

GENERAL NOTES

1. The scope of work for this project consists of cold planing; asphalt paving; shoulder widening; applying pavement striping and marking; installing sidewalks and concrete bus pads; re-constructing concrete gutters; and replacing guardrails, end treatments and signs. The Kipapa Bridge (Roosevelt Bridge) is excluded from the project.
2. The Contractor is reminded of the requirements of Subsection 105.16 - Subcontracts.
3. The Contractor's attention is directed to the following Sections: Subsection 104.11 - Utilities and Services; Subsection 107.06 - Contractor Duty Regarding Public Convenience; and Section 645 - Work Zone Traffic Control.
4. At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic.
5. The location and existence of underground utilities, manholes, monuments and other structures as shown on the plans are from the latest available data, but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall make an independent check on the ground by probing and/or checking with the various utility companies and government agencies to verify the exact locations and depths of the existing utilities and obstructions. The Contractor shall exercise proper care in excavating and cold planing in the area. Whenever connections of new utilities are shown on the plans, the Contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavating new lines. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations. All damaged portions shall be replaced or repaired in accordance with the standards and specifications of the affected utility company at the Contractor's expense.
6. The Contractor shall notify in writing, the Oahu Transit Services, Inc. (Tel. No. 848-4571) two (2) weeks prior to construction, informing them of location, scope of work, closure of the name of the highway and/or traffic lanes, and dates of closure.
7. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting construction operations.
8. The Contractor shall indemnify and be solely responsible for the protection of adjacent properties, utilities and existing structures from damages due to construction. Repairing any damages shall be at the Contractor's own expense, to the satisfaction of the Engineer.
9. Existing drainage system shall be functional at all times during construction. The Contractor shall furnish materials, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to the various contract items.
10. Earth swale shall be graded to drain. This work shall be considered incidental to the various contract items.
11. Smooth riding connections shall be constructed at all limits of project, including the beginning and end of project, connecting approaches, side streets, walkways and driveways as shown on the plans and/or as directed by the Engineer. This work shall be considered incidental to the various contract items.
12. All saw cutting and safety edge work shall be considered incidental to Hot Mix Asphalt Pavement, Mix No. IV.
13. Dressing of shoulder, sidewalk and bus turnout shall consist of clearing, grubbing, grading, reshaping and compacting the unpaved shoulders with suitable material as shown on the plans and/or as directed by the Engineer. Suitable materials shall include materials from roadway excavation, including topsoil and base material therefrom and if necessary, additional materials from borrow outside the limits of the right of way. This Work shall be considered incidental to the various contract items.

14. The Contractor shall provide and maintain for access to and from all existing driveways, sidewalks, ADA access routes, side streets and cross streets at all times. This work shall be considered incidental to the various contract items.
15. The Contractor shall remove and dispose of all existing raised pavement markers, thermoplastic line markings, traffic tapes, and epoxy adhesives prior to the overlaying of asphalt concrete. This work shall be considered incidental to Hot Mix Asphalt Pavement, Mix No. IV.
16. No material and/or equipment shall be stockpiled or otherwise stored within the highway right-of-way except at locations designated in writing and approved by the Engineer. If use of location is approved by the Engineer, the Contractor shall obtain a permit to use the property within the highway right-of-way from the Oahu District Office at telephone no. 831-6712.
17. The exact locations and limits of areas to be filled with leveling course, cold-planed, reconstructed, or excavated shall be determined in the field by the Engineer.
18. All holes, depressions and wheel ruts shall be filled and compacted with Hot Mix Asphalt Pavement, Mix No. V prior to resurfacing. This work shall be considered incidental to the various contract items.
19. Prior to his paving operations, the Contractor shall be responsible for locating, preserving and marking all utility and highway facilities that will require adjustments to the new finished grade. The Contractor shall submit to the Engineer a list of all items, including water, drainage, sewer, gas, electrical, telephone and cable utilities, etc. to be adjusted to the new finished grade.
20. After completion of resurfacing, the Contractor and the Engineer will test for and determine ponding areas (i.e. low spots within the resurfaced area). It shall be the responsibility of the Contractor to correct and resurface and/or repair all such ponding areas at no cost to the State.
21. The Contractor shall verify the presence of existing aerial and underground utilities which may conflict with construction activities and shall coordinate with the utility company for temporary relocation, as necessary. All costs associated with the temporary relocation shall be borne by the Contractor.
22. The Contractor shall obtain all necessary permits prior to start of work at his own cost.
23. The exact locations and limits of guardrail improvements shall be determined in the field by the Engineer.
24. The Contractor shall submit maintenance plans and schedules, including traffic detours, road or lane closures, lane switches, and the placement of temporary traffic control devices, to the Engineer for acceptance prior to construction.
25. No section where guardrails have been removed shall be left unshielded at the end of each work day. Open sections shall be shielded by portable physical barriers. Furnishing, installing and maintaining physical barriers shall be considered incidental to the various contract items.
26. All work specified in the contract but not listed separately in the proposal schedule shall be considered incidental to the various contract items.
27. The Contractor shall allow only one truck to cross Kipapa Bridge at a time during road closure hours. Truck weight shall not exceed 32 tons. Maximum weight limit for the Kipapa Bridge is 32 tons. Contractor must have a permit to operate or transport overweight vehicles and load over State Highways. This permit is obtained from the State Department of Transportation, Oahu District Office, 727 Kakoi Street.

LEGEND

	Concrete Areas		Existing Sewer Manhole
	Reconstruction Areas		Adjusted Sewer MH Frame/Cover
	Cold Planing Areas		New Sewer Manhole
	Resurfacing Limits		Existing 6" Gas Line
	Existing Electrical Line		New 6" Gas Line
	New Electrical Line		Existing Gas Valve Box
	Existing Joint Pole		Adjusted Gas Valve Box
	Existing Power Pole		Existing Gas Manhole
	Existing Electric Manhole		Adjusted Gas MH Frame/Cover
	Adjusted Elec. MH Frame/Cover		Existing Monument
	Existing Telephone Line		Adjusted Monument
	New Telephone Line		Existing 24" Drain Line
	Existing Telephone Pole		New 24 " RCP Drain Line
	Existing Telephone Manhole		Existing Storm Drain Manhole
	Adjusted Tele. MH Frame/Cover		Adjusted Storm Drain MH Frame/Cover
	Existing Signal Corps Line		New Storm Drain Manhole
	New Signal Corps Line		Existing Grated Drop Inlet
	Existing TV Cable		Existing Catch Basin
	New TV Cable		Existing Traffic Sign
	Existing Sandwich Isles Communication Line		Existing Highway Lighting Standard
	Existing 12" Water Line		Existing Highway Lighting Pullbox
	Existing Water Manhole		Existing Traffic Signal Pole
	Adjusted Water MH Frame/Cover		New Traffic Signal Pole
	Existing Water Air Valve		Existing Traffic Signal Pullbox
	Adjusted Water Air Valve		Adjusted Traffic Signal Pullbox
	New Water Air Valve		New Traffic Signal Pullbox
	Existing Water Valve Box		Existing Metal Guardrail
	Adjusted Water Valve Box		New Metal Guardrail
	Existing Water Meter		Existing Chain Link Fence
	Adjusted Water Meter		New Chain Link Fence
	Existing Fire Hydrant		
	Existing Sewer Line		
	New 12" Sewer Line		

1 1/22/14 Revised Note #12 and Added Note #27.

DATE REVISION

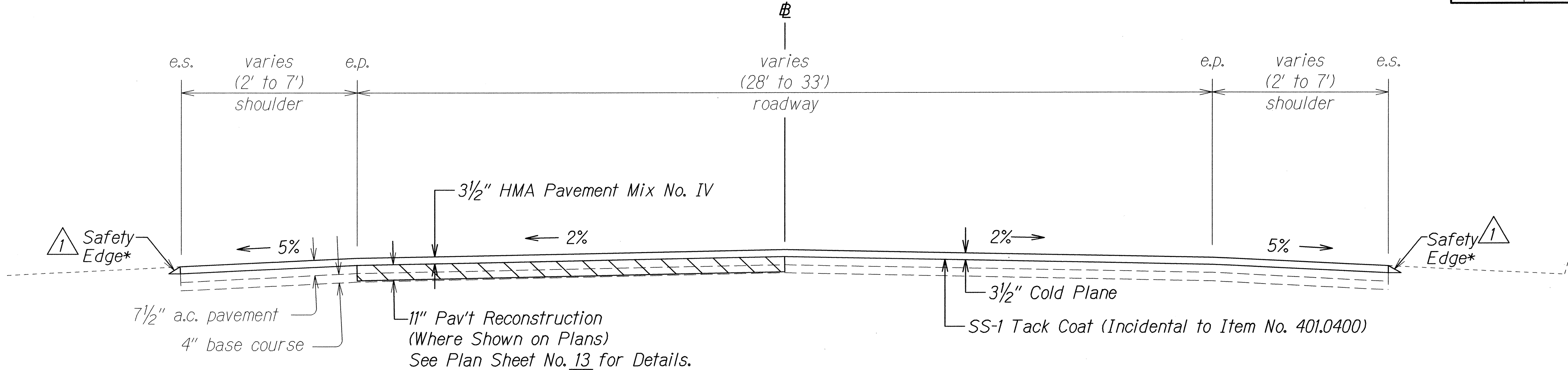
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**GENERAL NOTES AND LEGEND**  
**KAMEHAMEHA HIGHWAY RESURFACING**  
**Vicinity of Ka Uka Boulevard**  
**to Vicinity of Waihau Street**  
**Federal Aid Project No. NH-099-1(029)**

Date: Sept., 2013

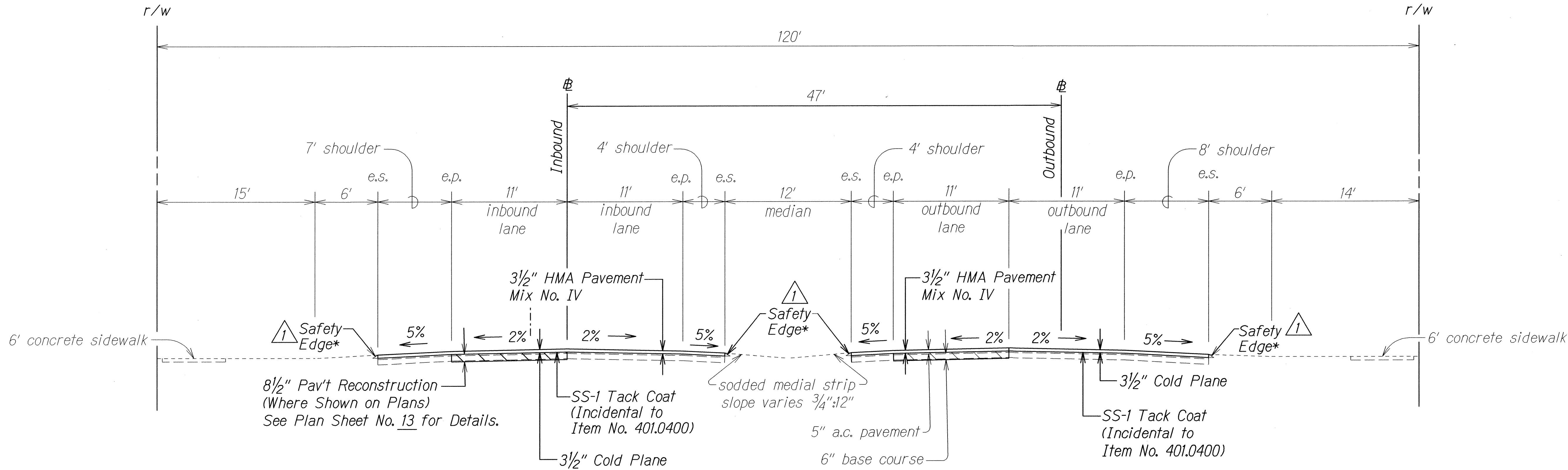
SHEET No. 1 OF 2 SHEETS

ADD. 3

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	ADD.10	84



**TYPICAL SECTION**  
**# STA. 13+19.80 to INBOUND # STA. 6+69.51**  
 Scale: 3/8"=1'-0"



\*See Plan Sheet No. 13 for Details.

**TYPICAL SECTION**  
**INBOUND # STA. 6+69.51 to INBOUND # STA. 56+00.00**  
 Scale: 3/16"=1'-0"

1/22/14 Added Safety Edge.

DATE REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TYPICAL SECTIONS**  
KAMEHAMEHA HIGHWAY RESURFACING  
Vicinity of Ka Uka Boulevard  
to Vicinity of Waihau Street  
Federal Aid Project No. NH-099-1(029)

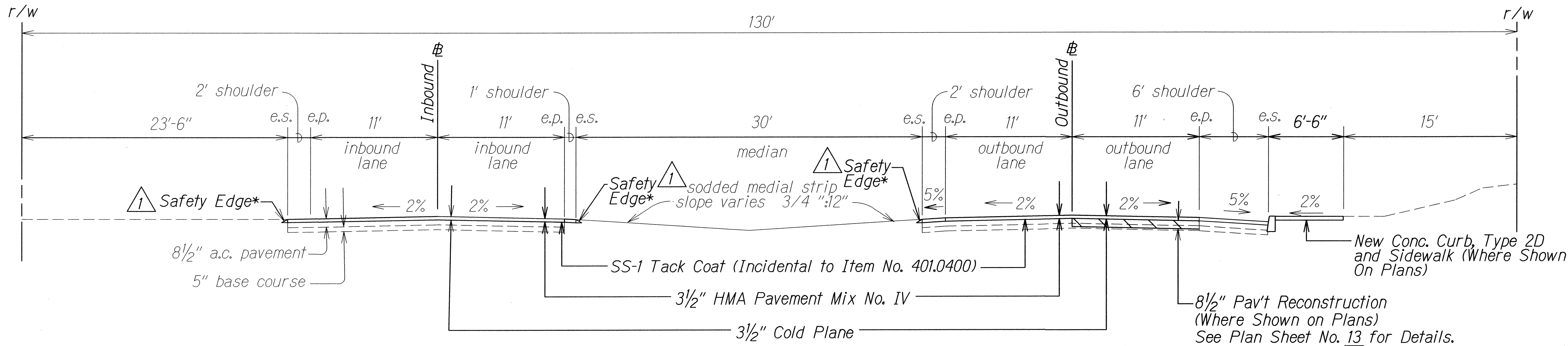
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SHEET No. 2 OF 6 SHEETS

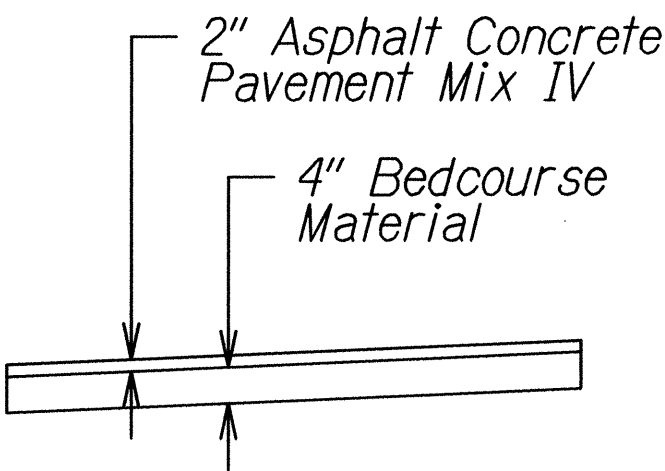
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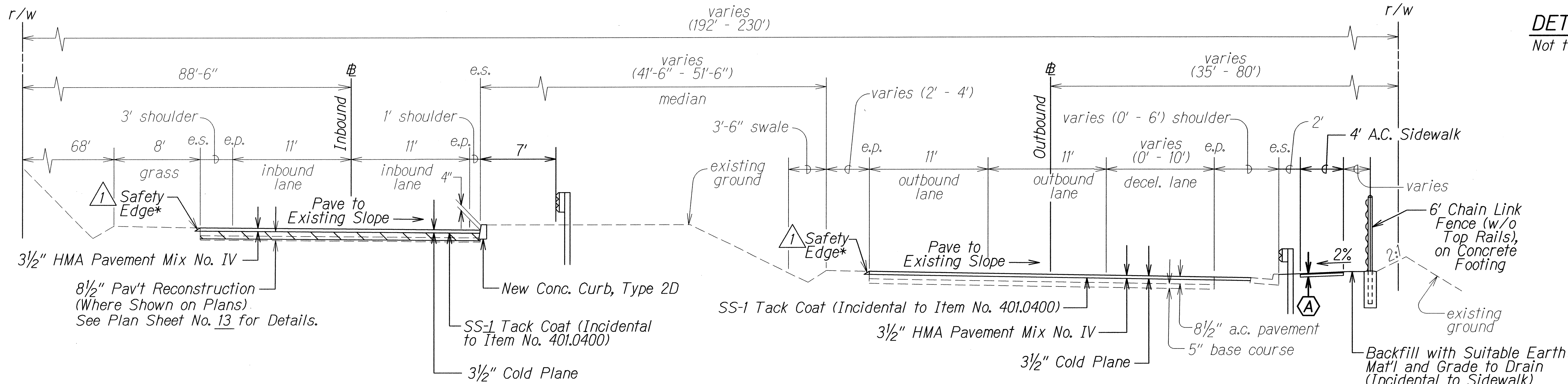
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HAWAII	HAW.	NH-099-1(029)	2014	ADD.11	84



**TYPICAL SECTION**  
**INBOUND Sta. 56+00.00 to INBOUND Sta. 66+00.00**  
 Scale: 3/16" = 1'



**DETAIL A**  
 Not to Scale



**TYPICAL SECTION**  
**INBOUND Sta. 66+00.00 to INBOUND Sta. 81+00.00**  
 Scale: 3/16" = 1'

1 \*See Plan Sheet No. 13 For Details.

1 1/22/14 Added Safety Edge.

DATE REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TYPICAL SECTIONS**  
**KAMEHAMEHA HIGHWAY RESURFACING**  
Vicinity of Ka Uka Boulevard  
to Vicinity of Waihau Street  
Federal Aid Project No. NH-099-1(029)  
Scale: 3/16" = 1'-0" Date: Sept., 2013

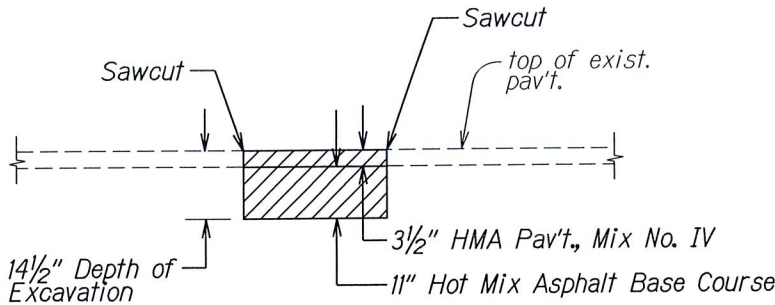
SHEET No. 3 OF 3 SHEETS



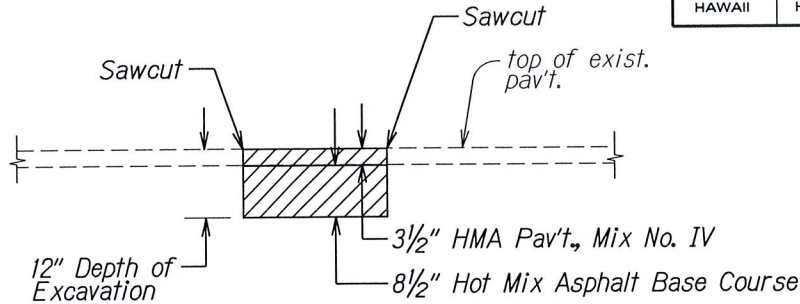
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HAWAII	HAW.	NH-099-1(029)	2014	ADD.13	84

Notes:

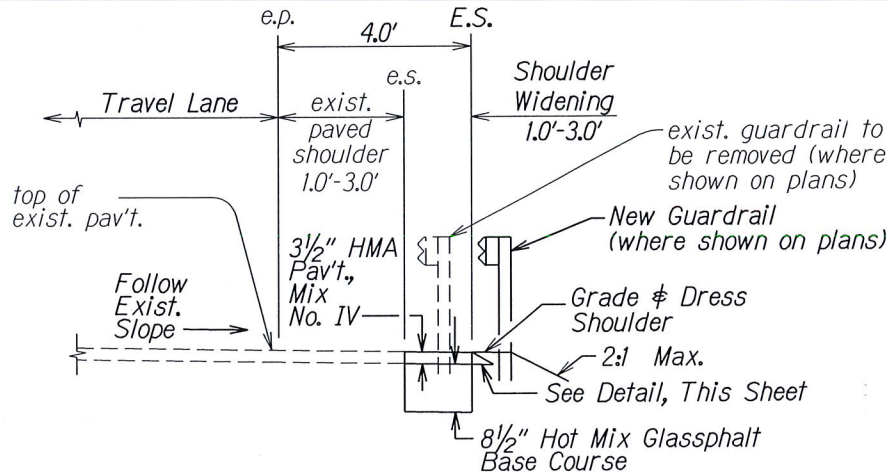
- Prior to placement of the asphalt base course, the exposed subbase or subgrade shall be recompactd to a dense and unyielding condition. The work shall be considered incidental to the Hot Mix Asphalt Base Course.
- The minimum width of pavement reconstruction is shown on the plans. Additional reconstruction width required by the Contractor to adequately accommodate paving equipment for placement in accordance with the specifications is assumed to be 7' wide and has been accounted for in the estimated quantities for Hot Mix Asphalt Pavement Mix No. IV and Hot Mix Asphalt Base Course. Reconstruction widths greater than 7' for Contractor's convenience will not be paid.



TYPICAL PAVEMENT  
RECONSTRUCTION DETAIL  
KA UKA BLVD. TO LANIKUHANA AVE.  
( $\pm$  STA. 0+00 to  $\pm$  STA. 11+00)  
Not to Scale

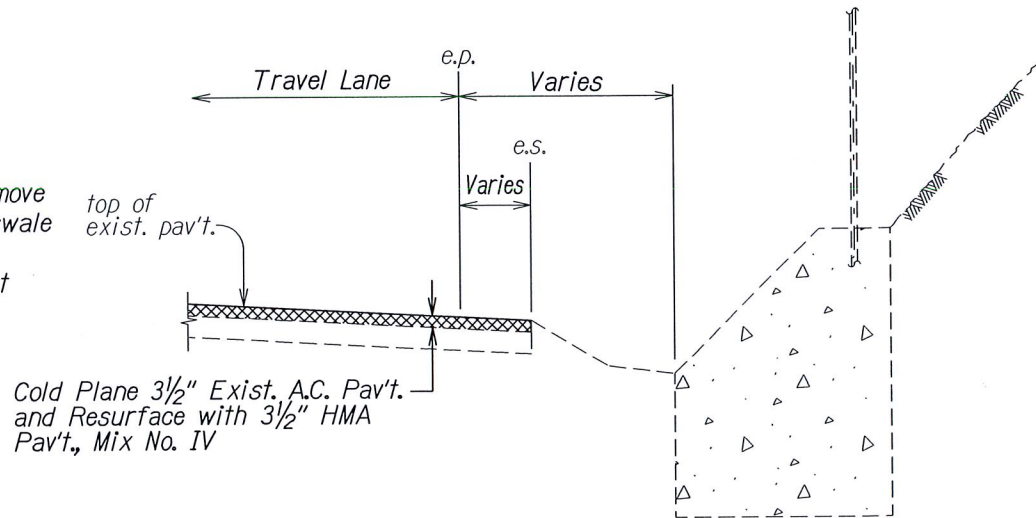


TYPICAL PAVEMENT  
RECONSTRUCTION DETAIL  
LANIKUHANA AVE. TO WAIHAU ST.  
( $\pm$  STA. 11+00 to  $\pm$  STA. 81+00)  
Not to Scale

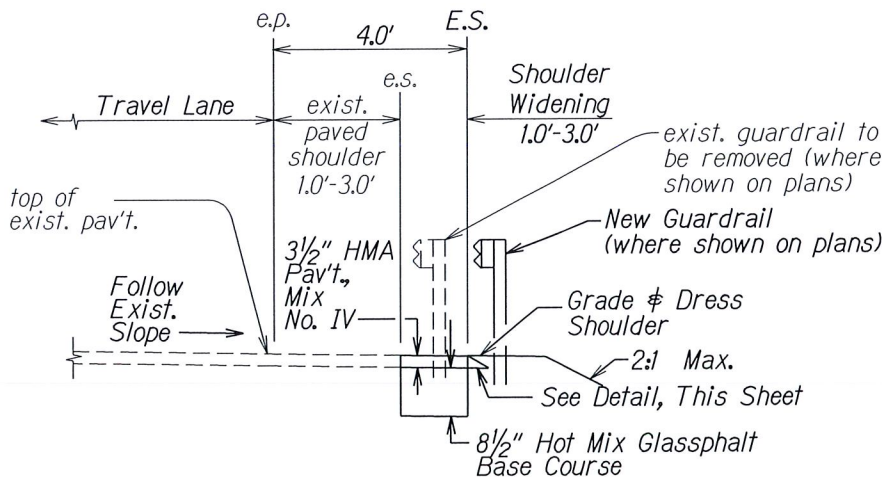


1 TYPICAL SHOULDER WIDENING DETAIL  
FOR 8.0' GUARDRAIL POST  
Not to Scale

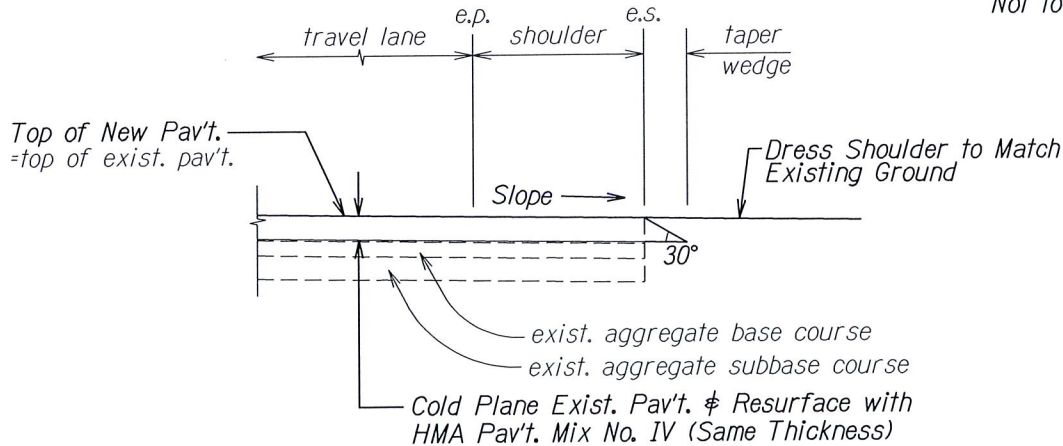
Note: On the Wahiawa side of Kipapa Bridge, the Contractor shall remove boulders and debris from the swale including brooming off prior to cold-planing/paving the adjacent shoulder. See Hydraulics Plan Sheets H3 to H4 for gutter reconstruction details.



