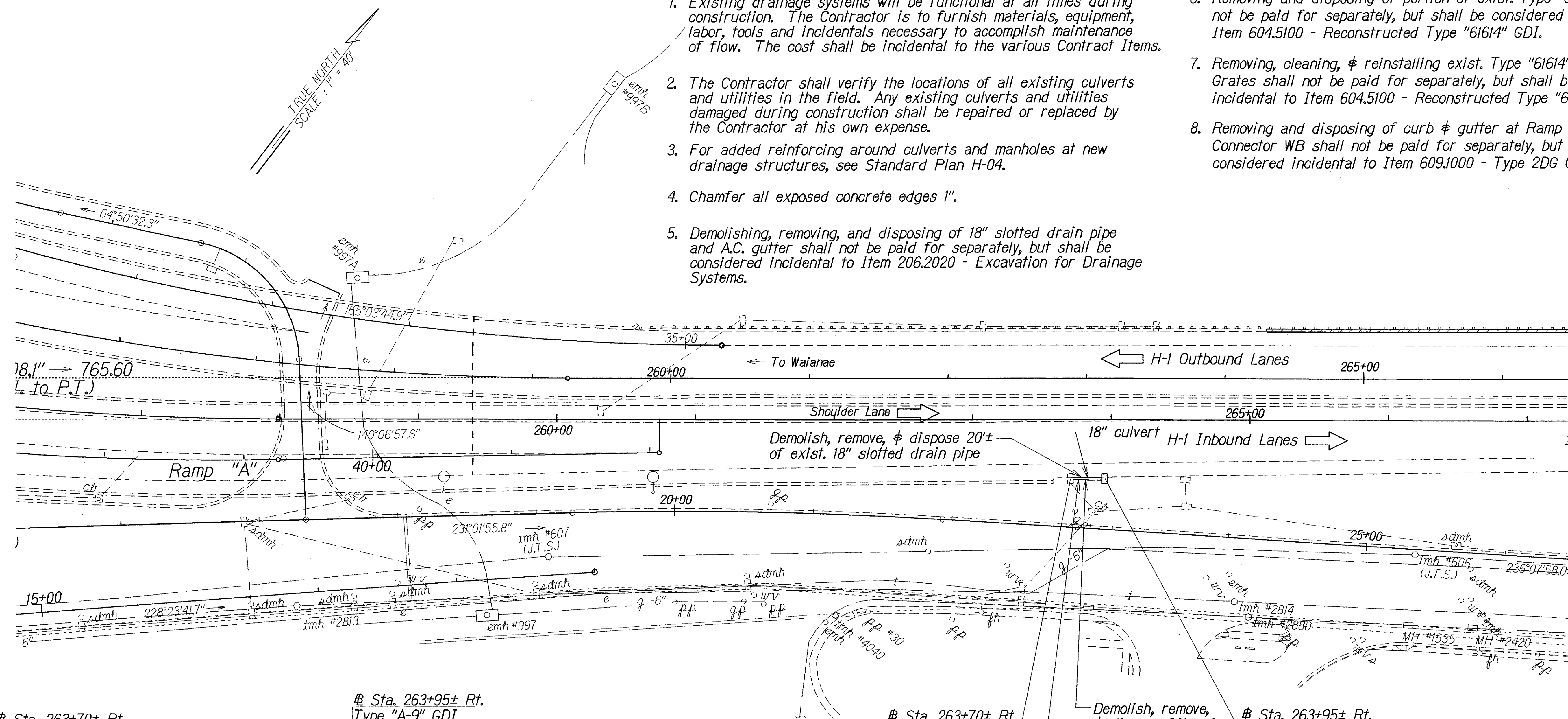


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-K(240)	2004	122	143

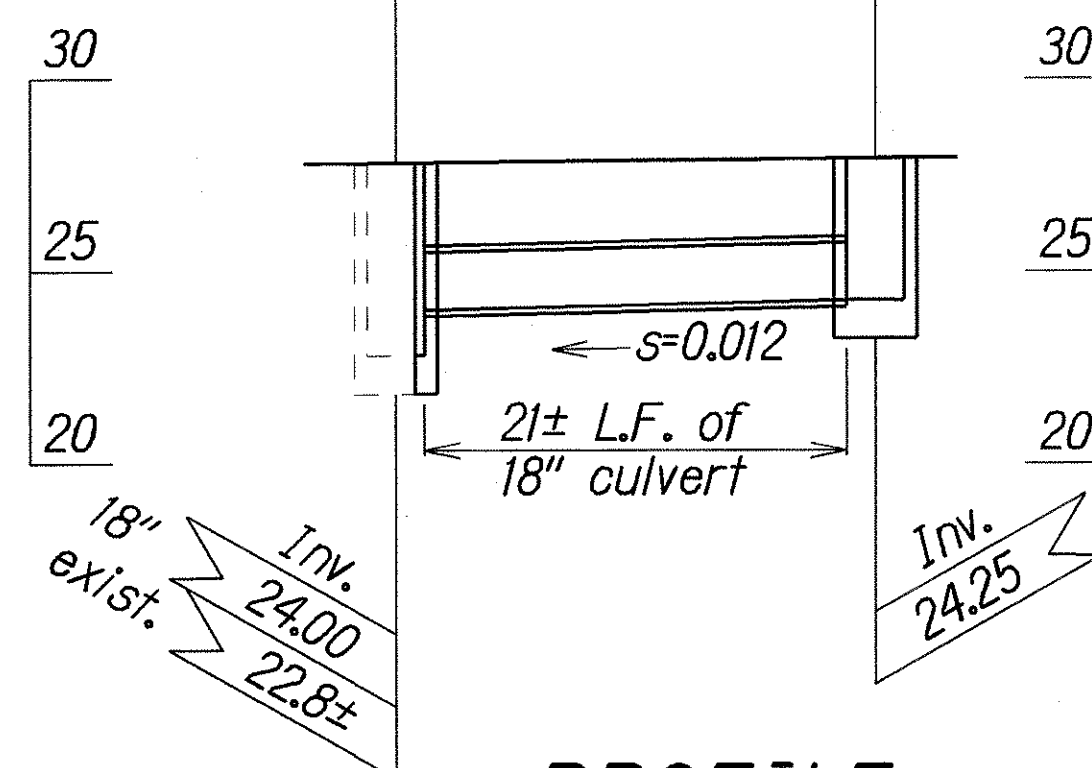
DRAINAGE NOTES:

- Existing drainage systems will be functional at all times during construction. The Contractor is to furnish materials, equipment, labor, tools and incidentals necessary to accomplish maintenance of flow. The cost shall be incidental to the various Contract Items.
- The Contractor shall verify the locations of all existing culverts and utilities in the field. Any existing culverts and utilities damaged during construction shall be repaired or replaced by the Contractor at his own expense.
- For added reinforcing around culverts and manholes at new drainage structures, see Standard Plan H-04.
- Chamfer all exposed concrete edges 1".
- Demolishing, removing, and disposing of 18" slotted drain pipe and A.C. gutter shall not be paid for separately, but shall be considered incidental to Item 206.2020 - Excavation for Drainage Systems.
- Removing and disposing of portion of exist. Type "61614" GDI shall not be paid for separately, but shall be considered incidental to Item 604.5100 - Reconstructed Type "61614" GDI.
- Removing, cleaning, & reinstalling exist. Type "61614" Frame & Grates shall not be paid for separately, but shall be considered incidental to Item 604.5100 - Reconstructed Type "61614" GDI.
- Removing and disposing of curb & gutter at Ramp D and Nimitz Connector WB shall not be paid for separately, but shall be considered incidental to Item 609.1000 - Type 2DG Curb & Gutter.



Sta. 263+70± Rt.
Reconstructed Type "61614" GDI

Sta. 263+95± Rt.
Type "A-9" GDI



PROFILE

Scale: Horiz. 1"=10'-0"
Vert. 1"=5'-0"

PLAN

Scale: 1"=40'-0"

Sta. 263+70± Rt.
Construct: Reconstructed Type "61614" GDI
(For typ. det. see sht. H3)
Install: 18" Culvert
(For Profile see this sheet)

Estimated Quantities
Structure Excavation = 15 C.Y.
Bedcourse Material = 4 C.Y.
18" Culvert = 21 L.F.
Reconstructed Type "61614" GDI = 1 EA.
(5.00 ft. to 5.99 ft.)
Concrete Gutter Transition = 24 L.F.

Sta. 263+70± Rt.
Reconstructed Type "61614" GDI
Inv.=24.00 (18")
Inv.=22.8± (exist.)
(For det., see sht. H3)

Sta. 263+95± Rt.
Construct: Type "A-9" GDI
(For det. see sht. H4 & Struc. Sht. S15.10)

Estimated Quantities
Type "A-9" GDI = 1 EA.
(3.00 ft. to 3.99 ft.)

