See Standard M-100-1 for STANDARD SYMBOLS

(R-1) 9-22-86 ~ REVISED INDEX ~ LEG.

STATE DEPARTMENT OF HIGHWAYS
DIVISION OF HIGHWAYS — STATE OF COLORADO

PE & UTILS UNDER IXFU 470-1(2)
R.O.W. UNDER IXFU470-1(2) AND IXFU470-1(58)

FEDERAL ROAD REGION NO	DIVISION	PROJECT NO	SHEET NO
VIII	COLORADO	IXFU470-1(42) IXFU470-1(35)	1/211

(9) 96

AS CONSTRUCTED
NO REVISIONS ☐ REVISED 12-1-87 VOID ☐

	REVISIONS		
(R-1)	9-22-86	1, 6, 9, 13, 19, 20, 92, added 201	L.E.G.

PLAN AND PROFILE OF ~~PROPOSED~~

COMBINED FEDERAL AID PROJECT NO. IXFU 470-1(42) & IXFU 470-1(35)

STATE HIGHWAY NO. 470 MP 12.90—

JEFFERSON COUNTY

SCALES OF ORIGINAL DRAWINGS
AS SHOWN ON PLAN AND PROFILE

GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD

DeLEUW CATHER & COMPANY
DENVER, CO.

DAVID J. WEAVER — REGISTERED — COLORADO

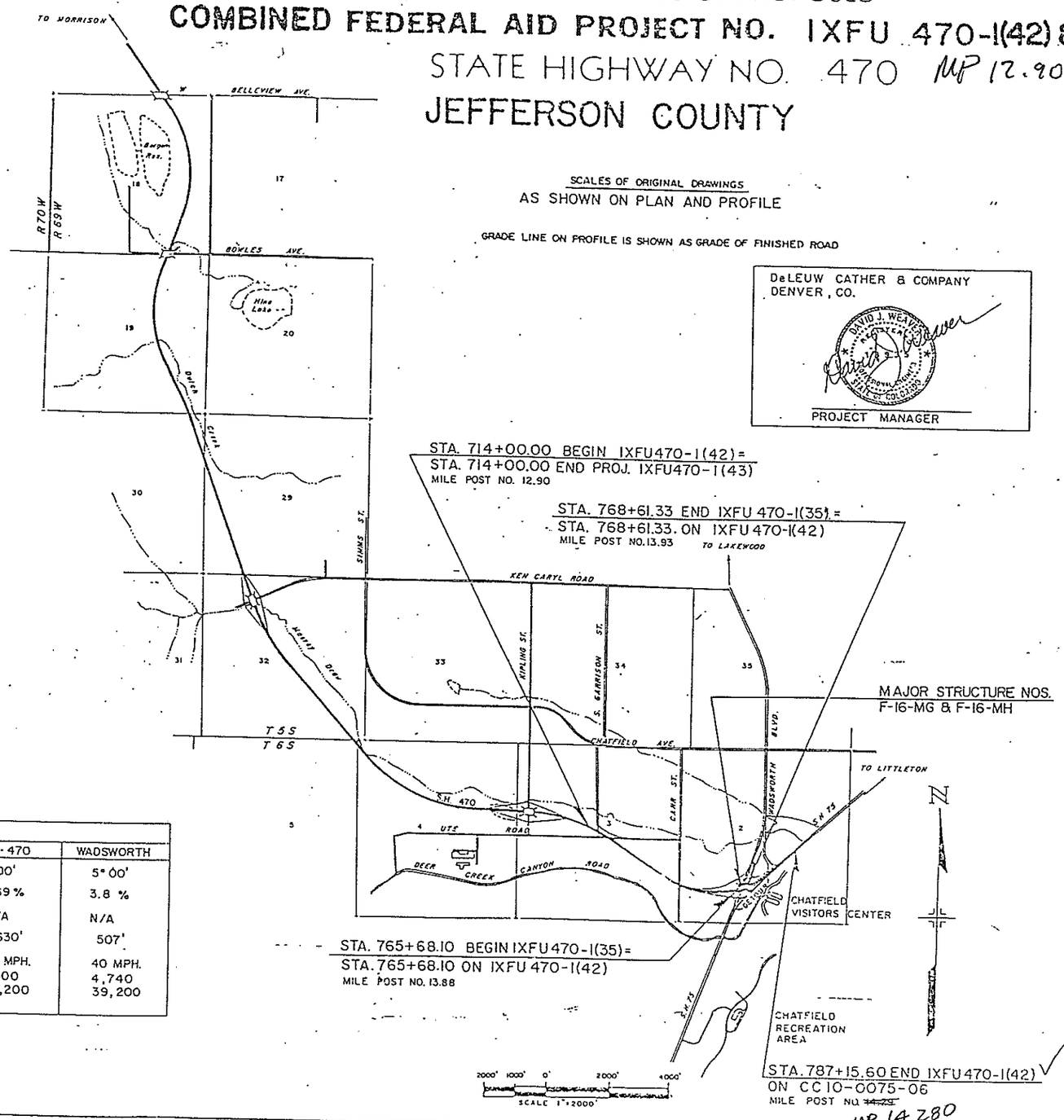
PROJECT MANAGER

TABULATION OF LENGTH

STATION	LIN. FT. ROADWAY	LIN. FT. MAJOR STRUCTURE
714+00.00 BEGIN IXFU 470-1(42) = 714+00.00 END IXFU 470-1(43) MILE POST NO. 12.90	5168.10	
765+68.10 BEGIN IXFU 470-1(35) = ON IXFU 470-1(42) = MILE POST NO. 13.88 BEGIN STR. NOS. F-16-MG & F-16-MH		293.23
768+61.33 END STR. NOS. F-16-MG & F-16-MH END IXFU 470-1(35) = ON IXFU 470-1(42) = MILE POST NO. 13.93	1854.27	
787+15.60 END IFXU 470-1(42) = ON CC10-0075-06 MILE POST NO. 14.29		
SUBTOTAL SH. 470	7022.37	293.23
WADSWORTH (FOR INFORMATION ONLY) 1336+50 BEGIN WADSWORTH CONSTRUCTION	3885.00	
1375+35 END WADSWORTH CONSTRUCTION		
SUBTOTAL WADSWORTH	3885.00	
COMBINED PROJECT NET LENGTH	10,907.37	293.23

SUMMARY	LIN. FT.	MILES
ROADWAY - IXFU 470-1(42) (NET LENGTH)	7022.37	1.330
MAJOR STRUCTURES IXFU 470-1(35)	293.23	0.056
COMBINED PROJECTS TOTAL LENGTH	7315.60	1.386

DESIGN DATA	S.H. 470	WADSWORTH
MAXIMUM DEGREE OF CURVE	2° 00'	5° 00'
MAXIMUM GRADE	2.69 %	3.8 %
MINIMUM SSD HORIZONTAL	N/A	N/A
MINIMUM SSD VERTICAL	630'	507'
MAXIMUM DESIGN SPEED	70 MPH.	40 MPH.
2005 DESIGN TRAFFIC VOLUME DHV =	4,500	4,740
2005 DESIGN TRAFFIC VOLUME ADT =	37,200	39,200



STA. 714+00.00 BEGIN IXFU470-1(42) =
STA. 714+00.00 END PROJ. IXFU470-1(43)
MILE POST NO. 12.90

STA. 768+61.33 END IXFU 470-1(35) =
STA. 768+61.33. ON IXFU 470-1(42)
MILE POST NO. 13.93

MAJOR STRUCTURE NOS.
F-16-MG & F-16-MH

STA. 765+68.10 BEGIN IXFU 470-1(35) =
STA. 765+68.10 ON IXFU 470-1(42)
MILE POST NO. 13.88

STA. 787+15.60 END IXFU 470-1(42)
ON CC10-0075-06
MILE POST NO ~~14.25~~
MP 14.280

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REVISED M AND S STANDARDS

M-606-12	GUARD RAIL-TYPE 4 CONCRETE BARRIER (9 SHEETS) 2-18-83

DIVISION OF HIGHWAYS

APPROVED:

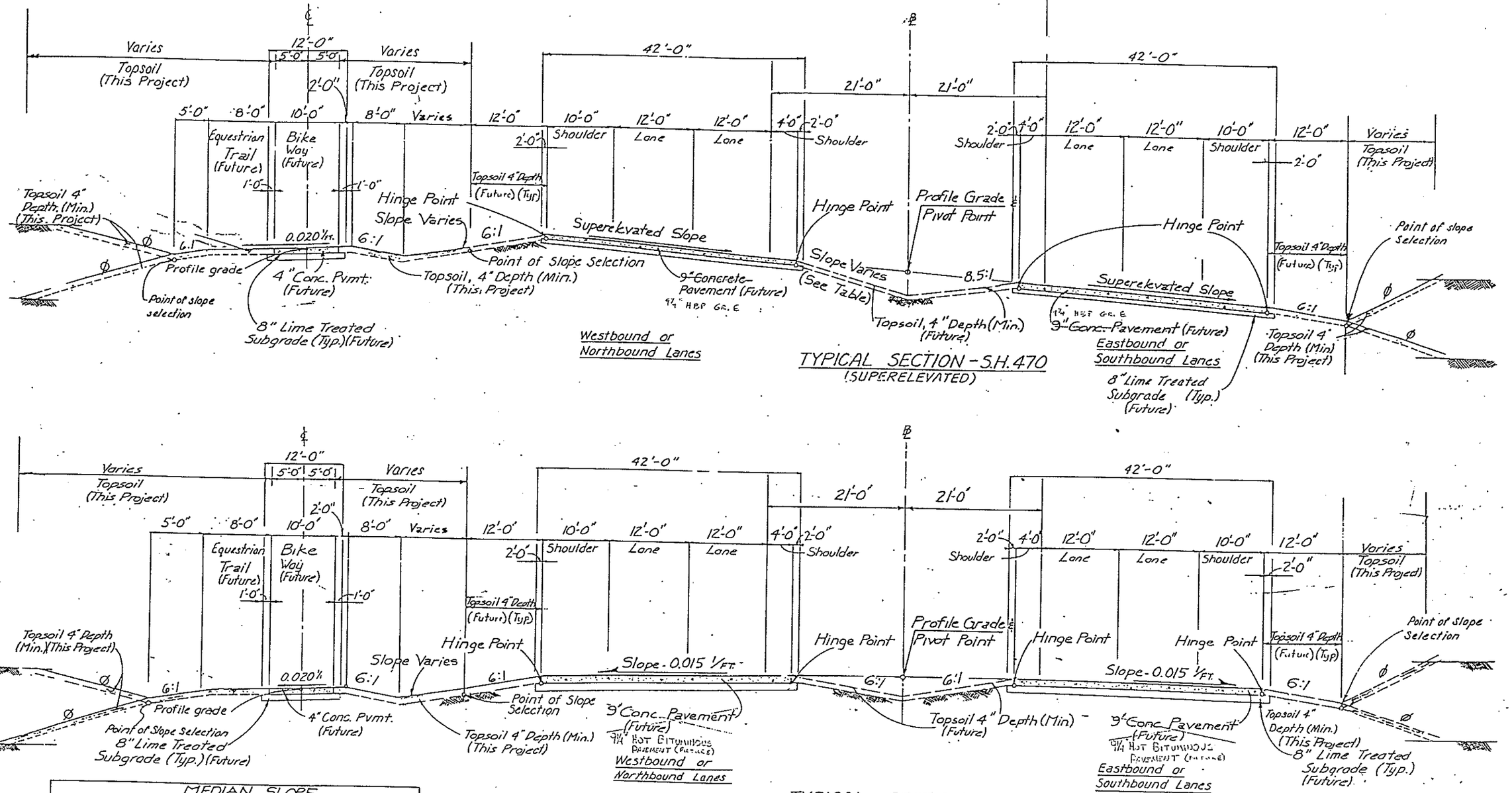
James E. Siebe / 7-29-86
ASST. CHIEF ENGINEER — DATE

AS CONSTRUCTED INFORMATION

CONTRACTOR Kiewit Western Co.
ENGINEER R. L. McKenzie (Project or Resident)
PROJECT STARTED October 28, 1986
PROJECT COMPLETED DEC. 1, 1987
AS CONSTRUCTED PLANS APPROVED 8 Jul 1988
Curt Fong 2-4-88
TITLE — DATE

LEG - DIST. XI /6WO

AS CONSTRUCTED						
NO REVISIONS	REVISED 1-1-87	VOID	FED.ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
			VIII	COLO.	IXFU 470-1(42) IXFU 470-1(35)	3	211



TYPICAL SECTION - S.H. 470
(SUPERELEVATED)

TYPICAL SECTION - S.H. 470

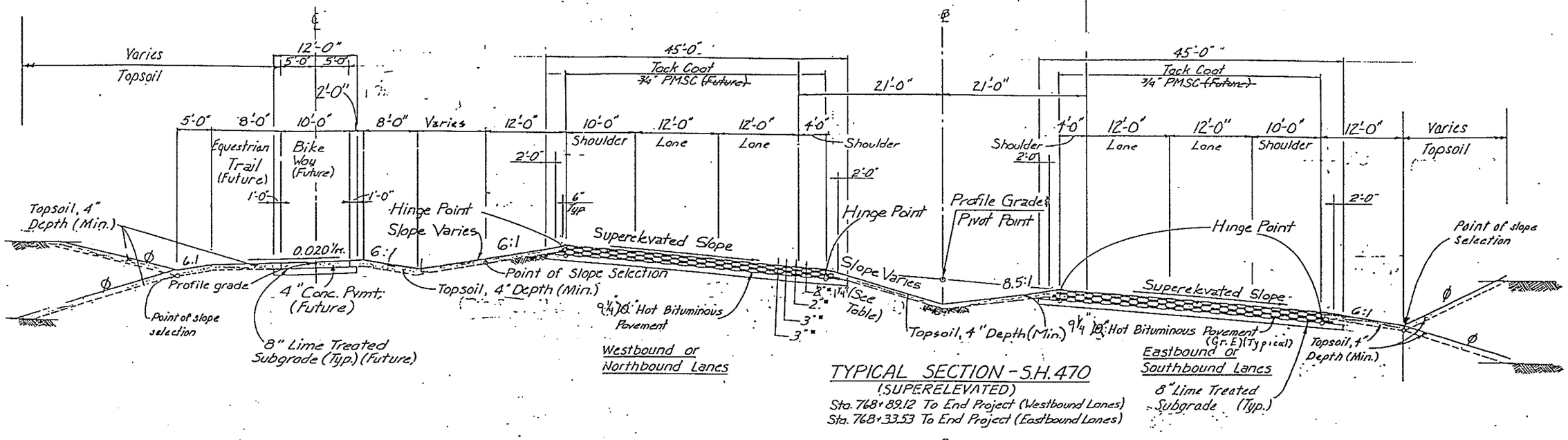
MEDIAN SLOPE		
Dc Base Line	Superelev.	Slope
0°-45'-00"	.029 %	5.69:1
1°-00'-00"	.038 %	5.16:1
1°-30'-00"	.053 %	4.47:1
2°-00'-00"	.065 %	4.04:1

Typical Section Notes

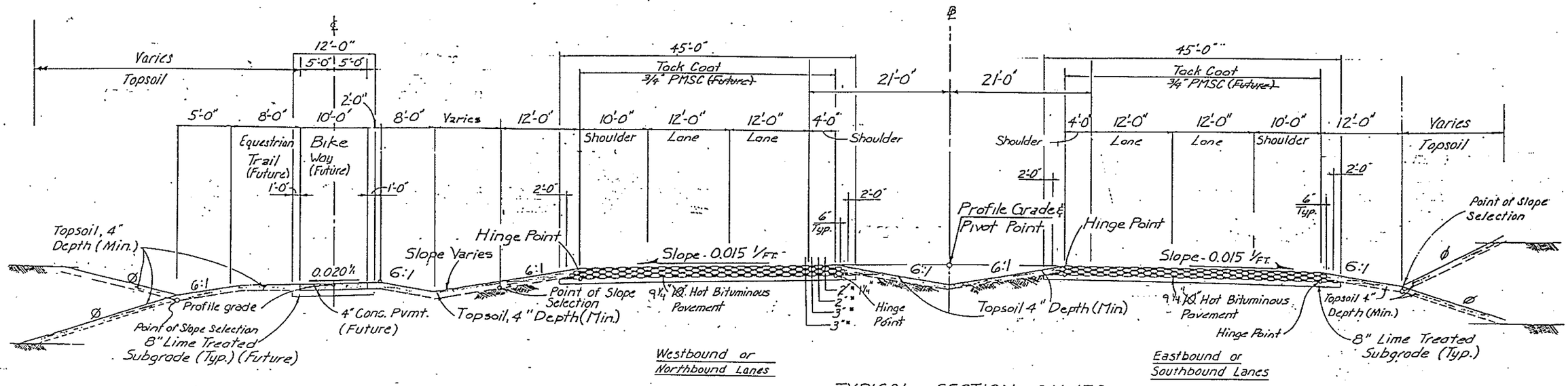
1. The depth and width of side ditch shall be varied where necessary to provide proper drainage.
2. The contractor will be required to place 4 inches of topsoil as shown.
3. Break points on slopes and in bottoms of ditches shall be rounded on construction for a pleasing appearance. See standards for details of cut slope treatment, flaring, and widening.

ϕ Slope varies See cross sections for slope treatment

AS CONSTRUCTED						
NO REVISIONS ☐	REVISED 1-1-87	VOID ☐	FED.ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
			VIII	COLO.	IXFU 470-1(42) IXFU 470-1(35)	4	211



TYPICAL SECTION - S.H. 470
(SUPERELEVATED)
Sta. 768+89.12 To End Project (Westbound Lanes)
Sta. 768+33.53 To End Project (Eastbound Lanes)



Westbound or Northbound Lanes

Eastbound or Southbound Lanes

TYPICAL SECTION - S.H. 470
Sta. 768+89.12 To End Project (Westbound Lanes)
Sta. 768+33.53 To End Project (Eastbound Lanes)

MEDIAN SLOPE		
Baseline	Superelev.	Slope
0°45'00"	.029%	5.69:1
1°00'00"	.038%	5.16:1
1°30'00"	.053%	4.47:1
2°00'00"	.065%	4.04:1

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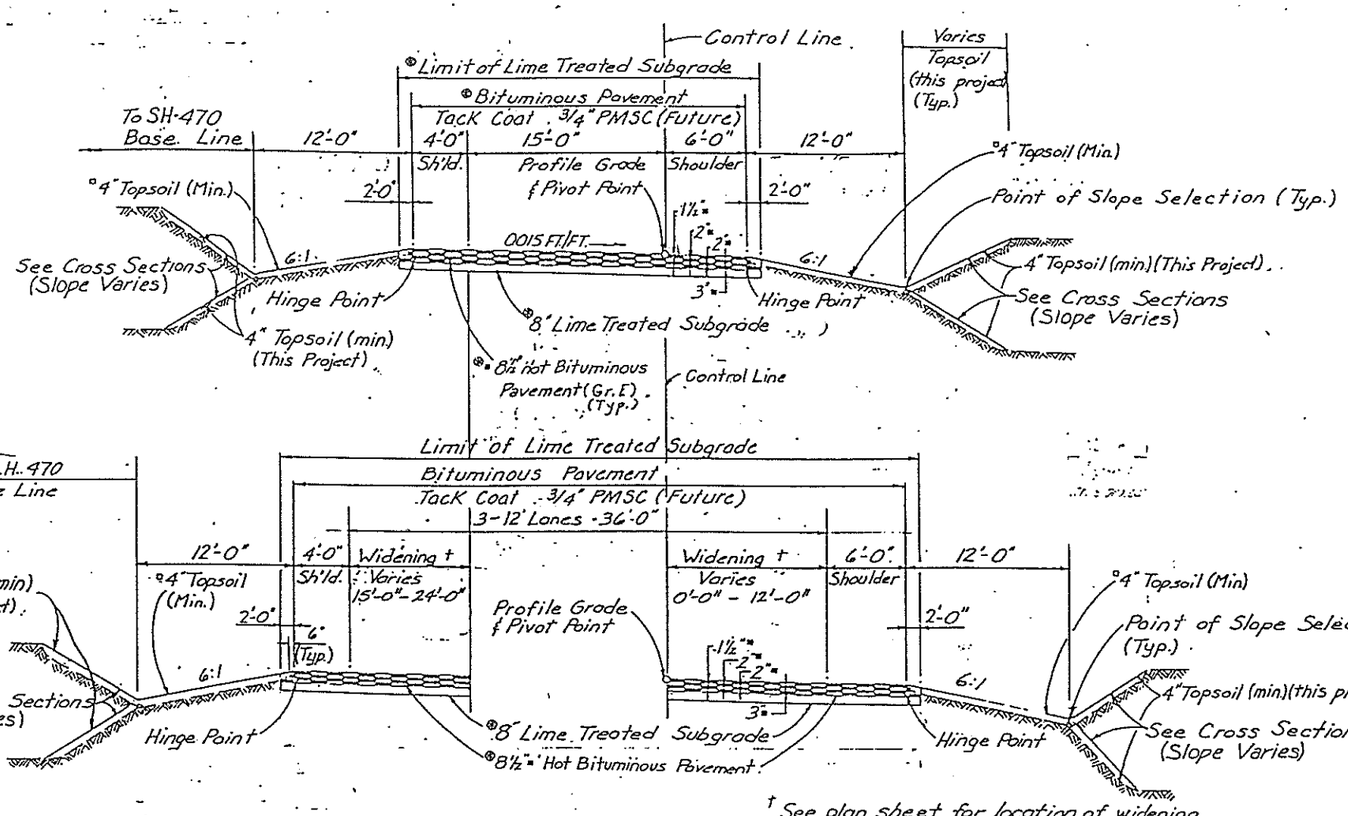
1. The depth and width of side ditch shall be varied where necessary to provide proper drainage.
2. The contractor will be required to place 4 inches of topsoil as shown.
3. Break points on slopes and in bottoms of ditches shall be rounded on construction for a pleasing appearance. See standards for details of cut slope treatment, flaring, and widening.

* Approximate-Thickness
Ø Slope varies See cross sections for slope treatment

AS CONSTRUCTED							
NO REVISIONS		REVISED	1-1-87	VOID			

FED.ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLO.	IXFU 470-1(42) IXFU 470-1(35)	5	211



† See plan sheet for location of widening tapers & widened Sections.

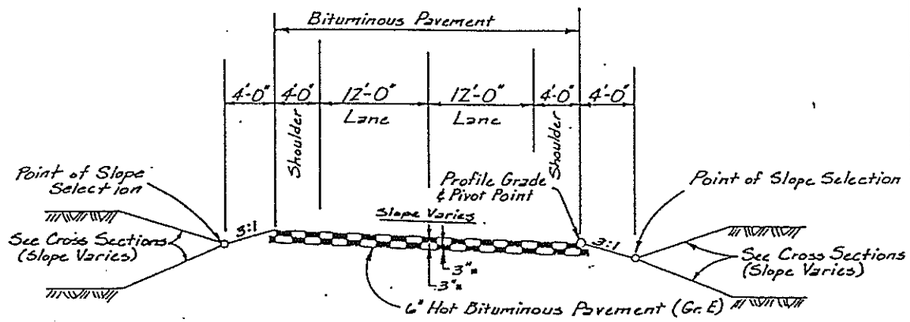
S.H.-470 RAMPS ⊛ TYPICAL SECTIONS

Wads worth Interchange
Looking Ahead, Ramps 'A' & 'B';
Looking Back, Ramps 'C' & 'D'.

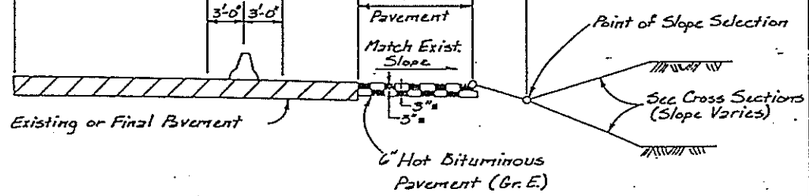
Notes: ⊛ Ramp 'B' and Ramp 'D' shall be paved in this contract. Ramp 'A' and Ramp 'C', Build Subgrade Only. Lime Treatment and paving shall be constructed on future project.

□ Future for Ramp 'A' and Ramp 'C' (Not In Contract) For limits of topsoil and seeding, See Landscape Plans.

■ Approximate Thickness.



DETOUR TYPICAL SECTION



DETOUR TYPICAL SECTION

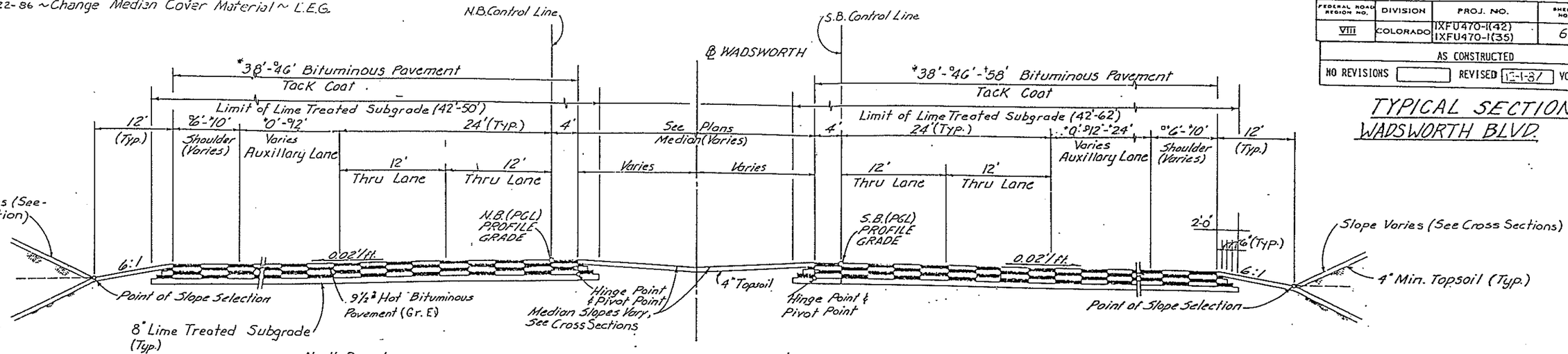
(A-1) 9-22-86 ~Change Median Cover Material ~ L.E.G.

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU470-1(42) IXFU470-1(35)	6	211

AS CONSTRUCTED

NO REVISIONS ☐ REVISED 12-1-87 VOID ☐

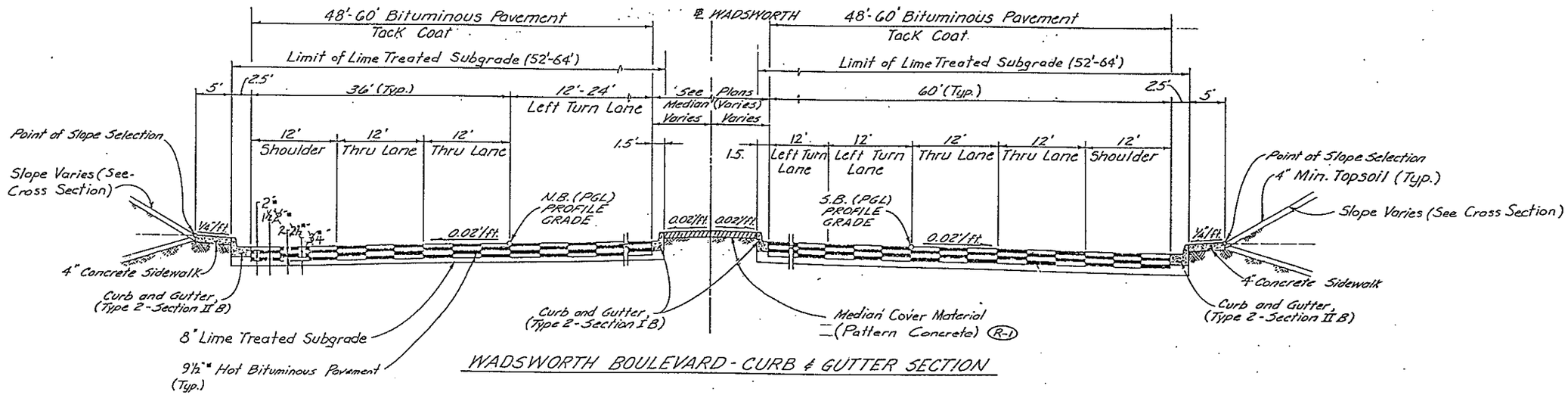
TYPICAL SECTIONS WADSWORTH BLVD.