SHOULDER PAVING DETAIL  
AT EXISTING CHAIN LINK BARRIER  
(near Kipapa Bridge)  
Not to Scale



1 TYPICAL SHOULDER WIDENING DETAIL  
FOR 6.0' GUARDRAIL POST  
Not to Scale



1 TYPICAL PAVEMENT EDGE DETAIL (FOR COLD PLANING PROJECT)  
Not to Scale

Note: Contractor shall mount a device directly on the paver screed extension to provide a 30° beveled shoulder edge.

1 1/23/14 Revised Details.

DATE REVISION

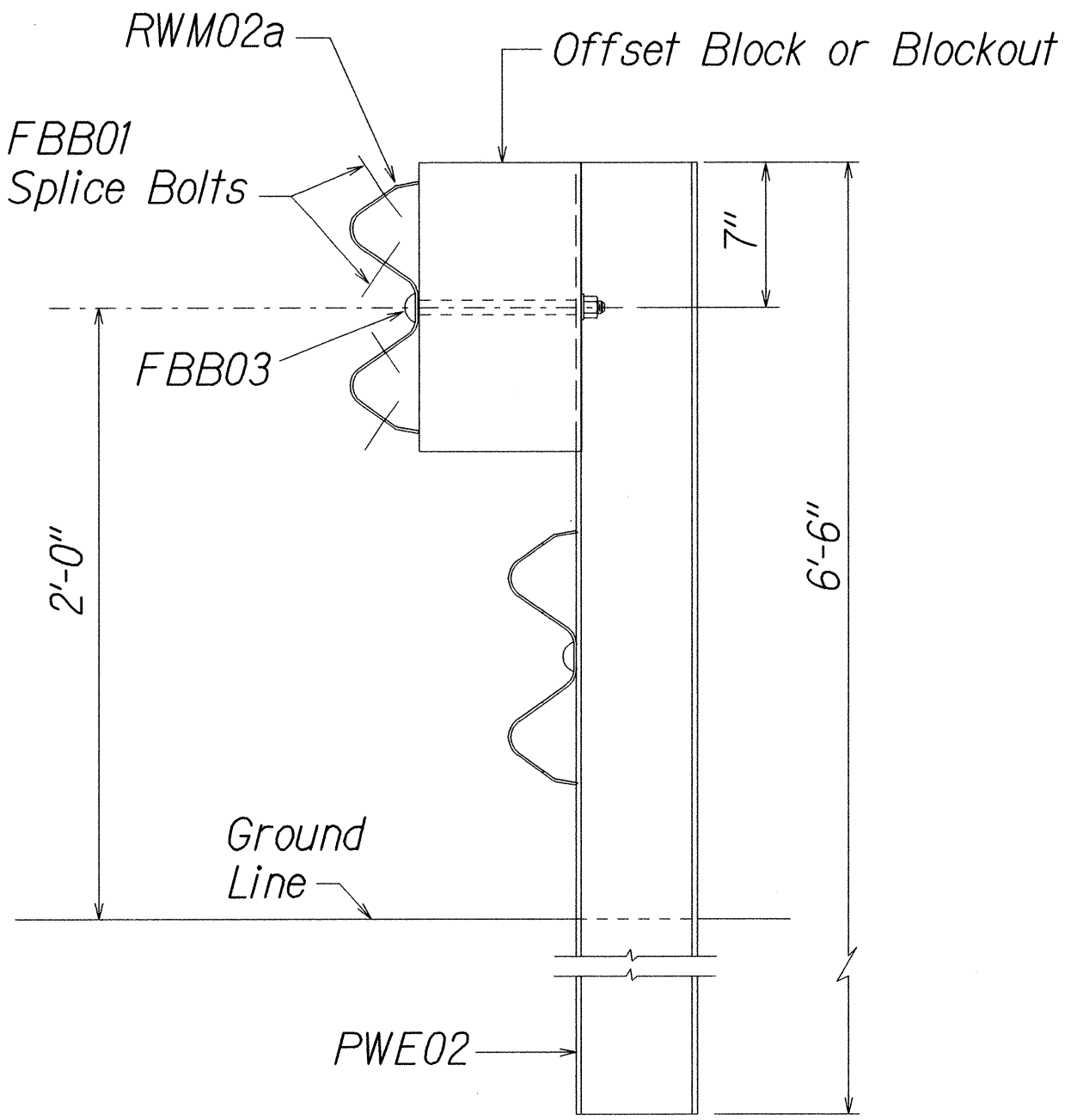
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**TYPICAL DETAILS**  
KAMEHAMEHA HIGHWAY RESURFACING  
Vicinity of Ka Uka Boulevard  
to Vicinity of Waihaui Street  
Federal Aid Project No. NH-099-1(029)

Scale: NTS Date: Sept., 2013

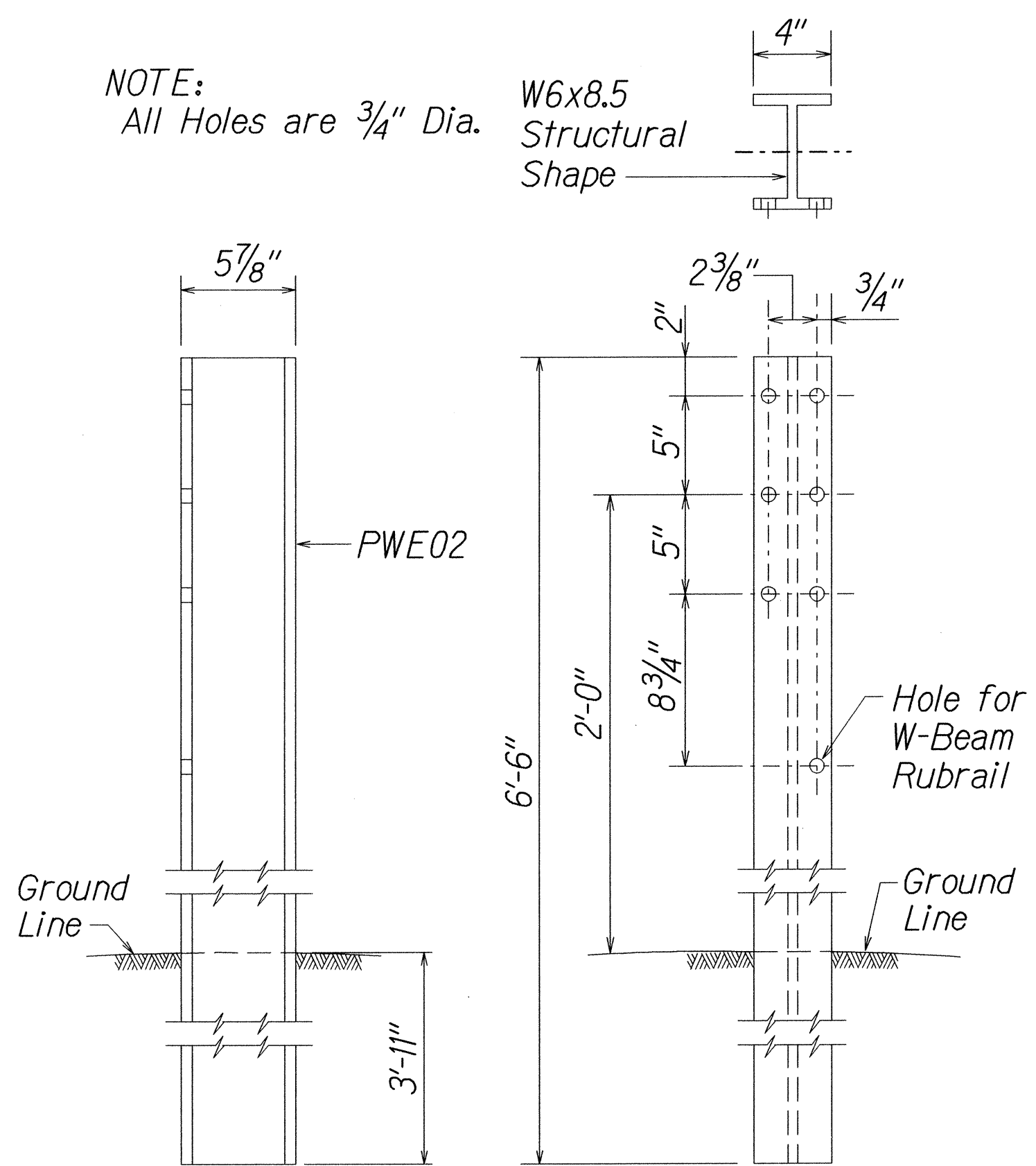
SHEET No. 2 OF 6 SHEETS



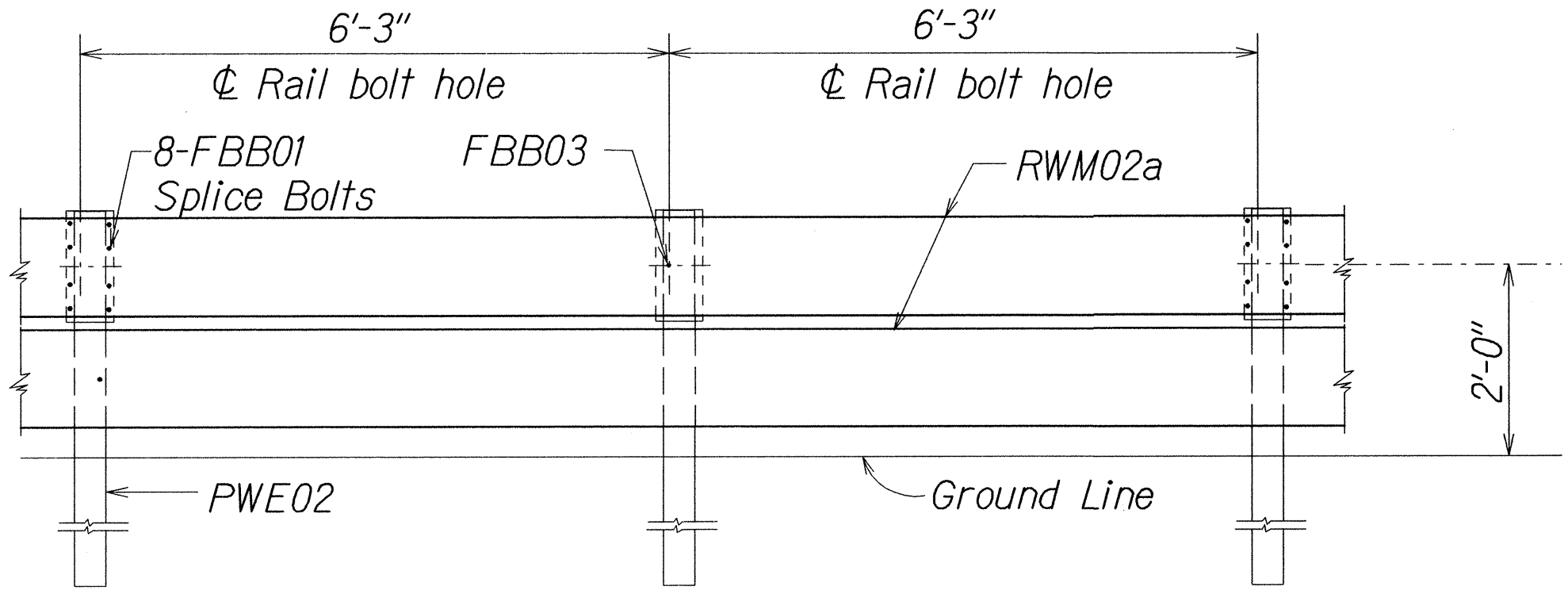




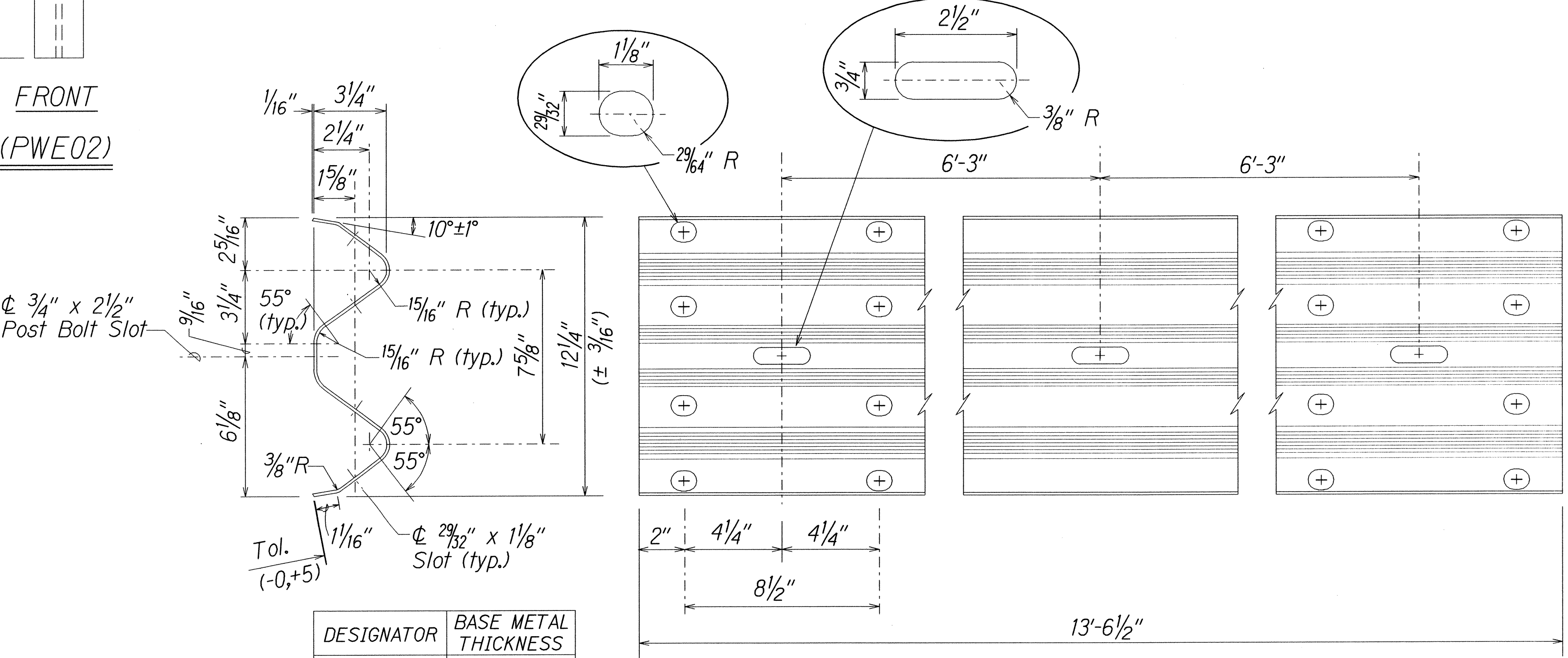
ELEVATION  
STRONG POST RUBRAIL  
(W-BEAM) GUARDRAIL



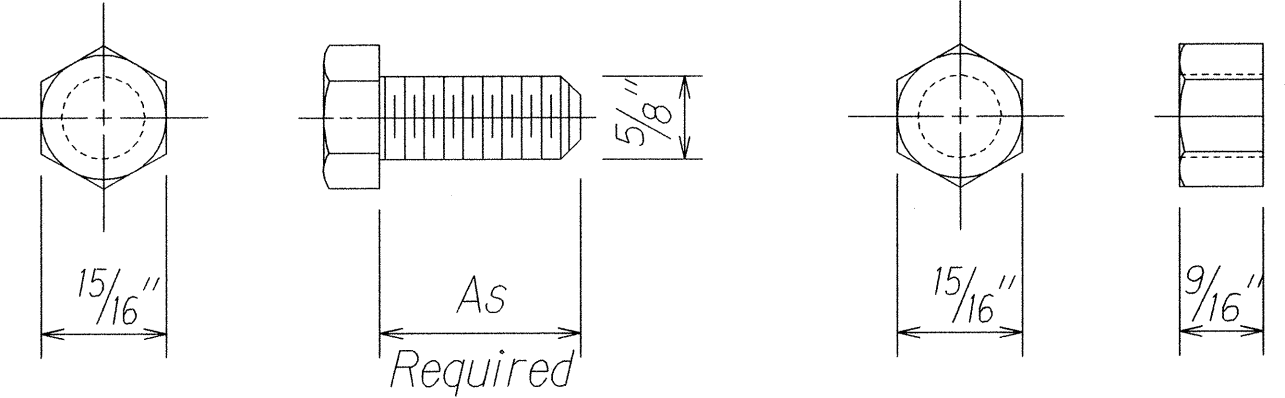
SIDE FRONT  
W-BEAM STRONG POST (PWE02)



ELEVATION  
STRONG POST RUBRAIL (W-BEAM) GUARDRAIL WITH  
RECYCLED OFFSET BLOCK OR PLASTIC BLOCKOUT



2 SPACE W-BEAM GUARDRAIL (RWM02a)



HEX BOLT & NUT (FBX16a)

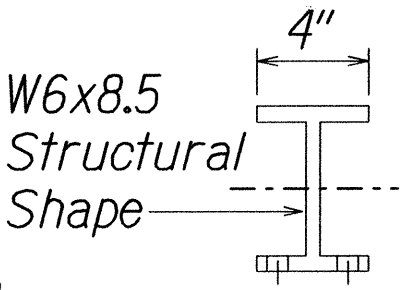
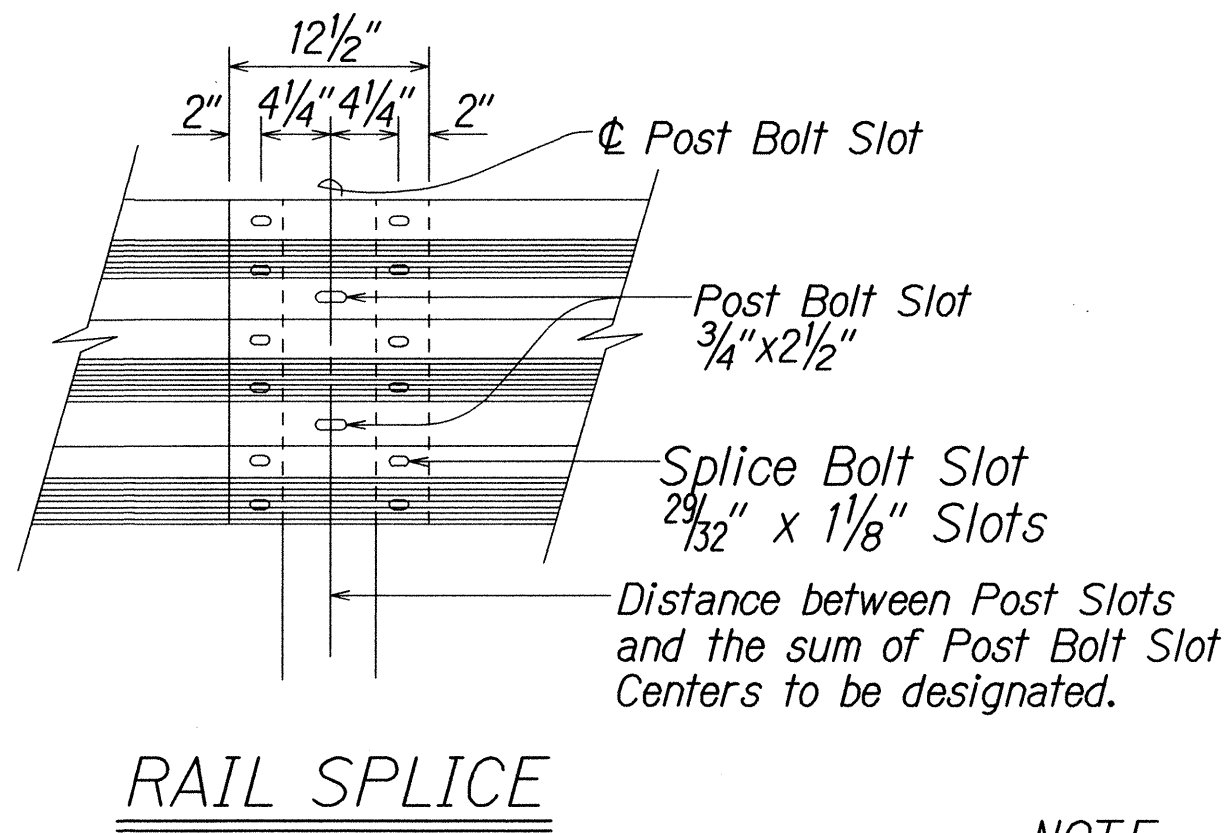
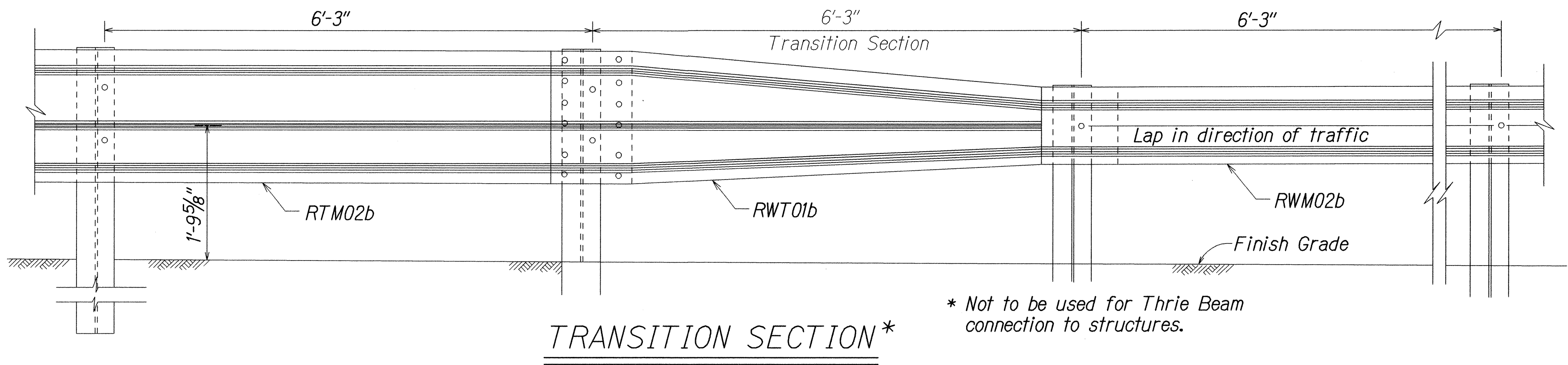
1/14/14 Inserted updated sheet.

