

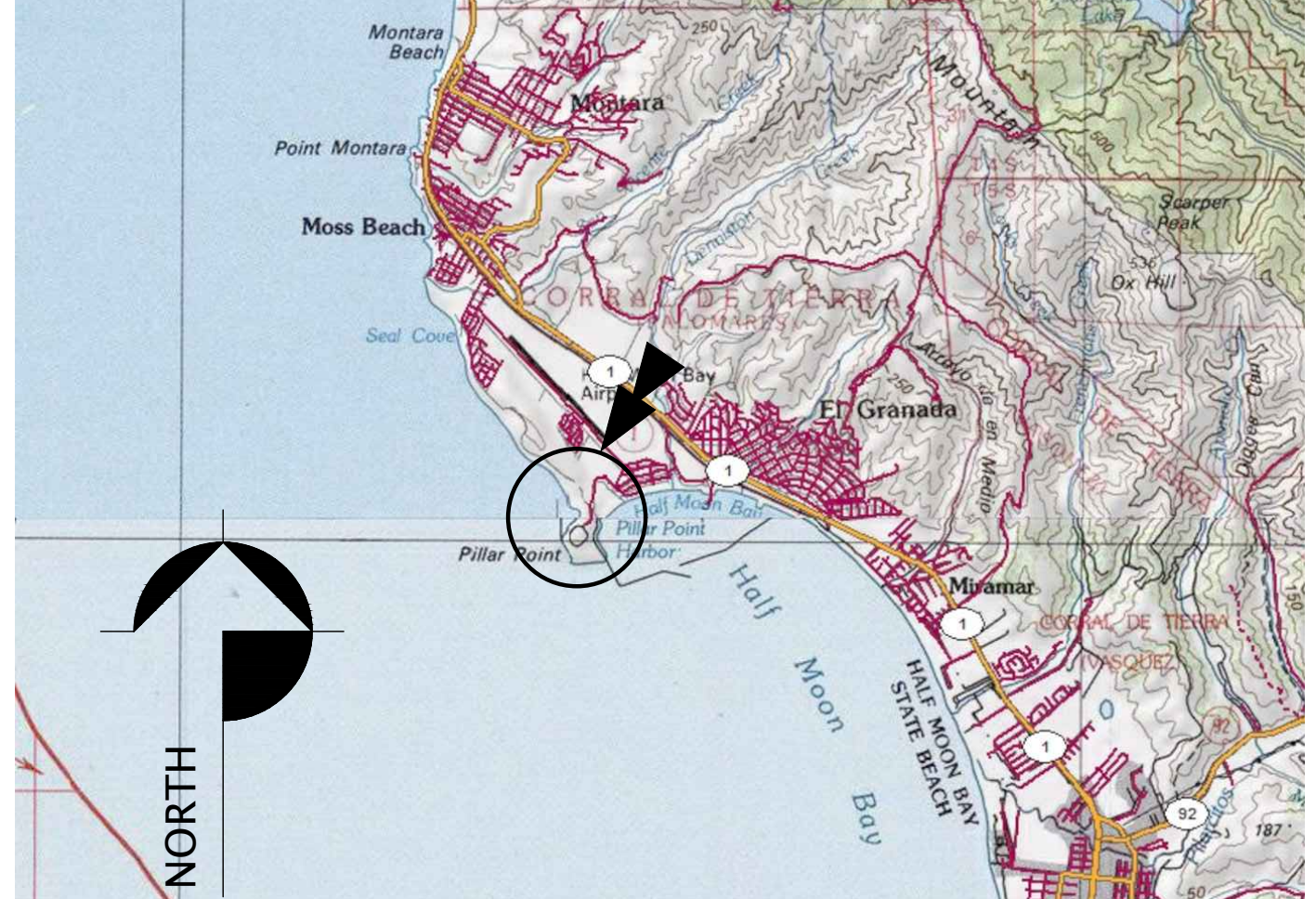
A I B I C I D I E I F I G I H I I I J I K I L I M I N I O I P

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PILLAR POINT AIR FORCE STATION BLUFF AND HILLSIDE RESTORATION HALF MOON BAY, CA



SITE VICINITY MAP
NTS



SITE LOCATION MAP
NTS

GENERAL NOTES

1. THE PURPOSE OF THIS PROJECT IS TO REDUCE EROSION, MINIMIZE SEDIMENT TRANSPORT TO NEARBY WATERWAYS, RESTORE NATURAL DRAINAGE PATTERNS, AND ALLEVIATE NEGATIVE ENVIRONMENTAL IMPACTS TO THE PILLAR POINT HEADLAND THROUGH THE RESTORATION OF SEVERAL AREAS OF EROSION AND BARE SOIL. THESE AREAS WILL BE MINIMIZED AND RESTORED WITH NATIVE PLANTINGS AND SEED AS WELL AS EROSION CONTROL MATERIALS SUCH AS EROSION CONTROL BLANKETS AND FIBER ROLLS. IN SOME CASES DRAINAGE IMPROVEMENTS WILL BE MADE USING GRADE REVERSALS AND ROLLING DIPS TO PREVENT STORMWATER RUNOFF FROM CONCENTRATING AND CREATING ADDITIONAL EROSION.

THE SPECIFIC GOALS OF THE PROJECT INCLUDE THE FOLLOWING:
 • PROPERLY FILL AND ELIMINATE EXISTING GULLIES AND EXISTING AREAS OF EROSION;
 • RE-ESTABLISH THE NATURAL TOPOGRAPHY AND POSITIVE DRAINAGE WITHIN HIGHLY ERODED COASTAL BLUFF AREAS;
 • RESTORE DISTURBED AREAS AND GULLIES TO COASTAL PRAIRIE AND COASTAL SCRUB VEGETATION;

2. ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE LATEST SAFETY RULES AND REGULATIONS OF ALL AUTHORITIES AND AGENCIES HAVING JURISDICTION OVER THE WORK.

SURVEY NOTES

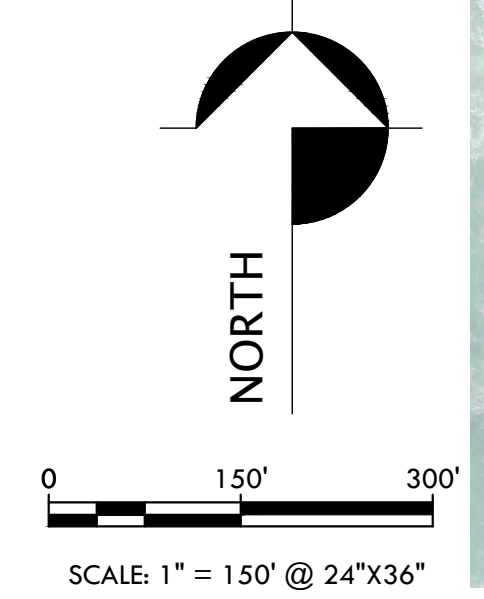
- SITE TOPOGRAPHIC CONTOURS ARE EXTRACTED FROM SAN MATEO COUNTY 2006 LIDAR.
- THE INTERVAL FOR THE LIDAR CONTOURS IS 10 FOOT.
- PROPERTY BOUNDARY FROM VANDENBERG AFB GEOBASE OFFICE
- AERIAL IMAGERY PROVIDED BY GOOGLE EARTH PRO

LEGEND

	EXISTING CONTOURS
	PROPERTY BOUNDARY
	(E) FENCELINE AROUND AIR FORCE STATION
	(E) AREA OF EROSION
	(E) PAVEMENT
	(E) BUILDING
	(E) EXISTING
	(N) NEW

SHEET INDEX

#	SHEET	SHEET TITLE
1	C1.0	COVER SHEET
2	C1.1	CONSTRUCTION ACCESS & STAGING
3	C2.0	OVERALL RESTORATION PLAN
3	C2.1	RESTORATION AND SIGNAGE PLAN ENLARGEMENT
4	C2.2	RESTORATION AND SIGNAGE PLAN ENLARGEMENT
5	C2.3	RESTORATION AND SIGNAGE PLAN ENLARGEMENT
6	C2.4	RESTORATION AND SIGNAGE PLAN ENLARGEMENT
7	C3.0	EROSION CONTROL DETAILS
8	C4.0	RESTORATION DETAILS



1 EXISTING SITE LAYOUT
SCALE: 1" = 150' @ 24"x36"

SHEET TITLE:
COVER SHEET

CLIENT:
PILLAR POINT AIR FORCE STATION
MANTECH ADVANCED SYSTEMS INTERNATIONAL
2250 CORPORATE PARK DRIVE
HERNDON VA, 20171

PROJECT TITLE:
PILLAR POINT RESTORATION
BLUFFS AND HILLSIDES AT
PILLAR POINT AIR FORCE STATION
HALF MOON BAY, CALIFORNIA

FALL CREEK ENGINEERING, INC.

Consulting Engineers
Civil • Environmental • Water Resources
1525 SEABRIGHT AVE.
SANTA CRUZ, CA 95062
TEL: (831) 426-9054

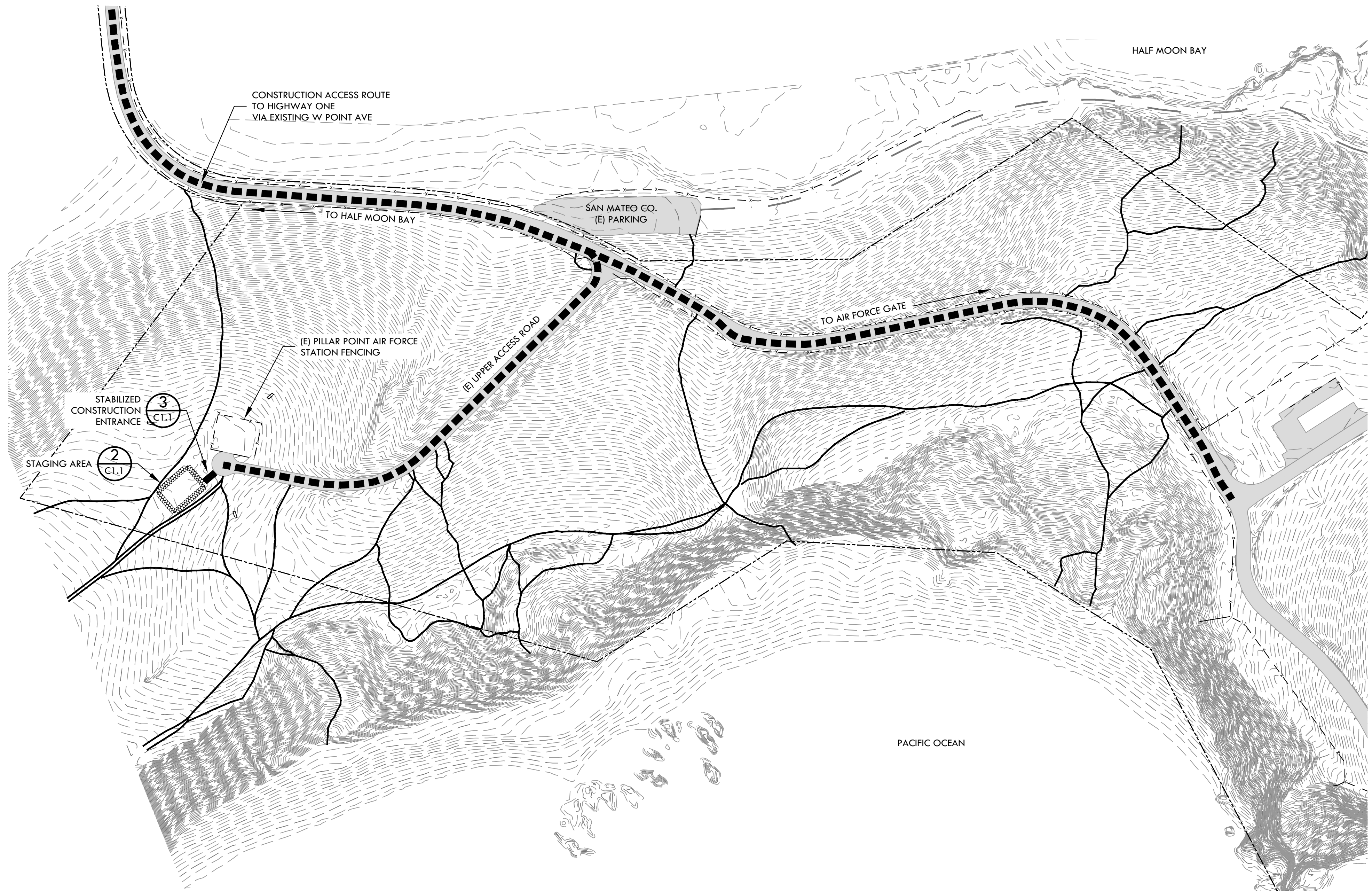


DRAWN BY: JLS
CHECKED BY: RLC
DATE: MARCH 2018
JOB NO: 21611
SCALE: AS SHOWN
SHEET:

