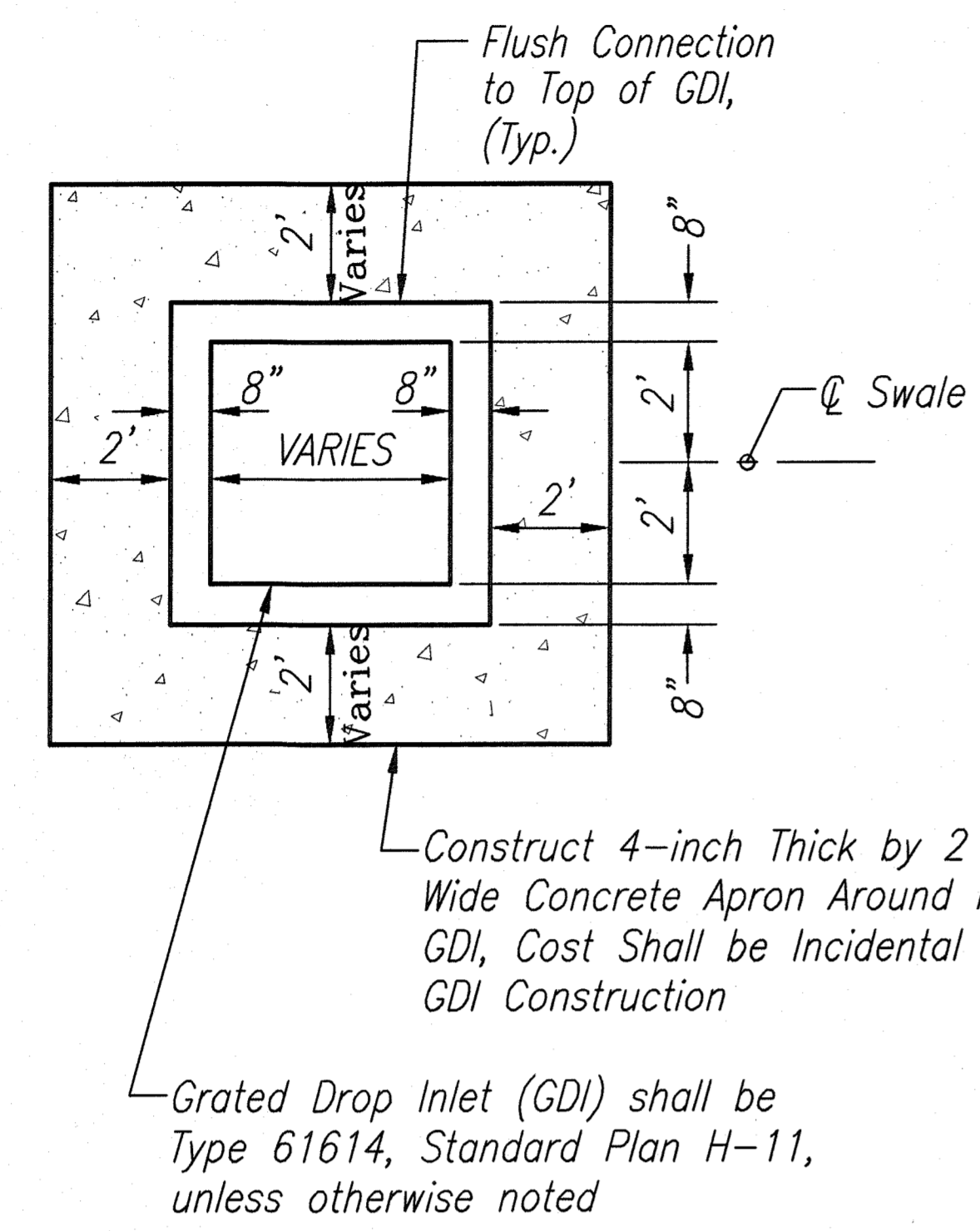
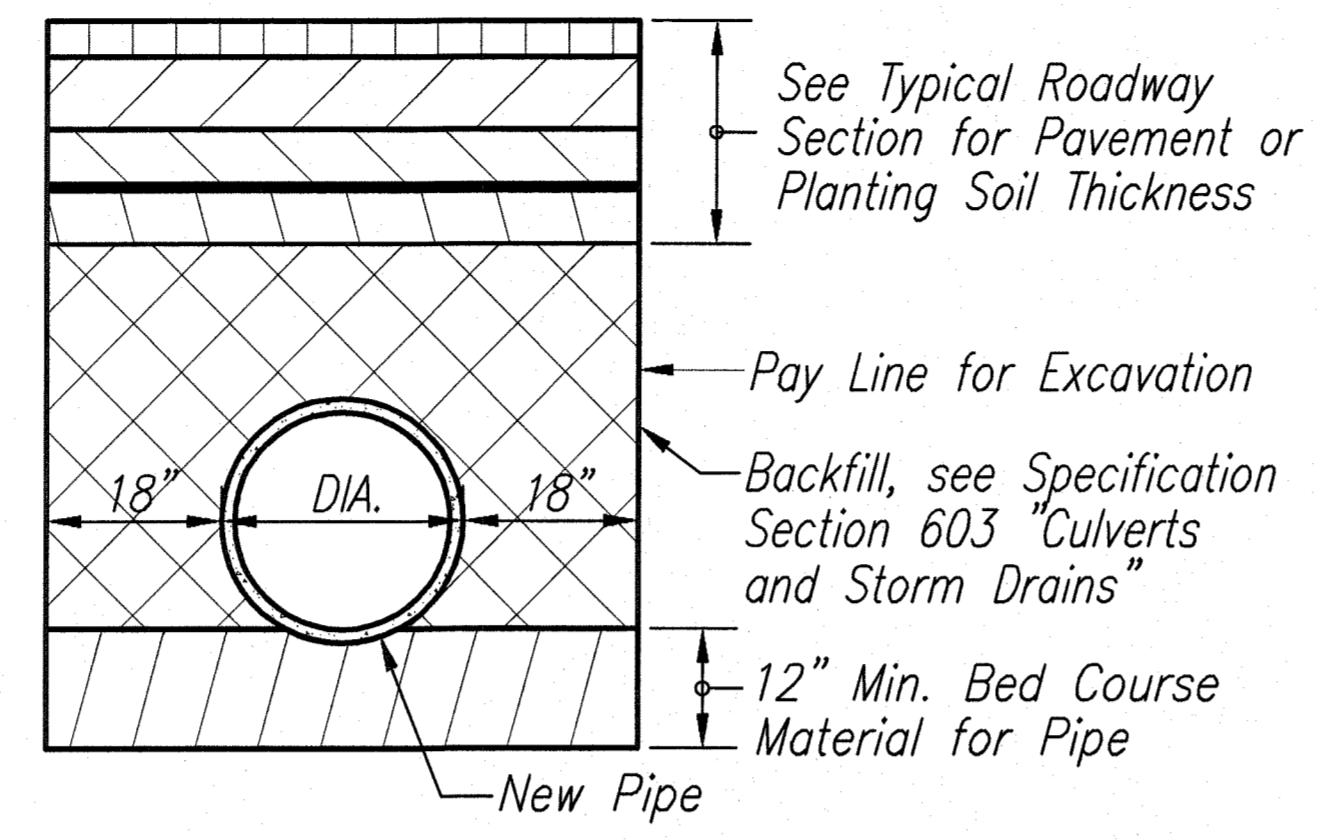


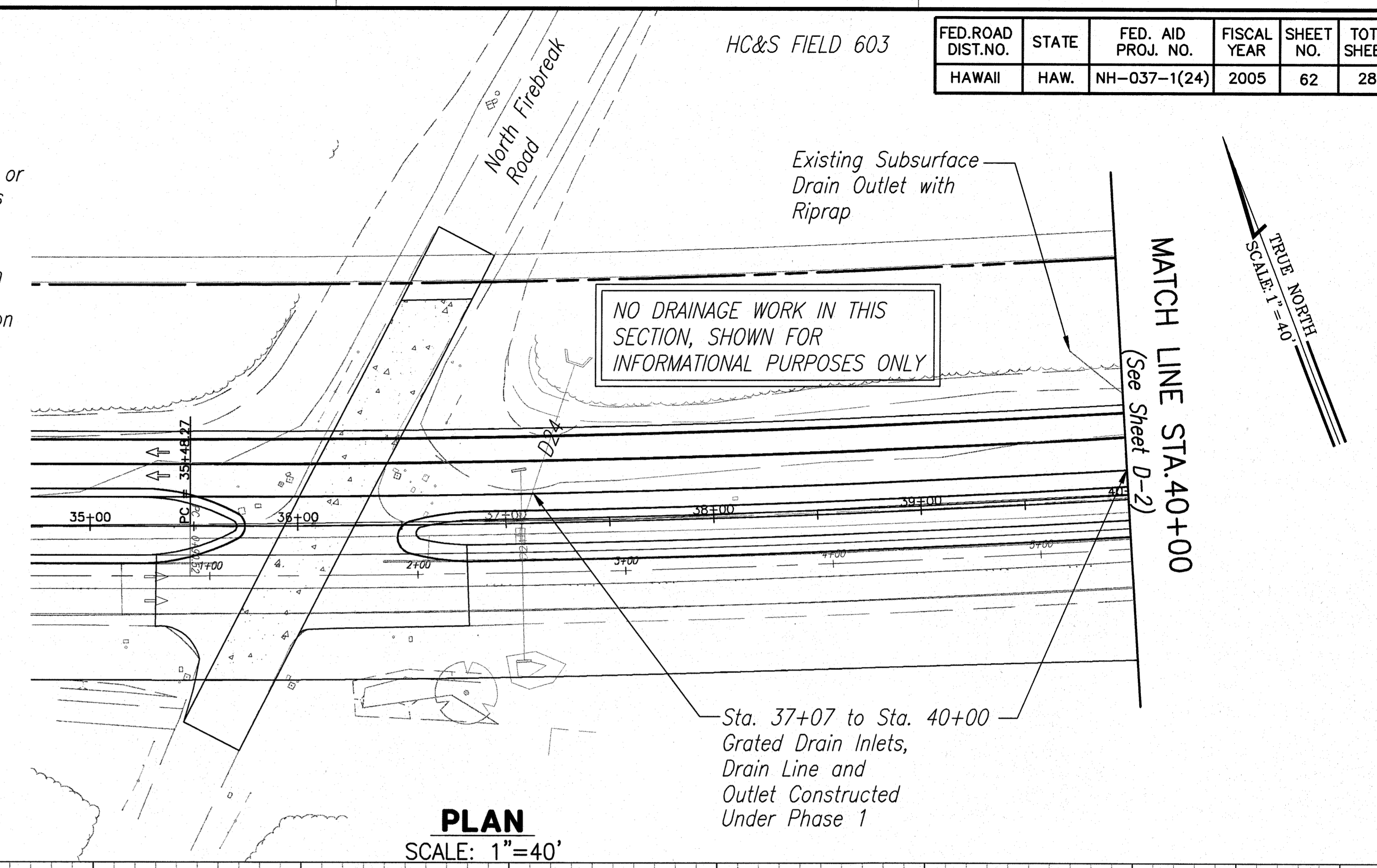
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-037-1(24)	2005	62	288



PLAN CONCRETE APRON AROUND GDI
SCALE: 3/8" 1'-0"



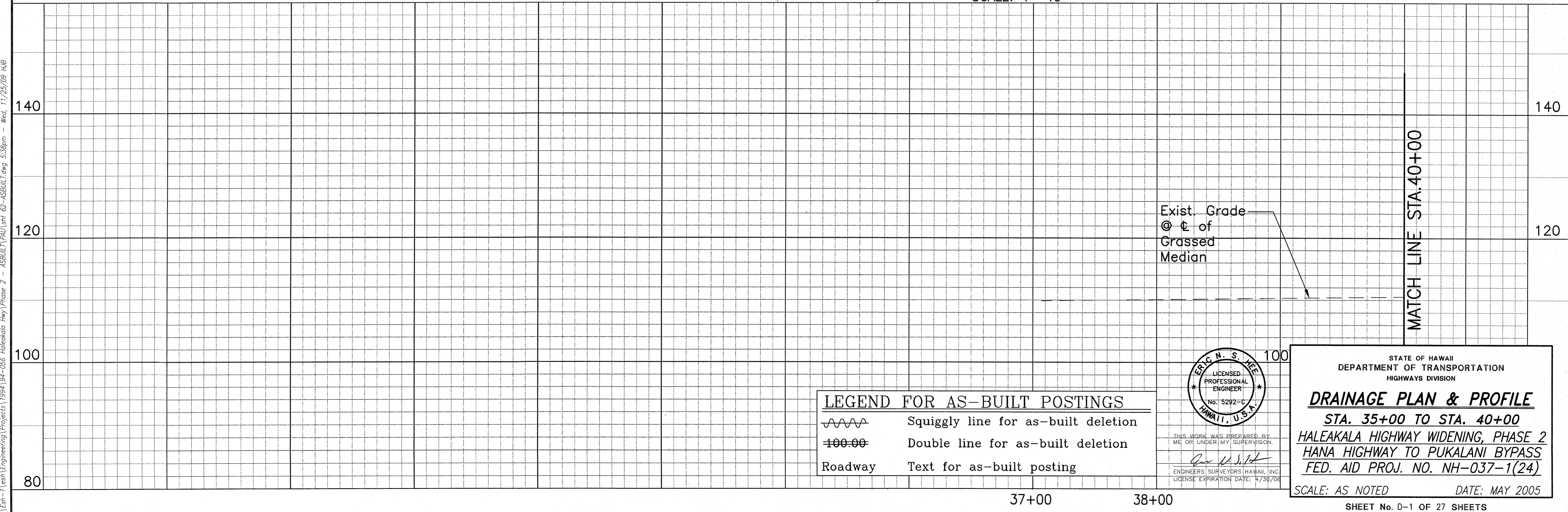
TRENCH FOR DRAIN PIPES
NOT TO SCALE



PLAN
SCALE: 1"=40'

11/25/09 HLB
 62-ASBUILT.dwg 5:38pm - Wed, 11/25/09 HLB
 ASBUILT (Plan) 1st
 194-056 Haleakala Hwy Phase 2 - ASBUILT (Plan) 1st
 11/25/09 HLB
 62-ASBUILT.dwg 5:38pm - Wed, 11/25/09 HLB

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



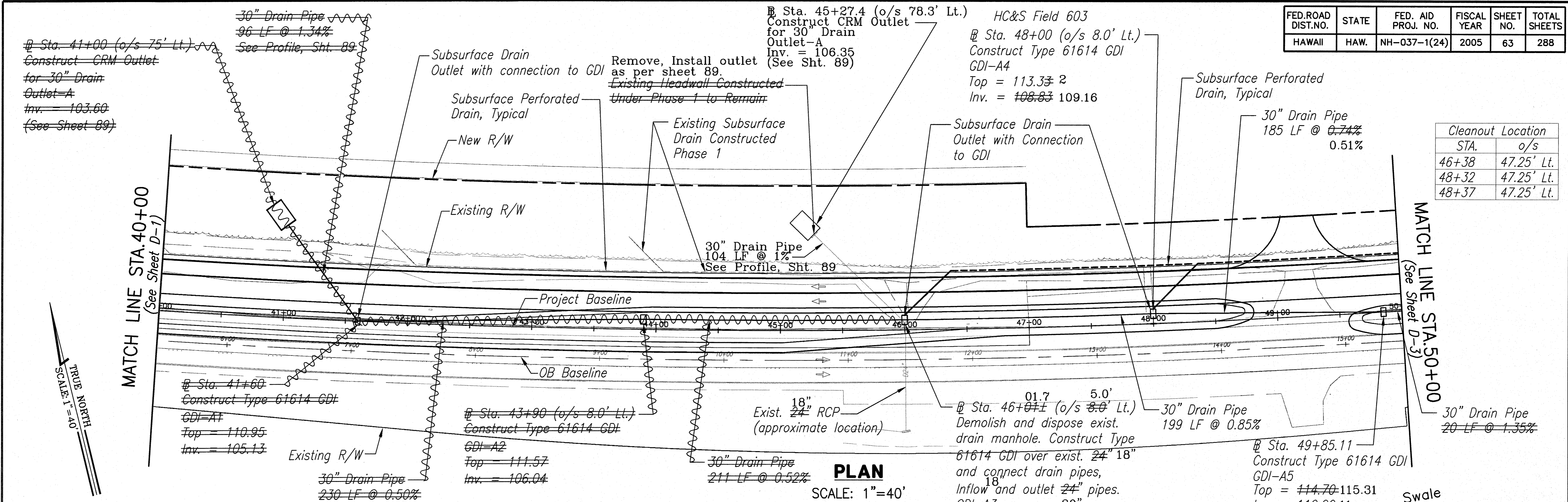
LEGEND FOR AS-BUILT POSTINGS

	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 Eric N. S. Jee
 ENGINEERS SURVEYORS HAWAII, INC.
 LICENSE EXPIRATION DATE: 4/30/04

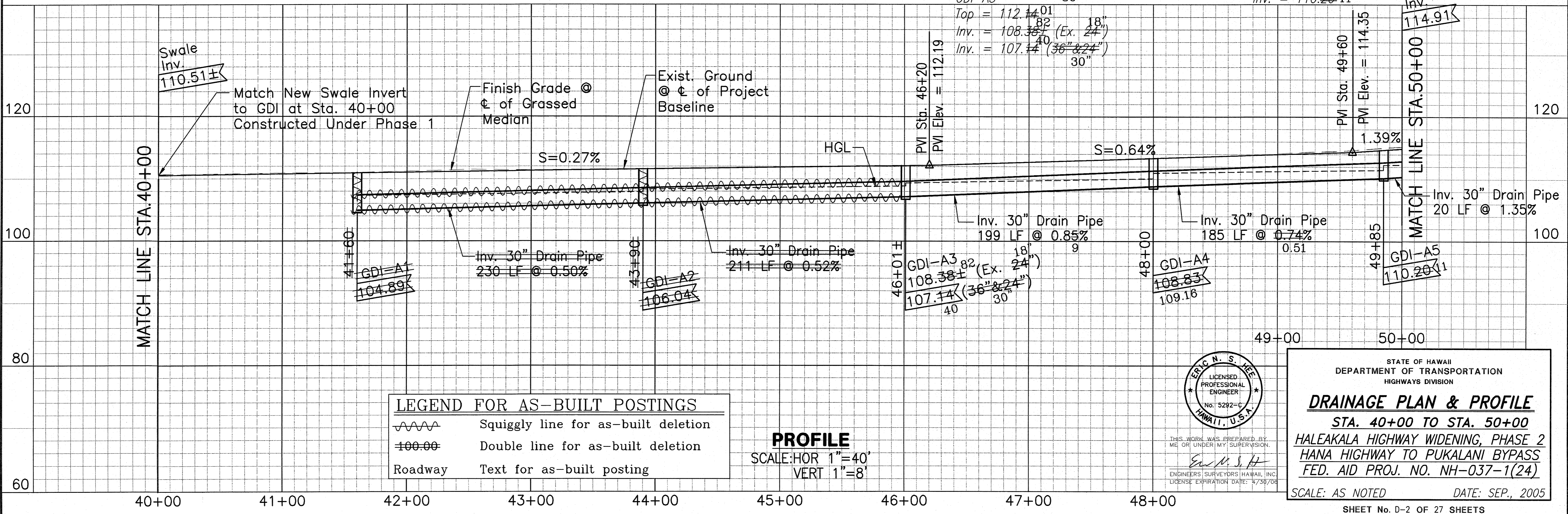
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
DRAINAGE PLAN & PROFILE
 STA. 35+00 TO STA. 40+00
 HALEAKALA HIGHWAY WIDENING, PHASE 2
 HANA HIGHWAY TO PUKALANI BYPASS
 FED. AID PROJ. NO. NH-037-1(24)
 SCALE: AS NOTED DATE: MAY 2005
 SHEET No. D-1 OF 27 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-037-1(24)	2005	63	288



Cleanout Location	
STA.	o/s
46+38	47.25' Lt.
48+32	47.25' Lt.
48+37	47.25' Lt.

PLAN
SCALE: 1"=40'



LEGEND FOR AS-BUILT POSTINGS	
	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

PROFILE
SCALE: HOR 1"=40'
VERT 1"=8'

ORIGINAL PLAN	DATE
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

\\Esn-1\esh\Engineering\Projects\1994\94-056 Haleakala Hwy\Phase 2 - ASBUILT\PA\194-056 Haleakala Hwy\Phase 2 - Med 11/25/09 HUB



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

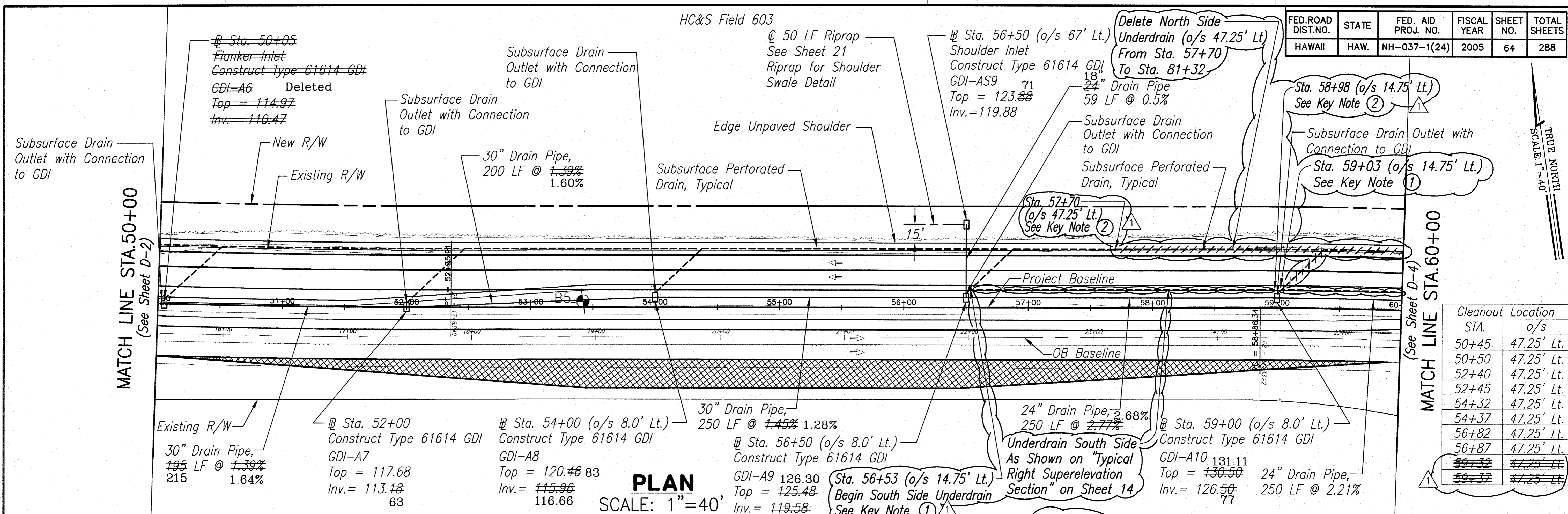
DRAINAGE PLAN & PROFILE
STA. 40+00 TO STA. 50+00
HALEAKALA HIGHWAY WIDENING, PHASE 2
HANA HIGHWAY TO PUKALANI BYPASS
FED. AID PROJ. NO. NH-037-1(24)

SCALE: AS NOTED DATE: SEP., 2005

SHEET No. D-2 OF 27 SHEETS

AS-BUILT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-037-1(24)	2005	64	288

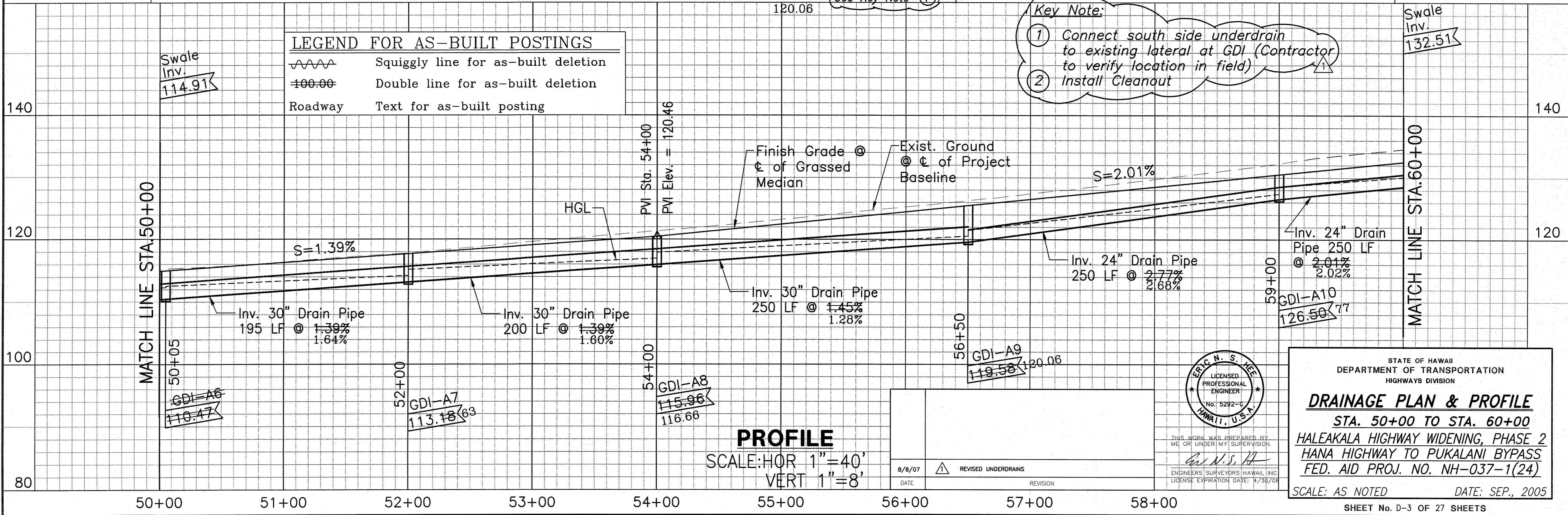


Cleanout Location STA.	o/s
50+45	47.25' Lt.
50+50	47.25' Lt.
52+40	47.25' Lt.
52+45	47.25' Lt.
54+32	47.25' Lt.
54+37	47.25' Lt.
56+82	47.25' Lt.
56+87	47.25' Lt.
59+32	47.25' Lt.
59+37	47.25' Lt.

