
A. As specified in Division 1. Submit to the Architect shop drawings, manufacturer's data and certificates for equipment, materials and finish, and pertinent details for each system specified. Information to be submitted includes manufacturer's descriptive literature of catalogued products, equipment, drawings, diagrams, performance and characteristic curves as applicable, test data and catalog cuts. Obtain written approval before procurement, fabrication, or delivery of the items to the job site.
B. Proposed substitutions of products will not be reviewed or approved prior to awarding of the Contract.
C. Substitutions shall be proven to the Architect or Engineer to be equal or superior to the specified product. Architect's decision is final. The Contractor shall pay all costs incurred by the Architect and Engineer in reviewing and processing any proposed substitutions whether or not a proposed substitution is accepted.
D. If a proposed substitution is rejected, the contractor shall furnish the specified product at no increase in contract price.
E. If a proposed substitution is accepted, the contractor shall be completely responsible for all dimensional changes, electrical changes, or changes to other work which are a result of the substitution. The accepted substitution shall be made at no additional cost to the owner or design consultants.

1.03 Quality Assurance:
A. Codes: All electrical equipment and materials, including installation and testing, shall conform to the latest editions of the following applicable codes:
1. California Electrical Code (CEC).
2. Occupational Safety and Health Act (OSHA) standards.
3. All applicable local codes, rules and regulations.
4. Electrical Contractor shall posses a C-10 license and all other licenses as may be required. Licenses shall be in effect at start of this contract and be maintained throughout the duration of this contract.
B. Variances: In instances where two or more codes are at variance, the most restrictive requirement shall apply.
C. Standards: Equipment shall conform to applicable standards of American National Standards Institute (ANSI), Electronics Industries Association (EIA), Institute of Electrical and Electronics Engineers (IEEE), and National Electrical Manufacturers Association (NEMA).
D. Underwriter Laboratories (UL) listing is required for all equipment and materials where such listing is offered by the Underwriters Laboratories. Provide service entrance labels for all equipment required by the NEC to have such labels.
E. The electrical contractor shall guarantee all work and materials installed under this contract for a period of one (1) year from date of acceptance by owner.
F. All work and materials covered by this specification shall be subject to inspection at any and all times by representatives of the owner. Work shall not be closed in or covered before inspection and approval by the owner or his representative. Any material found not conforming with these specifications shall, within 3 days after being notified by the owner, be removed from premises; if said material has been installed, entire expense of removing and replacing same, including any cutting and patching that may be necessary, shall be borne by the contractor.

1.04 Contract Documents:
A. Drawings: The Electrical Drawings shall govern the general layout of the completed construction.
1. Locations of equipment, panels, pullboxes, conduits, sinbsups, ground connections are approximate unless dimensioned; verify locations with the Architect prior to installation.
2. The general arrangement and location of existing conduits, piping, apparatus, etc., is approximate. The drawings and specifications are for the assistance and guidance of the contractor, exact locations, distances and elevations are governed by actual field conditions. Accuracy of data given herein and on the drawings is not guaranteed. Minor changes may be necessary to accommodate work. The contractor is responsible for verifying existing conditions. Should it be necessary to deviate from the design due to interference with existing conditions or work in progress, claims for additional compensation shall be limited to those for work required by unforeseen conditions as determined by the Architect.
3. All drawings and divisions of these specifications shall be considered as whole. The contractor shall report any apparent discrepancies to the Architect prior to submitting bids.
4. The contractor shall be held responsible to have examined the site and compared it with the specifications and plans and to have satisfied himself as to the conditions under which the work is to be performed. He shall be held responsible for knowledge of all existing conditions whether or not accurately described. No subsequent allowance shall be made for any extra expense due to failure to make such examination.

1.05 Closeout Submittals:
A. Manuals: Furnish manuals for equipment where manuals are specified in the equipment specifications or are specified in Division 1.

1.06 Coordination:
A. Coordinate the electrical work with the other trades, code authorities, utilities and the Architect.
B. Contractor shall pay all inspection and other applicable fees and procure all permits necessary for the completion of this work.
C. Where connections must be made to existing installations, properly schedule all the required work, including the power shutdown periods.
D. When two trades join together in an area, make certain that no electrical work is omitted.

1.07 Job Conditions:
A. Operations: Perform all work in compliance with Division 1
1. Keep the number and duration of power shutdown periods to a minimum.
2. Show all proposed shutdowns and their expected duration on the construction schedule. Schedule and carry out shutdowns so as to cause the least disruption to operation of the Owner's facilities.
3. Carry out shutdown only after the schedule has been approved, in writing, by the owner. Submit power interruption schedule 15 days prior to date of interruption.
B. Construction Power: Unless otherwise noted in Division 1 of these specifications, contractor shall make all arrangements and provide all necessary facilities for temporary construction power from the owner's on site source. Energy costs shall be paid for by the Owner.

1.08 Safety and Indemnity:
A. The Contractor is solely and completely responsible for conditions of the job site including safety of all persons and property during performance of the work. This requirement will apply continually and not be limited to normal working hours. The contractor shall provide and maintain throughout the work site proper safeguards including, but not limited to, enclosures, barriers, warning signs, lights, etc. to prevent accidental injury to people or damage to property.
B. Contractor in performing work under this Division of the Specifications shall hold harmless, indemnify, and defend the Owner, the Engineer, their consultants, and each of their officers, agents and employees from any and all liability claims, losses, or damage arising out of or alleged to arise from bodily injury, sickness, or death of a person or persons and for all damages arising out of injury to or destruction of property arising directly or indirectly out of or in connection with the performance of the work under this Division of the Specifications, and from the Contractor's negligence in the performance of the work described in the construction contract documents, but not including liability that may be due to the sole negligence of the Owner, the Engineer, their Consultants or their officers, agents and employees.
C. If a work area is encountered that contains hazardous materials, the contractor is advised to coordinate with the owner and it's abatement consultant for abatement of hazardous material by the Owner's Representative. "Hazardous materials" means any toxic substance regulated or controlled by OSHA, EPA, State of California or local rules, regulations and laws. Nothing herein shall be construed to create a liability for Aurum Consulting Engineers regarding hazardous materials abatement measures, or discovery of hazardous materials.

1.09 Arc Flash:
A. The contractor shall install a clearly visible arc flash warning to the inside door of all panelboards and industrial control panels, as well as to the front of all switchboards and motor control centers that are a part of this project.
B. The warning shall have the following wording: line 1 "WARNING" (in large letters), line 2 "Potential Arc Flash Hazard" (in medium letters), line 3 & 4 "Appropriate Personal Protective Equipment and Tools required when working on this equipment".

1.10 All boxes and enclosures for emergency circuits shall be permanently marked with a readily visible red spray painted mark.

PART 2 - PRODUCTS

2.01 Nameplates:
A. Identify each piece of equipment and related controls with a rigid laminated engraved plastic nameplate. Unless otherwise noted, nameplates shall be melamine plastic 0.125 inch thick, white with black center core. Surface shall be matte finish. Corners shall be square. Accurately align lettering and engrave into the core. Minimum size of nameplates shall be 0.5 by 2.5 inches unless otherwise noted. Where not otherwise specified, lettering shall be a minimum of 0.25 inch high normal block style. Engrave nameplates with the inscriptions indicated on the Drawings and, if not so indicated, with the equipment name. Securely fasten nameplates in place using two stainless steel or brass screws.

2.02 Finish requirements:
A. Equipment: Refer to each electrical equipment section of these Specifications for painting requirements of equipment enclosures. Repair any final paint finish which has been damaged or is otherwise unsatisfactory, to the satisfaction of the Architect.
B. Wiring System: In finished areas, paint all exposed conduits, boxes and fittings to match the color of the surface to which they are affixed.

PART 3 - EXECUTION

3.01 Workmanship:
A. All electrical equipment and materials shall be installed in a neat and workmanship manner in accordance with the "NECA-1 Standard Practices For Good Workmanship in Electrical Contracting". Workmanship of the entire job shall be first class in every respect.

3.02 Equipment Installations:
A. Provide the required inserts, bolts and anchors, and securely attach all equipment and materials to their supports.
B. Do all the cutting and patching necessary for the proper installation work and repair any damage done.
C. Earthquake restraints: all electrical equipment, including conduits over 2 inches in diameter, shall be braced or anchored to resist a horizontal force acting in any direction as per Title 24, part 2, sec 16a-o, part 3.
D. Structural work: All core drilling, bolt anchor insertion, or cutting of existing structural concrete shall be approved by a California registered structural consulting engineer prior to the execution of any construction. At all floor slabs and structural concrete walls to be drilled, cut or bolt anchors inserted, the contractor shall find and mark all reinforcing in both faces located by means of x-ray, psach-smeter, or prof-ometer. Submit sketch showing location of rebar and proposed cuts, cores, or bolt anchor locations for approval.

3.03 Field Test:
A. Perform equipment field tests and adjustments. Properly calibrate, adjust and operationally check all circuits and components, and demonstrate as ready for service.
B. Operational Tests: Operationally test all circuits to demonstrate that the circuits and equipment have been properly installed and adjusted and are ready for full-time service. Demonstrate the proper functioning of circuits in all modes of operation, including alarm conditions.

3.04 Records:
A. Maintain one copy of the contract Drawing Sheets on the site of the work for recording the "as built" condition. After completion of the work, the Contractor shall carefully mark the sheets as actually constructed, revising, deleting and adding to the Drawing Sheets as required. As built Drawings shall be delivered to the Architect within ten (10) days of completion of construction.

3.05 Clean Up:
A. Upon completion of electrical work, remove all surplus materials, rubbish, and debris that accumulated during the construction work. Leave the entire area neat, clean, and acceptable to the Architect.

SECTION 26 05 26

GROUNDING

PART 1 - EXECUTION

1.1 Grounding and Bonding:
A. Grounding and bonding shall be as required by codes and local authorities.
B. All electrical equipment shall be grounded, including, but not limited to, panel boards, terminal cabinets and outlet boxes.
C. The ground pole of receptacles shall be connected to their outlet boxes by means of a copper ground wire connecting to a screw in the back of the box.
D. A green insulated copper ground wire, sized to comply with codes, shall be installed in all conduit runs.
E. All metal parts of pull boxes shall be grounded per code requirements.
F. All ground conductors shall be green insulated copper.

SECTION 26 05 42

CONDUITS, RACEWAYS AND FITTINGS

PART 1 - EXECUTION

1.01 Conduit, Raceway and Fitting Installation:
A. For all conduit runs exposed to weather provide rigid metal (GRS).
B. The minimum size raceway shall be 1/2-inch unless indicted otherwise on the Drawings.
C. Installation shall comply with the CEC.
D. From pull point to pull point, the sum of the angles of all of the bends and offset shall not exceed 360 degrees.
E. Conduit Supports: Properly support all conduits as required by the NEC. Run all conduits concealed except where otherwise shown on the drawings.
1. Exposed Conduits: Support exposed conduits within three feet of any equipment or device and at intervals not exceeding NEC requirements; wherever possible, group conduits together and support on common supports. Support exposed conduits fastened to the surface of the concrete structure by one-hole clamps, or with channels. Use conduit spacers with one-hole clamps.
a. Conduits attached to walls or columns shall be as unobtrusive as possible and shall avoid windows. Run all exposed conduits parallel or at right angles to building lines.
b. Group exposed conduits together. Arrange such conduits uniformly and neatly.
2. Support all conduits within three feet of any junction box, coupling, bend or fixture.
3. Support conduit risers in shafts with Unistrut Supersirut, or approved equal, channels and straps.
I. Moisture Seals: Provide in accordance with NEC paragraphs 230-8 and 300-5(g).
J. Provide a nylon pull cord in each empty raceway.
K. Provide galvanized rigid steel factory fittings for galvanized rigid steel conduit.
L. Conduits shall be blown out and swabbed prior to pulling wires.

SECTION 26 05 19

LINE VOLTAGE WIRE AND CABLE

PART 1 - PRODUCTS

1.01 Conductors:
A. Conductors shall be copper, type THHN/THWN/MTW oil and gasoline resistant, 600 volt rated insulation.
B. Conductors shall be stranded copper.
C. Minimum gage and control wire size shall be No. 12 AWG unless otherwise noted.
D. All conductors used on this Project shall be of the same type and conductor material.

1.02 Terminations:
A. Manufacturer - Terminals as manufactured by T&B, Burndy or equal.
B. Wire Terminations - Stranded conductors shall be terminated in clamping type terminations which serve to contain all the strands of the conductor. Curling of a stranded conductor around a screw type terminal is not allowed. For screw type terminations, use a fork type stake-on termination on the stranded conductor. Use only a stake-on tool approved for the fork terminals selected.
C. End Seals - Heat shrink plastic caps of proper size for the wire on which used.

1.03 Tape:
A. Tape used for terminations and cable marking shall be compatible with the insulation and jacket of the cable and shall be of plastic material.

PART 2 - EXECUTION

2.01 Cable Installation:
A. Clean Raceways - Clean all raceways prior to installation of cables as specified in Section 26 05 42 - Conduits Raceway and Fittings.
B. All wiring including low voltage wiring shall be installed in conduit, U.O.N.
C. All feeder conductors shall be continuous from equipment to equipment. Splices in feeders are not permitted unless specifically noted or approved by the Electrical Engineer.
D. All branch circuit wiring shall be run concealed in ceiling spaces, walls, below floors or in crawl spaces unless noted otherwise.

2.02 Cable Terminations and Splices:
A. Splices - UL Listed wirenuts.
B. Terminations - Shall comply with the following:
1. Make up and form cable and orient terminals to minimize cable strain and stress on device being terminated on.
2. Burnish oxide from conductor prior to inserting in oxide breaking compound filled terminal.

2.03 Circuit and Conductor Identification:
A. Color Coding - Provide color coding for all circuit conductors. Insulation color shall be white for neutrals and grounded conducting conductors. Conductor colors shall be as follows:

VOLTAGE	208/120V	480/277V
Phase A	Black	Brown
Phase B	Red	Orange
Phase C	Blue	Yellow
Neutral	White	Gray
Ground	Green	Green

B. Color coding shall be in the conductor insulation for all conductors #10 AWG and smaller; for larger conductors, color shall be either in the insulation or in colored plastic tape applied at every location where the conductor is readily accessible.
C. Circuit Identification - All underground distribution and service circuits shall be provided with plastic identification tags in each secondary box and at each termination. Tags shall identify the source transformer of the circuit and the building number(s) serviced by the circuit.

2.04 Field Tests:
A. All systems shall test free from short circuits and grounds, shall be free from mechanical and electrical defects, and shall show an insulation resistance between phase conductors and ground of not less than the requirements of the CEC. All circuits shall be tested for proper neutral connections.
B. Insulation Resistance Tests: perform insulation resistance tests on circuits with #2 AWG and larger conductors to be energized with a lineto-neutral voltage of 120 volts or more. Make these tests before all equipment has been connected. Test the insulation with a 500Vdc insulation resistance teater with a scale reading 100 megohms. The insulation resistance shall be 2 megohms or more. Submit results for review.
C. Contractor shall torque all termination of feeders/circuits terminations where required per CEC and manufacturer labeling requirements at point of connection.

SECTION 26 05 33

OUTLET, JUNCTION AND PULL BOXES

PART 1 - PRODUCTS

1.01 Outlet boxes, Junction and Pull boxes
A. Standard Outlet Boxes: Galvanized, steel, knock-out type of size and configuration best suited to the application indicated on the Drawings. Minimum box size shall be 4 inches square (octagon for most light fixtures) by 1-1/2 inches deep with mud rings as required. Boxes used with conduit 1" or larger shall be minimum 2" deep.
B. Switch boxes: Minimum box size shall be 4 inches square by 1-1/2 inches deep with mud rings as required. Install multiple switches in standard gang boxes with raised device covers suitable for the application indicated.
C. Conduit bodies: Cadmium plated, cast iron alloy. Conduit bodies with threaded conduit hubs and neoprene gasketed, cast iron covers. Bodies shall be used to facilitate pulling of conductors or to make changes in conduit direction only. Splices are not permitted in conduit bodies. Crouse-Hinds Form 8 Conduiets, Appleton Form 35 Unilets or equal.
D. Sheet Metal Boxes: Use standard outlet or concrete ring boxes wherever possible; otherwise use a minimum 16 gauge galvanized sheet metal, NEMA I box sized to Code requirements with covers secured by cadmium plated machine screws located six inches on centers. Circle AW Products, Hoffman Engineering Company or equal.
E. Flush Mounted Pull boxes and Junction boxes: Provide overlapping covers with flush head cover retaining screws, prime coated.