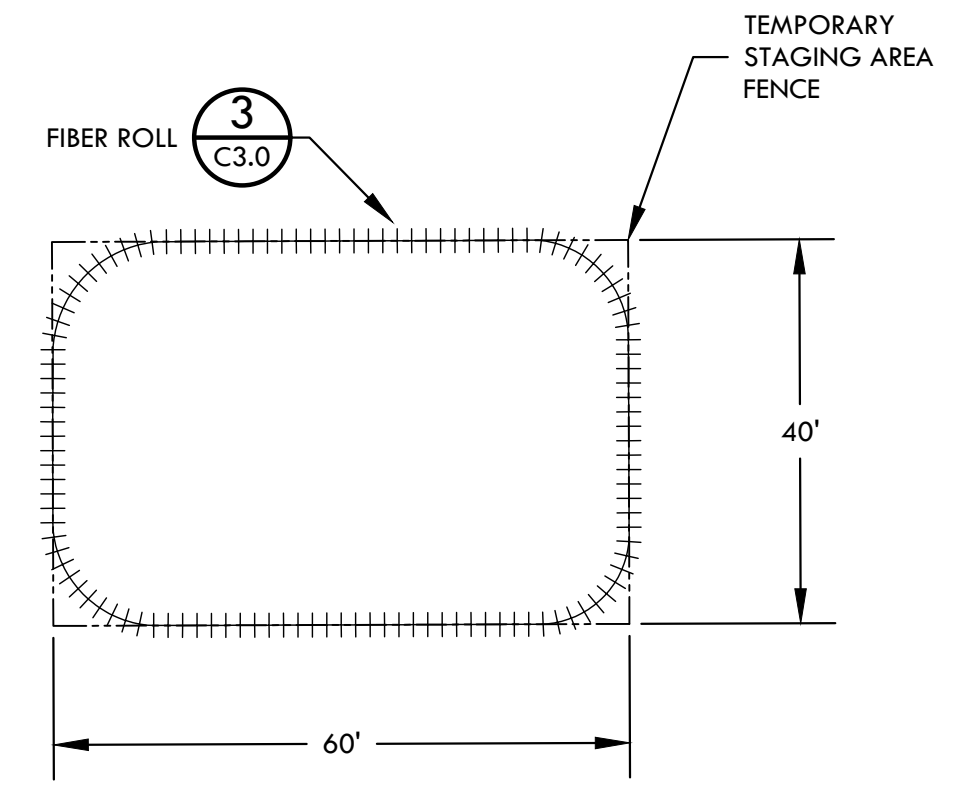
C1.0
1 OF 9

A B C D E F G H I J K L M N O P

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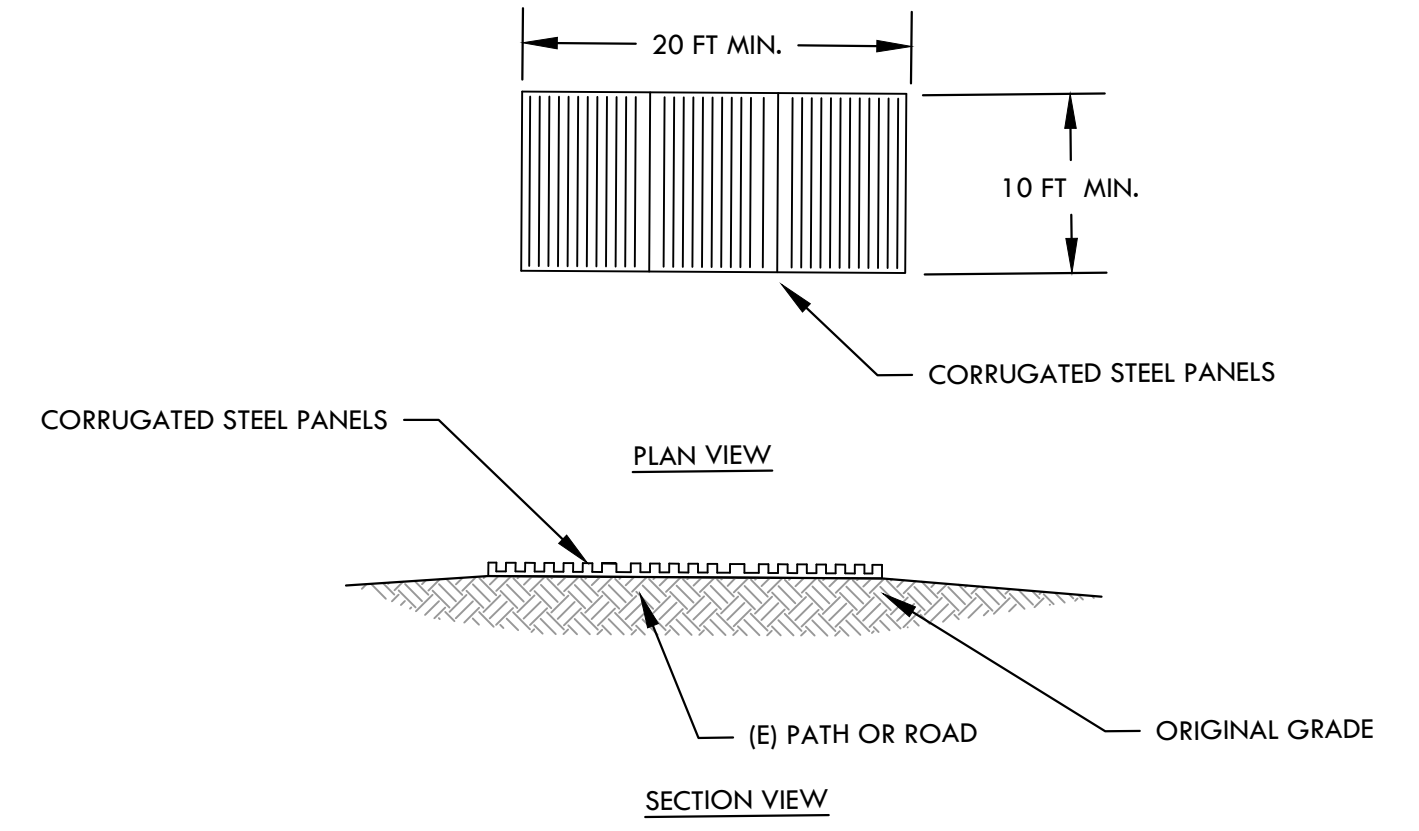


1 CONSTRUCTION ACCESS & STAGING
SCALE: 1" = 100' @ 24"X36"



2 STAGING AREA
SCALE: AS DIMENSIONED

NOTES:
1. TEMPORARY STAGING AREA SHALL BE RESTORED TO PRE-PROJECT CONDITION



3 STABILIZED CONSTRUCTION ENTRANCE
SCALE: AS DIMENSIONED

LEGEND	
---	EXISTING CONTOURS
---	PROPERTY BOUNDARY
- - - -	(E) FENCELINE AROUND AIR FORCE STATION
---	(E) AREA OF EROSION
█	CONSTRUCTION ACCESS
█	(E) PAVEMENT
(E)	EXISTING
(N)	NEW

SHEET TITLE:
CONSTRUCTION ACCESS & STAGING

CLIENT:
PILLAR POINT AIR FORCE STATION
MANTECH ADVANCED SYSTEMS INTERNATIONAL
2250 CORPORATE PARK DRIVE
HERNDON VA, 20171

PROJECT TITLE:
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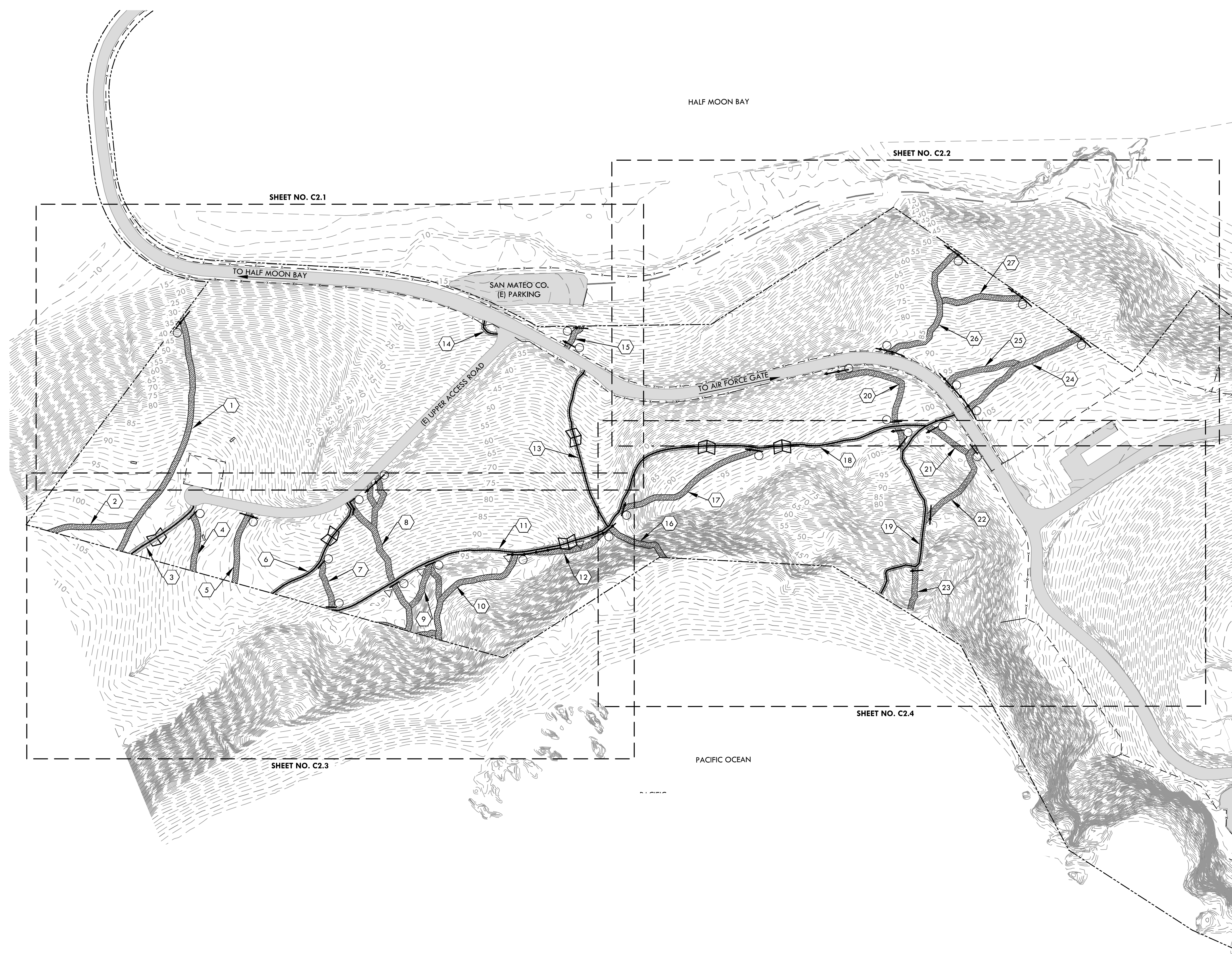
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JOB NO: 21611
SCALE: AS SHOWN
SHEET:

C1.1
2 OF 9

24"X36" SHEET. IF SHEET SIZE IS SMALLER, DRAWING HAS BEEN REDUCED.

