

R. 4843

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SHEET NO. 96-98	STD. REINFC. CONC. CULV.—SLAB TOP TYPE UNDER FILL 1'-0" TO 5'-0" (10'-0" TO 20'-0" SPAN) 45' SKEW
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ALL REQUIRED ROAD STANDARDS APPROVED BY B.P.R. JAN. 26, 1960, EXCEPT SHEET "MQ"
SHEET "MQ" APPROVED BY B.P.R. MARCH 17, 1960.

INDEX R/W PLANS	
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SHEET NO. 8-10	PLAN AND PROFILE
SHEET NO. 11	PLAN AND PROFILE "BR-4-A" (SEPARATE CONTRACT) 136-H9-4437
SHEET NO. 12	"S-9-A" 136-H9-4438

- (A) Type 'A' Barricade
- (B) Type 'B' Barricade
- (C) Typical Sign Standard

STATE OF INDIANA STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED STATE HIGHWAY (3) 56 PE. I PROJECT NO. 1-74-2 (22) 69 CONSTR.

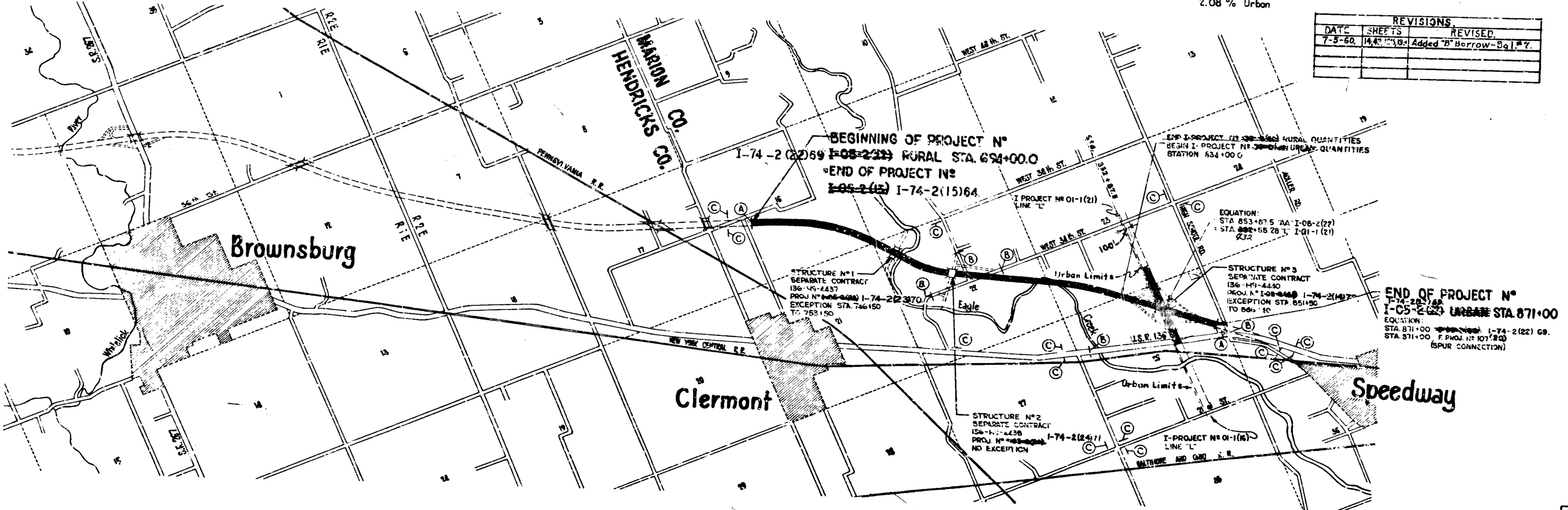
BEGINNING AT A POINT 2918.8 FEET SOUTH OF THE NORTH LINE AND 1537.7 FEET EAST OF THE WEST LINE OF SEC. 16-T16N-R2E IN MARION COUNTY, AND RUNNING IN A SOUTHEASTERLY DIRECTION 17,700 FEET TO A POINT 2362.1 FEET SOUTH OF THE NORTH LINE AND 218.6 FEET WEST OF THE EAST LINE OF SEC. 26-T16N-R2E ALL IN MARION COUNTY.

Scale: 1"=2000'

RURAL URBAN
GROSS LENGTH: 2.651 MI. 0.700 MI.
NET LENGTH: 2.518 MI. 0.607 MI.

SCALES:
PLAN (LONG: 1"=100' PROFILE (HORIZ: 1"=100'
TRANS: 1"=100' VERT: 1"=10')

MAX. GRADE 2.449% Rural
2.08% Urban



REVISION	
REV. 1-21-59	Change Proj. No. to 1-74-2(22) 69 every sheet
DATE	SHEETS
5-14-59	1-22-15-45
7-23-57	1
10-1-59	1, 43, 44
10-8-59	14, 42, 44
10-28-59	11
12-16-59	12
1-21-60	15
5-9-60	40
5-10-60	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100
5-13-60	4, 5, 12, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

PLANS PREPARED BY
PIERCE GRUBER & BEAM INC.
CONSULTING STRUCTURAL ENGINEERS
INDIANAPOLIS, INDIANA

CERTIFIED DATE Nov 4 1958
Richard L. Raymond
PIERCE GRUBER & BEAM INC. CONSULTING STRUCTURAL ENGINEERS



CLEARANCE REVISIONS 16'-3"	
DATE	SHEETS
4-1-60	15, 16, 23, 25, 26, 27, 29, 30, 33
	34, 35, 37, 38, 43, 45, 44

REVISIONS	
DATE	SHEETS
7-5-60	14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

DESIGN DATA FOR U.S. 136
A.D.T. 1955 5,289
A.D.T. 1975 15,708
DIRECTIONAL 0.6
DESIGN SPEED 70 M.P.H.
ACCESS CONTROL FULL
COMMERCIAL 7%

R/W PLANS FOR THIS PROJECT INCLUDE
R/W FOR BRIDGE PROJECTS
136-H9-4437 1-74-2(23)70
136-H9-4438 1-74-2(24)71
136-H9-4440 1-74-2(14)72

APPROVED AND ADOPTED 12/3/58
BY STATE HIGHWAY DEPARTMENT OF INDIANA.
John H. ...
CHIEF ENGINEER—STATE HIGHWAY DEPARTMENT OF INDIANA

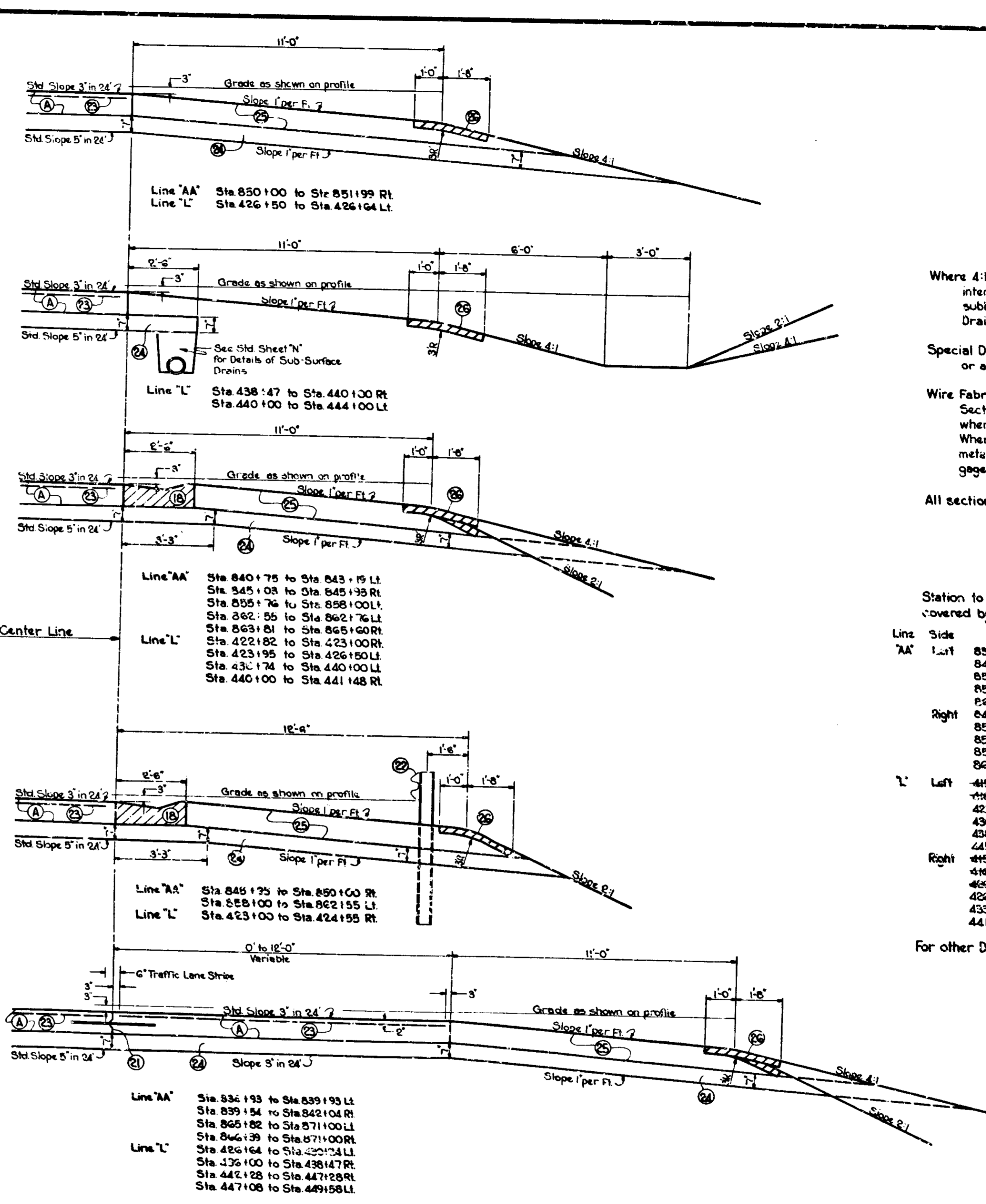
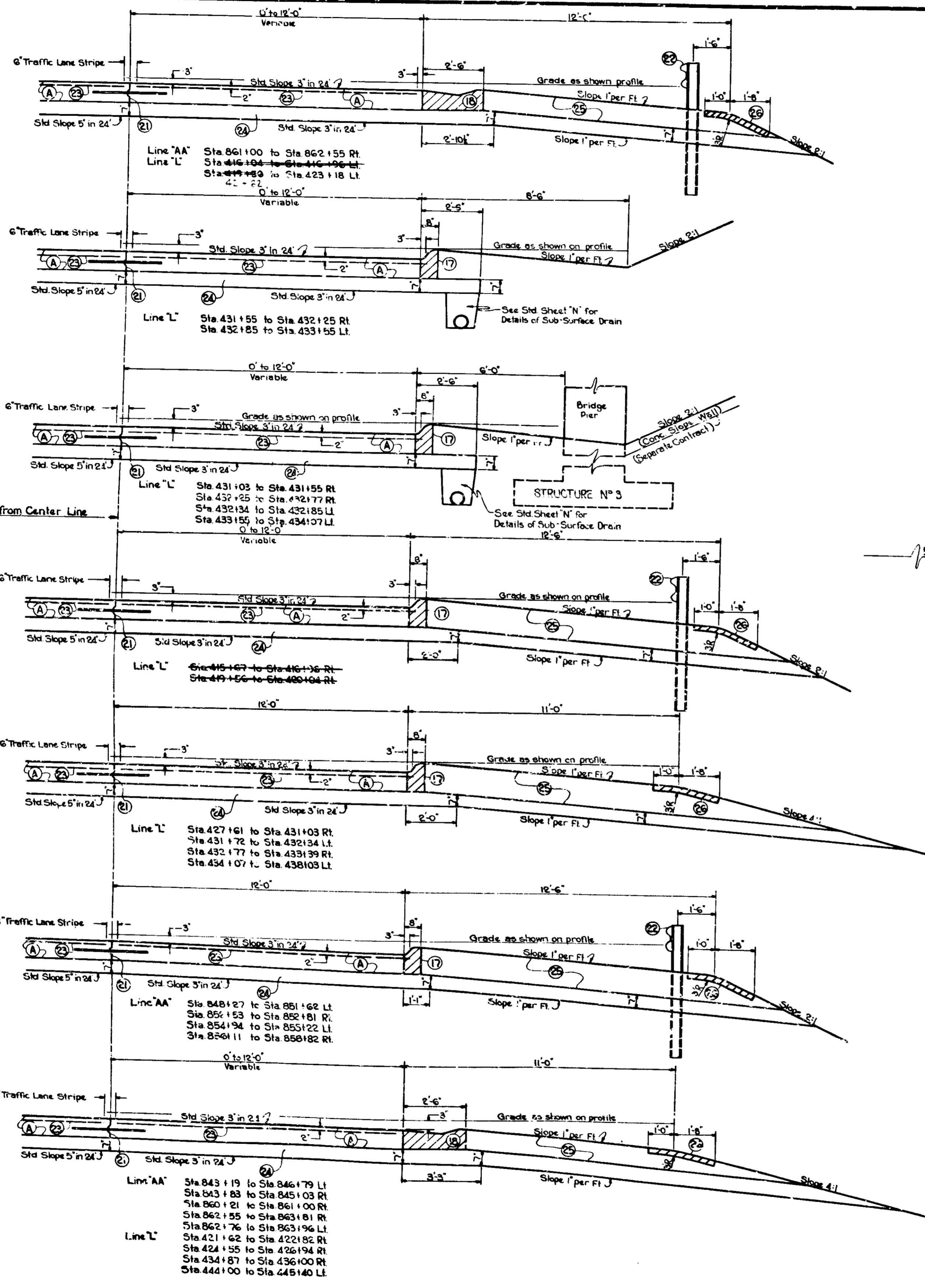
STATE HIGHWAY DEPARTMENT OF INDIANA.
STANDARD SPECIFICATIONS DATED 1951
TO BE USED WITH THESE PLANS.

RECOMMENDED FOR APPROVAL 12-1-58
W.H.B. ...
ENGINEER OF ROAD DESIGN, STATE HIGHWAY DEPARTMENT OF INDIANA

BUREAU OF PUBLIC ROADS
DEPARTMENT OF COMMERCE
APPROVED
DIVISION ENGINEER DATE

FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	205-002	1969	4	187

1-74-2 (22) 69
Rev 5-13-65 Limits of Construction



GENERAL NOTES

Where 4:1 slope on Fill Sections meets existing ground above intersection of bottom of subbase and 4:1 Fill Slope, eliminate subbase under shoulder section and substitute Sub-surface Drains, as shown on Standard Sheet 'N'.

Special Ditches to be constructed as called for on the plans, or as directed by the Project Engineer.

Wire Fabric or Expanded Metal as shown on "Standard Pavement Section E-IIJR" shall be used with these sections except where additional 12' lane and curb section is called for. Where 12' lane and curb section is specified the width of metal or wire fabric shall be 12'-0" instead of 11'-6" and 25#2 gage wires will be required longitudinally instead of 24.

All sections shown in the direction of traffic flow.

Station to station locations shown on Detail Sheets and not covered by sections on this sheet.

Line	Side	Stations	Description	Detail Sheet No.
AA	Left	839+93 to 840+75	Entrance "NW-C"	
		846+79 to 848+27	Exit "NW-L"	
		851+62 to 854+94	Structure N#3	
		855+22 to 855+76	Entrance "NE-L"	
		858+96 to 865+82	Exit "NE-C"	
Right	863+04 to 843+93	Exit "SW-C"		
	851+99 to 852+53	Entrance "SW-L"		
	852+81 to 856+11	Structure N#5		
	858+82 to 860+21	Exit "SE-L"		
	860+60 to 866+39	Entrance "SE-C"		
L	Left	415+60 to 416+104	R.C. Bridge Approach	
		416+104 to 419+56	EQUATION	
		423+118 to 423+195	Entrance "SW-C"	
		430+24 to 431+72	Exit "SW-L"	
		434+03 to 438+74	Entrance "NW-L"	
	Right	445+40 to 447+08	Exit "NW-C"	
		445+66 to 445+67	R.C. Bridge Approach	
		446+96 to 449+56	EQUATION	
		465+44 to 481+08	Exit "SE-C"	
		426+194 to 427+61	Entrance "SE-L"	
433+39 to 434+87	Exit "NE-L"			
441+48 to 442+78	Entrance "NE-C"			

For other Details see Sheet N# 23, 27, 31 & 35

- LEGEND**
- (A) 10' Reinforced Concrete Pavement
 - (B) Integral Concrete Curb Type "B"
 - (C) Standard Lip Gutter
 - (D) Keyway Construction Joint
 - (E) Steel Beam Guard Rail
 - (F) Wire Fabric or Expanded metal
 - (G) Subbase Type I or II
 - (H) Earth Fill
 - (I) Sodding Reqt.

SHOULDER SECTIONS TO BE USED WITH "STANDARD DIVIDED LANE SECTIONS FOR FEDERAL AID INTERSTATE PROJECTS"

TYPICAL CROSS SECTIONS

SCALE: 1"=10'

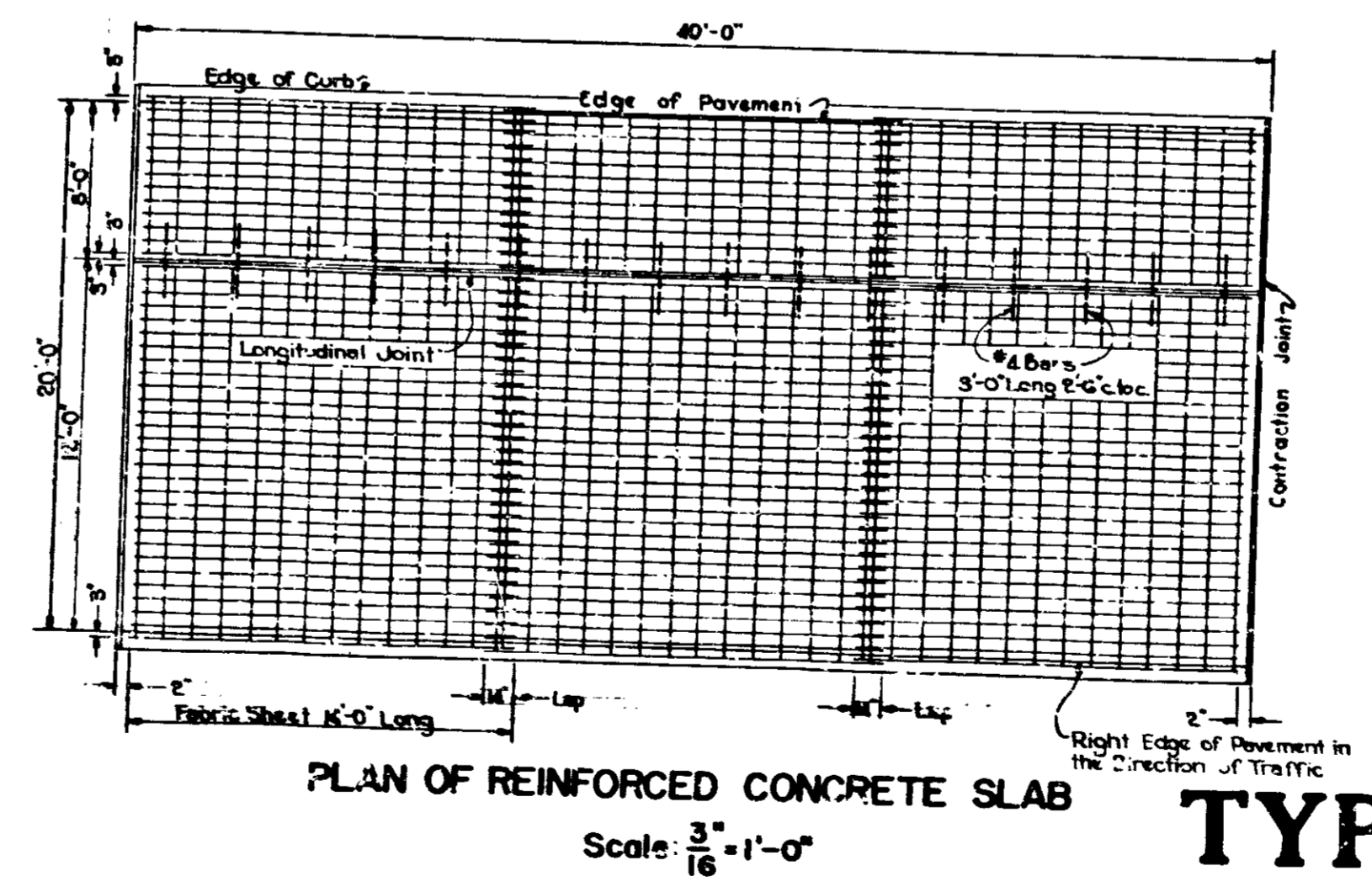
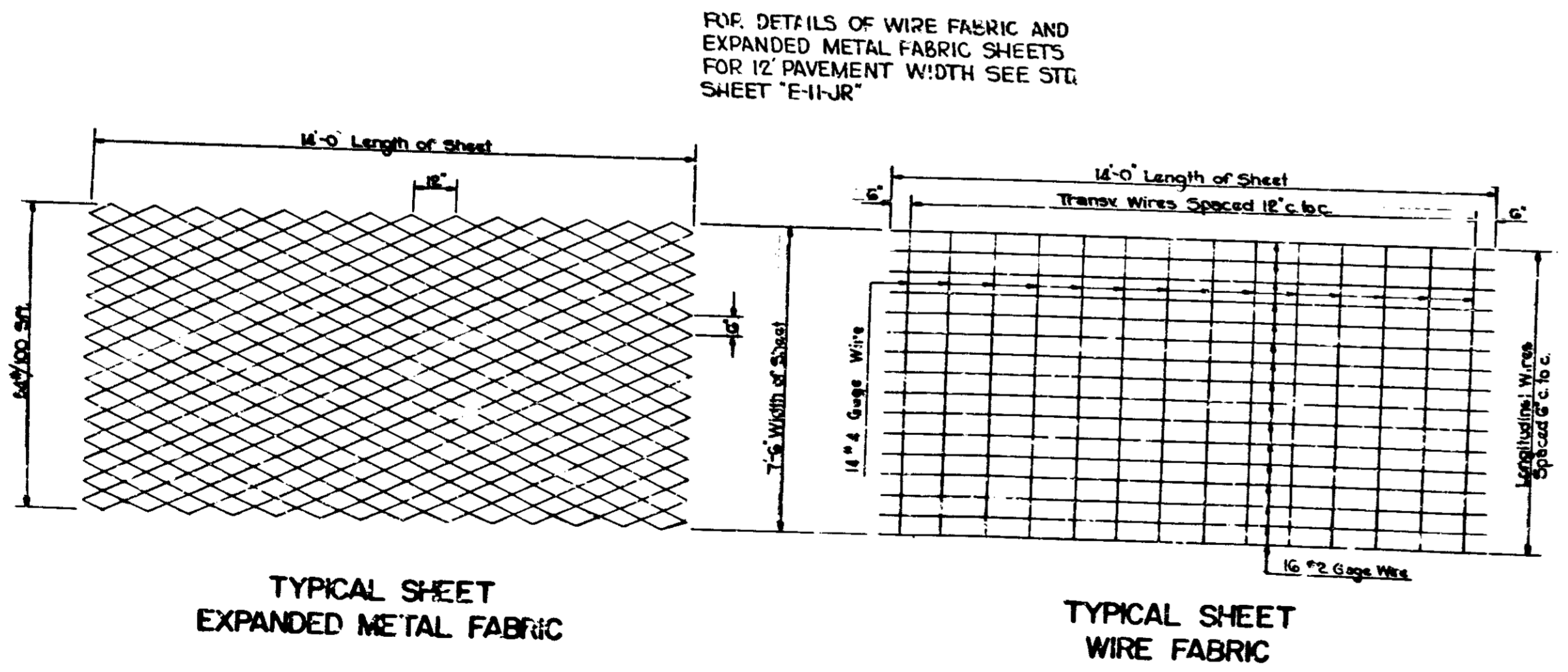
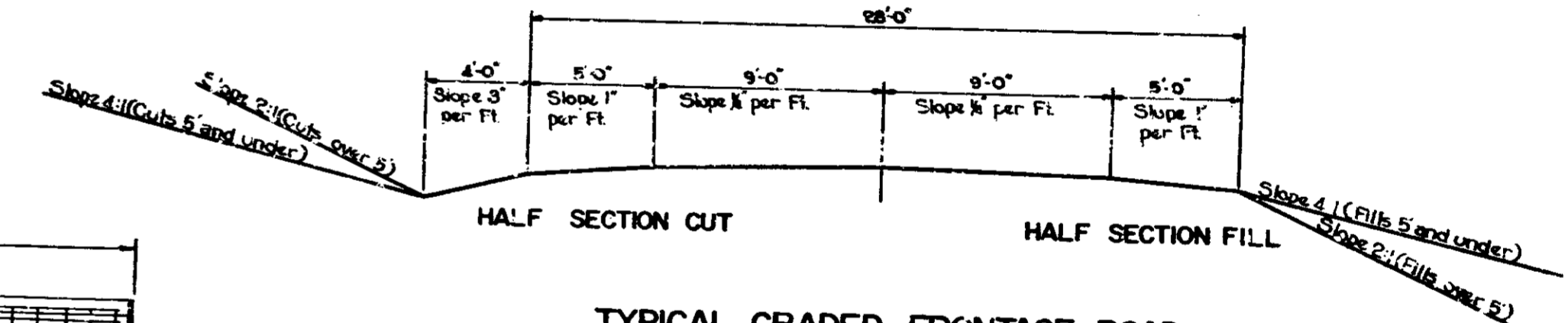
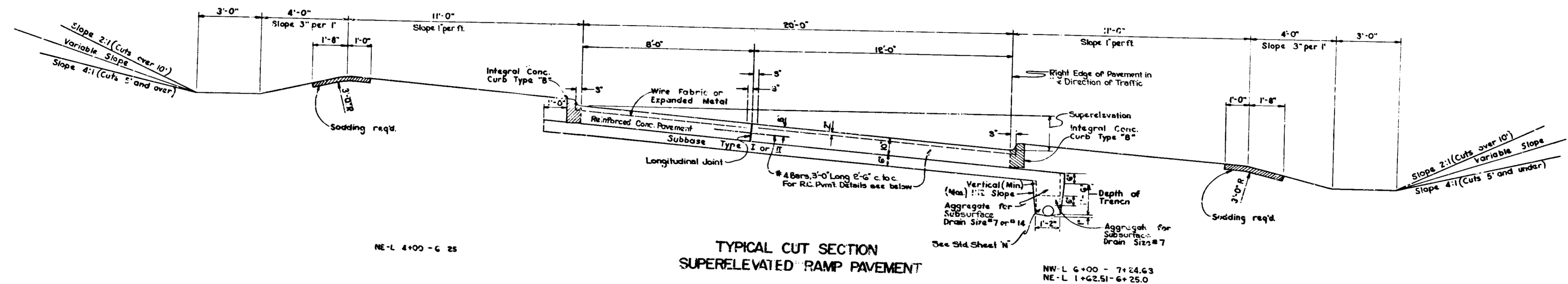
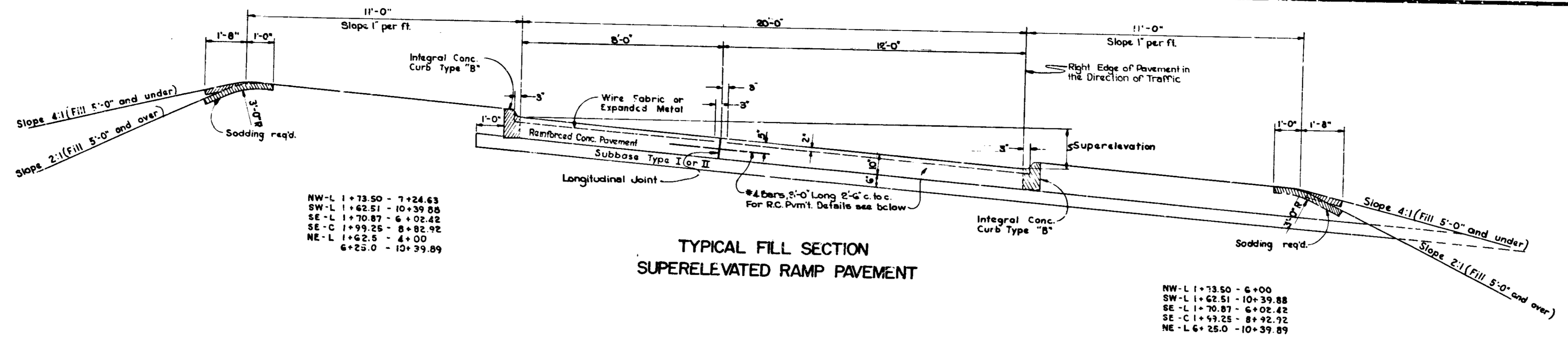
APPROVED: *[Signature]*
CHIEF ENGINEER

APPROVED: *[Signature]*
ENGINEER OF ROAD DESIGN

RECOMMENDED FOR APPROVAL 12-1-58
[Signature]
ENGINEER OF ROAD DESIGN

FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	208-000	1959	5	187

1-74-2 (22) 69



TYPICAL CROSS SECTIONS

SCALE: $\frac{3}{8} = 1'-0''$ except as noted.

APPROVED *E. E. ...*
 CHIEF ENGINEER

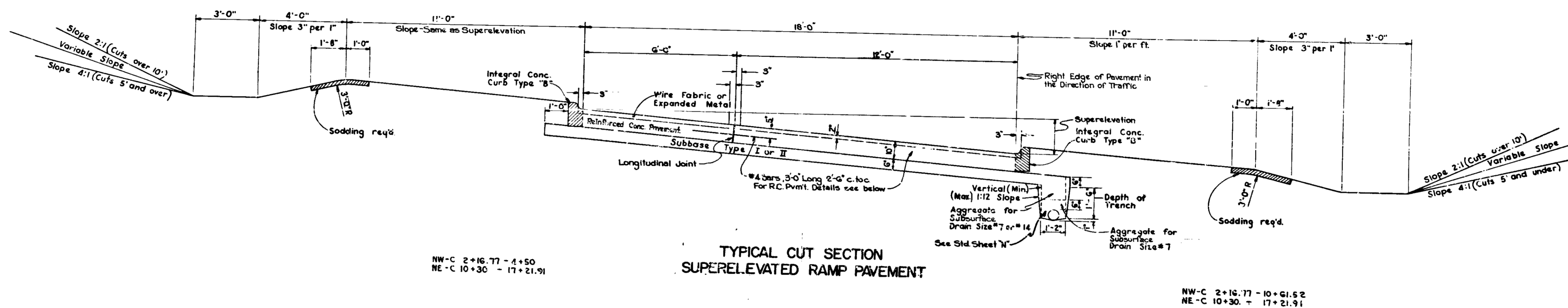
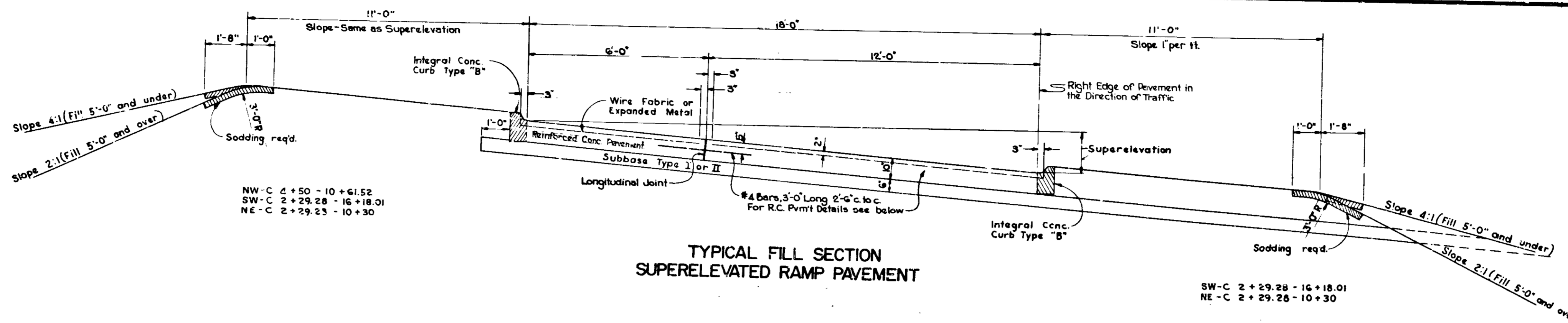
RECOMMENDED FOR APPROVAL 12-1-58

APPROVED *W. H. ...*
 ENGINEER

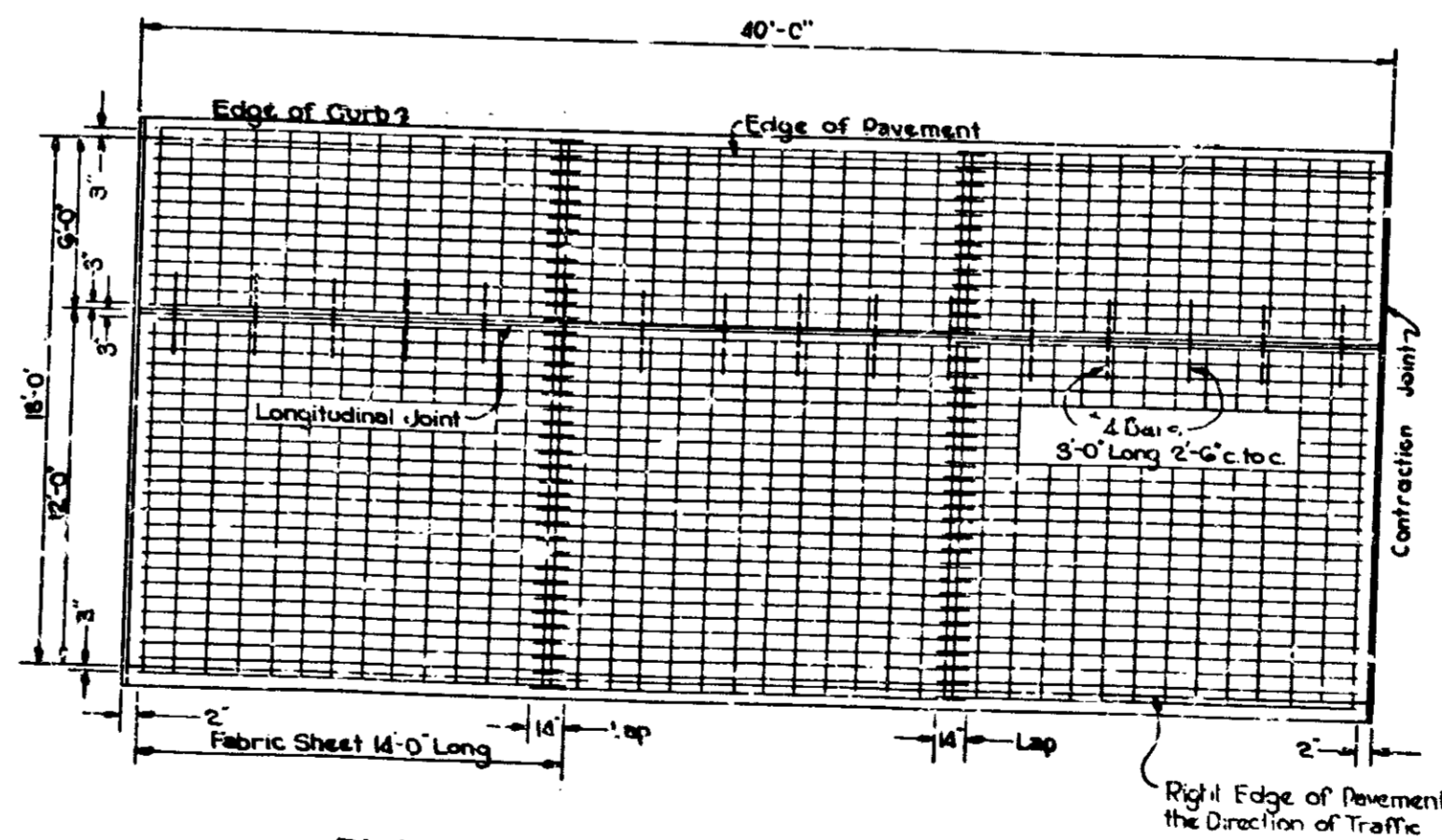
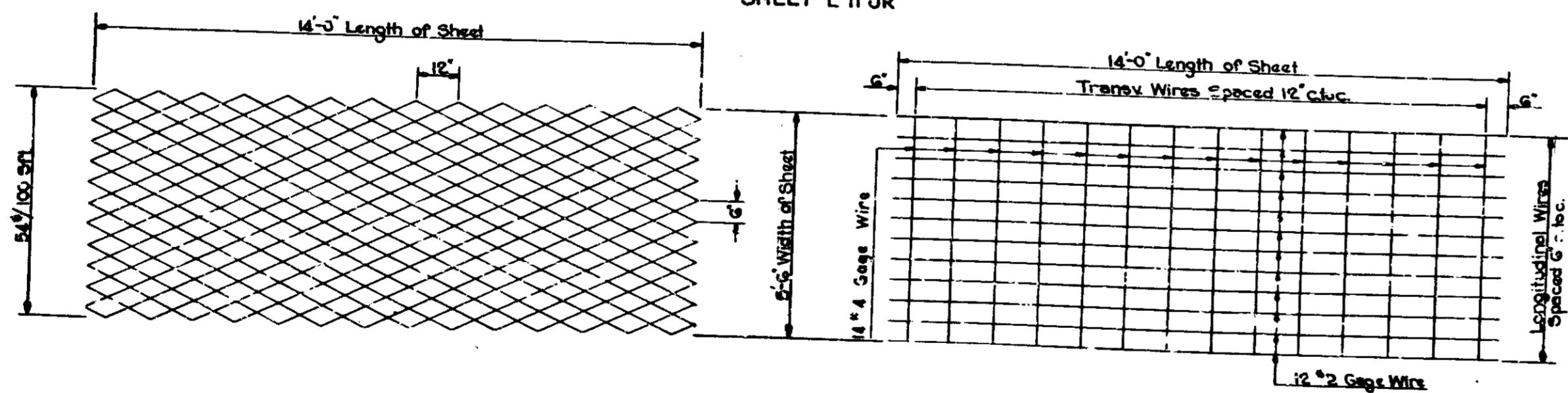
ENGINEER OF ROAD DESIGN, STATE HIGHWAY DEPARTMENT OF INDIANA

FEDERAL ROAD DIVISION NO	STATE	PRJ. NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
4	IND.	508-022	1959	G	187

1-74-2(22) 69



FOR DETAILS OF WIRE FABRIC AND EXPANDED METAL FABRIC SHEETS FOR 12' PAVEMENT WIDTH SEE STD. SHEET 'E-II-JR'



For Additional Details See Sheets 21, 23, 27, 31 & 35

TYPICAL CROSS SECTIONS

SCALE: $\frac{3}{8} = 1'-0"$ except as noted.

