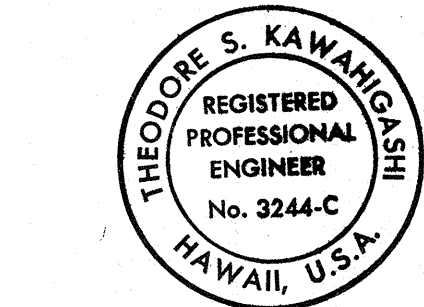


DRAINAGE SUMMARY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(51)	1989	12	106

STRUCTURES			PIPE CULVERTS		ESTIMATED QUANTITIES														REMARKS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
INLET NUMBER	TYPE	STATION	ITEM NO.		206.	503.	602.		603.	603.	603.		604.				611.		660.	660.	660.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL	
PLAN	
NOTE BOOK	
NO.	



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OR UNDER MY SUPERVISION
Theodore S. Kawahigashi
Signature

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE ESTIMATED
QUANTITIES

INTERSTATE ROUTE H-3
FA.I PROJECT NO. I-H3-1(51)

SCALE: NONE

DATE: AUG. 1988

SHEET No. 1 OF 1 SHEETS

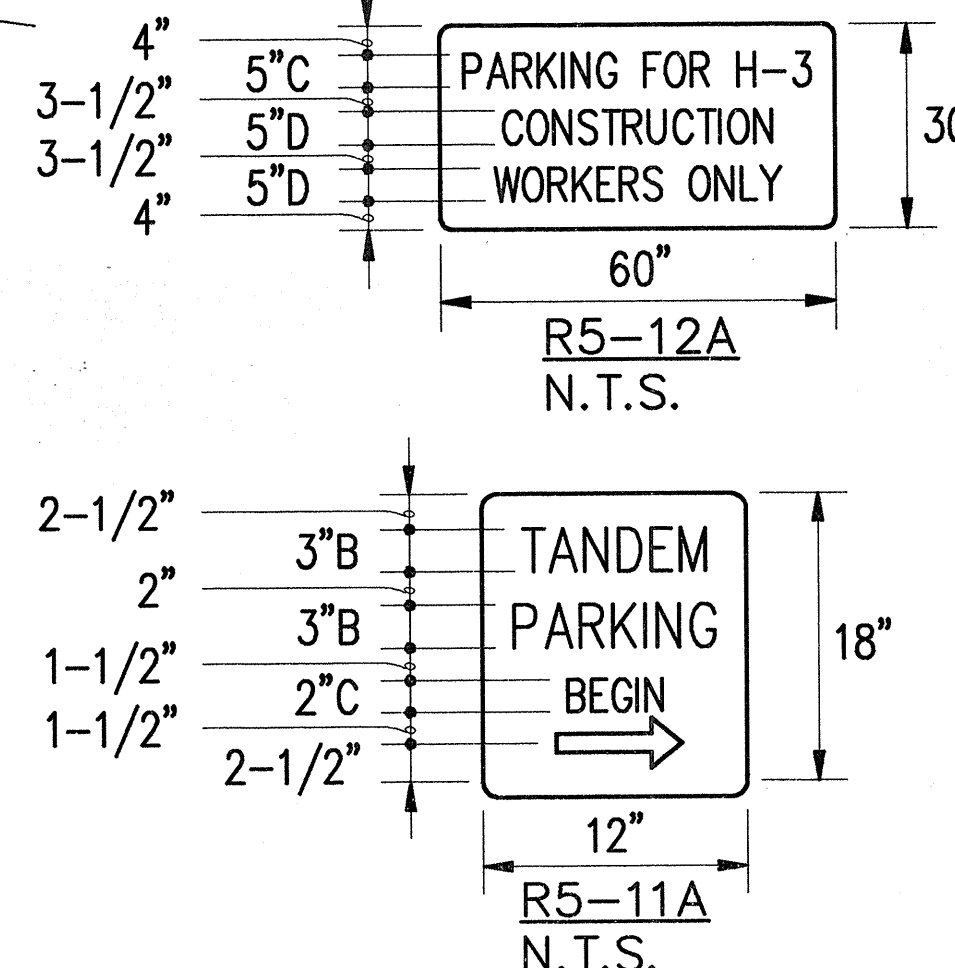
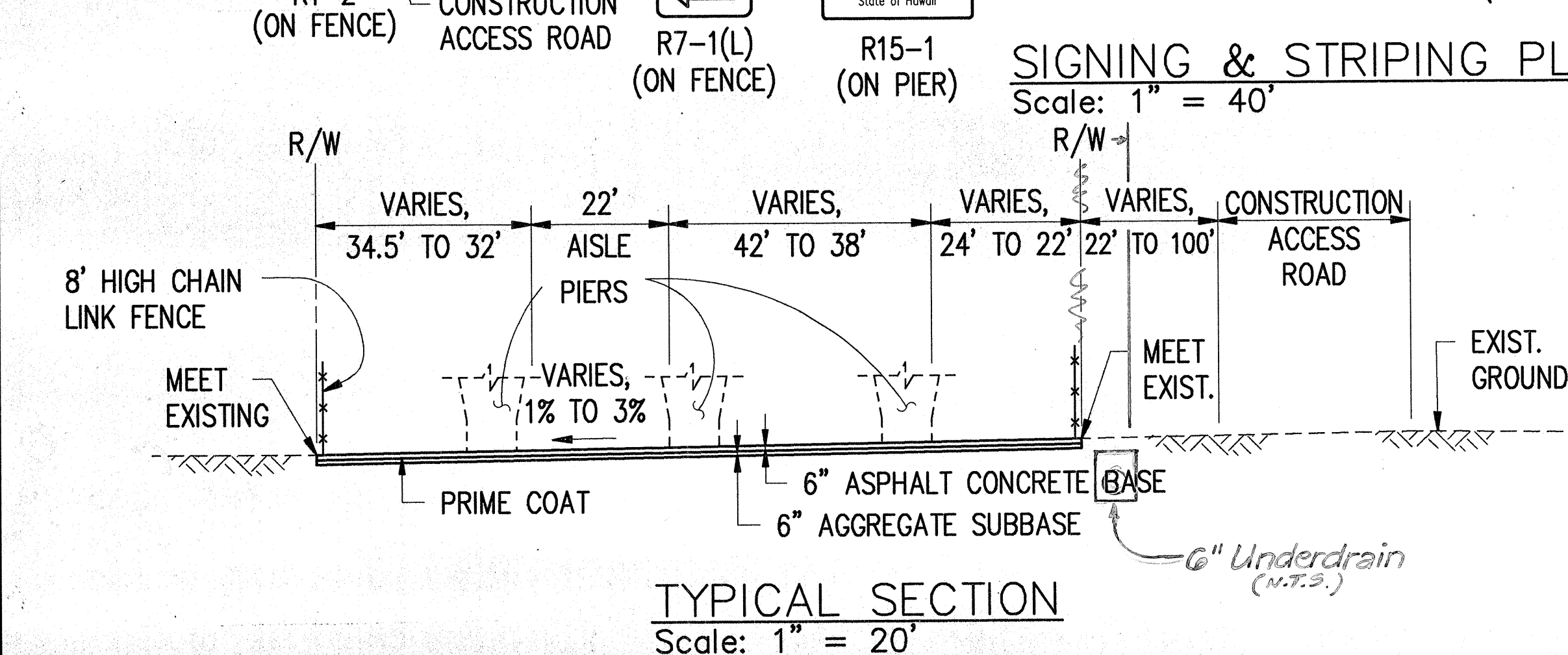
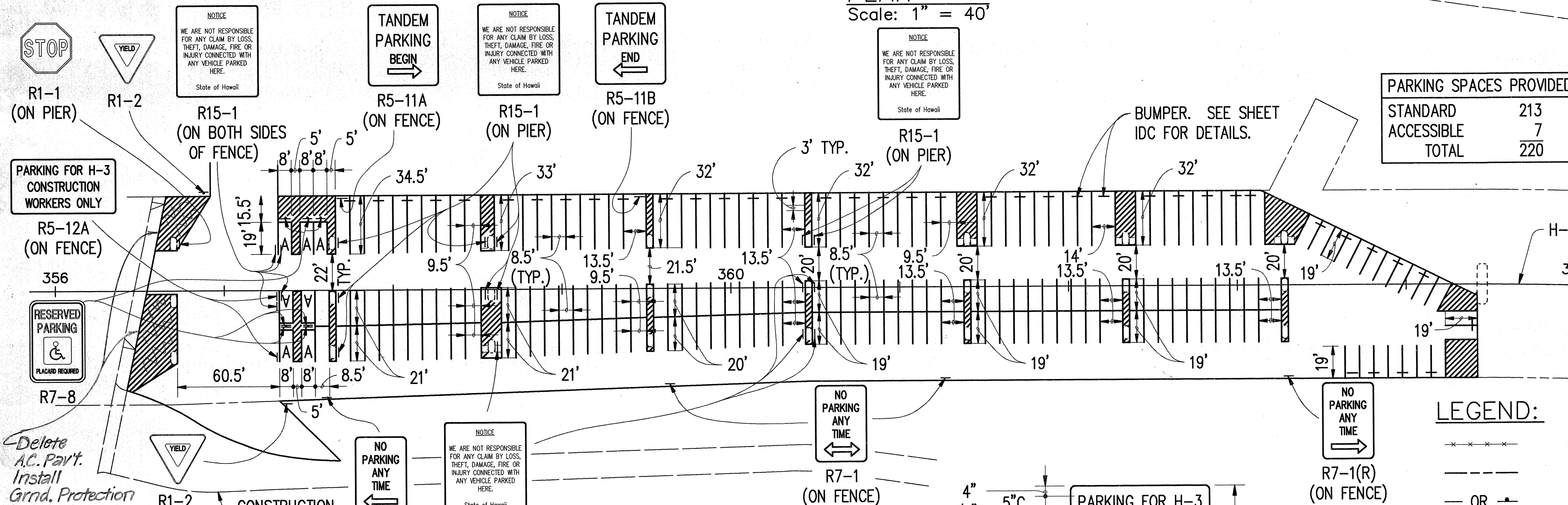
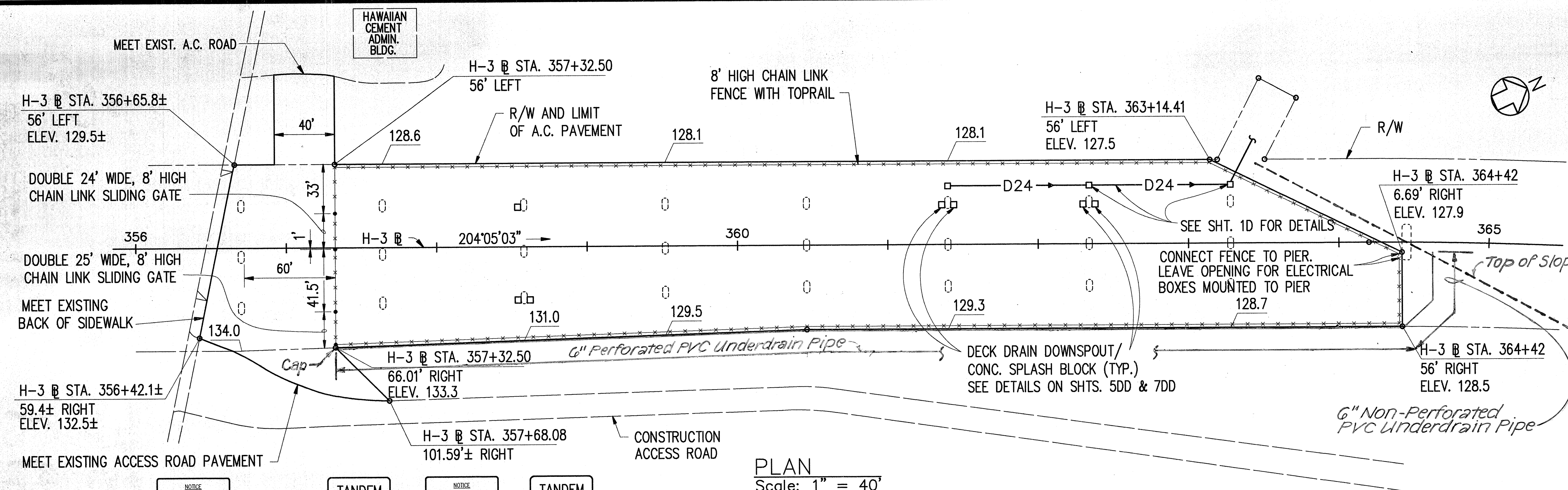
ORIGINAL PLAN	SURVEY PLOTTED BY _____ DATE _____
NOTE BOOK	DRAWN BY _____
	TRACED BY _____
	DESIGNED BY _____
	QUANTITIES BY _____
No. _____	CHECKED BY _____



