

HYDRAULIC CALCULATIONS TABLE

- 1. DESIGNATES THE TYPE OF STORM PIPE CONNECTION (SOFFIT TO SOFFIT, CENTERLINE TO CENTERLINE, OR FLOWLINE TO FLOWLINE) OR THE ELEVATION DIFFERENCE ACROSS THE STRUCTURE AT THE UPSTREAM STATION.
- 2. THE STATION AT WHICH THE HYDRAULIC GRADE LINE INTERSECTS THE NORMAL DEPTH IN THE PIPE.
- 3. THE ELEVATION AT WHICH THE HYDRAULIC GRADE LINE INTERSECTS THE NORMAL DEPTH IN THE PIPE.
- 4. STARTING HGL PER STORM SEWER AS BUILT DATED 12-15-1983

Line ST-	1																							
Downstream Station	Upstream Station	Q (cfs)	Pipe Type	Size Box (W x H) Pipe (")	'n" Value	Design Slope (ft/ft)	Upstream Junction Type (1)	Connect or FL	Dwn HGL	Up HGL	Up HGL w/ Jump	Dwn FL	Up FL	V (fps)	V ² /2g (ft)	S _r	Q _{cap} (cfs)	D _n (ft)	D _p (ft)	V _p (fps)	V _p ² /2g (ft)	Partial Station (2)	Partial Elevation (3)	
0+00.00	0+06.03	36.47	Pipe	36"	0.013	0.0158	Bend - 45°	Soffits	641.69	641.71	641.91	634.95	635.05	5.16	0.41	0.0030	83.81	1.38	N/A	N/A	N/A	N/A	N/A	
0+06.03	1+18.27	36.47	Pipe	36"	0.013	0.0158	Manhole - 90°	Soffits	641.91	642.25	642.56	635.05	636.81	5.16	0.41	0.0030	83.73	1.38	N/A	N/A	N/A	N/A	N/A	
1+18.27	1+89.77	36.47	Pipe	36"	0.013	0.0158	Manhole - 90°	Soffits	642.56	642.77	643.12	636.81	637.94	5.16	0.41	0.0030	83.73	1.38	N/A	N/A	N/A	N/A	N/A	
1+89.77	2+17.26	29.53	Pipe	36"	0.013	0.0158	Manhole - Through		640.7	643.12	643.17	643.20	637.94	4.18	0.27	0.0020	83.73	1.23	N/A	N/A	N/A	N/A	N/A	
2+17.26	2+24.23	14.27	Pipe	24"	0.013	0.0050	Inlet		640.73	643.20	643.23	643.71	640.70	4.54	0.32	0.0040	16.00	1.47	N/A	N/A	N/A	N/A	N/A	
Line ST-	1A																							
Downstream Station	Upstream Station	Q (cfs)	Pipe Type	Size Box (W x H) Pipe (")	'n" Value	Design Slope (ft/ft)	Upstream Junction Type	Connect or FL	Dwn HGL (Auto Calc)	Up HGL	Up HGL w/ Jump	Dwn FL	Up FL	V (fps)	V ² /2g (ft)	S _r	Q _{cap} (cfs)	D _n (ft)	D _p (ft)	V _p (fps)	V _p ² /2g (ft)	Partial Station	Partial Elevation	
0+00.00	0+08.99	14.26	Pipe	24"	0.013	0.0363	Bend - 45°	Soffits	643.36	643.40	643.56	640.20	640.53	4.54	0.32	0.0040	43.10	0.79	N/A	N/A	N/A	N/A	N/A	N/A
0+08.99	0+14.58	14.26	Pipe	24"	0.013	0.0363	Inlet		640.73	643.56	643.58	644.06	640.53	4.54	0.32	0.0040	43.10	0.79	N/A	N/A	N/A	N/A	N/A	N/A
Line ST-	2																							
Downstream Station	Upstream Station	Q (cfs)	Pipe Type	Size Box (W x H) Pipe (")	'n" Value	Design Slope (ft/ft)	Upstream Junction Type	Connect or FL	Dwn HGL (Auto Calc)	Up HGL	Up HGL w/ Jump	Dwn FL	Up FL	V (fps)	V ² /2g (ft)	S _r	Q _{cap} (cfs)	D _n (ft)	D _p (ft)	V _p (fps)	V _p ² /2g (ft)	Partial Station	Partial Elevation	
0+00.00	0+56.59	6.94	Pipe	18"	0.013	0.0100	Wye	Centerlines	643.01	643.25	643.29	639.19	639.76	3.93	0.24	0.0044	10.50	0.89	N/A	N/A	N/A	N/A	N/A	N/A
0+56.59	1+10.71	6.44	Pipe	18"	0.013	0.0100	Wye	Centerlines	643.29	643.49	643.59	639.76	640.30	3.64	0.21	0.0038	10.50	0.85	N/A	N/A	N/A	N/A	N/A	N/A
1+10.71	1+91.41	4.60	Pipe	18"	0.013	0.0100	Bend - 45°	Soffits	643.59	643.75	643.80	640.30	641.10	2.60	0.11	0.0019	10.50	0.69	N/A	N/A	N/A	N/A	N/A	N/A
1+91.41	2+00.58	4.60	Pipe	18"	0.013	0.0100	Bend - 45°	Soffits	643.80	643.87	643.87	641.10	641.20	2.60	0.11	0.0019	10.50	0.69	N/A	N/A	N/A	N/A	N/A	N/A
2+00.58	2+18.42	4.60	Pipe	18"	0.013	0.0100	Wye	Centerlines	643.87	643.90	643.91	641.20	641.37	2.60	0.11	0.0019	10.50	0.69	N/A	N/A	N/A	N/A	N/A	N/A
