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FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND	44(4)	1952	1	175

**STATE OF INDIANA  
STATE HIGHWAY COMMISSION**

**PLAN AND PROFILE OF PROPOSED  
STATE HIGHWAY  
F. PROJECT NO. 44 (4)**

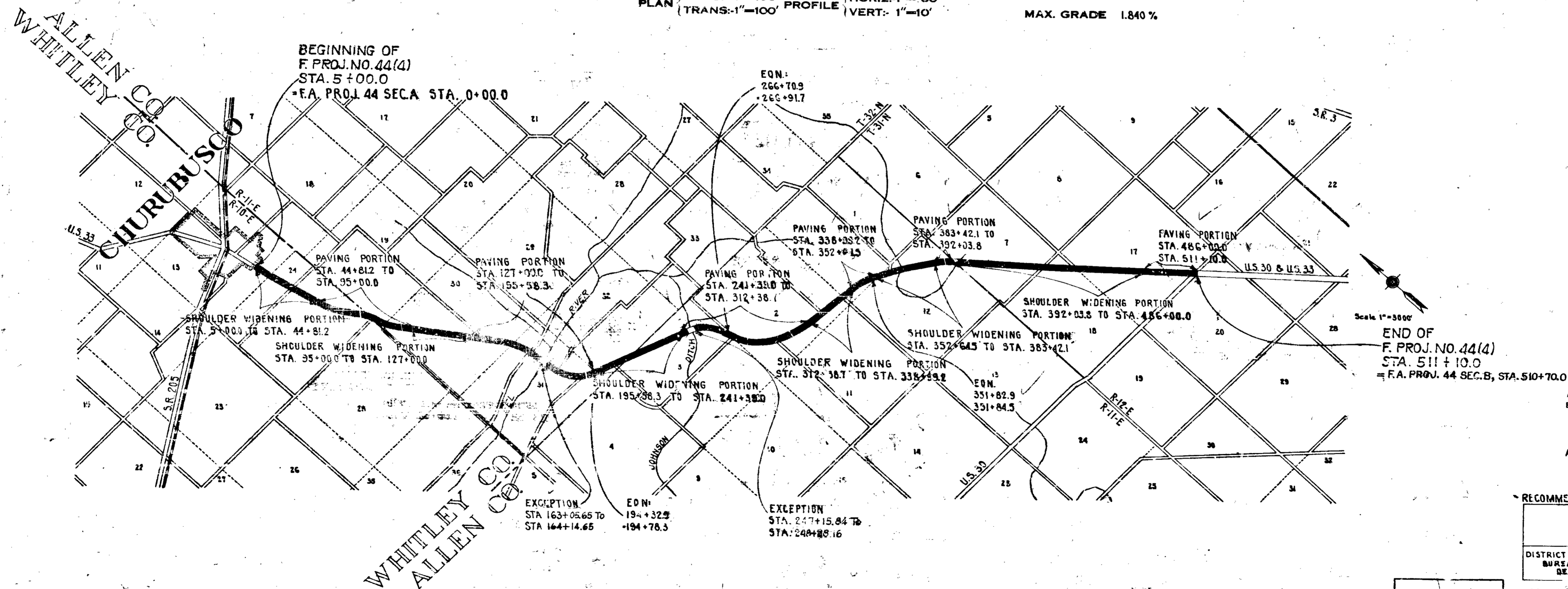
**CHURUBUSCO - FT. WAYNE ROAD**

BEGINNING ON U.S. ROAD 33 AT THE SOUTH CORPORATION LINE OF CHURUBUSCO IN WHITLEY COUNTY AND EXTENDING IN A SOUTHEASTERLY DIRECTION TO A POINT ON U.S. 33 APPROX. 60 FEET SOUTHEAST OF THE NORTH LINE OF SEC. 20-T31N-R12E, IN ALLEN COUNTY

GROSS LENGTH- 9.572 MI. PAVING PORTION NET LENGTH- 4.436 MI.  
NET LENGTH- 5.530 MI. SHOULDER WIDENING PORTION NET LENGTH- 5.094 MI.  
SCALES- PLAN (LONG- 1"=100' PROFILE (HORIZ- 1"=100' VERT- 1"=10'  
MAX. GRADE 1.840 %

REVISIONS

DATE	SHEETS NO.	REVISED
12-22-49	10 & 11	R/W
3-13-52	25	Intersection Details



STATE HIGHWAY COMMISSION OF INDIANA.  
STANDARD SPECIFICATIONS DATED 1946  
TO BE USED WITH THESE PLANS

RECOMMENDED FOR APPROVAL 12-10-51

*W. H. Pugh*  
ENGINEER OF ROAD DESIGN, STATE HIGHWAY COMMISSION OF INDIANA

APPROVED AND ADOPTED 12/19/51  
BY STATE HIGHWAY COMMISSION OF INDIANA.  
*James E. Hadden*  
CHAIRMAN - STATE HIGHWAY COMMISSION OF INDIANA  
APPROVED Dec. 18, 1951  
*Frank Bowen*  
CHIEF ENGINEER - STATE HIGHWAY COMMISSION OF INDIANA

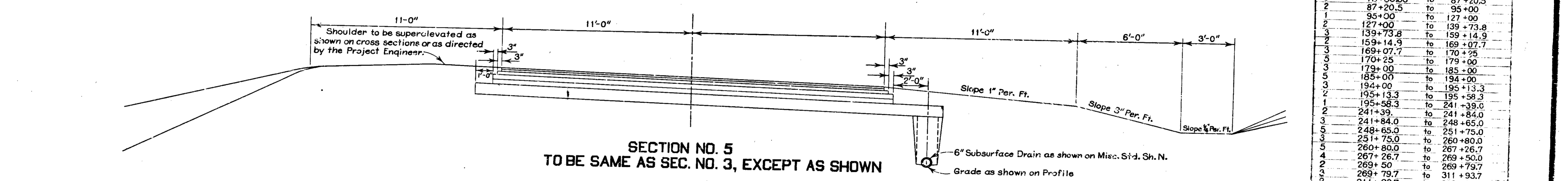
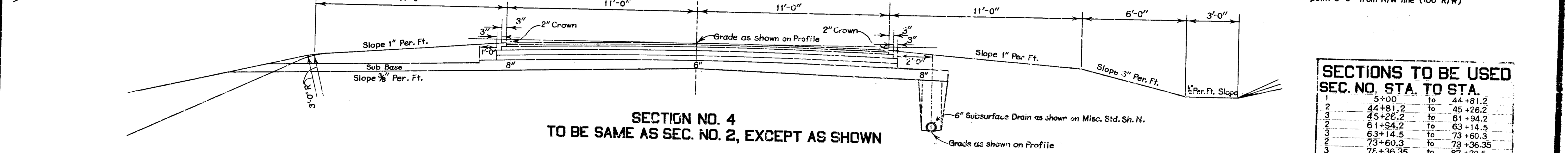
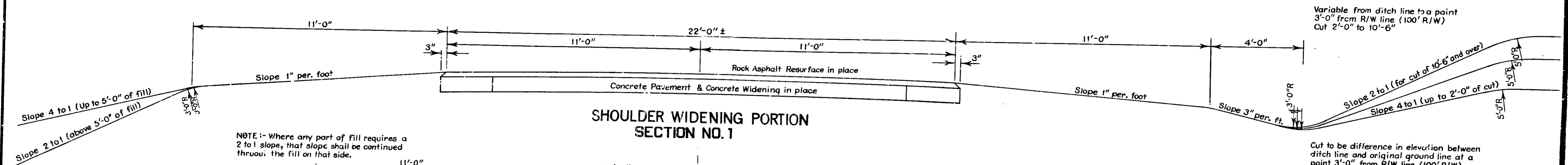
RECOMMENDED FOR APPROVAL DATE

DISTRICT ENGINEER  
BUREAU OF PUBLIC ROADS  
DEPARTMENT OF COMMERCE

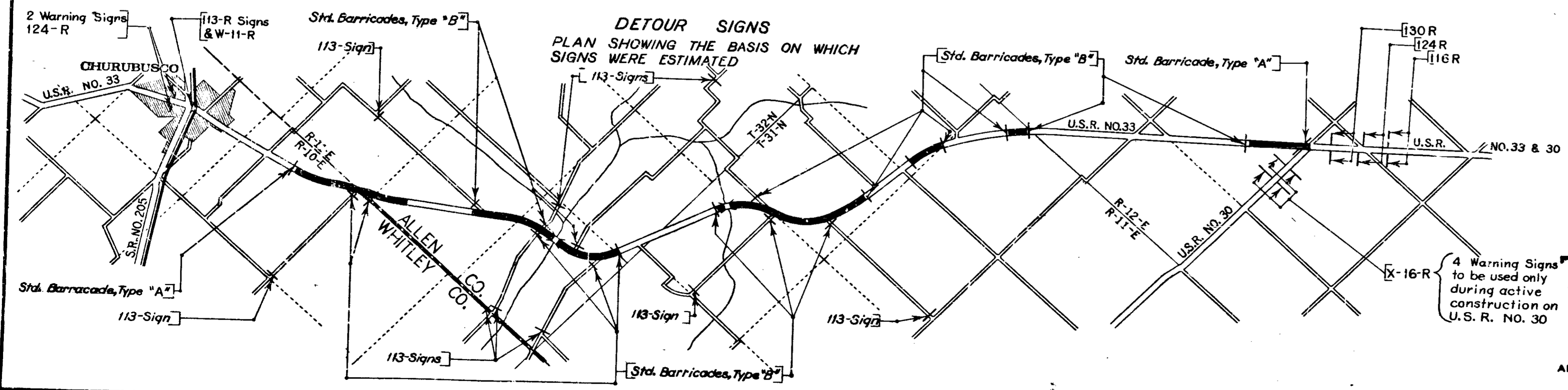
APPROVED DATE

DIVISION ENGINEER  
BUREAU OF PUBLIC ROADS  
DEPARTMENT OF COMMERCE

FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	44 (4)	1952	2	175



SECTIONS TO BE USED		
SEC. NO.	STA. TO	STA.
1	5+00	to 44+81.2
2	44+81.2	to 45+26.2
3	45+26.2	to 61+94.2
4	61+94.2	to 63+14.5
5	63+14.5	to 73+60.3
6	73+60.3	to 73+36.35
7	73+36.35	to 87+20.5
8	87+20.5	to 95+00
9	95+00	to 127+00
10	127+00	to 139+73.8
11	139+73.8	to 159+14.9
12	159+14.9	to 169+07.7
13	169+07.7	to 170+25
14	170+25	to 179+00
15	179+00	to 185+00
16	185+00	to 194+00
17	194+00	to 195+13.3
18	195+13.3	to 195+58.3
19	195+58.3	to 241+39.0
20	241+39.0	to 241+84.0
21	241+84.0	to 248+65.0
22	248+65.0	to 251+75.0
23	251+75.0	to 260+80.0
24	260+80.0	to 267+26.7
25	267+26.7	to 269+50.0
26	269+50	to 269+79.7
27	269+79.7	to 311+93.7
28	311+93.7	to 312+38.7
29	312+38.7	to 338+99.2
30	338+99.2	to 339+44.2
31	339+44.2	to 352+19.5
32	352+19.5	to 352+64.5
33	352+64.5	to 383+42.1
34	383+42.1	to 383+87.1
35	383+87.1	to 391+58.8
36	391+58.8	to 392+03.8
37	392+03.8	to 426+00.0
38	426+00.0	to 504+50
39	See Sh. NO. 25 Sta. 504+50	to 511+10



# TYPICAL CROSS SECTIONS

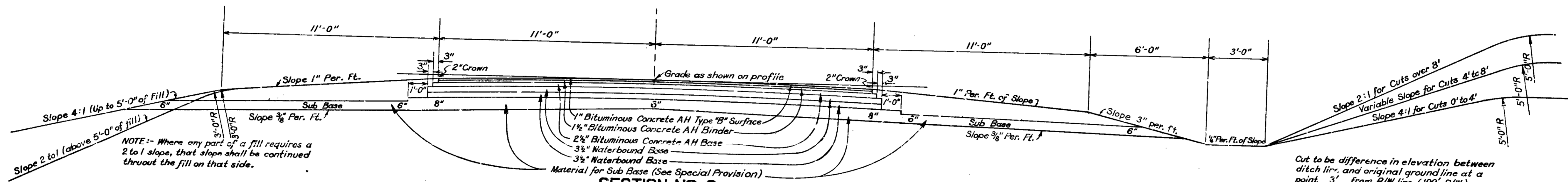
SCALE: \_\_\_\_\_

APPROVED: *Raymond A. ...* 12/18/51  
 CHIEF ENGINEER, STATE HIGHWAY COMMISSION OF INDIANA

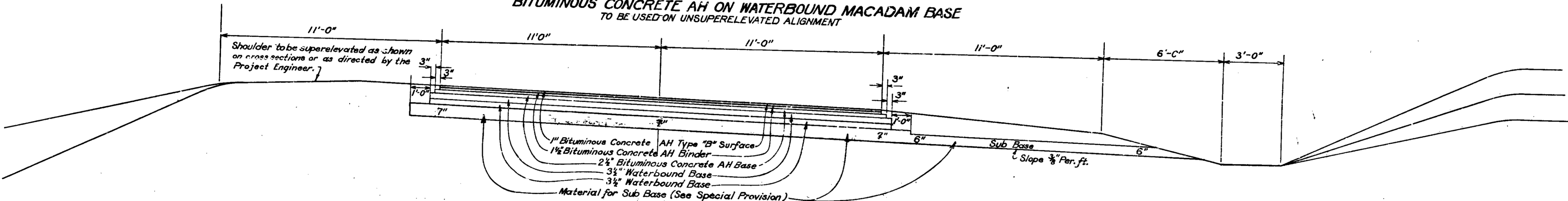
APPROVED: *Samuel C. ...* 12/19/51  
 CHAIRMAN, STATE HIGHWAY COMMISSION OF INDIANA

RECOMMENDED FOR APPROVAL 12-18-51  
*W. H. ...*  
 ENGINEER OF ROAD DESIGN, STATE HIGHWAY COMMISSION OF INDIANA

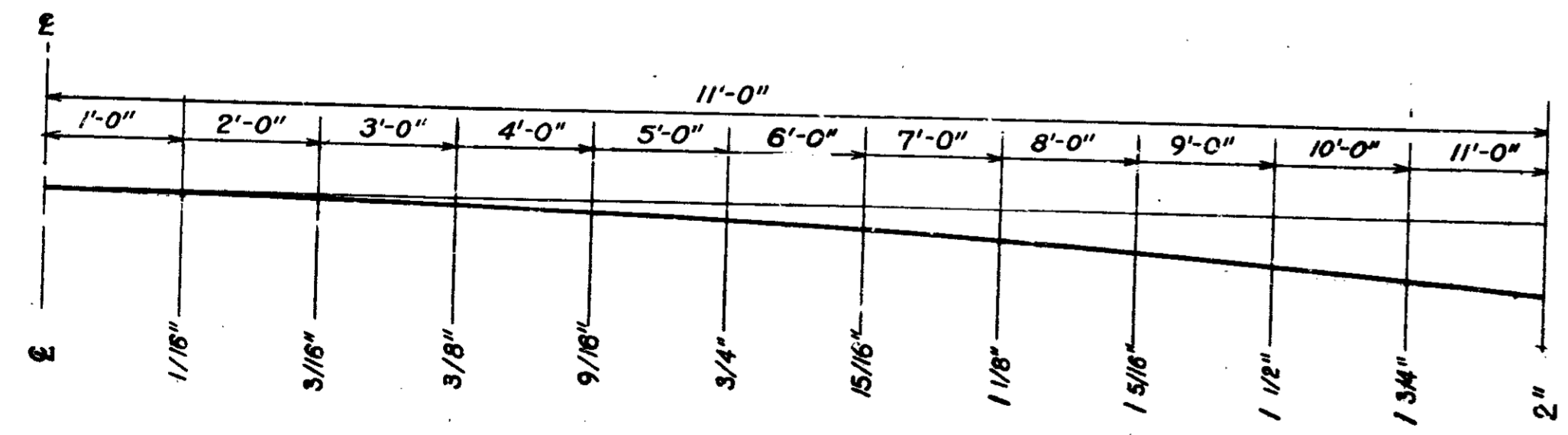
FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	44(4)	1952	3	175



**SECTION NO. 2**  
**BITUMINOUS CONCRETE AH ON WATERBOUND MACADAM BASE**  
 TO BE USED ON UNSUPERELEVATED ALIGNMENT



**SECTION NO. 3**  
**BITUMINOUS CONCRETE AH ON WATERBOUND MACADAM BASE**  
 TO BE USED ON SUPERELEVATED CURVES



**PAVEMENT OFFSETS**  
 HALF SECTION 22' PAVEMENT  
 Not to Scale

**TYPICAL CROSS SECTIONS**

SCALE: 1/4" = 1'

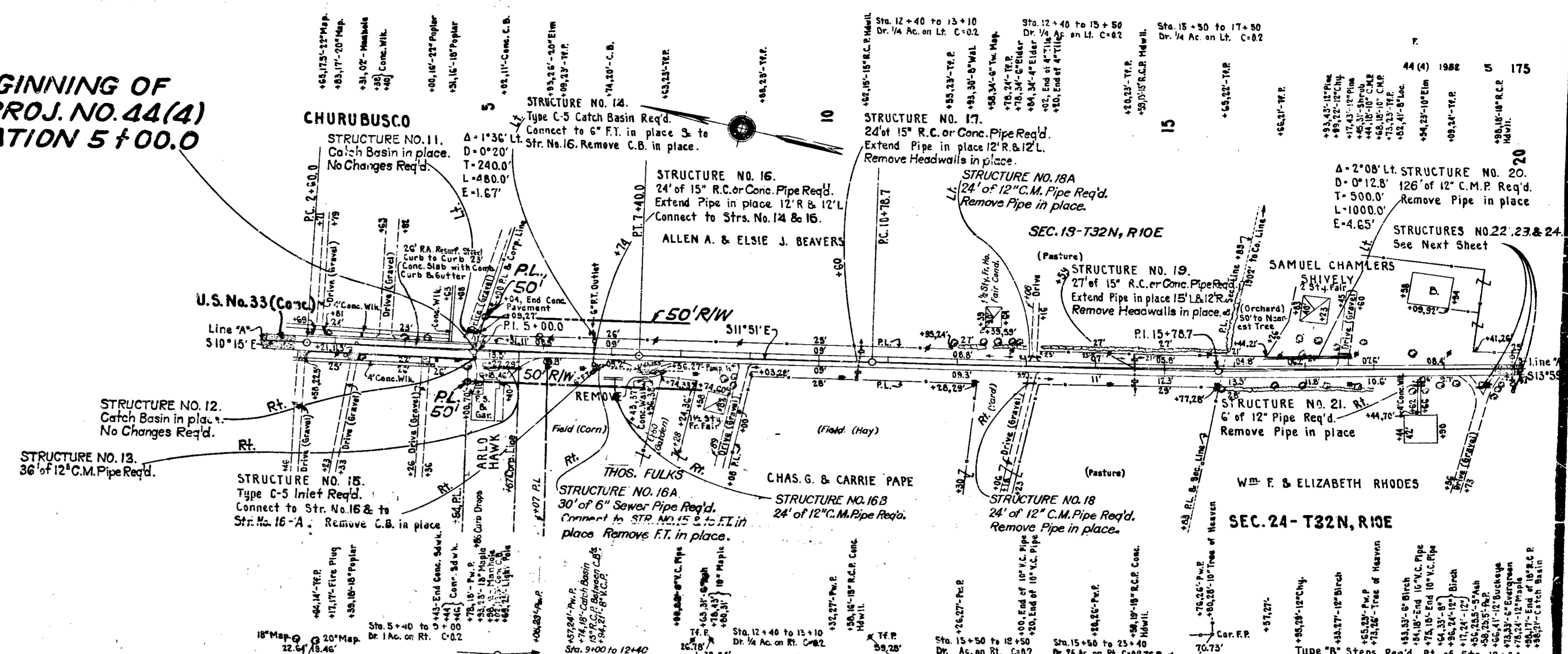
APPROVED *Frank Bowen* 12/18/51  
 CHIEF ENGINEER STATE HIGHWAY COMMISSION OF INDIANA

RECOMMENDED FOR APPROVAL 12-18-51

APPROVED *Lamuel C. Hadden* 12/19/51  
 CHAIRMAN STATE HIGHWAY COMMISSION OF INDIANA

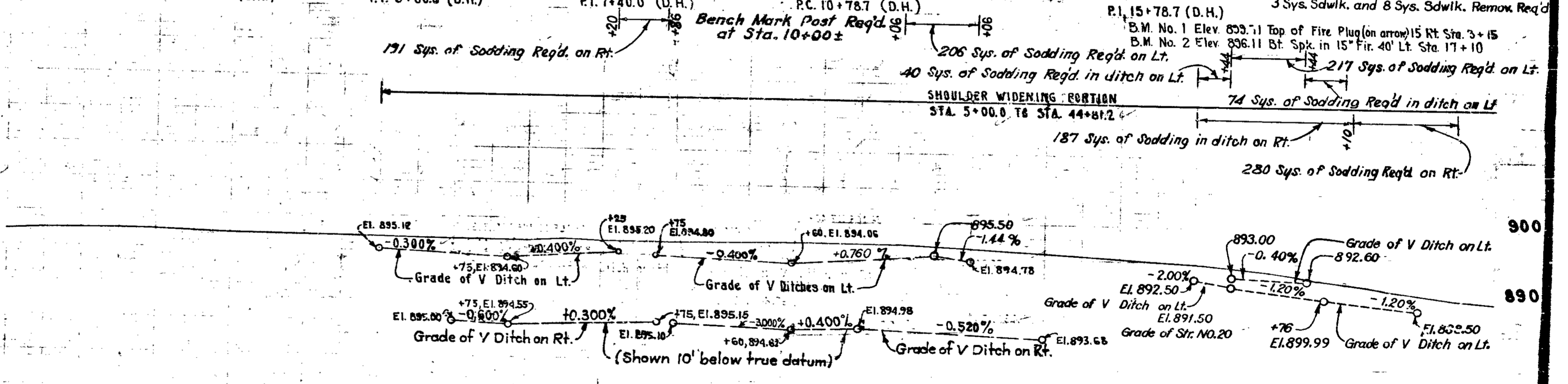
*W. F. Perkins*  
 ENGINEER OF ROAD DESIGN STATE HIGHWAY COMMISSION OF INDIANA

**BEGINNING OF  
F. PROJ. NO. 44(4)  
STATION 5+00.0**



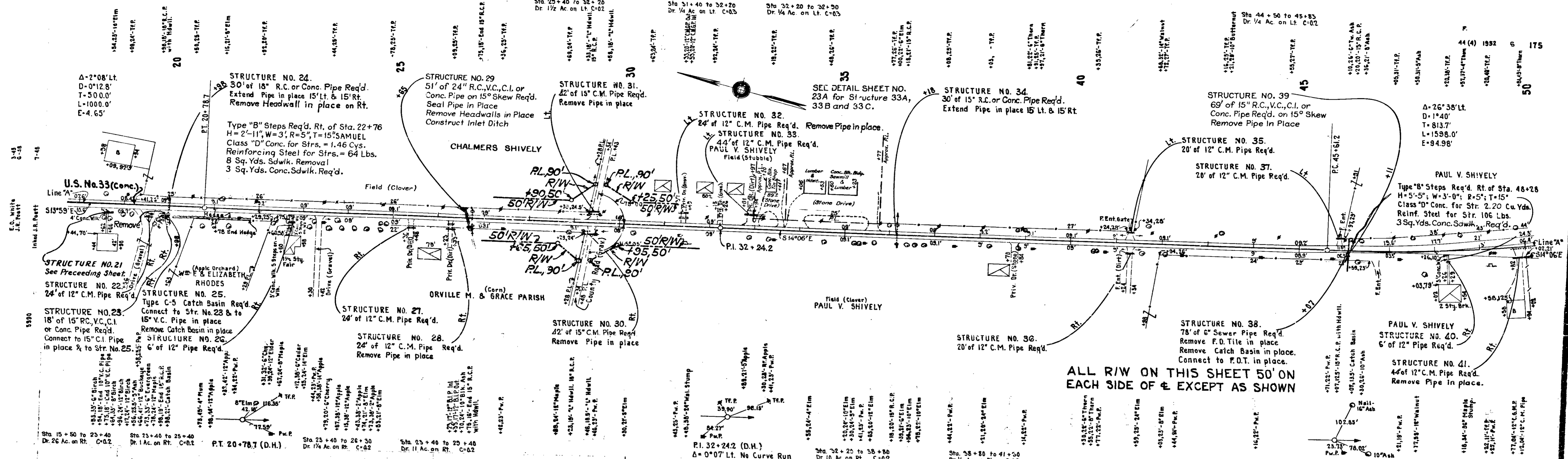
**ALL R/W ON THIS SHEET 50' ON EACH SIDE OF & EXCEPT AS SHOWN**

**TYPICAL CROSS SECTION AS SHOWN ON SHEET NO. 2 AND NO. 3 TO BE USED ON THIS PROJECT.**  
**STATE HIGHWAY COMMISSION OF INDIANA STANDARD SPECIFICATIONS DATED 1946 TO BE USED WITH THESE PLANS**  
 Standards under dates as listed in index on Title Sheet to be used on this Project.  
 Grade line as shown on profile represents top of finished surface.  
 All ditches of 1% and over shall be sodded except where Paved Side Ditch is to be constructed.  
 All shoulders, cut and fill slopes shall be plain or mulched seeded except where sodding is specified.  
 Shoulders are to be sodded as shown on Miscellaneous Standard Sheet "B".  
 Sodding shall be placed along paved side ditch as shown on Miscellaneous Standard Sheet "E".  
 Excavation quantities for Balances on plan and profile are given on Sheet No. 22 A.  
 Paper Relocation to be cross-sectioned by the Project Engineer before construction.  
 Curves of 1° and over shall be superelevated according to the Standards of 1932, except as shown in details on Sheet No. 22  
 Public and Private Approaches shall be constructed as shown in Details on Sheet NO. 23 A.