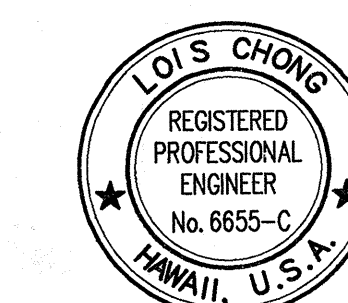
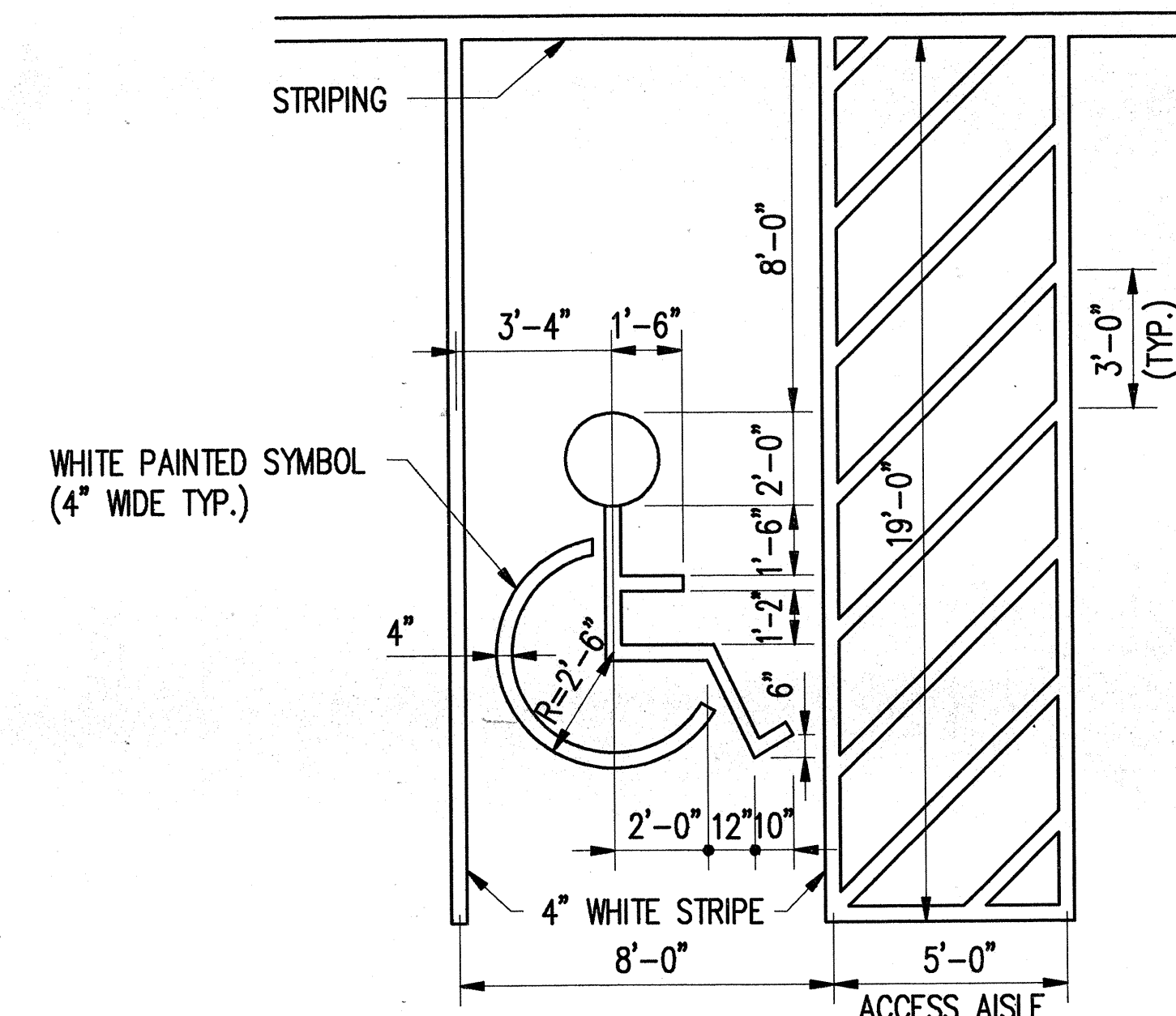
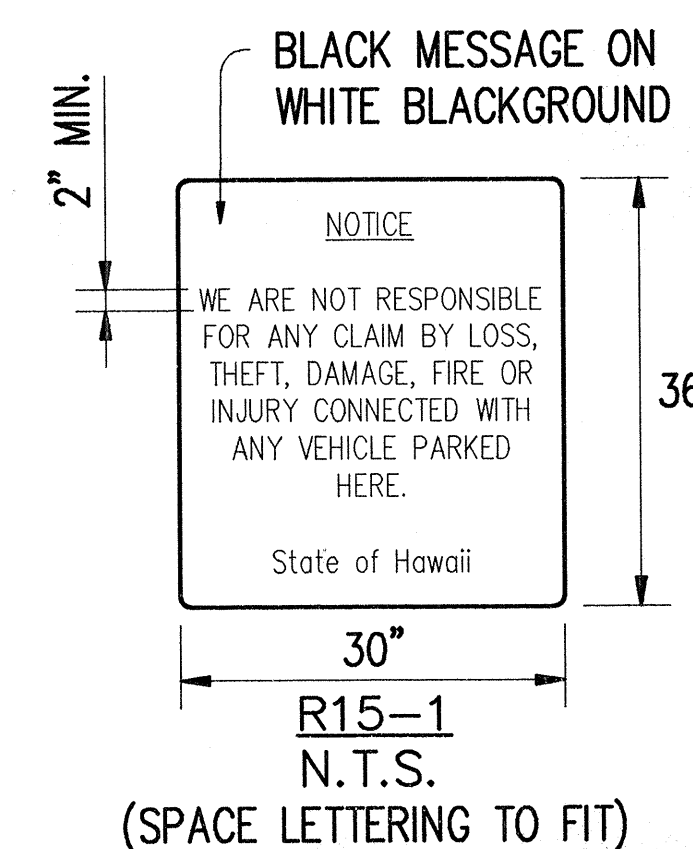
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(51)	1989	C.O. 13S-1	106

NOTES:

- SIGNS, PAVEMENT MARKINGS AND STRIPINGS SHALL CONFORM TO THE LATEST EDITIONS AND AMENDMENTS OF THE FHWA PUBLICATIONS, "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", 1988 AND "STANDARD HIGHWAY SIGNS", 1972 AND AS AMENDED.
- UNLESS OTHERWISE NOTED ON THE PLANS EXACT LOCATIONS OF SIGNS WILL BE DETERMINED BY THE ENGINEER.
- ALL STRIPINGS SHALL BE 4" WHITE PAINT.
- PARKING STALLS MARKED WITH "A" SHALL HAVE THE 'SYMBOL OF ACCESSIBILITY' PAINTED WITHIN EACH STALL. SEE 'SYMBOL OF ACCESSIBILITY' PAVEMENT MARKING DETAIL.
- THIS SHEET SHALL SUPERSEDE SHEET ID WHERE CONFLICTS IN INFORMATION OCCUR.
- ALL SIGNS SHALL BE HI-INTENSITY.
- DELETE GROUND PROTECTION BETWEEN H-3 BASELINE STATIONS 356+50 AND 364+50.
- ALL SIGN HARDWARE WILL BE FABRICATED IN SUCH A WAY THAT IT WILL PREVENT REMOVAL OF THE SIGN.



NOTE:
Sign R5-11B similar to R5-11A.

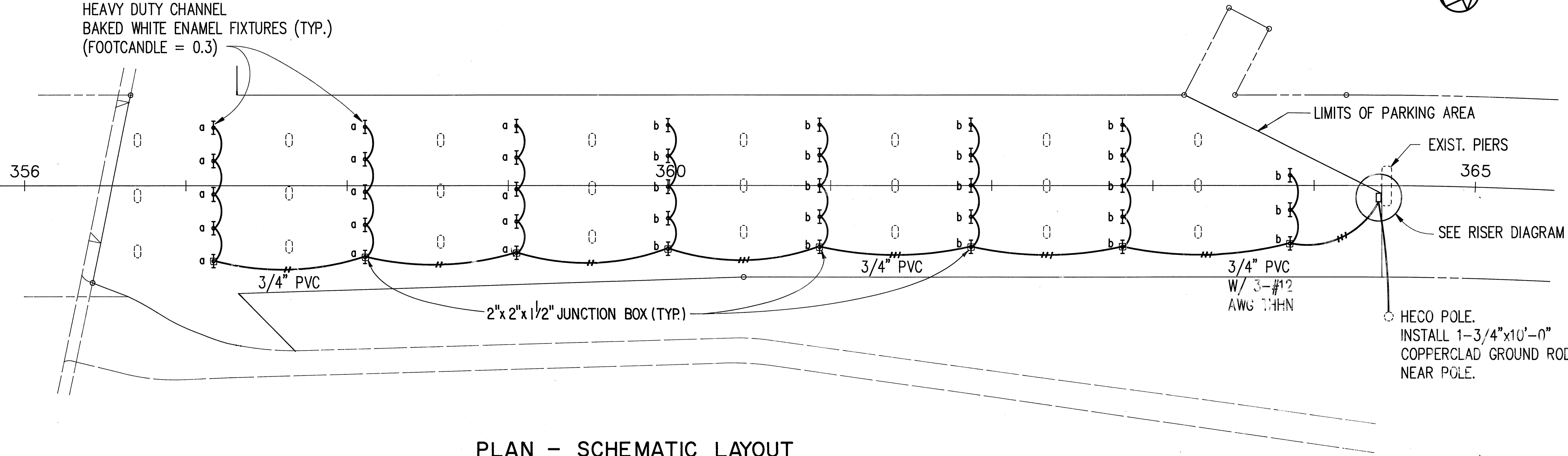


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OR UNDER MY SUPERVISION.

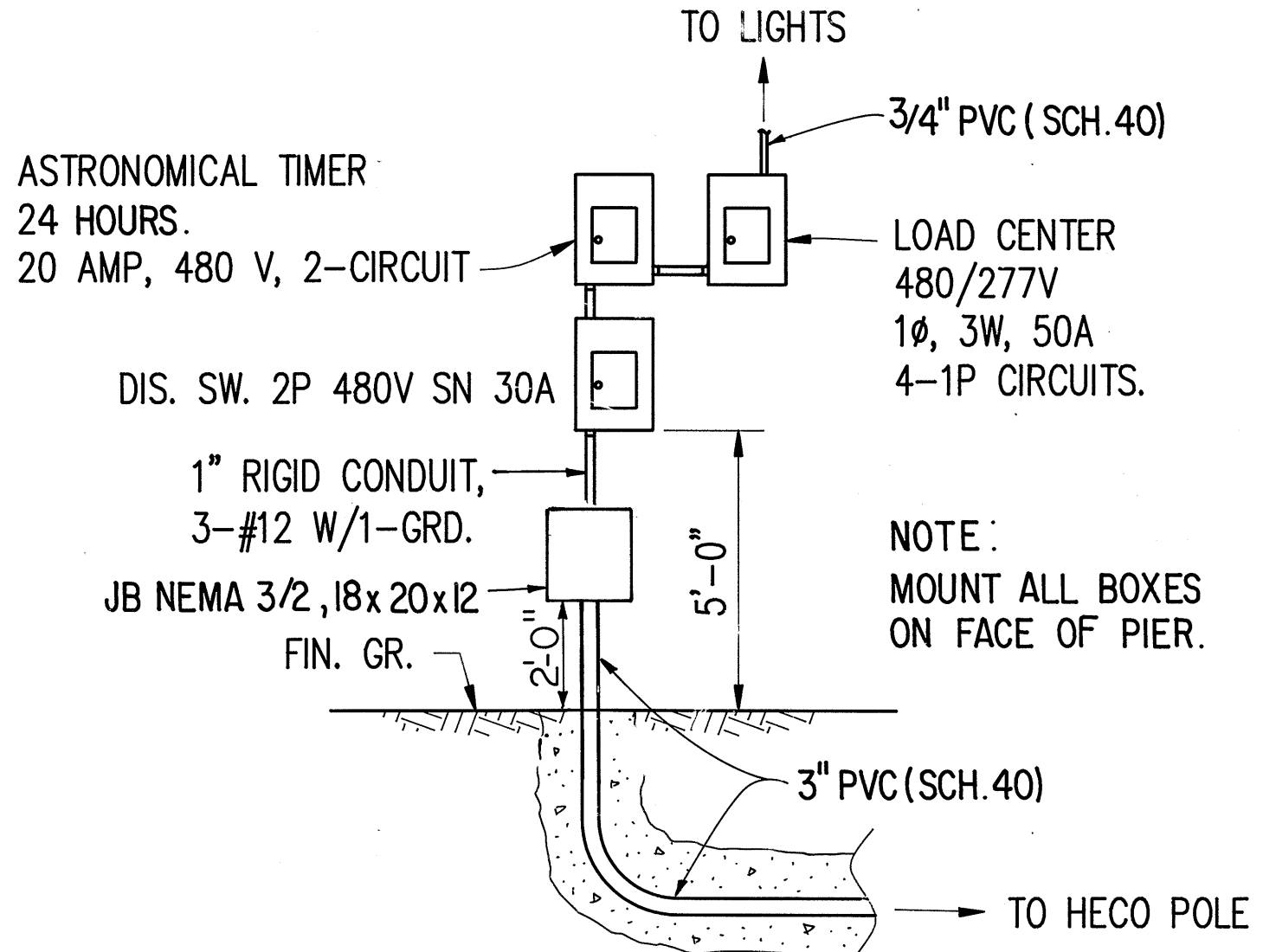
DATE	REVISION
6/28/91	Added sheet for parking area
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PARKING AREA UNDER VIADUCT ADJACENT TO HALAWA CRUSHER ROAD	
INTERSTATE ROUTE H-3 F.A.I. PROJ. NO. I - H3 - 1 (51)	
SCALE: AS SHOWN DATE: JUNE 1991	
SHEET No. 1A OF 4 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(51)	1989	C.O. 13S-2	106

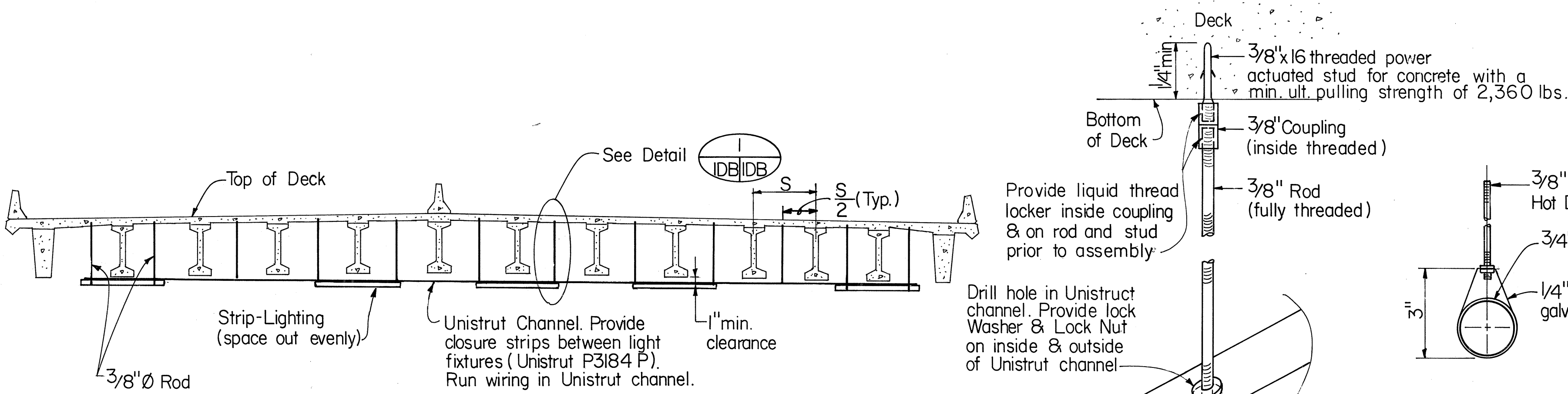
STRIP-LIGHTING, SLIMLINE
1-75W, 8FT, 277V
HEAVY DUTY CHANNEL
BAKED WHITE ENAMEL FIXTURES (TYP.)
(FOOTCANDLE = 0.3)



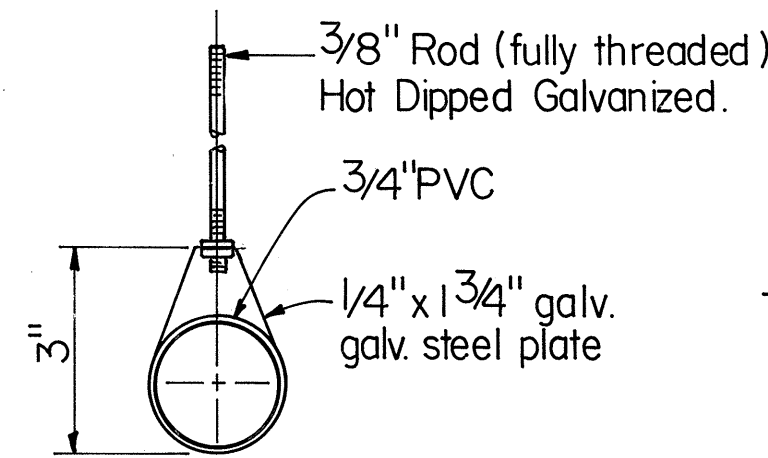
PLAN - SCHEMATIC LAYOUT
Scale : 1" = 40"



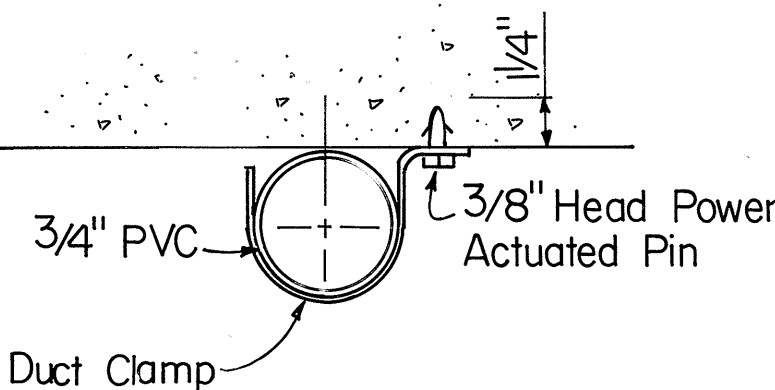
RISER DIAGRAM
N.T.S.



