



**POST-DEVELOPED RUNOFF CALCULATIONS - RATIONAL METHOD**

DRAINAGE AREA ID	DRAINAGE AREA ACRES	RUNOFF COEFFICIENT C	TIME OF CONCENTRATION MIN.	INTENSITY				POND OUTLET				TOTAL RUNOFF				POND				
				5-YEAR IN/HR	10-YEAR IN/HR	25-YEAR IN/HR	100-YEAR IN/HR	5-YEAR CFS	10-YEAR CFS	25-YEAR CFS	100-YEAR CFS	5-YEAR CFS	10-YEAR CFS	25-YEAR CFS	100-YEAR CFS					
A	0.062	0.90	10	6.2	7.5	8.3	9.8	0.35	0.42	0.46	0.55									
B-1	0.055	0.35	10	6.2	7.5	8.3	9.8	0.12	0.14	0.16	0.19									
B-2	0.046	0.35	10	6.2	7.5	8.3	9.8	0.10	0.12	0.13	0.16									
B-3	0.071	0.90	10	6.2	7.5	8.3	9.8	0.40	0.48	0.53	0.63	0.33	0.33	0.44	0.59	0.88	1.00	1.18	1.46	B
B-4	0.051	0.90	10	6.2	7.5	8.3	9.8	0.28	0.34	0.38	0.45									
B-5	0.036	0.90	10	6.2	7.5	8.3	9.8	0.20	0.24	0.27	0.32									
B-6	0.099	0.90	10	6.2	7.5	8.3	9.8	0.55	0.67	0.74	0.87									
C	0.020	0.90	10	6.2	7.5	8.3	9.8	0.11	0.13	0.15	0.17									
D-1	0.160	0.90	10	6.2	7.5	8.3	9.8	0.89	1.08	1.20	1.41									
D-2	0.129	0.90	10	6.2	7.5	8.3	9.8	0.72	0.87	0.96	1.14	0.24	0.24	0.32	1.14	0.72	0.82	0.97	1.93	D
D-3	0.521	0.90	10	6.2	7.5	8.3	9.8	2.91	3.52	3.89	4.60									
D-4	0.040	0.90	10	6.2	7.5	8.3	9.8	0.22	0.27	0.30	0.35									
D-5	0.029	0.90	10	6.2	7.5	8.3	9.8	0.16	0.20	0.22	0.26									
D-6	0.087	0.90	10	6.2	7.5	8.3	9.8	0.49	0.59	0.65	0.77									
E	0.011	0.90	10	6.2	7.5	8.3	9.8	0.06	0.07	0.08	0.10									

**LEGEND**

- 100 --- EXISTING CONTOUR
- 100 --- PROPOSED CONTOUR
- DRAINAGE AREA BOUNDARY
- A --- DRAINAGE AREA DESIGNATION
- XX --- DRAINAGE AREA (Ac.)
- XX --- RUNOFF 100yr (C.F.S.)

**PRE-DEVELOPED RUNOFF CALCULATIONS - RATIONAL METHOD**

DRAINAGE AREA ID	DRAINAGE AREA ACRES	RUNOFF COEFFICIENT C	TIME OF CONCENTRATION MIN.	INTENSITY				RUNOFF			
				5-YEAR IN/HR	10-YEAR IN/HR	25-YEAR IN/HR	100-YEAR IN/HR	5-YEAR CFS	10-YEAR CFS	25-YEAR CFS	100-YEAR CFS
A	0.223	0.35	20	5.0	5.7	6.7	8.3	0.39	0.44	0.52	0.65
B	0.502	0.35	20	5.0	5.7	6.7	8.3	0.88	1.00	1.18	1.46
C	0.312	0.35	20	5.0	5.7	6.7	8.3	0.55	0.62	0.73	0.91
D	0.413	0.35	20	5.0	5.7	6.7	8.3	0.72	0.82	0.97	1.20
E	0.064	0.35	20	5.0	5.7	6.7	8.3	0.11	0.13	0.15	0.19

**1 POST-DEVELOPED**  
SCALE: 1" = 20'

**1 PRE-DEVELOPED**  
SCALE: 1" = 20'

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**TOTAL ENGINEERING SERVICES, LLC**  
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TYPE FIRM 13555



**DQ Restaurant**  
AMERICAN DAIRY QUEEN  
MINNEAPOLIS, MN U.S.A.  
\*REGISTERED U.S. PATENT OFFICE.  
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BUILDING TYPE: DAIRY QUEEN TEXAS

**NEW BUILDING**  
**DAIRY QUEEN**  
1801 SOUTH GOLIAD STREET  
ROCKWALL, TEXAS 75087

**REVISIONS**

NO.	DATE
1	10-15-2014
2	01-07-2015
3	01-23-2015

DATE: 08/27/2014  
PROJECT NO. LAY 14 002  
SHEET NO. C4.1  
ISSUED FOR PERMIT DRAINAGE PLAN

**RECORD DRAWING**

SP 2014-018

Reference: P:\LAY 14 002 - LAY Construction - DD\Rockwall\TCD\LAY 14 002 - DRAINAGE PLAN.DWG Pinned: 1/23/2015 9:02:22 AM  
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