COUNTY OF SAN BERNARDINO

DEPARTMENT OF PUBLIC WORKS

RIALTO CHANNEL

FLOODPLAIN STUDY

AMENDMENT OCTOBER 2012

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STUDY AREA:

The study area is along Rialto channel between the I-10 Freeway and Cactus Basin at Baseline Avenue. The study length is approximately 3.85 miles and is located in the City of Rialto.

PURPOSE OF STUDY:

The system has been analyzed and the flood plain modeled using a combination of several different proposed projects. HEC-RAS software was used for the modeling. Each scenario has been analyzed using the anticipated 100 year runoff. Hydrology for these different conditions has been previously determined and is not included in this report.

The purpose of this study is to prioritize the phased Rialto Channel projects based on the greatest reduction in flood risk as characterized in the flood plain mapping for each scenario.

ANALYSIS APPROACH

- Due to potential obstructions within the roadways, the system was analyzed based upon a subcritical flow condition.
- The capacity of the existing Rialto Channel has been calculated to be as little as 178 cfs in some areas.
- Runoff that overtops Rialto channel and flows onto local streets was analyzed using side weirs at each street crossing thus resulting in a spilt flow through the adjoining streets.
- A separate HEC- RAS study for each intersecting major streets was prepared using the Q resulting from the side weir analysis.
- The anticipated runoff resulting from the spilt flow analysis was compared to the calculated street capacity. flooding was assumed to occur wherever the calculated Q100 runoff was greater than the calculated street capacity..

DESCRIPTION OF POTENTIAL IMPROVEMENT SCENARIOS

1. **Existing condition with no additional improvements (no attenuation within Cactus Basins)**

   The system was analyzed and the flood plain modeled based on the existing condition of Basin #3,4 and 5, channel geometry and crossing culverts. Due to the current metering of the outlet structure beneath Baseline Avenue, flow is assumed to flow from Basin 3 unto the intersection of Baseline and Cactus Avenues. Q100 at this location is 8.646 cfs.

   This condition assumes ultimate condition drainage flow baths downstream of the basin

2. **Construction of ultimate improvements to Cactus Basin No. 3.**

   The system was analyzed and the flood plain modeled based on the ultimate improvements of basin #3 only without any improvements of the channel or crossing culverts. Again, due to the current metering of the outlet structure beneath Baseline Avenue, flow is assumed to flow from Basin 3 unto the intersection of Baseline and Cactus Avenues. Q100 at this location is 5,104 cfs.

3. **Construction of ultimate improvements to Cactus Basin No. 3,4 and 5.**

   The system was analyzed and the flood plain modeled based on the ultimate improvements of basin #3,4 and 5 without any improvements of the channel or crossing culverts. Again, due to the current metering of the outlet structure beneath Etiwanda Avenue, flow is assumed to flow from Basin 1 unto the intersection of Etiwanda and Cactus Avenues. Q100 at this location is 1,329 cfs.

4. **Construction of ultimate Cactus Basin No.3 with construction of ultimate road crossings at Foothill Blvd, Merrill Ave, Randall Ave, and Cactus Avenue.**

The system was analyzed and the flood plain modeled based on the ultimate improvements of basin #3 only with improvements of the above crossing culverts. Again, due to the current metering of the outlet structure beneath Baseline Avenue, flow is assumed to flow from Basin 3 unto the intersection of Baseline and Cactus Avenues. Q100 at this location is 5,104 cfs.

5. **Construction of ultimate Cactus Basin No.3, construction of all ultimate road crossings with interim earth channel Improvements to convey Q of 1000 cfs.**

   The system was analyzed and the flood plain modeled based on the ultimate improvements of basin #3 only with ultimate improvements of downstream road crossing culverts. Again, due to the current metering of the outlet structure beneath Baseline Avenue, flow is assumed to flow from Basin 3 unto the intersection of Baseline and Cactus Avenues. Q100 at this location is 5,582 cfs.

   In order to model interim earth channel Improvements to convey a design Q of 1000 cfs, Rialto channel cross section has been modeled as ineffective flow and subtract 1000 cfs from the discharge of the channel.

6. **Construction of ultimate Cactus Basin No.3 and ultimate Rialto Channel from Etiwanda Avenue to I-10 including all road crossings.**

   The system was analyzed and the flood plain modeled based on the ultimate improvements of basin #3 only with ultimate improvements of road crossing culverts. Q100 outlet flow from basin #1 is 5,582 cfs.

   To model ultimate channel Improvements, Rialto channel cross sections have been modeled as ineffective flow and subtract Q design from the total discharge of the channel.

7. **Construction of ultimate Cactus Basin No.3, construction of all ultimate road crossings with interim earth channel Improvements to convey Q of 1260 cfs.**

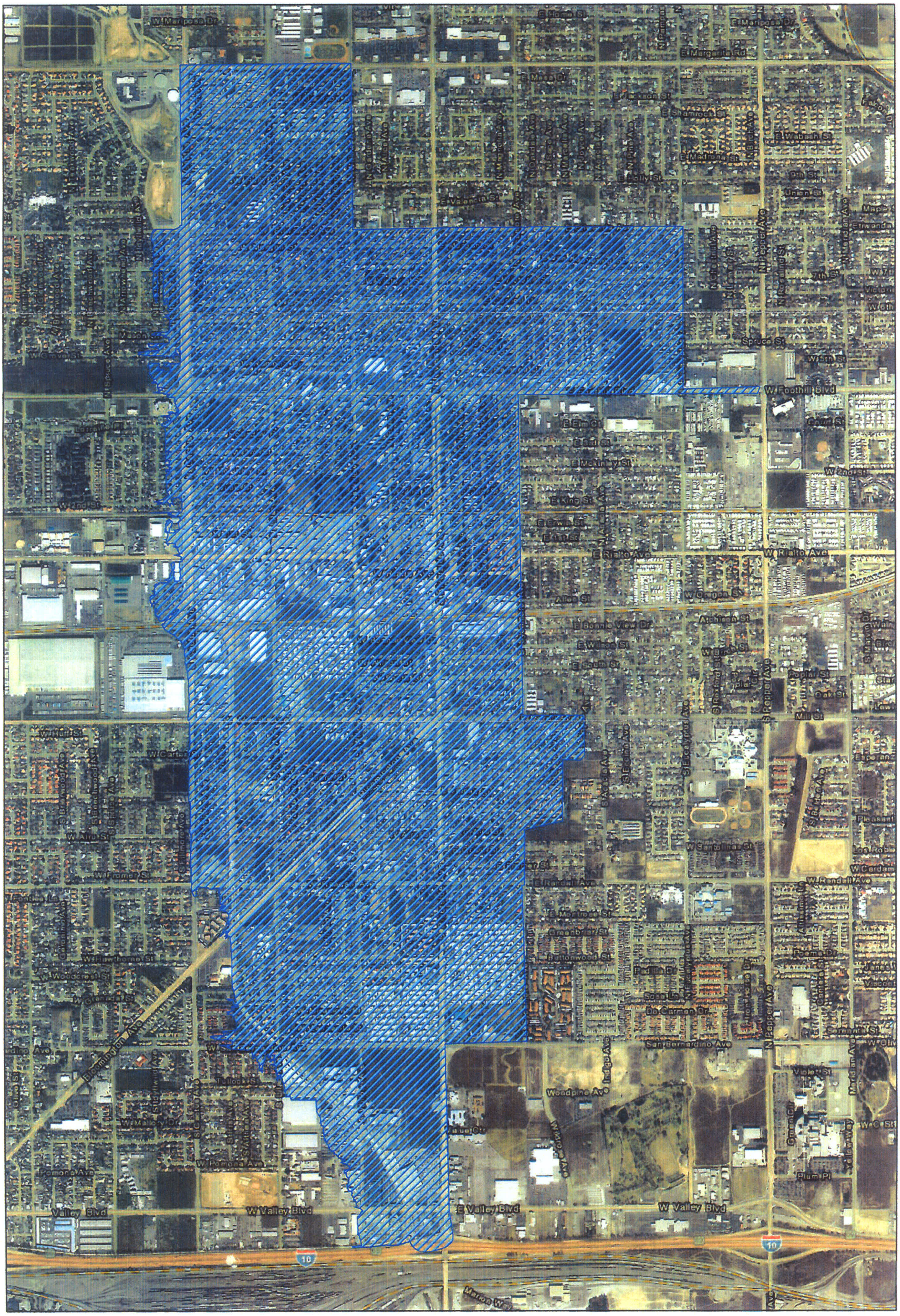
The system was analyzed and the flood plain modeled based on the ultimate improvements of basin #3 only with ultimate improvements of downstream road crossing culverts. Again, due to the current metering of the outlet structure beneath Baseline Avenue, flow is assumed to flow from Basin 3 unto the intersection of Baseline and Cactus Avenues. Q100 at this location is 5,582 cfs.

In order to model interim earth channel Improvements to convey a design Q of 1260 cfs, Rialto channel cross section has been modeled as ineffective flow and subtract 1260 cfs from the discharge of the channel.

8. **Pre-Freeway construction condition with no additional improvements (no attenuation within Cactus Basins)**

The system was analyzed and the flood plain modeled based on pre-freeway construction condition and the existing condition of Basin #3,4 and 5, channel geometry and crossing culverts. The pre-freeway Q100 condition was determined to be 2760 cfs from a separate report. This condition also assumes ultimate condition drainage flow baths downstream of the basin. Due to the current metering of the outlet structure beneath Baseline Avenue, flow is assumed to flow from Basin 3 unto the intersection of Baseline and Cactus Avenues.

Within the exhibit for this condition the Q100 existing condition as discussed in Scenario 1 is also shown for comparison purpose.