PLAN
SCALE: 1"=40'

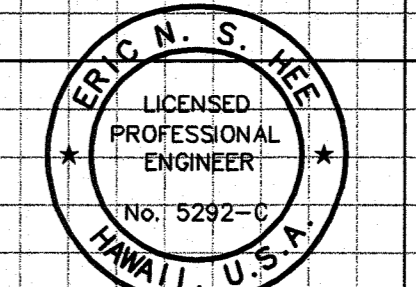
LEGEND FOR AS-BUILT POSTINGS	
~~~~~	Squiggly line for as-built deletion
====	Double line for as-built deletion
Roadway	Text for as-built posting

**Key Note:**  
 (1) Connect south side underdrain to existing lateral at GDI (Contractor to verify location in field)  
 (2) Install Cleanout



**PROFILE**  
SCALE: HOR 1"=40'  
VERT 1"=8'

DATE	REVISION
8/8/07	REVISED UNDERDRAINS



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DRAINAGE PLAN & PROFILE**  
STA. 50+00 TO STA. 60+00  
HALEAKALA HIGHWAY WIDENING, PHASE 2  
HANA HIGHWAY TO PUKALANI BYPASS  
FED. AID PROJ. NO. NH-037-1(24)

SCALE: AS NOTED DATE: SEP., 2005  
SHEET No. D-3 OF 27 SHEETS

8-8-2007 revised underdrains

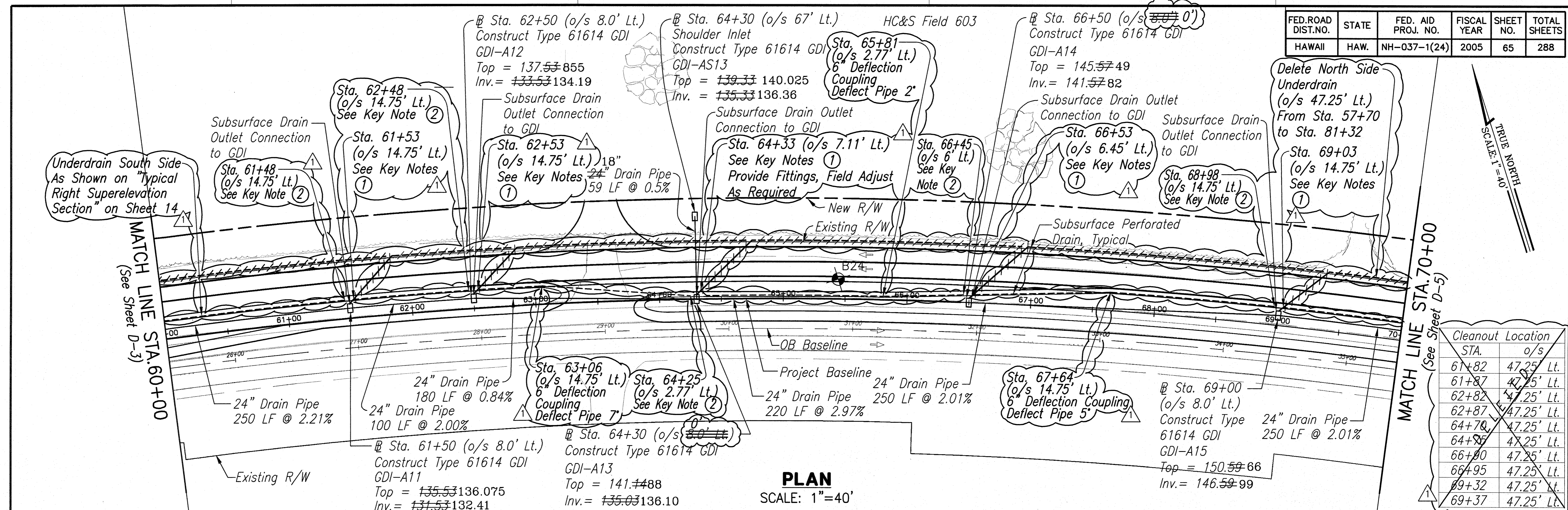
ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

\\esh-1\esh\Engineering\Projects\1994\04-056 Haleakala Hwy\Phase 2 - ASBUILT\Plan\SHR 64-ASBUILT.dwg 5:40pm - Wed, 11/25/09 HLB

AS-BUILT

C.O. 64

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-037-1(24)	2005	65	288



STA.	o/s	LT.
61+82	47.25'	Lt.
61+87	47.25'	Lt.
62+82	47.25'	Lt.
62+87	47.25'	Lt.
64+70	47.25'	Lt.
64+75	47.25'	Lt.
66+80	47.25'	Lt.
66+95	47.25'	Lt.
69+32	47.25'	Lt.
69+37	47.25'	Lt.

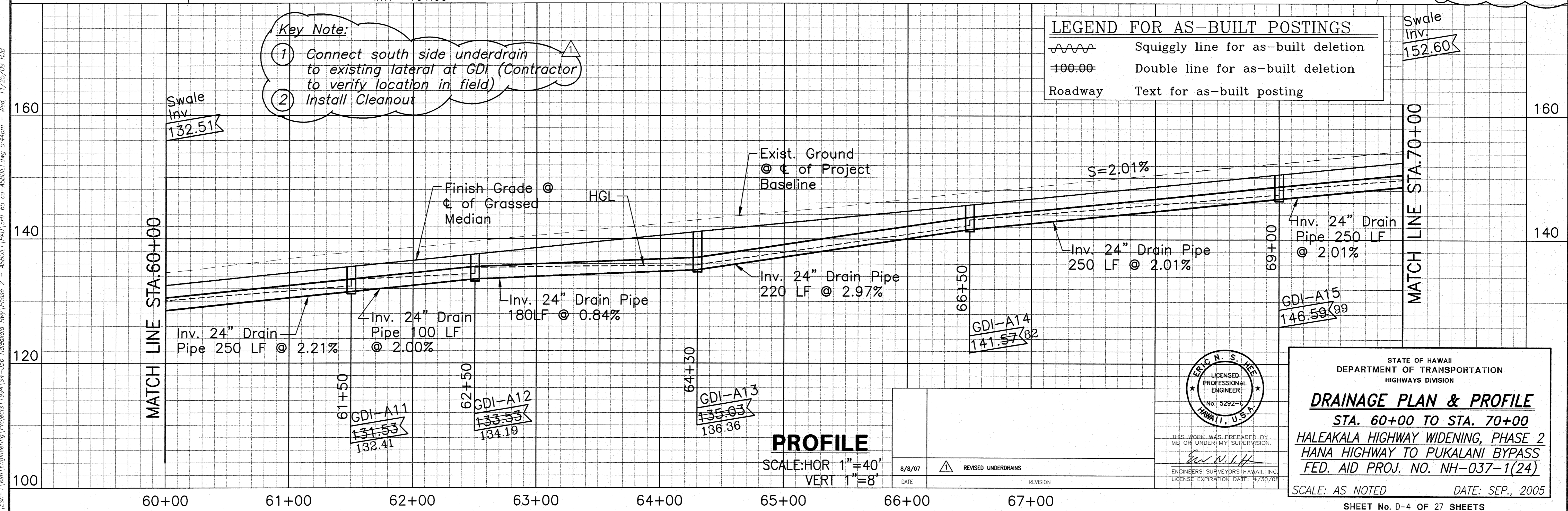
**Key Note:**

(1) Connect south side underdrain to existing lateral at GDI (Contractor to verify location in field)

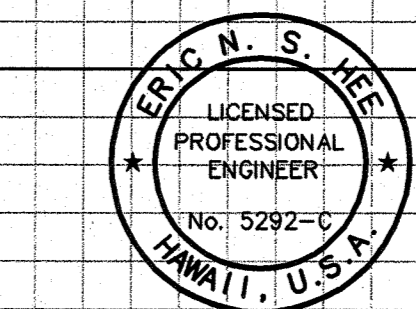
(2) Install Cleanout

**LEGEND FOR AS-BUILT POSTINGS**

	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting



**PROFILE**  
SCALE: HOR 1"=40'  
VERT 1"=8'



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DRAINAGE PLAN & PROFILE**  
STA. 60+00 TO STA. 70+00  
HALEAKALA HIGHWAY WIDENING, PHASE 2  
HANA HIGHWAY TO PUKALANI BYPASS  
FED. AID PROJ. NO. NH-037-1(24)

SCALE: AS NOTED      DATE: SEP., 2005

SHEET No. D-4 OF 27 SHEETS

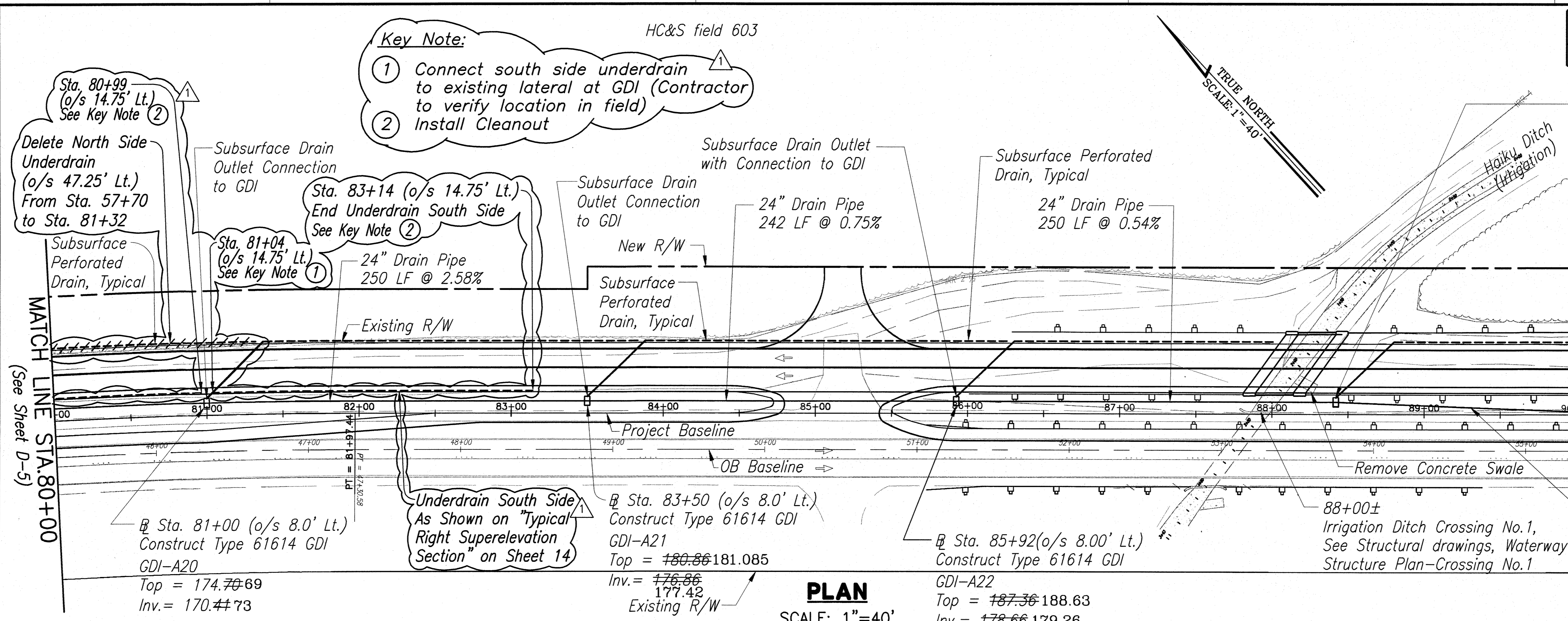
8-8-2007 revised underdrains

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

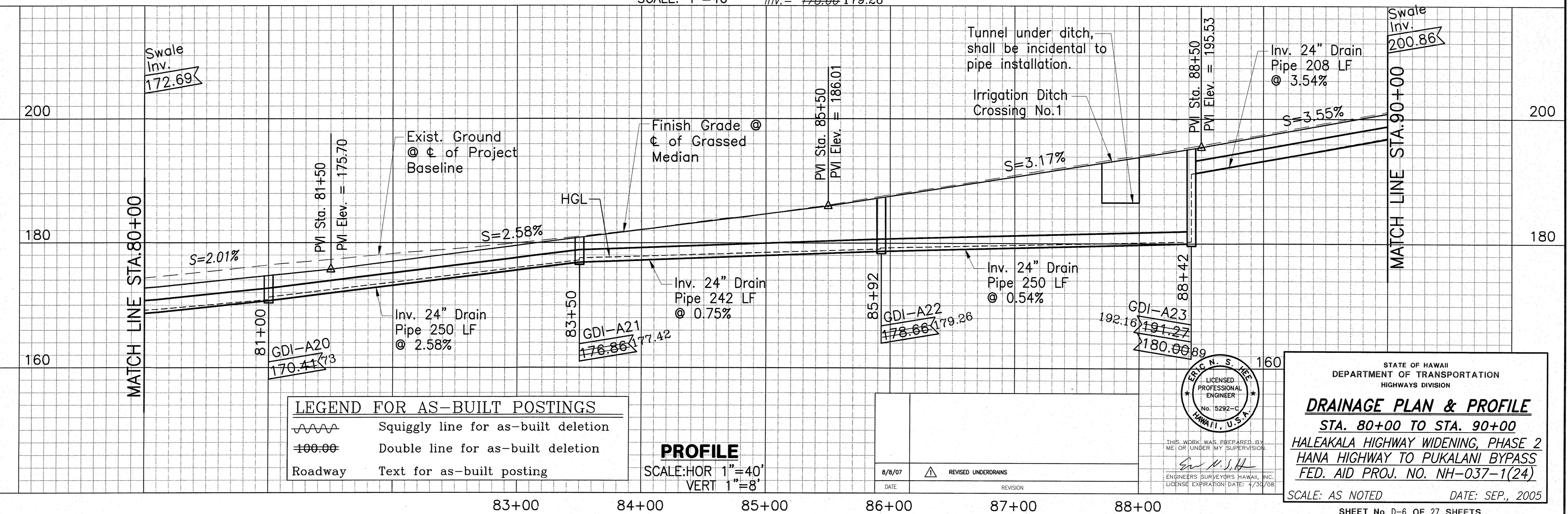
\\Esp-1\esh\Engineering\Projects\994\94-056 Haleakala Hwy Phase 2 - ASBUILT\PAV\SPR 65 ca-ASBUILT.dwg, 5:44pm - Wed, 11/25/09 HUB



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-037-1(24)	2005	67	288

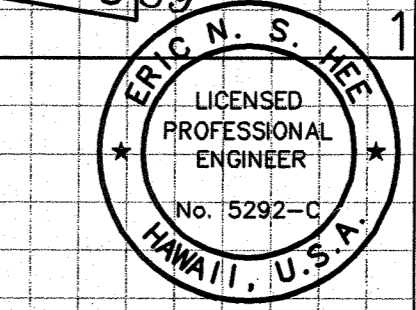


**PLAN**  
SCALE: 1"=40'



**LEGEND FOR AS-BUILT POSTINGS**

	Squiggly line for as-built deletion
	Double line for as-built deletion
	Text for as-built posting



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DRAINAGE PLAN & PROFILE**  
STA. 80+00 TO STA. 90+00  
HALEAKALA HIGHWAY WIDENING, PHASE 2  
HANA HIGHWAY TO PUKALANI BYPASS  
FED. AID PROJ. NO. NH-037-1(24)

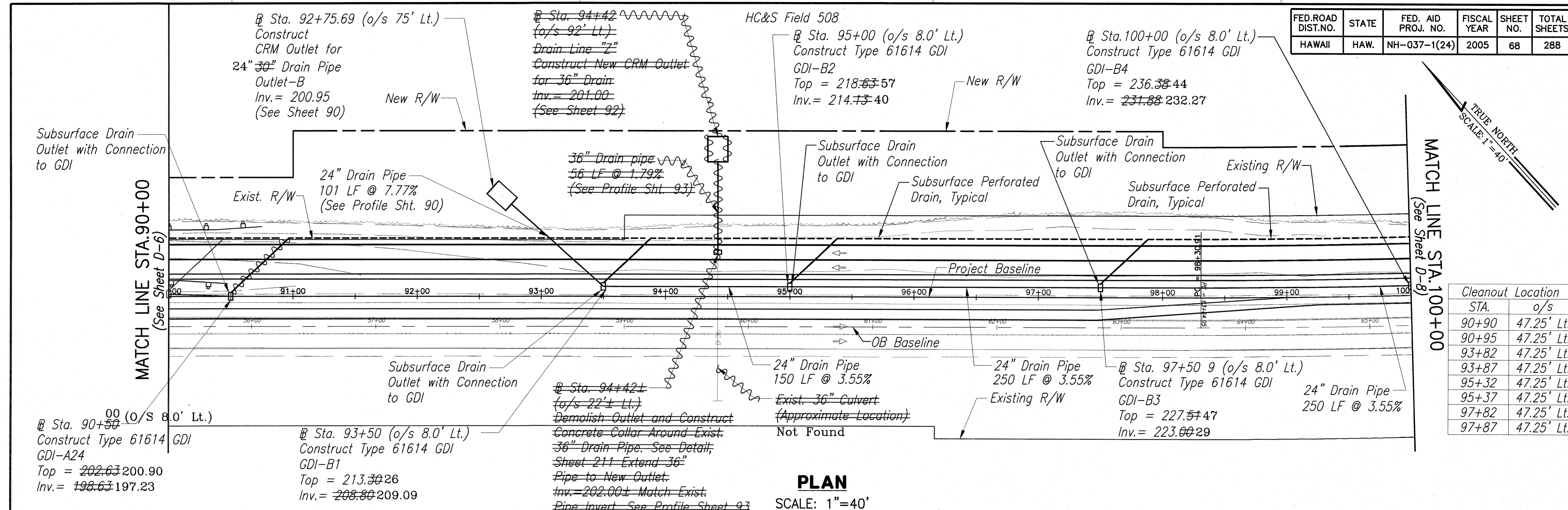
SCALE: AS NOTED DATE: SEP., 2005  
SHEET No. D-6 OF 27 SHEETS

8-8-2007 revised underdrains

ORIGINAL PLAN DATE: _____  
DRAWN BY: _____  
DESIGNED BY: _____  
CHECKED BY: _____

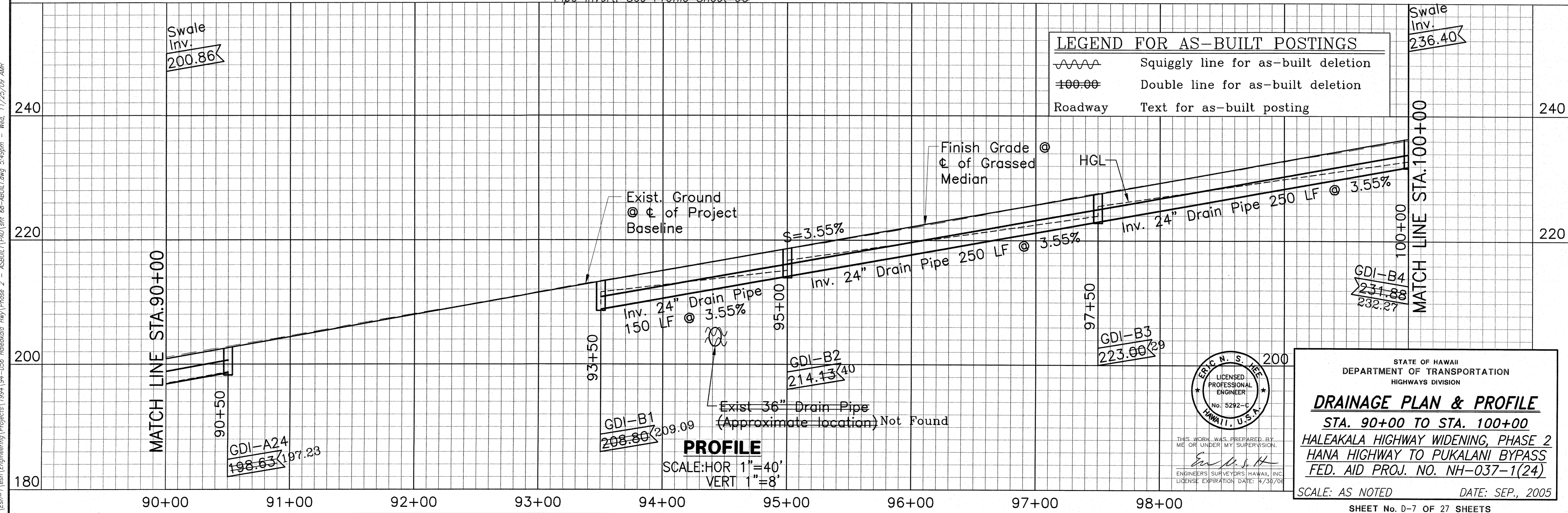
1 Esri - 1 esri Engineering Projects 1994-056 Haleakala Hwy Phase 2 - ASBUILT (PAU) SHT 67-ASBUILT.dwg 5/4/09 - Mod. 11/25/09 HJB

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-037-1(24)	2005	68	288



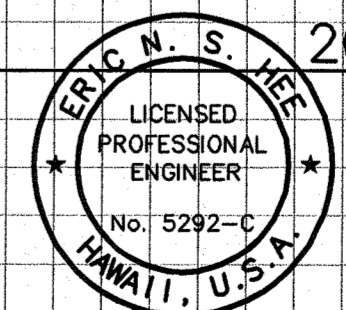
Cleanout Location STA.	o/s
90+90	47.25' Lt.
90+95	47.25' Lt.
93+82	47.25' Lt.
93+87	47.25' Lt.
95+32	47.25' Lt.
95+37	47.25' Lt.
97+82	47.25' Lt.
97+87	47.25' Lt.

**PLAN**  
SCALE: 1"=40'



**LEGEND FOR AS-BUILT POSTINGS**

- Squiggly line for as-built deletion
