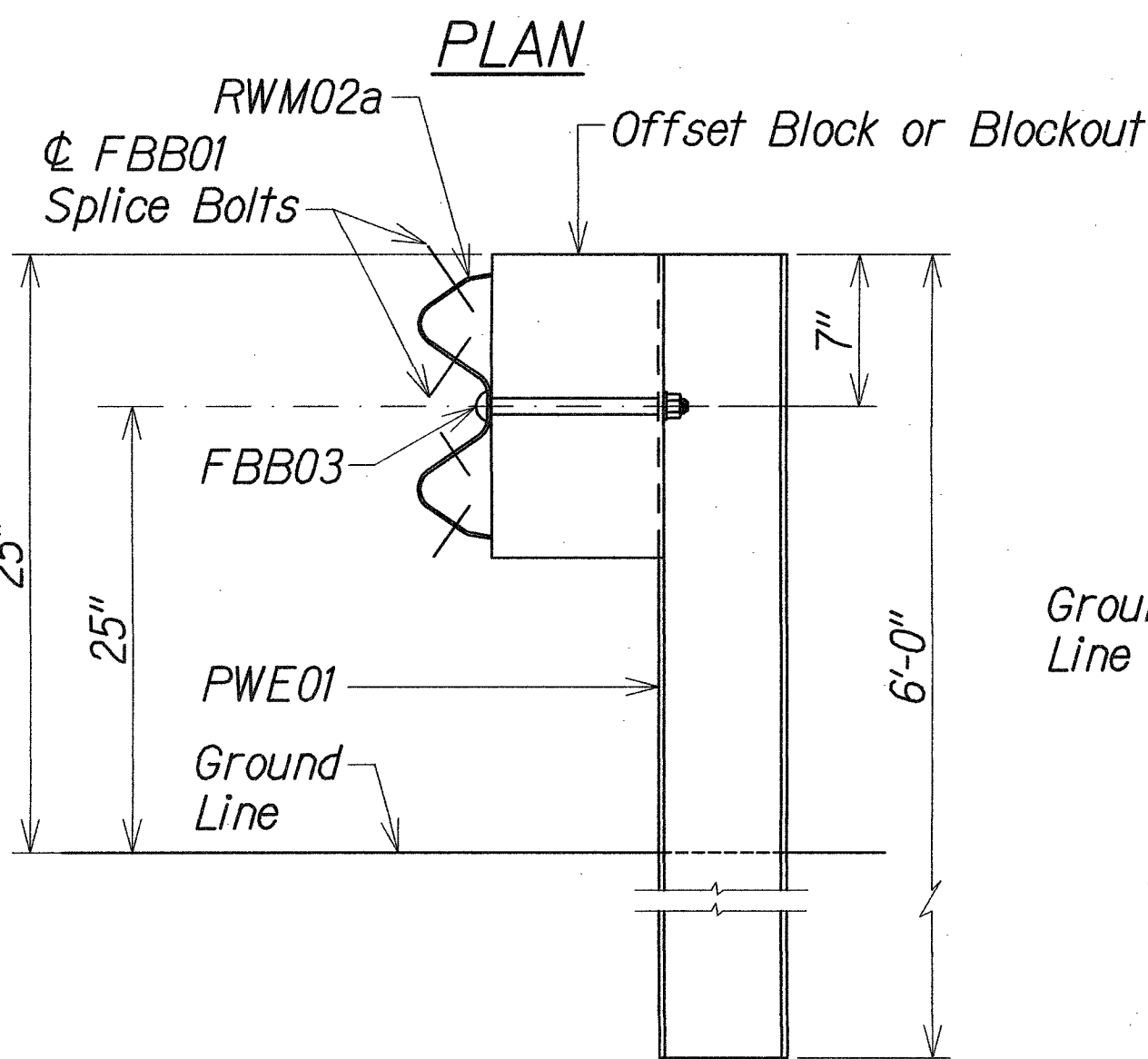
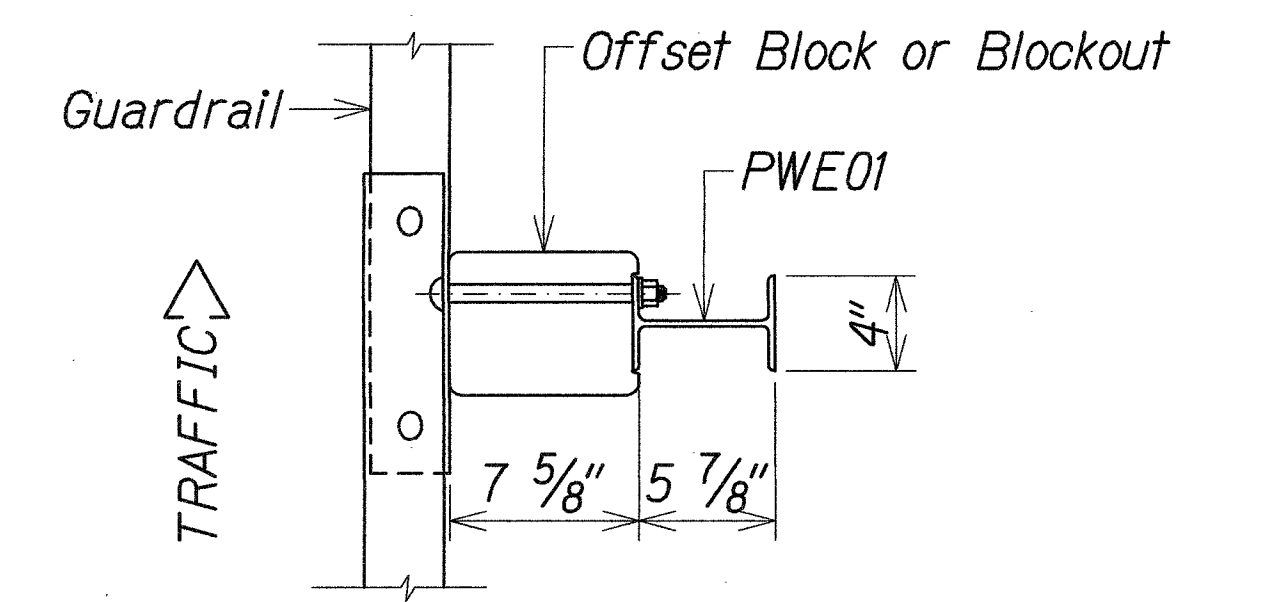
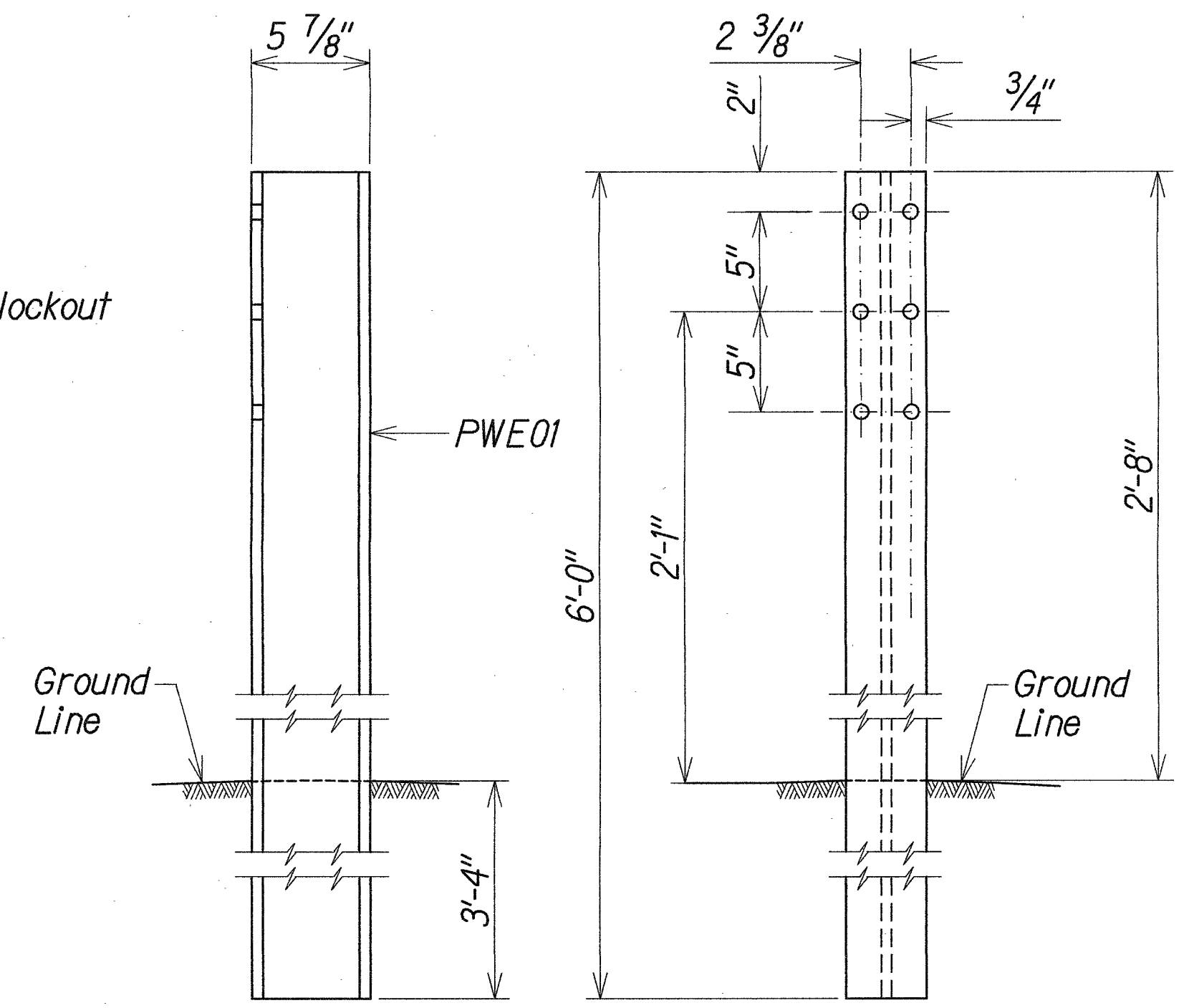
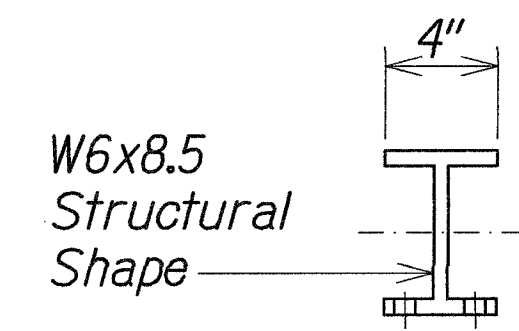