**BALANCE NO. 1**

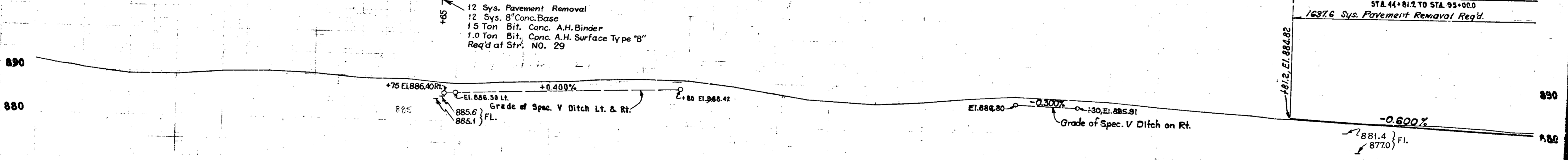
871.11	871.22	871.33	871.44	871.55	871.66	871.77	871.88	871.99	872.10	872.21	872.32	872.43	872.54	872.65	872.76	872.87	872.98	873.09	873.20	873.31	873.42	873.53	873.64	873.75	873.86	873.97	874.08	874.19	874.30	874.41	874.52	874.63	874.74	874.85	874.96	875.07	875.18	875.29	875.40	875.51	875.62	875.73	875.84	875.95	876.06	876.17	876.28	876.39	876.50	876.61	876.72	876.83	876.94	877.05	877.16	877.27	877.38	877.49	877.60	877.71	877.82	877.93	878.04	878.15	878.26	878.37	878.48	878.59	878.70	878.81	878.92	879.03	879.14	879.25	879.36	879.47	879.58	879.69	879.80	879.91	880.02	880.13	880.24	880.35	880.46	880.57	880.68	880.79	880.90	881.01	881.12	881.23	881.34	881.45	881.56	881.67	881.78	881.89	882.00	882.11	882.22	882.33	882.44	882.55	882.66	882.77	882.88	882.99	883.10	883.21	883.32	883.43	883.54	883.65	883.76	883.87	883.98	884.09	884.20	884.31	884.42	884.53	884.64	884.75	884.86	884.97	885.08	885.19	885.30	885.41	885.52	885.63	885.74	885.85	885.96	886.07	886.18	886.29	886.40	886.51	886.62	886.73	886.84	886.95	887.06	887.17	887.28	887.39	887.50	887.61	887.72	887.83	887.94	888.05	888.16	888.27	888.38	888.49	888.60	888.71	888.82	888.93	889.04	889.15	889.26	889.37	889.48	889.59	889.70	889.81	889.92	890.03	890.14	890.25	890.36	890.47	890.58	890.69	890.80	890.91	891.02	891.13	891.24	891.35	891.46	891.57	891.68	891.79	891.90	892.01	892.12	892.23	892.34	892.45	892.56	892.67	892.78	892.89	893.00	893.11	893.22	893.33	893.44	893.55	893.66	893.77	893.88	893.99	894.10	894.21	894.32	894.43	894.54	894.65	894.76	894.87	894.98	895.09	895.20	895.31	895.42	895.53	895.64	895.75	895.86	895.97	896.08	896.19	896.30	896.41	896.52	896.63	896.74	896.85	896.96	897.07	897.18	897.29	897.40	897.51	897.62	897.73	897.84	897.95	898.06	898.17	898.28	898.39	898.50	898.61	898.72	898.83	898.94	899.05	899.16	899.27	899.38	899.49	899.60	899.71	899.82	899.93	900.04	900.15	900.26	900.37	900.48	900.59	900.70	900.81	900.92	901.03	901.14	901.25	901.36	901.47	901.58	901.69	901.80	901.91	902.02	902.13	902.24	902.35	902.46	902.57	902.68	902.79	902.90	903.01	903.12	903.23	903.34	903.45	903.56	903.67	903.78	903.89	904.00	904.11	904.22	904.33	904.44	904.55	904.66	904.77	904.88	904.99	905.10	905.21	905.32	905.43	905.54	905.65	905.76	905.87	905.98	906.09	906.20	906.31	906.42	906.53	906.64	906.75	906.86	906.97	907.08	907.19	907.30	907.41	907.52	907.63	907.74	907.85	907.96	908.07	908.18	908.29	908.40	908.51	908.62	908.73	908.84	908.95	909.06	909.17	909.28	909.39	909.50	909.61	909.72	909.83	909.94	910.05	910.16	910.27	910.38	910.49	910.60	910.71	910.82	910.93	911.04	911.15	911.26	911.37	911.48	911.59	911.70	911.81	911.92	912.03	912.14	912.25	912.36	912.47	912.58	912.69	912.80	912.91	913.02	913.13	913.24	913.35	913.46	913.57	913.68	913.79	913.90	914.01	914.12	914.23	914.34	914.45	914.56	914.67	914.78	914.89	915.00	915.11	915.22	915.33	915.44	915.55	915.66	915.77	915.88	915.99	916.10	916.21	916.32	916.43	916.54	916.65	916.76	916.87	916.98	917.09	917.20	917.31	917.42	917.53	917.64	917.75	917.86	917.97	918.08	918.19	918.30	918.41	918.52	918.63	918.74	918.85	918.96	919.07	919.18	919.29	919.40	919.51	919.62	919.73	919.84	919.95	920.06	920.17	920.28	920.39	920.50	920.61	920.72	920.83	920.94	921.05	921.16	921.27	921.38	921.49	921.60	921.71	921.82	921.93	922.04	922.15	922.26	922.37	922.48	922.59	922.70	922.81	922.92	923.03	923.14	923.25	923.36	923.47	923.58	923.69	923.80	923.91	924.02	924.13	924.24	924.35	924.46	924.57	924.68	924.79	924.90	925.01	925.12	925.23	925.34	925.45	925.56	925.67	925.78	925.89	926.00	926.11	926.22	926.33	926.44	926.55	926.66	926.77	926.88	926.99	927.10	927.21	927.32	927.43	927.54	927.65	927.76	927.87	927.98	928.09	928.20	928.31	928.42	928.53	928.64	928.75	928.86	928.97	929.08	929.19	929.30	929.41	929.52	929.63	929.74	929.85	929.96	930.07	930.18	930.29	930.40	930.51	930.62	930.73	930.84	930.95	931.06	931.17	931.28	931.39	931.50	931.61	931.72	931.83	931.94	932.05	932.16	932.27	932.38	932.49	932.60	932.71	932.82	932.93	933.04	933.15	933.26	933.37	933.48	933.59	933.70	933.81	933.92	934.03	934.14	934.25	934.36	934.47	934.58	934.69	934.80	934.91	935.02	935.13	935.24	935.35	935.46	935.57	935.68	935.79	935.90	936.01	936.12	936.23	936.34	936.45	936.56	936.67	936.78	936.89	937.00	937.11	937.22	937.33	937.44	937.55	937.66	937.77	937.88	937.99	938.10	938.21	938.32	938.43	938.54	938.65	938.76	938.87	938.98	939.09	939.20	939.31	939.42	939.53	939.64	939.75	939.86	939.97	940.08	940.19	940.30	940.41	940.52	940.63	940.74	940.85	940.96	941.07	941.18	941.29	941.40	941.51	941.62	941.73	941.84	941.95	942.06	942.17	942.28	942.39	942.50	942.61	942.72	942.83	942.94	943.05	943.16	943.27	943.38	943.49	943.60	943.71	943.82	943.93	944.04	944.15	944.26	944.37	944.48	944.59	944.70	944.81	944.92	945.03	945.14	945.25	945.36	945.47	945.58	945.69	945.80	945.91	946.02	946.13	946.24	946.35	946.46	946.57	946.68	946.79	946.90	947.01	947.12	947.23	947.34	947.45	947.56	947.67	947.78	947.89	948.00	948.11	948.22	948.33	948.44	948.55	948.66	948.77	948.88	948.99	949.10	949.21	949.32	949.43	949.54	949.65	949.76	949.87	949.98	950.09	950.20	950.31	950.42	950.53	950.64	950.75	950.86	950.97	951.08	951.19	951.30	951.41	951.52	951.63	951.74	951.85	951.96	952.07	952.18	952.29	952.40	952.51	952.62	952.73	952.84	952.95	953.06	953.17	953.28	953.39	953.50	953.61	953.72	953.83	953.94	954.05	954.16	954.27	954.38	954.49	954.60	954.71	954.82	954.93	955.04	955.15	955.26	955.37	955.48	955.59	955.70	955.81	955.92	956.03	956.14	956.25	956.36	956.47	956.58	956.69	956.80	956.91	957.02	957.13	957.24	957.35	957.46	957.57	957.68	957.79	957.90	958.01	958.12	958.23	958.34	958.45	958.56	958.67	958.78	958.89	959.00	959.11	959.22	959.33	959.44	959.55	959.66	959.77	959.88	959.99	960.10	960.21	960.32	960.43	960.54	960.65	960.76	960.87	960.98	961.09	961.20	961.31	961.42	961.53	961.64	961.75	961.86	961.97	962.08	962.19	962.30	962.41	962.52	962.63	962.74	962.85	962.96	963.07	963.18	963.29	963.40	963.51	963.62	963.73	963.84	963.95	964.06	964.17	964.28	964.39	964.50	964.61	964.72	964.83	964.94	965.05	965.16	965.27	965.38	965.49	965.60	965.71	965.82	965.93	966.04	966.15	966.26	966.37	966.48	966.59	966.70	966.81	966.92	967.03	967.14	967.25	967.36	967.47	967.58	967.69	967.80	967.91	968.02	968.13	968.24	968.35	968.46	968.57	968.68	968.79	968.90	969.01	969.12	969.23	969.34	969.45	969.56	969.67	969.78	969.89	970.00	970.11	970.22	970.33	970.44	970.55	970.66	970.77	970.88	970.99	971.10	971.21	971.32	971.43	971.54	971.65	971.76	971.87	971.98	972.09	972.20	972.31	972.42	972.53	972.64	972.75	972.86	972.97	973.08	973.19	973.30	973.41	973.52	973.63	973.74	973.85	973.96	974.07	974.18	974.29	974.40	974.51	974.62	974.73	974.84	974.95	975.06	975.17	975.28	975.39	975.50	975.61	975.72	975.83	975.94	976.05	9
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ALL R/W ON THIS SHEET 50' ON EACH SIDE OF  $\Phi$  EXCEPT AS SHOWN

See Preceding Sheet for Sodding Req'd. on Rt. 211 Sys. of Sodding Req'd. on Rt. 142 Sys. of Sodding Req'd. on Rt. 657 Sys. of Sodding Req'd. on Lt. 187 Sys. of Sodding Req'd. in ditch on Lt. 267 Sys. of Sodding Req'd. in ditch on Rt. 178 Sys. of Sodding Req'd. on Rt. 257 Sys. of Sodding Req'd. on Rt.

SHOULDER WIDENING PORTION STA. 5+00.0 TO STA. 44+81.2  
PAVING PORTION STA. 44+81.2 TO STA. 95+00.0  
1637.6 Sys. Pavement Removal Req'd.



BALANCE NO. 2

88232	88233	88234	88235	88236	88237	88238	88239	88240	88241	88242	88243	88244	88245	88246	88247	88248	88249	88250	88251	88252	88253	88254	88255	88256	88257	88258	88259	88260	88261	88262	88263	88264	88265	88266	88267	88268	88269	88270	88271	88272	88273	88274	88275	88276	88277	88278	88279	88280	88281	88282	88283	88284	88285	88286	88287	88288	88289	88290	88291	88292	88293	88294	88295	88296	88297	88298	88299	88300
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Sta. 46+25 to 50+20  
Dr. 1/4 Ac. on Lt. C-02

Sta. 65+00 to 71+50  
Dr. 1 Ac. on Lt. C-03

Sta. 95+00 to 141.00  
Dr. 3 Ac. on Lt. C-03

ALLEN COUNTY  
SEC. 19-T32N, R1E

STRUCTURE NO. 47  
24" of 12" Pipe Req'd.  
Remove Pipe in place

STRUCTURE NO. 48  
60" of 18" R.C. V.C.C.I. or  
Conc. Pipe Req'd.  
Remove Pipe in place

STRUCTURE NO. 49  
135" of 10" Sewer Pipe Req'd.  
Connect to F.Tile in place.  
Remove F.Tile in place.

STRUCTURE NO. 52  
55" of 6" Sewer Pipe Req'd.  
Remove F.D. Tile &  
Catch Basin in place

STRUCTURE NO. 46  
21" of 15" R.C. or Conc. Pipe Req'd.  
Extend Pipe in place @ Lt. & Rt.  
Remove Hdws. in place.

STRUCTURE NO. 43  
60" of 24" R.C. V.C.C.I. or  
Conc. Pipe Req'd.  
Remove Pipe in place.

STRUCTURE NO. 44  
24" of 12" C.M. Pipe Req'd.

STRUCTURE NO. 45  
24" of 12" C.M. Pipe Req'd.  
Remove Pipe in place

WHITLEY COUNTY  
SEC. 24-T32N, R1E

ALL R/W ON THIS SHEET 50' ON  
EACH SIDE OF  $\epsilon$  EXCEPT AS SHOWN

SEC. 25-T32N, R1E

STRUCTURE NO. 42  
20" of 12" C.M. Pipe Req'd.  
Remove Pipe in place.

STRUCTURE NO. 40  
See Preceding Sheet

STRUCTURE NO. 41  
See Preceding Sheet.

U.S. No. 33 (Conc.)

18" 10' 30" Maple Stump

12" 10' 12" C.M. Pipe

12" 10' 12" C.M. Pipe

12" 10' 12" C.M. Pipe

12" 10' 12" C.M. Pipe

12" 10' 12" C.M. Pipe

12" 10' 12" C.M. Pipe

12" 10' 12" C.M. Pipe

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12" 10' 12" C.M. Pipe

12" 10' 12" C.M. Pipe

12" 10' 12" C.M. Pipe

217 Sys. of Sodding Req'd. in ditch on Lt.  
389 Sys. of Sodding Req'd. in ditch on Rt.

172 Sys. of Sodding Req'd. on Rt.

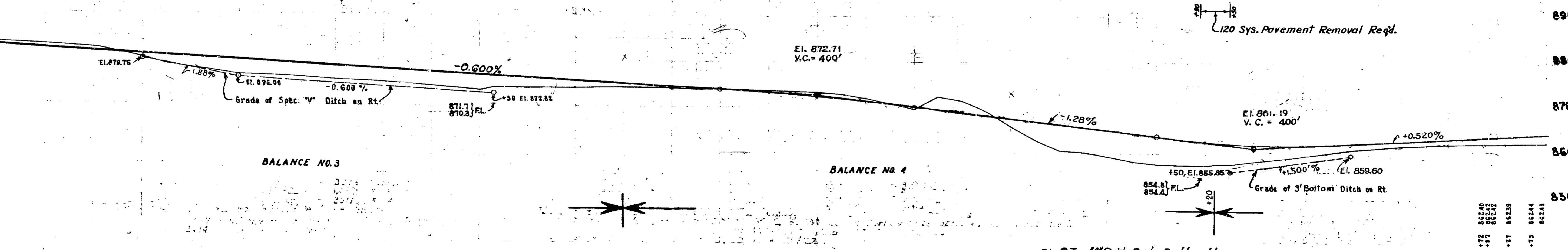
467 Sys. of Sodding Req'd. in Ditch on Lt.  
703 Sys. of Sodding Req'd. in Ditch on Rt.

228 Sys. of Sodding  
Req'd. on Lt.

208 Sys. of Sodding  
Req'd. in Ditch on Rt.

429 Sys. of Sodding Req'd. on Rt.

PAVING PORTION  
STA. 44+81.2 TO STA. 95+00.0  
1400 Sys. Breaking Bitum. Surf. and Conc. Base Req'd.  
1800 Sys. Pavement Removal Req'd.  
200 Sys. Breaking Bitum. Surf. and Conc. Base Req'd.  
1400 Sys. Pavement Removal Req'd.



BALANCE NO. 3

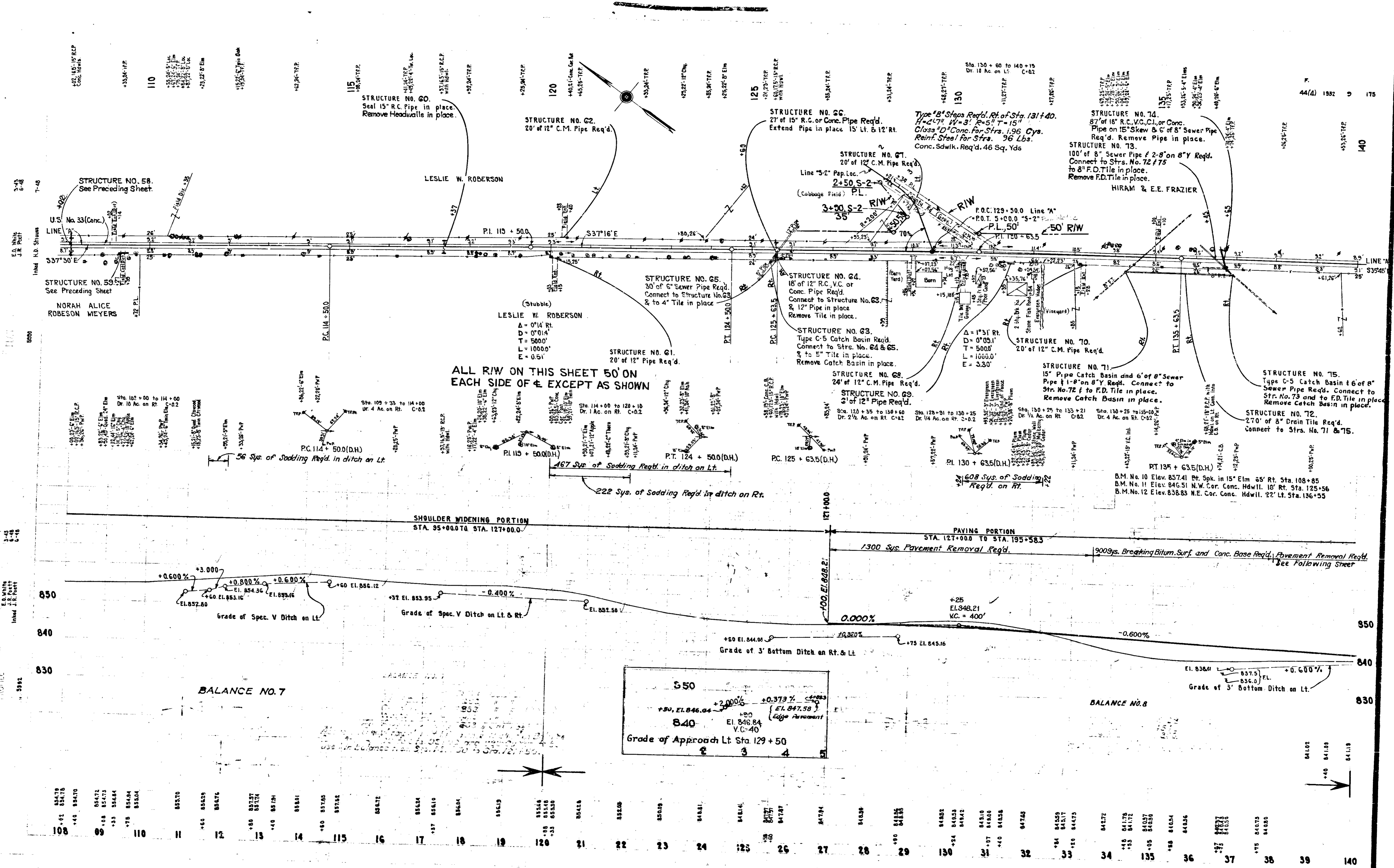
BALANCE NO. 4

6 Type 'A' Guide Posts Req'd. on Lt.

8 Type 'A' Guide Posts Req'd. on Rt.

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
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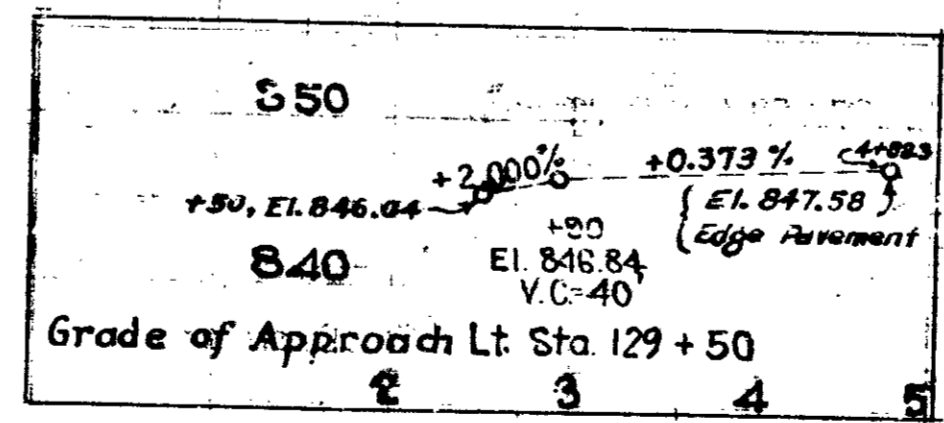
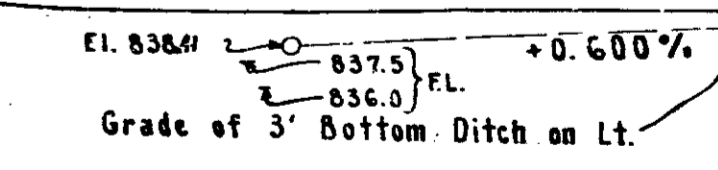
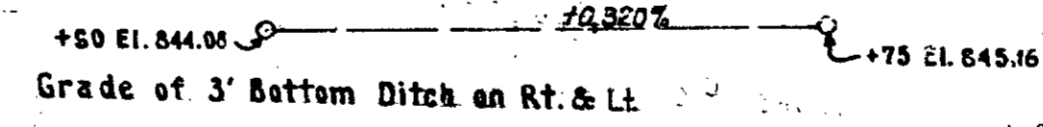
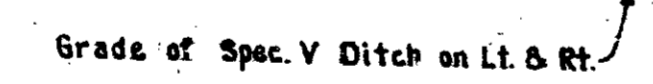
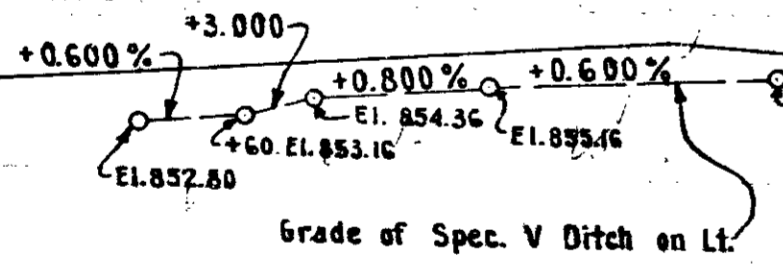