- Double line for as-built deletion
- Roadway Text for as-built posting



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DRAINAGE PLAN & PROFILE**  
STA. 90+00 TO STA. 100+00  
HALEAKALA HIGHWAY WIDENING, PHASE 2  
HANA HIGHWAY TO PUKALANI BYPASS  
FED. AID PROJ. NO. NH-037-1(24)

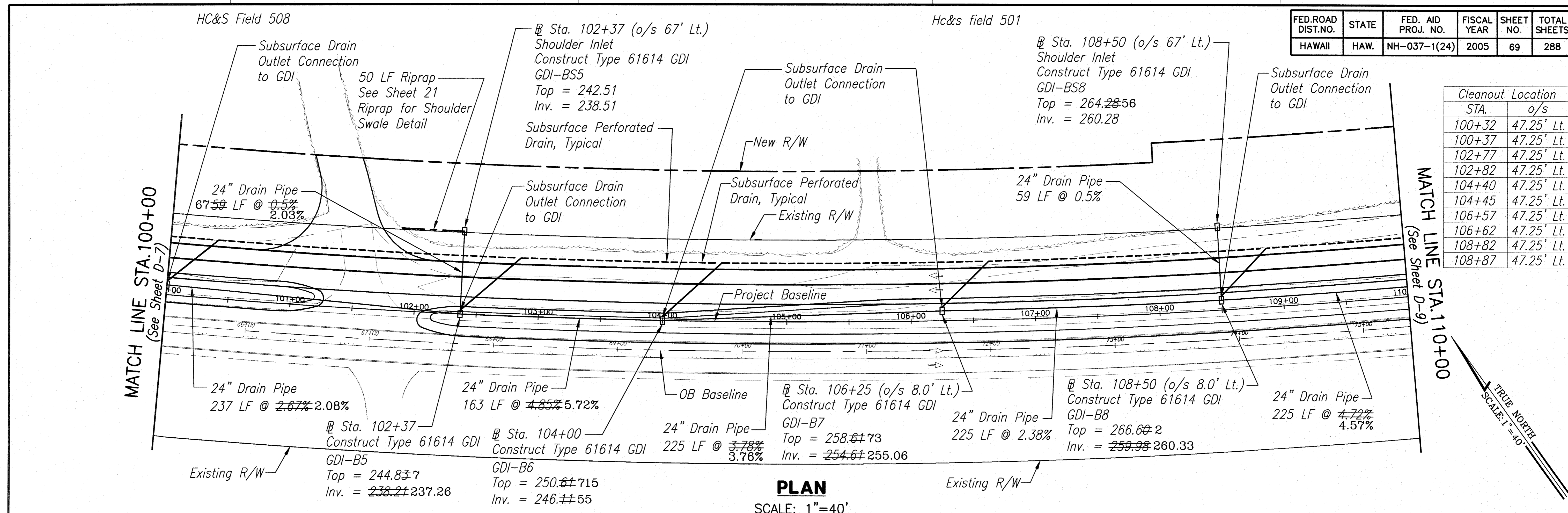
SCALE: AS NOTED DATE: SEP., 2005  
SHEET No. D-7 OF 27 SHEETS

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

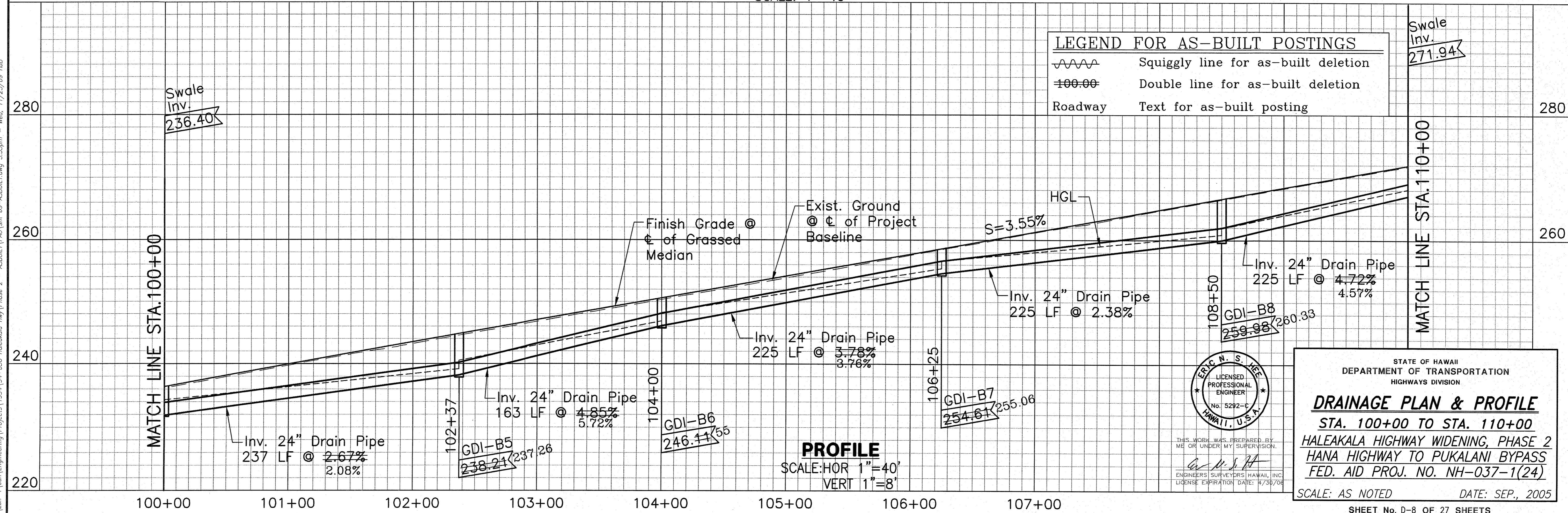
[Esh-1]esh[Engineering]Projects\994\94-056 Haleakala Hwy Phase 2 - ASBUILT\PAU\sh-66-ABULT.dwg 5:49pm - Wed, 11/25/09 AMR

AS-BUILT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-037-1(24)	2005	69	288



Cleanout Location STA.	o/s
100+32	47.25' Lt.
100+37	47.25' Lt.
102+77	47.25' Lt.
102+82	47.25' Lt.
104+40	47.25' Lt.
104+45	47.25' Lt.
106+57	47.25' Lt.
106+62	47.25' Lt.
108+82	47.25' Lt.
108+87	47.25' Lt.

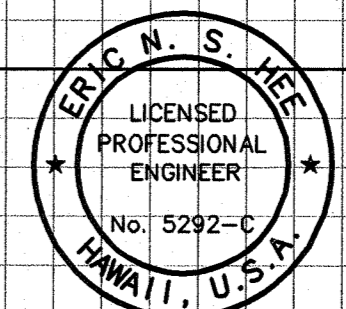


**LEGEND FOR AS-BUILT POSTINGS**

	Squiggly line for as-built deletion
	Double line for as-built deletion
	Text for as-built posting

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

\Esh-1\esh\Engineering\Projects\1994\94-056 Haleakala Hwy Phase 2 - ASBUILT\PAU\sh-69-ASBUILT.dwg 5:53pm - Wed, 11/25/09 HAB



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DRAINAGE PLAN & PROFILE**  
STA. 100+00 TO STA. 110+00  
HALEAKALA HIGHWAY WIDENING, PHASE 2  
HANA HIGHWAY TO PUKALANI BYPASS  
FED. AID PROJ. NO. NH-037-1(24)

SCALE: AS NOTED DATE: SEP., 2005

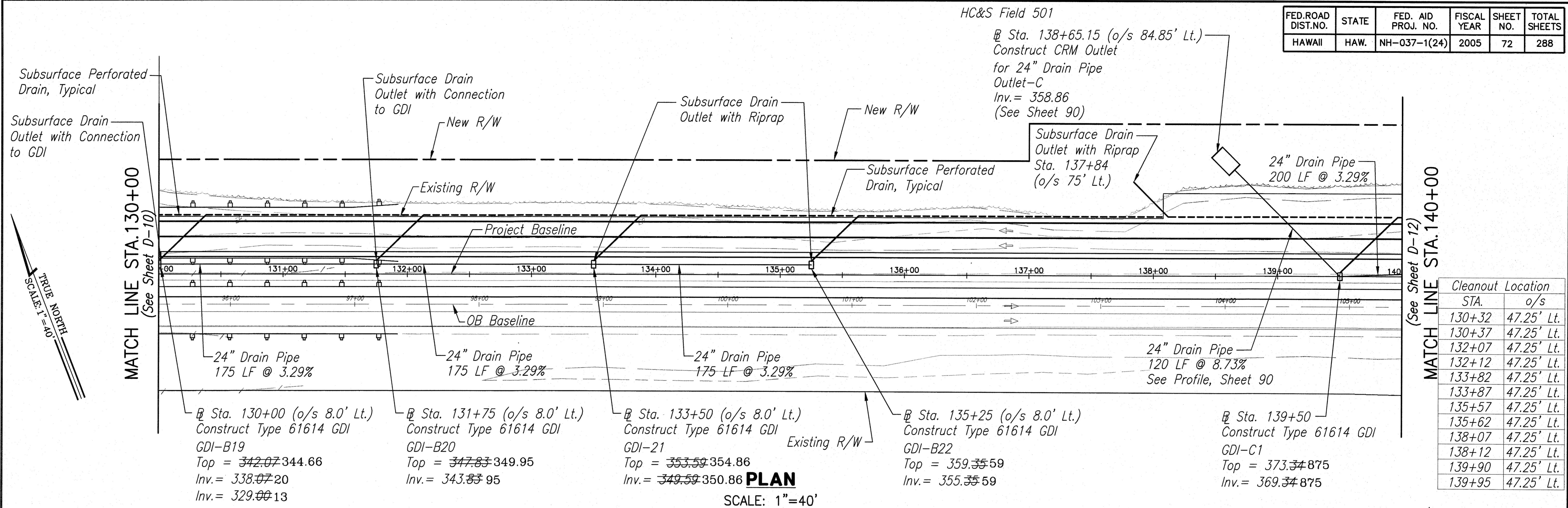
SHEET No. D-8 OF 27 SHEETS

AS-BUILT

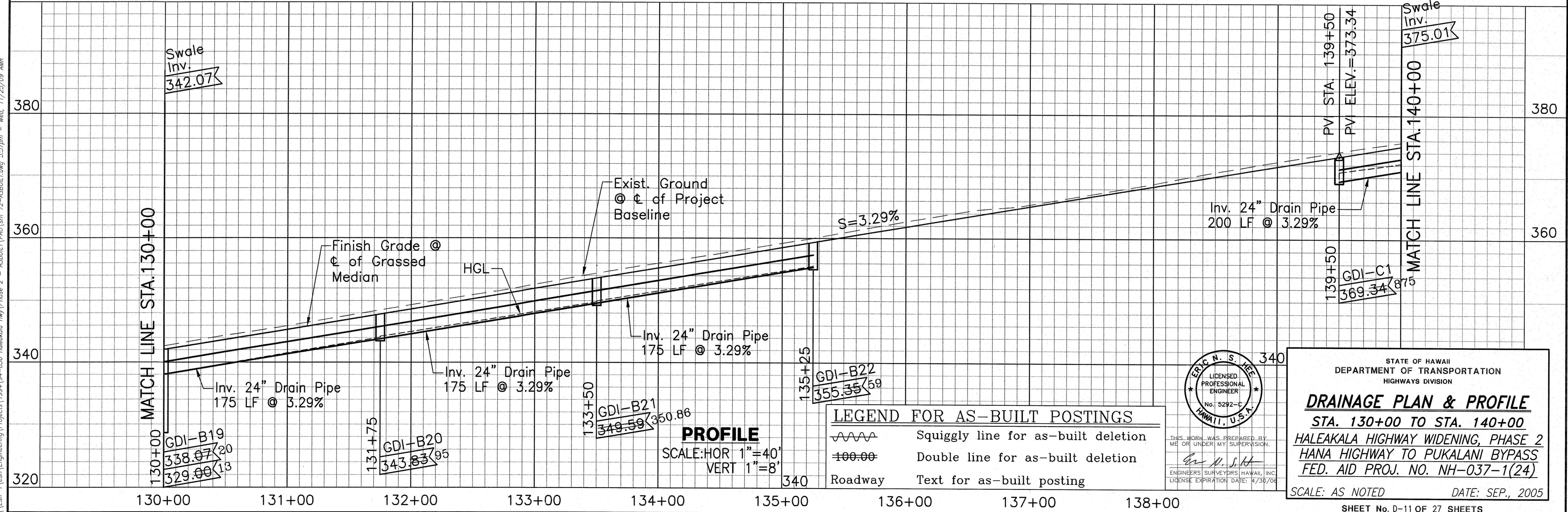




FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-037-1(24)	2005	72	288



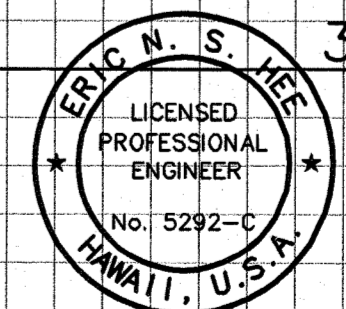
**PLAN**  
SCALE: 1"=40'



**PROFILE**  
SCALE: HOR 1"=40'  
VERT 1"=8'

**LEGEND FOR AS-BUILT POSTINGS**

	Squiggly line for as-built deletion
	Double line for as-built deletion
	Text for as-built posting



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DRAINAGE PLAN & PROFILE**  
STA. 130+00 TO STA. 140+00  
HALEAKALA HIGHWAY WIDENING, PHASE 2  
HANA HIGHWAY TO PUKALANI BYPASS  
FED. AID PROJ. NO. NH-037-1(24)

SCALE: AS NOTED      DATE: SEP., 2005  
SHEET No. D-11 OF 27 SHEETS

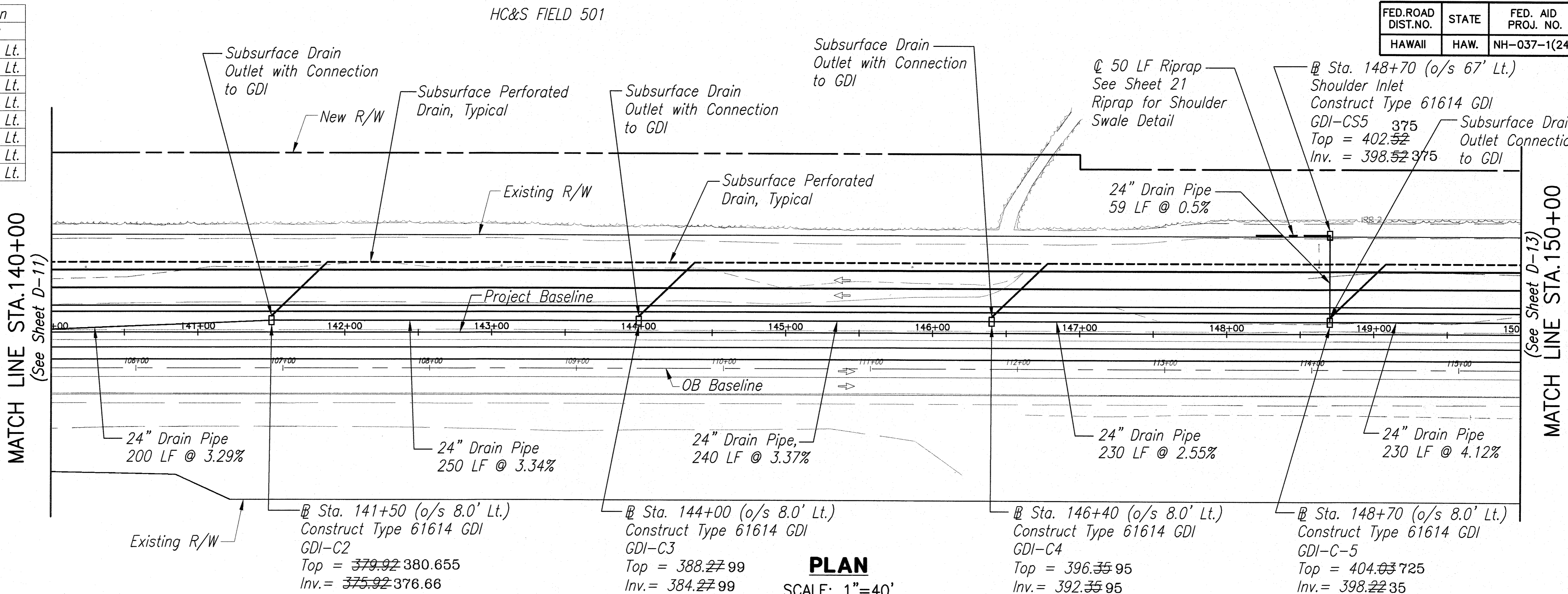
ORIGINAL PLAN	DATE
NOTE BOOK	DESIGNED BY
QUANTITIES BY	CHECKED BY
No.	

[Ech-1] (est. Engineering) Projects 1994 94-056 Haleakala Hwy Phase 2 - ASBUILT (PAU) sht. 72-ASBUILT.dwg 5:57pm - Wed, 11/25/09 AMR

AS-BUILT

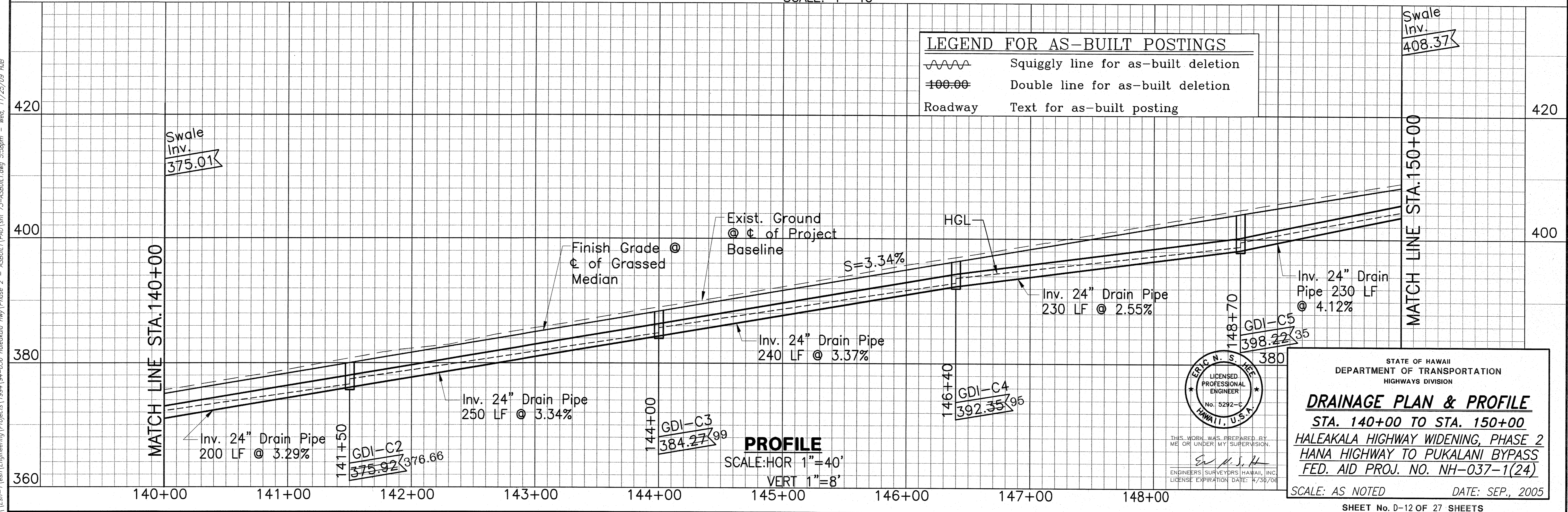
STA.	o/s
141+82	47.25' Lt.
141+87	47.25' Lt.
144+32	47.25' Lt.
144+37	47.25' Lt.
146+72	47.25' Lt.
146+77	47.25' Lt.
149+02	47.25' Lt.
149+07	47.25' Lt.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-037-1(24)	2005	73	288



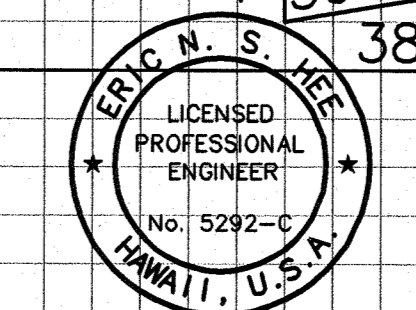
TRUE NORTH  
SCALE: 1"=40'

LEGEND FOR AS-BUILT POSTINGS	
~~~~~	Squiggly line for as-built deletion
==00.00	Double line for as-built deletion
Roadway	Text for as-built posting



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

\\esh-1\esh\Engineering\Projects\1994\94-056 Haleakala Hwy\Phase 2 - ASBUILT\PAU\sh 73-ASBUILT.dwg 5:56pm - Wed, 11/25/09 HLB



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

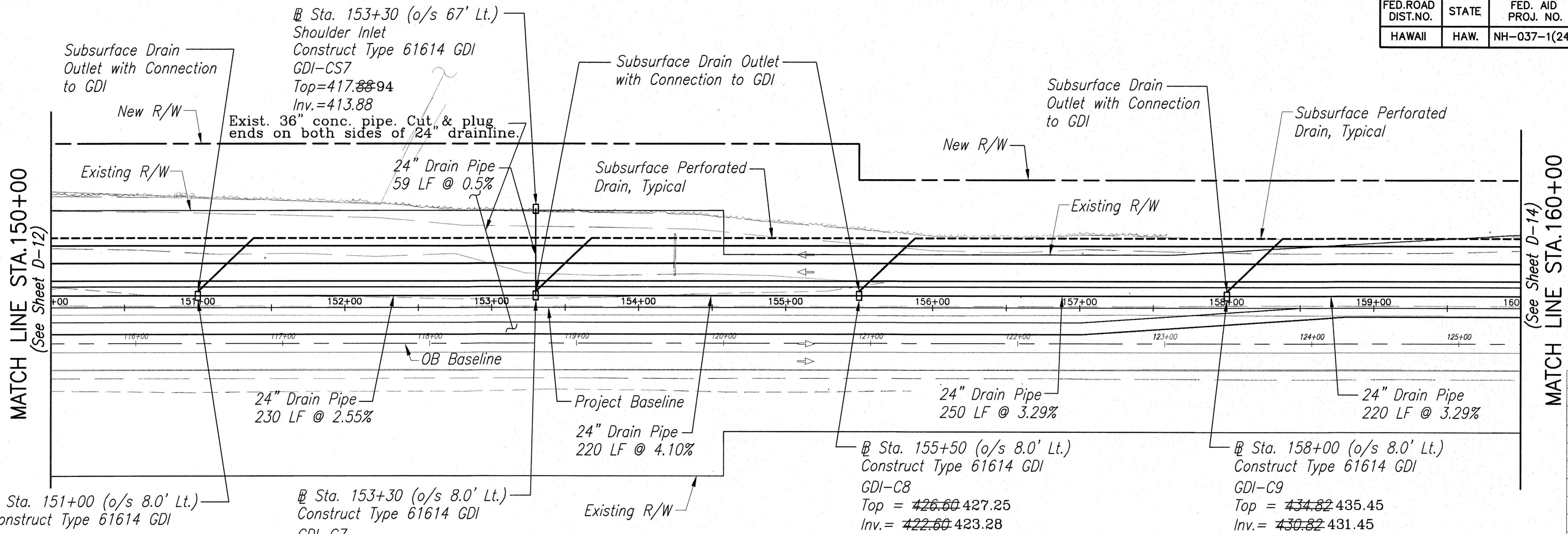
DRAINAGE PLAN & PROFILE
STA. 140+00 TO STA. 150+00
HALEAKALA HIGHWAY WIDENING, PHASE 2
HANA HIGHWAY TO PUKALANI BYPASS
FED. AID PROJ. NO. NH-037-1(24)