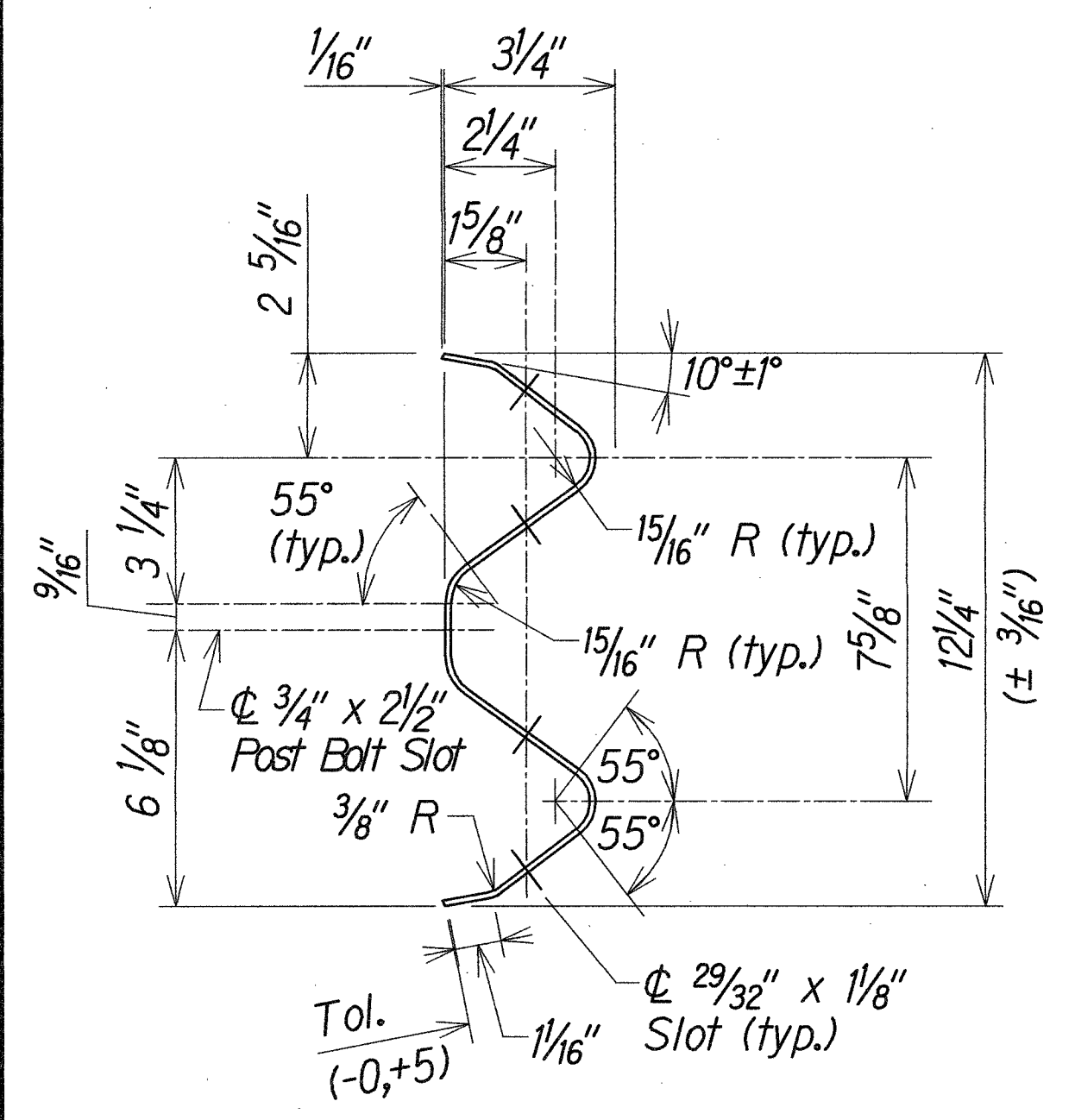
SECTION A-A

NOTE:
All Holes are
3/4" Dia.

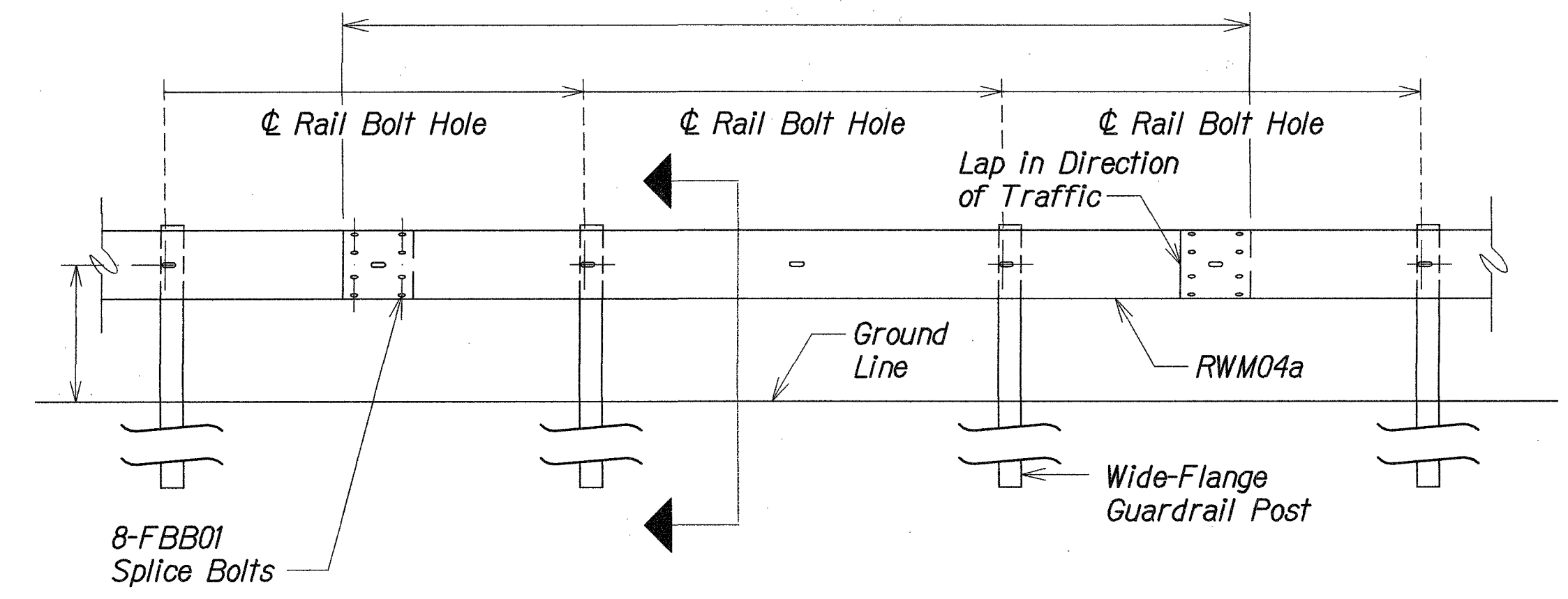
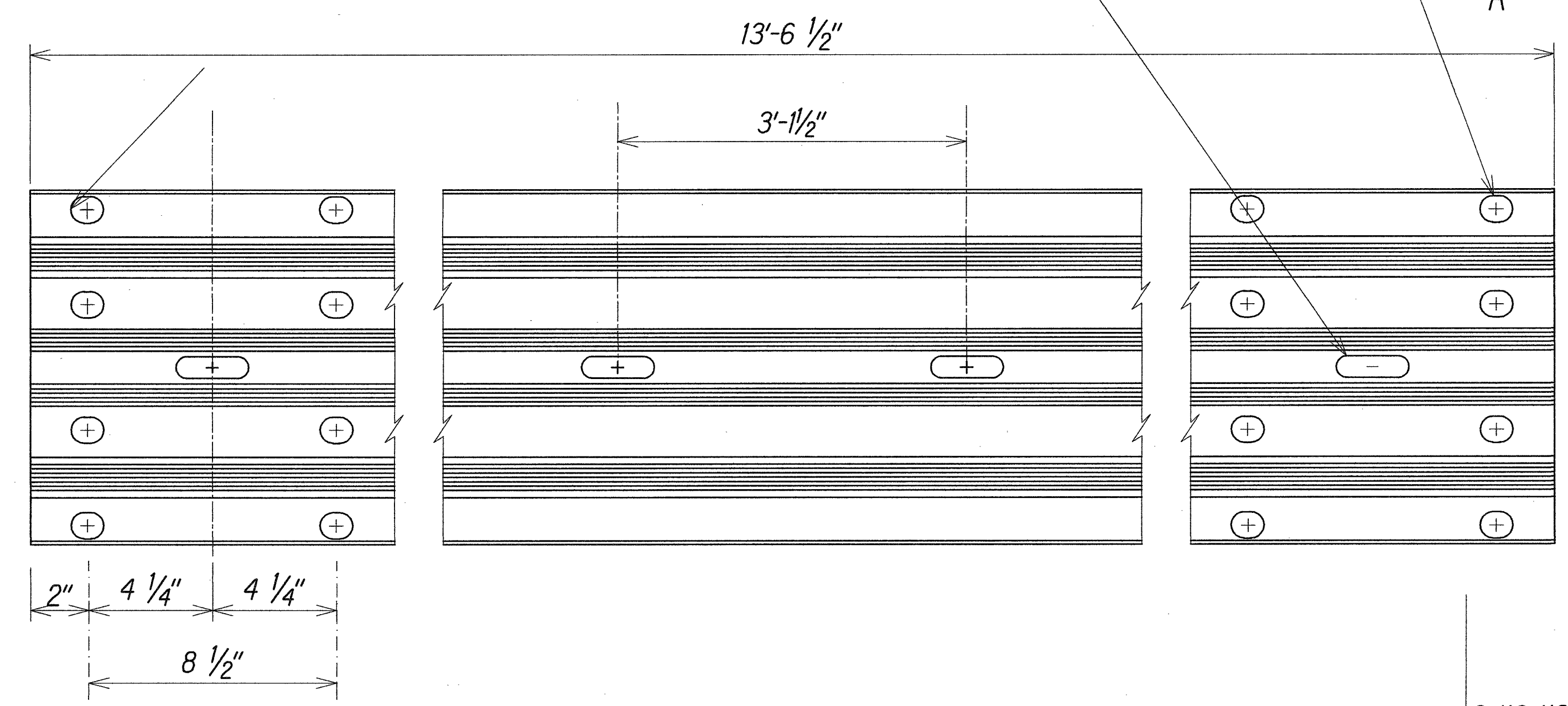


W-BEAM STRONG POST (PWE01)

