

**STORM WATER RUNOFF  
Retention Volume Calculations**

for

**Jacquelyn Estates Subdivision  
Phase 1  
Rev. 04/04/14  
4900 W 2100 S  
Weber County, UT**

*Criteria & Conclusions*

**Return Period: 100 year  
Duration: 24 hour  
Total Required Storage 9,032 cu. ft.**

Date: 06/09/14



O: (801) 771-0542  
M: (Text) 791-6274  
price.engineer@gmail.com



JUN 09 2014

**Project:** Site Plan Rev 04/04/14, Jacquelyn Estates Ph 1., Weber County  
**Design:** K. Price  
**Date:** 6/9/2014

**RETENTION VOLUME CALCULATIONS**  
**Design Criteria:** 100 year 24 Hour

Area Calculations		Area Coefficients	
Residential Lots	2.83 acres	Cl	0.35
Road & Sholder	0.19 acres	Cr	0.90
Other	0.00 acres	Cg	0.60
<b>Total Area</b>	<b>3.02 acres</b>		

**Total Area Coefficient**  
 $C = (A_l \times C_l + A_r \times C_r + A_g \times C_g) / A = 0.38$

**Allowable Runoff @ 0.2 cfs / acre**      0.00      cfs

Minutes	C*A	I	T(sec)	Cumulative Runoff	Allowable Runoff	Storage (cu.ft.)
5	1.16	5.17	300	1,801	0	1,801
10	1.16	3.93	600	2,739	0	2,739
15	1.16	3.25	900	3,397	0	3,397
30	1.16	2.19	1,800	4,579	0	4,579
60	1.16	1.35	3,600	5,645	0	5,645
120	1.16	0.73	7,200	6,122	0	6,122
360	1.16	0.27	21,600	6,774	0	6,774
720	1.16	0.15	43,200	7,476	0	7,476
1440	1.16	0.09	86,400	9,032	0	9,032

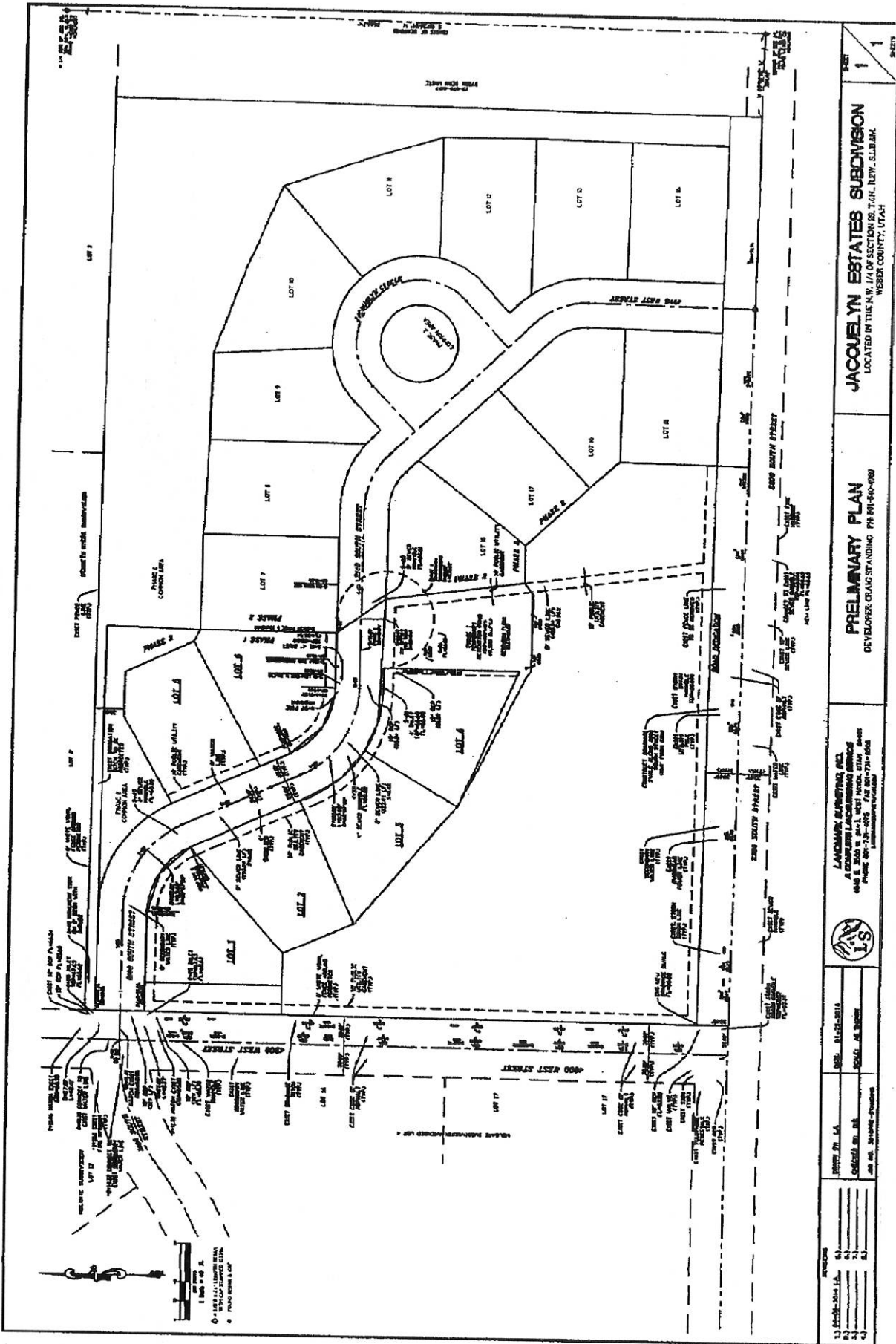
**Storage Required**      9,032      cu.ft.

Outlet Control  
 Q = 0.00 cfs      g = 32.20 ft/s<sup>2</sup>  
 C = 0.80      h = 1.00 ft

**Required Restriction Size =  $Q / (C \times (2 \times g \times h)^{0.5}) = 0.00$**       in<sup>2</sup>

**Restriction Diameter**      0      inches





1  
1  
1

**JACQUELYN ESTATES SUBDIVISION**  
 LOCATED IN THE N.W. 1/4 OF SECTION 10, T.10N., R.12W., S.18E. 1/4, WISNER COUNTY, DAKOTA

**PRELIMINARY PLAN**  
 DEVELOPER: CRANE STANDING PH 801-640-080

**LANDMARK SURVEYING, INC.**  
 1000 S. MAIN STREET, SUITE 100  
 WISNER, DAKOTA 58054  
 PHONE: 801-737-0055 FAX: 801-737-0058  
 LANDMARKSURVEYING.COM



APPROVED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 COUNTY: \_\_\_\_\_

NO.	DESCRIPTION	DATE
1	PRELIMINARY PLAN	10/28/14
2		
3		
4		