PART 2 - EXECUTION

2.01 Outlet Boxes
A. General:
1. All outlet boxes shall finish flush with building walls, ceilings and floors except in mechanical and electrical rooms above accessible ceiling or where exposed work is called for on the Drawings.
2. Install raised device covers (plaster rings) on all switch and receptacle outlet boxes installed in masonry or stud walls or in furred, suspended or exposed concrete ceilings. Covers shall be of a depth to suit the wall or ceiling finish.
3. Leave no unused openings in any box. Install close-up plugs as required to seal openings.
B. Box Layout:
1. Outlet boxes shall be installed at the locations and elevations shown on the drawings or specified herein. Make adjustments to locations as required by structural conditions and to suit coordination requirements of other trades.
2. Locate switch outlet boxes on the latch side of doorways.
3. Outlet boxes shall not be installed back to back nor shall through-wall boxes be permitted. Outlet boxes on opposite sides of a common wall shall be separated horizontally by at least one stud or vertical structural member.
4. For outlets mounted above counters, benches or backsplashes, coordinate location and mounting heights with built-in units. Adjust mounting height to agree with required location for equipment served.
5. On fire rated walls, the total face area of the outlet boxes shall not exceed 100 square inches per 100 square feet of wall area.
C. Supports:
1. Outlet Boxes installed in metal stud walls shall be equipped with brackets designed for attaching directly to the studs or shall be mounted on specified box supports.
2. Fixture outlet boxes installed in suspended ceiling of gypsum board or lath and plaster construction shall be mounted to 16 gauge metal channel bars attached to main ceiling runners.
3. Fixture outlet boxes installed in suspended ceilings supporting acoustical tiles or panels shall be supported directly from the structure above where pendant mounted lighting fixture are to be installed on the box.
4. Fixture Boxes above tile ceilings having exposed suspension systems shall be supported directly from the structure above.
5. Outlet and / or junction boxes shall not be supported by grid or fixture hanger wires at any location.

2.02 Junction And Pull Boxes
A. General:
1. Install junction or pull boxes where required to limit bends in conduit runs to not more than 360 degrees or where pulling tension achieved would exceed the maximum allowable for the cable to be installed. Note that these boxes are not shown on the Drawings.
2. Locate pull boxes and junction boxes in concealed locations above accessible ceilings or exposed in electrical rooms, utility rooms or storage areas.
3. Install raised covers (plaster rings) on boxes in stud walls or in furred, suspended or exposed concrete ceilings. Covers shall be of a depth to suit the wall or ceiling finish.
4. Leave no unused openings in any box. Install close-up plugs as required to seal openings.
5. Identify circuit numbers and panel on cover of junction box with black marker pen.
B. Box Layouts:
1. Boxes above hung ceilings having concealed suspension systems shall be located adjacent to openings for removable recessed lighting fixtures.
C. Supports:
1. Boxes installed in metal stud walls shall be equipped with brackets designed for attaching directly to the studs or shall be mounted on specified box supports.
2. Boxes installed in suspended ceilings of gypsum board or lath and plaster construction shall be mounted to 16 gauge metal channel bars attached to main ceiling runners.
3. Boxes installed in suspended ceilings supporting acoustical tiles or panels shall be supported directly from the structure above.
4. Boxes mounted above suspended acoustical tile ceilings having exposed suspension systems shall be supported directly from the structure above.

SECTION 26 24 13

SWITCHBOARDS, 600 VOLTS AND BELOW

PART 1 - GENERAL

1.01 Submittals:
A. Shop Drawings - For each switchboard furnished under this Contract, submit manufacturer's information on the switchboard.
B. Submit operation and maintenance data for switchboards, and circuit breakers including nameplate data, parts lists, manufacturer's circuit breaker time current coordination curves, factory and field test reports, recommended maintenance procedures and typewritten as-built panel and switchboard schedules. Submit in accordance with Division 1.

1.02 Warranty
A. Manufacturer shall warrant equipment to be free from defects in materials and workmanship for the lesser of one (1) year from date of installation or eighteen (18) months from date of purchase

PART 2 - PRODUCTS

2.01 Switchboards:
A. General: Switchboards shall be designed, built and tested in accordance with applicable portions of the latest NEMA, EUSERC, and Underwriter Laboratories standards and the latest requirements of the California Electrical Code. All sections and devices shall be UL listed and labeled.
1. Switchboards shall be dead front, completely self-supporting structure of the required number of vertical sections bolted together to form one metal, totally enclosed, switchboard. Sides, top, and rear covers shall be code gauge steel, bolted to the switchboard structure.
2. The switchboard shall be furnished with phase and neutral busses of the amps, volts and phase shown on the Drawings. The bus shall extend the full length of the switchboard. Tapered bus is not acceptable. The switchboard sections, when called for on the plans, shall be as follows:
a. Metering Section and landing lugs; Fully Pacific Gas & Electric Company compatible.
b. All sections shall include full capacity busing between sections.
c. All sections shall be front aligned and shall have front-connected devices.
3. All buses shall be silver plated copper, supported with high impact, non-tracking insulating material, braced to withstand the mechanical forces exerted during short circuit conditions. The current density of the bus shall not exceed 1000 amperes per square inch of cross section area or the switchboard bussing shall be of sufficient cross-sectional area to meet UL standard 891 for temperature rise. Provisions shall be provided for future splicing of additional sections from either end. The neutral bus shall be 100% rated.
4. A ground bus shall be furnished secured to each vertical section structure, and shall extend the length of the main and distribution sections of the switchboard. The ground bus shall be sized per UL standard 891 and be of the same material as the through bus.
5. Vertical main bus bars shall be furnished full height to accommodate future branch devices.
6. The switchboard shall be furnished and installed complete with all underground pull sections, utility sections, main device and feeder sections as indicated on the Drawings. Underground pull sections, utility cable termination, transformer and metering sections shall be in accordance with Pacific Gas and Electric Company requirements.
7. The main device, where indicated to be individually mounted, shall be completely isolated from the utility and the feeder sections of the switchboard, both in the device section and the cable section of the switchboard cubicle. The cable section shall also be isolated from the main horizontal bus. The main device cubicle shall have UL service equipment label.
8. Feeder devices shall be group-mounted and be front accessible, furnished with vertical wiring gutter on the front of the distribution sections. Wiring gutters shall be furnished with hinged, code gauge steel formed covers. Unused device space shall be covered with blank code gauge steel covers.
9. All vertical sections comprising the switchboard shall be aligned front and rear.
10. Switchboards for outdoor installation shall be furnished in NEMA 3R non-walk-in enclosures provided with thermostatically controlled space heaters in each vertical section. Space heaters shall be powered from a circuit breaker protected circuit originating within the switchboard and shall be sized adequately to prevent the formation of condensation. Space heater shall be rated for operation at 120V AC.
B. Circuit Breakers
1. Circuit breakers, unless otherwise indicated, shall be the molded case type with ratings as indicated on the Drawings.
2. Main circuit breakers, where indicated to be Molded case type, shall be 80 [100] percent rated, with the frame size and trip plug ratings shown.
3. Manufacturer
a. The switchboard shall be Square D, Siemens or I.E.M., no other switchboard manufacturers are acceptable.

PART 3 - EXECUTION

3.01 Installation:
A. Switchboards shall be installed where indicated on the Drawings, and in accordance with the manufacturer's instructions.

3.02 Mounting:
A. Switchboards shall be mounted on a concrete pad, as indicated on the drawings. Reinforcing shall be shown on the Drawings. The top surface of the pad shall be 2 inches above the surrounding surface.
B. The switchboard shall be bolted to the pad with ½ inch diameter bolts minimum at each corner of each section unless otherwise noted.
C. The switchboard shall be seismically qualified to withstand potential seismic forces up to UBC Seismic Zone 4.

3.03 Padlocks:
A. Exterior switchboard shall be provided with padlocks keyed as directed by the Owner's Representative. Padlocks shall be supplied by the contractor.

PANELBOARDS AND DISTRIBUTION PANELS

PART 1 - PRODUCTS

1.01 Panelboards:
A. General: Lighting and Receptacle Panelboards shall be the automatic circuit breaker type. The number and arrangement of circuits, trip ratings, spares and blank spaces for future circuit breakers shall be as shown on the Drawings or, if not shown, 42 circuits. All circuit breakers shall be quick-make, quick-break, thermal-magnetic, bolt-on type (unless otherwise noted on drawings), with 1, 2 or 3 poles as shown, each with a single operating handle. Tandem or piggy-back breakers shall not be used.
B. Nameplates:
1. Each panelboard shall have a field mounted identifying, rigid, plastic nameplate giving the panel identification as shown on the Drawings.
2. Each panelboard shall have a manufacturer's nameplate showing the voltage, bus rating, number of phases, frequency and number of wires.
C. Construction:
1. Door and trim shall be finished to match finish type and color of surrounding wall. Box shall be hot-dip galvanized, field finished to match the front.
2. Panelboards and enclosures shall conform to requirements of all relevant codes. Panelboards shall be suitable for use as service equipment.
3. Panelboards shall be furnished with hinged trim fronts with key latch and a typed directory card and holder. Panelboard circuits shall be arranged with odd numbers on the left and even numbers on the right. Provide weatherproof, NEMA type 3R enclosures for outdoor installation.
D. Busbars: Panelboard busbars shall be phase sequence type suitable for bolt-on circuit breakers. All busbars shall be copper.
E. Circuit Breakers: Circuit breakers shall be the molded case type with trip and interrupting ratings as shown on the Drawings.
F. Manufacturer:
1. Panelboard manufacturer shall be Square D, Siemens or I.E.M., No other panelboard manufacturers are acceptable. Panelboards shall be of the same manufacturer as the switchboard.

1.02 Distribution Panels:
A. General: Distribution panels shall be the automatic circuit breaker type. The number and arrangement of circuits, trip ratings, spares and blank spaces for future circuit breakers shall be as shown on the Drawings. All circuit breakers shall be quick-make, quick-break, thermal-magnetic bolt-on type, with 1, 2 or 3 poles as shown, each with a single operating handle. Tandem or piggy-back breakers shall not be used.
B. Nameplates:
1. Each distribution panel shall have a field mounted, identifying, rigid, plastic nameplate giving the panel identification as shown on the Drawings.
2. Each distribution panel shall have a manufacturer's nameplate showing the voltage, bus rating, number of phases, frequency and number of wires.
C. Construction:
1. Door and trim shall be finished to match color of surrounding wall. Box shall be hot-dip galvanized, field finished to match the front.
2. Distribution panels and enclosures shall conform to requirements of all relevant codes. Distribution panels shall be suitable for use as service equipment.
3. Distribution panels shall have a front door with key latch and a typed directory card and permanently attached holder. Adhesive backed holders are not acceptable. Distribution panels circuits shall be arranged with odd numbers on the left and even numbers on the right. Provide weatherproof, NEMA type 3R enclosures for outdoor installations.
D. Busbars: Distribution panels busbars shall be phase sequence type suitable for bolt-on circuit breakers. All busbars shall be copper, sized for a maximum current density of 1000A psi.
E. Circuit Breakers: Circuit breakers shall be the molded case type with trip and interrupting ratings as shown on the Drawings.
F. Manufacturer:
1. Distribution panel manufacturer manufacturer shall be Square D, Siemens, I.E.M. or Eaton Cutler Hammer; no other distribution panel manufacturers are acceptable. Distribution panels shall be of the same manufacturer as the switchboard.

PART 2 - EXECUTION

2.01 Mounting:
A. Panelboards and Distribution Panels shall be mounted with the top of the box 6'-6" above the floor. Panelboards and Distribution Panels shall be plumb within 1/8-inch. The highest breaker operating handle shall not be higher than 72 inches above the floor.

SECTION 26 28 16

CIRCUIT BREAKERS

PART 1 - PRODUCTS

1.01 Circuit Breaker: Each circuit breaker shall consist of the following:
A. A molded case breaker with an over center toggle-type mechanism, providing quick-make, quick-break action. Each circuit breaker shall have a permanent trip unit containing individual thermal and magnetic trip elements in each pole. Multipole circuit breakers shall have variable magnetic trip elements which are set by a single adjustment to assure uniform tripping characteristics in each pole. Circuit breakers shall be of the bolt-on type unless otherwise noted.
B. Breaker shall be calibrated for operation in an ambient temperature of 40°C.
C. Each circuit breaker shall have trip indication by handle position and shall be trip-free.
D. Three pole breakers shall be common trip.
E. The circuit breakers shall be constructed to accommodate the supply connection at either end of the circuit breaker. Circuit breaker shall be suitable for mounting and operation in any position.
F. Breakers shall be rated as shown on Drawings.
G. Circuit breaker and/or fuse/circuit breaker combinations for series connected interrupting ratings shall be listed by UL as recognized component combinations for use in the end use equipment in which it is installed. Any series rated combination used shall be marked on the end use equipment per CEC section 110-22.
H. Breakers shall be UL listed. Circuit breakers shall have removable lugs.
I. Lugs shall be UL listed for copper and aluminum conductors.
J. Breakers shall be UL listed for installation of mechanical screw type lugs.
K. Circuit breakers serving HACR rated loads shall be HACR type. Circuit breakers serving other motor loads shall be motor rated.
L. Breakers indicated as "current limiting " (CL), shall be of the non-fused type; Square D I-Limiter, Westinghouse Limit-R, or ITE Sentron only.

SECTION 26 05 73

ELECTRICAL POWER SYSTEM STUDIES

PART 1 - GENERAL

1.01 Summary:
A. The electrical equipment manufacturer shall provide electrical power system studies for the project. The type and content of each study is specified in the following articles.

1.02 Submittals:
A. Completed electrical power system studies shall be bound and submitted to the architect prior to or as a part of the switchboard and panelboard submittals.

PART 2 - PRODUCTS

2.01 Manufacturers:
A. The specified electrical power system studies shall be performed by Square D Company or approved equal.

2.02 Electrical Power System Studies:
A. Protective Device Time-Current Coordination Analysis
1. The time-current coordination analysis shall be performed with the aid of computer software intended for this purpose, and will include the determination of settings, ratings, or types for the overcurrent protective devices supplied.
2. Where necessary, an appropriate compromise shall be made between system protection and service continuity with [service continuity considered more important than system protection] [system protection considered more important than service continuity] [system protection and service continuity considered to be of equal importance].
3. A sufficient number of computer generated log-log plots shall be provided to indicate the degree of system protection and coordination by displaying the time-current characteristics of series connected overcurrent devices and other pertinent system parameters.
4. Computer printouts shall accompany the log-log plots and will contain descriptions for each of the devices shown, settings of the adjustable devices, the short-circuit current availability at the device location when known, and device identification numbers to aid in locating the devices on the log-log plots and the system one-line diagram.
5. The study shall include a separate, tabular computer printout containing the suggested device settings of all adjustable overcurrent protective devices, the equipment where the device is located, and the device number corresponding to the device on the system one-line diagram.
6. A computer generated system one-line diagram shall be provided which clearly identifies individual equipment buses, bus numbers, device identification numbers and the maximum available short-circuit current at each bus when known.
7. A discussion section which evaluates the degree of system protection and service continuity with overcurrent devices, along with recommendations as required for addressing system protection or device coordination deficiencies.
8. Significant deficiencies in protection and/or coordination shall be called to the attention of the architect and recommendations made for improvements as soon as they are identified.
9. The contractor shall be responsible for supplying pertinent electrical system conductor, circuit breaker, generator, and other component and system information in a timely manner to allow the time-current analysis to be completed prior to final installation.

B. Short-Circuit Analysis
1. Calculation of the maximum rms symmetrical three-phase short-circuit current at each significant location in the electrical system shall be made using a digital computer.
2. Appropriate motor short-circuit contribution shall be included at the appropriate locations in the system so that the computer calculated values represent the highest short-circuit current the equipment will be subjected to under fault conditions.
3. A tabular computer printout shall be included which lists the calculated short-circuit currents, X/R ratios, equipment short-circuit interrupting or withstand current ratings, and notes regarding the adequacy or inadequacy of the equipment.
4. The study shall include a computer printout of input circuit data including conductor lengths, number of conductors per phase, conductor impedance values, insulation types, transformer impedances and X/R ratios, motor contributions, and other circuit information as related to the short-circuit calculations.
5. Include a computer printout identifying the maximum available short-circuit current in rms symmetrical amperes and the X/R ratio of the fault current for each bus/branch calculation.
6. The system one-line diagram shall be computer generated and will clearly identify individual equipment buses, bus numbers used in the short-circuit analysis, cable and bus connections between the equipment, calculated maximum short-circuit current at each bus location and other information pertinent to the computer analysis.
7. A comprehensive discussion section evaluating the adequacy or inadequacy of the equipment must be provided and include recommendations as appropriate for improvements to the system.
8. The contractor shall be responsible for supplying pertinent electrical system conductor, circuit breaker, generator, and other component and system information in a timely manner to allow the short-circuit analysis to be completed prior to final installation.
9. Any inadequacies shall be called to the attention of the architect and recommendations made for improvements as soon as they are identified.