A I B I C I D I E I F I G I H I I I J I K I L I M I N I O I P

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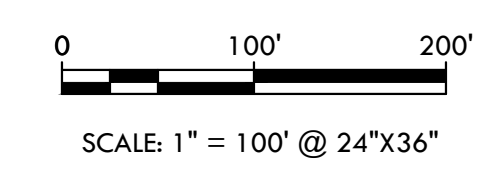
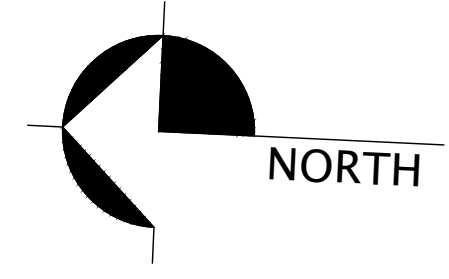


AREA OF EROSION NO.	TREATMENT TYPE	LENGTH (FT)
1	TREATMENT 1	462
2	TREATMENT 1	132
3	TREATMENT 2	144
4	TREATMENT 1	115
5	TREATMENT 1	134
6	TREATMENT 2	231
7	TREATMENT 1	89
8	TREATMENT 1	317
8	TREATMENT 1	93
9	TREATMENT 1	82
10	TREATMENT 1	339
11	TREATMENT 2	536
12	TREATMENT 1	136
13	TREATMENT 2	305
14	TREATMENT 2	43
15	TREATMENT 1	52
16	TREATMENT 1	120
17	TREATMENT 1	275
18	TREATMENT 2	662
19	TREATMENT 2	440
20	TREATMENT 1	248
21	TREATMENT 1	85
22	TREATMENT 1	182
23	TREATMENT 1	80
24	TREATMENT 1	249
25	TREATMENT 1	138
26	TREATMENT 1	268
27	TREATMENT 1	148

NOTE:
 1. AREAS OF EROSION TO BE DISTURBED ARE ASSUMED TO HAVE A WIDTH OF 10 FEET.
 2. TREATMENT 1 SEE DETAIL 1 ON SHEET C4.0
 3. TREATMENT 2 SEE DETAIL 2 ON SHEET C4.0

LEGEND

	EXISTING CONTOURS
	PROPERTY BOUNDARY
	(E) AIR FORCE STATION FENCING
	AREA OF EROSION TREATMENT 1
	AREA OF EROSION TREATMENT 2
	(E) PAVEMENT
	(N) INFORMATIONAL SIGN
	(N) WARNING SIGN
	(N) RESOURCE PROTECTION FENCING
	ROLLING DIP
(E)	EXISTING
(N)	NEW



1 OVERALL RESTORATION PLAN
 SCALE: 1" = 100' @ 24"X36"

SHEET TITLE:
OVERALL RESTORATION PLAN

CLIENT:
PILLAR POINT AIR FORCE STATION
 MANTech ADVANCED SYSTEMS INTERNATIONAL
 2250 CORPORATE PARK DRIVE
 HERNDON VA, 20171

PROJECT TITLE:
PILLAR POINT RESTORATION
 BLUFFS AND HILLSIDES AT
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 HALF MOON BAY, CALIFORNIA

FALL CREEK ENGINEERING, INC.

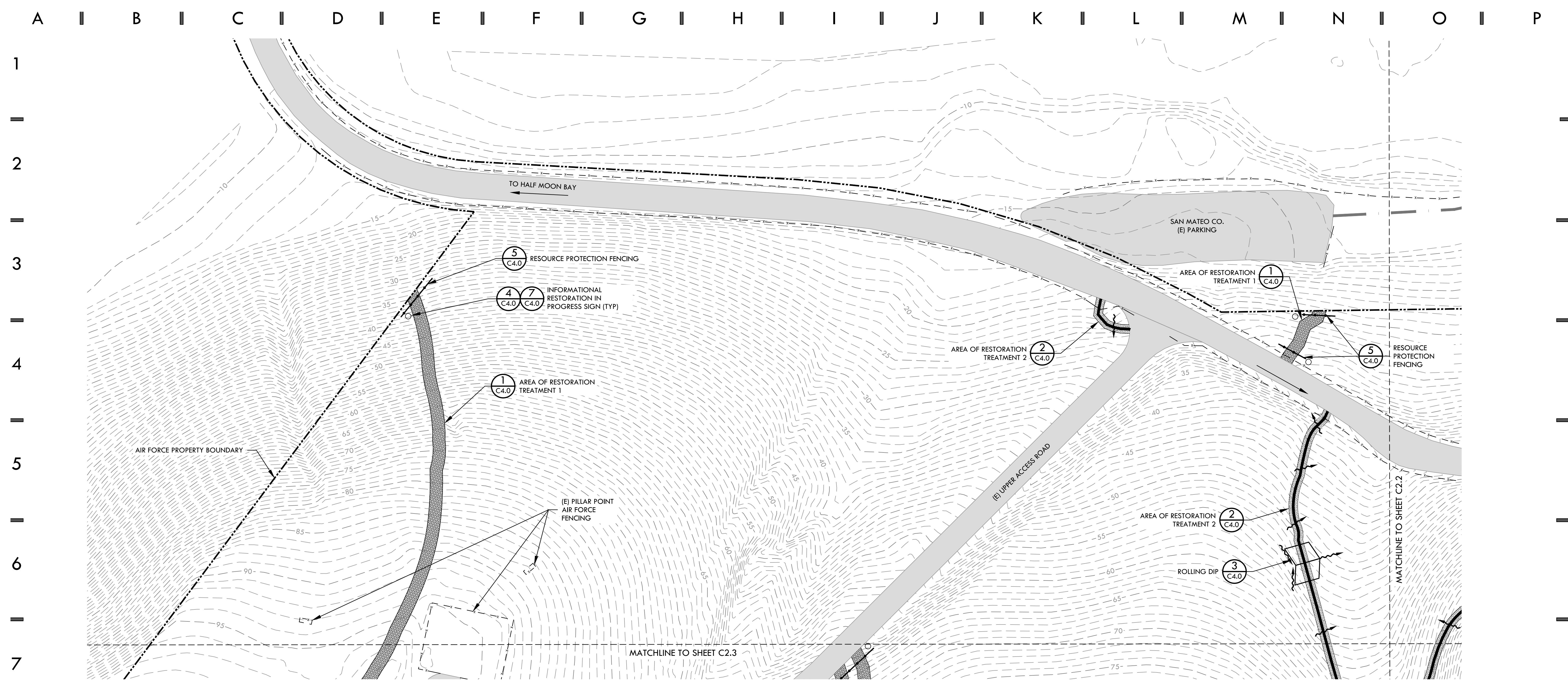
 Consulting Engineers
 Civil • Environmental • Water Resources
 1525 SEABRIGHT AVE.
 SANTA CRUZ, CA 95062
 TEL: (831) 426-9054



DRAWN BY: JLS
 CHECKED BY: RLC
 DATE: MARCH 2018
 JOB NO: 21611
 SCALE: AS SHOWN
 SHEET:

C2.0

24"X36" SHEET. IF SHEET SIZE IS SMALLER, DRAWING HAS BEEN REDUCED.



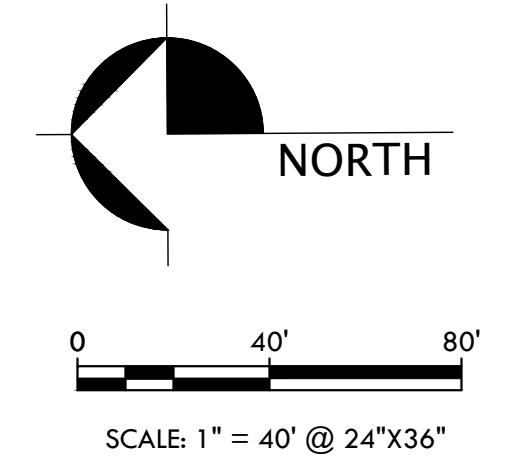
1 RESTORATION AND SIGNAGE PLAN ENLARGEMENT
SCALE: 1" = 40' @ 24"X36"

TREATMENT 1: HISTORICAL DRAINAGE PATTERNS SHALL BE RECOVERED BY RESTORING THESE AREAS OF EROSION THROUGH A MULTIFACETED TREATMENT AS FOLLOWS. ERODED AREAS SHALL BE TRACKED AND SCARIFIED. EXCAVATED MATERIAL IN DRAINAGE SHALL BE PLACED AND COMPACTED IN THROUGH CUT SCARIFIED AREAS. FINISHED GRADE OF FILLED THROUGH CUT SHALL MATCH ADJACENT EXISTING GROUND PROVIDING A SMOOTH, COMPACTED SURFACE THAT ALLOWS FOR UNIMPEDED SHEET FLOW OF RUNOFF. 2" OF TOPSOIL MIXED WITH COMPOST AND NATIVE SEED MIX SHALL BE PLACED OVER COMPACTED FILL. SHORT TERM EROSION CONTROL BLANKET WITH BIODEGRADABLE NETTING SHALL BE INSTALLED OVER TOPSOIL. FIBER ROLLS SHALL BE SPACED AT 50' MAX INTERVALS UNLESS OTHERWISE SPECIFIED.

TREATMENT 2: AREAS PRESCRIBED WITH TREATMENT 2 WILL BE RESTORED WHILE MAINTAINING A 5 FOOT CLEAR AREA OUTSLOPED TO MAINTAIN POSITIVE DRAINAGE. EXISTING GRADE ON EITHER SIDE OF THE THROUGH CUTS WILL BE PULLED IN, PLACED AND COMPACTED IN THE 5 FOOT CLEAR AREA, PROVIDING A SMOOTH, COMPACTED SURFACE THAT ALLOWS FOR UNIMPEDED SHEET FLOW OF RUNOFF. THE SIDES SHALL BE REVEGETATED.

LEGEND

	EXISTING CONTOURS
	PROPERTY BOUNDARY
	(E) AIR FORCE STATION FENCING
	TREATMENT 1 AREA OF EROSION
	TREATMENT 2 AREA OF EROSION
	(E) PAVEMENT
	(N) INFORMATIONAL SIGN
	(N) WARNING SIGN
	(N) RESOURCE PROTECTION FENCING
	EXISTING
	NEW
	SURFACE FLOW DIRECTION
	ROLLING DIP



24"X36" SHEET. IF SHEET SIZE IS SMALLER, DRAWING HAS BEEN REDUCED.

SHEET TITLE:
RESTORATION AND SIGNAGE PLAN ENLARGEMENT

CLIENT:
PILLAR POINT AIR FORCE STATION
MANTECH ADVANCED SYSTEMS INTERNATIONAL
2250 CORPORATE PARK DRIVE
HERNDON VA, 20171

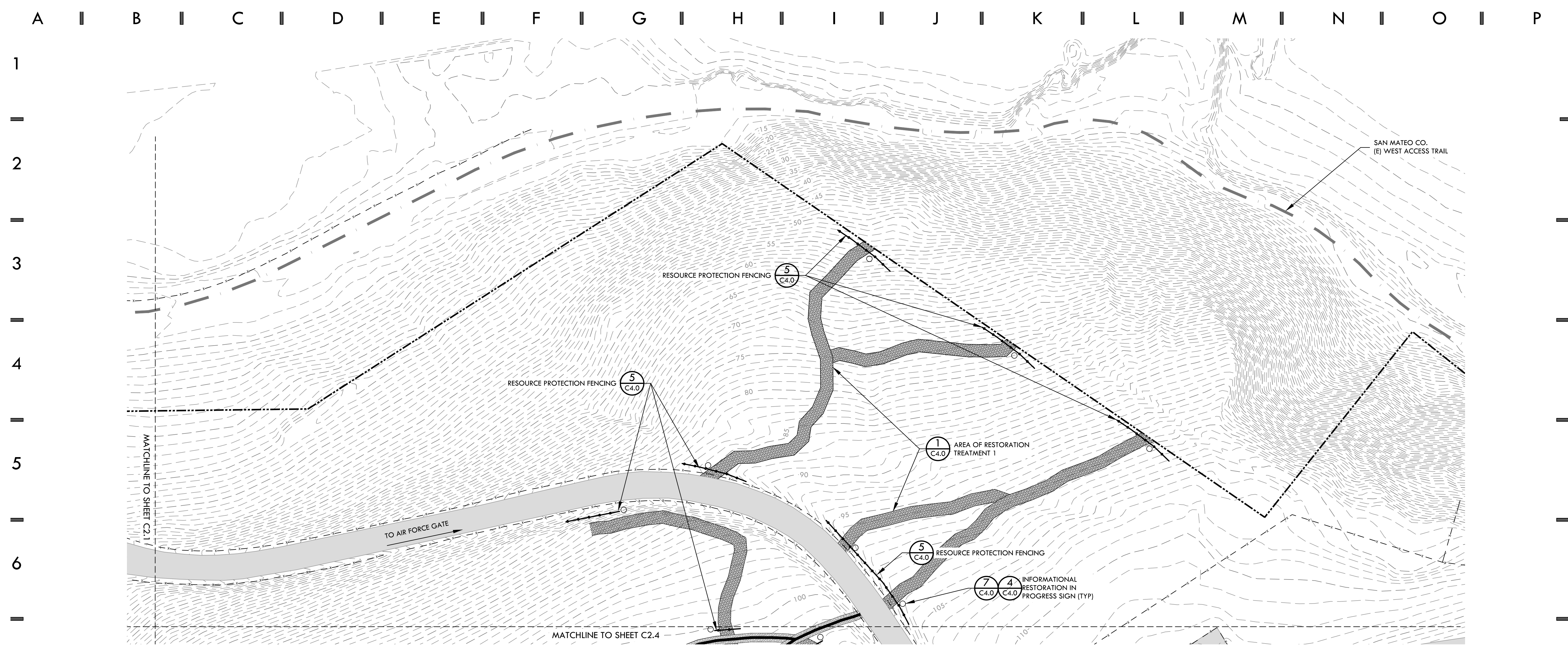
PROJECT TITLE:
PILLAR POINT RESTORATION
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Consulting Engineers
Civil • Environmental • Water Resources
1525 SEABRIGHT AVE.
SANTA CRUZ, CA 95062
TEL: (831) 426-9054