Demolish, remove, & dispose 20'± of exist. a.c. gutter
Conc. gutter transition
(For det., see sht. H4)

Sta. 263+95± Rt.
Type "A-9" GDI
Inv.=24.25
(For det., see sht. H4 and struc. sht. S15.10)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE PLANS

INTERSTATE ROUTE H-1

Guardrail and Shoulder Improvements

Airport Interchange to Middle Street

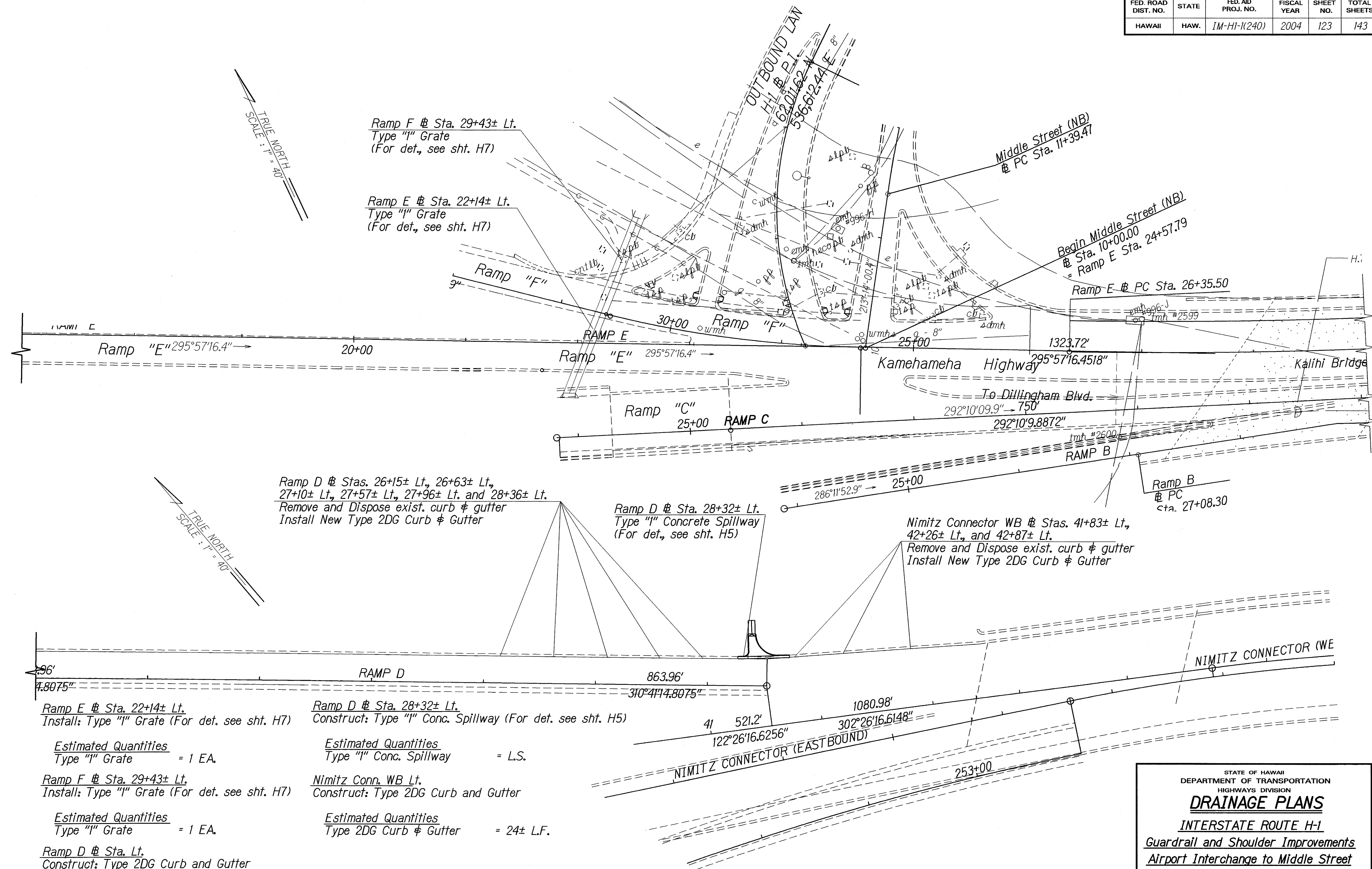
Federal Aid Project No. IM-HI-K(240)

Scale: As shown Date: July, 2001

SHEET No. **HI** OF **8** SHEETS

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-K(240)	2004	123	143



Ramp E @ Sta. 22+14± Lt.
Install: Type "I" Grate (For det. see sht. H7)

Estimated Quantities
Type "I" Grate = 1 EA.

Ramp F @ Sta. 29+43± Lt.
Install: Type "I" Grate (For det. see sht. H7)

Estimated Quantities
Type "I" Grate = 1 EA.

Ramp D @ Sta. Lt.
Construct: Type 2DG Curb and Gutter

Estimated Quantities
Type 2DG Curb & Gutter = 40± L.F.

Ramp D @ Sta. 28+32± Lt.
Construct: Type "I" Conc. Spillway (For det. see sht. H5)

Estimated Quantities
Type "I" Conc. Spillway = L.S.

Nimitz Conn. WB Lt.
Construct: Type 2DG Curb and Gutter

Estimated Quantities
Type 2DG Curb & Gutter = 24± L.F.

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE PLANS

INTERSTATE ROUTE H-1

Guardrail and Shoulder Improvements

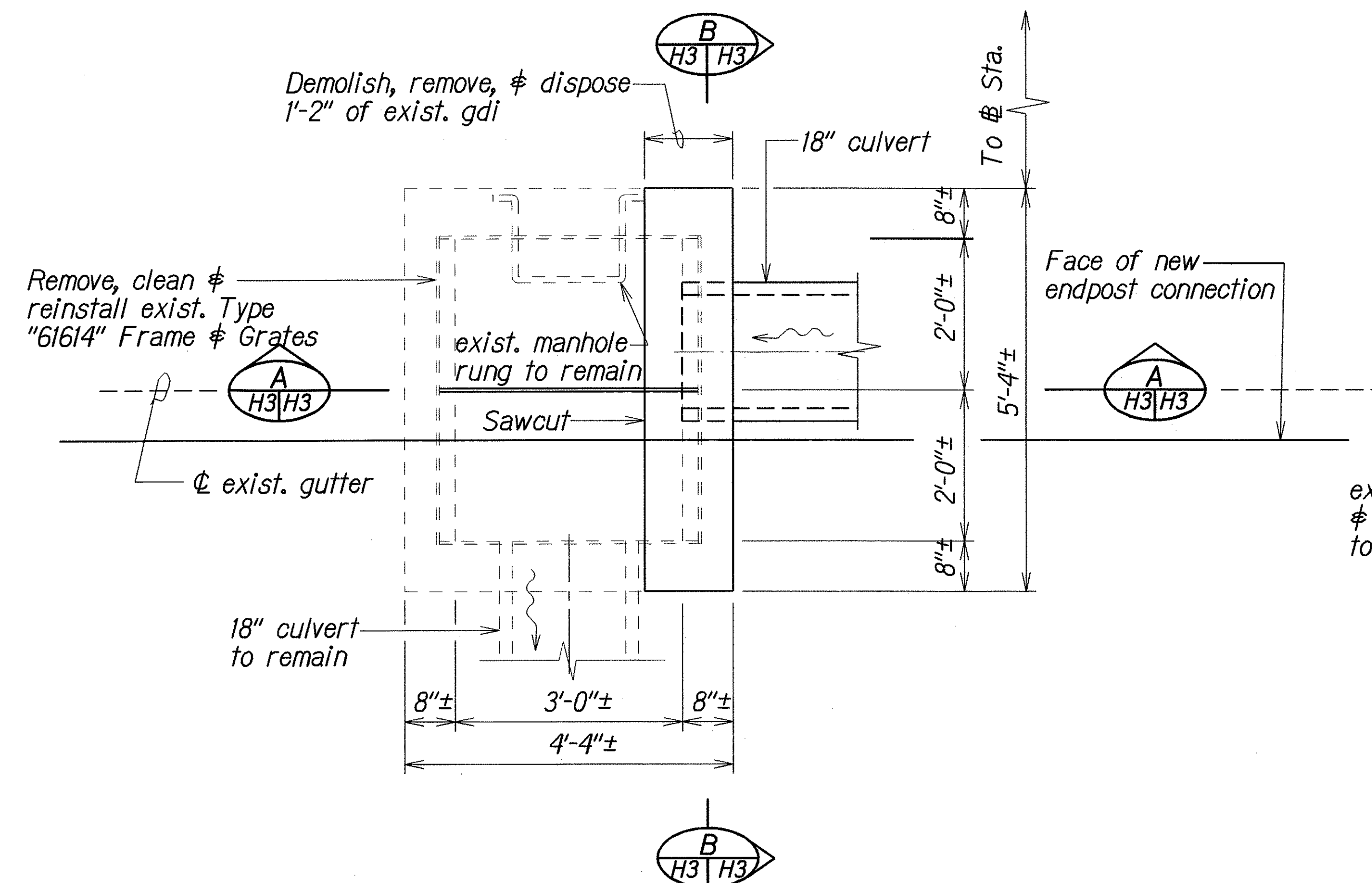
Airport Interchange to Middle Street

Federal Aid Project No. IM-HI-K(240)