C. Arc-Flash Hazard Analysis
1. The Arc-Flash Hazard Analysis shall be performed with the aid of computer software intended for this purpose in order to calculate Arc-Flash Incident Energy (AFIE) levels and flash protection boundary distances.
2. The Arc-Flash Hazard Analysis shall be performed in conjunction with a short-circuit analysis and a time-current coordination analysis.
3. Results of the Analysis shall be submitted in tabular form, and shall include device or bus name, bolted fault and arcing fault current levels, flash protection boundary distances, personal-protective equipment classes and AFIE levels.
4. The analysis shall be performed under worst-case Arc-Flash conditions, and the final report shall describe, when applicable, how these conditions differ from worst-case bolted fault conditions.
5. The Arc-Flash Hazard Analysis shall be performed by a registered professional engineer.
6. The Arc-Flash Hazard Analysis shall be performed in compliance with IEEE Standard 1584-2002, the IEEE Guide for Performing Arc-Flash Calculations.
7. The Arc-Flash Hazard Analysis shall include recommendations for reducing AFIE levels and enhancing worker safety.
8. The proposed vendor shall demonstrate experience with Arc-Flash Hazard Analysis by submitting names of at least ten actual Arc-Flash Hazard Analyses it has performed in the past year.
9. The proposed vendor shall demonstrate capabilities in providing equipment, services, and training to reduce Arc-Flash exposure and train workers in accordance with NFPA 70E and other applicable standards.
10. The proposed vendor shall demonstrate experience in providing equipment labels in compliance with NEC-2002 section 110 and ANSI Z535.4 to identify AFIE and appropriate Personal Protective Equipment classes.

SECTION 26 51 00

LIGHTING

PART 1 - PRODUCTS

1.01 Fixtures
A. Fixtures shall be of the types, wattage's and voltages shown on the Drawings and be UL classified and labeled for the intended use.
B. Substitutions will not be considered unless the photometric distribution curve indicates the proposed fixture is equal to or exceeds the specified luminaire.
C. Luminaire wire, and the current carrying capacity thereof shall be in accordance with the CEC.
D. Luminaires and lighting equipment shall be delivered to the project site complete, with suspension accessories, aircraft cable, stems, canopies, hickeys, castings, sockets, holders, ballasts, diffusers, frames, and related items, including support and braces.

1.02 LED Power Supplies / Drivers:
A. Power Supplies and Drivers shall be of the types shown on the drawings. Drivers shall be CBM certified and bear the UL label. Drivers shall be the high power factor type and have a 10% maximum total harmonic distortion.
B. All Drivers for fixtures installed outdoors shall provide reliable operation at 0°F at 90% of the nominal line voltage.
C. Drivers shall be Sound Rated A+ or will be rejected and shall be replaced at no expense to the Owner.

1.03 Light Sources:
A. All LED sources shall be new at the time of acceptance; been fabricated within 12 months before installation per the date code on the module; and shall be CREE, General Electric, Osram /Sylvania, Phillips, or approved equal.
B. Unless otherwise noted on the drawings, Light Engines shall have the highest available efficacy, 3500°K, and 85 CRI minimum.

PART 2 - EXECUTION

2.01 Installation:
A. General:
1. All fixtures and luminaires shall be clean and light engines shall be operable at the time of acceptance.
2. Install luminaires in accordance with manufacturer's instructions, complete with power supply/driver, light source and controls, ready for operation as indicated.
3. Align, mount, and level the luminaires uniformly.
4. Avoid interference with and provide clearance for equipment. Where an indicated position conflicts with equipment locations, change the location of the luminaire by the minimum distance necessary.
B. Mounting and Supports:
1. Mounting heights shall be as shown on the Drawings. Unless otherwise shown, mounting height shall be measured to the centerline of the outlet box for wall mounted fixtures and to the bottom of the fixture for suspended fixtures and to the bottom of the fixture for all other types.
2. Luminaire supports shall be anchored to structural members.
3. Pendant stem mounted luminaires shall be provided with ball aligners to assure a plumb installation and shall have a minimum 45 degree clean swing from horizontal in all directions. Sway bracing shall be installed as required to limit the movement of the fixture. Fixtures shall be allowed to sway a maximum of 45° without striking any object.

Fixture supports shall be designed to resist earthquake forces of UBC Seismic Area.

SECTION 26 22 00

TRANSFORMERS

PART 1 - PRODUCTS:

1.01 Dry Type Transformer:
A. Unless otherwise noted on the Drawings, general purpose transformers for supplying lighting and small power loads shall be dry type, two winding, 60 Hertz, aluminum windings, temperature rise not exceeding 150°C under full load in an ambient of 40°C, with Class H 220°C insulation. Capacity rating, number of phases and voltages shall be as shown on the Drawings. Transformer shall comply with all applicable provisions of NEMA Standard ST20 and shall have NEMA Standard taps. Transformers rated below 15 KVA shall have two (2) 5% full capacity taps below rated primary volts and transformers rated 15 KVA and above shall have six (6) 2-1/2% full capacity taps, two above the four below nominal voltage Terminal compartment shall have temperature rise not to exceed 35°C. Provide unit UL listed for indoor/outdoor mounting. Provide dry-type

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

TUNITAS CREEK BEACH RESTROOM

SHEET SCHEDULE	
SHEET	CONTENTS
A1-1	TITLE PAGE & SPECIFICATIONS
A1-2A	FLOOR PLAN & SPECIFICATIONS
A1-2B	ELEVATION VIEWS & SPECIFICATIONS
A1-3	CMU PLAN & DETAILS & SPECIFICATIONS
A1-4	FOUNDATION PLAN & DETAILS, & SPECS

ROMTEC
18240 NORTH BANK ROAD - ROSEBURG, OR 97470
(541)-496-3541 FAX (541)-496-0803

THESE PLAN VIEW AND ELEVATION DRAWINGS ARE A PRELIMINARY ARCHITECTURAL REPRESENTATION OF THE BUILDING. ALL DIMENSIONS, FEATURES AND COMPONENTS SHOWN ON THESE PRELIMINARY DRAWINGS MAY OR MAY NOT BE PART OF THE QUOTE. PLEASE REFER TO THE "SCOPE OF SUPPLY AND SERVICES" LETTER PROVIDED WITH YOUR QUOTE FOR ROMTEC'S PROPOSED SCOPE OF SUPPLY.

TUNITAS CREEK BEACH

SECTION 13 34 23 - PRE-ENGINEERED BUILDING

Specification Date: 12/14/2022

SECTION 1: BUILDING SUPPLIER SCOPE

1.1 SUMMARY

A. The work shall include furnishing the sealed architectural, structural, mechanical, and electrical plan sets and furnishing the structural, mechanical, and electrical building components as a complete, pre-designed building package as shown on drawings and as specified herein.

1.2 GENERAL REQUIREMENTS

A. Packaged building design and engineering and furnishing all specified building package components shall be supplied by Romtec, Inc., or pre-approved alternate, hereafter designated as the building supplier.

B. The building supplier shall be a single source design, engineering, and manufacturing firm who shall meet all the following requirements.

C. The packaged building shall be a current standard product of building supplier.

D. Building supplier shall be regularly engaged in and have at least ten (10) years of experience in packaged building engineering, design, supply, and construction.

E. The building supplier must meet or exceed the product specifications. The Romtec, Inc. building package is an approved guide and example.

F. Alternate building suppliers shall demonstrate that they have designed, engineered, produced, delivered, and constructed at minimum ten (10) functioning site-built buildings of similar type. Project completion dates and a reference contact from the owner of each project must be provided.

G. Alternate building suppliers must disclose all instances of any prior municipal reviewer or landscape architect's rejection of the same or similar product as an "or equal" to the specified basis of design building package.

H. Bidders who propose and alternate building supplier other than Romtec, Inc. are required to provide a complete submittal package minimum of ten (10) calendar days prior to the bid opening date with full sealed plan sets, calculations, and all pre-engineered structural items.

I. Any products proposed as "or equal" that are not as specified must be specifically listed in the alternate building supplier submittal package and accompanied by manufacturers data sheets for review. These products will be approved or denied prior to the bid opening. Incomplete submittals will be rejected and returned to the bidder.

J. The building and its concrete footings, foundation, and slab are to be engineered by the building supplier to meet site-specific conditions, including wind and snow loading, local frost depth, and ground conditions.

K. Fasteners that are normally included with individual components, as we all any atypical fasteners, shall be supplied by building supplier.

L. Building is to be designed and constructed to meet local codes and approvals for permanent structures. Any building that is temporary, permanently relocatable, prefabricated modular, an offsite constructed product, or constructed of precast material is not an accepted equal to permanent, onsite, conventional construction.

M. No approval by any external entity will override the local building authority's codes and inspections. Seals meant for modular homes and production plant certifications will not be allowed in lieu of sealed plans from a licensed engineer and conventional inspection during construction.

N. Building sidings, treatments, and roofing are to be as specified. Precast buildings with painted textures are not considered architecturally equivalent.

O. The building supplier shall provide complete, code-compliant building plans including plans, elevations, sections, and details, under seal of a National Kitchen and Bathroom Association (NKBA) certified technical designer.

P. The building supplier shall provide complete structural calculations meeting code for design loads and seismic design under seal of a professional Engineer with current license in the state of California.

Q. The reviewing authority reserves the right to review or reject all submittals at its sole discretion.

R. All work and materials shall comply with current industry building codes and regulations for the state of California.

S. Americans with Disabilities Act Accessibility Guidelines (ADAAG) will be followed in design, manufacture, and construction.

1.3 DESIGN & SUBMITTAL DOCUMENTATION

A. The building supplier work shall include the design of the architectural, mechanical, structural, and electrical components that will be required for this building.

B. The building will be designed as a complete building package to be delivered to the job site for construction on-site by the contractor.

C. Within one (1) week of contract award, the building supplier shall submit the packaged building preliminary Scope of Supply and Design Submittal (SSDS), including the building plan view and elevation drawings.

D. The building supplier will provide complete submittal documentation in the building supplier's standard electronic submittal format for review.

E. The preliminary SSDS will be reviewed by relevant parties and returned to the building supplier with any required revisions to the terms, product data sheets, and/or building plan view and elevation drawings noted as comments.

F. The building supplier shall make any required corrections or revisions and resubmit the preliminary SSDS until the preliminary SSDS is approved by the relevant parties.

G. Once the preliminary SSDS has been approved, the building supplier will provide full sealed plan sets stamped by an engineer licensed in the state that the building is located for review by the permitting authority.

H. Up to three (3) wet stamped sets of the plans and structural calculations shall be provided by building supplier before any additional fees apply. Standard plan set size is 11" x 17".

I. Permitting authority will review the full sealed plan set and return with any required revisions or corrections noted as comments.

J. Building supplier shall provide one full round of sealed plan revisions in response to permitting authority comments before any additional fees are allowed.

K. The following sections shall be included in the building supplier's preliminary Scope of Supply and Design Submittal. Incomplete submittals will be rejected and returned to the bidder.

1. INTRODUCTION
2. BUILDING DESIGN,
   (a) SUPPLIED ITEMS
   (b) EXCLUDED ITEMS
   (c) PLAN VIEW AND ELEVATION DRAWINGS
3. PRODUCT DATA
4. WARRANTY & LIMITATIONS

Note: Overall site plan is not part of building supplier's scope.

1.4 WARRANTY

A. The building package and all associated components provided by building supplier shall be warranted against defects in materials and workmanship for a period of not less than one (1) year from the date of acceptance. Acceptance is the date of delivery of the building package, or, if delivery is delayed for any reason beyond building supplier's control, the date that the building and all its associated components were ready to deliver.

B. Building supplier shall pass through to owner all relevant manufacturers warranties for individual products and components of the building package.

FOR BID PURPOSES ONLY

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DESCRIPTION	BY	DATE	REV

NOT FOR CONSTRUCTION

ROMTEC
18240 NORTH BANK ROAD
ROSEBURG, OR 97470
(541)-496-3541 FAX (541)-496-0803

PROJECT: TUNITAS CREEK BEACH - RESTROOM
HALF MOON BAY, CALIFORNIA

SHEET TITLE: TITLE PAGE SPECIFICATIONS

PROJECT I.D.# 1932

DATE: 04/11/2023

DRAWN BY: JRM

SHEET NO. A1-1

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CSW | ST2
CSW/Stuber-Stroeh Engineering Group, Inc.
Civil & Structural Engineers | Surveying & Mapping | Environmental Planning
Land Planning | Construction Management
504 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.9850
fax: 415.883.9535
http://www.csw-st2.com

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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT	SCALE: NOT TO SCALE
		CHECKED BY: CSW/ST2 (JAH)	TITLE PAGE SPECIFICATIONS	DATE: 04/21/2023
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS	FILE NO.: E4995
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

A1-1
SHEET 110 OF 124

APPROVED:

DATE: 04/21/2023

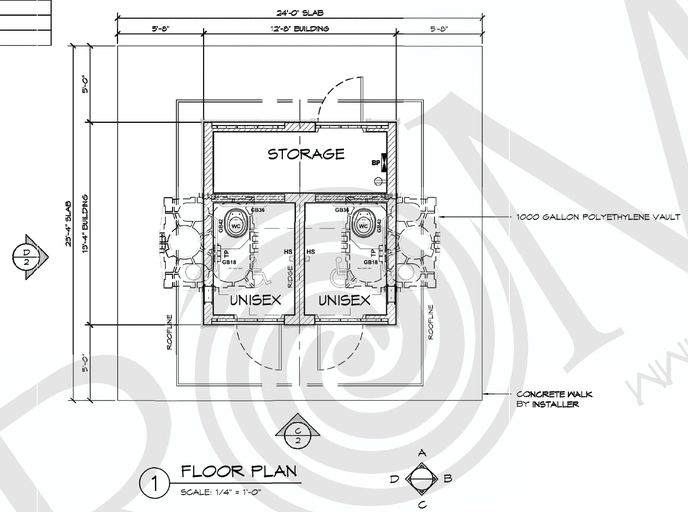
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

LEGEND		
SYMBOL	DESCRIPTION	AREA/ QUANTITY
	GABLE WINDOW	4
	2x6 WOOD FILLER WALL	2
	16" x 24" EXTERIOR, CMU WALL VENT	2
	EXTERIOR WALL LIGHTS	5
	INTERIOR CEILING LIGHTS	5
	ELECTRICAL OUTLET	1

THESE PLAN VIEW AND ELEVATION DRAWINGS ARE A PRELIMINARY ARCHITECTURAL REPRESENTATION OF THE BUILDING. ALL DIMENSIONS, FEATURES AND COMPONENTS SHOWN ON THESE PRELIMINARY DRAWINGS MAY OR MAY NOT BE PART OF THE QUOTE. PLEASE REFER TO THE "SCOPE OF SUPPLY AND SERVICES" LETTER PROVIDED WITH YOUR QUOTE FOR ROMTEC'S PROPOSED SCOPE OF SUPPLY.

WALL TYPE SCHEDULE

8" REINFORCED CONCRETE MASONRY (BLOCK WALL WITH MORTAR JOINTS, GROUTED SOLID ALL CELLS RUNNING BOND PATTERN.



1 FLOOR PLAN
SCALE: 1/4" = 1'-0"

SECTION 2: BUILDING PACKAGE PRODUCTS

2.1 APPROVED BUILDING SUPPLIERS

A. Romtec, Inc.,

18240 North Bank Road, Roseburg, OR 97470

Tel: 541-496-3541; Fax: 541-496-0803; Email: cdooley@romtec.com

Web: www.Romtec.com

B. Requests for use of an alternate building supplier will be considered in accordance with provisions of Section 1.

2.2 BUILDING DESCRIPTION

A. Refer to drawings for quantities, dimensions, locations, and installation methods for the materials and items described in this section.

B. Building dimensions shall match what is indicated on drawings.

2.3 WATERLESS RESTROOM FIXTURES

A. Waterless restroom components shall be supplied by building supplier.

B. Underground vault shall be 1000-gallon polyethylene vault with steel reinforced center column.

C. Vent pipe for vault shall be:

1. Inner diameter of 12" and black polyethylene
2. Vent pipe to have bird screen

D. Toilet riser for vault shall be:

1. Single piece, 18", white polyethylene molded double walled riser with safety bars and a heavy duty seat and lid that come preinstalled

E. Grab bars shall be stainless steel.

F. Surface mount, automatic waterless hand sanitizer dispenser.

G. Toilet paper dispenser shall be stainless steel, wall mount with three roll capacity.

2.4 ELECTRICAL

A. The following electrical fixtures shall be supplied by building supplier.

B. Light fixtures shall be supplied by building supplier.

1. Exterior wall mounted, Lithonia, vandal resistant LED light fixtures shall have a durable polycarbonate housing and high-impact polycarbonate refractor.
2. Interior surface mount, 48" LED light fixtures.
3. Lights controlled by motion sensor.

C. Main breaker panel shall be supplied by building supplier.

1. Breaker Panel shall be 100 Amp, single-phase, indoor.

Note: Breaker panel shall be sized to accept only the loads of the building supplier electrical fixture package. The building supplier should modify the main breaker panel as needed to be most efficient based on any design changes.