Legend

Parcels

Water Surface Limits

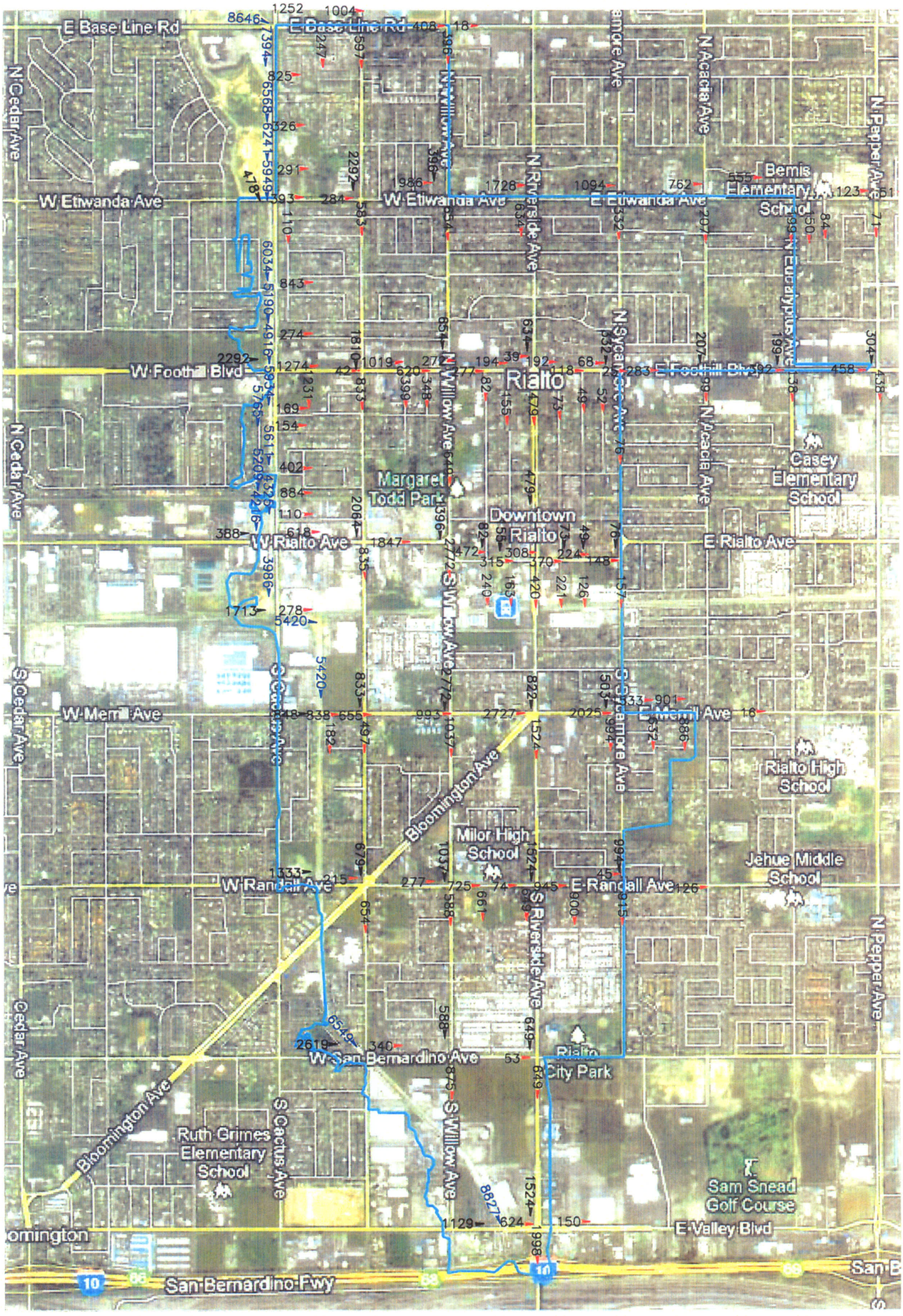
Existing Condition Flood Limits

5378 parcels within the flood limits

N

1 inch = 1,366 feet

0 300 600 1,200 1,800 Feet



EXISTING CONDITION

LEGEND

XXX → = Q LATERAL (CFS)

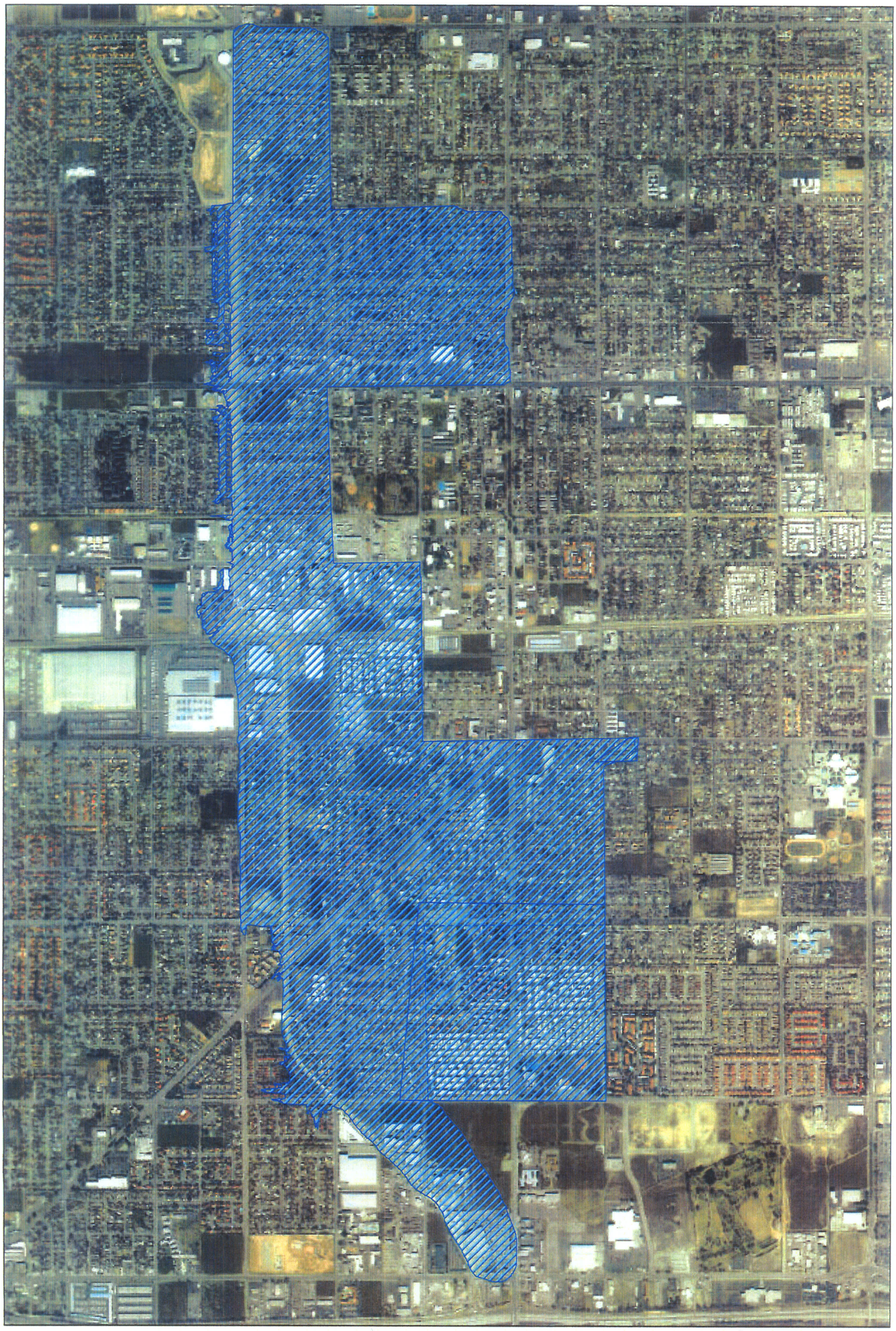
XXX → = Q RIALTO CHANNEL (CFS)

XXX → = Q WEIR (CFS)

N

GRAPHIC SCALE 1"=700'

700 0 700 1400 2100



Proposed improvements to Basin 3

3,148 parcels within the flood limits

Street Name	Existing Culvert	Proposed Culvert
Rosewood St	RCB 14'x6'	
Foothill Blvd	DBL CSPA 81"x59"	DBL 12'x6'
2nd St	DBL 12'x6'	
US 1st Street	DBL CSPA 52"x72"	
Rialto Ave	DBL CSPA 81"x59" then RCB 3.5'x8.17'	
US Cactus Basin	DBL CSPA 44"x72"	
Cactus Basin	DBL CSPA 44"x72"	
US Rail Road	DBL CSPA 44"x72"	
Rail Road	DBL CSPA 44"x72"	DBL 16'x8'
Merrill Ave	DBL CSPA 44"x72"	DBL 10'x8'
Randall Ave	DBL CSPA 44"x72"	DBL 10'x8'
Bloomington Ave	DBL 12'x9'	
San Bernardino Ave	DBL 12'x9'	
Willow Ave	DBL 12'x9'	
Valley Blvd	DBL 14'x10'	
US I-10 Freeway	DBL 15'x15'	
I-10 Freeway	DBL 15'x15'	
Riverside Ave	DBL 15'x15'	
Solver Ave	DBL 14'x14'	
DS Solver Ave	DBL 14'x14'	
DS Santa ana Ave	DBL 14'x10'	
Agua Mensa RD	DBL 10'x7'	

Street Capacity

Street Name	WIDE (ft)	SLOPE %	Q cap. (cfs)
Base Line RD	70.00	0.60	255.00
Elma Park St	57.00	0.60	207.00
W Madrona St	34.00	0.40	100.00
W Valencia St	34.00	0.50	112.00
W Etiwanda Ave	45.00	0.60	163.00
W Rosewood St	29.00	1.70	175.00
Ramona Dr	36.00	0.70	140.00
Foothill Blvd	87.00	0.60	318.00
Holladay Pl	34.00	0.50	112.00
W 3rd St	36.00	0.40	106.00
W 2nd St	32.00	0.40	94.00
Dirt Rd	64.00	0.50	170.00
W 1st St	37.00	0.30	94.00
Rialto Ave	67.00	0.40	199.00
US Rail Road	25.00	0.40	73.00
W Merrill Ave	45.00	0.40	133.00
W Randall Ave	43.00	0.40	127.00
San Bernardino Ave & Lilac Ave	63.00	0.40	187.00
W Valley Blvd	80.00	1.00	337.00
Lilac ave	35.00	0.02	212.00
Willow ave	35.00	0.02	230.00
Riverside Ave	60.00	0.02	398.00
Sycomora Ave	35.00	0.01	185.00
Acacia Ave	35.00	0.01	162.00
Eucalyptus	35.00	0.02	199.00
Pepper Ave	70.00	0.01	403.00

Node #	Location	Q100		
		Basin # 3,4,5	No Basins	Basin # 3 only
220	Etiwanda Ave	1,328.90	9,123.92	5,581.67
221	Foothill Blvd	3,119.00	11,415.92	7,873.67
222	South Pacific RR	3,233.11	11,803.92	8,261.67
223	Atchison Topeka RR	4,774.31	13,516.92	9,974.67
224	Merril Ave	5,063.86	14,364.92	10,822.67
225	Randall Ave	5,375.80	14,907.92	11,365.67
226	Bloomington Ave	6,007.98	15,697.92	12,155.67
227	San Bernardino Ave	6,945.38	17,145.92	13,603.67
228	Willow Ave	7,476.18	18,316.92	14,774.67
229	Valley Blvd	7,963.44	19,445.92	15,903.67
230	FWY 10	9,465.99	21,575.92	18,033.67
231	Slover Ave	9,870.54	22,095.92	18,553.67
232	Sycamore Ave	9,883.25	22,200.92	18,658.67
233	North Santa Ana Ave	9,991.19	22,950.92	19,408.67