APPROVED *C.E. Vogelbein*
CHIEF ENGINEER, STATE HIGHWAY DEPARTMENT OF INDIANA

RECOMMENDED FOR APPROVAL 12-1-59

APPROVED *W.A. Behrens*
ENGINEER OF ROAD DESIGN, STATE HIGHWAY DEPARTMENT OF INDIANA

W.A. Behrens
ENGINEER OF ROAD DESIGN, STATE HIGHWAY DEPARTMENT OF INDIANA

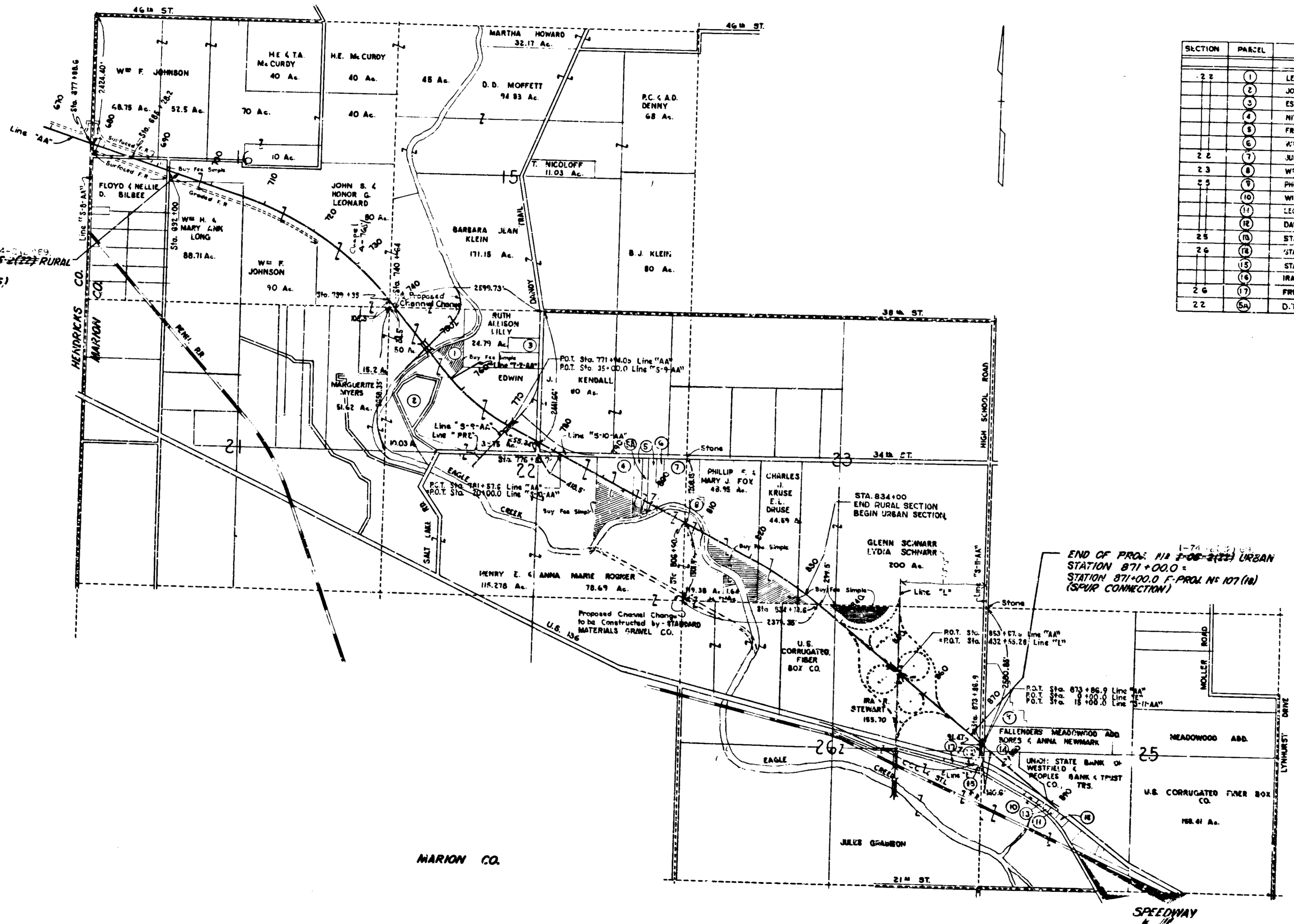
FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	2-65-2(2)	1959	8	127

1-74-2(22) 69.

SECTION	PARCEL	OWNER	ACREAGE
22	(1)	LEONARD A. & MARY E. KERNEL	15.4
	(2)	JOSEPH E. & JOSEPHINE M. FERRELL	12.67
	(3)	EST. W. G. HILLMAN	2.12
	(4)	NITA M. HIGHTSHUE, IDA O. & LAYMAN	
	(5)	FRANK & DOROTHY WOODLOCK	
22	(6)	W. R. & KATHLEEN ALEXANDER	25.6
	(7)	JULIAN K. & BETTY L. NAIL	
23	(8)	W. C. & IRENE H. KASSEBALIM	6.67
25	(9)	PHILIP DEV. CO.	
	(10)	WILBUR B. & EDNA TOSLINSON	
	(11)	LEONARD E. & VELMA WARDLOW	
	(12)	DAVE WARDLOW	
25	(13)	STATE OF INDIANA	
	(14)	STATE OF INDIANA	
26	(15)	STATE OF INDIANA	
	(16)	IRA R. STEWART	
26	(17)	FRED YOUNGER	
22	(18)	D. T. LUX	

BEGINNING OF PROJ. NO. 2-65-2(22) RURAL
STATION 694+00
END OF PROJ. NO. 1-05-2(15)
STATION 694+00

END OF PROJ. NO. 2-65-2(22) URBAN
STATION 871+00.0
STATION 871+00.0 F-PROJ. NO. 107 (10)
(SPUR CONNECTION)



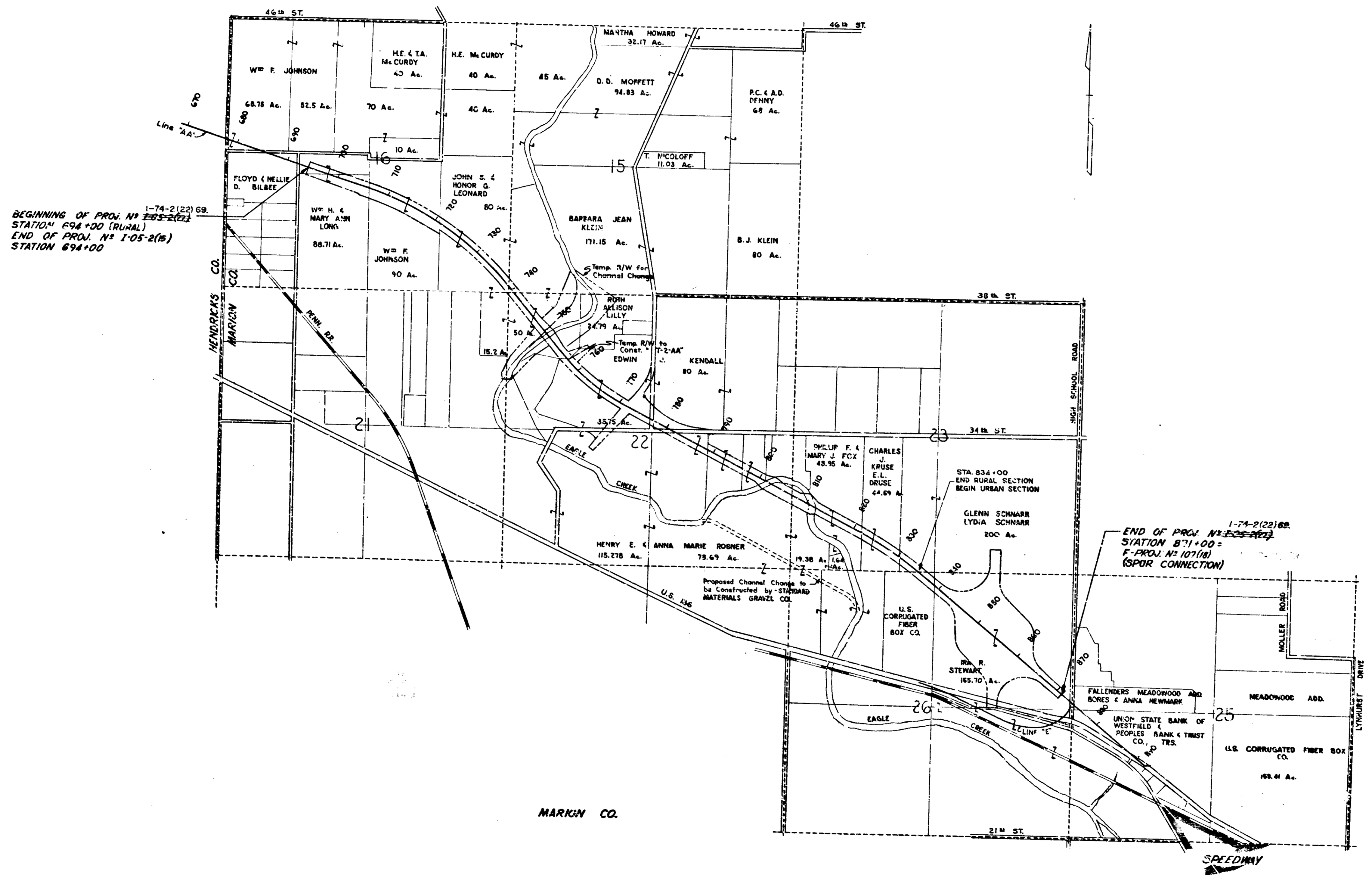
MARION CO.

PROJECT NO. 1-74-2(22) 69.
PLAT NO. 1
FOR DESIGN DEPT.
Scale: 1"=1000'



FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	1-74-2(22)	1959	9	187

1-74-2(22) 89.

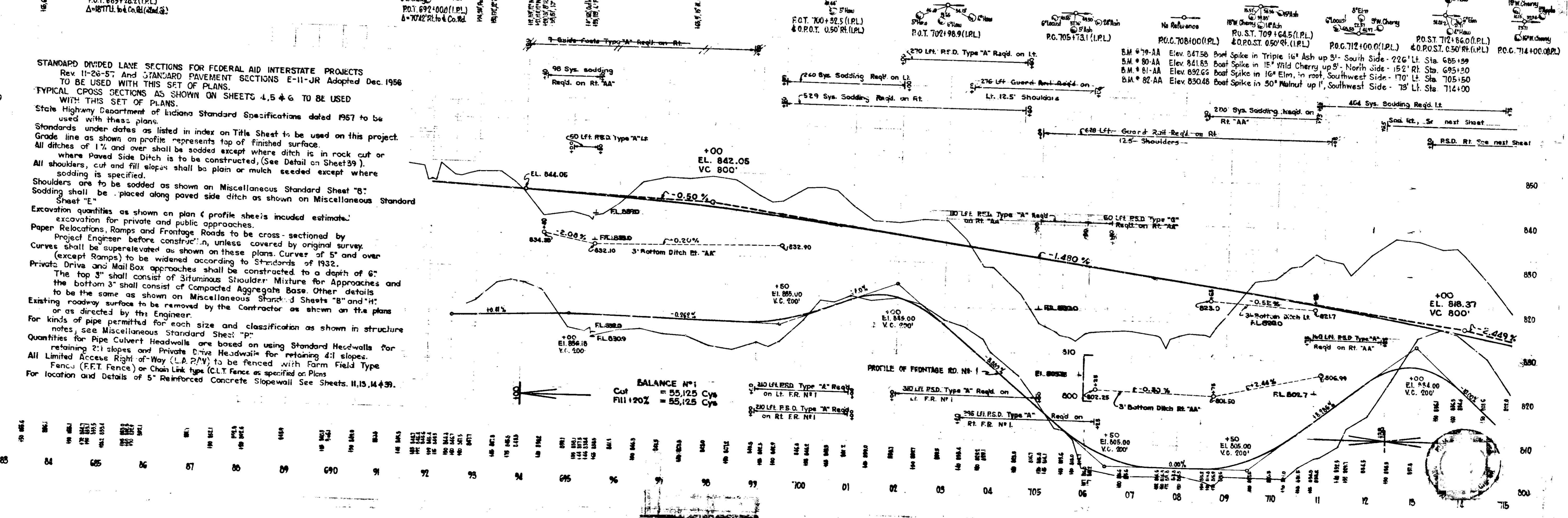
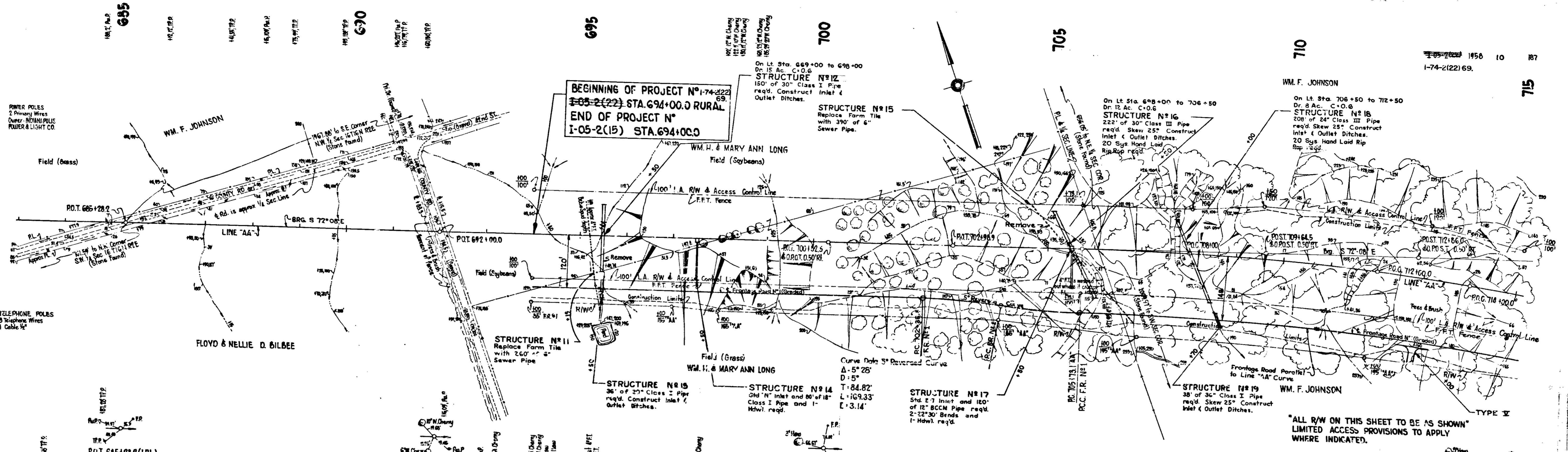


BEGINNING OF PROJ. NO. 1-74-2(22) 89.
 STATION 694+00 (RURAL)
 END OF PROJ. NO. 1-05-2(15)
 STATION 694+00

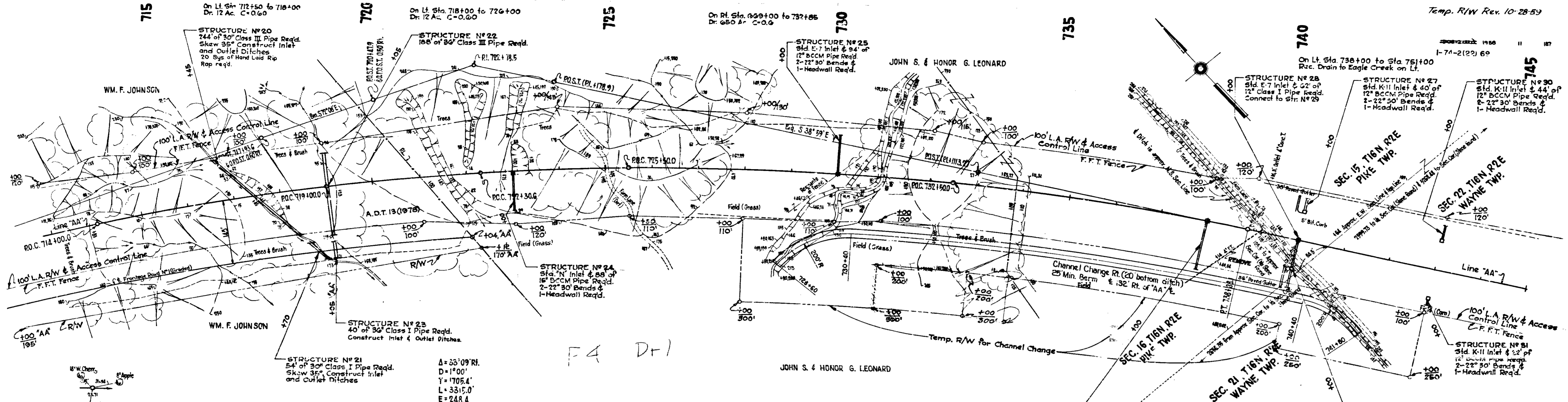
END OF PROJ. NO. 1-74-2(22) 89.
 STATION 871+00 =
 F-PROJ. NO. 107(18)
 (SPUR CONNECTION)

PROJECT NO. 1-74-2(22) 89.
 PLAT NO. 2
 FOR R/W DEPT.
 Scale: 1" = 100'





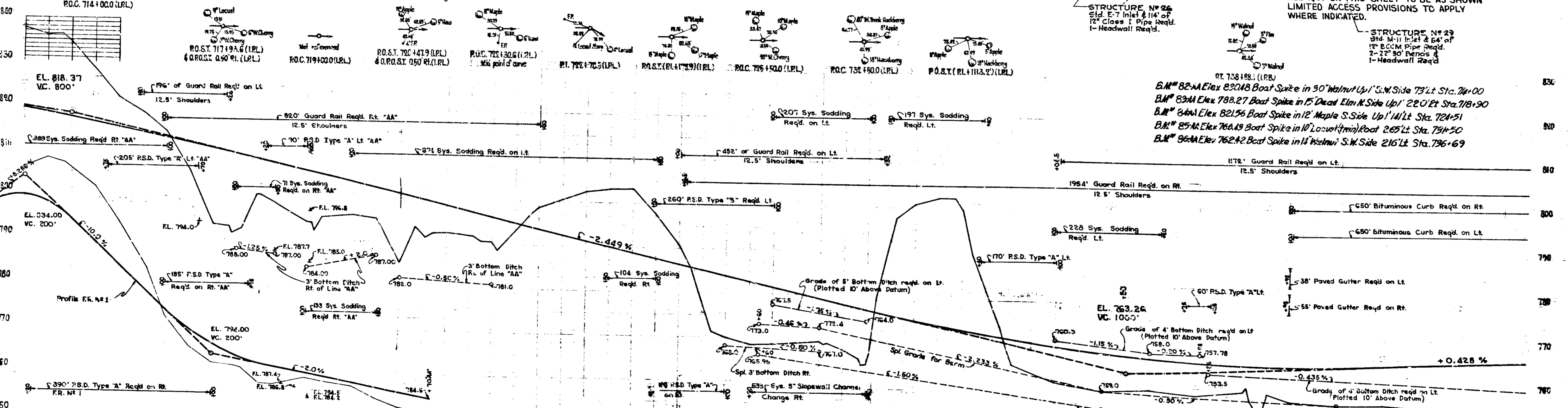
685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715
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F4 D+1

ALL R/W ON THIS SHEET TO BE AS SHOWN LIMITED ACCESS PROVISIONS TO APPLY WHERE INDICATED.

- BM# 82-AElev 820.18 Boat Spike in 30' Walnut Up' S.W. Side 73' Lt Sta. 74+00
- BM# 83-AElev 788.27 Boat Spike in 15' Dead Elm N. Side Up' 22' Lt Sta. 718+90
- BM# 84-AElev 821.56 Boat Spike in 12' Maple S. Side Up' 14' Lt Sta. 724+51
- BM# 85-AElev 764.19 Boat Spike in 10' Locust (trim) Root 265' Lt Sta. 734+50
- BM# 86-AElev 762.42 Boat Spike in 14' Walnut S.W. Side 216' Lt Sta. 736+69

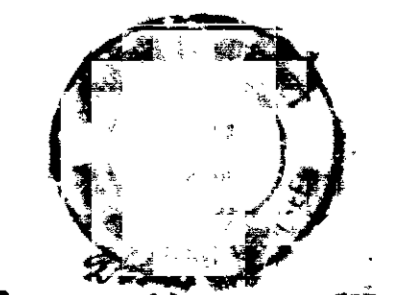


BALANCE #2
 Cut = 58,203 Cys.
 Fill + 20 = 58,203 Cys.

BALANCE #3
 Cut = 85,358 Cys.
 Fill + 15% = 86,122 Cys.
 Spl. Borrow = 2,764 Cys.

The above quantities include 80461 Cys. Cut from Channel Change Sta. 728+00 - 741+00 R/W; 60 Cys. Cut and 8211 Cys. Fill + 20% with Separate C. Exception Sta. 746+80 to 755+80

713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745
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Revised Disposal of excess land 3-16-97

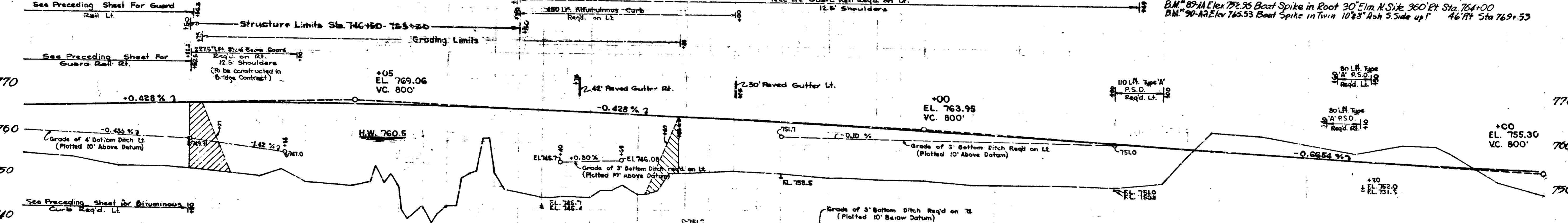
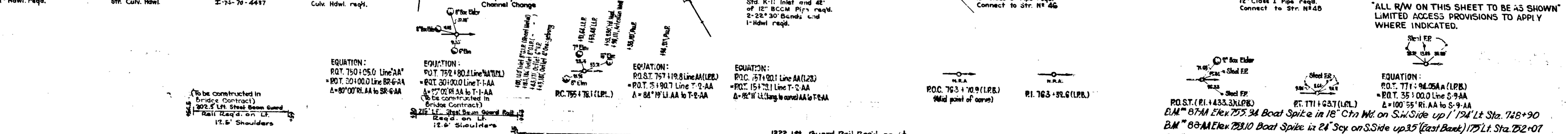
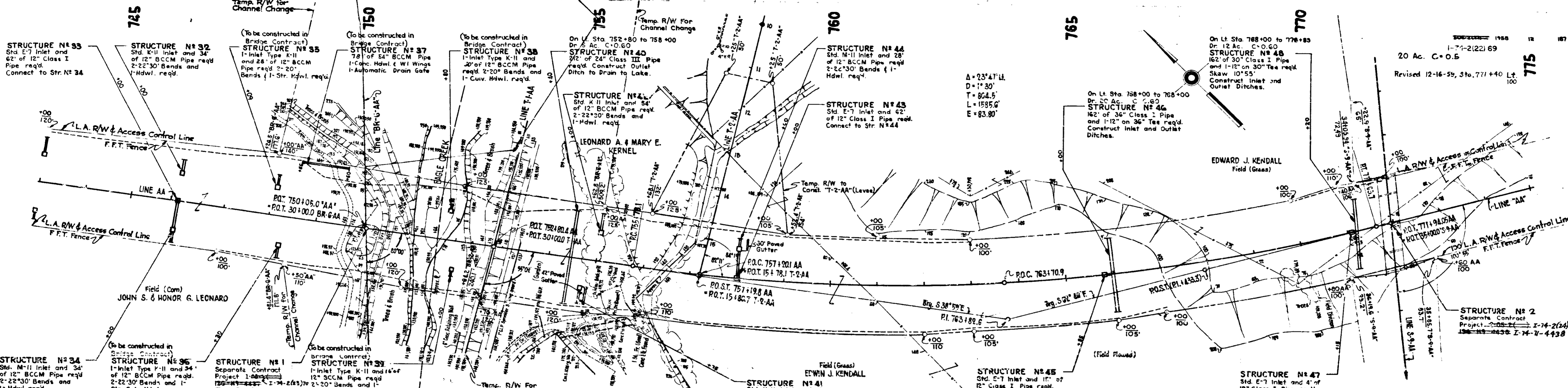
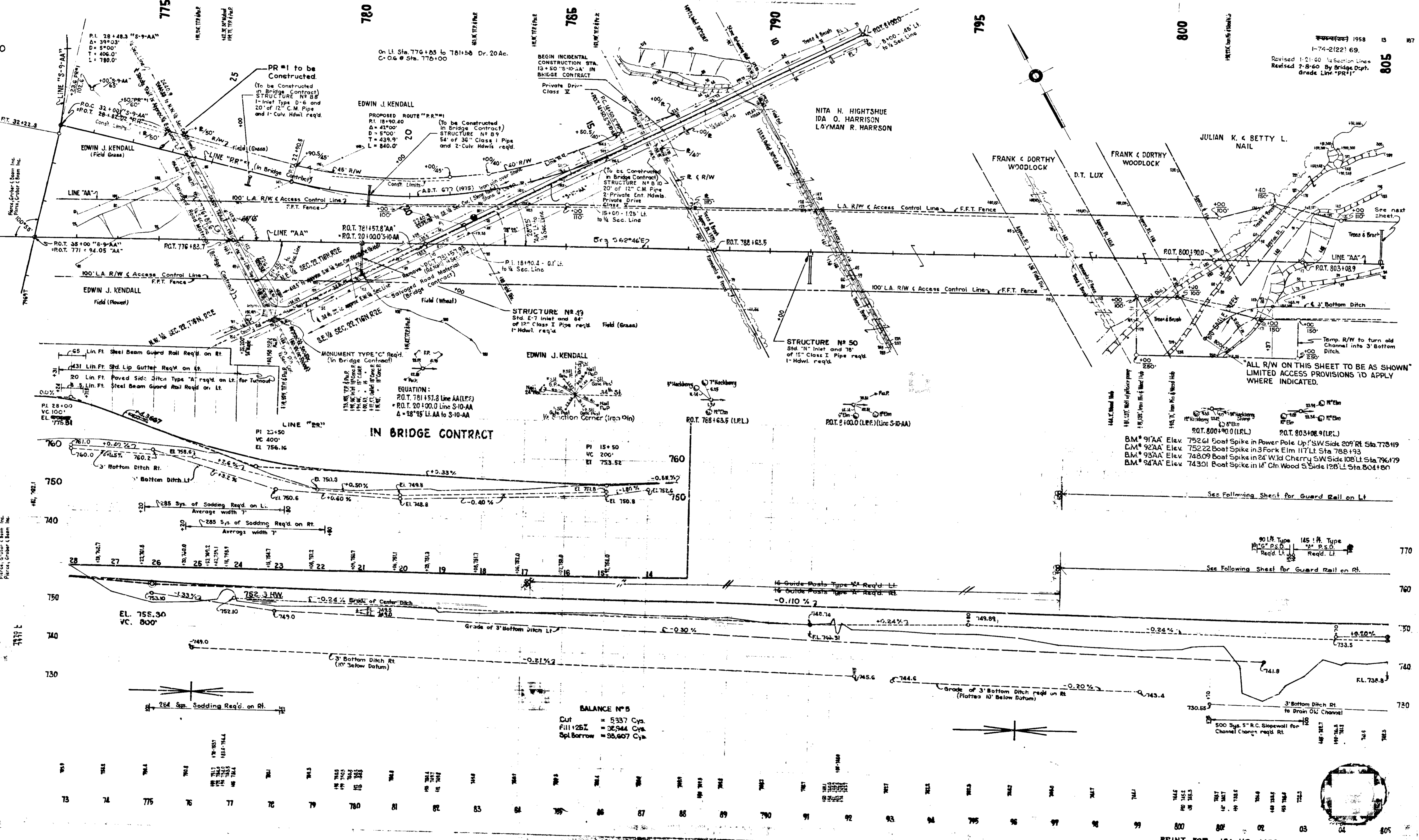


Table with columns for stationing (749 to 775) and rows for various data points including elevations, grades, and structure details.

BALANCE #4
Cut = 18,935 Cys.
Fill @ 20% = 81,980 Cys.
Spill Burrow = 63,047 Cys.

NOTE: above quantities include 5,971 Cys. Fill @ 20% from Line T-2-AA (Levee) and 2,463 Cys. Fill @ 20% within Separate Contract Grading Exception, Sta. 760+75 to 765+85.





IN BRIDGE CONTRACT
 EQUATION:
 P.O.T. 781+57.8 Line AA(L.F.)
 P.O.T. 20+00.0 Line S-10-AA
 $\Delta = 28^{\circ}25' \text{ LI. AA to S-10-AA}$

BALANCE NO 5

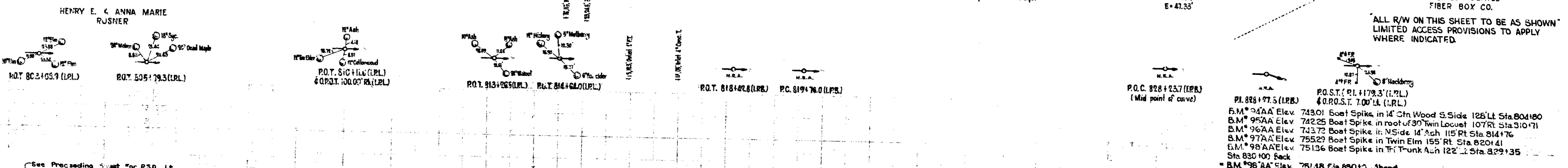
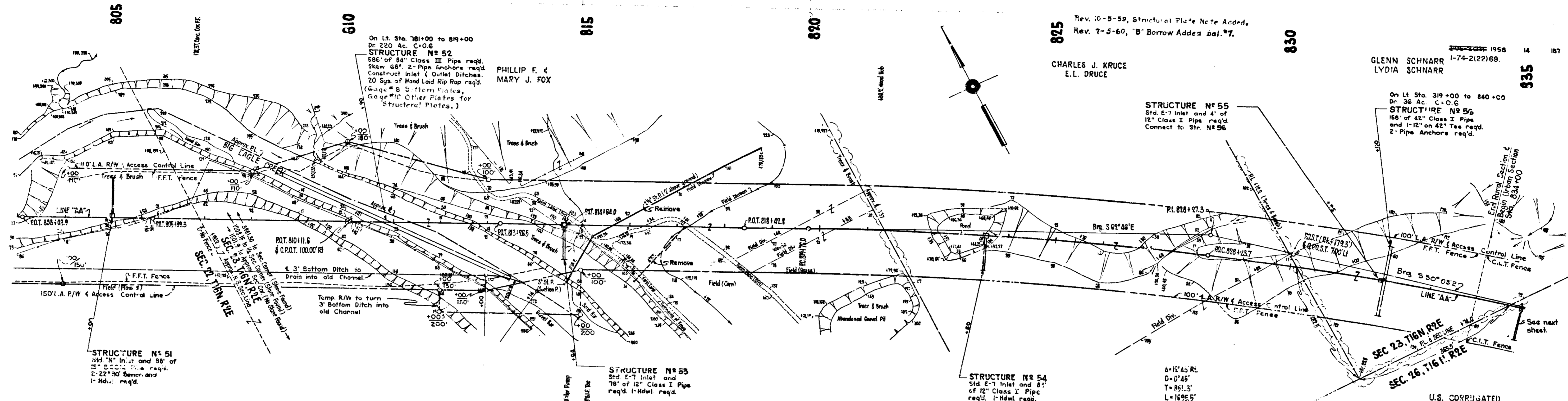
Cut	= 5337 Cys.
Fill	= 32944 Cys.
Sp. Borrow	= 95607 Cys.

- B.M. 91AA Elev. 752.61 Boat Spike in Power Pole Up SW Side 209' Rt. Sta. 778+19
- C.M. 92AA Elev. 752.22 Boat Spike in 3 Fork Elm 117' Lt. Sta. 788+93
- B.M. 93AA Elev. 748.09 Boat Spike in 24' Wild Cherry SW Side 108' Lt. Sta. 796+79
- B.M. 94AA Elev. 743.01 Boat Spike in 14' Cdn Wood S Side 128' Lt. Sta. 804+80

Rev. 10-5-59, Structural Plate Note Added,
Rev. 7-5-60, "B" Borrow Adzee dal. 7.
CHARLES J. KRUCZ
E.L. DRUCE

GLENN SCHNARR
LYDIA SCHNARR

1958
1-74-2122169
14
187
335



BALANCE N°6
Cut = 23,038 Cys.
Fill + 15% = 116,067 Cys.
Spl. Borrow = 92,687 Cys.

BALANCE N°7
Cut = 20,904 Cys.
Fill + 15% = 22,640 Cys.
Spl. Borrow = 2,736 Cys.
Grade "B" Special borrow = 1,155 Cys.

803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835
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835

840

845

850

855

860

1-74-2(22)69

Rev. 4-1-60 Grade & Earth Quantities
Rev. 5-13-60 Earthwork

865

SEC. 23 T16N, R2E

GLENN SCHNARR (1/2 int.)
LYDIA SCHNARR (1/2 int.)

IVA R. STEWART

Field (Plowed)

IVA R. STEWART

Field (Plowed)

Field (Plowed)

Field (Plowed)

IVA R. STEWART

IVA R. STEWART

Note: It is recommended that
the contractor return Cross Sections
from Sta. 846+00 to 853+00
prior to Construction

STRUCTURE No. 3
Separate Contract
Proj. # 95-2(25) 1-74-2(1-1) 72
95-2(25) 1-74-72-4440

SEC. 26 T16N, R2E

U.S. CORRUGATED FIBER BOX CO.

STRUCTURE No. 57
SHUT INlet 12" x 24"
of 12" Class I Pipe
req'd. 1' Hdw. req'd.

End Rural Section
Begin Urban Section

P.T. 836+71.5 (L.P.B.)
N.R.A.

P.O.T. 840+000 (M.P.)
N.R.A.
P.O.T. 841+75.0 (L.P.L.)
& P.O.T. 7.00' R.T.
P.O.T. 842+40.5 (L.P.L.)
& P.O.T. 7.00' R.T.

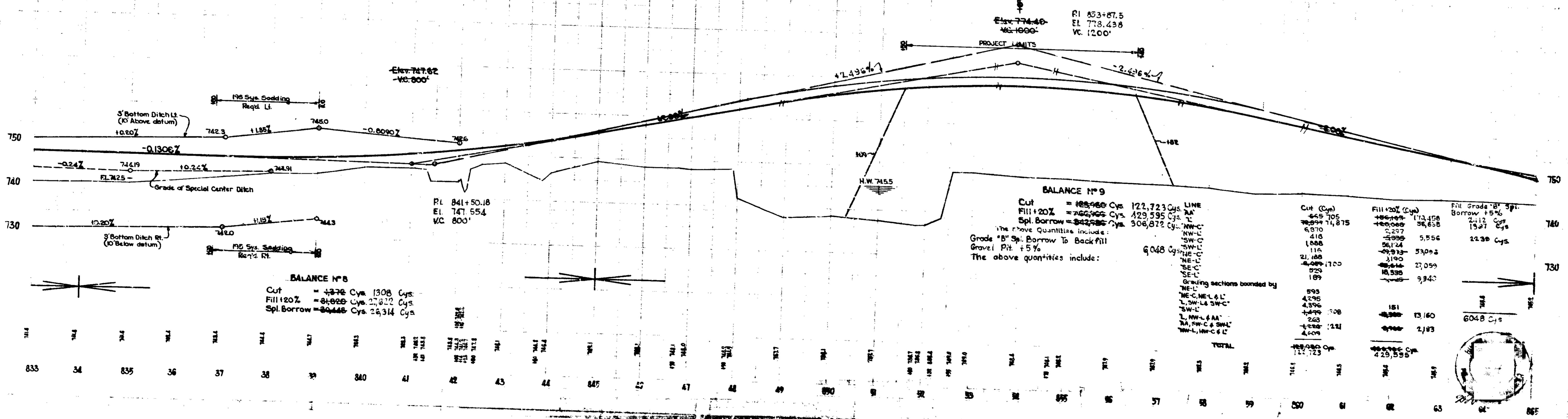
EQUATION:
P.O.T. 853+87.5 (Line AA') (L.P.B.)
P.O.T. 432+55.28 (Line LL')
 $\Delta = 130^\circ 40' 30''$ Line AA' to Line LL'

For R/W See Sheet No. 20

P.O.T. 864+59.6 (L.P.L.)
& P.O.T. 7.00' R.T.

SEE INTERCHANGE DETAILS FOR DRAINAGE, R/W AND QUANTITIES

B.M. # 99 AA' Elev. 748.75 Bent Spike in 4" Cys. 2 1/2" Lt. = 841+40
B.M. # 100 AA' = 747.42 " " " " 6" Sq. Cor. Fence Post (East Side) 756' R.T. Sta. 855+69

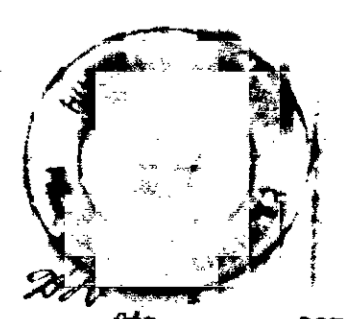


BALANCE # 8
 Cut = 4372 Cys. 1308 Cys.
 Fill 100% = 81825 Cys. 27,622 Cys.
 Spl. Borrow = 80448 Cys. 26,314 Cys.

BALANCE # 9
 Cut = 45596 Cys. 122,723 Cys.
 Fill 100% = 266365 Cys. 429,595 Cys.
 Spl. Borrow = 84258 Cys. 306,872 Cys.

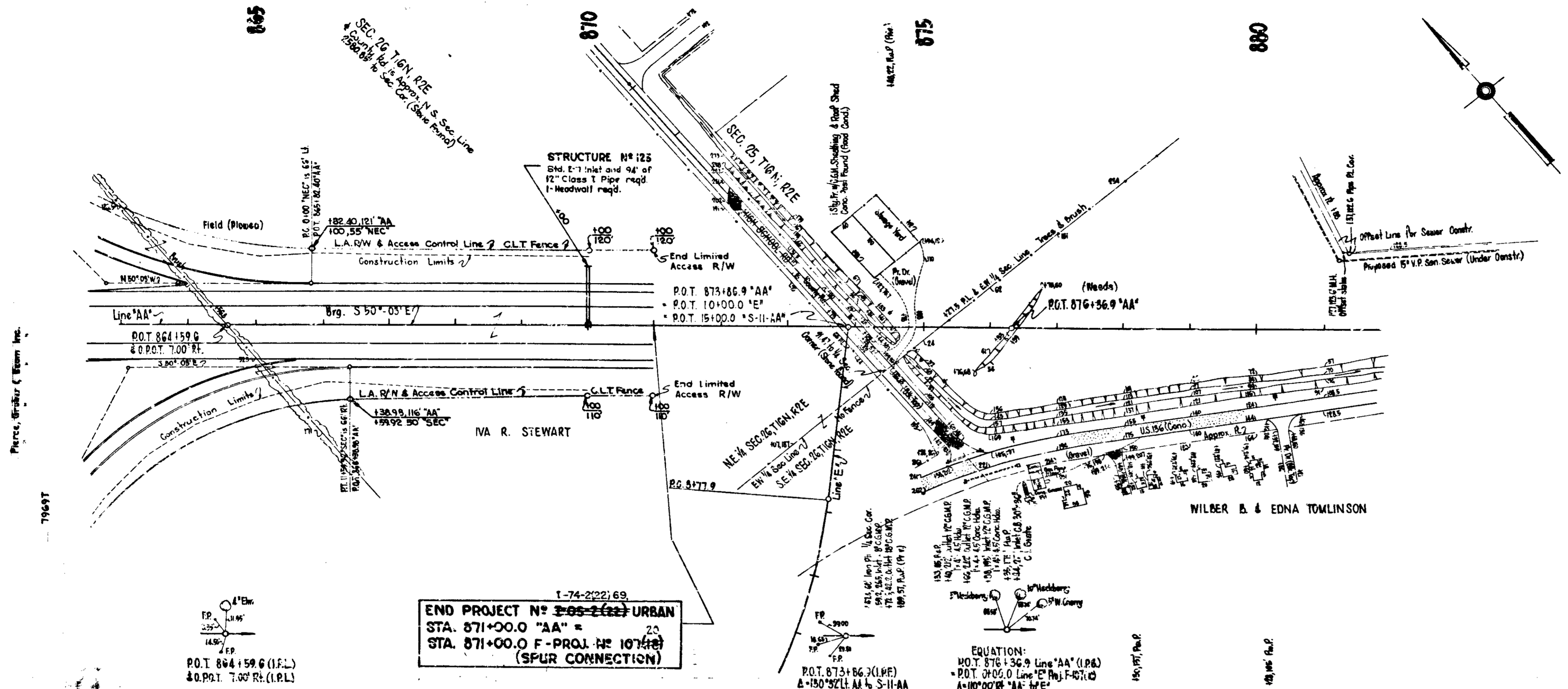
The above quantities include:
 Grade "B" Spl. Borrow To Backfill
 Gravel Pit + 5%
 The above quantities include:
 6048 Cys.

LINE	Cut (Cys)	Fill 100% (Cys)	Fill Grade "B" Spl. Borrow + 5% (Cys)
AA'	645,705	1,173,458	2,112
LL'	78,997	38,658	13,971
NW-C'	418	2,297	
SW-C'	1,888	5,556	24,338
NE-C'	116	53,093	
SE-C'	21,188	27,059	
SW-L'	18,338		
SE-L'	189	9,343	
NE-L'	593		
SW-L4 SW-C'	4,396		
SW-L'	1,479	13,160	
SW-L4 AA'	263		
SW-C4 SW-L'	1,288	2,183	
SW-L4 SW-C4 L'	4,609		
TOTAL	1,127,723	1,649,906	6048



Pierce, Gruber & Brown, Inc.

