APPENDIX D

SCENARIO 3B WITHOUT LA MEDIA ROAD

1. **Scenario 3B Without La Media Road Land Use Summary & Trip Generation File**
2. **Revised Otay Mesa 3B – 2030 Street Network Plot**
3. **Revised Otay Mesa CPU 2030 3B ADT Plot (Without La Media Road)**
4. **SANDAG 2050 Regional Transportation Plan (excerpt, pg. A-17)**
5. **CALTRANS Ramp Meter Rate E-Mail**
6. **I-805 Peak Hour Volume Data**
7. **City Requested ADT Adjustments**
8. **E-Memo: OMCPU Intersection Peak Hour Turn Volumes (Method Used)**
9. **Freeway On-Ramp Lengths**
10. **Buildout Recommended Lane Configurations – Alternative 3B Without La Media Road**
11. **Buildout AM / PM Peak Hour Traffic – Alternative 3B Without La Media Road**
12. **Table Appendix D-1, Traffic Signal Warrant Worksheets**
13. **Intersection LOS Worksheets**

Otay Mesa Buildout (3B) Land Use Summary			
Land Use	**Input Vehicle Trip Generation**		
	Type	**Amount**	**Veh. Trips**
Single Family	du	4,273	37,570
Multi-Family	du	14,501	116,056
Elementary school	site	7	8,295
Junior College	student	5,000	9,095
Senior High School	student	4,800	8,230
⁎IBT - Office	ksf	2,771	39,103
⁎L-R Office	ksf	362	5,760
⁎Heavy Industry	ksf	8,458	34,962
⁎IBT- Industrial Park	ksf	8,034	64,283
⁎IBT - Business Park	ksf	5,356	87,819
⁎Industrial Park	ksf	6,020	97,463
⁎Light Industry LGR IP	ksf	12,685	101,497
⁎IBT - Manufacturing	ksf	2,678	10,823
Commercial Airport	Flt	682	1,368
✔ Community Commercial	ksf	3,848	269,768
✔ Neighborhood Commercial	ksf	69	8,295
Gas Station w/fdmt	pump	27	6,710
⁎ IBT- Warehouse	ksf	8,034	40,060
Truck Storage	acre	30	920
Warehouse or Storage	ksf	63	315
Active Park	acre	166	7,284
Cross Border Facility (CBF)	Passenger	17,225	31,205
Lodging - Hotel (BRWN FLD & CBF)	room	570	5,693
Air & Space Museum (BRWN FLD)		360	732
Restaurant (BRWN FLD)		30	12,000
Park & Ride (BRWN FLD)	Site	1	297
Solar Field (BRWN FLD)		67	5
Communication or Utility	acre	6	18
OMPOE in/out Laden	truck	2,000	8,096
OMPOE in/out unladen	truck	4,000	16,192
Church	site	5	205
Police or Fire Station	site	11	225
Other Health Care	ksf	293	14,681
Grand Total:			***1,045,025***

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⁎ **Industrial Square footage total of 54,461,000**

✔ **Commercial square footage total of 3,917,000**

Zone	Code	Name (Land Use)	Type	Amount	Person (Trips)	Vehicle (Trips)
4429	101	SINGLE FAMILY	du	800.0	10080.	7034.
4429	4112	RIGHT-OF-WAY	acre	62.0	0.	0.
4429	7601	ACTIVE PARK	acre	6.0	400.	263.
4429	9101	INACTIVE USE	acre	249.7	0.	0.
4429	9710	MULTI-FAMILY(UNDER20DU/AC)	du	820.0	9348.	6563.
4429		TOTAL			19828.	13860.
4431	6107	CHURCH	acre	5.0	267.	205.
4431	7601	ACTIVE PARK	acre	11.0	733.	482.
4431	9711	GAS STATION W/FDMT(PUMP)	pump	12.0	2466.	1790.
4431	9719	OTHER HEALTH CARE(KSF)	ksf	292.7	19788.	14681.
4431		TOTAL			23254.	17158.
4443	101	SINGLE FAMILY	du	1069.0	13469.	9399.
4443	4112	RIGHT-OF-WAY	acre	47.4	0.	0.
4443	7601	ACTIVE PARK	acre	5.3	353.	232.
4443	9101	INACTIVE USE	acre	263.2	0.	0.
4443	9710	MULTI-FAMILY(UNDER20DU/AC)	du	330.0	3762.	2641.
4443		TOTAL			17584.	12273.
4450	4112	RIGHT-OF-WAY	acre	13.6	0.	0.
4450	9101	INACTIVE USE	acre	187.3	0.	0.
4450		TOTAL			0.	0.
4460	9715	LIGHT INDUSTRY LRG IP(KSF)	ksf	830.9	8226.	6648.
4460		TOTAL			8226.	6648.
4463	4112	RIGHT-OF-WAY	acre	15.6	0.	0.
4463	9101	INACTIVE USE	acre	168.4	0.	0.
4463		TOTAL			0.	0.
4464	4112	RIGHT-OF-WAY	acre	24.4	0.	0.
4464	9733	COMMUNITY COMMERCIAL (KSF)	ksf	770.9	77088.	54542.
4464		TOTAL			77088.	54542.
4467	101	SINGLE FAMILY	du	387.0	4876.	3403.
4467	4112	RIGHT-OF-WAY	acre	28.4	0.	0.
4467	7601	ACTIVE PARK	acre	7.0	466.	307.
4467	9101	INACTIVE USE	acre	132.7	0.	0.
4467	9710	MULTI-FAMILY(UNDER20DU/AC)	du	216.0	2462.	1729.
4467		TOTAL			7805.	5435.
4472	4112	RIGHT-OF-WAY	acre	40.0	0.	0.
4472	9101	INACTIVE USE	acre	738.3	0.	0.
4472	9715	LIGHT INDUSTRY LRG IP(KSF)	ksf	725.0	7177.	5801.

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Zone	Code	Name (Land Use)	Type	Amount	Person (Trips)	Vehicle (Trips)
4472	9717	INDUSTRIAL PARK(KSF)	ksf	777.0	15540.	12739.
4472	9768	AIR&SPACE MUSEUM(BRWN +.0)	ksf	360.0	1080.	732.

