

CITY OF ALBUQUERQUE

August 4, 2015

Philip W. Clark, PE
Clark Consulting Engineers
19 Ryan Rd
Edgewood, NM 87015



**Re: The Jones Home
9000 Alameda NE
Grading and Drainage
Engineers Stamp Date 7/22/2015 (C20D073)**

Dear Mr. Clark,

Based upon the information provided in your submittal received 7/23/2015, the above referenced Grading and Drainage Plan cannot be approved for Grading Permit or Building Permit until the following comments are addressed.

- Provide the "First Flush" calculations and Ponding for the new impervious area's.
- Provide a basin for the 2cfs.
- A Floodplain Permit will be required before any construction begins.
- Provide roof flows.
- The scour wall to the west of the home needs to protect the septic tank and septic drain field.
- Provide the flow amount coming from Alameda Blvd. and Ventura St., headed in a southwesterly direction into the AE flood zone, if any.
- The two flood control structures provided are not acceptable. In option B the block should extend below the scour depth.
- The driveway must be concrete, provide a detail as to how the driveway will not block the 2cfs flow.

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

Note; The COA Transportation department will allow a single entry in Alameda Blvd., once this street is completely built out and becomes a Principal Arterial Road. Coordinate with DMD for the future road alignment in Alameda, the home may possibly be in the future right of way.

If you have any questions, you can contact me at 924-3999 or Rudy Rael at 924-3977.

Sincerely,

Shahab Biazar, P.E.
City Engineer, Albuquerque
Planning Department

RR/CC
C: email

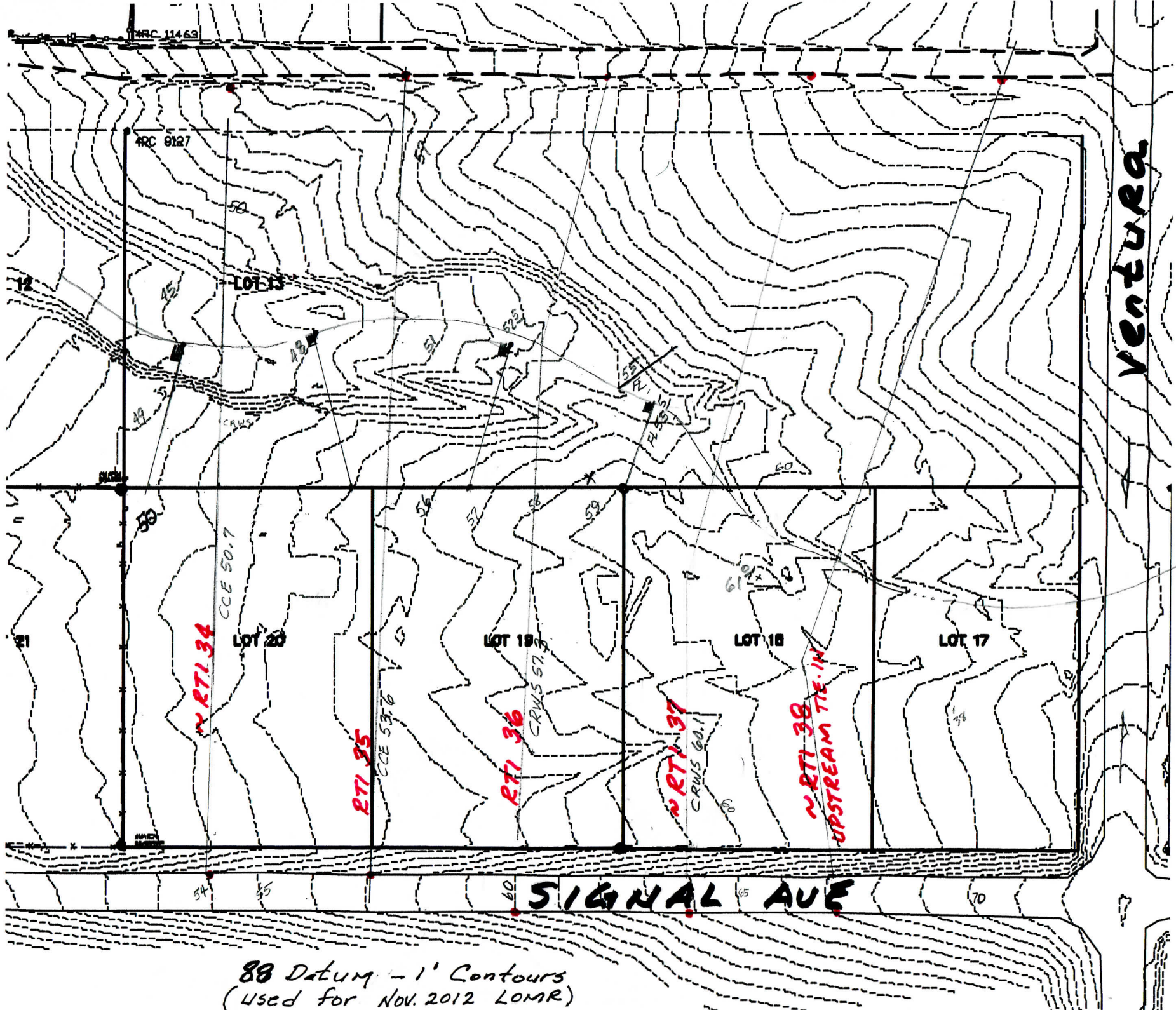
@ Signal Pnte.

