



2002

2138

**EUGENE DIETZGEN CO.**  
DRAWING MATERIALS, MATHEMATICAL and  
SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

Distances from Center of Roadway for Cross-Sectioning  
Roadway 16 feet wide. Side Slopes 1 on 1.  
For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be 30.6 + (20 - 16) \* 2 or 2 ft. added to 30.6 = 32.6. For slopes of 1 on 1 1/2 see inside of back cover.  
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**CITY ENGINEER'S  
OFFICE**

INDEXED  
MAR 27 1951

This Field Book is manufactured of a High Grade 50% Rag Paper having a WATER RESISTING SURFACE, and is sewed with Bing Special Enamel Waterproof thread.

Made in U. S. A.

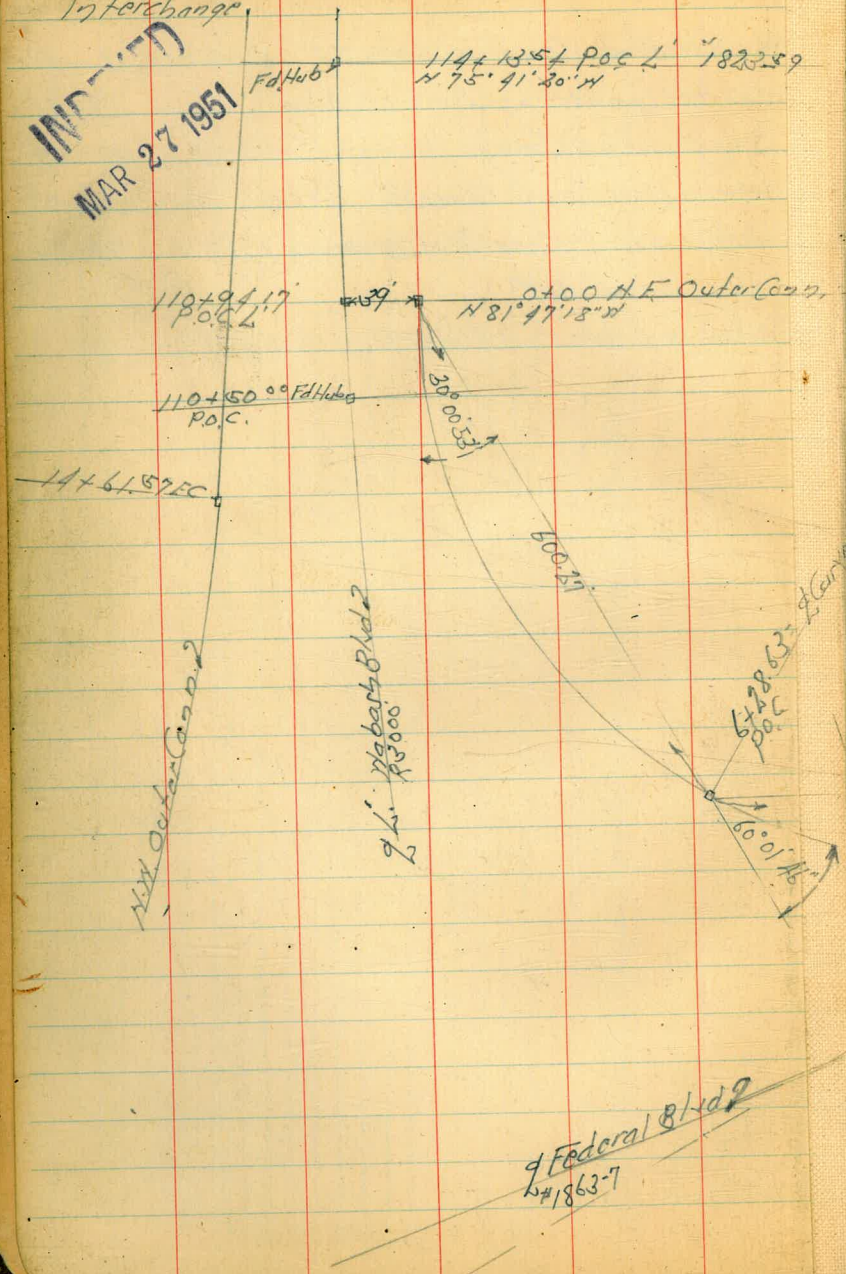


Wabash Blvd Sec A NE 00 SE SW NW 12 1-36  
Market Connection Wabash Blvd. 37-56  
Prop. Channel Change Wabash Blvd Sec B 57-59  
Wabash Blvd Sec B Cross Sec 50+50-74+0 60-77  
Check Levels Federal Blvd Broadway 25<sup>th</sup> 78-79  
to Market - 32<sup>nd</sup>  
Re Survey Lots 17-18 Blk 3 Mc Lane on H St Add 80



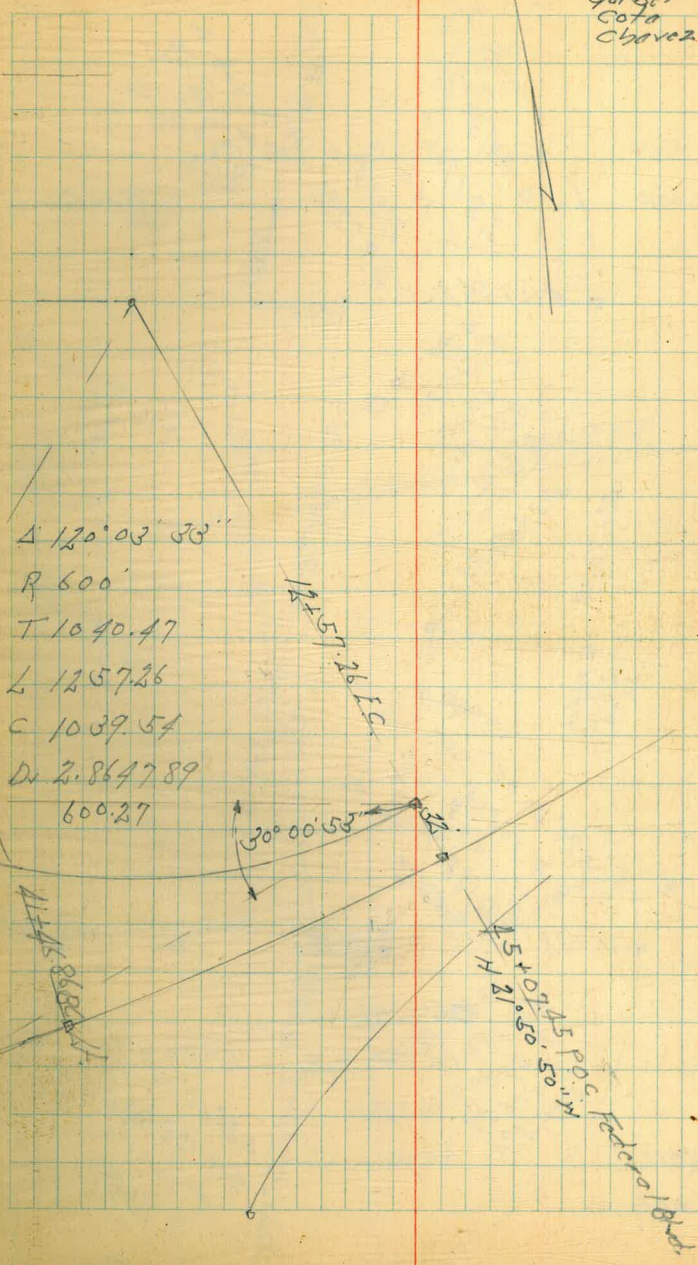
Alignment North East Outer Connection  
 Hobash Boulevard Sec 7 Federal Blvd.  
 Interchange

IMPROVED  
 MAR 27 1951



July 29 - 49.  
 F.S. Wilson  
 Garber  
 Coffa  
 Chavez

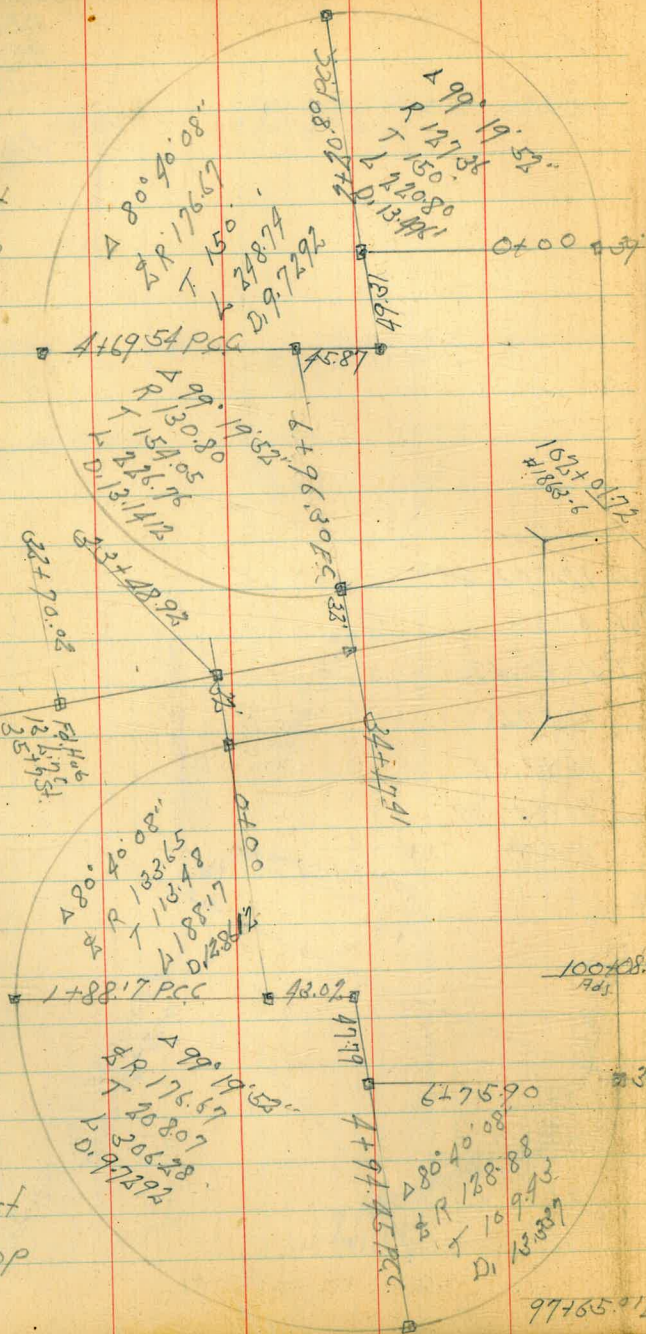
1





North West  
Inner Loop

South West  
Inner Loop



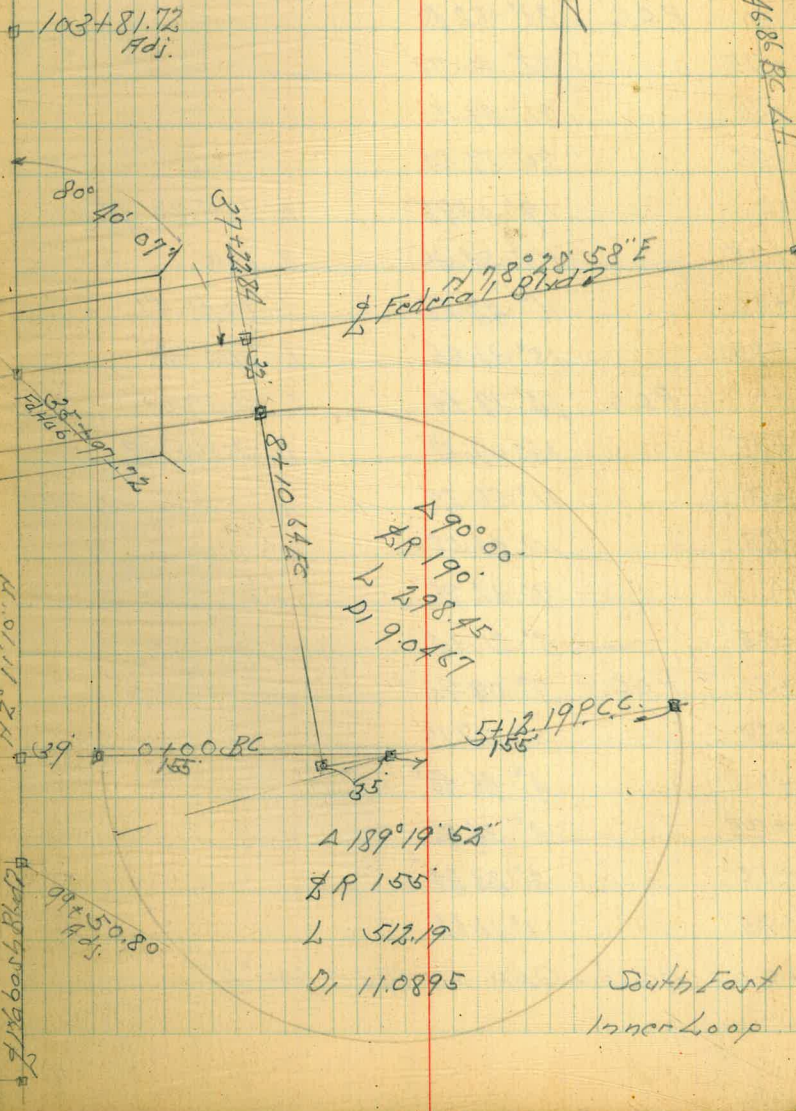
105749.75 B.C.Rt.

Aug. 8-19  
H.S. Iron  
Garber  
Cota  
Chavez

2

444683 B.C. Alt.

Indicates Hubset



South East  
Inner Loop



Alignment North East Outer Connection  
 Wabash Blvd. Sec. A Federal Blvd. Interchange  
 Sketch Page 1

+55		26° 29.97'	
+25		25° 04.02'	
5+0	P.O.C.	23° 52.40'	
+75		22° 40.78'	
+50		21° 29.16'	
+25		20° 17.54'	
4+0		19° 05.92'	A 120° 03' 33"
+75		17° 54.30'	R 600
+50		16° 42.68'	T 1040.47'
+25		15° 31.06'	L 1257.26'
3+0	P.O.C.	14° 19.44'	C 1039.54'
+75		13° 07.82'	D 2.864789
+50		11° 56.20'	
+25		10° 44.58'	
2+0		9° 32.96'	
+75		8° 21.34'	
+50	P.O.C.	7° 09.72' ✓	
+25		5° 58.10'	
1+0		4° 46.48' ✓	
+75		3° 34.86'	
+50		2° 23.24' ✓	
+25		1° 11.62'	

0+0.0 = B.C.H. = Opp 110+94.17 P.O.C. "L"



	+75		56° 06.14'
	+50		54° 54.52'
	+25		53° 42.90'
5+0	11+0		52° 31.28'
	+75		51° 19.66'
	+50		50° 08.04'
	+25		48° 56.42'
4+0	10+0		47° 44.80'
	+75		46° 33.18'
	+50		45° 21.56'
	+25	P.O.C.	44° 38.59'
3+0	9+0		42° 58.32'
	+75		41° 46.70'
	+50		40° 35.08'
	+25		39° 23.46'
2+0	8+0		38° 11.84'
	+75		37° 00.22'
	+50		35° 48.60'
	+25		34° 36.98'
1+0	7+0		33° 25.36'
	+75		32° 13.74'
	+50		31° 02.12'
	+28.63	P.O.C.	30° 00.90'
0+0	6+0		28° 38.88'
	5+75		27° 27.27'



Align. North East Outer Connection

+  
+  
5+  
+  
+  
+  
4+0  
+  
+  
+  
3+0  
+  
+  
+  
2+0  
+  
+  
+  
1+  
+  
+  
+  
0+0

+57.26 F.C.      60° 01.78'  
+25                58° 29.38'  
12+0               57° 17.76'

Opp 45+07.45 P.O.C. Federal Blvd



Cross Section North East Outer Connection  
 Yakob Blvd. Sec A Federal Blvd. Interchange  
 Sketch Page 1

Lt. 8' Rt. 6

Notes: - R+Lt are + Above & - Below

+  
 +  
 5 +  
 +  
 +  
 4 +  
 +  
 +  
 3 +  
 +  
 +  
 2 +  
 +  
 +  
 1 +  
 +  
 +  
 0 +

	+75			
	+50			
	+25			
0+00	B.C.Lt. - opp 110+94.17 P.O.C.			
	11.46	115.65	1.65	104.19
	12.57	165.84	0.55	93.27
	13.22	93.82	1.22	81.60
0+00	B.M.	82.92	69.96	

409 M.H.R.  
 347 1st + 42  
 H.V.O.C.  
 7844-45

144.3	138.1	132.6	122.8	110.1	100.8	88.0
+342 116	+280 78	+235 51	+127 30	56	-9.5 15	-22.1 38

144.1	132.4	123.4	110.2	99.6	87.8
+339 102	+229 68	+132 35	55	-10.6 18	-22.1 38

145.6	135.5	129.1	122.2	110	100.2	95.4
+346 117	+245 55	+181 39	+112 31	47	-10.8 19	-15.6 39

145.6	135.6	129.0	122.0	110.1
+355 123	+255 71	+189 41	+119 31	55.8 07H66
				115.65



137.1	132.9	124.4	111.9	106.4	93.7	77.1
+258	+210	+135	110	-5.5	-18.2	-9.8
108	68	37		10	34	74

138.2	134.2	125.9	119.3	110.2	104.5	94.4	84.2
+280	+240	+157	+91	127	-5.7	-15.9	-26.0
89	64	32	17		14	32	50

122.95

TP 11.95 122.95 4.65 111.00

141.5	137.5	131.4	122.7	111.1	100.0	94.5	78.2
+304	+264	+203	+116	46	-5.1	-16.6	-32.9
90	74	46	25		9	29	82

+50 P.O.C.