DATE REVISION

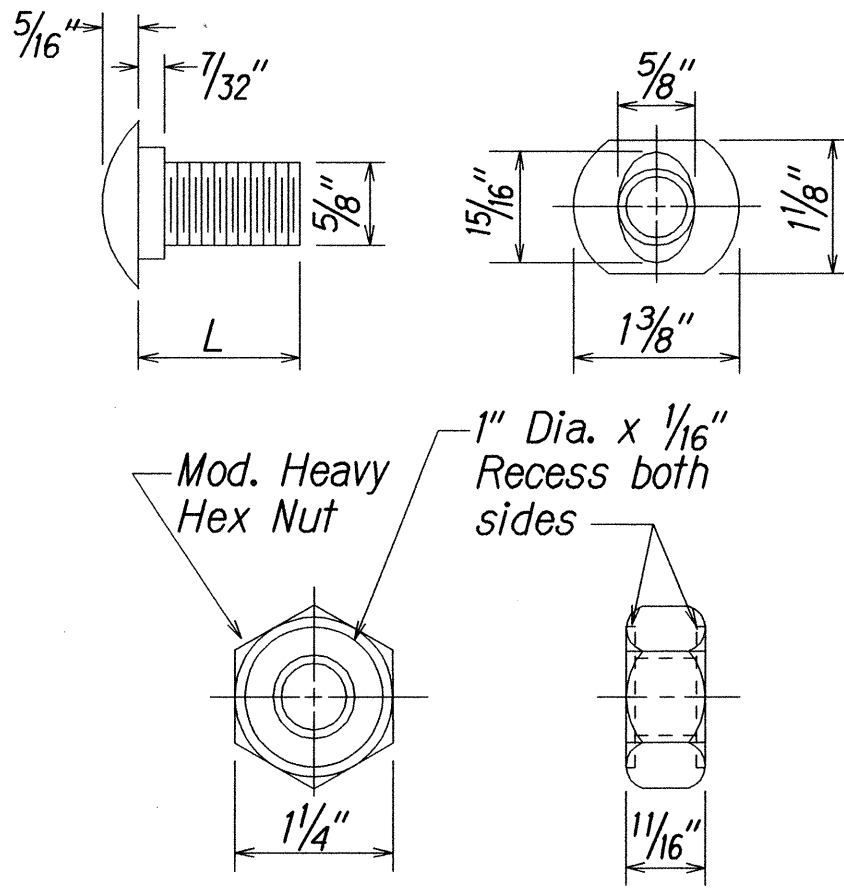
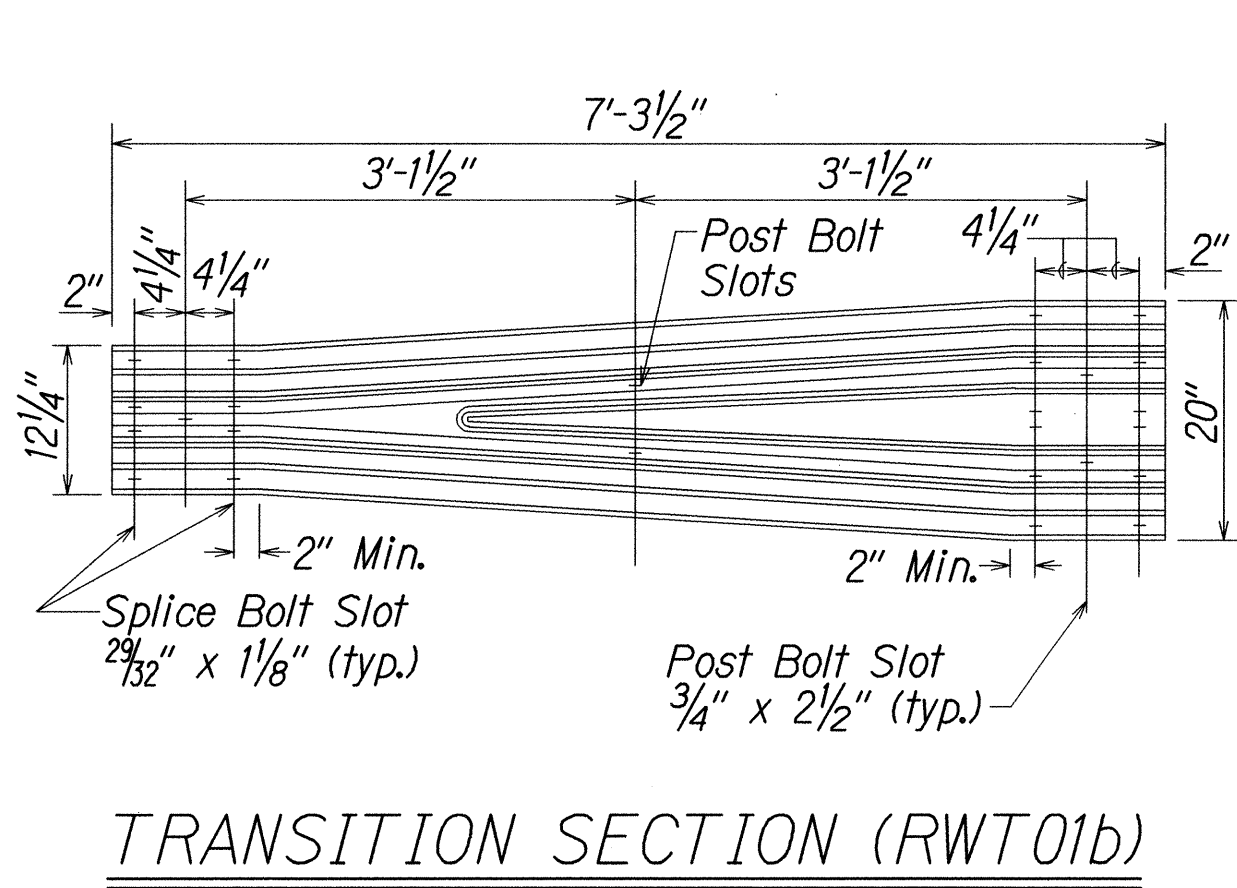
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**STRONG POST RUBRAIL  
(W-BEAM) GUARDRAIL**  
KAMEHAMEHA HIGHWAY RESURFACING  
Vicinity of Ka Uka Boulevard  
to Vicinity of Waihau Street  
Federal Aid Project No. NH-099-1(029)  
Scale: Not to Scale Date: January 14, 2014  
SHEET No. 4 OF 12 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	ADD.29	84

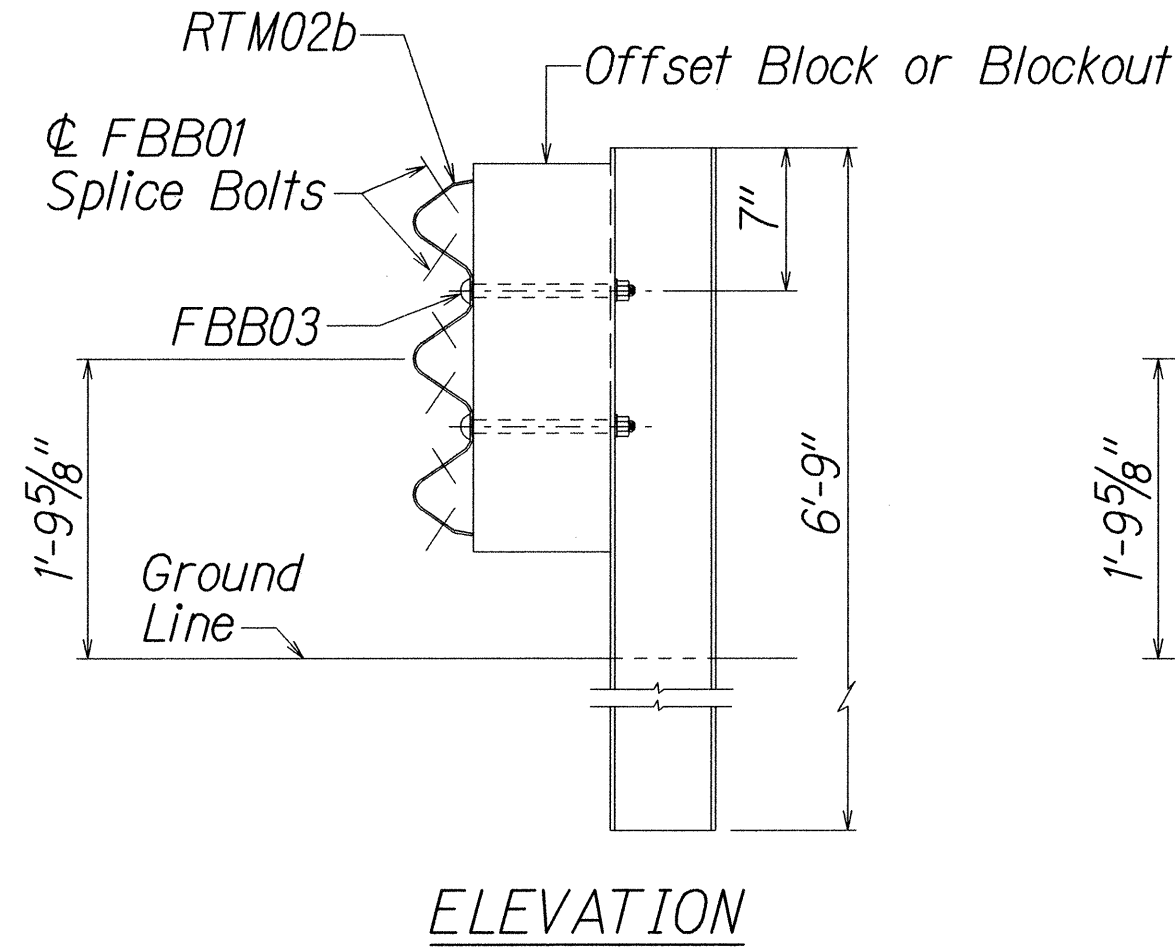
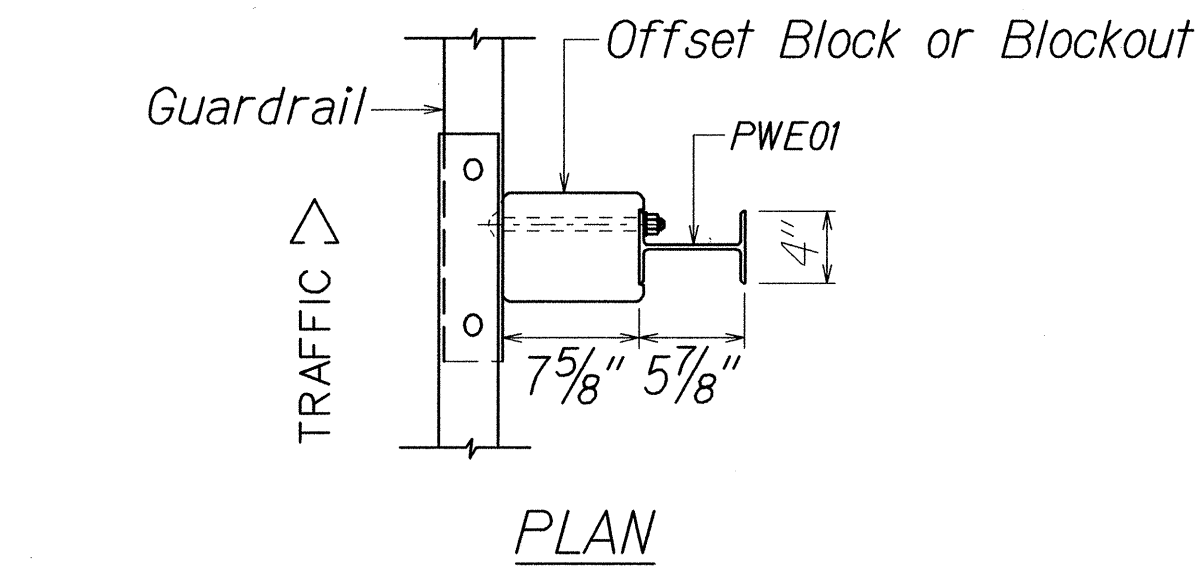
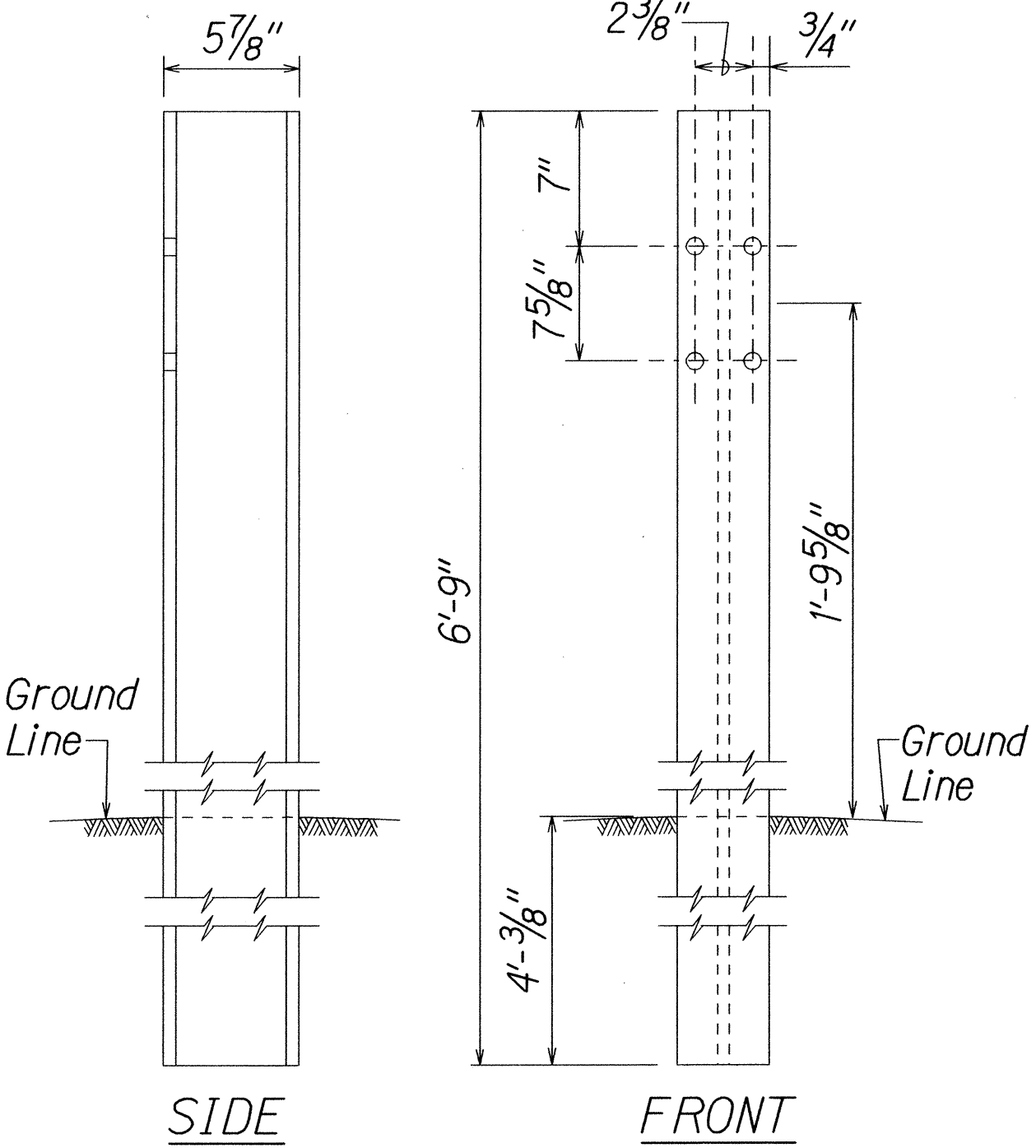
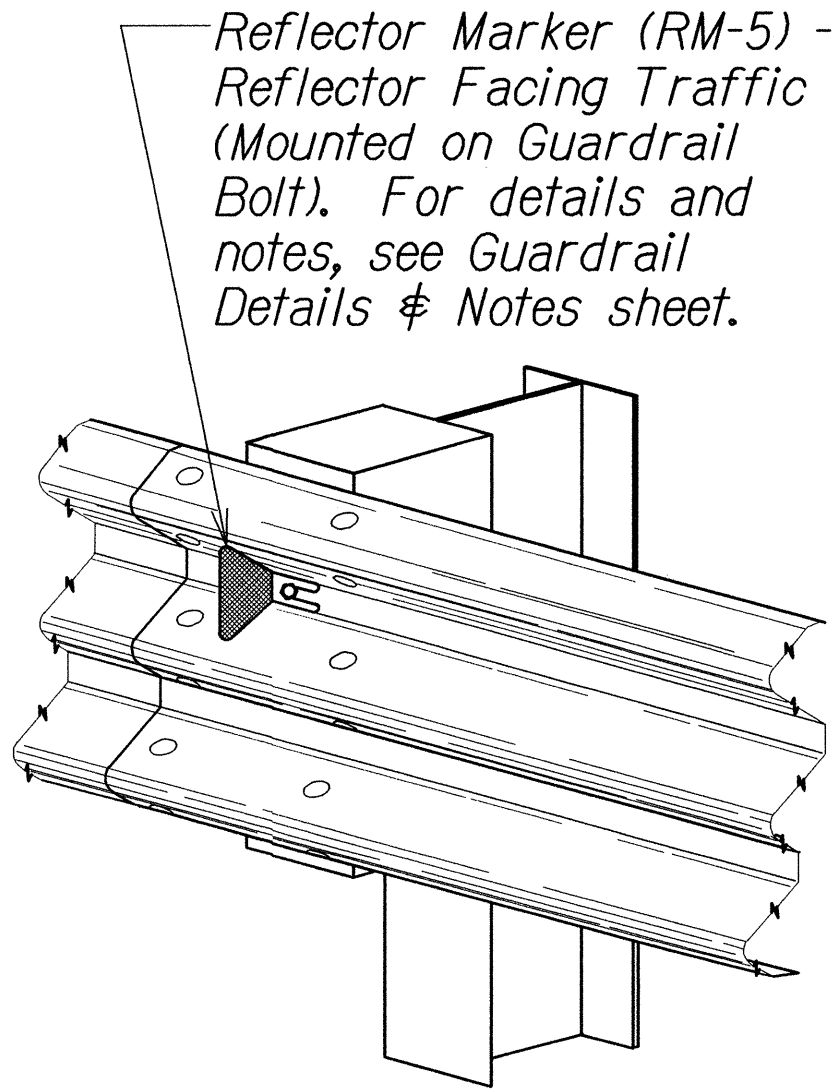
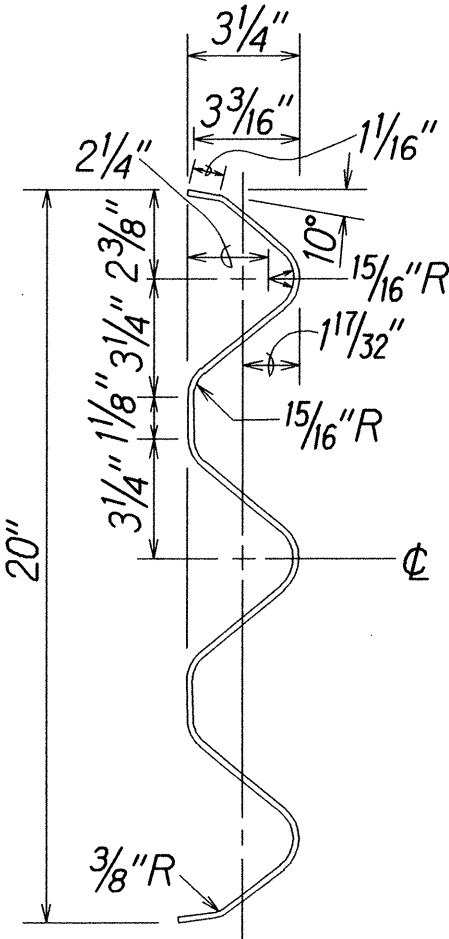


NOTE:  
All Holes are  $\frac{3}{4}$ " Dia.

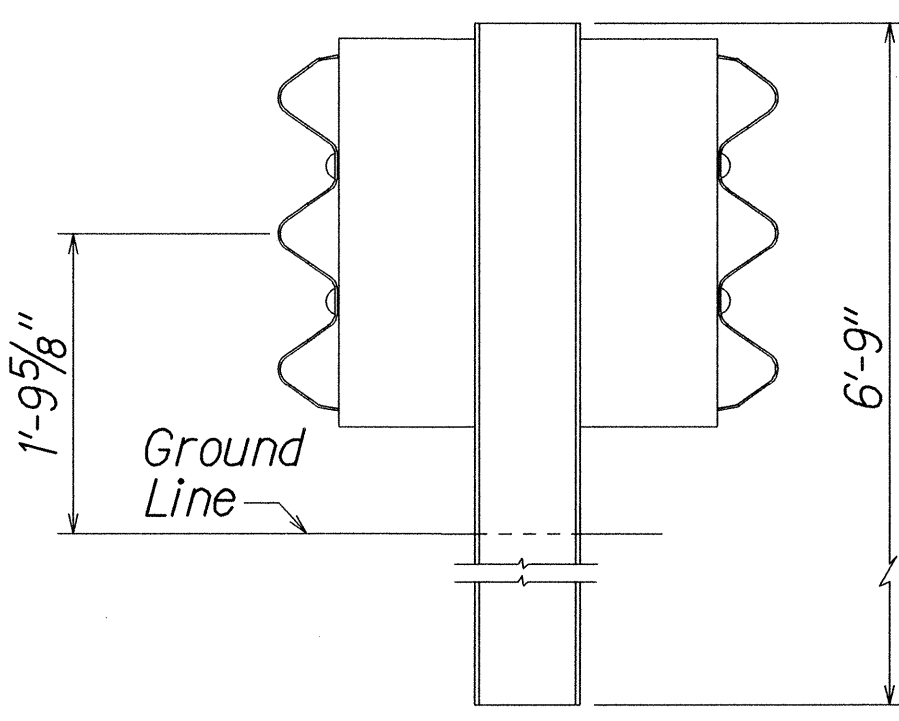


DESIGNATOR	L
FBB01	1 $\frac{3}{8}$ "
FBB02	2"
FBB03	10"

