

# CITY OF SAUSALITO BRIDGEWAY SLIDE REPAIR PROJECT MSE WALL ALTERNATIVE



SITE LOCATION MAP  
(NO SCALE)



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

**ABBREVIATIONS & SYMBOLS**

APPROX	APPROXIMATELY
BW	BOTTOM OF WALL ELEVATION
COS	CITY OF SAUSALITO
(E)	EXISTING
FT	FEET
IN	INCH
LF	LINEAR FEET
(N)	NEW
STD DET	CALTRANS STANDARD DETAIL
TW	TOP OF WALL ELEVATION
UCS	MARIN CO. UNIFORM CONSTRUCTION STANDARDS
	APPROX BORING LOCATION BY MILLER PACIFIC

**GENERAL**

1. ALL CONDITIONS AND DIMENSIONS SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR. ANY DISCREPANCIES THAT REQUIRE CLARIFICATION OR REVISIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE STARTING WORK.
2. THE CONTRACTOR SHALL POSSESS A CLASS "A" LICENSE.
3. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, SAFETY, AND SEQUENCE.
4. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT PRIOR TO START OF ANY CONSTRUCTION. CONTRACTOR SHALL NOTIFY ALL PUBLIC OR PRIVATE UTILITY COMPANIES A MINIMUM OF 48 HOURS PRIOR TO COMMENCEMENT OF WORK ADJACENT TO EXISTING UTILITY LINES. CONTRACTOR SHALL BE AWARE OF OVERHEAD LINES AT THE CONSTRUCTION SITE AND SHALL MAKE EVERY EFFORT TO PROTECT UTILITIES DURING CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF ALL EXISTING UTILITIES IN THE FIELD. ANY UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
6. CITY OF SAUSALITO ENCROACHMENT PERMIT IS REQUIRED FOR ALL WORK, INCLUDING STAGING OF MATERIALS AND EQUIPMENT IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AN ENCROACHMENT PERMIT IN ACCORDANCE WITH THE PERMIT REQUIREMENTS. THE CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN TO THE ENGINEER FOR REVIEW PRIOR TO STARTING ANY WORK AT THE SITE.
7. THE CONTRACTOR SHALL COORDINATE WITH ENGINEER TO ESTABLISH THE RETAINING WALL LAYOUTS PRIOR TO BEGINNING EXCAVATION AND WALL CONSTRUCTION.
8. THE CONTRACTOR SHALL HAUL AWAY ALL UNUSED/EXCESS EXCAVATED MATERIAL OFF SITE FOR LEGAL DISPOSAL.
9. NO CONSTRUCTION MATERIALS, EQUIPMENT, DEBRIS OR WASTE SHALL BE PLACED OR STORED WHERE IT MAY BE SUBJECT TO WIND OR RAIN EROSION AND DISPERSION.
10. WORKMANSHIP TO BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS ALONG WITH 2018 CALTRANS STANDARD SPECIFICATIONS, MARIN COUNTY AND CITY OF SAUSALITO STANDARDS AND GENERALLY ACCEPTED CONSTRUCTION PRACTICES.

**SURVEY NOTES**

1. TOPOGRAPHY BASED ON A FIELD SURVEY PERFORMED BY WILLIS SURVEYING IN 2017. CONTOURS ARE SHOWN EVERY TWO VERTICAL FEET.

**MECHANICALLY STABILIZED EARTH (MSE) SLOPES & RETAINING WALLS**

1. REFER TO TECHNICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR MSE SLOPES & RETAINING WALLS.
2. GEOSYNTHETIC REINFORCING SHALL BE INSTALLED AS SHOWN ON THE PLANS AND SHALL CONSIST OF MIRAGRID 3XT OR APPROVED EQUAL.
3. BLOCKS USED IN WALL CONSTRUCTION SHALL BE VERSA-LOK SQUARE FOOT UNITS OR APPROVED EQUAL.
4. FILL USED FOR WALL BACKFILL AND FILL SLOPES SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING EIGHT INCHES IN THICKNESS. BACKFILL SHALL BE MOISTURE CONDITIONED TO AT LEAST TWO PERCENT ABOVE THE OPTIMUM MOISTURE CONTENT AND COMPACTED TO AT LEAST 90 PERCENT RELATIVE COMPACTION IN ACCORDANCE WITH ASTM D1557.

**DRAINAGE**

1. PIPE USED FOR DRAINAGE SHALL CONFORM TO ASTM D3034, SDR 35 OR APPROVED EQUAL.
2. USE SWEEP TYPE FITTINGS AT ALL CHANGES IN DIRECTION.
3. PIPE INSTALLATION SHALL CONFORM TO ALL REQUIREMENTS OUTLINED IN THE MOST RECENT VERSION OF THE CALIFORNIA PLUMBING CODE. EACH DRAINAGE PIPE SHALL BE PROVIDED WITH A CLEANOUT AT ITS UPSTREAM END, AND EACH RUN OF PIPING THAT IS MORE THAN 100 FEET IN TOTAL LENGTH SHALL BE PROVIDED WITH A CLEANOUT FOR EACH 100 FEET OR FRACTION THEREOF. IN LENGTH OF PIPING. AN ADDITIONAL CLEANOUT SHALL BE PROVIDED IN A DRAINAGE LINE FOR EACH AGGREGATE HORIZONTAL CHANGE IN DIRECTION EXCEEDING 135 DEGREES.
4. DRAIN INLETS SHALL CONSIST OF 24 IN X 24 IN DRAIN INLETS BY JENSEN PRECAST (MODEL NO. D1242436 OR D1242448) WITH ASSOCIATED RISERS AND PEDESTAL RATED GRATE COVERINGS OR APPROVED EQUAL.
5. RECTANGULAR SIDEWALK UNDERDRAINS SHALL CONSIST OF SIZE #3 BY FOUNDRY SERVICE & SUPPLIES, INC. OR APPROVED EQUAL.

**EROSION & SEDIMENT CONTROL**

1. EROSION AND SEDIMENT CONTROL MEASURES SHALL COMPLY WITH ALL REQUIREMENTS OUTLINED IN THE MARIN COUNTY STORMWATER POLLUTION PREVENTION PROGRAM (MCSTOPPP) MINIMUM CONTROL MEASURES FOR SMALL CONSTRUCTION PROJECTS AS OUTLINED IN THE MCSTOPPP CONSTRUCTION EROSION AND SEDIMENT CONTROL PLAN APPLICANT PACKAGE.
2. ANY AREAS IN WHICH GROUND SURFACE AND VEGETATIVE COVER HAS BEEN DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE COVERED WITH A PRE-APPROVED SEED MIX AND BIODEGRADABLE EROSION CONTROL MATS UPON COMPLETION OF CONSTRUCTION.
3. EROSION CONTROL MATS SHALL CONSIST OF BIONET SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL.
4. STRAW WATTLES SHALL CONSIST OF GREEN SEDIMAX - SWB9 BY NORTH AMERICAN GREEN OR APPROVED EQUAL.