USE FOR BFE

Sub Crit.
La Cueva
@ Signal Pnte

HEC-RAS Plan: subcrit River: RIVER-1 Post-Pro Reach: Reach-1 Profile: PF 1

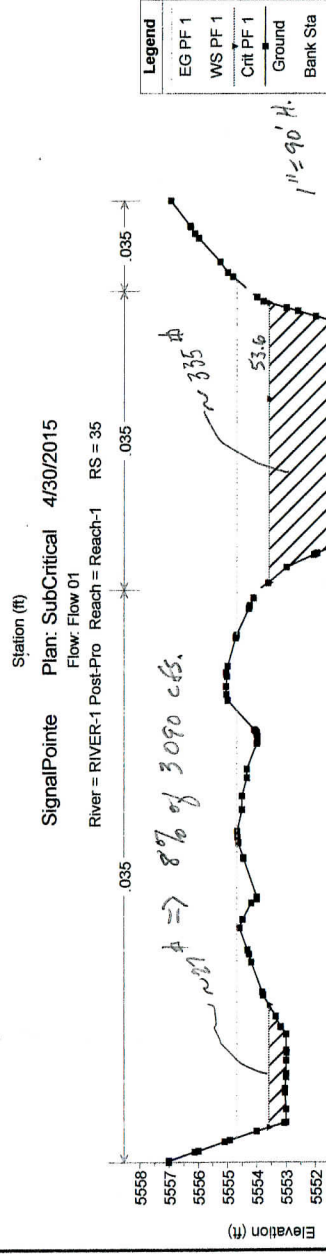
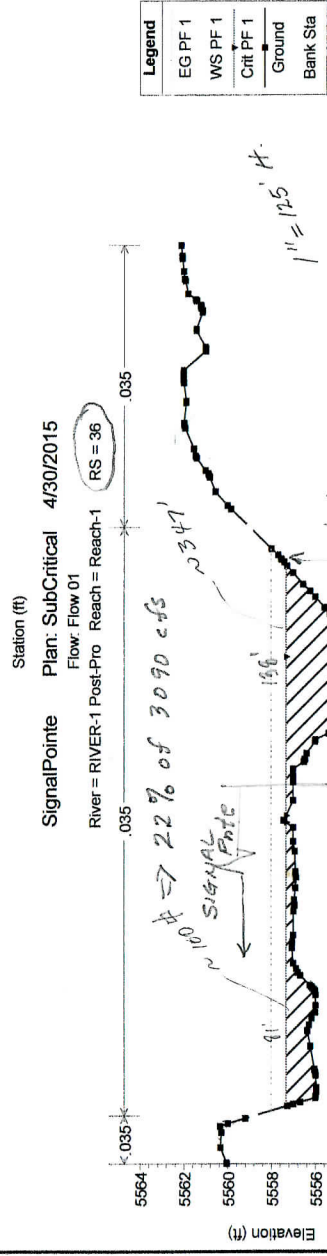
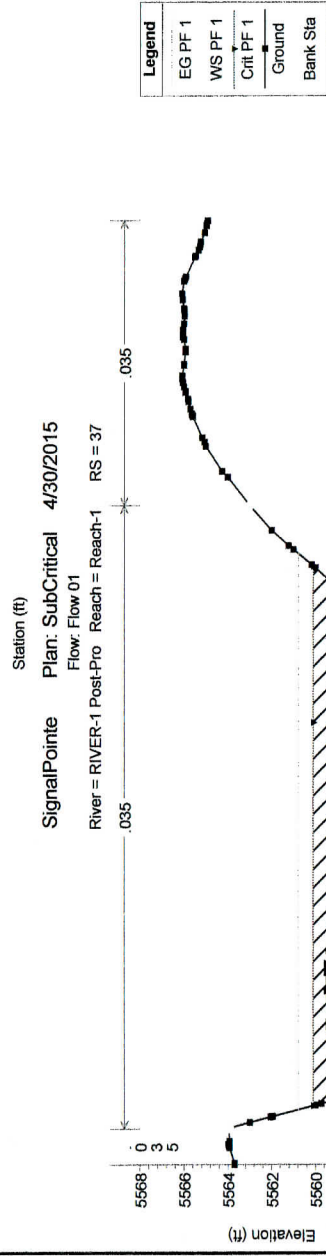
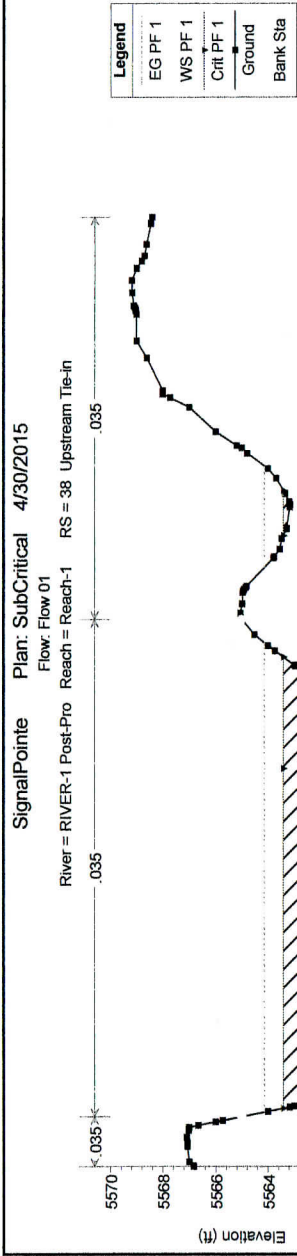
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	38	PF 1	3090.00	5561.00	5563.42	5563.42	5564.14	0.014715	6.82	457.06	326.39	0.97
Reach-1	37	PF 1	3090.00	5557.67	5560.10	* 5560.10	5560.78	0.017015	6.63	466.05	355.30	1.02
Reach-1	36	PF 1	3090.00	5553.00	5557.33	* 5557.33	5558.01	0.016843	6.64	465.54	351.50	1.02
Reach-1	35	PF 1	3090.00	5549.81	5553.59	* 5553.59	5554.68	0.010772	8.49	383.13	189.48	0.91
Reach-1	34	PF 1	3090.00	5546.18	5550.68	* 5550.68	5551.99	0.013131	9.22	335.28	127.87	1.00
Reach-1	33	PF 1	3090.00	5543.89	5547.65	5547.65	5548.91	0.013197	9.01	342.88	135.68	1.00
Reach-1	32.5	PF 1	3090.00	5539.80	5544.53	5544.53	5546.10	0.010966	10.09	312.71	117.94	0.96
Reach-1	32	PF 1	3090.00	5537.80	5542.77	5542.77	5543.96	0.013710	8.74	353.50	150.99	1.01
Reach-1	31	PF 1	3090.00	5536.00	5540.37	5540.37	5541.30	0.014771	7.75	399.17	221.26	1.00
Reach-1	30	PF 1	3090.00	5533.99	5538.24	5538.24	5539.11	0.014555	7.50	412.17	232.47	0.99
Reach-1	29	PF 1	3090.00	5532.32	5536.70	5536.70	5537.48	0.014850	7.06	437.93	274.63	0.98
Reach-1	28	PF 1	3090.00	5531.20	5535.62	5535.62	5536.38	0.015069	6.99	442.11	284.15	0.99
Reach-1	27	PF 1	3090.00	5529.00	5534.27	5534.27	5535.00	0.017055	6.87	449.73	324.94	1.03
Reach-1	26	PF 1	3090.00	5527.98	5532.61	5532.61	5533.38	0.016097	7.07	436.88	289.34	1.01
Reach-1	25	PF 1	3090.00	5526.22	5530.66	5530.66	5531.40	0.016048	6.89	448.61	308.76	1.01
Reach-1	24	PF 1	3090.00	5525.00	5529.47	5529.47	5530.23	0.015841	6.98	442.59	295.50	1.01
Reach-1	23	PF 1	3090.00	5523.90	5527.78	5527.78	5528.66	0.014352	7.51	411.49	228.75	0.99
Reach-1	22.5	PF 1	3090.00	5522.96	5527.08	5527.08	5527.97	0.014201	7.59	407.34	224.30	0.98