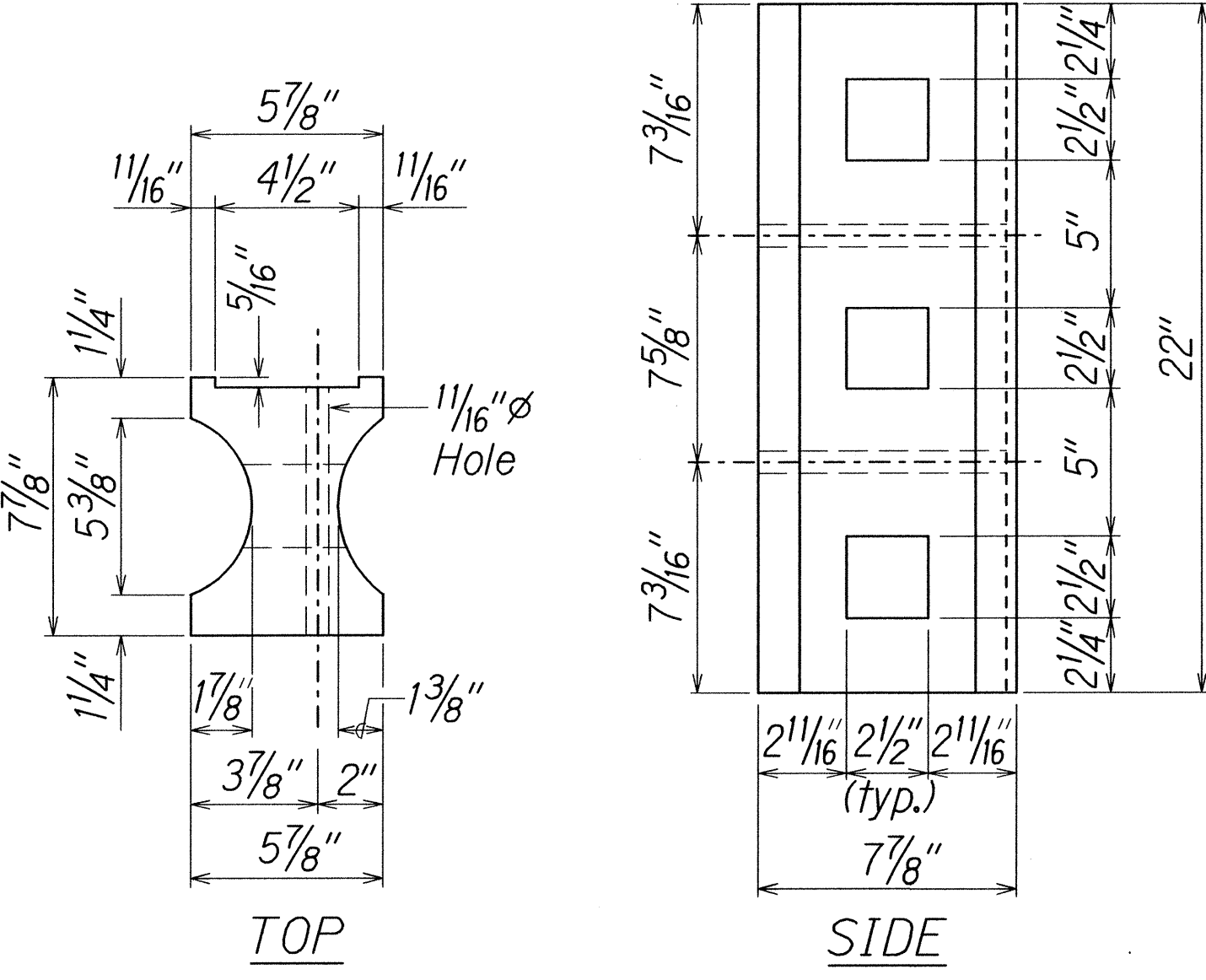
GUARDRAIL BOLTS  
AND RECESSED NUT



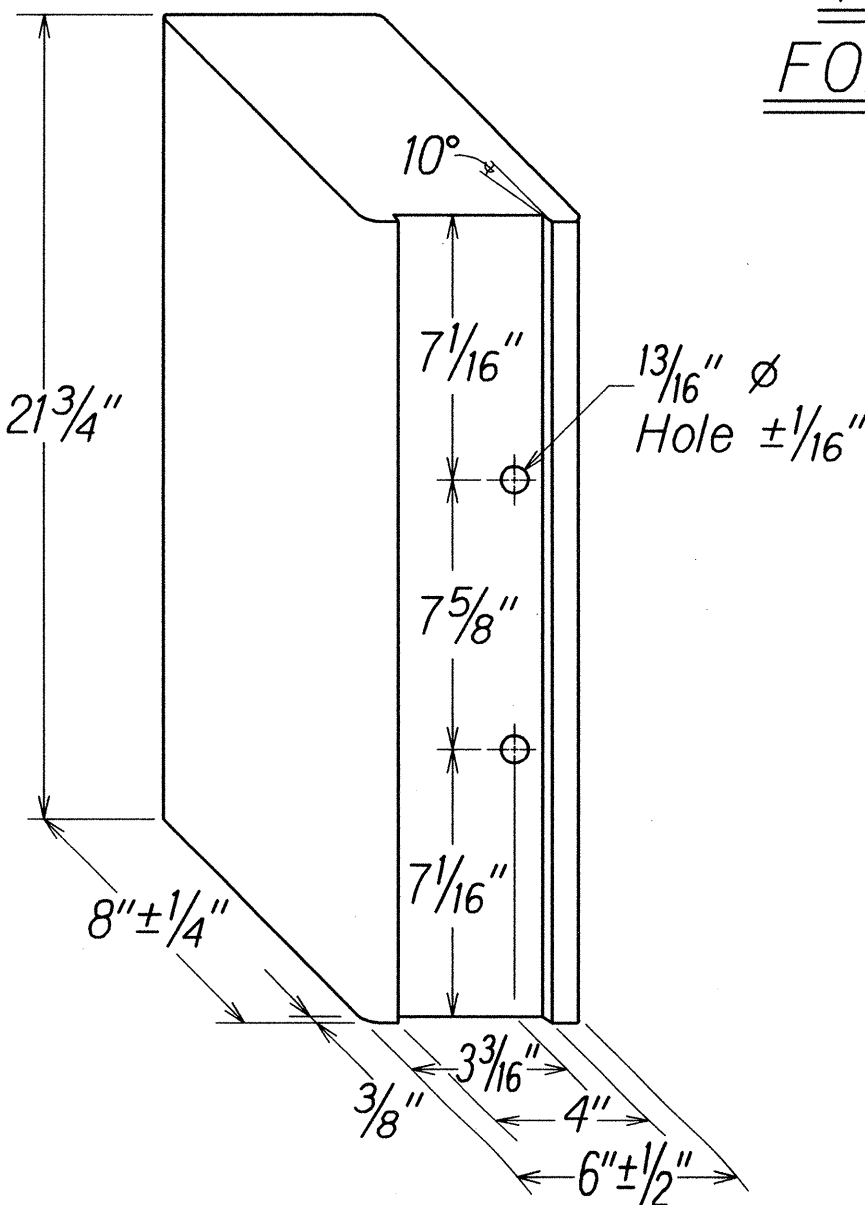
STRONG POST  
THRIE-BEAM GUARDRAIL  
(SGR09a)



STRONG POST THRIE-BEAM  
MEDIAN GUARDRAIL  
(SGM09a)



MODIFIED 6X8X22 PLASTIC BLOCKOUT  
(TYPE I-THRIE)

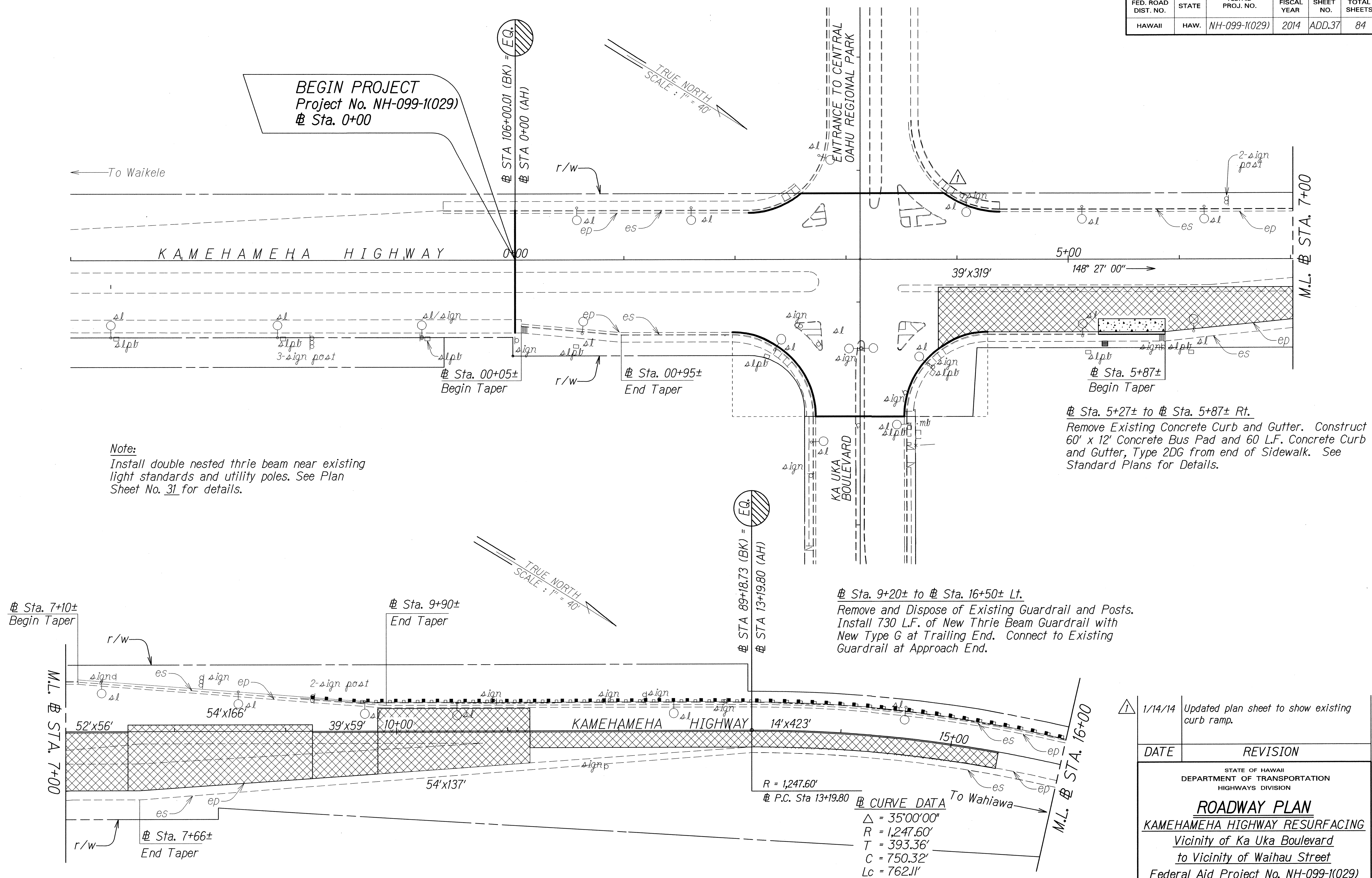


1/14/14 Inserted updated sheet.


DATE REVISION

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<b>STRONG POST</b>	
<b>THRIE-BEAM GUARDRAIL</b>	
KAMEHAMEHA HIGHWAY RESURFACING	
Vicinity of Ka Uka Boulevard	
to Vicinity of Waihau Street	
Federal Aid Project No. NH-099-1(029)	
Scale: No to Scale	Date: January 14, 2014
SHEET No. 5 OF 12 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	ADD.37	84

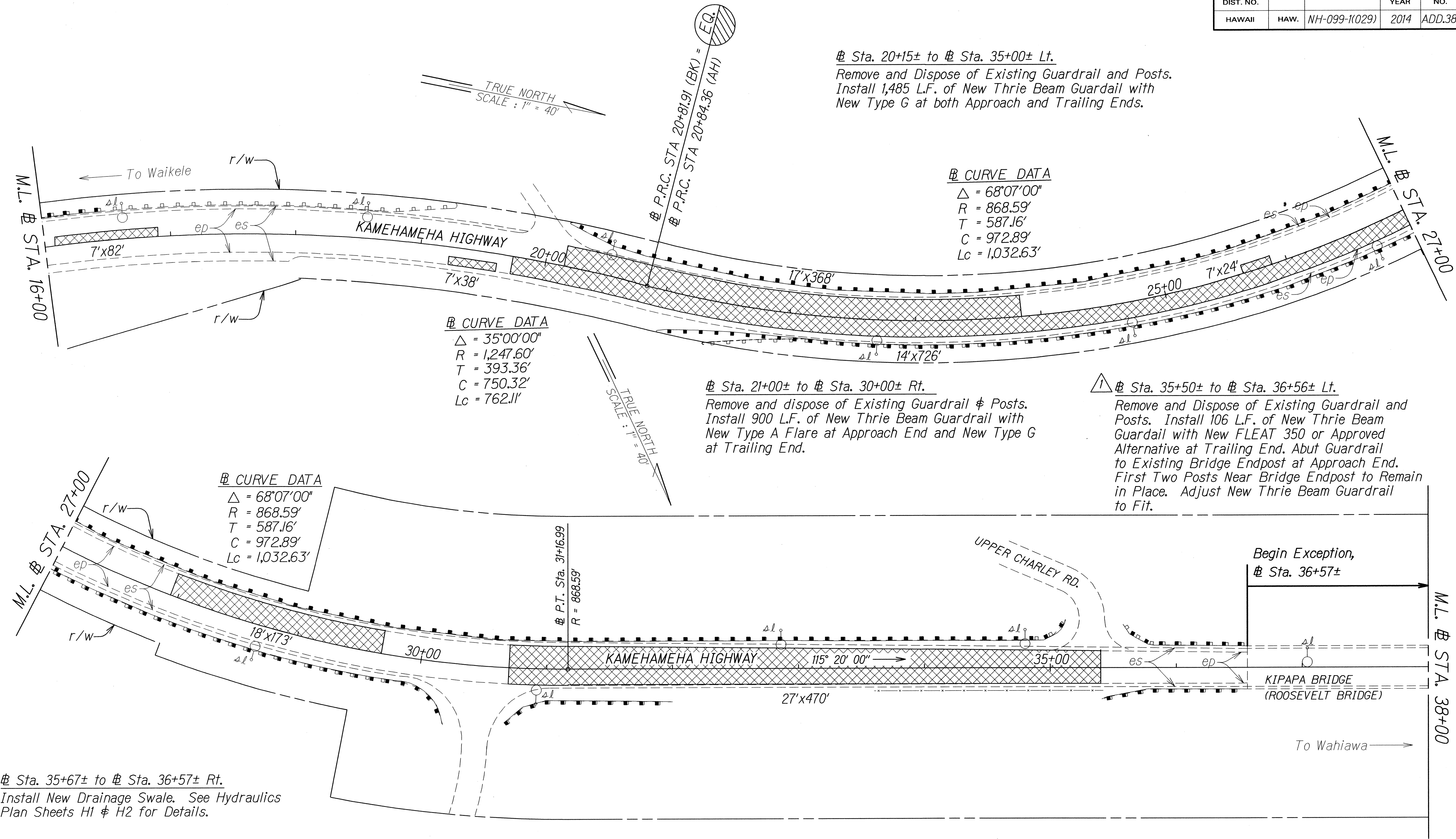


ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
NOTE BOOK	DRAWN BY <i>X</i>	• <i>X</i>
	TRACED BY _____	•
	DESIGNED BY <i>X</i>	•
	<i>dd3.mile</i>	•
QUANTITIES BY _____	•	•
CHECKED BY _____	•	•
<i>Wkmindgn</i>	•	•

	1/14/14 Updated plan sheet to show existing curb ramp.	
	<table border="1"> <tr> <th>DATE</th> <th>REVISION</th> </tr> </table>	DATE
DATE	REVISION	
<div style="text-align: center;"> <p>STATE OF HAWAII          DEPARTMENT OF TRANSPORTATION          HIGHWAYS DIVISION</p> <p><b><u>ROADWAY PLAN</u></b></p> <p><b><u>KAMEHAMEHA HIGHWAY RESURFACING</u></b></p> <p><u>Vicinity of Ka Uka Boulevard</u>  <u>to Vicinity of Waihau Street</u></p> <p><u>Federal Aid Project No. NH-099-1(029)</u></p> <p>Scale: 1" = 40'      Date: Sept., 2013</p> </div>		
<div style="text-align: center;"> <p>SHEET No. 1 OF 10 SHEETS</p> </div>		



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	ADD.38	84



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

Note:  
Install double nested thrie beam near existing light standards and utility poles. See Plan Sheet No. 31 for details.

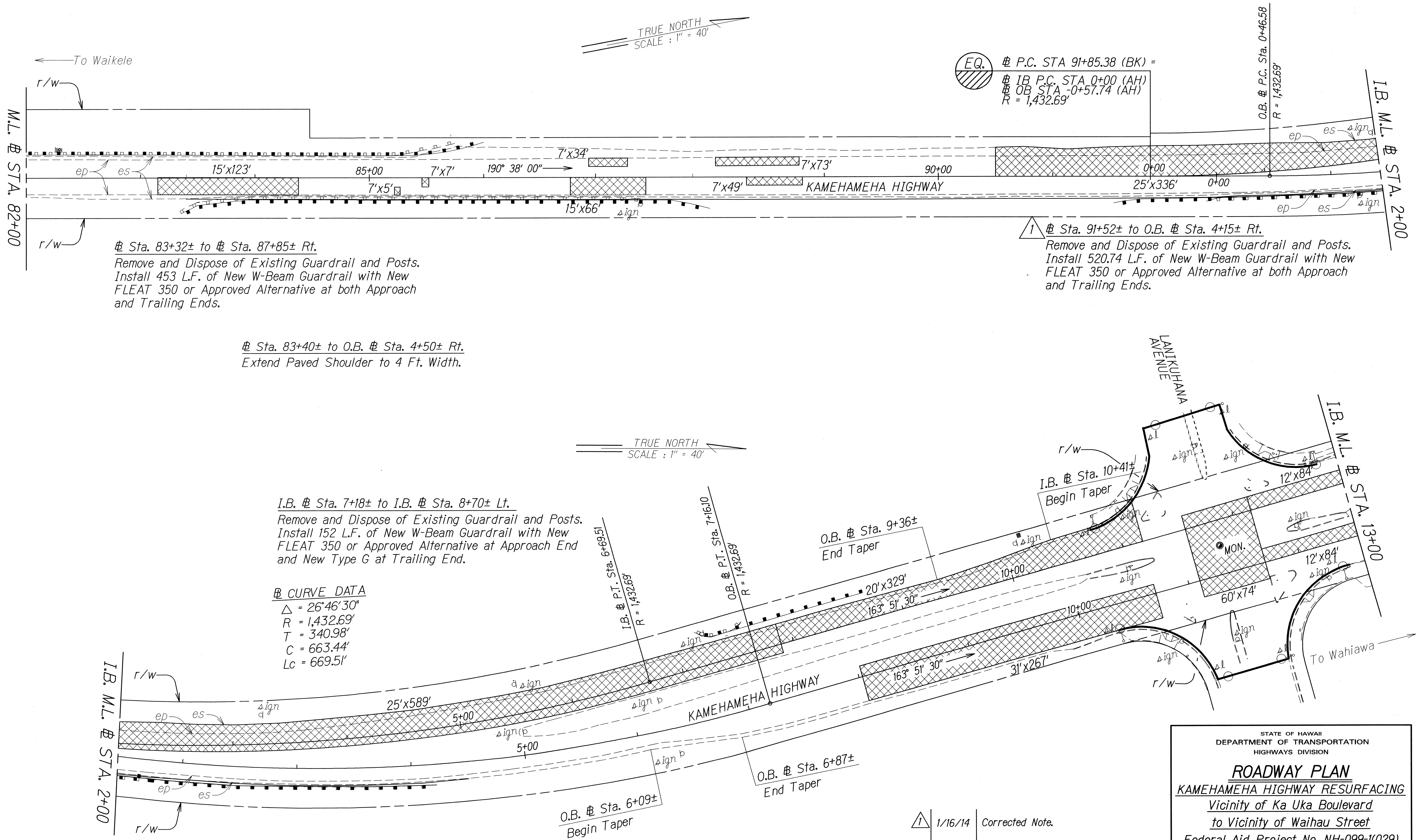
1/16/14 Corrected Note.

DATE REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ROADWAY PLAN**  
KAMEHAMEHA HIGHWAY RESURFACING  
Vicinity of Ka Uka Boulevard  
to Vicinity of Waihau Street  
Federal Aid Project No. NH-099-1(029)  
Scale: 1" = 40' Date: Sept., 2013

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	ADD.41	84



ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DESIGNED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	

1/16/14 Corrected Note.

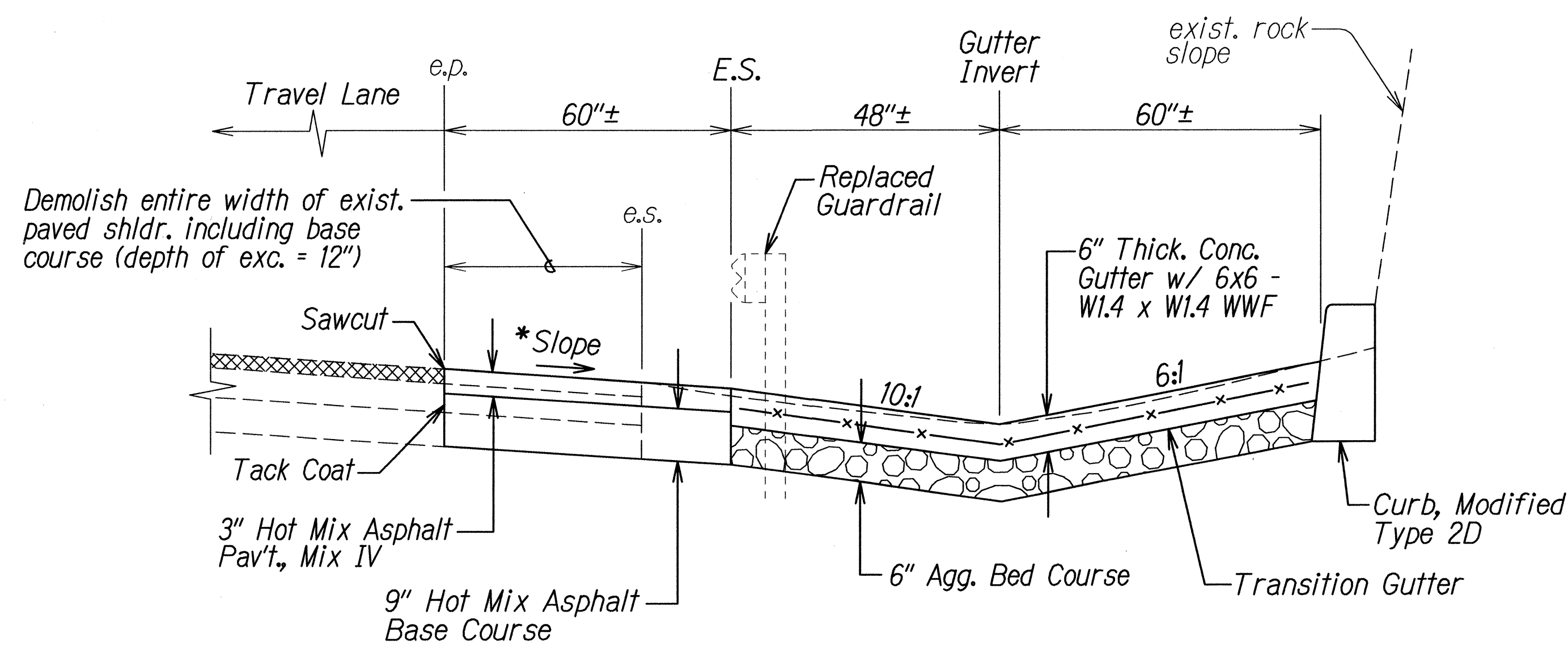
DATE	REVISION
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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ROADWAY PLAN**  
KAMEHAMEHA HIGHWAY RESURFACING  
Vicinity of Ka Uka Boulevard  
to Vicinity of Waihiwa Street  
Federal Aid Project No. NH-099-1(029)  
Scale: 1" = 40' Date: Sept., 2013

