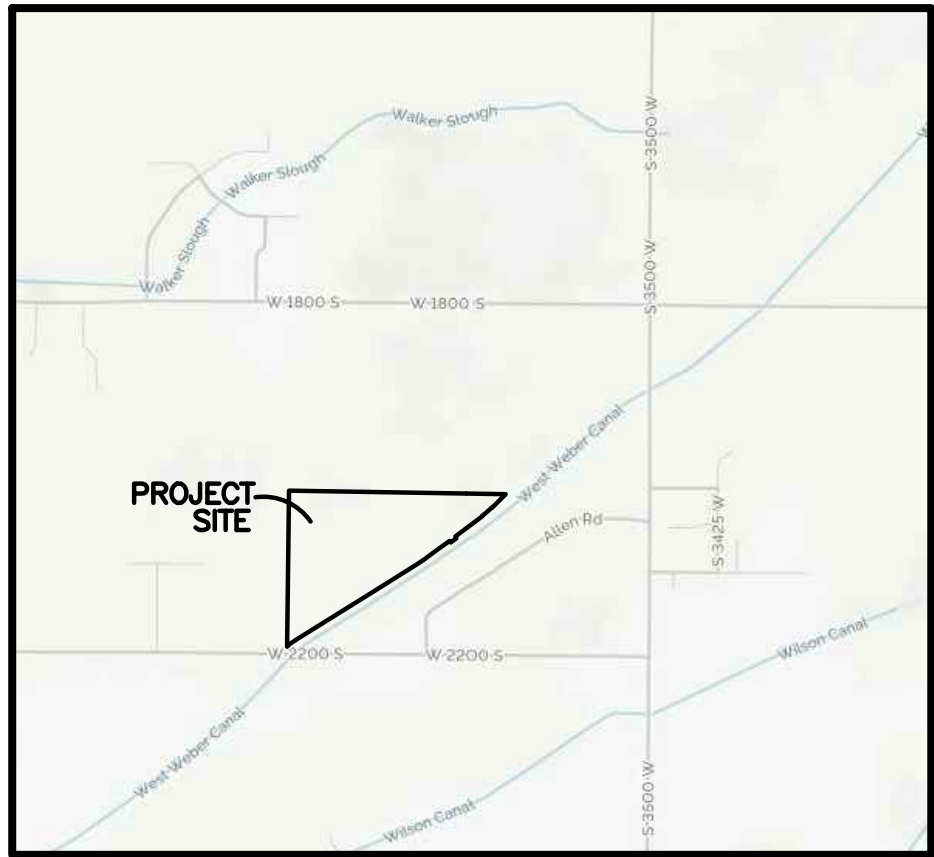




Vicinity Map
SCALE: NONE

Line Table

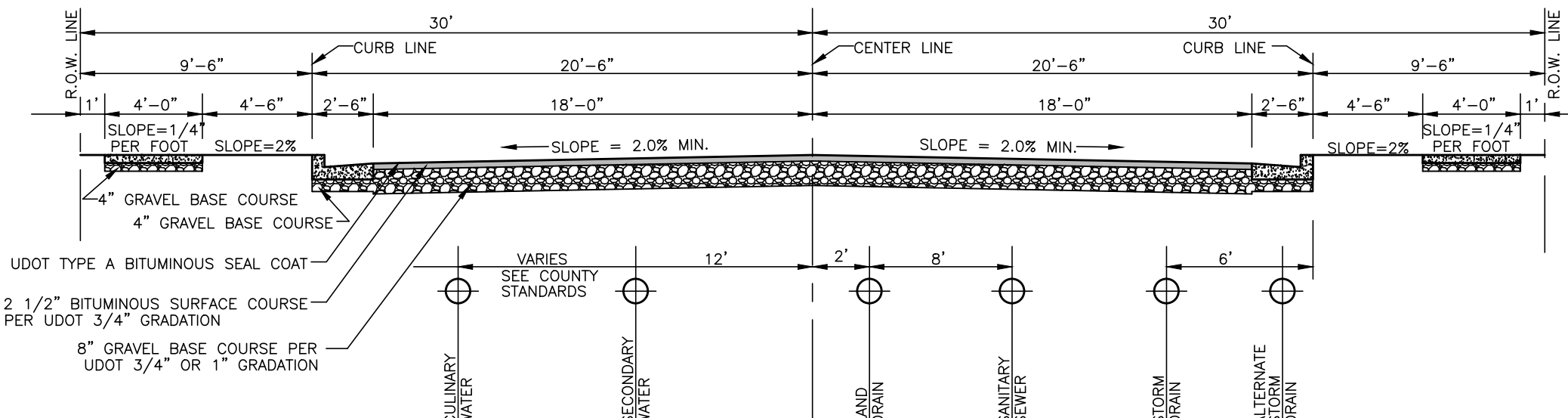
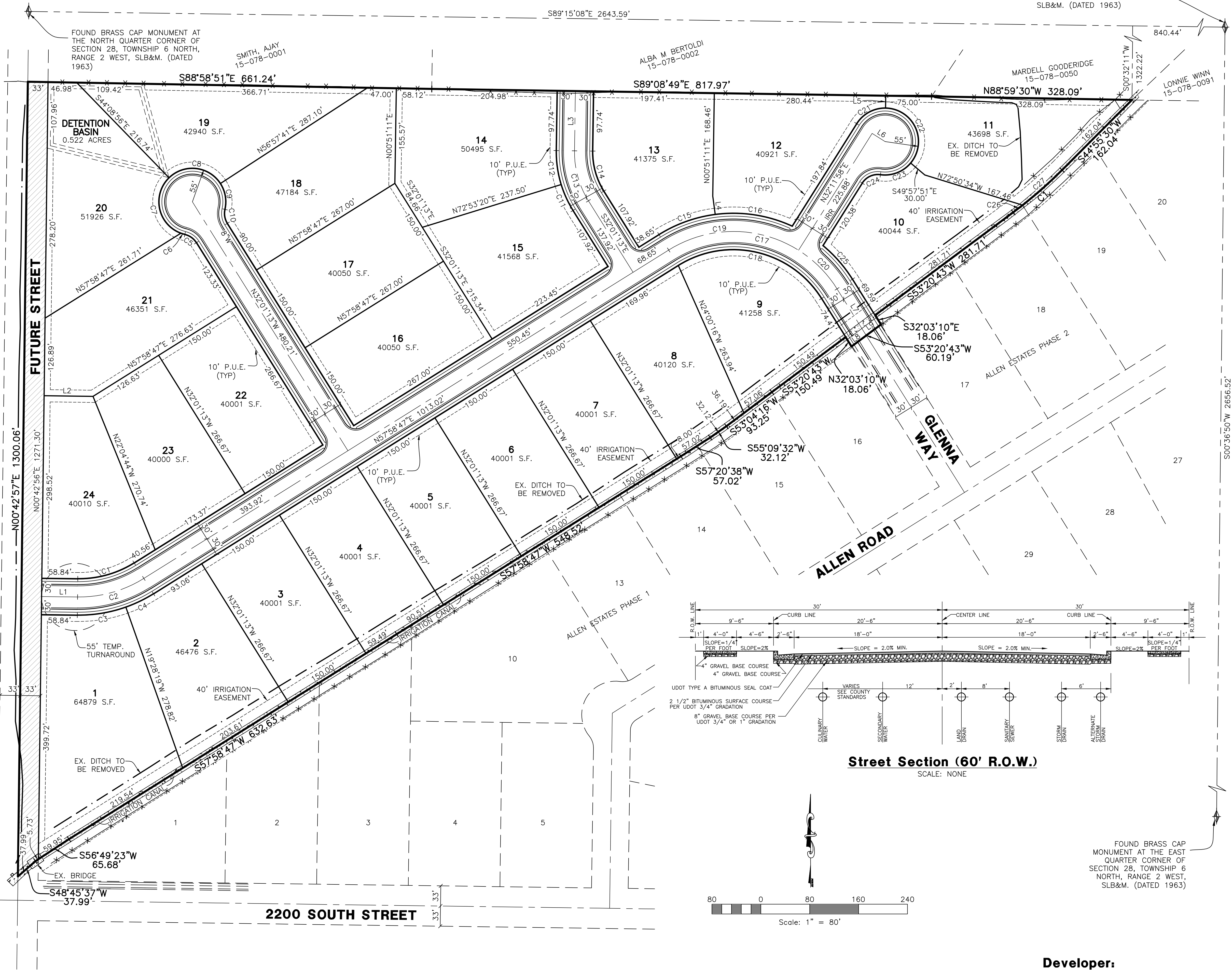
LINE	BEARING	DISTANCE
L1	S89°17'03"E	58.84'
L2	N89°17'04"W	80.00'
L3	S00°51'11"W	97.74'
L4	N07°28'54"W	30.00'
L5	N00°51'11"E	20.00'
L6	S57°48'02"E	25.00'
L7	N32°03'10"W	90.06'
L8	N53°20'43"E	30.10'
L9	N53°20'43"E	30.09'

