

PROJECT: PUULOA ROAD IMPROVEMENTS; KAMEHAMEHA HIGHWAY TO SALT LAKE BOULEVARD
FAP NO. STP-7310(1)

[illegible]

36

ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
	DRAWN BY _____	" _____
	TRACED BY _____	" _____
NOTEBOOK	DESIGNED BY _____	" _____
	QUANTITIES BY _____	" _____
No. _____	CHECKED BY _____	" _____

PROJECT: PUULOA ROAD IMPROVEMENTS; KAMEHAMEHA HIGHWAY TO SALT LAKE BOULEVARD
FAP NO. STP-7310(1)

Item No.				206.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	603.	
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PREFIX: G:\DOTH9601A\ACAD\
FILE: DOT96203A.dwg
BEGIN: 12/01/99
SCALE: 1=1

ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
NOTEBOOK	DRAWN BY _____	_____
	TRACED BY _____	_____
	DESIGNED BY _____	_____
	QUANTITIES BY _____	_____
No. _____	CHECKED BY _____	_____



9'

4" $\varnothing$ Debris Barrier

4'

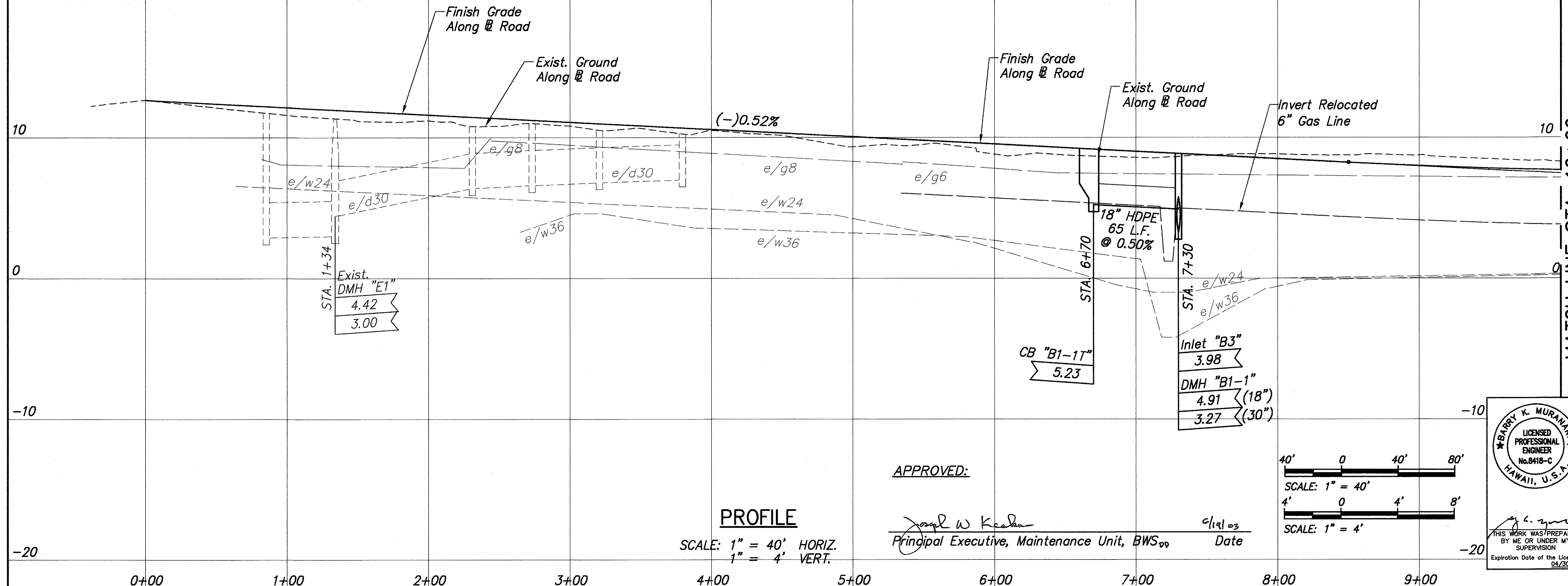
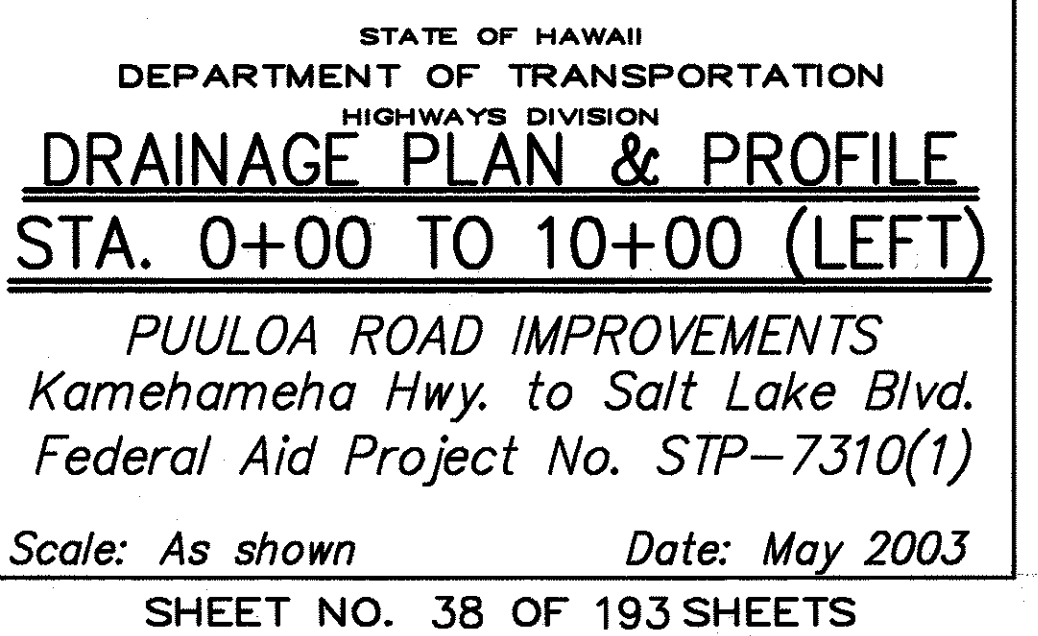
8" Typ.

8" Typ.

Concrete Headwall

30" $\varnothing$ Drain

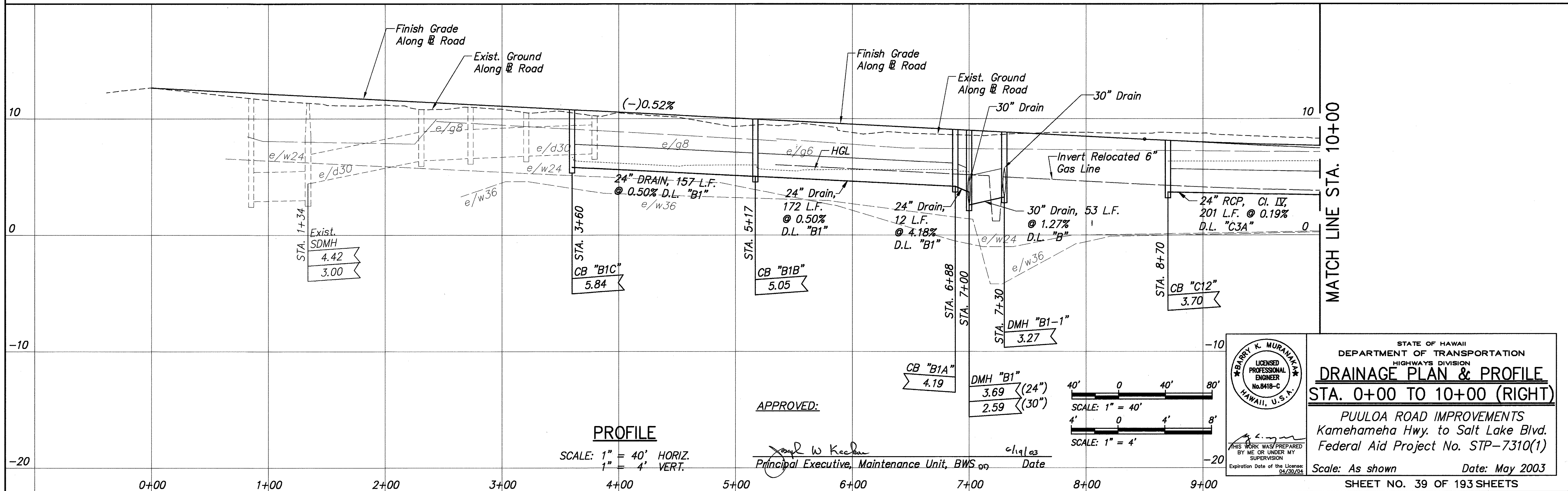
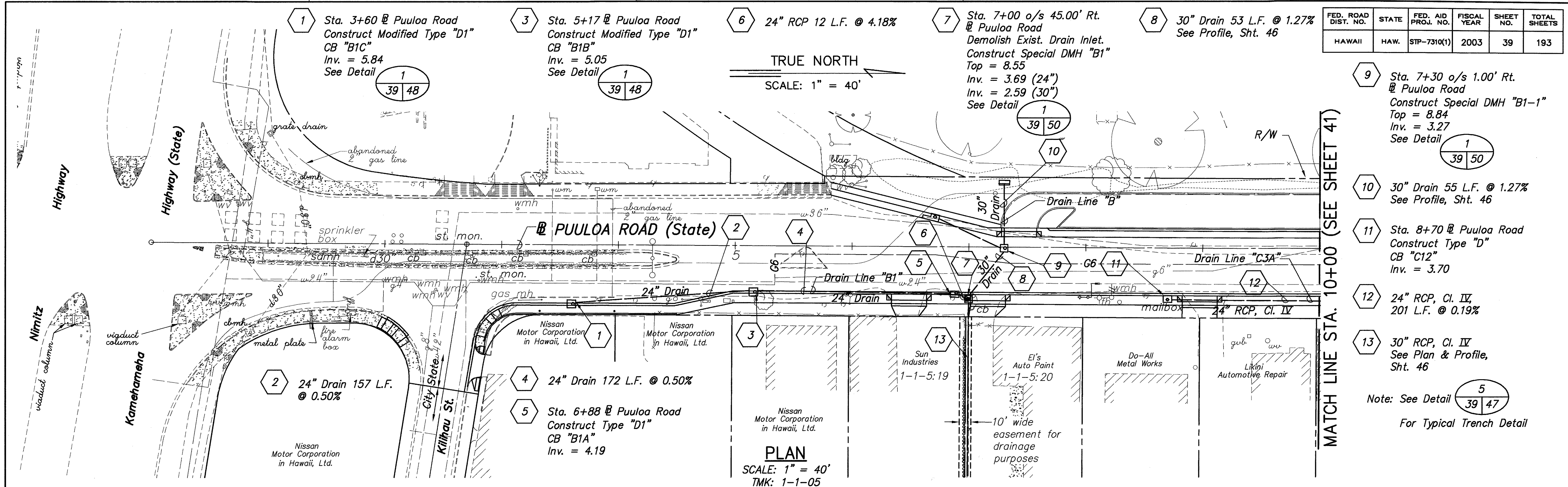
PLAN



ORIGINAL PLAN	SURVEY PLOTTED BY _____ DATE _____
NOTEBOOK	DRAWN BY _____
	TRACED BY _____
	DESIGNED BY _____
	QUANTITIES BY _____
No. _____	CHECKED BY _____

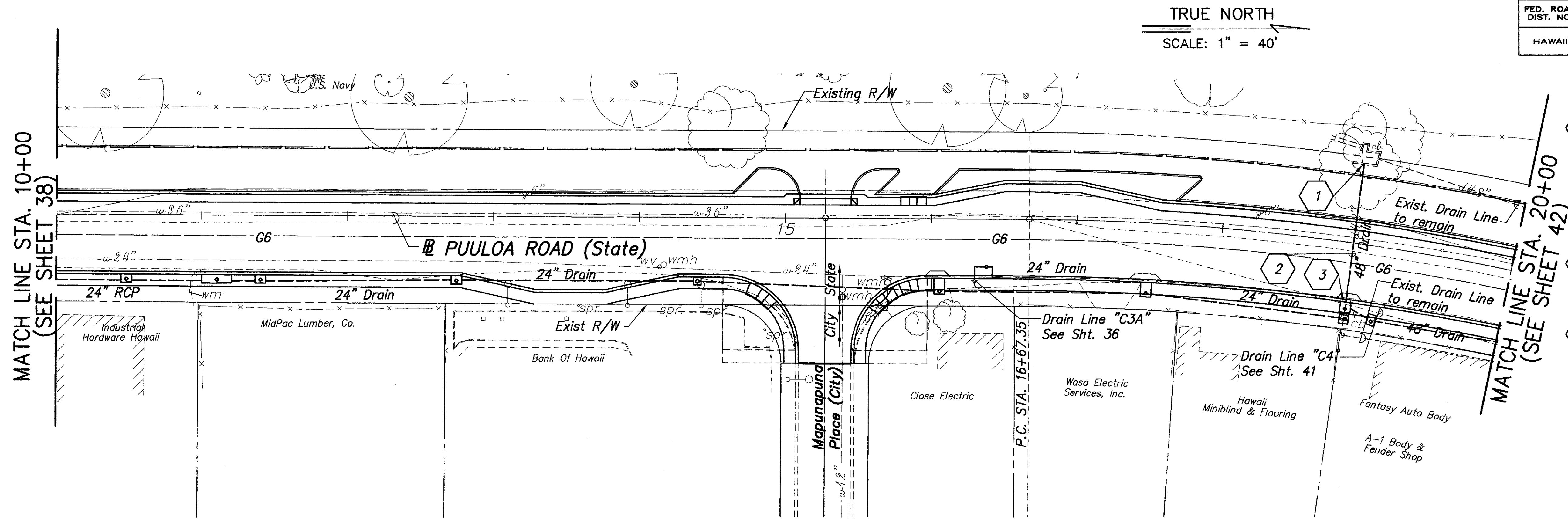
38

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-7310(1)	2003	39	193



39

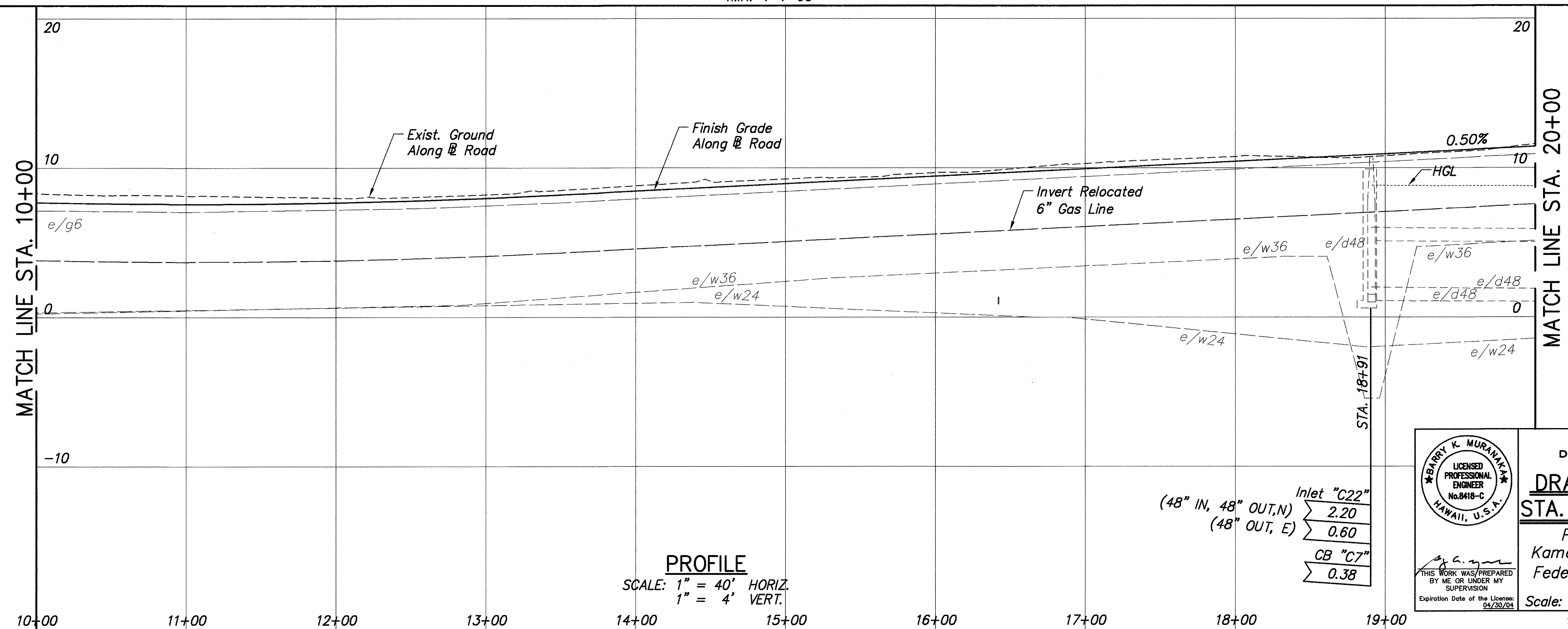
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-7310(1)	2003	40	193



- Sta. 18+91 @ Puuloa Road
Connect new 48" Drain to Existing Inlet "C22"
Inv. = 2.20 (48" In, 48" Out, N)
Inv. = 0.60 (48" Out, E)
Install 3 Ea. Debris Barriers
See Detail, Sht. 38.
- Remove Exist. 48" Drain.
Install 48" Drain, 95 L.F.
@ 0.23%
- Sta. 18+91 @ Puuloa Road
CB "C7"
Inv. = 0.38
See Sht. 41

Note: See Detail 5
40 47
For Typical Trench Detail

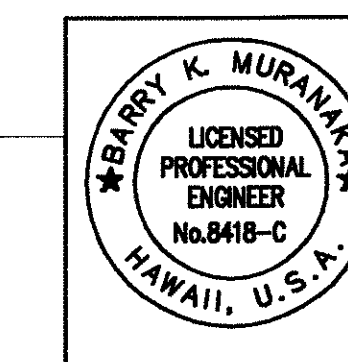
PLAN
SCALE: 1" = 40'
TMK: 1-1-05



40' 0' 40' 80'
SCALE: 1" = 40'
4' 0' 4' 8'
SCALE: 1" = 4'

PROFILE
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

Inlet "C22"
(48" IN, 48" OUT, N) > 2.20
(48" OUT, E) > 0.60
CB "C7"
> 0.38



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE PLAN & PROFILE
STA. 10+00 TO 20+00 (LEFT)

PUULOA ROAD IMPROVEMENTS
Kamehameha Hwy. to Salt Lake Blvd.
Federal Aid Project No. STP-7310(1)

Scale: As shown Date: May 2003

SHEET NO. 40 OF 193 SHEETS

P.M.: STY
CURRENT OPR: rki
PREV. OPR:
CURRENT TIME: May 09, 2003 - 5:30pm
LAST SAVED BY:
LAST MODIFIED: Fri, 09 May 2003 - 5:27pm