WADSWORTH BOULEVARD - ROADWAY SECTION

North Bound
* 1336+49.73 NB. to 1349+77.53 N.B.
□ 1347+77.53 N.B. to 1350+77.42 N.B.
□ 1365+25.31 B.L. to End.

South Bound
* 1337+43.90 S.B. to 1346+00.00 S.B.
□ 1347+80.00 S.B. to 1350+45.30 S.B.
□ 1364+38.53 B.L. to 1370+00.00 B.L.
+ 1371+00.00 B.L. to End.



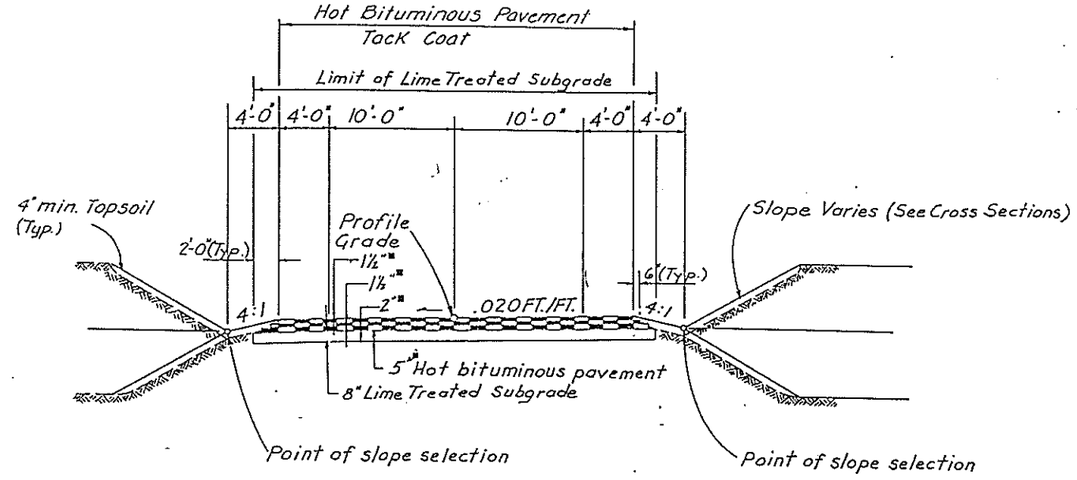
WADSWORTH BOULEVARD - CURB & GUTTER SECTION

■ Approximate Thickness

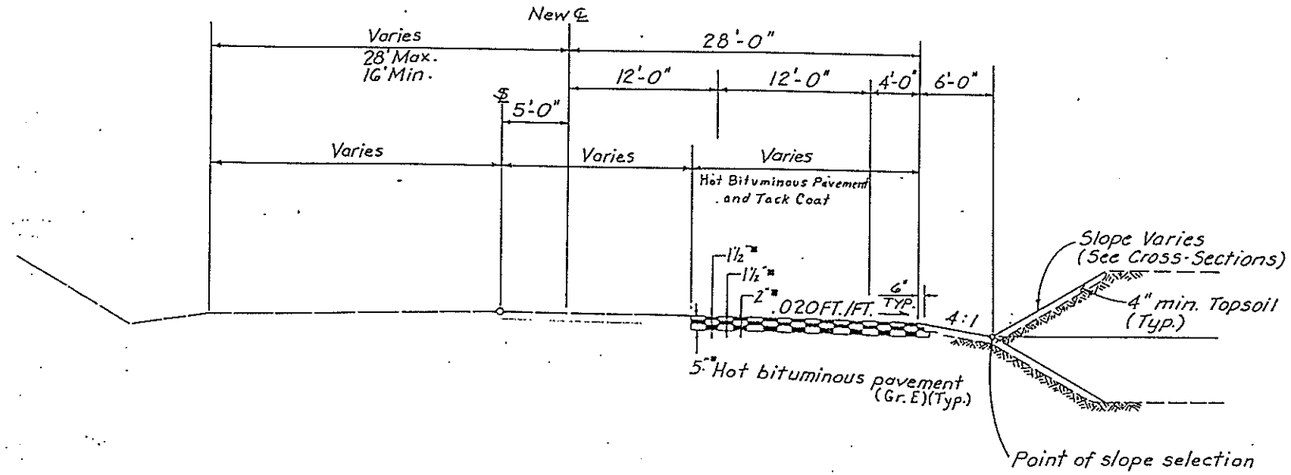
F COLORADO
EPARTMENT OF HIGHWAYS
N OF HIGHWAYS
FORM NO. 126
B. 1984

AS CONSTRUCTED						
NO REVISIONS		REVISED 12-1-87	VOID			

FED.ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLO.	IXFU 470-1(42) IXFU 470-1(35)	7	211

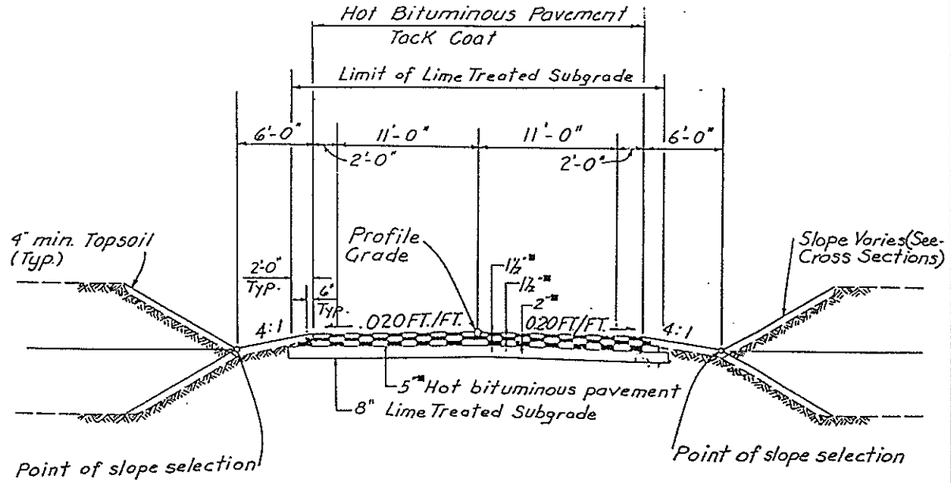


CARR STREET - SOBEY STREET ~ TYPICAL SECTION

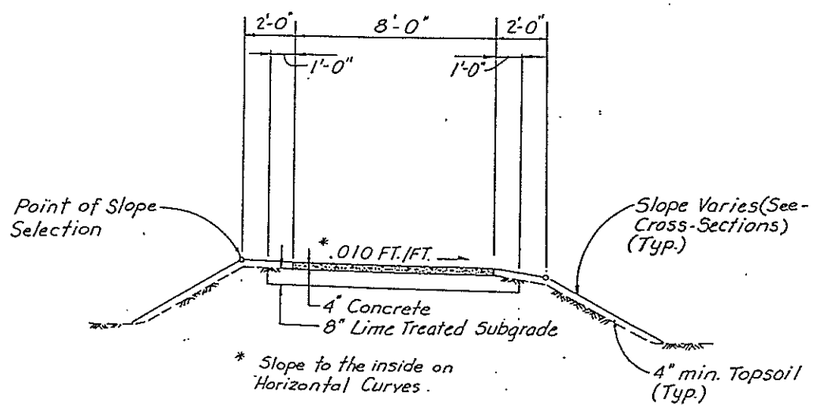


DEER CREEK CANYON ROAD
STA. 40+00 TO STA. 42+00

■ ~~Approximate~~ Thickness



STENE DRIVE - TYPICAL SECTION

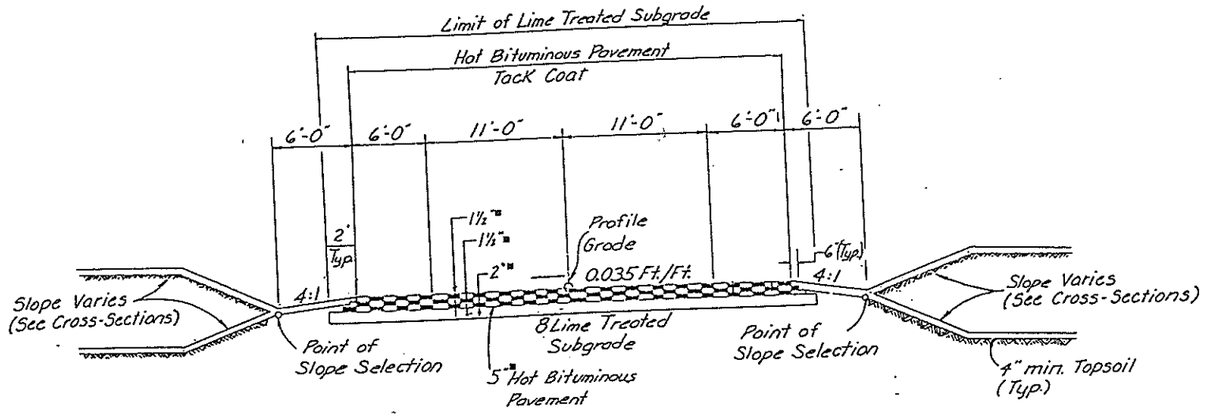


CHATFIELD BIKE PATH - TYPICAL SECTION

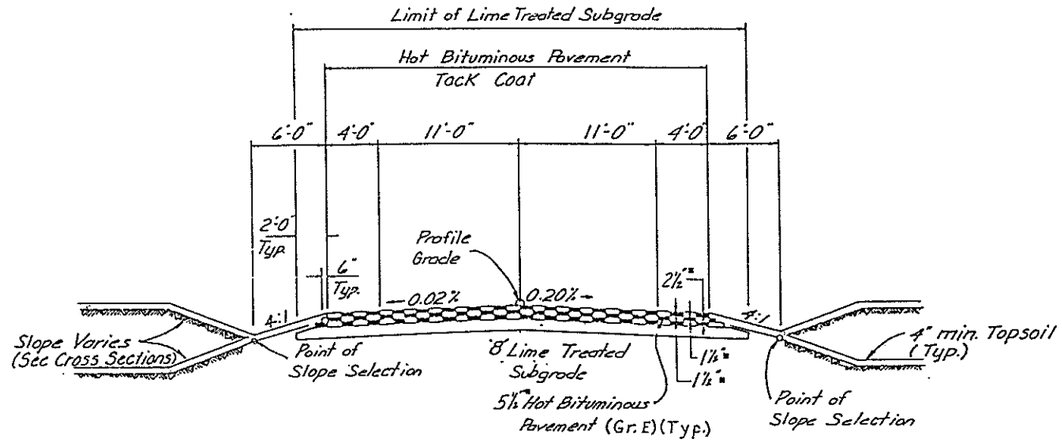
OF COLORADO
DEPARTMENT OF HIGHWAYS
ON OF HIGHWAYS:
H. SUM NO. 126:
EB. 1984

AS CONSTRUCTED							
NO REVISIONS		REVISED	1-1-87	VOID			

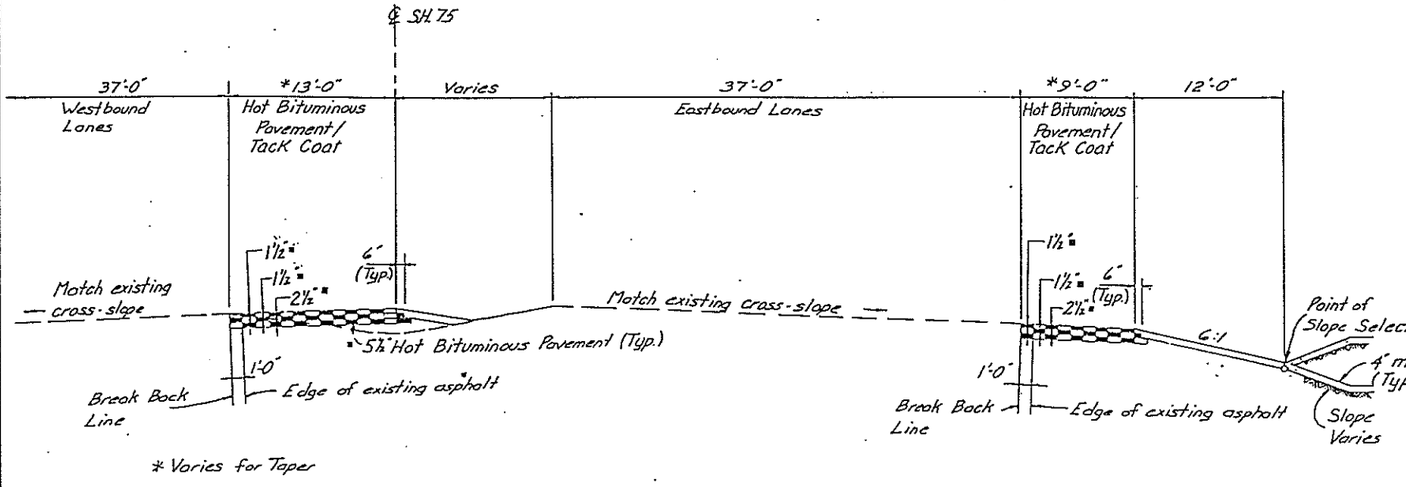
FED.ROAD REGION	DMSION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLO.	IXFU 470-1(42) IXFU 470-1(35)	8	211



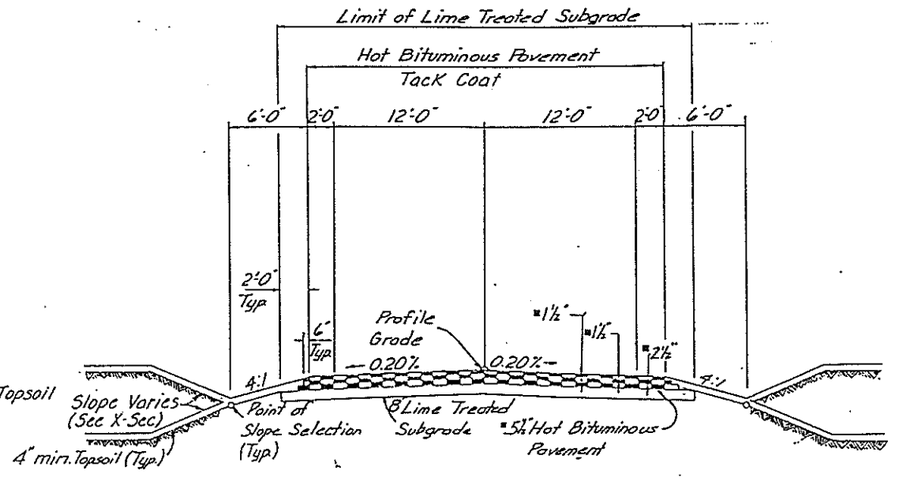
GARRISON ST.



Visitor Center Road & Private Road



Typical Section
S.H. 75



Interior Road

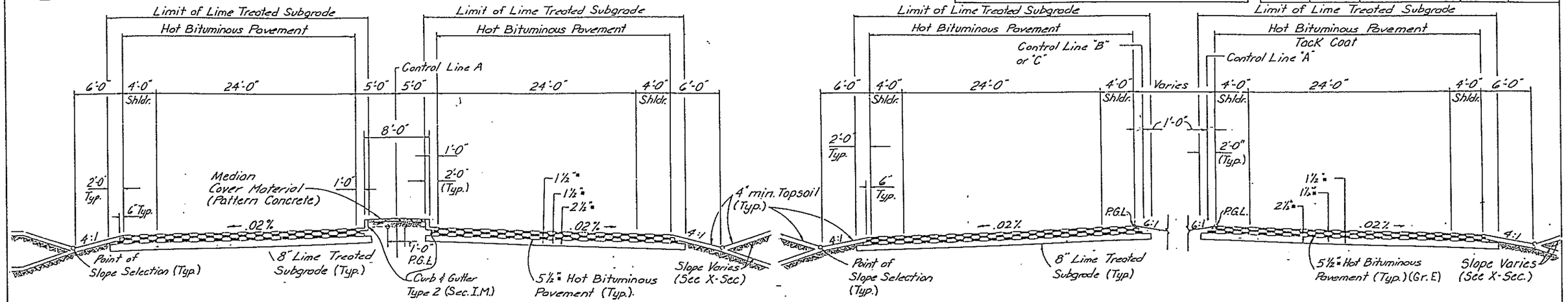
* Approximate Thickness

DWG. TY-

OF COLORADO
DEPARTMENT OF HIGHWAYS
ION OF HIGHWAYS:
H. FORM NO. 126:
FEB. 1984

AS CONSTRUCTED						
NO REVISIONS ☐	REVISED 12-1-87	VOID ☐	FED.ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
			VIII	COLO.	IXFU 470-1(42) IXFU 470-1(35)	9	211

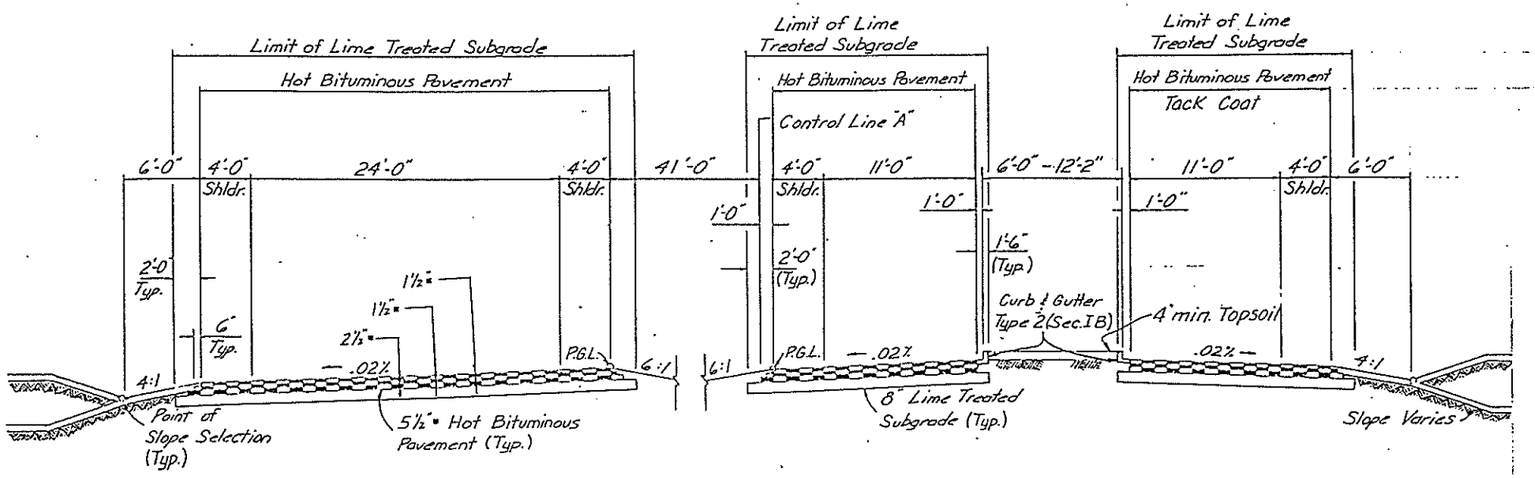
(R-1) 9-22-86 ~ Delete note 3 ~ L.E.G.



Typical Section
Chatfield Entrance Road
Sta. 0+70 to Sta. 2+12.73
Sta. 21+69 to Sta. 23+21

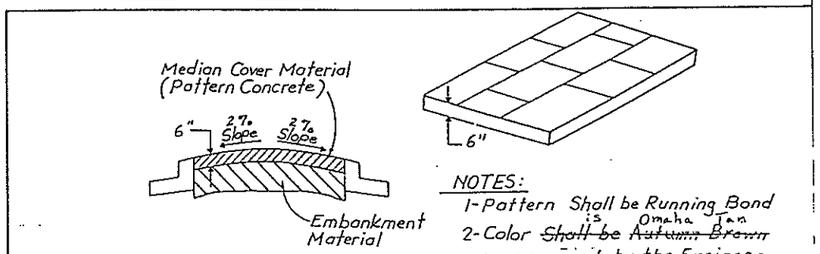
Typical Section
Chatfield Entrance Road
Sta. 2+46.73 to Sta. 9+17.45
Sta. 15+65.75 to Sta. 21+35

4" Topsoil (Typ.)
On All Slopes



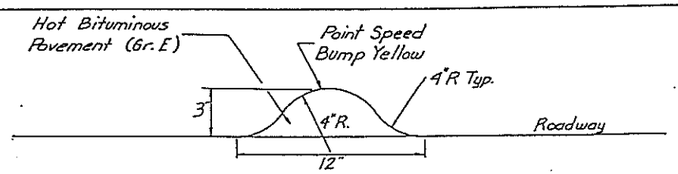
■ ~~Approximate~~ Thickness

Typical Section
Chatfield Entrance Road
Sta. 10+07.45 to Sta. 13+55



NOTES:
1- Pattern Shall be Running Bond
2- Color ~~Shall be Autumn Brown~~ is Omaha Tan as approved by the Engineer
(R-1) ~~3- Concrete Shall be Class A or B.~~
4- Median Cover Material Shall be Constructed to Slope and drain Toward Curb and Gutter.

Detail of Median Cover Material (Patterned Concrete)



Typical Section
Speed Bump

Note :
See Dwg PP-19
Speed bumps shall be located 50' on each side of Entry Station Building and shall be set on a slight angle across the roadway. Cost of speed bumps shall be included in item "Hot Bituminous Pavement (Grading E)".

DWG. TY-

SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED			
NO REVISIONS	REVISED 12-1-87	VOID	

FEDERAL ROAD REGION NO	DIVISION	PROJ. NO.	SHEET NO	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(42) IXFU 470-1(35)	10	211

INDEX BOOK	INDEX ITEM NO.	INDEX SHEET	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	IXFU 470-1(42) PLAN ROADWAY	IXFU 470-1(42) PROJECT TOTALS	AS CONST. PROJECT TOTALS	IXFU 470-1(35) PLAN ROADWAY	AS CONSTRUCTED ROADWAY	IXFU 470-1(35) PLAN STR. NO. F-16-MG	AS CONST. STR. NO. F-16-MG	IXFU 470-1(35) PLAN STR. NO. F-16-MH	AS CONST. STR. NO. F-16-MH	IXFU 470-1(35) PROJECT TOTALS	AS CONST. PROJECT TOTALS	COMBINED PROJECT TOTALS	AS CONST. PROJECT TOTALS	DIFF. +/-	% PLAN
1	1		201	Clearing and Grubbing.	L.S.	1	1	1									1	1	0	100
3	187		105	FIELD ADJUSTMENT (GENERIC CLASS 5) CMO 135	L.S	0	1									$16303.50		0		—	—
1	2		202	Removal of Structures and Obstructions	L.S.	1	1	1										1	1	0	100
1	3		202	Removal of Structure	EACH	6	6	8										6	8	+2	133
1	4		202	Removal of Pipe	LIN. FT.	963	963	1,142										963	1142	+179	118
1	5		202	Removal of Barricade	EACH	1	1	1										1	1	0	100
1	6		202	Removal of Delineator	EACH	84	84	84										84	84	0	100
1	7		202	Removal of Curb and Gutter	LIN. FT.	460	460	368										460	368	- 92	80
1	8		202	Removal of Asphalt Mat	SQ. YD.	86,729	86,729	75,645										86,729	75,645	-11,084	83
1	9		202	Removal of Pavement Marking	SQ. FT.	2000	2,000	10,274										2000	10,274	+ 8,274	514
1	10		202	Removal of Portions of Present Structure	L.S.	1	1	1										1	1	0	100
1	11		202	Removal of Ground Sign	EACH	92	92	88										92	88	- 4	96
1	12		202	Removal of Sign Panel	EACH	2	2	2										2	2	0	100
1	13		202	Removal of Traffic Signal Head	EACH	12	12	16										12	16	+4	133
1	14		202	Removal of Traffic Signal Pole	EACH	3	3	3										3	3	0	100
1	15		202	Removal of Traffic Signal Controller and Cabinet	EACH	1	1	1										1	1	0	100
1	16		202	Removal of Pedestal Pole	EACH	1	1	1										1	1	0	100
1	17		202	Removal of Fence	LIN. FT.	4,308	4,308	5,278										4,308	5,278	+970	122
1	18		202	Plug Culvert	EACH	9	9	9										9	9	0	100
3	175		203	EXCESS EXCAVATION CMO 342	CU. YD.	0	0	127,168										0	127,168		
1	19		203	Unclassified Excavation (Complete in Place)	CU. YD.	1,099,351	1,099,351	878,754	23,478	23,478						23,478	23,478	1,122,829	902,232	-220,597	80
1	20		203	Blading	HOUR	500	500	655										500	655	+155	131
1	21		206	Structure Excavation	CU. YD.	9,460	9,460	10,980			1189	1,197	2,013	2,020	3,202	3,217	12,662	14,177	+1535	112
1	22		206	Structure Backfill (Class 1)	CU. YD.	3,064	3,064	2,556			1,250	1,019	1,340	1,190	2,590	2,128	5,654	4,684	-970	83
1	23		206	Structure Backfill (Class 2)	CU. YD.	3,063	3,063	4,279			130	130	130	130	260	260	3,323	4,539	+1216	137
1	24		206	Filter Material (Class B)	CU. YD.	72	72	72			60	290	60	292	120	582	192	654	+462	341
1	25		207	Topsoil (Haul)	CU. YD.	56,623	56,623	56,623									56,623	56,623	0	100
1	26		210	Reset Ground Sign	EACH	11	11	10									11	10	-1	91
1	27		210	Reset Traffic Signal Head	EACH	8	8	12									8	12	+ 4	150
1	28		210	Reset Traffic Signal Pole	EACH	2	2	2									2	2	0	100
1	29		210	Reset Traffic Signal Controller Cabinet	EACH	1	1	1									1	1	0	100
1	30		210	Reset Fence DELETED BY 105	LIN. FT.	615	615	0									615	0	-615	0
1	31		210	Reset Gate	EACH	1	1	1									1	1	0	100
1	32		210	Reset Guard Rail Type 3	LIN. FT.	1233	1,233	1,430									1233	1,430	+197	116

SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED		
NO REVISIONS ☐	REVISED 12-1-87	VOID ☐

FEDERAL ROAD REGION NO	DIVISION	PROJ. NO.	SHEET NO	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(42) IXFU 470-1(35)	11	211

