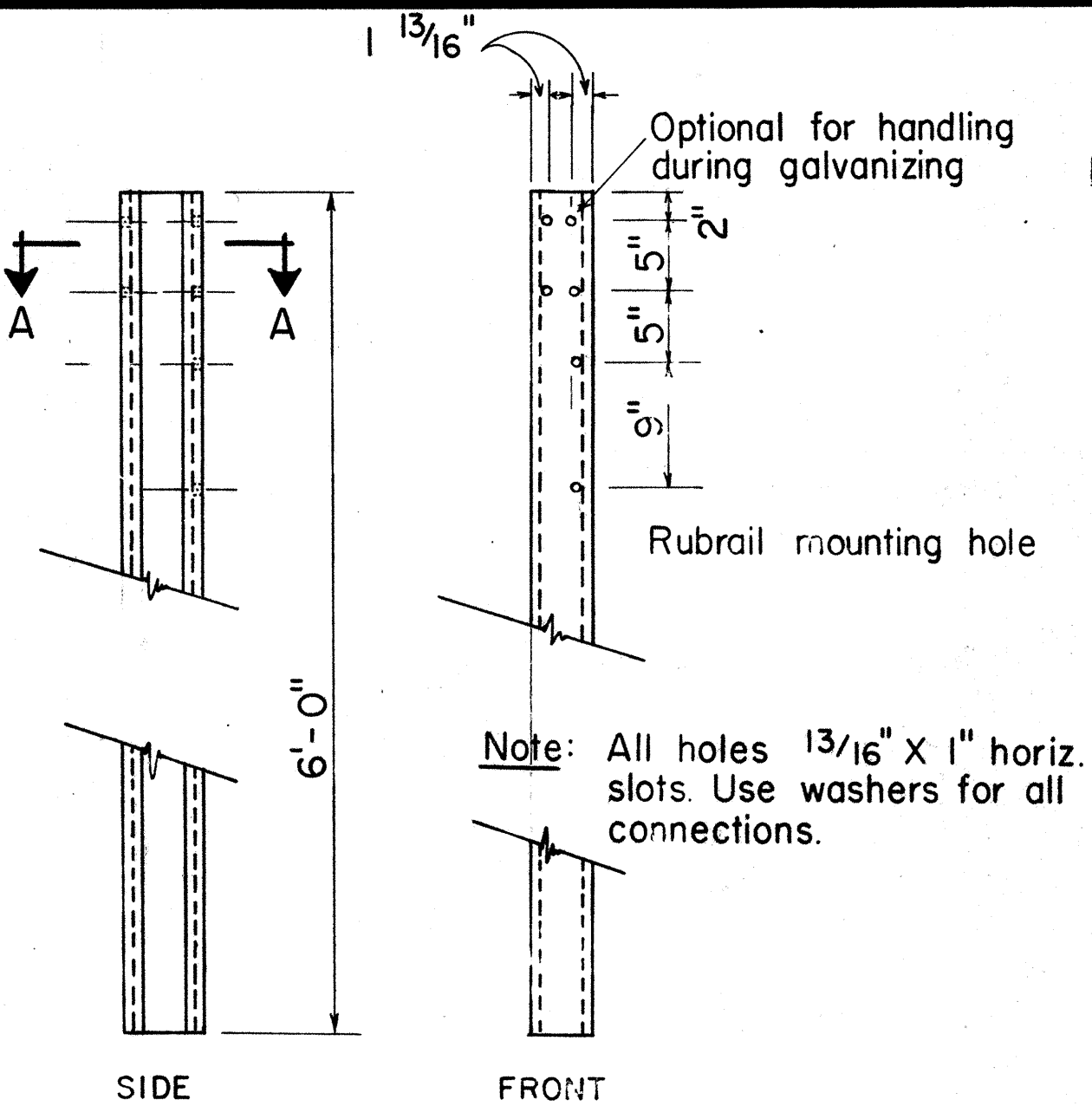


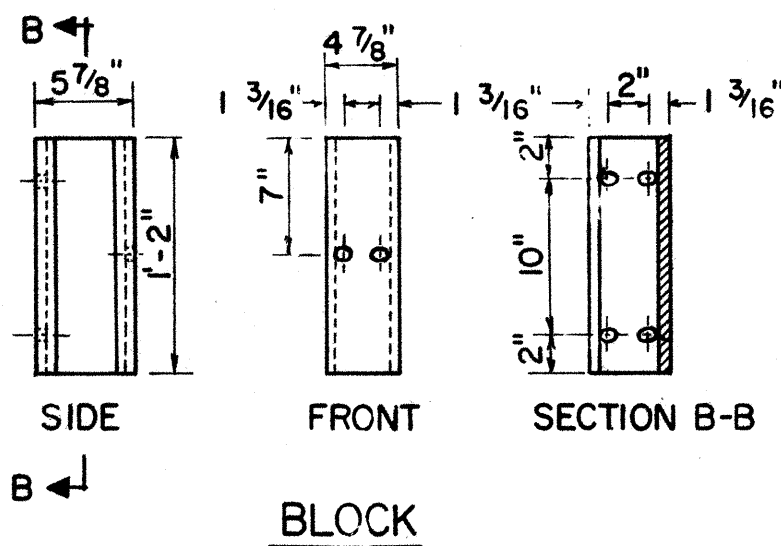
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HES-0300 (23)	1984	8	42

GENERAL NOTES

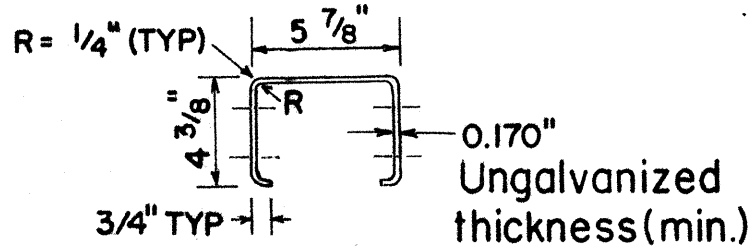
- Both of the alternate type posts may be used on any one project however, only one type of post shall be used in any single run of guardrail.
- All hardware, posts and blocks shall be galvanized. No punching, drilling or cutting will be permitted after galvanizing.
- Connection details for bent plate post and block shall be similar to the details shown for structural shape post, and block.
- Where conditions require, special post lengths in increments of 6 inches may be specified.
- For details of rail elements, bolts and nuts, see sheet DT 501.
- All fasteners, posts, blocks and rail elements shall conform to the latest edition and amendments of "A Guide to Standardized Highway Barrier Rail Hardware", a report prepared and approved by the AASHTO-AGC-ARTBA Joint Cooperative Committee.



POST



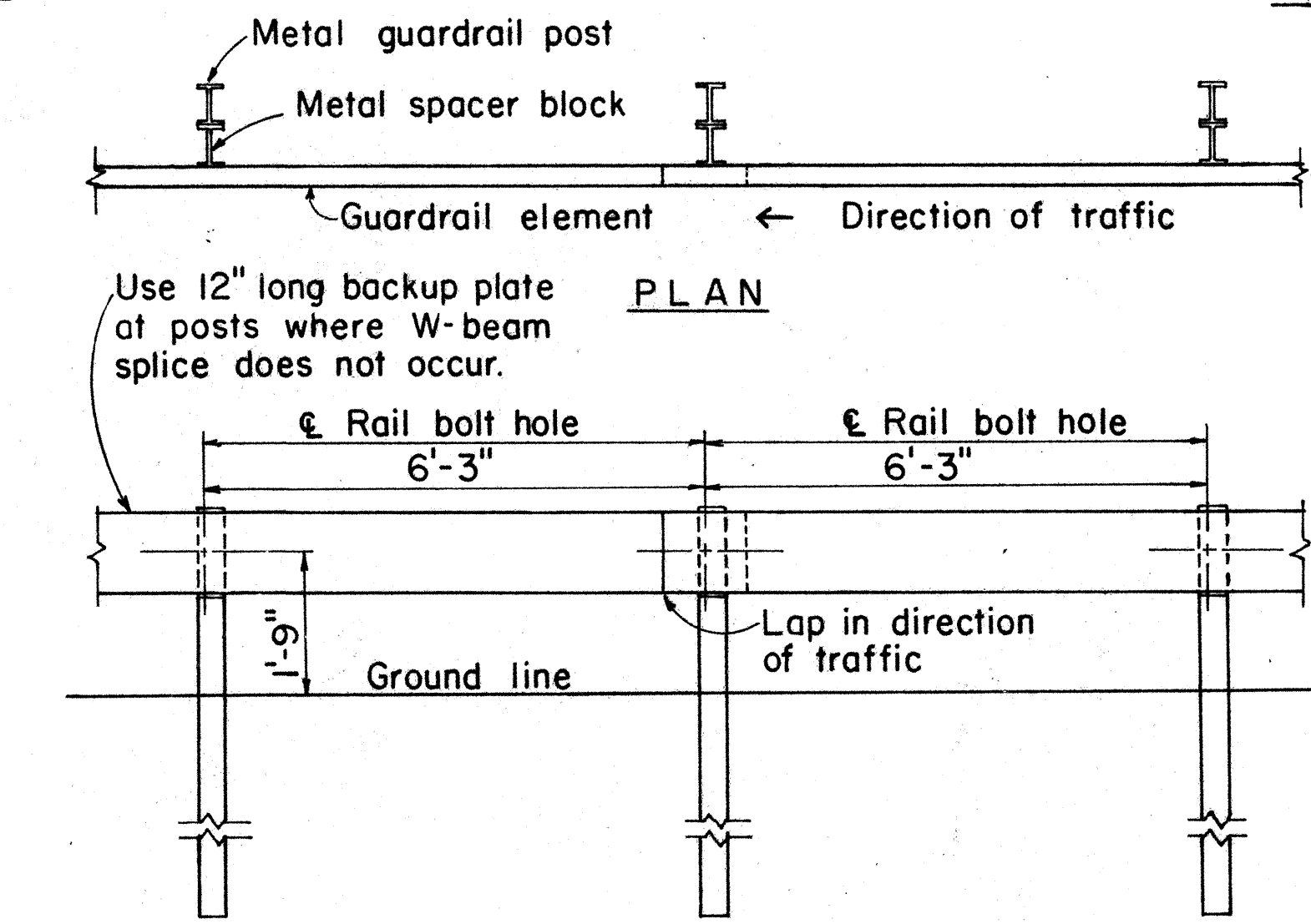
BLOCK



SECTION A-A
N.T.S.