PREFIX: G:\DOT\9601A\ACAD\
FILE: 31ba.dwg
BEGIN: 12/01/99
SCALE: 1=1

SURVEYED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

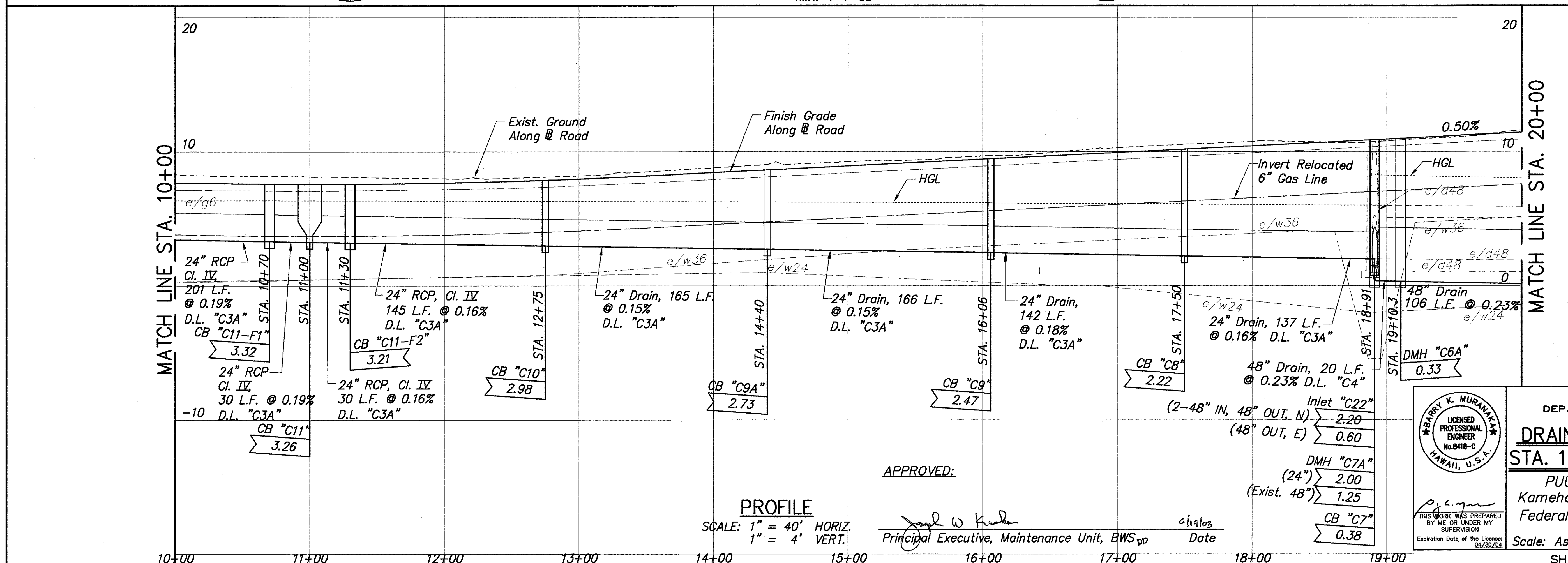
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE PLAN & PROFILE
STA. 10+00 TO 20+00 (RIGHT)

*PUULOLO ROAD IMPROVEMENTS
Kamehameha Hwy. to Salt Lake Blvd.
Federal Aid Project No. STP-7310(1)*

Scale: As shown Date: May 2003

SHEET NO. 41 OF 193 SHEETS

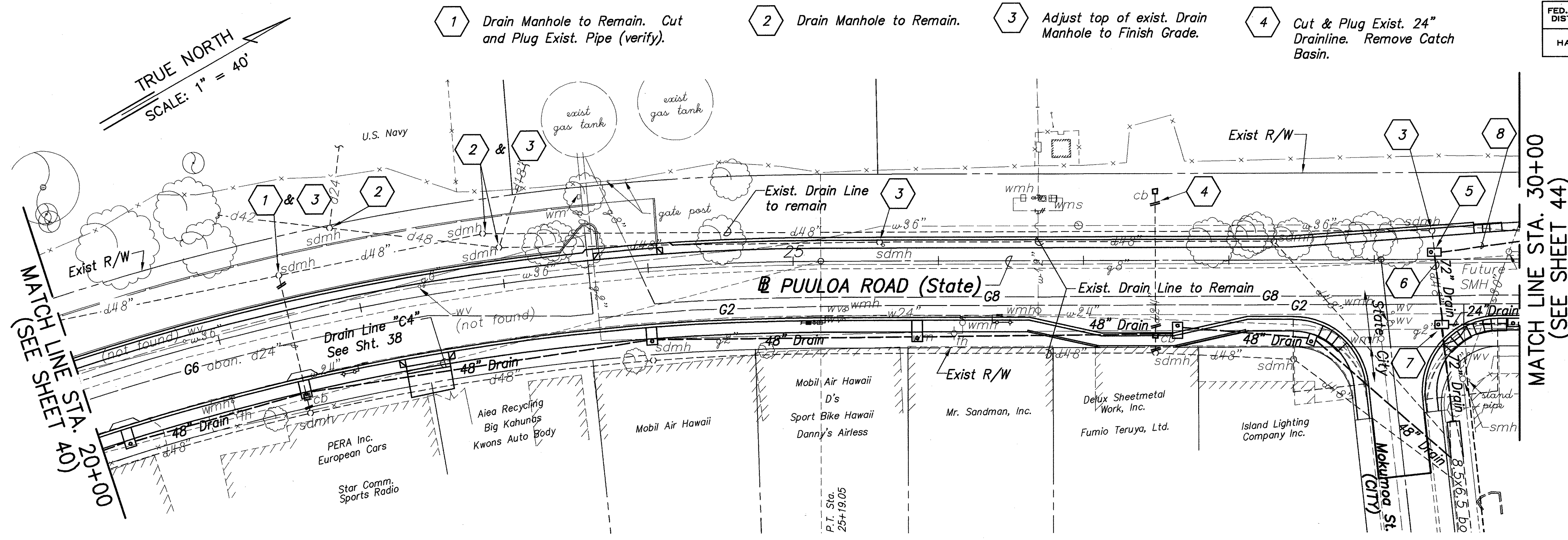


ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
	DRAWN BY _____	" _____
	TRACED BY _____	" _____
NOTEBOOK	DESIGNED BY _____	" _____
	QUANTITIES BY _____	" _____
	CHECKED BY _____	" _____

P.M.: STY
CURRENT: OPR: bkm
PREV: OPR: May 10, 2003 - 4:24pm
CURRENT TIME: May 10, 2003 - 4:24pm
LAST SAVED BY: May 10, 2003 - 4:02pm
LAST MODIFIED: Sat, 10 May 2003 - 4:02pm

PREP: G:\DOT\H9601A\ACAD\
FILE: 32ba.dwg
BEGIN: 12/01/99
SCALE: 1"=1'

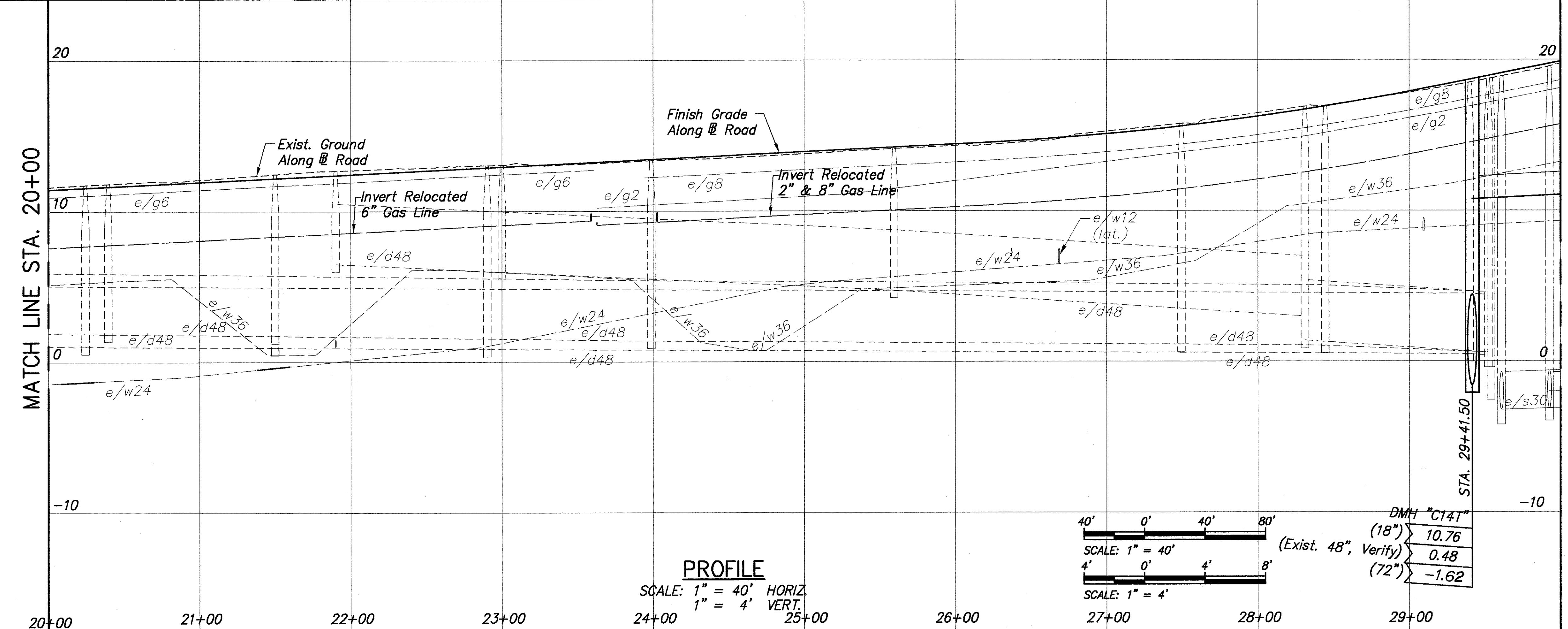
SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTED BY	
No.	



PLAN
SCALE: 1" = 40'
TMK: 1-1-05

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-7310(1)	2003	42	193

- 5 Sta. 29+41.50 o/s 5.0' Lt. @ Puuloa Road
Cut & Remove interfering portion of exist. 48" pipe as required.
Connect Exist. 48" Drain Construct Special DMH "C14T"
Top = 18.8
Inv. = 10.76 (18")
Inv. = 0.48 (Exist. 48" Verify)
Inv. = (-)1.62 (72")
See Detail 1/42/50
- 6 72" RCP 50.18 L.F. @ 0.34%
Remove interfering portion of exist. 48" pipe as required.
See Profile 1/42/47
- 7 Sta. 29+47 o/s 44.89' Rt. @ Puuloa Road
DMH "C13"
Inv. = 13.43 (24")
Inv. = (-)1.79 (72")
See Sht. 43
- 8 18" HDPE
175 L.F. @ 0.50%



PROFILE
SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

40'	0'	40'	80'
SCALE: 1" = 40'			
4'	0'	4'	8'
SCALE: 1" = 4'			
DMH "C14T"			
(18") 10.76			
(Exist. 48" Verify) 0.48			
(72") -1.62			

Match Line STA. 30+00 (SEE SHEET 44)

APPROVED:

M. J. [Signature] 7/11/03
Chief, Civil Engineering Branch, D.P.P. [Signature]
(for construction within City R/W only) Date

Dennis M. [Signature] 7/16/03
Chief, Wastewater Branch, D.P.P. [Signature] Date

Joseph W. [Signature] 7/19/03
Principal Executive, Maintenance Unit, BWS [Signature] Date

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
LICENSED PROFESSIONAL ENGINEER
No. 8418-C
HAWAII, U.S.A.

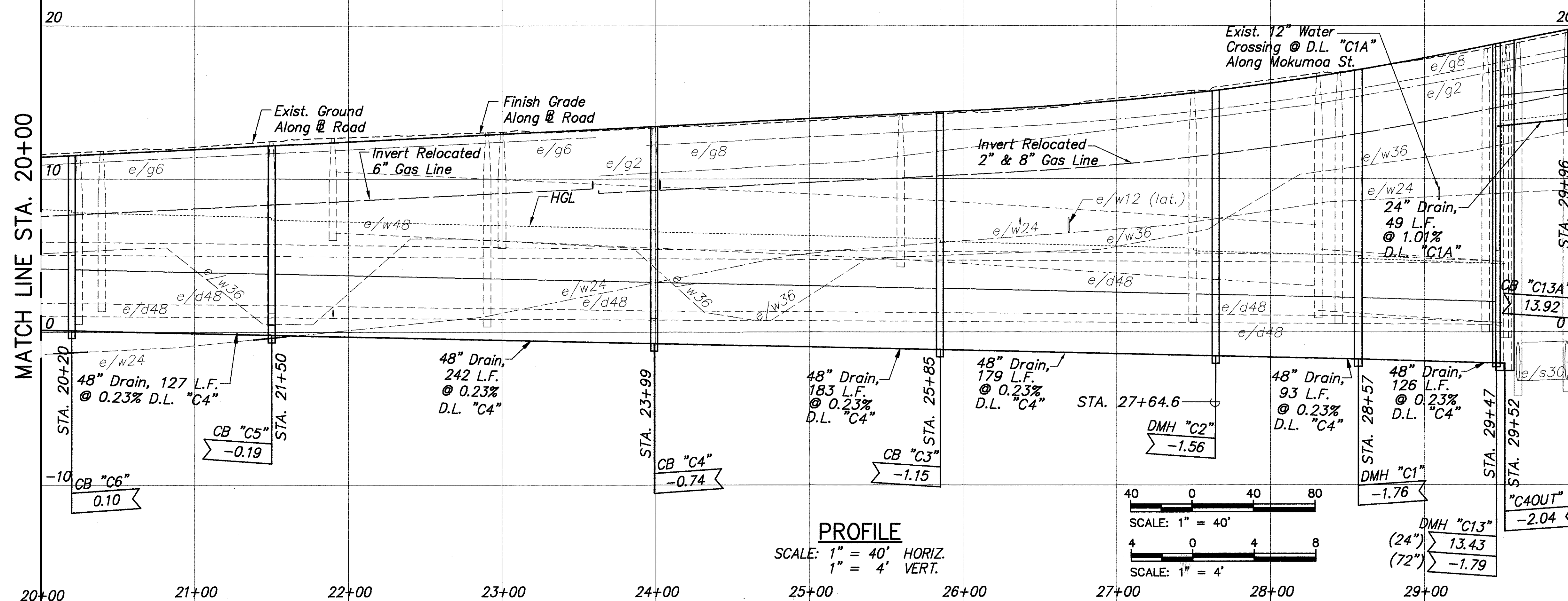
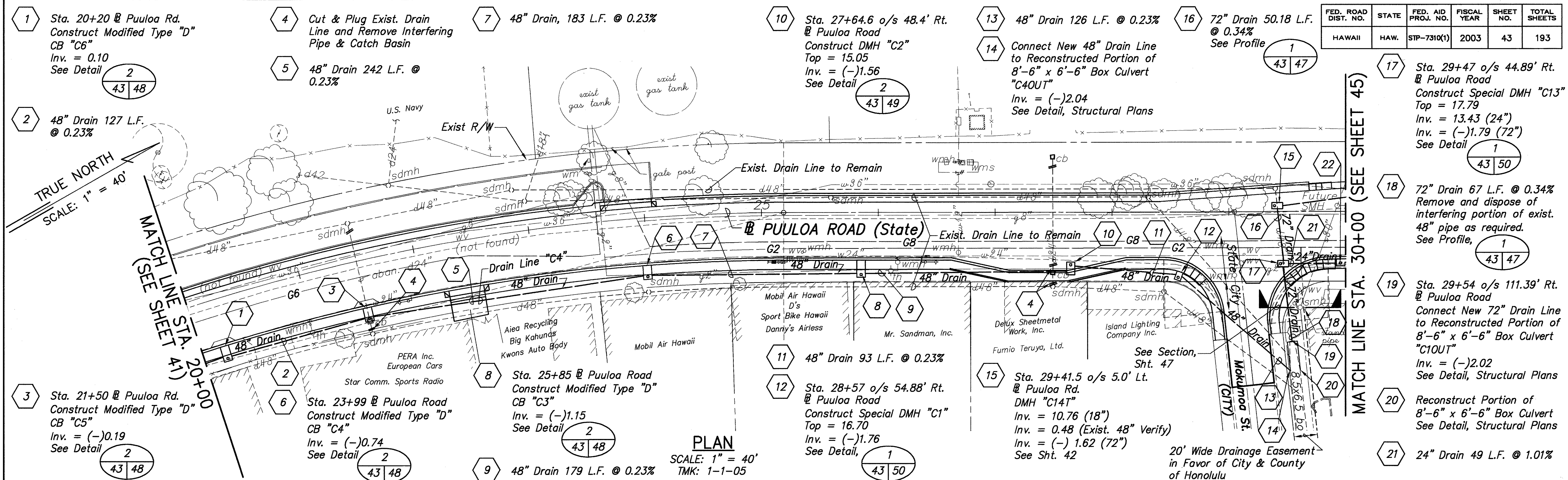
DRAINAGE PLAN & PROFILE
STA. 20+00 TO 30+00 (LEFT)

PUULOA ROAD IMPROVEMENTS
Kamehameha Hwy. to Salt Lake Blvd.
Federal Aid Project No. STP-7310(1)

Scale: As shown Date: May 2003

SHEET NO. 42 OF 193 SHEETS

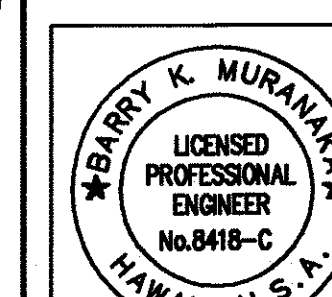
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-7310(1)	2003	43	193



APPROVED:

M. J. [Signature] 7/11/03
Chief, Civil Engineering Branch, D.P.P. Mr. [Signature] Date
(for construction within City R/W only)