ALL R/W ON THIS SHEET 50' ON EACH SIDE OF & EXCEPT AS SHOWN

SHOULDER WIDENING PORTION STA. 95+00.0 TO STA. 127+00.0

PAVING PORTION STA. 127+00.0 TO STA. 195+58.3

1300 Sys. Pavement Removal Req'd. 900 Sys. Breaking Bitum. Surf. and Conc. Base Req'd. Pavement Removal Req'd. See Following Sheet



BALANCE NO. 7

BALANCE NO. 8

108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140																																																																									
834.75	834.70	834.72	834.73	834.84	834.94	835.04	835.10	835.15	835.20	835.25	835.30	835.35	835.40	835.45	835.50	835.55	835.60	835.65	835.70	835.75	835.80	835.85	835.90	835.95	836.00	836.05	836.10	836.15	836.20	836.25	836.30	836.35	836.40	836.45	836.50	836.55	836.60	836.65	836.70	836.75	836.80	836.85	836.90	836.95	837.00	837.05	837.10	837.15	837.20	837.25	837.30	837.35	837.40	837.45	837.50	837.55	837.60	837.65	837.70	837.75	837.80	837.85	837.90	837.95	838.00	838.05	838.10	838.15	838.20	838.25	838.30	838.35	838.40	838.45	838.50	838.55	838.60	838.65	838.70	838.75	838.80	838.85	838.90	838.95	839.00	839.05	839.10	839.15	839.20	839.25	839.30	839.35	839.40	839.45	839.50	839.55	839.60	839.65	839.70	839.75	839.80	839.85	839.90	839.95	840.00



Sta 130+60 to 140+15  
Dr. 10 Ac. on Lt. C-02

Sta 140+15 to 145+55  
Dr. 1 1/2 Ac. on Lt. C-03

STRUCTURE NO. 76.  
24' of 12" C.M. Pipe Req'd

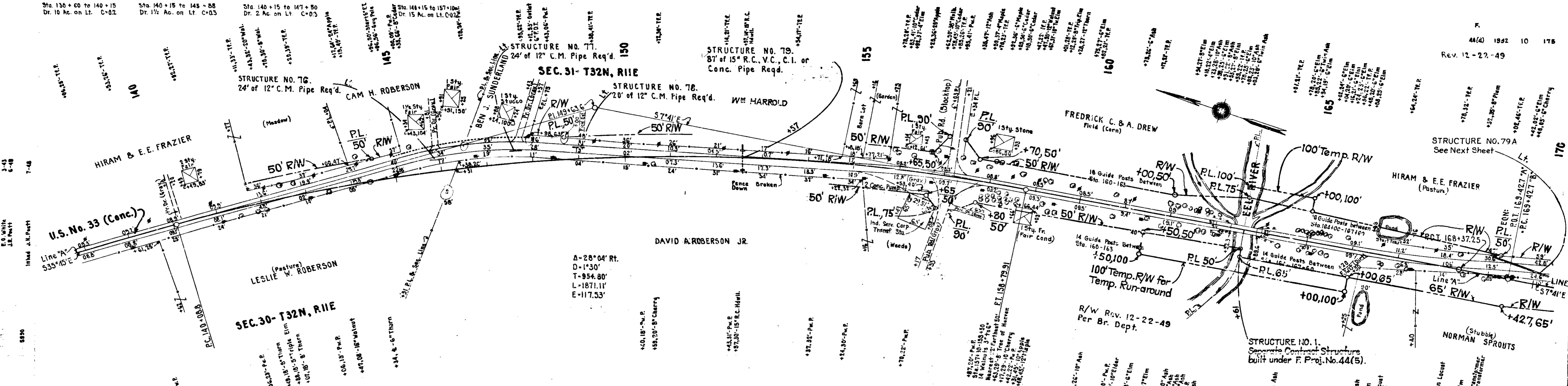
SEC. 31- T32N, R1E

STRUCTURE NO. 77.  
24' of 12" C.M. Pipe Req'd

STRUCTURE NO. 78.  
20' of 12" C.M. Pipe Req'd

STRUCTURE NO. 79.  
8' of 15" R.C. V.C. C.I. or  
Conc. Pipe Req'd.

44(a) 1992 10 175  
Rev. 12-22-49

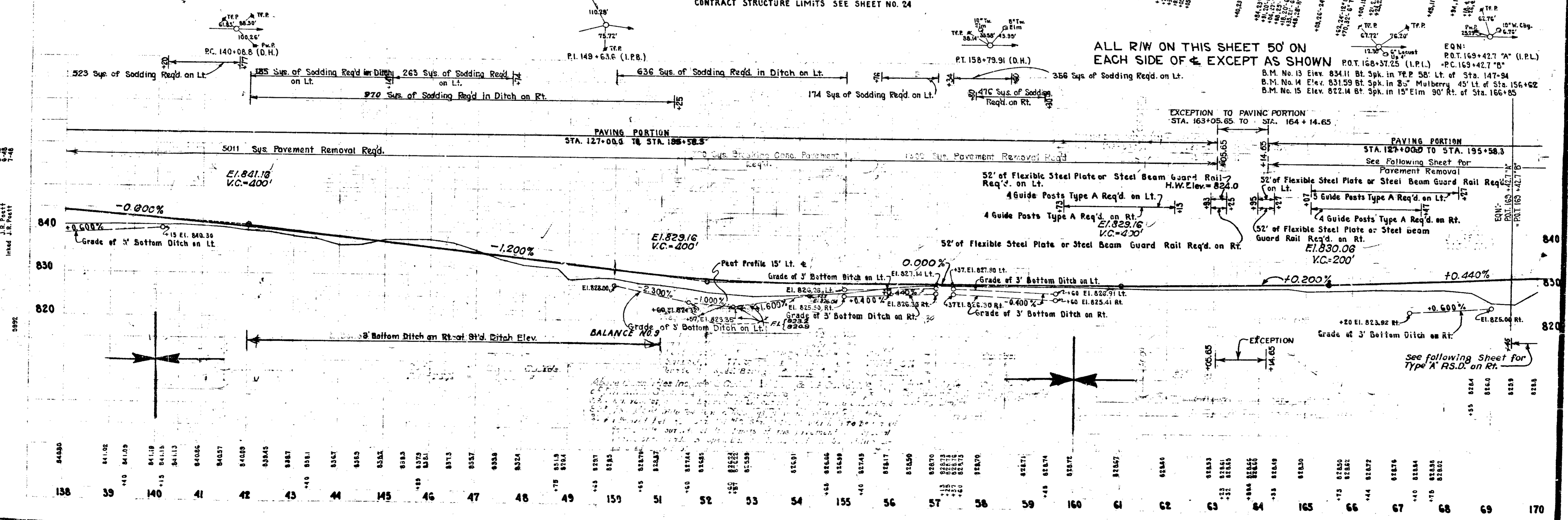


A=28°04' Rt.  
D=1°30'  
T=954.80'  
L=1871.11'  
E=117.53'

NOTE: FOR DETAIL OF PAVEMENT CONSTRUCTION WITHIN SEPARATE  
CONTRACT STRUCTURE LIMITS SEE SHEET NO. 24

ALL R/W ON THIS SHEET 50' ON  
EACH SIDE OF  $\pm$  EXCEPT AS SHOWN

EQN:  
P.O.T. 163+42.7 "A" (I.P.L.)  
-P.C. 163+42.7 "B"  
B.M. No. 13 Elev. 834.11 Bt. Spk. in T.P. 58' Lt. of Sta. 147+94  
B.M. No. 14 Elev. 831.59 Bt. Spk. in 35' Mulberry 45' Lt. of Sta. 156+62  
B.M. No. 15 Elev. 822.14 Bt. Spk. in 15' Elm 90' Rt. of Sta. 166+85

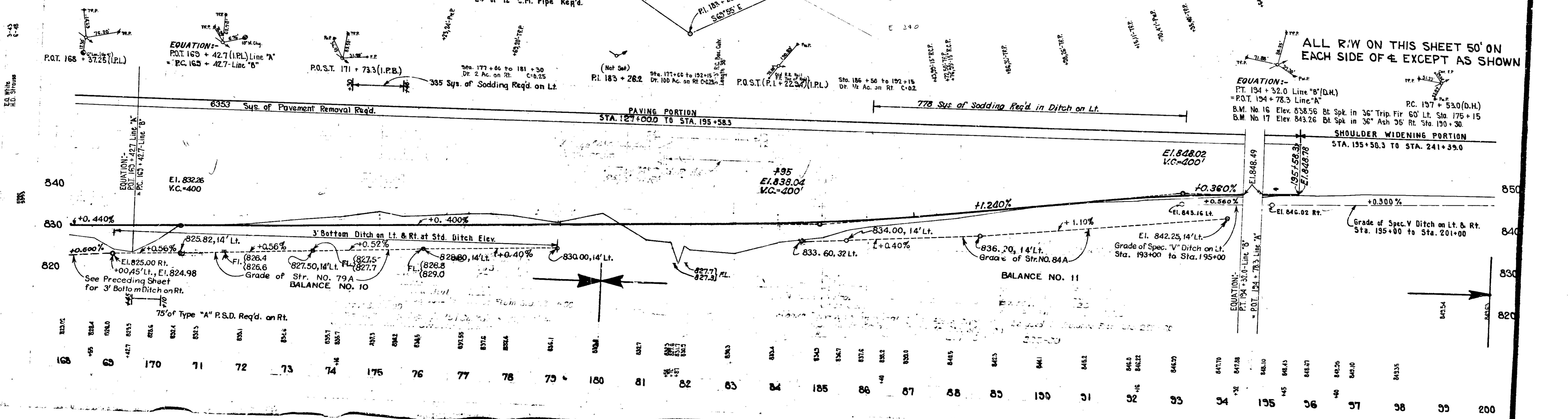
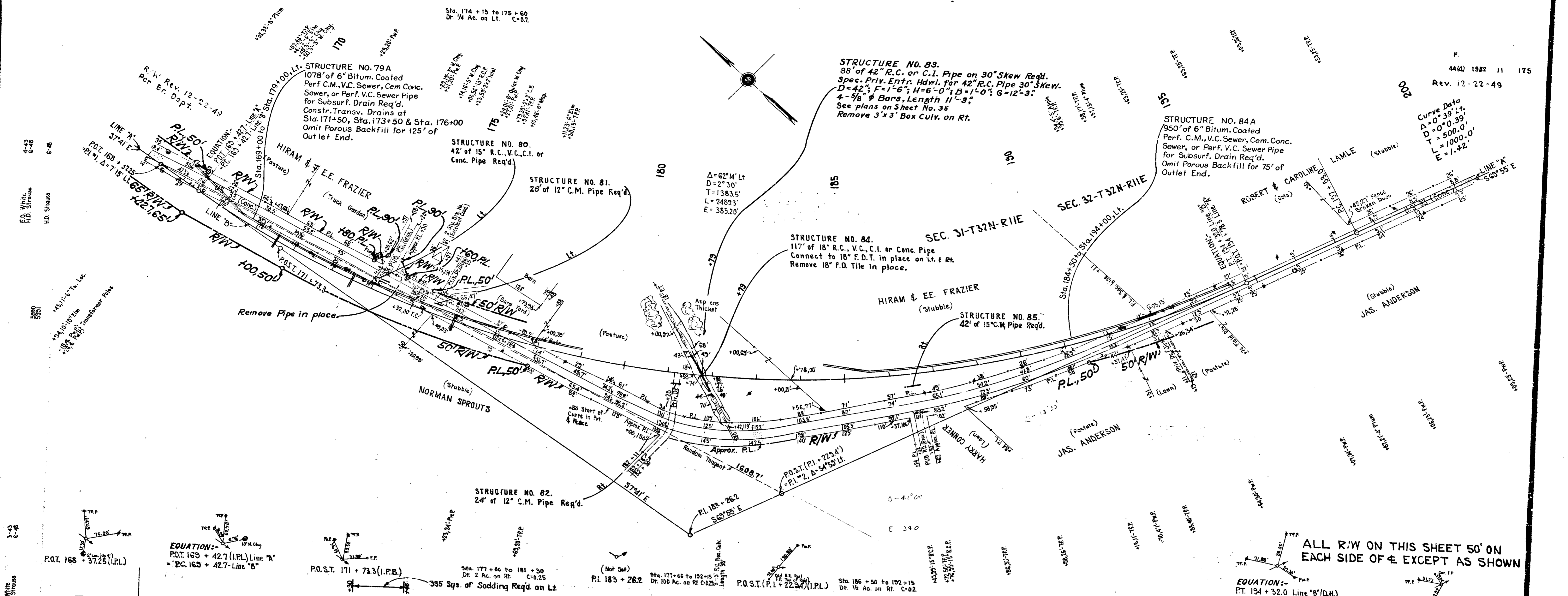


3-45  
3-46  
3-47  
3-48  
7-46

5992

See following Sheet for  
Type 'A' R.S.D. on Rt.

44 " 10  
W.H.B. 11-2-49  
W.H.B. 12-18-51

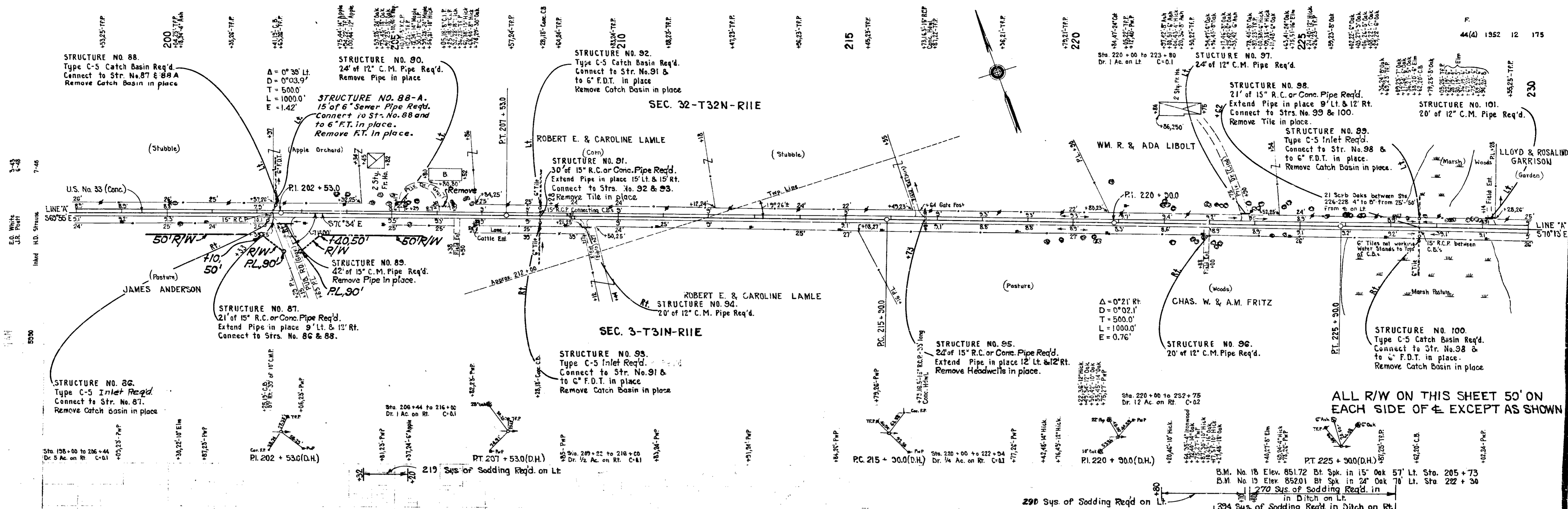


ALL R/W ON THIS SHEET 50' ON EACH SIDE OF E EXCEPT AS SHOWN

EQUATION:-  
 P.T. 194 + 32.0 Line "B" (D.H.)  
 = P.O.T. 194 + 78.3 Line "A"  
 B.M. No 16 Elev. 838.56 Bt Spk. in 36" Trip. Fir 60' Lt. Sta. 175 + 15  
 B.M. No 17 Elev. 843.26 Bt Spk. in 36" Ash 36' Rt. Sta. 190 + 30

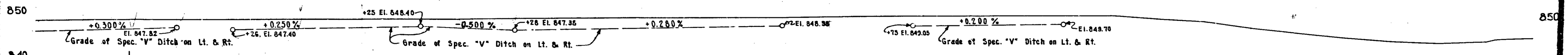
SHOULDER WIDENING PORTION  
 STA. 195+58.3 TO STA. 241+39.0

EQUATION:-  
 P.T. 194 + 32.0 Line "B"  
 = P.O.T. 194 + 78.3 Line "A"



ALL R/W ON THIS SHEET 50' ON EACH SIDE OF  $\pm$  EXCEPT AS SHOWN

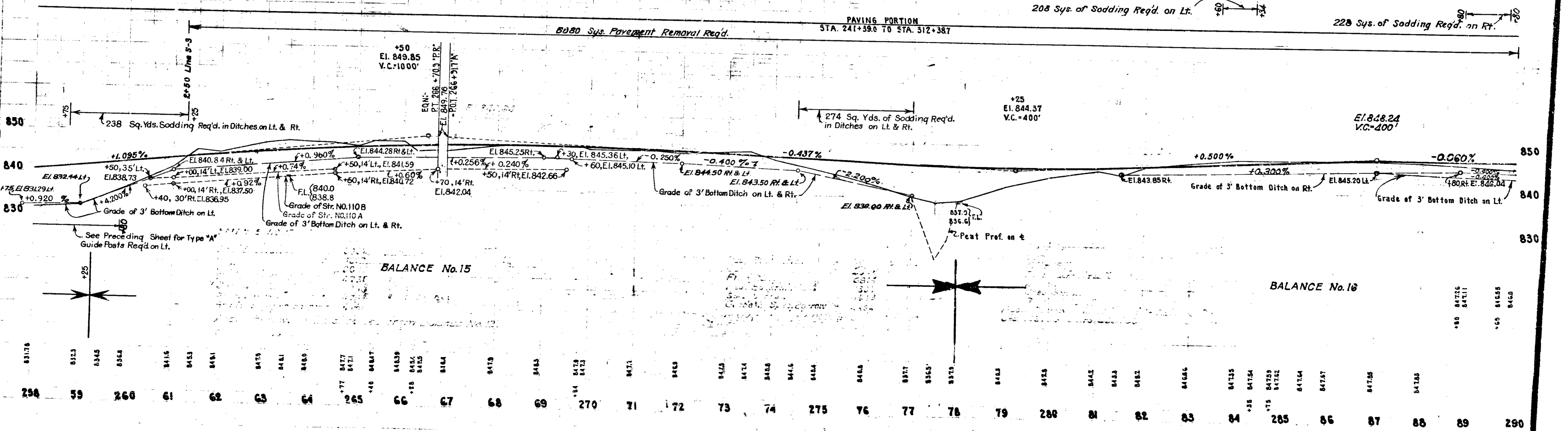
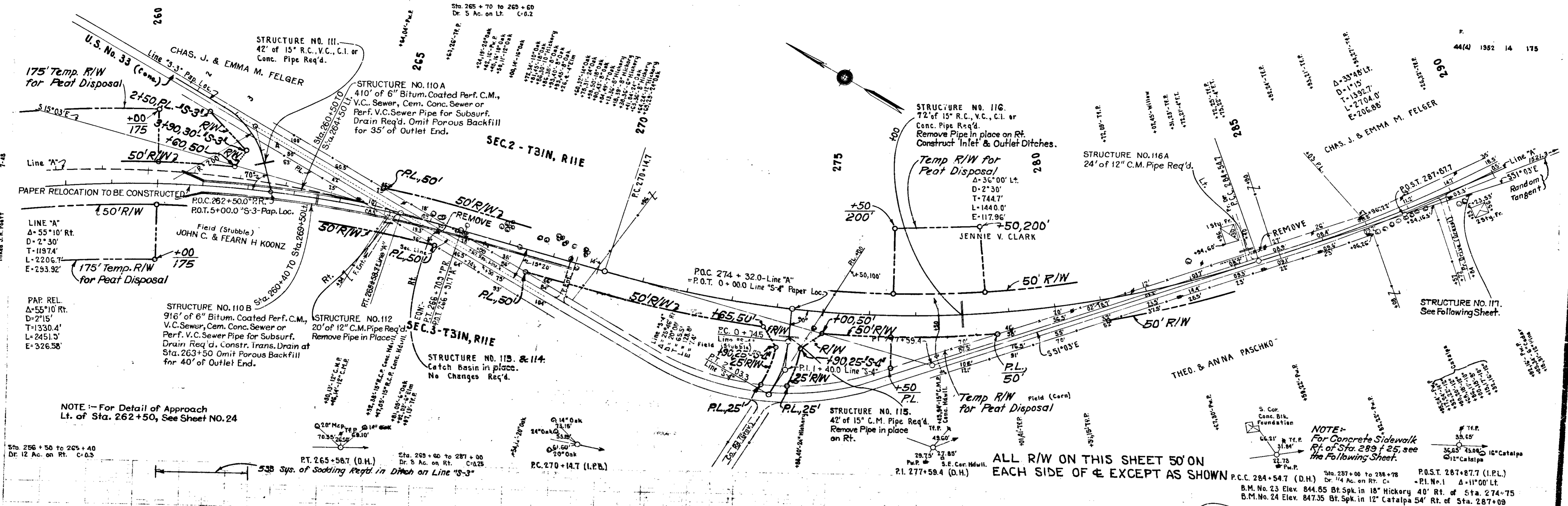
SHOULDER WIDENING PORTION  
S.A. 195+58.3 TO STA. 241+59.0