**SPECIAL INSPECTIONS**

1. PERIODIC SPECIAL INSPECTIONS AND STRUCTURAL OBSERVATION OF WALL CONSTRUCTION, AS REQUIRED BY THE 2019 CALIFORNIA BUILDING CODE (CBC) CHAPTER 17, SHALL BE PERFORMED BY MILLER PACIFIC OR A QUALIFIED TESTING AND INSPECTION AGENCY DURING WALL CONSTRUCTION, INCLUDING THE FOLLOWING:
  - 1.1 FOUNDATION & BENCHES: INTERMITTENT OBSERVATION OF EXCAVATED SOILS EXPOSED IN MSE WALL FOUNDATIONS AND BENCHES FOR MSE SLOPES.
  - 1.2 GEOSYNTHETIC REINFORCING: OBSERVATION OF EACH LAYER OF GEOSYNTHETIC REINFORCING FOR MSE WALLS AND SLOPES PRIOR TO COVERING WITH FILL.
  - 1.3 SUBDRAINS AND WALL DRAINAGE: OBSERVATION OF PERMEABLE MATERIAL, DRAIN PIPE, FILTER FABRIC (IF USED) AND CLEANOUTS PRIOR TO COVERING WITH FILL.
  - 1.4 REINFORCED EARTHEN FILL AND BACKFILL: INTERMITTENT OBSERVATION AND FIELD DENSITY TESTING OF COMPACTED BACKFILL. AS A MINIMUM, FIELD DENSITY SHALL BE PERFORMED FOR EVERY TWO FEET OF ELEVATION GAIN AND AT EVERY 100 FEET ALONG THE WALL OR SLOPE.

INDEX OF SHEETS	
SHEET NO.	SHEET TITLE
1	TITLE SHEET & NOTES
2	EXISTING CONDITIONS & SLOPE REPAIR PLAN
3	RETAINING WALL PROFILE & SECTIONS
4	DETAILS
5	BORING LOGS
6	EROSION & SEDIMENT CONTROL

KEVIN MCGOWAN, PUBLIC WORKS DIRECTOR/CITY ENGINEER

DATE

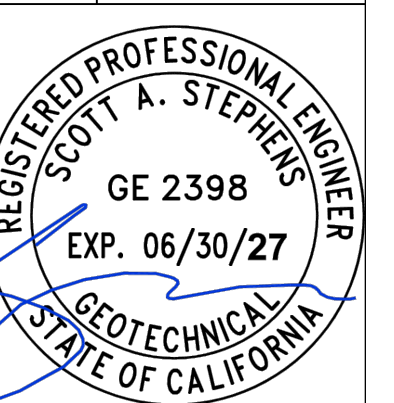
Revisions	By	Date	Mark	Description

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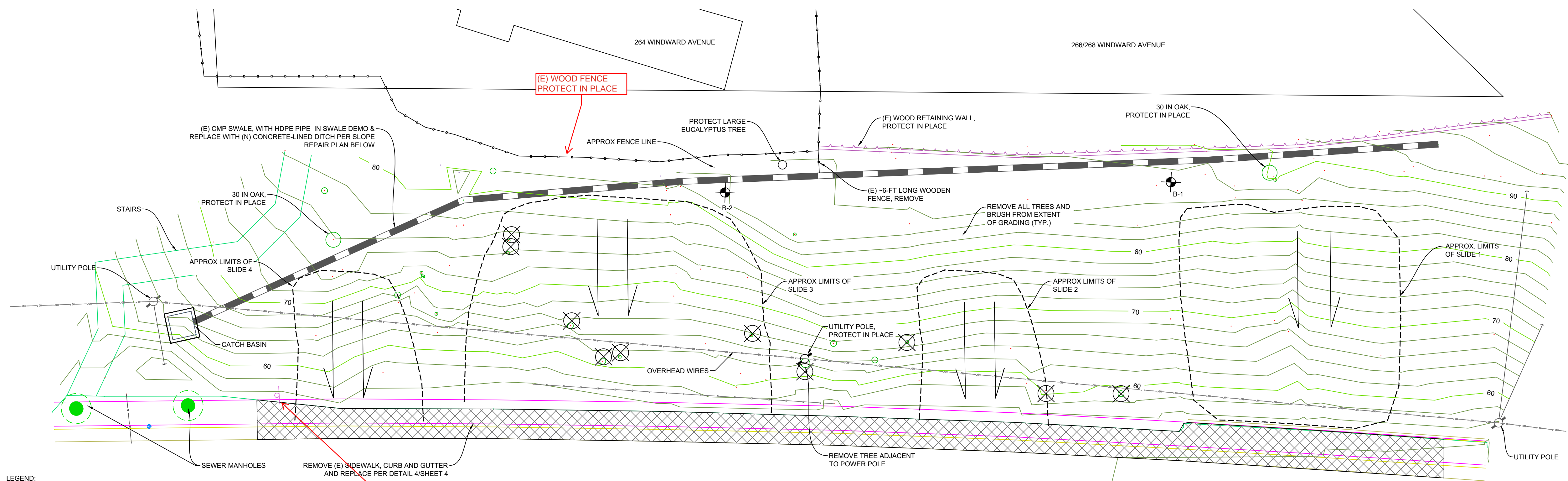
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Designed RCA	Date
Drawn RCA	Date
Checked SAS	Date