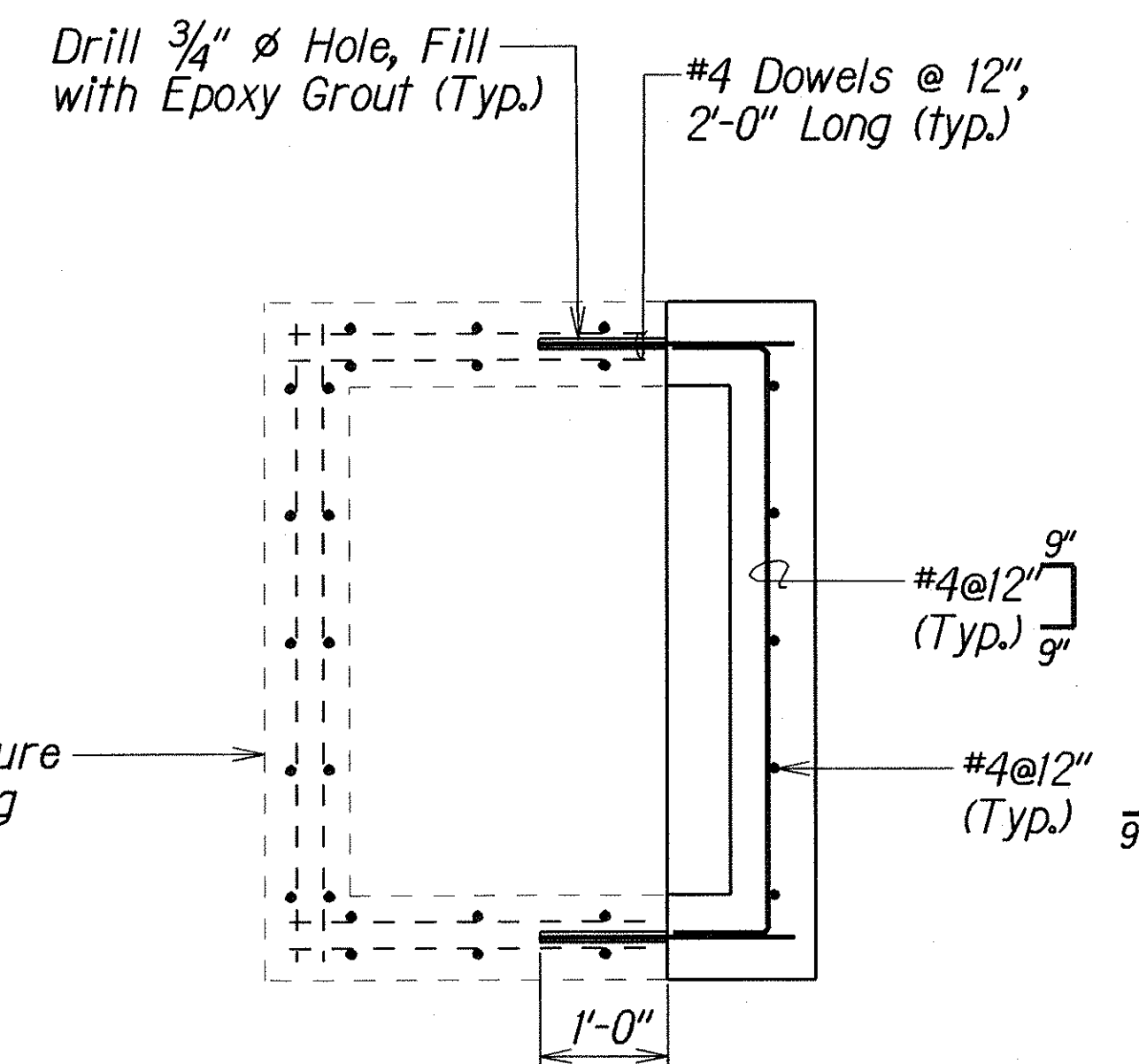
Scale: 1" = 40' Date: July, 2001

SHEET No. H2 OF 8 SHEETS

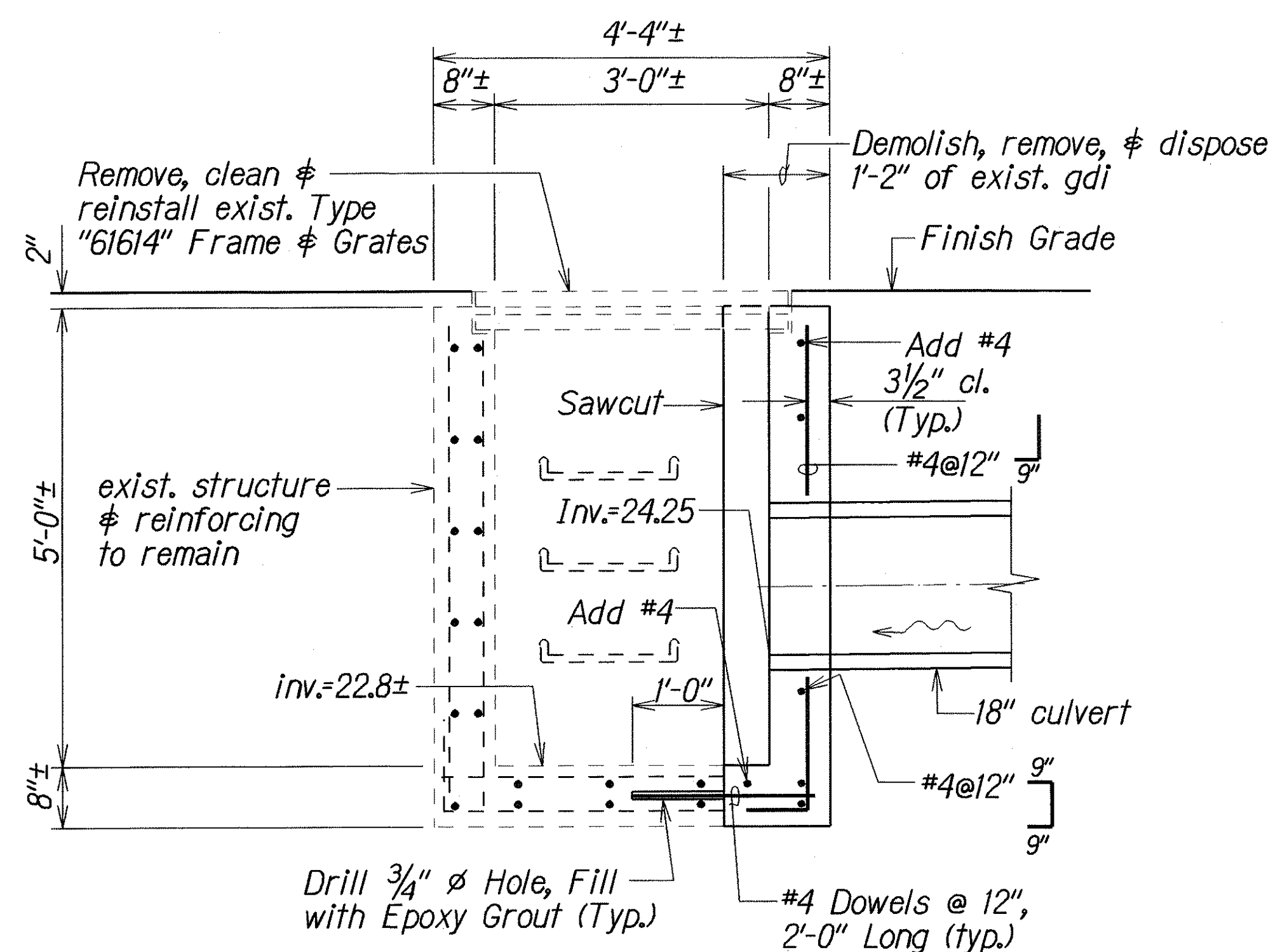
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(240)	2004	124	143



