MINNESOTA DEPARTMENT OF TRANSPORTATION
ANOKA COUNTY

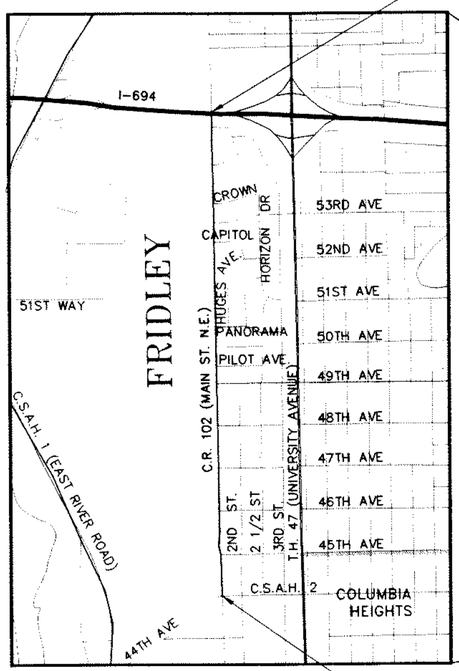
CONSTRUCTION PLAN FOR GRADING, AGGREGATE BASE, BITUMINOUS SURFACING, CONCRETE CURB & GUTTER, BITUMINOUS PATH AND UTILITIES

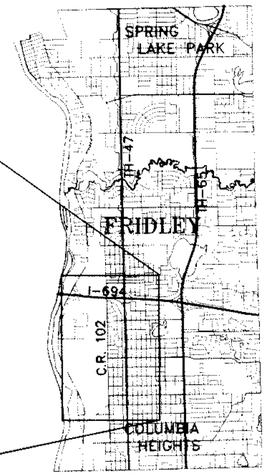
LOCATED ON C.R. 102 (MAIN ST.) BETWEEN C.S.A.H. 2 (44TH AVE.) AND I-694 (Geographic Description)

COUNTY PROJECT NO. 89-28-102

GROSS LENGTH	7,277.00	FEET 1.378	MILES
BRIDGES-LENGTH	0.00	FEET 0.000	MILES
EXCEPTIONS-LENGTH	0.00	FEET 0.000	MILES
NET LENGTH	7,277.00	FEET 1.378	MILES

END C.P. 89-28-102
STA. 179+55.00





BEGIN C.P. 89-28-102
STA. 106+78.00

N
W ANOKA COUNTY E
S

PLAN SYMBOLS

COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT OF WAY LINE
SLOPE EASEMENT
PRESENT RIGHT OF WAY
PROPERTY LINE
CORPORATE OR CITY LIMITS
RETAINING WALL
RAILROAD
RAILROAD RIGHT OF WAY
RIVER OR CREEK
DRAINAGE DITCH
CULVERT
DROP INLET
GAURD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
WOOD FENCE
STONE WALL OR FENCE
HEDGE
LOWLAND
TIMBER
ORCHARD
BRUSH
NURSERY
CATTLE GAURD
OVERPASS (Highway Over)
UNDERPASS (Highway Under)
BRIDGE
BUILDING (One Story Frame)
F-FRAME C-CONCRETE
S-STONE T-TILE
B-BRICK ST-STUCCO
RAILROAD CROSSING BELL
RAILROAD CROSSING GATE
MANHOLE M.H.
CATCH BASIN C.B.
FIRE HYDRANT
CAST IRON MONUMENT
IRON PIN
GRAVEL PIT
SAND PIT
BORROW PIT
ROCK QUARRY

UTILITY SYMBOLS

POWER POLE LINE
TELEPHONE OR TELEGRAPH POLE LINE
JOINT TELEPHONE & POWER ON POWER POLES
ON TELEPHONE POLES
ANCHOR
STEEL TOWER
STREET LIGHT
PEDESTAL (Cable Terminal)
GAS MAIN
WATERMAIN
TELEPHONE CABLE IN CONDUIT
ELECTRIC CABLE IN CONDUIT
TELEPHONE MANHOLE
ELECTRIC MANHOLE
BURIED TELEPHONE CABLE T-BUR
BURIED ELECTRIC CABLE P-BUR
AERIAL TELEPHONE CABLE T-AE
SEWER (Sanitary or Storm)
SEWER MANHOLE

SCALES

PLAN 0 50 100
PROFILE
HORIZONTAL 0 50 100
VERTICAL 0 5 10
X-SECTIONS
HORIZONTAL 0 10 20
VERTICAL 0 10 20
INDEX MAP 0 200 400

MINN. PROJ. NO.
MINN. PROJ. NO.

GOVERNING SPECIFICATIONS

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AS AMENDED BY "SUPPLEMENTAL SPECIFICATIONS", DATED MAY 2, 1994 SHALL APPLY.

INDEX

THIS PLAN CONTAINS 44 SHEETS

DESIGN DESIGNATION

ESN18$_{20}$ 1,238,749
R VALUE 60
ADT (1994)= 3263
Proj. ADT (2014)= 5547
Proj. HCADT (2014)= 1387
Soil Factor N/A
9 TON DESIGN
Shoulder Width 10

Functional Classification LOW DENSITY COLLECTOR
No. of Traffic Lanes 2 No. of Parking Lanes 2
Design Speed 35 MPH
Based on Stopping Sight Distance
Height of eye 3.5 Height of object 0.5
Design Speed not achieved at: N/A
STA. TO STA. MPH.
STA. TO STA. MPH.
STA. TO STA. MPH.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 7/13/94 REG. NO. 20235 ENGR. Douglas M. Fischer DESIGN ENGINEER
DESIGN SQUAD M. GABRICK

Recommended for Approval. Michael R. Kelly RIGHT-OF-WAY SECTION 7/29, 19 94
Recommended for Approval. TRAFFIC SECTION 7/20, 19 94
Recommended for Approval. CONSTRUCTION ENGINEER 7/29, 19 94
Approved 7/29, 19 94 DEPUTY COUNTY ENGINEER
Approved 7/29, 19 94 ANOKA COUNTY ENGINEER
Approved 9/21, 19 94 CITY OF FRIDLEY
Approved 9/21, 19 94 CITY OF COLUMBIA HEIGHTS

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ADMINISTRATOR DATE

STATE AID PROJ. NO.
COUNTY PROJ. NO. 89-28-102 SHEET NO. 1 OF 43 SHEETS

Fed. Project No. _____

STATEMENT OF ESTIMATED QUANTITIES

CHART NO.	NOTE	ITEM NO.	ITEM	UNIT	TOTAL QUANTITIES EST.	TOTAL QUANTITIES FINAL	ANOKA COUNTY EST.	ANOKA COUNTY FINAL	CITY OF COLUMBIA HEIGHTS EST.	CITY OF COLUMBIA HEIGHTS FINAL	CITY OF FRIDLEY EST.	CITY OF FRIDLEY FINAL	STORM SEWER (1) EST.	STORM SEWER (1) FINAL
		2021.501	MOBILIZATION	LUMP SUM	1		1							
		2031.501	FIELD OFFICE, TYPE D	EACH	1		1							
F		2101.502	CLEARING	TREE	21		21							
F		2101.507	GRUBBING	TREE	18		18							
P	(2)	2104.501	REMOVE SEWER PIPE (STORM)	LIN FT	407		407							
A		2104.501	REMOVE CURB & GUTTER	LIN FT	714		714							
E	(3,4)	2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	42627		42627							
B	(3)	2104.503	REMOVE CONCRETE PAVEMENT	SQ FT	2826		2826							
P	(2)	2104.509	REMOVE DRAINAGE STRUCTURE	EACH	15		15							
C	(3)	2104.511	SAWING CONCRETE PAVEMENT	LIN FT	141		141							
D	(3)	2104.513	SAWING BITUMINOUS PAVEMENT	LIN FT	1708		1708							
		2104.523	SALVAGE SIGNS, TYPE C	EACH	62		62							
P		2104.523	SALVAGE CASTING	EACH	13		13							
D		2105.501	COMMON EXCAVATION	CU YD	28024		28024							
D		2105.525	TOPSOIL BORROW (LV)	CU YD	2244		2244							
	(5)	2130.501	WATER	M-GAL	60		60							
M,N		2211.503	AGGREGATE BASE (CV), CLASS 5A	CU YD	6068		5546				522			
M,N		2340.508	TYPE 41 WEARING COURSE MIXTURE	TON	3807		3290				517			
N		2340.510	TYPE 31 BINDER COURSE MIXTURE	TON	4160		4160							
N		2340.514	TYPE 31 BASE COURSE MIXTURE	TON	4160		4160							
G		0340.601	2" THICK WEARING COURSE MIXTURE	SQ YD	310		310							
N		2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL	3909		3909							
P		2501.515	15" RC PIPE APRON	EACH	1								1	
P		2501.515	24" RC PIPE APRON	EACH	1								1	
P		2503.541	12" RC PIPE SEWER, DESIGN 3006 CL.III	LIN FT	1022								1022	
P		2503.541	12" RC PIPE SEWER, DESIGN 3006 CL.IV	LIN FT	24								24	
P		2503.541	15" RC PIPE SEWER, DESIGN 3006 CL.III	LIN FT	1880								1880	
P		2503.541	18" RC PIPE SEWER, DESIGN 3006 CL.III	LIN FT	235								235	
P		2503.541	21" RC PIPE SEWER, DESIGN 3006 CL.III	LIN FT	203								203	
P		2503.541	24" RC PIPE SEWER, DESIGN 3006 CL.III	LIN FT	439								439	
P		2503.541	27" RC PIPE SEWER, DESIGN 3006 CL.III	LIN FT	361								361	
P		2503.541	30" RC PIPE SEWER, DESIGN 3006 CL.III	LIN FT	312								312	
P		2503.541	33" RC PIPE SEWER, DESIGN 3006 CL.III	LIN FT	240								240	
P		2503.541	36" RC PIPE SEWER, DESIGN 3006 CL.III	LIN FT	144								144	
P		2503.541	42" RC PIPE SEWER, DESIGN 3006 CL.III	LIN FT	522								522	
P		2503.541	42" RC PIPE SEWER, DESIGN 3006 CL.IV	LIN FT	2363								2363	
P		0503.602	CONNECT TO EXISTING STORM SEWER PIPE	EACH	3								3	
I		0504.602	ADJUST WATER GATE VALVE MANHOLE	EACH	5				2		3			
I		0504.602	ADJUST WATER GATE VALVE BOX	EACH	18				4		14			
I		0504.602	RELOCATE HYDRANT & VALVE	EACH	3				1		2			
I		0504.602	RELOCATE WATER GATE VALVE AND BOX	EACH	5						5			
		0504.602	12" x 12" TEE	EACH	2						2			
		0504.602	12" x 45 DEGREE BEND	EACH	2						2			
		0504.602	12" GATE VALVE AND BOX	EACH	2						2			
		0504.603	12" D.I. WATERMAIN CLASS 50	LIN FT	127						127			
P		2506.501	CONST DRAINAGE STRUCTURE DES F	LIN FT	90.0								90.0	
P		2506.501	CONST DRAINAGE STRUCTURE DES G	LIN FT	86.3								86.3	
P		2506.501	CONST DRAINAGE STRUCTURE DES H	LIN FT	113.6								113.6	
P		2506.501	CONST DRAINAGE STRUCTURE DES 54-4020	LIN FT	24.9								24.9	
P		2506.501	CONST DRAINAGE STRUCTURE DES 60-4020	LIN FT	6.3								6.3	
P		2506.501	CONST DRAINAGE STRUCTURE DES 66-4020	LIN FT	158.1								158.1	
P		2506.501	CONST DRAINAGE STRUCTURE DES 72-4020	LIN FT	13.5								13.5	
P		2506.501	CONST DRAINAGE STRUCTURE DES 84-4020	LIN FT	12.8								12.8	
P		2506.501	CONST DRAINAGE STRUCTURE DES SPECIAL 1	LIN FT	5.5								5.5	
P		2506.503	RECONSTRUCT DRAINAGE STRUCTURE	LIN FT	34.6								34.6	
Q		2506.516	CASTING ASSEMBLY	EACH	84								84	
P		2506.521	INSTALL CASTING	EACH	13								13	
P	(6)	2506.522	ADJUST FRAME & RING CASTING	EACH	8								8	
P		0506.602	CONNECT TO EXISTING DRAINAGE STRUCTURE	EACH	3								3	
H	(6)	0506.602	ADJUST FRAME & RING CASTING (SANITARY)	EACH	14				5		9			
H		0506.602	RECONSTRUCT STRUCTURE (SANITARY)	EACH	1						1			
P	(9)	2511.501	RANDOM RIPRAP CLASS III	CU YD	8.7								8.7	

(STATEMENT OF ESTIMATED QUANTITIES CONTINUES ON SHEET 3.)

NOTES:

(1) STORM SEWER COST PARTICIPATION TO BE BASED ON STATE AID HYDRAULICS LETTER.
(2) INCLUDES ALL TYPES AND SIZES.
(3) INCLUDES ALL PAVEMENTS REGARDLESS OF DEPTH OR WIDTH.
(4) INCLUDES BITUMINOUS CURB REMOVAL.
(5) FOR DUST CONTROL AS DIRECTED BY THE ENGINEER.
(6) PAYMENT INCLUDED TO ADJUST EXISTING STRUCTURES TO NEW PAVEMENT ELEVATIONS. HOWEVER, THIS ITEM WILL ALSO BE USED FOR NEW STRUCTURES AS WELL IF WEAR COURSE IS DELAYED TO FOLLOWING CONSTRUCTION SEASON.
(7) FOR EROSION CONTROL AT STORM SEWER INLETS.
(8) FOR EROSION CONTROL AT TOE OF SLOPE, STA 127+00 TO STA 145+00, LEFT.
(9) RIPRAP TO BE PLACED AT ALL RCP APRON OUTLETS.

INDEX OF TABULATION CHARTS

THESE STANDARD PLATES AS APPROVED BY THE FHWA SHALL APPLY

STANDARD PLATES

PLATE NO.	DESCRIPTION
0005 A	SPECIFICATION REFERENCE TO STANDARD PLATES
3000 L	REINFORCED CONCRETE PIPE
3006 F	GASKET JOINT FOR R.C. PIPE
3100 G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3133 B	RIPRAP AT RCP OUTLETS
3145 E	CONCRETE PIPE TIES
4005 K	MANHOLE OR CATCH BASIN (DESIGN F)
4006 K	MANHOLE OR CATCH BASIN (DESIGN H)
4006 K	MANHOLE OR CATCH BASIN (DESIGN G)
4010 G	CONCRETE SHORT CONE & ADJUSTING RING
4011 D	PRECAST CONCRETE BASE
4020 G	MANHOLE OR CATCH BASIN COVER
4101 C	RING CASTING FOR MANHOLE OR CATCH BASIN
4110 E	COVER CASTING FOR MANHOLE
4126 F	CATCH BASIN FRAME CASTING
4149 C	GRATE CASTING FOR CATCH BASIN
4161 F	CURB BOX CASTING FOR CATCH BASIN
4180 H	MANHOLE OR CATCH BASIN STEP
7035 J	CONCRETE WALK & CURB RETURNS AT ENTRANCES
7036 D	PEDESTRIAN CURB RAMP
7100 F	CONCRETE CURB AND GUTTERS (DESIGN B)
7110 E	CURB AND GUTTER CONSTRUCTION AT CATCH BASIN
7111 G	INSTAL. & REINFORCEMENT OF CATCH BASIN CASTINGS
8000 I	STANDARD BARRICADES
9102 D	SODDING AT PIPE CULVERT ENDS

BASIS OF QUANTITIES

2340	TYPE 31 AND 41 BITUMINOUS COURSE MIXTURE: 110 LB/SQ.YD. PER 1" THICKNESS
2357	BIT. MAT'L FOR TACK COAT: 0.05 GALS/SQ.YD. PER LIFT APPLIED
2575	MULCH MATERIAL TYPE 1: 2 TONS/ACRE
2575	SEEDING: HORIZONTAL MEASURE +10%
2575	COMMERCIAL FERTILIZER ANAL. 10-10-10: 500 LB/ACRE ON ALL SEED AND SOD AREAS
2575	SEEDING MIXTURE NO. 700: 35 LB/ACRE

STATEMENT OF ESTIMATED QUANTITIES

CERTIFIED BY Douglas M Fischer P.E. REG NO. 20235 7/12 19 94 | S.P. _____ S.A.P. _____ C.P. 89-28-102 | Sheet No. 2 of 43 Sheets

Fed. Project No. _____

STATEMENT OF ESTIMATED QUANTITIES (CONT.)

CHART NO.	NOTE	ITEM NO.	ITEM	UNIT	TOTAL QUANTITIES EST.	TOTAL QUANTITIES FINAL	ANOKA COUNTY EST.	ANOKA COUNTY FINAL	CITY OF COLUMBIA HEIGHTS EST.	CITY OF COLUMBIA HEIGHTS FINAL	CITY OF FRIDLEY EST.	CITY OF FRIDLEY FINAL	STORM SEWER (1) EST.	STORM SEWER (1) FINAL
		2521.501	4" CONCRETE WALK	SQ. FT.	505		505							
K		2531.501	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	14806		7403		325		7078			
G		2531.507	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	43		43							
G		2531.507	8" CONCRETE DRIVEWAY PAVEMENT	SQ YD	238		238							
L		0531.602	PEDESTRIAN CURB RAMP	EACH	2		2							
R		0563.601	TRAFFIC CONTROL, DETOUR	LUMP SUM	1		1							
	(7)	2573.501	BALE CHECK	EACH	800		800							
	(8)	2573.503	SILT FENCE, PREASSEMBLED	LIN FT	1800		1800							
J		2575.501	SEEDING	ACRE	3.1		3.1							
J		2575.502	SEED, MIXTURE 700	POUND	109		109							
J		2575.505	SODDING, TYPE LAWN & BOULEVARD	SQ YD	17176		17176							
J		2575.511	MULCH MATERIAL, TYPE I	TON	6.2		6.2							
		2575.519	DISK ANCHORING	ACRE	3.1		3.1							
J		2575.531	COMMERCIAL FERT. ANALYSIS 10-10-10	TON	1.7		1.7							
		2580.501	TEMPORARY LANE MARKING	RD STA	73		73							

INDEX OF TABULATION CHARTS

CHART	SHEET NO.	DESCRIPTION
A	4	CURB AND GUTTER REMOVAL
B	4	CONCRETE REMOVAL
C	4	SAWING CONCRETE PAVEMENT
D	4	SAW BITUMINOUS PAVEMENT
E	4	BITUMINOUS REMOVAL
F	4	CLEARING & GRUBBING
G	5	DRIVEWAY CONSTRUCTION
H	5	SANITARY SEWER
I	5	WATERMAIN APPURTENANCES
J	5	TURF ESTABLISHMENT
K	6	CONCRETE CURB AND GUTTER
L	6	CONCRETE PEDESTRIAN RAMP
M	6	BITUMINOUS PATH
N	6	BASE AND BITUMINOUS
O	7	EARTHWORK SUMMARY
P	20-21	DRAINAGE TABULATION
Q	20	DRAINAGE CASTING SCHEDULE
R	41	DETOUR SIGNING

THESE STANDARD PLATES AS APPROVED BY THE FHWA SHALL APPLY

STANDARD PLATES

PLATE NO.	DESCRIPTION
0005 A	SPECIFICATION REFERENCE TO STANDARD PLATES
3000 L	REINFORCED CONCRETE PIPE
3006 F	GASKET JOINT FOR R.C. PIPE
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4180 H	MANHOLE OR CATCH BASIN STEP
7035 J	CONCRETE WALK & CURB RETURNS AT ENTRANCES
7036 D	PEDESTRIAN CURB RAMP
7100 F	CONCRETE CURB AND GUTTERS (DESIGN B)
7110 E	CURB AND GUTTER CONSTRUCTION AT CATCH BASIN
7111 G	INSTAL. & REINFORCEMENT OF CATCH BASIN CASTINGS
8000 I	STANDARD BARRICADES
9102 D	SODDING AT PIPE CULVERT ENDS

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(8) FOR EROSION CONTROL AT TOE OF SLOPE, STA 127+00 TO STA 145+00, LEFT.

(9) RIPRAP TO BE PLACED AT ALL RCP APRON OUTLETS.

BASIS OF QUANTITIES

2340	TYPE 31 AND 41 BITUMINOUS COURSE MIXTURE: 110 LB/SQ.YD. PER 1" THICKNESS
2357	BIT. MAT'L FOR TACK COAT: 0.05 GALS/SQ.YD. PER LIFT APPLIED
2575	MULCH MATERIAL TYPE I: 2 TONS/ACRE
2575	SEEDING: HORIZONTAL MEASURE +10%
2575	COMMERCIAL FERTILIZER ANAL. 10-10-10: 500 LB/ACRE ON ALL SEED AND SOD AREAS
2575	SEEDING MIXTURE NO. 700: 35 LB/ACRE

STATEMENT OF ESTIMATED QUANTITIES

CERTIFIED BY Douglas M. Fischer P.E. REG NO. 20235 9/12 19 94 | S.P. _____ S.A.P. _____ C.P. 89-28-102 | Sheet No. 3 of 43 Sheets

Fed. Project No. ________

CURB AND GUTTER REMOVAL (A)

STATION TO STATION	LOC.	DESCRIPTION	LIN.FT.
106+78 - 106+91	RT	RADIUS @ 44TH AVE.	15
106+83 - 107+34	LT	RADIUS	65
113+13 - 113+22	LT	RADIUS	13
113+36 - 113+59	RT	RADIUS @ 45TH AVE.	21
113+48 - 113+56	LT	RADIUS	12
119+40 - 119+63	RT	RADIUS @ 46TH AVE.,SO.	21
119+92 - 120+03	RT	RADIUS @ 46TH AVE.,NO.	21
126+02 - 126+23	RT	RADIUS @ 47TH AVE.,SO.	20
126+52 - 126+68	RT	RADIUS @ 47TH AVE.,NO.	15
132+58 - 132+82	RT	RADIUS @ 48TH AVE.,SO.	20
133+12 - 133+35	RT	RADIUS @ 48TH AVE.,NO.	21
139+16 - 139+34	RT	RADIUS @ 49TH AVE.,SO.	23
139+78 - 139+94	RT	RADIUS @ 49TH AVE.,NO.	22
142+32 - 142+53	RT	RADIUS @ PILOT AVE.,SO.	21
142+87 - 143+10	RT	RADIUS @ PILOT AVE.,NO.	21
148+36 - 148+60	RT	RADIUS @ PANORAMA AVE.,SO.	21
148+53 - 148+61	LT	RADIUS @ API	10
148+94 - 149+16	RT	RADIUS @ PANORAMA AVE.,NO.	21
153+99 - 154+10	LT	RADIUS @ FORD	11
154+31 - 154+40	LT	RADIUS @ FORD	11
155+19 - 155+31	LT	RADIUS @ FORD	11
155+51 - 155+61	LT	RADIUS @ FORD	11
155+89 - 156+00	LT	RADIUS @ GLADWIN	11
156+42 - 156+55	LT	RADIUS @ GLADWIN	11
158+69 - 158+81	LT	RADIUS	13
159+40 - 159+50	LT	RADIUS	13
161+40 - 161+63	RT	RADIUS @ CAPITOL AVE.,SO.	21
161+97 - 162+16	RT	RADIUS @ CAPITOL AVE.,NO.	21
162+27 - 162+31	LT	RADIUS	13
164+24 - 164+52	RT	RADIUS @ 53RD AVE.,SO.	30
164+97 - 165+27	RT	RADIUS @ 53RD AVE.,NO.	30
167+29 - 167+53	RT	RADIUS @ CROWN RD.,SO.	21
167+87 - 168+10	RT	RADIUS @ CROWN RD.,NO.	21
170+43 - 170+63	RT	RADIUS @ HORIZON CIR.,SO.	20
170+47 - 171+19	RT	RADIUS @ HORIZON CIR.,NO.	20
173+38 - 173+58	RT	RADIUS @ VENTURA AVE.,SO.	21
173+93 - 174+13	RT	RADIUS @ VENTURA AVE.,NO.	21
		TOTAL	714

CONCRETE REMOVAL (B)

STATION, LT/RT	LOC.	DESCRIPTION	SQ.FT.
107+79, RT	#4411	SIDEWALK	25
108+30, RT	#4415	SIDEWALK	39
108+68, RT	#4419	SIDEWALK	30
109+09, RT	#4421	SIDEWALK	37
109+76, RT	#4427/4429	SIDEWALK	24
110+01, RT	#4433/4435	SIDEWALK	25
112+38, RT	#4455	SIDEWALK	33
113+35, LT	---------	PAVEMENT	864
118+66, LT	---------	PAVEMENT	936
120+56, RT	#4603	SIDEWALK	12
121+35, RT	#4615	SIDEWALK	13
122+69, LT	#4639	PAVEMENT	72
123+77, RT	#4651	SIDEWALK	21
124+57, RT	#4663	SIDEWALK	20
125+37, RT	#4675	SIDEWALK	15
127+19, RT	#4701	SIDEWALK	19
127+24, RT	#4401	SIDEWALK	20
127+70, RT	#4705	SIDEWALK	16
128+27, RT	#4709	SIDEWALK	11
128+88, RT	#4715	SIDEWALK	14
129+87, RT	#4757	SIDEWALK	17
131+46, RT	#4765	SIDEWALK	20
132+31, RT	#4769	SIDEWALK	16
138+82, RT	#4881	SIDEWALK	14
140+66, RT	---------	SIDEWALK	18
148+74, LT	API SUPPLY	PAVEMENT	342
150+00, RT	#5012	PAVEMENT	45
154+25, RT	#5072	PAVEMENT	27
160+22, RT	#5268	PAVEMENT	36
172+75, RT	#100	PAVEMENT	45
		TOTAL	2826

SAWING CONCRETE PAVEMENT (C)

STATION TO STATION	LOCATION	DESCRIPTION	LIN. FT.
113+21-113+48	35' LT	ENTRANCE	27
118+52-118+78	35' LT	ENTRANCE	26
122+62-122+73	31' RT	ENTRANCE	11
148+62-148+85	35' LT	ENTRANCE	23
149+90-150+06	28' RT	ENTRANCE	16
154+19-154+29	28' RT	ENTRANCE	10
160+15-160+27	28' RT	ENTRANCE	12
172+67-172+83	28' RT	ENTRANCE	16
		TOTAL	141

SAWING BITUMINOUS PAVEMENT (D)

STATION TO STATION	LOCATION	DESCRIPTION	LIN. FT.
106+78	51' RT - 59' LT	PAVEMENT	110
113+01 - 113+35	52' RT	PAVEMENT	34
114+42 - 114+59	31' RT	ENTRANCE	17
115+80 - 115+90	31' RT	ENTRANCE	10
116+38 - 116+65	31' RT	ENTRANCE	27
117+12 - 117+29	31' RT	ENTRANCE	17
117+91 - 118+10	31' RT	ENTRANCE	19
118+70 - 118+88	31' RT	ENTRANCE	18
119+54 - 119+79	32' LT	ENTRANCE	25
119+63 - 119+90	52' RT	PAVEMENT	27
119+64 - 119+89	31' RT	ENTRANCE	25
120+88 - 121+17	31' RT	ENTRANCE	29
120+88 - 121+17	32' LT	ENTRANCE	29
120+91 - 121+01	31' RT	ENTRANCE	10
123+43 - 123+53	31' RT	ENTRANCE	10
124+08 - 124+35	31' RT	ENTRANCE	27
124+08 - 124+35	32' LT	ENTRANCE	27
124+10 - 124+25	31' RT	ENTRANCE	15
125+04 - 125+13	31' RT	ENTRANCE	9
125+80 - 126+05	32' LT	ENTRANCE	25
125+80 - 126+05	31' RT	ENTRANCE	25
126+24 - 126+51	52' RT	PAVEMENT	27
129+47 - 129+56	31' RT	ENTRANCE	9
132+83 - 133+10	52' RT	PAVEMENT	27
135+36 - 135+52	31' RT	ENTRANCE	16
136+16 - 136+30	31' RT	ENTRANCE	14
136+97 - 137+11	31' RT	ENTRANCE	14
137+73 - 137+87	31' RT	ENTRANCE	14
139+35 - 139+76	52' RT	PAVEMENT	41
142+54 - 142+86	52' RT	PAVEMENT	32
143+93 - 144+08	28' RT	ENTRANCE	15
146+62 - 146+88	32' LT	ENTRANCE	26
148+61 - 148+93	52' RT	PAVEMENT	32
153+14 - 153+31	32' LT	ENTRANCE	26
154+10 - 154+31	32' LT	ENTRANCE	21
155+31 - 155+51	20' LT	ENTRANCE	20
156+00 - 156+42	33' LT	ENTRANCE	42
156+58 - 156+75	28' RT	ENTRANCE	17
157+59 - 157+79	28' RT	ENTRANCE	20
158+14 - 158+34	28' RT	ENTRANCE	20
158+81 - 159+43	32' LT	ENTRANCE	62
159+79 - 159+95	28' RT	ENTRANCE	16
160+53 - 161+40	33' LT	ENTRANCE	87
161+15 - 161+31	32' LT	ENTRANCE	26
161+64 - 161+96	52' RT	PAVEMENT	32
162+18 - 162+81	32' LT	ENTRANCE	63
163+01 - 163+20	28' RT	ENTRANCE	19
163+31 - 163+49	28' RT	ENTRANCE	17
164+54 - 164+95	52' RT	PAVEMENT	41
165+69 - 165+85	28' RT	ENTRANCE	16
166+03 - 166+30	32' LT	ENTRANCE	27
166+34 - 166+53	28' RT	ENTRANCE	19
167+54 - 167+86	52' RT	PAVEMENT	32
168+76 - 169+01	28' RT	ENTRANCE	25
169+06 - 169+58	32' LT	ENTRANCE	52
169+86 - 170+06	28' RT	ENTRANCE	20
170+64 - 170+96	52' RT	PAVEMENT	32
171+66 - 171+98	28' RT	ENTRANCE	32
173+60 - 173+92	55' RT	PAVEMENT	32
175+33 - 175+51	28' RT	ENTRANCE	18
179+54	19' LT - 53' RT	PAVEMENT	72
	TOTAL		1708

BITUMINOUS REMOVAL (E)

STATION TO STATION	LOC.	DESCRIPTION	SQ.YD.
106+78 - 179+54	LT/RT	CR 102 MAINLINE PAVEMENT	38,395
113+01 - 113+35	RT	45TH ST. PAVEMENT	135
114+51, RT	#4513	DRIVEWAY	4
115+87, RT	#4523	DRIVEWAY	8
116+54, RT	#4543	DRIVEWAY	17
117+21, RT	#4551/4553	DRIVEWAY	11
118+01, RT	#4571/4573	DRIVEWAY	13
118+81, RT	#4591/4593	DRIVEWAY	12
119+63 - 119+90	RT	46TH STREET PAVEMENT	108
119+76, LT	-----	DRIVEWAY	89
120+97, RT	#4615	DRIVEWAY	8
121+02, LT	-----	DRIVEWAY	180
123+50, RT	#4651	DRIVEWAY	8
124+18, RT	#4663	DRIVEWAY	8
124+21, LT	-----	DRIVEWAY	46
125+10, RT	#4675	DRIVEWAY	6
125+93, LT	-----	DRIVEWAY	117
126+24 - 126+51	RT	47TH STREET PAVEMENT	95
129+53, RT	#4757	DRIVEWAY	6
132+83 - 133+10	RT	48TH STREET PAVEMENT	110
135+45, RT	#4833	DRIVEWAY	11
136+24, RT	#4845	DRIVEWAY	11
137+06, RT	#4857	DRIVEWAY	9
137+81, RT	#4869	DRIVEWAY	9
139+35 - 139+76	RT	49TH STREET PAVEMENT	145
142+54 - 142+86	RT	PILOT AVE. PAVEMENT	118
144+01, RT	#101	DRIVEWAY	4
146+75, LT	API	DRIVEWAY	101
148+61 - 148+93	RT	PANORAMA AVE. PAVEMENT	117
153+27, LT	#5130	DRIVEWAY	144
154+19, LT	#5130, SO.	DRIVEWAY	64
155+42, LT	#5130, NO.	DRIVEWAY	51
156+23, LT	#5170, SO.	DRIVEWAY	196
156+66, RT	#5108	DRIVEWAY	8
157+70, RT	#5132	DRIVEWAY	2
158+24, RT	#5144	DRIVEWAY	4
159+13, LT	#5170, NO.	DRIVEWAY	399
159+88, RT	#5156	DRIVEWAY	5
160+75, LT	#5220	DRIVEWAY	331
161+28, LT	#5250	DRIVEWAY	110
161+64 - 161+96	RT	CAPITOL STREET PAVEMENT	120
162+18 - 162+81	RT	53RD STREET PAVEMENT	161
162+58, LT	#5250/5280	DRIVEWAY	266
163+11, RT	#5269	DRIVEWAY	6
163+41, RT	#100	DRIVEWAY	5
164+45, LT	-----	DRIVEWAY	111
165+78, RT	#101	DRIVEWAY	5
166+18, LT	#5280	DRIVEWAY	105
166+45, RT	#100	DRIVEWAY	6
167+54 - 167+86	RT	CROWN ROAD PAVEMENT	123
168+90, RT	#101	DRIVEWAY	8
169+32, LT	#5300	DRIVEWAY	283
170+64 - 170+96	RT	HORIZON CIRCLE PAVEMENT	124
171+82, RT	#101	DRIVEWAY	11
173+60 - 173+92	RT	VENTURA AVE. PAVEMENT	130
175+43, RT	#5475	DRIVEWAY	8
		TOTAL	42,687

CLEARING AND GRUBBING (F)

STATION	LOCATION	CLEARING		GRUBBING	
		TREE	ACRE	TREE	ACRE
108+87	28 FT. RT	1		1	
119+34	38 FT. LT	2		1	
119+59	38 FT. LT	2		1	
119+91	39 FT. LT	1		1	
120+17	39 FT. LT	1		1	
120+27	38 FT. LT	1		1	
120+38	39 FT. LT	1		1	
120+74	40 FT. LT	1		1	
121+41	38 FT. LT	1		1	
121+62	38 FT. LT	1		1	
124+51	38 FT. LT	1		1	
125+60	38 FT. LT	1		1	
126+36	39 FT. LT	2		1	
159+58	38 FT. LT	1		1	
159+64	33 FT. LT	1		1	
159+91	40 FT. LT	1		1	
160+36	40 FT. LT	1		1	
160+45	37 FT. LT	1		1	
TOTAL		21		18	

TABULATION CHARTS

CURB AND GUTTER REMOVAL, SAWING CONCRETE PAVEMENT, BITUMINOUS REMOVAL, SAWING BITUMINOUS PAVEMENT CONCRETE REMOVAL, CLEARING AND GRUBBING.

