

DRAINAGE AREA AND STRUCTURE DATA

Drainage Area	Structure	Area (ac)	C	Tc (min)	I ₁₀ (in/hr)	Q ₁₀ (cfs)	Q ₁₀ Total	Q ₁₀₀ (cfs)	Intercept ₁₀ Q ₁₀ /Q	Q ₁₀ IN (cfs)	Q ₁₀ By (cfs)	Width of Spread (ft)	Inlet Type
1	A0	0.40	0.90	5	7.26	2.6	2.6	4.1	1.00	2.6	--	--	Type II-P Area Inlet (3'x3')
2	A1	0.50	0.60	5	7.26	2.2	2.2	3.8	0.90	2.0	0.2	5.0	Type II-P Inlet MH
3	A2	0.10	0.80	5	7.26	0.6	0.6	1.0	1.00	0.6	--	3.0	Type II-P Inlet MH
4	A3	0.25	0.60	5.2	7.20	1.1	1.3	3.0	1.00	1.3	--	4.0	Type II-P Inlet
5	A4	0.18	0.60	5	7.26	0.8	0.8	1.4	1.00	0.8	--	3.5	Type II-P Inlet
6	A7	0.06	0.80	5	7.26	0.3	0.3	0.6	1.00	0.3	--	--	Type II-P Area Inlet
7	B1	0.32	0.60	5	7.26	1.4	1.4	2.4	1.00	1.4	--	4.0	Type II-P Inlet
8	B2	0.30	0.60	5	7.26	1.3	1.3	2.3	1.00	1.3	--	3.5	Type II-P Inlet
9	B4	0.36	0.50	5	7.26	1.3	3.4	7.5	0.75	2.5	0.9	6.0	Type II-P Inlet
10	B3	1.44	0.50	5	7.26	5.2	5.2	9.2	0.60	3.1	2.1	7.0	Type II-P Inlet
11	B5	1.32	0.50	5	7.26	4.7	4.7	8.4	0.65	3.1	1.6	7.0	Type II-P Inlet
11A	B6	-	-	5	7.26	-	1.6	4.6	1.00	1.6	--	4.0	Type II-P Inlet
13	C1	0.33	0.50	5	7.26	1.2	1.2	2.1	1.00	1.2	--	6.0	Type II-P Area Inlet MH
14	C2	0.21	0.50	5	7.26	0.8	0.8	1.3	1.00	0.8	--	4.0	Type II-P Area Inlet MH
15	C3	0.21	0.50	5	7.26	0.8	0.8	1.3	1.00	0.8	--	4.0	Type II-P Area Inlet MH
16	C4	0.21	0.50	5	7.26	0.8	0.8	1.3	1.00	0.8	--	4.0	Type II-P Area Inlet MH
17	C5	0.21	0.50	5	7.26	0.8	0.8	1.3	1.00	0.8	--	4.0	Type II-P Area Inlet MH
18	D0	1.66	0.50	5	7.26	6.0	6.0	10.6	0.55	3.2	2.8	6.5	Type II-P Inlet
-	D1	-	-	5	7.26	-	2.8	6.6	0.90	2.5	0.3	6.0	Type II-P Inlet
19	D5	1.05	0.50	5	7.26	3.8	4.7	10.7	0.70	3.0	1.7	7.5	Type II-P Inlet
20	D6	0.13	0.50	5	7.26	0.5	2.2	7.5	1.00	2.2	--	4.5	Type I-P Inlet
21	D2	0.50	0.70	5	7.26	2.5	2.5	4.5	0.90	2.2	0.3	5.0	Type II-P Inlet
-	D3	-	-	5	7.26	-	0.3	1.5	1.00	0.3	--	2.5	Type II-P Inlet
22	D7	0.20	0.80	5	7.26	1.2	1.2	2.0	1.00	1.2	--	4.0	Type II-P Inlet
23	E1	1.73	0.50	5	7.26	6.3	6.3	11.0	0.55	3.5	2.8	8.0	Type II-P Inlet
24	E2	2.12	0.50	5	7.26	7.7	7.7	13.5	0.50	3.7	4.0	8.5	Type I-P Inlet (L=9')
25	E3	0.33	0.50	5	7.26	1.2	4.0	8.7	0.70	2.8	1.2	8.0	Type II-P Inlet
26	E4	0.13	0.50	5	7.26	0.5	4.5	10.3	0.65	3.0	1.5	9.0	Type I-P Inlet (L=6')
27	E6	0.36	0.50	5	7.26	1.3	2.5	7.0	0.90	2.2	0.3	8.0	Type II-P Inlet
28	E7	0.60	0.50	5	7.26	2.2	3.7	9.6	1.00	3.7	-	9.0	Type I-P Inlet (L=6')
29	E5	2.40	0.50	5	7.26	8.7	9.0	18.5	1.00	9.0	-	11.5	Type I-P Inlet (L=9')
30	E8	1.15	0.50	5	7.26	4.2	4.2	7.3	1.00	4.2	-	9.5	Ex. Inlet
31	E9	0.92	0.50	5	7.26	3.3	3.3	5.9	1.00	3.3	-	9.0	Ex. Inlet