SCALE: AS NOTED DATE: SEP., 2005

SHEET No. D-12 OF 27 SHEETS

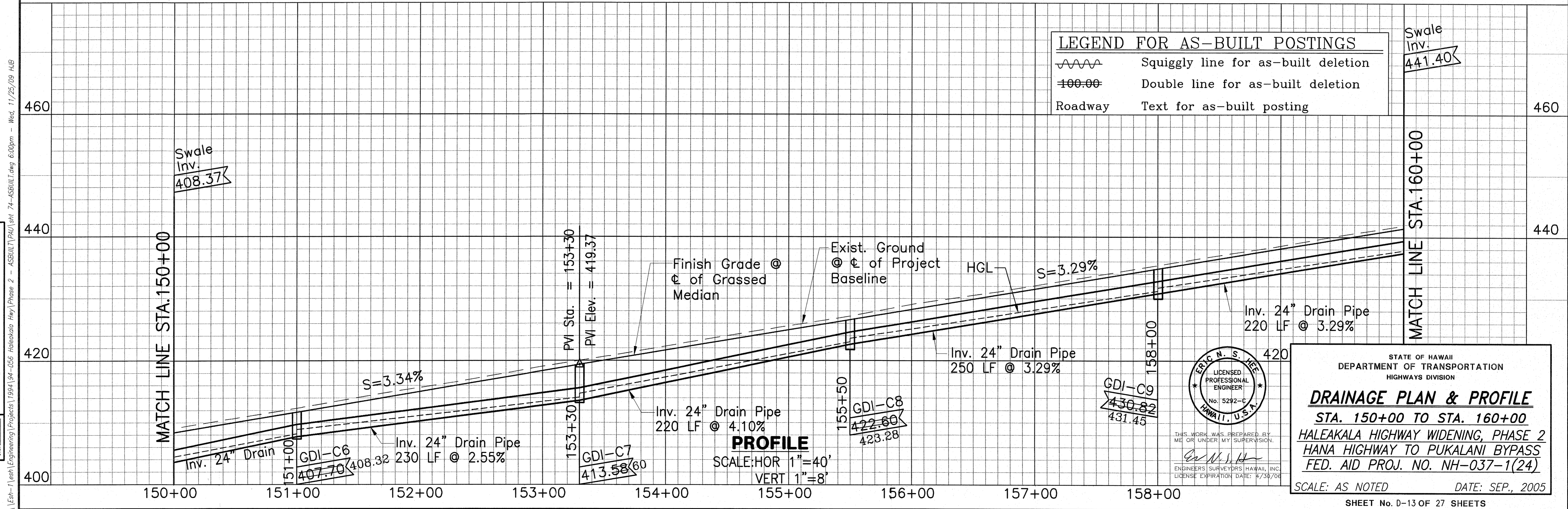
AS-BUILT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-037-1(24)	2005	74	288



Cleanout Location	
STA.	o/s
151+32	47.25' Lt.
151+37	47.25' Lt.
153+62	47.25' Lt.
153+67	47.25' Lt.
155+82	47.25' Lt.
155+87	47.25' Lt.
158+32	47.25' Lt.
158+37	47.25' Lt.

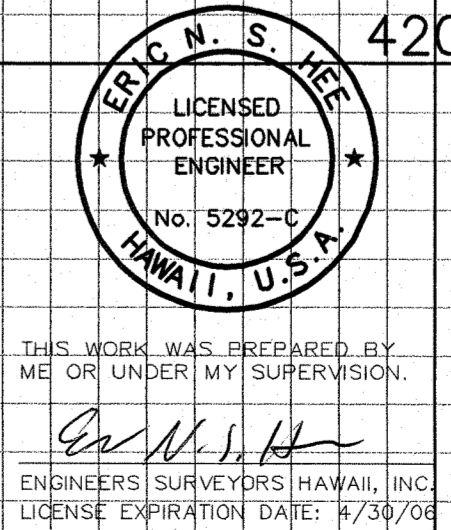
PLAN
SCALE: 1"=40'



LEGEND FOR AS-BUILT POSTINGS	
	Squiggly line for as-built deletion
	Double line for as-built deletion
	Text for as-built posting

DATE	
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

\\ep-1\esh\Engineering\Projects\1994\14-056 Haleakala Hwy\Phase 2 - ASBUILT\PAU\sh. 74-ASBUILT.dwg 6:00pm - Wed, 11/25/09 HUB

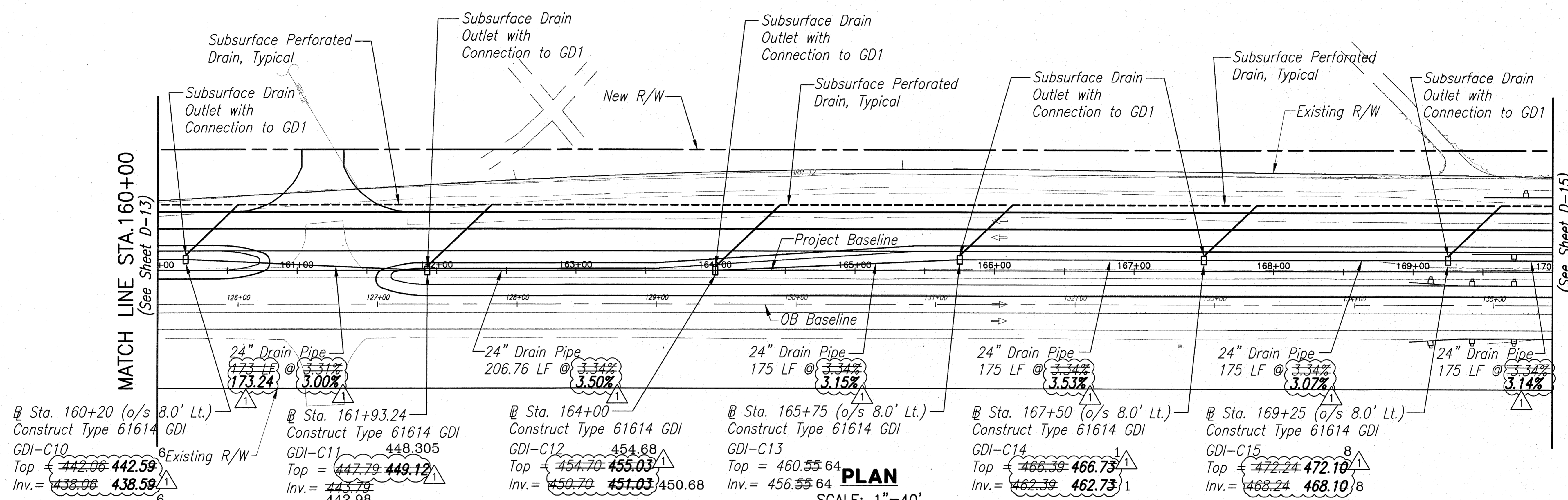


STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE PLAN & PROFILE
STA. 150+00 TO STA. 160+00
HALEAKALA HIGHWAY WIDENING, PHASE 2
HANA HIGHWAY TO PUKALANI BYPASS
FED. AID PROJ. NO. NH-037-1(24)

SCALE: AS NOTED DATE: SEP., 2005

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-037-1(24)	2005	75	288



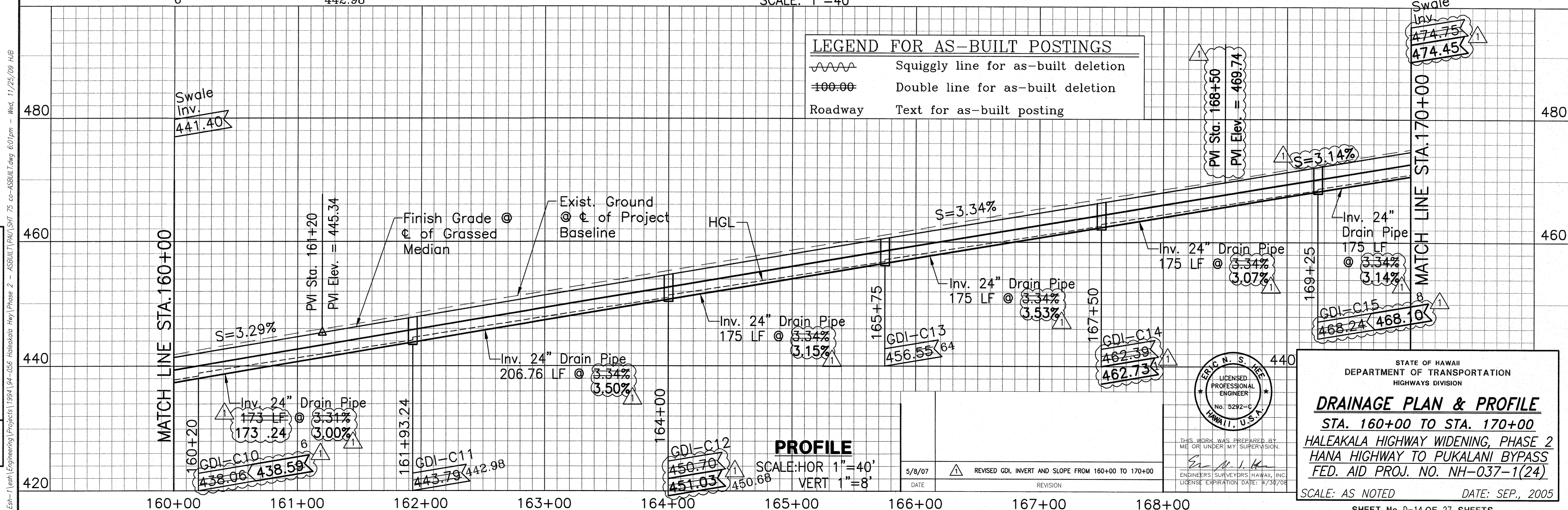
Cleanout Location STA.	o/s
160+52	47.25' Lt.
160+57	47.25' Lt.
162+34	47.25' Lt.
162+39	47.25' Lt.
164+40	47.25' Lt.
164+45	47.25' Lt.
166+07	47.25' Lt.
166+12	47.25' Lt.
167+82	47.25' Lt.
167+87	47.25' Lt.
169+57	47.25' Lt.
169+62	47.25' Lt.

@ Sta. 160+20 (o/s 8.0' Lt.) Construct Type 61614 GDI GDI-C10 Top = 442.06 442.59 Inv. = 438.06 438.59	@ Sta. 161+93.24 Construct Type 61614 GDI GDI-C11 Top = 447.79 449.12 Inv. = 443.79 442.98	@ Sta. 164+00 Construct Type 61614 GDI GDI-C12 Top = 454.70 455.03 Inv. = 450.70 451.03	@ Sta. 165+75 (o/s 8.0' Lt.) Construct Type 61614 GDI GDI-C13 Top = 460.55 64 Inv. = 456.55 64	@ Sta. 167+50 (o/s 8.0' Lt.) Construct Type 61614 GDI GDI-C14 Top = 466.39 466.73 Inv. = 462.39 462.73	@ Sta. 169+25 (o/s 8.0' Lt.) Construct Type 61614 GDI GDI-C15 Top = 472.24 472.10 Inv. = 468.24 468.10
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PLAN
SCALE: 1"=40'

LEGEND FOR AS-BUILT POSTINGS

	Squiggly line for as-built deletion
	Double line for as-built deletion
	Text for as-built posting



PROFILE
SCALE: HOR 1"=40'
VERT 1"=8'

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

\\Leah-1\esh\Engineering\Projects\1994\94-056 Haleakala Hwy\Phase 2 - AS-BUILT\PAU\SHIT 75 co-AS-BUILT.dwg 6:01pm - Wed, 11/25/09 HUB



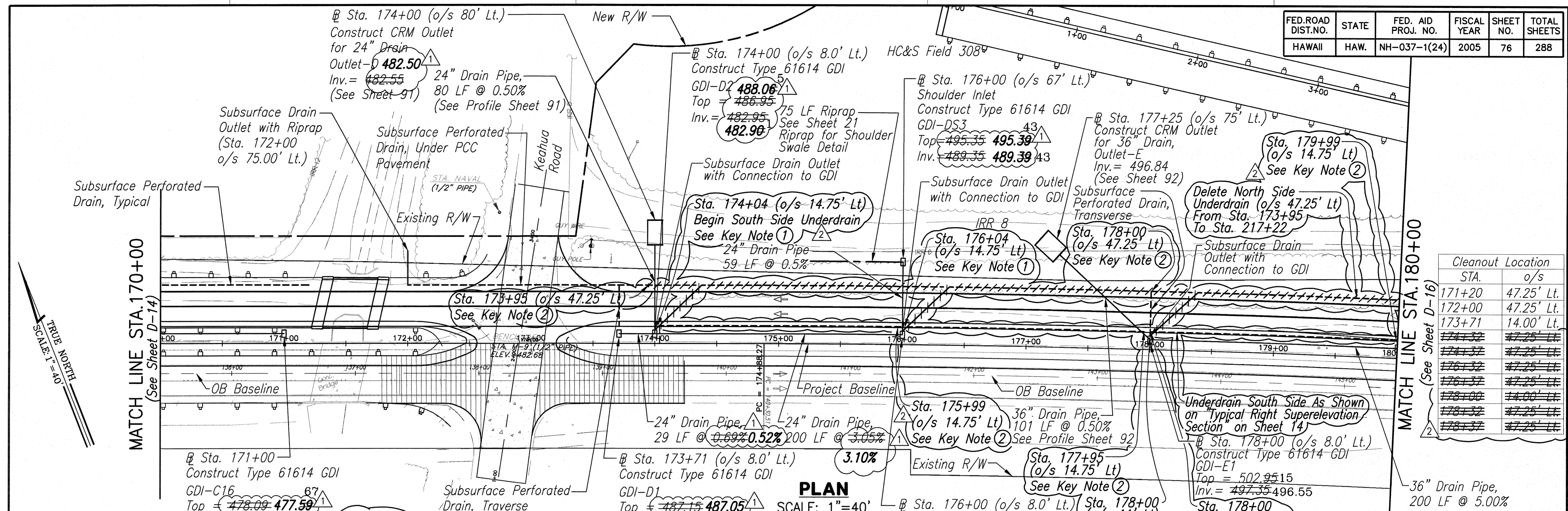
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE PLAN & PROFILE
STA. 160+00 TO STA. 170+00
HALEAKALA HIGHWAY WIDENING, PHASE 2
HANA HIGHWAY TO PUKALANI BYPASS
FED. AID PROJ. NO. NH-037-1(24)

SCALE: AS NOTED DATE: SEP., 2005

SHEET No. 0-14 OF 27 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-037-1(24)	2005	76	288

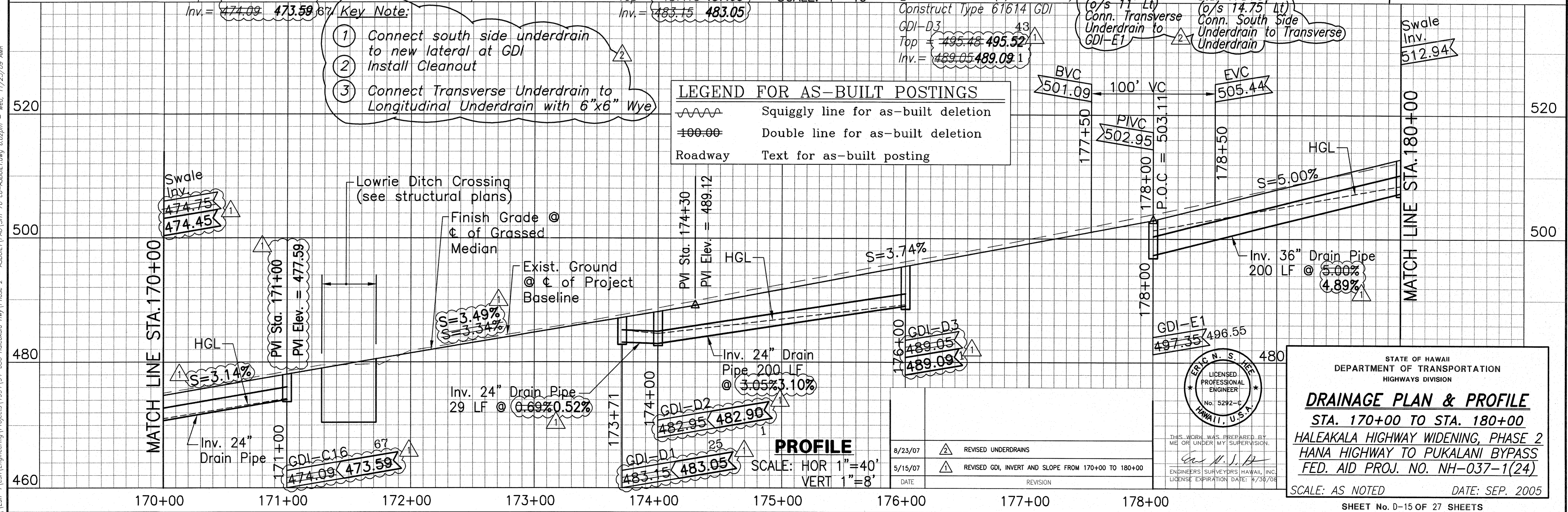


Cleanout Location	
STA.	o/s
171+20	47.25' Lt.
172+00	47.25' Lt.
173+71	14.00' Lt.
174+37	47.25' Lt.
174+37	47.25' Lt.
176+37	47.25' Lt.
176+37	47.25' Lt.
178+00	14.00' Lt.
178+37	47.25' Lt.
178+37	47.25' Lt.

- Key Note:**
- 1 Connect south side underdrain to new lateral at GDI
 - 2 Install Cleanout
 - 3 Connect Transverse Underdrain to Longitudinal Underdrain with 6"x6" Wye

LEGEND FOR AS-BUILT POSTINGS

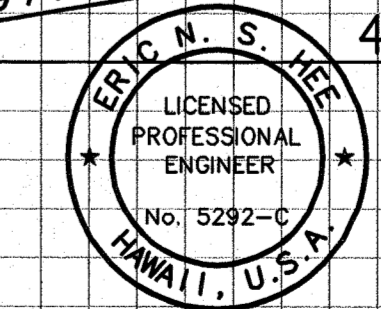
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	Double line for as-built deletion
Roadway	Text for as-built posting



8-23-2007 revised underdrains

SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
NO.	

\\Esh-1\esh\Engineering\Projects\1994\94-056 Haleakala Hwy\Phase 2 - ASBUILT\PAU\SH1 76 co-ASBUILT.dwg 6:02pm - Wed, 11/25/09 AMR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

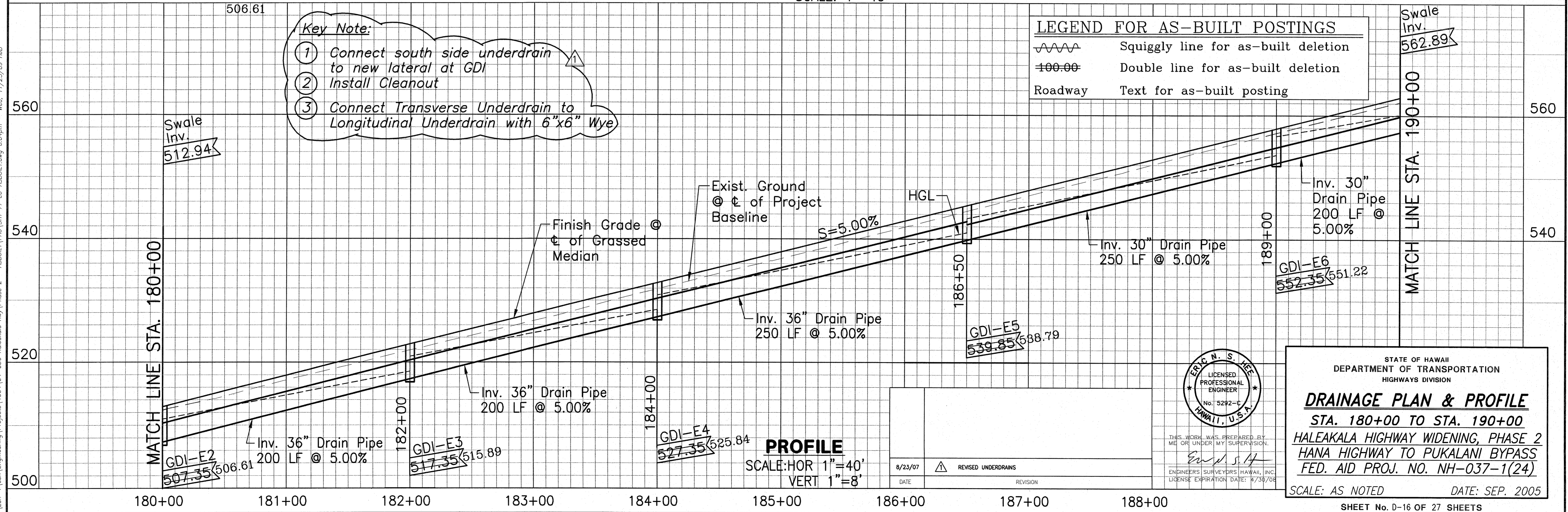
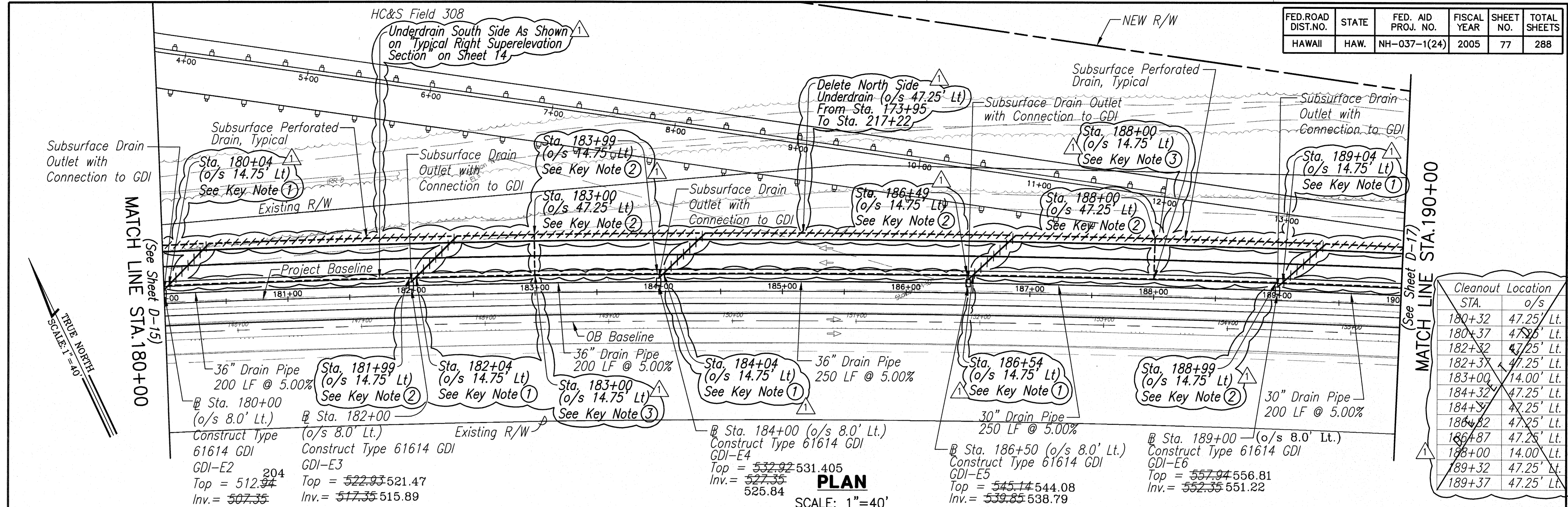
DRAINAGE PLAN & PROFILE
STA. 170+00 TO STA. 180+00
HALEAKALA HIGHWAY WIDENING, PHASE 2
HANA HIGHWAY TO PUKALANI BYPASS
FED. AID PROJ. NO. NH-037-1(24)

SCALE: AS NOTED DATE: SEP. 2005

SHEET No. D-15 OF 27 SHEETS

AS-BUILT C.O. 76

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-037-1(24)	2005	77	288



8-23-2007 revised underdrains

DATE	
DESIGNED BY	
CHECKED BY	
NO.	