FILE NAME: 8928102\102TABS.DWG MN.(07-09-94)

REVISIONS: DATE | BY | DATE | BY

CERTIFIED BY ____________ P.E. REG NO. 20235 7/11 19 94

Fed. Project No. ____________

DRIVEWAY CONSTRUCTION CHART (G)

DESCRIPTION						REPLACEMENT DRIVEWAY		REMOVALS SQ. YD.		CONC. REPLMT SQ. YD.		BIT. REPLMT 2" PLACED (1)
STATION/LOC.	ADDRESS	LOC.	REMARKS	LENGTH	WIDTH	LENGTH	WIDTH	CONC.	BIT.	6"	8"	SQ.YD.
113+35	--------	LT	COMMERCIAL/CONCRETE	32	27	32	27	96			96	
114+51	#4513	RT	RESIDENTIAL/BIT.	2	17	4	17		4			8
115+87	#4523	RT	RESIDENTIAL/BIT.	7	10	9	10		8			10
116+54	#4543	RT	RESIDENTIAL/BIT.	6	27	8	27		17			24
117+21	#4551/4553	RT	RESIDENTIAL/BIT.	6	17	8	17		11			15
118+01	#4571/4573	RT	RESIDENTIAL/BIT.	6	19	8	19		13			17
118+56	--------	LT	COMMERCIAL/CONCRETE	36	26	36	26	104			104	
118+80	#4591/4593	RT	RESIDENTIAL/BIT.	6	18	8	18		12			16
119+76	--------	LT	COMMERCIAL/BIT	32	25	32	25		89			(2)
120+97	#4615	RT	RESIDENTIAL/BIT.	5	10	7	10		8			8
121+02	--------	LT	COMMERCIAL/BIT	56	29	56	29		180			(2)
121+79	#4627	RT	RESIDENTIAL/GRAVEL		15							
122+69	#4639	RT	RESIDENTIAL/CONCRETE	8	11	10	11	8		12		
123+50	#4651	RT	RESIDENTIAL/BIT.	7	10	9	10		8			10
124+18	#4663	RT	RESIDENTIAL/BIT.	5	15	7	15		8			12
124+21	--------	LT	COMMERCIAL/BIT	32	27	32	27		46			(2)
125+10	#4675	RT	RESIDENTIAL/BIT.	6	9	8	9		6			8
125+93	--------	LT	COMMERCIAL/BIT	42	25	42	25		117			(2)
126+51	--------	LT	FIELD ENTRANCE/SAND		29							
129+53	#4757	RT	RESIDENTIAL/BIT.	6	9	8	9		6			8
135+45	#4833	RT	RESIDENTIAL/BIT.	6	16	8	16		11			14
136+24	#4845	RT	RESIDENTIAL/BIT.	7	14	9	14		11			14
137+06	#4857	RT	RESIDENTIAL/BIT.	6	14	8	14		9			12
137+81	#4869	RT	RESIDENTIAL/BIT.	6	14	8	14		9			12
144+01	#101	RT	RESIDENTIAL/BIT.	2	15	4	15		4			7
144+63	--------	LT	FIELD ENTRANCE/SAND		44							
146+75	API SUPPLY	LT	COMMERCIAL/BIT	35	26	35	26		101			(2)
148+74	API SUPPLY	LT	COMMERCIAL/CONCRETE	15	23	15	23	38			38	
150+00	#5012	RT	RESIDENTIAL/CONCRETE	3	16	5	16	5		9		
153+27	#5130	LT	COMMERCIAL/BIT	58	37	58	37		241			(2)
154+19	#5130	LT	COMMERCIAL/BIT	48	21	48	21		64			(2)
154+25	#5072	RT	RESIDENTIAL/CONCRETE	3	10	5	10	3		6		
155+42	#5130	LT	COMMERCIAL/BIT	38	20	38	20		51			(2)
156+23	#5170	LT	COMMERCIAL/BIT	42	42	42	42		196			(2)
156+66	#5108	RT	RESIDENTIAL/BIT.	4	17	6	17		8			11
157+70	#5132	RT	RESIDENTIAL/BIT.	1	20	3	20		2			6
158+24	#5144	RT	RESIDENTIAL/BIT.	2	20	4	20		4			8
159+13	#5170	LT	COMMERCIAL/BIT	50	61	50	61		339			(2)
159+88	#5156	RT	RESIDENTIAL/BIT.	3	16	5	16		5			8
160+22	#5268	RT	RESIDENTIAL/CONCRETE	3	12	5	12	4		7		
160+75	#5220	LT	COMMERCIAL/BIT	48	62	48	62		331			(2)
161+28	#5250	LT	COMMERCIAL/BIT	38	26	38	26		110			(2)
162+58	#5280/5250	LT	COMMERCIAL/BIT	38	63	38	63		266			(2)
163+11	#5269	RT	RESIDENTIAL/BIT.	3	19	5	19		6			11
163+41	#100	RT	RESIDENTIAL/BIT.	3	17	5	17		5			9
164+45	--------	LT	COMMERCIAL/BIT	27	37	27	37		111			(2)
165+78	#101	RT	RESIDENTIAL/BIT.	3	16	5	16		5			8
166+18	#5280	LT	COMMERCIAL/BIT	35	27	35	27		105			(2)
166+45	#100	RT	RESIDENTIAL/BIT.	3	19	5	19		6			10
168+90	#101	RT	RESIDENTIAL/BIT.	3	25	5	25		8			14
169+32	#5300	LT	COMMERCIAL/BIT	10	51	10	51		283			(2)
171+82	#101	RT	RESIDENTIAL/BIT.	3	32	5	32		11			18
172+75	#100	RT	RESIDENTIAL/CONCRETE	3	16	5	16	5		9		
175+43	#5475	RT	RESIDENTIAL/BIT.	4	18	6	18		8			12
			TOTAL					263	2843	43	238	310

(1) PAID FOR AS 2" THICK WEARING COURSE PLACED

(2) RECONSTRUCT WITH FULL ROADWAY PAVEMENT SECTION. SEE CHART (N)

SANITARY SEWER APPURTENANCES (H)

STATION	LOC.	INPLACE ITEM	OWNERSHIP	INPLACE ELEVATION	PROPOSED ELEVATION	ADJUST EACH	RECONSTRUCT EACH	REMARKS
106+58	13'RT	MANHOLE	COL. HTS.	847.40	847.40	1		SANITARY SEWER
106+94	6'RT	MANHOLE	COL. HTS.	846.40	846.24	1		SANITARY SEWER
109+95	9'RT	MANHOLE	COL. HTS.	841.85	841.10	1		SANITARY SEWER
112+85	14'RT	MANHOLE	COL. HTS.	840.66	840.07	1		SANITARY SEWER
112+96	8'RT	MANHOLE	COL. HTS.	840.74	840.27	1		SANITARY SEWER
116+68	2'LT	MANHOLE	FRIDLEY	841.45	841.72	1		SANITARY SEWER
119+77	3'LT	MANHOLE	FRIDLEY	842.03	841.00	1		SANITARY SEWER
123+18	3'LT	MANHOLE	FRIDLEY	842.94	842.31	1		SANITARY SEWER
129+67	3'LT	MANHOLE	FRIDLEY	845.32	844.84		1 (4.5 CONE)	SANITARY SEWER
132+96	3'LT	MANHOLE	FRIDLEY	847.15	847.72	1		SANITARY SEWER
136+19	2'LT	MANHOLE	FRIDLEY	853.88	854.50	1		SANITARY SEWER
139+57	2'LT	MANHOLE	FRIDLEY	856.51	856.06	1		SANITARY SEWER
172+55	2'LT	MANHOLE	FRIDLEY	860.16	860.74	1		SANITARY SEWER
176+19	2'LT	MANHOLE	FRIDLEY	858.41	858.75	1		SANITARY SEWER
179+80	2'LT	MANHOLE	FRIDLEY	859.22	859.22	1		SANITARY SEWER
					TOTAL	14	1	

WATERMAIN APPURTENANCES (I)

STATION	LOCATION	DESCRIPTION	RELOCATE EACH	ADJUST EACH
106+24	21' RT	GATE VALVE		1
106+51	34' RT	GATE VALVE		1
107+76	15' LT	G.V. MANHOLE		1
112+79	23' RT	HYDRANT & VALVE	1	
113+08	46' RT	GATE VALVE		1
113+08	37' RT	GATE VALVE		1
113+11	26' RT	G.V. MANHOLE		1
113+16	30' RT	GATE VALVE		1
113+19	37' RT	GATE VALVE		1
113+52	14' LT	GATE VALVE		1
113+56	23' LT	GATE VALVE		1
113+74	31' LT	HYDRANT		
119+50	27' RT	HYDRANT & VALVE	1	
126+06	29' RT	HYDRANT		
126+25	18' RT	GATE VALVE		1
139+20	31' RT	HYDRANT		
139+41	19' RT	GATE VALVE		1
139+51	29' RT	GATE VALVE		1
142+36	29' LT	HYDRANT		
142+61	28' RT	GATE VALVE		1
142+75	14' RT	GATE VALVE		1
145+77	10' LT	GATE VALVE		1
148+36	13' LT	GATE VALVE		1
148+43	27' LT	HYDRANT		
154+29	13' LT	G.V. MANHOLE		1
154+35	13' LT	G.V. MANHOLE		1
154+72	29' LT	HYDRANT		
160+20	15' LT	G.V. MANHOLE		1
161+60	28' LT	HYDRANT		
161+61	1' LT	GATE VALVE	1	
164+53	13' LT	GATE VALVE		1
164+58	3' LT	GATE VALVE	1	
164+78	22' LT	HYDRANT & VALVE	1	
165+99	16' LT	GATE VALVE		1
167+56	27' LT	HYDRANT		
167+57	1' LT	GATE VALVE	1	
170+64	2' LT	GATE VALVE	1	
173+68	2' LT	GATE VALVE	1	
173+82	28' LT	HYDRANT		
179+32	31' LT	HYDRANT		
179+48	12' LT	GATE VALVE		1
		TOTAL	8	23

TURF ESTABLISHMENT (J)

STATION - STATION	LOCATION	SOD SQ.YDS.	SEEDING ACRE	SEED MIX 700 POUND	FERTILIZER TON	MULCH TON
106+78 - 113+01	RT	693			0.04	
113+35 - 119+63	RT	540			0.03	
113+75 - 116+25	LT		0.8	28	0.20	1.6
119+90 - 126+24	RT	537			0.03	
126+51 - 132+83	RT	692			0.04	
133+10 - 139+35	RT	631			0.03	
139+76 - 142+54	RT	309			0.02	
142+86 - 148+61	RT	622			0.03	
148+93 - 161+64	RT	1330			0.07	
161+96 - 164+54	RT	247			0.01	
164+95 - 167+54	RT	225			0.01	
167+86 - 170+64	RT	247			0.01	
170+96 - 173+60	RT	262			0.01	
173+92 - 179+54	RT	593			0.03	
106+78 - 179+54	LT	10,248			0.53	
126+50 - 144+75	LT		2.3	81	0.58	4.6
	TOTAL	17,176	3.1	109	1.67	6.2

TABULATION CHARTS

DRIVEWAY CONSTRUCTION
SANITARY SEWER
WATERMAIN APPURTENANCES
TURF ESTABLISHMENT

REVISIONS: DATE | BY | DATE | BY

CERTIFIED BY [signature] P.E. REG NO. 20235 1/11 [illegible] 19 94 | S.P. ________ S.A.P. ________ C.P. 89-28-102 |

CONCRETE CURB AND GUTTER (K)

STA. TO STA.			LIN. FT. LT.	LIN. FT. RT.	LOCATION
CL	106+79	110+47	388		
CL	106+79	113+00		650	
CL	110+47	113+48	271		
CL	113+18	139+56	2639		
CL	113+37	119+63		659	
CL	119+92	126+23		664	
CL	126+52	132+82		665	
CL	133+12	139+34		658	
CL	139+56	165+95	2639		
CL	139+78	142+53		512	
CL	142+88	148+60		608	
CL	148+94	161+62		1304	
CL	161+97	164+53		292	
CL	164+97	167+53		293	
CL	165+95	179+54		311	
CL	167+87	170+62	1359		
CL	170+97	173+59		298	
CL	173+93	179+52		596	
TOTAL			7296	7510	

BITUMINOUS PATH (M)

STA. TO STA.			LOCATION	BIT. SURFACE SQ.YD.	BIT. WEAR TON	AGGR. BASE CU.YD.	REMARKS
CL	106+93	113+21	LT.	558.2	61.4	62.0	
CL	113+48	118+52	LT.	448.0	49.3	49.8	
CL	118+78	119+64	LT.	76.4	8.4	8.5	
CL	119+89	120+87	LT.	87.1	9.6	9.7	
CL	121+17	124+07	LT.	257.8	78.4	28.6	
CL	124+34	125+80	LT.	129.8	74.3	14.4	
CL	126+05	146+63	LT.	1829.5	201.2	203.3	
CL	146+89	148+62	LT.	193.8	21.3	21.5	
CL	148+85	153+14	LT.	381.3	41.9	42.4	
CL	153+40	154+09	LT.	61.3	6.7	6.8	
CL	154+30	155+32	LT.	90.7	10.0	10.1	
CL	155+52	156+02	LT.	44.4	4.9	4.9	
CL	156+44	158+83	LT.	212.4	23.4	23.6	
CL	159+44	160+44	LT.	88.9	9.8	9.9	
CL	161+06	162+27	LT.	135.1	14.9	15.0	
CL	162+90	163+04	LT.	101.3	11.1	11.3	
TOTAL				4696.0	516.6	521.8	

CONCRETE PEDESTRIAN RAMPS (L)

STATION		LOCATION	EACH	REMARKS
CL	106+93	40' LT.	1	
CL	164+04	24' LT.	1	
TOTAL			2	

BASE AND BITUMINOUS QUANTITIES CHART (N)

LOCATION	DESCRIPTION	BIT. SURF. SQ.YD.	WEARING COURSE TONS	BINDER COURSE TONS	BASE COURSE TONS	BIT. TACK GALLON	AGGR. BASE BASE CLASS 5 SQ.YD.	AGGR. BASE BASE CLASS 5 CU.YD.
CL 105+60 106+78	2" MILLING BIT. SURFACE	995	109.5			99.5		
CL 106+79 179+54	MAINLINE	33142	2734.3	3645.5	3645.5	3314.3	37714	4857.1
CL 107+78 110+47	RIGHT TURN LANE	150	12.4	16.5	16.5	15.0	315	30.0
CL 179+54 180+71	2" MILLING BIT. SURFACE	546	60.1			27.3		
45 TH. AVE.	FROM SAWCUT TO END RADIUS	166	13.7	18.3	18.3	16.6	199	24.9
46 TH. AVE.	FROM SAWCUT TO END RADIUS	145	12.0	16.0	16.0	14.5	178	21.9
47 TH. AVE.	FROM SAWCUT TO END RADIUS	145	12.0	16.0	16.0	14.5	178	21.9
48 TH. AVE.	FROM SAWCUT TO END RADIUS	145	12.0	16.0	16.0	14.5	178	21.9
49 TH. AVE.	FROM SAWCUT TO END RADIUS	191	15.8	21.0	21.0	19.1	224	28.3
PILOT AVE.	FROM SAWCUT TO END RADIUS	152	12.5	16.7	16.7	15.2	185	22.9
PANORAMA AVE.	FROM SAWCUT TO END RADIUS	152	12.5	16.7	16.7	15.2	185	22.9
CAPITOL AVE.	FROM SAWCUT TO END RADIUS	152	12.5	16.7	16.7	15.2	185	22.9
53 RD. AVE.	FROM SAWCUT TO END RADIUS	191	15.8	21.0	21.0	19.1	224	28.3
CROWN ROAD	FROM SAWCUT TO END RADIUS	152	12.5	16.7	16.7	15.2	185	22.9
HORIZON CIRCLE	FROM SAWCUT TO END RADIUS	156	12.9	17.2	17.2	15.6	189	23.5
VENTURA AVE.	FROM SAWCUT TO END RADIUS	152	12.5	16.7	16.7	15.2	185	22.9
COMMERCIAL BIT. ENT. (1)	BACK OF CURB TO MATCH EXIST.	2630	217.0	289.3	289.3	263.0	2780	373.6
	TOTAL	39362	3290.0	4160.3	4160.3	3909.0	43104	5545.9

(1) SEE CHART (G) FOR LOCATION.

TABULATION CHARTS

CONCRETE CURB AND GUTTER
CONCRETE PEDESTRIAN RAMPS
BITUMINOUS PATH
BASE AND BITUMINOUS QUANTITIES CHART
BASE AND BITUMINOUS QUANTITIES CHART

FILE NAME: 8928102\102TABS.DWG MN (07-09-94)

REVISIONS: DATE | BY | DATE | BY

CERTIFIED BY [signature] P.E. REG NO. 20235 7/11 19 94

S.P. ________ S.A.P. ________ C.P. 89-28-102

Fed. Project No. _____

EARTHWORK SUMMARY ⓪

EXCAVATION:

COMMON: CU.YDS.
- REGULAR: 8,357 CU.YDS.
- SUBCUT: 12,945 CU.YDS.
- RET. POND: 6,722 CU.YDS.

EMBANKMENT (CV):

FILLS:	1,759	CU.YDS.	
SUBCUT:	12,945	CU.YDS.	
TOPSOIL DRESSING:	1,870	CU.YDS.	(INCLUDES 401 CU.YDS. FOR RETENTION POND.)

BALANCE:

TOPSOIL:
TOPSOIL DRESSING (CV) x SWELL FACTOR = BORROW REQUIREMENT (LV)
1,870 x 1.2 = 2,244

GRANULAR:
REGULAR FILL (CV) + SUBCUT FILL (CV) - [REGULAR EXCAVATION (EV) x SHRINKAGE FACTOR] - [SUBCUT EXCAVATION x SHRINKAGE FACTOR] = EXCESS(-) OR (SHORTAGE(+)
1,759 + 12,945 - (8,357 x 0.85) - (12,945 x 0.90) = -4,050 CU.YDS.

BORROW (LV)/EXCESS (EV):

GRADING EXCESS:	4,050	CU.YDS.
TOPSOIL BORROW:	2,244	CU.YDS.

SOIL FACTORS:

(1) REGULAR GRADING AND TOPSOIL DRESSING (EV TO CV): 85% SHRINKAGE

(2) SUBCUT COMPACTION (EV TO CV): 90% SHRINKAGE

(3) TOPSOIL BORROW (CV TO LV): 120% SWELL

SOILS AND CONSTRUCTION NOTES

1. TOP OF GRADING GRADE IS DEFINED AS THE BOTTOM OF THE AGGREGATE BASE.
2. IN FILL AREAS, THE SUBGRADE SHALL BE CONSTRUCTED WITH SELECT GRADING MATERIAL.
3. SELECT GRADING MATERIALS SHALL CONSIST OF GRANULAR MATERIALS.
4. GRANULAR MATERIAL, REGARDLESS OF SOURCE, SHALL MEET THE REQUIREMENTS OF SPEC. 3149.2A
5. COMPACTION OF THE GRADING PORTION OF THIS PROJECT SHALL BE BY THE 'ORDINARY COMPACTION METHOD' WITH THE EXCEPTION OF THE STORM SEWER AND UTILITY TRENCHES WHICH SHALL BE COMPACTED BY THE 'SPECIFIED DENSITY METHOD'.
6. TEST ROLLING WILL NOT BE REQUIRED.
7. BITUMINOUS AND/OR CONCRETE ITEMS REMOVED BY CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL EITHER BE RECYCLED OR DISPOSED OF OFF THE PROJECT LIMITS WITH NO DIRECT COMPENSATION MADE THEREFORE.
8. DISPOSITIN OF EXCAVATED MATERIAL SHALL BE IN ACCORDANCE WITH SPEC. 2105.3D WITH NO DIRECT COMPENSATION MADE THEREFORE.
9. WHERE CONNECTING NEW SURFACING TO AN INPLACE PAVEMENT, THE EXCAVATION SHALL BE BACKFILLED PROMPTLY TO AVOID UNDERMINING THE INPLACE PAVEMENT.
10. USE TACK COAT BETWEEN ALL BITUMINOUS MIXTURES PRIOR TO PLACING BITUMINOUS MIXTURES AND PRIOR TO PLACING ANY BITUMINOUS MIXTURES ON EXISTING CONCRETE OR BITUMINOUS SURFACES. THE BITUMINOUS TACK COAT MATERIAL SHALL BE APPLIED AT A UNIFORM RATE OF 0.03 TO 0.05 GALLONS PER SQUARE YARD BETWEEN BITUMINOUS LAYERS. THE APPLICATION RATES ARE FOR UNDILUTED EMULSIONS (AS SUPPLIED FROM THE REFINERY); ASPHALT EMULSION MAY BE FURTHER DILUTED IN THE FIELD IN ACCORDANCE WITH SPEC. 2357.
11. COMPACTION OF ALL BITUMINOUS COURSES SHALL BE BY THE 'MODIFIED SPECIFIED DENSITY METHOD'.
12. COMPACTION OF THE AGGREGATE BASE LAYERS SHALL BE BY THE 'SPECIFIED DENSITY METHOD'.
13. IN ALL UNDEVELOPED AREAS TO BE DISTURBED BY CONSTRUCTION, STRIP AND RE-USE AS SLOPE DRESSING ALL TOPSOIL AND INPLACE SLOPE DRESSING. REFER TO THE CROSS-SECTION FOR THE LIMITS OF TOPSOIL STRIPPING. GENERAL DEPTHS OF TOPSOIL LAYER ARE ASSUMED TO BE 0'-3'.
14. USE TOPSOIL BORROW AS SLOPE DRESSING ON ALL DEVELOPED AREAS DISTURBED BY CONSTRUCTION
15. SLOPE DRESSING ON THIS PROJECT IS DEFINED AS THE TOPSOIL OR OTHER SOIL PLACED DURING PRIOR CONSTRUCTION TO PROVIDE A MEDIUM FOR ESTABLISHING TURF.
16. PLACE A MINIMUM OF 4 INCHES OF TOPSOIL OR SLOPE DRESSING ON ALL AREAS DISTURBED BY CONSTRUCTION AND SCHEDULED FOR PERMANENT TURF ESTABLISHMENT. FERTILIZE WITH COMMERCIAL FERTILIZER, ANALYSIS 10-10-10, AT A RATE OF 500 POUNDS PER ACRE OR EQUIVALENT.
17. SOD ALL DISTURBED LAWNS.
18. ALL SOD UTILIZED WITHIN THE PROJECT LIMITS SHALL MEET THE REQUIREMENTS OF SPEC. 3878.2A (LAWN AND BOULEVARD SOD).
19. EXCESS TOPSOIL MAY BE USED IN EMBANKMENT CONSTRUCTION IN AREAS OUTSIDE OF A 1 1/2:1 SLOPE FROM THE GRADING SHOULDER P.I.
20. BITUMINOUS REMOVAL QUANTITY BASED ON APPROXIMATELY 4" TO 12" OF BITUMINOUS SURFACING. THE CONTRACTOR SHALL INVESTIGATE AND MAKE THEIR OWN DETERMINATION OF ACTUAL PAVEMENT DEPTH.

EARTHWORK SUMMARY AND CONSTRUCTION NOTES

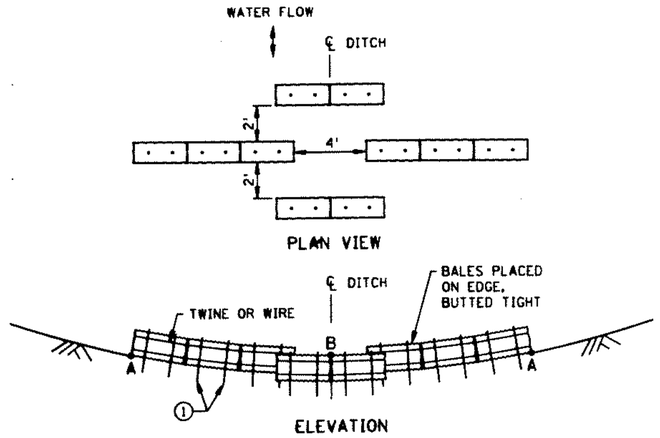
REVISIONS

DATE	BY	DATE	BY

FILE NAME: 9928102\102TABS.DWG MN/DOT (07-09-94)

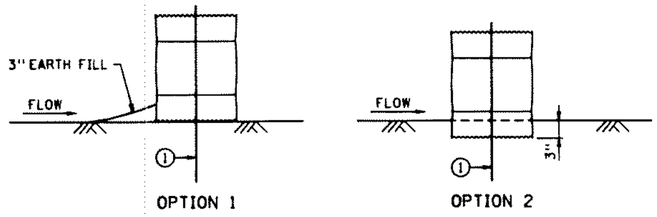
CERTIFIED BY _____ P.E. REG NO. 20235 7/11 19 94

S.P. _____ S.A.P. _____ C.P. 89-28-102

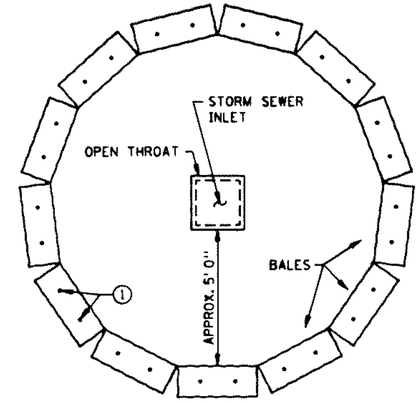


NOTE:
POINT A MUST BE HIGHER THAN POINT B

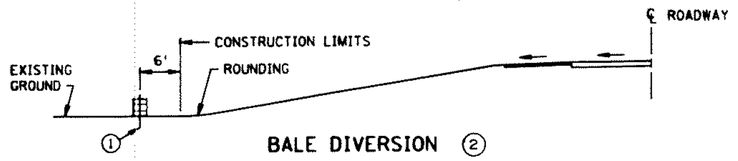
BALE DITCH VELOCITY CHECKS
(WILL REQUIRE A MINUMUM OF 10 BALES PER SITE)



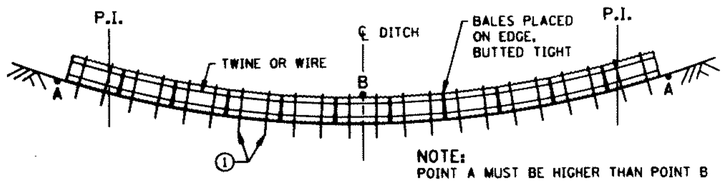
BALE CHECK DETAILS



BALE CHECK
TO PROTECT STORM SEWER INLETS



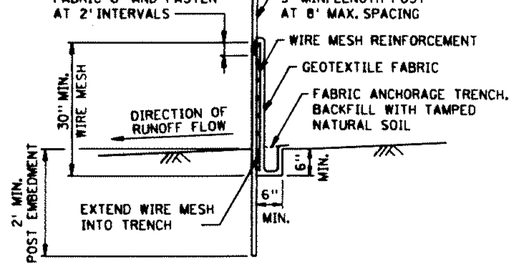
BALE DIVERSION ②



NOTE:
POINT A MUST BE HIGHER THAN POINT B

BALE DITCH SEDIMENT CHECK

RECOMMENDED SPACING BETWEEN BALE DITCH CHECKS	
DITCH GRADE (%)	SPACING (FT.)
2	100
4	75
6	50
8	40
10	25



SILT FENCE DETAIL

NOTE:
① TWO 2" X 2" WOOD STAKES OR REINFORCING BARS IN EACH BALE AND EMBEDDED IN THE GROUND 10" MINIMUM.

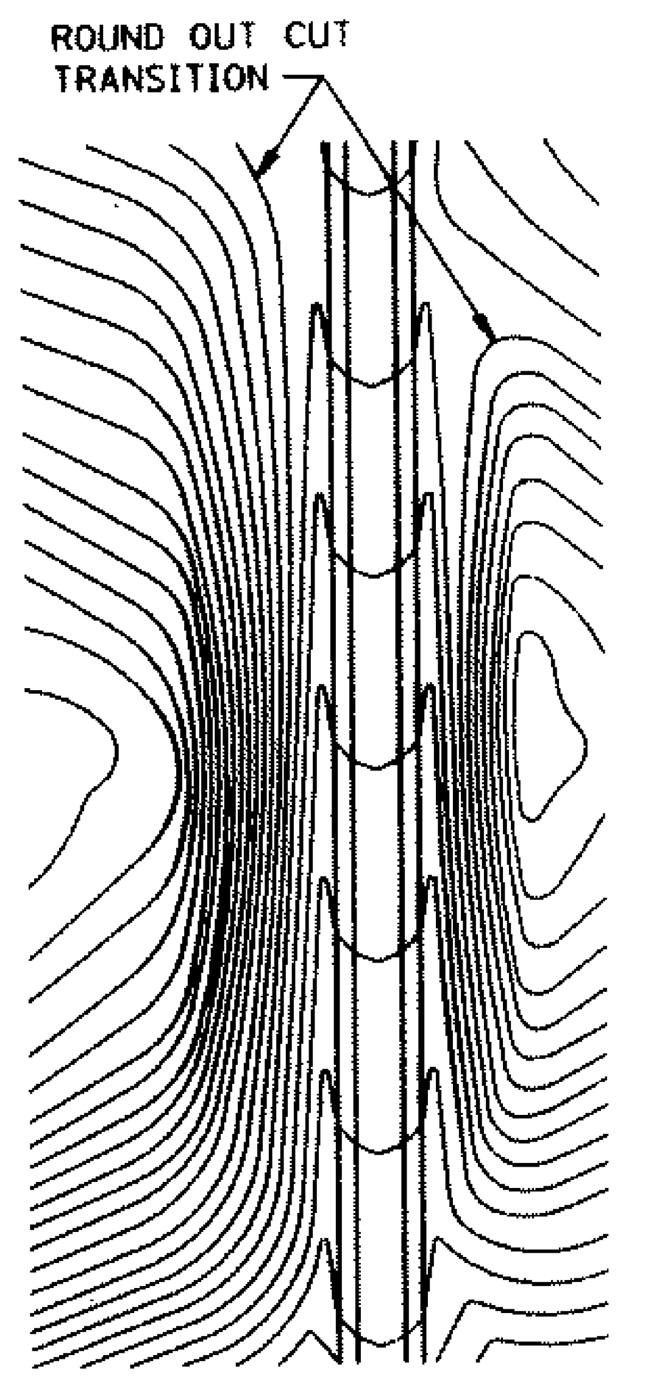
② SILT FENCE MAY ALSO BE USED AS A DEVERSION DEVICE.

SERVER CA6451:/USR/STANDARDS FILE NAME S4052M93.SPN

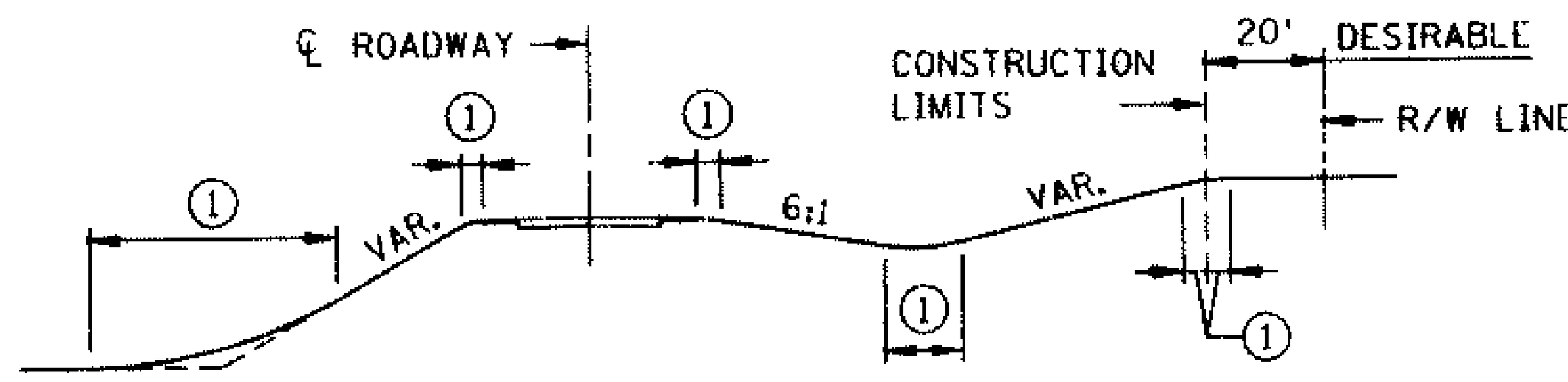
STANDARD SHEET NO. 5-297.405 (MODIFIED)	TITLE: TEMPORARY EROSION CONTROL
STANDARD APPROVED: AUGUST 2, 1993	

CERTIFIED BY Douglas McFarlane P.E. REG NO. 20235 7/11 19 94

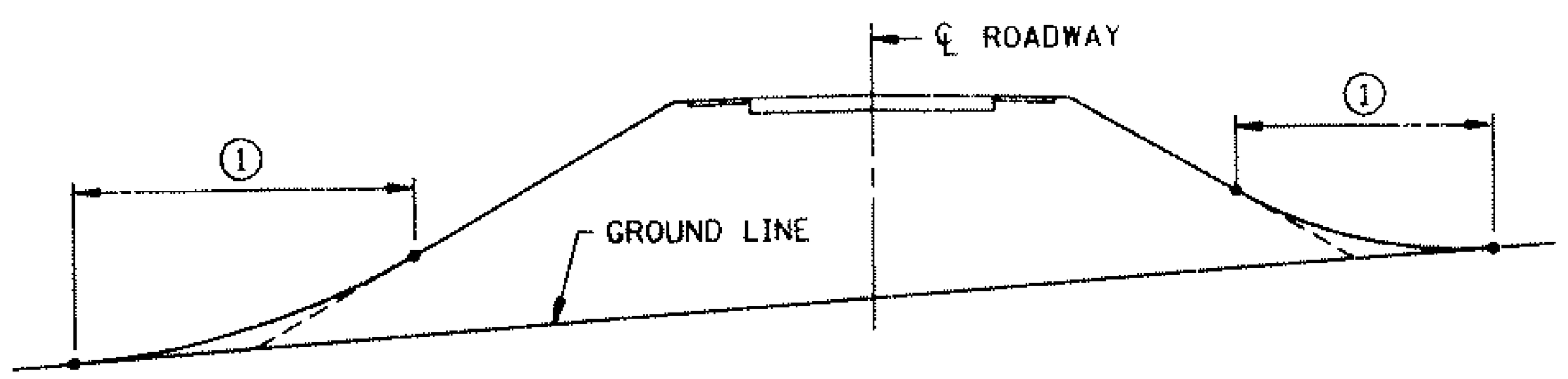
CO. PROJ. NO. 89-28-102 SHEET NO. 8 OF 43 SHEETS