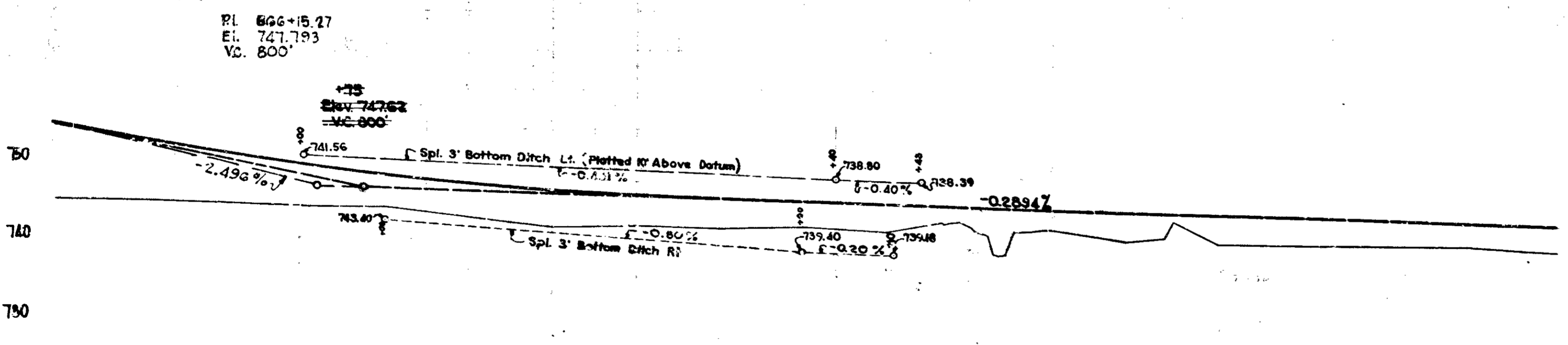
Pierce, Gruber & Brown, Inc.



END PROJECT N° 3-05-2(2) URBAN
 STA. 871+00.0 "AA" =
 STA. 871+00.0 F-PROJ. N° 107(18)
 (SPUR CONNECTION)

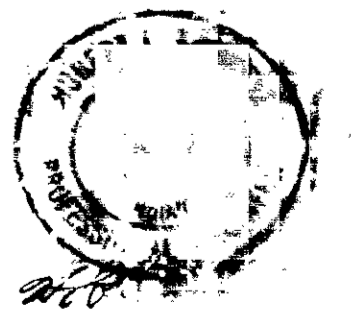
EQUATION:
 P.O.T. 876+36.9 Line "AA" (108)
 P.O.T. 876+00.0 Line "E" Proj. F-67(10)
 Δ=10°00'00" "AA" "E"

B.M. *101-AA Elev. 742.99 Boat Spikes in 42" Ash N. Side 116' Rt. Sta. 875+07
 B.M. *102-AA Elev. 741.93 Boat Spikes in P.W.P. * 41-450 & 106' Rt. Sta. 880+27 Ahead Sta. 892+16
 B.M. *102-AA Elev. 742.05 " " " " * 41-454 " " " " 880+27 Back Sta. 892+16



BALANCE N° 10
 Cut = 15,096 Cys. 10.92
 Fill 125% = 18,722 Cys. 14.172
 Spl. Borrow = 13,708 Cys. 13,074

83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	800	81
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400

405

410

415

420

425

430

Between Sta. 407+41
Within 150' of &
50 Syc. 6' to 24"
25 Cottonwood 12' to 24"

UTILITY OWNERSHIP
Power - Indpls. Power & Light Co.
Telephone - Indiana Bell Telephone Co.

I-74-2(22) 69,
Rev. 5-10-60 Limits of Const.

J & R GRADISON

IVA R STEWART

IVA R STEWART

Bank lined with
12" 16" Pop

11-55
7-51
J.W.
D.C.C.

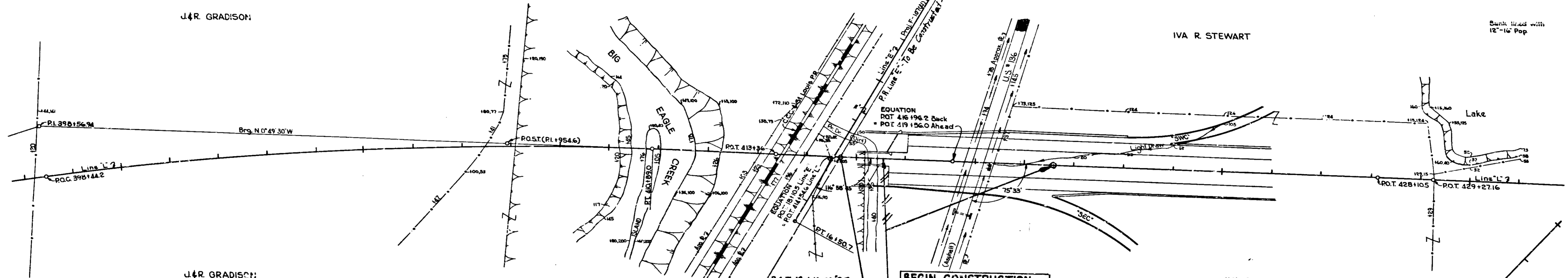
7465 T
7465 T

11-55
9-51
J.W.
D.C.C.

7468 L
7468 L

740

750



J & R GRADISON

Between Sta. 407-41
Within 150' of &
17 Syc. 6' to 18"
11 Cottonwood 10' to 24"
2 Oaks 36"

R.R. CENSUS
"West bound"
2 Freights Daily
1 Passenger Daily

"East bound"
2 Freights Daily
1 Passenger Daily

BEGIN CONSTRUCTION
LINE "L" STA. 415+54.29 - 421+61.80
END OF PROJ. N°
I-465-4(16) 149

For R/W See Sheet N° 20

PL 398+56.94
2+19' 55" Rt
D = 6' 48"
T = 125.75
L = 2489.6
E = 109.6

Between Sta. 407-41
Within 150' of &
17 Syc. 6' to 18"
11 Cottonwood 10' to 24"
2 Oaks 36"

P.O.S.T. (PL+9546) (P.F.)

P.T. 410+290 (P.F.)

P.O.T. 413+36 (P.R.)

P.O.T. 416+96.2 (P.F.) Back
P.O.T. 419+56.0 Ahead

P.O.T. 428+105 (P.B.)

P.O.T. 429+27.16 (P.R.)

B.M. #9 L El. 732.99 Boat Spike in 14" Syc. 320' Rt. Sta. 398+97
B.M. #10 L El. 734.57 Boat Spike in Root 66' Syc. 145' Rt. Sta. 407+100
B.M. #11 L El. 736.97 Boat Spike in Root 36' Hack 155' Rt. Sta. 412+25
B.M. #12 L El. 740.98 Cut in Conc. in Center of S. Conc. Hdwl. 325' Lt. Sta. 421+185
B.M. #13 L El. 745.69 Boat Spike in 2" Syc. Sup 190' Lt. Sta. 423+35

Elev. 780.02
VC 1600'

Elev. 745.27
VC 800'

SEPARATE CONTRACT STR. LIMITS
(I-465-4(9-2221) Proj. I-465-4(16) 149

GRADING LIMITS (I-465-4(9-2221)

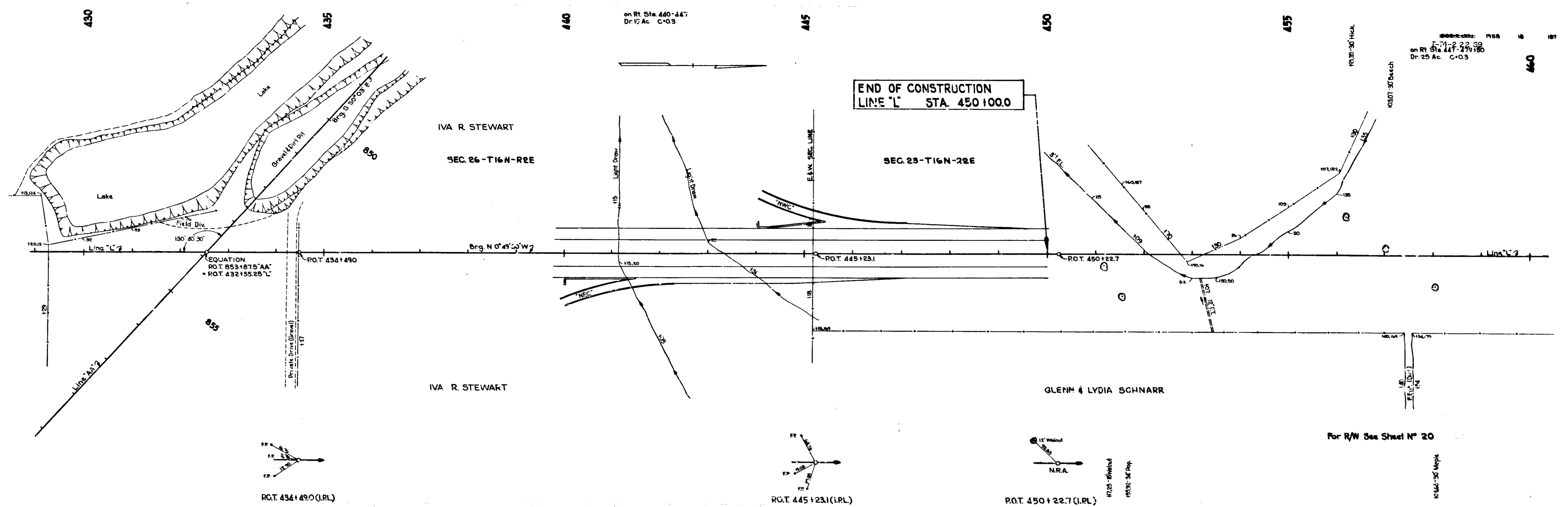
For Earth Work Quantities See
BALANCE N° 9, Sheet N° 5

FOR R/W, DRAINAGE AND QUANTITIES SEE INTERCHANGE DETAILS

134.6	7467	7468	7469	7470	7471	7472	7473	7474	7475	7476	7477	7478	7479	7480	7481	7482	7483	7484	7485	7486	7487	7488	7489	7490	7491	7492	7493	7494	7495	7496	7497	7498	7499	7500	7501	7502	7503	7504	7505	7506	7507	7508	7509	7510	7511	7512	7513	7514	7515	7516	7517	7518	7519	7520	7521	7522	7523	7524	7525	7526	7527	7528	7529	7530	7531	7532	7533	7534	7535	7536	7537	7538	7539	7540	7541	7542	7543	7544	7545	7546	7547	7548	7549	7550	7551	7552	7553	7554	7555	7556	7557	7558	7559	7560	7561	7562	7563	7564	7565	7566	7567	7568	7569	7570	7571	7572	7573	7574	7575	7576	7577	7578	7579	7580	7581	7582	7583	7584	7585	7586	7587	7588	7589	7590	7591	7592	7593	7594	7595	7596	7597	7598	7599	7600	7601	7602	7603	7604	7605	7606	7607	7608	7609	7610	7611	7612	7613	7614	7615	7616	7617	7618	7619	7620	7621	7622	7623	7624	7625	7626	7627	7628	7629	7630	7631	7632	7633	7634	7635	7636	7637	7638	7639	7640	7641	7642	7643	7644	7645	7646	7647	7648	7649	7650	7651	7652	7653	7654	7655	7656	7657	7658	7659	7660	7661	7662	7663	7664	7665	7666	7667	7668	7669	7670	7671	7672	7673	7674	7675	7676	7677	7678	7679	7680	7681	7682	7683	7684	7685	7686	7687	7688	7689	7690	7691	7692	7693	7694	7695	7696	7697	7698	7699	7700
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9-57
D.O.C.
2485 T



1758 18 187
 S. R. Sta. 447+22.36
 Dr. 25 Ac. C+03
 460

EQUATION
 P.O.T. 853+875 "AA"
 P.O.T. 432+5528 "L"

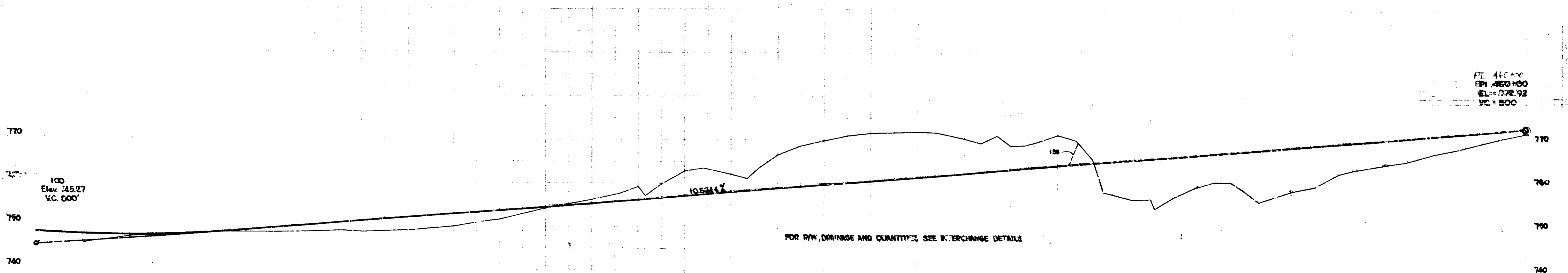
P.O.T. 434+49.0 (I.R.L.)

P.O.T. 445+23.1 (I.R.L.)

P.O.T. 450+22.7 (I.R.L.)

B.M. #14 "L" EL. 727.91 Boat Spike in 18" Syc. 2' up W Side 130' Lt. Sta. 434+25
 B.M. #15 "L" EL. 725.7 Boat Spike in 12" Chy. 1' up E. Side 130' Rt. Sta. 445+60
 B.M. #16 "L" EL. 769.19 Boat Spike in 40" Oak 2' up W Side 130' Rt. Sta. 456+57

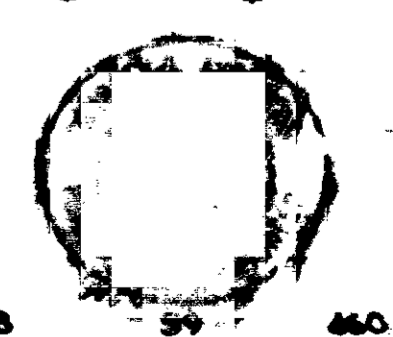
For R/W See Sheet N° 20

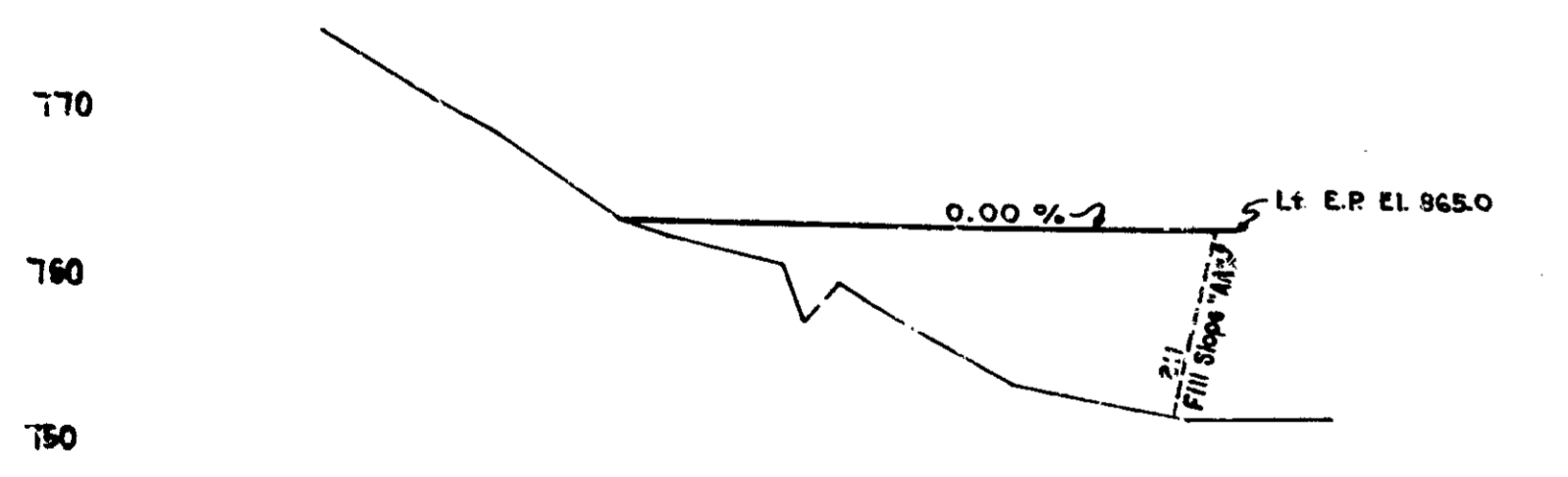
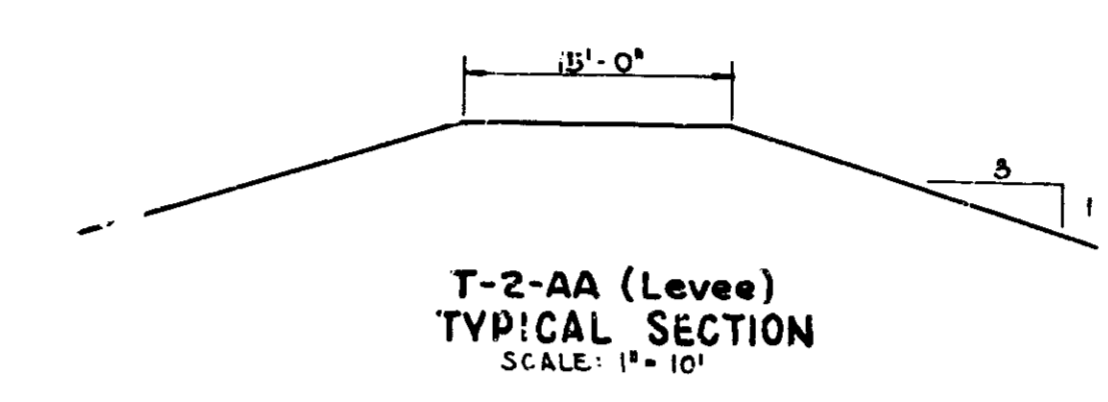
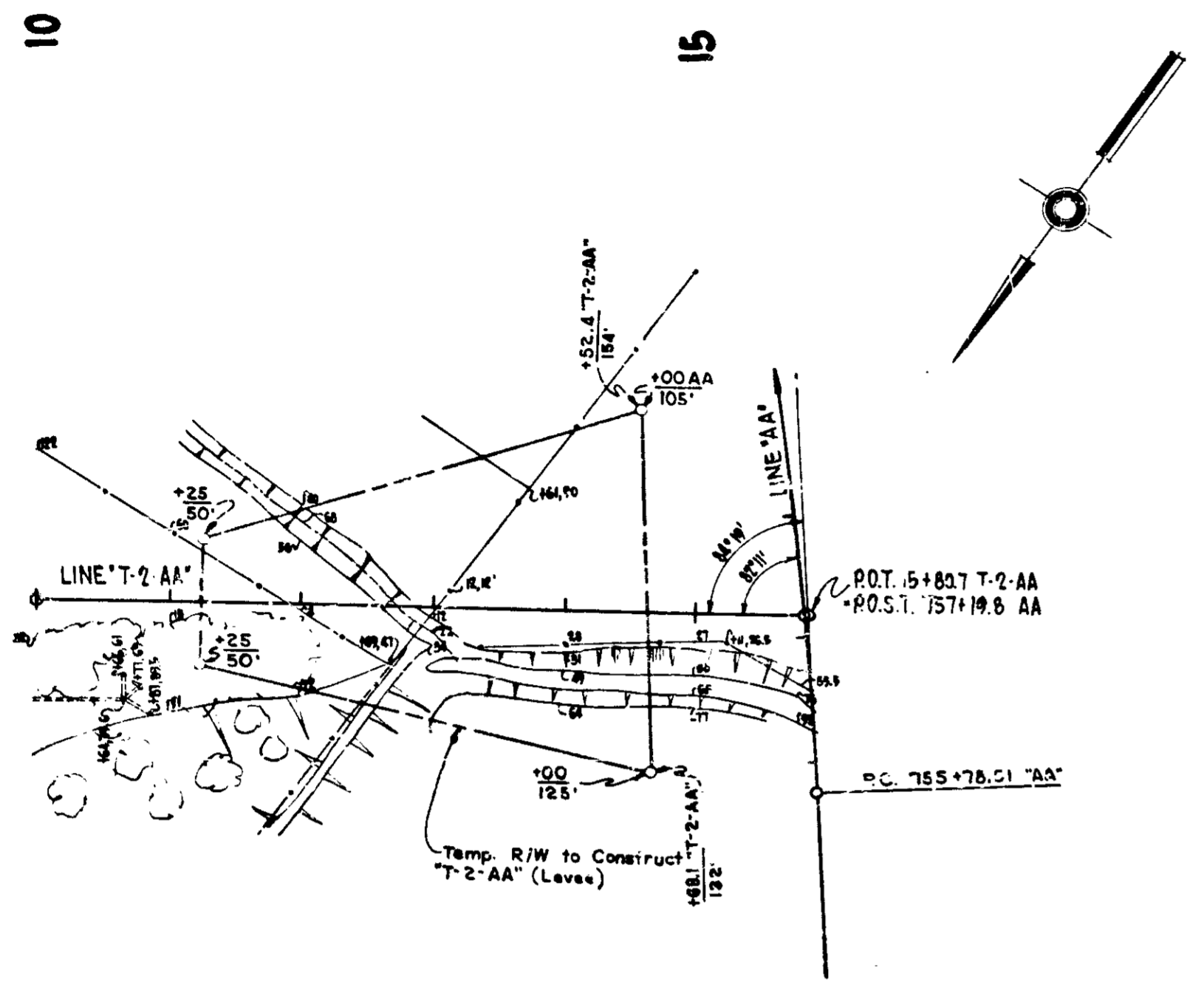


PI = 460+00
 EPI = 450+00
 EL = 742.93
 VC = 500

For Earth Work Quantities See
 BALANCE N° 9, Sheet N° 15

39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
7487	7481	7475	7469	7463	7457	7451	7445	7439	7433	7427	7421	7415	7409	7403	7397	7391	7385	7379	7373	7367	7361





For Earth Work Quantities See
BALANCE No. 4, Sheet No. 12

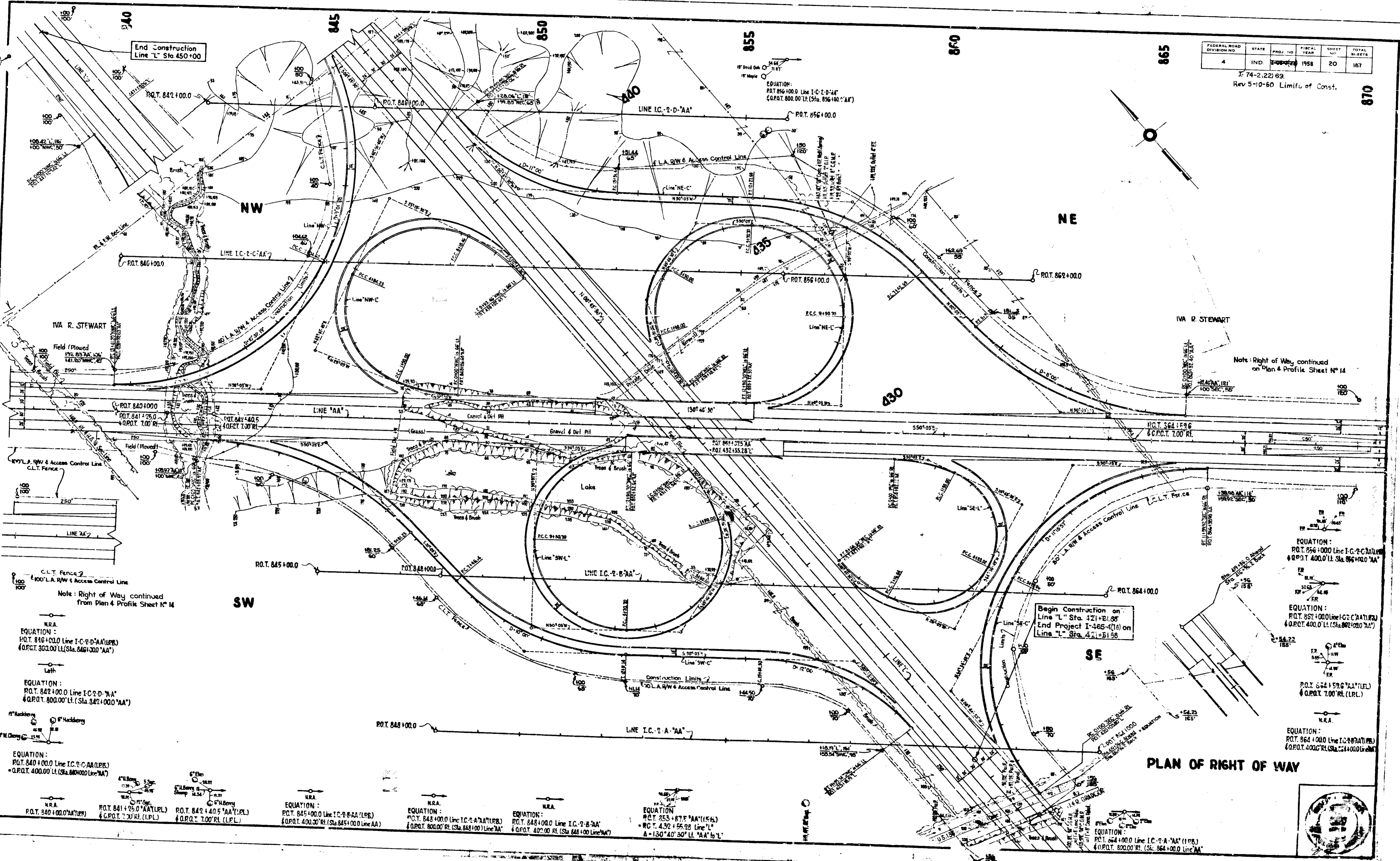
NO.	DATE	BY	CHKD.	APP.	REVISION
1					
2					
3					
4					
5					
6					



FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	2000	1958	20	187

J. 74-2(22) 69.
Rev 5-10-60 Limits of Const.

870



End Construction Line "L" Sta. 450+00

IWA R. STEWART
Field (Plowed)
192.83' AA, 106'
141.63' WW, 47'

Note: Right of Way continued from Plan & Profile Sheet N° 14

N.R.A.
EQUATION:
P.O.T. 846+00.0 Line I-C-2-D-AA (L.P.B.)
Q.P.O.T. 303.00' LL (Sta. 846+00.0 AA)

Lath
EQUATION:
P.O.T. 842+00.0 Line I-C-2-D-AA
Q.P.O.T. 800.00' LL (Sta. 842+00.0 AA)

6" Hackberry
6" Hackberry
6" W. Cherry
EQUATION:
P.O.T. 840+00.0 Line I-C-2-C-AA (L.P.B.)
Q.P.O.T. 400.00' LL (Sta. 840+00.0 AA)

6" Elm
6" Hackberry
6" Hackberry
EQUATION:
P.O.T. 841+25.0 AA (L.P.L.)
Q.P.O.T. 7.00' RL (L.P.L.)

N.R.A.
P.O.T. 840+00.0 AA (L.P.B.)
Q.P.O.T. 7.00' RL (L.P.L.)

N.R.A.
EQUATION:
P.O.T. 845+00.0 Line I-C-2-B-AA (L.P.B.)
Q.P.O.T. 400.00' RL (Sta. 845+00.0 Line AA)

N.R.A.
EQUATION:
P.O.T. 848+00.0 Line I-C-2-A-AA (L.P.B.)
Q.P.O.T. 800.00' RL (Sta. 848+00.0 Line AA)

N.R.A.
EQUATION:
P.O.T. 848+00.0 Line I-C-2-B-AA
Q.P.O.T. 402.00' RL (Sta. 848+00.0 Line AA)

N.R.A.
EQUATION:
P.O.T. 853+87.8 AA (L.P.B.)
RC T. 432+55.28 Line "L"
Δ = 130°40'30" LL "AA" to "L"

PLAN OF RIGHT OF WAY



Note: Right of Way continued on Plan & Profile Sheet N° 14

Begin Construction on Line "L" Sta. 421+81.88
End Project I-465-4(18) on Line "L" Sta. 421+81.88

EQUATION:
P.O.T. 856+00.0 Line I-C-2-C-AA (L.P.B.)
Q.P.O.T. 400.00' LL (Sta. 856+00.0 AA)

EQUATION:
P.O.T. 857+00.0 Line I-C-2-A-AA (L.P.B.)
Q.P.O.T. 400.00' LL (Sta. 857+00.0 AA)

P.O.T. 864+59.0 AA (L.P.L.)
Q.P.O.T. 7.00' RL (L.P.L.)

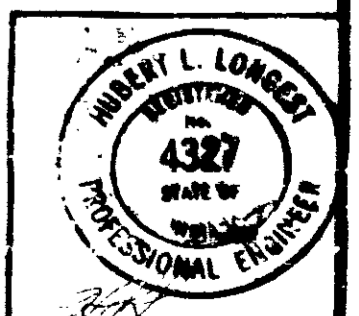
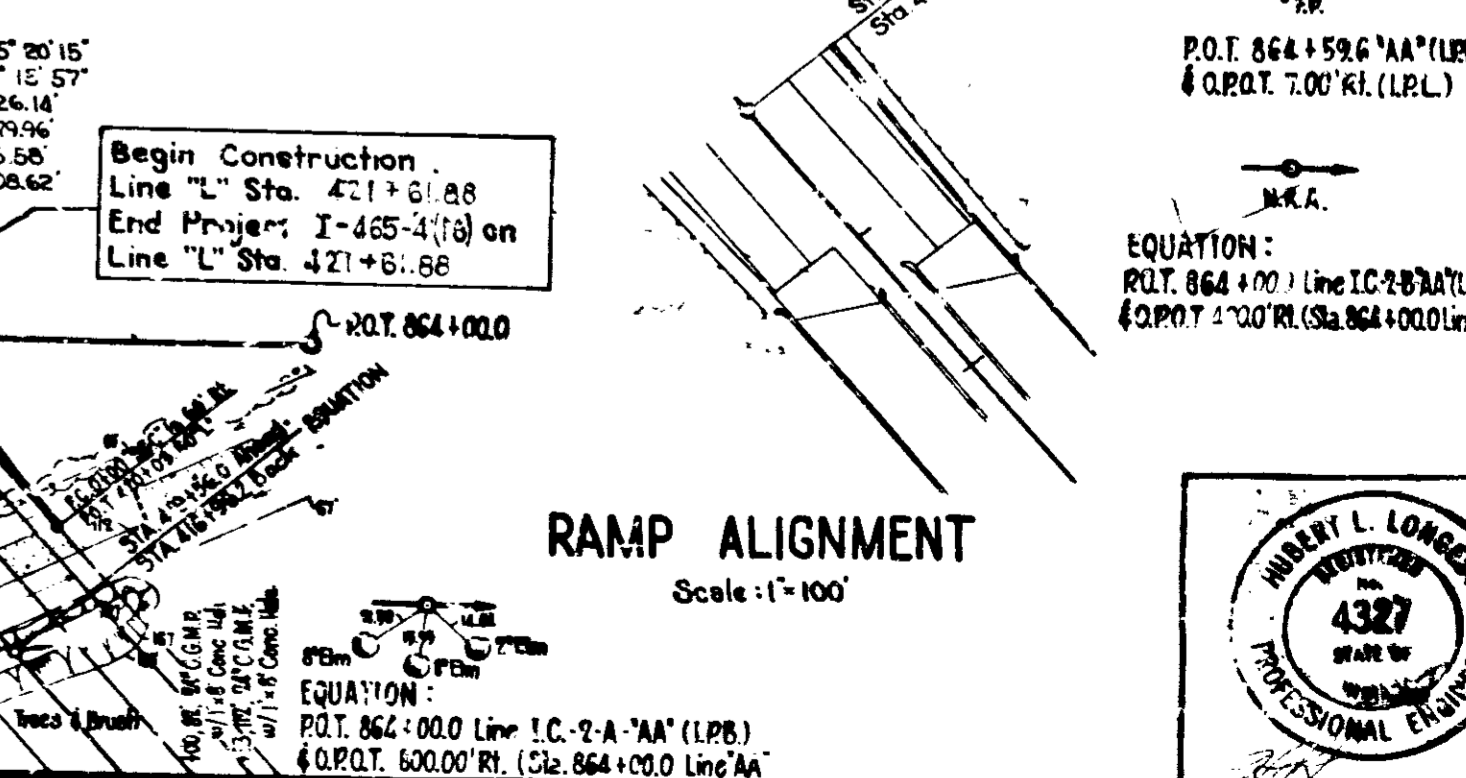
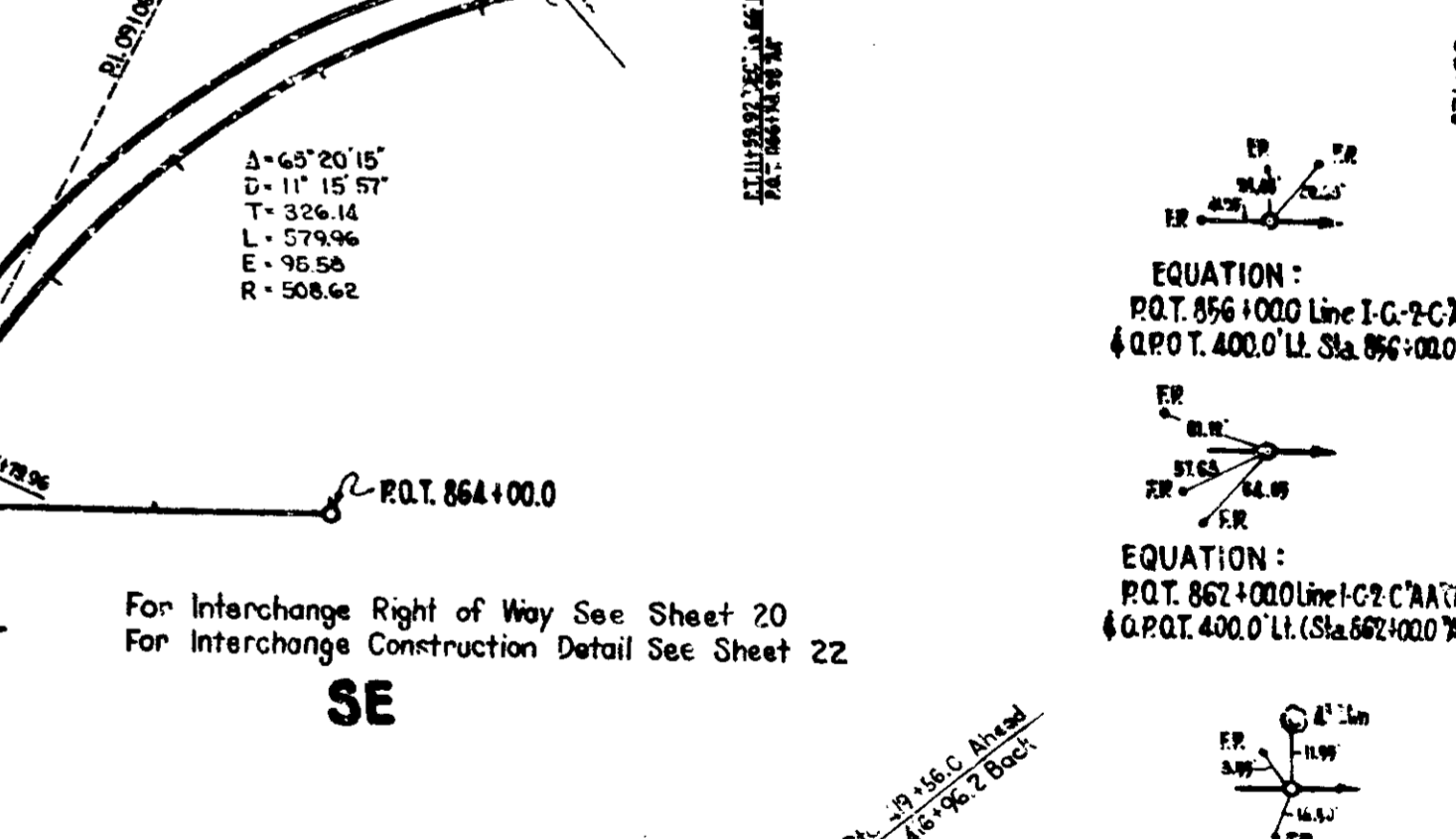
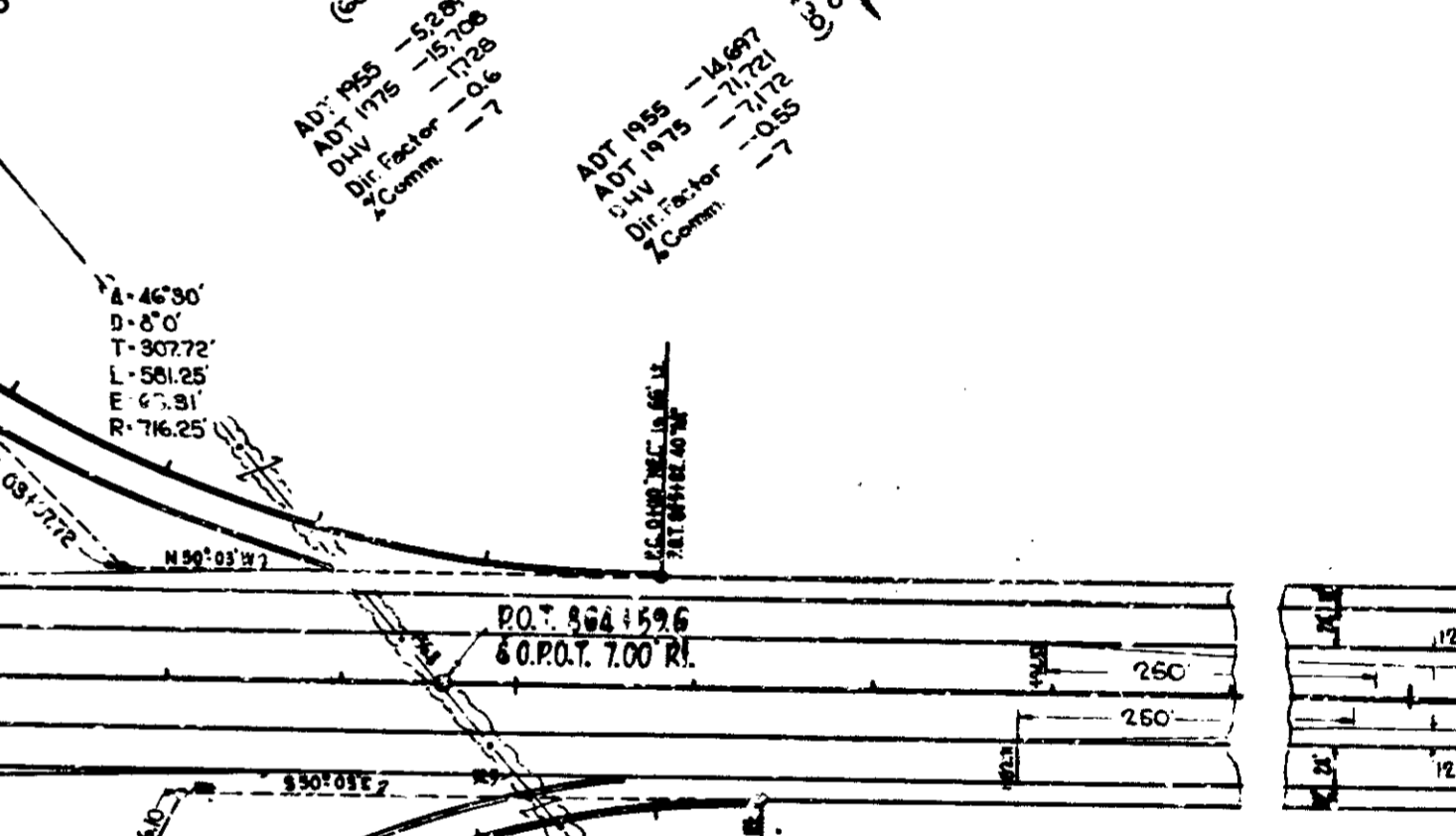
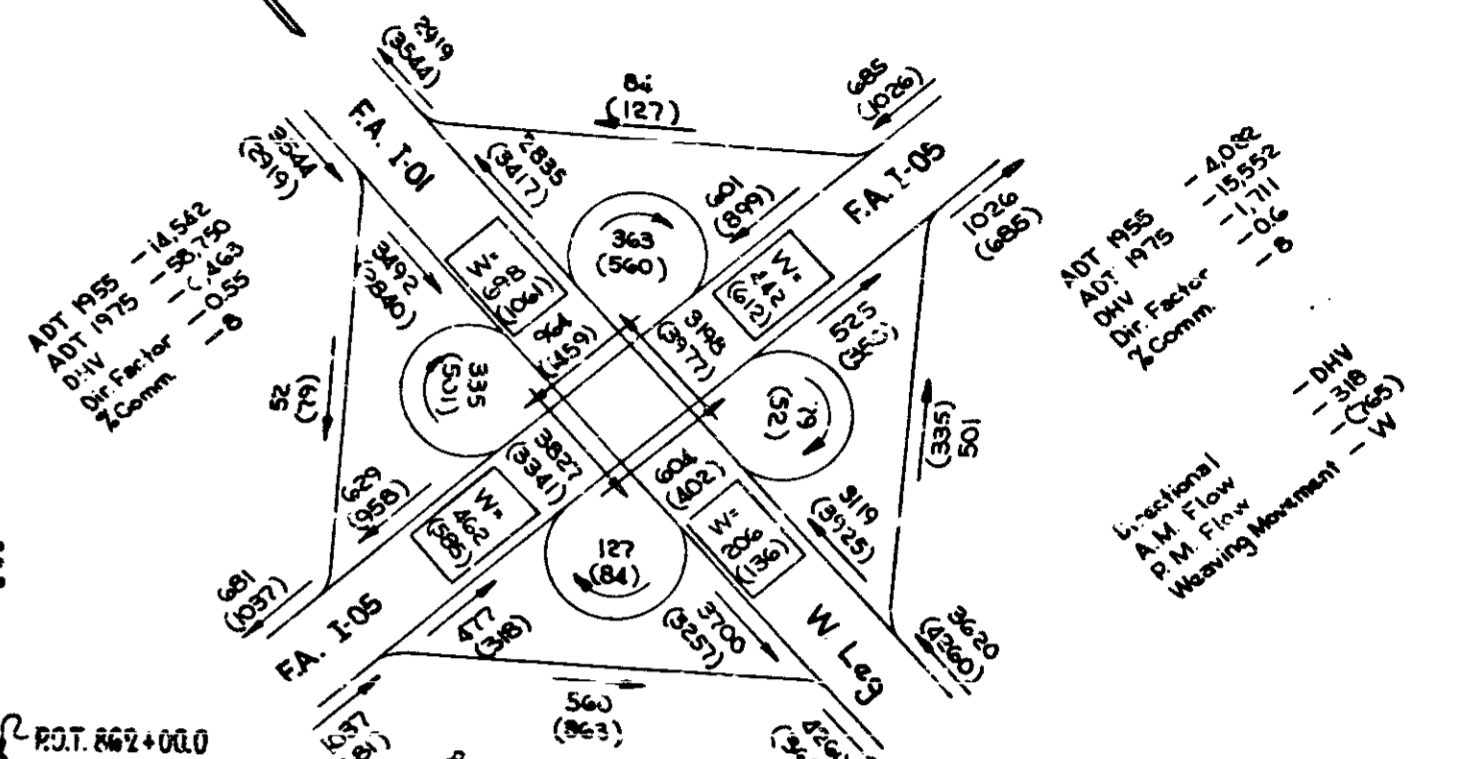
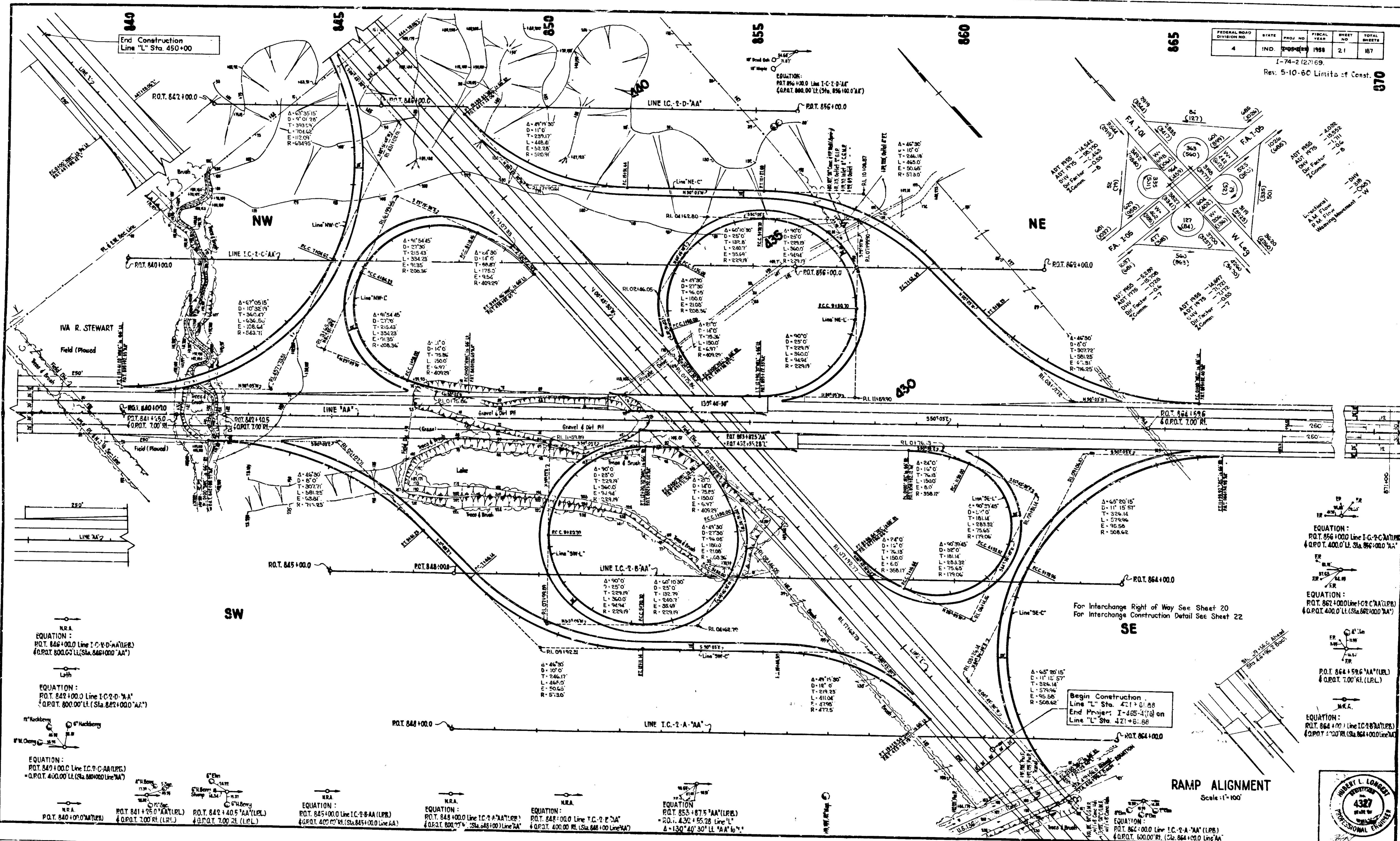
N.R.A.
EQUATION:
P.O.T. 864+00.0 Line I-C-2-B-AA (L.P.B.)
Q.P.O.T. 400.00' RL (Sta. 864+00.0 Line AA)