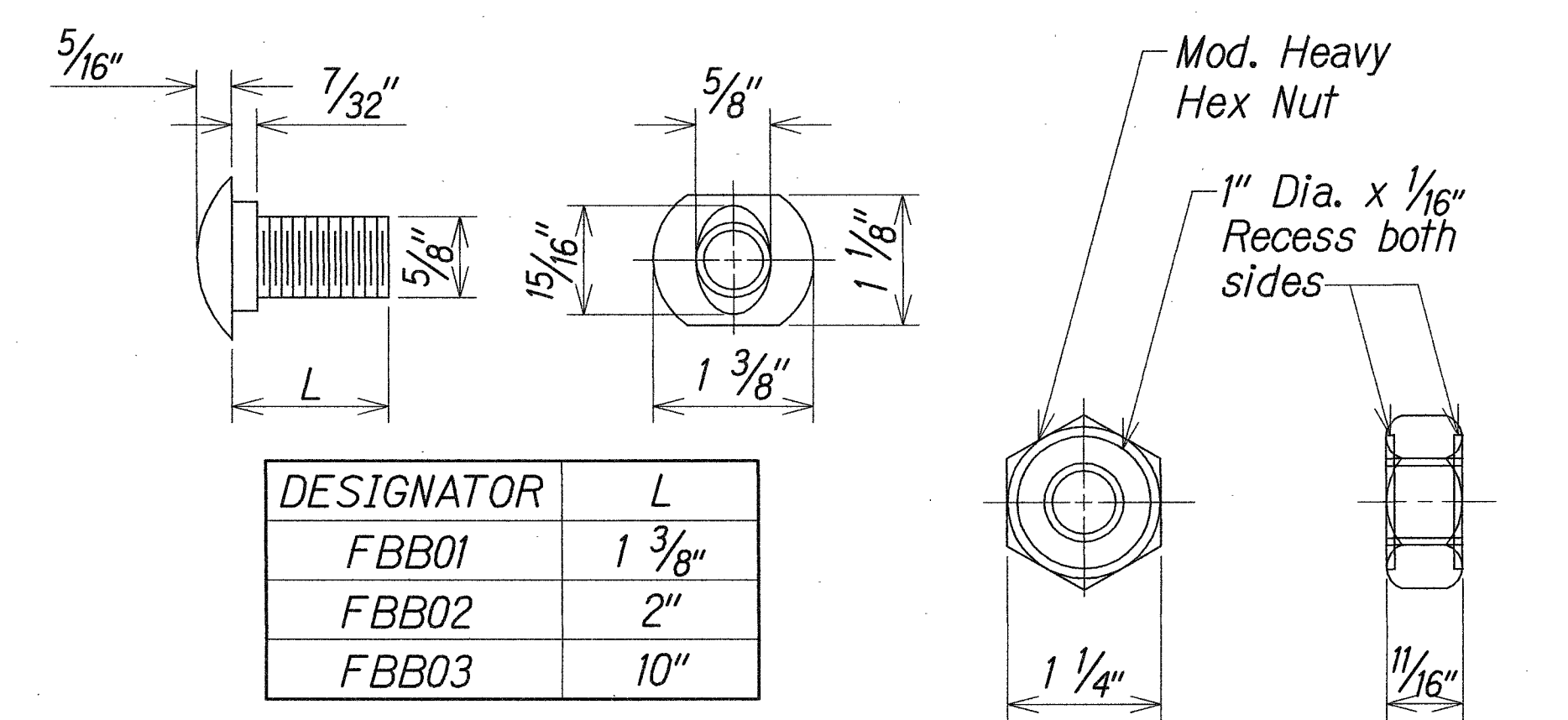
DESIGNATOR	BASE METAL THICKNESS
RWM02a	12 Gauge



4 SPACE W-BEAM GUARDRAIL (RWM04a)



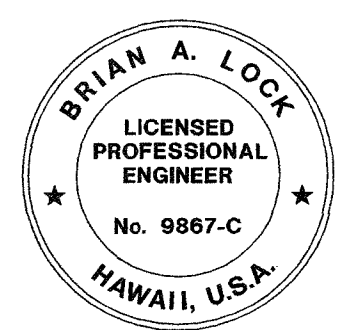
MIDWEST GUARDRAIL SYSTEM WITH
STANDARD 8" OFFSET BLOCK (SGR47)



DESIGNATOR	L
FBB01	1 3/8"
FBB02	2"
FBB03	10"

GUARDRAIL BOLTS AND RECESSED NUT

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



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mlh
WILSON OKAMOTO CORPORATION LIC. EXP. DATE
APRIL 30, 2020

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

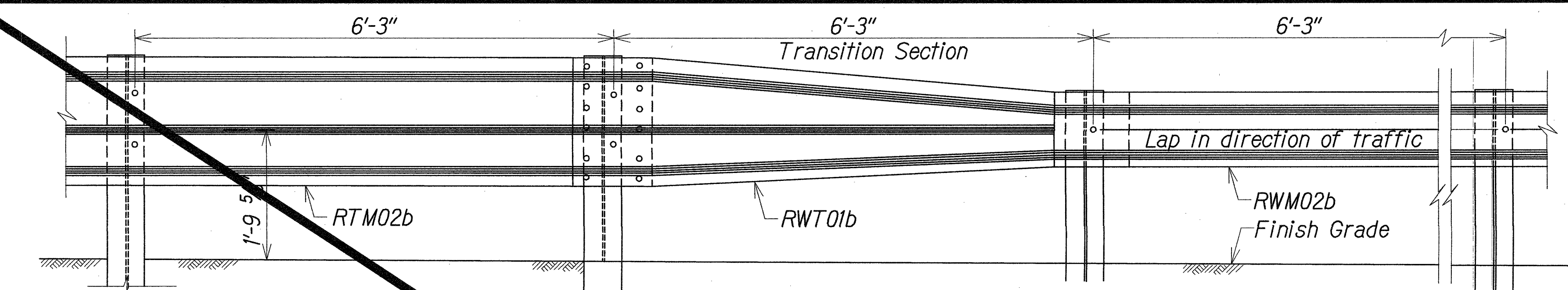
STRONG POST W-BEAM
GUARDRAIL DETAILS

HANA HIGHWAY
IMPROVEMENTS, PHASE 2C
Huelo to Hana
Project No. 360AB-01-18

Scale: None
Date: March 2018

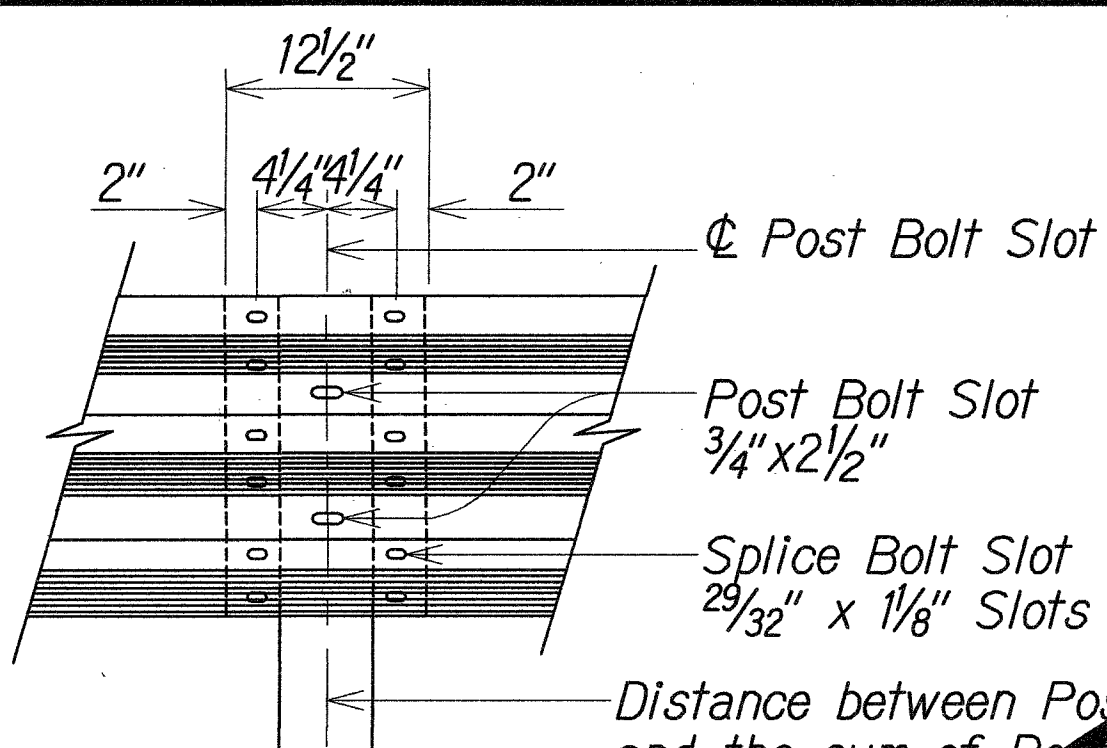
6/16/18	Replaced/Revised Details
DATE	REVISION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	360AB-01-18	2018	ADD. 12	59

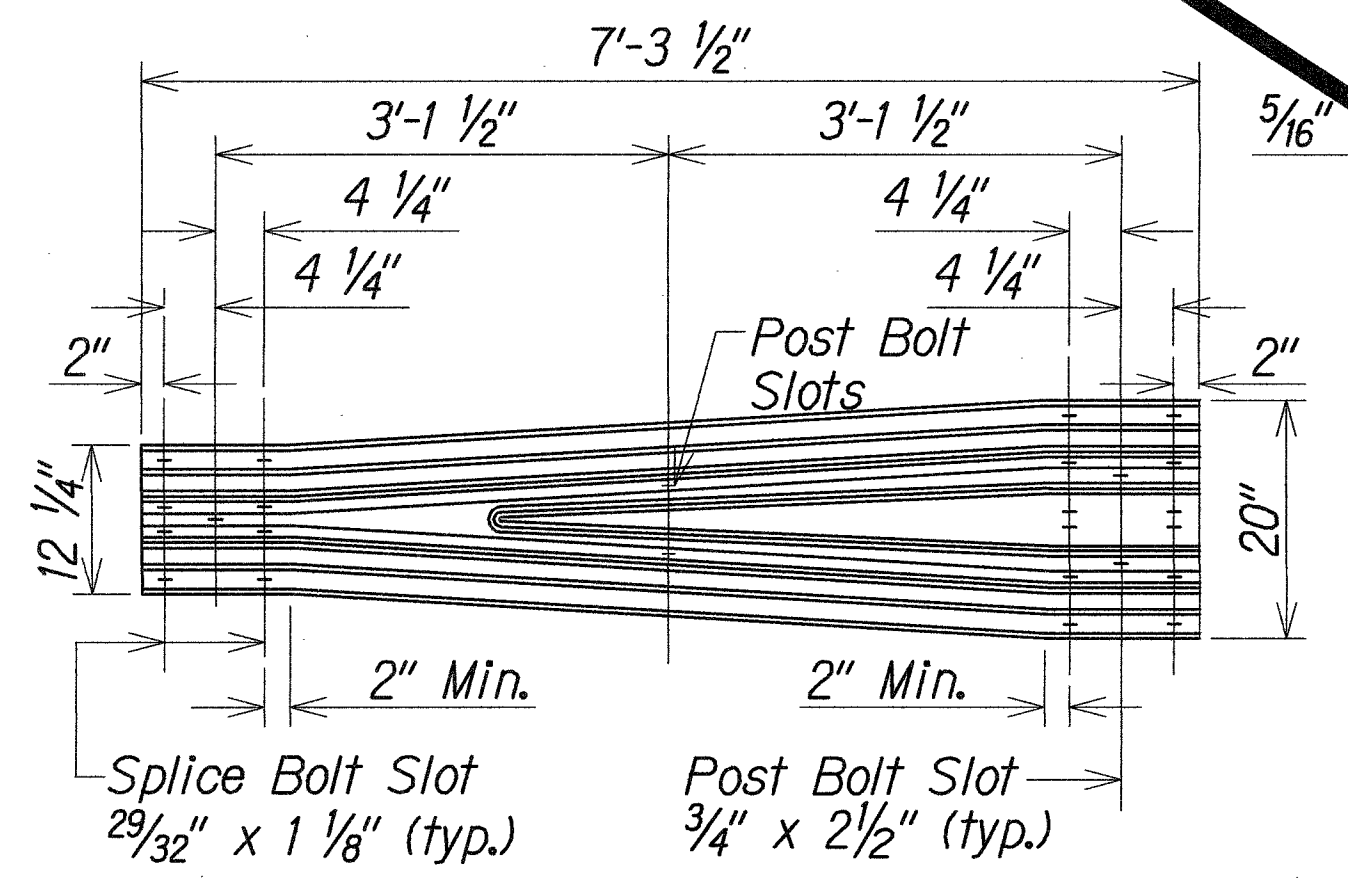
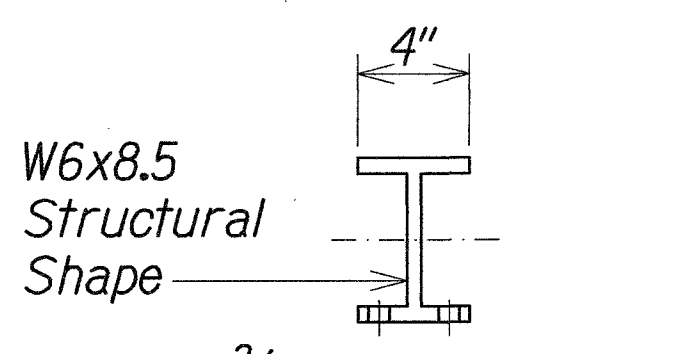