Dennis M. Nishimura 7/16/03
Chief, Wastewater Branch, D.P.P. m Date



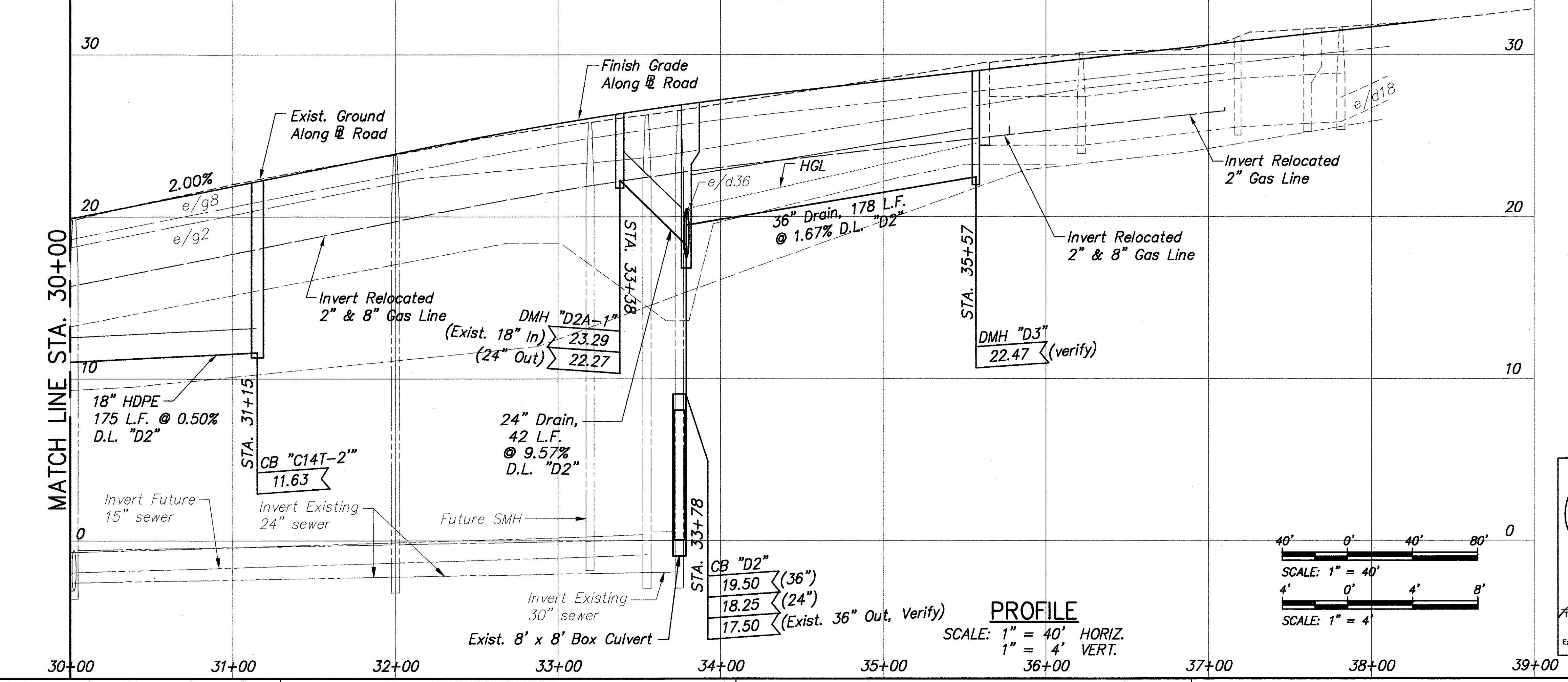
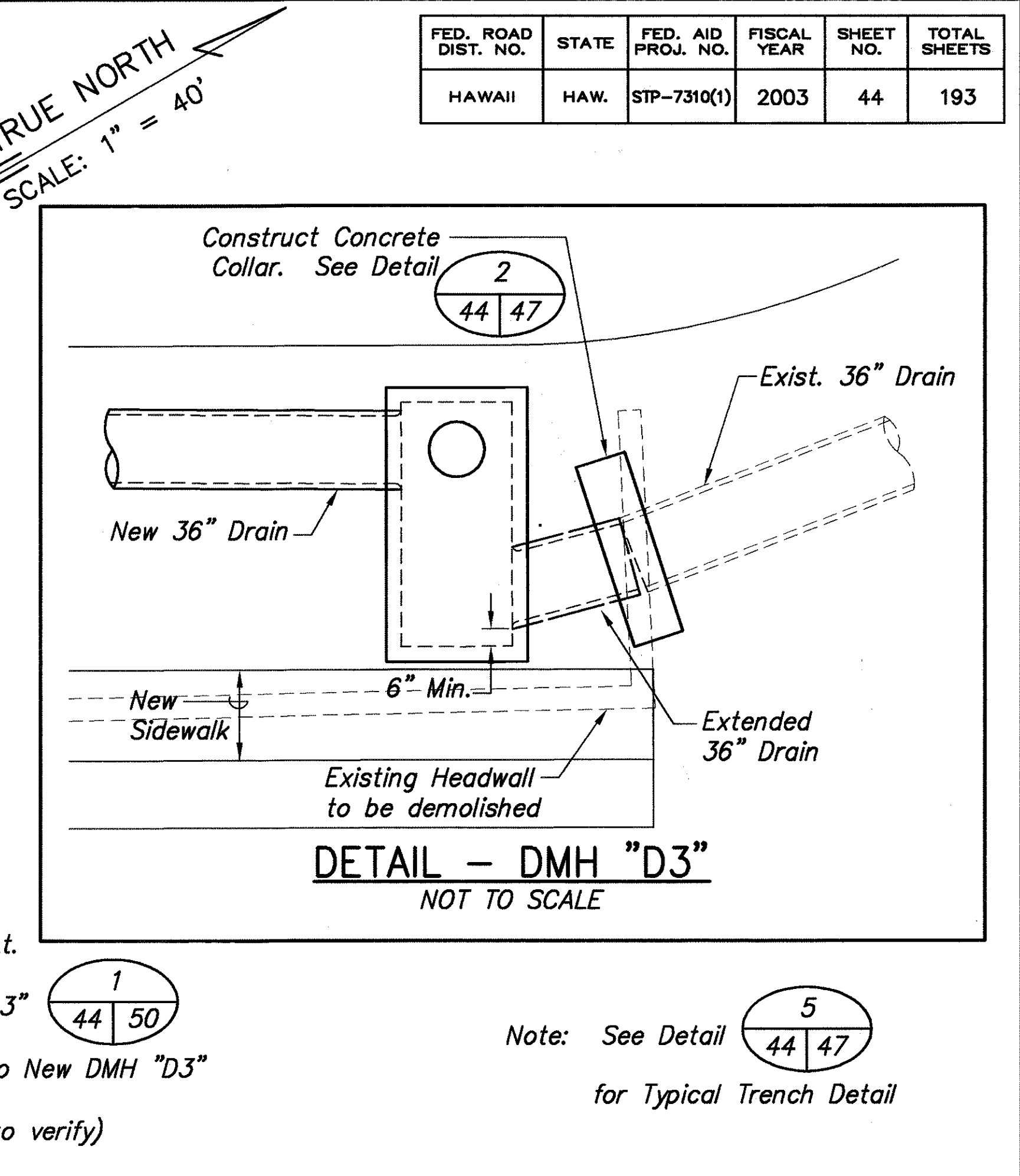
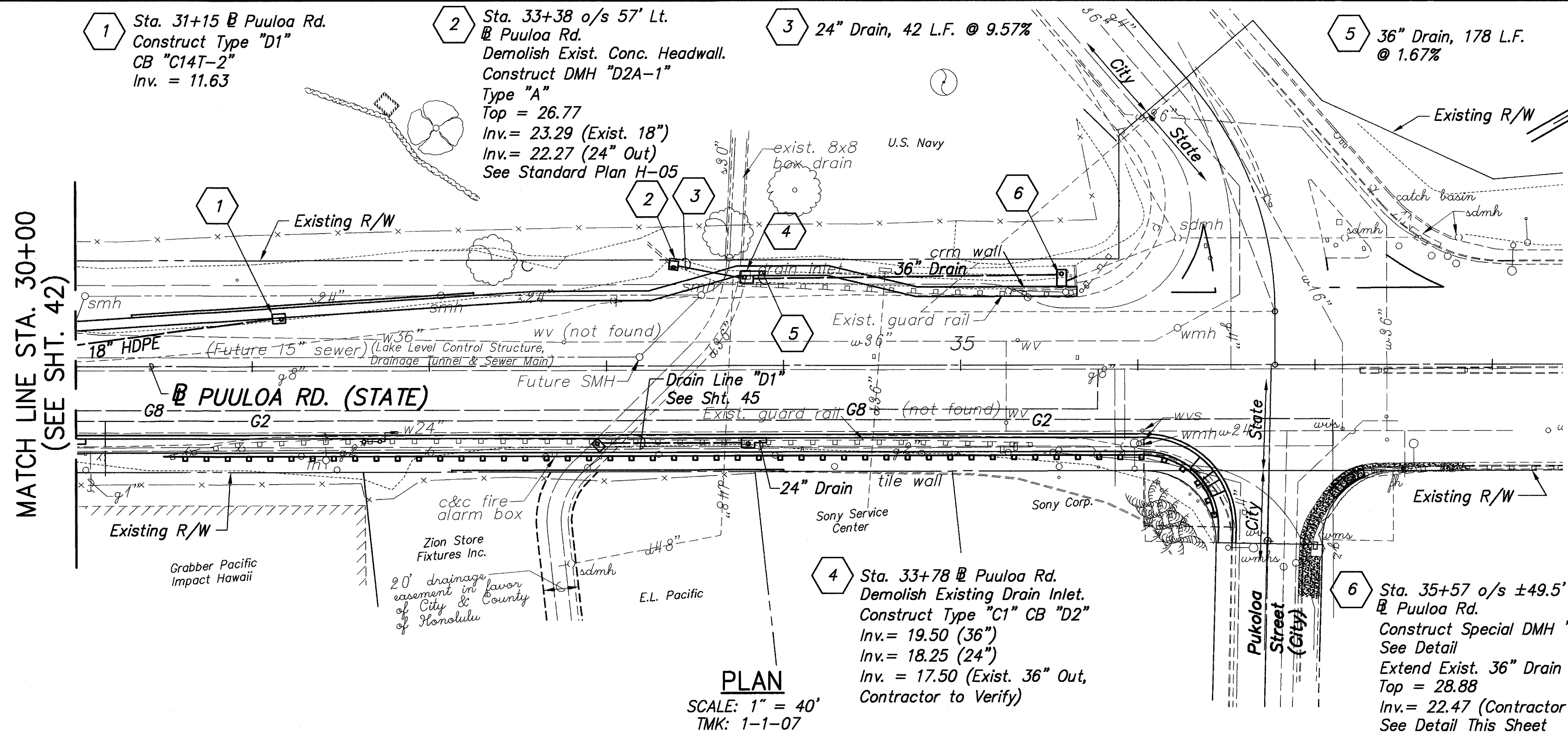
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE PLAN & PROFILE
STA. 20+00 TO 30+00 (RIGHT)
PUULOA ROAD IMPROVEMENTS
Kamehameha Hwy. to Salt Lake Blvd.
Federal Aid Project No. STP-7310(1)
Scale: As shown Date: May 2003

P.M.: STY
CURRENT: OPR: rki
PREV: OPR: May 09, 2003 - 4:34pm
CURRENT TIME: May 09, 2003 - 4:34pm
LAST SAVED BY:
LAST MODIFIED: Wed, 23 Apr 2003 - 10:30am

PREF: G:\DOT\9601A\ACAD\

FILE: 33ba.dwg
BEGIN: 12/01/99
SCALE: 1=1

SURVEYED BY	DATE
DRAWN BY	
CHECKED BY	
DESIGNED BY	
QUANTITIES BY	
NOTED BY	
NO.	



APPROVED:

M. J. [Signature] 7/11/03
Chief, Civil Engineering Branch, D.P.P. [Signature] Date
(for construction within City R/W only)

Dennis M. Nishimura 7/16/03
Chief, Wastewater Branch, D.P.P. [Signature] Date

[Signature] 7/16/03
Principal Executive, Maintenance Unit, BWS [Signature] Date

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE PLAN & PROFILE
STA. 30+00 TO END (LEFT)

PUULOA ROAD IMPROVEMENTS
Kamehameha Hwy. to Salt Lake Blvd.
Federal Aid Project No. STP-7310(1)

Scale: As shown Date: May 2003

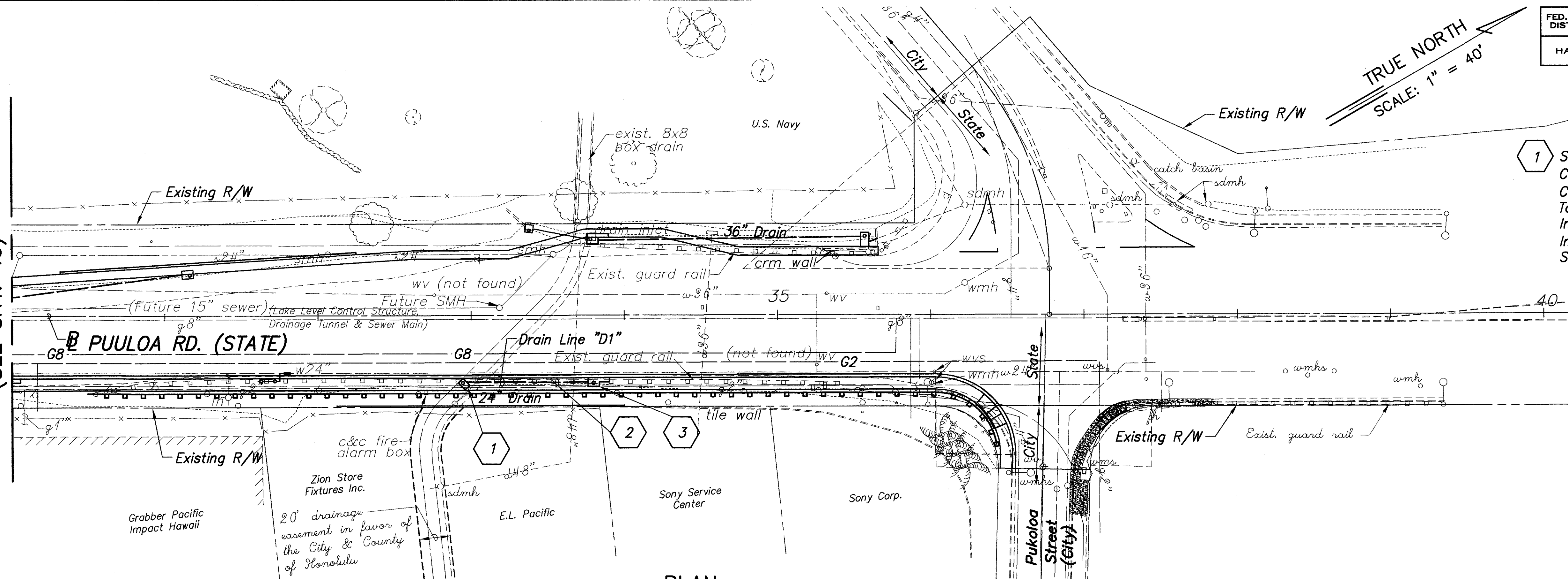
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Expiration Date of the License: 04/30/04

44

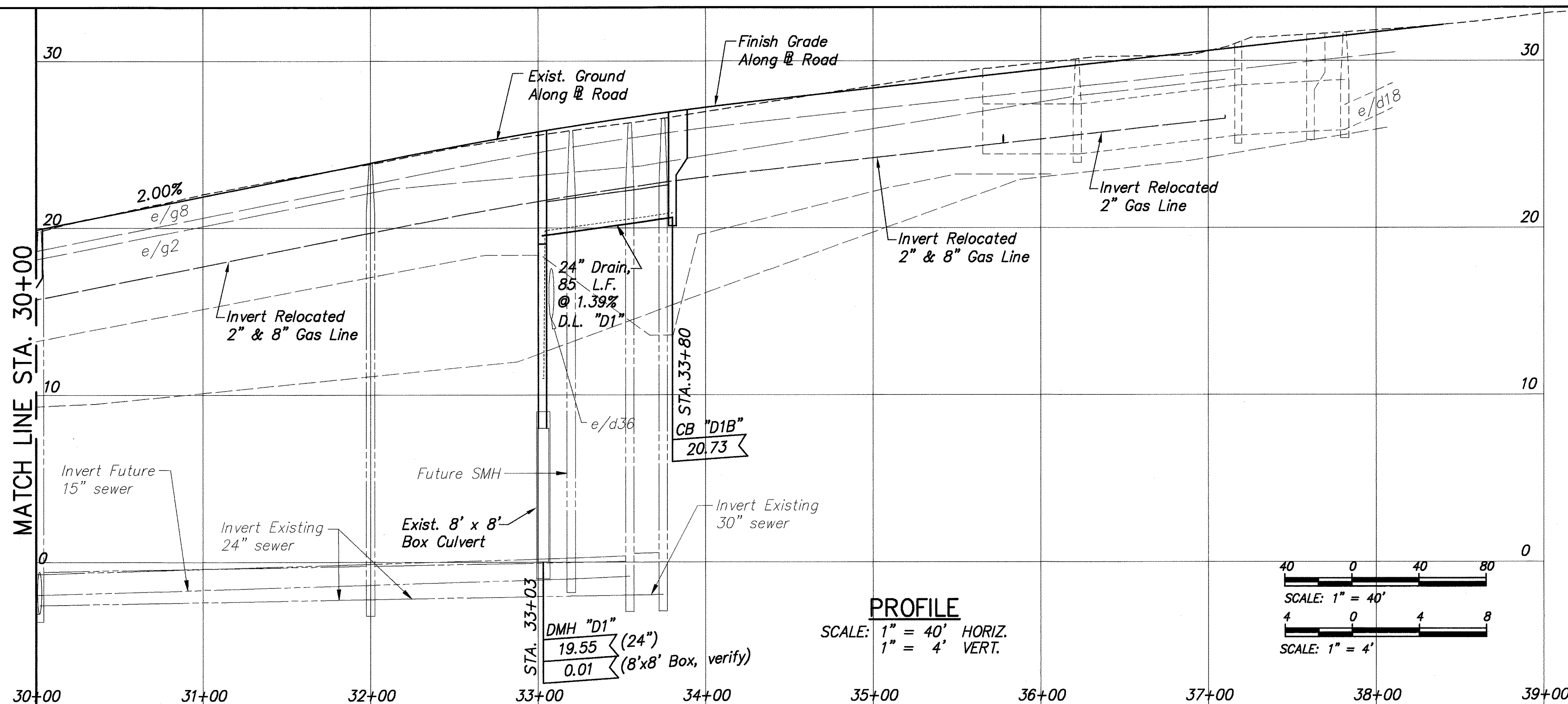
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-7310(1)	2003	45	193

MATCH LINE STA. 30+00
(SEE SHT. 43)



PLAN

SCALE: 1" = 40'
TMK: 1-1-07



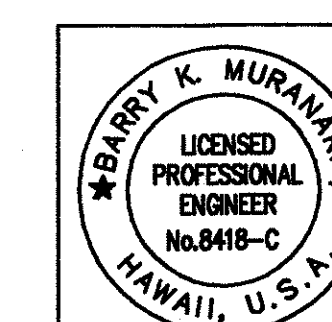
PROFILE

SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

APPROVED:

M. J. [Signature] 7/11/03
Chief, Civil Engineering Branch, D.P.P. *wt* Date
(for construction within City R/W only)

Dennis M. [Signature] 7/16/03
Chief, Wastewater Branch, D.P.P. *mn* Date



THIS WORK WAS PREPARED
BY ME OR UNDER MY
SUPERVISION
Expiration Date of the License: 04/30/04

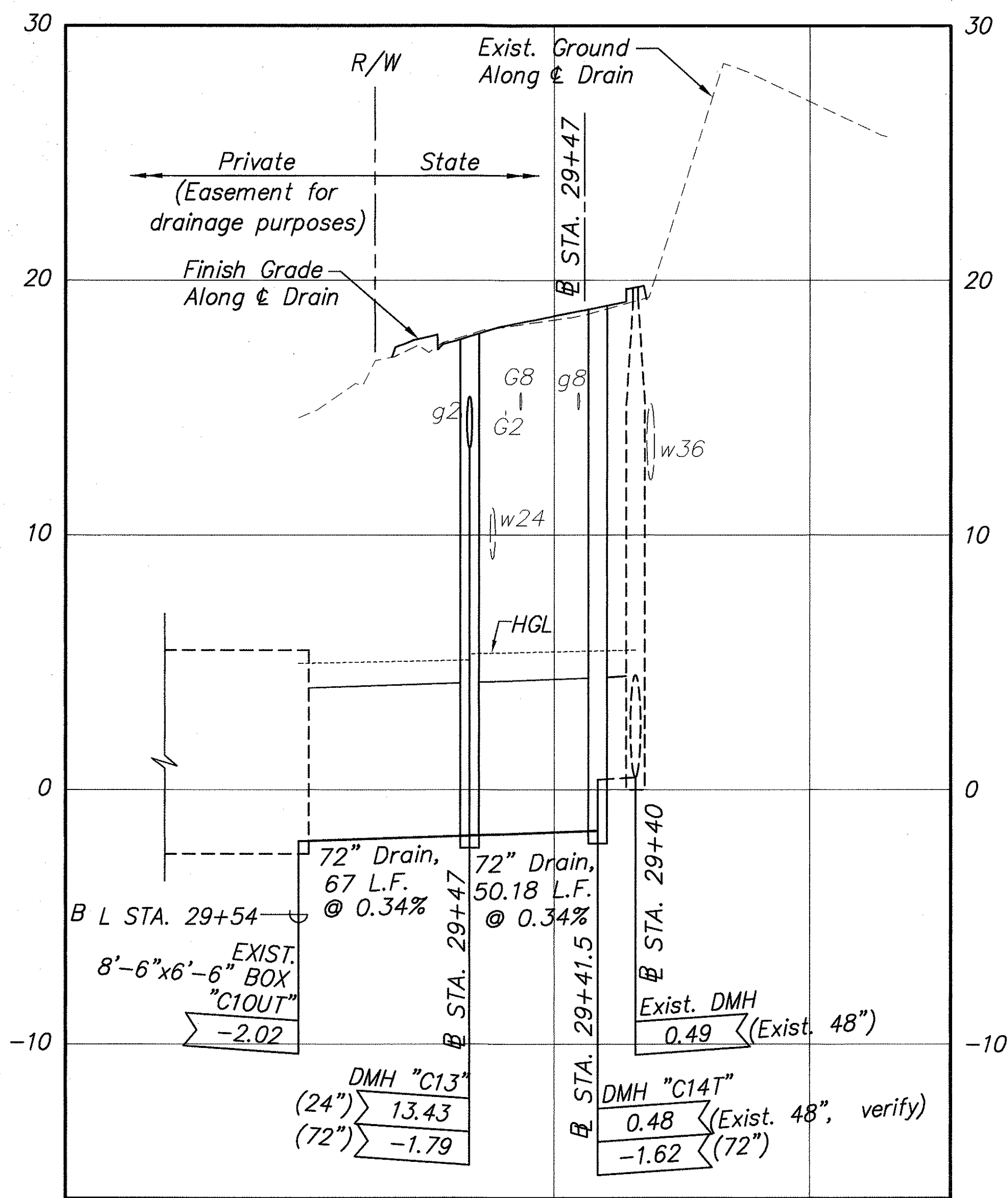
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE PLAN & PROFILE
STA. 30+00 TO END (RIGHT)
PUULOA ROAD IMPROVEMENTS
Kamehameha Hwy. to Salt Lake Blvd.
Federal Aid Project No. STP-7310(1)
Scale: As shown Date: May 2003
SHEET NO. 45 OF 193 SHEETS

