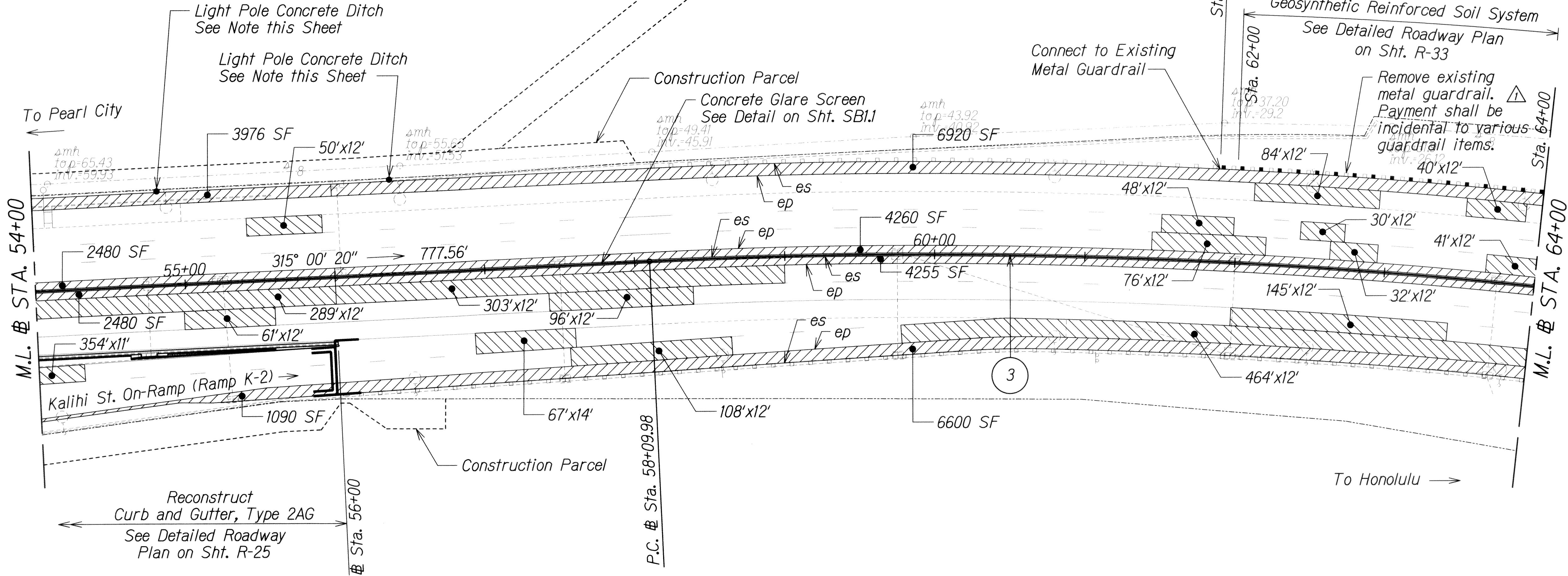


FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-HI-1(269)	2013	ADD. 27	382

CURVE 3 DATA

Δ = 12°59'40"
R = 3,819.72'
T = 435.01'
C = 864.44'
Lc = 866.30'



NOTE:
Construct Light Pole Concrete Ditch around new light pole. For light pole location, See Highway Lighting Plan Sht. E-7. For Light Pole Concrete Ditch, See Detail on Sht. R-38.

LEGEND:

- [] Resurfacing Limits
- [] 4" Cold Plane
- [] 2" SMA
- [] 2" HMA Mix IV
- [] Resurfacing Limits - Ramps
- [] 4" Cold Plane
- [] 4" HMA Mix IV
- [] Weakened Pavement Reconstruction
- [] See Table for Pavement Structure
- [] Shoulder Pavement Reconstruction
- [] See Table for Pavement Structure

Begin Sta.	End Sta.	Mainlanes	Median Shoulder	Right Shoulder	Ramps
49+22	56+00	2" SMA 2" HMA Mix IV 8" HMAB	2" SMA 2" HMA Mix IV 9" HMAB	2" SMA 2" HMA Mix IV 12" HMAB	4" HMA Mix IV 8" HMAB
56+00	127+00	2" SMA 2" HMA Mix IV 6" HMAB	2" SMA 2" HMA Mix IV 6" HMAB	2" SMA 2" HMA Mix IV 6" HMAB	4" HMA Mix IV 6" HMAB

6/17/13	Added Callout
Date	Revision

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
SIGNATURE: *Pamela K. Ueda*
EXPIRATION DATE OF LICENSE: 04/30/14

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN
STA. 54+00 TO STA. 64+00
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP NO. 1M-HI-1(269)

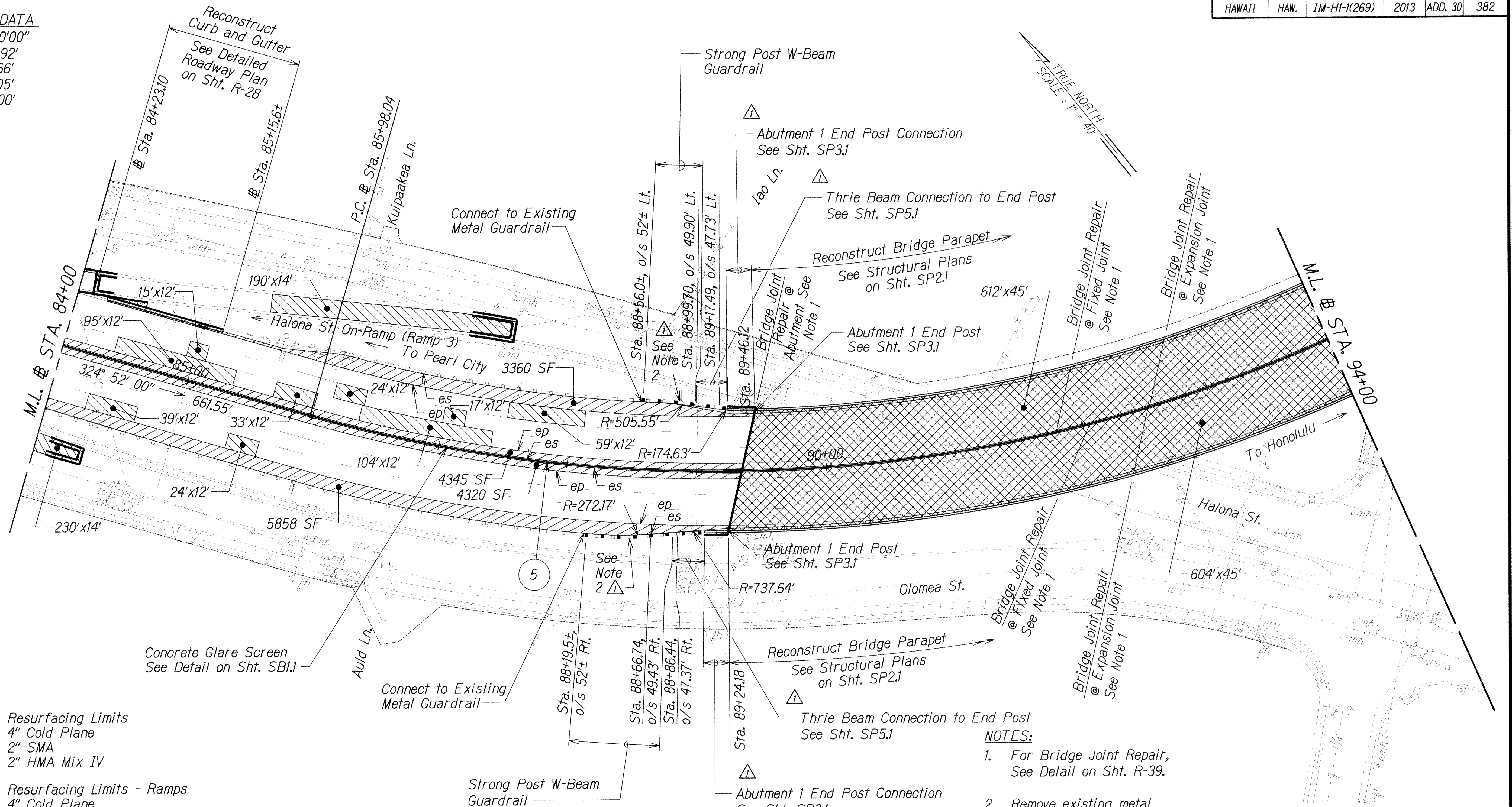
Scale: 1"=40' Date: Apr. 26, 2013

SHEET No. R-08 OF 43 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 30	382

CURVE 5 DATA

$\Delta = 45^{\circ}00'00''$
 $R = 1,145.92'$
 $T = 474.66'$
 $C = 877.05'$
 $L_c = 900.00'$



LEGEND:

- Resurfacing Limits
4" Cold Plane
2" SMA
2" HMA Mix IV
- Resurfacing Limits - Ramps
4" Cold Plane
4" HMA Mix IV
- Weakened Pavement Reconstruction
See Table for Pavement Structure
- Shoulder Pavement Reconstruction
See Table for Pavement Structure
- Bridge Deck Repair
Remove Exist. AC Surface Course
2" SMA
- 4" Plain Concrete

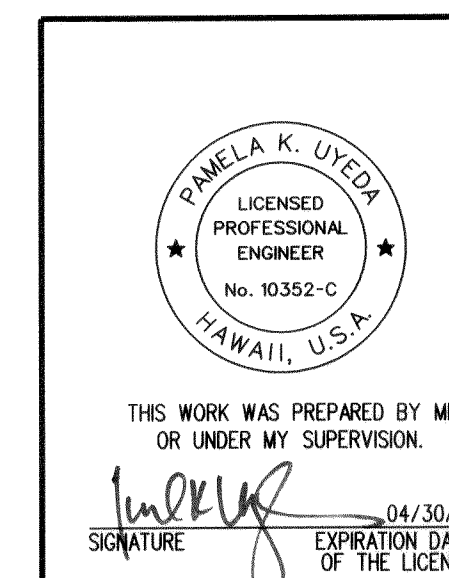
Begin Sta.	End Sta.	Mainlanes	Median Shoulder	Right Shoulder	Ramps
56+00	127+00	2" SMA 2" HMA Mix IV 6" HMAB	2" SMA 2" HMA Mix IV 6" HMAB	2" SMA 2" HMA Mix IV 6" HMAB	4" HMA Mix IV 6" HMAB

NOTES:

- For Bridge Joint Repair, See Detail on Sht. R-39.
- Remove existing metal guardrail. Payment shall be incidental to the various guardrail items.

SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	

T:\164594 IDIQ PAVMT PREVENTIVE MAINTENANCE\HI MIDDLE TO WARD\CADD\SHEETS\02 ROAD\R-09.dgn

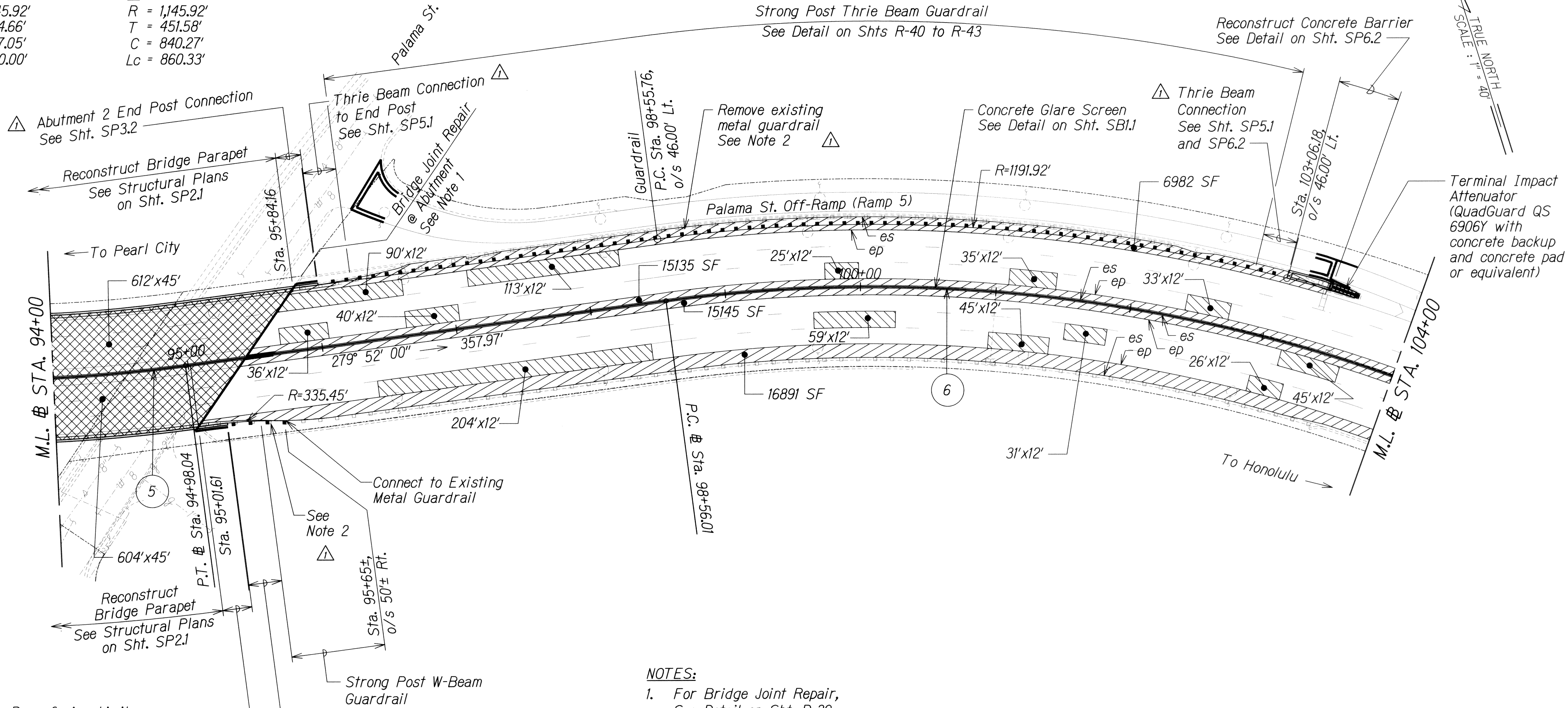


6/17/13	Revised Connections
Date	Revision
<div> <div> STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION ROADWAY PLAN STA. 84+00 TO STA. 94+00 INTERSTATE ROUTE H-1 REHABILITATION Middle Street to Vicinity of Ward Avenue FAP NO. IM-HI-1(269) Scale: 1"=40' Date: Apr. 26, 2013 </div> <div> SHEET No. R-11 OF 43 SHEETS </div> </div>	

ADD. 30

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-HI-1K(269)	2013	ADD. 31	382

CURVE 5 DATA	CURVE 6 DATA
$\Delta = 45^{\circ}00'00''$	$\Delta = 43^{\circ}01'00''$
$R = 1,145.92'$	$R = 1,145.92'$
$T = 474.66'$	$T = 451.58'$
$C = 877.05'$	$C = 840.27'$
$Lc = 900.00'$	$Lc = 860.33'$



LEGEND:

	Resurfacing Limits
	4" Cold Plane
	2" SMA
	2" HMA Mix IV
	Resurfacing Limits - Ramps
	4" Cold Plane
	4" HMA Mix IV
	Weakened Pavement Reconstruction
	Shoulder Pavement Reconstruction
	Bridge Deck Repair
	Remove Exist. AC Surface Course
	2" SMA

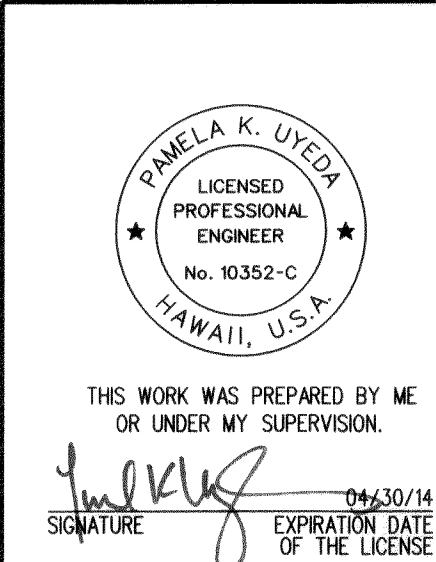
NOTES:

- For Bridge Joint Repair, See Detail on Sht. R-39.
- Remove existing metal guardrail. Payment shall be incidental to the various guardrail items.

Begin Sta.	End Sta.	Mainlanes	Median Shoulder	Right Shoulder
56+00	127+00	2" SMA 2" HMA Mix IV 6" HMAB	2" SMA 2" HMA Mix IV 6" HMAB	2" SMA 2" HMA Mix IV 6" HMAB

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

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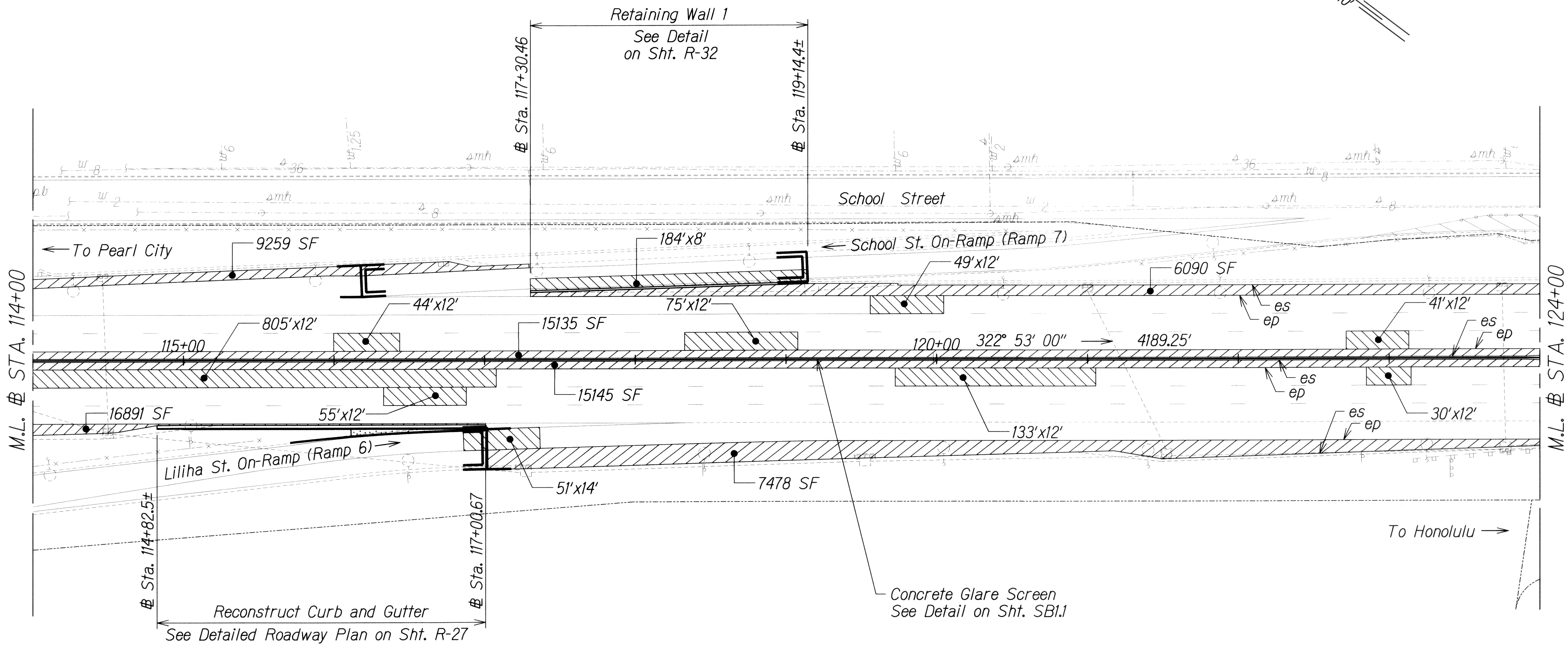
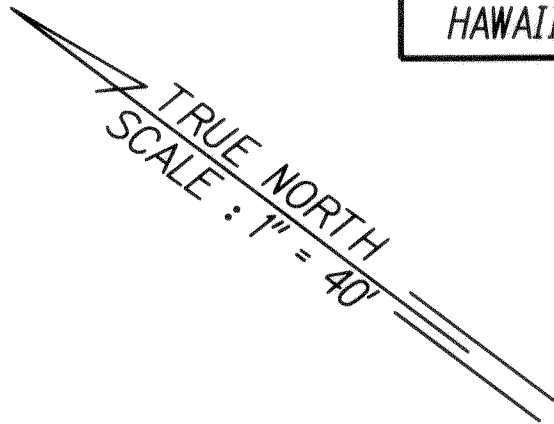


6/17/13	Revised Connections and Added Note 2
Date	Revision

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
ROADWAY PLAN
STA. 94+00 TO STA. 104+00
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP NO. 1M-HI-1K(269)
Scale: 1"=40' Date: Apr. 26, 2013

SHEET No. R-12 OF 43 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 33	382



LEGEND:

- []

Resurfacing Limits
4" Cold Plane
2" SMA
2" HMA Mix IV
- []

Resurfacing Limits - Ramps
4" Cold Plane
4" HMA Mix IV
- Weakened Pavement Reconstruction
See Table for Pavement Structure
- Shoulder Pavement Reconstruction
See Table for Pavement Structure
- 4" Plain Concrete

- NOTES:
- △

1. New pavement structure fronting Retaining Wall 1 shall be:
2" SMA
2" HMA Mix IV
6" HMAB
14" ASB (Above footing)
2.

New pavement structure behind Retaining Wall 1 shall be:
4" HMA Mix IV
6" HMAB
19" ASB Above footing

Begin Sta.	End Sta.	Mainlanes	Median Shoulder	Right Shoulder	Ramps
56+00	127+00	△ 2" SMA 2" HMA Mix IV 6" HMAB	2" SMA 2" HMA Mix IV 6" HMAB	2" SMA 2" HMA Mix IV 6" HMAB See Note 1	4" HMA Mix IV 6" HMAB See Note 2



6/17/13	△ Added notes 1 and 2.
Date	Revision

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
SIGNATURE: *[Signature]* EXPIRATION DATE OF THE LICENSE: 04/30/14

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN
STA. 114+00 TO STA. 124+00
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP NO. IM-HI-1(269)

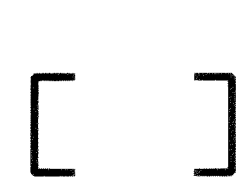
Scale: 1"=40' Date: Apr. 26, 2013

SHEET No. R-14 OF 43 SHEETS

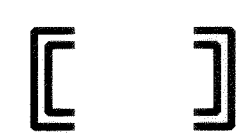
Begin Sta.	End Sta.	Mainlanes	Median Shoulder	Right Shoulder
56+00	127+00	2" SMA 2" HMA Mix IV 6" HMAB See Note 3	2" SMA 2" HMA Mix IV 6" HMAB	2" SMA 2" HMA Mix IV 6" HMAB
127+00	144+50	2" SMA 2" HMA Mix IV 8" HMAB See Note 4	2" SMA 2" HMA Mix IV 12" HMAB	2" SMA 2" HMA Mix IV 12" HMAB See Note 5

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-HI-1(269)	2013	ADD. 34	382

LEGEND:



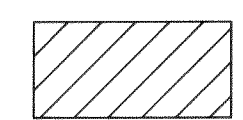
Resurfacing Limits
4" Cold Plane
2" SMA
2" HMA Mix IV



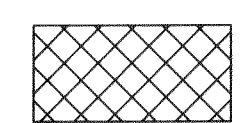
Resurfacing Limits - Ramps
4" Cold Plane
4" HMA Mix IV



Weakened Pavement Reconstruction
See Table for Pavement Structure



Shoulder Pavement Reconstruction
See Table for Pavement Structure



Bridge Deck Repair
Remove Exist. AC Surface Course
2" SMA



Cleanout, See Std. Plan H-29



6" Underdrain, See Detail on Sht. R-38



4" Underdrain, See Detail on Sht. R-38

NOTES:

- Connect Underdrain to drainage structure. See Std. Plan H-30. All costs associated with the underdrain connection to Drainage Structures will not be paid separately and will be considered incidental to the various underdrain pay items.
- 4-inch Cleanout shall be similar to Underdrain Cleanout Detail on Std. Plan H-29 except all pipes shall be 4"Ø. Payment shall be made under pay item 605.3000 Cleanout.

- New pavement structure in widened area fronting Retaining Wall 2 shall be:
2" SMA
2" HMA Mix IV
6" HMAB
19" ASB (14" ASB Above footing) △
- New pavement structure in widened area fronting Retaining Wall 3 shall be:
2" SMA
2" HMA Mix IV
8" HMAB
14" ASB (12" ASB Above footing) △
- See Detail of 4-inch Underdrain at Westbound Sta. 129+70 to Sta. 147+00 for modified pavement section on Sht. R-38.

- Contractor shall remove all existing underdrains adjacent to new underdrain installation that is not specified to remain. Existing penetrations into drainage structures and the box culvert shall be patched with 60 mil HDPE liner extending 2 feet beyond the existing hole. Payment shall be considered incidental to the various underdrain pay items.

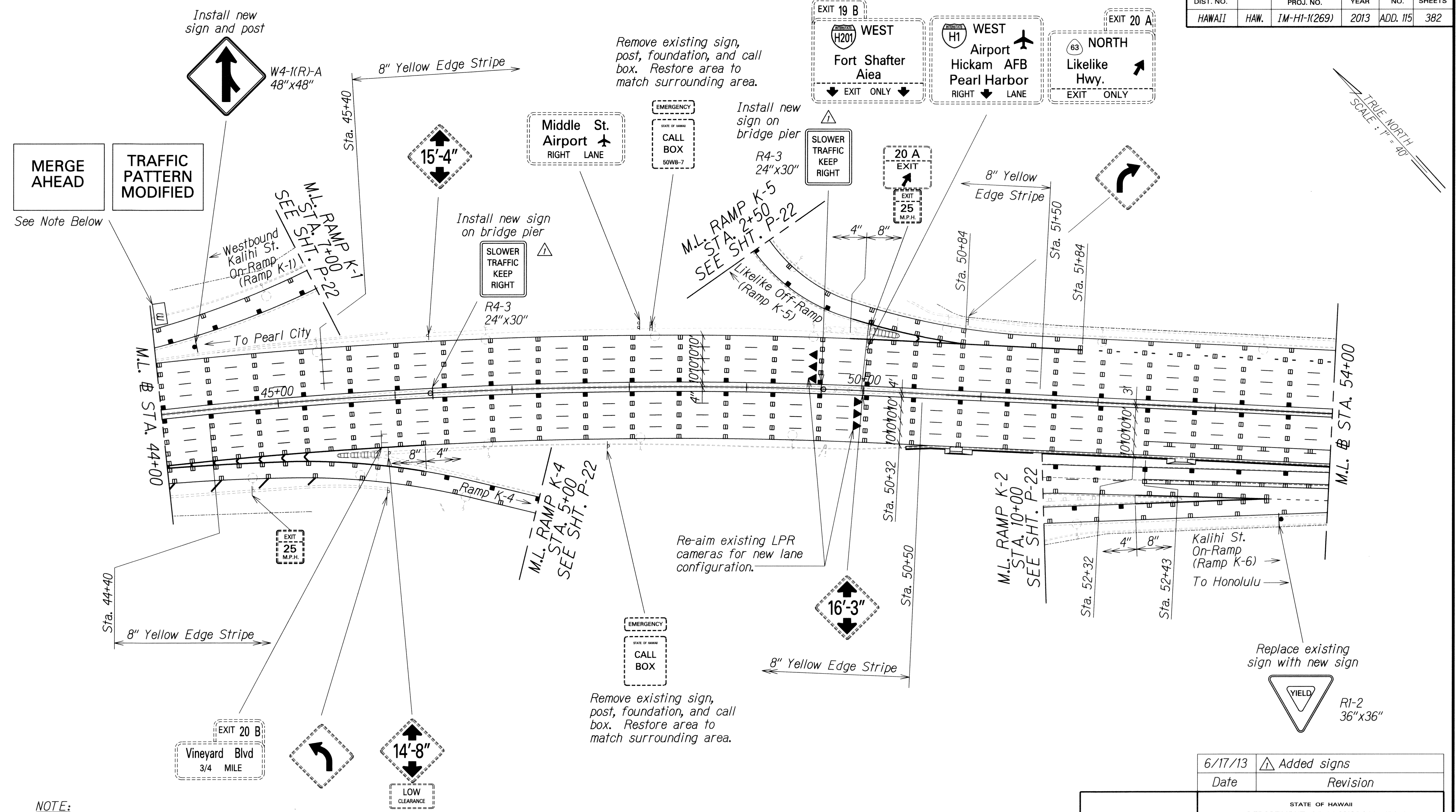
- An existing shallow box culvert underlies the Westbound right shoulder/mainlane between Nuuanu Stream and Pali Interchange. The Contractor shall excavate the 100'x12' pavement area to expose the top of the existing 10'-8"x4' box culvert (approx. 1.8' deep) and inspect the culvert for pre-existing damage. Any holes or damaged portions uncovered shall be patched with 60 mil HDPE liner extending 2 feet beyond the damaged area. In order to ensure that the lane is open to traffic the following day, the Contractor may place structural fill with 4" AC to match existing grade as a temporary condition (3 days max.) until the final pavement section is constructed. Payment shall be considered incidental to the various underdrain pay items.

6/17/13	△ Revised notes 3, 4, and 7.
Date	Revision

	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION ROADWAY PLAN STA. 124+00 TO STA. 134+00 INTERSTATE ROUTE H-1 REHABILITATION Middle Street to Vicinity of Ward Avenue FAP NO. 1M-HI-1(269) Scale: 1"=40' Date: Apr. 26, 2013
	SHEET No. R-15 OF 43 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-HI-1(269)	2013	ADD. 115	382

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NOTE:
Contractor shall provide and maintain portable message board to alert drivers of the new merge condition. Portable message board shall be erected when new lane configuration is implemented and shall be operational 24 hours a day for the following two week period. Payment included under pay item 645.1000 Traffic Control.

<p>6/17/13 Date</p>	<p>Added signs Revision</p>
-------------------------	---------------------------------

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING & PAVEMENT MARKING PLAN

STA. 44+00 TO STA. 54+00

INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP NO. 1M-HI-K269)

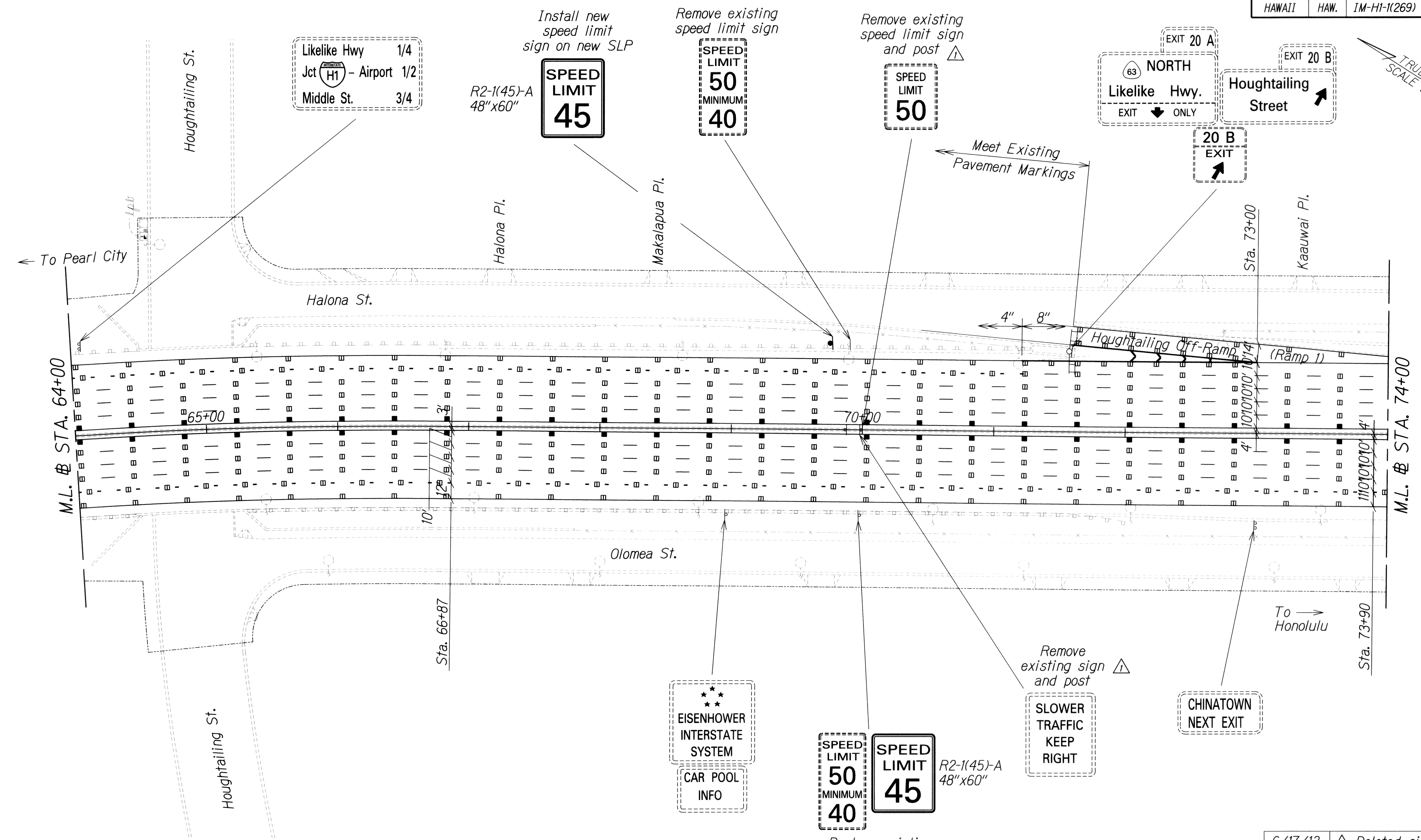
Scale: 1"=40' Date: Apr. 26, 2013

SHEET No. P-06 OF 24 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-HI-1(269)	2013	ADD. 117	382

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DESIGNED BY	DATE
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	



6/17/13	Deleted signs
Date	Revision

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Signature: *[Signature]* Date: 04/30/14

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

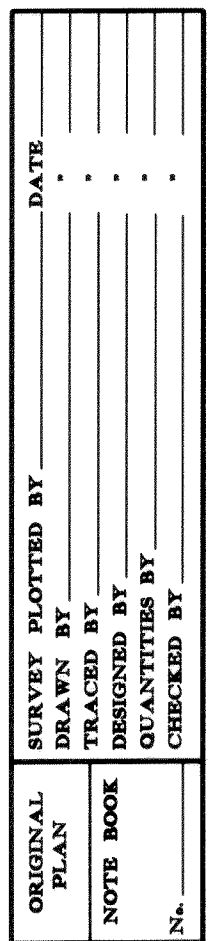
SIGNING & PAVEMENT MARKING PLAN

STA. 64+00 TO STA. 74+00

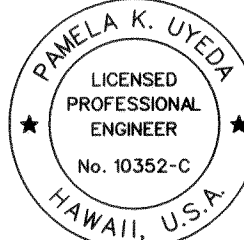
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP NO. 1M-HI-1(269)

Scale: 1"=40' Date: Apr. 26, 2013

TRUE NORTH
SCALE: 1" = 40"



6/17/13	Deleted signs
Date	Revision



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

[Signature]

SIGNATURE

04/30/14
EXPIRATION DATE
OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING & PAVEMENT MARKING PLAN

STA. 114+00 TO STA. 124+00

INTERSTATE ROUTE H-1 REHABILITATION

Middle Street to Vicinity of Ward Avenue

FAP NO. 1M-HI-1(269)

Scale: 1"=40'

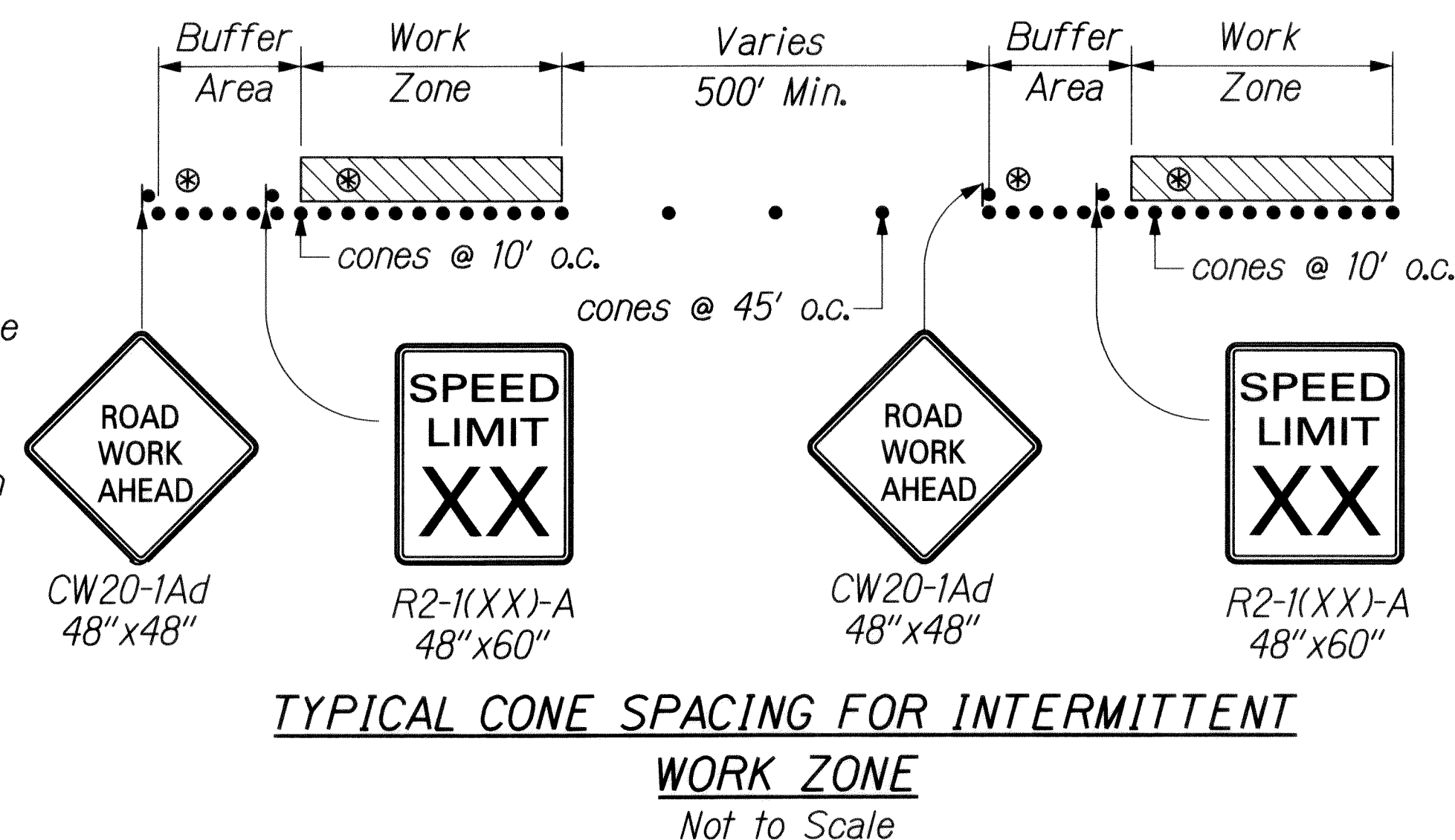
Date: Apr. 26, 2013

SHEET No. P-13 OF 24 SHEETS

GENERAL NOTES FOR TRAFFIC CONTROL PLAN

- Only Traffic Control Plans for major construction activities are shown. The Contractor shall develop his own Traffic Control Plans in accordance with Section 645 of the Special Provisions for activities to complete work not covered by the Traffic Control Plans. The Contractor shall submit the Traffic Control Plans to the Engineer for acceptance. Payment for development and implementation of the Traffic Control Plans shall be included in pay item 645.1000 - Traffic Control.
- All lane closures and traffic pattern changes (detours) not shown on the plan shall be submitted to the Engineer for acceptance in accordance with Specifications Section 645 - Work Zone Traffic Control. For restrictions on lane closures, detours, construction work during peak hours, and other requirements regarding maintaining vehicular and pedestrian traffic, see Subsection 107.03 - Working Hours; Night Work and Section 645 -Work Zone Traffic Control.
- The Contractor shall make minor adjustments at intersections, driveways, bridges, structures, etc. to fit field conditions.
- Cones or delineators shall be extended to a point where they are visible to approaching traffic.
- Traffic control devices shall be installed such that the sign or device farthest from the work area shall be placed first. The others shall then be placed progressively toward the work area.
- Flaggers and/or police officers shall be in sight of each other or in direct communications at all times.
- Sign spacings (L), taper lengths (T), and spacings of cones or delineators shall be as shown in Table 645-1 - For Traffic Control Plan of Section 645 in the Specifications, unless otherwise noted on HDOT's Traffic Control Plans.
- All traffic lanes shall be a minimum of 10 feet wide.
- All signs shall be promptly removed or covered whenever the message is not applicable or not in use.
- The backs of all signs for traffic control shall be appropriately covered to preclude the display of inapplicable sign messages (i.e., when signs have messages on both faces).
- Replace permanent pavement markings and traffic signs that are missing, damaged, or have been removed upon completion of each day's work. Payment for replacing permanent pavement markings and signs shall be considered incidental to the various contract items.
- At the end of each day's work or as soon as the work is completed, the Contractor shall remove all traffic control devices no longer needed to permit free and safe passage of public traffic. Removal shall be in the reverse order of installation.
- The locations of pavement markings, signs, and delineators used in the Traffic Control shall be as shown on the plans, Contractor's accepted Traffic Control Plans, and/or as determined in the field by the Engineer.
- Damage to signs, pavement markers, and delineators caused by the public or Contractor's negligence shall be repaired or replaced by the Contractor at no cost to the State.
- Signs for night work shall be retroreflective and shall be mounted with a Type B high intensity flasher. The flasher will be paid under Pay Item No. 645.1000-Traffic Control.
- The Contractor shall limit the extent of trench and excavation work for pavement reconstruction to an area that can be satisfactorily backfilled in one work day.

- Work zone limits shown for each traffic control phase encompass all work items to be completed in that particular phase. The length of the work zone may be reduced to accommodate the Contractor's actual work zone for that time period, provided it has been accepted by the Engineer, and all tangents, tapers, and buffer lengths are maintained.
- For intermittent work zones within a particular traffic control phase, only cones along the actual work zone need to be placed at 10' o.c. The intermittent work zone shall include a 335' buffer area along the leading edge of traffic flow. All other traffic control cones can be placed at 55' o.c. Each work zone shall have one CW20-1Ad sign, one R2-1(XX)-A sign, and two police officers. See typical detail below.



- The Contractor shall provide all sign supports and/or posts for construction warning signs, including median barrier mounting brackets.
- The Contractor shall provide and maintain portable message boards as shown on the traffic control plans to provide advanced warning of freeway lane closures. Message boards shall display closure dates and times and shall be operational 24 hours a day for three (3) days prior to the first freeway lane closure. Signs shall remain for the duration of the anticipated lane closures. The Contractor shall provide appropriate traffic control devices (barricades, cones, etc.) to protect the message boards. Installation, maintenance, and removal of message boards shall be paid under Pay Item No. 645.1000 - Traffic Control.
- The Contractor shall furnish, install, maintain, and remove all traffic control devices shown on the traffic control plans. Payment for all work shown, including furnishing all police officers shown on the traffic control plans, shall be under Pay Item No. 645.1000 - Traffic Control.
- The Contractor shall maintain a buffer lane as shown on the traffic control typical sections.

Approved:

Chief, Traffic Review Branch, DPP
(for Work within City R/W only)

Date: 6/13/13

GENERAL NOTES FOR TRAFFIC CONTROL PLAN (WITHIN CITY R/W)

- The Permittee shall make minor adjustments at intersections, driveways, bridges, structures, etc. to fit field conditions.
- Cones or delineators shall be extended to a point where they are visible to approaching traffic.
- Traffic control devices shall be installed such that the sign or device farthest from the work area is placed first. The others shall then be placed progressively toward the work area.
- Regulatory and Warning Signs within the construction zone that are in conflict with the traffic control plans shall be removed or covered.
- Flaggers and/or police officers shall be in sight of each other or in direct communication at all times.
- When required by the issuing office, the Permittee shall install a flashing arrow signal as shown on the traffic control plans.
- All traffic lanes shall be a minimum of 10 feet wide.
- All construction warning signs shall be promptly removed or covered whenever the message is not applicable or not in use.
- The backs of all signs used for traffic control shall be appropriately covered to preclude the display of inapplicable sign messages (i.e., when signs have messages on both faces).
- Lane closure shall be limited only to the extent of accomplishing each day's work. As soon as each day's work is completed, the Permittee shall remove all traffic control devices no longer needed to permit free and safe passage of public traffic. Removal shall be in the reverse order of installation. Existing faded or obliterated pavement markings that are necessary for safe traffic flow in the construction area shall be replaced with temporary or permanent markings before opening the roadway to public traffic each day.
- Permanent pavement markings and traffic signs shall be replaced upon completion of each phase of work.
- Cones and delineators shall be spaced at a maximum distance of 20 feet apart. A minimum of six channelizing devices shall be used for each taper length.
- Driveways shall be kept open unless the owners of the property using the driveway are otherwise provided for satisfactorily. Further, the Permittee shall control traffic going into and out of driveways.
- Buffer and taper area on approach to any work area shall be kept clear of vehicles and equipment.
- A high level warning device (flag tree) shall be installed on approach to all work areas.
- "No Parking" signs shall be posted within any work area and for the buffer and taper areas approaching the work area.
- Traffic control plans are approved for work on any City street only for the days and hours shown on the Construction Phasing Schedule on sheet TC-3.

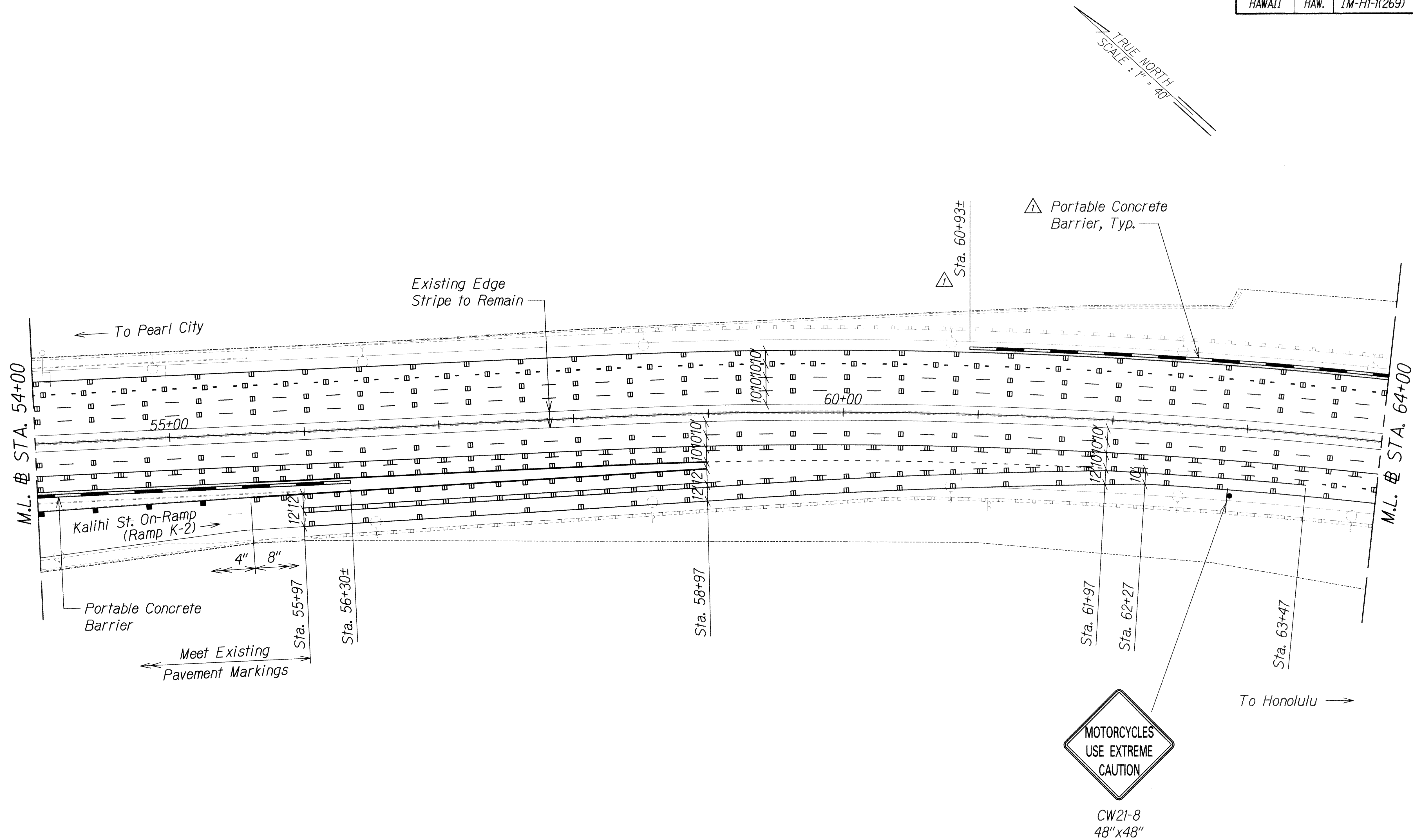
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-HI-1(269)	2013	ADD. 134	382

6/17/13	Added Notes
Date	Revision

 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. SIGNATURE: EXPIRATION DATE OF LICENSE: 6/30/14	<p style="text-align: center;">STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION</p> <p style="text-align: center;">TRAFFIC CONTROL NOTES AND LEGEND</p> <p style="text-align: center;">INTERSTATE ROUTE H-1 REHABILITATION Middle Street to Vicinity of Ward Avenue FAP NO. 1M-HI-1(269)</p> <p>Scale: None Date: Apr. 26, 2013</p>
	SHEET NO. TC-1 OF 128 SHEETS

ADD. 134

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 138	382



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

T:\16459A IDIQ PAVMT PREVENTIVE MAINTENANCE\HI-MIDDLE TO WARD\CADD\06 TCM\TMP-SS-07.dgn

PAMELA K. UYEDA
LICENSED PROFESSIONAL ENGINEER
No. 10352-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

[Signature] 04/30/14
SIGNATURE EXPIRATION DATE OF THE LICENSE

6/17/13	Added Portable Conc. Barrier
Date	Revision

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN PHASE 1
TEMPORARY STRIPING PLAN**

INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP NO. IM-HI-1(269)

Scale: 1"=40'

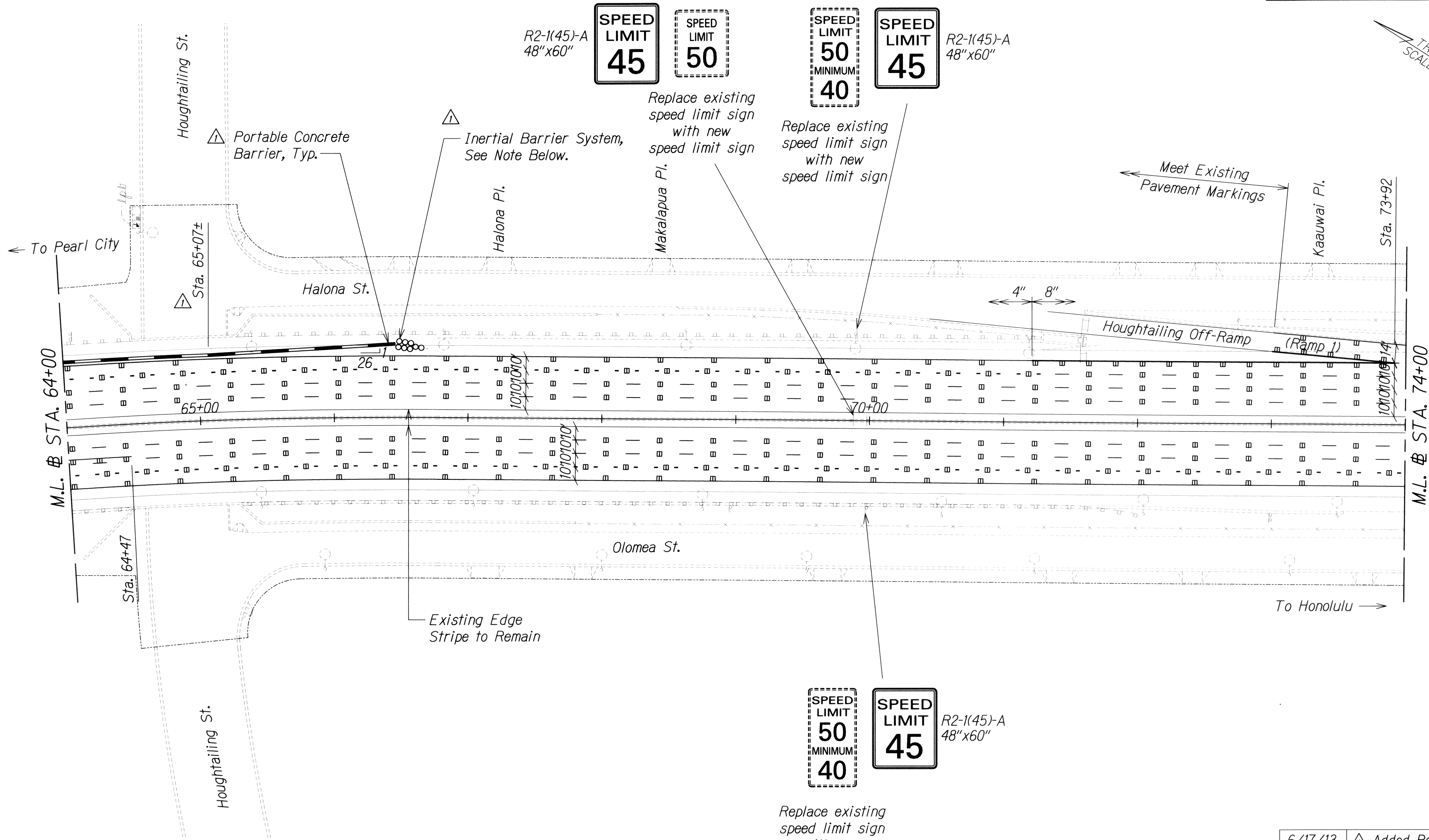
Date: Apr. 26, 2013

SHEET No. TC-5 OF 128 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 139	382

T:\16459A IDIQ PAVMT PREVENTIVE MAINTENANCE\HI-MIDDLE TO WARD\CADD\06 TCP\TMP-SS-08.dgn

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
IN CHARGE	
NOTED BY	
QUANTITIES BY	
CHECKED BY	



△ **NOTE:**
Inertial Barrier System shall meet NCHRP 350 Test Level 3 criteria. Payment shall be considered incidental to Pay Item No. 670.1000 - Portable Concrete Guardrail.