PIPE DATA

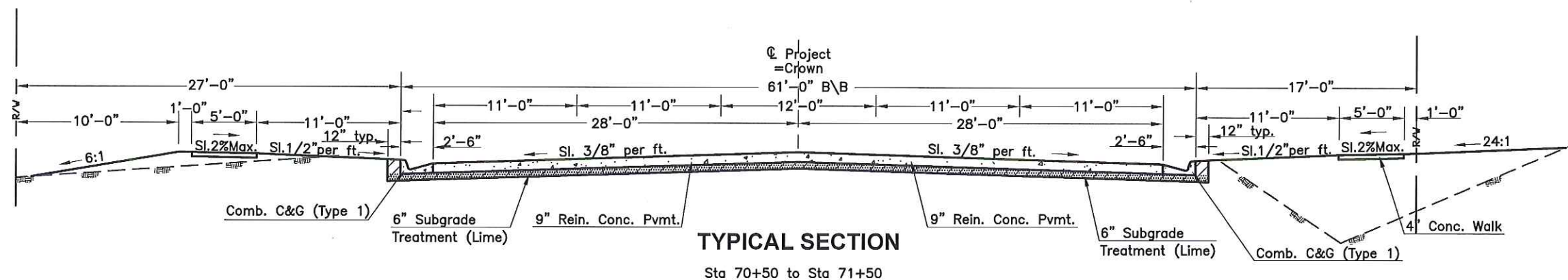
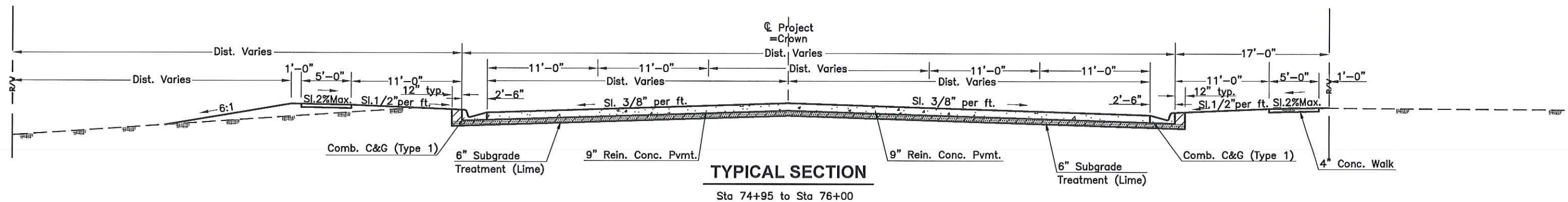
Pipe Segment	Area (ac)	C	Cx _A	Sum of Cx _A	Tc (min)	I ₁₀ (in/hr)	Q ₁₀ (cfs)	I ₁₀₀ (in/hr)	Q ₁₀₀ (cfs)	Pipe Length (ft)	Slope (%)	RCP (n = 0.012)			Travel Time (min)
												Dia (in)	Q _{cap} (cfs)	Vel (ft/sec)	
A0-A1	0.40	0.90	0.36	0.36	5	7.26	2.6	10.20	4.1	20	6.0	15"	17	10	--
A1-A2	0.50	0.60	0.30	0.66	5	7.26	4.8	10.20	7.9	21	4.5	15"	15	11	0.1
A2-A3	0.10	0.80	0.08	0.74	5.1	7.23	5.4	10.16	8.9	40	5.0	15"	15	11	0.1
A3-A4	0.25	0.60	0.15	0.89	5.2	7.20	6.4	10.12	10.8	23	3.5	15"	13	11	--
A4-A5	0.18	0.60	0.11	1.00	5.2	7.20	7.2	10.12	12.1	45	2.0	18"	16	9	0.1
A5-A6	--	--	--	1.00	5.3	7.17	7.2	10.08	12.1	140	2.0	18"	16	9	0.2
A6-A7	--	--	--	1.00	5.5	7.12	7.1	10.01	12.0	255	5.7	18"	27	13	0.3
A7-Outlet	0.06	0.80	0.05	1.05	5.7	7.04	7.4	9.90	12.5	24	2.8	18"	19	10	--
A8-A9							5.8 Detention Outlet		11.4 Detention Outlet	30		15"			--
B1-B2	0.32	0.60	0.19	0.19	5	7.26	1.4	10.20	2.4	23	1.0	15"	7	5	0.1
B2-B4	0.30	0.60	0.18	0.37	5.1	7.23	2.7	10.16	4.7	37	2.0	15"	10	7	0.1
B3-B4	1.44	0.50	0.72	0.72	5	7.26	5.2	10.20	9.2	9	2.0	15"	10	8	--
B4-B6	0.36	0.50	0.18	1.27	5.2	7.20	9.1	10.12	16.1	23	1.0	21"	17	7	--
B5-B6	1.32	0.50	0.66	0.66	5	7.26	4.8	10.20	8.4	9	2.0	15"	10	8	--
B6-Outlet	--	--	--	1.93	5.2	7.20	13.9	10.12	24.4	40	2.4	24"	38	12	0.1
B7	1.58	0.50	0.79	2.72	6.0	6.98	18.9	9.82	33.4	43	1.4	24"x38"	53	11	0.1
C1-C2	0.33	0.50	0.17	0.17	5	7.26	1.2	10.20	2.1	46	5.0	15"	16	8	0.1