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REV	DATE	BY	DESCRIPTION

NOT FOR CONSTRUCTION

ROMTEC
18240 NORTH BANK ROAD
ROSEBURG, OR 97470
(541)-496-3541 FAX (541)-496-0803

PROJECT: TUNITAS CREEK BEACH - RESTROOM
HALF MOON BAY, CALIFORNIA

SHEET TITLE: FLOOR PLAN SPECIFICATIONS

PROJECT I.D.# 1932

DATE: 04/11/2023

DRAWN BY: JRM

SHEET NO. A1-2A

SHEET 111 OF 124

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CSW | ST2

CSW/Stuber-Stroeh Engineering Group, Inc.
Civil & Structural Engineers | Surveying & Mapping | Environmental Planning
Land Planning | Construction Management
504 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.9850
fax: 415.883.9835
http://www.csw2.com
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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	FLOOR SPECIFICATIONS
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: NOT TO SCALE
DATE: 04/21/2023
FILE NO.: E4995

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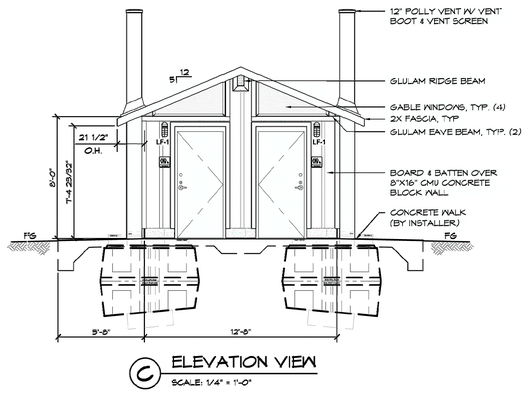
A1-2A
SHEET 1100F 124

APPROVED:

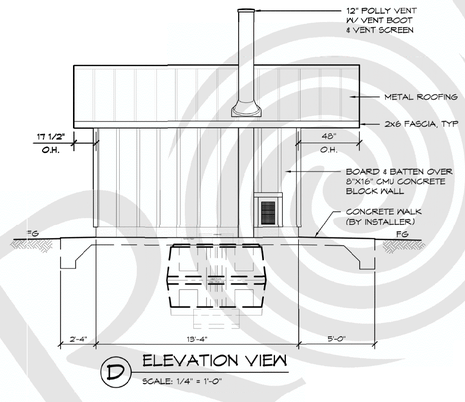
DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



C ELEVATION VIEW
SCALE: 1/4" = 1'-0"

THESE PLAN VIEW AND ELEVATION DRAWINGS ARE A PRELIMINARY ARCHITECTURAL REPRESENTATION OF THE BUILDING. ALL DIMENSIONS, FEATURES AND COMPONENTS SHOWN ON THESE PRELIMINARY DRAWINGS MAY OR MAY NOT BE PART OF THE QUOTE. PLEASE REFER TO THE "SCOPE OF SUPPLY AND SERVICES" LETTER PROVIDED WITH YOUR QUOTE FOR ROMTEC'S PROPOSED SCOPE OF SUPPLY.



D ELEVATION VIEW
SCALE: 1/4" = 1'-0"

2.5 STRUCTURE

A. Concrete Masonry Units (CMU) shall be supplied by building supplier.

1. Walls shall be constructed of 8"W x 16"L x 8"H smooth-face mortar joint concrete masonry units (concrete blocks).
2. Blocks shall be manufactured to ASTM C90 designation for load bearing concrete masonry units.
3. Block color to be Gray.

B. Exterior finish shall be fiber cement board and batten siding supplied by building supplier.

C. Sanitary tile cove base on interior walls to be supplied by building supplier.

D. Polycarbonate gable windows shall be supplied by building supplier.

1. Windows shall include pre-assembled steel frame with 1/8" thick polycarbonate with translucent pebble finish.
2. Steel frames are powder coated with undercoating (color to be selected by owner).

E. Kick proof wall vents for natural ventilation shall be supplied by building supplier.

1. Pre-assembled steel frame with 10-gauge, 1" square lock joint wire weave mesh and interior louver with integral insect screen.
2. Vents are powder coated with undercoating (color to be selected by owner).

F. Door system components shall be supplied by building supplier.

1. Doors shall be Steelcraft® SL18 standard laminated honeycomb core and 18-gauge galvanized steel.
2. Door frame shall be pre-welded Steelcraft® 3-Sided flush frame, 16-gauge galvannealed A-60 steel.
3. Doors and frames to be powder coated with undercoating (color to be selected by owner).
4. Masonry door clips (3/16" dia.) for door frame shall be fitted between the doorframe and concrete blocks to bond frame to wall. Door clips allow full internal grouting of the frame during installation.
5. Hinges shall meet ANSI A5112 with non-removable pin and two ball bearings.
6. Hager 5100 Series Grade 1 door closer is constructed of cast iron, which makes it ideal for heavy duty, high use and abusive environments.
7. Door lock shall be Grade 2, standard duty commercial cylindrical lever locks with no exposed mounting screws.

(i) Hager 341C latch protection plate with lock cut out.

8. Restroom doors to have Hager 3700 series interconnected locks with occupancy indicator.

2.6 ROOFING

A. The following roof components shall be supplied by building supplier.

1. Glulam beam shall be 24F-V4 and architectural grade.
2. Tongue & groove decking shall be 2x6 V-edge deck boards, select deck Douglas fir.

B. Roofing shall be Fabral, 26-gauge, Horizon 16, standing seam panels, with 16 in. coverage width.

1. Roofing package shall include inside and outside foam closures, matching trim (eaves, gables, and ridge) and fasteners, sheet metal flashing (all sides), and 30# felt (under metal).
2. Roofing color to be selected by the owner from the manufacturers standard color chart.

2.7 DELIVERY, STORAGE, AND HANDLING

A. The building supplier freight shall be based on delivering the product on a 48' to 53' flatbed or van truck and trailers, or as close to those dimensions as can legally access the site. Overall dimensions of the truck and trailers allowed to access the site are: 70' overall length, 102" wide and 168" high.

B. Building supplier shall deliver organized building package components in stages as shrink-wrapped pallets that correspond to a typical sequence of construction. A bill of material stating the stages of palletized components shall be included with every delivery.

1. Stage 1 pallets shall include structural components such as block, frames, vents, beams, connectors, trusses, etc.
2. Stage 2 pallets shall include second stage structural components such as filler wall material, windows, skylights, roofing, etc.
3. Stage 3 pallets shall include structural finish components such as siding material, tile, doors etc.
4. Stage 4 pallets shall include plumbing and electrical fixtures and other finish materials such as toilets, sinks, drinking fountains, electrical fixtures, accessories, etc.

DESCRIPTION | BY | DATE | REV

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ROMTEC
18240 NORTH BANK ROAD
ROSEBURG, OR 97470
(541)-496-3541 FAX (541)-496-0803

PROJECT: TUNITAS CREEK BEACH - RESTROOM
HALF MOON BAY, CALIFORNIA

SHEET TITLE: ELEVATIONS SPECIFICATIONS

PROJECT NO. 1932
DATE: 04/11/2023
DRAWN BY: JRM
SHEET NO. A1-2B

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SHEET 112 OF 124

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CSW/Stuber-Stroch Engineering Group, Inc.
Civil & Structural Engineers | Surveying & Mapping | Environmental Planning
Land Planning | Construction Management
504 Redwood Blvd, Suite 310 tel: 415.883.9850
Novato, CA 94947 fax: 415.883.9835
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APPROVED DATE:
ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	ELEVATION SPECIFICATIONS
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: NOT TO SCALE
DATE: 04/21/2023
FILE NO.: E4995

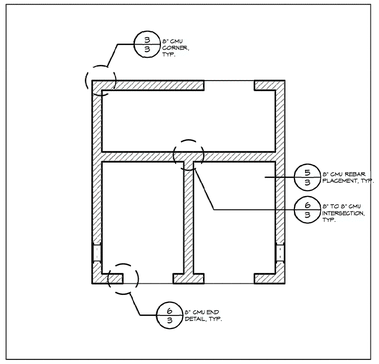
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

A1-2B
SHEET 1120F 124

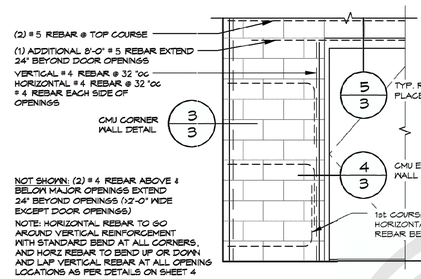
APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



A STRUCTURAL CMU PLAN
SCALE: 1/4" = 1'-0"



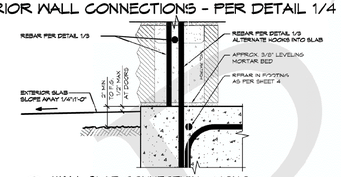
1 CMU REBAR LAYOUT DETAIL
SCALE: 1" = 1'-0"

CMU REBAR SCHEDULE		
REBAR	MIN. LAP	BEND DIAMETER
#4	24"	3" MIN.
#5	30"	3-3/4" MIN.

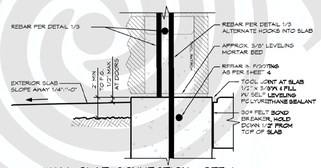
CMU REBAR NOTES:
- BENDS: MIN. INSIDE BEND DIAMETER SHALL BE NOT LESS THAN 6d AS PER TMS 402-16 SECTION 6.1.8.2
- SPLICES: LAP SPLICES ARE PERMITTED AS PER TMS 402-16 SECTION 6.1.6.1.1

PIPES INSTALLED THROUGH CMU WALL NOTES:
- SUPPLY: THE FIXTURE SUPPLY LINE SHOULD BE BORED A 1/2" LARGER THAN REQUIRED LINE SIZE AND THE PORTION OF PIPE LOCATED IN CMU WALL SHALL BE WRAPPED WITH 10MIL BLACK TAPE
- WASTE PIPE: THE FIXTURE WASTE LINE SHOULD BE BORED A 1/2" LARGER THAN REQUIRED LINE SIZE

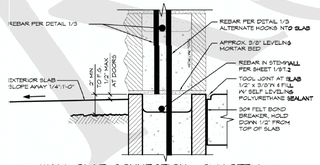
EXTERIOR WALL CONNECTIONS - PER DETAIL 1/4



2A WALL-SLAB CONNECTION - MONO
SCALE: 3" = 1'-0"



2B WALL-SLAB CONNECTION - STEM
SCALE: 3" = 1'-0"



2C WALL-SLAB CONNECTION - CMU STEM
SCALE: 3" = 1'-0"

SECTION 3: BUILDING INSTALLER SCOPE

The installing contractor or subcontractor, hereafter designated as the building installer, is responsible for building package installation. Building installer work will generally include foundation/pad construction and building package assembly/construction.

Note: Building supplier's scope is separate from the building installer's scope. Romtec, Inc., is the approved building supplier, not a designated building installer.

3.1 CONSTRUCTION SUBMITTALS

A. If required by owner and/or reviewing authority, building installer shall submit product data sheets and relevant information about the specified building installer supplied products below for review and approval.

3.2 WARRANTY

A. Building installer's work shall be warranted against defects in materials and workmanship for a period of not less than one (1) year from the date of acceptance. Acceptance is the date that installation work for the building package is completed, including any relevant final punch list. In the event that final acceptance of the completed building is delayed for reasons beyond building installer's control, the warranty shall be one (1) year from the completion of building installer's installation work and demobilization.

B. Building installer shall pass through to owner all relevant manufacturers warranties for individual products and components supplied by building installer.

3.3 ELECTRICAL

A. Electrical rough-in, installation and trim shall be provided by building installer.

1. All underground and/or overhead service to building shall be as specified in the final site plan.
2. Building installer is responsible for all necessary wire, connectors, grounding, conduit, and related items to install the building package electrical components and meet all relevant national, state, and local codes.
3. Building installer shall supply and install all switches and outlets required to complete the building package installation.

3.4 STRUCTURE

A. Masonry (concrete) grout shall be supplied and installed by building installer.

1. Grout shall have a minimum compressive strength of 2,500 psi at 28 days, 9+/-1" slump, with max ½" aggregate.
2. Fine or coarse grout may be used in accordance with 2009 UBC.
3. All CMU block must be fully grouted and may not be wetted.

Note: If required for installation, building installer will be responsible for providing appropriate equipment and labor for notching CMU block for bond beams, cutting CMU block to make any required shapes, and/or grinding CMU block for fixture mounting.

B. Rebar for walls shall be supplied and installed by building installer.

1. All walls shall have # 4 and # 5 rebar. See final approved plans for spacing.
2. All rebar used in the building must meet ASTM A615 manufacturing standards and is to be placed per the final approved plans.

C. Interior block wall finish shall be latex epoxy paint supplied and installed by building installer.

D. Interior floors to be sealed concrete finish supplied by building installer.

E. Sealant for all exposed wood shall be supplied and installed by building installer.

F. Sealant for all exterior CMU block is required, to be supplied and installed by building installer.

3. Fiber cement siding is primed to be painted on-site by building installer.

SECTION 4: CONTRACTOR SCOPE ITEMS

The items in this section may be provided by the same building installer as defined in Section 3 above (typically when a single entity is acting as both the building installer and contractor), or the items in this section may be provided by a separate entity such as a general contractor or site contractor, hereafter designated as contractor (typically when the building installer is a separate subcontractor). Contractor work will generally include site preparation and grading, excavations for structures, backfill and/or structural backfill, and any site or utility work outside the building package footprint.

Items in this section are generally to be completed prior to building installer beginning its installation work described in Section 3 above.

4.1 CONSTRUCTION SUBMITTALS

A. If required by owner and/or reviewing authority, contractor shall submit product data sheets and relevant information about the specified contractor supplied products below for review and approval.

4.2 WARRANTY

A. Contractor's work shall be warranted against defects in materials and workmanship for a period of not less than one (1) year from the date of acceptance. Acceptance is the date that installation work for the building package is completed, including any relevant final punch list. In the event that final acceptance of the completed building is delayed for reasons beyond contractor's control, the warranty shall be one (1) year from the completion of contractor's installation work and demobilization.

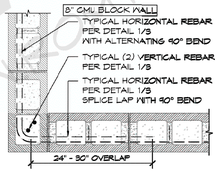
A. Contractor shall pass through to owner all relevant manufacturers warranties for individual products and components supplied by contractor.

4.3 ELECTRICAL

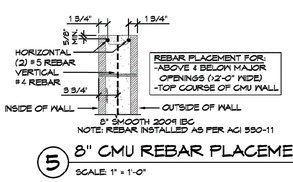
A. Incoming electrical utility lines to within approximately 10' of the building shall be provided by contractor.

1. All underground and/or overhead service to building shall be as specified in the final site plan.
2. Electric meter base and all rough wiring, switches, plugs and circuit breakers shall be as shown on final plans.

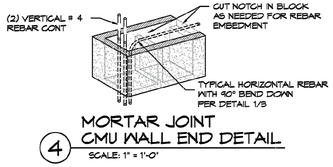
B. Contractor supplies and installs the meter base and meter.



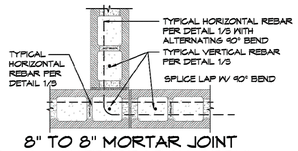
3 MORTAR JOINT CMU CORNER DETAIL
SCALE: 1" = 1'-0"



5 8" CMU REBAR PLACEMENT
SCALE: 1" = 1'-0"



4 MORTAR JOINT CMU WALL END DETAIL
SCALE: 1" = 1'-0"



6 8" TO 8" MORTAR JOINT CMU INTERSECTION DETAIL
SCALE: 1" = 1'-0"

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DESCRIPTION	BY	DATE	REV

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ROMTEC
18240 NORTH BANK ROAD
ROSEBURG, OR 97470
(541)-496-3541 FAX (541)-496-0803

PROJECT: TUNITAS CREEK BEACH - RESTROOM
HALF MOON BAY, CALIFORNIA

SHEET TITLE: STRUCTURAL CMU PLAN & DETAILS SPECIFICATIONS

PROJECT I.D.# 1932
DATE: 04/11/2023
DRAWN BY: JRM
SHEET NO. A1-3

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\Romtec Restroom.dwg 04/27/2023, 11:03 AM BRIER 1:3.5602

SHEET 113 OF 124

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CSW/Stuber-Stroh Engineering Group, Inc.
Civil & Structural Engineers | Surveying & Mapping | Environmental Planning
Land Planning | Construction Management
504 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.9850
fax: 415.883.9835
http://www.cswst2.com
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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	CHECKED BY: CSW/ST2 (JAH)	DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
STRUCTURAL CMU PLAN AND DETAIL SPECIFICATIONS
SAN MATEO COUNTY PARKS

SCALE: NOT TO SCALE
DATE: 04/21/2023
FILE NO.: E4995

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

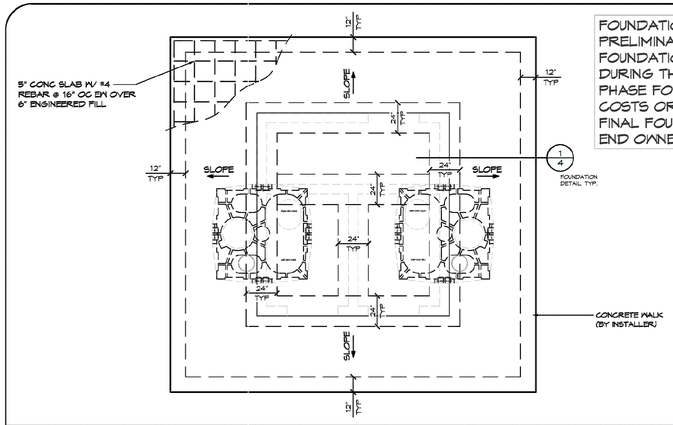
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

A1-3
SHEET 1130F 124

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



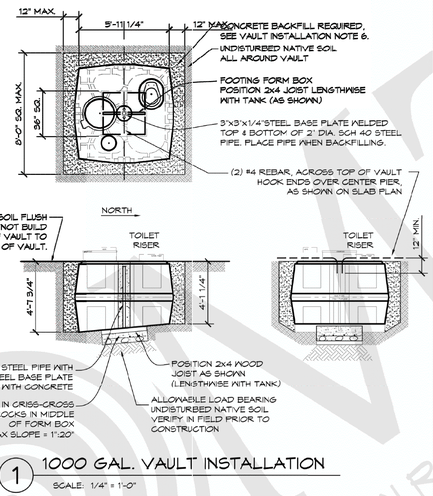
FOUNDATION DESIGN SHOWN HERE IS PRELIMINARY AND SUBJECT TO CHANGE. FINAL FOUNDATION DESIGN TO BE DETERMINED DURING THE FORTHCOMING FULL DESIGN PHASE FOR THE BUILDING. ANY INCREASED COSTS OR TIME NEEDED TO CONSTRUCT THE FINAL FOUNDATION DESIGN IS BETWEEN THE END OWNER AND THE BUILDING INSTALLER

A FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

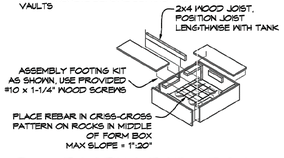
VAULT INSTALLATION NOTES:
1) VAULT MUST BE INSPECTED FOR DAMAGE DURING SHIPPING BEFORE INSTALLATION.
2) VAULT HOLE MUST NOT BE OVERSIZED.
3) DO NOT DIG VAULT HOLE DEEPER THAN SHOWN. (ANY UN-COMPACTED FILL AT BOTTOM OF VAULT CAN COMPACT AND CAUSE DAMAGE TO VAULT)
4) DO NOT BUILD UP SOIL AROUND TOP OF VAULT TO MEET HEIGHT OF VAULT. IF THAT IS THE CASE THE DIFFERENCE MUST BE MADE UP WITH MAKING THE CONCRETE SLAB THICKER.
5) IF OVERSIZE HOLE REQUIRED FOR REMOVAL OF BOULDERS OR OTHER MATERIAL, HOLE MUST BE FILLED WITH CONCRETE.
6) BACKFILL W/ CONCRETE AROUND VAULT AREA IN 12" INCREMENTS AND CHECK TOILET RISER LEVEL AS BACKFILLING.