SHEET No. 5 OF 10 SHEETS

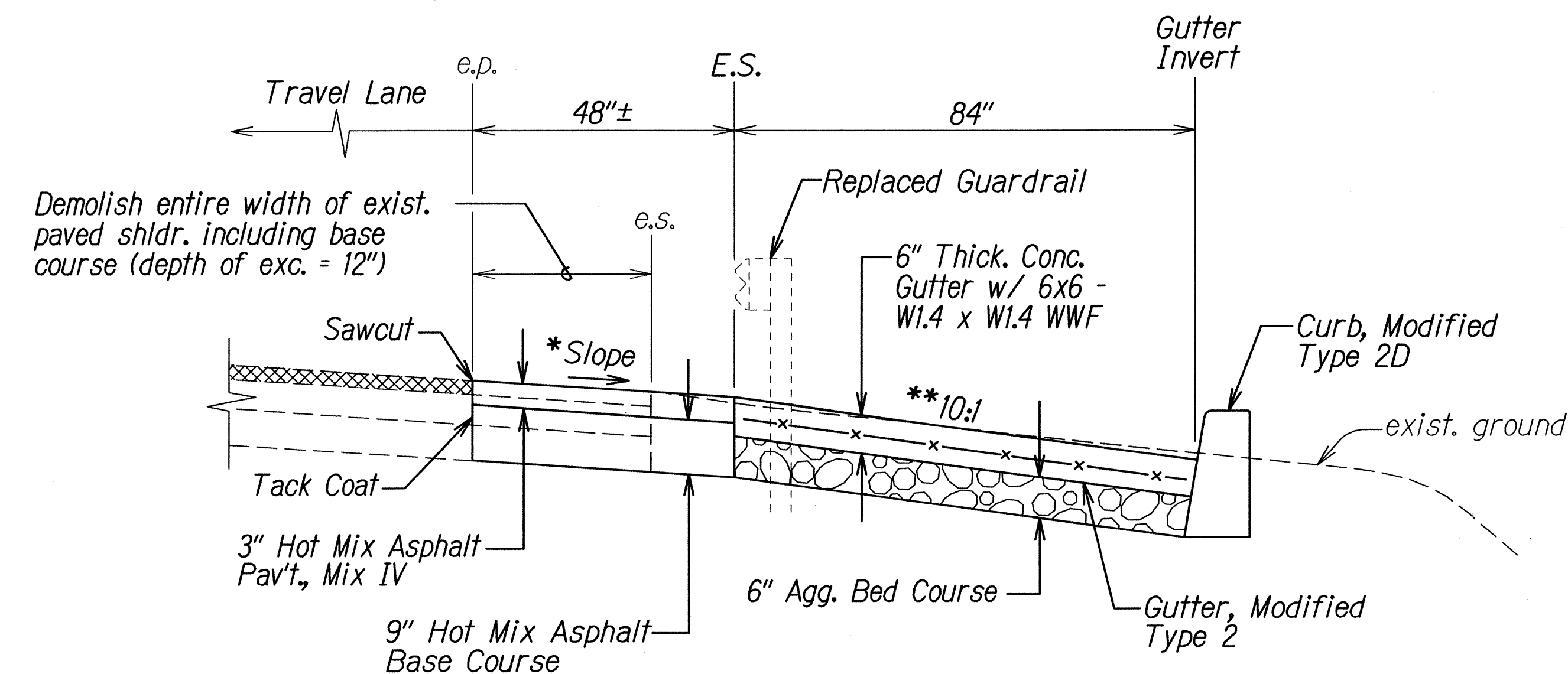




Gutter Sta. 0+00

SECTION A

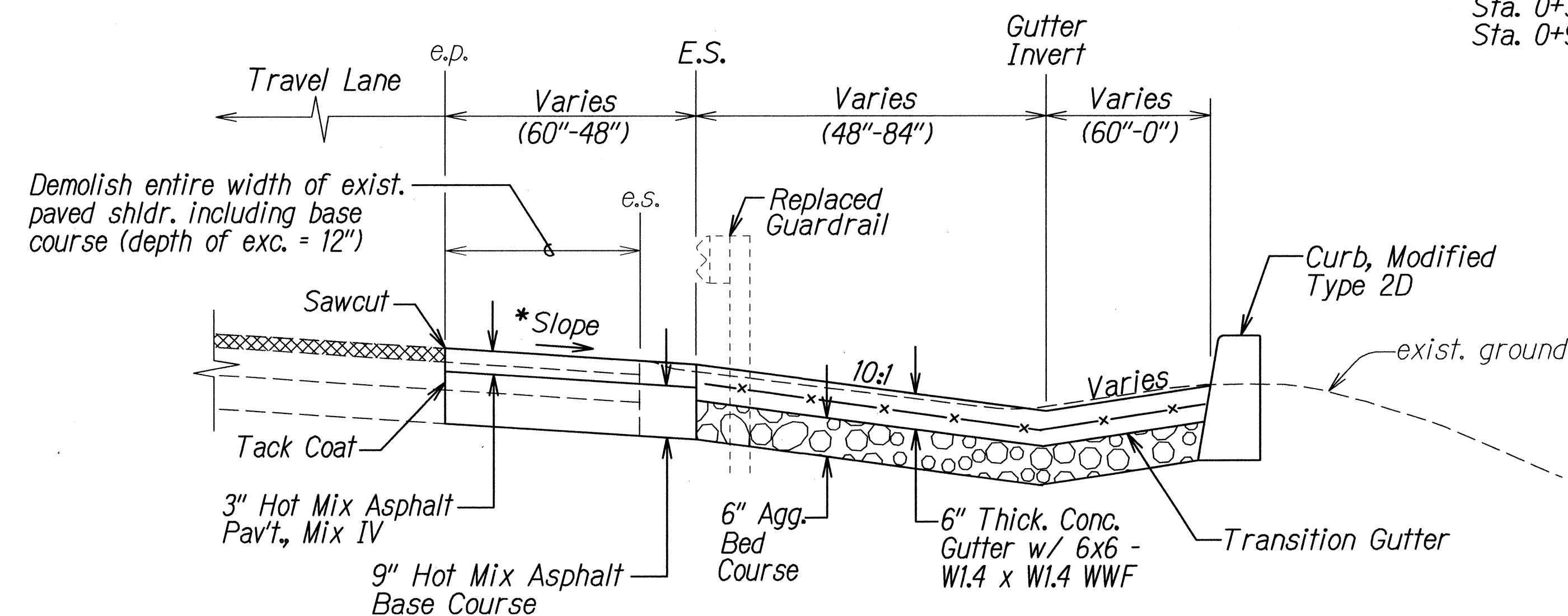
H1 H2



Gutter Sta. 0+30

SECTION C

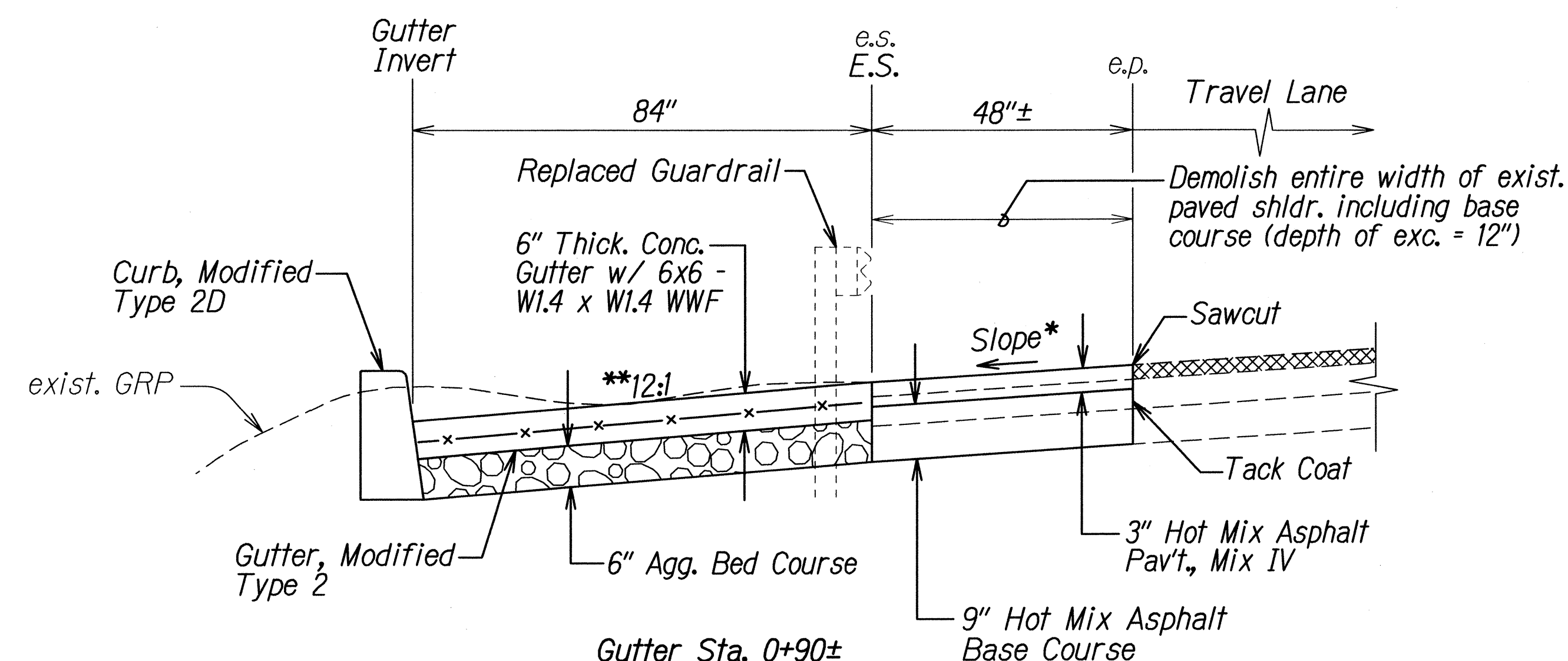
H1 H2



Gutter Sta. 0+00 to Sta. 0+30

SECTION B

H1 H2



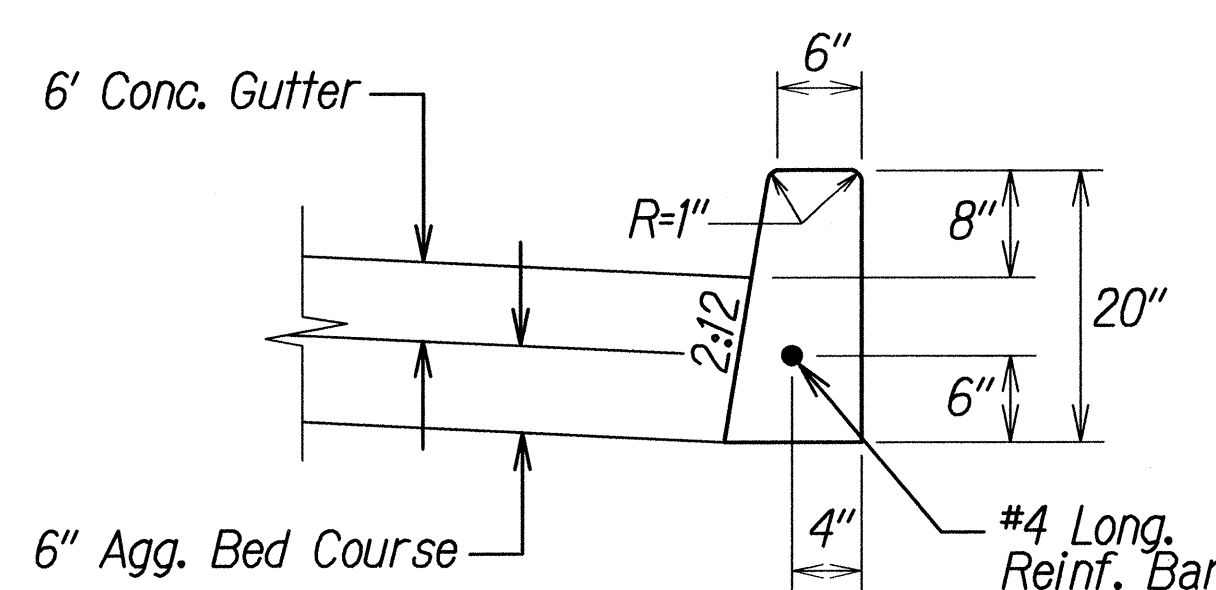
Gutter Sta. 0+90±

SECTION D

H1 H2

NOTES:

1. Demolish, remove and dispose of portions of existing asphalt concrete berm, rockwall, grouted rubble paving, spillway and all obstructions as necessary to construct the proposed concrete gutter. This work shall be considered incidental to contract Item No. 638.0210 - Gutter, Modified Type 2.
2. Excavation and aggregate bed course material for concrete gutter shall be considered incidental to contract Item No. 638.0210 - Gutter, Modified Type 2.
3. All transition gutters shall be paid for under contract Item No. 638.0210 - Gutter, Modified Type 2.
4. Excavation for new paved shoulders shall be paid for under contract Item No. 203.0100 - Roadway Excavation.
5. The maximum depth of exposed back of the new concrete curb shall be 8 inches. If the depth of the exposed back of the curb is greater than 8 inches, grade and dress the back of the curb. This work shall be considered incidental to contract Item No. 638.0110 - Curb, Modified Type 2D.



CURB, MODIFIED TYPE 2D

1/17/14 Deleted Note #2 and renumbered the notes accordingly.

DATE REVISION

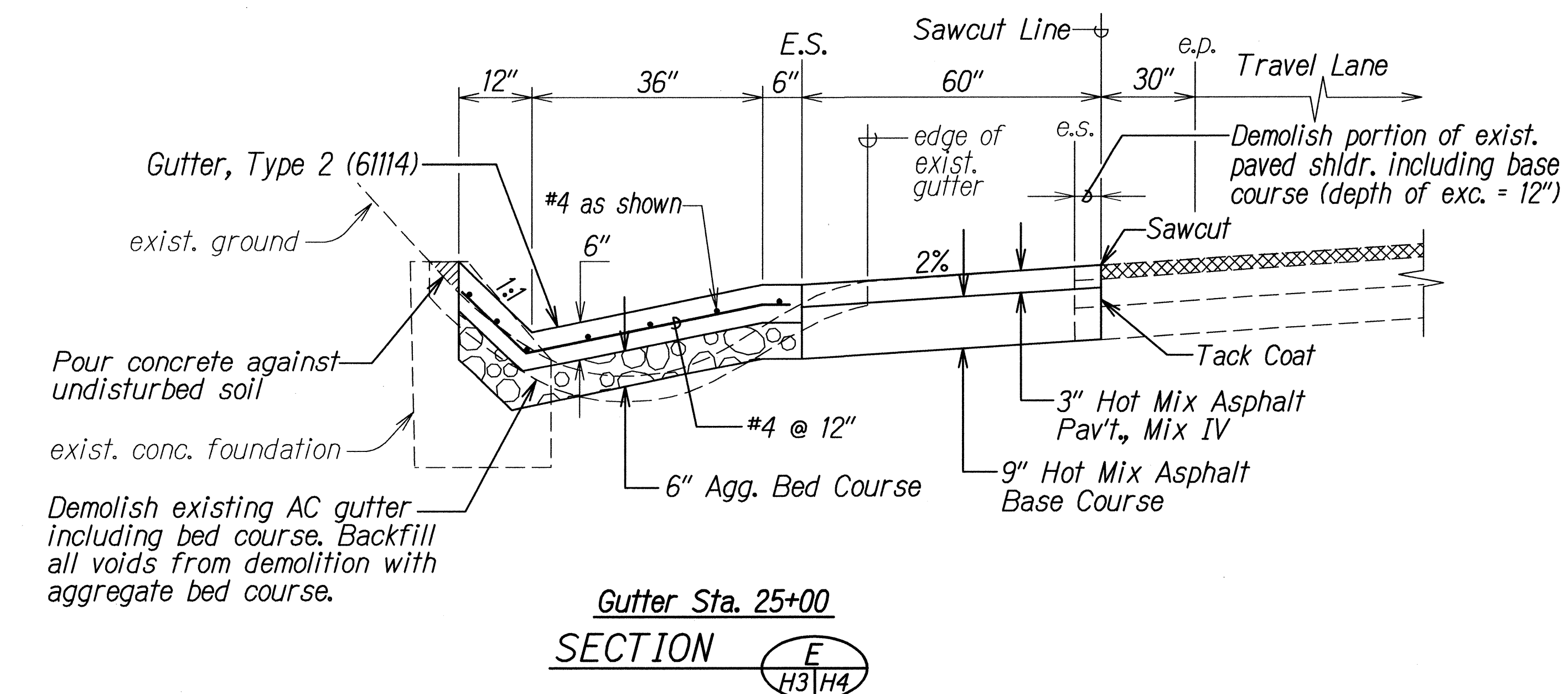
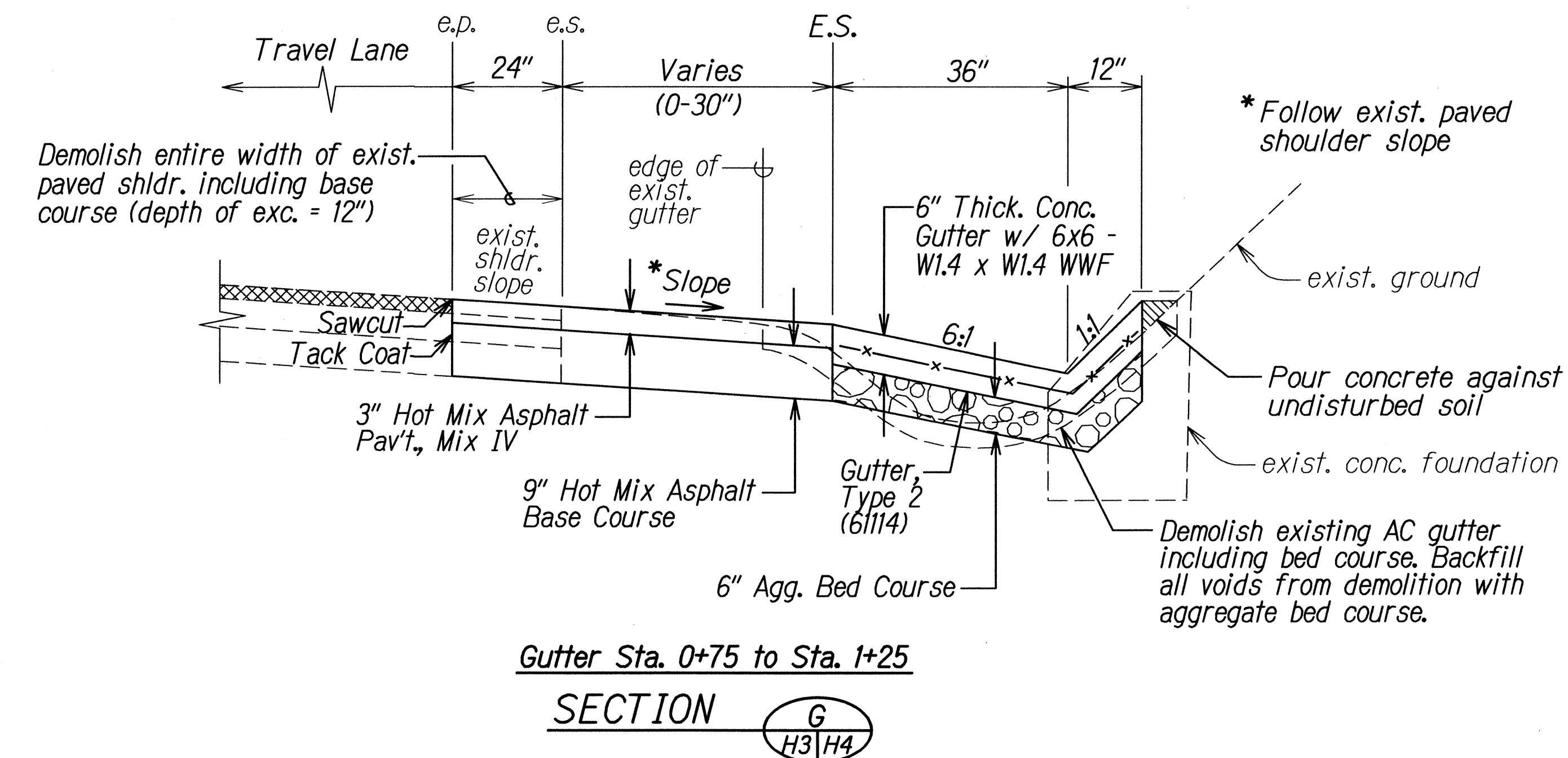
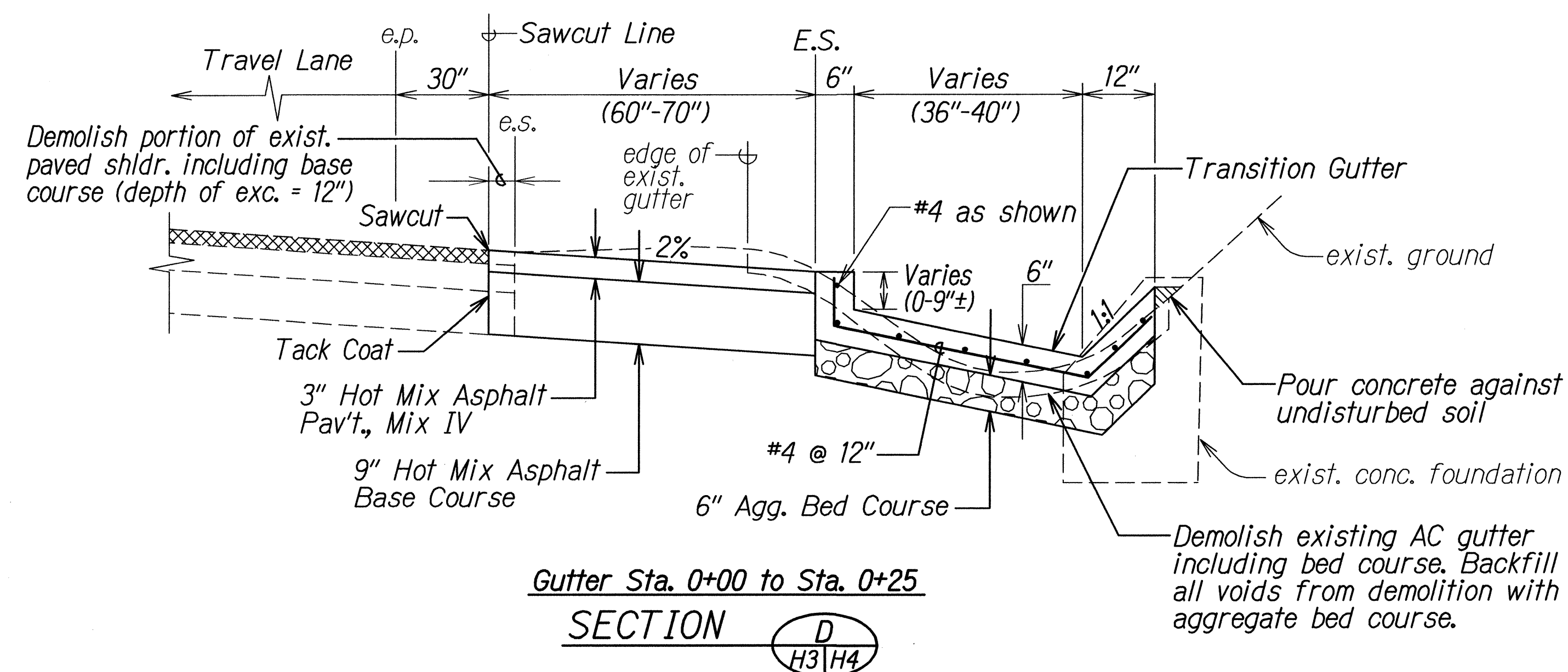
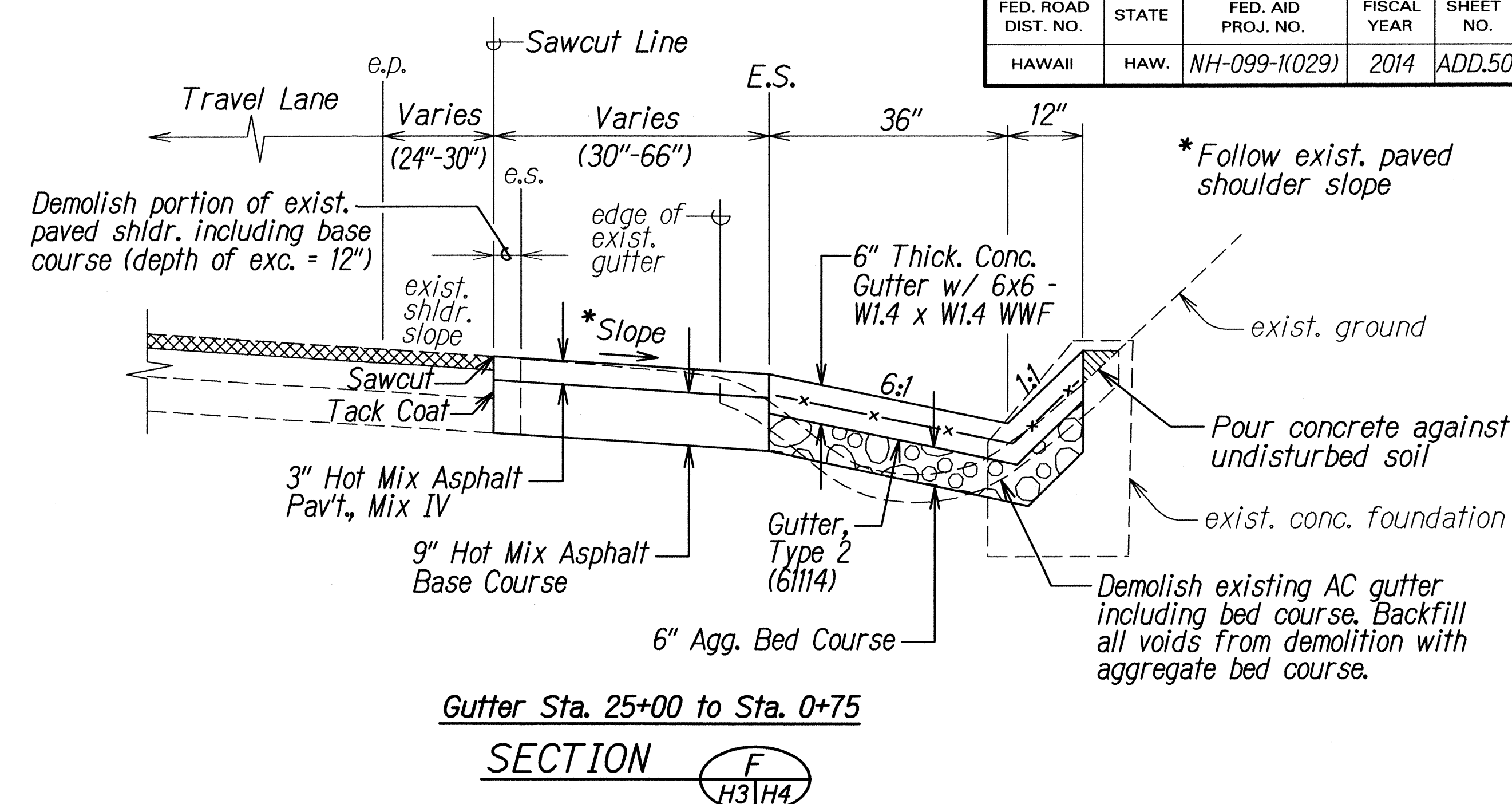
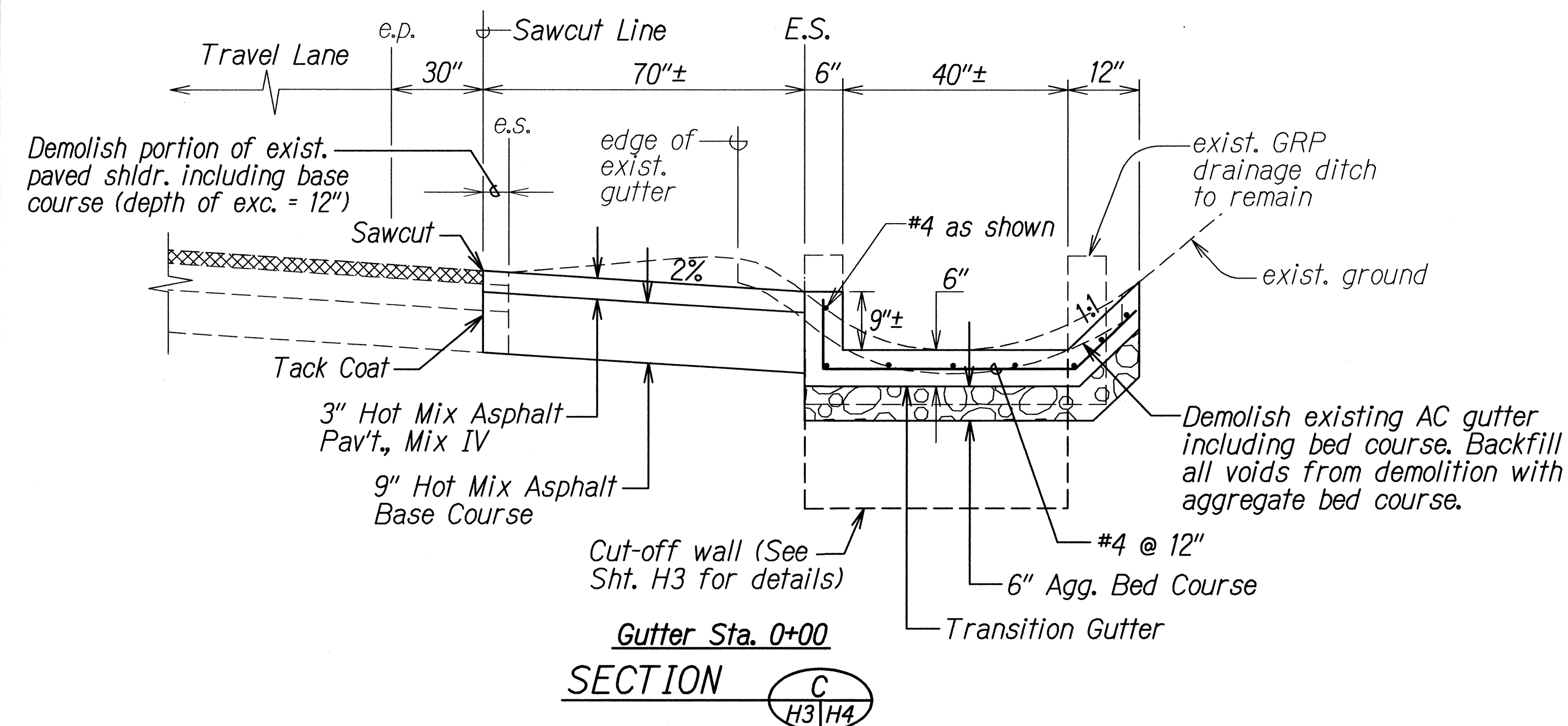
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DRAINAGE DETAILS**