148.8	144.8	130.0	121.2	110.6	98.3	80.2
+382	+342	+194	+106	56	-12.3	-30.4
105	80	41	20	17	19	53

+25

143.4	140.4	133.5	124.8	110.1	95.0	82.7
+303	+263	+224	+147	56	-15.1	-27.4
105	85	52	30		23	18

170

144.6	139.6	129.8	121.2	108.8	98.5	83.7
+358	+308	+210	+134	6.9	-10.2	-25.1
123	83	45	22		18	43

115.65

115.65



Cross Section North East Outer Connection  
 Harbor Blvd Sec H Federal Blvd. Interchange

Lt.

Rt.

Rt.

8

TP 0.59 113.10 10.44 112.51

+75

124.4 121.4 117.7 114.9 112.5 111.0 107.0 101.3  
~~119~~ ~~105~~ ~~78.9~~ ~~76~~ ~~75.2~~ ~~77~~ ~~78~~ ~~75~~ ~~10.4~~ ~~1.6~~ ~~35~~ ~~35~~ ~~70~~ ~~70~~ ~~4.3~~ ~~18~~

+50

137.5 124.1 121.3 119.1 116.3 115.4 111.5 101.4  
~~118~~ ~~109~~ ~~72.8~~ ~~77~~ ~~75~~ ~~78~~ ~~78~~ ~~66~~ ~~0.9~~ ~~15~~ ~~15~~ ~~35~~ ~~35~~ ~~48~~ ~~53~~ ~~14.9~~ ~~106~~

+25

130.2 127.3 124.6 121.7 119.7 118.3 118.3 116.1 110.7 97.9  
~~119~~ ~~118~~ ~~190~~ ~~84~~ ~~76.3~~ ~~55~~ ~~73.1~~ ~~38~~ ~~71.4~~ ~~2~~ ~~46~~ ~~0.0~~ ~~7~~ ~~22~~ ~~27~~ ~~27~~ ~~54~~ ~~76~~ ~~54~~ ~~30.4~~ ~~70.8~~

3+0 P.O.C.

133.2 130.5 126.8 124.1 120.8 116.9 107.6 94.8  
~~124~~ ~~118~~ ~~79.7~~ ~~88~~ ~~76.5~~ ~~57~~ ~~73.5~~ ~~32~~ ~~2.09~~ ~~107~~ ~~14~~ ~~14~~ ~~39~~ ~~14~~ ~~14~~ ~~14~~ ~~132~~ ~~47~~ ~~16.0~~ ~~86~~

+75

136.0 128.7 125.1 119.4 113.0 101.2 86.4  
~~146~~ ~~122~~ ~~79.3~~ ~~57~~ ~~75.7~~ ~~37~~ ~~3.5~~ ~~3.5~~ ~~6.4~~ ~~16~~ ~~16~~ ~~16~~ ~~16~~ ~~18.7~~ ~~16~~ ~~32.0~~ ~~83~~

2+50

135.4 130.4 125.1 115.8 110.3 102.9 86.1  
~~196~~ ~~110~~ ~~146~~ ~~60~~ ~~79.3~~ ~~25~~ ~~71~~ ~~71~~ ~~5.5~~ ~~13~~ ~~13~~ ~~13~~ ~~13~~ ~~12.9~~ ~~35~~ ~~35~~ ~~29.7~~ ~~83~~

122.95

122.95



+25

TP 067 89.03 12.24 8836

5+0 P.O.C.

+75

TP 067 100.60 13.17 9993

+50

+25

4+0

113.10

24.

8

pt.

9

84.7	85.0	86.9	86.4	87.4	88.9	90.9	91.1
-2.7	-2.4	-0.5	-1.0	1.6	+1.5	+3.5	+4.3
100	70	46	23		15	54	112

89.03

93.0	92.8	94.0	93.8	93.4	93.5	94.0	91.5
-0.4	-0.6	+0.6	+0.4	7.17	+0.1	+0.6	-1.9
113	93	50	25	62545	22	68	130

100.8	100.6	101.0	100.6	98.6	97.4	94.6	92.5
+2.2	+2.0	+2.4	+2.0	2.0	-1.3	-1.0	-6.1
100	82	45	33		18	70	115

100.60

108.4	107.5	105.9	102.4	100.7	96.7	94.2
+6.0	+5.1	+3.5	10.7	-1.7	-5.7	-8.2
104	63	25		30	72	113

116.1	114.0	111.6	108.6	106.1	103.9	102.5	98.9	96.5
+10.0	+7.9	+5.5	+3.5	7.0	-2.2	-2.6	-7.2	-9.6
104	78	53	36		18	17	90	111

120.2	117.4	115.0	112.5	109.0	107.3	104.6	99.7
+11.2	+8.4	+6.0	+3.5	4.1	-1.7	-4.4	-9.3
104	79	52	22		20	68	110

113.10



Cross Section North East Outer Connection

+75

51.1	58.8	51.1	51.2	51.7	50.9	49.4	53.2	53.7
-0.3	+7.4	-0.3	-0.2	11.7	-0.5	-2.0	+1.8	+2.3
97	75	62	25		13	35	72	100

+50

52A	51.8	55.3	51.3	52.6	52.1	51.6	51.0	51.2	51.0
+0.3	-0.3	+3.2	-0.8	+0.5	11.0	-0.5	-1.1	-0.9	-1.1
119	92	74	60	28		17	52	91	120

+28.63 POC - 1/2 Curve  
 TP 9.34 63.10 13.03 53.76 <sup>0.7.5/ab</sup> 40.27 <sub>6+28</sub>

59.0	55.1	59.1	52A	52.2	51.6	52.2	51.9	52.0
+7.4	+4.1	+7.5	+0.8	+0.6	11.5	+0.6	+0.3	+0.4
100	78	69	57	30	60/10	20	52	110

7 +12 For Profile 3.7

62.9	64.1	61.4	60.0	62.6	63.1	61.4	61.6	61.4	71.5
+1.5	+2.7	0.0	-1.4	+1.2	+1.7	5.4	+0.2	0.0	+10.1
102	90	82	66	51	25		22	88	131

6+0  
 +96 For Profile 7.3  
 TP 123 66.79 12.72 65.56

70.3	69.0	66.8	65.4	66.7	67A	67.5	73.9	81.0
+3.6	+2.3	+0.1	-1.3	11.6	+0.7	+0.8	+7.2	+14.3
103	82	58	28	3	20	48	85	110

+75  
 TP 1.42 78.28 12.17 76.86

78.28								
70.3	75.3	74.5	75.1	76.8	77.2	79.5	83.1	89.8
-1.5	-1.5	-2.3	-1.7	12.8	+0.4	+1.7	+6.9	+13.0
106	88	62	25		15	49	88	121

4 +5+55

89.03

89.00



+25

51.3	5A.8	59.7	55.6	51.5	5A.7	5A.2	5A.1	5A.5	58.9	52.7	A7.6	49.7
-2.8	+0.7	+5.6	+1.5	+3.4	+0.6	+0.1	9.0	+0.4	+4.8	-1.4	-6.5	-4.4
106	98	84	70	62	50	28		6	24	50	66	100

8+0

60.3	60.0	5A.8	5A.2	58.0	58.2	5A.5	55.8	55.2	51.0	48.9	49.0	57.8	56.1
-4.5	+4.2	-1.0	-1.6	+2.2	-2.6	-3.3	7.3	-0.6	-4.8	-6.9	-6.8	+2.0	+0.3
112	95	76	55	37	18	6		15	22	43	60	73	108

+25

55.6	58.5	59.8	5A.9	5A.1	58.3	49.8	51.1	50.3	48.6	49.3	59.3
+4.5	+7.4	+8.7	+3.8	+6.0	+2.2	-0.3	2.0	-0.8	-2.5	-1.8	+8.2
105	95	79	62	50	37	23		15	43	72	97

+50

55.8	58.0	56.8	51.4	51.1	50.7	49.4	49.5	46.8	48.9	57.8
+5.4	+7.6	+6.2	+1.0	+6.7	+0.3	13.7	+0.1	-1.6	-1.5	+7.4
100	91	74	60	38	27		20	55	80	112

+25

56.9	56.2	56.1	50.8	5A.5	51.3	5A.0	5A.5	50.1	50.7	50.3	48.5	50.2
+7.6	+5.4	+0.1	+3.8	+6.6	+3.3	+3.8	-0.6	13.4	-0.4	-2.2	-0.5	
79	70	60	44	34	25	18	10		20	53	106	

7+0

56.1	5A.7	58.9	56.6	51.7	51.6	53.1	55.3	50.9	50.4	49.9	49.3
+3.5	+1.6	+5.8	+5.5	-1.4	+4.5		+2.2	-2.2	-2.7	-3.2	-3.8
102	90	74	62	47	16	100	12	20	47	77	110

62.10

62.10



+75

56.9	57.1	59.5	59.0	57.4	55.8	56.2	54.7	58.0	54.2	53.8	51.8
+1.1	+1.3	+3.7	+3.2	+1.6	7.3	+0.4	-1.1	+2.2	-1.6	-2.0	+2.0
106	85	78	52	23		8	18	22	45	80	103

+60 Profile

9.4

+50

51.3	51.5	58.9	56.6	55.2	55.5	56.1	55.9	54.5	56.5	53.3	53.6
+1.8	+2.0	+3.4	+1.1	-0.3	7.6	+0.6	+0.4	-1.0	+1.0	-2.2	-1.9
106	92	65	55	23		12	25	44	58	61	100

+25

51.3	59.0	54.2	58.6	58.5	51.0	54.8	54.5	54.7	54.1	53.1	53.7
+0.3	+2.0	-2.8	+1.6	+1.5	6.1	-2.2	-2.5	-2.3	-2.9	-3.3	-3.3
104	80	65	42	26		12	25	35	55	75	107

+9+0

51.7	53.6	55.4	54.0	53.8	54.0	54.1	53.4	54.0	53.9	53.8
+3.7	-0.4	+1.7	0.0	-0.2	9.1	+0.1	-0.6	0.0	-0.1	-0.2
96	84	73	48	23		13	40	66	94	118

+75

52.0	56.1	56.6	56.0	58.0	57.1	54.1	53.3	59.3	54.8	54.3
-5.1	-1.0	-0.5	-1.1	+0.9	6.0	-3.0	-3.8	+2.2	-2.3	-2.8
100	91	60	32	6		10	42	65	85	115

8+50

54.6	54.5	55.0	53.9	53.7	53.7	54.1	54.9	55.8
+0.9	+0.8	+1.3	+0.2	9.7	0.0	+0.4	+1.2	+2.1
96	75	50	25		16	45	80	108

62.10

62.10



Cross Section North East Outer Connection  
 Habash Blvd. South Federal Blvd. Interchange

St.

pt 13

+25

57.0	51.4	51.5	53.9	53.9	53.9	53.6	52.5
+3.1	+3.5	+3.6	0.0	0.0	9.2	-0.3	-0.4
111	86	50	43	19		15	45

11+0

56.6	51.1	60.4	51.4	51.1	51.5	53.3	53.2	55.9	58.0	58.4	53.8
+3.4	+3.5	+7.2	+4.2	+3.9	+4.3	+0.1	9.9	+2.7	+5.7	+5.2	+0.6
100	78	65	58	48	26	21		12	32	44	50

+75

56.8	51.9	51.1	51.1	50.2	51.5	51.1	53.1	53.3	53.1	53.5	53.9	
+3.1	+4.2	+4.0	+3.0	+2.7	+5.5	+2.8	+3.0	9.4	-0.4	0.0	-0.2	+0.2
126	91	72	70	55	49	41	5		12	41	85	117

+50

57.8	58.0	56.6	56.2	58.1	56.0	56.0	55.9	53.1	52.1	52.1	52.6
+1.8	+2.0	+0.6	+0.2	+2.1	0.0	7.1	-0.1	-2.9	-3.3	-3.3	-3.4
100	70	60	37	33	27		11	20	48	80	100

+25

57.0	51.9	51.5	51.2	55.5	52.1	55.9	55.6	51.9	52.4	52.2	52.1
+1.1	-1.0	+1.6	+1.3	-0.4	+3.2	7.2	+0.3	-1.0	-3.5	-3.7	-3.8
100	83	60	34	22	16		16	40	57	86	116

10+0

56.2	51.7	51.3	58.6	58.8	51.8	59.4	55.4	51.6	58.0	58.0	55.0	55.0
-1.6	-0.1	-0.5	+0.8	-2.0	5.3	+1.6	-2.4	-3.2	+0.2	+0.2	-2.8	-2.8
102	68	40	16	8		6	14	55	65	80	90	100

62.10

62.10



BM

4.52 62.11

Loady DWC  
 45+96.79 Base line  
 62.18  
 #1823-33  
 #1501862-32

+57.26 = OPP 45+07.45 P.O.C. Federal Blvd

+25

12+0

TP

6.63 66.63 3.00 60.10

+75

11+60

62.10

58.1	56.9	54.1	55.2	58.4	61.7	61.3
+3.0	+1.8	-1.0	11.48	+3.3	+6.6	+6.8
52	30	10	87.66	9	18	32

57.1	56.1	54.3	54.1	54.5	60.8	61.1
+3.0	+2.0	+0.2	12.5	+0.4	+6.7	+7.0
55	35	13		21	30	40

54.5	53.0	62.1	62.5	54.0	54.2	54.0	54.4
+0.3	-1.2	+7.9	+8.3	-0.2	12.4	-0.2	+0.2
95	73	49	36	8		11	27

66.63

54.0	53.7	58.3	62.6	60.1	59.1	53.9	53.7	53.8
-6.0	-6.3	-1.7	+2.6	3.0	-0.3	-6.1	-6.3	-6.2
80	34	16	5		3	8	20	38

57.8	57.8	54.0	53.4	53.6	53.8	53.9	53.6
+4.0	+4.0	+0.2	-0.4	-0.2	9.3	+0.1	-0.2
105	77	70	40	12		17	40

63.10



Alignment South East Inner Loop  
 Mabarrs Blvd Sec 4 Federal Blvd Interchange  
 Sketch Page 2

15

+25		1° 55.89'	
+12.19	P.O.C.	94° 39.93'	
5+0		92° 24.75'	
+75		87° 47.51'	
+50		83° 10.27'	
+25		78° 33.04'	A 189° 19' 52"
4+0	P.O.C.	73° 55.80'	R 155'
+75		69° 18.55'	T
+50		64° 41.32'	L 512.19
+25		60° 04.09'	D. 11.0895
3+0		55° 26.85'	
+75		50° 49.61'	
+50		46° 12.38'	
+35	P.O.C.	43° 26.03'	
2+0		38° 57.90'	
+75		32° 20.66'	
+50	P.O.C.	27° 43.42'	
+25		23° 06.19'	
1+0		18° 28.95'	
+75		13° 51.71'	
+50		9° 14.47'	
+25		4° 37.24'	
0+0	B.C.Lf.		