Cactus Basin / Rialto Channel
Floodplain Assesses Values

Different Scenarios	Effected Parcels Number	Total Land Value ($)	Total Improvement Value ($)
Existing Condition	5,378	287,965,472	671,093,204
Proposed improvements to Basin #3	3,148	193,922,152	440,339,721
Proposed improvements to Basin #3 with ultimate road crossing	2,223	156,656,649	352,784,407
Proposed improvements to Basin #3 with channel improvements to convey 1000 cfs	2,113	146,251,191	332,043,940
Proposed improvements to Basin #3 with ultimate channel improvements	2,113	146,251,191	332,043,940
Proposed Basin #3,4 and 5	535	46,196,333	104,486,349
Proposed improvements to Basin #3 with channel improvements to convey 1260 cfs	2,113	146,251,191	332,043,940
Pre-Freeway Condition "Q100"	2,400	152,182,136	331,605,818

Existing Condition

Rialto Channel, Street Crossing Lateral Wier Table (Existing)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Base Line RD	20,300.00	8,645.92	0.00	1,251.72	7,394.21	110.43	3.19	3.18	1,353.31	1,359.71	1,358.34	1,357.85	1,356.48
Washington St	19,550.00	7,394.21	0.00	824.84	6,568.40	80.00	3.04	2.98	1,341.00	1,346.93	1,345.43	1,345.57	1,344.04
Madrona St	18,780.00	6,568.40	0.00	325.61	6,240.50	30.00	3.11	3.09	1,328.00	1,333.01	1,331.57	1,332.54	1,331.11
Valencia St	18,085.00	6,240.50	0.00	290.78	5,949.23	35.33	2.60	2.57	1,318.00	1,322.19	1,321.04	1,321.78	1,320.60
Etiwanda Ave	17,650.00	5,949.23	478.00	393.37	6,033.22	50.00	2.61	2.49	1,311.00	1,315.30	1,314.38	1,314.53	1,313.61
Rosewood St	16,290.00	6,033.22	0.00	843.30	5,189.88	50.00	4.24	4.14	1,290.00	1,295.98	1,295.04	1,295.09	1,294.25
Ramona Dr	15,480.00	5,189.88	0.00	273.92	4,915.92	35.33	2.61	2.47	1,279.60	1,283.75	1,282.60	1,282.98	1,281.92
Foothill Blvd	14,990.00	4,915.92	2,292.00	1,273.86	5,934.20	100.00	3.50	3.44	1,271.00	1,276.37	1,275.37	1,275.61	1,274.50
Holiday Pl	14,325.00	5,934.20	0.00	168.64	5,765.60	26.87	2.39	2.14	1,260.60	1,264.50	1,263.38	1,264.02	1,262.99
3rd St	14,060.00	5,765.60	0.00	154.33	5,611.30	32.58	1.89	1.78	1,255.85	1,259.14	1,258.13	1,258.52	1,257.52
2nd St	13,405.00	5,611.30	0.00	402.09	5,209.24	35.00	3.23	3.21	1,244.00	1,248.50	1,247.68	1,247.95	1,247.23
Dirt Rd	13,048.00	5,209.24	0.00	883.99	4,325.25	79.42	3.67	3.13	1,240.00	1,245.78	1,244.67	1,243.66	1,242.59
1st St	12,740.00	4,325.25	0.00	109.61	4,215.64	20.00	2.31	1.95	1,235.00	1,238.57	1,237.59	1,238.29	1,237.31
Rialto Ave	12,550.00	4,215.64	388.00	617.71	3,985.93	71.00	2.66	2.66	1,229.00	1,233.63	1,232.67	1,232.63	1,231.67
US Rail Road	11,025.00	3,985.59	1,713.00	278.13	5,420.30	80.00	1.63	1.44	1,214.00	1,217.80	1,216.63	1,216.74	1,215.26
Merrill Ave	9,400.00	5,420.30	848.00	837.63	5,430.13	55.00	3.90	3.87	1,186.00	1,192.83	1,190.90	1,191.97	1,189.84
Randall Ave	6,750.00	5,430.13	1,333.00	215.44	6,548.76	40.00	2.20	1.93	1,149.00	1,154.37	1,152.20	1,153.28	1,150.66
San Bernardino Ave & Lilac Ave	3,850.00	6,548.76	2,619.00	340.30	8,827.17	45.00	2.69	2.42	1,109.00	1,113.21	1,112.16	1,112.78	1,111.69
Valley Blvd	480.00	8,827.17	1,129.00	623.99	9,329.41	90.00	2.41	2.29	1,058.00	1,062.56	1,061.17	1,061.90	1,060.41

Base line Street, Lateral Wier Table (Existing)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Mesa Ave	7,260.00	1,251.72	0.00	246.88	1,004.26	56.45	1.80	1.68	1,352.33	1,355.17	1,354.57	1,354.50	1,354.13
Lilac Ave	6,490.00	1,004.26	0.00	596.74	408.09	285.00	1.24	1.03	1,350.00	1,352.29	1,352.04	1,351.16	1,350.82
Willow Ave	5,280.00	408.09	0.00	395.91	18.27	92.16	2.15	1.65	1,348.00	1,350.16	1,350.15	1,350.16	1,350.16

AVG
= 2.52'

Etiwanda Ave Lateral Wier Table (Existing)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Yucca Ave	10,030.00	393.37	0.00	109.78	283.59	45.00	1.21	1.14	1,312.00	1,313.49	1,313.21	1,313.39	1,313.07
Lilac Ave	8,870.00	283.59	2,284.85	582.54	1,985.90	40.00	3.82	3.76	1,306.10	1,310.64	1,309.99	1,310.57	1,309.92
Willow Ave	7,560.00	1,985.90	395.91	653.92	1,727.88	43.73	3.86	3.82	1,299.00	1,303.56	1,302.79	1,303.44	1,302.86
Riverside Ave	6,225.00	1,727.88	0.00	633.85	1,094.09	70.00	2.93	2.74	1,295.80	1,300.31	1,299.13	1,299.35	1,298.34
Sycamore Ave	4,900.00	1,094.09	0.00	331.86	762.28	50.00	2.24	2.22	1,286.20	1,290.14	1,289.24	1,289.25	1,288.41
Acacia Ave	3,575.00	762.28	0.00	207.19	555.04	55.00	1.66	1.52	1,273.60	1,276.38	1,275.66	1,275.67	1,274.99
Eucalyplus Ave	2,250.00	555.04	0.00	199.36	355.59	55.00	1.52	1.49	1,264.10	1,266.82	1,266.25	1,266.14	1,265.62
Mulberry Ave	2,000.00	355.59	0.00	149.64	206.18	70.00	1.11	1.05	1,262.50	1,264.51	1,264.11	1,263.76	1,263.48

Foothill Blvd Lateral Wier Table

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
"Open Area" Park Ave	9,435.00	1,273.86	0.00	1,231.41	42.27	545.00	1.66	1.06	1,269.10	1,273.48	1,272.66	1,269.76	1,269.55
Lilac Ave	8,760.00	42.27	1,809.54	832.65	1,019.18	271.59	1.82	1.31	1,265.00	1,267.61	1,267.61	1,267.21	1,266.82
Millard Ave	8,050.00	1,019.18	0.00	399.39	619.66	93.72	1.75	1.66	1,264.00	1,266.18	1,265.75	1,265.96	1,265.76
Califford Ave	7,700.00	619.66	0.00	347.62	271.98	126.70	1.28	1.23	1,263.50	1,265.37	1,264.98	1,264.78	1,264.69
Willow Ave	7,410.00	271.98	653.92	649.17	276.64	400.85	1.19	0.86	1,263.00	1,264.78	1,264.69	1,263.81	1,263.52
Palm Ave	6,865.00	276.64	0.00	82.32	194.26	50.00	0.90	0.88	1,259.20	1,260.75	1,260.50	1,260.28	1,260.05
Orange Ave	6,525.00	194.26	0.00	155.37	38.54	143.50	0.81	0.66	1,257.10	1,259.03	1,258.81	1,257.78	1,257.62
Riverside Ave	6,100.00	38.54	633.85	479.25	191.59	240.91	1.03	1.00	1,255.20	1,256.87	1,256.86	1,256.44	1,256.23
Olive Ave	5,700.00	191.59	0.00	73.16	118.13	50.00	0.83	0.81	1,254.00	1,255.36	1,255.09	1,255.10	1,254.83
Date Ave	5,320.00	118.13	0.00	49.17	68.01	45.00	0.76	0.67	1,252.00	1,253.19	1,252.96	1,252.78	1,252.58
Magnolia Ave	4,970.00	68.01	0.00	52.25	25.04	50.00	0.66	0.65	1,249.80	1,250.97	1,250.84	1,250.55	1,250.46
Sycamore Ave	4,770.00	25.04	331.86	76.42	282.89	50.00	0.86	0.84	1,248.00	1,249.22	1,249.11	1,249.01	1,248.86
Acacia Ave	3,500.00	282.89	207.19	99.04	391.66	55.00	0.95	0.93	1,239.30	1,240.98	1,240.72	1,240.56	1,240.25
Eucalyptus Ave	2,100.00	391.66	199.36	138.44	457.78	50.00	1.27	1.24	1,225.60	1,227.49	1,227.22	1,227.12	1,226.87
Pepper Ave	750.00	457.78	303.88	437.72	343.13	215.03	1.01	1.00	1,215.78	1,218.97	1,218.65	1,216.97	1,216.77

Rialto Ave Lateral Wier Table (Existing Condition)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Lilac Ave	9,600.00	617.71	2,064.06	834.85	1,846.82	75.00	3.51	3.14	1,225.80	1,229.58	1,229.31	1,229.48	1,228.66
Willow Ave	8,150.00	1,846.82	1,396.18	2,771.85	471.89	368.17	2.78	2.42	1,215.50	1,222.91	1,222.06	1,218.29	1,218.28
Palm Ave	7,465.00	471.89	82.32	239.76	314.86	233.05	1.11	0.61	1,215.00	1,218.19	1,217.82	1,215.25	1,215.10
Orange Ave	7,060.00	314.86	155.37	162.58	308.22	103.11	1.12	0.85	1,211.60	1,213.20	1,213.12	1,212.47	1,212.17
Riverside Ave	6,660.00	308.22	479.25	419.58	369.51	127.60	1.55	1.39	1,210.10	1,212.00	1,211.85	1,211.83	1,211.33
Olive Ave	6,270.00	369.51	73.16	221.10	223.68	54.00	1.62	1.61	1,207.30	1,209.19	1,208.91	1,209.09	1,208.92
Date Ave	5,930.00	223.68	49.17	125.74	148.40	110.00	0.76	0.69	1,208.00	1,208.83	1,208.82	1,208.76	1,208.76
Sycamore Ave	5,220.00	148.40	76.00	156.60	67.80	395.67	0.72	0.39	1,208.00	1,208.72	1,208.72	1,208.71	1,208.67