Curve Table

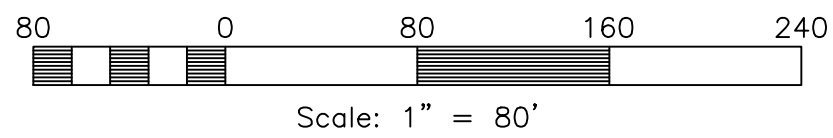
#	RADIUS	ARC LENGTH	CHD LENGTH	TANGENT	CHD BEARING	DELTA
C1	170.00'	97.13'	95.81'	49.93'	S74°20'52"W	32°44'10"
C2	200.00'	114.27'	112.72'	58.74'	N74°20'52"E	32°44'10"
C3	230.00'	81.04'	80.62'	40.94'	N80°37'19"E	20°11'17"
C4	230.00'	50.37'	50.27'	25.29'	S64°15'14"W	12°32'54"
C5	30.00'	23.81'	23.01'	12.46'	S54°34'11"E	45°05'57"
C6	55.00'	7.22'	7.22'	3.62'	S73°21'24"E	7°31'32"
C7	55.00'	110.82'	93.00'	87.08'	S11°52'17"E	115°26'42"
C8	55.00'	97.06'	84.95'	66.85'	N83°35'38"W	101°06'37"
C9	55.00'	44.27'	43.08'	23.41'	N09°58'48"W	46°07'03"
C10	30.00'	23.61'	23.01'	12.46'	N09°28'15"W	45°05'57"
C11	180.00'	46.84'	46.71'	23.55'	S24°33'57"E	14°54'33"
C12	180.00'	56.44'	56.21'	28.45'	S08°07'45"E	17°57'51"
C13	150.00'	86.06'	84.89'	44.25'	S15°35'01"E	32°52'24"
C14	120.00'	68.85'	67.91'	35.40'	S15°35'01"E	32°52'24"
C15	230.00'	98.50'	97.75'	50.02'	N70°14'56"E	24°32'19"
C16	230.00'	129.20'	127.51'	66.36'	S81°23'19"E	32°11'11"
C17	200.00'	314.05'	282.76'	199.89'	N77°02'12"W	89°58'03"
C18	170.00'	266.94'	240.35'	169.90'	N77°02'12"W	89°58'03"
C19	200.00'	224.17'	212.62'	125.51'	S89°54'38"E	64°13'11"
C20	200.00'	89.88'	89.12'	45.71'	S44°55'36"E	25°44'52"
C21	55.00'	56.30'	53.88'	30.90'	S61°31'34"W	58°39'13"
C22	55.00'	124.01'	99.36'	115.78'	N24°33'20"W	129°10'58"
C23	55.00'	55.53'	53.20'	30.39'	N68°57'35"E	57°50'53"
C24	30.00'	34.39'	32.54'	19.36'	N65°02'29"E	65°41'03"
C25	230.00'	73.27'	72.96'	36.95'	S41°10'46"E	18°15'11"
C26	719.98'	19.28'	19.28'	9.64'	S52°34'41"W	1°32'04"
C27	719.98'	86.53'	86.47'	43.32'	S48°22'04"W	6°53'09"

Legend

- = SECTION CORNER
- = BOUNDARY LINE
- = LOT LINE
- = ADJOINING PROPERTY
- = EASEMENTS
- = SECTION TIE LINE
- = EXISTING FENCE LINE
- = DITCH
- = PUBLIC UTILITY EASEMENT
- = ROAD DEDICATION FOR FUTURE ROAD



Street Section (60' R.O.W.)
SCALE: NONE



Saddlebred Acres

Weber County, Utah

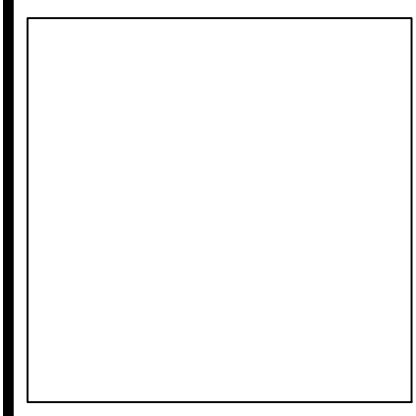
Developer:

Ivory Homes
970 Woodoak LN.
Salt Lake City, UT. 84117
(801) 386-6708

Reeve & Associates, Inc.
IRA
5160 SOUTH 1500 WEST RIVERDALE, UTAH 84405
TEL: (801) 621-3100 FAX: (801) 621-2666 www.reeve-assoc.com
LAND PLANNERS • CIVIL ENGINEERS • LAND SURVEYORS
TRAFFIC ENGINEERS • STRUCTURAL ENGINEERS • LANDSCAPE ARCHITECTS

REVISIONS	DESCRIPTION
DATE	

Saddlebred Acres
PART OF THE NE 1/4 OF SECTION 28, T.4N., R. 1W., S.L.B. & M., U.S. SURVEY
WEBER COUNTY, UTAH
Preliminary Plan



Project Info.	
Engineer:	G. Thorson
Designer:	C. Cave
Begin Date:	JUNE 23, 2016
Name:	SADDLEBREDED ACRES
Number:	4948-06

Sheet	2
1	Sheets

Storm Runoff Calculations

Allen Property - Ivory Homes

Taylor, UT

7/6/2016 TJH

The following runoff calculations are based on the Rainfall - Intensity - Duration Frequency Curve for the Taylor, UT area taken from data compiled using NOAA Atlas 14 for a 50-year storm event.

Runoff storm water has been calculated for two different sets of conditions, one being undeveloped land and the other with land fully improved. The difference between the two quantities will be detained in a subsurface detention basin where the storm water will be released at its historical rate of 0.2 cfs/acre.

The calculations are as follows:

1. Drainage Area:

Runoff Coefficients		
Paved Area	182,344	C = 0.95
Landscaped Area	967,905	C = 0.20
Roof	96,600	C = 0.95
Weighted Runoff Coefficient		C = 0.37

2. Time of Concentration:

Using Storm Water Run-Off "Overland Flow Time"

Tc = 30 minutes

3. Rainfall Intensities:

Rainfall Intensities were obtained using NOAA Atlas 14 for a 50-year storm event. This can be seen in section 5 below.

Rainfall Intensity for a 15 minute Time of Concentration 2.25 in/hr

4. Peak Run-off:

Runoff Coefficient	C = 0.37
Rainfall Intensity	i = 2.25 IN./HR.
Acreage	A = 28.62 ACRES
Runoff Quantity	Q = CIA

Q (total) Q = 23.69 cfs

5. Allowable Discharge:

Allowable Discharge of Storm Water Volume (pre-development) is 0.2 cfs per acre.
Allowable Discharge Q = (0.2 x acres)

Allowable Discharge = Q = 5.72 cfs

6. Volume of Run-off for 50-year 24 hour Storm Event:

C =	0.37					
A =	28.62					
Q(out) =	5.72 (based on 0.2 cfs/acre)					
time (min)	time (sec)	i (in./hr.)	Q (cfs)	Vol. in (cf)	Vol. out (cf)	Difference (cf)
0	0	0.00	0.00	0.00	0.00	0.00
5	300	5.32	56.01	16801.89	1717.42	15084.46
10	600	4.04	42.53	25518.65	3434.85	22083.81
15	900	3.34	35.16	31645.66	5152.27	26493.39
30	1800	2.25	23.69	42636.37	10304.54	32331.83
60	3600	1.39	14.63	52679.60	20609.07	32070.52
120	7200	0.77	8.11	58364.45	41218.15	17146.30
180	10800	0.53	5.57	60145.70	61827.22	-1681.52
360	21600	0.31	3.26	70492.12	123654.45	-53162.32
720	43200	0.19	2.01	86864.49	247308.89	-160444.40
1440	86400	0.11	1.15	99143.76	494617.79	-395474.02

