

UTAH
STATE ROADS
STATE ROAD COMMISSION

STATE OF UTAH
STATE ROAD COMMISSION

PLANS OF PROPOSED STATE ROAD

FEDERAL AID PROJECT

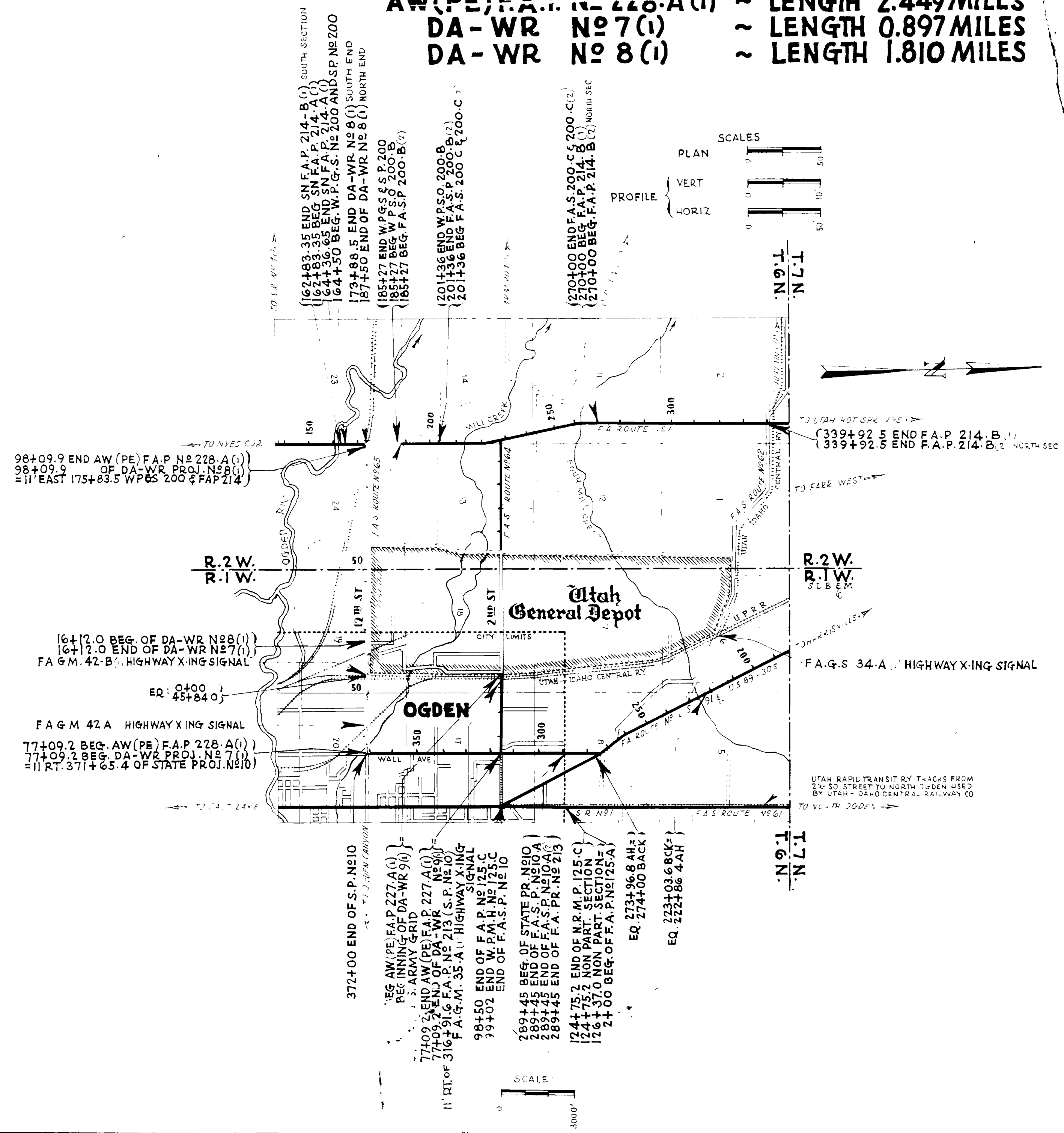
AW(PE) F.A.P. No 227-A(1)	~	LENGTH 0.613 MILES
DA-WR No 9(1)	~	LENGTH 0.613 MILES
AW(PE) F.A.P. No 228-A(1)	~	LENGTH 2.449 MILES
DA-WR No 7(1)	~	LENGTH 0.897 MILES
DA-WR No 8(1)	~	LENGTH 1.810 MILES

INDEX TO SHEETS DA-WR No 9(1)

SHEET	DESCRIPTION
1	TITLE SHEET
2	TYPICAL SECTION
3-4	PLAN AND PROFILE
5-7	EXT. TO EXIST. CULV. & DIVERSION
8	HEAD GATES AND OUTLETS
9	F.A.P. MARKERS
9A	DETAIL OF TRANSITION OF ROAD
10	CROSS SECTIONS

INDEX TO SHEETS DA-WR No 8(1)

SHEET	DESCRIPTION	DRAWING NO.	STATION
1	TITLE SHEET		
2	TYPICAL SECTION		
3-4	PLAN AND PROFILE		
5-7	EXT. TO EXIST. CULV. & DIVERSION	E 746	81+47.0
8	2 WAY DIVERSION RT. TYPE A-36	V 205	94+92
9-10	EXTENSION TO EXISTING CULVERT	E 752	13+64.1
11	HEAD GATES AND OUTLETS	V 224	VARIOUS
12-13	F.A.P. MARKERS	M 45	
14	CROSS SECTIONS		



INDEX TO SHEETS DA-WR No 9(1)

SHEET	DESCRIPTION	DRAWING NO.	STATION
1	TITLE SHEET		
2	TYPICAL SECTION		
3-4	PLAN AND PROFILE		
5	EXT. TO EXIST. CULV. & DIVERSION	E 746	81+47.0
6	24" 105" CULV. PIPE SYPHON	E 746	81+47.0
7	24" 105" " " " "	E 746	81+47.0
8	F.A.P. MARKERS	M 45	
9	DETAIL OF TRANSITION OF ROAD		
10	CROSS SECTIONS		

APPROVED JANUARY 1942
STATE ROAD COMMISSION OF UTAH

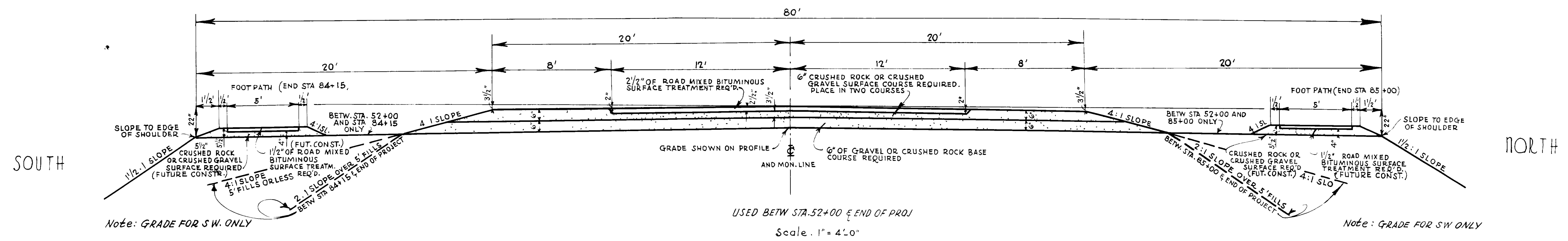
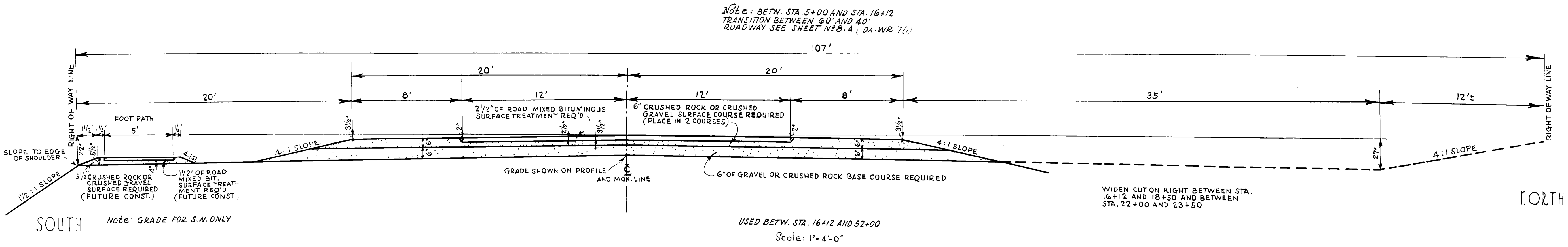
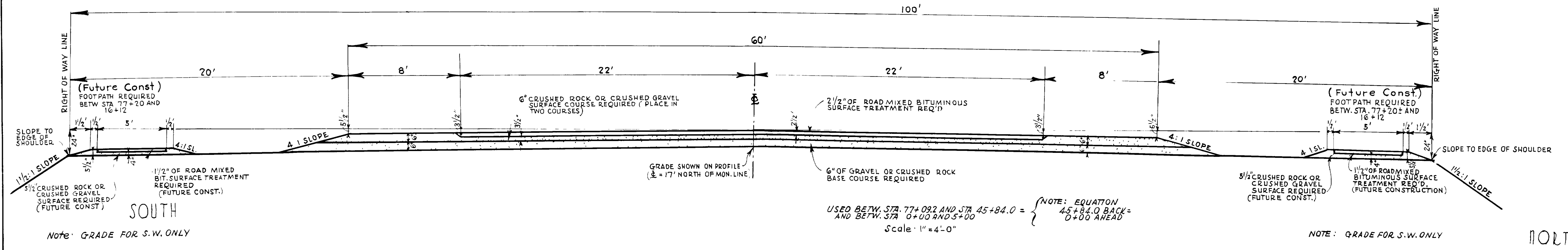
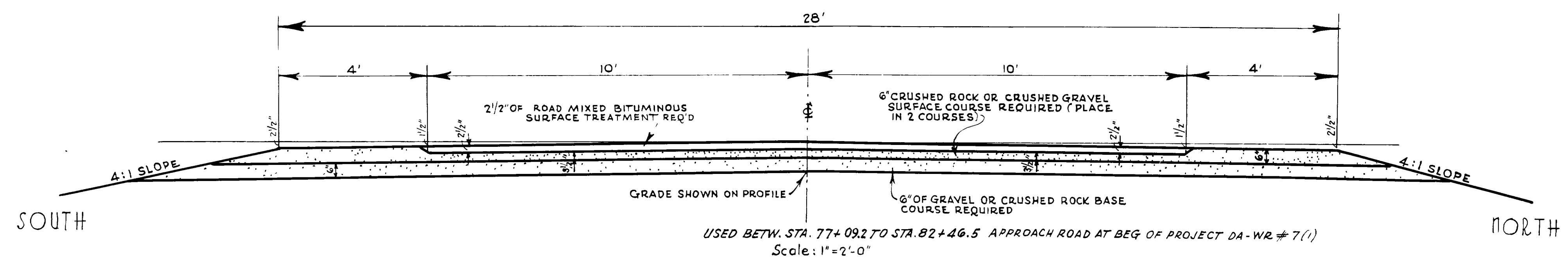
RECOMMENDED FOR APPROVAL

POST COMMANDER

APPROVED

COMMANDING GENERAL

FED. ROAD DIST. NO.	STATE	F. A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOT. SHEETS
12	UTAH	228 A(1)	1942	2	9
"	"	DA WR 7(1)	1942	2	9
"	"	DA WR 8(1)	1942	2	15



REVISIONS	DATE	BY	CHKD.

