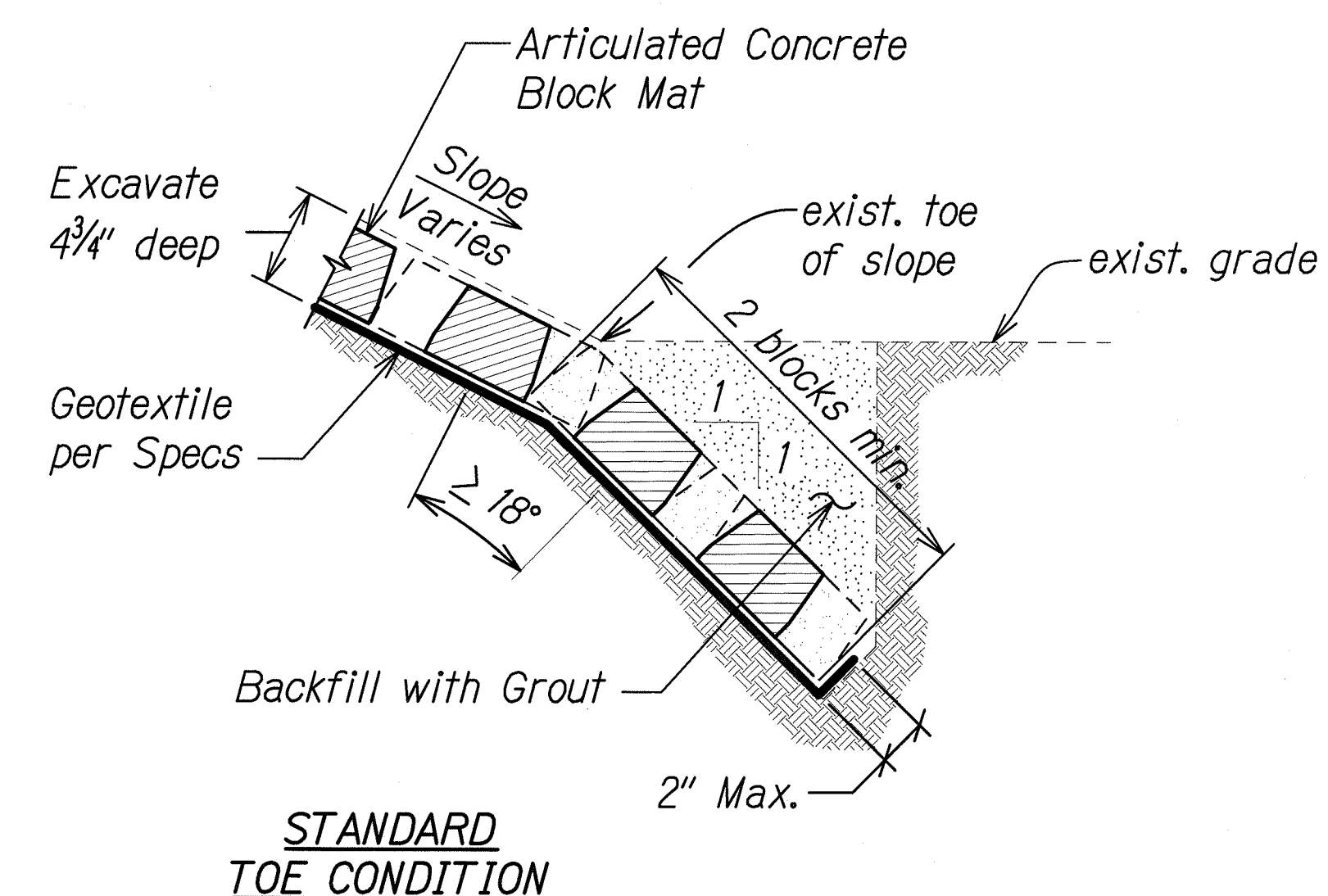
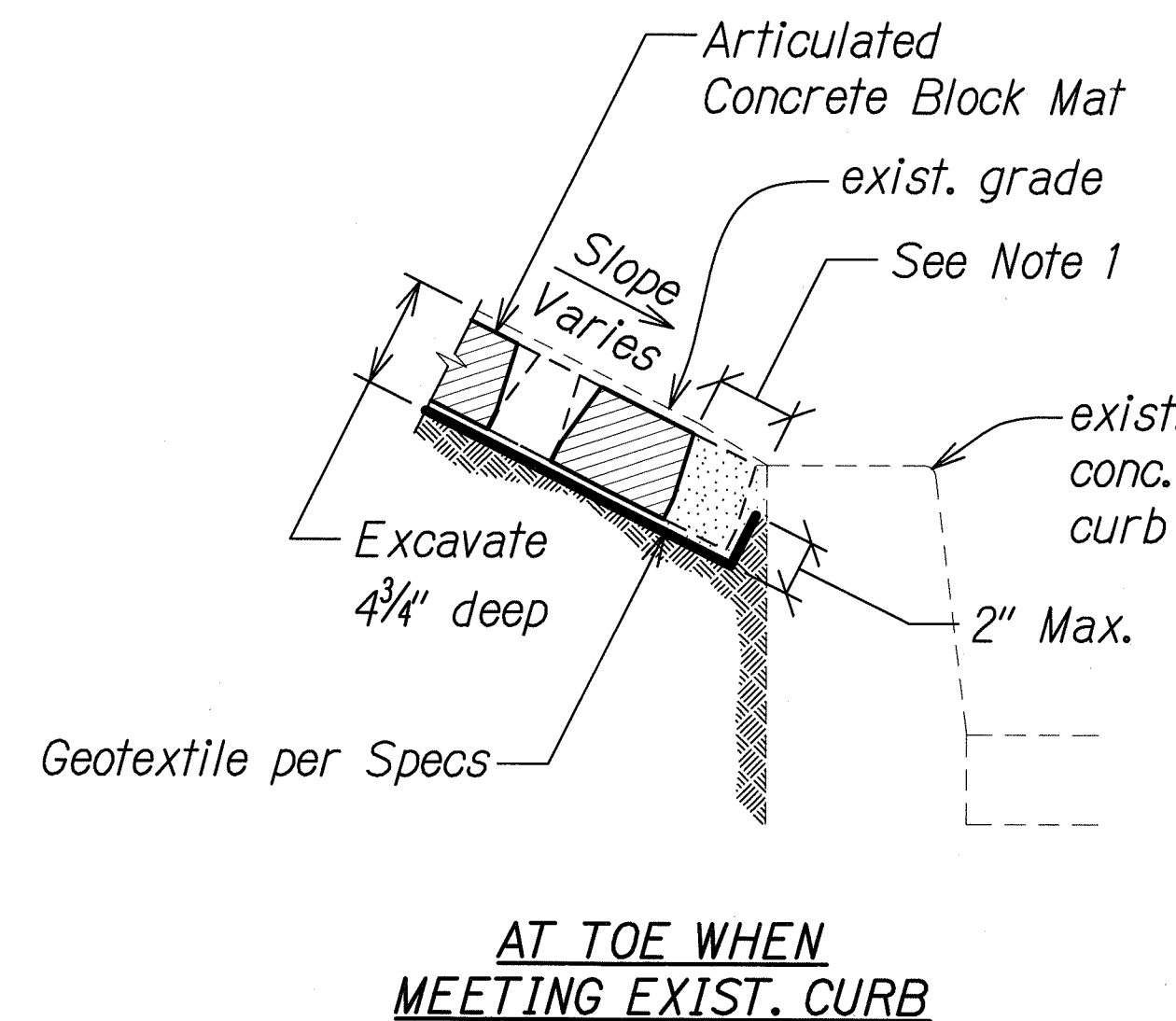
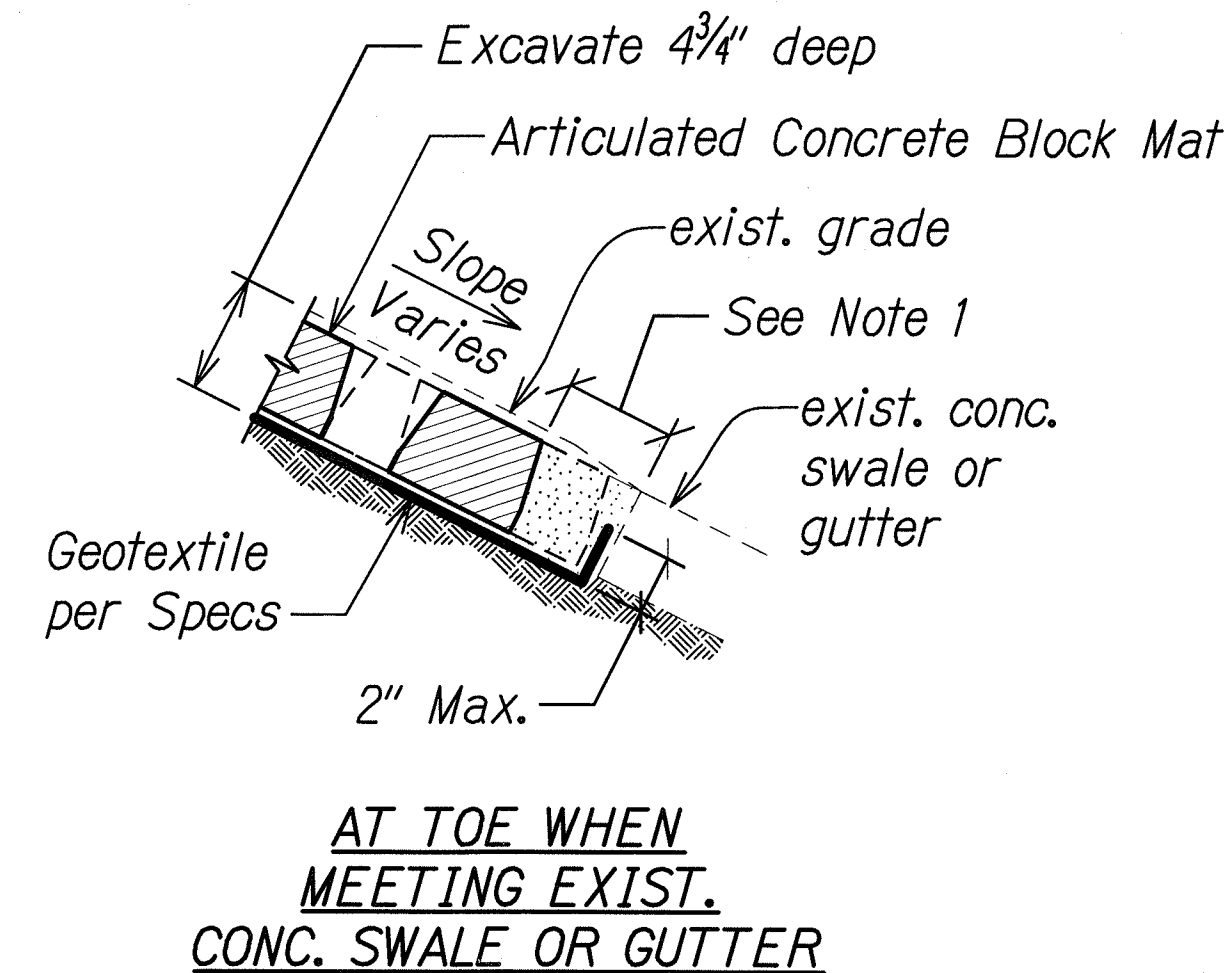
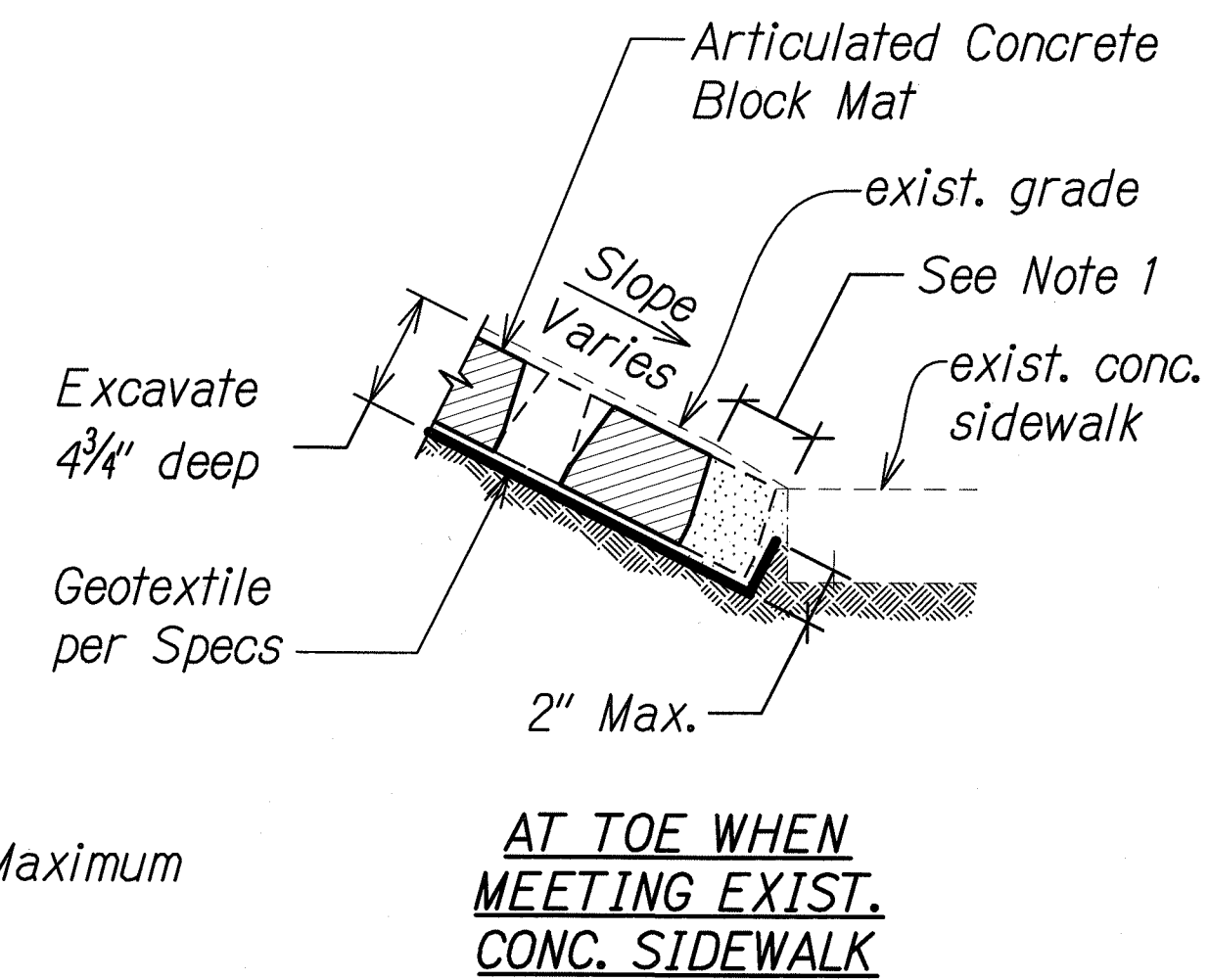