NOTE:
2500 PSI CONCRETE BACKFILL. CAST-IN-PLACE CONCRETE MAY BE USED AS BACKFILL AROUND VAULT. SEE GENERAL NOTES ON SHEET G1.

REQUIREMENT:
FILL VAULT WITH WATER BEFORE POURING CONCRETE BACKFILL

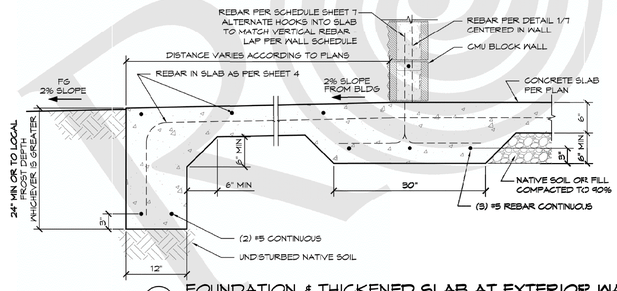


ASSEMBLE FOOTING KIT AS SHOWN
- 8 PIECES OF PRECUT REBAR LAID IN CRISS CROSS PATTERN ON ROCKS IN MIDDLE OF FORM BOX
- EACH FOOTING FORM REQUIRES 1/3 CU. YD. OF READY MIX CONCRETE. FILL THE FOOTING FORMS ON LEVEL SURFACE WITH CONCRETE BEFORE SETTING THE VAULTS



2 FOOTING FORM BOX
SCALE: 1/4" = 1'-0"

1 1000 GAL. VAULT INSTALLATION
SCALE: 1/4" = 1'-0"



1 FOUNDATION & THICKENED SLAB AT EXTERIOR WALLS
SCALE: 1" = 1'-0"

3.5 CAST IN-PLACE CONCRETE FOR BUILDING PACKAGE

A. All equipment, labor, trades, and materials for cast-in-place concrete shall be provided by building installer.
   1. Includes all materials and labor for building package foundations/footings and interior slabs.

B. Footings for the building package are to be dug by the building installer and poured on-site to meet local code for permanent structures. A prefabricated, modular mat placed on compacted base is not an accepted equal to a site specific, site poured, engineered foundation.

C. Engineered fill shall be ¾" minus crushed aggregate around footings, foundations, and slabs, or as required in the final approved plans.

D. Slab vapor barrier shall be 6-mil continuous plastic under the concrete slab, or as required in the final approved plans.

E. The foundation shall be installed as designed with all cast in-place concrete poured to dimensions specified, or as required in the final plans.
   1. Footings will be built to minimum 24" depth or greater if required by local frost depth or permitting authority.
   2. Minimum compressive strength of foundation concrete shall be 3,000 psi at 28 days, 4" +/-1" slump, with max ¾" aggregate, cured in accordance with ACI 308, or as required in approved final plans.
   3. Slabs shall have a fine broom finish with joints required in flat work as shown on plans.
   4. Steel rebar shall be installed as specified in final plans.

F. Building installer shal supply and install concrete slab sealer.
   1. Concrete slab sealer shall be a water-based, transparent curing, sealing and dust proofing compound with two (2) coats to be applied per manufacturer's instructions.

3.6 OTHER MATERIALS & EQUIPMENT

A. Unless otherwise specified, the following products and materials are supplied by building installer (if applicable).
   1. Building package installation
   2. Cast-in-place concrete foundations, footings, interior slabs
   3. Concrete slab & block sealer
   4. Mortar
   5. Concrete grout
   6. Rebar
   7. Latex epoxy paint
   8. Caulk for siding
   9. Typical fasteners; for example: roofing nails, staples, etc.
   10. Fasteners not included in product packaging
   11. Wood sealant for all decking, glulam beams, posts, and extensions
   12. All other items within the building footprint indicated on final plans or required by building codes to complete installation of the building package which are not specifically stated as supplied by building supplier.

3.7 DELIVERY, STORAGE, AND HANDLING

A. The building installer will be responsible for all equipment and labor required for off-loading of the delivered building package onsite.

B. The building installer will assume responsibility for adequate protection and maintenance of delivered building package materials from weather, damage, and pilferage during installation work. Any failure to adequately protect building package materials that affects the warranty of those materials will be at building installer's expense.

C. Building installer shall collect and maintain for final delivery to owner any operation & maintenance manuals included by individual product manufacturers with their respective product packaging. Any failure to collect, maintain, and/or deliver these O&M manuals to the owner that results in fees from building supplier for additional copies shall be at building installer's expense.

4.4 CAST IN-PLACE CONCRETE FOR BUILDING EXTERIOR

A. All equipment, labor, trades, and materials shall be supplied by contractor.
   1. Includes all materials and labor for exterior/entry slabs and sidewalks.

B. Refer to drawings for sidewalks and entry slabs.
   1. Minimum concrete compressive strength of 2,500 psi at 28 days, or as required in final approved plans.
   2. Remesh or rebar reinforcement shall be used in sidewalks.
   3. All sidewalks shall be finished with a fine broom with control joints installed per the final approved site plan.

4.5 OTHER MATERIALS & EQUIPMENT

A. Unless otherwise specified, the following products and materials are supplied by contractor.
   1. All items not specifically listed as supplied by building supplier or building installer.
   2. Any item listed as supplied by "contractor" or "others".

B. Unless specified in the plans or submittals, contractor supplies the following items (if applicable):
   1. Incoming electrical, water, sewer, and gas utilities.
   2. Asphalt paving
   3. Masonry pavers
   4. Sidewalks
   5. Landscaping
   6. Site grading
   7. Exterior/entry slabs
   8. Gutters and downspouts
   9. All other items exterior of the building footprint indicated on final plans or required by building codes which are not specifically stated as supplied by building supplier or building installer.

4.6 DELIVERY, STORAGE, AND HANDLING

C. The contractor will assume responsibility for adequate protection and maintenance of the installed building package materials after completion of installation work by building installer. Any failure to adequately protect building package materials that affects the warranty of those materials will be at contractor's expense.

SECTION 5: OWNER'S SCOPE

5.1 ONGOING MAINTENANCE

A. Owner is responsible for ongoing maintenance of the completed restroom building after completion of work by building installer and contractor.

5.2 SITE PLAN

A. Owner (or owner's site engineer) is responsible for providing the final approved site plan to building supplier and/or building installer.

5.3 SPECIAL INSPECTION

A. If required, special inspection(s) services shall be provided by owner.

B. If special inspection(s) are required by the permitting authority or relevant agency(ies), then the building supplier, building installer, and/or contractor shall provide reasonable assistance to the owner to accommodate the special inspection(s).

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DESCRIPTION	BY	DATE	REV

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ROMTEC
18240 NORTH BANK ROAD
ROSEBURG, OR 97470
(541)-496-3541 FAX (541)-496-0803

PROJECT: TUNITAS CREEK BEACH - RESTROOM
HALF MOON BAY, CALIFORNIA

SHEET TITLE: FOUNDATION PLAN & DETAILS SPECIFICATIONS

PROJECT I.D.# 1932
DATE: 04/11/2023
DRAWN BY: JRM
SHEET NO. A1-4

SHEET 114 OF 124

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504 Redwood Blvd, Suite 310 Novato, CA 94947
tel: 415.883.9850
fax: 415.883.9835
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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	CHECKED BY: CSW/ST2 (JAH)	DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
FOUNDATION PLAN & DETAIL SPECIFICATIONS
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: NOT TO SCALE
DATE: 04/21/2023
FILE NO.: E4995

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SHEET 1140F 124

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ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

TUNITAS CREEK BEACH
RANGER STATION

SHEET SCHEDULE	
SHEET	CONTENTS
A2-1	TITLE PAGE & SPECIFICATIONS
A2-2A	FLOOR PLAN & SPECIFICATIONS
A2-2B	ELEVATION VIEWS & SPECIFICATIONS
A2-3	CMU PLAN & DETAILS & SPECIFICATIONS
A2-4	FOUNDATION PLAN & DETAILS, & SPECS

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18240 NORTH BANK ROAD - ROSEBURG, OR 97470
(541)-496-3541 FAX (541)-496-0803

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TUNITAS CREEK BEACH

SECTION 13 34 23 - PRE-ENGINEERED BUILDING

Specification Date: 12/14/2022

SECTION 1: BUILDING SUPPLIER SCOPE

1.1 SUMMARY

A. The work shall include furnishing the sealed architectural, structural, mechanical, and electrical plan sets and furnishing the structural, mechanical, and electrical building components as a complete, pre-designed building package as shown on drawings and as specified herein.

1.2 GENERAL REQUIREMENTS

A. Packaged building design and engineering and furnishing all specified building package components shall be supplied by Romtec, Inc., or pre-approved alternate, hereafter designated as the building supplier.

B. The building supplier shall be a single source design, engineering, and manufacturing firm who shall meet all the following requirements.

C. The packaged building shall be a current standard product of building supplier.

D. Building supplier shall be regularly engaged in and have at least ten (10) years of experience in packaged building engineering, design, supply, and construction.

E. The building supplier must meet or exceed the product specifications. The Romtec, Inc. building package is an approved guide and example.

F. Alternate building suppliers shall demonstrate that they have designed, engineered, produced, delivered, and constructed at minimum ten (10) functioning site-built buildings of similar type. Project completion dates and a reference contact from the owner of each project must be provided.

G. Alternate building suppliers must disclose all instances of any prior municipal reviewer or landscape architect's rejection of the same or similar product as an "or equal" to the specified basis of design building package.

H. Bidders who propose and alternate building supplier other than Romtec, Inc. are required to provide a complete submittal package minimum of ten (10) calendar days prior to the bid opening date with full sealed plan sets, calculations, and all pre-engineered structural items.

I. Any products proposed as "or equal" that are not as specified must be specifically listed in the alternate building supplier submittal package and accompanied by manufacturers data sheets for review. These products will be approved or denied prior to the bid opening. Incomplete submittals will be rejected and returned to the bidder.

J. The building and its concrete footings, foundation, and slab are to be engineered by the building supplier to meet site-specific conditions, including wind and snow loading, local frost depth, and ground conditions.

K. Fasteners that are normally included with individual components, as we all any atypical fasteners, shall be supplied by building supplier.

L. Building is to be designed and constructed to meet local codes and approvals for permanent structures. Any building that is temporary, permanently relocatable, prefabricated modular, an offsite constructed product, or constructed of precast material is not an accepted equal to permanent, onsite, conventional construction.

M. No approval by any external entity will override the local building authority's codes and inspections. Seals meant for modular homes and production plant certifications will not be allowed in lieu of sealed plans from a licensed engineer and conventional inspection during construction.

N. Building sidings, treatments, and roofing are to be as specified. Precast buildings with painted textures are not considered architecturally equivalent.

O. The building supplier shall provide complete, code-compliant building plans including plans, elevations, sections, and details, under seal of a National Kitchen and Bathroom Association (NKBA) certified technical designer.

P. The building supplier shall provide complete structural calculations meeting code for design loads and seismic design under seal of a professional Engineer with current license in the state of California.

Q. The reviewing authority reserves the right to review or reject all submittals at its sole discretion.

R. All work and materials shall comply with current industry building codes and regulations for the state of California.

S. Americans with Disabilities Act Accessibility Guidelines (ADAAG) will be followed in design, manufacture, and construction.

1.3 DESIGN & SUBMITTAL DOCUMENTATION

A. The building supplier work shall include the design of the architectural, mechanical, structural, and electrical components that will be required for this building.

B. The building will be designed as a complete building package to be delivered to the job site for construction on-site by the contractor.

C. Within one (1) week of contract award, the building supplier shall submit the packaged building preliminary Scope of Supply and Design Submittal (SSDS), including the building plan view and elevation drawings.

D. The building supplier will provide complete submittal documentation in the building supplier's standard electronic submittal format for review.

E. The preliminary SSDS will be reviewed by relevant parties and returned to the building supplier with any required revisions to the terms, product data sheets, and/or building plan view and elevation drawings noted as comments.

F. The building supplier shall make any required corrections or revisions and resubmit the preliminary SSDS until the preliminary SSDS is approved by the relevant parties.

G. Once the preliminary SSDS has been approved, the building supplier will provide full sealed plan sets stamped by an engineer licensed in the state that the building is located for review by the permitting authority.

H. Up to three (3) wet stamped sets of the plans and structural calculations shall be provided by building supplier before any additional fees apply. Standard plan set size is 11" x 17".

I. Permitting authority will review the full sealed plan set and return with any required revisions or corrections noted as comments.

J. Building supplier shall provide one full round of sealed plan revisions in response to permitting authority comments before any additional fees are allowed.

K. The following sections shall be included in the building supplier's preliminary Scope of Supply and Design Submittal. Incomplete submittals will be rejected and returned to the bidder.

1. INTRODUCTION
2. BUILDING DESIGN,
   (a) SUPPLIED ITEMS
   (b) EXCLUDED ITEMS
   (c) PLAN VIEW AND ELEVATION DRAWINGS
3. PRODUCT DATA
4. WARRANTY & LIMITATIONS

Note: Overall site plan is not part of building supplier's scope.

1.4 WARRANTY

A. The building package and all associated components provided by building supplier shall be warranted against defects in materials and workmanship for a period of not less than one (1) year from the date of acceptance. Acceptance is the date of delivery of the building package, or, if delivery is delayed for any reason beyond building supplier's control, the date that the building and all its associated components were ready to deliver.

B. Building supplier shall pass through to owner all relevant manufacturers warranties for individual products and components of the building package.

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ROMTEC
18240 NORTH BANK ROAD
ROSEBURG, OR 97470
(541)-496-3541 FAX (541)-496-0803

PROJECT: TUNITAS CREEK BEACH - RANGER STATION
HALF MOON BAY, CALIFORNIA

SHEET TITLE: TITLE PAGE SPECIFICATIONS

PROJECT I.D.# 1932

DATE: 04/11/2023

DRAWN BY: JRM

SHEET NO. A2-1

SHEET 115 OF 124

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504 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.9850
fax: 415.883.9835
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R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT
		CHECKED BY: CSW/ST2 (JAH)	TITLE PAGE SPECIFICATIONS
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: NOT TO SCALE
DATE: 04/21/2023
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SHEET 1150F 124

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DATE: 04/21/2023

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DIRECTOR OF PUBLIC WORKS
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LEGEND		
SYMBOL	DESCRIPTION	AREA/ QUANTITY
	EXTERIOR WALL LIGHTS	4
	INTERIOR CEILING LIGHTS	4
⊖	ELECTRICAL OUTLET	6

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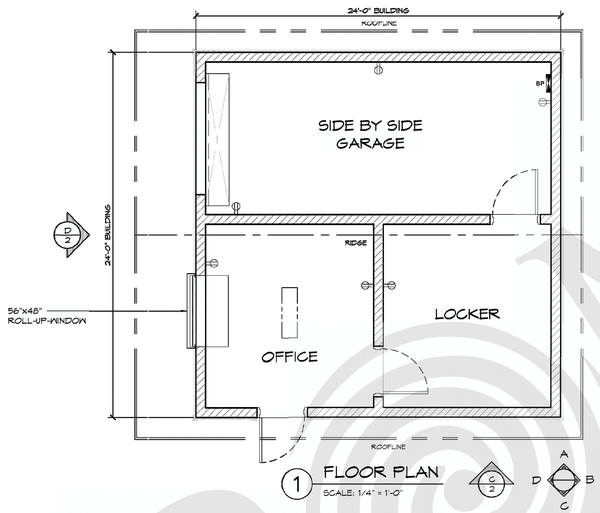
WALL TYPE SCHEDULE

8" REINFORCED CONCRETE MASONRY BLOCK WALL WITH MORTAR JOINTS, GROUTED SOLID ALL CELLS RUNNING BOND PATTERN.