TRANSITION SECTION *

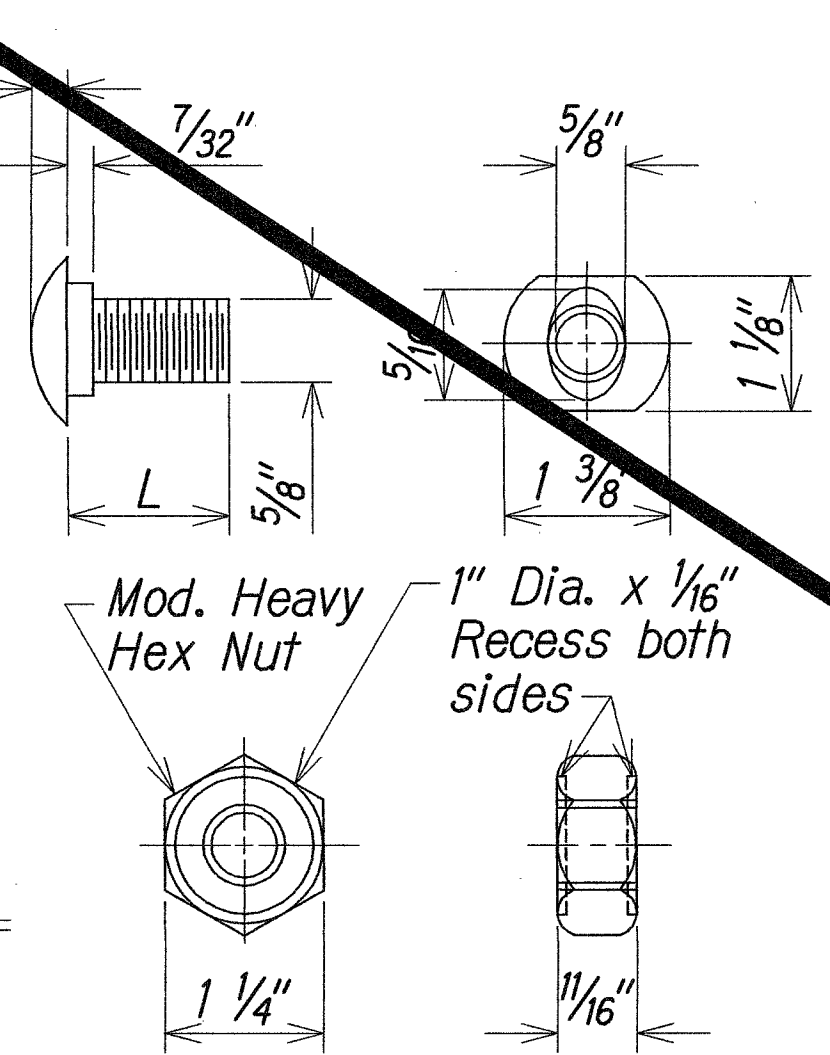
* Not to be used for Thrie Beam connection to structures.



RAIL SPLICE

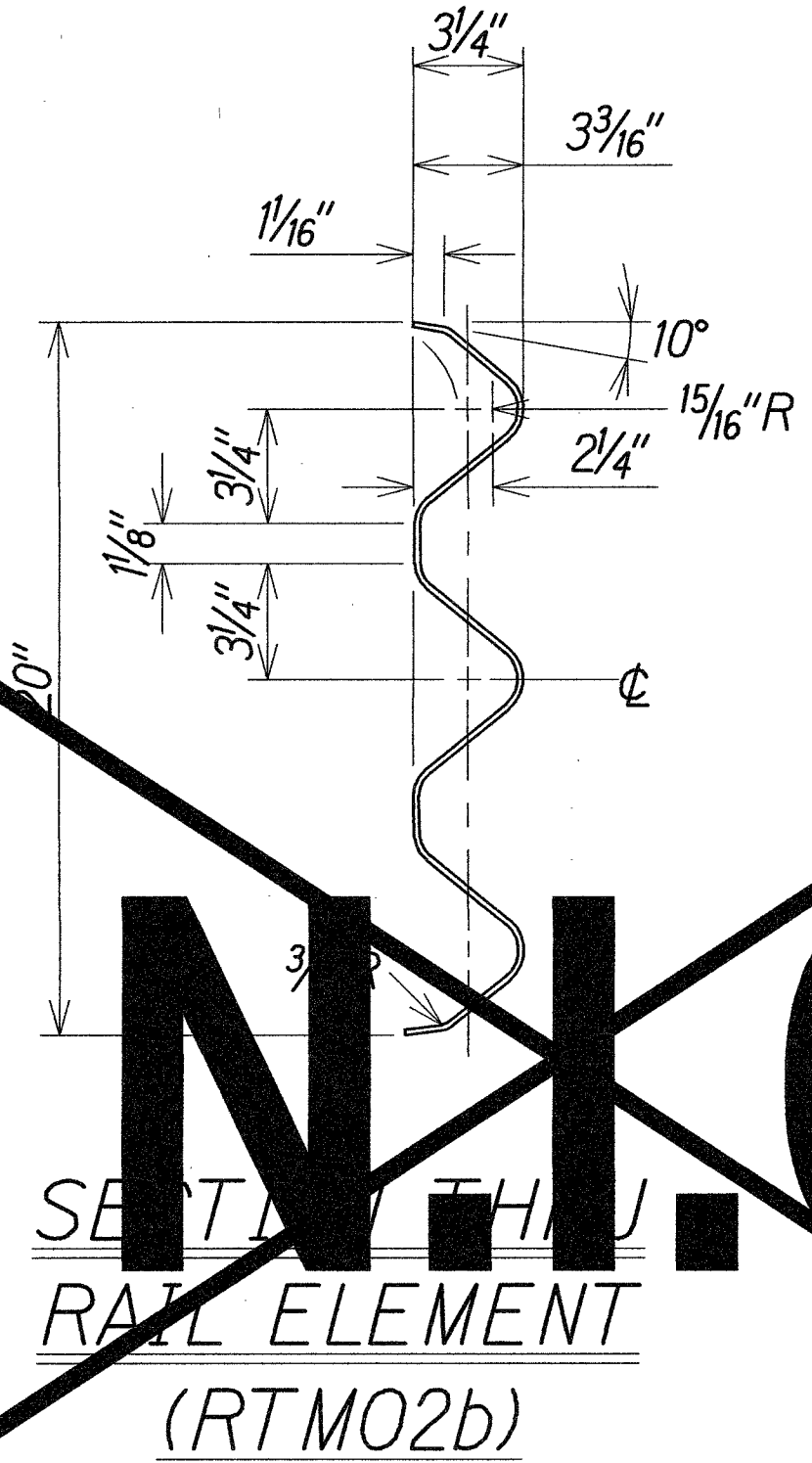


TRANSITION SECTION (RWT01b)



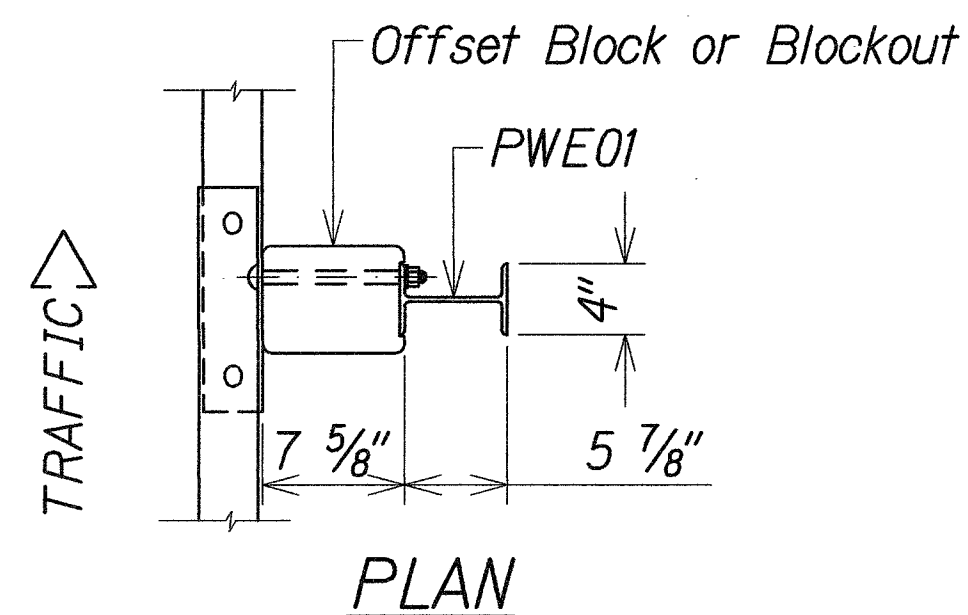
DESIGNATOR	L
FBB01	1 3/8"
FBB02	2"
FBB03	10"

GUARDRAIL BOLTS AND RECESSED NUT

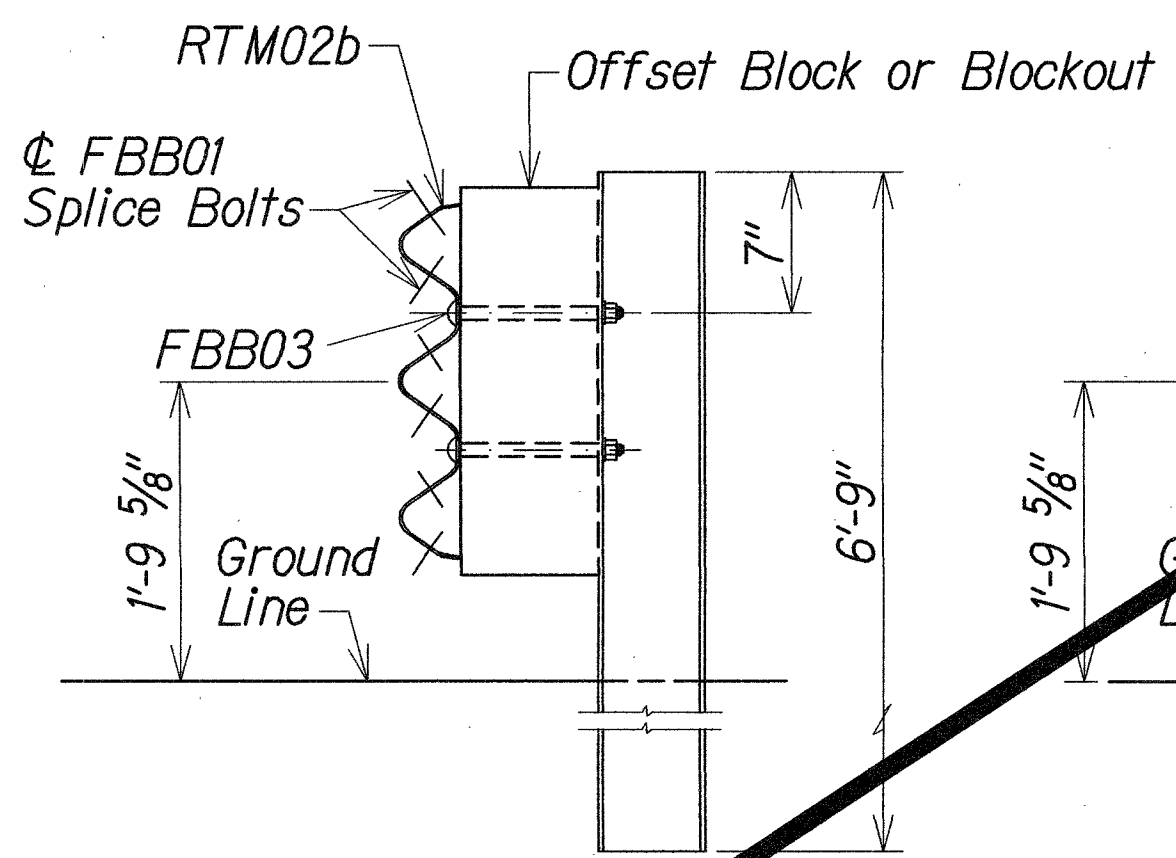


Reflector Marker (RM-5) - Reflector Facing Traffic (Mounted on Guardrail Bolt). For details and notes, see Guardrail Details & Notes sheet.