KAMEHAMEHA HIGHWAY RESURFACING  
Vicinity of Ka Uka Boulevard  
to Vicinity of Waihau Street  
Federal-Aid Project No. NH-099-1(029)

Not to Scale Date: December, 2013

SHEET No. H2 OF 4 SHEETS



**NOTES:** 1

- Existing concrete foundation for the chain link fence shall not be demolished.
- Top of exist. concrete foundation shall not be covered with concrete or asphalt.
- Demolishing, removing and disposing of existing gutter and backfilling the voids with bed course material, and pouring concrete against undisturbed soil, shall be considered incidental to contract Item No. 638.0200 - Gutter, Type 2 (61114).
- Excavation and aggregate bed course material for concrete gutter shall be considered incidental to contract Item No. 638.0200 - Gutter, Type 2 (61114).
- All transition gutters shall be paid for under contract Item No. 638.0200 - Gutter, Type 2 (61114).
- Excavation for new paved shoulders shall be paid for under contract Item No. 203.0100 - Roadway Excavation.

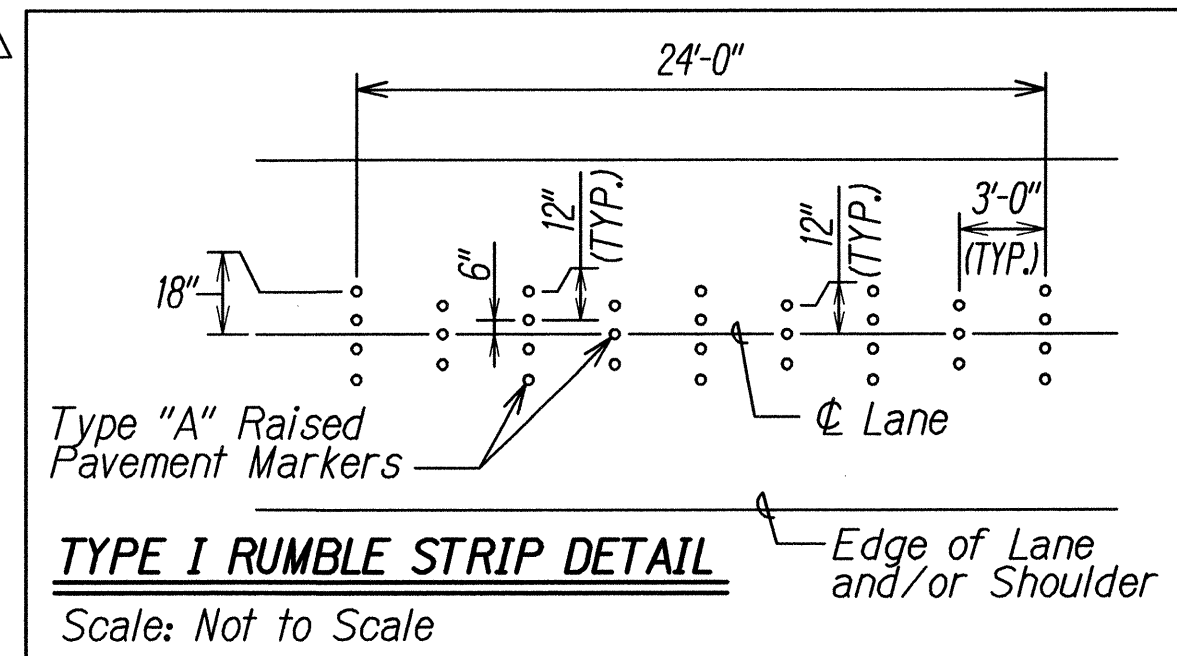
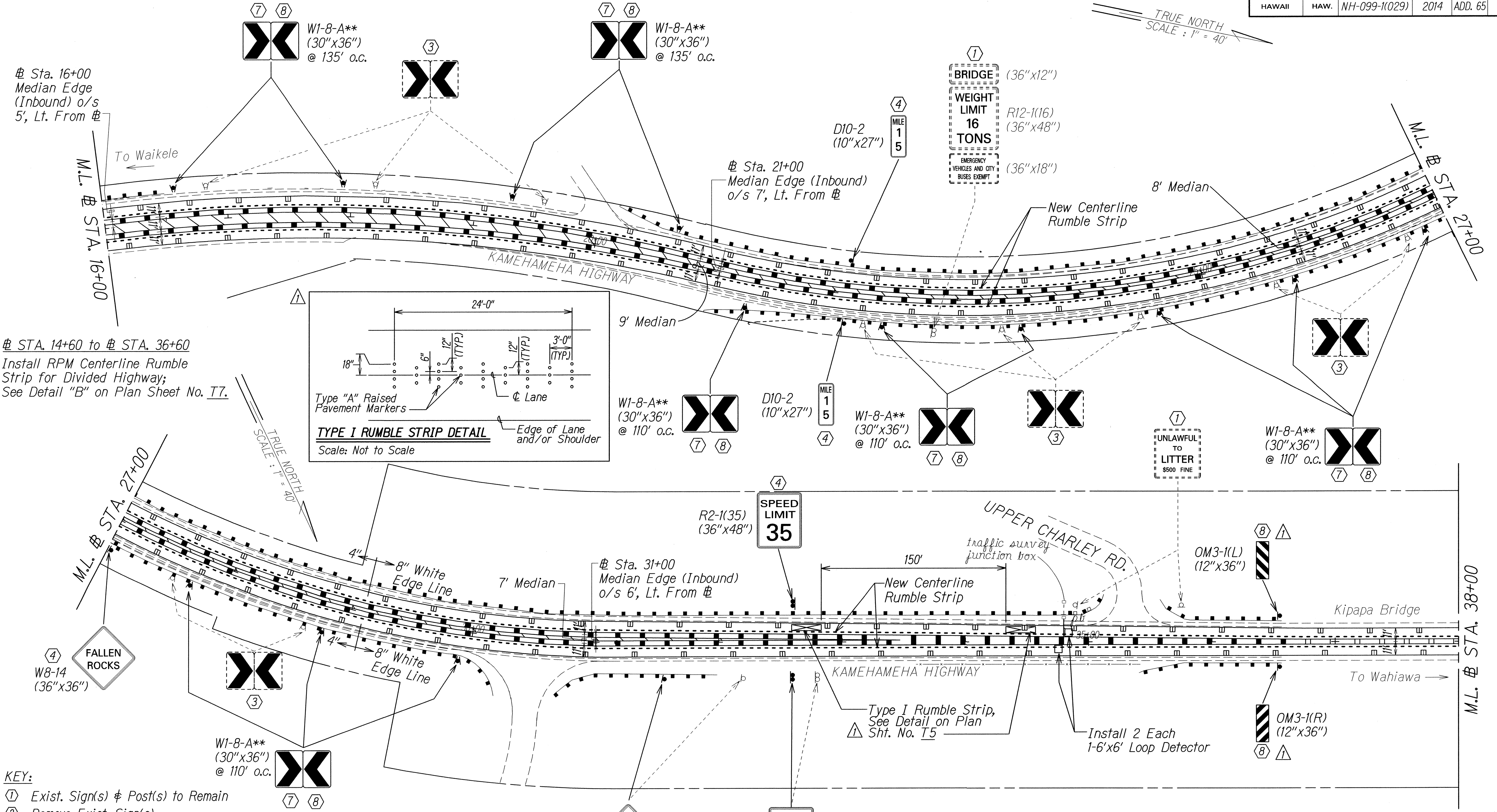
DATE	REVISION
1/17/14	Deleted Note #7.
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<b>DRAINAGE DETAILS</b>	
KAMEHAMEHA HIGHWAY RESURFACING Vicinity of Ka Uka Boulevard to Vicinity of Waihau Street Federal-Aid Project No. NH-099-1(029)	
Not to Scale	Date: December, 2013
SHEET No. H4 OF 4 SHEETS	







FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	ADD. 65	84



Sta. 14+60 to Sta. 36+60  
Install RPM Centerline Rumble Strip for Divided Highway;  
See Detail "B" on Plan Sheet No. T7.

- KEY:**
- ① Exist. Sign(s) & Post(s) to Remain
  - ② Remove Exist. Sign(s)
  - ③ Remove Exist. Sign(s) w/ Post(s)
  - ④ Remove Exist. Sign(s) & Install New Sign(s) w/ Post(s)
  - ⑤ Remove Exist. Sign(s) & Install New Sign(s) on Exist. Hwy. Light Pole
  - ⑥ Remove Exist. Sign(s) & Install New Sign(s) on Exist. Flashing Lt. Pole
  - ⑦ Install New Sign(s)
  - ⑧ Install New Sign(s) & Post(s)
  - ⑨ Install New Sign(s) on Exist. Hwy. Light Pole
  - ⑩ Install New Sign(s) on Exist. Traffic Signal Pole
  - ⑪ Relocate Exit. Sign(s) & Post(s) to New Location

\*\*Fluorescent Yellow Sign Sheeting

Sta. 36+60 to Sta. 41+50  
Install RPM Centerline Rumble Strip for Undivided Highway;  
See Detail "A" on Plan Sheet No. T7.

DATE	REVISION
1/15/14	Add Type I Rumble Strip & Detail Add Sign Key Callout

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

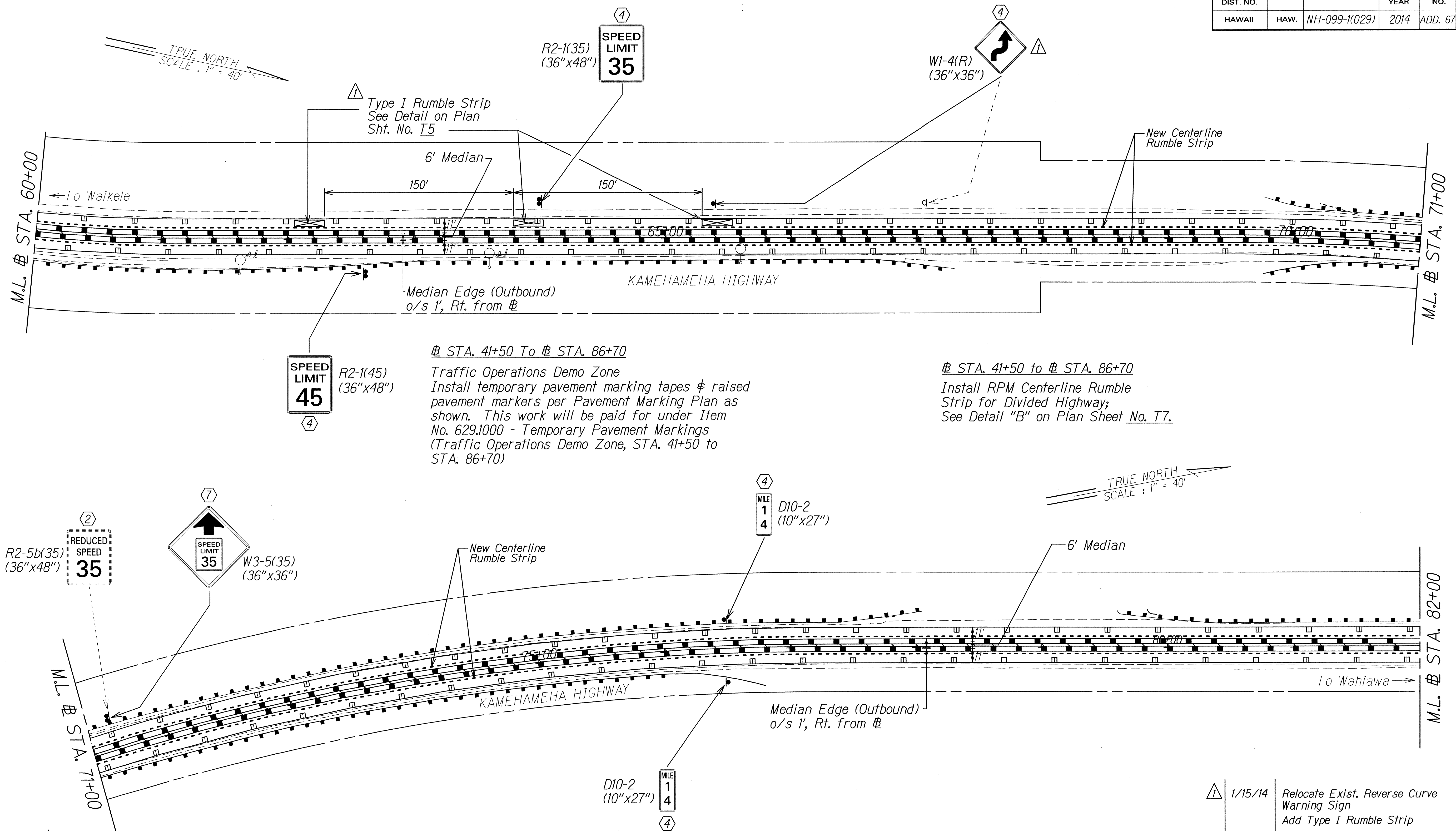
**PAVEMENT MARKING & SIGNING PLAN**  
KAMEHAMEHA HIGHWAY RESURFACING  
Vicinity of Ka Uka Boulevard  
to Vicinity of Waihau Street  
Federal Aid Project No. NH-099-1(029)  
Scale: 1" = 40' Date: JAN. 2014

SHEET No. T5 OF 24 SHEETS



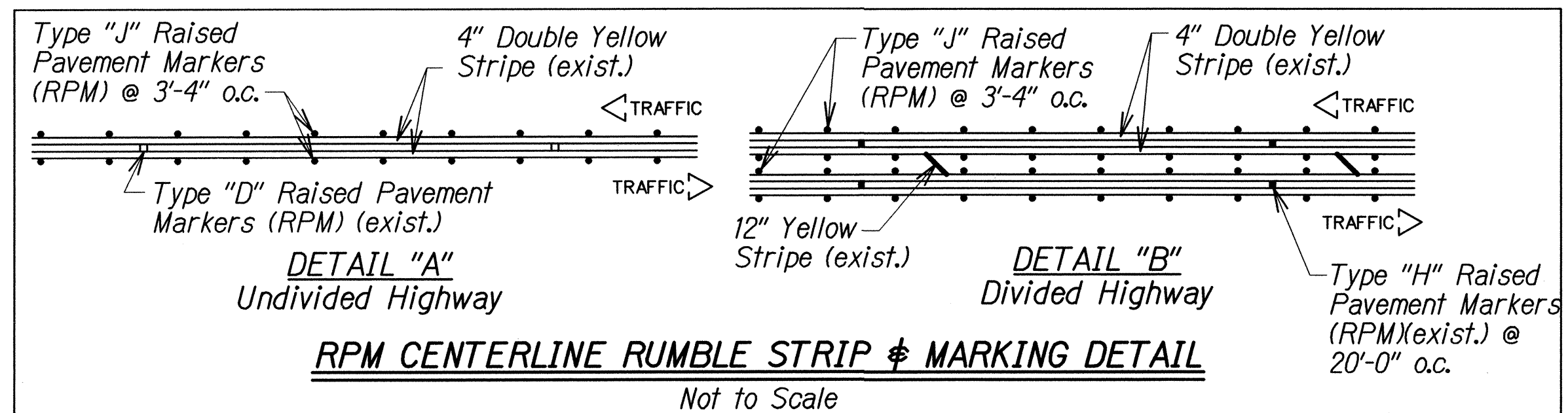


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	ADD. 67	84



# KEY:

- ① Exist. Sign(s) & Post(s) to Remain
- ② Remove Exist. Sign(s)
- ③ Remove Exist. Sign(s) w/ Post(s)
- ④ Remove Exist. Sign(s) w/ Post(s) & Install New Sign(s) w/ Post(s)
- ⑤ Remove Exist. Sign(s) & Install New Sign(s) on Exist. Hwy. Light Pole
- ⑥ Remove Exist. Sign(s) & Install New Sign(s) on Exist. Flashing Lt. Pole
- ⑦ Install New Sign(s)
- ⑧ Install New Sign(s) & Post(s)
- ⑨ Install New Sign(s) on Exist. Hwy. Light Pole
- ⑩ Install New Sign(s) on Exist. Traffic Signal Pole
- ⑪ Relocate Exit. Sign(s) & Post(s) to New Location



DATE	REVISION
1/15/14	Relocate Exist. Reverse Curve Warning Sign Add Type I Rumble Strip

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<b>PAVEMENT MARKING &amp; SIGNING PLAN</b>	
KAMEHAMEHA HIGHWAY RESURFACING	
Vicinity of Ka Uka Boulevard	
to Vicinity of Waihau Street	
Federal Aid Project No. NH-099-1(029)	
Scale: 1" = 40'	Date: JAN. 2014
SHEET No. T7 OF 24 SHEETS	



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	ADD. 68	84

# STA. 41+50 To # STA. 86+70

Traffic Operations Demo Zone  
Install temporary pavement marking tapes & raised pavement markers per Pavement Marking Plan as shown. This work will be paid for under Item No. 629.1000 - Temporary Pavement Markings (Traffic Operations Demo Zone, STA. 41+50 to STA. 86+70)

# STA. 41+50 to # STA. 86+70  
Install RPM Centerline Rumble Strip for Divided Highway;  
See Detail "B" on Plan Sheet No. T7.

(36"x12")

BRIDGE

(36"x18")

R12-1(16)

(36"x48")

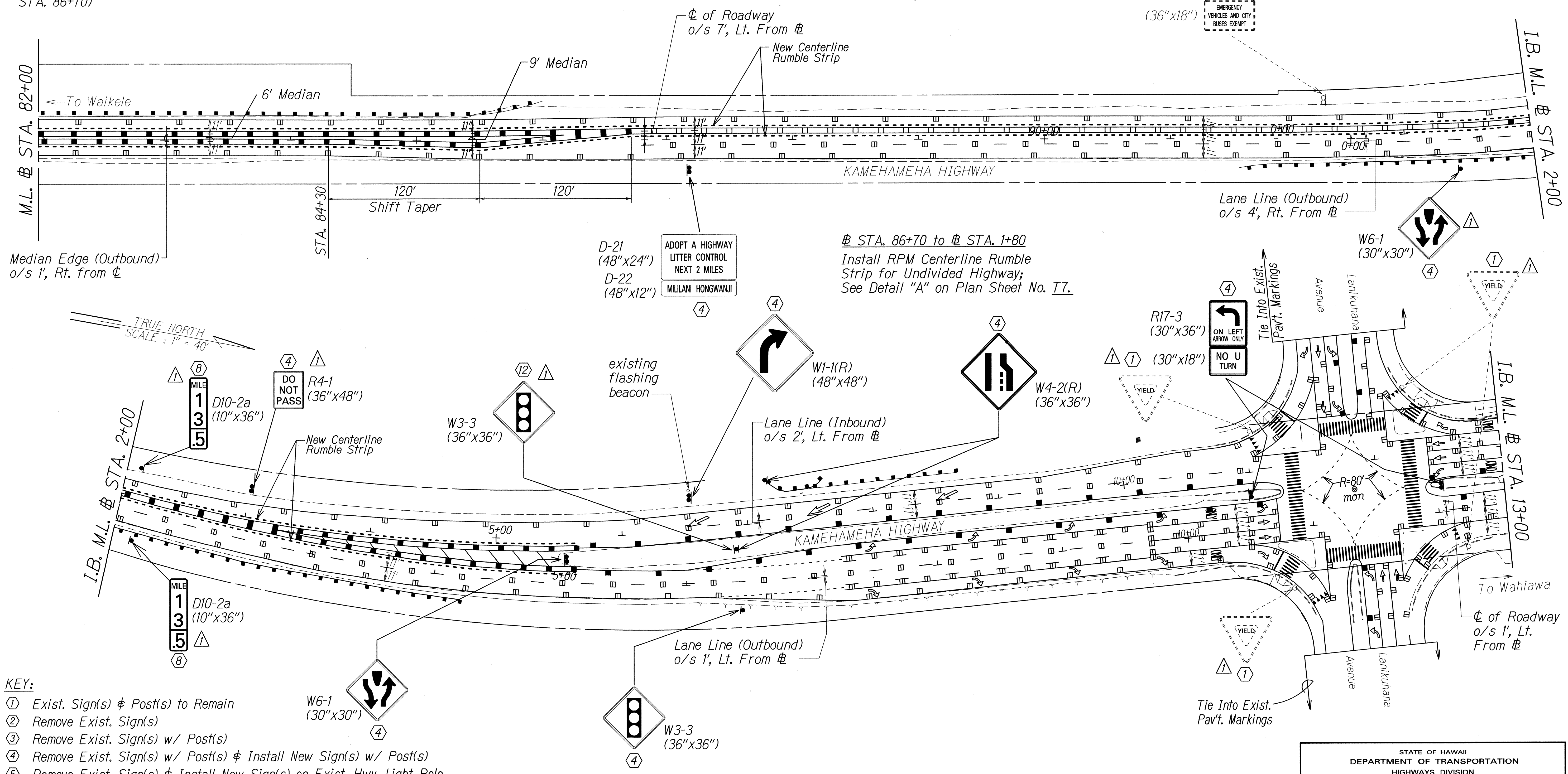
(36"x18")

WEIGHT LIMIT

16

TONS

EMERGENCY VEHICLES AND CITY BUSES EXEMPT



- KEY:
- ① Exist. Sign(s) & Post(s) to Remain
  - ② Remove Exist. Sign(s)
  - ③ Remove Exist. Sign(s) w/ Post(s)
  - ④ Remove Exist. Sign(s) w/ Post(s) & Install New Sign(s) w/ Post(s)
  - ⑤ Remove Exist. Sign(s) & Install New Sign(s) on Exist. Hwy. Light Pole
  - ⑥ Remove Exist. Sign(s) & Install New Sign(s) on Exist. Flashing Lt. Pole
  - ⑦ Install New Sign(s)
  - ⑧ Install New Sign(s) & Post(s)
  - ⑨ Install New Sign(s) on Exist. Hwy. Light Pole
  - ⑩ Install New Sign(s) on Exist. Traffic Signal Pole
  - ⑪ Relocate Exit. Sign(s) & Post(s) to New Location
  - ⑫ Remove Exist. Sign(s) & Install New Sign(s)

# STA. 1+80 to # STA. 5+60  
Install RPM Centerline Rumble Strip for Divided Highway;  
See Detail "B" on Plan Sheet No. T7.