BALANCE NO. 12

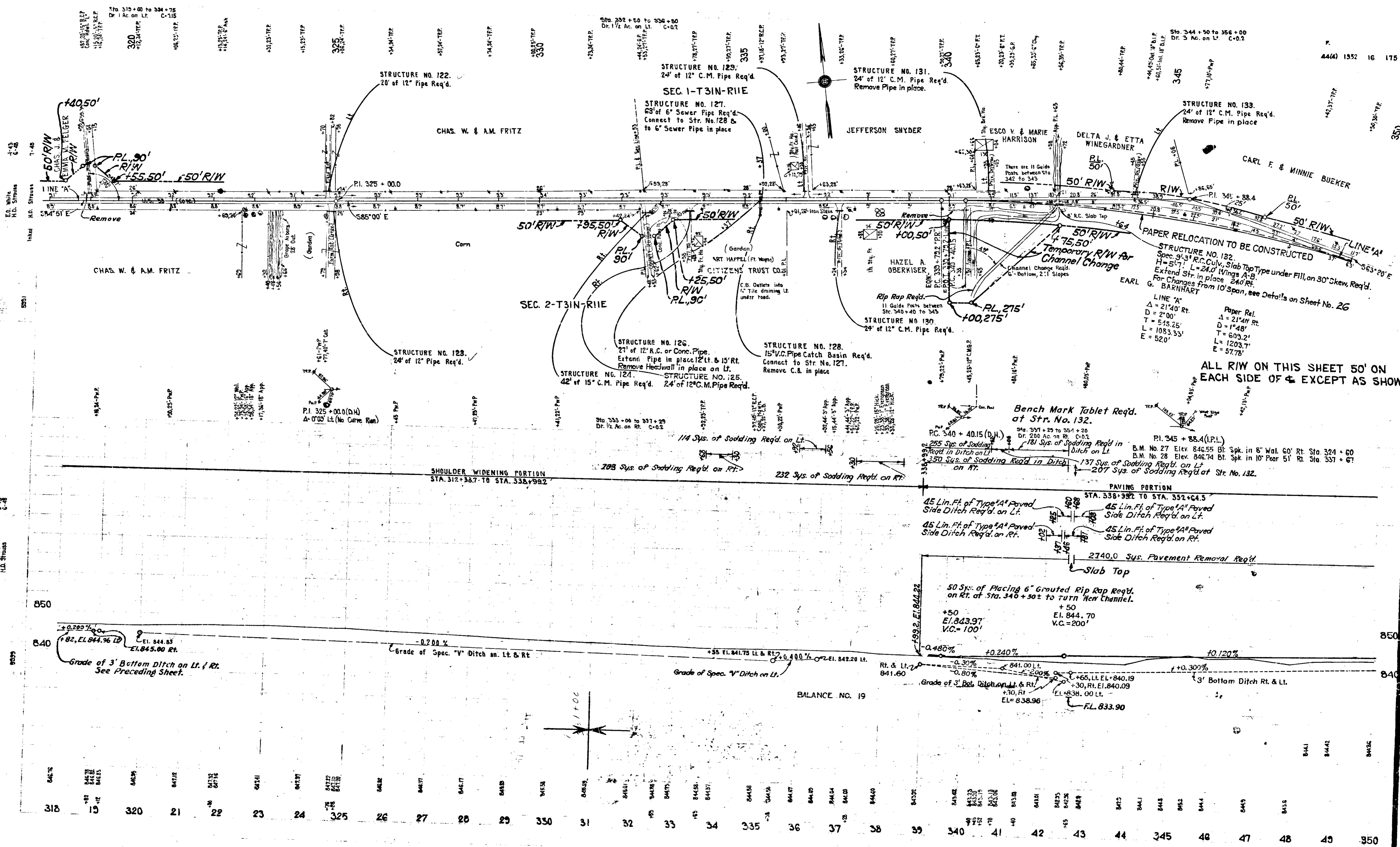
84335	84334	84333	84332	84331	84330	84329	84328	84327	84326	84325	84324	84323	84322	84321	84320	84319	84318	84317	84316	84315	84314	84313	84312	84311	84310	84309	84308	84307	84306	84305	84304	84303	84302	84301	84300	84299	84298	84297	84296	84295	84294	84293	84292	84291	84290	84289	84288	84287	84286	84285	84284	84283	84282	84281	84280	84279	84278	84277	84276	84275	84274	84273	84272	84271	84270	84269	84268	84267	84266	84265	84264	84263	84262	84261	84260	84259	84258	84257	84256	84255	84254	84253	84252	84251	84250	84249	84248	84247	84246	84245	84244	84243	84242	84241	84240	84239	84238	84237	84236	84235	84234	84233	84232	84231	84230	84229	84228	84227	84226	84225	84224	84223	84222	84221	84220	84219	84218	84217	84216	84215	84214	84213	84212	84211	84210	84209	84208	84207	84206	84205	84204	84203	84202	84201	84200	84199	84198	84197	84196	84195	84194	84193	84192	84191	84190	84189	84188	84187	84186	84185	84184	84183	84182	84181	84180	84179	84178	84177	84176	84175	84174	84173	84172	84171	84170	84169	84168	84167	84166	84165	84164	84163	84162	84161	84160	84159	84158	84157	84156	84155	84154	84153	84152	84151	84150	84149	84148	84147	84146	84145	84144	84143	84142	84141	84140	84139	84138	84137	84136	84135	84134	84133	84132	84131	84130	84129	84128	84127	84126	84125	84124	84123	84122	84121	84120	84119	84118	84117	84116	84115	84114	84113	84112	84111	84110	84109	84108	84107	84106	84105	84104	84103	84102	84101	84100	84099	84098	84097	84096	84095	84094	84093	84092	84091	84090	84089	84088	84087	84086	84085	84084	84083	84082	84081	84080	84079	84078	84077	84076	84075	84074	84073	84072	84071	84070	84069	84068	84067	84066	84065	84064	84063	84062	84061	84060	84059	84058	84057	84056	84055	84054	84053	84052	84051	84050	84049	84048	84047	84046	84045	84044	84043	84042	84041	84040	84039	84038	84037	84036	84035	84034	84033	84032	84031	84030	84029	84028	84027	84026	84025	84024	84023	84022	84021	84020	84019	84018	84017	84016	84015	84014	84013	84012	84011	84010	84009	84008	84007	84006	84005	84004	84003	84002	84001	84000
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831.76	832.3	834.5	838.8	841.5	845.3	848.1	847.9	848.1	848.0	847.7	847.1	848.3	848.5	848.4	848.2	848.1	847.9	847.8	847.7	847.6	847.5	847.4	847.3	847.2	847.1	847.0	846.9	846.8	846.7	846.6	846.5	846.4	846.3	846.2	846.1	846.0	845.9	845.8	845.7	845.6	845.5	845.4	845.3	845.2	845.1	845.0	844.9	844.8	844.7	844.6	844.5	844.4	844.3	844.2	844.1	844.0	843.9	843.8	843.7	843.6	843.5	843.4	843.3	843.2	843.1	843.0	842.9	842.8	842.7	842.6	842.5	842.4	842.3	842.2	842.1	842.0	841.9	841.8	841.7	841.6	841.5	841.4	841.3	841.2	841.1	841.0	840.9	840.8	840.7	840.6	840.5	840.4	840.3	840.2	840.1	840.0	839.9	839.8	839.7	839.6	839.5	839.4	839.3	839.2	839.1	839.0	838.9	838.8	838.7	838.6	838.5	838.4	838.3	838.2	838.1	838.0	837.9	837.8	837.7	837.6	837.5	837.4	837.3	837.2	837.1	837.0	836.9	836.8	836.7	836.6	836.5	836.4	836.3	836.2	836.1	836.0	835.9	835.8	835.7	835.6	835.5	835.4	835.3	835.2	835.1	835.0	834.9	834.8	834.7	834.6	834.5	834.4	834.3	834.2	834.1	834.0	833.9	833.8	833.7	833.6	833.5	833.4	833.3	833.2	833.1	833.0	832.9	832.8	832.7	832.6	832.5	832.4	832.3	832.2	832.1	832.0	831.9	831.8	831.7	831.6	831.5	831.4	831.3	831.2	831.1	831.0	830.9	830.8	830.7	830.6	830.5	830.4	830.3	830.2	830.1	830.0
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STRUCTURE NO. 122.  
20' of 12" Pipe Req'd.

STRUCTURE NO. 123.  
24' of 12" Pipe Req'd.

STRUCTURE NO. 124.  
42' of 15" C.M. Pipe Req'd.

STRUCTURE NO. 125.  
24' of 12" C.M. Pipe Req'd.

STRUCTURE NO. 126.  
27' of 12" R.C. or Conc. Pipe.  
Extend Pipe in place 12' Lt. & 15' Rt.  
Remove Headwall in place on Lt.

STRUCTURE NO. 127.  
63' of 6" Sewer Pipe Req'd  
Connect to Str. No. 128 &  
to 6" Sewer Pipe in place

STRUCTURE NO. 128.  
15" V.C. Pipe Catch Basin Req'd.  
Connect to Str. No. 127.  
Remove C.B. in place

STRUCTURE NO. 130.  
24' of 12" C.M. Pipe Req'd.

STRUCTURE NO. 131.  
24' of 12" C.M. Pipe Req'd.  
Remove Pipe in place.

STRUCTURE NO. 132.  
Spec. 9'-3" R.C. Culv. Slab Top Type under Fill, on 30" Skew, Req'd.  
Extend Str. in place 240' Rt.  
For Changes from 10' Span, see Details on Sheet No. 26

STRUCTURE NO. 133.  
24' of 12" C.M. Pipe Req'd.  
Remove Pipe in place

PAPER RELOCATION TO BE CONSTRUCTED

LINE 'A'  
Δ = 21'40" Rt.  
D = 2'00"  
T = 518.25'  
L = 1083.33'  
E = 52.0'

Paper Rel.  
Δ = 21'40" Rt.  
D = 1'48"  
T = 603.2'  
L = 1203.7'  
E = 57.78'

ALL RIW ON THIS SHEET 50' ON EACH SIDE OF & EXCEPT AS SHOWN

Bench Mark Tablet Req'd. at Str. No. 132.

Sta. 321 + 29 to 354 + 20  
Dt. 200 Ac. on Rt. C=0.2

181 Sys. of Sodding Req'd in Ditch on Lt.

137 Sys. of Sodding Req'd. on Lt.

207 Sys. of Sodding Req'd. at Str. No. 132.

PI. 345 + 88.4 (I.P.L.)  
B.M. No. 27 Elev. 846.55 Bt. Spk. in 8" Wal. 60' Rt. Sta. 324 + 60  
B.M. No. 28 Elev. 846.74 Bt. Spk. in 10' Pear 51' Rt. Sta. 337 + 67

PAVING PORTION  
STA. 338 + 992 TO STA. 352 + 64.5

45 Lin. Ft. of Type 'A' Paved Side Ditch Req'd. on Lt.

45 Lin. Ft. of Type 'A' Paved Side Ditch Req'd. on Rt.

2140.0 Sys. Pavement Removal Req'd. Slab Top

50 Sys. of Placing 6" Grouted Rip Rap Req'd. on Rt. of Sta. 340 + 50 ± to TURN New Channel.

+50  
El. 843.97  
V.C. = 100'

+50  
El. 844.70  
V.C. = 200'

Grade of 3' Bottom Ditch on Lt. & Rt. See Preceding Sheet.

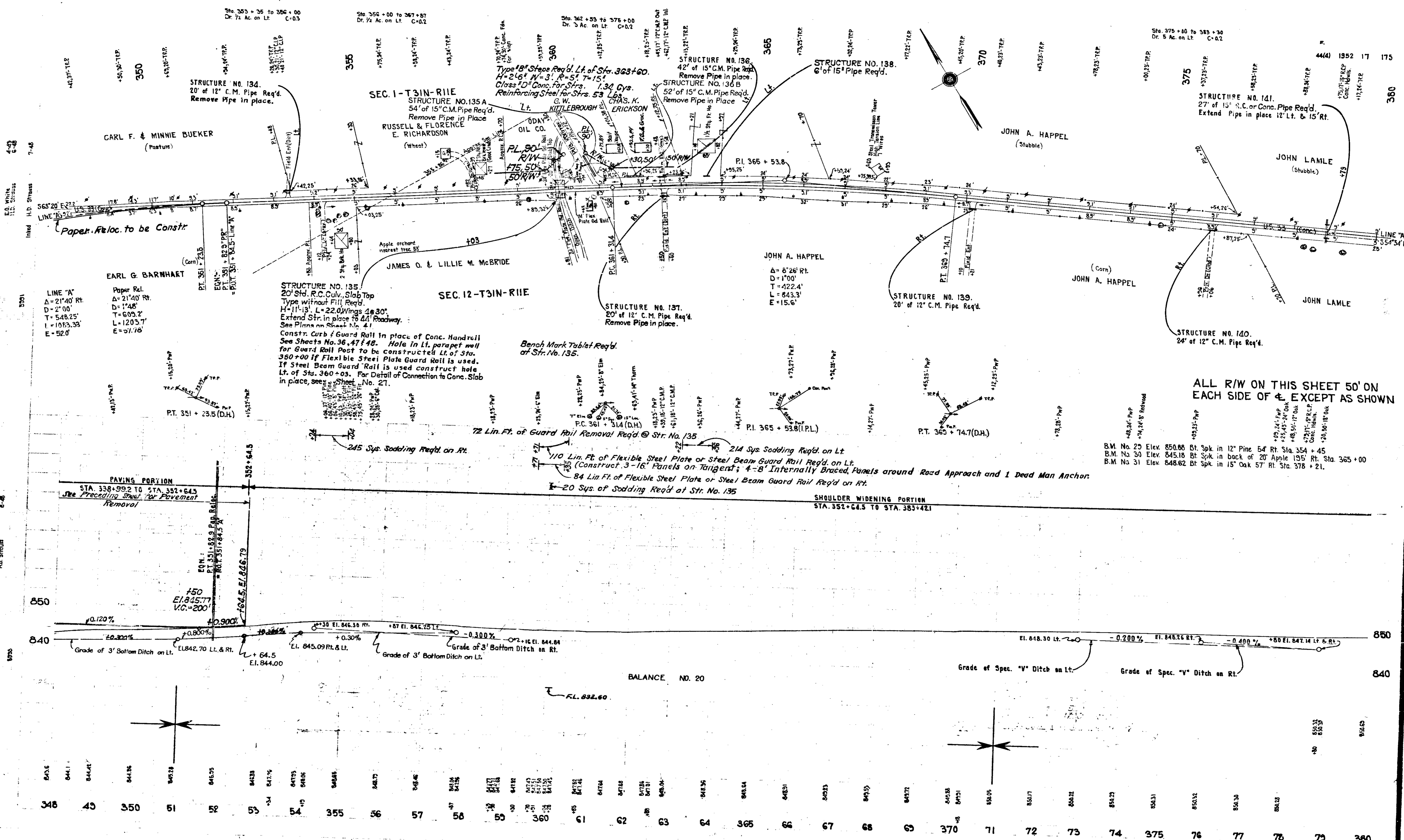
Grade of Spec. 'V' Ditch on Lt. & Rt.

Grade of Spec. 'V' Ditch on Lt.

Grade of 3' Bot. Ditch on Lt. & Rt.

Grade of 3' Bottom Ditch Rt. & Lt.

FL. 833.90



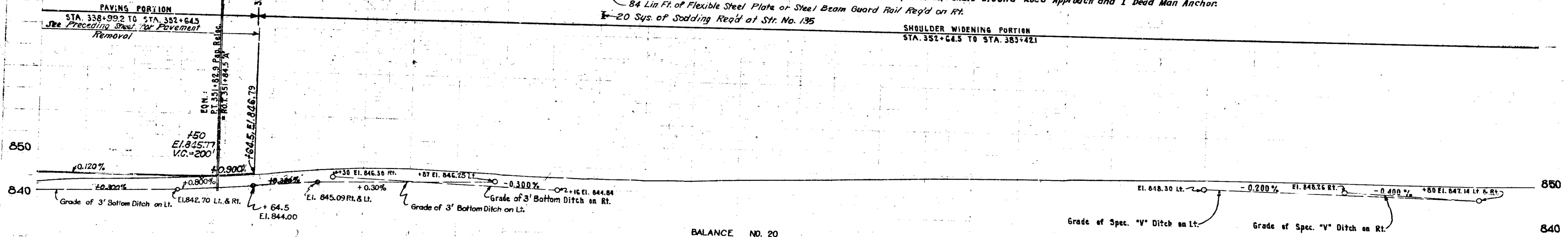
LINE "A"  
 $\Delta = 21'40"$  Rt.  
 $D = 2'00"$   
 $T = 548.25'$   
 $L = 1083.33'$   
 $E = 52.0'$

STRUCTURE NO. 135  
 20' Std. R.C. Culv. Slab Top  
 Type without Fill Req'd.  
 $H = 11'13"$ ,  $L = 22.0'$  Wings  $18'30"$   
 Extend Str. in place to Rt. Roadway.  
 See Plans on Sheet No. 41.  
 Constr. Curb & Guard Rail in place of Conc. Handrail  
 See Sheets No. 36, 47 & 48. Hole in Lt. parapet wall  
 for Guard Rail Post to be constructed Lt. of Sta.  
 360+00 if Flexible Steel Plate Guard Rail is used.  
 If Steel Beam Guard Rail is used construct hole  
 Lt. of Sta. 360+03. For Detail of Connection to Conc. Slab  
 in place, see Sheet No. 21.

Bench Mark Tablet Req'd.  
 of Str. No. 135.

ALL R/W ON THIS SHEET 50' ON  
 EACH SIDE OF & EXCEPT AS SHOWN

B.M. No. 25 Elev. 850.66 Bt. Spk. in 12" Pine 54' Rt. Sta. 354 + 45  
 B.M. No. 30 Elev. 845.18 Bt. Spk. in back of 20' Apple 195' Rt. Sta. 365 + 00  
 B.M. No. 31 Elev. 848.62 Bt. Spk. in 15" Oak 57' Rt. Sta. 378 + 21.

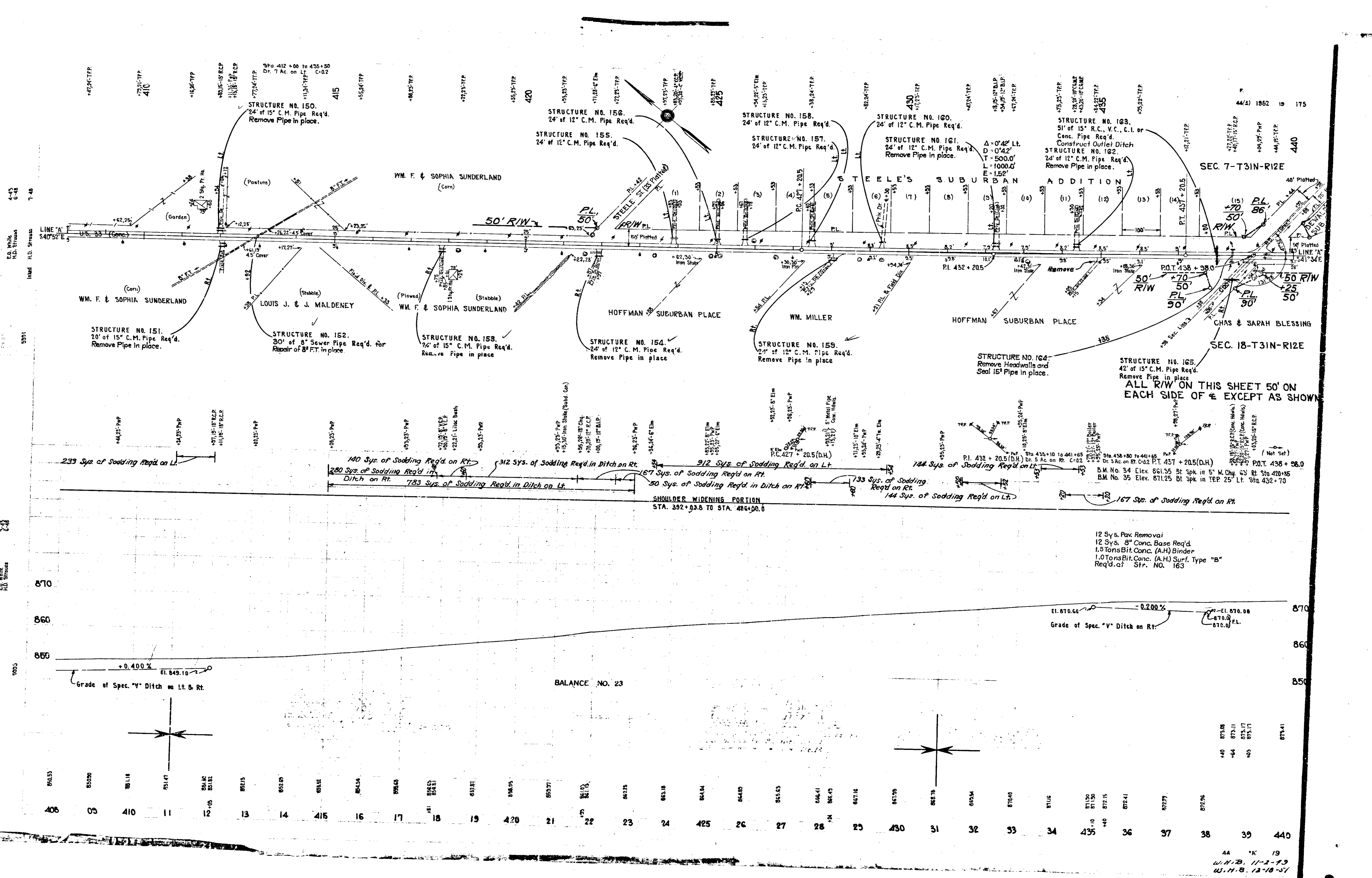


348	43	350	51	52	53	54	355	56	57	58	59	360	61	62	63	64	365	66	67	68	69	370	71	72	73	74	375	76	77	78	79	380
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44  
 11-2-43  
 12-18-51







44/4) 1952 19 175

440

SEC. 7-T3IN-R12E

SEC. 18-T3IN-R12E

ALL R/W ON THIS SHEET 50' ON EACH SIDE OF & EXCEPT AS SHOWN

SHOULDER WIDENING PORTION  
STA. 392+03.8 TO STA. 406+00.0

12 Sys. Pav. Removal  
12 Sys. 8" Conc. Base Req'd  
1.5 Tons Bit. Conc. (A.H) Binder  
1.0 Tons Bit. Conc. (A.H) Surf. Type "B"  
Req'd. of Str. NO. 163

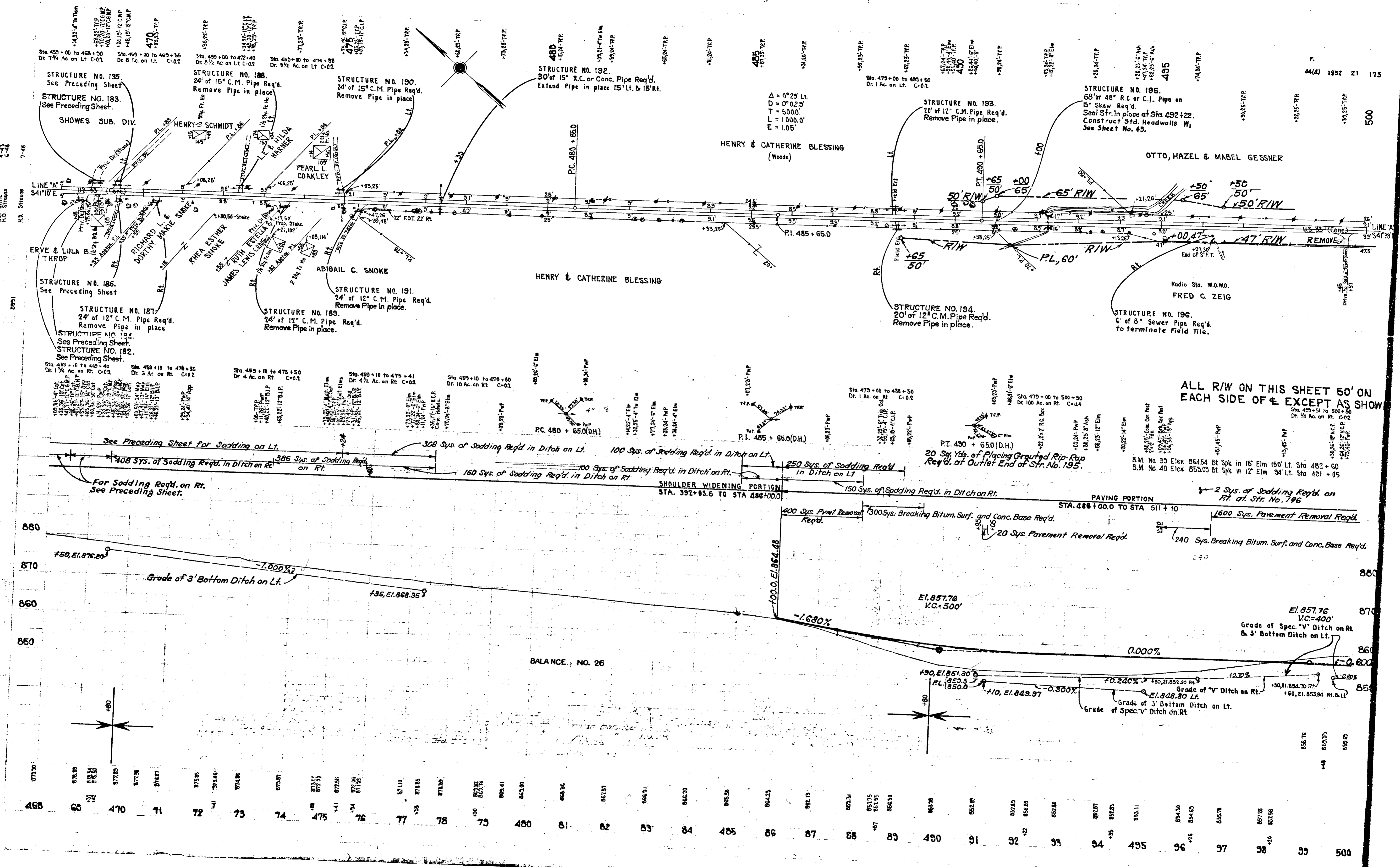
Grade of Spec. "V" Ditch on Rt.  
El. 870.00  
El. 870.00  
El. 870.00

BALANCE NO. 23

850.33	850.90	851.18	851.47	851.82	851.92	852.15	852.67	853.32	854.54	856.60	856.82	856.81	857.87	858.95	859.97	861.03	861.15	862.25	863.18	864.04	864.89	865.63	866.41	866.43	867.18	867.90	868.76	869.54	870.00	871.06	871.30	871.50	872.15	872.41	872.77	872.96	873.08	873.11	873.17	873.17	873.41		
406	05	410	11	12	13	14	415	16	17	18	19	420	21	22	23	24	425	26	27	28	29	430	31	32	33	34	435	36	37	38	39	440											

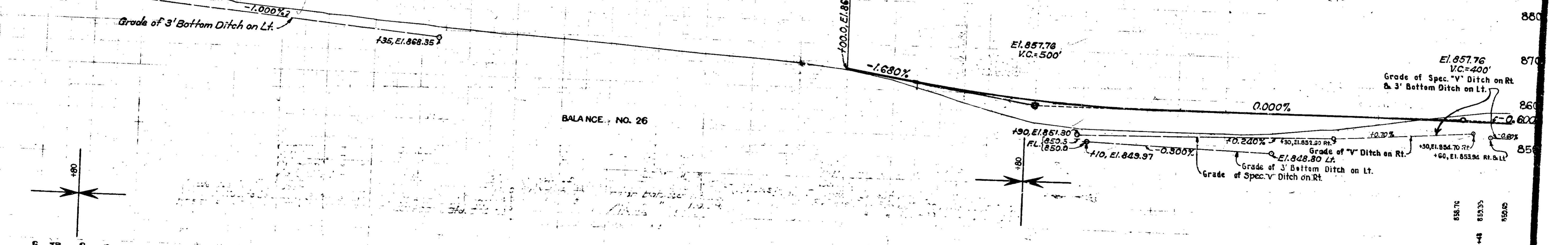
44 "A" 19  
W.H.B. 11-2-79  
W.H.B. 12-18-51



