

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	19J-01-03	2005	6	17

DRAINAGE SUMMARY

PROJECT : HAWAII BELT ROAD DRAINAGE IMPROVEMENTS, Vicinity of Honolii Bridge
PROJECT NO. : 19J-01-03

ITEM NO.		202. 2000	206. 2000	312. 0100	401. 0400	503. 1000	603. 1000	603. 2000	603. 3000	604. 3000	604. 5000	604. 5200	604. 8000	609. 6000
UNIT USED		C.Y.	C.Y.	Ton	Ton	LF.	C.Y.	LF.	LF.	Ea.	Ea.	Ea.	Ea.	LF.
Baseline Station (From)	Baseline Station (To)	Removal of Existing A.C. Pavement	Structure Excavation for Drainage System	Plant Mix Glassphalt Concrete Base Course	Asphalt Concrete Pavement Mix No. IV	Concrete Drainage Channel	Bed Course Material for Culvert	12-Inch RCP, Cl. III or 12-Inch HDPP, Type S	18-Inch RCP, Cl. III or 18-Inch HDPP, Type S	Type 01014P Grated Drop Inlet, 4.00 ft. to 4.99 ft.	Type A-9P Grated Drop Inlet, 5.00 ft. to 5.99 ft.	Type "A" Storm Drain Manhole, 4.00 ft. to 4.99 ft.	Adjusting Telephone Pull Box	Curb, Type 2D
Hawaii Belt Rd. 32+00 Lt.	Hawaii Belt Rd. 36+00 Lt.	74			76								1	400
Hawaii Belt Rd. 0+03 Lt.	Hawaii Belt Rd. 0+60 Lt.		26	7	4	33	2	5	23		1	1		
Hawaii Belt Rd. 0+60 Lt.	Hawaii Belt Rd. 1+10 Lt.		44	11	6		9		47	1				
Hawaii Belt Rd. 1+10 Lt.	Hawaii Belt Rd. 1+75 Lt.		58	14	8		12		62	1				
Hawaii Belt Rd. 1+75 Lt.	Hawaii Belt Rd. 2+75 Lt.		90	22	13		18		97	1				
Hawaii Belt Rd. 2+75 Lt.	Hawaii Belt Rd. 3+75 Lt.		90	22	13		18		97	1				
	TOTAL	74	308	76	120	33	59	5	326	4	1	1	1	400

ORIGINAL PLAN	DESIGNED BY C. Matsuda, B. Toda	DATE 7/16/04
NOTED BY B. Toda	CHECKED BY B. Toda	
TRACED BY A. Muraoka		
GRADED BY A. Muraoka		

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

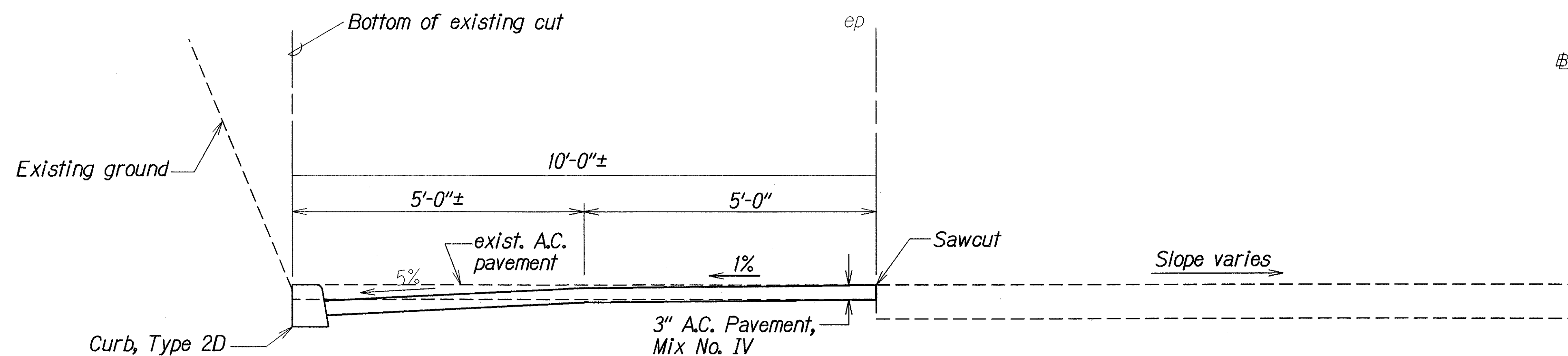
DRAINAGE SUMMARY

HAWAII BELT ROAD DRAINAGE IMPROVEMENTS
Vicinity of Honolii Bridge
Project No. 19J-01-03

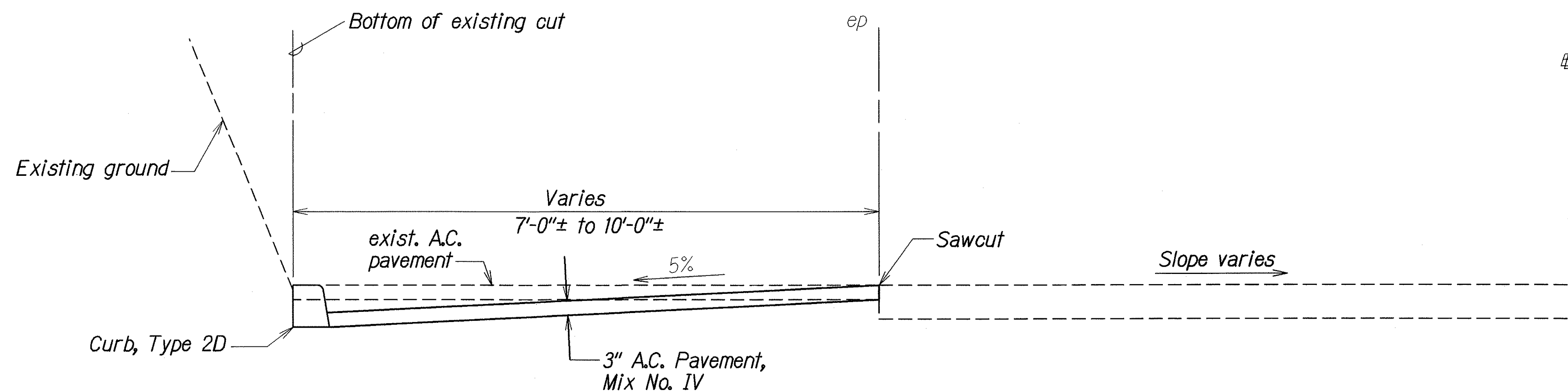
Date: July 2004

SHEET No. HI OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	19J-01-03	2005	7	17



TYPICAL SECTION AT # STA. 32+00 LT. TO # STA. 35+00 LT.



TYPICAL SECTION AT # STA. 35+00 LT. TO # STA. 36+00 LT.

ORIGINAL PLAN	DATE
DESIGNED BY	3/24/03
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

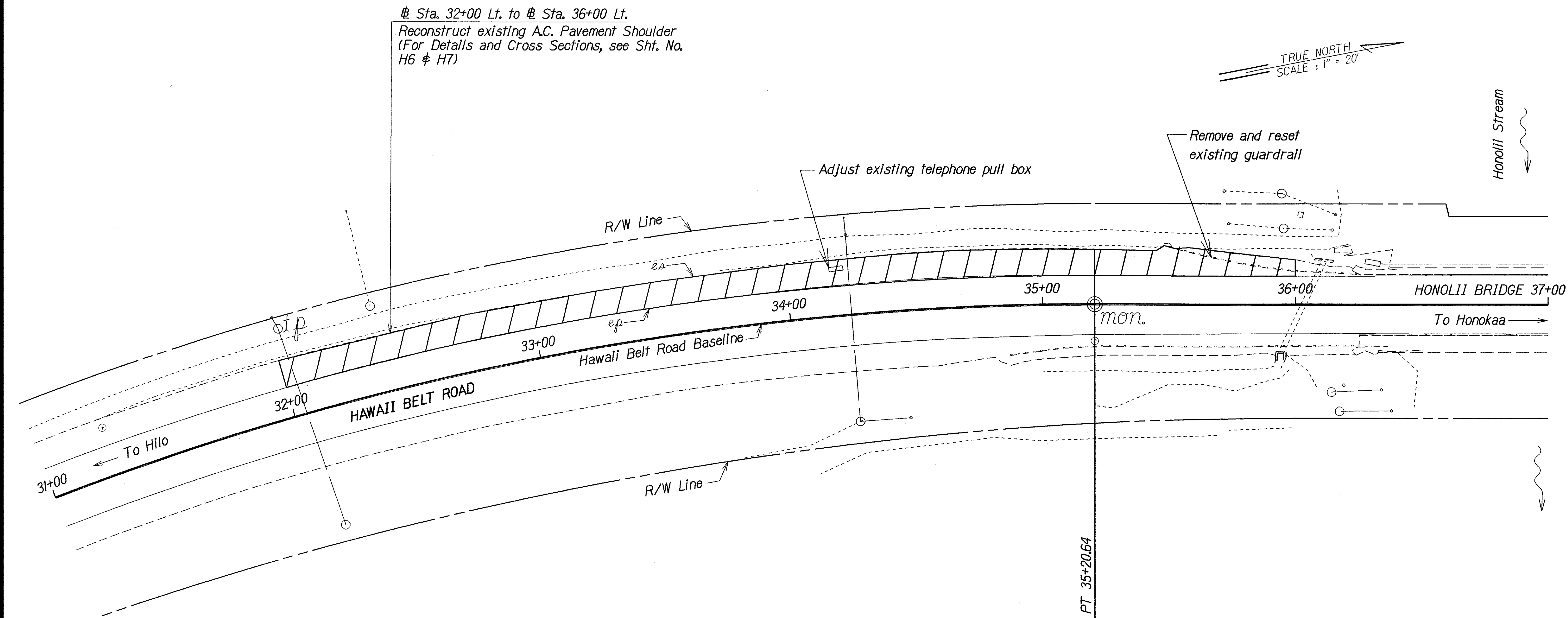
DRAINAGE DETAILS

HAWAII BELT ROAD DRAINAGE IMPROVEMENTS
Vicinity of Honolulu Bridge
Project No. 19J-01-03

Scale: 3/4"=1'-0" Date: July 2004

SHEET No. H2 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	19J-01-03	2005	8	17



ORIGINAL PLAN	SURVEY PLotted BY	DATE
	DRAWN BY	4/7/03
	DESIGNED BY	
	CHECKED BY	
	APPROVED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE PLAN

HAWAII BELT ROAD DRAINAGE IMPROVEMENTS

Vicinity of Honolii Bridge

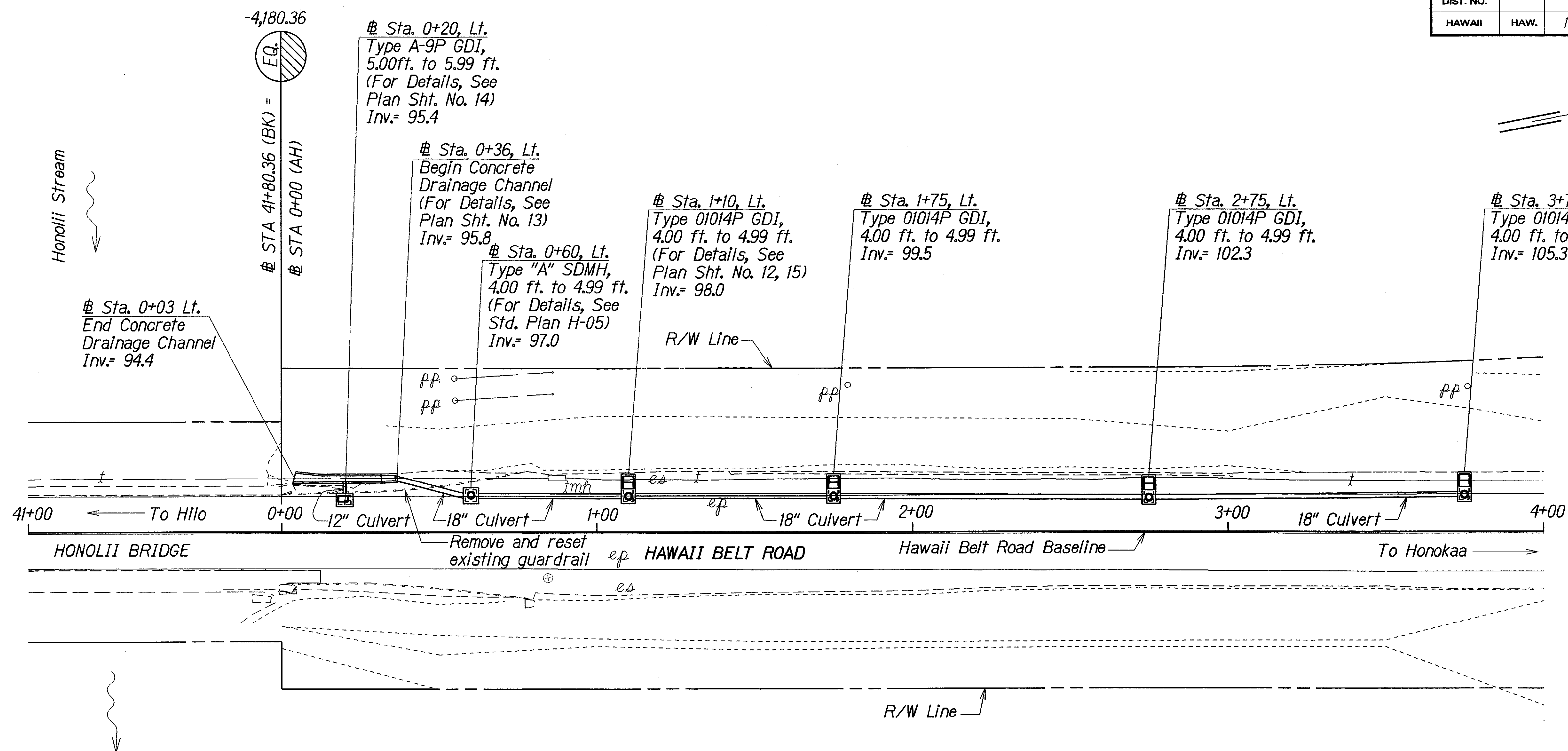
Project No. 19J-01-03

Scale: 1"=20' Date: July 2004

SHEET No. H3 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	19J-01-03	2005	9	17

TRUE NORTH
SCALE: 1" = 20'