DATE	REVISION
1/15/14	Relocate Exist. Signs Add/Revise Sign Key Callout Add Milepost Marker

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

PAVEMENT MARKING & SIGNING PLAN

KAMEHAMEHA HIGHWAY RESURFACING

Vicinity of Ka Uka Boulevard

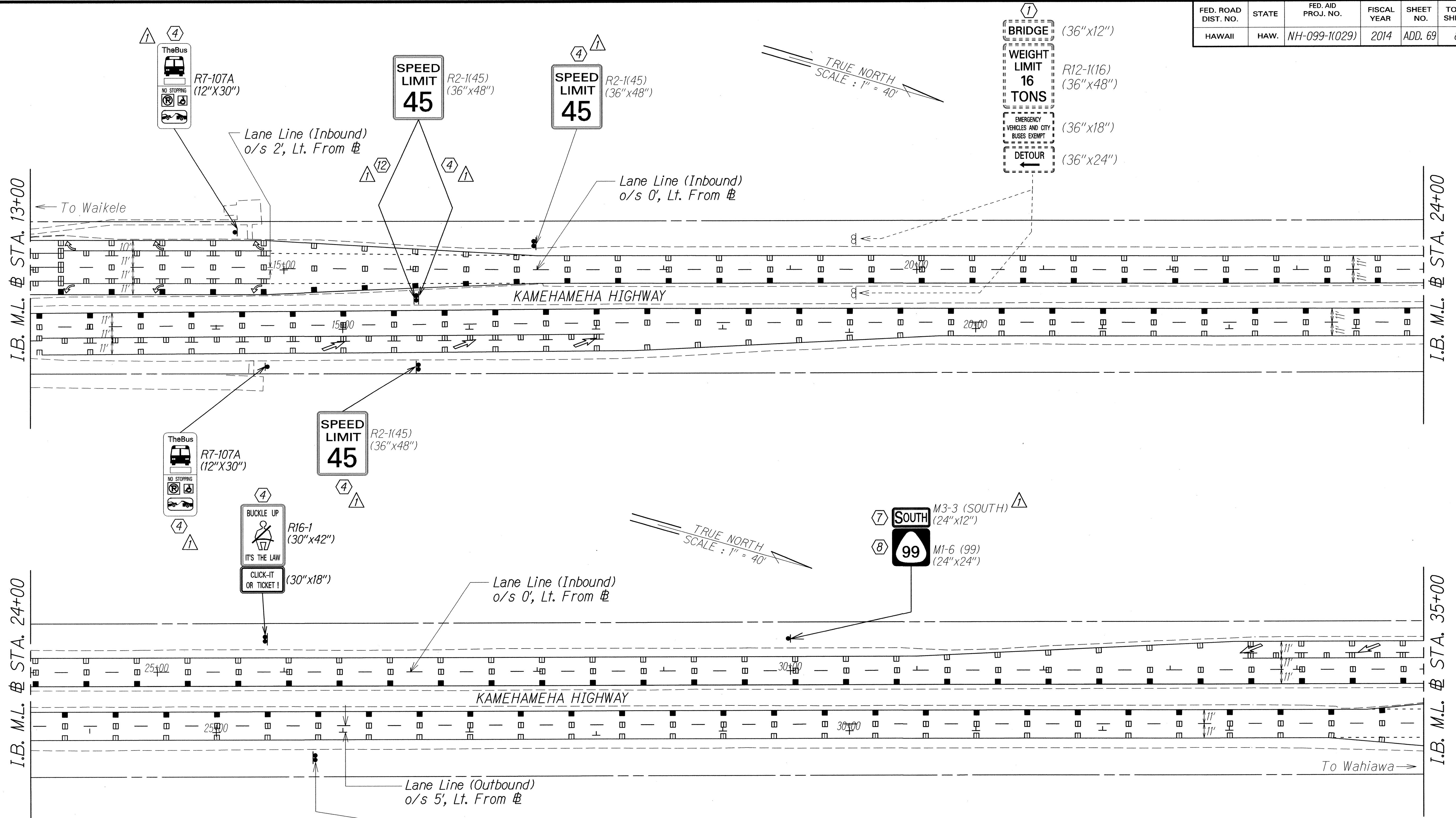
to Vicinity of Waihau Street

Federal Aid Project No. NH-099-1(029)

Scale: 1" = 40'

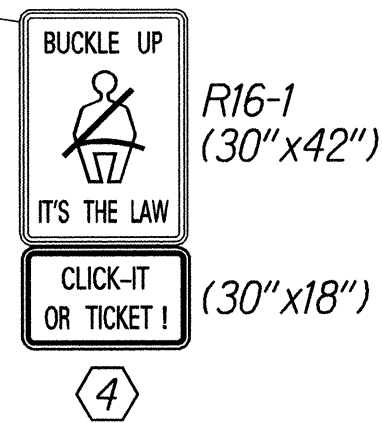
Date: JAN. 2014

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	ADD. 69	84



KEY:

- ① Exist. Sign(s) & Post(s) to Remain
- ② Remove Exist. Sign(s)
- ③ Remove Exist. Sign(s) w/ Post(s)
- ④ Remove Exist. Sign(s) w/ Post(s) & Install New Sign(s) w/ Post(s)
- ⑤ Remove Exist. Sign(s) & Install New Sign(s) on Exist. Hwy. Light Pole
- ⑥ Remove Exist. Sign(s) & Install New Sign(s) on Exist. Flashing Lt. Pole
- ⑦ Install New Sign(s)
- ⑧ Install New Sign(s) & Post(s)
- ⑨ Install New Sign(s) on Exist. Hwy. Light Pole
- ⑩ Install New Sign(s) on Exist. Traffic Signal Pole
- ⑪ Relocate Exist. Sign(s) & Post(s) to New Location
- ⑫ Remove Exist. Sign(s) & Install New Sign(s)



DATE	REVISION
1/15/14	Add State Route Marker & Cardinal Dir. Marker Revise Sign Key Callout

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
<b>PAVEMENT MARKING &amp; SIGNING PLAN</b>
<b>KAMEHAMEHA HIGHWAY RESURFACING</b>
<u>Vicinity of Ka Uka Boulevard</u> <u>to Vicinity of Waihau Street</u>
Federal Aid Project No. NH-099-1(029)
Scale: 1" = 40' Date: JAN. 2014

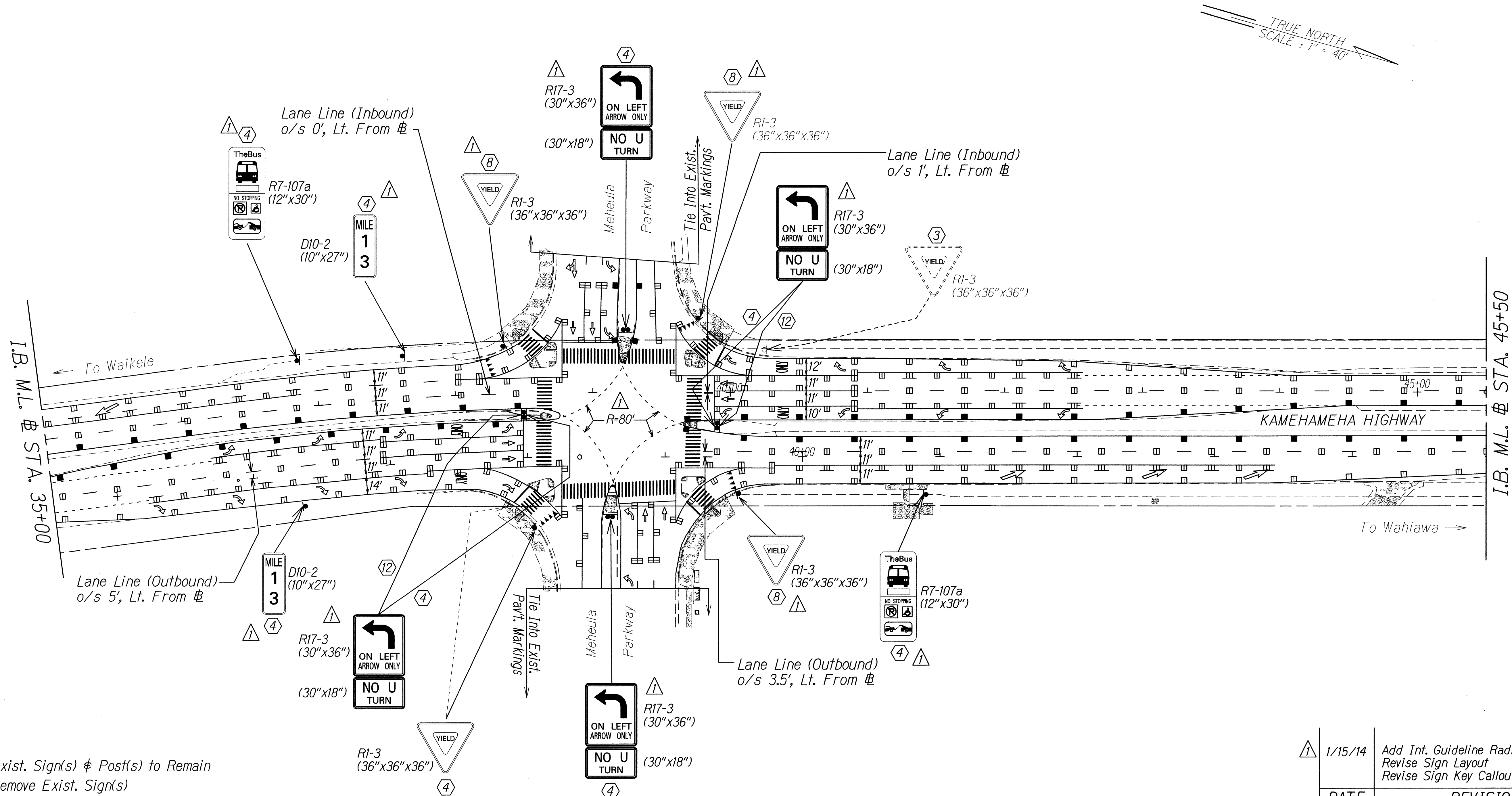
SHEET No. 79 OF 24 SHEETS

ADD. 69

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




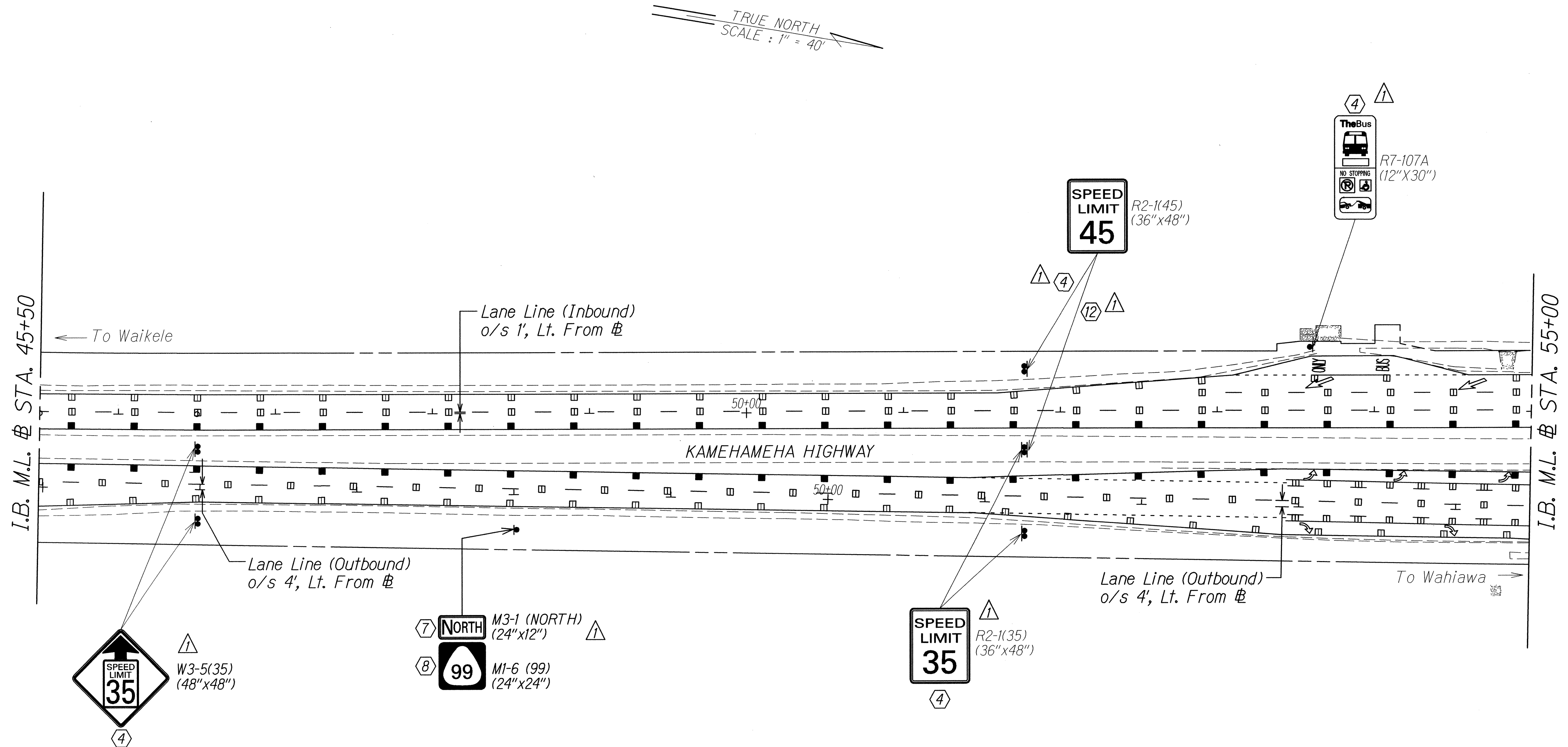
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	ADD. 70	84



KEY:

- ① Exist. Sign(s) & Post(s) to Remain
- ② Remove Exist. Sign(s)
- ③ Remove Exist. Sign(s) w/ Post(s)
- ④ Remove Exist. Sign(s) w/ Post(s) & Install New Sign(s) w/ Post(s)
- ⑤ Remove Exist. Sign(s) & Install New Sign(s) on Exist. Hwy. Light Pole
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- ⑦ Install New Sign(s)
- ⑧ Install New Sign(s) & Post(s)
- ⑨ Install New Sign(s) on Exist. Hwy. Light Pole
- ⑩ Install New Sign(s) on Exist. Traffic Signal Pole
- ⑪ Relocate Exist. Sign(s) & Post(s) to New Location
- ⑫ Remove Exist. Sign(s) & Install New Sign(s)

	1/15/14	Add Int. Guideline Radius Revise Sign Layout Revise Sign Key Callout
DATE	REVISION	
<p>STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION</p> <p><b><u>PAVEMENT MARKING &amp; SIGNING PLAN</u></b> <b><u>KAMEHAMEHA HIGHWAY RESURFACING</u></b> <i><u>Vicinity of Ka Uka Boulevard</u></i> <i><u>to Vicinity of Waihaui Street</u></i> <i><u>Federal Aid Project No. NH-099-1(029)</u></i> Scale: 1" = 40'      Date: JAN. 2014</p>		
SHEET No. 710 OF 24 SHEETS		



KEY:

- ① Exist. Sign(s) & Post(s) to Remain
- ② Remove Exist. Sign(s)
- ③ Remove Exist. Sign(s) w/ Post(s)
- ④ Remove Exist. Sign(s) w/ Post(s) & Install New Sign(s) w/ Post(s)
- ⑤ Remove Exist. Sign(s) & Install New Sign(s) on Exist. Hwy. Light Pole
- ⑥ Remove Exist. Sign(s) & Install New Sign(s) on Exist. Flashing Lt. Pole
- ⑦ Install New Sign(s)
- ⑧ Install New Sign(s) & Post(s)
- ⑨ Install New Sign(s) on Exist. Hwy. Light Pole
- ⑩ Install New Sign(s) on Exist. Traffic Signal Pole
- ⑪ Relocate Exist. Sign(s) & Post(s) to New Location
- ⑫ Remove Exist. Sign(s) & Install New Sign(s)

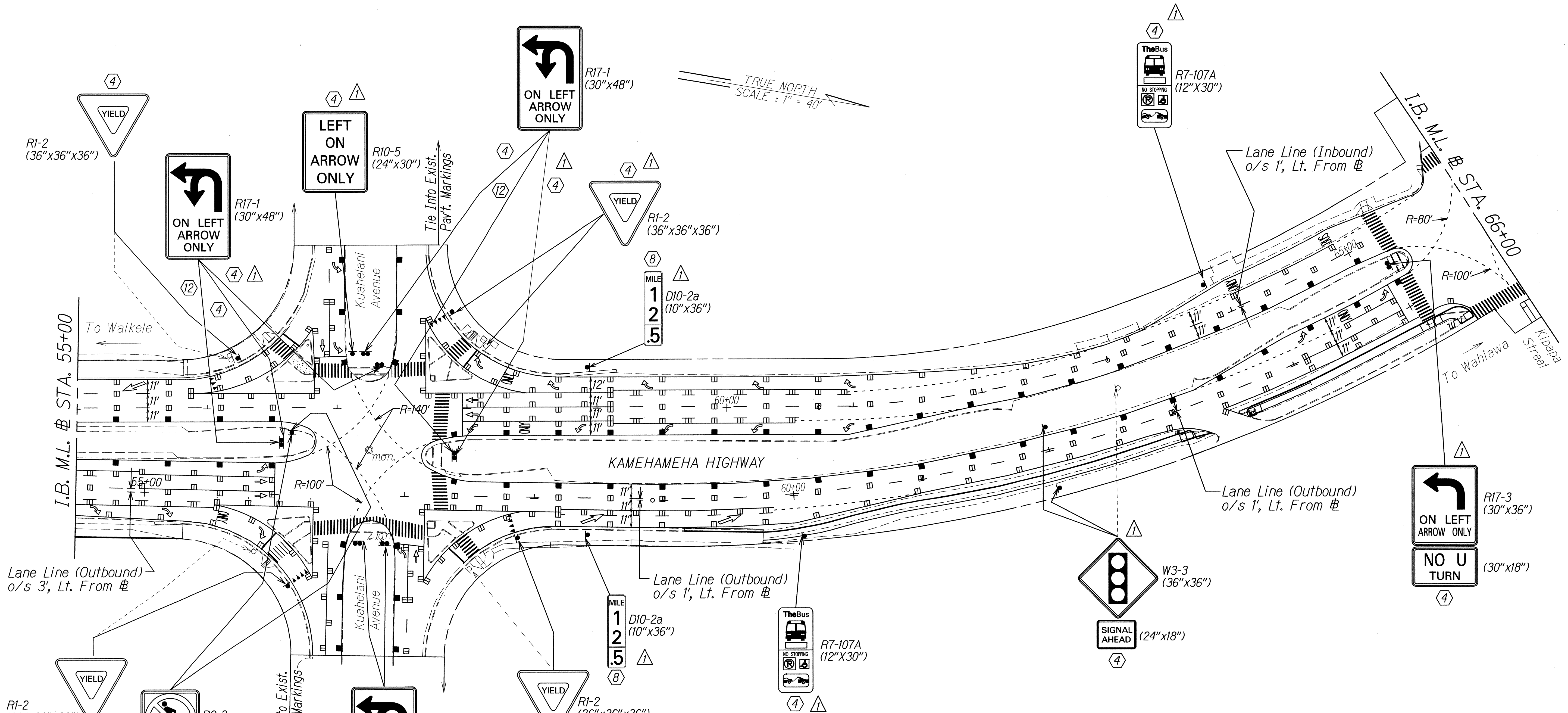
1/15/14	Add/Revise Signs Add State Route Marker # Cardinal Dir. Marker Add/Revise Sign Key Callout
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DATE	REVISION
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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**PAVEMENT MARKING & SIGNING PLAN**  
**KAMEHAMEHA HIGHWAY RESURFACING**  
**Vicinity of Ka Uka Boulevard**  
**to Vicinity of Waihau Street**  
**Federal Aid Project No. NH-099-1(029)**  
Scale: 1" = 40' Date: JAN. 2014





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

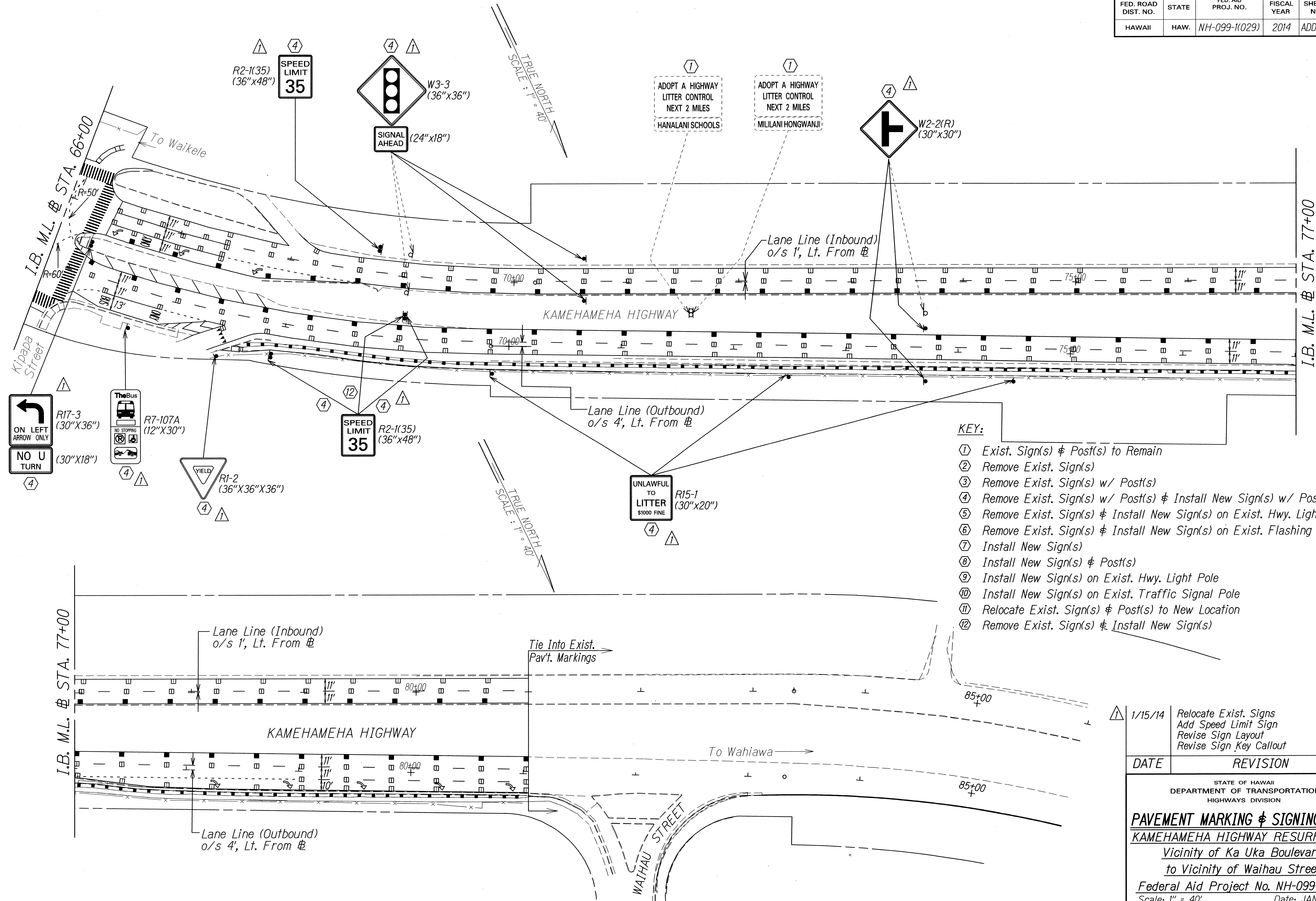
- KEY:
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  - ② Remove Exist. Sign(s)
  - ③ Remove Exist. Sign(s) w/ Post(s)
  - ④ Remove Exist. Sign(s) w/ Post(s) & Install New Sign(s) w/ Post(s)
  - ⑤ Remove Exist. Sign(s) & Install New Sign(s) on Exist. Hwy. Light Pole
  - ⑥ Remove Exist. Sign(s) & Install New Sign(s) on Exist. Flashing Lt. Pole
  - ⑦ Install New Sign(s)
  - ⑧ Install New Sign(s) & Post(s)
  - ⑨ Install New Sign(s) on Exist. Hwy. Light Pole
  - ⑩ Install New Sign(s) on Exist. Traffic Signal Pole
  - ⑪ Relocate Exist. Sign(s) & Post(s) to New Location
  - ⑫ Remove Exist. Sign(s) & Install New Sign(s)
  - ⑬ Remove Exist. Sign(s) & Install New Sign(s) on Exist. Traffic Signal Pole