+10.64	EC	45° 00'	
8+0		43° 22.72'	
+75		39° 27.56'	
+50		35° 51.40'	Δ 90° 00'
+25		32° 05.23'	R 190'
7+0		28° 19.06'	T
+75		24° 32.89'	L 298.45
+50		20° 46.72'	D, 9.0467
+25	P.O.C.	17° 00.35'	
6+0		13° 14.39'	
+75		9° 28.22'	
5+50		5° 42.06'	



Alignment South West Inner Loop  
Habayah Blvd. Sec H - Federal Blvd. Interchange  
Sketch Page 2

17

	$0^{\circ} 00'$	
+94.15 P.C.C.	$49^{\circ} 39.93'$	
+75	$46^{\circ} 30.63'$	
+50	$42^{\circ} 27.40'$	
+25	$38^{\circ} 24.17'$	$\Delta 99^{\circ} 19' 52''$
4+0	$34^{\circ} 20.94'$	R 176.67
+75	$30^{\circ} 17.71'$	T 208.07
+50	$26^{\circ} 14.48'$	L 306.28
+25	$22^{\circ} 11.25'$	D. 9.7292
3+0	$18^{\circ} 08.02'$	
+75	$14^{\circ} 04.79'$	
+50	$10^{\circ} 01.56'$	
+25	$5^{\circ} 58.33'$	
2+0	$1^{\circ} 55.10'$	
+88.17 P.C.C.	$40^{\circ} 20.07'$	
+75	$37^{\circ} 30.67'$	
+50	$32^{\circ} 09.15'$	$\Delta 80^{\circ} 40' 08''$
+25	$26^{\circ} 47.63'$	R 123.65
1+0	$21^{\circ} 26.10'$	T 112.48
+75	$16^{\circ} 04.57'$	L 188.17
+50	$10^{\circ} 43.05'$	D. 12.8612
+25	$5^{\circ} 21.52'$	
0+00 B.C.B.		



+75.90	F.C.	40° 20'	
+50		34° 34.57'	
+25		29° 01.14'	Δ. 80° 40' 08"
6+0		23° 27.72'	R 128.88
+75		17° 54.29'	T 109.43
+50		12° 20.87'	L 181.45
+25		6° 47.45'	D. 13.337
5+0		1° 14.02'	



Alignment North West Inner Loop  
 Mabarrh Blvd Sec 4 Federal Blvd Interchange  
 Sketch Page 2

5+0		6° 40.28'	
+69.54	P.C.C.	0° 20.00'	
+50		37° 09.93'	Δ 80° 40' 08"
+25		33° 06.70'	R 176.67
+10		29° 03.47'	T 150'
+75		25° 00.24'	L 218.74
+50		20° 57.01'	D. 9.7292
+25		16° 53.78'	
3+0		12° 50.55'	
+75		8° 47.32'	
+50		4° 44.09'	
+20.80	P.C.C.	0° 39.93'	
2+0		44° 59.22'	Δ 99° 19' 52"
+75		39° 21.82'	R 127.36
+50		33° 44.41'	T 150'
+25		28° 07.01'	L 220.80
+10		22° 29.61'	D. 13.4961
+75	P.O.C.	16° 52.21'	
+50		11° 14.80'	
+25		5° 37.40'	
0+00	B.C.		



+96.30	F.C.	49° 39.93'	
+75		45° 59.99'	
+50		39° 31.46'	Δ 99° 19' 52"
+25		34° 02.93'	R 130.80
6 +0		28° 34.40'	T 154.05
+75	P.O.C.	23° 05.87'	L 226.76
+67	21' 20.77"	17° 37.34'	D. 13.1412
+50			
5+25		12° 08.81'	



Cross Section South East Inner Loop  
 Nabash Blvd. Sec 4 Federal Blvd. Interchange  
 Sketch Page 2 Alignment Page 15

409.12-49  
 7.8.55  
 Garber  
 Cota  
 Chavez

17.41  
 11.87

L1-F

R1-W

+0

52.5	52.2	40.9	53.6	48.9	48.4	48.9	50.1	49.7
8.6	8.9	11.2	7.5	12.3	12.7	12.2	11.0	11.4
80	56	46	39	18		25	50	60

+75

52.1	52.8	54.0	49.5	49.6	49.3	50.1	51.1
9.0	8.3	7.1	11.6	11.5	11.8	10.4	14.0
80	43	35	25		35	56	68

+150

52.8	50.4	52.9	49.9	49.4	50.1	50.2	50.3
8.3	10.7	8.2	11.2	11.7	10.4	10.9	10.8
80	46	40	9		26	45	60

+35

53.1	52.8	53.8	55.6	57.4	52.2	51.0
8.0	8.3	7.3	5.5	3.7	8.9	10.1
80	27	33		17	28	60

+0

BC Lt

52.6	52.5	51.3	55.3	51.9	53.2	52.6	52.7
8.5	8.6	9.8	7.55	9.2	7.9	8.5	8.4
80	42	18	16	16	20	46	60

991 61.08 6.63 51.17

BM

603 57.80 57.77

N.W. BP  
 Federal  
 357517

61.08



+50

+25

2+0

TP 8.18 57.10 12.16 48.92

+75

+50

1+25

61.08

LT

Z

RT

22

49.1	46.8	52.8	46.2	45.6	45.6	45.8	45.4
80	10.3	4.3	10.9	11.5	11.5	11.3	11.7
60	40	20		7	23	90	60

49.4	49.2	47.0	47.8	47.2	45.2	45.4	45.4
7.7	7.9	10.1	9.3	9.9	11.9	11.7	11.7
60	11	21	6	21	21	40	60

50.5	49.6	48.8	48.8	48.1	47.3	47.2
86	7.5	8.0	8.0	9.0	9.8	9.9
60	53	60	20	20	27	60

57.10

47.1	47.2	48.5	48.1	50.6	48.9	47.0	46.3	46.1
14.0	13.9	12.6	13.0	10.5	12.2	13.2	14.8	15.0
37	28	25	18	20		24	25	60

43.2

11.9

60

50.1	46.4	46.5	50.3	49.8	51.1	49.0	47.9	51.6	49.5	53.7
10.4	14.7	14.6	10.8	11.5	9.4	12.1	13.2	9.5	11.6	7.4
46	44	34	31	19	15		25	36	49	60

49.3	49.3	51.1	49.3	52.8	48.8	48.3	48.6	49.1	56.6
11.8	11.8	12.0	11.8	8.3	12.3	12.8	12.5	13.0	4.5
60	49	45	31	21	10		20	37	60

61.08



South East Inner Loop

4+0

+75

+50

+25

3+0

2+75

57.10

57

58

PT

23

48.0	53.1	49.6	49.9	46.8	46.0	46.1	46.4	52.0
8.2	3.4	7.5	7.2	10.3	11.1	11.0	10.7	5.1
60	49	36	16	9		30	151-700	80

48.1	52.6	48.9	50.3	47.0	46.0	46.1	50.5
9.0	1.5	8.2	6.8	10.1	11.1	11.0	6.6
62	53	16	15		4	49-700	80

48.1	51.6	49.8	49.9	46.1	46.2	46.1	46.2
9.0	5.5	7.3	7.2	11.0	10.9	11.0	16.9
63	54	47	17			50	60

48.0	51.5	49.4	48.8	46.2	46.0	46.0	45.9	45.6
9.0	5.6	7.7	8.3	10.9	11.1	11.1	11.2	11.3
	46	38	18	11		30	35	60

48.0	52.5	49.5	49.8	46.3	45.5	46.2	46.0	45.6
9.1	4.6	7.6	7.3	10.8	11.6	10.9	11.1	11.5
64	46	38	30	14		20	40	80

48.1	47.0	51.4	45.0	45.0	45.6	45.8	47.6	45.6
8.4	9.2	5.7	11.3	11.2	11.5	11.3	9.5	11.5
86	50	40	33		35	50	56	61

57.10



+25

TP 8.90 59.33 6.67 50.43

+12.9 P.C.C.

5+0

+75

x50

4+25

57.10

50.9	50.4	48.7	50.3	51.7	48.2	50.1	50.5
8.1	8.9	10.6	9.0	7.6	11.1	9.2	8.8
60	28	6		4	11	33	60

59.33

50.3	50.2	48.7	48.3	50.4	47.4	50.0	49.4	52.6	52.0
6.6	6.9	9.0	8.8	6.7	9.7	7.1	6.7	4.5	5.1
60	34	17	0.7H5	5	25	34	40	47	60

50.3	51.2	48.1	51.2	49.2	41.3	48.0	48.1	50.0	48.6
6.8	5.9	9.0	5.9	7.9	9.8	9.1	9.0	7.1	8.5
60	37	25	7		5	25	38	46	60

49.1	50.1	48.5	50.1	46.5	46.1	47.5	47.8	48.0
7.4	7.0	8.6	6.4	10.6	11.0	9.6	9.3	9.1
60	60	38	29	21		20	40	60

50.0	48.9	53.8	47.0	47.1	47.0	47.5	47.1
7.1	8.2	8.3	10.1	10.0	10.1	9.6	10.0
60	25	35	16		20	36	60

50.1	48.8	52.2	47.9	47.3	46.8	47.4	47.9	46.7	46.6
7.0	8.2	7.9	9.2	9.8	10.3	9.7	9.2	10.4	10.4
60	34	44	27		20	37	44	48	60

57.10



+75

+60 For Profile 11.5

+50

+25

+0

+75

+50

59.33

49.8 9.5 60	49.8 10.5 45	47.5 11.8 35	47.8 11.5	47.9 11.4 30	47.9 11.4 38	47.9 11.4 60
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52.6 6.7 60	53.8 5.5 70	53.9 5.4 20	54.3 5.0	53.9 5.4 10	47.8 11.5 10	49.1 10.9 60
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54.3 5.0 60	54.1 5.2 10	53.5 5.8 20	53.4 5.9	53.3 6.0 20	48.5 10.8 10	48.4 10.9 60
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80	51.4 7.9 53	53.5 5.8 10	56.5 7.8 18	50.0 0.3	51.3 2.0 20	54.5 4.8 10	55.6 6.7 60
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54.4 4.9 57	50.1 8.1 45	51.2 8.1 20	49.3 9.0	50.8 8.5 23	50.2 9.1 45	50.2 9.1 60
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51.1 7.6 60	50.3 9.0 10	50.2 9.1 50	49.6 9.0	49.6 8.7 21	54.6 4.7 40	51.1 7.6 60
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59.33



3.67 53.53

on Hub 1  
0+0 53.53  
page 21

TP 5.06 57.20 7.19 52.14

8+10.64 EC : opp 37+22.84 Fedl - ol Blvd.

+75

+50

+25

7+0

59.33

Lt

S

Rt

26

53.6	50.4	49.3	46.0	41.2	41.4	56.1	58.9
5.8 65	8.9 54	10.0 27	13.3 19	12.05 09 Hub	11.9 10	3.3 76	0.1 35

Federal Blvd.

48.4	51.1	52.8	49.4	48.4	51.1	54.0	55.6	51.0	58.3
10.9 65	7.6 51	6.6 35	9.9 25	10.9 65	8.2	5.0 70	3.7 27	2.0 45	1.0 80

47.9	49.2	47.5	48.1	47.1	54.4	55.1
11.4 66	10.1 37	11.8 27	11.2	11.6 18	4.9 38	3.6 80

47.1	48.4	47.1	50.6	48.5	48.7	50.8	46.5	47.5
12.2 75	10.9 55	12.7 33	8.7 8	10.8	10.6 7	8.5 13	13.8 34	11.8 60

48.1	48.4	47.1	48.0	49.0	47.1	53.6	53.0
11.2 60	10.9 40	11.6 20	11.3	10.0 12	11.6 40	5.7 50	5.1 80

59.33



Cross Section South West Inner Loop  
 Habas Blvd. Sec. A Federal Blvd. Interchange  
 Sketch Page 2 Alignment Page 17

+25

1+0

+75

+50

+25

0+00 BC. = Opp 33+48.92 of Federal

BM

7.08

60.61

53.53

0.72 Hub  
 0+05.12  
 Page 21  
 Also Page 26

Aug 15-49  
 H.S. Simon  
 Garber  
 Coto  
 Chavez

Lt = 5

2

PT = 11 27

55.3	55.6	57.6	55.1	56.2	56.6	56.9	57.1
53 60	58 75	58 68	55 30	44	50 30	47 70	55 60

55.3	56.3	56.6	56.4	56.2	56.8	57.0
53 60	43 45	40 22	42	44 20	48 70	46 80

54.1	55.2	56.5	57.2	57.8	56.5	56.8	57.3
59 60	54 52	41 27	34	54 20	43 23	48 40	55 60

53.6	55.1	55.7	56.0	56.7	57.5	57.1
70 80	55 46	49 27	40	39 20	33 70	35 80

48.1	50.8	54.2	55.2	56.2	56.9	57.4
55 63	48 55	64 20	54	44 20	47 70	53 60

47.3	48.2	50.8	52.4	53.4	54.5	54.9
53 60	48 48	48 20	81 70 Hab	74 25	56 30	57 60

60.61



870

+75

+50

+25

+88.17 P.C.C.

+50

60.61

53.8	53.3	53.9	53.1	53.1	53.0	53.2
<del>6.8</del>	<del>7.3</del>	<del>6.7</del>	<del>6.5</del>	<del>6.9</del>	<del>6.6</del>	<del>6.4</del>
60	40	20		20	40	80

53.9	53.2	53.3	53.9	53.3	53.6	53.8
<del>6.7</del>	<del>6.4</del>	<del>6.3</del>	<del>6.7</del>	<del>6.3</del>	<del>6.0</del>	<del>5.8</del>
60	40	16		40	40	80

53.3	53.8	53.6	53.2	53.0	53.3	53.3
<del>6.3</del>	<del>6.8</del>	<del>6.0</del>	<del>6.4</del>	<del>5.8</del>	<del>5.9</del>	<del>5.2</del>
60	67	40		20	40	80

53.5	53.6	53.0	53.6	53.4	53.8	53.2	53.5
<del>6.1</del>	<del>5.0</del>	<del>5.6</del>	<del>6.0</del>	<del>4.5</del>	<del>5.8</del>	<del>4.8</del>	<del>4.6</del>
60	42	25	8		20	40	80

53.9	53.2	53.6	53.3	53.4	53.8	53.0	53.5	53.4
<del>4.7</del>	<del>4.3</del>	<del>5.0</del>	<del>5.3</del>	<del>4.2</del>	<del>4.8</del>	<del>3.6</del>	<del>3.1</del>	<del>2.8</del>
60	39	29	11	8	48	20	40	80

53.2	53.2	53.2	53.3	53.0	53.0	53.1
<del>5.4</del>	<del>4.4</del>	<del>4.4</del>	<del>4.3</del>	<del>5.6</del>	<del>3.6</del>	<del>3.5</del>
60	46	30		20	40	80

60.61



+50

49.8	50.1	50.4	49.8	51.3	51.5	51.0	51.4
10.8	10.5	10.2	10.8	9.8	9.1	9.6	9.2
60	40	22	50	20	40	40	80

+25

50.1	50.5	50.9	52.6	52.3	52.2	51.6	51.1
10.5	10.1	9.7	7.9	8.3	8.4	9.0	8.9
60	44	24	14	80	20	40	80

+10

53.4	53.0	52.9	52.8	51.9	51.1	52.1
7.2	7.6	7.7	8.4	8.7	8.9	8.5
60	40	20	84	20	40	80

+75

53.6	53.1	52.7	52.2	52.3	52.4	52.1
7.0	7.5	7.9	8.4	8.5	8.2	7.9
60	40	20	84	20	40	80

+50

53.6	53.3	52.8	52.5	52.1	53.0	53.1
7.0	7.3	7.8	8.1	7.9	7.6	7.5
60	40	20	81	20	40	80

+25

53.8	53.1	52.9	52.5	52.9	53.4	53.5
6.8	7.5	7.7	7.1	6.7	7.2	7.1
60	40	20	71	20	40	60



+75

+50

+25

TP

5.12

54.80

10.93

49.68

on H<sub>2</sub>O  
+94.45 PCC

5108

+94.45 P.C.C.

+75

60.61

Lt

Z

pt,

30

46.2	45.5	45.3	44.1	44.0	43.2	42.5
86	93	95	101	108	116	120
80	40	20		20	40	80

46.0	45.8	45.3	43.5	41.9	42.9	42.3
88	90	95	113	129	119	125
80	40	20		20	40	80

46.5	45.9	45.1	43.7	43.3	43.4	43.1
83	89	97	111	115	114	117
80	40	20		20	40	80

54.80

45.2	45.1	44.6	44.3	42.8	43.7	43.6
154	149	160	163	178	169	170
70	40	20		20	40	80

49.5	42.5	50.4	49.1	51.3	50.5	50.1
111	111	102	109.3	93	101	99
80	40	20	on H <sub>2</sub> O	20	40	80

50.0	48.6	49.6	50.1	49.1	49.8	48.4	51.7	51.3	50.4
106	120	110	105	115	108	122	89	93	102
60	48	40	22	10		5	13	40	80

60.61



South West Inner Loop  
 Webster Blvd. Sec A Federal Blvd. Interchange

BM

1.26

53.54

072 Hub  
 040 SE 1/4  
 53.53  
 Page 21

+75.90 EC

+50

+25

6+0

54.80

Lt.