PROFESSIONAL ENGINEER
No. 71024
Exp. 12/31/16
CIVIL
STATE OF CALIFORNIA

DRAWN BY: JLS
CHECKED BY: RLC
DATE: MARCH 2018
JOB NO.: 21611
SCALE: AS SHOWN
SHEET: C2.1

4 OF 9

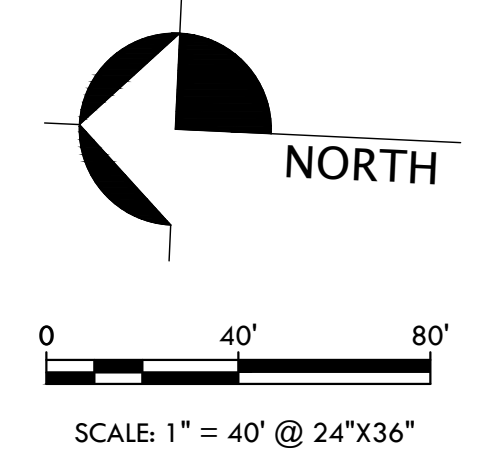


1 RESTORATION AND SIGNAGE PLAN ENLARGEMENT
SCALE: 1" = 40' @ 24"X36"

TREATMENT 1: HISTORICAL DRAINAGE PATTERNS SHALL BE RECOVERED BY RESTORING THESE AREAS OF EROSION THROUGH A MULTIFACETED TREATMENT AS FOLLOWS. ERODED AREAS SHALL BE TRACKED AND SCARIFIED. EXCAVATED MATERIAL IN DRAINAGE SHALL BE PLACED AND COMPACTED IN THROUGH CUT SCARIFIED AREAS. FINISHED GRADE OF FILLED THROUGH CUT SHALL MATCH ADJACENT EXISTING GROUND PROVIDING A SMOOTH, COMPACTED SURFACE THAT ALLOWS FOR UNIMPEDED SHEET FLOW OF RUNOFF. 2" OF TOPSOIL MIXED WITH COMPOST AND NATIVE SEED MIX SHALL BE PLACED OVER COMPACTED FILL. SHORT TERM EROSION CONTROL BLANKET WITH BIODEGRADABLE NETTING SHALL BE INSTALLED OVER TOPSOIL. FIBER ROLLS SHALL BE SPACED AT 50' MAX INTERVALS UNLESS OTHERWISE SPECIFIED.

TREATMENT 2: AREAS PRESCRIBED WITH TREATMENT 2 WILL BE RESTORED WHILE MAINTAINING A 5 FOOT CLEAR AREA OUTSLOPED TO MAINTAIN POSITIVE DRAINAGE. EXISTING GRADE ON EITHER SIDE OF THE THROUGH CUTS WILL BE PULLED IN, PLACED AND COMPACTED IN THE 5 FOOT CLEAR AREA, PROVIDING A SMOOTH, COMPACTED SURFACE THAT ALLOWS FOR UNIMPEDED SHEET FLOW OF RUNOFF. THE SIDES SHALL BE REVEGETATED.

LEGEND	
	EXISTING CONTOURS
	PROPERTY BOUNDARY
	(E) AIR FORCE STATION FENCING
	TREATMENT 1 AREA OF EROSION
	TREATMENT 2 AREA OF EROSION
	(E) PAVEMENT
	(N) INFORMATIONAL SIGN
	(N) WARNING SIGN
	(N) RESOURCE PROTECTION FENCING
	(E) EXISTING
	(N) NEW
	SURFACE FLOW DIRECTION
	ROLLING DIP



SHEET TITLE:
RESTORATION AND SIGNAGE PLAN ENLARGEMENT

CLIENT:
PILLAR POINT AIR FORCE STATION
MANTECH ADVANCED SYSTEMS INTERNATIONAL
2250 CORPORATE PARK DRIVE
HERNDON VA, 20171

PROJECT TITLE:
PILLAR POINT RESTORATION
BLUFFS AND HILLSIDES AT
PILLAR POINT AIR FORCE STATION
HALF MOON BAY, CALIFORNIA

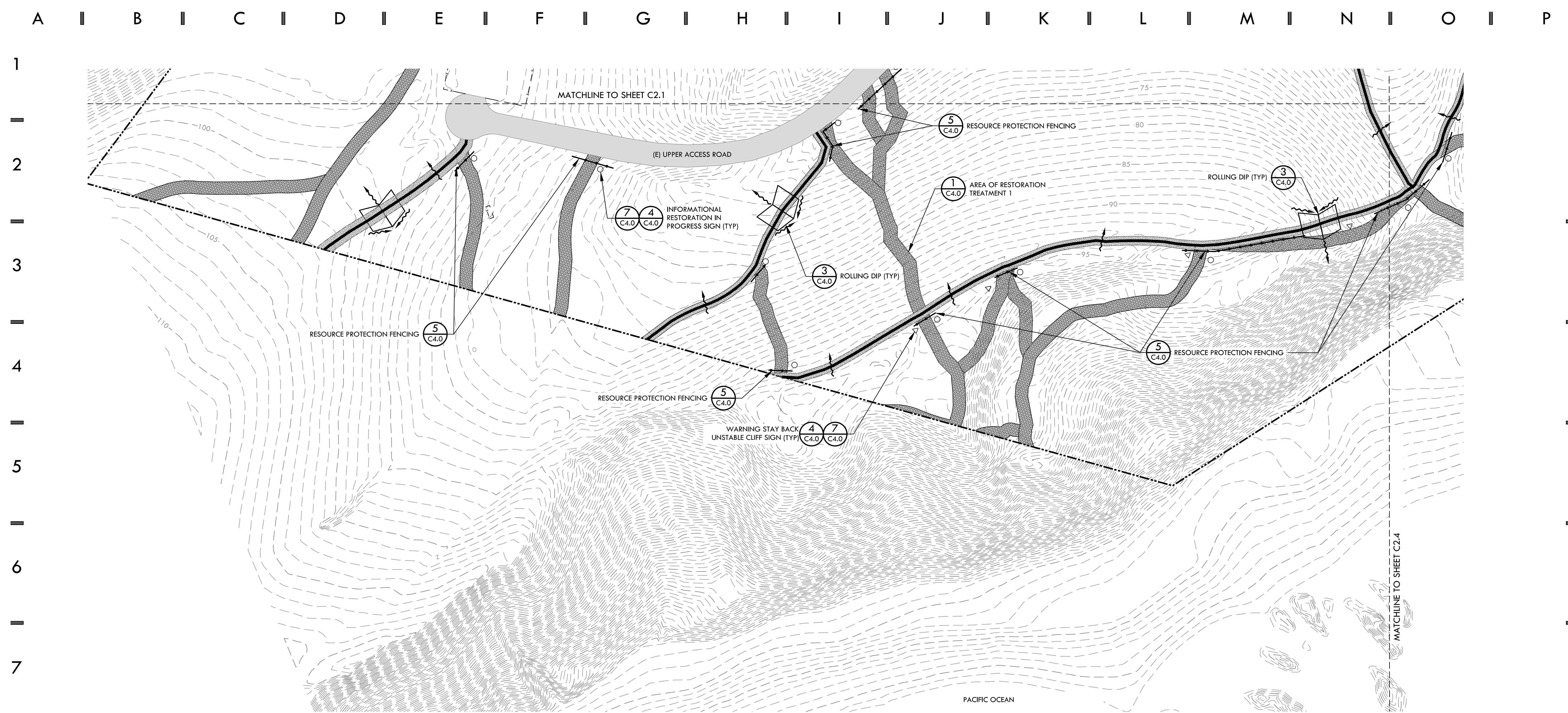
FALL CREEK ENGINEERING, INC.
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SANTA CRUZ, CA 95062
TEL: (831) 426-9054

PROFESSIONAL ENGINEER
JLS
No. 71024
Exp. 12/31/16
CIVIL
STATE OF CALIFORNIA

DRAWN BY: JLS
CHECKED BY: RLC
DATE: MARCH 2018
JOB NO.: 21611
SCALE: AS SHOWN
SHEET: C2.2

5 OF 9

24"X36" SHEET. IF SHEET SIZE IS SMALLER, DRAWING HAS BEEN REDUCED.



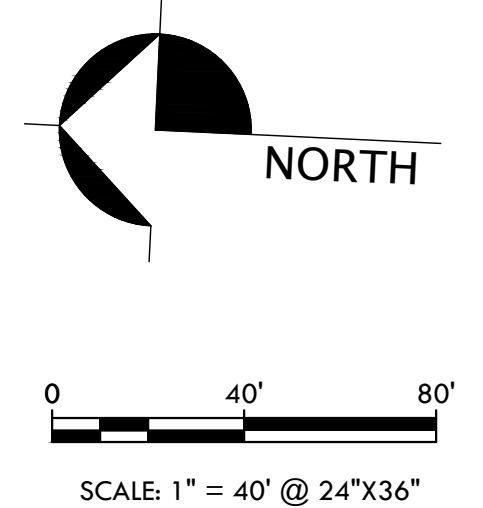
1 RESTORATION AND SIGNAGE PLAN ENLARGEMENT
SCALE: 1" = 40' @ 24"X36"

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TREATMENT 2: AREAS PRESCRIBED WITH TREATMENT 2 WILL BE RESTORED WHILE MAINTAINING A 5 FOOT CLEAR AREA OUTSLOPED TO MAINTAIN POSITIVE DRAINAGE. EXISTING GRADE ON EITHER SIDE OF THE THROUGH-CUTS WILL BE PULLED IN, PLACED AND COMPACTED IN THE 5 FOOT CLEAR AREA, PROVIDING A SMOOTH, COMPACTED SURFACE THAT ALLOWS FOR UNIMPEDED SHEET FLOW OF RUNOFF. THE SIDES SHALL BE REVEGETATED.

LEGEND

	EXISTING CONTOURS
	PROPERTY BOUNDARY
	(E) AIR FORCE STATION FENCING
	TREATMENT 1 AREA OF EROSION
	TREATMENT 2 AREA OF EROSION
	(E) PAVEMENT
	(N) INFORMATIONAL SIGN
	(N) WARNING SIGN
	(N) RESOURCE PROTECTION FENCING
	EXISTING
	NEW
	SURFACE FLOW DIRECTION
	ROLLING DIP



24"X36" SHEET. IF SHEET SIZE IS SMALLER, DRAWING HAS BEEN REDUCED.

SHEET TITLE:
RESTORATION AND SIGNAGE PLAN ENLARGEMENT

CLIENT:
PILLAR POINT AIR FORCE STATION
MANTECH ADVANCED SYSTEMS INTERNATIONAL
2250 CORPORATE PARK DRIVE
HERNDON VA, 20171

PROJECT TITLE:
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HALF MOON BAY, CALIFORNIA

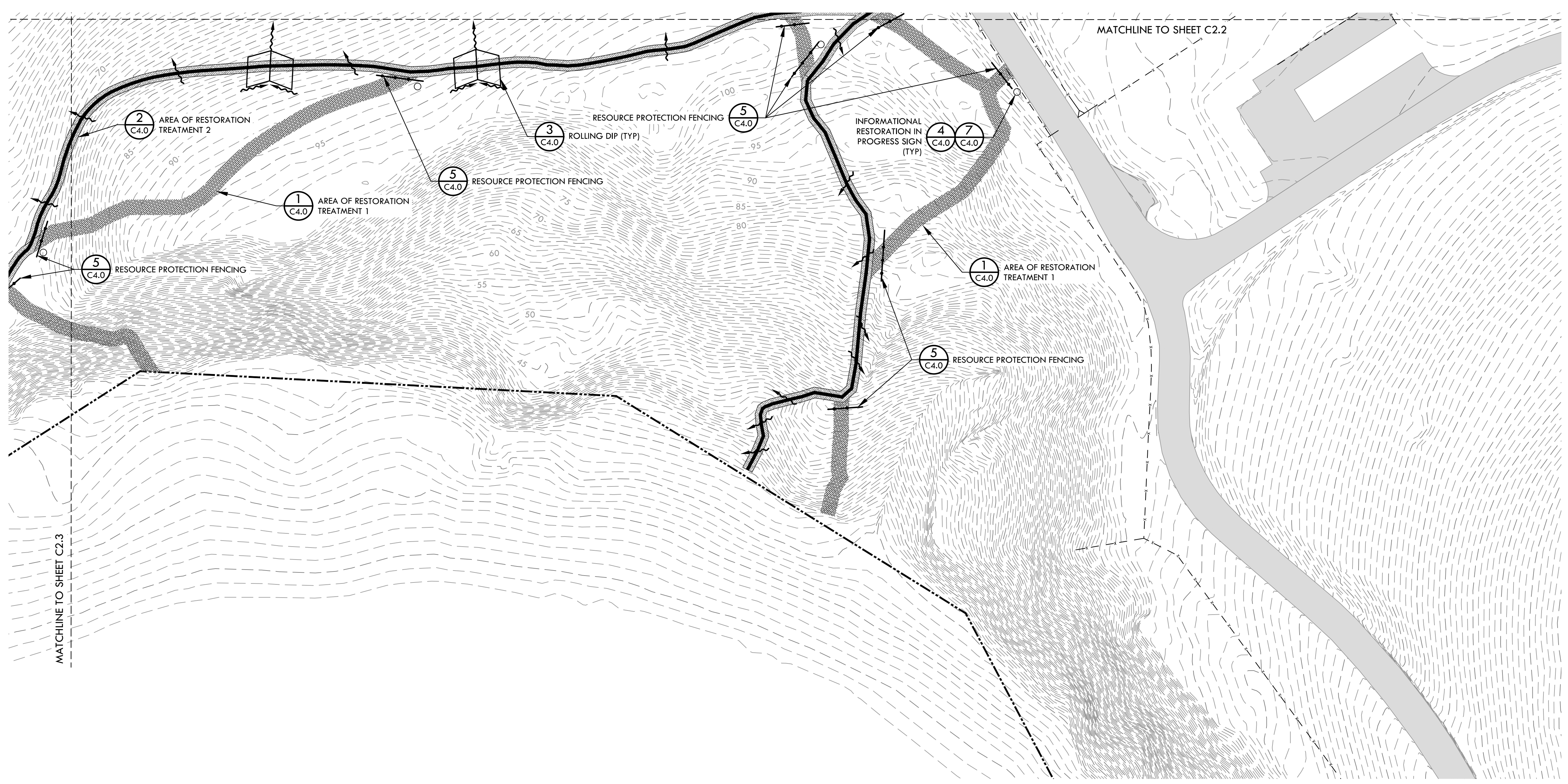
FALL CREEK ENGINEERING, INC.
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PROFESSIONAL ENGINEER
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SCALE: AS SHOWN
SHEET: C2.3
6 OF 9