4472	9770	SOLAR FIELD (BRWN FLD)	acre	66.5	7.	5.
4472		TOTAL			23804.	19277.
4479	4112	RIGHT-OF-WAY	acre	60.5	0.	0.
4479	9715	LIGHT INDUSTRY LRG IP(KSF)	ksf	1960.2	19406.	15684.
4479	9734	HEAVY INDUSTRY (KSF)	ksf	1960.2	9801.	8103.
4479		TOTAL			29207.	23787.
4496	4112	RIGHT-OF-WAY	acre	6.4	0.	0.
4496	9101	INACTIVE USE	acre	54.2	0.	0.
4496	9710	MULTI-FAMILY(UNDER2DU/AC)	du	1016.0	11682.	8191.
4496	9731	NEIGHBORHOOD COMMERCIAL(KSF)	ksf	33.2	5630.	3983.
4496		TOTAL			17317.	12175.
4497	4112	RIGHT OF-WAY	acre	16.0	0.	0.
4497	9101	INACTIVE USE	acre	67.0	0.	0.
4497	9715	LIGHT INDUSTRY LRG IP(KSF)	ksf	1916.6	18975.	15335.
4497		TOTAL			18975.	15335.
4499	1101	SINGLE FAMILY	du	123.0	1550.	1081.
4499	4112	RIGHT-OF-WAY	acre	54.9	0.	0.
4499	7601	ACTIVE PARK	acre	4.9	326.	215.
4499	9101	INACTIVE USE	acre	37.9	0.	0.
4499	9710	MULTI-FAMILY(UNDER2DU/AC)	du	630.0	7182.	5042.
4499	9714	WAREHOUSING OR STORAGE(KSF)	ksf	63.2	385.	315.
4499		TOTAL			9443.	6653.
4505	4112	RIGHT-OF-WAY	acre	33.0	0.	0.
4505	6806	ELEMENTARY SCHOOL	stdn	1.0	2119.	1185.
4505	7601	ACTIVE PARK	acre	15.0	999.	657.
4505	9101	INACTIVE USE	acre	21.0	0.	0.
4505	9710	MULTI-FAMILY(UNDER2DU/AC)	du	1578.0	17989.	12629.
4505		TOTAL			21107.	14472.
4511	4112	RIGHT-OF-WAY	acre	5.7	0.	0.
4511	6806	ELEMENTARY SCHOOL	acre	2.0	4237.	2370.
4511	9733	COMMUNITY COMMERCIAL (KSF)	ksf	234.7	23470.	16606.
4511		TOTAL			27707.	18976.
4517	1101	SINGLE FAMILY	du	435.0	5481.	3825.
4517	4112	RIGHT-OF-WAY	acre	75.1	0.	0.
4517	9101	INACTIVE USE	acre	64.4	0.	0.
4517		TOTAL			5481.	3825.
4520	4112	RIGHT-OF WAY	acre	26.8	0.	0.
4520	9733	COMMUNITY COMMERCIAL (KSF)	ksf	326.7	32670.	23115.
4520		TOTAL			32670.	23115.
4521	4112	RIGHT OF-WAY	acre	10.0	0.	0.
4521	9733	COMMUNITY COMMERCIAL (KSF)	acre	271.7	27168.	19222.
4521		TOTAL			27168.	19222.
4522	4112	RIGHT-OF-WAY	acre	16.7	0.	0.
4522	9101	INACTIVE USE	acre	24.7	0.	0.
4522	9715	TBT-WAREHOUSE (KSF)	ksf	161.6	986.	806.
4522	9736	TBT-BUSINESS PARK(KSF)	ksf	107.7	2154.	1766.
4522	9737	TBT-INDUSTRIAL PARK(KSF)	ksf	161.6	1600.	1295.

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Zone	Code	Land Use Name	Type	Amount	Trips Person	Trips Vehicle
4527	9738	IBT-MANUFACTURING (KSF)	ksf	53.9	269.	218.
4522	9747	IBT-OFFICE(KSF-53.9;ZN 4522)	ksf	53.9	1374.	1053.
4522		TOTAL			6383.	5135.
4524	4112	RIGHT-OF-WAY	acre	20.9	0.	0.
4524	9735	IBT-WAREHOUSE (KSF)	ksf	379.4	2315.	1892.
4524	9736	IBT-BUSINESS PARK(KSF)	ksf	252.9	5059.	4147.
4524	9737	IBT-INDUSTRIAL PARK(KSF)	ksf	379.4	3755.	3036.
4524	9738	IBT-MANUFACTURING (KSF)	ksf	126.5	632.	511.
4524	9749	IBT-OFFICE(KSF-126;ZN 4524)	ksf	126.5	2618.	2007.
4524		TOTAL			14380.	11593.
4525	4112	RIGHT-OF-WAY	acre	20.0	0.	0.
4525	9735	IBT-WAREHOUSE (KSF)	ksf	370.5	2260.	1847.
4525	9736	IBT-BUSINESS PARK(KSF)	ksf	247.0	4940.	4049.
4525	9737	IBT-INDUSTRIAL PARK(KSF)	ksf	370.5	3668.	2964.
4525	9738	IBT-MANUFACTURING (KSF)	ksf	123.5	617.	499.
4525	9750	IBT-OFFICE(KSF-123;ZN 4525)	ksf	123.5	4569.	1969.
4525		TOTAL			14053.	11329.
4526	101	SINGLE FAMILY	du	75.0	945.	659.
4526	4112	RIGHT-OF-WAY	acre	14.6	0.	0.
4526	9101	INACTIVE USE	acre	45.0	0.	0.
4526	9710	MULTI-FAMILY(UNDER20DU/AC)	du	340.0	3876.	2721.
4526	9733	COMMUNITY COMMERCIAL (KSF)	ksf	748.3	24829.	17567.
4526		TOTAL			29650.	20948.
4527	4112	RIGHT-OF-WAY	acre	20.5	0.	0.
4527	9735	IBT-WAREHOUSE (KSF)	ksf	423.4	2589.	2141.
4527	9736	IBT-BUSINESS PARK(KSF)	ksf	282.3	5649.	4628.
4527	9737	IBT-INDUSTRIAL PARK(KSF)	ksf	423.4	4192.	3388.
4527	9738	IBT-MANUFACTURING (KSF)	ksf	141.1	706.	570.
4527	9751	IBT-OFFICE(KSF-141;ZN 4527)	ksf	141.1	2897.	2174.
4527		TOTAL			15902.	12871.
4528	4112	RIGHT-OF-WAY	acre	16.7	0.	0.
4528	9717	INDUSTRIAL PARK(KSF)	ksf	199.6	3931.	3272.
4528	9733	COMMUNITY COMMERCIAL (KSF)	ksf	478.9	47892.	33885.
4528		TOTAL			51883.	37156.
4529	4112	RIGHT-OF-WAY	acre	17.0	0.	0.
4529	9735	IBT-WAREHOUSE (KSF)	ksf	118.7	724.	597.
4529	9736	IBT-BUSINESS PARK(KSF)	ksf	79.1	1582.	1297.
4529	9737	IBT-INDUSTRIAL PARK(KSF)	ksf	118.7	1175.	949.
4529	9738	IBT-MANUFACTURING (KSF)	ksf	39.5	198.	160.
4529	9747	IBT-OFFICE(KSF-39.9;ZN 4522)	ksf	39.5	1009.	774.
4529		TOTAL			4687.	3771.
4530	4112	RIGHT-OF-WAY	acre	47.2	0.	0.
4530	9717	INDUSTRIAL PARK(KSF)	ksf	227.4	4347.	3564.
4530	9733	COMMUNITY COMMERCIAL (KSF)	ksf	521.7	52167.	36910.
4530		TOTAL			56515.	40474.