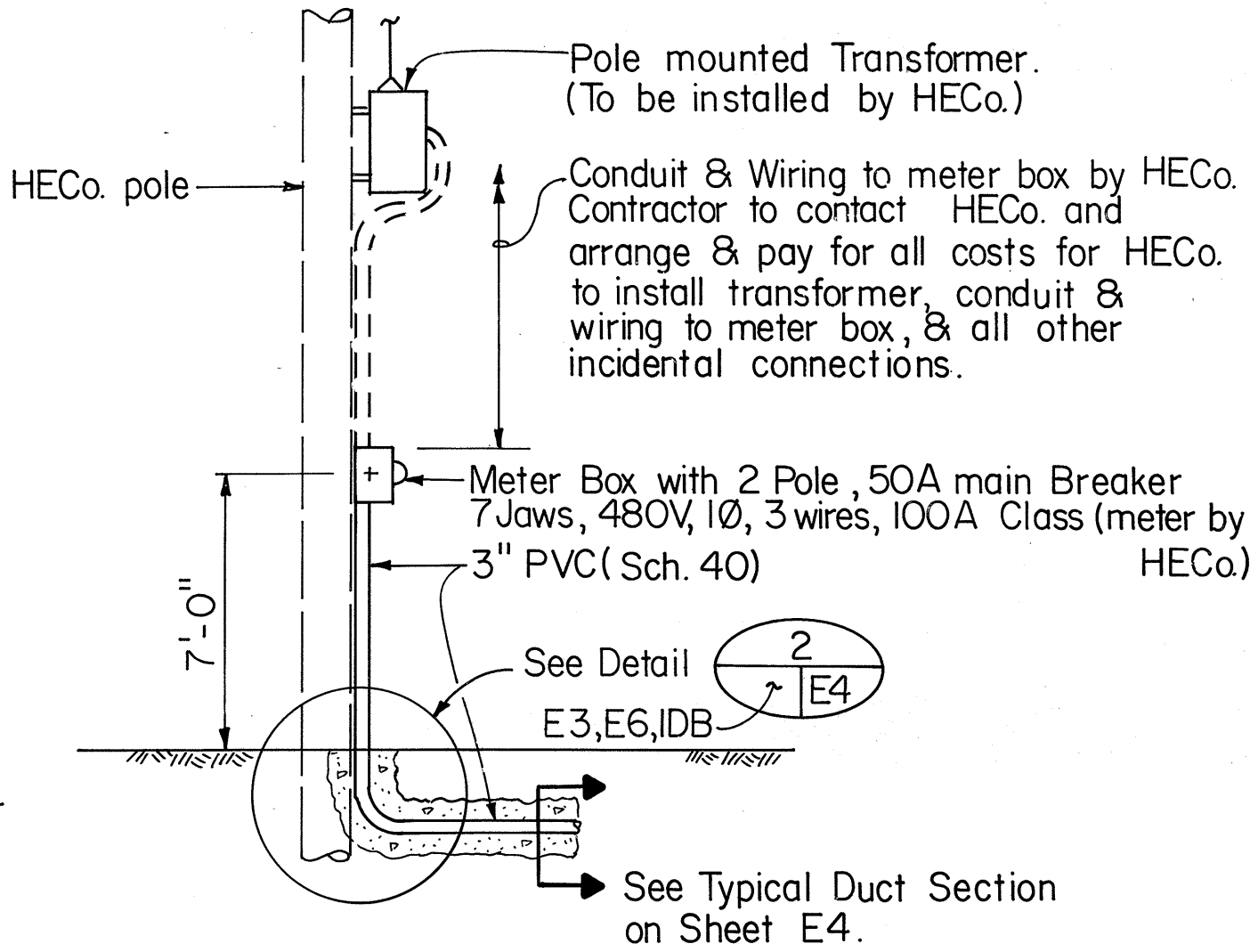
TYPICAL SECTION
Not to Scale



DETAIL 2
Not to Scale

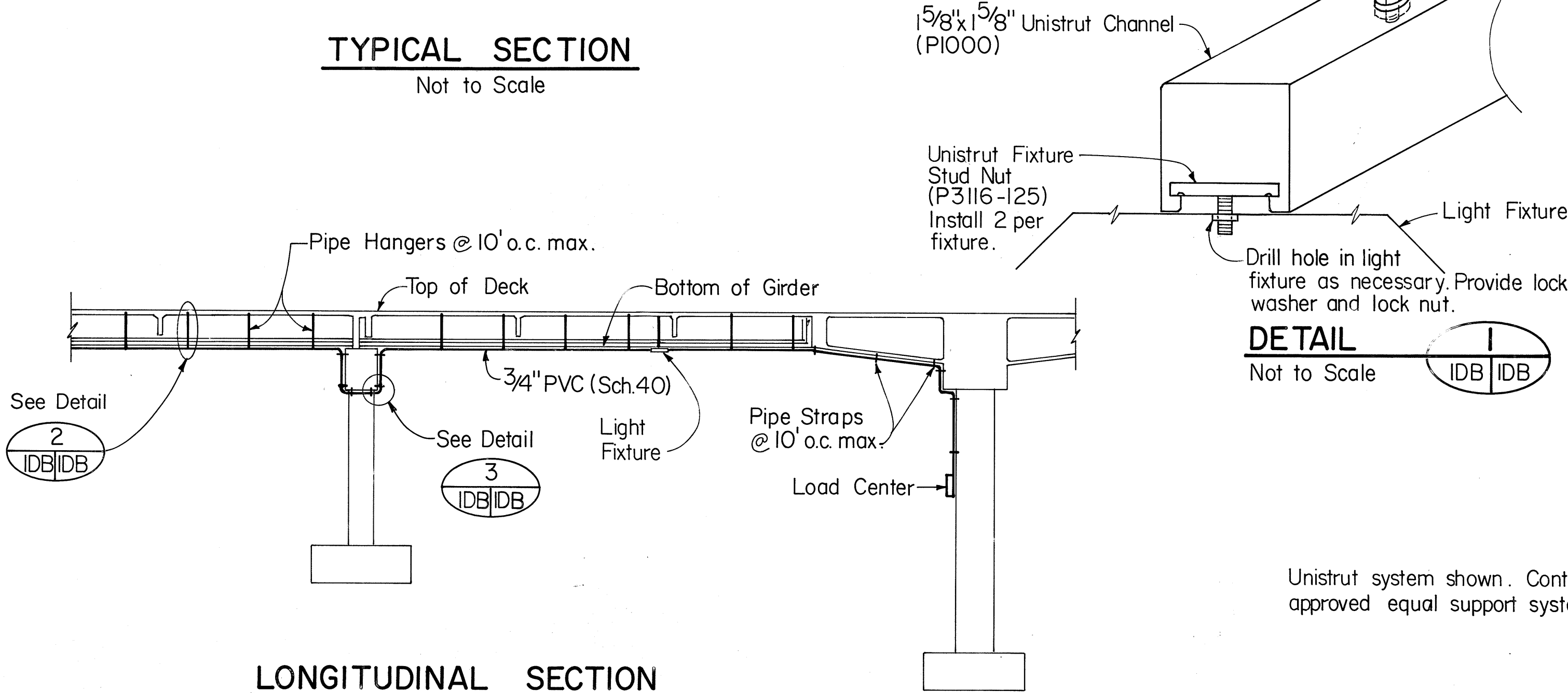


DETAIL 3
Not to Scale



HECO POLE DIAGRAM
Not to Scale

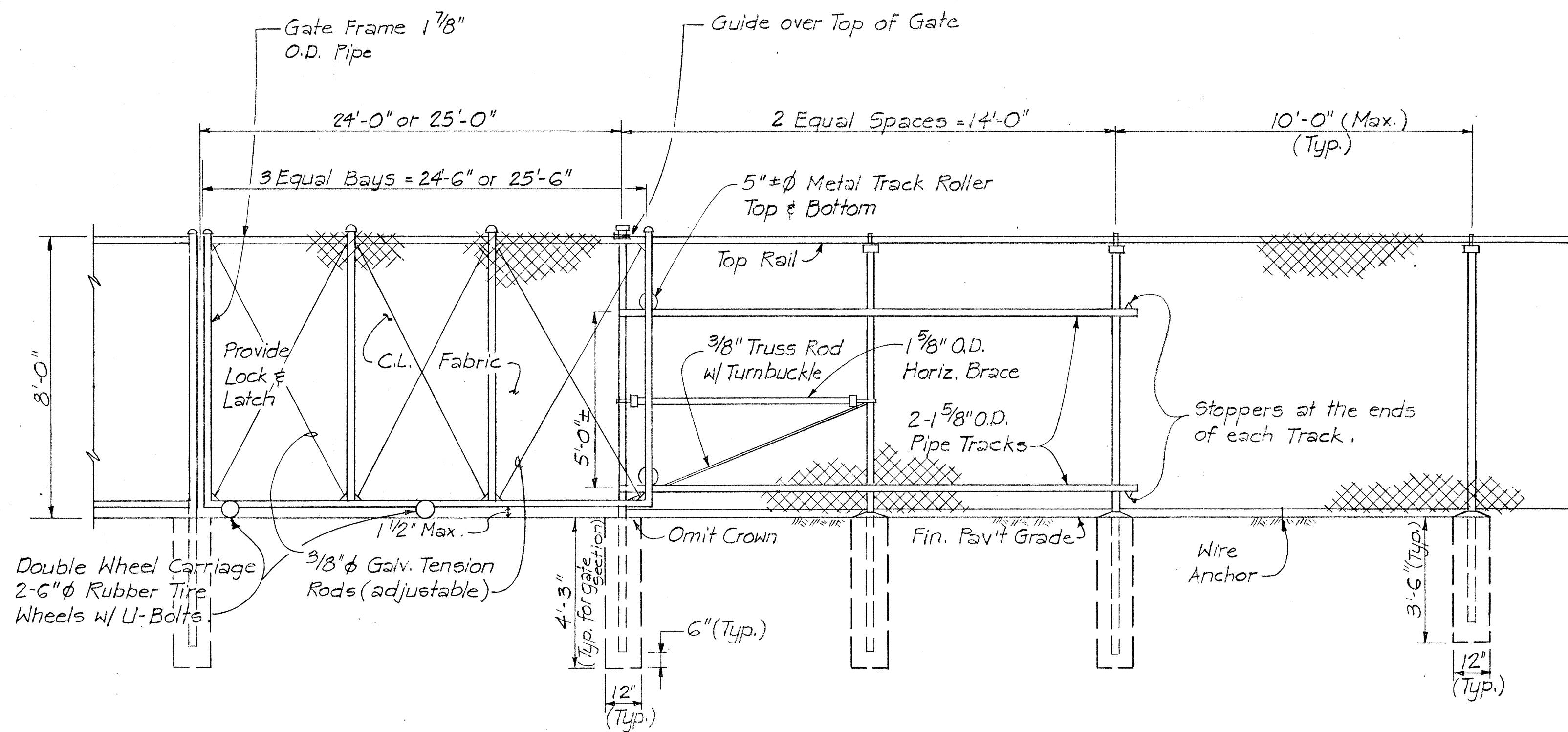
- NOTES:**
1. All steel & fasteners shall be hot dipped galvanized.
 2. Drilling into girders will not be permitted.
 3. Pay item no. 622-5040, Parking Lot Lighting System includes all necessary wiring to make the system functional, starting from the meter box to the end of the parking lot lighting system.
 4. Allow one-3/8" support rod between every girder for the Unistrut support/raceway system.
 5. Provide one duct clamp at the beginning and end of each bend.
 6. "Pipe straps" and "duct clamp" shall be considered as mutually interchangeable phases.