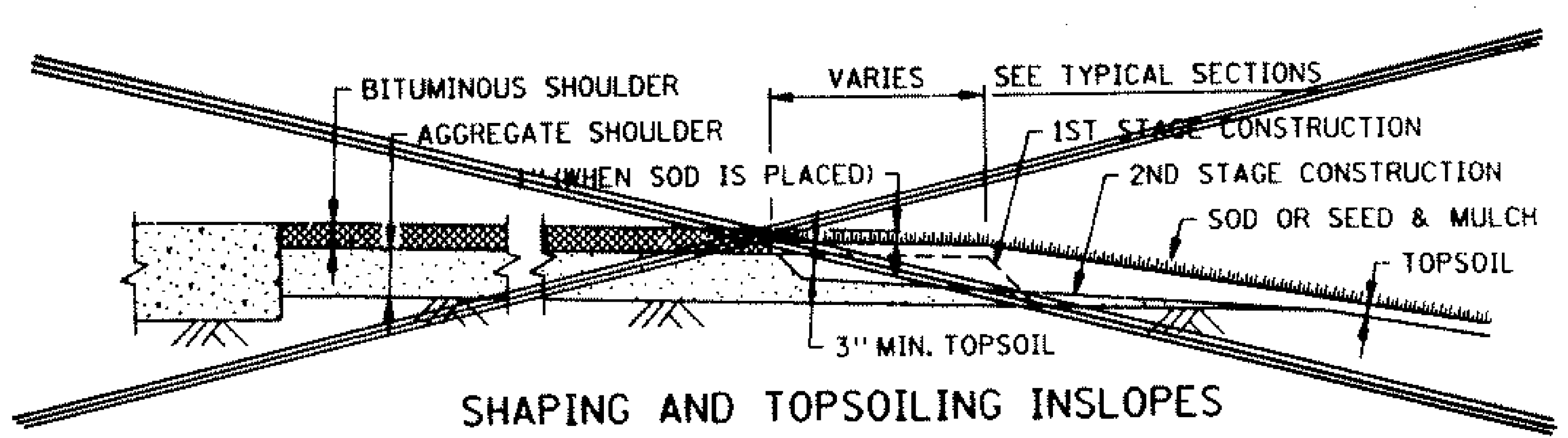
CONTOURING ROAD CUTS



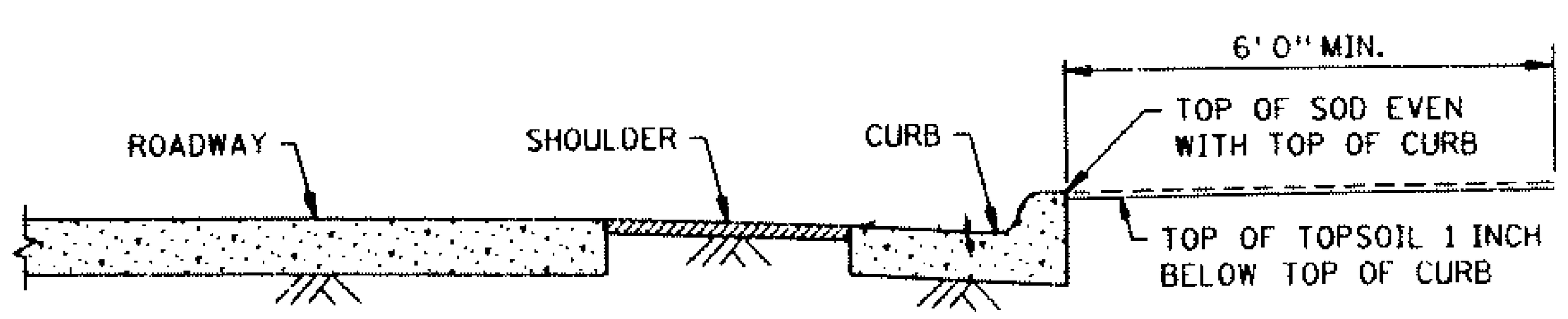
ROUNDING SHOULDERS AND BACKSLOPES



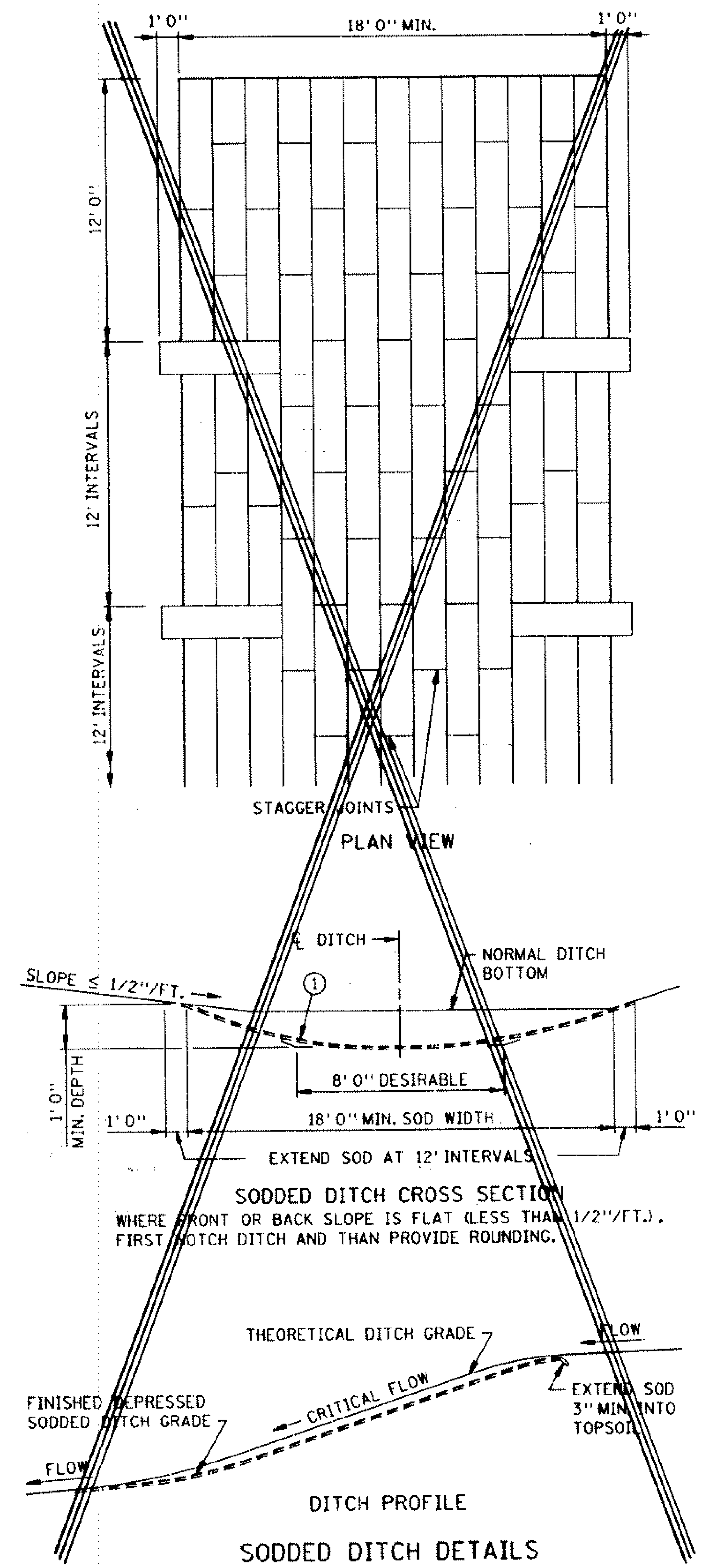
SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES



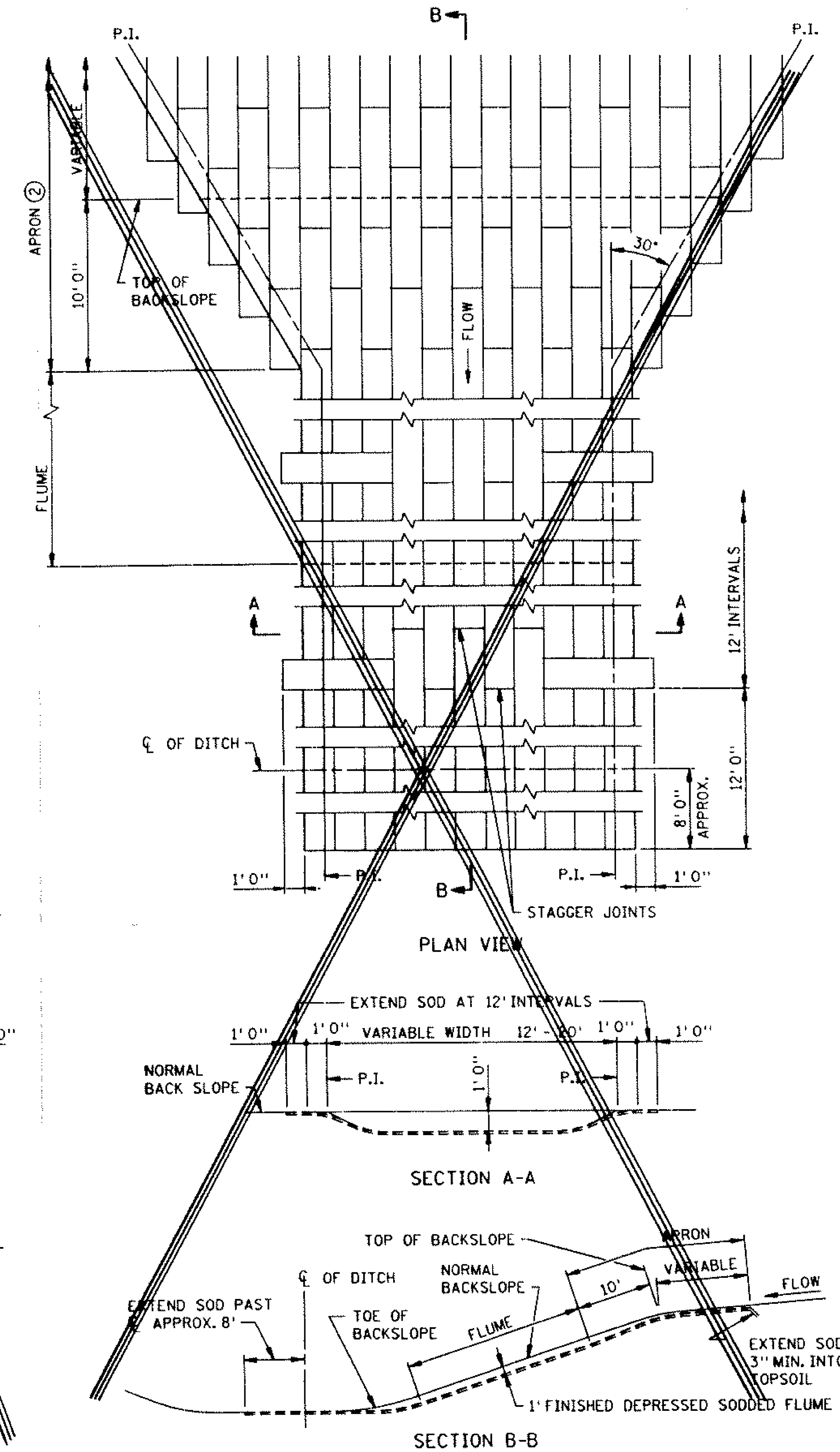
SHAPING AND TOPSOILING INSLOPES



SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED



SODDED DITCH DETAILS



SODDED FLUME DETAILS

NOTES:

SEE SPEC. 2575.3 FOR ADDITIONAL INFORMATION.

① FOR ROUNDING, SEE ROAD DESIGN MANUAL.

② CONSTRUCT TAPER AS DIRECTED BY THE ENGINEER.

STANDARD SHEET NO. 5-297.404	TITLE: PERMANENT EROSION CONTROL ALONG ROADWAYS, DITCHES AND FLUMES
STANDARD APPROVED: DECEMBER 19, 1990	

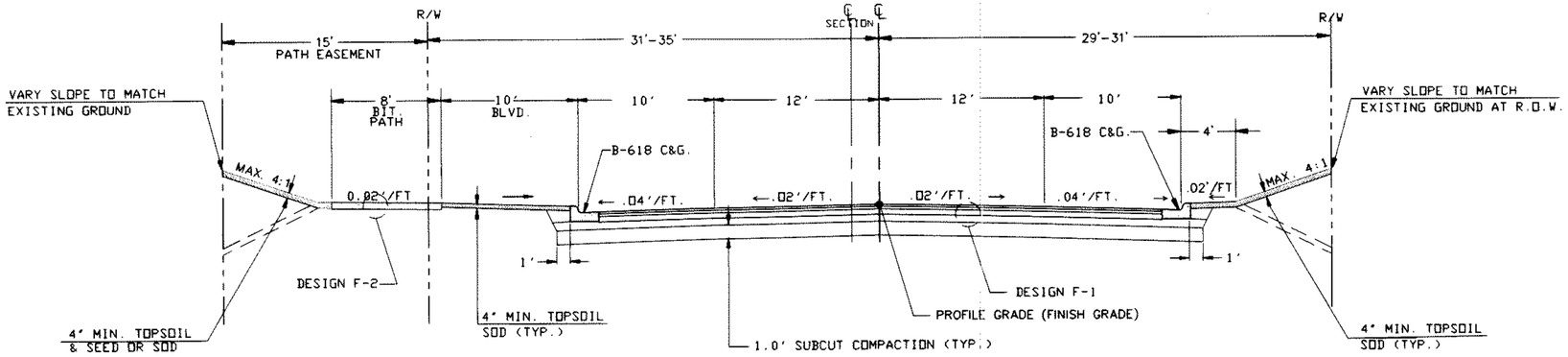
CERTIFIED BY [signature] P.E. REG NO. 20235 7/11 19 94

CO. PROJ. NO. 89-28-102 SHEET NO. 9 OF 43 SHEETS

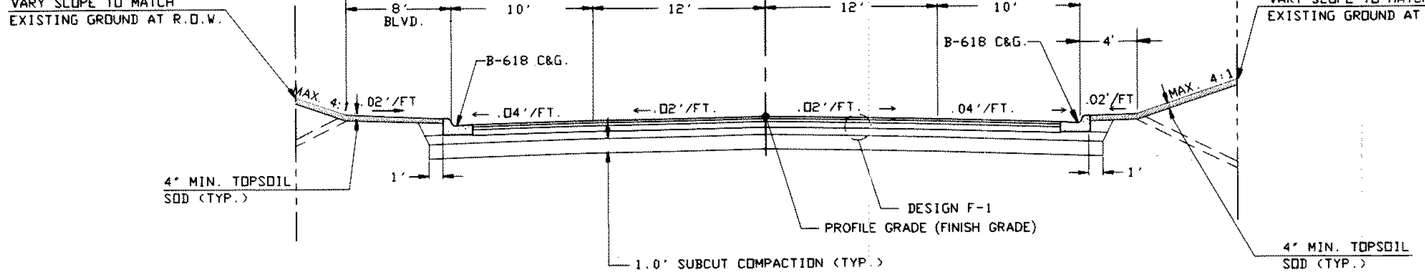
VAX780 QSA3:[45,100] FILE NAME S404L90.SPN

Fed. Project No. _____

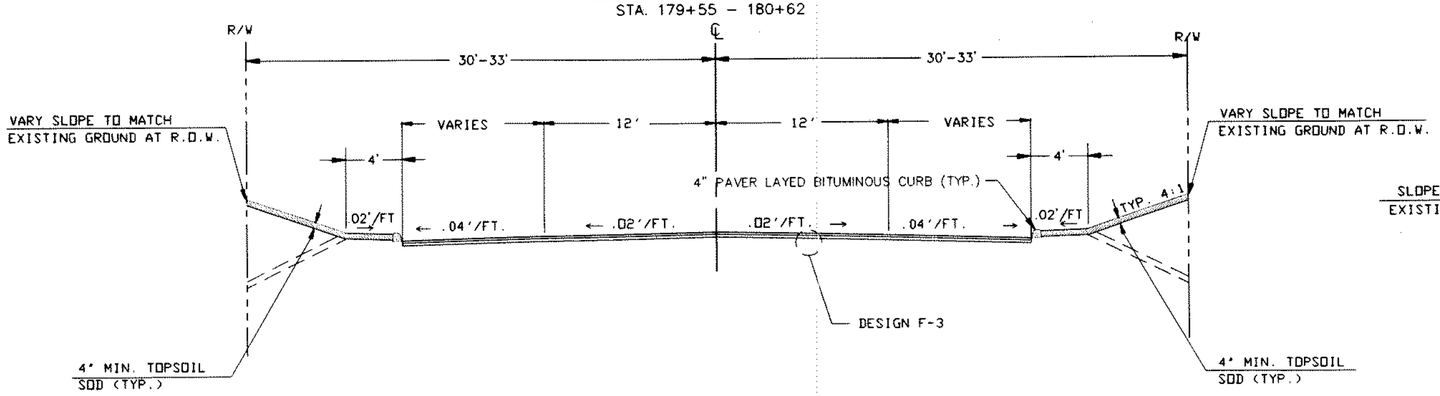
C.R. 102-MAINLINE
STA. 106+78 – 164+42

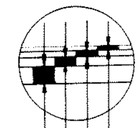


C.R. 102-MAINLINE
STA. 164+42 – 179+55



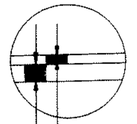
C.R. 102-MAINLINE
STA. 179+55 – 180+62





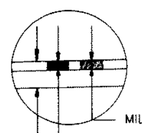
DESIGN F-1

1 1/2" TYPE 41 WEARING COURSE-SPEC. 2340
BITUMINOUS MIXTURE DESIGNATION: 41WEA50055Y
2" TYPE 41 BINDER COURSE-SPEC. 2340
BITUMINOUS MIXTURE DESIGNATION: 41BIB50055Y
2" TYPE 31 BASE COURSE-SPEC. 2340
BITUMINOUS MIXTURE DESIGNATION: 31BBB50000Y
5" AGGREGATE BASE CL-5A SPEC. 2211
TACK COAT-SPEC. 2357, TO BE APPLIED BETWEEN ALL BITUMINOUS LIFTS.



DESIGN F-2

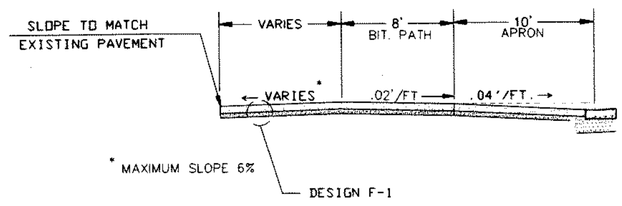
2" TYPE 41 WEARING COURSE-SPEC. 2340
BITUMINOUS MIXTURE DESIGNATION: 41WEA50055Y
4" AGGREGATE BASE CL-5A SPEC. 2211
TACK COAT-SPEC. 2357, TO BE APPLIED BETWEEN ALL BITUMINOUS LIFTS.



DESIGN F-3

MILL 2" BITUMINOUS SURFACE
2" TYPE 41 WEARING COURSE-SPEC. 2340
BITUMINOUS MIXTURE DESIGNATION: 41WEA50055Y
EXISTING BITUMINOUS PAVEMENT.
TACK COAT-SPEC. 2357, TO BE APPLIED BETWEEN ALL BITUMINOUS LIFTS.

COMMERCIAL ENTRANCE APRON



TYPICAL SECTIONS

REVISIONS

DATE	BY	DATE	BY

CERTIFIED BY Douglas M Timbers P.E. REG NO. 20235 7/11 19 94

S.P. _____ S.A.P. _____ C.P. 89-28-102

Sheet No. 10 of 43 Sheets

Fed. Project No. ________

C:\P\8928102\S1REMOVE
1.99407062108427E+007

EXISTING CONDITIONS AND REMOVALS

REVISIONS			
DATE	BY	DATE	BY

CERTIFIED BY [signature] P.E. REG NO. 20235 7/11 19 94

S.P. ________ S.A.P. ________ C.P. 89-28-102

Sheet No. 11 of 43 Sheets

Fed. Project No. ____

REMOVALS FOR DRIVEWAYS AND SIDEWALK WILL BE TO THE EXISTING RIGHT-OF-WAY LINE, UNLESS OTHERWISE INSTRUCTED.
DENOTES REMOVAL AREAS
DENOTES 2" MILL AND OVERLAY AREAS
DENOTES BITUMINOUS SAWCUT
DENOTES CONCRETE SAWCUT
MATCH LINE STA 133+00
48TH AVE.
49TH AVE.
PILOT AVE.
FIELD ENT.
140+00
145+00
4833
4845
4857
4869
4881
GAR
100 GAR
101 GAR
101
REMOVE C&G
SAWCUT MATCH POINT 52' RT.
MATCH LINE STA BELOW LEFT
MATCH LINE STA ABOVE RIGHT
FORD MFG. CO.
5130
GLADWIN
5170
H.B. FULLER
5220
INC.
5250
PANORAMA AVE.
CAPITOL ST.
150+00
155+00
160+00
B-7
EX R.O.W.
5000
5012 (GAR)
5024
5036
5048
5060
5072
5084
5096
5108
5120
5132
5144
5156
5268
5269
MATCH LINE STA 163+00

EXISTING CONDITIONS AND REMOVALS

REVISIONS: DATE | BY | DATE | BY

C:\P\8928102\S2REMOVE
1.99407062121241 0E+007

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S.P. ____ S.A.P. ____ C.P. 89-28-102

Sheet No. 12 of 43 Sheets

Fed. Project No. _____

KURT MFG. CO.
5280

REMOVALS FOR DRIVEWAYS AND SIDEWALK WILL BE TO THE EXISTING RIGHT-OF-WAY LINE, UNLESS OTHERWISE INSTRUCTED.

DENOTES REMOVAL AREAS

DENOTES 2" MILL AND OVERLAY AREAS

DENOTES BITUMINOUS SAWCUT
DENOTES CONCRETE SAWCUT

MATCH LINE STA 163+00

165+00

170+00

175+00

MATCH LINE STA BELOW LEFT

PUMP HOUSE

B-6

B-5

B-4

53RD AVE.

CROWN RD.

HORIZON CIRCLE

VENTURA AVE.

REMOVE C&G

SAWCUT MATCH POINT 52' RT.

SAWCUT MATCH POINT 52' RT.

SAWCUT MATCH POINT 52' RT.

SAWCUT MATCH POINT 55' RT.

5475

MATCH LINE STA ABOVE RIGHT

184+31.89

B-3

5495

SERVICE RD.

N 56099.3596
E 889272.8625

EXISTING CONDITIONS AND REMOVALS

C:\P\8928102\S\REMOVE
1994070621270650E+007

REVISIONS

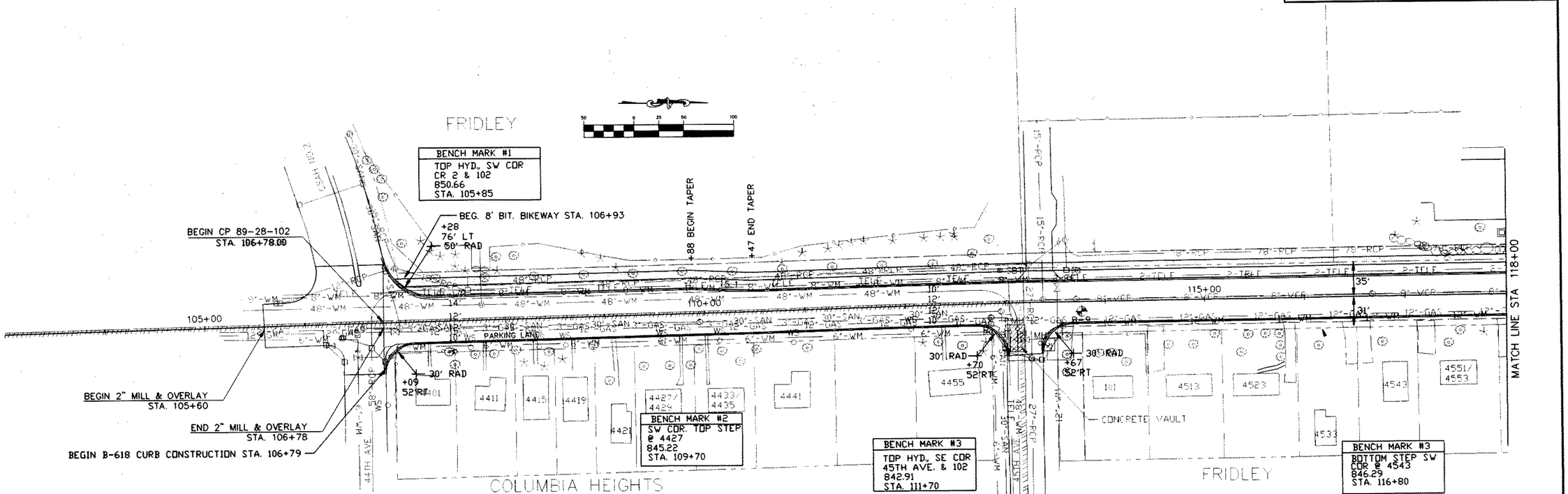
DATE	BY	DATE	BY

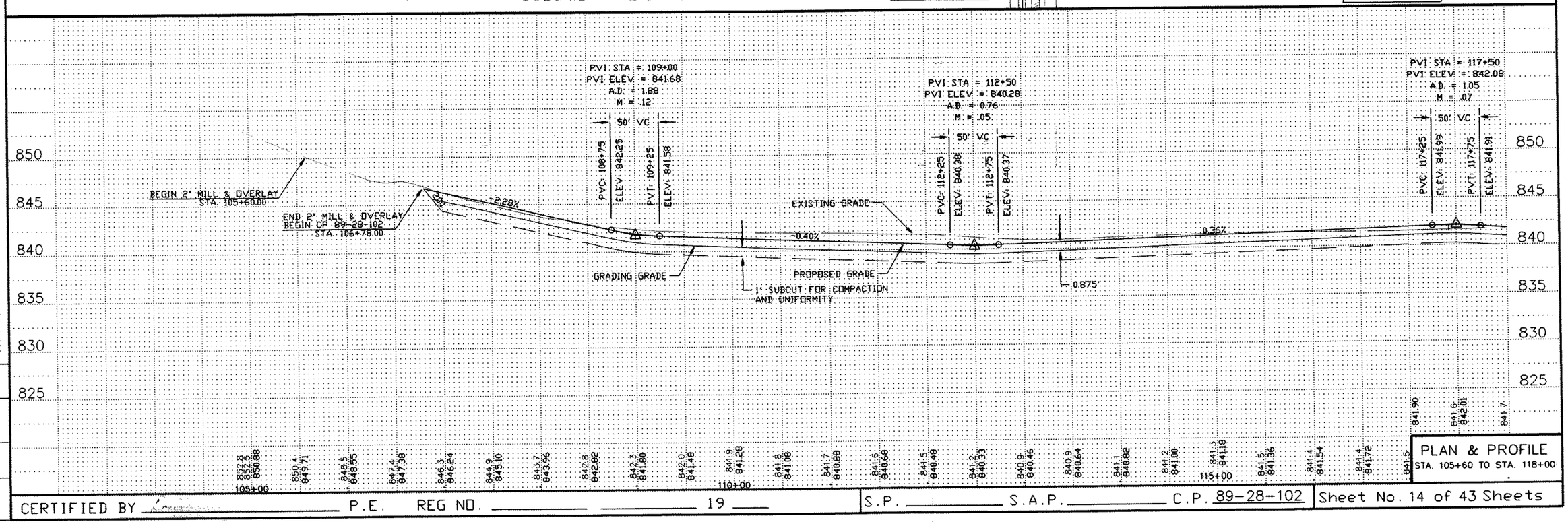
CERTIFIED BY _____ P.E. REG NO. 20235 7/11 19 94

S.P. _____ S.A.P. _____ C.P. 89-28-102

Sheet No. 13 of 43 Sheets

Fed. Project No. _____





PLAN & PROFILE
STA. 105+60 TO STA. 118+00

C:\P\-892802\SIPLAN
1.99407062208155IE+007

REVISIONS			
DATE	BY	DATE	BY

CERTIFIED BY _____ P.E. REG NO. _____ 19 ____

S.P. _____ S.A.P. _____ C.P. 89-28-102

Sheet No. 14 of 43 Sheets

Fed. Project No. _____

F&I WATER SERVICE
70 L.F. 12" D.I.P.
1 EA. 12" GATE VALVE & BOX
1 EA. 12" X 12" TEE

MATCH LINE STA 118+00

MATCH LINE STA 133+00

8' BIT. PATH

EX. R.O.W

BENCH MARK #5
NW COR. BOTTOM
STEP @ 4603
843.43
STA. 120+60

BENCH MARK #6
NW COR. BOTTOM
STEP @ 4675
846.30
STA. 125+40

BENCH MARK #7
NW COR. BOTTOM
STEP @ 4709
846.69
STA. 128+25

BENCH MARK #8
NW COR. BOTTOM
STEP @ 4765
848.14
STA. 131+40

PVI STA = 119+25
PVI ELEV = 840.88
A.D. = 1.07
M = .07
50' VC
PVC: 119+00
ELEV: 841.05
PVT: 119+50
ELEV: 840.98

PVI STA = 125+50
PVI ELEV = 843.28
A.D. = 0.85
M = .05
50' VC
PVC: 125+25
ELEV: 843.18
PVT: 125+75
ELEV: 843.16

PVI STA = 127+00
PVI ELEV = 842.58
A.D. = 1.35
M = .08
50' VC
PVC: 126+75
ELEV: 842.70
PVT: 127+25
ELEV: 842.80

-0.69%
0.38%
-0.47%
0.88%

EXISTING GRADE
PROPOSED GRADE
GRADING GRADE
0.875'
1' SUBCUT FOR COMPACTION AND UNIFORMITY

C:\P\8928102\S2PLAN
1.994070622223197E+007

REVISIONS			
DATE	BY	DATE	BY

CERTIFIED BY _____ P.E. REG NO. _____ _____ 19 ____

S.P. _____ S.A.P. _____ C.P. 89-28-102

PLAN & PROFILE
STA. 118+00TO STA. 133+00

Sheet No. 15 of 43 Sheets

Fed. Project No. ________

F&I WATER SERVICE
70 L.F. 12" D.I.P.
1 EA. 12" GATE VALVE & BOX
1 EA. 12" X 12" TEE
F&I WATER SERVICE
60 L.F. 12" D.I.P.
1 EA. 12" GATE VALVE & BOX
1 EA. 12" X 12" TEE
1 EA. 12" X 45° BEND
15' BIKE EASEMENT
MATCH LINE STA 133+00
MATCH LINE STA 148+00
48TH AVE.
49TH AVE.
PILOT AVE.
BENCH MARK #9
SW COR. BOTTOM STEP @ 4833
857.15
STA. 135+60
BENCH MARK #10
SW COR. BOTTOM STEP @ 4881
859.32
STA. 138+80
BENCH MARK #11
NW COR. BOTTOM STEP @ 100 PILOT
856.49
STA. 142+30
4833
4845
4857
4869
4881
PVI STA = 133+25
PVI ELEV = 848.06
A.D. = 1.33
M = .08
50' VC
PVI STA = 137+40
PVI ELEV = 857.23
A.D. = 2.72
50' VC
M = .17
PVI STA = 143+25
PVI ELEV = 854.23
A.D. = 2.51
M = .47
150' VC
PVI STA = 147+25
PVI ELEV = 842.15
A.D. = 1.96
M = .12
50' VC
EXISTING GRADE
PROPOSED GRADE
GRADING GRADE
H.P. ELEV = 857.13
1' SUBCUT FOR COMPACTION AND UNIFORMITY
0.875'
2.21%
-0.51%
-3.02%
860
855
850
845
840
835

PLAN & PROFILE	STA. 133+00 TO STA. 148+00

REVISIONS — DATE | BY | DATE | BY

C:\P\8928102\S3PLAN
19940706223947 37E+007

CERTIFIED BY ________________ P.E. REG NO. __________ __________ 19 ____

S.P. ____________ S.A.P. ____________ C.P. 89-28-102

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Fed. Project No. _____

MFG CO.
5130

GLADWIN
5170

H.B. FULLER
5220

5250

BENCH MARK #13
SE COR CONC. SLAB
BY BTM STEP @ 5130
844.31
STA. 154+90

MATCH LINE STA 148+00

MATCH LINE STA 163+00

CON-TELE — TELE — 12"-WM — 12"-GAS — 10' — 12' — 150+00 — 155+00 — 160+00

B-7

RAD +30 52'RT

30' RAD +24 52'RT

30' RAD +33 52'RT

30' RAD +27 52'RT

5000 — 5012 (GAR) — 5024 — 5036 — 5048 — 5060 — 5072 — 5084 — 5096 — 5108 — 5120 — 5132 — 5144 — 5156 — 5268 — 5269

GAR — 6'-WM — 8'-VCP — CAPITOL ST — 5TH AVE — 5'-FED

BENCH MARK #12
NW COR. BOTTOM
STEP @ 100 PAN.
843.77
STA. 148+10

BENCH MARK #14
NW COR CONC. GAR.
APRON @ 5269 CAPITOL
844.81
STA. 164+15

PVI STA = 149+35
PVI ELEV = 839.92
A.D. = 1.74
M = .11
50' VC
PVC: 149+10
ELEV: 840.19
PVT: 149+60
ELEV: 840.09

PVI STA = 152+85
PVI ELEV = 842.29
A.D. = 0.33
M = .02
50' VC
PVC: 152+60
ELEV: 842.12
PVT: 153+10
ELEV: 842.38

PVI STA = 154+20
PVI ELEV = 842.76
A.D. = 0.75
M = .05
50' VC
PVC: 153+95
ELEV: 842.67
PVT: 154+45
ELEV: 842.66

PVI STA = 155+15
PVI ELEV = 842.38
A.D. = 0.85
M = .05
50' VC
PVC: 154+90
ELEV: 842.48
PVT: 155+40
ELEV: 842.49

PVI STA = 159+50
PVI ELEV = 844.32
A.D. = 0.81
M = .05
50' VC
PVC: 159+25
ELEV: 844.21
PVT: 159+75
ELEV: 844.23

PVI STA = 161+20
PVI ELEV = 843.70
A.D. = 0.99
M = .06
50' VC
PVC: 160+95
ELEV: 843.79
PVT: 161+45
ELEV: 843.86

-1.06% 0.68% 0.35% -0.40% 0.45% -0.36% 0.63%

PROPOSED GRADE
EXISTING GRADE
GRADING GRADE

0.875'
1' SUBCUT FOR COMPACTION AND UNIFORMITY

860 855 850 845 840 835

841.35 840.7 840.82 840.7 840.29 840.8 840.04 840.8 840.36 840.7 840.70 840.7 841.64 840.7 841.38 841.0 841.71 841.2 842.05 841.4 842.34 841.5 842.52 841.69 842.69 841.9 842.64 842.1 842.45 842.2 842.54 842.4 842.76 842.6 842.90 842.8 843.21 843.0 843.43 843.2 843.65 843.3 843.87 843.5 844.10 843.7 844.27 843.9 844.14 844.1 843.96 844.2 843.78 844.4 843.89 844.6 844.20 844.8 844.52 844.9

150+00 155+00 160+00

C:\P\9928103\S4PLAN
1:9940706225335965E+007

REVISIONS

DATE	BY	DATE	BY

PLAN & PROFILE
STA. 148+00 TO STA. 163+00

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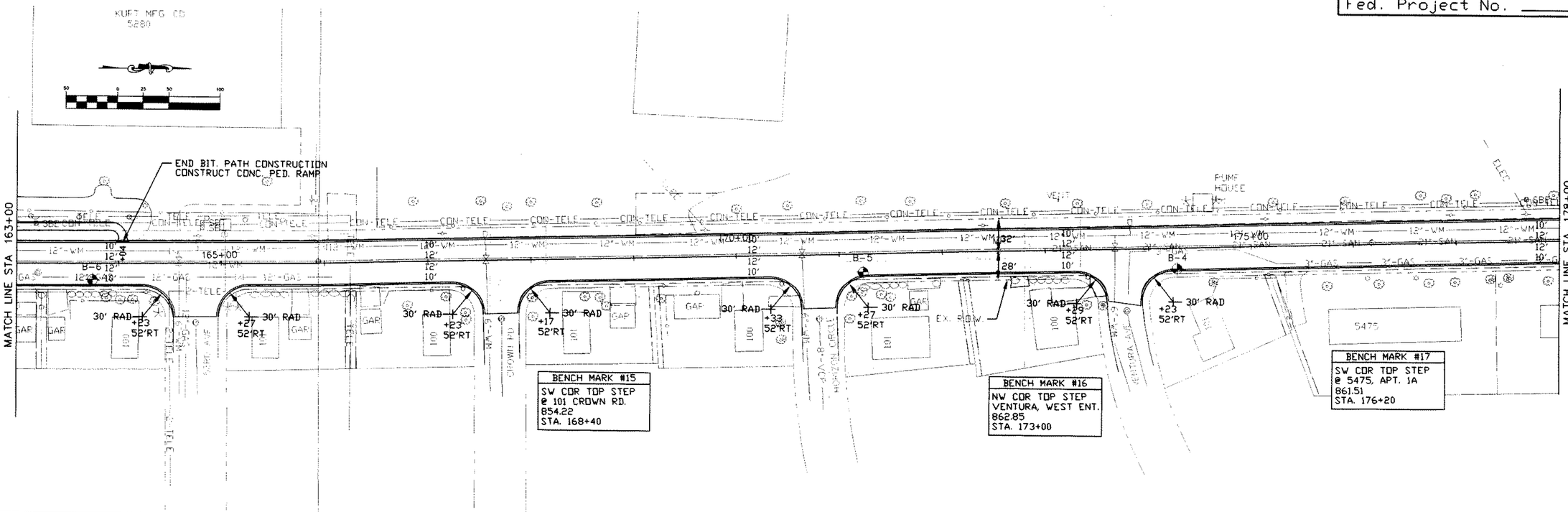