BENT PLATE POST AND BLOCK
SCALE: 1" = 1'-0"

STRUCTURAL SHAPE POST AND BLOCK
SCALE: 1" = 1'-0"

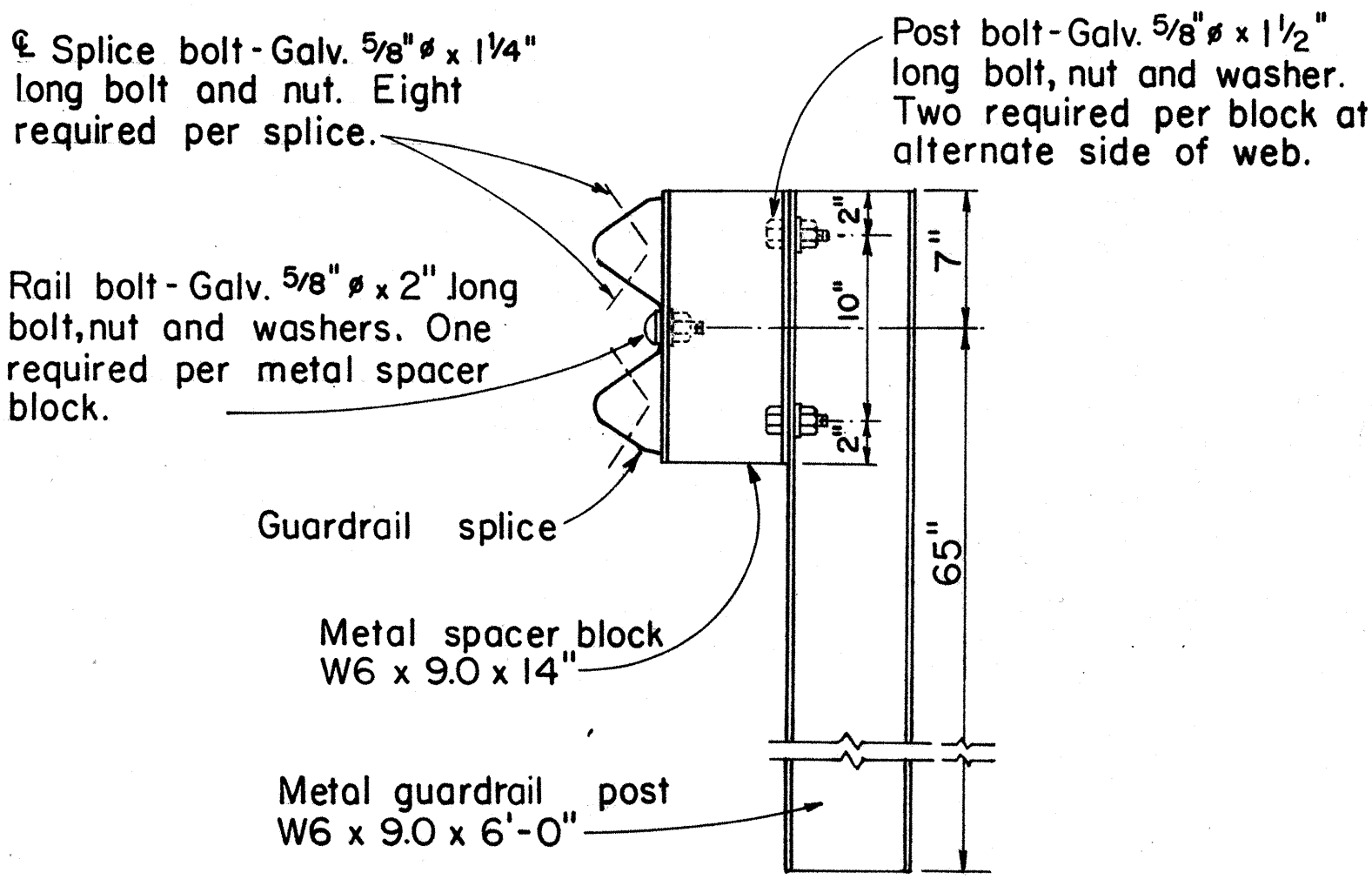


ELEVATION

METAL GUARDRAIL ON METAL POST
WITH METAL SPACER BLOCK
SCALE: 1/2" = 1'-0"

AT SHOULDER SECTION

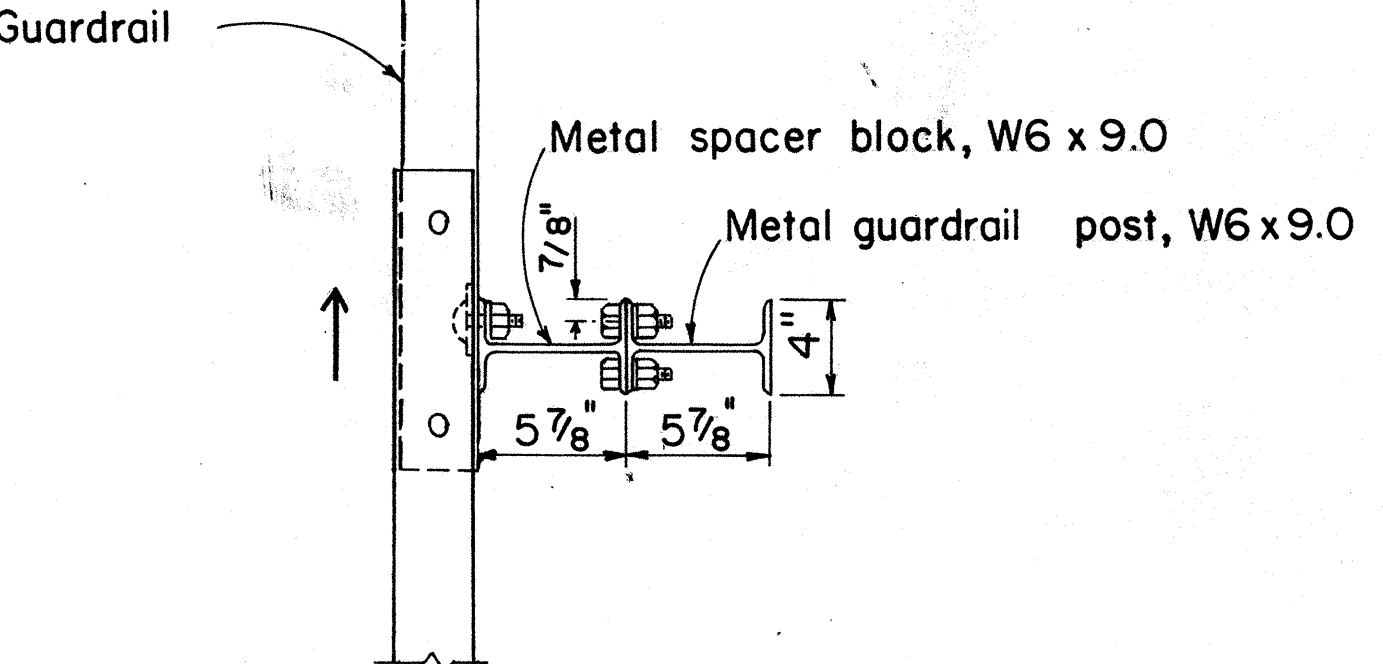
TYPICAL METAL GUARDRAIL DETAIL
SCALE: 1/2" = 1'-0"



SINGLE METAL GUARDRAIL ON METAL POST
WITH METAL SPACER BLOCK
SCALE: 1/2" = 1'-0"

ELEVATION

PLAN



APPROVAL RECOMMENDED:
TRAFFIC ENGINEER
DATE: 9/1/82

APPROVED:
ASSISTANT CHIEF, ENGINEERING
DATE: 9/22/82

NO.	REVISION	APPROVED BY	DATE
1	Supersedes sht. DT 500 approved 12/30/69.	H.P.	9/22/82
2	Added General Notes No. 6	J.D.	9-28-83