Reach-1	22	PF 1	3090.00	5522.16	5526.29	5526.29	5527.20	0.013387	7.66	406.99	226.71	0.96
Reach-1	21	PF 1	3090.00	5520.96	5525.15	5525.15	5526.27	0.009892	8.50	363.63	159.37	0.99
Reach-1	20	PF 1	3090.00	5519.88	5525.01	5524.19	5525.68	0.003899	6.54	472.18	151.60	0.65
Reach-1	19	PF 1	3090.00	5517.20	5525.01	5522.25	5525.57	0.001018	6.03	512.12	86.87	0.44
Reach-1	18.7	PF 1	3090.00	5516.26	5524.75	5522.18	5525.52	0.001214	7.02	439.99	71.81	0.50
Reach-1	18.35	PF 1	3090.00	5515.25	5522.81	5522.81	5525.30	0.001798	12.65	244.21	48.13	0.99
Reach-1	18	PF 1	3090.00	5514.13	5522.61	5522.61	5522.95	0.000445	6.42	1153.14	331.82	0.49
Reach-1	17	PF 1	3090.00	5511.15	5519.94	5519.94	5522.56	0.001772	12.99	239.41	59.84	0.98
Reach-1	16	PF 1	3090.00	5508.15	5517.02	5517.02	5519.56	0.001690	12.80	246.56	76.00	0.96
Reach-1	15	PF 1	3090.00	5505.15	5514.02	5514.02	5516.56	0.001690	12.80	246.56	76.00	0.96
Reach-1	14	PF 1	3090.00	5502.15	5511.02	5511.02	5513.56	0.001690	12.80	246.56	76.00	0.96
Reach-1	13	PF 1	3090.00	5499.15	5508.02	5508.02	5510.56	0.001690	12.80	246.56	76.00	0.96
Reach-1	12	PF 1	3090.00	5496.15	5505.02	5505.02	5507.56	0.001690	12.80	246.56	76.00	0.96
Reach-1	11	PF 1	3090.00	5493.15	5502.02	5502.02	5504.56	0.001690	12.80	246.56	76.00	0.96
Reach-1	10	PF 1	3090.00	5490.15	5499.19	5499.19	5501.76	0.001643	12.88	248.31	76.00	0.95
Reach-1	9	PF 1	3090.00	5487.15	5496.05	5496.05	5498.56	0.001657	12.72	250.27	90.40	0.95
Reach-1	8	PF 1	3090.00	5484.15	5492.92	5492.92	5495.56	0.001795	13.04	238.36	59.67	0.99
Reach-1	7	PF 1	3090.00	5480.86	5489.64	5489.64	5492.27	0.001783	13.01	239.14	62.17	0.99
Reach-1	6	PF 1	3090.00	5474.14	5482.92	5482.92	5485.55	0.001782	13.01	239.18	62.22	0.99
Reach-1	5	PF 1	3090.00	5467.45	5476.58	5476.58	5479.40	0.001878	13.48	229.18	40.76	1.00
Reach-1	4	PF 1	3090.00	5462.75	5471.66	5471.66	5474.41	0.001882	13.32	231.93	42.68	1.01



Thalweg
(Dom.)