PLAN

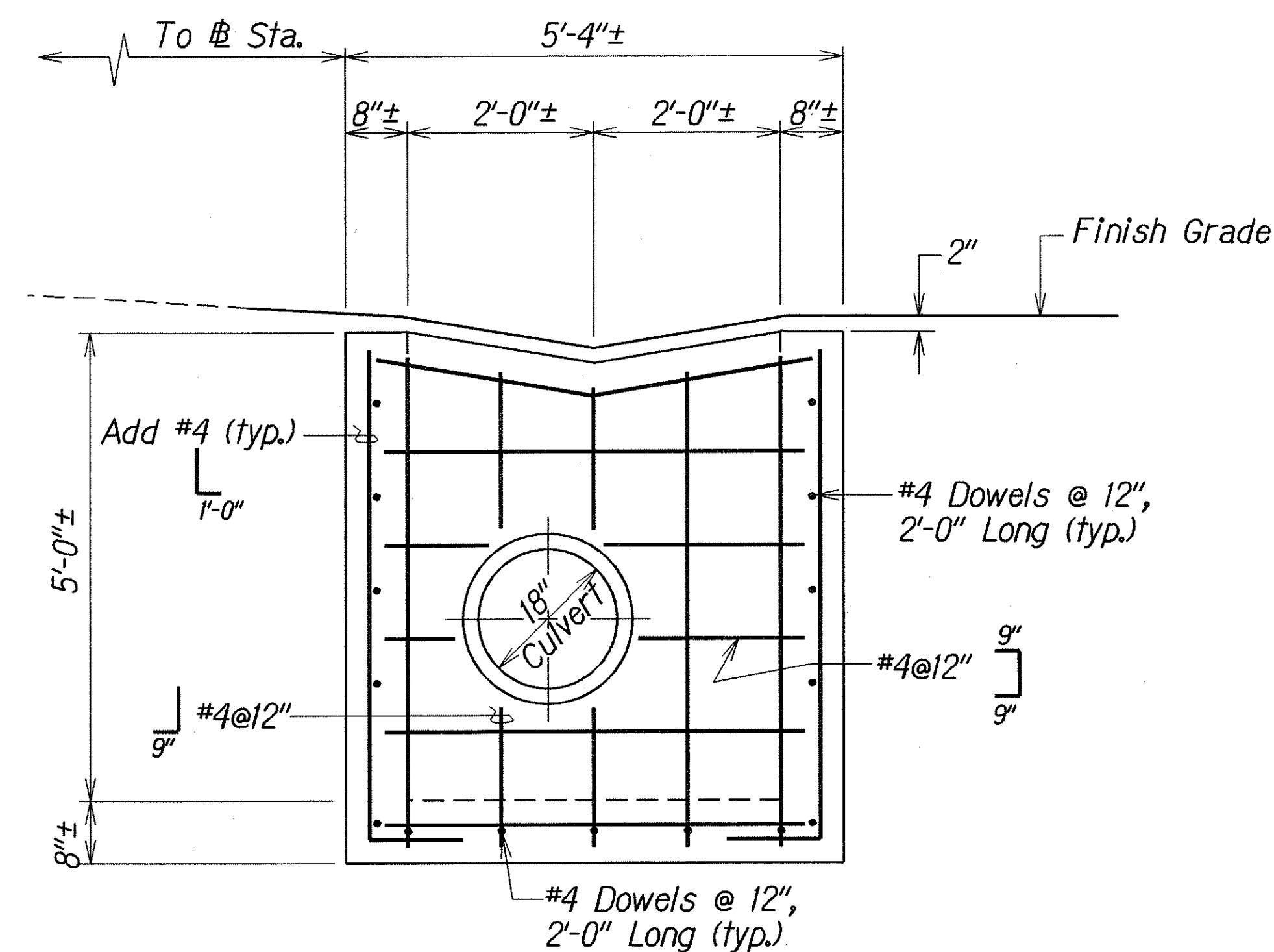


PLAN VIEW OF WALL REINFORCING



SECTION

A
H3/H3



SECTION

B
H3/H3

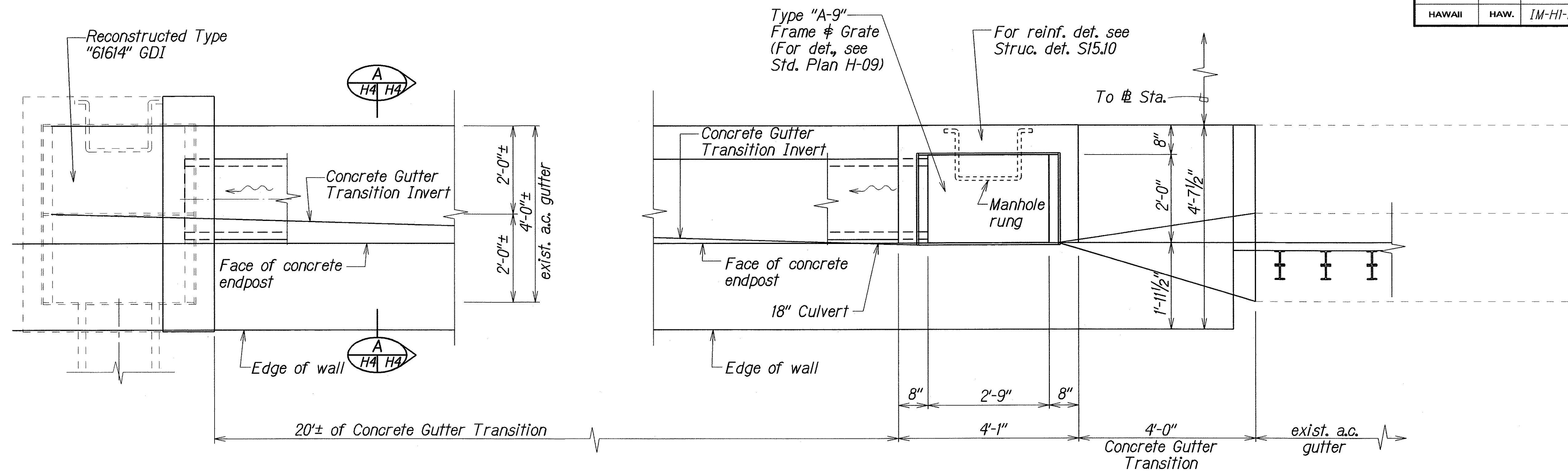
Note: For added reinforcing around culverts and manholes see Standard Detail H-04.

DETAILS OF RECONSTRUCTED TYPE "61614" GRATED DROP INLET

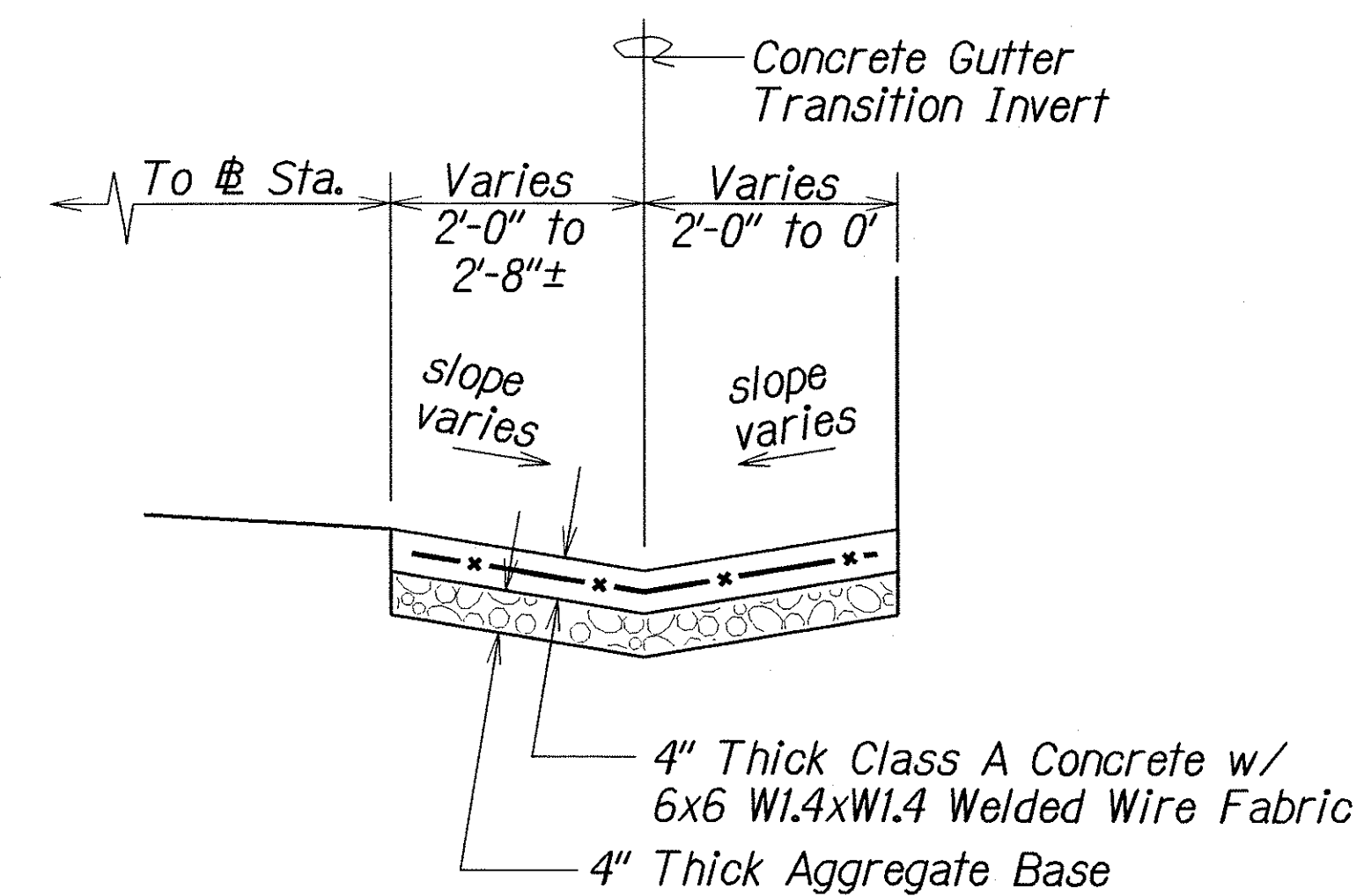
ORIGINAL PLAN	DATE	5/19/00
DESIGNED BY	TRACED BY	
QUANTITIES BY	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE DETAILS
INTERSTATE ROUTE H-1
Guardrail and Shoulder Improvements
Airport Interchange to Middle Street
Federal Aid Project No. IM-HI-1(240)
Scale: 3/4" = 1'-0" Date: July, 2001
SHEET No. H3 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(240)	2004	125	143



PLAN



SECTION A

DETAILS OF TYPE "A-9" GRATED DROP INLET

ORIGINAL PLAN	DATE
5/19/00	
DESIGNED BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
TRACED BY	
DRAWN BY	
REVIEWED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