**TITLE SHEET & NOTES**  
Bridgeway Slide Repair  
MSE Wall Alternative  
Project No. 264.046



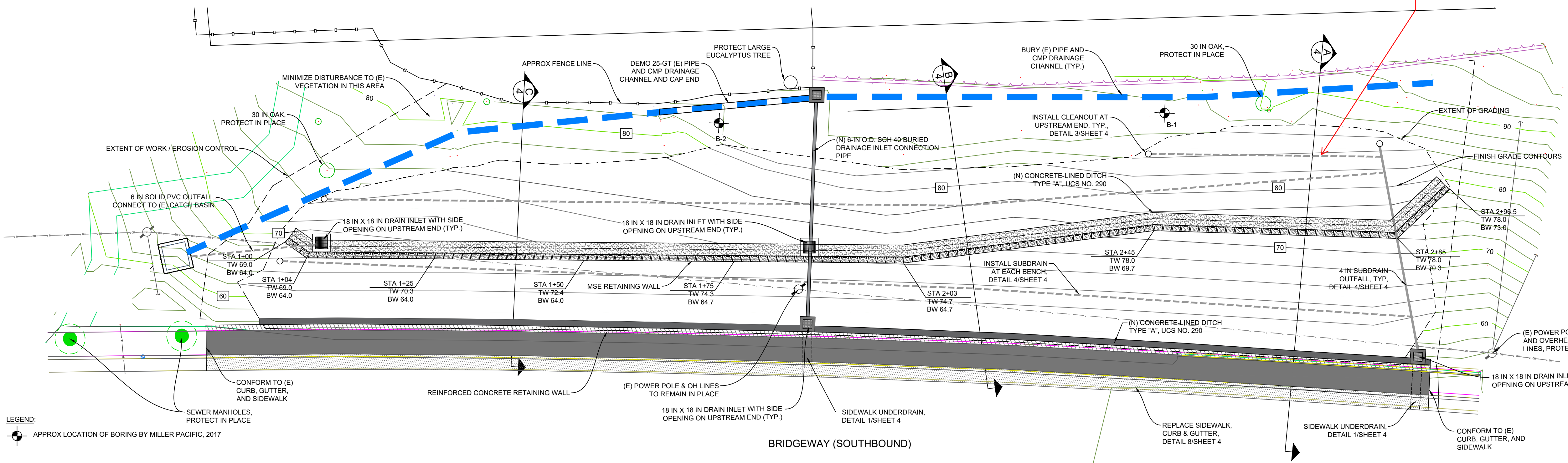
SHEET  
**1**



**LEGEND:**  
 ○ APPROX LOCATION OF BORING BY MILLER PACIFIC, 2017  
 ⊗ TREE TO BE REMOVED

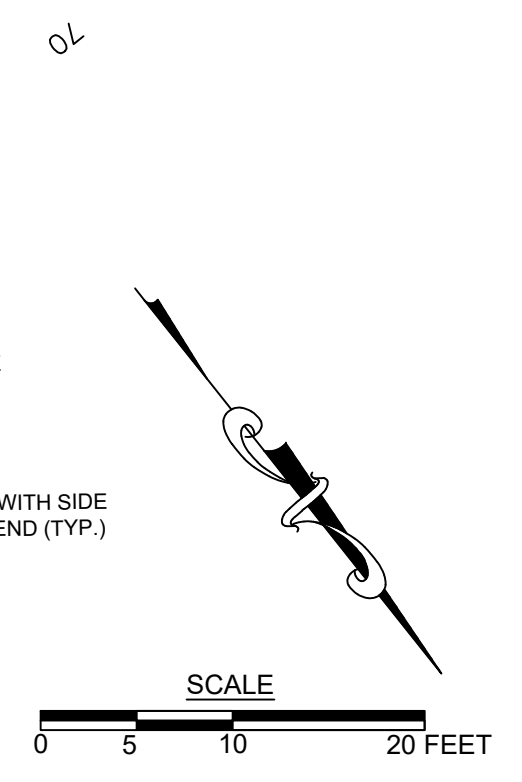
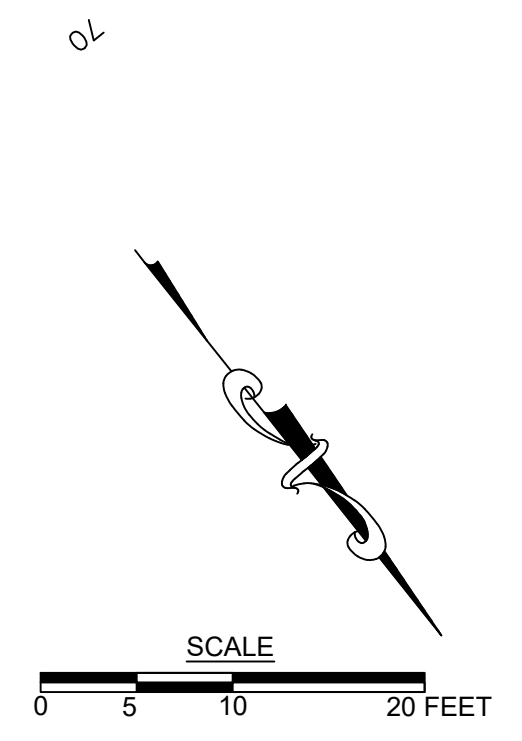
Existing roadside sign to be relocated onto new metal pole at location directed by engineer.

**1** EXISTING CONDITIONS & DEMOLITION PLAN  
 (SCALE: 1" = 10'-0")



**LEGEND:**  
 ○ APPROX LOCATION OF BORING BY MILLER PACIFIC, 2017

**2** SLOPE REPAIR PLAN  
 (SCALE: 1" = 10'-0")



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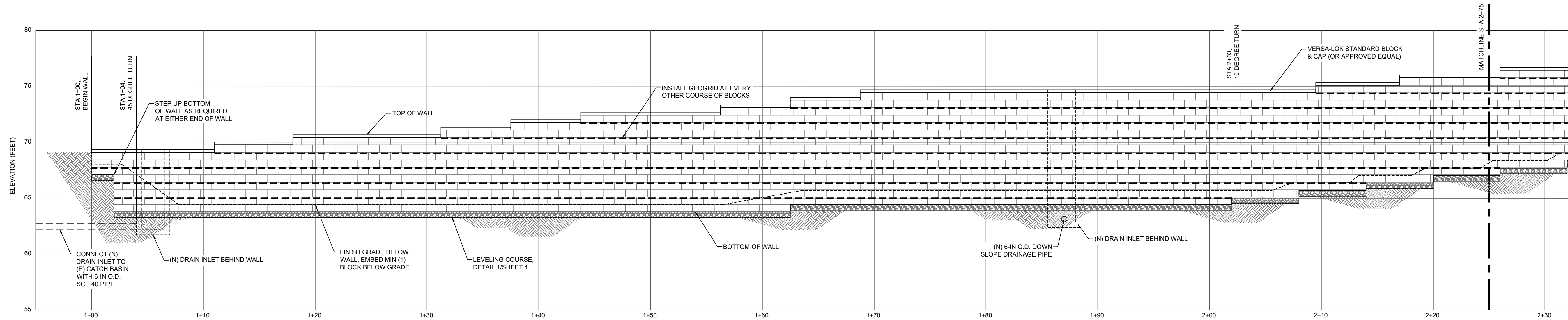


Designed	Date	Drawn	Date	Checked	Date
RCA		RCA		SAS	

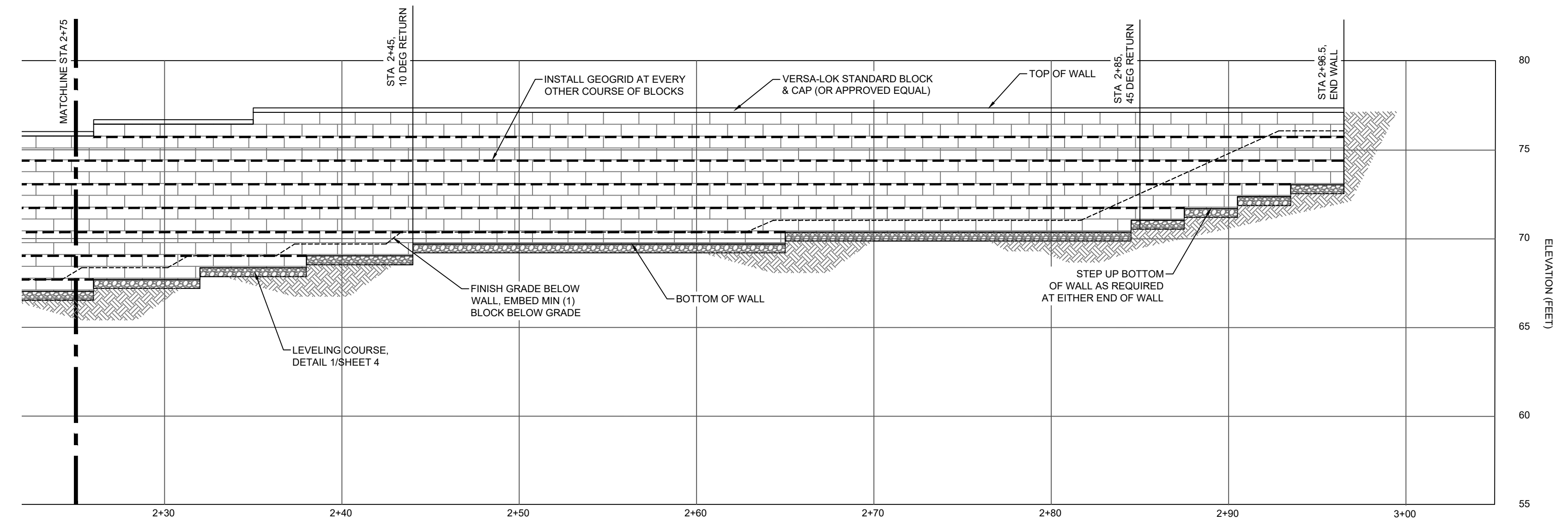
**EXISTING CONDITIONS & SLOPE REPAIR PLAN**  
 Bridgeway Slide Repair  
 MSE Wall Alternative  
 Project No. 264.046