UTAH STATE ROAD COMMISSION
SALT LAKE CITY, UTAH

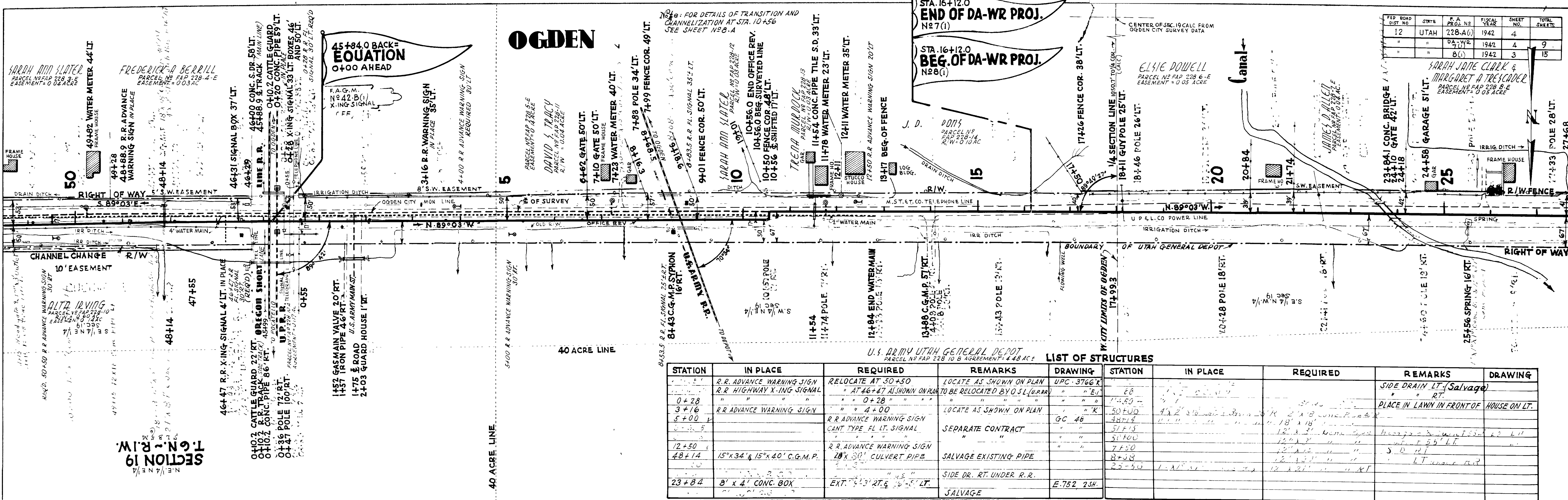
ROAD MIXED BITUMINOUS SURFACED ROADWAY

DESIGNED BY _____ SCALE AS SHOWN
DRAWN BY H.M.F. ISSUED _____
CHECKED BY H.S.W. APPROVED _____
EXAMINED BY _____

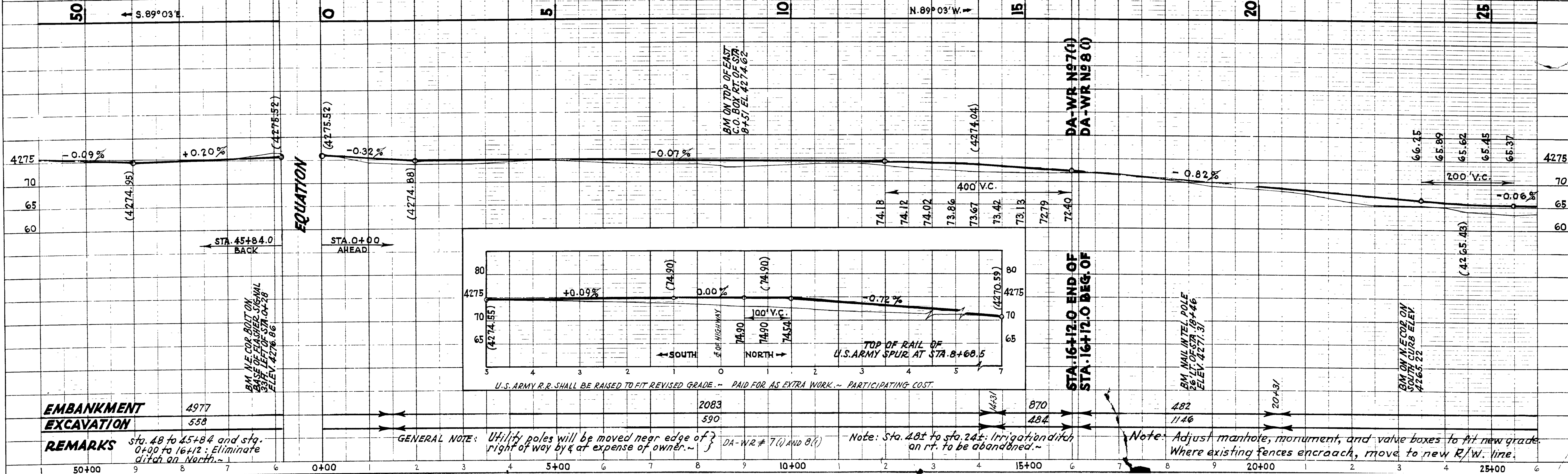
BR. NO. _____ DRG. NO. _____

PLAN	CHECKED	DATE
C. R. KIMBALL	1941	
H. S. WRIGHT	1942	
H. M. FEMMEL		

PROFILE	CHECKED	DATE
C. R. KIMBALL	1941	
H. S. WRIGHT	1942	
H. M. FEMMEL		



STATION	IN PLACE	REQUIRED	REMARKS	DRAWING	STATION	IN PLACE	REQUIRED	REMARKS	DRAWING
	R.R. ADVANCE WARNING SIGN	RELOCATE AT 50+50	LOCATE AS SHOWN ON PLAN	UPC-3766 R				SIDE DRAIN LT. (Salvage)	
	R.R. HIGHWAY X-ING SIGNAL	AT 46+47 AS SHOWN ON PLAN	TO BE RELOCATED BY O.S.L. (UPRR)	" " E1				" " RT	
0+28	" " " "	" " " "	" " " "	" " " "				PLACE IN LAWN IN FRONT OF HOUSE ON LT.	
3+16	R.R. ADVANCE WARNING SIGN	" " " "	LOCATE AS SHOWN ON PLAN	" " K	50+00				
5+00	R.R. ADVANCE WARNING SIGN	" " " "	" " " "	GC 46	48+14				
	GANT TYPE FL. LT. SIGNAL	" " " "	SEPARATE CONTRACT	" " "	51+15				
12+50	R.R. ADVANCE WARNING SIGN	" " " "	" " " "	" " "	50+00				
48+14	15" x 34' & 15" x 40' C.G.M.P.	28" x 30' CULVERT PIPE	SALVAGE EXISTING PIPE	" " "	7+50				
	" " " "	" " " "	" " " "	" " "	8+38				
23+84	8' x 4' CONC. BOX	EXT. " " " "	SIDE DR. RT. UNDER R.R.	E-752 734	25+50				



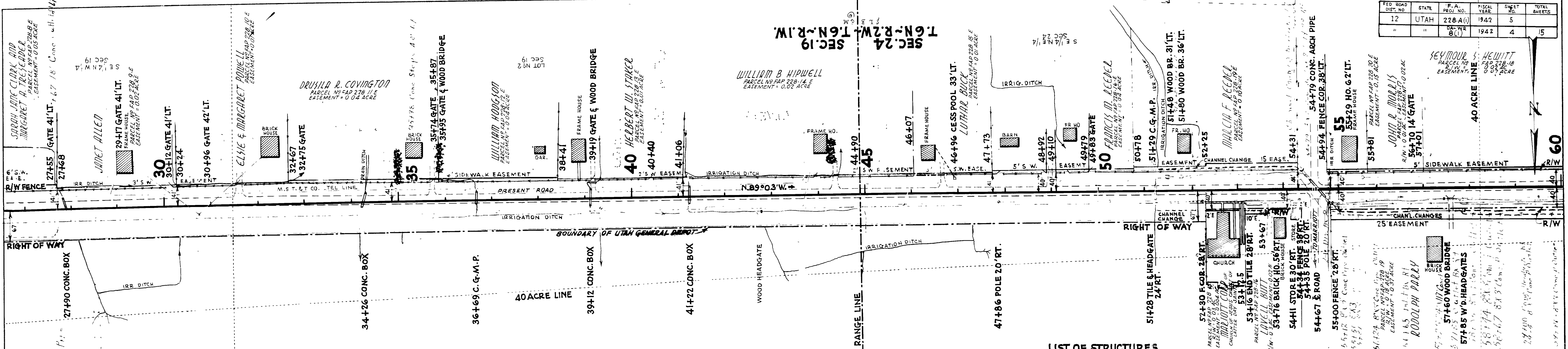
EMBANKMENT	4977
EXCAVATION	558
REMARKS	Sta. 48 to 45+84 and sta. 0+00 to 16+12. Eliminate ditch on North.

GENERAL NOTE: Utility poles will be moved near edge of right of way by & at expense of owner. DA-WR # 7(1) AND 8(1) Note: Sta. 48 to sta. 24: Irrigation ditch on rt. to be abandoned. Note: Adjust manhole, monument, and valve boxes to fit new grade. Where existing fences encroach, move to new R/W. line.

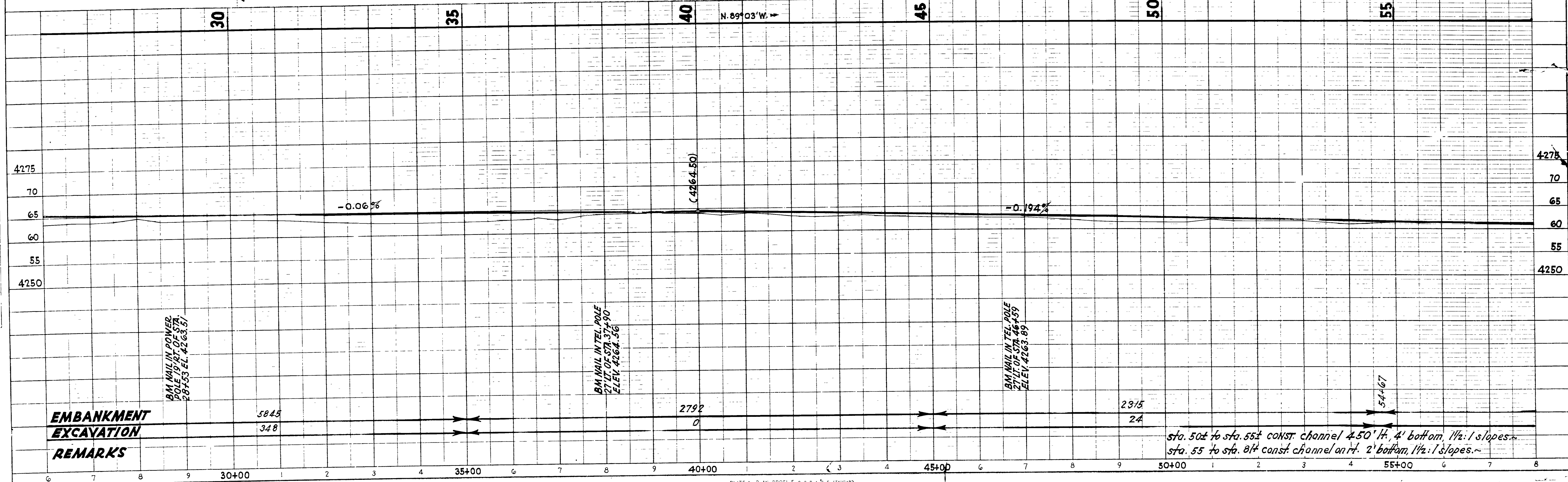
PLAN	DATE	BY
NOTE BOOK	1941	C. A. KIMBALL
PLANNED	1942	H. S. WRIGHT
FIELD CHECKED		H. M. FERMEL
TRACED		