P.M.: STY
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PREV. OPR:
CURRENT TIME: May 09, 2003 - 4:34pm
LAST SAVED BY:
LAST MODIFIED: Fri, 09 May 2003 - 3:57pm

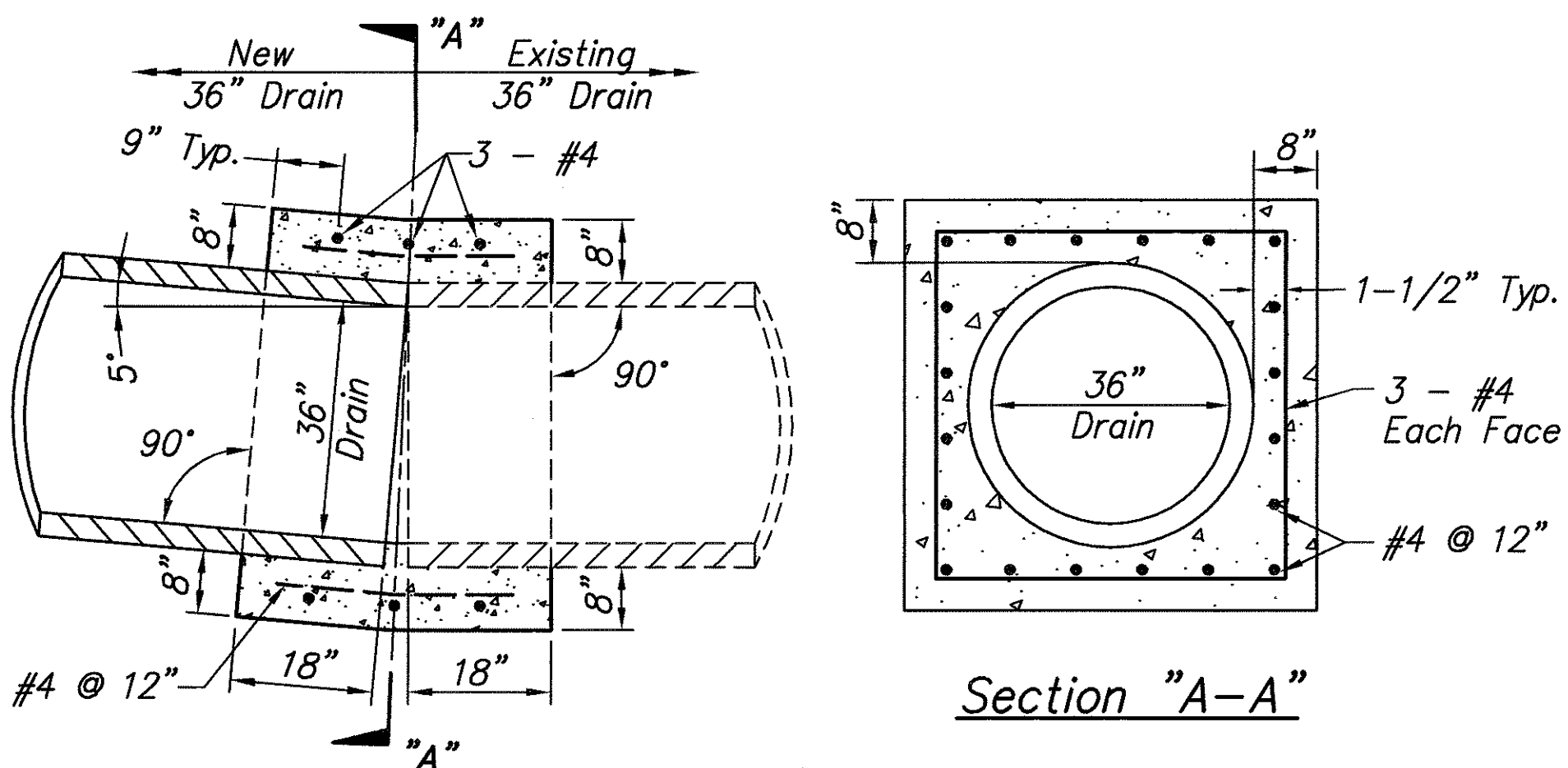
PREFIX: G:\DOT\H9601A\ACAD\
FILE: D:\96133a.dwg
BEGIN: 12/01/99
SCALE: 1"=1'

DATE	BY
DESIGNED BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTEBOOK	
No.	

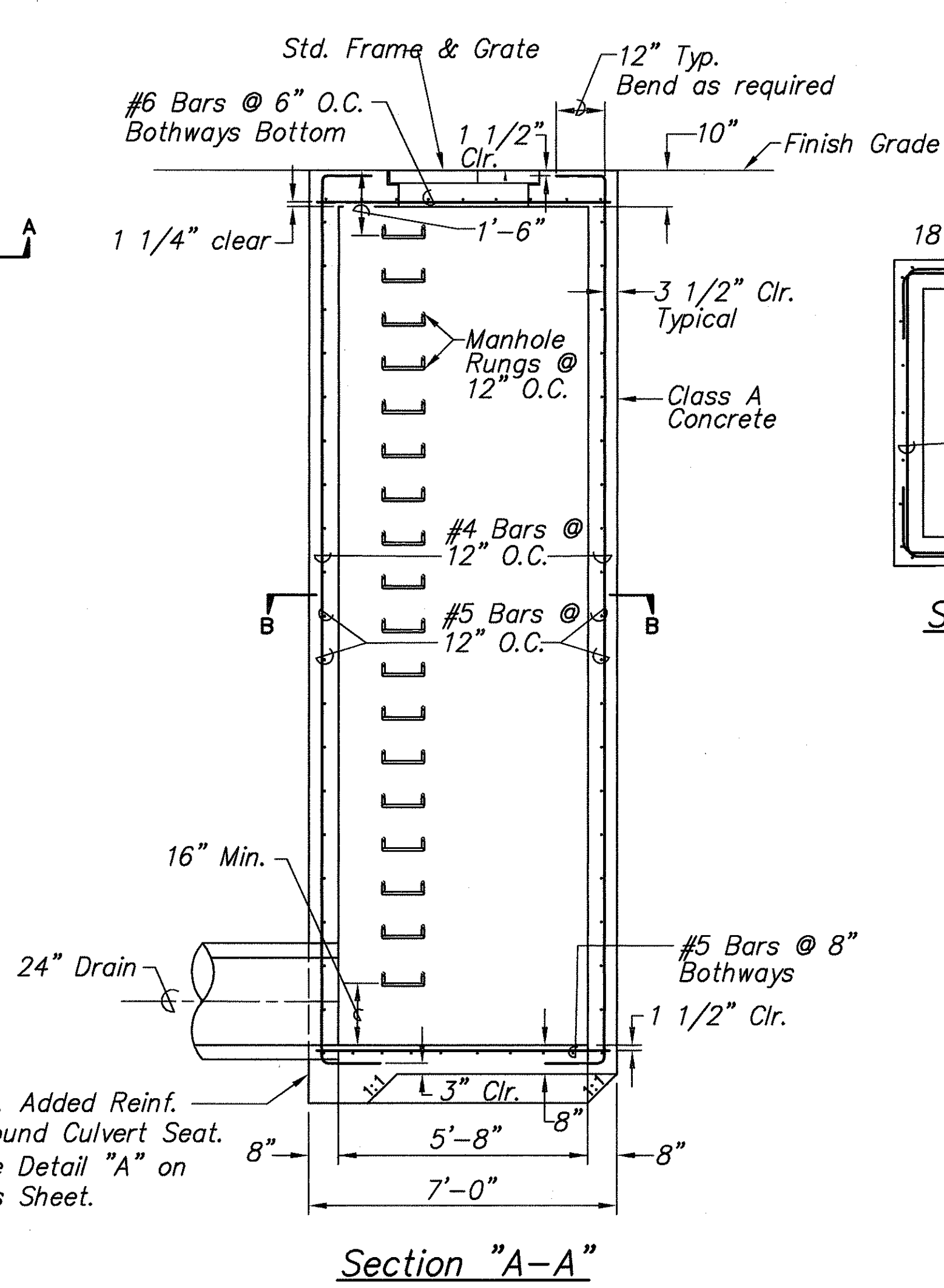
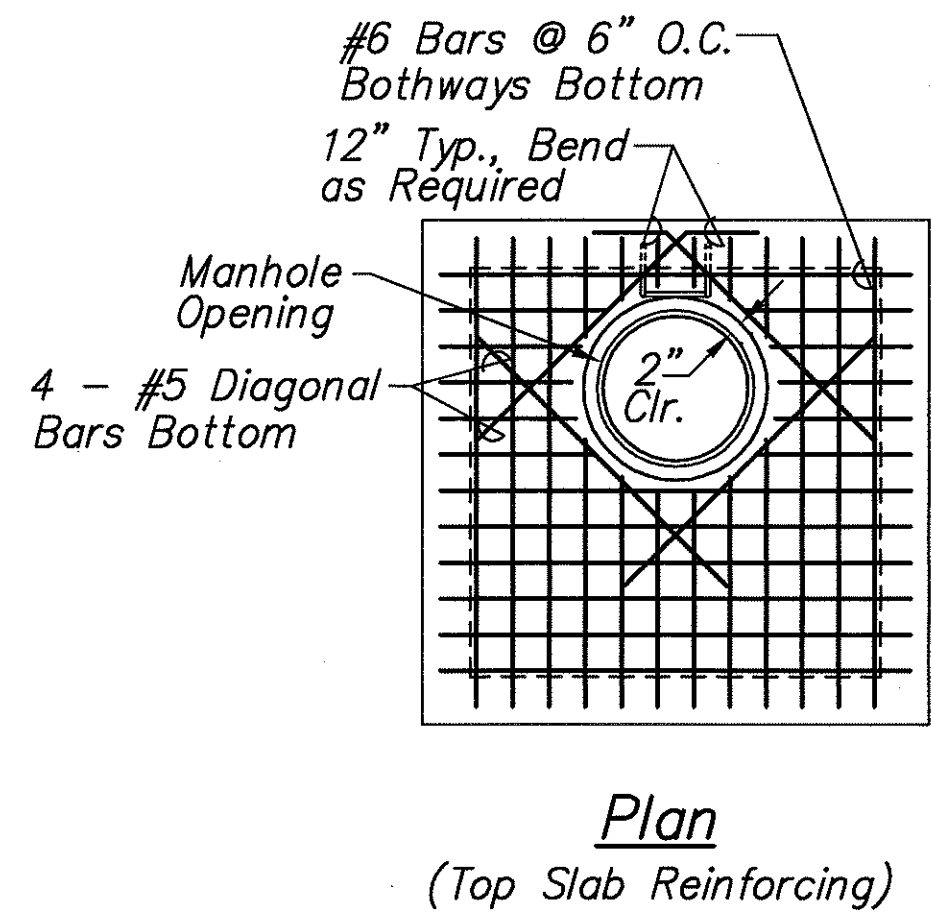
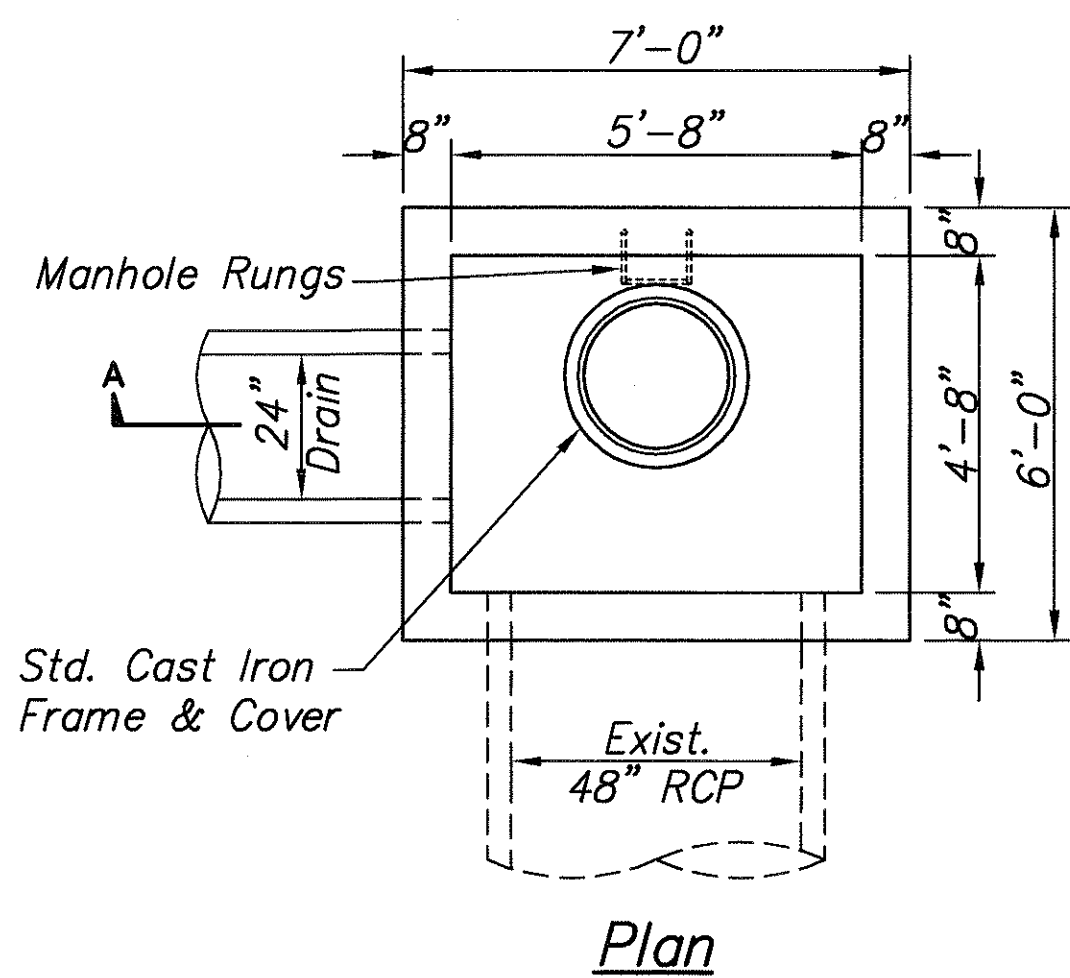
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-7310(1)	2003	47	193



