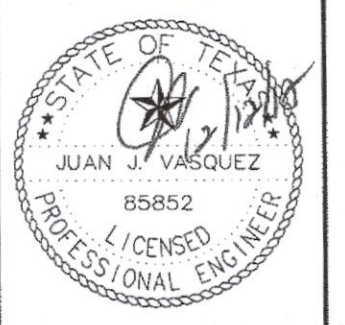


COMPUTATION SHEET																																						
HYDRAULIC COMPUTATIONS FOR STORM DRAINS																																						
Design Point ID	Drainage Area				Rainfall Intensity				Design Flow			Design Conduit				Friction Loss		Hydraulic Grade Line			Velocity		Minor Loss			Ground/HGL Elev				Comments								
	Upstream Location (Design Point)	Downstream Location	Distance	Drainage Area	Total Drainage Area "A"	Runoff Coefficient "C"	Incremental "CA"	Total "CA"	Design Flood	Inlet Time	Travel Time in Conduit	Time of Concentration	Rainfall Intensity "I"	Design Runoff "Q"	Inlet Bypass "Q"	Pipe Discharge "Q"	No. of Conduits	Span Box Culvert	Pipe Diameter (Culvert Rise)	Slope of Conduit	Pipe Discharge "Q"	Friction Slope (S)	Friction Loss	Upstream HGL Elevation	Downstream HGL Elevation	Design Point Elevation	Upstream Velocity (V <sub>1</sub> )	Downstream Velocity (V <sub>2</sub> )	Upstream Velocity Head (V <sub>1</sub> <sup>2</sup> /2g)		Downstream Velocity Head (V <sub>2</sub> <sup>2</sup> /2g)	Minor Loss Coefficient K	K (V <sub>1</sub> <sup>2</sup> /2g)	Total Minor Loss	Upstream Ground Elev (Top of Curb)	Elev Difference Ground-HGL	Upstream Pipe Flowline	Downstream Pipe Flowline
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
<b>LINE SD-1 = EXISTING LATERAL SD-1H</b>																																						
	249.47	11.42	238.05	0.40	0.40	0.90	0.36	0.36	100	10	0	10	9.80	3.53	0	3.53	1	-	18	0.0109	3.53	0.0008	0.19	534.06	533.87	534.12	0.00	2.00	0.00	0.06	1.25	0.00	0.06	536.15	2.03	532.15	529.56	5' STD CURB INLET
	11.42	0.00	11.42	0.39	0.79	0.90	0.71	1.07	100	10	0	10	9.80	6.97	0	6.97	1	-	18	0.0109	6.97	0.0032	0.04	533.66	533.62	533.87	2.00	3.94	0.06	0.24	0.50	0.03	0.21	535.50	1.63	529.56	529.44	18"x12"x60" WYE
<b>LINE SD-2</b>																																						
	9.50	0.00	9.50	0.39	0.39	0.90	0.35	0.35	100	10	0	10	9.80	3.44	0	3.44	1	-	12	0.1990	3.44	0.0054	0.05	533.71	533.66	533.71	4.38	3.94	0.30	0.24	1.25	0.37	0.00	535.70	1.99	531.70	529.81	5' STD CURB INLET

INLET CALCULATIONS (100-YR)																			
HYDRAULIC COMPUTATIONS FOR STORM DRAINS																			
Design Point ID	INLET			STORM	DRAINAGE AREA CHARACTERISTICS				FLOW				SAG INLET		INLET LENGTH				Comments
	Storm Line	Station	Type "S"=Sag "G"=On Grade		Design Flood	Runoff Coefficient "C"	Intensity "I"	Area "A"	Street "Qs"	Pipe "Qp"	Carryover Flow to Inlet "Qco"	Total Flow to Inlet "Q"	Gutter or ROW Capacity	Weir (W) Orifice (O) Flow	Sag Depth	Inlet Bypass Flow/Carryover "Qco"	Flow Intercept by Inlet "Q"	Inlet Flow Bypass to Design Point	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	SD-1	2+49.47	S	100	0.90	9.80	0.32	2.82	2.82	0.00	2.82	-	W	0.50	0.00	2.82	0.00	6.99	5' INLET, LINE SD-1 STA 2+49.47
B	SD-2	0+09.50	S	100	0.90	9.80	0.39	3.44	3.44	0.00	3.44	-	W	0.50	0.00	3.44	0.00	6.99	5' INLET, LINE SD-2 STA 0+09.50

\*Inlet capacities according to Figure 3.10 for sag from City of Rockwall Standards of Design and Construction

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY JUAN J. VASQUEZ, 85852, ON 12/12/2017



DEVELOPER:  
 MCCLURE PARTNERS  
 P. O. BOX 802047  
 DALLAS, TX 75380

HYDRAULIC CALCULATIONS  
 LOT 4, BLOCK A  
 DALTON GOLIAD ADDITION  
 CITY OF ROCKWALL, TEXAS

Scale: 1" = 30'  
 Designed by: JUV  
 Drawn by: JUV  
 Checked by: JUV  
 638608mpc42-HYDRAULIC CALCULATIONS.dwg  
 Date: 12/12/2017

SHEET  
**C4.2**

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