Replace existing speed limit sign with new speed limit sign

SPEED LIMIT 50
MINIMUM 40

SPEED LIMIT 45

R2-1(45)-A
48"x60"

6/17/13	△ Added Portable Conc. Barrier
Date	Revision

PAMELA K. UYEDA
LICENSED PROFESSIONAL ENGINEER
No. 10352-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE: *[Signature]* EXPIRATION DATE OF LICENSE: 04/30/14

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

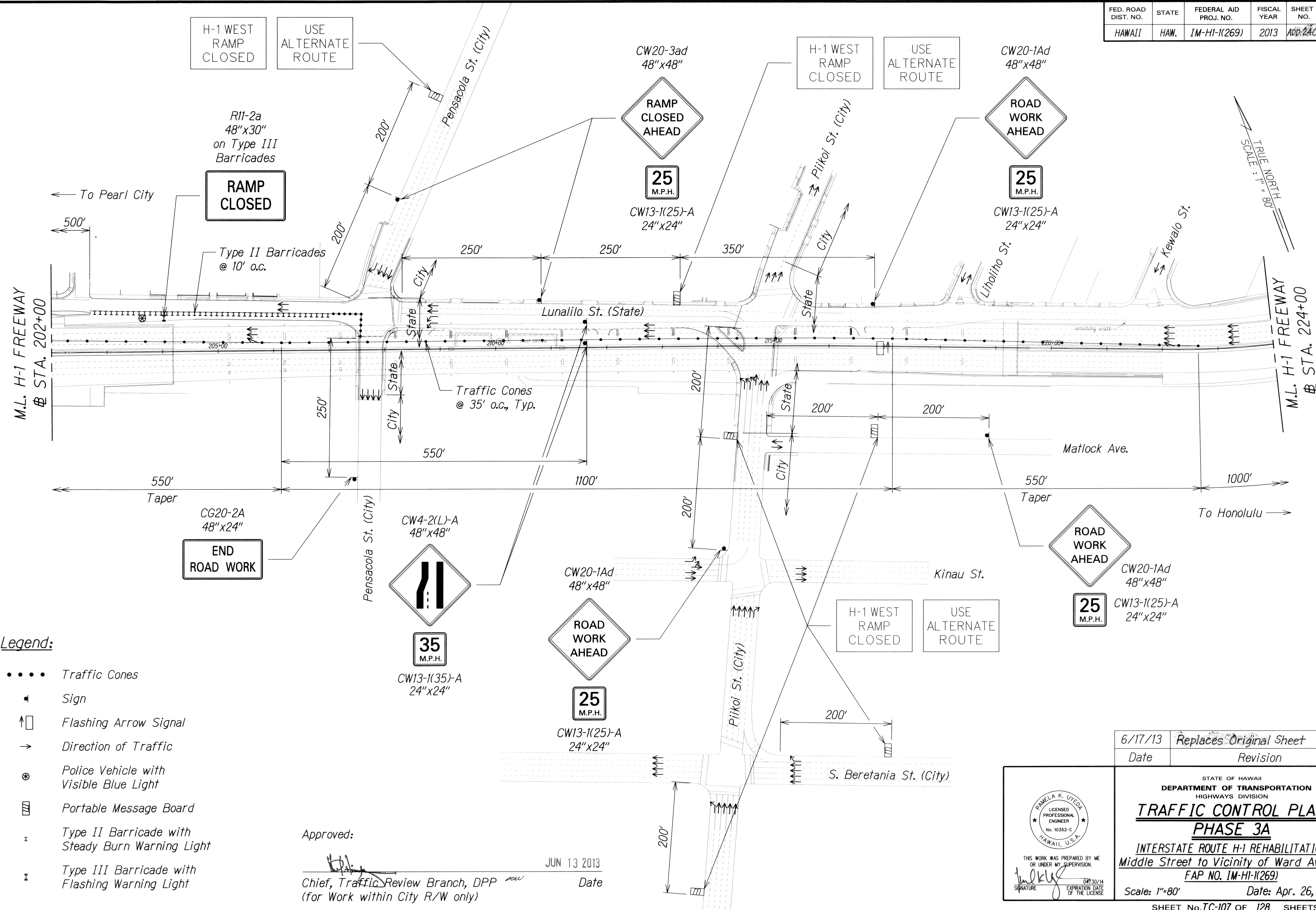
**TRAFFIC CONTROL PLAN PHASE 1
TEMPORARY STRIPING PLAN**

INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP NO. IM-HI-1(269)

Scale: 1"=40' Date: Apr. 26, 2013

SHEET No. TC-6 OF 128 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-HI-1(269)	2013	ADD. 240	382



Legend:

- • • • Traffic Cones
- ▲ Sign
- ⬆ Flashing Arrow Signal
- ➔ Direction of Traffic
- ⊙ Police Vehicle with Visible Blue Light
- ▤ Portable Message Board
- ⌈ Type II Barricade with Steady Burn Warning Light
- ⌋ Type III Barricade with Flashing Warning Light

Approved: _____
 Chief, Traffic Review Branch, DPP
 (for Work within City R/W only)

JUN 13 2013
 Date

6/17/13 Date	Replaces Original Sheet Revision
-----------------	-------------------------------------

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 SIGNATURE: *[Signature]* DATE: 6/13/14
 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN
PHASE 3A

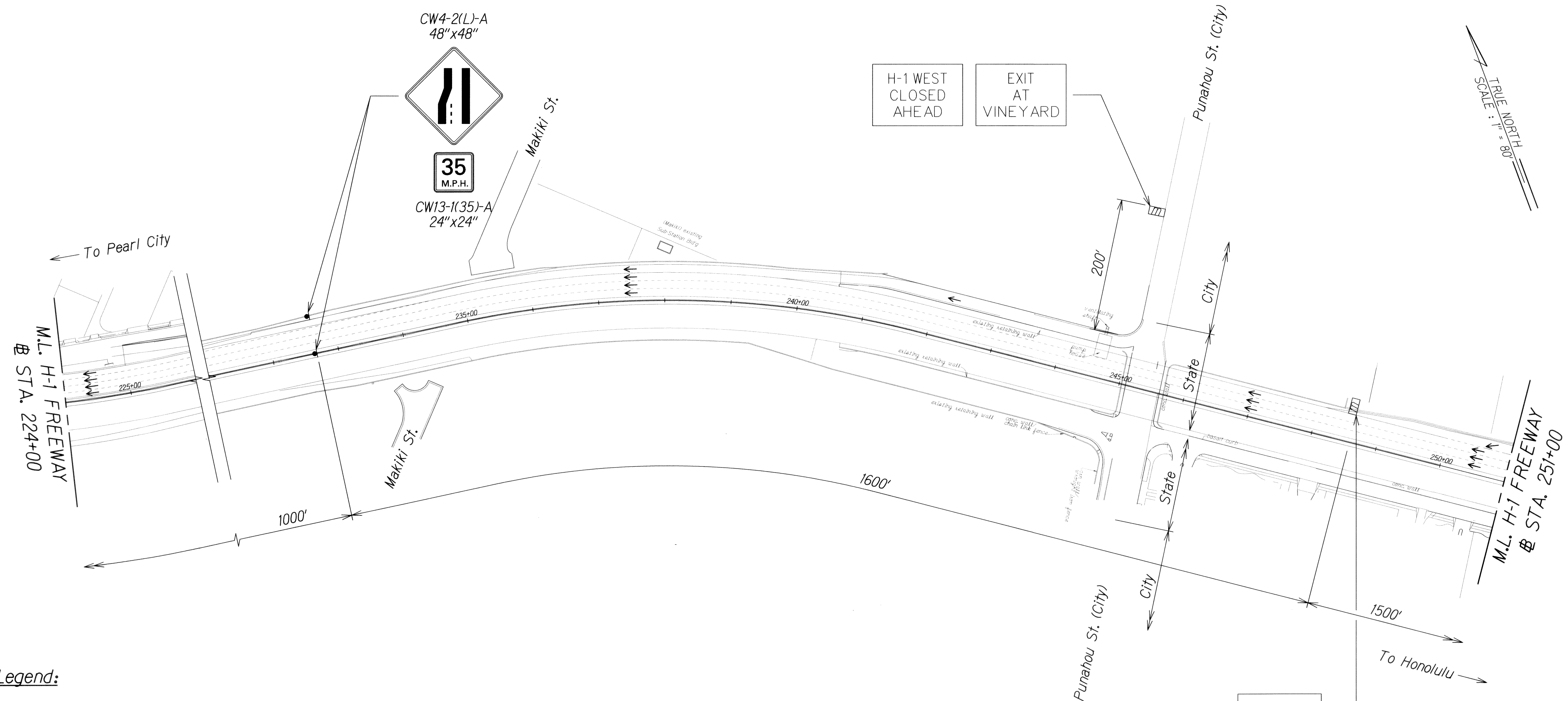
INTERSTATE ROUTE H-1 REHABILITATION
 Middle Street to Vicinity of Ward Avenue
 FAP NO. 1M-HI-1(269)

Scale: 1"=80' Date: Apr. 26, 2013

SHEET No. TC-107 OF 128 SHEETS

ADD. 240


FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 241	382



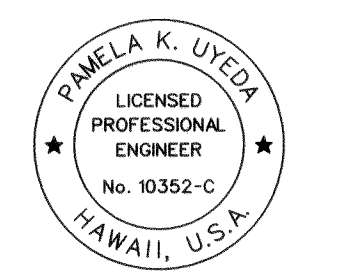
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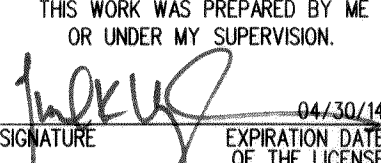
- • • • Traffic Cones
- ▲ Sign
- ⬆ Flashing Arrow Signal
- ➔ Direction of Traffic
- ⊕ Police Vehicle with Visible Blue Light
- ☐ Portable Message Board
- I Type II Barricade with Steady Burn Warning Light
- I Type III Barricade with Flashing Warning Light

DATE	DATE
DESIGNED BY	DESIGNED BY
TRACED BY	TRACED BY
NOTED BY	NOTED BY
CHECKED BY	CHECKED BY
DATE	DATE

Approved:  JUN 13 2013 Date
 Chief, Traffic Review Branch, DPP (for Work within City R/W only)

6/17/13	Replaces Original Sheet
Date	Revision



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 SIGNATURE:  EXPIRATION DATE OF THE LICENSE: 04/30/14

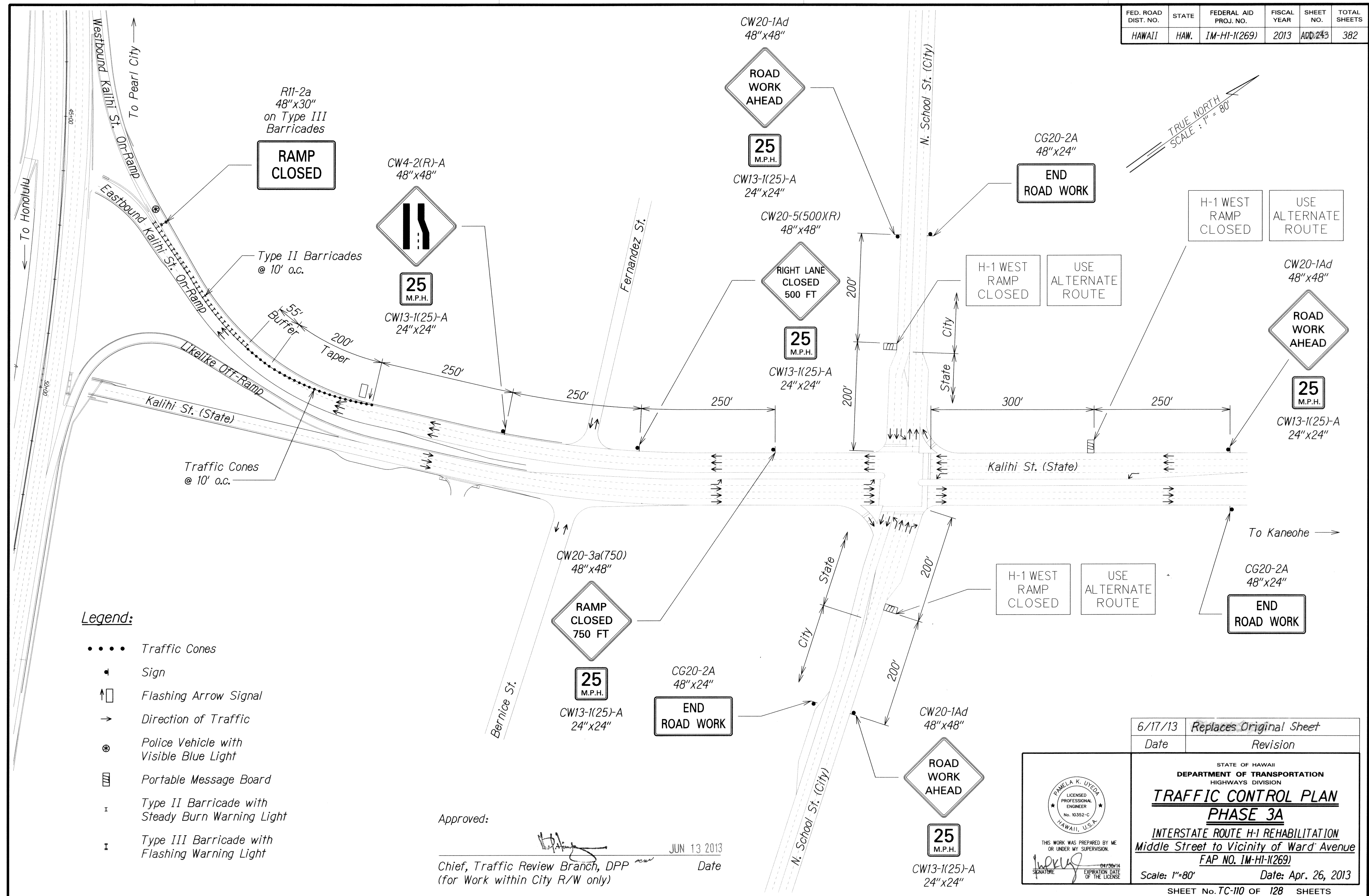
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN
PHASE 3A

INTERSTATE ROUTE H-1 REHABILITATION
 Middle Street to Vicinity of Ward Avenue
 FAP NO. IM-HI-1(269)

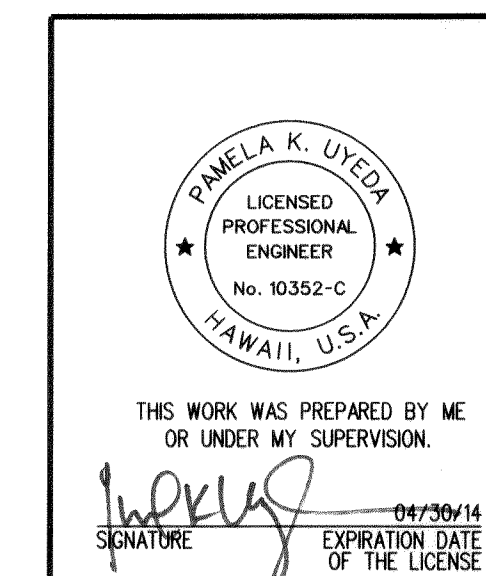
Scale: 1"=80' Date: Apr. 26, 2013

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-HI-1(269)	2013	ADD. 243	382



SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

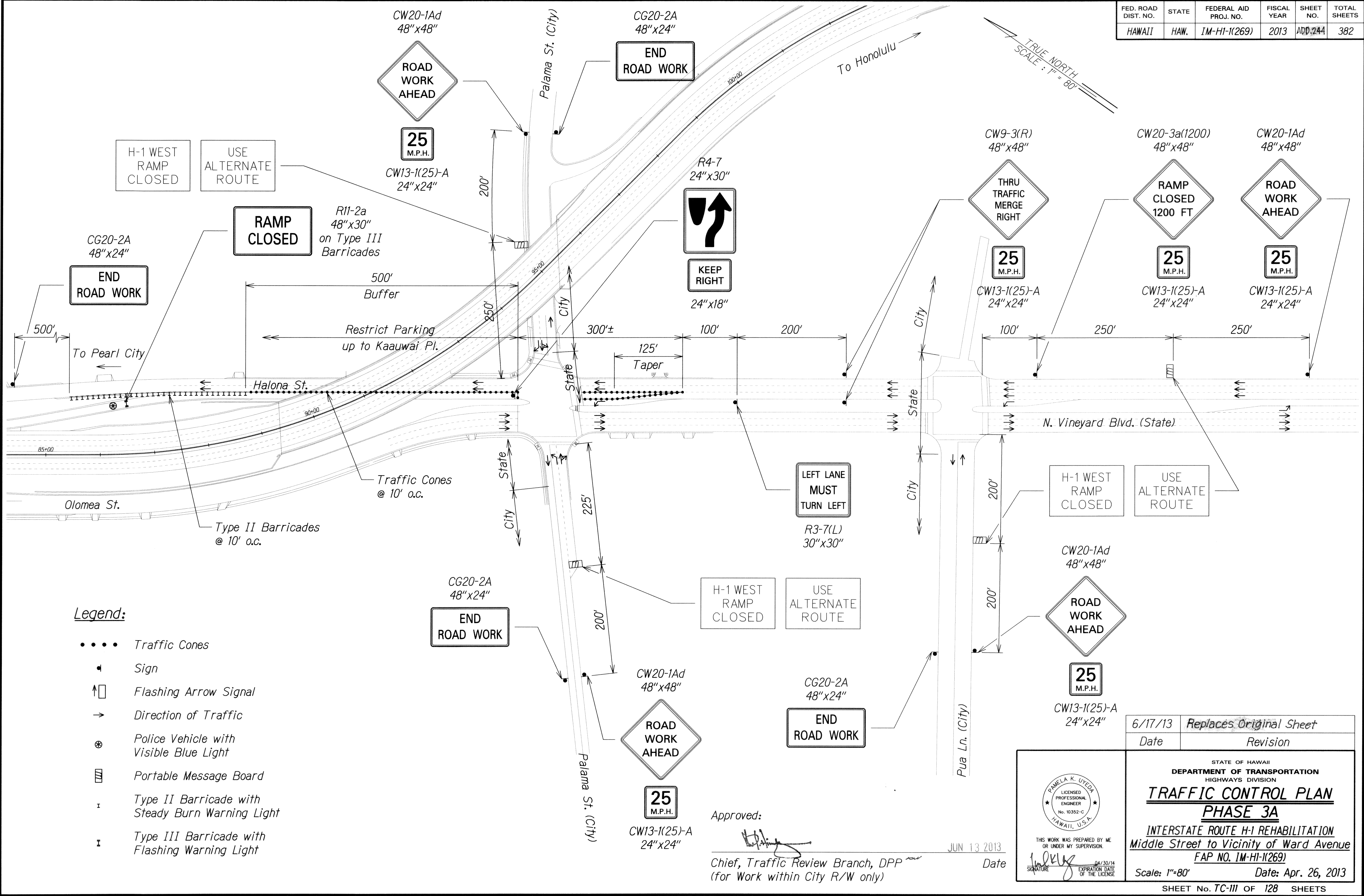
6/17/13	Replaces Original Sheet
Date	Revision



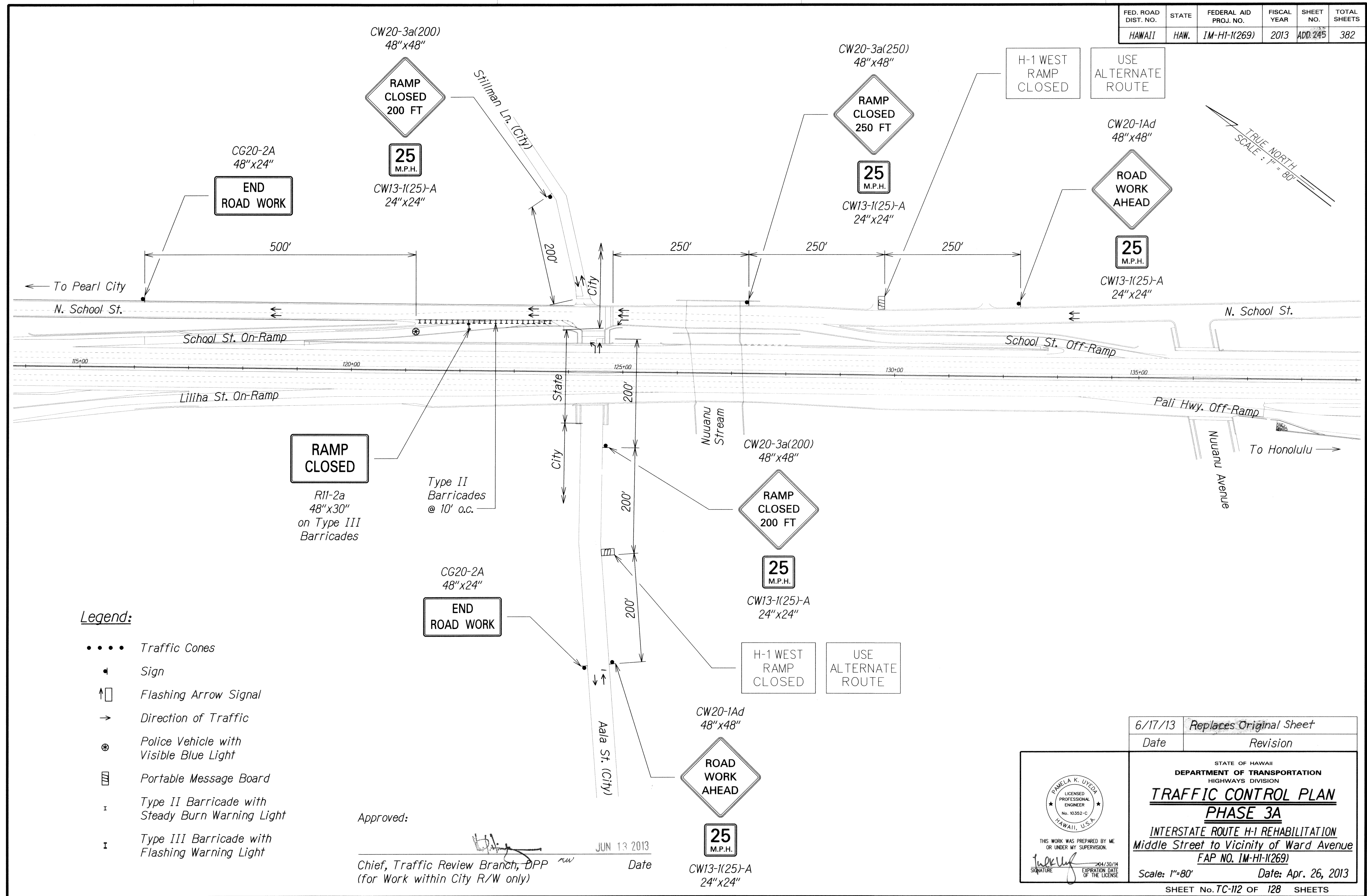
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
TRAFFIC CONTROL PLAN
PHASE 3A
 INTERSTATE ROUTE H-1 REHABILITATION
 Middle Street to Vicinity of Ward Avenue
 FAP NO. 1M-HI-1(269)
 Scale: 1"=80' Date: Apr. 26, 2013
 SHEET No. TC-110 OF 128 SHEETS

ADD. 243

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-HI-1(269)	2013	ADD. 244	382



FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 245	382



DATE	DATE	DATE	DATE	DATE	DATE
DESIGNED BY	DESIGNED BY	DESIGNED BY	DESIGNED BY	DESIGNED BY	DESIGNED BY
TRACED BY	TRACED BY	TRACED BY	TRACED BY	TRACED BY	TRACED BY
NOTED BY	NOTED BY	NOTED BY	NOTED BY	NOTED BY	NOTED BY
CHECKED BY	CHECKED BY	CHECKED BY	CHECKED BY	CHECKED BY	CHECKED BY

6/17/13	Replaces Original Sheet
Date	Revision

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE: [Signature] EXPIRATION DATE OF THE LICENSE: 2014/30/14

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN
 PHASE 3A**

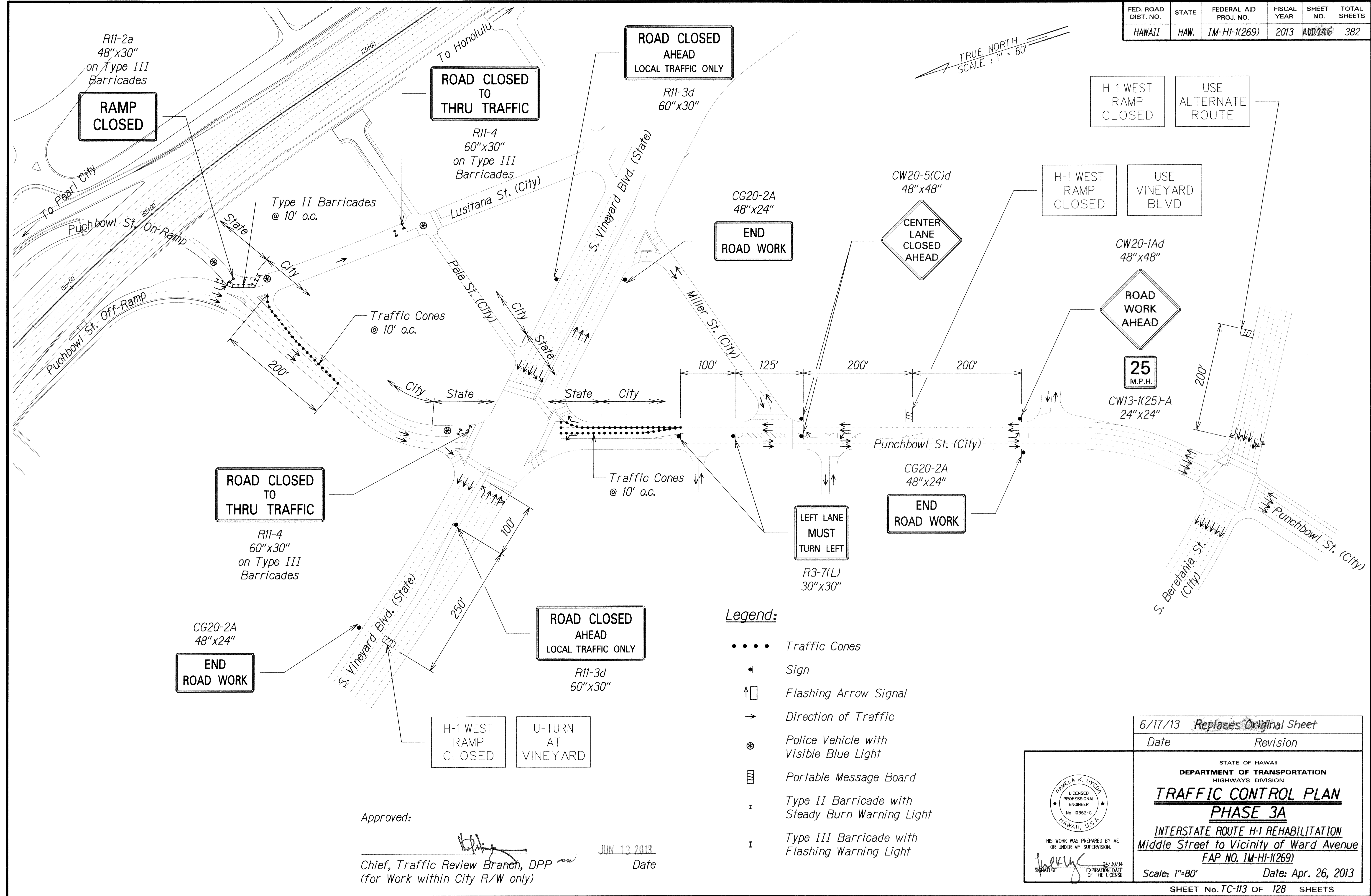
INTERSTATE ROUTE H-1 REHABILITATION
 Middle Street to Vicinity of Ward Avenue
 FAP NO. IM-HI-1(269)

Scale: 1"=80' Date: Apr. 26, 2013

SHEET No. TC-112 OF 128 SHEETS

ADD. 245

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD 246	382

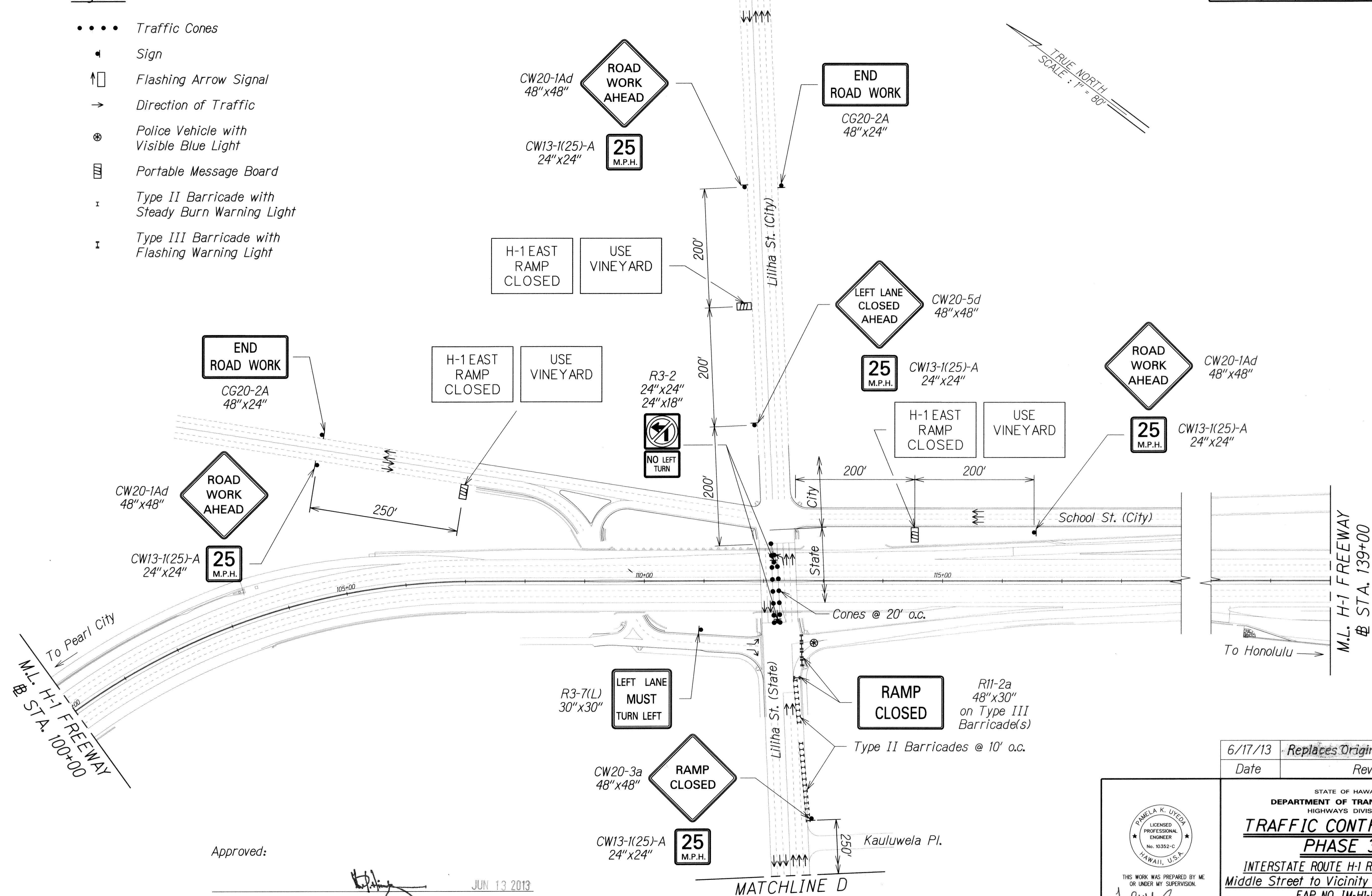


SURVEY PLOTTED BY	DATE
DESIGNED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
N.	

ADD. 246

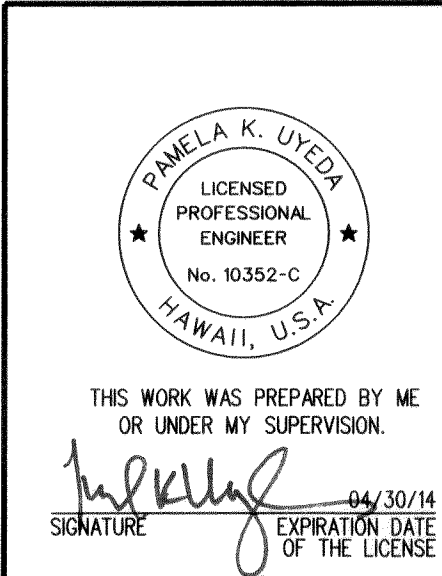
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 255	382

- Legend:
- • • • Traffic Cones
 - Sign
 - ⬆ Flashing Arrow Signal
 - ➔ Direction of Traffic
 - ⊗ Police Vehicle with Visible Blue Light
 - ▤ Portable Message Board
 - ⌚ Type II Barricade with Steady Burn Warning Light
 - ⌚ Type III Barricade with Flashing Warning Light



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

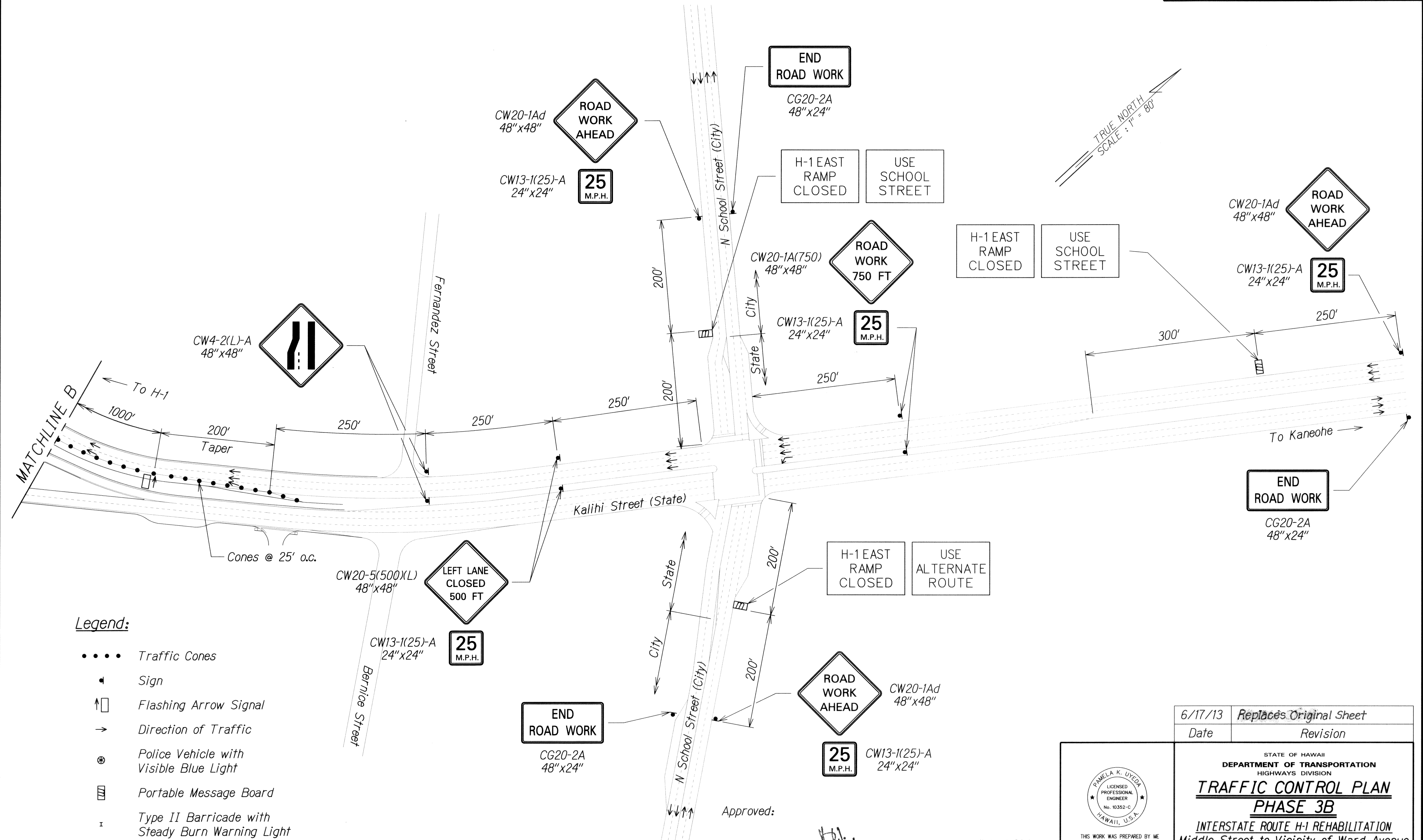
6/17/13	Replaces Original Sheet
Date	Revision



STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION TRAFFIC CONTROL PLAN PHASE 3B INTERSTATE ROUTE H-1 REHABILITATION Middle Street to Vicinity of Ward Avenue FAP NO. IM-HI-1(269) Scale: 1"=80' Date: Apr. 26, 2013
SHEET No. TC-122 OF 128 SHEETS

ADD. 255

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-HI-1(269)	2013	ADD. 258	382



Legend:

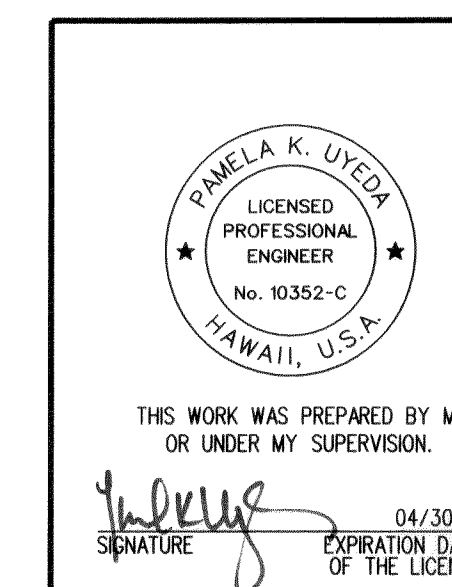
- • • • Traffic Cones
- ▲ Sign
- ⬆️ Flashing Arrow Signal
- ➔ Direction of Traffic
- ⊕ Police Vehicle with Visible Blue Light
- ▤ Portable Message Board
- ⌚ Type II Barricade with Steady Burn Warning Light
- ⌚ Type III Barricade with Flashing Warning Light

Approved:

Chief, Traffic Review Branch, DPP
(for Work within City R/W only)

JUN 13 2013

Date



6/17/13	Replaces Original Sheet
Date	Revision

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**TRAFFIC CONTROL PLAN
PHASE 3B**

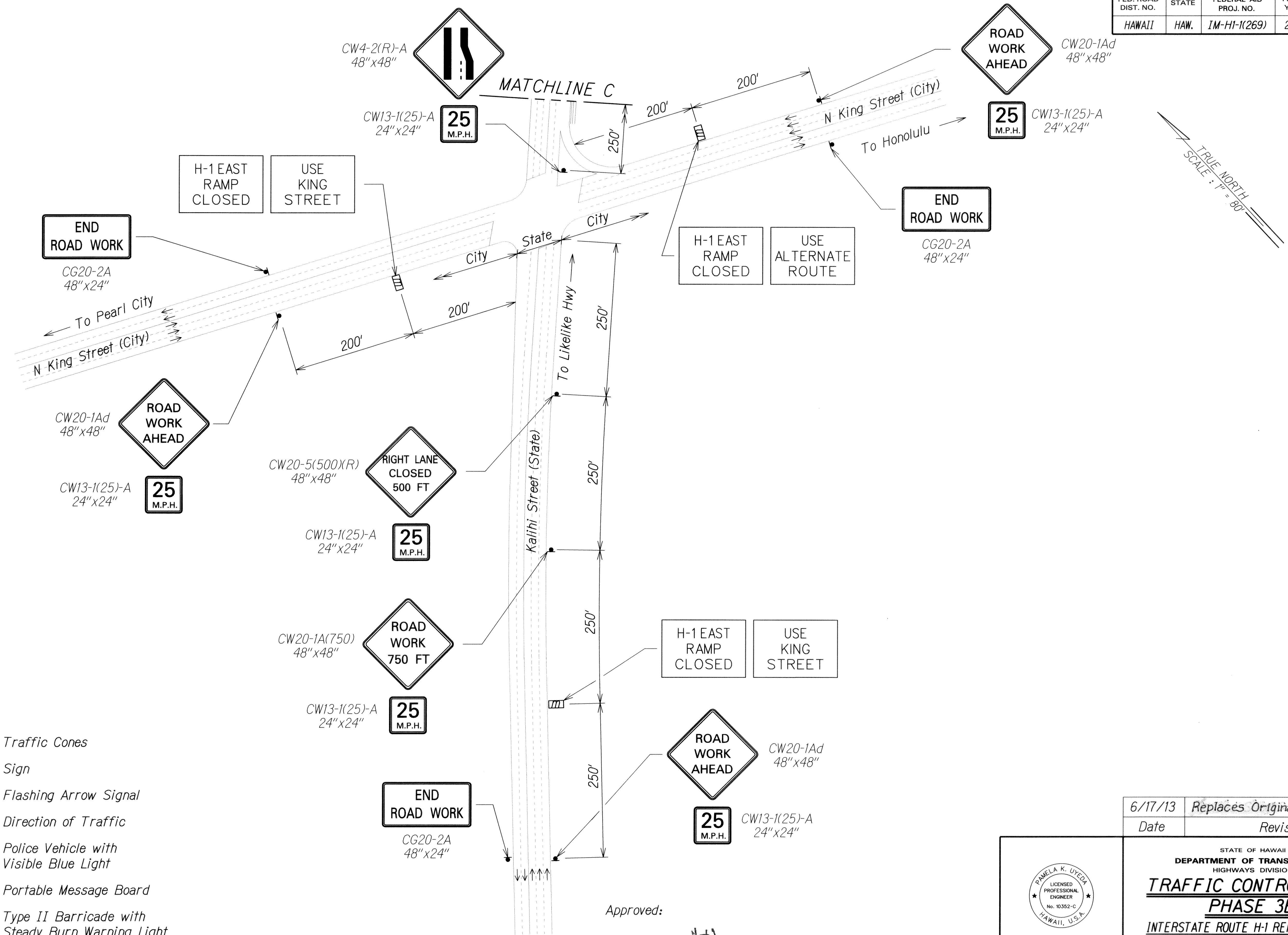
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP NO. 1M-HI-1(269)

Scale: 1"=80' Date: Apr. 26, 2013

SHEET No. TC-125 OF 128 SHEETS

ADD. 258

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 259	382



Legend:

- • • • Traffic Cones
- ▲ Sign
- ⬆ Flashing Arrow Signal
- ➔ Direction of Traffic
- ⊙ Police Vehicle with Visible Blue Light
- ▤ Portable Message Board
- ▬ Type II Barricade with Steady Burn Warning Light
- ▬ Type III Barricade with Flashing Warning Light

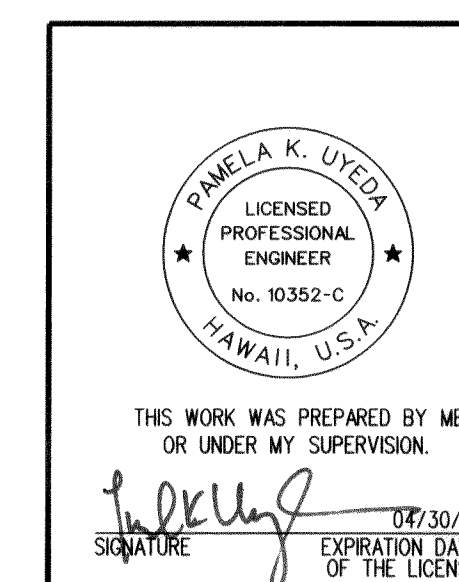
DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
APPROVED BY	

Approved:

Chief, Traffic Review Branch, DPP
(for Work within City R/W only)

JUN 13 2013
Date

6/17/13	Replaces Original Sheet
Date	Revision



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN
PHASE 3B

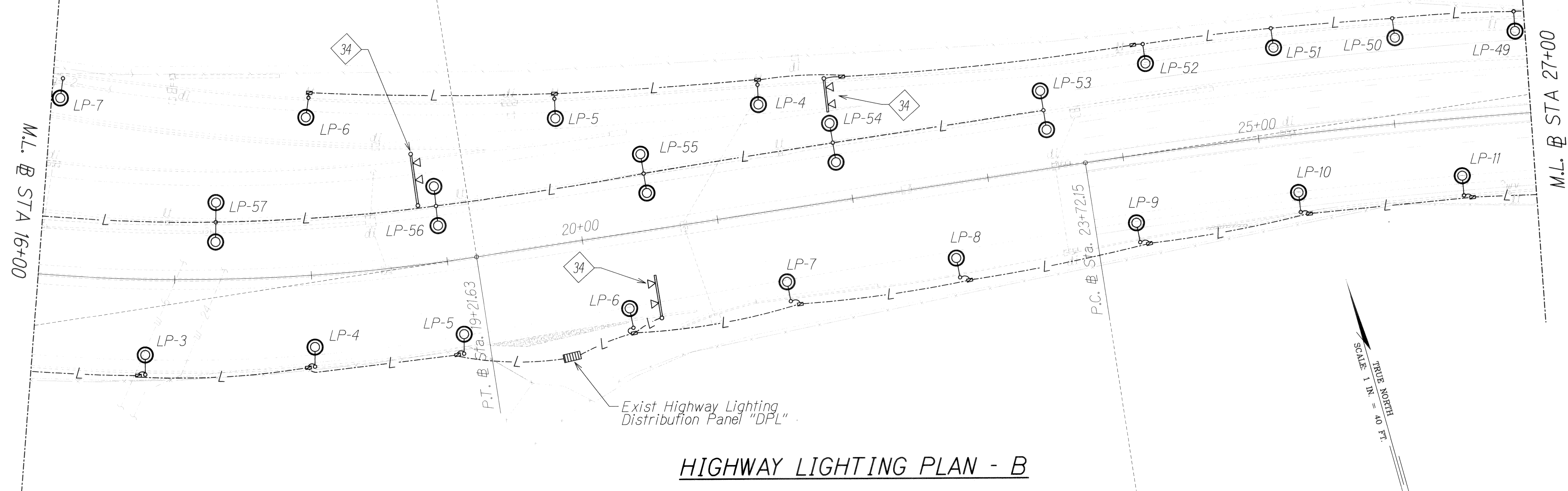
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP NO. 1M-HI-1(269)