C2-C3	0.21	0.50	0.11	0.28	5.1	7.23	2.0	10.16	3.6	44	7.0	15"	18	10	0.1
C5-C4	0.21	0.50	0.11	0.11	5	7.26	0.8	10.20	1.4	46	0.5	15"	5	3	0.2
C4-C3	0.21	0.50	0.11	0.22	5.2	7.20	1.6	10.12	2.8	46	0.5	15"	5	4	0.2
C3-Outlet	0.21	0.50	0.11	0.61	5.4	7.15	4.4	10.05	7.7	37	2.4	15"	11	9	0.1
D0-D1	1.66	0.50	0.83	0.83	5	7.26	6.0	10.20	10.6	27	4.0	15"	14	11	--
D1-D3	--	--	--	0.83	5	7.26	6.0	10.20	10.6	33	5.0	15"	16	12	0.1
D2-D3	0.50	0.70	0.35	0.35	5	7.26	2.5	10.20	4.5	11	4.0	15"	14	9	--
D3-D4	--	--	--	1.18	5.1	7.23	8.5	10.16	15.0	56	5.0	15"	16	13	0.1
D5-D6	1.05	0.50	0.53	0.53	6	6.98	9.4	9.82	14.4	27	4.0	15"	14	10	0.1
D6-D7	0.13	0.50	0.07	0.60	6.1	6.95	9.9	9.79	15.2	22	4.0	15"	14	10	0.1
D7-D4	0.20	0.80	0.16	0.76	6.2	6.92	10.0	9.76	17.1	121	5.0	15"	16	12	0.2
D4-Outlet	--	--	--	1.94	6.4	6.87	19.0	9.70	31.4	42	1.0	24"	24	8	0.1
D9-D5	--	--	--	--	--	--	5.7 Detention Outlet		7.9 Detention Outlet	52		15"			
D10-D11							19.0		31.4	61	4.6	24"			
E1-E2	1.73	0.50	0.87	0.87	5	7.26	6.3	10.20	11.1	29	2.0	15"	10	8	--
E2-E4	2.12	0.50	1.06	1.93	5	7.26	14.0	10.20	24.6	112	2.0	21"	24	10	0.2
E3-E4	0.32	0.50	0.16	0.16	5	7.26	1.2	10.20	2.0	29	1.0	15"	7	4	0.1
E4-E7	0.13	0.50	0.07	2.16	5.2	7.20	15.6	10.12	27.4	135	1.2	24"	27	9	0.2
E5-E6	2.40	0.50	1.20	1.78	5.1	7.23	12.9	10.16	22.6	27	0.5	24"	24	8	0.1
E6-E7	0.36	0.50	0.18	1.96	5.2	7.20	14.1	10.12	24.8	35	0.5	24"	24	8	0.1
E9-E7	0.92	0.50	0.46	0.46	5	7.26	3.3	10.20	5.9			Ex.12"			
E8-E5	1.15	0.50	0.58	0.58	5	7.26	4.2	10.20	7.3			Ex.12"			
E7-Ex.Pipe	0.60	0.50	0.30	4.88	5.4	7.15	34.9	10.05	61.3			Ex.36"			

