WinStorm (STORM DRAIN DESIGN) Version 3.05, Jan. 25, 2002
Run @ 10/3/2007 8:11:49 AM

PROJECT NAME : SYSTEM C
JOB NUMBER :
PROJECT DESCRIPTION :
DESIGN FREQUENCY : 100 Years
MEASUREMENT UNITS: ENGLISH

OUTPUT FOR DESIGN FREQUENCY of: 100 Years

Runoff Computation for Design Frequency.

ID	C Value	Area (acre)	Tc (min)	Tc Used (min)	Intensity (in/hr)	Supply Q (cfs)	Total Q (cfs)
C-2	0.9	0.44	10.00	10.00	9.80	0.000	3.875
C-3	0.9	0.17	10.00	10.00	9.80	0.000	1.511
C-4	0.9	0.32	10.00	10.00	9.80	0.000	2.817
C-5	0.9	1.15	10.00	10.00	9.80	0.000	10.176
C-1	0.9	0.23	10.00	10.00	9.80	0.000	1.998

On Grade Inlets Conmputation Data.

Inlet ID	Inlet Type	Total Q (cfs)	Intercept Capacity (cfs)	Q Bypass Allow (cfs)	Q Bypass Actual (cfs)	To Inlet ID	Required Length (ft)	Actual Length (ft)	Ponded Width (ft)
C-2	Curb	3.875	3.551	0.000	0.323	C-3	13.36	10.00	11.85
C-3	Curb	1.834	1.786	0.000	0.049	C-4	11.53	10.00	7.30
C-4	Curb	2.866	2.866	0.000	0.000		14.30	15.00	7.15
C-5	Curb	10.176	7.191	0.000	2.984	C-1	30.36	15.00	13.60
C-1	Curb	4.982	4.816	0.000	0.166		17.67	15.00	7.19

Cumulative Junction Discharge Computations

Node I.D.	Node Type	Weighted C-Value	Cumulat. Dr. Area (acres)	Cumulat. Tc (min)	Intens. (in/hr)	User Supply Q cfs)	Additional Q in Node (cfs)	Total Disch. (cfs)
C-2	Curb	0.900	0.44	10.00	9.80	0.000	0.00	3.876
C-3	Curb	0.900	0.61	10.29	9.75	0.000	0.00	5.359
C-5	Curb	0.900	1.76	10.63	9.69	0.000	-0.01	15.354
C-1	Curb	0.900	1.99	10.76	9.67	0.000	-0.01	17.288
C-4	Curb	0.900	0.32	10.00	9.80	0.000	0.00	2.818
MH-1	BoxMh	0.900	2.31	10.78	9.67	0.000	-0.01	20.062
OUT	Outlt	0.900	2.31	10.78	9.67	0.000	-0.01	20.062

Conveyance Configuration Data

Run#	Node US	Node DS	Flowline Elev. US (ft)	Flowline Elev. DS (ft)	Shape #	Span (ft)	Rise (ft)	Length (ft)	Slope (%)	n_value
2	C-3	C-5	514.39	507.86	Circ 1	0.00	1.50	188.30	3.47	0.013
3	C-5	C-1	507.36	503.60	Circ 1	0.00	2.00	103.54	3.63	0.013
4	C-1	MH-1	503.60	503.50	Circ 1	0.00	2.00	7.63	1.31	0.013
5	C-4	MH-1	507.81	504.00	Circ 1	0.00	1.50	79.60	4.79	0.013
6	MH-1	OUT	496.30	495.80	Circ 1	0.00	2.00	39.66	1.26	0.013
1	C-2	C-3	516.89	514.39	Circ 1	0.00	1.50	125.00	2.00	0.013

Conveyance Hydraulic Computations. Tailwater = 502.500 (ft)

Run#	Hydraulic Gradeline US Elev (ft)	Hydraulic Gradeline DS Elev (ft)	Fr. Slope (%)	Depth Unif. (ft)	Depth Actual (ft)	Velocity Unif. (f/s)	Velocity Actual (f/s)	Q (cfs)	Cap (cfs)	Junc Loss (ft)
2*	514.76	509.07	0.260	0.54	1.21	9.45	3.51	5.36	19.57	-0.170
3*	509.07	506.00	0.461	0.82	2.00	12.57	4.89	15.35	43.13	0.297
4*	506.00	504.70	0.584	1.20	1.20	8.83	8.83	17.29	25.90	1.199
5*	508.23	504.35	0.072	0.35	0.35	8.83	8.83	2.82	23.00	0.069
6*	502.80	502.50	0.786	1.34	2.00	8.94	6.39	20.06	25.41	-0.012
1*	518.21	514.91	0.136	0.52	0.52	7.07	7.07	3.88	14.86	0.798

END

* Super critical flow.

NORMAL TERMINATION OF WINSTORM.

COMPUTATION SHEETS

1. THIS OUTPUT FILE SHOWS RESULTS FOR ROCKWALL'S 100-YR DISCHARGE CONDITIONS FOR ENTIRE SYSTEM; HOWEVER, INLETS ARE SIZED AND PLACED BASED ON 25-YR CRITERIA, AND PIPES ARE DESIGNED BASED ON 100-YR CRITERIA.
2. ALL COMPUTATIONS ARE BASED ON EXISTING WATERSHED CONDITIONS
3. JUNCTION LOSSES WERE DETERMINED BASED ON CITY OF ROCKWALL "VELOCITY HEAD LOSS COEFFICIENTS FOR CLOSED CONDUITS"

ORIGINAL DRAWING SEALED & SIGNED BY
Matthew L. Abbe, P.E.
TX NO. 92715

NO.	REVISION	BY	DATE

City of Rockwall, Texas

205 BYPASS
PHASE 6

HYDRAULIC DATA
STORM SYSTEM C - 100 YR FLOWS

3 OF 10

TCB | AECOM
TCB INC.
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17300 DALLAS PARKWAY, SUITE 1010
DALLAS, TEXAS 75248

Unit PW-DAL-FW	Scale: Horz: AS SHOWN Vert: AS SHOWN	Date	11/24/2009
Designed RI	Checked TCB	Project No.	60004153
Drawn EG	Approved TCB	Sheet	70 of 216

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11/24/2009