Zone	Land Use Code	Name	Type	Amount	Trips Person	Trips Vehicle
4531	4112	RIGHT-OF-WAY	acre	33.2	0.	0.
4531	4113	COMMUNICATION OR UTILITY	acre	2.1	8.	6.
4531	9715	LIGHT INDUSTRY LRG IP(KSF)	ksf	1178.0	11167.	9025.
4531	9734	HEAVY INDUSTRY (KSF)	ksf	149.9	749.	619.
4531		TOTAL			11925.	9651.
4532	4112	RIGHT-OF WAY	acre	8.7	0.	0.
4532	9715	LIGHT INDUSTRY LRG IP(KSF)	ksf	1337.1	13237.	10698.
4532		TOTAL			13237.	10698.
4545	4112	RIGHT-OF WAY	acre	23.3	0.	0.
4545	9101	INACTIVE USE	acre	87.3	0.	0.
4545	9710	MULTI-FAMILY(UNDER20DU/AC)	du	381.0	4343.	3049.
4545	9717	INDUSTRIAL PARK(KSF)	ksf	778.2	15564.	12759.
4545	9733	COMMUNITY COMMERCIAL (KSF)	ksf	17.0	1699.	1202.
4545		TOTAL			21606.	17010.
4546	101	SINGLE FAMILY	du	59.0	743.	519.
4546	4112	RIGHT-OF-WAY	acre	2.9	0.	0.
4546	4113	COMMUNICATION OR UTILITY	acre	3.9	16.	12.
4546	9101	INACTIVE USE	acre	134.1	0.	0.
4546	9710	MULTI-FAMILY(UNDER20DU/AC)	du	40.0	456.	320.
4546		TOTAL			1215.	851.
4547	4112	RIGHT-OF-WAY	acre	16.6	0.	0.
4547	7601	ACTIVE PARK	acre	8.1	539.	355.
4547	9710	MULTI-FAMILY(UNDER20DU/AC)	du	1101.0	12665.	8892.
4547	9717	INDUSTRIAL PARK(KSF)	ksf	991.9	19838.	16263.
4547	9733	COMMUNITY COMMERCIAL (KSF)	ksf	15.7	1568.	1110.
4547		TOTAL			34611.	26619.
4548	4112	RIGHT-OF-WAY	acre	18.2	0.	0.
4548	9717	INDUSTRIAL PARK(KSF)	ksf	1417.9	28358.	23247.
4548		TOTAL			28358.	23247.
4549	4112	RIGHT-OF-WAY	acre	18.2	0.	0.
4549	9101	INACTIVE USE	acre	6.4	0.	0.
4549	9706	JUNIOR COLLEGE (STUDENTS)	stu	5000.0	11500.	9085.
4549	9717	INDUSTRIAL PARK(KSF)	ksf	179.2	3585.	2939.
4549		TOTAL			15085.	12033.
4550	4112	RIGHT-OF-WAY	acre	9.3	0.	0.
4550	9735	IBT-WAREHOUSE (KSF)	ksf	200.1	1221.	998.
4550	9736	IBT-BUSINESS PARK(KSF)	ksf	133.4	2668.	2185.
4550	9737	IBT INDUSTRIAL PARK(KSF)	ksf	200.1	1961.	1601.
4550	9738	IBT-MANUFACTURING (KSF)	ksf	66.7	334.	270.
4550	9740	IBT-OFFICE(KSF-66.7(ZN 4550)	ksf	66.7	1614.	1237.
4550		TOTAL			7819.	6294.
4551	4112	RIGHT OF WAY	acre	45.0	0.	0.
4551	9715	IBT-WAREHOUSE (KSF)	ksf	502.3	3064.	2505.
4551	9736	IBT-BUSINESS PARK(KSF)	ksf	434.9	6698.	5491.
4551	9737	IBT-INDUSTRIAL PARK(KSF)	ksf	502.3	4973.	4019.
4551	9738	IBT MANUFACTURING (KSF)	ksf	167.4	837.	677.
4551	9740	IBT-OFFICE(KSF 166;ZN 4551)	ksf	167.4	3232.	2477.
4551		TOTAL			18804.	15168.
4558	101	SINGLE FAMILY	du	125.0	1575.	1099.
4558	4112	RIGHT-OF-WAY	acre	3.6	0.	0.
4558	6806	ELEMENTARY SCHOOL	stu	1.0	2129.	1185.

4558	7601	ACTIVE PARK	acre	5.2	346.	228.
4558	9101	INACTIVE USE	acre	108.3	0.	0.
4558	9710	MULTI-FAMILY(UNDER20DU/AC)	du	590.0	6726.	4722.
4558		TOTAL			10766.	7234.
4560	4112	RIGHT-OF-WAY	acre	15.2	0.	0.
4560	6806	ELEMENTARY SCHOOL	site	1.0	2119.	1165.
4560	7601	ACTIVE PARK	acre	24.2	1612.	1061.
4560	9101	INACTIVE USE	acre	145.5	0.	0.
4560	9710	MULTI-FAMILY(UNDER20DU/AC)	du	3754.0	42796.	30045.
4560		TOTAL			46526.	32291.
4561	101	SINGLE FAMILY	du	765.0	9639.	6726.
4561	4112	RIGHT-OF-WAY	acre	3.8	0.	0.
4561	6806	ELEMENTARY SCHOOL	site	2.0	4237.	2370.
4561	7601	ACTIVE PARK	acre	20.7	1379.	907.
4561	9101	INACTIVE USE	acre	166.0	0.	0.
4561	9707	L-R OFF(KSF-98;ZN4561,4578)	ksf	98.0	2156.	1659.

Zone	Code	Name	Type	Amount	Trips Person	Trips Vehicle
4561	9710	MULTI-FAMILY(UNDER20DU/AC)	du	2025.0	23085.	16207.
4561	9733	COMMUNITY COMMERCIAL (KSF)	ksf	47.0	4704.	3329.
4561		TOTAL			45701.	31792.
4562	4112	RIGHT-OF WAY	acre	13.4	0.	0.
4562	7601	ACTIVE PARK	acre	39.4	2624.	1727.
4562	9101	INACTIVE USE	acre	54.3	0.	0.
4562	9717	INDUSTRIAL PARK(KSF)	ksf	1178.9	23579.	19329.
4562	9725	SENIOR HIGH SCHOOL(STUDENTS)	stu	7400.0	9120.	4115.
4562		TOTAL			35323.	25172.
4563	4112	RIGHT-OF-WAY	acre	4.9	0.	0.
4563	9735	IBT-WAREHOUSE (KSF)	ksf	1001.5	8109.	4993.
4563	9736	IBT-BUSINESS PARK(KSF)	ksf	667.6	13353.	10946.
4563	9737	IBT-INDUSTRIAL PARK(KSF)	ksf	1001.5	9915.	8013.
4563	9738	IBT-MANUFACTURING (KSF)	ksf	333.8	1669.	1349.
4563	9758	IBT-OFFICE(KSF-333;ZN 4563)	ksf	333.8	5442.	4171.
4563		TOTAL			36487.	29472.
4564	4112	RIGHT-OF WAY	acre	3.4	0.	0.
4564	9101	INACTIVE USE	acre	38.0	0.	0.
4564	9735	IBT-WAREHOUSE (KSF)	ksf	702.9	4287.	3504.
4564	9736	IBT-BUSINESS PARK(KSF)	ksf	468.6	9372.	7683.
4564	9737	IBT-INDUSTRIAL PARK(KSF)	ksf	702.9	6958.	5624.
4564	9738	IBT MANUFACTURING (KSF)	ksf	234.3	1171.	947.
4564	9754	IBT-OFFICE(KSF-234;ZN 4564)	ksf	234.3	4170.	3196.
4564		TOTAL			25959.	20954.
4565	4112	RIGHT-OF WAY	acre	19.5	0.	0.
4565	9735	IBT WAREHOUSE (KSF)	ksf	1035.5	6317.	5163.
4565	9736	IBT-BUSINESS PARK(KSF)	ksf	690.3	13807.	11318.
4565	9737	IBT-INDUSTRIAL PARK(KSF)	ksf	1035.5	10252.	8285.
4565	9738	IBT-MANUFACTURING (KSF)	ksf	345.2	1726.	1395.
4565	9756	IBT-OFFICE(KSF-345;ZN 4565)	ksf	345.2	5592.	4286.
4565		TOTAL			37692.	30447.

4566	4112	RIGHT-OF-WAY	acre	15.2	0.	0.
4566	9715	IBT-WAREHOUSE (KSF)	ksf	544.2	5150.	4209.
4566	9736	IBT-BUSINESS PARK(KSF)	ksf	562.8	11256.	9227.
4566	9737	IBT-INDUSTRIAL PARK(KSF)	ksf	844.2	8338.	6754.
4566	9738	IBT-MANUFACTURING (KSF)	ksf	281.4	1407.	1137.
4566	9755	IBT-OFFICE(KSF-282;ZN 4566)	ksf	281.4	4784.	3667.
4566		TOTAL			30954.	24993.
4567	4112	RIGHT-OF-WAY	acre	9.0	0.	0.
4567	9713	COMMUNITY COMMERCIAL (KSF)	ksf	95.4	9540.	6750.
4567	9735	IBT-WAREHOUSE (KSF)	ksf	208.9	1274.	1042.
4567	9736	IBT-BUSINESS PARK(KSF)	ksf	139.3	2785.	2283.
4567	9737	IBT-INDUSTRIAL PARK(KSF)	ksf	208.9	2068.	1671.
4567	9738	IBT-MANUFACTURING (KSF)	ksf	69.6	348.	281.
4567	9746	IBT-OFFICE(KSF-66.7;ZN 4550)	ksf	69.6	1685.	1292.
4567		TOTAL			17700.	13319.