NOTE:
Drainage Plan designed for a 10 year storm.

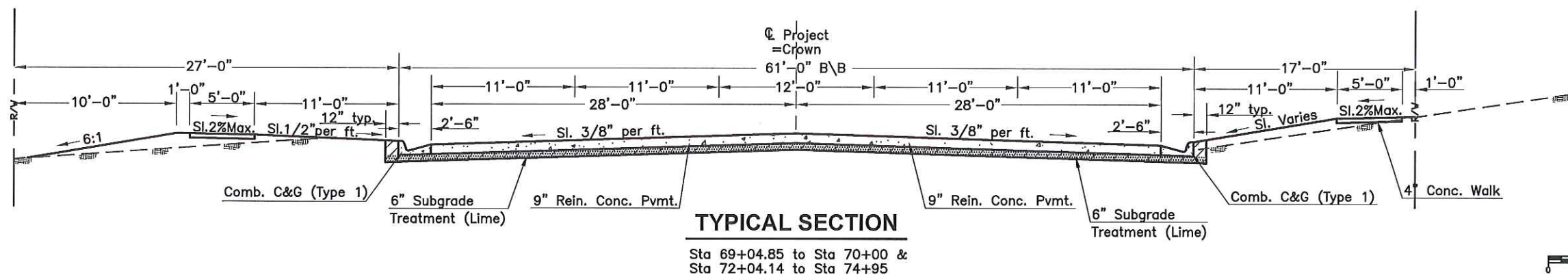
Q = CIA
Q = Peak rate of runoff in cubic feet per second
C = Runoff coefficient (or Runoff Ratio).
I = Intensity of Rainfall in inches per hour for each time of concentration.
A = Drainage Area in Acres
T = Time required for longest runoff to flow over the surface to nearest inlet in minutes.

NOTE: This example sheet is not intended to address all drafting problems encountered in civil engineering design.

DRAWN BY: <u>D. SPAAR</u>				CONSULTANT LOGO			STORM DRAINAGE IMPROVEMENT PROJECT T-50XXXXXX.XX KENNEDY HEIGHTS AREA	SUMMARY OF DRAINAGE DATA	DATE: <u>Month Year</u> SHEET: <u>5 of 36</u> PROJ.: <u>T-50XXXXXX.XX</u>
NO.	DATE:	REVISION	BY:	APP'D					



NOTE: This example sheet is not intended to address all drafting problems encountered in civil engineering design.