1" =
80'

CEE-Re-run Model



$$\Delta = \downarrow y_{normal}$$

HEC-RAS Plan: Supercrit River: RIVER-1 Post-Pro Reach: Reach-1 Profile: PF 1

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Reach-1	38	PF 1	3090.00	5561.00	5563.06	5563.39	5564.29	0.035031	8.92	346.37	290.73	1.44
Reach-1	37	PF 1	3090.00	5557.67	5559.86	5560.10	5560.87	0.032179	8.06	383.23	351.37	1.36
Reach-1	36	PF 1	3090.00	5553.00	5557.17	5557.33	5558.04	0.024424	7.50	411.73	341.70	1.20
Reach-1	35	PF 1	3090.00	5549.81	5552.76	5553.59	5555.12	0.031921	12.35	250.19	119.88	1.51
Reach-1	34	PF 1	3090.00	5546.18	5549.88	5550.67	5552.30	0.024946	12.50	247.28	96.54	1.38
Reach-1	33	PF 1	3090.00	5543.89	5546.88	5547.65	5548.37	0.034856	12.65	244.20	120.39	1.57
Reach-1	32.5	PF 1	3090.00	5539.80	5543.61	5544.53	5546.49	0.026243	13.62	226.81	80.63	1.43
Reach-1	32	PF 1	3090.00	5537.80	5541.62	5542.78	5544.70	0.033898	14.08	219.43	90.21	1.59
Reach-1	31	PF 1	3090.00	5536.00	5540.37	5541.37	5543.37	0.022825	9.11	339.22	199.40	1.23
Reach-1	30	PF 1	3090.00	5533.99	5537.89	5538.24	5539.20	0.024469	9.20	335.73	205.49	1.27
Reach-1	29	PF 1	3090.00	5532.32	5536.29	5536.70	5537.65	0.032440	9.37	329.83	242.92	1.42
Reach-1	28	PF 1	3090.00	5531.20	5535.32	5535.62	5536.45	0.024931	8.52	362.56	252.39	1.25
Reach-1	27	PF 1	3090.00	5529.00	5534.05	5534.28	5535.07	0.024394	8.12	380.61	279.88	1.23
Reach-1	26	PF 1	3090.00	5527.98	5532.21	5532.61	5533.58	0.035016	9.38	329.34	255.62	1.46
Reach-1	25	PF 1	3090.00	5526.22	5530.64	5530.86	5531.40	0.016808	7.00	441.54	307.22	1.03
Reach-1	24	PF 1	3090.00	5525.00	5529.25	5529.46	5530.27	0.023062	8.11	381.13	269.43	1.20
Reach-1	23	PF 1	3090.00	5523.90	5527.41	5527.78	5528.78	0.028076	9.38	329.27	216.72	1.34
Reach-1	22.5	PF 1	3090.00	5522.96	5526.72	5527.08	5528.08	0.027334	9.37	329.76	212.96	1.33
Reach-1	22	PF 1	3090.00	5522.16	5525.88	5526.29	5527.36	0.029733	9.77	316.37	204.92	1.38
Reach-1	21	PF 1	3090.00	5520.96	5524.84	5525.15	5526.34	0.015494	9.81	315.05	155.99	1.22
Reach-1	20	PF 1	3090.00	5519.88	5523.80	5524.19	5525.51	0.016450	10.52	293.84	136.99	1.27
Reach-1	19	PF 1	3090.00	5517.20	5521.21	5522.25	5524.57	0.017088	14.92	207.16	73.78	1.57
Reach-1	18.7	PF 1	3090.00	5516.26	5521.65	5522.81	5524.35	0.007997	13.18	234.47	60.86	1.18
Reach-1	18.35	PF 1	3090.00	5515.25	5522.81	5522.81	5525.30	0.001798	12.65	244.21	48.13	0.99
Reach-1	18	PF 1	3090.00	5514.13	5522.15	5522.61	5525.15	0.002224	13.91	222.12	44.27	1.09
Reach-1	17	PF 1	3090.00	5511.15	5519.94	5524.73	5524.47	0.006417	20.77	148.80	35.92	1.80
Reach-1	16	PF 1	3090.00	5508.15	5514.08	5517.02	5523.37	0.009892	24.46	126.31	33.32	2.21
Reach-1	15	PF 1	3090.00	5505.15	5510.72	5514.02	5522.04	0.013051	27.00	114.46	31.87	2.51
Reach-1	14	PF 1	3090.00	5502.15	5507.48	5511.02	5520.44	0.015690	28.89	106.95	30.91	2.74
Reach-1	13	PF 1	3090.00	5499.15	5504.31	5508.02	5518.64	0.017976	30.38	101.72	30.23	2.92
Reach-1	12	PF 1	3090.00	5496.15	5501.18	5505.02	5516.63	0.019916	31.54	97.96	29.72	3.06
Reach-1	11	PF 1	3090.00	5493.15	5498.09	5502.02	5514.46	0.021568	32.48	95.15	29.34	3.18
Reach-1	10	PF 1	3090.00	5490.15	5495.11	5499.19	5512.20	0.022275	33.18	93.14	28.30	3.22
Reach-1	9	PF 1	3090.00	5487.15	5491.95	5496.05	5509.81	0.024255	33.91	91.12	28.79	3.36
Reach-1	8	PF 1	3090.00	5484.15	5488.90	5492.92	5507.28	0.025216	34.40	89.83	28.61	3.42
Reach-1	7	PF 1	3090.00	5480.86	5485.56	5489.64	5504.63	0.026527	35.04	88.17	28.38	3.50
Reach-1	6	PF 1	3090.00	5474.14	5478.57	5482.92	5501.28	0.033674	38.24	80.80	27.32	3.92
Reach-1	5	PF 1	3090.00	5467.45	5471.92	5476.59	5497.46	0.037088	40.56	76.19	24.88	4.08
Reach-1	4	PF 1	3090.00	5462.75	5467.06	5471.66	5493.51	0.040230	41.28	74.86	25.60	4.25
Reach-1	3	PF 1	3090.00	5459.87	5464.18	5468.73	5489.13	0.038061	40.08	77.09	26.61	4.15
Reach-1	2	PF 1	3090.00	5457.33	5461.67	5466.01	5484.89	0.035340	38.67	79.90	27.68	4.01
Reach-1	1	PF 1	3090.00	5454.00	5458.60	5462.85	5481.24	0.033630	38.19	80.91	27.38	3.92