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	4/7/03
QUANTITIES BY	DESIGNED BY	
CHECKED BY	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE PLAN

HAWAII BELT ROAD DRAINAGE IMPROVEMENTS

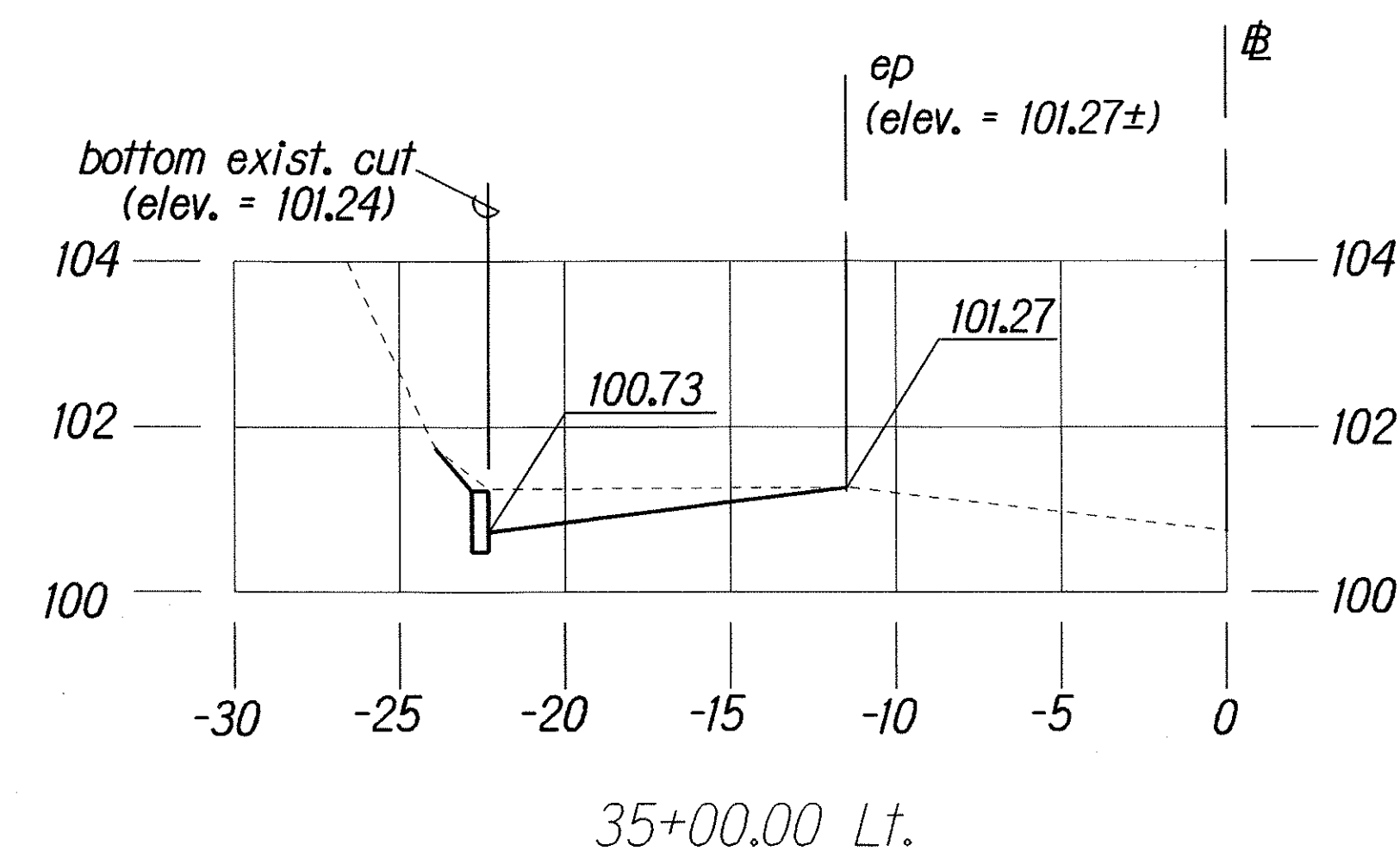
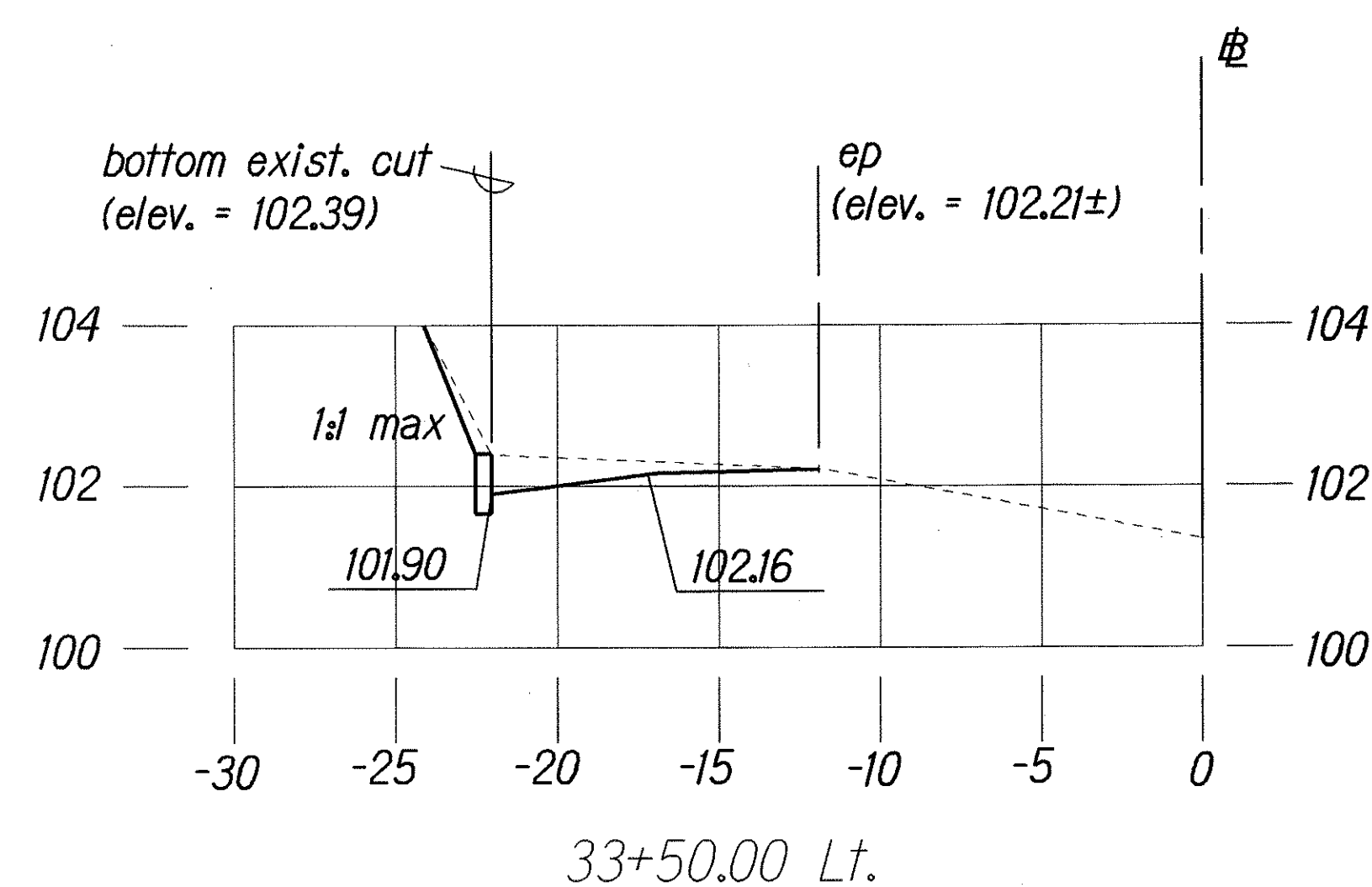