SECTION 2: BUILDING PACKAGE PRODUCTS

2.1 APPROVED BUILDING SUPPLIERS

A. Romtec, Inc.,

18240 North Bank Road, Roseburg, OR 97470

Tel: 541-496-3541; Fax: 541-496-0803; Email: cdooley@romtec.com

Web: www.Romtec.com

B. Requests for use of an alternate building supplier will be considered in accordance with provisions of Section 1.

2.2 BUILDING DESCRIPTION

A. Refer to drawings for quantities, dimensions, locations, and installation methods for the materials and items described in this section.

B. Building dimensions shall match what is indicated on drawings.

2.3 ELECTRICAL

A. The following electrical fixtures shall be supplied by building supplier.

B. Light fixtures shall be supplied by building supplier.

1. Exterior wall mounted, Lithonia, vandal resistant LED light fixtures shall have a durable polycarbonate housing and high-impact polycarbonate refractor.
2. Exterior lights controlled by photocell.
3. Interior surface mount, 48" LED light fixtures.

C. Mechanical exhaust package with inline fans supplied by building supplier.

D. Main breaker panel shall be supplied by building supplier.

1. Breaker Panel shall be 100 Amp, single-phase, indoor.

Note: Breaker panel shall be sized to accept only the loads of the building supplier electrical fixture package. The building supplier should modify the main breaker panel as needed to be most efficient based on any design changes.

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ROMTEC
18240 NORTH BANK ROAD
ROSEBURG, OR 97470
(541)-496-3541 FAX (541)-496-0803

PROJECT: TUNITAS CREEK BEACH - RANGER STATION
HALF MOON BAY, CALIFORNIA

SHEET TITLE: FLOOR PLAN SPECIFICATIONS

PROJECT J.O.B. 1932

DATE: 04/11/2023

DRAWN BY: JRM

SHEET NO. A2-2A

SHEET 116 OF 124

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WWW.ROMTEC.COM

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Novato, CA 94947
tel: 415.883.9850
fax: 415.883.9835
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R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

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		CHECKED BY: CSW/ST2 (JAH)	FLOOR SPECIFICATIONS	DATE: 04/21/2023
		DRAWN BY: MTM	SAN MATEO COUNTY PARKS	FILE NO.: E4995
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	

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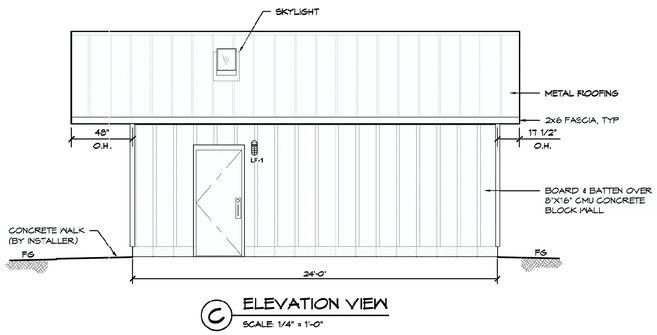

C ELEVATION VIEW

SCALE: 1/4" = 1'-0"

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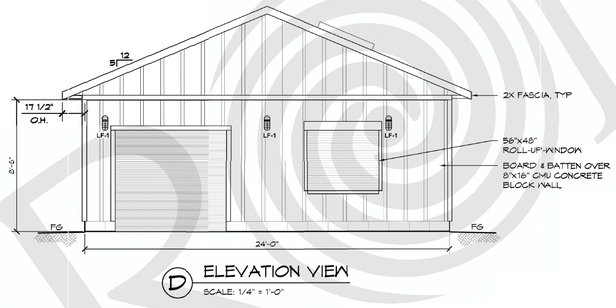

D ELEVATION VIEW

SCALE: 1/4" = 1'-0"

2.4 STRUCTURE

A. Concrete Masonry Units (CMU) shall be supplied by building supplier.

1. Walls shall be constructed of 8"W x 16"L x 8"H smooth-face mortar joint concrete masonry units (concrete blocks).
2. Blocks shall be manufactured to ASTM C90 designation for load bearing concrete masonry units.
3. Block color to be Gray.

B. Exterior finish in gable ends shall be fiber cement board and batten siding supplied by building supplier.

C. Stainless steel, roll-up window with stainless steel counter supplied by building supplier.

D. Overhead, 620 series roll-up utility door supplied by building supplier.

E. Door system components shall be supplied by building supplier.

1. Doors shall be Steelcraft® SL18 standard laminated honeycomb core and 18-gauge galvanized steel.
2. Door frame shall be pre-welded Steelcraft® 3-Sided flush frame, 16-gauge galvannealed A-60 steel.
3. Doors and frames to be powder coated with undercoating (color to be selected by owner).
4. Masonry door clips (3/16" dia.) for door frame shall be fitted between the doorframe and concrete blocks to bond frame to wall. Door clips allow full internal grouting of the frame during installation.
5. Hinges shall meet ANSI A5112 with non-removable pin and two ball bearings.
6. Hager 5100 Series Grade 1 door closer is constructed of cast iron, which makes it ideal for heavy duty, high use and abusive environments.
7. Doors to have pull handles with stainless steel plates and deadbolt locks.

2.5 ROOFING

A. The following roof components shall be supplied by building supplier.

1. Pre-engineered wood truss roof system.
2. Deck mount, skylights.

B. Roofing shall be Fabral, 26-gauge, Horizon 16, standing seam panels, with 16 in. coverage width.

1. Roofing package shall include inside and outside foam closures, matching trim (eaves, gables, and ridge) and fasteners, sheet metal flashing (all sides), and 30# felt (under metal).
2. Roofing color to be selected by the owner from the manufacturers standard color chart.

2.6 DELIVERY, STORAGE, AND HANDLING

A. The building supplier freight shall be based on delivering the product on a 48' to 53' flatbed or van truck and trailers, or as close to those dimensions as can legally access the site. Overall dimensions of the truck and trailers allowed to access the site are: 70' overall length, 102" wide and 168" high.

B. Building supplier shall deliver organized building package components in stages as shrink-wrapped pallets that correspond to a typical sequence of construction. A bill of material stating the stages of palletized components shall be included with every delivery.

1. Stage 1 pallets shall include structural components such as block, frames, vents, beams, connectors, trusses, etc.
2. Stage 2 pallets shall include second stage structural components such as filler wall material, windows, skylights, roofing, etc.
3. Stage 3 pallets shall include structural finish components such as siding material, tile, doors etc.
4. Stage 4 pallets shall include plumbing and electrical fixtures and other finish materials such as toilets, sinks, drinking fountains, electrical fixtures, accessories, etc.

REV	DATE	BY	DESCRIPTION

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ROMTEC
18240 NORTH BANK ROAD
ROSEBURG, OR 97470
(541)-496-3541 FAX (541)-496-0803

PROJECT: TUNITAS CREEK BEACH - RANGER STATION
HALF MOON BAY, CALIFORNIA

SHEET TITLE: ELEVATIONS SPECIFICATIONS

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Civil & Structural Engineers | Surveying & Mapping | Environmental Planning
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504 Redwood Blvd, Suite 310 tel: 415.883.9850
Novato, CA 94947 fax: 415.883.9835
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ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

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		DRAWN BY: MTM	SAN MATEO COUNTY PARKS
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

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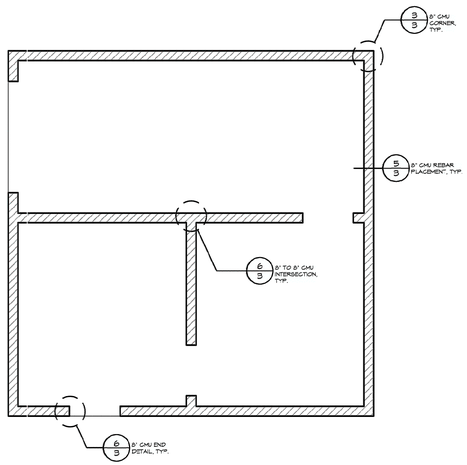
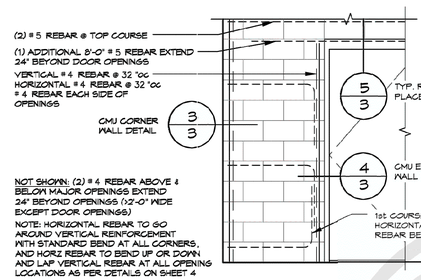
ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



A STRUCTURAL CMU PLAN
SCALE: 1/4" = 1'-0"



NOT SHOWN: (2) # 4 REBAR ABOVE & BELOW MAJOR OPENINGS EXTEND 24" BEYOND OPENINGS (>2'-0" WIDE EXCEPT DOOR OPENINGS)

NOTE: HORIZONTAL REBAR TO GO AROUND VERTICAL REINFORCEMENT WITH STANDARD BEND AT ALL CORNERS, AND HORZ REBAR TO BEND UP OR DOWN AND LAP VERTICAL REBAR AT ALL OPENING LOCATIONS AS PER DETAILS ON SHEET 4

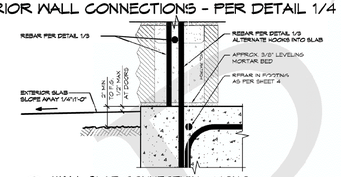
1 CMU REBAR LAYOUT DETAIL
SCALE: 1" = 1'-0"

CMU REBAR SCHEDULE		
REBAR	MIN. LAP	BEND DIAMETER
#4	24"	3" MIN.
#5	30"	3-3/4" MIN.

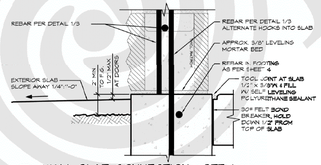
CMU REBAR NOTES:
- BENDS: MIN. INSIDE BEND DIAMETER SHALL BE NOT LESS THAN 6d AS PER TMS 402-16 SECTION 6.1.5.2
- SPLICES: LAP SPLICES ARE PERMITTED AS PER TMS 402-16 SECTION 6.1.6.1.1

PIPES INSTALLED THROUGH CMU WALL NOTES:
- SUPPLY: THE FIXTURE SUPPLY LINE SHOULD BE BORED A 1/2" LARGER THAN REQUIRED LINE SIZE AND THE PORTION OF PIPE LOCATED IN CMU WALL SHALL BE WRAPPED WITH 10MIL BLACK TAPE
- WASTE PIPE: THE FIXTURE WASTE LINE SHOULD BE BORED A 1/2" LARGER THAN REQUIRED LINE SIZE.

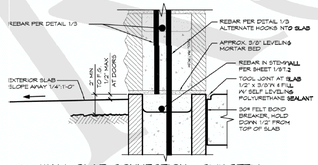
EXTERIOR WALL CONNECTIONS - PER DETAIL 1/4



2A WALL-SLAB CONNECTION - MONO
SCALE: 3" = 1'-0"



2B WALL-SLAB CONNECTION - STEM
SCALE: 3" = 1'-0"



2C WALL-SLAB CONNECTION - CMU STEM
SCALE: 3" = 1'-0"

SECTION 3: BUILDING INSTALLER SCOPE

The installing contractor or subcontractor, hereafter designated as the building installer, is responsible for building package installation. Building installer work will generally include foundation/pad construction and building package assembly/construction.

Note: Building supplier's scope is separate from the building installer's scope. Romtec, Inc., is the approved building supplier, not a designated building installer.

3.1 CONSTRUCTION SUBMITTALS

A. If required by owner and/or reviewing authority, building installer shall submit product data sheets and relevant information about the specified building installer supplied products below for review and approval.

3.2 WARRANTY

A. Building installer's work shall be warranted against defects in materials and workmanship for a period of not less than one (1) year from the date of acceptance. Acceptance is the date that installation work for the building package is completed, including any relevant final punch list. In the event that final acceptance of the completed building is delayed for reasons beyond building installer's control, the warranty shall be one (1) year from the completion of building installer's installation work and demobilization.

B. Building installer shall pass through to owner all relevant manufacturers warranties for individual products and components supplied by building installer.

3.3 STRUCTURE

A. Masonry (concrete) grout shall be supplied and installed by building installer.
1. Grout shall have a minimum compressive strength of 2,500 psi at 28 days, 9+/-1" slump, with max ½" aggregate.
2. Fine or coarse grout may be used in accordance with 2009 UBC.
3. All CMU block must be fully grouted and may not be wetted.

Note: If required for installation, building installer will be responsible for providing appropriate equipment and labor for notching CMU block for bond beams, cutting CMU block to make any required shapes, and/or grinding CMU block for fixture mounting.

B. Rebar for walls shall be supplied and installed by building installer.
1. All walls shall have # 4 and # 5 rebar. See final approved plans for spacing.
2. All rebar used in the building must meet ASTM A615 manufacturing standards and is to be placed per the final approved plans.

C. Interior block wall finish shall be latex epoxy paint supplied and installed by building installer.

D. Ceiling finish shall be supplied and installed by building installer per the final approved plans.

E. Interior floors to be sealed concrete finish supplied by building installer.

F. Sealant for all exposed wood shall be supplied and installed by building installer.

G. Sealant for all exterior CMU block is required, to be supplied and installed by building installer.

H. Fiber cement siding is primed to be painted on-site by building installer.

3.4 ELECTRICAL

A. Electrical rough-in, installation and trim shall be provided by building installer.
1. All underground and/or overhead service to building shall be as specified in the final site plan.
2. Building installer is responsible for all necessary wire, connectors, grounding, conduit, and related items to install the building package electrical components and meet all relevant national, state, and local codes.
3. Building installer shall supply and install all switches and outlets required to complete the building package installation.

SECTION 4: CONTRACTOR SCOPE ITEMS

The items in this section may be provided by the same building installer as defined in Section 3 above (typically when a single entity is acting as both the building installer and contractor), or the items in this section may be provided by a separate entity such as a general contractor or site contractor, hereafter designated as contractor (typically when the building installer is a separate subcontractor). Contractor work will generally include site preparation and grading, excavations for structures, backfill and/or structural backfill, and any site or utility work outside the building package footprint.

Items in this section are generally to be completed prior to building installer beginning its installation work described in Section 3 above.

4.1 CONSTRUCTION SUBMITTALS

A. If required by owner and/or reviewing authority, contractor shall submit product data sheets and relevant information about the specified contractor supplied products below for review and approval.

4.2 WARRANTY

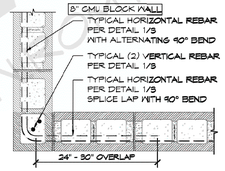
A. Contractor's work shall be warranted against defects in materials and workmanship for a period of not less than one (1) year from the date of acceptance. Acceptance is the date that installation work for the building package is completed, including any relevant final punch list. In the event that final acceptance of the completed building is delayed for reasons beyond contractor's control, the warranty shall be one (1) year from the completion of contractor's installation work and demobilization.

B. Contractor shall pass through to owner all relevant manufacturers warranties for individual products and components supplied by contractor.

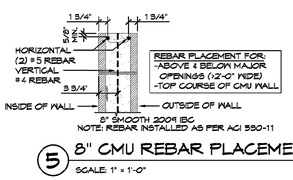
4.3 ELECTRICAL

A. Incoming electrical utility lines to within approximately 10' of the building shall be provided by contractor.
1. All underground and/or overhead service to building shall be as specified in the final site plan.
2. Electric meter base and all rough wiring, switches, plugs and circuit breakers shall be as shown on final plans.

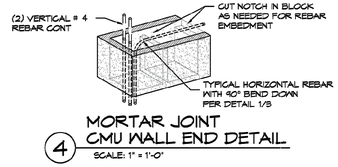
B. Contractor supplies and installs the meter base and meter.