Z

Rt.

31

47.1	48.3	48.8	51.1	51.2	50.8	50.4
71	65	60	57	56	40	44
60	75	18	8	07/65	20	39

47.5	47.5	46.1	46.5	45.5	50.8	50.2
73	73	87	83	93	40	46
60	35	17		30	48	60

47.2	46.8	45.1	44.9	44.1	45.9	50.0	50.3
76	80	91	99	104	89	48	45
60	44	35		14	28	48	60

47.3	46.4	45.1	44.3	44.5	44.5	43.7
75	84	91	105	103	103	111
60	40	50		20	40	60

54.80



Cross Section North West Inner Loop  
 Mabary Blvd. Sec 4 Federal Blvd Interchange  
 Sketch Page 2 Alignment Page 19

TP 1.43 81.34 12.71 7991

140

+75

+50

+25

0+0 B.C.

6.12 92.62 2.65 86.50  
 12.60 89.15 1.08 76.55  
 13.25 77.63 1.00 64.38  
 BM 11.85 65.38 53.53

072 H66  
 123 + 81.72  
 Mabary Blvd

072 H66  
 0+0 SE 1/4  
 Page 21

Aug-16-49 Lt-JH  
 17515508  
 Garber  
 Chavez  
 Hatch

Rt. 2 E

32

58.4 59.2 100 12.3 10.2 13.2 81.5  
 34.2 33.4 21.7 20.3 18.4 13.4 81  
 53 40 20 22 10 60  
 53 TOP  
 Cut Bank

10.1 11.6 14.8 17.8 81.5 81.1 88.3  
 22.5 210 17.8 14.8 11.1 5.5 43  
 62 44 21 20 47 60

11.3 13.0 17.0 20.8 23.1 24.6 27.6 28.6  
 21.2 19.6 15.4 11.8 9.5 8.0 5.0 1.0  
 62 45 30 15 11 35 50

12.2 12.9 18.2 23.4 25.2 26.3 27.3 27.8  
 20.4 19.7 14.4 9.7 7.4 6.3 5.3 4.8  
 60 50 31 13 20 10 60

12.3 16.5 23.2 25.2 26.3 26.5 26.9  
 20.3 16.1 9.4 7.4 6.3 6.1 5.7  
 60 41 17 7.4 20 40 60  
 07 H66

92.65



Lt Lt Rt

+65 For Profile 128

+50

+20.80 P.C.C

2+0

TP 161 69.91 130.4 68.30

+75

+50

1+2.5

8/24

58.8	58.5	59.2	60.1	60.2	58.5	59.0	59.2
$\frac{111}{80}$	$\frac{116}{40}$	$\frac{107}{15}$	9.2	9.7	$\frac{114}{20}$	$\frac{129}{30}$	$\frac{107}{80}$

36-80407  
H05

58.6	59.2	61.2	61.8	62.1	62.3	62.5	62.8
$\frac{113}{80}$	$\frac{107}{35}$	$\frac{87}{22}$	$\frac{81}{15}$	$\frac{782}{07H06}$	$\frac{76}{20}$	$\frac{71}{40}$	$\frac{71}{80}$

58.3	58.8	61.9	61.3	61.7	62.1	62.5	62.9
$\frac{116}{80}$	$\frac{111}{48}$	$\frac{90}{40}$	$\frac{86}{20}$	8.2	$\frac{78}{20}$	$\frac{74}{40}$	$\frac{70}{80}$

89.91

58.5	59.2	61.0	61.4	62.0	61.5	66.6	62.1	63.0
$\frac{228}{80}$	$\frac{221}{46}$	$\frac{203}{40}$	$\frac{199}{20}$	19.3	$\frac{138}{28}$	$\frac{147}{33}$	$\frac{186}{43}$	$\frac{185}{80}$

58.2	60.1	62.0	64.4	61.9	10.0	11.5	13.5
$\frac{230}{63}$	$\frac{206}{35}$	$\frac{193}{28}$	$\frac{169}{15}$	13.5	$\frac{113}{20}$	$\frac{98}{40}$	$\frac{78}{80}$

60.8	61.9	61.3	68.1	69.5	11.5	13.1	16.0
$\frac{205}{80}$	$\frac{124}{50}$	$\frac{140}{28}$	$\frac{132}{19}$	11.8	$\frac{98}{20}$	$\frac{76}{40}$	$\frac{35}{80}$

8/24



4+0

58.3	58.0	59.9	60.5	60.9	60.9	60.9
116 60	119 50	121 26	9.4	9.0 20	9.0 40	9.0 80

+75

57.2	57.3	58.8	61.1	60.4	61.3	61.3	61.6
127 80	126 52	111 45	89 26	9.5	8.6 20	8.6 50	8.8 80

+50

57.9	57.6	57.4	59.4	60.0	61.8	61.8	62.3
120 80	123 45	125 30	10.5 25	9.9	8.1 15	8.1 30	7.6 80

+25

55.6	56.2	58.1	57.9	58.3	58.3	58.7	59.4
143 80	137 43	148 34	12.0 23	11.6	11.6 20	11.2 40	10.5 80

2+0

56.8	56.1	56.4	57.4	58.7	58.7	58.5	58.8
131 80	138 40	135 25	12.5	11.2 20	11.4 40	11.1 80	

+85 For Profile

11.0

2+75

58.2	56.1	56.5	56.4	56.9	57.1	56.7	57.4
117 60	137 54	134 40	13.5 20	13.0	12.8 20	13.2 40	13.5 60

69-91

69-91



+50

+25

5+0

+69.59 P.C.C.

+50

+25

69.91

5+

+

P.C.C.

35

58.0	58.4	59.0	59.0	58.2	58.6	58.8
$\frac{11.9}{60}$	$\frac{11.5}{40}$	$\frac{10.9}{20}$	$\frac{10.9}{20}$	$\frac{11.7}{10}$	$\frac{11.3}{20}$	$\frac{11.1}{60}$

57.5	57.7	59.1	58.5	59.4	59.3	59.4
$\frac{12.1}{60}$	$\frac{12.2}{40}$	$\frac{10.8}{20}$	$\frac{11.4}{20}$	$\frac{10.5}{20}$	$\frac{10.6}{40}$	$\frac{10.5}{60}$

57.6	59.4	58.8	58.1	59.5	59.8	59.8
$\frac{12.3}{60}$	$\frac{10.5}{40}$	$\frac{11.1}{20}$	$\frac{11.2}{20}$	$\frac{10.4}{20}$	$\frac{10.1}{40}$	$\frac{10.1}{60}$

57.9	59.3	59.1	59.6	59.8	60.0	60.5
$\frac{12.0}{60}$	$\frac{9.6}{40}$	$\frac{10.8}{20}$	$\frac{10.3}{20}$	$\frac{10.1}{20}$	$\frac{9.9}{40}$	$\frac{9.9}{60}$

57.1	58.6	59.4	59.8	60.0	60.0	60.6
$\frac{12.8}{60}$	$\frac{11.3}{40}$	$\frac{10.5}{20}$	$\frac{10.1}{20}$	$\frac{9.9}{20}$	$\frac{9.9}{40}$	$\frac{9.3}{60}$

57.5	58.5	59.5	59.1	60.3	60.5	60.6
$\frac{12.4}{60}$	$\frac{11.3}{40}$	$\frac{10.4}{25}$	$\frac{10.2}{20}$	$\frac{9.6}{20}$	$\frac{9.4}{40}$	$\frac{9.3}{60}$

69.91



North West Inner Loop

BM

8.36

52.41

on X Hub  
0.40 S.W. 1/4  
52.41  
Page 17.

+96.30 EC

+75

+50

TP

3.74

60.77

12.88

57.03

+25

640

5+75

P.O.C.

69.91

Lt.

Z

Rt.

36

55.8	55.8	5A.3	51.8	51.1	51.3	50.8
5.0	5.0	6.5	9.0	9.69	9.5	10.0
80.	80.	30	21	67 Hub	15	32

5A.2	53.5	5A.0	5A.2	51.1	50.0	50.1	40.0
6.6	7.3	5.9	6.6	9.1	10.0	10.1	11.8
80	40	38	15	10		20	40

53.1	53.0	56.3	55.9	53.5	52.0	52.2	52.6
7.1	6.9	4.5	4.9	7.3	8.8	8.6	8.3
60	46	40	20	8	20	10	60
				60.77			

56.4	56.6	56.1	55.1	56.1	56.1	56.1	56.1
13.5	13.8	13.3	14.2	13.8	13.3	13.3	13.3
60	40	20		20	40	40	60

58.5	57.8	56.0	57.4	57.4	57.7	57.9
11.4	12.1	12.9	12.3	12.5	12.3	12.0
60	40	25		20	40	60

58.5	57.2	57.1	54.6	58.4	57.6	57.8
11.4	12.7	12.2	11.2	11.5	12.1	12.1
66	37	24	67 Stas	28	46	60

69.91

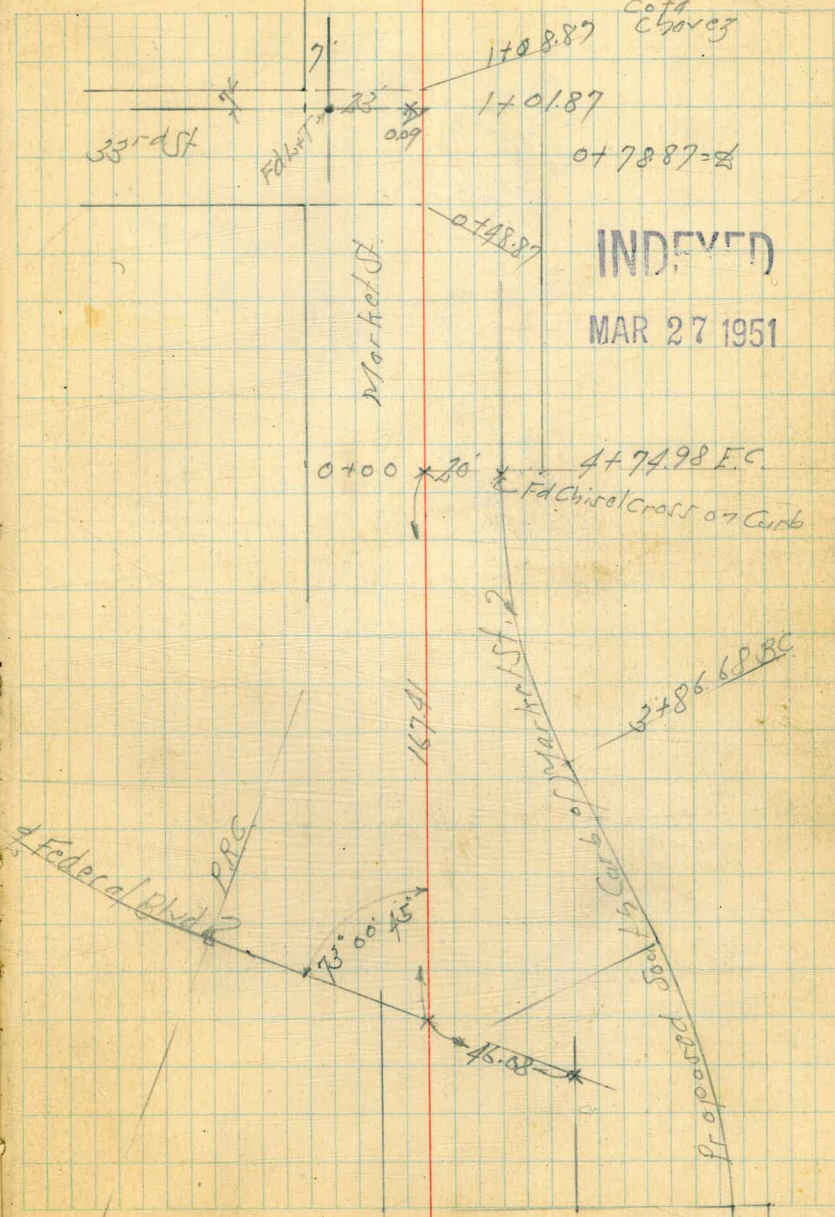


Market St. Connection to  
Habash Blvd. Free Map

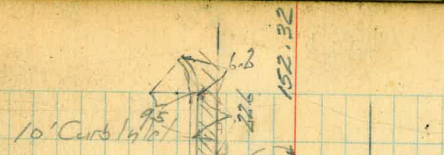
Topog #2046-26  
Co-ordinates Book 2 - 51.

Sept. 21-49  
H. S. J. S. S. O. N  
garber  
Cota  
Chavez

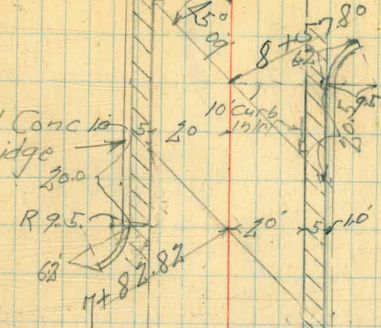
37





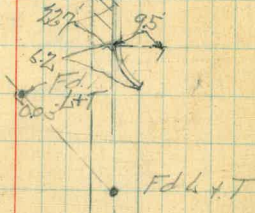


3 Panel Conc 10' Pile Bridge



6+46.15

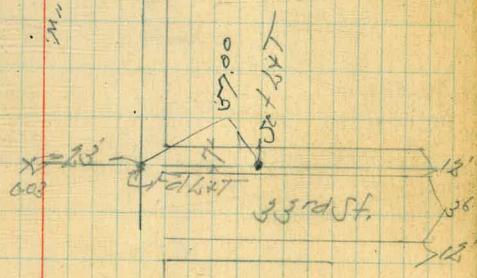
6+28.50



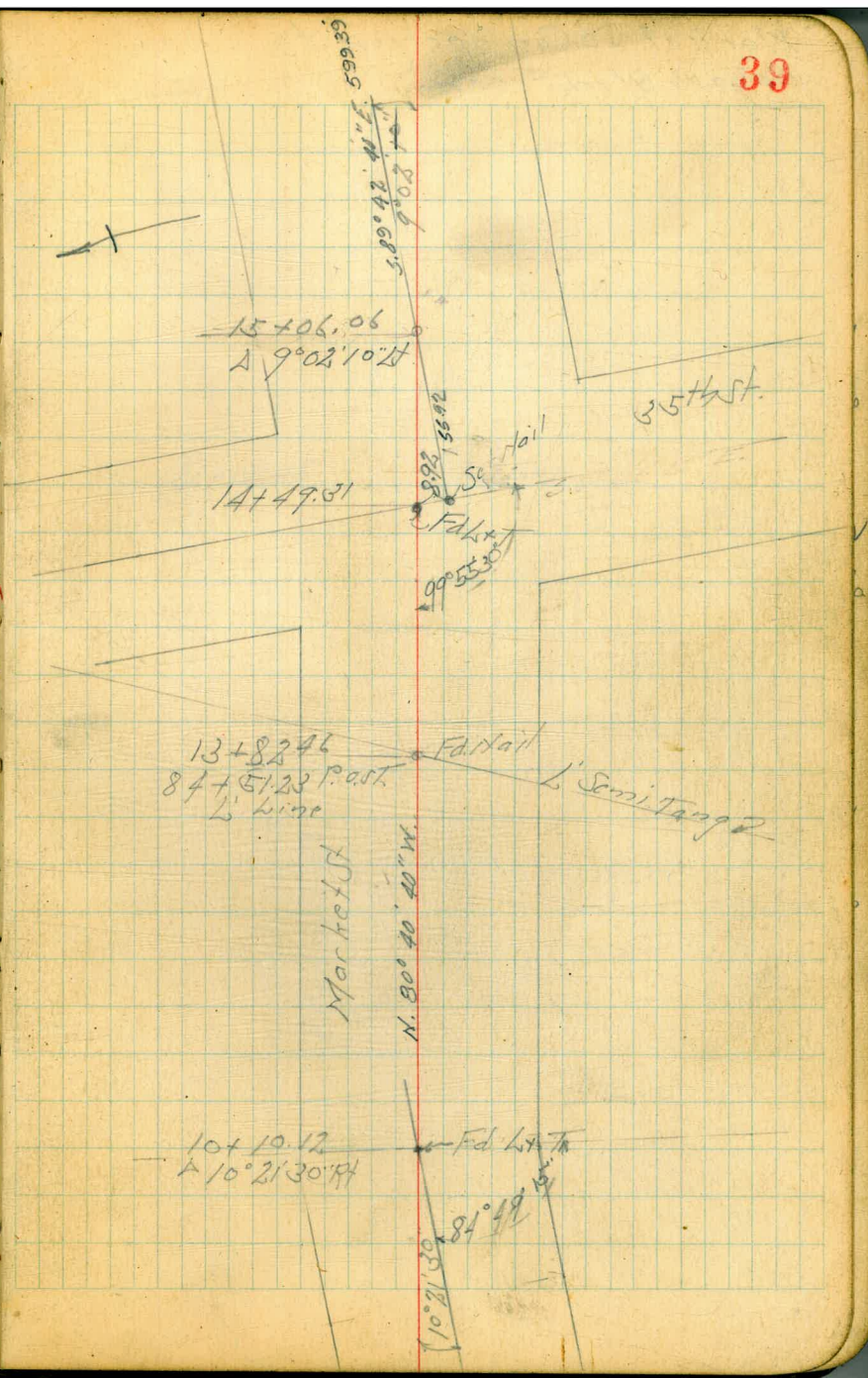
Market St.

