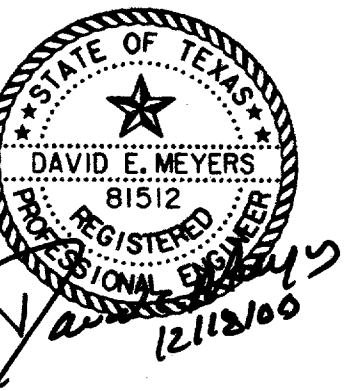


HYDRAULIC CALCULATIONS

COLLECTION POINT INLETS OR MANHOLES		DISTANCE BETWEEN COLLECTION POINTS	INCREMENTAL DRAINAGE AREA				TIME @ UPSTREAM STATION (MIN.)	INTENSITY "I-100" (IN./HR)	100 YR. STORM RUNOFF "Q"	SLOPE OF HYDRAULIC GRADIENT (FT./FT.)	STORM SEWER SIZE	VELOCITY "V" (F.P.S.)	FLOW TIME IN SEWER (MIN.)	TIME @ DOWNSTREAM STATION (MIN.)	VELOCITY HEAD (FEET)	HYDRAULIC GRADE AT UPSTREAM STATION	HYDRAULIC GRADE AT DOWNSTREAM STATION	HYDRAULIC GRADE AT INLETS	COMMENTS	
UPSTREAM STATION	DOWNSTREAM STATION		INCREM. AREA NO.	AREA "A" (AC.)	RUNOFF COEFF. "C"	INCREM. "CA"														ACCUM. "CA"
LINE 'A'																				
1253.83	1155.00	98.83	NA	44.82	0.88	39.44	39.44	13.42	7.96	313.9	0.0055	72	11.10	0.15	13.57	1.91	610.00	609.45		
1155.00	1141.37	13.63	A-16	0.65	0.90	0.59	40.03	13.57	7.93	317.4	0.0056	72	11.22	0.02	13.59	1.96	609.41	609.33		
1141.37	1105.00	36.37	BEND	NA	0.90	0.00	40.03	13.59	7.92	317.2	0.0056	72	11.22	0.05	13.64	1.95	608.06	607.86		
1105.00	1075.00	30.00	A-15	1.11	0.90	1.00	41.03	13.64	7.91	324.7	0.0059	72	11.48	0.04	13.69	2.05	607.77	607.59		
1075.00	1060.05	14.95	A-14	0.15	0.90	0.14	41.16	13.69	7.91	325.4	0.0059	72	11.51	0.02	13.71	2.06	607.58	607.49		
1060.05	1037.00	23.05	BEND	NA	0.90	0.00	41.16	13.71	7.90	325.2	0.0059	72	11.50	0.03	13.74	2.05	606.16	606.02		
1037.00	991.92	45.08	LAT A-13	1.82	0.90	1.64	42.80	13.74	7.90	337.9	0.0064	72	11.95	0.06	13.80	2.22	605.86	605.57		
991.92	847.92	144.00	A-12	0.16	0.90	0.14	42.94	13.80	7.88	338.5	0.0064	72	11.97	0.20	14.00	2.23	605.56	604.64		
847.92	815.00	32.92	A-11	0.18	0.90	0.16	43.10	14.00	7.84	338.1	0.0042	78	10.19	0.05	14.06	1.61	604.95	604.81		
815.00	778.19	36.81	A-10	0.62	0.50	0.31	43.41	14.06	7.83	340.1	0.0042	78	10.25	0.06	14.12	1.63	604.79	604.64		
778.19	714.00	64.19	LN. J,L,M,N	23.49	0.89	20.91	64.32	14.12	7.82	503.2	0.0043	90	11.39	0.09	14.21	2.01	600.32	600.04		
714.00	587.91	126.09	A-9	0.30	0.90	0.27	64.59	14.21	7.81	504.1	0.0043	90	11.41	0.18	14.40	2.02	600.03	599.49		
587.91	545.00	42.91	BEND	NA	0.90	0.00	64.59	14.40	7.77	501.9	0.0043	90	11.36	0.06	14.46	2.00	599.50	599.32		
545.00	505.89	39.11	A-8	0.34	0.50	0.17	64.76	14.46	7.76	502.5	0.0043	90	11.37	0.06	14.52	2.01	599.31	599.14		
505.89	472.50	33.39	BEND	NA	0.90	0.00	64.76	14.52	7.75	501.8	0.0043	90	11.36	0.05	14.57	2.00	599.15	599.00		
472.50	462.93	9.57	A-7	0.36	0.90	0.32	65.08	14.57	7.74	503.7	0.0043	90	11.40	0.01	14.58	2.02	598.99	598.95		
462.93	358.02	104.91	A-6	0.31	0.90	0.28	65.36	14.58	7.74	505.7	0.0043	90	11.45	0.15	14.73	2.03	598.93	598.48		
358.02	349.43	8.59	A-5	0.29	0.90	0.26	65.62	14.73	7.71	505.9	0.0043	90	11.45	0.01	14.74	2.04	598.47	598.44		
349.43	298.82	50.61	A-4	0.29	0.90	0.26	65.89	14.74	7.71	507.8	0.0044	90	11.49	0.07	14.82	2.05	598.42	598.20		
298.82	132.11	166.71	A-3	0.88	0.90	0.79	66.68	14.82	7.69	513.0	0.0045	90	11.61	0.24	15.06	2.09	598.16	597.41	PARTIAL FLOW	
132.11	124.03	8.08	A-2	0.13	0.90	0.12	66.79	15.06	7.65	511.0	0.0044	90	11.57	0.01	15.07	2.08	597.42	597.39		
124.03	115.00	9.03	A-1	0.13	0.90	0.12	66.91	15.07	7.65	511.8	0.0044	90	11.58	0.01	15.08	2.08	597.38	597.34	F.L. 90" 589.84	
LAT. 'A-1'																				