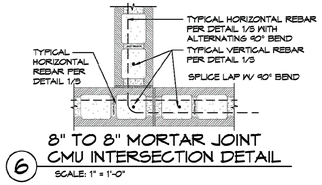
3 MORTAR JOINT CMU CORNER DETAIL
SCALE: 1" = 1'-0"



5 8" CMU REBAR PLACEMENT
SCALE: 1" = 1'-0"



4 MORTAR JOINT CMU WALL END DETAIL
SCALE: 1" = 1'-0"



6 8" TO 8" MORTAR JOINT CMU INTERSECTION DETAIL
SCALE: 1" = 1'-0"

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DESCRIPTION	BY	DATE	REV

NOT FOR CONSTRUCTION

ROMTEC
18240 NORTH BANK ROAD
ROSEBURG, OR 97470
(541)-496-3541 FAX (541)-496-0803

PROJECT: TUNITAS CREEK BEACH - RANGER STATION
HALF MOON BAY, CALIFORNIA

SHEET TITLE: STRUCTURAL CMU PLAN & DETAILS SPECIFICATIONS

PROJECT I.D.# 1932

DATE: 04/11/2023

DRAWN BY: JRM

SHEET NO. A2-3

SHEET 118 OF 124

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\Romtec Ranger Sheet.dwg 04/27/2023 - 11:12 AM BRBR 13.5602

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CSW/Stuber-Stroh Engineering Group, Inc.
Civil & Structural Engineers | Surveying & Mapping | Environmental Planning
Land Planning | Construction Management
504 Redwood Blvd, Suite 310
Novato, CA 94947
http://www.csw2.com
tel: 415.883.9850
fax: 415.883.9835
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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE	DESIGNED BY: CSW/ST2 (BRB)	CHECKED BY: CSW/ST2 (JAH)	DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
STRUCTURAL CMU PLAN AND DETAIL SPECIFICATIONS
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: NOT TO SCALE
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

A2-3
SHEET 118 OF 124

APPROVED:

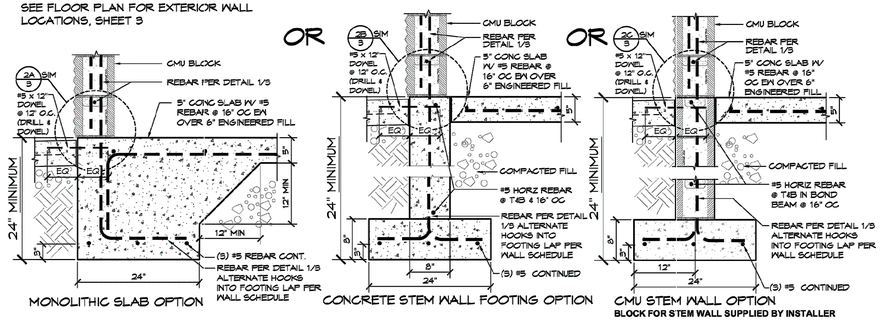
REGISTERED PROFESSIONAL ENGINEER — ANN MADER STILLMAN — C 47882 — EXPIRES 12/31/23 — CIVIL — STATE OF CALIFORNIA

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

EXTERIOR WALL FOUNDATIONS - CHOOSE ONE OF THE FOLLOWING

SEE FLOOR PLAN FOR EXTERIOR WALL LOCATIONS, SHEET 3



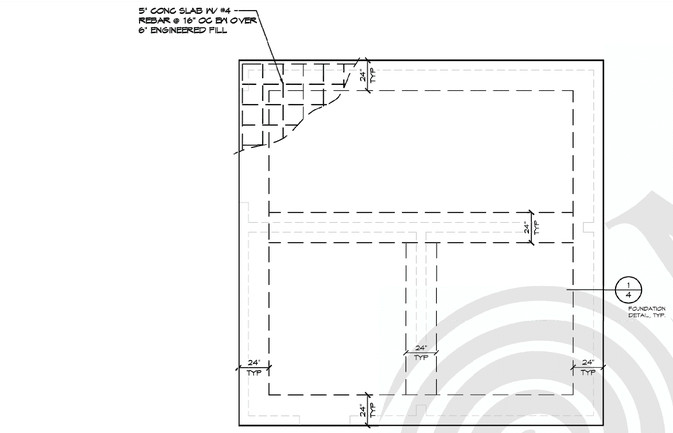
MONOLITHIC SLAB OPTION — CONCRETE STEM WALL FOOTING OPTION — CMU STEM WALL OPTION
BLOCK FOR STEM WALL SUPPLIED BY INSTALLER

1 EXTERIOR WALL FOUNDATION DETAIL OPTIONS

SCALE: 1" = 1'-0"

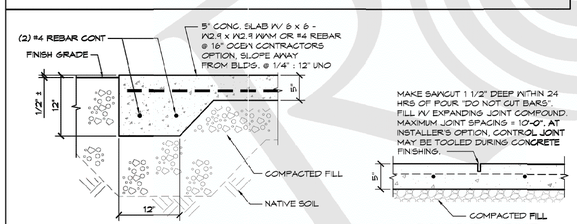
GENERAL NOTES:
* WHEN USING EITHER STEM WALL OPTION, RECESS STEM WALL THE THICKNESS OF SLAB AT DOOR THRESHOLD
* PRIVACY WALLS TO HAVE A 30" WIDE x 12" DEEP FOOTING, IF APPLICABLE
* CMU STEM WALL OPTION, CMU BLOCK IS BY INSTALLER
* VERTICAL REBAR IN SLAB/STEM WALL TO MATCH VERTICAL WALL REINFORCEMENT LAP PER WALL SCHEDULE

FOUNDATION DESIGN SHOWN HERE IS PRELIMINARY AND SUBJECT TO CHANGE. FINAL FOUNDATION DESIGN TO BE DETERMINED DURING THE FORTHCOMING FULL DESIGN PHASE FOR THE BUILDING. ANY INCREASED COSTS OR TIME NEEDED TO CONSTRUCT THE FINAL FOUNDATION DESIGN IS BETWEEN THE END OWNER AND THE BUILDING INSTALLER



A FOUNDATION PLAN

SCALE: 1/4" = 1'-0"



2 EDGE OF CONC. WALKWAY

SCALE: 1" = 1'-0"

3 SAWCUT JOINT

SCALE: 1" = 1'-0"

3.5 CAST IN-PLACE CONCRETE FOR BUILDING PACKAGE

A. All equipment, labor, trades, and materials for cast-in-place concrete shall be provided by building installer.
   1. Includes all materials and labor for building package foundations/footings and interior slabs.

B. Footings for the building package are to be dug by the building installer and poured on-site to meet local code for permanent structures. A prefabricated, modular mat placed on compacted base is not an accepted equal to a site specific, site poured, engineered foundation.

C. Engineered fill shall be ¾" minus crushed aggregate around footings, foundations, and slabs, or as required in the final approved plans.

D. Slab vapor barrier shall be 6-mil continuous plastic under the concrete slab, or as required in the final approved plans.

E. The foundation shall be installed as designed with all cast in-place concrete poured to dimensions specified, or as required in the final plans.
   1. Footings will be built to minimum 24" depth or greater if required by local frost depth or permitting authority.
   2. Minimum compressive strength of foundation concrete shall be 3,000 psi at 28 days, 4" +/-1" slump, with max ¾" aggregate, cured in accordance with ACI 308, or as required in approved final plans.
   3. Slabs shall have a fine broom finish with joints required in flat work as shown on plans.
   4. Steel rebar shall be installed as specified in final plans.

F. Building installer shall supply and install concrete slab sealer.
   1. Concrete slab sealer shall be a water-based, transparent curing, sealing and dust proofing compound with two (2) coats to be applied per manufacturer's instructions.

3.6 OTHER MATERIALS & EQUIPMENT

A. Unless otherwise specified, the following products and materials are supplied by building installer (if applicable).
   1. Building package installation
   2. Cast-in-place concrete foundations, footings, interior slabs
   3. Concrete slab & block sealer
   4. Mortar
   5. Concrete grout
   6. Rebar
   7. Latex epoxy paint
   8. Caulk for siding
   9. Plumbing rough in, installation and trim
   10. Electrical rough in, installation and trim
   11. Switches & outlets
   12. Typical fasteners; for example: roofing nails, staples, etc.
   13. Fasteners not included in product packaging
   14. Wood sealant for all decking, glulam beams, posts, and extensions
   15. All other items within the building footprint indicated on final plans or required by building codes to complete installation of the building package which are not specifically stated as supplied by building supplier.

3.7 DELIVERY, STORAGE, AND HANDLING

A. The building installer will be responsible for all equipment and labor required for off-loading of the delivered building package onsite.

B. The building installer will assume responsibility for adequate protection and maintenance of delivered building package materials from weather, damage, and pilferage during installation work. Any failure to adequately protect building package materials that affects the warranty of those materials will be at building installer's expense.

C. Building installer shall collect and maintain for final delivery to owner any operation & maintenance manuals included by individual product manufacturers with their respective product packaging. Any failure to collect, maintain, and/or deliver these O&M manuals to the owner that results in fees from building supplier for additional copies shall be at building installer's expense.

4.4 CAST IN-PLACE CONCRETE FOR BUILDING EXTERIOR

A. All equipment, labor, trades, and materials shall be supplied by contractor.
   1. Includes all materials and labor for exterior/entry slabs and sidewalks.

B. Refer to drawings for sidewalks and entry slabs.
   1. Minimum concrete compressive strength of 2,500 psi at 28 days, or as required in final approved plans.
   2. Remesh or rebar reinforcement shall be used in sidewalks.
   3. All sidewalks shall be finished with a fine broom with control joints installed per the final approved site plan.

4.5 OTHER MATERIALS & EQUIPMENT

A. Unless otherwise specified, the following products and materials are supplied by contractor.
   1. All items not specifically listed as supplied by building supplier or building installer.
   2. Any item listed as supplied by "contractor" or "others".

B. Unless specified in the plans or submittals, contractor supplies the following items (if applicable):
   1. Incoming electrical, water, sewer, and gas utilities.
   2. Asphalt paving
   3. Masonry pavers
   4. Sidewalks
   5. Landscaping
   6. Site grading
   7. Exterior/entry slabs
   8. Drain valves and backflow check valves
   9. Branch circuit breakers
   10. Irrigation Equipment
   11. Gutters and downspouts
   12. Fire alarm and fire suppression equipment
   13. Lighting equipment not attached to the building.
   14. All other items exterior of the building footprint indicated on final plans or required by building codes which are not specifically stated as supplied by building supplier or building installer.

4.6 DELIVERY, STORAGE, AND HANDLING

A. The contractor will assume responsibility for adequate protection and maintenance of the installed building package materials after completion of installation work by building installer. Any failure to adequately protect building package materials that affects the warranty of those materials will be at contractor's expense.

SECTION 5: OWNER'S SCOPE

5.1 ONGOING MAINTENANCE

A. Owner is responsible for ongoing maintenance of the completed restroom building after completion of work by building installer and contractor.

5.2 SITE PLAN

A. Owner (or owner's site engineer) is responsible for providing the final approved site plan to building supplier and/or building installer.

5.3 SPECIAL INSPECTION

A. If required, special inspection(s) services shall be provided by owner.

B. If special inspection(s) are required by the permitting authority or relevant agency(ies), then the building supplier, building installer, and/or contractor shall provide reasonable assistance to the owner to accommodate the special inspection(s).

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REV	DATE	BY	DESCRIPTION

NOT FOR CONSTRUCTION

ROMTEC
18240 NORTH BANK ROAD
ROSEBURG, OR 97470
(541)-496-3541 FAX (541)-496-0803

PROJECT: TUNITAS CREEK BEACH - RANGER STATION
HALF MOON BAY, CALIFORNIA

SHEET TITLE: FOUNDATION PLAN & DETAILS SPECIFICATIONS

PROJECT J.O.B. 1932
DATE: 04/11/2023
DRAWN BY: JRM
SHEET NO. A2-4

SHEET 119 OF 124

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CSW/Stuber-Stroeh Engineering Group, Inc.
Civil & Structural Engineers | Surveying & Mapping | Environmental Planning
Land Planning | Construction Management
504 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.9850
fax: 415.883.9835
http://www.csw2.com
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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER — ROBERT C. STEVENS — No. C 058660 — CIVIL — STATE OF CALIFORNIA

COUNTY OF SAN MATEO — PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT FOUNDATION PLAN & DETAIL SPECIFICATIONS SAN MATEO COUNTY PARKS
		CHECKED BY: CSW/ST2 (JAH)	
		DRAWN BY: MTM	
			ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO
			555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: NOT TO SCALE
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

A2-4
SHEET 1190F 124

APPROVED:

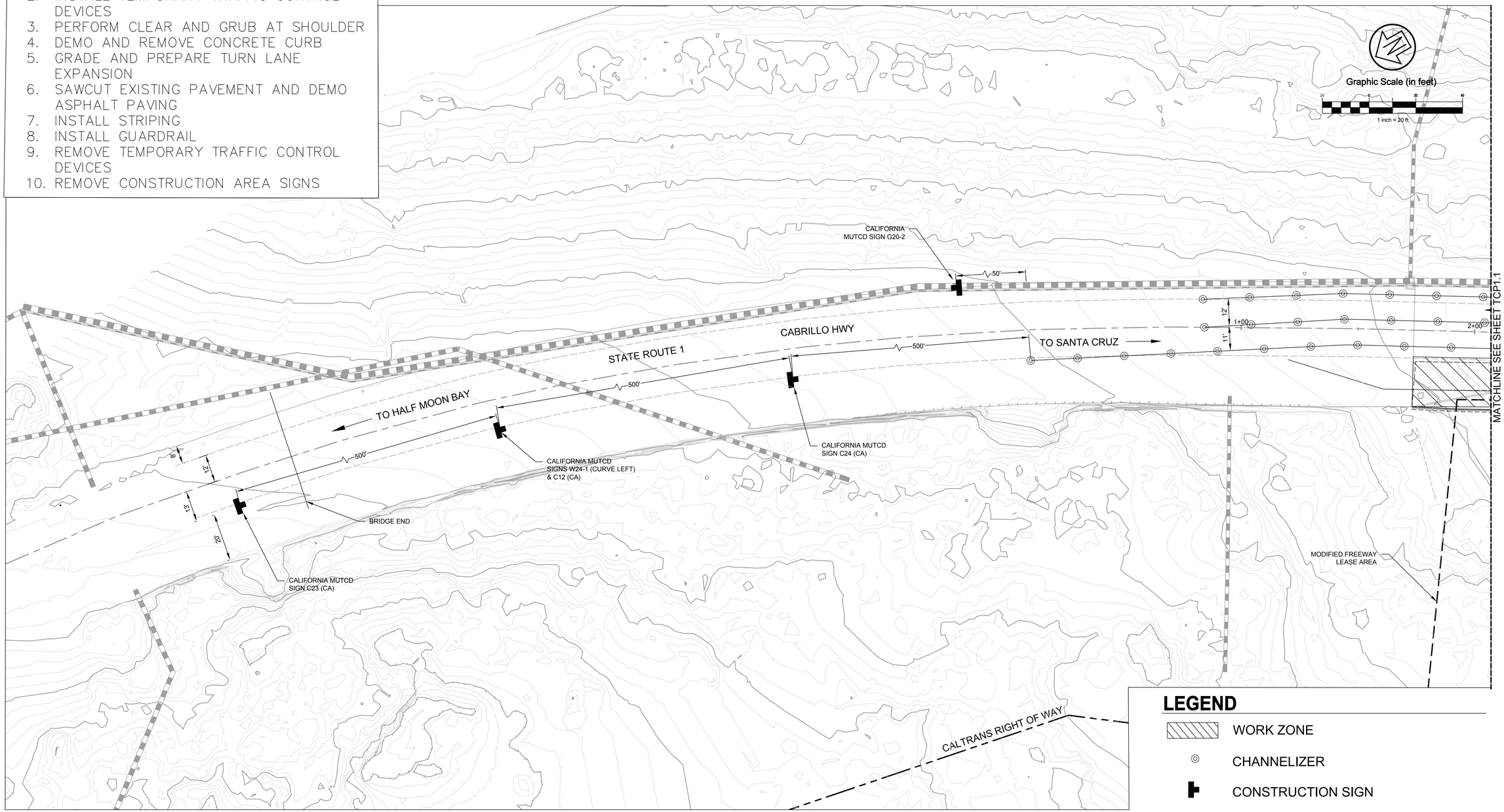
REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

CONSTRUCTION TO BE PERFORMED:

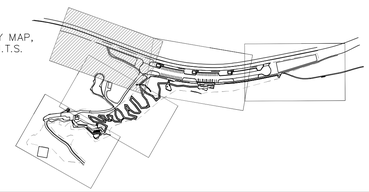
1. INSTALL CONSTRUCTION AREA SIGNS
2. INSTALL TEMPORARY TRAFFIC CONTROL DEVICES
3. PERFORM CLEAR AND GRUB AT SHOULDER
4. DEMO AND REMOVE CONCRETE CURB
5. GRADE AND PREPARE TURN LANE EXPANSION
6. SAWCUT EXISTING PAVEMENT AND DEMO ASPHALT PAVING
7. INSTALL STRIPING
8. INSTALL GUARDRAIL
9. REMOVE TEMPORARY TRAFFIC CONTROL DEVICES
10. REMOVE CONSTRUCTION AREA SIGNS



LEGEND

- WORK ZONE
- CHANNELIZER
- CONSTRUCTION SIGN

KEY MAP, N.T.S.