INDEX BOOK	INDEX PROJECT NO	INDEX SHEET	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	IXFU 470-1(42) PLAN ROADWAY	IXFU 470-1(42) PROJECT TOTALS	AS CONST. PROJECT TOTALS	IXFU 470-1(35) PLAN ROADWAY	AS CONSTRUCTED ROADWAY	IXFU 470-1(35) PLAN STR. NO. F-16-MG	AS CONST. STR. NO. F-16-MG	IXFU 470-1(35) PLAN STR. NO. F-16-MH	AS CONST. STR. NO. F-16-MH	IXFU 470-1(35) PROJECT TOTALS	AS CONST. PROJECT TOTALS	COMBINED PROJECT TOTALS	AS CONST. PROJECT TOTALS	DIFF. +/-	% PLAN
1	33		210	Reset End Anchorage	EACH	5	5	3									5	3	-2	60
1	34		210	Adjust Manhole	EACH	4	4	9									4	9	+5	225
1	35		210	Modify Manhole	EACH	2	2	2									2	2	0	100
1	36		212	Seeding (Native)	ACRE	105	105	117.2									105	117.2	+12.2	112
1	37		212	Peat	CU. YD.	123	123	131									123	131	+ 8	106
3	161		213	Mulch Therifier MCR 142-9	TON	0	0	3.9									0	3.9	—	—
1	38		213	Mulching	ACRE	102	102	113.3									102	113.3	+11.3	111
3	162		213	Soil Retention Blanket (Excelsior) MCR 142-10	SQ. YD.	0	0	827									0	827	—	—
1	39		213	Erosion Bales	EACH	305	305	26									305	26	-279	9
1	40		215	Transplant Tree (1½ Inch To 3 Inch)	EACH	X 21	21 X	20									21 X	20	-1	95
1	41		215	Transplant Tree (3 Inch To 6 Inch)	EACH	6	6	6									6	6	0	100
3	177		304	Aggregate Base Course (Special) MCR 142-5	TON	0	0	5,299.05									0	5,299.05	—	—
3	120		304	1½ Inch Washed Rock MCR 142-8	TON	0	0	317.31									0	317.31	—	—
1	42		307	Hydrated Lime	TON	1,756	1,756	1,277.52									1,756	1,277.52	-478.48	73
1	43		307	Processing Lime Treated Subgrade (8 Inch)	SQ. YD.	133,012	133,012	105,836									133,012	105,836	-27,176	80
3	174		403	HBP Patching MCR 142-2	TON	0	0	605.88									0	605.88	—	—
1	44		403	Hot Bituminous Pavement (Grading E)(Haul and Asphalt) CMO 742	TON	61,310	61,310	61,858.23									61,310	61,858.23	+548.23	101
			403	PRICE ADJ	L.S.			-276.21									-276.21	-276.21		
3	184		410	Plant Mix Seal Coat (Type B) CMO 742	TON	0	0	415.27									0	415.27	—	—
1	45		411	Emulsified Asphalt (Slow Setting)	GAL.	16,399	16,399	10,044									16,399	10,044	-6,355	61
1	46		503	Drilled Caisson (18 Inch)	LIN. FT.						736	711	654	597	1,390	1,308	1390	1,308	-82	94
1	47		503	Drilled Caisson (30 Inch)	LIN. FT.						100	99	84	81	184	180	184	180	-4	98
1	48		503	Drilled Caisson (36 Inch)	LIN. FT.						151	137	116	112	267	249	267	249	-18	93
1	49		506	RipRap	CU. YD.	167	167	210									167	210	+43	126
1	50		506	Heavy Riprap	CU. YD.	84	84	256									84	256	+172	305
2	51		507	Concrete Slope and Ditch Paving (Reinforced)	CU YD.	33	33	38			111	119	96	102.91	207	221.91	240	259.91	+19.91	108
3	172		510	Structural Plate Arch CMO 442	EACH	0	0	1									0	1	—	—
2	52		512	Bearing Device (Type I)	EACH						14	14	14	14	28	28	28	28	0	100
2	53		513	Drain Pipe (3 Inch)	LIN. FT.	25	25	14									25	14	-11	56
2	54		518	Bridge Compression Joint Sealer	LIN. FT.						40	40	40	40	80	80	80	80	0	100
2	55		518	Waterstop	LIN. FT.						104	92	104	92	208	184	208	184	-24	88
3	171		601	Structural Concrete Coating CMO 442	SQ FT	0	0	15,089									0	15,089	—	—
2	56		601	Concrete Class A (Miscellaneous) CMO 442	CU. YD.	406	406	335									406	335	-71	82
2	57		601	Concrete Class A (Bridge)	CU. YD.						500	500	500	500	1,000	1000	1000	1000	0	100
2	58		601	Concrete Class A (Wall)	CU. YD.	472	472	435									472	435	-37	92
2	59		601	Concrete Class S (Bridge)	CU. YD.	91,749	91,749				980	980	932	932	1,912	1912	1912	1912	0	100
2	60		602	Reinforcing Steel CMO 442	LB.	~~99,449~~	~~99,449~~	87,382			186,060	186,060	176,570	176,570	362,630	362,630	462,379 462,079	450,012	-12,367	97
2	61		602	Reinforcing Steel (Epoxy Coated)	LB.						51,745	51,745	48,540	48,540	100,285	100,285	100,285	100,285	0	100
2	62		603	18 Inch Reinforced Concrete Pipe	LIN. FT.	1,458	1,458	1,699									1,458	1699	+ 241	117
2	63		603	24 Inch Reinforced Concrete Pipe	LIN. FT.	592	592	668									592	668	+ 76	113

(vellum)

SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED			
NO REVISIONS		REVISED 12-1-87	VOID

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(42) IXFU 470-1(35)	12	211

INDEX BOOK	INDEX NET PLAN NO.	INDEX SHEET	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	IXFU 470-1(42) PLAN ROADWAY	IXFU 470-1(42) PROJECT TOTALS	AS CONST. PROJECT TOTALS	IXFU 470-1(35) PLAN ROADWAY	AS CONSTRUCTED ROADWAY	IXFU 470-1(35) PLAN STR. NO. F-16-MG	AS CONST. STR. NO. F-16-MG	IXFU 470-1(35) PLAN STR. NO. F-16-MH	AS CONST. STR. NO. F-16-MH	IXFU 470-1(35) PROJECT TOTALS	AS CONST. PROJECT TOTALS	COMBINED PROJECT TOTALS	AS CONST. PROJECT TOTALS	DIFF. +/-	% PLAN
2	64		603	30 Inch Reinforced Concrete Pipe	LIN.FT.	156	156	260									156	260	+104	167
2	65		603	36 Inch Reinforced Concrete Pipe	LIN.FT.	230	230	284									230	284	+54	123
2	66		603	48 Inch Reinforced Concrete Pipe	LIN.FT.	152	152	144									152	144	-8	95
2	67		603	54 Inch Reinforced Concrete Pipe	LIN.FT.	416	416	400									416	400	-16	96
3	177		603	54 INCH REINFORCED CONCRETE END SECTION HCR 142-7	EACH	0	0	4									0	4	—	—
2	68		603	18 Inch Reinforced Concrete End Section	EACH	29	29	37									29	37	+8	128
2	69		603	24 Inch Reinforced Concrete End Section	EACH	15	15	16									15	16	+1	107
2	70		603	30 Inch Reinforced Concrete End Section	EACH	1	1	1									1	1	0	100
2	71		603	36 Inch Reinforced Concrete End Section	EACH	1	1	1									1	1	0	100
2	72		603	48 Inch Reinforced Concrete End Section	EACH	1	1	1									1	1	0	100
2	73		604	Inlet Type C (5 Foot)	EACH	23	23	20									23	20	-3	87
2	74		604	Inlet Type C (10 Foot)	EACH	4	4	8									4	8	+4	200
2	75		604	Inlet Type D (10 Foot)	EACH	1	1	1									1	1	0	100
2	76		604	Inlet Type RL 10(10' Foot)	EACH	2	2	2									2	2	0	100
2	77		604	Manhole Slab Base (5 Foot)	EACH	1	1	1									1	1	0	100
2	78		604	Manhole Slab Base (10 Foot)	EACH	4	4	4									4	4	0	100
2	77		604	18 Inch Reinforced Concrete Pipe Sewer	LIN.FT.	1032	1,032	981									1032	981	-51	95
2	80		604	24 Inch Reinforced Concrete Pipe Sewer	LIN.FT.	1060	1,060	1173									1060	1173	+113	111
2	81		604	30 Inch Reinforced Concrete Pipe Sewer	LIN.FT.	1,316	1,316	1315									1,316	1315	-1	100
2	82		604	8 Inch Plastic Pipe Sewer (Polyvinylchloride)	LIN.FT.	1,335	1,335	1,567									1,335	1,567	+232	117
3	133		606	END ANCHORAGE TYPE 3F M&S 142-11	EACH	0	0	2									0	2	—	—

(R-1) 9-22-86 ~ Revise and Delete Bid Item ~ L.E.G.

SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED — NO REVISIONS ☐ REVISED ☒ VOID ☐

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(42) IXFU 470-1(35)	13	211

INDEX BOOK	INDEX ITEM NO.	INDEX SHEET	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	IXFU 470-1(42) PLAN ROADWAY	IXFU 470-1(42) PROJECT TOTALS	AS CONST. PROJECT TOTALS	IXFU 470-1(35) PLAN ROADWAY	AS CONSTRUCTED ROADWAY	IXFU 470-1(35) PLAN STR. NO. F-16-MG	AS CONST. STR. NO. F-16-MG	IXFU 470-1(35) PLAN STR. NO. F-16-MH	AS CONST. STR. NO. F-16-MH	IXFU 470-1(35) PROJECT TOTALS	AS CONST. PROJECT TOTALS	COMBINED PROJECT TOTALS	AS CONST. PROJECT TOTALS	DIFF. +/-	% PLAN
2	83		606	Guard Rail Type 3 (6-3 Post Spacing)	Lin. Ft.	1,025	1,025	1,384									1,025	1,384	+359	135
2	84		606	Guard Rail Type 4	Lin. Ft.	368	368	670									368	670	+302	182
2	85		606	End Anchorage Type 3E	Each	6	6	10									6	10	+4	167
2	86		607	End Post	Each	7	7	1									7	1	-6	14
2	87		607	Corner and Line Brace Post	Each	27	27	18									27	18	-9	67
2	88		607	Fence Barbed Wire with Treated Wooden Posts	Lin. Ft.	5,260	5,260	0									5,260	0	-5260	0
2	89		607	Fence Combination Wire with Treated Wooden Posts	Lin. Ft.	5,440	5,440	6,130									5,440	6,130	+690	113
2	90		607	Silt Fence DELETED BY ICS	Lin. Ft.	750	750	0									750	0	-750	0
2	91		607	End Post (Chain Link)	Each	2	2	2									2	2	0	100
2	92		607	Corner and Line Brace Post (Chain Link)	Each	5	5	8									5	8	+3	160
2	93		607	Fence Chain Link (72 Inch)	Lin. Ft.	2,120	2,120	2,285									2,120	2,285	+165	108
2	94		607	Vehicle Gate	Each	7	7	7									7	7	0	100
2	95		608	Concrete Sidewalk	Sq. Yd.	798	798	788									798	788	-10	99
2	96		608	Concrete Curb Ramp	Sq. Yd.	44	44	44									44	44	0	100
2	97		608	Concrete Bikeway	Sq. Yd.	1,698	1,698	1,872									1,698	1,872	+174	110
2	98		609	Curb and Gutter Type 2 (Section I-B)	Lin. Ft.	1,836	1,836	1,843									1,836	1,843	+7	100
3	185		609	CURB TYPE 6 (SECTION M) MCR 142-12	Lin. Ft.	0	0	910									0	910	—	—
2	99		609	Curb and Gutter Type 2 (Section I-M)	Lin. Ft.	642	642	911									642	911	+269	142
2	100		609	Curb and Gutter Type 2 (Section IIB)	Lin. Ft.	1,568	1,568	1,442									1,568	1,442	-126	92
2	101		610	Median Cover Material (Patterned Concrete)	Sq. Ft.	~~5,338~~ 14,883	~~5,338~~ 14,883	13,502									~~5,338~~ 14,883	13,502	-1381	91
(R-1)																				
2	102		612	Delineator (Type I)	Each	31	31	142									31	142	+111	458
2	103		612	Delineator (Type II)	Each	42	42	95									42	95	+53	226
2	104		613	3/4 Inch Electrical Conduit	Lin. Ft.						55	28	55	20	110	48	110	48	-62	44
2	105		613	1-1/2 Inch Electrical Conduit	Lin. Ft.	285	285	163									285	163	-122	57
3	176		613	2 INCH PVC MCR 142-4	Lin. Ft.	0	0	599									0	599	—	—
2	106		613	2 Inch Electrical Conduit CMO 642	Lin. Ft.	1,056	1,056	1,673			788	800	752	759	1,540	1,559	2,596	3,232	+636	124
2	107		613	3 Inch Electrical Conduit CMO 642	Lin. Ft.	581	581	872									581	872	+291	150
2	108		613	3 Inch Electrical Conduit (Jacked)	Lin. Ft.	50	50	105									50	105	+55	210
2	109		613	Direct Burial Cable	Lin. Ft.	8,307	8,307	8,762									8,307	8,762	+455	105
2	110		613	Wiring	L.S.	1	1	1									1	1	0	100
2	111		613	Luminaire High Pressure Sodium (47,000 Lumen)	Each	11	11	11									11	11	+0	100
2	112		613	Luminaire High Pressure Sodium (Wall Type)(12,000 Lumen)	Each	2	2	2									2	2	0	100
2	113		613	Luminaire (Special)	Each	3	3	3									3	3	0	100
2	114		613	Light Standard Steel (30 Foot)	Each	3	3	3									3	3	0	100
2	115		613	Light Standard Steel (40 Foot)	Each	7	7	7									7	7	0	100
2	116		613	Concrete Foundation Pad	Each	10	10	10									10	10	0	100
3	117		614	Flagging	Hour	10,000	10,000	7,317.5									10,000	7,317.5	-2682.5	73

SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED			
NO REVISIONS	REVISED 12-1-37	VOID	

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO	TOTAL SHEETS
VIII	COLORADO	IXFU 470-I(42) IXFU 470-I(35)	14	211

INDEX BOOK	INDEX ITEM NO.	INDEX SHEET	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	IXFU 470-I(42) PLAN ROADWAY	IXFU 470-I(42) PROJECT TOTALS	AS CONST. PROJECT TOTALS	IXFU 470-I(35) PLAN ROADWAY	AS CONSTRUCTED ROADWAY	IXFU 470-I(35) PLAN STR. NO. F-16-MG	AS CONST. STR. NO. F-16-MG	IXFU 470-I(35) PLAN STR. NO. F-16-MH	AS CONST. STR. NO. F-16-MH	IXFU 470-I(35) PROJECT TOTALS	AS CONST. PROJECT TOTALS	COMBINED PROJECT TOTALS	AS CONST. PROJECT TOTALS	DIFF. + / -	% PLAN
3	118		614	Traffic Control Supervisor	Day	300	300	201									300	201	-99	67
3	117		614	Sign Panel (Class I) CMO 642	Sq. Ft.	393	393	539									393	539	+146	137
3	120		614	Sign Panel (Class II)	Sq. Ft.	641	641	656									641	656	+ 15	102
3	121		614	Sign Panel (Class III)	Sq. Ft.	1,364	1,364	1,756									1,364	1,756	+392	129
3	169		614	SIGN LETTERING MCR 142-13	L. S.	0	0	1									0	1	—	—
3	122		614	Timber Sign Post 4x4 Inch	Lin. Ft.	433	433	558									433	558	+125	129
3	123		614	Timber Sign Post 6x6 Inch	Lin. Ft.	1,040	1,040	1,091									1,040	1,091	+51	105
3	124		614	Steel Sign Post (U-2)	Lin. Ft.	535	535	782									535	782	+247	146
3	125		614	Steel Sign Post (W 8x18)	Lin. Ft.	32	32	32									32	32	-0	100
3	126		614	Steel Sign Post (W8x21)	Lin. Ft.	36	36	165									36	165	+129	458
3	127		614	Concrete Footing (Type 3)	Each	2	2	2									2	2	0	100
3	128		614	Concrete Footing (Type 4)	Each	2	2	7									2	7	+5	350
3	129		614	Concrete Footing VI (Spread)	Each	1	1	1									1	1	0	100
3	130		614	Concrete Footing II-S (Spread)	Each	1	1	1									1	1	0	100
3	131		614	Mask Sign Legend	Each	2	2	4									2	4	+2	200
3	132		614	Balanced Butterfly Structure	Each	1	1	1									1	1	0	100
3	133		614	Cantilever Structure (30 To Less Than 35 Foot Frame)	Each	1	1	1									1	1	0	100

SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED			
NO REVISIONS	REVISED 12-1-87	VOID	

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO	SHEET NO	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(42) IXFU 470-1(35)	15	211

INDEX BOOK	INDEX PROJ. NO.	INDEX SHEET	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	IXFU 470-1(42) PLAN ROADWAY	IXFU 470-1(42) PROJECT TOTALS	AS CONST. PROJECT TOTALS	IXFU 470-1(35) PLAN ROADWAY	AS CONSTRUCTED ROADWAY	IXFU 470-1(35) PLAN STR. NO. F-16-MG	AS CONST. STR. NO. F-16-MG	IXFU 470-1(35) PLAN STR. NO. F-16-MH	AS CONST. STR. NO. F-16-MH	IXFU 470-1(35) PROJECT TOTALS	AS CONST. PROJECT TOTALS	COMBINED PROJECT TOTALS	AS CONST. PROJECT TOTALS	DIFF. +/-	% PLAN
3	134		614	Pedestrian Signal Face (16) CMO 642	EACH	16	16	22									16	22	+6	138
3	135		614	Traffic Signal Face (12-8-8) CMO 642	EACH	8	8	12									8	12	+4	150
3	136		614	Traffic Signal Face (12-12-12) CMO 642	EACH	12	12	22									12	22	+10	183
3	137		614	Traffic Signal Face (12-12-12-12-12) CMO 642	EACH	4	4	5									4	5	+1	125
3	138		614	Traffic Signal Controller Cabinet CMO 642	EACH	2	2	3									2	3	+1	150
3	139		614	Coordination Unit. CMO 642	EACH	2	2	3									2	3	+1	150
3	140		614	Loop Detector Wire CMO 642	LIN. FT.	4,725	4,725	7,498									4,725	7,498	+2,773	159
3	141		614	Traffic Signal Vehicle Detector Amplifier (Loop Type) CMO 642	EACH	4	4	6									4	6	+2	150
3	142		614	Flashing Beacon (Portable)	EACH	15	15	15									15	15	0	100
3	143		614	Barricade (Type 3 F-B)	EACH	2	2	2									2	2	0	100
3	144		614	Barricade (Type 3 M-A)	EACH	9	9	9									9	9	0	100
3	145		614	Barricade (Type 3 M-C)	EACH	4	4	2									4	2	-2	50
3	146		614	Barricade (Type 3M-A)(Temporary)	EACH	2	2	8									2	8	+6	400
3	147		614	Barricade (Type 3M-B)(Temporary)	EACH	2	2	6									2	6	+4	300
3	148		614	Barricade (Type 3M-C)(Temporary)	EACH	13	13	1									13	1	-12	8
3	149		614	Construction Traffic Sign (Panel Size A)	EACH	17	17	15									17	15	-2	88
3	150		614	Construction Traffic Sign (Panel Size B)	EACH	100	100	100									100	100	-0	100
3	151		614	Construction Traffic Sign (Panel Size C)	EACH	17	17	17									17	17	-0	100
3	152		614	Vertical Panel	EACH	75	75	85									75	85	+10	113
3	153		614	Vertical Panel (with Light)(Flashing)	EACH	75	75	75									75	75	-0	100
3	154		614	Advance Warning Flashing or Sequencing Arrow Panel (C Type)	EACH	3	3	2									3	2	-1	67
3	155		614	Drum Channelizing Device	EACH	104	104	101									104	101	-3	97
3	156		614	Concrete Barrier (Temporary)	LIN. FT.	1,325	1,325	1,790									1,325	1,790	+465	135

SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED		
NO REVISIONS ☐	REVISED 12-1-87	VOID ☐

FEDERAL ROAD REGION NO	DIVISION	PROJ. NO.	SHEET NO	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(42) IXFU 470-1(35)	16	211

INDEX BOOK	INDEX PAGE	INDEX SHEET	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	IXFU 470-1(42) PLAN ROADWAY	IXFU 470-1(42) PROJECT TOTALS	AS CONST. PROJECT TOTALS	IXFU 470-1(35) PLAN ROADWAY	AS CONSTRUCTED ROADWAY	IXFU 470-1(35) PLAN STR. NO. F-16-MG	AS CONST. STR. NO. F-16-MG	IXFU 470-1(35) PLAN STR. NO. F-16-MH	AS CONST. STR. NO. F-16-MH	IXFU 470-1(35) PROJECT TOTALS	AS CONST. PROJECT TOTALS	COMBINED PROJECT TOTALS	AS CONST. PROJECT TOTALS	DIFF. +/-	% PLAN
3	15.1		614	Traffic Cone	Each	400	400	220									400	220	-180	55
3	16.6		614	SPAN WIRE POLE CMO 642	EACH	0	0	4									0	4	—	—
3	15.1		614	Traffic Signal-Light Pole Steel (2 Mast Arm)	Each	4	4	4									4	4	0	100
3	16.1		614	Traffic Signal Pole Steel (2 Mast Arm)	Each	2	2	2									2	2	0	100
3	16.0		614	Traffic Signal Pedestal Pole Aluminum	Each	4	4	5									4	5	+1	125
3	16.1		614	Impact Attenuator (G-R-E-A-T)	Each	2	2	2									2	2	0	100
3	16.2		614	Traffic Signal Controller (Solid State) (Full-Actuated) (4 Phase) CMO 642	Each	2	2	3									2	3	+1	150
3	16.3		618	Prestressing Steel Wire or Strand	LB.						58,180	58,180	47,240	47,240	105,420	105,420	105,420	105,420	0	100
3	16.4		619	2 Inch Plastic Pipe	Lin. Ft.	1305	1,305	1,294									1,305	1,294	-11	99
3	16.5		620	Field Laboratory (Class 2)	Each	1	1	1									1	1	0	100
3	16.6		620	Sanitary Facility	Each	1	1	1									1	1	0	100
3	16.7		622	Entry Station Building	Each	1	1	1									1	1	0	100
3	16.8		625	Construction Surveying	L.S.	1	1	1									1	1	0	100
			626	Mobilization	L.S.	0.7	0.7	0.7	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	1	1	0	100
3	16.9		627	Pavement Marking Paint	Gal.	497	497	693									497	693	+196	139
3	17.0		627	Thermoplastic Pavement Marking	Sq. Ft.	17,535	17,535	18,047									17,535	18,047	+512	103
3	17.1		627	4 Inch Pavement Marking Tape DELETED BY 105	Lin. Ft.	2,000	2,000	0									2,000	0	-2000	0
3	17.2		627	Preformed Plastic Pavement Marking (60 Mils)	Sq. Ft.	1,618	1,618	1,959									1,618	1,959	+341	121
3	17.3		627	Preformed Plastic Pavement Marking (90 Mils) DELETED BY 105	Sq. Ft.	1,312	1,312	0									1,312	0	-1312	0
				FORCE ACCOUNT ITEMS																
			CMO 635	ICE SENSORS	INVOICE	0	0	($735.00)							0	($37950.94)	0	($37950.94)	—	—
			CMO 642	TELEPHONE SERVICE TO CHATFIELD ENTRY	F.A.	($2400.00)	($2400.00)	($512.00)							($2400.00)		0	($7852.00)	—	—
			F/A 01	On-the-Job Trainee	Each	3	3		1		1		1		3	($796.00)	($4600.00) 6	6	(76%) —	—
			F/A 02	MBE Incentive Payment	F.A.	0.7 ($14,000)	0.7 ($14,000)	($10,528.48)	0.1		0.1		0.1		0.3 ($4,512.21)		1	10,528.48	—	—
			MODIFY CMO 642	PETROLINE WATER SERVICE				($2,450.48)										2,450.48		
			MODIFY CMO 635	RELOCATE PEDESTAL				($1,121.20)										1,121.20		
			MODIFY CMO 616	HAND PLACE GUARDRAIL				($3,262.98)										3,262.98		
			F/A 03	Minor Contract Revisions	F.A.	($1,000) 0.7	($14,000) 0.7		0.1		0.1		0.1		($6000) 0.3	0	($20,000) 1		—	—
			F/A 04	Temporary Erosion Control	F.A.	1 ($10,000)	1 ($10,000)	($3776.50)									1 ($10,000)	0	—	—
			CMO 642	SUPPLEMENTAL TO 242	F.A.	0	0										0	($3776.50)	—	—
			F/A 05	Repair and Reset Irrigation System	F.A.	($2010.00) 1	($2,000.00) 1	0									($2,000) 1	0	—	—
			F/A 06	Furnish and Install Electrical Service Connection from Power Source to Controllers, and Street Lights and Overhead Signs (Work by Public Service Company)	F.A.	($500) 1	($500) 1	($12,860.17)									1 ($500)	12,860.17	—	—
			F/A 07	Furnish Power Source (Work by Public Service Company)	F.A.	1 ($300.00)	1 ($2000)	($121,736.00)									1 ($2000)	($121,736)	—	—
			CMO 642	ILLUMINATION PANEL RELOC	F.A.	0	0	($2852.85)							0	($322.55)	0	($2527.45)	—	—
			F/A 08	INSTALL OF INCR. FLOPS CMO 9-12	F.A.	0	0	1 ($2493.91)									0	1 ($2493.91)	—	—

OF COLORADO
DEPARTMENT OF HIGHWAYS
ON OF HIGHWAYS
L FORM NO. 126
EB. 1984

AS CONSTRUCTED									
NO REVISIONS ☐	REVISED 12-1-87	VOID ☐	FED.ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
			VIII	COLO.	IXFU 470-1(42) IXFU 470-1(35)	17	211

SUMMARY OF EARTHWORK

INDEX BOOK	INDEX PAGE	INDEX SHEET	ITEM	PROJECT TOTALS IXFU 470-1(42) CU. YD.	IXFU 470-1(42) FINAL	IXFU 470-1(35) CU. YD.	IXFU 470-1(35) FINAL
			Unclassified Excavation (C.I.P)				
			S.H. 470 (From Cross Sections)	534,413		23,478	
			S.H. 470 (Sub Excavation)	117,001			
			Wadsworth (From Cross Sections)	316,780			
			Wadsworth (Sub. Excavation)	90,932			
			Garrison Street (From Cross Sections)	2,817			
			Stene Drive (From Cross Sections)	179			
			Deer Creek Road (From Cross Sections)	220			
			Visitor Center Road (From Cross Sections)	15,429			
			Private Road (From Cross Sections)	34			
			Chatfield Entrance Road (From Cross Sections)	186			
			Chatfield Interior Road (From Cross Sections)	579			
			Entrance Road Bikepath (From Cross Sections)	228			
			Interior Road Bikepath (From Cross Sections)	97			
			Massey Draw Bikepath (From Cross Sections)	2459			
			North Tie Road (From Cross Sections)	129			
			South Tie Road (From Cross Sections)	55			
			S.H. 75 (From Cross Sections)	374			
			From Detour	17,200			
			From Structure Quantities (Ditch)	209			
			From Storm Sewer Tab. (Ditch)	30			
			Totals By Project	~~1,099,351~~	873,754	23,478	23,478
			Combined Project Totals	~~1,122,829~~ 902,232			Cu. yd.

(FOR INFORMATION ONLY)
MOISTURE DENSITY CONTROL

Item				
		Cu. Yd.		
Compaction (AASHTO T-99)				
Compaction		593,236		
Bases of Fills		136,037		
Total		729,273		
		M. Gal.		
Wetting				
-Roadway (729,273 x 0.04)		29,171		
-Dust Palliative		2,000		
Total		31,171		

ROADWAY QUANTITY BALANCE
(FOR INFORMATION ONLY)

	CU. YD.	FINAL
Unclassified Excavation (C.I.P.)		
Total For Balance	1,122,829	~~902,232~~
Embankment Material (Net)		
S.H. 470 (From Cross Sections)	180,376 *	
S.H. 470 (Uncompacted)	20,353	
S.H. 470 (Sub-Excavation)	117,001	
Wadsworth (From Cross Sections)	15,046	
Wadsworth (Sub-Excavation)	90,932	
Garrison Street (From Cross Sections)	1,976	
Stene Drive (From Cross Sections)	50	
Deer Creek Road (From Cross Sections)	400	
Visitor Center Road (From Cross Sections)	13,714	
Chatfield Entrance Road (From Cross Sections)	117,354	
Chatfield Interior Road (From Cross Sections)	43,911	
Entrance Road Bikepath (From Cross Sections)	458	
Interior Road Bikepath (From Cross Sections)	1,169	
Massey Draw Bikepath (From Cross Sections)	606	
North Tie Road (From Cross Sections)	2,537	
South Tie Road (From Cross Sections)	537	
S.H. 75 (From Cross Sections)	1,619	
From Detour	2,398	
From Structure Quantities (Emb.)	641	
From Tabulation Of Storm Sewer	1,349	
From Tabulation Of Sanitary Sewer	583	
Private Road (From Cross Sections)	579	
Total	613,589	
Embankment x Factor (1.13)		
(613,589 - 20,353) x 1.13	670,357	
Embankment Material (Uncompacted)	20,353	
Excess Excavation - (Property of Contractor)	304,951 *	
Excess Excavation - (U.S. Army Corps of Engineers) (To be Stockpiled on Corp Property as designated by the Engineer.	127,168	
Total For Balance	1,122,829	902,232

* Includes 9023 Cu. yds. From project IXFU 470-1(35)
* Property owner between Sta 720± to Sta 745± may remove approximatly 221,280 Cu Yds.
Min. R Value of 7 Required.