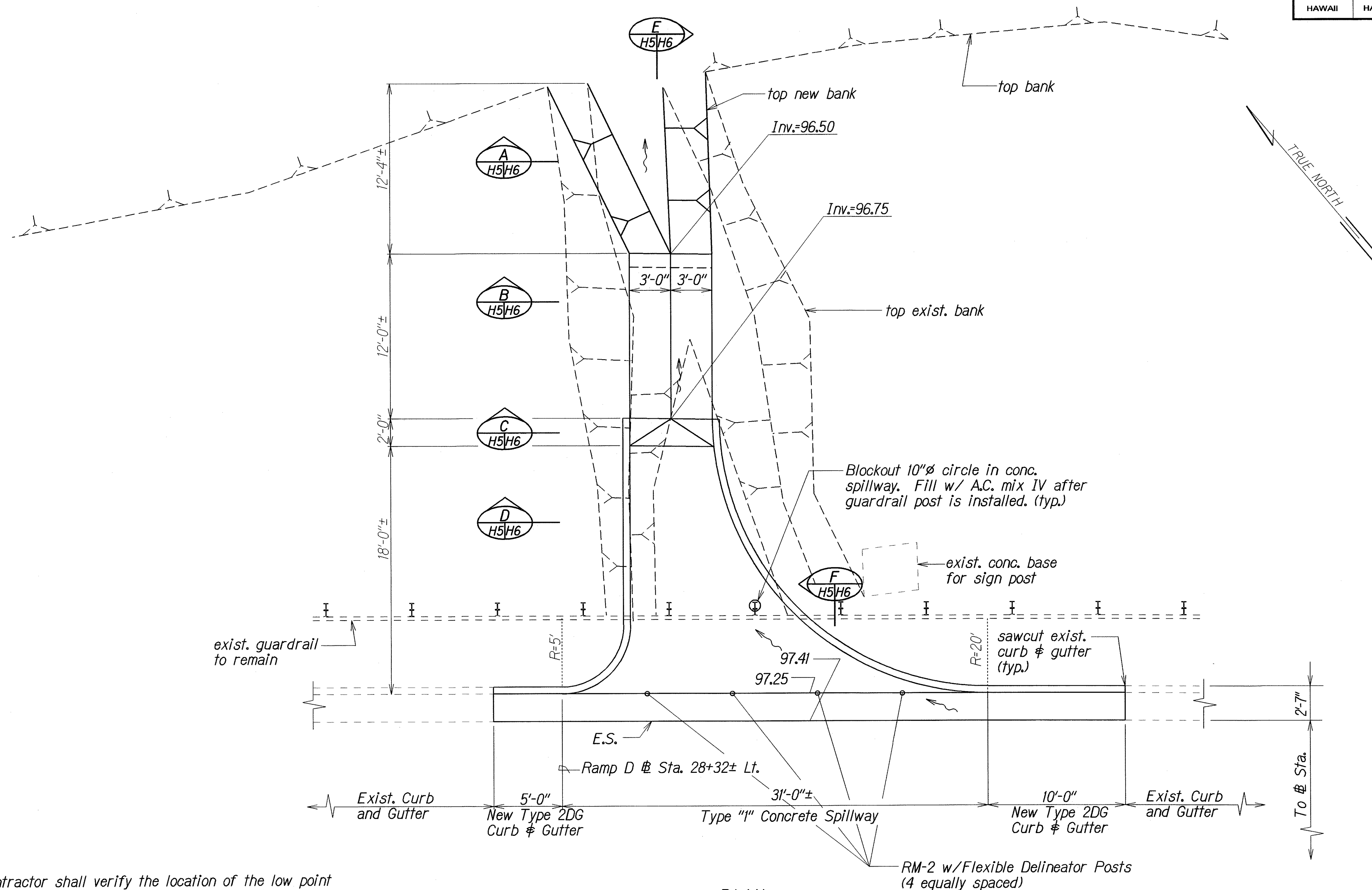
DRAINAGE DETAILS

INTERSTATE ROUTE H-1
Guardrail and Shoulder Improvements
Airport Interchange to Middle Street
Federal Aid Project No. IM-HI-1(240)

Scale: 3/4" = 1'-0" Date: July, 2001

SHEET No. H4 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-HI-K(240)	2004	126	143



Notes:

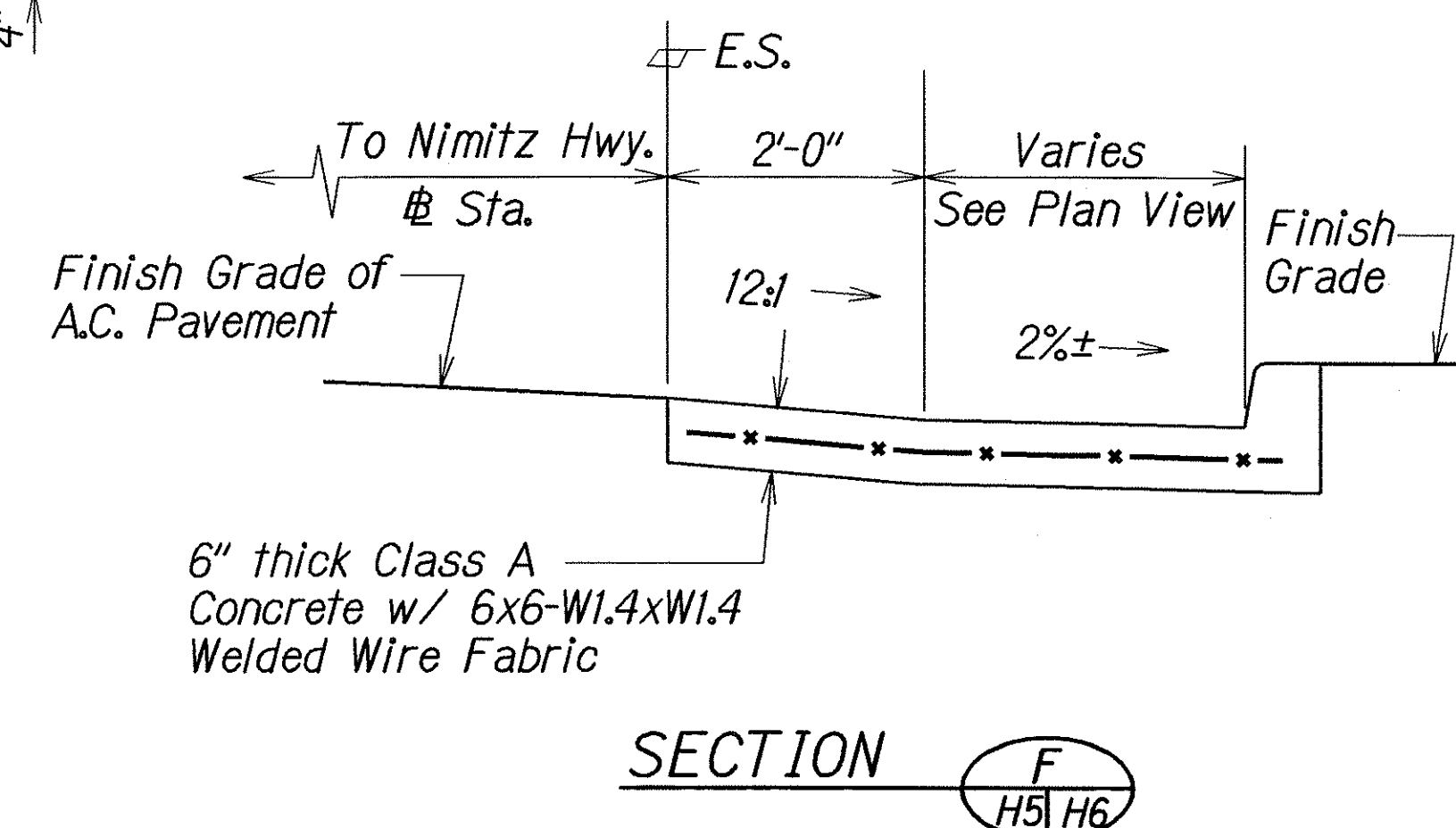
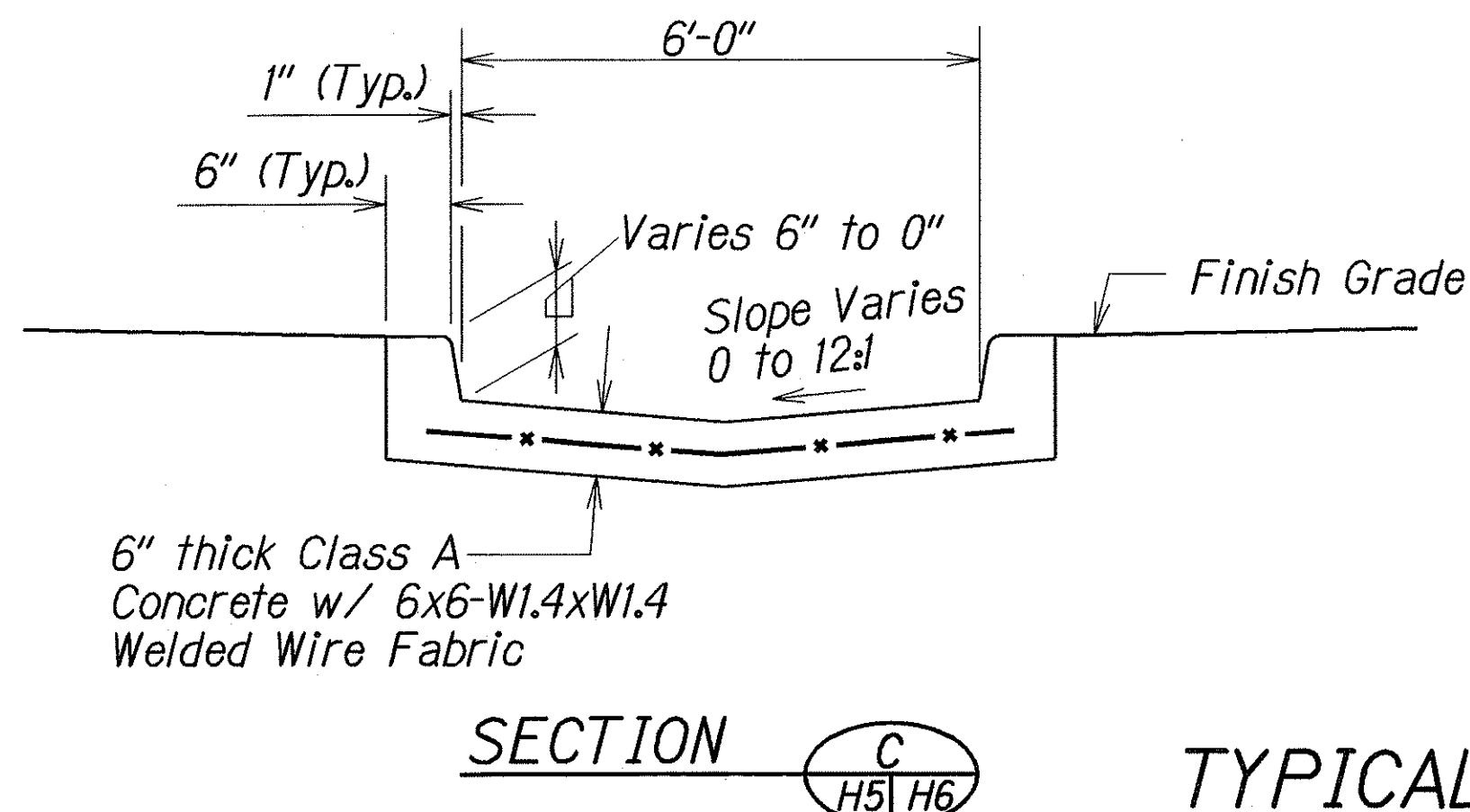
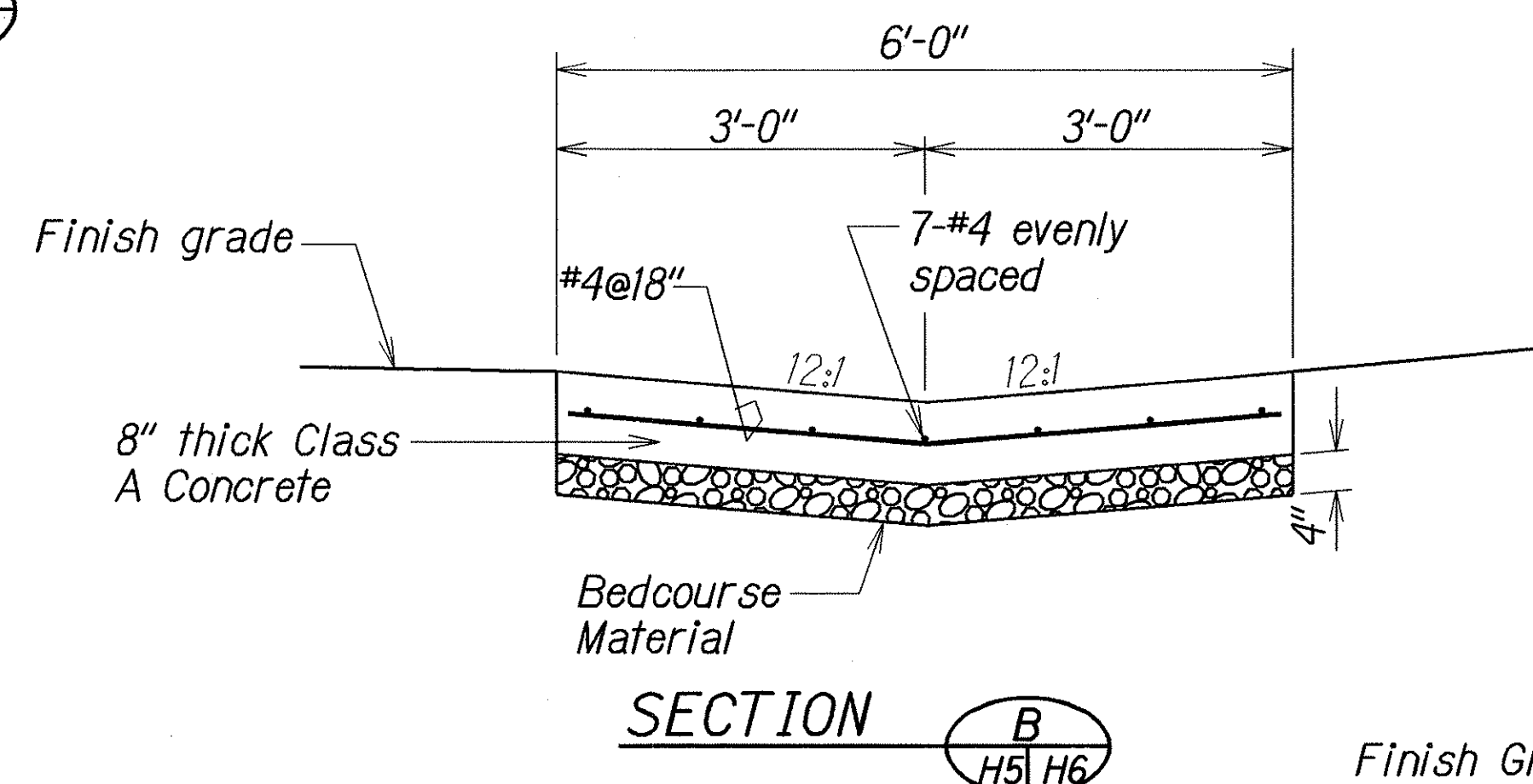
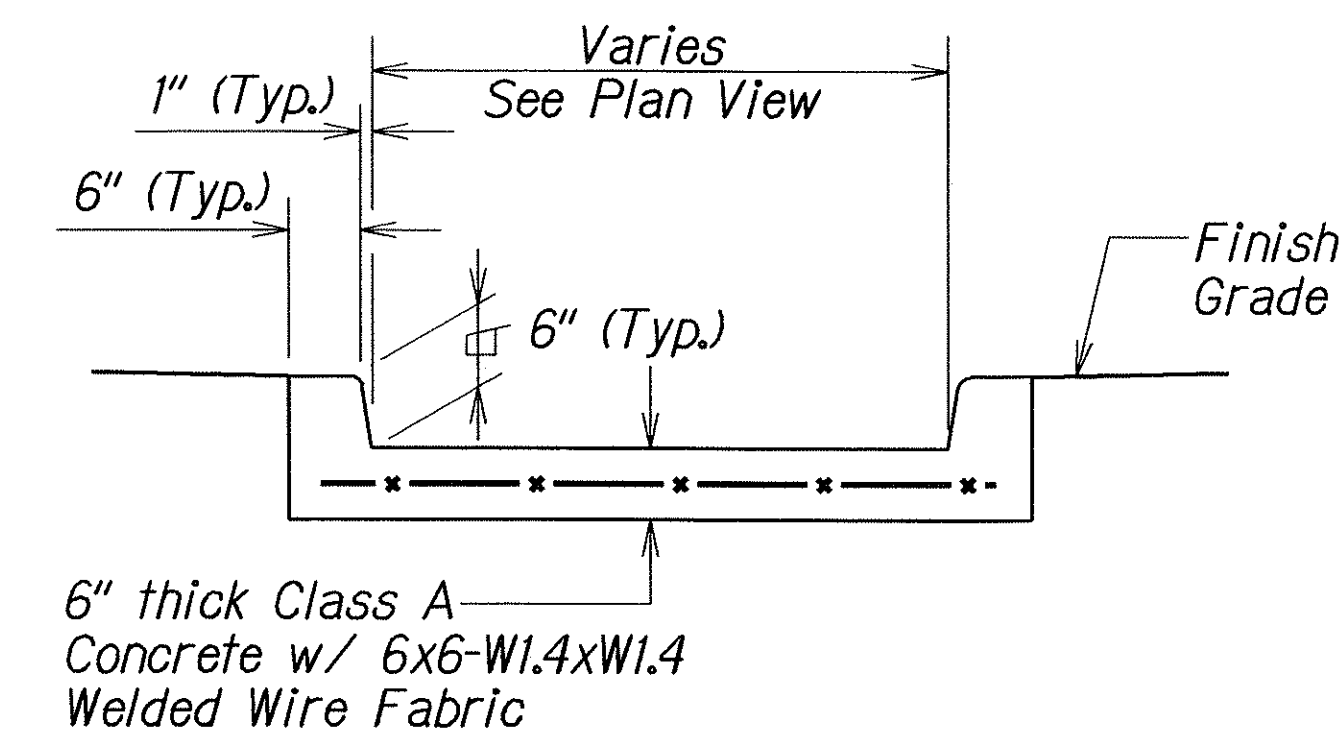
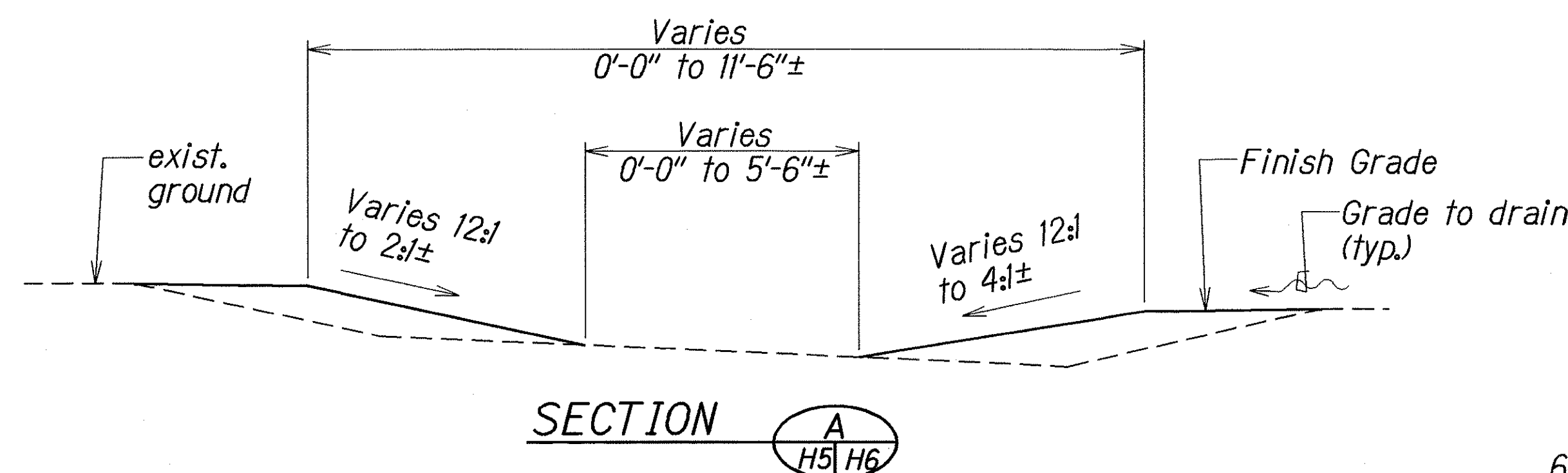
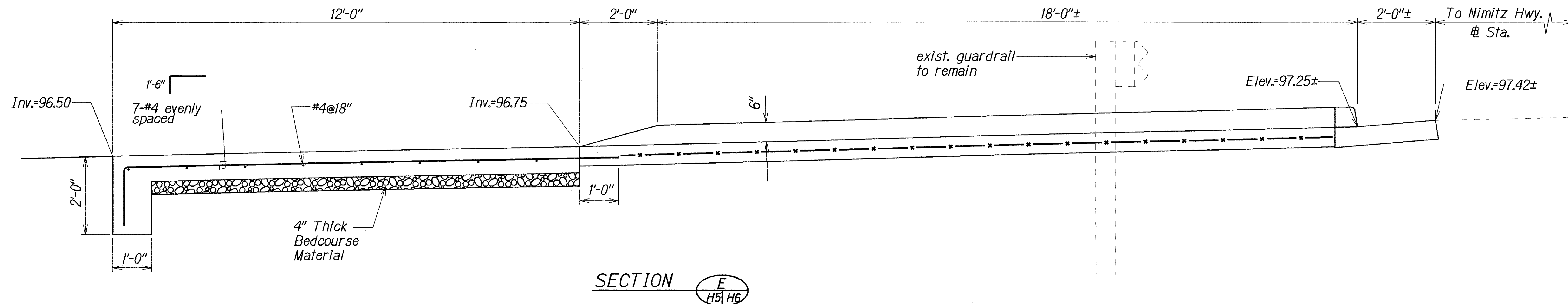
1. The Contractor shall verify the location of the low point before construction of the Type "1" Concrete Spillway.
2. Remove and reinstall metal guardrail and posts as necessary.
3. Elevations shown are referred to a "□" cut on the concrete bridge wall footing where elev. = 100.00 ft. (assumed).
4. RM-2 Flexible Delineator Posts shall not be paid for separately but shall be considered incidental to Type "1" Concrete Spillway.