EQUATION:
P.O.T. 864+00.0 Line I-C-2-A-AA (L.P.B.)
Q.P.O.T. 800.00' RL (Sta. 864+00.0 Line AA)

FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	2-00-01	1958	21	187

I-74-2 (2) 69
 Rev. 5-10-60 Limits of Const.

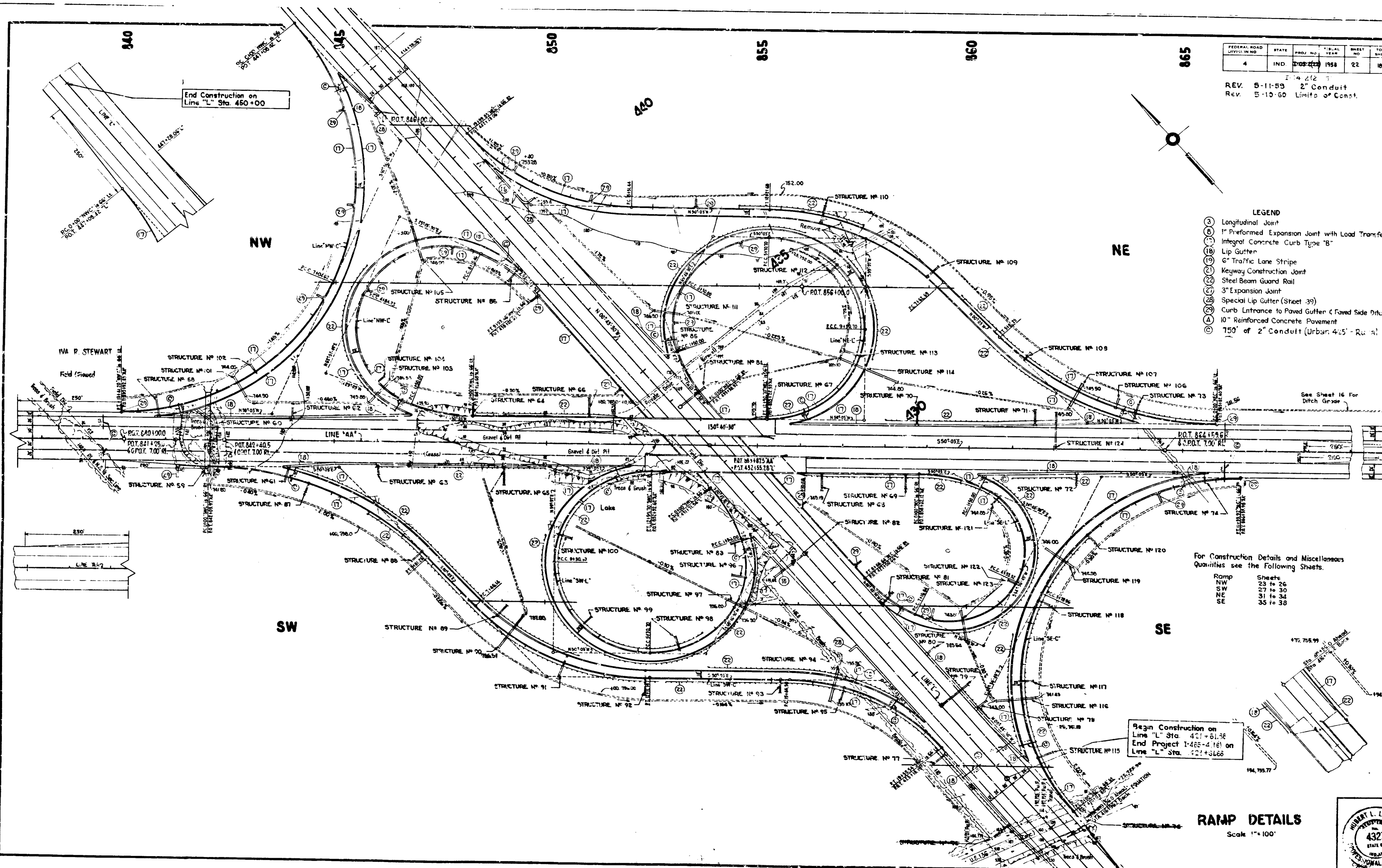
370



FEDERAL ROAD DISTRICT NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND	208-222	1958	22	167

REV. 5-11-59 2" Conduit
 Rev. 5-10-60 Limits of Const.

- LEGEND**
- (3) Longitudinal Joint
 - (8) 1" Preformed Expansion Joint with Load Transfer
 - (7) Integral Concrete Curb Type "B"
 - (18) Lip Gutter
 - (19) 6" Traffic Lane Stripe
 - (21) Keyway Construction Joint
 - (22) Steel Beam Guard Rail
 - (23) 3" Expansion Joint
 - (26) Special Lip Gutter (Sheet 39)
 - (27) Curb Entrance to Paved Gutter & Faced Side Ditch
 - (28) 10" Reinforced Concrete Pavement
 - (C) 750' of 2" Conduit (Urban 4x5' - Rural 3x3')



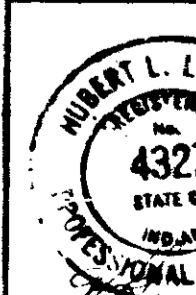
End Construction on Line "L" Sta. 450+00

Begin Construction on Line "L" Sta. 421+61.98
 End Project I-465-4181 on Line "L" Sta. 421+86.68

For Construction Details and Miscellaneous Quantities see the Following Sheets.

Ramp	Sheets
NW	23 to 26
SW	27 to 30
NE	31 to 34
SE	35 to 38

RAMP DETAILS
 Scale 1"=100'



QUANTITIES NOT SHOWN ELSEWHERE ON THE PLANS Rev. 4-1-60 Structures

FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	205-2000	1959	93	187

Item	Quantity
STEEL BEAM GUARD RAIL	
Sta. 840+34.5 "AA" Lt. to Sta. 851+64.5 "AA" Lt.	390 Lft.
Sta. 1+15 "NW-L" Lt. to Sta. 5+55 "NW-L" Lt.	430 Lft.
Total	760 Lft.
STANDARD LIP GUTTER	
Sta. 840+74.56 "AA" Lt. to Sta. 846+70.00 "AA" Lt.	607 Lft.
Sta. 498+73.64 "L" Lt. to Sta. 440+00 "L" Lt.	126 Lft.
Sta. 442+00 "L" Lt. to Sta. 445+39.85 "L" Lt.	124 Lft.
Total	857 Lft.
INTEGRAL CONCRETE CURB TYPE "B"	
Sta. 0+00 "NW-C" Rt. to Sta. 13+41.20 "NW-C" Rt.	1341 Lft.
Sta. 1+65.77 "NW-C" Lt. to Sta. 12+61.52 "NW-C" Lt.	1129 Lft.
Sta. 0+00 "NW-L" Rt. to Sta. 9+93.46 "NW-L" Rt.	993 Lft.
Sta. 1+42.5 "NW-L" Lt. to Sta. 9+24.63 "NW-L" Lt.	860 Lft.
Sta. 840+26.65 "AA" Lt. to Sta. 851+44.5 "AA" Lt.	318 Lft.
Total	4631 Lft.
SODDING	
Line "NW-C" (Ditches)	
Sta. 0+00 to Sta. 3+50 Rt.	363 Sys.
Sta. 6+40 to Sta. 11+20 Rt.	426 Sys.
Sta. 2+85 to Sta. 5+55 Lt.	284 Sys.
Total	1073 Sys.

Station	Paved Gutter Lft.	P.S.D. Type "A" Lft.
859+92.83 "AA" Lt.	11	16
435+00 "L" Lt.	11	8
438+02.65 "L" Lt.	11	8
2+50 "NWC" Rt.	11	12
5+00 "NWC" Rt.	11	6
7+50 "NWC" Rt.	11	12
5+00 "NWL" Rt.	11	16
7+50 "NWL" Rt.	11	21
Total	86 Lft.	87 Lft.

SPECIAL LIP GUTTER
Sta. 444+00 "L" Lt. 32 Lft.

Reinforcing Steel 1212 lbs.
1" Expansion Joint 89 Lft.
3" Expansion Joint 37 Lft.
Special Integral Conc. Curb 20 Lft.
1" Preformed Expansion Joint with Load Transfer 70 Lft.

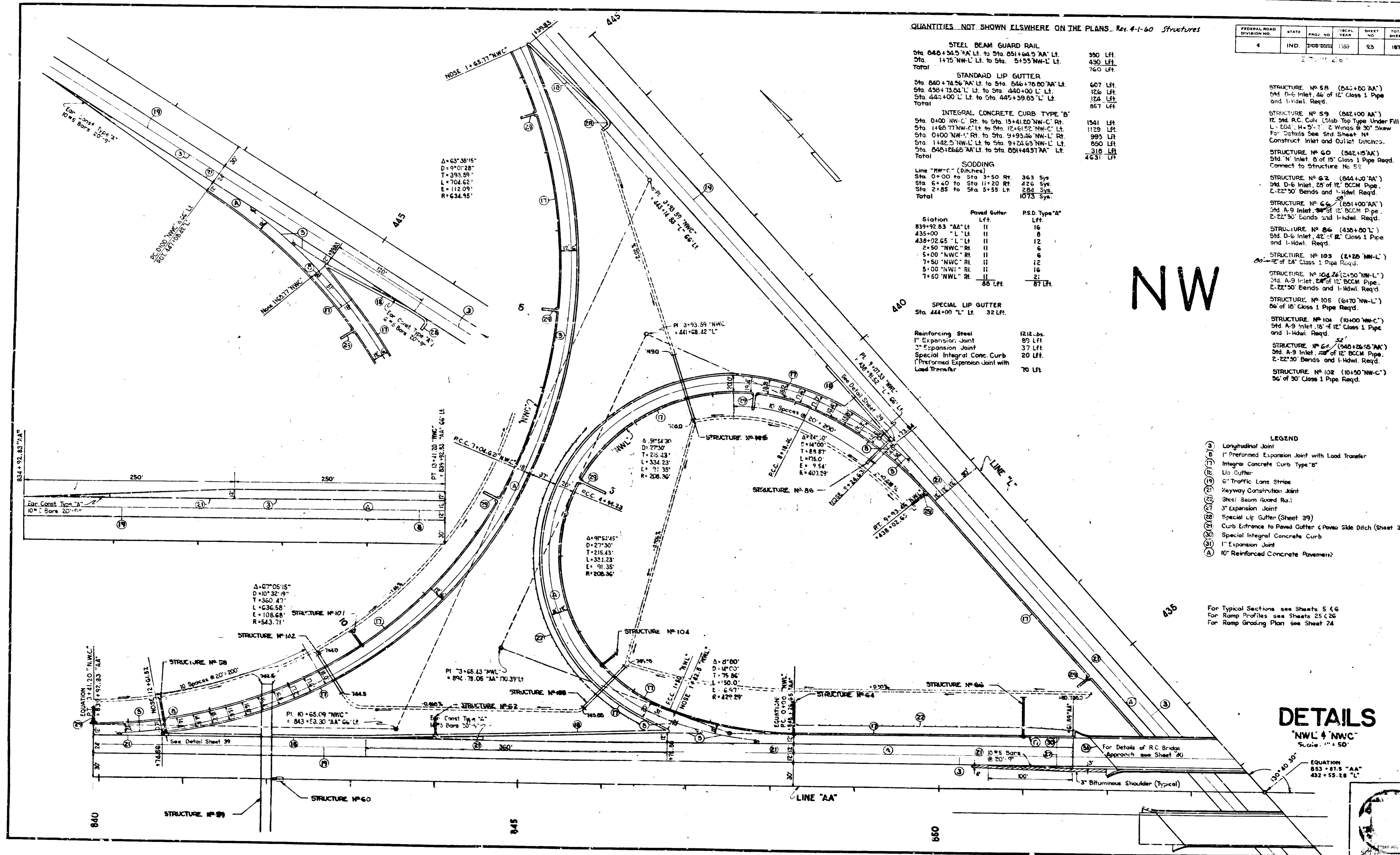
- STRUCTURE NO. 58 (840+80 "AA")
Std. D-6 Inlet, 46' of 12" Class 1 Pipe and 1-Hdwl. Reqd.
- STRUCTURE NO. 59 (842+00 "AA")
12 Std. R.C. Culv. (Slab Top Type Under Fill)
L=204', H=5'-7". 2 Wings @ 30' Skew
For Details See Std. Sheet No. 1
Construct Inlet and Outlet Ditches.
- STRUCTURE NO. 60 (842+15 "AA")
Std. "N" Inlet, 8' of 15" Class 1 Pipe Reqd.
Connect to Structure No. 57
- STRUCTURE NO. 62 (844+00 "AA")
Std. D-6 Inlet, 28' of 12" BCCM Pipe,
2-22'30" Bends and 1-Hdwl. Reqd.
- STRUCTURE NO. 64 (851+00 "AA")
Std. A-9 Inlet, 24' of 12" BCCM Pipe,
2-22'30" Bends and 1-Hdwl. Reqd.
- STRUCTURE NO. 66 (438+80 "L")
Std. D-6 Inlet, 42' of 12" Class 1 Pipe and 1-Hdwl. Reqd.
- STRUCTURE NO. 103 (2+25 "NW-L")
20' of 24" Class 1 Pipe Reqd.
- STRUCTURE NO. 104.26 (2+50 "NW-L")
Std. A-9 Inlet, 24' of 12" BCCM Pipe,
2-22'30" Bends and 1-Hdwl. Reqd.
- STRUCTURE NO. 105 (6+70 "NW-L")
86' of 18" Class 1 Pipe Reqd.
- STRUCTURE NO. 104 (10+00 "NW-C")
Std. A-9 Inlet, 18' of 12" Class 1 Pipe and 1-Hdwl. Reqd.
- STRUCTURE NO. 64 (840+26.65 "AA")
Std. A-9 Inlet, 24' of 12" BCCM Pipe,
2-22'30" Bends and 1-Hdwl. Reqd.
- STRUCTURE NO. 102 (10+50 "NW-C")
56' of 30" Class 1 Pipe Reqd.

- LEGEND
- (3) Longitudinal Joint
 - (1) Preformed Expansion Joint with Load Transfer
 - (17) Integral Concrete Curb Type "B"
 - (18) Lip Gutter
 - (19) 6" Traffic Lane Stripe
 - (21) Keyway Construction Joint
 - (22) Steel Beam Guard Rail
 - (23) 3" Expansion Joint
 - (24) Special Lip Gutter (Sheet 39)
 - (25) Curb Entrance to Paved Gutter & Paved Side Ditch (Sheet 39)
 - (26) Special Integral Concrete Curb
 - (31) 1" Expansion Joint
 - (A) 10" Reinforced Concrete Pavement

For Typical Sections see Sheets 5 & 6
For Ramp Profiles see Sheets 25 & 26
For Ramp Grading Plan see Sheet 24

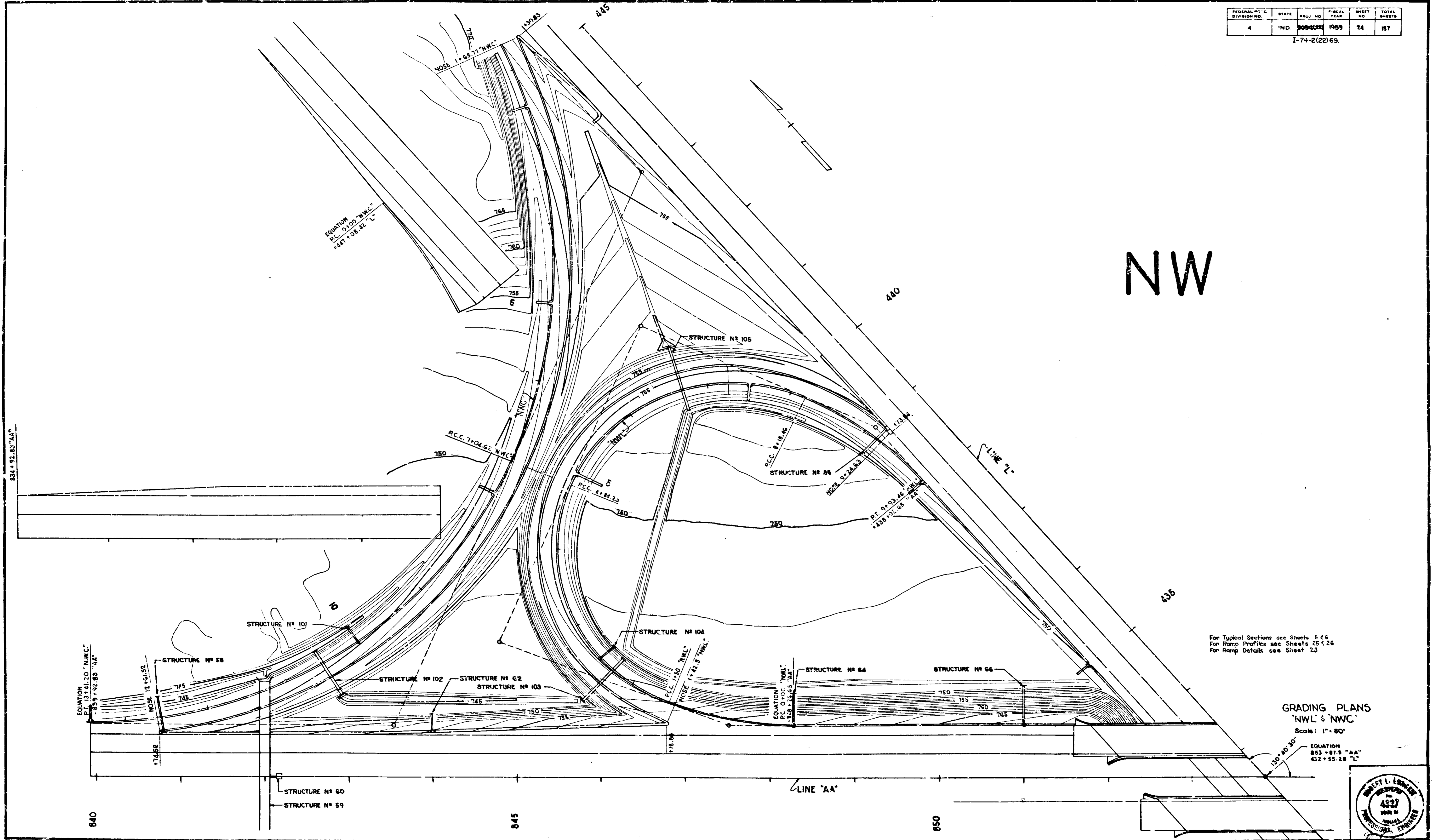
DETAILS
"NWL" & "NWC"
Scale: 1" = 50'

EQUATION
853+87.5 "AA"
432+55.28 "L"



FEDERAL DISTRICT DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	300-822	1969	24	187

I-74-2(22)69.



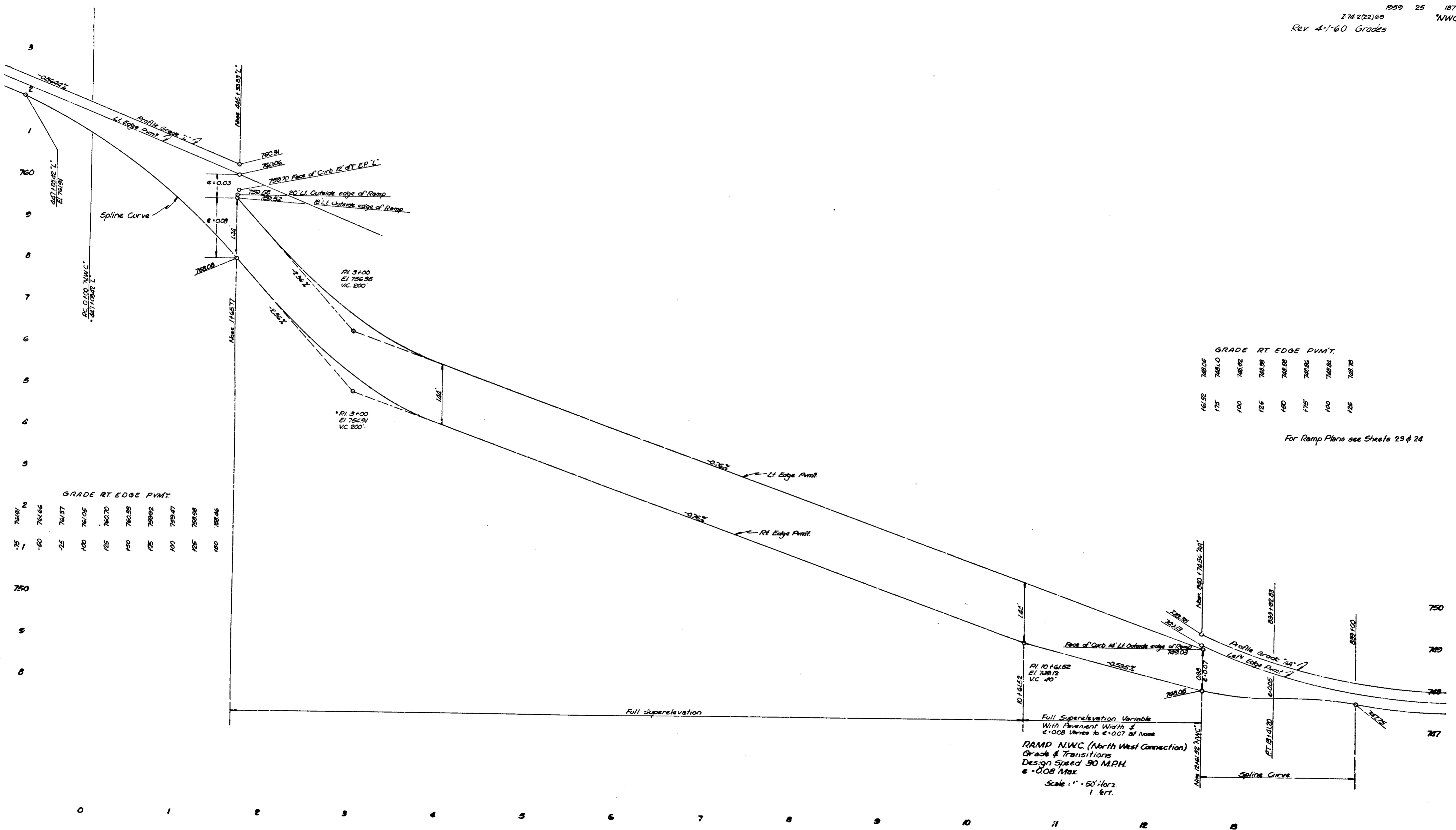
For Typical Sections see Sheets 5 & 6
 For Ramp Profiles see Sheets 25 & 26
 For Ramp Details see Sheet 23

GRADING PLANS
 'NWL' & 'NWC'

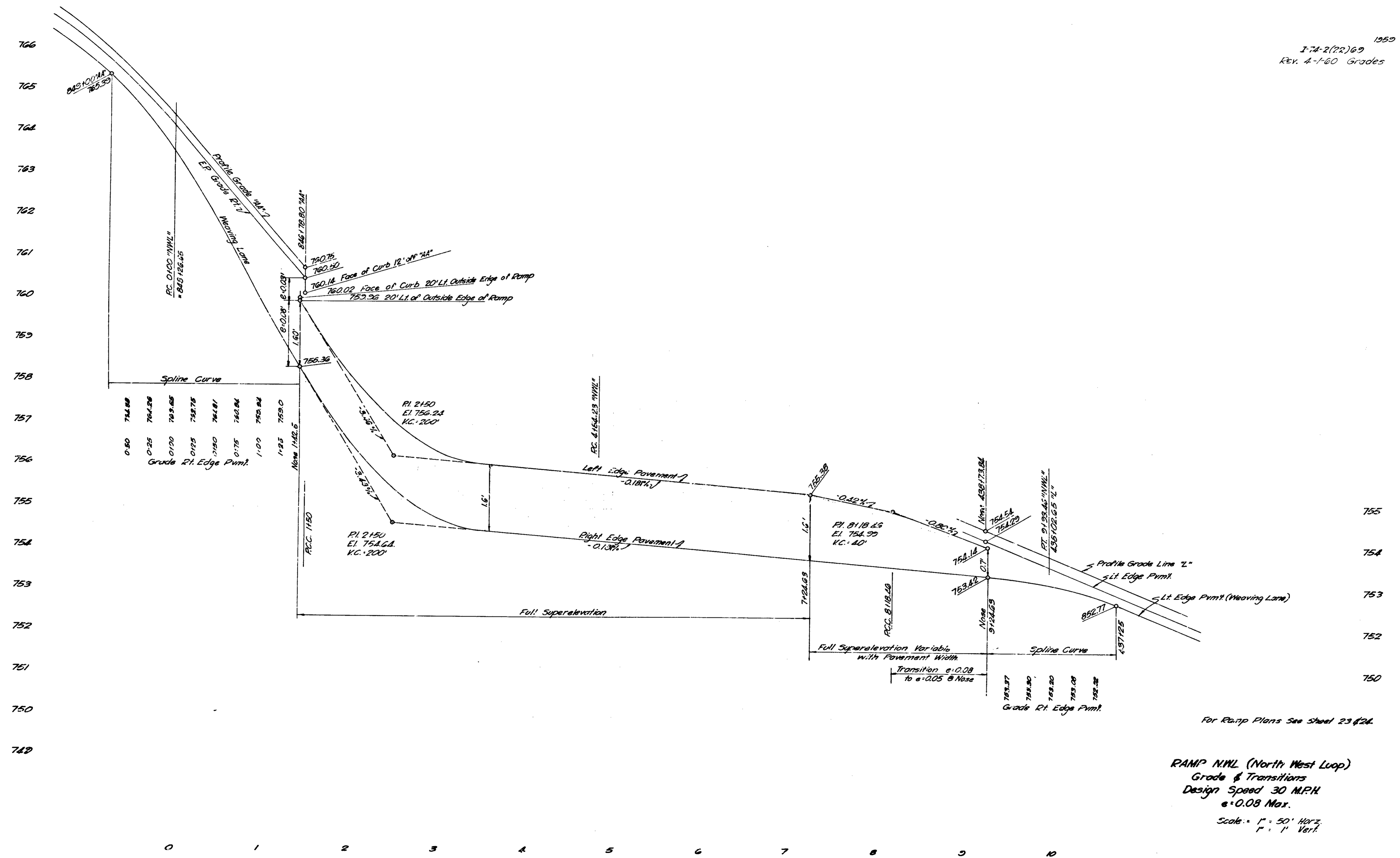
Scale: 1" = 80'

EQUATION
 853 + 87.5 "AA"
 432 + 55.28 "L"





For Ramp Plans see Sheets 23 & 24

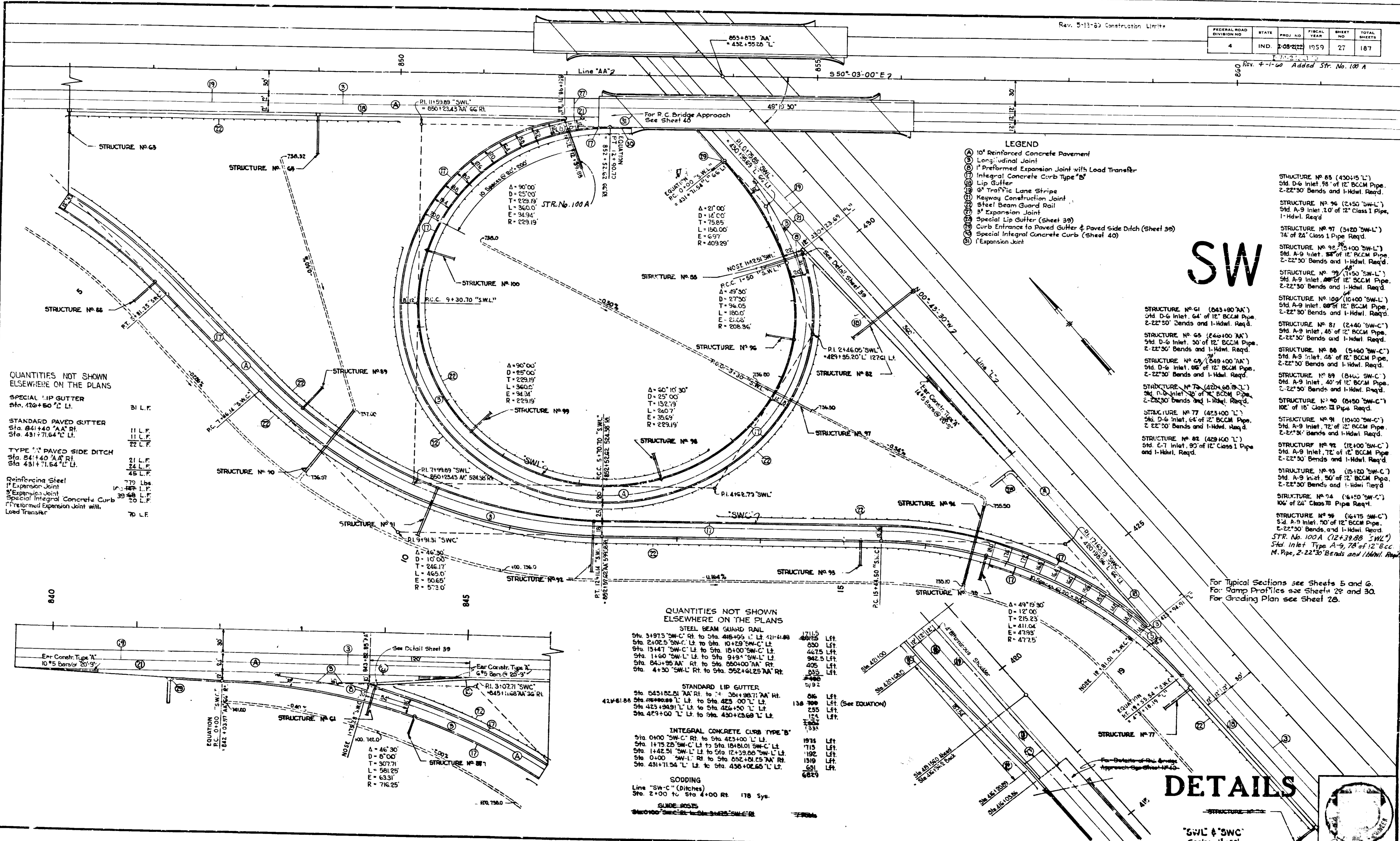


For Ramp Plans See Sheet 23 (24)

RAMP NWL (North West Loop)
 Grade & Transitions
 Design Speed 30 M.P.H.
 e=0.08 Max.
 Scale: 1" = 50' Horiz.
 1" = 1' Vert.

FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	2-05-2(22)	1959	27	187

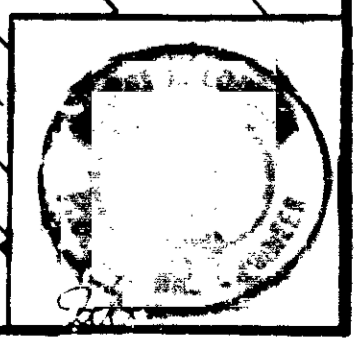
Rev. 4-1-60 Added Str. No. 100 A



SW

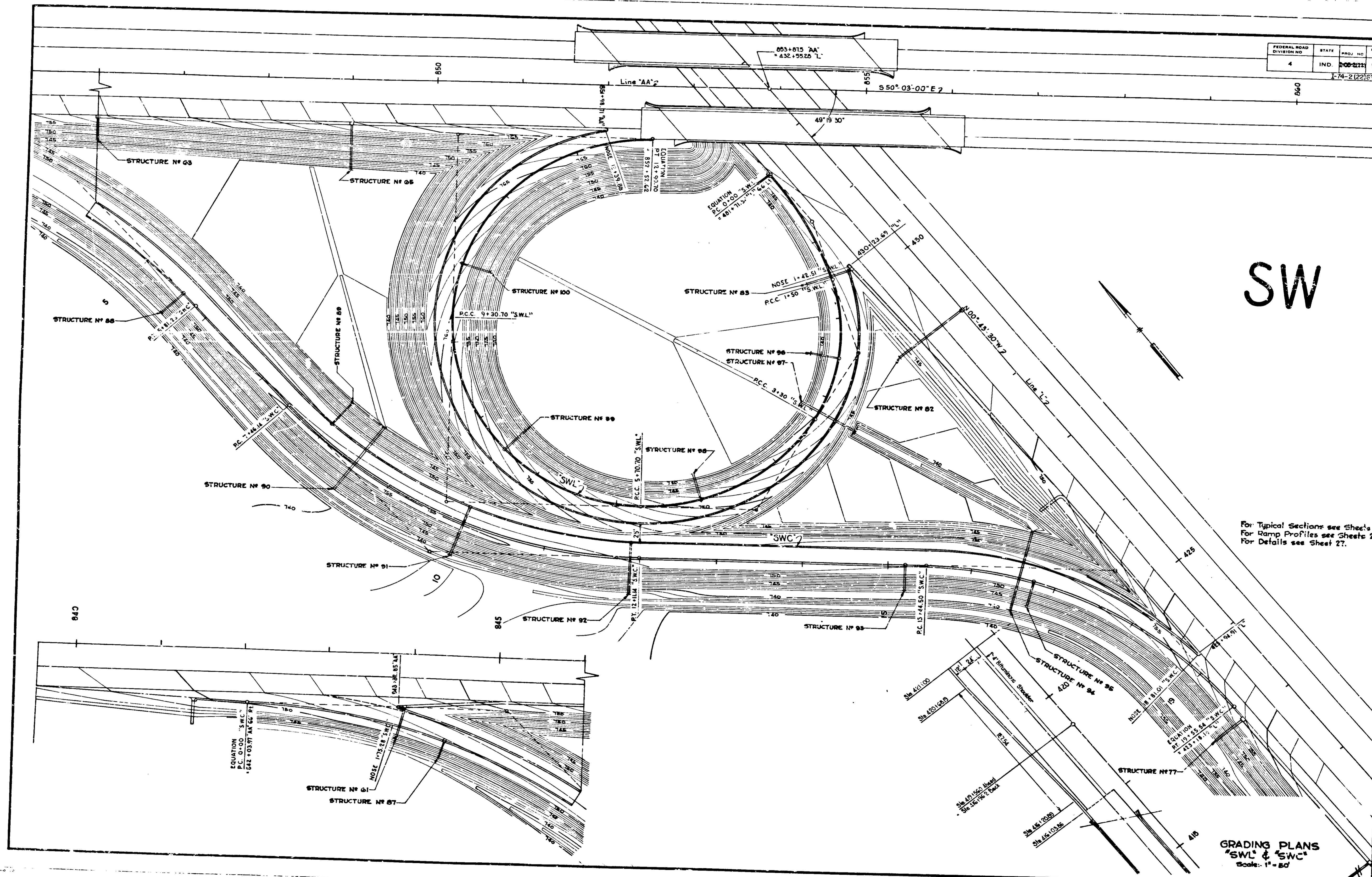
- STRUCTURE No. 65 (430+15 "L") Std. D-6 Inlet, 78" of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE No. 96 (2+50 "SW-L") Std. A-9 Inlet, 2'0" of 12" Class I Pipe, 1-Hdwl. Req'd.
- STRUCTURE No. 97 (3+20 "SW-L") 74' of 24" Class I Pipe Req'd.
- STRUCTURE No. 98 (3+00 "SW-L") Std. A-9 Inlet, 22' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE No. 99 (7+50 "SW-L") Std. A-9 Inlet, 22' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE No. 100 (10+00 "SW-L") Std. A-9 Inlet, 60' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE No. 61 (843+80 "AA") Std. D-6 Inlet, 64' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE No. 65 (240+00 "AA") Std. D-6 Inlet, 30' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE No. 67 (849+00 "AA") Std. D-6 Inlet, 60' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE No. 70 (423+00 "SW-L") Std. D-6 Inlet, 36' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE No. 77 (423+00 "L") Std. D-6 Inlet, 64' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE No. 82 (429+00 "L") Std. E-7 Inlet, 80' of 12" Class I Pipe and 1-Hdwl. Req'd.
- STRUCTURE No. 81 (2+40 "SW-C") Std. A-9 Inlet, 45' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE No. 86 (5+60 "SW-C") Std. A-9 Inlet, 40' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE No. 89 (8+00 "SW-C") Std. A-9 Inlet, 40' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE No. 90 (8+50 "SW-C") 102' of 18" Class III Pipe Req'd.
- STRUCTURE No. 91 (10+00 "SW-C") Std. A-9 Inlet, 72' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE No. 92 (12+00 "SW-C") Std. A-9 Inlet, 50' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE No. 93 (15+20 "SW-C") Std. A-9 Inlet, 50' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE No. 94 (6+50 "SW-C") 106' of 24" Class III Pipe Req'd.
- STRUCTURE No. 95 (16+15 "SW-C") Std. A-9 Inlet, 50' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STR. No. 100 A (12+39.58 "SW-L") Std. Inlet Type A-9, 78" of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.

For Typical Sections see Sheets 5 and 6.
For Ramp Profiles see Sheets 29 and 30.
For Grading Plan see Sheet 26.



FEDERAL ROAD DIVISION NO	STATE	PROJ. NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
4	IND	400-211	1959	26	187

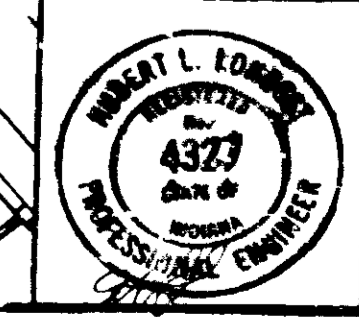
I-74-2(22)69

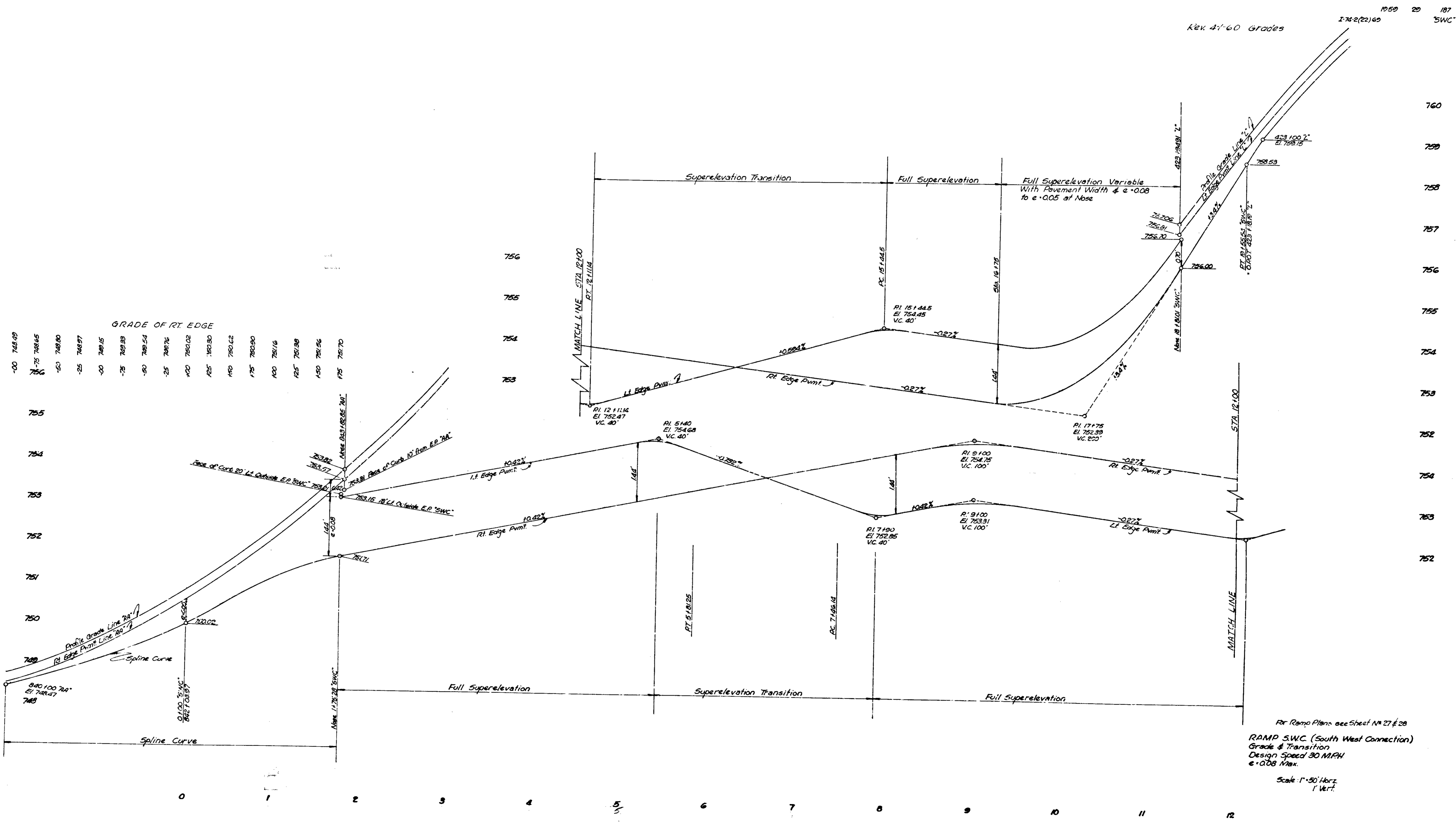


SW

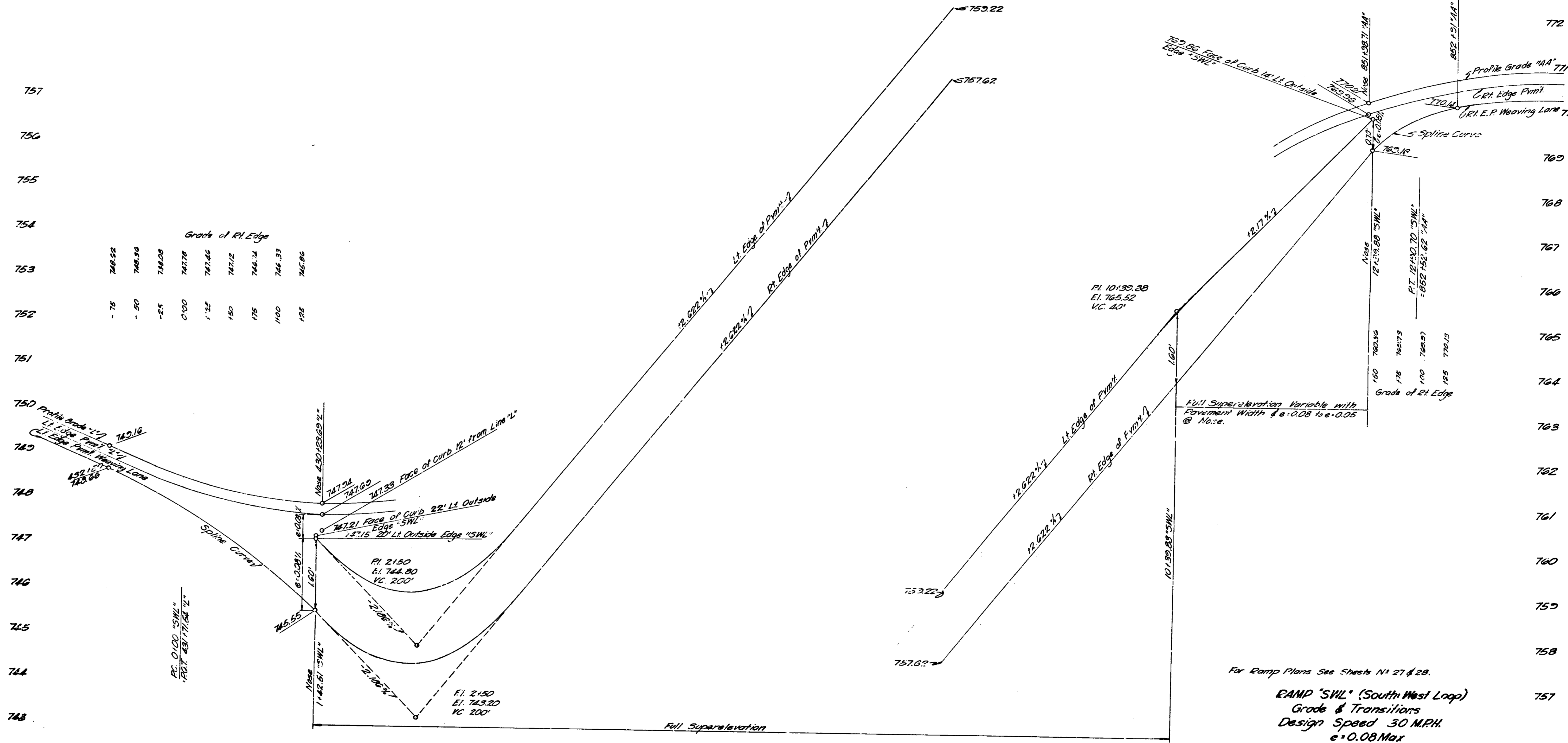
For Typical Sections see Sheets 5 and 6.
For Ramp Profiles see Sheets 29 and 30.
For Details see Sheet 27.

GRADING PLANS
"SWL" & "SWC"
Scale: 1" = 50'





For Ramp Plans see Sheet No. 27 & 28
 RAMP SWC (South West Connection)
 Grade & Transition
 Design Speed 30 MPH
 e=0.08 Max.
 Scale: 1"=50' Horiz.
 1"=10' Vert.



Grade of Rt. Edge

-76	748.92	748.96	748.99	747.78	747.86	747.12	746.14	744.33	746.86
-75									
-74									
-73									
-72									
-71									
-70									
-69									
-68									
-67									
-66									
-65									
-64									
-63									
-62									
-61									
-60									
-59									
-58									
-57									

Full Superlevation Variable with Pavement Width & e: 0.08 to e: 0.05 @ Nose.

For Ramp Plans See Sheets N° 27 & 28.
RAMP "SWL" (South West Loop)
 Grade & Transitions
 Design Speed 30 M.P.H.
 e=0.08 Max
 Scale: 1" = 50' Horz.
 1" = 1' Vert.

FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	100-1-1	1959	31	107

I-74-2 (22) 39.
Rev. 4-1-60 Structures

QUANTITIES NOT SHOWN ELSEWHERE ON THE PLANS

STEEL BEAM GUARD RAIL

Sta. 0+00 NE-C Rt. to Sta. 7+12 NE-C Rt.	705 Lft.
Sta. 10+00 NE-C Rt. to Sta. 13+01.5 NE-C Rt.	305 Lft.
Sta. 2+55 NE-C Lt. to Sta. 6+00 NE-C Lt.	345 Lft.
Sta. 7+05 NE-C Rt. to Sta. 854+94 AA Lt.	542.5 Lft.
Sta. 1+70 NE-L Lt. to Sta. 6+50 NE-L Lt.	542.5 Lft.
Sta. 7+55 NE-L Lt. to Sta. 10+00 NE-L Lt.	245 Lft.
Sta. 856+00 AA Lt. to Sta. 862+55 AA Lt.	655 Lft.
Total	3260 Lft.

STANDARD LIP GUTTER

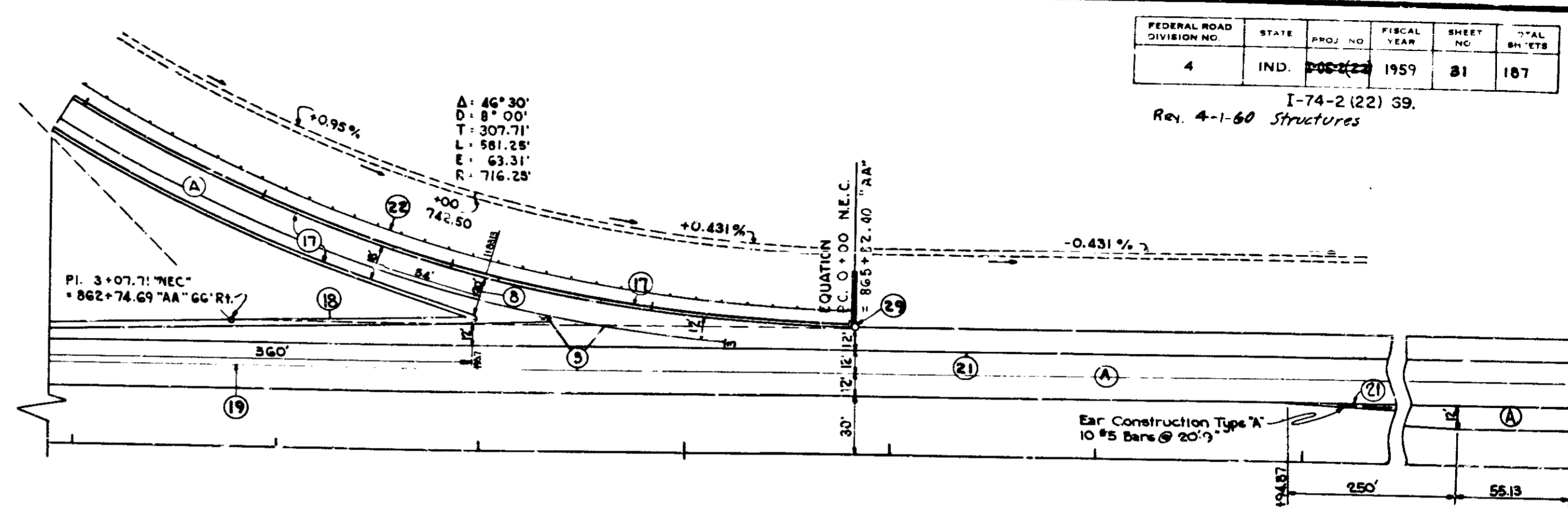
Sta. 854+95.70 AA Lt. to Sta. 855+22.33 AA Lt.	25 Lft.
Sta. 855+76.23 AA Lt. to Sta. 863+95.77 AA Lt.	820 Lft.
Sta. 434+90 Lt. Rt. to Sta. 436+00 Lt. Rt.	110 Lft.
Sta. 440+00 Lt. Rt. to Sta. 441+48.02 Lt. Rt.	132 Lft.
Total	1090 Lft.

INTEGRAL CONCRETE CURB TYPE 'B'

Sta. 0+00 NE-C Rt. to Sta. 19+99.85 NE-C Rt.	2000 Lft.
Sta. 1+83.15 NE-C Lt. to Sta. 19+21.91 NE-C Lt.	1746 Lft.
Sta. 0+00 NE-L Lt. to Sta. 12+90.70 NE-L Lt.	1291 Lft.
Sta. 1+42.51 NE-L Lt. to Sta. 12+99.89 NE-L Lt.	1192 Lft.
Total	3647 Lft.

SOODING

Line "NE-C"	Sta. 18+50 to Sta. 20+00 Rt. 133 Sys.
Line "NE-L"	Sta. 6+25 to Sta. 10+25 385 Sys.
Line "L"	Sta. 436+00 to Sta. 440+00 364 Sys.
Total	852 Sys.



QUANTITIES NOT SHOWN ELSEWHERE ON THE PLANS

Spl. Lip Gutter

Sta. 440+00 Lt. Rt.	32 Lft.
---------------------	---------

Std. Paved Gutter Type "A"

Sta. 865+82.40 AA Rt.	11 Lft.
Sta. 14+00 NE-C Rt.	15 Lft.
Sta. 16+50 NE-C Rt.	11 Lft.
Sta. 18+50 NE-C Rt.	11 Lft.
Sta. 2+23 NE-L Rt.	11 Lft.
Sta. 5+00 NE-L Rt.	6 Lft.
Total	66 Lft.

Guide Posts

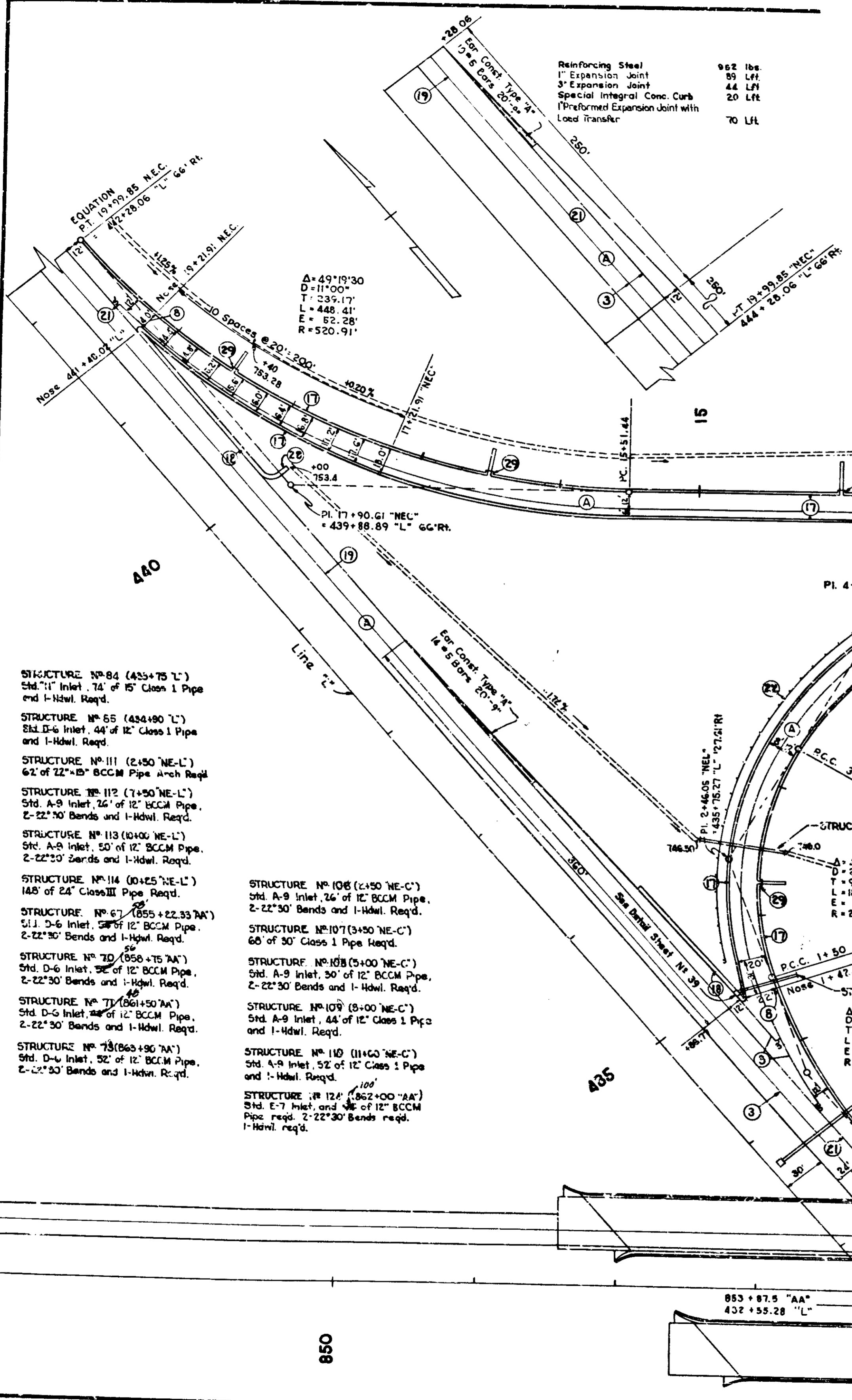
Sta. 866+62.40 to 871+00 AA Rt. - 6 Posts

NE

LEGEND

- (1) Longitudinal Joint
- (2) Preformed Expansion Joint with Load Transfer
- (3) Integral Concrete Curb Type "B"
- (4) Lip Gutter
- (5) Traffic Lane Stripe
- (6) Keyway Construction Joint
- (7) Steel Beam Guard Rail
- (8) Expansion Joint
- (9) Special Lip Gutter (Sheet 39)
- (10) Curb Entrance to Paved Side Ditch (Sheet 39)
- (11) Special Integral Concrete Curb (Sheet 40)
- (12) Expansion Joint
- (13) Reinforced Concrete Pavement

For Typical Sections See Sheets 5 & 6
For Ramp Profiles See Sheets 33 & 34
For Grading Plans See Sheet 32



- STRUCTURE NO 84 (435+75 L')
- Std. 11" Inlet, 74' of 15" Class I Pipe and 1-Hdwl. Req'd.
- STRUCTURE NO 85 (434+90 L')
- Std. D-6 Inlet, 44' of 12" Class I Pipe and 1-Hdwl. Req'd.
- STRUCTURE NO 111 (2+50 NE-L')
- 62' of 22" x 24" BCCM Pipe Arch Req'd.
- STRUCTURE NO 112 (7+50 NE-L')
- Std. A-9 Inlet, 24' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE NO 113 (10+00 NE-L')
- Std. A-9 Inlet, 50' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE NO 114 (10+25 NE-L')
- 148' of 24" Class III Pipe Req'd.
- STRUCTURE NO 67 (1855+22.33 AA')
- Std. D-6 Inlet, 50' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE NO 70 (856+75 AA')
- Std. D-6 Inlet, 50' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE NO 71 (861+50 AA')
- Std. D-6 Inlet, 50' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE NO 73 (863+96 AA')
- Std. D-6 Inlet, 50' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.

- STRUCTURE NO 106 (2+50 NE-C')
- Std. A-9 Inlet, 24' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE NO 107 (3+50 NE-C')
- 66' of 30" Class I Pipe Req'd.
- STRUCTURE NO 108 (5+00 NE-C')
- Std. A-9 Inlet, 50' of 12" BCCM Pipe, 2-22'30" Bends and 1-Hdwl. Req'd.
- STRUCTURE NO 109 (8+00 NE-C')
- Std. A-9 Inlet, 44' of 12" Class I Pipe and 1-Hdwl. Req'd.
- STRUCTURE NO 110 (11+00 NE-C')
- Std. A-9 Inlet, 52' of 12" Class I Pipe and 1-Hdwl. Req'd.
- STRUCTURE NO 124 (862+00 AA')
- Std. E-7 Inlet, and 45' of 12" BCCM Pipe req'd. 2-22'30" Bends req'd. 1-Hdwl. req'd.

DETAILS

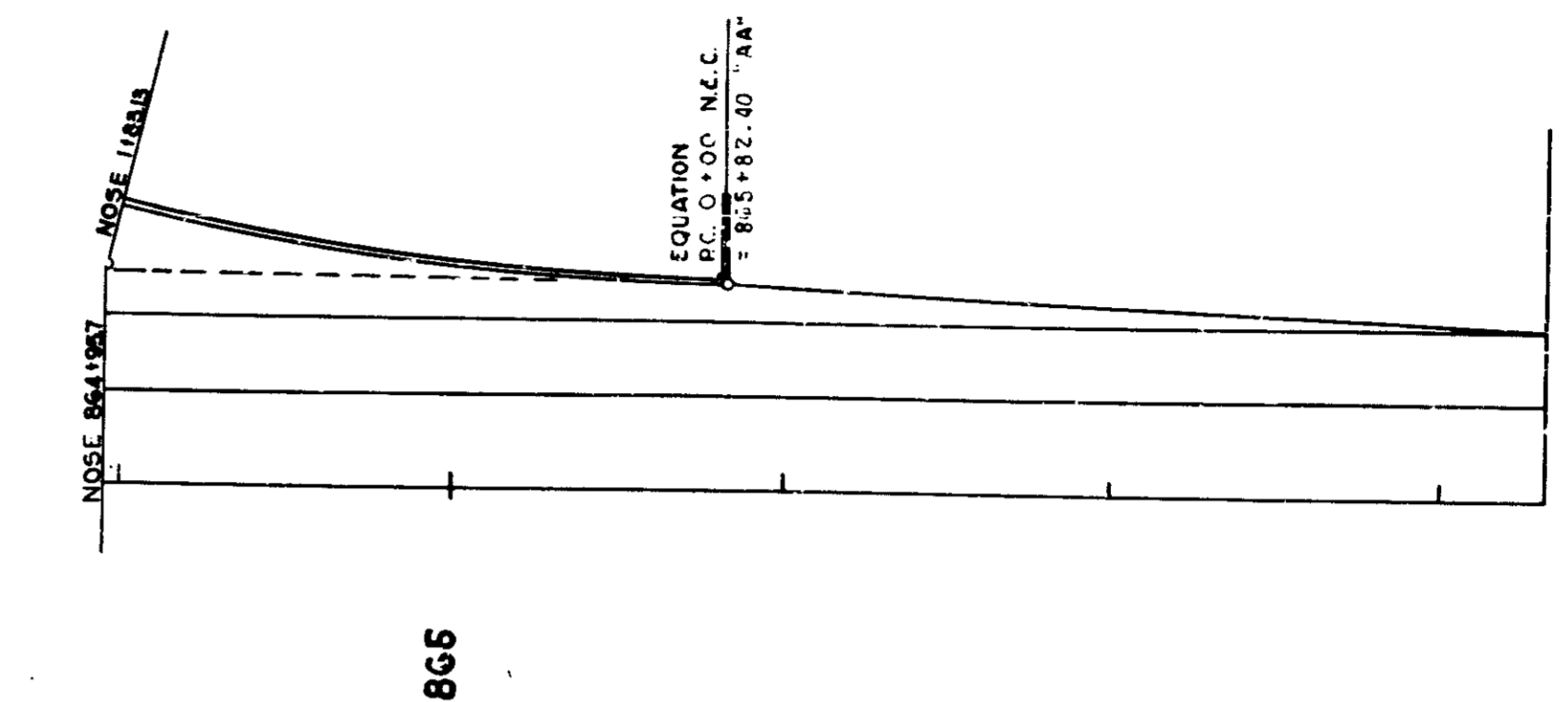
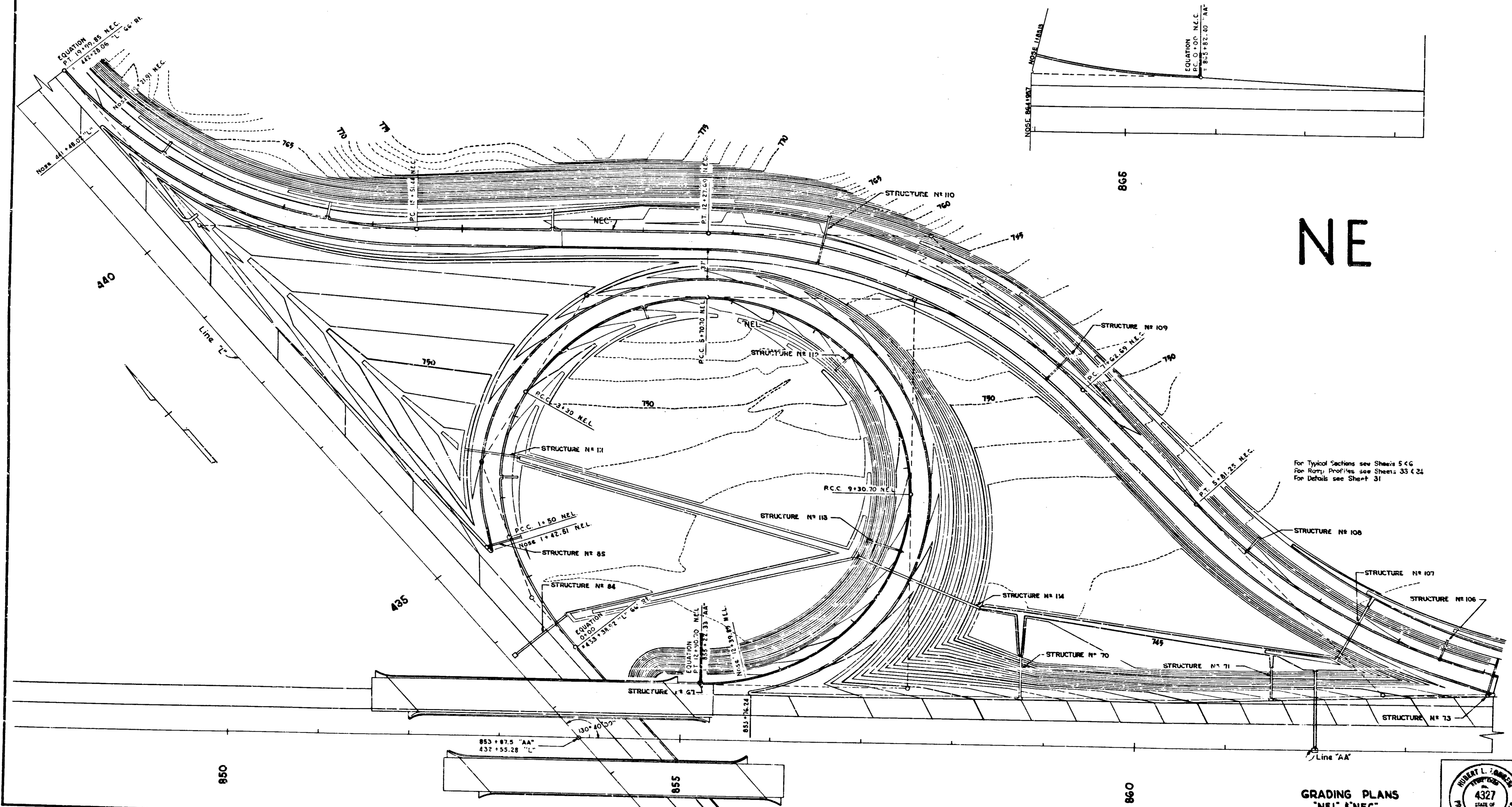
"NEL" & "NEC"

Scale: 1" = 50'



FEDERAL NO. DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND	900-0000	1953	32	187

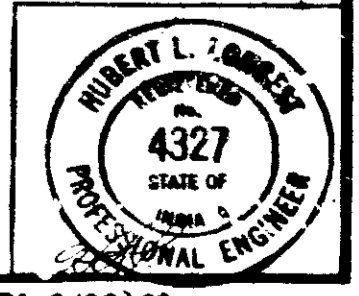
I-74-2(22), 69

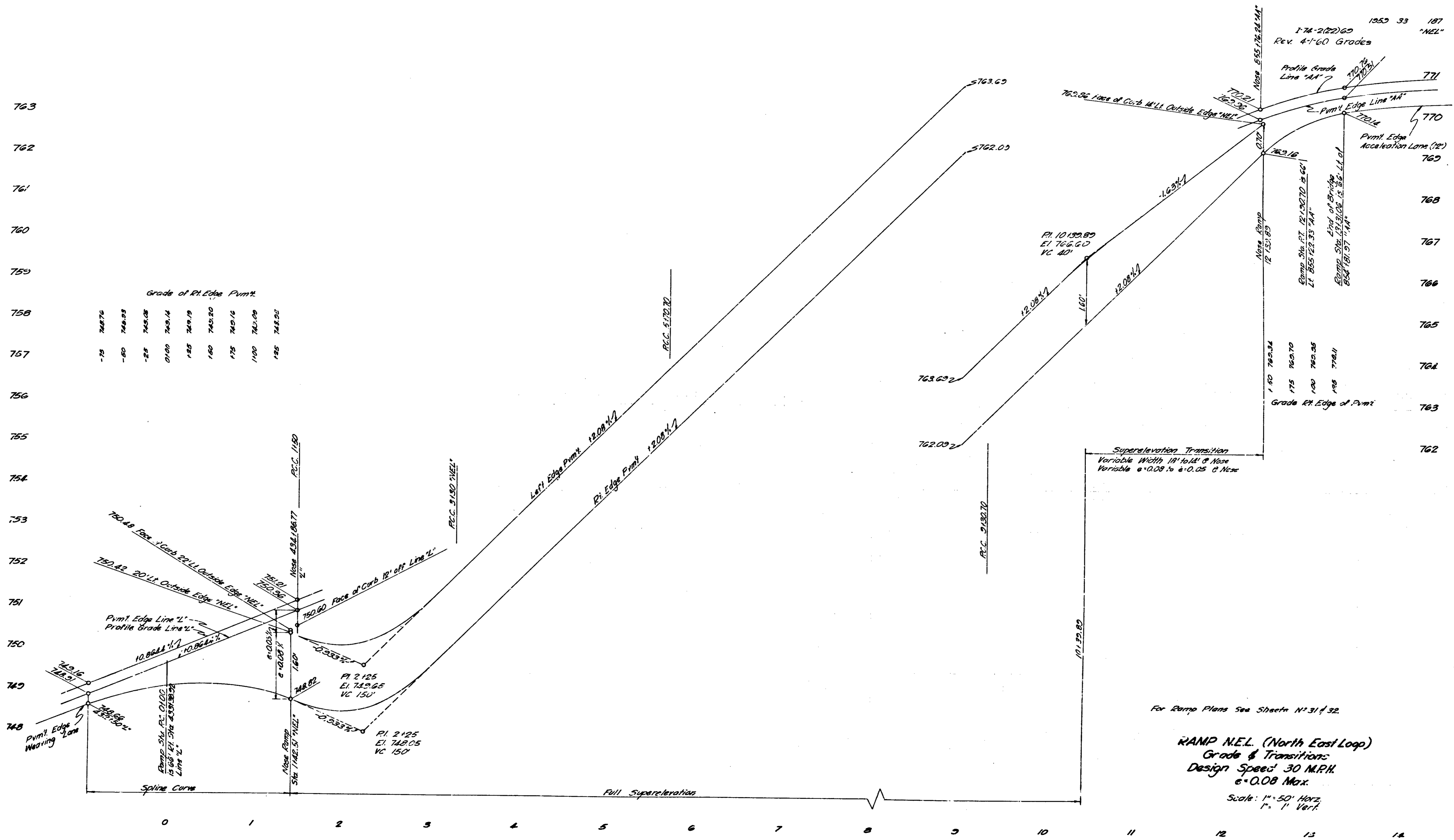


NE

For Typical Sections see Sheets 5 & 6
For Rorty Profiles see Sheets 33 & 34
For Details see Sheet 31

GRADING PLANS
"NEL" & "NEC"





Grade of Pt. Edge Pymt

-75	748.76
-80	748.93
-25	745.08
01.00	749.14
125	749.19
180	749.20
175	749.16
1100	749.09
185	748.93

I-74-2(22)63 1050 33 187
 Rev. 4-1-60 Grades
 "NEL"

Profile Grade Line "AA"
 771
 770
 769
 768
 767
 766
 765
 764
 763
 762

763.86 Face of Curb 14" LL Outside Edge "NEL"
 770.21
 762.26
 0.70
 763.18
 12.00%/1
 1.63%/1
 12.00%/1
 160'

Pt. 10.150.89
 El. 766.60
 VC 40'
 Nose Ramp
 R 1531.89
 12.00%/1
 160'

Grade Pt. Edge of Pymt
 1.50 765.34
 175 760.70
 190 760.35
 195 770.11

Superelevation Transition
 Variable Width 18' to 14' @ Nose
 Variable $\epsilon = 0.08$ to $\epsilon = 0.05$ @ Nose

For Ramp Plans See Sheets N° 31 & 32

RAMP N.E.L. (North East Loop)
 Grade & Transitions
 Design Speed 30 M.P.H.
 $\epsilon = 0.08$ Max.

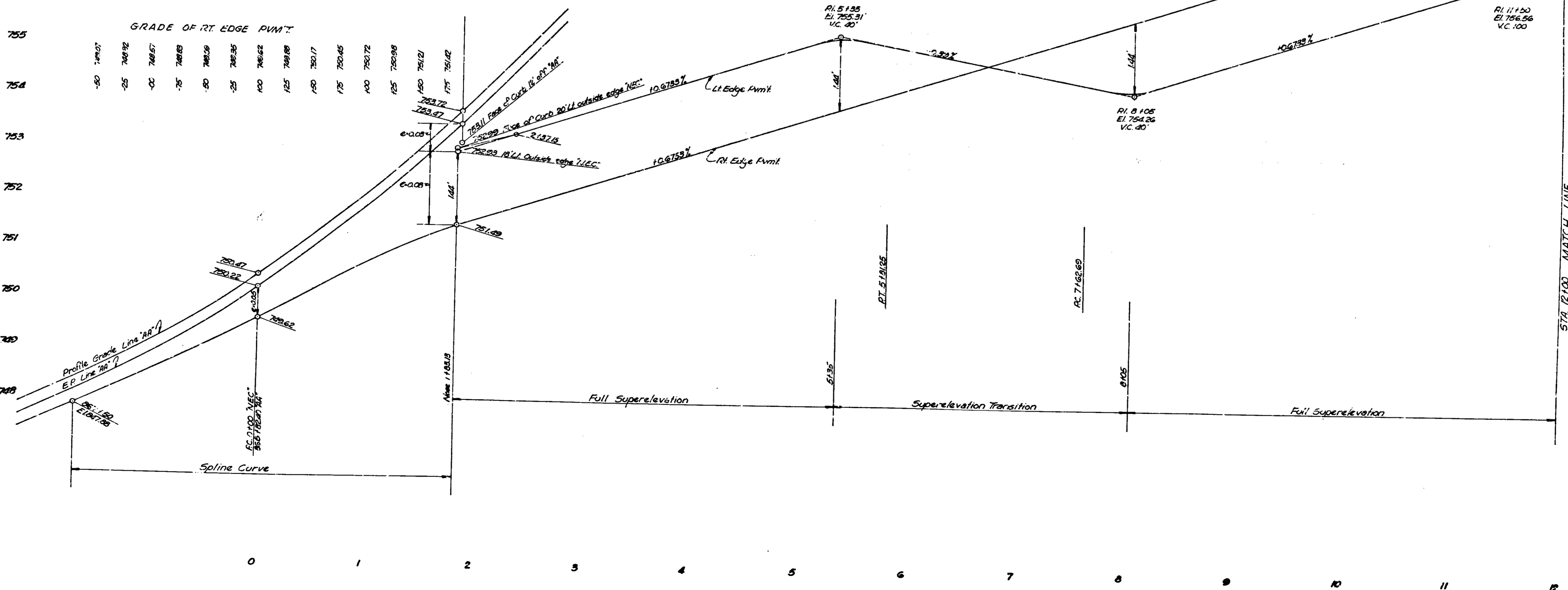
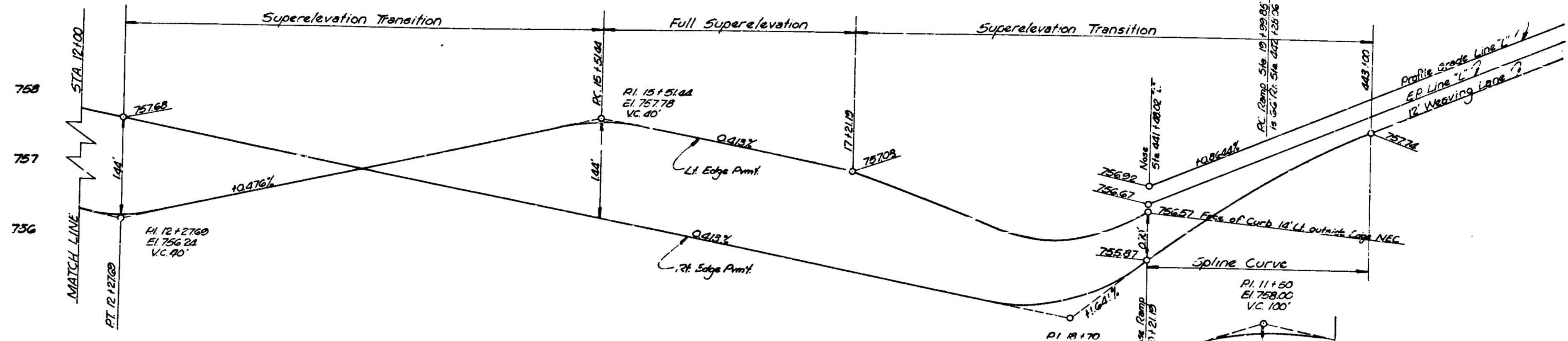
Scale: 1" = 50' Horiz.
 1" = 1' Vert.