8-23-2007 revised underdrains



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

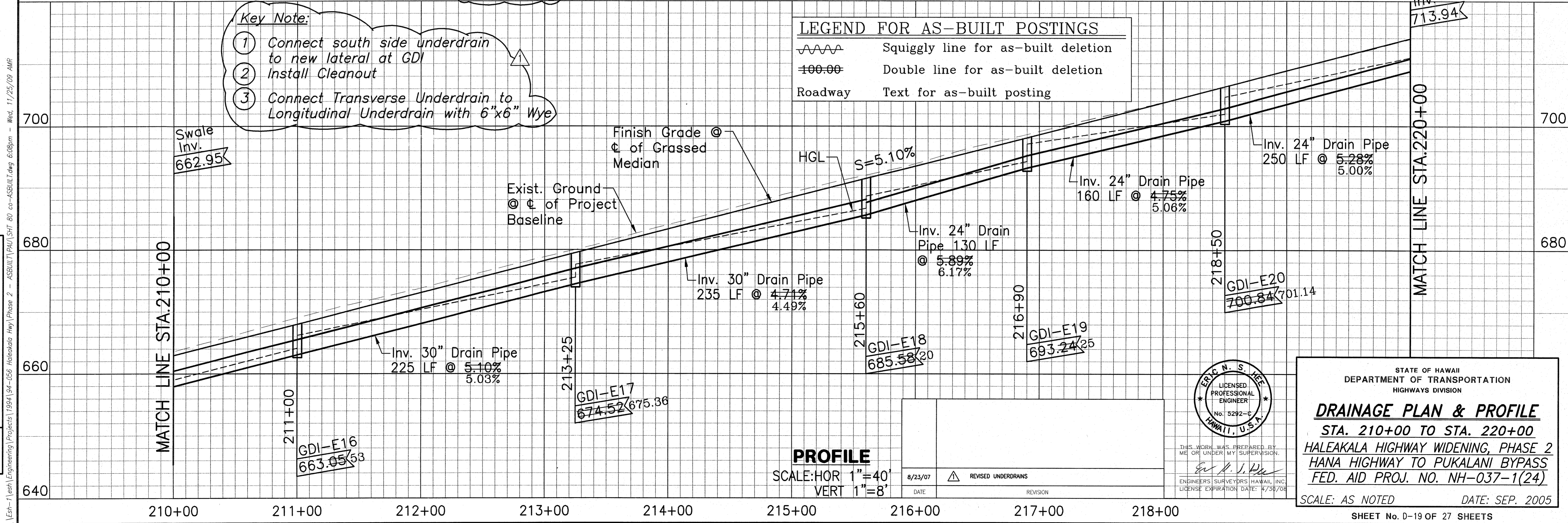
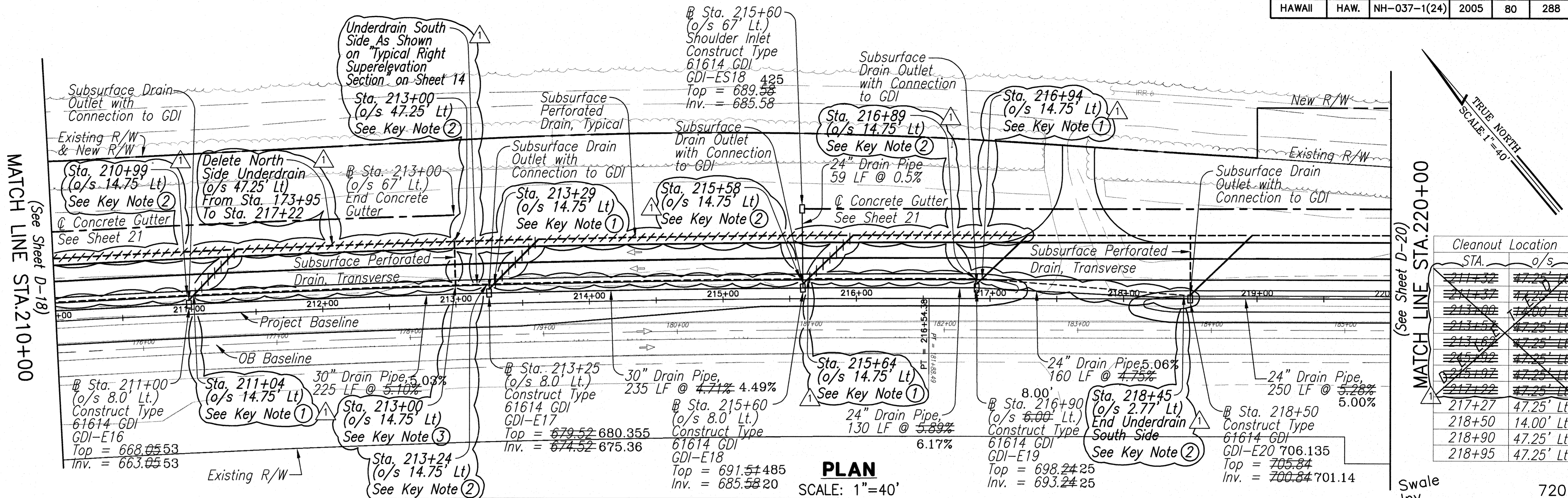
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STA. 180+00 TO STA. 190+00
HALEAKALA HIGHWAY WIDENING, PHASE 2
HANA HIGHWAY TO PUKALANI BYPASS
FED. AID PROJ. NO. NH-037-1(24)

SCALE: AS NOTED DATE: SEP. 2005

AS-BUILT

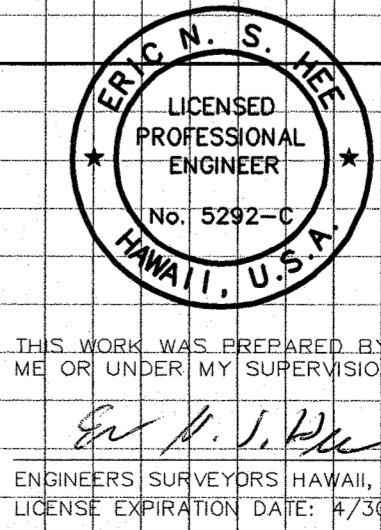
C.O. 77

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-037-1(24)	2005	80	288



8-23-2007 revised underdrains	
SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
No.	

\\Esh-1\esh\Engineering\Projects\1994\94-056 Haleakala Hwy\Phase 2 - ASBUILT\PAU\SH1 80 co-ASBUILT.dwg 6:08pm - Wed, 11/25/09 AMR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

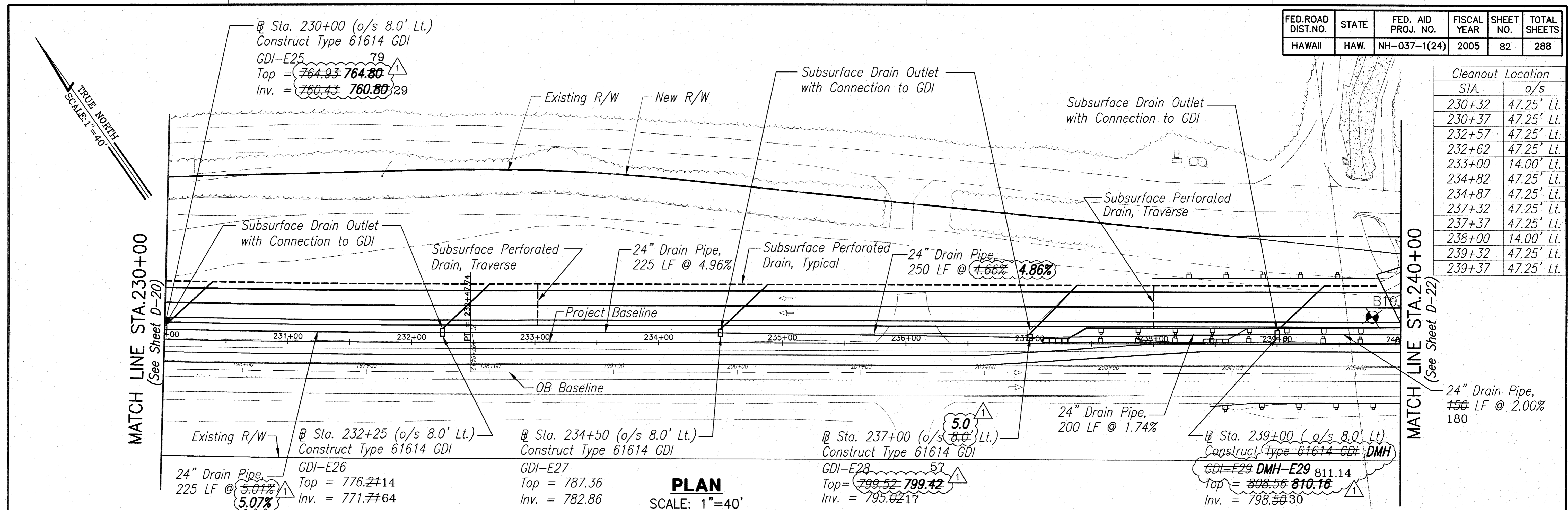
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STA. 210+00 TO STA. 220+00
HALEAKALA HIGHWAY WIDENING, PHASE 2
HANA HIGHWAY TO PUKALANI BYPASS
FED. AID PROJ. NO. NH-037-1(24)

SCALE: AS NOTED DATE: SEP. 2005

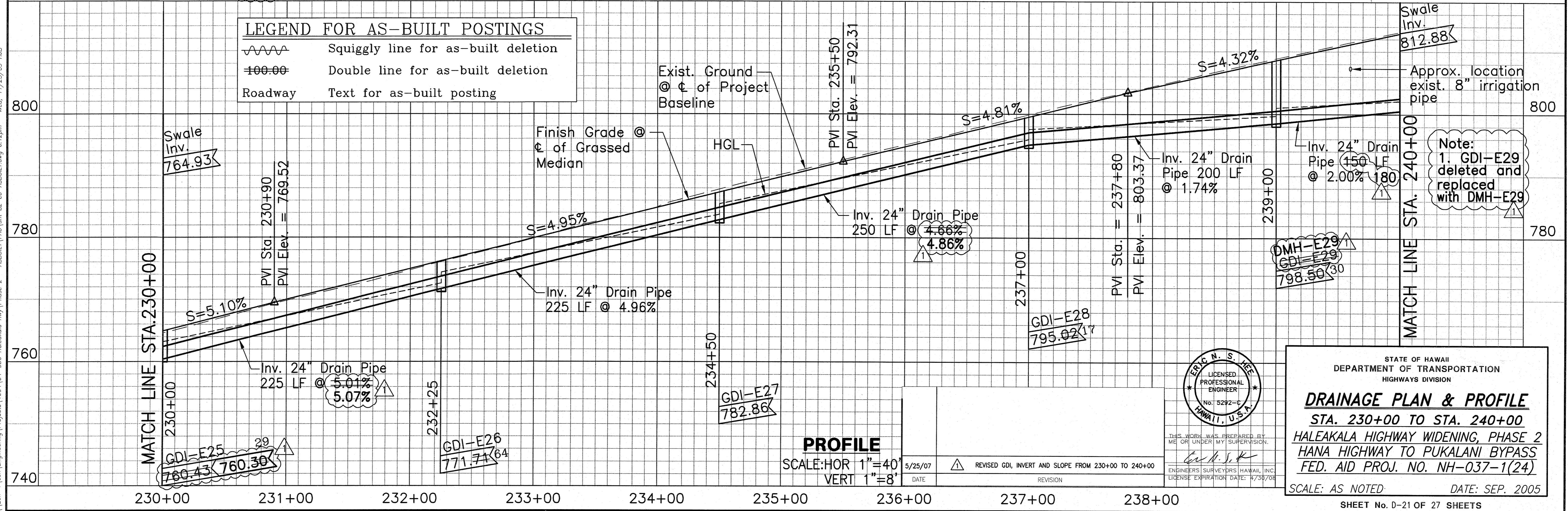
SHEET No. D-19 OF 27 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-037-1(24)	2005	82	288

Cleanout Location	
STA.	o/s
230+32	47.25' Lt.
230+37	47.25' Lt.
232+57	47.25' Lt.
232+62	47.25' Lt.
233+00	14.00' Lt.
234+82	47.25' Lt.
234+87	47.25' Lt.
237+32	47.25' Lt.
237+37	47.25' Lt.
238+00	14.00' Lt.
239+32	47.25' Lt.
239+37	47.25' Lt.



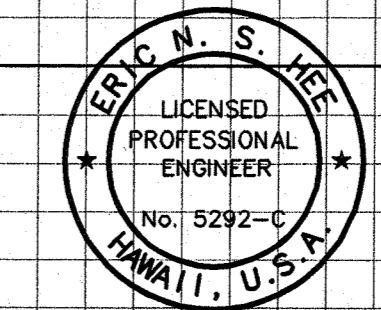
LEGEND FOR AS-BUILT POSTINGS	
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	Double line for as-built deletion
Roadway	Text for as-built posting



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

\\esh-1\esh\Engineering\Projects\1994\94-056 Haleakala Hwy\Phase 2 - ASBUILT\PAU\sh1.82 co-ASBUILT.dwg 6:12pm - Wed, 11/25/09 HUB

PROFILE
 SCALE: HOR 1"=40'
 VERT 1"=8'
 5/25/07 REVISED GDI, INVERT AND SLOPE FROM 230+00 TO 240+00



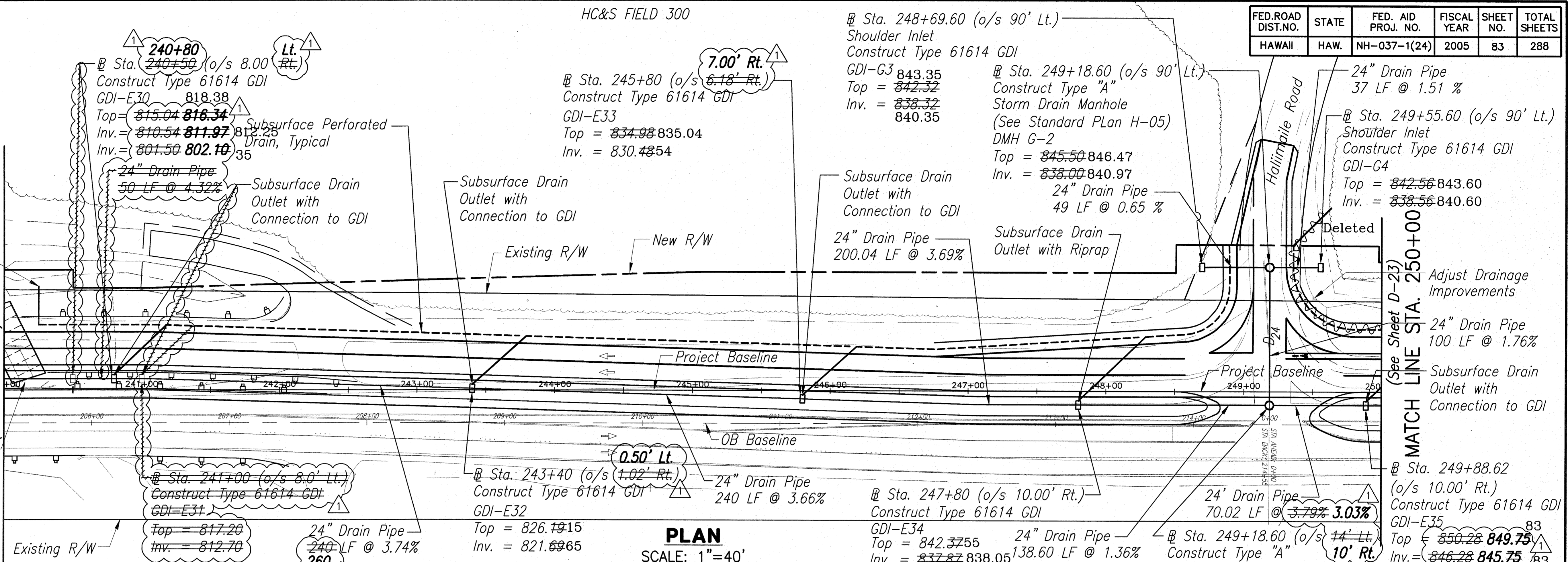
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
DRAINAGE PLAN & PROFILE
 STA. 230+00 TO STA. 240+00
 HALEAKALA HIGHWAY WIDENING, PHASE 2
 HANA HIGHWAY TO PUKALANI BYPASS
 FED. AID PROJ. NO. NH-037-1(24)
 SCALE: AS NOTED DATE: SEP. 2005
 SHEET No. 0-21 OF 27 SHEETS

Cleanout Location STA.	o/s
240+25	47.25' Lt.
241+32	46.54' Lt.
241+37	46.39' Lt.
243+74	39.27' Lt.
243+79	39.12' Lt.
246+14	32.07' Lt.
246+19	31.92' Lt.
248+24	39.30' Lt.
248+29	39.61' Lt.
248+89.36	106.16' Lt.
249+35.87	105.82' Lt.

Subsurface Drain Outlet with Riprap Sta. 240+25 (o/s 75'.00 Lt.)

24" Drain Pipe 150 LF @ 2.0% Tunnel under Ditch No.4

MATCH LINE STA. 240+00 (See Sheet D-21)

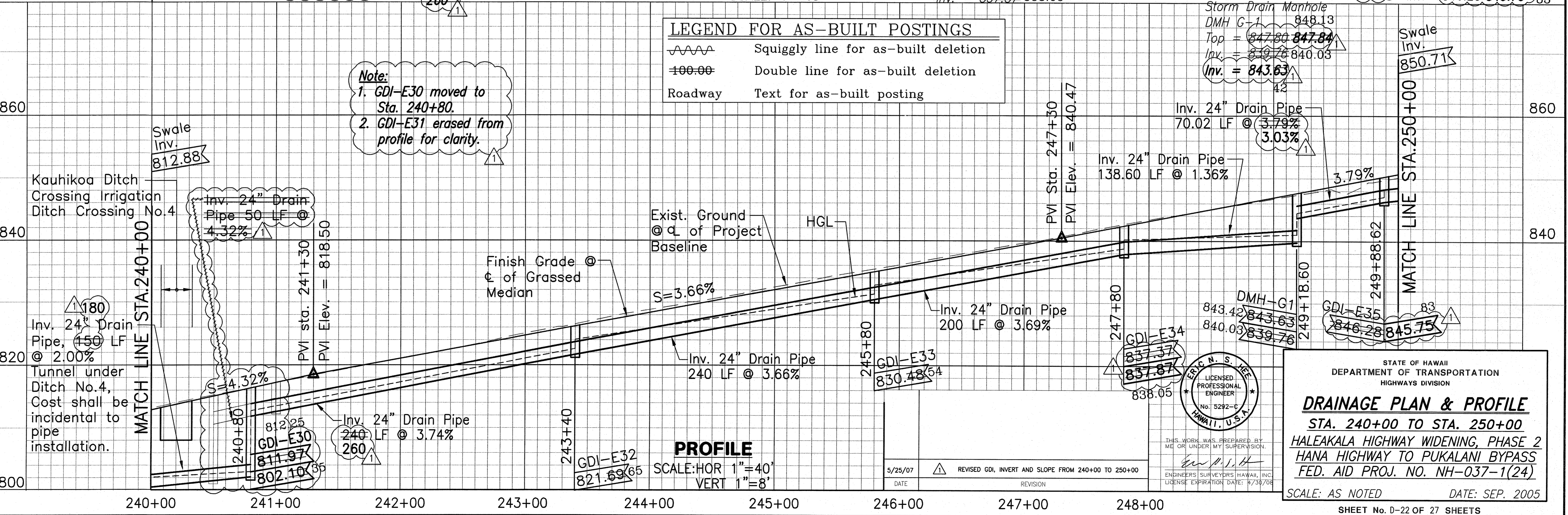


PLAN
SCALE: 1"=40'

LEGEND FOR AS-BUILT POSTINGS	
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	Double line for as-built deletion
Roadway	Text for as-built posting

Note:
1. GDI-E30 moved to Sta. 240+80.
2. GDI-E31 erased from profile for clarity.

SURVEY PLOTTED BY: _____ DATE: _____
 DRAWN BY: _____
 DESIGNED BY: _____
 CHECKED BY: _____
 No. _____
 (Esh-1)esh(Engineering) Projects | 1994-194-056 Haleakala Hwy Phase 2 - ASBUILT (PAU) sht 83 co-ASBUILT.dwg 6:14pm - Wed, 11/25/09 HUB



PROFILE
SCALE: HOR 1"=40'
VERT 1"=8'

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

 ENGINEERS SURVEYORS HAWAII, INC.
 LICENSE EXPIRATION DATE: 4/30/08

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

DRAINAGE PLAN & PROFILE
 STA. 240+00 TO STA. 250+00
 HALEAKALA HIGHWAY WIDENING, PHASE 2
 HANA HIGHWAY TO PUKALANI BYPASS
 FED. AID PROJ. NO. NH-037-1(24)

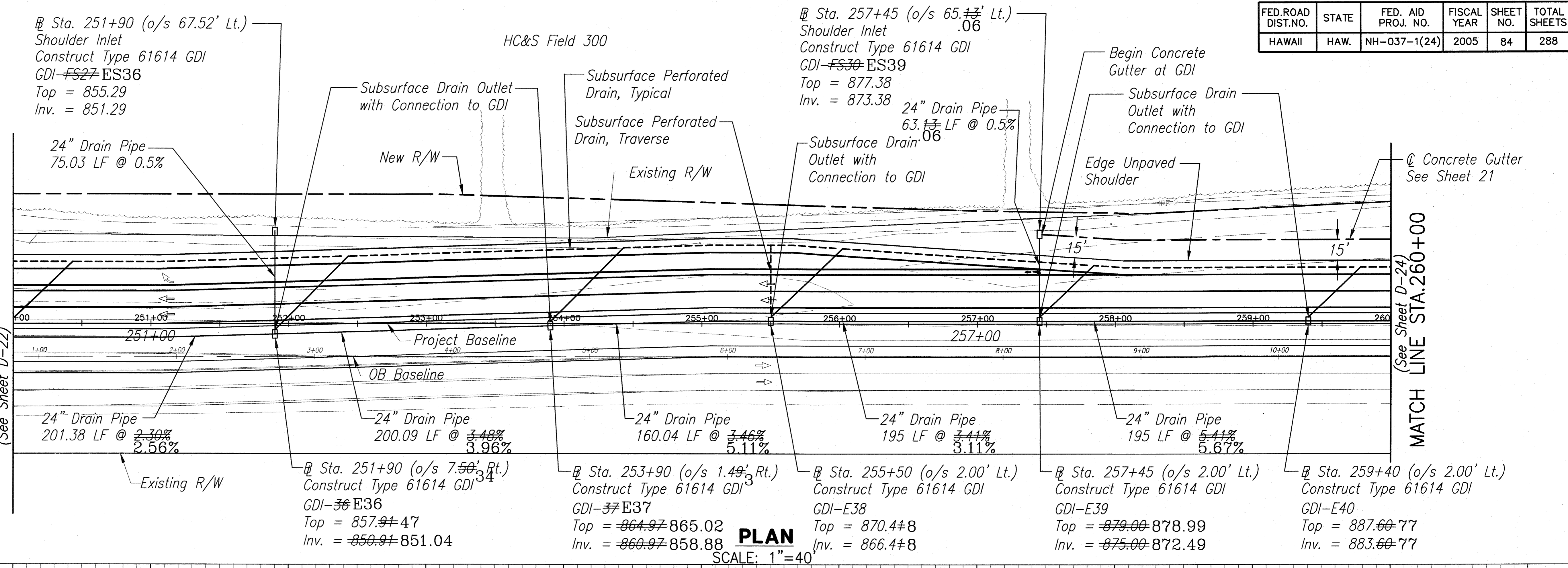
SCALE: AS NOTED DATE: SEP. 2005
 SHEET No. D-22 OF 27 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-037-1(24)	2005	84	288

Cleanout Location STA.	o/s
250+38.62	45.25' Lt.
250+43.62	45.25' Lt.
252+38	49.21' Lt.
252+43	49.36' Lt.
254+38	55.22' Lt.
254+43	55.37' Lt.
255+50	8.00' Lt.
255+97	55.19' Lt.
256+02	54.86' Lt.
257+80	43.04' Lt.
257+85	42.71' Lt.
259+75	41.28' Lt.
259+80	41.28' Lt.