Merrill Ave Lateral Wier Table (Existing No Basins)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Athea Ave	8,630.00	837.63	0.00	182.45	655.19	40.00	1.76	1.73	1,185.00	1,187.91	1,187.21	1,187.43	1,186.76
Lilac Ave	8,100.00	655.19	835.00	496.97	993.22	50.00	2.92	2.91	1,183.00	1,186.04	1,185.92	1,186.02	1,185.91
Willow Ave	6,820.00	993.22	2,772.00	1,037.02	2,727.35	55.00	4.73	4.46	1,180.00	1,185.61	1,184.73	1,185.54	1,184.19
Riverside Ave	5,530.00	2,727.35	821.92	1,524.11	2,024.79	250.00	2.17	2.10	1,175.50	1,180.44	1,179.53	1,178.88	1,177.67
Sycamore Ave	4,130.00	2,024.79	503.60	994.28	1,533.00	60.00	4.11	4.09	1,168.00	1,172.34	1,172.08	1,172.29	1,172.11
Sage Ave	3,630.00	1,533.00	0.00	631.72	901.00	50.00	3.47	3.42	1,168.40	1,172.10	1,171.87	1,172.06	1,171.87
Joyce Ave	3,190.00	901.00	0.00	885.78	16.28	100.00	3.49	2.68	1,166.50	1,171.42	1,170.86	1,170.03	1,169.99

Randall Ave Lateral Wier Table (Existing condition, No Basins)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Lilac Ave	8,570.00	215.44	679.42	619.00	276.81	50.00	3.42	3.37	1,144.30	1,147.73	1,147.72	1,147.73	1,147.72
Willow Ave	7,250.00	276.81	1,037.02	587.87	724.91	120.00	1.84	1.82	1,145.00	1,147.63	1,147.50	1,147.38	1,146.84
Open Area	6,940.00	724.91	0.00	660.89	73.82	200.00	1.59	1.40	1,142.00	1,144.92	1,144.59	1,143.31	1,143.20
Riverside Ave	5,940.00	73.82	1,524.11	649.03	945.18	100.00	2.25	2.19	1,139.60	1,142.41	1,142.25	1,142.28	1,141.73
Olive Ave	5,370.00	945.18	0.00	900.00	45.18	90.00	1.70	1.41	1,135.90	1,138.60	1,137.90	1,137.54	1,137.03
Sycamore Ave	4,610.00	45.18	994.28	915.00	124.46	100.00	2.61	2.23	1,132.70	1,135.46	1,135.31	1,135.31	1,134.66

San Bernardino Ave Lateral Wier Table (Existing No Basins)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Willow Ave	8,500.00	340.30	588.00	875.30	53.22	414.34	1.83	0.91	110.20	1,109.76	1,108.95	1,102.43	1,102.04

Valley Blvd Lateral Wier Table (Existing Condition No Basins)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Riverside Ave	11,390.00	623.94	1,542.00	1,998.00	156.00	110.00	9.15	8.35	1,062.50	1,071.66	1,071.65	1,071.65	1,071.65

Proposed basin #3 only

Rialto Channel, Street Crossing Lateral Wier Table (Proposed Basin #3 only)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Base Line RD	20,300.00	5,103.67	0.00	778.64	4,324.98	110.43	2.34	2.32	1,353.31	1,358.47	1,357.49	1,356.59	1,355.60
Washington St	19,550.00	4,324.98	0.00	473.59	3,850.27	80.00	2.11	2.06	1,341.00	1,345.57	1,344.52	1,344.19	1,343.11
Madrona St	18,780.00	3,850.27	0.00	201.21	3,649.12	30.00	2.26	2.24	1,328.00	1,331.72	1,330.72	1,331.26	1,330.27
Valencia St	18,085.00	3,649.12	0.00	179.31	3,469.62	35.33	1.89	1.86	1,318.00	1,321.14	1,320.33	1,320.71	1,319.89
Etiwanda Ave	17,650.00	3,469.62	478.00	254.08	3,693.18	50.00	2.00	1.86	1,311.00	1,314.46	1,313.72	1,313.74	1,313.01
Rosewood St	16,290.00	3,693.18	0.00	673.53	3,020.88	50.00	3.67	3.57	1,290.00	1,295.17	1,294.46	1,294.32	1,293.67
Ramona Dr	15,480.00	3,020.88	0.00	184.35	2,836.73	35.33	2.01	1.89	1,279.60	1,282.78	1,282.00	1,282.11	1,281.38
Foothill Blvd	14,990.00	2,836.73	2,292.00	935.05	4,196.96	100.00	2.88	2.80	1,271.00	1,275.49	1,274.71	1,274.83	1,273.88
Holiday Pl	14,325.00	4,196.96	0.00	116.73	4,080.62	26.87	1.88	1.68	1,260.60	1,263.85	1,262.96	1,263.37	1,262.48
3rd St	14,060.00	4,080.62	0.00	104.51	3,976.80	32.58	1.50	1.37	1,255.85	1,258.54	1,257.74	1,257.92	1,257.09
2nd St	13,405.00	3,976.80	0.00	304.54	3,674.90	35.00	2.67	2.67	1,244.00	1,247.94	1,247.17	1,247.40	1,246.66
Dirt Rd	13,048.00	3,674.90	0.00	683.92	2,995.89	79.42	3.05	2.64	1,240.00	1,245.07	1,244.05	1,243.00	1,242.24
1st St	12,740.00	2,995.89	0.00	85.74	2,910.15	20.00	2.01	1.66	1,235.00	1,237.98	1,237.30	1,237.70	1,237.01
Rialto Ave	12,550.00	2,910.15	388.00	500.08	2,794.28	71.00	2.32	2.31	1,229.00	1,233.02	1,232.32	1,232.01	1,231.31
US Rail Road	11,025.00	2,794.28	1,713.00	139.62	4,369.80	80.00	1.18	0.91	1,214.00	1,217.13	1,216.18	1,216.02	1,214.64
Merrill Ave	9,400.00	4,369.80	848.00	576.18	4,643.70	55.00	3.07	3.02	1,186.00	1,192.05	1,189.96	1,191.22	1,189.07
Randall Ave	6,750.00	4,643.70	543.00	565.73	4,615.66	40.00	4.73	3.66	1,149.00	1,156.97	1,154.73	1,153.78	1,151.59
San Bernardino Ave & Lilac Ave	3,850.00	4,615.66	2,238.00	298.60	6,556.08	45.00	2.47	2.22	1,109.00	1,112.90	1,111.98	1,112.46	1,111.47
Valley Blvd	480.00	6,556.08	2,300.00	524.84	8,325.53	90.00	2.16	2.04	1,058.00	1,062.23	1,060.93	1,061.57	1,060.16

Base line Street, Lateral Wier Table (Proposed Basin #3 only)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Mesa Ave	7,260.00	778.64	0.00	162.14	616.50	56.45	1.37	1.27	1,352.33	1,354.62	1,354.18	1,354.00	1,353.70
Lilac Ave	6,490.00	616.50	0.00	363.38	253.00	285.00	0.94	0.74	1,350.00	1,351.87	1,351.74	1,350.84	1,350.54

AVG
= 2.13'

Etiwanda Ave Lateral Wier Table (Proposed Basin #3 only)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Yucca Ave	10,030.00	254.08	0.00	80.92	173.50	45.00	0.99	0.93	1,312.00	1,313.18	1,312.99	1,313.10	1,312.87
Lilac Ave	8,870.00	173.50	525.52	197.35	501.66	40.00	1.87	1.83	1,306.10	1,308.23	1,308.08	1,308.18	1,307.97
Willow Ave	7,560.00	501.66	0.00	192.57	309.10	43.73	1.70	1.69	1,299.00	1,301.06	1,300.70	1,300.90	1,300.69
Riverside Ave	6,225.00	309.10	0.00	165.15	143.85	70.00	1.18	1.12	1,295.80	1,297.76	1,297.38	1,297.11	1,296.85

Foothill Blvd Lateral Wier Table(Proposed Basin #3 only)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
"Open Area" Park Ave	9,435.00	935.05	0.00	899.84	35.41	545.00	1.36	0.86	1,269.10	1,273.01	1,272.36	1,269.62	1,269.46
Lilac Ave	8,760.00	35.41	278.27	122.45	191.23	271.59	0.66	0.35	1,265.00	1,266.95	1,266.83	1,265.76	1,265.66

Rialto Ave Lateral Wier Table (Proposed Basin #3 only)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Lilac Ave	9,600.00	500.08	1,022.29	551.16	971.21	75.00	2.60	2.38	1,225.80	1,228.60	1,228.40	1,228.51	1,228.06
Willow Ave	8,150.00	971.21	0.00	960.00	11.21	368.17	1.24	1.20	1,215.50	1,221.78	1,221.17	1,216.74	1,216.74

Merrill Ave Lateral Wier Table (Proposed Basin #3 only)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Athea Ave	8,630.00	576.20	0.00	133.56	442.54	40.00	1.43	1.41	1,185.00	1,187.43	1,186.88	1,186.97	1,186.43
Lilac Ave	8,100.00	442.54	551.16	435.44	558.23	50.00	2.68	2.67	1,183.00	1,185.77	1,185.68	1,185.75	1,185.65
Willow Ave	6,820.00	558.23	970.98	435.74	1,092.00	55.00	2.66	2.50	1,180.00	1,183.16	1,182.66	1,183.10	1,182.35
Riverside Ave	5,530.00	1,092.00	0.00	408.27	683.86	250.00	0.92	0.87	1,175.50	1,178.94	1,178.33	1,177.01	1,176.42
Sycamore Ave	4,130.00	683.86	0.00	379.34	304.52	60.00	2.17	2.15	1,168.00	1,170.24	1,170.14	1,170.21	1,170.17
Sage Ave	3,630.00	304.52	0.00	211.22	93.26	50.00	1.70	1.65	1,168.40	1,170.14	1,170.10	1,170.12	1,170.10

Randall Ave Lateral Wier Table (Basin #3 only)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Lilac Ave	8,570.00	565.73	435.44	617.59	383.72	50.00	3.42	3.37	1,144.30	1,147.77	1,147.72	1,147.76	1,147.72
Willow Ave	7,250.00	383.72	435.74	394.00	425.45	120.00	1.43	1.39	1,145.00	1,147.49	1,147.06	1,146.88	1,146.43
Open Area	6,940.00	425.45	0.00	267.73	161.94	200.00	1.01	0.76	1,142.00	1,144.25	1,144.01	1,142.60	1,142.50
Riverside Ave	5,940.00	161.94	408.27	293.92	276.31	100.00	1.31	1.29	1,139.60	1,141.41	1,141.31	1,141.15	1,140.88
Olive Ave	5,370.00	276.31	0.00	111.07	165.33	90.00	1.00	0.72	1,135.90	1,137.42	1,137.20	1,136.60	1,136.33
Sycamore Ave	4,610.00	165.33	379.34	420.00	125.00	100.00	1.47	1.25	1,132.70	1,134.22	1,134.17	1,134.12	1,133.83