$$F_v = 1.36$$

$$y_{(avg.)} = 3.2'$$

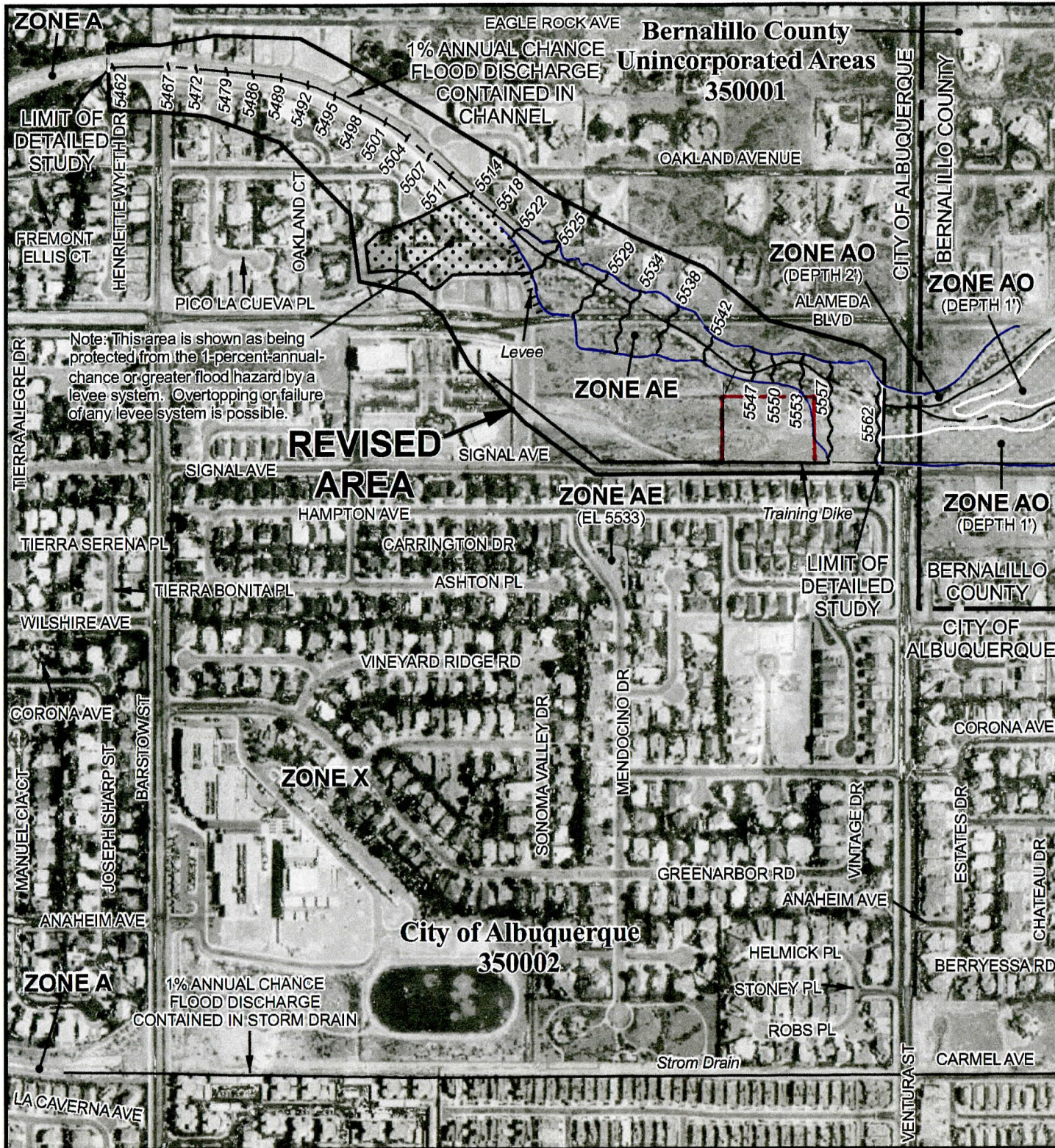
$$y_1 (\text{Super Crit.}) = 3.2$$

$$Sed G. Eg. 3.89 \dots$$

$$\frac{y_s}{y_1} = 0.73 + 0.14 \pi F_1^2$$

$$\therefore y_s = 4.94' / USE 5'$$

@ Signal Pnte.
La Cueva
Super Crit.



MAP LEGEND

-  1% annual chance (100-Year) Floodplain
-  1% annual chance (100-Year) Floodway
-  0.2% annual chance (500-Year) Floodplain

BASE MAP IMAGERY WAS OBTAINED FROM UNITED STATES GEOLOGICAL SURVEY ON APRIL 4, 2012.