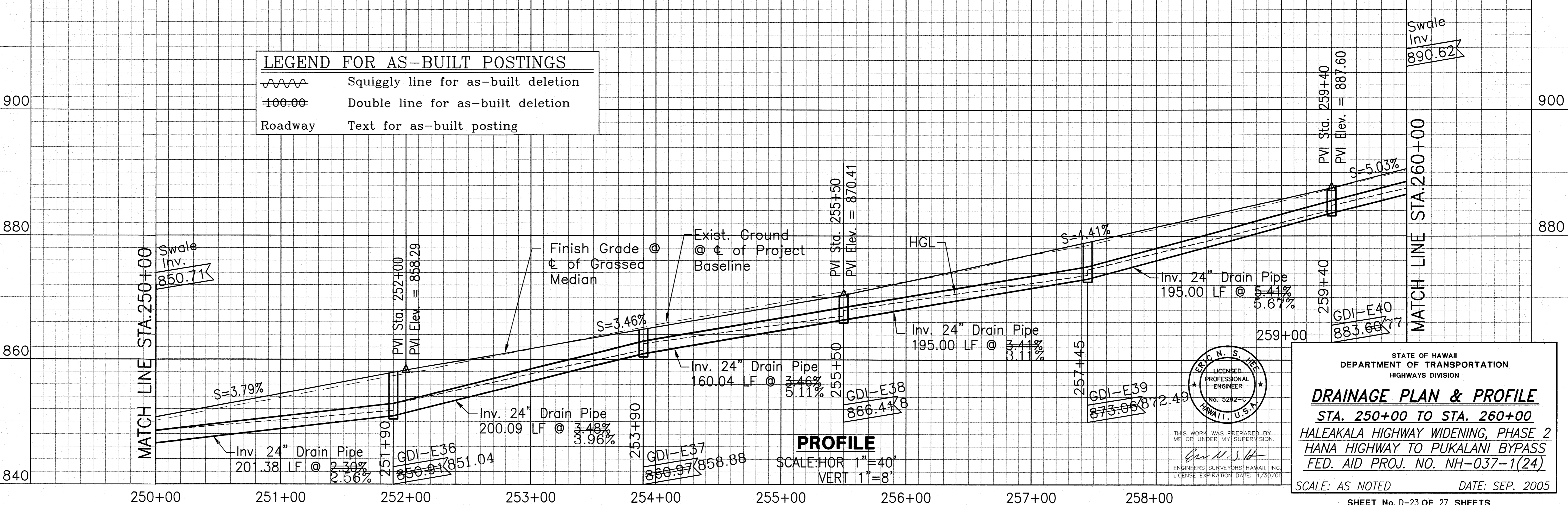
MATCH LINE STA. 250+00
(See Sheet D-22)

TRUE NORTH
SCALE: 1"=40'



PLAN
SCALE: 1"=40'

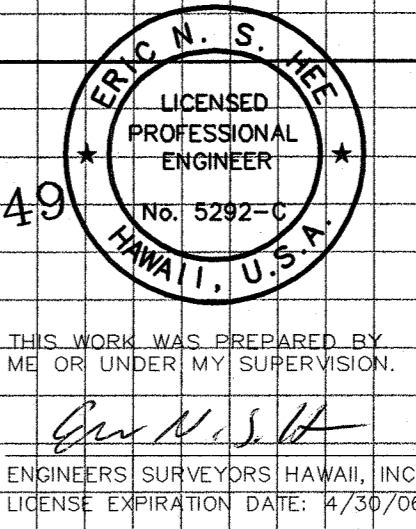
LEGEND FOR AS-BUILT POSTINGS	
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	Double line for as-built deletion
Roadway	Text for as-built posting



PROFILE
SCALE: HOR 1"=40'
VERT 1"=8'

ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
No.	

\\Esh-1\ESH-1\Engineering\Projects\1994\94-056 Haleakala Hwy Phase 2 - ASBUILT.sht 84-ASBUILT.dwg 1:27pm - Fr, 10/02/09 HAB



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

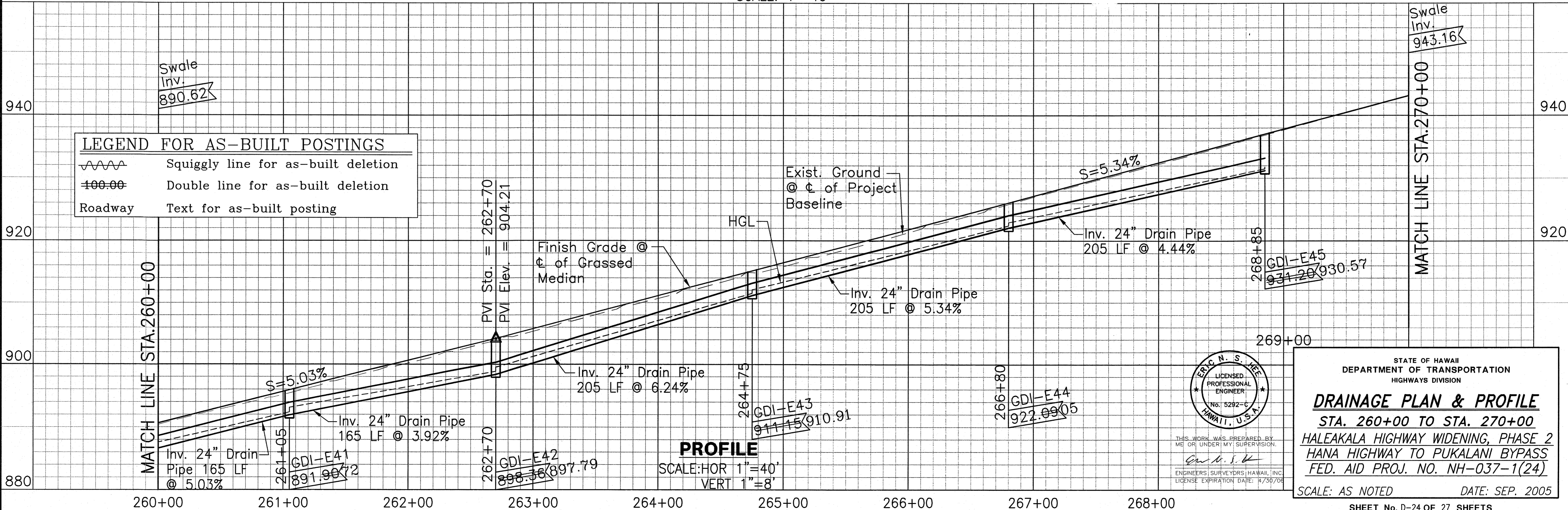
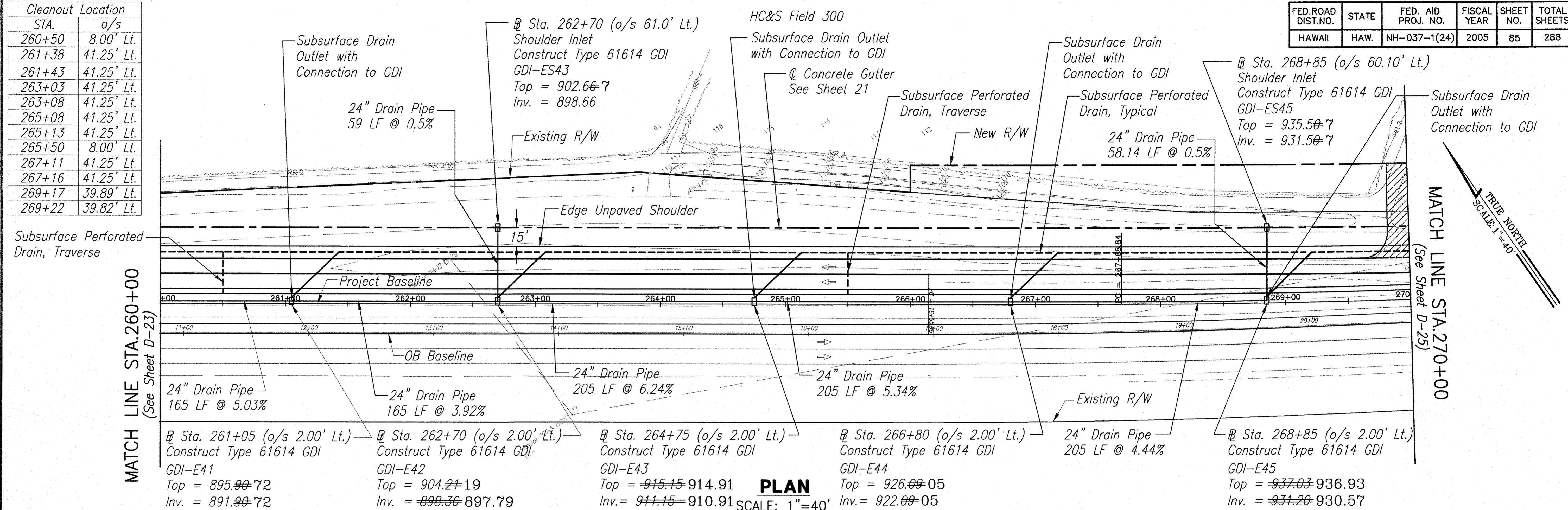
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STA. 250+00 TO STA. 260+00
HALEAKALA HIGHWAY WIDENING, PHASE 2
HANA HIGHWAY TO PUKALANI BYPASS
FED. AID PROJ. NO. NH-037-1(24)

SCALE: AS NOTED DATE: SEP. 2005

SHEET No. D-23 OF 27 SHEETS

Cleanout Location STA.	o/s
260+50	8.00' Lt.
261+38	41.25' Lt.
261+43	41.25' Lt.
263+03	41.25' Lt.
263+08	41.25' Lt.
265+08	41.25' Lt.
265+13	41.25' Lt.
265+50	8.00' Lt.
267+11	41.25' Lt.
267+16	41.25' Lt.
269+17	39.89' Lt.
269+22	39.82' Lt.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-037-1(24)	2005	85	288

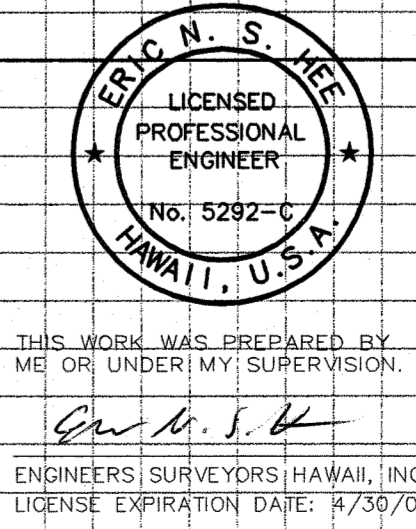


LEGEND FOR AS-BUILT POSTINGS

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	Double line for as-built deletion
	Roadway
	Text for as-built posting

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

11ESH-1/ESH/Engineering/Projects/1994/04-056 Haleakala Hwy Phase 2 - ASBUILT sht 85-ASBUILT.dwg 10:17am - Fri, 10/02/09 14B
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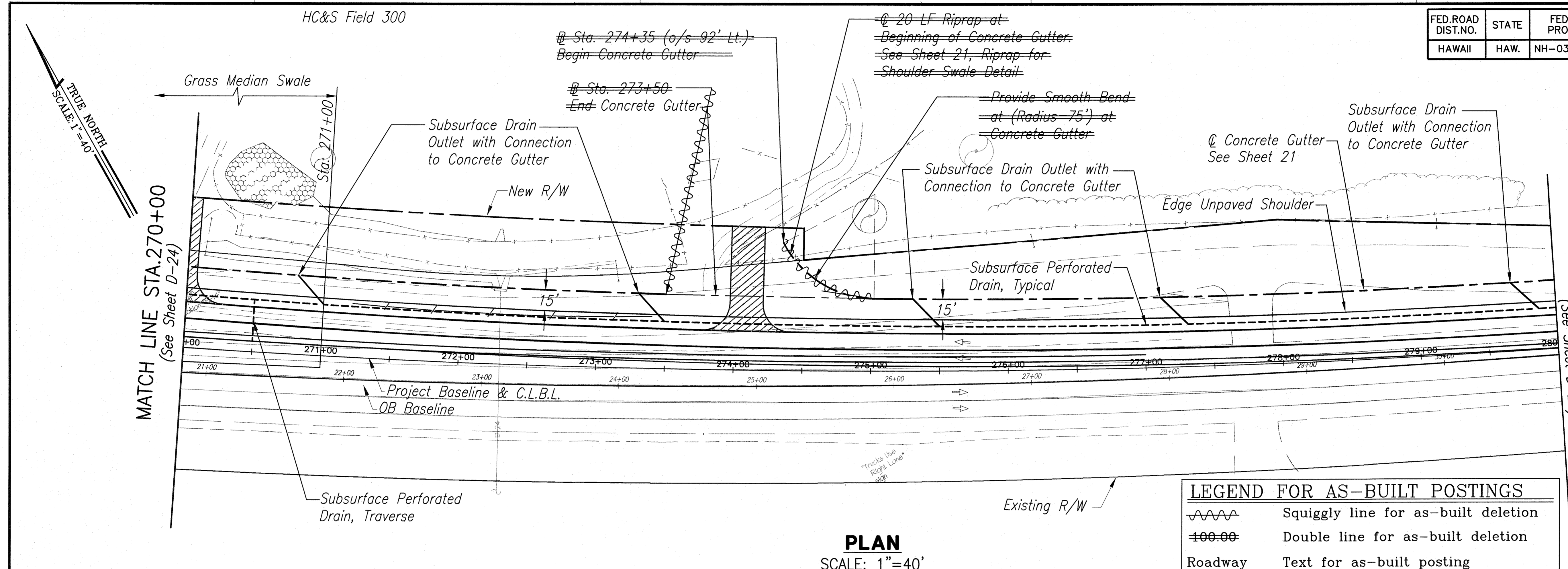
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE PLAN & PROFILE
STA. 260+00 TO STA. 270+00
HALEAKALA HIGHWAY WIDENING, PHASE 2
HANA HIGHWAY TO PUKALANI BYPASS
FED. AID PROJ. NO. NH-037-1(24)

SCALE: AS NOTED DATE: SEP. 2005
SHEET No. D-24 OF 27 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-037-1(24)	2005	86	288

Cleanout Location STA.	o/s
270+50	7.78' Lt.
270+95	37.44' Lt.
271+00	37.37' Lt.
273+45	35.97' Lt.
273+50	35.91' Lt.
275+45	33.25' Lt.
275+50	33.25' Lt.
277+24	31.16' Lt.
277+29	31.14' Lt.
279+79	29.69' Lt.
279+84	29.67' Lt.



PLAN
SCALE: 1"=40'

LEGEND FOR AS-BUILT POSTINGS

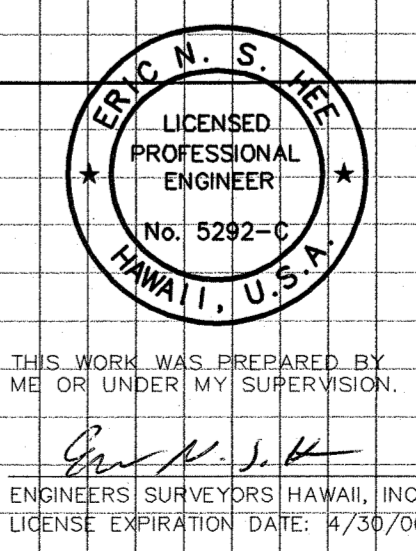
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	Double line for as-built deletion
Roadway	Text for as-built posting



PROFILE
SCALE: HOR 1"=40'
VERT 1"=8'

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

\\Esh-1\ESH\Engineering\Projects\1994\04-066 Haleakala Hwy Phase 2 - ASBUILT\sh. 86-ASBUILT.dwg 10:16am - Fri, 10/02/09 AMR

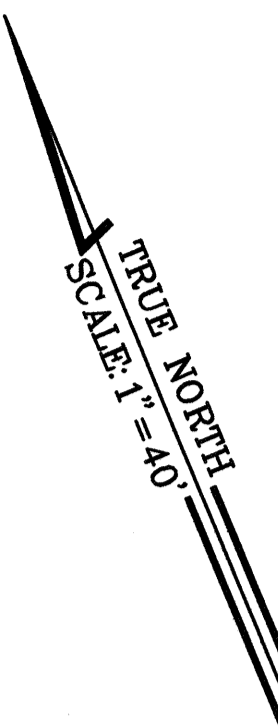
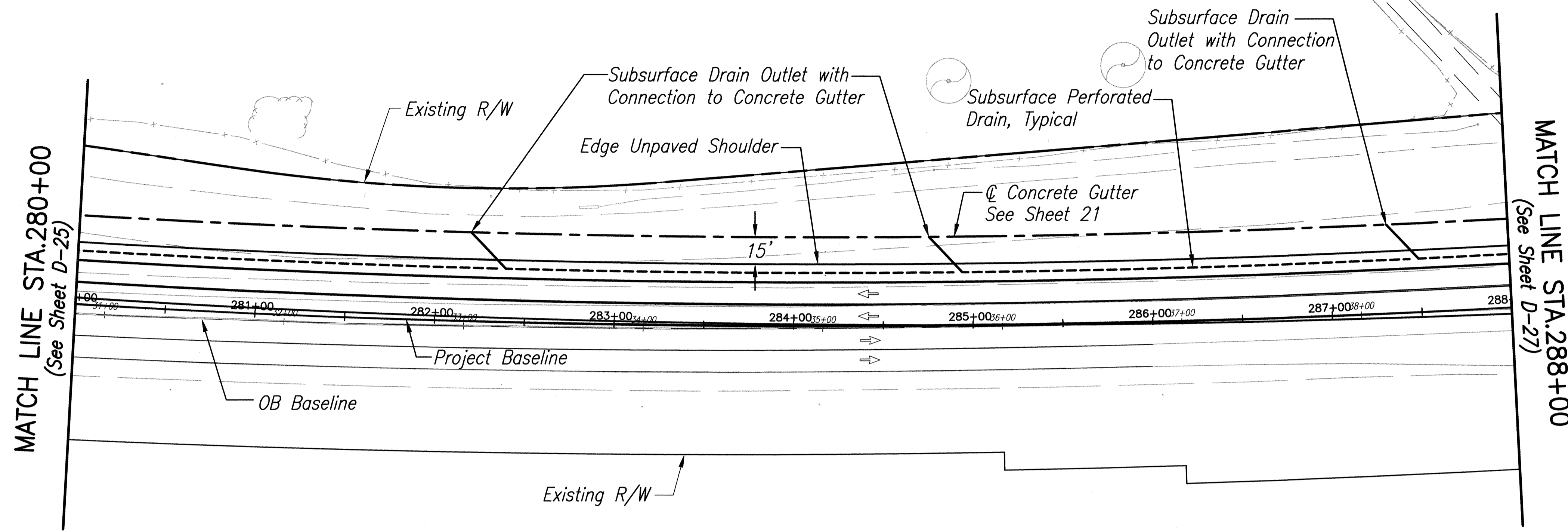


STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE PLAN & PROFILE
STA. 270+00 TO STA. 280+00
HALEAKALA HIGHWAY WIDENING, PHASE 2
HANA HIGHWAY TO PUKALANI BYPASS
FED. AID PROJ. NO. NH-037-1(24)

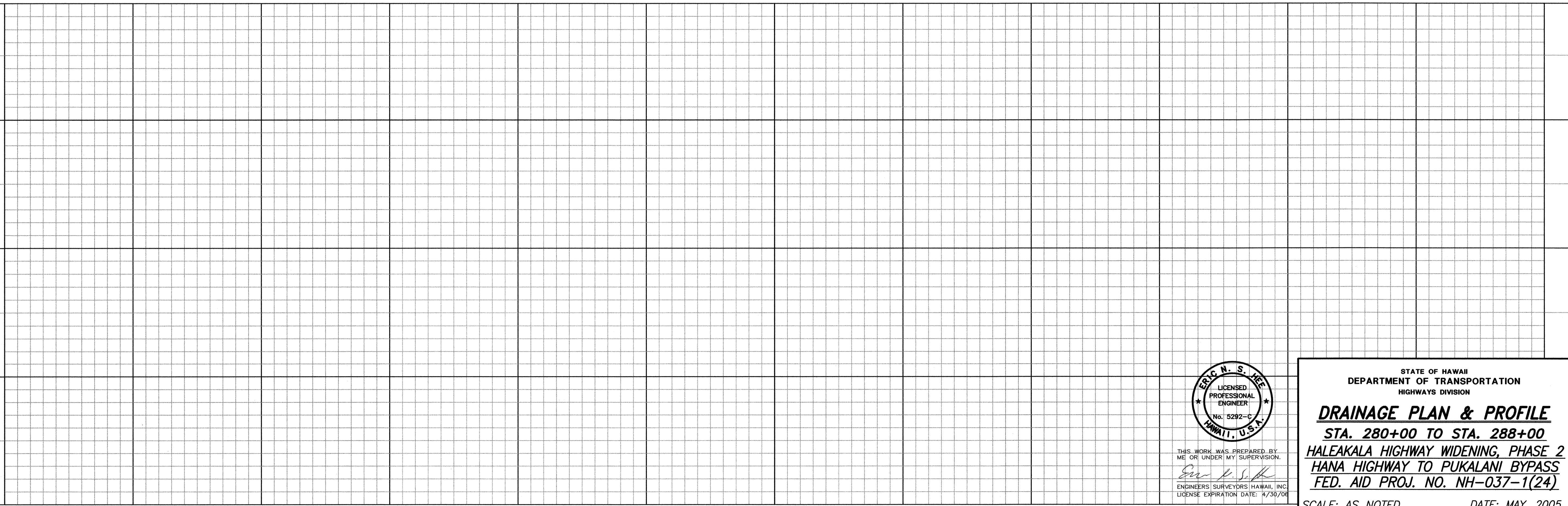
SCALE: AS NOTED DATE: SEP., 2005

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-037-1(24)	2005	87	288



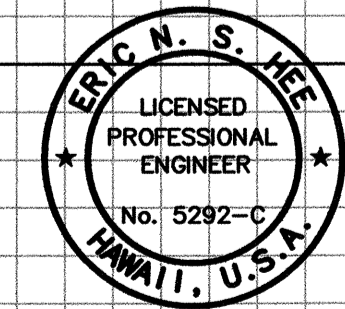
Cleanout Location	
STA.	o/s
282+34	28.85' Lt.
282+39	28.85' Lt.
284+89	28.61' Lt.
284+94	28.61' Lt.
287+44	29.00' Lt.
287+49	29.01' Lt.