12 13 14 15 16 17 18 19

GRADE RT. EDGE P.V.M.T.

125	756.88
130	756.81
135	756.66
140	756.89
145	757.28
150	757.63

1050 34 187
I-74-2(22)60
"NEC"
LEV. 4-1-60 Grades



GRADE OF RT. EDGE P.V.M.T.

-50	749.07
-25	749.92
00	748.57
25	748.83
50	748.16
75	748.35
100	746.22
125	748.88
150	750.17
175	750.45
200	750.72
225	750.98
250	751.21
275	751.42

For Ramp Plans see Sheets #31 & 32
RAMP "NEC"
Grade & Transitions
Design Speed 30 MPH.
e = 0.08 Max.
Scale: 1" = 50' Horiz
1" = 10' Vert.

FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	2000000	F89	98	187

Rev. 4-1-60 Structures

- STRUCTURE No 68 (856+50 "AA")
Std. A-9 Inlet, 24' of 12" B.C.C.M. Pipe
2-22'-30" Bends Req'd. Rt.
1-Hdwl. Req'd.
- STRUCTURE No 69 (858+50 "AA")
Std. A-9 Inlet, 24' of 12" B.C.C.M. Pipe
2-22'-30" Bends Req'd. Rt.
1-Hdwl. Req'd.
- STRUCTURE No 72 (860+50 "AA")
Std. D-6 Inlet, 24' of 12" B.C.C.M. Pipe
2-22'-30" Bends Req'd. Rt.
1-Hdwl. Req'd.
- STRUCTURE No 74 (865+50 "AA")
Std. D-6 Inlet, 24' of 12" B.C.C.M. Pipe Req'd.
1-Hdwl. Req'd. 2-22'-30" Bends Req'd. Rt.
- STRUCTURE No 75 (410+65 "L")
Std. A-9 Inlet, 24' of 12" B.C.C.M. Pipe
2-22'-30" Bends Req'd. Rt.
1-Hdwl. Req'd.
- STRUCTURE No 78 (423+40 "L")
Std. D-6 Inlet, 18' of 12" B.C.C.M. Pipe
2-22'-30" Bends Req'd. Rt.
1-Hdwl. Req'd.
- STRUCTURE No 79 (424+00 "L")
Std. E-7 Inlet, 94' of 12" B.C.C.M. Pipe
2-22'-30" Bends Req'd. Rt.
1-Hdwl. Req'd.
- STRUCTURE No 80 (325+20 "L")
Std. D-6 Inlet, 30' of 12" B.C.C.M. Pipe
2-22'-30" Bends Req'd. Rt.
1-Hdwl. Req'd.
- STRUCTURE No 81 (426+85 "L")
Std. D-6 Inlet, 38' of 12" Class I Pipe Req'd. Rt.
1-Hdwl. Req'd.
- STRUCTURE No 115 (1+60 "SE-C")
Std. A-9 Inlet, 56' of 12" B.C.C.M. Pipe
2-22'-30" Bends Req'd. Rt.
1-Hdwl. Req'd.
- STRUCTURE No 116 (3+15 "SE-C")
98' of 18" Class III Pipe Req'd.
- STRUCTURE No 117 (5+60 "SE-C")
Std. A-9 Inlet, 42' of 12" B.C.C.M. Pipe
2-22'-30" Bends Req'd. Rt.
1-Hdwl. Req'd.
- STRUCTURE No 118 (5+60 "SE-C")
Std. A-9 Inlet, 38' of 12" B.C.C.M. Pipe
2-22'-30" Bends Req'd. Rt.
1-Hdwl. Req'd.
- STRUCTURE No 119 (6+75 "SE-C")
80' of 15" Class I Pipe Req'd.
- STRUCTURE No 120 (7+60 "SE-C")
Std. A-9 Inlet, 32' of 12" B.C.C.M. Pipe
2-22'-30" Bends Req'd. Rt.
1-Hdwl. Req'd.

- STRUCTURE No 121 (2+00 "SE-L")
Std. A-9 Inlet, 24' of 12" B.C.C.M. Pipe
2-22'-30" Bends Req'd. Rt.
1-Hdwl. Req'd.
- STRUCTURE No 122 (4+40 "SE-L")
Std. A-9 Inlet, 28' of 12" B.C.C.M. Pipe
2-22'-30" Bends Req'd. Rt.
1-Hdwl. Req'd.
- STRUCTURE No 123 (6+00 "SE-L")
78' of 18" Class I Pipe Req'd.

- LEGEND**
- (S) Longitudinal Joint
 - (P) Preformed Expansion Joint with Load Transfer
 - (B) Integral Concrete Curb Type 'B'
 - (L) Lip Gutter
 - (V) Traffic Lane Stripe
 - (K) Keyway Construction Joint
 - (G) Steel Beam Guard Rail
 - (E) Expansion Joint
 - (S) Special Lip Gutter (Sheet No. 39)
 - (C) Curb Entrance to Paved Gutter & Paved Side Ditch (Sheet No. 39)
 - (S) Special Integral Concrete Curb (Sheet No. 40)
 - (E) Expansion Joint
 - (R) Reinforced Concrete Pavement

QUANTITIES NOT SHOWN ELSEWHERE ON THE PLANS

1+53 "SEC" STEEL BEAM GUARD RAIL	
Sta. 49+00 "AA" Rt. to Sta. 74+58 "SEC" Rt.	405
Sta. 1+90 "SEC" Lt. to Sta. 4+66 "SE-C" Lt.	292.5
Sta. 86+40 "AA" Rt. to Sta. 86+56 "AA" Rt.	155
Sta. 1+40 "SE-L" Lt. to Sta. 6+81 "SE-L" Lt.	605
Sta. 856+1063 "AA" Rt. to Sta. 2+95 "SE-L" Rt.	955
Sta. 423+00 "L" Rt. to Sta. 424+55 "L" Rt.	155
	2367.5
STANDARD LIP GUTTER	
Sta. 860+20 "AA" Rt. to Sta. 865+59 "AA" Rt.	559
Sta. 421+60 "L" Rt. to Sta. 426+95 "L" Rt.	537
	1,096
1+53 "SEC" INTEGRAL CONCRETE CURB TYPE 'B'	
Sta. 49+00 "AA" Rt. to Sta. 11+59 "SE-C" Rt. 100'	388.5
Sta. 1+53 "SE-C" Lt. to Sta. 10+02 "SE-C" Lt.	560
Sta. 4+00 "SE-L" Rt. to Sta. 8+66 "SE-L" Rt.	867
Sta. 1+32.87 "SE-L" Lt. to Sta. 8+02.42 "SE-L" Lt.	738
Sta. 856+1063 "AA" Rt. to Sta. 856+182.12 "AA" Rt.	272
Sta. 427+60 "L" Rt. to Sta. 433+85 "L" Rt.	570
	2,376
	44.27
SODDING	
Line "SE-C"	
Sta. 0+00 to Sta. 2+35 Rt.	209
	Sq.
SPECIAL INTEGRAL CONCRETE CURB	20
	Lft.

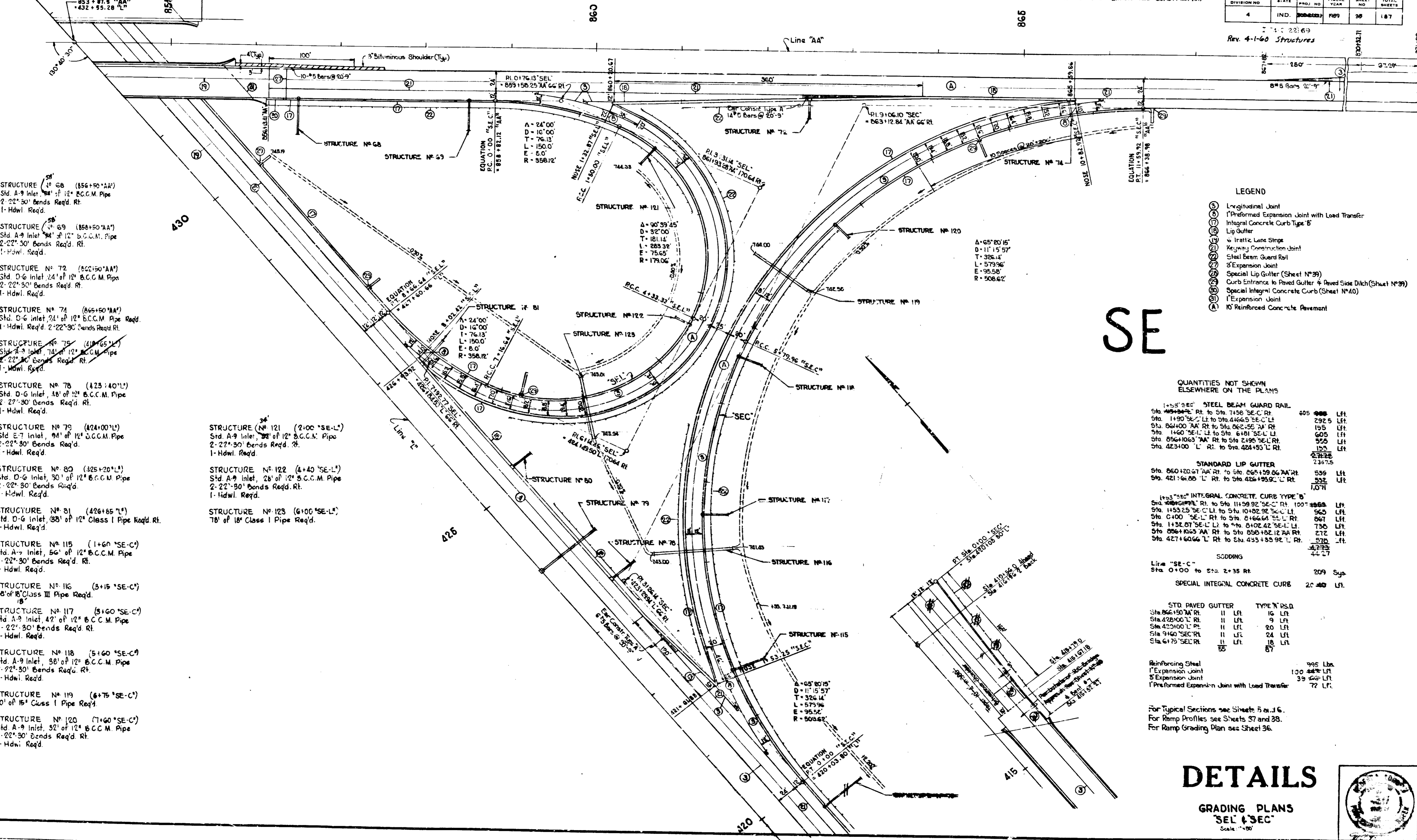
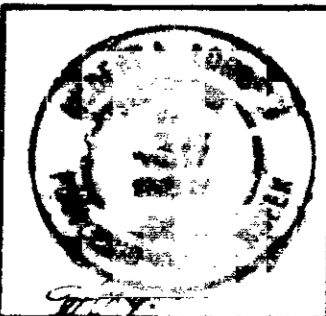
STD. PAVED GUTTER	TYPE 'B' S.D.
Sta. 866+50 "AA" Rt.	11 Lft. 16 Lft.
Sta. 428+00 "L" Rt.	11 Lft. 9 Lft.
Sta. 423+00 "L" Rt.	11 Lft. 20 Lft.
Sta. 9+60 "SEC" Rt.	11 Lft. 24 Lft.
Sta. 6+75 "SE-L" Lt.	11 Lft. 18 Lft.
	55
	87

Reinforcing Steel 995 Lbs.
Expansion Joint 130 Lbs.
Expansion Joint 39 Lbs.
Preformed Expansion Joint with Load Transfer 72 Lbs.

For Typical Sections see Sheets 5 & J. G.
For Ramp Profiles see Sheets 37 and 38.
For Ramp Grading Plan see Sheet 36.

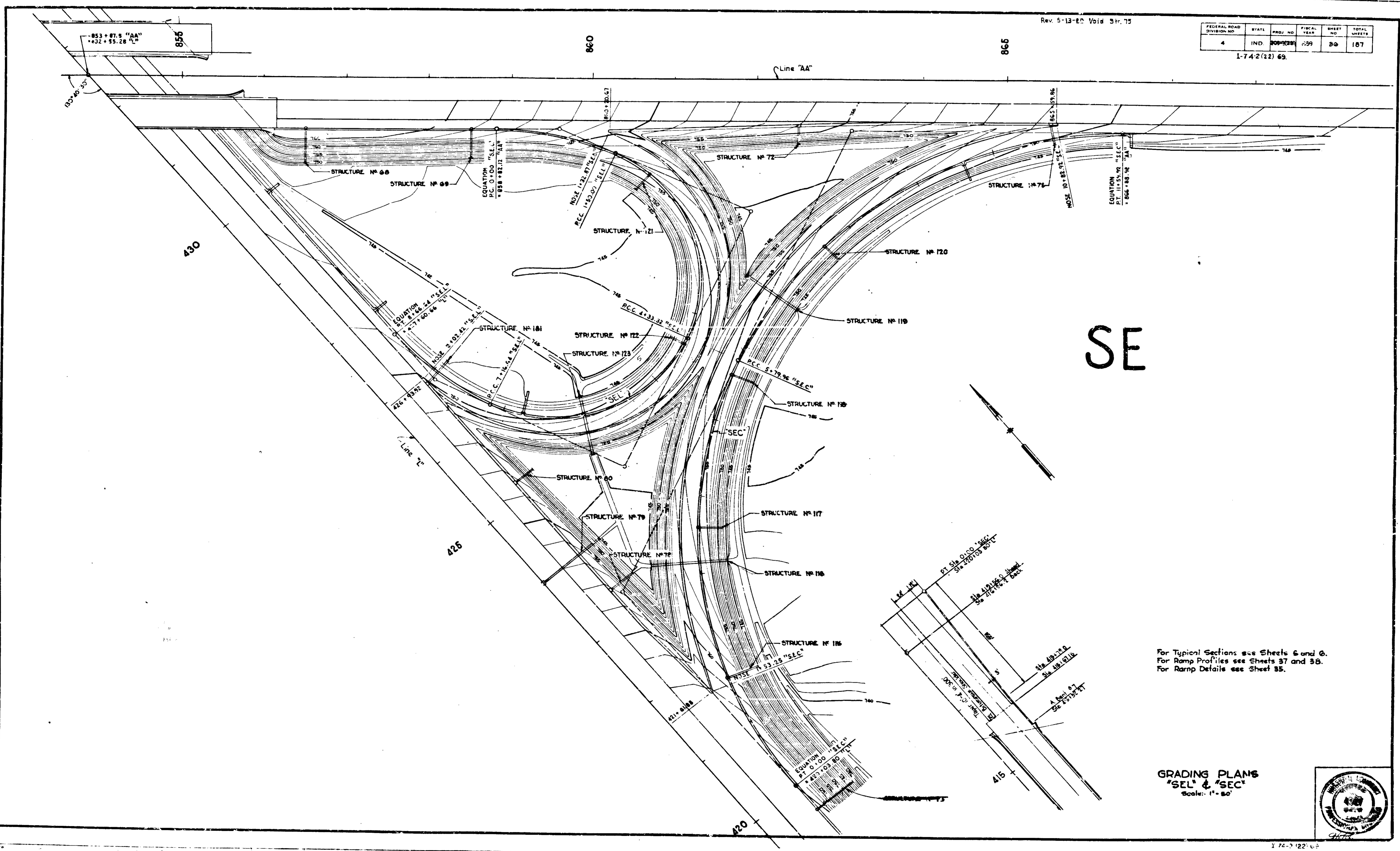
DETAILS

GRADING PLANS
"SE" & "SEC"
Scale: 1"=50'



FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	200-224	1959	30	187

1-74-2(22) 69.



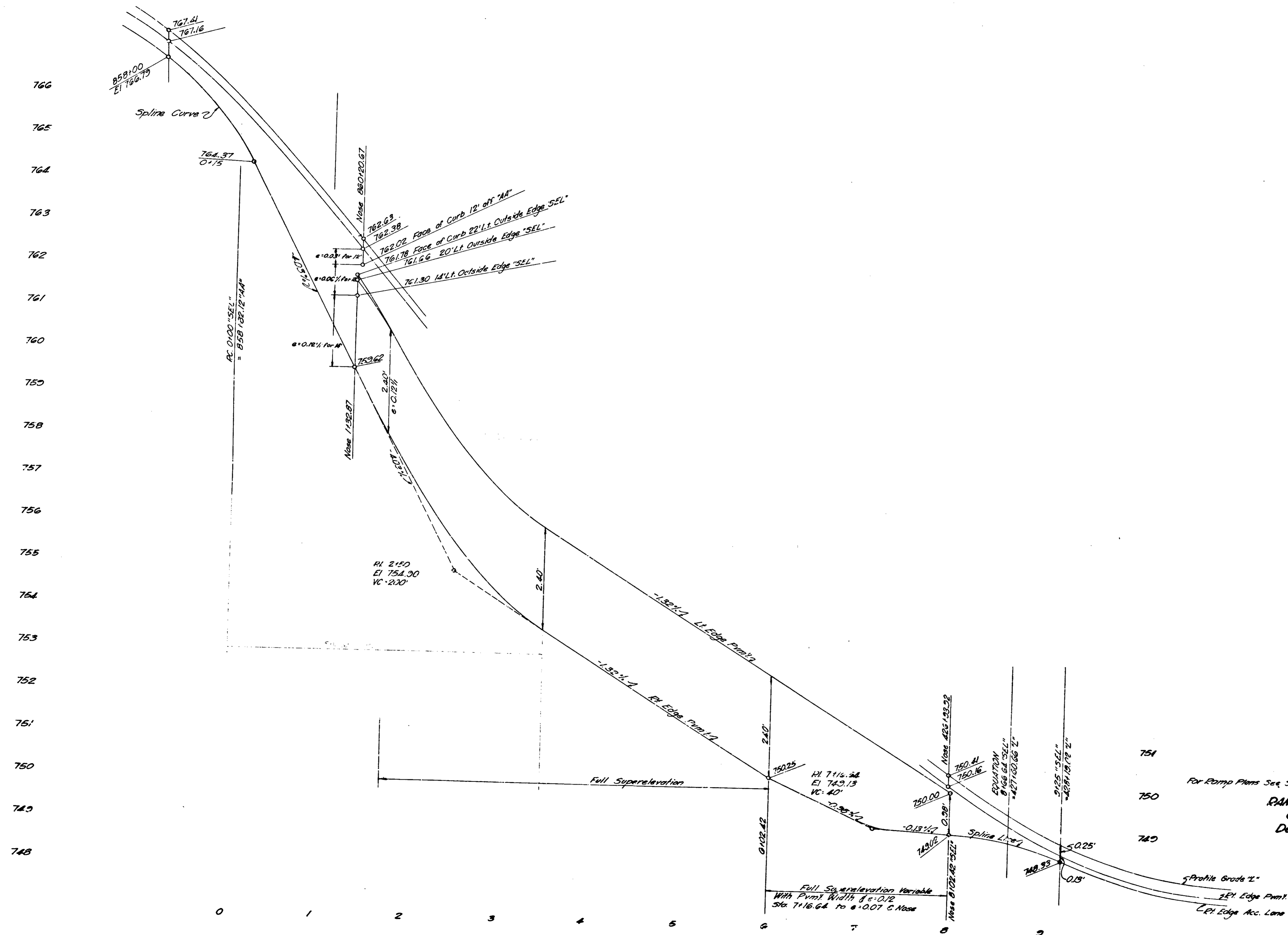
SE

For Typical Sections see Sheets 6 and 6.
 For Ramp Profiles see Sheets 37 and 38.
 For Ramp Details see Sheet 35.

GRADING PLANS
 "SEL" & "SEC"
 Scale: 1" = 50'



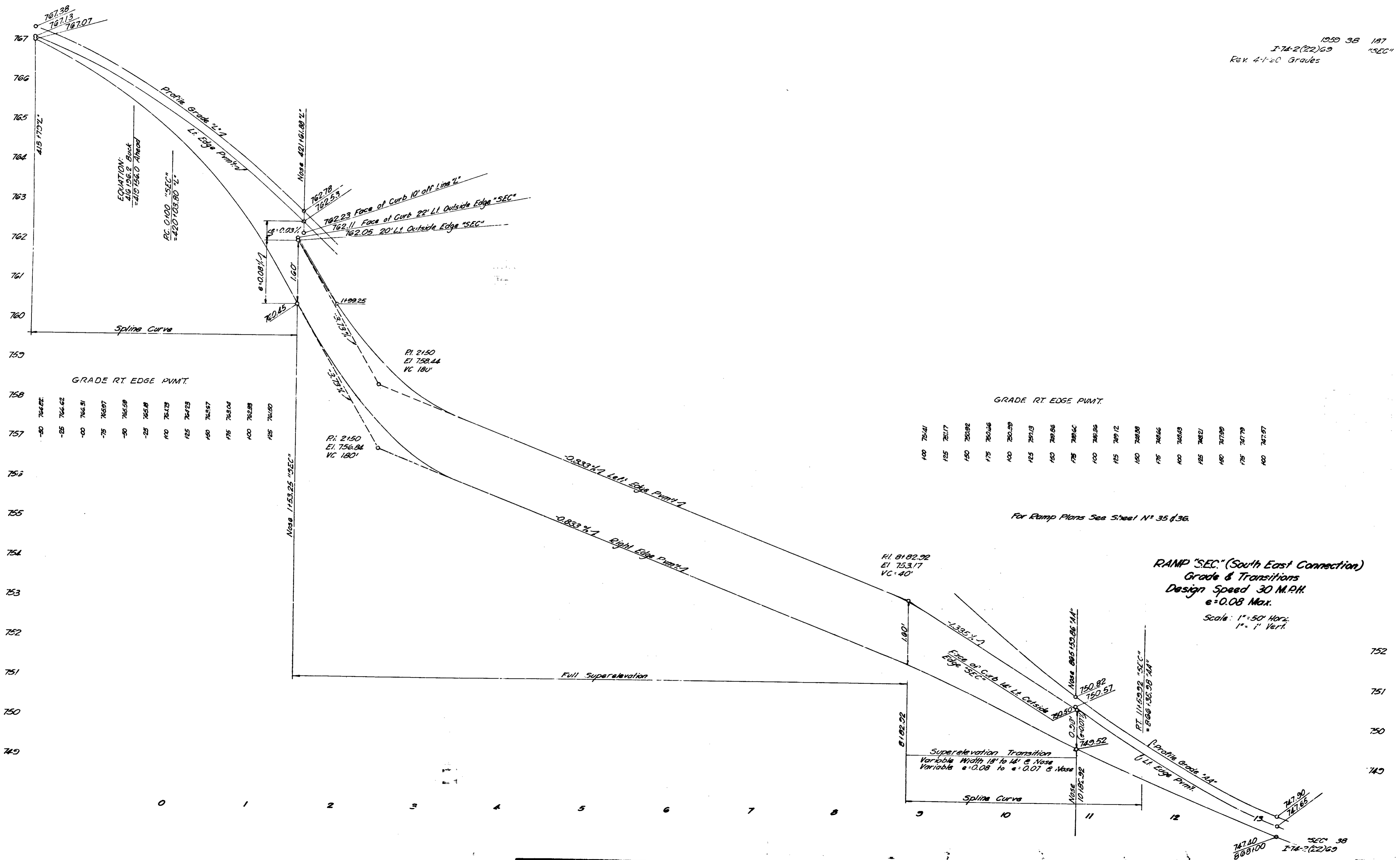
1050 37 187
 I-74-2(22)60 "SEL"
 Rev. 4-1-60 Grades



For Ramp Plans See Sheets N: 35 & 36
RAMP "SEL" (South East Loop)
 Grade & Transitions
 Design Speed 30 MPH
 e = 0.12 Max.
 Scale: 1" = 50' Horz.
 1" = 1' Vert.

"SEL" 37
 I-74-2(22)60

1050 38 187
 I-74-2(22)69 "SEC"
 Rev 4-1-00 Grades



GRADE RT. EDGE PWT.

75	756.02
75	756.62
75	756.31
75	755.97
75	756.59
75	756.18
76	756.73
76	756.29
76	755.87
76	755.04
76	754.28
76	753.80

GRADE RT. EDGE PWT.

75	754.41
75	754.17
75	753.82
75	753.26
75	752.59
75	751.13
75	749.86
75	748.64
75	748.26
75	747.12
75	746.38
75	745.66
75	745.03
75	744.21
75	743.89
75	743.79
75	743.57

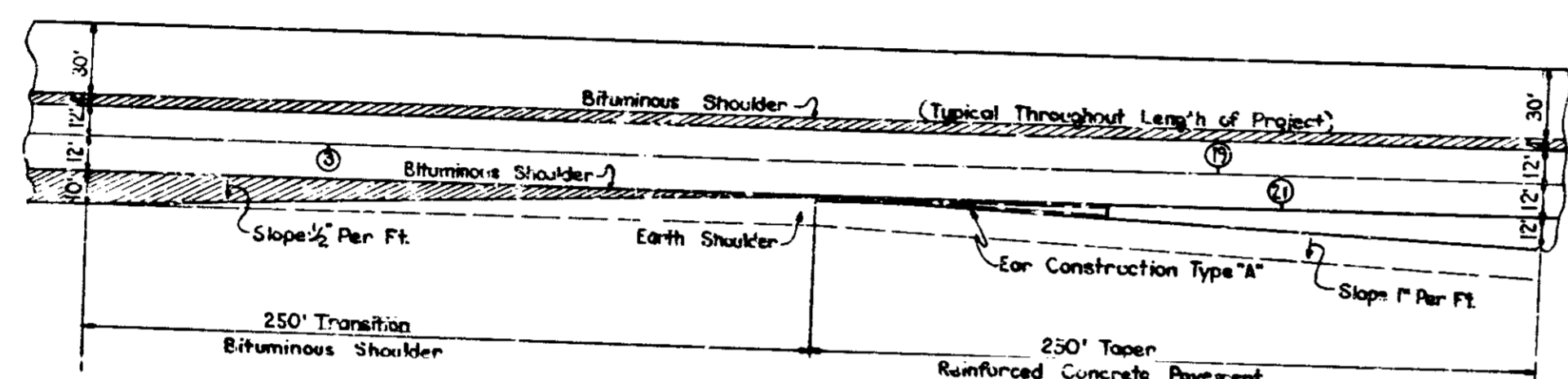
RAMP "SEC" (South East Connection)
 Grade & Transitions
 Design Speed 30 M.P.H.
 e=0.08 Max.
 Scale: 1"=50' Horiz.
 1"=1' Vert.

For Ramp Plans See Sheet N° 35 of 36.

Super-elevation Transition
 Variable Width 18' to 14' @ Nose
 Variable e=0.08 to e=0.07 @ Nose

FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	205-000	1959	39	197

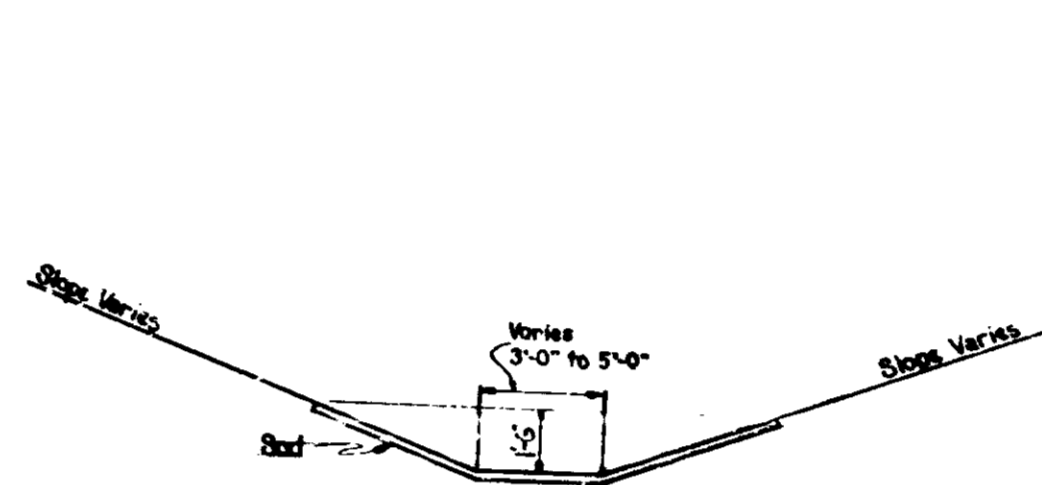
2-71-1969



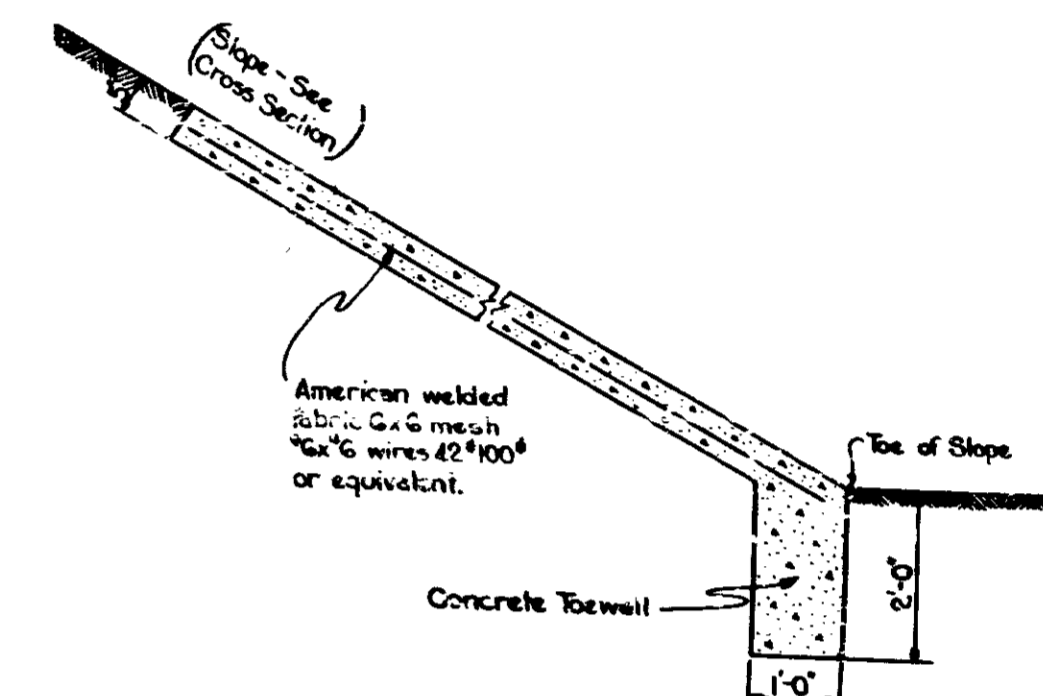
TYPICAL BITUMINOUS SHOULDER TAPER
Scale: 1"=50'

TRANSITIONS

Line "AA"	834 + 92.83	to	837 + 42.83	Left
" "	837 + 03.97	to	839 + 53.97	Right
Line "L"	449 + 58.42	to	450 + 00	Left
" "	447 + 28.06	to	450 + 00	Right

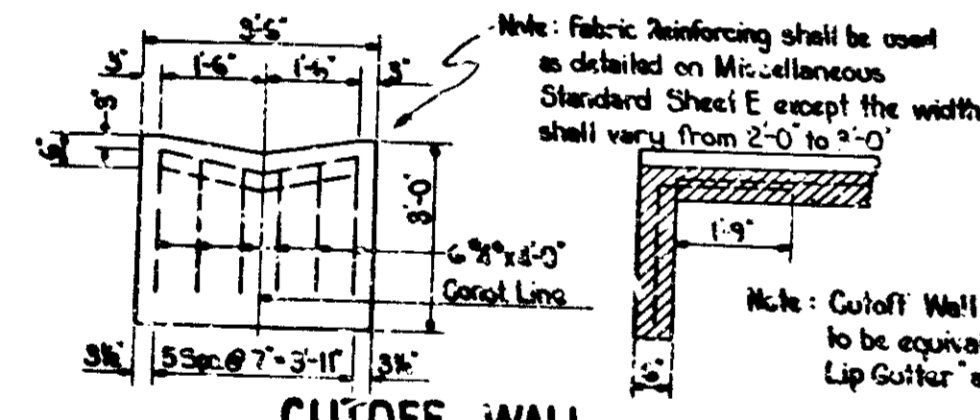


SODDED DITCH DETAIL
Scale: 1/2"=1'-0"



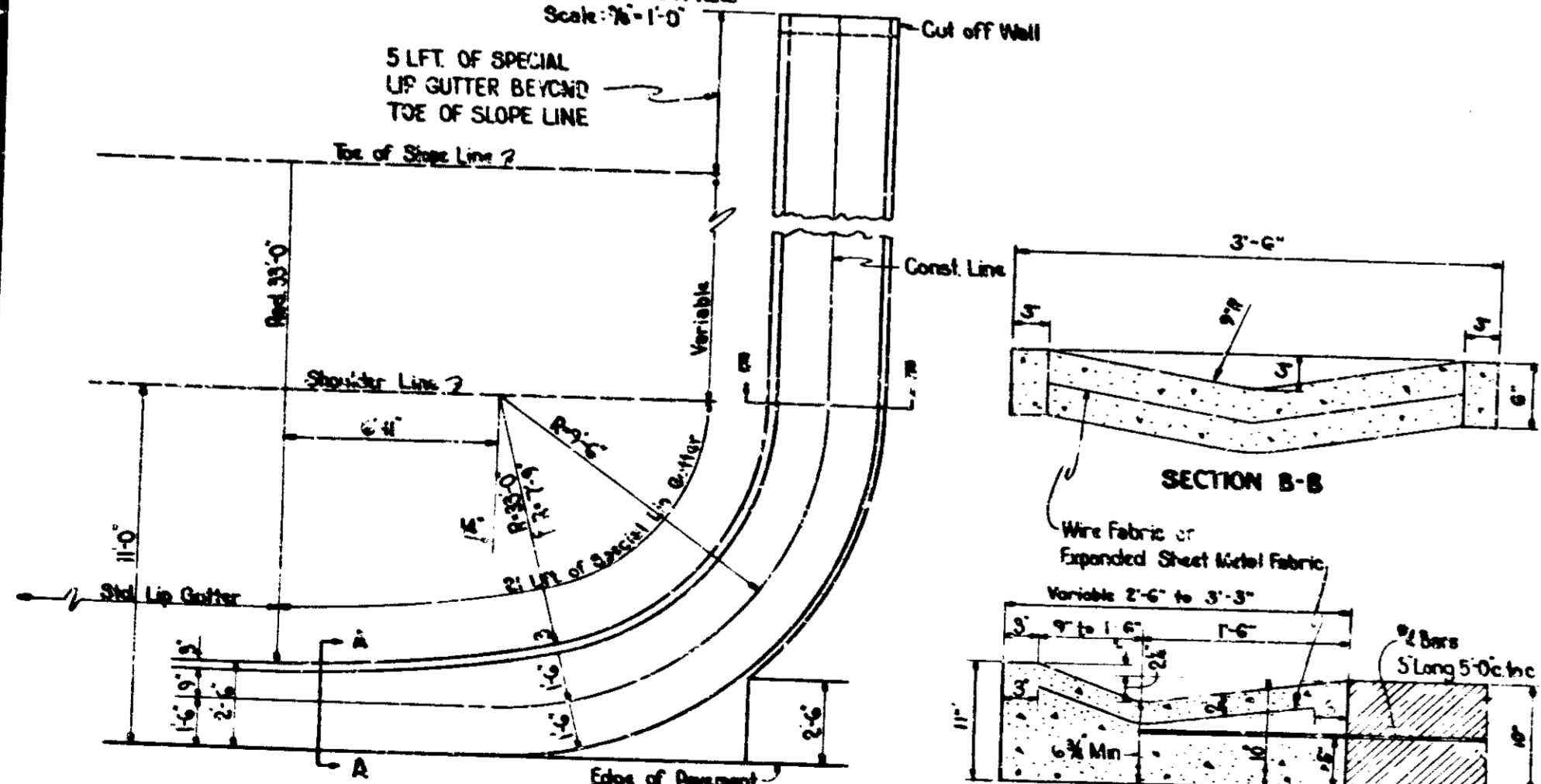
CONCRETE SLOPEWALL

Line "AA"
Sta. 728 + 60 to 731 + 00 Rt. Sheet 11
Sta. 739 + 50 to 741 + 80 Rt. Sheet 11
Sta. 800 + 75 to 803 + 00 Rt. Sheet 13
Sta. 812 + 50 to 814 + 14 Rt. Sheet 14

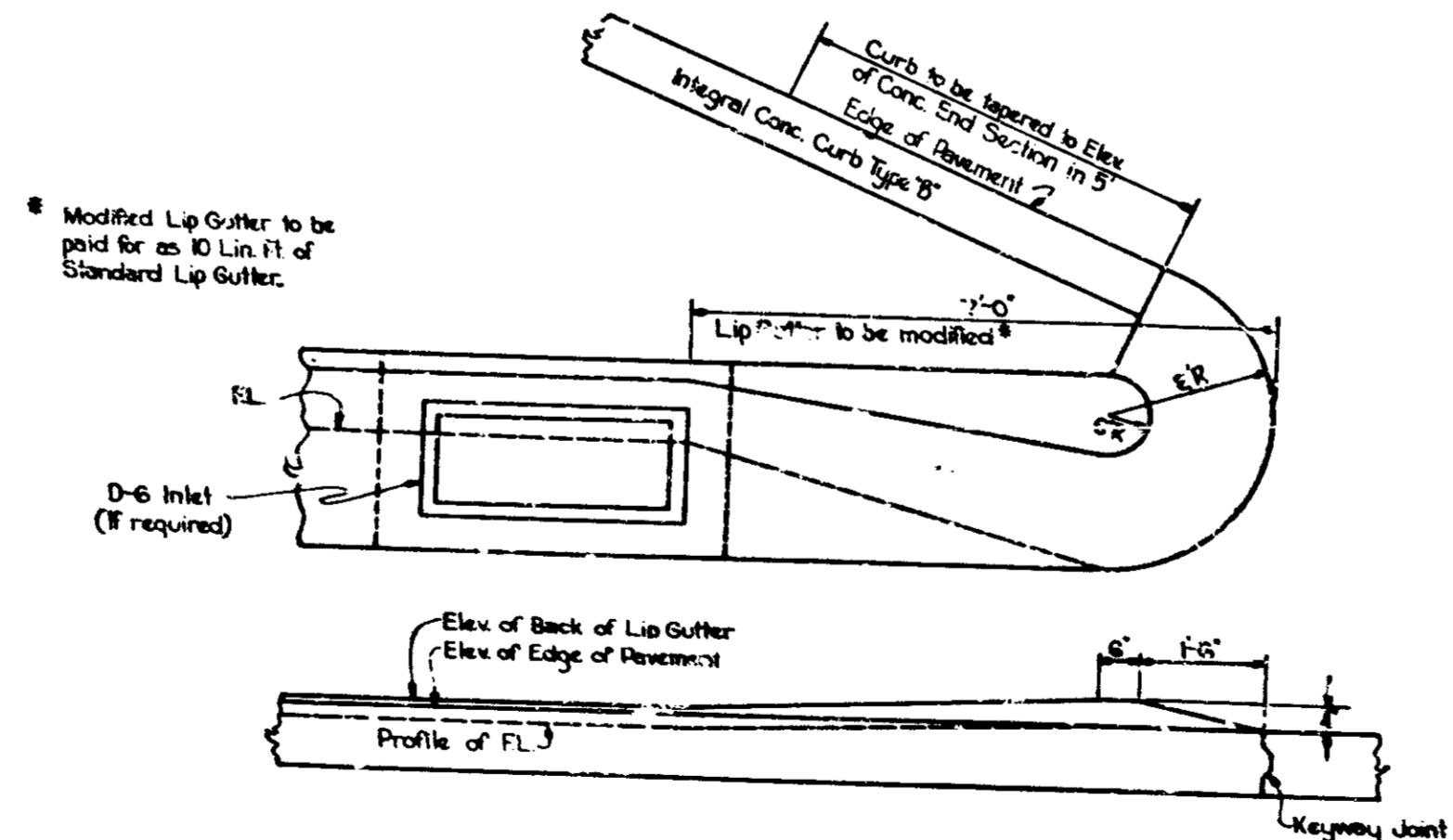


CUTOFF WALL
Scale: 1/2"=1'-0"

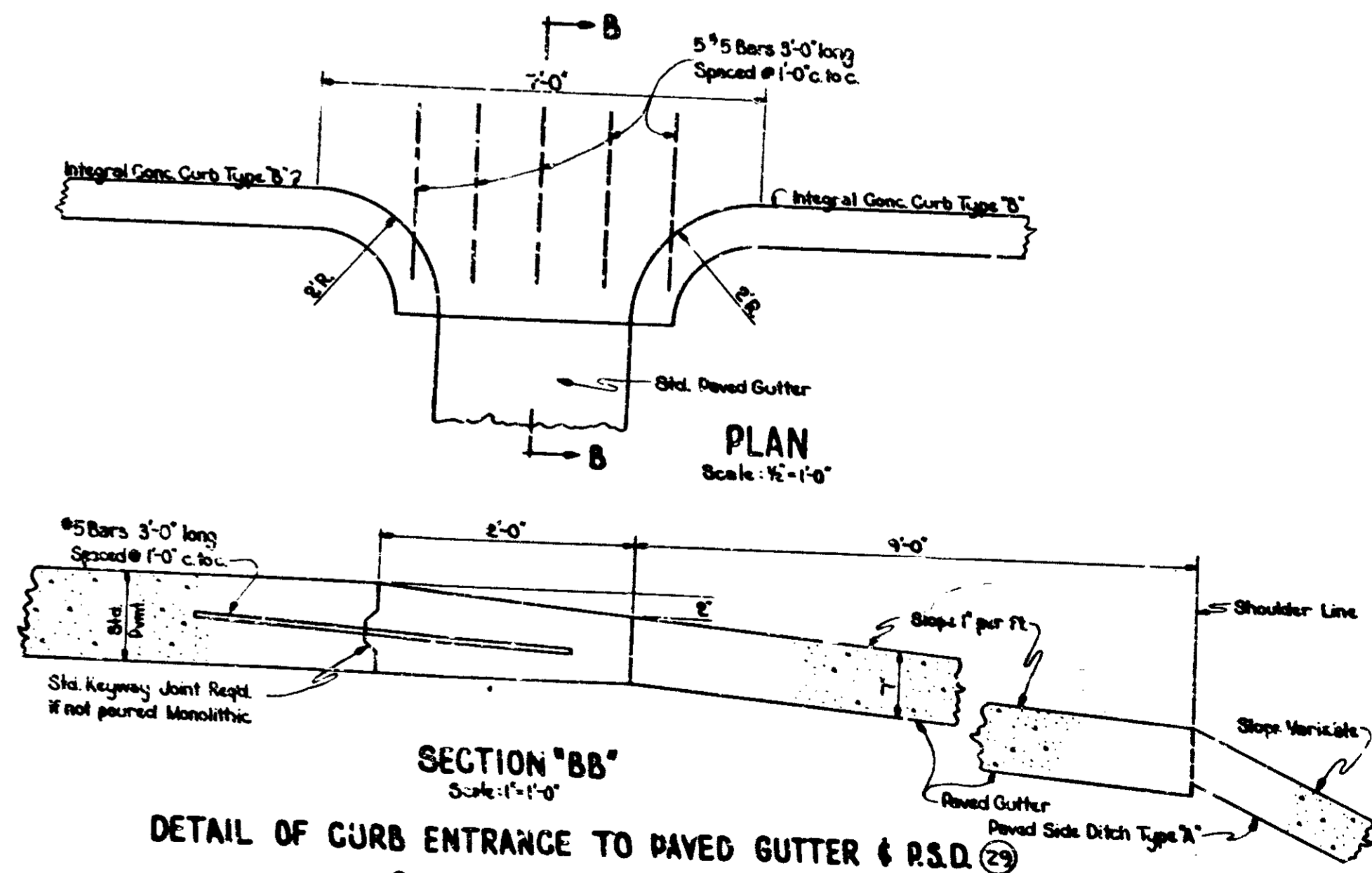
Note: Cutoff Wall including Reinforcing Steel to be equivalent to 5'-0" Lin. Ft. of Special Lip Gutter and paid for accordingly.