NOTE: All Holes are 3/4" Dia.

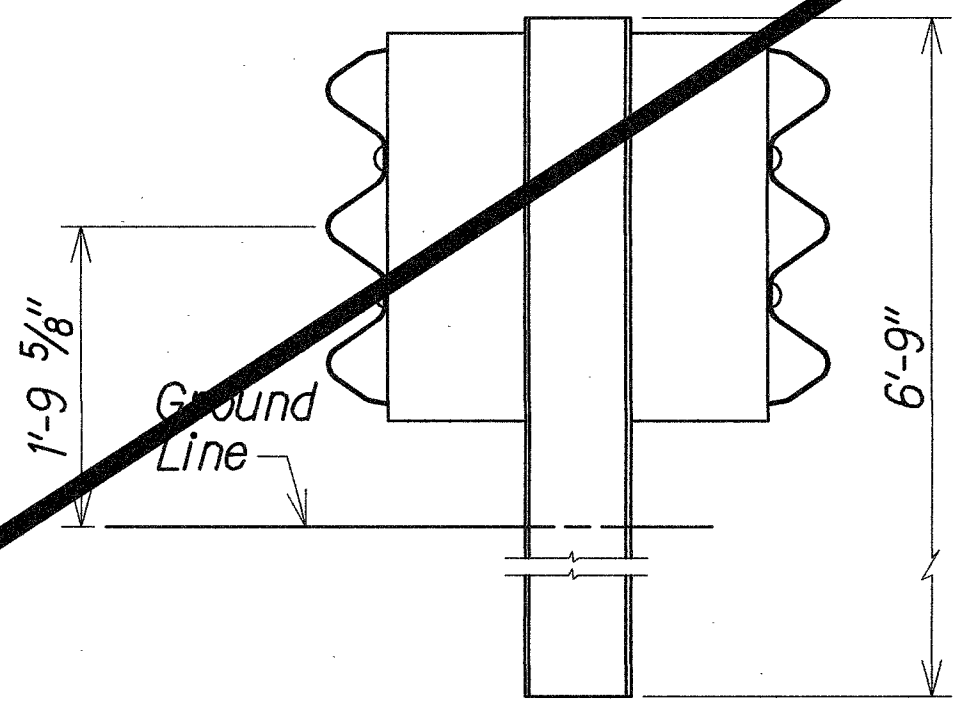


PLAN



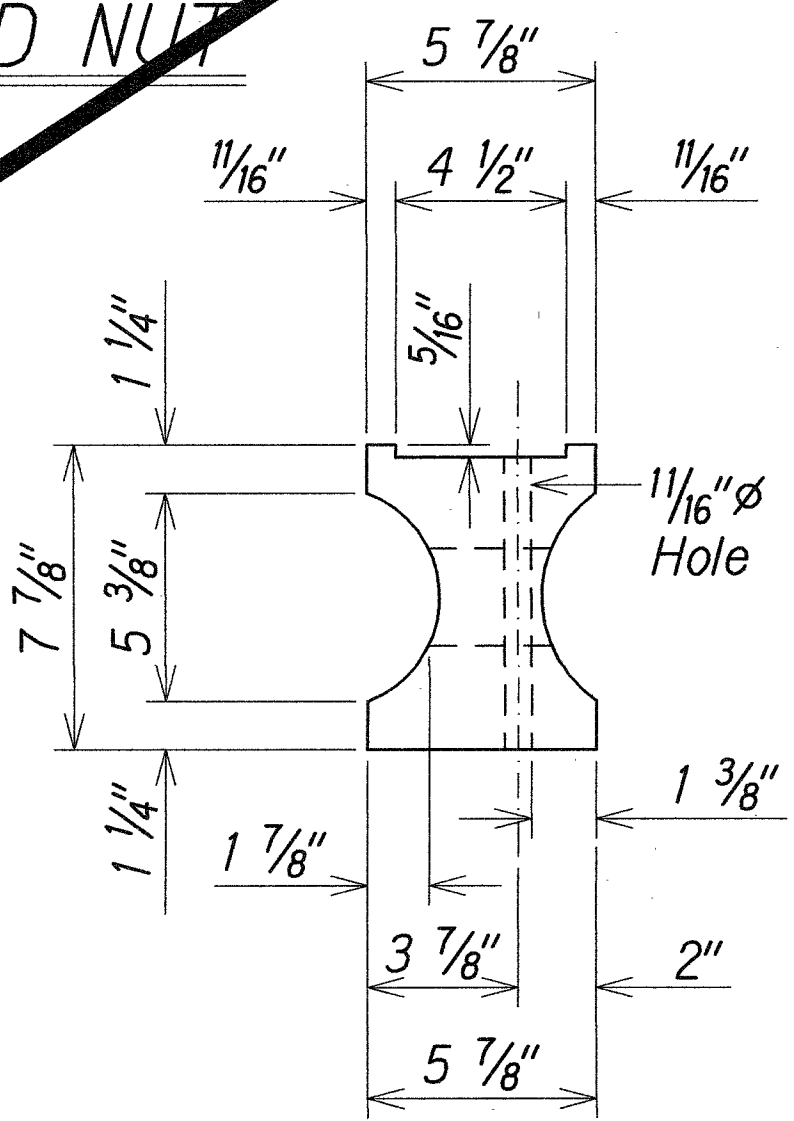
ELEVATION

STRONG POST THRIE-BEAM GUARDRAIL (SGR09a)



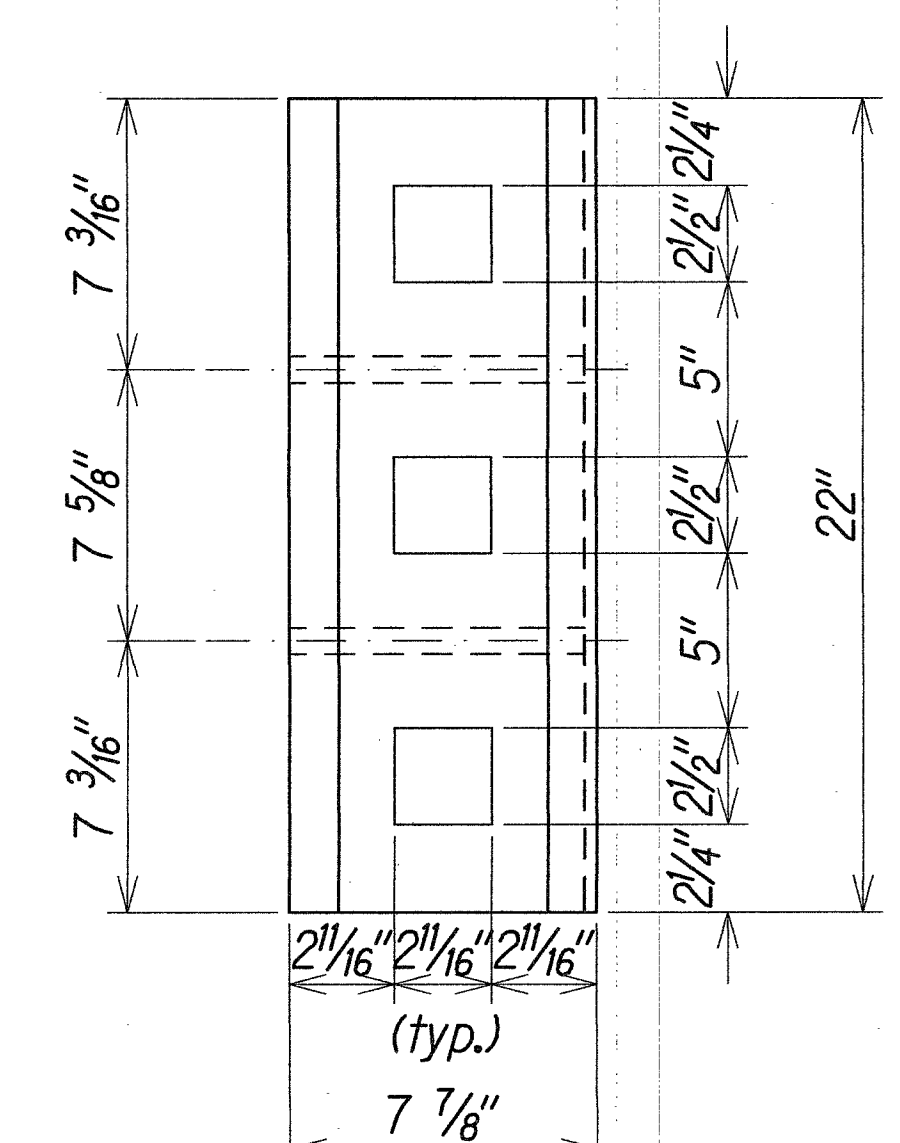
ELEVATION

STRONG POST THRIE-BEAM MEDIAN GUARDRAIL (SGM09a)