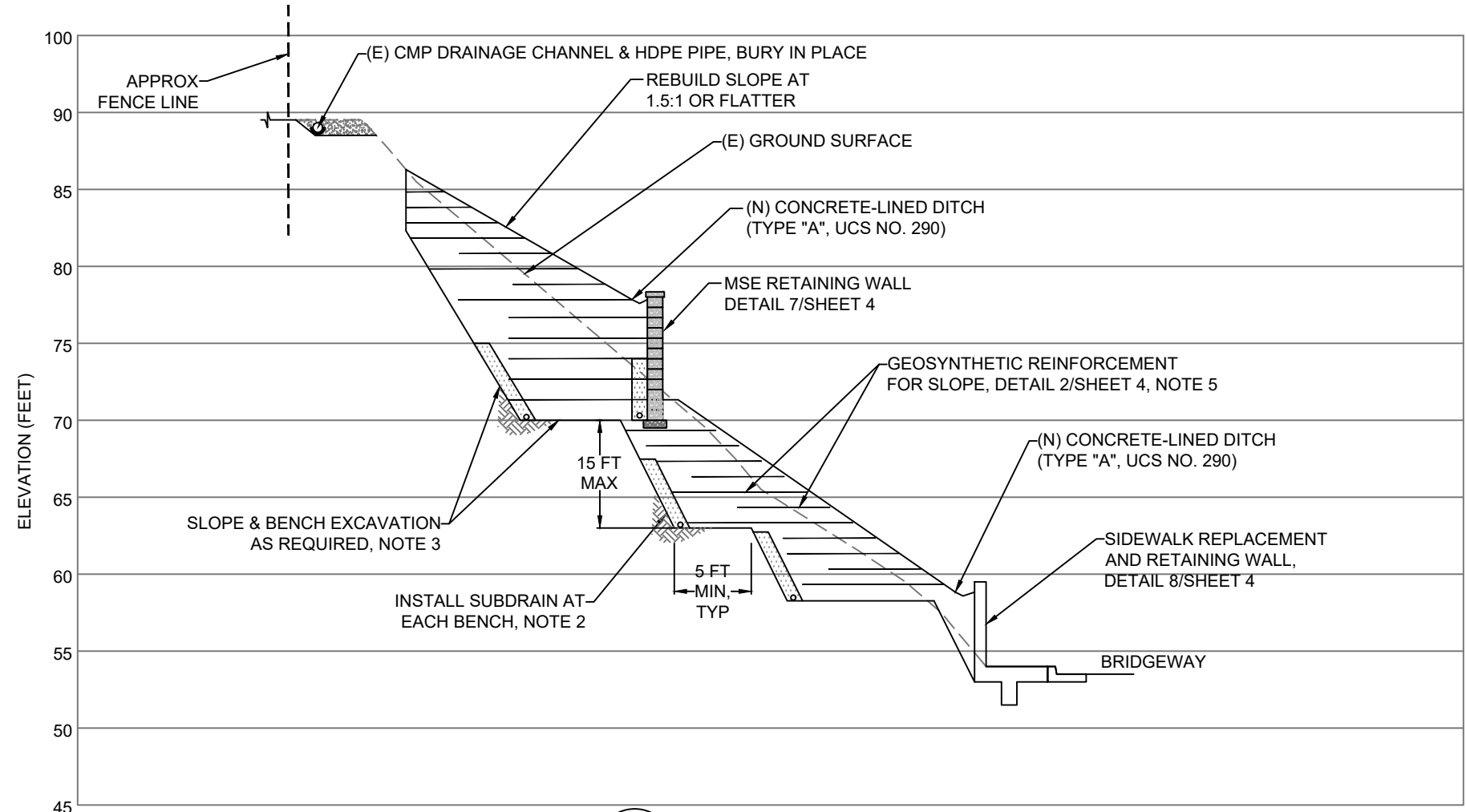
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**2**



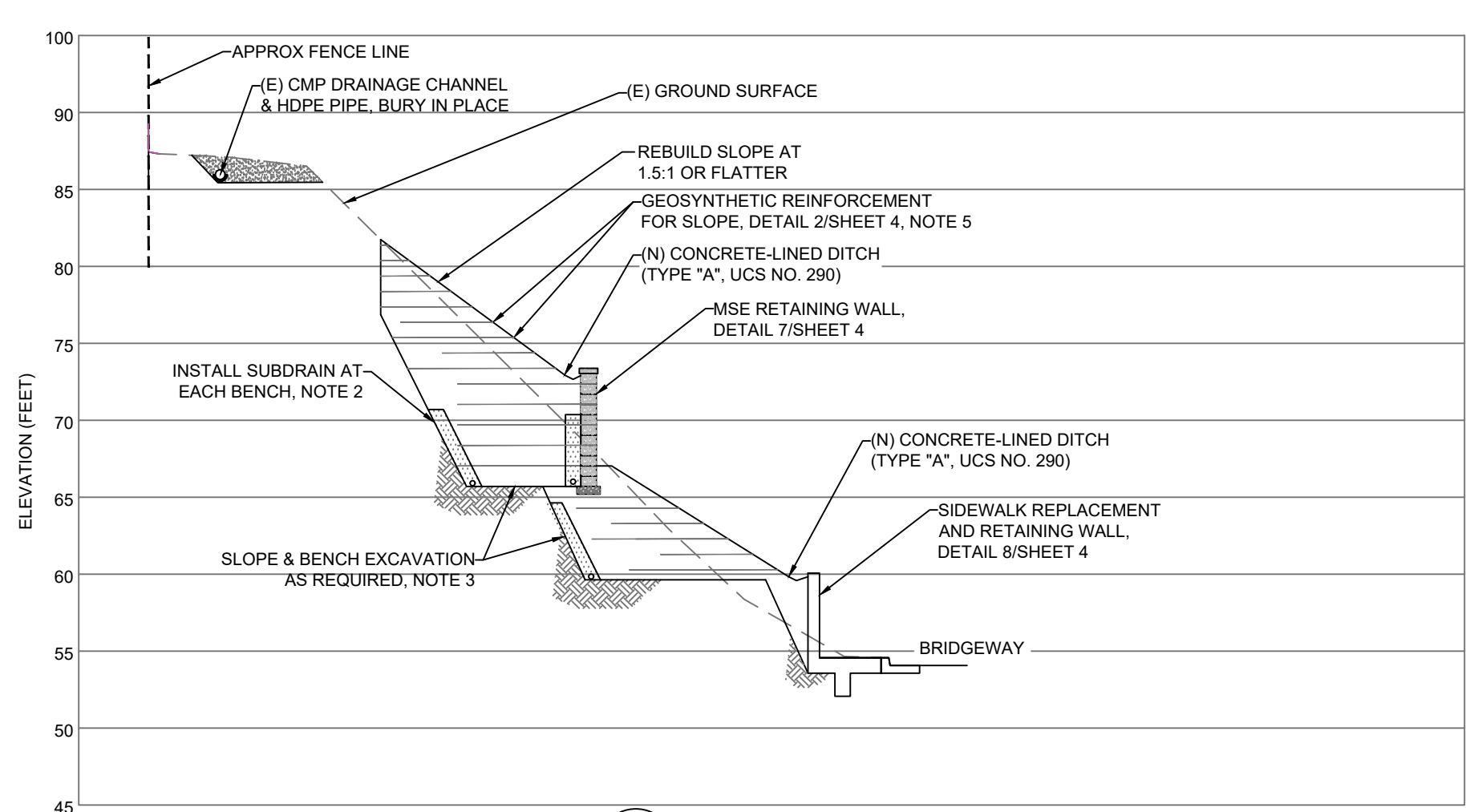
1 WALL PROFILE - STA 1+00 TO 2+30  
(SCALE: 1" = 5'-0")