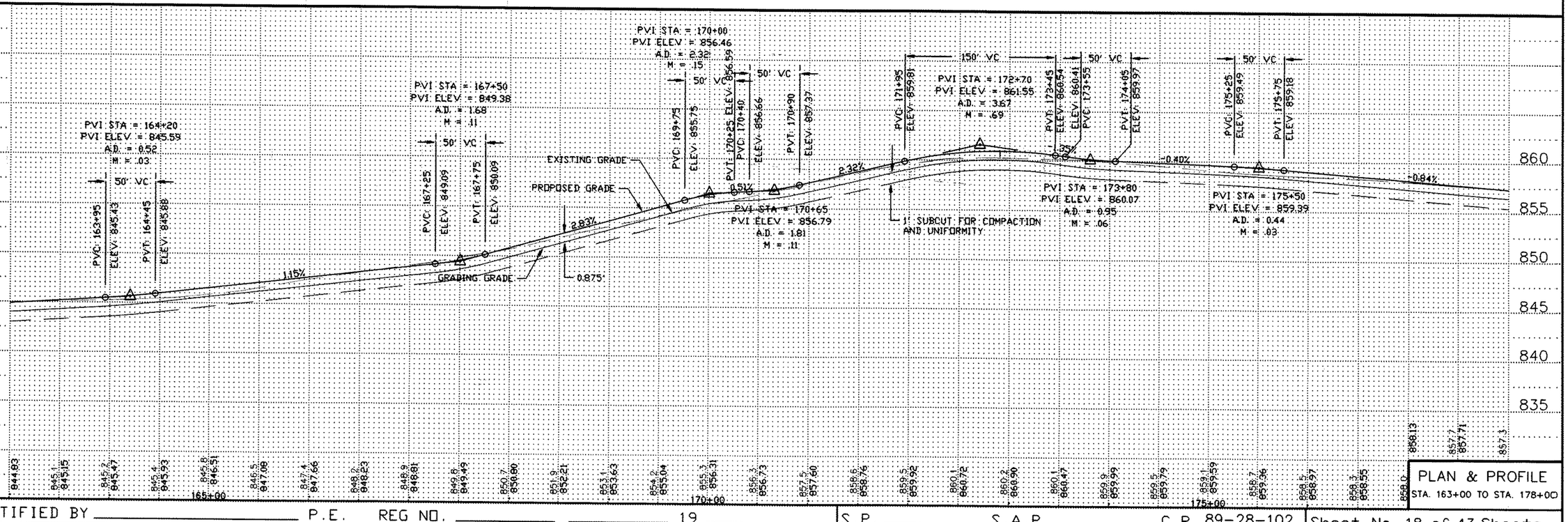

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REVISIONS

DATE	BY	DATE	BY

PLAN & PROFILE
STA. 163+00 TO STA. 178+00

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PLAN & PROFILE
STA. 178+00 TO STA. 180+61

REVISIONS			
DATE	BY	DATE	BY

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1.99407062319439E+007

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Fed. Project No. _____

DRAINAGE TABULATION

(P)

STRUCT NO.	STATION	LOCATION DIST. OUT FT. RT/LT	REMARKS	STRUCT TYPE MH/CB	DESIGN	REMOVAL: DRAIN. STRUCT EACH	REMOVAL: PIPE SEWER LIN.FT	SALV. CAST. ASSY. EACH	INSTALL CAST. ASSY. EACH	ADJ. CAST. EACH	RECONST. MH/CB LIN.FT.	PAY HEIGHT LIN.FT.	TOP CAST. ELEV.	OUTLET ELEV.	DRAINS TO: EXIST	DRAINS TO: NEW	F & I CASTING ASS'Y	PIPE GRADE	FURNISH & INSTALL: 12"RCP LIN.FT	15"RCP LIN.FT	18"RCP LIN.FT	21"RCP LIN.FT	24"RCP LIN.FT	27"RCP LIN.FT	30"RCP LIN.FT	33"RCP LIN.FT	36"RCP LIN.FT	42"RCP LIN.FT	CLASS PIPE	APRON EACH	STRUCT NO.
6	10572	23.3 LT	NO CONST. REQ'D.	CB									848.41	843.41	7															6
7	10576	23.3 LT	NO CONST. REQ'D.	CB									848.24	843.14	10															7
8	10597	122.0 LT	NO CONST. REQ'D.	CB									844.74	841.64	9															8
2	10620	20.1 RT		CB		1	18	1					848.24	843.45	3															2
3	10637	13.9 RT		MH			30	1	1		5.6		847.89	842.35	4	10		2.88			87									3
1	10638	38.1 RT		CB		1	24	1					848.24	843.95	2															1
9	10662	140.0 LT	NO CONST. REQ'D.	CB									844.81	840.91	10															9
4	10665	24.8 RT	CONST. ON EXISTING 48" RCP	MH/CB	84-4020	1		1	1			5.9	847.32	841.44	11															4
5	10678	39.1 RT		CB		1	18	1					847.54	844.34	4															5
10	10691	54.6 LT		MH	72-4020	1	75	1	1			7.0	846.76	839.84	11	104		1.49				45								10
11	10763	30.7 LT		MH				1	1		7.0		845.03	838.08	17	106														11
12	11284	20.7 RT		CB		1	6						840.27	835.22	13															12
13	11300	50.1 RT	NO CONST. REQ'D.	CB									839.17	834.72	14															13
17	11323	39.0 LT		MH						1			840.68	825.24	19															17
14	11325	57.0 RT	NO CONST. REQ'D	MH									839.84	829.90	17															14
15	11335	57.8 RT	NO CONST. REQ'D.	CB									838.98	834.68	14															15
16	11357	23.7 RT		CB		1		1					839.97	835.32	15															16
19	11361	62.7 LT	CONNECT TO EXISTING STRUCTURE	MH									840.60	821.80	OUTLET					58										19
18	11361	32.3 LT	CONNECT TO EXISTING STRUCTURE	CB						1			840.68	834.11	19															18
22	11964	45.6 RT	NO CONSTRUCTION REQUIRED	CB						1			840.88	836.28	21															22
21	11968	32.0 RT	RECONSTRUCT TO BOTTOM OF CONE	MH				1	1		4.5		840.60	825.82	20															21
20	11974	48.0 LT	NO CONSTRUCTION REQUIRED	MH						1			841.39	823.56	19															20
23	11991	46.1 RT	NO CONSTRUCTION REQUIRED	CB						1			840.88	836.88	22															23
24	12622	13.0 LT		MH				1	1		17.7		842.68	825.09	20															24
27	12624	45.6 RT	NO CONSTRUCTION REQUIRED	CB						1			842.12	836.37	24															27
28	12651	45.8 RT	NO CONSTRUCTION REQUIRED	CB						1			842.73	837.80	27															28
25	12666	33.9 LT		MH		1	75	1					841.93	835.83	24															25
26	12667	21.8 LT		CB		1	14						841.92	837.85	25															26
29	12974	34.3 LT	CONNECT TO EXISTING STRUCTURE	MH						1			845.07	837.40		122														29
31	13283	46.0 RT	NO CONSTRUCTION REQUIRED	CB						1			845.32	841.32	32															31
30	13284	36.0 LT		MH						1			847.78	839.07	29															30
32	13286	30.0 RT		MH						1			846.58	839.97	30	127														32
33	13310	46.0 RT	NO CONSTRUCTION REQUIRED	CB						1			845.32	841.72	32															33
34	14896	23.0 LT		CB		1	30						839.80	837.00	35															34
37	14890	40.0 RT		CB		1	4						839.82	836.72	EAST															37
38	14893	44.0 RT		CB		1	3						839.82	837.07	37															38
35	14896	7.0 RT		CB		1	33						839.80	837.05	37															35
36	14940	8.0 RT		CB		1	44						839.71	837.51	35															36
39	17872	23.0 LT	CONNECT TO EXISTING STRUCTURE	CB				1	1		3.7		856.74	852.86	42															39
40	17871	11.0 RT		CB		1	34						856.79	853.19	39															40
42	17949	20.0 LT		CB				1	1		4.8		857.52	852.52	DOT MH															42
41	17993	19.0 RT	NO CONSTRUCTION REQUIRED	CB									859.02	853.92	42															41
101	10612	20.9 RT	INSTALL CAST. FROM CB #2	CB	H				1			3.4	847.82	844.22		3		0.40	24											101
102	10637	45.0 RT	INSTALL CAST. FROM CB #1	CB	SPECIAL-1				1			3.4	847.89	844.29		3		0.40	32											102
103	10678	45.0 RT	INSTALL CAST. FROM CB #5	CB	SPECIAL-1				1			2.1	847.49	845.19		4		0.40	24										4	103
104	10734	41.0 LT		MH	84-4020							6.9	845.93	839.17		105	B	1.49				29								104
105	10763	41.0 LT		MH	F							6.6	845.21	838.74		11	B	1.49				10								105
106	10980	35.0 LT	CONST. ON EXIST. 48" RCP	MH	60-4020							7.8	841.34	833.65		17	B	2.049±												106
107	10980	24.9 LT		CB	G							3.6	840.54	836.77		106	A	0.40	10											107
108	10980	20.9 RT		CB	H							3.4	840.57	836.95		107	A	0.40	46											108
110	11251	20.9 RT		CB	G							3.6	839.51	835.74		111	A	1.62	35											110
109	11251	20.9 LT		CB	H							3.4	839.51	835.91		110	A	0.40	42											109
111	11286	25.4 RT	CONST. ON EXIST. 12" RCP	CB	G							4.1	839.41	835.17		13	A													111
112	11359	21.0 RT	INSTALL CAST. FROM CB #16	CB	H				1			4.3	839.85	835.35		15		MATCH	3											112
113	11361	20.9 LT		CB	H							3.4	839.87	836.26	18		A	0.40	11											113
114	11570	20.9 LT		CB	F							6.5	840.62	833.97		114A	A	0.40					52							114
114A	11570	78.9 LT	F&I. 5.8 C.Y. CL.III RIPRAP	APRON	24" RCP								OUTLET	833.60		POND													1	114A
114B	11414	86.0 LT	F&I. 2.9 C.Y. CL.III RIPRAP	APRON	15" RCP								INLET	832.60	19			0.18		52									1	114B
115	11570	20.9 RT		CB	H							3.3	840.62	837.13		114	A	0.40	42											115
116	11932	20.9 LT		CB	G							4.7	840.13	835.30		114	A	0.40					362							116
116A	11939	20.9 LT		CB	G							4.7	840.13	835.33		116	A	0.40					7							117
117	11932	20.9 RT		CB	H							3.4	840.13	836.55		116	A	0.40	42											118
118	12080	20.9 LT		CB	G							4.1	840.67	836.39		116A	A	0.40			141									119
119	12080	20.9 RT		CB	H							3.4	840.67	837.05		118	A	0.40	42											120
120	12330	20.9 LT		CB	G							3.8	841.63	837.64		118	A	0.40		250										121
121	12330	20.9 RT		CB	H							3.4	841.63	838.04		120	A	0.40	42											122
122	12692	35.0 LT	INSTALL CAST. FROM MH 25	MH	F				1			9.9	842.72	833.00		24		0.51	42				25							123
123	12692	20.9 LT		CB	G							2.2	841.85	839.48		122	A	0.40	14											124
124	12692	20.9 RT		CB	H							2.2	841.85	839.45		123	A	0.40	42											125
125	12974	20.9 LT		CB	G							2.2	844.17	841.80		29	A	0.40	14											126
126	12974	20.9 RT		CB	H							2.2	844.17	841.77		125	A	0.40	42											127
127	13284	20.9 LT	CONST. ON EXIST. 18" RCP	CB	F							7.3	846.89	839.46		30	A	0.98												129
129	13530	20.9 LT		CB	F							6.5	851.78	845.10		257	A	0.40	15											130
130	13530	20.9 RT		CB	H							2.2	851.78	849.38		129	A	0.40	42											

FILE NAME: 89P102STD-CH.DWG MN 07-12-94

REVISIONS

DATE	BY	DATE	BY
8/12/94	DWF		
8/16/94	KGJ		

DRAINAGE CASTING SCHEDULE

(Q)

ASSEMBLY TYPE	NO. REQD.	FRAME CASTING	GRATE CASTING	CURB BOX CASTING	RING CASTING	COVER CASTING
A	54	801	810	821-B		
B	28				700-7	716
C	2				700-7	721
TOTAL	84					

TABULATION CHARTS

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S.P. _____ S.A.P. _____ C.P. 89-28-102

Fed. Project No. _____

DRAINAGE TABULATION

(P)

STRUCT NO.	STATION	LOCATION DIST. FT.	OUT RT/LT	REMARKS	STRUCT TYPE MH/CB	DESIGN	REMOVAL DRAIN. STRUCT EACH	REMOVAL PIPE SEWER LIN.FT	SALV. CAST. ASSY. EACH	INSTALL CAST. ASSY. EACH	ADJ. CAST. EACH	RECONST. MH/CB LIN.FT.	PAY HEIGHT LIN.FT.	TOP CAST. ELEV.	OUTLET ELEV.	DRAINS TO EXIST	DRAINS TO NEW	F & I CASTING ASS'Y	PIPE GRADE	FURNISH & INSTALL 12"RCP LIN.FT	15"RCP LIN.FT	18"RCP LIN.FT	21"RCP LIN.FT	24"RCP LIN.FT	27"RCP LIN.FT	30"RCP LIN.FT	33"RCP LIN.FT	36"RCP LIN.FT	42"RCP LIN.FT	CLASS PIPE	APRON EACH	STRUCT. NO.
200	13898	20.9	RT		CB	H							3.8	855.62	851.69		202	A	0.40	42											200
202	13898	20.9	LT		CB	F							5.7	855.62	849.79		256	A	1.00	39											202
203	14218	20.9	RT		CB	H							3.0	853.99	850.84		204	A	1.00	21											203
204	14218		C/L		MH	F							5.1	854.75	849.78		252	B	1.62		192										204
205	14218	20.9	LT		CB	H							3.6	853.99	849.99		204	A	1.00	21											205
206	14650	20.9	RT		CB	H							3.8	843.62	839.68		207	A	1.00	21											206
207	14650		C/L		MH	66-4020							10.9	844.39	833.61		255	B	0.20									190			207
208	14650	20.9	LT		CB	H							3.8	843.62	839.62		207	A	1.00	21											208
209	14861	57.0	RT		CB	H							2.8	840.03	837.01		210	A	1.00	29											209
210A	14890	55.0	RT	CONSTRUCT ON EXISTING 15" RCP	MH	G							3.1	840.05	836.72	15"RCP		B													210
210	14893	57.0	RT		CB	H							3.2	839.83	836.76		210	A	1.00	4											210A
211	14941	20.9	RT		CB	H							3.6	839.21	835.46		212	A	1.00		21										211
212	14941		C/L		MH	66-4020							5.9	839.99	834.18		207	B	0.20									291			212
213	14941	20.9	LT		CB	H							3.8	839.21	835.21		212	A	1.00		21										213
214	15085	20.9	RT		CB	H							3.8	840.14	836.14		215	A	1.00	21											214
215	15085		C/L		MH	60-4020							6.3	840.91	834.69		212	B	0.35								144				215
216	15085	20.9	LT		CB	H							3.8	840.14	836.14		215	A	1.00	21											216
217	15325		C/L		MH	54-4020							6.8	842.40	835.77		215	B	0.45								240				217
218	15325	70.0	LT		CB	F							5.5	841.46	836.12		217	C	0.50		70										218
221	15514	20.9	RT		CB	H							3.3	841.62	838.13		222	A	1.00		21										221
222	15514	C/L	LT		MH	54-4020							6.0	842.40	836.52		217	B	0.40								189				222
223	15514	20.9	LT		CB	H							3.8	841.62	837.61		222	A	1.00		21										223
225	15640		C/L		MH	54-4020							6.0	842.91	837.02		222	B	0.40							126					225
226	15643	50.0	LT		CB	G							4.7	842.15	837.27		225	A	0.50		50										226
227	15600	50.0	LT		CB	G							4.7	842.38	837.48		226	A	0.50		43										227
228	15752	20.9	RT		CB	H							3.6	842.64	838.83		229	A	1.00	21											228
229	15752		C/L		MH	54-4020							6.1	843.41	837.41		225	B	0.35							112					229
230	15752	20.9	LT		CB	H							3.8	842.64	838.64		229	A	1.00	21											230
231	15910	C/L	LT		MH	F							6.1	844.11	838.12		229	B	0.45						158						231
232	15910	55.0	LT		CB	G							4.5	843.08	838.39		231	A	0.50		55										232
233	15915	55.0	LT		CB	G							4.5	843.12	838.44		232	A	1.00		5										233
234	16113	20.9	RT		CB	G							3.1	842.95	839.67		235	A	1.00		21										234
235	16113		C/L		MH	F							5.0	843.73	838.80		231	B	0.34						203						235
236	16113	20.9	LT		CB	H							3.8	842.95	839.01		235	A	1.00		21										236
234A	16232	20.9	RT		CB	H							3.6	843.61	839.82		235A	A	1.00	21											234A
235A	16226	C/L	RT		MH	G							5.0	844.37	839.50		235	B	0.62					113							235A
236A	16220	20.9	LT		CB	H							3.7	843.54	839.71		235A	A	1.00	21											236A
239	16532	20.9	RT		CB	H							3.6	846.08	842.27		240	A	1.00	21											239
240	16532	C/L	RT		MH	F							5.1	846.85	841.90		235A	B	0.78			306									240
241	16532	20.9	LT		CB	H							3.6	846.08	841.95		240	A	1.00	21											241
242	16637	C/L	LT		MH	F							5.1	848.04	843.09		240	B	1.13		105										242
243	16637	50.0	LT		CB	F							5.5	848.70	843.34		242	C	0.50		50										243
245	16823	20.9	RT		CB	H							3.4	850.65	847.10		246	A	1.00	21											245
246	16823	C/L	RT		MH	F							5.1	851.41	846.46		242	B	1.81		186										246
247	16823	20.9	LT		CB	H							3.8	850.65	846.67		246	A	1.00	21											247
248	17133	20.9	RT		CB	H							3.8	857.58	853.58		249	A	1.00	21											248
249	17133		C/L		MH	F							5.1	858.34	853.37		246	B	2.23		310										249
250	17133	20.9	LT		CB	H							3.8	857.58	853.58		249	A	1.00	21											250
251	14410	20.9	RT		CB	G							3.4	850.87	847.28		252	A	1.00	21											251
252	14410		C/L		MH	F							5.8	851.64	846.00		253	B	1.00		21										252
253	14410	20.9	LT		CB	66-4020							17.6	850.87	833.11		254	A	0.20									85			253
254	14335	60.0	LT		MH	66-4020							18.7	851.55	832.94		256	B	0.20									437			254
255	14460		C/L		MH	66-4020							17.0	850.13	833.22		253	B	0.20									54	4		255
256	13898	60.0	LT		MH	66-4020							20.3	852.25	832.07		257	B	0.32									368	4		256
257	13530	60.0	LT		MH	66-4020							17.7	848.50	830.90		258	B	0.25									420	4		257
258	13110	60.0	LT		MH	66-4020							16.4	846.10	829.85		259	B	0.25									420	4		258
259	12690	60.0	LT		MH	66-4020							14.8	843.50	828.80		24	B	0.35									83	4		259
300	17875	20.9	RT		CB	H							2.6	856.77	853.25	39		A	0.40	42											300
TOTALS:							15	408	16	16	10	47.1	511.1					84		1077	1573	534	84	559	361	238	429	144	2348		2	

FILE NAME: 89281102\STD-CH.DWG MN. (07-12-94)

REVISIONS

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8/16/94	KGJ		

TABULATION CHARTS

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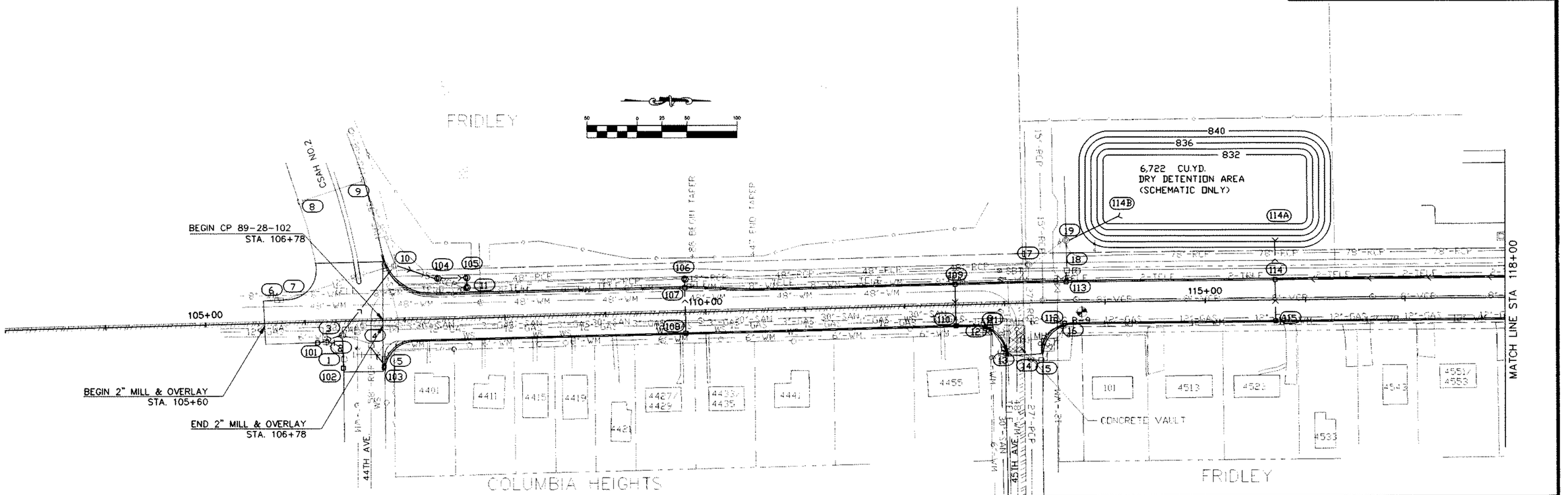
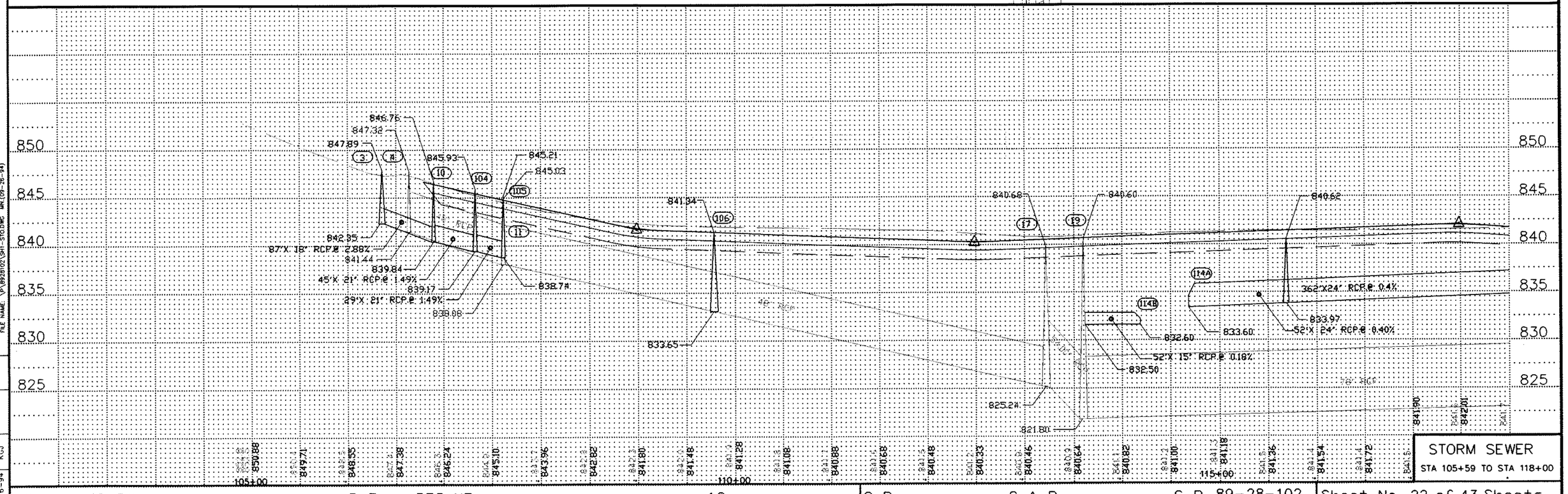
Fed. Project No. _____





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8-16-94	KGJ		

STORM SEWER
STA 105+59 TO STA 118+00

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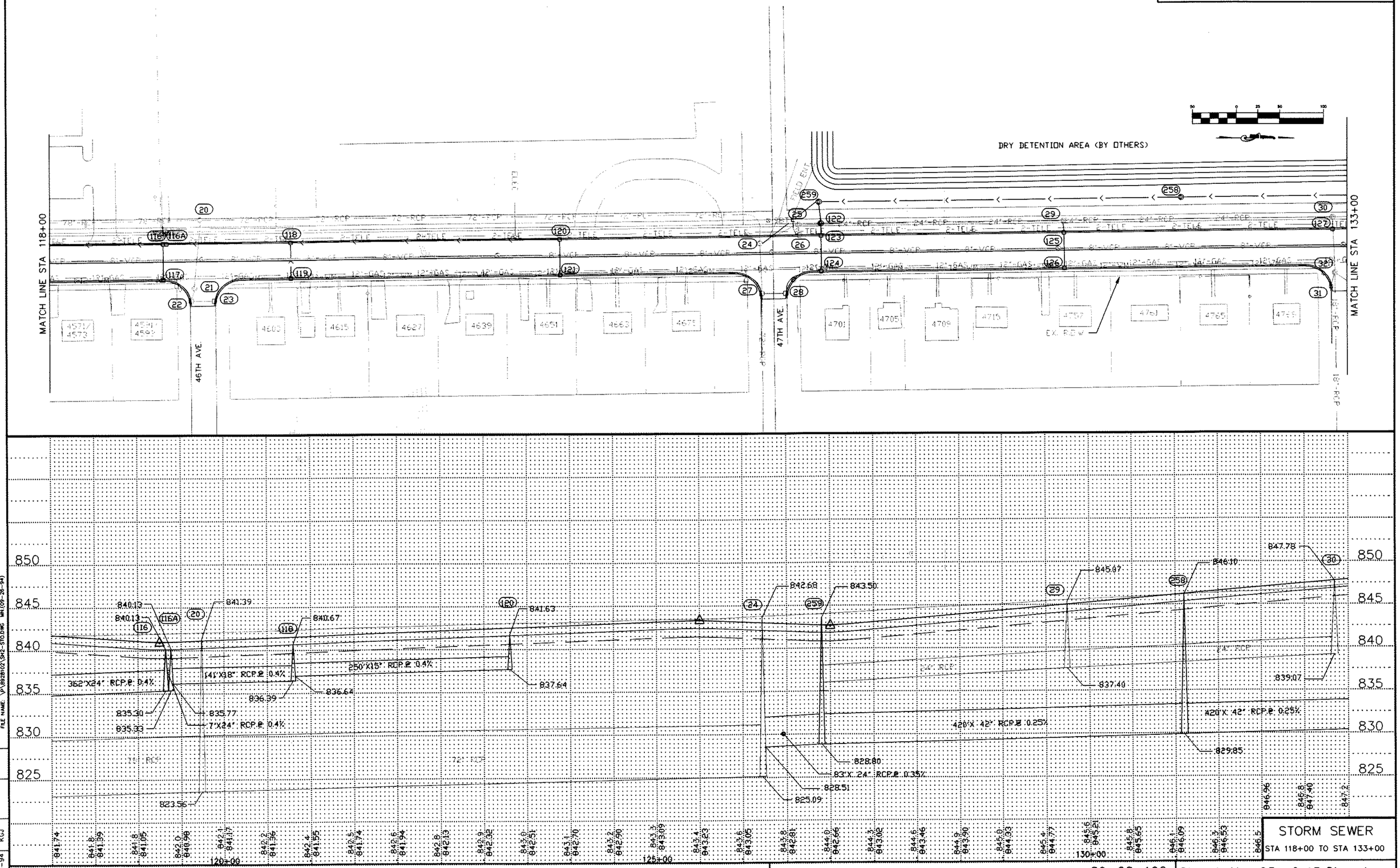

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8-16-94	KGJ		

STORM SEWER
STA 118+00 TO STA 133+00

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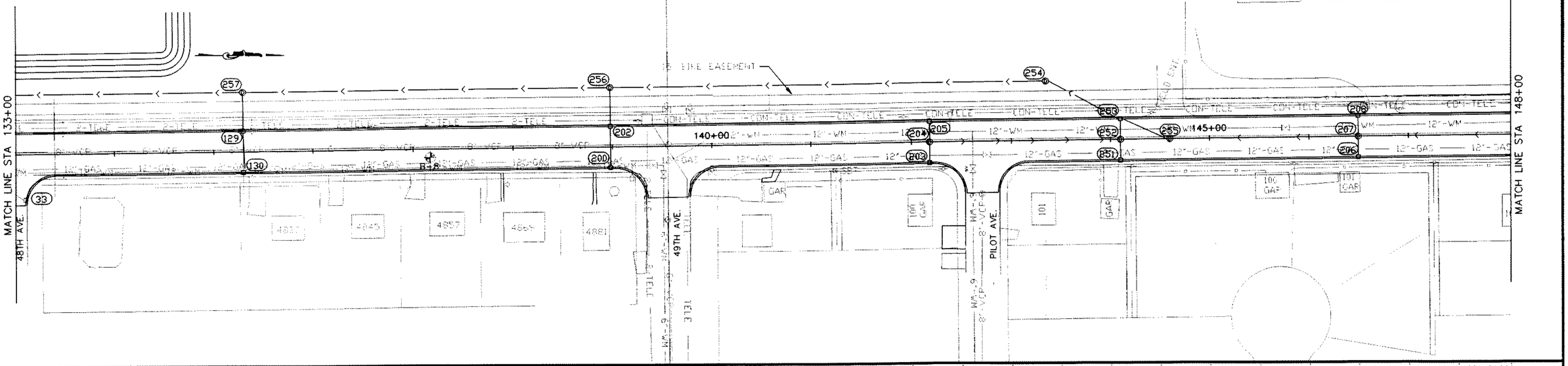
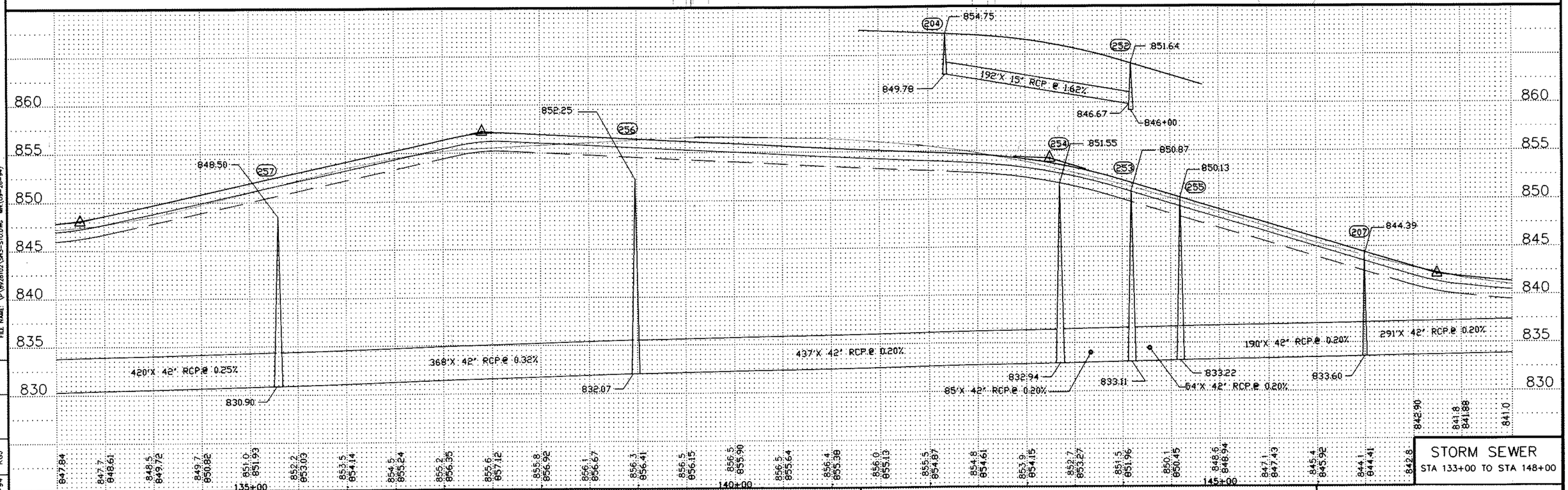
API CUPP





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8-12-94	DWF		
8-16-94	KCJ		

STORM SEWER
STA 133+00 TO STA 148+00

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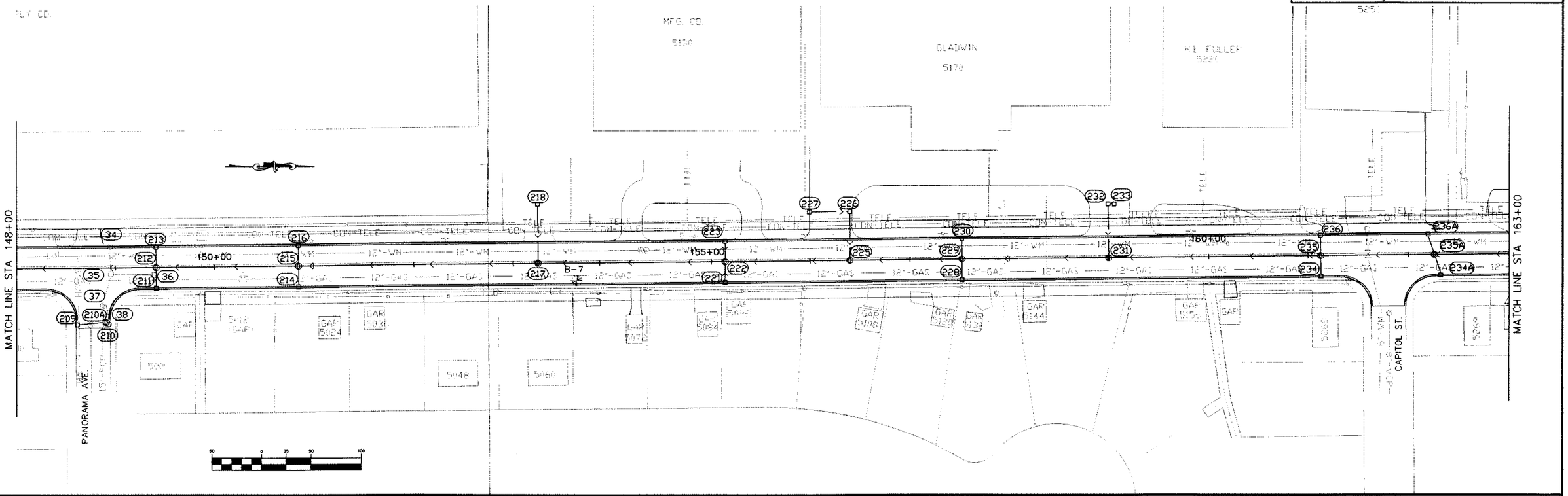