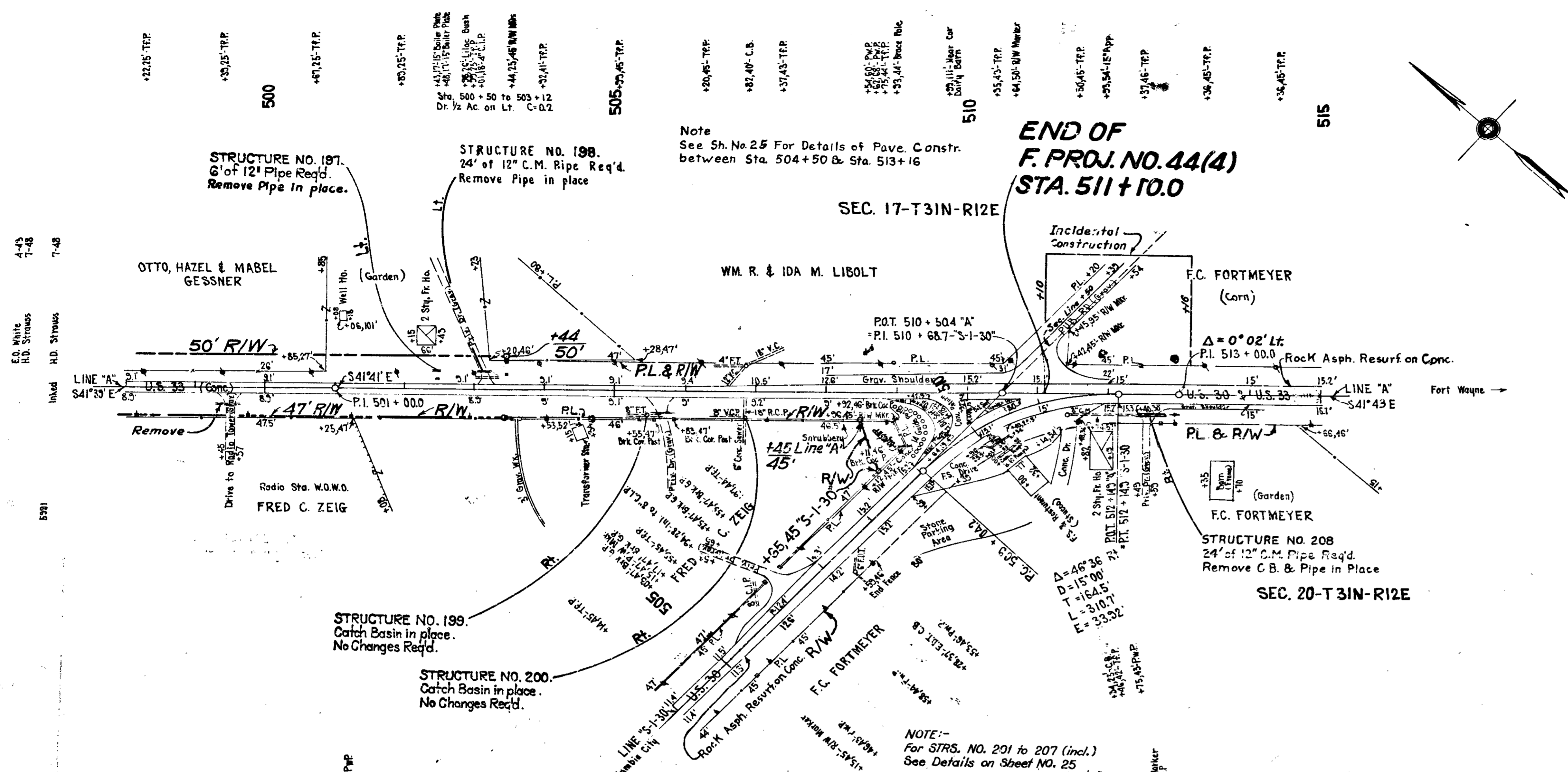


ALL R/W ON THIS SHEET 50' ON EACH SIDE OF  $\phi$  EXCEPT AS SHOWN

See Preceding Sheet for Sodding on Lt.  
 408 Sys. of Sodding Req'd. in Ditch on Rt.  
 366 Sys. of Sodding Req'd. on Rt.  
 368 Sys. of Sodding Req'd. in Ditch on Lt.  
 100 Sys. of Sodding Req'd. in Ditch on Rt.  
 100 Sys. of Sodding Req'd. in Ditch on Lt.  
 250 Sys. of Sodding Req'd. in Ditch on Lt.  
 150 Sys. of Sodding Req'd. in Ditch on Rt.  
 400 Sys. Paving Removal Req'd.  
 300 Sys. Breaking Bitum. Surf. and Conc. Base Req'd.  
 20 Sys. Paving Removal Req'd.  
 1600 Sys. Paving Removal Req'd.  
 240 Sys. Breaking Bitum. Surf. and Conc. Base Req'd.  
 2 Sys. of Sodding Req'd. on Rt. at Str. No. 196

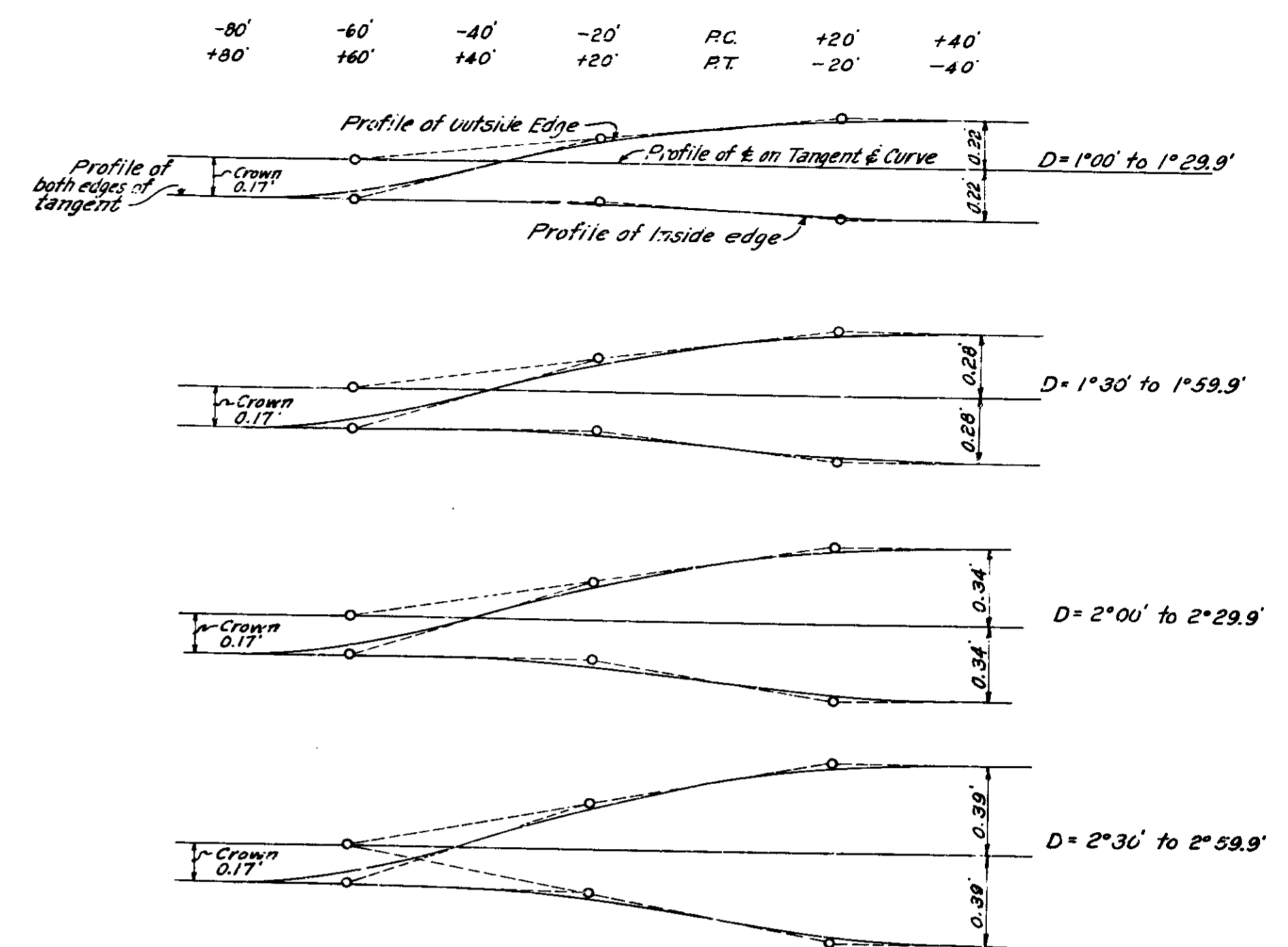


468	60	470	71	72	73	74	475	76	77	78	79	480	81	82	83	84	485	86	87	88	89	490	91	92	93	94	495	96	97	98	99	500
-----	----	-----	----	----	----	----	-----	----	----	----	----	-----	----	----	----	----	-----	----	----	----	----	-----	----	----	----	----	-----	----	----	----	----	-----

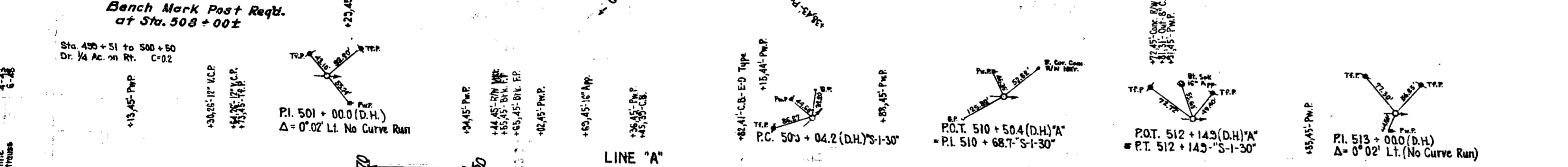


Note  
See Sh. No. 25 For Details of Pav. Constr.  
between Sta. 504+50 & Sta. 513+16

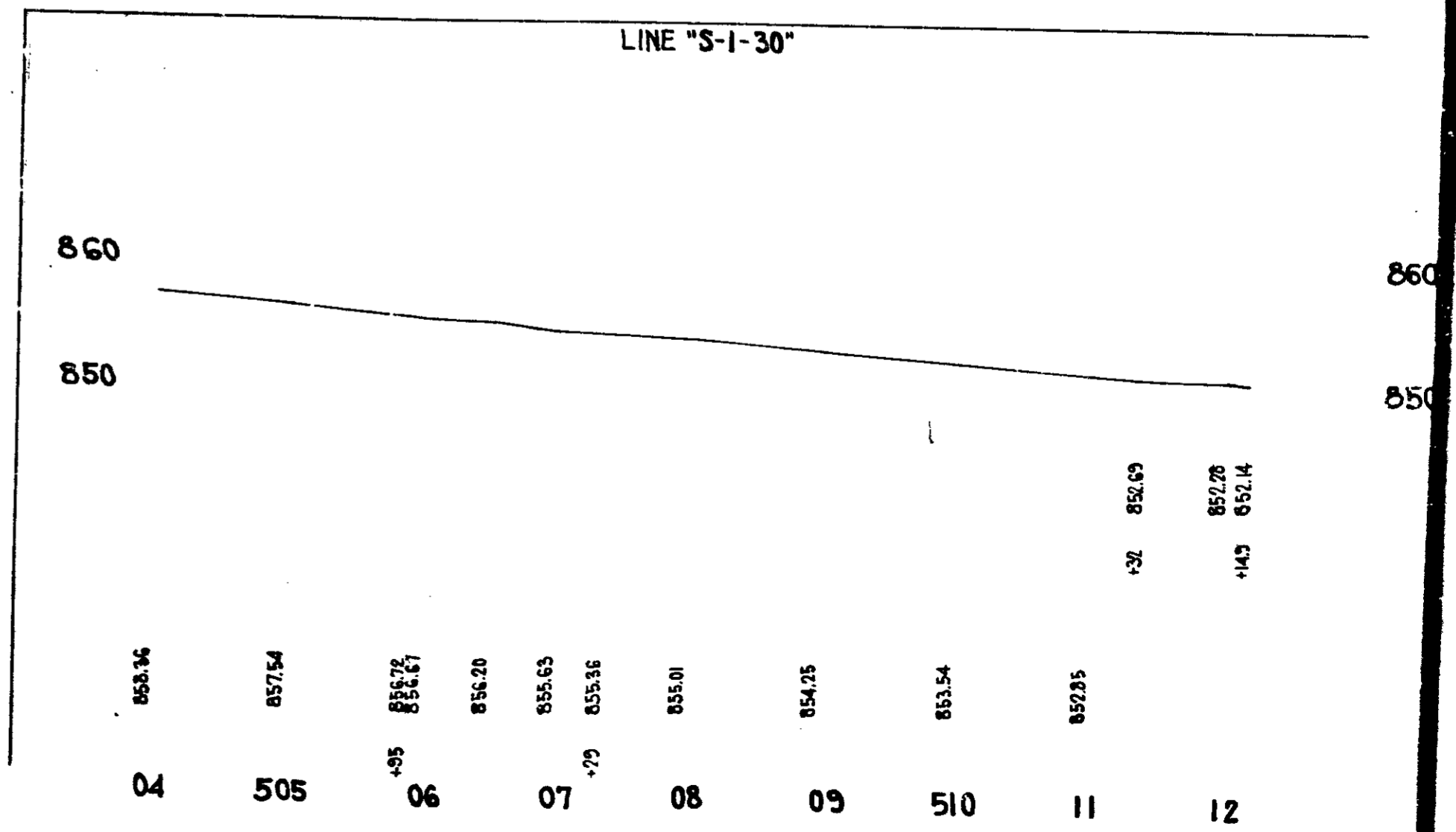
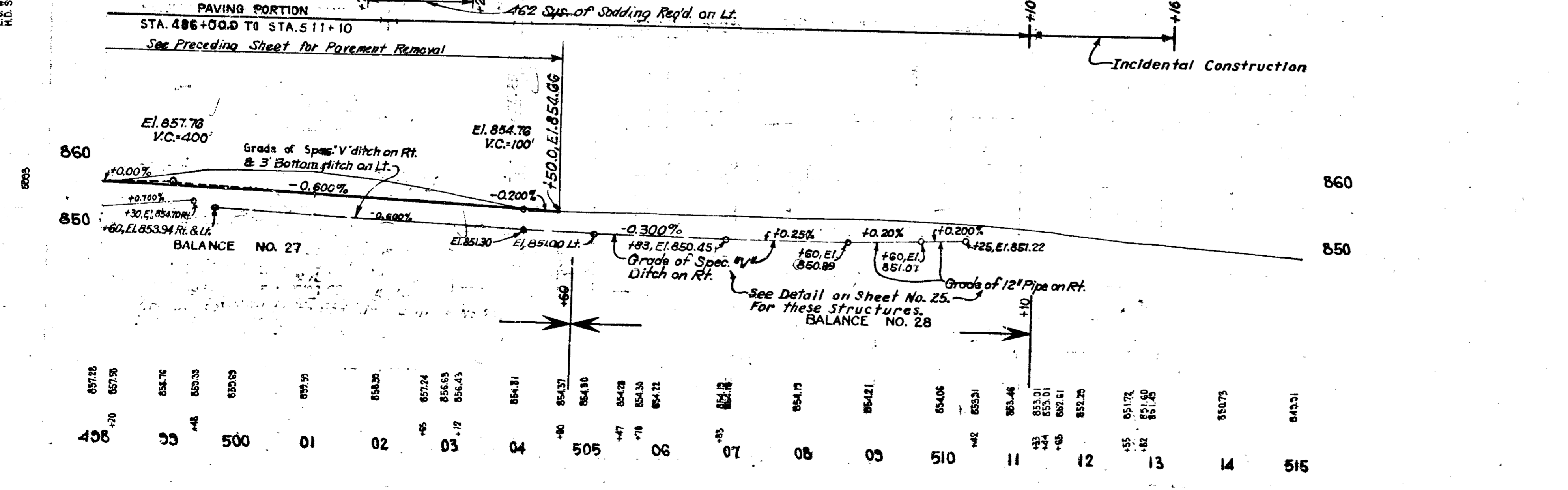
**END OF  
F. PROJ. NO. 44(4)  
STA. 511+10.0**



**DETAILS OF BANKING TRANSITIONS FOR SUPERELEVATED CURVES**  
NOTE:- Crown to be taken out of all Super-elevated Curves.  
All Vertical Curves shown above are  $L=40'$   
Maximum Rate of Super-elevation to be as shown in Stds. for 1932



**ALL R/W ON THIS SHEET 50' ON EACH SIDE OF  $\epsilon$  EXCEPT AS SHOWN**  
B.M. No. 41 Elev. 860.12 Bt Spk. in back side Pw.P. 42' Rt. Sta. 501 + 30  
B.M. No. 42 Elev. 858.55 Bt. Spk. in 12" Apple 40' Lt. Sta. 511 + 95





# APPROACHES

FEDERAL ROAD DIVISION NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND	44 (4) 1982	23	175

## PAVING PORTION

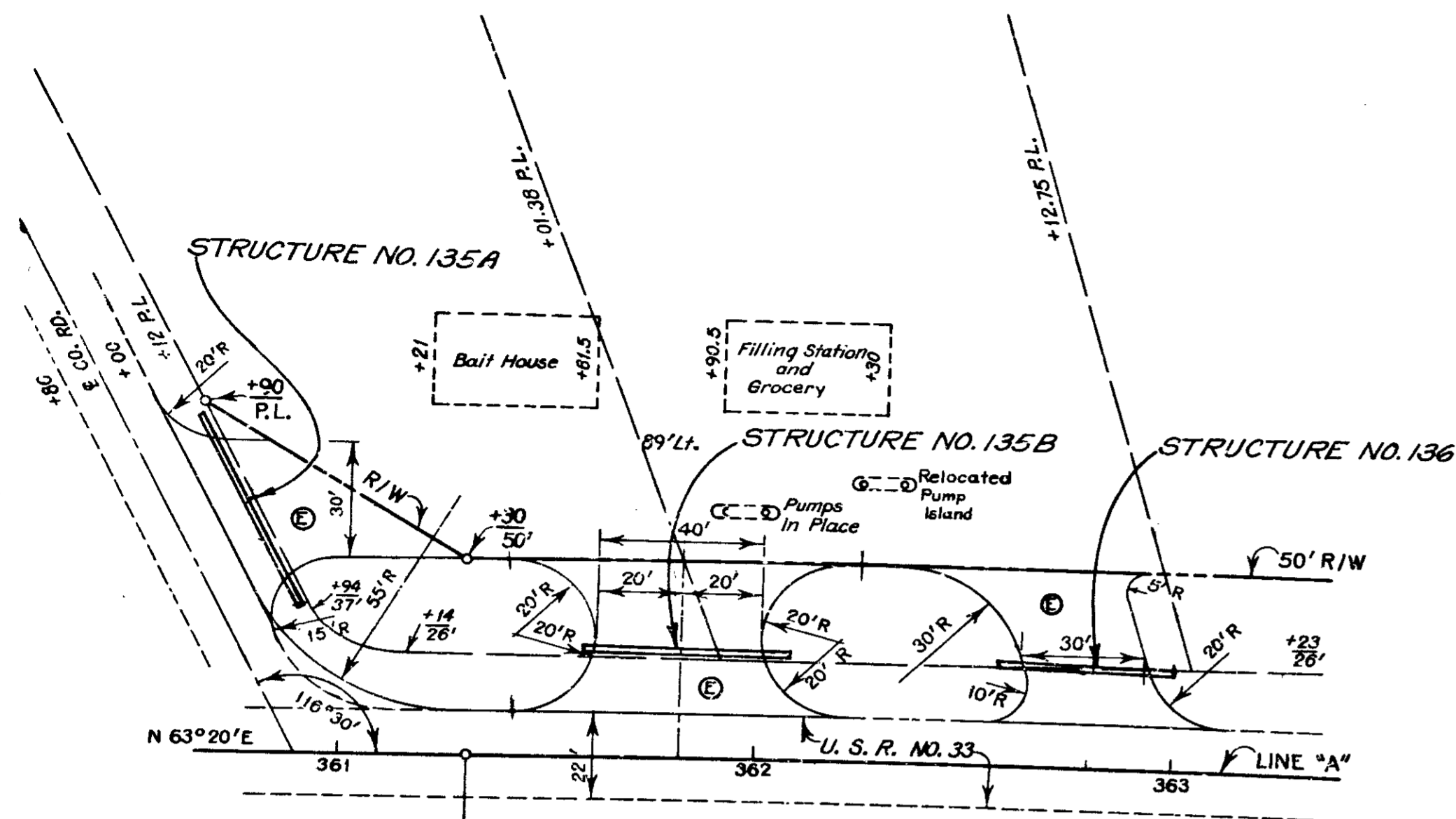
LOCATION	DESCRIPTION	EXCAVATION CU. YDS.		SURFACE			BIT. CONC. A.H. BINDER FOR APPROACHES SQ. YDS.	COMP. AGG. TONS	ANGLE "I"	See Detail On SH. NO.
		Cut	Fill	LENGTH In Feet	WIDTH In Feet	RADII In Feet				
45+84 Lt.	V		2							
46+66 Rt.	V									
49+92 Rt.	II	2		39	12	15-25	72.3	15		
50+12 Rt.	V	2								
50+13 Lt.	V									
61+14 Rt.	II	2		39	12	15-25	72.3	15		
62+25 Rt.	II			39	12	15-25	72.3	15		
70+98 Lt.	II	33		39	12	15-25	72.3	15		
73+514 Rt.	Pub. Rd.	500		110	20	36.25-66.25	403	134	68°	
75+13 Lt.	II	10		39	12	15-25	72.3	15		
77+72 Rt.	II			39	12	15-25	72.3	14		
78+99 Rt.	Pub. Rd.	25		97	20	35.4-71.5	377	126	64°	
83+05 Lt.	II		10	39	12	15-25	72.3	15		
83+05 Rt.	V		14							
94+00 Lt.	V									
94+00 Rt.	V	3								
128+90 Rt.	V									
3+65 on S-2-Rt. on Rt.	V									
129+50 Lt.	Pub. Rd.	240		228	20	36-62.5	660	220	70°	
130+24 Rt.	II	2		44	12	15-25	779	18		
133+20 Rt.	V									
135+05 Lt.	V		24							
140+15 Lt.	II	6		39	12	15-25	72.3	15		
145+89 Lt.	II		3	41	12	15-25	75.0	16		
147+50 Lt.	II		4	48	12	15-25	70.6	16		
149+00 Lt.	V		2							
157+13 Lt.	Pub. Rd.	5		70	20	38-38	267	89	90°	
157+25 Rt.	Pub. Rd.	3		75	20	37-47.5	292	98	80°	
157+33 Rt.	II	2		18	10	15	27	4		
166+44 Rt.	V		10							
173+97 Lt.	V	2	2							
174+14 Lt.	Pub. Rd.	2	5	70	20	38-38	268	88	90°	
175+50 Lt.	II			39	12	15-25	72.3	16		
181+20 Rt.	II		40	120	12	15-25	175.8	39		
186+40 Rt.	Pub. Rd.	47		80	20	38-38	290	98	90°	
192+16 Rt.	II	3		39	12	15-25	72.3	16		
241+48 Lt.	II			39	12	15-25	72.3	15		
249+20 Rt.	V									
249+20 Lt.	V									
262+50 Lt.	Pub. Rd.	95	25						24	
265+40 Rt.	V									
269+40 Lt.	V									
269+40 Rt.	V									
274+32 Rt.	Pub. Rd.	110	190	20	38-38	534		198	90°	
284+35 Lt.	II			39	12	15-25	72.3	16		
288+20 Rt.	II			39	12	15-25	72.3	16		
292+03 Rt.	Pub. Rd.	200		112	20	36-62.5	394	131		
296+82 Lt.	II			39	12	15-25	72.3	15		
311+15 Rt.	II			39	12	15-25	72.3	15		
341+00 Lt.	II			39	12	15-25	72.3	15		
344+50 Lt.	II	3		39	12	15-25	72.3	15		
488+50 Lt.	V									
488+57 Rt.	V									
499+48 Rt.	II	4		39	12	15-25	72.3	16		
503+12 Lt.	II	2		44	12	15-25	79.0	16		
Line S-1-30		245	20							
509+70 Rt.	II			34	12	15-25	72.3	10		
Line S-1-30 507+54 Rt. Com. Dr.				30	12	15-25	72.3	10		
509+75 Rt. Com. Dr.				30	12	15-25	72.3	10		
511+59 Rt. Com. Dr.				30	12	15-25	72.3	10		
512+54 Rt.	II			30	12	15-25	69.3	13		