2+18.42	2+23.42	2.01	Pipe	12"	0.013	0.0266	Bend - 45°	Soffits	643.91	643.92	643.97	641.62	641.76	2.56	0.10	0.0032	5.81	0.41	N/A	N/A	N/A	N/A	N/A	N/A
2+23.42	2+31.41	2.01	Pipe	12"	0.013	0.0266	Wye	Centerlines	643.97	644.00	644.07	641.76	641.97	2.56	0.10	0.0032	5.81	0.41	N/A	N/A	N/A	N/A	N/A	N/A
2+31.41	2+36.41	1.06	Pipe	12"	0.013	0.0266	Bend - 45°	Soffits	644.07	644.08	644.09	641.97	642.10	1.35	0.03	0.0009	5.81	0.29	N/A	N/A	N/A	N/A	N/A	N/A
2+36.41	2+99.13	1.06	Pipe	12"	0.013	0.0266	Inlet		643.77	644.09	644.15	644.51	642.10	1.35	0.03	0.0009	5.81	0.29	0.38	3.92	0.24	N/A	N/A	N/A
Line ST-	2A																							
Downstream Station	Upstream Station	Q (cfs)	Pipe Type	Size Box (W x H) Pipe (")	'n" Value	Design Slope (ft/ft)	Upstream Junction Type	Connect or FL	Dwn HGL (Auto Calc)	Up HGL	Up HGL w/ Jump	Dwn FL (Auto Calc)	Up FL	V (fps)	V ² /2g (ft)	S _r	Q _{cap} (cfs)	D _n (ft)	D _p (ft)	V _p (fps)	V _p ² /2g (ft)	Partial Station	Partial Elevation	
0+00.00	0+29.96	0.50	Pipe	12"	0.013	0.1168	Inlet		643.50	643.49	643.64	644.51	640.01	0.64	0.01	0.0002	12.18	0.14	0.14	7.62	0.90	0+28.68	643.49	
Line ST-	3																							
Downstream Station	Upstream Station	Q (cfs)	Pipe Type	Size Box (W x H) Pipe (")	'n" Value	Design Slope (ft/ft)	Upstream Junction Type	Connect or FL	Dwn HGL (Auto Calc)	Up HGL	Up HGL w/ Jump	Dwn FL (Auto Calc)	Up FL	V (fps)	V ² /2g (ft)	S _r	Q _{cap} (cfs)	D _n (ft)	D _p (ft)	V _p (fps)	V _p ² /2g (ft)	Partial Station	Partial Elevation	
0+00.00	0+05.00	1.84	Pipe	12"	0.013	0.0135	Bend - 45°	Soffits	643.61	643.63	643.67	640.55	640.61	2.34	0.09	0.0027	4.14	0.47	N/A	N/A	N/A	N/A	N/A	N/A
0+05.00	0+96.86	1.84	Pipe	12"	0.013	0.0135	Bend - 45°	Soffits	643.67	643.91	643.96	640.61	641.85	2.34	0.09	0.0027	4.14	0.47	N/A	N/A	N/A	N/A	N/A	N/A
0+96.86	1+01.86	1.84	Pipe	12"	0.013	0.0135	Bend - 45°	Soffits	643.96	643.97	644.01	641.85	641.92	2.34	0.09	0.0027	4.14	0.47	N/A	N/A	N/A	N/A	N/A	N/A
1+01.86	1+81.75	1.84	Pipe	12"	0.013	0.0135	None		643.00	644.01	644.23	644.23	641.92	2.34	0.09	0.0027	4.14	0.47	N/A	N/A	N/A	N/A	N/A	N/A
Line ST-	2B																							
Downstream Station	Upstream Station	Q (cfs)	Pipe Type	Size Box (W x H) Pipe (")	'n" Value	Design Slope (ft/ft)	Upstream Junction Type	Connect or FL	Dwn HGL (Auto Calc)	Up HGL	Up HGL w/ Jump	Dwn FL (Auto Calc)	Up FL	V (fps)	V ² /2g (ft)	S _r	Q _{cap} (cfs)	D _n (ft)	D _p (ft)	V _p (fps)	V _p ² /2g (ft)	Partial Station	Partial Elevation	
0+00.00	0+04.00	2.59	Pipe	18"	0.013	0.0100	Size Change	Soffits	643.98	643.98	643.98	641.37	641.41	1.47	0.03	0.0006	10.50	0.51	N/A	N/A	N/A	N/A	N/A	N/A
0+04.00	0+13.08	2.59	Pipe	12"	0.013	0.0100	Inlet		642.00	643.98	644.03	644.28	641.91	3.30	0.17	0.0053	3.56	0.63	N/A	N/A	N/A	N/A	N/A	N/A
Line ST-	2C																							
Downstream Station	Upstream Station	Q (cfs)	Pipe Type	Size Box (W x H) Pipe (")	'n" Value	Design Slope (ft/ft)	Upstream Junction Type	Connect or FL	Dwn HGL (Auto Calc)	Up HGL	Up HGL w/ Jump	Dwn FL (Auto Calc)	Up FL	V (fps)	V ² /2g (ft)	S _r	Q _{cap} (cfs)	D _n (ft)	D _p (ft)	V _p (fps)	V _p ² /2g (ft)	Partial Station	Partial Elevation	
0+00.00	0+13.56	1.04	Pipe	12"	0.013	0.0907	Inlet		643.20	644.07	644.09	644.13	641.97	1.32	0.03	0.0009	10.73	0.21	0.89	1.41	0.03	N/A	N/A	