MAP SCALE 1" = 500'

500 250 0 500 FEET

NIP

PANEL 0141G

FIRM

FLOOD INSURANCE RATE MAP
BERNALILLO COUNTY,
NEW MEXICO
AND INCORPORATED AREAS

PANEL 141 OF 825

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

<u>CONTAINS:</u>	<u>NUMBER</u>	<u>PANEL</u>	<u>SUFFIX</u>
<u>COMMUNITY</u>			
ALBUQUERQUE, CITY OF	350002	0141	G
BERNALILLO COUNTY, UNINCORPORATED AREAS	350001	0141	G

C-20

REVISED TO
REFLECT LOMR
EFFECTIVE: **November 8, 2012**

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
35001C0141G

MAP REVISED
SEPTEMBER 26, 2008

Case # 11-06-2877P
Federal Emergency Management Agency

POST PROJECT CHANNEL HEC-RAS OUTPUT
100-YEAR STORM

Cross Section	Station #	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G.- Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
38	40+17	3090	5561.00	5562.69	5563.39	5565.22	0.112373	12.76	242.13	284.75	2.44
37	39+17	3090	5557.35	5559.73	5559.84	5560.53	0.021598	7.17	430.95	349.24	1.14
36	38+17	3090	5553.00	5556.66	5557.02	5557.87	0.032369	8.83	350.13	281.05	1.39
35	37+17	3090	5549.50	5552.43	5553.01	5554.25	0.039436	10.81	285.72	196.02	1.58
34	36+17	3090	5546.10	5549.51	5549.90	5551.13	0.024393	10.20	302.85	157.71	1.30
33	35+40	3090	5542.90	5546.20	5546.82	5548.22	0.034498	11.39	271.19	155.24	1.52
32.5	34.68	3090	5539.80	5544.58	5544.80	5546.04	0.014566	9.69	318.97	121.86	1.06
32	34+13	3090	5537.80	5541.66	5542.79	5544.63	0.032428	13.83	223.42	91.28	1.56
31	33+12	3090	5534.90	5539.84	5540.20	5541.33	0.024846	9.80	315.33	176.77	1.29
30	32+27	3090	5533.50	5537.48	5537.88	5539.13	0.023245	10.30	300.12	149.26	1.28
29	31+90	3090	5532.30	5536.62	5536.86	5537.73	0.021950	8.44	366.04	235.09	1.19
28	31+50	3090	5531.25	5535.32	5535.74	5536.65	0.032706	9.25	334.16	252.38	1.42
27	30+95	3090	5528.80	5533.80	5534.11	5534.98	0.026627	8.73	354.10	249.56	1.29
26	30+50	3090	5528.00	5532.26	5532.60	5533.52	0.031274	9.00	343.32	260.57	1.38
25	29+90	3090	5526.22	5530.61	5530.66	5531.40	0.017900	7.15	432.12	305.16	1.06
24	29+40	3090	5525.00	5529.27	5529.46	5530.26	0.022218	7.99	386.94	272.11	1.18
23	28+90	3090	5523.90	5527.78	5528.01	5528.95	0.023138	8.66	356.78	228.97	1.22
22	28+40	3090	5522.16	5526.16	5526.45	5527.35	0.028698	8.75	353.11	262.34	1.33
21	27+90	3090	5521.00	5525.77	5525.12	5526.44	0.006197	6.53	473.35	172.24	0.69
20	27+40	3090	5519.70	5525.88	5523.63	5526.19	0.001581	4.44	696.54	160.51	0.38
19.3	27+30	3090	5518.75	5525.91	5522.79	5526.16	0.001192	4.05	763.65	143.32	0.31
19.2	27+20	3090	5518.45	5525.84	5522.84	5526.14	0.001406	4.42	698.80	128.67	0.33
19.1	27+10	3090	5517.90	5525.80	5522.68	5526.12	0.001485	4.59	673.02	118.54	0.34
19	27+01	3090	5517.20	5525.72	5522.36	5526.11	0.000532	5.01	616.68	101.07	0.36
18.9	26+90	3090	5516.86	5525.54	5522.42	5526.08	0.001909	5.92	521.82	97.77	0.45
18.8	26+80	3090	5516.56	5525.45	5522.44	5526.06	0.002245	6.25	494.75	96.64	0.49
18.7	26+70	3090	5516.26	5525.26	5522.69	5526.02	0.002924	6.98	442.90	91.26	0.56