San Bernardino Ave Lateral Wier Table (Proposed Basin #3 only)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Willow Ave	8,500.00	298.60	394.00	513.00	180.00	450.00	1.19	0.60	1,102.20	1,108.88	1,108.31	1,102.34	1,102.22

Valley Blvd Lateral Wier Table (Proposed Basin #3 only)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Riverside Ave	11,390.00	524.84	513.00	868.00	170.18	110.00	3.35	2.49	1,062.50	1,065.89	1,065.85	1,065.88	1,065.73

Proposed basin #3 with ultimate road crossings

Rialto Channel, Street Crossing Lateral Wier Table (Proposed Basin #3 with ultimate road crossings)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Base Line RD	20,335.00	5,103.67	0.00	320.54	4,783.13	80.55	2.21	1.56	1,353.80	1,357.46	1,357.12	1,356.98	1,354.71
Washington St	19,580.00	4,783.13	0.00	0.00	4,783.13	0.00	0.00	0.00	1,341.00	1,340.91	1,340.73	1,340.15	1,340.01
Madrona St	18,835.00	4,783.13	0.00	454.53	4,328.03	40.00	3.29	3.18	1,328.00	1,333.31	1,331.79	1,332.58	1,331.08
Valencia St	18,165.00	4,328.03	0.00	237.84	4,089.31	41.94	2.04	2.00	1,318.00	1,321.87	1,320.67	1,321.19	1,320.04
Etiwanda Ave	17,640.00	4,089.31	478.00	216.53	4,350.92	136.43	1.58	0.79	1,311.00	1,313.71	1,313.48	1,313.47	1,312.58
Rosewood St	16,320.00	4,350.92	0.00	267.82	4,083.98	30.00	3.04	2.71	1,292.00	1,295.81	1,295.38	1,295.45	1,295.04
Ramona Dr	15,450.00	4,083.98	0.00	276.95	3,807.02	60.00	2.22	1.74	1,279.00	1,283.32	1,282.25	1,282.30	1,281.22
Foothill Blvd	15,100.00	3,807.02	2,292.00	817.83	5,281.22	92.56	2.97	2.69	1,272.00	1,276.93	1,275.97	1,275.34	1,274.41
Holiday Pl	14,300.00	5,281.22	0.00	188.78	5,093.21	55.00	1.48	1.43	1,261.00	1,264.41	1,263.39	1,263.50	1,262.48
3rd St	14,035.00	5,093.21	0.00	204.23	4,888.73	50.00	1.67	1.61	1,256.00	1,259.51	1,258.55	1,258.63	1,257.67
2nd St	13,500.00	4,888.73	0.00	526.22	4,362.09	66.22	2.59	2.51	1,245.00	1,249.47	1,248.59	1,248.30	1,247.42
Dirt Rd	13,100.00	4,362.09	0.00	318.65	4,043.53	46.48	2.49	2.27	1,240.00	1,244.08	1,243.06	1,243.56	1,242.49
1st St	12,850.00	4,043.53	0.00	798.61	3,248.50	50.00	4.11	4.00	1,235.00	1,240.49	1,239.88	1,239.49	1,239.12
Rialto Ave	12,200.00	3,248.50	388.00	538.66	3,098.88	70.00	2.55	2.46	1,227.00	1,231.28	1,230.36	1,230.43	1,229.55
US Rail Road	11,120.00	3,098.88	1,713.00	138.98	4,675.04	66.96	1.32	1.02	1,214.00	1,216.43	1,216.32	1,215.87	1,214.71
Merrill Ave	9,470.00	4,675.04	848.00	468.02	5,050.44	40.02	3.43	3.24	1,187.00	1,193.16	1,191.06	1,192.59	1,190.43
Randall Ave	6,800.00	5,050.44	1,333.00	538.42	5,842.74	39.01	3.91	3.62	1,149.00	1,154.41	1,153.34	1,153.86	1,152.91
San Bernardino Ave & Lilac Ave	4,000.00	5,842.74	2,619.00	309.42	8,152.87	49.10	2.31	2.15	1,110.00	1,113.79	1,112.99	1,112.98	1,112.31
Valley Blvd	600.00	8,152.87	0.00	311.41	7,839.55	61.46	1.95	1.86	1,059.00	1,063.16	1,061.76	1,062.26	1,060.95

Base line Street, Lateral Wier Table (Proposed Basin #3 with ultimate crossings)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Mesa Ave	7,260.00	320.54	0.00	68.72	251.82	56.45	0.79	0.72	1,352.33	1,353.95	1,353.65	1,353.36	1,353.12
Lilac Ave	6,490.00	251.82	0.00	98.46	153.36	184.33	0.76	0.38	1,350.00	1,351.84	1,351.56	1,351.33	1,349.58

Etiwanda Ave, Lateral Wier Table (Proposed Basin #3 with ultimate crossings)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Yucca Ave	10,030.00	216.53	0.00	72.39	144.09	45.00	0.92	0.86	1,312.00	1,313.09	1,312.92	1,313.01	1,312.81
Lilac Ave	8,870.00	212.81	98.46	96.12	215.14	40.00	1.20	1.13	1,306.10	1,307.58	1,307.36	1,307.48	1,307.30
Willow Ave	7,560.00	215.14	0.00	105.35	109.77	43.73	1.17	1.13	1,299.00	1,300.36	1,300.17	1,300.21	1,300.10

Foothill Blvd Lateral Wier Table(Proposed Basin #3 with ultimate road crossings)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
"Open Area" Park Ave	9,435.00	817.83	0.00	794.03	23.77	545.00	1.25	0.79	1,269.10	1,272.85	1,272.25	1,269.59	1,269.43
Lilac Ave	8,760.00	23.77	168.51	75.13	117.50	271.59	0.47	0.25	1,265.00	1,266.93	1,266.84	1,265.55	1,265.47

Rialto Ave Lateral Wier Table (Proposed Basin #3 with ultimate road crossing)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Lilac Ave	9,600.00	538.66	869.16	521.72	884.77	75.00	2.49	2.29	1,225.80	1,228.49	1,228.29	1,228.40	1,228.00
Willow Ave	8,150.00	884.77	0.00	876.82	8.07	368.17	1.17	1.12	1,215.50	1,221.65	1,221.07	1,216.67	1,216.67

Merrill Ave Lateral Wier Table (Proposed Basin #3 with ultimate road crossing)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Athea Ave	8,630.00	468.02	0.00	112.20	355.71	40.00	1.28	1.25	1,185.00	1,187.21	1,186.73	1,186.75	1,186.28
Lilac Ave	8,100.00	355.71	521.72	398.37	479.15	50.00	2.53	2.51	1,183.00	1,185.59	1,185.53	1,185.58	1,185.50
Willow Ave	6,820.00	479.15	876.82	390.85	965.41	55.00	2.47	2.33	1,180.00	1,182.93	1,182.47	1,182.87	1,182.19
Riverside Ave	5,530.00	965.41	0.00	348.13	614.99	250.00	0.83	0.79	1,175.50	1,178.80	1,178.24	1,176.89	1,176.34
Sycamore Ave	4,130.00	614.99	0.00	352.14	263.66	60.00	2.06	2.05	1,168.00	1,170.13	1,170.04	1,170.10	1,170.06
Sage Ave	3,630.00	263.66	0.00	192.56	71.57	50.00	1.60	1.55	1,168.40	1,170.03	1,170.00	1,170.02	1,170.00

Randall Ave Lateral Wier Table (Basin #3 with ultimate road crossings)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Lilac Ave	8,570.00	538.42	510.57	637.92	411.07	50.00	3.49	3.44	1,144.30	1,147.84	1,147.79	1,147.83	1,147.79
Willow Ave	7,250.00	411.07	390.85	397.09	404.82	120.00	1.41	1.40	1,145.00	1,147.55	1,147.09	1,146.86	1,146.41
Open Area	6,940.00	404.82	0.00	247.41	156.77	200.00	0.97	0.72	1,142.00	1,144.21	1,143.97	1,142.55	1,142.46
Riverside Ave	5,940.00	156.77	348.13	270.36	233.73	100.00	1.24	1.22	1,139.60	1,141.34	1,141.24	1,141.05	1,140.81
Olive Ave	5,370.00	233.73	0.00	99.56	133.61	90.00	0.93	0.67	1,135.90	1,137.31	1,137.13	1,136.50	1,136.30
Sycamore Ave	4,610.00	133.61	352.14	360.00	125.75	100.00	1.38	1.18	1,132.70	1,134.12	1,134.08	1,134.03	1,133.77

San Bernardino Ave Lateral Wier Table (Proposed Basin #3 with ultimate road crossings)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Willow Ave	8,500.00	309.42	397.00	550.39	156.03	406.64	1.81	0.90	1,102.20	1,109.74	1,108.93	1,102.38	1,102.01

Valley Blvd Lateral Wier Table (Proposed Basin #3 with ultimate road crossings)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Riverside Ave	11,390.00	311.41	348.00	463.29	196.19	110.00	3.41	2.55	1,062.50	1,065.95	1,065.91	1,065.94	1,065.78