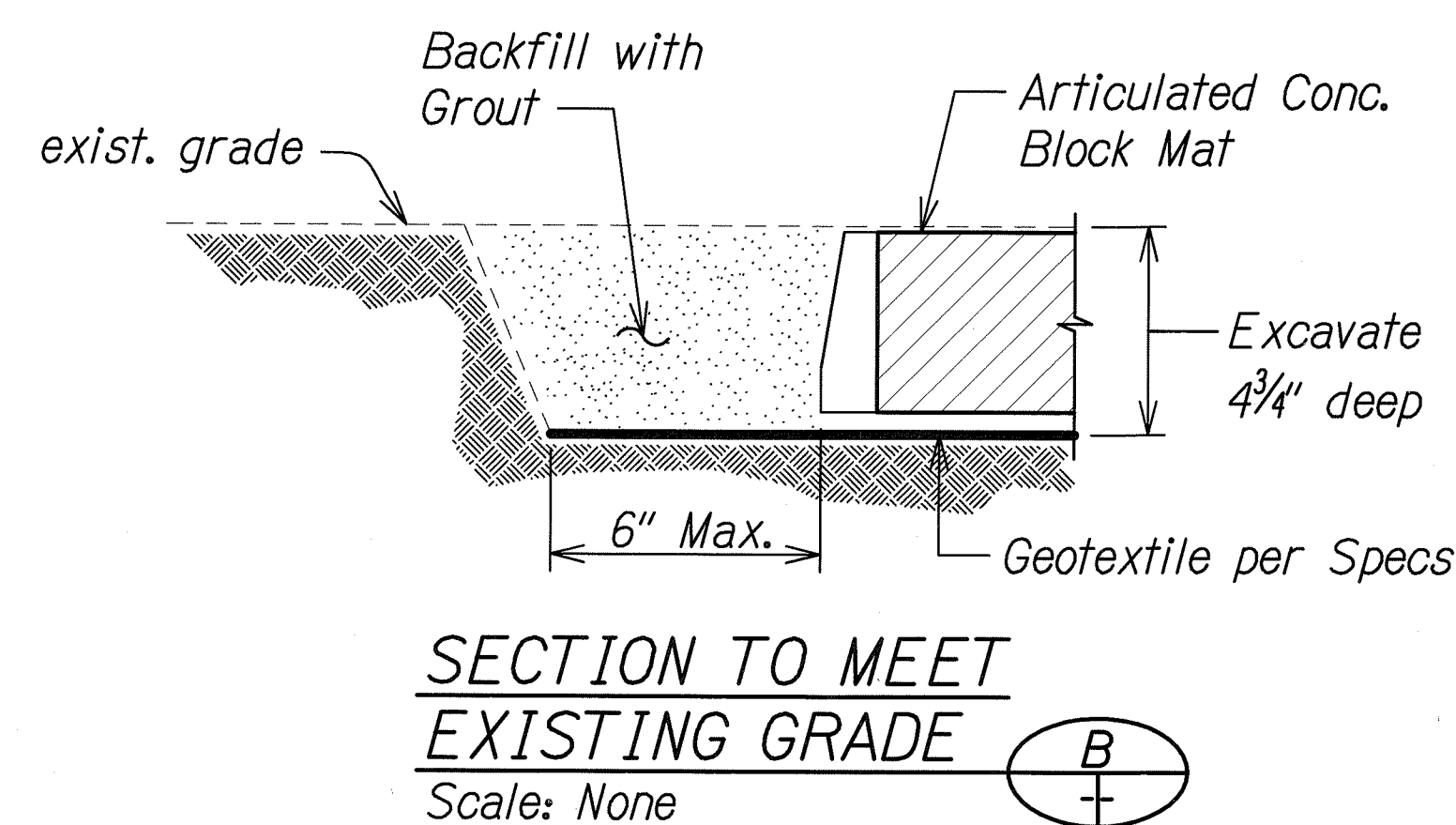
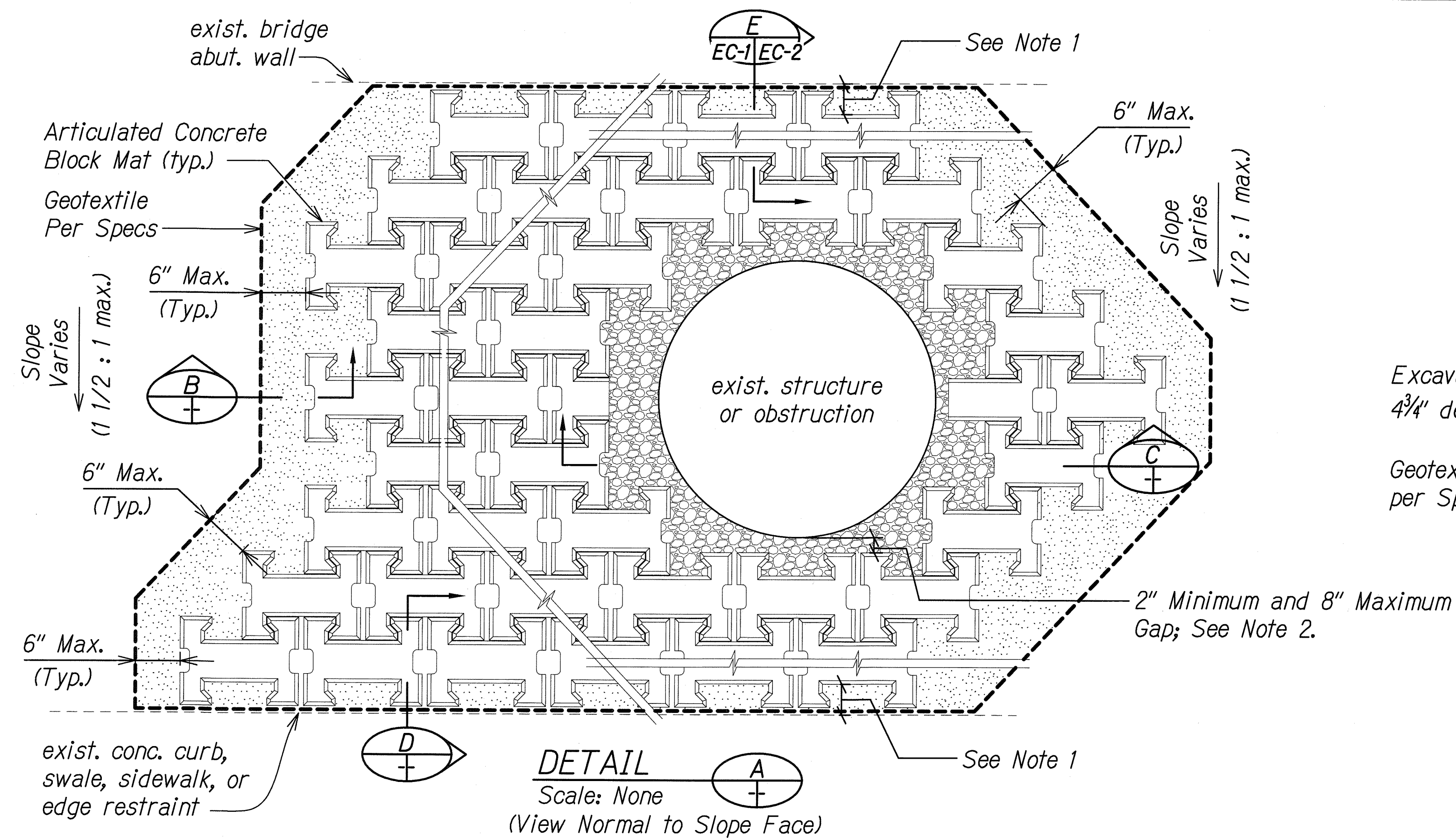
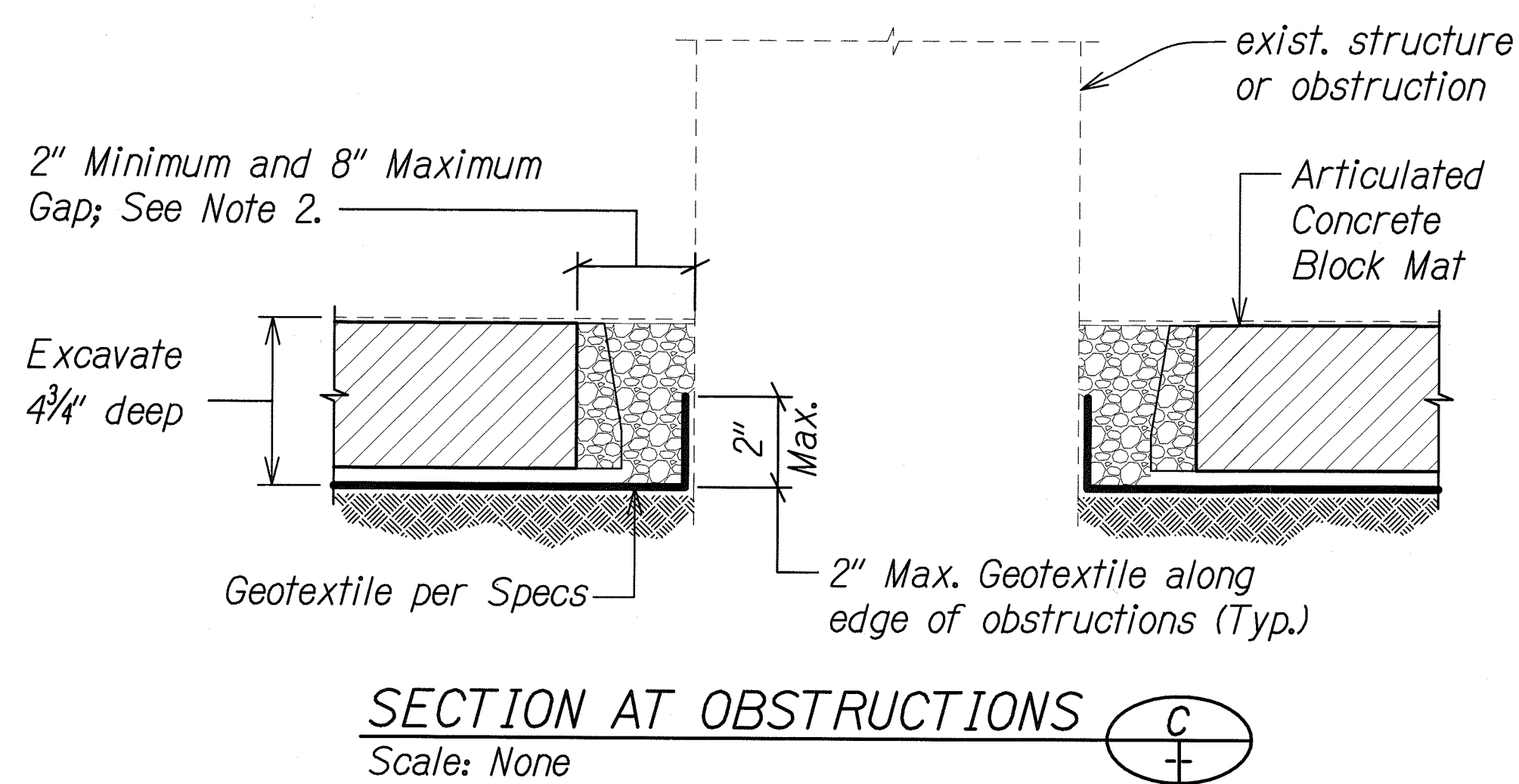