RECORD DRAWING

THE SIGNED AND SEALED CONSTRUCTION DOCUMENT HAS BEEN REVISED TO REFLECT CONSTRUCTION RECORDS MAINTAINED AND PROVIDED BY THE CONTRACTOR FOR THIS PROJECT. THE INFORMATION SHOWN ON THIS RECORD DRAWING, WHICH WAS PROVIDED BY THE CONTRACTOR, OR OTHERS NOT ASSOCIATED WITH THE DESIGN ENGINEER, CANNOT BE VERIFIED FOR ACCURACY OR COMPLETENESS. PACHECO KOCH SHALL ASSUME NO LIABILITY FOR ANY CHANGES MADE DURING CONSTRUCTION THAT WERE NOT SPECIFICALLY APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION. THE SEALED CONSTRUCTION DRAWINGS ARE ON FILE AT THE OFFICES OF PACHECO KOCH.

ATTESTED BY:
 SIGNATURE: *Cody Risinger*
 ENGINEER OF RECORD: CODY R. RISINGER, PE # 123160
 CONTRACTOR: STRATEGIC CONSTRUCTION
 DATE REVISED: 11/10/2020

NO.	DATE	REVISION
△	11/10/2020	RECORD DRAWINGS

7557 RAMBLER ROAD SUITE 1400
 DALLAS, TX 75231 972.235.3031
 TX REG. ENGINEERING FIRM F-469
 TX REG. SURVEYING FIRM LS-1008000

Pacheco Koch

HYDRAULIC CALCULATIONS

OFFICE BUILDING

4595 EXCEL PARKWAY

0.978 ACRE TRACT

TOWN OF ADDISON, DALLAS COUNTY, TEXAS

DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
CRR	CBA	FEB 2020	1"=20'	V:1"=5'		C4.3

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OFFICE BUILDING, 4595 EXCEL PARKWAY