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CSW/Stuber-Stroeh Engineering Group, Inc.
Civil & Structural Engineers | Surveying & Mapping | Environmental Planning
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504 Redwood Blvd, Suite 310
Novato, CA 94947
http://www.cswst2.com
tel: 415.883.9850
fax: 415.883.9835

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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT TRAFFIC CONTROL PLAN ENLARGEMENT - APPROACH SAN MATEO COUNTY PARKS
		CHECKED BY: CSW/ST2 (JAH)	
		DRAWN BY: MTM	
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

TCP1.0
SHEET 12 OF 124

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APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
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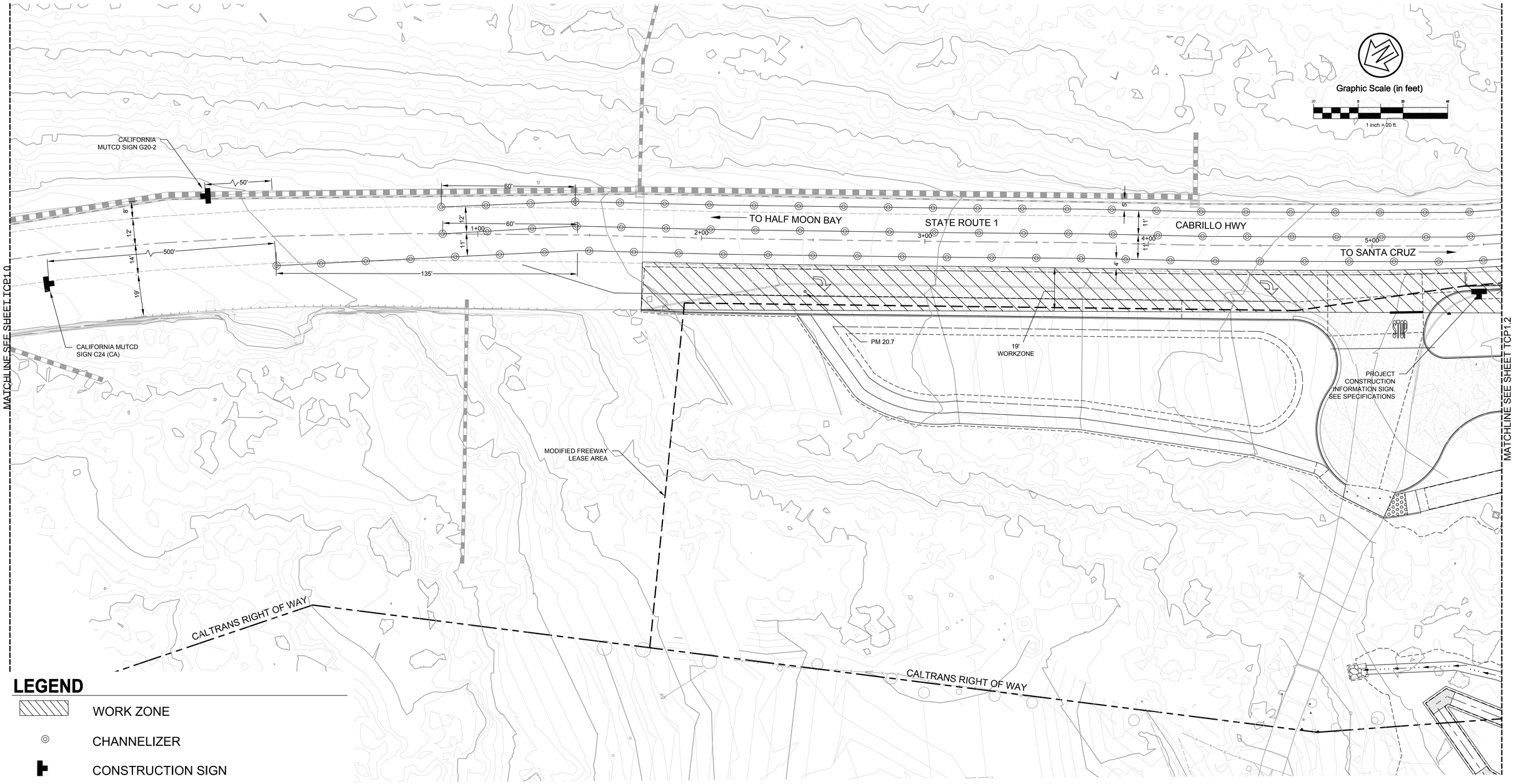
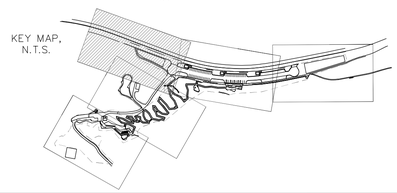
STATE OF CALIFORNIA



LEGEND

- WORK ZONE
- CHANNELIZER
- CONSTRUCTION SIGN

KEY MAP, N.T.S.



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Civil & Structural Engineers | Surveying & Mapping | Environmental Planning
Land Planning | Construction Management
504 Redwood Blvd, Suite 310
Novato, CA 94947
tel: 415.883.9850
fax: 415.883.9835
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APPROVED DATE:

ROBERT C. STEVENS, P.E.
R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT TRAFFIC CONTROL PLAN ENLARGEMENT - APPROACH SAN MATEO COUNTY PARKS
		CHECKED BY: CSW/ST2 (JAH)	
		DRAWN BY: MTM	
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

TCP1.1
SHEET 121 OF 124

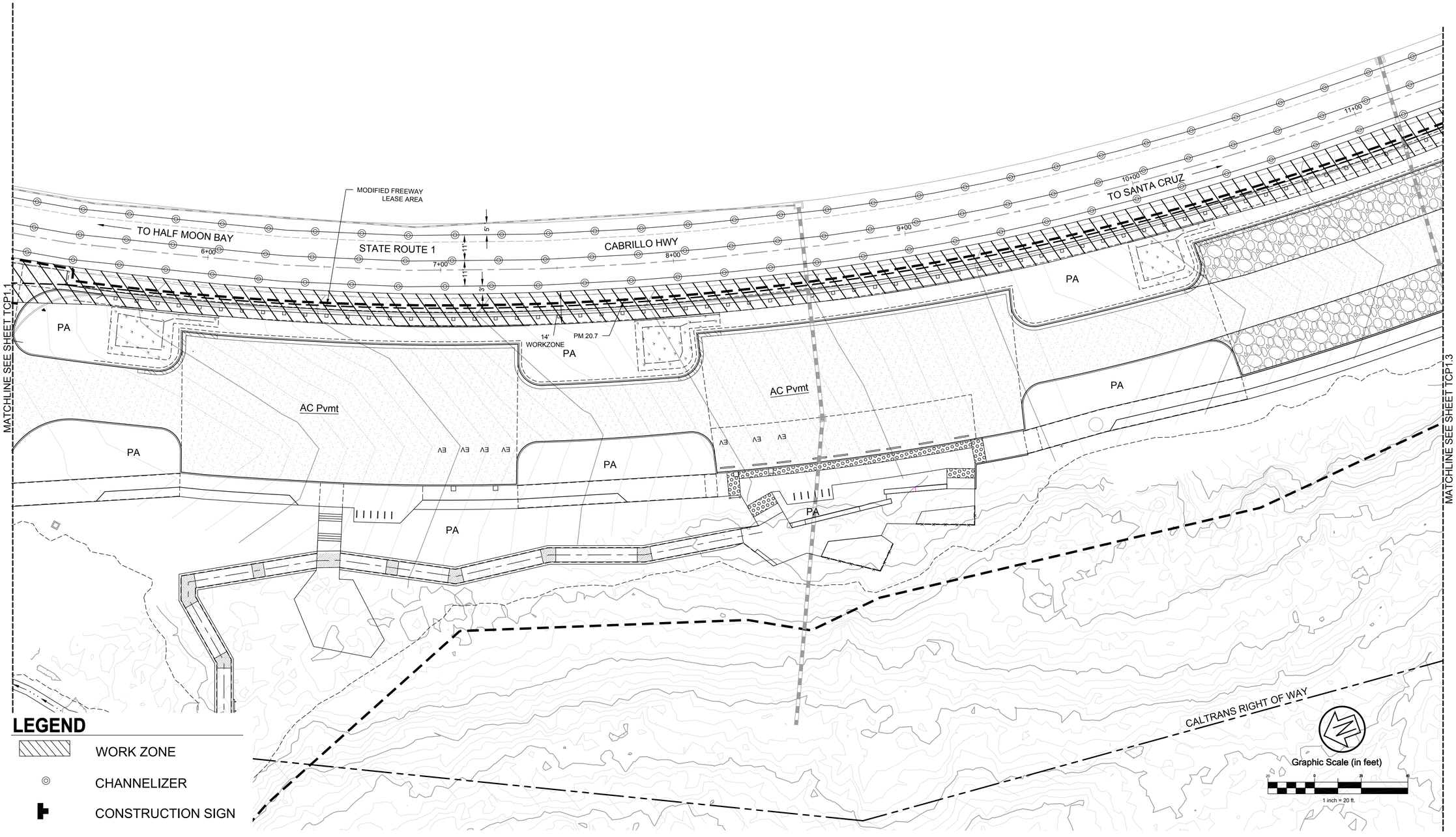
P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvement\DWG\Sheets\Caltrans\TCP1.0-1.1 - Traffic Control Plan - Approach.dwg 04/20/2023 - 08:39 PM BRBR 13.5602

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

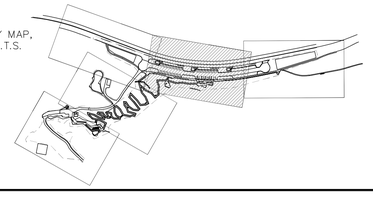
REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA



LEGEND

- WORK ZONE
- CHANNELIZER
- CONSTRUCTION SIGN

KEY MAP, N.T.S.



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REGISTERED PROFESSIONAL ENGINEER
ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
TRAFFIC CONTROL PLAN ENLARGEMENT
- PARKING LOT
SAN MATEO COUNTY PARKS

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

TCP1.2
SHEET 12 2OF 124

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\Caltrans\TCP1.2 - Traffic Control Plan - Parking Lot.dwg 04/26/2023 - 08:39 PM BRBBR 1:1

APPROVED:

DATE: 04/21/2023

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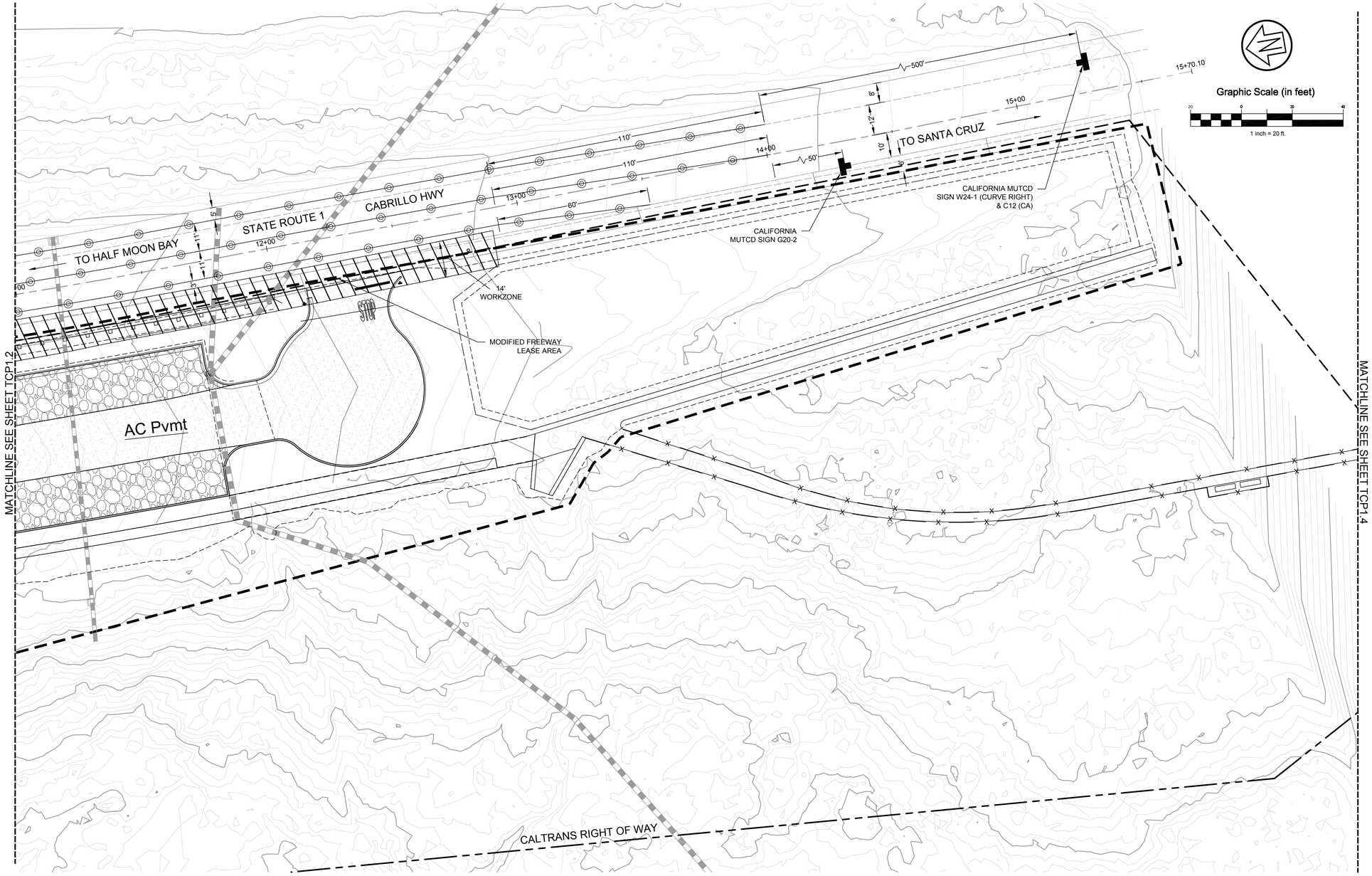
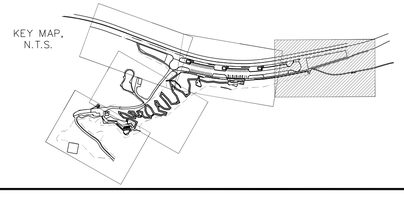
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023



LEGEND

- WORK ZONE
- CHANNELIZER
- CONSTRUCTION SIGN

KEY MAP, N.T.S.



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fax: 415.883.9835
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R.C.E. # 058660 EXPIRES 12/31/2024

REGISTERED PROFESSIONAL ENGINEER ROBERT C. STEVENS No. C 058660 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CSW/ST2 (BRB)
CHECKED BY: CSW/ST2 (JAH)
DRAWN BY: MTM

TUNITAS CREEK BEACH IMPROVEMENT PROJECT
TRAFFIC CONTROL PLAN ENLARGEMENT - EXIT
SAN MATEO COUNTY PARKS

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

TCP1.3
SHEET1230F 124

P:\Shared\Projects\Legacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\Caltrans\TCP1.3 - Traffic Control Plan - Exit.dwg 04/26/2023 - 08:39 PM BRIBR 1:1

APPROVED:

DATE: 04/21/2023

ANN MADER STILLMAN,
DIRECTOR OF PUBLIC WORKS
R. C. E. # 47882 / EXPIRES 12-31-2023

REGISTERED PROFESSIONAL ENGINEER
ANN MADER STILLMAN
C 47882
EXPIRES 12/31/23
CIVIL
STATE OF CALIFORNIA

Graphic Scale (in feet)

20 0 20 40

1 inch = 20 ft.

MATCHLINE SEE SHEET TCP1.3

14+00

15+00

15+70.10

500'

50'

CALIFORNIA MUTCD SIGN G20-2

CALIFORNIA MUTCD SIGN W24-1 (CURVE RIGHT) & C12 (CA)

TO HALF MOON BAY

STATE ROUTE 1

CALIFORNIA MUTCD SIGN W3-5A & C40A (CA)

CALIFORNIA MUTCD SIGN C23 (CA)

CABRILLO HWY

TO SANTA CRUZ

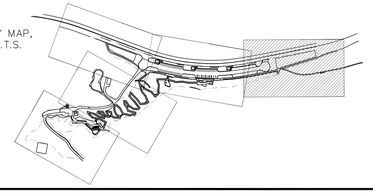
MODIFIED FREEWAY LEASE AREA

CALTRANS RIGHT OF WAY

LEGEND

- WORK ZONE
- CHANNELIZER
- CONSTRUCTION SIGN

KEY MAP, N.T.S.



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ROBERT C. STEVENS
No. C 058660
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CSW/ST2 (BRB)	TUNITAS CREEK BEACH IMPROVEMENT PROJECT TRAFFIC CONTROL PLAN ENLARGEMENT - LOOP TRAIL SAN MATEO COUNTY PARKS
		CHECKED BY: CSW/ST2 (JAH)	
		DRAWN BY: MTM	
		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1" = 20'
DATE: 04/21/2023
FILE NO.: E4995

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

TCP1.4
SHEET 124 OF 124

P:\Shared\Projects\.egacy\Novato\Projects\2019-20-006 Tunitas Creek Beach Improvements\DWG\Sheets\Caltrans\TCP1.4 - Traffic Control Plan - Ex4.dwg 04/26/2023 - 08:40 PM BRIER 1:1