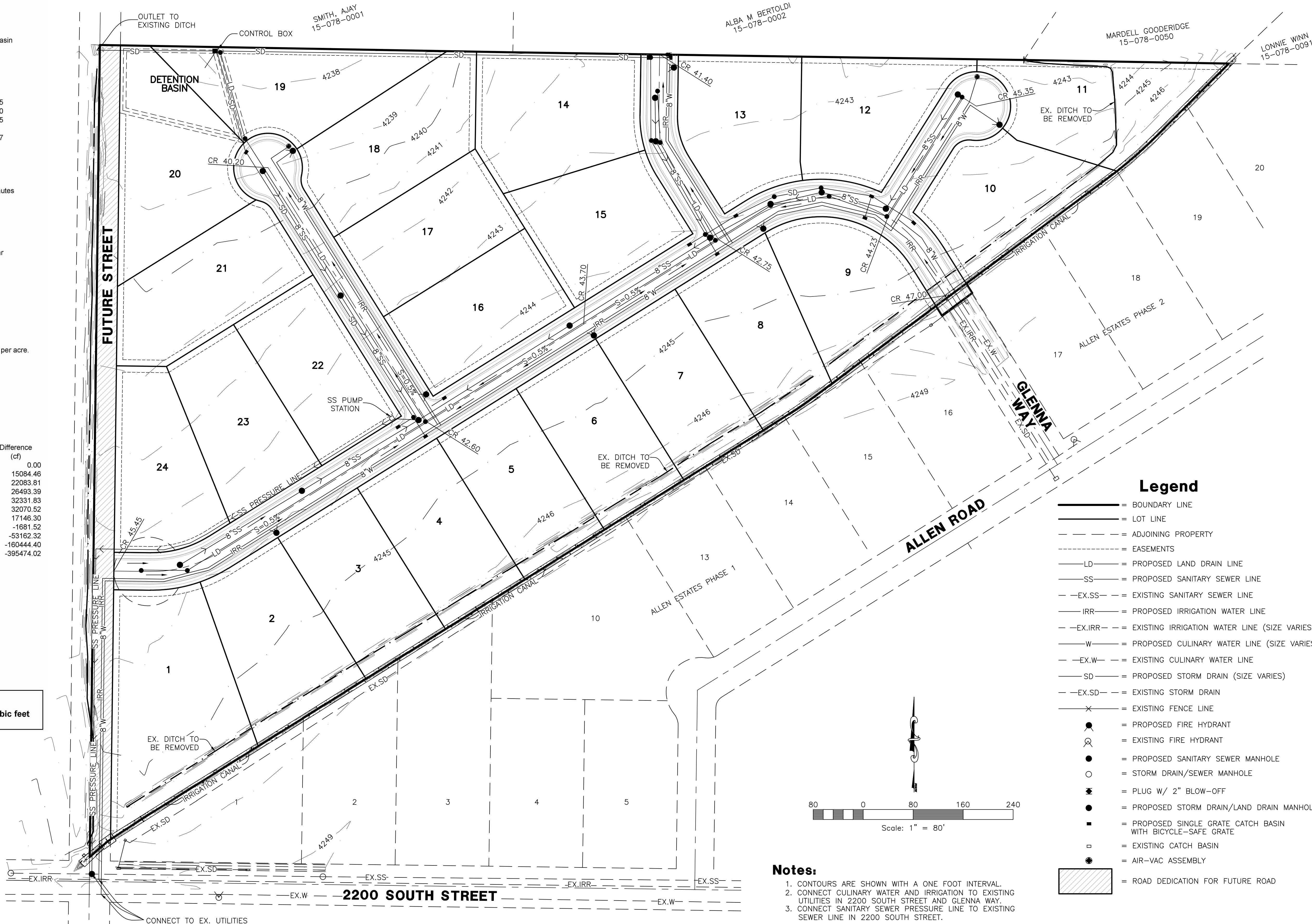
Required Detention Volume 32331.83 c.f.

7. Orifice Sizing

Given:	Q = 5.72 cfs
	2g = 64.4 ft/s ²
	H = 2.50 ft
	Cd = 0.62
	R = $\sqrt{Q / (0.7 * (64.4 * H)^{0.5} / \pi)}$
	R = 0.48 feet
	5.78 inches
	D = 11.55 inches

SUMMARY:

The required volume of the detention basin is 32,332 cubic feet
Orifice Diameter at outlet is 11.55 inches



Saddlebred Acres

Weber County, Utah

REVISIONS	DESCRIPTION
DATE	

Project Info.

Engineer: G. Thorson

Designer: C. Gave

Begin Date: JUNE 23, 2016

Name: SADDLEBREDED ACRES

Number: 4948-06