Horizontal Scale: 1"=5'

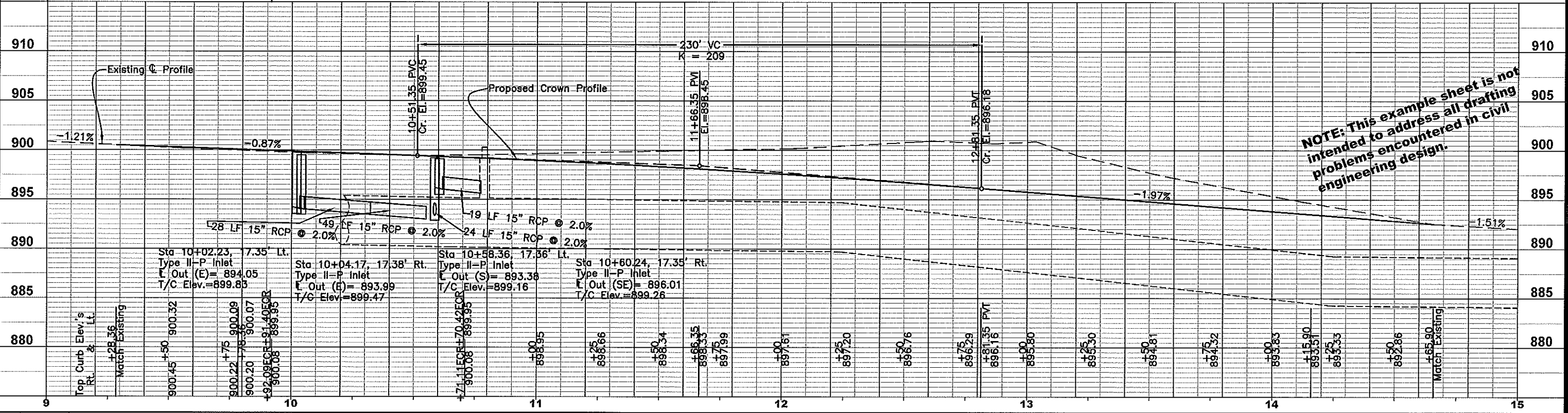
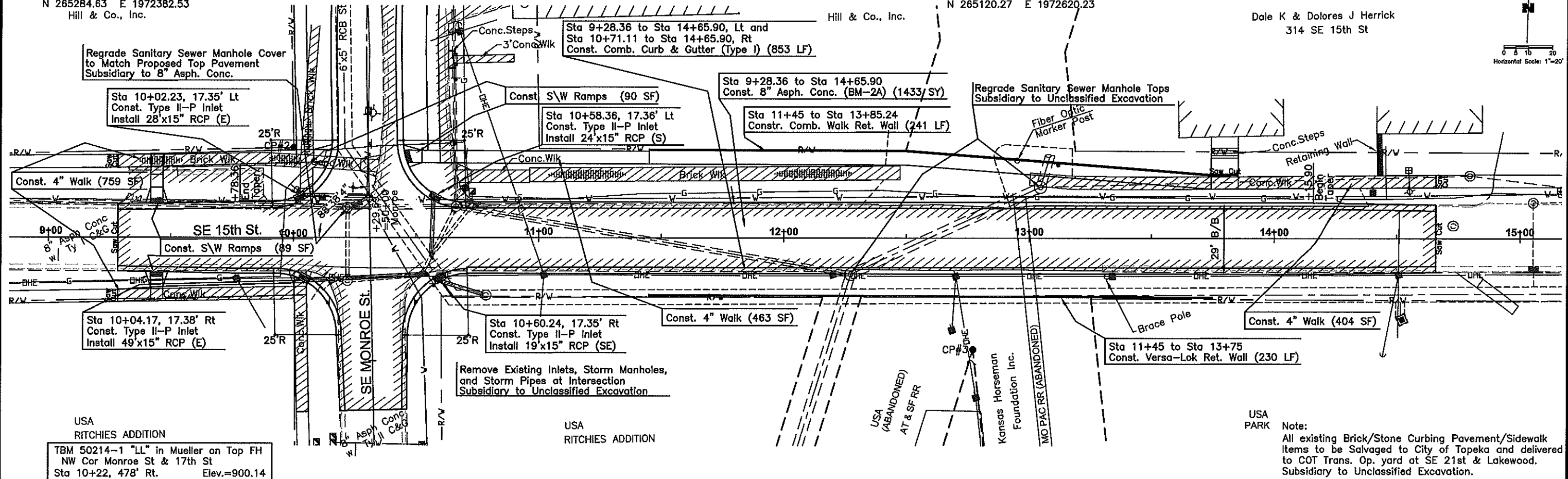
Vertical Scale: 1"=