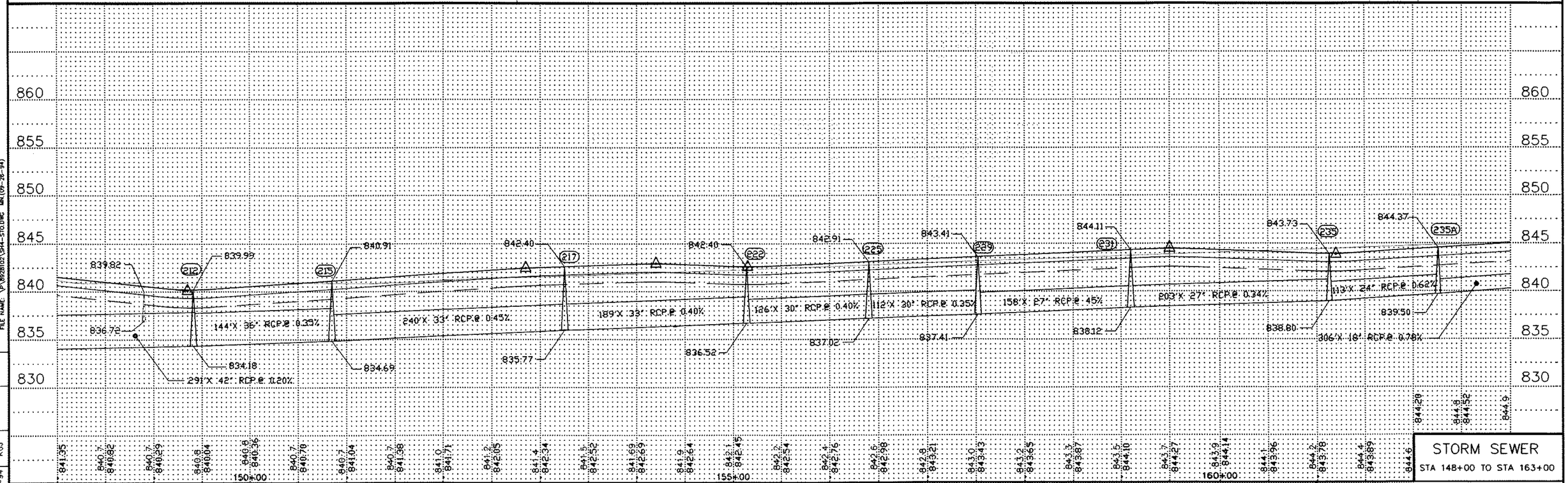

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8-16-94	KGJ		

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STORM SEWER
STA 148+00 TO STA 163+00

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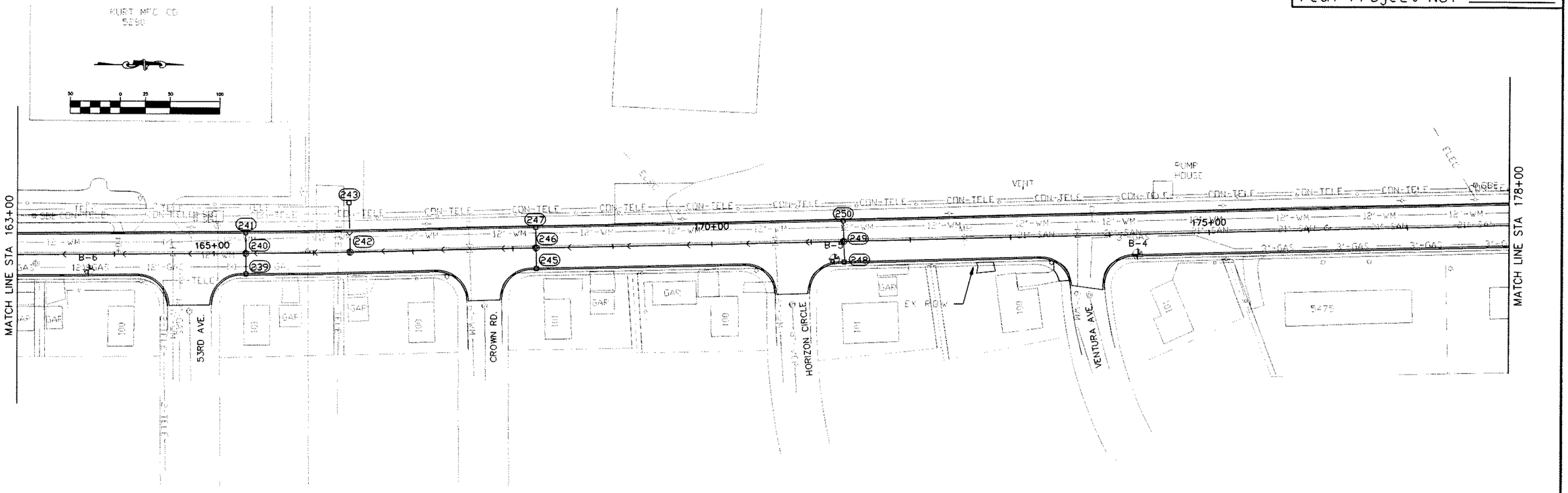

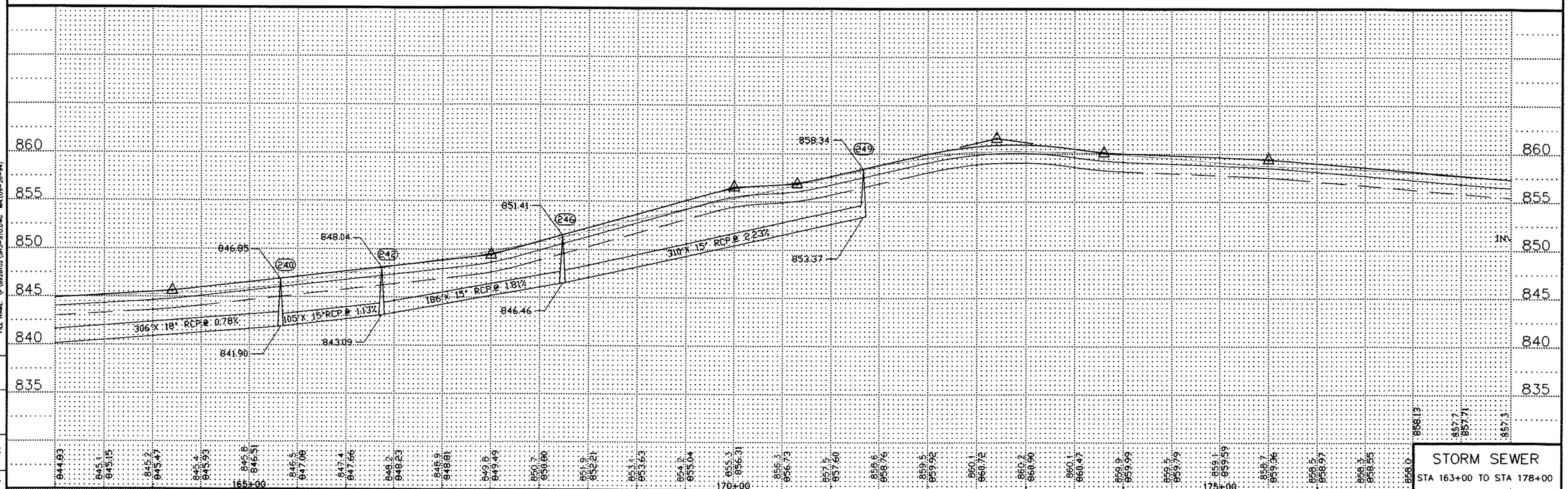

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STORM SEWER
STA 163+00 TO STA 178+00

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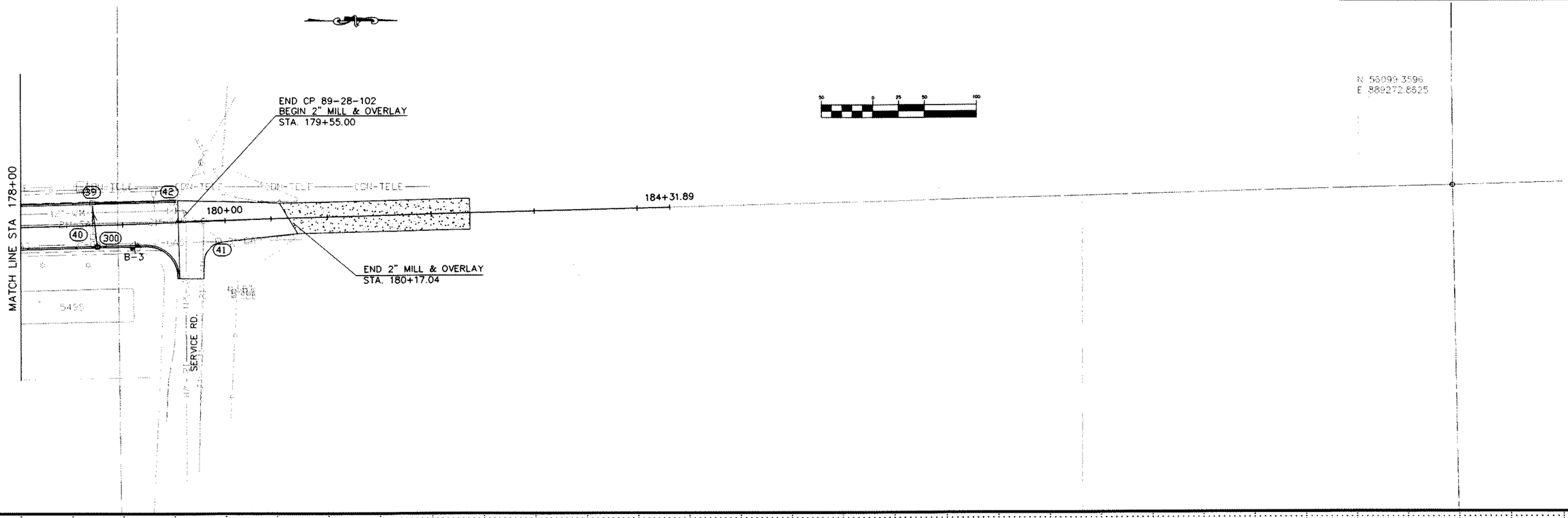

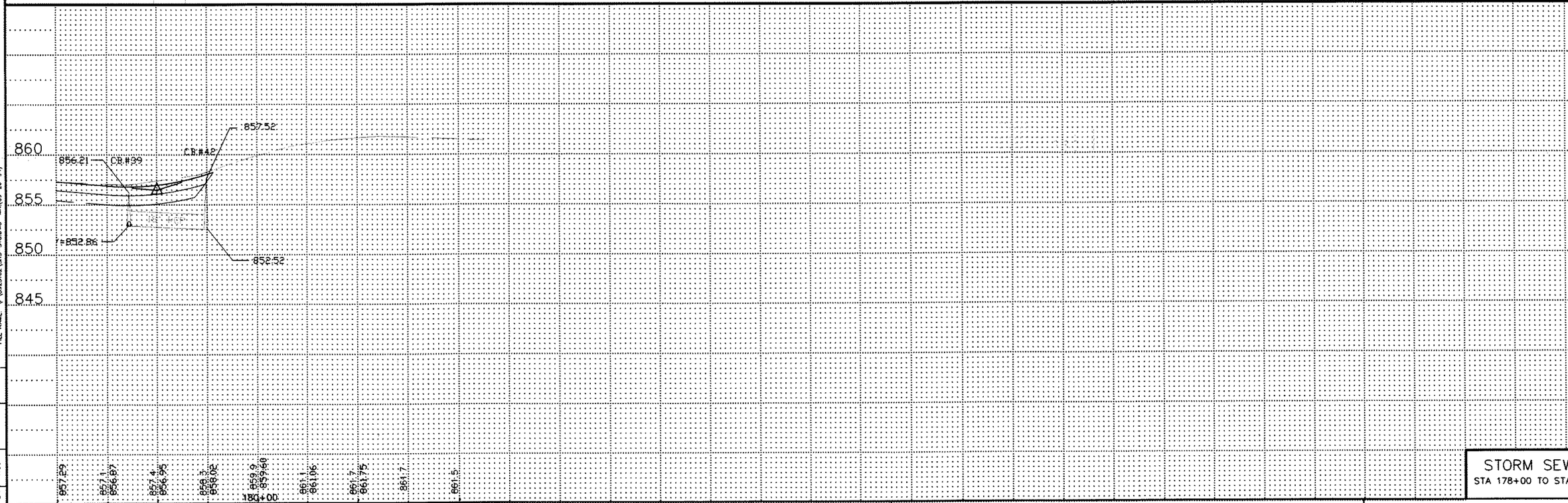

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8-12-94	DWF		
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STORM SEWER
STA 178+00 TO STA 180+61

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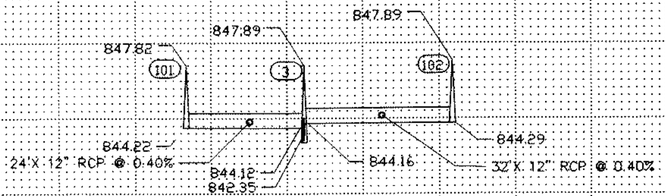

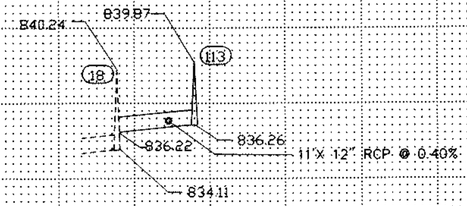

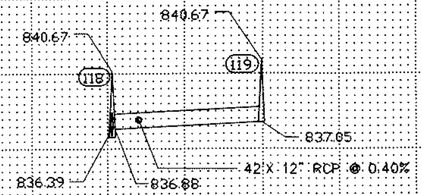

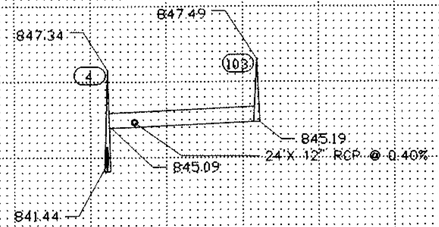

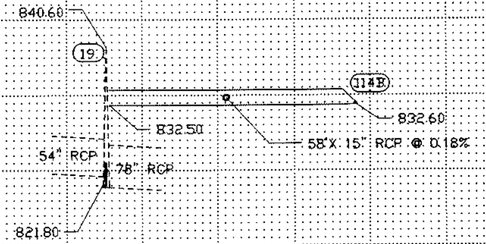

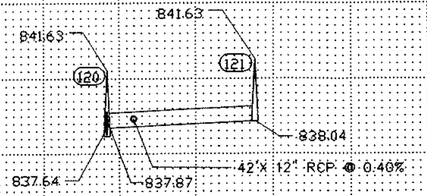

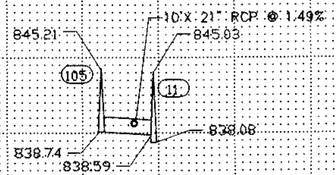

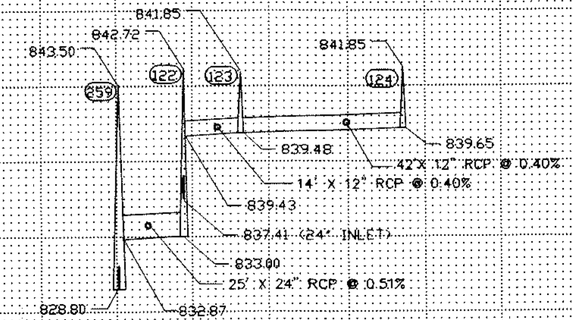

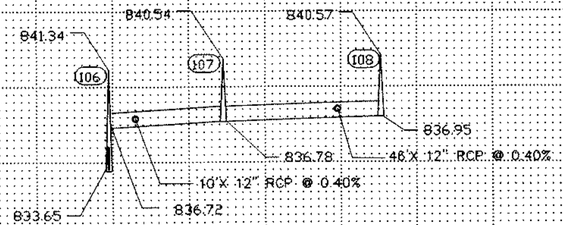

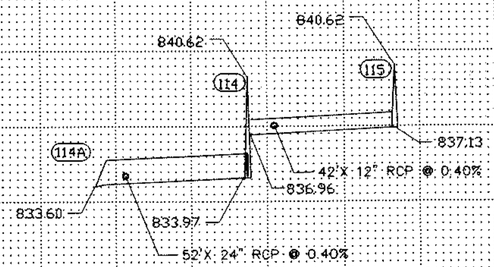

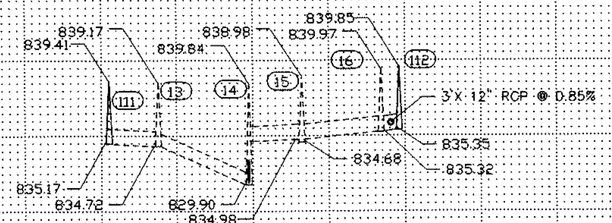

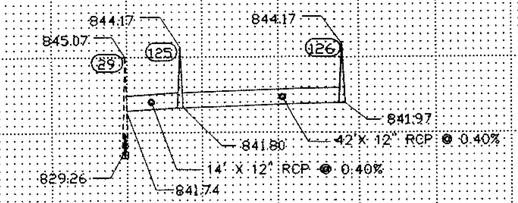

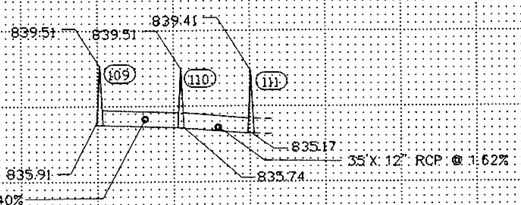

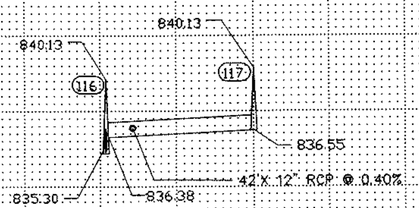

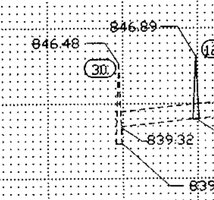

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STORM SEWER PROFILES

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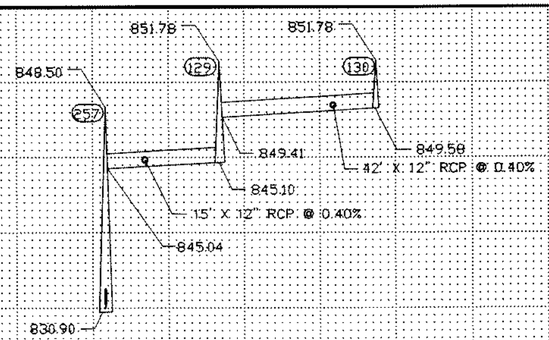

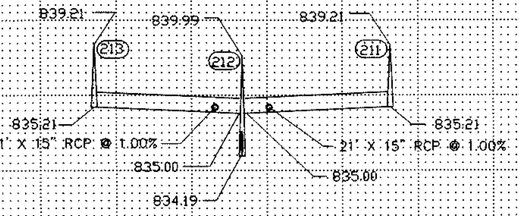

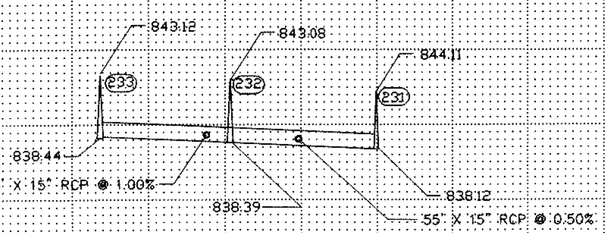

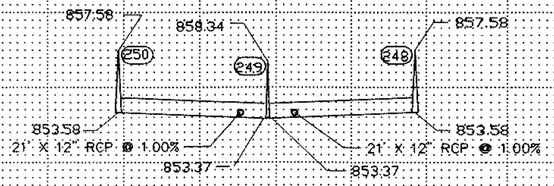

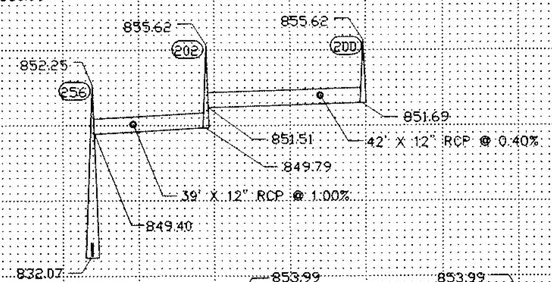

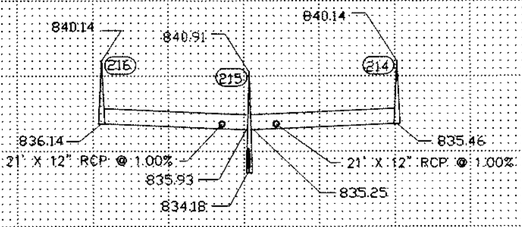

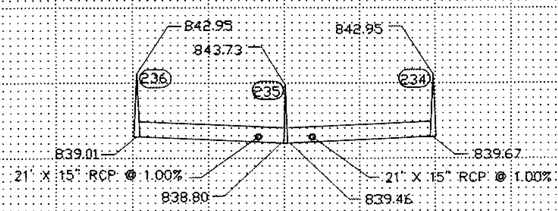

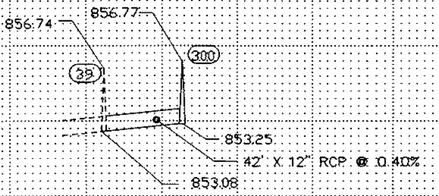

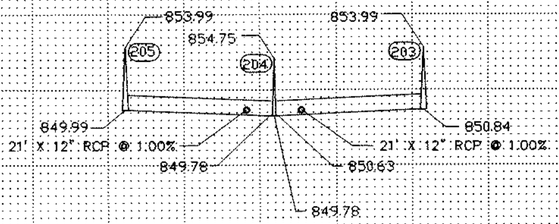

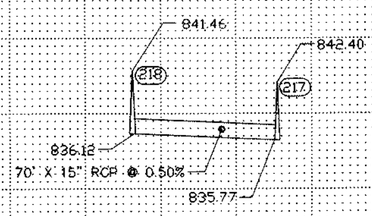

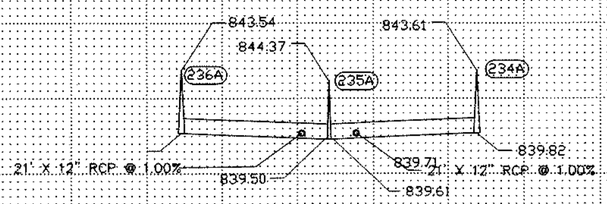

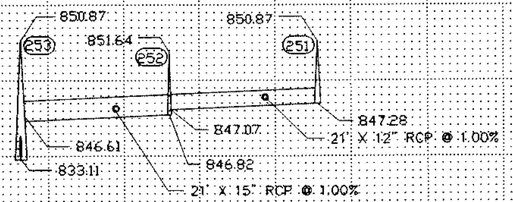

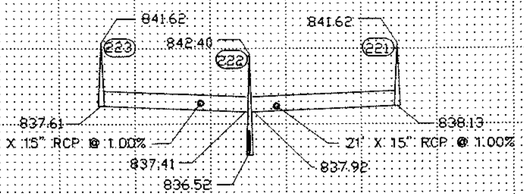

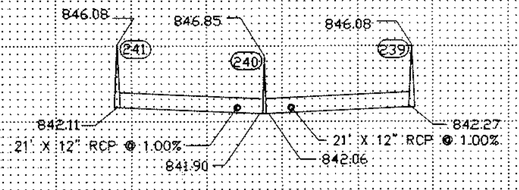

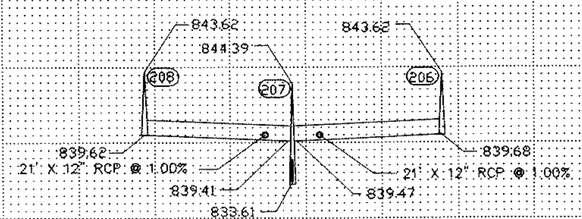

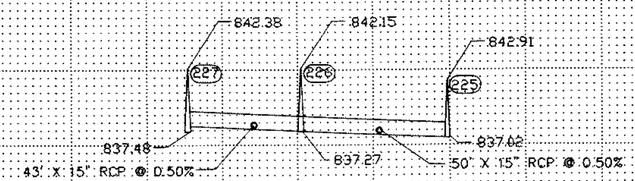

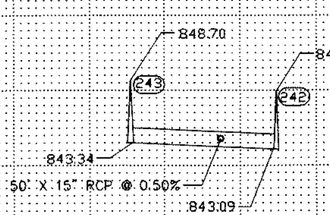

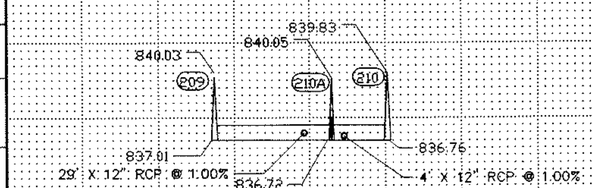

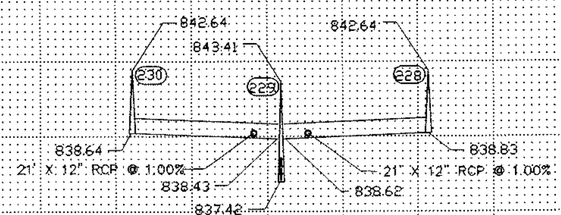

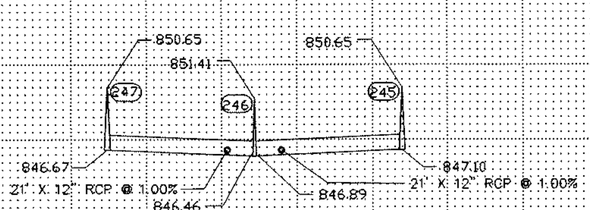

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8-12-94	DWF		
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STORM SEWER PROFILES

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EXCAVATION (CU.YD.) COMMON SUBCUT | EMBANKMENT (CU.YD.) REGULAR TOPSOIL

15' PATH EASEMENT R/W

109+50 ℄ — 842.0 — 841.48 — R/W — 1.0' SUBCUT

C 143.4 R 0.0
S 85.2 T 12.0

109+00 ℄ — 842.3 — 841.81

C 100.4 R 0.0
S 85.2 T 12.0

108+50 ℄ — 842.8 — 842.93

C 22.4 R 14.7
S 85.2 T 10.2

108+00 ℄ — 843.7 — 844.17

C 2.4 R 00.0
S 85.2 T 9.0

15' PATH EASEMENT

107+50 ℄ — 844.9 — 845.42

C 18.4 R 20.0
S 85.2 T 9.0

STA. 106+93
BEG. 8' BIT. PATH

107+00 ℄ — 846.3 — 846.66 — R/W — 1.0' SUBCUT

BEGIN CP. 89-28-102
STA. 106+78.00
BEG. FULL DEPTH CONST.

R/W

106+54 ℄ — 847.4 — 847.81

CSAH. 2 — 44 TH. AVE.

106+50 ℄ — 847.4 — 847.51

CSAH. 2 — 44 TH. AVE.

STA. 105+60 TO STA. 106+78
2" MILLING BIT. SURFACE

106+00 ℄ — 848.5 — 848.50 — R/W

R/W

EXCAVATION (CU.YD.) COMMON SUBCUT | EMBANKMENT (CU.YD.) REGULAR TOPSOIL

C 111.3 R 0.1
S 85.2 T 11.0

15' PATH EASEMENT R/W

112+50 ℄ — 841.2 — 840.33 — R/W — 1.0' SUBCUT

C 141.5 R 0.0
S 85.2 T 11.0

112+00 ℄ — 841.5 — 840.48

C 145.0 R 0.0
S 85.2 T 11.0

111+50 ℄ — 841.6 — 840.68

C 142.1 R 0.0
S 85.2 T 11.4

111+00 ℄ — 841.7 — 840.88

C 136.5 R 0.0
S 85.2 T 13.3

110+50 ℄ — 841.8 — 841.08

C 134.1 R 0.0
S 85.2 T 13.3

15' PATH EASEMENT R/W

110+00 ℄ — 841.9 — 841.28 — R/W — 1.0' SUBCUT

C 136.8 R 0.0
S 85.2 T 13.3

REVISIONS

DATE	BY	DATE	BY

FILE NAME: B928102\XS1.DWG MN (06-30-94)

CROSS-SECTION
STA. 106+00 TO STA. 112+50

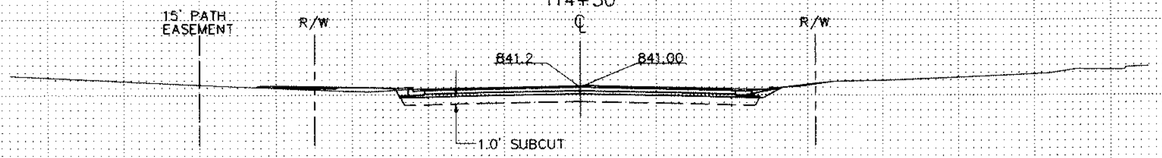
S.P. _____ S.A.P. _____ C.P. 89-28-102

Fed. Project No. _____

EXCAVATION (CU.YD.) COMMON SUBCUT	EMBANKMENT (CU.YD.) REGULAR TOPSOIL

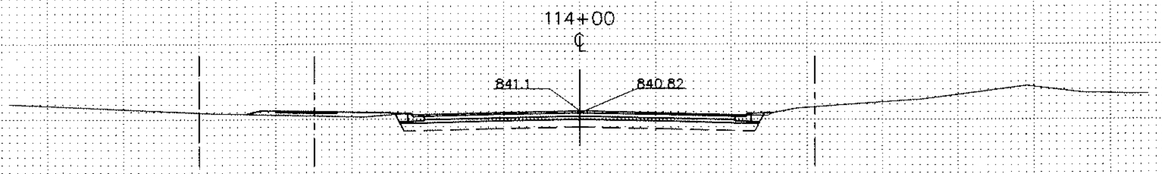
114+50

C. 55.7 R. 14.4
S. 85.2 T. 9.6



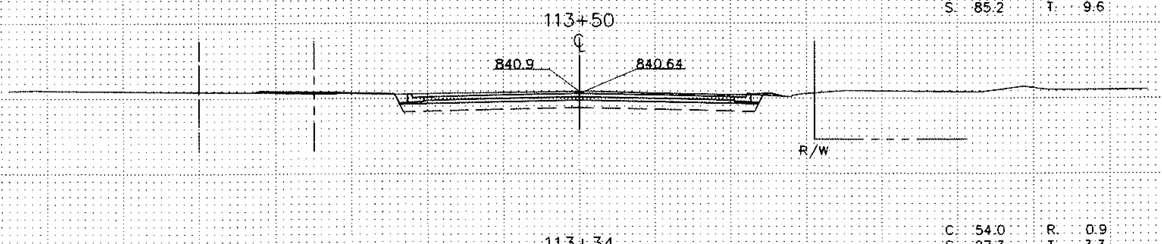
114+00

C. 58.8 R. 14.21
S. 85.2 T. 9.9



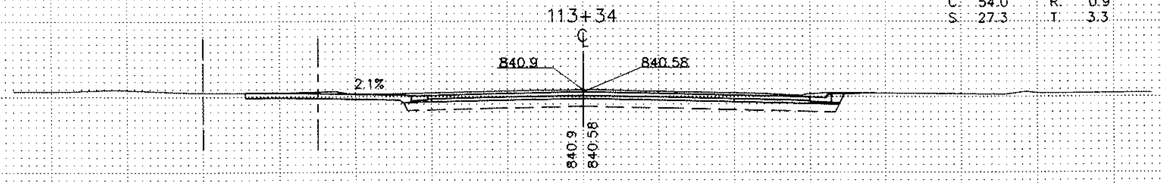
113+50

C. 61.8 R. 10.1
S. 85.2 T. 9.6



113+34

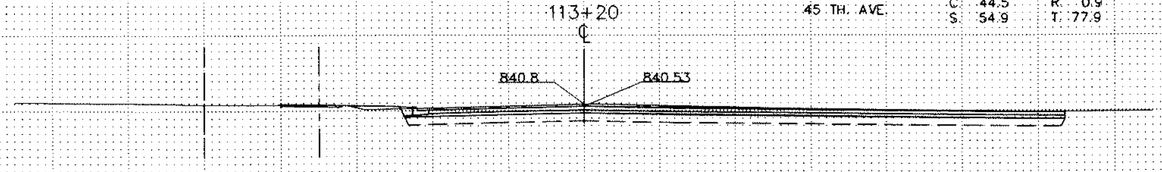
C. 54.0 R. 0.9
S. 27.3 T. 3.3



45 TH. AVE.

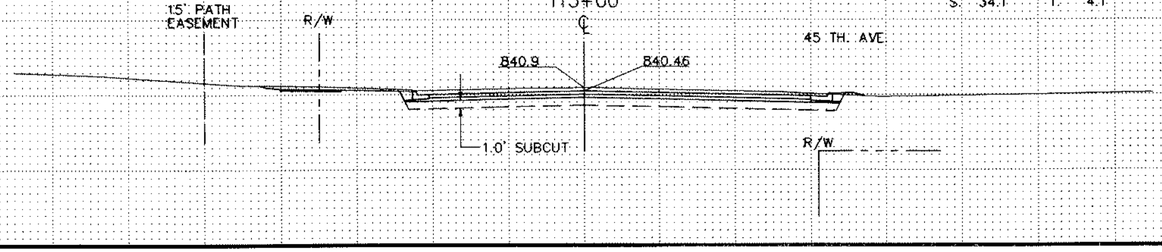
113+20

C. 44.5 R. 0.9
S. 54.9 T. 77.9



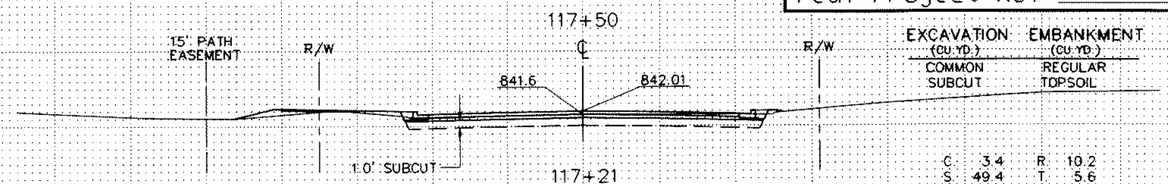
113+00

C. 29.7 R. 0.9
S. 34.1 T. 4.1



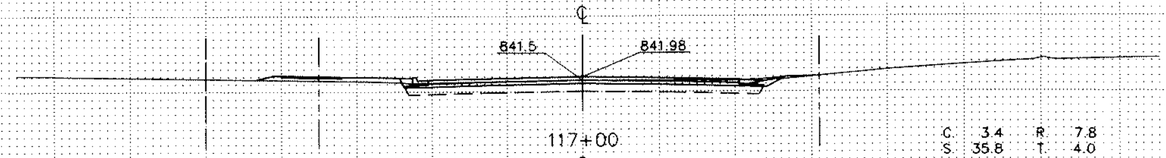
117+50

C. 3.4 R. 10.2
S. 49.4 T. 5.6



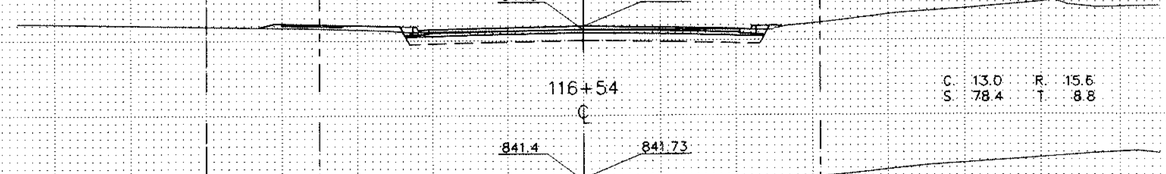
117+21

C. 3.4 R. 7.8
S. 35.8 T. 4.0



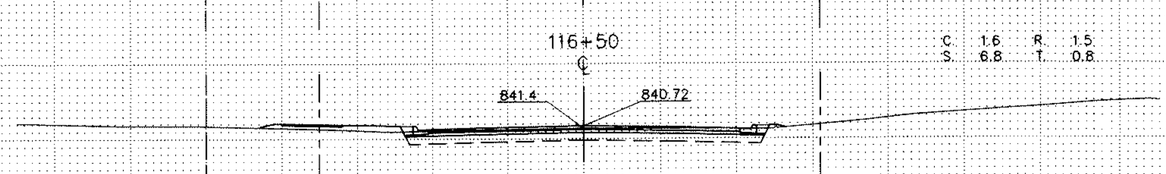
117+00

C. 13.0 R. 15.6
S. 78.4 T. 8.8



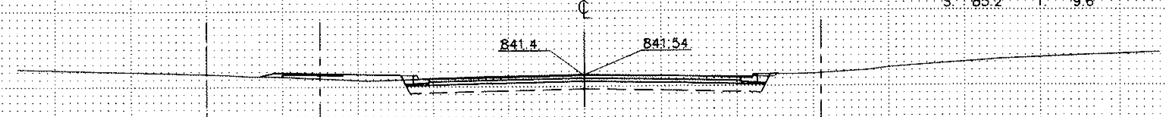
116+54

C. 1.6 R. 1.5
S. 6.8 T. 0.8



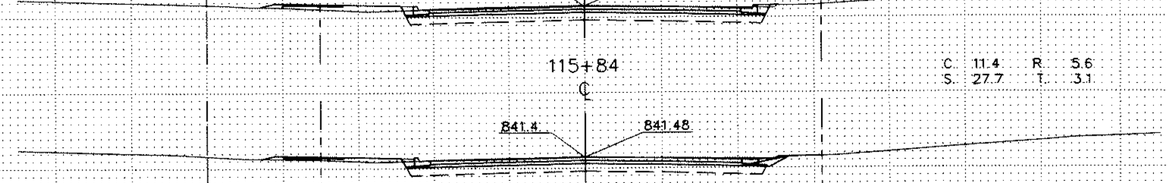
116+50

C. 24.8 R. 21.3
S. 85.2 T. 9.6



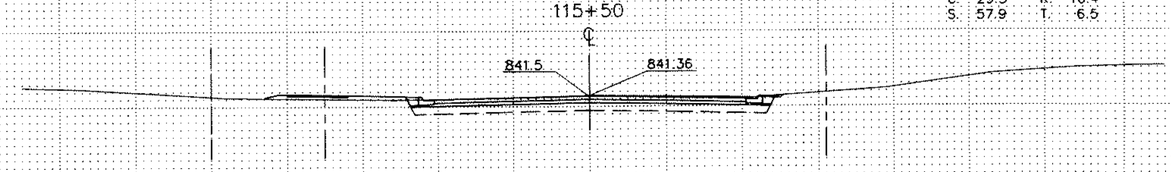
116+00

C. 11.4 R. 5.6
S. 27.7 T. 3.1



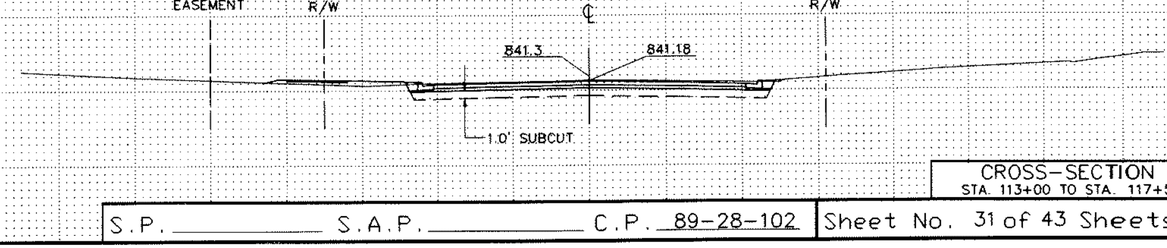
115+84

C. 29.3 R. 10.4
S. 57.9 T. 6.5



115+50

C. 49.1 R. 16.7
S. 85.2 T. 9.6



115+00

REVISIONS

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CROSS-SECTION
STA. 113+00 TO STA. 117+50