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-O-04-10M	2010	ADD. 11	45

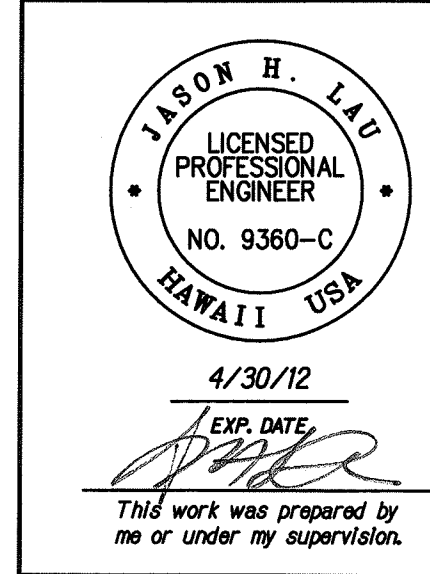


TYPICAL SECTION
Scale: None



- NOTES:**
1. Grout all gaps at peak and toe of ACBM.
 2. ACBM blocks may be sawcut to meet the space requirements. The remaining open areas shall be filled with uncompacted 3B Fine aggregate material and made flush with the top of the ACBMs as indicated in the Specifications.

DATE	REVISION
6/9/10	Changed design of ACBM system around exist. structure or obstruction



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ARTICULATED CONCRETE BLOCK MAT DETAILS

SLOPE MAINTENANCE FOR EROSION CONTROL AT VARIOUS SITES ON OAHU, PHASE 4

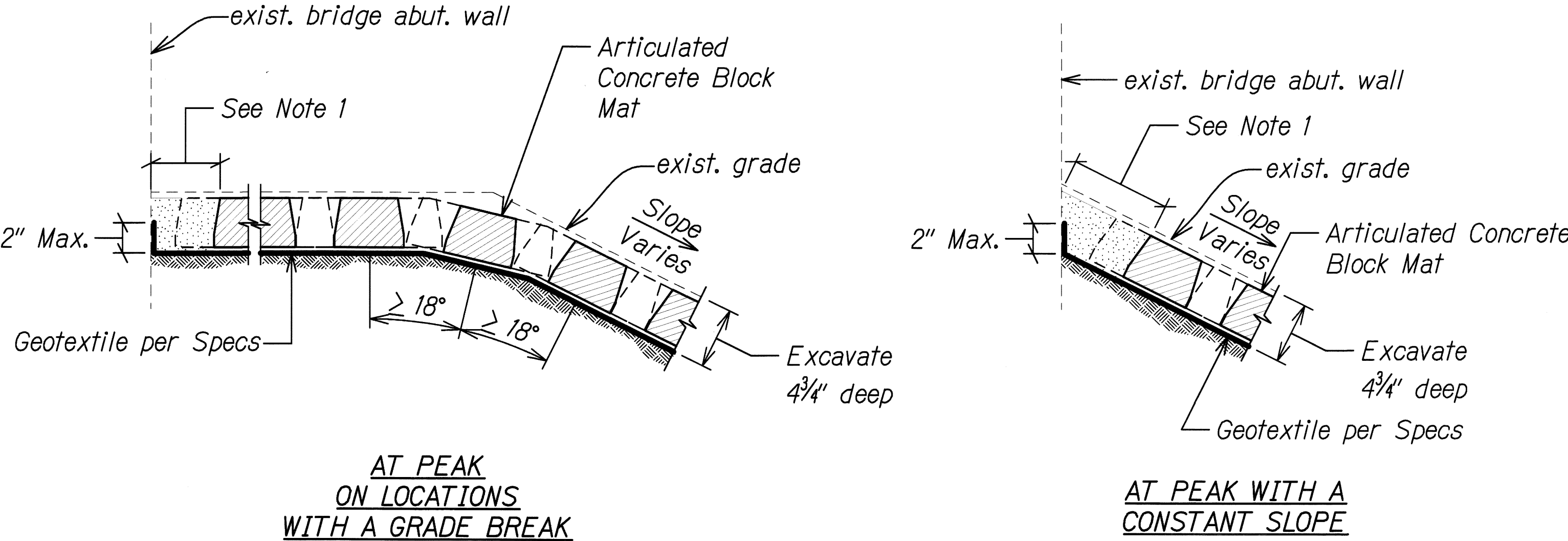
Project No. HWY-O-04-10M

Scale: As Shown Date: May 2010

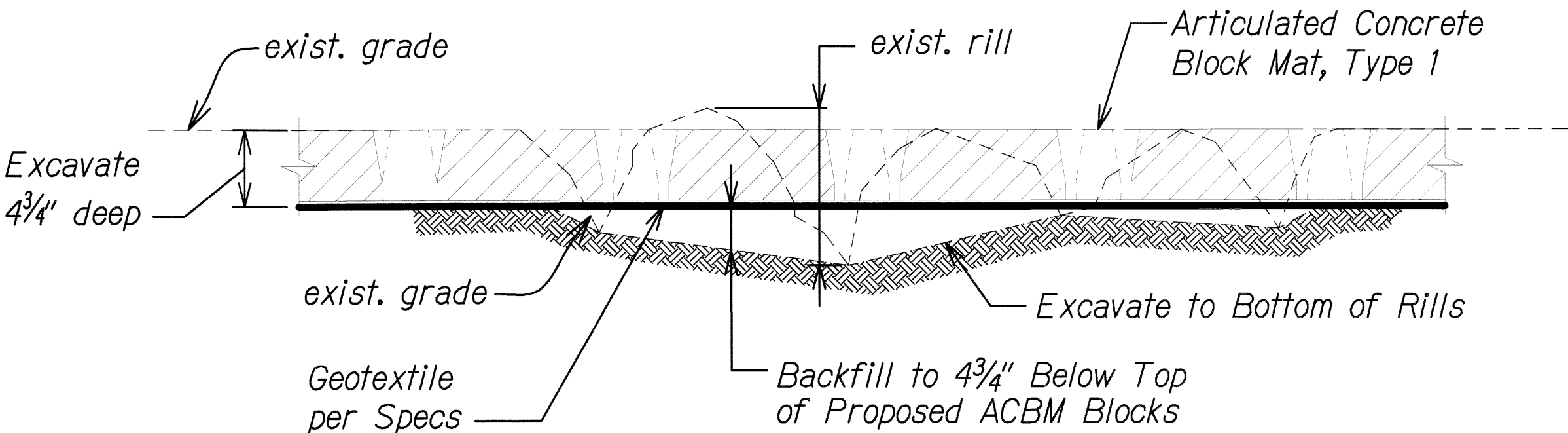
ORIGINAL PLAN	DATE
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

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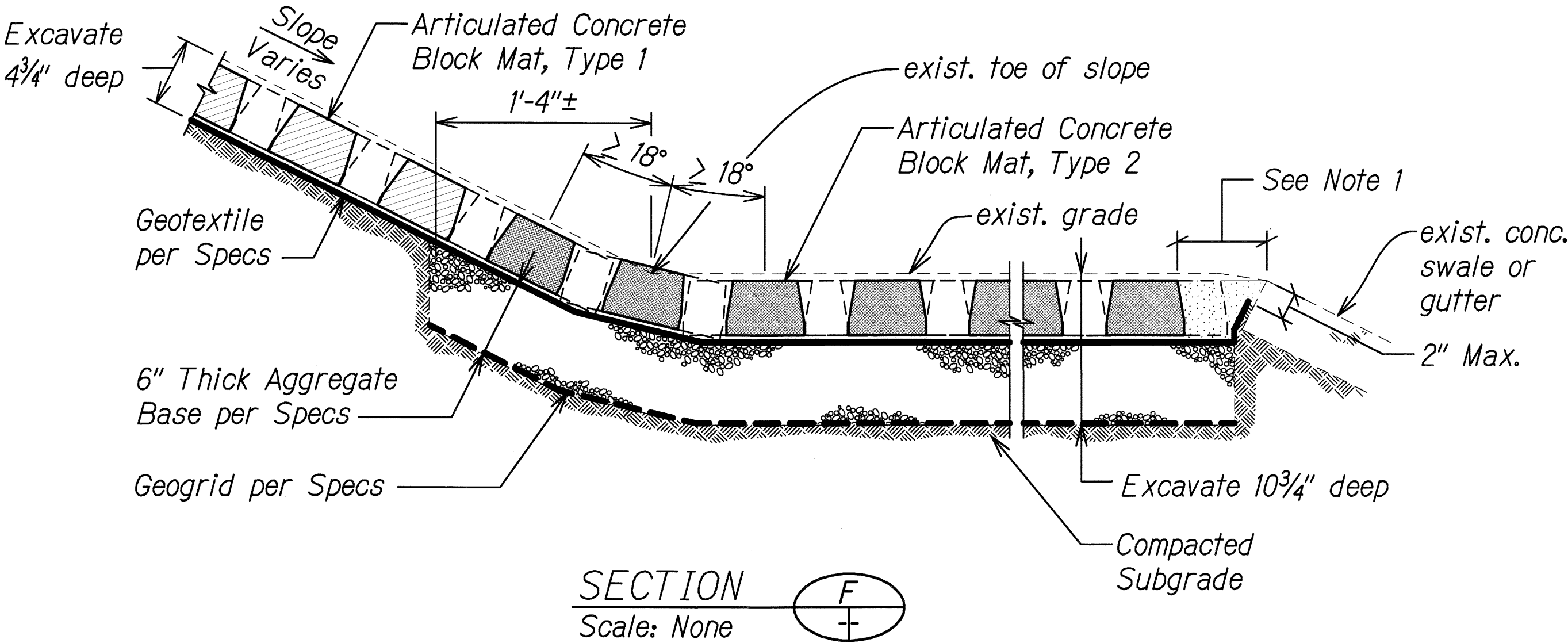
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-O-04-10M	2010	12	45



TYPICAL SECTION
Scale: None



TYPICAL LONGITUDINAL VIEW OF RILLS
Scale: None



- NOTES:
1. Grout all gaps at peak and toe of ACBM.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

10 DETAIL/SLDING 5/15/2010 10:45:43 AM

4/30/12
EXP. DATE

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**ARTICULATED CONCRETE
BLOCK MAT DETAILS**

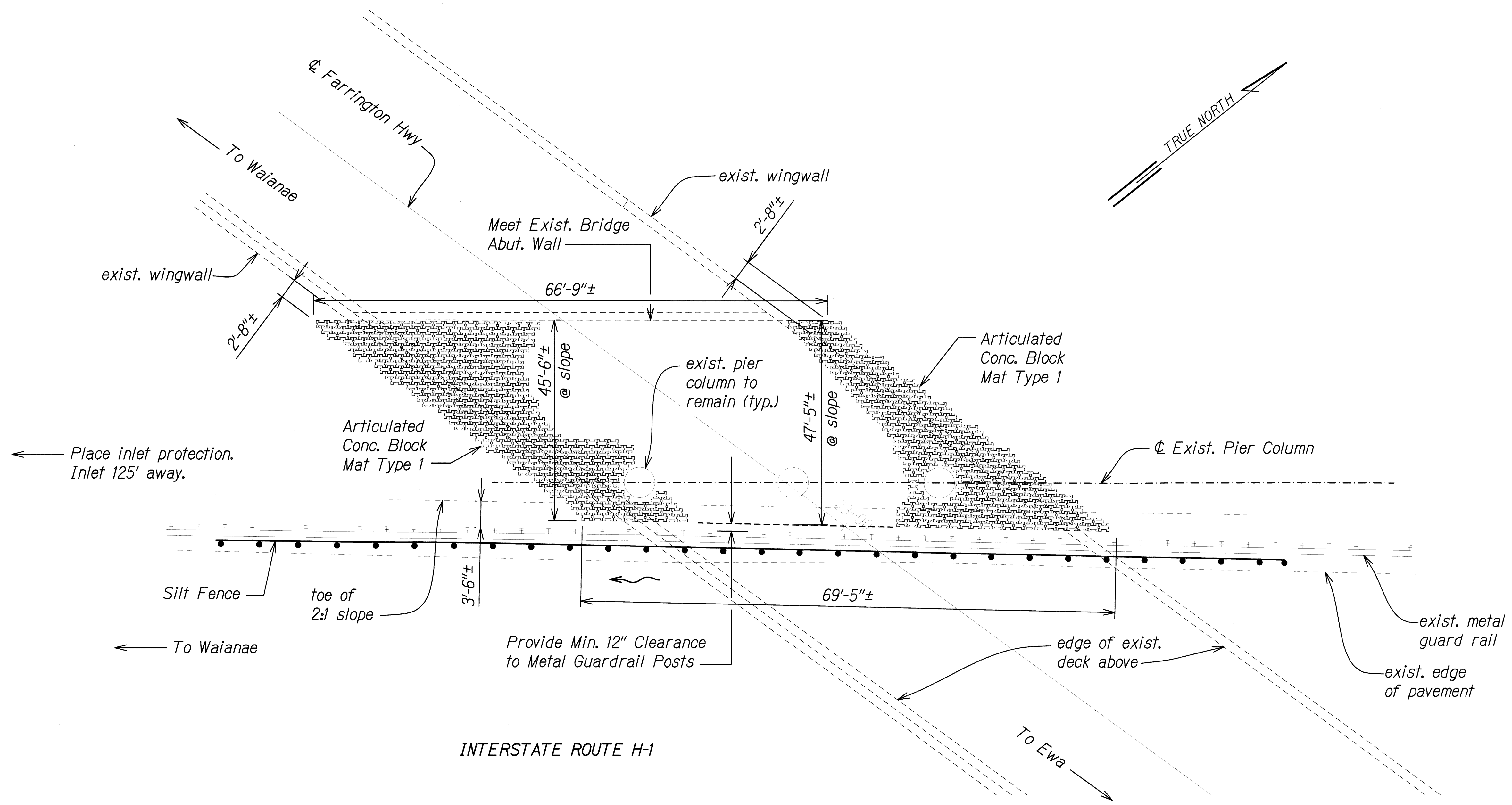
SLOPE MAINTENANCE FOR EROSION CONTROL
AT VARIOUS SITES ON OAHU, PHASE 4

Project No. HWY-O-04-10M

Scale: As Shown Date: May 2010

SHEET No. EC-2 OF 17 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-O-04-10M	2010	13	45



EROSION CONTROL PLAN SITE 1 -
FARRINGTON HIGHWAY OVERPASS AT H-1, WEST ABUTMENT
 Scale: 1/8" = 1'-0"

Estimated Area of Articulated Concrete Mat Type 1 measured along slope face: 3,165 SQ. FT.

SURVEY PLOTTED BY	DATE
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TRACED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	

SITE/ALONG: 5/5/2010 10:45 AM

4/30/12
EXP. DATE

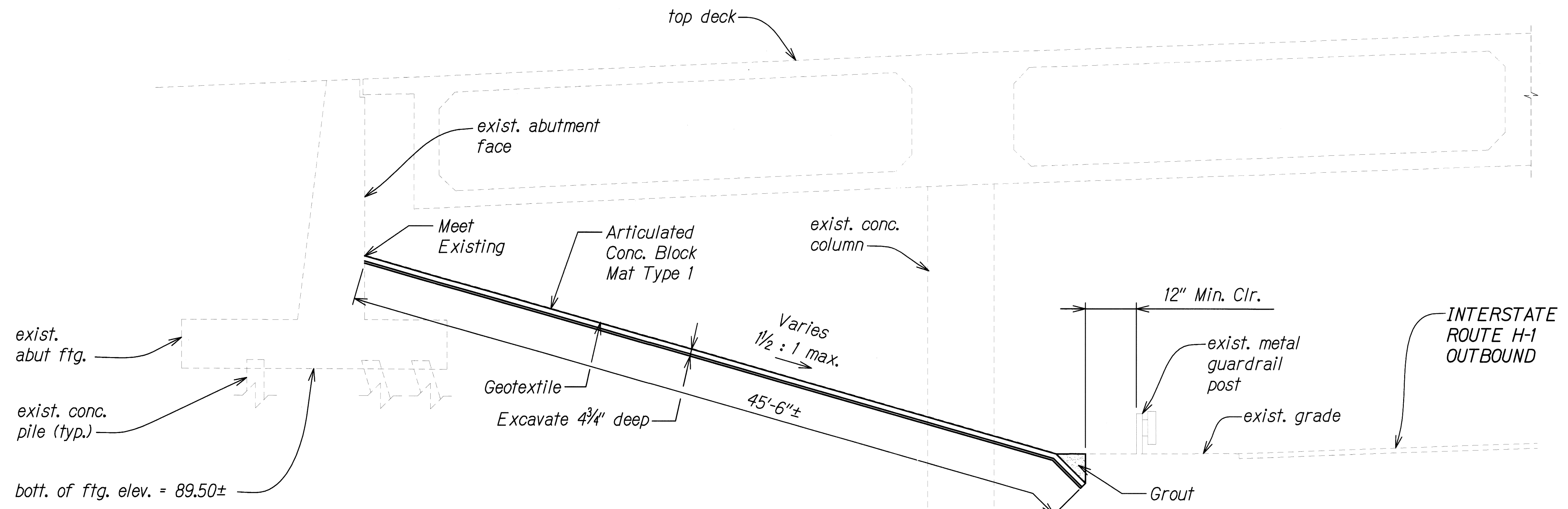
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