LONGITUDINAL SECTION
Not to Scale

6/28/91	Added sheet for parking area
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PARKING AREA UNDER VIADUCT ADJACENT TO HALAWA CRUSHER ROAD	
INTERSTATE ROUTE H-3 F.A.I. PROJ. NO. 1 - H3 - 1 (51)	
SCALE: AS SHOWN	DATE: JUNE 1991
SHEET No. 106 OF 4 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(51)	1989	C.O. 13S-3	106

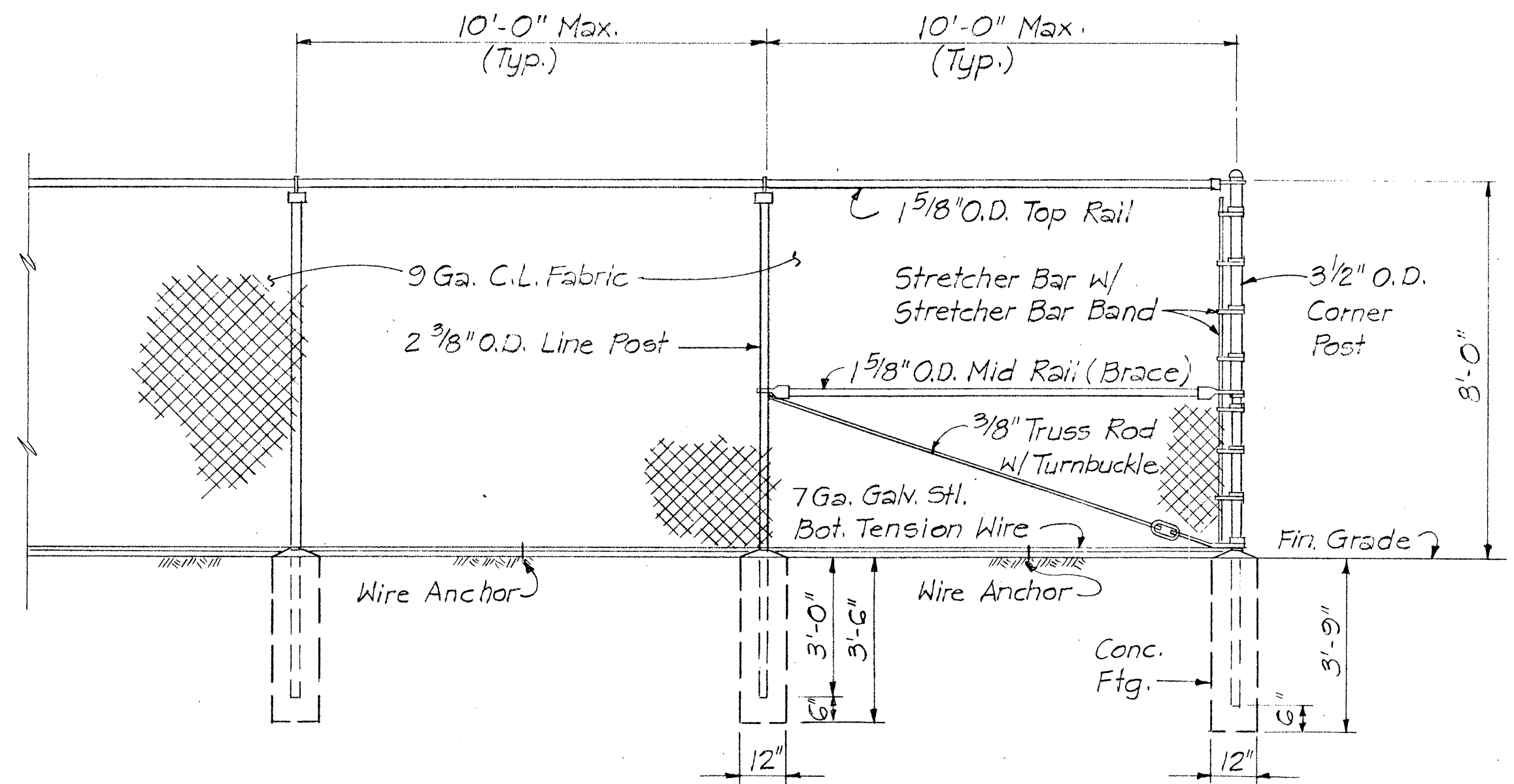


ELEVATION

SLIDING GATE DETAILS

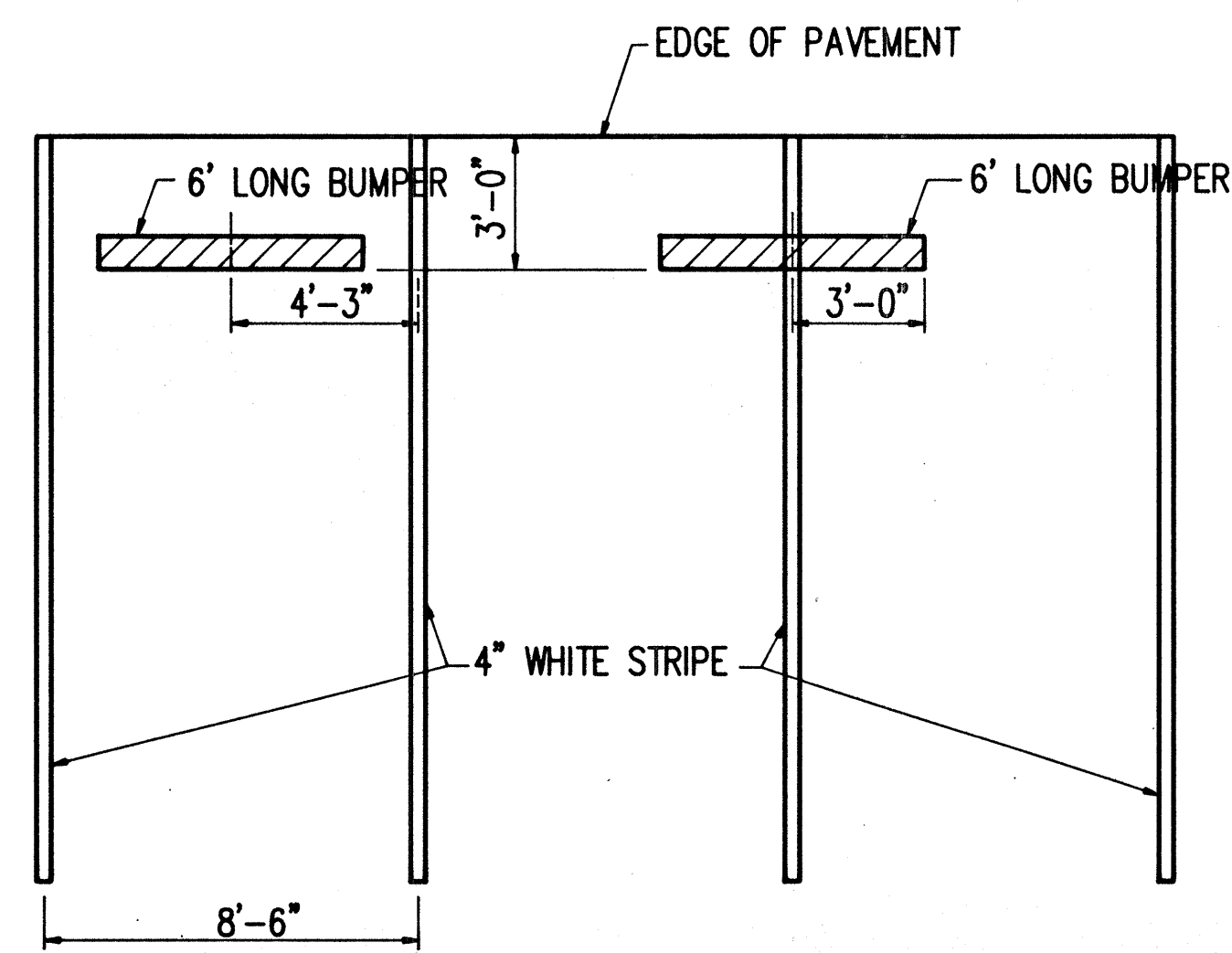
Not to Scale

NOTE: Full posts & end posts shall be 3 1/2" O.D. Pipe.
Footings shall be same as corner post footing



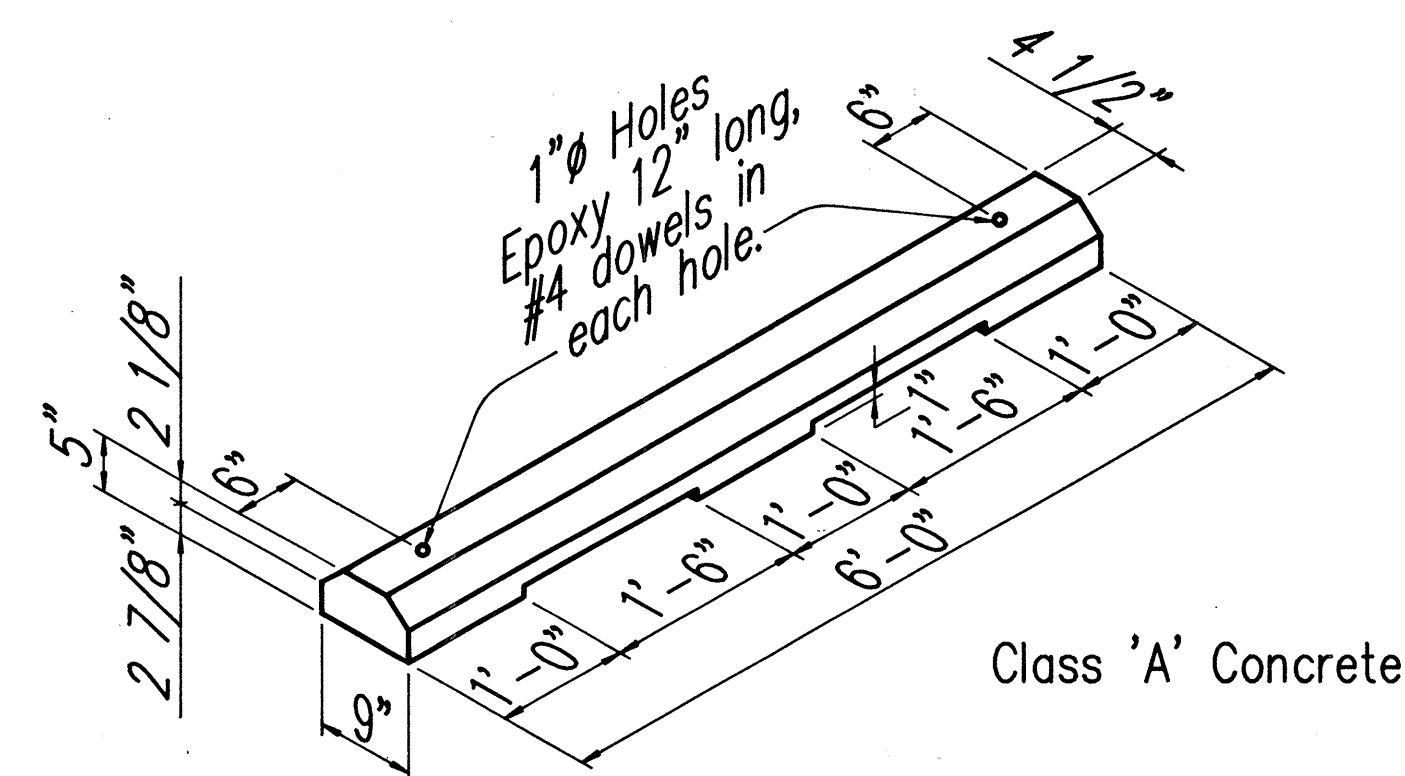
8'-0" HIGH CHAIN LINK FENCE

Scale: 3/8" = 1'-0"



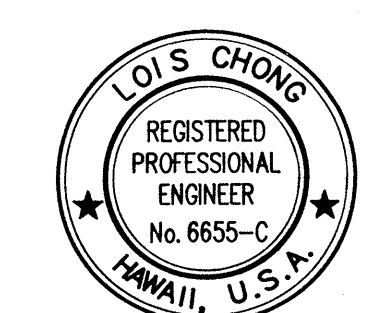
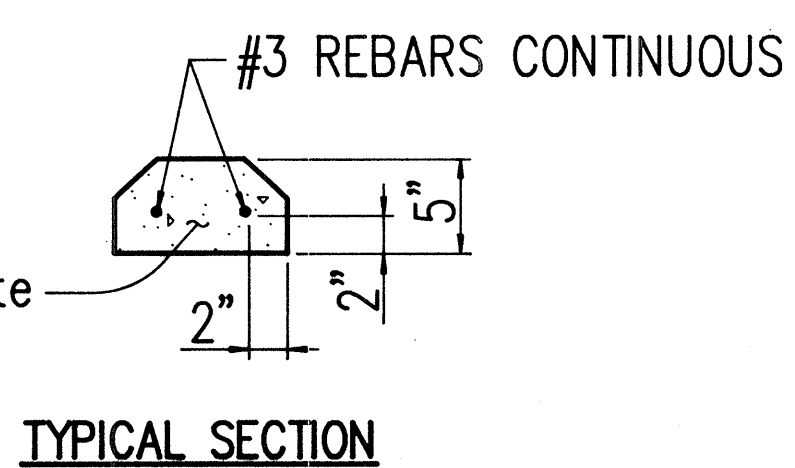
PARKING LOT STALLS ALONG EDGE OF PAVEMENT

NOT TO SCALE



PARKING BUMPER DETAIL

NOT TO SCALE

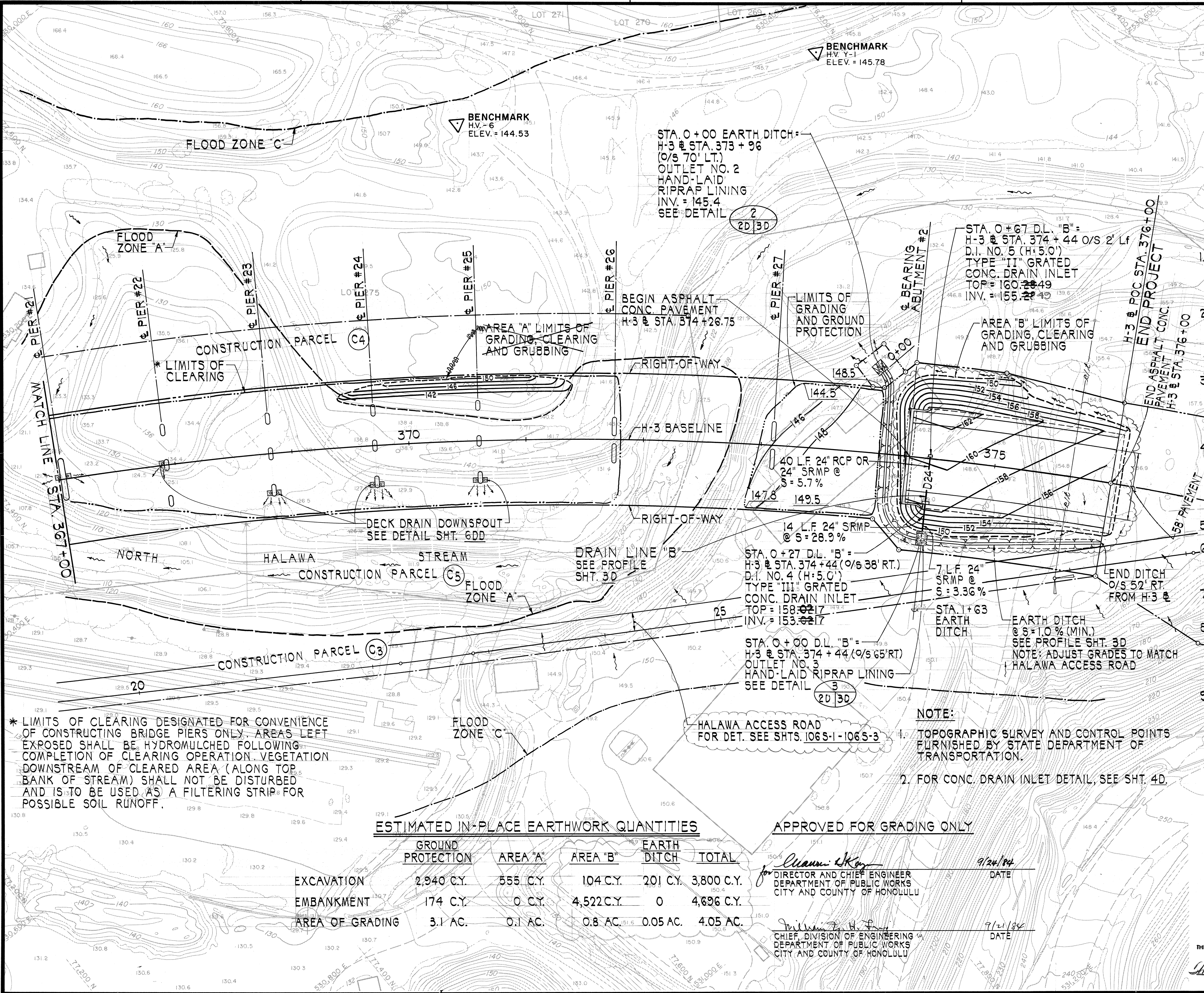


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OR UNDER MY SUPERVISION.