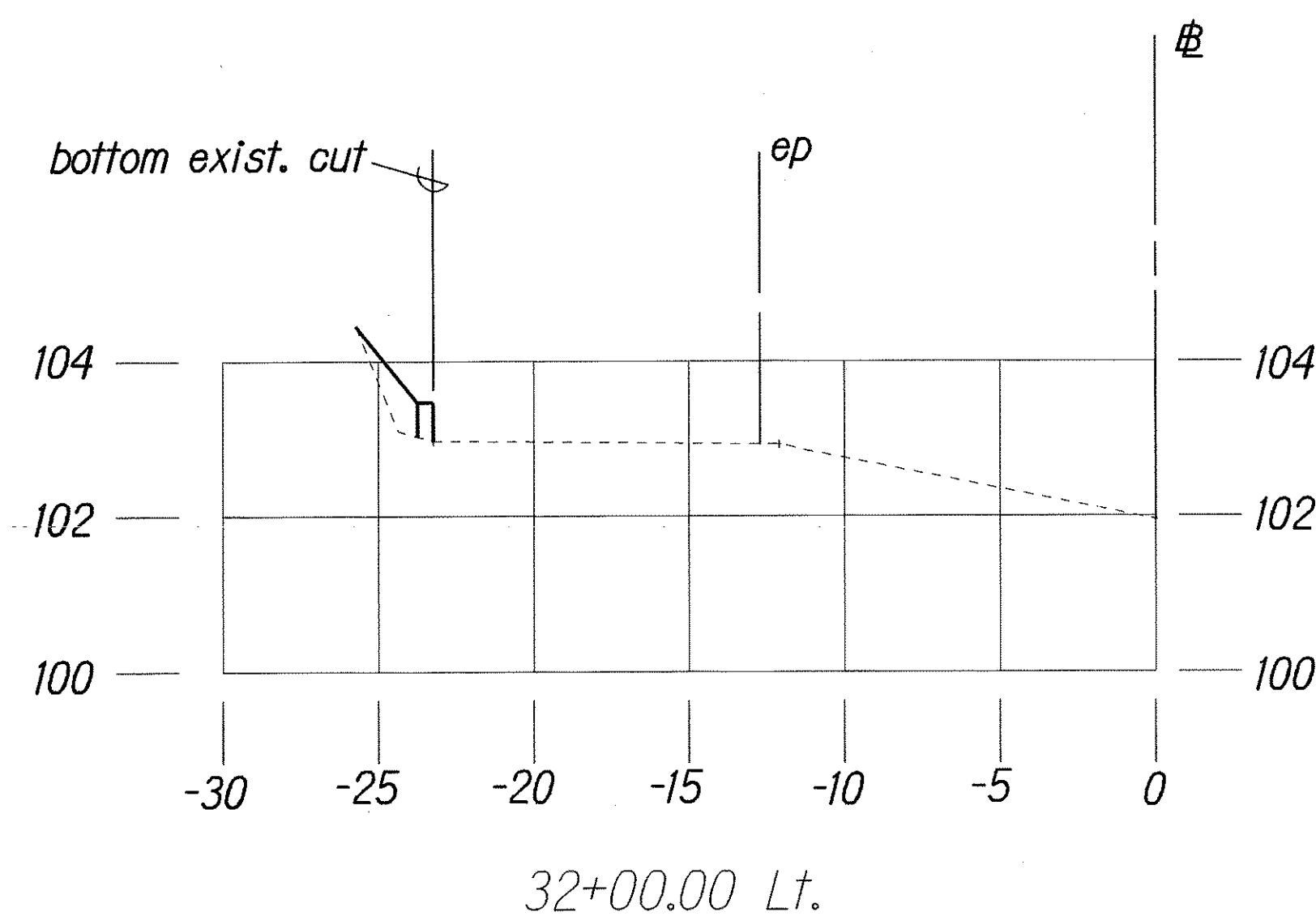
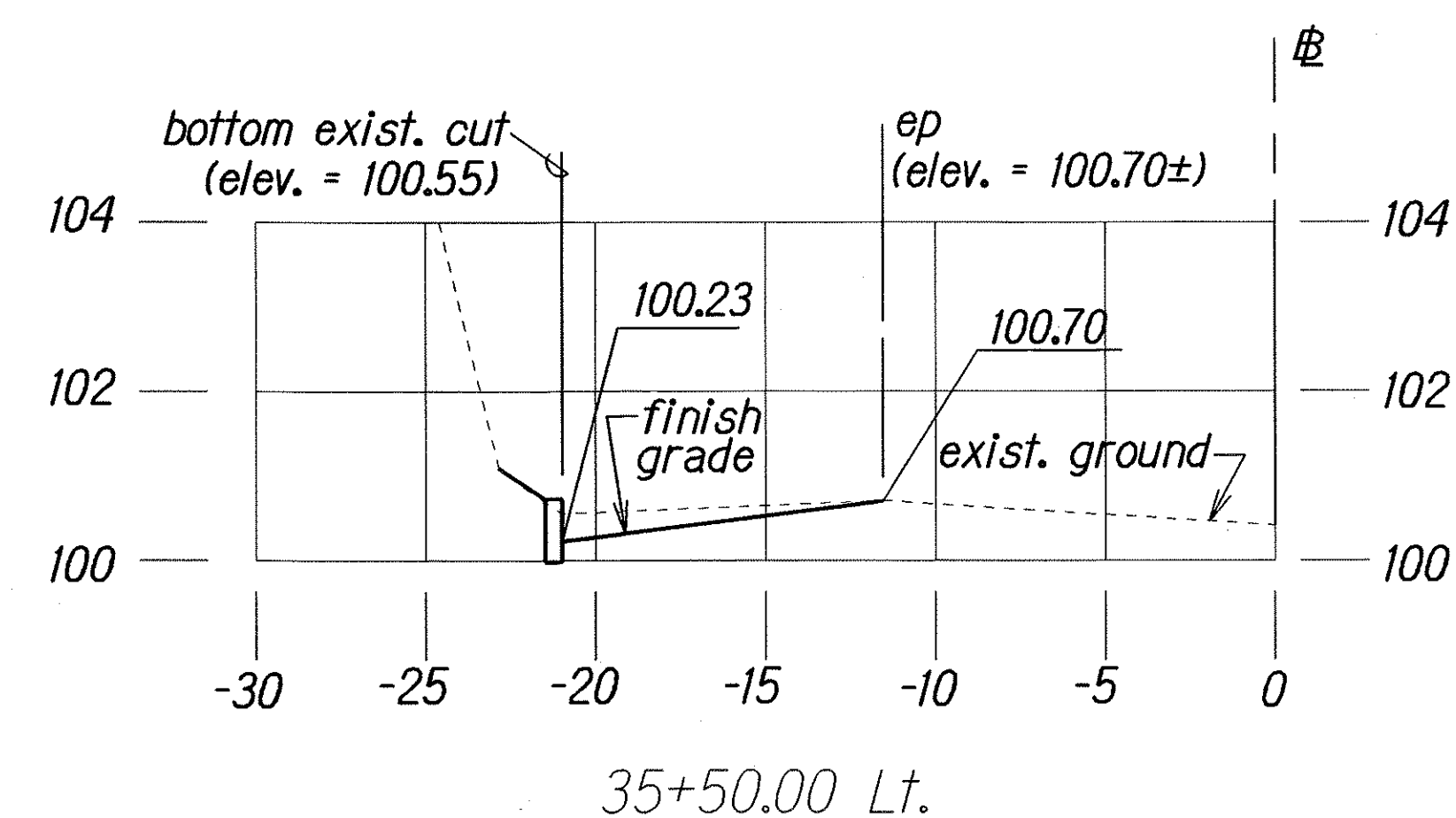
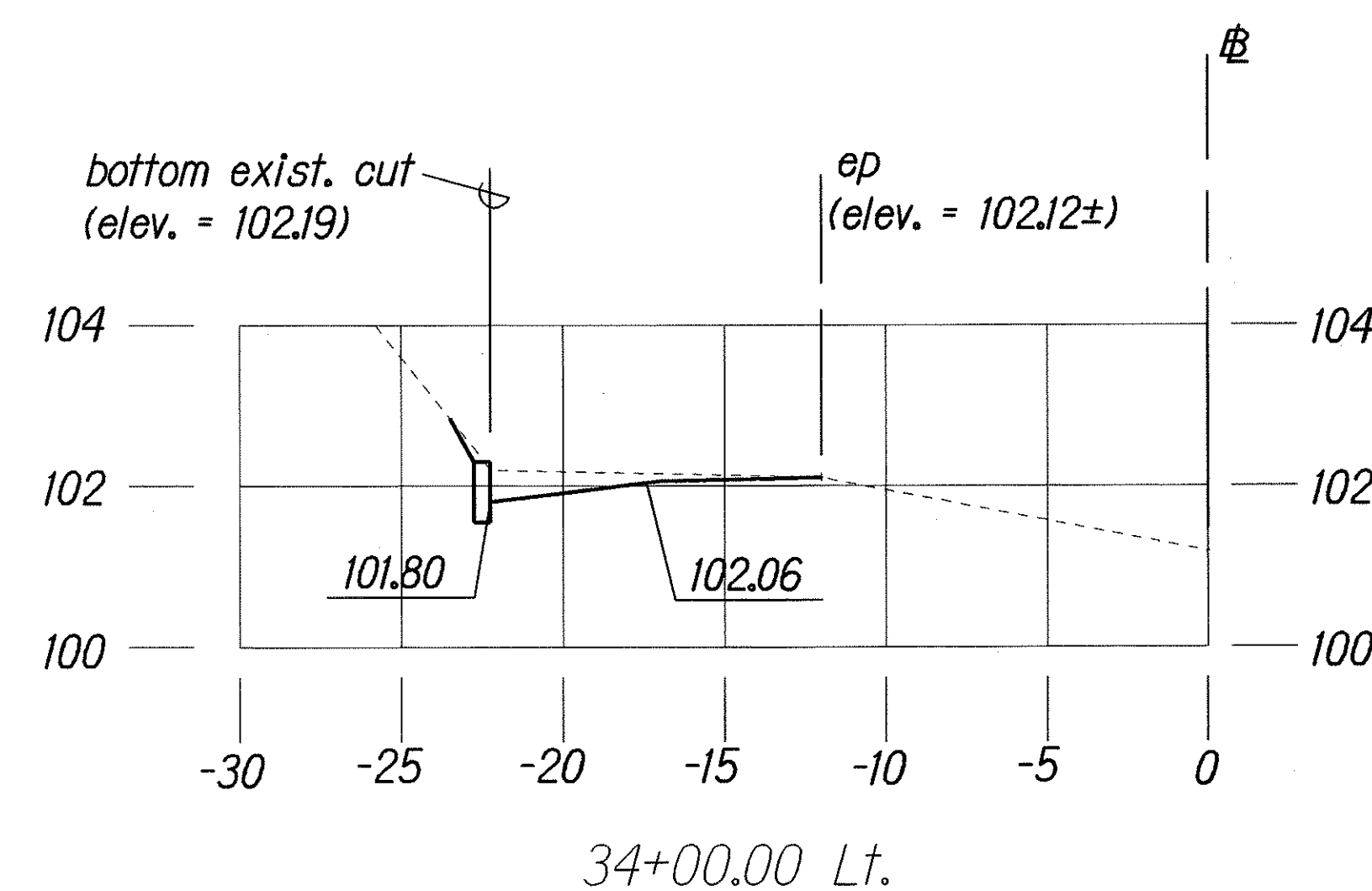
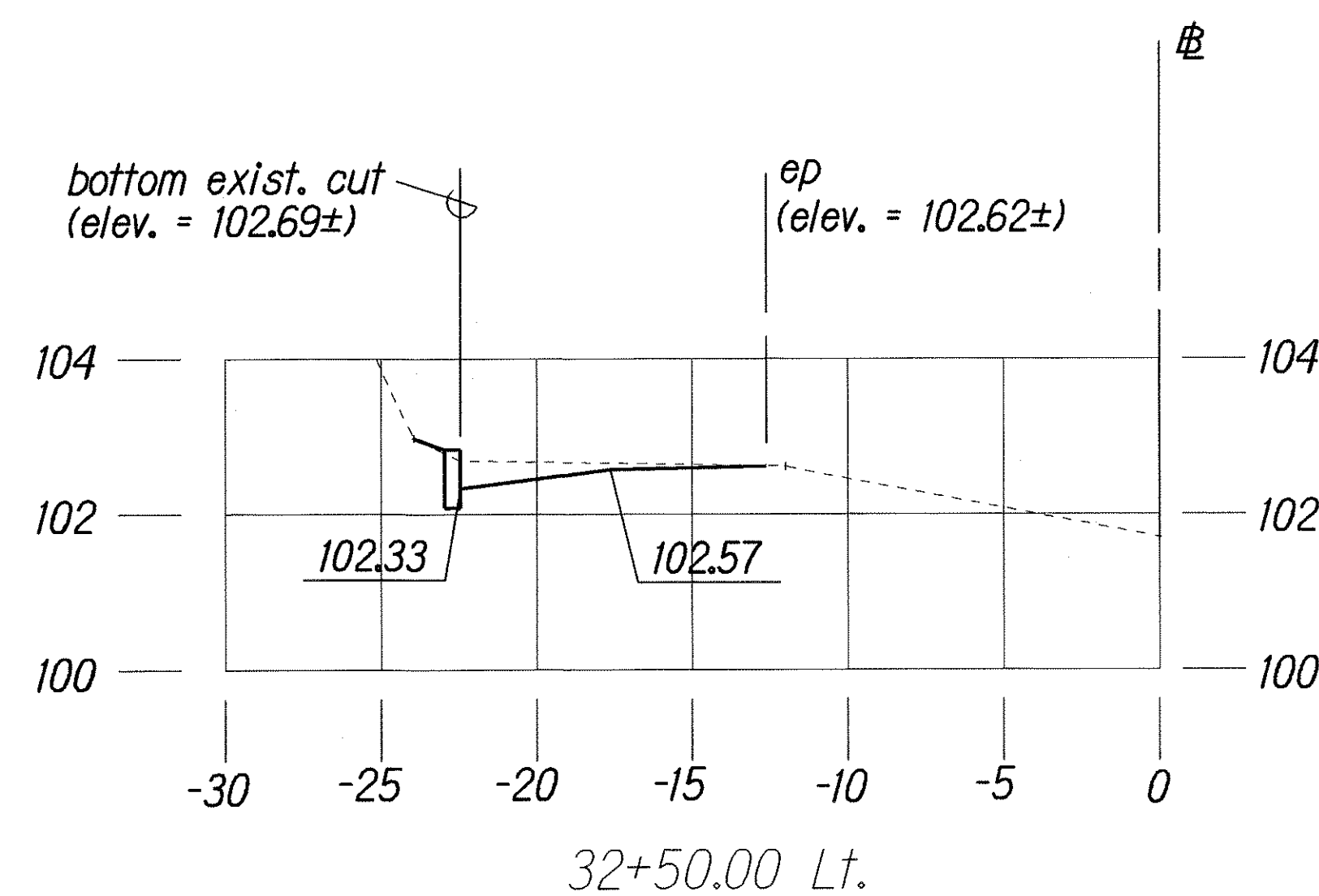
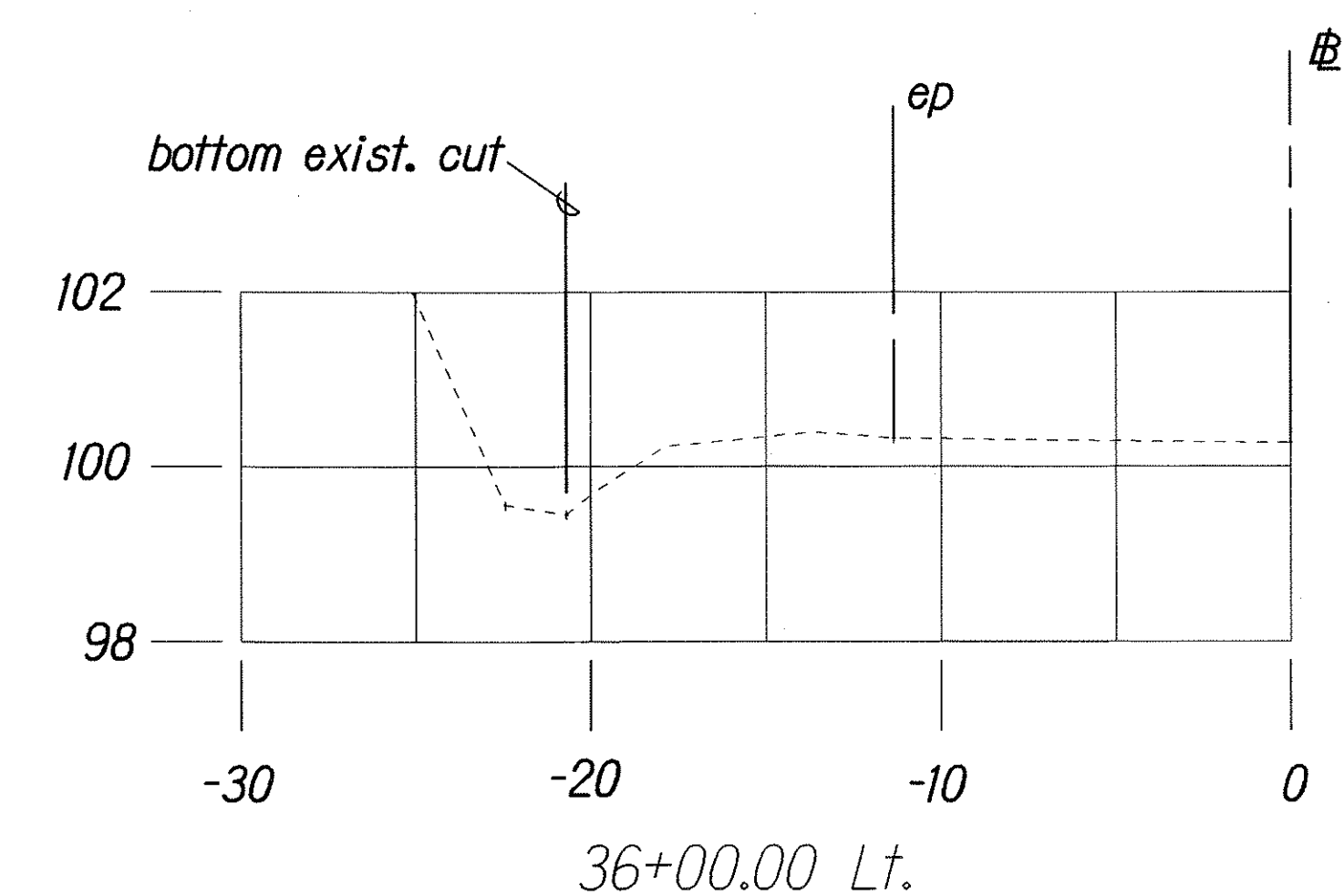
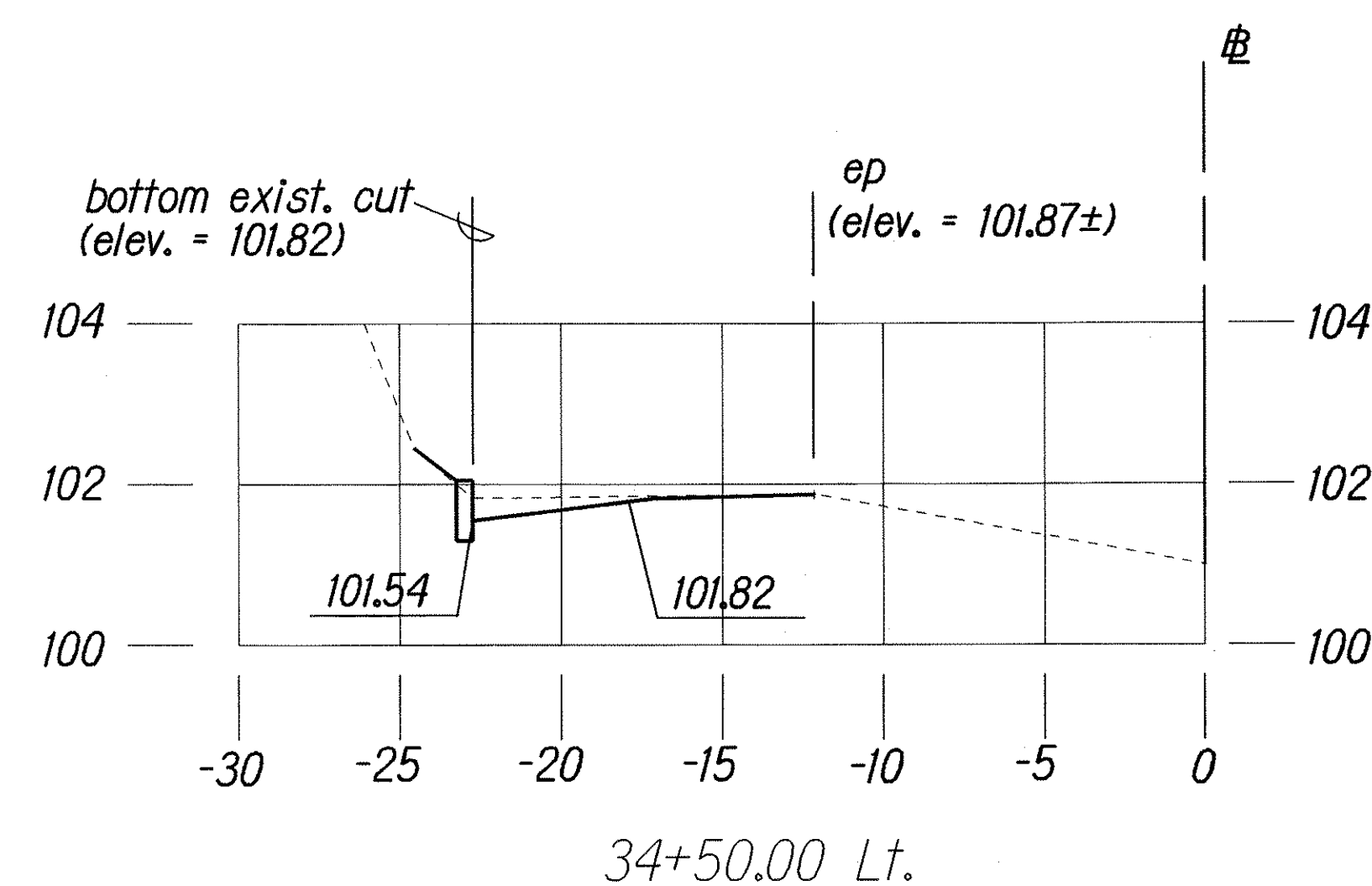
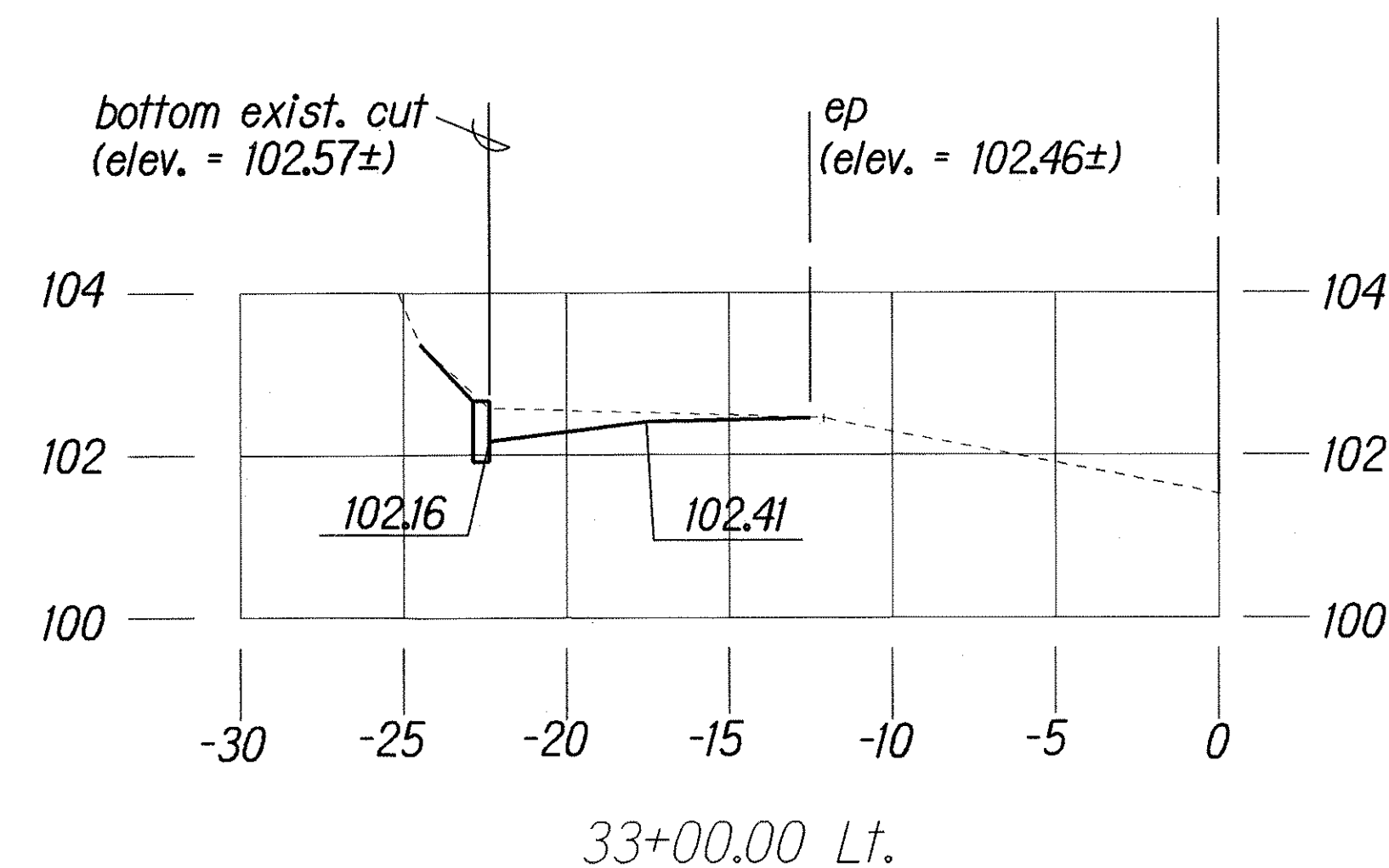
Vicinity of Honolii Bridge