## SHOULDER WIDENING PORTION

LOCATION	DESCRIPTION	EXCAVATION CU. YDS.		SURFACE			BIT. CONC. A.H. BINDER FOR APPROACHES SQ. YDS.	COMP. AGG. TONS	ANGLE "I"	See Detail On SH. NO.	PLAIN CONC. PAV'T SQ. YDS.
		Cut	Fill	LENGTH In Feet	WIDTH In Feet	RADII In Feet					
5+19 Rt.	IV	5									
5+84 Rt.	IV	5									
7+00 Rt.	II	2		39	12	15-25	72.3	16			
8+52 Lt.	II	2		40	30	20-20	174.0	58			
13+11 Lt.	II	2		39	12	15-25	72.3	16			
13+12 Rt.	II	2		39	12	15-25	72.3	14			
17+55 Lt.	II	2		39	12	15-25	72.3	14			
19+58 Rt.	II			39	12	15-25	72.3	14			
23+38 Rt.	II	2		39	12	15-25	72.3	16			
25+42 Rt.	II	2		39	12	15-25	72.3	16			
26+28 Rt.	II			39	12	15-25	72.3	16			
29+42 Lt.	Pub. Rd.			76	20	36.5-55	304	90	75°		
29+42 Rt.	Pub. Rd.			76	20	36.5-55	304	90	75°		
31+43 Lt.	II	1		39	12	15-25	72.3	14			
32+20 Lt.	II	2		39	12	15-25	72.3	16			
32+97 Lt.	IV	2									
33+77 Lt.	IV	2									
35+53 Lt.	IV	5									
38+77 Rt.	II	3		39	12	15-25	72.3	16			
41+30 Lt.	V	1									
41+30 Rt.	V	3									
109+08 Lt.	V		3								
109+33 Rt.	V	2									
120+08 Rt.	V										
120+33 Lt.	V	2									
202+53 Rt.	Pub. Rd.	20	5	81	20	36.1-61.0	330	89	71°		
205+25 Lt.	II	2		39	12	15-25	72.3	15			
206+25 Lt.	II			39	12	15-25	72.3	13			
206+45 Rt.	V										
209+22 Rt.	V										
216+59 Lt.	V		3								
222+94 Rt.	V	2									
223+82 Lt.	II			39	12	15-25	72.3	16			
229+21 Lt.	V		2								
231+23 Lt.	II			39	12	15-25	72.5	16			
237+72 Rt.	II			39	12	15-25	72.3	13			
239+50 Rt.	II			39	12	15-25	72.3	14			
319+00 Lt.	Pub. Rd.	5	15	75	20	37.5-40.8	285	86	85°		
324+76 Lt.	V										
324+88 Rt.	II			39	12	15-25	72.3	15			
332+53 Rt.	Pub. Rd.	5	10	70	20	37.5-40.8	274	85	85°		
333+63 Rt.	II			39	12	15-25	72.3	16			
336+50 Lt.	II			39	12	15-25	72.3	14			
337+28 Rt.	II			39	12	15-25	72.3	16			
353+34 Lt.	V										
354+19 Rt.	II			39	12	15-25	72.3	16			
357+87 Lt.	II	2		39	12	15-25	72.3	15			
360+90 Lt.	Pub. Rd.	5		90	20	35.4-55.0	355	102	64°		
360+90 Lt.	IV			40							
361+82 Lt.	IV			40							
362+95 Rt.	IV										
362+80 Lt.	IV			40							
370+18 Rt.	IV	2									
375+96 Rt.	II			39	12	15-25	72.3	16			
382+36 Rt.	V										
383+25 Rt.	II			39	12	15-25	72.3	11			
383+35 Lt.	V	2									
394+00 Lt.	V		3								
394+37 Rt.	V										
395+77 Lt.	II	1	2	39	12	15-25	72.3	15			
401+00 Rt.	V		10								
407+65 Rt.	V		10								

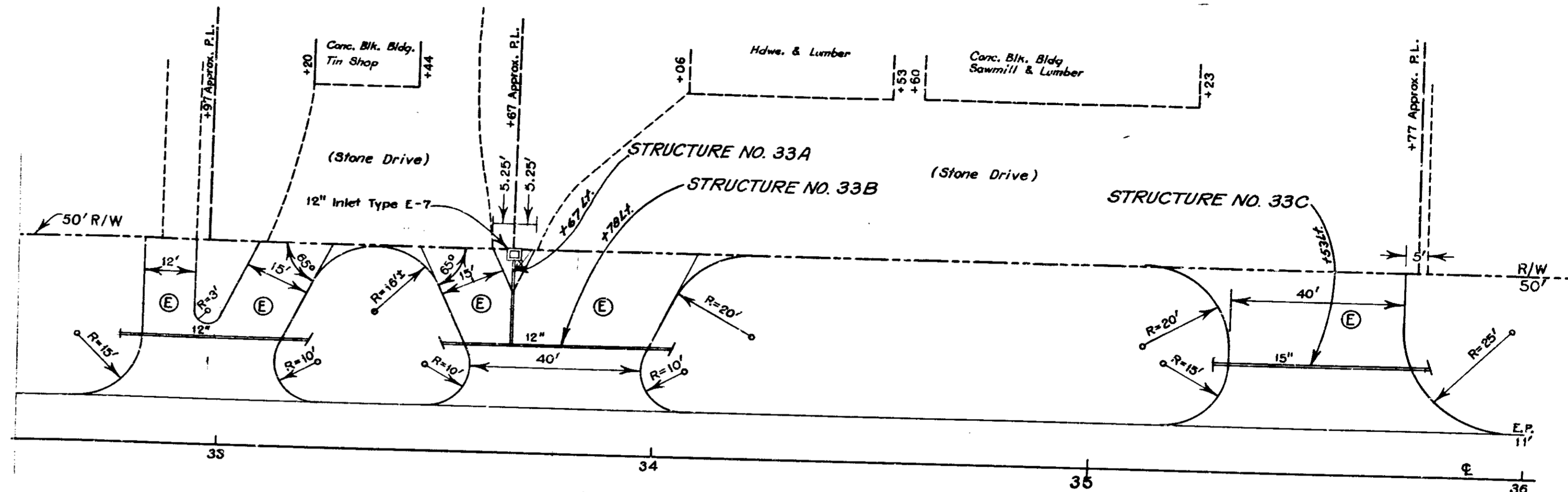
# DETAILS

FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	44(4)	1982	23 A	175



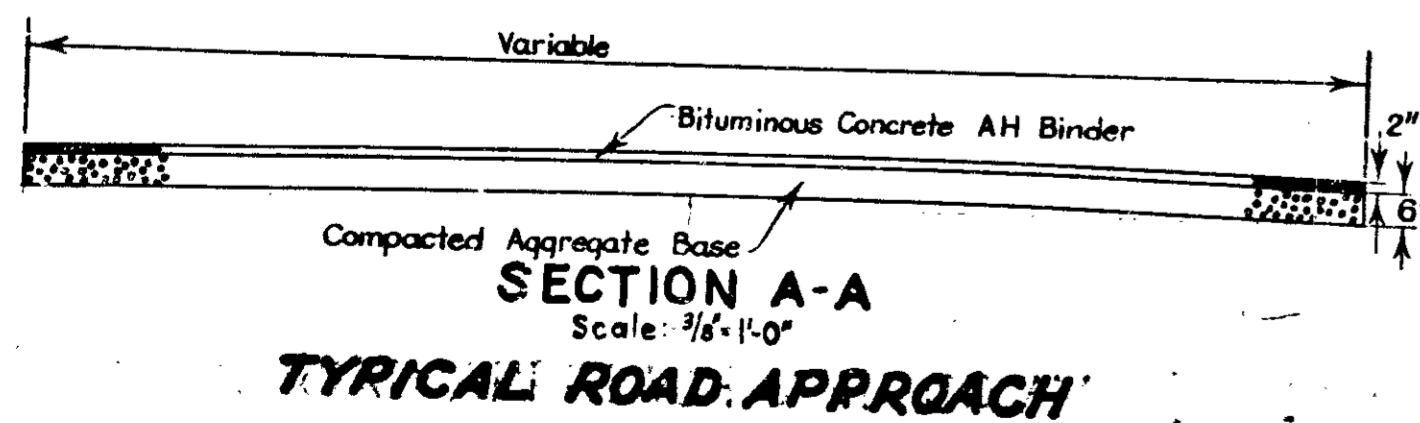
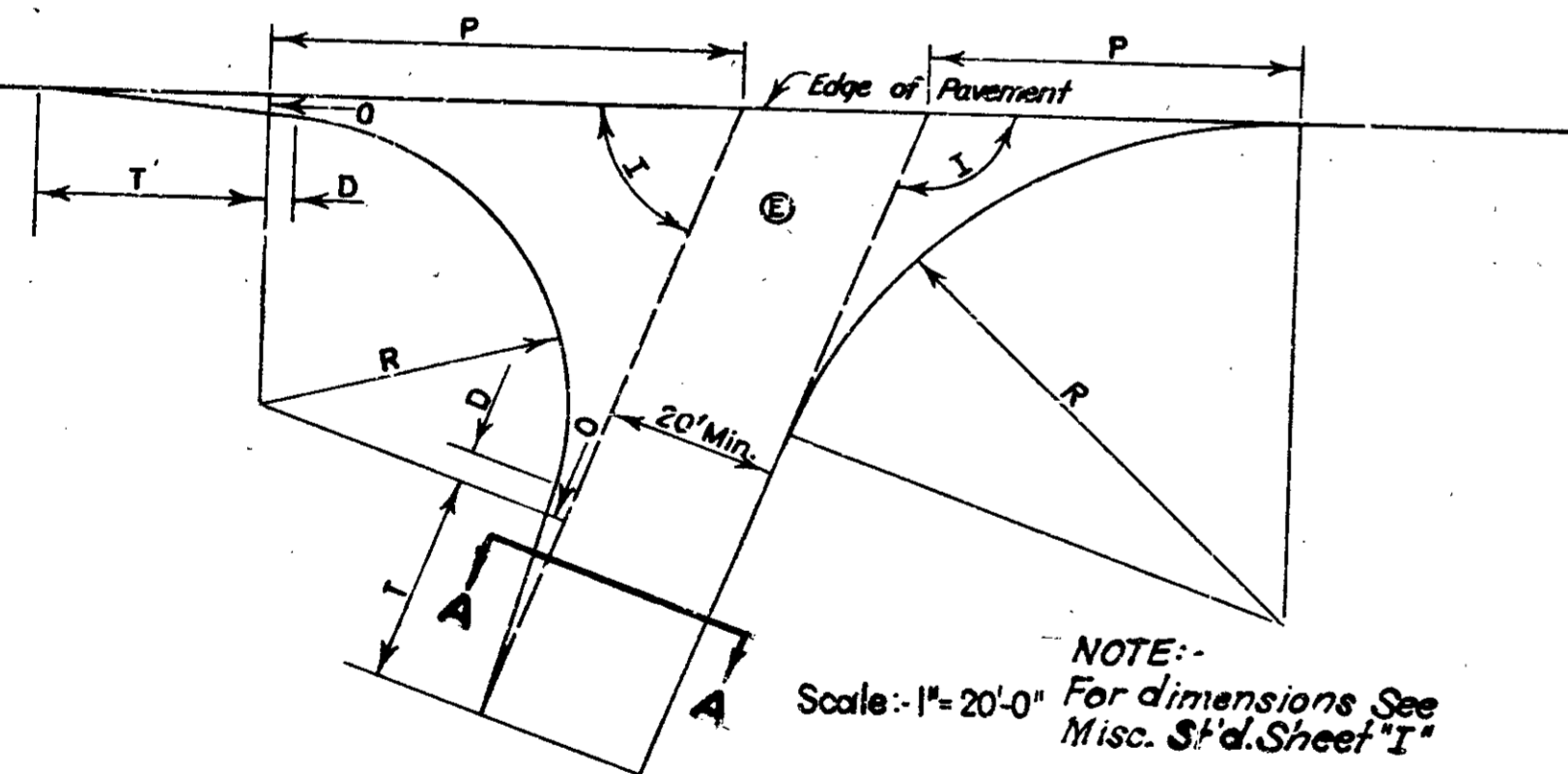
COMMERCIAL DRIVE ON LT.  
STA. 360+90 TO STA. 363+13  
Scale 1" 30'-0"

ADDITIONAL QUANTITIES  
 2" Bituminous Concrete A.H. Binder..... 513 Sq. Yds.  
 6" Compacted Aggregate..... 172 Tons  
 172 TONS

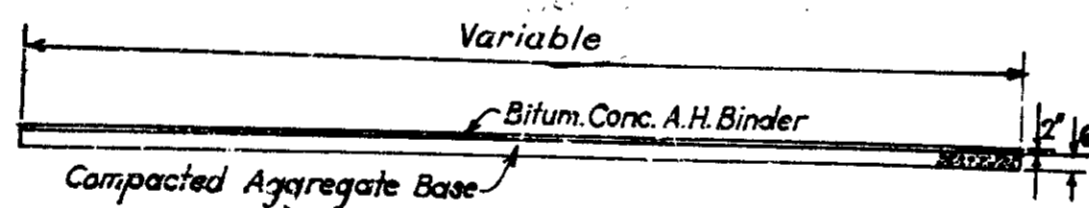


COMMERCIAL DRIVE ON LT.  
STA. 32+62 TO STA. 35+77  
Scale 1" 20'-0"

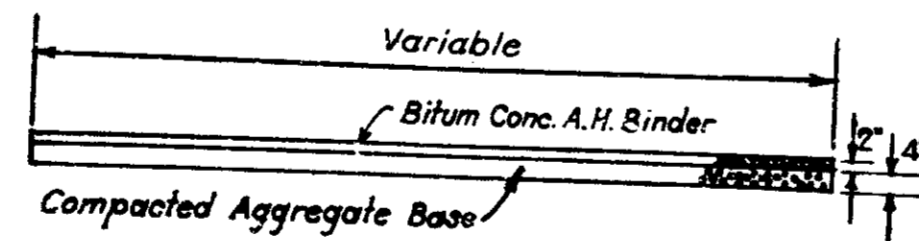
ADDITIONAL QUANTITIES  
 2" Bituminous Concrete A.H. Binder..... 556 Sq. Yds.  
 6" Compacted Aggregate..... 186 Tons



SECTION A-A  
Scale: 3/8" 1'-0"  
TYPICAL ROAD APPROACH



TYPICAL SECTION FOR COMM. DRIVE



TYPICAL SECTION FOR PRIV. DRIVE  
AND MAIL BOX APPROACHES

NOTE:- For other details of above Approaches, See Misc. S'tds. Sh. B & H

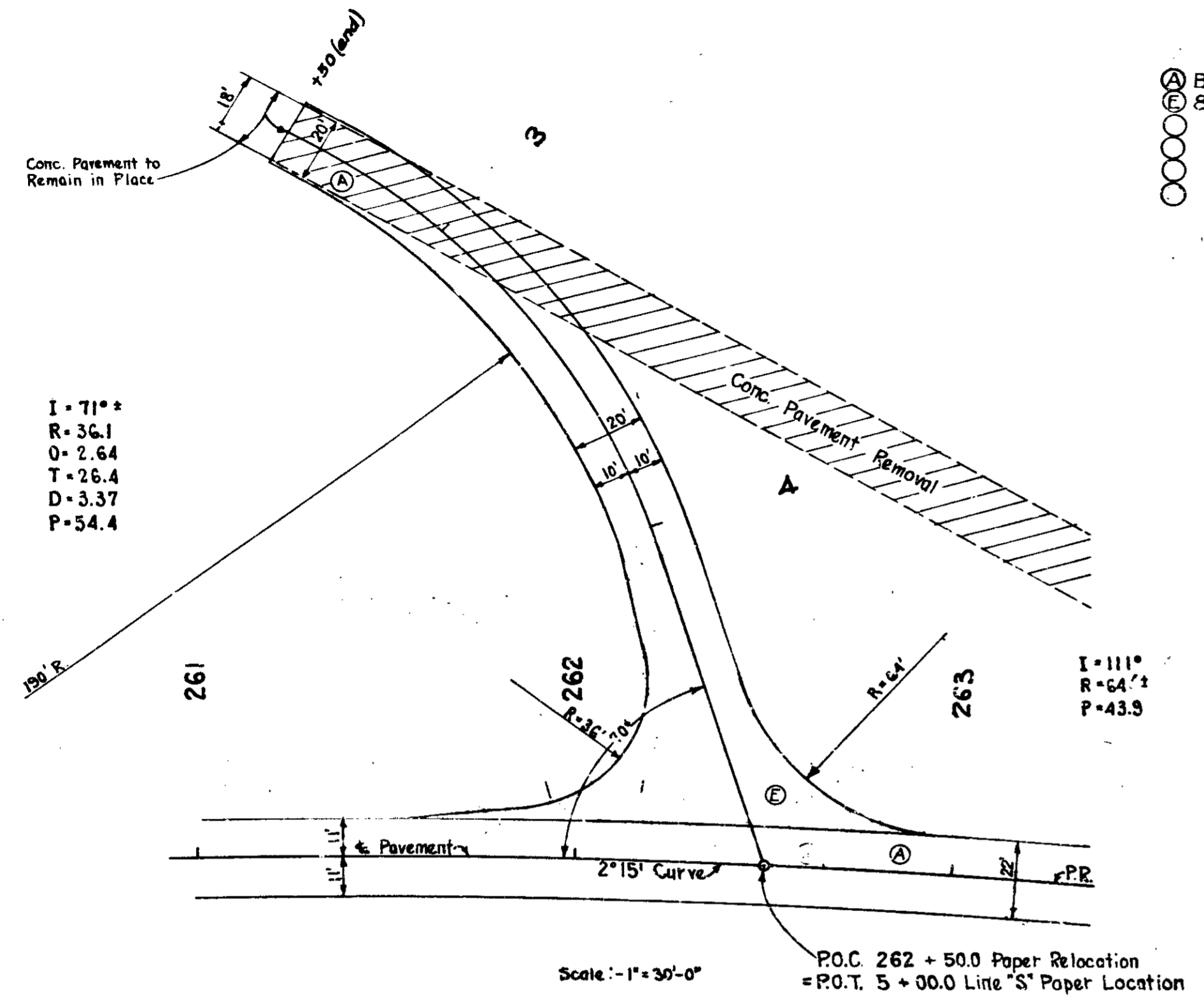
DETAILS



FEDERAL ROAD DIVISION NO.	STA. E.	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	44(4)	1952	24	175

**LEGEND**

- (A) Bitum. Conc. Pavement
- (B) 8" Approach Pavement



I = 71° ±  
R = 36.1  
O = 2.64  
T = 26.4  
D = 3.37  
P = 54.4

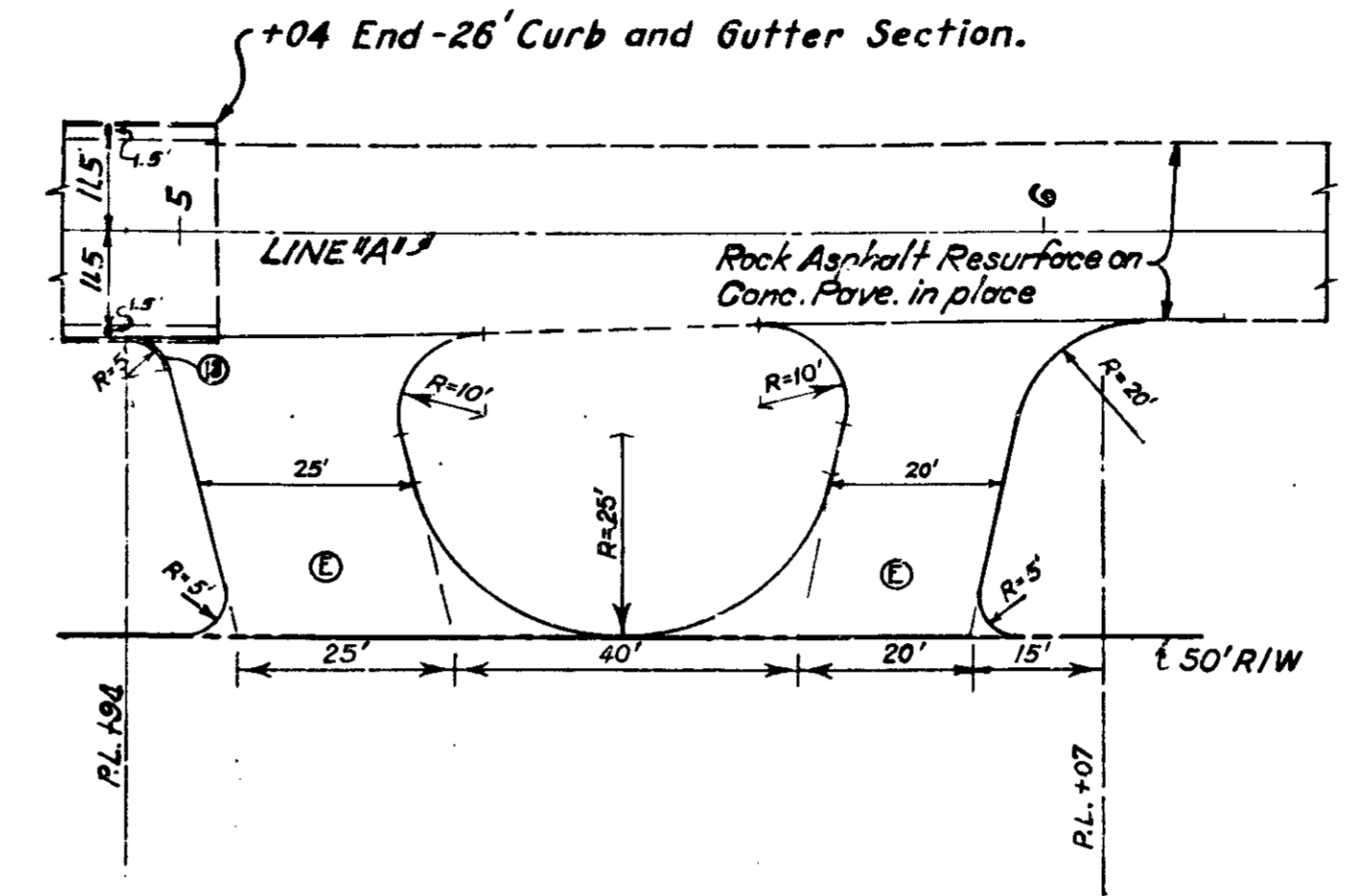
I = 111° ±  
R = 64.7 ±  
P = 43.3

P.O.C. 262 + 50.0 Paper Relocation  
= R.O.T. 5 + 00.0 Line "S" Paper Location

**GRADE OF APPROACH**  
Scale: Horiz. 1" = 50'-0"  
Vert. 1" = 4'-0"

**DETAIL OF INTERSECTION**  
STA. 262 + 50 "P.R." ON LT.  
= STA. 5 + 00 LINE "S" P.R.  
ADDITIONAL QUANTITIES

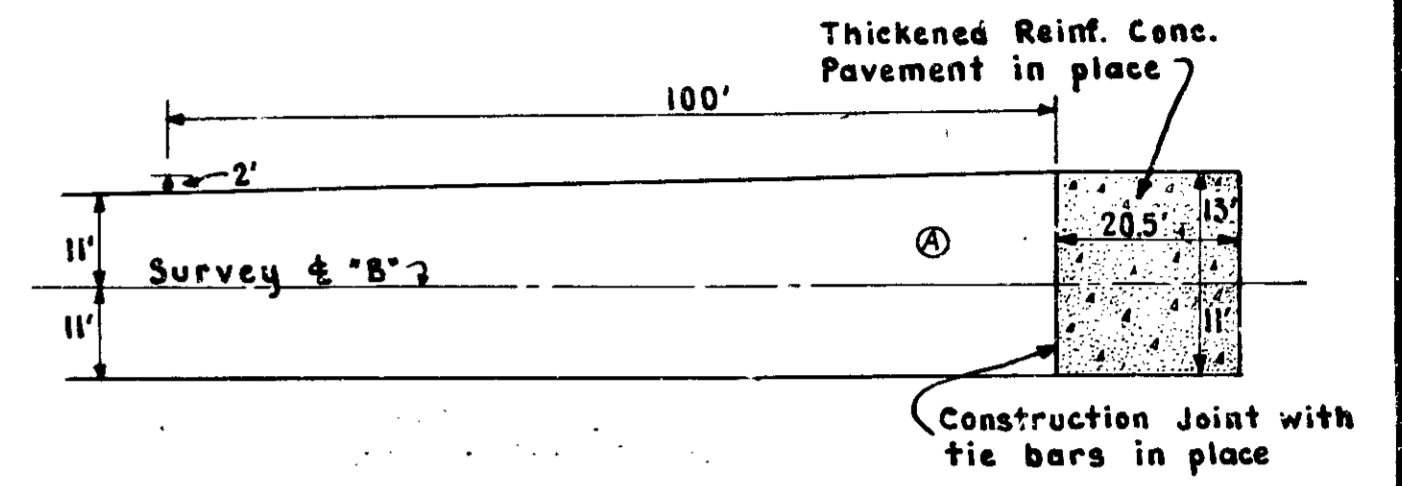
2" Bitum. Conc. A.H. Binder ..... 682 Sq. Yds.  
6" Compacted Aggregate ..... 228 Tons