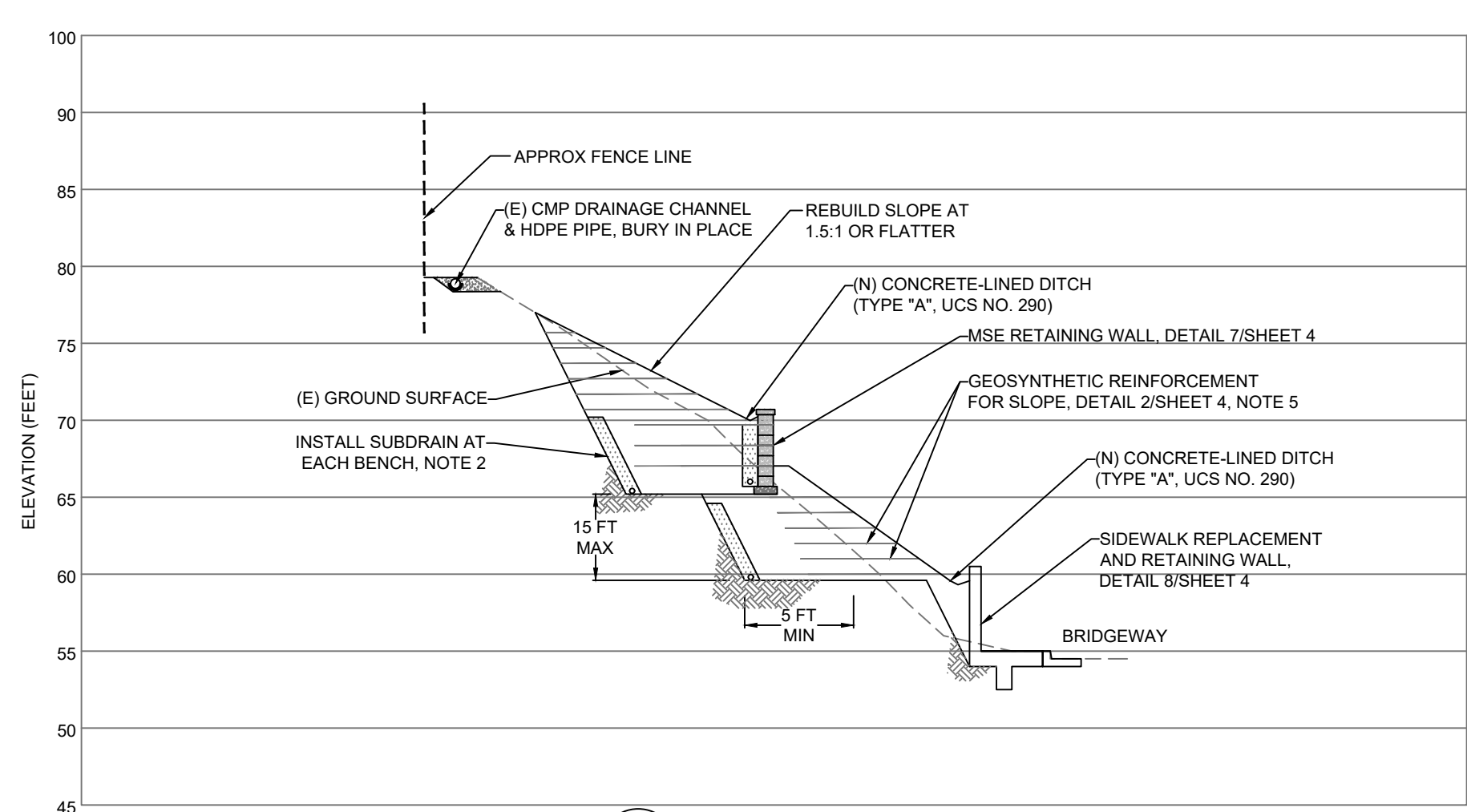
2 WALL PROFILE - STA 2+30 TO 3+00  
(SCALE: 1" = 5'-0")