Lois Chong

6/28/91	Added sheet for parking area
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION PARKING AREA UNDER VIADUCT ADJACENT TO HALAWA CRUSHER ROAD INTERSTATE ROUTE H-3 F.A.L. PROJ. NO. I - H3 - 1 (51) SCALE: AS SHOWN DATE: JUNE 1991 SHEET No. IDC OF 4 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(51)	1989	14	106



GRADING NOTES

- ALL GRADING WORK SHALL BE DONE IN ACCORDANCE WITH CHAPTER 23, GRADING, SOIL EROSION AND SEDIMENT CONTROL, OF THE REVISED ORDINANCES OF HONOLULU, 1978, AS AMENDED (ORDINANCE NO. 81-13).
- THE CONTRACTOR SHALL REMOVE ALL SILT AND DEBRIS RESULTING FROM HIS WORK AND DEPOSITED IN DRAINAGE FACILITIES, ROADWAYS AND OTHER AREAS. THE COSTS INCURRED FOR ANY NECESSARY REMEDIAL ACTION BY THE CHIEF ENGR. SHALL BE PAYABLE BY THE CONTRACTOR.
- THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST, NOISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH.
- ALL SLOPES AND EXPOSED AREAS SHALL BE SODDED OR PLANTED AS SOON AS FINAL GRADES HAVE BEEN ESTABLISHED. PLANTING SHALL NOT BE DELAYED UNTIL ALL GRADING WORK HAS BEEN COMPLETED. GRADING TO FINAL GRADE SHALL BE CONTINUOUS, AND ANY AREA, WITHIN WHICH WORK HAS BEEN INTERRUPTED OR DELAYED, SHALL BE PLANTED.
- FILLS ON SLOPES STEEPER THAN 5:1 SHALL BE KEYED.
- NO GRADING WORK SHALL BE DONE ON SATURDAYS, SUNDAYS AND HOLIDAYS AT ANY TIME WITHOUT PRIOR NOTICE TO THE CHIEF ENGINEER OR DISTRICT ENGINEER, STATE OF HAWAII.
- THE LIMITS OF THE AREA TO BE GRADED SHALL BE FLAGGED BEFORE THE COMMENCEMENT OF THE GRADING WORK.
- THE CITY SHALL BE INFORMED OF THE LOCATION OF THE BORROW/DISPOSAL SITE FOR THE PROJECT WHEN THE APPLICATION FOR A GRADING PERMIT IS MADE. THE BORROW/DISPOSAL SITE MUST ALSO FULFILL THE REQUIREMENTS OF THE GRADING ORDINANCE.
- ALL GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF CHAPTER 54, WATER QUALITY STANDARDS, AND CHAPTER 55, WATER POLLUTION CONTROL, OF TITLE II, ADMINISTRATIVE RULES OF THE STATE DEPARTMENT OF HEALTH.

NOTE:

- TOPOGRAPHIC SURVEY AND CONTROL POINTS FURNISHED BY STATE DEPARTMENT OF TRANSPORTATION.
- FOR CONC. DRAIN INLET DETAIL, SEE SHT. 4D.

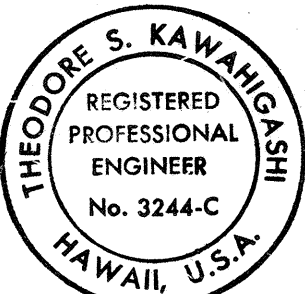
ESTIMATED IN-PLACE EARTHWORK QUANTITIES

	GROUND PROTECTION	AREA "A"	AREA "B"	EARTH DITCH	TOTAL
EXCAVATION	2,940 C.Y.	555 C.Y.	104 C.Y.	201 C.Y.	3,800 C.Y.
EMBANKMENT	174 C.Y.	0 C.Y.	4,522 C.Y.	0	4,696 C.Y.
AREA OF GRADING	3.1 AC.	0.1 AC.	0.8 AC.	0.05 AC.	4.05 AC.

APPROVED FOR GRADING ONLY

Quann Koy
 DIRECTOR AND CHIEF ENGINEER
 DEPARTMENT OF PUBLIC WORKS
 CITY AND COUNTY OF HONOLULU
 DATE 9/24/84

William F. H. F.
 CHIEF, DIVISION OF ENGINEERING
 DEPARTMENT OF PUBLIC WORKS
 CITY AND COUNTY OF HONOLULU
 DATE 9/21/84

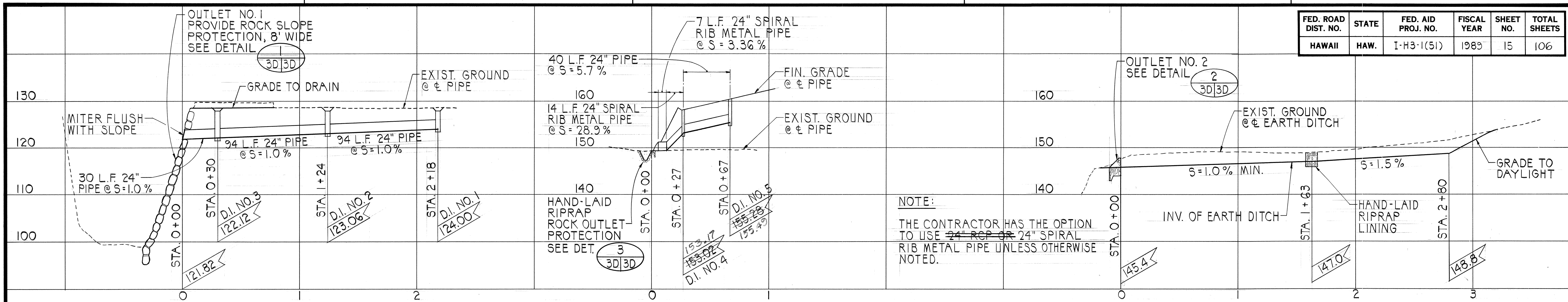


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 OR UNDER MY SUPERVISION
Shordone S. Kawahigashi
 Signature

8/17/90	REVISED QUANTITIES
10/18/89	REVISED GRADING
11/17/88	ADDED HALAWA ACCESS ROAD
DATE	REVISION

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
GRADING AND DRAINAGE PLAN
STA. 367 + 00 TO STA. 376 + 00
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(51)
SCALE: 1" = 40' DATE: AUG. 1988
SHEET NO. 20 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(51)	1983	15	106



NOTE:
THE CONTRACTOR HAS THE OPTION TO USE 24\"/>

PROFILE ~ DRAIN LINE "A"

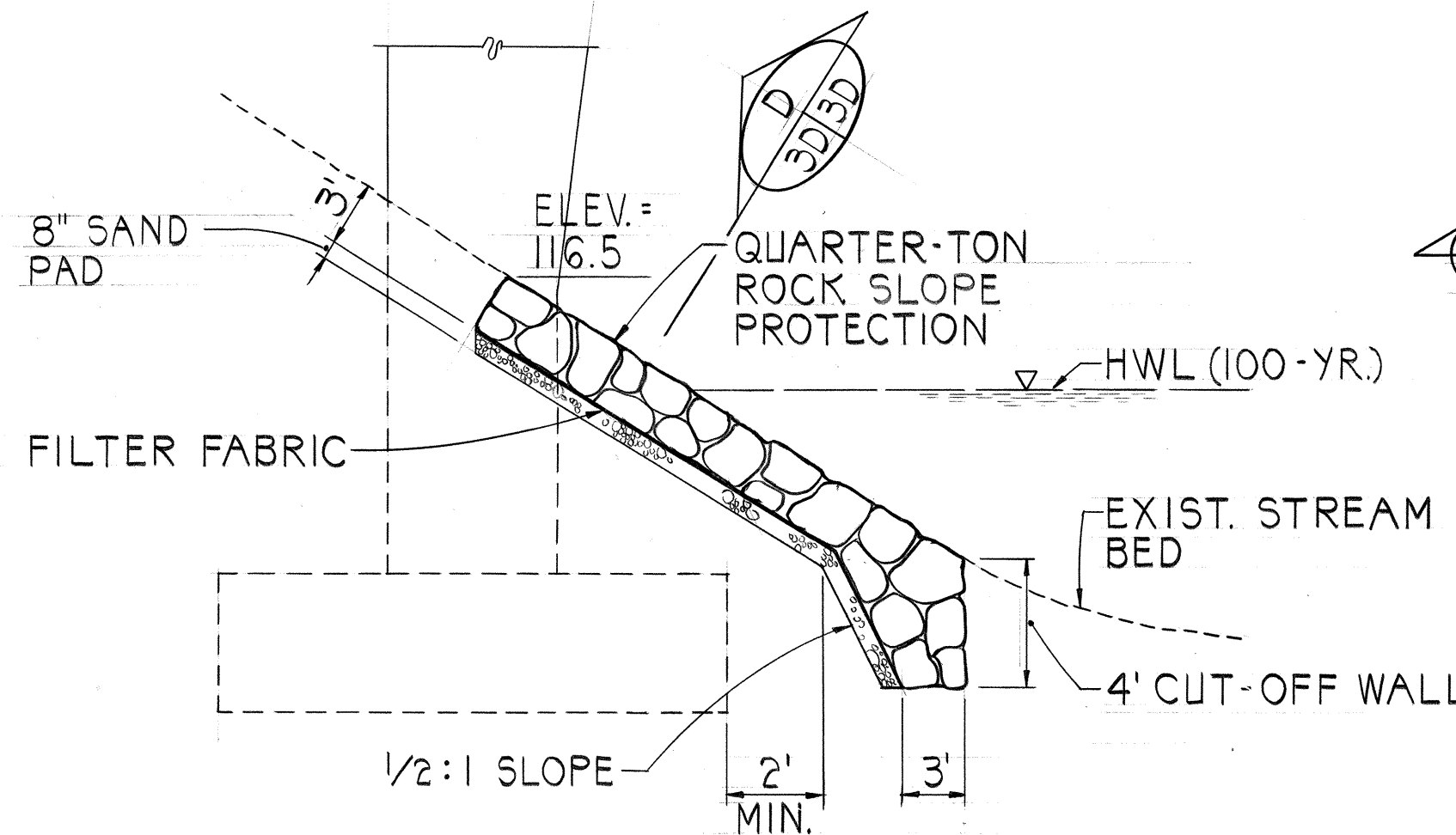
SCALES: HORIZ. 1" = 40'
VERT. 1" = 10'

PROFILE ~ DRAIN LINE "B"

SCALES: HORIZ. 1" = 40'
VERT. 1" = 10'

PROFILE ~ EARTH DITCH

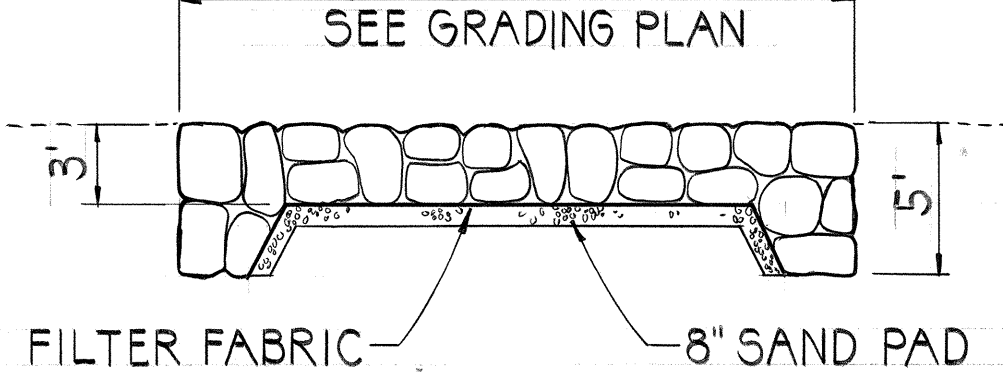
SCALES: HORIZ. 1" = 40'
VERT. 1" = 10'