Proposed basin #3 with interim channel improvements to convey 1000 cfs

Rialto Channel, Street Crossing Lateral Wier Table (Proposed Basin #3 with interim channel improvements to convey 1000 cfs)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Washington St	19,580.00	3,931.54	0.00	0.00	3,931.54	0.00	0.00	0.00	1,341.00	1,340.85	1,340.73	1,340.11	1,340.01
Madrona St	18,835.00	3,931.54	0.00	376.44	3,554.85	40.00	2.90	2.81	1,328.00	1,332.75	1,331.40	1,332.03	1,330.71
Valencia St	18,165.00	3,554.85	0.00	188.57	3,366.65	41.94	1.76	1.72	1,318.00	1,321.43	1,320.38	1,320.77	1,319.76
Etiwanda Ave	17,640.00	3,366.65	478.00	292.21	3,552.61	148.10	1.83	0.91	1,311.00	1,313.73	1,313.59	1,313.56	1,312.83
Rosewood St	16,320.00	3,552.61	0.00	211.34	3,341.38	30.00	2.62	2.31	1,292.00	1,295.84	1,295.00	1,295.47	1,294.62
Ramona Dr	15,450.00	3,341.38	0.00	382.82	2,958.89	60.00	2.65	2.16	1,279.00	1,283.48	1,282.66	1,282.23	1,281.65
Foothill Blvd	15,100.00	2,958.89	2,292.00	817.05	4,433.95	92.56	3.03	2.69	1,272.00	1,276.50	1,276.03	1,274.83	1,274.34
Holiday Pl	14,300.00	4,433.95	0.00	279.75	4,154.36	55.00	1.90	1.86	1,261.00	1,264.64	1,263.83	1,263.76	1,262.90
3rd St	14,035.00	4,154.36	0.00	245.00	3,909.57	50.00	1.86	1.82	1,256.00	1,259.59	1,258.77	1,258.67	1,257.86
2nd St	13,500.00	3,909.57	0.00	625.98	3,284.09	66.22	2.89	2.82	1,245.00	1,249.56	1,248.89	1,248.40	1,247.74
Dirt Rd	13,100.00	3,284.09	0.00	413.02	2,872.87	46.48	2.94	2.70	1,240.00	1,244.26	1,243.46	1,243.77	1,242.94
1st St	12,850.00	2,872.87	0.00	540.75	2,334.73	50.00	3.11	3.08	1,235.00	1,239.98	1,239.11	1,238.87	1,238.05
Rialto Ave	12,200.00	2,334.73	388.00	571.68	2,153.40	70.00	2.60	2.55	1,227.00	1,231.23	1,230.51	1,230.30	1,229.60
US Rail Road	11,120.00	2,153.40	1,713.00	416.16	3,449.35	66.96	2.77	2.11	1,214.00	1,216.50	1,216.46	1,216.83	1,216.77
Merrill Ave	9,470.00	3,449.35	848.00	685.57	3,611.00	40.02	4.38	4.19	1,187.00	1,192.98	1,191.99	1,192.42	1,191.38
Randall Ave	6,800.00	3,611.00	1,333.00	626.72	4,317.69	39.01	4.27	4.01	1,149.00	1,154.58	1,153.75	1,154.04	1,153.27
San Bernardino Ave & Lilac Ave	4,000.00	4,317.69	2,619.00	303.07	6,633.09	49.10	2.28	2.12	1,110.00	1,113.72	1,112.96	1,113.09	1,112.28
Valley Blvd	600.00	6,633.09	0.00	239.43	6,393.33	61.46	1.60	1.56	1,059.00	1,062.49	1,061.52	1,061.52	1,060.60

Etiwanda Ave, Lateral Wier Table (Proposed Basin #3 with interim channel improvements to convey 1000 cfs)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Yucca Ave	10,030.00	292.21	0.00	88.46	203.75	45.00	1.06	0.99	1,312.00	1,313.28	1,313.06	1,313.19	1,312.92
Lilac Ave	8,870.00	203.75	0.00	75.60	128.13	40.00	1.00	0.96	1,306.10	1,307.48	1,307.23	1,307.27	1,307.10

Foothill Blvd Lateral Wier Table(Proposed Basin #3 with interim channel improvements to convey 1000 cfs)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
"Open Area" Park Ave	9,435.00	817.05	0.00	792.16	24.98	545.00	1.24	0.79	1,269.10	1,272.85	1,272.24	1,269.59	1,269.43
Lilac Ave	8,760.00	24.98	164.06	73.27	115.80	271.59	0.46	0.25	1,265.00	1,266.94	1,266.83	1,265.55	1,265.46

Rialto Ave Lateral Wier Table (Proposed Basin #3 with interim channel improvements to convey 1000 cfs)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Lilac Ave	9,600.00	571.68	865.43	912.62	912.62	75.00	2.51	2.30	1,225.80	1,228.52	1,228.31	1,228.43	1,228.00
Willow Ave	8,150.00	912.62	0.00	903.51	8.91	368.17	1.19	1.15	1,215.50	1,221.69	1,221.10	1,216.69	1,216.69

Merrill Ave Lateral Wier Table (Proposed Basin #3 with interim channel improvements to convey 1000 cfs)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Athea Ave	8,630.00	685.57	0.00	163.23	522.23	40.00	1.65	1.61	1,185.00	1,187.64	1,187.07	1,187.17	1,186.65
Lilac Ave	8,100.00	522.23	912.62	574.82	859.82	50.00	3.24	3.21	1,183.00	1,186.34	1,186.24	1,186.33	1,186.18
Willow Ave	6,820.00	859.82	903.51	496.65	1,264.86	55.00	2.90	2.73	1,180.00	1,183.48	1,182.90	1,183.41	1,182.56
Riverside Ave	5,530.00	1,264.86	0.00	493.84	770.80	250.00	1.02	0.99	1,175.50	1,179.12	1,178.46	1,177.16	1,176.52
Sycamore Ave	4,130.00	770.80	0.00	413.23	357.58	60.00	2.29	2.28	1,168.00	1,170.38	1,170.27	1,170.35	1,170.29
Sage Ave	3,630.00	357.58	0.00	234.60	122.97	50.00	1.82	1.77	1,168.40	1,170.26	1,170.22	1,170.25	1,170.22

Randall Ave Lateral Wier Table (Basin #3 with interim channel improvements to convey 1000 cfs)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Lilac Ave	8,570.00	626.72	574.82	700.05	501.49	50.00	3.71	3.66	1,144.30	1,148.06	1,148.01	1,148.06	1,148.01
Willow Ave	7,250.00	501.49	496.65	464.64	534.55	120.00	1.59	1.55	1,145.00	1,147.74	1,147.22	1,147.11	1,146.59
Open Area	6,940.00	534.55	0.00	342.92	193.23	200.00	1.16	0.90	1,142.00	1,144.43	1,144.16	1,142.74	1,142.64
Riverside Ave	5,940.00	193.23	493.84	335.87	346.84	100.00	1.43	1.41	1,139.60	1,141.55	1,141.43	1,141.30	1,141.00
Olive Ave	5,370.00	346.84	0.00	134.05	213.50	90.00	1.08	0.81	1,135.90	1,137.56	1,137.28	1,136.75	1,136.45
Sycamore Ave	4,610.00	213.50	413.23	500.00	126.73	100.00	1.58	1.35	1,132.70	1,134.34	1,134.28	1,134.23	1,133.92

San Bernardino Ave Lateral Wier Table (Proposed Basin #3 with interim channel improvements to convey 1000 cfs)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Willow Ave	8,500.00	303.07	465.00	618.00	150.00	345.19	0.90	0.45	1,102.20	1,108.47	1,108.02	1,102.27	1,101.93

Proposed basin #3 with ultimate channel improvements

Rialto Channel, Street Crossing Lateral Wier Table (Proposed Basin #3 with ultimate channel improvements)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Base Line RD	20,335.00	3,933.67	0.00	155.63	3,778.04	80.55	1.30	0.97	1,353.80	1,356.81	1,356.21	1,355.97	1,354.44
Washington St	19,580.00	3,778.04	0.00	0.00	3,778.04	0.00	0.00	0.00	1,341.00	1,340.84	1,340.73	1,340.10	1,340.01
Madrona St	18,835.00	3,778.04	0.00	358.60	3,418.92	40.00	2.81	2.72	1,328.00	1,332.64	1,331.31	1,331.92	1,330.62
Valencia St	18,165.00	3,418.92	0.00	180.08	3,238.86	41.94	1.71	1.66	1,318.00	1,321.35	1,320.32	1,320.69	1,319.71
Etiwanda Ave	17,640.00	3,238.86	478.00	278.19	3,438.61	144.75	1.79	0.90	1,311.00	1,313.68	1,313.55	1,313.51	1,312.79
Rosewood St	16,320.00	3,438.61	0.00	207.38	3,231.22	30.00	2.59	2.28	1,292.00	1,295.79	1,294.97	1,295.42	1,294.59
Ramona Dr	15,450.00	3,231.22	0.00	371.92	2,859.27	60.00	2.61	2.12	1,279.00	1,283.42	1,282.62	1,282.18	1,281.61
Foothill Blvd	15,100.00	2,859.27	698.00	802.98	2,754.15	92.56	3.00	2.66	1,272.00	1,276.46	1,276.00	1,274.79	1,274.31
Holiday Pl	14,300.00	2,754.15	0.00	156.67	2,597.46	55.00	1.32	1.27	1,261.00	1,263.93	1,263.22	1,263.03	1,262.32
3rd St	14,035.00	2,597.46	0.00	149.84	2,447.59	50.00	1.36	1.31	1,256.00	1,258.92	1,258.26	1,258.01	1,257.36
2nd St	13,500.00	2,447.59	0.00	482.25	1,967.53	66.22	2.44	2.37	1,245.00	1,248.97	1,248.44	1,247.81	1,247.29
Dirt Rd	13,100.00	1,967.53	0.00	293.10	1,674.47	46.48	2.37	2.15	1,240.00	1,243.52	1,242.92	1,242.99	1,242.37
1st St	12,850.00	1,674.47	0.00	399.55	1,274.83	50.00	2.54	2.52	1,235.00	1,239.15	1,238.54	1,238.06	1,237.49
Rialto Ave	12,200.00	1,274.83	0.00	410.89	864.18	70.00	2.09	2.05	1,227.00	1,230.51	1,230.01	1,229.58	1,229.09
US Rail Road	11,120.00	864.18	756.00	77.14	1,543.07	55.22	1.45	0.73	1,214.00	1,216.46	1,216.45	1,213.79	1,213.69
Merrill Ave	9,470.00	1,543.07	848.00	514.73	1,875.99	40.02	3.68	3.46	1,187.00	1,191.49	1,191.23	1,190.95	1,190.68
Randall Ave	6,800.00	1,875.99	157.83	474.33	1,559.49	39.01	3.59	3.33	1,149.00	1,153.65	1,153.07	1,153.16	1,152.59
San Bernardino Ave & Lilac Ave	4,000.00	1,559.49	1,282.00	116.69	2,724.83	49.10	1.32	1.12	1,110.00	1,112.38	1,111.92	1,111.80	1,111.32
Valley Blvd	600.00	2,724.83	0.00	72.45	2,652.44	61.46	0.78	0.70	1,059.00	1,061.18	1,060.63	1,060.30	1,059.78

Etiwanda Ave, Lateral Wier Table (Proposed Basin #3 with ultimate channel improvements)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Yucca Ave	10,030.00	278.19	0.00	85.18	193.00	45.00	1.03	0.96	1,312.00	1,313.25	1,313.03	1,313.16	1,312.90
Lilac Ave	8,870.00	193.00	98.46	72.47	120.53	40.00	0.97	0.94	1,306.10	1,307.44	1,307.20	1,307.24	1,307.07

Foothill Blvd Lateral Wier Table(Proposed Basin #3 with ultimate channel improvements)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
"Open Area" Park Ave	9,435.00	802.98	0.00	775.64	25.73	545.00	1.22	0.78	1,269.10	1,272.83	1,272.22	1,269.59	1,269.43
Lilac Ave	8,760.00	25.73	157.65	71.49	111.71	271.59	0.45	0.24	1,265.00	1,266.95	1,266.83	1,265.54	1,265.45