GENERAL NOTES

WATER ~~SHALL BE~~ WAS USED AS A DUST PALLIATIVE WHERE REQUIRED. LOCATIONS ~~SHALL BE~~ WERE AS ORDERED. IT IS ESTIMATED THAT 2,000 M. GAL. ~~WILL BE~~ WERE REQUIRED FOR THIS PROJECT, AND ~~WILL~~ WERE NOT BE PAID FOR SEPARATELY, BUT ~~SHALL BE~~ WERE INCLUDED IN THE COST FOR UNCLASSIFIED EXCAVATION (C.I.P.)

DEPTH OF MOISTURE-DENSITY CONTROL FOR THIS PROJECT ~~SHALL BE~~ WAS AS FOLLOWS:
FULL DEPTH OF ALL EMBANKMENTS.
BASES OF FILLS 0-67 FOOT

EXCAVATION REQUIRED FOR COMPACTION OF BASES OF FILLS ~~WILL BE~~ WAS CONSIDERED AS SUBSIDIARY TO THAT OPERATION AND ~~WILL NOT BE~~ WAS NOT PAID FOR SEPARATELY.

TYPE OF COMPACTION FOR THIS PROJECT ~~WILL BE~~ WAS AASHTO T-99. SUBEXCAVATION MATERIAL ~~SHALL BE~~ WAS PLACED IN 8-INCH LIFTS AND COMPACTED TO NO LESS THAN 92% STANDARD DENSITY (AASHTO T-99) AND NO LESS THAN OPTIMUM MOISTURE.

BREAK POINTS ON SLOPES AND BOTTOMS OF DITCHES ~~SHALL BE~~ WERE ROUNDED ON CONSTRUCTION FOR A PLEASING APPEARANCE. SEE STANDARDS FOR DETAILS OF CUT SLOPE TREATMENT, FLARING, AND WIDENING.

IN DESIGNATED LOCATIONS, 6.0 FEET OF SUB-EXCAVATION BELOW SUBGRADE ~~WILL BE~~ WAS REQUIRED IN CUT AREAS. SUB-EXCAVTION ~~WILL BE~~ WAS BETWEEN HINGE POINTS.

SUB-EXCAVATION ~~SHALL BE~~ WAS PAID FOR AS UNCLASSIFIED EXCAVATION (COMPLETE-IN-PLACE). A LIST OF DESIGNATED AREAS IS AS FOLLOWS:

SH470 STA 716+00 TO 743+00 761+00 TO 765+50
STA 748+00 TO 753+00
WADSWORTH STA ~~1315+50~~ 1317+00 TO 1371+00
RAMP A STA 158+00 TO 165+50
RAMP B STA 260+35 TO 270+00
RAMP C STA 353+00 TO 369+00

UTILITY LINES AS SHOWN ON THE PLAN AND PROFILE SHEETS ARE PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR'S ATTENTION IS DIRECTED TO PARAGRAPH 107.18 OF THE STANDARD SPECIFICATIONS CONCERNING UTILITIES. THE CONTRACTOR WILL CALL 534-6700 FOR UTILITY LOCATIONS 48 HOURS PRIOR TO DIGGING.

~~IT IS ESTIMATED THAT~~ 742.5 HOURS OF FLAGGING AND 201 DAYS OF TRAFFIC CONTROL SUPERVISION ~~WILL BE~~ WERE REQUIRED ON THIS PROJECT.

THE CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES TO THOSE AREAS WITHIN THE LIMITS OF DISTURBANCE AND/OR TOES OF SLOPE AS SHOWN ON THE PLANS AND CROSS-SECTIONS. ANY DISTURBANCE BEYOND THESE LIMITS ~~SHALL BE~~ WAS RESTORED TO ORIGINAL CONDITION BY THE CONTRACTOR AT HIS OWN EXPENSE. CONSTRUCTION ACTIVITIES, IN ADDITION TO NORMAL CONSTRUCTION PROCEDURES, SHALL INCLUDE THE PARKING OF VEHICLES OR EQUIPMENT, DISPOSAL OF LITTER, AND ANY OTHER ACTION WHICH WOULD ALTER EXISTING CONDITIONS.

CONCRETE PIPE JOINT FASTENERS AS SHOWN ON M STANDARD ARE REQUIRED ON ALL CONCRETE CULVERT INSTALLATION EXCLUDING SIDE DRAINS.

THE MINIMUM THICKNESS OF TOPSOIL (CONTRACTORS SOURCE) SHALL BE FOUR INCHES. ~~IT IS ESTIMATED THAT~~ 56,623 CU. YDS. ~~WILL BE~~ WERE REQUIRED BASED UPON AVERAGE THICKNESS.

~~IT IS ESTIMATED THAT~~ 500 HOURS OF BLADING ~~WILL BE~~ WERE REQUIRED ON THIS PROJECT (MIN. 135 H.P.)

FOUR INCES OF TOPSOIL AND SEEDING SHALL BE PLACED ON ALL AREAS REQUIRING RIPRAP.

FENCE ALONG RIGHT-OF-WAY, AS SHOWN ON THE PLANS, SHALL BE CONSTRUCTED PRIOR TO START OF ANY OTHER CONSTRUCTION.

CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR RESETTING ALL LAND MONUMENTS DISTURBED BY CONSTRUCTION ACTIVITY. THE WORK SHALL BE DONE UNDER THE DIRECT SUPERVISION OF A REGISTERED LAND SURVEYOR. THE CONTRACTOR SHALL FILE MONUMENT RECORDS WITH THE BOARD OF REGISTRATION OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS FOR ALL MONUMENTS RESTORED, OR RESET. THIS WORK SHALL BE INCLUDED IN THE COST OF CONSTRUCTION SURVEYING. THE CONTRACTOR SHALL INITIATE A REQUEST TO PUBLIC SERVICE COMPANY FOR ANY CONSTRUCTION RELATED TEMPORARY ELECTRICAL POWER SOURCES AS SOON AS POSSIBLE. IN SOME INSTANCES UP TO 30 DAYS MAY BE REQUIRED TO PROVIDE THE SOURCES. THE REQUEST IS TO BE PROCESSED THROUGH PUBLIC SERVICE COMPANY OF COLORADO - LIGHTING UTILIZATION AT (303) 571-7537.

F COLORADO
EPARTMENT OF HIGHWAYS
N OF HIGHWAYS
L FORM NO. 126
B., 1984

AS CONSTRUCTED	FED.ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
NO REVISIONS ☐ REVISED 12-1-87 VOID ☐	VIII	COLO.	IXFU 470-1(42) IXFU 470-1(35)	18	211

TABULATION OF SURFACING QUANTITIES

ROAD	STATION TO STATION	QUANTITY – TONS: HOT BITUMINOUS PAVEMENT (GRADING E)(HAUL & ASPHALT) BOTTOM	FINAL	INTER-MEDIATE	FINAL	INTER-MEDIATE	FINAL	TOP	FINAL	HYDRATED LIME TONS	FINAL	PROCESSING LIME TREATED SUBGRADE SQ.YDS.	FINAL	TACK COAT GAL.	FINAL
S.H.-470	DEPTH	3"		3"		2"		2"							
	768+67.35 TO 781+00.00	1853		1808		1175		1145		163		12,327		1,644	
	781+00.00 TO 783+00.00	403		392		254		247		35		2,644		356	
	783+00.00 TO 796+00.00	1279		1238		870		825		105		7,965		1138	
RAMP 'B'	DEPTH	3"		2"		2"		1½"							
	263+93.29 TO 266+88.78 INCLUDING LEG	548		355		344		250		45		3,423		484	
	266+88.78 TO 269+88.78	264		172		169		124		22		1,633		235	
	269+88.78 TO 275+88.78	358		231		224		162		29		2,233		315	
	275+88.78 TO 281+00.00	262		169		162		117		22		1,647		230	
RAMP 'D'	DEPTH	3"		2"		2"		1½"							
	470+91.02 TO 473+95.25 INCLUDING LEG	391		253		245		178		32		2,444		345	
	473+95.25 TO 477+58.91	307		200		196		143		25		1,900		273	
	477+58.91 TO 483+00.00	293		188		182		131		24		1,834		257	
STENE DRIVE	DEPTH	2"		1½"				1½"							
	6+25.00 TO 6+77.00	53		39				39		7		559		48	
	6+77.00 TO 8+20.00	42		32				32		6		430		38	
S.H.-75 WIDENING	DEPTH	2½"		1½"				1½"							
	251+65.00 TO 258+45.00	126		73				70						90	
	243+76.00 TO 262+14.00	244		139				132						173	
	250+85.00 TO 251+85.00	31		18				18						22	
WADSWORTH BLVD.	DEPTH	3"		2½"		2"		2"							
	1336+49.73 N.B. TO 1353+70.00 B.L.	1355		1103		862		841		111		8405		1204	
	1337+48.99 S.B. TO 1353+70.00 B.L.	1334		1087		851		831		109		8259		1186	
	1353+70.00 B.L. TO 1361+75.00 B.L.	1783		1486		1189		1189		152		11,522		1621	
	1361+75.00 B.L. TO 1364+82.00 B.L.	462		375		293		285		38		2,865		410	
	1364+82.00 B.L. TO 1375+50.00 B.L.	2029		1658		1300		1274		165		12,533		1809	
	IRREGULARITIES (10%)	1342		—		—		—		—		—		—	
	TABLE SUB TOTALS	14,759		11,016		8,316		8,033		1,090		82,623		11,878	

ROAD	STATION TO STATION	QUANTITY – TONS: HOT BITUMINOUS PAVEMENT (GRADING E)(HAUL & ASPHALT) BOTTOM	FINAL	INTER-MEDIATE	FINAL	INTER-MEDIATE	FINAL	TOP	FINAL	HYDRATED LIME TONS	FINAL	PROCESSING LIME TREATED SUBGRADE SQ.YDS.	FINAL	TACK COAT GAL.	FINAL
DEER CREEK ROAD	DEPTH	2"		1½"				1½"							
	38+00.00 TO 40+00.00	22		16				16						20	
	40+00.00 TO 42+00.00	46		33				32						41	
GAR. – UTE	DEPTH	2"		1½"				1½"							
	93+25.00 TO 107+40.00	622		454				441		79		5,974		558	
CARR – SOBEY	DEPTH	2"		1½"				1½"							
	7+00.00 TO 8+59.25	58		42				41		7		566		52	
CHATFIELD ROADS: VISITOR-CENTER RD.	DEPTH	2½"		1½"				1½"							
	45+00.00 TO 45+67.21	68		40				39		7		508		49	
	45+67.21 TO 48+16.14	186		110				107		19		1410		134	
	48+16.14 TO 68+51.86	995		578				560		102		7690		712	
ENTRANCE ROAD	DEPTH	2½"		1½"				1½"							
	ENTRANCE 0+61.00 TO 23+36.00	1185		693				676		123		9315		851	
	EXIT 0+61.00 TO 23+36.00	1135		662				643		116		8788		814	
	BIKEPATH 0+80 TO 9+30 107+70 TO 119+85									16 12		1195 900			
INTERIOR ROAD	DEPTH	2½"		1½"				1½"							
	4+00.00 TO 36+80.00	1503		872				842		154		11,662		1075	
	AUXILARY ROADS	302		174				166		3.1		2,381		215	
	DEPTH	3"						3"							
	FROM DETOUR TAB	2507						2507		—		—		—	
	IRREGULARITIES (10%)	813		—		—		—		—		—		—	
	TABLE SUB TOTALS	9442		3,674		0		6,070		666		50,389		4521	
	PROJECT TOTALS			~~61,310~~ 61,858.23						~~1756~~ 1777.52		~~133,012~~ 134,244		~~46,399~~ 46,944	

Rate of application of Quicklime = 20.5 lbs./Sq. Yd. Per 8" Layer.
Rate of application of Hydrated Lime = 26.4 lbs./Sq. Yd. Per 8" Layer.
Rate of asphaltic Concrete application = 110 lbs./Sq. Yd./in. depth.

PAVEMENT DESIGN CRITERIA

	18K EDLA	R VALUE OF SUBGRADE	* W S N-0.8	T	LIFTS BOTTOM — TOP
S.H. 470	531	7	4.4	10"	3"-3"-2"-2"
Wadsworth Blvd.	400	7	4.1	9½"	3"-2½"-2"-2"
Wadsworth Ramps	205	7	3.7	8½"	3"-2"-2"-1½"
S.H. 75/Chatfield Park Roads	13	7	2.9	5½"	2½"-1½"-1½"
All other Roads	16	7	2.1	5"	2"-1½"-1½"

Based upon a Regional Factor of 1.75 and a serviceability index of 2.5
* 8" of Lime Stabilized Subgrade = 0.10/Inch

STRENGTH COEFFICIENT

Hot Bituminous Pavement = 0.44

STATE OF COLORADO
THE DEPARTMENT OF HIGHWAYS
DIVISION OF HIGHWAYS
FORM NO. 1256
REV. FEB. 1984

AS CONSTRUCTED								
NO REVISIONS 12-1-87	REVISED		VOID		FED.ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
					VIII	COLO.	IXFU 470-1(42) IXFU 470-1(35)	30	211

LEGEND:

- Topsoil
- Base Course
- Fill
- Water
- Sand
- Clay
- Claystone
- Sandstone
- Limestone
- Silty
- Claycy
- AA Asphalt

2 Inch I.D. California Liner Sample

1-3/8 Inch I.D. Split Spoon Sample

Shelby Tube Sample

TEST BORING:

Blows Per Foot — 50 F F — 4" Hole Size

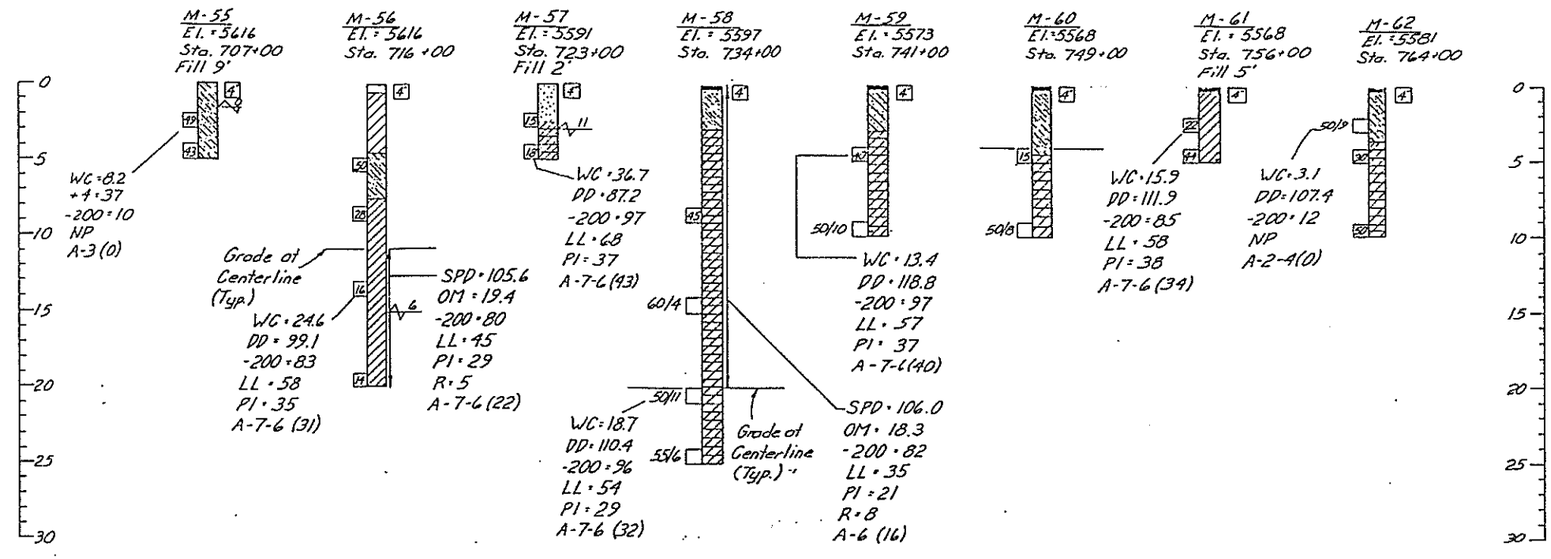
7 Water Table and Days After Drilling Water Level Was Measured

Depth To Invert of Concrete Box Culvert

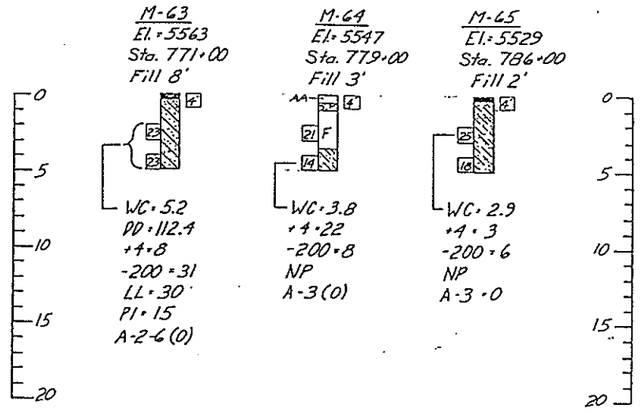
LABORATORY TEST RESULTS:

WC = Water Content (%)
DD = Dry Density (pcf)
+4 = Percentage retained on #4 Sieve
-200 = Percentage passing No. 200 Sieve
LL = Liquid Limit (%)
PI = Plasticity Index (%)
NP = Non-Plastic
UC = Unconfined Compressive Strength (psf)
SPD = Standard Proctor Density (Pcf)
OM = Optimum Moisture Content (%)
R = R Value

LOGS OF EXPLORATORY HOLES

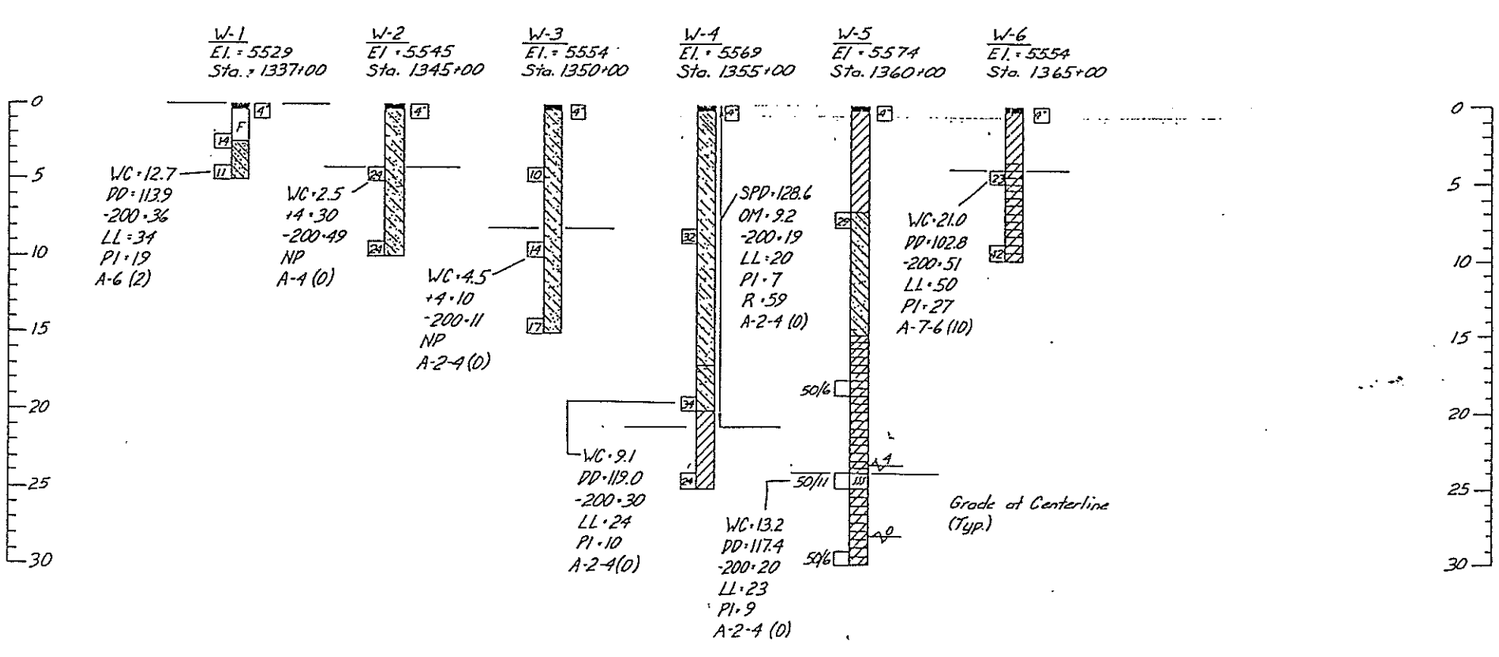


SH-470 MAINLINE



SH-470 MAINLINE

Information on this sheet from:
Geotechnical Investigation Report
Chen and Associates.
Job no. 1 750 84



WADSWORTH BOULEVARD RELOCATION

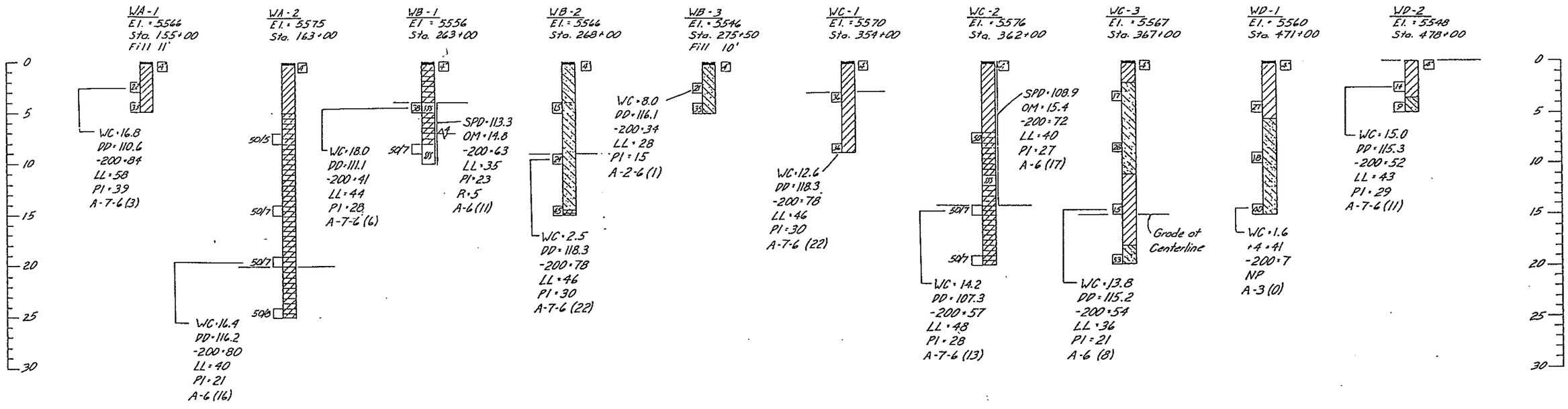
DWG. EH-1

OF COLORADO
DEPARTMENT OF HIGHWAYS
SION OF HIGHWAYS
H.&FORM NO. 126
FEB. 1984

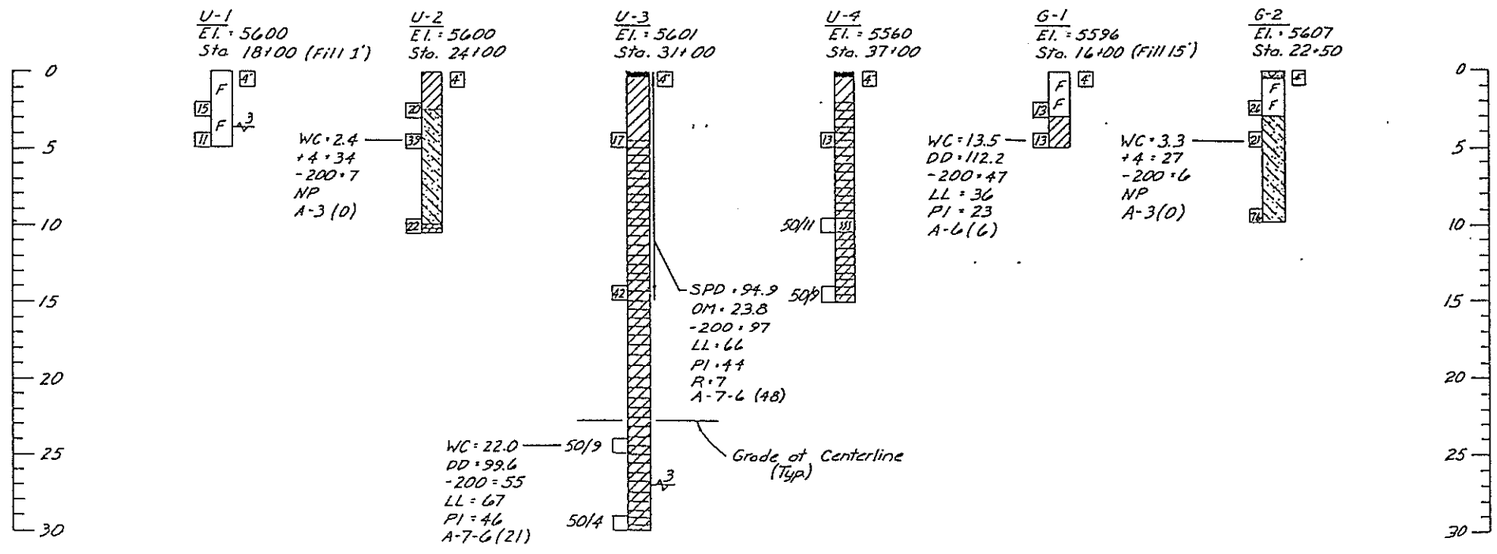
AS CONSTRUCTED					
NO REVISIONS 12-1-87	REVISED		VOID		

FED.ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLO.	IXFU 470-1(42) IXFU 470-1(35)	31	211

LOGS OF EXPLORATORY HOLES



WADSWORTH BOULEVARD INTERCHANGE



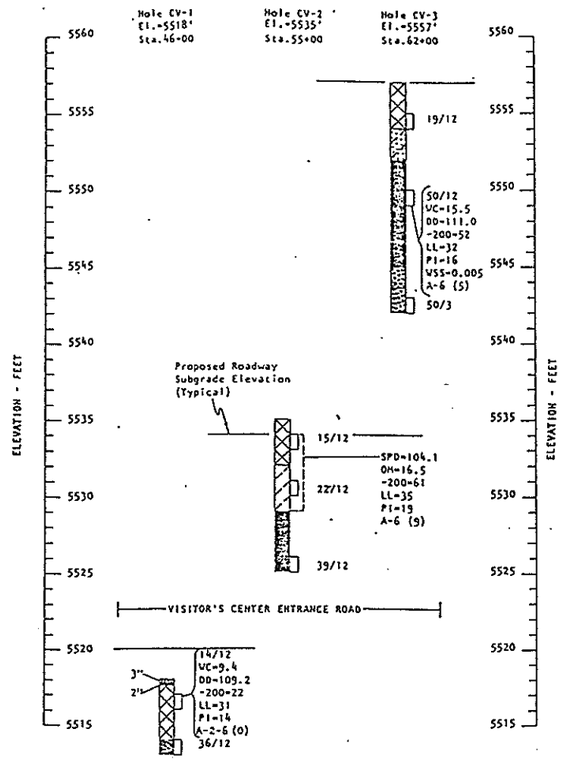
UTE AVE. AND GARRISON ST. RELOCATION

Information on this sheet from:
Geotechnical Investigation Report
Chen and Associates.
Job no. 1 750 84

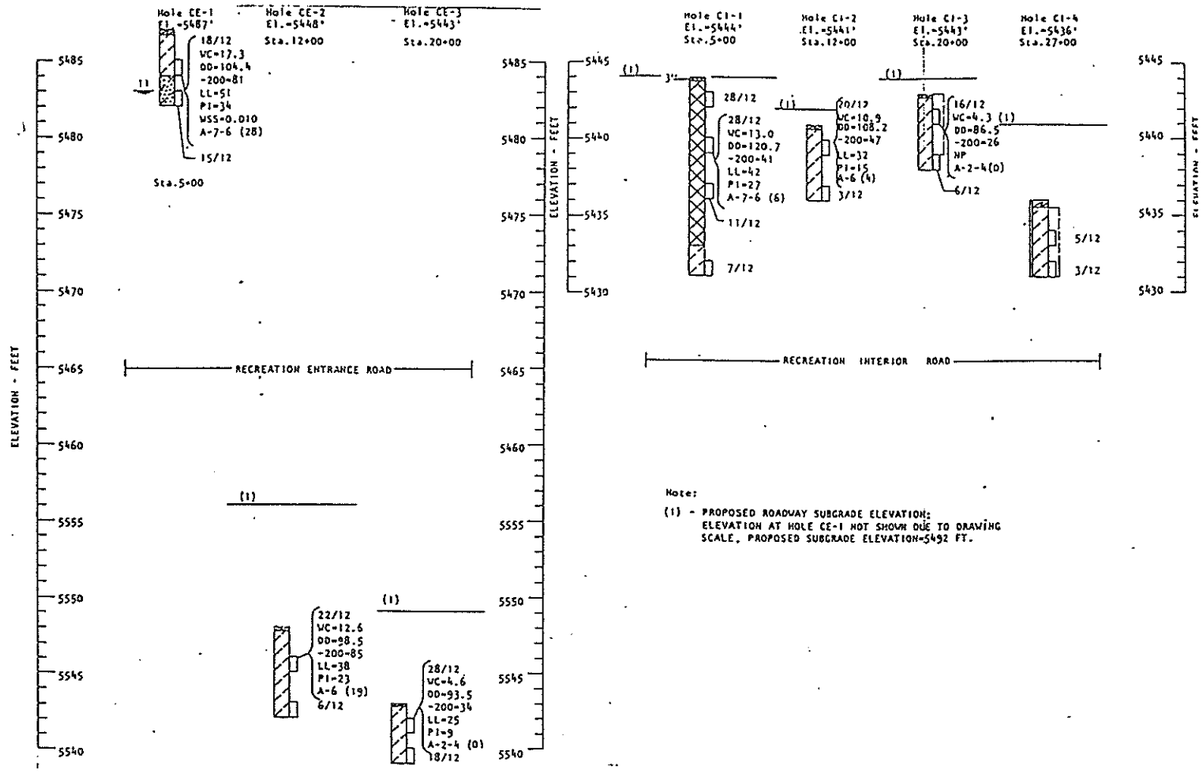
LOGS OF EXPLORATORY HOLES

AS CONSTRUCTED			
NO REVISIONS 12-1-87	REVISED	VOID	

FED.ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLO.	IXFU 470-1(42) IXFU 470-1(35)	31A	211



CHATFIELD VISITOR'S CENTER ENTRANCE ROAD



Note:
(1) - PROPOSED ROADWAY SUBGRADE ELEVATION: ELEVATION AT HOLE CE-1 NOT SHOWN DUE TO DRAWING SCALE, PROPOSED SUBGRADE ELEVATION=5492 FT.