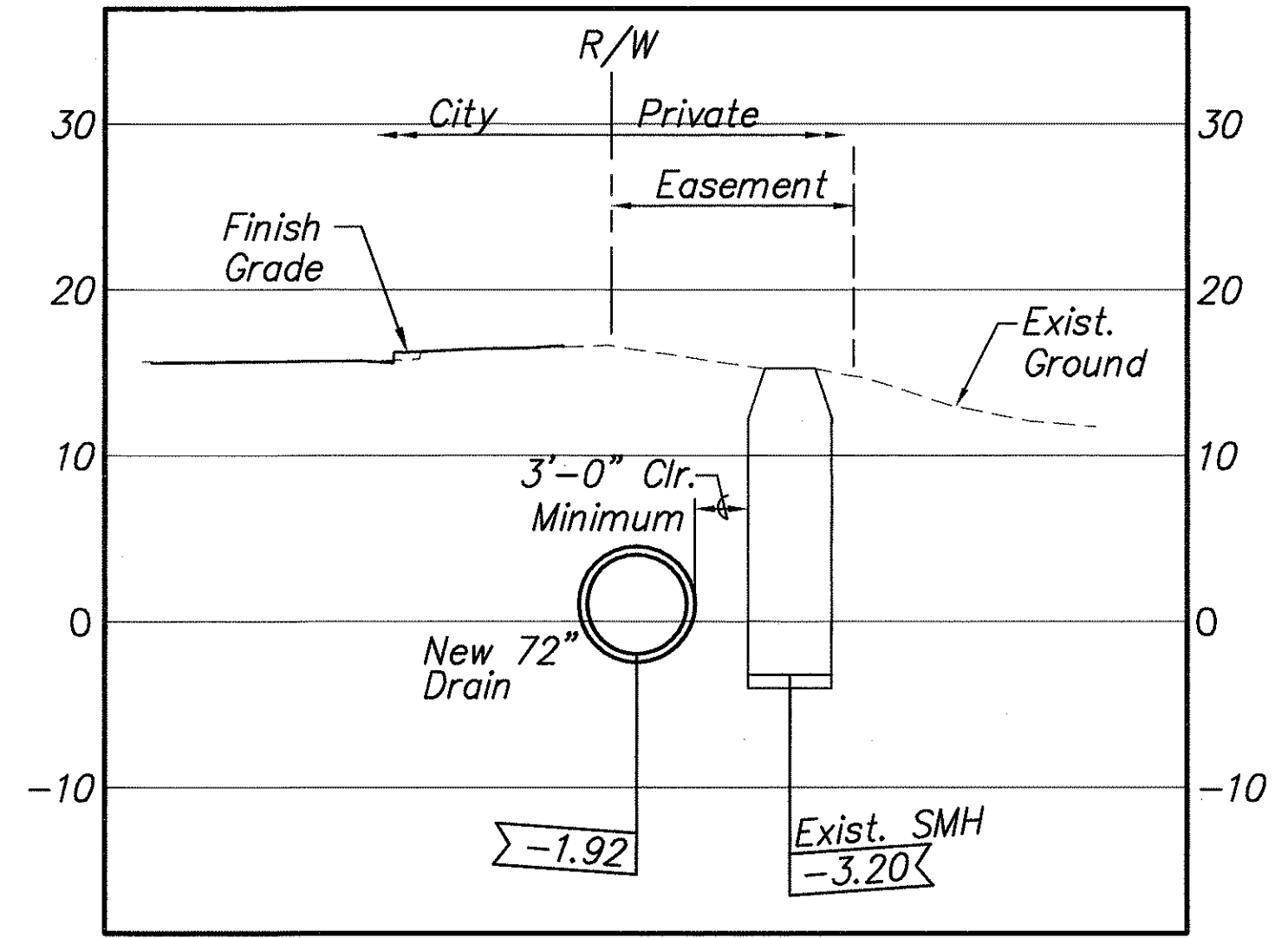
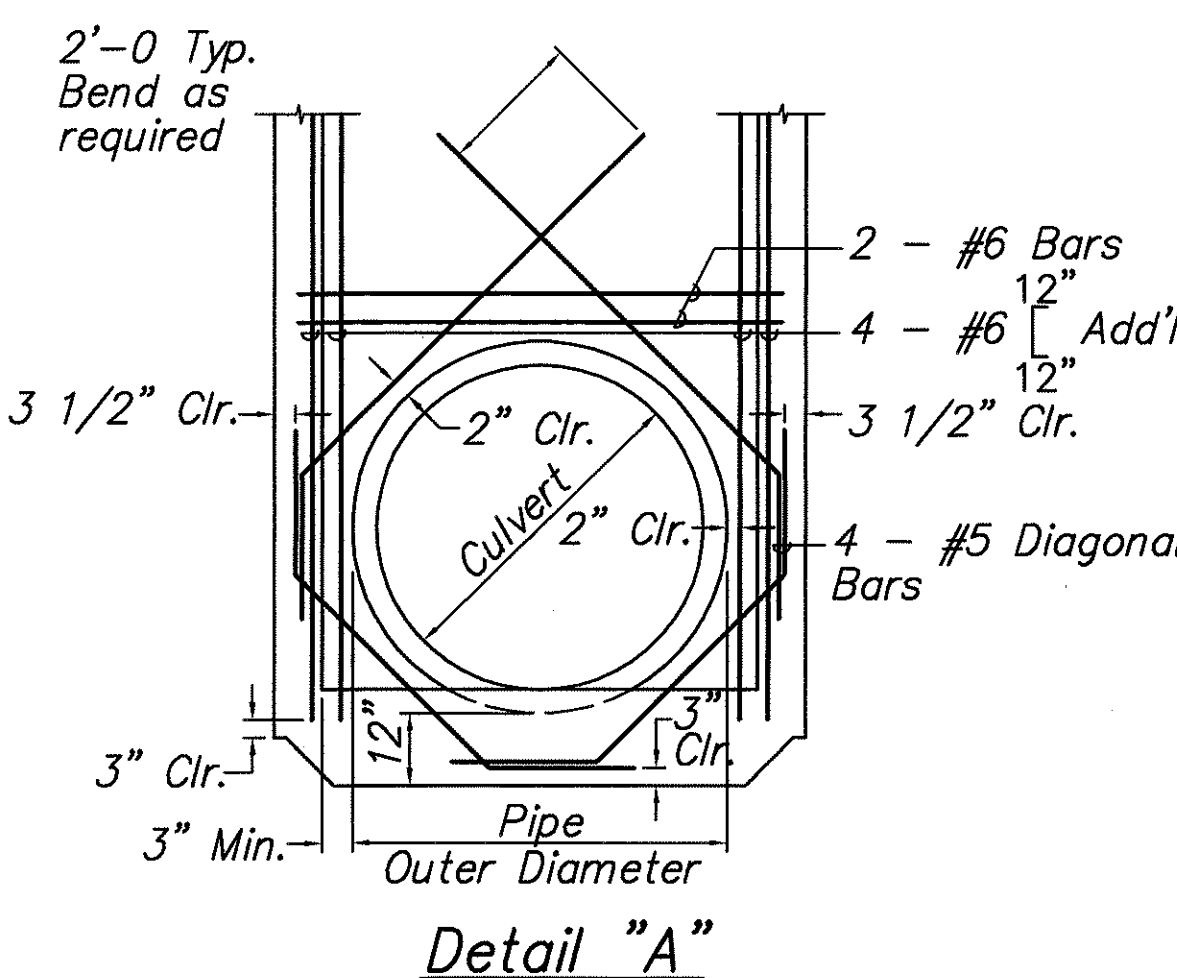
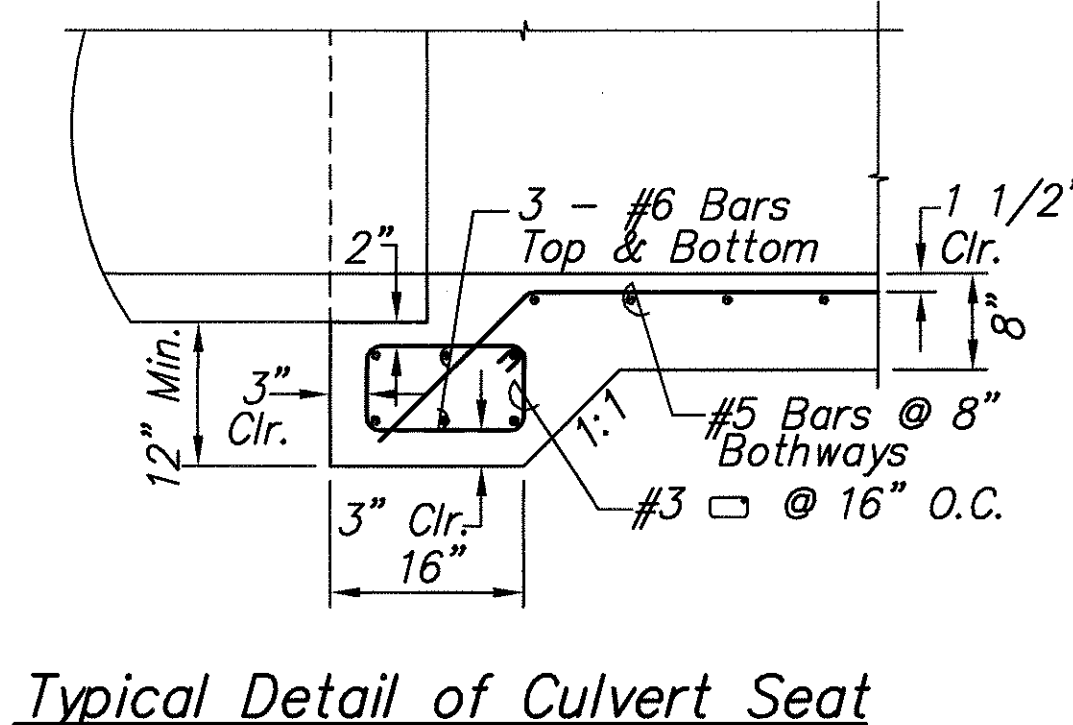
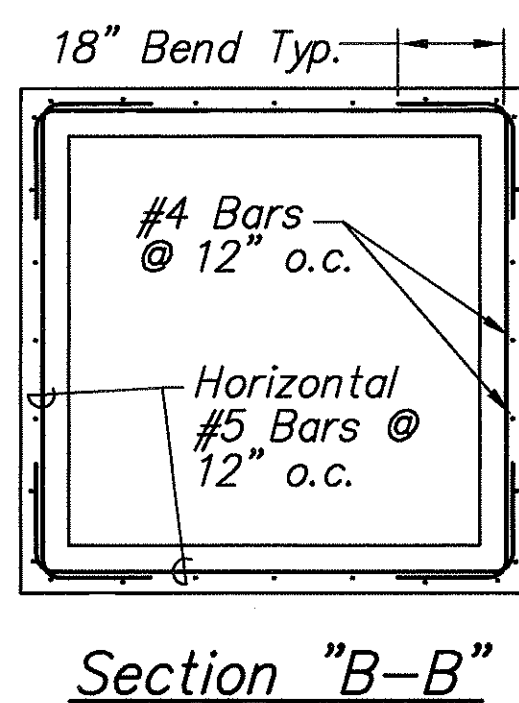
1 DRAINAGE PROFILE
 SCALES: 1" = 40' (HORIZ.)
 1" = 4' (VERT.)



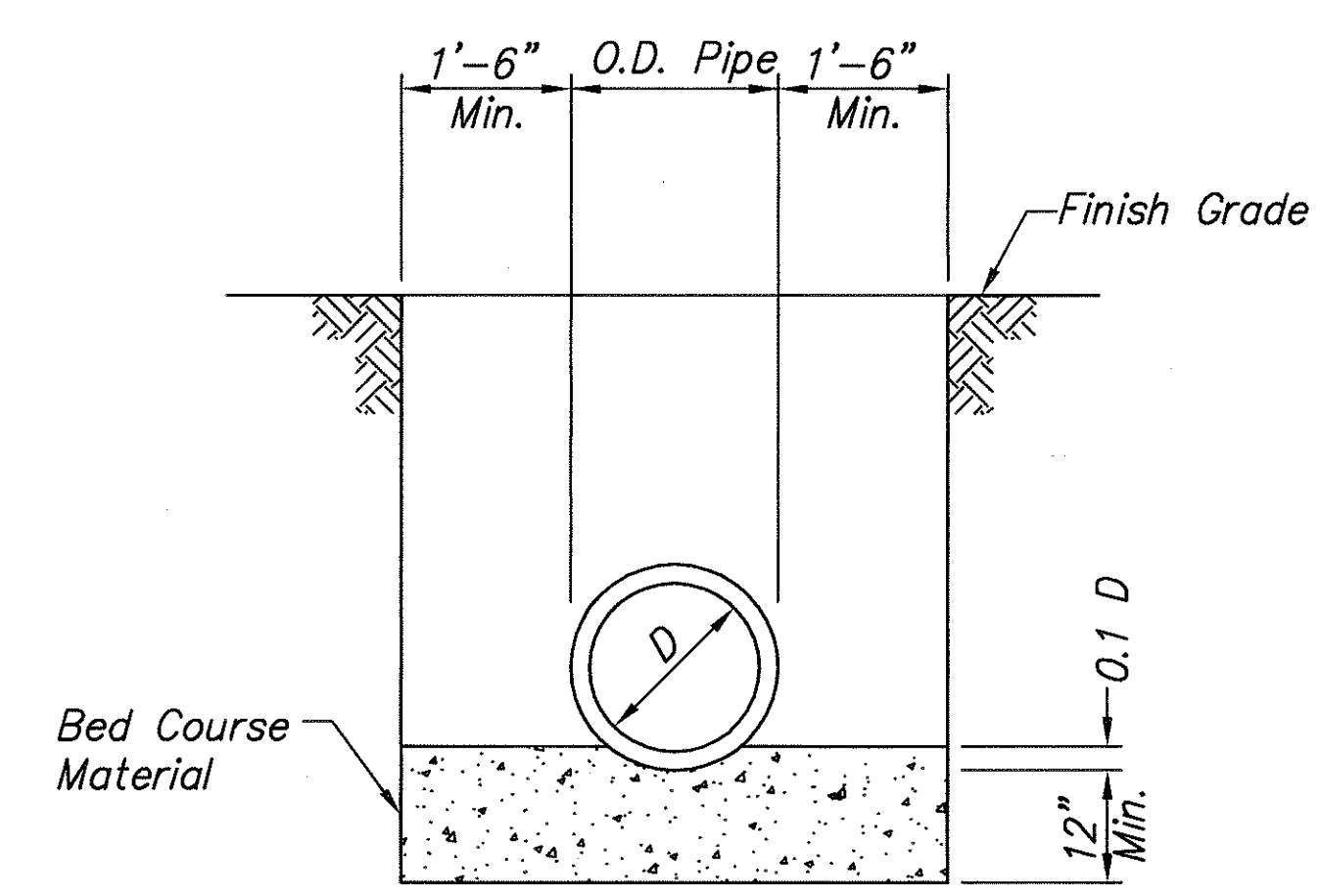
2 CONCRETE COLLAR DETAILS
 SCALE: 1/2" = 1'



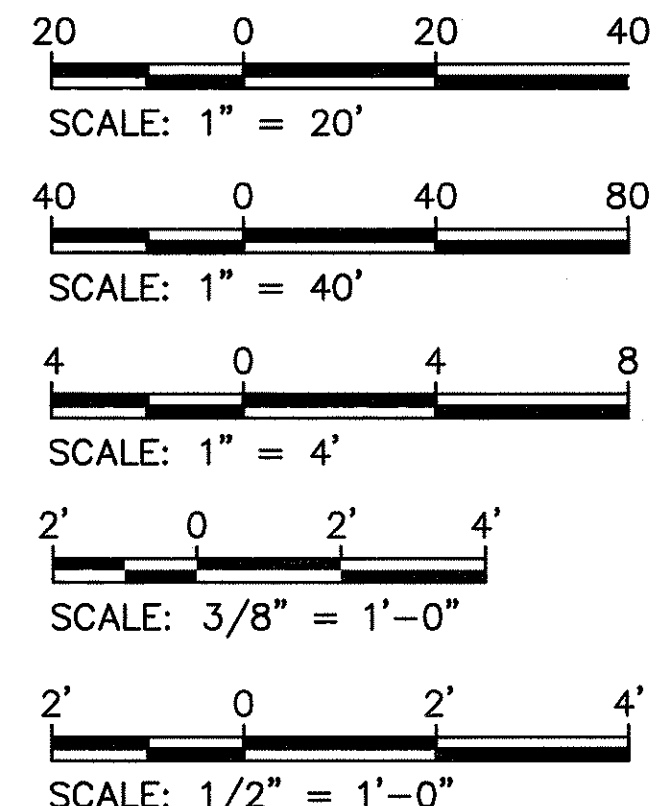
3 DRAIN MANHOLE "C7A" DETAILS
 SCALE: 3/8" = 1'-0"



4 SECTION
 SCALE: 1" = 20'

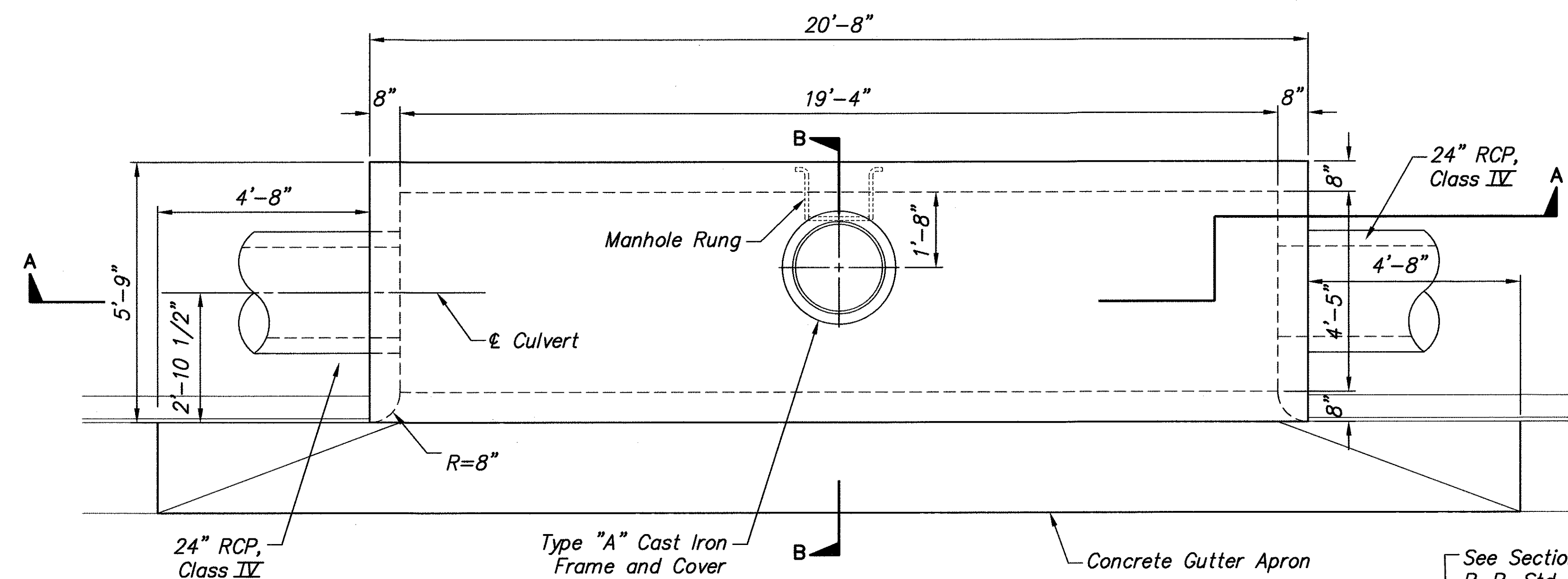


5 DETAIL - TYPICAL TRENCH FOR DRAIN PIPES
 Not to scale

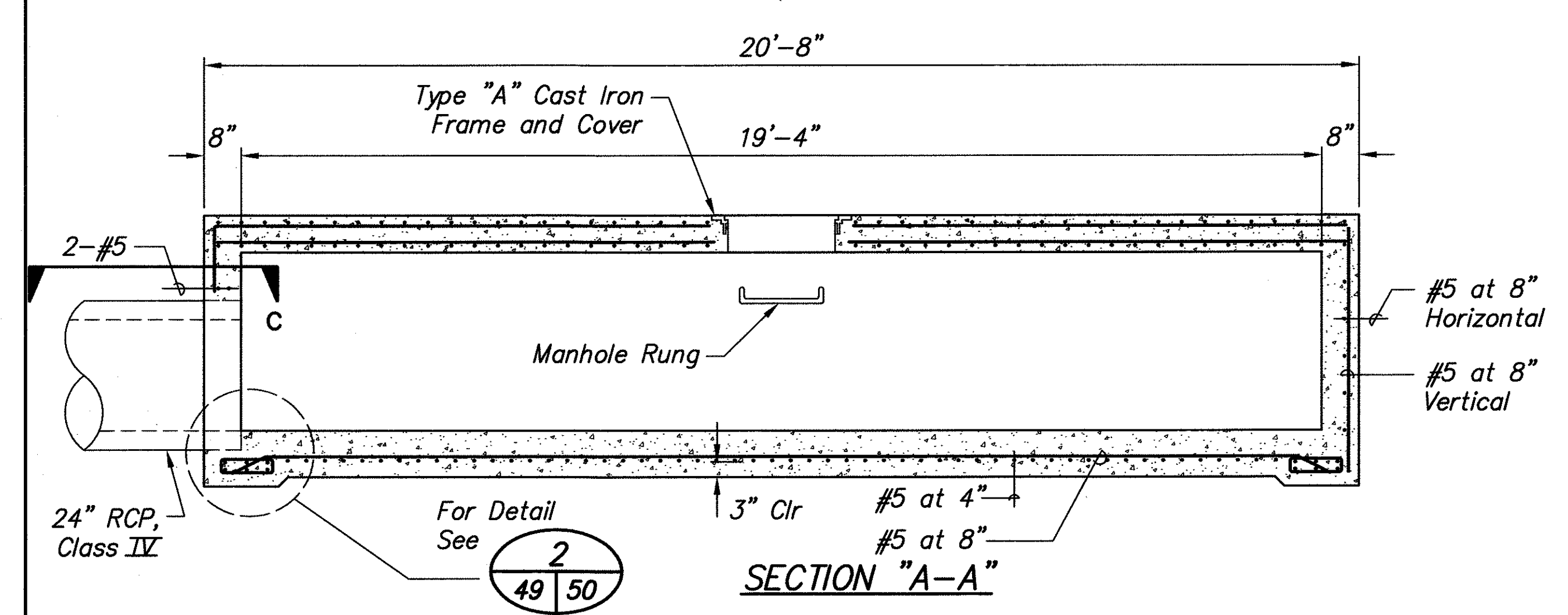


STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
MISCELLANEOUS DRAINAGE DETAILS
 PUULOA ROAD IMPROVEMENTS
 Kamehameha Hwy. to Salt Lake Blvd.
 Federal Aid Project No. STP-7310(1)
 Scale: As shown Date: May 2003
 SHEET NO. 47 OF 193 SHEETS