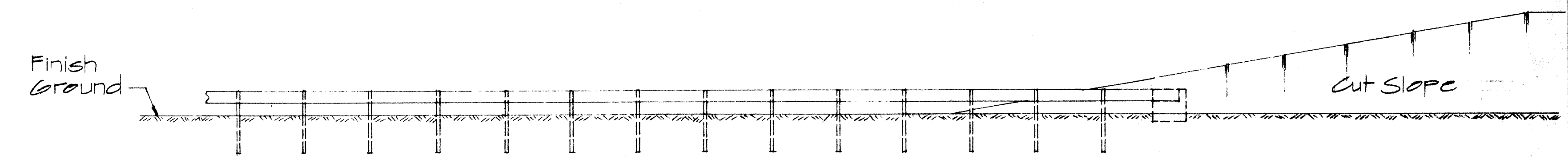
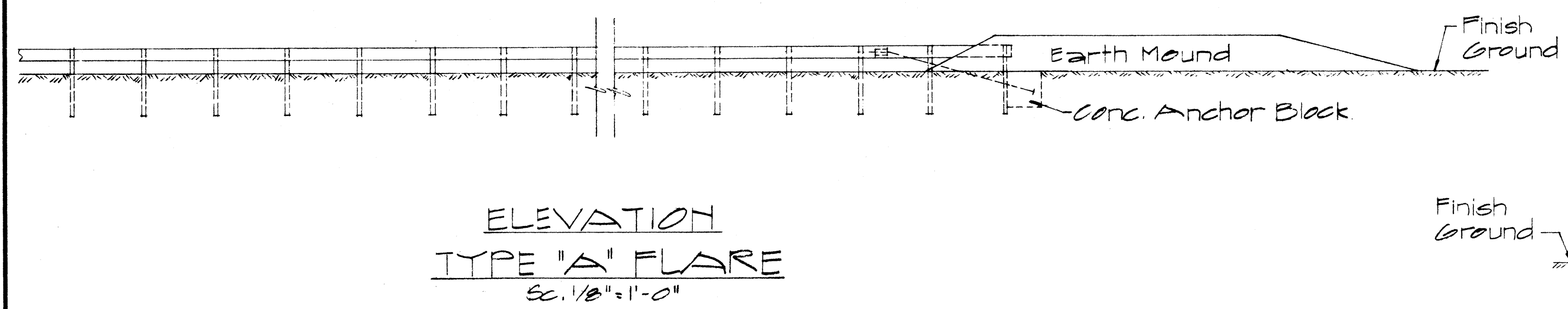
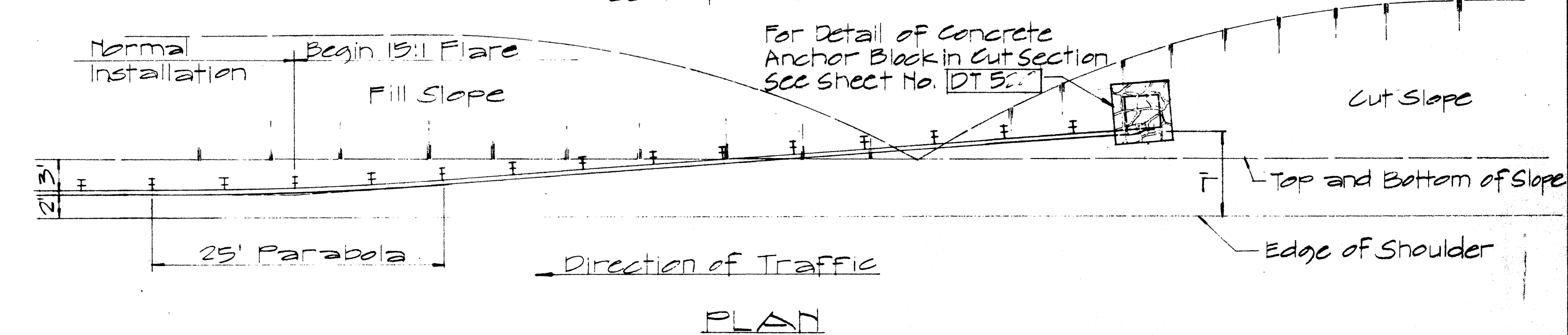
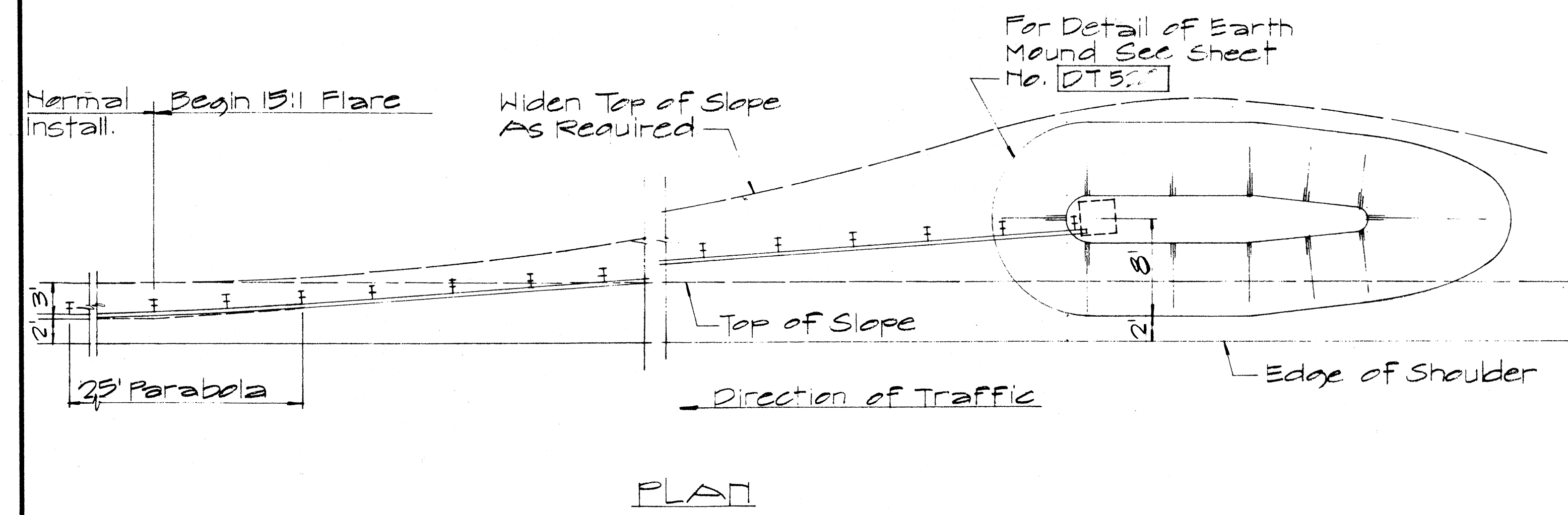
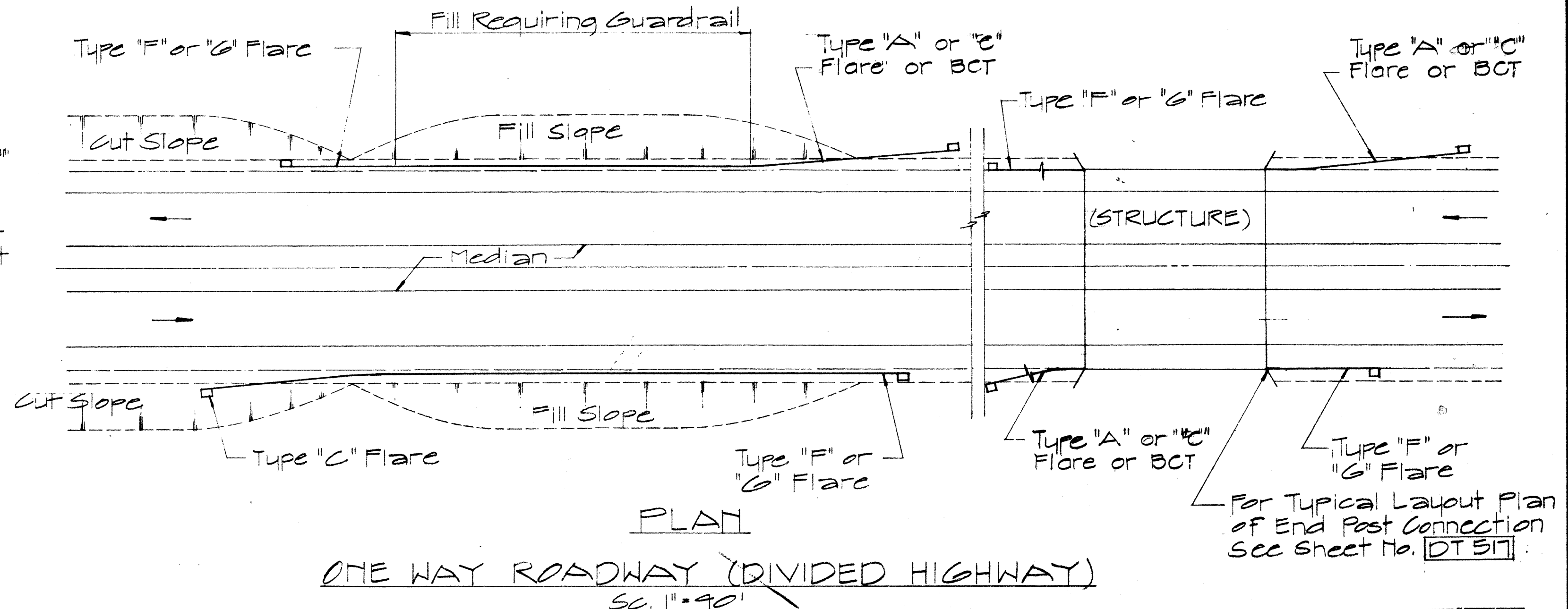
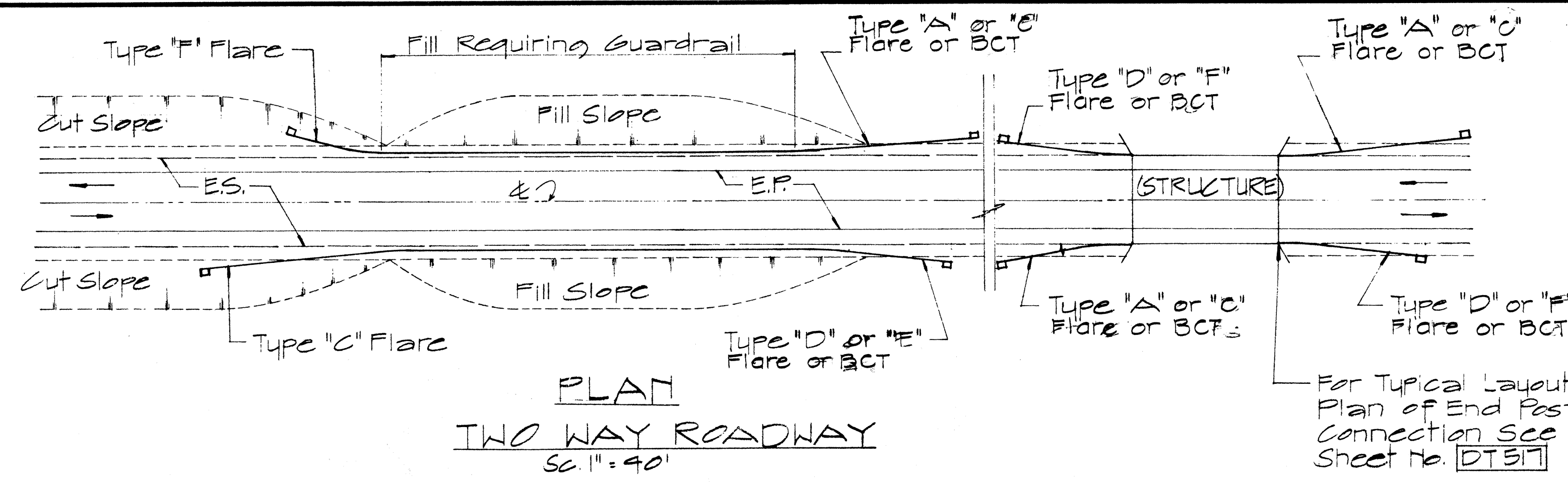
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
METAL GUARDRAIL