[illegible]

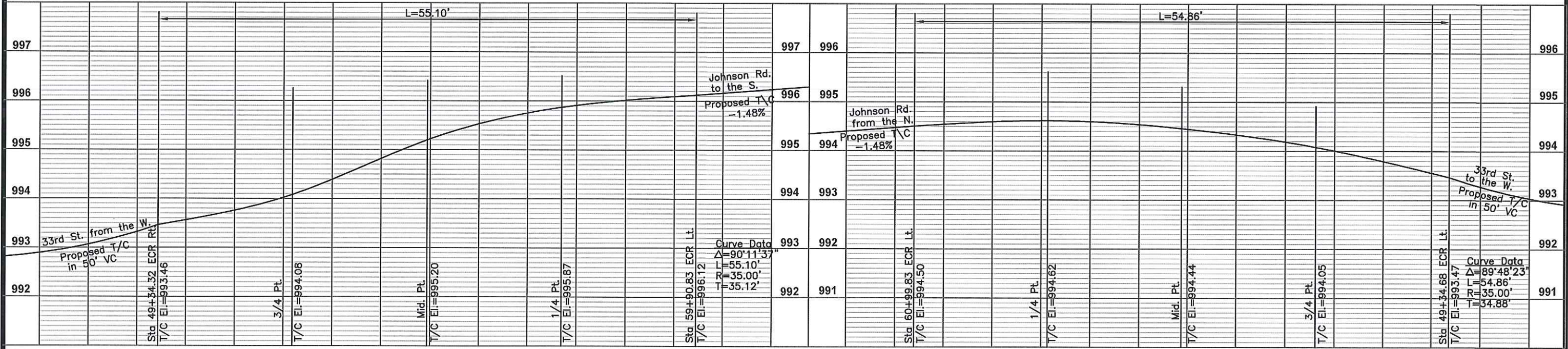
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1. Fnd 5/8" Pin @ NE Cor 15th & Monroe
2. 57.43' SW to set N&T at E Fc PP
3. 71.28' SE to set N&T at N Fc PP
4. 150.13' W to Fnd 1" Pin
N 265284.63 E 1972382.53
Hill & Co., Inc.

CP #3 Sta 12+77.32, 45.19' Rt
1. Fnd 5/8" Pin @ former RR R/W PI
2. 10.97' NW to set N&T on E Fc PP
3. 19.13' S to set N&T on E Fc PP
4. 63.71' NE to set N&T on S Fc PP
N 265120.27 E 1972620.23