PROFILE	DATE	BY
NOTE BOOK	1942	C. A. KIMBALL
PLANNED		H. S. WRIGHT
FIELD CHECKED		H. M. FERMEL
TRACED		H. S. WRIGHT

FED. ROAD DIST. NO.	STATE	F. A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
12	UTAH	228 A(1)	1942	5	15
"	"	8(1)	1942	4	"



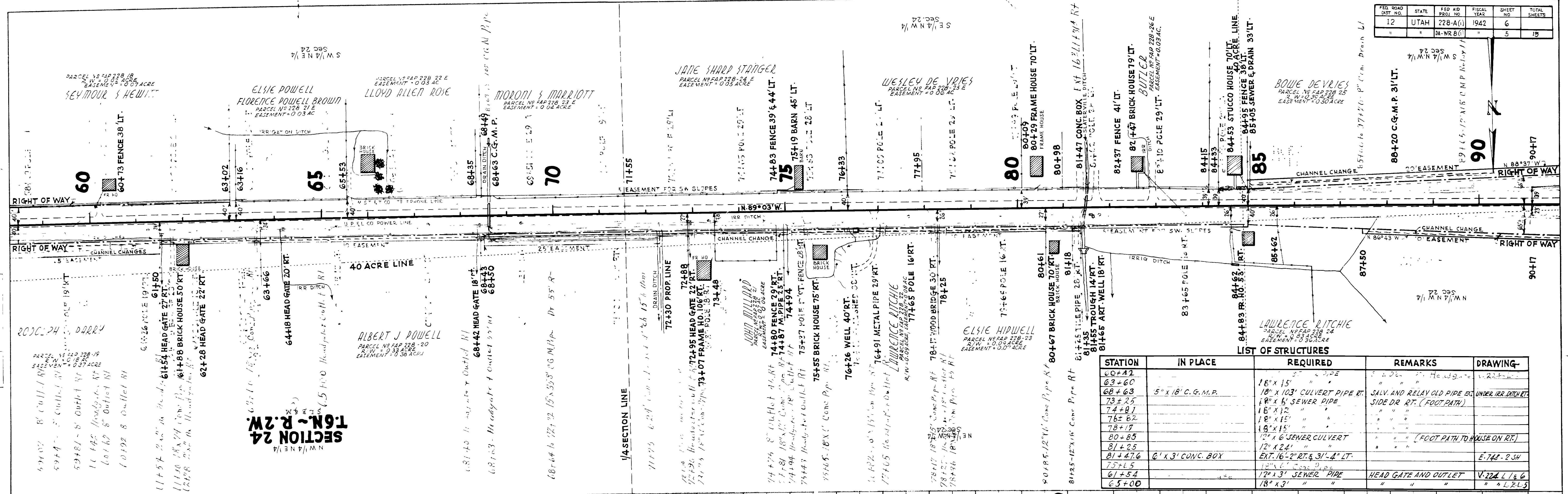
STATION	IN PLACE	REQUIRED	REMARKS	DRAWING	STATION	IN PLACE	REQUIRED	REMARKS	DRAWING
34+26	24" x 90' CONC. BOX	24" x 90' CONC. BOX			51+28	24" RT. HEADGATE	24" RT. HEADGATE		
36+69	C.G.M.P.				52+30	FOUR 28" RT.			
39+12	CONC. BOX				53+16	END TILE 28" RT.			
41+22	CONC. BOX				53+67	BRICK HOUSE			
44+90					54+11	STORE 20' RT.			
46+07					54+67	FENCE 20' RT.			
47+73					55+00	FENCE 28' RT.			
48+92					55+29	HO. G. 27' LT.			
49+10					55+61	FR. HOUSE			
49+79									
50+78									
51+29									
51+49									
51+80									
52+25									
53+67									
54+11									
54+67									
55+00									
55+29									
55+61									



1941
1942
C. R. KIMBALL
H. S. WRIGHT
H. M. WRIGHT
H. M. WRIGHT

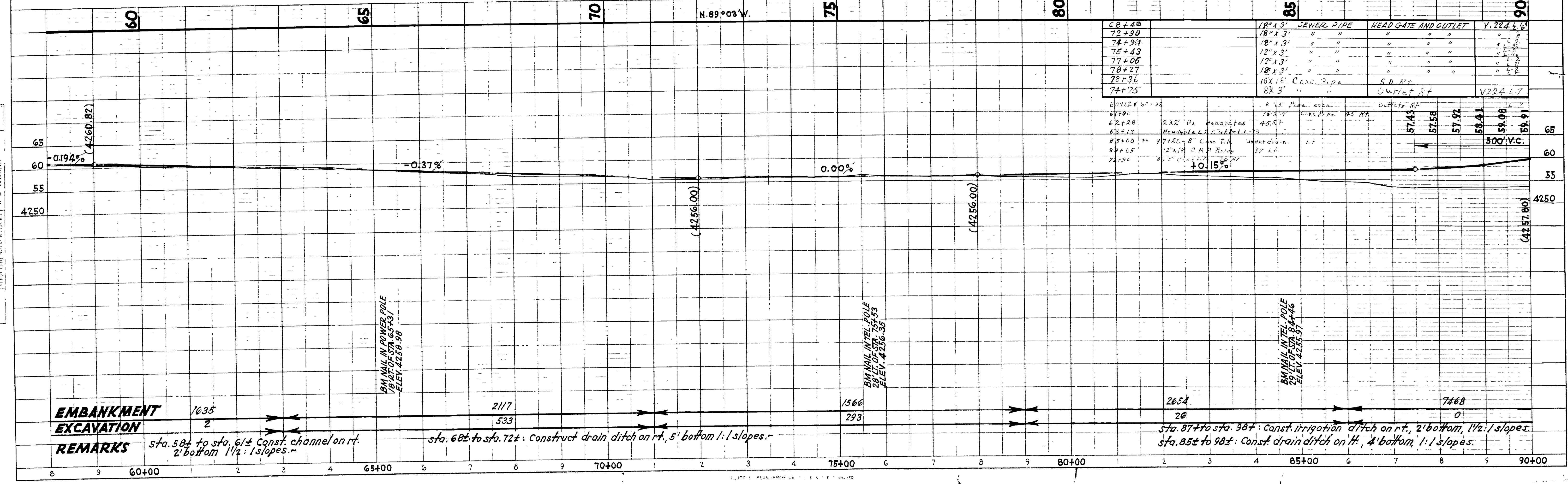
1941
1942
C. R. KIMBALL
H. S. WRIGHT
H. M. WRIGHT
H. S. WRIGHT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
12	UTAH	228-A(1)	1942	6	19
		DA-WR-8(1)		5	19



LIST OF STRUCTURES

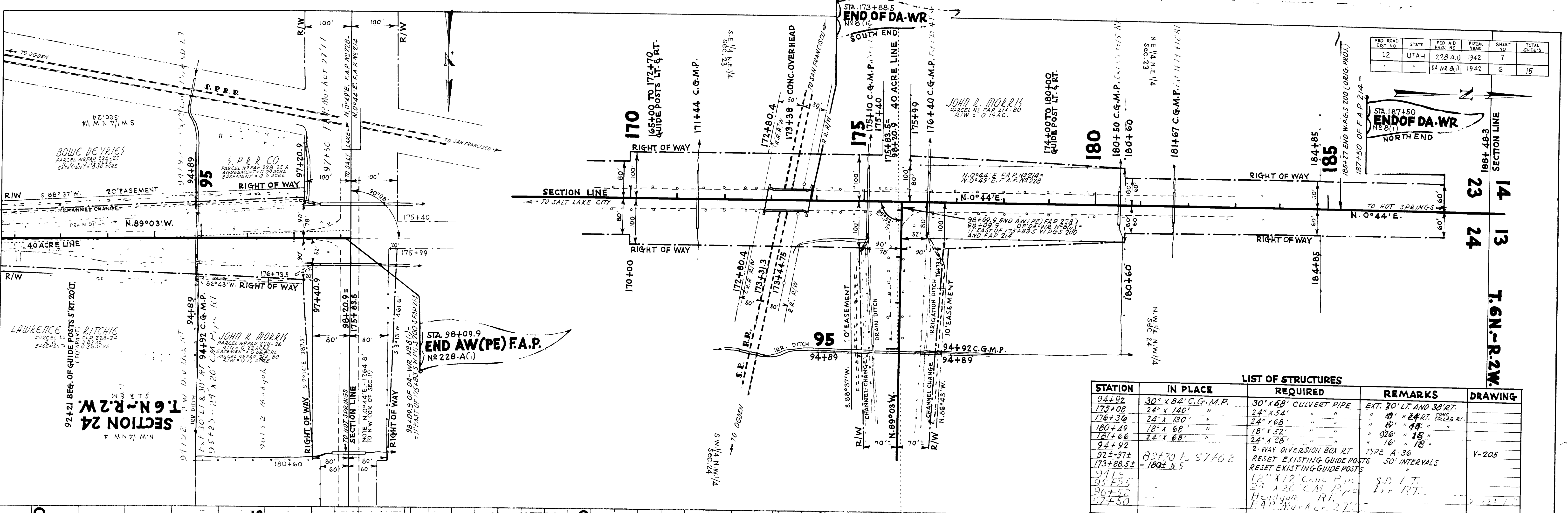
STATION	IN PLACE	REQUIRED	REMARKS	DRAWING
60+00		18" x 15" "	" " " "	V. 224-17
63+60		18" x 103' CULVERT PIPE RT.	SALV. AND RELAY OLD PIPE EX.	UNDER IRR. DITCH RT.
68+63	5" x 18" C.G.M.P.	18" x 6' SEWER PIPE	SIDE DR. RT. (FOOTPATH)	
73+25		18" x 12' "	" " " "	
74+81		18" x 15' "	" " " "	
76+82		18" x 15' "	" " " "	
78+17		18" x 15' "	" " " "	
80+85		12" x 6' SEWER CULVERT	" " " "	(FOOT PATH TO HOUSE ON RT.)
81+25		12" x 2' "	" " " "	
81+47.6	6' x 3' CONC. BOX	EXT. 16'-2" RT. & 3' 1/2" LT.	" " " "	E-742-2 SH
75+L5		12" x 3' SEWER PIPE	HEAD GATE AND OUTLET	V. 224 L 1 & 6
61+54		18" x 3' "	" " " "	" " L 2-5
65+00		18" x 3' "	" " " "	" " " "