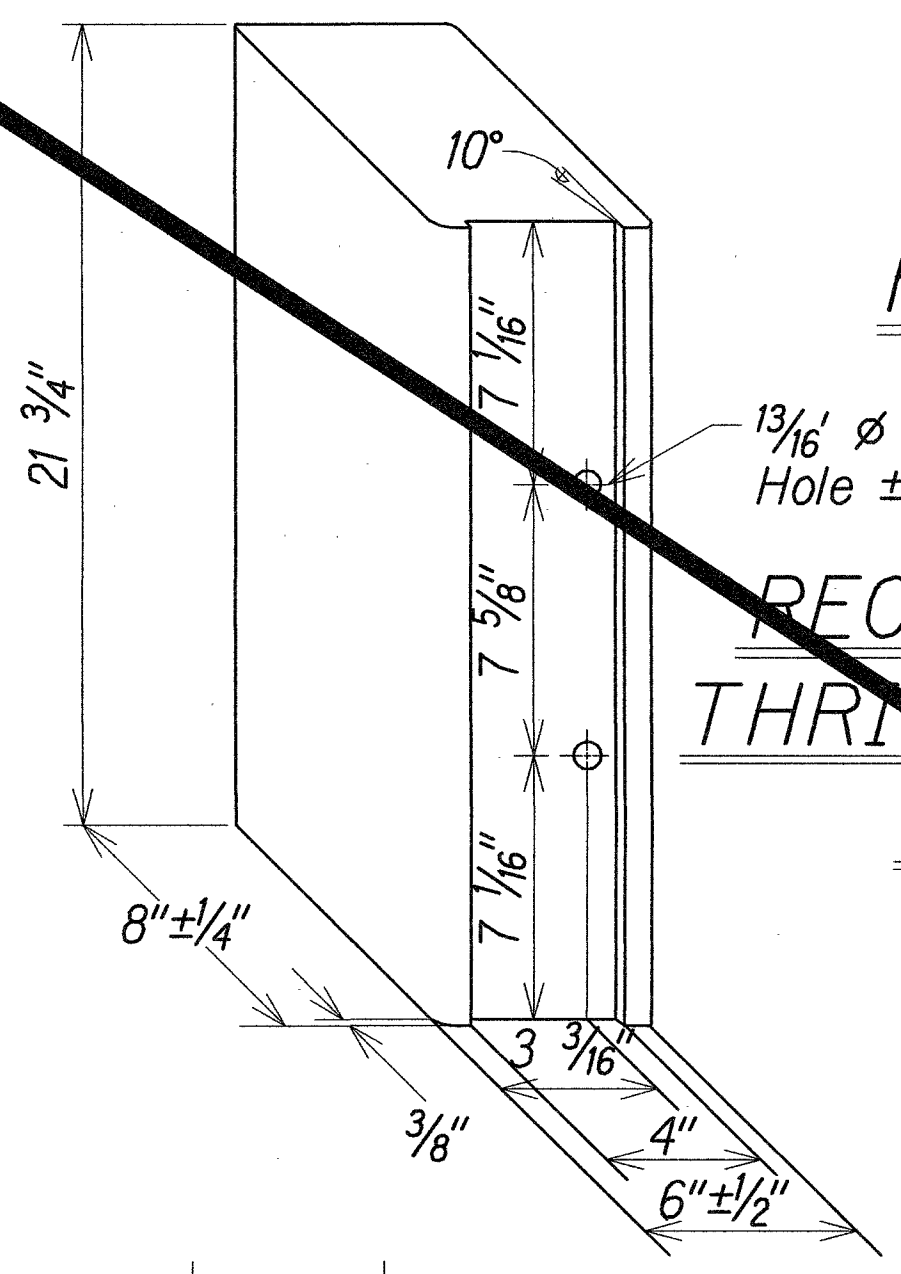


TOP

MODIFIED 6X8X22 PLASTIC BLOCKOUT (TYPE I-THRIE)

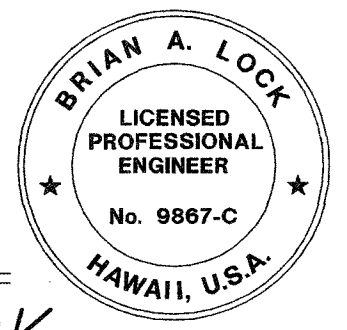


SIDE



RECYCLED POLYETHYLENE THRIE-BEAM OFFSET BLOCK (TYPE II - THRIE)

THRIE-BEAM STRONG POST FOR PLASTIC SPACER BLOCKS



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APRIL 30, 2020
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRONG POST THRIE-BEAM GUARDRAIL
HANA HIGHWAY
IMPROVEMENTS, PHASE 2C
Huelo to Hana
Project No. 360AB-01-18
Scale:

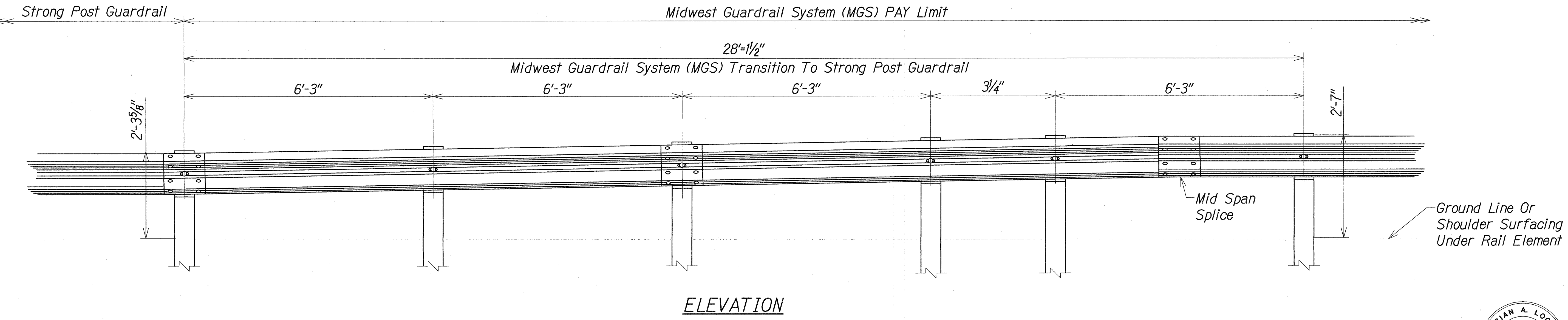
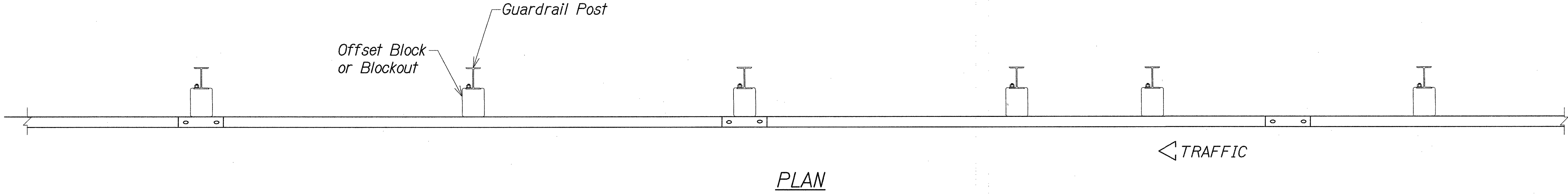
Date: March 2018
SHEET No. GRD-3 OF 11 SHEETS

ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

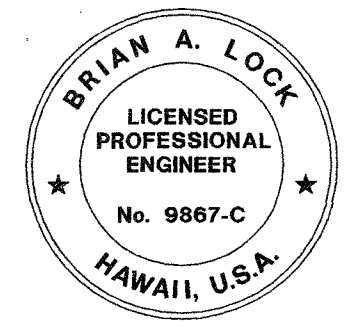
6/16/18 Sheet Deleted

DATE	REVISION
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	360AB-01-18	2018	ADD. 13S-1	59



DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NO.	



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APRIL 30, 2020
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**MSG TRANSITION TO
STRONG POST GUARDRAIL**

HANA HIGHWAY
IMPROVEMENTS, PHASE 2C
Huelo to Hana
Project No. 360AB-01-18
Date: March 2018

Scale:

6/16/18 New Sheet

DATE REVISION

SHEET No. GRD-3A OF 11 SHEETS

ADD. 13S-1

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	360AB-01-18	2018	ADD. 29	59

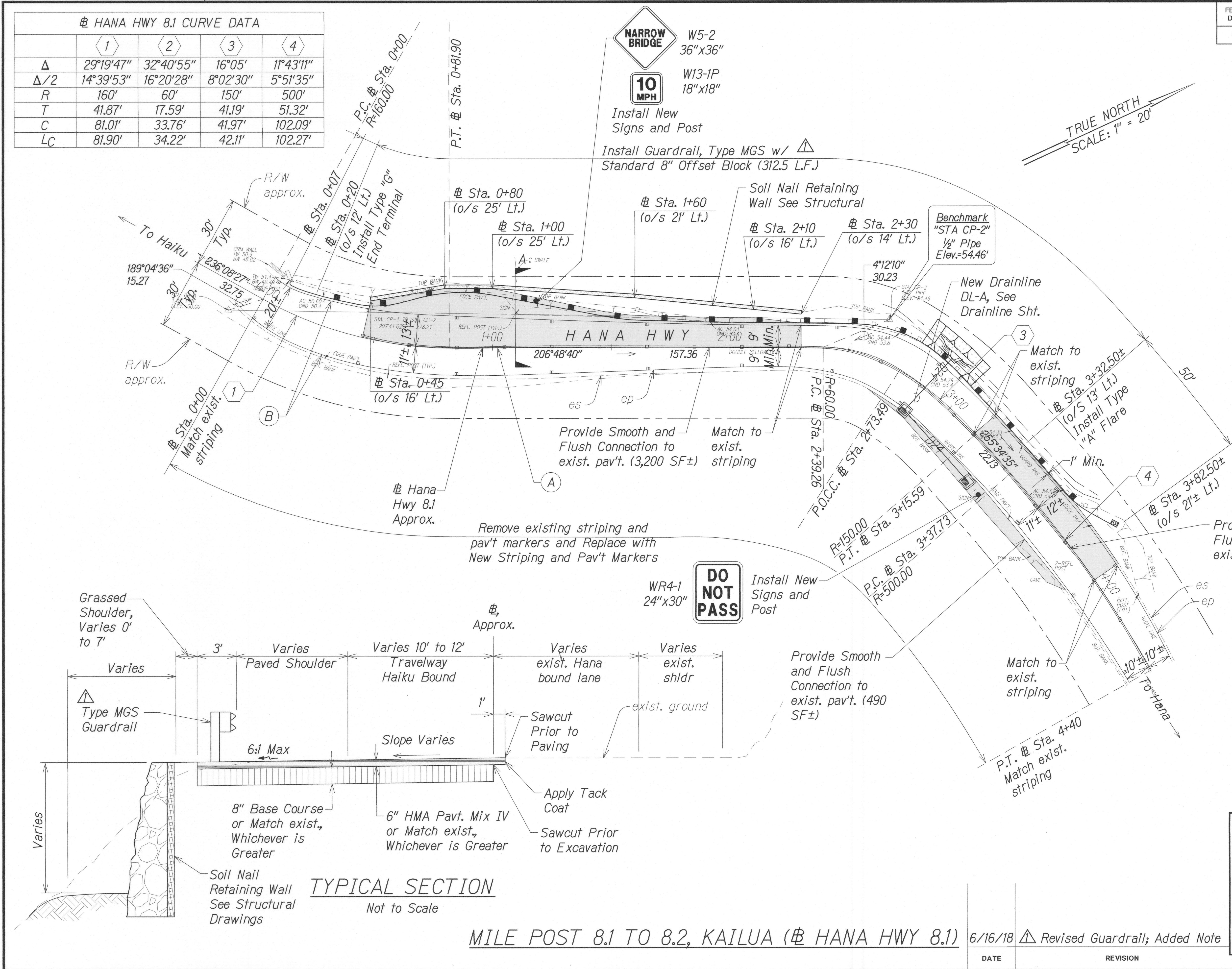
Legend:

New HMA Pavement

New Retaining Wall

- (A) 4" Wide Double Yellow Stripe with Type "D" RPM at 20' O.C.
- (B) 4" Wide Solid White Stripe with Type "C" RPM at 40' O.C.

- Notes:**
- Contractor to Span Guardrail Posts to Avoid New Drainline.
 - See Sheet ADD. 13S-1 For Transition To/From Non-MASH Compliant End Terminals (Type G, Type G Modified, and Type A) and existing W-Beam Guardrail.