5.88551, 150.88

3+70.95









Market St. Connection to  
Hobart Blvd. Freeway

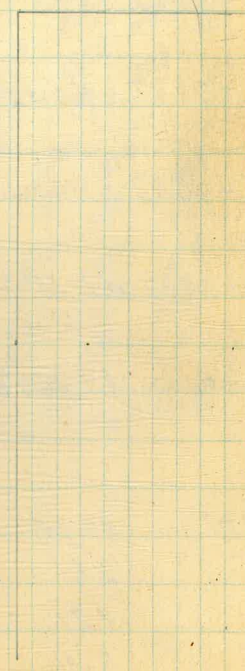
21+05.45

Fd. L+T

36.15 St.



Market St.





Cross Section Market St Connection  
to Wabash Blvd Freeway

2+0

TP 0.74 47.95 12.81 47.21

+50

+08.87 = EL 33rd to North

+98.87 = ECB

+78.87 = Z 33rd St

+58.87 = W Curb

+48.87 H.L. 33rd to North

0+0 = 4+7498 E.C. Market St. West

BM	10.14	60.02	0.30	49.88
	2.61	50.18	9.84	47.57
	2.21	57.41	12.48	51.20
	8.31	66.68	0.99	58.37
BM	7.59	59.36		51.77

H.E.T. & T.  
Market St  
4333 St. 164

N.M.R.P.  
Federal  
2575 St

Sept. 26-49  
H.S. 5100  
Garber L.N  
Cota  
Cavay

45.85	45.44	44.87	44.89	44.52	44.85	45.33	49.9	47.5
31.0	25.1	30.8	30.6	34.3	35.10	27.53	33.0	10.15
30.0	20.1.66	20.1.56		20.6	20.0	20.0	20.0	20.0

47.95

47.9	47.86	47.22	47.28	46.66	47.21	46.9	44.4	49.4
12.1	12.16	12.80	12.74	13.36	12.81	13.1	12.6	20.6
30.0	20.2.06	20.2.56		20.1	20.1	20.0	20.0	20.0
49.6	49.64	49.06	49.24	48.65	49.23	48.9	43.9	43.2
10.4	10.58	10.96	10.78	11.33	10.79	11.1	15.1	16.8
20.0	20.1	20.1		20.1	20.1	20.0	20.0	20.0
50.02	49.51	49.44	49.62	49.07	49.59	49.5	43.9	43.2
10.00	10.51	10.58	10.40	10.95	10.43	10.5	16.1	16.8
30.1.66	20.1.56	20.0		20.0	20.0	20.0	20.0	20.0
50.74	50.66	50.48	50.60	50.17	50.51	50.3	44.0	43.1
9.30	9.36	9.54	9.42	9.85	9.51	9.7	15.0	15.9
50.0.0.0.0	20.0	20.0		20.0	20.0	20.0	20.0	20.0
52.00	51.47	51.90	51.48	51.21	51.41	51.4	44.9	43.3
8.00	8.55	8.72	8.54	8.81	8.61	8.6	15.1	16.7
30.0.66	20.0.56	20.0		20.1	20.1	20.0	20.0	20.0
52.4	52.42	51.83	52.00	51.76	51.83	51.7	45.4	44.2
7.6	7.61	8.14	8.02	8.36	8.19	8.3	14.6	15.8
30.0	20.0.66	20.0.56		20.1	20.1.66	20.0	20.0	20.0
5.548	5.16	5.07	5.33	5.176	5.183	5.17	4.5	4.2
30.0	20.0.66	20.0.56		20.1	20.1.66	20.0	20.0	20.0

60.02

Cross Aug. 17. 50  
Sec. H.S. 5100  
Garber  
Percer  
Shepard



Later if needed - See Sketch.  
 Conc Walks + Steps to Houses should be taken

+50

From Sta. 4+50 to

Note: Add. outs are Shown as actual elevations

4+0

+77.95 = F.L. 33rd St. to South

+65.95 = F.Cb Line

+17.95 = 33rd St to South

+29.95 = M.Cb Line

+17.95 = M.L. - 33rd St to South

3+0

2+50

47.95

41.7 41.77 41.59 41.60 41.11 41.17 41.09  
 30 27.4 22.7 20 20 10 6.86  
 walk. Top cut

40.8 41.04 40.45 40.39  
 7.2 6.91 7.50 7.56  
 30.0 30.0 Cb 30.0 cut

40.78 40.29 40.92 41.27 38.9 37.0  
 10 20 20 30.0 21 80  
 cut Top Top C.Cb Wall

39.55 40.07 40.1  
 8.40 7.88 7.9  
 30.0 cut 30.0 Cb 30.0

40.8 40.80 40.13 40.06 39.20 39.85 39.6  
 7.2 7.15 7.82 7.89 8.75 8.10 8.8  
 30.0 30.1 30.1 30.1 30.0 30.0 30.0

40.5 40.68 40.04 39.91 39.06 39.90 39.47 39.57  
 7.5 7.37 7.91 8.04 8.87 9.05 8.48 10.88  
 30.0 30.1 30.1 30.1 30.0 30.0 cut 30.0 Cb 30.0 Cb

40.6 40.55 39.88 39.60 38.98 38.90 39.47 39.57  
 7.4 7.40 8.02 8.05 8.97 9.07 8.48 10.88  
 30.0 30.1 30.1 30.1 30.0 30.0 30.0 Cb 30.0 Cb

40.7 40.28 39.67 39.35 38.72 38.54 39.10 39.11  
 7.3 7.67 8.88 8.60 9.23 9.41 8.85 10.88  
 30.0 30.1 30.1 30.1 30.0 30.0 cut 30.0 Cb 30.0 Cb

40.9 40.20 39.75 39.74 38.71 39.31 39.3 39.3  
 7.1 7.75 8.30 8.31 9.24 9.64 8.7 8.7  
 30.0 30.1 30.1 30.1 30.0 30.0 Cb 30.0

41.1 40.92 40.40 40.49 39.60 40.10 40.1  
 5.9 7.03 7.55 7.45 8.35 7.85 7.9  
 30.0 30.1 30.1 30.1 30.0 30.0 30.0

41.3 42.63 42.67 42.09 42.98 42.7 38.4 37.6  
 1.7 4.80 5.82 5.28 5.92 5.47 5.3 7.6 10.4  
 30.0 30.2 Cb 30.2 cut 30.0 cut 30.0 Cb 30.0 30.0 7.0

47.95



+50

41.9 45.2 45.48 45.40 45.38 44.80 45.15 45.41  
 40 30 27.5 walk 22.6 20.1 20.1 10 50.0 45.11  
 • Top got. 10 20.1 44.66 45.06 45.20 34.1  
 got. Top walk at Rail of Bridge 30=ground under bridge

7+0

41.9 44.6 44.93 44.82 44.82 44.22 44.46 44.55  
 40 30 27.5 walk 22.6 20.1 20.1 10 50.0 44.30 43.87 44.46  
 got. Top got. Top 30 35 63 40

+50

39.1 44.1 44.33 44.22 44.24 43.58 43.74 43.80  
 40 30 27.5 walk 22.6 20 20 10 6.5 43.50 43.14 43.67 43.7 42.7 38.0  
 got. Top got. Top 30 50 80

6+0

39.2 43.4 43.58 43.53 43.47 42.93 43.10 43.02  
 40 30 27.5 (walk 22.6) 20.1 20.1 10 70.9 42.78 42.43 42.97 42.8 38.2 37.2  
 got. Top got. Top 30 39 80

+50

42.5 42.09 42.91 42.90 42.34 42.50 42.33  
 30 27.5 walk 22.6 20 20 10 80.8 41.94 41.62 42.20 42.23 47.8 36.5 36.5  
 got. Top got. Top 30 39 70 80  
 along House

TP

8.86 50.41 6.40 41.55

5+0

42.5 42.36 42.15 42.21 41.64 41.50 41.78  
 30 27.5 walk 22.6 20 20 10 5.17 41.46 41.07 41.64 42.07 37.6 37.0  
 got. Top got. Top walk ahead on ground. 80

47.95

47.95



10+10.12 L Note: Sec. taken on split of L

IP 12.69 61.88 1.22 49.19

+50

9+0

+57.80 = Ely. Conc. Bridge

B.M.

2.72 47.69

J.P. Ch. 100 ft  
Base of Rail  
Rail to Top of  
Conc. Bridge

8+0

7+82.82 = 1/4 Conc Bridge

50.41

Lt-N

Rt-S

44

Note: - Rt + Lt + Above of  
- Below

34.9 35.9 41.9 53.2 53.23 52.68 53.05 52.62 52.99  
-20.2 -17.2 -11.2 +0.3 +0.18 -0.37 8.83 -0.43 -0.06 -0.2 -1.4 -5.0 -4.8 -10.4  
98 83 50 32 20.2 20.2 20.3 48 80 102 110 122

61.88

34.0 35.2 43.4 48.81 48.34 48.84 49.00 49.06  
-14.8 -10.6 +0.6 -0.03 -0.50 57 +0.16 +0.22 -0.9 -3.0 -7.3 -9.6  
90 53 35 20.2 20.2 20.3 20.3 55 83 108 153

↑ Curb has sunk.

34.9 41.8 42.6 47.4 47.34 46.85 47.37 47.03 47.32  
-12.5 -5.6 -4.8 0.0 -0.03 -0.52 0.04 -0.34 -0.05 0.0 +0.2 -4.2 -7.5  
78 38 26 25.3 20.2 20.2 20.3 20.3 27 32 55 100

33.4 46.9 46.89 46.2 46.94 46.22 46.61 46.83 45.4 40.6  
-13.5 0.0 -0.65 -0.7 0.47 -0.72 -0.33 -0.11 -1.5 -6.9  
27 35.3 20.2 20.2 20.3 20.3 27.7 32 44

39.3 39.1 38.1  
-7.6 -7.8 -8.8  
73 105 158

46.11

49.0

41.1 44.6 45.71 45.52 45.14 45.60 45.84 45.65 45.22 45.85 45.95 32.4  
40 30 27.4 20.1 20.1 10 15 10 20.2 25.4 30  
edge walk on Bridge Top got. Top of Rail in Creek

50.41



1310

TP 12.49 85.09 0.72 72.60

+50

1210

+50

TP 12.53 73.32 1.09 68.79

1110

10150

61.88

8

109.1 94.3 83.4 75.5 74.8 74.4 74.1 73.2 73.8 74.0 89.9 98.9  
 +35.0 +20.2 +9.3 +1.4 +0.67 +0.27 // 0.0 -0.91 -0.33 -0.1 +4.8 +24.8  
 93 62 43 29 20.2 20.2 20.3 20.3 30 53 75

85.09

97.3 96.4 83.7 77.7 71.1 70.6 70.4 69.7 70.2 70.1 83.2 95.2  
 +26.9 +26.0 +13.3 +1.3 +0.69 +0.19 2.9 -0.72 -0.20 0.0 +12.8 +24.8  
 99 82 46 28 20.2 20.2 20.3 20.3 27 50 76

87.1 87.1 81.1 67.7 67.2 66.7 66.8 66.2 66.7 66.3 79.8 87.1  
 +20.3 +20.3 +9.3 +0.9 +0.44 -0.05 4.8 -0.63 -0.09 0.0 +13.0 +20.3  
 81 74 53 28 20.2 20.2 20.3 20.3 28 52 75

79.9 81.6 75.2 64.3 63.8 63.2 63.3 62.5 63.0 63.5 73.3 82.3  
 +16.6 +18.3 +11.9 +1.0 +0.46 -0.10 / 0.0 -0.78 -0.25 +0.2 +11.0 +19.0  
 75 60 41 28 20.2 20.2 20.3 20.3 30 56 77

73.32

75.4 68.9 60.6 50.1 59.6 59.6 59.1 59.6 59.8 63.1 64.4  
 +15.8 +9.3 +1.0 +0.53 0.0 3.29 -0.46 -0.03 +0.2 +4.1 +4.8  
 60 40 29 20.2 20.2 20.3 20.3 36 58 79

70.3 65.4 55.1 50.8 56.5 56 55.9 55.4 55.4 56.0 53.3 50.3  
 -5.6 -0.5 -0.8 +0.9 +0.64 +0.14 6.04 -0.47 -0.47 +0.1 -2.6 -5.6  
 70 60 45 28 20.2 20.2 20.3 20.3 46 75 100

2 Curb has sunk

61.88



15+06.06 L 9°02'10" LT

Sec. taken on split of angle

+84

+70

+59

TP 13.05 97.15 0.99 8410

+39

+29

+16

14+0

+75

13+50

8509

114.3  
+27.5  
103 **46**

104.8 103.5 94.5 86.2 87.2 86.8 86.8 86.1 86.3 86.9 81.5 104.3 103.8  
+18.6 +16.7 +7.7 +1.7 +0.91 0.0 10.44 -0.13 -0.46 +0.13 +0.74 +17.5 +17.0 +22.0  
90 77 48 40 19.5 19.5 13 20.8 20.8 40 55 62 68

114.00 102.8 98.5 91.8 85.6 85.4 85.4 85.4 85.4 85.4 85.4 85.4 85.4 85.4 85.4  
+28.6 +17.4 +12.9 +2.4 +0.39 0.0 11.81 0.0 -0.54 +0.06 +0.4 +2.4 +1.1 +3.5  
111 76 49 37 16.2 16.2 16 25.0 25.0 43 49

96.1 85.3 85.5 85.1 84.8 84.1 84.1 85.1 85.1 85.1 85.1 85.1 85.1 85.1 85.1  
+13.4 +8.6 +3.8 +0.41 +0.06 12.46 +0.04 -0.64 -1.11 -0.43 0.0 +2.8 +5.4  
121 96 62 17.5 17.5 16 26 42.3 42.3 70 108 158

96.8 88.5 86.5 85.1 84.5 84.2 84.2 84.2 84.2 84.2 84.2 84.2 84.2 84.2 84.2  
+11.6 +7.3 +2.3 +0.96 +0.25 +0.15 12.97 -0.05 -0.55 -0.81 -0.0 +2.4 +9.2  
137 82 57 32.6 32.6 26.3 16 27.0 39.2 72 103 170

97.15

90.0 80.2 84.1 83.9 83.4 83.0 82.8 82.8 82.8 82.8 82.8 82.8 82.8 82.8 82.8  
+6.4 +2.8 +0.71 +0.48 1.67 -0.43 -0.62 -0.05 +0.7 +1.5 +1.5  
104 64 30.2 20.3 20.3 33.5 33.5 61 80 102

90.9 85.1 84.1 83.1 83.5 83.1 82.1 82.1 82.1 82.1 82.1 82.1 82.1 82.1 82.1  
+7.8 +2.7 +1.27 +0.63 +0.42 1.99 -0.78 -0.04 +0.3 +5.4 +23.6  
110 60 30.2 30.2 20.3 20.3 20.3 30 51 78

113.2 102.1 102.5 85.3 83.5 82.7 82.5 81.4 81.4 81.4 81.4 81.4 81.4 81.4 81.4  
+36.7 +26.2 +20.0 +2.8 +0.95 +0.21 2.56 -1.09 -0.51 +0.1 +18.3 +26.6  
79 61 46 34 20.2 20.2 20.3 20.3 32 68 89

112.2 107.2 101.0 84.4 82.4 82.1 81.4 80.3 80.3 80.3 80.3 80.3 80.3 80.3 80.3  
+39.8 +25.8 +17.6 +3.0 +0.96 +0.27 3.9 -1.06 -0.51 0.0 +12.8 +24.5  
81 62 46 34 20.2 20.2 20.3 20.3 32 55 85

112.8 106.6 90.9 81.0 80.5 79.9 79.6 79.6 79.6 79.6 79.6 79.6 79.6 79.6 79.6  
+33.2 +27.0 +11.3 +1.4 +0.92 +0.26 5.2 -0.96 -0.43 -0.2 +5.0 +17.5 +24.5  
90 66 49 32 20.2 20.2 20.3 20.3 30 35 59 78