PLAN
SCALE: 1"=40'



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

\\Esh-1\esh\Engineering\Projects\94\94-056 Haleakala Hwy\PHASE 2\WORKING\FOLDER 194-560R\Amdrt.dwg 3:52pm - Sat, 10/01/05 AMR



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Eric N. S. Kee
ENGINEERS SURVEYORS HAWAII, INC.
LICENSE EXPIRATION DATE: 4/30/06

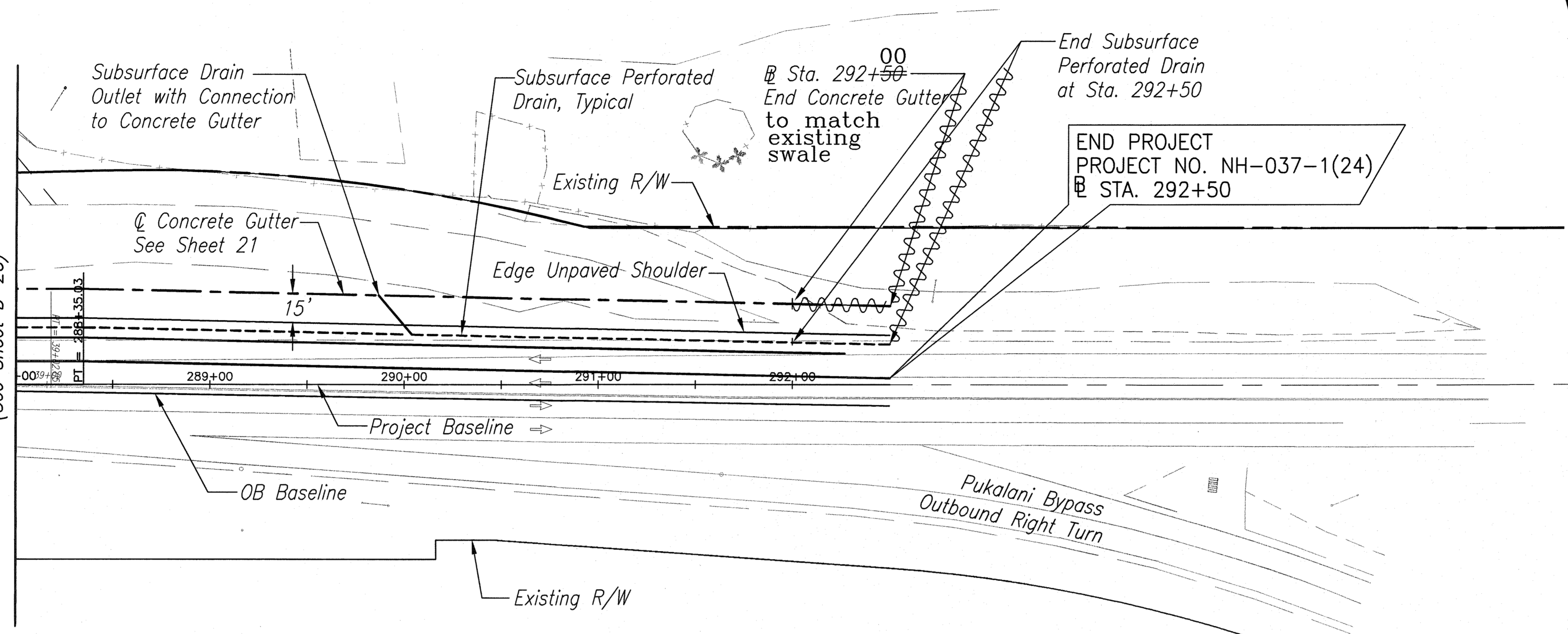
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE PLAN & PROFILE
STA. 280+00 TO STA. 288+00
HALEAKALA HIGHWAY WIDENING, PHASE 2
HANA HIGHWAY TO PUKALANI BYPASS
FED. AID PROJ. NO. NH-037-1(24)

SCALE: AS NOTED DATE: MAY, 2005

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-037-1(24)	2005	88	288

MATCH LINE STA. 288+00
(See Sheet D-26)



TRUE NORTH
SCALE: 1"=40'

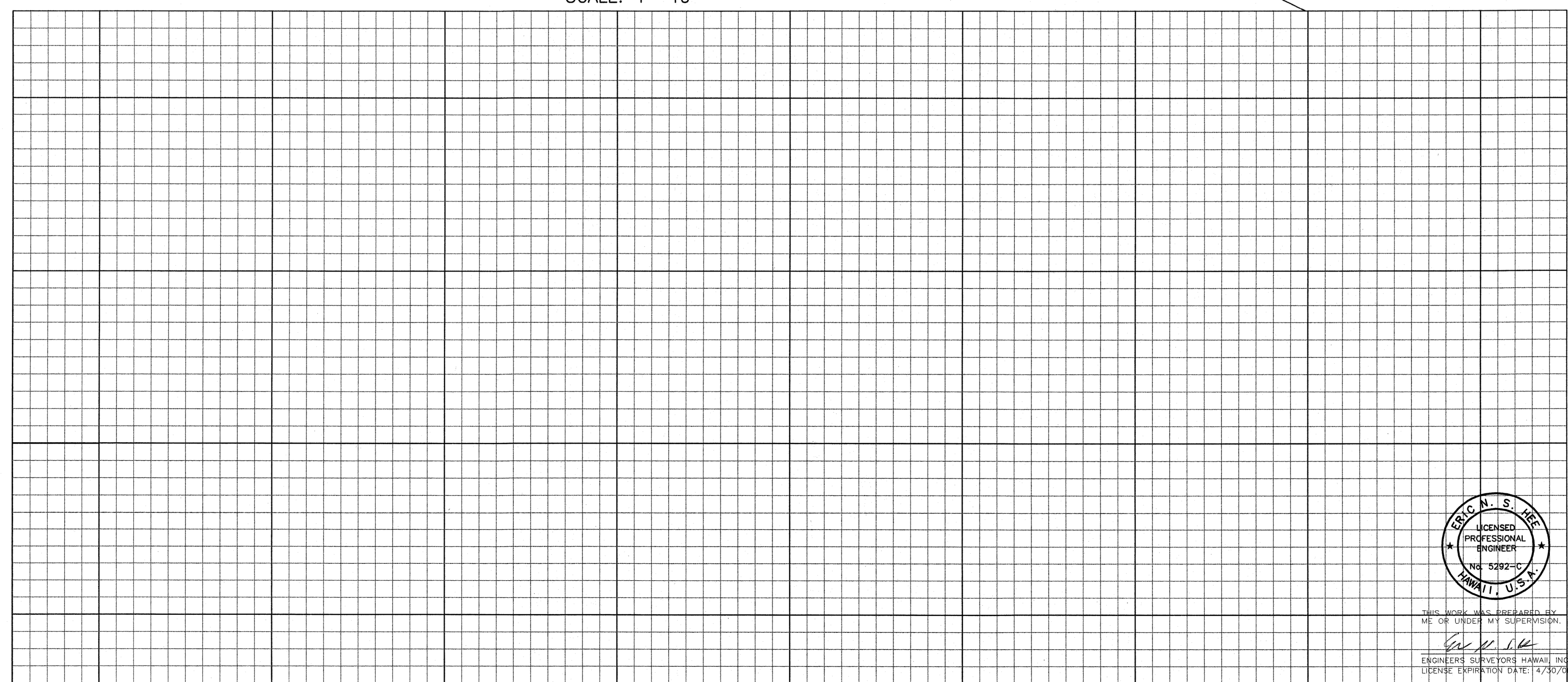
LEGEND FOR AS-BUILT POSTINGS

	Squiggly line for as-built deletion
	Double line for as-built deletion
	Roadway Text for as-built posting

Cleanout Location

STA.	o/s
289+99	25.85' Lt.
290+04	25.79' Lt.
292+50	20.70' Lt.

PLAN
SCALE: 1"=40'



ORIGINAL PLAN	DATE
NO.	
DESIGNED BY	
CHECKED BY	
DATE	

\\esh-1\ESH\Engineering\Projects\1994\94-066 Haleakala Hwy\Phase 2 - ASBUILT\sh. 88-ASBUILT.dwg 10:15am - Fri, 10/02/09 AMR



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Eric N. S. HEE
ENGINEERS SURVEYORS HAWAII INC.
LICENSE EXPIRATION DATE: 4/30/09

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE PLAN & PROFILE
STA. 288+00 TO END
HALEAKALA HIGHWAY WIDENING, PHASE 2
HANA HIGHWAY TO PUKALANI BYPASS
FED. AID PROJ. NO. NH-037-1(24)

SCALE: AS NOTED DATE: MAY, 2005

SHEET No. D-27 OF 27 SHEETS

AS-BUILT

\\esh-1\ESH\Engineering\Projects\1994\94-066 Haleakala Hwy\Phase 2 - ASBUILT\sh. 88-ASBUILT.dwg, sht. 88, 10/2/2009 10:15:51 AM, 1:1

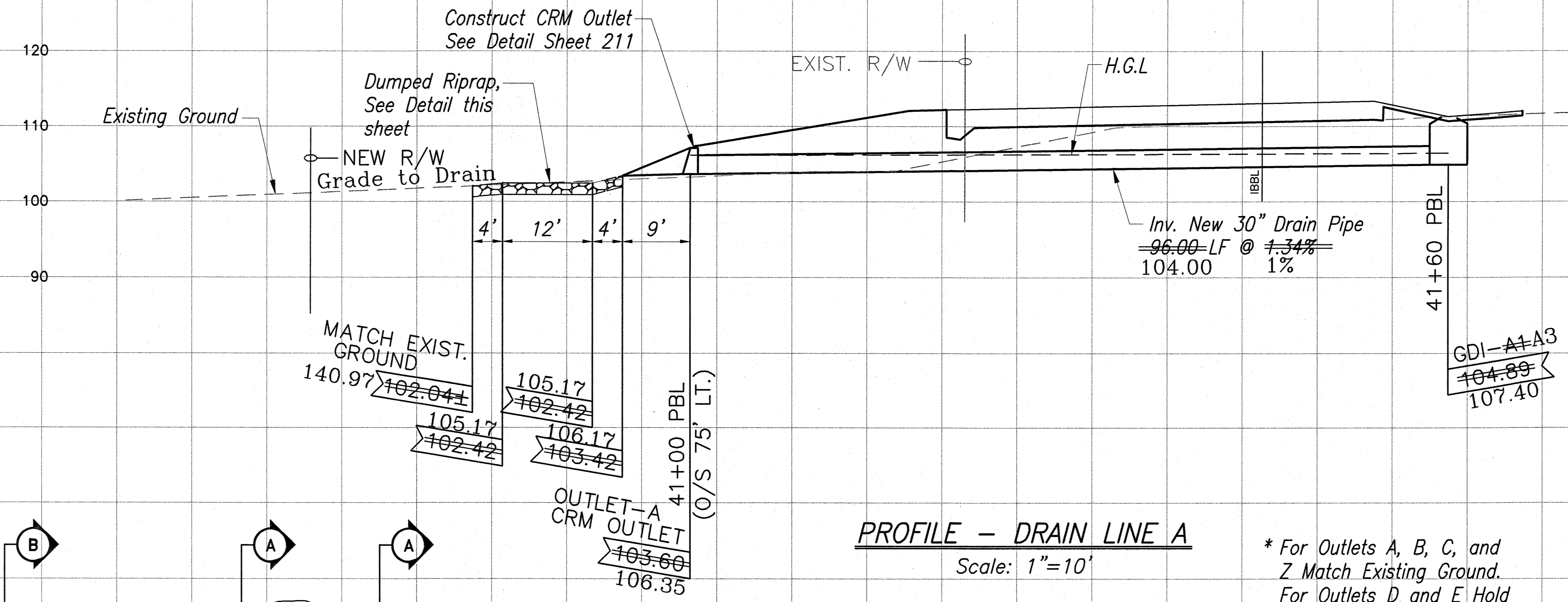
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-037-1(24)	2005	89	288

LEGEND FOR AS-BUILT POSTINGS

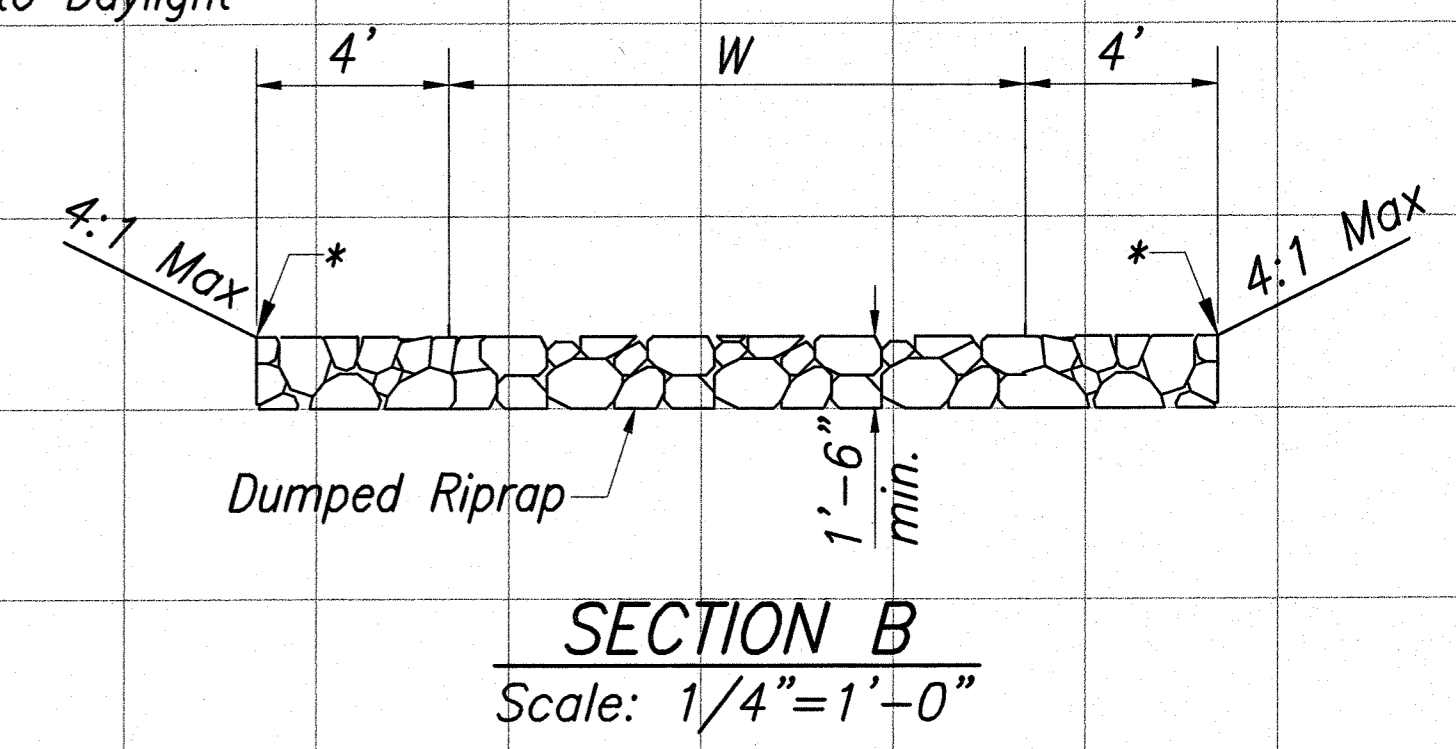
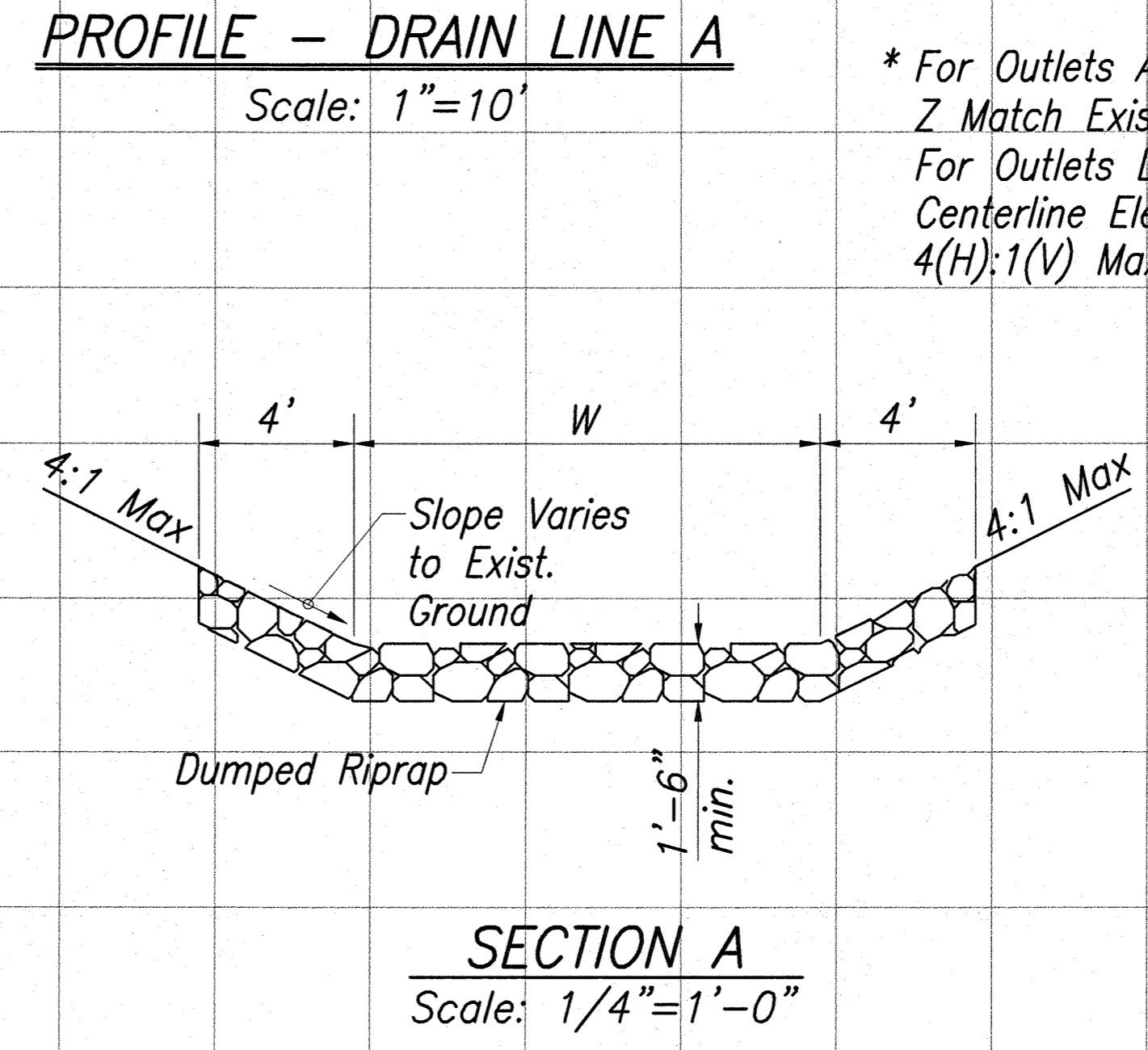
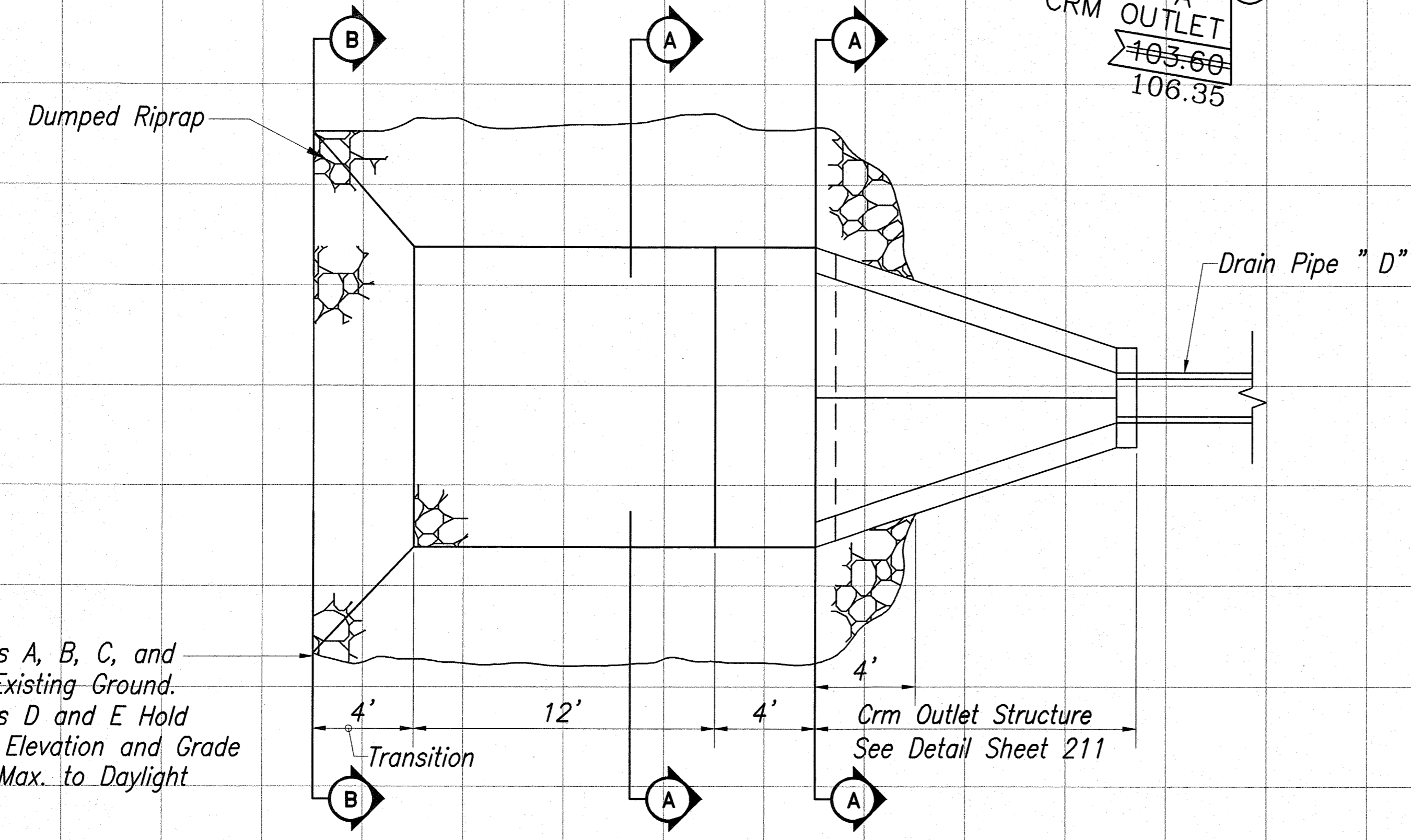
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~~±00.00~~ Double line for as-built deletion