S.P. _____ S.A.P. _____ C.P. 89-28-102

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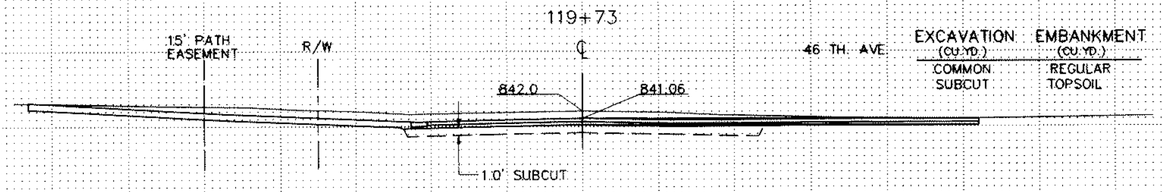
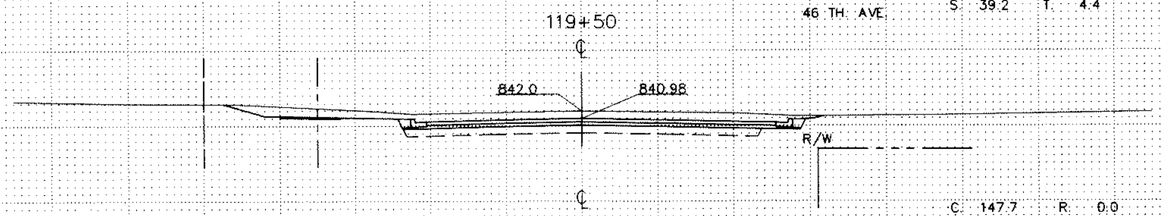
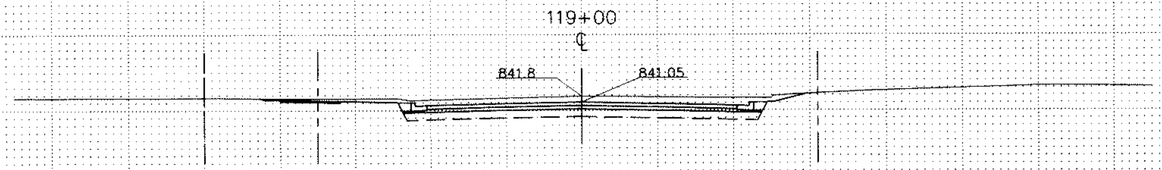


EXCAVATION (CU.YD.) COMMON SUBCUT | EMBANKMENT (CU.YD.) REGULAR TOPSOIL

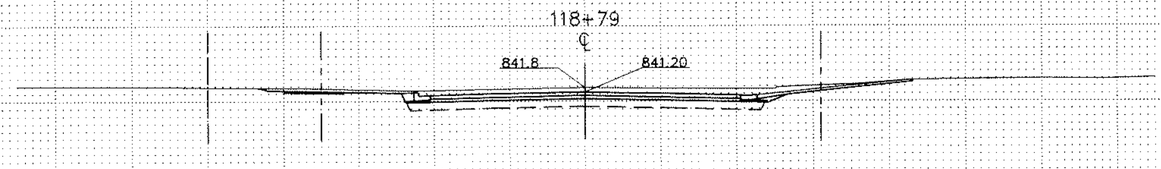
C. 78.6 R. 0.0
S. 39.2 T. 4.4



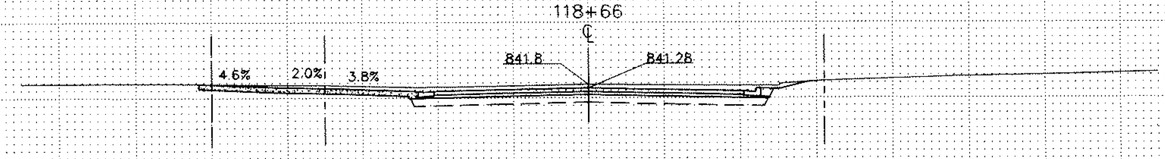
C. 147.7 R. 0.0
S. 85.2 T. 10.2



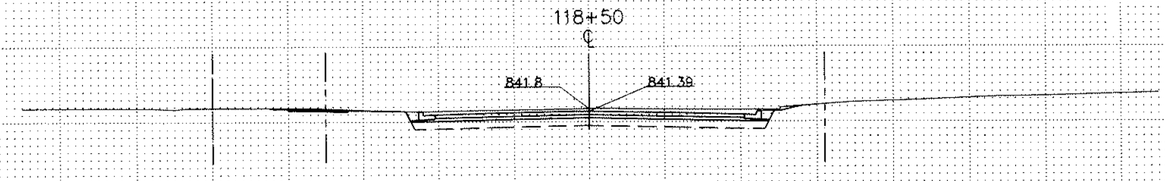
C. 52.9 R. 0.0
S. 35.8 T. 4.3



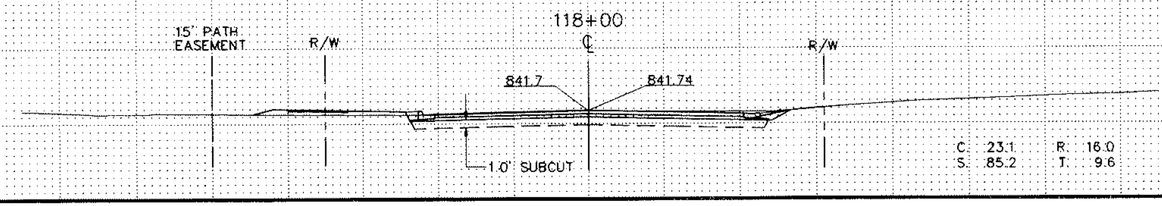
C. 29.3 R. 0.0
S. 22.2 T. 2.7



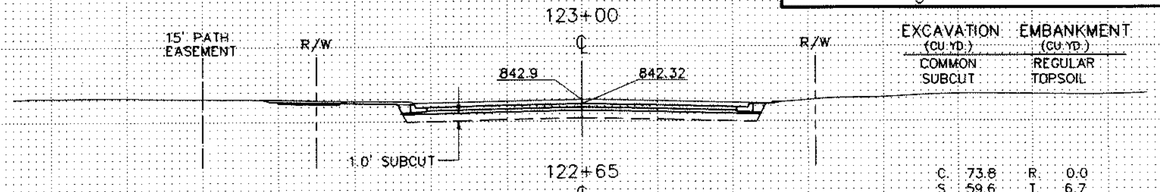
C. 29.2 R. 0.0
S. 27.3 T. 3.3



C. 61.8 R. 8.0
S. 85.2 T. 10.2

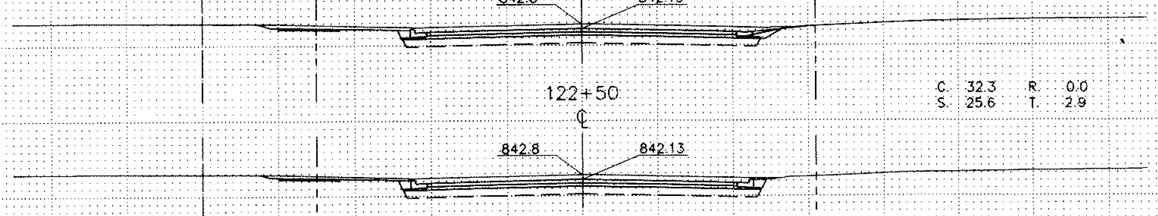


C. 23.1 R. 16.0
S. 85.2 T. 9.6

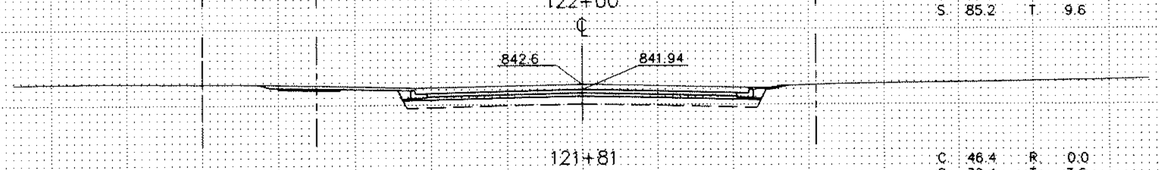


EXCAVATION (CU.YD.) COMMON SUBCUT | EMBANKMENT (CU.YD.) REGULAR TOPSOIL

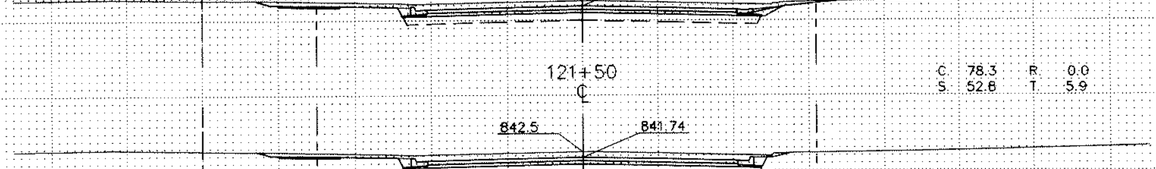
C. 73.8 R. 0.0
S. 59.6 T. 6.7



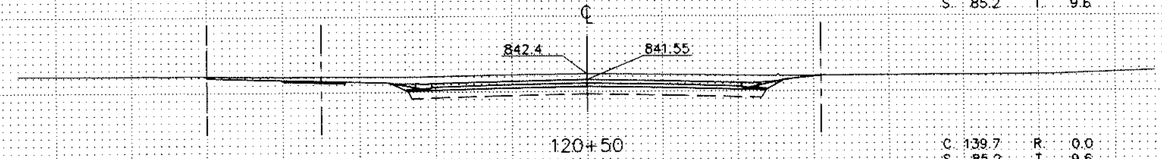
C. 32.3 R. 0.0
S. 25.6 T. 2.9



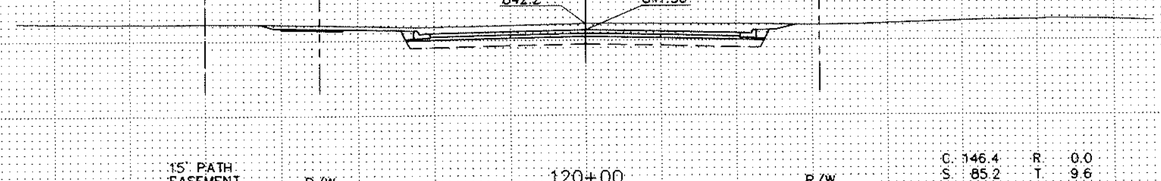
C. 108.9 R. 0.0
S. 85.2 T. 9.6



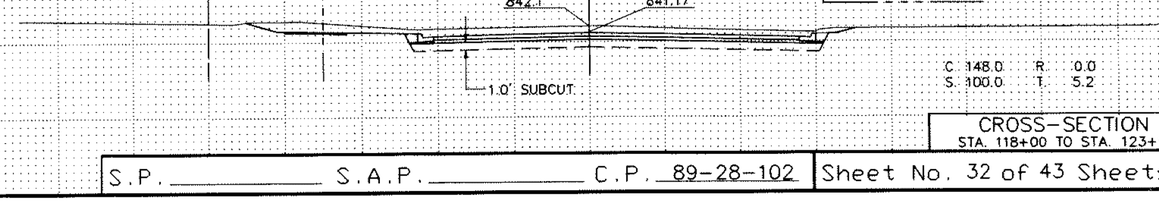
C. 46.4 R. 0.0
S. 32.4 T. 3.6



C. 78.3 R. 0.0
S. 52.6 T. 5.9



C. 130.9 R. 0.0
S. 85.2 T. 9.6



C. 139.7 R. 0.0
S. 85.2 T. 9.6

C. 146.4 R. 0.0
S. 85.2 T. 9.6

C. 148.0 R. 0.0
S. 100.0 T. 5.2

CROSS-SECTION
STA. 118+00 TO STA. 123+00

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REVISIONS

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FILE NAME 8928102\XS1.DWG MN (06-30-94)

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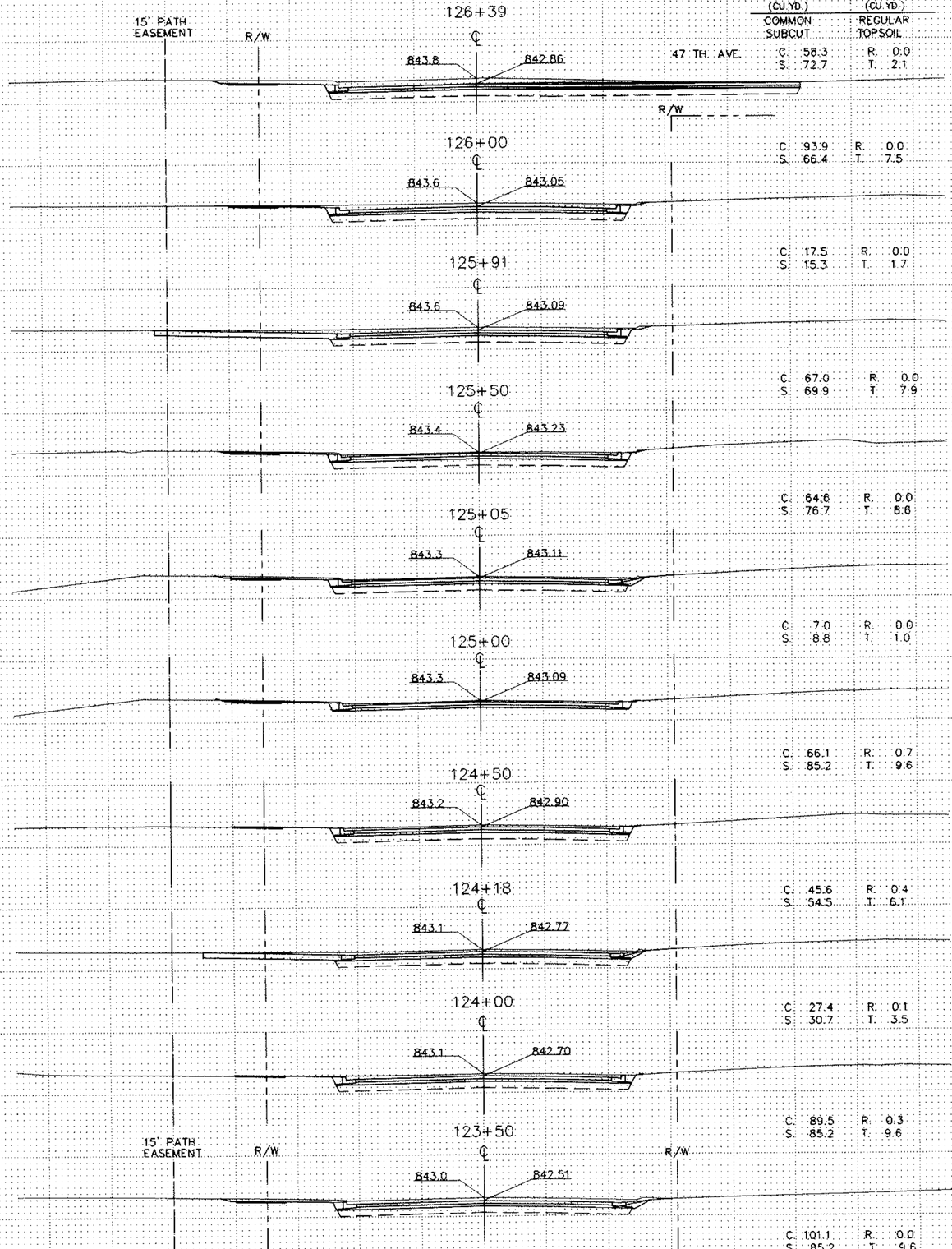

CROSS-SECTION
STA. 123+50 TO STA. 131+00

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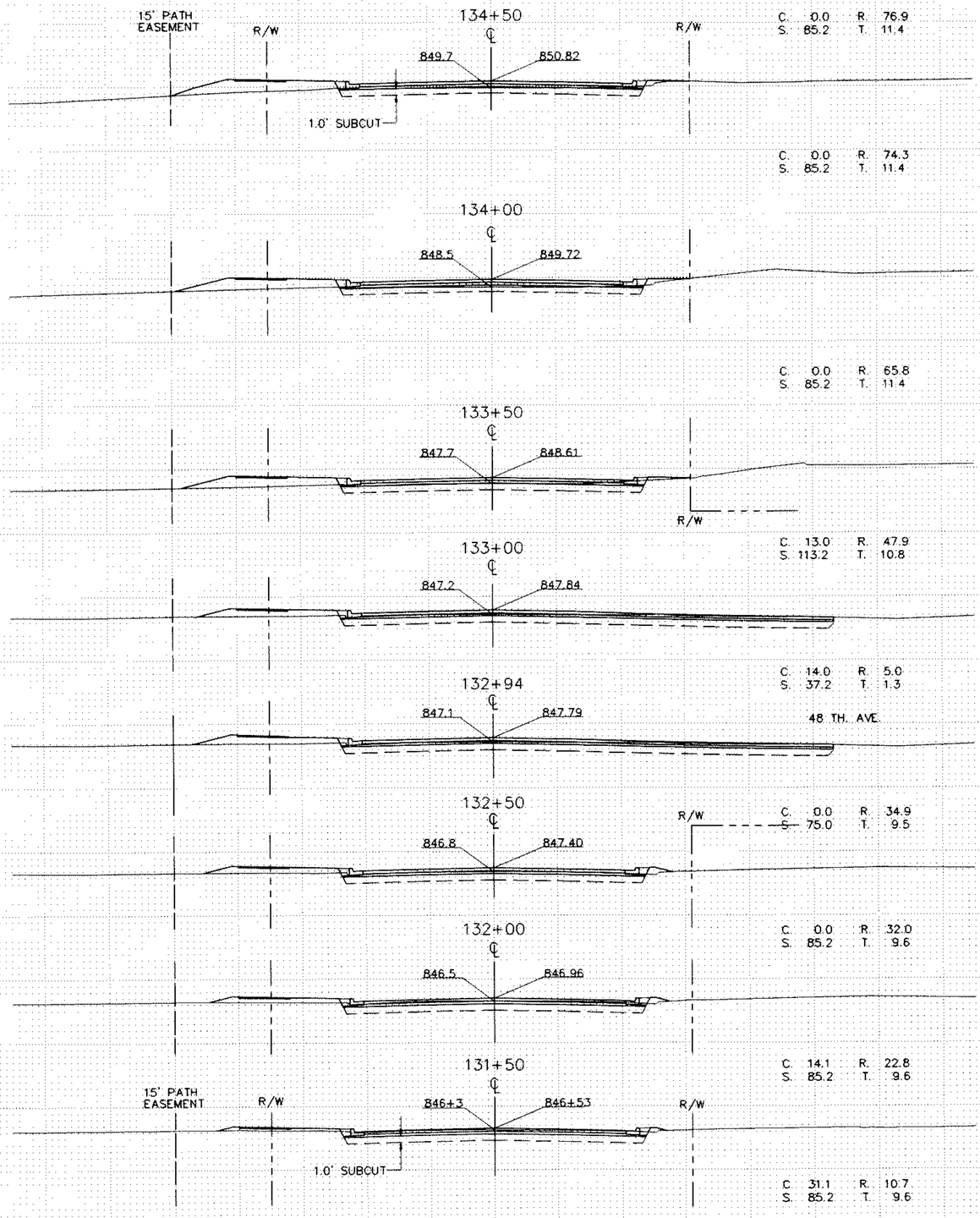
REVISIONS

DATE	BY	DATE	BY

FILE NAME: 8928102\XS1.DWG MN (06-30-94)

Fed. Project No. _____

	EXCAVATION (CU.YD.) COMMON SUBCUT	EMBANKMENT (CU.YD.) REGULAR TOPSOIL
134+50	C. 0.0 S. 85.2	R. 76.9 T. 11.4
134+00	C. 0.0 S. 85.2	R. 74.3 T. 11.4
133+50	C. 0.0 S. 85.2	R. 65.8 T. 11.4
133+00	C. 13.0 S. 113.2	R. 47.9 T. 10.8
132+94	C. 14.0 S. 37.2	R. 5.0 T. 1.3
132+50	C. 0.0 S. 75.0	R. 34.9 T. 9.5
132+00	C. 0.0 S. 85.2	R. 32.0 T. 9.6
131+50	C. 14.1 S. 85.2	R. 22.8 T. 9.6
137+00	C. 0.0 S. 85.2	R. 111.6 T. 11.4
	C. 0.0 S. 85.2	R. 90.19 T. 11.4
136+50	C. 1.1 S. 47.7	R. 44.6 T. 6.4
136+22	C. 4.0 S. 37.5	R. 33.7 T. 5.0
136+00	C. 0.0 S. 85.2	R. 80.3 T. 11.4
135+50	C. 0.0 S. 13.6	R. 12.6 T. 1.8
135+42	C. 0.0 S. 71.6	R. 65.4 T. 9.6
135+00		



REVISIONS

DATE	BY	DATE	BY

FILE NAME: 8928102VS2.DWG MN (06-30-94)

CROSS-SECTION
STA. 131+50 TO STA. 137+00

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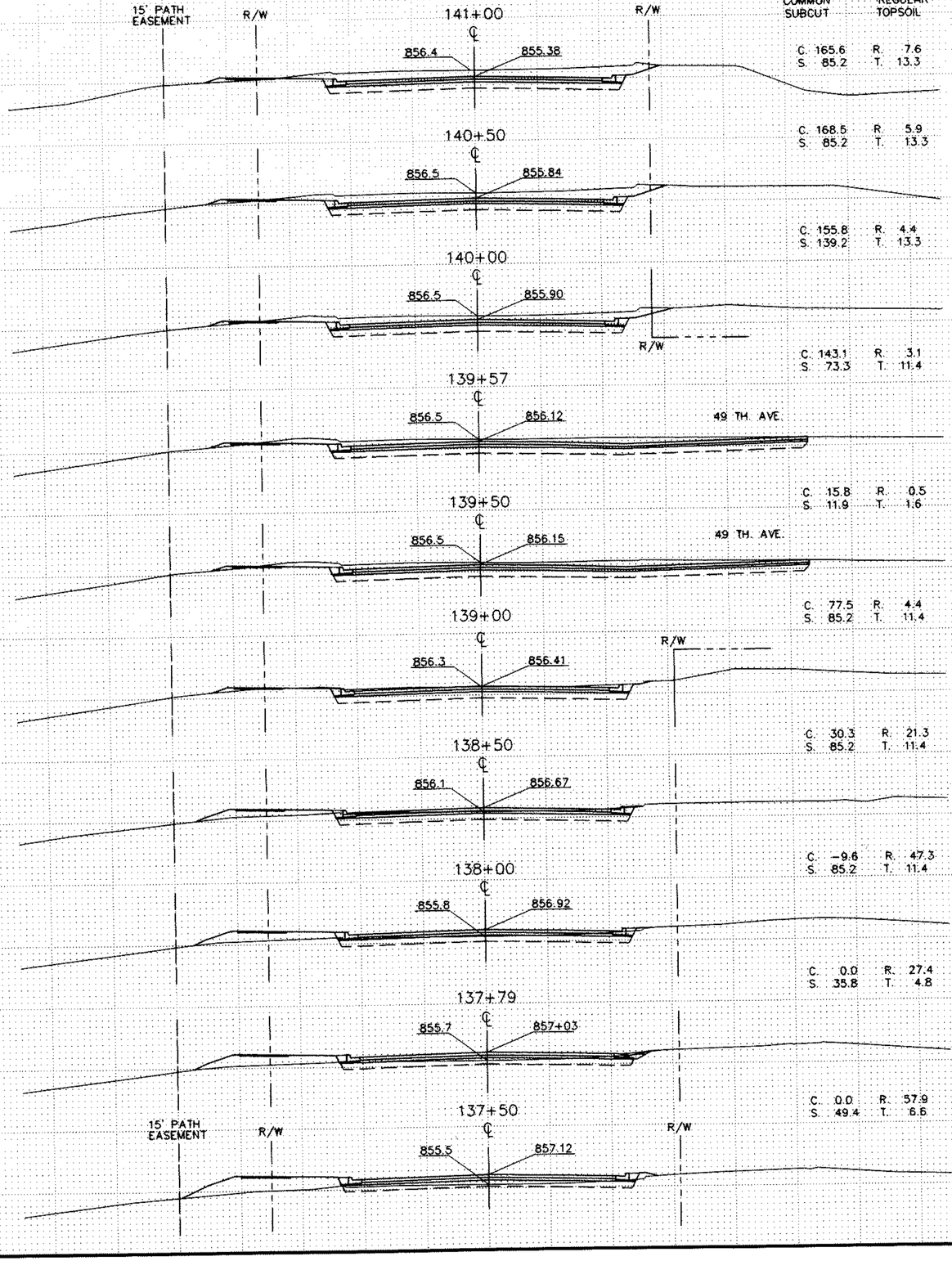
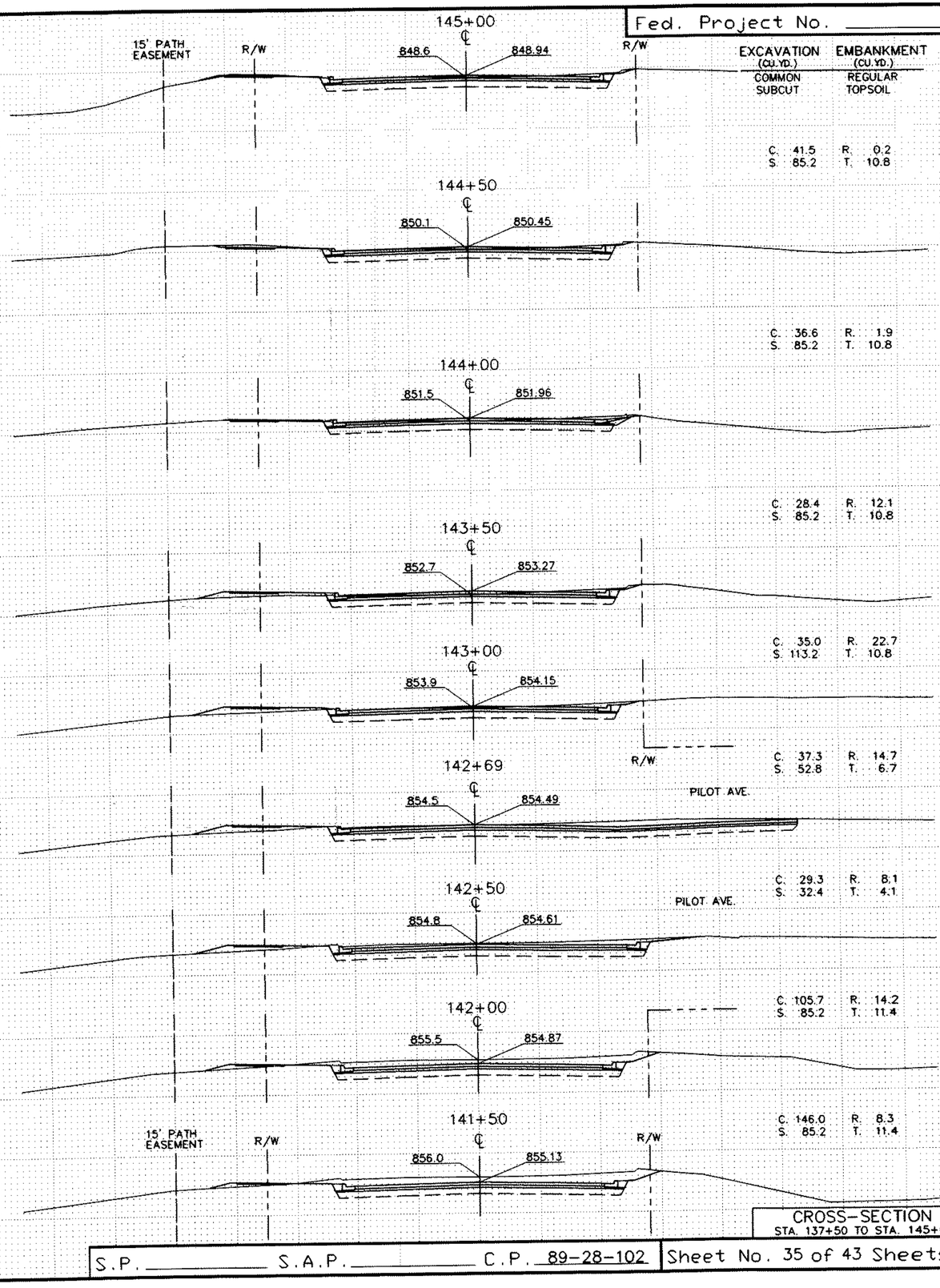


EXCAVATION (CU.YD.) COMMON SUBCUT	EMBANKMENT (CU.YD.) REGULAR TOPSOIL
C. 165.6	R. 7.6
S. 85.2	T. 13.3
C. 168.5	R. 5.9
S. 85.2	T. 13.3
C. 155.8	R. 4.4
S. 139.2	T. 13.3
C. 143.1	R. 3.1
S. 73.3	T. 11.4
C. 15.8	R. 0.5
S. 11.9	T. 1.6
C. 77.5	R. 4.4
S. 85.2	T. 11.4
C. 30.3	R. 21.3
S. 85.2	T. 11.4
C. -9.6	R. 47.3
S. 85.2	T. 11.4
C. 0.0	R. 27.4
S. 35.8	T. 4.8
C. 0.0	R. 57.9
S. 49.4	T. 6.6



EXCAVATION (CU.YD.) COMMON SUBCUT	EMBANKMENT (CU.YD.) REGULAR TOPSOIL
C. 41.5	R. 0.2
S. 85.2	T. 10.8
C. 36.6	R. 1.9
S. 85.2	T. 10.8
C. 28.4	R. 12.1
S. 85.2	T. 10.8
C. 35.0	R. 22.7
S. 113.2	T. 10.8
C. 37.3	R. 14.7
S. 52.8	T. 6.7
C. 29.3	R. 8.1
S. 32.4	T. 4.1
C. 105.7	R. 14.2
S. 85.2	T. 11.4
C. 146.0	R. 8.3
S. 85.2	T. 11.4