Scale: As Shown July, 1982
SHEET NO. 2 OF 7 SHEETSDT 500

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HE-0300(23)	1984	10	42

NOTE:
 1. Metal guard rail connection to structures requires End Post Connection. See structure plans.
 2. For detail of Breakaway Cable Terminal (BCT) See Sheet No. DT 519



APPROVAL RECOMMENDED:
Eushe Tanaka 12/22/69
 TRAFFIC ENGINEER DATE

APPROVED:
Walter J. J. J. 12-30-69
 ASSISTANT CHIEF, ENGINEERING DATE

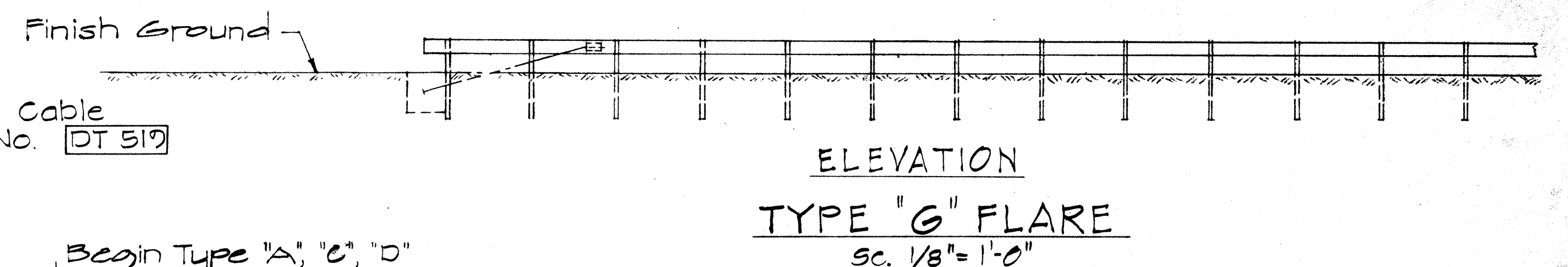
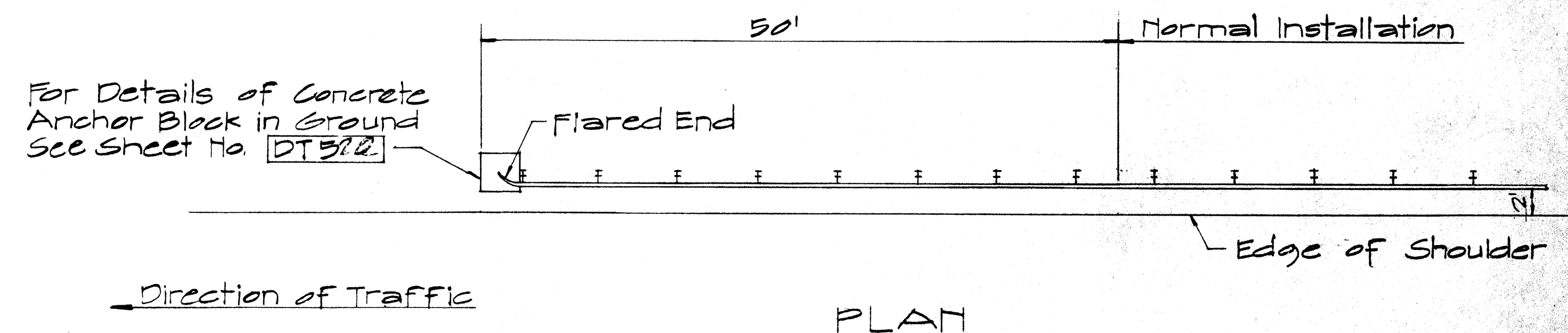
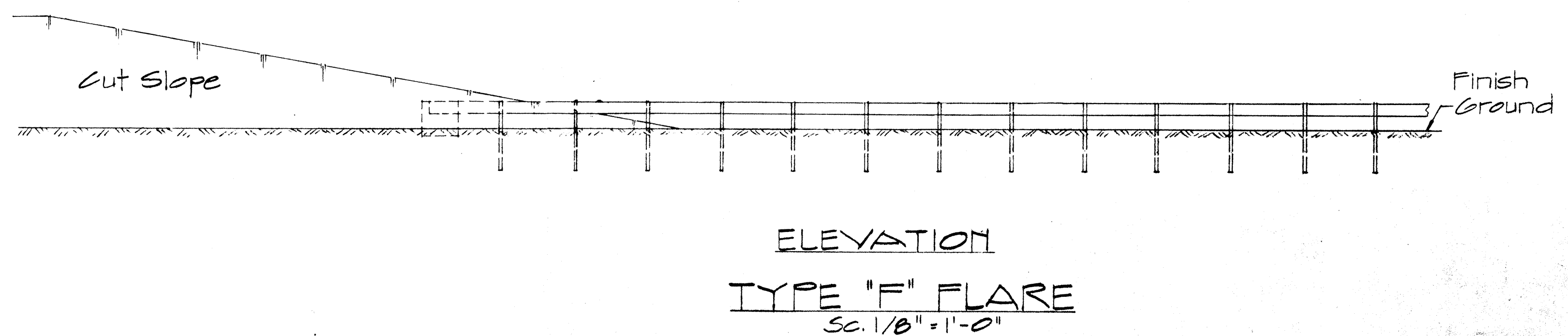
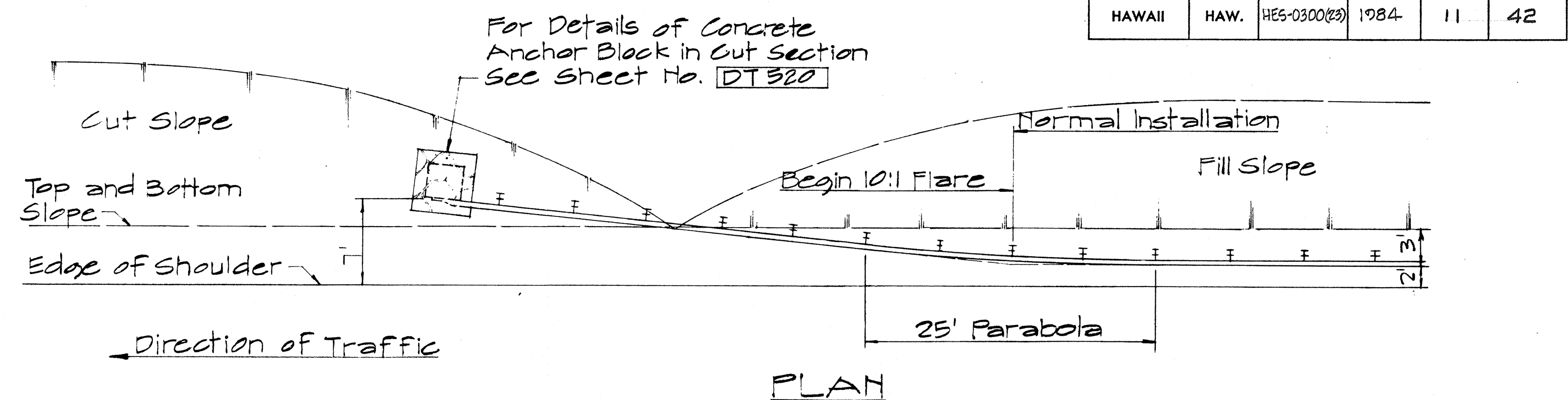
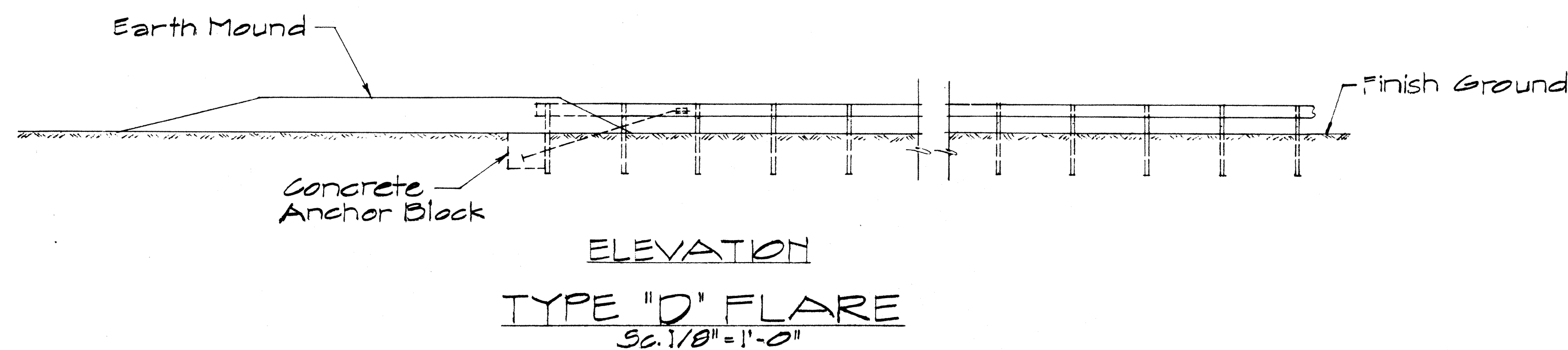
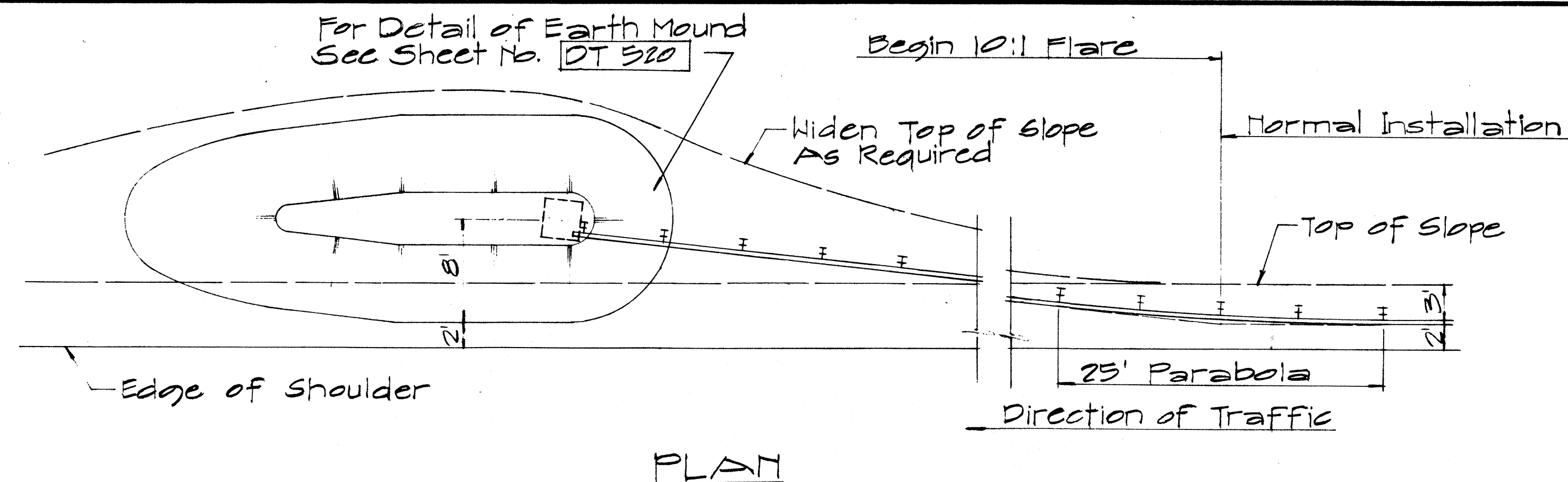
NO.	REVISION	APPROVED BY	DATE
1	Delete Type "B" Flare and Type "E" Flare	H.T.	6/15/82