TABLE 1 A

Post-project Cross Section 38

NO. KEY

DESK
DRAW
REVIE
DATE

Note: Contours
"Indexed" in
29 Datum

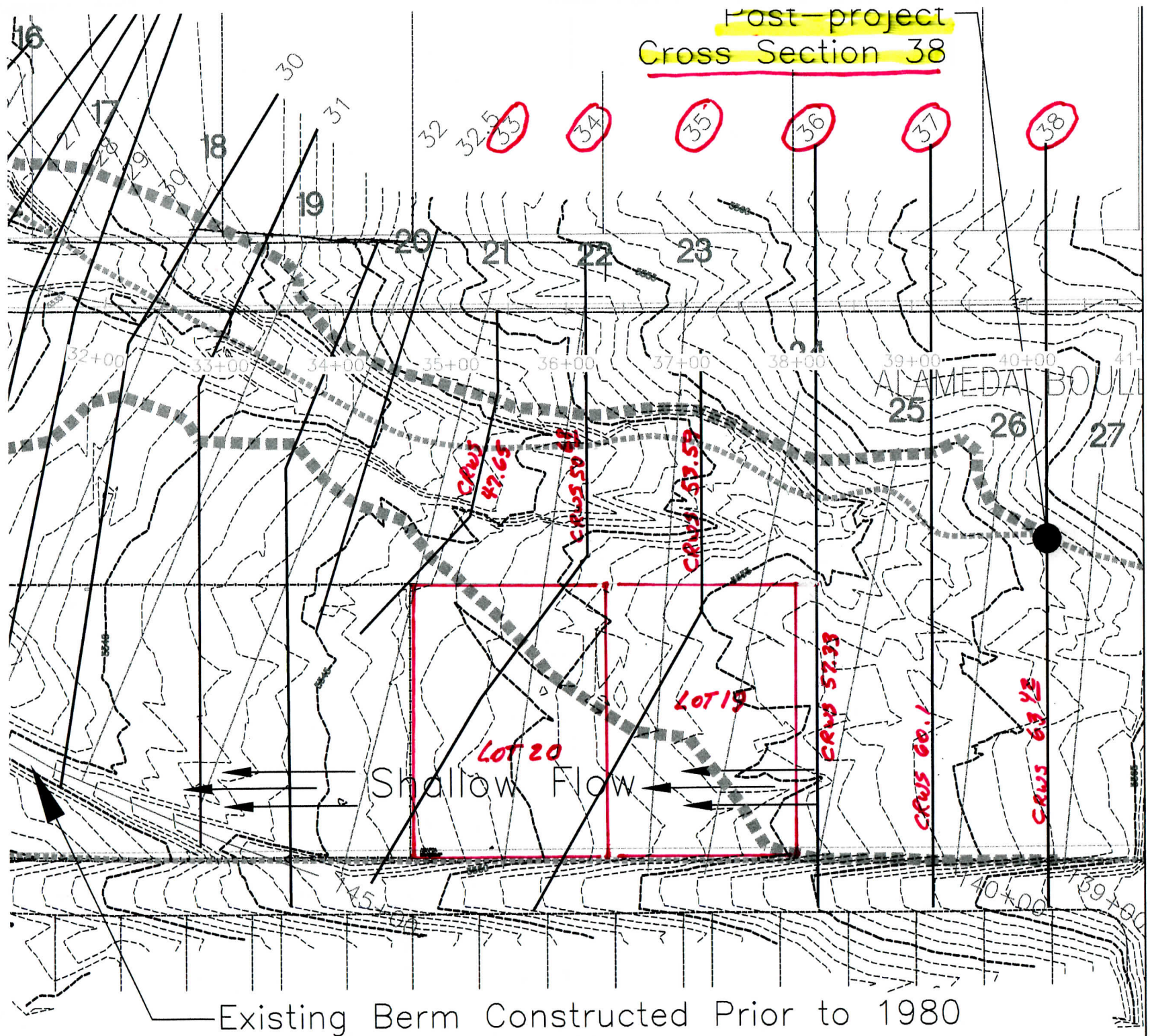
1" = 112'