Scale: 1"=80' Date: Apr. 26, 2013

SHEET No. TC-126 OF 128 SHEETS

ADD. 259

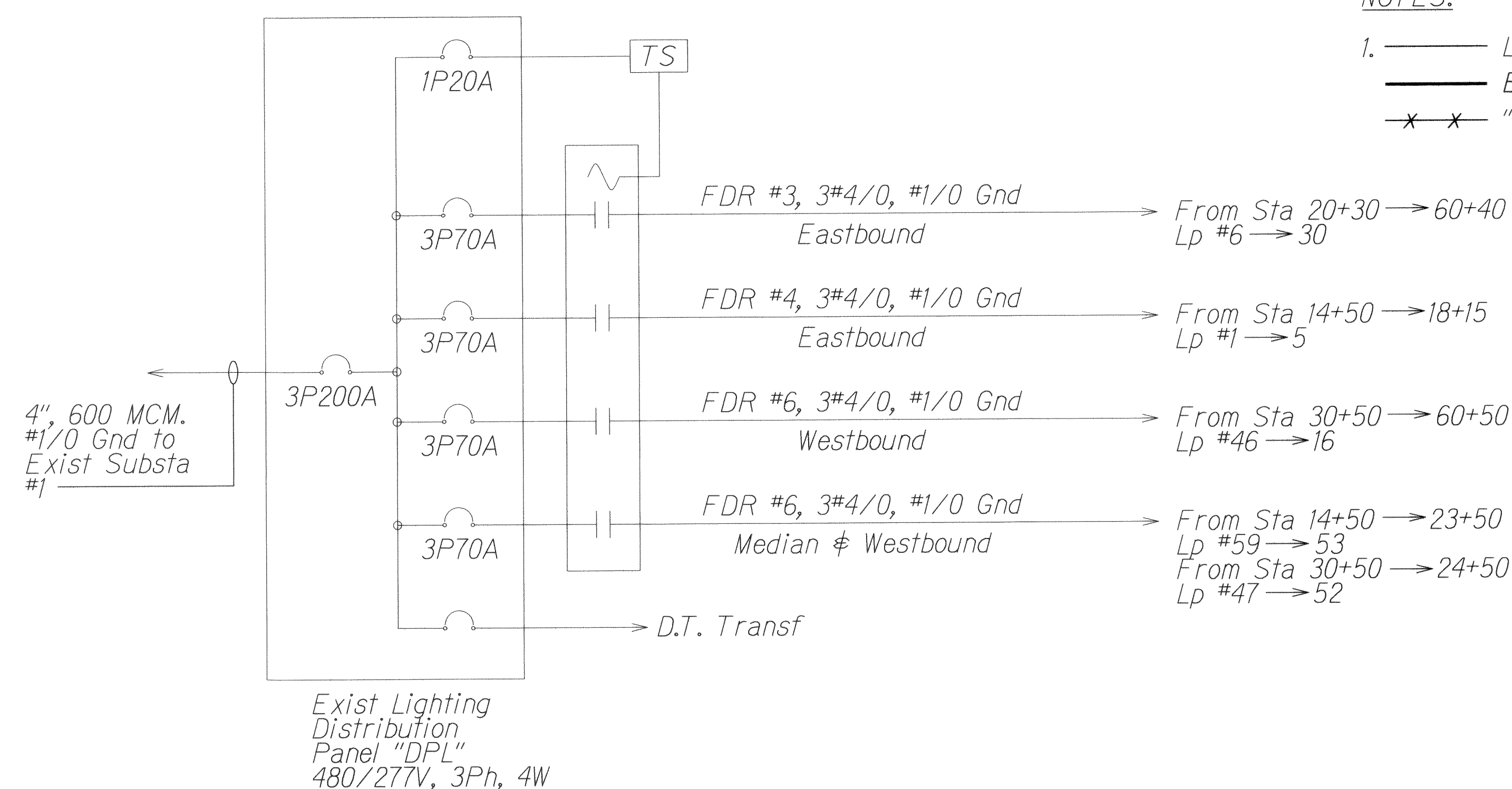
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 265	382



HIGHWAY LIGHTING PLAN - B

NOTES:

- Light Lines Denote Existing Condition
- Bold Lines Denote New Work
- "X" Denotes Removal Work



EXIST PANEL "DPL" ONE-LINE DIAGRAM



6/17/13	Replaces Original Sheet
Date	Revision

6/13/13

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING PLAN
STA 16+00 TO 27+00

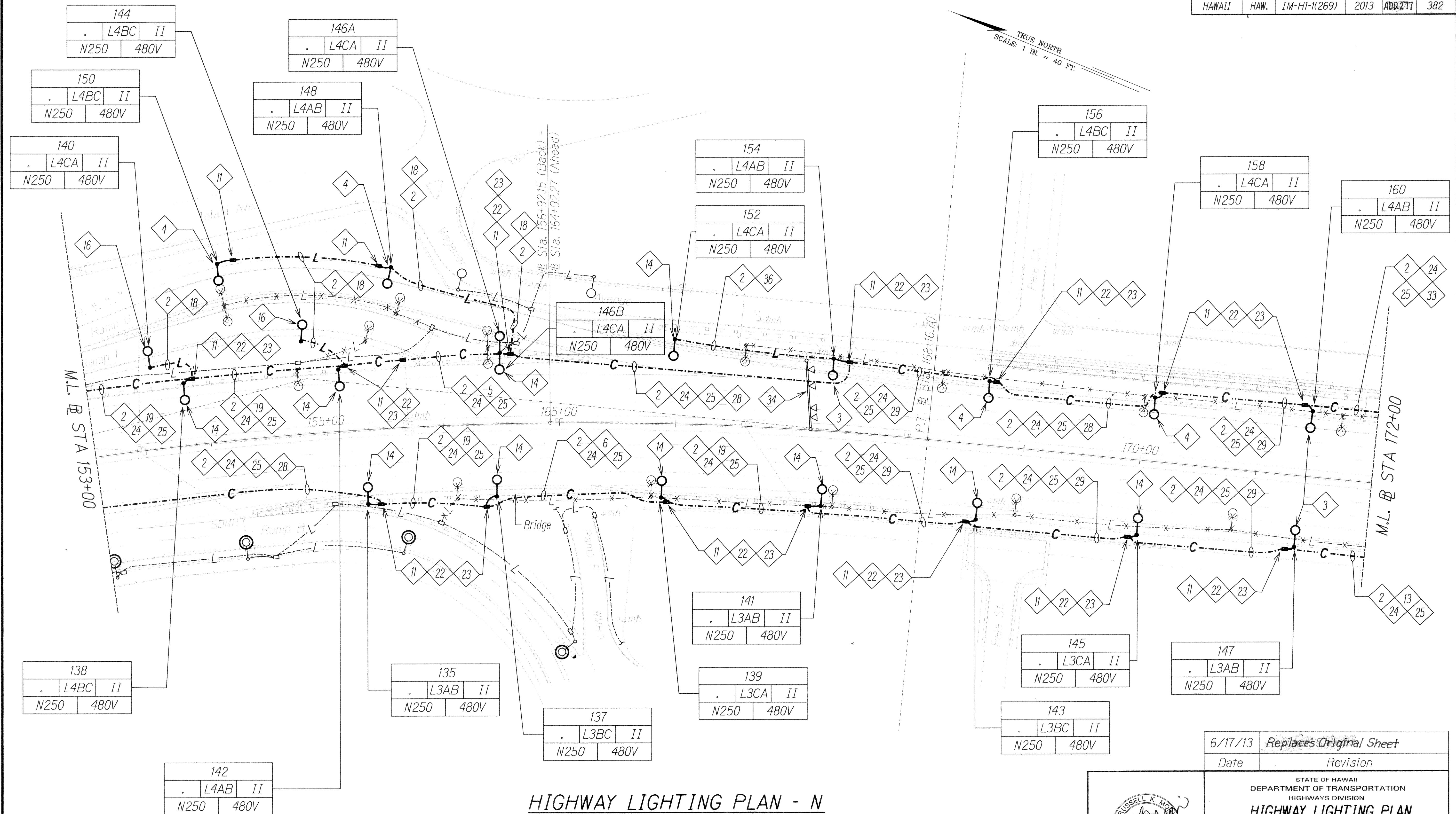
INTERSTATE ROUTE H-1 REHABILITATION
MIDDLE STREET TO VICINITY OF WARD AVENUE
FAP NO. IM-HI-1(269)

Scale: 1" = 40'-0" Date: April 26, 2013

SHEET No. E-4 OF 30 SHEETS

SURVEY PLOTTED BY	DATE
DESIGNED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

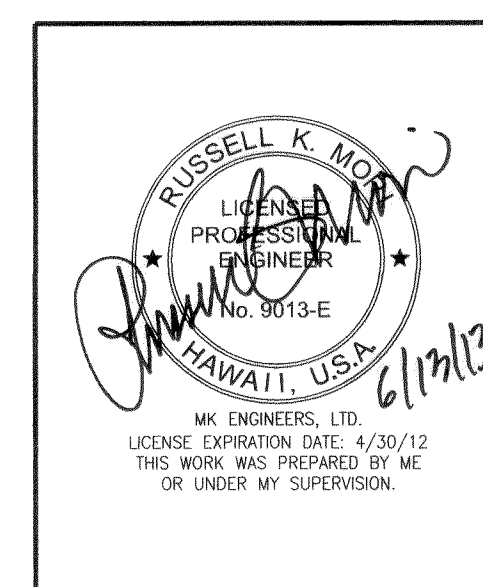
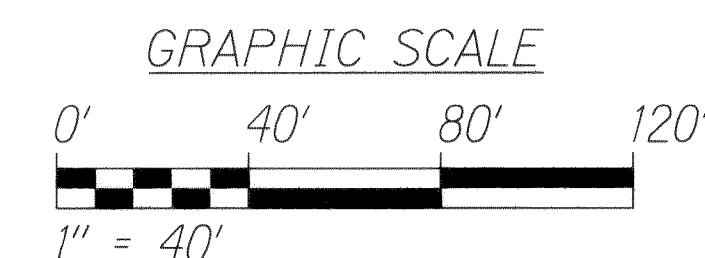
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 277	382



HIGHWAY LIGHTING PLAN - N

NOTES:

- Light Lines Denote Existing Condition
- Bold Lines Denote New Work
- "X" Denotes Removal Work



6/17/13	Replaces Original Sheet
Date	Revision

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING PLAN
STA 153+00 TO 172+00

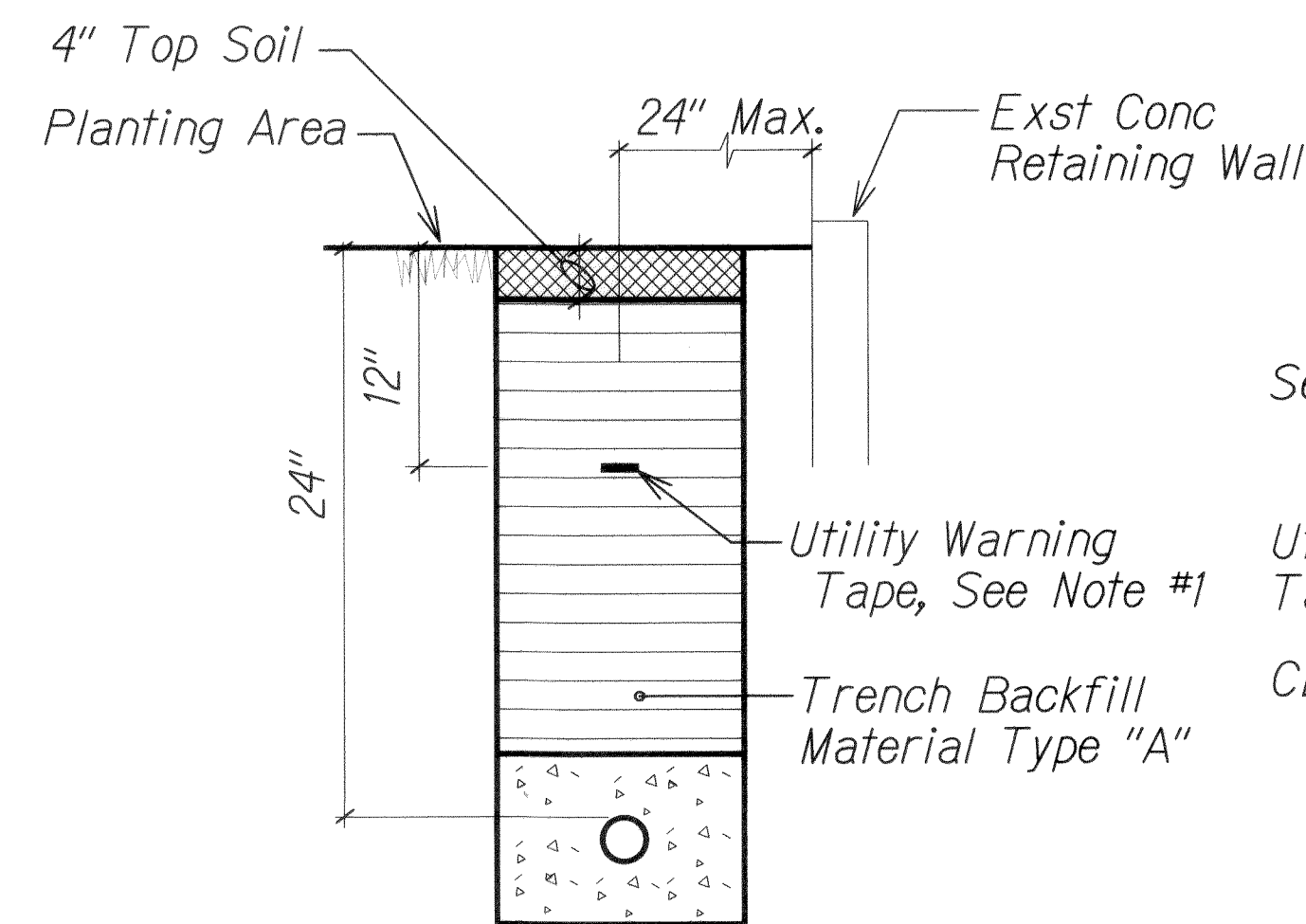
INTERSTATE ROUTE H-1 REHABILITATION
MIDDLE STREET TO VICINITY OF WARD AVENUE
FAP NO. IM-HI-1(269)

Scale: 1" = 40'-0" Date: April 26, 2013

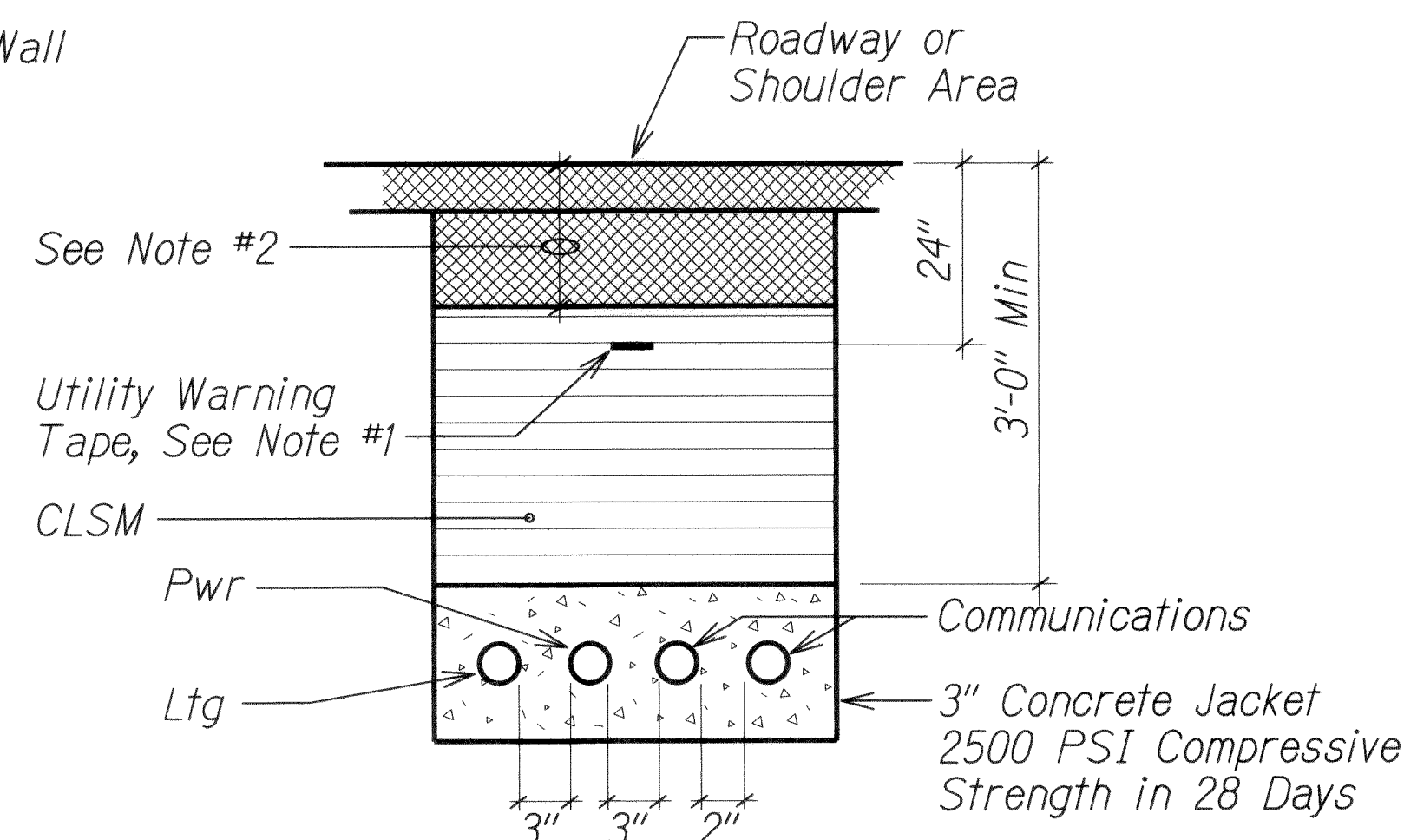
SHEET No. E-16 OF 30 SHEETS

ADD. 277

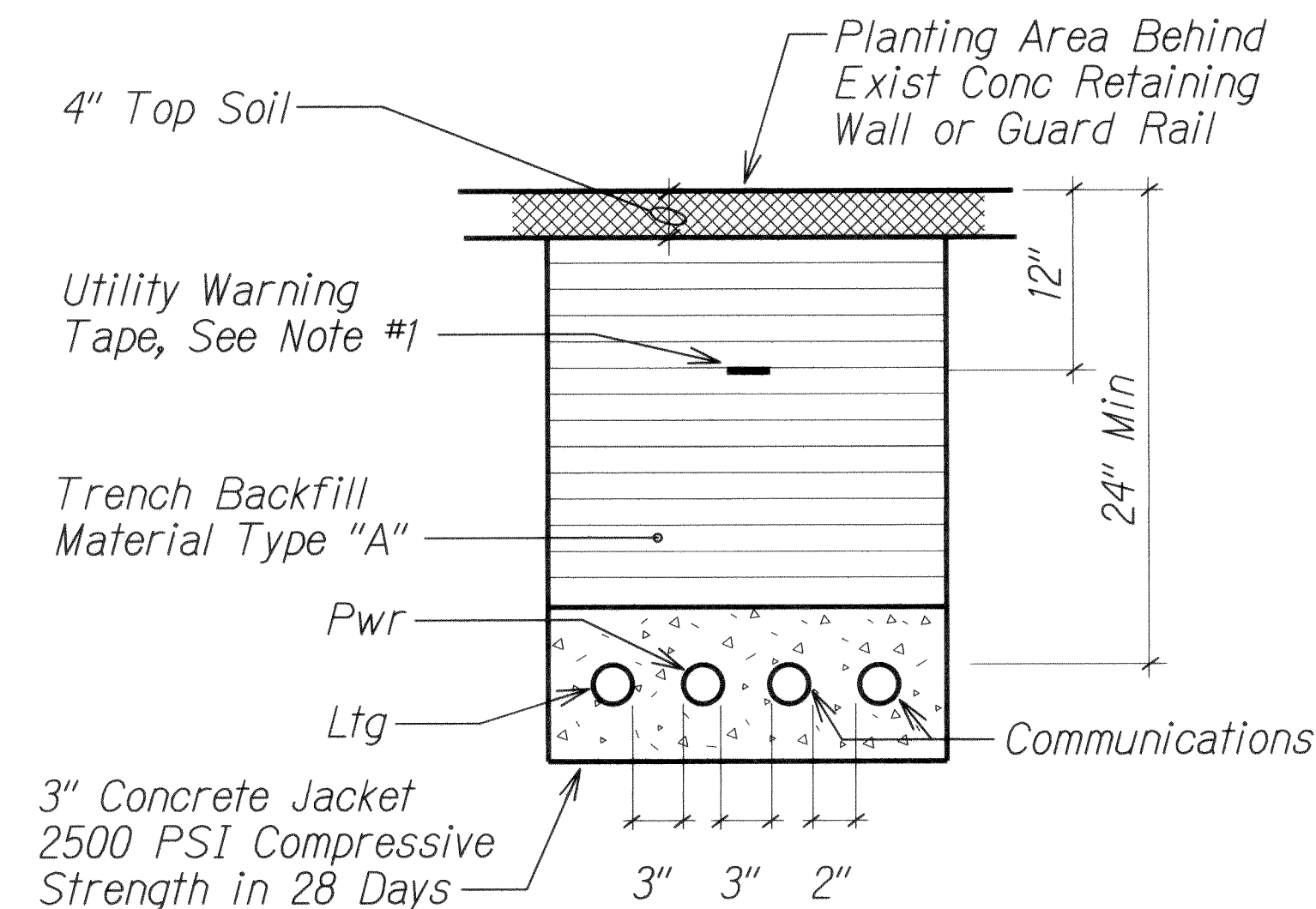
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 282	382



DUCT SECTION (A)
NTS

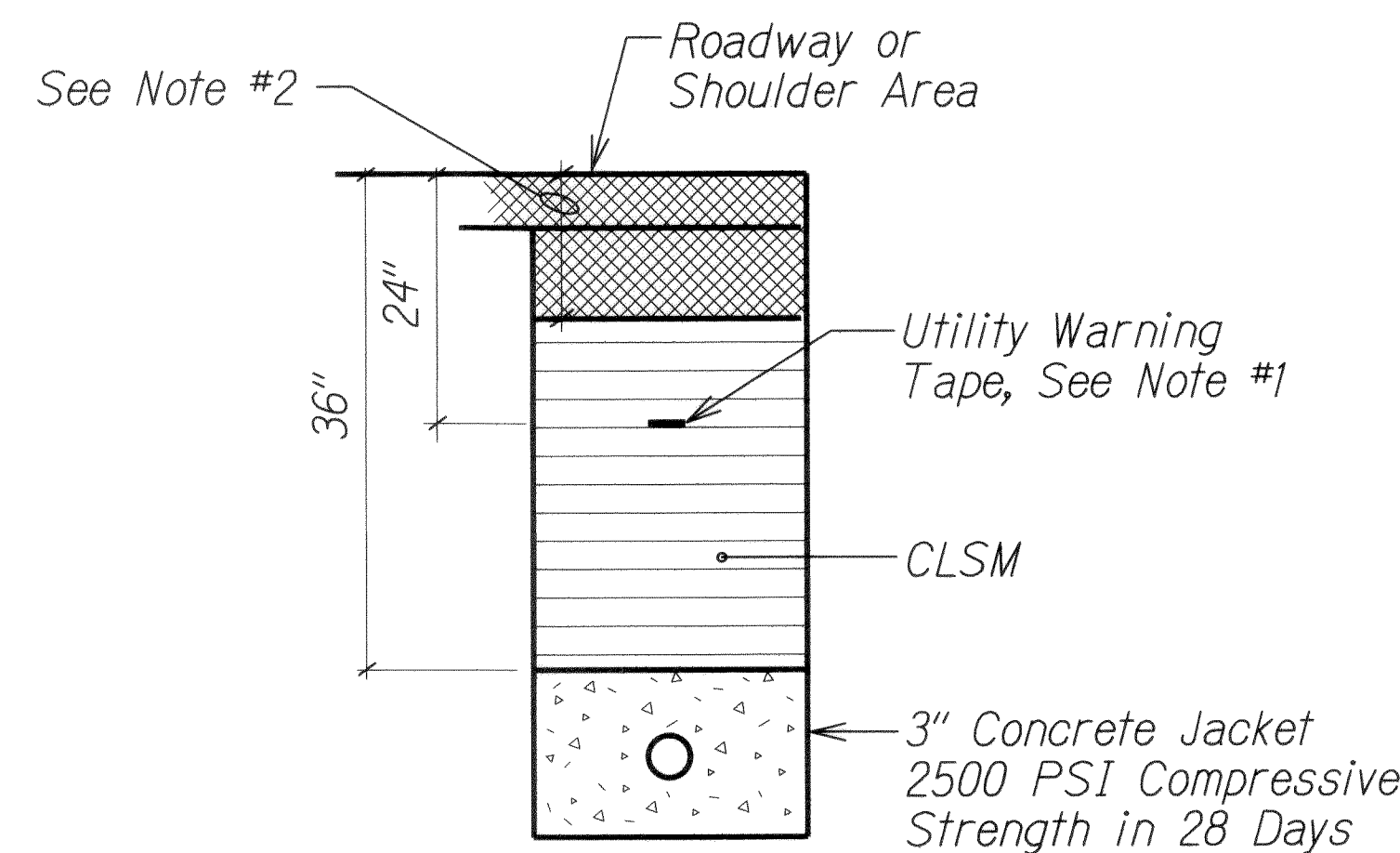


DUCT SECTION (B)
NTS



DUCT SECTION (C)
NTS

- (C1) Similar Except 18" Min. Depth
- (C2) Similar Except w/ 4-2" Lighting Conduits
- (C3) Similar Except w/ 6-2" Lighting Conduits



DUCT SECTION (D)
NTS

TYPICAL DUCT SECTIONS

NTS

- NOTES:**
- 8 MIL Thick Red Colored Plastic Warning Tape 3" Wide, Entire Length of Duct. Tape to Have Continuous Metallic Backing and Corrosion Resistant Foil Core. Warning and Identification to be Imprinted on Tape and Shall Read "Caution Buried Electric Cable Below". Message Shall be Repeated Approximately Every Ten Feet.
 - See Roadway Plans for Pavement Thickness (SMA, HMA Mix IV, HMAB) by Station Location. For Areas on the Roadway Plans Showing Resurfacing Only, the Pavement Thickness Shall be as Shown for the Mainline Weekend Pavement Reconstruction. SMA, HMA Mix IV and HMAB Shall be Paid Under the Applicable Pay Item.
 - Trench Backfill Top, Soil & CLSM Shall be Included in Pay Item 622.1000 Roadway Lighting System.

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

6/17/13	Replaces Original Sheet
Date	Revision

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DUCT SECTIONS

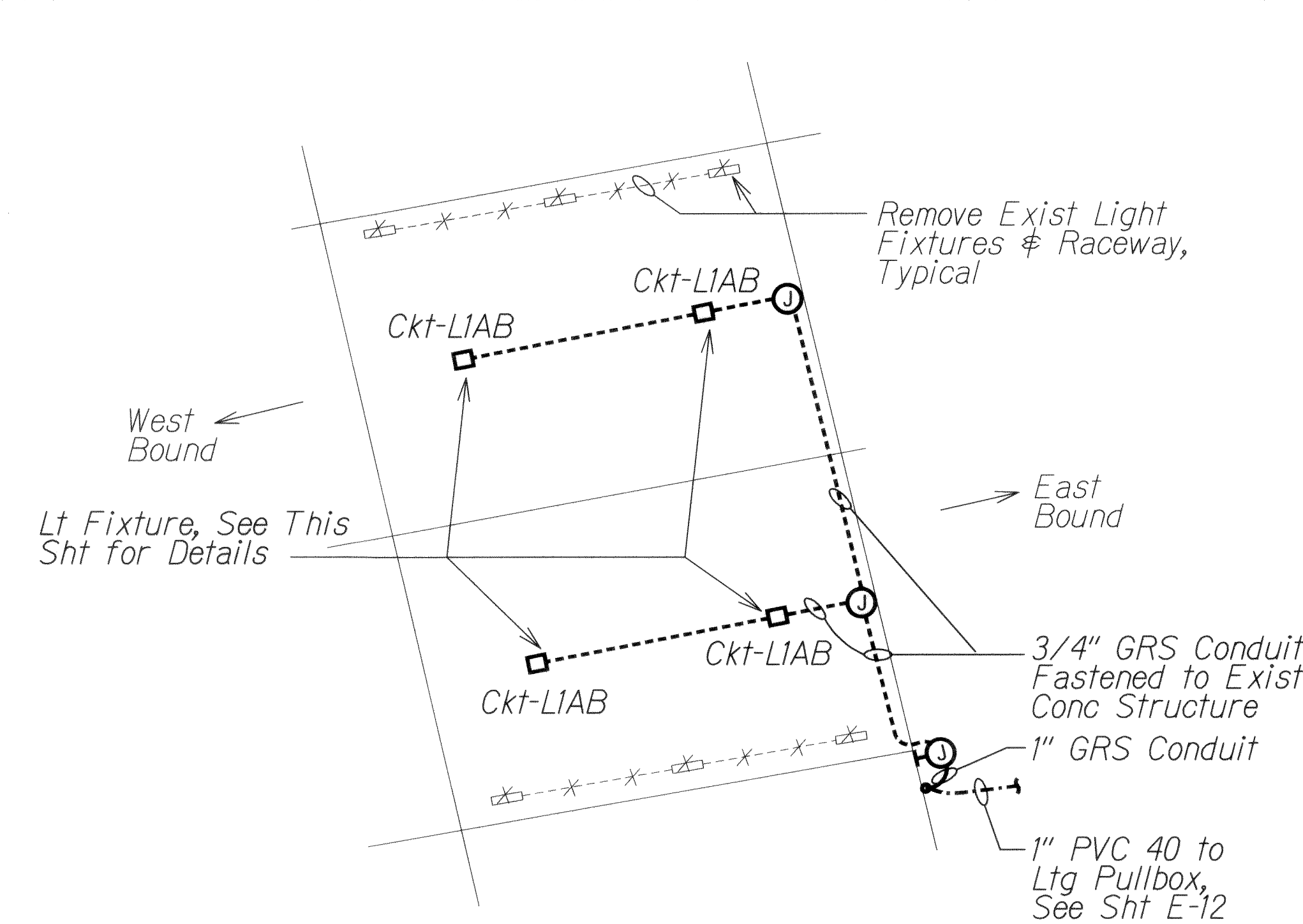
INTERSTATE ROUTE H-1 REHABILITATION
MIDDLE STREET TO VICINITY OF WARD AVENUE
FAP NO. IM-HI-1(269)

Scale: Not to Scale Date: April 26, 2013

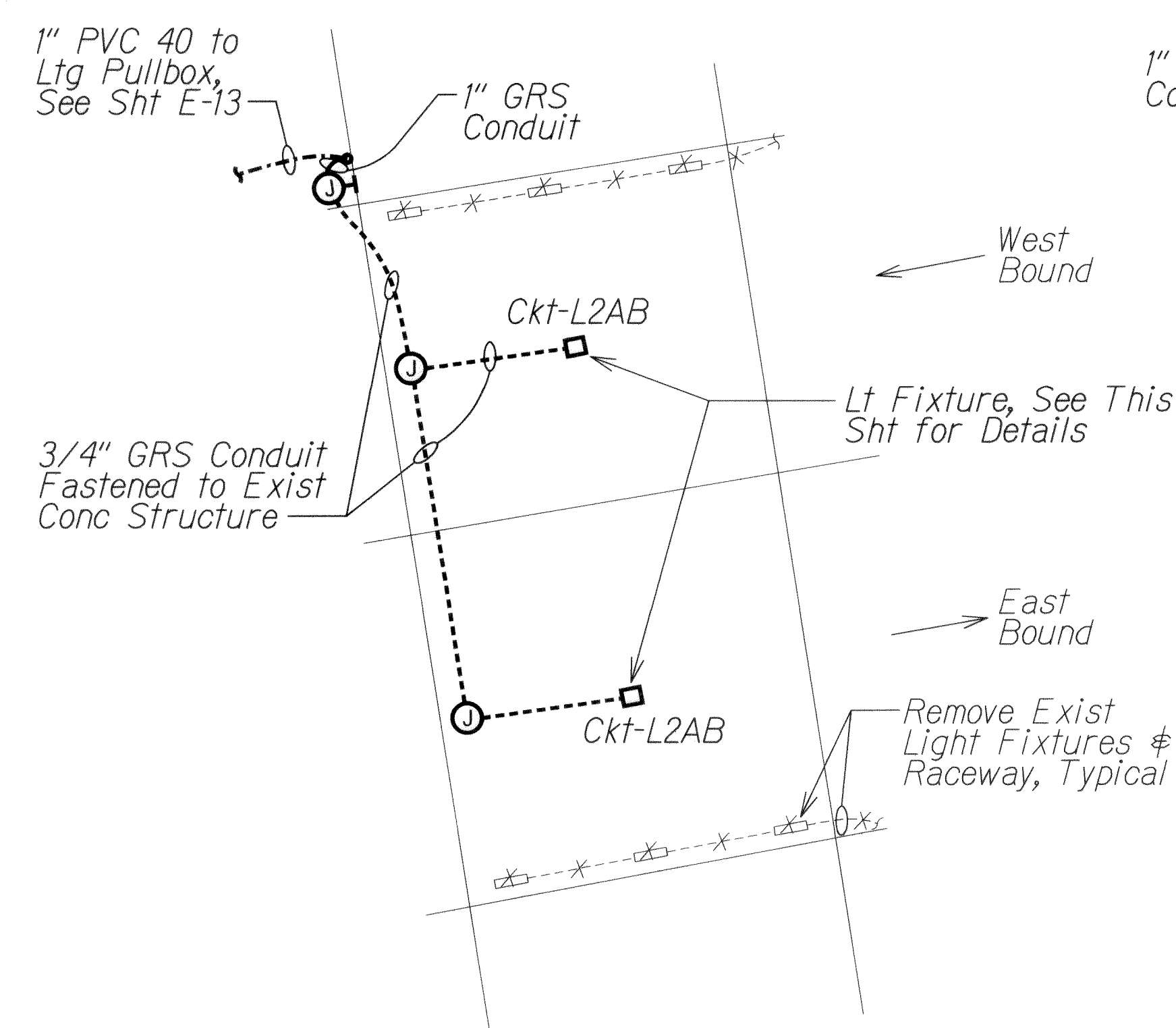
SHEET No. E-21 OF 30 SHEETS

ADD. 282

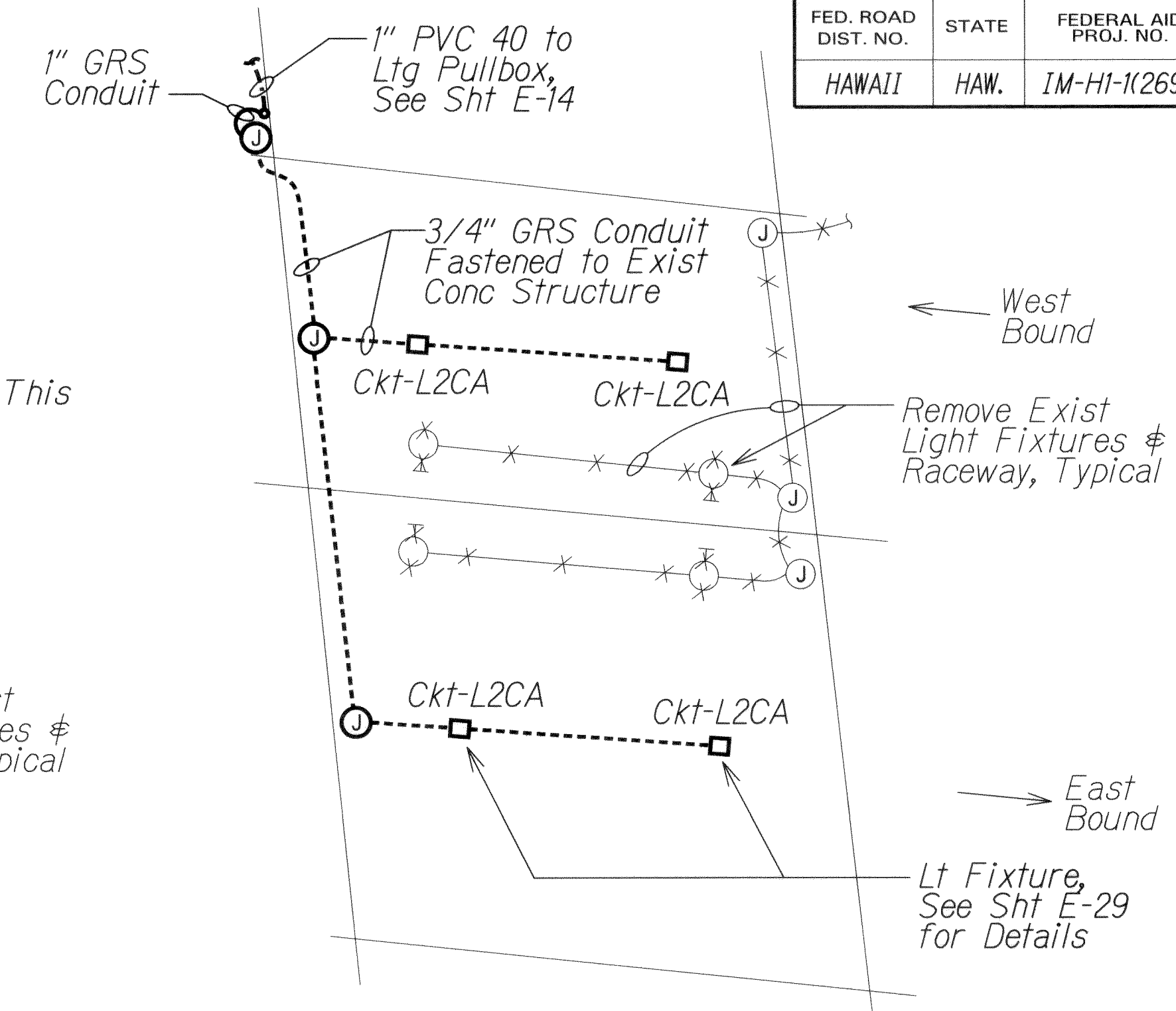
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 291	382



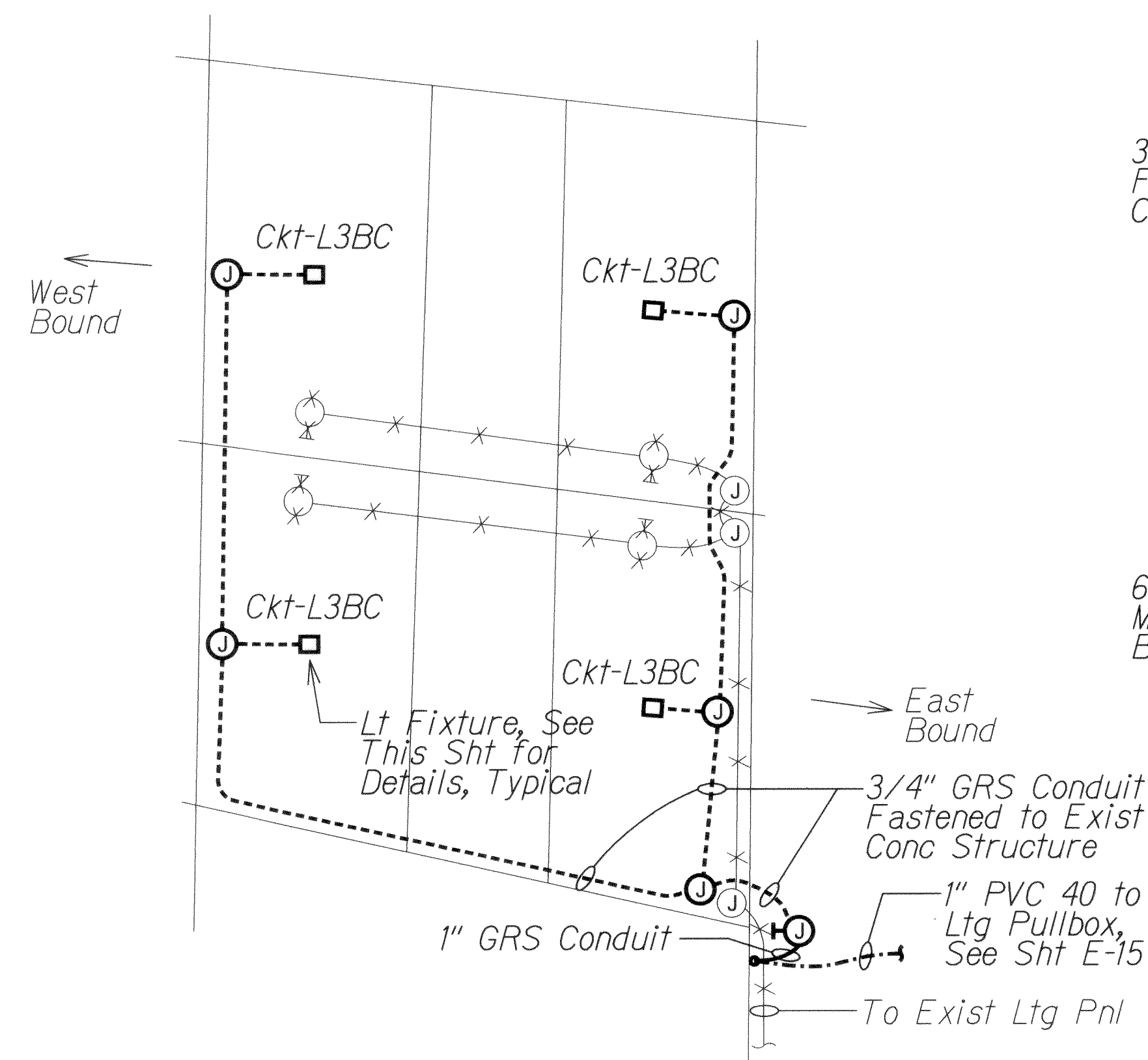
A LILIHA UNDERPASS
E-12 | E-30
LIGHTING PLAN
Scale: 1" = 20'-0"



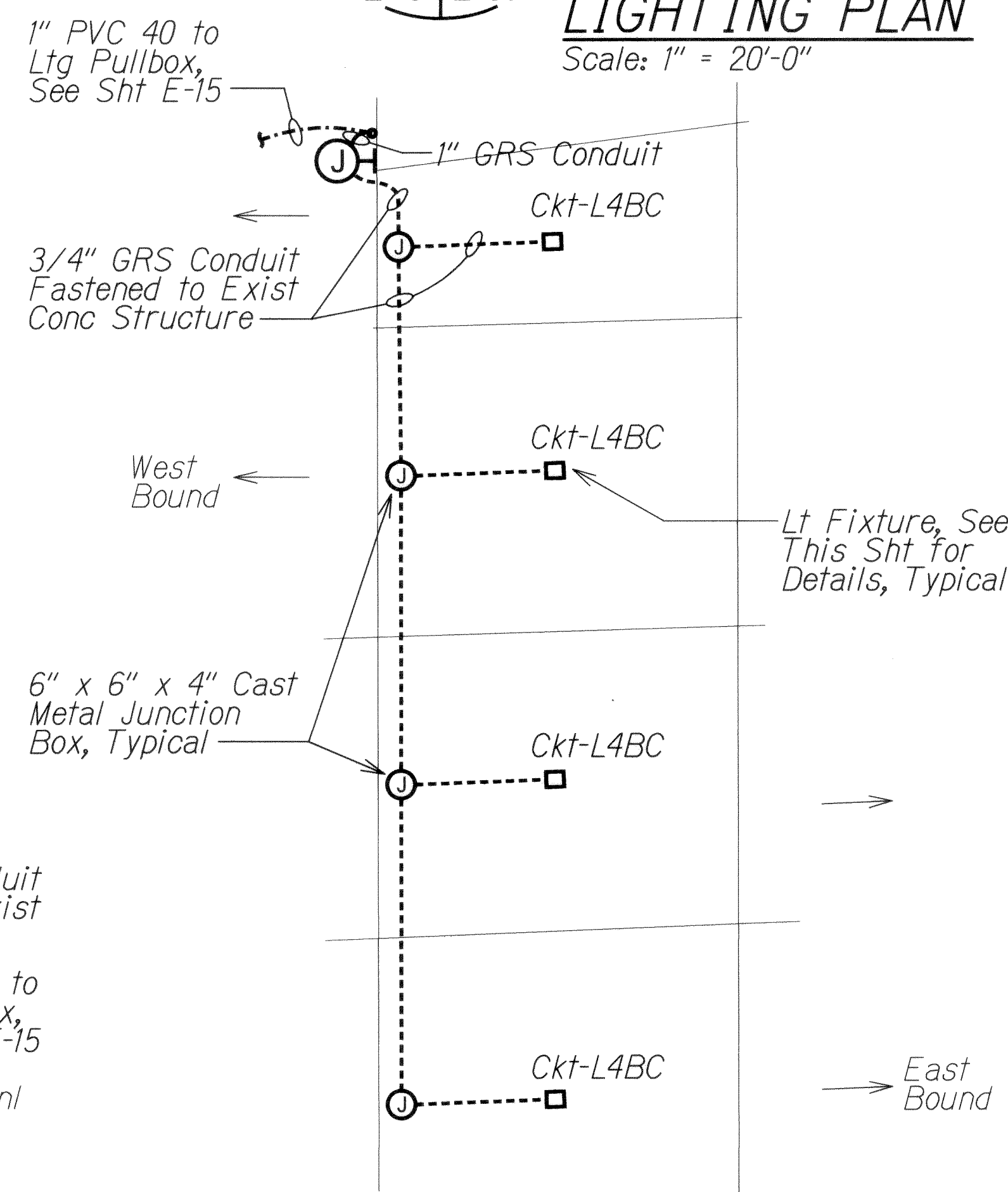
B AALA UNDERPASS
E-13 | E-30
LIGHTING PLAN
Scale: 1" = 20'-0"



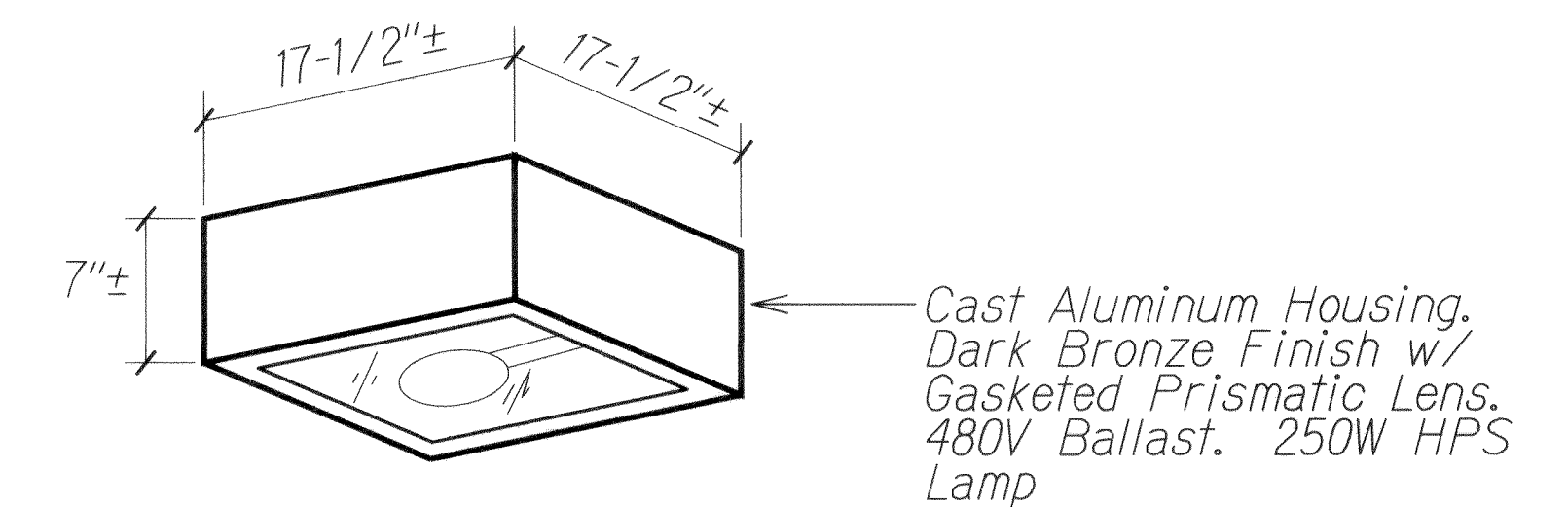
C NUUANU UNDERPASS
E-14 | E-30
LIGHTING PLAN
Scale: 1" = 20'-0"



D PALI HIGHWAY UNDERPASS
E-15 | E-30
LIGHTING PLAN
Scale: 1" = 20'-0"



E QUEEN EMMA UNDERPASS
E-15 | E-30
LIGHTING PLAN
Scale: 1" = 20'-0"



UNDERPASS LIGHT FIXTURE
NTS

DATE	
DESIGNED BY	
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	

6/17/13	Replaces Original Sheet
Date	Revision
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION UNDERPASS LIGHTING PLANS	
INTERSTATE ROUTE H-1 REHABILITATION MIDDLE STREET TO VICINITY OF WARD AVENUE FAP NO. IM-HI-1(269)	
Scale: As Noted	Date: April 26, 2013
SHEET No. E-30 OF 30 SHEETS	

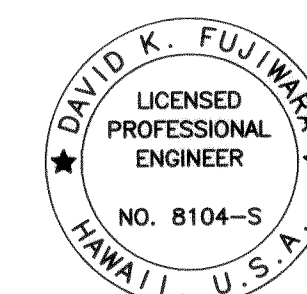
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 292	382

STRUCTURAL INDEX TO DRAWINGS

[illegible]

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

DRAWING NAME: Z:\00 ONGOING\11-030 H1 RESURFACING\LIKI LIKE TO PUNCHBOWL\CAD\06-14-13 100%\H1RA-S001 ADD.DWG PLOT TIME: 06-14-13, 10:17 AM)



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

David K. Fujiwara
KSE INC APRIL 30, 2
LIC EXP D

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURAL INDEX TO DRAWINGS


INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP No. IM-HI-1(269)


Scale: None Date: April 26, 2011

ADD. 292

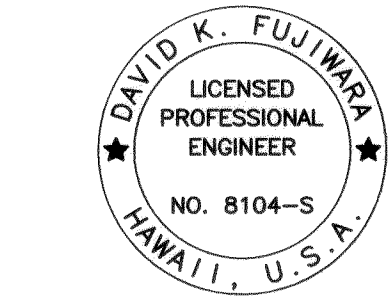
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	
No.		

DRAWING NAME: Z:\00 ONCING\11-030 HI RESURFACING LIKE\LIKE TO PUNCHBOWL\CAD\06-14-13 100% HRA-S001 ADD.DWG PLOT TIME: 06-14-13, 10:17 AM

STRUCTURAL INDEX TO DRAWINGS	
SHEET	DESCRIPTION
SI1.5	RECONSTRUCTED GDI AT STA. 52+75 RT. - PLAN AND SECTIONS
SI1.6	RECONSTRUCTED GDI AT STA. 54+75 RT. - PLAN AND SECTIONS
SI1.7	DRAIN INLET RECONSTRUCTION DETAIL
SI2.1	GDI AT STA. 125+75.37 - DEMO PLAN AND SECTIONS
SI2.2	GDI AT STA. 125+75.37 - SECTION 
SI2.3	GDI AT STA. 125+75.37 - PLAN AND SECTIONS
SI2.4	GDI AT STA. 125+75.37 - SECTIONS
SI2.5	GDI AT STA. 125+75.37 - PLANS
SI2.6	GDI AT STA. 125+75.37 - SECTIONS
SI2.7	GDI AT STA. 125+75.37 - SECTIONS
SI3.1	GDI AT STA. 128+24.77 - DEMO PLAN AND SECTION
SI3.2	GDI AT STA. 128+24.77 - PLANS AND SECTION
SI3.3	GDI AT STA. 128+24.77 - SECTIONS
SI4.1	GDI AT STA. 85+00 AND STA. 148+00 - DEMO PLAN AND SECTIONS
SI4.2	GDI AT STA. 85+00 AND STA. 148+00 - PLANS
SI4.3	GDI AT STA. 85+00 AND STA. 148+00 - SECTIONS
SI5.1	GDI AT STA. 187+90 - DEMO PLAN AND SECTION
SI5.2	GDI AT STA. 187+90 - PLANS
SI5.3	GDI AT STA. 187+90 - SECTIONS
SI5.4	GDI AT STA. 187+90 - PLAN AND SECTION
SL1.1	LIGHT POLE FOUNDATION
SRI.1	METAL RAILING SPLICE DETAILS

6/14/13	 Revise Description
DATE	REVISION

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
STRUCTURAL INDEX TO DRAWINGS
<i>INTERSTATE ROUTE H-1 REHABILITATION Middle Street to Vicinity of Ward Avenue FAP No. IM-H1-K(269)</i>
Scale: None Date: April 26, 2013
SHEET No. 50.2 OF 86 SHEETS



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David K. Fujiwara
KSF, INC. APRIL 30, 2014
LIC. EXP. DATE


FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-K(269)	2013	ADD. 293	382

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

DRAWING NAME: 2. (00 ONGONG) 11-030 HI RESURFACING LIKE LIKE TO PUNCHING LAD 06-14-13 100% HRA-S003 ADD DWG PLOT TIME: 06-14-13 10:18 AM

- General Specifications: Hawaii Department of Transportation (HDOT), Standard Specifications for Road and Bridge Construction, 2005, together with Special Provisions prepared for this contract.
- Design Specifications:
 - AASHTO 2010 LRFD Bridge Design Specifications (Fifth Edition) and its subsequent interim specifications with interim supplements and modifications by the HDOT Highways Division.
 - HDOT Document dated October 20, 2010 with subject title "Design Criteria for Bridges and Structures"
 - AASHTO 2009 Standard Specifications for structural supports for Highways, Signs, Luminaires, and Traffic Signals (Fifth Edition) ant its subsequent interim specifications with interim supplements and modifications by the HDOT Highways Division.
 - Temporary shoring and falsework shall follow the AASHTO Guide Design Specification for Bridge Temporary Works.
- Loads:
 - Live Load: AASHTO HL-93 Truck Loading
 - Railing Test Level: TL-4


Item No.	Structural Parts	Classes of Concrete	Specified Compressive Strength, f'c (28 Days)	Maximum Cement Content (lbs/cy)
(1)	Deck Cast in Place Concrete	Very Early Strength Latex Modified Concrete (VESLMC)	See Section 540	-
(2)	Nuuanu Stream Bridge Pier and Abutment Corbels, and Concrete on Sheet SP3.3 Refer to Note 4. (K)	-	5000 psi	650
(3)	Precast Concrete	-	5000 psi	650
(4)	Retaining Walls, End Posts, Bridge Rails, and Concrete Barriers	-	4000 psi	625
(5)	Foundations for Retaining Wall, - End Post, and Concrete Barriers	-	4000 psi	625
(6)	Drilled Shafts	-	4500 psi	670
(7)	Light Pole Base on Retaining Wall	-	4000 psi	625
(8)	Except as noted otherwise all others	-	4000 psi	625

All concrete shall have a maximum W/C Ratio of 0.45. 
The W/C Ratio for Class A Concrete shall follow the standard specifications.