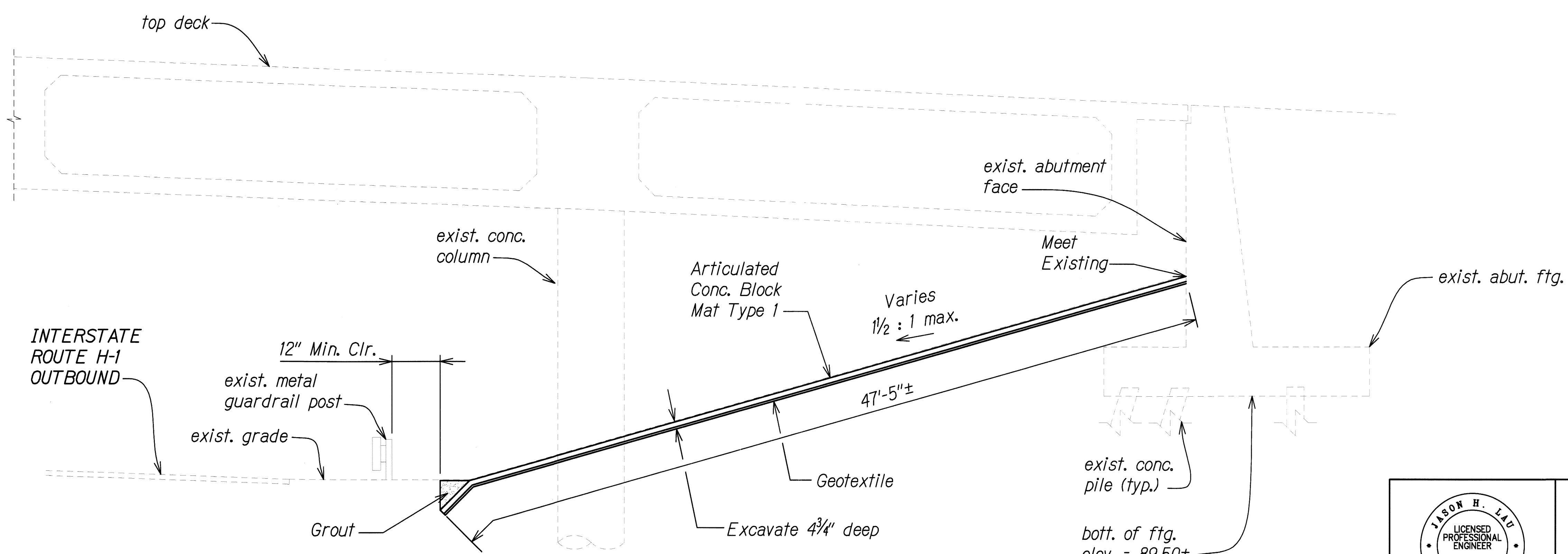
EROSION CONTROL PLAN
SITE 1
 SLOPE MAINTENANCE FOR EROSION CONTROL
 AT VARIOUS SITES ON OAHU, PHASE 4
 Project No. HWY-O-04-10M
 Scale: As Shown Date: May 2010

SHEET No. EC-3 OF 17 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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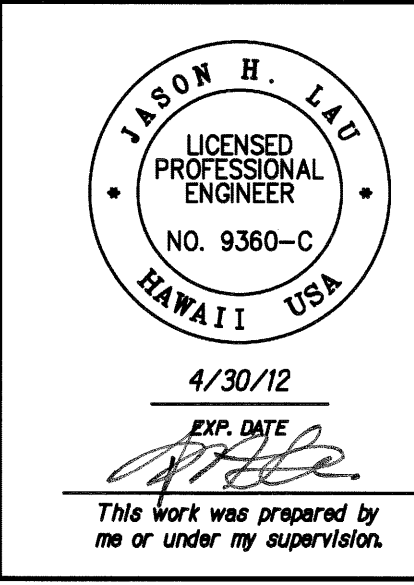
LEFT ELEVATION - SITE 1
Scale: 1/4" = 1'-0"



RIGHT ELEVATION - SITE 1
Scale: 1/4" = 1'-0"

DESIGNED BY	DATE
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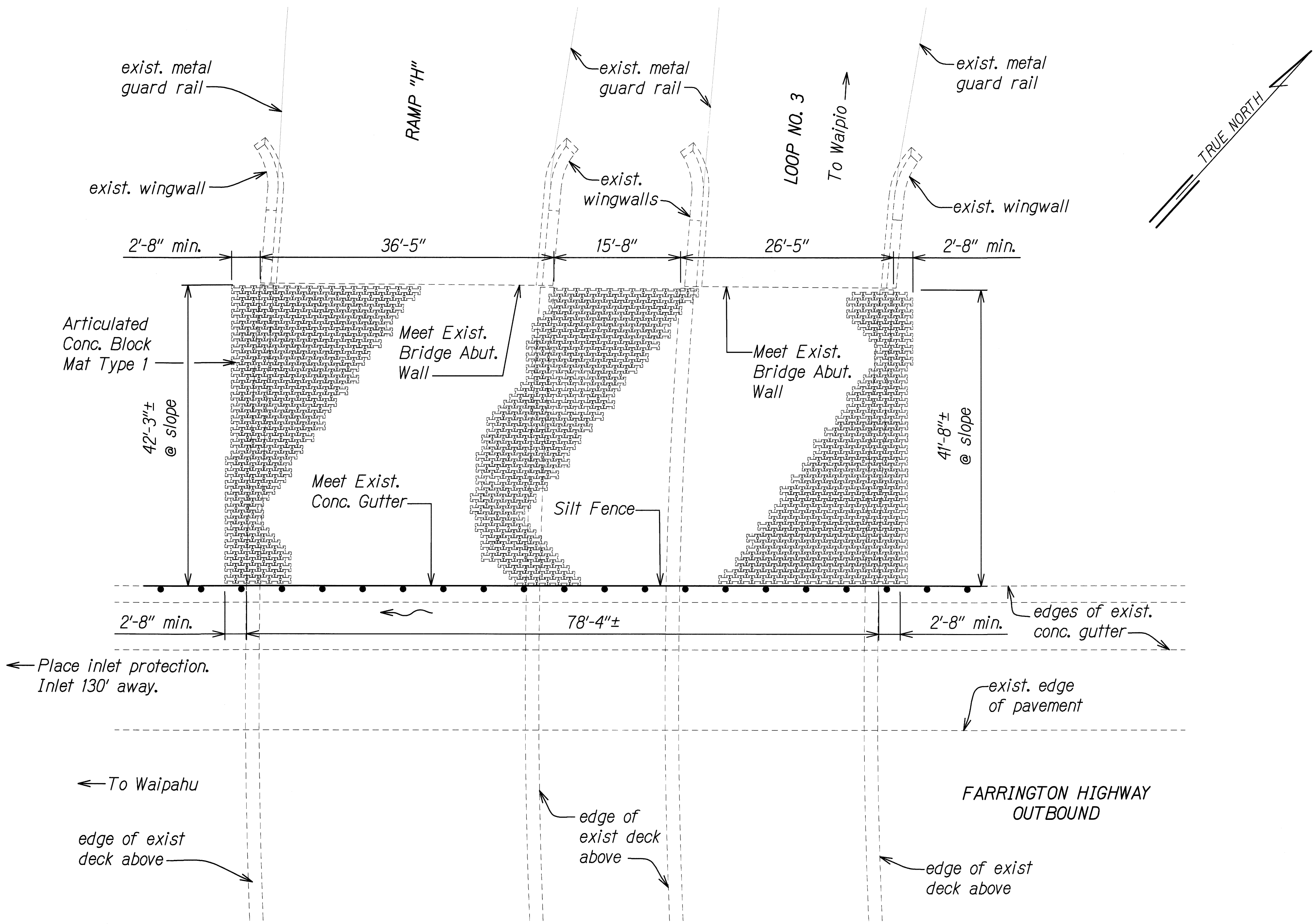
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**EROSION CONTROL
ELEVATION - SITE 1**

SLOPE MAINTENANCE FOR EROSION CONTROL
AT VARIOUS SITES ON OAHU, PHASE 4
Project No. HWY-O-04-10M
Scale: As Shown Date: May 2010

SHEET No. EC-4 OF 17 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-O-04-10M	2010	15	45



EROSION CONTROL PLAN SITE 2 -
FARRINGTON HIGHWAY AT KAMEHAMEHA HIGHWAY OVERPASS, WEST ABUTMENT

Scale: 1/8" = 1'-0"

Estimated Area of Articulated Concrete Mat Type 1 measured along slope face: 3,510 SQ. FT.

SURVEY PLOTTED BY	DATE
DESIGNED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
N.	

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4/30/12
EXP. DATE

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EROSION CONTROL PLAN

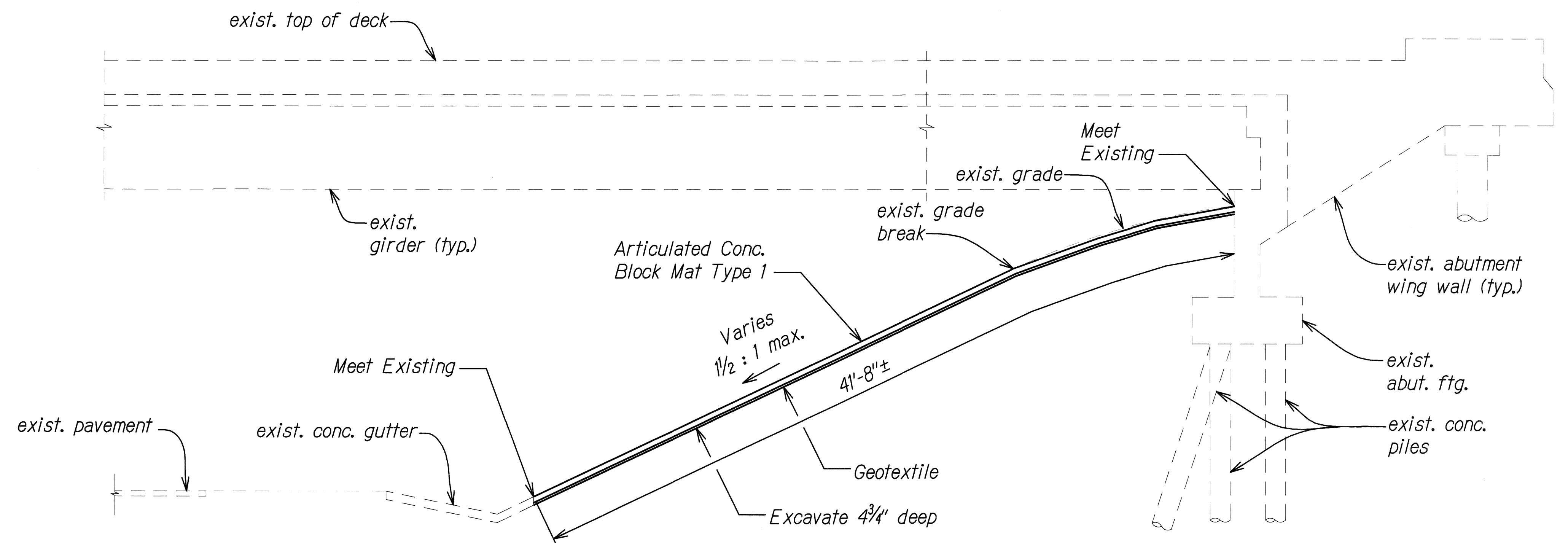
SITE 2

SLOPE MAINTENANCE FOR EROSION CONTROL AT VARIOUS SITES ON OAHU, PHASE 4

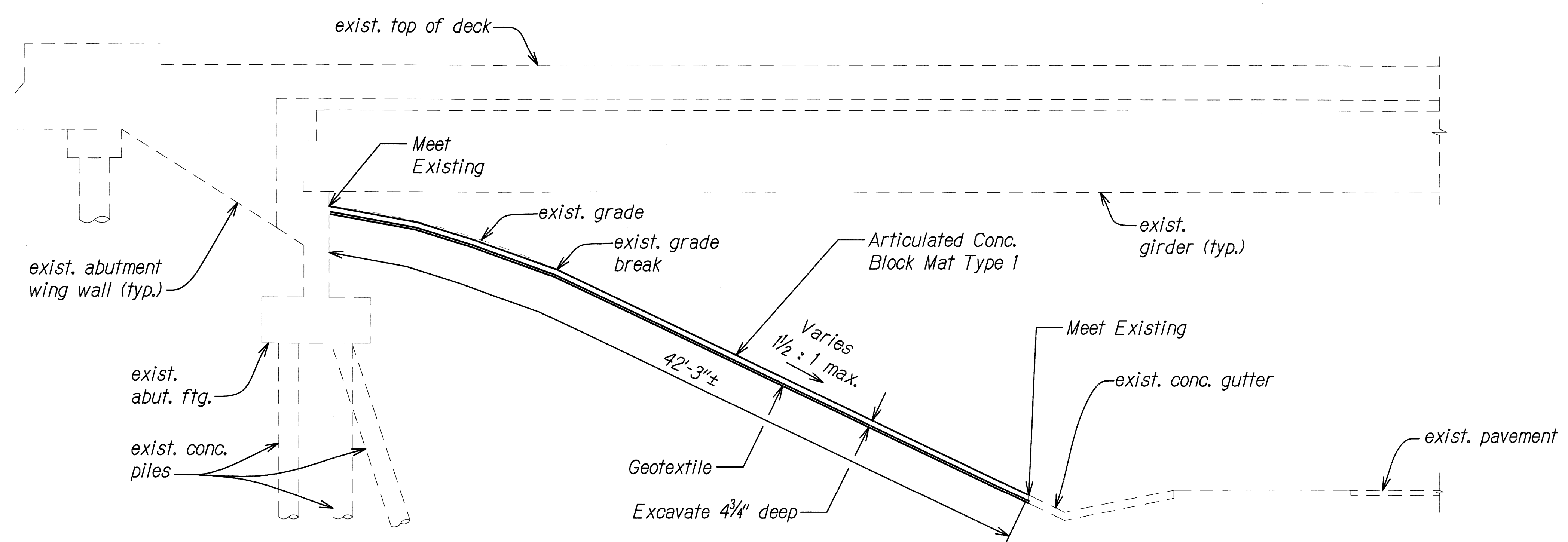
Project No. HWY-O-04-10M

Scale: As Shown Date: May 2010

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-O-04-10M	2010	16	45



RIGHT ELEVATION ABUTMENT - SITE 2
Scale: 1/4" = 1'-0"



LEFT ELEVATION ABUTMENT - SITE 2
Scale: 1/4" = 1'-0"