TYPICAL DETAILS OF TYPE "1" CONCRETE SPILLWAY

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	8/28/01
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
<u>DRAINAGE DETAILS</u>
<u>INTERSTATE ROUTE H-1</u>
<u>Guardrail and Shoulder Improvements</u>
<u>Airport Interchange to Middle Street</u>
<u>Federal Aid Project No. 1M-HI-K(240)</u>
Scale: 1/4" = 1'-0" Date: July, 2001
SHEET No. H5 OF 8 SHEETS

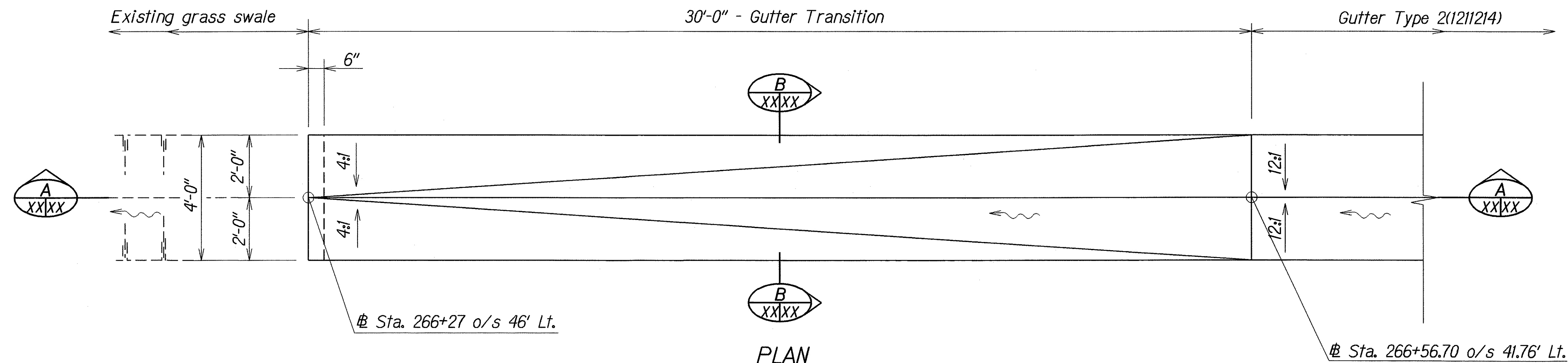
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(240)	2004	127	143



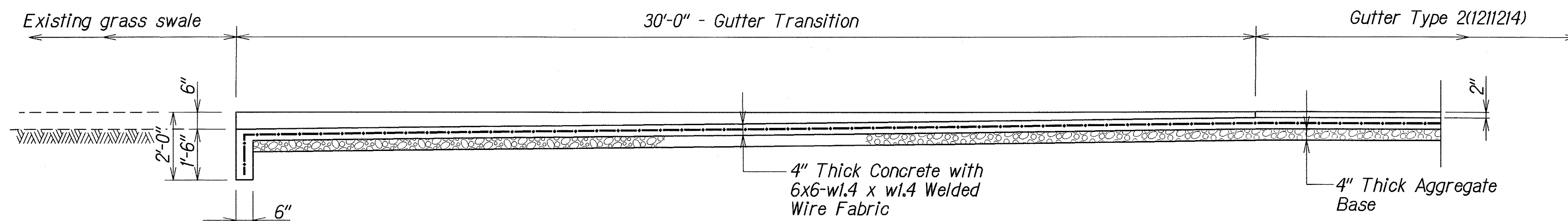
TYPICAL DETAILS OF TYPE "I" CONCRETE SPILLWAY

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
DRAINAGE DETAILS
 INTERSTATE ROUTE H-1
 Guardrail and Shoulder Improvements
 Airport Interchange to Middle Street
 Federal Aid Project No. IM-HI-1(240)
 Scale: 3/4" = 1'-0" Date: July, 2001
 SHEET No. H6 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-K(240)	2004	129	143