All concrete in Items 2, 3, 4, 5, and 7 shall have a 128 ounces of BASF Master Life AS20 or Grace Eclipse Shrinkage Reducing Admixture per cubic yard of concrete.

- Materials (Cont.):

A migrating corrosion inhibitor amine carboxylate water-based admixture shall be added to the concrete for Items 3, 4, 5 and 7. The minimum dosage shall be 1.5 pints per cubic yard of concrete. The admixture shall not affect the set time of the concrete.

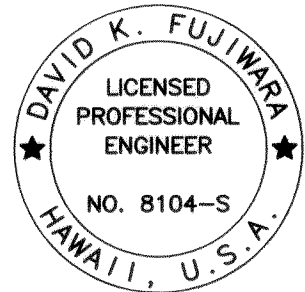
 - The use of any calcium chloride in any concrete is prohibited.
 -  All reinforcing steel shall be ASTM A 615 Grade 60 deformed bars unless otherwise noted.
 - Reinforcing steel shall be ASTM A 706 where welded connections are required.
 - All structural steel shall be ASTM A36 hot dip galvanized after fabrication, unless otherwise noted.
 - All anchor bolts, washers and nuts shall be ASTM A325 hot dip galvanized after fabrication, unless otherwise specified. Washers shall be used with bolts and anchor bolts.
 - All stainless steel shall be duplex stainless steel Type 2205 with a minimum yield strength of 65 ksi and a minimum tensile strength 95 ksi.
 - All welding shall conform to the latest ANSI / AASHTO / AWS D1.5 Bridge Welding Code. All welds shall be ground smooth. Unless noted otherwise, all welding shall be shielded arc welding done with E70 electrodes.
 - A migrating corrosion inhibitor amine carboxylate water-based admixture shall be added to the dry pack mortar, grout and non-shrink grout. The minimum dosage shall be 10 grams per 0.4 to 0.5 cubic feet of dry pack mortar, grout, or non-shrink grout.
 - Glass fiber reinforced polymer (GFRP) rebar shall conform to Special Provisions Section 672.
 - A calcium nitrite corrosion inhibitor shall be added to the concrete for Item 4. (A) (2).

The Dose shall be a minimum 5 gallons per cubic yard of concrete and accepted by the Engineer. In addition to inhibiting corrosion, the calcium nitrite shall accelerate the concrete hydration to give a final set at 3 hours. At final set, the minimum concrete compressive strength shall 700 psi. The 3 hours and the 28 day compressive strengths shall be determined by ASHTO T-22, ASTM C109 or ASTM C779. These tests shall be performed by the Contractor in the presence of the Engineer. If ASTM C779 is used, the Contractor shall first prepare base-line samples which will be used by Engineer for comparison and acceptance of the work. The records of these tests shall be submitted to the Engineer the same day the tests are performed. The addition a SRA to the calcium nitrite shall not alter the 3 hour and 28 day compressive strength.


STRUCTURAL GENERAL NOTES

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 294	382

- Reinforcement:
 - The covering measured from the surface of the concrete to the face of any reinforcing bars shall be as follows, except as otherwise shown:
 - Deck slabs
 - Top bars = 2 1/2" (Unless otherwise noted)
 - Bottom bars = 1 1/2"
 - Concrete cast against and permanently exposed to earth = 3"
 - All others unless otherwise noted = 2".
 - Reinforcing bars shall be detailed in accordance with the latest edition of the AASHTO LRFD bridge design specifications unless otherwise noted.
 - Minimum clear spacing between parallel bars shall be 1 1/2 times the diameter of bars (for non bundled bars). In no case shall the clear distance between the bars be less than either 1 1/2 times the maximum size of the coarse aggregate or 1 1/2".
 - All dimensions relating to reinforcing bars are to centers of bars unless otherwise noted.
 - Reinforcing bars shall be securely tied at all intersections and lap splices except where the spacing of intersections is less than one foot in each direction, in which case alternate intersections shall be tied.
- Construction Notes:
 - The Contractor shall verify all dimensions and site conditions and shall report any discrepancies in writing to the Engineer before commencing work or ordering materials.
 - The Contractor shall verify all site conditions and not rely upon these plans for existing, dimensions, elevations and azimuths, stream channel location, roads, roadway gutters, curbs and sidewalks, etc.. Conditions may differ from those shown.



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KSF, INC. APRIL 30, 2014
LIC. EXP. DATE

6/14/13	 Revise Notes
DATE	REVISION

Scale: None Date: April 26, 2013

SHEET No. 50.3 OF 86 SHEETS

STRUCTURAL GENERAL NOTES




INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP No. IM-HI-1(269)





STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ADD. 294

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 295	382


STRUCTURAL GENERAL NOTES (CONT.)

6. Construction Notes (Cont.): 
- (C) The Contractor shall be solely responsible for the protection of adjacent properties, utilities and existing and new structures from damage due to construction. Repairing any damage shall be at the Contractor's own expense, to the satisfaction of the Engineer.
- (D) The Contractor shall verify the location of all utility lines and notify the respective owners before commencing with excavation, and any temporary piling or sheeting.
- (E) Except as otherwise noted, all vertical dimensions are measured plumb.
- (F) For concrete finish see Standard Specifications and Special Provisions.
-  (G) Construction joints may be relocated or additional ones added subject to the acceptance of the Engineer.
- (H) Unless otherwise noted, all exposed concrete edges shall be chamfered 3/4" x 3/4".
- (J) The Contractor shall verify the location and size of all existing reinforcing bars prior to drilling.
- (K) Location of drilled holes shown in plans are approximate. Prior to placing holes in concrete, the Contractor shall locate all reinforcing steel, anchor bolts, thru bolts holes, etc. and adjust the location of the drilled holes to clear of them. Final hole locations are subject to the acceptance of the Engineer.
-  (L) Drilled holes in existing concrete for reinforcing steel dowels shall not be left unfilled for more than 8 hours. Embed length of epoxy dowels shown on plans shall be increased if the epoxy used is not able to develop the full strength of the dowels. Epoxy shall attain full strength prior to pouring concrete around reinforcing steel dowels. Follow all manufacturer's recommendations for dowel and epoxy.
- (M) Contractor shall unplug, clean and maintain existing drains during construction of the project.
- (N) Bolts and nuts for guardrail connections shall bear flush against concrete surfaces. Wedge washers shall be used as required.
- (O) When only portions of concrete are to be demolished. The intersections between the demolished concrete and the concrete that are to remain shall have a 1/4 inch deep sawcut or to depth of shallowest reinforcement around the entire perimeter of the demolished area.
- (P) The concrete surfaces which new concrete is poured against shall be roughened to a full amplitude of 1/4 of an inch and cleaned.
- (Q) All existing reinforcing shall remain in place and shall not be damaged in any way unless otherwise noted.
- (R) Existing reinforcing at exposed edges of concrete shall be cut back to provide 2" clear from finish concrete surface.
- (S) The Contractor shall restore the bridge name inscribed in railing when it is obstructed or removed. This work shall be considered incidental to the cost of the end posts.
- (T) New concrete surfaces shall match the finish of the existing structure. Any reveals, patterns, or decorative features shall also match the existing structure.

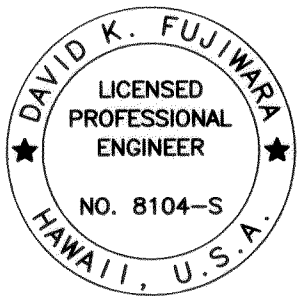
6. Construction Notes (Cont.): 
- (U) The Contractor shall submit shop drawings and calculations for the proposed details needed to protect the existing structures from increases in the existing load due to construction dead and live loads. The drawings and calculations shall be stamped by a licensed Structural Engineer and a licensed Civil Engineer specializing in geotechnical engineering in the State of Hawai'i. The above work, including working drawings and calculations, shall be incidental to various Contract items. The drawings and calculations shall be found acceptable by the Engineer before any construction work is to proceed.
-  (V) At least 30 days prior to commencing work, submit calculations and working drawings stamped by a licensed civil engineer specializing in geotechnical engineering in the State of Hawaii for any excavation or exposed, cut face 4 ft in height or greater. Also, if shoring is to be used, submit calculations and working drawing stamped by a licensed civil engineer specializing in structural engineering in the State of Hawaii. Follow all OSHA and HIOSH regulations.
-  (W) Cover VESLMC with a curing blanket with R value of at least 1.0 ft²-°F.hr/BTU for a minimum of 24 hrs. The blanket shall be placed in contact with the concrete after the concrete has set enough to not be damaged by the application of the blanket. The maximum surface temperature drop allowed when removing the blanket is 40° F.
-  (X) Separate dissimilar metals at point of contact by wrapping bar with teflon tape.
7. General:
- (A) All items noted incidental will not be paid for separately.
- (B) Standard Plans refer to all structures in general, except for modifications as may be required for special conditions. For such modifications refer to the corresponding detailed drawings.
- (C) Plans of the existing structures are available for review from the Highways Design Branch located at the State Department of Transportation, Highways Division Kakuhihewa Building, Room 609, 601 Kamokila Boulevard, Kapolei, HI 96707 (phone number 692-7586).
- (D) Temporarily relocate highway lighting conduit, pullboxes, etc. obstructing construction as needed. This work shall be considered incidental to the various contract items.

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

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6/14/13	 Revise Notes
DATE	REVISION

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
STRUCTURAL GENERAL NOTES	
INTERSTATE ROUTE H-1 REHABILITATION Middle Street to Vicinity of Ward Avenue FAP No. IM-HI-1(269)	
Scale: None	Date: April 26, 2013
SHEET No. 504 OF 86 SHEETS	



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LIC. EXP. DATE

DRAWING NAME: Z:\00 ONGOING\11-030 H1 RESURFACING LIKELIKE TO PUNCHBOWL\CAD\06-14-13 100%\H1RA-S005 ADD.DWG PLOT TIME: 06-14-13, 10:19 AM)



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APRIL 30, 2014

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

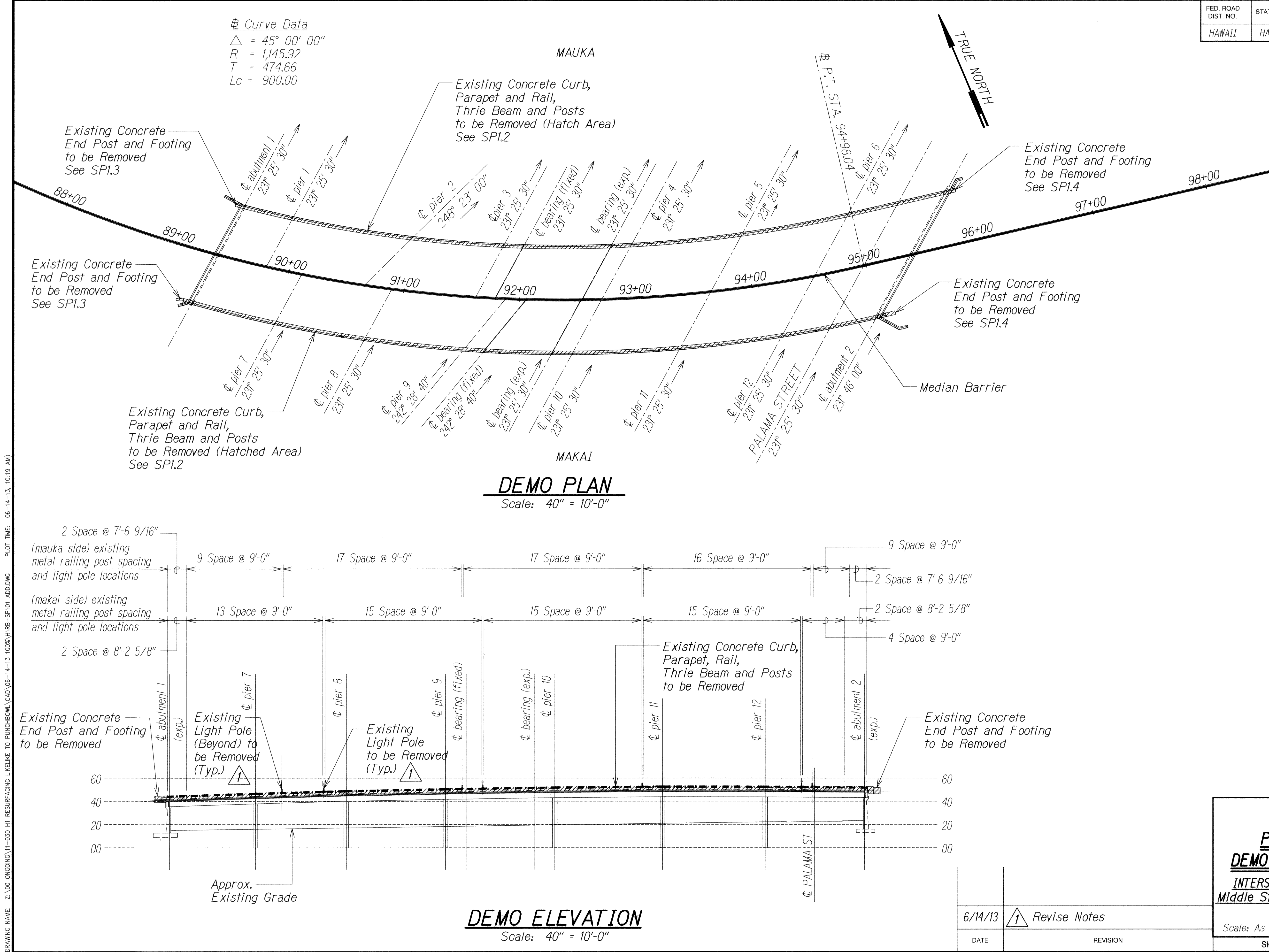
SYMBOLS AND ABBREVIATIONS

INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP No. 1M-HI-1269)

Scale: None Date: April 26, 2013

SHEET No. 50.5 OF 86 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 297	382



ORIGINAL PLAN	DATE
DRAWN BY	
TRACED BY	
CHECKED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

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KSF, INC. APRIL 30, 2014 LIC. EXP. DATE

STATE OF HAWAII
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HIGHWAYS DIVISION

PALAMA SEPARATION
DEMO - PLAN AND ELEVATION

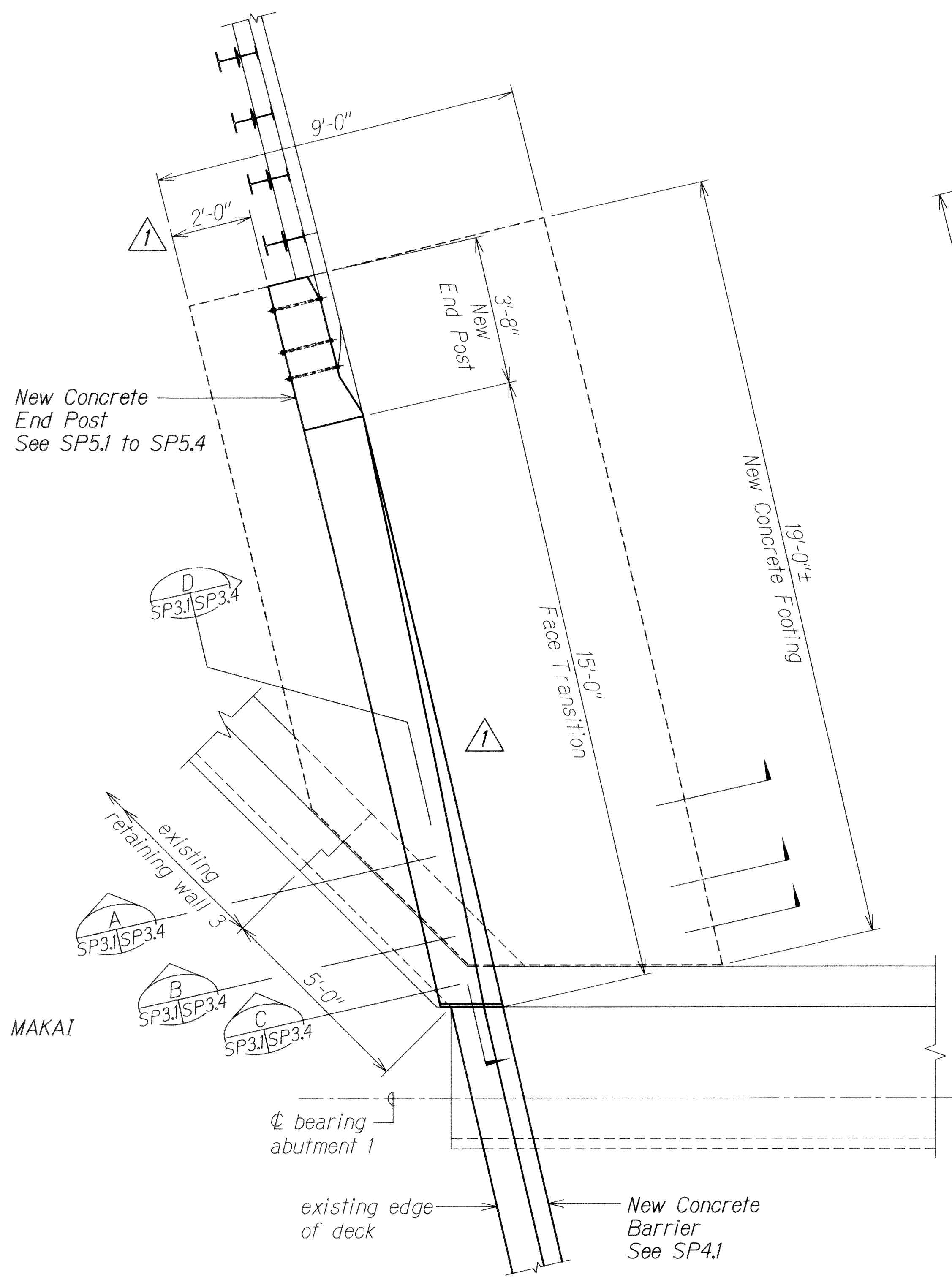
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP No. IM-HI-1(269)

Scale: As Shown

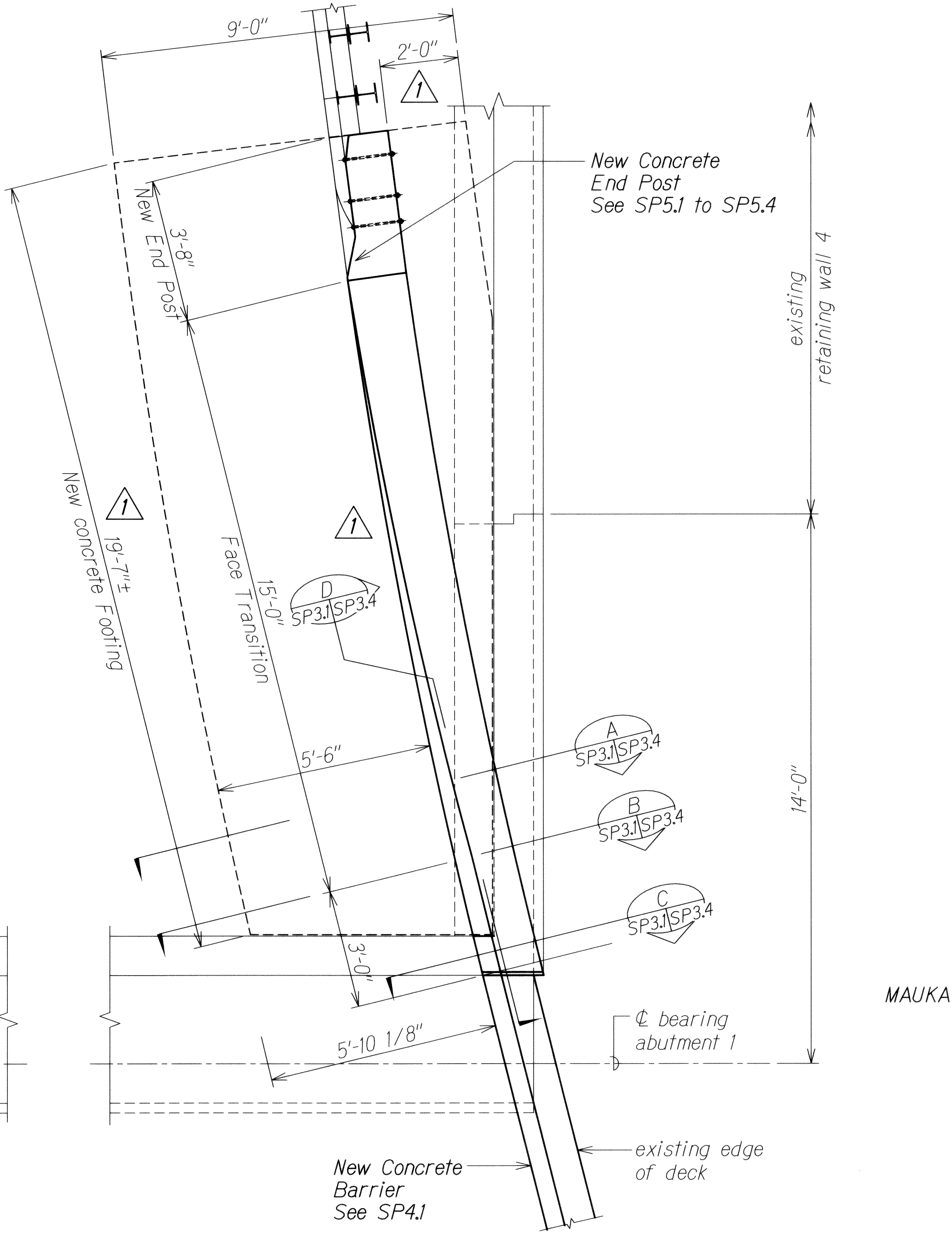
Date: April 26, 2013

SHEET No. SPI.1 OF 86 SHEETS

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HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 302	382



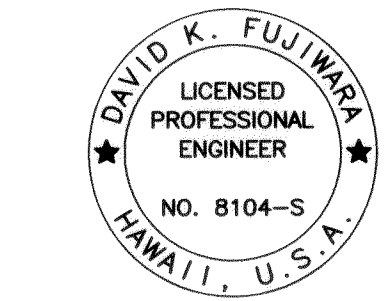
PLAN - AT END POST
 ABUTMENT 1 (MAKAI SIDE) A
 Scale: 1/2" = 1'-0"



PLAN - AT END POST
 ABUTMENT 1 (MAUKA SIDE) B
 Scale: 1/2" = 1'-0"

ORIGINAL PLAN	DATE
DRAWN BY	
TRACED BY	
NOTED BY	
CHECKED BY	
NO.	

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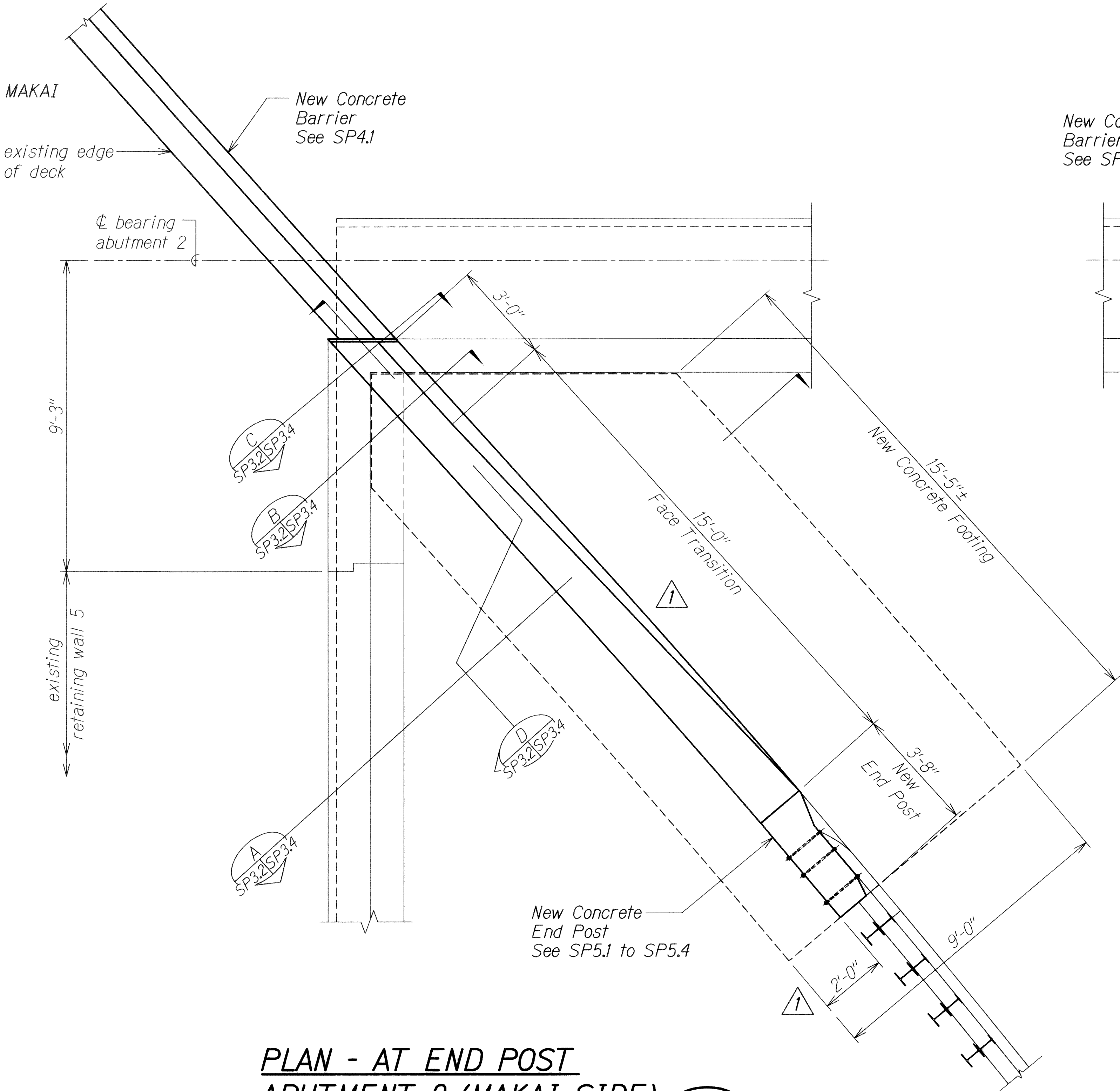
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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
PALAMA SEPARATION
END POST PLANS
 INTERSTATE ROUTE H-1 REHABILITATION
 Middle Street to Vicinity of Ward Avenue
 FAP No. IM-HI-1(269)
 Scale: As Shown Date: April 26, 2013

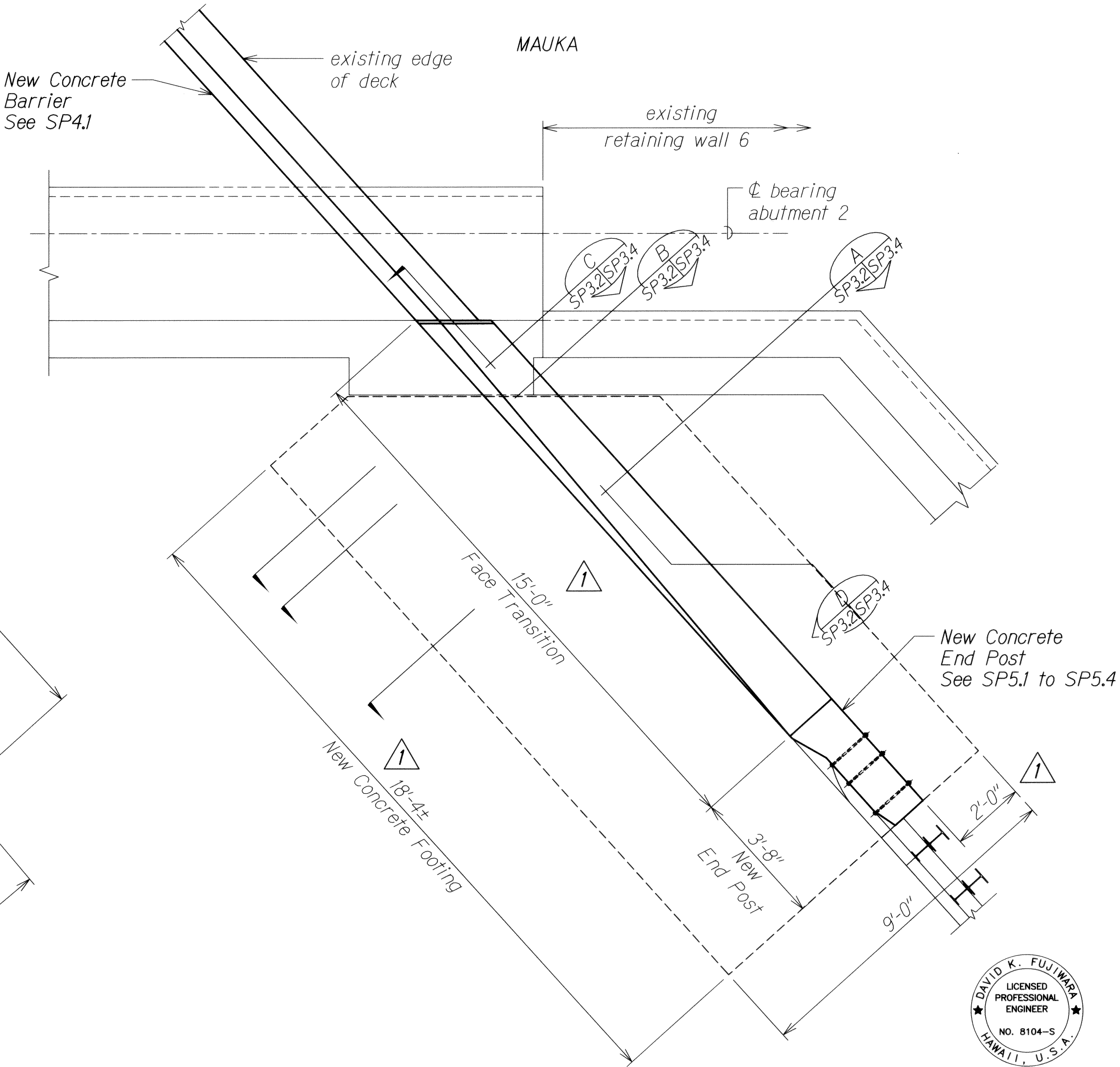
SHEET No. SP3.1 OF 86 SHEETS

6/14/13	1 Revise Details
DATE	REVISION

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 303	382



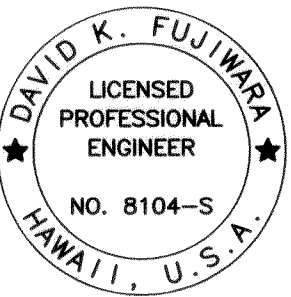
PLAN - AT END POST
ABUTMENT 2 (MAKAI SIDE) **A**
 Scale: 1/2" = 1'-0" **SP3.2** **SP3.2**



PLAN - AT END POST
ABUTMENT 2 (MAUKA SIDE) **B**
 Scale: 1/2" = 1'-0" **SP3.2** **SP3.2**

ORIGINAL PLAN	DATE
NOTE BOOK	DESIGNED BY
	QUANTITIES BY
	CHECKED BY
No.	

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 LIC. EXP. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

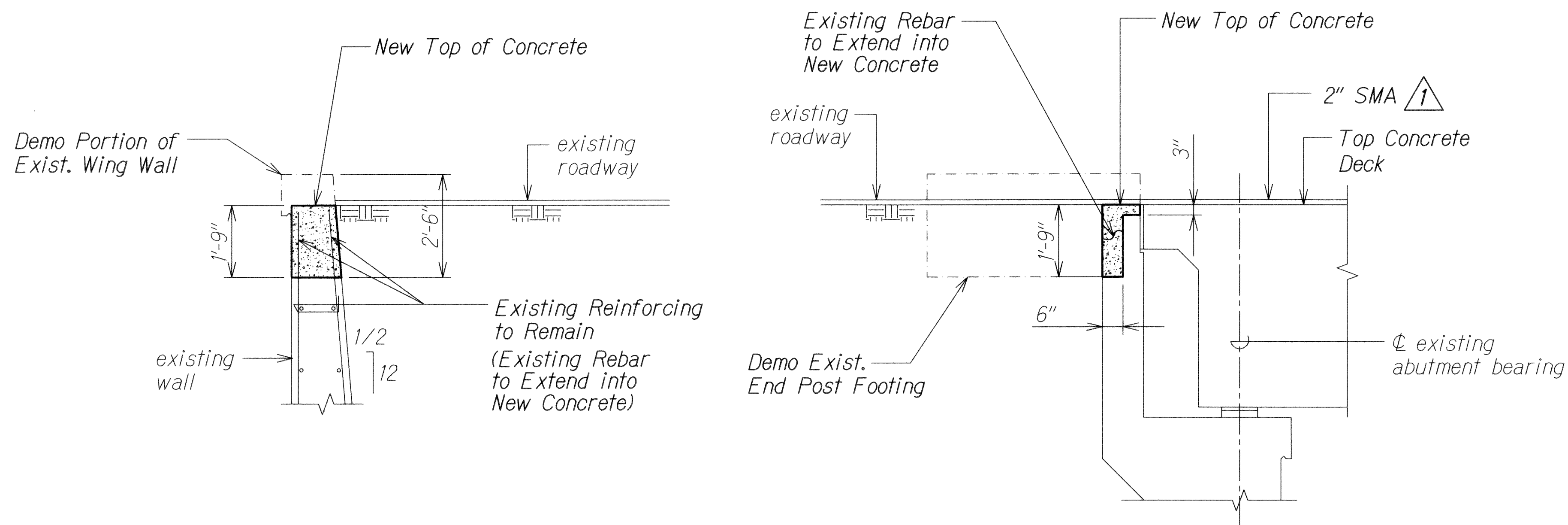
PALAMA SEPARATION
END POST PLANS
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP No. IM-HI-1(269)

Scale: As Shown
Date: April 26, 2013

SHEET No. SP3.2 OF 86 SHEETS

6/14/13	1	Revise Details
DATE	REVISION	

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-HI-1(269)	2013	ADD. 304	382



SECTION A
Scale: 1/2" = 1'-0" SP33 SP33

SECTION B
Scale: 1/2" = 1'-0" SP33 SP33

Note:
Existing reinforcing that is to remain shall be cut off 2" clr. from face of concrete.

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

DRAWING NAME: Z:\00 ONGOING\11-030 HI RESURFACING LIKELIKE TO PUNCHBOWL\CAD\06-14-13 100% HIRB-SP303 ADD.DWG PLOT TIME: 06-14-13, 10:20 AM)



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6/14/13	1 Revise Note
DATE	REVISION

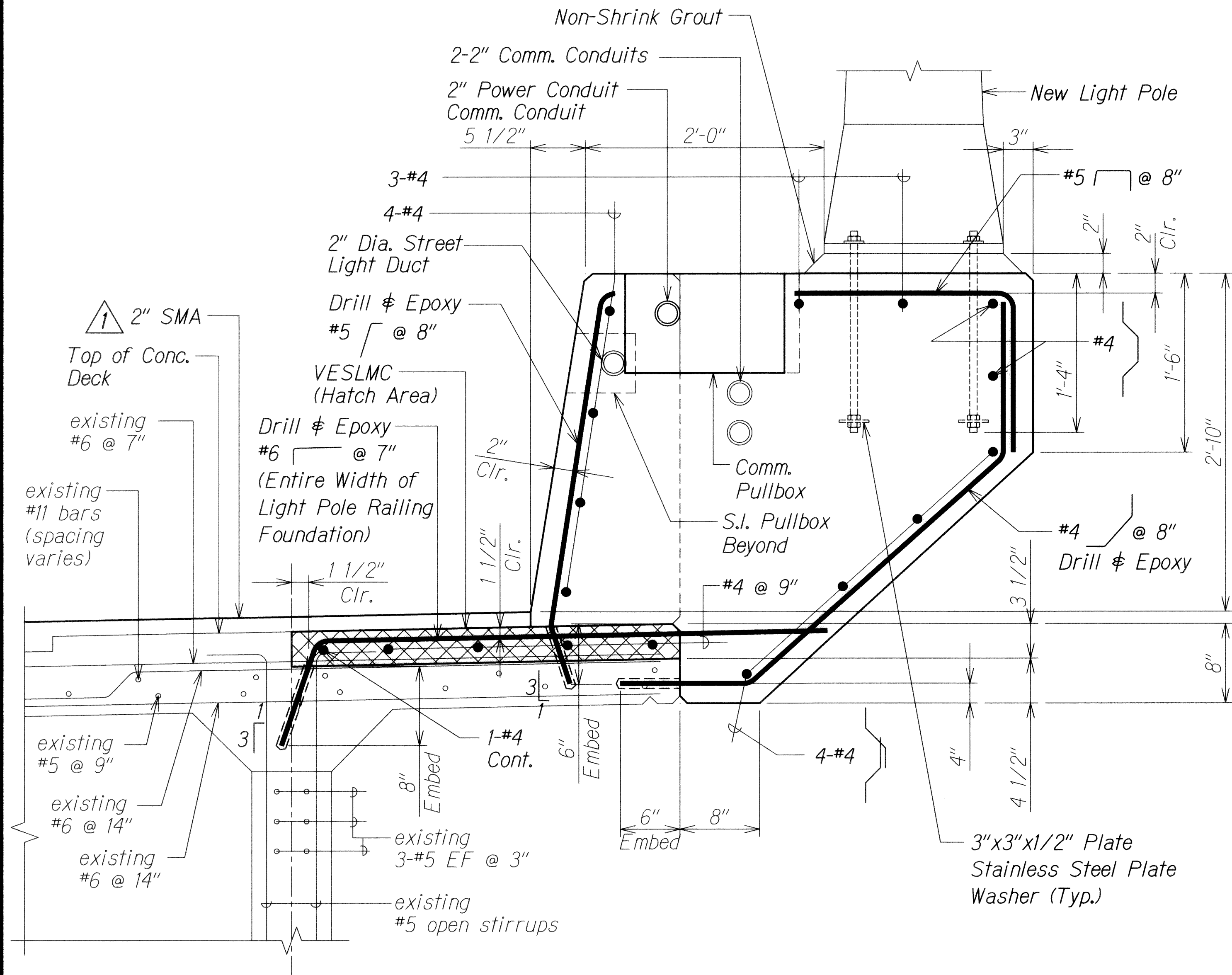
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PALAMA SEPARATION SECTIONS
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP No. 1M-HI-1(269)

Scale: As Shown Date: April 26, 2013

SHEET No. SP33 OF 86 SHEETS

ADD. 304

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 309	382

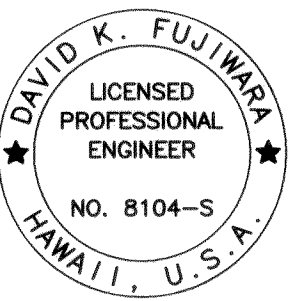


SECTION A
Scale: 1 1/2" = 1'-0" **SP4.2 | SP4.4**

- Notes:
- VESLMC shall attain a minimum compressive strength of 3000 psi before opening to traffic. See Special Provisions Sections 540.03 (H)(5).
 - Pour VESLMC deck before installing dowels.

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

DRAWING NAME: Z:\00 ONGOING\11-030 HI RESURFACING LIKE TO PUNCHDOWN\CAD\06-14-13_100P\HIBB-SP402_ADD.DWG PLOT TIME: 06-14-13, 10:21 AM

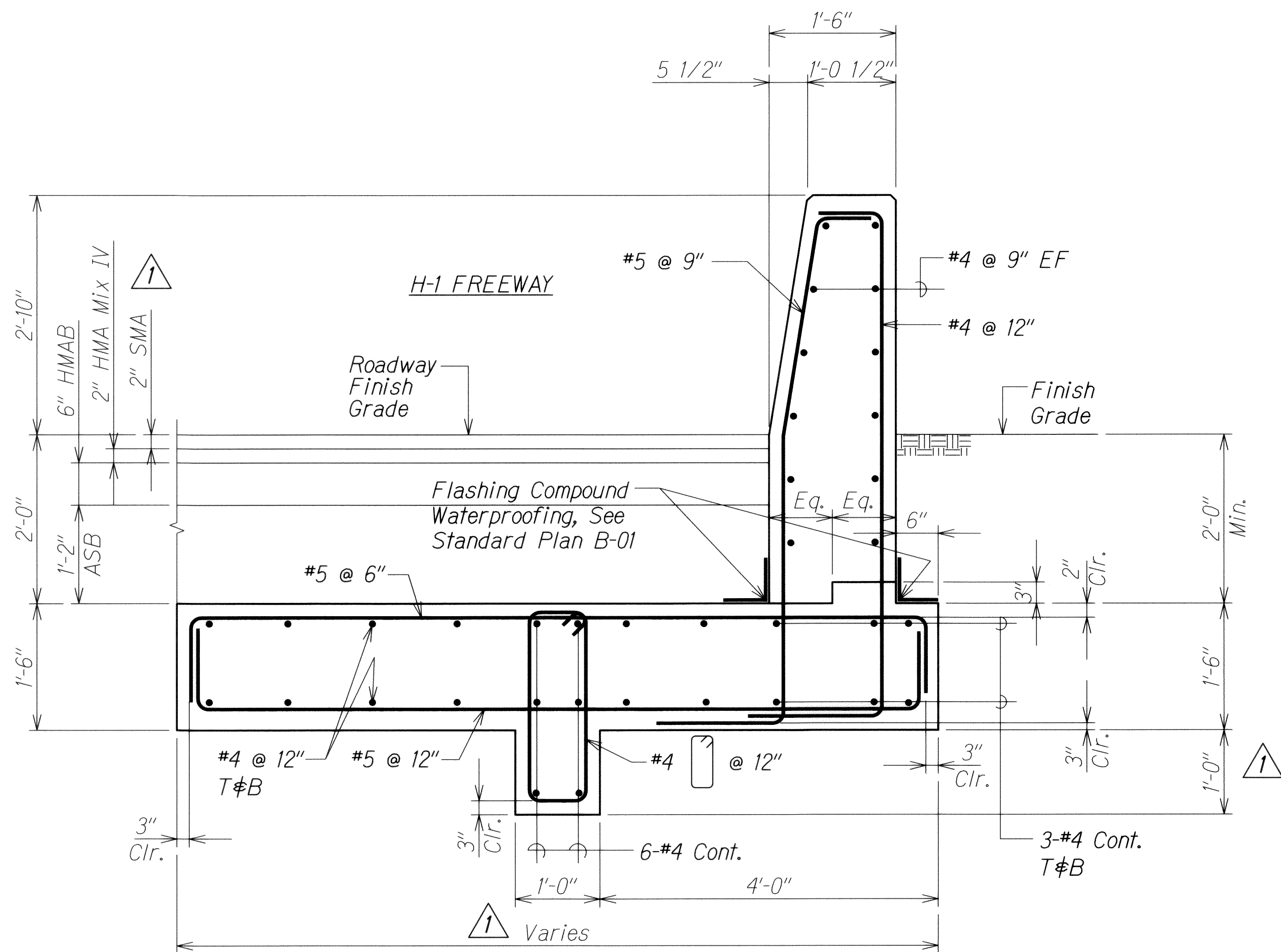


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David K. Fujiwara
KSF, INC. APRIL 30, 2014 LIC. EXP. DATE

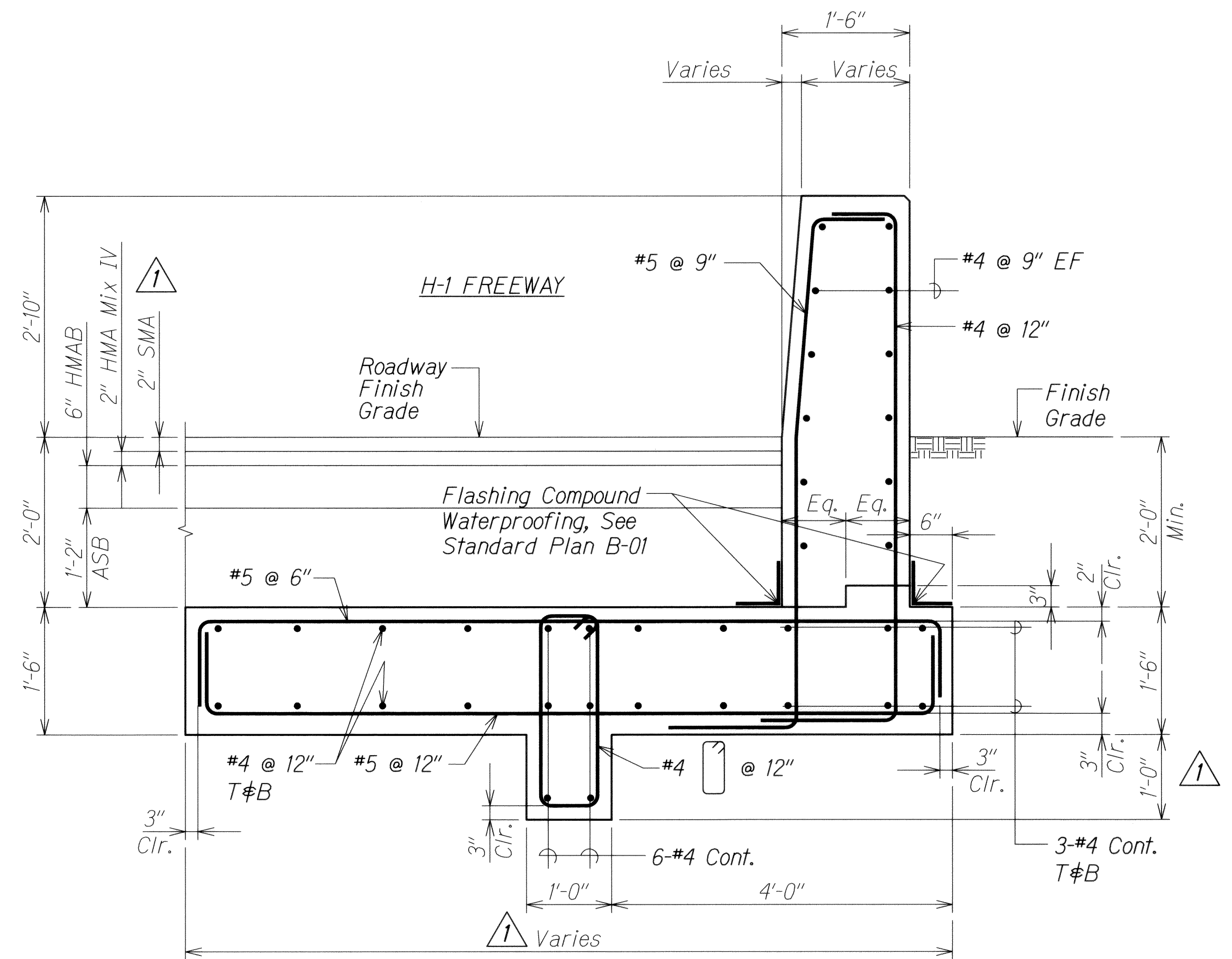
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PALAMA SEPARATION
TYPICAL RAILING SECTION AT LIGHT POLE
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP No. IM-HI-1(269)
Scale: As Shown Date: April 26, 2013
SHEET No. SP4.4 OF 86 SHEETS

6/14/13	1 Revise Notes
DATE	REVISION

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-HI-1(269)	2013	ADD. 311	382



SECTION A
Scale: 1" = 1'-0" **SP5J SP5.2**



SECTION B
Scale: 1" = 1'-0" **SP5J SP5.2**

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

DRAWING NAME: Z:\00 ONGOING\11-030 H1 RESURFACING LIKE LIKE TO PUNCHDOWN\CAD\06-14-13 100% H1RB-SP502 ADD.DWG PLOT TIME: 06-14-13 10:27 AM

6/14/13	Revise Details
DATE	REVISION

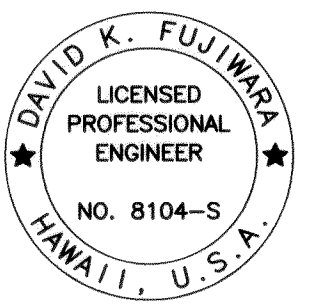
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL END POST SECTIONS

INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP No. 1M-HI-1(269)