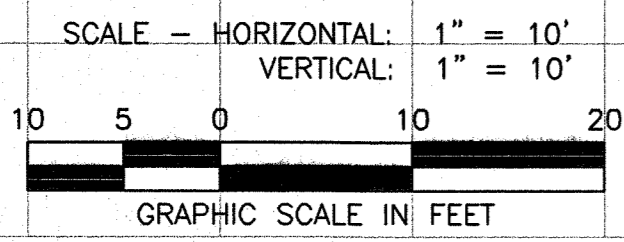
Roadway Text for as-built posting



| Outlet Structure | Drain Pipe Diameter D (inch) | W (ft.) |
|------------------|------------------------------|---------|
| A                | 30                           | 14      |
| B                | 24                           | 12      |
| C                | 24                           | 12      |
| D                | 24                           | 12      |
| E                | 36                           | 16      |
| Z                | 36                           | 16      |



For Outlets A, B, C, and Z Match Existing Ground.  
For Outlets D and E Hold Centerline Elevation and Grade 4(H):1(V) Max. to Daylight



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

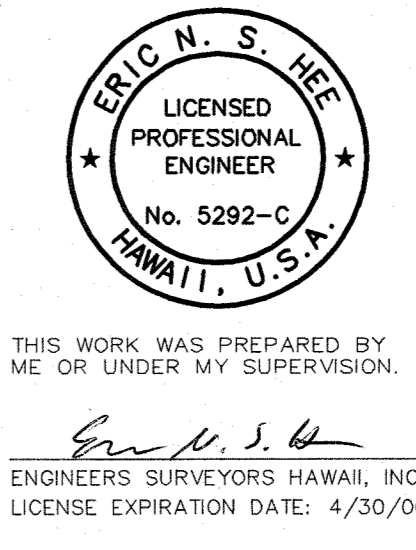
**TYPICAL SECTION OF DUMPED RIPRAP AT OUTLET STRUCTURES**

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

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

|               |      |
|---------------|------|
| ORIGINAL PLAN | DATE |
| DESIGNED BY   |      |
| TRACED BY     |      |
| QUANTITIES BY |      |
| NO.           |      |

PROJECT: HAWAIIAN HIGHWAY IMPROVEMENTS (Phase 2) - ASBUILT (SHT 89) AND ASBUILT (SHT 90) - 2005  
 DATE: 11/28/05  
 DRAWN BY: [Name]  
 CHECKED BY: [Name]  
 DESIGNED BY: [Name]  
 QUANTITIES BY: [Name]  
 NO.: [Number]



11/28/05

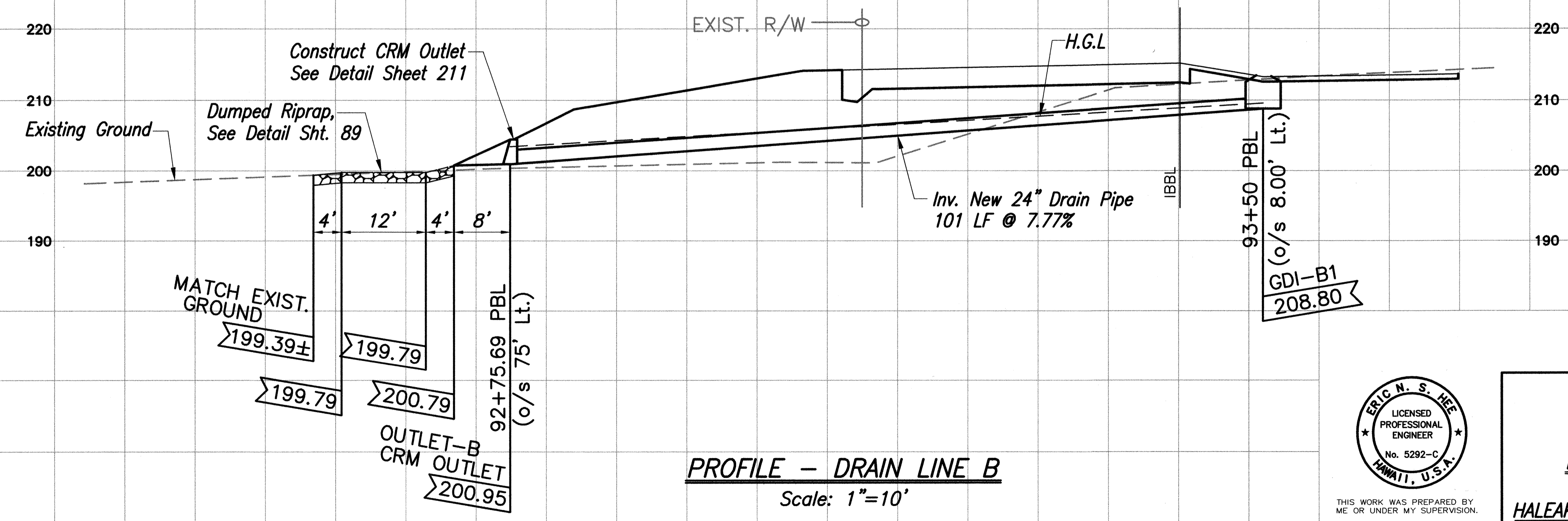
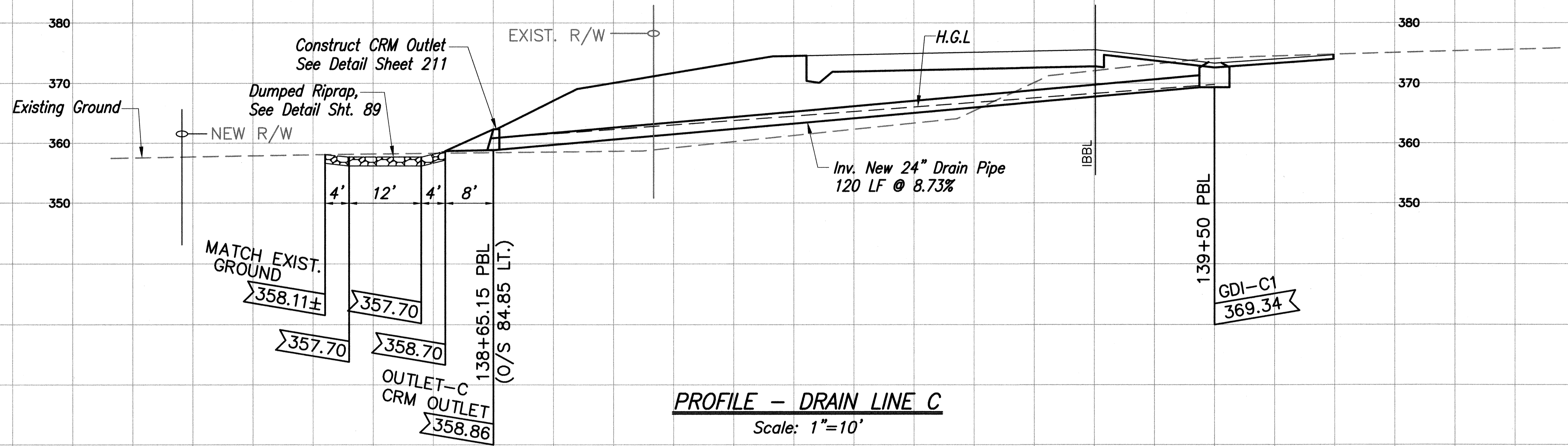
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DRAIN LINE PROFILE**

HALEAKALA HIGHWAY WIDENING, PHASE 2  
HANA HIGHWAY TO PUKALANI BYPASS  
FED. AID PROJ. NO. NH-037-1(24)  
SCALE: AS NOTED DATE: SEP., 2005

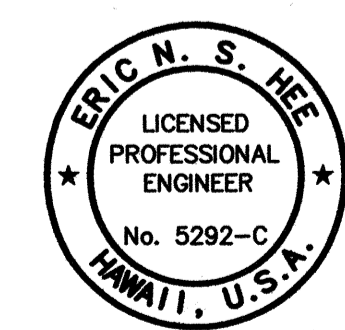
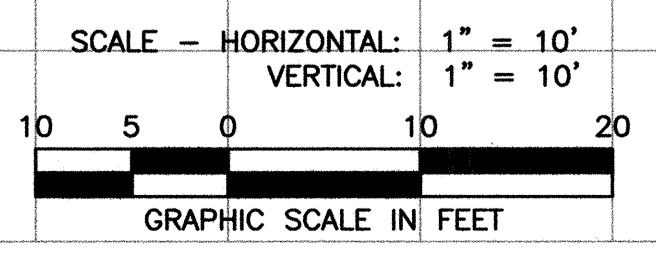
SHEET No. 1 OF 5 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | NH-037-1(24)       | 2005        | 90        | 288          |



|               |      |
|---------------|------|
| ORIGINAL PLAN | DATE |
| DRAWN BY      |      |
| DESIGNED BY   |      |
| NOTE BOOK     |      |
| QUANTITIES BY |      |
| CHECKED BY    |      |
| No.           |      |

\Leh-1\en\Engineering\Projects\1994\194-058 Hana\hwa\Phase 2\WORKING\ORDER\DRAWING LINE PROFILE.dwg Wed, Oct 05 2005 - 1:16pm



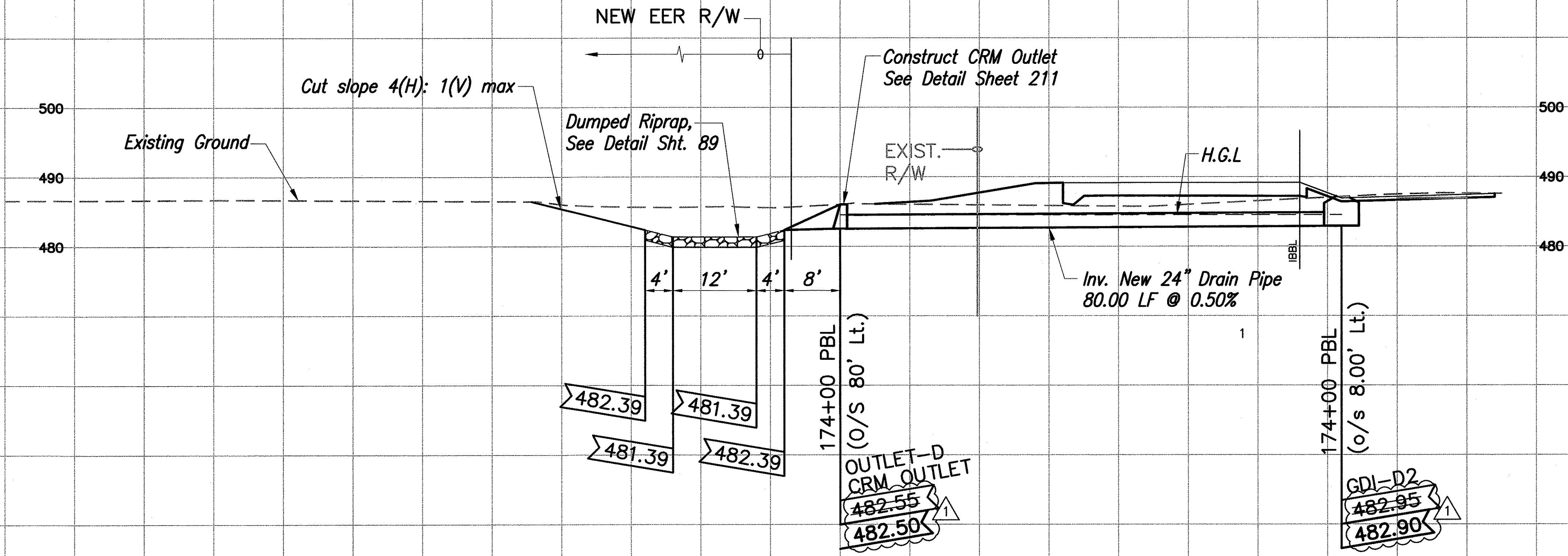
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
*Eric N. S. Hee*  
 ENGINEERS SURVEYORS HAWAII, INC.  
 LICENSE EXPIRATION DATE: 4/30/06

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**DRAIN LINE PROFILE**

HALEAKALA HIGHWAY WIDENING, PHASE 2  
 HANA HIGHWAY TO PUKALANI BYPASS  
 FED. AID PROJ. NO. NH-037-1(24)  
 SCALE: AS NOTED DATE: SEP., 2005

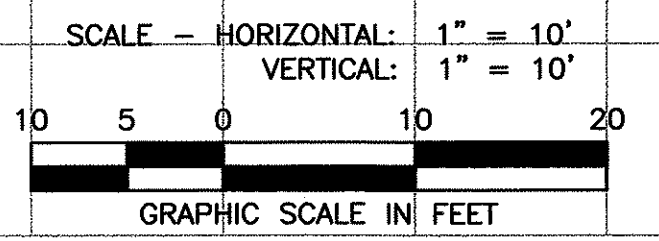
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | NH-037-1(24)       | 2005        | 91        | 288          |



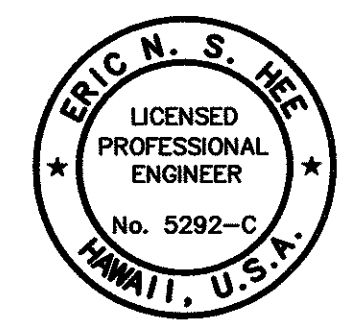
**PROFILE - DRAIN LINE "D"**  
Scale: 1"=10'

|                   |      |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY          |      |
| DESIGNED BY       |      |
| QUANTITIES BY     |      |
| CHECKED BY        |      |
| No.               |      |

\E:\01\1\enr\Engineering\Projects\1994\194-059\Haleakala Hwy\PHASE 2\194-059\Haleakala change Order-Fourth set\DRAIN LINE PROFILE.dwg, May 15 2007 - 3:02pm



|        |   |                        |
|--------|---|------------------------|
| 5/8/07 | ▲ | REVISED PROFILE INVERT |
| DATE   |   | REVISION               |



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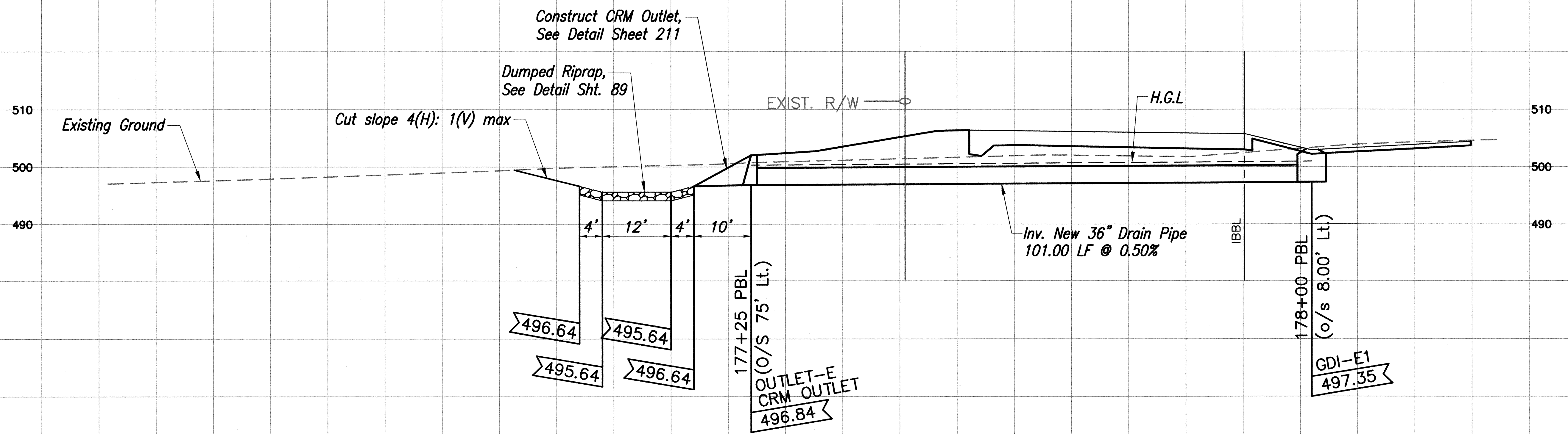
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**DRAIN LINE PROFILE**

**HALEAKALA HIGHWAY WIDENING, PHASE 2  
 HANA HIGHWAY TO PUKALANI BYPASS  
 FED. AID PROJ. NO. NH-037-1(24)  
 SCALE: AS NOTED DATE: SEP., 2005**

SHEET No. 3 OF 5 SHEETS

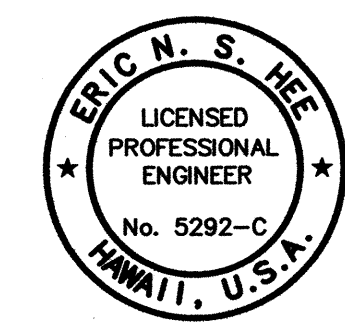
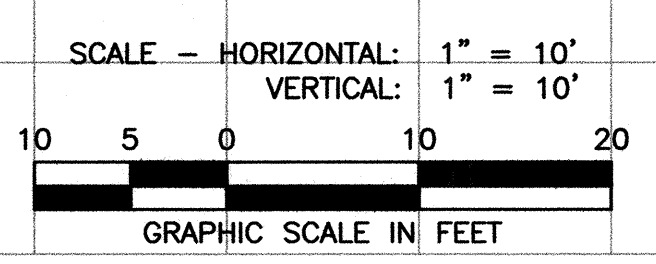
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| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| HAWAII              | HAW.  | NH-037-1(24)       | 2005        | 92        | 288          |



**PROFILE - DRAIN LINE "E"**  
Scale: 1"=10'

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

\\\Esc-1\esh\Engineering\Projects\1994\194-208 HALEAKALA Hwy\Phase 2\WORKING\DRAIN LINE PROFILE.dwg Wed, Oct 05 2005 - 1:15pm  
 208



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 LICENSE EXPIRATION DATE: 4/30/06

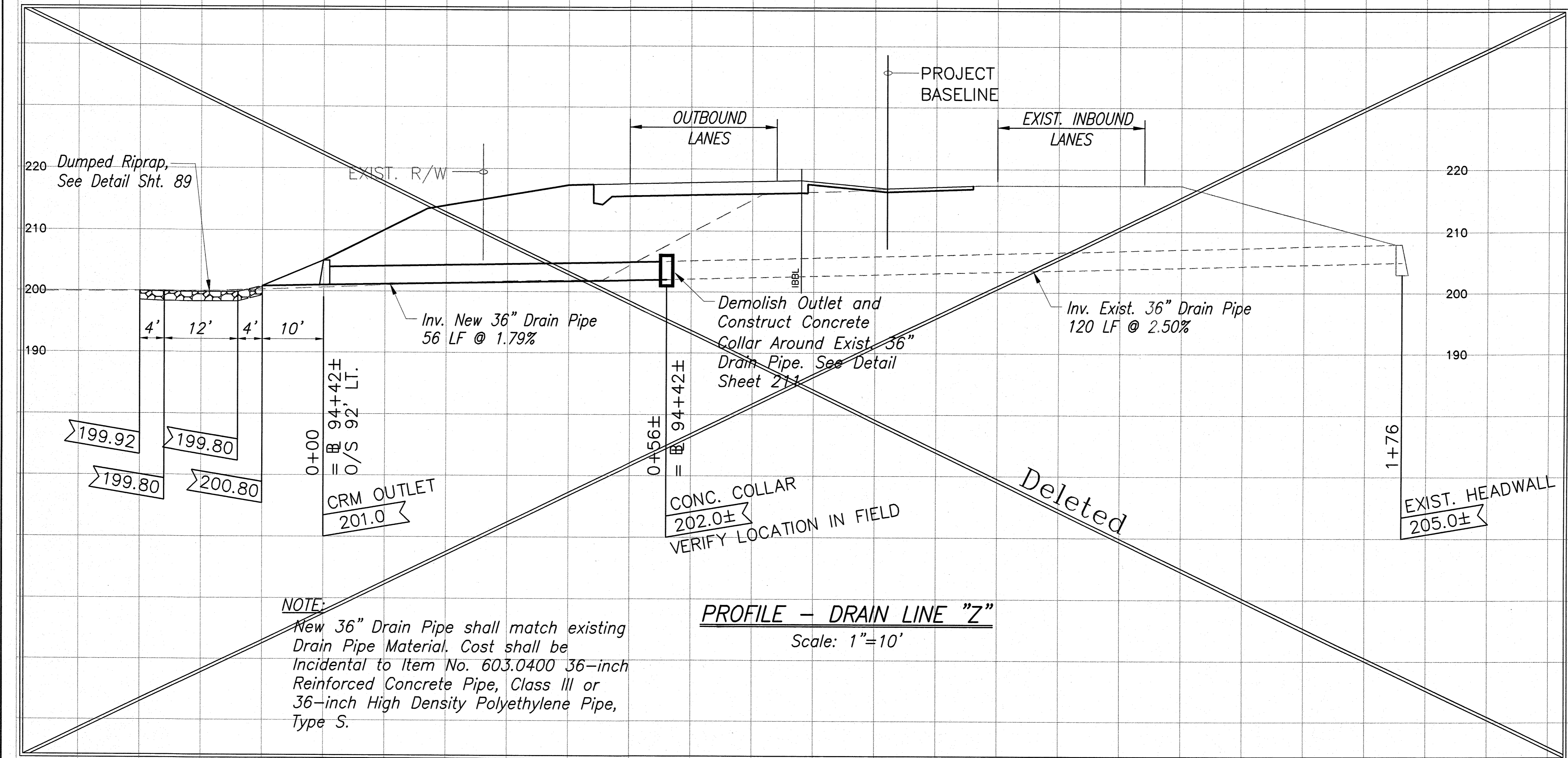
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**DRAIN LINE PROFILE**

**HALEAKALA HIGHWAY WIDENING, PHASE 2  
 HANA HIGHWAY TO PUKALANI BYPASS  
 FED. AID PROJ. NO. NH-037-1(24)  
 SCALE: AS NOTED DATE: SEP. 2005**

SHEET No. 4 OF 5 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
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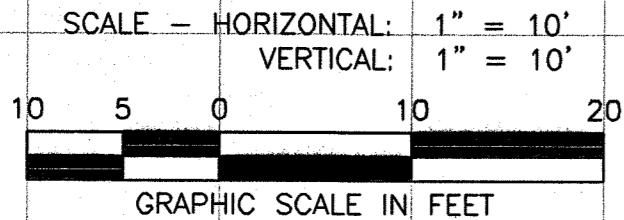


**NOTE:**  
 New 36" Drain Pipe shall match existing Drain Pipe Material. Cost shall be incidental to Item No. 603.0400 36-inch Reinforced Concrete Pipe, Class III or 36-inch High Density Polyethylene Pipe, Type S.

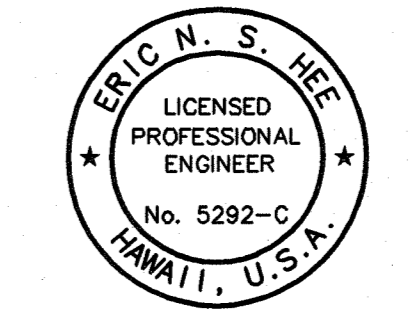
**PROFILE - DRAIN LINE "Z"**  
 Scale: 1"=10'

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

\\esh-1\ESH\Engineering\Projects\1994\94-026 Haleakala Hwy\Phase 2 - ASBUILT\SHR 93-ASBUILT.dwg Fri, Sep 25 2009 - 1:25pm  
 A/B



| LEGEND FOR AS-BUILT POSTINGS |                                     |
|------------------------------|-------------------------------------|
|                              | Squiggly line for as-built deletion |
|                              | Double line for as-built deletion   |
| Roadway                      | Text for as-built posting           |



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 LICENSE EXPIRATION DATE: 4/30/06

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**DRAIN LINE PROFILE**

HALEAKALA HIGHWAY WIDENING, PHASE 2  
 HANA HIGHWAY TO PUKALANI BYPASS  
 FED. AID PROJ. NO. NH-037-1(24)  
 SCALE: AS NOTED DATE: SEP., 2005

AS-BUILT