DETAIL ~ ROCK SLOPE PROTECTION

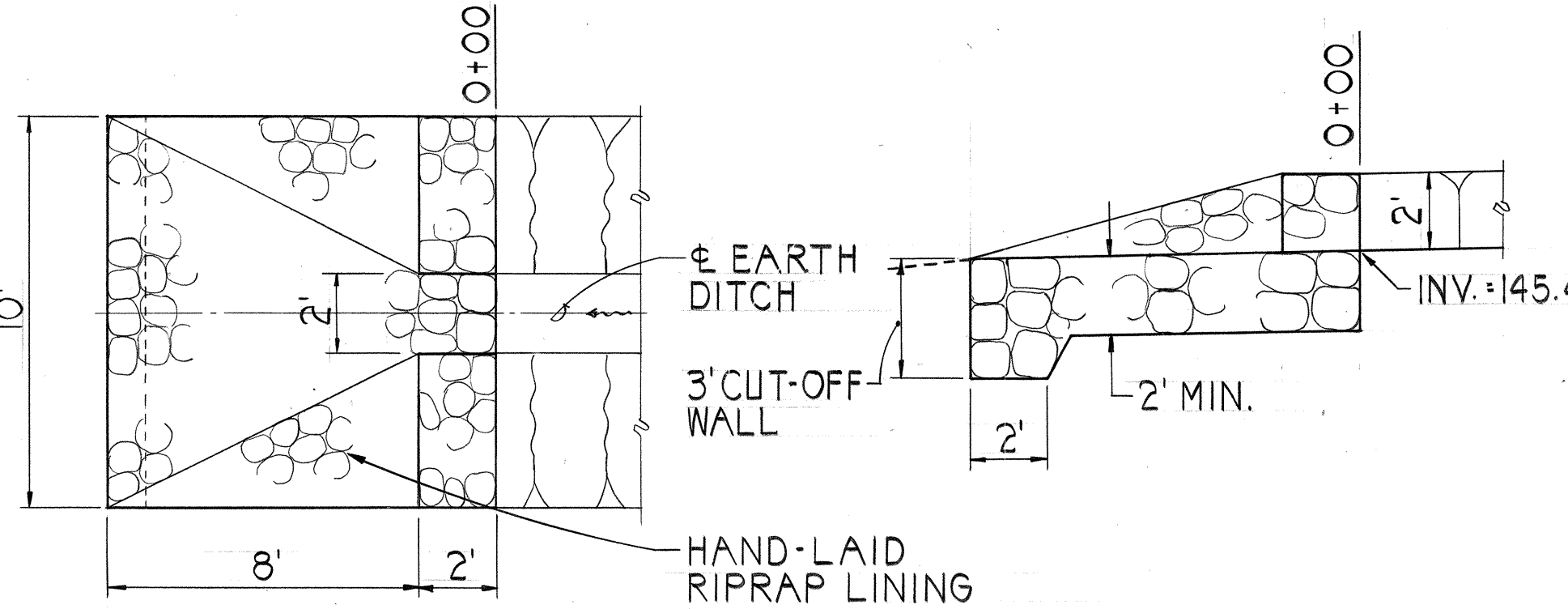
NOT TO SCALE

NOTE:
EXCAVATION FOR ROCK SLOPE PROTECTION FOR BRIDGE FOUNDATION PROTECTION SHALL BE INCIDENTAL TO STRUCTURAL EXCAVATION FOR BRIDGE FOOTING.
VARIES



SECTION D

NOT TO SCALE

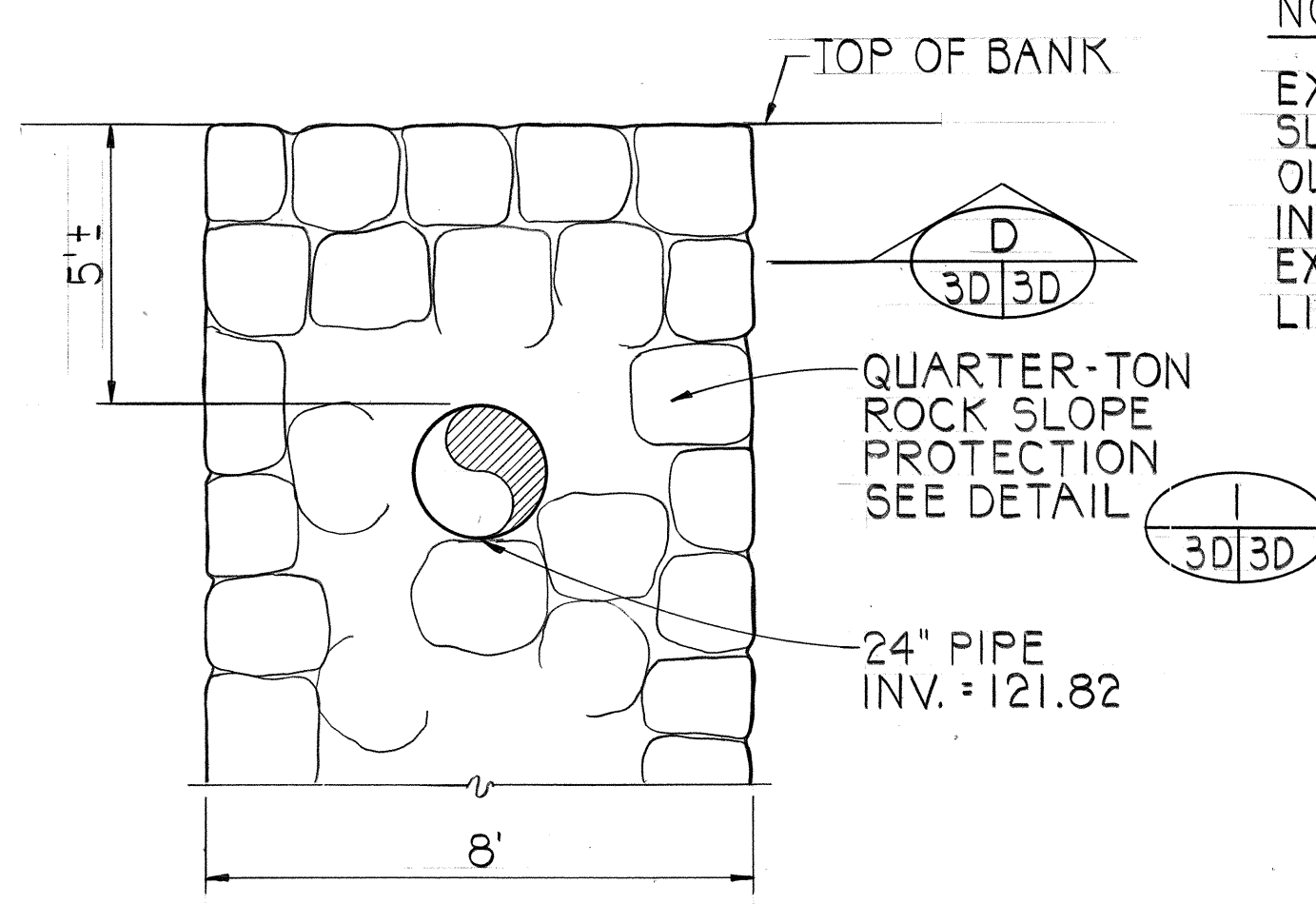


DETAIL ~ OUTLET NO. 2

SCALE: 1/4" = 1'-0"

SECTION A

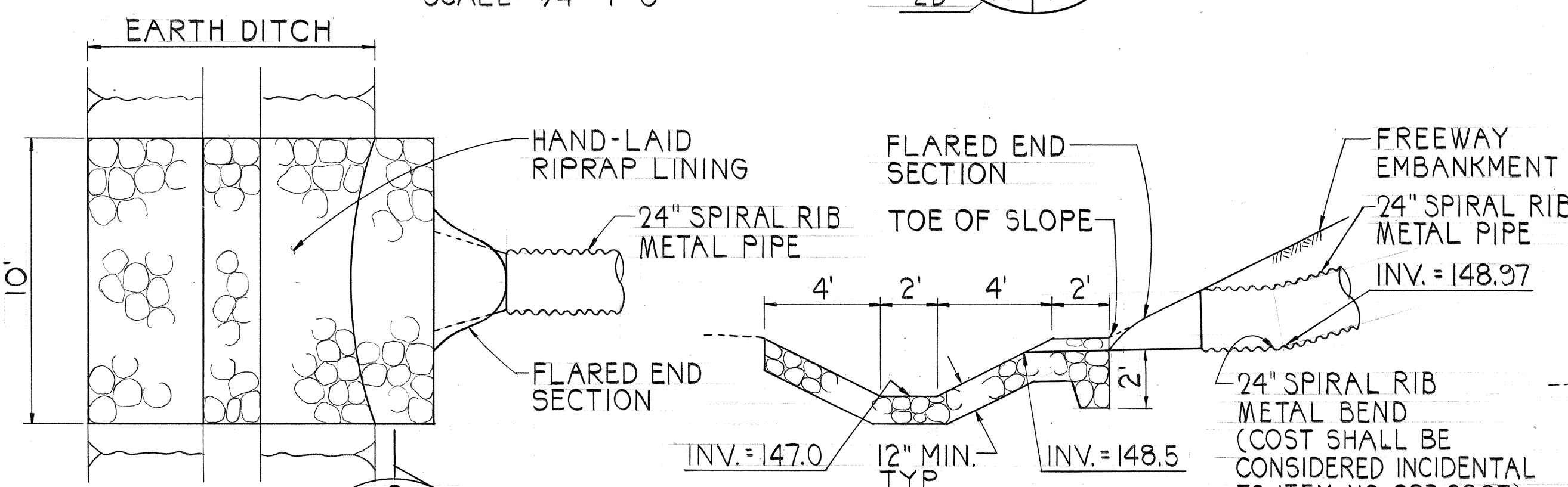
3D/3D



ELEVATION OF OUTLET NO. 1

NOT TO SCALE

NOTE:
EXCAVATION FOR ROCK SLOPE PROTECTION FOR OUTLET NO. 1 SHALL BE INCIDENTAL TO TRENCH EXCAVATION FOR DRAIN LINE "A".

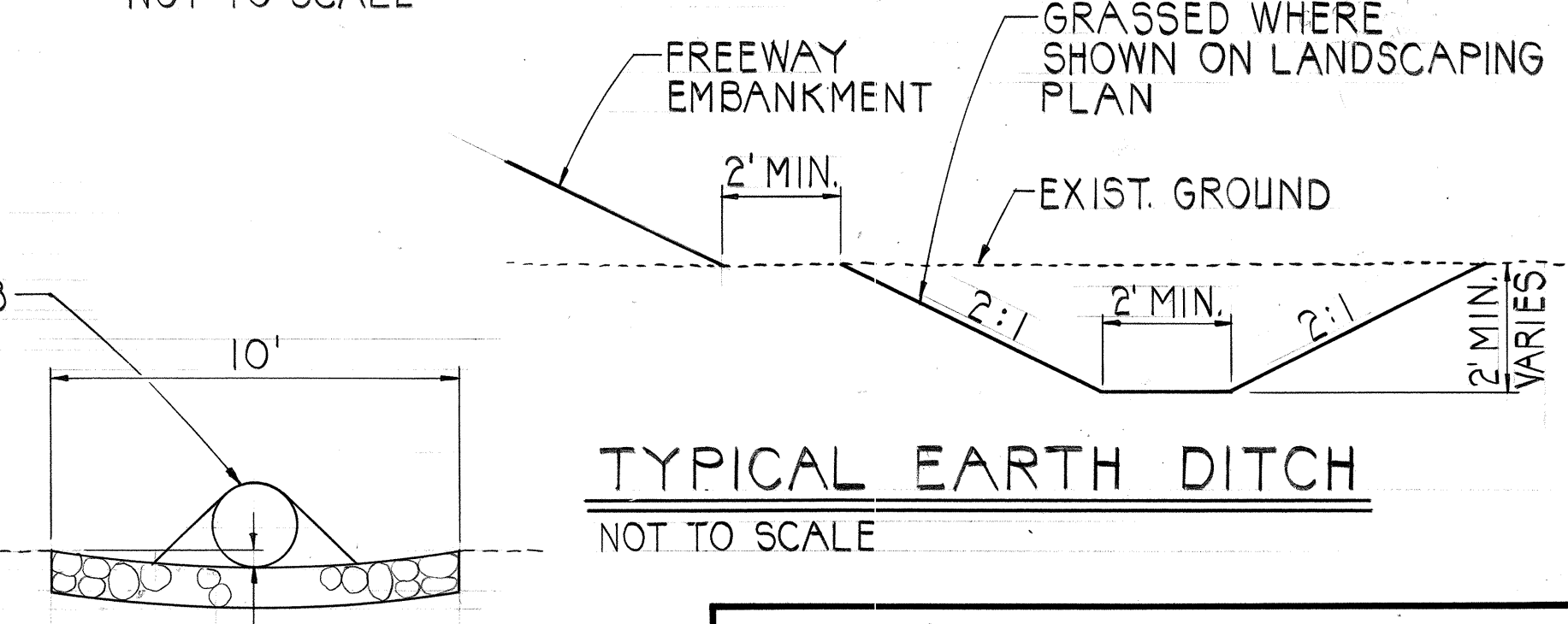


DETAIL ~ OUTLET NO. 3

SCALE: 1/4" = 1'-0"

SECTION B

3D/3D



TYPICAL EARTH DITCH

NOT TO SCALE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS

INTERSTATE ROUTE H-3
F.A.I. PROJECT NO. I-H3-1(51)

SCALE: AS NOTED DATE: AUG. 1988
SHEET NO. 3D OF 4 SHEETS

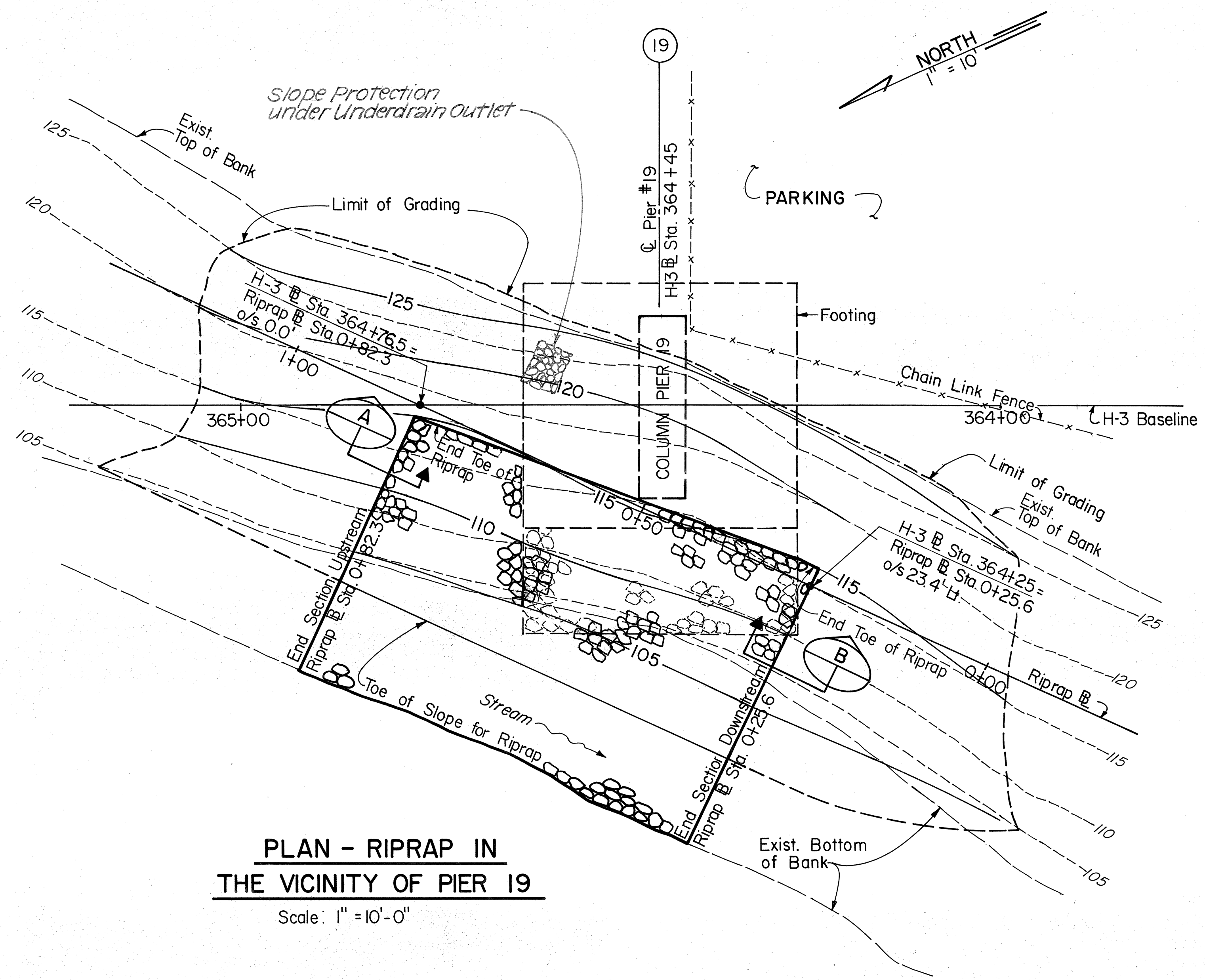
THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION

Theodore S. Kawaharashi
Signature

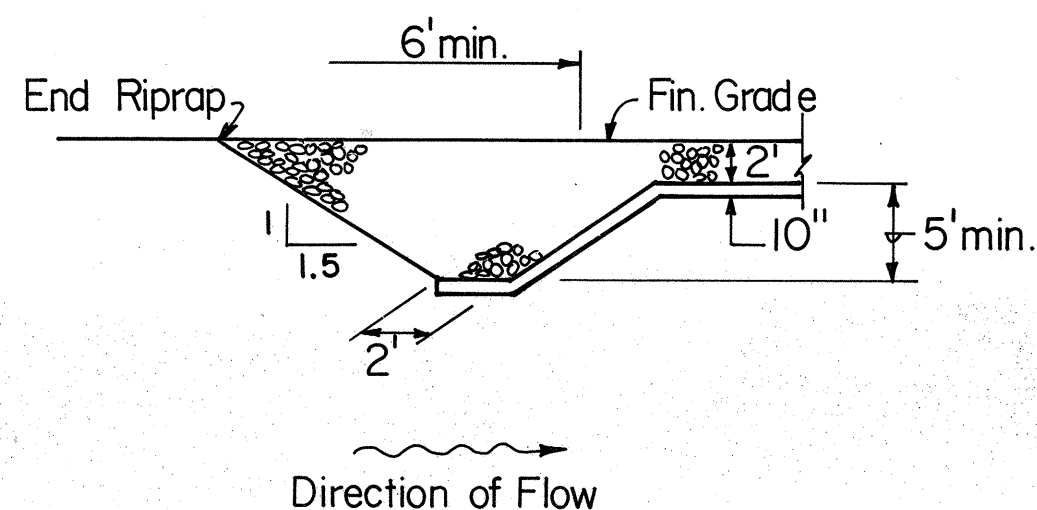
THEODORE S. KAWAHARASHI
REGISTERED PROFESSIONAL ENGINEER
No. 3244-C
HAWAII, U.S.A.

DATE: _____
SURVEY PLOTTED BY: _____
DRAWN BY: _____
DESIGNED BY: _____
CHECKED BY: _____
ORIGINAL PLAN: _____
NOTE BOOK: _____
No. _____

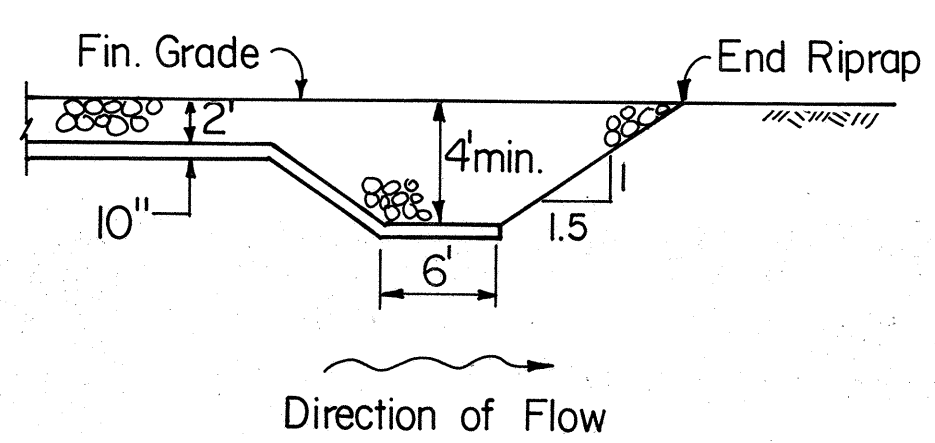
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (51)	1989	1	1



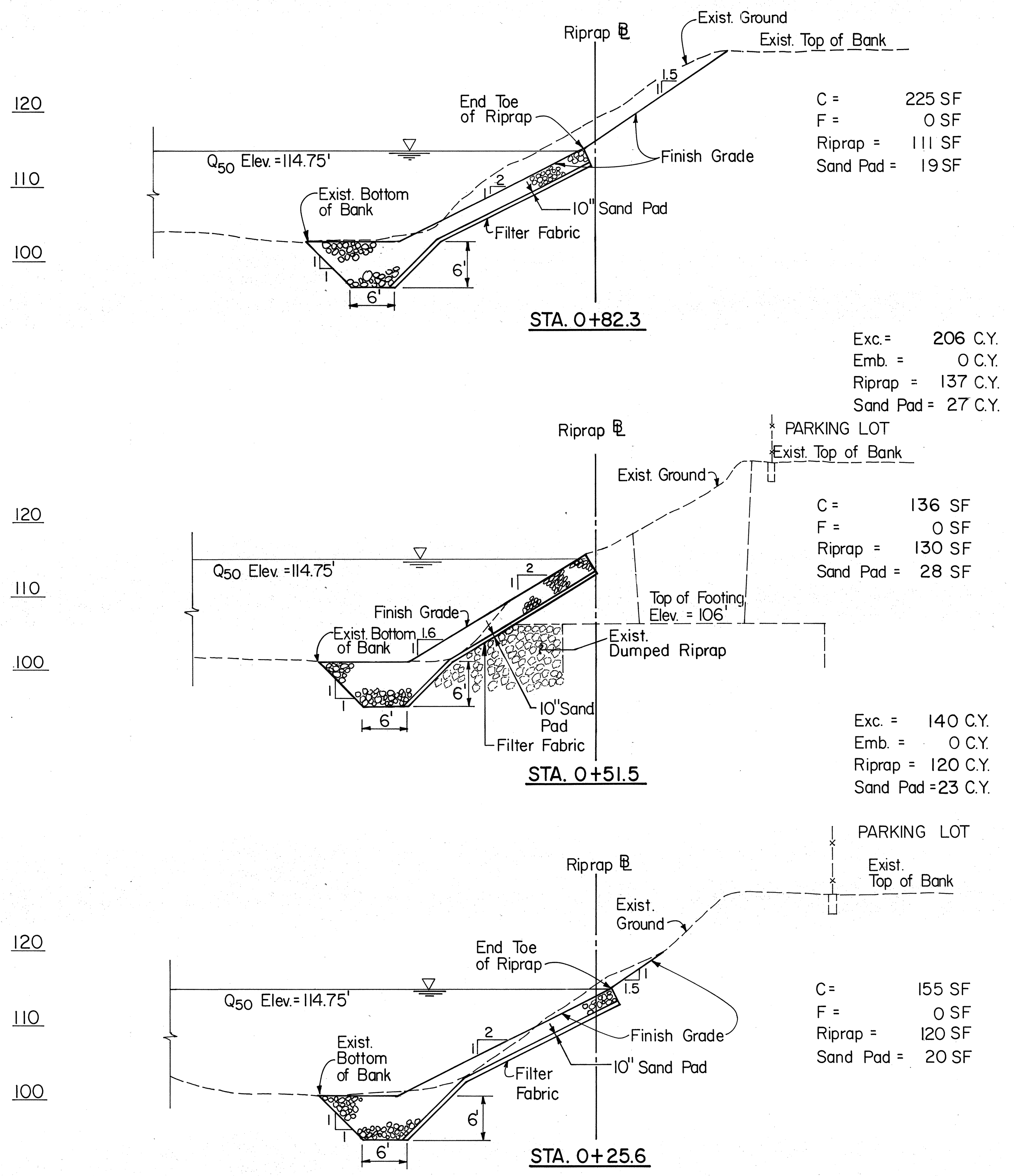
PLAN - RIPRAP IN THE VICINITY OF PIER 19
Scale: 1" = 10'-0"



SECTION A
Scale: 1" = 10'-0"
END SECTION UPSTREAM



SECTION B
Scale: 1" = 10'-0"
END SECTION DOWNSTREAM



C = 225 SF
F = 0 SF
Riprap = 111 SF
Sand Pad = 19 SF

Exc. = 206 C.Y.
Emb. = 0 C.Y.
Riprap = 137 C.Y.
Sand Pad = 27 C.Y.

C = 136 SF
F = 0 SF
Riprap = 130 SF
Sand Pad = 28 SF

Exc. = 140 C.Y.
Emb. = 0 C.Y.
Riprap = 120 C.Y.
Sand Pad = 23 C.Y.

C = 155 SF
F = 0 SF
Riprap = 120 SF
Sand Pad = 20 SF

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

H-3 HALAWA QUARRY VIADUCT - MAUKA

SLOPE PROTECTION

IN THE VICINITY OF PIER 19

INTERSTATE ROUTE H-3

F.A.I. PROJECT NO. I-H3-1 (51)

HORIZ. 1" = 10'

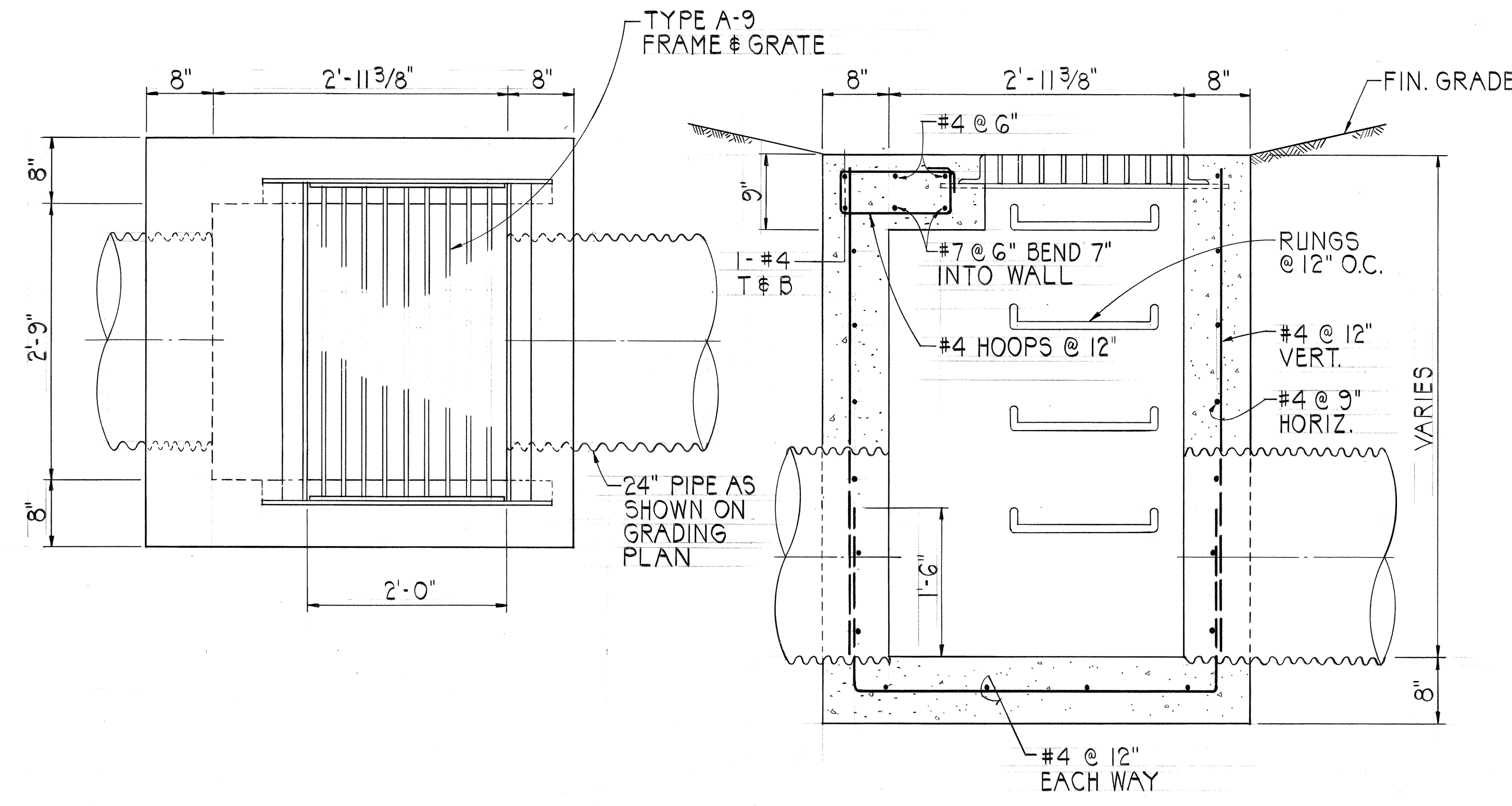
SCALE: VERT. 1" = 10'