CHATFIELD RECREATION ENTRANCE ROAD & INTERIOR ROAD

Information on this sheet from:
Geotechnical Investigation Report
Chen and Associates
Job no. 1 750A 84

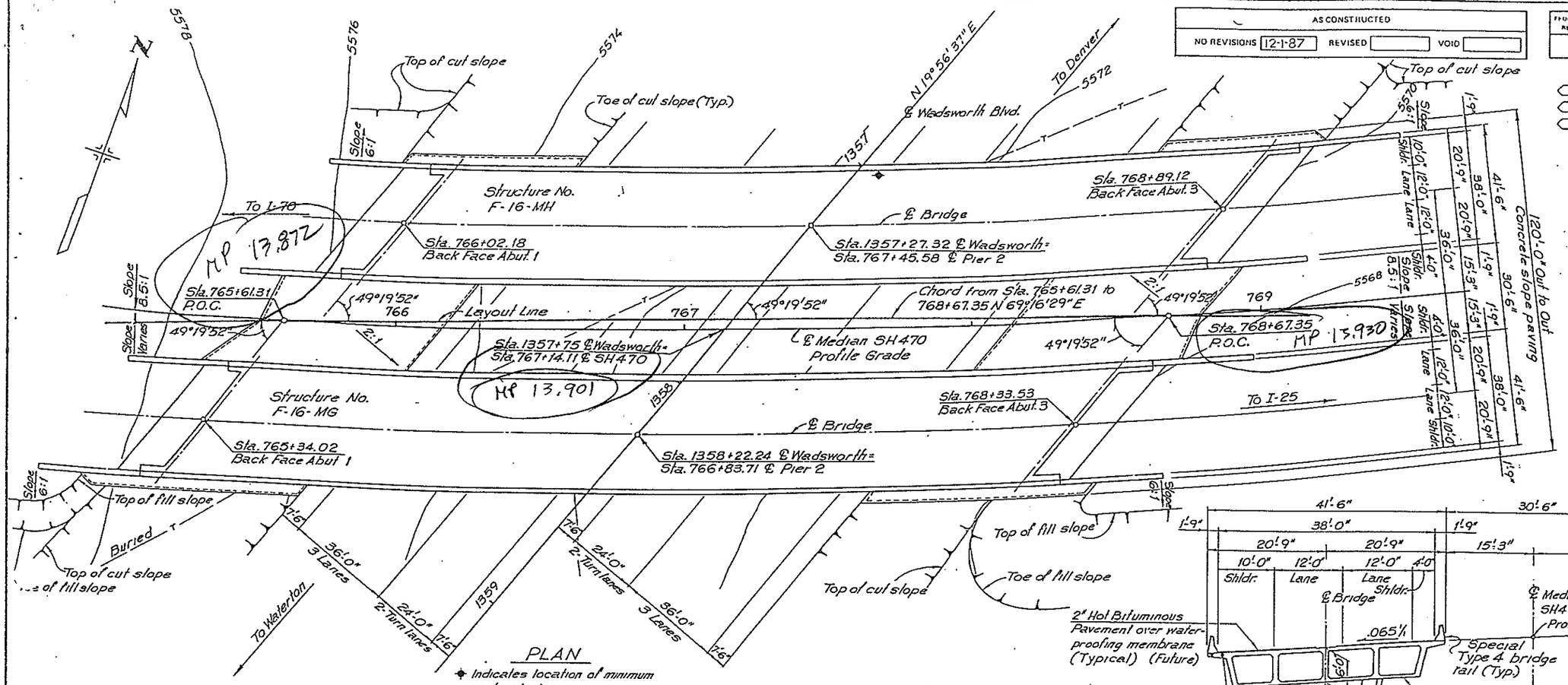
AS CONSTRUCTED			
NO REVISIONS 12-1-87	REVISED	VOID	

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(42) IXFU 470-1(35)	34	211

REVISIONS		

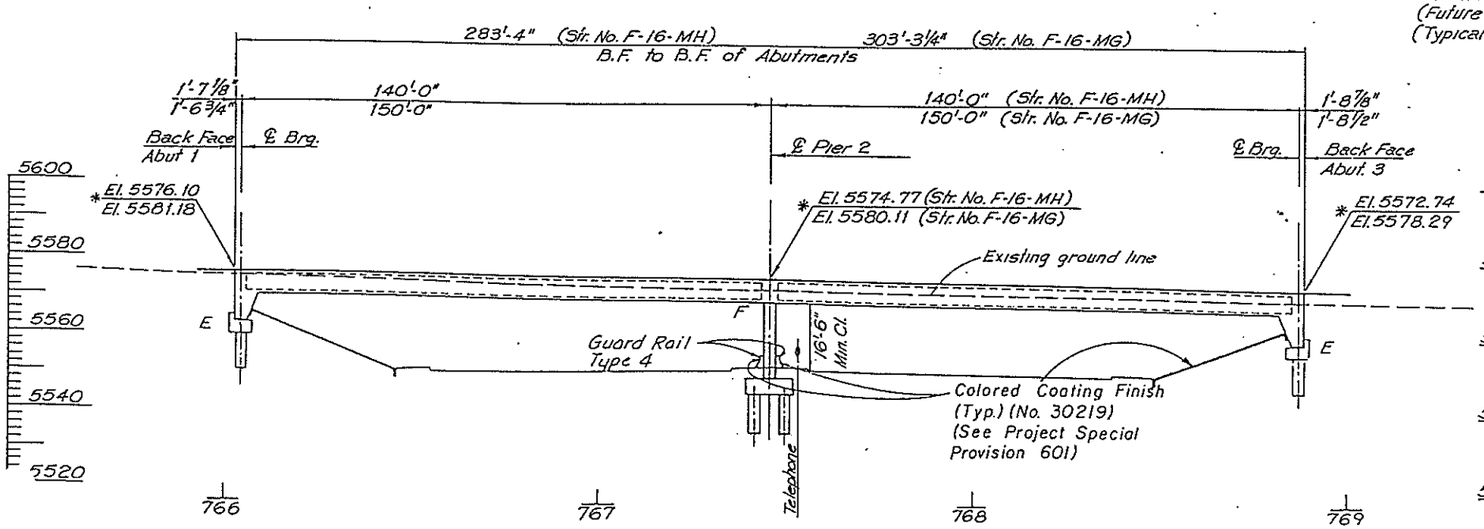
CURVE DATA: (For SH470)

Δ = 77° 3' 53"	Δc = 71° 3' 53"
Ts = 2432.43'	Dc = 2° 00' 00"
Es = 790.37'	Tc = 2045.88'
θs = 3° 00' 00"	Lc = 3553.24'
Ls = 300.00'	Rc = 2864.79'
L.T. = 200.03'	e = .065
S.T. = 100.03'	



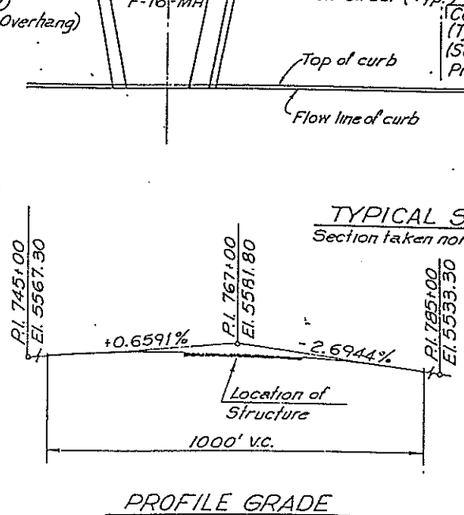
PLAN

* Indicates location of minimum vertical clearance



SECTION

℄ Str. No. F-16-MH Shown
℄ Str. No. F-16-MG Similar as noted
* Finished Roadway elevation



PROFILE GRADE SH470

TYPICAL SECTION

Section taken normal to ℄ SH470

Live Loading: HS 20-44 & Interstate Alternate

KKBNA, INC. CONSULTING ENGINEERS WHEAT RIDGE, COLORADO

DIVISION OF HIGHWAYS

S. H. 470 OVER WADSWORTH BOULEVARD

GENERAL LAYOUT

Designer T. Mellon	Structure Numbers	F-16-MG (E.B.L.)
Detailer B. Cox		F-16-MH (W.B.L.)
Drawing Number B 2 of 30 Drawings		

Original Scale : 1" = 100'

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(42) IXFU 470-1(35)	74	211
AS CONSTRUCTED				
NO REVISIONS 12-1-87	REVISED		VOID	

S.H. 470 STA. 705 TO 735

(7) Curve Data

Δ = 31°35'19"	e = 0.38 %
Ts = 1720.78'	M.D.S. = 70 M.P.H.
Es = 225.11'	S.S.D. = 850'
Δc = 29°35'19"	e = 1°00'00"
Dc = 1°00'00"	Ls = 200'
Tc = 1513.22'	L.T. = 133.34'
Lc = 2958.87'	S.T. = 66.67'
Rc = 5729.58'	

(303) Curve Data — Garrison St.

Δc = 88°39'15"	e = 0.035 %
Dc = 7°38'22"	M.D.S. = 40 M.P.H.
Tc = 732.59'	S.S.D. = 385'
Lc = 1160.48'	
Rc = 750.00'	

(304) Curve Data (S.L.)

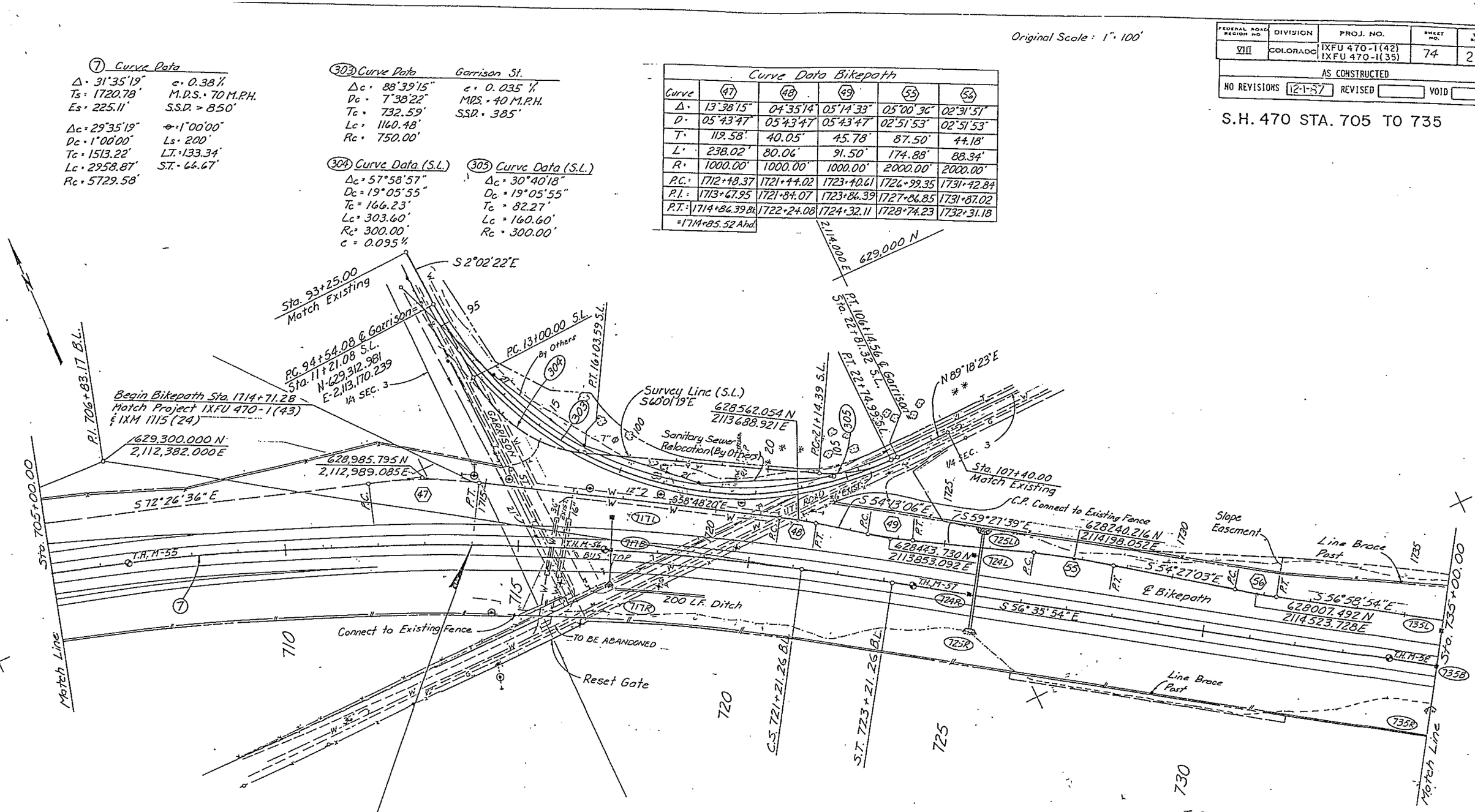
Δc = 57°58'57"	
Dc = 19°05'55"	
Tc = 166.23'	
Lc = 303.60'	
Rc = 300.00'	
c = 0.095 %	

(305) Curve Data (S.L.)

Δc = 30°40'18"	
Dc = 19°05'55"	
Tc = 82.27'	
Lc = 160.60'	
Rc = 300.00'	

Curve Data Bikepath

Curve	(47)	(48)	(49)	(55)	(56)
Δ	13°38'15"	04°35'14"	05°14'33"	05°00'36"	02°31'51"
D	05°43'47"	05°43'47"	05°43'47"	02°51'53"	02°51'53"
T	119.58'	40.05'	45.78'	87.50'	44.18'
L	238.02'	80.06'	91.50'	174.88'	88.34'
R	1000.00'	1000.00'	1000.00'	2000.00'	2000.00'
P.C.	1712+48.37	1721+44.02	1723+40.61	1726+99.35	1731+42.84
P.I.	1713+67.95	1721+84.07	1723+86.39	1727+86.85	1731+87.02
P.T.	1714+86.39 Bk =1714+85.52 Ahd.	1722+24.08	1724+32.11	1728+74.23	1732+31.18



STA. 714+00.00 BEGIN IXFU 470-1(42)
STA. 714+00.00 END PROJ. IXFU 470-1(43)

Jefferson County
T6S, R69W, Sec. 3

BENCHMARKS

B.M. 706 - N0.5 Rebar 180' Lt: Sta. 705+80 El. 5629.45

B.M. 712 - N0.5 Rebar 205' Lt: Sta. 712+40 El. 5610.81

B.M. 732 - CL. Marker Sta. 732+59.42 El. 5614.57

UTILITIES

Mountain Bell
Public Service Company of Colorado
Ken Caryl Ranch Water & Sanitation Dist.
Denver Water Board

AS CONSTRUCTED			
NO REVISIONS	12-1-87	REVISED	VOID

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO	SHEET NO	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(42) IXFU 470-1(35)	75	211

GARRISON ST. - UTE ROAD

P.I. Sta 95+75.00
El. 5616.15
+2.00%
Match Existing
Sta. 93+25.00
e = 0.020/0.00
P.C. 94+54.08
P.C. 14.75
50'
e = 0.035
SSD = 318'
MDS > 40 M.P.H.
15.50
P.T. 15.54
200' V.C.
-0.615%
P.I. 5611.69
10.95
P.C. 12.92
R = 750'
MDS = 40 M.P.H. SSD = 385'
400' V.C.
SSD = 649' MDS > 50 M.P.H.
P.T. 07.49
-2.10%
e = 0.035
P.T. 106+14.56
50'
e = 0.020/0.020
Match Existing
Sta. 107+40.00
Runout
125' Superelevation Trans.
125' Superelevation Trans.
Runout

95+00
100+00
105+00

5620
5610
5600
5590
5580

100' V.C.
P.C. 10.63
10.22
P.T. 10.25
-1.25%
P.I. Sta. 1713+50
El. 5610.00
Sta. 1714+71.28
End IXFU 470-1(43)
Sta. 1714+71.28
Begin IXFU 470-1(42)
P.T. Sta. 1714+86.39 BK =
P.T. Sta. 1714+85.52 AH
P.I. 5613.25
+0.50%
120'
P.C. 12.75
200' V.C.
P.T. 08.80
-4.45%
P.C. 95.45
92.28
200' V.C.
P.T. 91.67
P.I. Sta. 1729+50
El. 5594.02
+0.67%
-1.26%
See Sheet P.P. 6
P.C. 93.68
93.78
100' V.C.
P.T. 93.89
54" RCP
Inv. El. @ ℄ 5583.20
P.I. 5591.00

5640
5630
5620
5610
5600
5590
5580

600' V.C.
-4.0025%
P.C. 24.01
P.T. 08.05
14.02
TH-11-55
1715+00
1720+00
1725+00
1730+00
BIKEWAY
Tele.
16" Gas
Tele.
Gas
TH-11-56
TH-11-56
Type C Inlet
Inv. El. 5608.00
P.I. Sta. 711+00
El. 5612.00
54" CSP
36" Water
21" San.
(To be Abandoned)
36" Water
(To be abandoned)
-1.3153%
Profile Grade
TH-11-57
STA. 714+00 BEGIN IXFU 470-1(42)
STA. 714+00 END IXFU 470-1(43)
Type C Inlet
Inv. El. 5598.10
S.H. 470
54" RCP
Inv. El. @ ℄ 5583.64
24" RCP
Inv. El. @ ℄ 5571.53

5630
5620
5610
5600
5590
5580
5570
5560

05+00
710+00
715+00
720+00
725+00
730+00
735+00

Embankment
Embankment x 1.13
Excavation
719+87
34,430
36,346
64,507
160,550

PLATE 2 FULL CROSS SECTION

(8) Curve Data
Δ = 7.7°03'53"
Ts = 2432.43
Es = 799.10'

Δc = 71°03'53"
Dc = 2°00'00"
Tc = 2045.88'
Lc = 3553.24'
Rc = 2864.79'

e = 0.065 ft
M.O.S. = 70 M.P.H.
S.S.D. = > 850'

e = 3°00'00"
Ls = 300.00'
L.T. = 200.03'
S.T. = 100.03'

(319) Curve Data
Δc = 90°14'30"
Dc = 114°35'30"
Tc = 50.21'
Lc = 78.75'
Rc = 50.00'

Curve Data Bikepath

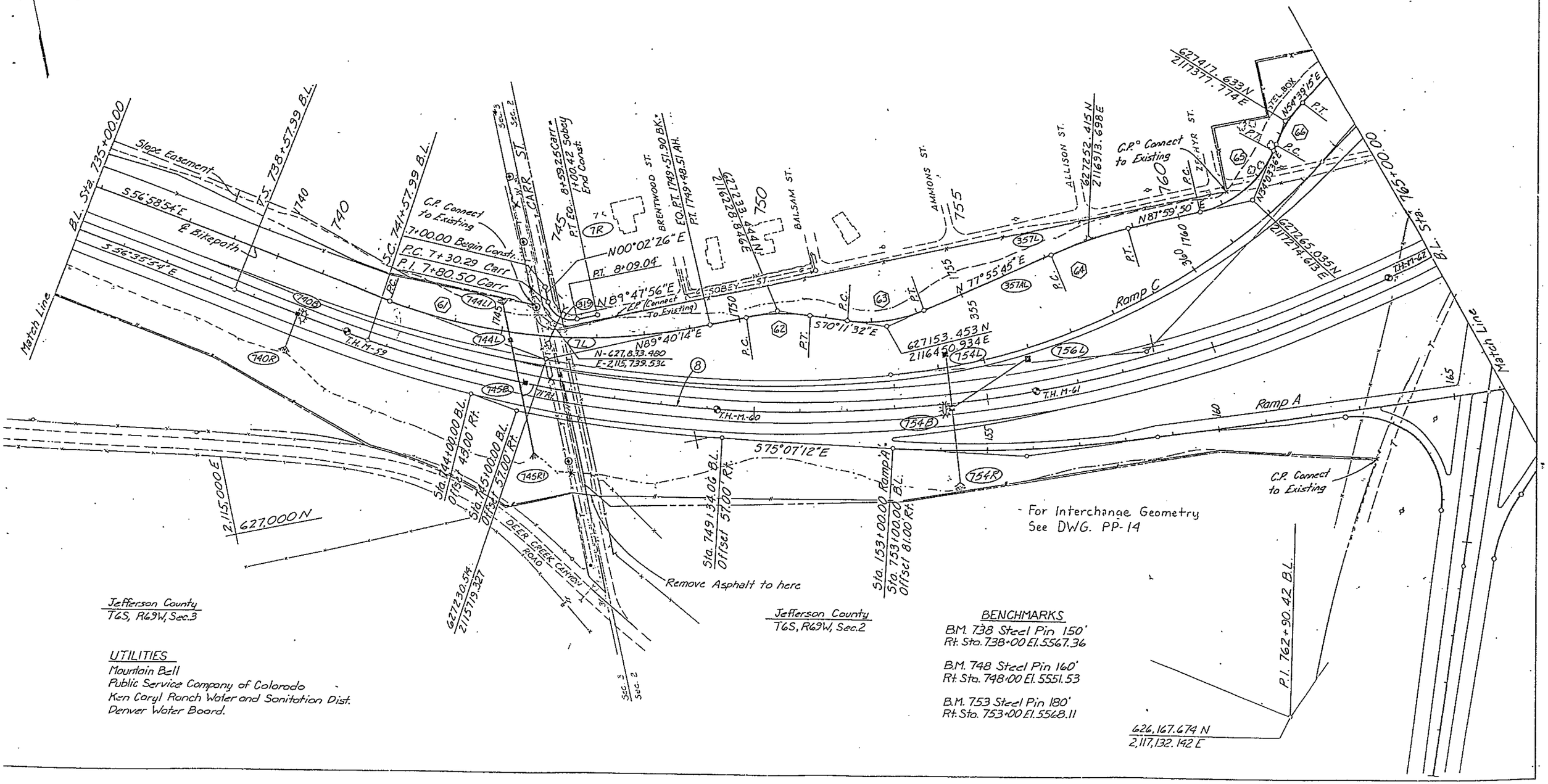
Curve	(61)	(62)	(63)	(64)	(65)	(66)
Δ	33°20'53"	20°08'15"	31°52'44"	10°04'05"	53°56'14"	20°35'39"
D	4°46'29"	14°19.26"	19°05'55"	5°43'47"	25°27'53"	19°05'55"
T	359.92'	71.03'	85.68'	88.09'	114.49'	54.50'
L	698.44'	140.59'	166.92'	175.72'	211.81'	107.83'
R	1200.00'	400.00'	300.00'	1000.00'	225.00'	300.00'
P.C.	1742+53.47	1750+27.58	1752+47.52	1757+13.89	1760+48.17	1762+75.19
P.I.	1746+12.89	1750+98.61	1753+33.20	1758+01.98	1761+62.66	1763+29.69
P.T.	1744+51.90	1751+68.17	1754+14.43	1758+89.61	1762+59.99	1763+83.02

AS CONSTRUCTED
NO REVISIONS 12-1-87 REVISED [ ] VOID [ ]

FED.ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLO.	IXFU 470-1(42) IXFU 470-1(35)	76	211

SH.-470 STA. 735 TO 765

Original Scale: 1"=100'



Jefferson County
T6S, R69W, Sec.3

Jefferson County
T6S, R69W, Sec.2

UTILITIES
Mountain Bell
Public Service Company of Colorado
Ken Caryl Ranch Water and Sanitation Dist.
Denver Water Board.