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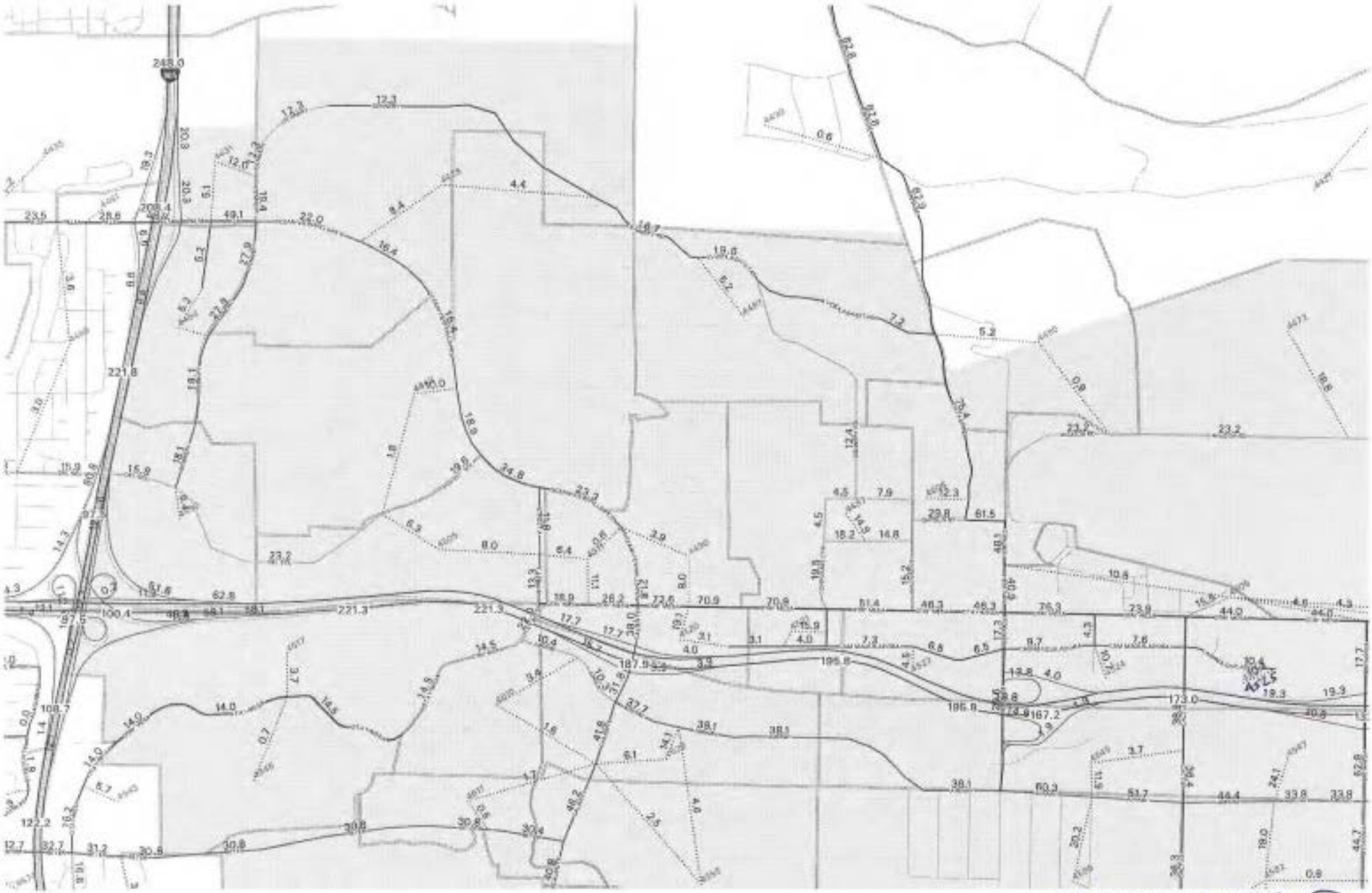
Zone	Code	Name	Type	Amount	Trips Person	Trips Vehicle
4569	4112	RIGHT-OF-WAY	acre	24.0	0.	0.
4569	9715	LIGHT INDUSTRY LRG IP(KSF)	ksf	1086.8	10760.	8696.
4569		TOTAL			10760.	8696.
4570	4112	RIGHT-OF-WAY	acre	11.0	0.	0.
4570	9715	LIGHT INDUSTRY LRG IP(KSF)	ksf	1287.4	12745.	10301.
4570		TOTAL			12745.	10301.
4578	101	SINGLE FAMILY	du	435.0	5481.	3825.
4578	4112	RIGHT-OF-WAY	acre	3.8	0.	0.
4578	7601	ACTIVE PARK	acre	13.6	906.	596.
4578	9102	INACTIVE USE	acre	239.4	0.	0.
4578	9707	L-R OFF(KSF-98;ZN4561,4578)	ksf	98.0	2256.	1653.
4578	9710	MULTI-FAMILY(UNDER20DU/AC)	du	1150.0	13110.	9204.
4578	9733	COMMUNITY COMMERCIAL (KSF)	ksf	47.0	4704.	3329.
4578		TOTAL			26357.	18606.
4580	4112	RIGHT-OF-WAY	acre	9.4	0.	0.
4580	9101	INACTIVE USE	acre	5.0	0.	0.
4580	9715	LIGHT INDUSTRY LRG IP(KSF)	ksf	83.0	822.	664.
4580	9733	COMMUNITY COMMERCIAL (KSF)	ksf	352.7	35218.	24918.
4580		TOTAL			36040.	25582.
4581	4112	RIGHT-OF-WAY	acre	11.0	0.	0.
4581	9715	LIGHT INDUSTRY LRG IP(KSF)	ksf	2156.4	21349.	17254.
4581		TOTAL			21349.	17254.
4584	4112	RIGHT-OF-WAY	acre	20.0	0.	0.
4584	9715	LIGHT INDUSTRY LRG IP(KSF)	ksf	65.3	647.	523.
4584	9733	COMMUNITY COMMERCIAL (KSF)	ksf	158.5	15851.	11215.
4584	9735	IBT WAREHOUSE (KSF)	ksf	177.1	1081.	884.
4584	9736	IBT-BUSINESS PARK(KSF)	ksf	118.1	2362.	1976.
4584	9737	IBT-INDUSTRIAL PARK(KSF)	ksf	177.1	1754.	1417.
4584	9738	IBT-MANUFACTURING (KSF)	ksf	59.0	295.	239.
4584	9745	IBT-OFFICE(KSF 59.0;ZN 4584)	ksf	59.0	1470.	1127.
4584		TOTAL			23460.	17340.