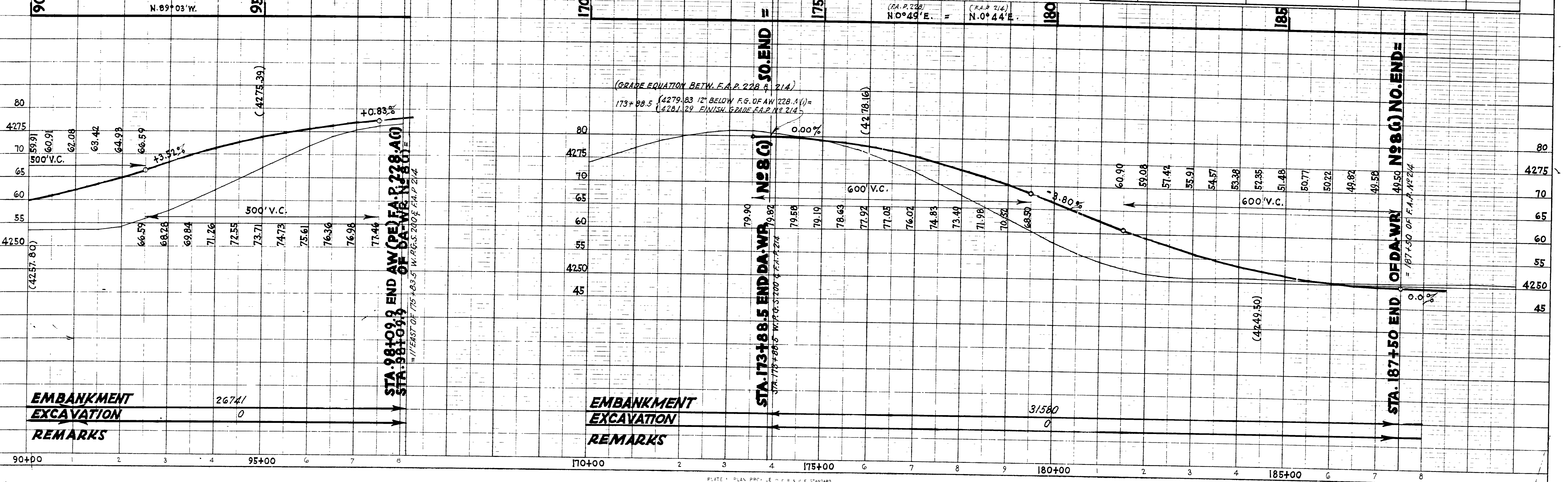
PLAN
 PREPARED BY
 C. R. KIMBALL
 H. M. FEHMELE
 H. S. WRIGHT
 H. M. FEHMELE
 No. 4914
 DATED
 1941
 1942

PROFILE
 PREPARED BY
 C. R. KIMBALL
 H. M. FEHMELE
 H. S. WRIGHT
 H. M. FEHMELE
 No. 4915
 DATED
 1941
 1942

FED. ROAD DIST. NO.	STATE	FED. AID PKG. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
12	UTAH	228 A(1)	1942	7	15
		DA WR 8(1)	1942	6	15



STATION	LIST OF STRUCTURES			DRAWING
	IN PLACE	REQUIRED	REMARKS	
94+92	30" x 84" C.G.M.P.	30" x 68" CULVERT PIPE	EXT. 30' LT. AND 38' RT.	V-205
175+08	24" x 140"	24" x 54"	" " 24' RT. 88' 32' RT.	
176+36	24" x 130"	24" x 68"	" " 80' " 48' "	
180+49	18" x 68"	18" x 52"	" " 92' " 18' "	
181+66	24" x 68"	24" x 28"	" " 16' " 18' "	
94+92		2-WAY DIVERSION BOX RT	TYPE A-36	
92+97	80+70 to 57+62	RESET EXISTING GUIDE POSTS	50' INTERVALS	
173+88.5	-180±5.5	RESET EXISTING GUIDE POSTS		
94+55		12" X 12" CONC. PIPE	S.D. LT.	
95+25		24" X 26" C.A.I. P.P.	Err RT.	
96+52		Headgate RT.		
97+50		F.A.P. Marker 27"		



EMBANKMENT
 EXCAVATION
 REMARKS
 26741
 0

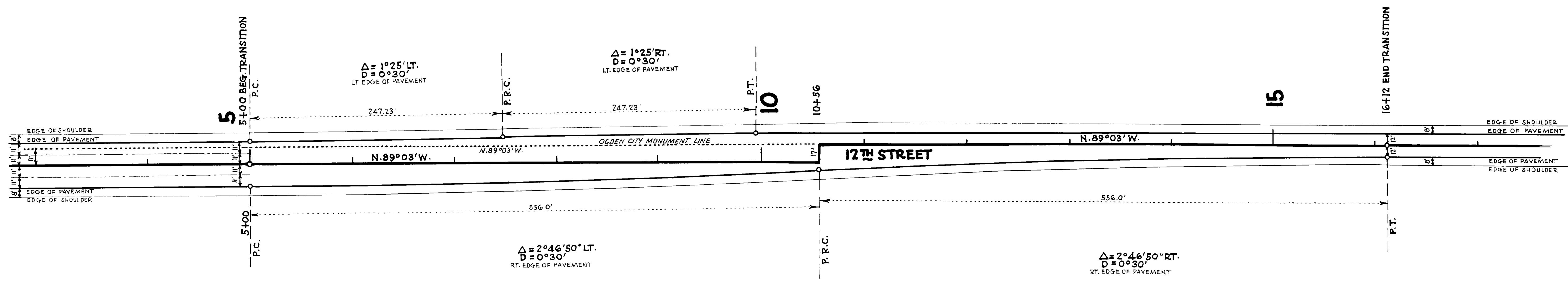
EMBANKMENT
 EXCAVATION
 REMARKS
 31580
 0

EMBANKMENT
 EXCAVATION
 REMARKS
 4958
 0

FED. ROAD DIST. NO.	STATE	DA-WR PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
12	UTAH	7.1	1942	8.4	15



REVISIONS	DATE	BY	NO.



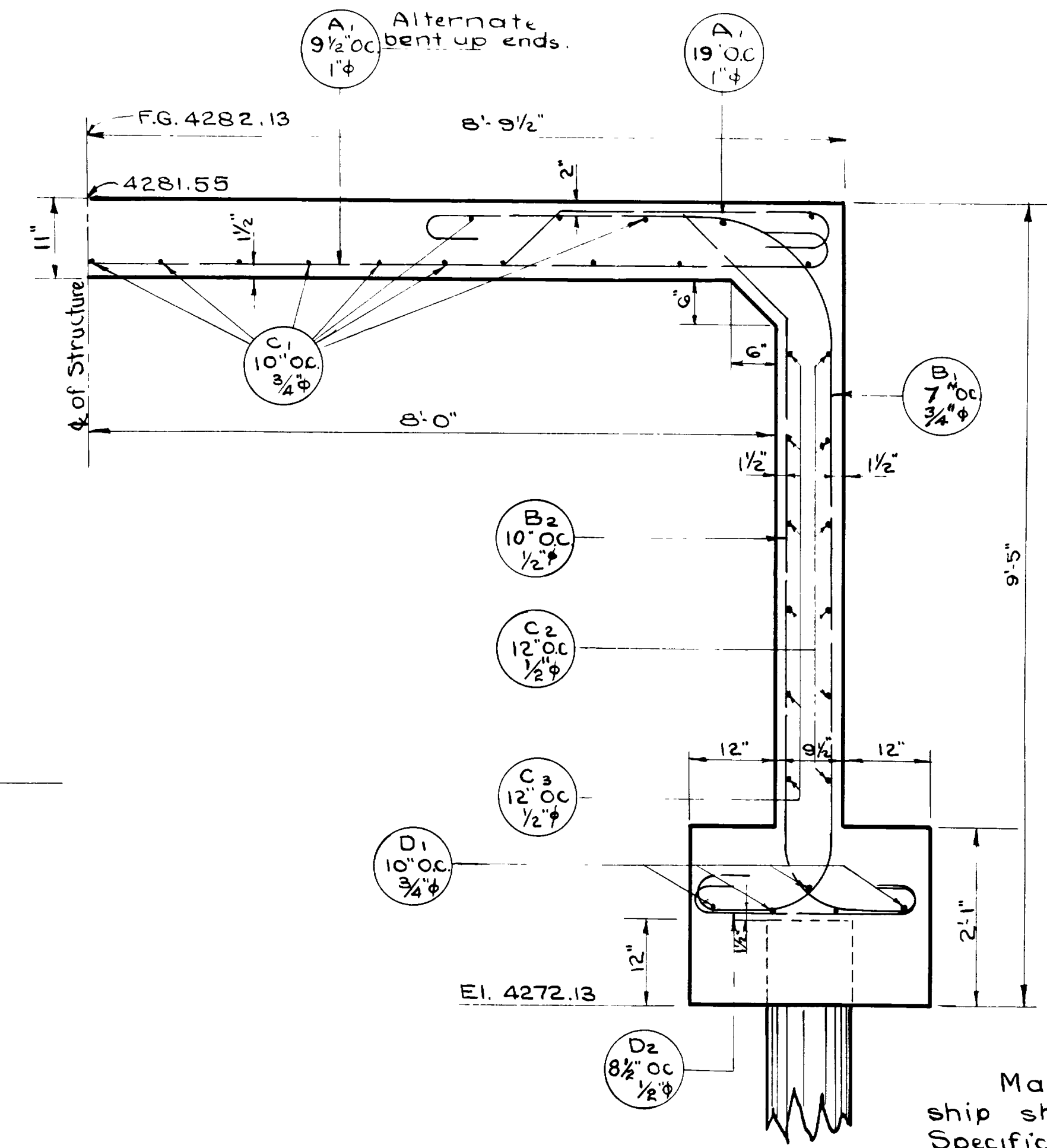
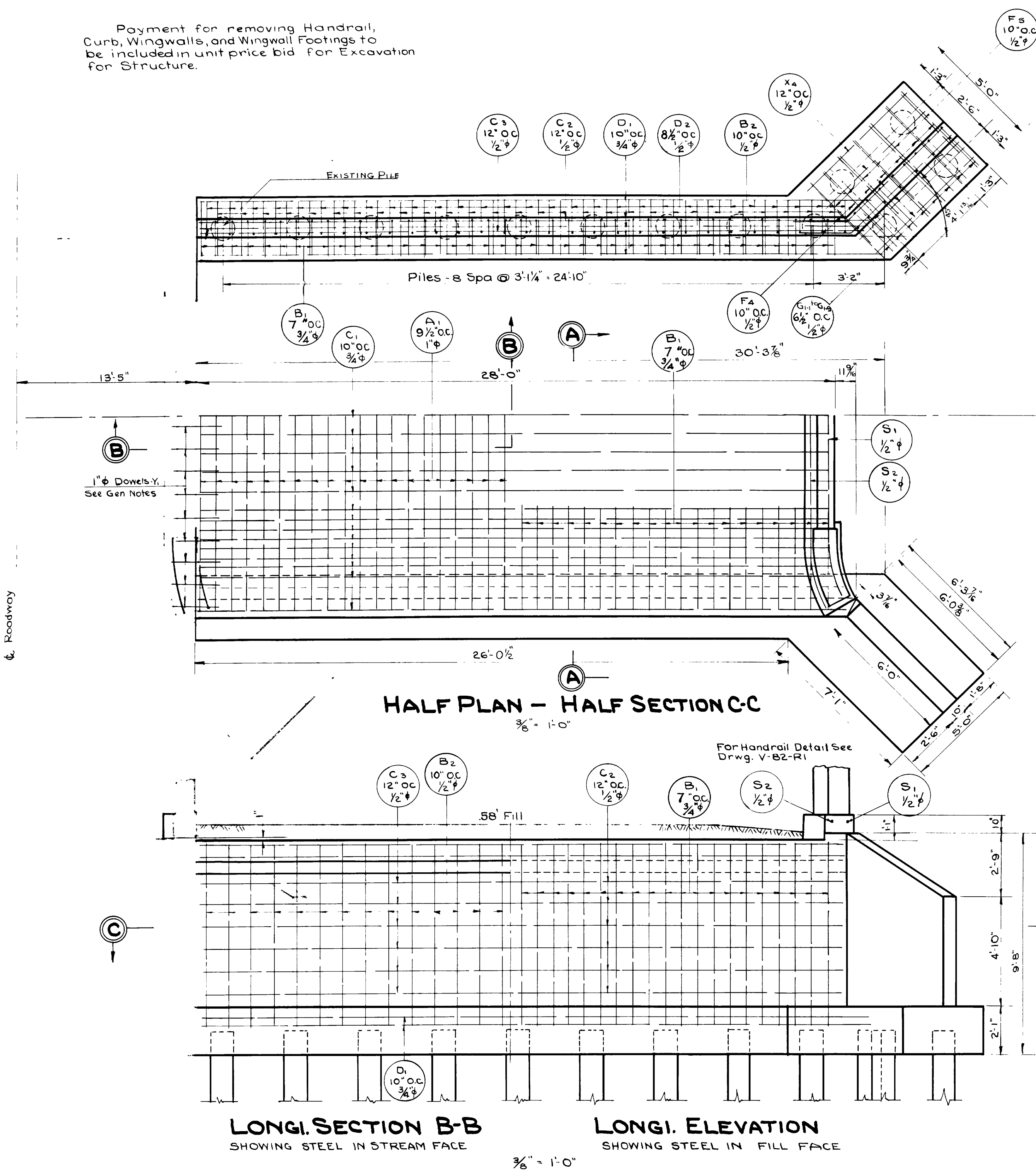
UTAH STATE ROAD COMMISSION
SALT LAKE CITY - UTAH