A I B I C I D I E I F I G I H I I I J I K I L I M I N I O I P

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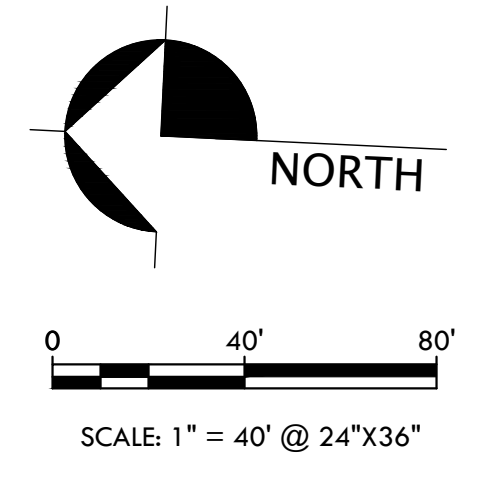
1 RESTORATION AND SIGNAGE PLAN ENLARGEMENT
SCALE: 1" = 40' @ 24"X36"

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LEGEND

	EXISTING CONTOURS
	PROPERTY BOUNDARY
	(E) AIR FORCE STATION FENCING
	TREATMENT 1 AREA OF EROSION
	TREATMENT 2 AREA OF EROSION
	(E) PAVEMENT
	(N) INFORMATIONAL SIGN
	(N) WARNING SIGN
	(N) RESOURCE PROTECTION FENCING
	(E) EXISTING
	(N) NEW
	SURFACE FLOW DIRECTION
	ROLLING DIP



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RESTORATION AND SIGNAGE PLAN ENLARGEMENT

CLIENT:
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2250 CORPORATE PARK DRIVE
HERNDON VA, 20171

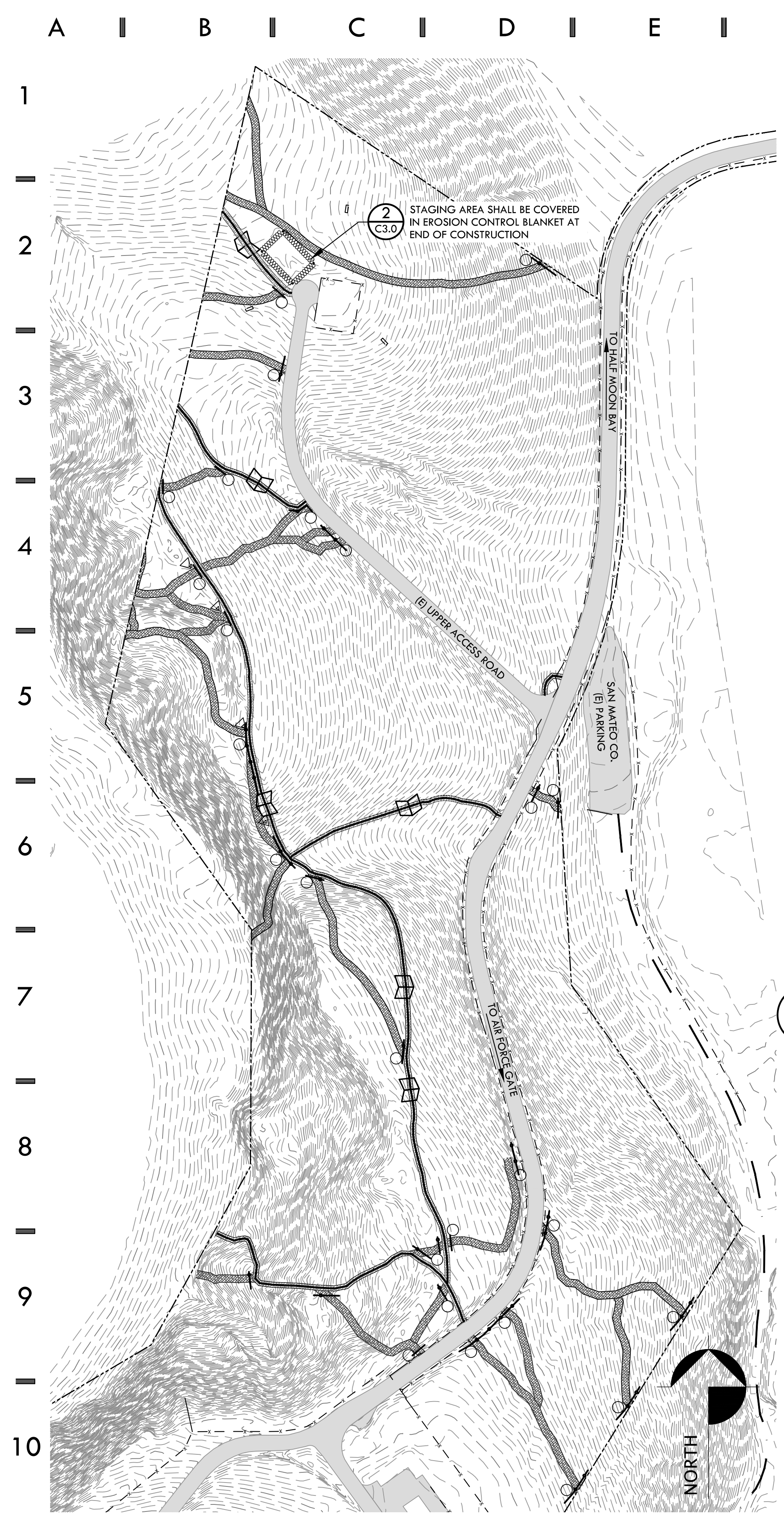
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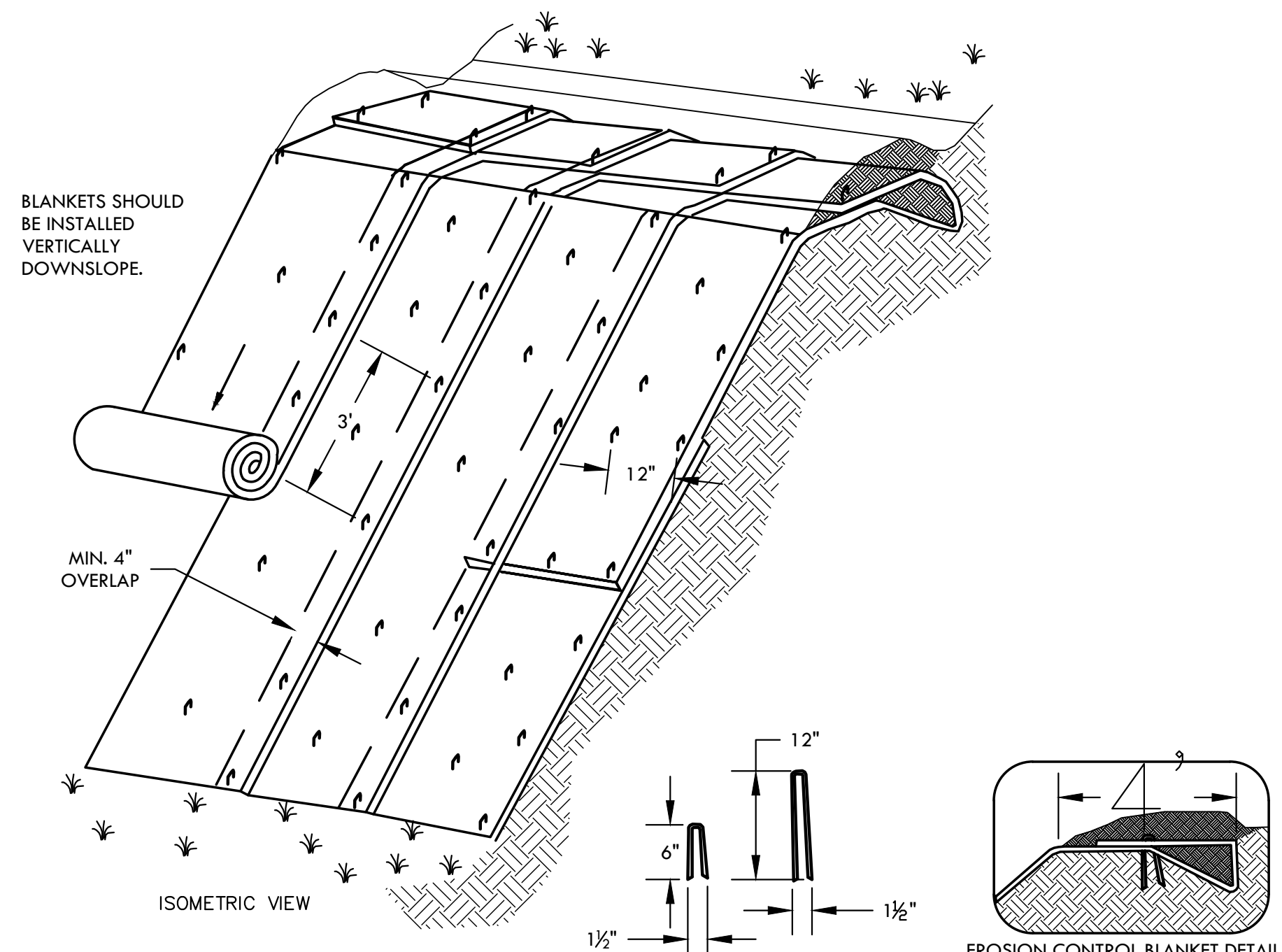
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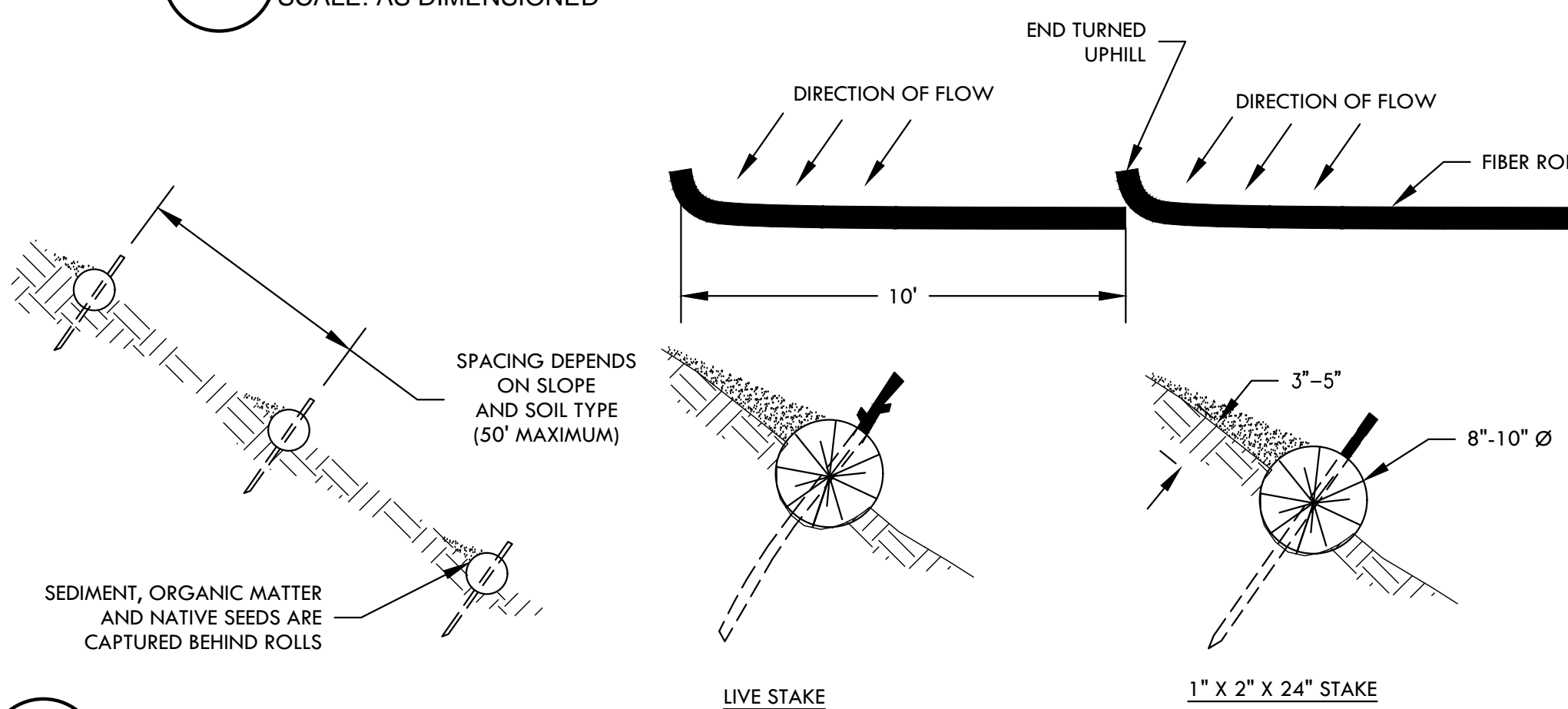
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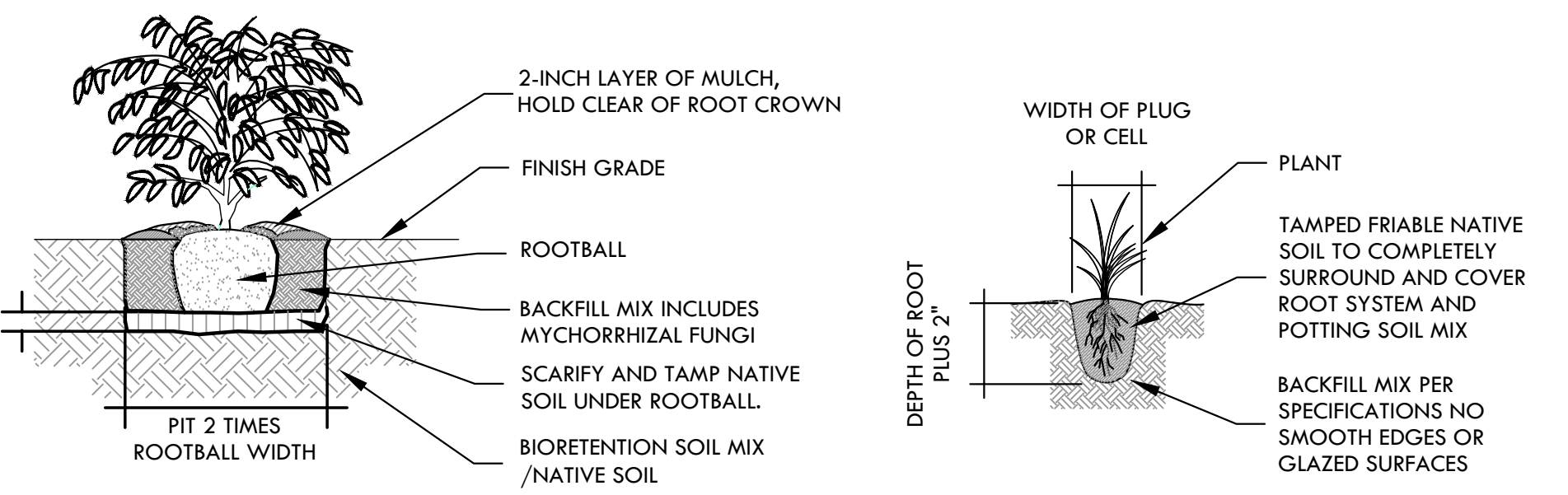
1 EROSION CONTROL PLAN
SCALE: 1" = 100'