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

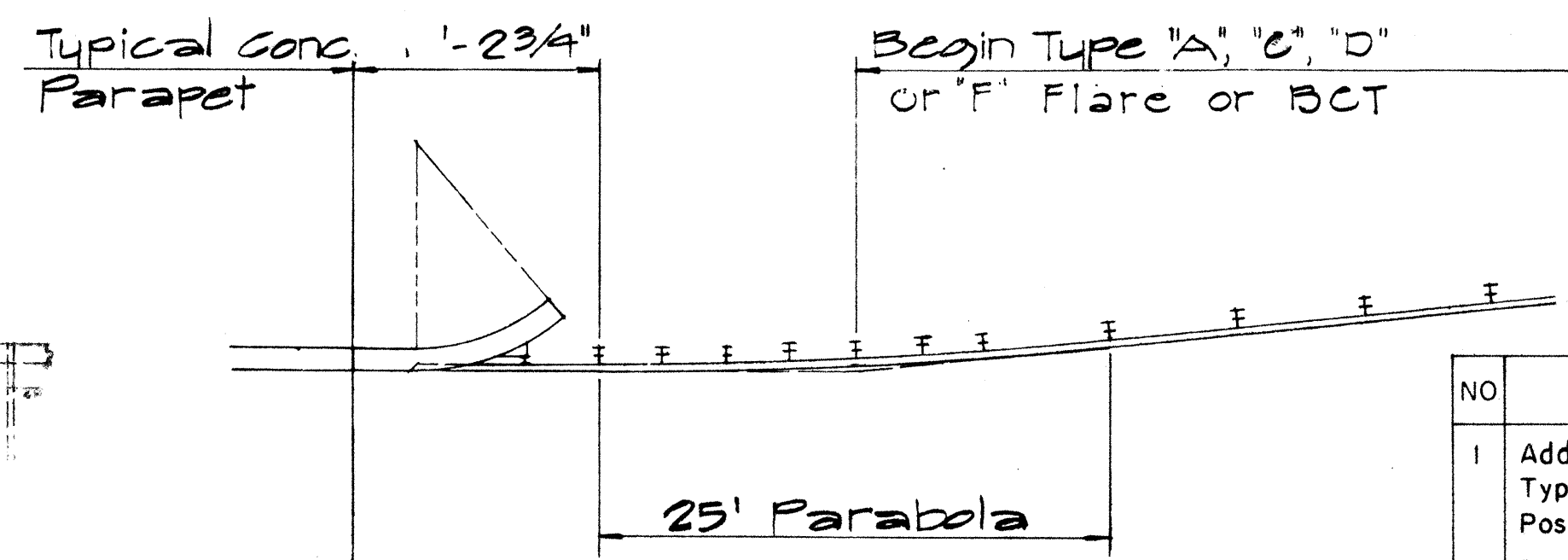
STANDARD DETAILS
 OF APPROACH END
 FLARE - ONE & TWO
 WAY ROADWAY

SC. As Noted April 1969
 SHEET No. 4 OF 7 SHEETS DT 516

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HES-0300(23)	1984	11	42



NOTE:
For detail of Breakaway Cable Terminal (BCT) See Sheet No. DT 517



TYPICAL LAYOUT PLAN OF END POST CONNECTION

Sc. 1/8" = 1'-0"

NO	REVISION	APPROVED BY	DATE
1	Additional Posts Added to Typical Layout Plan Of End Post Connection	H.C.	4-12-72
2	Delete Type "B" Flare and Type "E" Flare	H.C.	6-15-78

APPROVAL RECOMMENDED:
Eushe Tanaka
TRAFFIC ENGINEER
12/23/69
DATE

APPROVED:
Wm. J. J. J.
ASSISTANT CHIEF, ENGINEERING
12-30-69
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
TRAILING END
FLARE - ONE & TWO
WAY ROADWAY

Scale: As Noted April 1969

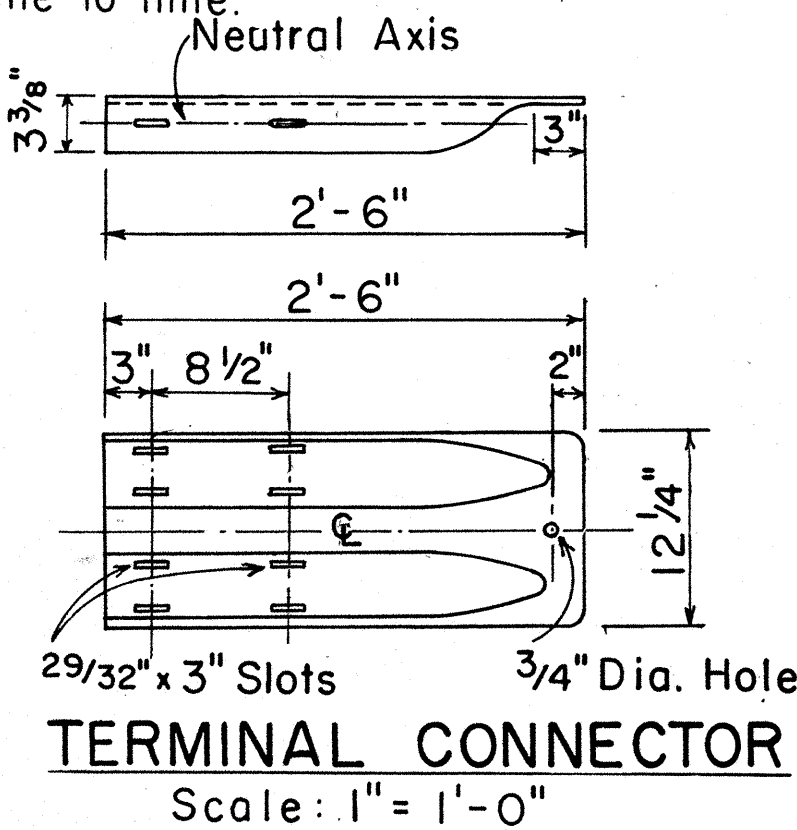
SHEET No. 5 OF 7 SHEETS DT 517

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
CHECKED BY	
NOTE BOOK	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HE-0200(23)	1984	12	42

NOTES:

- Anchor Plate and Anchor Cable Assembly (Standard Swaged Fitting and Stud). See Standard Detail Sheet No. DT 520.
- Other Anchor Cable Assemblies may be used. Minimum breaking strength of assembly should be 40,000 lbs.
- Second Terminal Post does not require holes to accommodate Anchor Cable.
- Slip Base Load shall be controlled with a Calibrated Torque Wrench - Torque 155 - 170 ft. lbs.
- Concrete shall be Class A.
- B.C.T. Hardware has been superseded by "A Guide Standardized Highway Barrier Rail Hardware," A report prepared and approved by the AASHTO-AGC-ARTBA joint cooperation committee. All hardware shall conform to above mentioned publication and as revised from time to time.