DATE: OCT. 1992

SHEET No. 1 OF 1 SHEETS

C.O.15S-1

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(51)	1989	16	106



PLAN

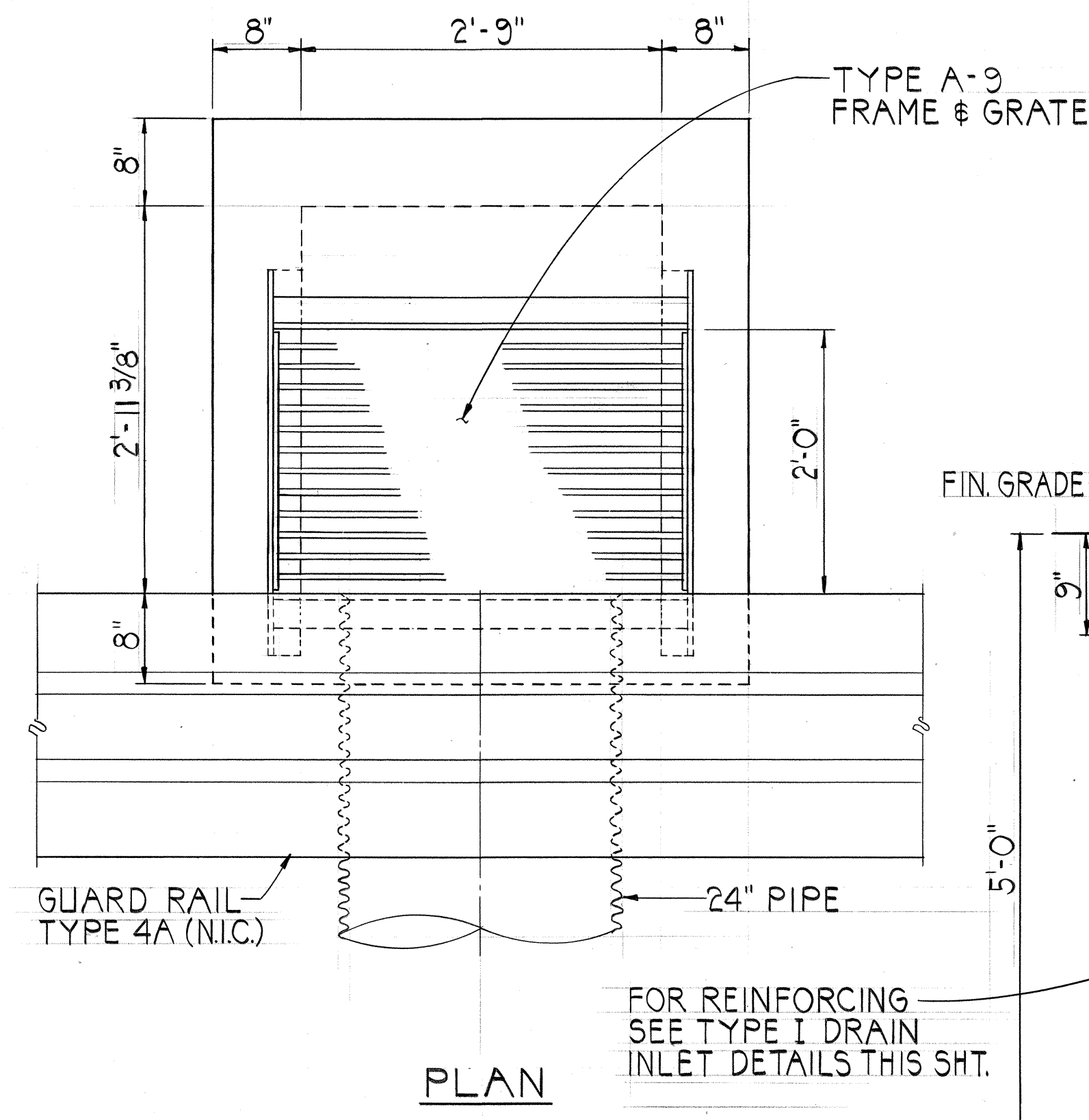
SECTION

TYPICAL TYPE I DRAIN INLET DETAILS

SCALE: 1" = 1'-0"

NOTES:

1. CONCRETE SHALL BE CLASS "A" CONCRETE.
2. THE CONTRACTOR HAS THE OPTION TO USE 24" RCP OR 24" SPIRAL RIB METAL PIPE UNLESS OTHERWISE NOTED.
3. BED COURSE MATERIAL SHALL BE INCIDENTAL TO THE COST OF THE PIPE CULVERT.

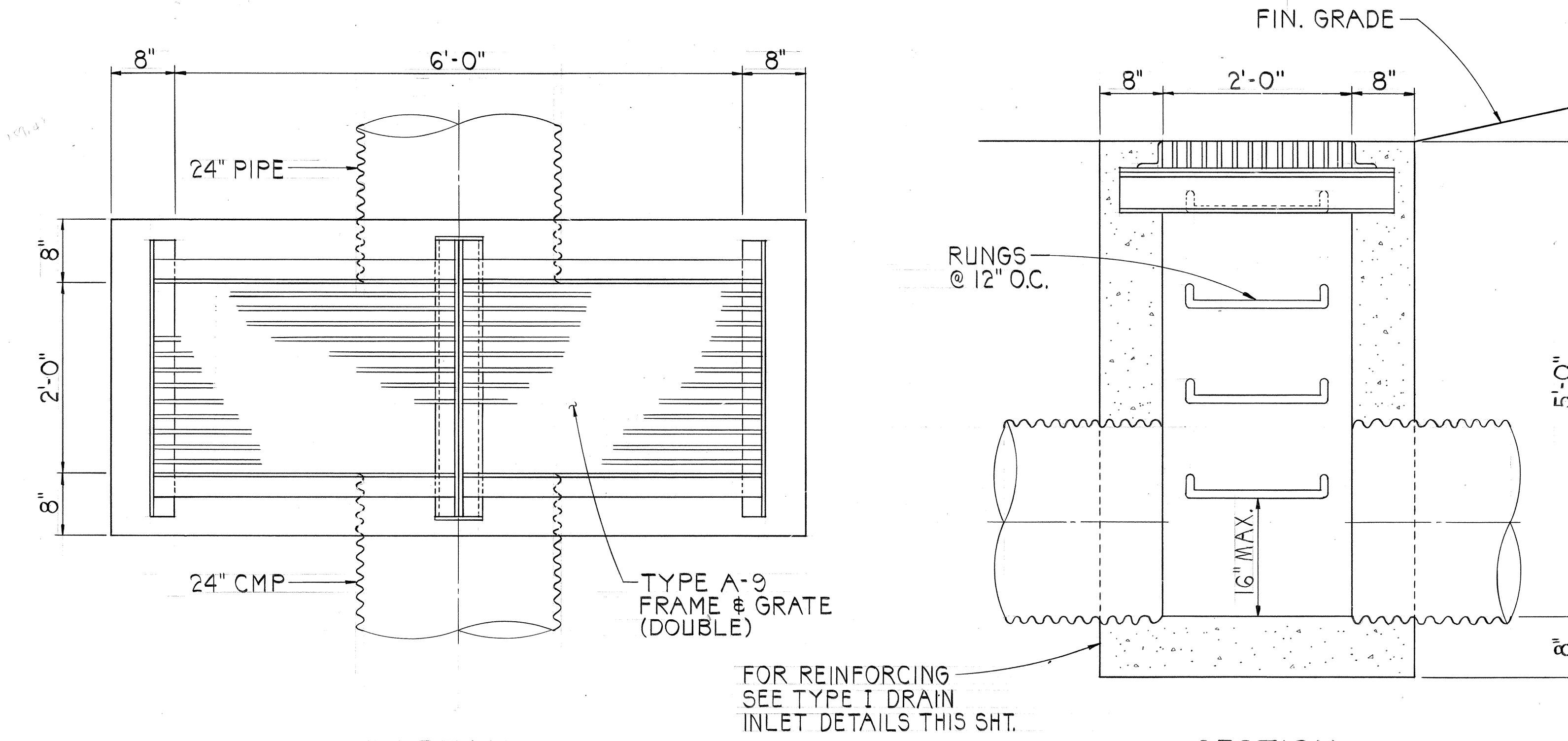


PLAN

SECTION

TYPICAL TYPE II DRAIN INLET DETAILS

SCALE: 1" = 1'-0"

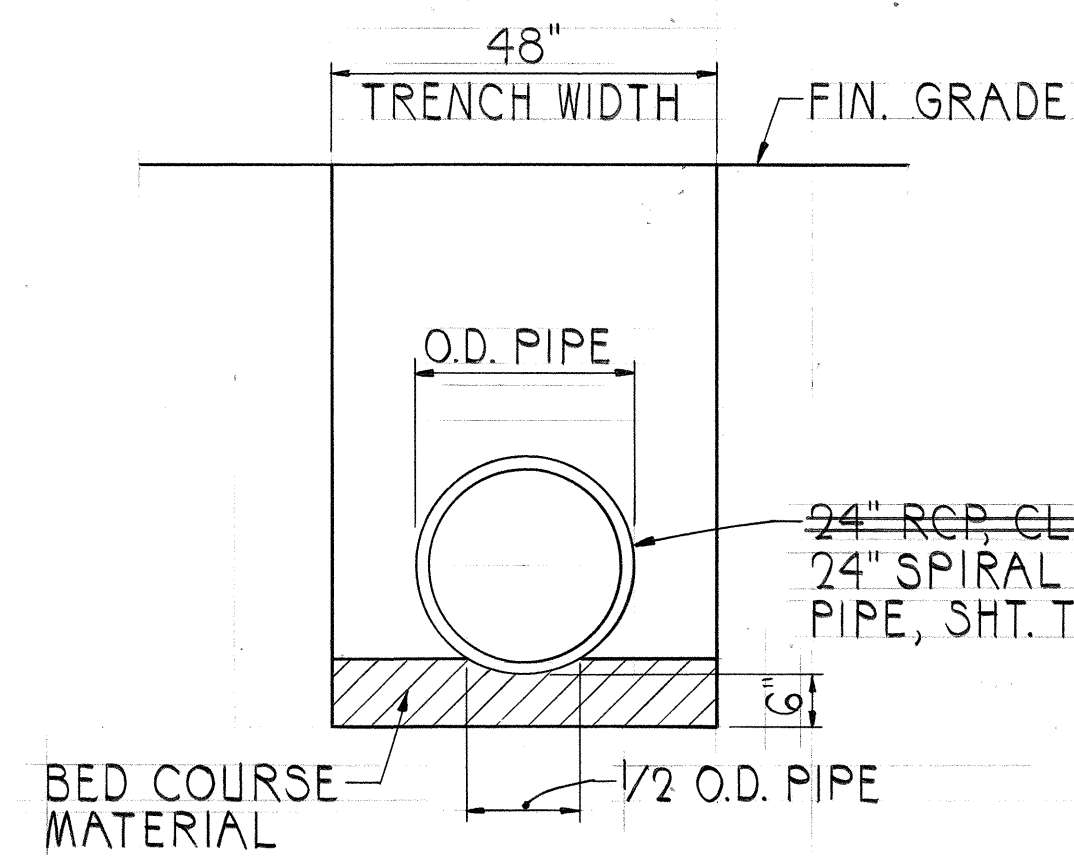


PLAN

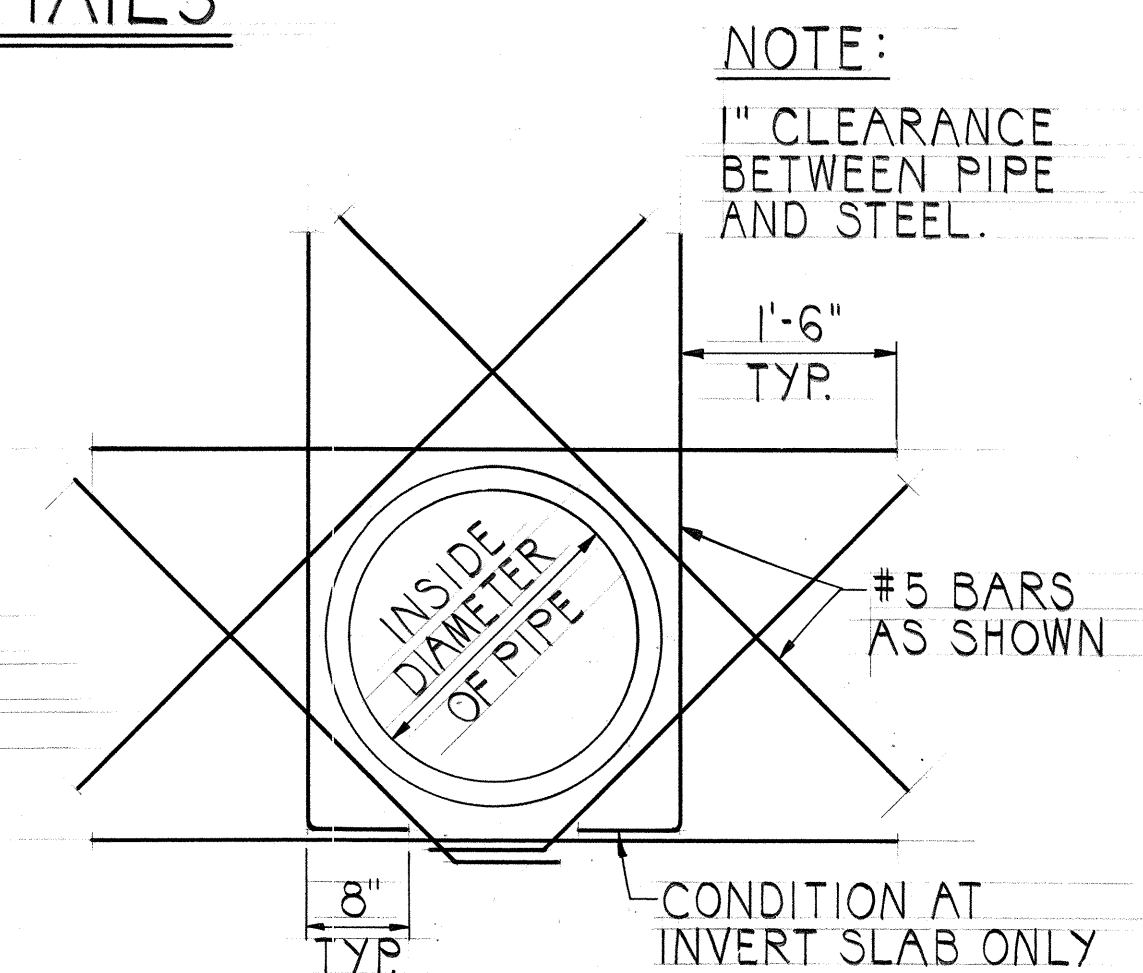
SECTION

TYPICAL TYPE III DRAIN INLET DETAILS

SCALE: 1" = 1'-0"



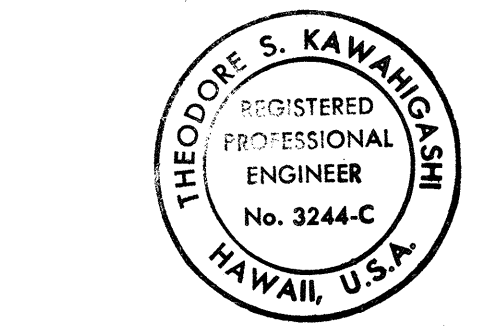
TYPICAL TRENCH SECTION
NOT TO SCALE



TYPICAL REINFORCEMENT AT PIPES
NOT TO SCALE

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	

11/17/88	REVISED BASIS OF PAYMENT FOR BED COURSE MATERIAL
DATE	REVISION



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Theodore S. Kawahigashi
Signature

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS

INTERSTATE ROUTE H-3
F.A.I. PROJECT NO. I-H3-1(51)

SCALE: AS NOTED DATE: AUG. 1988
SHEET NO. 4D OF 4 SHEETS