Dale K & Dolores J Herrick
314 SE 15th St

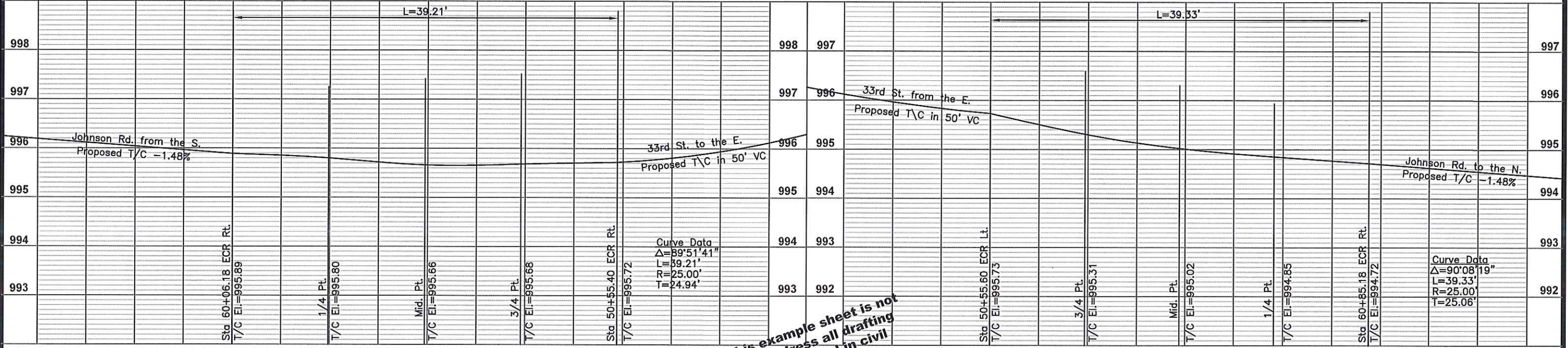


NO.	DATE	REVISION	BY	APP'D	DRAWN BY: D. SPAAR APP'D BY: I. GREEN FIELD BOOKS: F-438/440 SURVEYED BY: J. CUMMINGS	 620 SE MADISON ST. • 2nd Floor • TOPEKA, KS 66607 Phone: (785) 368-3842 • Fax: (785) 368-3881	STREET IMPROVEMENT PROJECT T-60XXXX.XX	PLAN/PROFILE SE 15th Street Sta 9+00 to 15+00	DATE: Month Year SHEET: 2 of 20 PROJ.: T-60XXXX.XX



SW Curb Return
Johnson Rd. & 33rd St.

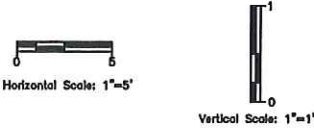
NW Curb Return
Johnson Rd. & 33rd St.



SE Curb Return
Johnson Rd. & 33rd St.

NE Curb Return
Johnson Rd. & 33rd St.

NOTE: This example sheet is not intended to address all drafting problems encountered in civil engineering design.



NO.	DATE:	REVISION	BY:	APP'D

DRAWN BY: D. SPAAR
APP'D BY: S. BRUNS

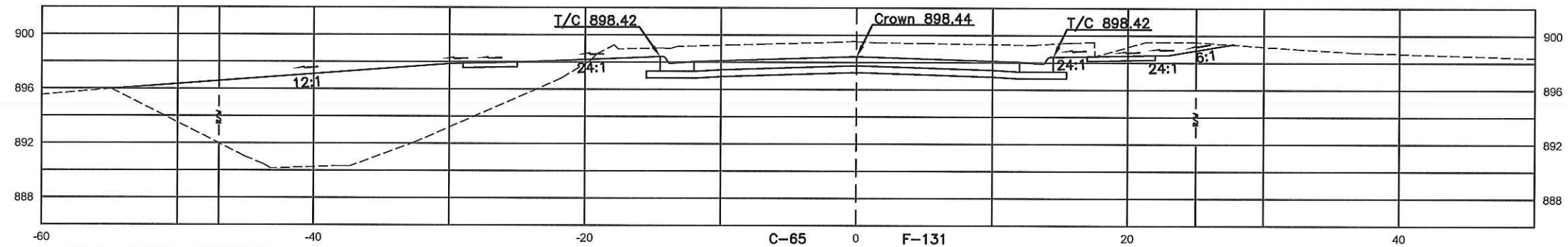


TRAFFICWAY IMPROVEMENT
PROJECT T-70XXXX.XX
NE Johnson Rd. - 33rd St. to 38th St.

RETURN ELEVATIONS
Johnson Rd.
& 33rd St.

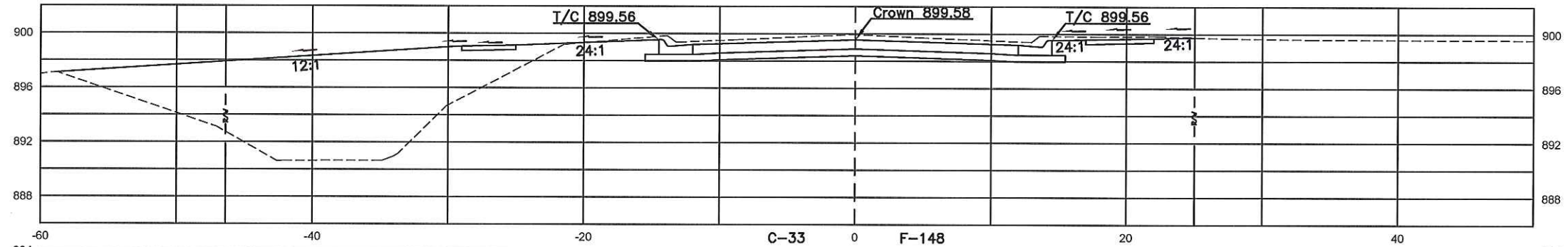
DATE: Month Year
SHEET: 37 of 83
PROJ.: T-70XXXX.XX