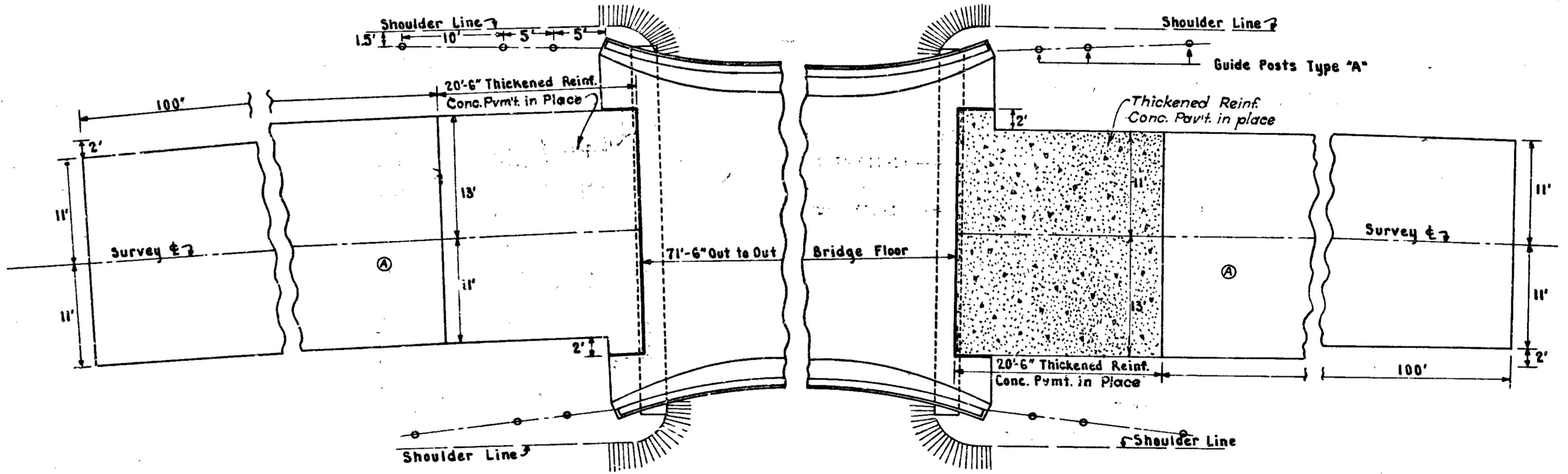
**COMMERCIAL DRIVE ON RT.**  
STA. 4 + 94.0 TO STA. 5 + 84.0  
Scale: 1" = 20'-0"

**ADDITIONAL QUANTITIES**

2" Bitum. Conc. A.H. Binder ..... 221 Sq. Yds.  
6" Compacted Aggregate ..... 74 Tons  
Concrete Curb ..... 8 Lin. Ft.



**DETAIL OF APPROACH TRANSITION TO EXCEPTION AT STRUCTURE NO. 1 STATION 163 + 61**  
Scale 1" = 20'-0"  
TYPICAL FOR BOTH ENDS OF STR.



**DETAIL OF APPROACH TRANSITION TO EXCEPTION AT STRUCTURE NO. 2 STA. 247 + 72**  
Scale 1/8" = 1'-0"

**DETAILS**  
Scales as Shown

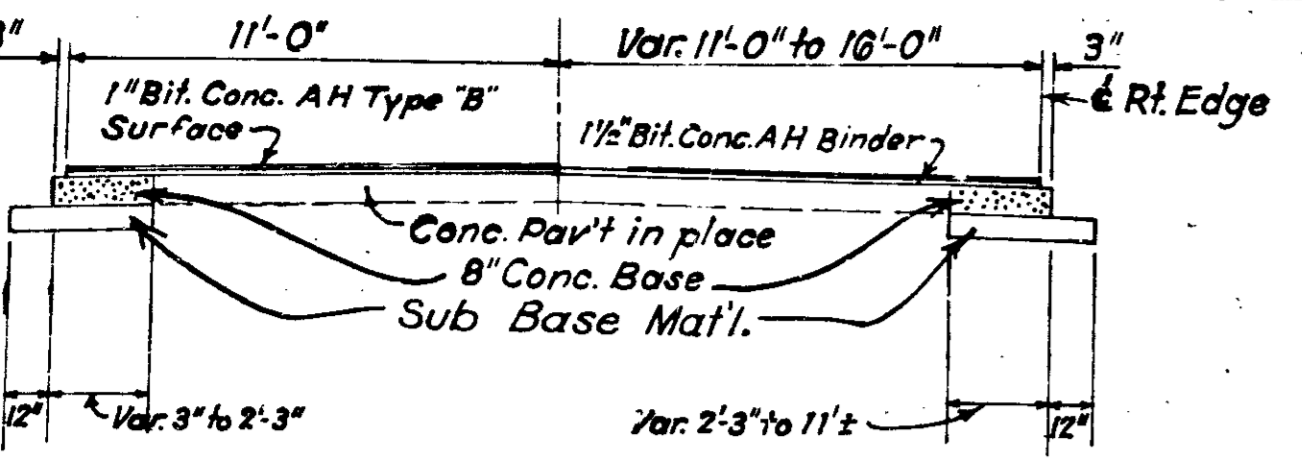
Intersection Details  
Revised March 13, 1952  
as per Design Dept

FEDERAL ROAD DISTRICT NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	44(4)	1952	25	175

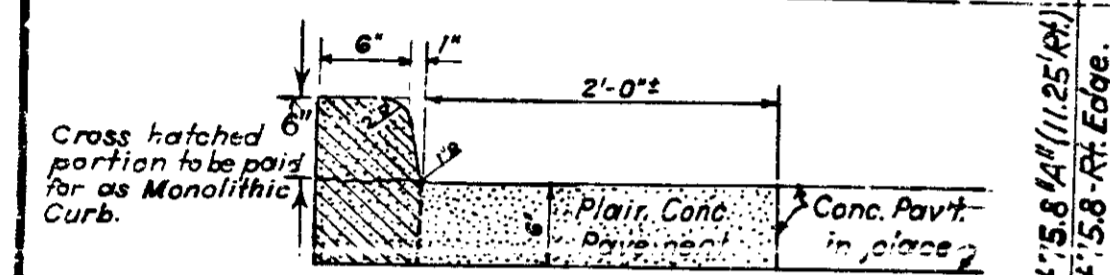
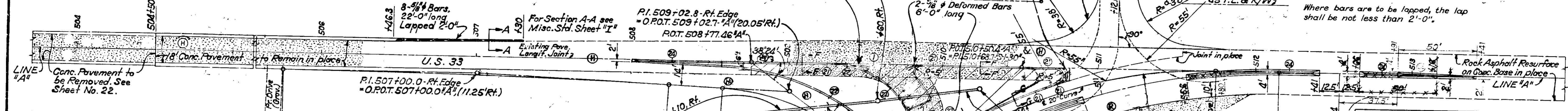
Revised: March 13, 1952

NOTE: 5/8" Bars Req'd. at Type "A" Ear Construction @ -  
Return of 10' Radius; 2-5/8" Bars; 7'-6" long Req'd.  
" 15' " 2- " " 9'-0" " " "  
" 20' " 2- " " 11'-0" " " "  
" 30' " 2- " " 13'-3" " " "  
" 50' " 2- " " 17'-6" " " "

Where bars are to be lapped, the lap shall be not less than 2'-0".



TYPICAL PAVEMENT SECTION  
AHEAD OF STA. 504+50



SECTION H-H (See Spec. Provisions)  
MONOLITHIC CURB  
Scale: 1"=1'-0"

TOTAL PAVEMENT QUANTITIES  
STA. 504+50.0 TO STA. 513+16.0

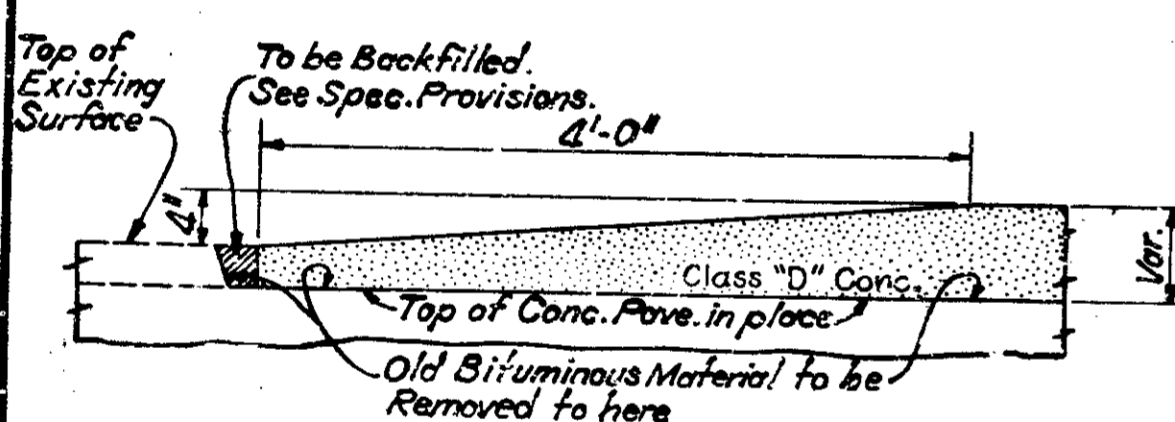
Pavement Removal	609	Sq. Yds.
Curb Removal	22	Lin. Ft.
8" Conc. Base	606	Sq. Yds.
Plain Conc. Pavement	231	Sq. Yds.
Reinforcing Steel	540	Pounds
1/2" Preformed Expansion Joint	245	Lin. Ft.
1 1/2" Bituminous Concrete AH Binder	139	Tons
Grade Posts, Type "B"	55	Each
1" Bituminous Concrete AH Surface	93	Tons
Special Conc. Center Curb	175	Sq. Yds.
Special Conc. Curb, Type "B"	227	Lin. Ft.
Special Integral Conc. Curb, Type "B"	250	Lin. Ft.
Special Combined Curb and Gutter	68	Lin. Ft.
Approach Pavement	300	Sq. Yds.
Monolithic Curb	148	Lin. Ft.

**LEGEND**

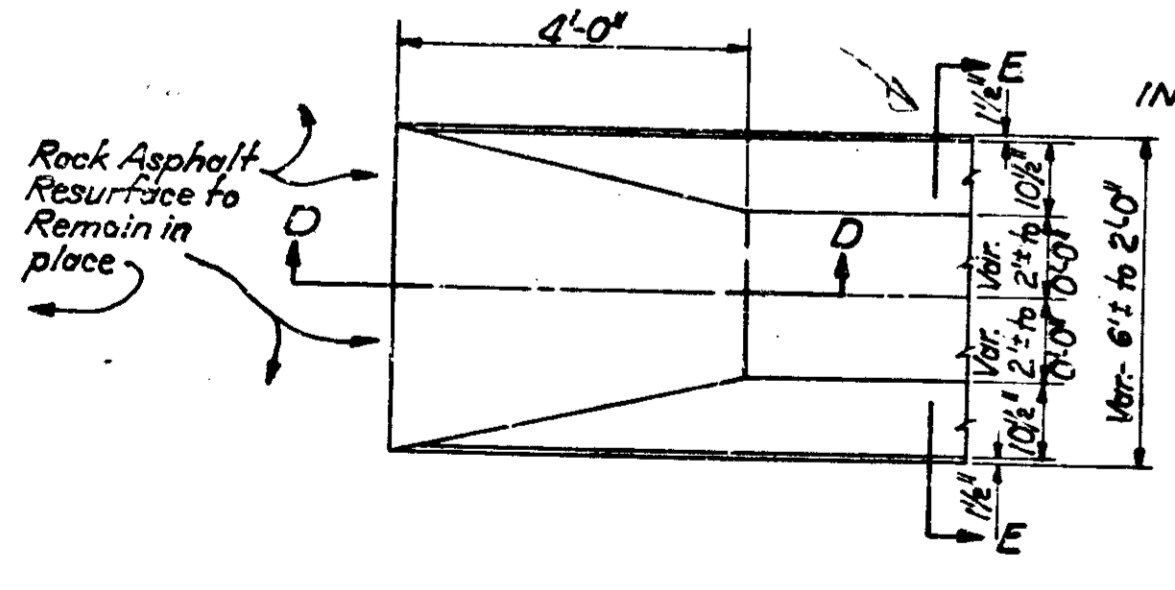
- ① Standard Thickened Edge
- ② Longitudinal Joint
- ③ Buff Joint
- ④ Preformed Exp. Jt. with Load Transfer
- ⑤ 1/2" Preformed Expansion Joint
- ⑥ 6" Traffic Lane Stripe
- ⑦ Special Conc. Curb, Type "B"
- ⑧ Special Integral Conc. Curb Type "B"
- ⑨ Special Combined Curb and Gutter
- ⑩ Special Conc. Center Curb
- ⑪ Monolithic Curb

⑫ Bituminous Conc. Pavement  
⑬ Plain Conc. Pavement  
⑭ Approach Pavement  
⑮ Ear Construction, Type "A" - Omit Joints ⑦ & ⑧  
⑯ Bituminous Concrete On Concrete Base

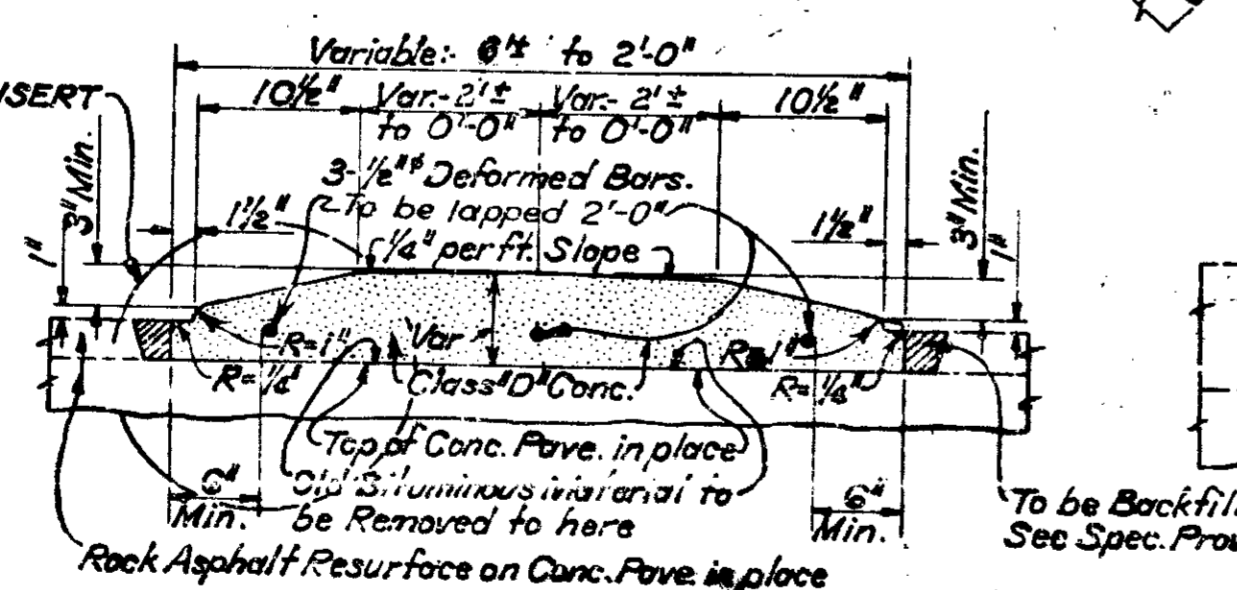
▨ Pavement Removal



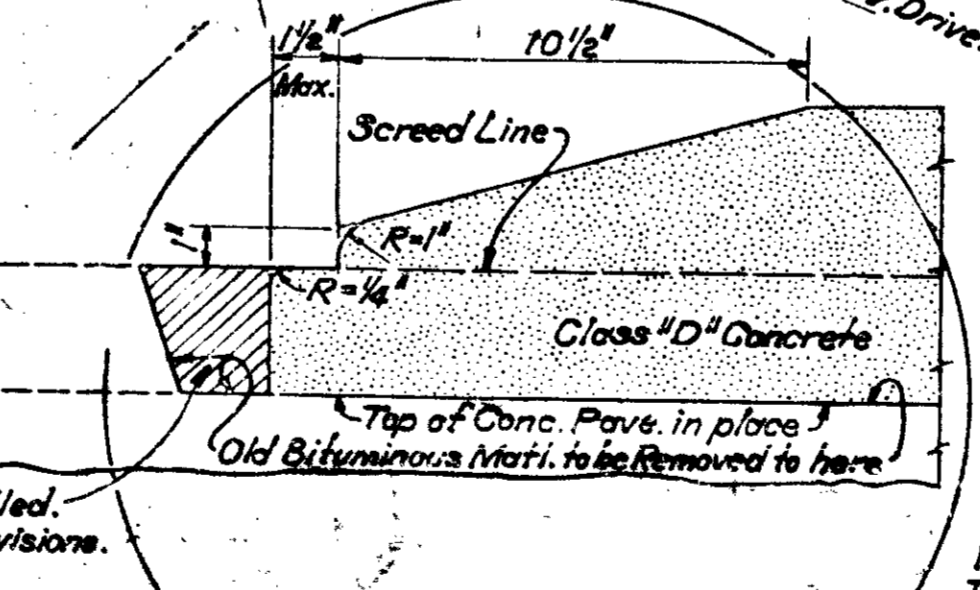
SECTION D-D' (See Spec. Provisions)  
MONOLITHIC CURB  
Scale: 1"=1'-0"



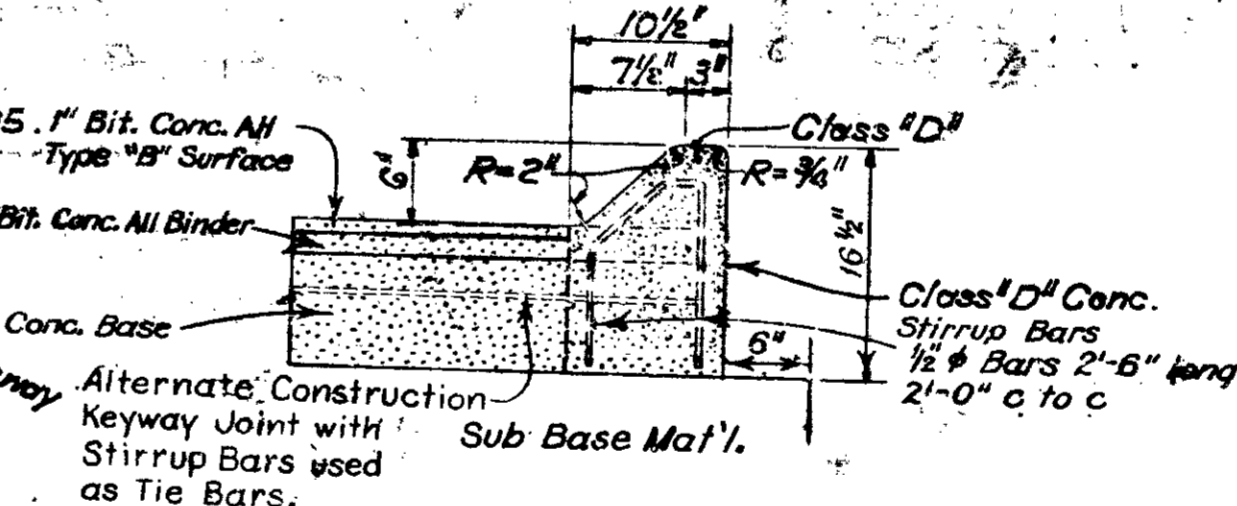
PLAN  
Scale: 1"=2'-0"



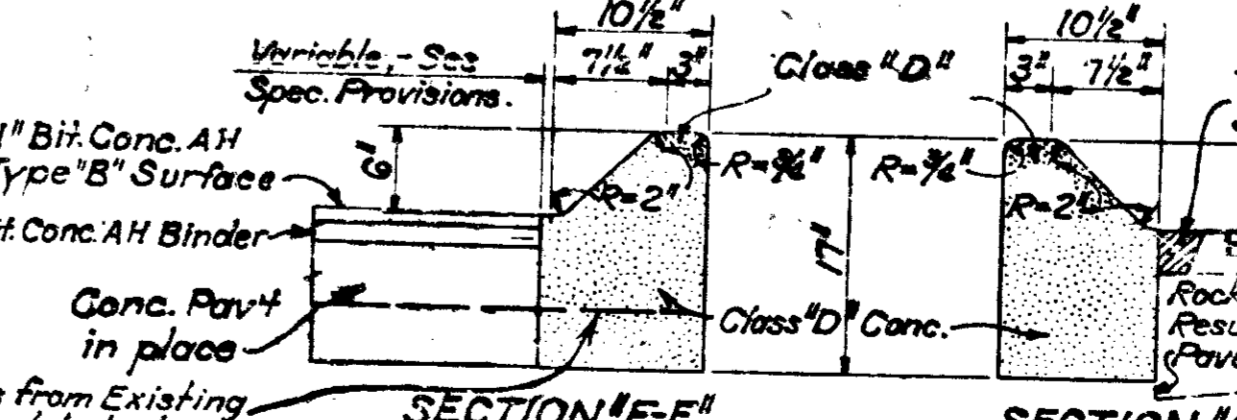
SECTION E-E'  
Scale: 1"=1'-0"



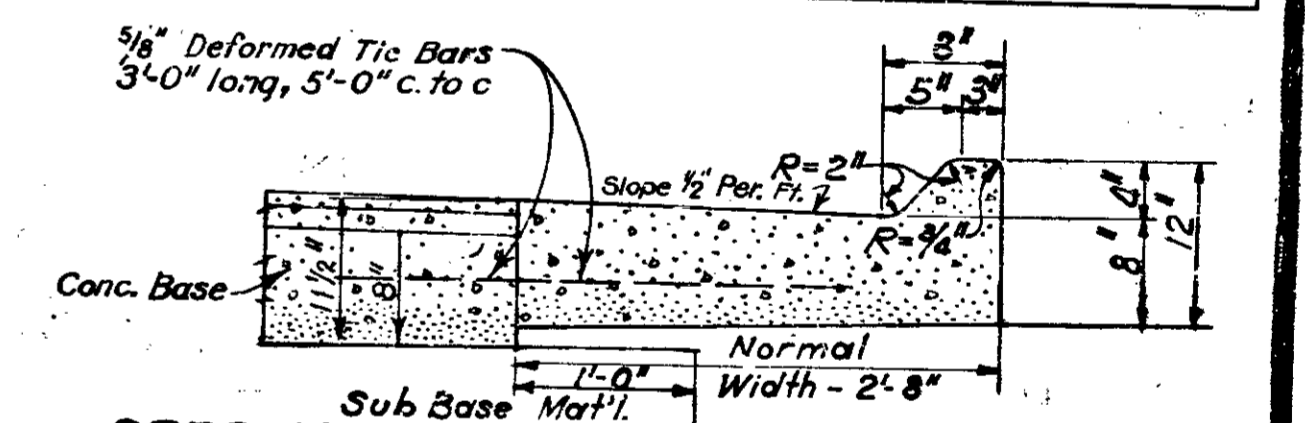
INSERT  
Scale: 3"=1'-0"