DETAIL OF HIGHWAY TRANSITION

DESIGNED BY: O. D. M. SCALE: 1" = 50'
 DRAWN BY: H. M. F. ISSUED: _____
 CHECKED BY: H. S. W. APPROVED: _____
 EXAMINED BY: _____
 BR NO: _____ DNG NO: _____

FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
12	UTAH	228A			

Payment for removing Handrail, Curb, Wingwalls, and Wingwall Footings to be included in unit price bid for Excavation for Structure.



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

GENERAL NOTES

Materials, Construction, and workmanship shall be in accordance with State Standard Specifications for Road & Bridge Construction edition of 1939.

All exposed edges shall be chamfered 1". All reinforcement shall be of 1/2" spaced 12" center to center unless otherwise shown.

Holes shall be bored to receive 1" dowsels to be grouted 1'-0" into existing structure at 12" center to center.

DESIGN DATA

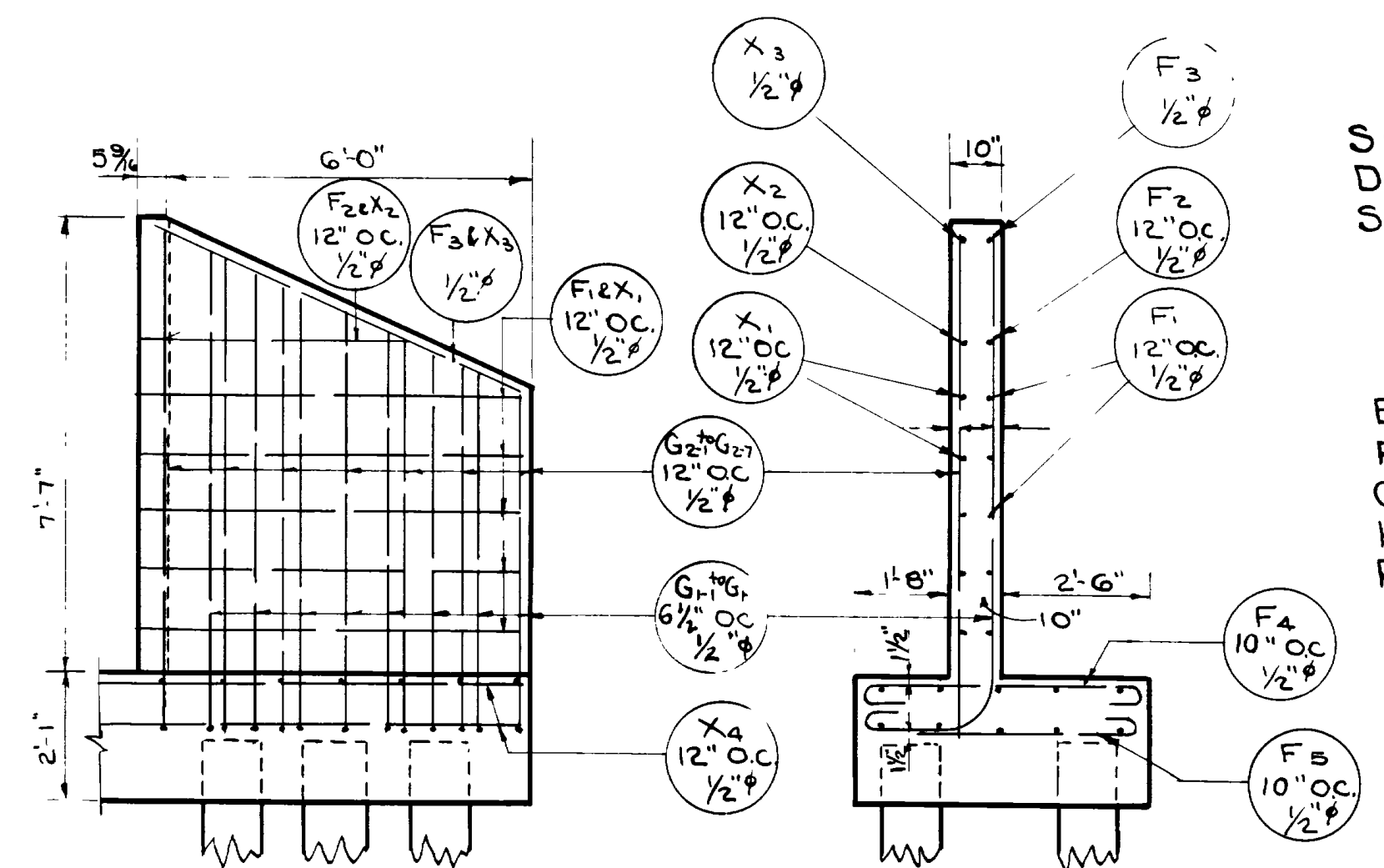
H-15 loading in accordance with A.A.S.H.O. Specifications for 1941

Dead Load: Concrete 150#/cu.ft. Gravel 140#/cu.ft.

Stresses: $f_s = 20,000$, $f_c = 1,000$ $n = 10$.

QUANTITIES

Excavation for Structure	120	cu yds
Reinforcing Steel	7867	lbs.
Concrete Class "A"	485	cu yds
Handrail	17.5	Lin ft.
Piles 12" ϕ - 20'-0" long - 24 piles (Treated)	480	Lin ft.



WINGWALL DETAIL
3/8" = 1'-0"

LONGI. SECTION B-B
SHOWING STEEL IN STREAM FACE

LONGI. ELEVATION
SHOWING STEEL IN FILL FACE

REVISIONS	DATE	BY
1		
2		
3		
4		
5		

SHEET 1 of 2 SHEETS.

UTAH STATE ROAD COMMISSION
SALT LAKE CITY - UTAH

16'-0" CONC. RIGID FR.
BRIDGE EXT. 28'-0"
AW.FAP.228@RT.STA 77+20.3
WALL AVE. & 12th ST. WEBER CO.

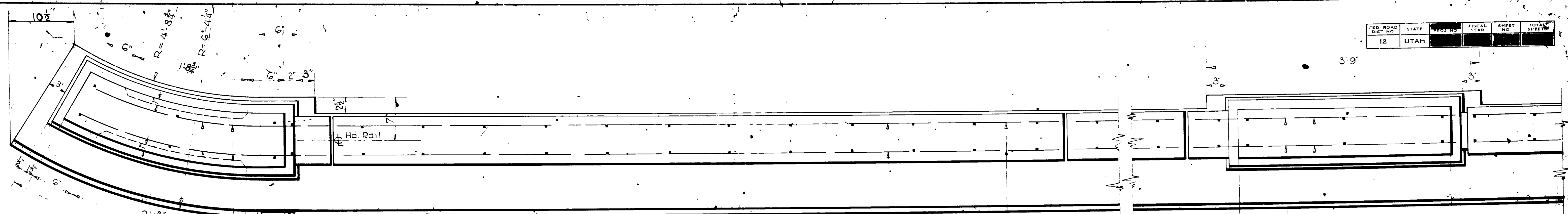
DESIGNED BY: D.F.H. SCALE: 3/8" = 1'-0"
DRAWN BY: D.F.H. ISSUED: 6/19/42
CHECKED BY: APPROVED: *[Signature]* CHIEF BRIDGE ENGINEER
EXAMINED BY:

NOTE: For plans of structure in place see Drwg 1610901 Station 371+00 - Project S.P. 10.

D.A.-W.R. No 7 (1)

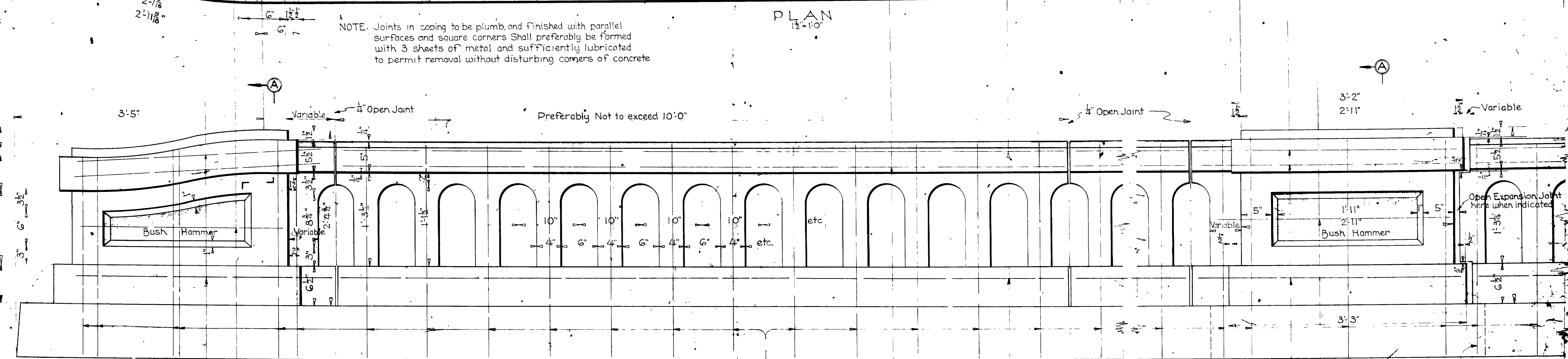
BR NO. DRG NO. **E-751**

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
12	UTAH				

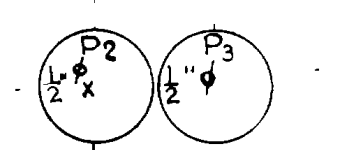


PLAN
1/2" = 1'-0"