Rialto Ave Lateral Wier Table (Proposed Basin #3 with ultimate channel improvements)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Lilac Ave	9,600.00	410.89	847.13	486.09	771.87	75.00	2.37	2.19	1,225.80	1,228.33	1,228.17	1,228.25	1,227.91
Willow Ave	8,150.00	771.87	0.00	766.66	5.19	368.17	1.09	1.03	1,215.50	1,221.49	1,220.96	1,216.59	1,216.59

Merrill Ave Lateral Wier Table (Proposed Basin #3 with ultimate channel improvements)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Athea Ave	8,630.00	514.73	0.00	121.44	393.33	40.00	1.35	1.32	1,185.00	1,187.31	1,186.80	1,186.85	1,186.35
Lilac Ave	8,100.00	393.33	486.09	398.27	481.15	50.00	2.52	2.51	1,183.00	1,185.60	1,185.53	1,185.59	1,185.50
Willow Ave	6,820.00	481.15	766.66	361.58	886.34	55.00	2.35	2.21	1,180.00	1,182.78	1,182.35	1,182.72	1,182.07
Riverside Ave	5,530.00	886.34	0.00	312.39	572.51	250.00	0.79	0.73	1,175.50	1,178.71	1,178.18	1,176.81	1,176.29
Sycamore Ave	4,130.00	572.51	0.00	333.45	238.30	60.00	1.99	1.98	1,168.00	1,170.05	1,169.97	1,170.03	1,169.99
Sage Ave	3,630.00	238.30	0.00	179.70	58.03	50.00	1.53	1.48	1,168.40	1,169.96	1,169.93	1,169.95	1,169.93

Randall Ave Lateral Wier Table (Basin #3 with ultimate channel improvements)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Lilac Ave	8,570.00	474.33	398.27	563.08	309.22	50.00	3.21	3.16	1,144.30	1,147.56	1,147.52	1,147.55	1,147.52
Willow Ave	7,250.00	309.22	361.58	340.90	333.35	120.00	1.29	1.26	1,145.00	1,147.31	1,146.94	1,146.68	1,146.29
Open Area	6,940.00	333.35	0.00	198.61	134.01	200.00	0.87	0.62	1,142.00	1,144.08	1,143.87	1,142.44	1,142.36
Riverside Ave	5,940.00	134.01	312.39	249.21	195.40	100.00	1.16	1.16	1,139.60	1,141.24	1,141.16	1,140.96	1,140.76
Olive Ave	5,370.00	195.40	0.00	84.73	109.52	90.00	0.88	0.59	1,135.90	1,137.23	1,137.08	1,136.43	1,136.21
Sycamore Ave	4,610.00	109.52	333.45	320.00	122.97	100.00	1.32	1.12	1,132.70	1,134.06	1,134.02	1,133.97	1,133.73

Basin #3 Improvements Project

Proposed ultimate improvement of Basin # 3,4 and 5

Rialto Channel, Street Crossing Lateral Wier Table (Proposed all basins)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Base Line RD	20,300.00	850.90	0.00	145.17	705.62	110.43	0.85	0.76	1,353.31	1,356.33	1,356.00	1,354.34	1,353.97
Washington St	19,550.00	705.62	0.00	39.61	666.24	80.00	0.40	0.40	1,341.00	1,343.29	1,342.89	1,341.84	1,341.40
Madrona St	18,780.00	666.24	0.00	41.59	624.61	30.00	0.81	0.78	1,328.00	1,329.61	1,329.25	1,329.17	1,328.81
Valencia St	18,085.00	624.61	0.00	28.94	595.93	35.33	0.55	0.55	1,318.00	1,319.37	1,319.05	1,318.90	1,318.56
Etiwanda Ave	17,650.00	595.93	478.00	0.00	1,073.93	0.00	0.00	0.00	1,311.00	1,312.71	1,311.98	1,311.80	1,310.36
Rosewood St	16,290.00	1,073.93	0.00	0.00	1,073.93	0.00	0.00	0.00	1,290.00	1,292.26	1,290.69	1,291.65	1,289.91
Ramona Dr	15,480.00	1,073.93	0.00	0.00	1,073.93	0.00	0.00	0.00	1,279.60	1,280.35	1,278.75	1,279.87	1,278.01
Foothill Blvd	14,990.00	1,073.93	1,790.10	264.50	2,600.48	100.00	1.65	1.19	1,271.00	1,274.39	1,273.65	1,273.76	1,271.73
Holiday Pl	14,325.00	2,600.48	0.00	72.86	2,527.62	26.87	1.43	1.22	1,260.60	1,263.14	1,262.50	1,262.66	1,262.03
3rd St	14,060.00	2,527.62	0.00	59.69	2,467.95	32.58	1.05	0.94	1,255.85	1,257.91	1,257.29	1,257.30	1,256.68
2nd St	13,405.00	2,467.95	0.00	214.51	2,253.47	35.00	2.12	2.11	1,244.00	1,247.28	1,246.60	1,246.76	1,246.12
Dirt Rd	13,048.00	2,253.47	0.00	461.33	1,792.13	79.42	2.44	2.03	1,240.00	1,244.24	1,243.44	1,242.30	1,241.62
1st St	12,740.00	1,792.13	0.00	43.06	1,749.07	20.00	1.40	1.04	1,235.00	1,237.33	1,236.68	1,237.05	1,236.40
Rialto Ave	12,550.00	1,749.07	114.11	340.08	1,523.10	71.00	1.79	1.79	1,229.00	1,232.38	1,231.79	1,231.37	1,230.79
US Rail Road	11,025.00	1,523.10	1,541.20	28.00	3,035.80	71.46	0.62	0.31	1,214.00	1,216.30	1,215.62	1,215.02	1,213.93
Merrill Ave	9,400.00	3,035.80	289.55	140.51	3,185.01	55.00	1.37	1.17	1,186.00	1,190.47	1,188.37	1,189.42	1,186.98
Randall Ave	6,750.00	3,185.01	944.12	0.00	4,129.13	0.00	0.00	0.00	1,149.00	1,151.33	1,148.37	1,150.14	1,147.35
San Bernardino Ave & Lilac Ave	3,850.00	4,129.13	1,468.20	74.11	5,523.22	45.00	0.89	0.88	1,109.00	1,112.88	1,110.87	1,112.58	1,109.89
Valley Blvd	480.00	5,523.22	487.26	37.44	5,973.44	54.88	0.90	0.45	1,058.00	1,062.22	1,058.42	1,060.94	1,058.90

Rialto Ave Lateral Wier Table (Proposed 3 Basins)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Lilac Ave	9,600.00	340.08	0.00	192.40	147.64	75.00	3.51	3.14	1,225.80	1,229.58	1,229.31	1,229.48	1,228.66

Proposed Basins #3 with interim channel improvements to convey 1260 cfs

Rialto Channel, Street Crossing Lateral Wier Table (Proposed Basin #3 with interim channel improvements to convey 1260 cfs)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Base Line RD	20,335.00	3,843.67	0.00	147.14	3,696.51	80.55	1.24	0.93	1,353.80	1,356.78	1,356.16	1,355.91	1,354.42
Washington St	19,580.00	3,696.51	0.00	0.00	3,696.51	0.00	0.00	0.00	1,341.00	1,340.84	1,340.73	1,340.10	1,340.01
Madrona St	18,835.00	3,696.51	0.00	353.53	3,342.03	40.00	2.79	2.69	1,328.00	1,332.58	1,331.29	1,331.87	1,330.60
Valencia St	18,165.00	3,342.03	0.00	175.18	3,166.90	41.94	1.68	1.63	1,318.00	1,321.30	1,320.29	1,320.65	1,319.68
Etiwanda Ave	17,640.00	3,166.90	478.00	270.37	3,373.71	142.83	1.78	0.89	1,311.00	1,313.66	1,313.52	1,313.48	1,312.78
Rosewood St	16,320.00	3,373.71	0.00	200.43	3,172.49	30.00	2.54	2.23	1,292.00	1,295.76	1,294.92	1,295.39	1,294.54
Ramona Dr	15,450.00	3,172.49	0.00	365.80	2,807.16	60.00	2.59	2.09	1,279.00	1,283.39	1,282.60	1,282.16	1,281.59
Foothill Blvd	15,100.00	2,807.16	2,292.00	795.47	4,302.53	92.56	2.98	2.64	1,272.00	1,276.44	1,275.98	1,274.77	1,274.30
Holiday Pl	14,300.00	4,302.53	0.00	270.56	4,031.12	55.00	1.86	1.82	1,261.00	1,264.60	1,263.79	1,263.70	1,262.86
3rd St	14,035.00	4,031.12	0.00	237.88	3,792.28	50.00	1.83	1.78	1,256.00	1,259.54	1,258.74	1,258.62	1,257.83
2nd St	13,500.00	3,792.28	0.00	618.03	3,175.00	66.22	2.87	2.79	1,245.00	1,249.52	1,248.87	1,248.35	1,247.72
Dirt Rd	13,100.00	3,175.00	0.00	406.01	2,770.86	46.48	2.91	2.67	1,240.00	1,244.20	1,243.43	1,243.71	1,242.91
1st St	12,850.00	2,770.86	0.00	529.49	2,248.28	50.00	3.07	3.04	1,235.00	1,239.92	1,239.07	1,238.81	1,238.01
Rialto Ave	12,200.00	2,248.28	388.00	560.02	2,084.01	70.00	2.57	2.52	1,227.00	1,231.18	1,230.47	1,230.25	1,229.57
US Rail Road	11,120.00	2,084.01	1,713.00	397.47	3,407.22	66.96	2.64	2.05	1,214.00	1,216.50	1,216.46	1,216.71	1,216.64
Merrill Ave	9,470.00	3,407.22	848.00	678.31	3,579.42	40.02	4.35	4.16	1,187.00	1,192.95	1,191.96	1,192.40	1,191.35
Randall Ave	6,800.00	3,579.42	1,333.00	623.76	4,289.99	39.01	4.26	4.00	1,149.00	1,154.57	1,153.74	1,154.02	1,153.26
San Bernardino Ave & Lilac Ave	4,000.00	4,289.99	2,619.00	301.46	6,608.82	49.10	2.27	2.11	1,110.00	1,113.71	1,112.95	1,113.08	1,112.27
Valley Blvd	600.00	6,608.82	0.00	238.32	6,370.76	61.46	1.60	1.55	1,059.00	1,062.49	1,061.51	1,061.52	1,060.60

Eulanda Ave, Lateral Weir Table (Proposed Basin #3 with interim channel improvements to convey 1200 cfs)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Yucca Ave	10,030.00	270.37	0.00	83.34	187.04	45.00	1.02	0.95	1,312.00	1,313.23	1,313.02	1,313.14	1,312.88
Lilac Ave	8,870.00	187.04	0.00	70.71	116.33	40.00	0.95	0.92	1,306.10	1,307.43	1,307.19	1,307.22	1,307.06