TYPICAL SECTION
Not to Scale

MILE POST 8.1 TO 8.2, KAILUA (HANA HWY 8.1)

6/16/18 Revised Guardrail; Added Note

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

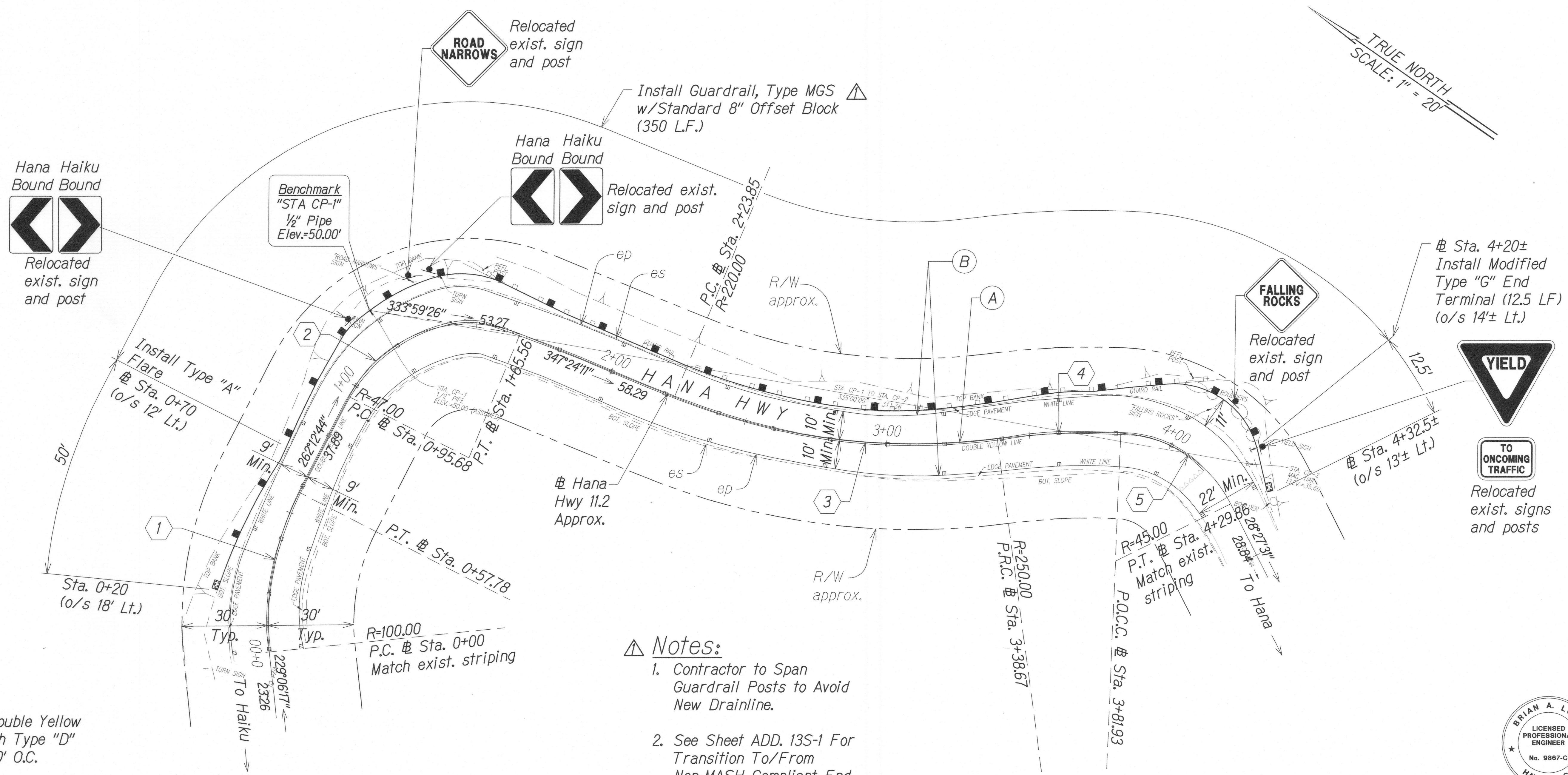
ROADWAY PLANS

HANA HIGHWAY
IMPROVEMENTS, PHASE 2C
Huelo to Hana
Project No. 360AB-01-18

Scale: 1" = 20' Date: March 2018

SHEET No. RP-1 OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	360AB-01-18	2018	ADD. 30	59



- A 4" Wide Double Yellow Stripe with Type "D" RPM at 20' O.C.
- B 4" Wide Solid White Stripe with Type "C" RPM at 40' O.C.

HANA HWY 11.2 CURVE DATA					
	1	2	3	4	5
Δ	33°06'26"	85°11'27"	29°54'13"	9°54'55"	61°01'09"
Δ/2	16°33'13"	42°35'43"	14°57'17"	4°57'27"	30°29'50"
R	100'	47'	220'	250'	45'
T	29.72'	43.21'	58.75'	21.69'	26.52'
C	56.98'	63.62'	113.52'	43.21'	45.69'
Lc	57.78'	69.88'	114.82'	43.26'	47.94'

MILE POST 11.2, PAPAEEA (HANA HWY 11.2)

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

6/16/18	Revised Guardrail; Added Notes
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS

HANA HIGHWAY
IMPROVEMENTS, PHASE 2C
Huelo to Hana
Project No. 360AB-01-18

Scale: 1" = 20'
Date: March 2018

SHEET No. RP-2 OF 5 SHEETS



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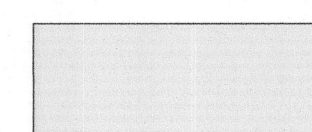
 APRIL 30, 2020
 WILSON OKAMOTO CORPORATION LIC. EXP. DATE

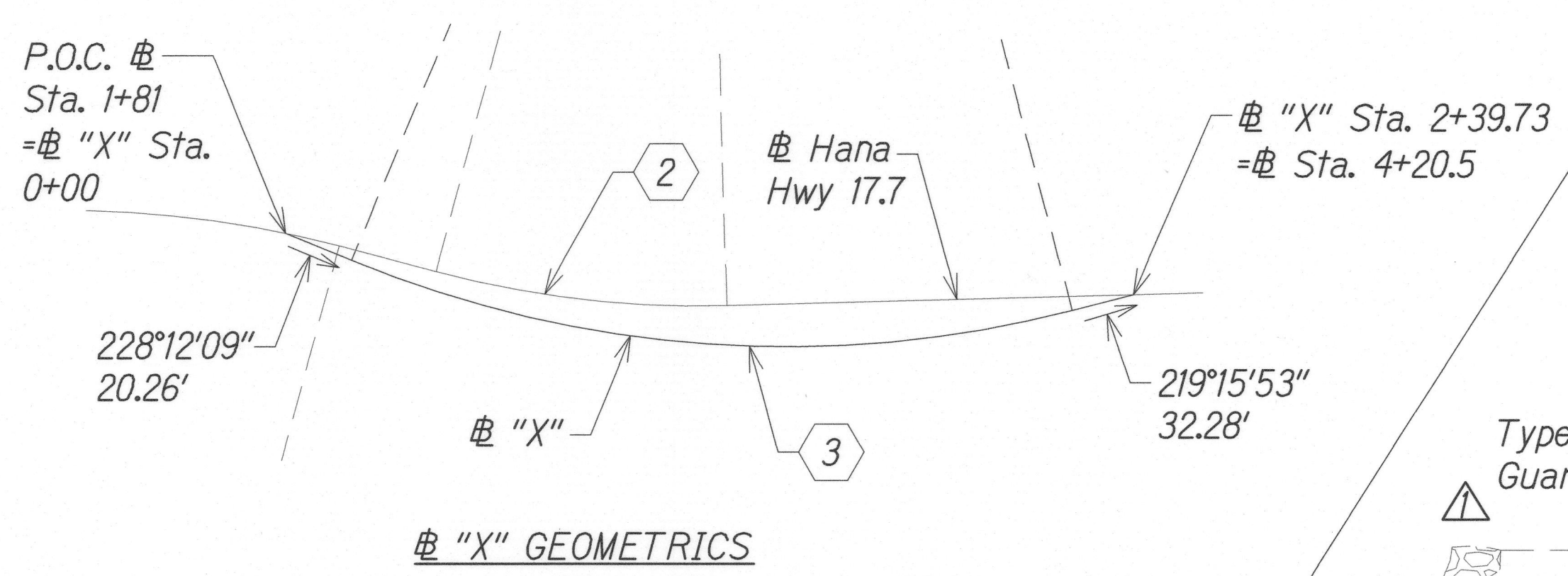
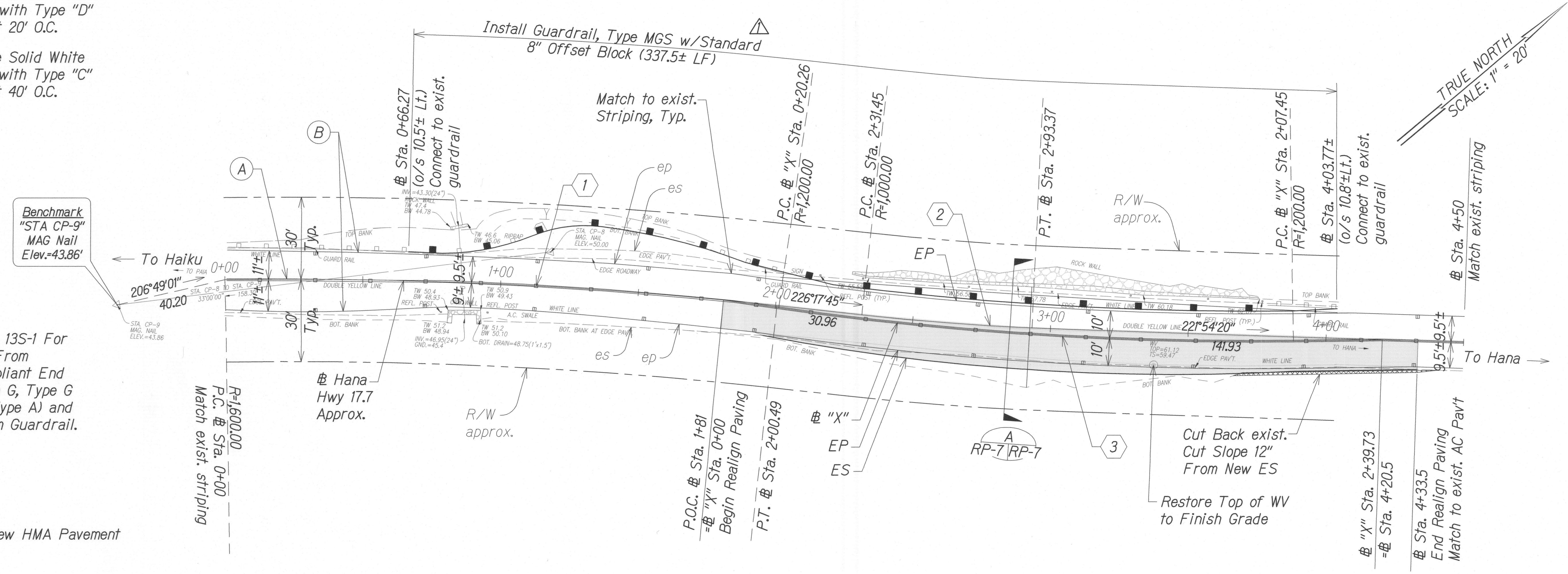
- (A) 4" Wide Double Yellow Stripe with Type "D" RPM at 20' O.C.
- (B) 4" Wide Solid White Stripe with Type "C" RPM at 40' O.C.