CROSS-SECTION
STA. 137+50 TO STA. 145+00

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REVISIONS

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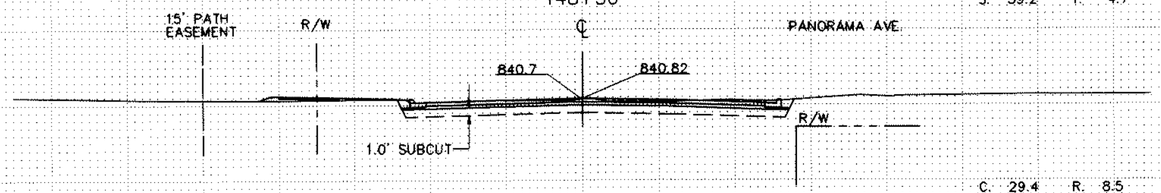
EXCAVATION (CU.YD.)	EMBANKMENT (CU.YD.)
COMMON SUBCUT	REGULAR TOPSOIL

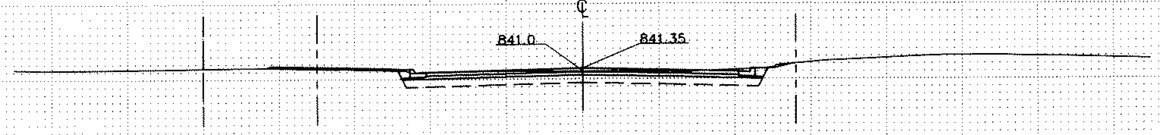
148+50 ℄



C. 14.34 R. 5.5
S. 39.2 T. 4.7

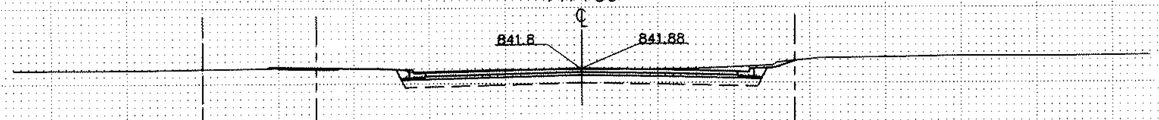
C. 29.4 R. 8.5
S. 85.2 T. 10.2

148+00 ℄



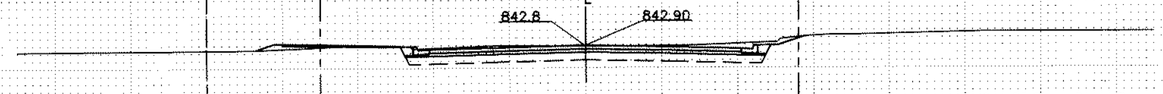
C. 41.38 R. 2.6
S. 85.2 T. 10.2

147+50 ℄



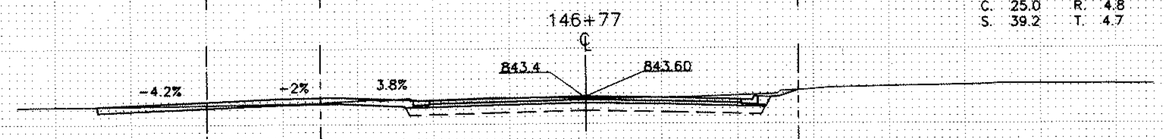
C. 57.0 R. 5.3
S. 85.2 T. 10.2

147+00 ℄



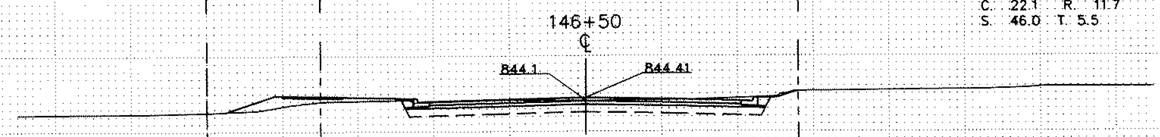
C. 25.0 R. 4.8
S. 39.2 T. 4.7

146+77 ℄



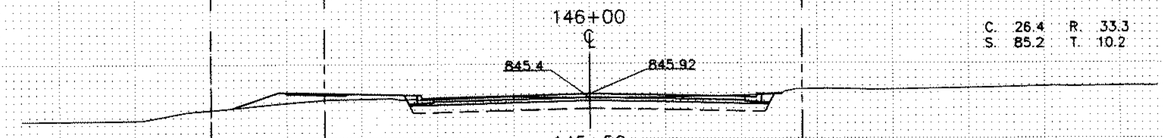
C. 22.1 R. 11.7
S. 46.0 T. 5.5

146+50 ℄

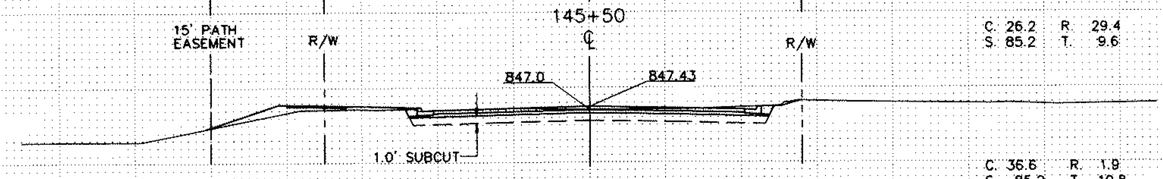


C. 26.4 R. 33.3
S. 85.2 T. 10.2

146+00 ℄



145+50 ℄

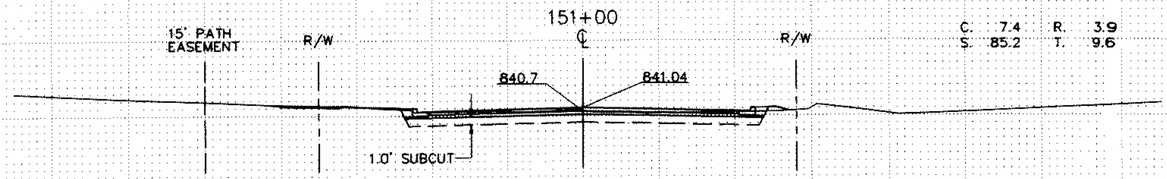


C. 26.2 R. 29.4
S. 85.2 T. 9.6

C. 36.6 R. 1.9
S. 85.2 T. 10.8

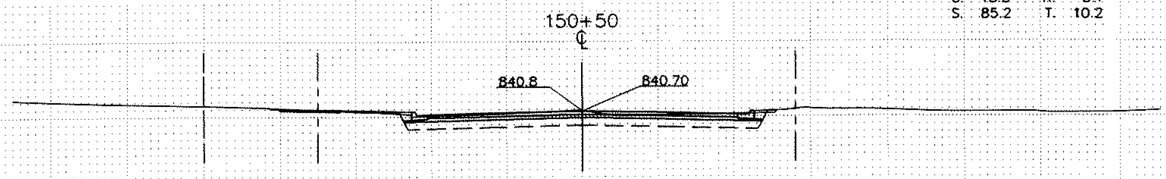
EXCAVATION (CU.YD.)	EMBANKMENT (CU.YD.)
COMMON SUBCUT	REGULAR TOPSOIL

151+00 ℄



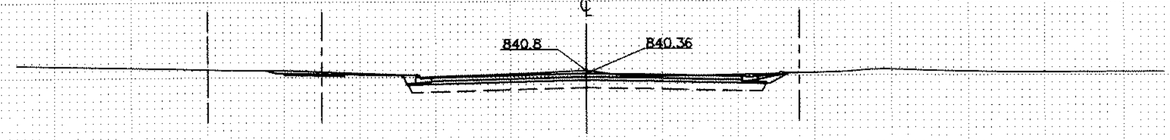
C. 7.4 R. 3.9
S. 85.2 T. 9.6

150+50 ℄



C. 18.8 R. 3.1
S. 85.2 T. 10.2

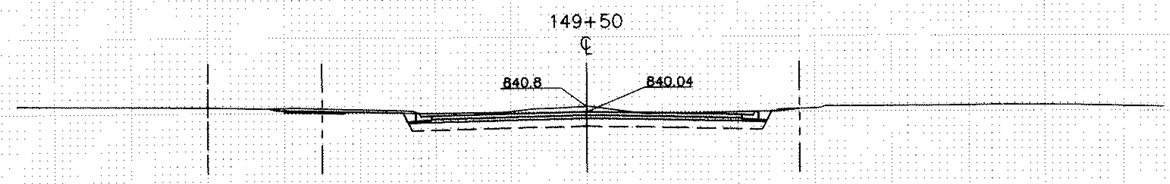
150+00 ℄



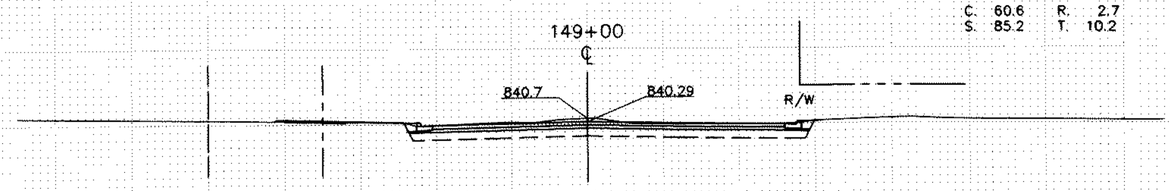
C. 42.7 R. 1.7
S. 85.2 T. 10.2

C. 68.3 R. 0.0
S. 85.2 T. 10.2

149+50 ℄



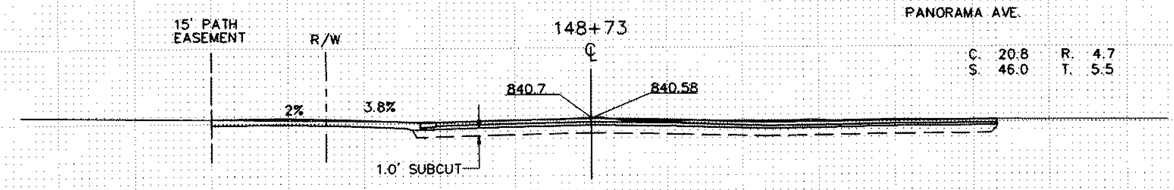
149+00 ℄



C. 60.6 R. 2.7
S. 85.2 T. 10.2

PANORAMA AVE.

148+73 ℄



C. 20.8 R. 4.7
S. 46.0 T. 5.5

CROSS-SECTION
STA. 145+50 TO STA. 151+00

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REVISIONS

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FILE NAME: 8928102\VS2.DWG MN (05-30-94)

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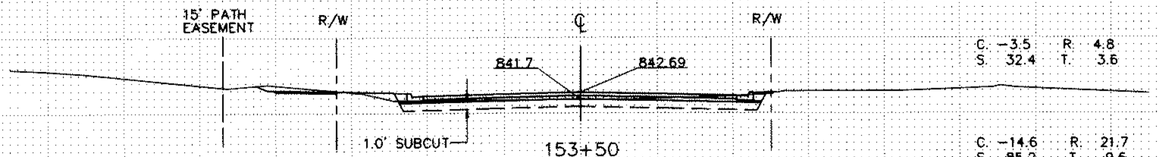
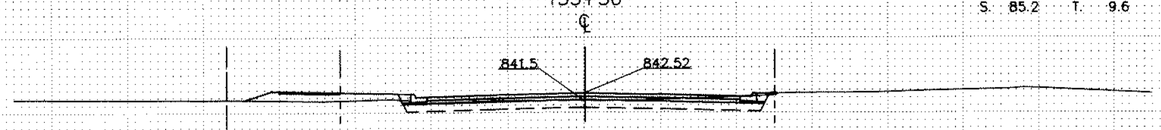
	EXCAVATION (CU.YD.) COMMON SUBCUT	EMBANKMENT (CU.YD.) REGULAR TOPSOIL

154+00



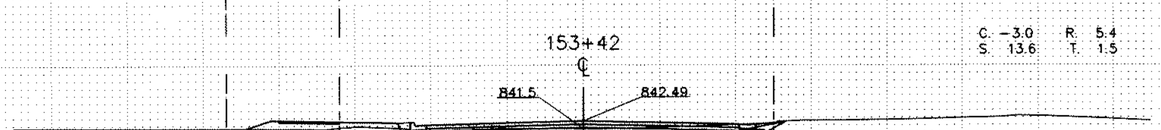
C. −3.5 R. 4.8
S. 32.4 T. 3.6

153+50



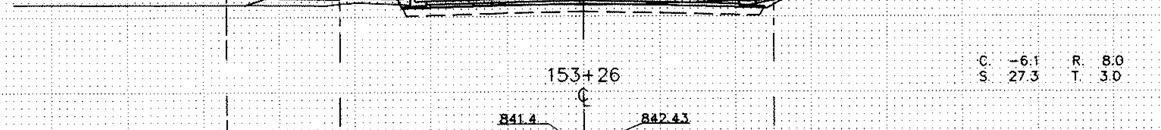
C. −14.6 R. 21.7
S. 85.2 T. 9.6

153+42



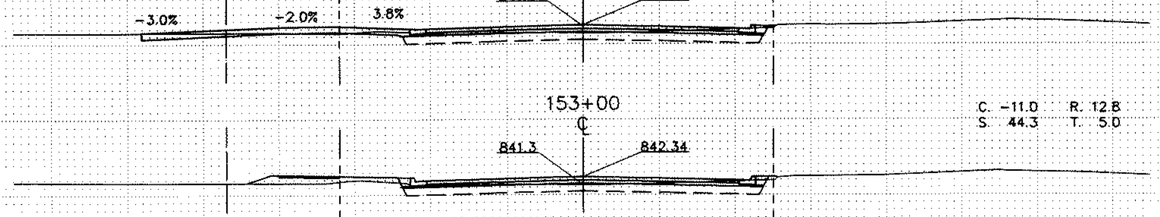
C. −3.0 R. 5.4
S. 13.6 T. 1.5

153+26



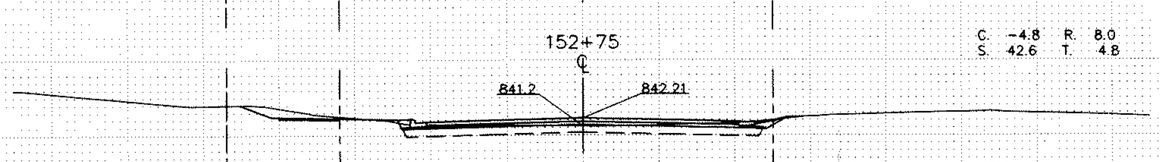
C. −6.1 R. 8.0
S. 27.3 T. 3.0

153+00



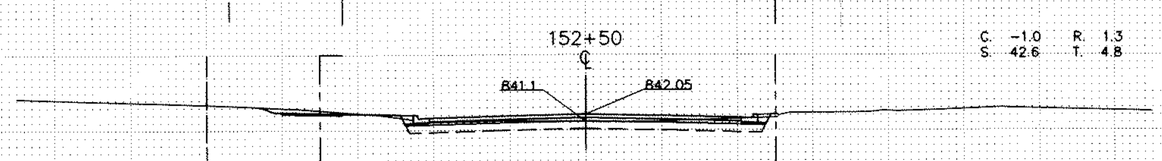
C. −11.0 R. 12.8
S. 44.3 T. 5.0

152+75



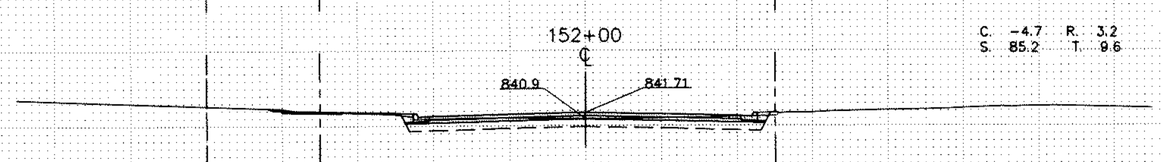
C. −4.8 R. 8.0
S. 42.6 T. 4.8

152+50



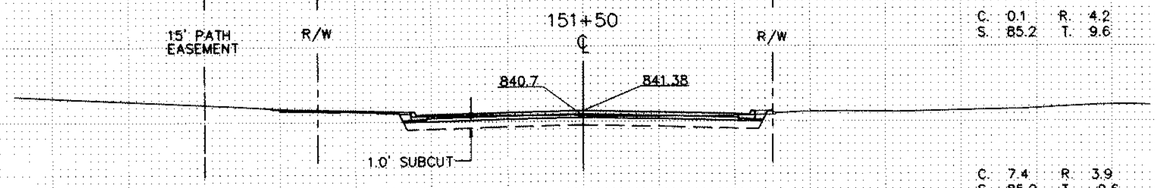
C. −1.0 R. 1.3
S. 42.6 T. 4.8

152+00



C. −4.7 R. 3.2
S. 85.2 T. 9.6

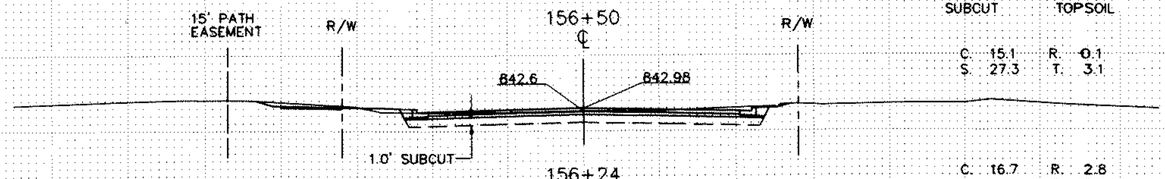
151+50



C. 7.4 R. 3.9
S. 85.2 T. 9.6

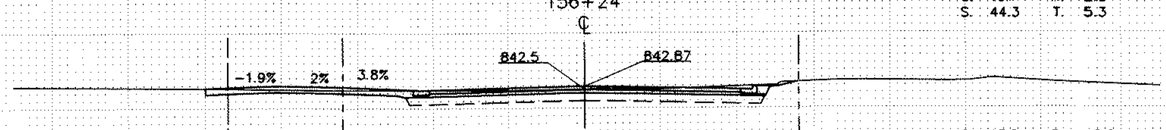
	EXCAVATION (CU.YD.) COMMON SUBCUT	EMBANKMENT (CU.YD.) REGULAR TOPSOIL

156+50



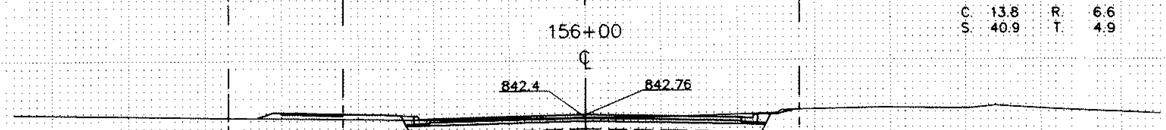
C. 15.1 R. 0.1
S. 27.3 T. 3.1

156+24



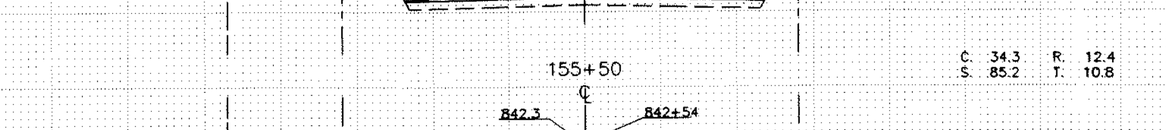
C. 16.7 R. 2.8
S. 44.3 T. 5.3

156+00



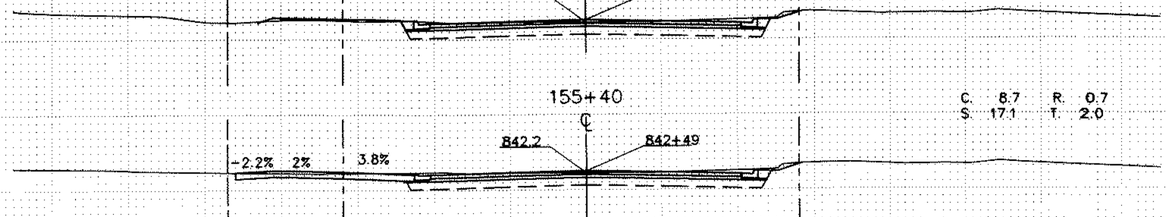
C. 13.8 R. 6.6
S. 40.9 T. 4.9

155+50



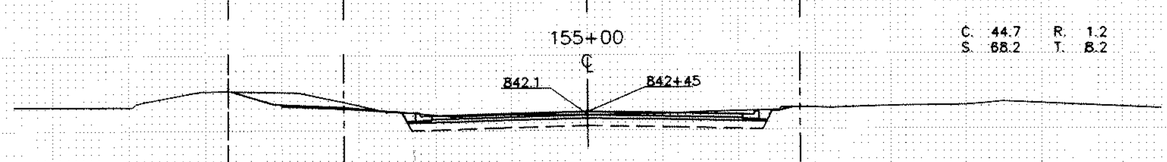
C. 34.3 R. 12.4
S. 85.2 T. 10.8

155+40



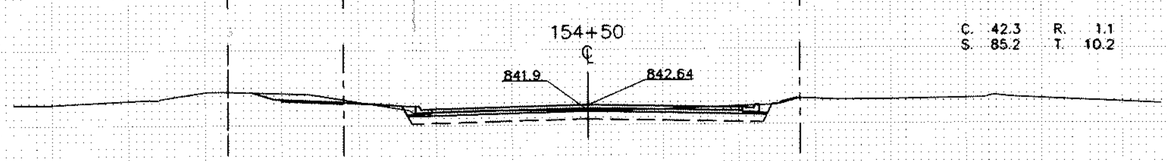
C. 8.7 R. 0.7
S. 17.1 T. 2.0

155+00



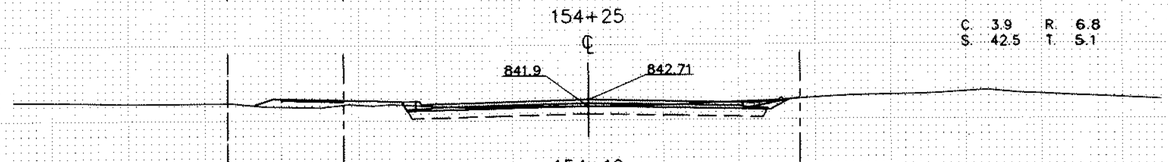
C. 44.7 R. 1.2
S. 68.2 T. 8.2

154+50



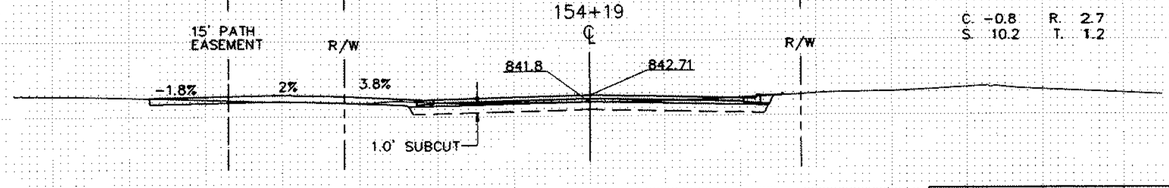
C. 42.3 R. 1.1
S. 85.2 T. 10.2

154+25



C. 3.9 R. 6.8
S. 42.5 T. 5.1

154+19



C. −0.8 R. 2.7
S. 10.2 T. 1.2

CROSS-SECTION
STA. 151+50 TO STA. 156+50

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FILE NAME: 8928102\XS2.DWG MN. (06-30-94)

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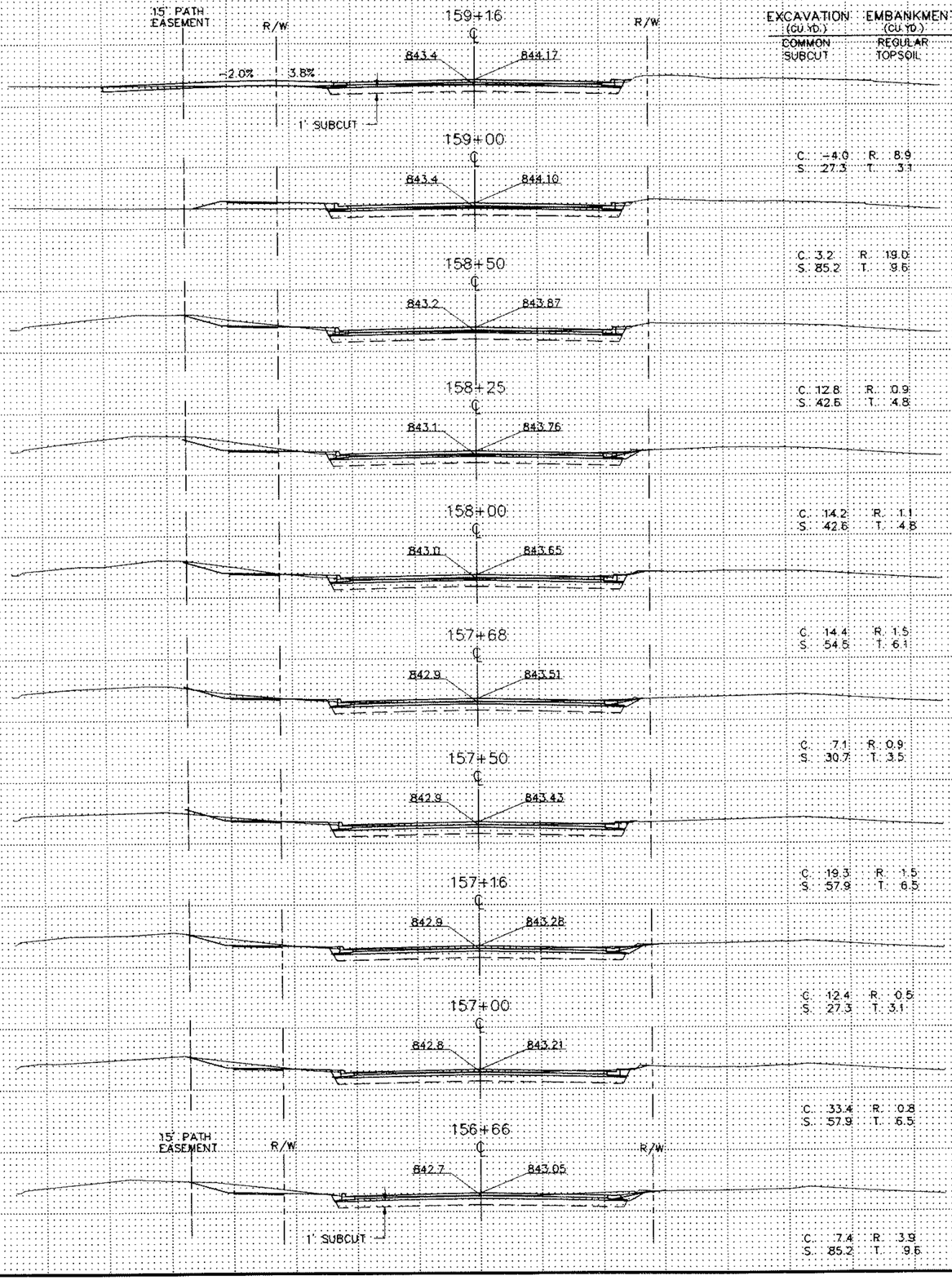

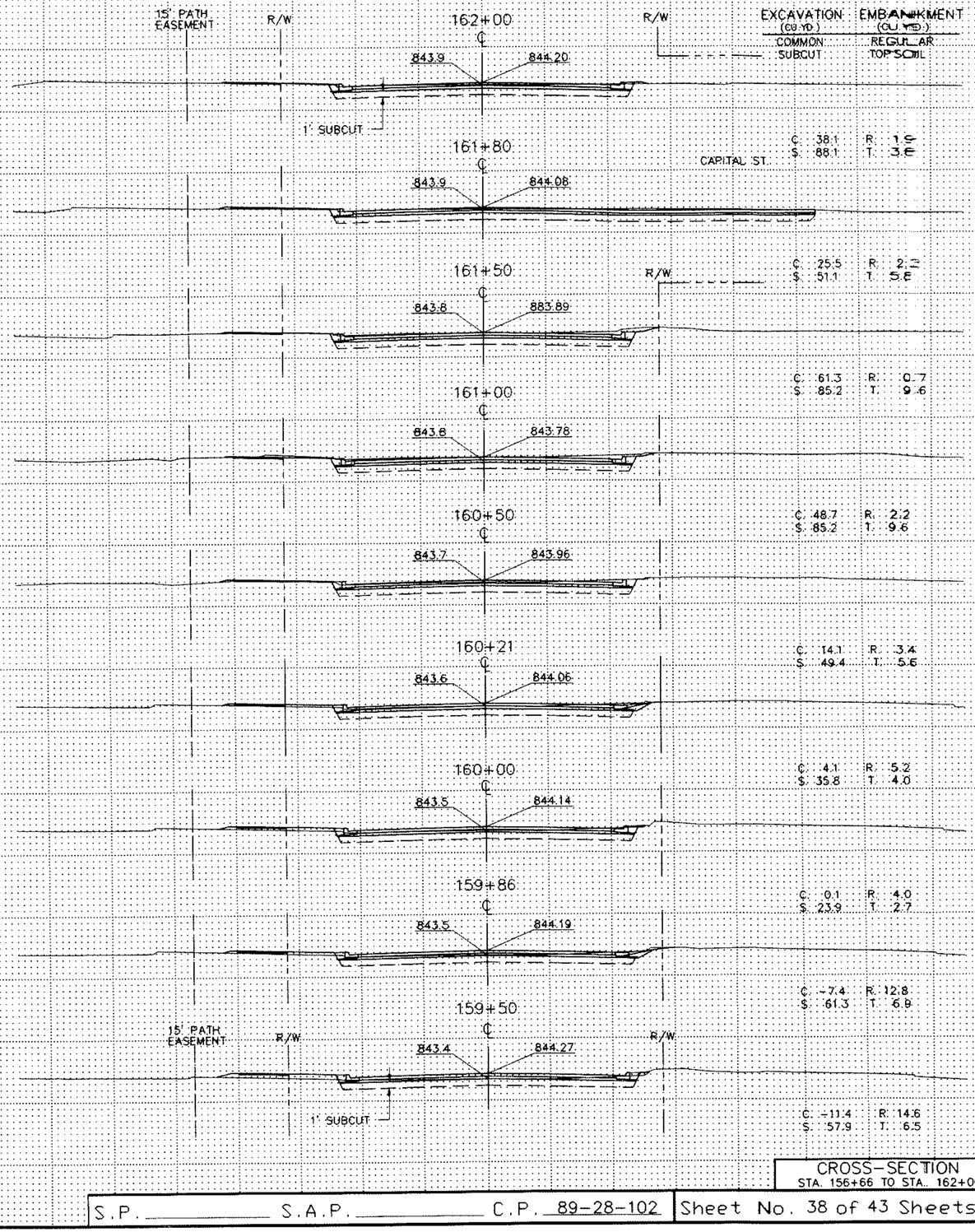

REVISIONS

DATE	BY	DATE	BY

FILE NAME 8928102\XS3.DWG MN (06-30-94)

CROSS-SECTION
STA. 156+66 TO STA. 162+00

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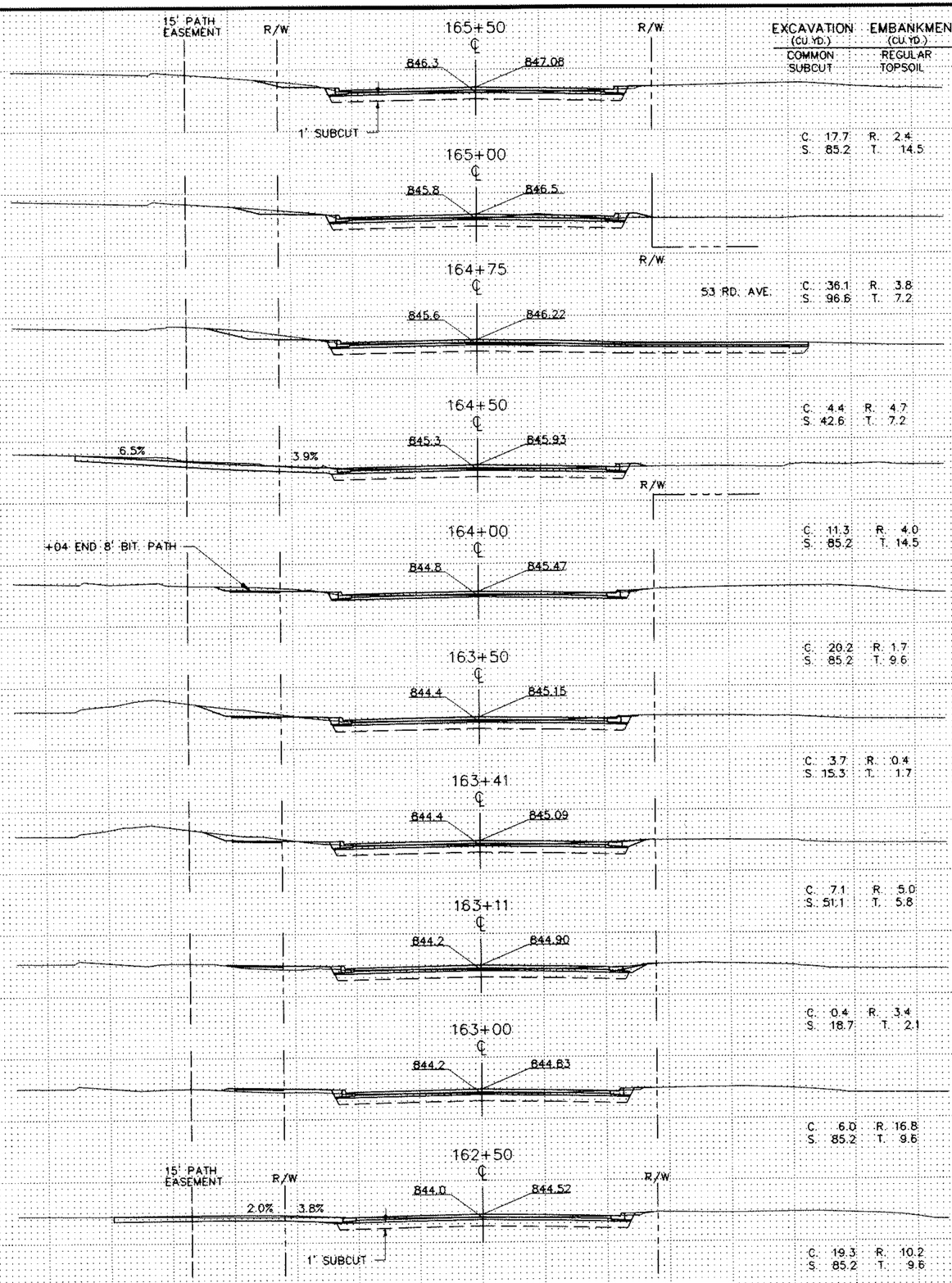