SECTION F-F'  
SPECIAL CONCRETE CURB, TYPE "B"  
Scale: 1"=1'-0"

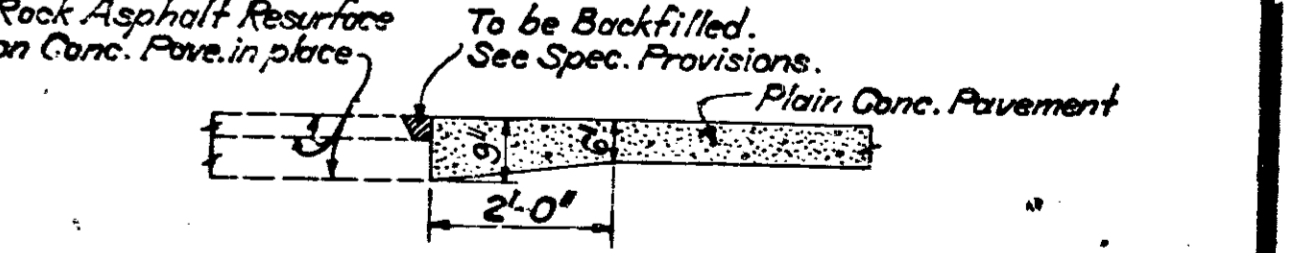


SECTION G-G'  
SPECIAL CONCRETE CURB, TYPE "B"  
SEE SPECIAL PROVISIONS  
Scale: 1"=1'-0"



SPECIAL COMBINED CURB AND GUTTER  
Scale: 1"=1'-0"

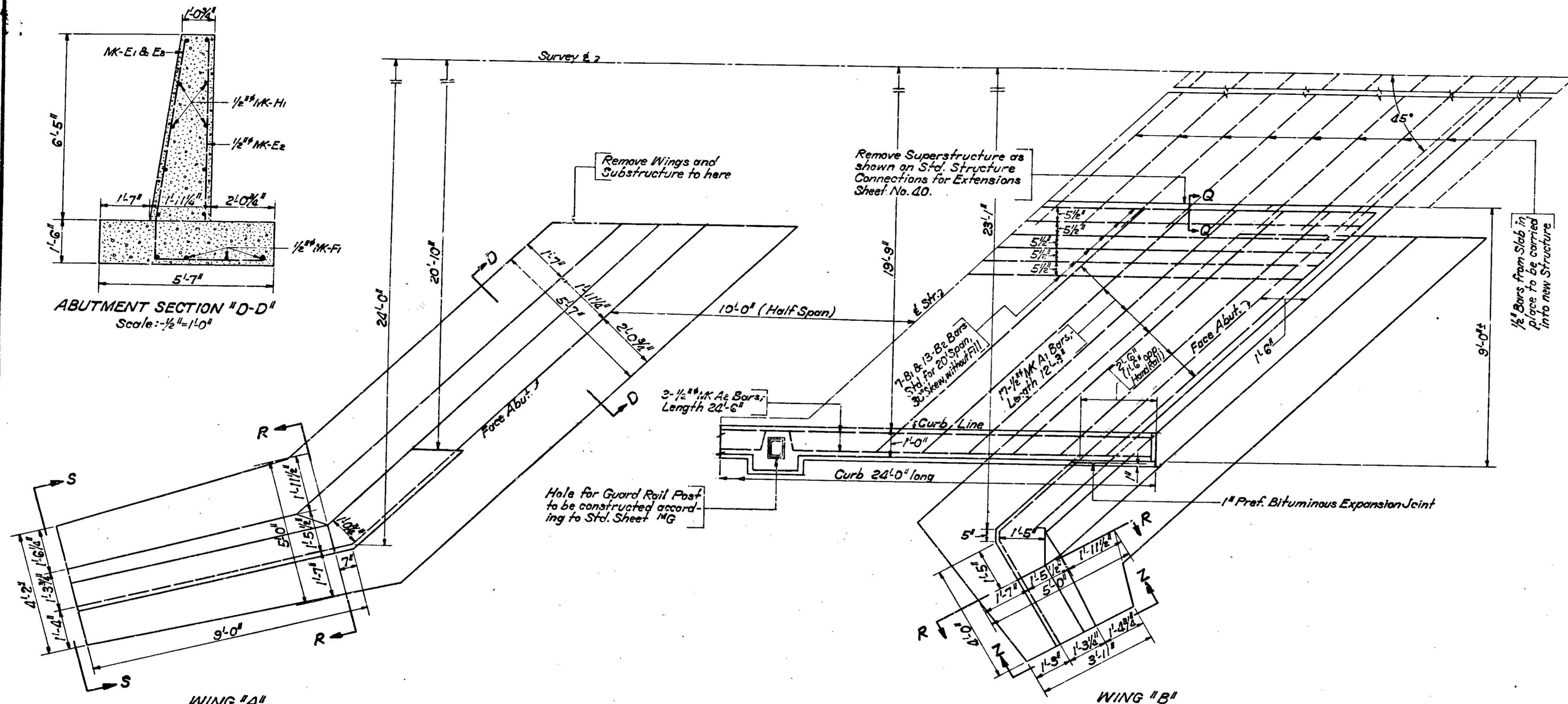
NOTE: Where Spec. Combined Curb & Gutter is constructed to a width greater than the normal width of 2'-8", the additional width shall be constructed to a uniform depth of 9" converted to equivalent Lin. Ft., and paid for accordingly.



PLAIN CONCRETE PAVEMENT  
Scale: 1"=2'-0"

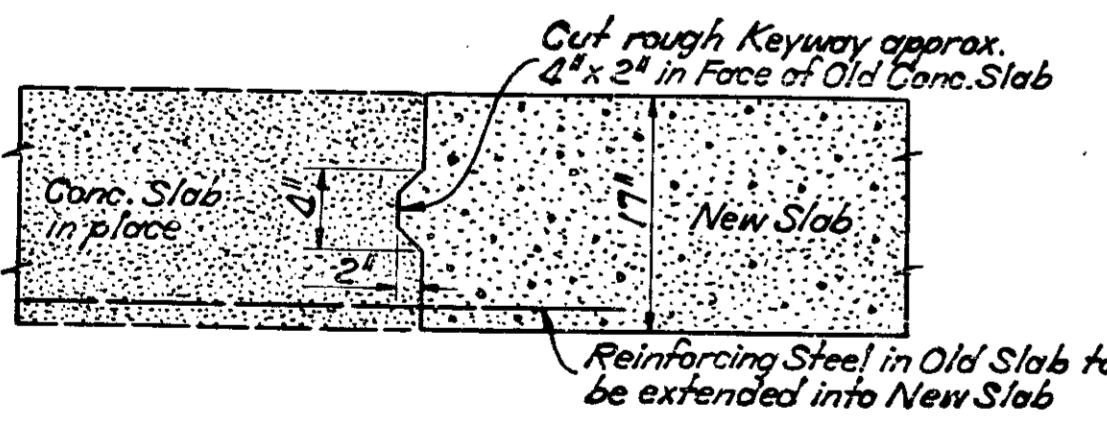
INTERSECTION OF U.S. NO. 33  
AND U.S. NO. 30  
STA. 511+00 ±  
**DETAILS**  
Scale: 1"=30'-0"  
Except as Shown.





**STRUCTURE NO. 143**  
**STA. 393 + 23.0**  
**20' SPECIAL REINF. CONC. CULVERT**  
**SLAB TOP TYPE WITHOUT FILL**  
**45° SKEW. H=3'-5' WINGS A-B**  
 Scale: 1/2" = 1'-0"

USE THE FOLLOWING STANDARDS:-  
 For Footing of Stem Walls - 20' Span, H=5'-7', 45° Skew  
 For Stem Walls & Wings - 14' Span, H=3'-5', 45° Skew  
 For Superstructure - 20' Span, 30° Skew  
 Extend Str. in place to 44' Roadway. Construct Std. Guard Rail in place of Conc. Handrail as shown on Std. Sheet MG.  
 For Details and General Notes not shown on this Sheet, see Standard Sheets listed above.



SECTION Q-Q'  
 SHOWING CONNECTION TO  
 CONC. SLAB IN PLACE  
 Scale: 1/2" = 1'-0"

TOTAL REINFORCING STEEL FOR ONE SIDE					
MARK	NO. PIECES	SIZE	LENGTH	TOTAL LENGTH	TOTAL WEIGHT
				5/8"	1"
<b>SUPERSTRUCTURE</b>					
20' Span, 45° Skew (Taken from Std. for 30° Skew)					
A1	17	1/2"	12'-3"	208'-3"	
B1	7	1"	24'-3"		169'-9"
B2	13	1"	23'-6"		305'-6"
A2	3	1/2"	24'-3"	72'-9"	
From Sheet #6 1/2" Special Reinforcing Steel					30
<b>SUBSTRUCTURE</b>					
Footings for Abutments, - 20' Span, 45° Skew, H=5'-7'					
F1	3	1/2"	16'-9"	50'-3"	(Wing 'A' Side)
F2	3	1/2"	15'-6"	46'-6"	(Wing 'B' Side)
F3	66	1/2"	4'-3"	280'-6"	
Footings for Wings - No Steel Req'd.					
Stem Walls for Abutments, - 14' Span, 45° Skew, H=3'-5'					
H1	11	1/2"	18'-6"	203'-6"	(Wing 'A' Side)
H2	11	1/2"	17'-3"	189'-9"	(Wing 'B' Side)
E1	22	1/2"	8'-0"	176'-0"	
E2	22	1/2"	6'-3"	137'-6"	
Stem Walls for Wing 'A', - 14' Span, 45° Skew, H=3'-5'					
R1	13	1/2"	9'-0"	117'-0"	
R2	2	5/8"	7'-3"	14'-6"	
R3	2	5/8"	6'-3"	12'-6"	
R4	2	5/8"	5'-6"	11'-0"	
M1	1	5/8"	9'-0"	9'-0"	
M2	2	5/8"	8'-3"	16'-6"	
M3	2	5/8"	7'-0"	14'-0"	
M5	1	5/8"	7'-9"	7'-9"	
U1	2	1/2"	7'-3"	14'-6"	
Stem Walls for Wing 'B', - 14' Span, 45° Skew, H=3'-5'					
H3	13	1/2"	7'-0"	52'-0"	
R5	1	5/8"	7'-3"	7'-3"	
R6	1	5/8"	6'-3"	6'-3"	
R7	1	5/8"	5'-6"	5'-6"	
M4	1	5/8"	9'-0"	9'-0"	
M6	1	5/8"	8'-3"	8'-3"	
M7	1	5/8"	7'-0"	7'-0"	
U2	2	1/2"	7'-3"	14'-6"	
<b>TOTALS</b>				1563'-0"	1074*
				128'-5"	134*
				475'-3"	1269*
<b>TOTAL (ONE SIDE)</b>					2477*
<b>GRAND TOTAL (BOTH SIDES)</b>					4954*
<b>CONCRETE</b>					Cys.
Superstructure - (One Side)					11.18
Substructure - (One Side)					27.02
<b>TOTAL (ONE SIDE)</b>					38.20
<b>GRAND TOTAL (BOTH SIDES)</b>					76.40

\* Mark's shown are the same as shown on the respective Standard Sheets. Lengths have been revised for this Structure where required.

# DETAILS

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

# ESTIMATE OF QUANTITIES

## PAVING PORTION

## STRUCTURE DATA

GRADING			PAVEMENT			MISCELLANEOUS			STRUCTURE DATA													
ITEM	UNIT	QUANTITY	ITEM	UNIT	QUANTITY	ITEM	UNIT	QUANTITY	STRUCTURE NO.	LOCATION	DESCRIPTION	SIZE	RIND	DEPTH	WINGS	FLOW	REMARKS					
EXTENSION COMMON	CY	7601	REINFORCING STEEL	LBS	540	CONCRETE	CU YD	231	1	163+61	Structure built under Separate Contract											
GRAVEL	CU YD	11943	ASPHALT SURFACE	CU YD	2875	CONCRETE	CU YD	28840	2	247+72	Structure built under Separate Contract											
GRAVEL	CU YD	7989	BITUM. COND. MIX. A.H. TYP. B	CU YD	4312	CONCRETE	CU YD	208	37	45+90 Lt.	C.M. Pipe	12"		20'								
GRAVEL	CU YD	39844	BITUM. COND. MIX. A.H. TYP. B	CU YD	714	CONCRETE	CU YD	139333	38	46+07	Sewer Pipe	6"		78'								
GRAVEL	CU YD	22	CONCRETE	CU YD	37990	CONCRETE	CU YD	28840	39	46+11	R.C. V.C. C.I. or Conc. Pipe	15"		69'		881.4	877.0	0.69	22	Remove F.D. Tile in place. Remove C.B. in place. Connect to F.D.T. in place		
GRAVEL	CU YD	5060	CONCRETE	CU YD	606	CONCRETE	CU YD	208	40	48+28 Rt.	Pipe	6"		6'					15	Remove Pipe in place. Remove Pipe in place. Remove Pipe in place.		
GRAVEL	CU YD	17,685	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	41	50+00 Rt.	C.M. Pipe	12"		44'						15	Remove Pipe in place. Remove Pipe in place. Remove Pipe in place.	
GRAVEL	CU YD	5,294	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	42	50+15 Lt.	C.M. Pipe	12"		20'								
GRAVEL	CU YD	2,001.2	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	43	58+29	R.C. V.C. C.I. or Conc. Pipe	24"		69'		871.7	870.3	0.58				
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	44	61+10 Rt.	C.M. Pipe	12"		24'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	45	62+20 Rt.	C.M. Pipe	12"		24'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	46	62+86	R.C. or Conc. Pipe	15"		21'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	47	70+96 Lt.	Pipe	12"		26'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	48	72+90	R.C. V.C. C.I. or Conc. Pipe	18"		69'		854.8	854.4	2.29	15	Remove Pipe in place. Extend Pipe in place 9' Lt. & 12' Rt. Remove Hdws. in place Lt. & Rt. Remove Pipe in place. Connect to F.T. in place. Remove F.T. in place.		
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	49	79+30	Sewer Pipe	10"		135'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	50	75+15 Rt.	C.M. Pipe	12"		24'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	51	77+75 Rt.	C.M. Pipe	12"		24'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	52	77+80	Sewer Pipe	6"		93'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	53	81+47	R.C. or Conc. Pipe	15"		36'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	54	83+03 Lt.	C.M. Pipe	12"		24'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	55	94+00 Lt.	C.M. Pipe	12"		20'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	56	94+00 Rt.	C.M. Pipe	12"		20'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	57	128+90 Lt.	C.M. Pipe	12"		20'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	58	130+20 Rt.	C.M. Pipe	12"		24'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	59	131+36 Rt.	Pipe	6"		6'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	60	133+21 Rt.	C.M. Pipe	12"		20'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	61	134+20 Rt.	Pipe Latch Basin & Sewer Pipe	15"		6'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	62	134+21 Rt.	Drain Tile	8"		270'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	63	136+45	Sewer Pipe	8"		100'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	64	136+65	R.C. V.C. C.I. or Conc. Pipe	15"	87'	837.5	836.0	9.80	20	42	Connect to Str. No. 72 & to F.D. Tile in place. Remove C.B. in place. Connect to Str. No. 71 & 75. Connect to Str. No. 72 & 75 & to F.D. Tile in place. Remove F.D. Tile in place. Remove Pipe in place.			
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	65	136+90 Rt.	Sewer Pipe & Type C-5 Catch Basin	8"		6'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	66	145+90 Lt.	C.M. Pipe	12"		24'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	67	147+65 Lt.	C.M. Pipe	12"		24'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	68	149+05 Lt.	C.M. Pipe	12"		20'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	69	152+57	R.C. V.C. C.I. or Conc. Pipe	15"		87'		823.2	820.8	0.69				
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	70	174+15 Lt.	R.C. V.C. C.I. or Conc. Pipe	15"		42'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	71	175+50 Lt.	C.M. Pipe	12"		26'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	72	181+20 Rt.	C.M. Pipe	12"		24'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	73	181+19	R.C. or C.I. Pipe	30"	88"	827.7	827.3	4.38	133	47	Spec. Priv. Entr. Hdws. for 42" R.C. Pipe 30" Sk. Remove Box Culv. on Rt. (D=42", F=1'-6", H=6'-0", B=1'-0", G=12'-3", 4-5/8" # Bars, Lqth. 11'-3") Connect to 18" F.D. Tile in place. on Lt. & Rt. Remove 18" F.D. Tile in place.			
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	74	181+79	R.C. V.C. C.I. or Conc. Pipe	18"		117'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	75	186+50 Rt.	C.M. Pipe	15"		42'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	76	241+50 Lt.	C.M. Pipe	12"		24'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	77	249+15 Lt.	C.M. Pipe	12"		58'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	78	249+15 Rt.	C.M. Pipe	12"		58'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	79	254+59	R.C. V.C. C.I. or Conc. Pipe	30"	84'	831.0	830.8	1.71	9		Remove Pipe in place. Not included in this Contract. Not included in this Contract.			
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	80	257+71	R.C. V.C. C.I. or Conc. Pipe	15"	85'	831.2	831.0	2.29	15		Construct Outlet Ditch			
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	81	262+20 Lt.	R.C. V.C. C.I. or Conc. Pipe	15"		42'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	82	265+35 Rt.	C.M. Pipe	12"		20'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	83	266+32 Rt.	Catch Basin in place											
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	84	284+37 Lt.	C.M. Pipe	12"		24'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	85	214+32 Rt.	C.M. Pipe	15"		42'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	86	270+09	R.C. V.C. C.I. or Conc. Pipe	15"		72'		837.0	836.6	1.71	7	Remove Pipe in place on Rt. Remove Pipe in place on Rt. Const. Inlet & Outlet Ditches.		
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	87	289+28 Rt.	Pipe	6"		54'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	88	291+60	R.C. or Conc. Pipe	15"		42'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	89	292+00 Rt.	C.M. Pipe	15"		42'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	90	303+36	R.C. or Conc. Pipe	15"		42'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	91	341+00 Lt.	C.M. Pipe	12"		24'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	92	342+64	Spec. R.C. Culv. Slab Top Type	30"		24'	5'-1"	A-B	833.9	833.9	74.90	255	3,794	Remove Pipe in place. Extend Str. in place on Rt. Remove Pipe in place.
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	93	344+50 Lt.	C.M. Pipe	12"		24'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	94	488+50 Lt.	C.M. Pipe	12"		20'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	95	488+60 Rt.	C.M. Pipe	12"		20'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	96	491+00	R.C. or C.I. Pipe	15"	68'	850.3	850.0	9.94	44	614	Remove Pipe in place. Remove Pipe in place. Seal Str. in place at Sta. 492+22. Const. Std. Hdws. W. To Terminate F.T.			
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU YD	208	97	496+28 Rt.	Sewer Pipe	6"		6'								
GRAVEL	CU YD	2,186	CONCRETE	CU YD	2186	CONCRETE	CU Y															



# ESTIMATE OF QUANTITIES

## SHOULDER WIDENING-2

## STRUCTURE DATA

4 1100 44(1) 52 30 175

GRADING			PAVEMENT			MISCELLANEOUS		
ITEM	UNIT	QUANTITY	ITEM	UNIT	QUANTITY	ITEM	UNIT	QUANTITY
REINFORCED CONCRETE			REINFORCED CONCRETE			REINFORCED CONCRETE		
GRAVEL			GRAVEL			GRAVEL		
ASPHALT			ASPHALT			ASPHALT		
CONCRETE			CONCRETE			CONCRETE		
...			...			...		

ITEM	UNIT	QUANTITY	DESCRIPTION	SIZE	KIND	DEPTH	HEIGHT	WIDTH	FLOW LINE	ELEVATION	DRAINAGE	REMARKS			
													LOCATION		
135B			C.M. Pipe	15"			52'					Remove pipe in place.			
136			C.M. Pipe	15"			42'					Remove pipe in place.			
137			C.M. Pipe	12"			20'					Remove Pipe in place.			
138			Pipe	15"			5'								
139			C.M. Pipe	12"			20'								
140			C.M. Pipe	12"			24'								
141			R.C. or Conc. Pipe	15"			27'					Extend Pipe in place 12' Lt. & 15' Rt.			
142			C.M. Pipe	12"			20'								
143			Spec. R.C. Culv. Slab Top Type	45"			20'	3'-5"	A-B	839.0	839.0	76.3%	165	4,954	Extend Str. in place on Lt. & Rt. to 44' Rdwy. as shown on Details.
144			C.M. Pipe	12"			20'								
145			C.M. Pipe	18"			20'								
146			C.M. Pipe	12"			24'								
147			C.M. Pipe	18"			20'								
148			Sewer Pipe	8"			17'								
149			C.M. Pipe	18"			20'								
150			C.M. Pipe	15"			20'								
151			C.M. Pipe	15"			20'								
152			Sewer Pipe	8"			30'								
153			C.M. Pipe	15"			24'								
154			C.M. Pipe	12"			24'								
155			C.M. Pipe	12"			24'								
156			C.M. Pipe	12"			24'								
157			C.M. Pipe	12"			24'								
158			C.M. Pipe	12"			24'								
159			C.M. Pipe	12"			24'								
160			C.M. Pipe	12"			24'								
161			C.M. Pipe	12"			24'								
162			C.M. Pipe	12"			24'								
163			R.C. V.C. C.I. or Conc. Pipe	15"			51'			870.0	870.0	0.69	12		Remove Pipe in place.
164			R.C. Pipe in place												Remove Pipe in place.
165			C.M. Pipe	15"			27'								Construct Outlet Ditch.
166			R.C. or Conc. Pipe				42'								Remove Hdwl's.
167			Type C-5 Catch Basin												Remove Pipe in place.
168			Type C-5 Inlet												Extend Pipe in place 15' Lt. & 12' Rt. Connect to Str. No. 167 & 168 & to 8' FT. in place. Remove FT. in place.
169			C.M. Pipe	12"			20'								Connect to Str. No. 166 & to 8' FT. in place. Remove C.B. in place.
170			Pipe	12"			6'								Connect to Str. No. 166 & to 8' FT. in place. Remove C.B. in place.
171			C.M. Pipe	12"			24'								Remove Pipe in place.
172			C.M. Pipe	12"			24'								
172A			C.M. Pipe	15"			42'								Remove Pipe in place.
173			C.M. Pipe	12"			24'								
173A			C.M. Pipe	12"			42'								
174			R.C. Pipe in place				24'								
175			C.M. Pipe	12"			24'								
176			Pipe	12"			24'								
177			C.M. Pipe	12"			24'								
178			C.M. Pipe	12"			24'								
179			C.M. Pipe	12"			24'								
180			C.M. Pipe	12"			24'								
181			C.M. Pipe	12"			24'								
182			C.M. Pipe	12"			24'								
183			C.M. Pipe	12"			24'								
184			Pipe	12"			6'								
185			C.M. Pipe	12"			24'								
186			C.M. Pipe	12"			24'								
187			C.M. Pipe	12"			24'								
188			C.M. Pipe	12"			24'								
189			C.M. Pipe	12"			24'								
190			C.M. Pipe	15"			24'								
191			C.M. Pipe	12"			24'								
192			R.C. or Conc. Pipe	15"			30'								

STRUCTURES											
ITEM	PIPE - LINEAL FEET										
	4"	6"	8"	10"	12"	15"	18"	24"			
REINFORCED CONCRETE											
CAST-IRON PIPE											
...											

SUBSURFACE DRAINAGE				FOR STRUCTURES			
PIPE - LINEAL FEET				ITEM			
PIPE	INLET	MANHOLE	RECONSTRUCTED	ITEM	QUANTITY	ITEM	QUANTITY

ITEM	UNIT	QUANTITY	DESCRIPTION	REMARKS
79A			Bitum. coated Perf. C.M. V.C. Sewer	Construct Transverse Drains at Sta. 171+50, Sta. 173+50 and Sta. 176+00
80A			Bitum. coated Perf. C.M. V.C. Sewer	Omit Porous Backfill for 125' of Outlet end.
106A			Bitum. coated Perf. C.M. V.C. Sewer	Omit Porous Backfill for 75' of Outlet end.
110A			Bitum. coated Perf. C.M. V.C. Sewer	Construct Transverse Drain at Sta. 250+50
110B			Bitum. coated Perf. C.M. V.C. Sewer	Omit Porous Backfill for 35' of Outlet end.
110C			Bitum. coated Perf. C.M. V.C. Sewer	Construct Transverse Drain at Sta. 263+50

NOTE: ADDITIONAL STRUCTURES FOR PAVING PORTION

27-36  
40-42  
44-47  
48