BENCHMARKS
B.M. 738 Steel Pin 150' Rt. Sta. 738+00 El. 5567.36
B.M. 748 Steel Pin 160' Rt. Sta. 748+00 El. 5551.53
B.M. 753 Steel Pin 180' Rt. Sta. 753+00 El. 5568.11

AS CONSTRUCTED				
NO REVISIONS 12-1-37	REVISED		VOID	

FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLO.	IXFU 470-1(42) IXFU 470-1(35)	77	211

S.H. 470 - STA. 765 TO 797

Original Scale 1"=100'

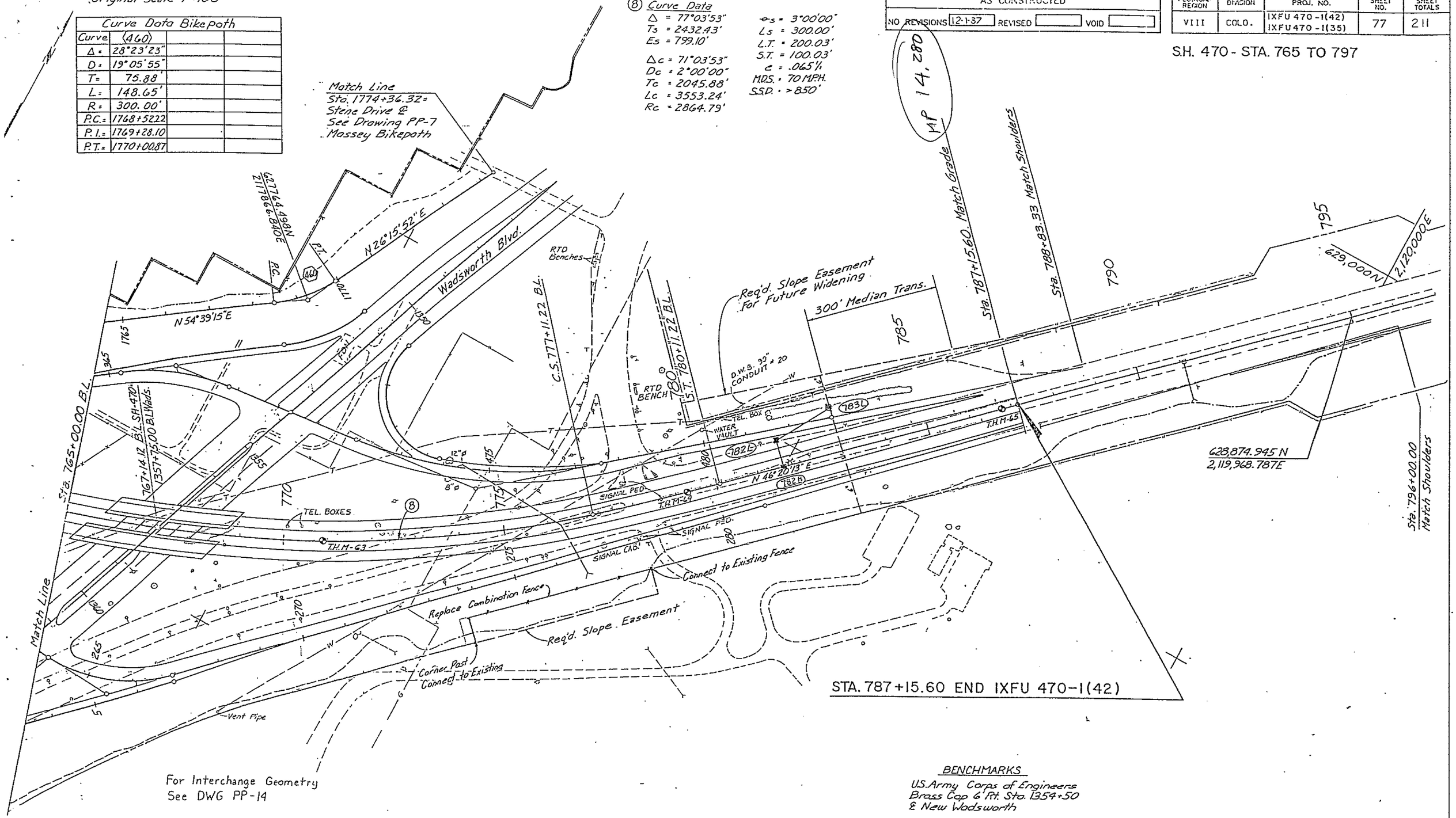
Curve Data Bikepath			
Curve	(460)		
Δ =	28°23'23"		
D =	19°05'55"		
T =	75.88'		
L =	148.65'		
R =	300.00'		
P.C. =	1768+52.22		
P.I. =	1769+28.10		
P.T. =	1770+00.87		

(8) Curve Data

Δ = 77°03'53"
Ts = 2432.43'
Es = 799.10'

Δc = 71°03'53"
Dc = 2°00'00"
Tc = 2045.88'
Lc = 3553.24'
Rc = 2864.79'

θs = 3°00'00"
Ls = 300.00'
L.T. = 200.03'
S.T. = 100.03'
e = .065%
M.D.S. = 70 M.P.H.
S.S.D. = >850'



For Interchange Geometry
See DWG PP-14

BENCHMARKS

U.S. Army Corps of Engineers
Brass Cap 6' Rt. Sta. 1354+50
℄ New Wadsworth

B.M. 783 Power Pole @ N. R.O.W. Fence
Sta. 783+40 El. 5544.47

B.M. 791 N.W. Inside Corner 'C' Inlet
Sta. 791+22 El. 5517.71

AS CONSTRUCTED					
NO REVISIONS	12-1-87	REVISED		VOID	

FEDERAL ROAD REGION NO	DIVISION	PROJ NO	SHEET NO	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(42) IXFU 470-1(35)	78	211

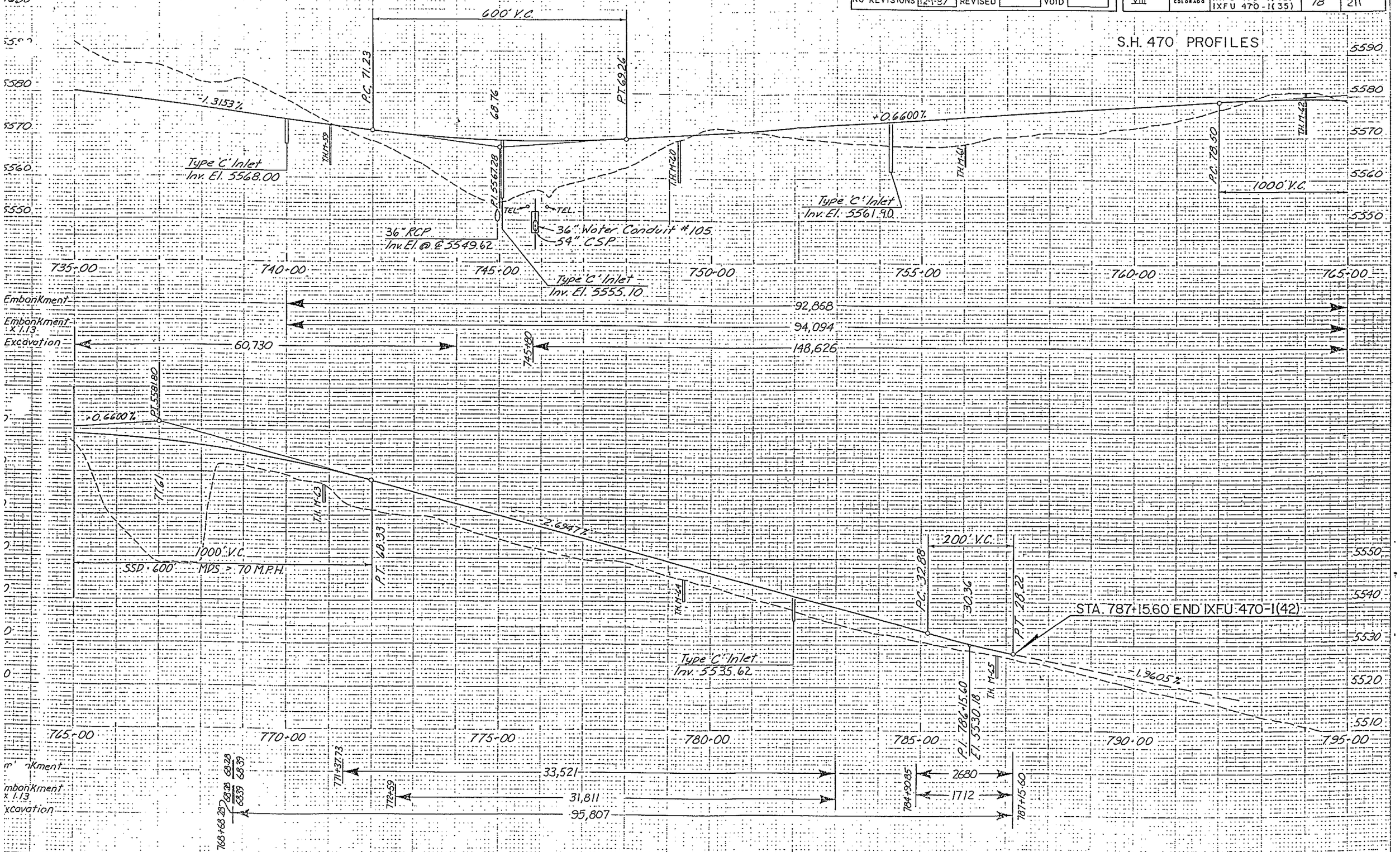


PLATE 3 FULL CROSS SECTION

AS CONSTRUCTED				
NO REVISIONS		REVISED 12-1-87	VOID	

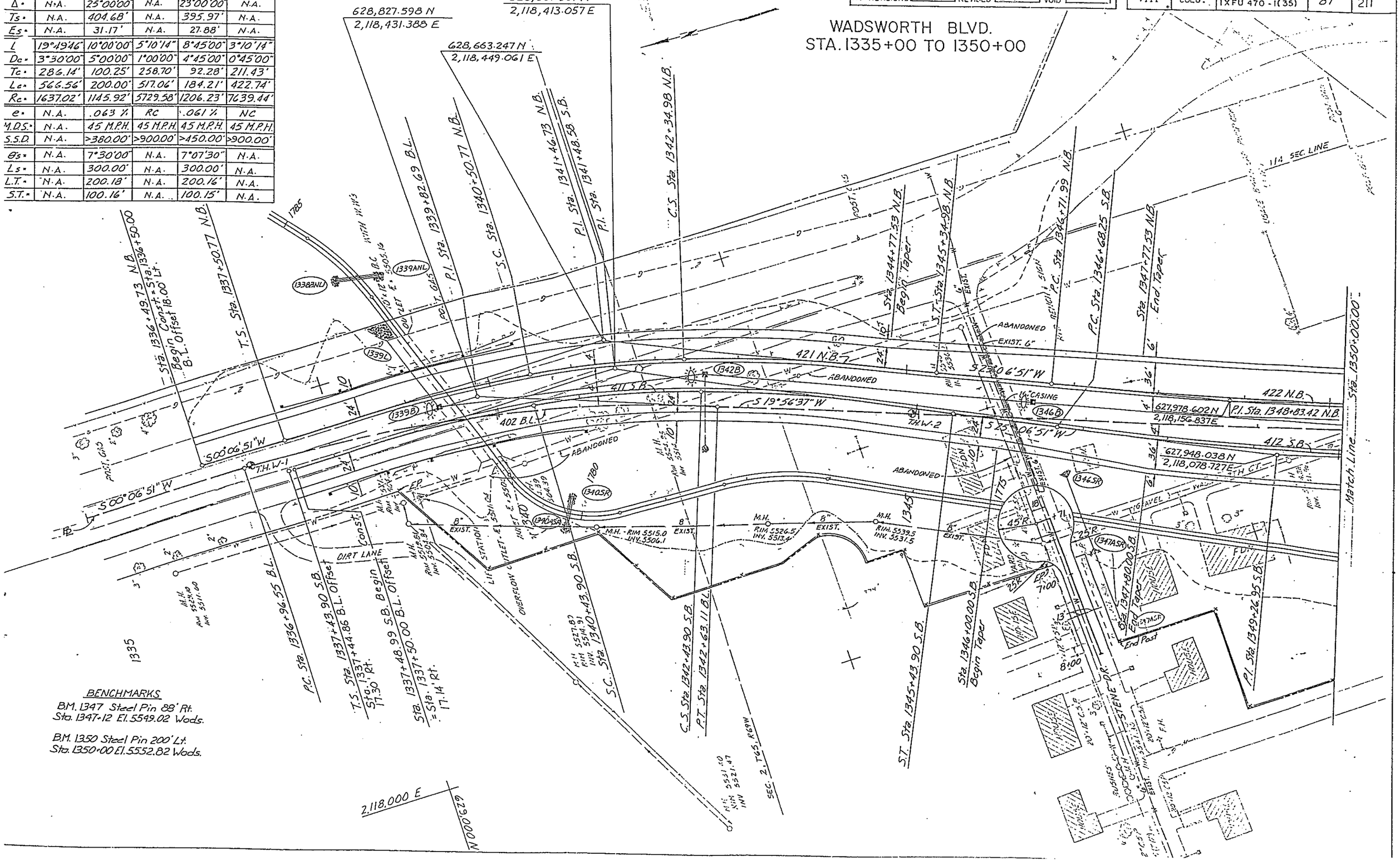
FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLO.	IXFU 470-1(42) IXFU 470-1(35)	81	211

WADSWORTH BLVD.
STA. 1335+00 TO 1350+00

Original Scale 1" = 50'

Curve Data

Curve	402 B.L.	411 S.B.	412 S.B.	421 N.B.	422 N.B.
Δ =	N.A.	25°00'00"	N.A.	23°00'00"	N.A.
Ts =	N.A.	404.68'	N.A.	395.97'	N.A.
Es =	N.A.	31.17'	N.A.	27.88'	N.A.
L	19°49'46"	10°00'00"	5°10'14"	8°45'00"	3°10'14"
Dc =	3°30'00"	5°00'00"	1°00'00"	4°45'00"	0°45'00"
Tc =	286.14'	100.25'	258.70'	92.28'	211.43'
Lc =	566.56'	200.00'	517.06'	184.21'	422.74'
Rc =	1637.02'	1145.92'	5729.58'	1206.23'	7639.44'
e =	N.A.	.063 %	RC	.061 %	NC
M.D.S. =	N.A.	45 M.P.H.	45 M.P.H.	45 M.P.H.	45 M.P.H.
S.S.D.	N.A.	>380.00'	>900.00'	>450.00'	>900.00'
θs =	N.A.	7°30'00"	N.A.	7°07'30"	N.A.
Ls =	N.A.	300.00'	N.A.	300.00'	N.A.
L.T. =	N.A.	200.18'	N.A.	200.16'	N.A.
S.T. =	N.A.	100.16'	N.A.	100.15'	N.A.



BENCHMARKS

B.M. 1347 Steel Pin 88' Rt.
Sta. 1347+12 El. 5549.02 Wads.

B.M. 1350 Steel Pin 200' Lt.
Sta. 1350+00 El. 5552.82 Wads.

AS CONSTRUCTED				
NO REVISIONS 12-1-87	REVISED	VOID		

FEDERAL ROAD REGION NO	DIVISION	PROJ. NO	SHEET NO	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(42) IXFU 470-1(35)	82	211

STENE DR. & WADSWORTH BLVD.
PROFILES

Original Scale:
1" = 50' Horiz.
1" = 5' Vert.

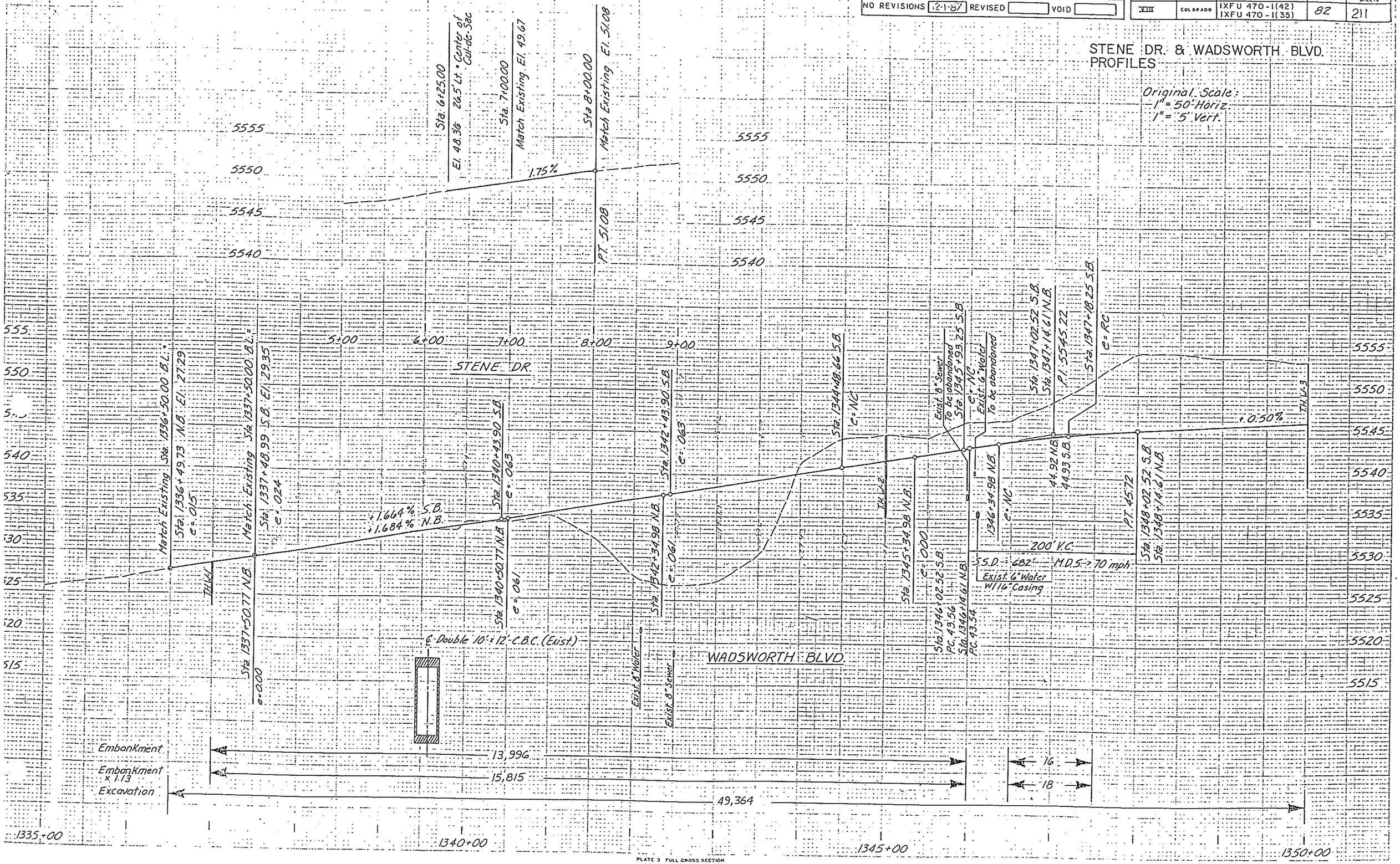


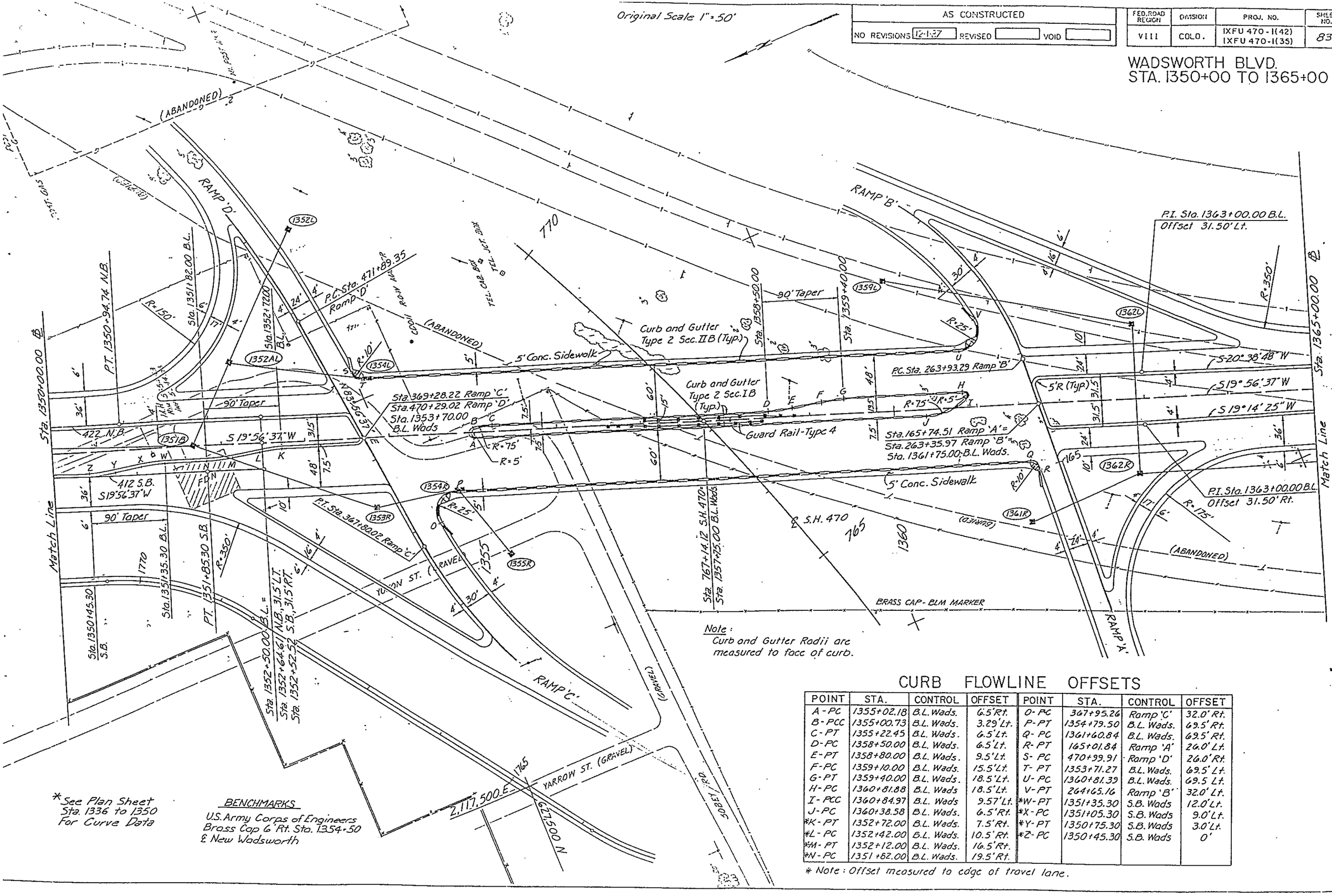
PLATE 3 FULL CROSS SECTION

Original Scale 1"=50'

AS CONSTRUCTED			
NO REVISIONS 12-1-37	REVISED	VOID	

FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLO.	IXFU 470-1(42) IXFU 470-1(35)	83	211

WADSWORTH BLVD.
STA. 1350+00 TO 1365+00



Note:
Curb and Gutter Radii are measured to face of curb.

*See Plan Sheet Sta. 1336 to 1350 For Curve Data

BENCHMARKS
U.S. Army Corps of Engineers Brass Cap 6' Rt. Sta. 1354+50 & New Wadsworth

CURB FLOWLINE OFFSETS

POINT	STA.	CONTROL	OFFSET	POINT	STA.	CONTROL	OFFSET
A-PC	1355+02.18	B.L. Wads.	6.5' Rt.	O-PC	367+95.26	Ramp 'C'	32.0' Rt.
B-PCC	1355+00.73	B.L. Wads.	3.29' Lt.	P-PT	1354+79.50	B.L. Wads.	69.5' Rt.
C-PT	1355+22.45	B.L. Wads.	6.5' Lt.	Q-PC	1361+60.84	B.L. Wads.	69.5' Rt.
D-PC	1358+50.00	B.L. Wads.	6.5' Lt.	R-PT	165+01.84	Ramp 'A'	26.0' Lt.
E-PT	1358+80.00	B.L. Wads.	9.5' Lt.	S-PC	470+99.91	Ramp 'D'	26.0' Rt.
F-PC	1359+10.00	B.L. Wads.	15.5' Lt.	T-PT	1353+71.27	B.L. Wads.	69.5' Lt.
G-PT	1359+40.00	B.L. Wads.	18.5' Lt.	U-PC	1360+81.39	B.L. Wads.	69.5 Lt.
H-PC	1360+81.88	B.L. Wads	18.5' Lt.	V-PT	264+65.16	Ramp 'B'	32.0' Lt.
I-PCC	1360+84.97	B.L. Wads	9.57' Lt.	*W-PT	1351+35.30	S.B. Wads	12.0' Lt.
J-PC	1360+38.58	B.L. Wads.	6.5' Rt.	*X-PC	1351+05.30	S.B. Wads	9.0' Lt.
*K-PT	1352+72.00	B.L. Wads.	7.5' Rt.	*Y-PT	1350+75.30	S.B. Wads	3.0' Lt.
*L-PC	1352+42.00	B.L. Wads.	10.5' Rt.	*Z-PC	1350+45.30	S.B. Wads	0'
*M-PT	1352+12.00	B.L. Wads.	16.5' Rt.				
*N-PC	1351+62.00	B.L. Wads.	19.5' Rt.				

* Note: Offset measured to edge of travel lane.

AS CONSTRUCTED
NO REVISIONS 12-1-37 REVISED [ ] VOID [ ]

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(42) IXFU 470-1(35)	84	211

WADSWORTH BLVD. PROFILE
STA. 1350 TO 1365

℄ S.H. 470

Telephone

Sta 1352+50.00 B.L.
Sta 1352+52.52 S.B.
Sta 1352+64.61 N.B.
El. 47.97

TH V-4

Existing Ground after Bridge Construction

TH V-3

N.B. & S.B. Profile Grade

+0.50%

TH V-5

P.I. 5551.97

-0.542%

TH V-6

Sta 1351+35.30 S.B.

6" RC

Sta 1352+60.30 S.B.

8" NC

Type 'C' Inlet
Inv. El. 5540.10

P.C. 51.47

517.1

200' V.C.

SSD > 600' MDS > 70 MPH

P.T. 51.43

P.C. 50.35

600' V.C.

18" RCP
Inv. El. @ ℄ 5542.88

65 60 55 50 45 40

5565 5560 5555 5550 5545 5540

1350+00 1355+00 1360+00 1365+00

kment
kment
tion

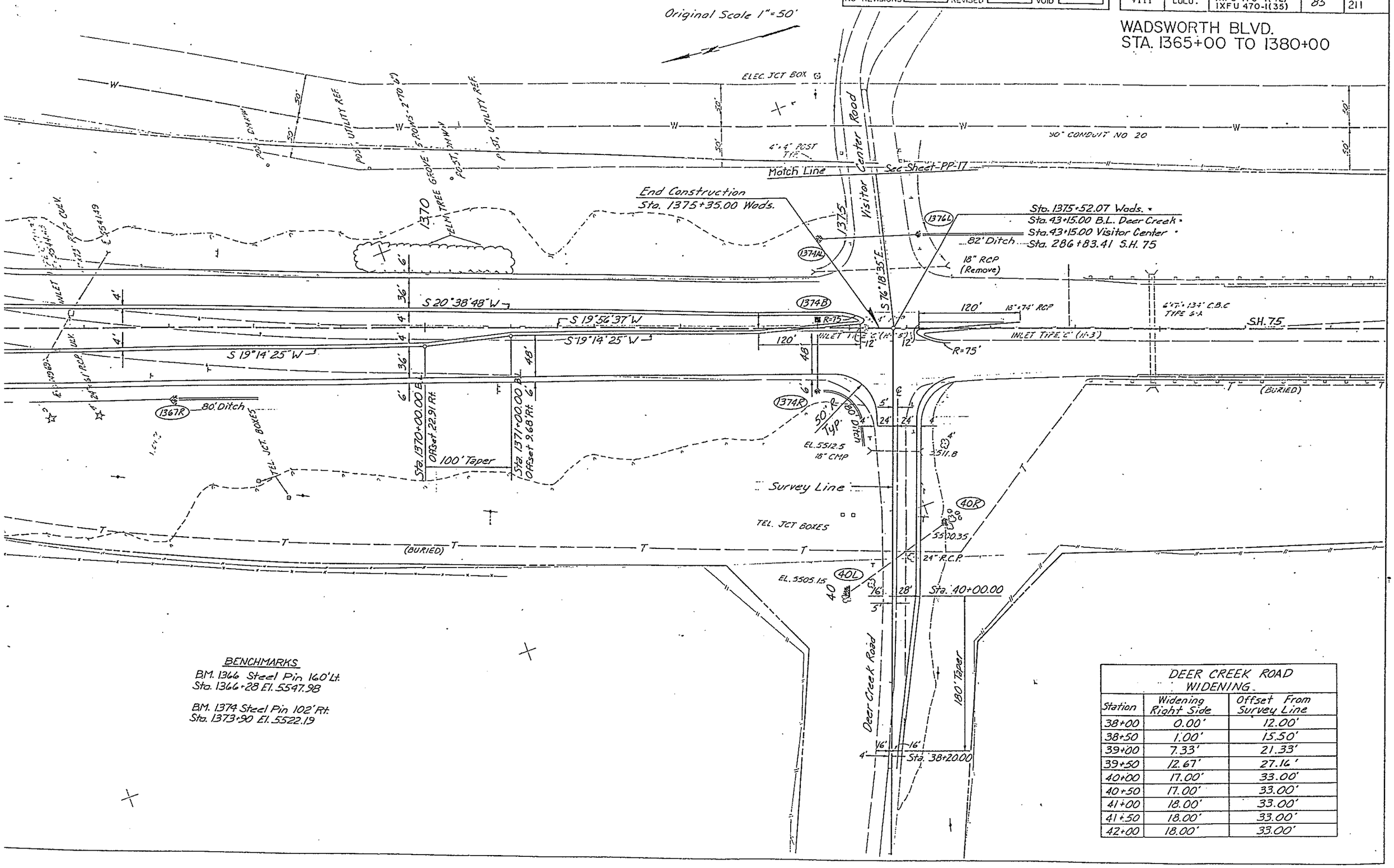
350
396
442
499
233,349

PLATE 3 FULL CROSS SECTION

AS CONSTRUCTED				
NO REVISIONS 2-1-57	REVISED		VOID	

FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLO.	IXFU 470-1(42) IXFU 470-1(35)	85	211

WADSWORTH BLVD.
STA. 1365+00 TO 1380+00



BENCHMARKS

B.M. 1366 Steel Pin 160' Lt.
Sta. 1366+28 El. 5547.98

B.M. 1374 Steel Pin 102' Rt.
Sta. 1373+90 El. 5522.19

DEER CREEK ROAD WIDENING		
Station	Widening Right Side	Offset From Survey Line
38+00	0.00'	12.00'
38+50	1.00'	15.50'
39+00	7.33'	21.33'
39+50	12.67'	27.16'
40+00	17.00'	33.00'
40+50	17.00'	33.00'
41+00	18.00'	33.00'
41+50	18.00'	33.00'
42+00	18.00'	33.00'

AS CONSTRUCTED					
NO REVISIONS	12-1-87	REVISED		VOID	

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(42) IXFU 470-1(35)	86	211

WADSWORTH BLVD. PROFILE
STA. 1365 TO 1375

Original Scale: 1" = 50' Horiz.
1" = 5' Vert.