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	

SITE BOUNDING: 5/25/2010 10:45:22 AM

4/30/12
EXP. DATE

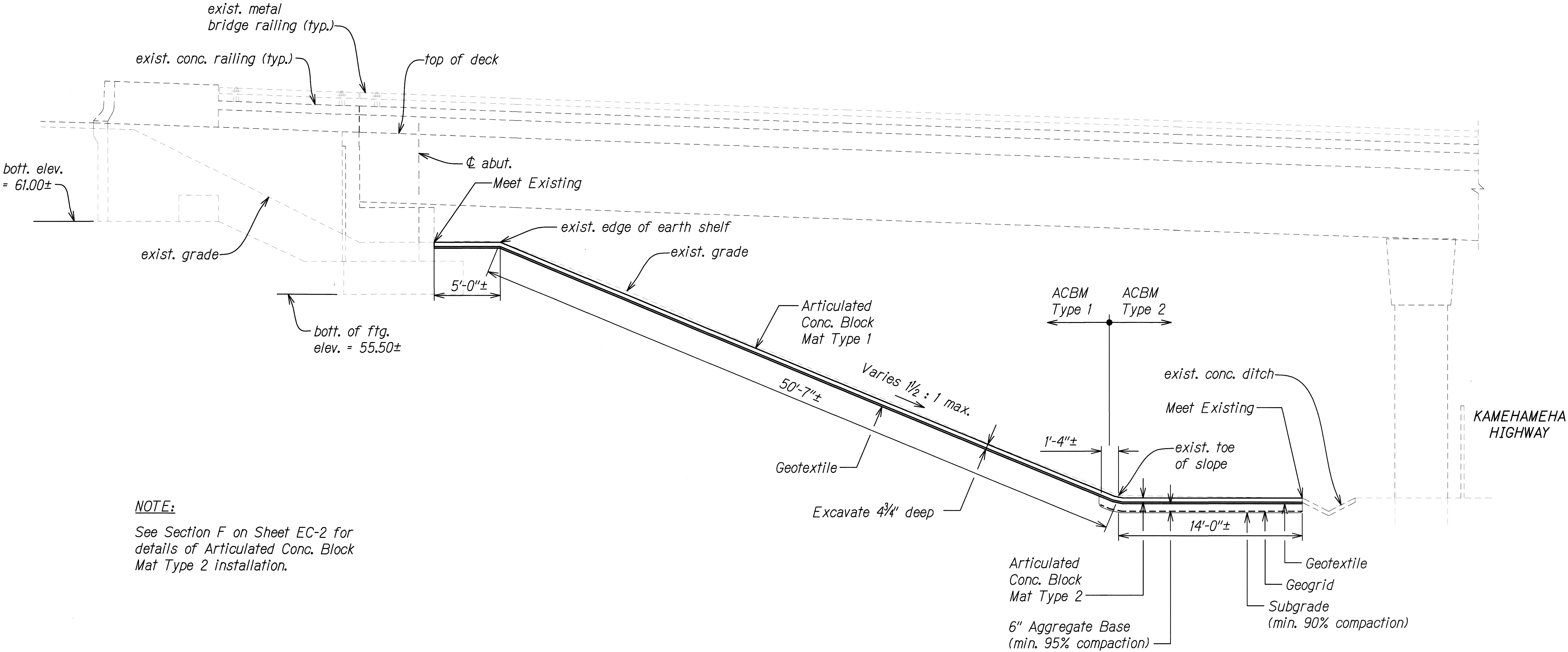
Jason H. Lau
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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**EROSION CONTROL
ELEVATIONS - SITE 2**

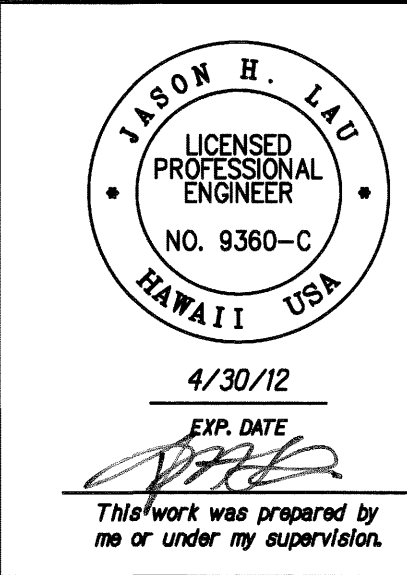
SLOPE MAINTENANCE FOR EROSION CONTROL
AT VARIOUS SITES ON OAHU, PHASE 4
Project No. HWY-O-04-10M
Scale: As Shown Date: May 2010

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-O-04-10M	2010	18	45



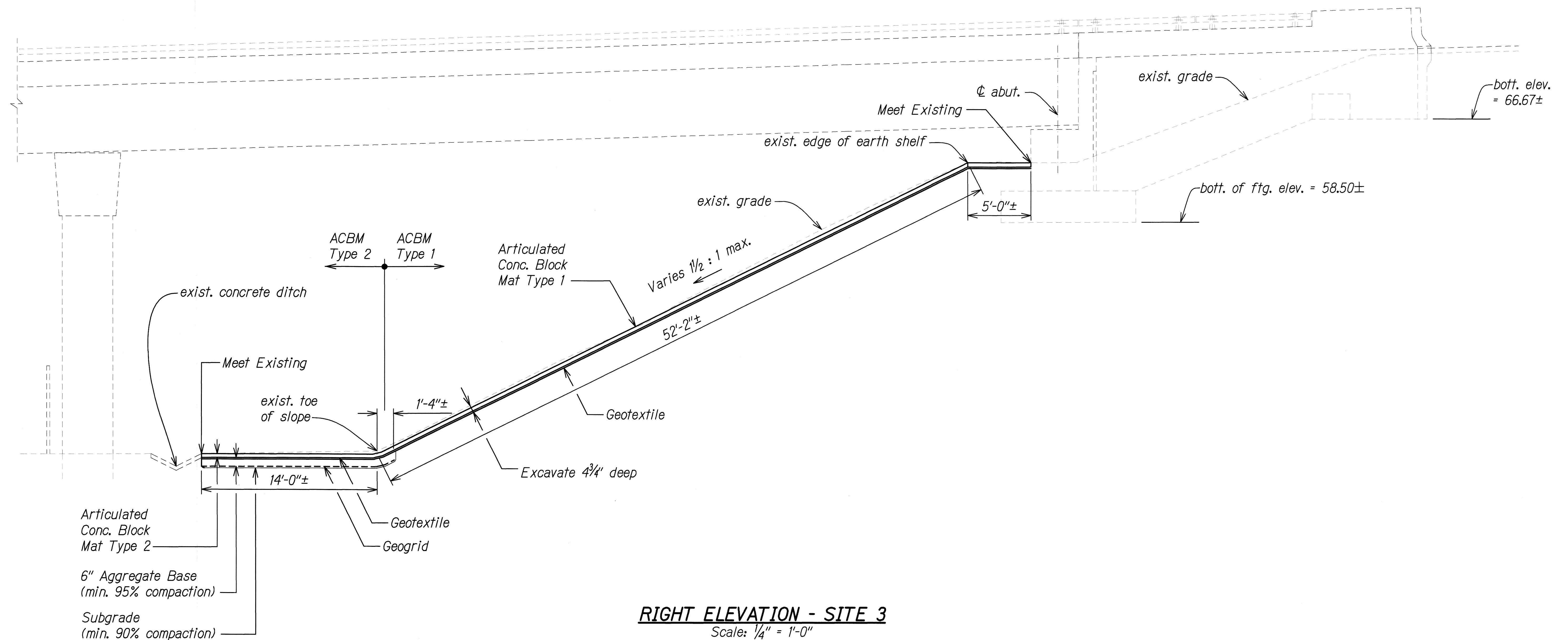
NOTE:
See Section F on Sheet EC-2 for details of Articulated Conc. Block Mat Type 2 installation.

LEFT ELEVATION - SITE 3
Scale: 1/4" = 1'-0"



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**EROSION CONTROL
ELEVATION - SITE 3**
SLOPE MAINTENANCE FOR EROSION CONTROL
AT VARIOUS SITES ON OAHU, PHASE 4
Project No. HWY-O-04-10M
Scale: As Shown Date: May 2010

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-O-04-10M	2010	19	45



NOTE:

See Section F on Sheet EC-2 for details of Articulated Conc. Block Mat Type 2 installation.

4/30/12
EXP. DATE
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HIGHWAYS DIVISION

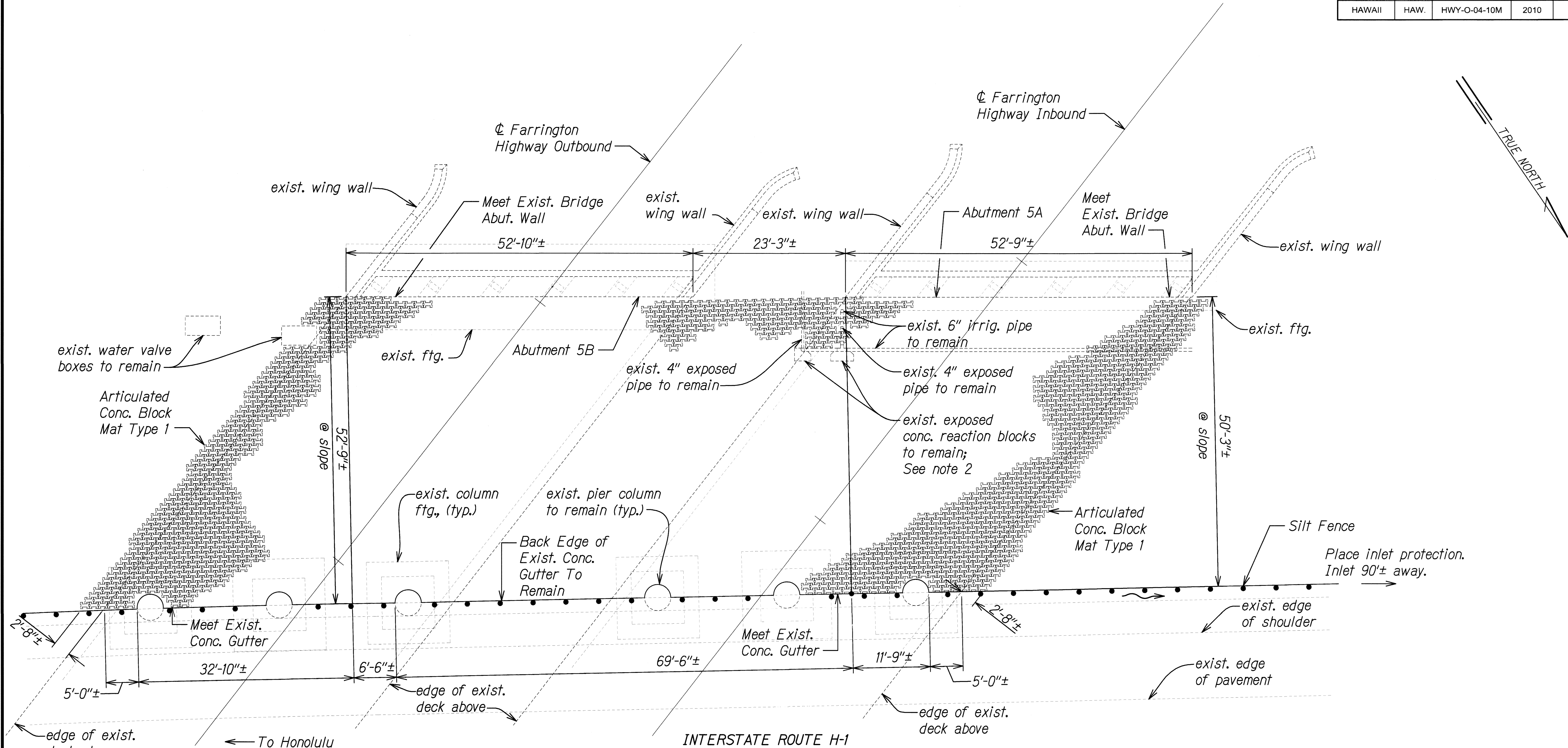
EROSION CONTROL
ELEVATION - SITE 3

SLOPE MAINTENANCE FOR EROSION CONTROL
AT VARIOUS SITES ON OAHU, PHASE 4

Project No. HWY-O-04-10M

Scale: As Shown Date: May 2010

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-04-10M	2010	20	45



**EROSION CONTROL PLAN SITE 4 -
FARRINGTON HIGHWAY OVERPASS AT H-1, WEST ABUTMENTS**

Scale: 1/8" = 1'-0"

Estimated Area of Articulated Concrete Block Mat Type 1 measured along slope face: 9,730 SQ. FT.

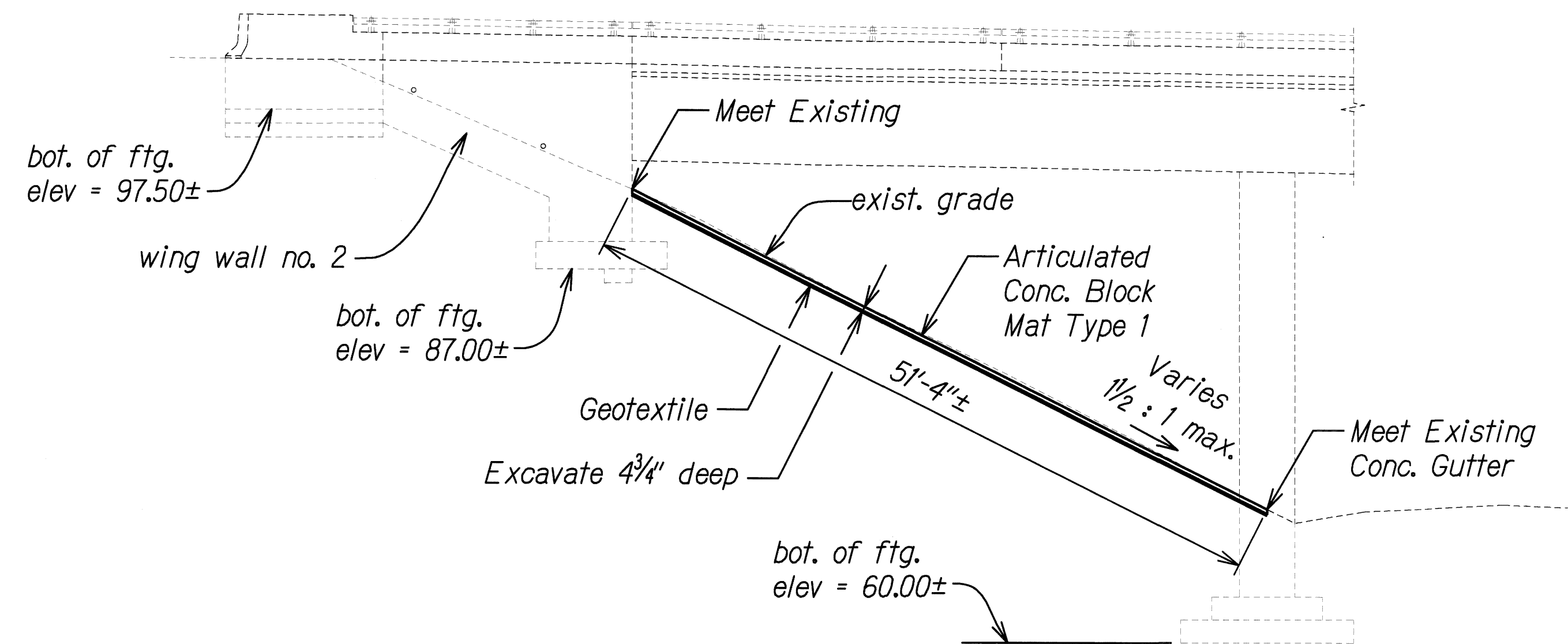
- NOTE:**
- For Traffic Control Plans, see Sheets TC-6 to TC-8.
 - Restore grade to match existing surrounding areas prior to mat installation.