Project No. 19J-01-03

Scale: 1"=20' Date: July 2004

SHEET No. **H4** OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	19J-01-03	2005	10	17



CROSS SECTIONS @ STA. 32+00 LT. TO @ STA. 36+00 LT.

Scale: Horiz.: 1"=5'
Vert: 1"=2'

SURVEY PLOTTED BY	DATE
DRAWN BY	4/2/03
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

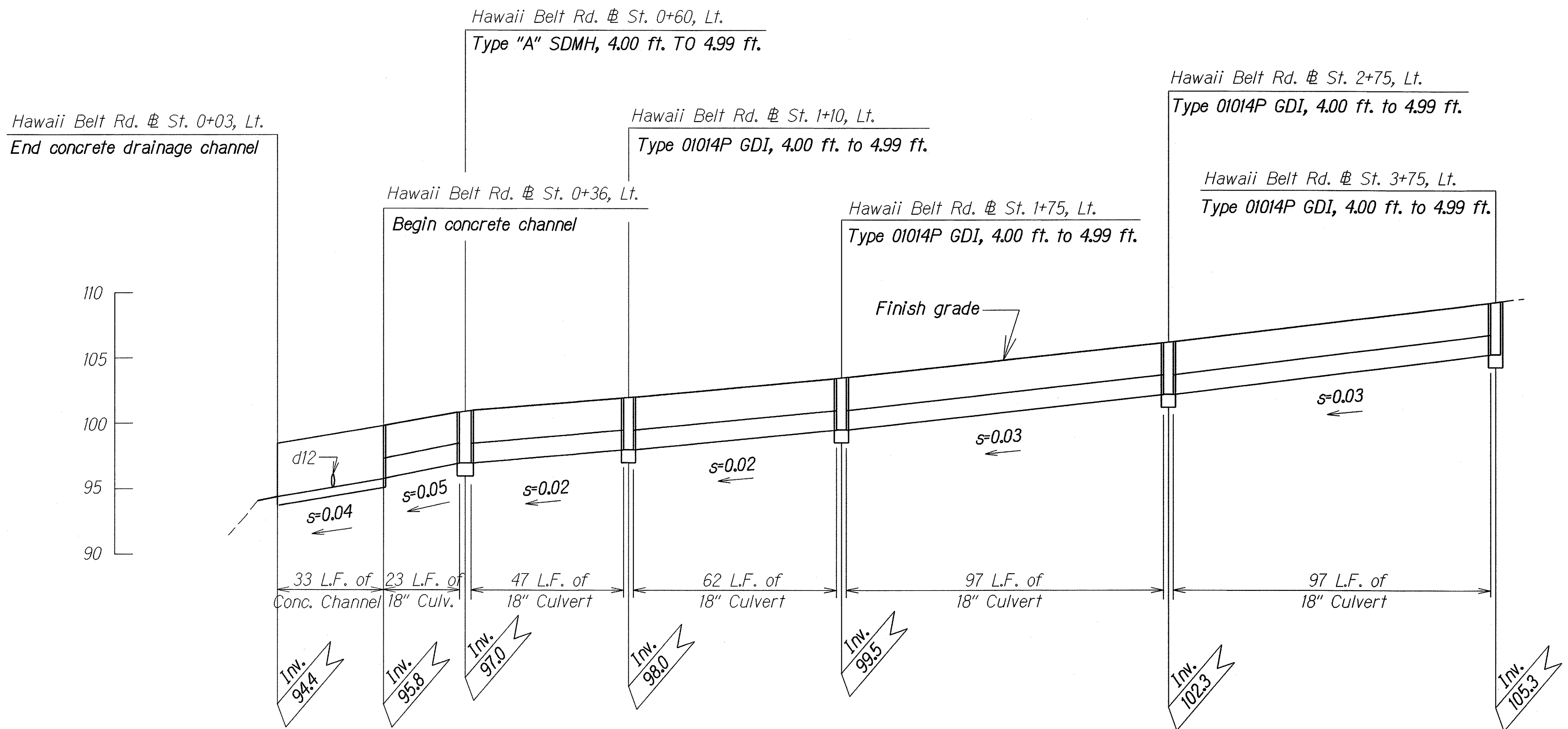
ROADWAY CROSS SECTIONS

HAWAII BELT ROAD DRAINAGE IMPROVEMENTS
Vicinity of Honolulu Bridge
Project No. 19J-01-03

Scale: As Shown Date: July 2004

SHEET No. H5 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	19J-01-03	2005	11	17



PROFILE OF STA. 0+03 LT. TO STA. 3+75 LT.

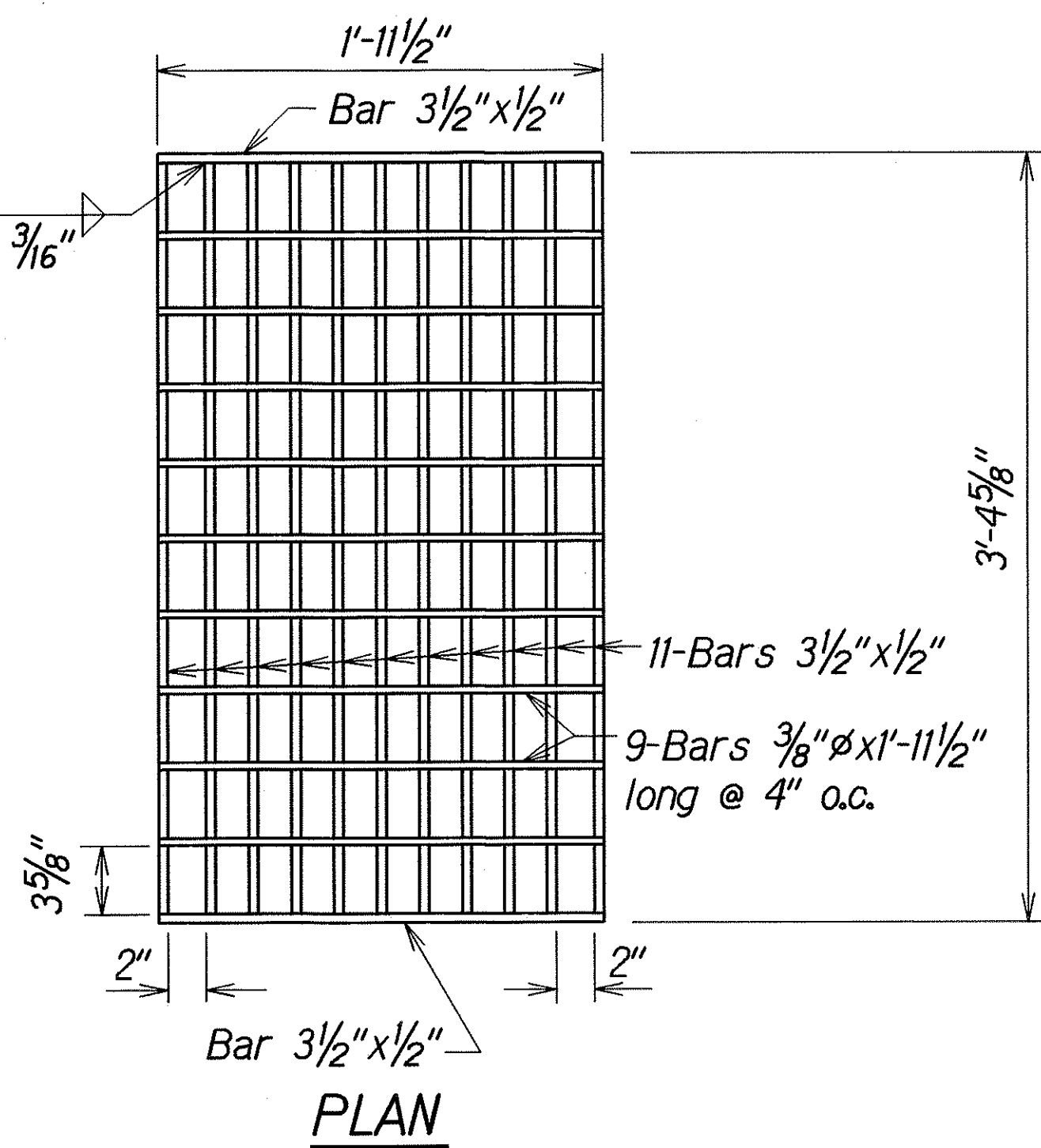
DESIGNED BY	DATE
TRACED BY	4/7/03
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
DATE	
NOTE BOOK	
PLAN	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