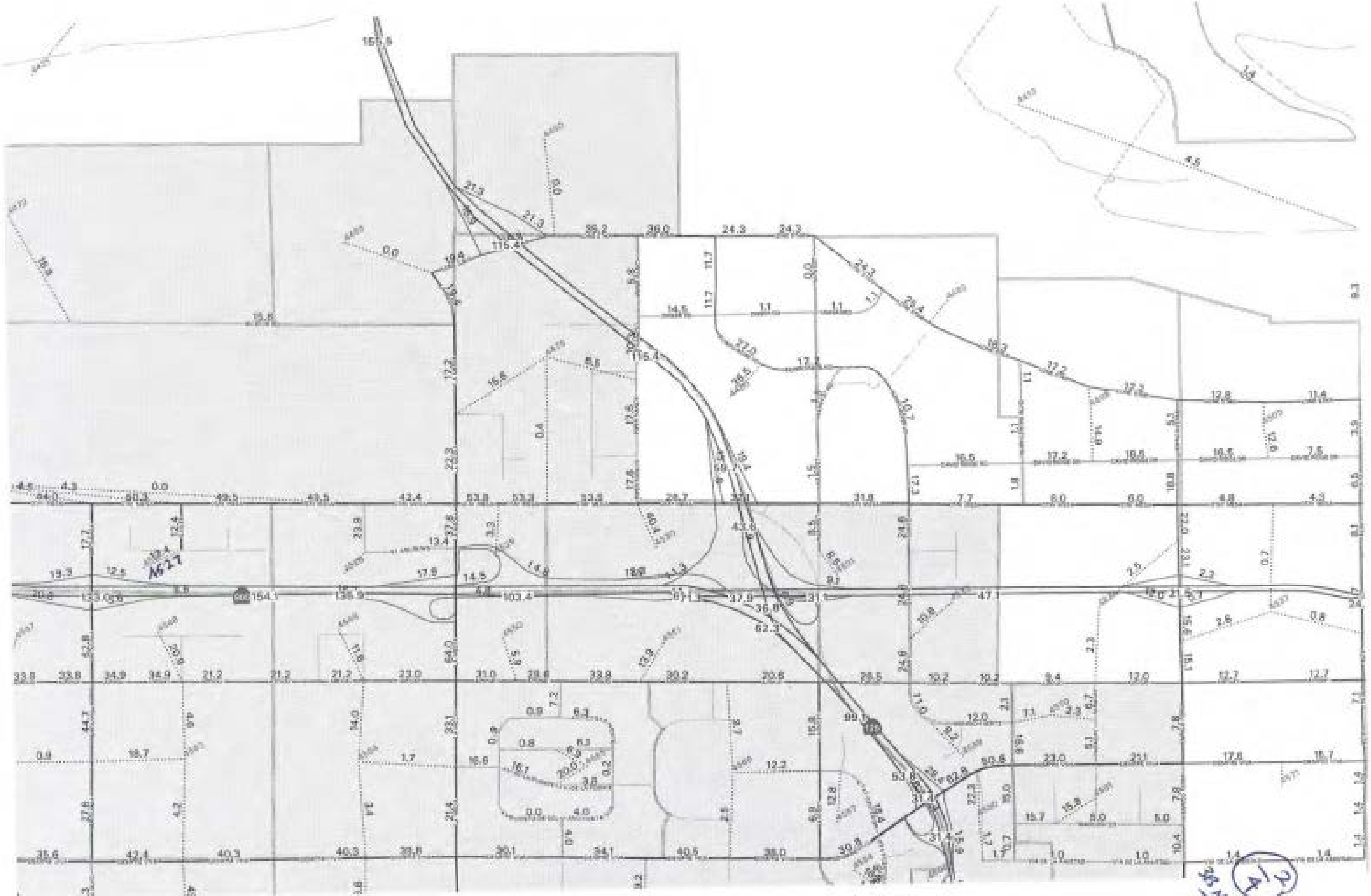
OTAY MESA Final 2030 3B (.5 FAR)
trip generation and land use by zone   page 7

Zone	Code	Name	Type	Amount	Trips Person	Trips Vehicle
4586	4112	RIGHT-OF-WAY	acre	7.1	0.	0.
4586	9101	INACTIVE USE	acre	257.7	0.	0.
4586	9734	HEAVY INDUSTRY (KSF)	ksf	1887.7	9438.	7803.
4586		TOTAL			9438.	7803.
4587	4112	RIGHT-OF-WAY	acre	10.9	0.	0.
4587	9734	HEAVY INDUSTRY (KSF)	ksf	3039.0	15195.	12563.
4587		TOTAL			15195.	12563.
4588	4112	RIGHT-OF-WAY	acre	6.1	0.	0.
4588	9740	CROSS BORDER FACILITY (PASS)	pass	17725.0	48230.	31205.
4588	9741	CROSS BORDER FAC-HOTEL(RM)	room	300.0	4860.	2996.
4588	9742	CROSS BORDER FAC-INDPRK(KSF)	ksf	280.0	4088.	3351.
4588	9743	CROSS BORDER FAC-GAS (PUMP)	pump	12.0	2466.	1790.
4588	9744	CROSS BORDER FAC-RETAIL(KSF)	ksf	78.5	4420.	3127.
4588	9752	IBT-OFFICE(KSF-270;ZN 4588)	ksf	269.9	4643.	3559.
4588	9759	IBT-WAREHOUSE(KSF-ZN4588)	ksf	530.0	3233.	2643.
4588	9760	IBT-BUSINESS PARK(KSF-4588)	ksf	353.4	7068.	5794.
4588	9761	IBT-INDUST PARK(KSF-4588)	ksf	530.0	5247.	4241.
4588	9762	IBT-MANUFACTURING(KSF-4588)	ksf	176.7	883.	714.
4588		TOTAL			85138.	59419.
4589	9101	INACTIVE USE	acre	53.0	0.	0.
4589	9735	IBT-WAREHOUSE (KSF)	ksf	300.2	1831.	1497.
4589	9736	IBT-BUSINESS PARK(KSF)	ksf	200.2	4003.	3282.
4589	9737	IBT INDUSTRIAL PARK(KSF)	ksf	300.2	2972.	2402.
4589	9738	IBT-MANUFACTURING (KSF)	ksf	100.1	500.	404.
4589	9748	IBT-OFFICE(KSF-100;ZN 4589)	ksf	100.1	2192.	1680.
4589	9771	FIRE OR POLICE STATION	acre	10.9	305.	225.
4589		TOTAL			11804.	9490.
4590	4112	RIGHT-OF-WAY	acre	24.0	0.	0.
4590	9735	IBT-WAREHOUSE (KSF)	ksf	1078.1	6576.	5375.
4590	9736	IBT-BUSINESS PARK(KSF)	ksf	718.7	14375.	11784.
4590	9737	IBT-INDUSTRIAL PARK(KSF)	ksf	1078.1	10673.	8626.
4590	9738	IBT-MANUFACTURING (KSF)	ksf	359.4	1797.	1452.
4590	9757	IBT-OFFICE(KSF-359;ZN 4590)	ksf	359.4	5786.	4435.
4590		TOTAL			39207.	31672.
4606	4001	OMPOE IN/OUT LADEN(TRUCKS)	truck	2000.0	10600.	8096.
4606		TOTAL			10600.	8096.
4607	4002	OMPOE IN/OUT UNLADEN(TRUCKS)	truck	4000.0	21200.	16192.
4607		TOTAL			21200.	16192.
4608	4112	RIGHT-OF-WAY	acre	22.0	0.	0.
4608	9101	INACTIVE USE	acre	44.0	0.	0.
4608	9710	MULTI-FAMILY(UNDER20DU/AC)	du	145.0	1653.	1160.
4608	9715	LIGHT INDUSTRY LRG IP(KSF)	ksf	108.5	1074.	868.
4608	9731	NEIGHBORHOOD COMMERCIAL(KSF)	ksf	35.9	6095.	4312.
4608	9734	HEAVY INDUSTRY (KSF)	ksf	1420.9	7105.	5874.
4608		TOTAL			15926.	12215.