2 EROSION CONTROL BLANKET INSTALLATION
SCALE: AS DIMENSIONED



3 FIBER ROLL
SCALE: AS DIMENSIONED



4 REVEGETATION: SHRUB AND GRASS PLANTING
SCALE: AS DIMENSIONED

EROSION CONTROL NOTES:

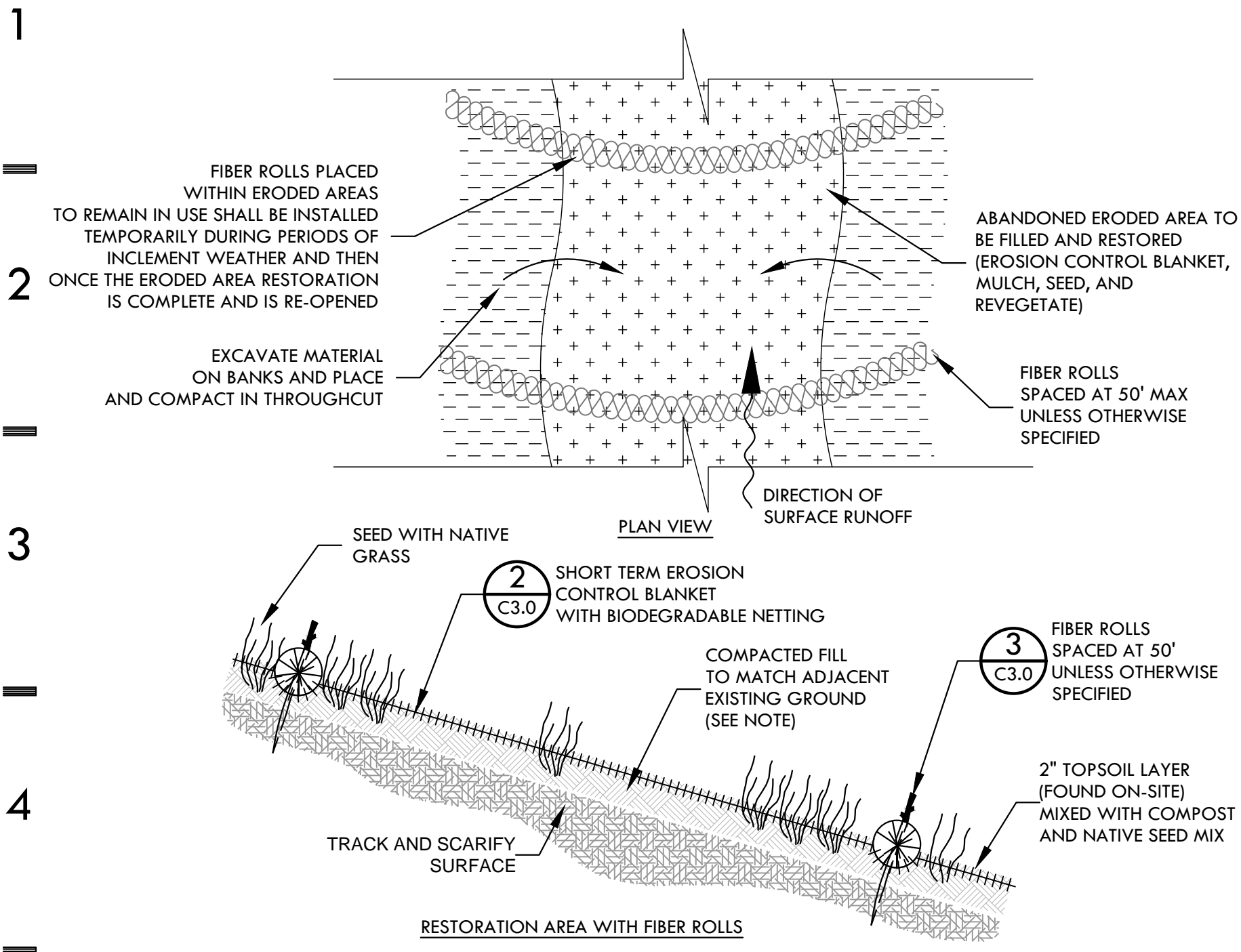
1. GENERAL. THE CONTRACTOR SHALL INSTALL, MAINTAIN AND INSPECT EROSION CONTROL AND TEMPORARY STORMWATER CONTROL MEASURES TO CONTROL SEDIMENT AND RUNOFF.
 - 1.1. THIS PROJECT IS NOT EXPECTED TO OCCUR DURING THE WINTER SEASON (OCTOBER 15TH THROUGH APRIL 15TH). SEEDING SHALL OCCUR BETWEEN SEPTEMBER 15TH AND OCTOBER 15TH AND WATERING IS REQUIRED UNTIL RAINY SEASON HAS BEGUN.
 - 1.2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROL BMP INSTALLATION AND MAINTENANCE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ADDITIONAL MEASURES, NECESSARY TO CONTROL SITE EROSION AND PREVENT SEDIMENT TRANSPORT OFF-SITE ARE IMPLEMENTED.
 - 1.3. THE PROJECT MANAGER SHALL STOP OPERATIONS DURING PERIODS OF INCLEMENT WEATHER IF HE OR SHE DETERMINES THAT EROSION PROBLEMS ARE NOT BEING CONTROLLED ADEQUATELY.
 - 1.4. ALL GRADING SHALL CONFORM TO ALL APPLICABLE STANDARDS AND REGULATIONS.
 - 1.5. ALL DISTURBED SURFACES SHALL BE PREPARED AND MAINTAINED TO CONTROL EROSION AND TO ESTABLISH NATIVE OR NATURALIZED VEGETATIVE GROWTH COMPATIBLE WITH THE AREA. THIS CONTROL SHALL CONSIST OF: A. EFFECTIVE TEMPORARY PLANTING, SOME OTHER FAST-GERMINATION SEED, AND MULCHING WITH SLOPE STABILIZATION MATERIAL; B) PERMANENT PLANTING OF NATIVE OR NATURALIZED DROUGHT RESISTANT SPECIES OF SHRUBS, TREES, OR OTHER VEGETATION WHEN THE PROJECT IS COMPLETED; C) MULCHING, FERTILIZING, WATERING OR OTHER METHODS MAY BE REQUIRED TO ESTABLISH NEW VEGETATION. ON SLOPES LESS THAN 20%, TOPSOIL SHOULD BE STOCKPILED AND REAPPLIED.
 - 1.6. GRADING SHALL BEGIN WITHIN 30 DAYS OF VEGETATION REMOVAL. TEMPORARY EROSION CONTROL IS REQUIRED AFTER THE 30 DAY LIMIT.
 - 1.7. NO VEGETATION REMOVAL OR GRADING WILL BE ALLOWED WHICH WILL RESULT IN SILTATION OF THE OCEAN OR UNCONTROLLABLE EROSION.
 - 1.8. DUST FROM GRADING OPERATIONS MUST BE CONTROLLED.
 - 1.9. LAND CLEARING SHALL BE KEPT TO A MINIMUM. VEGETATION REMOVAL SHALL BE LIMITED TO THAT AMOUNT NECESSARY TO ACHIEVE THE PROJECT GOALS.
 - 1.10. IF THE PROJECT MUST OCCUR BETWEEN OCTOBER 15TH AND APRIL 15TH, EXPOSED SOIL SHALL BE PROTECTED FROM EROSION AT ALL TIMES. COVERING OR INSTALLING FILTER BERMS OR OTHER MEANS SHALL BE EMPLOYED TO PREVENT SEDIMENT FROM LEAVING THE SITE OR ENTERING THE OCEAN.
 - 1.11. DURING THE PROJECT, NO TURBID WATER SHALL BE PERMITTED TO ENTER THE OCEAN. USE OF SILT TRAPS, FILTER BERMS, OR OTHER MEASURES SHALL BE USED TO PREVENT SUCH DISCHARGE.
2. SEED AND MULCH. ALL AREAS EXPOSED DURING RESTORATION ACTIVITIES SHALL BE PROTECTED BY MULCHING AND HAND BROADCASTING OF THE FOLLOWING SEED MIX AND INCORPORATED OVER ALL DISTURBED SLOPES.