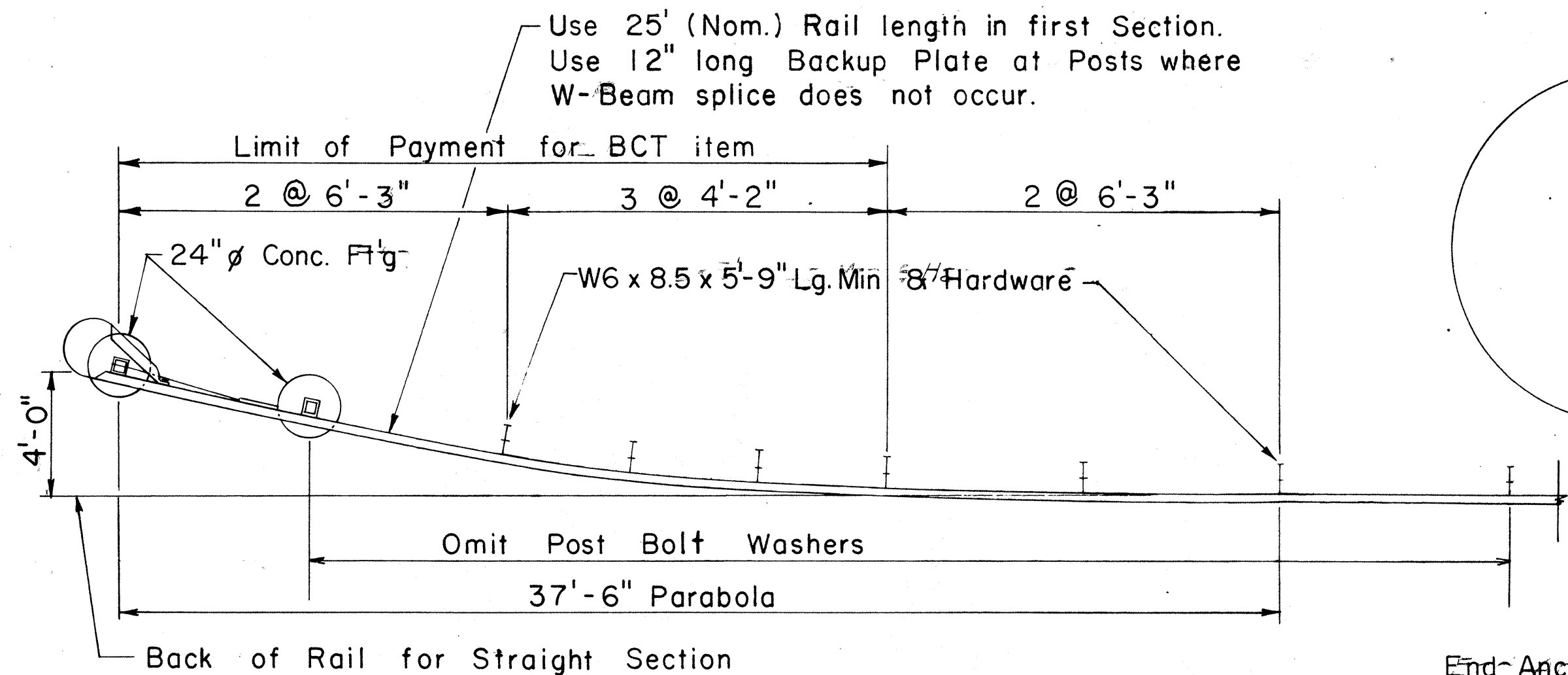
APPROVAL RECOMMENDED:

Erich Tanaka
TRAFFIC ENGINEER
6/14/78
DATE

APPROVED:

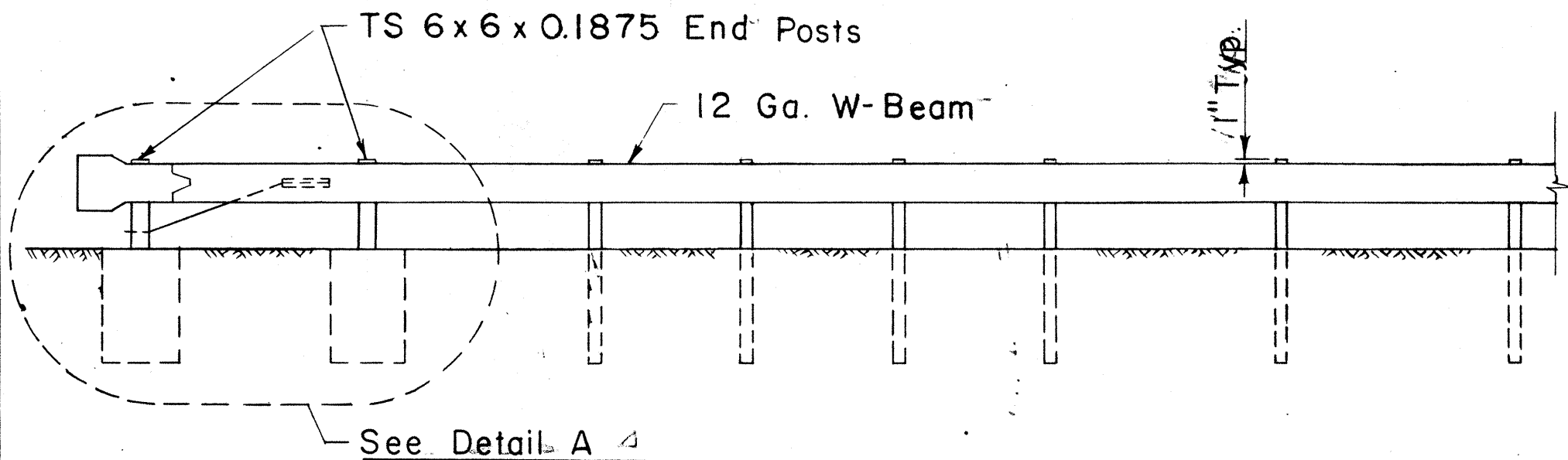
Harold Zaleski
ASSISTANT CHIEF, ENGINEERING
6/15/78
DATE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<u>STANDARD DETAIL</u>	
BREAKAWAY CABLE TERMINAL (BCT)	
Scale: As Shown	Date: June 1978
SHEET No. 6 OF 7 SHEETS DT 5	