35.80	0.00	35.80	A-1	0.13	0.90	0.12	0.12	10.00	8.74	1.0	0.0001	18	0.58	1.03	11.03	0.01	599.46	599.46	599.47	PARTIAL FLOW
LAT. 'A-2'																				
19.63	0.00	19.63	A-2	0.13	0.90	0.12	0.12	10.00	8.74	1.0	0.0001	18	0.58	0.57	10.57	0.01	599.50	599.49	599.50	PARTIAL FLOW
LAT. 'A-3'																				
54.85	0.00	54.85	A-3	0.88	0.90	0.79	0.79	10.00	8.74	6.9	0.0043	18	3.92	0.23	10.23	0.24	600.25	600.01		
LAT. 'A-4'																				
34.06	0.00	34.06	A-4	0.29	0.90	0.26	0.26	10.00	8.74	2.3	0.0005	18	1.29	0.44	10.44	0.03	600.46	600.45	600.50	PARTIAL FLOW
LAT. 'A-5'																				
17.90	0.00	17.90	A-5	0.29	0.50	0.15	0.15	10.00	8.74	1.3	0.0001	18	0.72	0.42	10.42	0.01	600.55	600.55	600.56	PARTIAL FLOW
LAT. 'A-6'																				
34.06	0.00	34.06	A-6	0.31	0.90	0.28	0.28	10.00	8.74	2.4	0.0005	18	1.38	0.41	10.41	0.03	600.95	600.94	600.99	PARTIAL FLOW
LAT. 'A-7'																				
17.89	0.00	17.89	A-7	0.36	0.90	0.32	0.32	10.00	8.74	2.8	0.0007	18	1.60	0.19	10.19	0.04	600.98	600.97	601.03	PARTIAL FLOW
LAT. 'A-8'																				
12.24	0.00	12.24	A-8	0.34	0.50	0.17	0.17	10.00	8.74	1.5	0.0002	18	0.84	0.24	10.24	0.01	601.31	601.31		
LAT. 'A-9'																				
42.15	0.00	42.15	A-9	0.30	0.90	0.27	0.27	10.00	8.74	2.4	0.0005	18	1.34	0.53	10.53	0.03	602.05	602.03		
LAT. 'A-10'																				
14.82	0.00	14.82	A-10	0.62	0.50	0.31	0.31	10.00	8.74	2.7	0.0007	18	1.53	0.16	10.16	0.04	606.40	606.39		
LAT. 'A-11'																				
13.86	0.00	13.86	A-11	0.18	0.90	0.16	0.16	10.00	8.74	1.4	0.0002	18	0.80	0.29	10.29	0.01	606.56	606.55	606.57	PARTIAL FLOW
LAT. 'A-12'																				
13.86	0.00	13.86	A-12	0.16	0.90	0.14	0.14	10.00	8.74	1.3	0.0001	18	0.71	0.32	10.32	0.01	607.78	607.78	607.79	PARTIAL FLOW
LAT. 'A-13'																				
220.57	192.05	28.52	A-13.3,13.2	1.50	0.90	1.35	1.35	10.00	8.74	11.8	0.0126	18	6.68	0.07	10.07	0.69	609.45	609.09		
192.05	100.00	92.05	A-13.1	0.32	0.90	0.29	1.64	10.07	8.72	14.3	0.0185	18	8.09	0.19	10.26	1.02	608.76	607.06		
LAT. 'A-13.1'																				
0.00	0.00	0.00	A-13.1	0.32	0.90	0.29	0.29	10.00	8.74	2.5	0.0006	18	1.42	0.00	10.00	0.03	609.09	609.09	609.13	
LAT. 'A-13.2'																				
26.01	0.00	26.01	A-13.2,13.3	1.50	0.90	1.35	1.35	10.00	8.74	11.8	0.0126	18	6.68	0.06	10.06	0.69	609.78	609.45		
LAT. 'A-14'																				
19.67	0.00	19.67	A-14	0.15	0.90	0.14	0.14	10.00	8.74	1.2	0.0001	18	0.49	0.49	10.49	0.01	609.63	609.63	609.64	PARTIAL FLOW
LAT. 'A-15'																				
23.61	0.00	23.61	A-15	1.11	0.90	1.00	1.00	10.00	8.74	8.7	0.0069	18	4.94	0.08	10.08	0.38	609.60	609.43		
LAT. 'A-16'																				
43.88	0.00	43.88	A-16	0.65	0.90	0.59	0.59	10.00	8.74	5.1	0.0024	18	2.89	0.25	10.25	0.13	611.34	611.24		

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY DAVID E. MEYERS, P.E. 81512



RECORD DRAWING

DATE	DESCRIPTION	REF NO.				
10/3/97	ISSUED FOR CONSTRUCTION	N/A				
7/14/97	ISSUED FOR BID	N/A				
<b>STORM WATER CALCULATIONS</b>						
<b>HYDRAULIC CALCULATIONS</b>						
<b>ADDISON CIRCLE</b>						
<b>PHASE II PUBLIC INFRASTRUCTURE</b>						
<b>TOWN OF ADDISON, TEXAS</b>						
Huitt-Zollars, Inc./Engineering/Architecture Dallas, Fort Worth, Houston, El Paso, Phoenix, Tustin, Ontario						
DESIGN	DRAWN	APPR.	SCALE	DATE	PROJECT NO.	NO.
HZI	HZI	DEM	N.T.S.	JUN. 97	01-1822-21	SW5