BROMUS CARINATUS
DANTHONIA CALIFORNICA
ELYMUS GLAUCUS
FESTUCA RUBRA
STIPA PULCHRA
STIPA LEPIDA
KOELERIA MACRANTHA

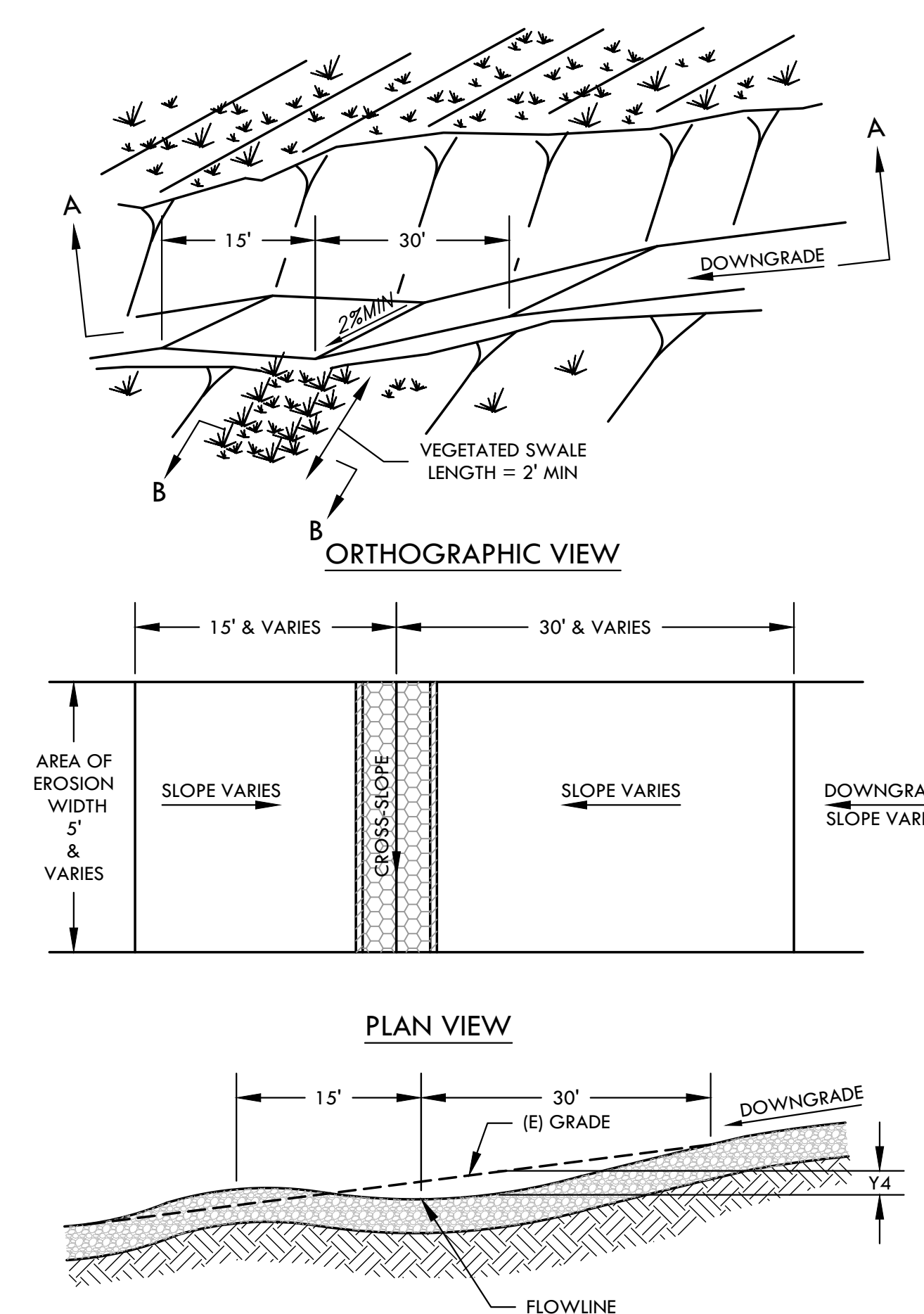
THE MIX/APPLICATION SHALL ALSO CONTAIN:
 - FERTILIZER (6-3-3) SHALL BE HAND BROADCAST AND INCORPORATED AT 30-LB/ACRE OVER ENTIRE AREA.
 - MYCORRHIZAL FUNGI SHALL BE ADDED AT 50 LB/ ACRE.
 - IF HYDROSEEDING, ADD MULCH AND TACKIFIER TO ABOVE.
- 2.1 ALL EXCESS EXCAVATED MATERIAL SHALL BE REMOVED TO AN APPROVED DISPOSAL SITE OR DISPOSED OF ON-SITE IN A MANNER THAT WILL NOT CAUSE EROSION.
- 2.2 ANY MATERIAL STOCKPILED ON-SITE SHALL BE COVERED WITH PLASTIC, ESPECIALLY DURING THE WINTER MONTHS OR DURING PERIODS OF RAIN.
- 2.3 UPON COMPLETION OF RESTORATION, ALL REMAINING EXPOSED SOILS SHALL BE PERMANENTLY REVEGETATED PER DESIGN PLANS. SEE TREATMENT 1. SURFACE SHALL BE SCARIFIED AND ADDED TOPSOIL SHALL BE MIXED WITH COMPOST AS SHOWN IN TREATMENT 1.
- 2.5 EXPOSED SOIL ON SLOPES LESS THAN 20% SHALL BE SEEDED AND COVERED WITH A MINIMUM OF 2 INCHES OF STRAW MULCH OR HYDROSEEDED.
- 2.6 EXPOSED SOIL ON SLOPES GREATER THAN 20% SHALL BE SEEDED (EITHER HAND BROADCAST OR HYDROSEED) PRIOR TO EROSION CONTROL BLANKET INSTALLATION. THE EROSION CONTROL BLANKET SHALL BE STAKED IN PLACE.
- 2.7 IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ADDITIONAL MEASURES, NECESSARY TO CONTROL SITE EROSION AND PREVENT SEDIMENT TRANSPORT OFF-SITE ARE IMPLEMENTED.
3. FIBER ROLLS. FIBER ROLLS SHALL CONSIST OF 100% BIODEGRADABLE MATERIAL. FIBER ROLLS (OR STRAW WATTLES) SHALL BE INSTALLED ALONG THE CONTOUR OF THE SLOPE TO SLOW RUNOFF VELOCITY AND TRAP SEDIMENT. FIBER ROLLS SHALL BE INSTALLED WHEREVER THE DISTURBED SLOPE IS ADJACENT TO A STREAM OR DRAINAGE COURSE. TRENCH DEPTH SHALL BE 1/4 TO 1/2 OF THE THICKNESS OF THE ROLL, AND THE WIDTH SHALL EQUAL THE ROLL DIAMETER, IN ORDER TO PROVIDE AREA TO BACKFILL THE TRENCH. WOOD STAKES SHALL BE INSTALLED EVERY FOUR FEET THROUGH THE WATTLE AND THE END SHALL BE TURNED UP HILL TO PREVENT RUNOFF FORM GOING AROUND THE ROLL. FIBER ROLLS PLACED ON RESTORATION TREATMENT SHALL REMAIN PERMANENTLY INSTALLED. FIBER ROLLS PLACED ON TREATMENT 2 AREAS TO REMAIN IN USE SHALL BE INSTALLED ON A TEMPORARY BASIS AND THEN REMOVED ONCE TREATMENT 2 AREAS ARE STABLE.
4. EROSION CONTROL BLANKET. THE EROSION CONTROL BLANKET SHALL BE CONSTRUCTED OF 100% BIODEGRADABLE DOUBLE NET WITH STRAW AND COCONUT FIBER CORE WITH A FUNCTIONAL LONGEVITY OF 12 MONTHS (CALTRANS TYPE B).
 - 4.1. CONSTRUCTION GUIDELINES
 - 4.1.1 GRADE AND SHAPE AREA OF INSTALLATION
 - 4.1.2 REMOVE ALL ROCK, CLODS, AND VEGETATIVE OR OTHER OBSTRUCTIONS SO THAT THE INSTALLED BLANKET WILL HAVE DIRECT CONTACT WITH THE SOIL.
 - 4.1.3 LOOSEN 2-3 INCHES OF TOPSOIL ABOVE FINAL GRADE
 - 4.1.4 U-SHAPED WIRE STAPLES, METAL GEOTEXTILE STAKE PINS OR TRIANGULAR WOODEN STAKES CAN BE USED TO ANCHOR MATS TO THE GROUND SURFACE. WIRE STAPLES SHOULD BE A MINIMUM OF 11 GAUGE. METAL STAKE PINS SHOULD BE 3/16 INCH DIAMETER STEEL WITH A 1/2 INCH STEEL WASHER AT THE HEAD OF THE PIN. WIRE STAPLES AND METAL STAKES SHOULD BE DRIVEN FLUSH TO THE SOIL SURFACE. ALL ANCHORS SHOULD BE 6-8 INCHES LONG AND HAVE SUFFICIENT GROUND PENETRATION TO RESIST PULLOUT. LONGER ANCHORS MAY BE REQUIRED FOR LOOSE SOILS.
 - 4.1.5 EROSION CONTROL BLANKETS AND SEED SHALL BE INSTALLED ON ALL DISTURBED SLOPES WITH GREATER THAN 20% GRADES. HYDROSEED SHALL OCCUR PRIOR TO INSTALLATION OF BLANKET.
 - 4.2. INSTALLATION ON SLOPE (SHALL FOLLOW MANUFACTURER'S RECOMMENDATIONS):
 - 4.2.1 BEGIN AT THE TOP OF THE SLOPE AND ANCHOR THE BLANKET IN A 6 INCH DEEP BY 6 INCH WIDE TRENCH. BACKFILL TRENCH AND TAMP EARTH FIRMLY.
 - 4.2.2 UNROLL BLANKET DOWNSLOPE IN THE DIRECTION OF WATER FLOW. BLANKET SHOULD BE UNROLLED SLOWLY IN A CONTROLLED MANNER TO ACHIEVE DIRECT CONTACT WITH THE SOIL.
 - 4.2.3 THE EDGE OF ADJACENT PARALLEL ROLLS MUST BE OVERLAPPED 2-3 INCHES AND BE STAPLED EVERY 3 FEET.
 - 4.2.4 WHEN BLANKETS MUST BE SPLICED, PLACE BLANKET END OVER END (SHINGLE STYLE) WITH 6 INCH OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12 INCHES APART.
 - 4.2.5 LAY BLANKET LOOSELY AND MAINTAIN DIRECT CONTACT WITH THE SOIL, DO NOT STRETCH.
 - 4.2.6 BLANKETS SHALL BE STAPLED SUFFICIENTLY TO ANCHOR BLANKET AND MAINTAIN CONTACT WITH THE SOIL. STAPLES SHALL BE PLACED DOWN THE CENTER AND STAGGERED WITH THE STAPLES PLACED ALONG THE EDGES. STEEP SLOPES, 1:1 TO 2:1 REQUIRE 2 STAPLES PER SQUARE YARD. MODERATE SLOPES, 2:1 TO 3:1, REQUIRE 1-2 STAPLES PER SQUARE YARD (1 STAPLE 3 O.C.). GENTLE SLOPES REQUIRE 1 STAPLE PER SQUARE YARD.
5. OTHER PROVISIONS
 - 5.1. IF CONSTRUCTION OCCURS BETWEEN OCTOBER 15TH AND APRIL 15TH, EXPOSED SOIL NOT INVOLVED IN IMMEDIATE CONSTRUCTION ACTIVITY SHALL BE PROTECTED FROM EROSION AT ALL TIMES. AFTER APRIL 15TH, EROSION CONTROL MEASURES SHALL BE IN PLACE DURING INCLEMENT WEATHER.
 - 5.2. EROSION CONTROL MEASURES SHALL BE KEPT IN PLACE BY THE CONTRACTOR UNTIL NATIVE VEGETATION HAS BEEN ESTABLISHED AND PROVIDES NECESSARY SLOPE COVER (MINIMUM 80% COVER, APPROXIMATELY 2 TO 3 YEARS).
 - 5.3. A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE PREPARED FOR THE PROJECT BY A CERTIFIED QUALIFIED SWPPP DEVELOPER (QSD).

24" X 36" SHEET. IF SHEET SIZE IS SMALLER, DRAWING HAS BEEN REDUCED.