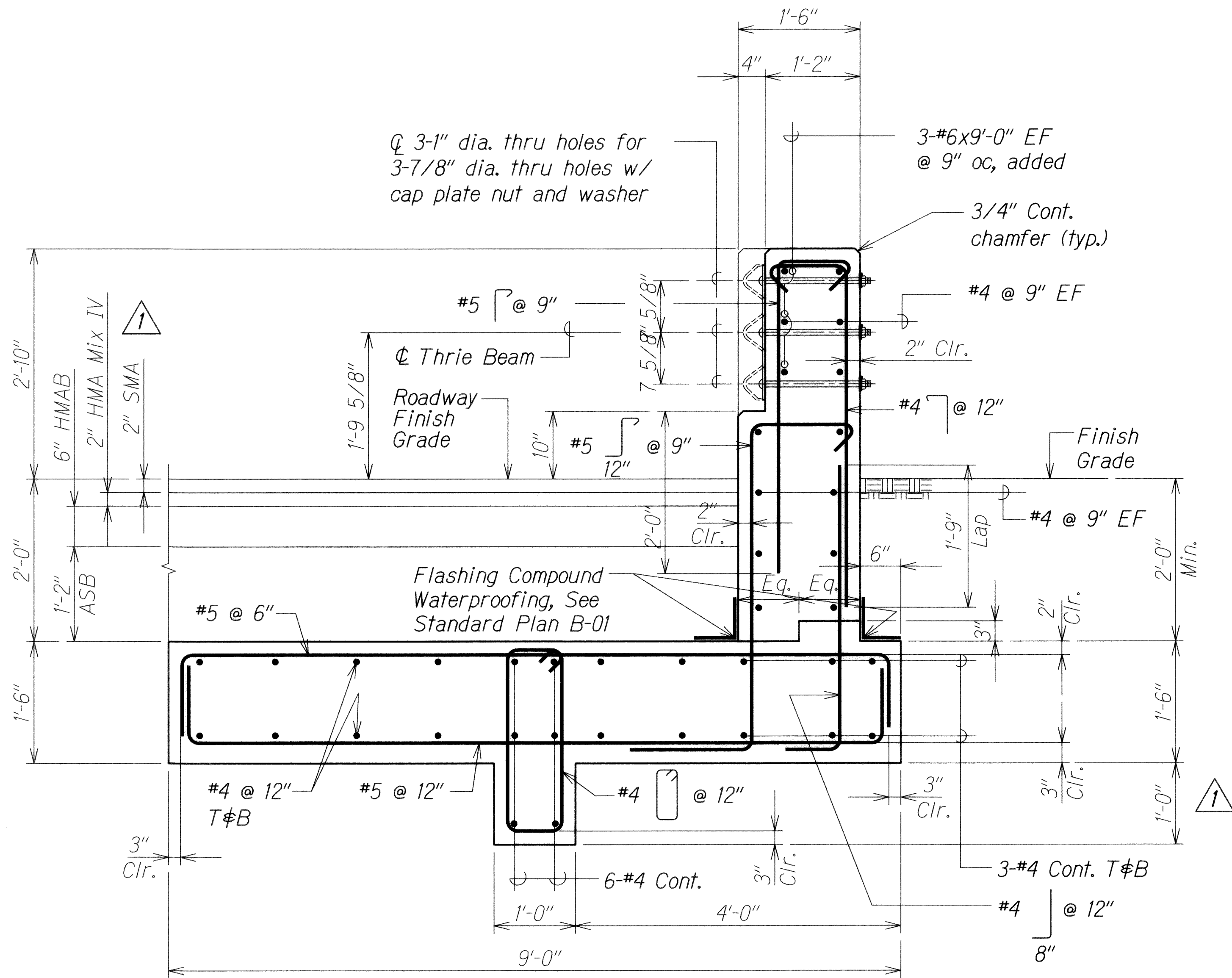
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SHEET No. SP5.2 OF 86 SHEETS

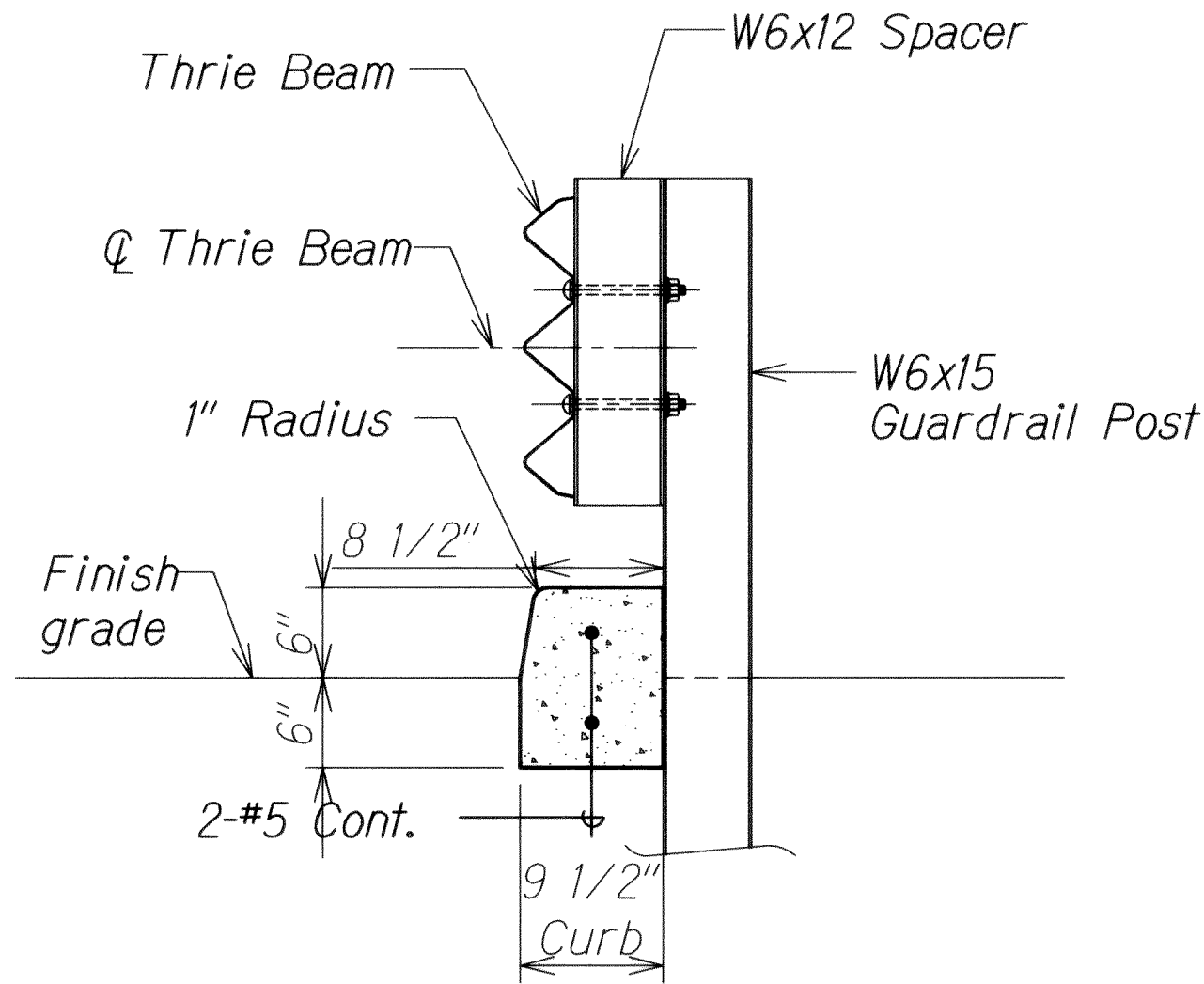


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David K. Fujiwara
APRIL 30, 2014
LIC. EXP. DATE

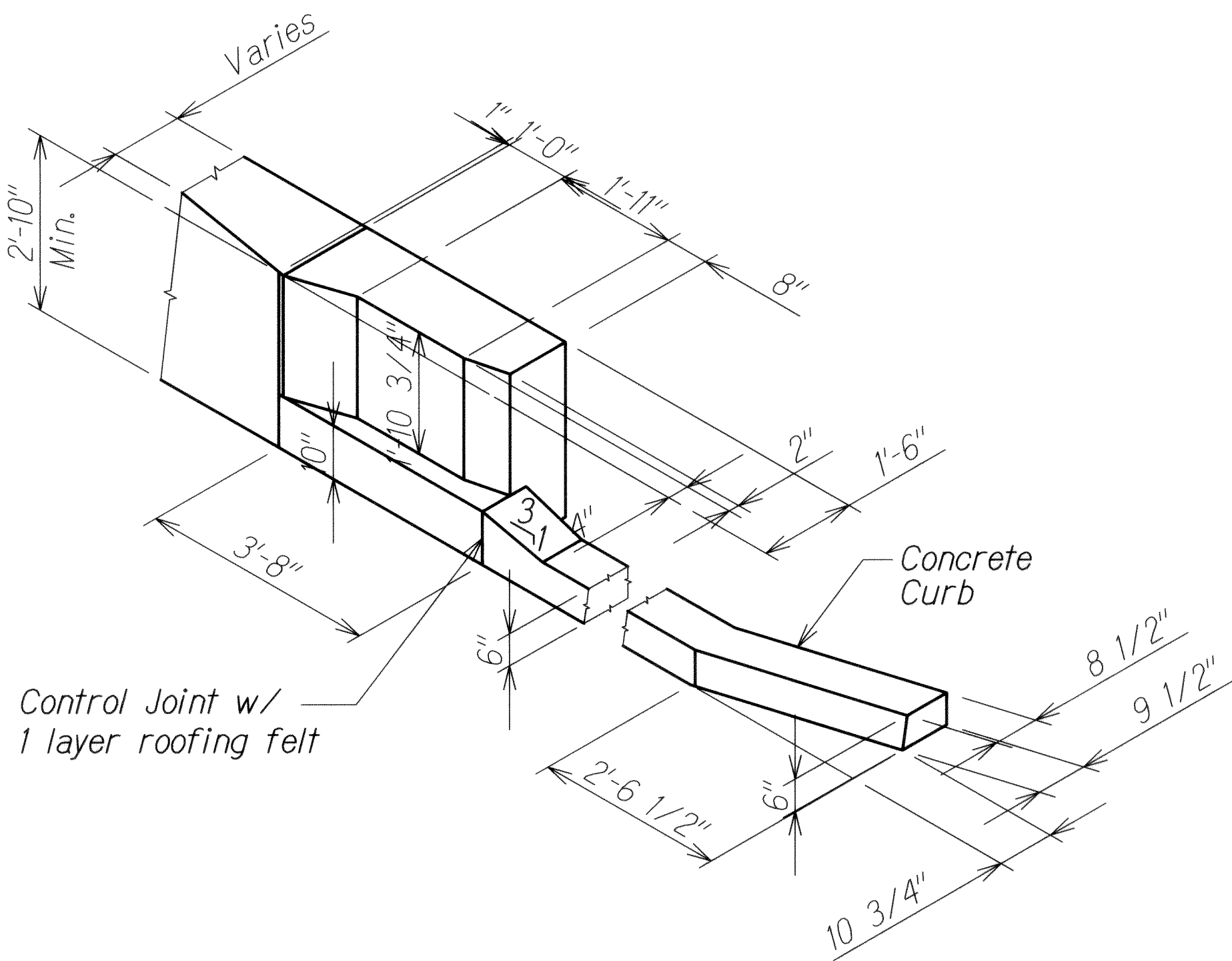
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 313	382



SECTION A
Scale: 1" = 1'-0" **SP5.1 SP5.4**



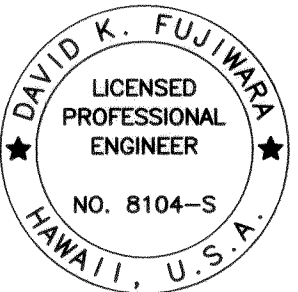
SECTION B
Scale: 1" = 1'-0" **SP5.1 SP5.4**



END POST DETAIL 1
Scale: 1/2" = 1'-0" **SP5.4 SP5.4**

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

DRAWING NAME: Z:\00 ONGOING\11-030 HI RESURFACING LIKE LIKE TO PUNCHBOWL\CAD\06-14-13 100% HIRB-SP502 ADD.DWG PLOT TIME: 06-14-13, 10:27 AM

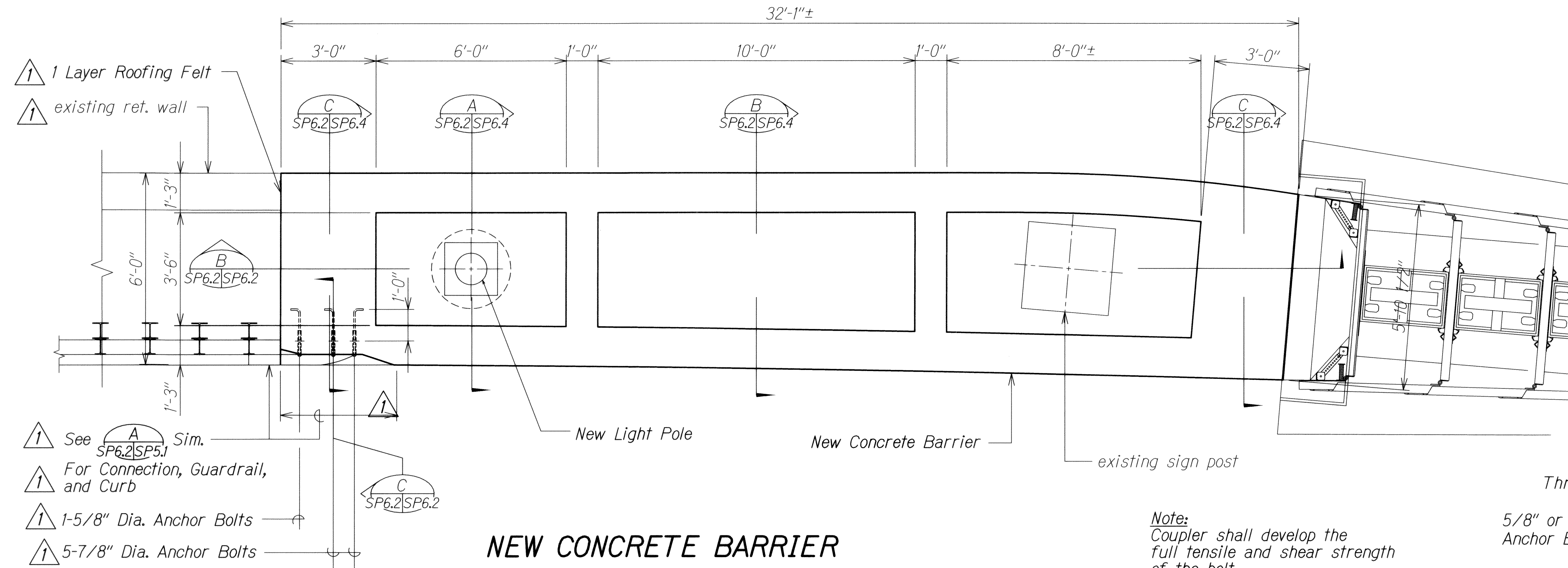


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LIC. EXP. DATE

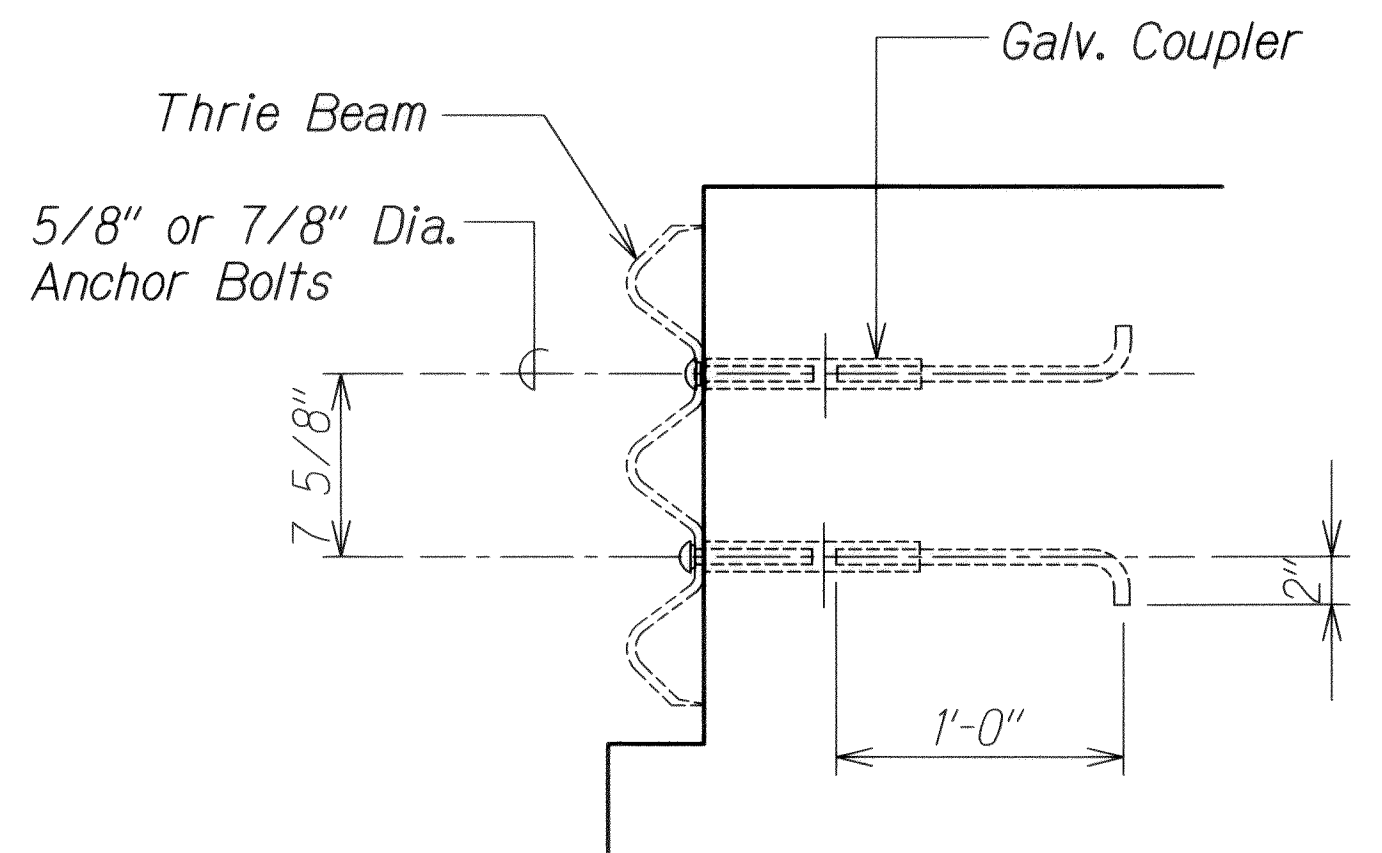
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION TYPICAL END POST SECTIONS AND DETAIL INTERSTATE ROUTE H-1 REHABILITATION Middle Street to Vicinity of Ward Avenue FAP No. IM-HI-1(269)
Scale: As Shown Date: April 26, 2013
SHEET No. SP5.4 OF 86 SHEETS

6/14/13	1 Revise Details
DATE	REVISION

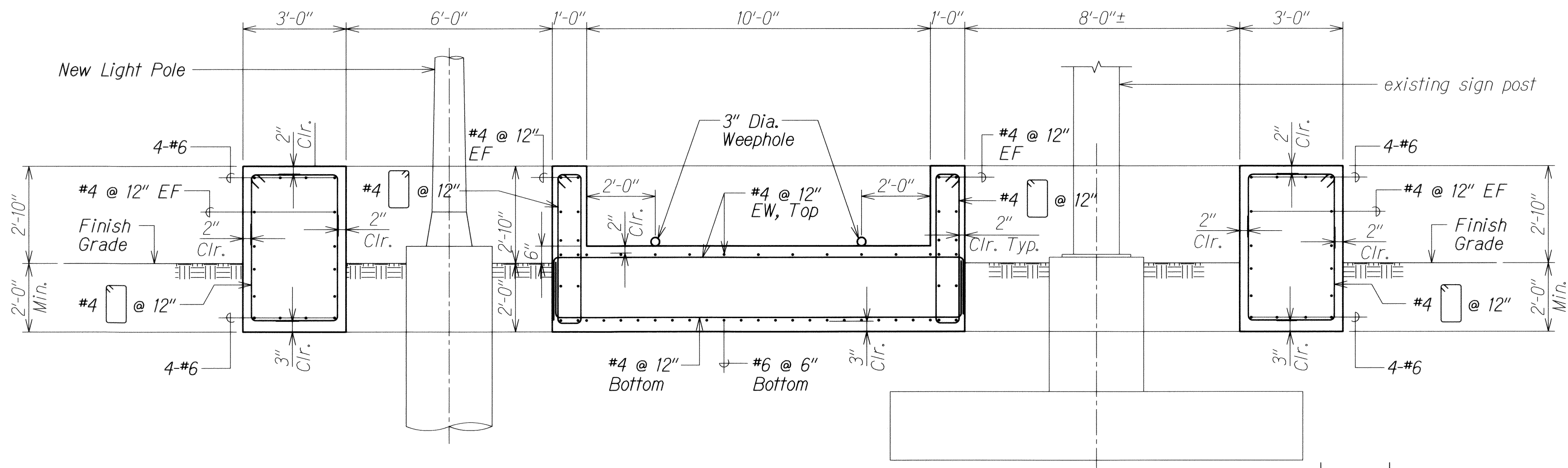
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-1(269)	2013	ADD. 315	382



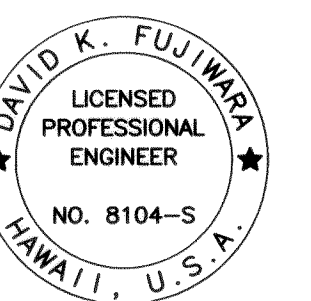
NEW CONCRETE BARRIER
AT STA. 103+06.16 TO 103+36.52 - PLAN
Scale: 1/2" = 1'-0" **SP6.2 SP6.2**



SECTION C
Scale: 1 1/2" = 1'-0" **SP6.2 SP6.2**



SECTION B
Scale: 1/2" = 1'-0" **SP6.2 SP6.2**



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

NEW BARRIER AT STA. 103+06.16 TO STA. 103+36.52 - PLAN AND SECTION

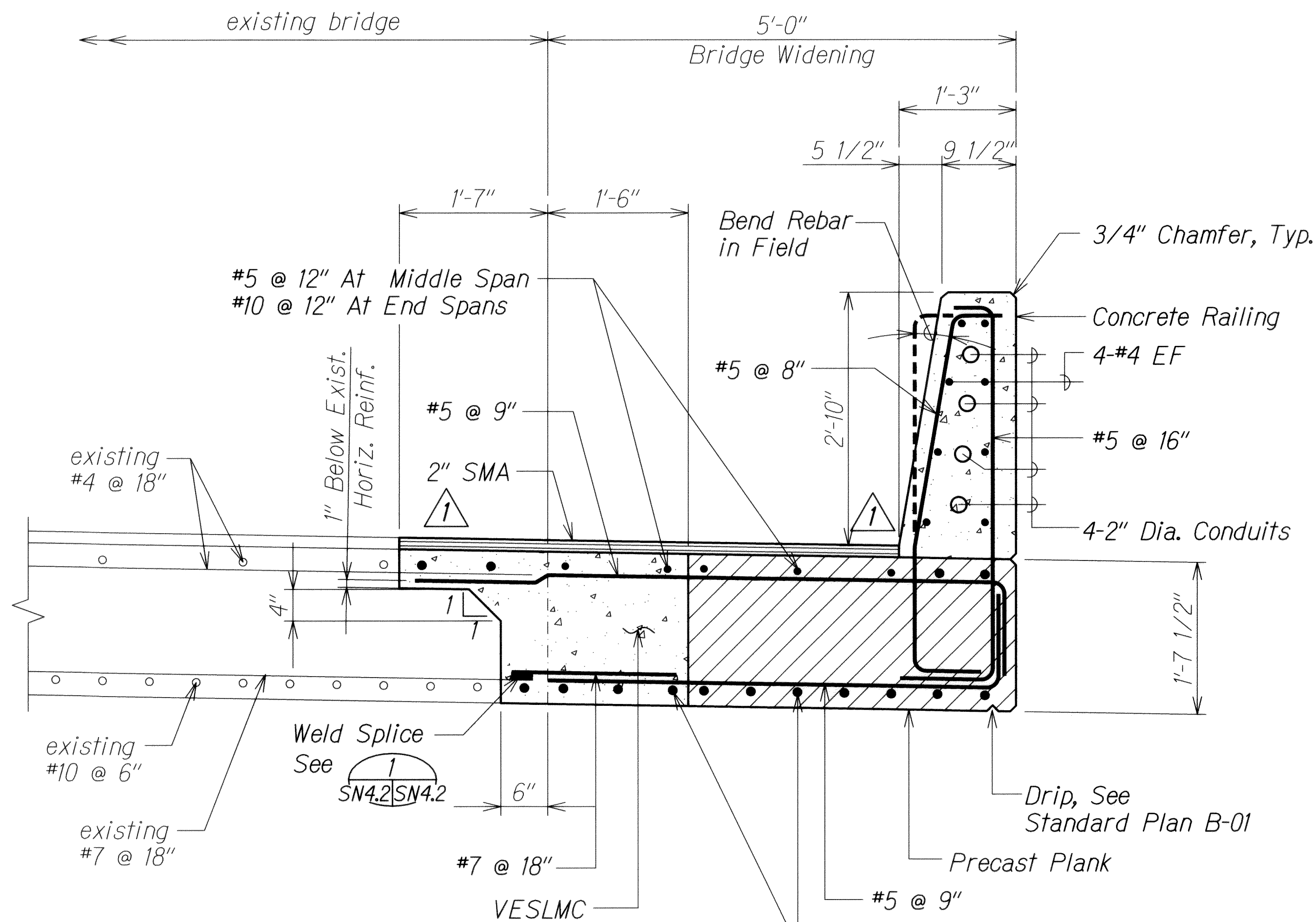
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP No. IM-H1-1(269)

Scale: As Shown Date: April 26, 2013

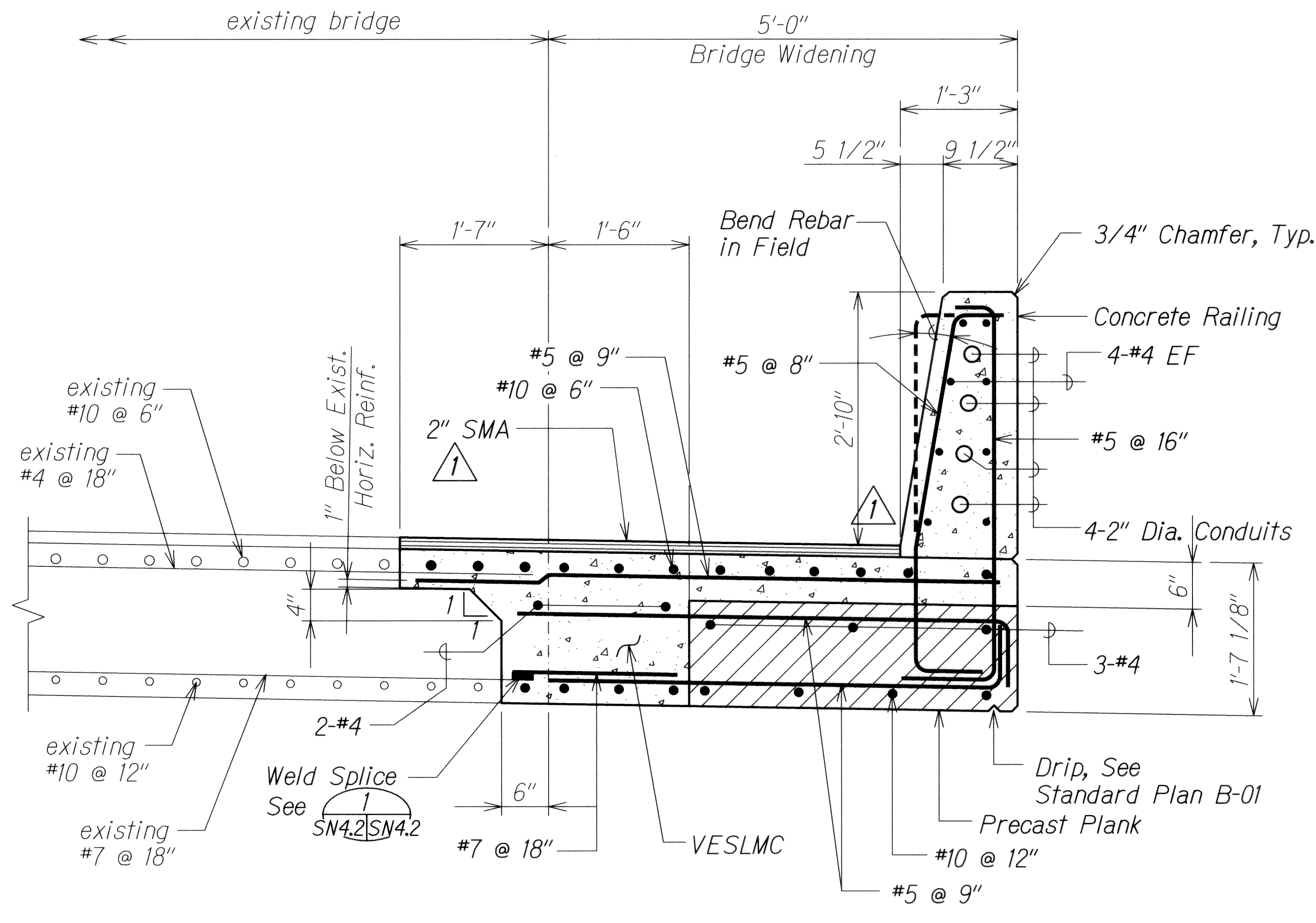
SHEET No. SP6.2 OF 86 SHEETS

DATE	REVISION
6/14/13	1 Revise Details and Title Block

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-H1-1(269)	2013	ADD. 323	382

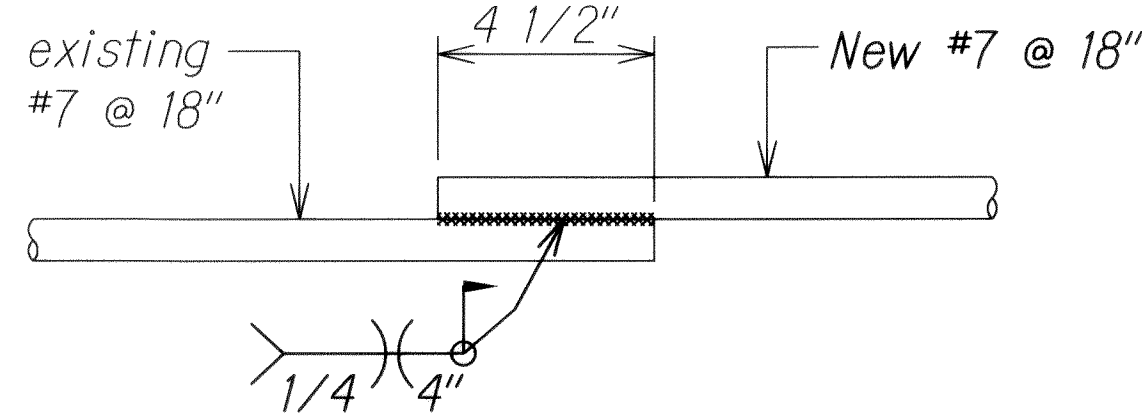


SECTION A
Scale: 1" = 1'-0"
SN3J SN4J
SN2J



SECTION B
Scale: 1" = 1'-0"
SN3J SN4J

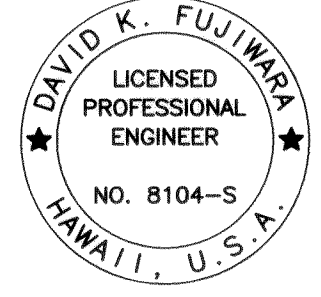
- Notes:**
1. The Contractor shall verify the finish grades and camber the precast slab accordingly to account for existing site conditions and dead load deflection. Shop drawings shall be submitted to the Engineer for acceptance.
 2. Falsework for cast in place slab shall be supported by both the precast plank and existing slab or may be supported independently by a temporary falsework structure.
 3. Existing #4 @ 18" may be bent to facilitate placing of precast planks.



REBAR SPLICE DETAIL
Scale: 3" = 1'-0"
SN4J SN4J

ORIGINAL PLAN	DATE
DESIGNED BY	DATE
TRACED BY	DATE
DESIGNED BY	DATE
QUANTITIES BY	DATE
CHECKED BY	DATE

DRAWING NAME: Z:\00 ONGOING\11-030 H1 RESURFACING LIKE TO PUNCHDOWN (CAD)\06-14-13 1008\H1RC-SN401 ADD.DWG PLOT TIME: 06-14-13 10:30 AM



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
NUUANU STREAM BRIDGE
TYPICAL DECK AND RAILING SECTIONS
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP No. 1M-H1-1(269)

Scale: As Shown
SHEET No. SN4J OF 86 SHEETS

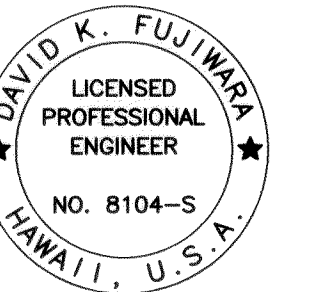
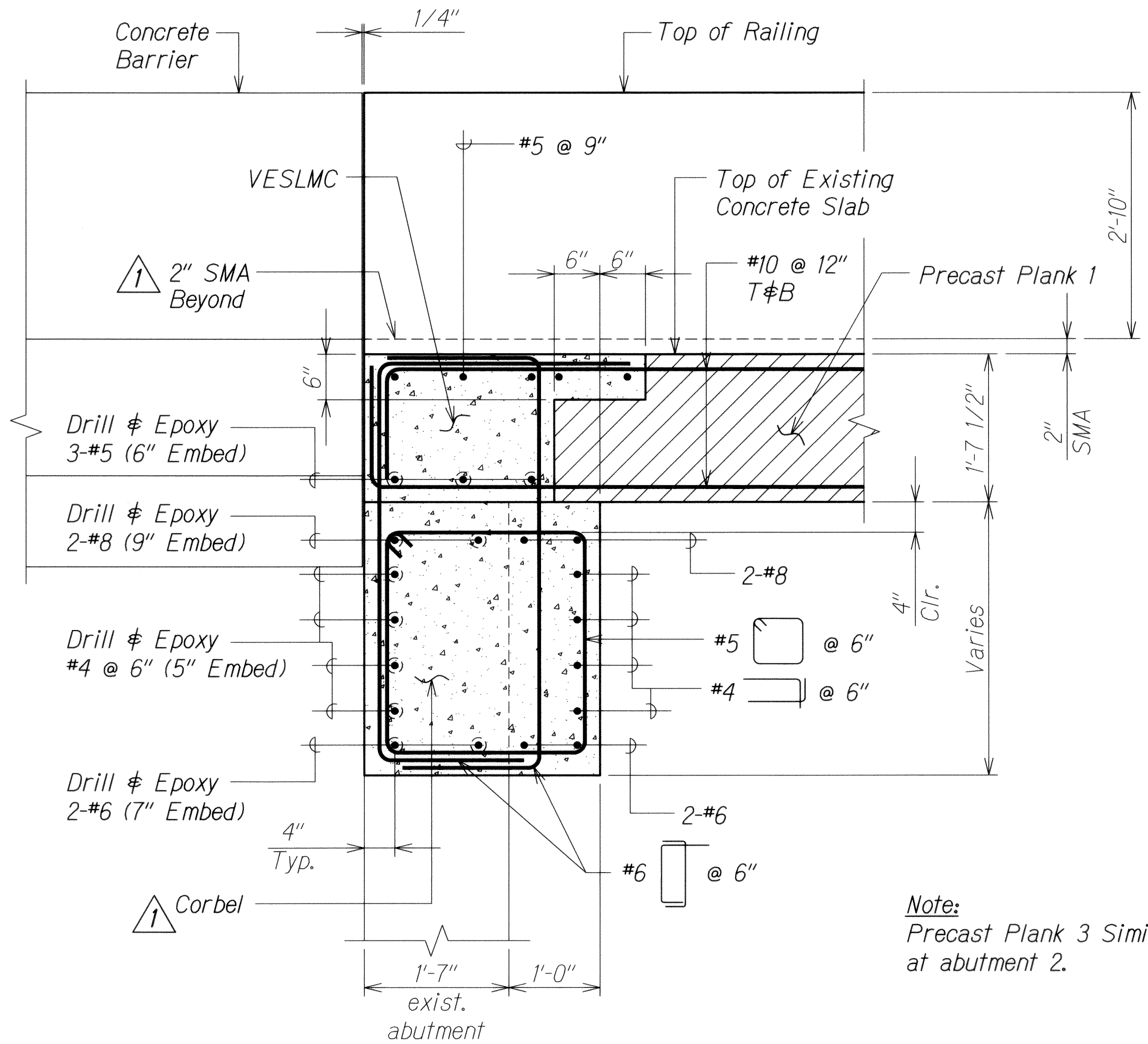
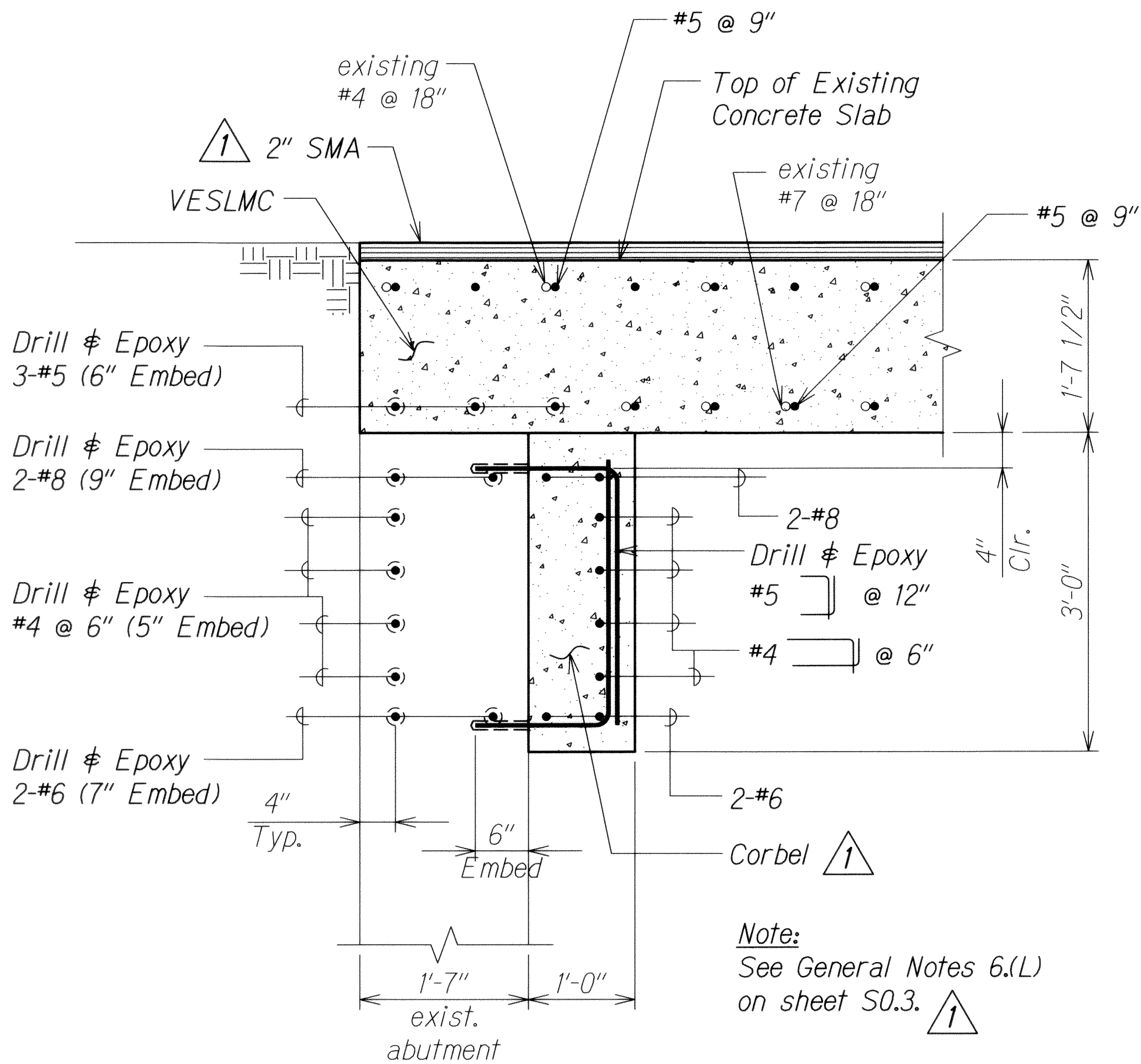
Date: April 26, 2013

6/14/13	1	Revise Notes and Details
DATE		REVISION

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-1(269)	2013	ADD. 325	382

DRAWING NAME: Z:\00 ONGOING\11-030 HI RESURFACING LIKE\KE TO PUNCHBOWL\CAD\06-14-13 100% (HRC-SN401) ADD.DWG PLOT TIME: 06-14-13, 10:30 AM

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



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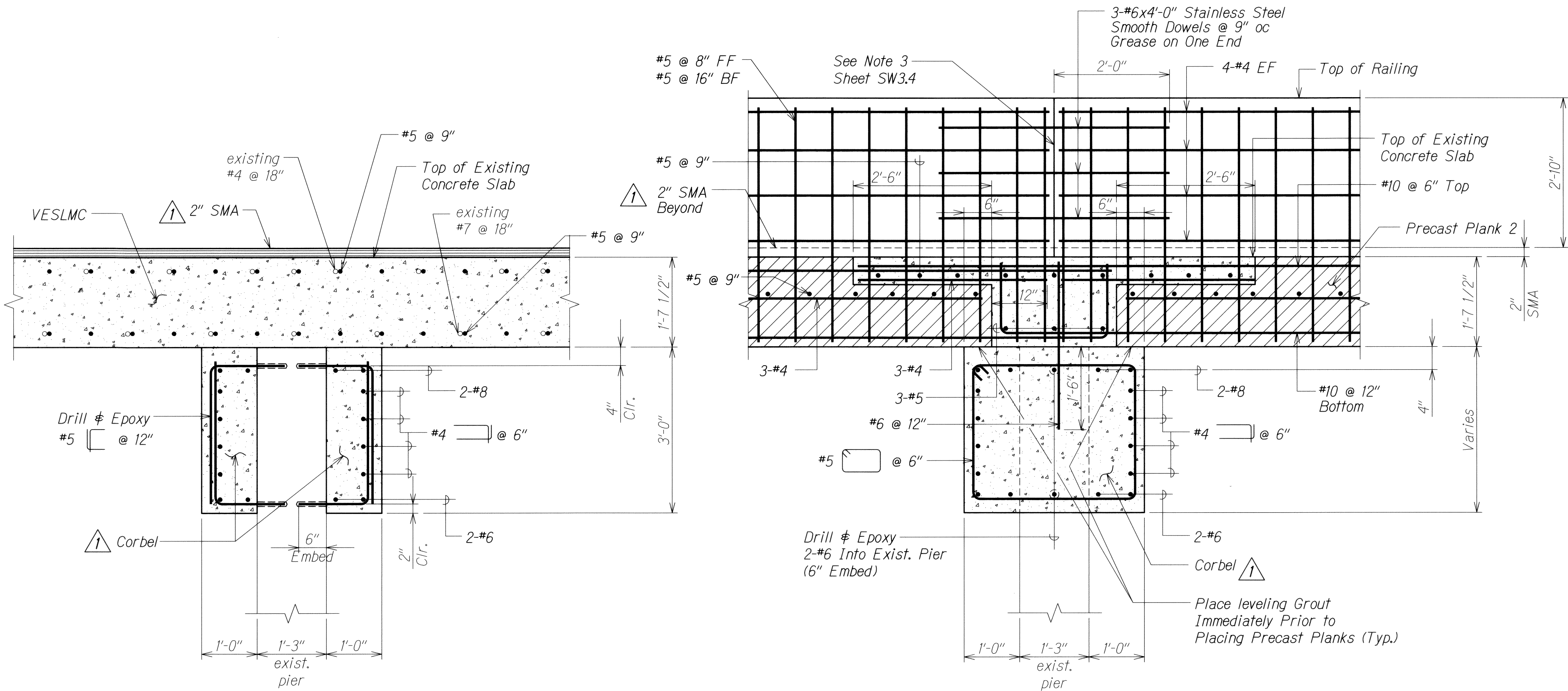
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
NUUANU STREAM BRIDGE
SECTIONS
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP No. IM-H1-1(269)

Scale: As Shown
SHEET No. **SN4.3** OF **86** SHEETS

Date: April 26, 2013

6/14/13	1	Revise Notes
DATE		REVISION

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 326	382

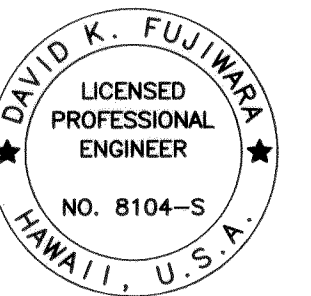


SECTION A
Scale: 1" = 1'-0" **SN31 SN4.4**

SECTION B
Scale: 1" = 1'-0" **SN31 SN4.4**

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

DRAWING NAME: Z:\00 ONGOING\11-030 HI RESURFACING LIKE LIKE TO PUNCHBOWL\CAD\06-14-13 1002\HRC-SN401 ADD.DWG PLOT TIME: 06-14-13, 10:30 AM



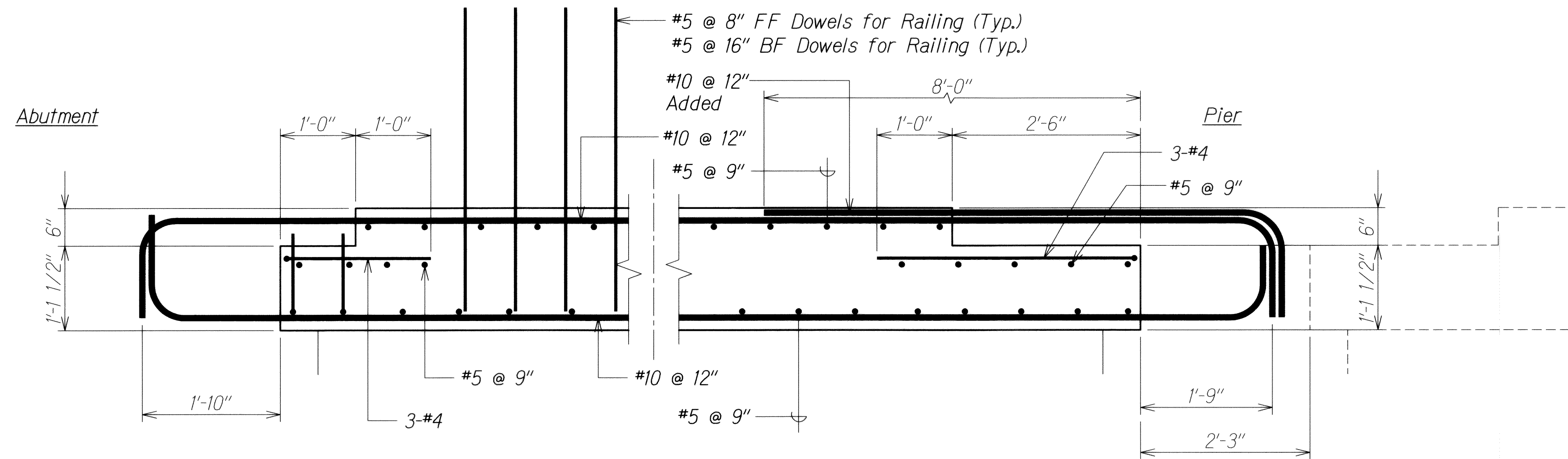
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STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
NUUANU STREAM BRIDGE	
SECTIONS	
INTERSTATE ROUTE H-1 REHABILITATION Middle Street to Vicinity of Ward Avenue FAP No. IM-HI-1(269)	
Scale: As Shown	Date: April 26, 2013
SHEET No. SN4.4 OF 86 SHEETS	

6/14/13	1 Revise Notes
DATE	REVISION

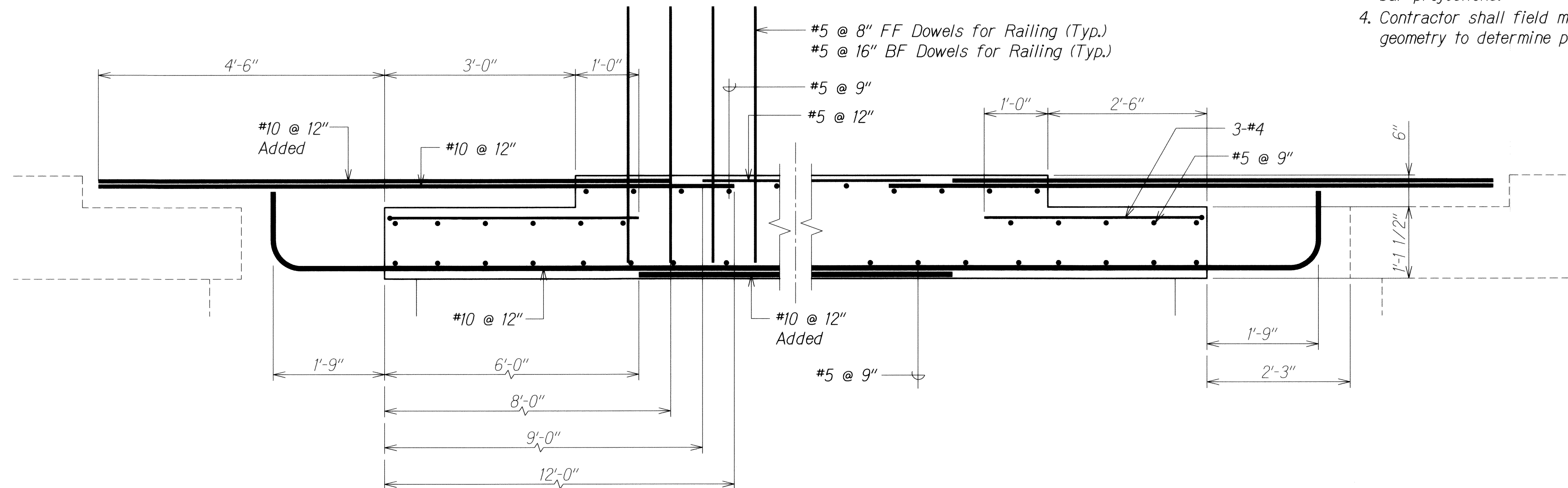
ADD. 326

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 327	382

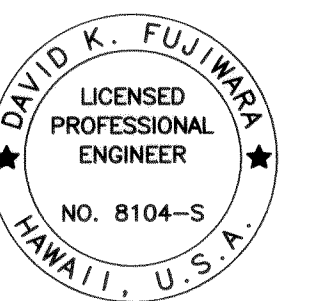


PRECAST PLANKS #1 AND #3 A
Scale: 1" = 1'-0"

- Notes:
1. Space dowels 2" clear from railing joints.
 2. Stagger #10 top and bottom bars to avoid conflict over piers.
 3. See sheet SN4.1 for #5 @ 9" transverse bar projections.
 4. Contractor shall field measure existing geometry to determine plank dimensions.



PRECAST PLANK #2 B
Scale: 1" = 1'-0"



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STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
NUUANU STREAM BRIDGE	
PRECAST PLANK SECTIONS	
INTERSTATE ROUTE H-1 REHABILITATION	
Middle Street to Vicinity of Ward Avenue	
FAP No. IM-HI-1(269)	
Scale: As Shown	Date: April 26, 2013
SHEET No. SN5J OF 86 SHEETS	

6/14/13	1 Revise Notes
DATE	REVISION

ADD. 327

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 328	382

NUUANU STREAM BRIDGE
CONSTRUCTION SEQUENCE:

- 1

Install temporary barriers and traffic control devices
- 2

Perform demolition work
- 3

Construct corbels
- 4

Install precast planks after the corbels have reach their 28 day strength or a minimum of 7 days after constructing corbels whichever occurs last.
- 5

Install deck reinforcing
- 6

Pour deck concrete continuously from end to end. Pour deck concrete so concrete poured over any adjacent pier or abutment is still plastic until the concrete is poured over any neighboring pier or abutment. Concrete pour shall occur during the H-1 lane closures stated under construction Phase 1 or 3 (See Sheet TC-3) The concrete shall obtain 3000 psi compressive strength prior to reopening the lanes to traffic and construction loading. See Special Provisions Sections 540.03 (HX5).
- 7

Install bridge railing a minimum of 3 days after pouring deck.
- 8

Pave the widened area of the bridge. Contractor shall provide transitions where pavement surface has abrupt changes of more than 1/4". Paving shall occur during the repaving of the adjacent existing SMA topping over the bridge deck.