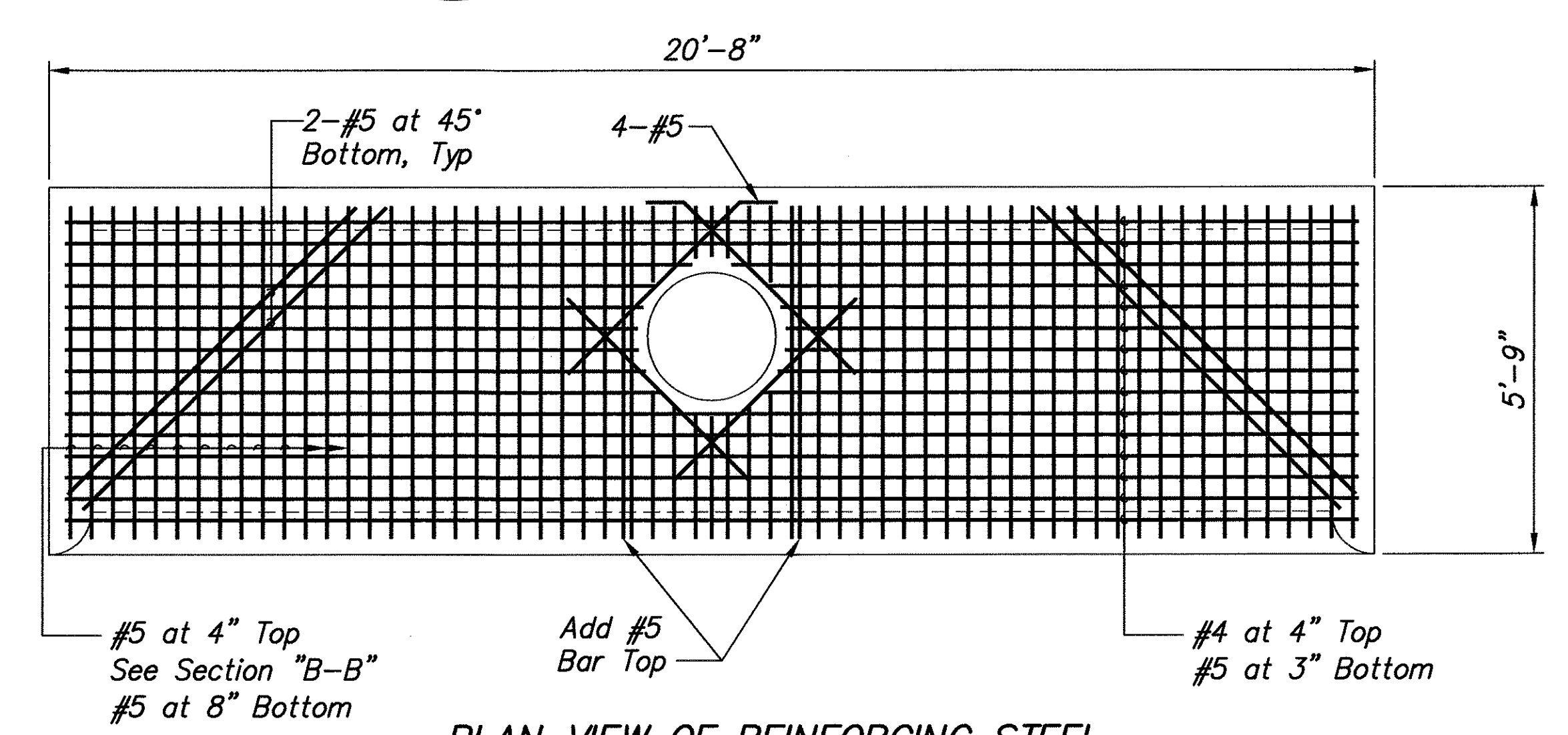
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-7310(1)	2003	49	193



PLAN

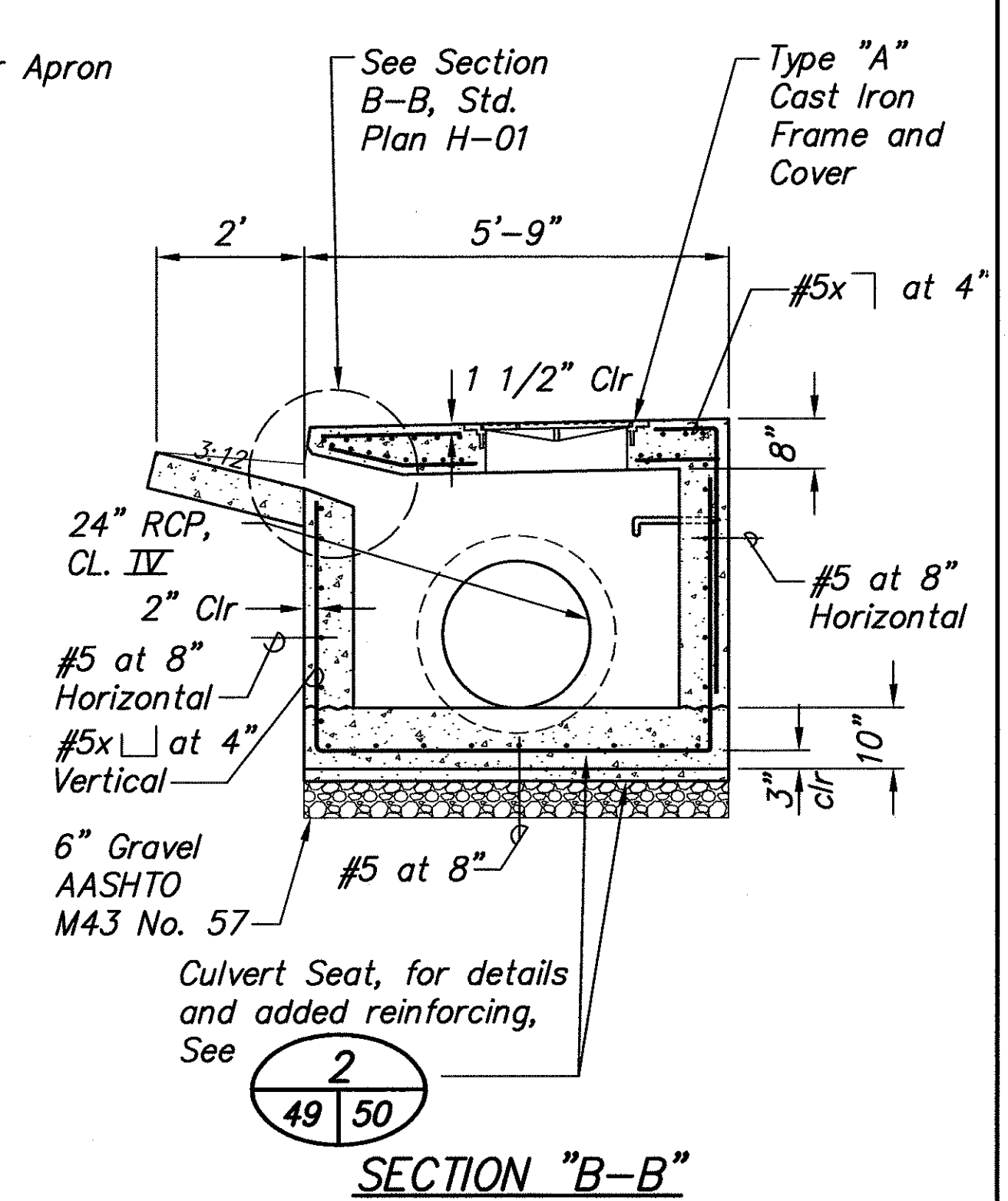


SECTION "A-A"

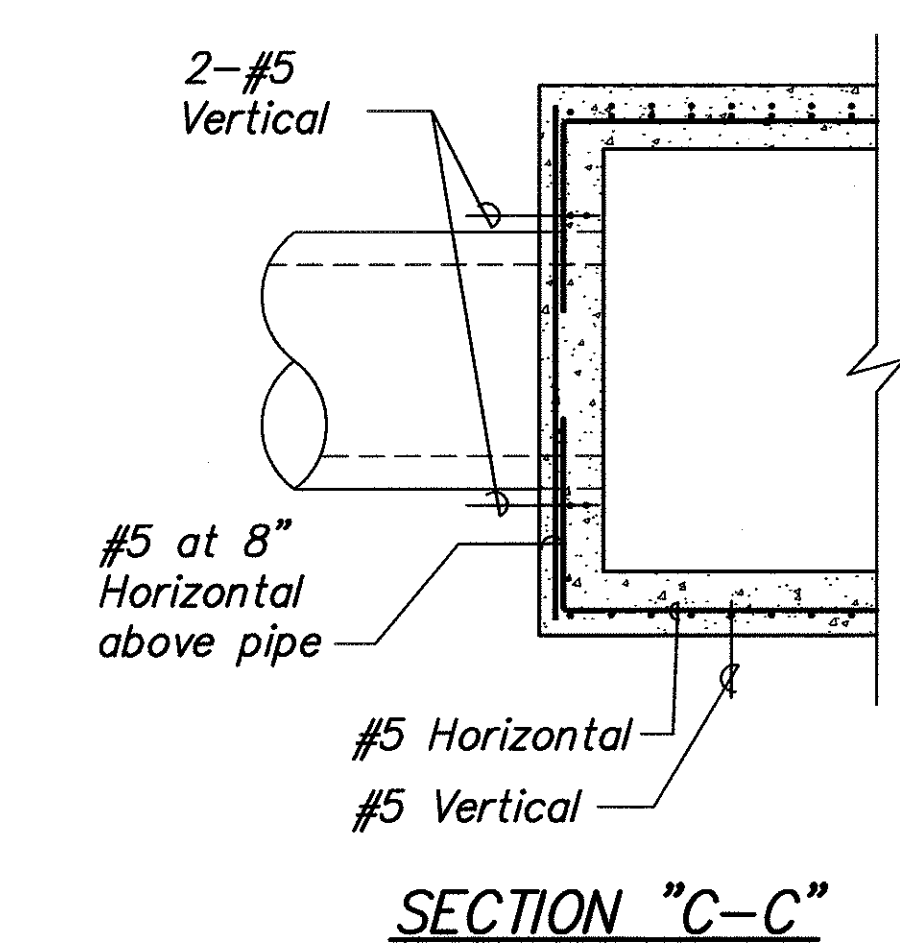


PLAN VIEW OF REINFORCING STEEL

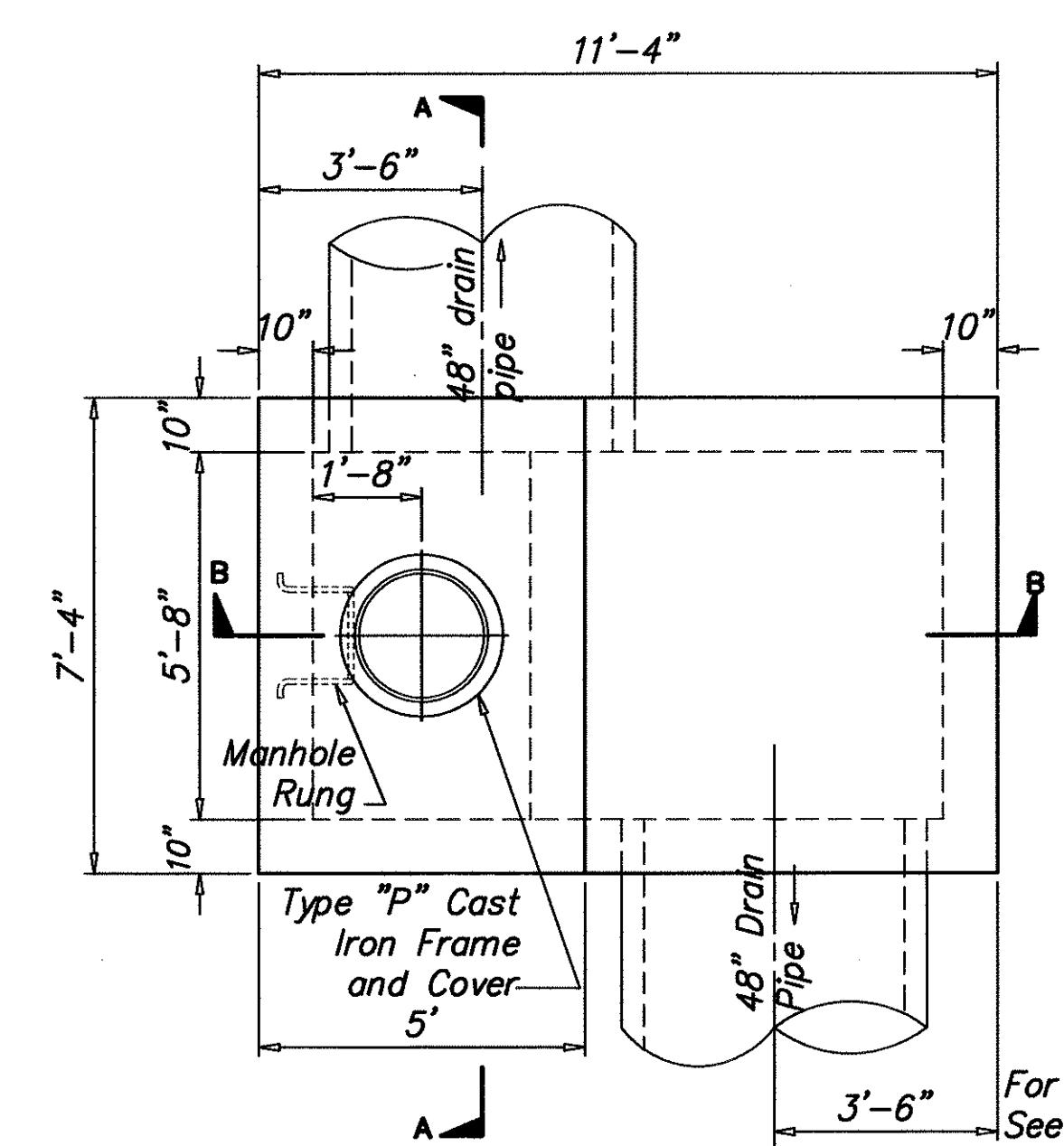
1
41 49 SPECIAL CATCH BASIN "C11"
SCALE: 1/2" = 1'-0"



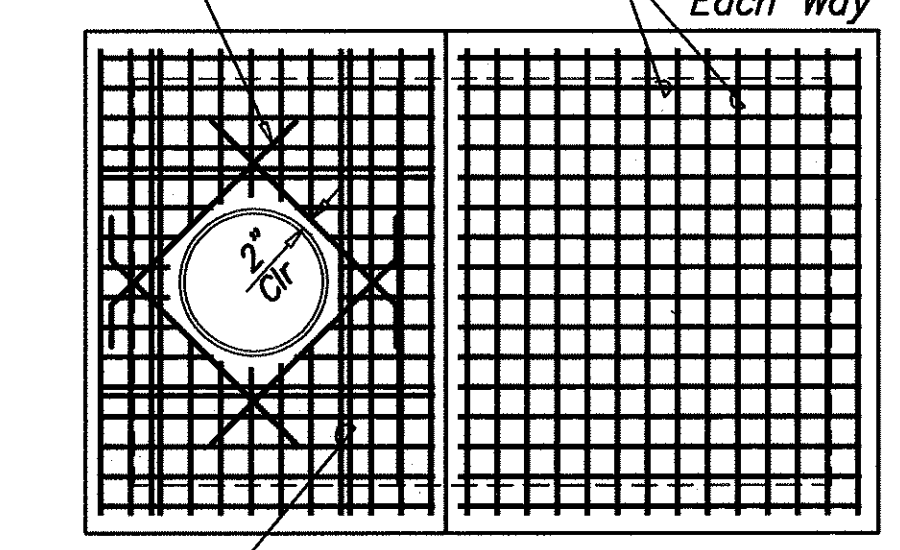
SECTION "B-B"



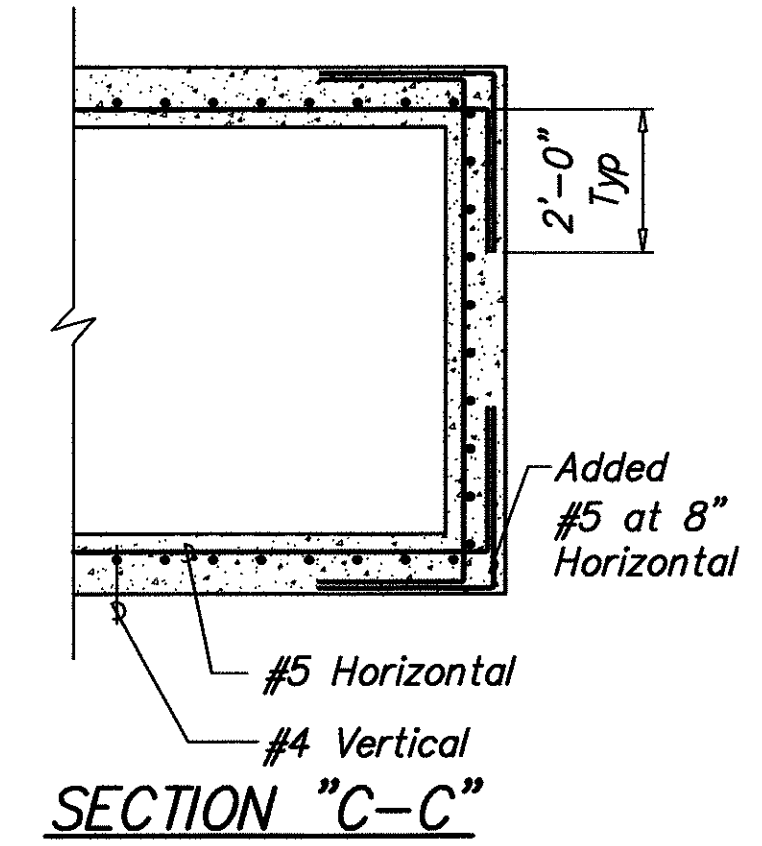
SECTION "C-C"