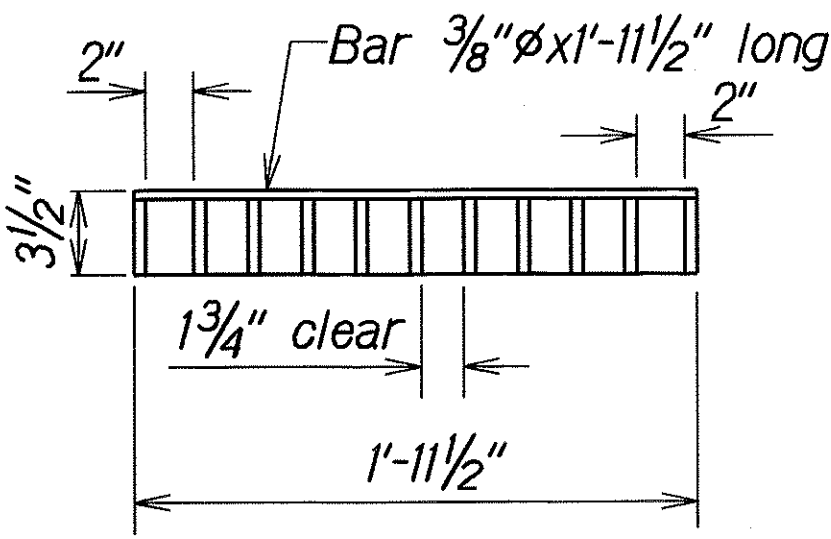
DRAINAGE PROFILE
HAWAII BELT ROAD DRAINAGE IMPROVEMENTS
Vicinity of Honolulu Bridge
Project No. 19J-01-03

Scale: 1"=40' Date: July 2004
SHEET No. H6 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	19J-01-03	2005	12	17



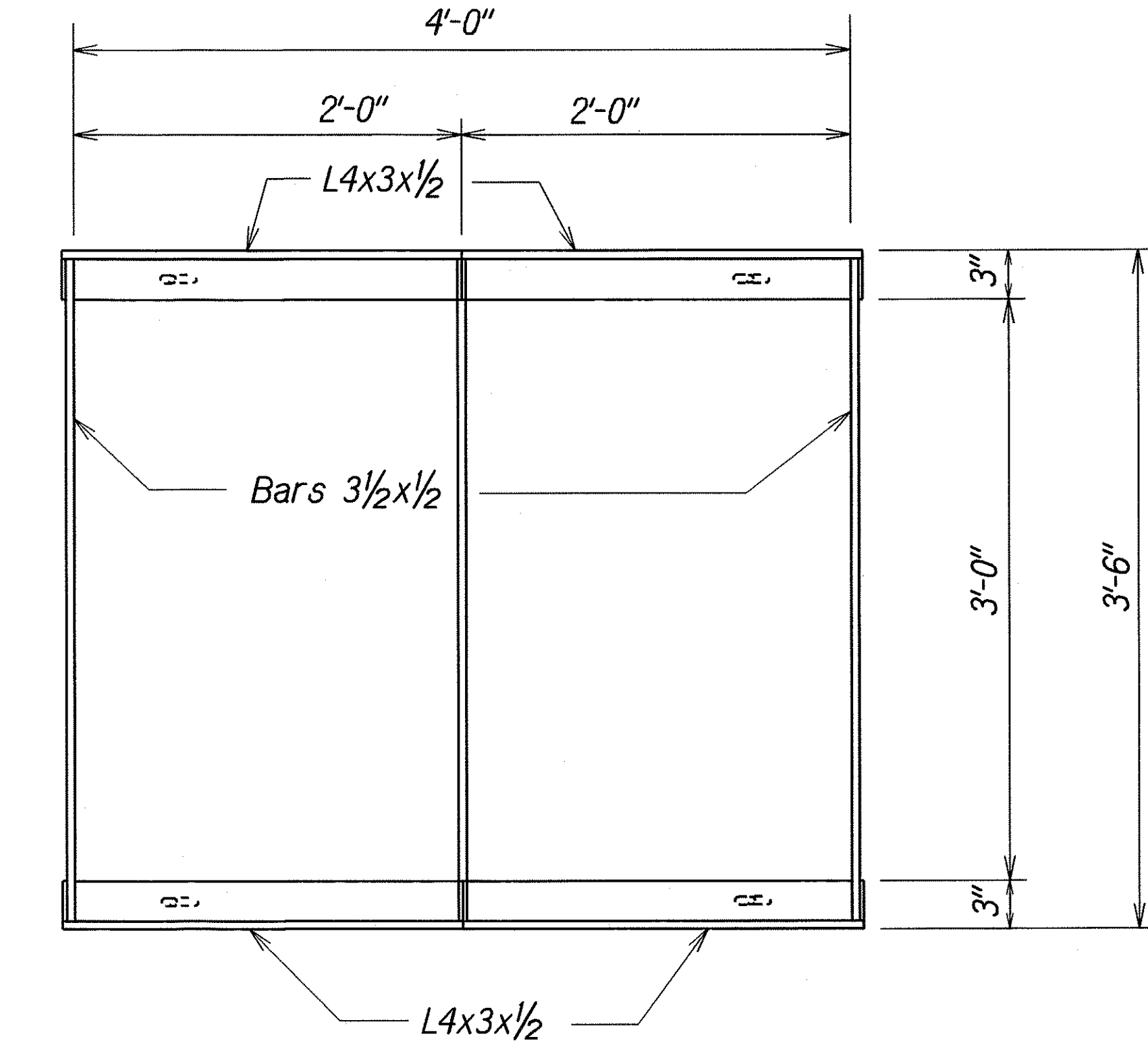
PLAN



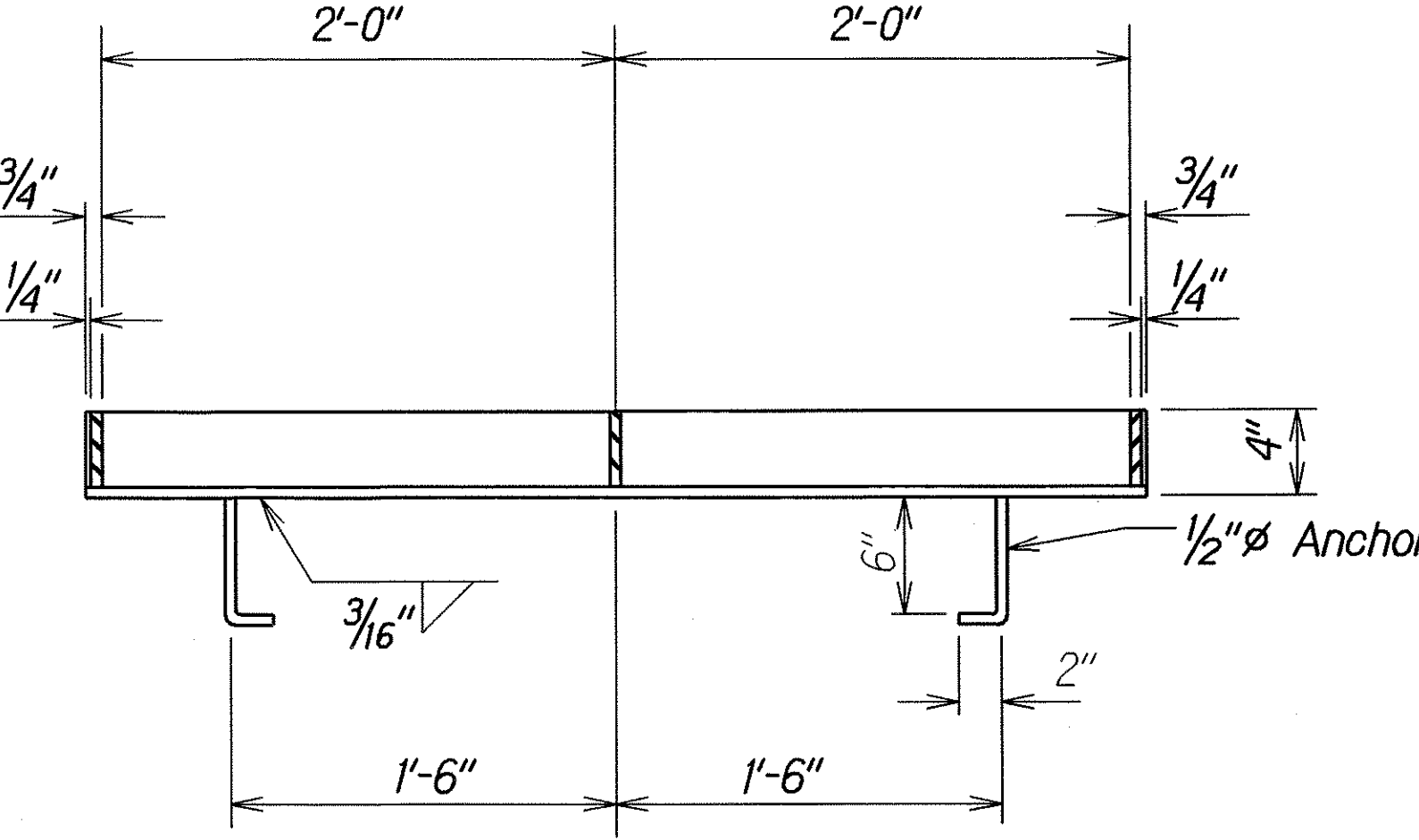
SECTION

GRATE

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



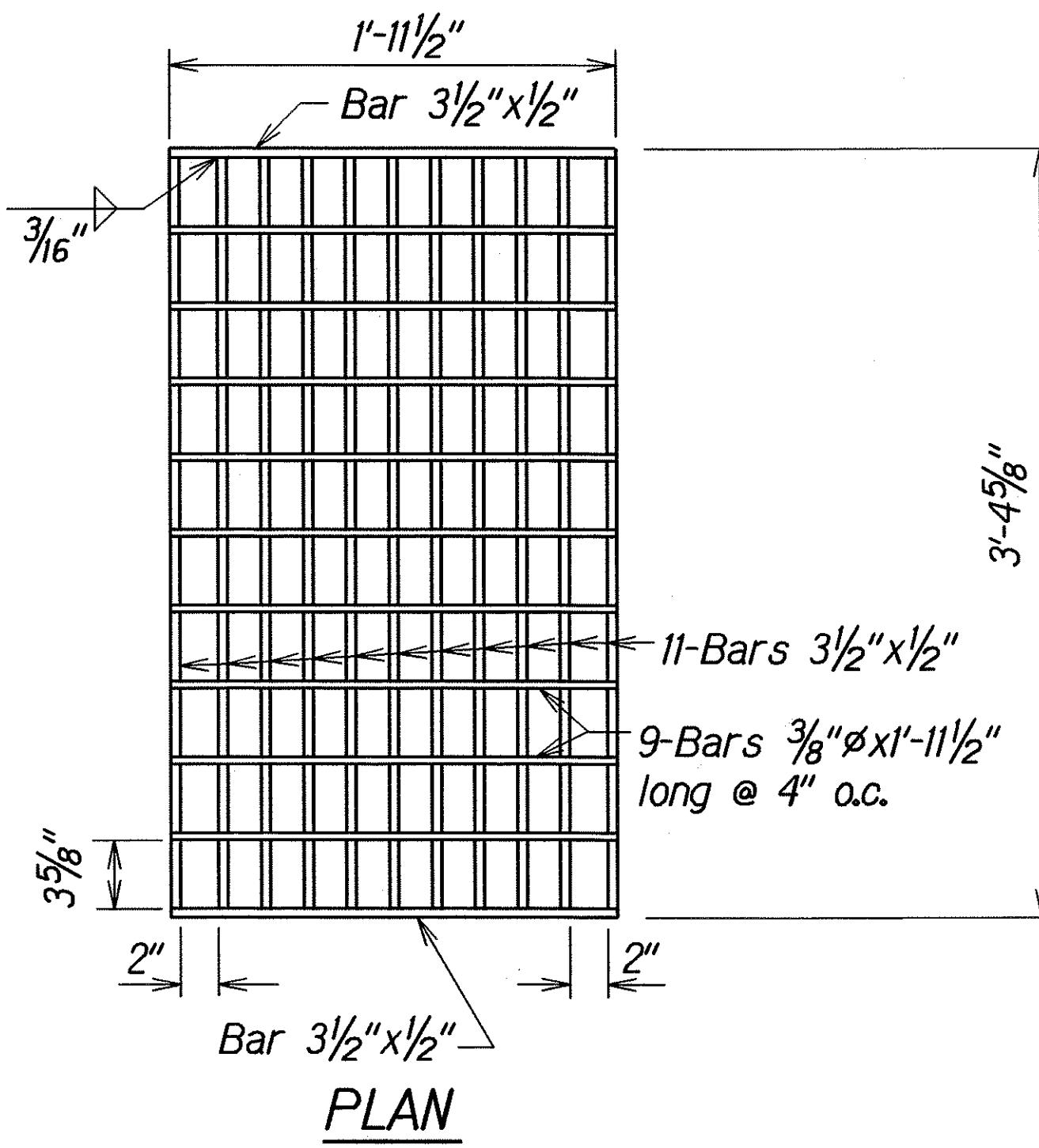
PLAN



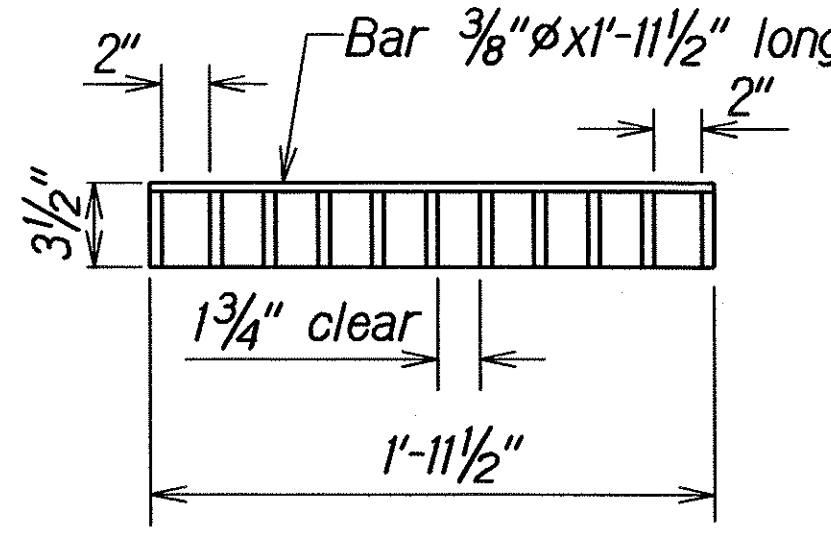
SECTION

FRAME

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



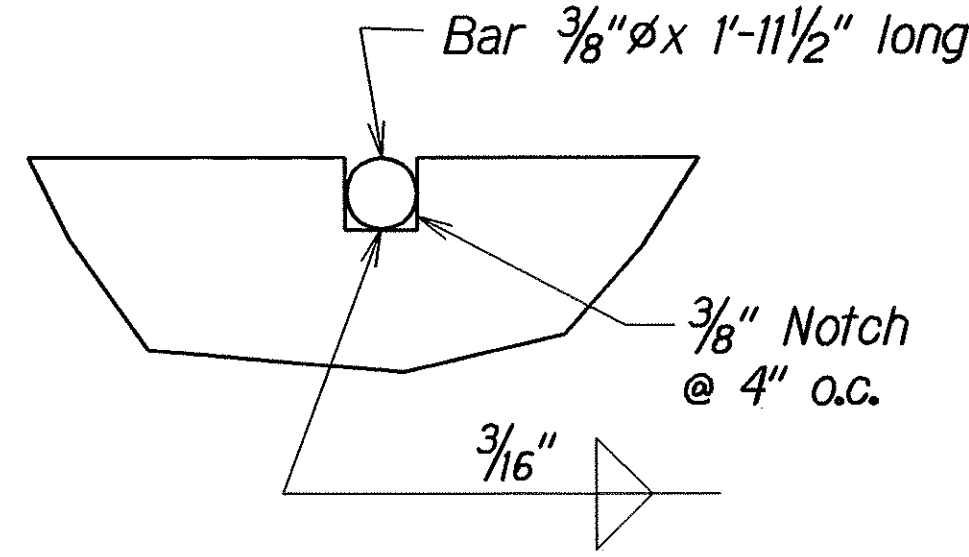
PLAN



SECTION

GRATE

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



NOTCH DETAIL

Full Size

NOTE:
All welds 3/8" unless otherwise noted.