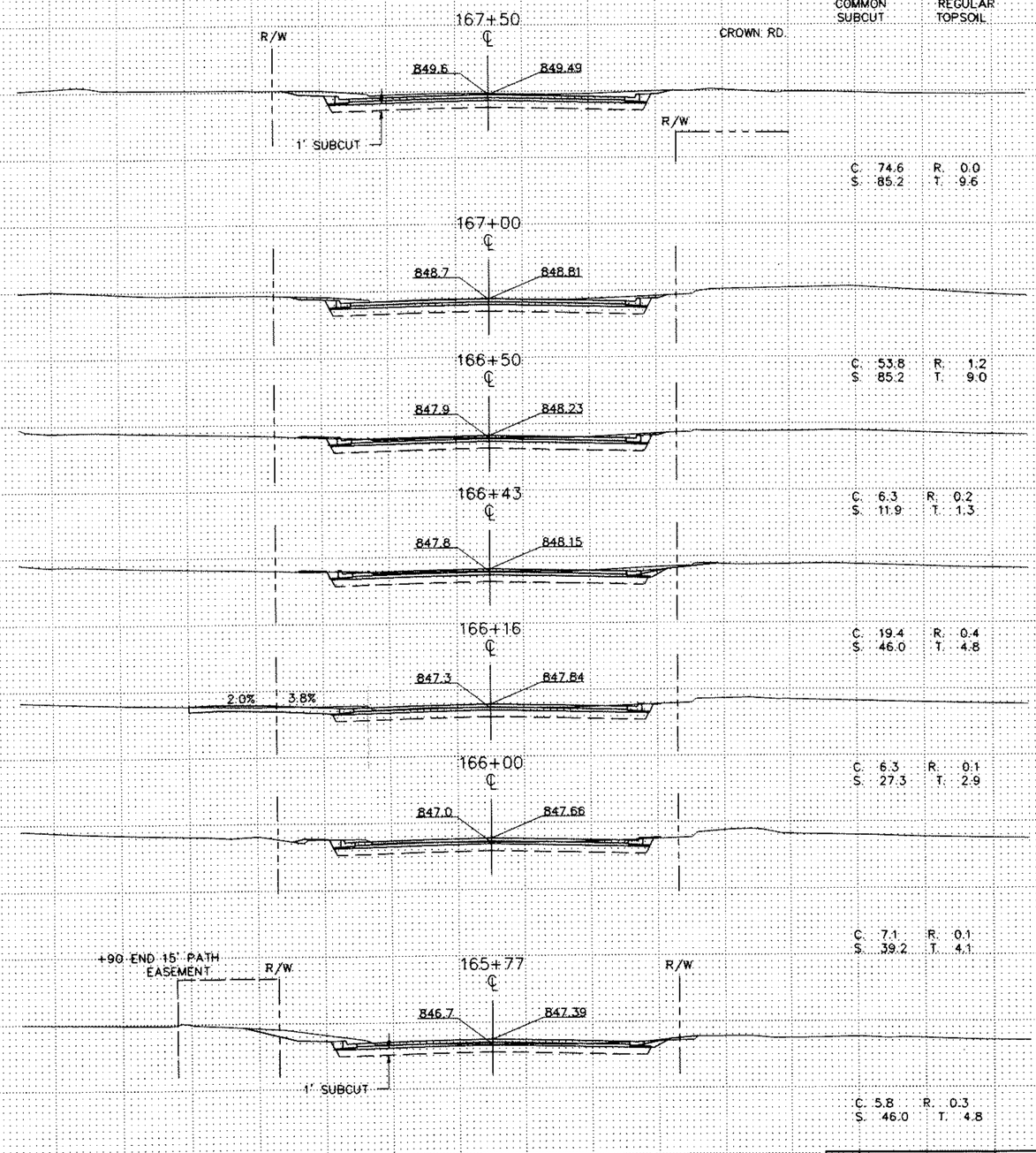

REVISIONS

DATE	BY	DATE	BY

FILE NAME: 8928102\XS3.DWG MN. (06-30-94)

CROSS-SECTION
STA. 162+50 TO STA. 167+50

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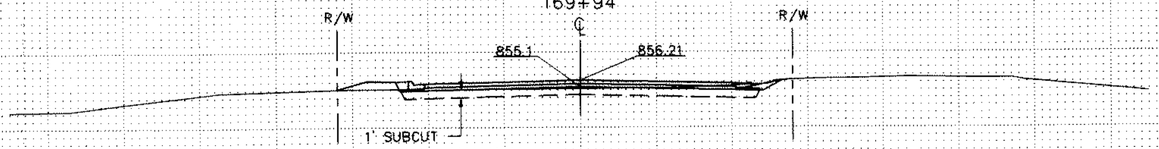
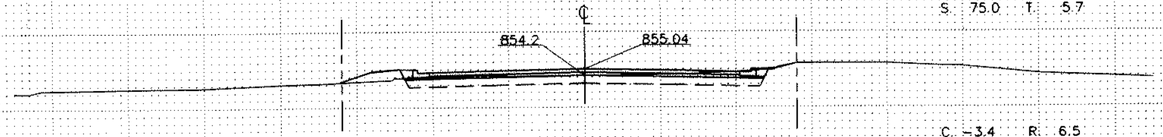
EXCAVATION (CU.YD.)	EMBANKMENT (CU.YD.)
COMMON	REGULAR
SUBCUT	TOPSOIL

169+94



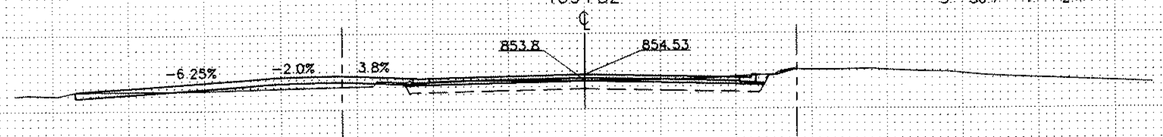
C. -18.9 R. 12.5
S. 75.0 T. 5.7

169+50



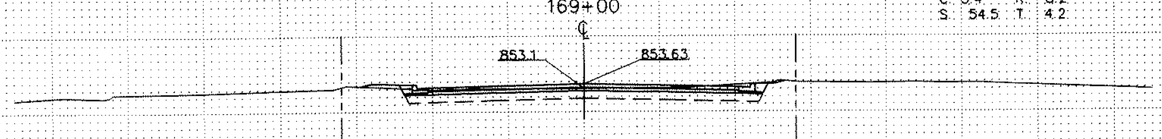
C. -3.4 R. 6.5
S. 30.7 T. 2.4

169+32



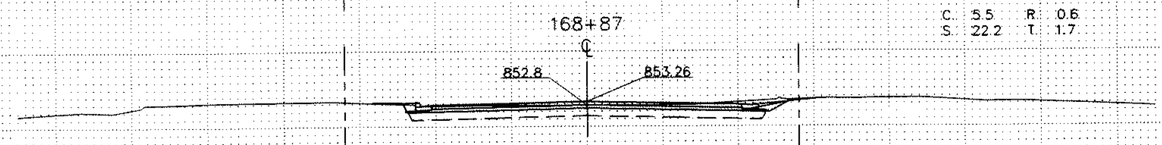
C. 3.4 R. 8.2
S. 54.5 T. 4.2

169+00



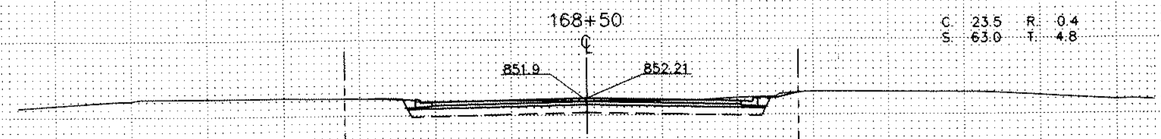
C. 5.5 R. 0.6
S. 22.2 T. 1.7

168+87



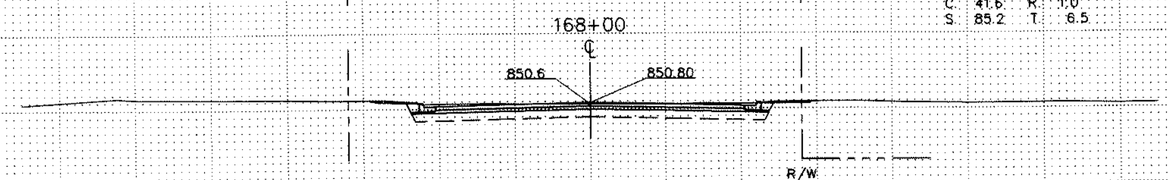
C. 23.5 R. 0.4
S. 63.0 T. 4.8

168+50



C. 41.6 R. 1.0
S. 85.2 T. 6.5

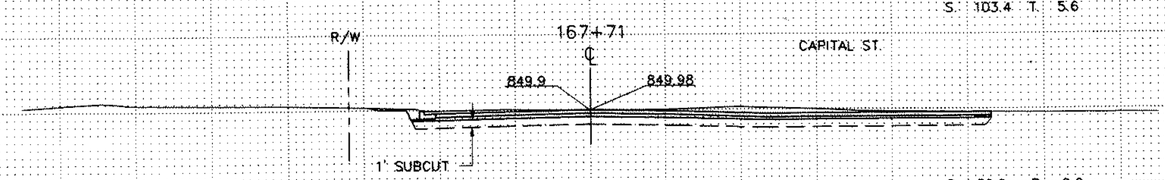
168+00



C. 61.6 R. 0.5
S. 103.4 T. 5.6

CAPITAL ST.

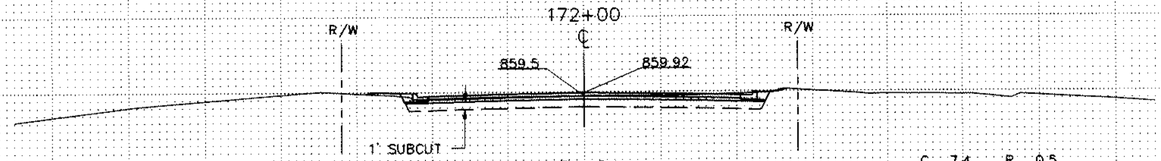
167+71



C. 32.6 R. 0.0
S. 35.8 T. 4.0

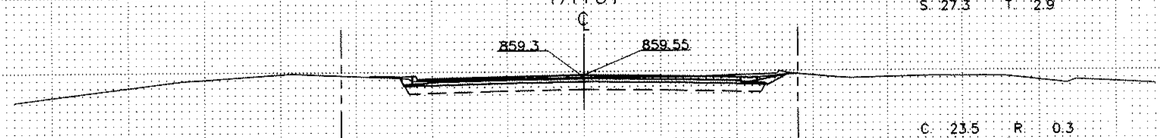
EXCAVATION (CU.YD.)	EMBANKMENT (CU.YD.)
COMMON	REGULAR
SUBCUT	TOPSOIL

172+00



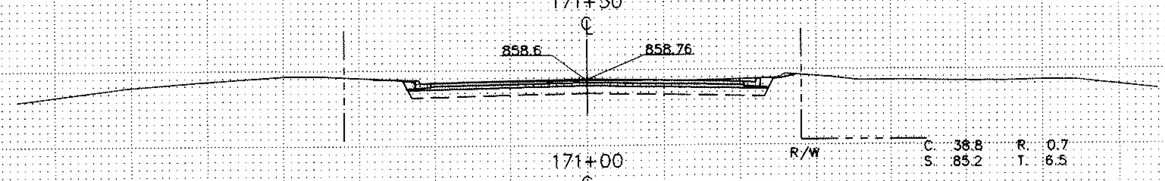
C. 7.4 R. 0.5
S. 27.3 T. 2.9

171+84



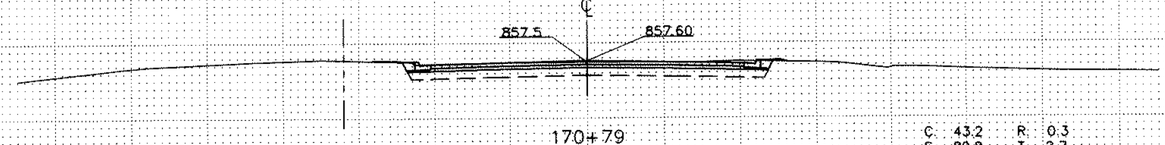
C. 23.5 R. 0.3
S. 57.9 T. 4.4

171+50



C. 38.8 R. 0.7
S. 85.2 T. 6.5

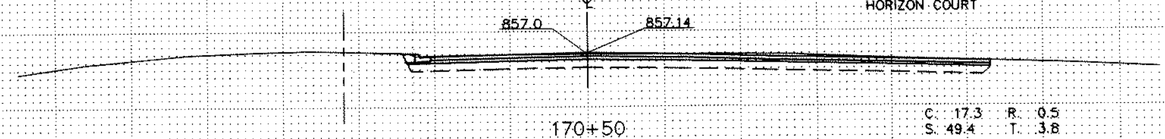
171+00



C. 43.2 R. 0.3
S. 89.8 T. 2.7

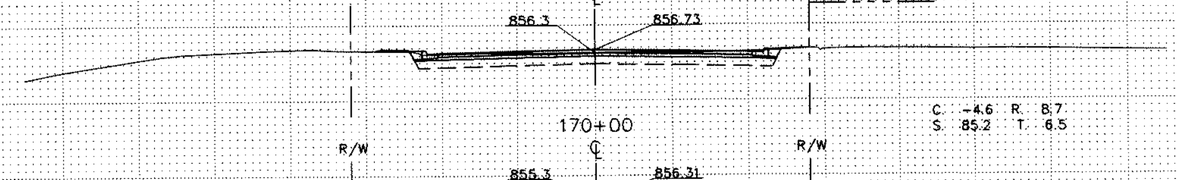
HORIZON COURT

170+79



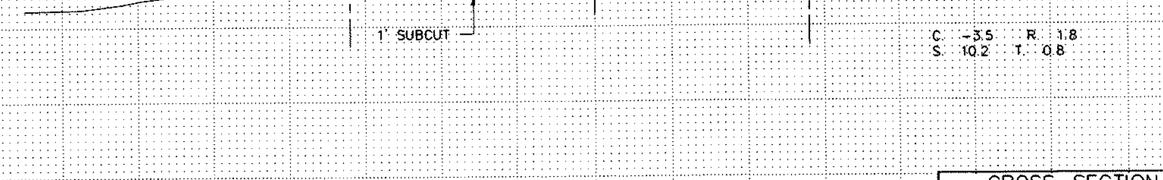
C. 17.3 R. 0.5
S. 49.4 T. 3.8

170+50



C. -4.6 R. 8.7
S. 85.2 T. 6.5

170+00



C. -3.5 R. 1.8
S. 10.2 T. 0.8

CROSS-SECTION
STA. 167+71 TO STA. 172+00

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DATE	BY	DATE	BY

FILE NAME: 8928102VXS3.DWG MN (06-30-94)

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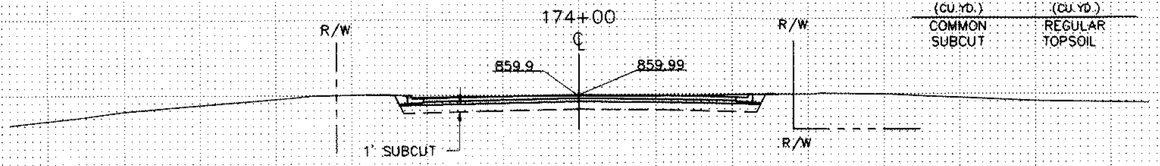
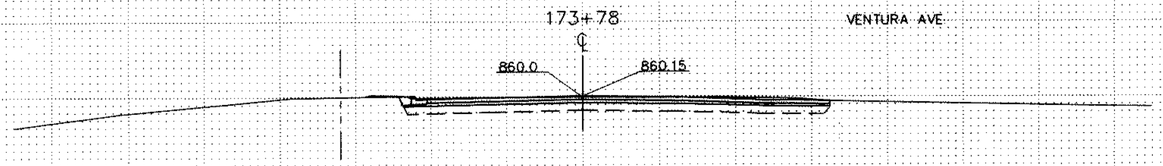


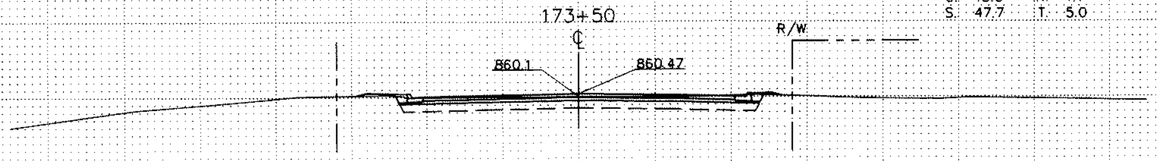
EXCAVATION (CU.YD.)	EMBANKMENT (CU.YD.)
COMMON	REGULAR
SUBCUT	TOPSOIL

C. 16.7 R. 0.2
S. 37.5 T. 4.0

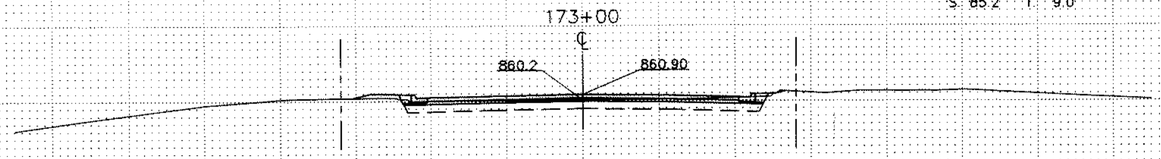
VENTURA AVE



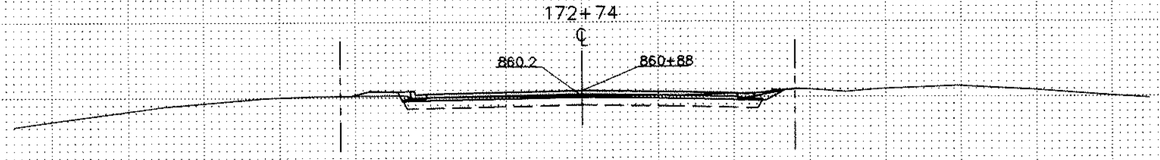
C. 15.0 R. 1.1
S. 47.7 T. 5.0



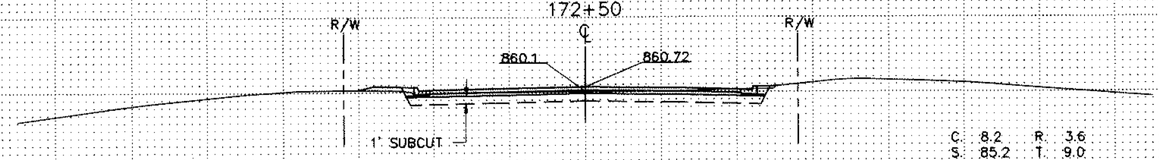
C. 7.0 R. 4.3
S. 85.2 T. 9.0



C. -1.6 R. 2.7
S. 44.3 T. 4.7

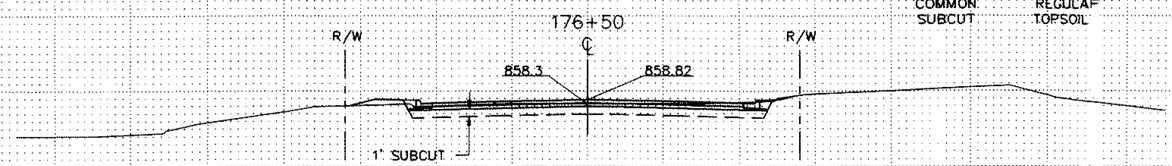


C. 0.0 R. 2.4
S. 40.9 T. 4.3

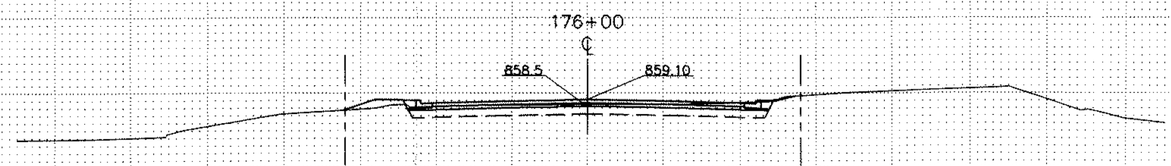


C. 8.2 R. 3.6
S. 85.2 T. 9.0

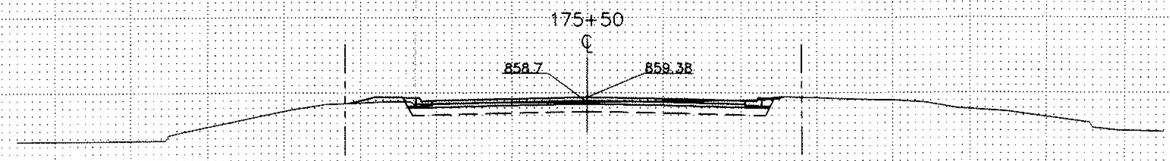
EXCAVATION (CU.YD.)	EMBANKMENT (CU.YD.)
COMMON	REGULAR
SUBCUT	TOPSOIL



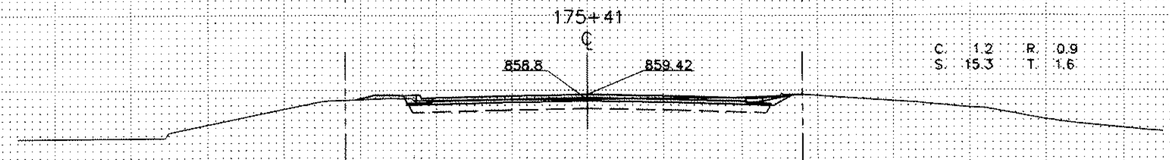
C. 23.8 R. 6.0
S. 85.2 T. 9.0



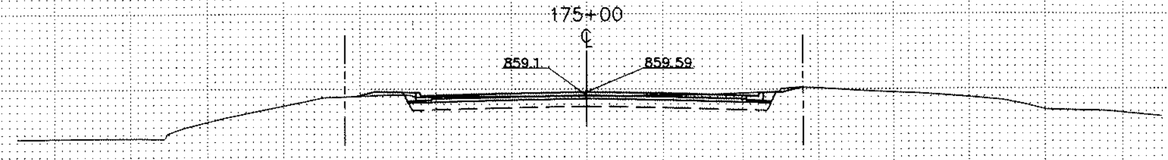
C. 8.9 R. 7.5
S. 85.2 T. 9.0



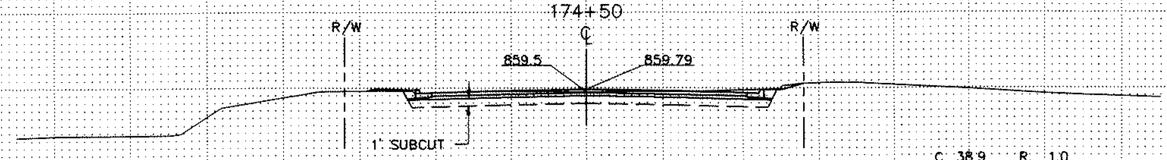
C. 1.2 R. 0.9
S. 15.3 T. 1.6



C. 11.4 R. 3.3
S. 69.9 T. 7.4



C. 27.2 R. 2.8
S. 85.2 T. 9.0



C. 38.9 R. 1.0
S. 85.2 T. 9.0

CROSS-SECTION
STA. 172+50 TO STA. 176+50

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REVISIONS

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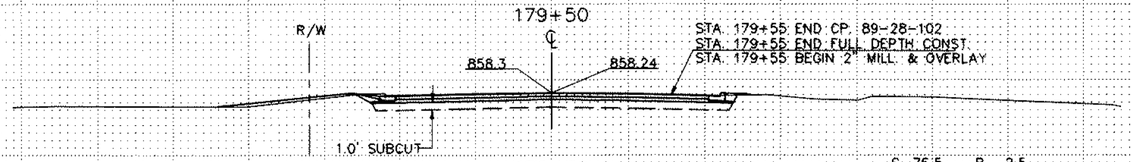
FILE NAME: 8928102\XS3.DWG MN. (06-30-94)

Fed. Project No. _____

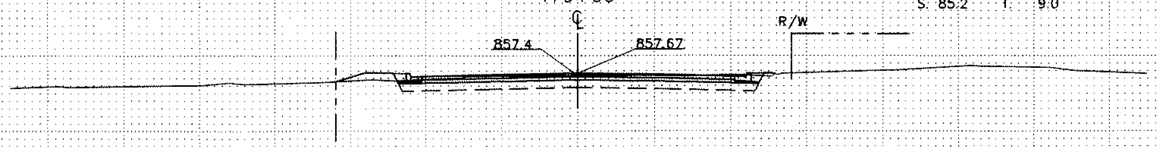
EXCAVATION (CU.YD.)	EMBANKMENT (CU.YD.)
COMMON	REGULAR
SUBCUT	TOPSOIL

179+50



C. 76.5 R. 2.5
S. 85.2 T. 9.0

179+00



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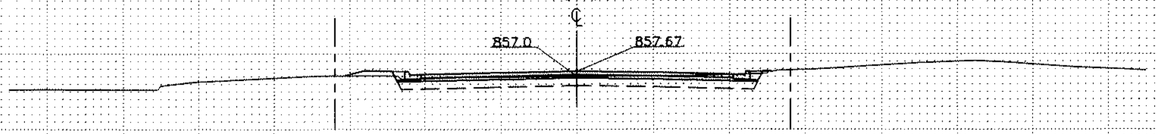
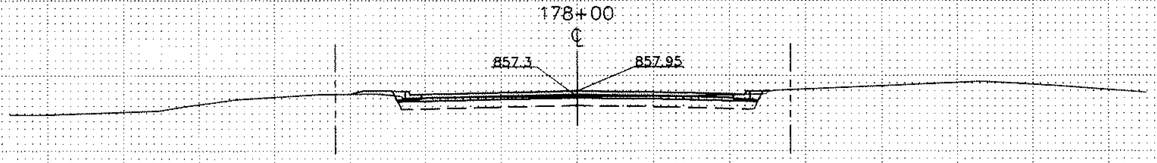
S. 85.2 T. 9.0

178+50



C. 65.2 R. 0.0
S. 85.2 T. 9.0

178+00



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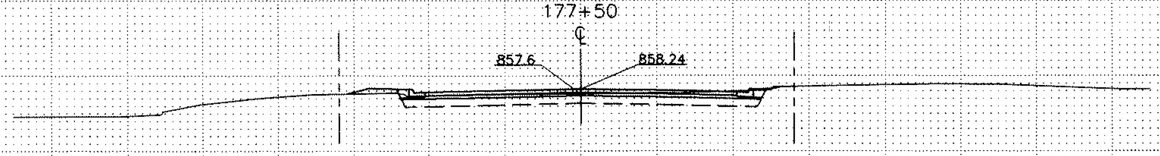
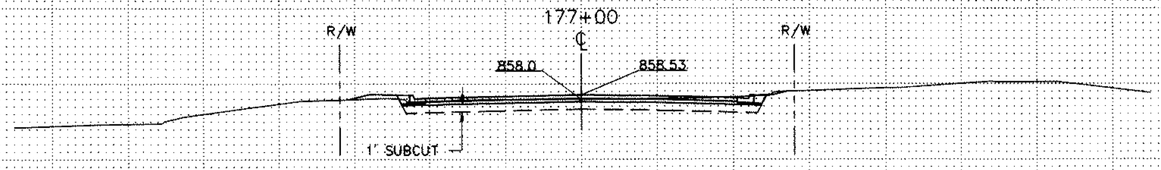
S. 85.2 T. 9.0

177+50



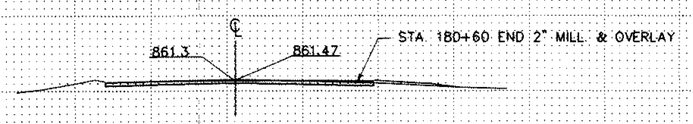
C. 50.5 R. 0.7
S. 85.2 T. 9.0

177+00

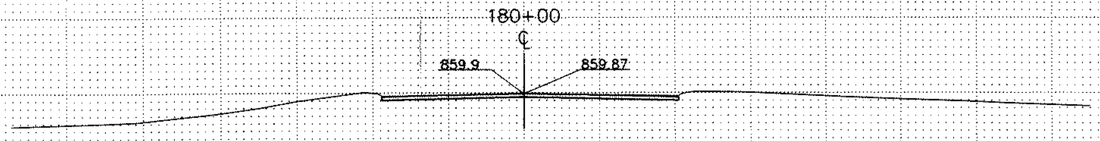


C. 40.6 R. 2.3
S. 85.2 T. 9.0

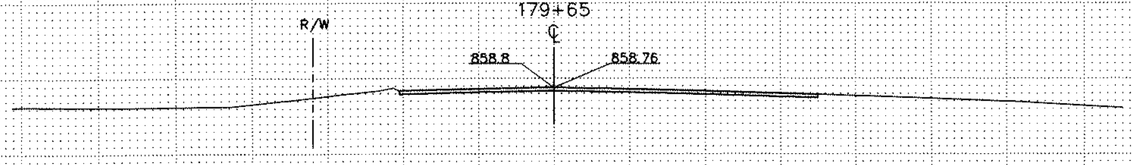
180+50



180+00



179+65



FILE NAME 8928102\XS3.DWG MN (06-30-94)

REVISIONS					
DATE	BY		DATE	BY	

CROSS-SECTION
STA. 177+00 TO STA. 180+50

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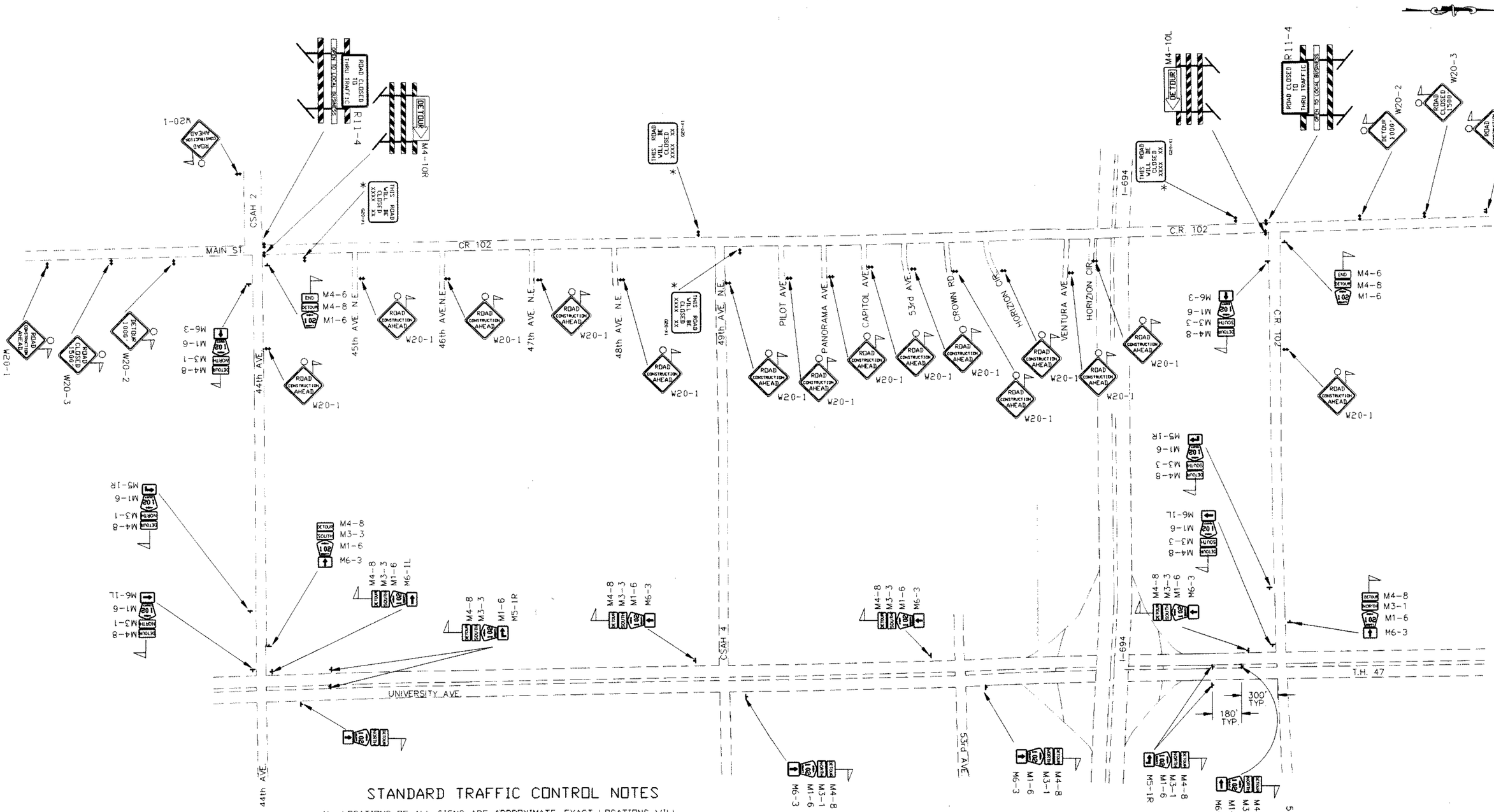

STANDARD TRAFFIC CONTROL NOTES

1) LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2) ALL BARRICADES SHALL BE PROPERLY WEIGHTED WITH SANDBAGS.
3) ALL BARRICADES SHALL HAVE REFLECTIVE MATERIAL ON BOTH SIDES.
4) ALL BARRICADE MARKINGS SHALL BE SLANTED IN THE MINNESOTA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
5) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX 'B', DATAD NOVEMBER 1992.
6) ADDITIONS OR CHANGES TO THIS PLAN MAY BE MADE AS DETERMINED BY THE ENGINEER.

*THESE SIGNS ARE TO BE INSTALLED AT LEAST 7 DAYS PRIOR TO THE DETOUR INSTALLATION, AND REMOVED IMMEDIATELY FOLLOWING THE DETOUR INSTALLATION.

REVISIONS					
DATE	BY	DATE	BY	DATE	BY

DRAWING NOT TO SCALE

DETOUR CR 102

CERTIFIED BY: Douglas M. Tinsley Reg. No. 20235 7/11/94

S.P. _____ S.A.P. _____ C.P. 89-28-102

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Fed. Project No. _____

M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY
FLAG			
FLASHER	TYPE 'A'	ROAD CONSTRUCTION AHEAD	• 18
W20-1	48" x 48"		
FLAG			
FLASHER	TYPE 'A'	DETOUR 1000'	• 2
W20-2	48" x 48"		
FLAG			
FLASHER	TYPE 'A'	ROAD CLOSED 1500'	• 2
W20-3	48" x 48"		
FLAG			
FLASHER	TYPE 'A'	DETOUR	• 1
M4-10R	48" x 18"		
TYPE III	8 FOOT		
FLAG			
FLASHER	TYPE 'A'	DETOUR	• 1
M4-10L	48" x 18"		
TYPE III	8 FOOT		
FLAG			
FLASHER	TYPE 'A'	ROAD CLOSED TO THRU TRAFFIC / OPEN TO LOCAL BUSINESS	• 2
R11-4	60" x 30"		
TYPE III	8 FOOT		
G20-X1	60" x 48"	THIS ROAD WILL BE CLOSED XXXX XX	• 4

M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY
FLAG		DETOUR NORTH MNDOT 102 COUNTY	M5-1L • 3
M4-8	24" x 12"		M5-1R • 0
M3-1	21" x 12"		M6-1L • 2
M1-6	24" x 24"		M6-1R • 0
	21" x 15"		M6-3 • 5
FLAG		DETOUR SOUTH MNDOT 102 COUNTY	M5-1L • 0
M4-8	24" x 12"		M5-1R • 3
M3-3	21" x 12"		M6-1L • 0
M1-6	24" x 24"		M6-1R • 2
	21" x 15"		M6-3 • 5
FLAG		END DETOUR MNDOT 102 COUNTY	• 2
M4-6	24" x 12"		
M4-8	24" x 12"		
M1-6	24" x 24"		

THESE SIGNS ARE TO BE INSTALLED AT LEAST 7 DAYS PRIOR TO THE DETOUR INSTALLATION, AND REMOVED IMMEDIATELY FOLLOWING THE DETOUR INSTALLATION.

STANDARD TRAFFIC CONTROL NOTES

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6) ADDITIONS OR CHANGES TO THIS PLAN MAY BE MADE AS DETERMINED BY THE ENGINEER.

REVISIONS

DATE	BY	DATE	BY

DETOUR QUANTITIES CR 102

CERTIFIED BY: Douglas N. Buckley Reg. No. 20235 7/11/94

S.P. _____ S.A.P. _____ C.P. 89-28-102

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