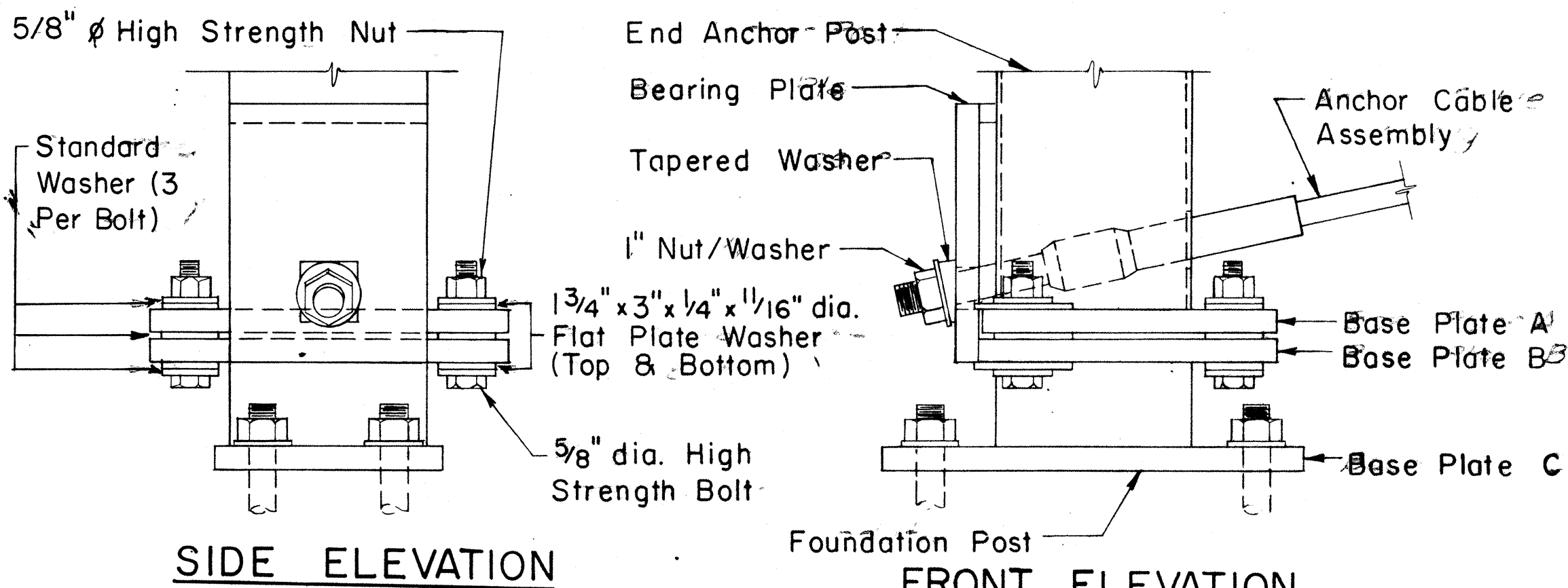
PLAN

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



ELEVATION

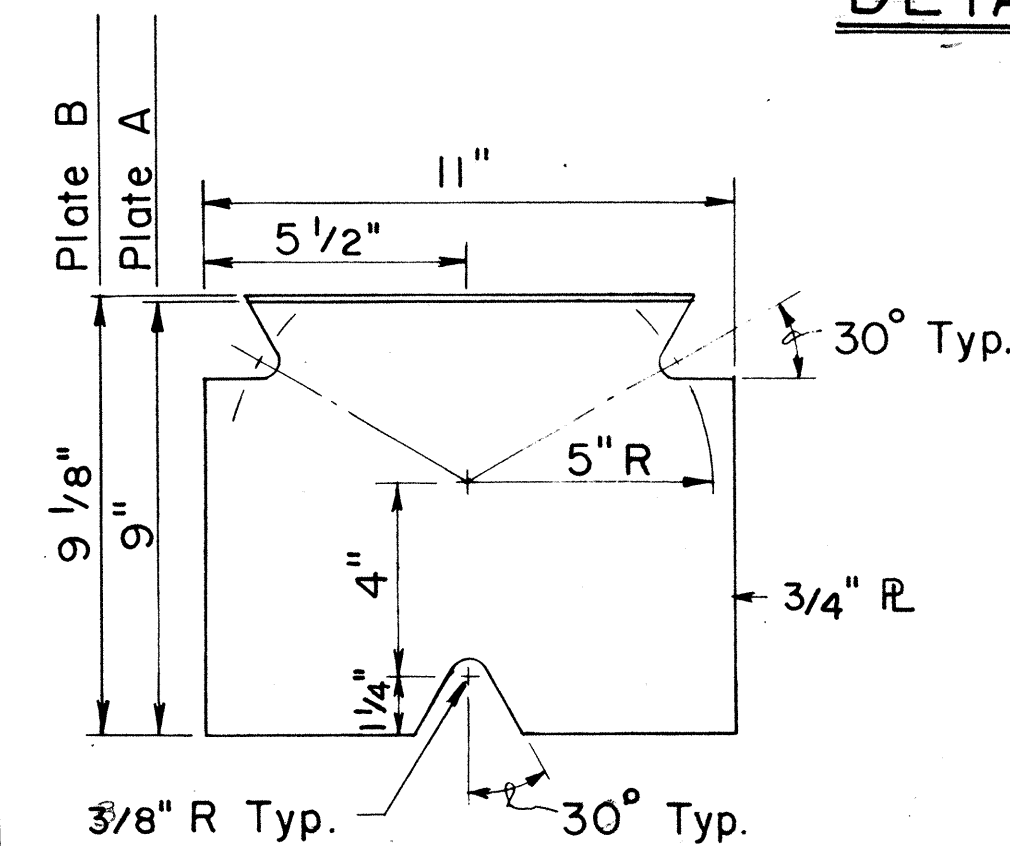
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SIDE ELEVATION

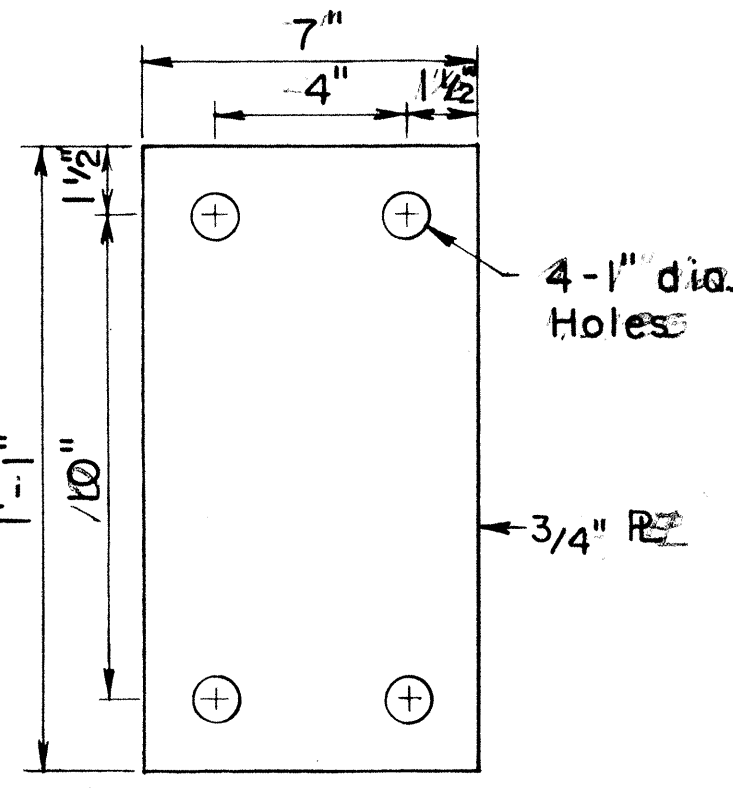
FRONT ELEVATION

DETAIL B



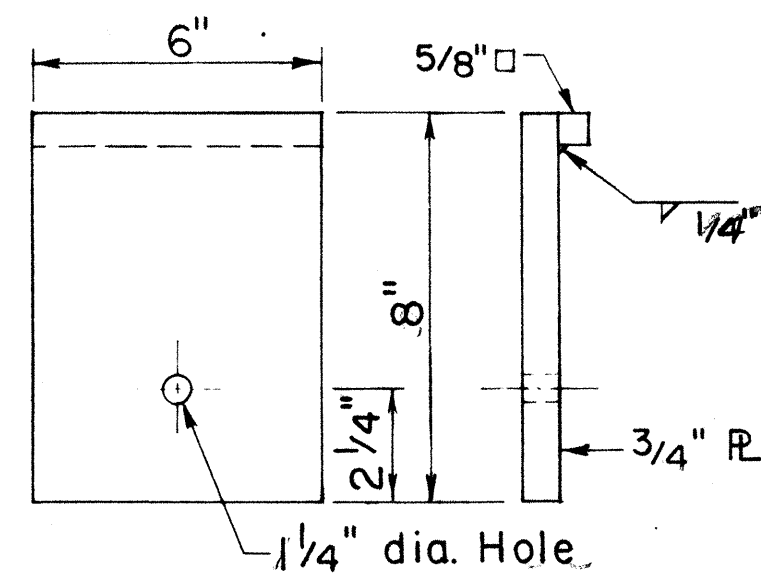
BASE PLATES A & B

Scale: 3" = 1'-0"



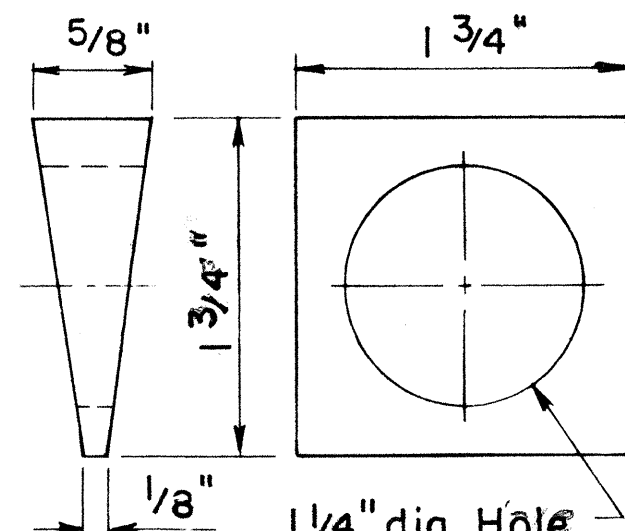
BASE PLATE C

Scale: 3" = 1'-0"



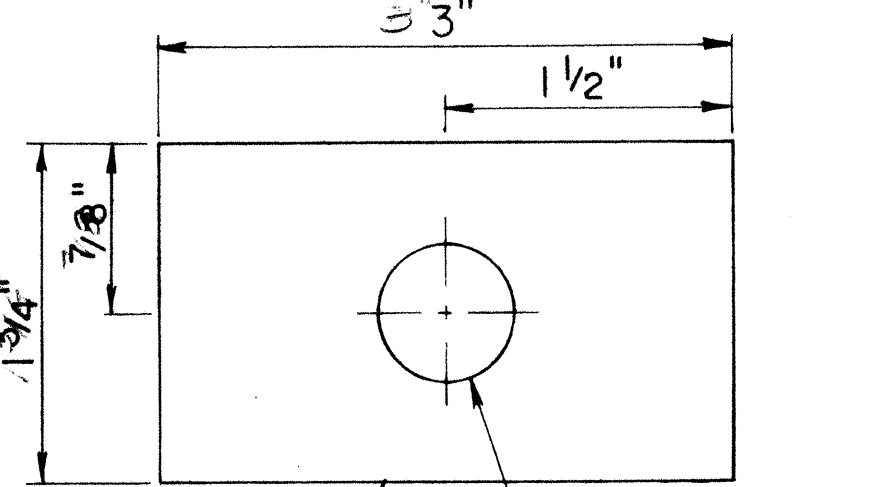
BEARING PLATE

Scale: 3" = 1'-0"