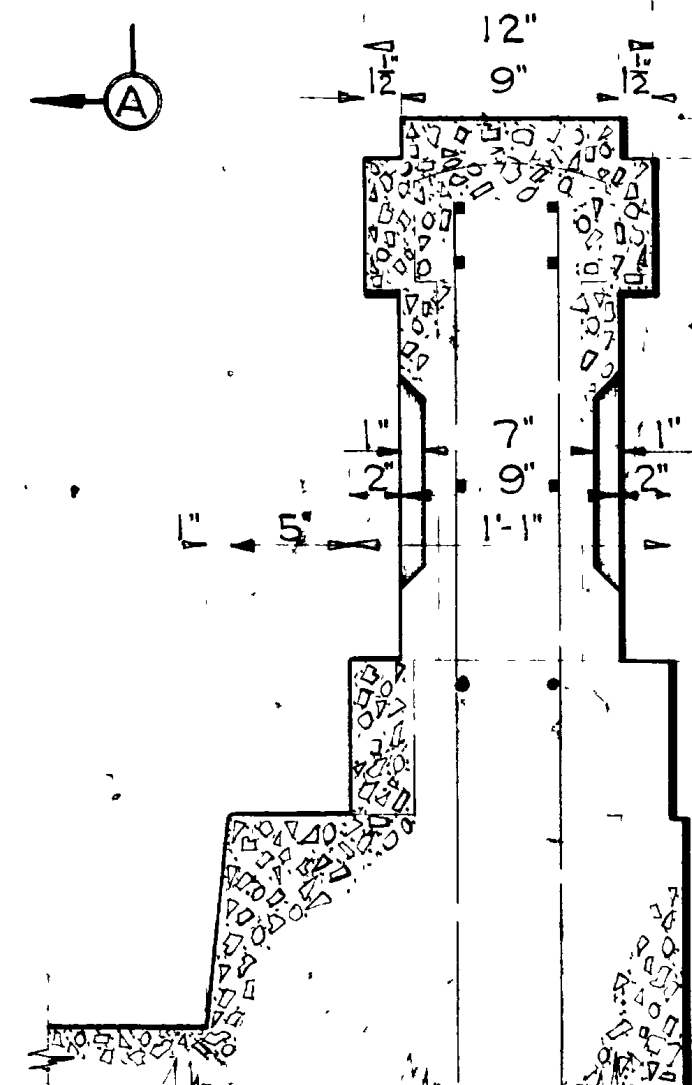
NOTE: Joints in coping to be plumb, and finished with parallel surfaces and square corners. Shall preferably be formed with 3 sheets of metal and sufficiently lubricated to permit removal without disturbing corners of concrete.



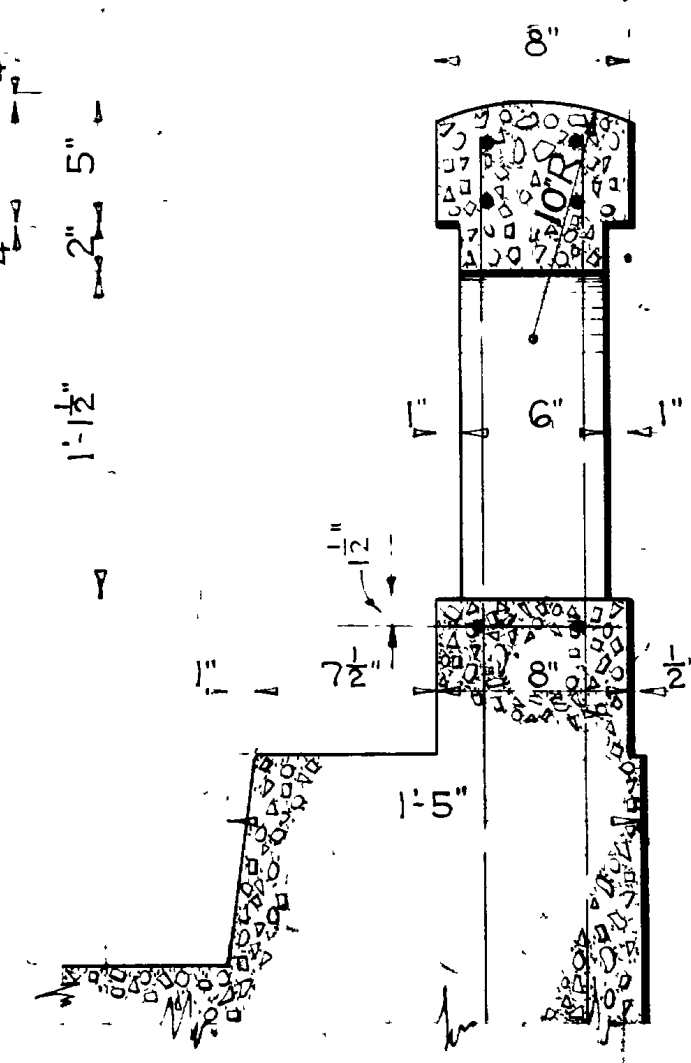
ELEVATION
1/2" = 1'-0"



2'-10" + Variable



SECTION AA
CROSS SECTION OF END POST AND INTERMEDIATE POST
1/2" = 1'-0"



CROSS SECTION THRU RAILING
1/2" = 1'-0"

GENERAL NOTES
 All concrete to be class "A" and to be kept moist 14 days after pouring. All corners to be square and sharp except as shown. The general outline is to be finished so as to be entirely free from wavy surfaces and lines.
 All reinforcing steel to be #2 and #3 deformed bars complying with A.A.S.H.O. specifications and are to be secured against displacement by wiring at all intersections with #10 Gage Iron Wire.

For Materials and Workmanship see State Standard Specifications for Road and Bridge Construction, 1939 edition.

If expansion joint is used cut this bar to clear joint

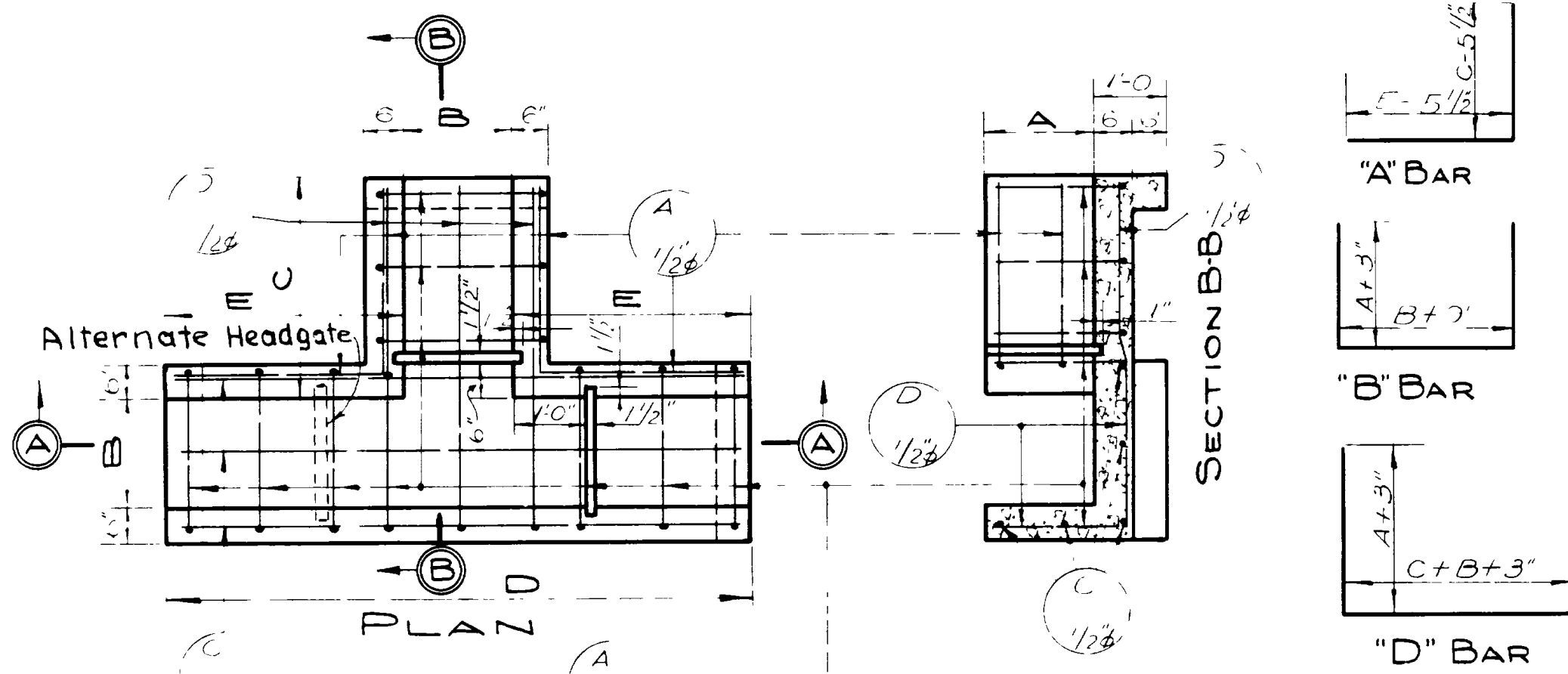
CONCRETE QUANTITIES (Not Including Curb)	
One end post	6.39 Cu. Ft.
One intermediate post	6.32 Cu. Ft.
Handrail-per foot	.90 Cu. Ft.

UTAH STATE ROAD COMMISSION
 SALT LAKE CITY, UTAH
 H. S. KIPP, CHIEF ENGINEER

STANDARD CONCRETE HANDRAIL

DESIGNED BY: C.G.S. SCALE: 1/2" = 1'-0"
 DRAWN BY: C.G.S. REVISION: 1
 CHECKED BY: [Signature] CITY ENGINEER
 EXAMINED BY: [Signature] CITY ENGINEER

BRIDGE NO. [] DRG. NO. []



DIMENSIONS

TYPE	A	B	C	D	E
A18	1'-6"	1'-6"	2'-3"	6'-0"	2'-3"
A24	2'-0"	2'-0"	3'-0"	8'-0"	3'-0"
A36	3'-0"	3'-0"	4'-6"	12'-0"	4'-6"

QUANTITIES

TYPE	EXCAV FOR STRUCT. CY	CONCRETE CL. A' C.Y.	REINF. STEEL LBS.
A18	3.9±	0.82	75
A24	6.5±	1.37	123
A36	14.6±	2.91	235

REINFORCING STEEL

TYPE	A BARS	B BARS	C BARS	D BARS
	NO.	LGTH.	NO.	LGTH.
A18	4	3'-7"	5	5'-9"
A24	4	5'-1"	6	7'-9"
A36	6	8'-1"	8	11'-9"