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
NOTE BOOK	_____
QUANTITIES BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
DATE	_____

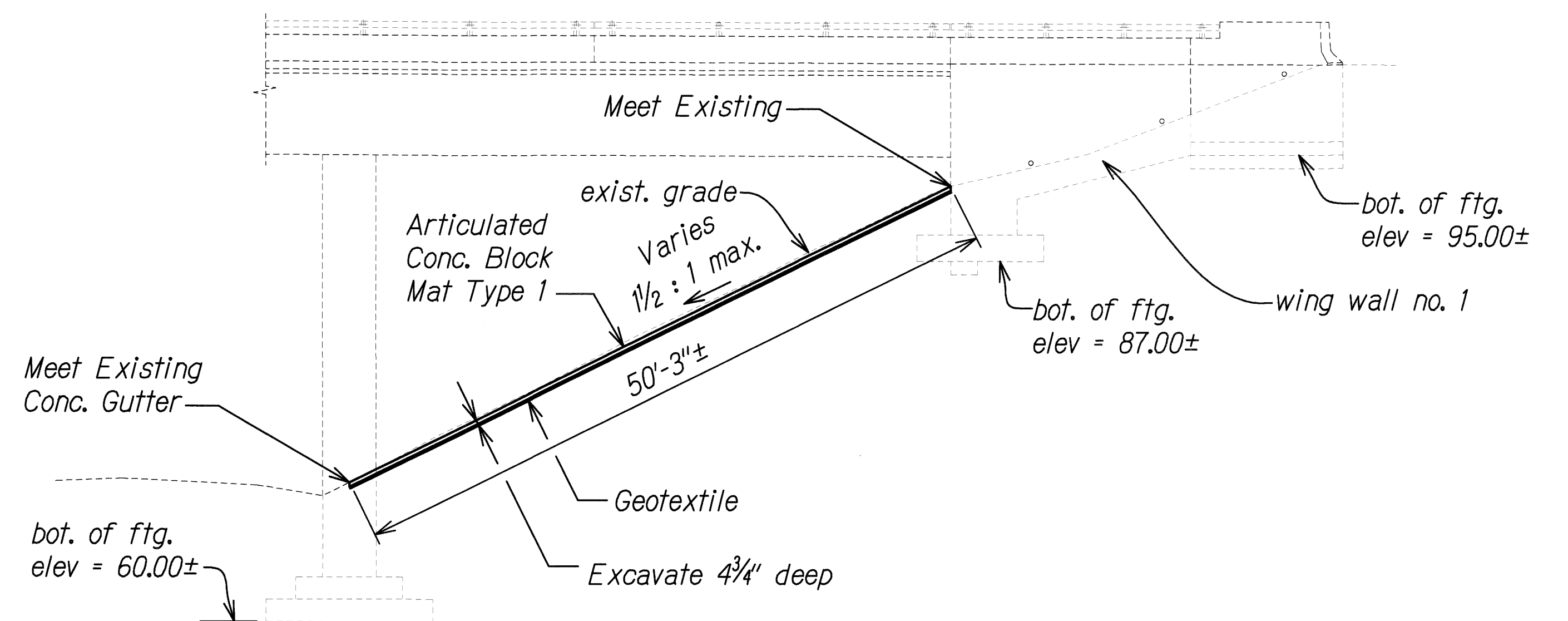
SITE 4A, SWMP/H-1, ASSAULTING 5/19/2010 11:45:00 AM

 4/30/12 EXP. DATE <i>Jason H. Lau</i> This Work was prepared by me or under my supervision.	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION EROSION CONTROL PLAN SITE 4 SLOPE MAINTENANCE FOR EROSION CONTROL AT VARIOUS SITES ON OAHU, PHASE 4 Project No. HWY-0-04-10M Scale: As Shown Date: May 2010 SHEET No. EC-10 OF 17 SHEETS
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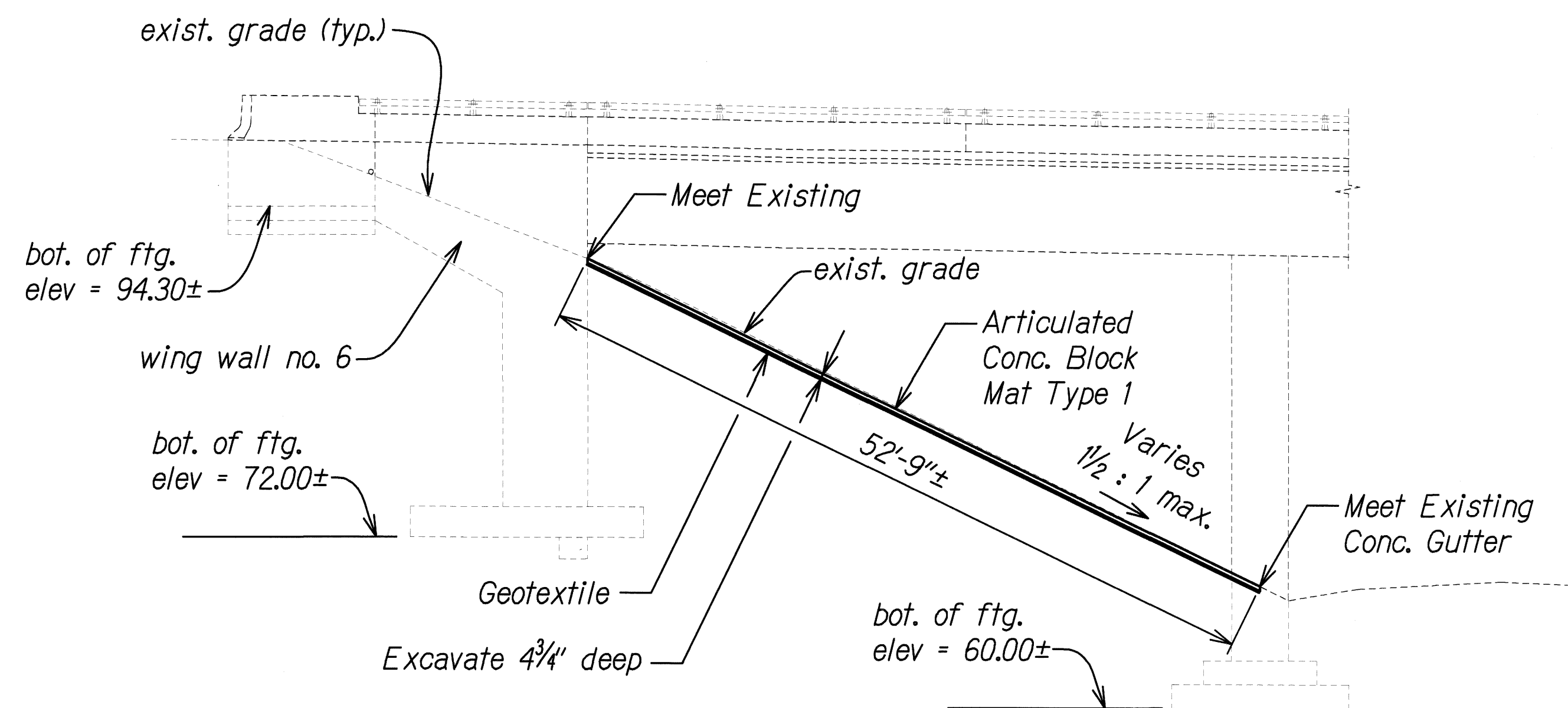
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-O-04-10M	2010	21	45



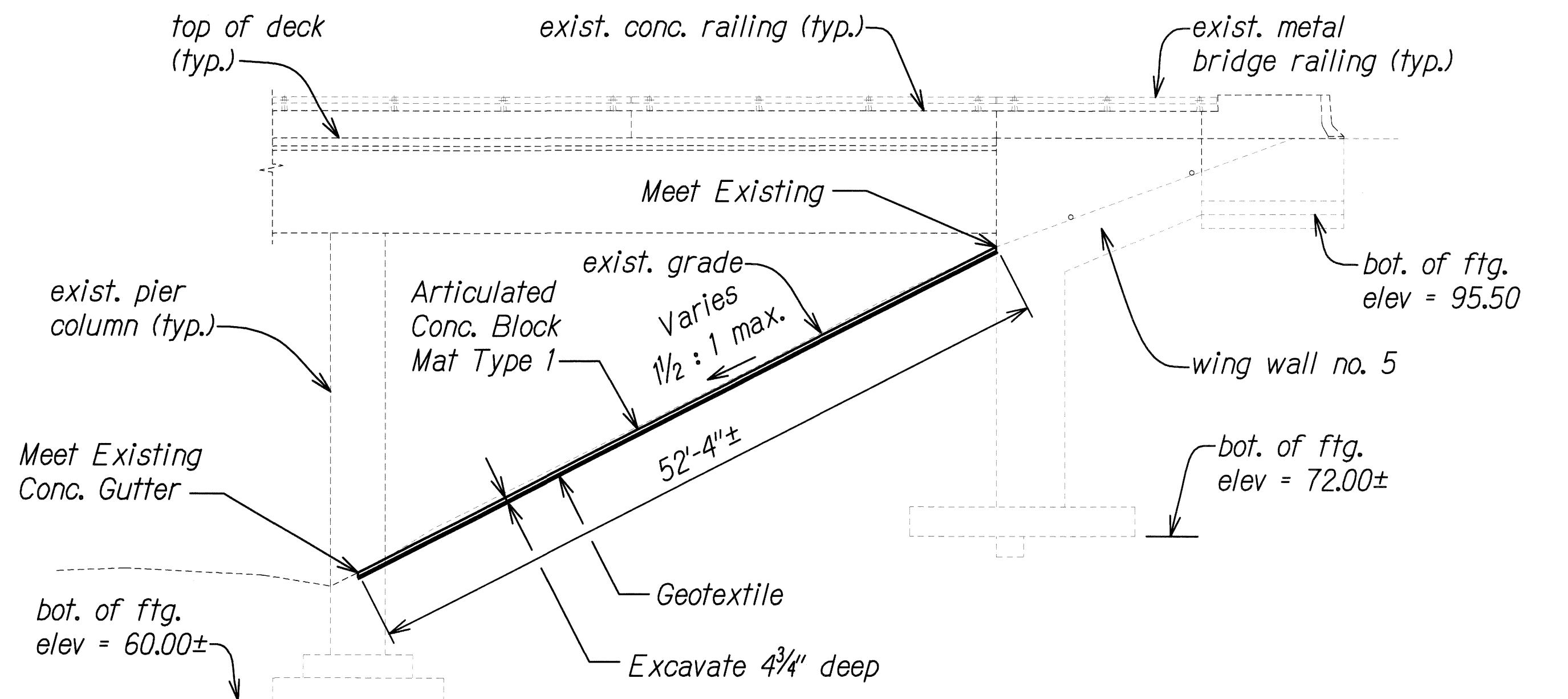
LEFT ELEVATION - SITE 4 ABUTMENT 5A
Scale: 1/8" = 1'-0"



RIGHT ELEVATION SITE - 4 ABUTMENT 5A
Scale: 1/8" = 1'-0"



LEFT ELEVATION - SITE 4 ABUTMENT 5B
Scale: 1/8" = 1'-0"



RIGHT ELEVATION - SITE 4 ABUTMENT 5B
Scale: 1/8" = 1'-0"

DATE	____
SURVEY PLOTTED BY	____
DESIGNED BY	____
QUANTITIES BY	____
CHECKED BY	____
NOTE BOOK	____
ORIGINAL PLAN	____

SITE#4B-SSWHP-HI-AB5B-ELEV WING WALL 5A AND 5B-02 5/25/2010 10:40:29 AM

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

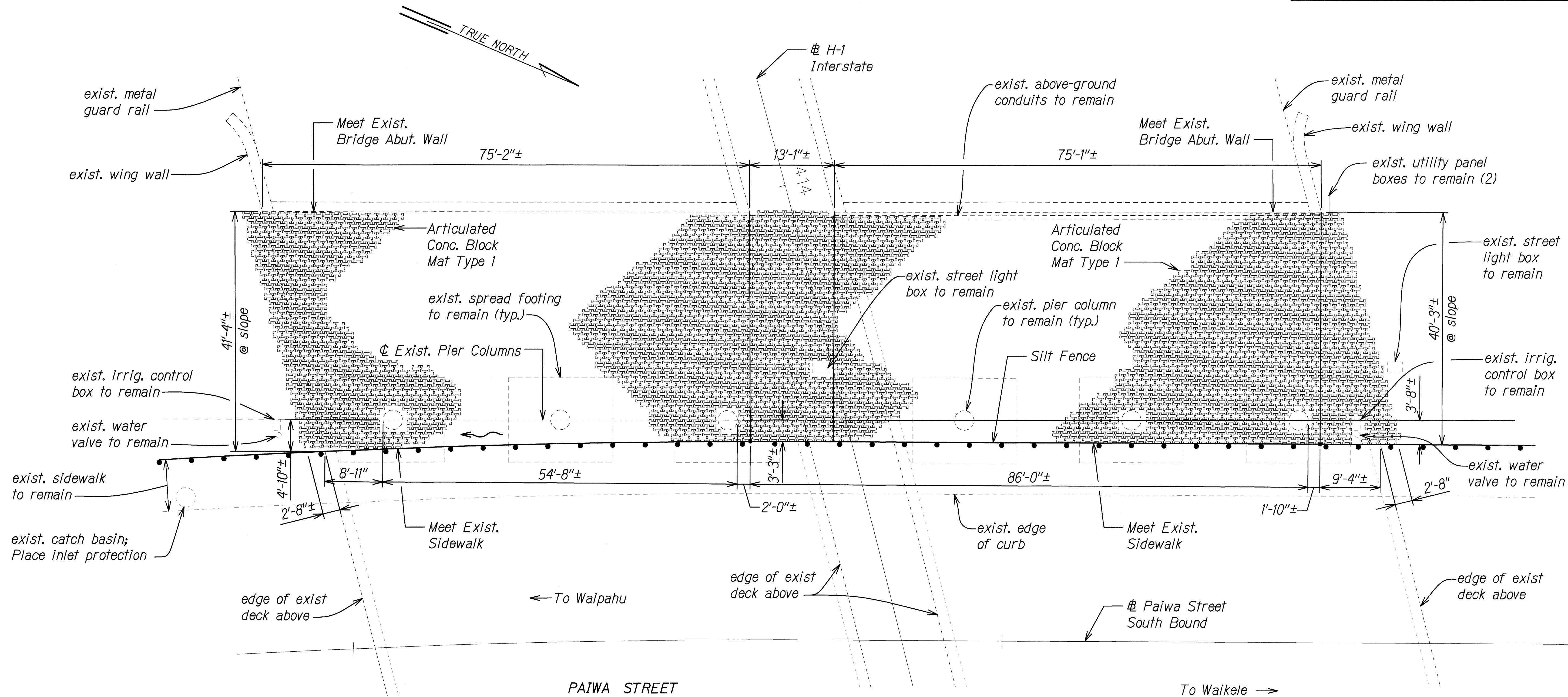
**EROSION CONTROL
ELEVATIONS - SITE 4**

SLOPE MAINTENANCE FOR EROSION CONTROL
AT VARIOUS SITES ON OAHU, PHASE 4

Project No. HWY-O-04-10M
Scale: As Shown Date: May 2010

SHEET No. EC-11 OF 17 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-O-04-10M	2010	22	45



**EROSION CONTROL PLAN SITE 5 -
WEST ABUTMENT, INTERSTATE ROUTE H-1/PAIWA STREET OVERPASS**

Scale: 1/8" = 1'-0"

Estimated Area of Articulated Concrete Block Mat Type 1 measured along slope face: 9,240 SQ. FT.