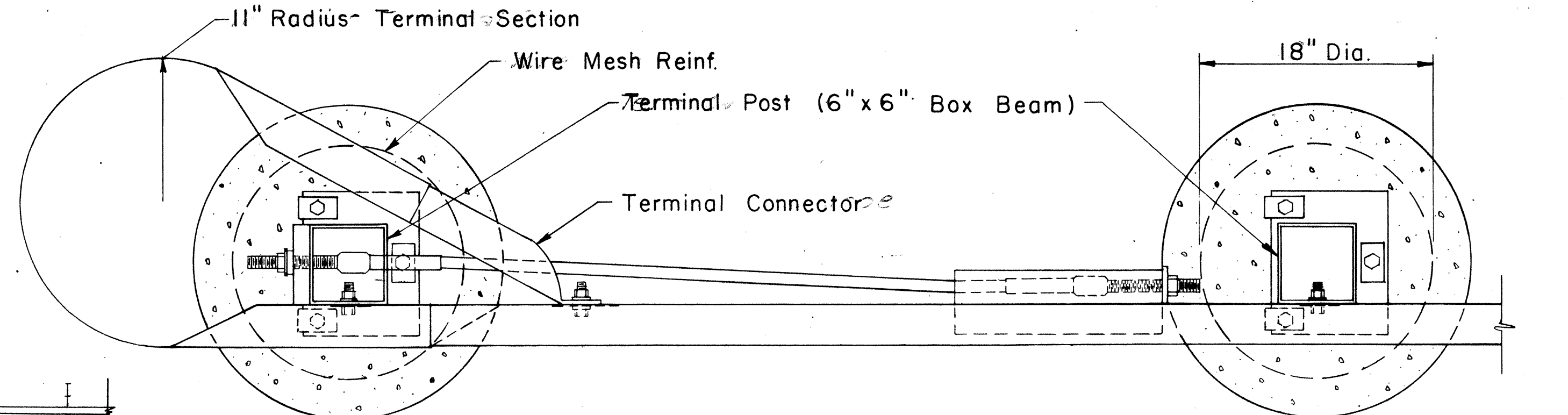
TAPERED WASHER

Scale: Full Size

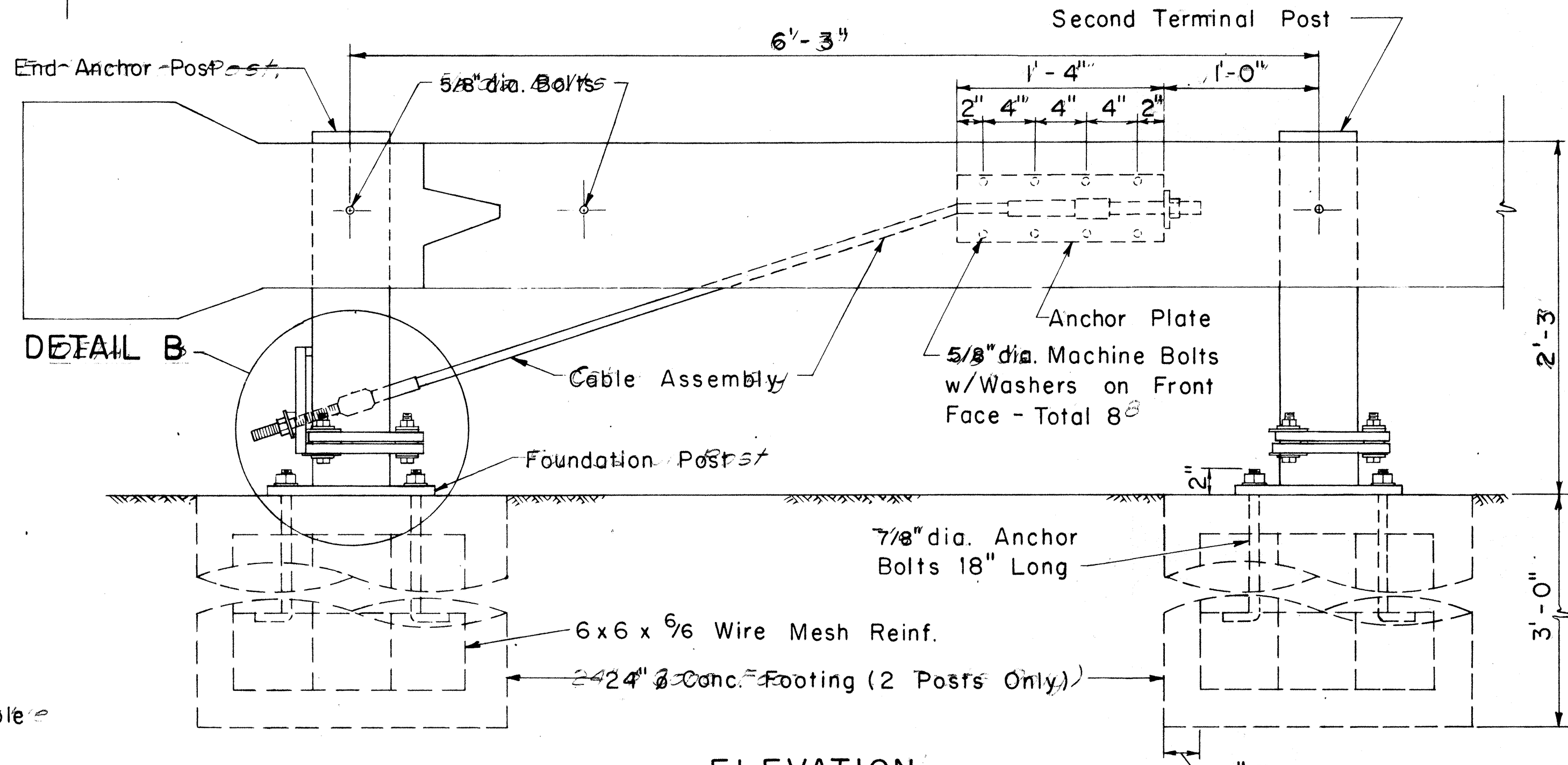


FLAT PLATE WASHER

Scale: Full Size



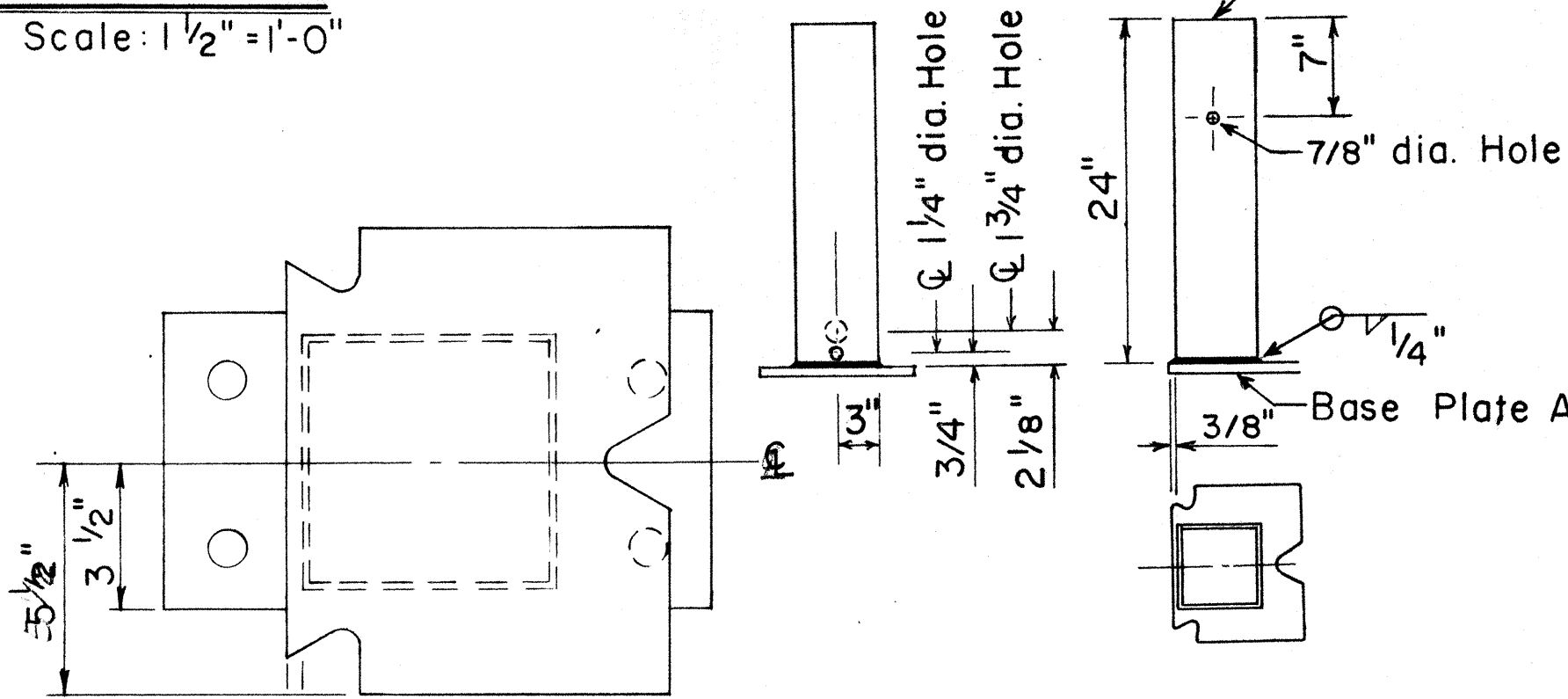
PLAN



ELEVATION

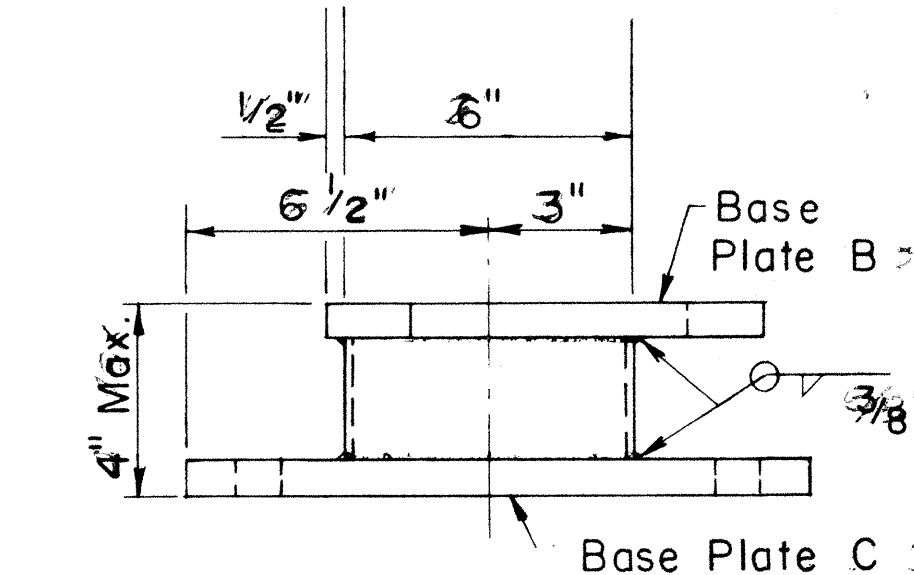
DETAIL A

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



TERMINAL POST

Scale: 1" = 1'-0"



FOUNDATION POST

Scale: 3" = 1'-0"

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 519 Approved 12/30/69	H.I.	6/15/78
2	Added Note 6	H.I.	12/11/80