Notes:

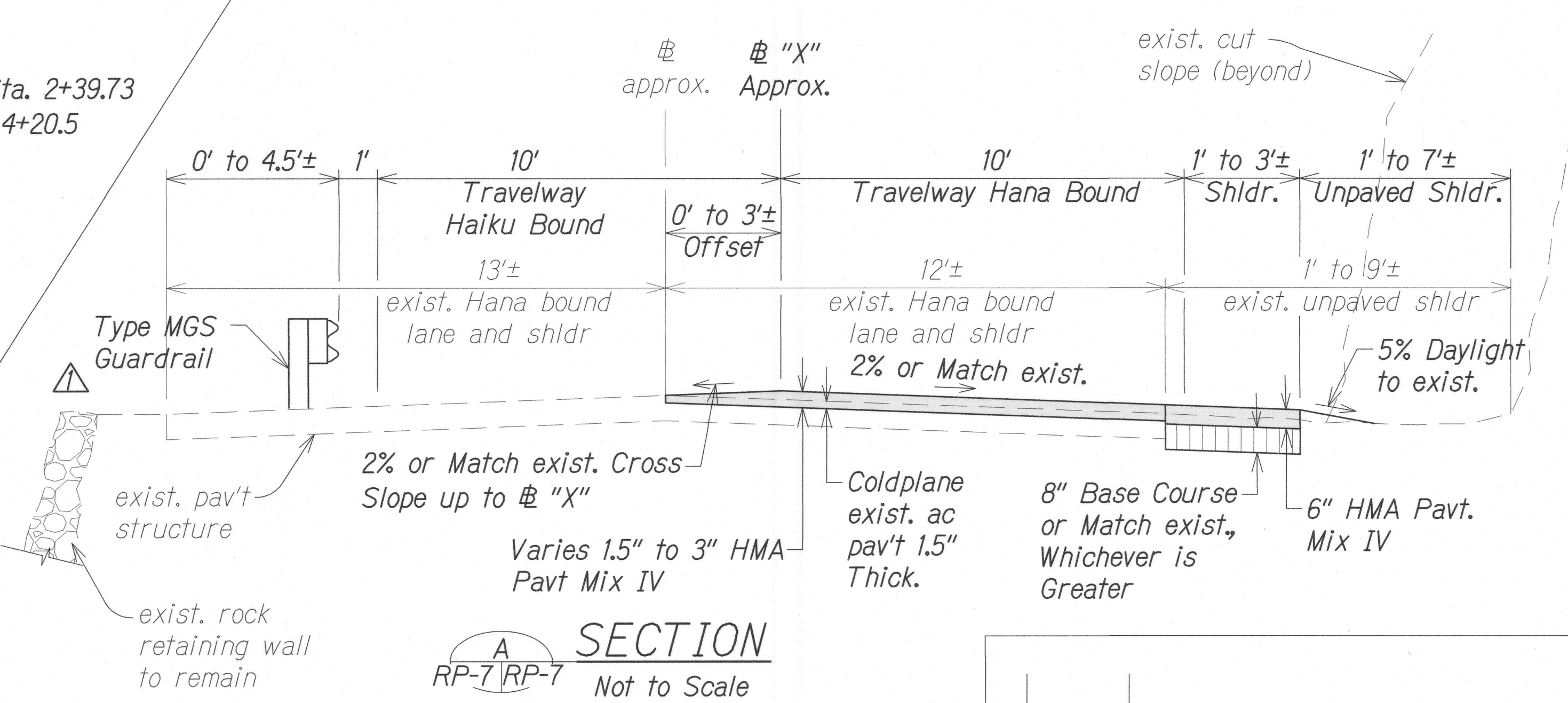
1. See Sheet ADD. 13S-1 For Transition To/From Non-MASH Compliant End Terminals (Type G, Type G Modified, and Type A) and existing W-Beam Guardrail.

Legend:

 New HMA Pavement

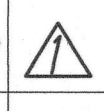


HANA HWY 17.7 CURVE DATA		"X" CURVE DATA	
	1	2	3
Δ	7°10'47"	4°23'24"	8°56'16"
$\Delta/2$	3°35'23"	2°11'42"	4°28'8"
R	1,600'	1,000'	1,200'
T	100.38'	38.33'	93.79'
C	200.36'	76.60'	187'
LC	200.49'	76.62'	187.19'



SECTION
RP-7/RP-7
Not to Scale

MILE POST 17.7, WAIANU (# HANA HWY 17.7)

6/16/18  Revised Guardrail; Added Note

DATE REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

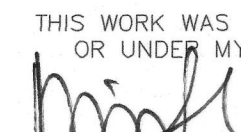
ROADWAY PLANS

HANA HIGHWAY
IMPROVEMENTS, PHASE 2C
Huelo to Hana
Project No. 360AB-01-18

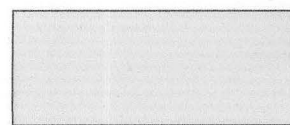
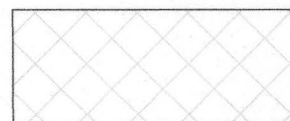
Scale: 1" = 20' Date: March 2018

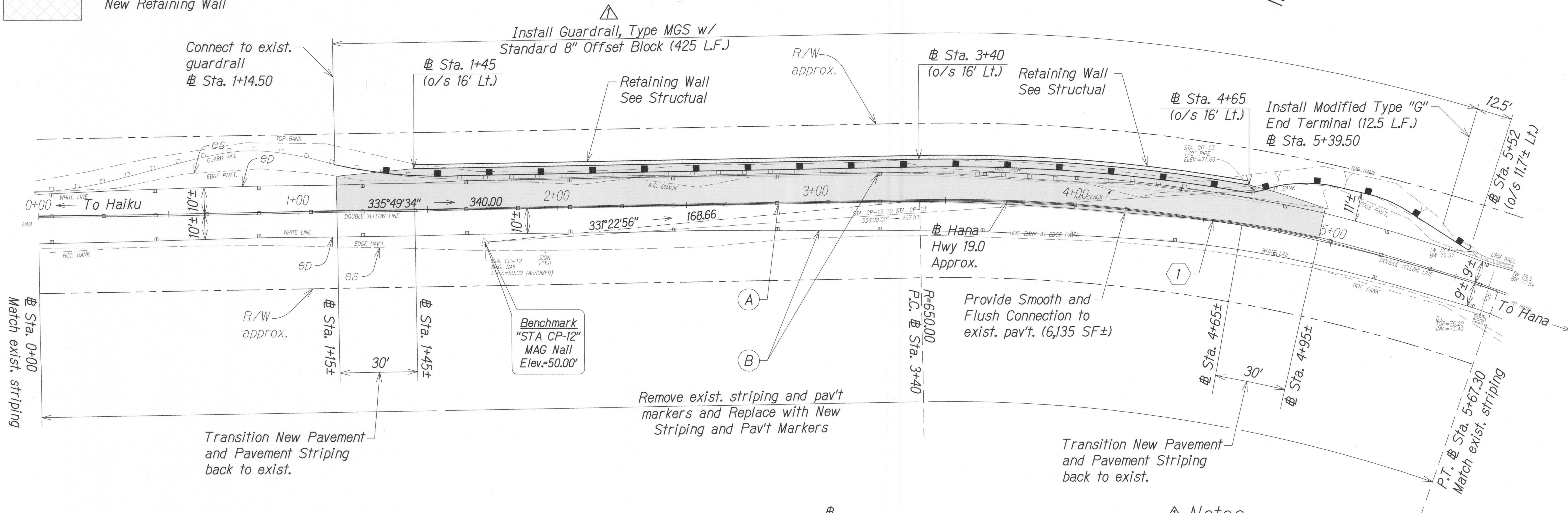
SHEET No. RP-3 OF 5 SHEETS



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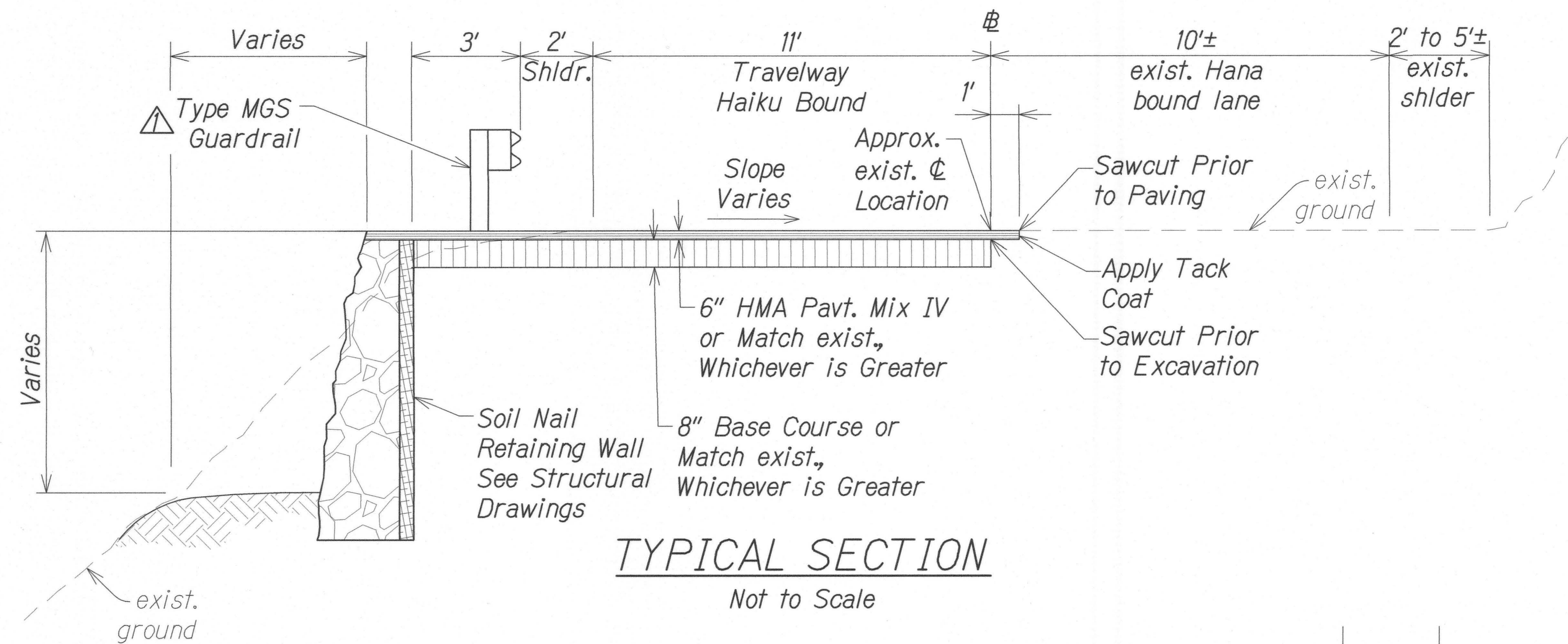
Legend:

-  New HMA Pavement
-  New Retaining Wall



- (A) 4" Wide Double Yellow Stripe with Type "D" RPM at 20' O.C.
- (B) 4" Wide Solid White Stripe with Type "C" RPM at 40' O.C.

HANA HWY 19.0 CURVE DATA	
Δ	20°02'09"
$\Delta/2$	10°01'04"
R	650'
T	114.82'
C	226.14'
LC	227.30'



- Notes:
- See Sheet ADD. 135-1 For Transition To/From Non-MASH Compliant End Terminals (Type G, Type G Modified, and Type A) and existing W-Beam Guardrail.



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 APRIL 30, 2020
 LIC. EXP. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS
HANA HIGHWAY
IMPROVEMENTS, PHASE 2C
Huelo to Hana
Project No. 360AB-01-18
Scale: 1" = 20' Date: March 2018

DATE
6/16/18

REVISION
Revised Guardrail; Added Note

SHEET No. RP-4 OF 5 SHEETS