Note: For Traffic Control Plans
See Sheets TC-9 to TC-11

ORIGINAL PLAN	DATE
DESIGNED BY	DESIGNED BY
NOTED BY	NOTED BY
CHECKED BY	CHECKED BY

SITE 5A, S5WMP-WAIKALE-ABUT 1 - PLAN 1 EIGHT SCALE 1/8" = 1'-0" 5/12/2010 11:04 AM

JASON H. LAU

LICENSED PROFESSIONAL ENGINEER

NO. 9360-C

HAWAII, USA

4/30/12

EXP. DATE

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STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

EROSION CONTROL PLAN

SITE 5

SLOPE MAINTENANCE FOR EROSION CONTROL AT VARIOUS SITES ON OAHU, PHASE 4

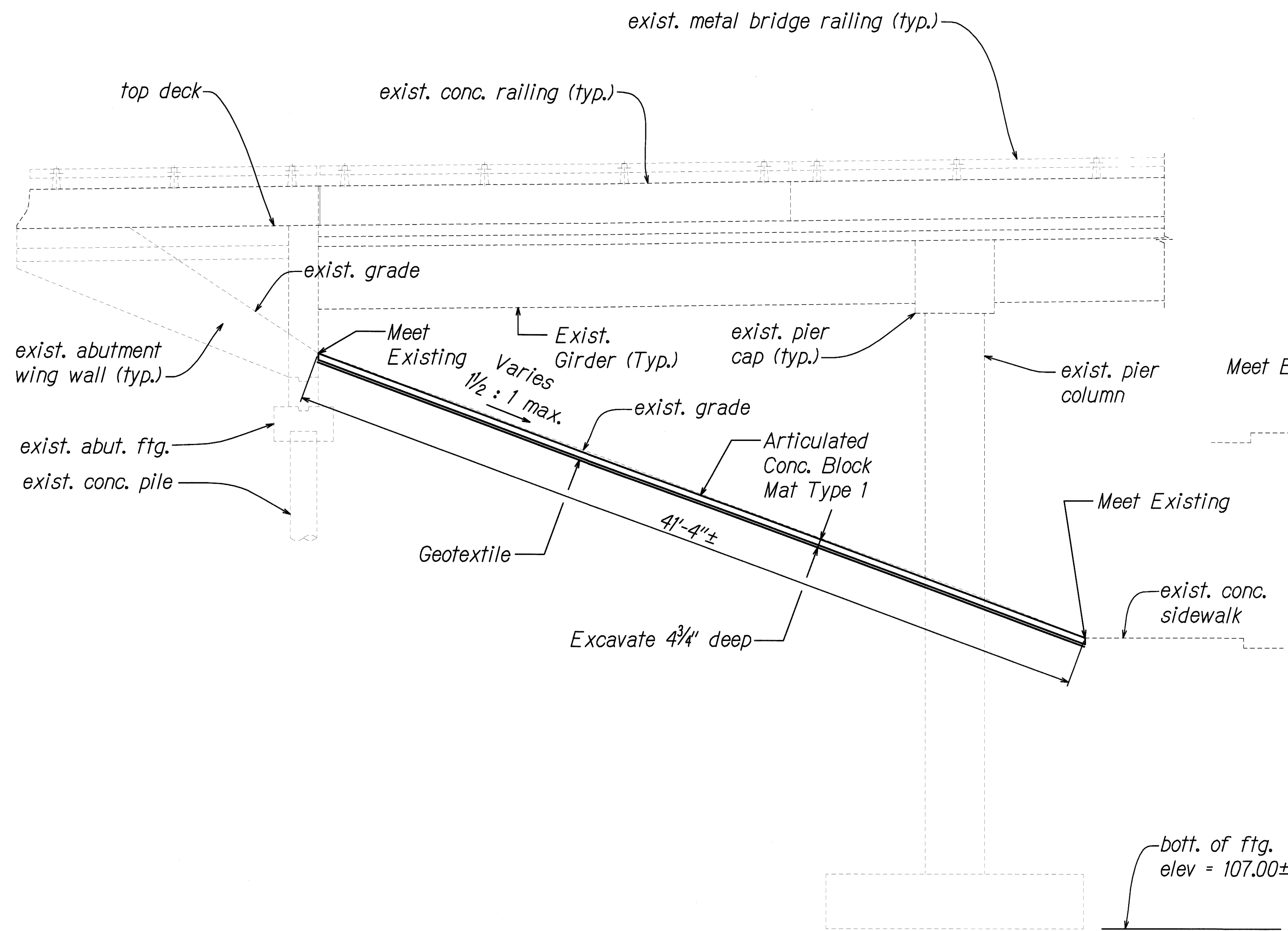
Project No. HWY-O-04-10M

Scale: As Shown

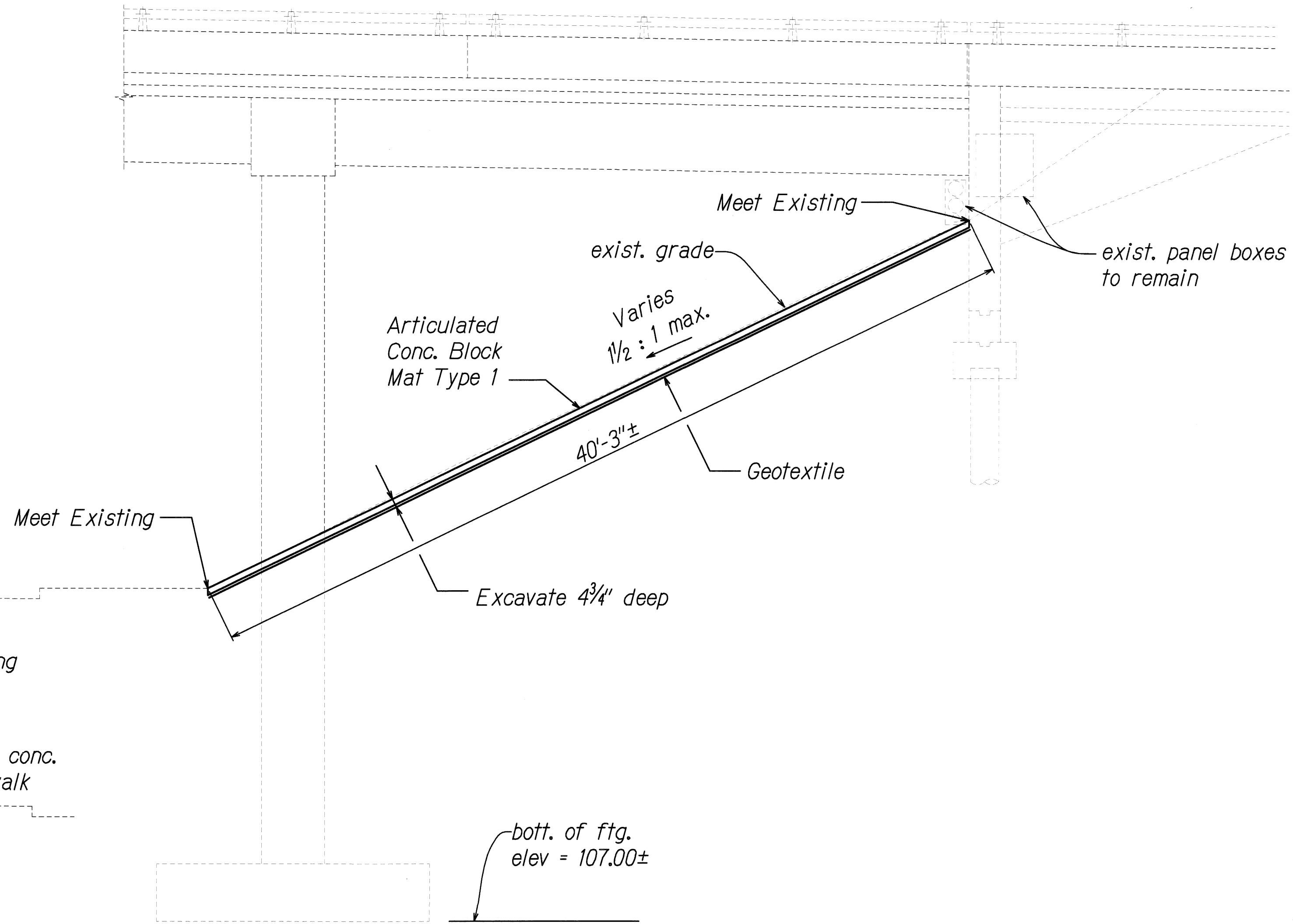
Date: May 2010

SHEET No. EC-12 OF 17 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-O-04-10M	2010	23	45



LEFT ELEVATION - SITE 5
Scale: 1/4" = 1'-0"



RIGHT ELEVATION - SITE 5
Scale: 1/4" = 1'-0"

ISBON H. L.L.U.

LICENSED PROFESSIONAL ENGINEER

NO. 9360-C

HAWAII USA

4/30/12

EXP. DATE

[Signature]

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**EROSION CONTROL
ELEVATIONS - SITE 5**

SLOPE MAINTENANCE FOR EROSION CONTROL
AT VARIOUS SITES ON OAHU, PHASE 4
Project No. HWY-O-04-10M

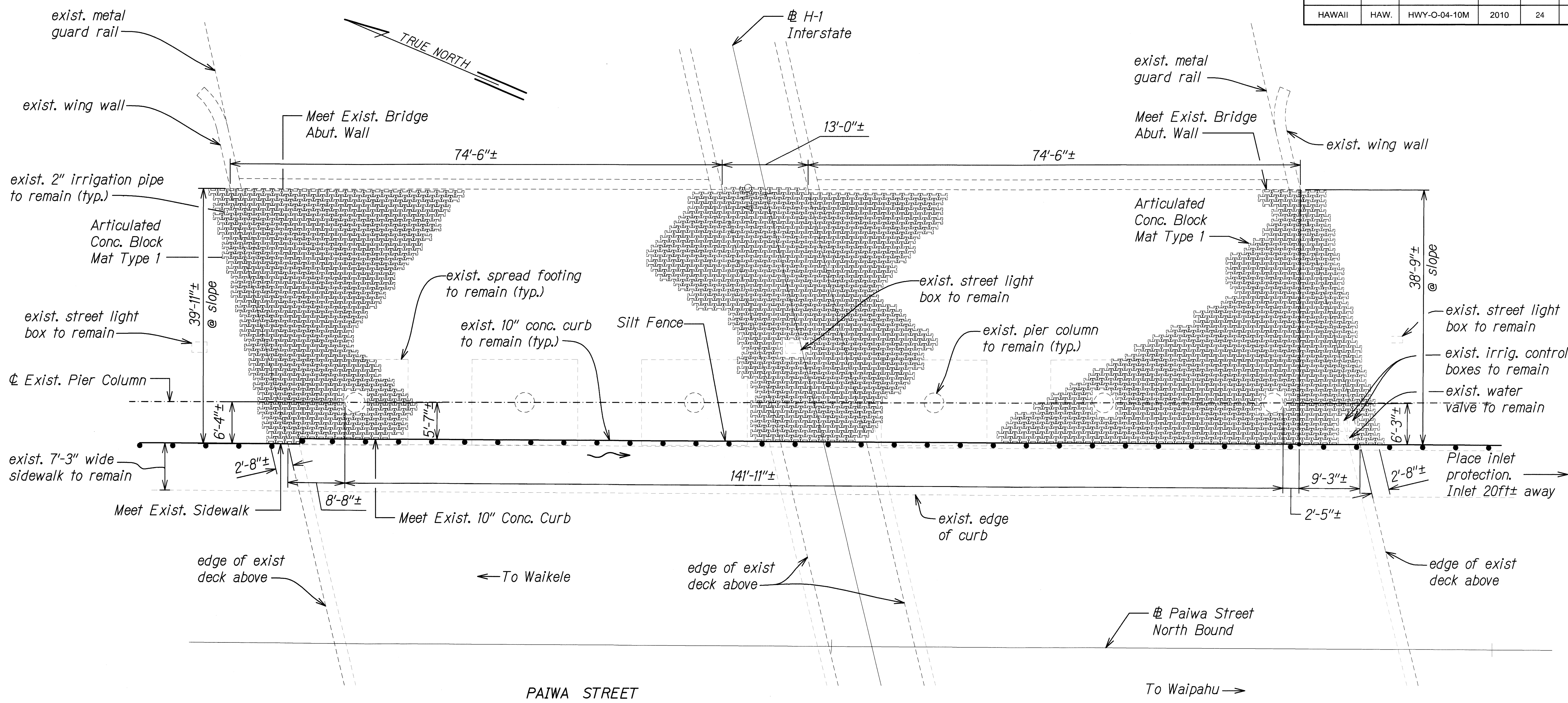
Scale: As Shown Date: May 2010

SHEET No. EC-13 OF 17 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

SITE 5B, SSMP-WAIALE ABL ABUT 1 - ELEV QUARTER SCALING 5/25/2010 11:40:48 AM

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-O-04-10M	2010	24	45



EROSION CONTROL PLAN SITE 6-
EAST ABUTMENT, INTERSTATE ROUTE H-1/PAIWA STREET OVERPASS

Scale: 1/8" = 1'-0"

Estimated Area of Articulated Concrete Mat Type 1 measured along slope face: 9,260 SQ. FT.