DIMENSIONS

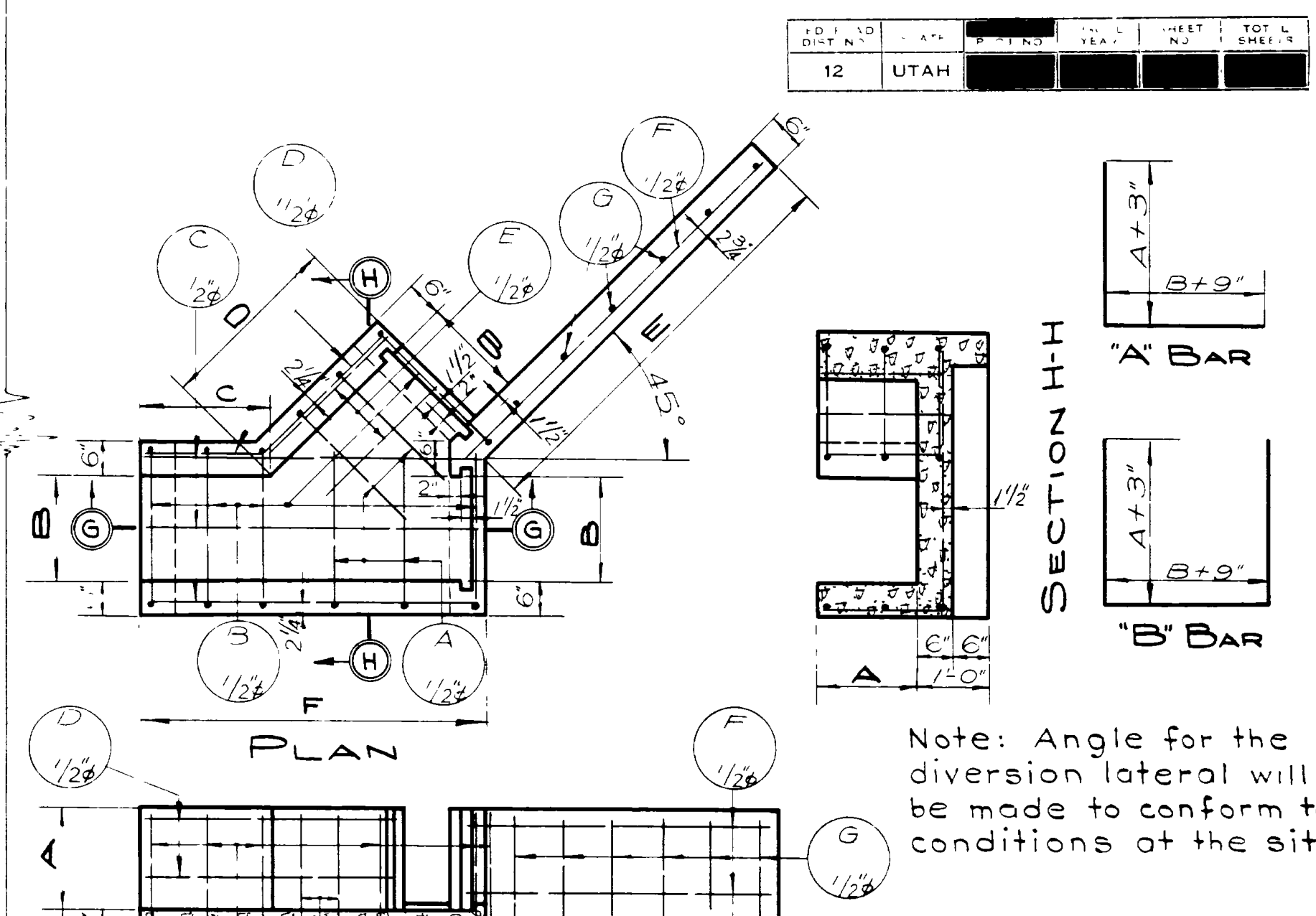
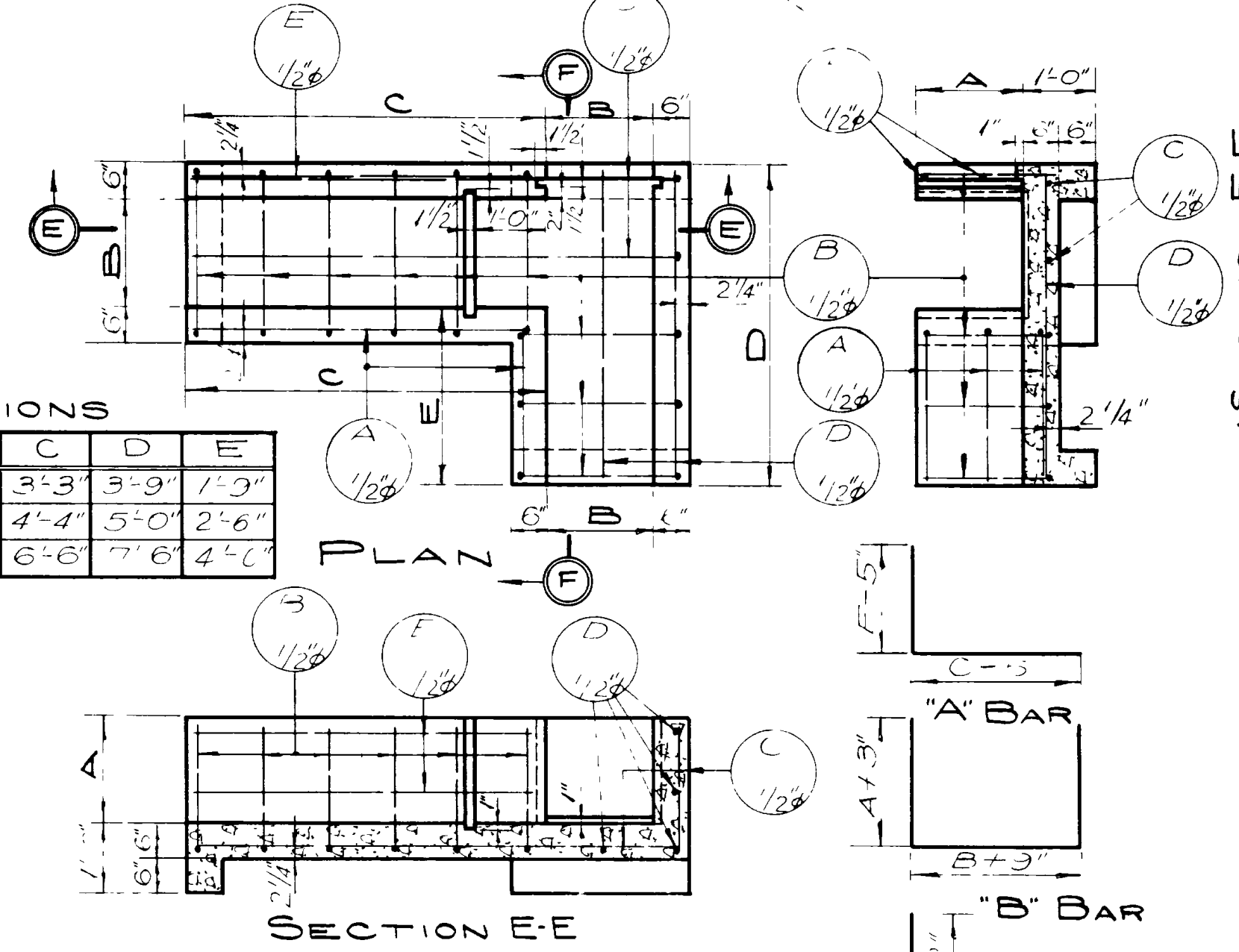
TYPE	A	B	C	D	E
C18	1'-6"	1'-6"	3'-3"	3'-9"	1'-9"
C24	2'-0"	2'-0"	4'-4"	5'-0"	2'-6"
C36	3'-0"	3'-0"	6'-6"	7'-6"	4'-6"

REINFORCING STEEL

TYPE	A BARS	B BARS	C BARS	D BARS	E BARS
	NO.	LGTH.	NO.	LGTH.	NO.
C18	3	4'-2"	6	5'-9"	2
C24	3	5'-10"	8	7'-3"	3
C36	4	9'-2"	11	10'-3"	4

QUANTITIES

TYPE	EXCAV FOR STRUCT. CY	CONCRETE CL. A' C.Y.	REINF. STEEL LB.
C18	3.5±	0.69	54
C24	5.6±	1.14	95
C36	12.5±	2.35	190



DIMENSIONS

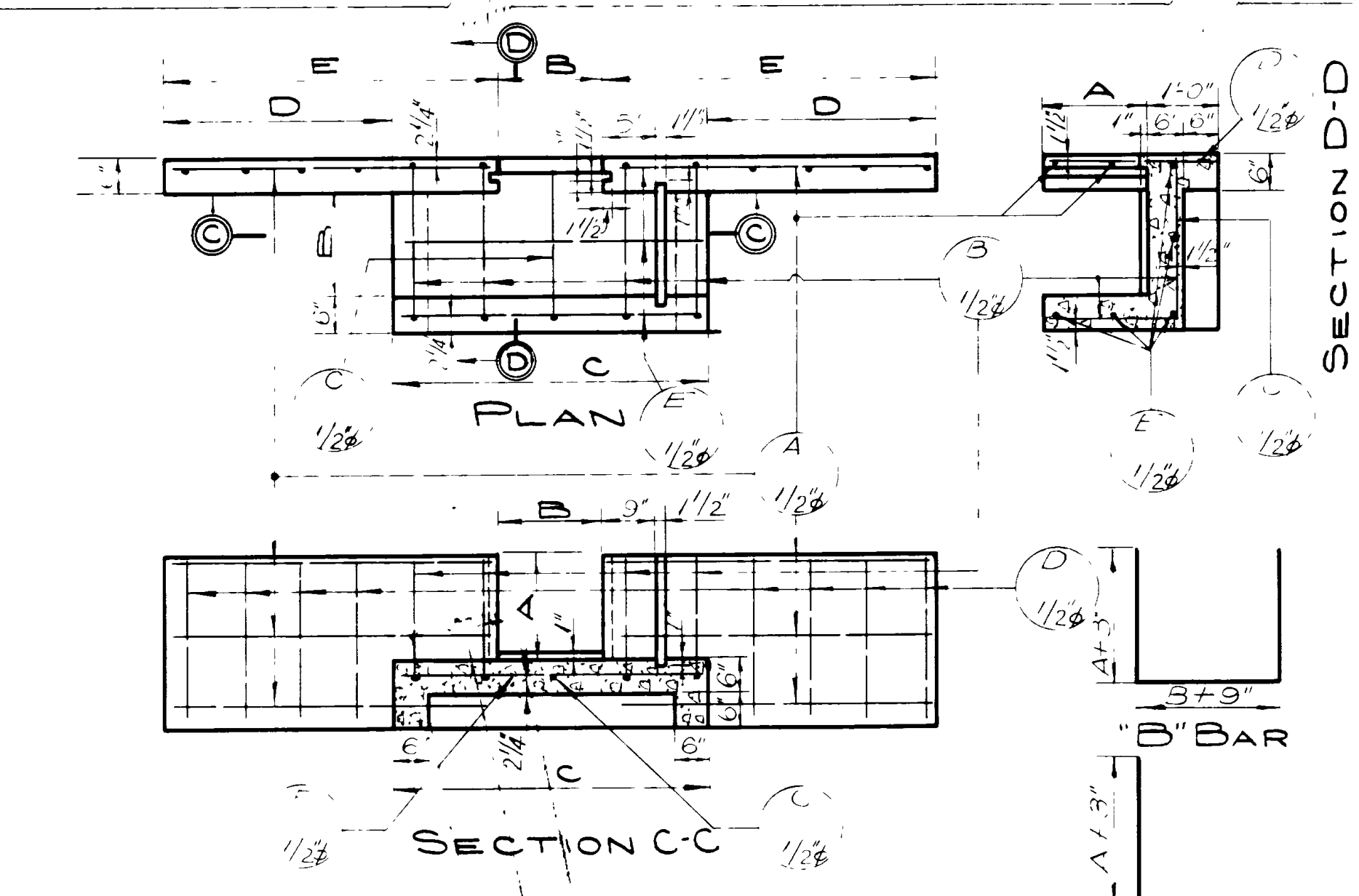
TYPE	A	B	C	D	E	F
E18	1'-6"	1'-6"	1'-0"	2'-8"	3'-6"	5'-0"
E24	2'-0"	2'-0"	2'-10"	3'-2"	4'-8"	6'-8"
E36	3'-0"	3'-0"	4'-9"	4'-2"	7'-0"	10'-0"