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



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



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

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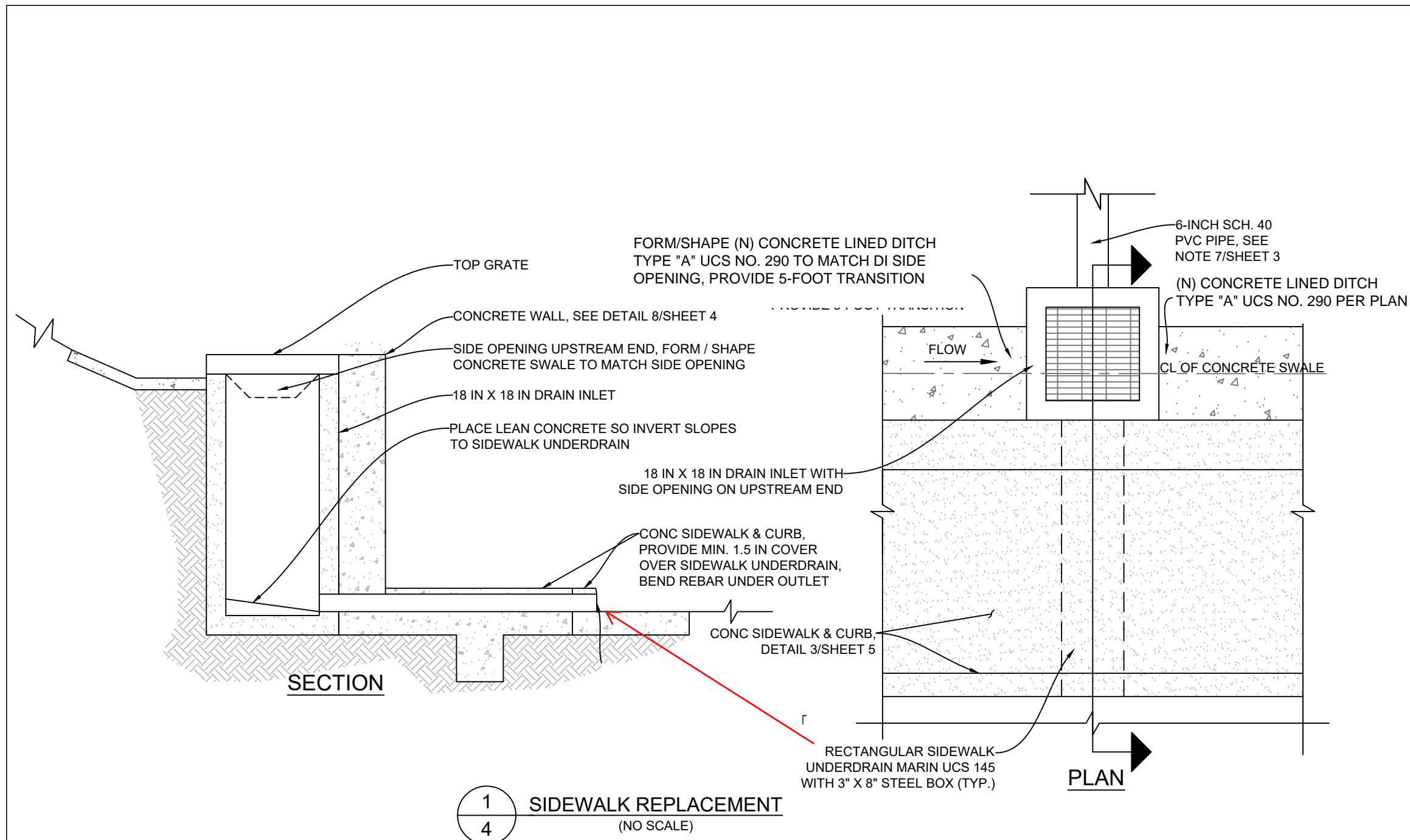
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RETAINING WALL PROFILE & SECTIONS  
Bridgeway Slide Repair  
MSE Wall Alternative

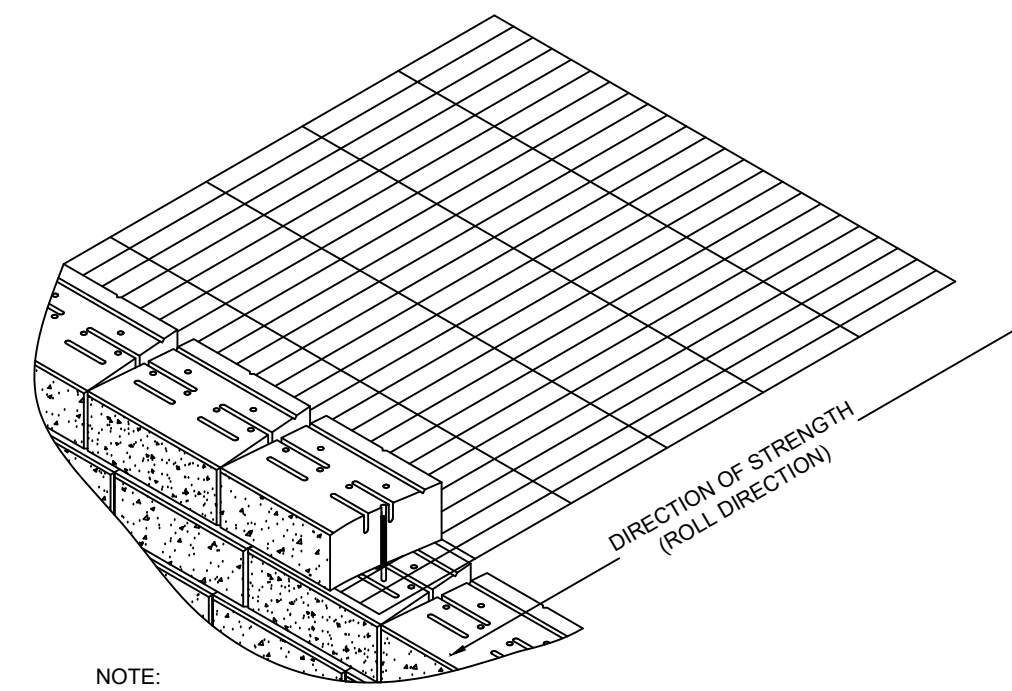
Project No. 264.046

REGISTERED PROFESSIONAL ENGINEER  
SCOTT A. STEPHENS  
GE 2398  
EXP. 06/30/27  
GEOTECHNICAL  
STATE OF CALIFORNIA

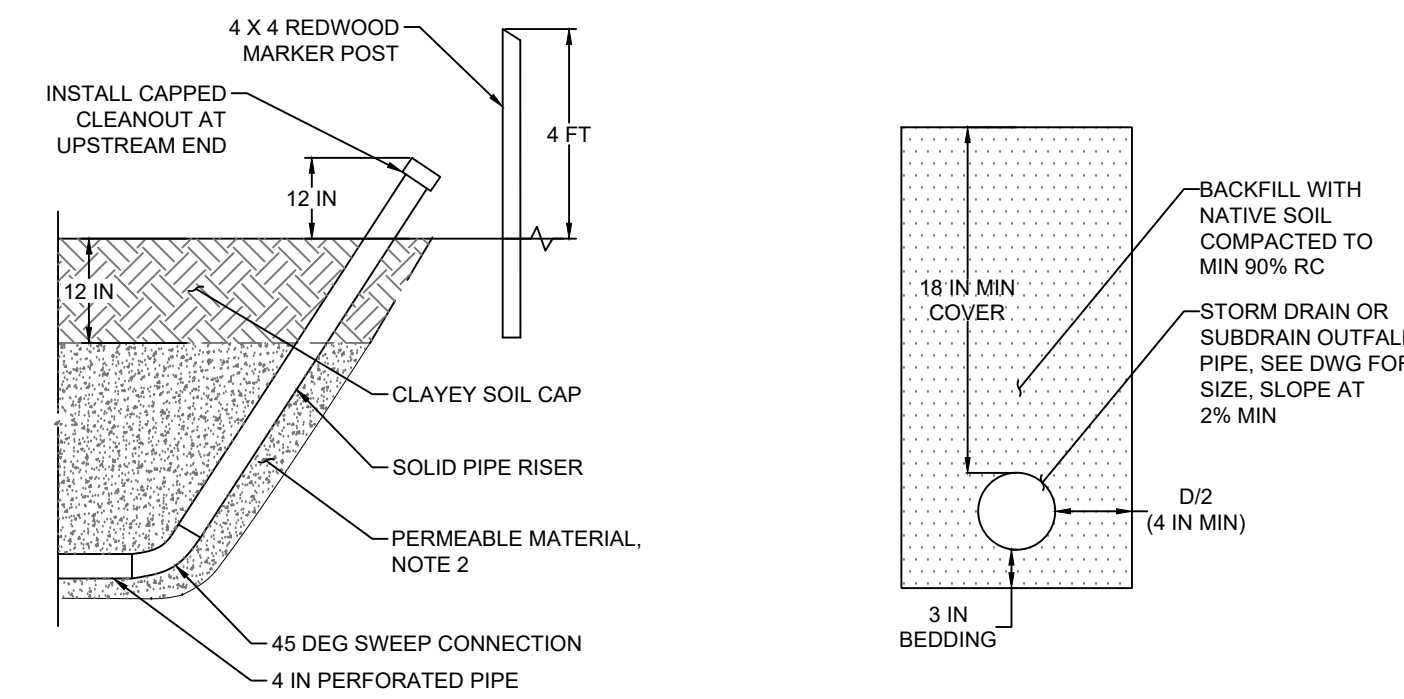
SHEET  
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1  
4 SIDEWALK REPLACEMENT  
(NO SCALE)