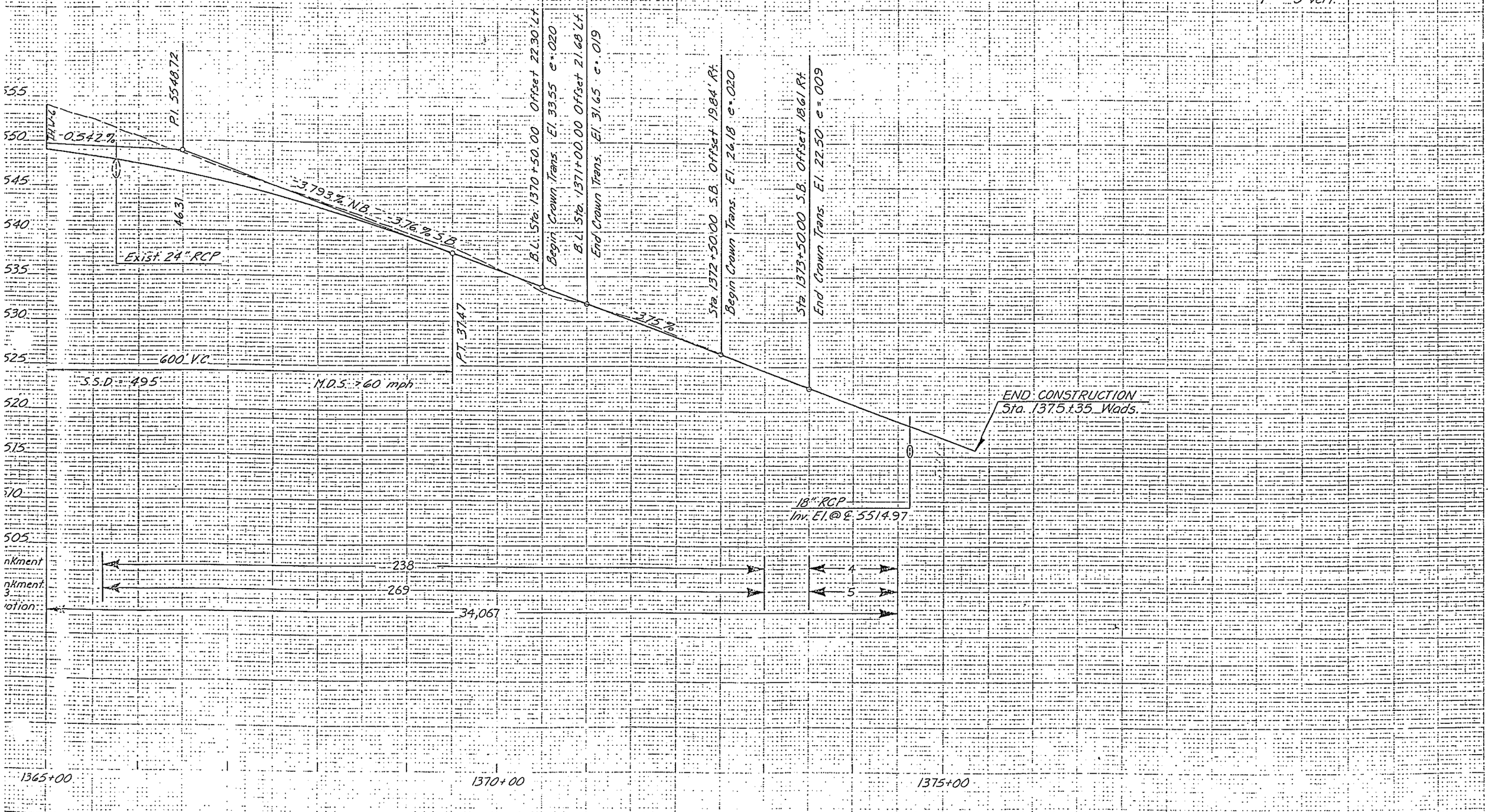


PLATE 3 FULL CROSS SECTION

OF COLORADO
DEPARTMENT OF HIGHWAYS
ION OF HIGHWAYS:
H. FORM NO. 126:
FEB '984

Original Scale 1"=100'

AS CONSTRUCTED				FED.ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
NO REVISIONS 12-1-87	REVISED	VOID		VIII	COLO.	IXFU 470-1(42) IXFU 470-1(35)	87	211

WADSWORTH S.H.470
INTERCHANGE LAYOUT PLAN

Sta. 353+00.00 Ramp 'C' = Offset 76' Lt.
P.C. Sta. 353+00.09 Ramp 'C'
Sta. 753+00.00 B.L.
P.T. Sta. 363+58.73 Ramp 'C' = Sta. 7+00.00 Leg 'C'
N 627,488.403
E 2,117,676.225
P.I. Sta. 366+52.71 Ramp 'C'
P.I. Sta. 4+00.43 Leg 'C' = Sta. 366+51.26 Lt. Offset 34.50
P.C. Sta. 6+42.85 Leg 'C'
Sta. 369+28.22 Ramp 'C' = Sta. 470+29.02 Ramp 'D' = Sta. 1353+70.00 B.L. Woods.
P.T. Sta. 8+45.57 Leg 'C' = Sta. 1350+91.29 S.B. Woods. Offset 36.00' Rt.
Sta. 483+00.00 Ramp 'D' Offset 81.17' Lt. = Sta. 783+00.00 Offset 81.00' Rt.
P.C. Sta. 1+00.00 Leg 'D' = Offset 36.00' Lt. Sta. 1350+77.42 N.B. Woods.
P.T. Sta. 4+36.37 Leg 'D' = Sta. 473+95.25 Ramp 'D' Offset 12.00 Lt.
Sta. 153+00.00 Ramp 'A' = Offset 81.00' Rt. Sta. 753+00.00 B.L.
P.C. Sta. 153+03.76 Ramp 'A'
P.I. Sta. 155+87.59 Ramp 'A' N 626,822.852 E 2,116,694.801
Ramp 'A' Begin Taper
Sta. 158+64.21 P.T. 158+69.57 Ramp 'A'
Begin Taper Sta 159+60.00
Sta 161+40.00
P.C. Sta. 1+00.00 Leg 'A' = Sta 162+68.57 Ramp 'A' Offset 12.00 Rt.
P.T. Sta. 4+22.77 Leg 'A' = Sta 136+38.53 B.L. Woods. Offset 65.80' Rt.
S 19° 14' 25" W
S 19° 56' 37" W
P.C. Sta. 1+00.00 Leg 'B' = Sta 1365+25.31 B.L. Woods. Offset 64.73' Lt.
P.I. 762+90.42 B.L.
P.T. Sta. 2+49.93 Leg 'B'
P.I. Sta. 358+54.90 Ramp 'C'
N 626,990.336
E 2,116,988.936
P.C. Sta. 365+19.32 Ramp 'C'
P.T. Sta. 367+80.02 Ramp 'C'
P.C. Sta. 471+89.35 Ramp 'D'
P.I. Sta. 474+82.88 Ramp 'D'
N 627,545.998
E 2,118,407.567
Sta. 357+69.32 Begin Taper
Sta. 475+78.91 Begin Taper
P.T. Sta. 477+58.91
Sta. 479+38.91
Sta. 480
Sta. 281+00.00 Ramp 'B' = Offset 76' Rt. Sta 781+00.00 B.L.
Sta 780+11.22 B.L.
C.S. 777+11.22 B.L.
Sta 275+88.78
Sta. 767+14.12 B.L. SH 470 = Sta. 1357+75.00 B.L. Woods.
Sta. 269+88.78 Begin Taper
626,000 N
2,118,500 E
P.I. Sta. 265+48.054
N 626,748.054
E 2,117,895.759
P.C. Sta 165+74.51 Ramp 'A' = P.C. Sta 263+93.29 Ramp 'B'
P.C. Sta 263+35.97 Ramp 'B' = Sta. 1361+75.00 B.L. Woods.
P.T. Sta. 266+88.78 Ramp 'B' Offset 16.00' Lt. Sta. 6+93.48 Leg 'B'
Begin Taper Sta. 269+88.78
600' Taper
300' Taper
180' Taper
750' Taper
RAMP 'A'
RAMP 'B'
RAMP 'C'
RAMP 'D'
WADSWORTH BLVD.
S.H.470
T.H. M-62
T.H. M-63
T.H. M-64
T.H. VA-1
T.H. VA-2
T.H. VB-1
T.H. VB-2
T.H. VB-3
T.H. VB-4
T.H. VC-1
T.H. VC-2
T.H. VC-3
T.H. VC-4
S.B. Woods.
N.B. Woods.
N 50°53'01" E
S 19°56'37" W
N 54°04'11" E
N 51°01'01" E
S 83°35'04" E
S 75°01'12" E
S 86°26'10" E
N 83°56'37" E
N 49°46'14" E
N 46°20'13" E
N 45°11'28" E
N 20°38'48" E
Sta 275+88.78
Sta 483+00.00 Ramp 'D' Offset 81.17' Lt. = Sta 783+00.00 Offset 81.00' Rt.

⑧ Curve Data

Δ =	77°03'53"	Θs =	3°00'00"
Ts =	2432.43'	Ls =	300.00'
Es =	799.10'	L.T. =	200.03'
		S.T. =	100.03'
Δc =	71°03'53"	e =	0.065 %
Dc =	2°00'00"	M.D.S. =	70 mph
Tc =	2045.88'	S.S.D. >	850'
Lc =	3553.24'		
Rc =	2864.79'		

TRAFFIC DIAGRAM
Year 2005

Curve Data

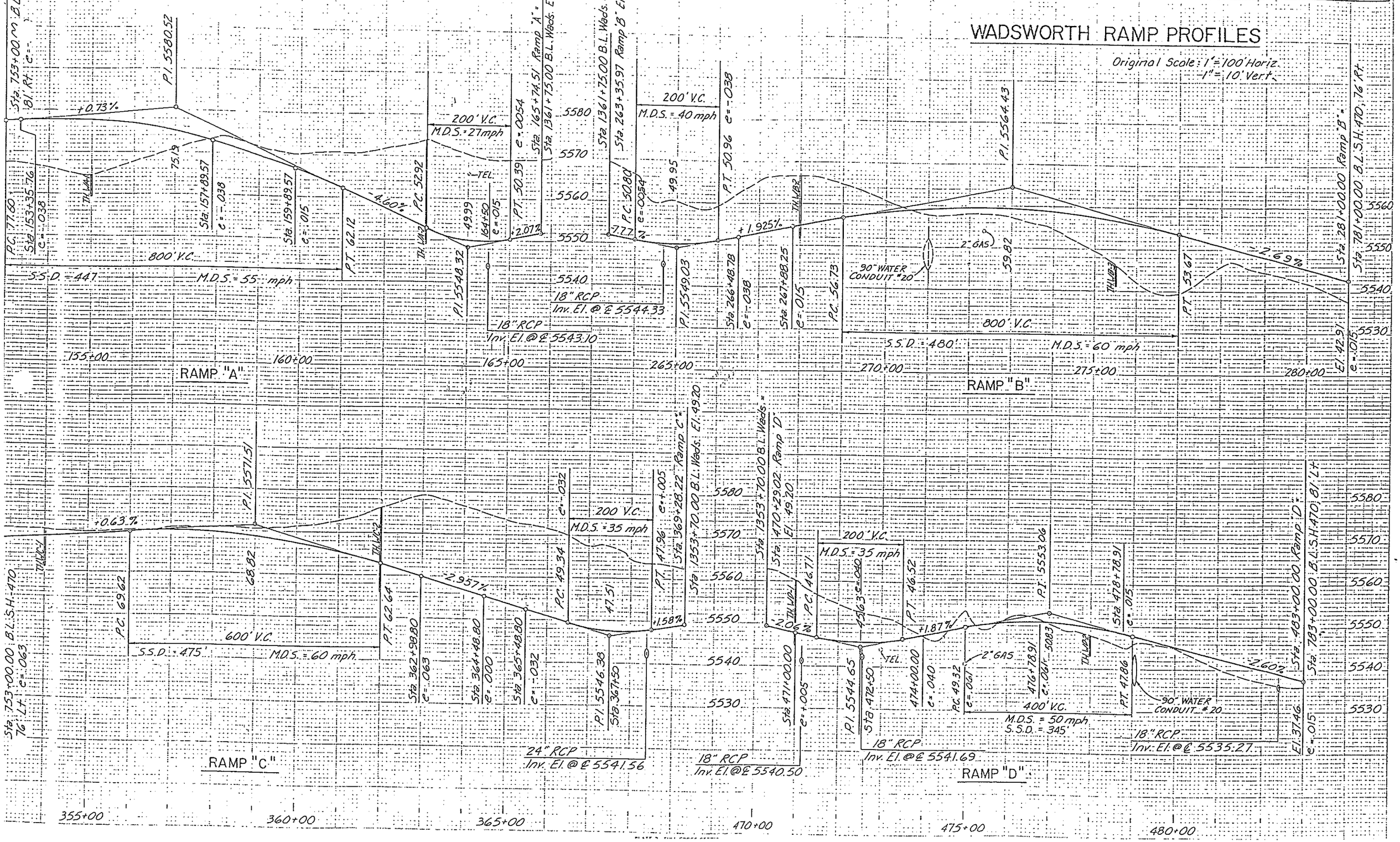
Curve	431A	262A	257B	267B	248C	247C	249C	236D	282D
Δc	11°18'58"	105°40'35"	48°22'22"	24°32'40"	42°20'45"	29°52'26"	33°11'10"	34°10'23"	128°29'01"
Dc	2°00'00"	32°44'26"	16°22'13"	16°22'13"	4°00'00"	11°27'33"	16°22'13"	6°00'00"	38°11'50"
Tc	283.83'	230.87'	157.20'	76.14'	554.81'	133.39'	104.29'	293.53'	310.87'
Lc	565.81'	322.77'	295.49'	149.93'	1058.65'	260.70'	202.72'	569.55'	356.37'
Rc	2864.79	175.00'	350.00'	350.00'	1432.39'	500.00'	350.00'	954.93'	150.00'
e	.038	.040	.038	.038	.063	.032	.038	.061	.040
M.D.S.	50 mph	23 mph	30 mph	30 mph	50 mph	30 mph	30 mph	40 mph	22 mph
S.S.D.	>650'	>175'	>230'	>230'	>460'	>270'	>230'	>380'	>162'

AS CONSTRUCTED				
NO REVISIONS [illegible]	REVISED	VOID		

FEDERAL ROAD REGION NO	DIVISION	PROJ NO	SHEET NO	TOTAL SHEETS
VIII	COLORADO	IXFU470-1(42) IXFU470-1(35)	88	211

WADSWORTH RAMP PROFILES

Original Scale: 1" = 100' Horiz.
1" = 10' Vert.



AS CONSTRUCTED					
NO REVISIONS 2-1-57	REVISED	VOID	FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO	TOTAL SHEETS
			XIII	COLORADO	IXFU470-1(42) IXFU470-1(35)	89	211

RAMP LEG PROFILES

ORIGINAL SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

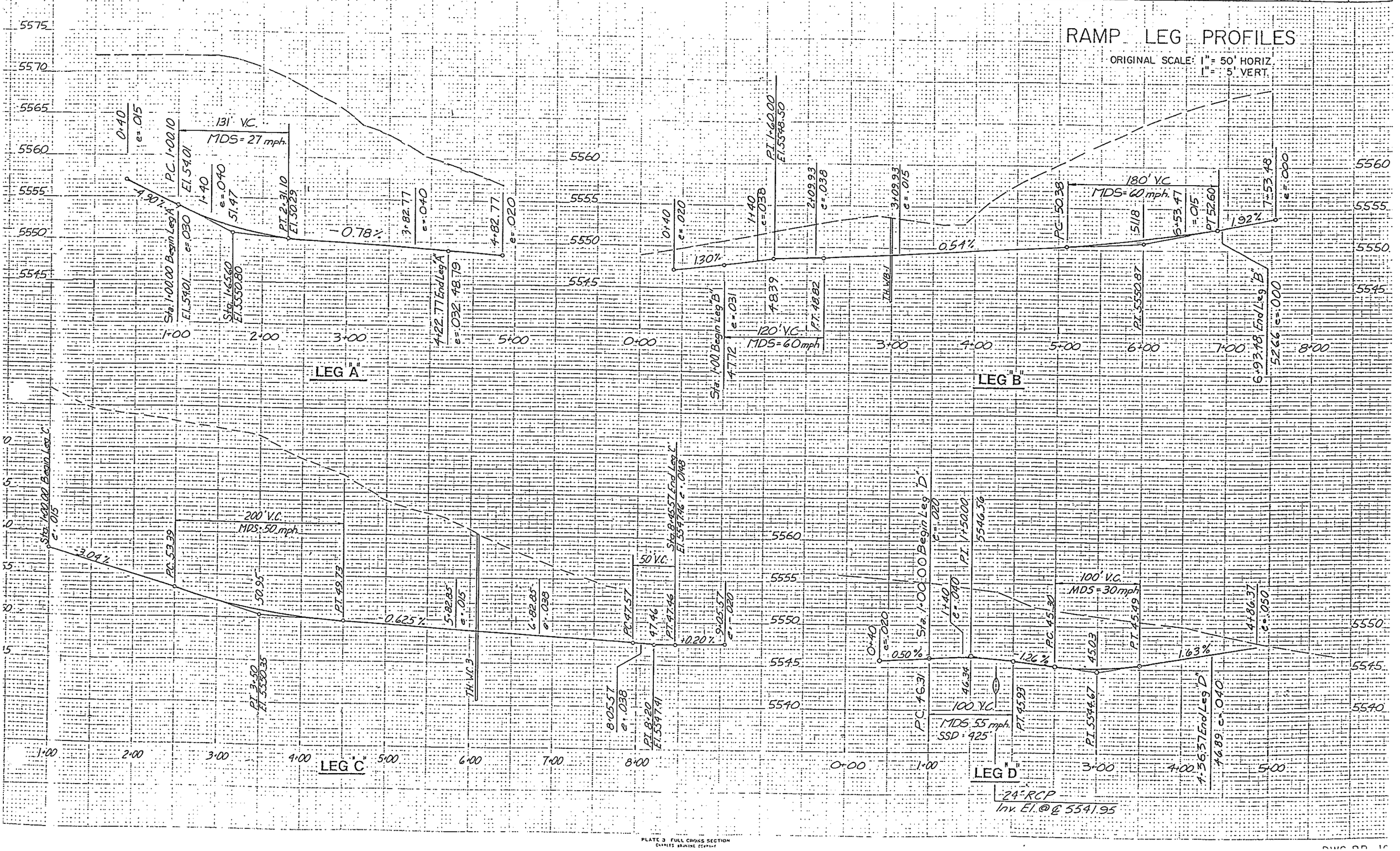
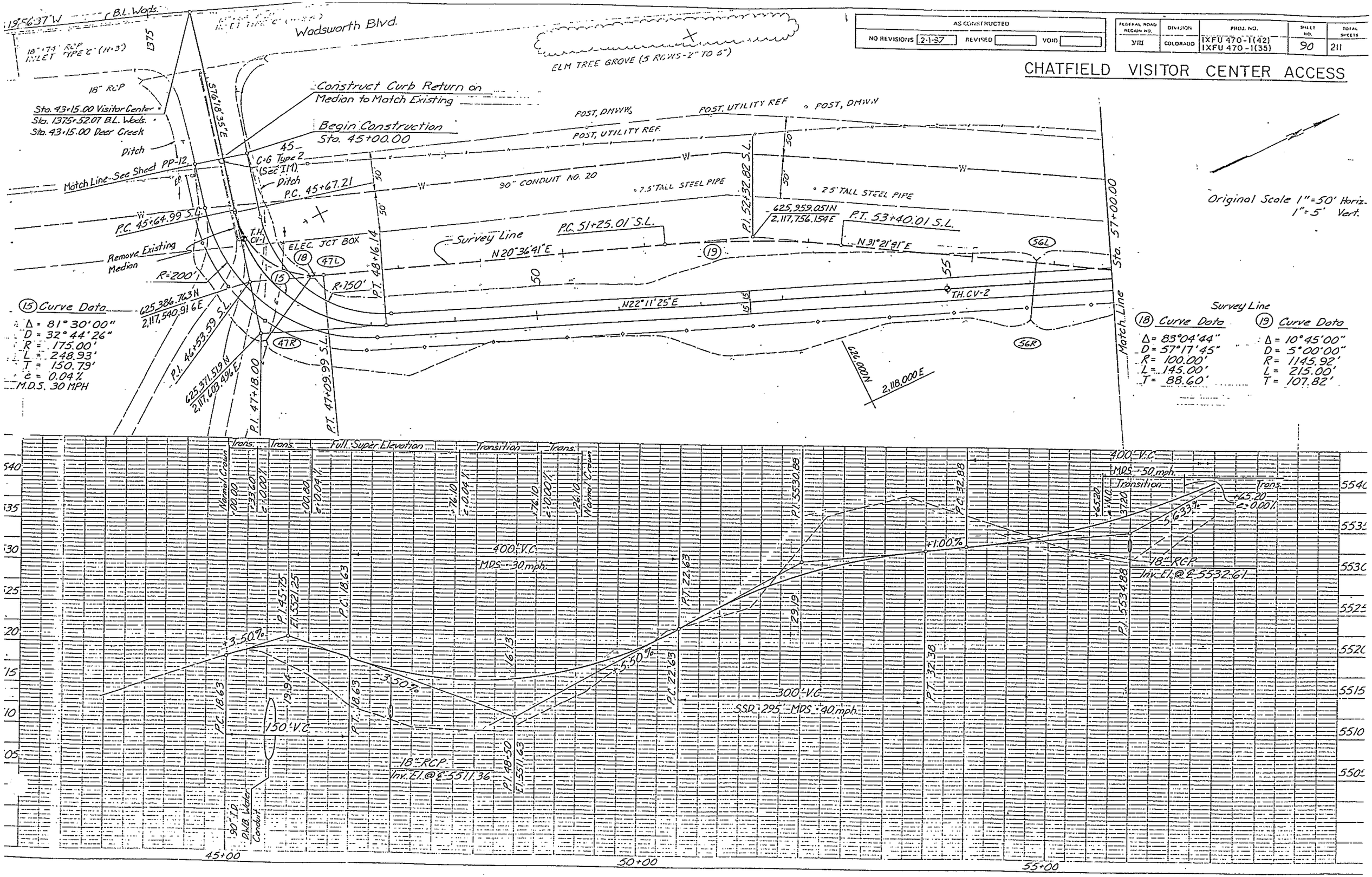


PLATE 3 FULL CROSS SECTION
CHARLES BRINING COMPANY

AS CONSTRUCTED					
NO REVISIONS 2-1-87	REVISED		VOID		

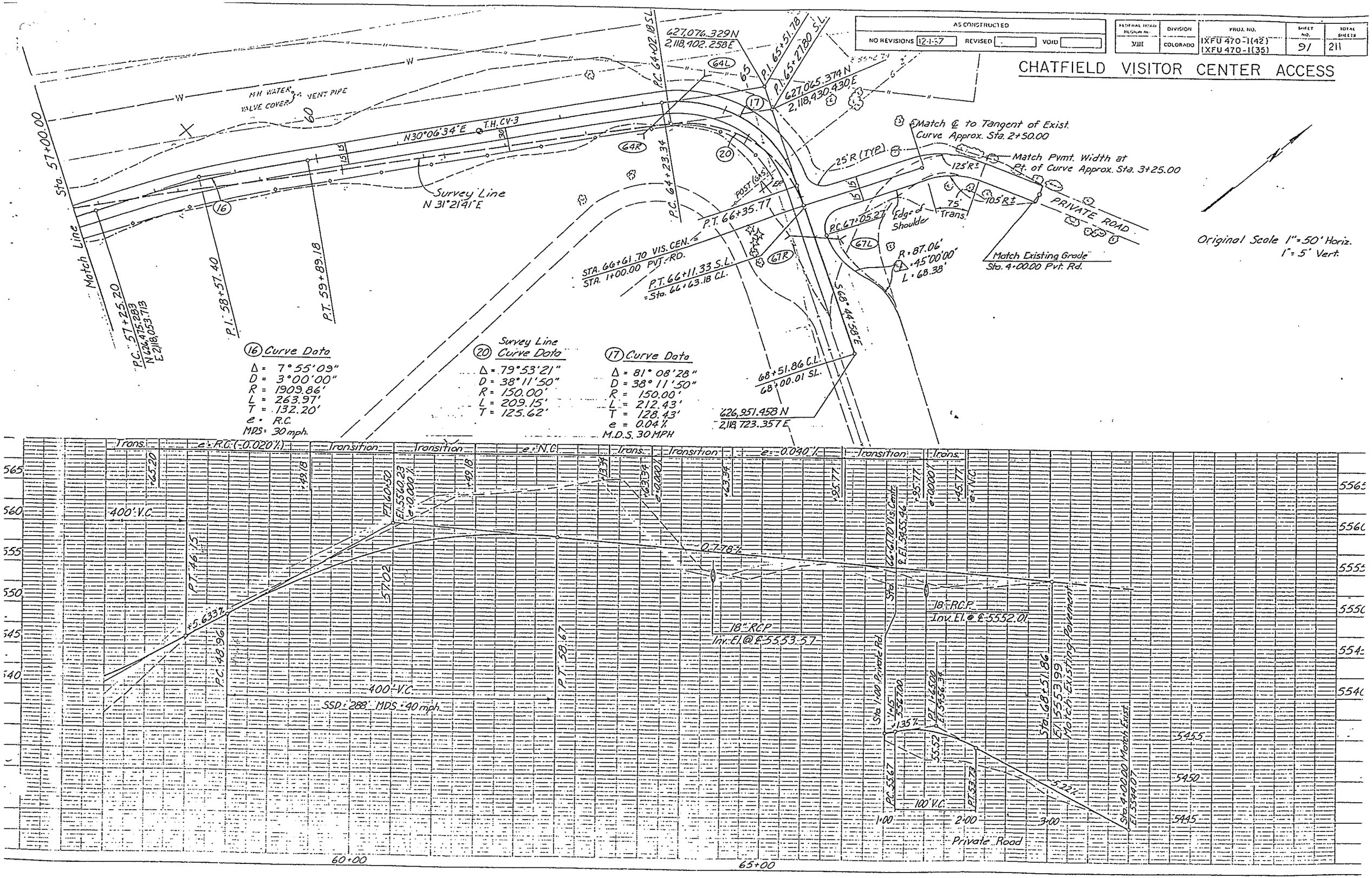
FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(42) IXFU 470-1(35)	90	211

CHATFIELD VISITOR CENTER ACCESS



AS CONSTRUCTED					
NO REVISIONS 12-1-57	REVISED	VOID	FEDERAL ROAD REGION NO. VIII	DIVISION COLORADO	PROJ. NO. IXFU 470-1(42) IXFU 470-1(35)
			SHEET NO. 91	TOTAL SHEETS 211	

CHATFIELD VISITOR CENTER ACCESS



STATE OF COLORADO
STATE DEPARTMENT OF HIGHWAYS
DIVISION OF HIGHWAYS
C. O. H. FORM NO. 1261
REV. FEB. 1984.