Note: For Traffic Control Plans
See Sheet TC-12

DATE	____
DESIGNED BY	____
CHECKED BY	____
NOTED BY	____
ORIGINAL PLAN	____
NOTE BOOK	____
N.	____

SITE 6A, SSUMP-WAUKALE ABUTMENT 5/15/2010 10:00:30 AM

4/30/12
EXP. DATE

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HIGHWAYS DIVISION

EROSION CONTROL PLAN

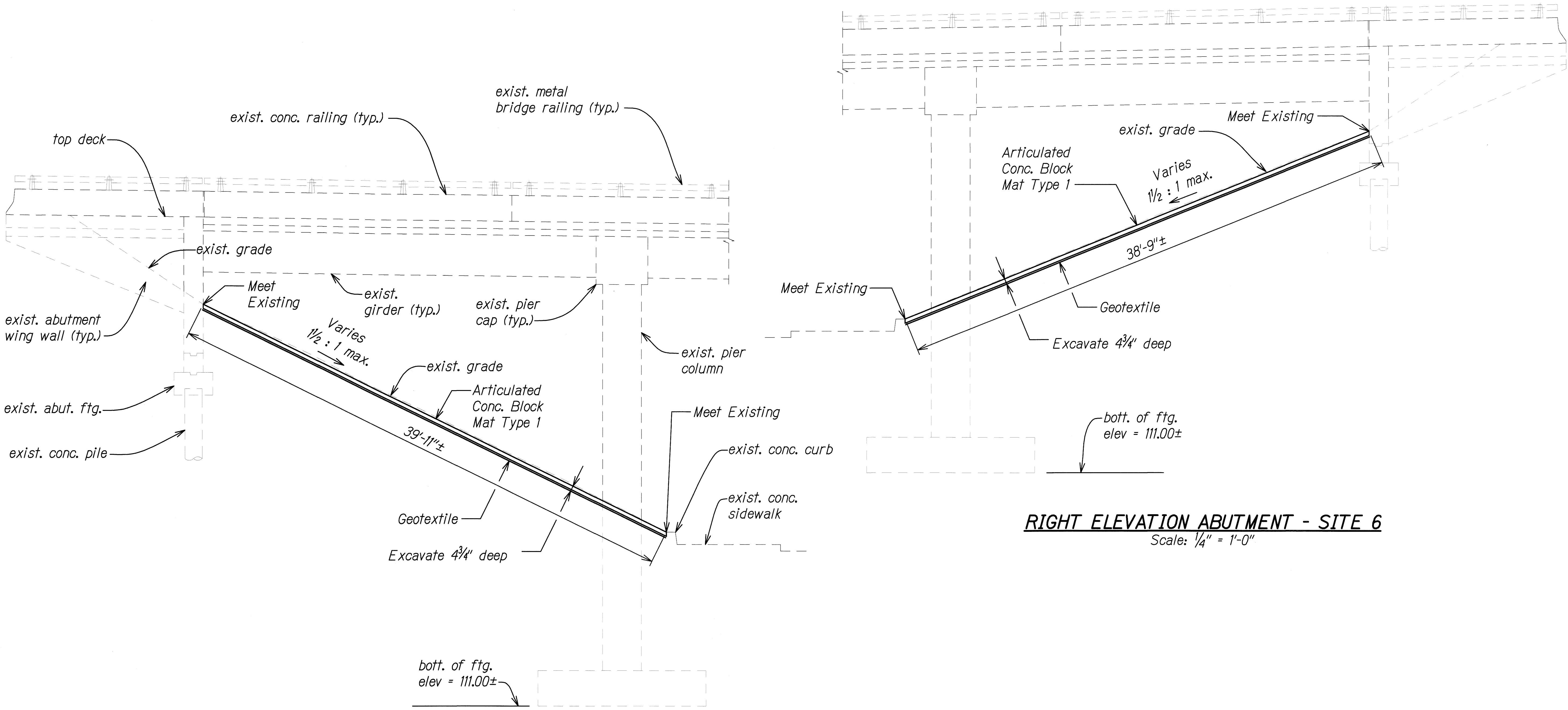
SITE 6

SLOPE MAINTENANCE FOR EROSION CONTROL
AT VARIOUS SITES ON OAHU, PHASE 4
Project No. HWY-O-04-10M

Scale: As Shown Date: May 2010

SHEET No. EC-14 OF 17 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-O-04-10M	2010	25	45



LEFT ELEVATION ABUTMENT - SITE 6
Scale: 1/4" = 1'-0"

RIGHT ELEVATION ABUTMENT - SITE 6
Scale: 1/4" = 1'-0"

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
N.	

SITE 6B - SWIMWAY ABUT 2 - ELEV. QUANTITIES SCALE: 1/4" = 1'-0" 5/15/2010 10:40:39 AM

4/30/12
EXP. DATE
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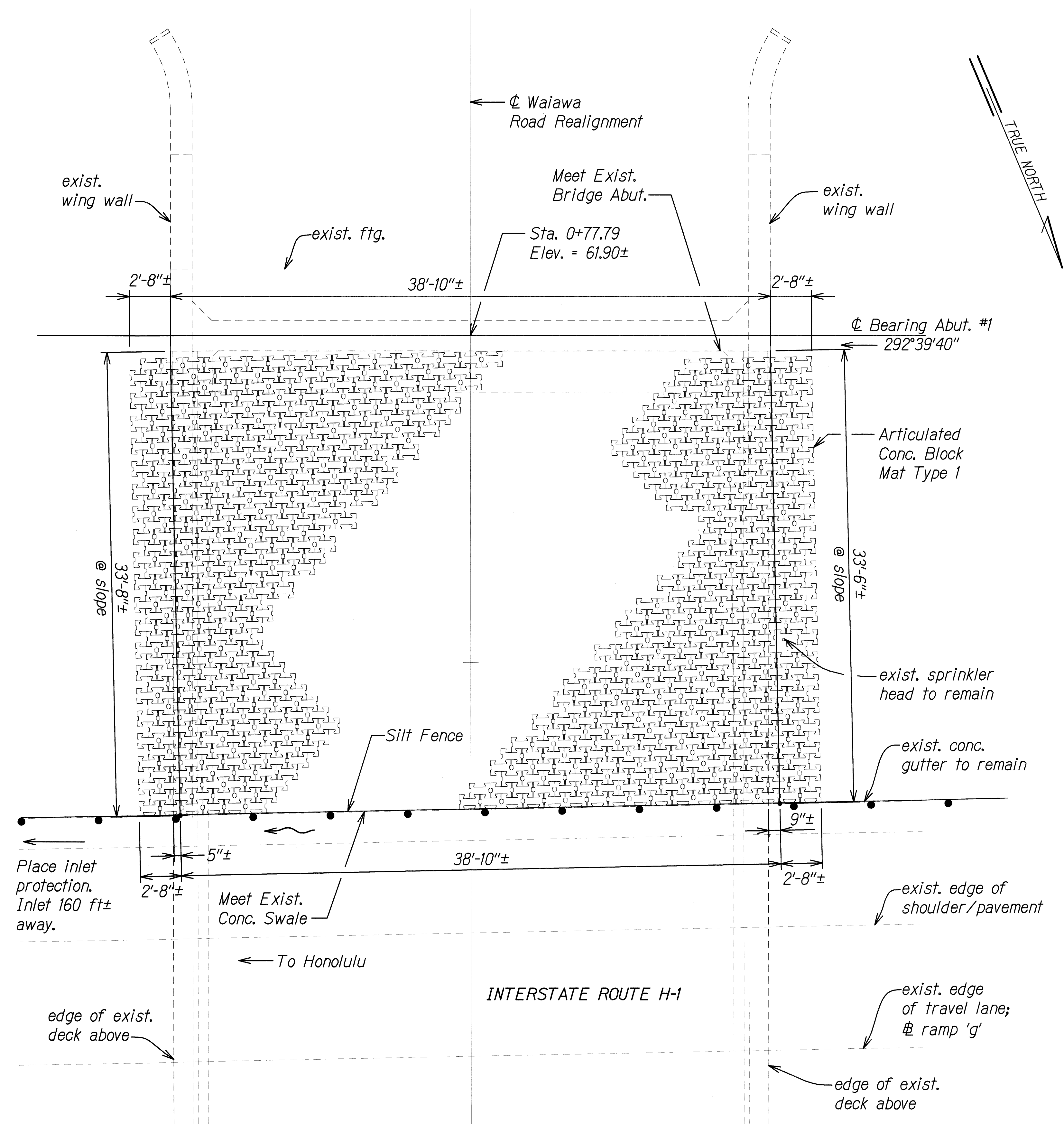
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**EROSION CONTROL
ELEVATIONS - SITE 6**

SLOPE MAINTENANCE FOR EROSION CONTROL
AT VARIOUS SITES ON OAHU, PHASE 4
Project No. HWY-O-04-10M
Scale: As Shown Date: May 2010

SHEET No. EC-15 OF 17 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-O-04-10M	2010	26	45



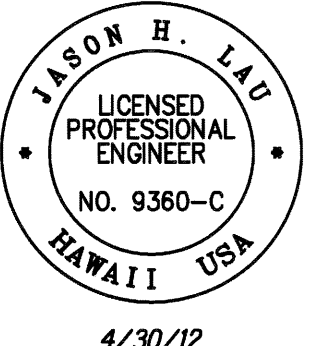
Note: For Traffic Control Plans
See Sheets TC-13 to TC-18

Estimated Area of Articulated Concrete Block
Mat Type 1 measured along slope face: 1,480 SQ. FT.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

SITE 7A SWAMP-WAIAWA-ABUTMENT 5/15/2010 10:40:00 AM

**EROSION CONTROL PLAN SITE 7 -
WAIAWA ROAD OVERPASS, SOUTH ABUTMENT**
Scale: 1/4" = 1'-0"



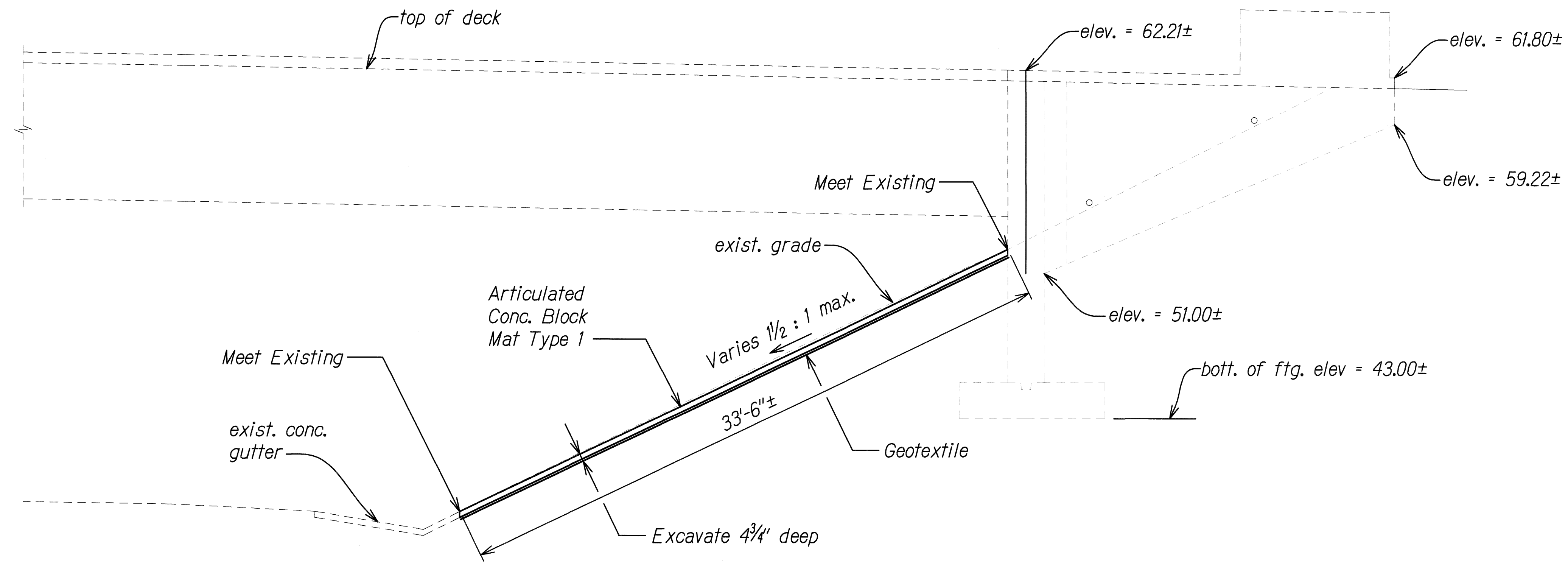
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EROSION CONTROL PLAN
SITE 7

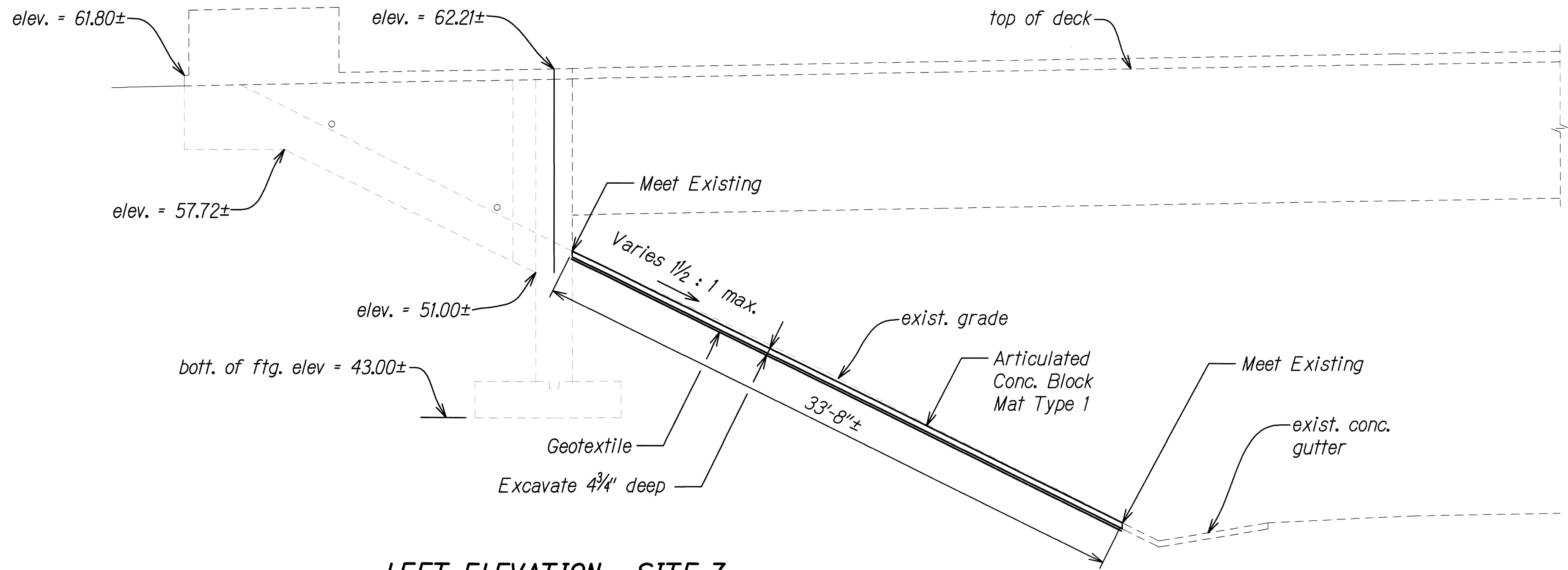
SLOPE MAINTENANCE FOR EROSION CONTROL
AT VARIOUS SITES ON OAHU, PHASE 4
Project No. HWY-O-04-10M
Scale: As Shown Date: May 2010

SHEET No. EC-16 OF 17 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-O-04-10M	2010	27	45



RIGHT ELEVATION - SITE 7
Scale: 1/4" = 1'-0"



LEFT ELEVATION - SITE 7
Scale: 1/4" = 1'-0"

ORIGINAL PLAN	DATE
NOTED BY	DATE
DESIGNED BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE

SITE 7B, SSMW-AIAWA-ABZ, ABUT 1, ELEV. W/DWG. 5/25/2010 11:59:42 AM

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**EROSION CONTROL
ELEVATIONS - SITE 7**

SLOPE MAINTENANCE FOR EROSION CONTROL
AT VARIOUS SITES ON OAHU, PHASE 4

Project No. HWY-O-04-10M

Scale: As Shown Date: May 2010

SHEET No. EC-17 OF 17 SHEETS