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P

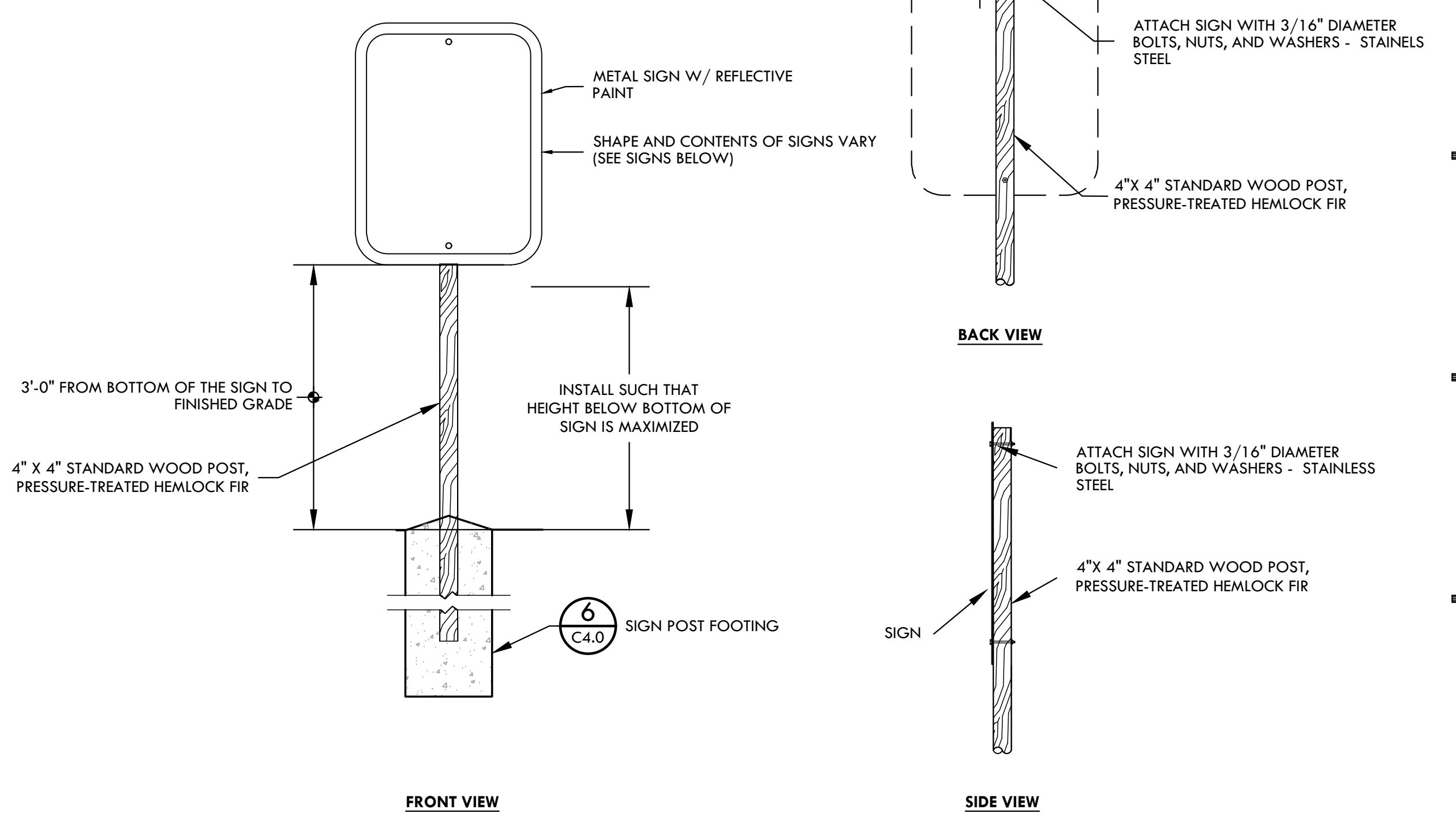


- NOTES:
1. AREA OF EROSION RESTORATION SHALL FOLLOW DETAIL UNLESS OTHERWISE SPECIFIED ON PLANS OR DIRECTED IN FIELD.
 2. CLEAR BRUSH, TREES AND ROOTS TO PREP BANK MATERIAL FOR PULLING IN TO FILL THROUGH CUT.
 3. CLEAR TOP SOIL DOWN TO CONSOLIDATED STABLE SOIL AND SCARIFY STABLE SOIL BEFORE PLACING FILL.
 4. COMPACTED FILL SHALL MATCH EXISTING GRADE.
 5. COMPACTED FILL SHALL BE ONSITE SOIL, FREE OF ORGANICS AND AGGREGATE LARGER THAN 2 INCHES.
 6. FINISHED SURFACE SHALL ALLOW FOR UNIMPEDED SHEET FLOW OF STORMWATER RUNOFF.
 7. OUTSLOPE IN DIRECTION OF NATURAL DRAINAGE.
 8. COVER DISTURBED AREAS IN 2 INCHES OF TOPSOIL, MULCH AND SEED.
 9. COVER TOPSOIL WITH EROSION CONTROL BLANKET.
 10. INSTALL 10 FEET LONG FIBER ROLLS EVERY 50 FEET MAX UNLESS OTHERWISE SPECIFIED.

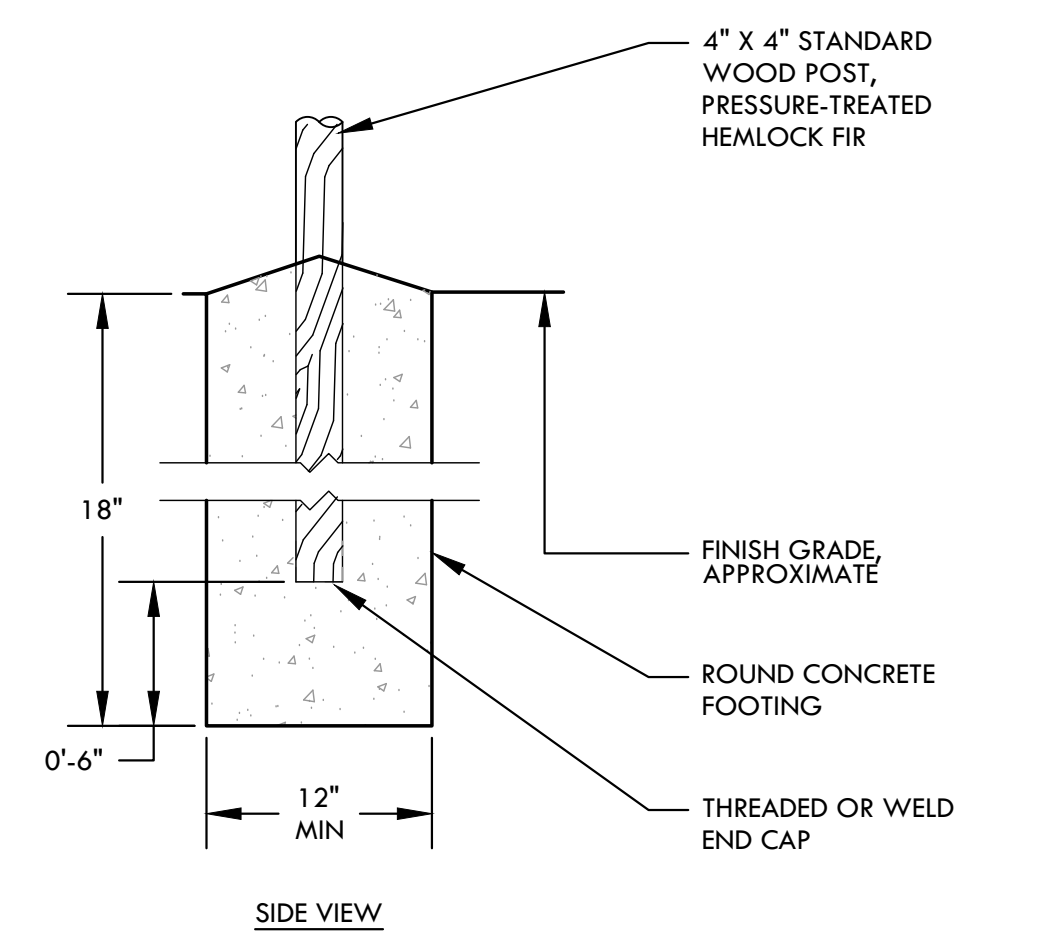


- NOTES:
1. AREA OF EROSION RESTORATION SHALL FOLLOW DETAIL UNLESS OTHERWISE SPECIFIED ON PLANS OR DIRECTED IN FIELD.
 2. CLEARED AREA SHALL BE 5 FEET WIDE WITH 1 FOOT MIN VEGETATED BUFFERS ON BOTH SIDES OF CLEARED AREA.
 3. CLEAR BRUSH, TREES AND ROOTS ON EITHER SIDE OF CLEAR AREA TO PREP FOR PULLING MATERIAL IN TO FILL THROUGH CUT.
 4. CLEAR TOP SOIL DOWN TO CONSOLIDATED STABLE SOIL AND SCARIFY STABLE SOIL BEFORE PLACING FILL.
 5. COMPACTED FILL SHALL MATCH EXISTING GRADE.
 6. COMPACTED FILL SHALL BE ONSITE SOIL, FREE OF ORGANICS AND AGGREGATE LARGER THAN 2 INCHES.
 7. COMPACTED FILL SHALL BE 92%-95% RELATIVE COMPACTION.
 8. FINISHED GRADE SHALL ALLOW FOR SMOOTH COMPACTED SURFACE.
 9. FINISHED SURFACE SHALL ALLOW FOR UNIMPEDED SHEET FLOW OF STORMWATER RUNOFF TO EXIT CLEARED AREA.
 10. OUTSLOPE IN DIRECTION OF NATURAL DRAINAGE WITH A 2-5% CROSS SLOPE.
 11. ALL DISTURBED AREAS OUTSIDE OF CLEARED AREA SHALL BE TREATED WITH EROSION CONTROL MEASURES PER PLANS AND SPECIFICATIONS.

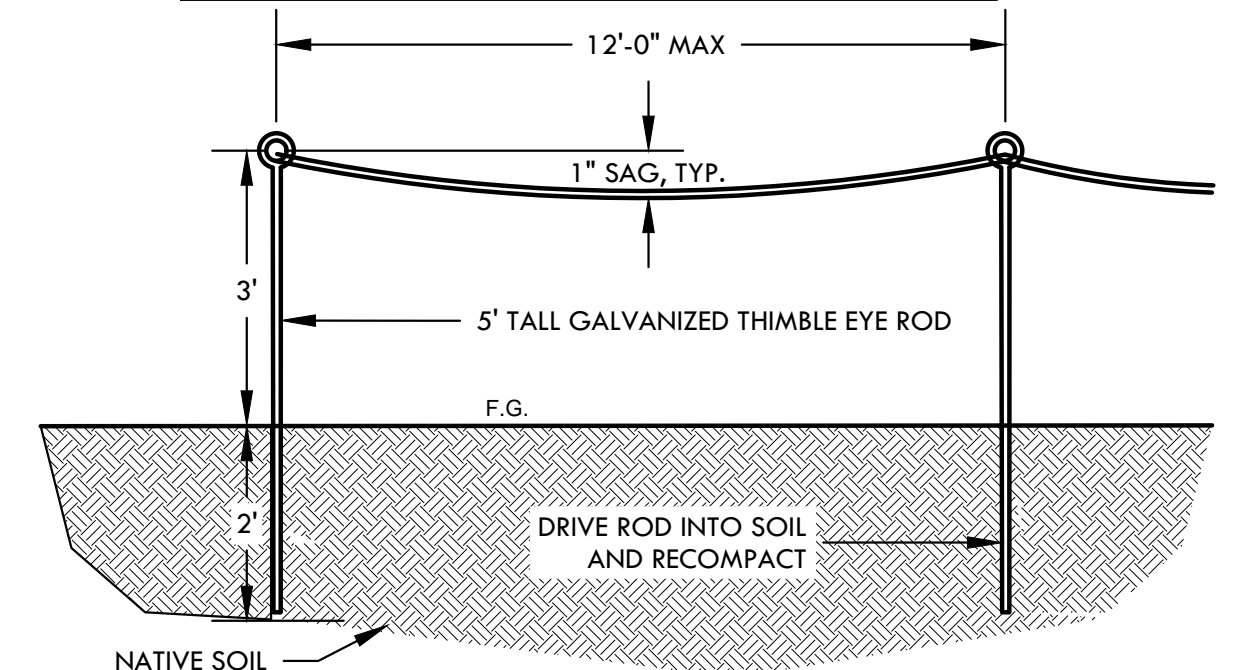
- NOTES:
1. SIGN POST SHALL BE LOCATED IN A POSITION WITH HIGH VISIBILITY.
 2. SIGN POST SHALL BE STAINED BROWN BEFORE MOUNTING SIGN PLATES.



4 TYPICAL SIGN INSTALLATION DETAILS
SCALE: AS DIMENSIONED



6 TYPICAL SIGN POST FOOTING DETAIL
SCALE: AS DIMENSIONED



5 RESOURCE PROTECTION FENCING
SCALE: AS DIMENSIONED



7 SIGN EXAMPLES
SCALE: AS DIMENSIONED

SHEET TITLE:
RESTORATION DETAILS

CLIENT:
PILLAR POINT AIR FORCE STATION
MANTECH ADVANCED SYSTEMS INTERNATIONAL
2250 CORPORATE PARK DRIVE
HERNDON VA, 20171

PROJECT TITLE:
PILLAR POINT RESTORATION
BLUFFS AND HILLSIDES AT
PILLAR POINT AIR FORCE STATION
HALF MOON BAY, CALIFORNIA

FALL CREEK ENGINEERING, INC.
Consulting Engineers
Civil • Environmental • Water Resources

1525 SEABRIGHT AVE.
SANTA CRUZ, CA 95062
TEL: (831) 426-9054



DRAWN BY: JLS
CHECKED BY: RLC
DATE: MARCH 2018
JOB NO: 21611
SCALE: AS SHOWN
SHEET:

C4.0