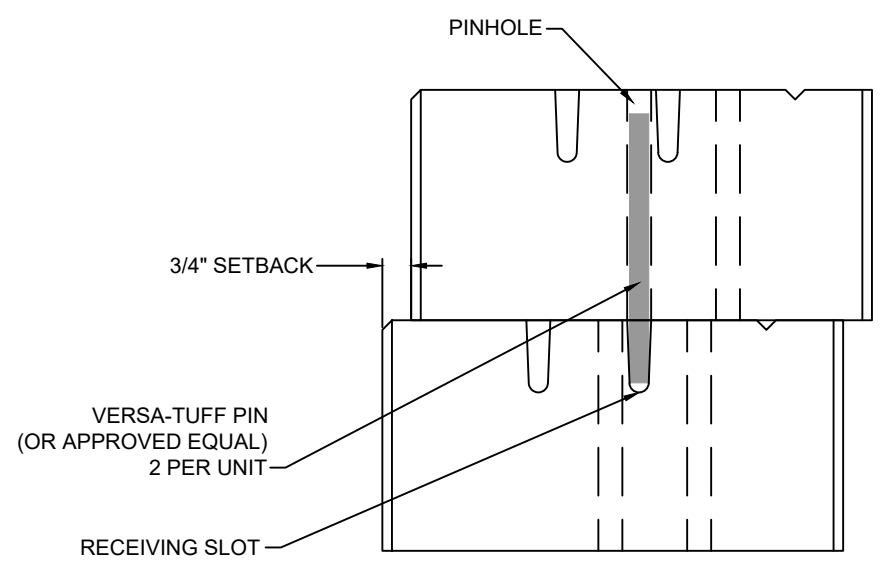


2  
4 GEOSYNTHETIC REINFORCEMENT INSTALLATION  
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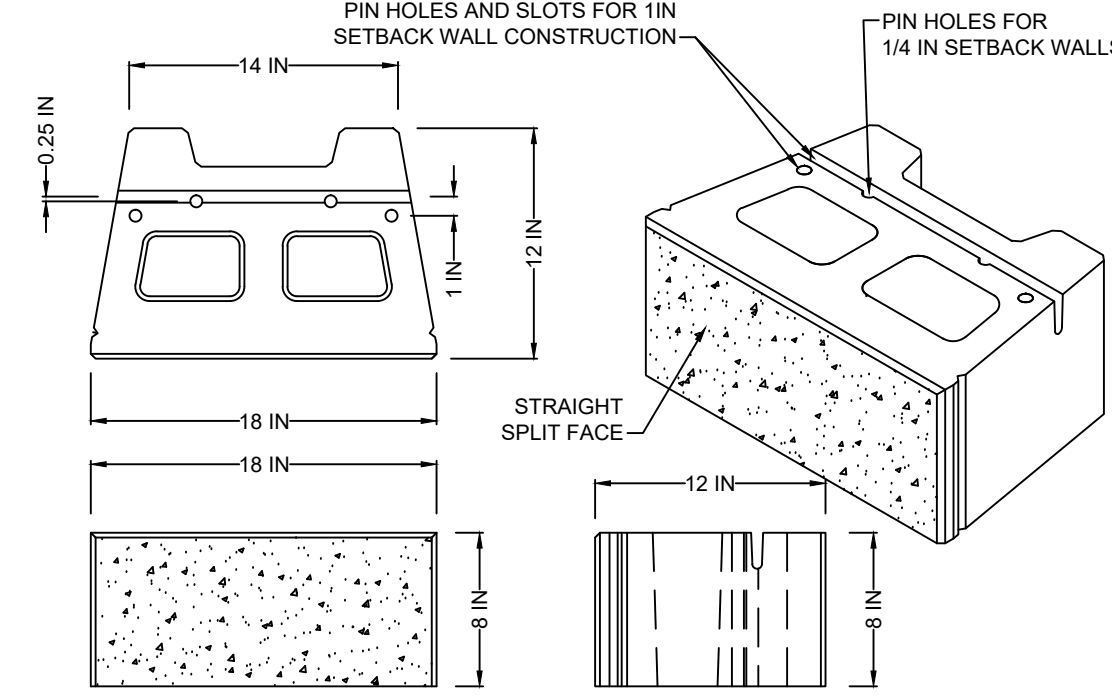


3  
4 SUBDRAIN CLEANOUT  
(NO SCALE)

4  
4 STORM DRAIN TRENCH  
(NO SCALE)