OTAY MESA Final 2030 3B (.5 FAR)
trip generation and land use by zone

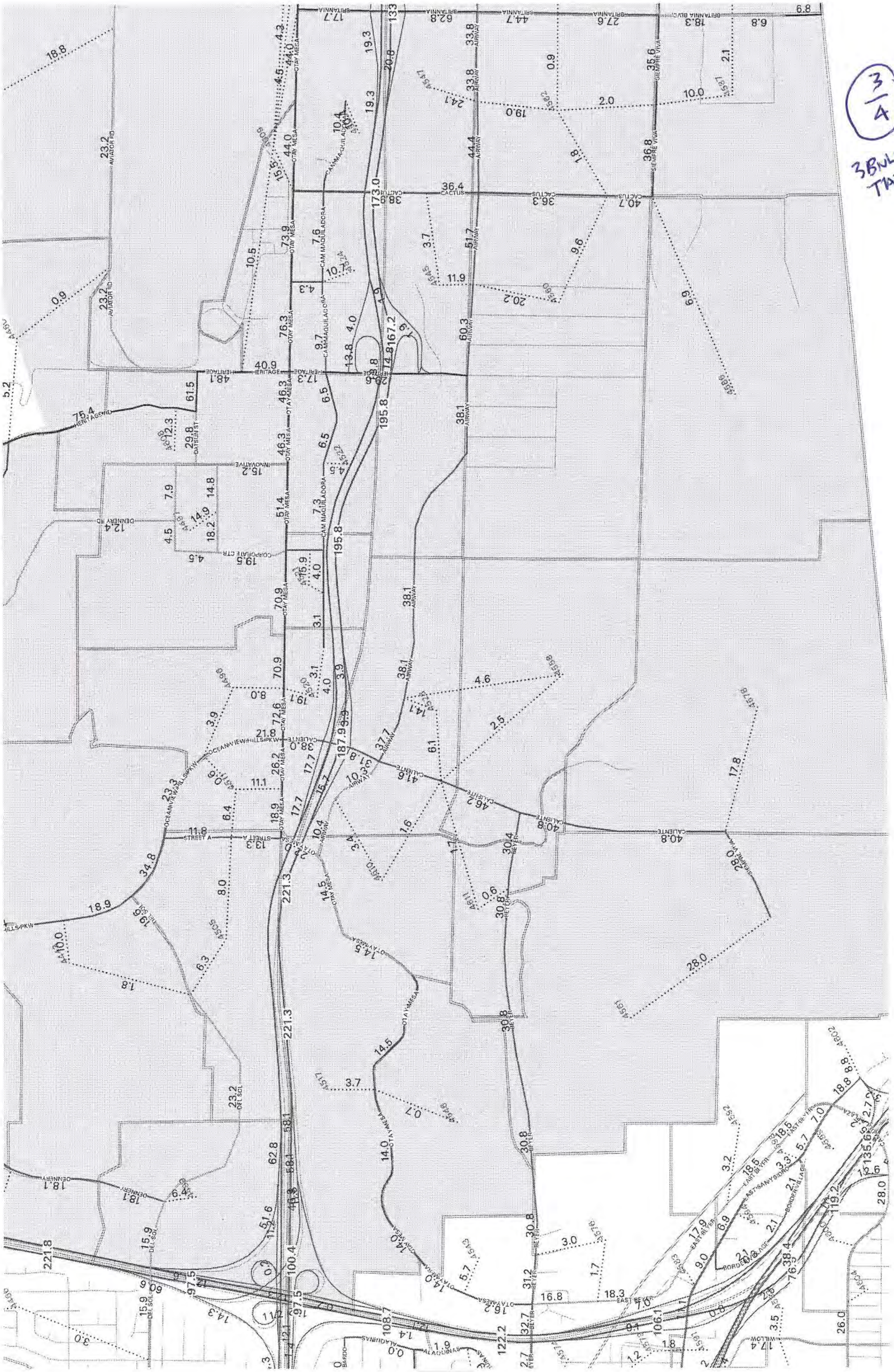
Zone	Land Use Code	Name	Type	Amount	Trips Person	Trips Vehicle
4609	9720	TRUCK STORAGE (WR+SG&STRG)	acre	30.0	1125.	920.
4609	9726	COMMERCIAL AIRPORT (CM/FLT)	flt	682.0	2114.	1368.
4609	9733	COMMUNITY COMMERCIAL (KSF)	ksf	182.9	18290.	12941.
4609	9761	COMMERCIAL OFFICE(BRWN FLD)	ksf	265.9	3702.	2454.
4609	9764	HOTEL (BRWN FLD)	room	270.0	4374.	2697.
4609	9765	GAS STATION (BRWN FLD)	ksf	3.2	4311.	3130.
4609	9766	FAST FOOD REST (BRWN FLD)	ksf	14.3	14098.	9975.
4609	9767	HIGH T/O REST (BRWN FLD)	ksf	15.8	2861.	2026.
4609	9769	PARK & RIDE (BRWN FLD)	acre	0.7	389.	297.
4609		TOTAL			50766.	35806.
4610	4112	RIGHT-OF-WAY	acre	23.3	0.	0.
4610	9101	INACTIVE USE	acre	2.6	0.	0.
4610	9710	MULTI-FAMILY(UNDER20DU/AC)	du	110.0	1254.	880.
4610	9775	SENIOR HIGH SCHOOL(STUDENTS)	stu	7400.0	9120.	4115.
4610		TOTAL			10374.	4995.
4611	7601	ACTIVE PARK	acre	5.8	386.	254.
4611	9101	INACTIVE USE	acre	23.8	0.	0.
4611	9710	MULTI-FAMILY(UNDER20DU/AC)	du	265.0	3021.	2121.
4611		TOTAL			3407.	2375.


3B WITHOUT LA MEDIA
READABLE VOLUMES TAZ
4/1



REVISED OTAY MESA 3B - 2030 Street Network

DRAFT - REVISED OTAY MESA CPU 2030 3B ADT PLOT



BRITANNIA
OTAY MESA
CACTUS
AIRWAY
HERITAGE
CAM MAQUILADORA
INNOVATIVE
DENNERY RD
CORPORATE CTR
CALIENTE
OCEAN VIEW HILLS PKW
STREET A
BEYER
DEL SOL
SIEMPRE VIVA
EAST BEYER
ALAQUINAS
WILLOW

3/4

3BNLM TAZ

7/4
36NLM TAB

Table A.3 – Phased Highway Projects - Revenue Constrained Plan (Continued)

Year Built By	Freeway	From	To	Existing	Improvements	($ Millions - 2010 Dollars) Cost	Cumulative Cost
2020	SR 94/ SR 125	South to East (Freeway Connector)				$ 139	$ 7,342
2020	I-5	SR 56	Manchester Ave	8F+2HOV	10F+4ML	$ 655	$ 7,997
2030	I-5	Palomar St	SR 54	8F	8F+2HL	$ 200	$ 8,197
2030	I-5	I-5/I-805 Merge	SR 56	8F/14F+2HOV	8F/14F+4ML	$ 40	$ 8,237
2030	I-5	Manchester Ave	Palomar Airport Rd	8F+2HOV	10F+4ML	$ 1,230	$ 9,467
2030	I-5/SR 56	West to North (Freeway Connector)				$ 65	$ 9,532
2030	I-5/SR 56	South to East (Freeway Connector)				$ 120	$ 9,652
2030	I-15/SR 78	East to South and North to West (HOV Connectors)				$ 105	$ 9,757
2030	I-805	SR 905	Palomar St	8F	8F+4ML	$ 350	$ 10,107
2030	I-805	SR 15	Mission Valley	8F	8F+4ML	$ 110	$ 10,217
2030	I-805	Mission Valley Viaduct	SR 52	8F/10F	8F/10F+4ML	$ 537	$ 10,754
2030	SR 52	Mast Blvd	Dye Rd	2C/4C	4C	$ 570	$ [illegible]
2030	SR 94/ SR 125	West to North (Freeway Connector)				$ 180	$ [illegible]
2030	SR 125	SR 54	I-5	8F	10	$ [illegible]	$ [illegible]
2030	SR 241	Orange County	I-5	4T	6T	$ 58	$ [illegible]
2030	I-5	Palomar Airport Rd	SR 78	8F+2HOV	8F+4ML	$ 1,009	$ [illegible]
2035	I-5	SR 78	Vandegrift Blvd	8F	8F+4ML	$ 455	$ 13,495
2035	I-15/SR 94	South to West and East to North (HOV Connectors)				$ 80	$ 13,575
2035	SR 52	I-805	I-15	6F	6F+2ML	$ 223	$ 13,798
2040	I-5/SR 78	South to East and West to North (HOV Connectors)				$ 120	$ 13,918
2040	I-5/SR 78	North to East and West to South (HOV Connectors)				$ 120	$ 14,038
2040	I-805/I-15	South to East (Freeway Connector)				$ 60	$ 14,098