112.2 107.9 95.5 80.1 80.6 80.0 79.7 79.7 79.7 79.7 79.7 79.7 79.7 79.7 79.7  
+34.5 +30.2 +17.8 +1.0 +0.94 +0.30 7.26 -0.88 -0.39 -0.1 +13.2 +23.5  
90 74 47 33 20.2 20.2 20.3 20.3 31 49 72

8509



TP 1240 11966 1.33 10726

18+0

+50

17+0

TP 1260 10859 1.16 9599

+50

16+00

15+50

97.15

1348 1299 1260 1200 1070 1062 106.5 107.7 129.2 126.5  
 +27.8 +2.9 +1.0 +0.67 +0.04 63 -0.81 -0.20 +0.7 +22.2 +19.5  
 49 40 35 19.7 19.4 20.7 20.7 38 50 77

129.4 112.0 106.2 104.4 104.1 103.5 103.4 102.6 103.2 103.8 102.6 125.8 122.5  
 +26.0 +8.6 +2.8 +1.0 +0.73 +0.10 519 -0.83 -0.24 +0.4 +6.2 +22.4 +19.1  
 56 48 42 34 19.4 19.4 20.5 20.5 38 46 54 70

124.7 124.6 112.4 103.1 101.2 100.7 100.0 100.0 99.1 99.7 100.8 100.0 12.1  
 +24.7 +24.6 +2.4 +3.1 +1.2 +0.68 +0.03 64 -0.89 -0.31 +0.8 +6.8 +16.0 +12.1  
 74 55 51 41 34 19.4 19.4 20.6 20.6 40 52 55 94

120.3 116.1 102.1 98.0 97.2 96.6 96.4 95.7 96.3 106.6 105.8 109.0  
 +23.8 +19.6 +5.6 +1.5 +0.66 +0.05 70 -0.83 -0.23 -0.2 +10.1 +9.3  
 78 53 47 38 19.4 19.4 20.5 20.5 37 44 68 82

109.6 104.3 101.2 101 94.2 92.7 92.1 93.1 92.7 92.3 92.8 92.6 90.4 104.9 109.2  
 +14.5 +11.2 +8.1 +7.9 +1.1 +0.64 0.0 12 -0.39 -0.83 -0.32 -0.5 +5.3 +11.8 +16.1  
 87 69 61 44 39 19.5 19.5 20.8 20.8 38 42 59 82

105.0 95.6 90.6 90.2 89.5 88.5 89.1 89.1 89.1 90.1 92.6 111 114.1  
 +15.4 +5.9 +1.0 +0.59 -0.06 61 -0.18 -0.45 +0.4 +3.0 +24.5 +24.5  
 85 51 40 18.4 18.4 13 20.7 20.7 36 42 57 83

97.15



+75

+73 on N 100 - Top

+64 on South 100 - Top

+50

20+0

TP 7.34 125.81 119 118.47

+50

19+0

18+50

119.66

1270 1335 1258 1237  
 +14.6 +11.1 +3.5 +1.3 +0.21 -0.33 36  
 83 47 43 39 23.5 20.0 25.0 25.0 +1.1 +5.3 +6.8 +33.3  
 122.12 122.45  
 121.95  
 122.5  
 123.5 127.7 129.2 155.7

1379 1289 1288 122.5  
 +15.7 +13.7 +1.6 +0.29 -0.32 3.55 -0.73 +0.15 +0.6 +19.2 +18.8 +27.4  
 77 50 38 19.6 19.6 20.8 20.8 20.8 39 41 91 96  
 137.9 128.5 123.3 122.3 121.7 121.87  
 +15.9 +6.5 +1.3 +0.29 -0.32 8.1 -0.78 +0.14 +1.0 +18.4 +22.1  
 52 47 40 19.5 19.5 20.7 20.7 40 51 74

1423 1310 1212 1201 120.27  
 +12.0 +10.7 +0.9 +0.42 -0.22 5.4 -0.66 -0.10 +0.3 +19.2 +23.3  
 61 52 39 19.5 19.5 20.7 20.7 38 47 74  
 1196  
 120.2  
 120.6  
 139.5  
 143.6

12581  
 144.1 1256 1195 117.5 117.5 116.1  
 +26.6 +8.1 +2.0 +0.71 +0.03 2.94 -0.82 -0.27 +1.0 +19.4 +18.5  
 58 47 40 19.4 19.4 20.7 20.7 39 45 70  
 117.2  
 118.5 136.9 136.0

144.1 1316 1156 114.0  
 +30.1 +17.6 +1.6 +0.64 +0.065 6.6 -0.82 -0.29 -0.1 +22.3 +22.3  
 64 54 38 19.4 19.4 20.7 20.7 39 45 80  
 113.7  
 113.9  
 136.3  
 136.3

140.7 1174 111.5 111.2 110.5 110.5  
 +30.2 +4.9 +1.0 +0.67 0.0 9.2 -0.87 -0.21 +0.5 +22.8 19.8  
 53 45 37 19.4 19.4 20.7 20.7 38 53 73  
 109.6  
 103  
 111.0  
 133.3  
 130.3

119.66



2

BM 10.82 114.96  
 on Hut  
 80-11105P  
 114.93  
 1844-29

TP 4.71 125.78 4.73 121.08

BM 3.43 122.39  
 H. J. B.P.  
 Market  
 43816 St  
 122.26

21+05.45

20+80

125.81

131.2 127.9 123.5 122.5 122.9 122.4  
 +8.5 +5.0 +0.6 -0.38 2.0 -0.75  
 104 71 42 19 20.7 -0.56 -0.1 +0.2 +0.5  
 132.8 129.3 125.5 122.8 122.2 122.5 122.1  
 +10.3 +6.8 +3.0 +0.28 -0.31 -0.29 3.28 -0.44 -0.43 +0.18 0.0 +0.5  
 104 76 49 39.6 39.6 20 20 44.0 44.0 72 111  
 125.8  
 4th Conc  
 122.3 122.8 123.1 123.4  
 75 102 130  
 122.1 122.7 122.5 122.0



Market St Connection  
South of Market St.

+50

TP 1201 11434 098 10233

12+0

TP 1125 10331 080 9196

+50

TP 1273 9276 0.08 80.03

TP 1265 80.11 0.22 67.46

11+0

TP 1263 6768 1.58 55.05

+50

10+10.13

BM 8.94 56.63

4769

St. Charles  
Market  
& Bridge.

1005

Pt of S - South

50

104.1  
103.8 89.4 15.8 66.1 60.6 61.5 61.3 61.9  
96 -0.9 -15.3 -28.9 -38.6 -44.1 -43.2 -43.4 -42.8  
126 168 215 261 271 275 309 354

114.34

94.3 91.2 78.6 53.6 55.0 55.5 59.6 60.5  
90 -3.1 -15.7 -40.7 -39.3 -38.8 -34.7 -33.8  
152 200 285 294 225 331 357

My Home  
House

10231

84.1 19.5 18.8 17.0 61.1 59.8 48.1 46.5 43.0  
87 -4.6 -5.3 -7.1 -17.0 -25.3 -35.4 -37.6 -41.1  
117 148 170 211 251 296 350 395

9276

60.8 55.7 50.3 47.9 41.9 43.1 43.0 45.0 43.4 42.8 40.8  
69 -5.1 -10.5 -12.9 -18.9 -17.7 -17.8 -15.8 -17.4 -18.0 -20.0  
155 182 197 220 264 300 304 312 320 400

6768

50.2 50.0 44.8 41.4 38.5 40.3  
64 -0.2 -5.4 -8.8 -11.7 -9.9  
108 120 177 235 300

41.4

95

56.63

Note - All distances out refer to L  
Diff. in elev's. refer to 100' Offset Line



+39

TP 12.15 124.41 2.08 112.26

+39

+31

14+0

+50

12+0

11434

108.21

113.7

113.8

108.7

103.7

95.5

87.8

76.5

112 144 195 247 299 338 372

12441

112.8

113.3

106.3

101.6

102.3

97.8

92.0

115

+0.5

-6.5

-11.2

-10.5

-15.0

-20.8

129

185

242

301

346

432

112.4

112.6

119

+0.2

125

110.5

111.0

100.0

96.0

89.5

103.8

+0.5

-10.5

-14.5

-21.0

113

167

214

272

108.1

108.2

92.5

84.1

102.2

+0.1

-15.6

-24.0

108

161

204

108.2

109.5

96.7

90.4

69.7

100

65.5

66.5

68.1

6.1

+1.3

-11.5

-17.8

-38.5

-38.2

-42.7

-41.7

-40.1

112

151

208

258

282

287

343

356

11434



Market St Connection  
South of Market St.

16+0

+50

15+06.06

+84

+70

14159

12441

100.24

113.1	117.6	119.6	122.3	118.6	116.5	113.8	107.8	101.9	101.1
11.3	+4.5	+6.5	+9.2						
133	174	219	264	306	342	378	402	412	

114.9	118.0	120.6	120.3	117.0	114.2	107.9	95.1	95.0	96.5
9.5	+3.1	+5.7	+5.4						
136	177	222	263	306	342	395	403	409	

113.81	117.4	118.9	115.5	111.3	102.5	95.3	87.1	87.7	94.9
10.6	+3.6	+5.07							
135	206	247	291	328	350	376	393	411	

113.4	105.7	98.2	84.2
247	283	318	363

110.6	103.0	95.0	80.4
247	286	323	365

115.0	112.4	108.4	100.7	93.8	77.7
185	200	247	287	321	368

12441



TP 13.08 149.18 0.69 136.10

19+0

+50

18+0

TP 13.05 136.79 0.67 123.74

+50

17+0

16+50

124.41

100R4

131.9  
133.7  
134.5  
133.6  
19 +1.8 +2.6 +1.7  
138 170 225

128.4  
127.9  
129.4  
128.9  
123.9  
84 -0.5 +1.0 +0.5 -4.5  
137 192 135 300

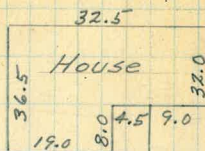
125.4  
124.1  
127.8  
128.9  
126.9  
124.1  
11.4 -1.3 +2.4 +3.5 +1.5 -1.3  
140 180 225 265 300

136.79  
120.11  
120.7  
125.4  
127.5  
128.2  
124.6  
119.8  
116.0  
46 +0.6 +5.3 +7.4 +8.1 +4.5  
134 167 211 257 291 343 386

114.11  
119.8  
125.5  
125.4  
123.6  
118.6  
117.1  
113.0  
10.2 137 182 218 258 298 340 390

111.5  
117.3  
121.2  
122.6  
119.7  
115.7  
113.0  
108.2  
106.9  
13.9 +5.8 +9.7 +11.1  
132 174 219 262 302 343 394 415

124.41





TP

308 14873

52.1404  
100.7404  
19+50

+64

TP

272 151.81 0.09 149.09

+50

20+0

19+50

149.18

100 Rt

150.4	154.2	156.2	155.9	149.4
+3.8	+5.8	+5.5	-1.0	
127	128	202	238	

151.81

149.1	154.0	155.7	150.7
+4.9	+6.6	+1.6	
136	197	237	

144.2	145.5	149.1	151.3	147.4
+1.3	+4.9	+7.1	+3.2	
135	168	208	232	

137.5	138.8	141.7	140.2
+1.3	+4.2	+2.7	
140	198	220	

149.08





Market St Connection  
to Habash Blvd. Freeway North of Market St.

100' Lt. 55

18+00

12.85 143.54 1.55 130.69

+50

17+00

+50

12.73 132.24 1.05 119.51

16+00

+50

15+06.06

B.M.

6.73 120.56

113.83

Stop 115' 50  
Sta. 15+06.06

135.6	140.5	143.2	143.3	142.2	145.8	148.8	138.3	157.0
383	309	304	259	212	177	133	143.54	1.3
+0.1	+4.5	+5.0	+6.7	+6.0	+4.6	+2.1	130.7	-0.6
400	325	285	250	209	172	134	1.5	79

121.9	128.1	131.2	130.4	129.2	127.0	125.7	125.5
407	343	290	236	180	133	6.5	-0.2
	+2.4	+5.5	+4.7	+3.5	+1.3		

123.9	127.3	124.7	123.9	121.3
325	293	184	132	10.9
+2.6	+6.0	+3.1	+2.6	
132.24				

122.6	120.9	121.1	118.7	112.86
260	191	153	127	7.7
		+8.2	+5.8	

116.6	117.1	118.9	119.9	118.4	110	108.4
314	239	183	153	127	113	11.2
			+10.5	+9.0	+1.6	

116.8	116.2	109.6
153	120	11.0
+7.2	+6.6	

120.56

For S. Sec 1890 47



+73

+64

+50

20+00

+50

19+00

18+50

7.83

150.73

0.64 142.90

100 27. 56

141.8	141.2	141.9	139.4
+2.4	+1.8	+2.5	11.3
205	173	137	
145.0	143.3	142.5	
+4.7	+3.0	+2.2	140.3
221	180	136	

152.8	151.7	147.8	146.3	143.6	141.2	139.9
+11.6	+10.5	+6.6	+5.1	+2.7	-1.2	-1.3
309	260	218	180	140	10.4	78

153.8	154.1	152	150.8	150.0	146.7	144.5
+7.1	+7.4	+5.3	+4.1	+3.3	-1.4	-2.2
304	260	218	181	140	4.0	83

154.4	154.6	153.2	151.9	150.3	148.73	146.3
+5.7	+5.9	+4.5	+3.2	+1.6	-1.2	-2.4
305	270	226	186	146	2.00	80

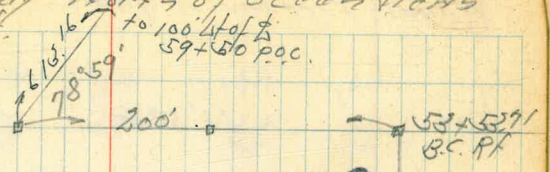
152.1	153.5	153.1	150.6	149.3	147.2	146.2
+4.9	+6.3	+5.9	+3.4	+2.1	3.5	-1.0
313	267	235	180	138		85

136.8	142.5	143.9	147.0	148.1	150.5	150.4	149.0	146.2	143.7	142.5
407	374	345	333	308	268	218	178	137	7.0	-1.2

150.73



Proposed Channel Change  
 Nabash Freeway North of Ocean View  
 West of 34th St. 57  
 to 100 ft of 59-50 P.C.



Nov. 23-49  
 F. Sisson  
 D. Smith  
 Chavez  
 Bunch

INDEXED  
 MAR 27 1951

NO 22008



A 85° 00'  
 R 300'  
 T 274.90  
 L 445.06  
 D. 5,72.96

L 7 Nabash

Proposed Channel Change 2

7+45.06 E.C.

				N/W B.M. Br. Plg. Market # 36
	7.24	122.38		
+2.10	129.62	12.65	127.52	
+2.06	140.17	12.62	138.11	



Cross Section Proposed Channel Change  
 Hobash Freeway Alignment

+50		23° 52' 40"		
3+0		19° 05' 22"		
+50		14° 19' 11"		
+0.3	15 ft of L 2 of 5' Conchell		120.5	Water Level
1+0		9° 32' 96"		
+50		4° 16' 48"		
0+0.0	B.C.			
BM	463	19.15	6.79	14.52
	1.31	21.31		20.00

S.F. 7647  
 06809 1/2 W  
 4342207  
 1844-14

9.2	18.2	14.2	13.9	14.3	14.1
10.0	1.0	5.0	5.5	1.9	5.1
5.5	4.0	3.5		2.5	5.0
Bottom Channel					
17.2	14.2	14.2	14.3	14.3	13.9
2.0	5.0	5.0	4.9	1.9	5.2
5.0	4.1	3.5		2.5	5.0
15.4	14.6	14.7	14.2	14.0	
5.0	3.5	4.5	5.0	5.0	
14.2	14.7	14.7	14.5	14.4	
5.0	3.5	4.5	4.7	4.8	
5.0				5.0	
15.0	14.2	14.8	14.7	14.4	
4.2	5.0	4.4	4.5	4.8	
5.0	3.5		3.5	5.0	
16.0	14.3	14.8	14.3	14.2	14.5
3.2	4.9	4.4	4.8	5.0	4.7
5.0	3.7	3.5	4.8	3.5	5.0
Bottom Hab					
19.15					



BM.

2.64 20.04

07 H<sub>06</sub>  
53+53.71 85  
20.04  
1844-14

TP

9.20 22.68 5.67 13.48

+4506 E.C.