PLAN

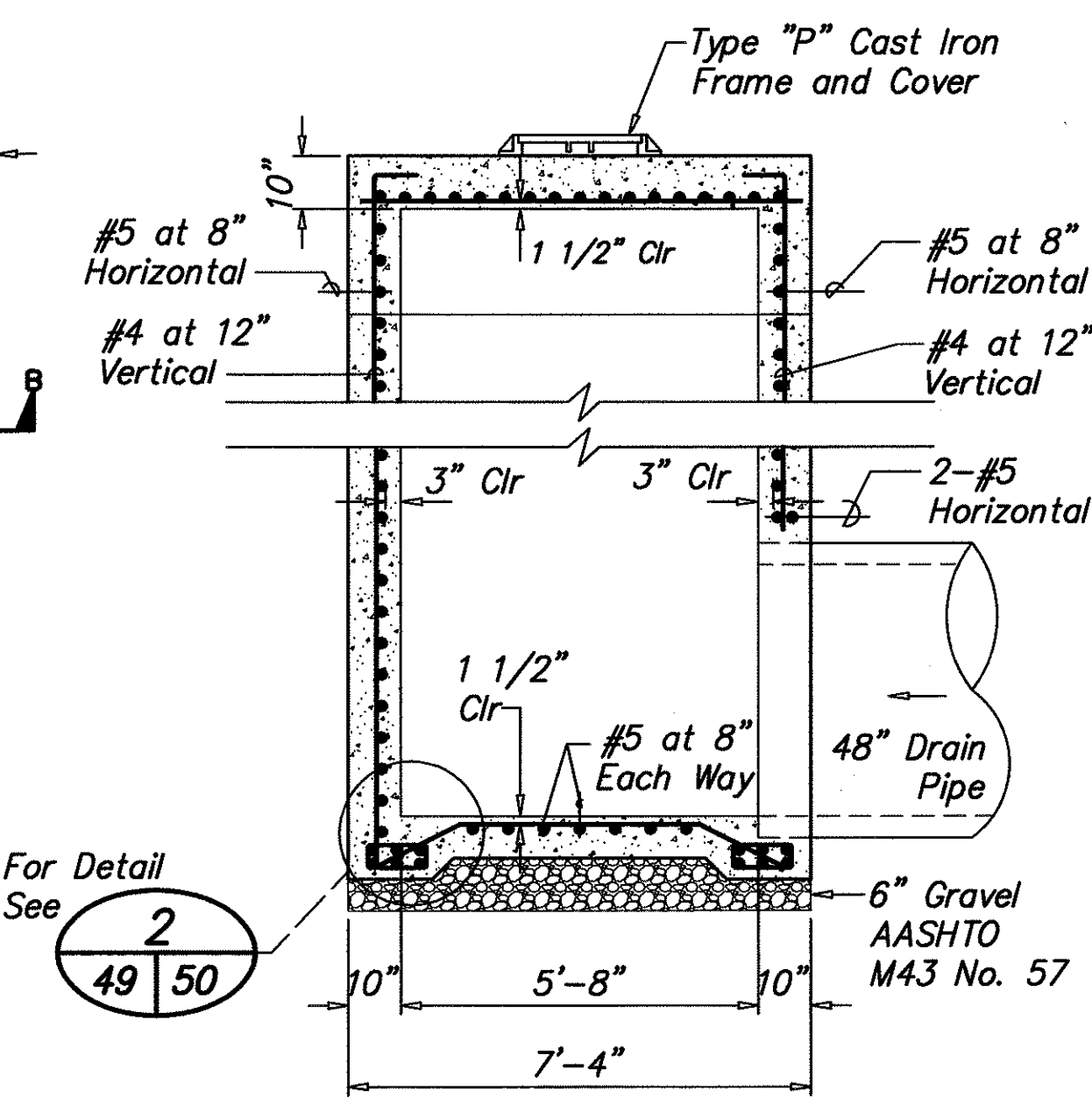


PLAN VIEW OF REINFORCING STEEL

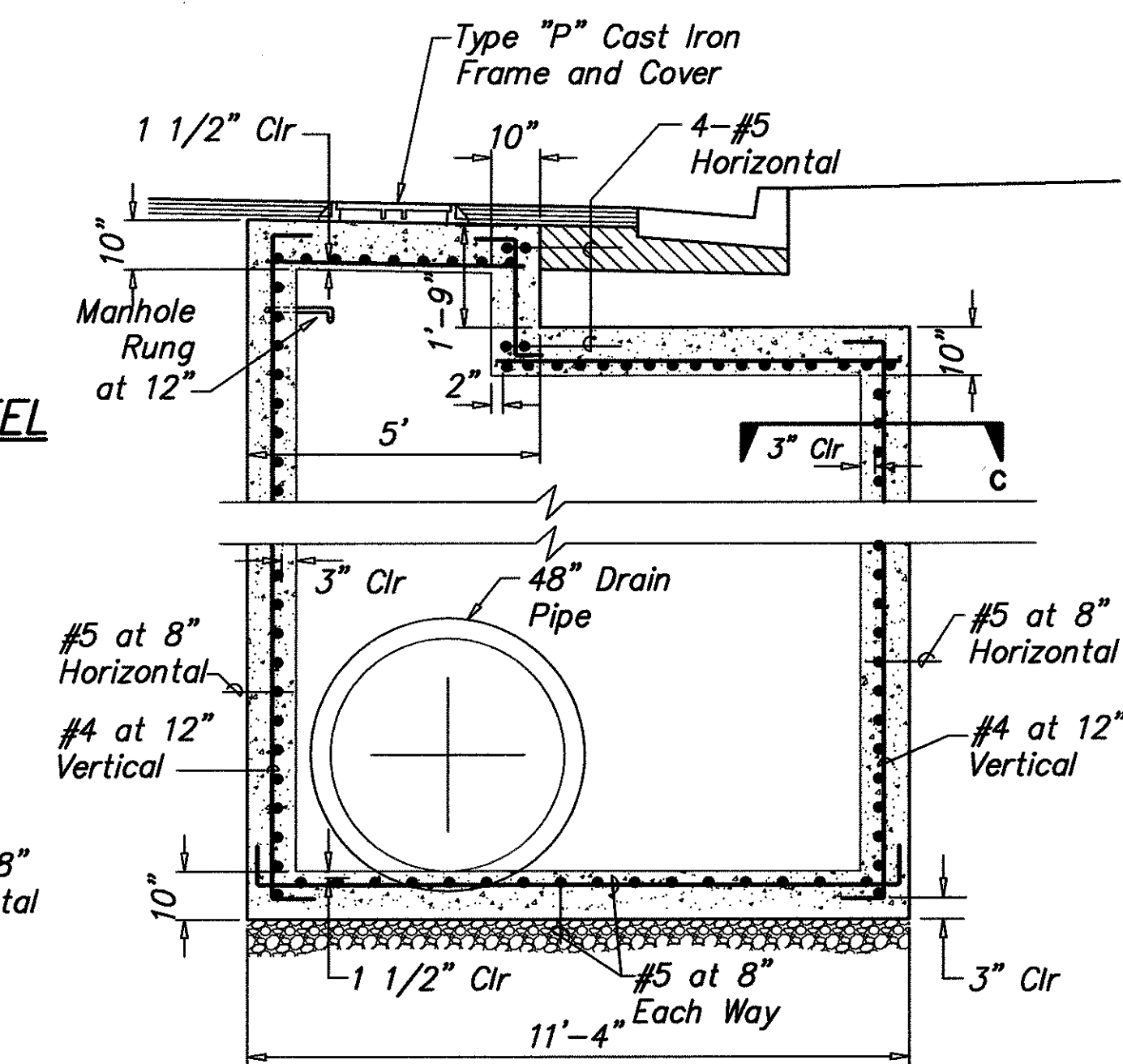


SECTION "C-C"

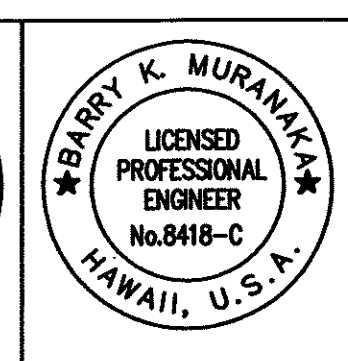
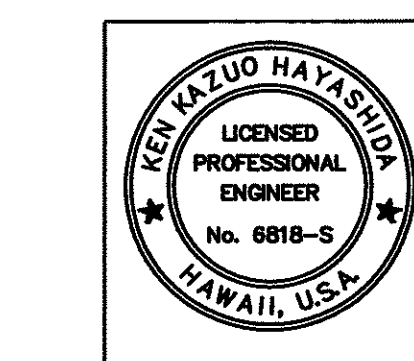
2
43 49 SPECIAL DRAIN MANHOLE "D2"
SCALE: 3/8" = 1'-0"



SECTION "A-A"

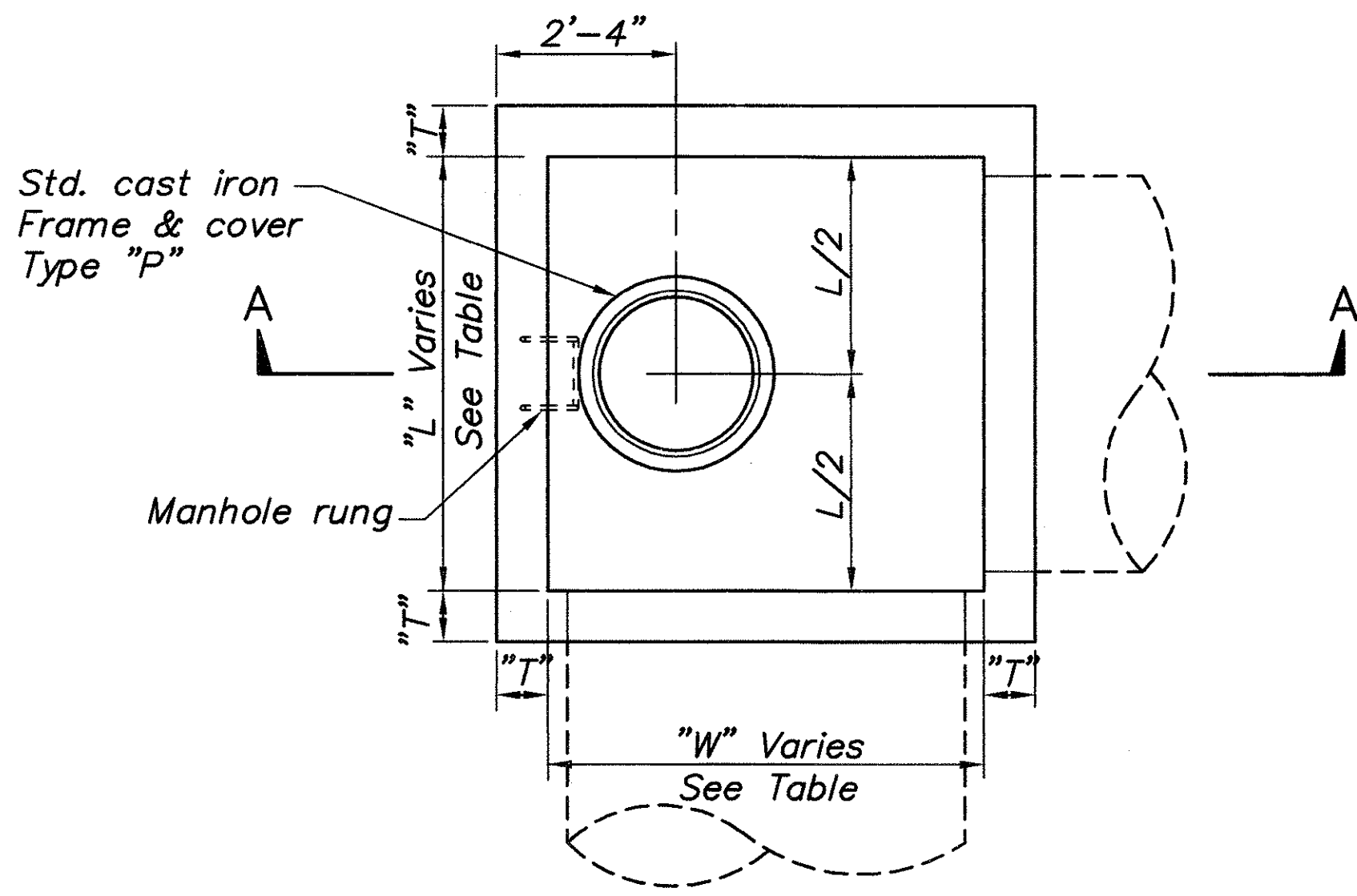


SECTION "B-B"



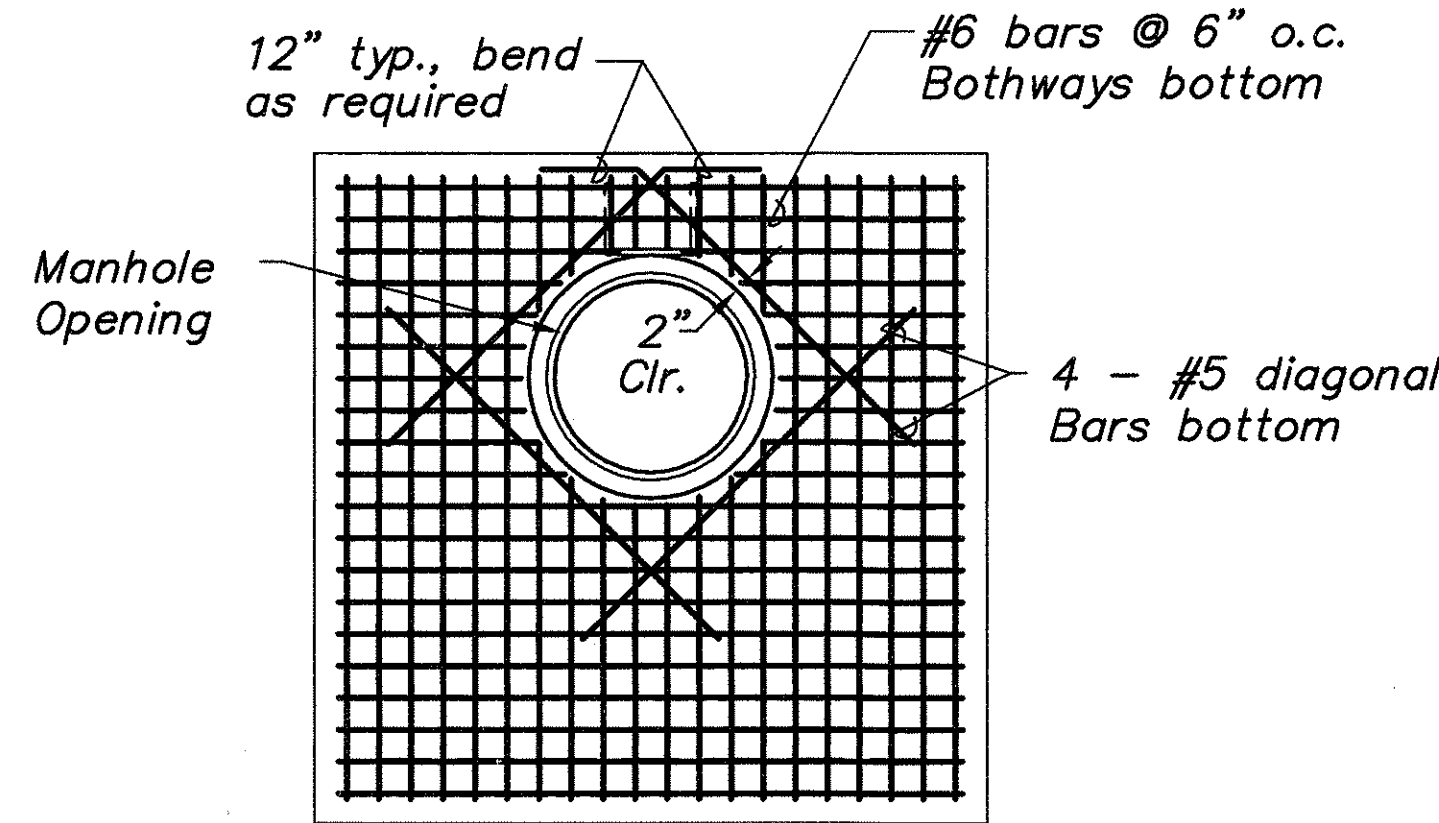
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**SPECIAL CATCH BASIN "C11" AND
DRAIN MANHOLE "D2" DETAILS**
PUULOA ROAD IMPROVEMENTS
Kamehameha Hwy. to Salt Lake Blvd.
Federal Aid Project No. STP-7310(1)
Scale: As shown Date: May 2003
SHEET NO. 49 OF 193 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-7310(1)	2003	50	193



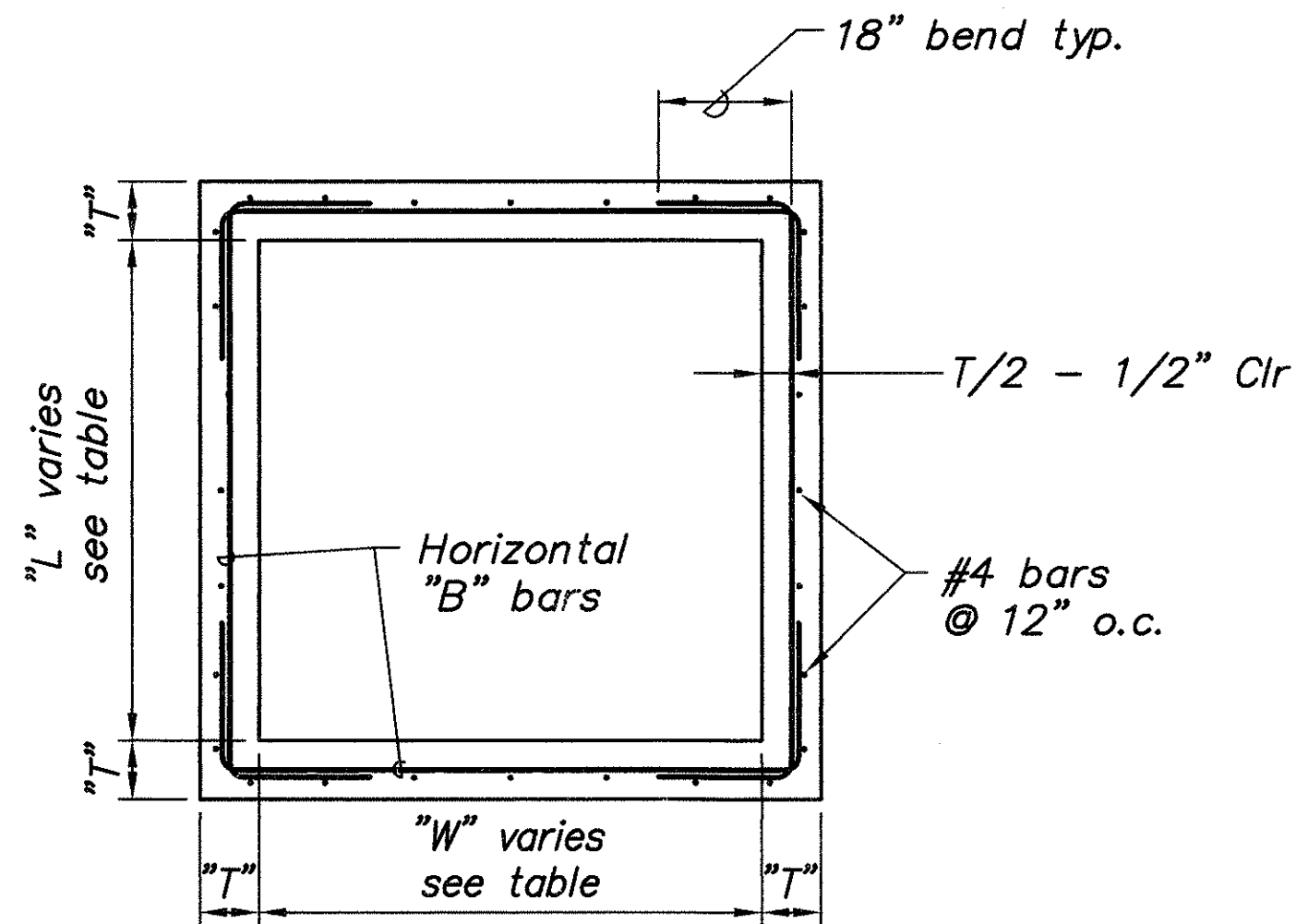
PLAN

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



PLAN - TOP SLAB REINFORCING (MANHOLE COND.)