[illegible]

ADD MANAGED LANES NORTH OF SR-905

2050 RTP

CALTRANS MOST RESTRICTIVE METER RATE

From: Douglas Hooper [douglas_hooper@dot.ca.gov]
Sent: Thursday, November 18, 2010 4:44 PM
To: sam@urbansystems.net
Subject: SR 905 ramp meter info to date

Good Afternoon Sam,

Please excuse my delay in getting back. These are the locations I have after discussing with my coworker:

SB 905
Britannia Blvd - 2 SOV lanes and 2 cars per green La Media Rd - same as above

NB 905
La Media Rd (SB) - 1 SOV and 1 HOV with 2 cars per green La Media Rd (NB) - same as above

For now I would assume the most restrictive cycling rate to be 15 sec/cycle for all the onramps.
Another one of my coworkers will be gone through this month and could ask more details then if needed.

Hope this info will suffice,

Douglas Hooper
Traffic Operations
Ramp Metering and Congestion Monitoring
Office (858) 467 - 4379
Fax (858) 467 - 3047

1. 2 SOV LANES X 2 CARS PER GREEN PER LANE = 4 CARS PER GREEN CYCLE.

2. 3600 SECONDS PER HOUR / 15 SECONDS PER CYCLE = 240 CYCLES PER HOUR

3. 240 CYCLES PER HOUR X 4 CARS PER GREEN CYCLE = 960 CARS PER HOUR METER RATE

1/2
KD

PEAK HOUR VOLUME DATA

Peak hour volume data consists of hourly volume relationships and data location. The hourly volumes are expressed as a percentage of the Annual Average Daily Traffic (AADT). The percentages are shown for both the AM and the PM peak periods

The principle data described here are the K factor, the D factor and their product (KD). The K factor is the percentage of AADT during the peak hour for both directions of travel. The D factor is the percentage of the peak hour travel in the peak direction. KD multiplied with the AADT gives the one way peak period directional flow rate or the design hourly volume (DHV). The design hourly volume is used for either Operational Analysis or Design Analysis. Refer to the 2000 Highway Capacity Manual for more details.

Following is a glossary of terms used in this listing of peak hour volume data.

Dir	Indicates direction of travel for peak volume
AADT	Annual Average Daily Traffic in vehicles per day (vpd).
AM Peak	Represents the morning peak period for traffic analysis
CS	Control Station Number. Caltrans identification number for monitoring site.
CO	County abbreviation used by Caltrans
D	D factor. The percentage of traffic in the peak direction during the peak hour. Values in this book are derived by dividing the measured PHV by the sum of both directions of travel during the peak hour.
DAY	Day of week for the peak volume.
DDHV	The directional design hour volume, in vehicles per hour (vph) DDHV=AADTxKxD. See equation (8-1) on page 8-11 of the 2000 Highway Capacity Manual.
DI	Caltrans has twelve transportation districts statewide. This abbreviation identifies the district in which the count station is located.
HR	The ending time for the peak hour volume listed. The volume observed fro 1 to 2 would be recorded as 2.

									AM PEAK								PM PEAK						
									1 WAY	%	%	%					1 WAY	%	%	%			
DI	RTE	CO	PRE	PM	CS	LEG	YR	Dir					HR	DAY	MNTH	Dir					HR	DAY	MNTH
04	780	[illegible]		[illegible]	[illegible]	A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	THU	SEP	[illegible]	[illegible]	9.54	52.40	[illegible]	[illegible]	[illegible]	SEP
11	805	[illegible]		[illegible]	[illegible]	A	[illegible]	[illegible]	3521	[illegible]	[illegible]	4.32	9	[illegible]	[illegible]	S	[illegible]	8.55	[illegible]	5.41	[illegible]	FRI	OCT
11	805	SD		[illegible]	664	[illegible]	[illegible]	N	5901	[illegible]	[illegible]	[illegible]	[illegible]	WED	JAN	S	[illegible]	[illegible]	[illegible]	4.40	[illegible]	[illegible]	[illegible]
11	805	[illegible]		8.544	[illegible]	A	[illegible]	N	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	S	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	MON	MAY
11	805	[illegible]		[illegible]	[illegible]	B	08	N	9774	[illegible]	[illegible]	[illegible]	[illegible]	TUE	MAY	S	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	OCT
11	805	[illegible]		[illegible]	[illegible]	B	[illegible]	N	[illegible]	[illegible]	[illegible]	[illegible]	7	[illegible]	JUN	S	[illegible]	[illegible]	58.79	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	SD		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.34	[illegible]	[illegible]	[illegible]	TUE	SEP	N	10432	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	JUN
[illegible]	[illegible]	SD		[illegible]	[illegible]	[illegible]	[illegible]	N	[illegible]	7.43	[illegible]	[illegible]	7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	18	THU	OCT
	[illegible]	SD		17.85	[illegible]	A	[illegible]	N	11114	[illegible]	[illegible]	[illegible]	7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	MAY
11	805	SD		[illegible]	[illegible]	[illegible]	[illegible]	N	[illegible]	[illegible]	[illegible]	[illegible]	7	MON	JUN	S	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	THU	MAY
11	805	SD		[illegible]	[illegible]	X	[illegible]	N	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AUG	S	[illegible]	[illegible]	[illegible]	[illegible]	16	THU	MAR
11	805	SD		[illegible]	[illegible]	B	[illegible]	[illegible]	[illegible]	8.10	[illegible]	[illegible]	8	WED	NOV	N	6360	[illegible]	[illegible]	4.95	17	[illegible]	MAY
04	880	SCL		[illegible]	[illegible]	D	08	S	6600	7.82	53.69	[illegible]	8	TUE	JUL	S	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	APR
04	880	ALA		[illegible]	[illegible]	[illegible]	08	[illegible]	[illegible]	6.85	[illegible]	[illegible]	8	MON	JUN	N	[illegible]	[illegible]	[illegible]	[illegible]	14	[illegible]	JUN
11	905	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	W	[illegible]	8.52	[illegible]	[illegible]	[illegible]	WED	[illegible]	[illegible]	[illegible]	[illegible]	55.03	[illegible]	16	THU	SEP
11	[illegible]	SD		5.164	[illegible]	A	[illegible]	E	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	THU	APR	W	[illegible]	[illegible]	[illegible]	[illegible]	16	FRI	FEB
11	[illegible]	SD		[illegible]	[illegible]	B	[illegible]	W	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TUE	OCT	E	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

"D" USE 60/40
"K" USE 8%

I-805 PEAK HOUR & DIRECTIONAL SPLIT

TP

From: Huffman, Victoria [VHuffman@sandiego.gov]
Sent: Wednesday, January 26, 2011 5:51 PM
To: Lisa@urbansystems.net; sam@urbansystems.net
Cc: Gonsalves, Ann
Subject: Possible ADT Adjustments

1/7 3BN LM ADJ.