ZONE M

**HERRAS
CRWS**

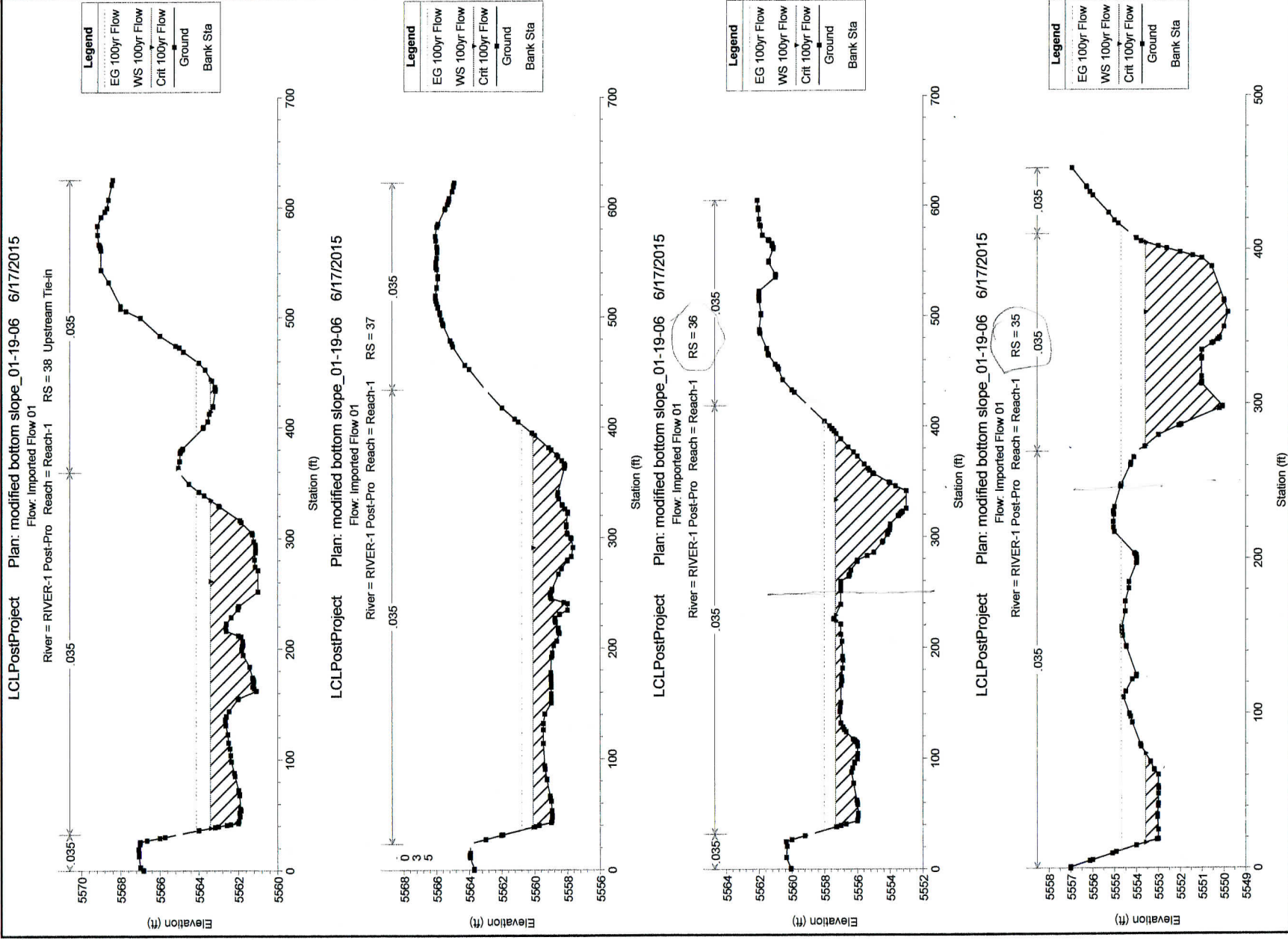
PROJ

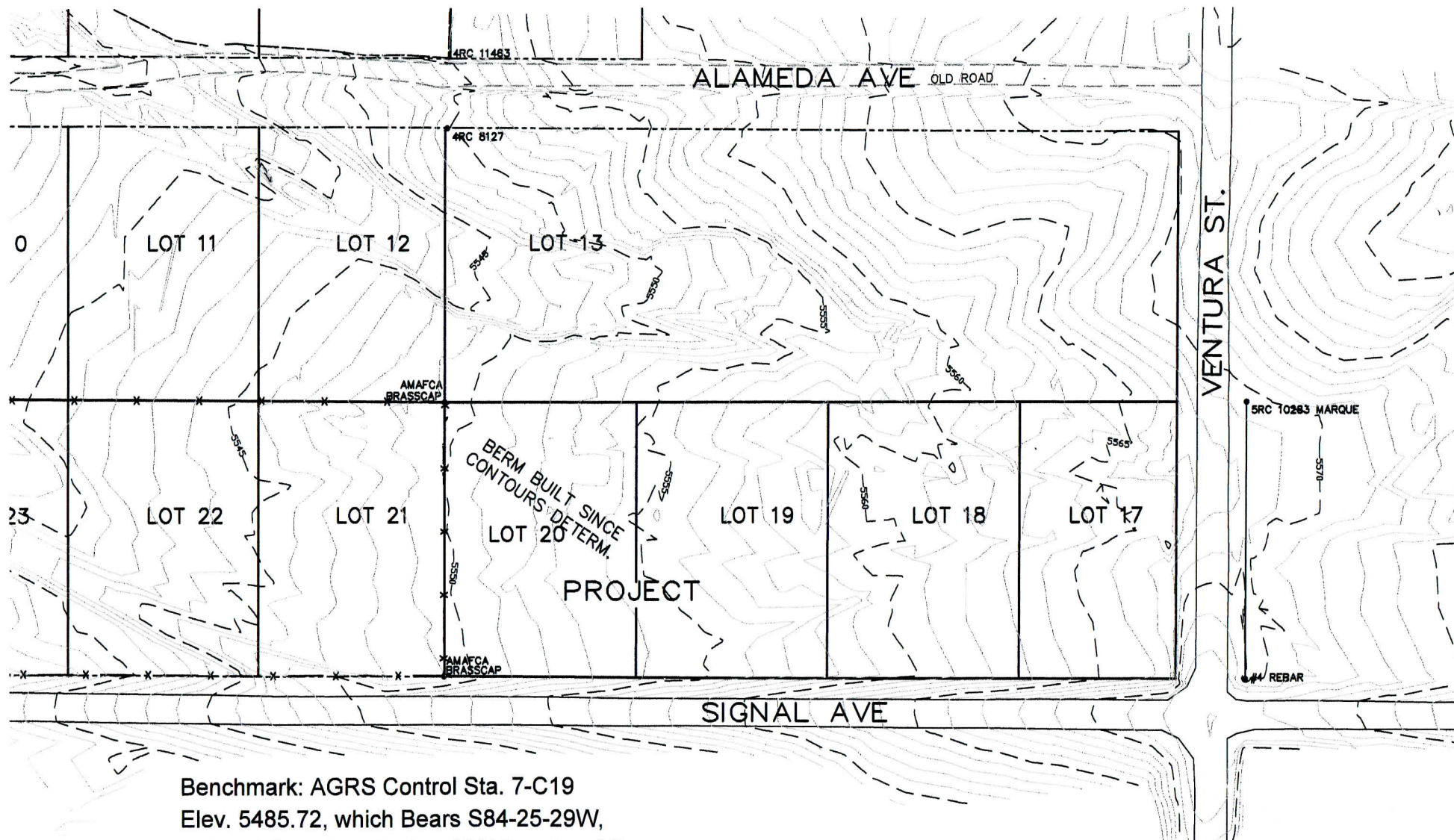
SHEET



Existing Berm Constructed Prior to 1980

RT1. Post Project





Benchmark: AGRS Control Sta. 7-C19
 Elev. 5485.72, which Bears S84-25-29W,
 2026.18 feet, from Project NW Cor. (Lot 20)

TOPO PROVIDED BY TERRAMETRICS, Philip W.
 Turner, P.S., NAVD88, 1' Contour Int.
 Contours Provided For LOMR Case 11-06-2877P
 Effective Date 11/8/2012