DETAIL OF SPECIAL LIP GUTTER (28)
Scale: 1/2"=1'-0"
See Sheets 23, 27 & 31

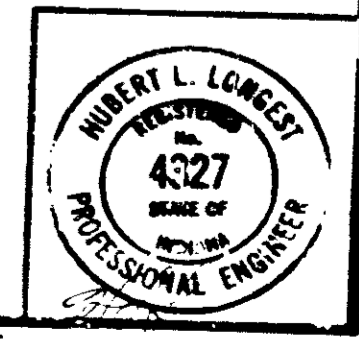


DETAIL OF LIP GUTTER NOSE CONSTRUCTION
Scale: 1"=2'
See Sheets 23, 27, 31 & 35



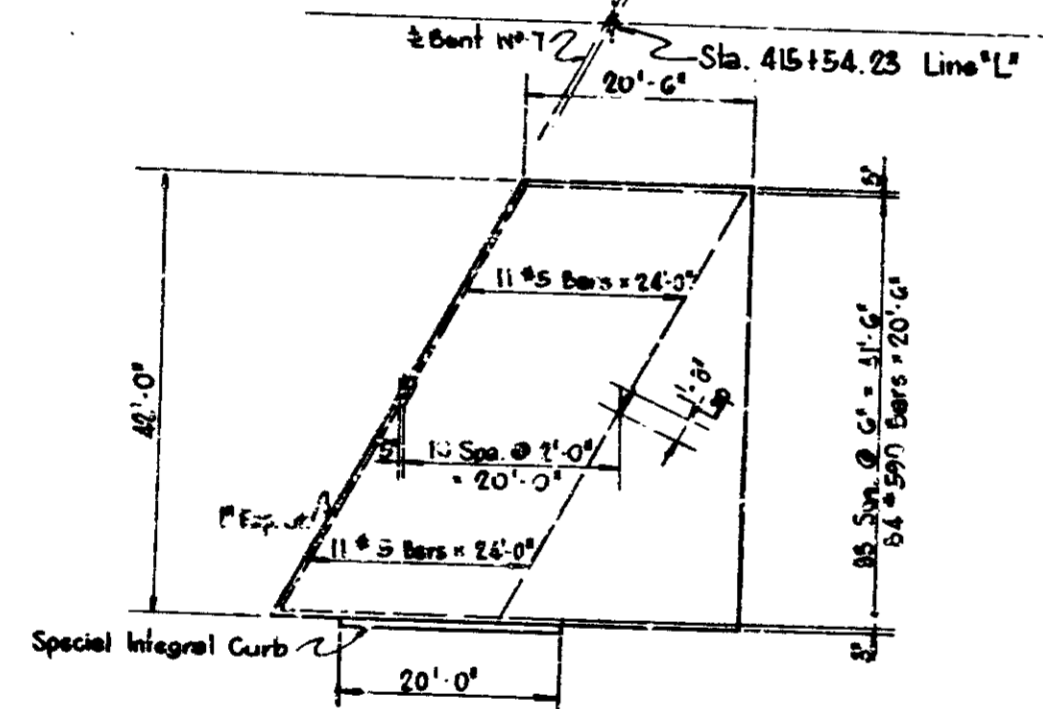
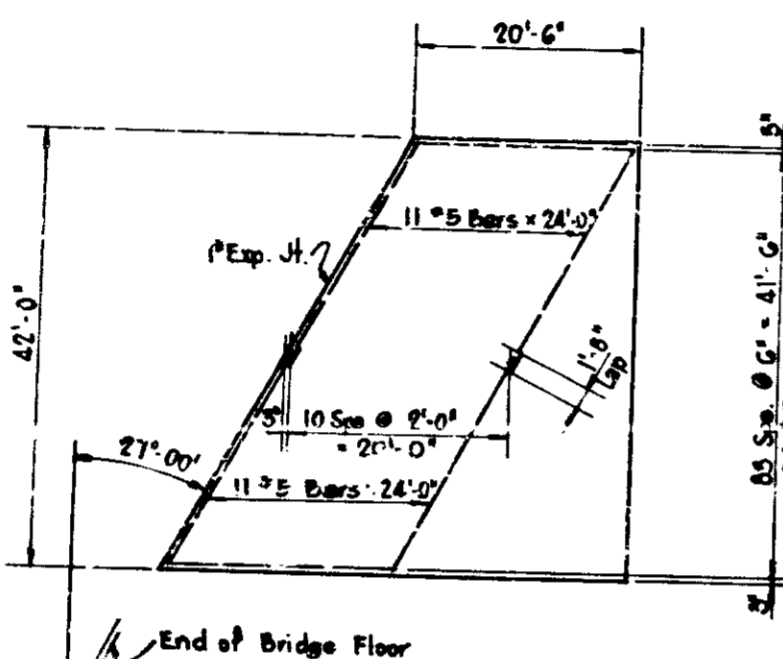
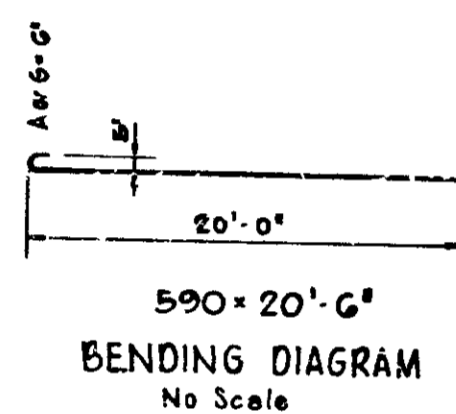
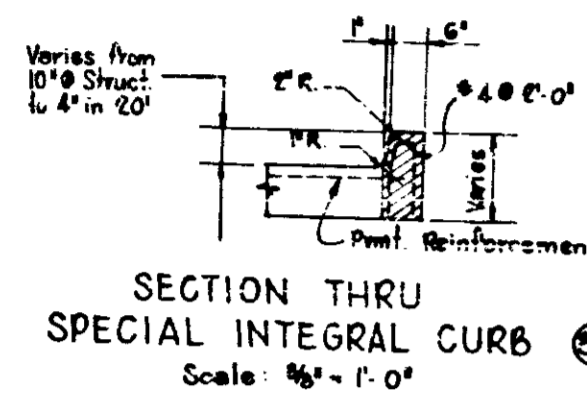
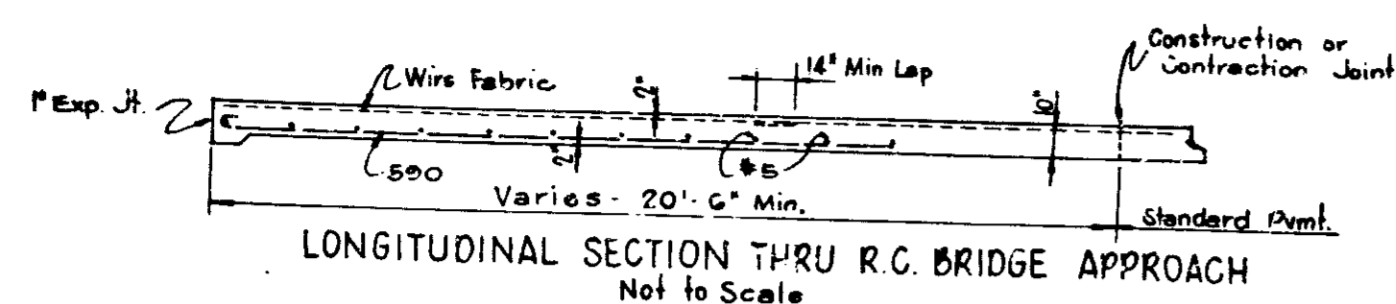
DETAIL OF CURB ENTRANCE TO PAVED GUTTER & R.S.D. (29)
Scale: 1/2"=1'-0"
See Sheets 23, 27, 31 & 35

DETAILS



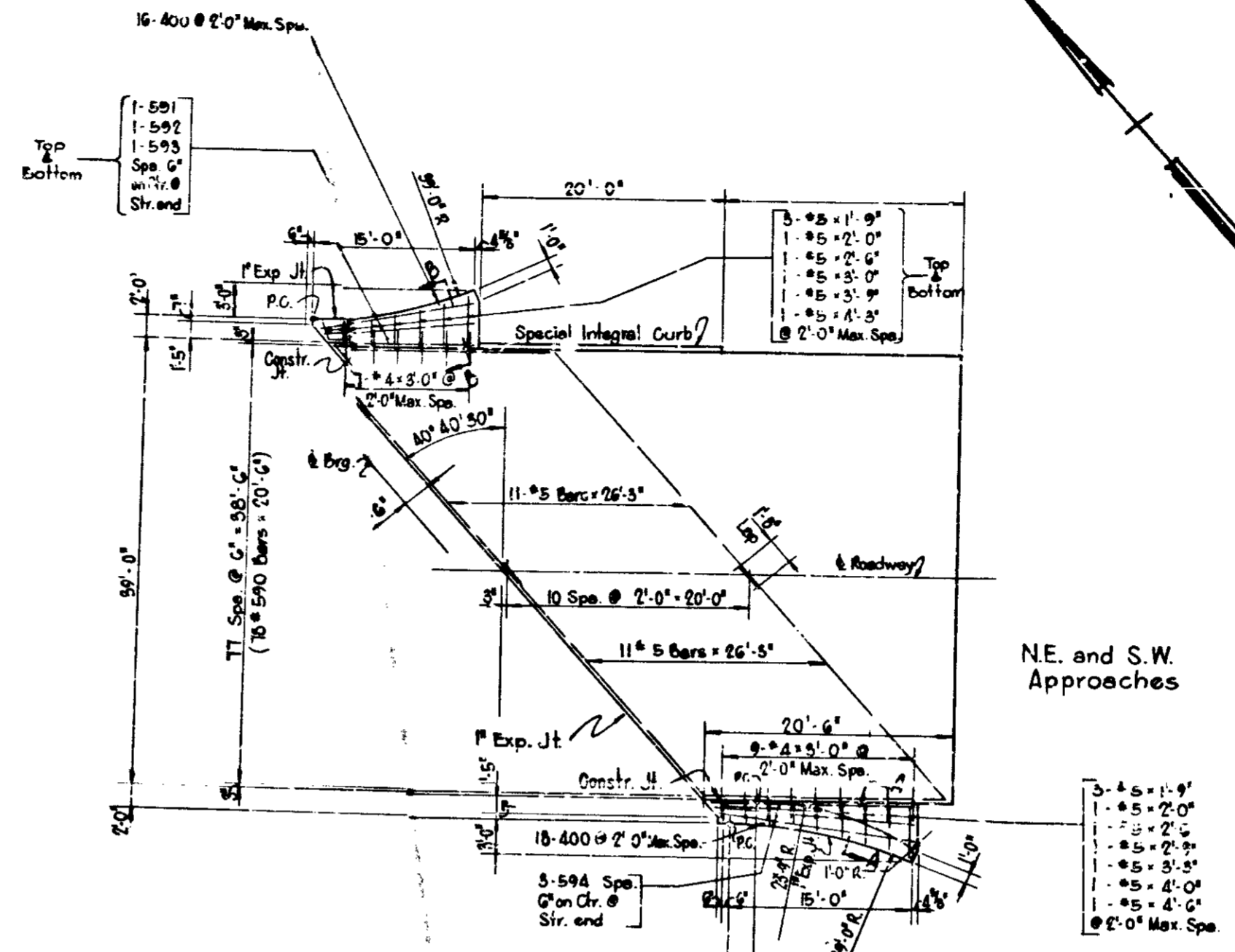
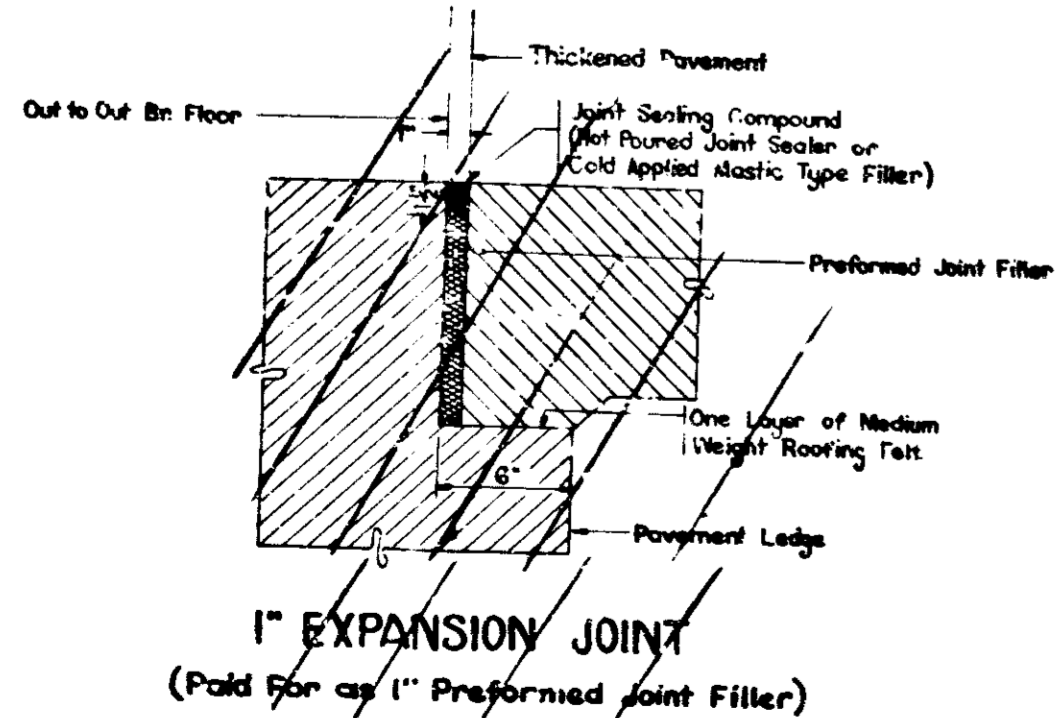
FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	106-20	1959	40	187

I-74-2 (22) 69
REV 5-3-50 Slab Approaches Details

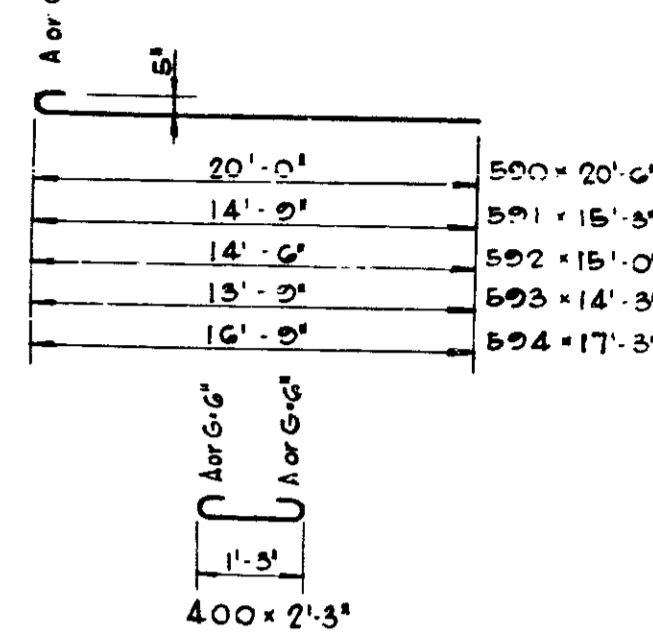


Mark	No. Pos.	Length	Weight
590	166	20'-6"	
#5	44	24'-0"	
Total No. 5			469.4*
TOTAL STEEL			469.4*
CONCRETE			
R.C. Bridge Approach			291 Sq.Yds.

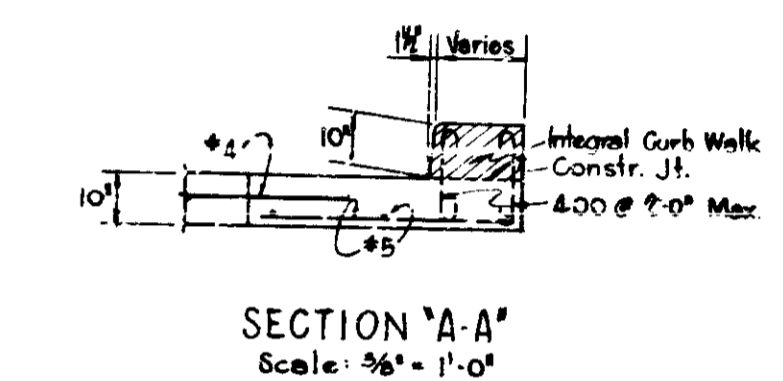
R.C. BRIDGE APPROACH - NORTH END
Scale: 3/8" = 1'-0"
100-C-221



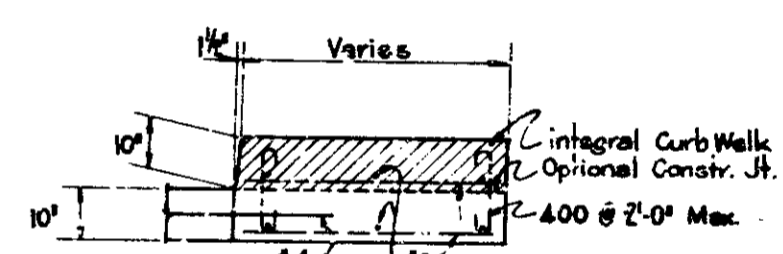
Mark	No. Pos.	Length	Weight
590	312	20'-6"	
591	6	15'-3"	
592	6	15'-0"	
593	6	14'-3"	
594	18	17'-3"	
#5	88	24'-3"	
#5	6	4'-0"	
#5	6	4'-3"	
#5	6	4'-0"	
#5	6	3'-9"	
#5	6	3'-3"	
#5	6	3'-0"	
#5	6	2'-9"	
#5	12	2'-6"	
#5	12	2'-0"	
#5	36	1'-9"	
Total No. 5			9,964*
400	136	2'-3"	
#4	64	3'-0"	
Total No. 4			333*
TOTAL STEEL			10,297*
CONCRETE			
R.C. Bridge Approach			686 Sq.Yds.
Conc for Integral Curb			
Walk Class F* Conc.			97 Cu.Yds.



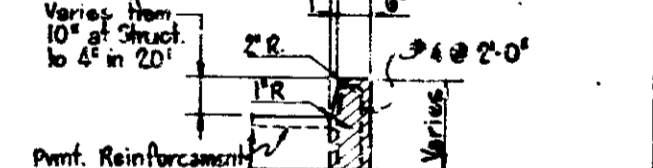
BENDING DIAGRAMS
No Scale



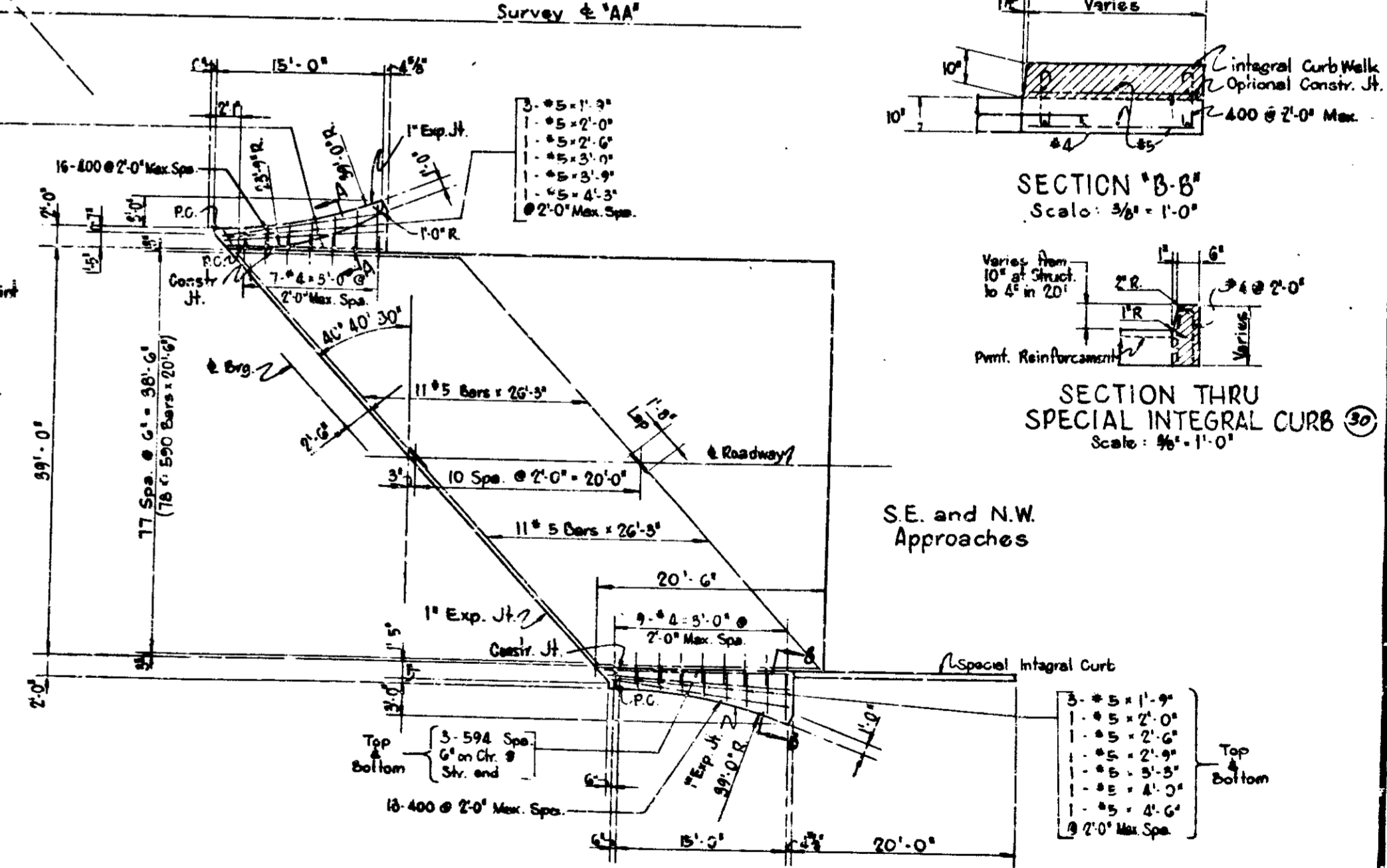
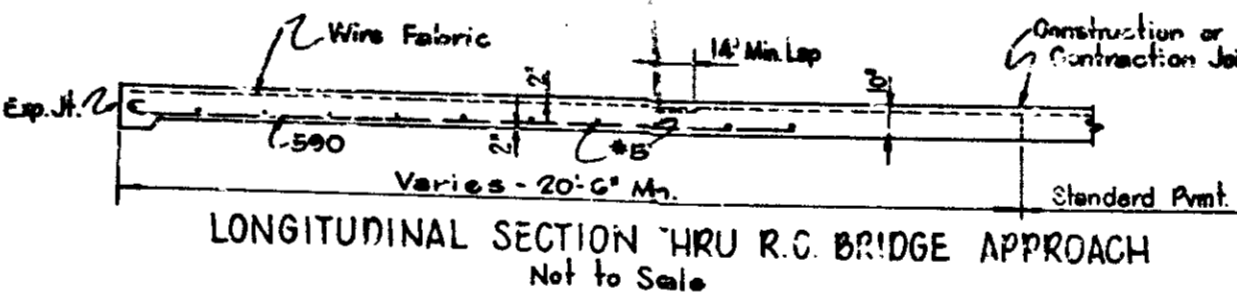
SECTION 'A-A'
Scale: 3/8" = 1'-0"



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

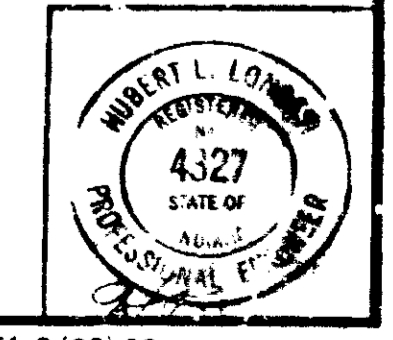


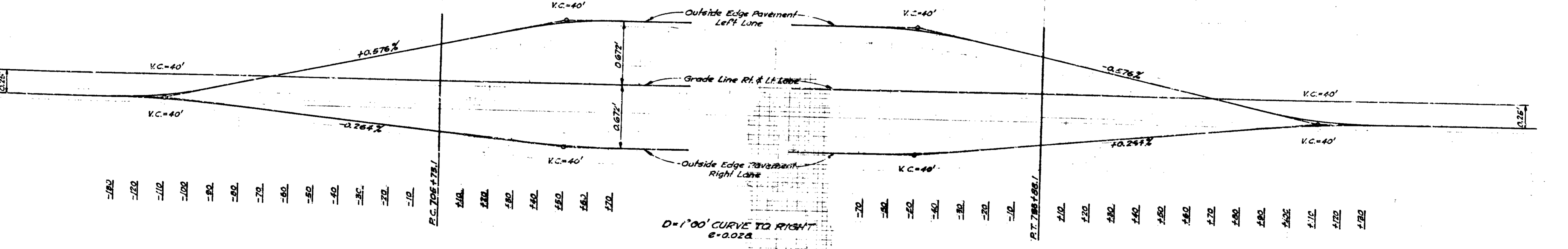
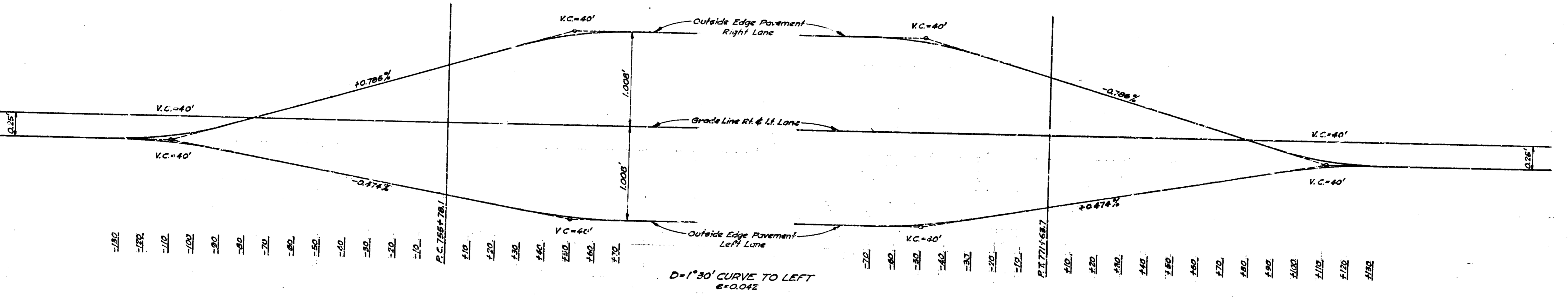
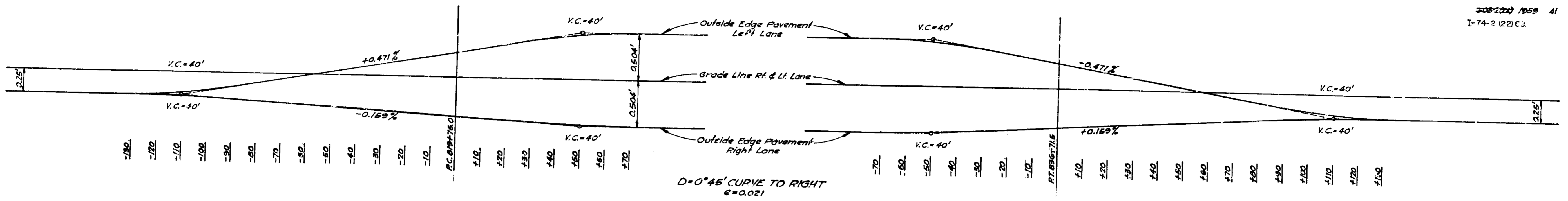
SECTION THRU SPECIAL INTEGRAL CURB
Scale: 3/8" = 1'-0"



R.C. BRIDGE APPROACH DETAILS
East end shown - West end opposite hand
Scale: 3/8" = 1'-0"
100-H-4440
I-74-72-4440

DETAILS





PAVEMENT EDGE TRANSITIONS
 LINE "AA"
 Design Speed 70 M.P.H.

640 23-7-58

STRUCTURE DATA

RURAL SECTION

FEDERAL ROAD DIVISION NO.	STATE	PRI. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	103-2-4433	1959	42	187

I-74-2(22) 69.
Rev. 10-9-59, structural Plate Note Add.

STRUCTURE NUMBER	LOCATION	DESCRIPTION	SIZE	SKEW	LENGTH	HEIGHT	LINE	FLOW LINE				REMARKS	PLANS ON SHEET NO.
								UP ELEV.	DOWN ELEV.	CONCRETE CLASS.	SPECIAL REINFORCING GRADE		
1	750+05.0	Separate Contract					AA					Eagle Creek 102-10-4437 I-74-70-4437	
2	35+00.0	Separate Contract					S-9-AA					Separation 102-10-4433 I-74-71-4438	
11	695+19	6" Sewer Pipe			220'		AA					Remove 4" Field Tile in place	
12	695+50	30" Class I Pipe			150'							Construct Inlet and Outlet Ditches	
13	695+50 RT	30" Class I Pipe			36'							Construct Inlet and Outlet Ditches	
14	697+50 RT	18" Class I Pipe			80'			839.0	833.0	4.14	45	1-Hdwl. Req'd.	
15	705+45	6" Sewer Pipe			390'			832.0	830.9	5.78	12	Remove 4" Field Tile in place	
16	705+50	30" Class III Pipe			25'	222'						Construct Inlet and Outlet 20 Sys. of Hand Laid Rip Rap Req'd.	
17	705+50 RT	12" BCCM Pipe			120'			820.0	805.3	5.78	66	2-22" 30' Bends Req'd and 1-Hdwl. Req'd.	
18	708+00	24" Class III Pipe			25'	208'		820.0	802.7	3.75	55	Construct Inlet and Outlet Ditches 20 Sys. of Hand Laid Rip Rap Req'd.	
19	708+10 RT	36" Class I Pipe			25'	58'		801.4	800.5	2.63	10	Construct Inlet and Outlet Ditches	
20	717+45	30" Class III Pipe			35'	244'		794.0	787.7	5.18	100	Construct Inlet and Outlet Ditches 20 Sys. of Hand Laid Rip Rap Req'd.	
21	718+10 RT	30" Class I Pipe			35'	54'		787.4	786.5	5.78		Construct Inlet and Outlet Ditches	
22	719+05	36" Class III Pipe			158'			796.8	785.0	8.12	217		
23	719+05 RT	36" Class I Pipe			40'			784.5	784.2	8.12		Construct Inlet and Outlet Ditches	
24	723+00 RT	12" BCCM Pipe			38'					0.86	8	2-22" 30' Bends Req'd and 1-Hdwl. Req'd.	
25	730+00 LT	12" BCCM Pipe			94'					0.64	7	2-22" 30' Bends Req'd and 1-Hdwl. Req'd.	
26	738+00 RT	12" Class I Pipe			114'					0.64	7	1-Hdwl. Req'd.	
27	740+00 LT	12" BCCM Pipe			40'					0.64		2-22" 30' Bends Req'd and 1-Hdwl. Req'd.	
28	740+00	12" Class I Pipe			67'					0.64	6	Connect to Structure No. 29	
29	740+00 RT	12" BCCM Pipe			54'					0.64	1	2-22" 30' Bends Req'd and 1-Hdwl. Req'd.	
30	743+00 LT	12" BCCM Pipe			44'					0.64		2-22" 30' Bends Req'd and 1-Hdwl. Req'd.	
31	743+00 RT	12" BCCM Pipe			22'					0.64		2-22" 30' Bends Req'd and 1-Hdwl. Req'd.	
32	746+00 LT	12" BCCM Pipe			4'					0.64		2-22" 30' Bends Req'd and 1-Hdwl. Req'd.	
33	746+00	12" Class I Pipe			62'					0.64		Connect to Structure No. 34	
34	746+00 RT	12" BCCM Pipe			34'					0.64	6	2-22" 30' Bends Req'd and 1-Hdwl. Req'd.	
35	748+09 LT	12" BCCM Pipe								0.64	1	2-22" 30' Bends Req'd and 1-Hdwl. Req'd.	
36	748+30 RT	12" BCCM Pipe										Bridge Contract	
37	749+30 LT	54" BCCM Pipe										Bridge Contract	
38	751+80 LT	12" BCCM Pipe										Bridge Contract	
39	752+00 RT	12" BCCM Pipe										Bridge Contract	
40	754+40	24" Class III Pipe			212'			745.7	745.4	3.75	29	Construct Outlet Ditch to Drain to Lake	
41	754+75 RT	12" BCCM Pipe			42'					0.64		2-22" 30' Bends Req'd and 1-Hdwl. Req'd.	
42	755+00 LT	12" BCCM Pipe			54'					0.64		2-22" 30' Bends Req'd and 1-Hdwl. Req'd.	
43	758+00	12" Class I Pipe			67'					0.64	6	Connect to Structure No. 44	
44	758+00 LT	12" BCCM Pipe			25'					0.64		2-22" 30' Bends Req'd and 1-Hdwl. Req'd.	
45	765+85	12" Class I Pipe			1E'						2	Connect to Structure No. 46	
46	766+00	36" Class I Pipe			122'			751.0	750.3	8.12	235	1-12" on 36" Tee Req'd. Construct Inlet and Outlet Ditches	
47	771+12	12" Class I Pipe			4'							Connect to Structure No. 48	
48	771+20	30" Class I Pipe			105'			757.0	751.5	2.49	37	1-12" on 30" Tee Req'd. Construct Outlet Ditch to Drain into 3' Bottom Ditch S-7-AA	
49	780+00 RT	12" Class I Pipe			34'					0.29	6	1-Hdwl. Req'd.	
50	791+00 RT	12" Class I Pipe			78'					0.25	8	1-Hdwl. Req'd.	
51	805+00 LT	15" BCCM Pipe			38'					0.86	8	2-22" 30' Bends Req'd and 1-Hdwl. Req'd.	
52	810+90	54" Class III Pipe			586'			728.3	728.0	5.12	2582	2-Pipe Anchors Req'd. Construct Inlet & Outlet Ditches 30 Sys. of Hand Laid Rip Rap Req'd.	
53	814+14 RT	12" Class I Pipe			78'					0.64	6	1-Hdwl. Req'd.	
54	823+50	12" Class I Pipe			64'					0.29	6	1-Hdwl. Req'd.	
55	821+85	12" Class I Pipe			4'					0.29	6	1-Hdwl. Req'd.	
56	832+00	42" Class I Pipe			156'		AA	741.3	741.0	2.60	276	Connect to Structure No. 56	
								Total			3711	1-12" on 42" Tee and 2 Pipe Anchors Req'd.	

* Gage #8 Bottom Plates, Gage #10 Other Plates for Structural Plates.