42°30'

+400

38°11.84'

+50

33°25.36'

3+0

28°28.88'

19.15

13.9	12.9	13.9	9.1	9.3	8.1	8.7	11.7	14.4
5.3	6.2	5.8	10.1	9.88	11.1	10.25	11.5	11.8
5.0	2.5	1.5	5	07166	069round	10	2.5	1.8

14.2	14.1	9.0	8.3	8.9	14.0	14.0
5.0	5.1	10.2	10.9	10.5	5.2	5.2
5.0	2.5	8	10.9	10	2.5	5.0

14.2	13.2	9.1	9.1	14.3	14.1	14.2
5.0	6.0	10.1	10.1	4.9	5.1	5.0
5.0	2.5	1.5	10.1	17	2.5	5.0

8.5	8.5	11.2	11.8	14.1	13.4	13.9
10.7	10.7	8.0	7.4	5.1	5.8	5.5
5.0	3.8	3.0	1.5	5.1	2.5	5.0

19.15



Cross Section N. of Hwy Blvd. Line  
 Additional Outc West of L  
 50+50 to 74+0

INDEXED  
 MAR 27 1951

53+0

+50

53+0

+50

57+0

50+50

BM

5.55

19.88

14.33

67 Hub  
 0+0 Page 158  
 108' Lt 50+50

Fig. # 1823-49  
 Cross Sec. # 1844-14

Stationing

Left-Right

Nov. 30-49  
 H. J. Smith  
 Charles  
 Burch T

60

16.3	16.9	14.1	14.0	15.8
5.6	3.0	5.8	5.9	4.1
180'	141'	130'	110'	100'

16.6	15.3	14.3	12.4	12.8
5.3	4.6	5.6	7.5	7.1
160'	146'	135'	130'	100'

16.2	14.7	13.0
5.7	5.2	6.9
160'	125'	100'

16.1	16.2	14.2	14.5
5.8	5.7	5.7	5.4
160'	126'	115'	160'

15.5	14.7	16.2	15.4
4.4	5.2	2.7	4.5
160'	125'	113'	100'

14.5	14.3	14.8
5.4	5.6	5.1
160'	130'	100'

19.88

Face of Rt + Lt # 1844-14



55+0

0° 25.15'

+68

0° 19.65'

+50

0° 16.55'

54+0

0° 07.96'

+75

0° 03.66'

53+53.7' B.C.R.

TP

5.21

21.34

3.75

16.13

19.88

16.7	16.9	15.1	14.4	11.1	11.0
4.6	4.4	5.6	6.9	9.6	10.3
160	150	140	132	130	100

16.7	15.5	14.7	12.0	11.2
4.6	5.8	6.6	9.3	10.1
160	150	124	113	100

16.7	15.1	14.9	11.3	11.2	14.2
4.6	6.2	6.4	10.0	10.1	7.1
160	150	126	112	103	100

16.1	14.4	11.7	11.7	14.0	14.2
5.2	6.9	9.6	9.6	7.3	7.1
160	136	125	114	108	100

15.2	14.6	11.5	11.2	13.9	14.2
6.1	6.7	9.8	10.1	7.4	7.1
160	136	129	115	110	100

16.5	14.3	11.0	11.2	10.6
4.8	7.0	10.3	10.1	7.7
160	139	130	120	100

21.34



Δt

TP 6.38 24.87 3.35 17.99

+30 1° 04.68'

+22 70' Loff  $\frac{7}{15} = 2$  3.60 17.74

0.7 R<sup>17</sup>

57+0 0° 59.53'

+73 0° 54.88'

+50 0° 50.93'

56+0 0° 42.34'

55+50 0° 33.74'

21.34

17.6 17.6 17.9 18.0 16.5  
3.7/180 3.7/160 3.4/140 3.3/120 4.8/100

17.5 18.2 17.5 17.1 16.0  
3.8/180 3.1/160 3.8/140 3.6/120 5.3/100

17.6 17.3 18.3 16.6 15.6  
3.7/160 4.0/142 3.0/126 4.7/119 5.7/100

17.6 17.2 17.1 16.3 14.9  
3.7/160 4.1/140 3.6/129 5.0/116 6.4/100

17.0 16.9 18.2 14.1 14.1 12.7  
4.3/160 4.4/138 3.1/136 5.6/114 7.2/103 8.6/100

17.0 16.1 15.8 16.5 12.2 10.3  
4.3/160 4.6/143 5.5/138 4.8/135 9.1/118 8.0/100

21.34



Habers Blvd West of L

TP 6.55 2637 455 19.82

60+0 1° 51.09'

+50 P.O.C. 1° 42.50'

59+0 1° 38.90'

+95 2.5 R of L = L Sever MH

+82 6.8 R of L = Conc Water Valve Box  
with Sever MH cover

+50 1° 25.81'

58+0 1° 16.72'

57+60 1° 09.84'

24.37

H.

L

63

19.3 19.1 19.8 19.9 19.9  
4.5 4.7 4.6 4.5 4.5  
200 180 150 125 100

19.4 19.4 19.4 20.1 19.7  
5.0 5.0 5.0 4.3 4.7  
200 180 150 117 100  
H.S. Sario  
Hawi

19.1 18.8 18.8 18.1 18.1 18.6  
5.27 5.58 5.6 5.7 5.7 5.8  
220 230 200 175 135 100  
H.C. 6  
Rail 1/2 pi  
H. gutter  
St. 100 ft  
100 ft

18.4 18.1 18.1 18.5 18.4  
6.0 6.3 6.3 5.9 6.0  
180 160 140 130 100

17.1 17.9 17.9 18.1 18.1  
6.7 6.5 6.5 6.3 6.3  
180 155 140 130 100

17.1 17.1 17.9 18.1 18.1  
6.7 6.7 6.5 6.3 6.3  
180 150 130 112 100

24.37



4.

24

+40

2° 32.35'

21.7

4.7  
275  
Stucco  
House

21.6	18.0	18.1	17.3	19.0	19.1	19.7	18.1
4.8	8.4	8.3	9.1	7.4	7.3	6.7	8.3
225	210	190	170	162	150	125	100

62+20

2° 28.91'

21.5	21.8	17.3	16.5	18.5	18.5
4.8	4.6	9.1	9.8	7.9	7.9
230	195	183	132	123	100

+95

2° 24.61'

21.5	21.6	21.0	20.6	16.4	17.3
4.9	4.8	5.4	5.8	10.0	9.1
230	190	150	125	115	160

+50

2° 16.89'

21.4	21.6	21.5	21.6	22.1
5.0	4.8	4.9	4.8	4.3
230	180	150	125	100

FH Stucco  
House

61+0

2° 08.23'

20.2	20.3	20.3	20.1	20.0	19.7
6.2	6.1	6.1	6.3	6.4	6.7
230	200	175	150	125	100

FH Stucco  
House  
50' from  
Stucco  
House

60+50

1° 59.69'

20.1	20.4	20.4	20.3	20.3
6.6	6.0	6.0	6.1	6.2
200	155	150	130	100

FH Stucco  
House

26.37

26.37



Lt.

Z

B.M. 1.52 29.75

8 P.M. 12.0  
E of 3rd rd  
7/12/1914  
27.68  
1844-19

+50 3° 08.45'

+27 732 Lt of 7-7  
Sewer Hole 8.43 22.84

Top of Riv

64+0 2° 59.85'

+50 2° 51.26'

+35 2° 48.68'

22.9  
8.4  
261

TP 10.85 31.27 5.95 20.42

63+0 2° 42.66'

62+60 2° 25.79'

26.27

23.3 18.6 18.1 26.0 13.5 20.5 23.7  
8.0 12.5 12.6 5.8 11.8 10.8 7.6  
280' 210' 235' 230' 200' 140' 100'

22.1 18.2 18.2 20.5 18.4 20.7 20.6 20.2  
8.6 12.1 12.1 10.8 12.9 10.6 10.7 11.1  
270 255 242 315 185 150 135 100

Top of 7' Pipe  
Concrete

23.4 22.7 17.6 17.9 20.0 19.7 18.1 20.1 19.9  
7.9 8.4 12.5 12.4 11.3 11.6 13.2 10.6 11.4  
270 260 250 233 225 185 167 130 100

17.8 16.3 19.6 19.8 20.0 17.9 20.4 20.1  
13.5 13.0 11.7 11.5 11.3 13.4 10.9 11.2  
247 235 228 211 175 156 128 100

31.27

21.9 18.1 18.4 19.5 20.2 17.3 20.1 20.3  
4.5 8.2 8.0 6.9 9.5 9.1 6.3 6.1  
250 245 233 210 157 128 115 100

22.1 18.0 18.0 18.8 19.4 20.1 18.4 17.0 17.9  
13 8.4 8.4 7.6 7.0 6.3 9.0 9.4 8.5  
240 200 210 180 150 135 114 109 100

26.37



+15		3° 26.81	
66+0		3° 34.23	
+80		3° 30.79	18.7 22.1 23.0
+50		3° 25.63	
BM	11.13	40.81	29.68
65+0 P.O.C.	232 Lt. of d = Schrod Manhole	3° 17.04	10.24
64+88.7		3° 15.10	
		31.27	

B.P.M. Rail Bldg  
N of 3416  
at intersection  
of Top +  
Rim

26.8	26.7	26.2	26.0
14.01 189-FH Conc	14.14 165-FH Conc 26.14	14.6 12.5	14.8 10.0
26.8	26.6	26.3	26.0
16.55-FH Conc 10.57-FH Conc 10.57-FH Conc	14.04 15.59-FH Conc	14.3 12.5	14.5 10.0
21.6	21.8	21.4	21.9
13.2 21.5	13.0 20.0	12.43 18.6 = WY Conc	12.84 15.7 = FH Conc
20.2	26.9	21.1	26.8
11.64 21.4 5.5 21.2	11.96 20.0 on Bl	13.06 15.0 on Bl	13.98 10.0 on Bl 40.81
23.5	18.1	18.8	20.8
7.8 29.5	13.2 23.4	12.5 23.2	10.5 20.0
21.4	22.0	24.9	21.8
9.9 16.5	9.3 14.2	6.4 1.8	2.78 10.0 on Bl
23.0	18.8	12.1	20.0
8.3 28.2	11.5 2.5	11.6 2.34	10.3 19.0
21.5	24.9	21.9	27.9
9.8 15.0	6.4 12.9	3.4 10.0	
		31.27	



+30

4° 13.76'

68+0

4° 08.60'

+50

4° 00'

TP

8.86

45.79

3.88

36.93

69+0

3° 51.42'

+55

3° 43.68'

66+0

3° 41.10'

40.81

34.3  
11.5  
207

36.3  
9.49  
183

35.6  
10.2  
177

21.2  
4.6  
148

47.0  
+1.2  
25

52.7  
+6.9  
100

22.4  
13.4  
230  
Top Cat Bank

31.3  
14.5  
203

35.2  
10.6  
191

36.6  
9.19  
169

35.6  
10.2  
152

44.6  
1.2  
132

54.3  
+8.5  
100

29.5  
16.3  
270  
Top Cat Bank

29.8  
16.0  
177

35.3  
10.5  
138

37.1  
8.71  
135

35.7  
10.1  
125

47.0  
+1.2  
100

45.79

27.2  
13.5  
210  
Top Cat Bank

27.8  
13.0  
165

29.8  
11.0  
150

41.2  
3.719  
100

Top Cat Bank

25.7  
15.1  
322  
Top Cat Bank

26.1  
14.1  
173

27.0  
13.8  
138

31.0  
9.8  
100

25.4  
15.4  
315  
Top Cat Bank

26.2  
14.6  
184  
Top Cat Bank

26.3  
14.5  
150

26.2  
14.6  
130

29.6  
11.2  
100

40.81



+48.62

4° 51.33'

+30

4° 48.14'

TP. 12.72 58.95 10.59 46.23

TP 11.79 46.82 10.76 35.03

70+0 4° 42.98'

+50

4° 34.39'

69+0

4° 25.79'

68+65

4° 19.78'

45.79

26.9

29.5

35.9

42.9

41.4

53.5

32.1

39.5

23.1

46.1

116

35.0

27.8

24.8

200

150

117

100

Top RR  
Fill

29.2

31.4

41.7

45.5

45.0

49.6

53.5

29.8

27.6

17.3

14.5

14.0

9.1

5.5

27.0

23.8

21.3

180

150

110

100

Top RR  
Fill

58.25

25.4

29.5

20.7

50.9

53.6

55.6

53.5

10.43

16.3

15.1

+5.1

+7.8

+10.0

+10.1

28.6

260

245

21.5

188

140

100

Top RR  
Fill

25.5

35.4

53.2

52.8

53.7

10.34

10.4

+7.4

+20

+7.9

25.5

23.5

200

135

100

Top RR  
Fill

35.1

35.4

43.7

46.6

47.0

10.09

10.4

2.1

+0.8

+1.2

22.5

206

184

150

100

Top RR  
Fill

36.0

35.1

36.3

41.1

48.7

28.4

10.7

2.5

4.7

+2.3

20.4

19.3

180

150

100

Top RR  
Fill

45.79



TP 0.54 68.58 3.08 68.04

92 34.5  
150.17  
73+25

+50

5° 43.14

140.21

73+0

5° 34.54

+50

5° 25.95

140.21

TP

12.89 71.12 0.72 58.23

72+0

5° 17.38

+50

5° 08.76

140.21

71+0

5° 00.17

58.95

59.9 62.3 62.1 62.8 66.5  
142 8.8 9.0 8.3 4.6  
200 175 150 125 100

58.3 65.4 66.5 69.4  
128 5.7 4.6 1.7  
200 177 150 105

4.69 61.0 62.8 66.4  
24.2 10.1 8.3 4.7  
218 184 150 100

34.3 47.4 56.4 58.2 58.8  
24.7 11.6 3.6 0.8 0.2  
263 212 188 150 125

29.5 39.6 52.3 54. 57.5  
32.5 19.4 6.7 5.0 1.5  
295 231 181 150 125

125 = N.Y. Farm  
House

29.2 33.1 45.9 45.8 50.0 53.8 56.4 58.9  
32.8 25.2 10.1 13.2 9.0 5.2 2.6 1.0  
238 250 200 183 169 132 127 100

58.95



Wabash Blvd West of E  
50+50 to 74+0

41.

8

.0

BM

9.57 29.69

BPM Rail Br.  
E of 32nd  
+ 1 in per cent  
29.68

TP

4.05 39.26 4.77 35.21

TP

7.42 39.98 13.06 32.56

74+0

5° 57.73 160.61

TP

0.19 44.62 11.68 45.43

73+75

5° 47.44

TP

0.82 57.11 12.29 56.29

68.58

39.2

57

200

39.5

4.7

175

39.5

5.1

150

42.6

3.0

119

16.3

+1.7

100

11.62

55.0

2.1

182

50.5

6.6

150

51.4

5.7

135

89.5

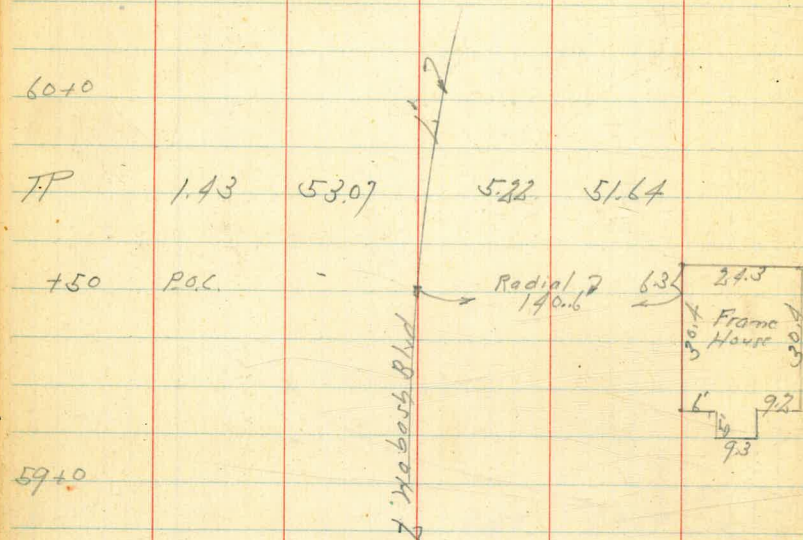
0.3

100

57.11



Cross Section Heberish Blvd L Line  
 Additional Outs East of L  
 58+0 to 73+0 Stationing



60+0  
 TP 1.43 53.07 52.2 51.64

+50 P.O.C. Radial 140.6 63 24.3 Frame House 19.3 9.3

59+0

+50

58+0

10.61 36.86 4.25 46.35  
 10.66 50.50 0.88 39.84  
 B.M. 11.04 40.72 29.68

BPM Rail Br.  
 East of 33rd  
 + Imperial

Rt. East.