REINFORCING STEEL

TYPE	A BARS	B BARS	C BARS	D BARS	E BARS	F BARS	G BARS
	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.
E18	4	4'-3"	5	5'-9"	5	4'-9"	2
E24	7	5'-0"	5	7'-3"	7	6'-5"	3
E36	9	7'-0"	7	10'-3"	9	9'-9"	4

QUANTITIES

TYPE	EXCAV FOR STRUCT. CY	CONCRETE CL. A' C.Y.	REINF. STEEL LB.
E18	3.7±	0.78	68
E24	6.1±	1.26	117
E36	13.8±	2.58	231



DIMENSIONS

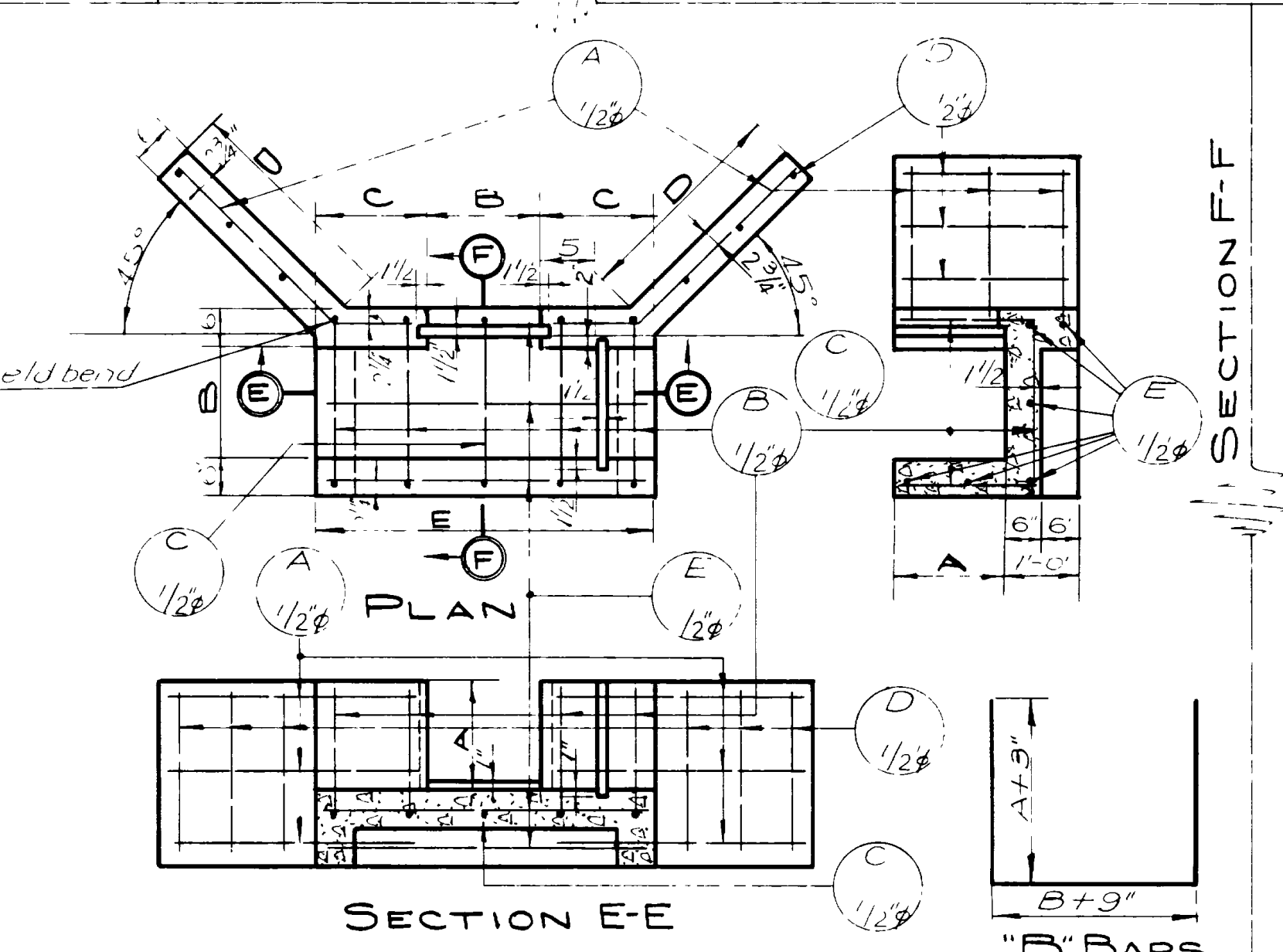
TYPE	A	B	C	D	E
B18	1'-6"	1'-6"	3'-0"	2'-6"	3'-3"
B24	2'-0"	2'-0"	4'-0"	3'-4"	4'-4"
B36	3'-0"	3'-0"	6'-0"	5'-0"	6'-3"

QUANTITIES

TYPE	EXCAV FOR STRUCT. CY	CONCRETE CL. A' C.Y.	REINF. STEEL LBS.
B18	3.0±	0.56	48
B24	4.9±	0.90	90
B36	11.3±	1.81	151

REINFORCING STEEL

TYPE	A BARS	B BARS	C BARS	D BARS	E BARS
	NO.	LGTH.	NO.	LGTH.	NO.
B18	2	4'-3"	2	4'-3"	2
B24	3	4'-0"	4	5'-0"	3
B36	3	6'-0"	4	7'-0"	3



DIMENSIONS

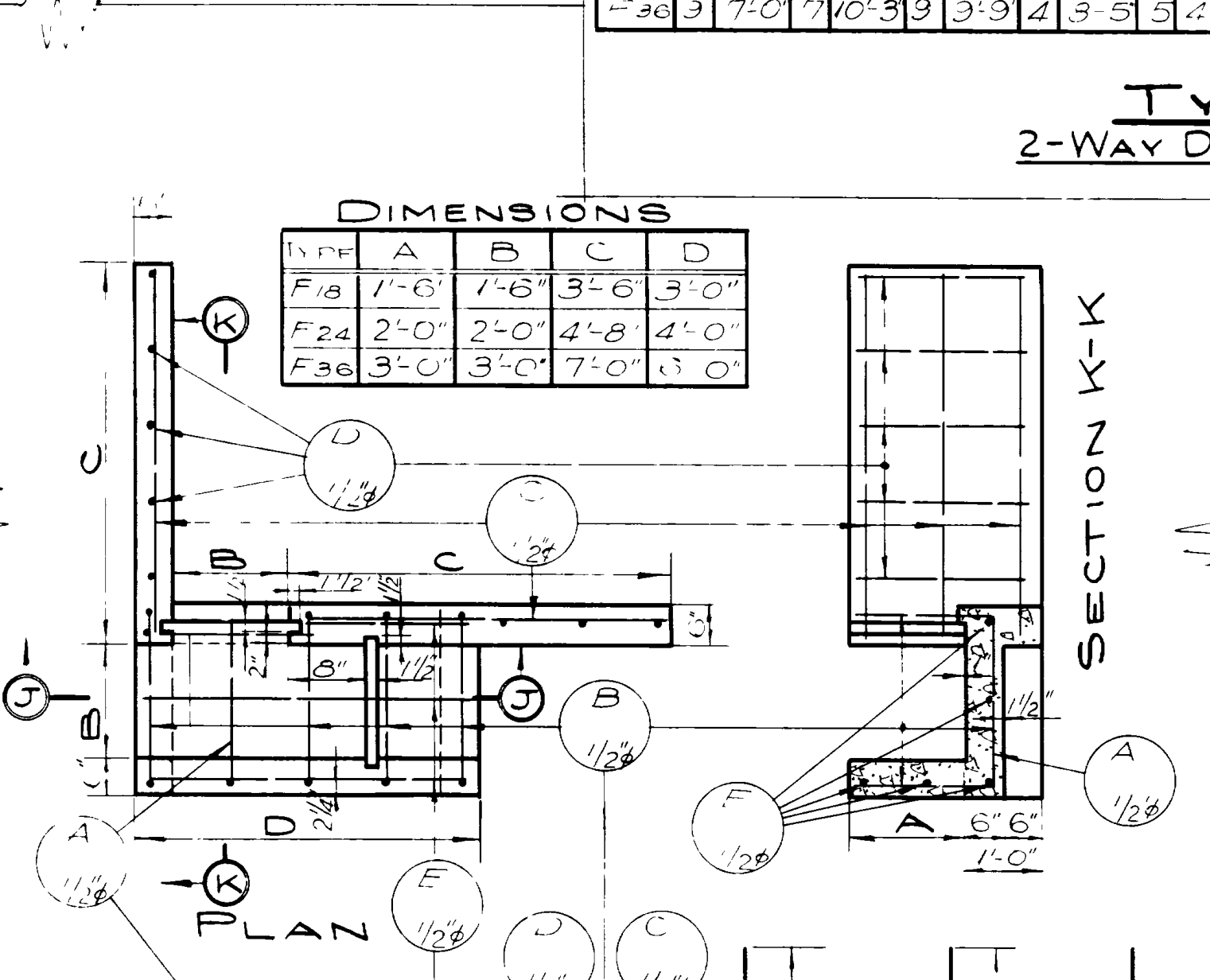
TYPE	A	B	C	D	E
D18	1'-6"	1'-6"	0'-3"	2'-0"	3'-0"
D24	2'-0"	2'-0"	1'-0"	2'-8"	4'-0"
D36	3'-0"	3'-0"	1'-6"	4'-0"	6'-0"

QUANTITIES

TYPE	EXCAV FOR STRUCT. CY	CONCRETE CL. A' C.Y.	REINF. STEEL LB.
D18	3.0±	0.49	44
D24	4.3±	0.80	74
D36	9.9±	1.62	154

REINFORCING STEEL

TYPE	A BARS	B BARS	C BARS	D BARS	E BARS
	NO.	LGTH.	NO.	LGTH.	NO.
D18	6	2'-3"	4	5'-9"	1
D24	3	3'-2"	4	7'-3"	2
D36	2	5'-0"	3	7'-0"	3



DIMENSIONS

TYPE	A	B	C	D
F18	1'-6"	1'-6"	3'-6"	3'-0"
F24	2'-0"	2'-0"	4'-8"	4'-0"
F36	3'-0"	3'-0"	7'-0"	5'-0"

QUANTITIES

TYPE	EXCAV FOR STRUCT. CY	CONCRETE CL. A' C.Y.	REINF. STEEL LB.
F18	3.4±	0.58	49
F24	5.3±	0.94	81
F36	11.3±	1.88	166

REINFORCING STEEL

TYPE	A BARS	B BARS	C BARS	D BARS	E BARS
	NO.	LGTH.	NO.	LGTH.	NO.
F18	1	4'-0"	4	5'-9"	6
F24	2	5'-0"	4	7'-3"	5
F36	3	7'-0"	5	9'-9"	5

TYPE "B"
2-WAY DIVERSION BOX

TYPE "D"
2-WAY DIVERSION BOX

TYPE "F"
2-WAY DIVERSION BOX

TYPE "E"
2-WAY DIVERSION BOX

TYPE "E"
OPPOSITE HAND

PROJECT

TYPE STATION	TYPE STATION	TYPE STATION

GENERAL NOTES

For Materials and Workmanship, see State Standard Specifications for Road and Bridge Construction, 1939 edition.

All exposed edges to be chamfered 1" unless otherwise noted.

All reinforcing to be 1/2" deformed bars.

Furnishing of suitable Flash Boards to be included in unit price bid for Concrete.