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

DRAWING NAME: Z:\00 ONGOING\11-030 H1 RESURFACING LIKE LIKE TO PUNCHBOWL.CAD 06-14-13 100% (HRC-SN601 ADD.DWG PLOT TIME: 06-14-13, 10:31 AM)



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6/14/13	<div><div>1</div>Revise Note</div>
DATE	REVISION
SHEET No. <i>SN61</i> OF 86 SHEETS	

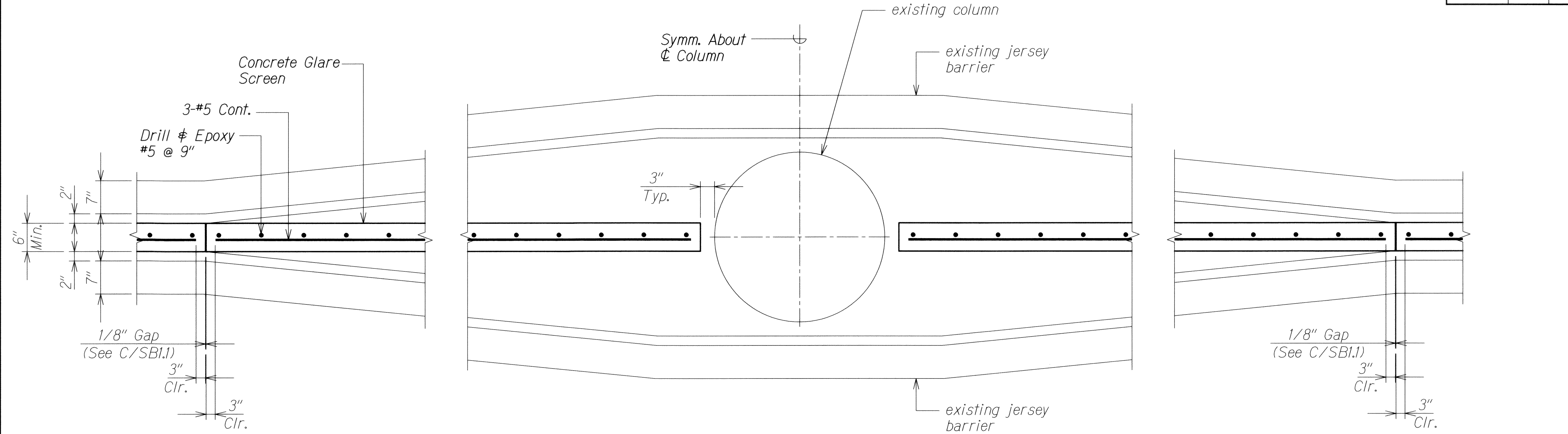
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

NUUANU STREAM BRIDGE
CONSTRUCTION SEQUENCE

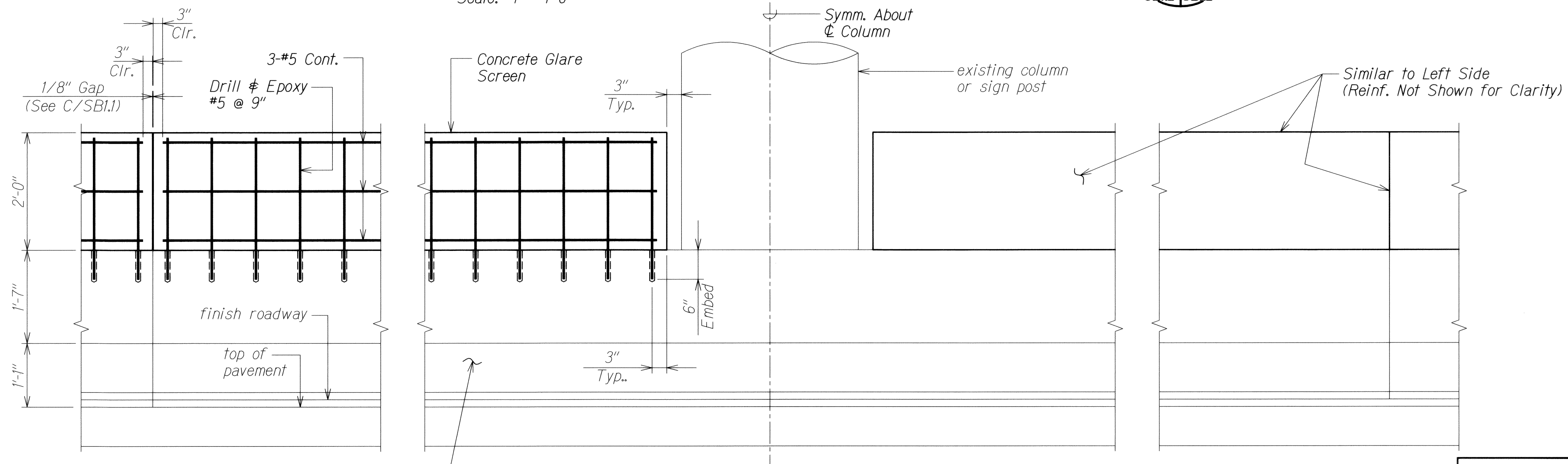
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP No. IM-HI-1(269)

Scale: As Shown Date: April 26, 2013

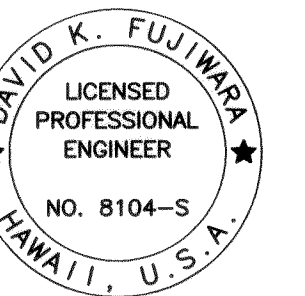
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-H1-1(269)	2013	ADD. 330	382



TYPICAL CONCRETE GLARE SCREEN PLAN AT COLUMN B
Scale: 1" = 1'-0" SBI.2 SBI.2



ELEVATION B
Scale: 1" = 1'-0" SBI.2 SBI.2



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APRIL 30, 2014
KSF, INC. LIC. EXP. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL GLARE SCREEN ON EXISTING BARRIER
PLAN AND ELEVATION
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP No. 1M-H1-1(269)

Scale: As Shown Date: April 26, 2013

SHEET No. SBI.2 OF 86 SHEETS

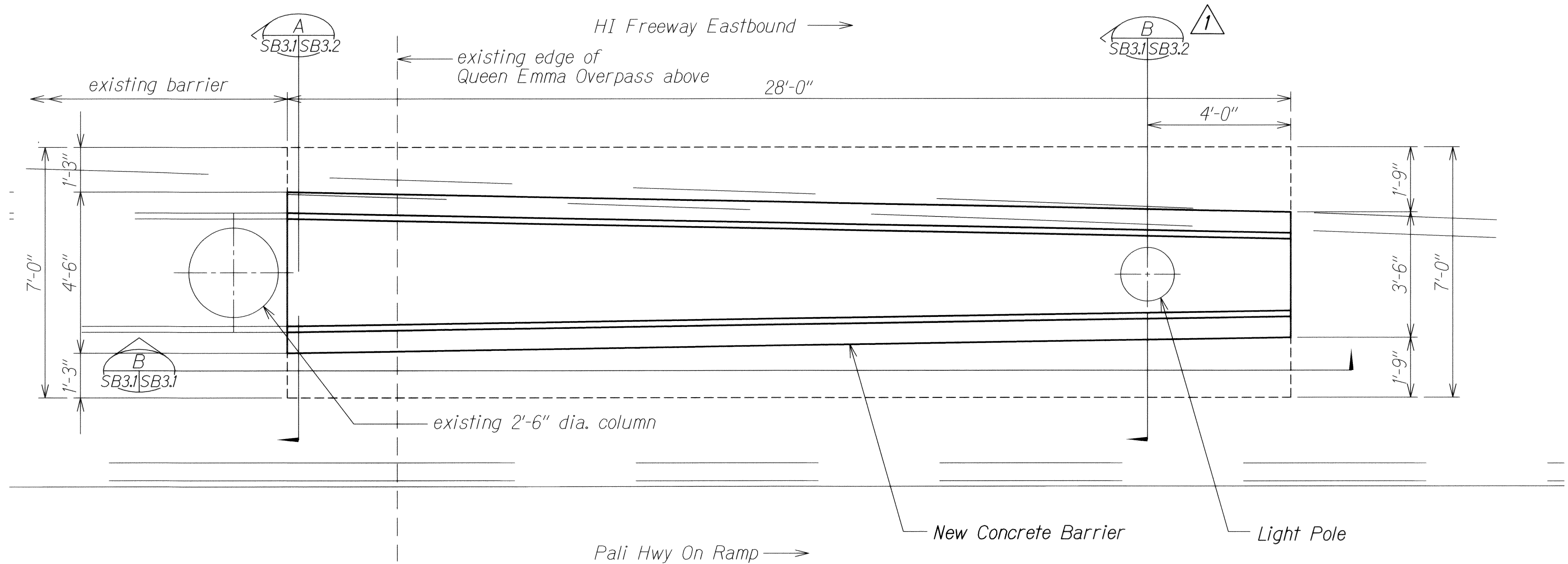
6/14/13	1	Revise Title Block
DATE		REVISION

ADD. 330

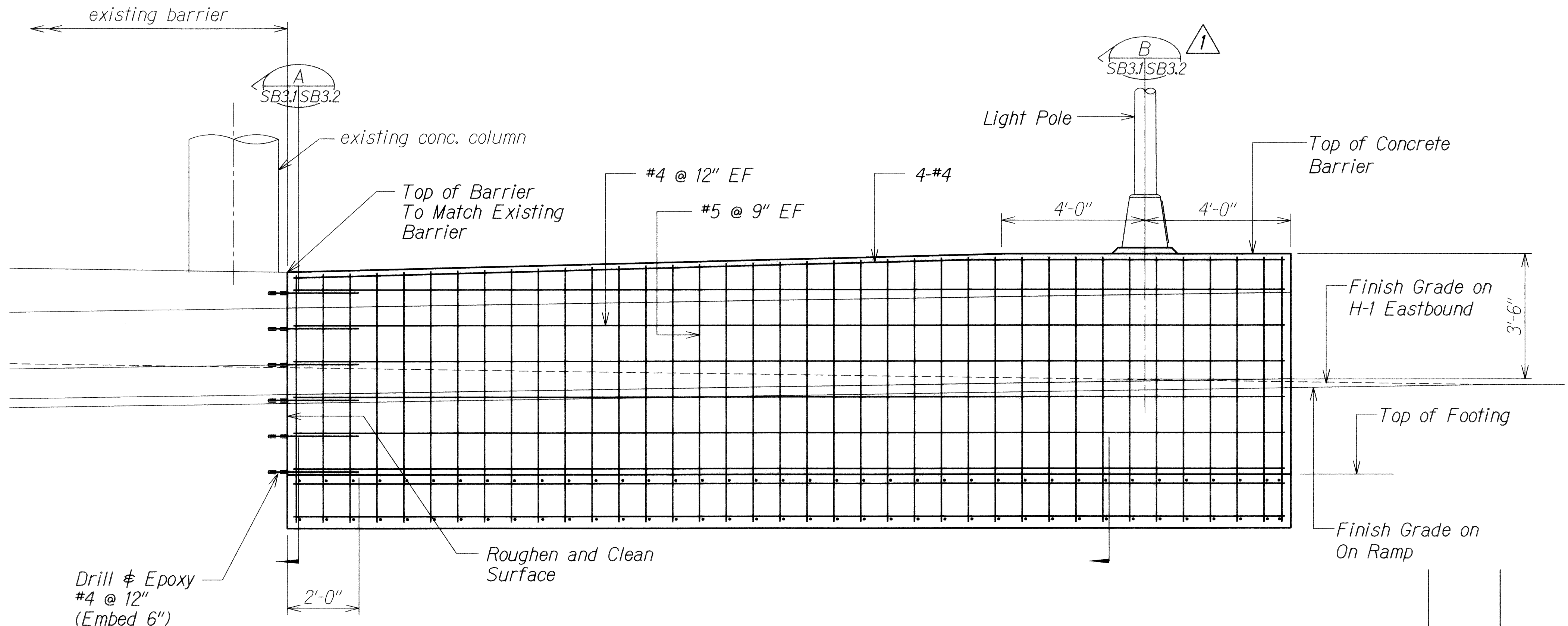
ORIGINAL PLAN	DATE
DESIGNED BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
NO.	

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FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-HI-1(269)	2013	ADD. 332	382

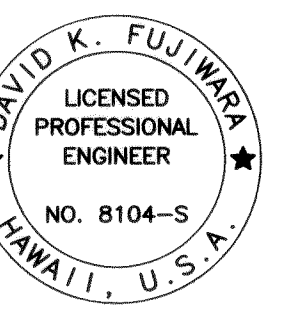


QUEEN EMMA OVERPASS BARRIER
Scale: 1/2" = 1'-0"



ELEVATION
Scale: 1/2" = 1'-0"

Note:
Construction of barrier shall be paid for under concrete for barrier/retaining walls, concrete for barrier/retaining wall footing, reinforcing steel for barrier/retaining walls, and reinforcing steel for barrier/retaining wall footings.



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**QUEEN EMMA BARRIER
PLAN AND SECTION**

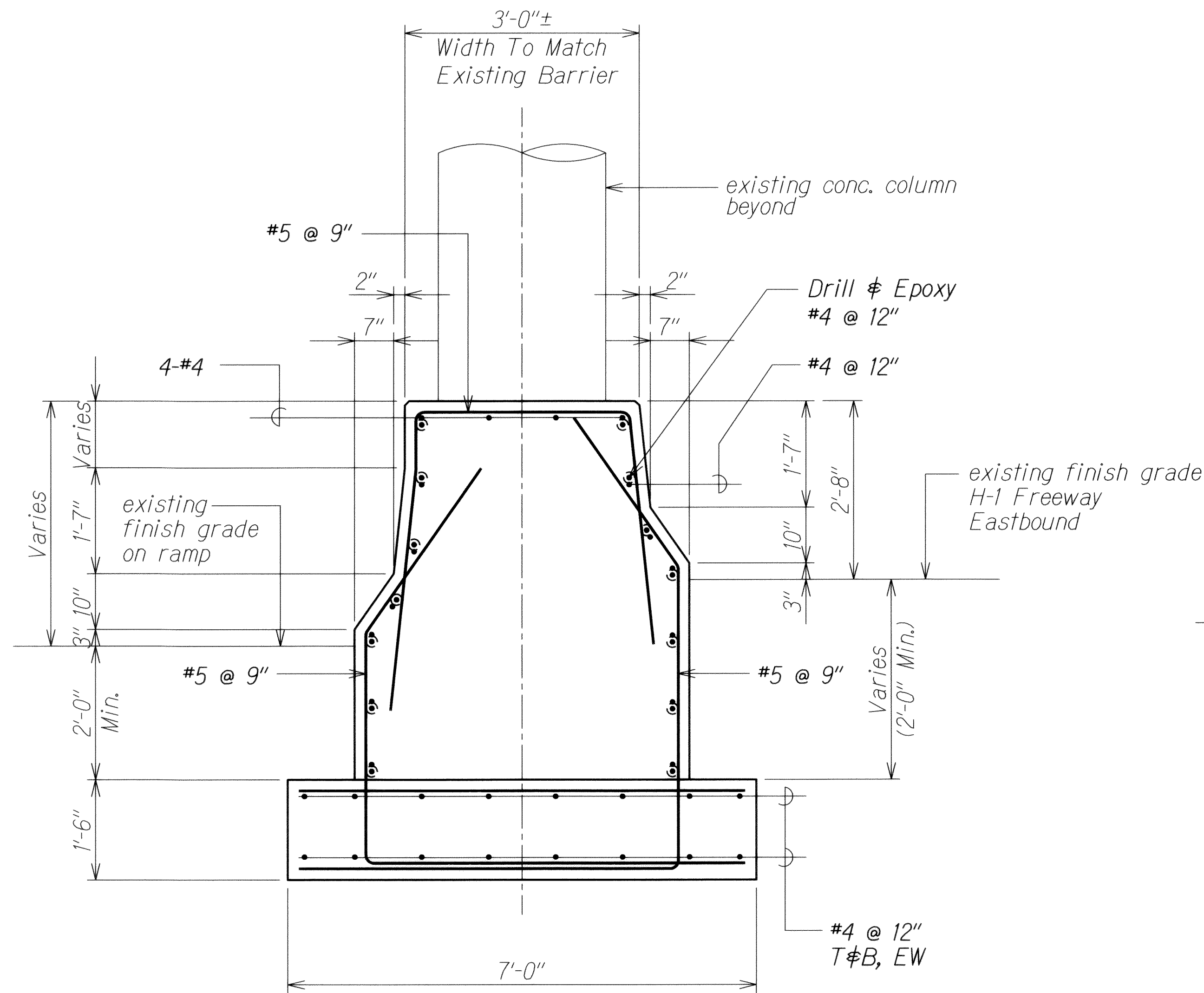
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP No. 1M-HI-1(269)

Scale: As Shown Date: April 26, 2013

SHEET No. SB31 OF 86 SHEETS

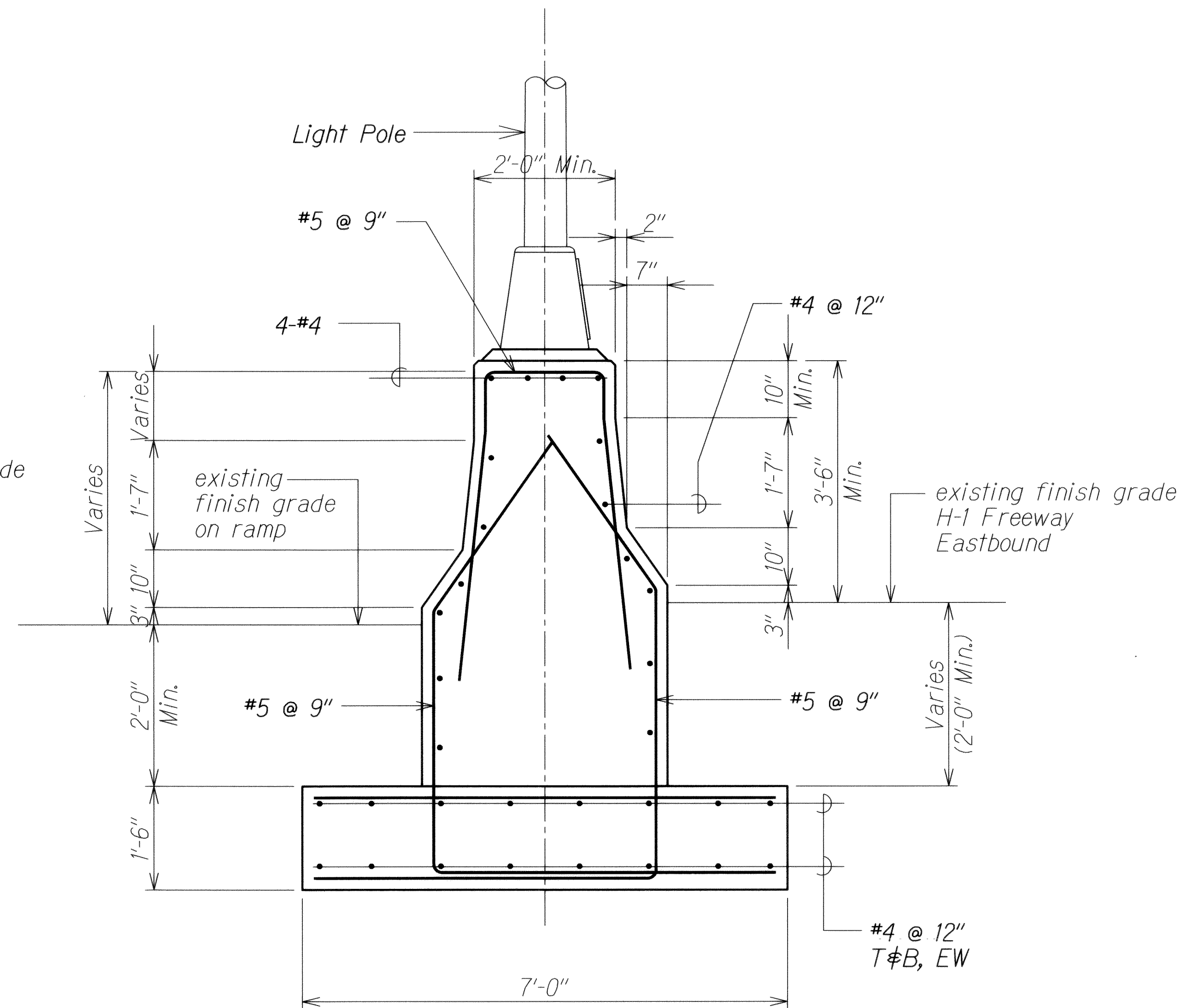
6/14/13	1	Revise Section Call Out
DATE	REVISION	

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-HI-1(269)	2013	ADD. 333	382

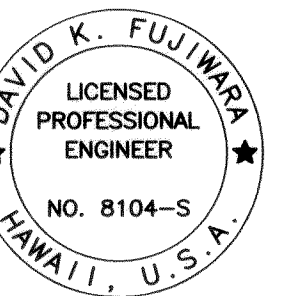


SECTION A
Scale: 3/4" = 1'-0" **S31/S32**

Note:
Backfill and concrete curb shall match existing condition.
Concrete shall be 4000 psi.



SECTION B
Scale: 3/4" = 1'-0" **S31/S32**



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

QUEEN EMMA BARRIER SECTIONS

INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP No. 1M-HI-1(269)

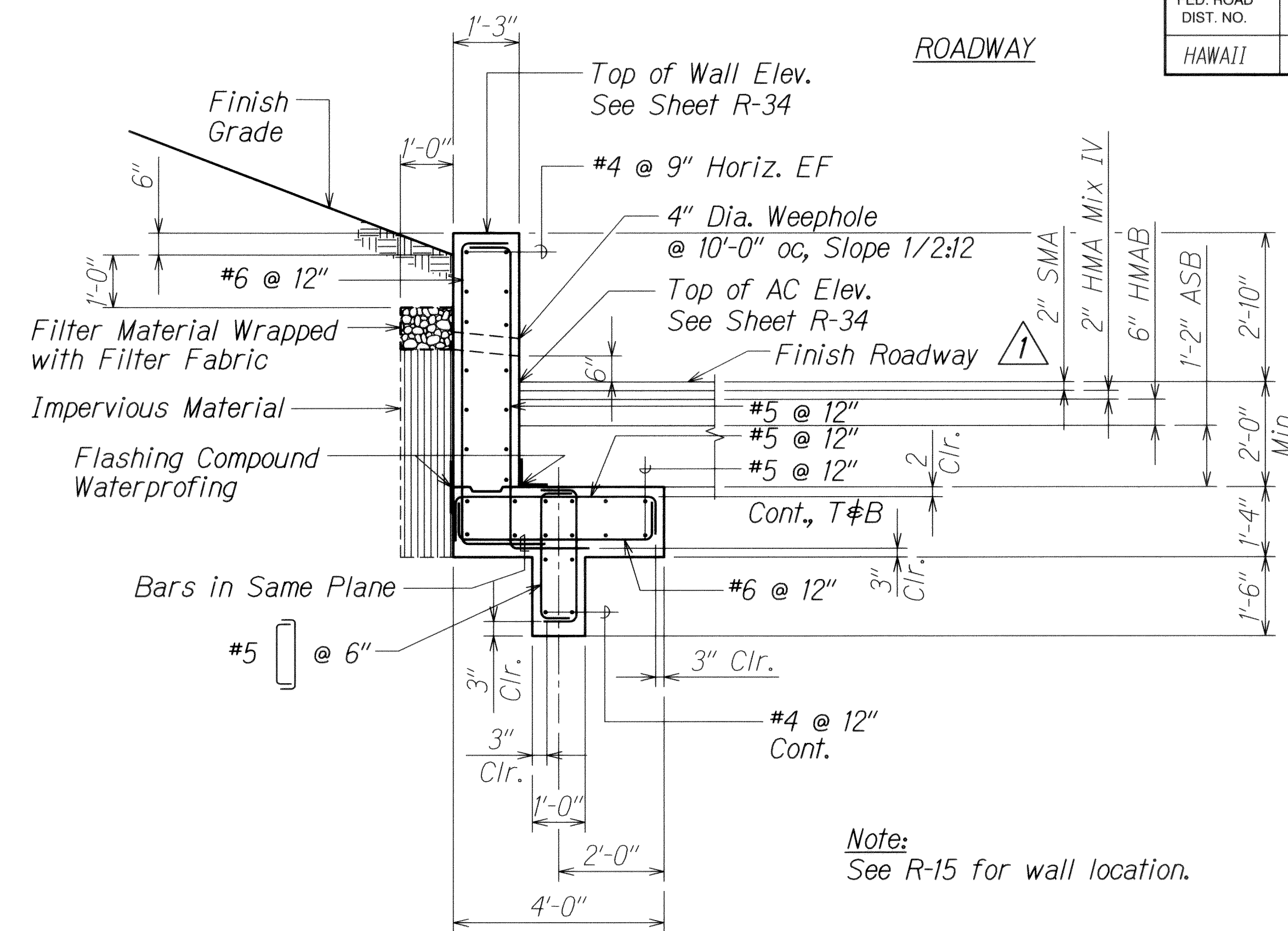
Scale: As Shown Date: April 26, 2013

SHEET No. SB3.2 OF 86 SHEETS

6/14/13	1 Added Note
DATE	REVISION


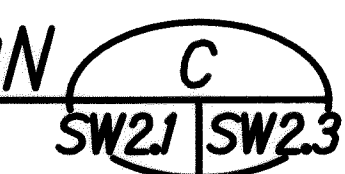
ADD. 333

DRAWING NAME: Z:\00 ONGOING\11-030 H1 RESURFACING LIKELIKE TO PUNCHBOWL\CAD\06-14-13 100%\H1RE-SW202 ADD.DWG PLOT TIME: 06-14-13, 10:34 AM)



NUUANU STREAM RETAINING WALL 2B TYPICAL SECTION 

Scale: 1/2" = 1'-0"

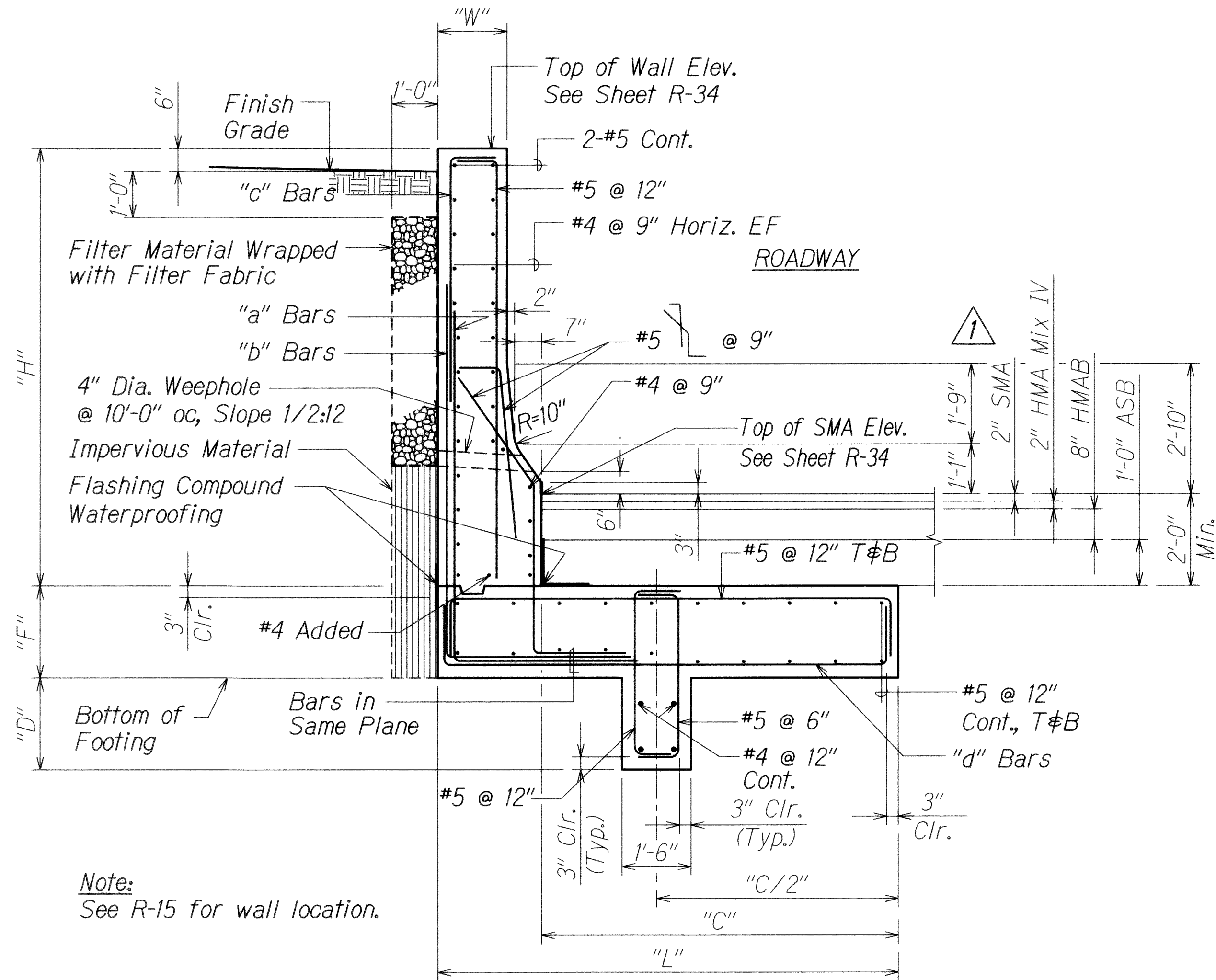


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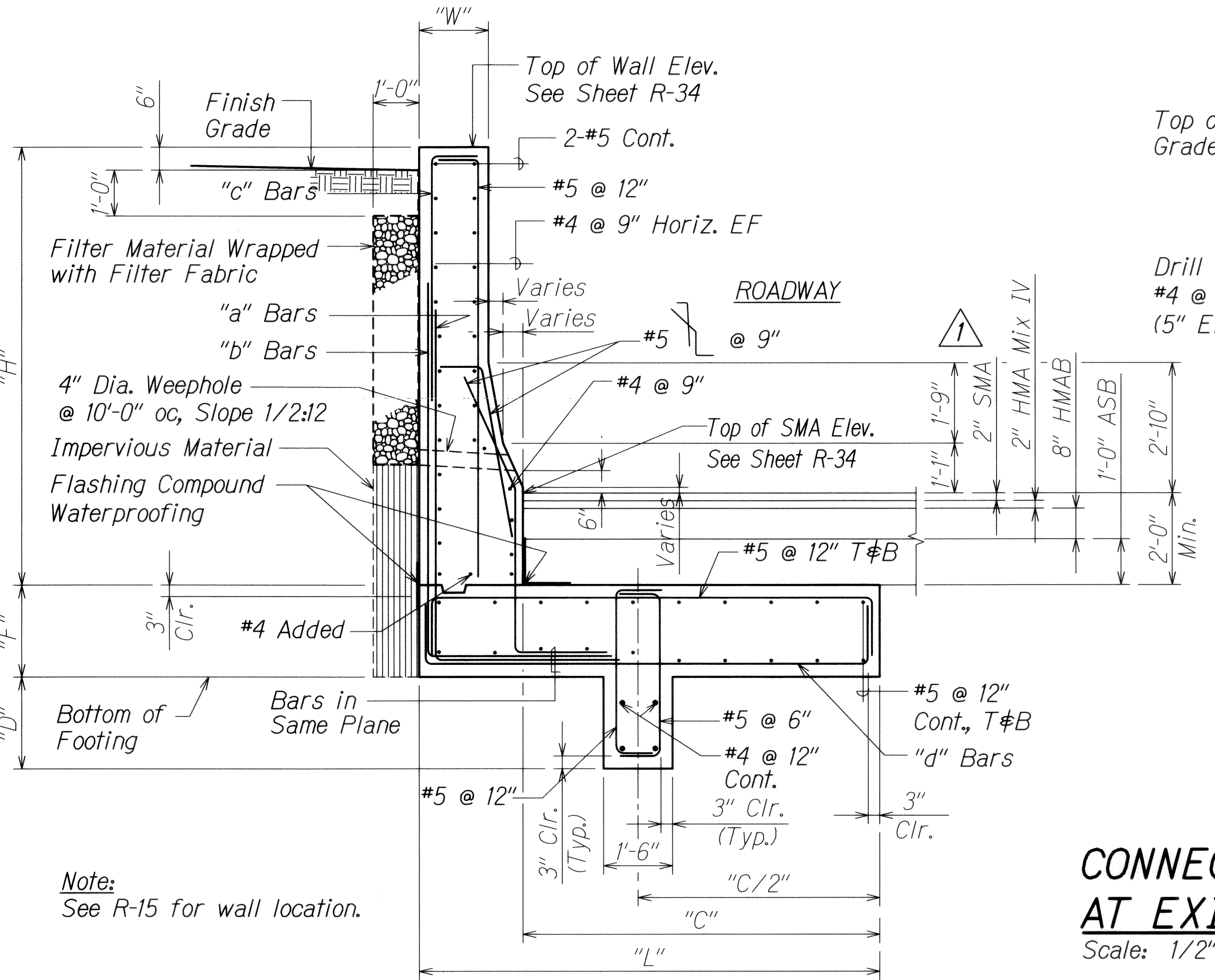
SHEET No. SW2.3 OF 86 SHEETS

DATE	REVISION
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FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-HI-1(269)	2013	ADD. 346	382



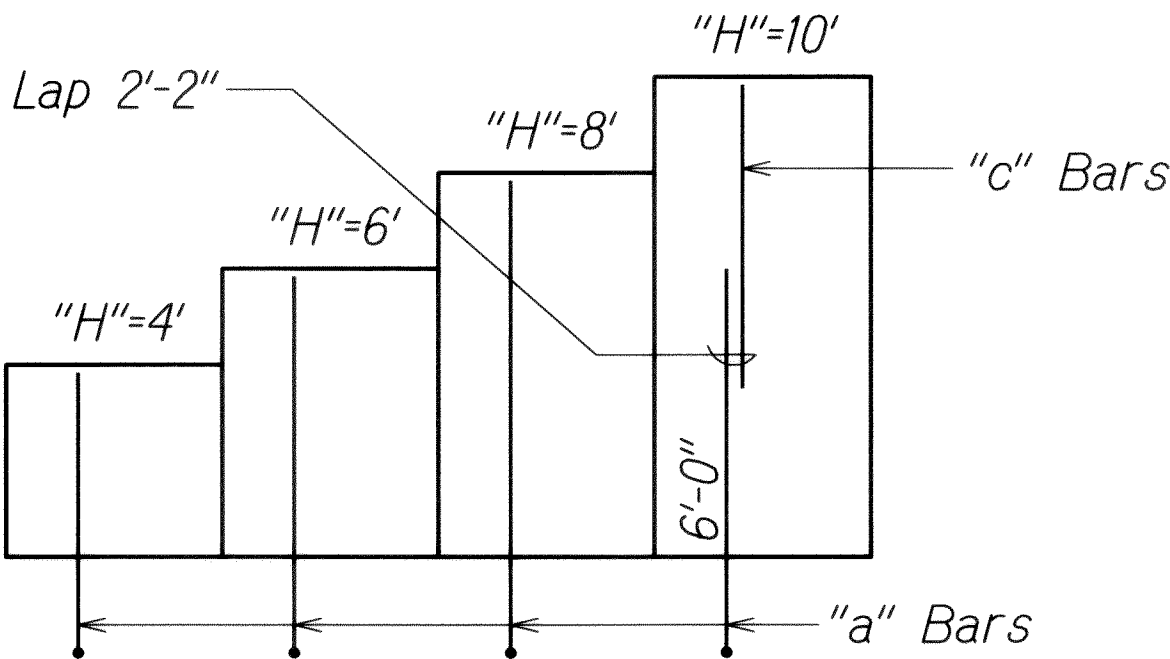
NUUANU STREAM
RETAINING WALL 3 TYPICAL SECTION **A**
Scale: 1/2" = 1'-0"



NUUANU STREAM RETAINING
WALL 3 AT FACE TRANSITION - SECTION **B**
Scale: 1/2" = 1'-0"

CONNECTION DETAIL
AT EXISTING WALL **C**
Scale: 1/2" = 1'-0"

DIMENSIONS AND REINFORCING STEEL FOR RETAINING WALL 3			
STEM DESIGN HEIGHT - "H"	≤ 6'-0"	≤ 8'-0"	≤ 10'-0"
FOOTING WIDTH - "L"	4'-6"	7'-0"	8'-6"
HEEL - "C"	3'-6"	5'-6"	7'-0"
STEM THICKNESS - "W"	1'-0"	1'-6"	1'-6"
FOOTING DEPTH - "F"	1'-7"	1'-7"	1'-7"
KEY DEPTH - "D"	-	1'-0"	2'-0"
"a" BARS	#6 @ 12"	#6 @ 12"	#6 @ 12"
"b" BARS	-	-	-
"c" BARS	-	-	#5 @ 12"
"d" BARS	#6 @ 12"	#6 @ 12"	#6 @ 12"



VERTICAL REINFORCING
STEEL ARRANGEMENT **D**
Scale: 1/4" = 1'-0"

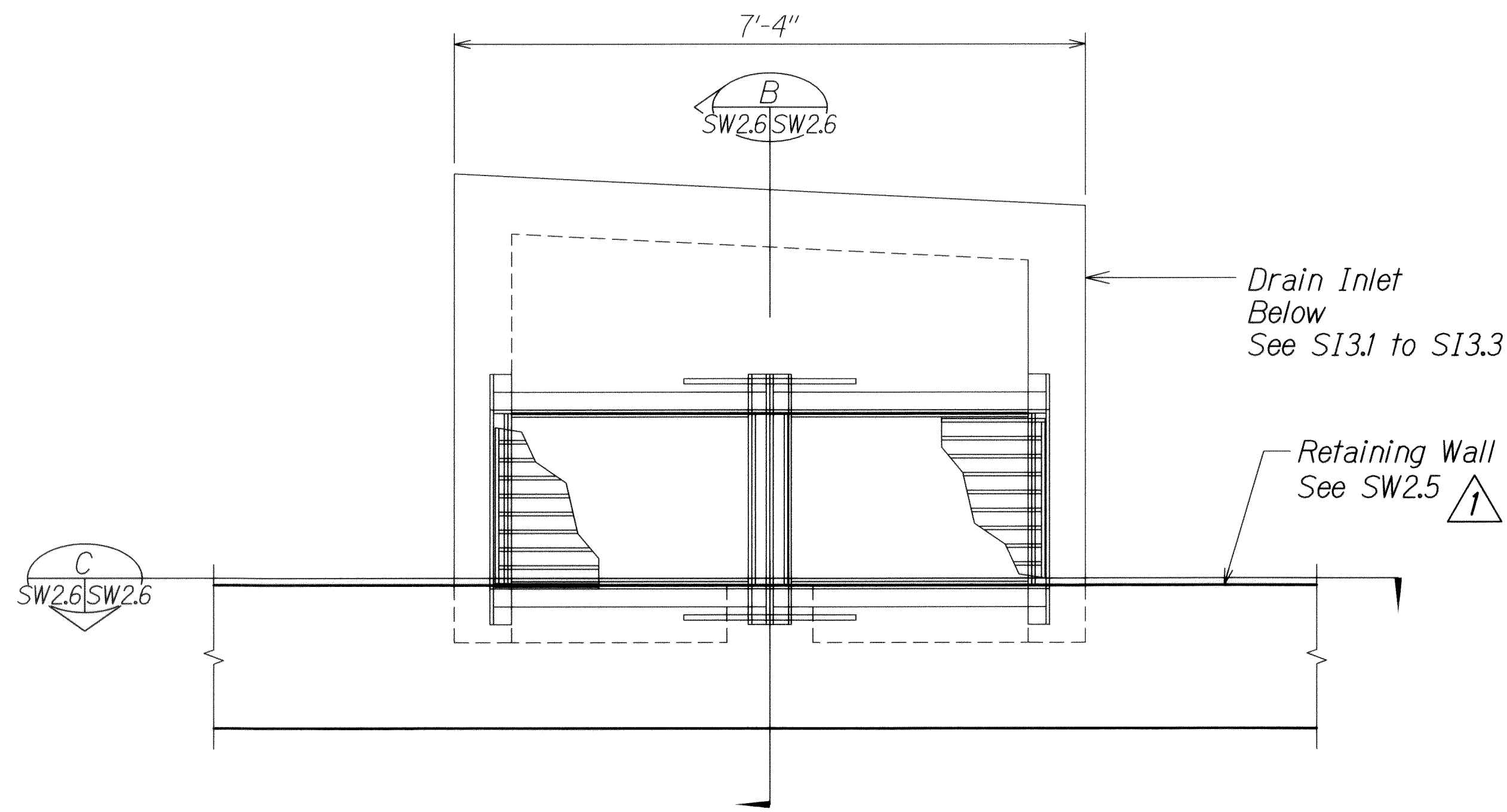
- Notes:**
- Spacing of "a" bars and "b" bars given in table is at base of stem with repeating placement pattern as indicated.
 - Dimension next to "a" bars and "b" bars indicates distance from top of footing to upper end of bars.



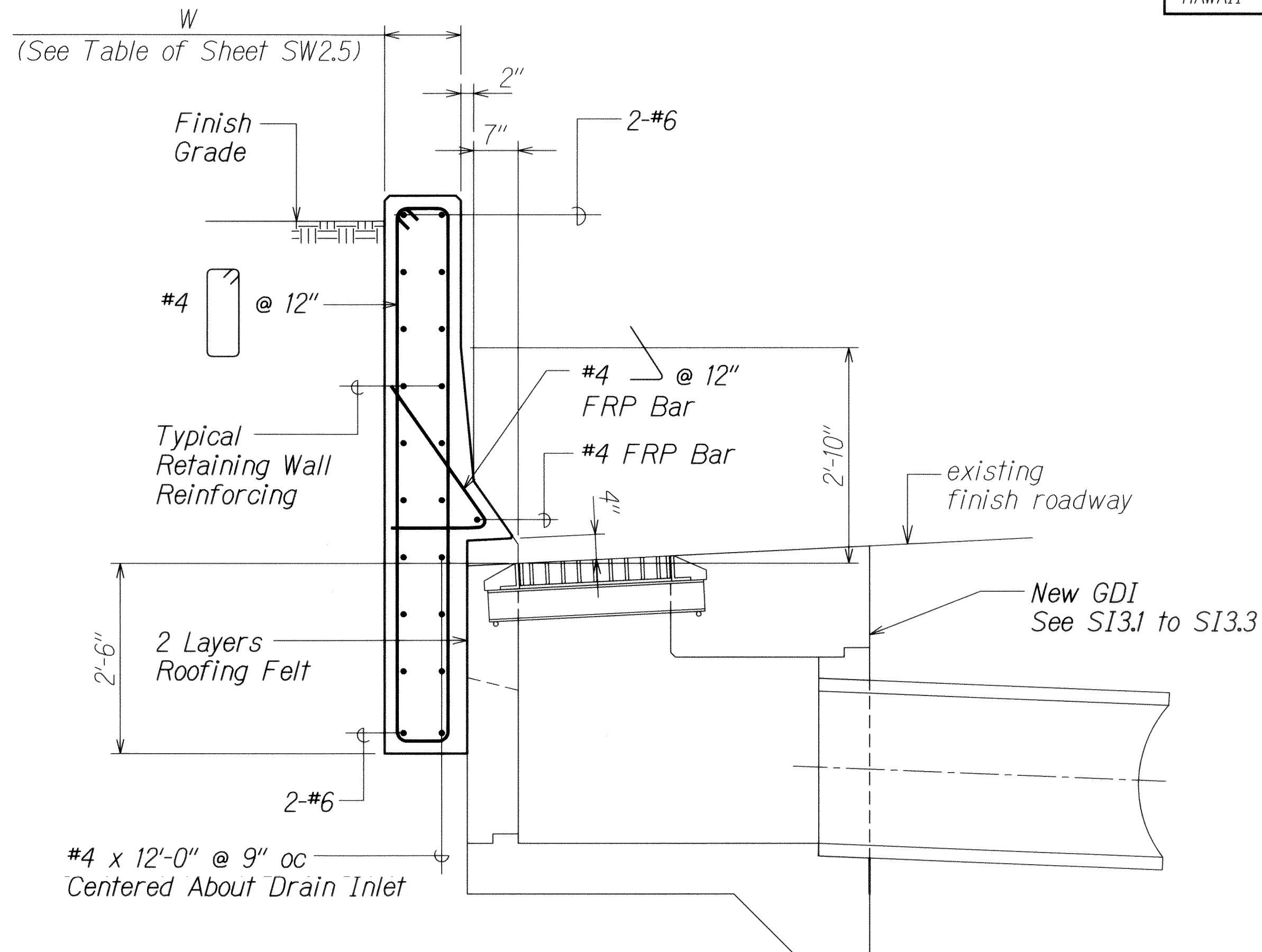
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KSF, INC. APR. 30, 2014
LIC. EXP. DATE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
NUUANU STREAM RETAINING WALL 3	
SECTIONS AND DETAIL	
INTERSTATE ROUTE H-1 REHABILITATION Middle Street to Vicinity of Ward Avenue FAP No. 1M-HI-1(269)	
Scale: As Shown	Date: April 26, 2013
SHEET No. SW2.5 OF 86 SHEETS	

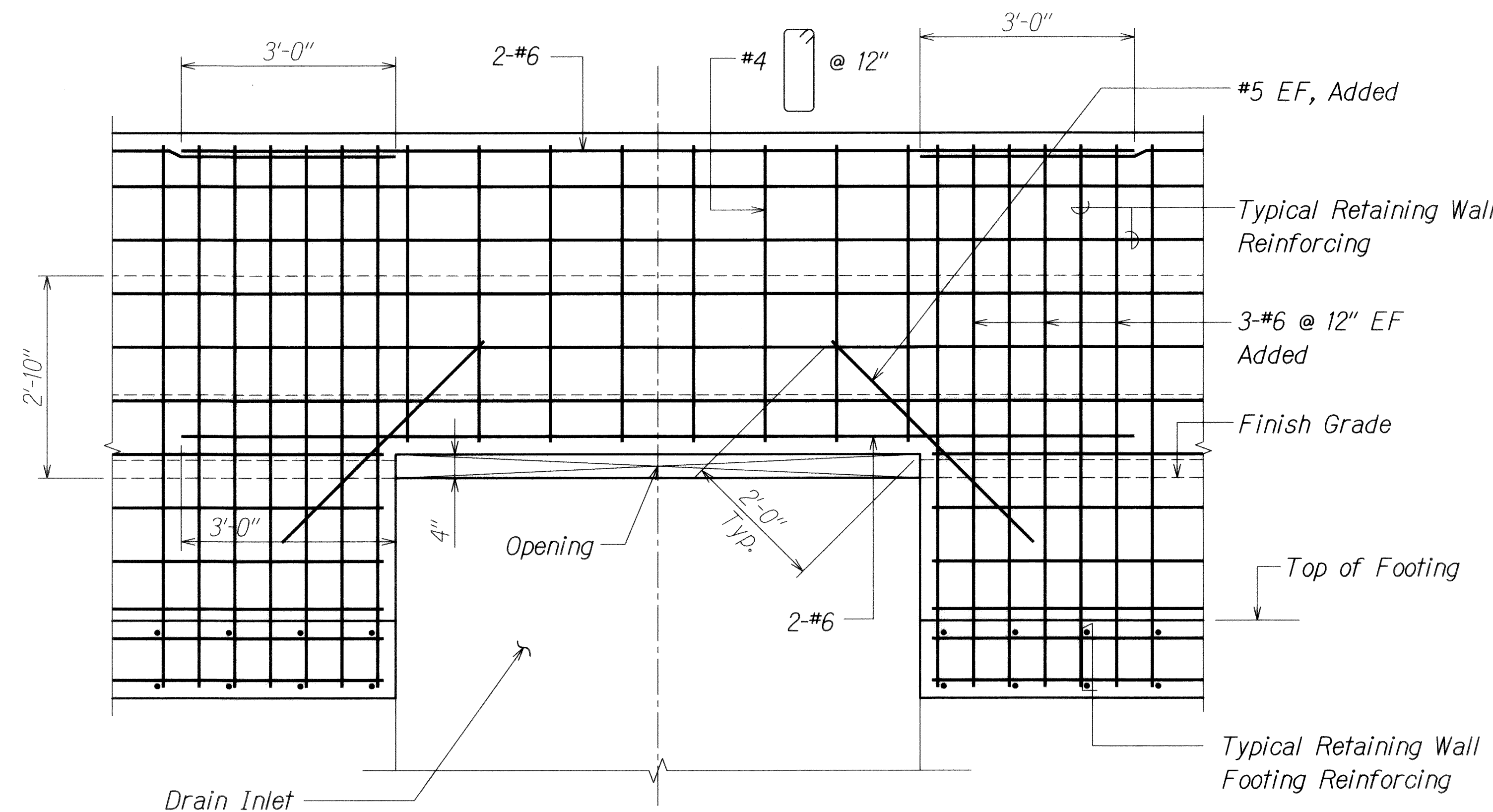
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-1(269)	2013	ADD. 347	382



**RETAINING WALL 3 ABOVE
GDI AT STA. 128+24.77 - PLAN**
Scale: 3/4" = 1'-0"
SECTION A
SW2.6 | SW2.6



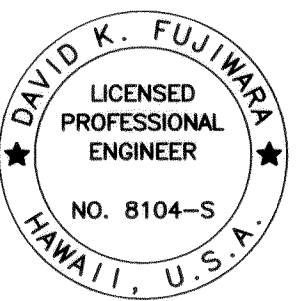
SECTION
Scale: 3/4" = 1'-0"
SECTION B
SW2.6 | SW2.6



SECTION
Scale: 3/4" = 1'-0"
SECTION C
SW2.6 | SW2.6

ORIGINAL PLAN	DATE
NOTE BOOK	DESIGNED BY
	QUANTITIES BY
	CHECKED BY

DRAWING NAME: Z:\00 ONGOING\11-030 H1 RESURFACING LIKE-LIKE TO PUNCHBOWL (CAD)\06-14-13 100% HIR-SW2.6 ADD.DWG PLOT TIME: 06-14-13, 10:34 AM



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KSF, INC. APRIL 30, 2014
LIC. EXP. DATE