DETAILS OF TYPE "01014P" STEEL FRAME AND GRATES

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

DRAINAGE DETAILS

HAWAII BELT ROAD DRAINAGE IMPROVEMENTS

Vicinity of Honolulu Bridge

Project No. 19J-01-03

Scale: As Shown

Date: July 2004

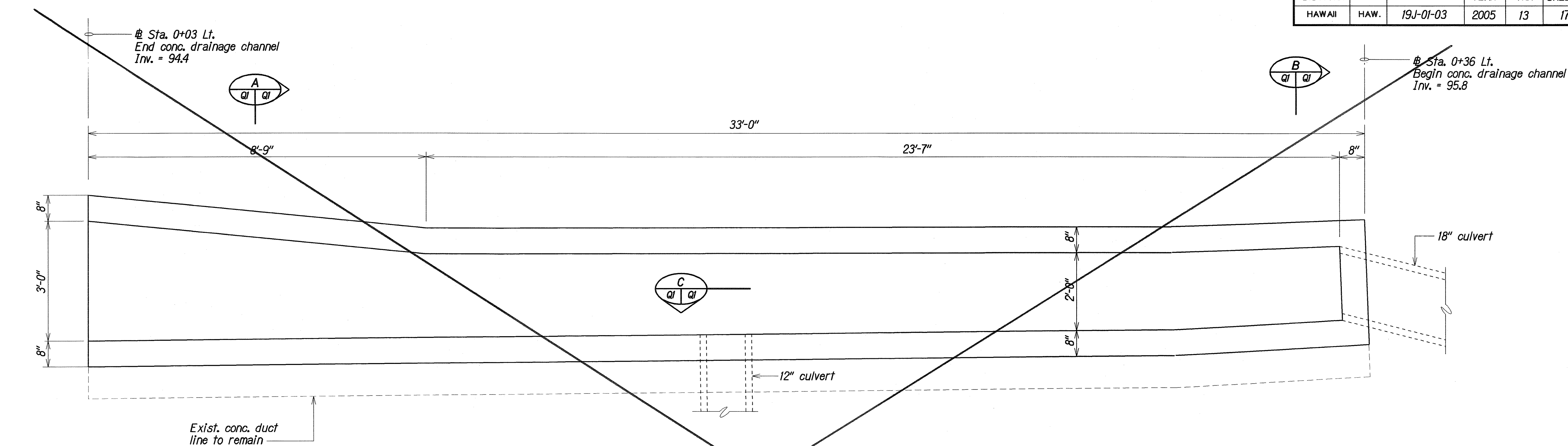
SHEET No. H7

OF 7

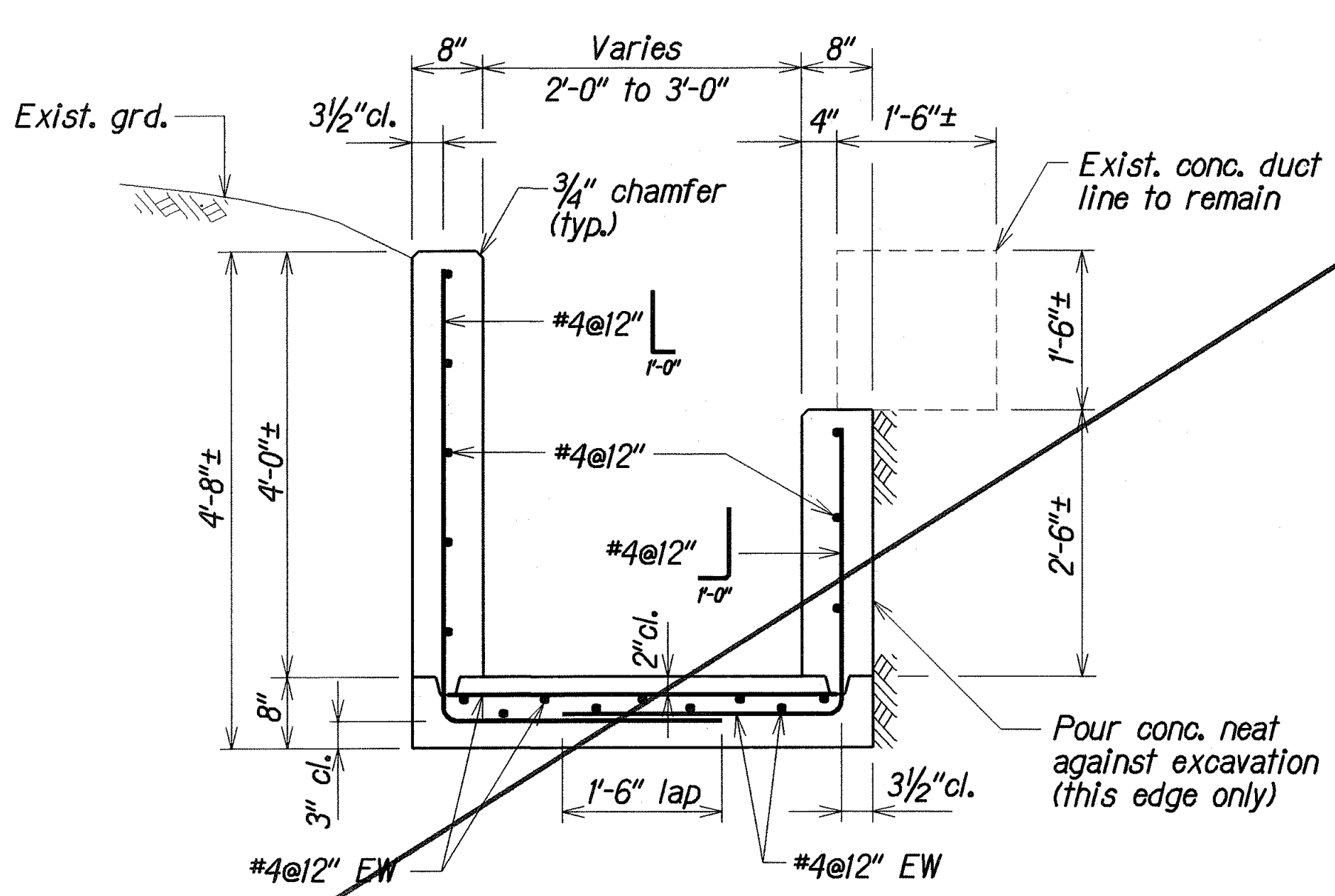
SHEETS

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

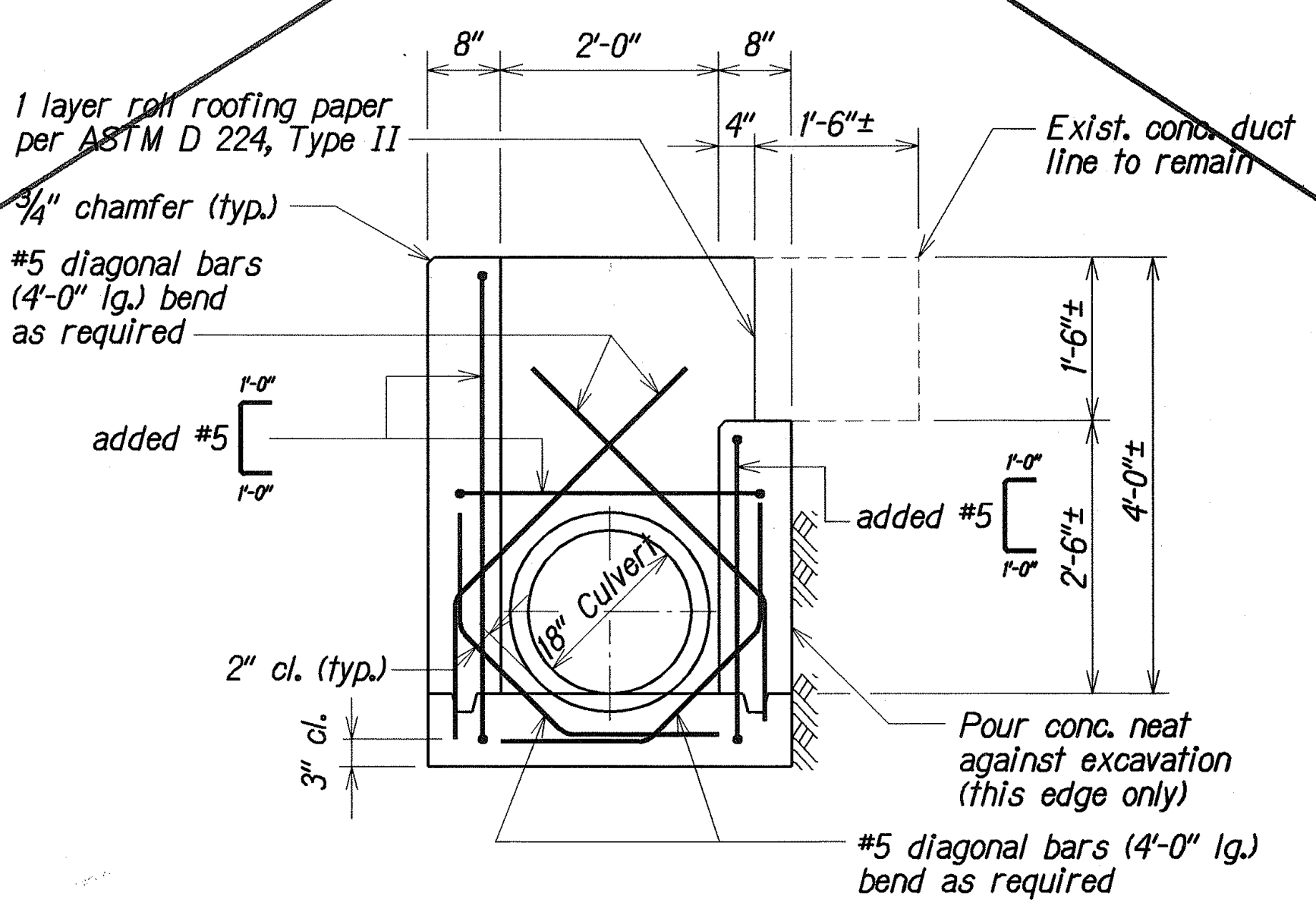
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	19J-01-03	2005	13	17



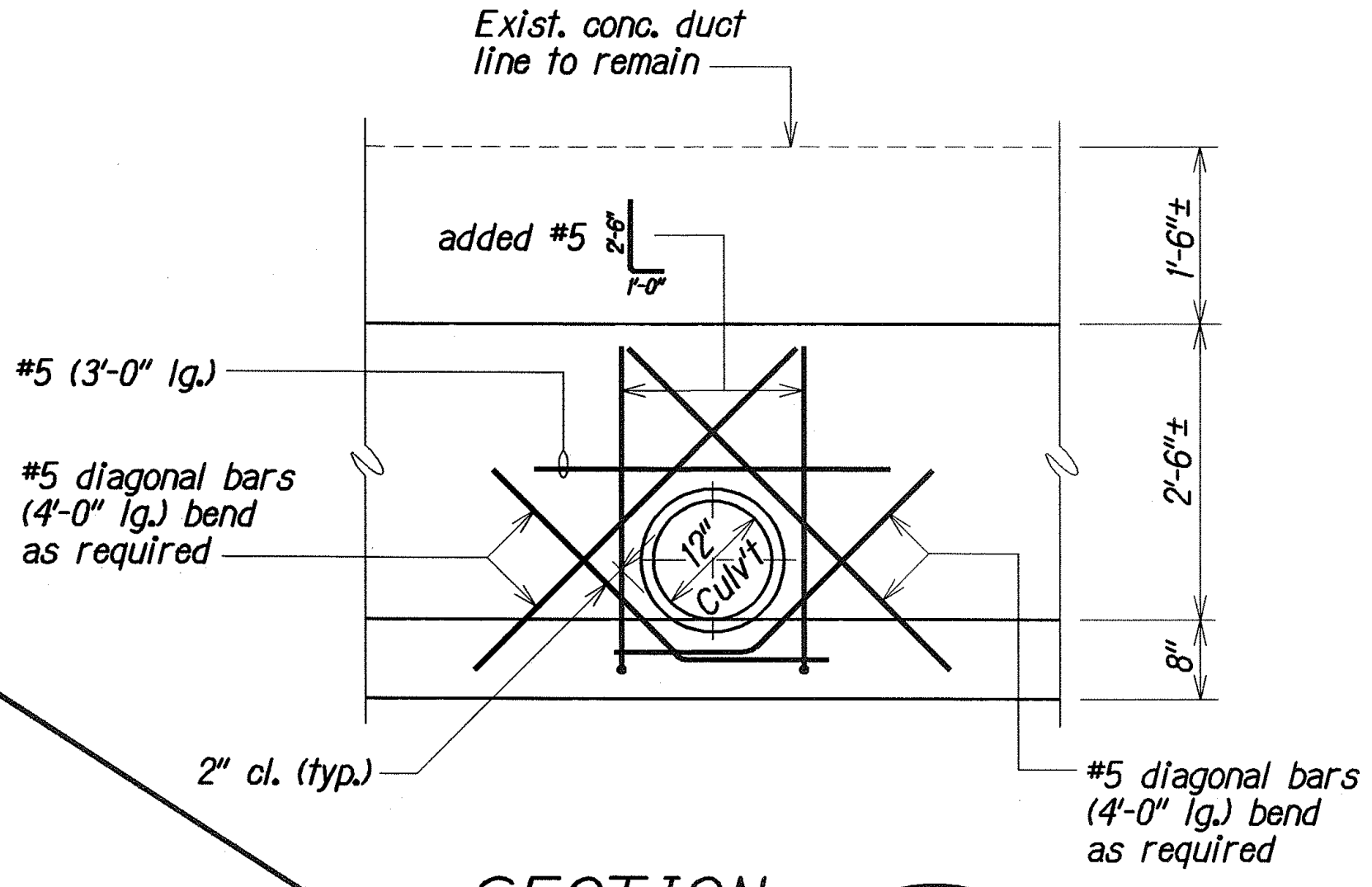
PLAN OF CONCRETE DRAINAGE CHANNEL
Scale: 3/4" = 1'-0"