STRUCTURE NUMBER	LOCATION	DESCRIPTION	SIZE	SKEW	LENGTH	HEIGHT	WINGS	FLOW LINE				REMARKS	PLANS ON SHEET NO.
								UP ELEV.	DOWN ELEV.	CONCRETE CLASS.	SPECIAL REINFORCING GRADE		

ESTIMATE OF QUANTITIES (RURAL SECTION)

FEDERAL ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	105-2-22	1959	43	187

1-74-2, 22) 69.
Rev. 5-14-59, 2" Conduit Added
Rev. 10-1-59, Bitum. Prime for Shoulders,
Rev. 10-5-59, Structural Plate Mate 4, Inc.
Rev. 4-1-60, Subsurface Drains &
Quantities.
Rev. 5-13-60, Guide Posts
Rev. 7-5-60, Grade 'B' Special Borrows.

GRADING		
ITEM	UNIT	QUANTITY
COMMON EXCAVATION	CYS.	265,240
SOLID ROCK EXCAVATION	CYS.	
UNCLASSIFIED EXCAVATION	CYS.	
SPECIAL BORROW	CYS.	133,466
OVERHAUL	CYS.	
ADDED HAUL	UNITS	
PEAT EXCAVATION	CYS.	
SURCHARGE - 4'	LFT.	
SURCHARGE - 4'-8'	LFT.	
SURCHARGE - 8'-12'	LFT.	
SURCHARGE - 12'-16'	LFT.	
SURCHARGE - 16'-20'	LFT.	
SURCHARGE - 20'-24'	LFT.	
MACHINE OPERATION	HRS.	
MACHINE AVAILABILITY	HRS.	
DYNAMITE	LBS.	
2" CASED TEST HOLES	LFT.	
4" CASED TEST HOLES	LFT.	
6" CASED TEST HOLES	LFT.	
2" CASED DYNAMITE HOLES	LFT.	
4" CASED DYNAMITE HOLES	LFT.	
6" CASED DYNAMITE HOLES	LFT.	
GRADE 'B' SPECIAL BORROW	CYS.	4866
PAVEMENT REMOVAL	SYS.	
SALVAGED PAVEMENT	SYS.	
SURFACE REMOVAL	SYS.	
BREAKING PAVEMENT	SYS.	
CURB REMOVAL	LFT.	
CENTER CURB REMOVAL	LFT.	
COMB. CURB & GUTTER REMOVAL	LFT.	
LIP GUTTER REMOVAL	LFT.	
GUTTER REMOVAL	LFT.	
WALK REMOVAL	SYS.	
STEPS REMOVAL	SYS.	
GUARD RAIL SALVAGE	LFT.	
RETAINING WALL REMOVAL	LFT.	
RETAINING WALL REMOVAL	CYS.	
PAVED SIDE DITCH REMOVAL	LFT.	
SALVAGED ROAD MATERIAL	CYS.	

PAVEMENT		
ITEM	UNIT	QUANTITY
SUBBASE TYPE "I" or "II"	CYS.	27,134
SALVAGED ROAD MATERIAL FOR SUBBASE	CYS.	
H.E.S. PLAIN CONCRETE	SYS.	
REINFORCED CONCRETE 10"	SYS.	70,984
PLAIN CONCRETE	SYS.	
H.E.S. REINFORCED CONCRETE	SYS.	
PLAIN CEMENT CONCRETE FOR CROSSOVERS	SYS.	
BITUMINOUS MIXTURE FOR CROSSOVERS	TONS	
COVERING AGGREGATE	TONS	
SUBGRADE FINE AGGREGATE	TONS	
COMPACTED AGGREGATE	TONS	
PRIVATE DRIVE PAVEMENT	SYS.	
COMMERCIAL DRIVE PAVEMENT	SYS.	
REINFORCING STEEL	LBS.	6,074
CONTRACTION JOINTS, TYPE "D-1"	LFT.	15,960
1" PREFORMED JOINT FILLER	LFT.	164
1/2" PREFORMED JOINT FILLER	LFT.	148
1" PREFORMED EXPANSION JOINT WITH LOAD TRANSFER	LFT.	
3" EXPANSION JOINT	LFT.	100
CONCRETE BASE	SYS.	
H.E.S. CONCRETE BASE	SYS.	
CONCRETE PATCHES	SYS.	
CONCRETE PATCHES CLASS I	SYS.	
CONCRETE PATCHES CLASS II	SYS.	
CONCRETE PATCHES CLASS III	SYS.	
CONCRETE PATCHES CLASS IV	SYS.	
CONCRETE WIDENING	SYS.	
FILLING CRACKS AND JOINTS	TONS	
BITUMINOUS MATERIAL FOR UNDERSEAL	TONS	
DRILLING HOLES	EACH	
AGGREGATE FOR COMPACTED AGGREGATE BASE	TONS	
WATER FOR COMPACTED AGGREGATE BASE	M.GALS.	
AGGREGATE FOR SHOULDER DRAINS	TONS	
BITUMINOUS MATERIAL FOR PRIME	TONS	
BITUMINOUS MATERIAL FOR SEAL	TONS	
COVERING AGGREGATE	TONS	
HOT ASPHALTIC CONCRETE BINDER (H)	TONS	
HOT ASPHALTIC CONCRETE SURFACE TYPE "B"	TONS	
BITUMINOUS COATED BLENDED AGGREGATE BINDER	(1) TONS	
BITUMINOUS COATED BLENDED AGGREGATE SURFACE	TONS	
BITUMINOUS COATED AGGREGATE BINDER	(1) TONS	
BITUMINOUS COATED AGGREGATE SURFACE	TONS	

MISCELLANEOUS		
ITEM	UNIT	QUANTITY
BITUM. MIXTURE FOR APPROACHES	TONS	
SALVAGED ROAD MATERIAL FOR APPROACHES	CYS.	
BITUMINOUS SHOULDER	TONS	6,539
BITUMINOUS MATERIAL FOR SEAL	TONS	52
COVERING AGGREGATE	TONS	415
BITUMINOUS MATERIAL FOR PRIME FOR BITUM. SHOULDERS	TONS	23.5
CONCRETE CURB	LFT.	
CONCRETE CURB TYPE "B"	LFT.	
CONCRETE GUTTER	LFT.	
COMB. CONC. CURB AND GUTTER	LFT.	
RECONSTRUCTED CONC. CURB	LFT.	
RECONSTRUCTED CONC. GUTTER	LFT.	
RECONSTRUCTED COMB. CONC. CURB AND GUTTER	LFT.	
RESET CURB	LFT.	
RESET COMB. CONC. CURB & GUTTER	LFT.	
CONCRETE CENTER CURB	LFT.	
CONCRETE CENTER CURB	(1) 3"	
FLEXIBLE STEEL PLATE GUARD RAIL	LFT.	
STEEL BEAM GUARD RAIL	LFT.	835
SHOP CURVED STEEL BEAM GUARD RAIL	LFT.	
DOUBLE FACE STEEL BEAM GUARD RAIL	LFT.	
WIRE ROPE GUARD RAIL	LFT.	
WOVEN WIRE FABRIC GUARD RAIL	LFT.	
GUARD RAIL	LFT.	11,412
GUARD RAIL POSTS	EA.	
RESETTING STEEL BEAM GUARD RAIL	LFT.	
RESETTING WIRE ROPE GUARD RAIL	LFT.	
RESET WOVEN WIRE FABRIC GUARD RAIL	LFT.	
GUARD FENCE	LFT.	
GUIDE POSTS, TYPE "A"	EA.	37,029
GUIDE POSTS, TYPE "B"	EA.	
BARRICADES, TYPE "A"	EA.	1
BARRICADES, TYPE "B"	EA.	3
TYPICAL SIGN STANDARDS	EA.	5
RAILROAD CROSSING SIGN, TYPE "A"	EA.	
RAILROAD CROSSING SIGN, TYPE "B"	EA.	
ADVANCE RAILROAD WARNING SIGN	EA.	
CONCRETE HEADER	LFT.	
RECONSTRUCTED CONCRETE HEADER	LFT.	
CEMENT CONCRETE SIDEWALK	SYS.	
RECONSTRUCTED CONCRETE SIDEWALK	SYS.	
CROSSWALK	SYS.	
RIGHT OF WAY MARKERS	EA.	7
RESET RIGHT OF WAY MARKERS	EA.	
MONUMENTS, TYPE "A"	EA.	
MONUMENTS, TYPE "B"	EA.	
CASTINGS ADJUSTED TO GRADE, MONUMENTS	EA.	
MONUMENTS, RE-ESTABLISHED	EA.	
BENCH MARK POSTS	EA.	1
RESETTING BENCH MARK POSTS	EA.	
SODDING	SYS.	27,214
FURNISHING AND PLACING: AGRICULTURAL LIMESTONE FERTILIZER	TONS	80
FERTILIZER	TONS	14
SEED	LBS.	3,051
FURNISHING AND APPLYING MULCHING MATERIAL	TONS	153
PLAIN SEEDING	SYS.	
MULCHED SEEDING	SYS.	
FURNISHING AND INSTALLING 2" CONC.	LFT.	325
FENCE (CHAIN LINK TYPE)	LFT.	
FENCE (FARM FIELD TYPE)	LFT.	28,134

MISCELLANEOUS		
ITEM	UNIT	QUANTITY
5" HAND LAID RIP RAP	SYS.	
12" HAND LAID RIP RAP	SYS.	80
GROUTED RIP RAP	SYS.	
PLACING GROUTED RIP RAP	SYS.	
PLACING 5" HAND LAID RIP RAP	SYS.	
PLACING 12" HAND LAID RIP RAP	SYS.	
PRECAST CONCRETE RIP RAP	SYS.	
CONCRETE SIDEWALL 5"	SYS.	1,744
STANDARD LIP GUTTER	LFT.	
PAVED GUTTER	LFT.	225
PAVED SIDE DITCH, TYPE "A"	LFT.	3,785
PAVED SIDE DITCH, TYPE "B"	LFT.	260
PAVED SIDE DITCH, TYPE "G"	LFT.	150
INTEGRAL CONCRETE CURB	LFT.	
INTEGRAL CONCRETE CURB TYPE "B"	LFT.	1875
BITUMINOUS CURB	LFT.	
CONCRETE CURB	LFT.	
CONCRETE CURB TYPE "B"	LFT.	
CONCRETE GUTTER	LFT.	
COMB. CONC. CURB AND GUTTER	LFT.	
RECONSTRUCTED CONC. CURB	LFT.	
RECONSTRUCTED CONC. GUTTER	LFT.	
RECONSTRUCTED COMB. CONC. CURB AND GUTTER	LFT.	
RESET CURB	LFT.	
RESET COMB. CONC. CURB & GUTTER	LFT.	
CONCRETE CENTER CURB	LFT.	
CONCRETE CENTER CURB	(1) 3"	
FLEXIBLE STEEL PLATE GUARD RAIL	LFT.	
STEEL BEAM GUARD RAIL	LFT.	835
SHOP CURVED STEEL BEAM GUARD RAIL	LFT.	
DOUBLE FACE STEEL BEAM GUARD RAIL	LFT.	
WIRE ROPE GUARD RAIL	LFT.	
WOVEN WIRE FABRIC GUARD RAIL	LFT.	
GUARD RAIL	LFT.	11,412
GUARD RAIL POSTS	EA.	
RESETTING STEEL BEAM GUARD RAIL	LFT.	
RESETTING WIRE ROPE GUARD RAIL	LFT.	
RESET WOVEN WIRE FABRIC GUARD RAIL	LFT.	
GUARD FENCE	LFT.	
GUIDE POSTS, TYPE "A"	EA.	37,029
GUIDE POSTS, TYPE "B"	EA.	
BARRICADES, TYPE "A"	EA.	1
BARRICADES, TYPE "B"	EA.	3
TYPICAL SIGN STANDARDS	EA.	5
RAILROAD CROSSING SIGN, TYPE "A"	EA.	
RAILROAD CROSSING SIGN, TYPE "B"	EA.	
ADVANCE RAILROAD WARNING SIGN	EA.	
CONCRETE HEADER	LFT.	
RECONSTRUCTED CONCRETE HEADER	LFT.	
CEMENT CONCRETE SIDEWALK	SYS.	
RECONSTRUCTED CONCRETE SIDEWALK	SYS.	
CROSSWALK	SYS.	
RIGHT OF WAY MARKERS	EA.	7
RESET RIGHT OF WAY MARKERS	EA.	
MONUMENTS, TYPE "A"	EA.	
MONUMENTS, TYPE "B"	EA.	
CASTINGS ADJUSTED TO GRADE, MONUMENTS	EA.	
MONUMENTS, RE-ESTABLISHED	EA.	
BENCH MARK POSTS	EA.	1
RESETTING BENCH MARK POSTS	EA.	
SODDING	SYS.	27,214
FURNISHING AND PLACING: AGRICULTURAL LIMESTONE FERTILIZER	TONS	80
FERTILIZER	TONS	14
SEED	LBS.	3,051
FURNISHING AND APPLYING MULCHING MATERIAL	TONS	153
PLAIN SEEDING	SYS.	
MULCHED SEEDING	SYS.	
FURNISHING AND INSTALLING 2" CONC.	LFT.	325
FENCE (CHAIN LINK TYPE)	LFT.	
FENCE (FARM FIELD TYPE)	LFT.	28,134

MISCELLANEOUS		
ITEM	UNIT	QUANTITY

LINE	LOCATION		LANE	G ¹ CLASS VII PIPE	STA.	LOCATION	OUTLET			AGGREGATE FOR SUBSURFACE DRAINS	GUIDE POSTS TYPE "A"	REMARKS
	FROM	TO					G ¹ TEES	90° ELBOW	G ¹ CLASS VII PIPE			
	LFT.	LFT.					CYS.	CYS.	LFT.			
AA	694+00	695+00	Rt.	100	695+00	Drain thru Fill Pt.	1	18	6			
AA	698+00	705+00	Rt.	900	705+00	Drain thru Fill Pt.	1	18	6			
AA	710+55	716+00	Rt.	51.4	716+00	Drain thru Fill Pt.	1	18	32			
AA	725+00	727+00	Rt.	200	727+00	Drain thru Fill Pt.	1	18	12			
AA	731+05	734+00	Rt.	295	734+00	Drain thru Fill Pt.	1	18	17			
AA	742+00	744+50	Lt.	1950	742+50	Crossover under Pvm't.	2	32	119		Curve to Lt.	
AA	815+00	823+40	Rt.	840	823+40	Drain thru Fill Pt.	1	18	1		Curve to Lt.	
AA	834+00	702+50	Lt.	350	702+50	Drain thru Fill Pt.	1	18	50			
AA	704+00	739+60	Lt.	3560	739+00	E-7 Str. N° 24	1	18	20		Curve to Rt.	
					740+00	E-7 Str. N° 28	1	28	215		Curve to Rt.	
AA	767+25	777+00	Lt.	975	777+00	Drain thru Fill Pt.	1	18	2		Curve to Rt.	
AA	812+50	834+00	Lt.	2150	819+15	Crossover under Pvm't.	1	32	60		Curve to Rt.	
					831+95	E-7 Str. N° 55	1	28	2		Curve to Rt.	
Undistributed Quantities												
Totals				800						125		
				3,184					310	74.4		9

NOTE: An allowance of 2' of G¹ Class VII Pipe is made for each Tee and Elbow and is included in the length shown under Outlet G¹ Class VII Pipe.

ITEM	PIPE - LINEAL FEET												AGGREGATE FOR SUBSURFACE DRAINS	GUIDE POSTS TYPE "A"	REMARKS	
	4'	6'	8'	10'	12'	15'	18'	24'	30'	36'	42'	84'				
	CLS. I	CLS. II	CLS. III	CLS. IV	CLS. V	CLS. VI	CLS. VII	CLS. VIII	CLS. IX	CLS. X	CLS. XI	CLS. XII				
CLASS I																
CLASS II					569		78	80		402	243	158				
CLASS III																
CLASS IV									405	466	188	586				
CLASS V																
CLASS VI																
REINFORCED CONCRETE																
VITRIFIED CLAY CONCRETE																
CORRUGATED METAL BITUMINOUS COATED CORRUGATED METAL WITH PAVED INVERT									566	176						
SEWER						950	200	100								
R.C. OR V.C. SEWER																
DEFORMED CORRUGATED METAL																
DRAIN TILE							400	300	200							

SUBSURFACE DRAINAGE			CASTINGS ADJUSTED TO GRADE			FOR STRUCTURES			AUTO DRAINAGE GATES		
PIPE - LINEAL FEET			AGG. CU. YDS.			ITEM			UNIT QUANTITY		
G ¹ CLASS VII			13,164 - 3,953			EACH			CONCRETE CLASS 'D'		
			644						CYS. 87		
			744						REINFORCING STEEL		
									LBS.		

CATCH BASINS		PIPE CATCH BASIN		INLETS		MANHOLES		RECONSTRUCTED	
TYPE	EACH	SIZE	FACH	TYPE	EACH	TYPE	EACH	TYPE	LN FT.
		12"		E-7	12	A-4		MANHOLE	
		15"		N	4	B-4		CATCH BASIN	
		18"		K-11	6			INLET	
		24"		M-11	3			R.C. SPRING BOX	

STRUCTURE DATA

URBAN SECTION

FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR
4	IND.	60-2-20-2	1959

Rev 513-60 Str 75+75 Void
 I-74-2(20) '59.
 REMARKS Rev. 4-1-60 Structures

STRUCTURE NUMBER	LOCATION	DESCRIPTION	SIZE	SKEW	LENGTH 'L'	HEIGHT 'H'	LINE	FLOW LINE		CONCRETE CLASS 'D'	SPECIAL BORROW GRADE %	REINFORCING STEEL	REMARKS	PLANS ON SHEET NO.
								UP STREAM ELEV.	DOWN STREAM ELEV.					
3	853+61.9	Separate Contract					AA						Separation - 106-49-4440 - I-74-72-4440	15
57	835+00 RL	Class I Pipe Std. E Inlet	12"		72'					0.64	5		1-Hdwl. Req'd.	15
58	840+80 LI	Class I Pipe Std. D Inlet	12"		46'					0.79	5		1-Hdwl. Req'd.	15
59	842+00	Sta R.C. Culvert (slab top type) under Pill			204'	5'-7"	742.5	741.4	502.3	695	379.65		Construct Inlet and Outlet Ditches. Wings on 30° Skew Connect to Structure No 59	23
60	842+15	Class I Pipe Std. N Inlet	15"		8'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	23
61	843+90 RL	BCCM Pipe Std. D Inlet	12"		64'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	23
62	844+00 LI	BCCM Pipe Std. D Inlet	12"		28'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	23
63	844+00 RL	BCCM Pipe Std. D Inlet	12"		30'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	23
64	845+26.65 LI	BCCM Pipe Std. A Inlet	12"		52'-30"					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	27
65	849+00 RL	BCCM Pipe Std. D Inlet	12"		74'-6"					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	27
66	851+00 LI	BCCM Pipe Std. A Inlet	12"		58'-54"					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	27
67	855+22.31 LI	BCCM Pipe Std. D Inlet	12"		58'-54"					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	31
68	855+50 RL	BCCM Pipe Std. A Inlet	12"		52'-54"					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	31
69	855+50 RL	BCCM Pipe Std. A Inlet	12"		58'-54"					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	35
70	855+75 LI	BCCM Pipe Std. D Inlet	12"		58'-54"					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	35
71	861+50 LI	BCCM Pipe Std. D Inlet	12"		45'-44"					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	31
72	862+50 RL	BCCM Pipe Std. D Inlet	12"		24'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	31
73	863+90 LI	BCCM Pipe Std. D Inlet	12"		52'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	35
74	865+50 RL	BCCM Pipe Std. D Inlet	12"		24'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	31
LINE 'L'														
75	107+65 RL	BCCM Pipe Std. A Inlet	12"		74'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	35
76	108+00 RL	BCCM Pipe Std. D Inlet	12"		38'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	35
77	123+00 LI	BCCM Pipe Std. D Inlet	12"		64'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	-7
78	123+40 RL	BCCM Pipe Std. D Inlet	12"		48'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	27
79	124+00 RL	BCCM Pipe Std. E Inlet	12"		94'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	35
80	142+20 RL	BCCM Pipe Std. D Inlet	12"		30'					0.64	7		2-22" 30' Bends and 1-Hdwl. Req'd.	35
81	142+26.25 RL	Class I Pipe Std. D Inlet	12"		28'					0.29	5		1-Hdwl. Req'd.	35
82	170+00 LI	Class I Pipe Std. E Inlet	12"		20'					0.29	7		1-Hdwl. Req'd.	27
83	130+75 LI	BCCM Pipe Std. D Inlet	12"		58'					0.64	7		2-22" 30' Bends and 1-Hdwl. Req'd.	27
84	133+75	Class I Pipe Std. N Inlet	15"		74'					0.29	8		1-Hdwl. Req'd.	27
85	134+90 RL	Class I Pipe Spl. D Inlet	12"		44'					0.29	5		1-Hdwl. Req'd.	31
86	138+80 LI	Class I Pipe Std. D Inlet	12"		42'					0.29	5		1-Hdwl. Req'd.	31
S.W. CONNECTION														
87	2+40 RL	BCCM Pipe Std. A Inlet	12"		48'		SWC			0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	27
88	5+60 RL	BCCM Pipe Std. A Inlet	12"		48'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	27
89	8+00 LI	BCCM Pipe Std. A Inlet	12"		40'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	27
90	3+50	Class III Pipe Std. A Inlet	18"		102'			781.00	786.57	3.75	9		2-22" 30' Bends and 1-Hdwl. Req'd.	27
91	10+00	BCCM Pipe Std. A Inlet	12"		72'					0.64	5		2-22" 30' Bends and 1-Hdwl. Req'd.	27
92	12+00	BCCM Pipe Std. A Inlet	12"		72'					0.64	5		2-22" 30' Bends and 1-Hdwl. Req'd.	27
93	15+20 RL	BCCM Pipe Std. A Inlet	12"		50'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	27
94	16+50	Class III Pipe	24"		106'			786.50	786.10	3.75	13		2-22" 30' Bends and 1-Hdwl. Req'd.	27
95	16+75 RL	BCCM Pipe Std. A Inlet	12"		50'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	27
S.W. LOOP														
96	2+50 RL	Class I Pipe Std. A Inlet	12"		20'		SWL			0.64			1-Hdwl. Req'd.	27
97	3+20	Class I Pipe	24"		74'			786.80	786.30	3.75	10		2-22" 30' Bends and 1-Hdwl. Req'd.	27
98	5+00 RL	BCCM Pipe Std. A Inlet	12"		36'-34"					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	27
99	7+50 RL	BCCM Pipe Std. A Inlet	12"		48'-36"					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	27
100	10+00 RL	BCCM Pipe Std. A Inlet	12"		64'-60"					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	27
100A	12+39.88 RL	BCCM Pipe Std. A Inlet	12"		78'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	27
N.W. CONNECTION														
101	10+00 RL	Class I Pipe Std. A Inlet	12"		18'		NWC			0.64			1-Hdwl. Req'd.	23
102	10+50	Class I Pipe	30"		56'			744.50	744.00	5.78	12		1-Hdwl. Req'd.	23
N.W. LOOP														
103	2+28	Class I Pipe	24"		40'-38"		NWL			1.46.58	745.68	3.75	10	23
104	2+50 RL	BCCM Pipe Std. A Inlet	12"		26'-34"					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	23
105	6+70	Class I Pipe	18"		86'			749.00	748.00	0.80	16		2-22" 30' Bends and 1-Hdwl. Req'd.	23
N.E. CONNECTION														
106	2+50 RL	BCCM Pipe Std. A Inlet	12"		26'		NEC			0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	31
107	3+50	Class I Pipe	30"		68'			743.80	743.50	5.78	13		2-22" 30' Bends and 1-Hdwl. Req'd.	31
108	5+00 RL	BCCM Pipe Std. A Inlet	12"		50'					0.64			1-Hdwl. Req'd.	31
109	8+00	Class I Pipe Std. A Inlet	12"		44'					0.64	5		2-22" 30' Bends and 1-Hdwl. Req'd.	31
110	11+00	Class I Pipe Std. A Inlet	12"		52'					0.64	5		1-Hdwl. Req'd.	31
16° N.E. LOOP														
111	2+50	BCCM Pipe Arch Class 9	24"		62'		NEL			1.46.50	746.0	0.85	7	31
112	7+50 RL	BCCM Pipe Std. A Inlet	12"		26'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	31
113	10+00 RL	BCCM Pipe Std. A Inlet	12"		50'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	31
114	10+25	Class III Pipe	24"		145'			745.10	744.00	2.50	16		2-22" 30' Bends and 1-Hdwl. Req'd.	31

STRUCTURE NUMBER	LOCATION	DESCRIPTION	SIZE	SKEW	LENGTH 'L'	HEIGHT 'H'	LINE	FLOW LINE		CONCRETE CLASS 'D'	SPECIAL BORROW GRADE %	REINFORCING STEEL	REMARKS	PLANS ON SHEET NO.
								UP STREAM ELEV.	DOWN STREAM ELEV.					
S.E. CONNECTION														
115	1+00 RL	BCCM Pipe Std. A Inlet	12"		56'		SEC			0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	23
116	3+15	Class III Pipe	18"		28'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	23
117	5+00 RL	BCCM Pipe Std. A Inlet	12"		42'			748.00	741.43	2.24	9		2-22" 30' Bends and 1-Hdwl. Req'd.	23
118	5+60 RL	BCCM Pipe Std. A Inlet	12"		36'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	23
119	6+75	Class I Pipe	18"		80'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	23
120	7+00 RL	BCCM Pipe Std. A Inlet	12"		82'			744.00	742.58	1.71	6		2-22" 30' Bends and 1-Hdwl. Req'd.	23
S.E. LOOP														
121	2+00 RL	BCCM Pipe Std. A Inlet	12"		54'		SEL			0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	31
122	4+40 RL	BCCM Pipe Std. A Inlet	12"		78'					0.64			2-22" 30' Bends and 1-Hdwl. Req'd.	31
123	6+00	Class I Pipe	18"		78'			748.00	748.54	1.54	8		2-22" 30' Bends and 1-Hdwl. Req'd.	31
124	8+00	BCCM Pipe Std. E Inlet	12"		94'		AA			0.64	7		2-22" 30' Bends and 1-Hdwl. Req'd.	31
125	8+10	Class I Pipe Std. E Inlet	12"		94'		AA			0.29	7		1-Hdwl. Req'd.	31

ESTIMATE OF QUANTITIES (URBAN SECTION)

FEDERAL ROAD DISTRICT NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	8-69-2(2-2)	1959	45	107

1-74-2 (22) 69.
Rev. 5-14-59, Bit. Shoulder Prime
Rev. 10-1-59, Bit. Shoulder Prime
Rev. 4-1-60, Subsurface Drain & Quantities.
Rev. 5-13-60, Limits of Construction.

ITEM	UNIT	QUANTITY
COMMON EXCAVATION 12-12-0	CYS.	408.44
SOLID ROCK EXCAVATION	CYS.	1068.00
UNCLASSIFIED EXCAVATION	CYS.	1068.00
SPECIAL BORROW	CYS.	346.280
OVERHAUL	CYS.	1068.00
ADDED HAUL	UNIT	
PEAT EXCAVATION	CYS.	
SURCHARGE - 4'	LFT.	
SURCHARGE - 4' 6"	LFT.	
SURCHARGE - 5' 12"	LFT.	
SURCHARGE - 12' 16"	LFT.	
SURCHARGE - 16' 20"	LFT.	
SURCHARGE - 20' 24"	LFT.	
MACHINE OPERATION	HRS.	
MACHINE AVAILABILITY	HRS.	
DYNAMITE	LBS.	
2" CASED TEST HOLES	LFT.	
4" CASED TEST HOLES	LFT.	
6" CASED TEST HOLES	LFT.	
2" CASED DYNAMITE HOLES	LFT.	
4" CASED DYNAMITE HOLES	LFT.	
6" CASED DYNAMITE HOLES	LFT.	
GRADE TEST SPECIAL BORROW	CYS.	292.60
PAVEMENT REMOVAL	SYS.	
SALVAGED PAVEMENT	SYS.	
SURFACE REMOVAL	SYS.	
BREAKING PAVEMENT	SYS.	
CURB REMOVAL	LFT.	
CENTER CURB REMOVAL	LFT.	
COMP. CURB & GUTTER REMOVAL	LFT.	
LIP GUTTER REMOVAL	LFT.	
GUTTER REMOVAL	LFT.	
WALK REMOVAL	SYS.	
STEPS REMOVAL	SYS.	
GUARD RAIL SALVAGE	LFT.	
RETAINING WALL REMOVAL	LFT.	
RETAINING WALL REMOVAL	CYS.	
PAVED SIDE DITCH REMOVAL	LFT.	
SALVAGED ROAD MATERIAL	CYS.	

PAVEMENT		
ITEM	UNIT	QUANTITY
SUBBASE TYPE "I" or "II"	CYS.	17,014
SALVAGED ROAD MATERIAL FOR SUBBASE	CYS.	10,100
H.E.S. PLAIN CONCRETE	SYS.	
REINFORCED CONCRETE 10" PLAIN CONCRETE	SYS.	32,000
H.E.S. REINFORCED CONCRETE	SYS.	
PLAIN CEMENT CONCRETE FOR CROSsoVERS	SYS.	
BITUMINOUS MIXTURE FOR CROSsoVERS	TONS	
COVERING AGGREGATE	TONS	
SUBGRADE FINE AGGREGATE	TONS	
COMPACTED AGGREGATE	TONS	
PRIVATE DRIVE PAVEMENT	SYS.	
COMMERCIAL DRIVE PAVEMENT	SYS.	
REINFORCING STEEL	LBS.	14,285
CONTRACTION JOINTS TYPE D-1	LFT.	14,072
1" PREFORMED JOINT FILLER	LFT.	
1" PREFORMED EXPANSION JOINT WITH LOAD TRANSFER	LFT.	282
3" EXPANSION JOINT	LFT.	159 2/3
1" PREFORMED JOINT FILLER	LFT.	319 1/3
CONCRETE BASE	SYS.	
H.E.S. CONCRETE BASE	SYS.	
CONCRETE PATCHES	SYS.	
CONCRETE PATCHES CLASS I	SYS.	
CONCRETE PATCHES CLASS II	SYS.	
CONCRETE PATCHES CLASS III	SYS.	
CONCRETE PATCHES CLASS IV	SYS.	
CONCRETE WIDENING	SYS.	
FILLING CRACKS AND JOINTS	TONS	
BITUMINOUS MATERIAL FOR UNDERSEAL	TONS	
DRILLING HOLES	EACH	
AGGREGATE FOR COMPACTED	TONS	
AGGREGATE BASE	TONS	
WATER FOR COMPACTED	M.GALS.	
AGGREGATE BASE	M.GALS.	
AGGREGATE FOR SHOULDER DRAINS	TONS	
BITUMINOUS MATERIAL FOR PRIME	TONS	
BITUMINOUS MATERIAL FOR SEAL	TONS	
COVERING AGGREGATE	TONS	
HOT ASPHALTIC CONCRETE BINDER (I)	TONS	
HOT ASPHALTIC CONCRETE SURFACE TYPE "B"	TONS	
BITUMINOUS COATED BLENDED AGGREGATE BINDER	(I) TONS	
BITUMINOUS COATED BLENDED AGGREGATE SURFACE	TONS	
BITUMINOUS COATED AGGREGATE BINDER	(I) TONS	
BITUMINOUS COATED AGGREGATE SURFACE	TONS	

MISCELLANEOUS		
ITEM	UNIT	QUANTITY
BITUM MIXTURE FOR APPROACHES	TONS	
SALVAGED ROAD MATERIAL FOR APPROACHES	CYS.	
BITUMINOUS SHOULDER	1009 TONS	1009
BITUMINOUS MATERIAL FOR SEAL	TONS	3.1
COVERING AGGREGATE	TONS	64.4
BITUMINOUS MATERIAL FOR PRIME	TONS	38.3
PRIME SUBBASE	TONS	38.3
CONCRETE CURB	LFT.	
CONCRETE CURB TYPE "B"	LFT.	
CONCRETE GUTTER	LFT.	
COMB. CONC. CURB AND GUTTER	LFT.	
RECONSTRUCTED CONC. CURB	LFT.	
RECONSTRUCTED CONC. GUTTER	LFT.	
RECONSTRUCTED COMB. CONC. CURB AND GUTTER	LFT.	
RESET CURB	LFT.	
RESET COMB. CONC. CURB & GUTTER	LFT.	
CONCRETE CENTER CURB	LFT.	
CONCRETE CENTER CURB	SYS.	
FLEXIBLE STEEL PLATE GUARD RAIL	LFT.	
STEEL BEAM GUARD RAIL 11.530'	LFT.	11,530
SHOP CURVED STEEL BEAM GUARD RAIL	LFT.	
DOUBLE FACE STEEL BEAM GUARD RAIL	LFT.	
WIRE ROPE GUARD RAIL	LFT.	
WOVEN WIRE FABRIC GUARD RAIL	LFT.	
GUARD RAIL	LFT.	
RESETTING FLEXIBLE STEEL PLATE GUARD RAIL	LFT.	
GUARD RAIL	LFT.	
GUARD RAIL POSTS	EA.	
RESETTING STEEL BEAM GUARD RAIL	LFT.	
RESETTING WIRE ROPE GUARD RAIL	LFT.	
RESET WOVEN WIRE FABRIC GUARD RAIL	LFT.	
GUARD FENCE	LFT.	
GUIDE POSTS, TYPE "A"	EA.	14,285
GUIDE POSTS, TYPE "B"	EA.	
BARRICADES, TYPE "A"	EA.	1
BARRICADES, TYPE "B"	EA.	2
TYPICAL SIGN STANDARDS	EA.	10
RAILROAD CROSSING SIGN TYPE "A"	EA.	
RAILROAD CROSSING SIGN TYPE "B"	EA.	
ADVANCE RAILROAD WARNING SIGN	EA.	
CONCRETE HEADER	LFT.	
RECONSTRUCTED CONCRETE HEADER	LFT.	
CEMENT CONCRETE SIDEWALK	SYS.	
RECONSTRUCTED CONCRETE SIDEWALK	SYS.	
CROSSWALK	SYS.	
RIGHT OF WAY MARKERS	EA.	2
RESET RIGHT OF WAY MARKERS	EA.	
MONUMENTS, TYPE "A"	EA.	
MONUMENTS, TYPE "B"	EA.	
CASTINGS ADJUSTED TO GRADE	EA.	
MONUMENTS	EA.	
MONUMENTS, RE-ESTABLISHED	EA.	
BENCH MARK POSTS	EA.	
RESETTING BENCH MARK POSTS	EA.	
SODDING	17,578 SYS.	17,578
FURNISHING AND PLACING:		
AGRICULTURAL LIMESTONE	TONS	101
FERTILIZER	TONS	15
SEED	TONS	3512
FURNISHING AND APPLYING MULCHING MATERIAL	TONS	176
PLAIN SEEDING	SYS.	
MULCHED SEEDING	SYS.	
FURNISHING AND INSTALLING CONDUIT	LFT.	475
FENCE (CHAIN LINK TYPE)	LFT.	3922

MISCELLANEOUS		
ITEM	UNIT	QUANTITY
6" HAND LAID RIP RAP	SYS.	
12" HAND LAID RIP RAP	SYS.	
GROUTED RIP RAP	SYS.	
PLACING GROUTED RIP RAP	SYS.	
PLACING 6" HAND LAID RIP RAP	SYS.	
PLACING 12" HAND LAID RIP RAP	SYS.	
PRECAST CONCRETE RIP RAP	SYS.	
PAVED GUTTER	LFT.	281
STANDARD LIP GUTTER	LFT.	4301
SPL. LIP GUTTER	SYS.	37
PAVED SIDE DITCH TYPE "A"	LFT.	287
PAVED SIDE DITCH TYPE "B"	LFT.	
PAVED SIDE DITCH TYPE "C"	LFT.	
SPL. INTEGRAL CONC. CURB	LFT.	10,300
INTEGRAL CONCRETE CURB	LFT.	
INTEGRAL CONCRETE CURB TYPE "B"	LFT.	19,534
BITUMINOUS CURB	LFT.	

MISCELLANEOUS		
ITEM	UNIT	QUANTITY
6" HAND LAID RIP RAP	SYS.	
12" HAND LAID RIP RAP	SYS.	
GROUTED RIP RAP	SYS.	
PLACING GROUTED RIP RAP	SYS.	
PLACING 6" HAND LAID RIP RAP	SYS.	
PLACING 12" HAND LAID RIP RAP	SYS.	
PRECAST CONCRETE RIP RAP	SYS.	
PAVED GUTTER	LFT.	281
STANDARD LIP GUTTER	LFT.	4301
SPL. LIP GUTTER	SYS.	37
PAVED SIDE DITCH TYPE "A"	LFT.	287
PAVED SIDE DITCH TYPE "B"	LFT.	
PAVED SIDE DITCH TYPE "C"	LFT.	
SPL. INTEGRAL CONC. CURB	LFT.	10,300
INTEGRAL CONCRETE CURB	LFT.	
INTEGRAL CONCRETE CURB TYPE "B"	LFT.	19,534
BITUMINOUS CURB	LFT.	

SUBSURFACE DRAINS

LINE	LOCATION				G ^o CLASS VII PIPE	STA.	LOCATION	OUTLET			AGGREGATE FOR SUBSURFACE DRAINS	GUIDE POSTS TYPE "A"	REMARKS	
	FROM	TO	LANE	STA.				G ^o TEES	90° ELBOWS	WYES				
L	429+80	455+59	Rt.	LFT.	409	450+17	Drain thru Fill Lt.			190	24	EACH	Connect to S.S. Drain on N.E.-L.	
NE-L	0+00	7+00			700	10+30	Drain thru Fill Rt.			42	3		Cross under Pvt. Lt. Rt. S.E.-L.	
NE-C	10+90	19+99			969	12+27	Drain thru Fill Rt.			28	57		Connect to S.S. Drain on Line "L"	
						19+00	Drain thru Fill Rt.			80			Connect to S.S. Drain on Line "L"	
L	457+00	441+50	Rt.	LFT.	450	497+00	Drain to Spl. Ditch Rt.			28	1		Cross under Pavement	
L	442+25	450+00	Rt.	LFT.	772					46	27			
L	428+00	428+90	Lt.	LFT.	150	428+00	Drain thru Fill Lt.			18	6		Connect to S.S. Drain on N.E.-C.	
L	431+50	434+50	Lt.	LFT.	900	431+50	Drain thru Fill Lt.			18	18			
L	439+00	450+00	Lt.	LFT.	1100	439+00	Drain thru Fill Lt.			35	66		Cross under Pavement N.W.-L.	
NW-C	0+00	8+00			800	6+00	Drain thru Fill Rt.			18	47			
NW-C	10+00	11+50			150	11+50	Drain thru Fill Rt.			22	9		N.W.-C Wyes into Line L - S.S. Drain	
SW-C	11+00	13+00	Lt.	LFT.	200	12+00	Drain into Str. No. 91			44	23		Curve to Rt.	
AA	884+00	887+35	Lt.	LFT.	335	883+35	Under Pvm. & Thru Fill Lt.			44	23			
Undistributed Quantities											800	125		
Totals											6760	486	5	
											7115	508	10	

Note: An allowance of 2' of 6" Class VII Pipe is made for each Tee and Elbow and is included in the length shown under Outlet G^o Class VII Pipe.

STRUCTURES

ITEM	PIPE - LINEAL FEET										
	4"	6"	8"	10"	12"	15"	18"	24"	30"	36"	48"
CLASS I											
CLASS II					640	182	164	144	124		
CLASS III											
CLASS IV							200	254			
CLASS V											
CLASS VI											
REINFORCED CONCRETE											
VITRIFIED CLAY											
CONCRETE											
CORRUGATED METAL											
BITUMINOUS COATED CORRUGATED METAL											
SEWER											
R.C. or V.C. SEWER					300	200	100				
DEFORMED CORRUGATED METAL											
SPRINKLER CORRUGATED PIPE									62		
DRAIN TILE					400	300	200				

SUBSURFACE DRAINAGE		CASTINGS ADJUSTED TO GRADE		FOR STRUCTURES			AUTO. DRAINAGE GATES						
PIPE - LINEAL FEET				EACH		ITEM			SIZE				
6" CLASS VII	7611					CONCRETE CLASS "D"	CYS.	52.14					
						REINFORCING STEEL	LBS.	37,965					

CATCH BASINS		PIPE CATCH BASIN		INLETS		MANHOLES		RECONSTRUCTED	
TYPE	EACH	SIZE	EACH	TYPE	EACH	TYPE	EACH	TYPE	LIN. FT.
		12"		N	2	A-4		MANHOLE	
		15"		D-G	18	B-4		CATCH BASIN	
		18"		A-9	18			INLET	
		24"		E-7	5			R.C. SPRING BOX	