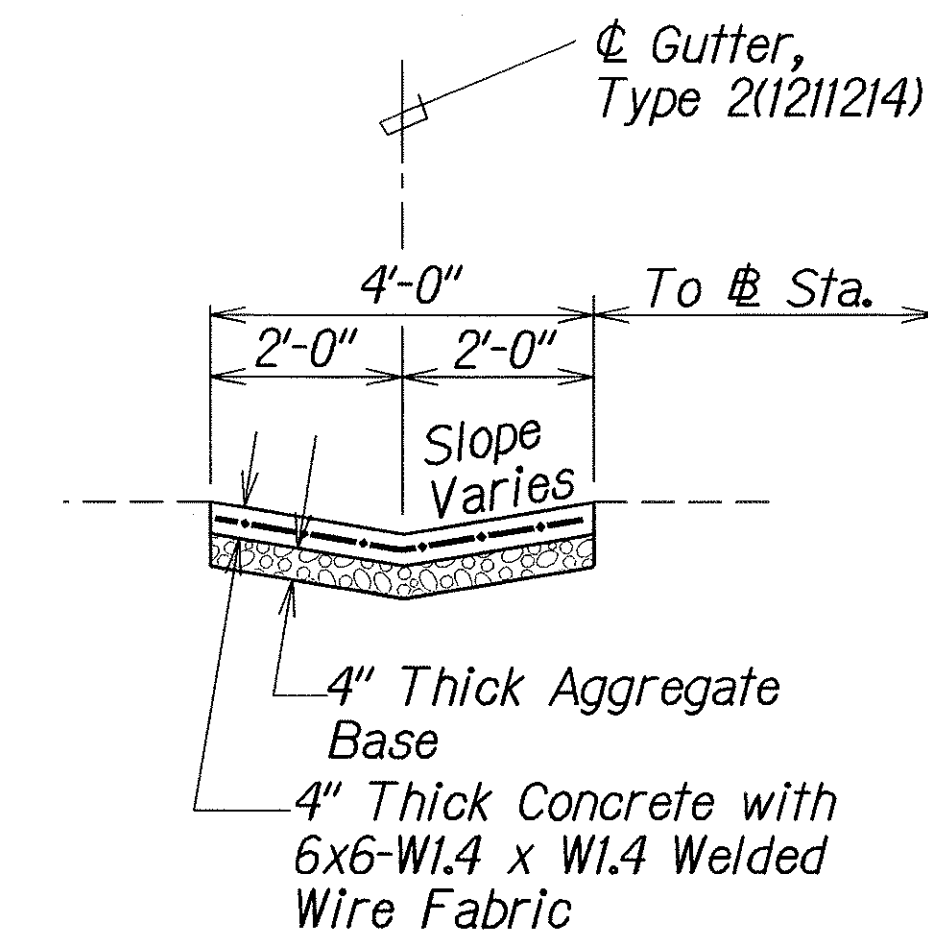


PLAN



SECTION

A
XXXX

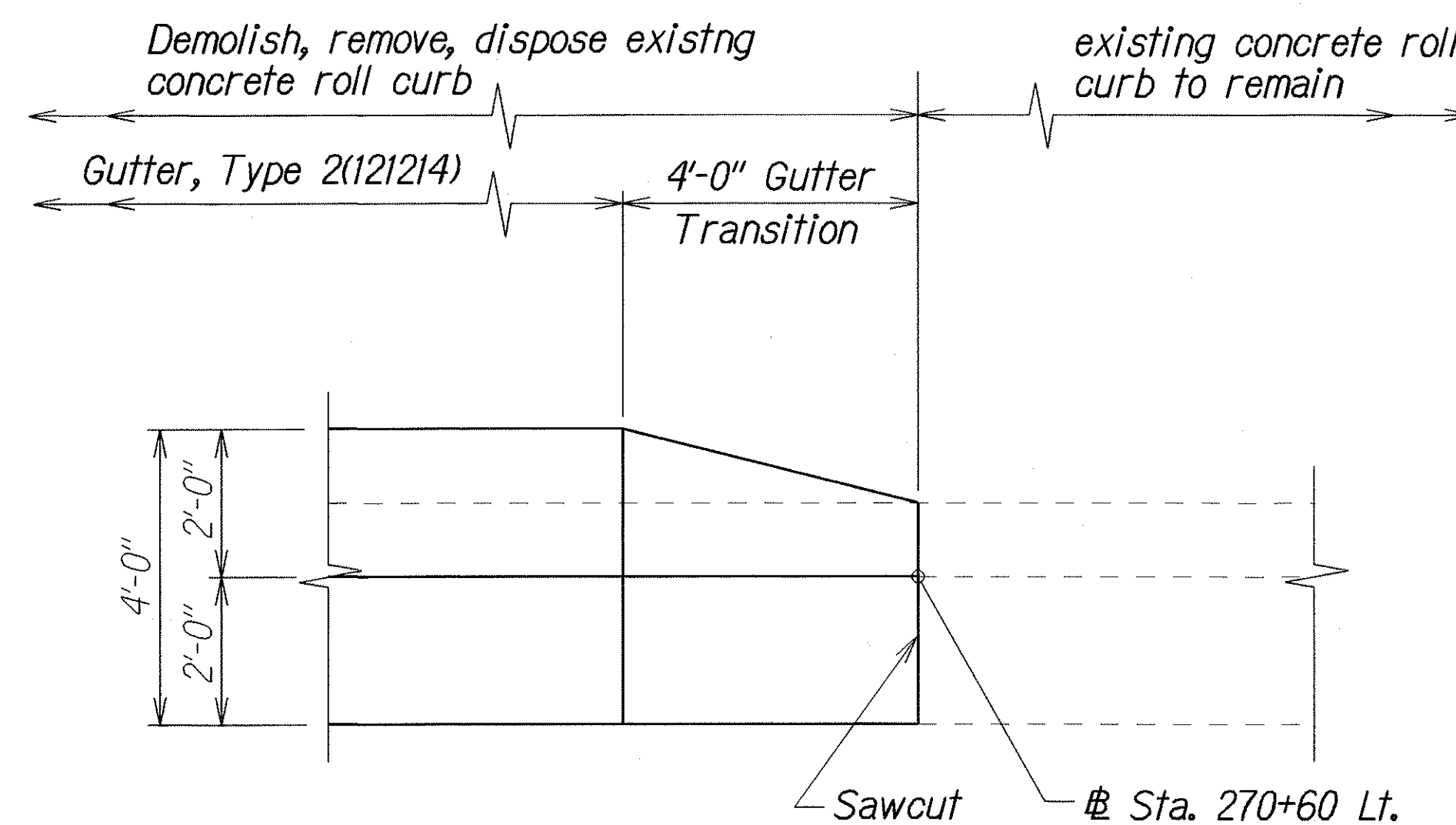


SECTION

B
XXXX

DETAIL OF 30' GUTTER TRANSITION AT STA. 266+27 O/S 46' LT.

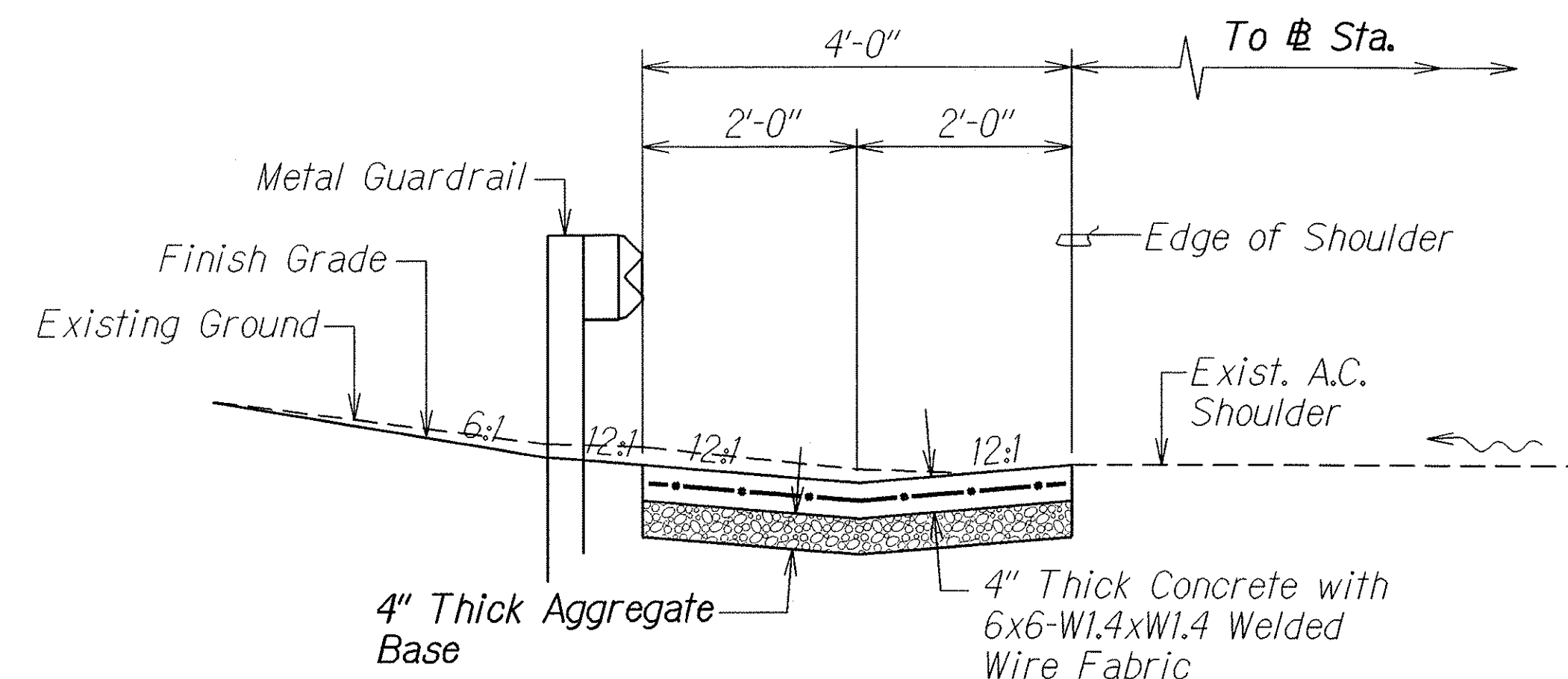
Scale: $\frac{1}{2}$ "=1'-0"



PLAN

DETAIL OF 4'-0" GUTTER TRANSITION AT STA. 270+60 LT.

Scale: $\frac{1}{2}$ "=1'-0"



TYPICAL DETAIL OF GUTTER, TYPE 2(1211214)

Scale: $\frac{3}{4}$ "=1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAIL
INTERSTATE ROUTE H-1
GUARDRAIL SHOULDER IMPROVEMENTS
Airport Viaduct to Middle Street
Federal Aid Project No. IM-HI-K(240)
Scale: As Shown Date: Sept, 2003

SHEET No. H8 OF 8 SHEETS