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



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



SECTION C-C
Scale: 3/4" = 1'-0"
(STEEL REINFORCING AT 12" CULVERT CONNECTION)

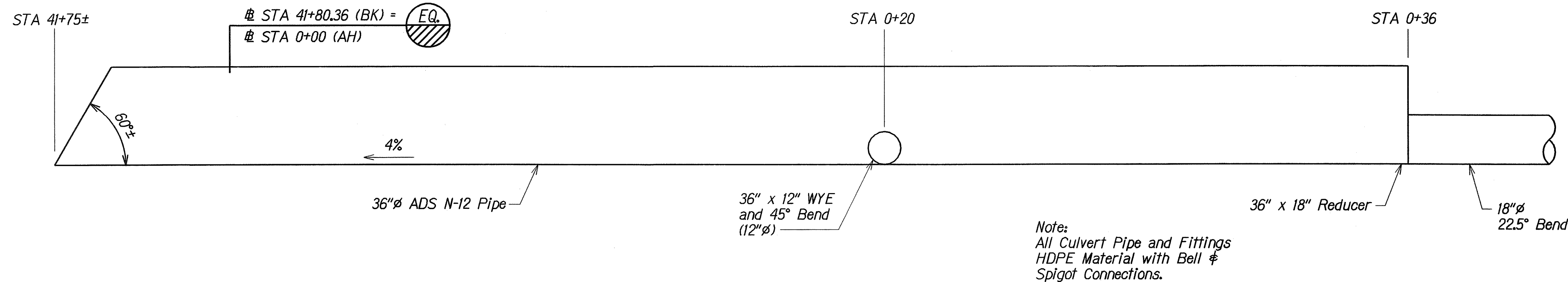
DESIGNED BY	DATE
TRACED BY	AUG 2004
DESIGNED BY	AUG 2004
QUANTITIES BY	AUG 2004
CHECKED BY	AUG 2004

THIS SHEET SUPERCEDED BY SHEET 13 S-1.

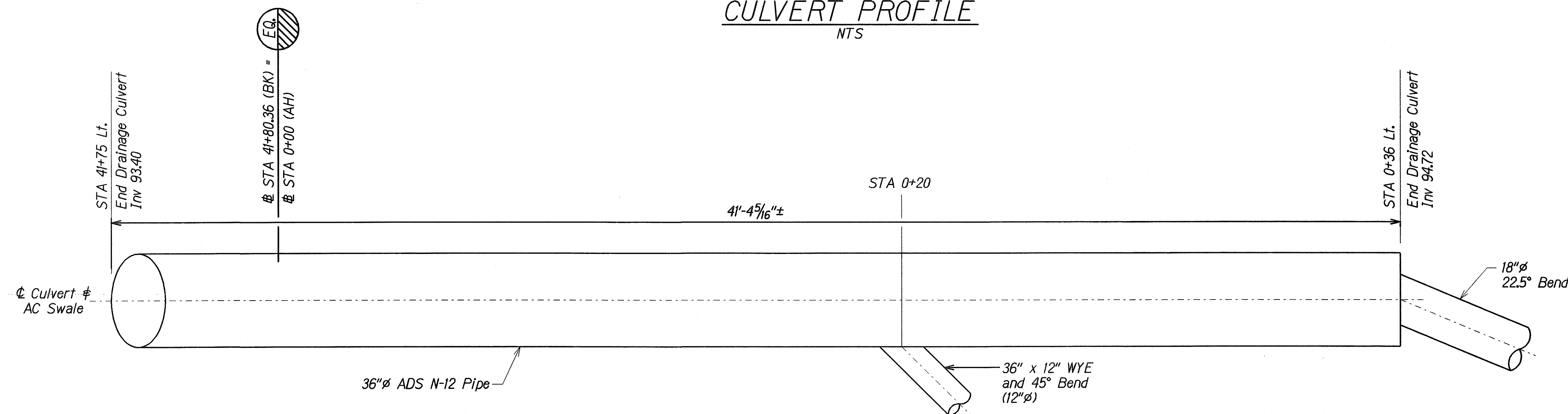
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS
PLAN & SECTIONS OF CONCRETE DRAINAGE CHANNEL, 12" AND 18" CULVERT CONNECTION
HAWAII BELT ROAD MISCELLANEOUS DRAINAGE IMPROVEMENTS
Vicinity of Hanalei Bridge
Project No. 19J-01-03
Scale: As Noted
Date: Aug. 2004

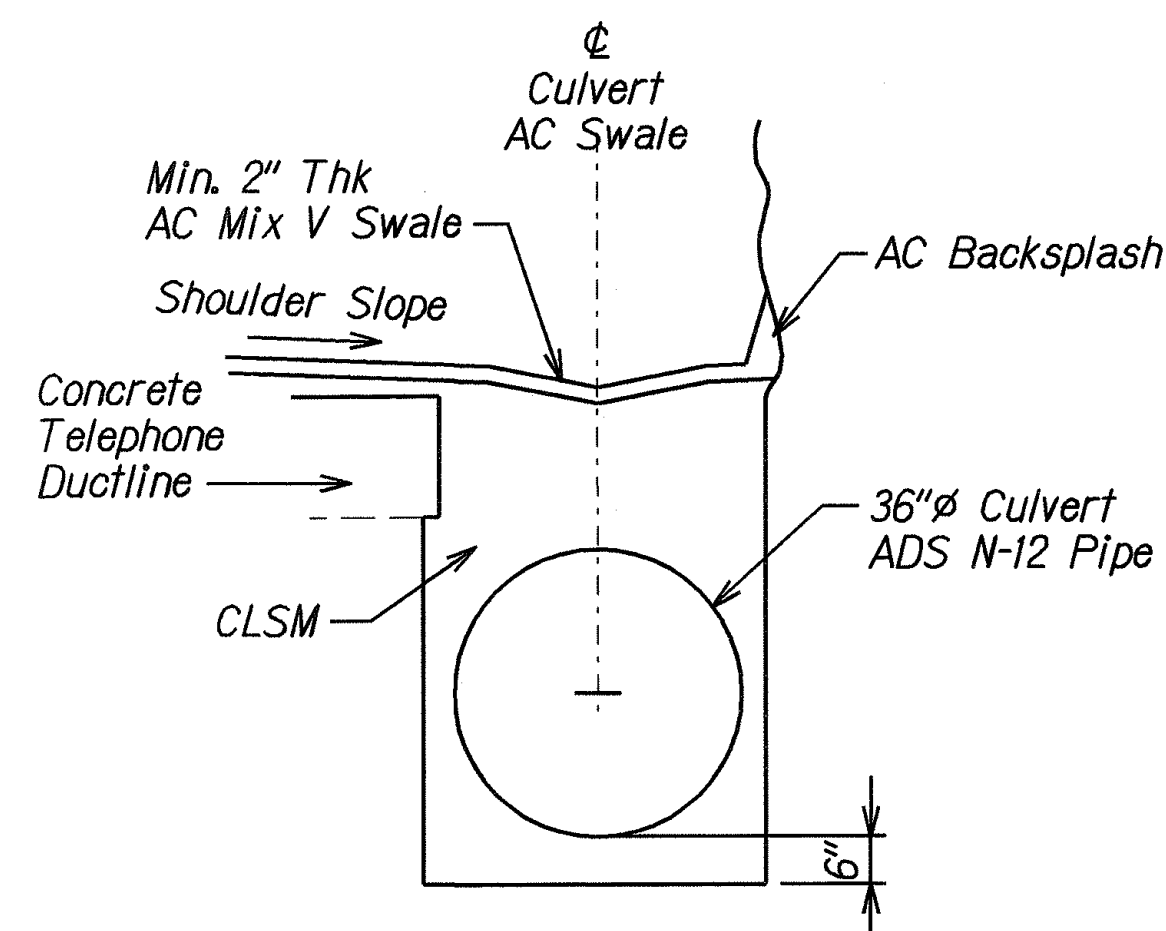
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	19J-01-03	2005	13 S-1	17



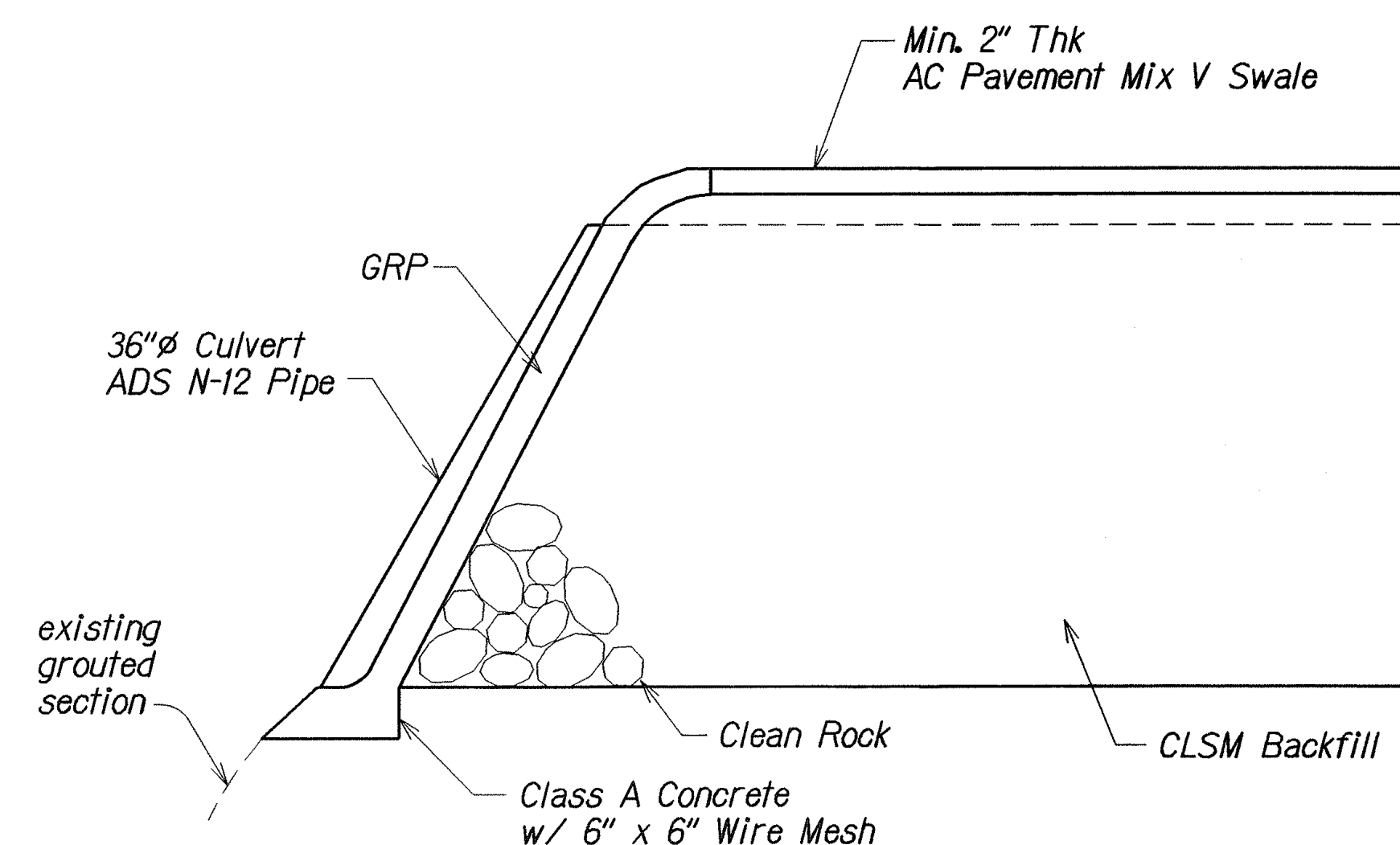
CULVERT PROFILE
NTS



CULVERT PLAN
NTS



CULVERT SECTION
@ STA 0+30±
LOOKING DOWNSTREAM
NTS



CULVERT DETAIL AT DISCHARGE
@ STA 41+75±
NTS

Note:
This tracing prepared during
"As-Built" posting.
Culvert replaces open channel
on sheet 13.