Foothill Blvd Lateral Wier Table(Proposed Basin #3 with interim channel improvements to convey 1260 cfs)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
"Open Area" Park Ave	9,435.00	795.47	0.00	771.45	23.74	545.00	1.22	0.77	1,269.10	1,272.82	1,272.22	1,269.58	1,269.42
Lilac Ave	8,760.00	23.74	70.71	25.65	69.19	271.59	0.21	0.13	1,265.00	1,266.93	1,266.84	1,265.31	1,265.21

Rialto Ave Lateral Weir Table (Proposed Basin #3 with interim channel improvements to convey 1200 cfs)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Lilac Ave	9,600.00	560.02	771.45	501.76	831.57	75.00	2.41	2.24	1,225.80	1,228.42	1,228.21	1,228.33	1,227.96
Willow Ave	8,150.00	831.57	0.00	824.82	6.77	368.17	1.14	1.08	1,215.50	1,221.58	1,221.02	1,216.64	1,216.64

Merrill Ave Lateral Wier Table (Proposed Basin #3 with interim channel improvements to convey 1260 cfs)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Athea Ave	8,630.00	678.31	0.00	153.14	525.45	40.00	1.57	1.54	1,185.00	1,187.63	1,187.02	1,187.16	1,186.57
Lilac Ave	8,100.00	525.45	501.76	444.12	582.94	50.00	2.71	2.70	1,183.00	1,185.82	1,185.71	1,185.81	1,185.69
Willow Ave	6,820.00	582.94	824.82	403.71	1,004.18	55.00	2.53	2.38	1,180.00	1,183.01	1,182.53	1,182.94	1,182.23
Riverside Ave	5,530.00	1,004.18	0.00	364.29	636.45	250.00	0.85	0.81	1,175.50	1,178.84	1,178.27	1,176.93	1,176.35
Sycamore Ave	4,130.00	636.45	0.00	360.34	275.94	60.00	2.09	2.08	1,168.00	1,170.16	1,170.07	1,170.14	1,170.09
Sage Ave	3,630.00	275.94	0.00	198.15	77.75	50.00	1.63	1.58	1,168.40	1,170.06	1,170.03	1,170.05	1,170.03

Ranuali Ave Lateral Weir Table (Basin #3 with interim channel improvements to convey 1260 cfs)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Lilac Ave	8,570.00	623.76	444.12	645.12	422.75	50.00	3.52	3.47	1,144.30	1,147.88	1,147.82	1,147.87	1,147.82
Willow Ave	7,250.00	422.75	403.71	405.73	421.97	120.00	1.43	1.42	1,145.00	1,147.57	1,147.11	1,146.89	1,146.43
Open Area	6,940.00	421.97	0.00	260.25	161.84	200.00	1.00	0.74	1,142.00	1,144.24	1,144.00	1,142.58	1,142.49
Riverside Ave	5,940.00	161.84	364.29	276.17	245.53	100.00	1.26	1.24	1,139.60	1,141.37	1,141.26	1,141.08	1,140.82
Olive Ave	5,370.00	245.53	0.00	102.07	141.74	90.00	0.95	0.68	1,135.90	1,137.34	1,137.15	1,136.52	1,136.30
Sycamore Ave	4,610.00	141.74	360.34	377.00	125.08	100.00	1.41	1.19	1,132.70	1,134.15	1,134.11	1,134.05	1,133.78

San Bernardino Ave Lateral Wier Table (Proposed Basin #3 with interim channel improvements to convey 1260 cfs)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Willow Ave	8,500.00	301.46	405.73	557.00	150.19	343.31	0.90	0.45	1,102.20	1,108.46	1,108.02	1,102.26	1,101.92

Pre-Freeway construction condition

Rialto Channel, Street Crossing Lateral Wier Table (Pre-freeway Condition Q100)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Base Line RD	20,300.00	2,760.00	0.00	428.40	2,331.40	110.43	1.61	1.56	1,353.31	1,357.45	1,356.77	1,355.52	1,354.81
Washington St	19,550.00	2,331.40	0.00	243.20	2,087.82	80.00	1.36	1.32	1,341.00	1,344.50	1,343.79	1,343.09	1,342.36
Madrona St	18,780.00	2,087.82	0.00	118.67	1,969.15	30.00	1.60	1.58	1,328.00	1,330.71	1,330.05	1,330.26	1,329.60
Valencia St	18,085.00	1,969.15	0.00	103.26	1,865.69	35.33	1.31	1.29	1,318.00	1,320.31	1,319.77	1,319.87	1,319.31
Etiwanda Ave	17,650.00	1,865.69	478.00	158.77	2,184.84	50.00	1.51	1.36	1,311.00	1,313.73	1,313.21	1,313.08	1,312.51
Rosewood St	16,290.00	2,184.84	0.00	238.20	1,947.37	50.00	1.91	1.78	1,290.00	1,294.99	1,292.66	1,294.29	1,291.91
Ramona Dr	15,480.00	1,947.37	0.00	136.86	1,810.54	35.33	1.65	1.55	1,279.60	1,282.22	1,281.64	1,281.59	1,281.05
Foothill Blvd	14,990.00	1,810.54	2,292.00	568.66	3,534.93	100.00	2.39	2.00	1,271.00	1,275.22	1,273.61	1,274.51	1,273.39
Holiday Pl	14,325.00	3,534.93	0.00	98.42	3,437.35	26.87	1.71	1.49	1,260.60	1,263.57	1,262.77	1,263.09	1,262.31
3rd St	14,060.00	3,437.35	0.00	89.23	3,347.82	32.58	1.32	1.23	1,255.85	1,258.29	1,257.57	1,257.67	1,256.99
2nd St	13,405.00	3,347.82	0.00	271.03	3,075.93	35.00	2.47	2.47	1,244.00	1,247.69	1,246.97	1,247.16	1,246.46
Dirt Rd	13,048.00	3,075.93	0.00	604.38	2,469.50	79.42	2.85	2.43	1,240.00	1,244.74	1,243.85	1,242.72	1,242.01
1st St	12,740.00	2,469.50	0.00	67.18	2,402.32	20.00	1.76	1.41	1,235.00	1,237.73	1,237.05	1,237.44	1,236.77
Rialto Ave	12,550.00	2,402.32	388.00	439.30	2,349.27	71.00	2.12	2.12	1,229.00	1,232.76	1,232.12	1,231.75	1,231.13
US Rail Road	11,025.00	2,349.27	1,713.00	95.27	3,966.37	80.00	0.97	0.70	1,214.00	1,216.87	1,215.97	1,215.72	1,214.43
Merrill Ave	9,400.00	3,966.37	848.00	490.52	4,325.29	55.00	2.76	2.71	1,186.00	1,191.70	1,189.66	1,190.89	1,188.76
Randall Ave	6,750.00	4,325.29	1,333.00	451.47	5,208.15	40.00	4.32	3.13	1,149.00	1,156.61	1,154.32	1,153.38	1,150.95
San Bernardino Ave & Lilac Ave	3,850.00	5,208.15	2,619.00	300.33	7,528.47	45.00	2.48	2.23	1,109.00	1,112.84	1,111.98	1,112.40	1,111.48
Valley Blvd	480.00	7,528.47	1,129.00	623.99	8,033.48	90.00	2.41	2.29	1,058.00	1,058.08	1,057.13	1,048.23	1,047.96

Base line Street, Lateral Weir Table (Pre-freeway Q100)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Mesa Ave	7,260.00	428.40	0.00	88.23	340.11	56.45	0.88	0.85	1,352.33	1,354.13	1,353.81	1,353.52	1,353.21
Lilac Ave	6,490.00	340.11	0.00	171.43	168.62	204.44	1.03	0.52	1,350.00	1,352.17	1,351.83	1,351.73	1,349.59

Foothill Blvd Lateral Wier Table(Pre-freeway Q100)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
"Open Area" Park Ave	9,435.00	568.66	0.00	553.41	14.88	545.00	0.99	0.62	1,269.10	1,272.46	1,271.99	1,269.47	1,269.34
Lilac Ave	8,760.00	14.88	171.43	64.19	121.60	241.28	0.48	0.24	1,265.00	1,266.85	1,266.74	1,265.57	1,265.48

Rialto Ave Lateral Weir Table (Pre-freeway Q100)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Lilac Ave	9,600.00	439.30	64.19	239.70	263.79	75.00	1.47	1.37	1,225.80	1,227.64	1,227.27	1,227.40	1,227.16
Willow Ave	8,150.00	263.79	0.00	100.00	163.79	368.17	0.87	0.63	1,215.50	1,220.65	1,220.39	1,216.37	1,216.37

Merrill Ave Lateral Wier Table (Pre-freeway Q100)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Athea Ave	8,630.00	490.52	0.00	116.32	373.94	40.00	1.31	1.28	1,185.00	1,187.26	1,186.76	1,186.80	1,186.31
Lilac Ave	8,100.00	373.94	239.70	305.16	308.45	50.00	2.11	2.10	1,183.00	1,185.19	1,185.11	1,185.17	1,185.10
Willow Ave	6,820.00	308.45	100.00	135.63	271.77	55.00	1.24	1.15	1,180.00	1,181.50	1,181.24	1,181.38	1,181.06
Riverside Ave	5,530.00	271.77	0.00	40.83	231.18	250.00	0.30	0.18	1,175.50	1,177.83	1,177.56	1,176.09	1,175.80
Sycamore Ave	4,130.00	231.18	0.00	145.71	85.47	60.00	1.14	1.14	1,168.00	1,169.17	1,169.14	1,169.16	1,169.14

Randall Ave Lateral Weir Table (Pre-freeway Q100)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Lilac Ave	8,570.00	451.47	305.16	512.30	244.44	50.00	3.02	2.97	1,144.30	1,147.37	1,147.32	1,147.36	1,147.32
Willow Ave	7,250.00	244.44	135.63	241.29	138.24	120.00	1.09	1.00	1,145.00	1,147.12	1,146.79	1,146.19	1,145.91
Open Area	6,940.00	138.24	0.00	57.56	79.87	200.00	0.49	0.26	1,142.00	1,143.63	1,143.49	1,142.07	1,142.02

San Bernardino Ave Lateral Wier Table (Pre-freeway Q100)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Willow Ave	8,500.00	300.33	241.29	500.00	41.62	341.87	0.89	0.45	1,102.20	1,108.46	1,108.01	1,102.26	1,101.92

Valley Blvd Lateral Weir Table (Pre-freeway Q100)

Street Name	River Sta.	Q US (cfs)	Q Lateral (cfs)	Q Weir (cfs)	Q DS (cfs)	Top Wdth Weir (ft)	Max Depth Weir (ft)	Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US. (ft)	W.S. US. (ft)	E.G. DS (ft)	W.S. DS (ft)
Riverside Ave	11,390.00	623.99	40.83	596.04	68.78	110.00	2.76	1.91	1,062.50	1,065.29	1,065.26	1,065.28	1,065.17