1/15/14	Relocate Exist. Signal Ahead Warning Sign Revise Sign Layout Add Milepost Marker Revise Sign Key Callout
---------	---

DATE REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**PAVEMENT MARKING & SIGNING PLAN**  
**KAMEHAMEHA HIGHWAY RESURFACING**  
Vicinity of Ka Uka Boulevard  
to Vicinity of Waihau Street  
Federal Aid Project No. NH-099-1(029)  
Scale: 1" = 40' Date: JAN. 2014

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	ADD. 73	84



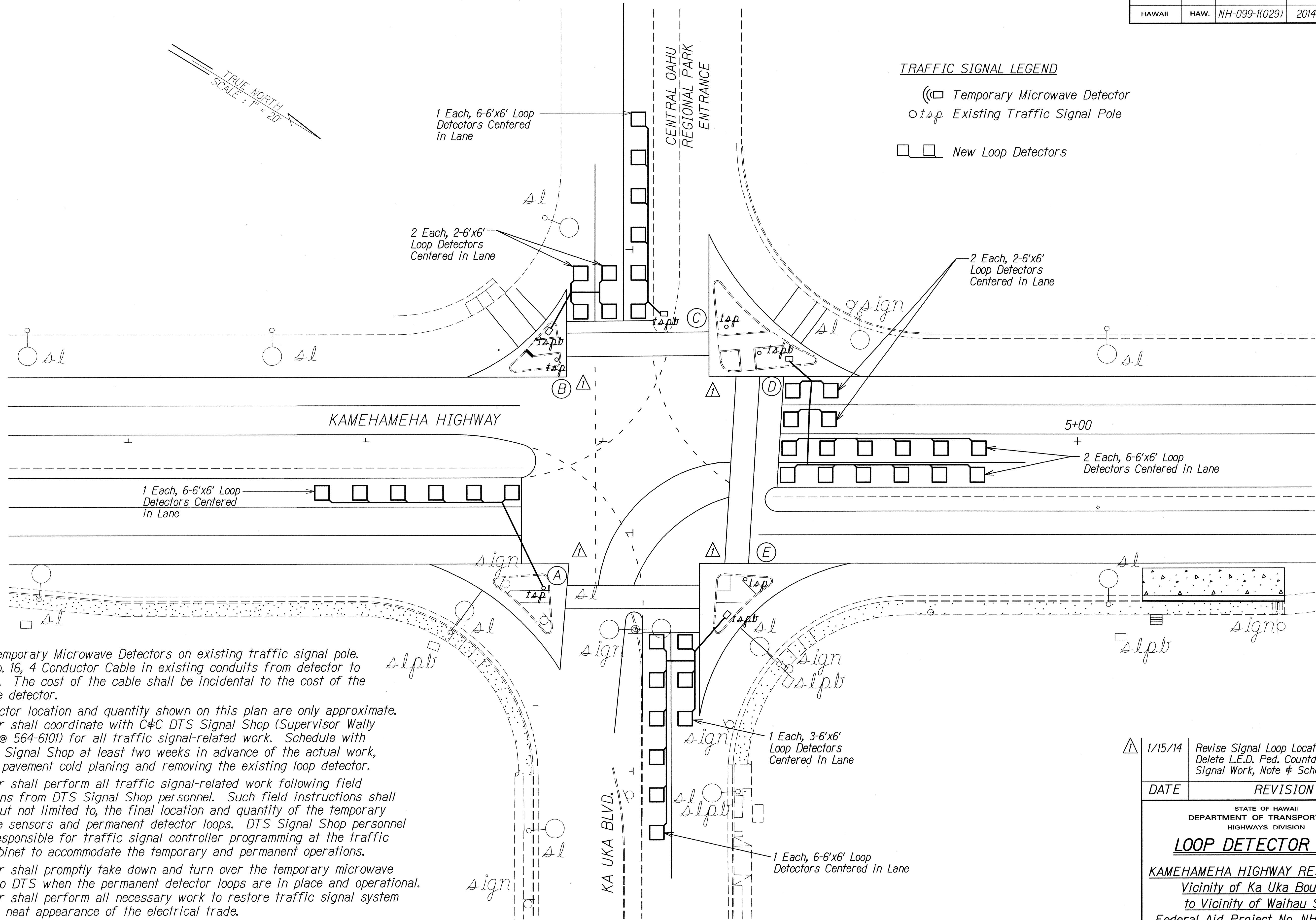
- KEY:
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  - ② Remove Exist. Sign(s)
  - ③ Remove Exist. Sign(s) w/ Post(s)
  - ④ Remove Exist. Sign(s) w/ Post(s) & Install New Sign(s) w/ Post(s)
  - ⑤ Remove Exist. Sign(s) & Install New Sign(s) on Exist. Hwy. Light Pole
  - ⑥ Remove Exist. Sign(s) & Install New Sign(s) on Exist. Flashing Lt. Pole
  - ⑦ Install New Sign(s)
  - ⑧ Install New Sign(s) & Post(s)
  - ⑨ Install New Sign(s) on Exist. Hwy. Light Pole
  - ⑩ Install New Sign(s) on Exist. Traffic Signal Pole
  - ⑪ Relocate Exist. Sign(s) & Post(s) to New Location
  - ⑫ Remove Exist. Sign(s) & Install New Sign(s)

ORIGINAL PLAN	DATE
NOTED BY	DESIGNED BY
QUANTITIES BY	CHECKED BY
N. W. W. W.	

1/15/14	Relocate Exist. Signs Add Speed Limit Sign Revise Sign Layout Revise Sign Key Callout
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PAVEMENT MARKING & SIGNING PLAN	
KAMEHAMEHA HIGHWAY RESURFACING	
Vicinity of Ka Uka Boulevard to Vicinity of Waihiwa Street	
Federal Aid Project No. NH-099-1(029)	
Scale: 1" = 40' Date: JAN. 2014	
SHEET No. 713 OF 24 SHEETS	



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	ADD. 75	84



TRAFFIC SIGNAL LEGEND

- Temporary Microwave Detector
- Existing Traffic Signal Pole
- New Loop Detectors



NOTES:

1. Install Temporary Microwave Detectors on existing traffic signal pole. Install No. 16, 4 Conductor Cable in existing conduits from detector to controller. The cost of the cable shall be incidental to the cost of the microwave detector.
2. Loop detector location and quantity shown on this plan are only approximate. Contractor shall coordinate with C&C DTS Signal Shop (Supervisor Wally Nakihiro @ 564-6101) for all traffic signal-related work. Schedule with C&C DTS Signal Shop at least two weeks in advance of the actual work, including pavement cold planing and removing the existing loop detector.
3. Contractor shall perform all traffic signal-related work following field instructions from DTS Signal Shop personnel. Such field instructions shall include, but not limited to, the final location and quantity of the temporary microwave sensors and permanent detector loops. DTS Signal Shop personnel will be responsible for traffic signal controller programming at the traffic signal cabinet to accommodate the temporary and permanent operations.
4. Contractor shall promptly take down and turn over the temporary microwave sensors to DTS when the permanent detector loops are in place and operational. Contractor shall perform all necessary work to restore traffic signal system back to a neat appearance of the electrical trade.



1/15/14  
Revise Signal Loop Location  
Delete L.E.D. Ped. Countdown  
Signal Work, Note # Schedule

DATE REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**LOOP DETECTOR PLAN**  
KAMEHAMEHA HIGHWAY RESURFACING  
Vicinity of Ka Uka Boulevard  
to Vicinity of Waihau Street  
Federal Aid Project No. NH-099-1(029)

Scale: 1" = 20' Date: JAN. 2014

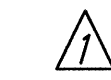
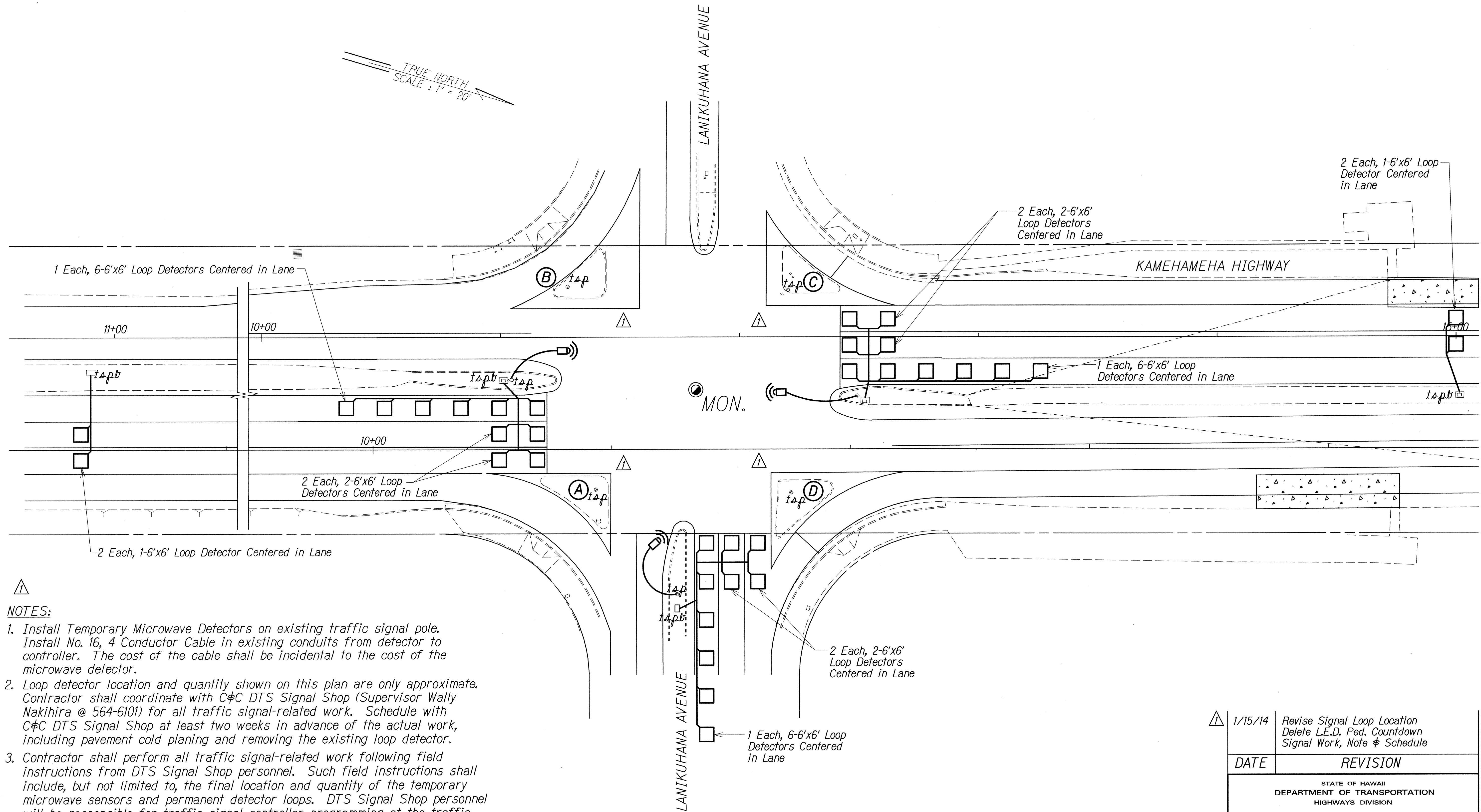
SHEET No. T15 OF 24 SHEETS

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	ADD. 76	84



TRUE NORTH  
SCALE : 1" = 20'



NOTES:

1. Install Temporary Microwave Detectors on existing traffic signal pole. Install No. 16, 4 Conductor Cable in existing conduits from detector to controller. The cost of the cable shall be incidental to the cost of the microwave detector.
2. Loop detector location and quantity shown on this plan are only approximate. Contractor shall coordinate with C&C DTS Signal Shop (Supervisor Wally Nakihiro @ 564-6101) for all traffic signal-related work. Schedule with C&C DTS Signal Shop at least two weeks in advance of the actual work, including pavement cold planing and removing the existing loop detector.
3. Contractor shall perform all traffic signal-related work following field instructions from DTS Signal Shop personnel. Such field instructions shall include, but not limited to, the final location and quantity of the temporary microwave sensors and permanent detector loops. DTS Signal Shop personnel will be responsible for traffic signal controller programming at the traffic signal cabinet to accommodate the temporary and permanent operations.
4. Contractor shall promptly take down and turn over the temporary microwave sensors to DTS when the permanent detector loops are in place and operational. Contractor shall perform all necessary work to restore traffic signal system back to a neat appearance of the electrical trade.

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

TRAFFIC SIGNAL LEGEND

- Ⓜ Temporary Microwave Detector  
○ isp Existing Traffic Signal Pole  
□ New Loop Detectors



1/15/14  
Revise Signal Loop Location  
Delete L.E.D. Ped. Countdown  
Signal Work, Note # Schedule

DATE REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**LOOP DETECTOR PLAN**

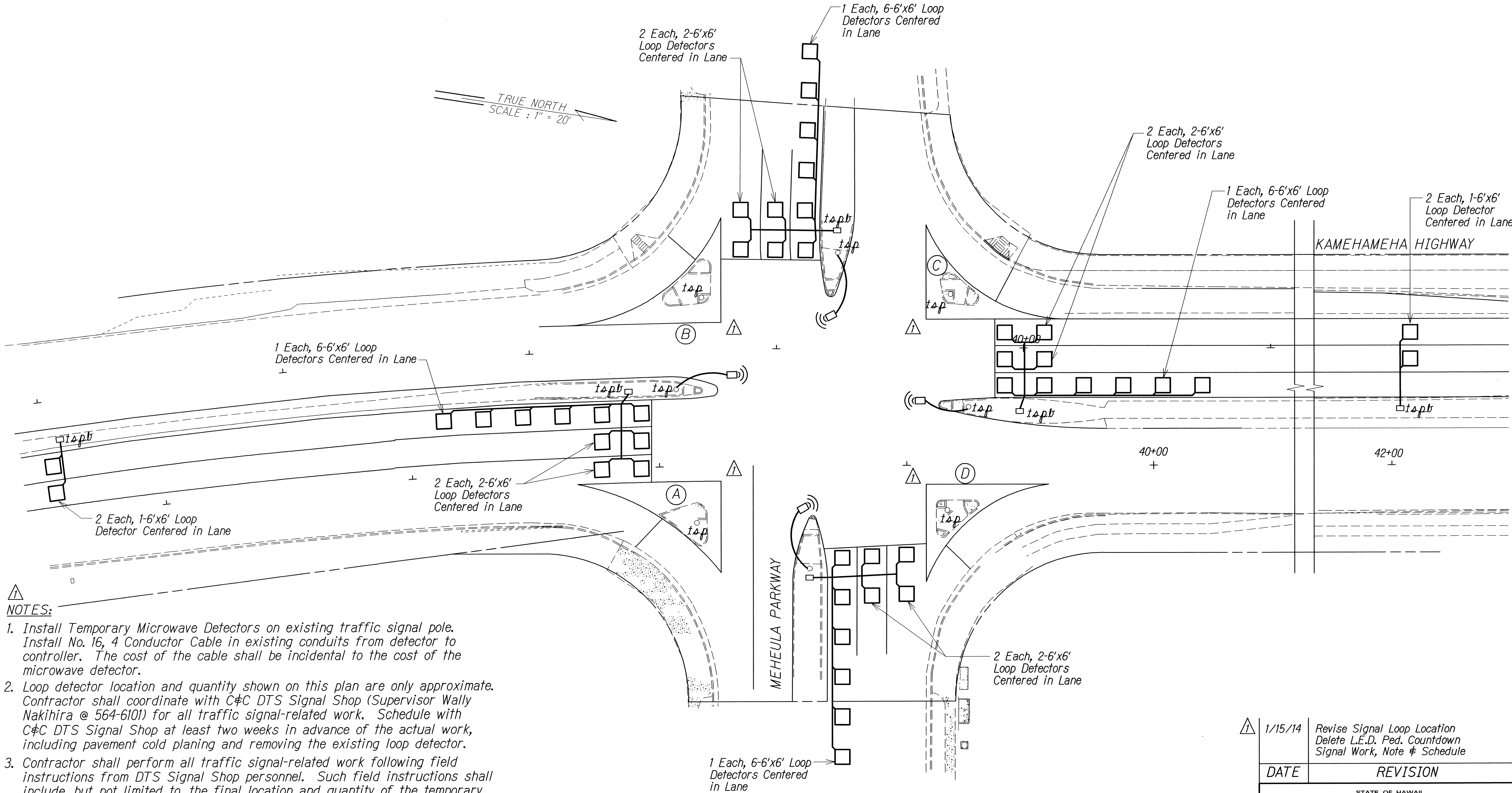
KAMEHAMEHA HIGHWAY RESURFACING  
Vicinity of Ka Uka Boulevard  
to Vicinity of Waihou Street  
Federal Aid Project No. NH-099-1(029)

Scale: 1" = 20' Date: JAN. 2014

SHEET No. 716 OF 24 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	ADD. 77	84



NOTES:

1. Install Temporary Microwave Detectors on existing traffic signal pole. Install No. 16, 4 Conductor Cable in existing conduits from detector to controller. The cost of the cable shall be incidental to the cost of the microwave detector.
2. Loop detector location and quantity shown on this plan are only approximate. Contractor shall coordinate with C&C DTS Signal Shop (Supervisor Wally Nakihiro @ 564-6101) for all traffic signal-related work. Schedule with C&C DTS Signal Shop at least two weeks in advance of the actual work, including pavement cold planing and removing the existing loop detector.
3. Contractor shall perform all traffic signal-related work following field instructions from DTS Signal Shop personnel. Such field instructions shall include, but not limited to, the final location and quantity of the temporary microwave sensors and permanent detector loops. DTS Signal Shop personnel will be responsible for traffic signal controller programming at the traffic signal cabinet to accommodate the temporary and permanent operations.
4. Contractor shall promptly take down and turn over the temporary microwave sensors to DTS when the permanent detector loops are in place and operational. Contractor shall perform all necessary work to restore traffic signal system back to a neat appearance of the electrical trade.

TRAFFIC SIGNAL LEGEND

- Temporary Microwave Detector
- Existing Traffic Signal Pole
- New Loop Detectors

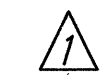
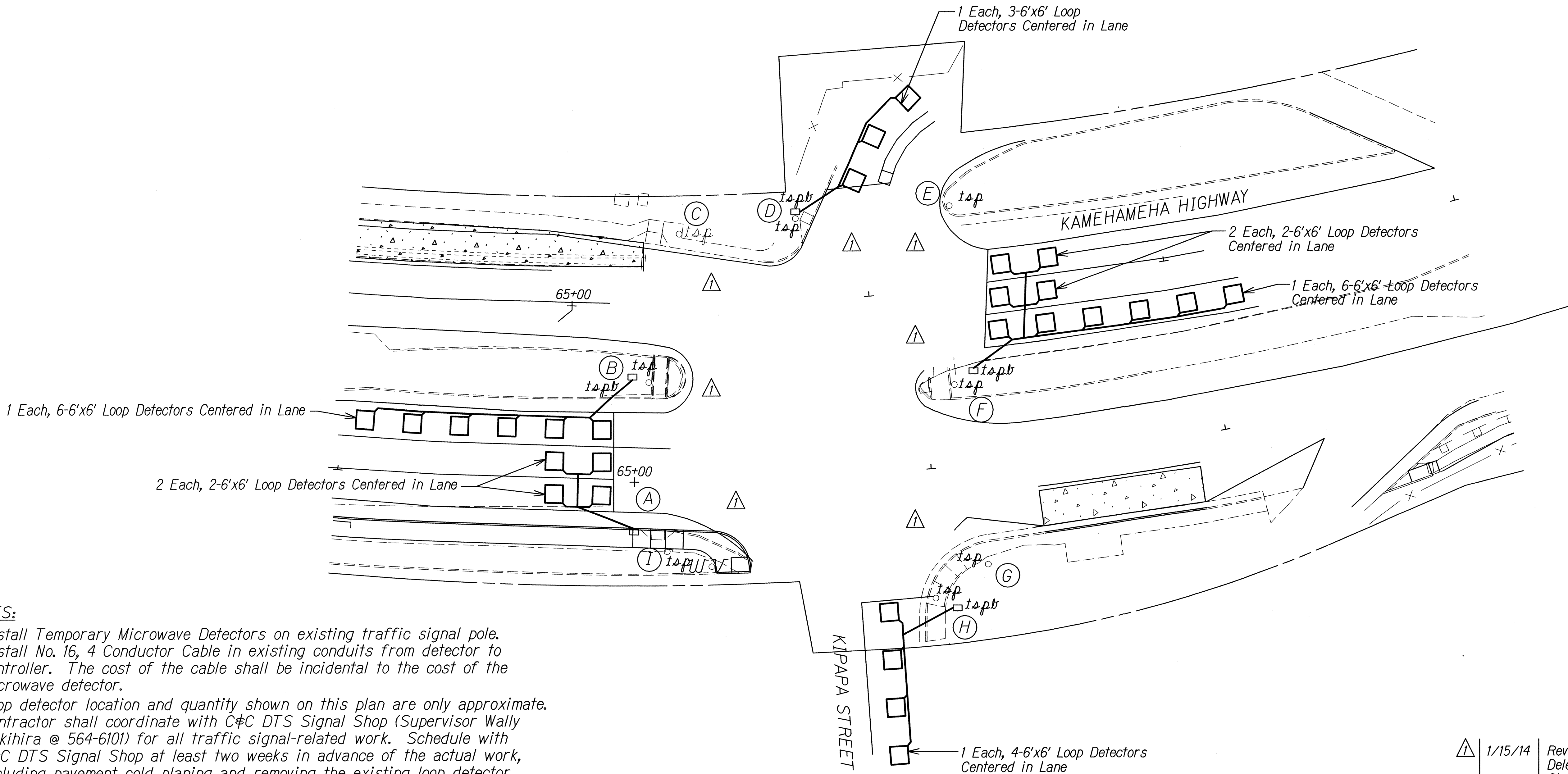
1/15/14	Revise Signal Loop Location Delete L.E.D. Ped. Countdown Signal Work, Note # Schedule
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<b>LOOP DETECTOR PLAN</b>	
KAMEHAMEHA HIGHWAY RESURFACING Vicinity of Ka Uka Boulevard to Vicinity of Waihau Street Federal Aid Project No. NH-099-1(029)	
Scale: 1" = 20'	Date: JAN. 2014
SHEET No. T17 OF 24 SHEETS	







TRUE NORTH  
SCALE: 1" = 20'



NOTES:

1. Install Temporary Microwave Detectors on existing traffic signal pole. Install No. 16, 4 Conductor Cable in existing conduits from detector to controller. The cost of the cable shall be incidental to the cost of the microwave detector.
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TRAFFIC SIGNAL LEGEND

- (○) Temporary Microwave Detector  
○ tsp Existing Traffic Signal Pole  
□ New Loop Detectors



1/15/14  
Revise Signal Loop Location  
Delete L.E.D. Ped. Countdown  
Signal Work, Note # Schedule

DATE REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**LOOP DETECTOR PLAN**  
KAMEHAMEHA HIGHWAY RESURFACING  
Vicinity of Ka Uka Boulevard  
to Vicinity of Waihou Street  
Federal Aid Project No. NH-099-1(029)

Scale: 1" = 20' Date: JAN. 2014

SHEET No. T19 OF 24 SHEETS