71

58.07	45.5	47.0	48.0	50.4	55.2
14.3 10.2	11.4 10.8	9.9 13.1	8.9 14.0	6.5 18.5 = FH House	1.7 2.0
16.3	10.3	10.3	52.2	55.6	
13.7 10.0	10.6 11.3	7.6 1.0	4.7 1.75	1.3 2.00	
5	45.8	48.9	51.0	54.0	
11.1 10.0	11.1 12.0	8.0 15.0	5.9 1.75	2.9 2.00	
16.5	42.0	45.1	46.0	47.9	
16.4 10.0	14.9 12.9	11.8 13.0	10.9 1.50	9.0 2.00	
56.86					



Rt = East.

Z

28.02	18.2 9.8 11.2	22.0 6.0 12.8	23.0 5.0 15.0	25.2 3.8 18.5	28.0 2.0 21.4	30.0 1.2 27.0
35.55	23.4 13.3 15.5	25.8 9.8 18.0	29.0 6.6 20.0	31.3 4.3 23.5	32.1 3.5 29.0	
25.6 100	26.3 22.6 12.0	28.4 19.5 14.0	31.0 10.9 17.0	41.0 6.9 20.0	39.8 8.1 22.5	39.5 8.4 25.0
23.1 100	28.3 19.6 12.3	35.7 12.2 15.0	41.8 6.1 18.0	43.8 4.1 20.0	46.0 1.9 24.0	49.5 1.6 25.5
19.2 100	28.1 19.2 11.0	29.7 19.2 13.0	32.3 15.6 15.0	35.6 12.3 17.5	39.1 8.8 20.0	42.4 5.5 24.0
47.94	26.7 21.2 16.7	28.6 19.3 16.4	35 16.4 14.0	31.9 16.0 19.0	33.8 14.1 20.0	35.3 12.6 22.5
21.7 153	32.9 30.2 13.5	40.1 13.0 18.7	42.6 10.5 20.0	45.6 7.5 22.0	47.4 5.7 23.5	

53.07

on St 45  
100 RT 63+0

+40  
TP 3.69 28.02 11.22 24.33

62+20

TP 0.52 35.55 12.91 35.03

+95

+50

61+0

+80 Extra  
TP 8.04 47.94 13.17 39.90  
(Elev. 16.2) (17.9) (22) (19.5) (27.0) Elev  
25 RT 50 RT 75 RT 90 RT

60+50

53.07



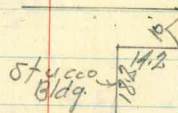




+15

Tompkins

ST



Francis

66+0

P.O.C 100' RA

+80

TP

11.86

54.04

0.44

42.18

+50

+30

Extra

65+0

64+88.7

42.62

Z

pt: East

74

80.5	49.1	47.8	46.3	46.0	45.5	46.6
3.2 100	4.3 123	6.2 176	7.6 181	7.96 187	8.18 211	7.39 214
			WCB Francis	Gut	Gut	ECB Francis
47.9	47.6	46.0	46.9	45.4	44.6	45.2
4.1 100	6.4 135	8.0 149	7.1 163	8.6 199	9.43 190	8.83 216
		WCB Francis	WCB Francis	WCB Francis	Gut	Gut
47.7	45.0	44.8	43.4	42.6	42.2	43.0
6.3 105	9.0 135	12.2 178	10.58 194	11.44 194	11.81 220	11.01 220
			WCB	Gutter	Gutter	ECB
54.04	36.1	38.5	39.9	40.4	40.6	40.0
4.7 100	5.9 125	4.1 150	3.7 184	2.15 198	2.95 198	3.37 224
			Francis	WCB Francis	Gut	Gut
47.7	28.1	31.4	31.4	38.2	31.3	31.6
14.9 100	14.5 34	5.2 58	5.2 100	4.36 154	5.3 184	4.80 200
				Top S. Rail	WCB Francis	Gut
47.7	29.7	30.8	30.6	31.2	20.5	36.4
13.9 100	12.9 150	11.8 170	6.0 190	5.30 206	6.11 206	6.20 230
				WCB Francis	Gut	Gut
47.7	29.5	30.3	30.5	30.3	35.5	35.4
14.2 100	13.1 150	12.3 187	6.1 197	6.28 207	7.08 207	7.17 207
				WCB Francis	Gut	Gut

42.62



+30  
TP 12.81 70.34 6.57 57.53

68+0

+50  $\frac{P.O.S. 100ft}{+125}$   
TP 10.13 64.10 0.07 53.97

67+0

+55

66+0

70.34  
59.0 58.1 57.5 56.7 56.5 57.4  
11.3 12.2 12.77 13.62 13.25 12.90  
125 43 65 = W.C.B. of Francis 55 = gutter 80 = gutter 8 = F.C.B. of Francis

59  
56.5 55.6 54.8 54.8 54.8 55.5  
7.2 7.6 8.51 9.34 9.33 9.34 8.55  
100 125 139.5 159.5 172.5 184.5 184.5  
157 = W.C.B. 159.5 = gutter 172.5 = gutter 184.5 = gutter

55.6 54.6 52.3 52.4 51.6 51.5 52.3  
10.5 11.50 11.8 11.67 12.47 12.60 11.81  
100 125 = 145 150 167 = W.C.B. 167 = gutter 192 = gutter 192 = F.C.B.

64.10  
51.0 49.5 46.6 49.0 48.2 49.0  
0.57 3.0 4.53 5.38 4.89 5.76 4.98  
100 140 174 = W.C.B. of Francis of Return 177 = gutter 186 5.76 = gutter 198 = F.C.B. of Francis

51.0 49.4 48 48.5 48.4  
3.0 4.56 5.98 5.53 5.67  
100 on oil 125 on oil 180 on oil 194 on oil 207

51.19 49.5 49.0 49.0 47.4 47.5 48.2  
2.85 3.52 4.04 5.0 5.75 6.64 6.49 5.77  
100 = Top 500 of Top 500 125 = gutter 150 180 = W.C.B. of Francis of Francis 180 = gutter 211 = gutter 211 = F.C.B. of Francis



+48.62 = Mid. Parcel

+30

70+0

TP 12.64 82.71 0.27 70.07

+50

69+0

68+65

70.34

rt. Dec 6-49  
H.S. & Son  
Dis. Mills  
Chavez  
Bunch. 76

13.6 14.2 14.2  
9.1 8.47 8.48  
100 127 147

Scherry Hill  
on Farm

13.0 13.8 13.4 14.2  
9.7 8.9 9.28 8.51  
105 131 150 150

Gut  
Cotton  
Return

12.5 12.4 11.7 12.0 11.6 12.5  
10.2 10.30 10.25 10.67 11.07 10.24  
115 123.5 123.5 133.5 149 149

8371 = NCS Gut = Gut = Gut = Gut = Gut

61.2 61.8 67.4 66.7 67.2 66.5 67.3  
9.1 3.0 2.88 3.58 3.08 3.80 3.00  
100 128 133 133 145.5 158 158

61.1 62.4 61.1 62.2 61.6 62.4  
8.6 7.91 8.63 8.11 8.55 7.87  
125 142 142 154.5 167.5 167.5

60.2 60.1 59.8 59.8 59.3 59.2 60.0  
10.1 10.2 10.54 11.46 11.0 11.13 10.81  
113 133 49 49 60 74 74

70.34

EV Farm  
House  
Francis



BM

6.95

80.74

on Hub 68  
74+0  
8660  
1847-23

73+0

+50

73+0

TP

7.57

87.69

2.59

80.12

+50

71+0

82.7  
82.5

82.71

84.0

5.7  
116

85.5

5.2  
125

81.3

6.4  
95

82.0

5.7  
108

85.6

7.1  
125

80.5

7.3  
95

80.3

7.4  
83-116

19.6

8.06  
83-94

80.2

7.50  
97

80.8

7.75  
109-94

85.2

6.93  
109-ECB  
129.5  
T-20  
C-15011

87.69

19.0

2.8  
85

19.1

2.69  
97-116  
100-116

19.1

3.67  
107

19.3

3.38  
119-94

80.1

2.56  
119-ECB

15.9

6.8  
97

16.1

6.60  
103.5

15.4

7.19  
103.5-94

15.0

6.87  
117

15.2

7.45  
129-94

16.1

6.62  
129-94  
Francis

82.71

W.C. of  
Francis



Check Levels Federal Blvd. Extension  
 Broadway + 35th St. to Market + 33rd St

B.M.	6.97	58.74	57.77	NW 8P Federal 35th St Plan 51.87
	11.50	69.71	0.53	58.21
	13.00	82.49	0.22	69.49
	13.14	95.25	0.38	82.11
	9.82	102.49	2.58	92.67
B.M.	3.70	102.84	3.35	99.14 NE Mon Broadway + 34th 99.26 Plan
	10.16	103.98	9.02	93.82
	2.03	94.86	11.15	92.83
B.M.	1.79	87.83	8.82	86.04 NW Char to F + 33rd St
	0.59	76.15	12.27	75.56
	1.02	64.20	12.97	63.18
	4.20	57.59	10.81	53.39
B.M.			7.76	49.83 NE 74th Market + 33rd 49.88 Plan

INDEXED

Feb. 23. 50  
 F.S. 100-  
 D Smith  
 Chavez 78

	MAR 27. 1951	57.59		
	12.89	70.05	0.43	57.16
	12.50	82.23	0.32	69.73
B.M.		1.02	81.21	SW 8P Market + 32nd 81.47 Plan



Check Levels Federal Blvd. Extension  
 Federal + 35th to Federal + Home Ave.

Feb 29. 50  
 H. Simon  
 O. Smith  
 Chavez 79

BM 6.78 58.55 51.77 H.N.B.P.  
 Federal &  
 35th St.

BM 2.39 58.51 2.43 56.12 on 2nd Mo  
 52 Broadway  
 New York  
 8th Fl.

12.02 65.35 518 53.33 on 2nd Hub  
 11 + 46.86 EC.

BM 3.22 62.13 on 2 + 0 2nd Fl.  
 Federal  
 45 + 96.79 A  
 1823-33  
 62.18

7.27 69.81 2.81 62.54

9.03 78.12 0.72 69.09

BM 2.92 75.20 B.P.S. W. Bridge  
 Federal +  
 Home Ave.  
 Plan 75.29 4.823  
 75.26 = 1863

State 81.11



Re Survey Lot 17-18 Block 3 McLoren  
H Street Add.

Ryt Street 97264

INDEXED

MAR 27 1951

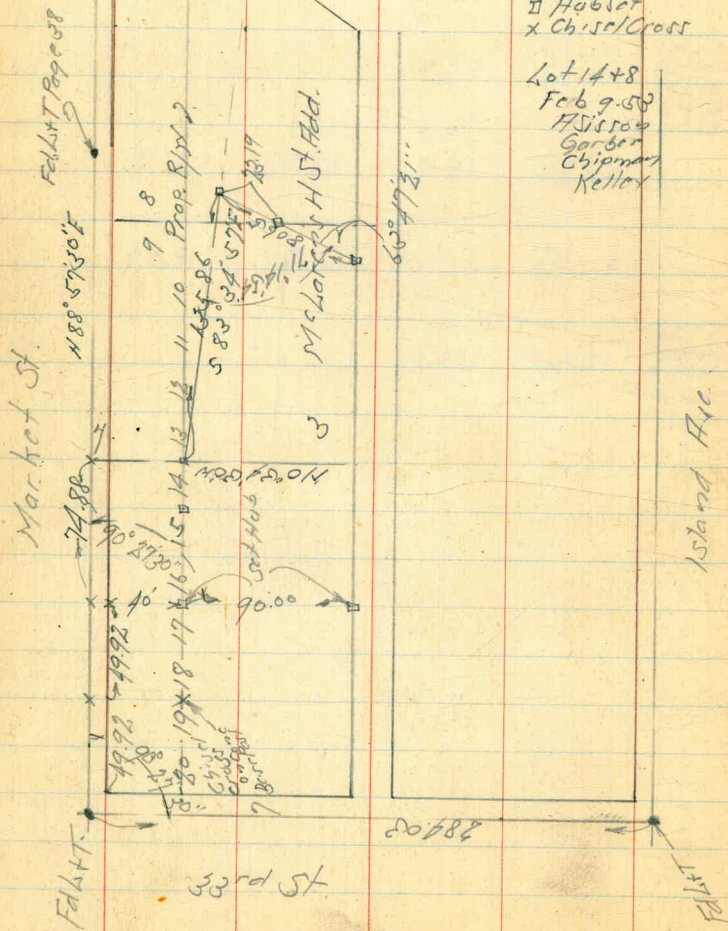
March 27-51

F.S. Iron  
Garber  
Parker  
Bertolucci

N.O. 22009

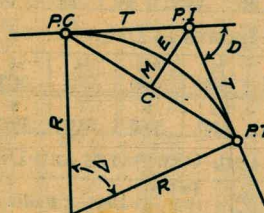
Denotes  
□ Hub Set  
x Chisel/Cross

Lot 14+8  
Feb 9-50  
H.S. Iron  
Garber  
Chipman  
Kelley



# DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

Copyright, 1914, by Eugene Dietzgen Co., New York City



## CURVE FORMULAS

Radius  $= R = \frac{50}{\sin \frac{D}{2}}$  (1) Degree of Curve  $= D$  and  $\sin \frac{D}{2} = \frac{50}{R}$  (2)

Tangent  $= T = R \tan \frac{\Delta}{2}$  (3) Length of Curve  $= L = 100 \frac{\Delta}{D}$  (4)

Middle ordinate  $= M = R(1 - \cos \frac{\Delta}{2})$  (5)  $= R \text{vers} \frac{\Delta}{2}$  (6)

External  $= E = T \tan \frac{\Delta}{4} = R \div \cos \frac{\Delta}{2} - R$  (8)  $= R \text{exsec} \frac{\Delta}{2}$  (9)

Long Chord  $= C = 2 R \sin \frac{\Delta}{2}$  (10)  $\Delta =$  Central Angle

## EXPLANATION AND USE OF TABLES

**Stations.**—Given P. I. = Sta. 161+60.35 to find Sta. of P. C. and P. T.  $\Delta = 62^\circ 10'$   $D = 8^\circ 20'$ . From Table IV for  $1^\circ$  curve  $T = 3454.1$  and  $\div 8\frac{1}{3} = 414.49$  ft. From Table V correction  $= .36$  or  $T = 414.85$  ft. P. C. = Sta. P. I.  $- T = 157 + 45.50$ . Also from (4)  $L = 746.00$  and P. T. = Sta. P. C.  $+ L = 164 + 91.50$ .

**Offsets.**—Tangent offsets vary (approximately) directly with  $D$  and with square of the distance. Thus tangent offset for Sta. 158 on above curve is 2.16 ft. found as follows. From Table III tangent offset for 100 ft.  $= 7.27$  ft. Distance  $= 158 - \text{Sta. P. C.} = 54.50$ , hence offset  $= 7.27 (54.50 \div 100)^2 = 2.16$  ft. Also square of any distance divided by twice the radius equals (approximately) the distance from tangent to curve. Thus  $(54.50)^2 \div (2 \times 688.26) = 2.16$  ft.

**Deflections.**—Deflection angle  $= \frac{1}{2} D$  for 100 ft.,  $\frac{1}{4} D$  for 50 ft., etc. For  $c$  ft.  $= (\text{in minutes}) .3 \times C \times D^2$  or  $= \text{defl. for 1 ft. from Table III} \times C$ . For Sta. 158 of above curve  $= .3 \times 54.5 \times 8\frac{1}{3} = 136.2'$  or  $2^\circ 16.2'$ , or  $= 2.50 \times 54.5 = 136.2'$  from Table III. For Sta. 159 deflection angle  $= 2^\circ 16.2' + 8^\circ 20' \div 2 = 6^\circ 26.2'$ , etc.

**Externals.**—May be found in similar manner to tangents. Thus  $E$  for curve above is 115.37. For from Table IV for  $1^\circ$  curve  $E = 960.6$  for  $8^\circ 20' = 960.6 \div 8\frac{1}{3} = 115.27$  and from Table V correction  $= .10$  or  $E = 115.37$  ft. Or suppose  $\Delta = 32^\circ$  and  $E$  is measured and found to be 42 ft. What is  $D$ ? From Table IV  $E = 230.9$  and  $\div 42 = 5.5$  or  $D = 5^\circ 30'$ .



DISTANCES FROM CENTER OF ROADWAY FOR  
CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1½  
For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	26.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For same slopes but other widths of roadbed correct above figures by one-half difference in width of roadbed; thus in example above for 20 ft. roadbed distance will be 41.9 + (20 - 16) \* 2 or 2 ft. added to 41.9 = 43.9. For slopes of 1 on 1 see inside of front cover.

MADE IN U.S.A.

92.62  
744  
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85.18