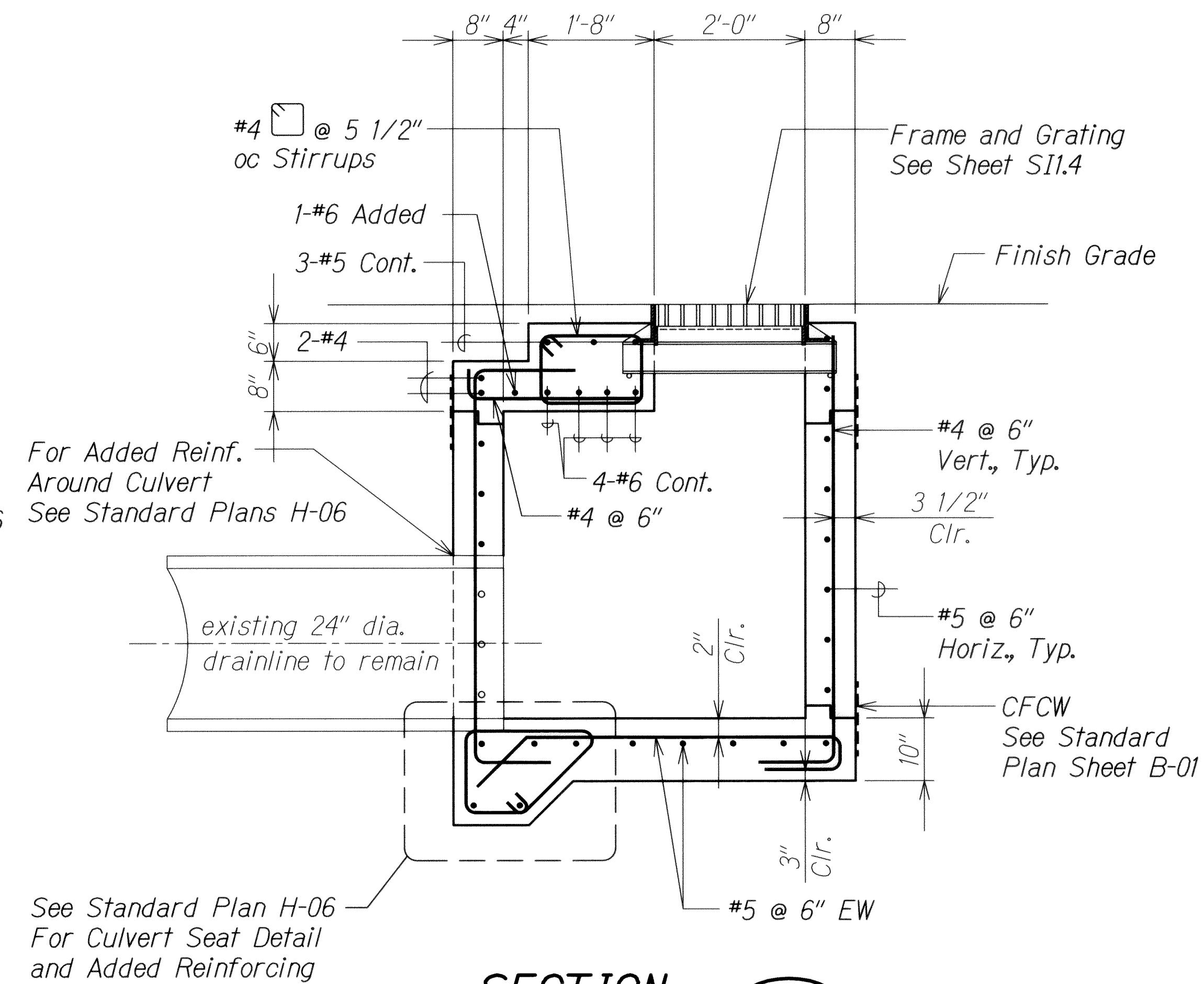
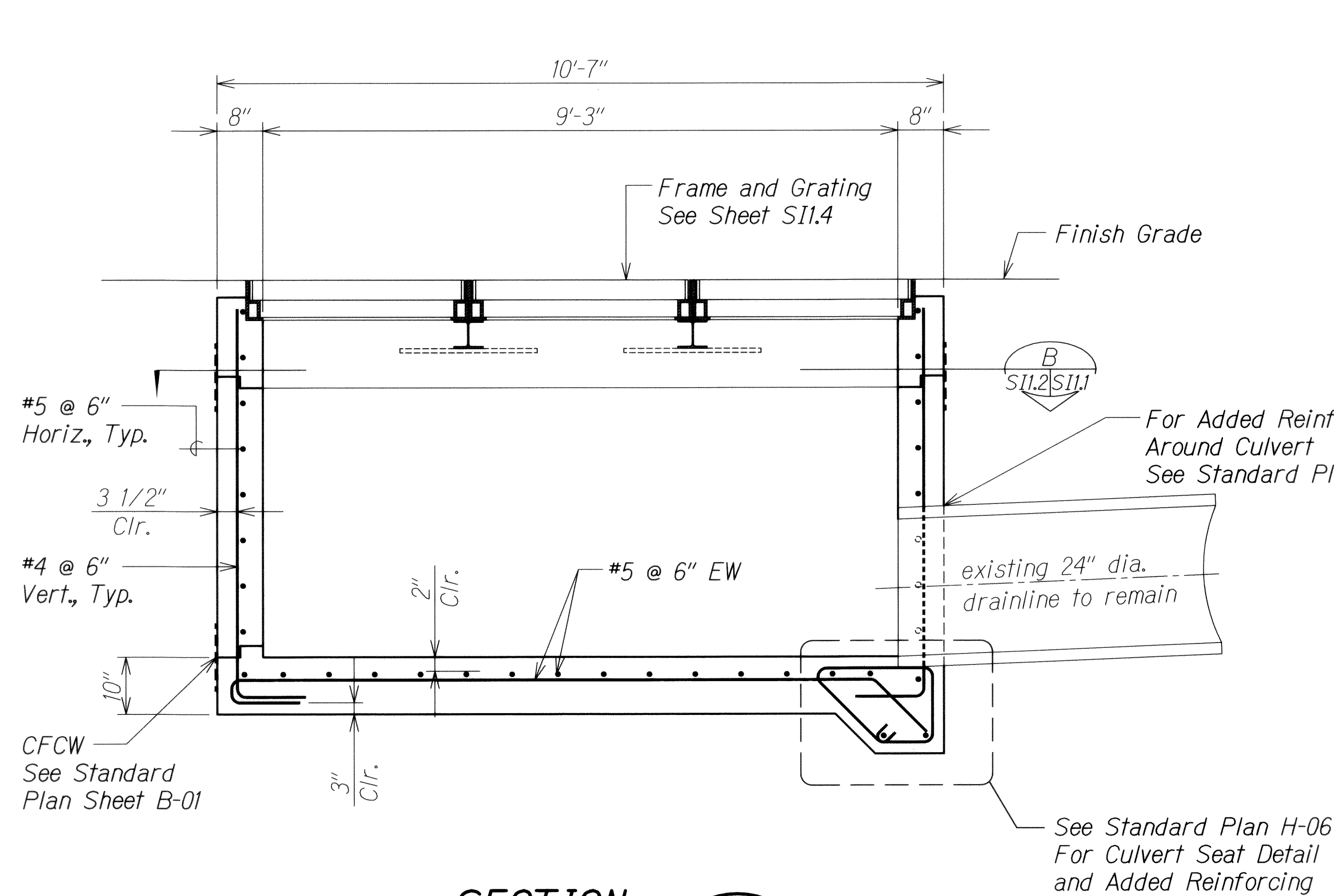
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RETAINING WALL 3 ABOVE GDI
PLAN AND SECTIONS
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP No. IM-H1-1(269)

Scale: As Shown Date: April 26, 2013
SHEET No. SW2.6 OF 86 SHEETS

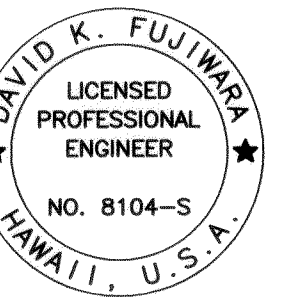
6/14/13	1	Revise Note and Section Call Out
DATE	REVISION	

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 353	382



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

DRAWING NAME: Z:\00 ONGOING\11-030 H1 RESURFACING LIKE TO PUNCHBOWL CAD\06-14-13 100%PHR-S101 ADD.DWG PLOT TIME: 06-14-13 10:35 AM



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David K. Fujiwara
KSF, INC. APRIL 30, 2014
LIC. EXP. DATE

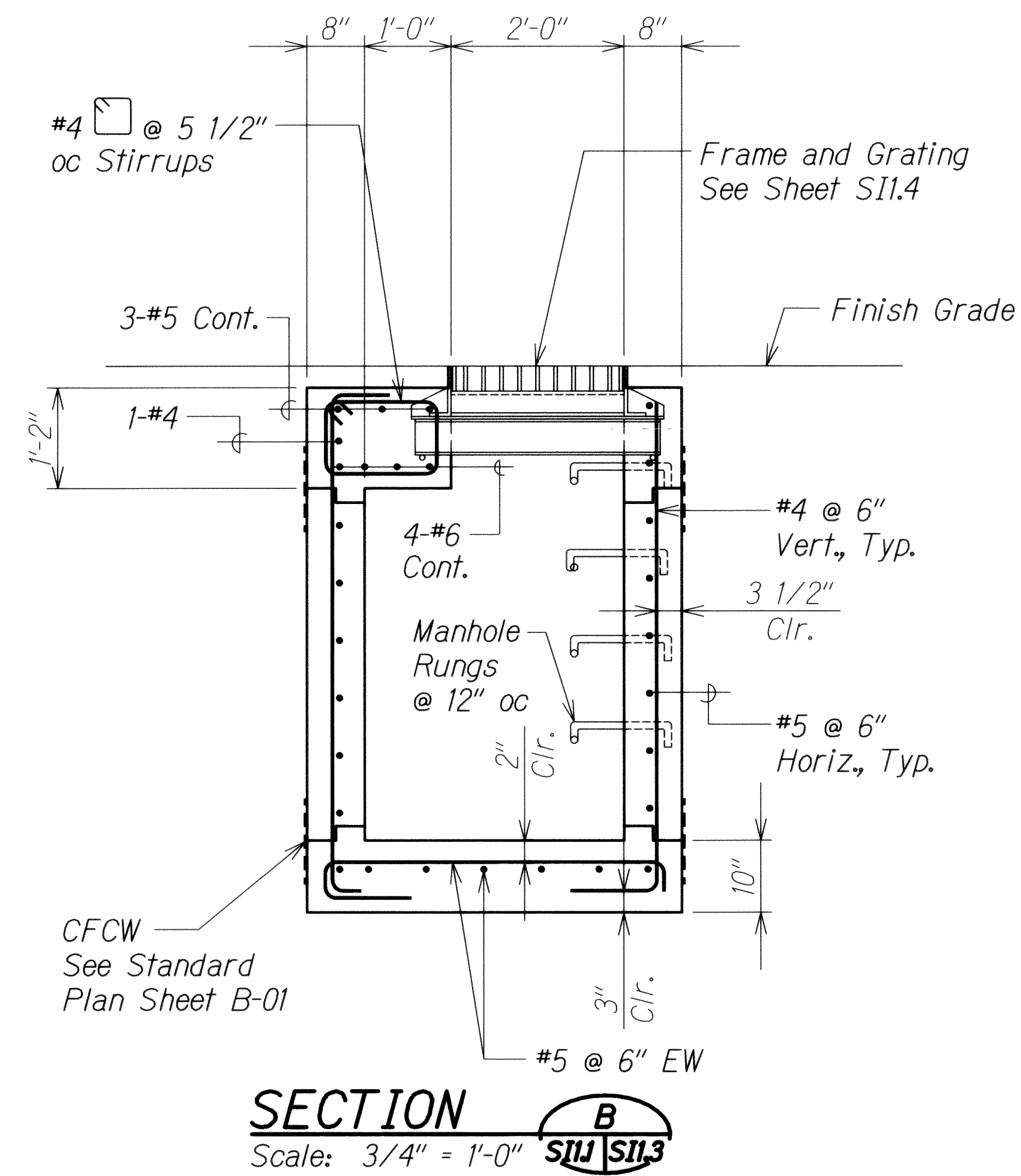
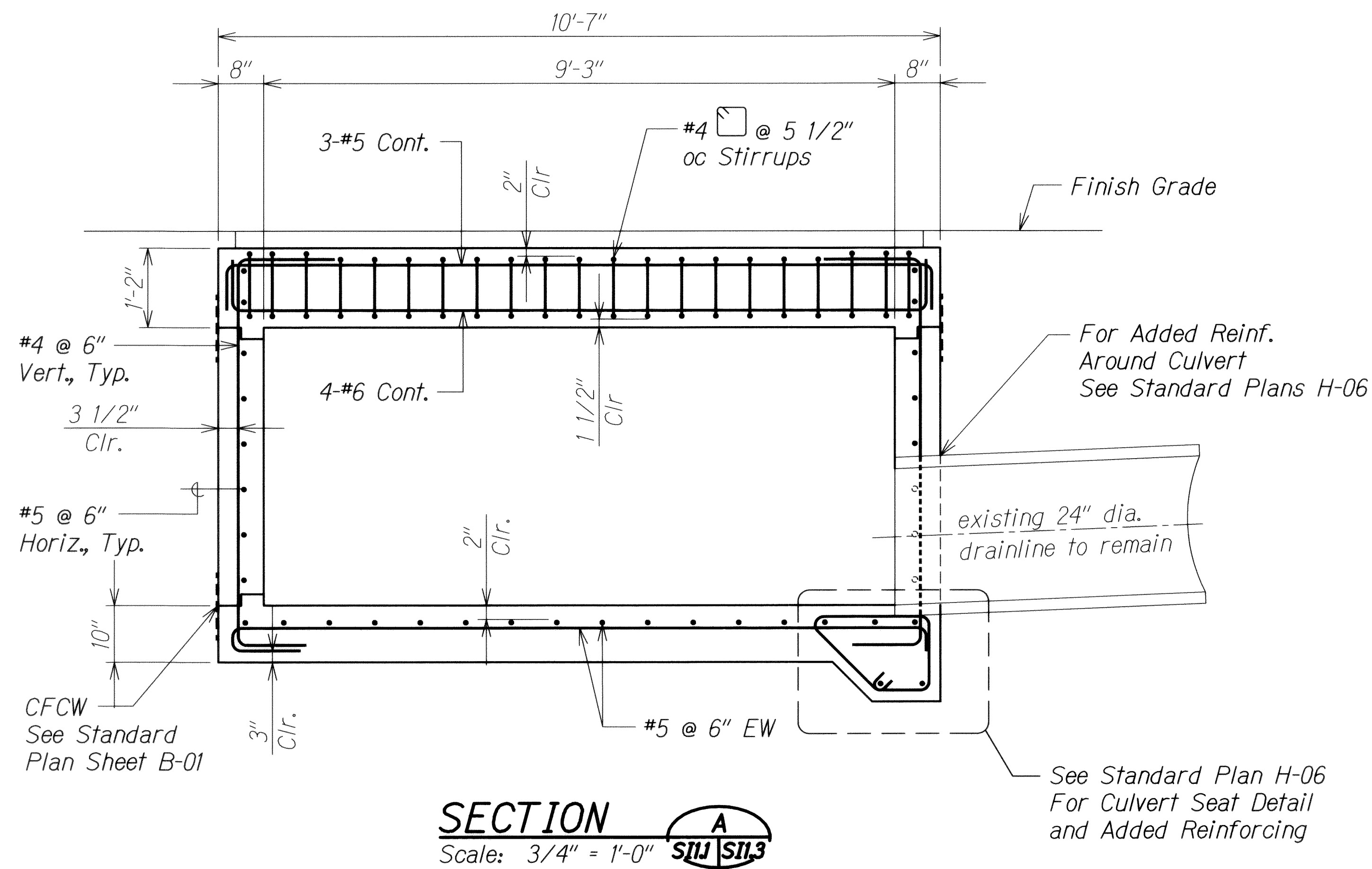
6/14/13	1	Revise Title Block
DATE		REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RECONSTRUCTED GDI AT STA. 50+80 RT.
SECTIONS
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP No. IM-HI-1(269)

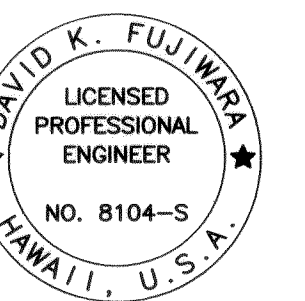
Scale: As Shown Date: April 26, 2013
SHEET No. S11.2 OF 86 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 354	382



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

DRAWING NAME: Z:\00 ONGOING\11-030 H1 RESURFACING LIKE TO PUNCHBOWL\CAO\06-14-13 1028\H1R-S101 ADD.DWG PLOT TIME: 06-14-13, 10:35 AM



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David K. Fujiwara
APRIL 30, 2014
KSF, INC. LIC. EXP. DATE

6/14/13	1	Revise Title Block
DATE		REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RECONSTRUCTED GDI AT STA. 50+80 RT.

SECTIONS

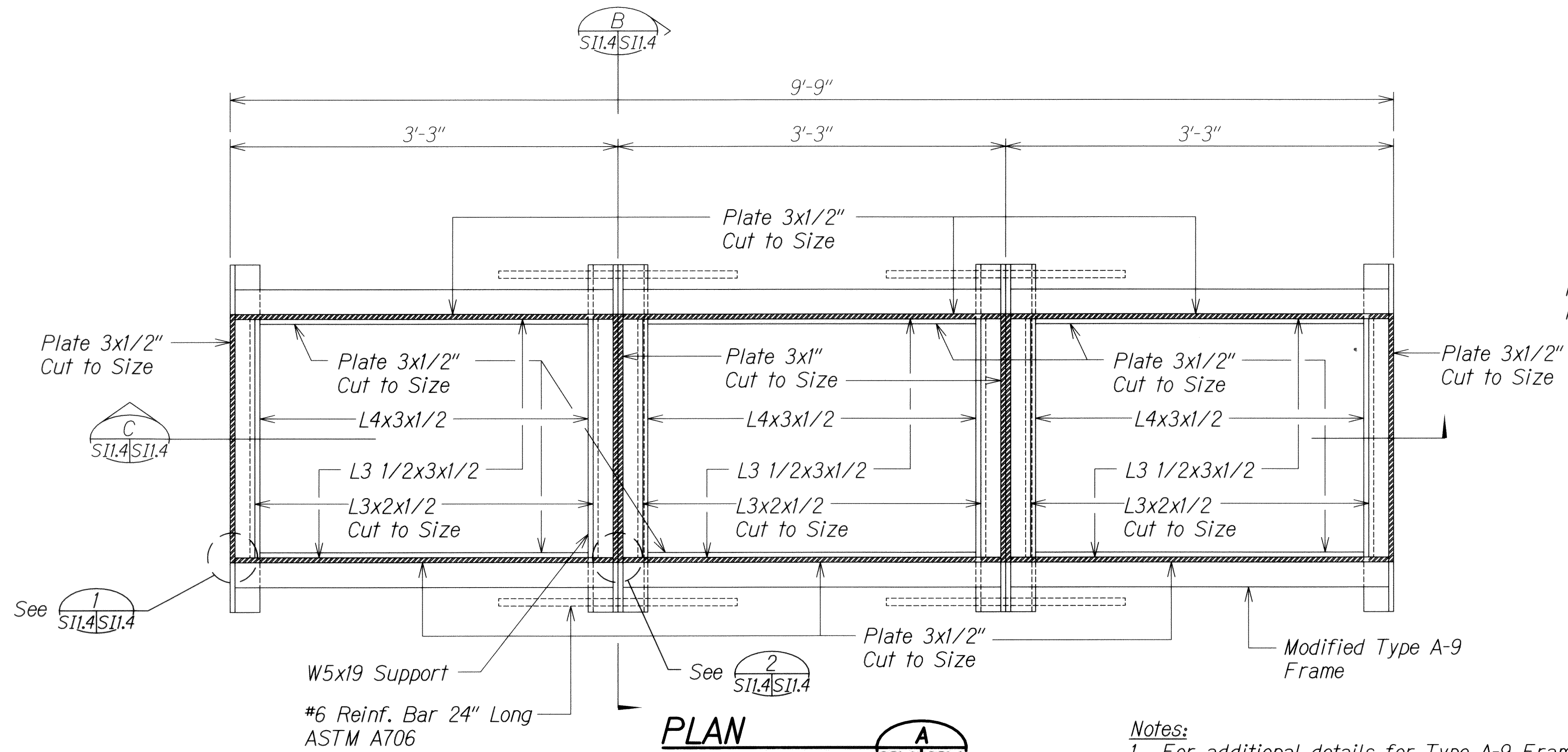
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP No. IM-HI-1(269)

Scale: As Shown Date: April 26, 2013

SHEET No. S11.3 OF 86 SHEETS

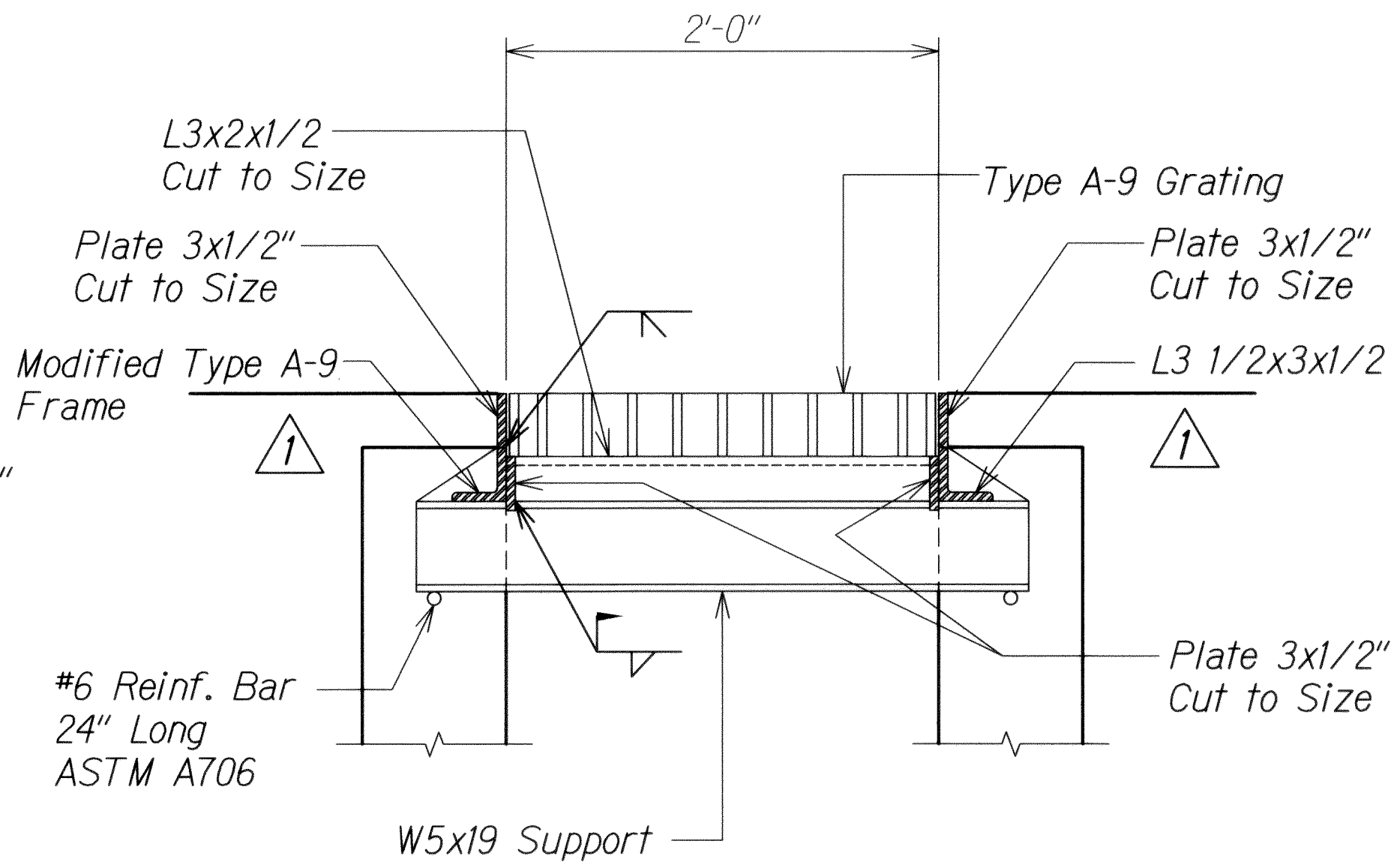
ADD. 354

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-HI-1(269)	2013	ADD. 355	382

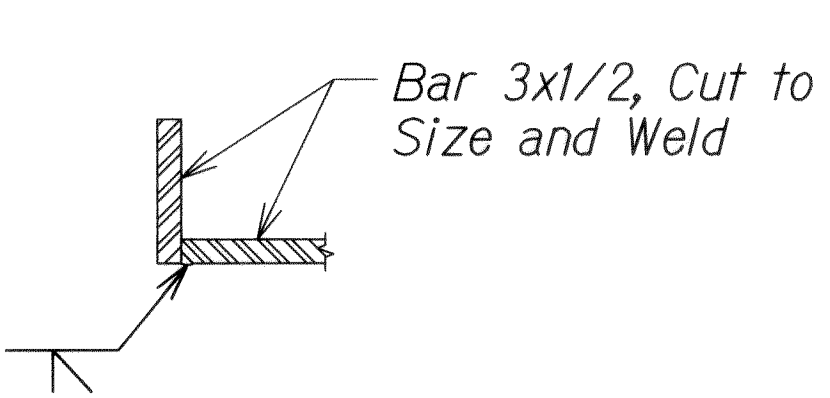


PLAN
Scale: 1 1/2" = 1'-0" **SII.4 SII.4**

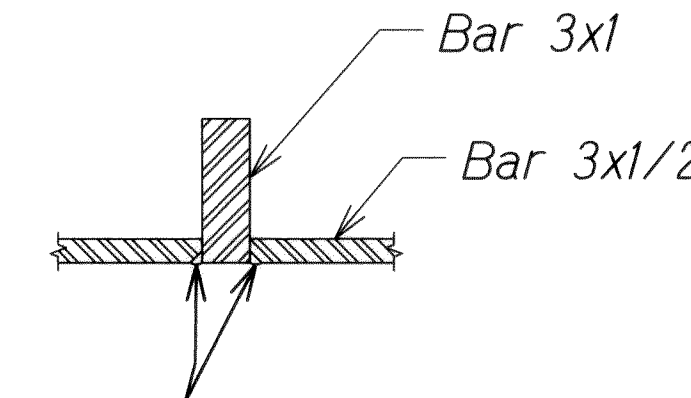
- Notes:**
1. For additional details for Type A-9 Frame and grate see State Standard Plans H-10 and H-11.
 2. All fillet welds shall be 5/16"
 3. The Contractor shall verify height adjustment in the field. Frames and grates shall be no higher than the finish grade.



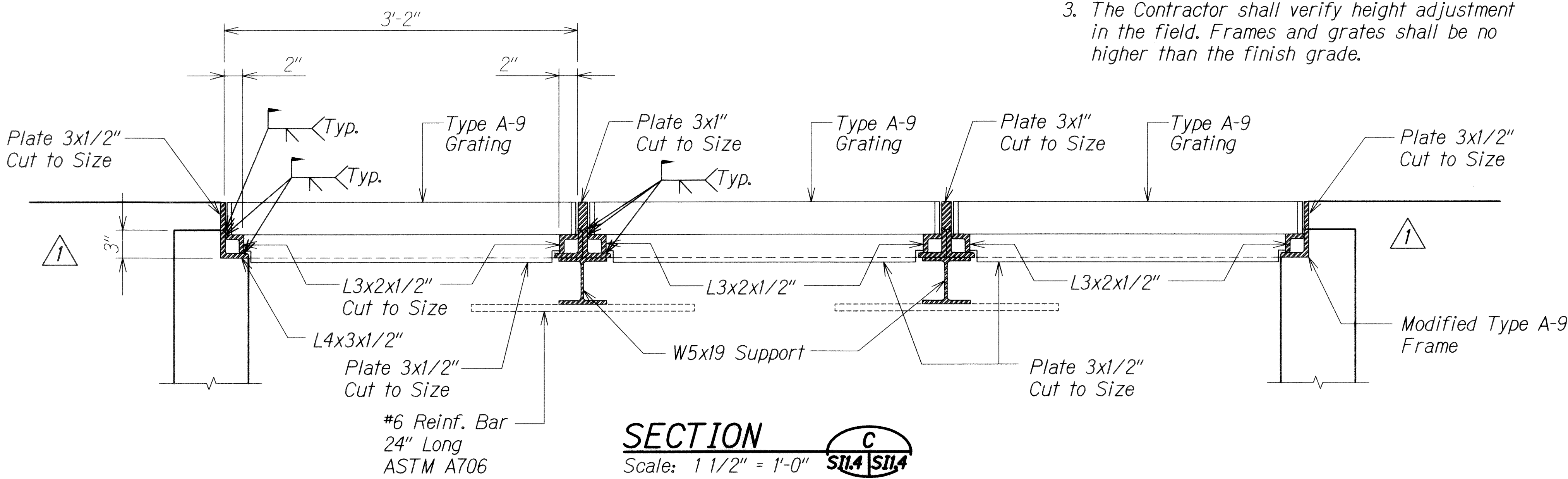
SECTION B
Scale: 1 1/2" = 1'-0" **SII.4 SII.4**



DETAIL 1
Scale: 3" = 1'-0" **SII.4 SII.4 SII.7**



DETAIL 2
Scale: 3" = 1'-0" **SII.4 SII.4 SII.7**



SECTION C
Scale: 1 1/2" = 1'-0" **SII.4 SII.4**

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

DRAWING NAME: Z:\00 ONGOING\11-030 HI RESURFACING\LIKE TO PUNCHDOWN\CAO\06-14-13, 100% HIRF-S101 ADD.DWG PLOT TIME: 06-14-13, 10:35 AM

6/14/13	1	Revise Details
DATE		REVISION

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

RECONSTRUCTED GDI AT STA. 50+80 RT.

FRAME AND GRATING DETAILS

INTERSTATE ROUTE H-1 REHABILITATION

Middle Street to Vicinity of Ward Avenue

FAP No. 1M-HI-1(269)

Scale: As Shown

Date: April 26, 2013

SHEET No. SII.4

OF 86

SHEETS

DAVID K. FUJIMURA

LICENSED PROFESSIONAL ENGINEER

NO. 8104-S

HAWAII, U.S.A.

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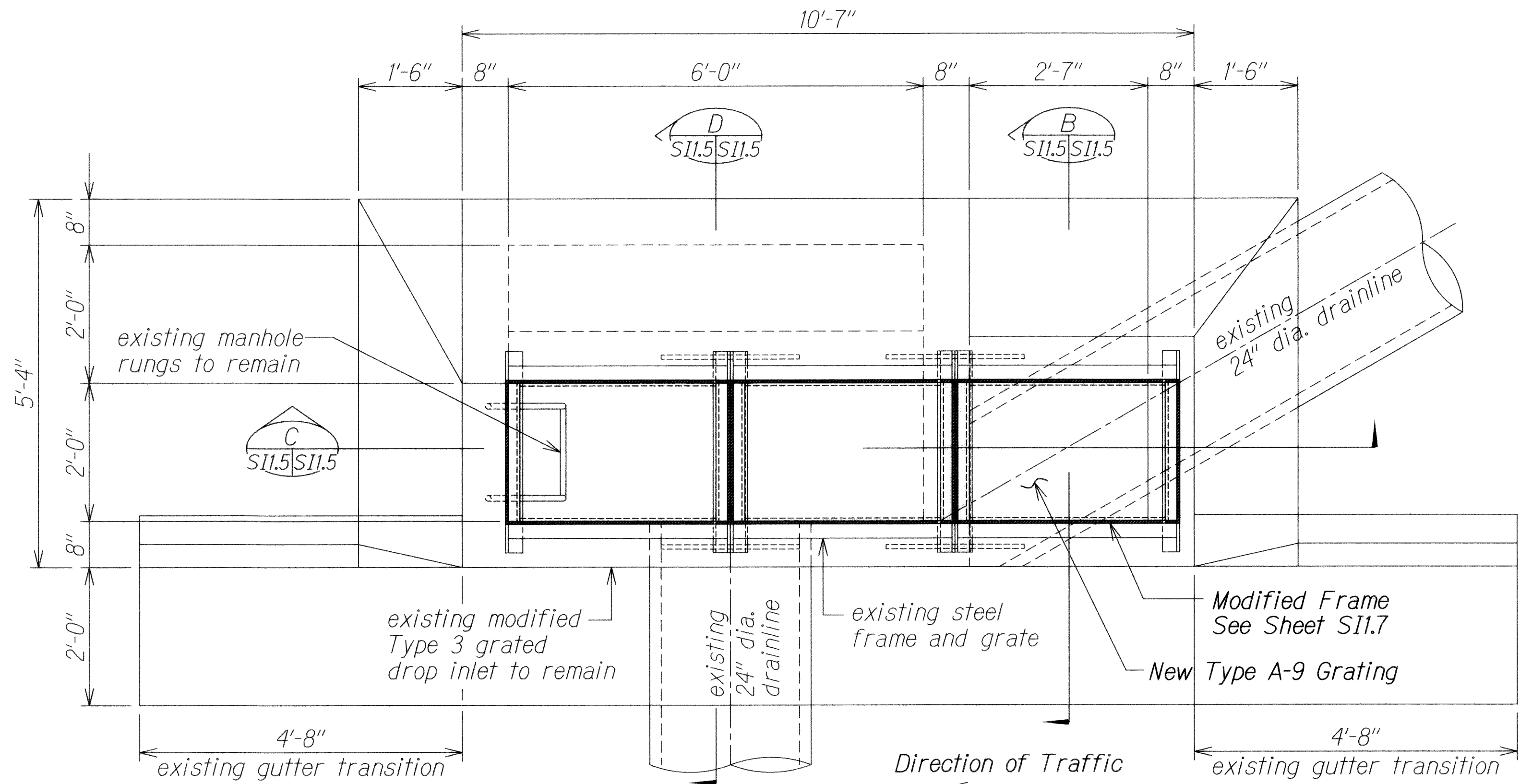
David K. Fujiwara

APR 30, 2014

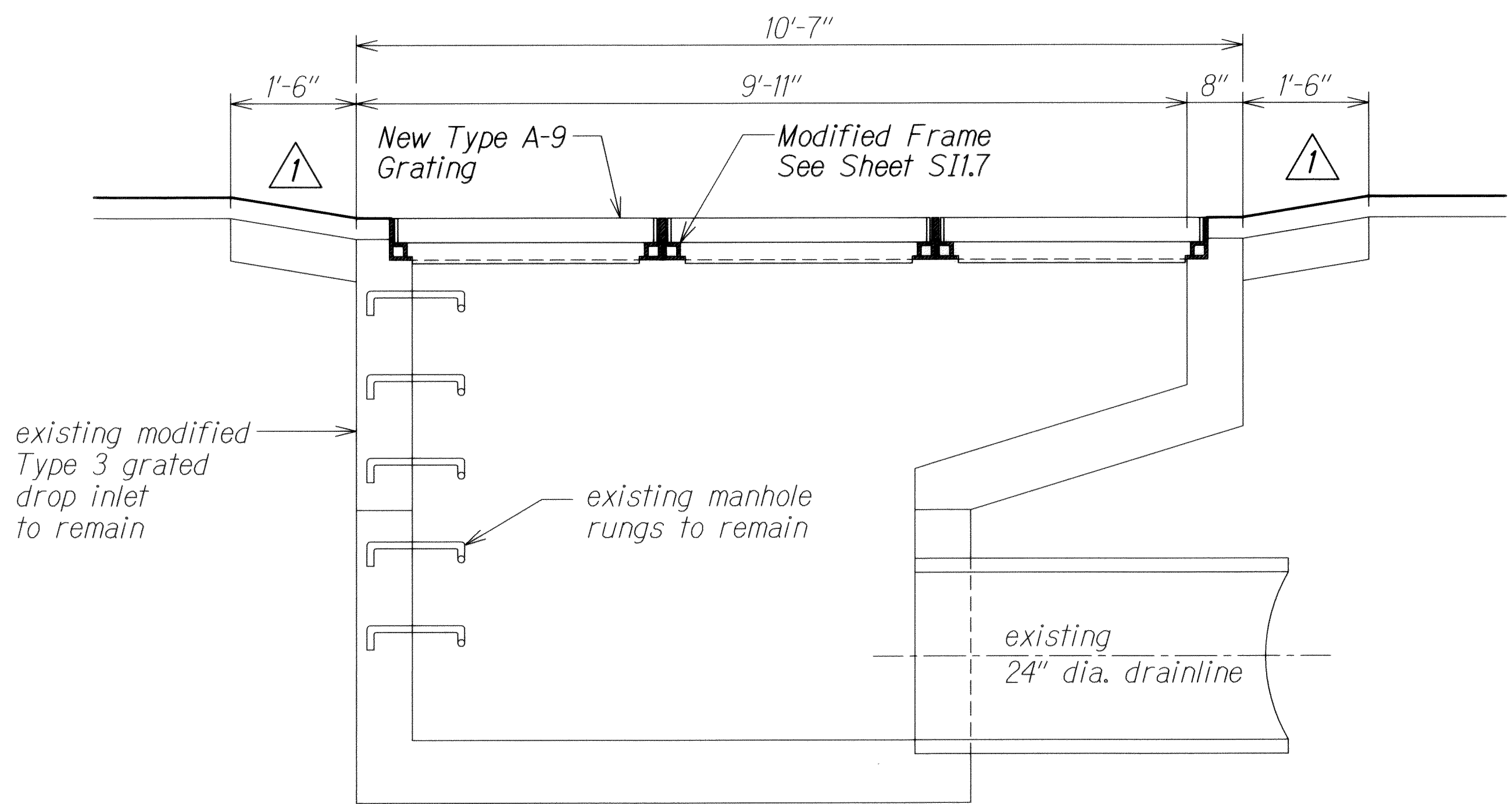
KSF, INC.

U.C. EXP. DATE

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 356	382

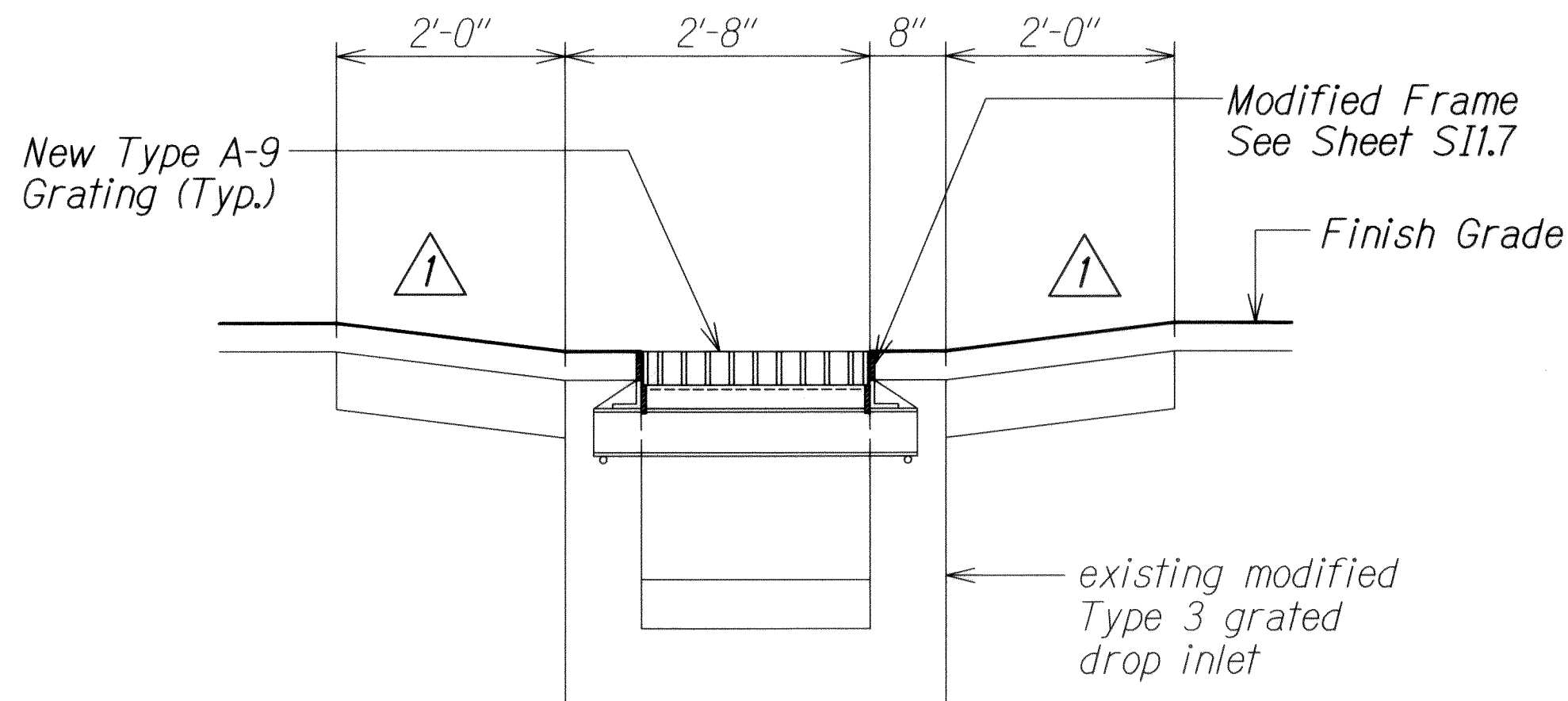


PLAN
Scale: 3/4" = 1'-0" **A**
S11.5 S11.5

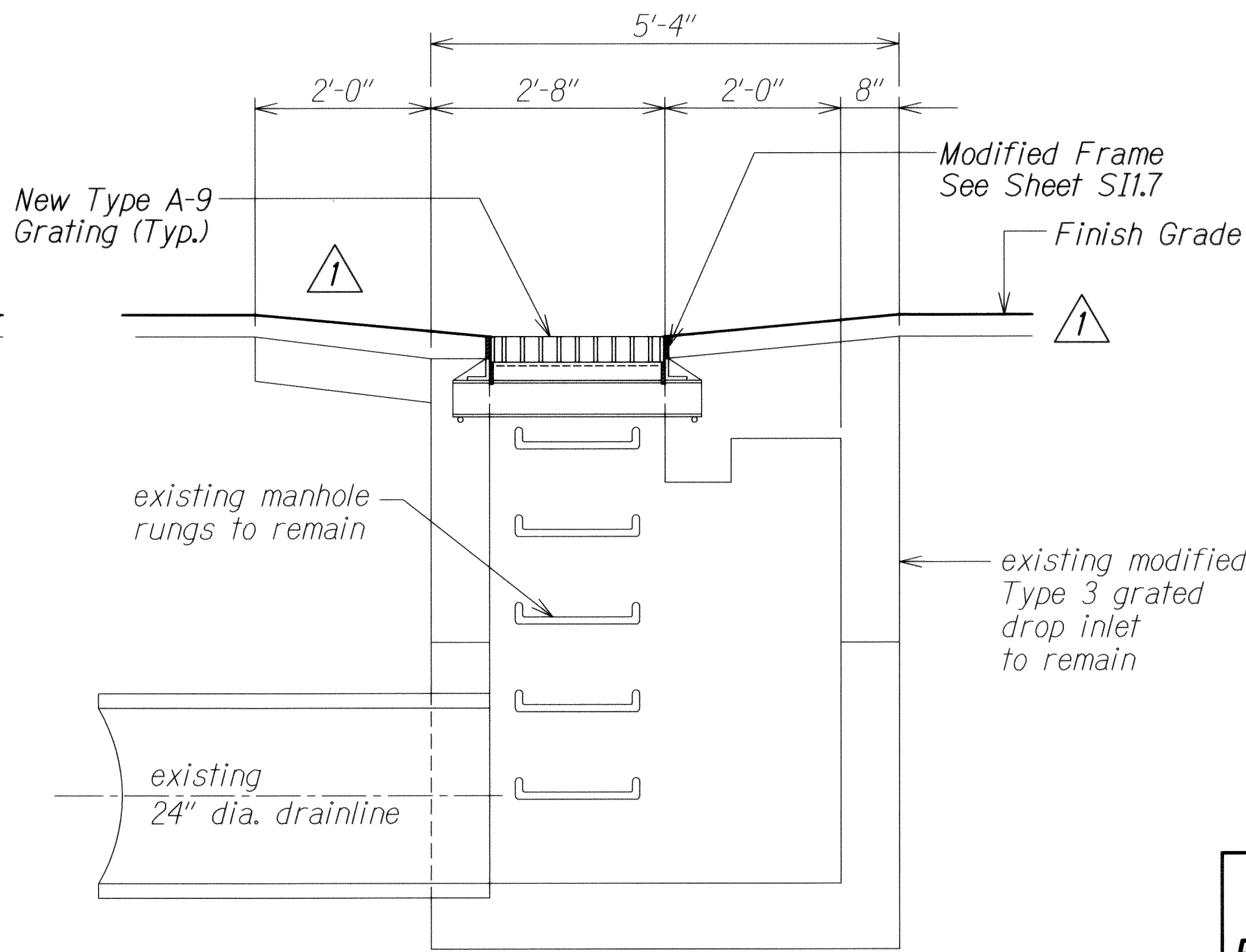


SECTION C
Scale: 3/4" = 1'-0" **S11.5 S11.5**

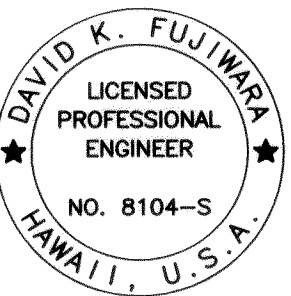
MODIFIED TYPE 3 GRATED DROP INLET AT STA. 52+75 E.B. RT.
Scale: 3/4" = 1'-0"



SECTION B
Scale: 3/4" = 1'-0" **S11.5 S11.5**



SECTION D
Scale: 3/4" = 1'-0" **S11.5 S11.5**



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KSF, INC. APRIL 30, 2014
LIC. EXP. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