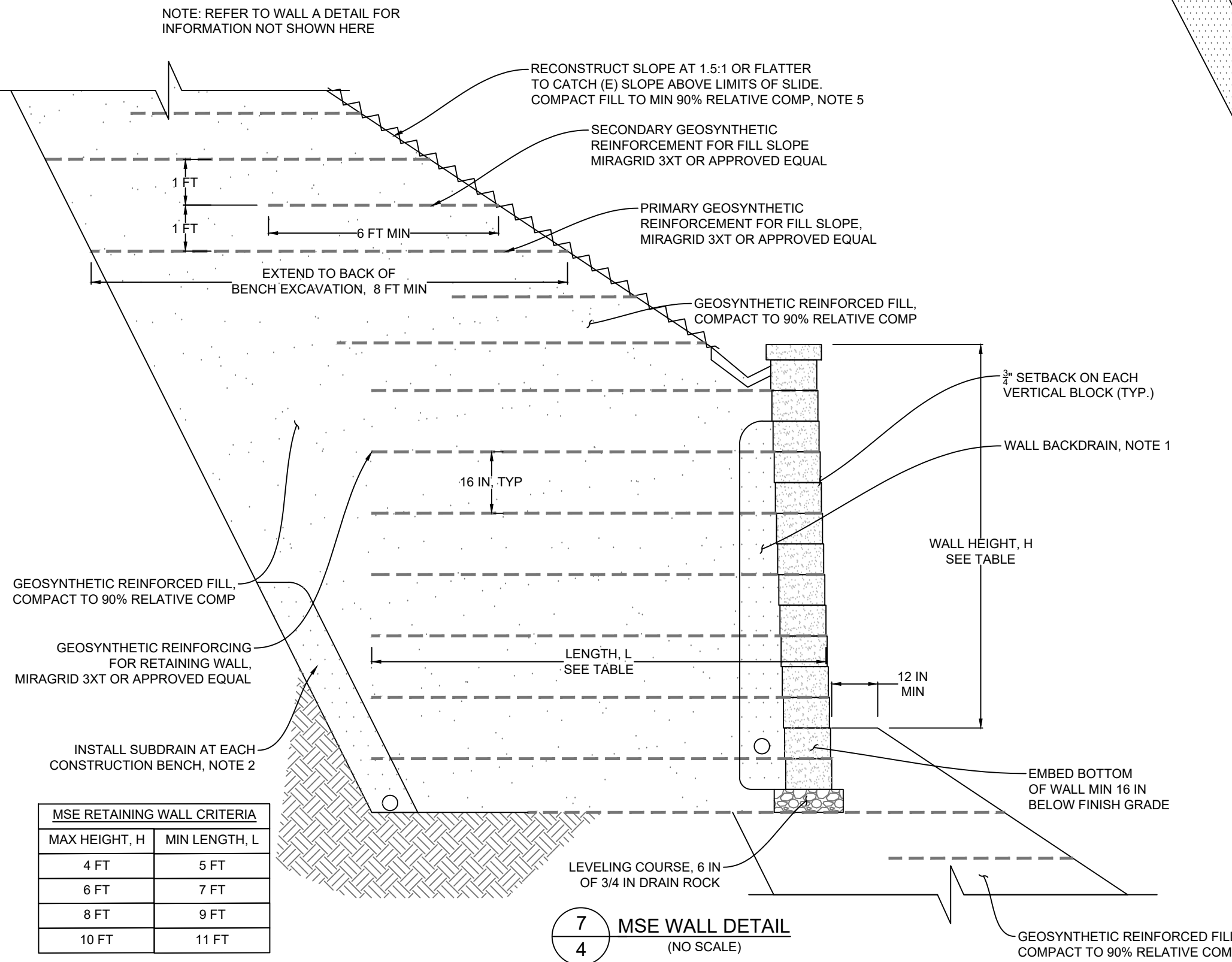


5  
4 PINNING DETAIL  
(NO SCALE)

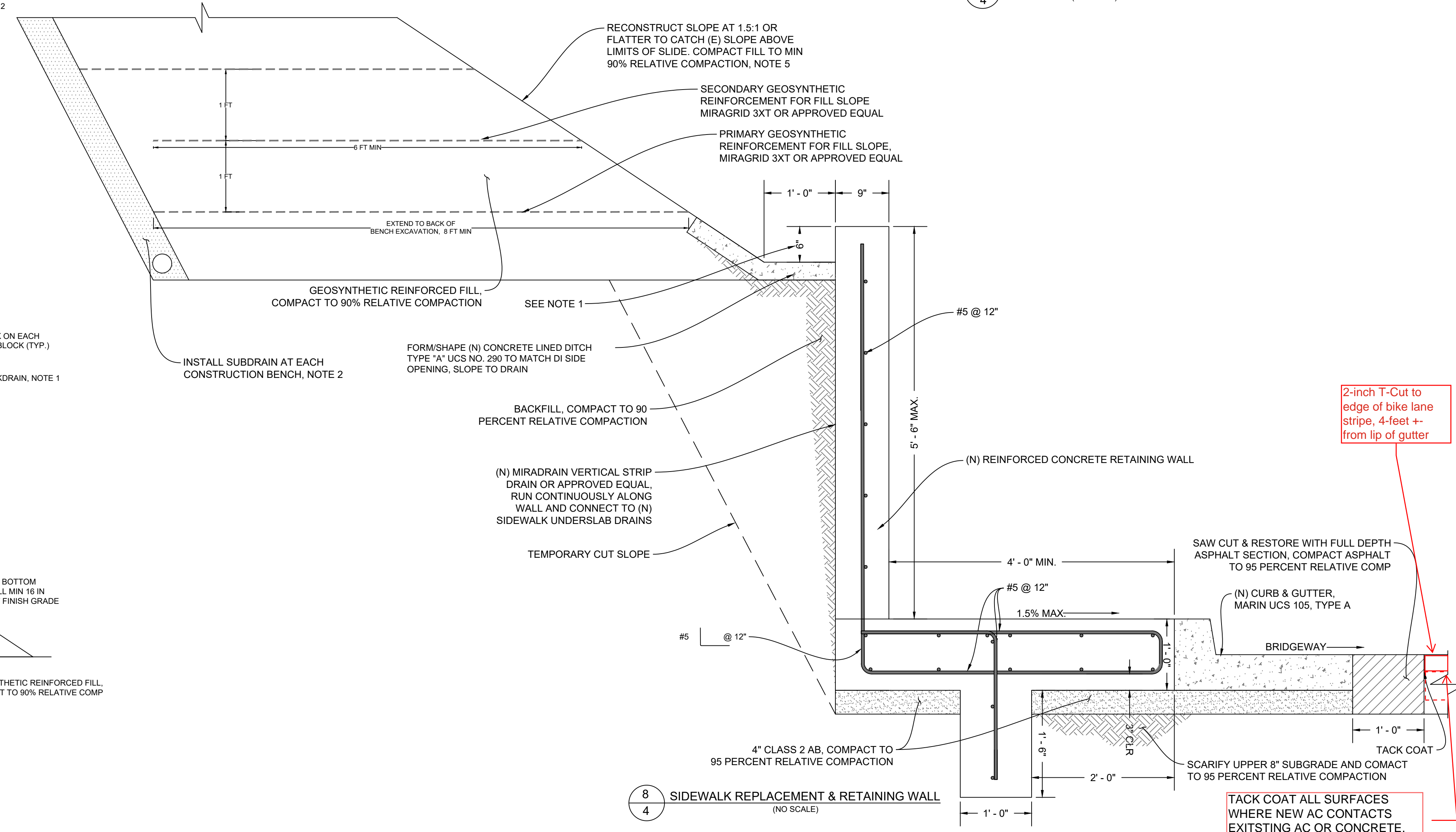


6  
4 VERSALOK SQUARE FOOT UNIT  
(NO SCALE)

- NOTES
- RETAINING WALL DRAIN SHALL BE AT LEAST 12-IN-WIDE AND SHALL CONSIST OF CALTRANS CLASS 2 PERMEABLE MATERIAL. WALL DRAIN SHALL EXTEND UP 12 INCHES BELOW BOTTOM OF CONCRETE-LINED DITCH.
  - SUBDRAINS SHALL BE AT LEAST 12-IN-WIDE AND SHALL CONSIST OF CALTRANS CLASS 1 PERMEABLE MATERIAL WRAPPED IN FILTER FABRIC OR CALTRANS CLASS 2 PERMEABLE MATERIAL. SUBDRAIN SHALL EXTEND AT LEAST 5 FT ABOVE CONSTRUCTION BENCH.
  - TEMPORARY SLOPING AND BENCHING FOR WALL AND SLOPE REPAIR SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM TO ALL OSHA REQUIREMENTS.
  - INSTALL GEOGRID PER MANUFACTURER'S REQUIREMENTS. THE GEOTECHNICAL ENGINEER SHALL OBSERVE PLACEMENT OF EACH GEOGRID LAYER PRIOR TO COVERING WITH FILL.
  - GEOSYNTHETIC REINFORCEMENT MAY BE OMITTED FOR SLOPES INCLINED AT 2:1 OR FLATTER.



7  
4 MSE WALL DETAIL  
(NO SCALE)



8  
4 SIDEWALK REPLACEMENT & RETAINING WALL  
(NO SCALE)

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DETAILS

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4