AS CONSTRUCTED					
NO REVISIONS		REVISED	12-1-87	VOID	

FED.ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLO.	IXFU 470-1(42) IXFU 470-1(35)	92	211

CHATFIELD RECREATION ENTRANCE ROAD

Original Scale : 1" = 100'

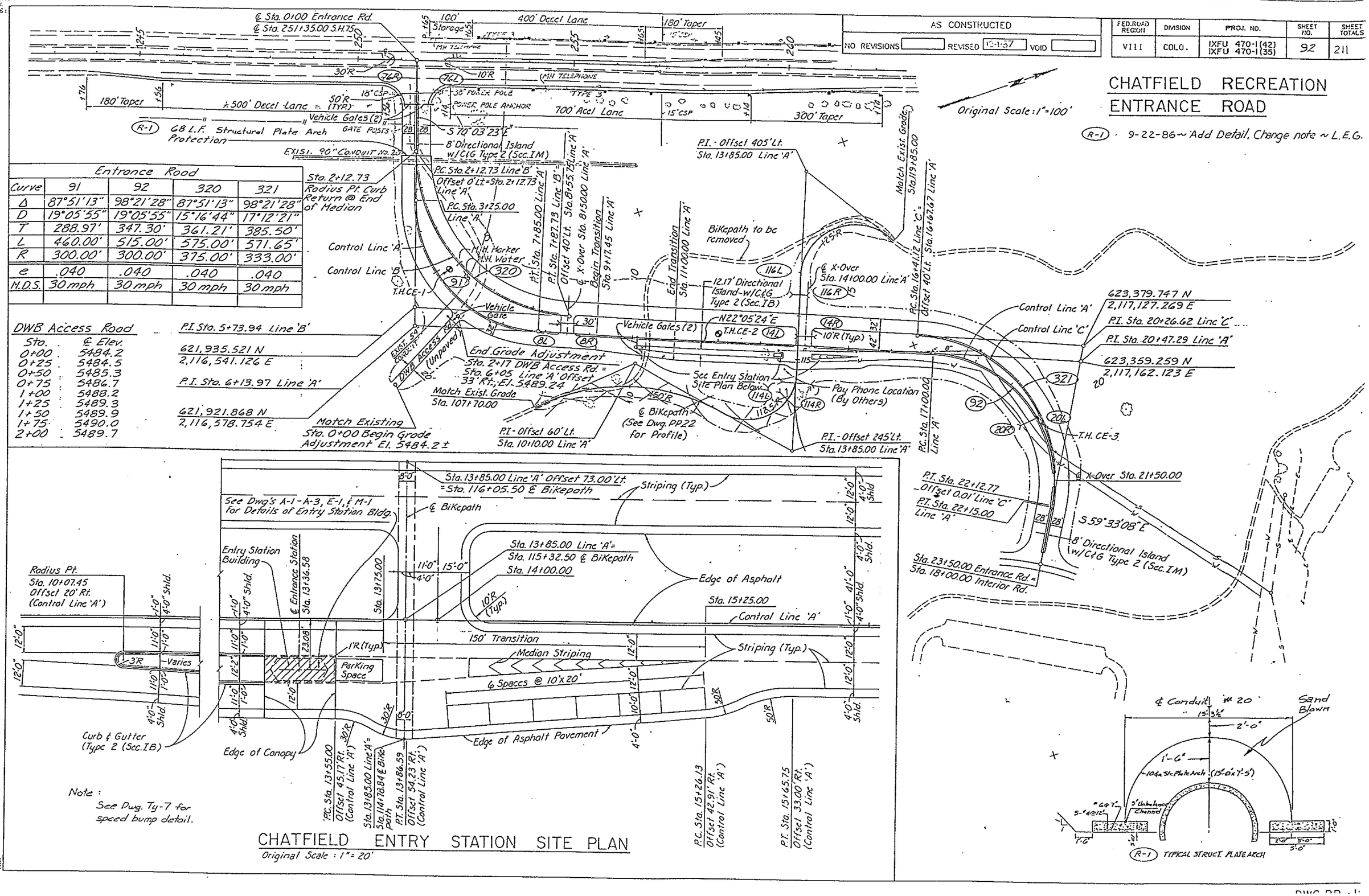
(R-1) · 9-22-86 ~ Add Detail, Change note ~ L.E.G.

Entrance Road

Curve	91	92	320	321
Δ	87°51'13"	98°21'28"	87°51'13"	98°21'28"
D	19°05'55"	19°05'55"	15°16'44"	17°12'21"
T	288.97'	347.30'	361.21'	385.50'
L	460.00'	515.00'	575.00'	571.65'
R	300.00'	300.00'	375.00'	333.00'
e	.040	.040	.040	.040
M.D.S.	30 mph	30 mph	30 mph	30 mph

DWB Access Road

Sta.	℄ Elev.
0+00	5484.2
0+25	5484.5
0+50	5485.3
0+75	5486.7
1+00	5488.2
1+25	5489.3
1+50	5489.9
1+75	5490.0
2+00	5489.7



CHATFIELD ENTRY STATION SITE PLAN

Original Scale : 1" = 20'

(R-1) TYPICAL STRUCT. PLATE ARCH

AS CONSTRUCTED					
NO REVISIONS	12-1-87	REVISED		VOID	

FEDERAL ROAD REGION NO	DIVISION	PROJ. NO	SHEET NO	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(42) IXFU 470-1(35)	93	211

Original Scale: 1"=100' Horiz.
1"=10' Vert.

CHATFIELD ENTRANCE RD. PROFILE

Sta. 0+60 El. 5511.86
Meet Existing
e=-0.020%
Trans. +15.00
Trans. +65.00
e=-0.000%
e=+0.040%
+65.00
Trans.
+45.00
+95.00
e=+0.020%
-1.33%
P.I. 5510.00
-6.00%
50' V.C.
P.C. 11.33
P.R.C. 04.00
02.55
P.T. 01.20
88.83
P.I. 5502.50
Sta. 3+25.00
200' V.C.
S.S.D.=240'
M.D.S.=35 mph
-5.193%
See Diagram Below For Superelevation Information
Trans.
e=-0.040%
Trans.
+90.00
e=-0.020%
+40.00
+75.00
+25.00
e=0.00
+00.00
+36.00
Trans.
200' V.C.
M.D.S.=30 mph
P.C. 58.37
Sta. 11+74.82
54.35
P.I. 52.68
Sta. 13+74.82
-0.50%
P.I. 5453.18
Sta. 12+74.82
18" RCP
Inv. El. @ ℄ 5444.98
P.C. 48.53
Sta. 22+03.90
48.04
P.T. 47.08
Sta. 23+03.90
-2.40%
Sta. 21+99.99 El.=5448.55
P.I. 5448.28
Sta. 22+53.90
Sta. 23+50 End Profile
El.=5445.97

CONTROL LINE 'A' PROFILE

SUPERELEVATION DIAGRAM (No Scale)

Edge Shld. | Hinged Pt. | P.G.L.
0.020% | 0.020% | 16' | 16' | 1'
Control Line 'A'
Sta. 7+95.00

Edge Shld. | Fixed Pt. | Hinged Pt. | Pivot Pt. & P.G.L.
-0.020% | 0.000% | +0.020%
Variable | Variable | 16' | 1'
Control Line 'A'
Sta. 13+75.00

Edge Shld. | Hinged Pt. | Pivot Pt. & P.G.L.
0.000% | 0.020% | 16' | 16' | 1'
Control Line 'A'
Sta. 8+45.00

Edge Shld. | Hinge Pt. | Pivot Pt. & P.G.L.
0.000%
14' | Variable | 16' | 1'
Control Line 'A'
Sta. 14+50.00

Edge Shld. | P.G.L.
-0.020% | 0.020%
16' | 16' | 1'
Control Line 'A'
Sta. 8+95.00 to Sta. 9+17.45

Edge Shld. | Pivot Pt. & P.G.L.
-0.020%
1'
Control Line 'A'
Sta. 15+25.00

NOTE: These sections look back station!

Sta. 3100 El. 5504.00
-6.00%
P.C. 77.34 Sta. 7+37.73
50' V.C.
P.T. 74.94 Sta. 7+87.73
Offset 40' Lt. Line 'A' Sta. 8+55.75
Meet Line 'A' Profile
-5.193%
P.I. 5476.24
Sta. 7+62.73
e=-0.020%
+53.00
e=-0.040%
+48.00
e=-0.020%
50' Trans.
50' Trans.

CONTROL LINE 'B' PROFILE

P.I. Sta. 16+41.12 El. 5451.21
Offset 40' Lt. Line 'A' Sta. 16+67.67
-0.50%
0.476%
Sta. 21+99.99 El.=5448.55
Offset 0.13' Lt. Line 'A' Sta. 22+00.00
Meet Line 'A' Profile
e=-0.020%
+81.12
e=0.000%
+72.77
e=+0.040%
Superelevation Controlled By Line 'A'
50' Trans.
100' Trans.

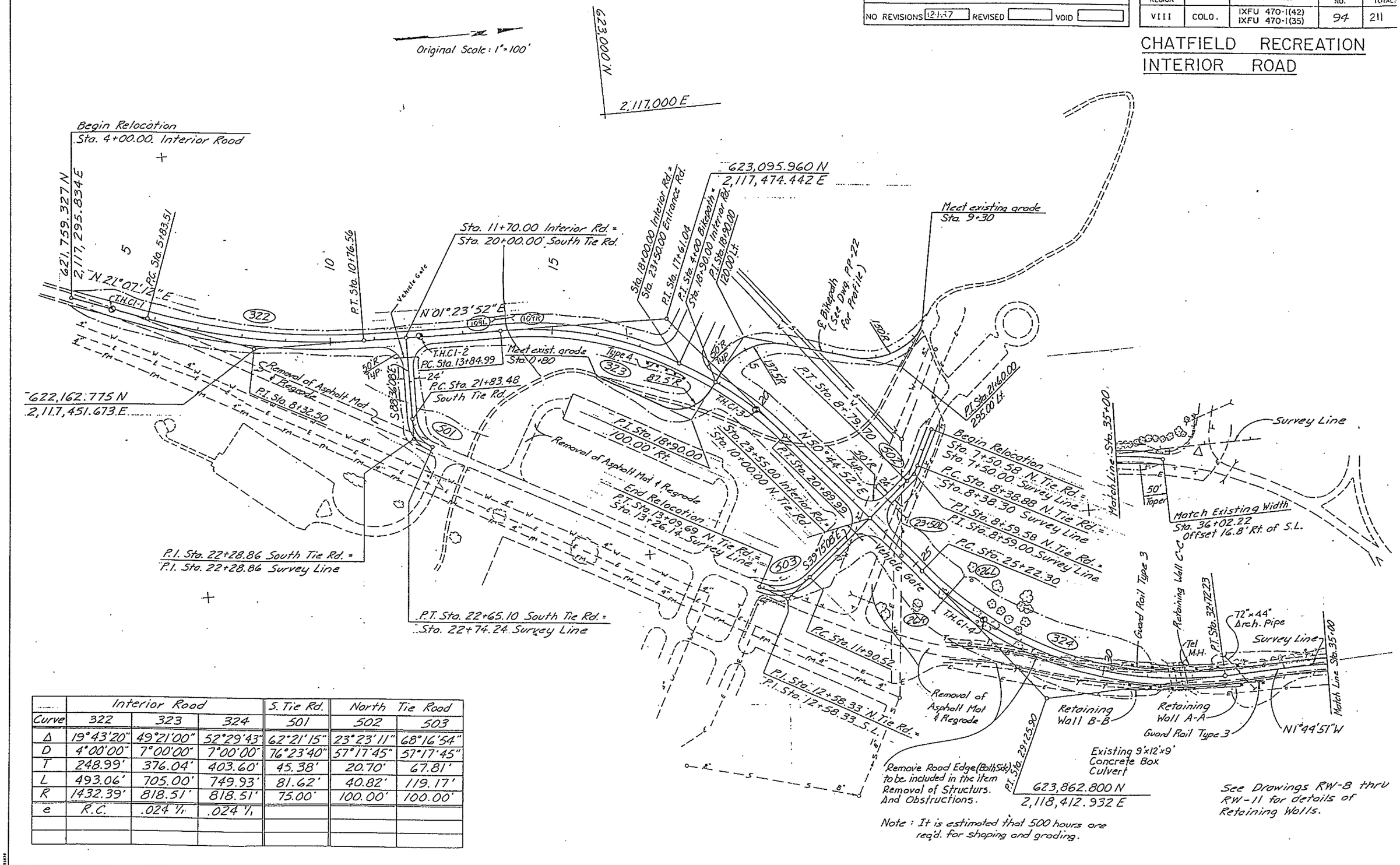
CONTROL LINE 'C' PROFILE

STATE OF COLORADO
STATE DEPARTMENT OF HIGHWAYS
DIVISION OF HIGHWAYS
C.O.H. FORM NO. 126
REV. FEB. 1984

AS CONSTRUCTED				
NO REVISIONS 12-1-87	REVISED		VOID	

FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLO.	IXFU 470-1(42) IXFU 470-1(35)	94	211

CHATFIELD RECREATION INTERIOR ROAD



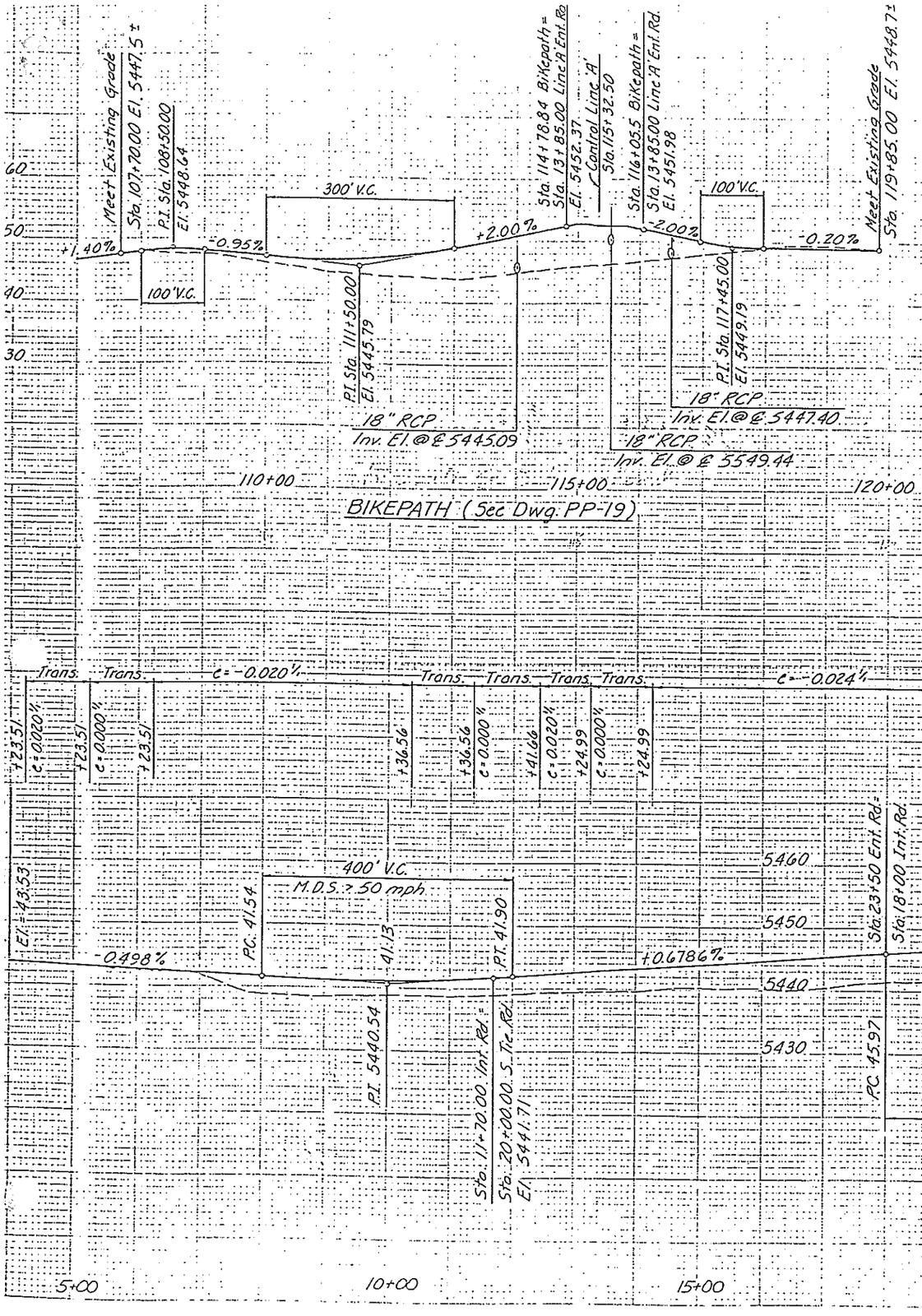
	Interior Road			S. Tie Rd.	North Tie Road	
Curve	322	323	324	501	502	503
Δ	19°43'20"	49°21'00"	52°29'43"	62°21'15"	23°23'11"	68°16'54"
D	4°00'00"	7°00'00"	7°00'00"	76°23'40"	57°17'45"	57°17'45"
T	248.99'	376.04'	403.60'	45.38'	20.70'	67.81'
L	493.06'	705.00'	749.93'	81.62'	40.82'	119.17'
R	1432.39'	818.51'	818.51'	75.00'	100.00'	100.00'
e	R.C.	.024 ¹/₁	.024 ¹/₁			

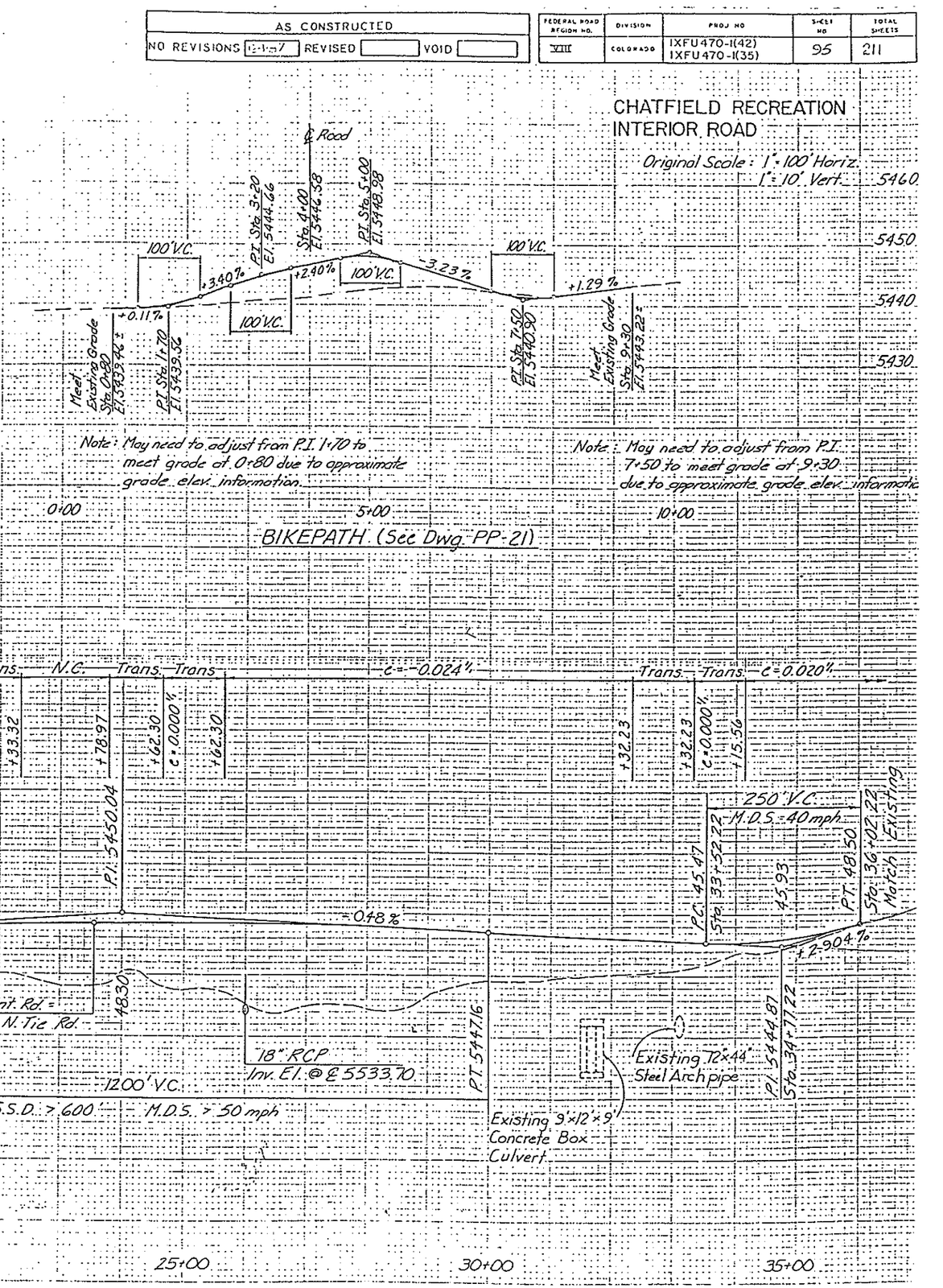
AS CONSTRUCTED			
NO REVISIONS	REVISED	VOID	

FEDERAL ROAD REGION NO.	DIVISION	PROJ NO	SHEET NO	TOTAL SHEETS
VIII	COLORADO	IXFU470-1(42) IXFU470-1(35)	95	211

CHATFIELD RECREATION
INTERIOR ROAD

Original Scale: 1" = 100' Horiz.
1" = 10' Vert.





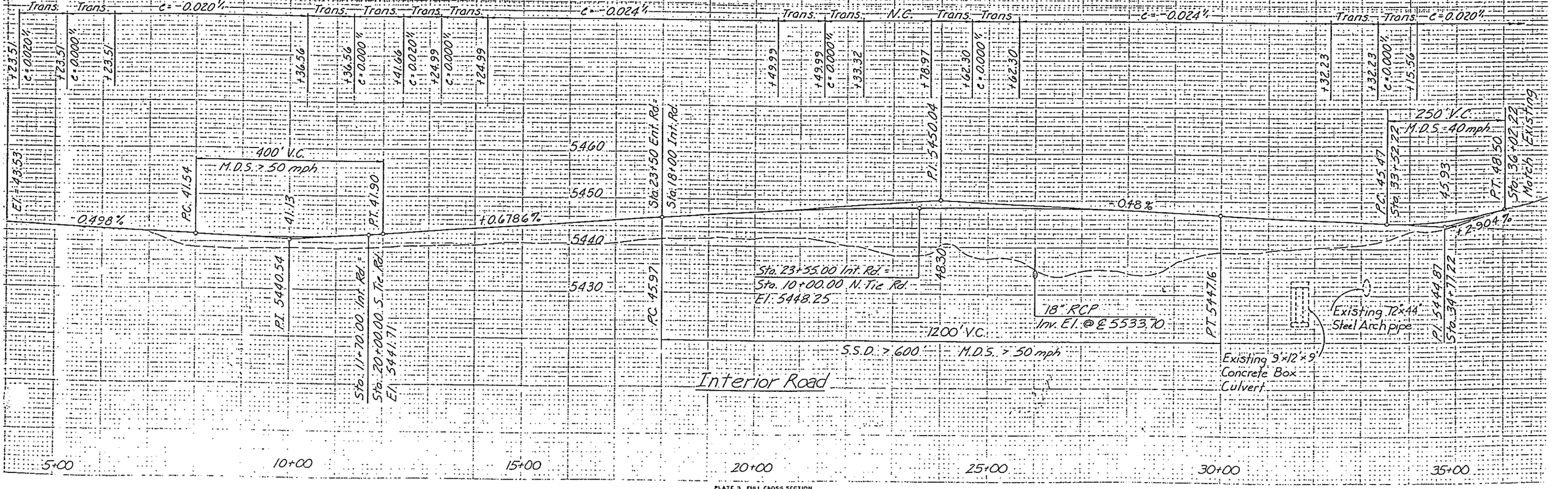


PLATE 3 FULL CROSS SECTION
CHARLES BRUNING COMPANY

DWG. PP-22

AS CONSTRUCTED					
NO REVISIONS	12-1-57	REVISED		VOID	

FEDERAL ROAD REGION NO	DIVISION	PROJ. NO	SHEET NO	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(42) IXFU 470-1(35)	96	211

Original Scale: 1" = 50' Horiz.
1" = 5' Vert.

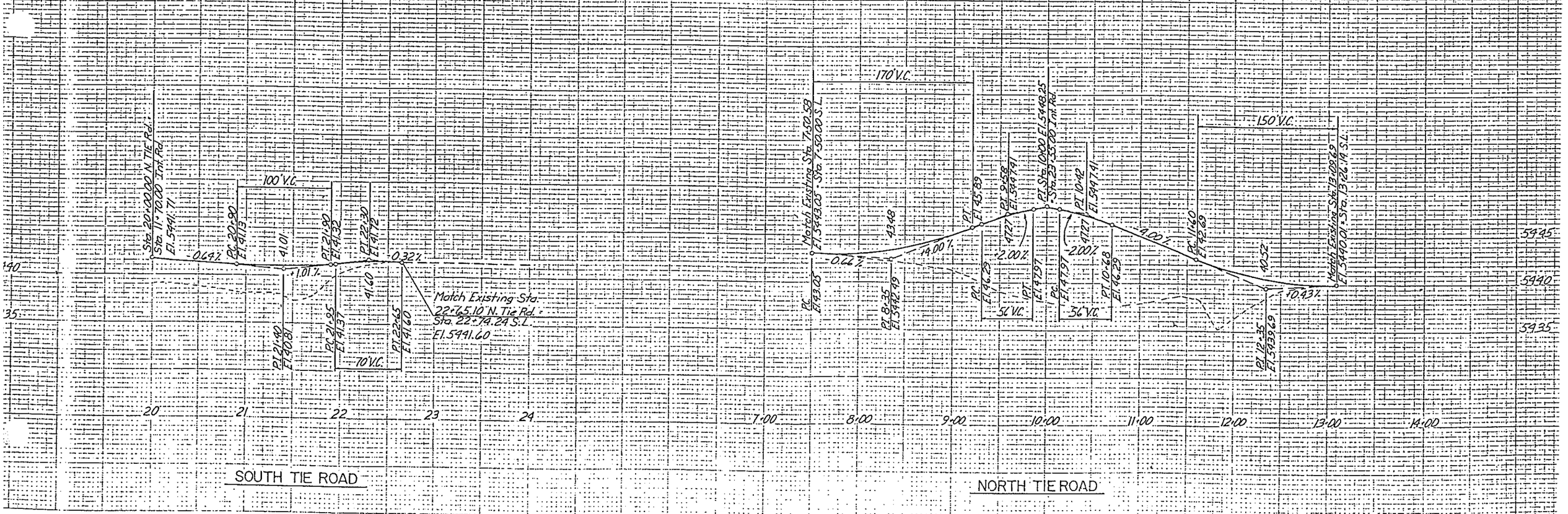


PLATE 3 FULL CROSS SECTION
CHARLES DRAKE COMPANY

DWG. PP-23