10+00



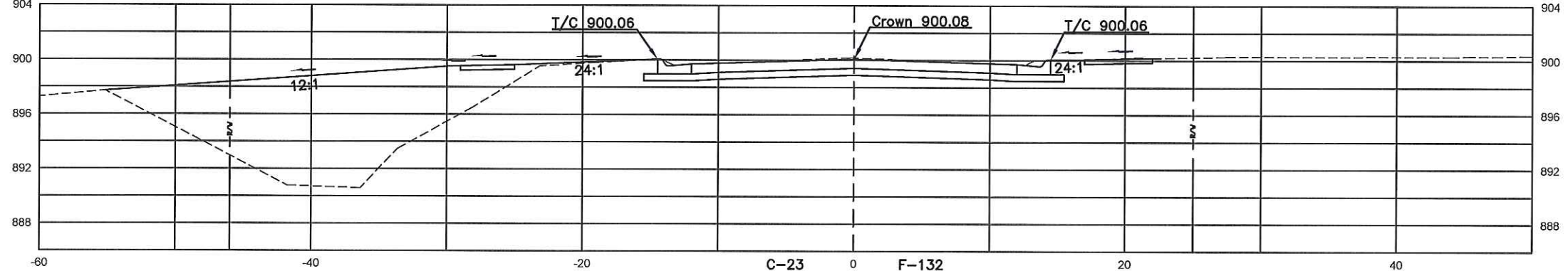
10+00

9+50



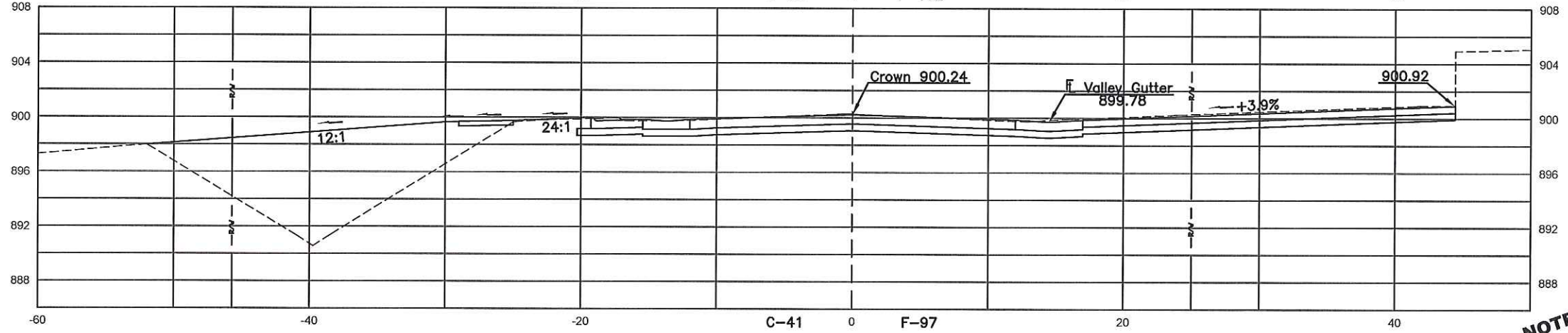
9+50

9+15.98



9+15.98

9+00



9+00

NOTE: This example sheet is not intended to address all drafting problems encountered in civil engineering design.

Scale: 1"=5' Vert. & Horz.

NO.	DATE	REVISION	BY	APP'D

DRAWN BY: D. SPAAR
APP'D BY: J. GREEN

CONSULTANT LOGO

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STREET IMPROVEMENT
PROJECT T-60XXXX.XX

CROSS SECTIONS
SE 17th Street
Sta 9+00 to Sta 10+00

DATE: Month Year
SHEET: 2 of 20
PROJ.: T-60XXXX.XX