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



SECTION "B-B"

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

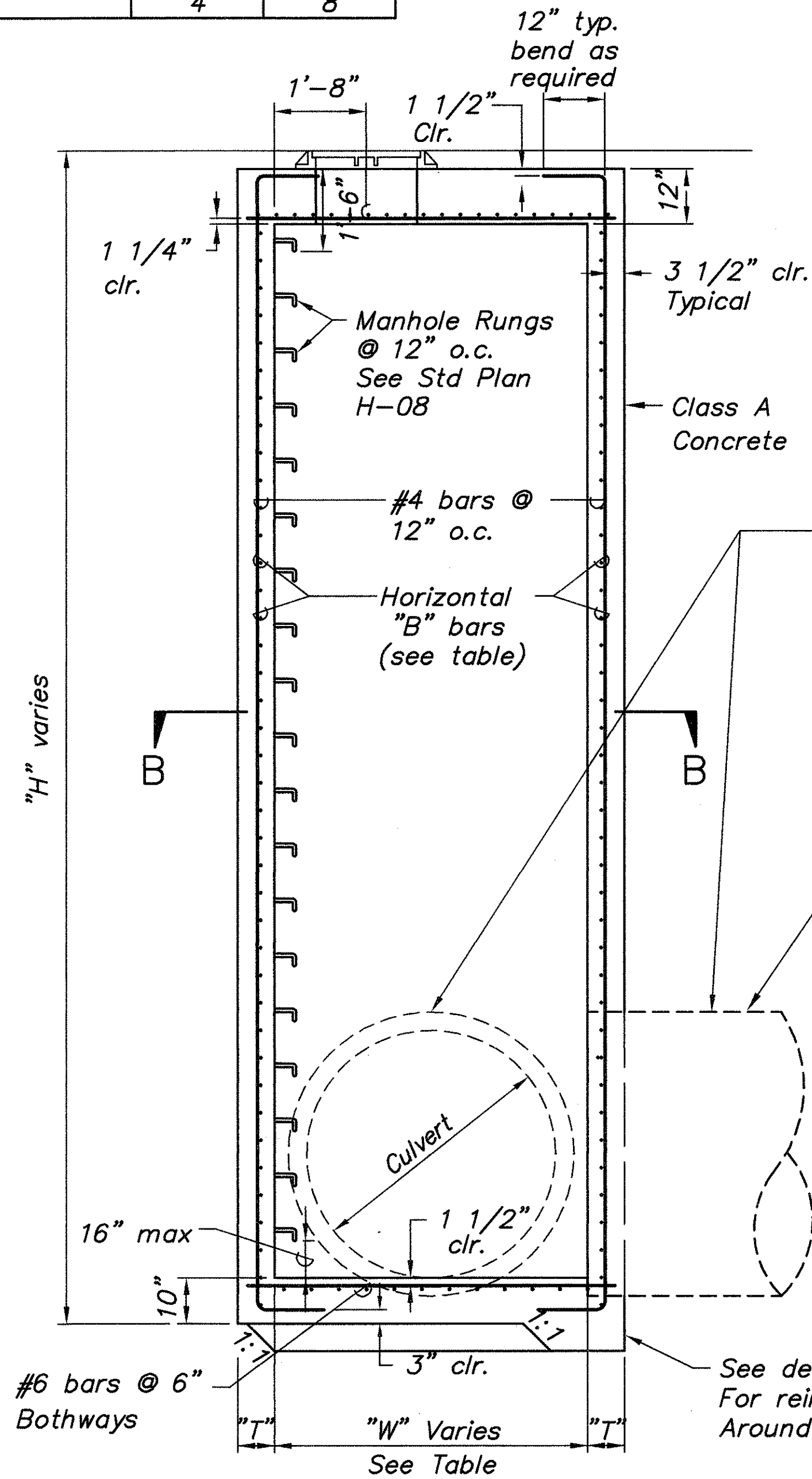
SPECIAL DRAIN MANHOLE DETAILS

Scale: as shown

"H" max. (ft.)	"L" or "W"			
	6'-0"		8'-0"	
	"T"	"B" bars	"T"	"B" bars
0'-0" to 5'-0"	8"	#4 @ 10"	10"	#5 @ 10"
5'-1" to 10'-0"	8"	#5 @ 9"	10"	#5 @ 8"
10'-1" to 15'-0"	8"	#5 @ 6"	10"	#5 @ 6"
15'-1" to 20'-0"	8"	#5 @ 4"	10"	#5 @ 4"

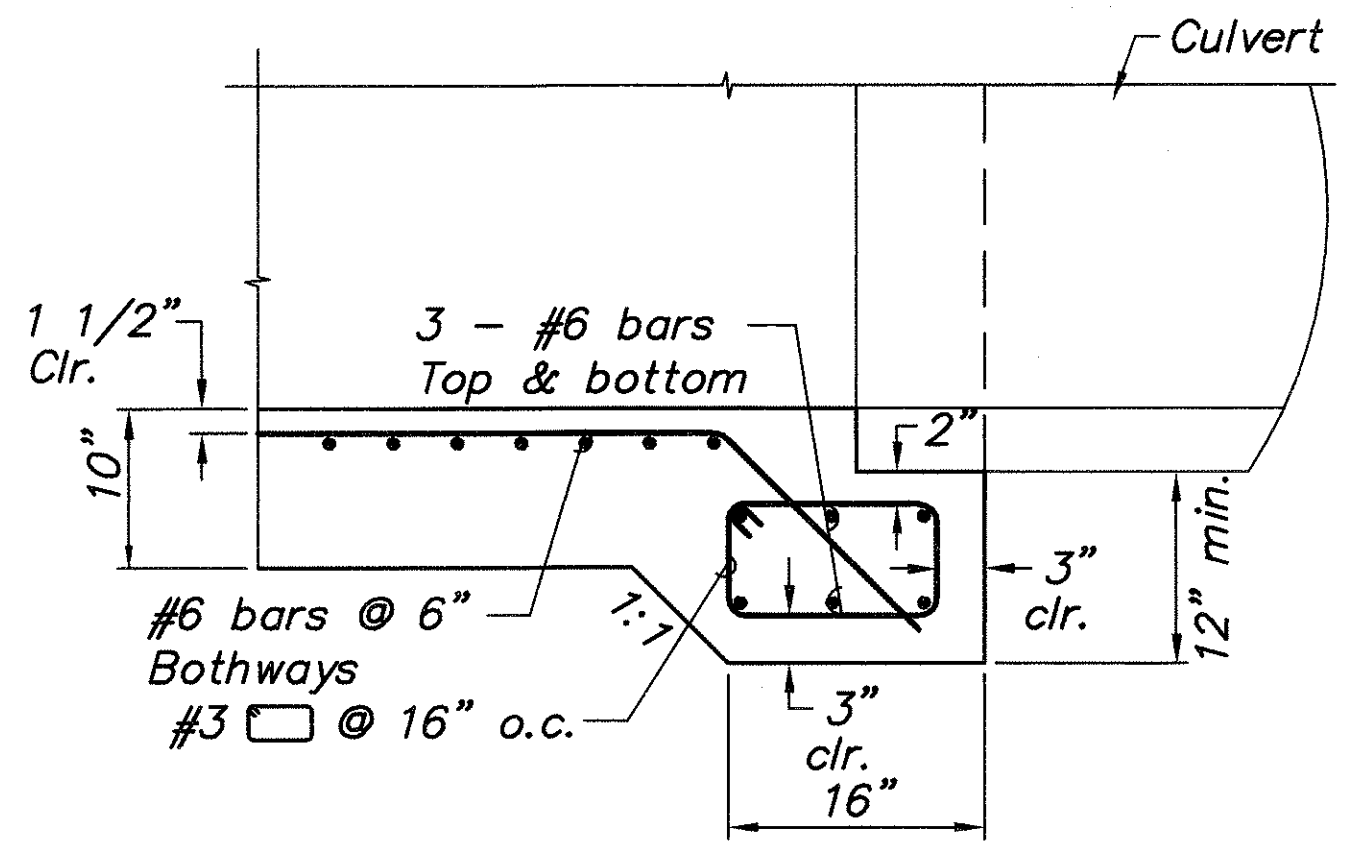
Drain Manhole	"L"	"W"
B1-1	5'	5'
B1	5'	5'
C6-A	4'	6'
C14T	4'	8'
C13	4'	8'
C1	4'	6'
D3	4'	8'

Note:
Dimension "L" refers to the wall on which rungs are to be installed.



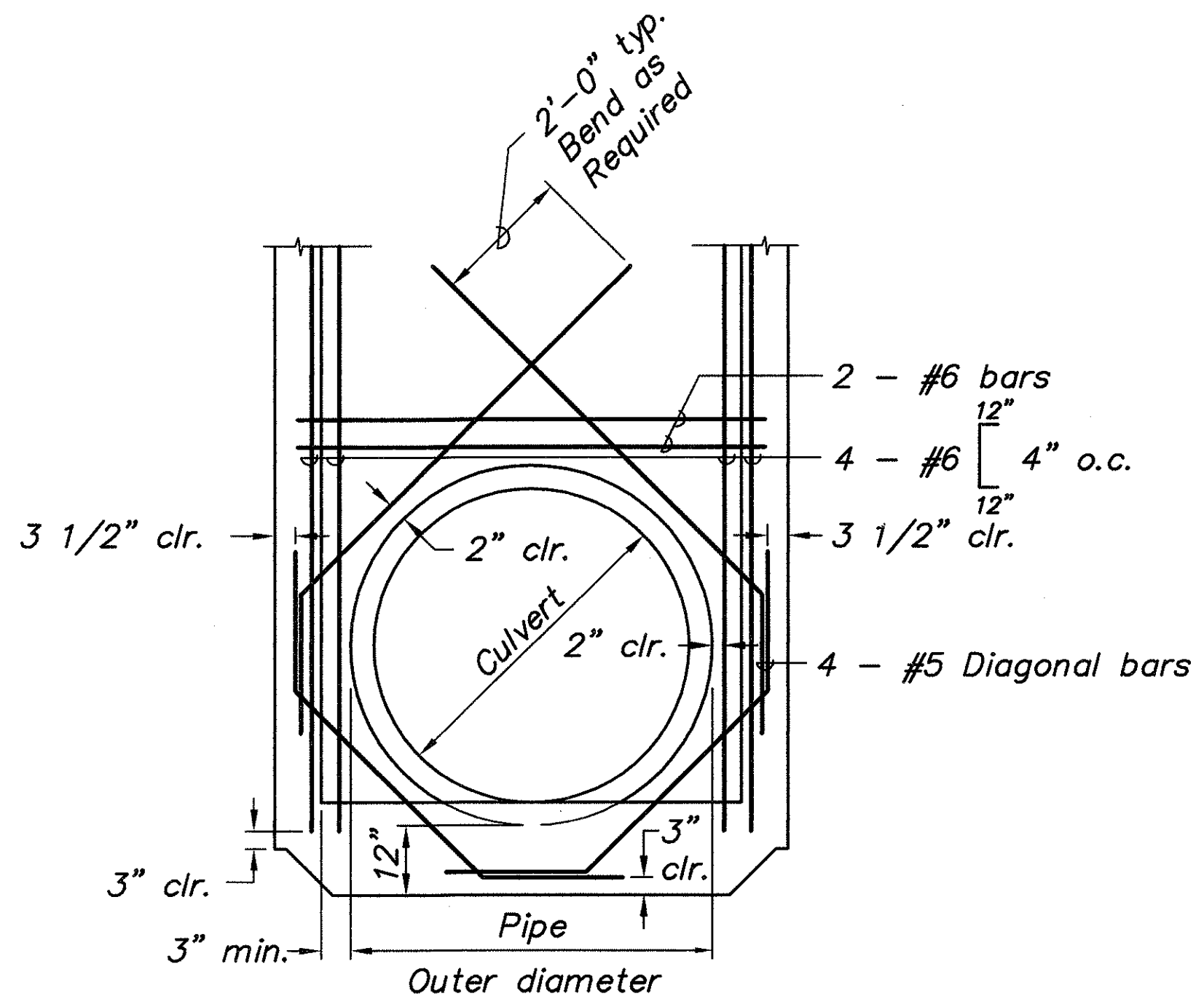
SECTION "A-A"

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



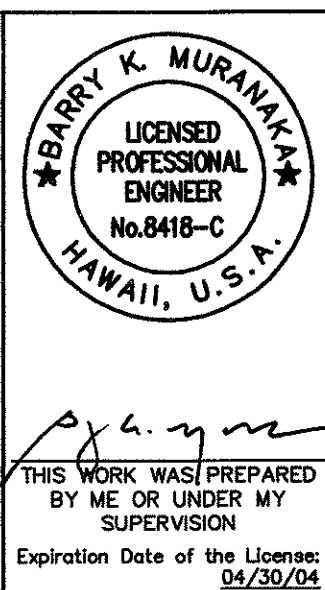
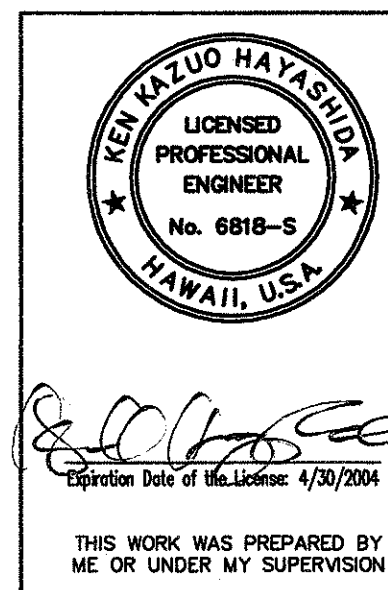
2 CULVERT SEAT DETAIL

Scale: 1" = 1'-0"



3 DETAIL

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

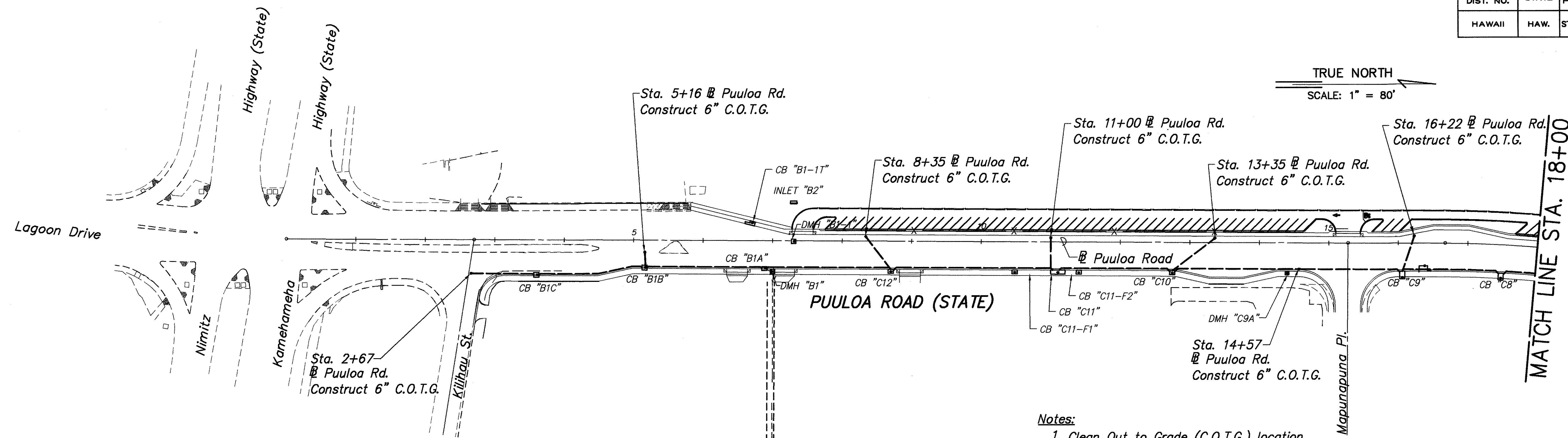


STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
SPECIAL DRAIN MANHOLE
TYPICAL DETAILS
PUULOLO ROAD IMPROVEMENTS
Kamehameha Hwy. to Salt Lake Blvd.
Federal Aid Project No. STP-7310(1)

Scale: As shown Date: May 2003

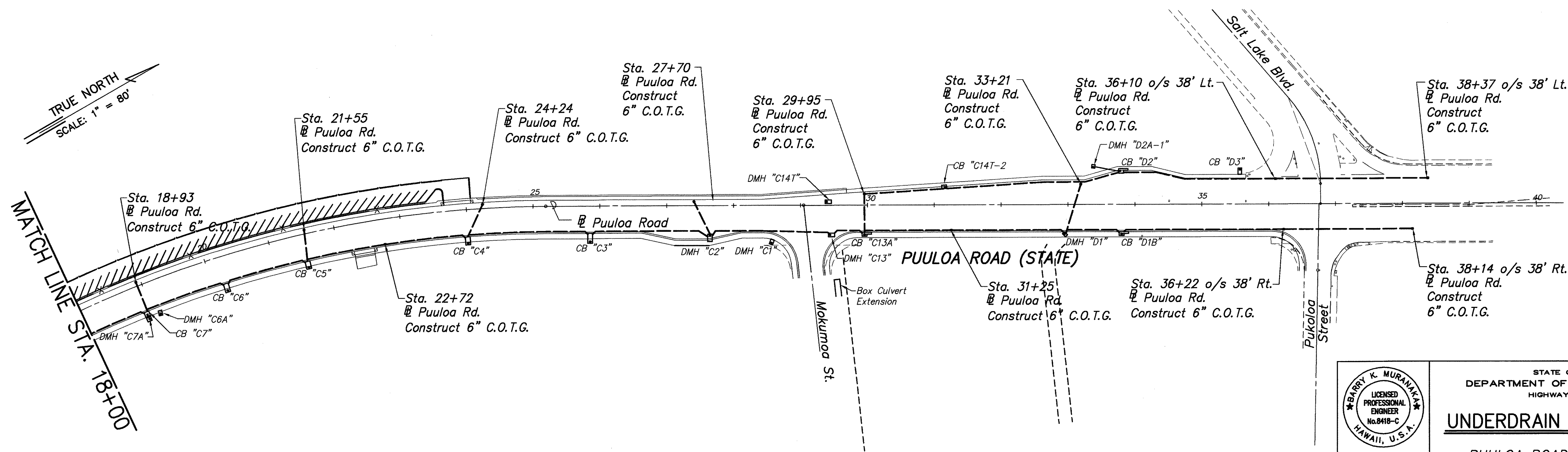
SHEET NO. 50 OF 193 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-7310(1)	2003	52	193

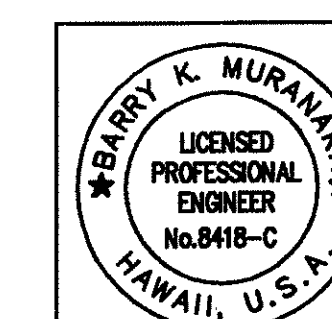
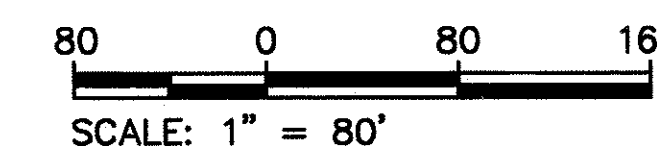


UNDERDRAIN LAYOUT PLAN
SCALE: 1" = 80'

- Notes:**
1. Clean Out to Grade (C.O.T.G.) location shall be offset 3' from curb face unless otherwise noted.
 2. See sheets 18 & 53 for underdrain schedule and details.



UNDERDRAIN LAYOUT PLAN
SCALE: 1" = 80'



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UNDERDRAIN LAYOUT PLAN

PUULOA ROAD IMPROVEMENTS
Kamehameha Hwy. to Salt Lake Blvd.
Federal Aid Project No. STP-7310(1)

Scale: As shown Date: May 2003

SHEET NO. 52 OF 193 SHEETS

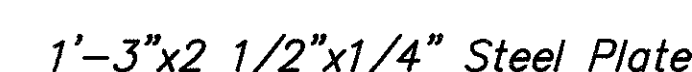
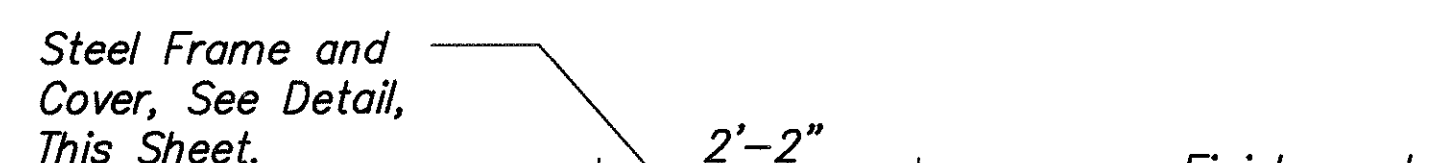
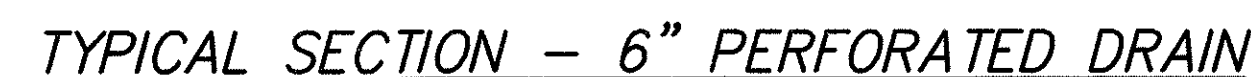
P.M.: STY
CURRENT: OPR: rki
PREV. OPR:
CURRENT TIME: May 09, 2003 - 3:22pm
LAST SAVED BY: rgo
LAST MODIFIED: Sat, 21 Dec 2002 - 10:02am

PREFIX: G:\DOT\H9601A\ACAD\
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SCALE: 1"=1

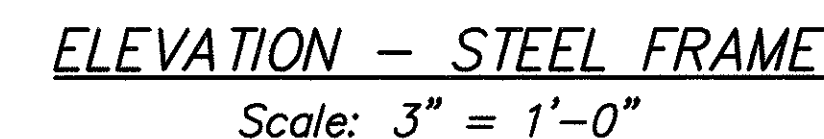
SURVEY PLOTTED BY	DATE
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTEBOOK	
No.	

P.M.: STY
PREFIX: G:\DOT\H6601A\ACAD\
FILE: UNDER2a.dwg
CURRENT OP: rki
PREV. OP:
BEGIN: 12/01/99
SCALE: 1=1
CURRENT TIME: May 09, 2003 - 3:22pm
LAST SAVED BY:
LAST MODIFIED: Sat, 21 Dec 2002 - 10:02am

ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
	DRAWN BY _____	" _____
	TRACED BY _____	" _____
NOTEBOOK	DESIGNED BY _____	" _____
	QUANTITIES BY _____	" _____
	CHECKED BY _____	" _____
No. _____		



PLAN - STEEL FRAME
Scale: 3" = 1'-0"



Note: See underdrain schedule for more information.