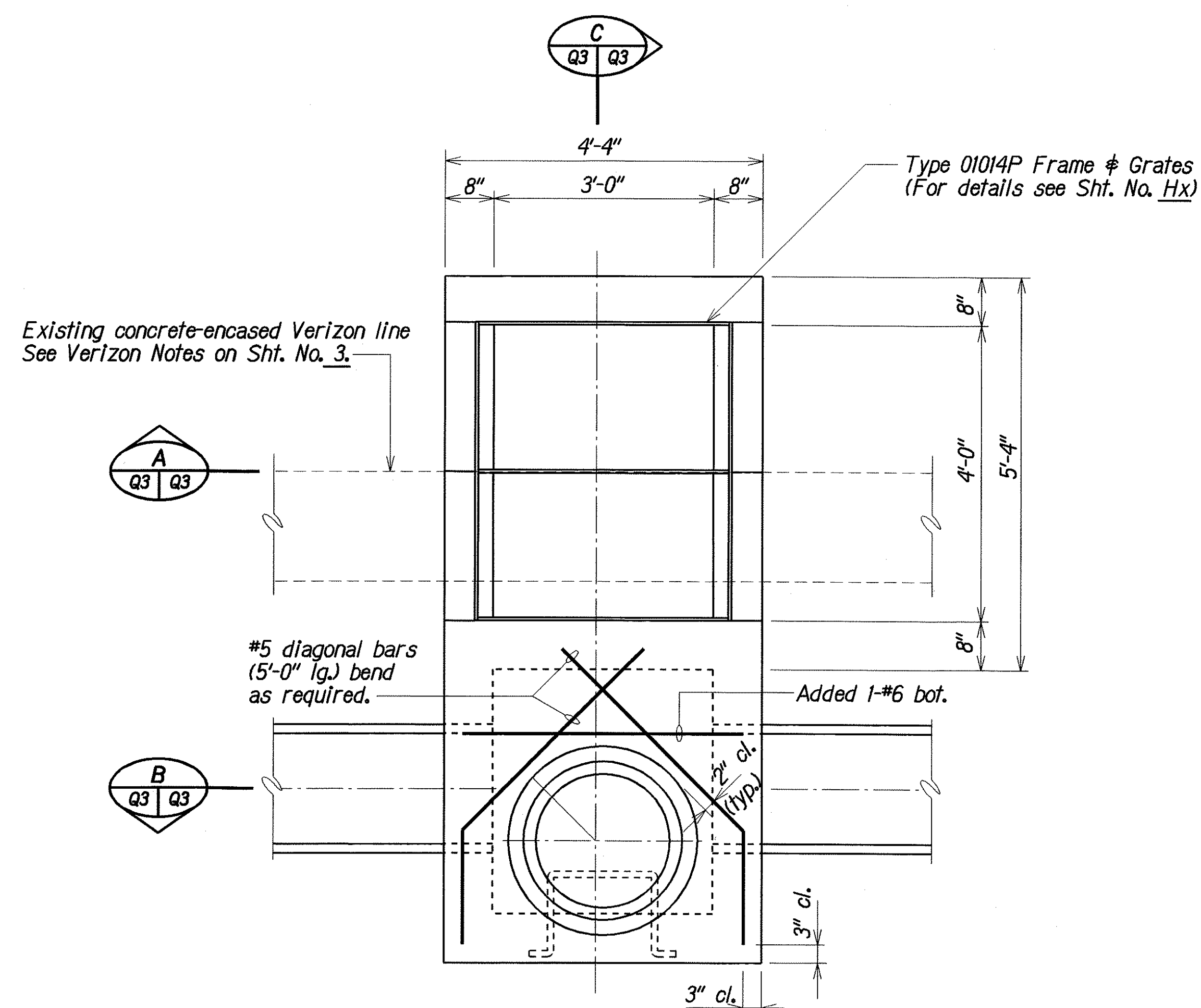
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE DETAILS
PLAN & PROFILE 36" DRAINAGE CULVERT,
DETAILS OF 36" DRAINAGE CULVERT
HAWAII BELT ROAD MISCELLANEOUS DRAINAGE IMPROVEMENTS
Vicinity of Honolulu Bridge
Project No. 19J-01-03
Scale: As Noted
Date: Aug. 2004

SHEET No. 01A OF 3 SHEETS

"AS-BUILT"

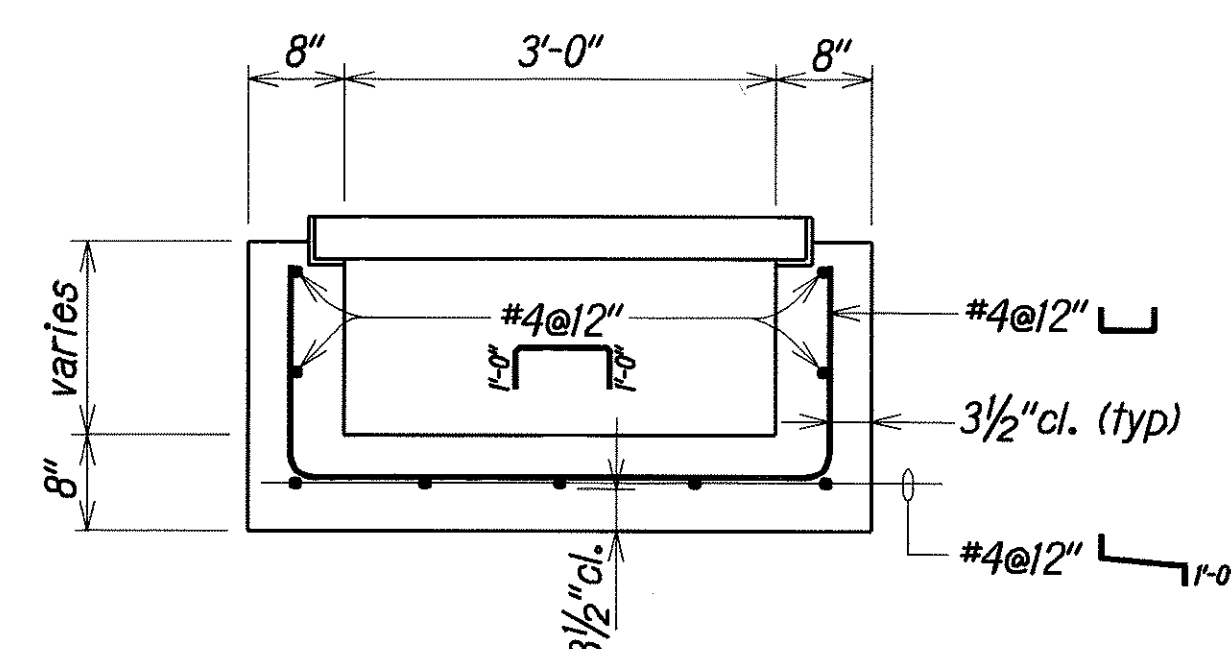
13 S-1

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	19J-01-03	2005	15	17



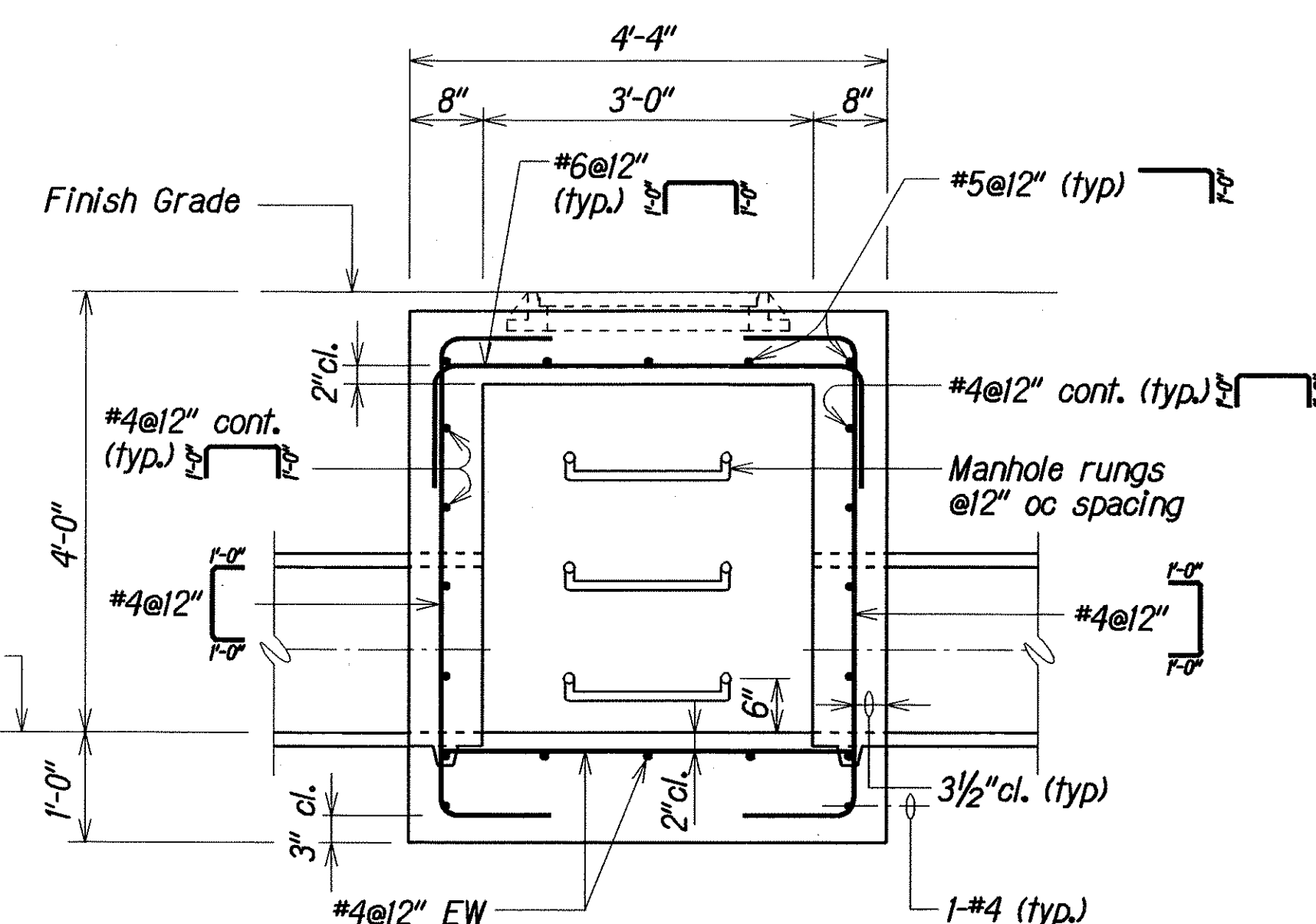
PLAN

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



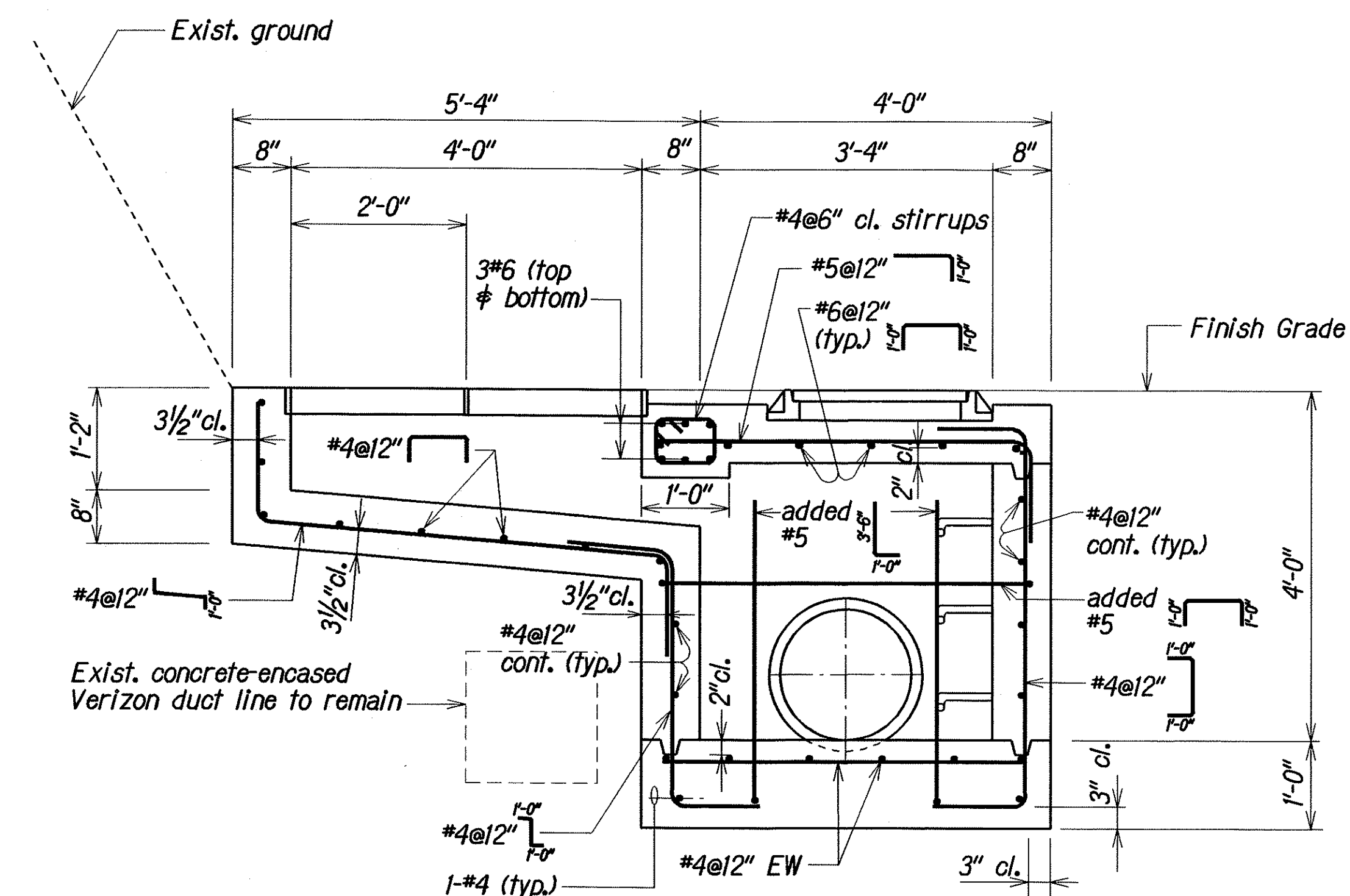
SECTION A

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



SECTION B

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



SECTION C

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

TYPICAL DETAILS OF MODIFIED TYPE 01014P GRATED DROP INLET

DESIGNED BY	DATE
DRAWN BY	AUG 2004
CHECKED BY	AUG 2004
NOTED BY	AUG 2004
QUANTITIES BY	AUG 2004
REVISIONS	AUG 2004

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE DETAILS
TYPICAL DETAILS OF MODIFIED TYPE 01014P
GRATED DROP INLET
HAWAII BELT ROAD MISCELLANEOUS DRAINAGE IMPROVEMENTS
Vicinity of Honolulu Bridge
Project No. 19J-01-03
Scale: As Noted Date: Aug. 2004