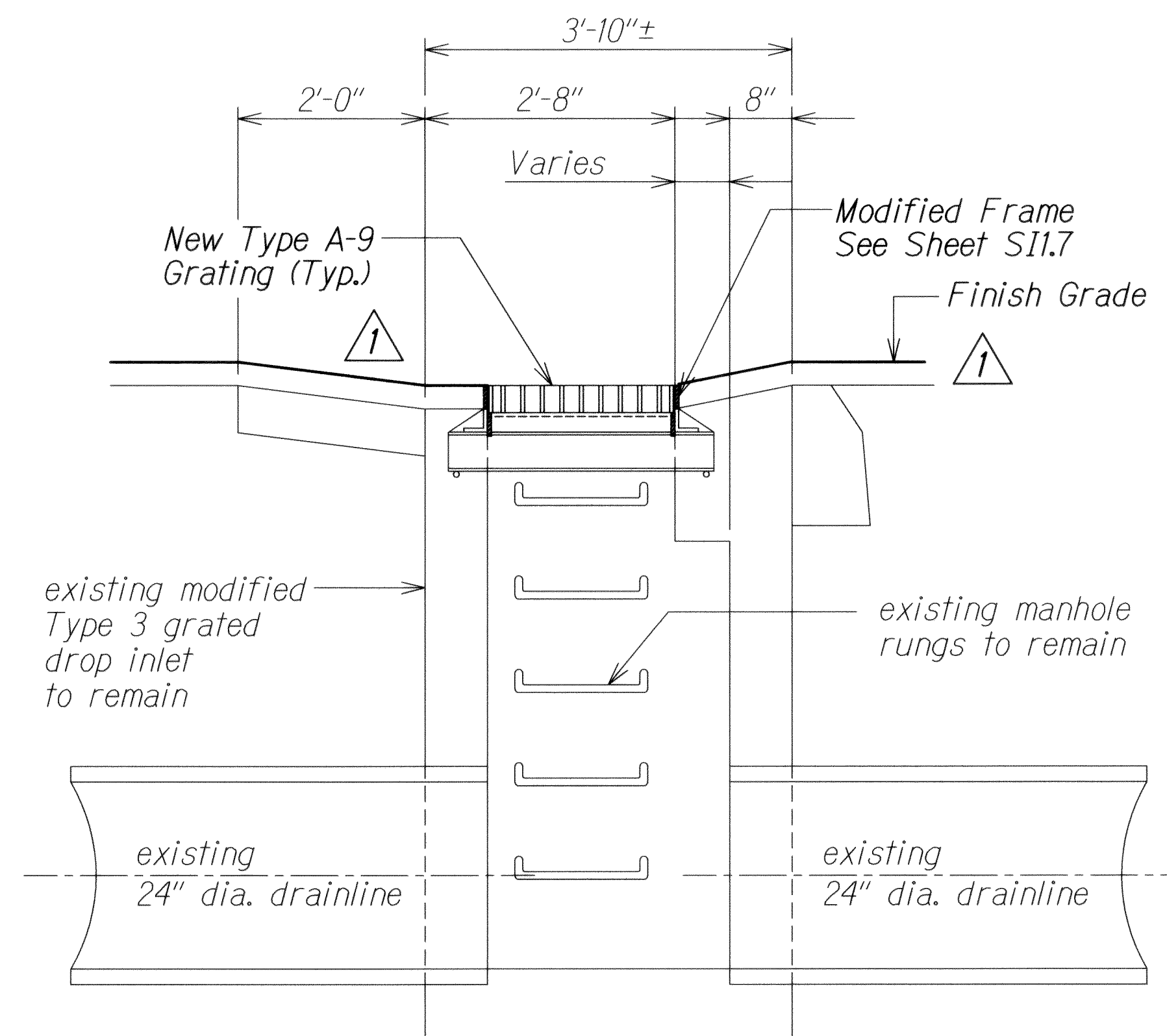
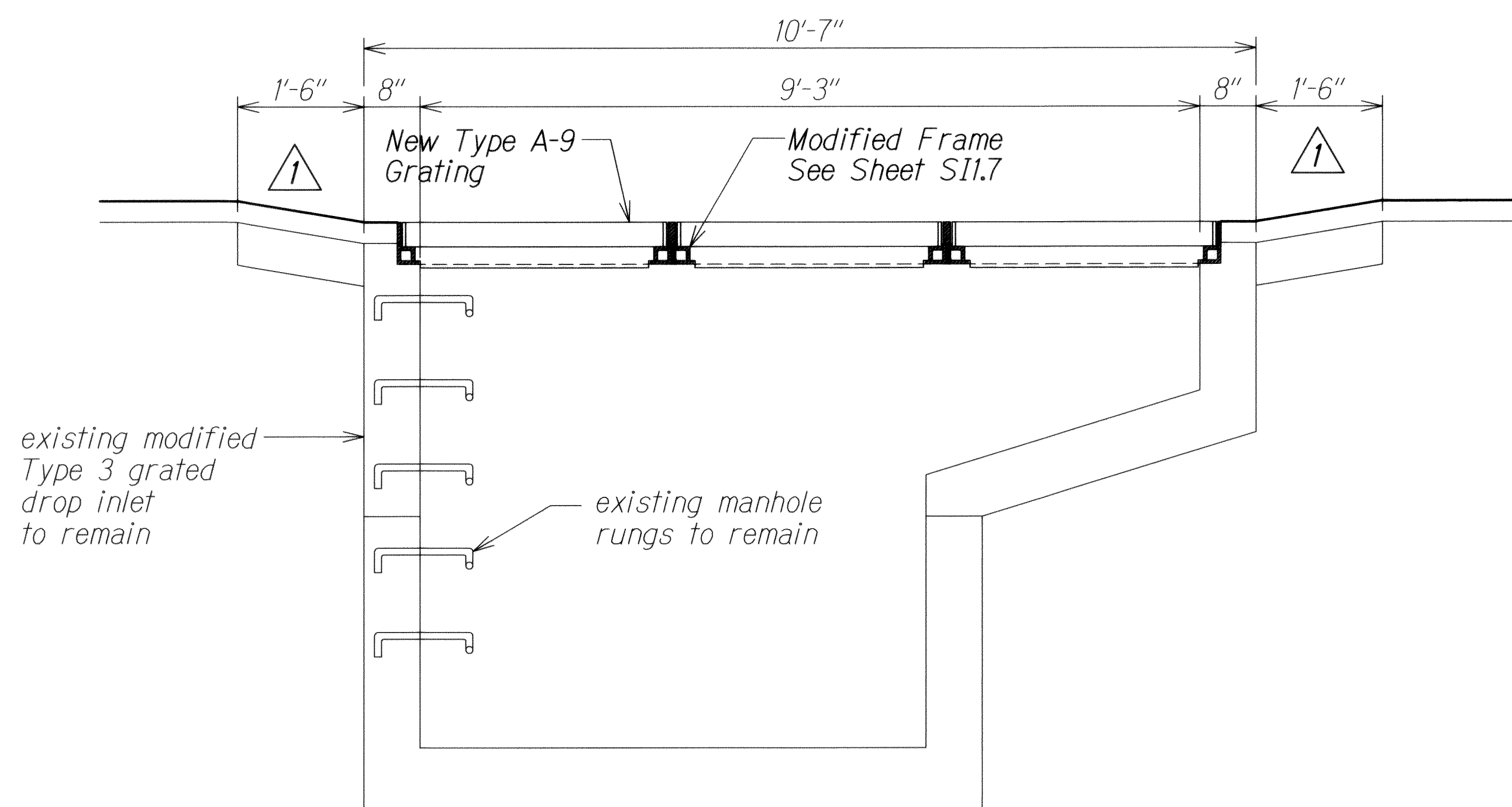
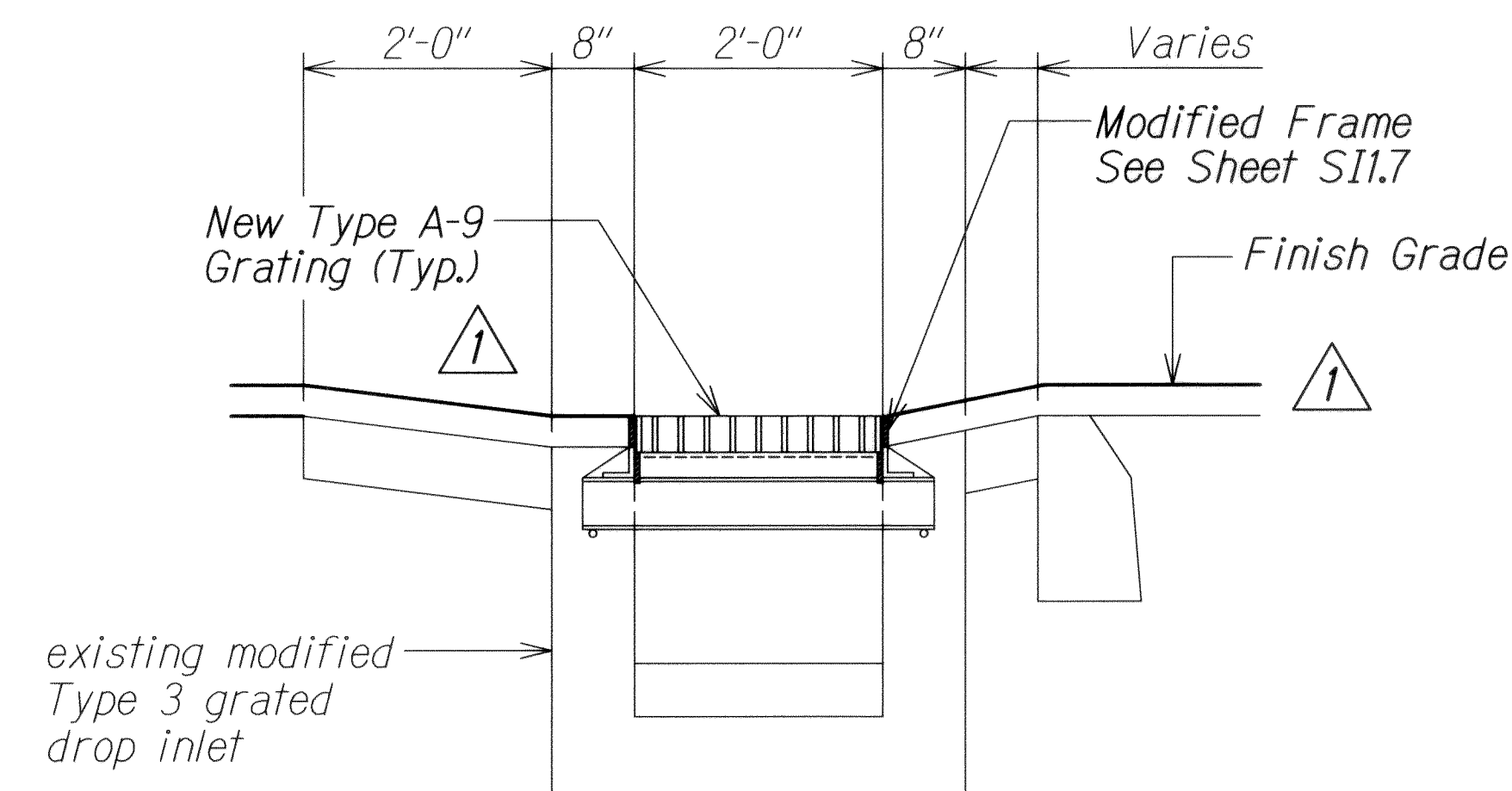
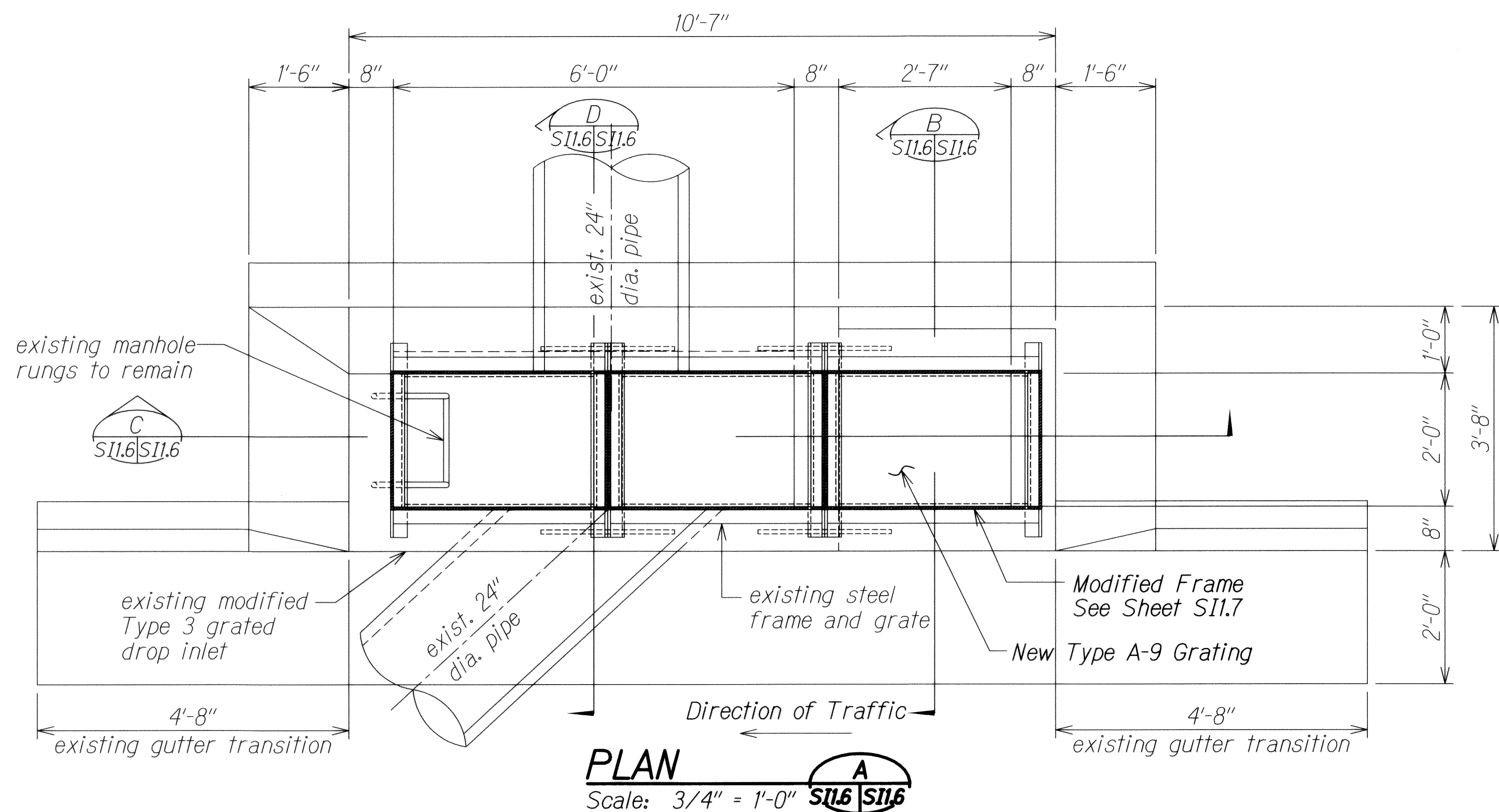
RECONSTRUCTED GDI AT STA. 52+75 RT.
PLAN AND SECTIONS
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP No. IM-HI-1(269)

Scale: As Shown
Date: April 26, 2013

SHEET No. S11.5 OF 86 SHEETS

6/14/13	1	Revise Details
DATE		REVISION

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 357	382



SECTION C
Scale: 3/4" = 1'-0" S11.6 S11.7

SECTION D
Scale: 3/4" = 1'-0" S11.6 S11.7

MODIFIED TYPE 3 GRATED DROP INLET AT STA. 54+75 E.B. RT.
Scale: 3/4" = 1'-0"

6/14/13	1	Revise Details
DATE		REVISION

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

RECONSTRUCTED GDI AT STA. 54+75 RT.

PLAN AND SECTIONS

INTERSTATE ROUTE H-1 REHABILITATION

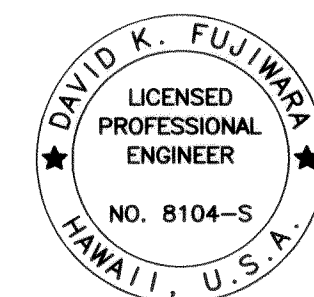
Middle Street to Vicinity of Ward Avenue

FAP No. IM-HI-1(269)

Scale: As Shown

Date: April 26, 2013

SHEET No. S11.6 OF 86 SHEETS

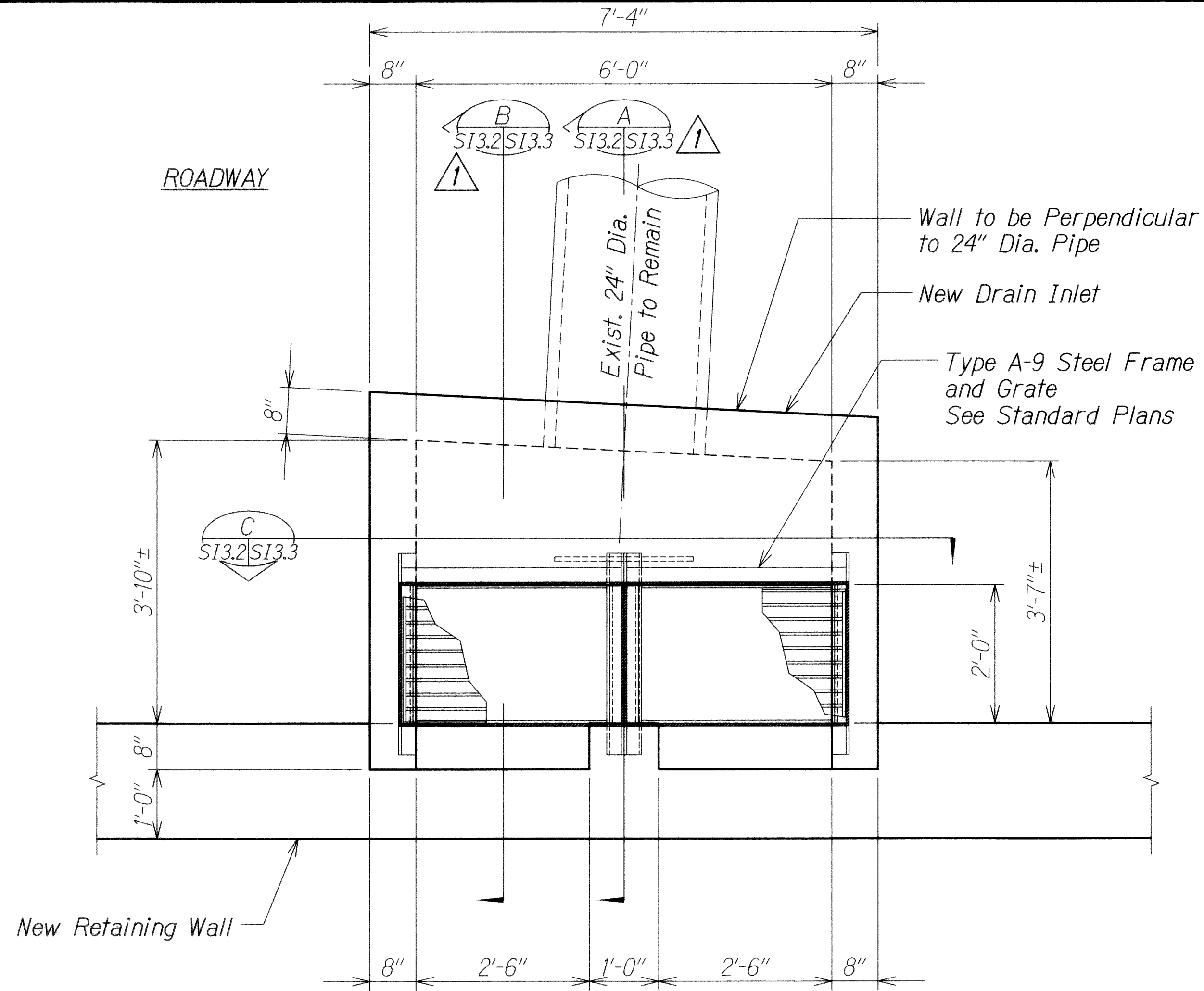


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APRIL 30, 2014
LIC. EXP. DATE

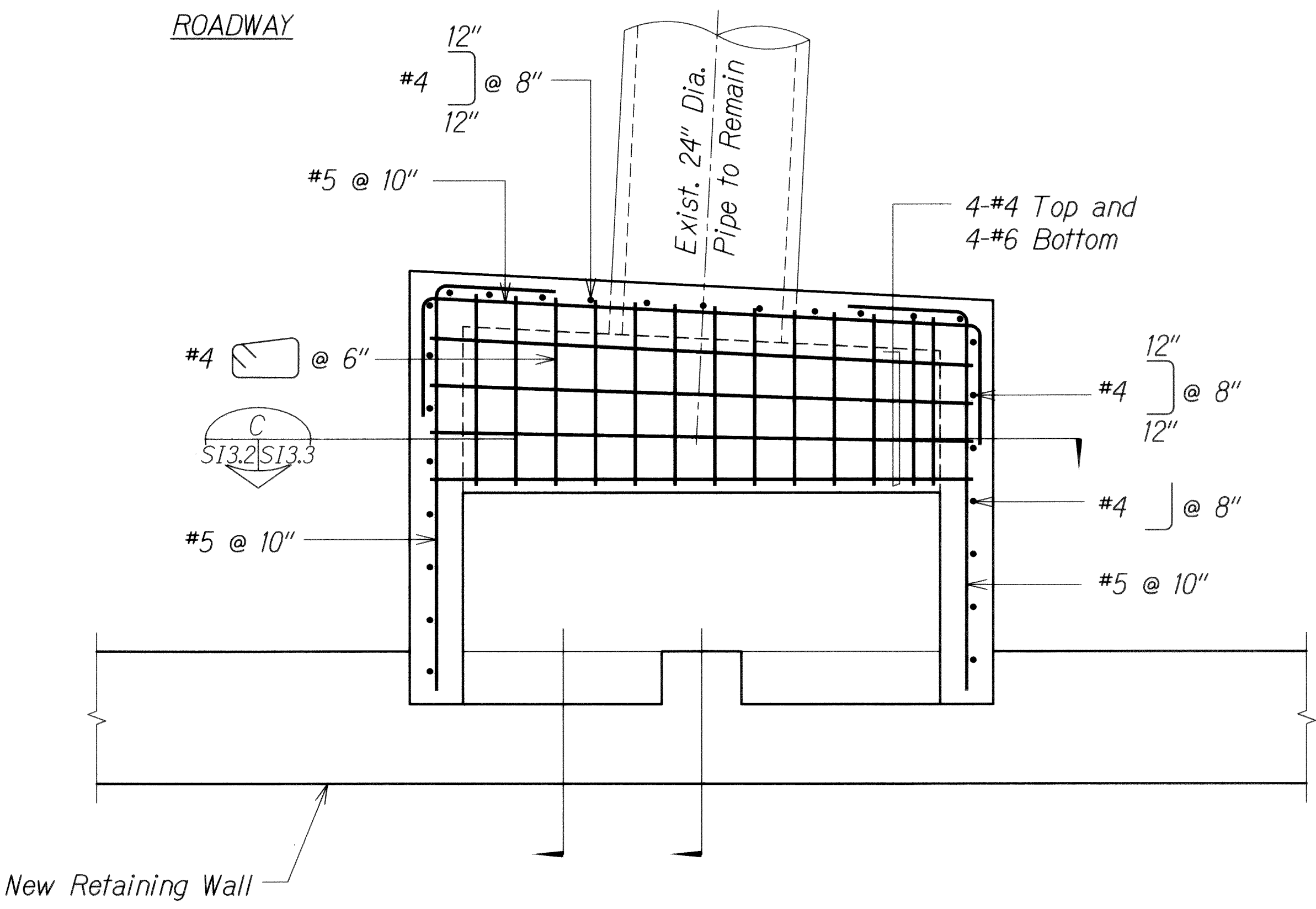
ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NOTED BY	
NO.	

DRAWING NAME: Z:\00 ONGOING\11-030 H1 RESURFACING LIKELIKE TO PUNCHBOWL\CAD\06-14-13 100% H1R-S1105 ADD.DWG PLOT TIME: 06-14-13, 10:36 AM

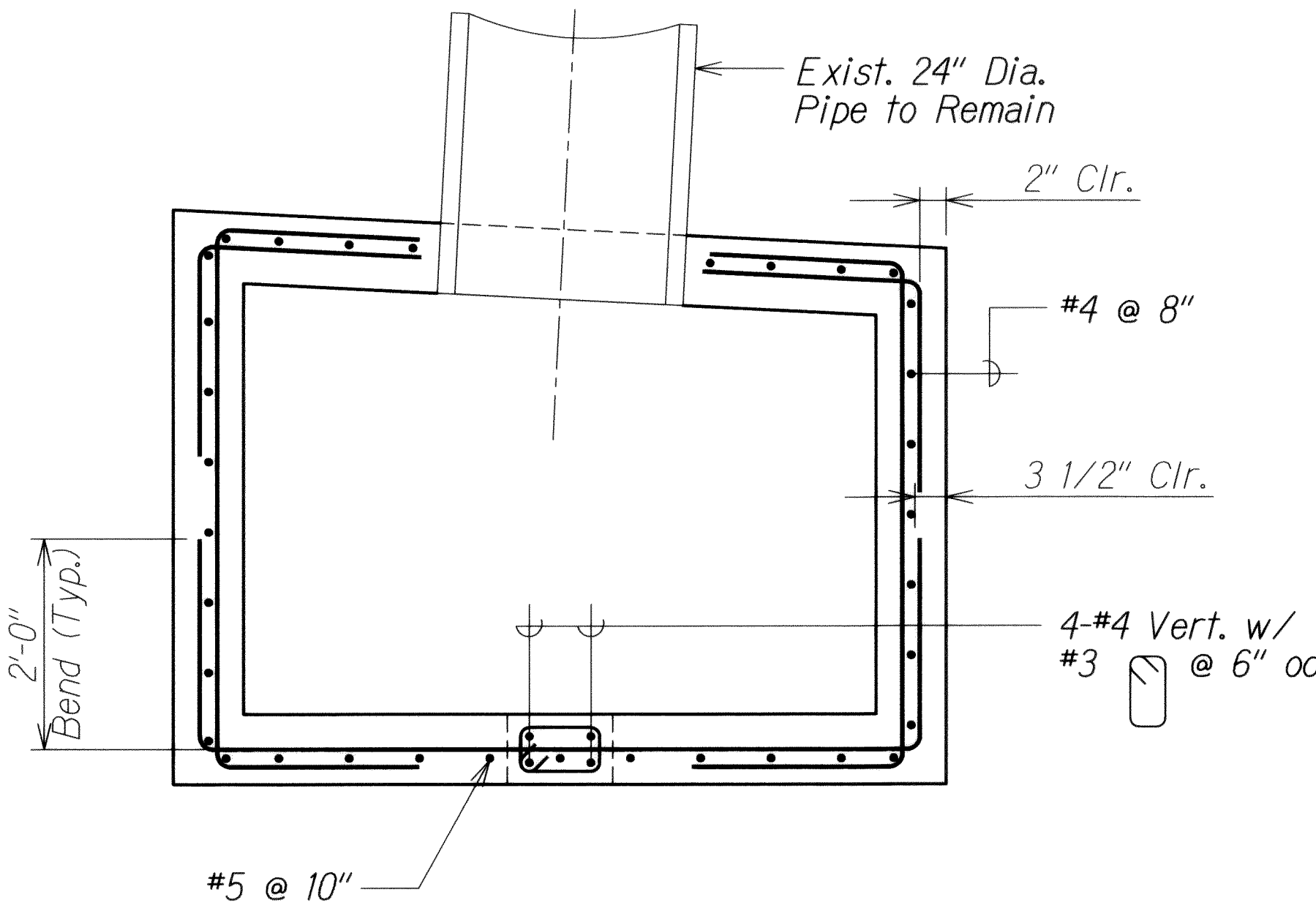
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-HI-1(269)	2013	ADD. 367	382



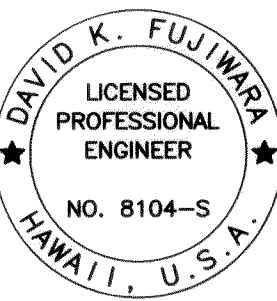
GDI AT STA. 128+24.77 - PLAN A
 Scale: 3/4" = 1'-0" SI3.2 SI3.2



TOP SLAB REINFORCING - PLAN B
 Scale: 3/4" = 1'-0" SI3.2 SI3.2



SECTION C
 Scale: 3/4" = 1'-0" SI3.3 SI3.2



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David K. Fujiwara
 KSF, INC. APRIL 30, 2014
 LIC. EXP. DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

GDI AT STA. 128+24.77
PLANS AND SECTION

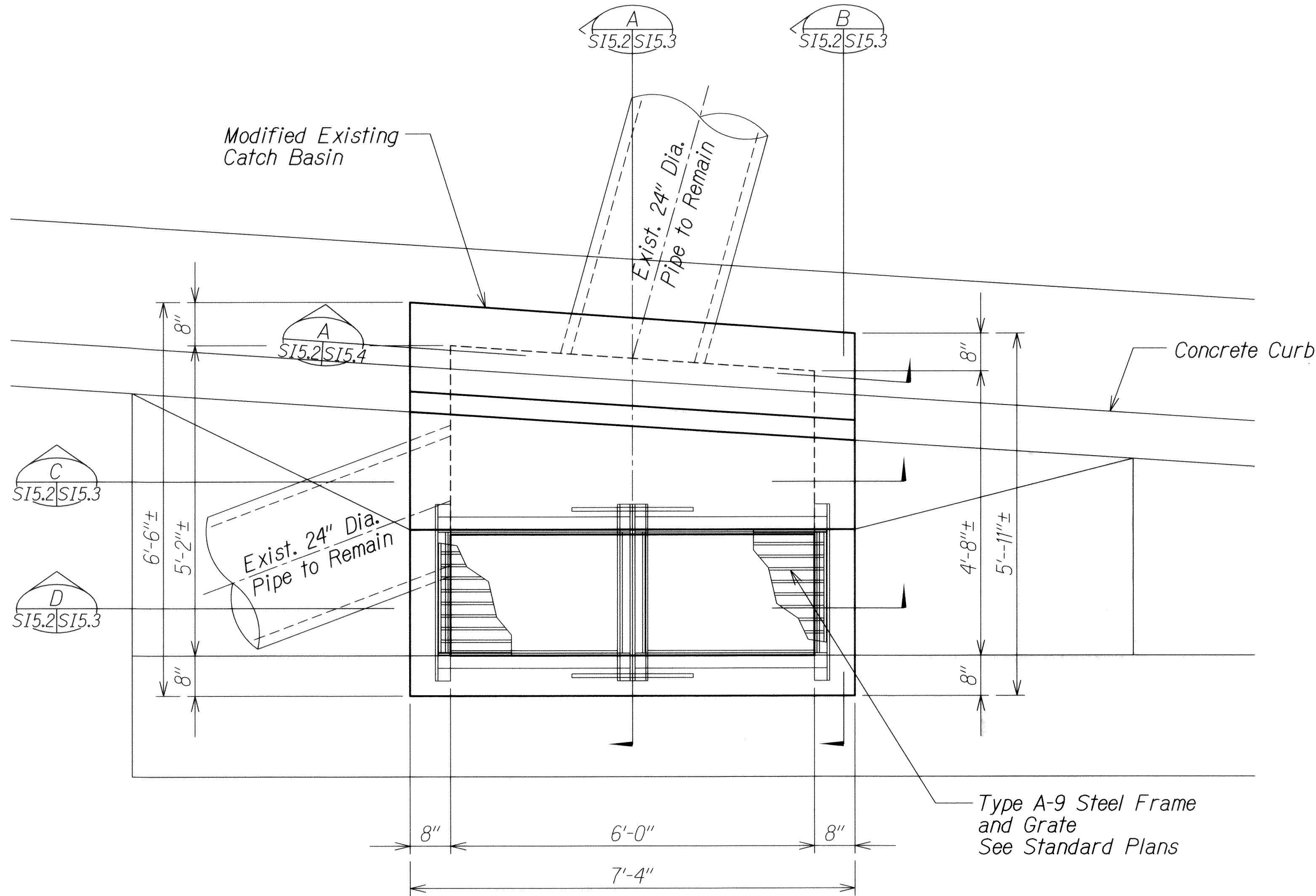
INTERSTATE ROUTE H-1 REHABILITATION
 Middle Street to Vicinity of Ward Avenue
 FAP No. 1M-HI-1(269)

Scale: As Shown Date: April 26, 2013

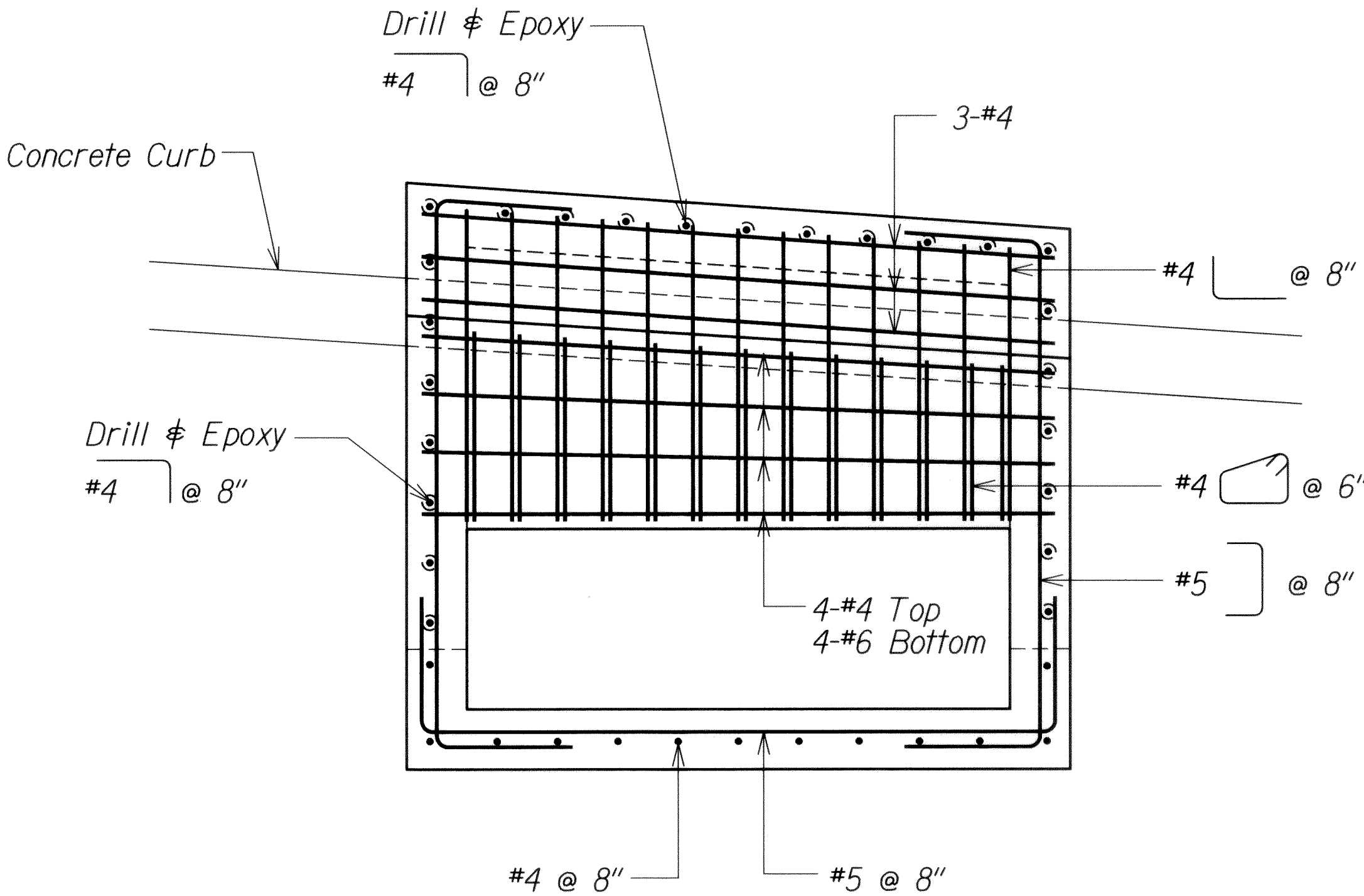
SHEET No. SI3.2 OF 86 SHEETS

6/14/13	1 Revise Section Callout
DATE	REVISION

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 373	382



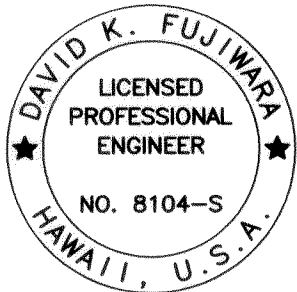
GDI AT STA. 187+90 - PLAN A
 Scale: 3/4" = 1'-0"



TOP SLAB REINFORCING PLAN B
 Scale: 3/4" = 1'-0"

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

DRAWING NAME: Z:\00 ONGOING\11-030 HI RESURFACING LIKE TO PUNCHBOWL\CAD\06-14-13 100%\HIRF-S501 ADD.DWG PLOT TIME: 06-14-13, 10:40 AM



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David K. Fujiwara
 APRIL 30, 2014
 LIC. EXP. DATE

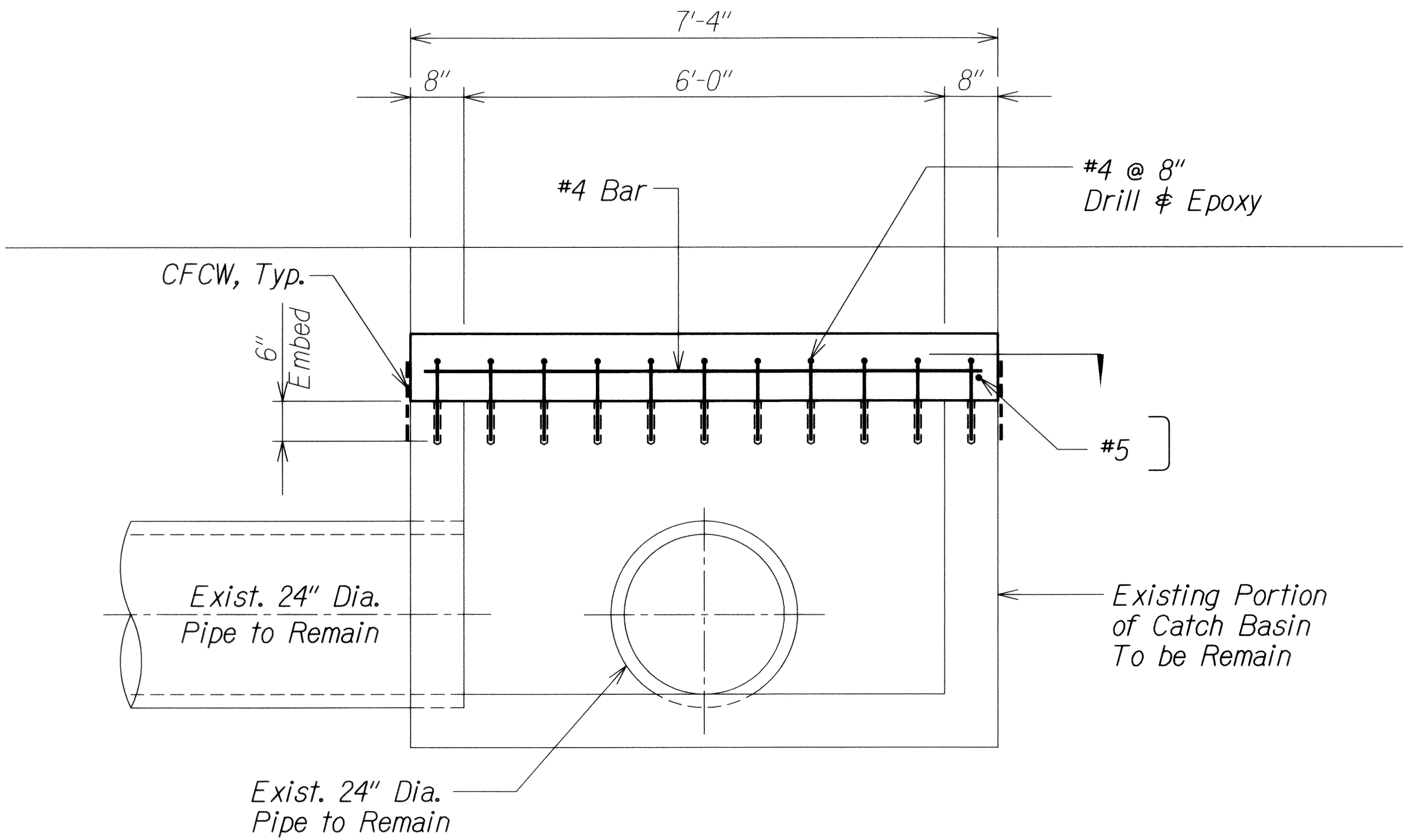
6/14/13	1	Revise Section Callout
DATE		REVISION

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
GDI AT STA. 187+90
PLANS
 INTERSTATE ROUTE H-1 REHABILITATION
 Middle Street to Vicinity of Ward Avenue
 FAP No. IM-HI-1(269)

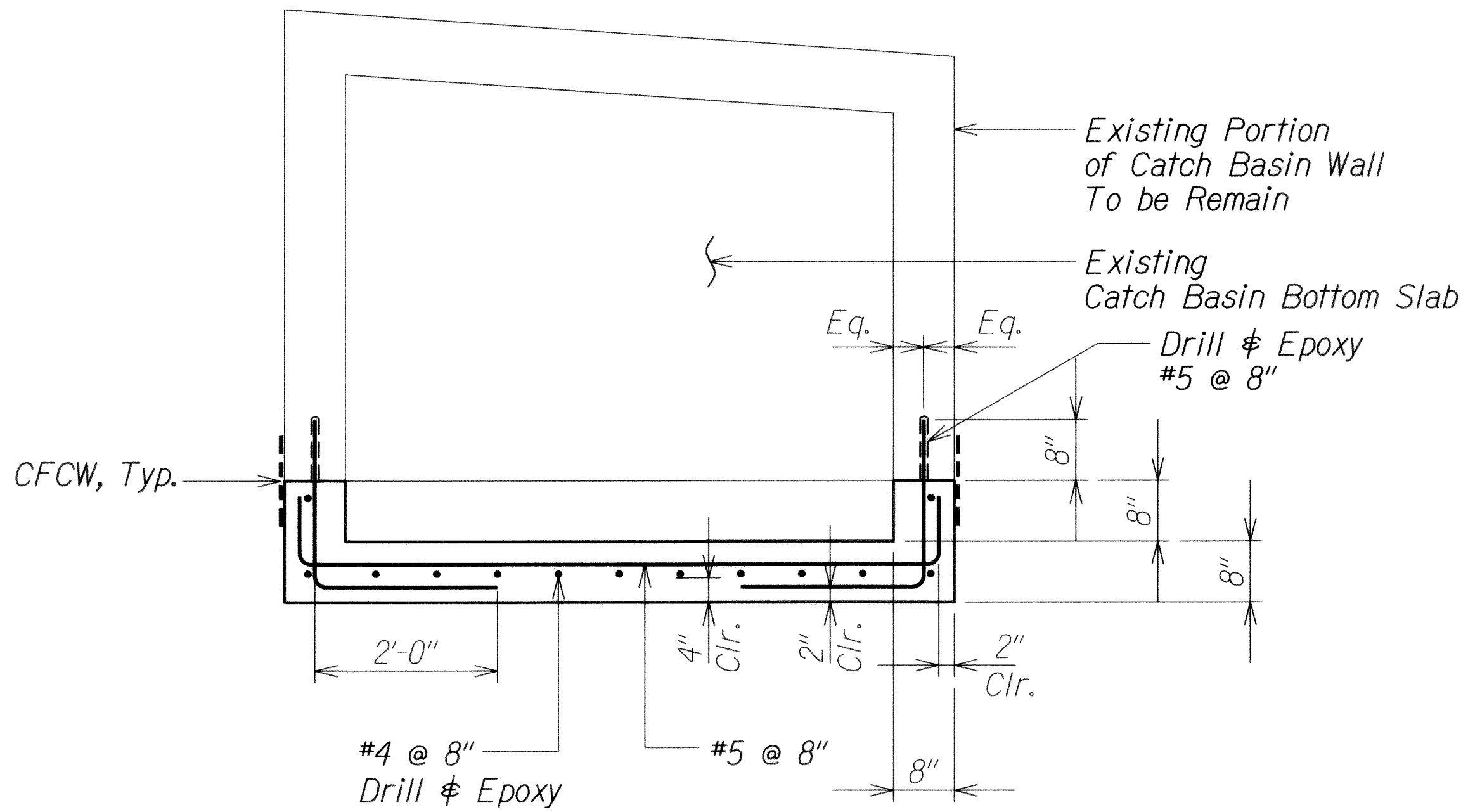
Scale: As Shown
 Date: April 26, 2013

SHEET No. S15.2 OF 86 SHEETS

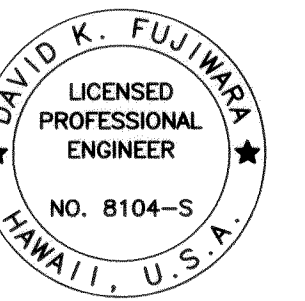
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(269)	2013	ADD. 375	382



SECTION A
Scale: 3/4" = 1'-0" **SI5.4 SI5.4** 1



WALL PLAN B
Scale: 3/4" = 1'-0" **SI5.4 SI5.4** 1



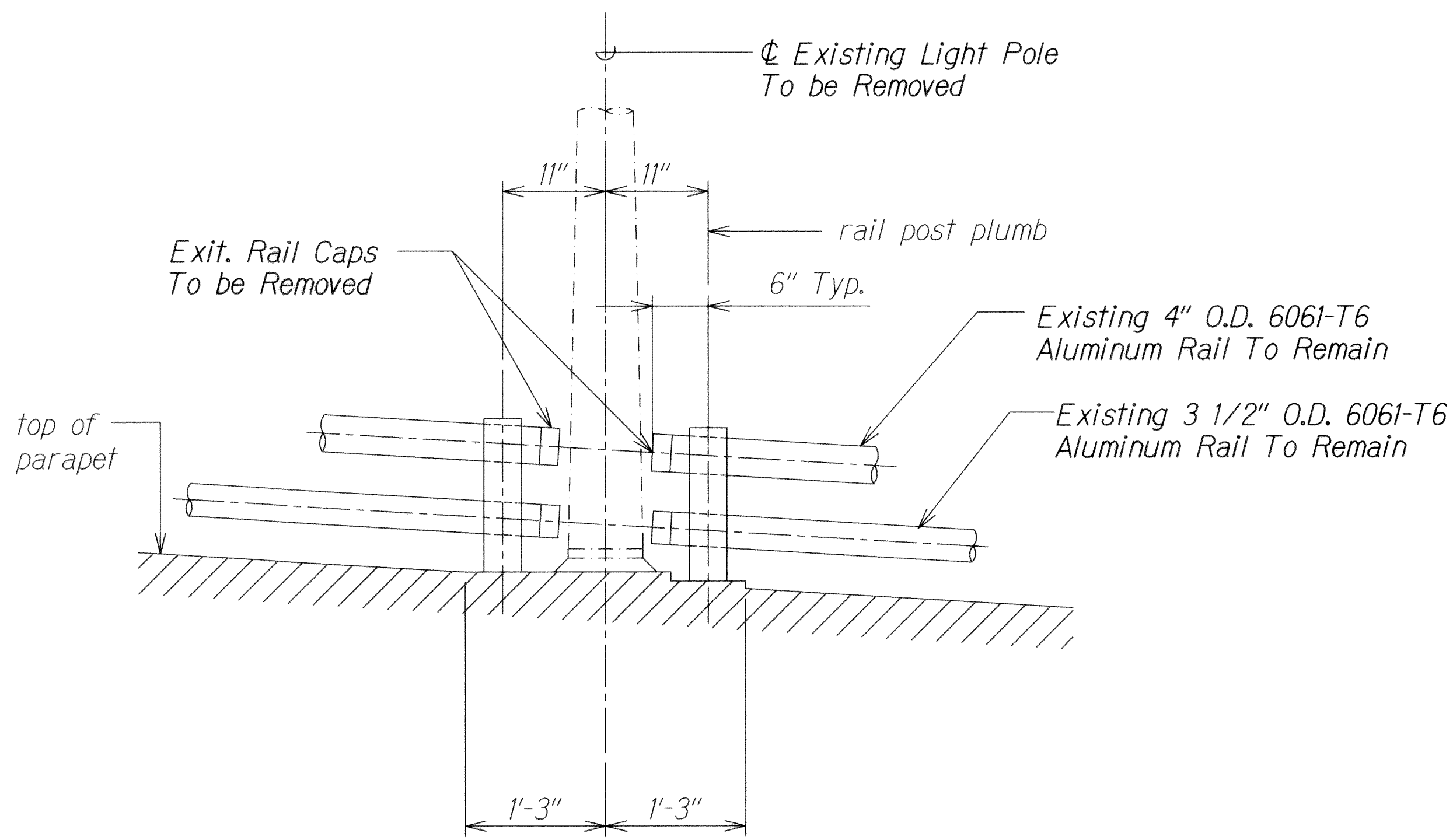
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David K. Fujiwara
KSF, INC. APRIL 30, 2014
LIC. EXP. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
GDI AT STA. 187+90
PLAN AND SECTION
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP No. IM-HI-1(269)
Scale: As Shown Date: April 26, 2013
SHEET No. SI5.4 OF 86 SHEETS

6/14/13	1 Revise Section Callout
DATE	REVISION

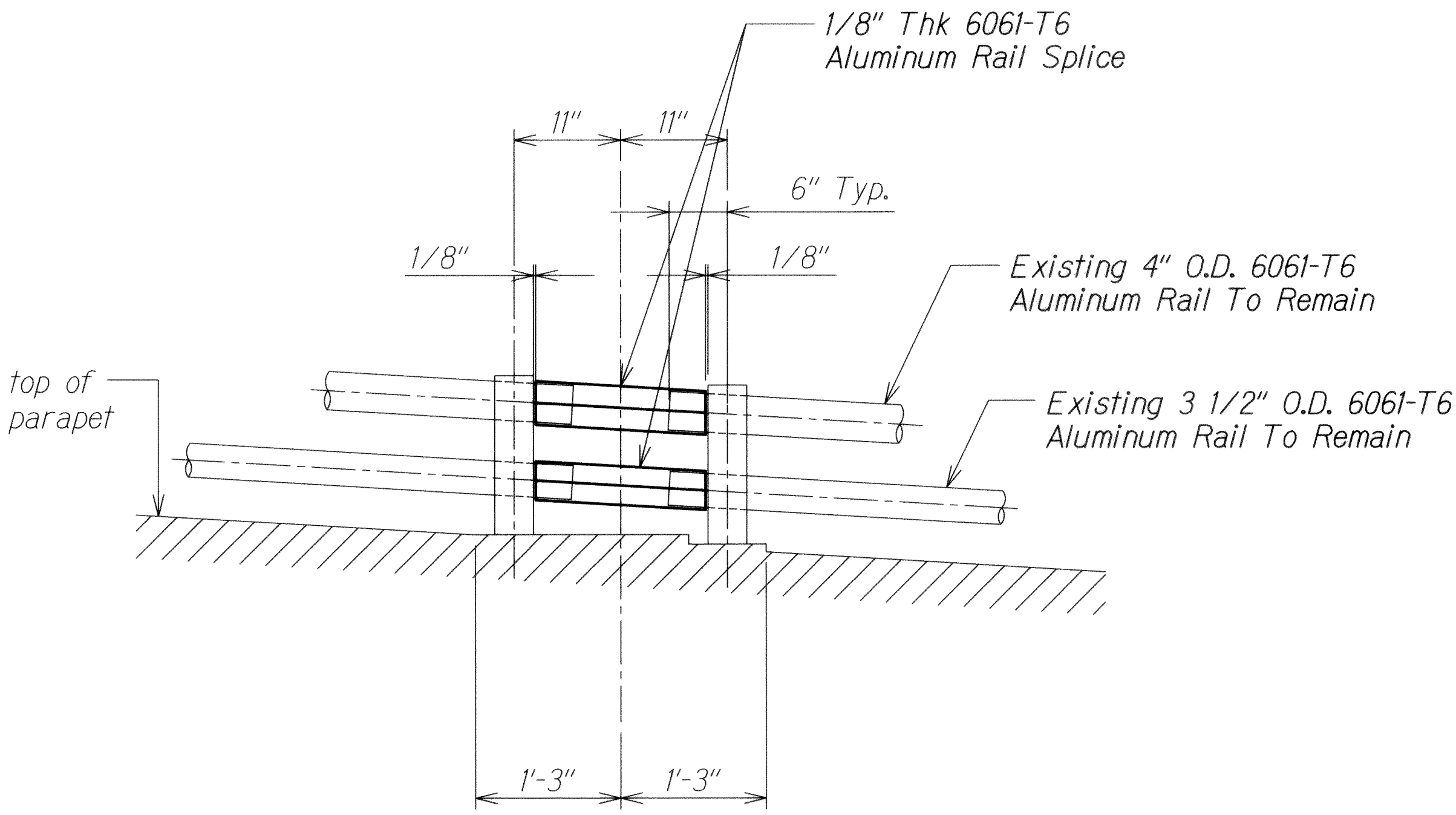
ADD. 375

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-H1-1(269)	2013	ADD. 377	382

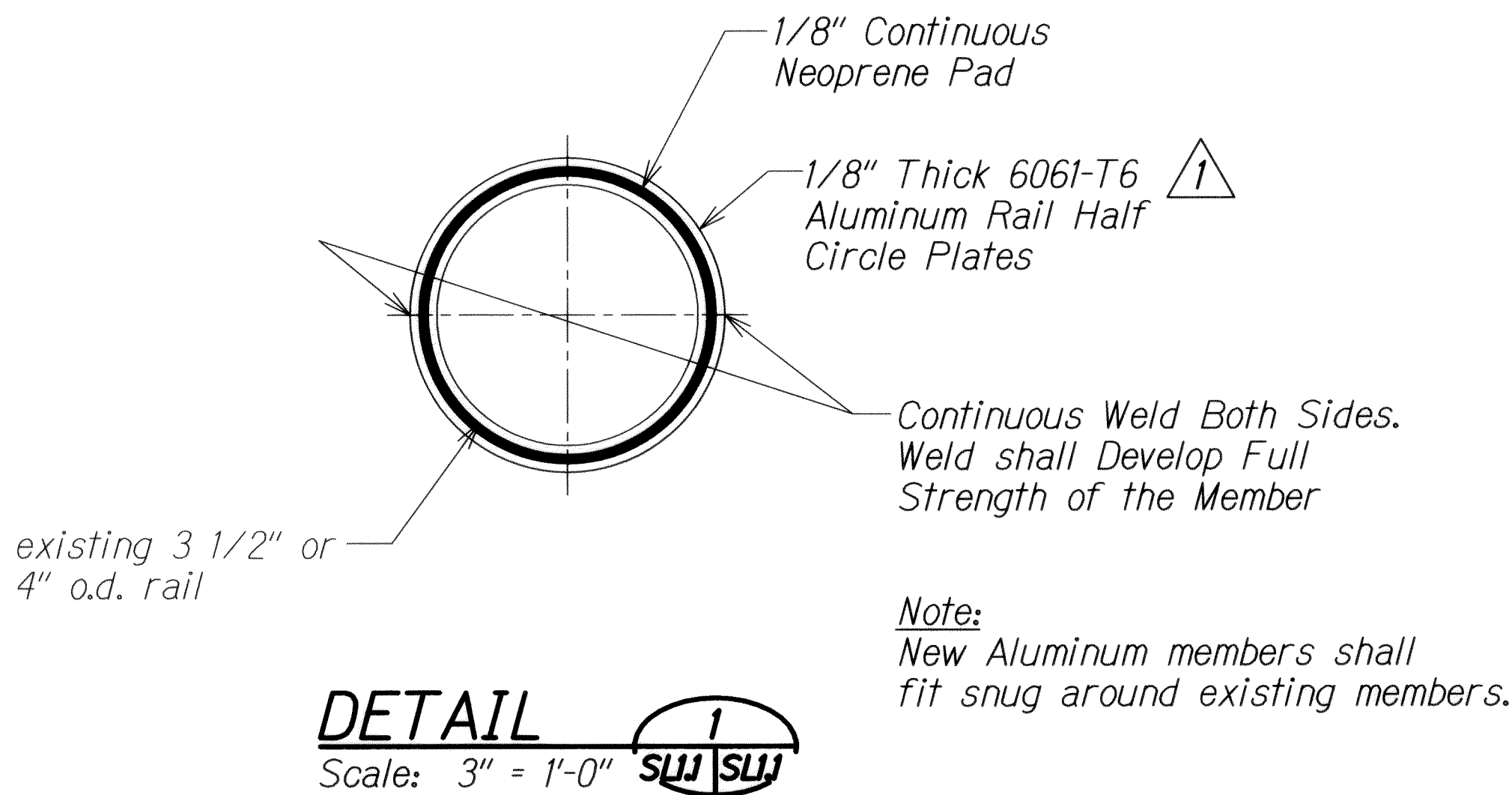


DEMO SECTION A
Scale: 1" = 1'-0"

Note:
The cost of the metal railing splice shall be considered incidental to the cost of removing of the light pole.



METAL RAILING SPLICE SECTION B
Scale: 1" = 1'-0"

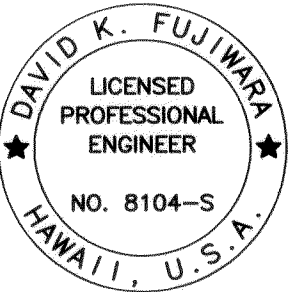


DETAIL 1
Scale: 3" = 1'-0"

Note:
New Aluminum members shall fit snug around existing members.

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

DRAWING NAME: Z:\00 ONGOING\11-030 H1 RESURFACING LIKELIKE TO PUNCHBOWL (CAD)\06-14-13 100% (H1R)-SRI01 ADD.DWG PLOT TIME: 06-14-13 10:41 AM



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David K. Fujiwara
KSF, INC. APRIL 30, 2014 LIC. EXP. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
METAL RAILING SPLICE DETAILS
INTERSTATE ROUTE H-1 REHABILITATION
Middle Street to Vicinity of Ward Avenue
FAP No. 1M-H1-1(269)
Scale: As Shown Date: April 26, 2013
SHEET No. SRIJ OF 86 SHEETS

6/14/13	1 Revise Note
DATE	REVISION