Hi Sam,

Here's the list of TAZs with zone connector loadings that might require some segment ADT adjustment:

Adopted Community Plan: (SEE APPENDIX B)

4561
4586
4560
4547
4587
4588
4567
4569
4532
4497
4608 (loading okay but assume loading point is signalized as this would reduce tremendous number of U-turns at Datsun/Otay Valley Road)

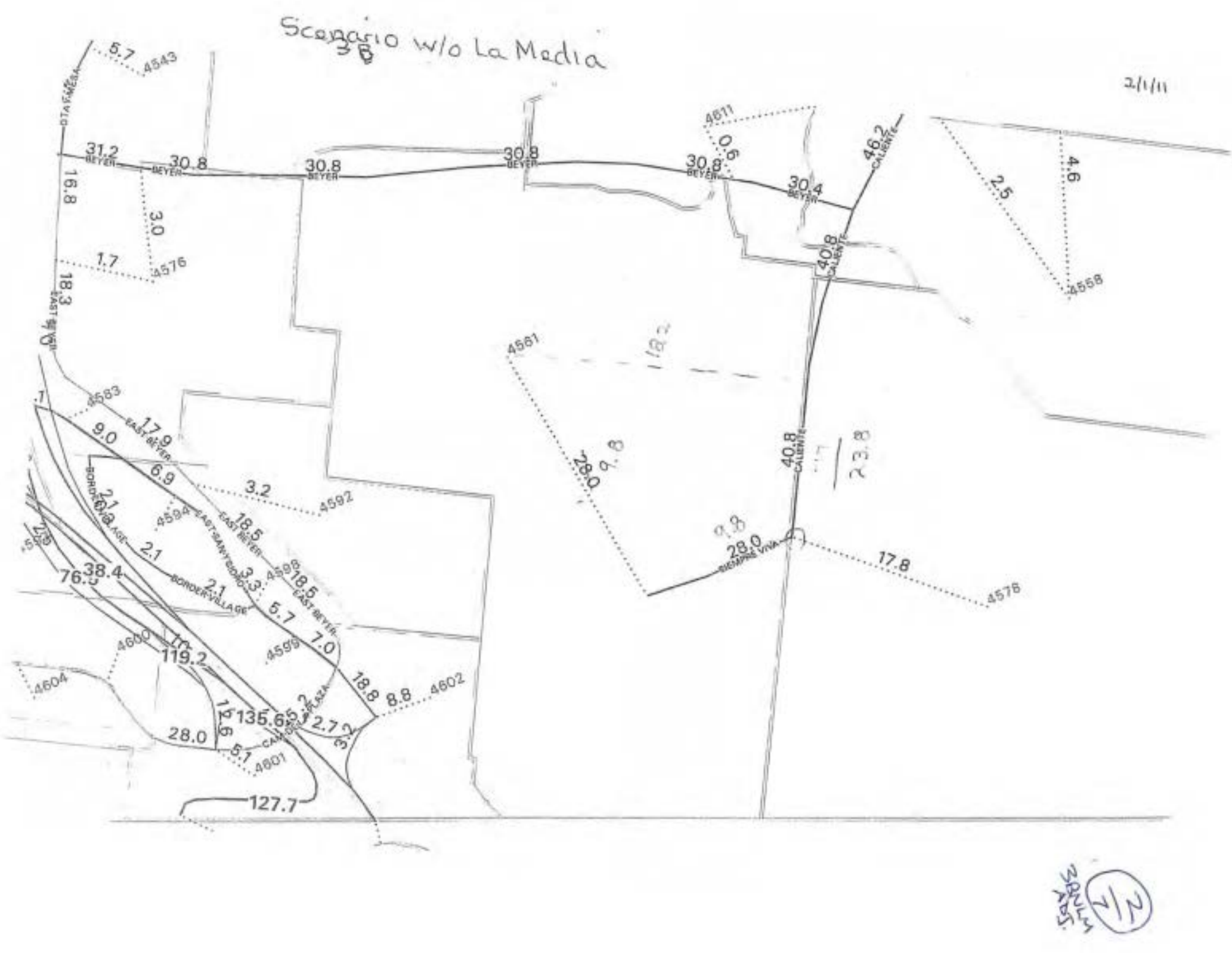
Scenario 3B (both with and without La Media Rd):

(SEE ATTACHED FIGURE 7-1 WITH AGREED TO CHANGES)

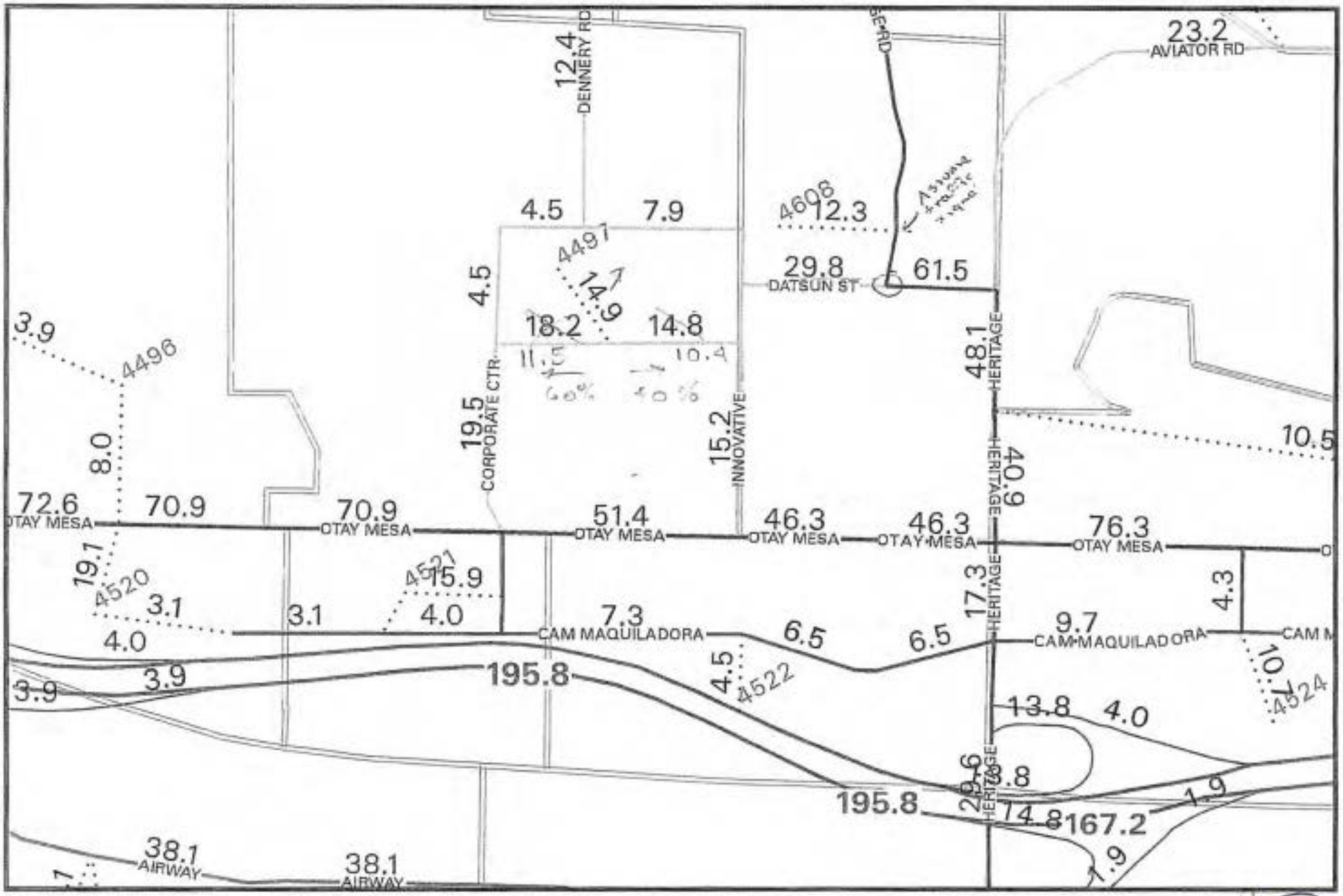
4561
4586
4587
4560
4547
4497
4569
4532
4587
4608 (loading okay but assume loading pcint is signalized) (DONE; NO CHANGE TO ANT TO THE NORTH)

As I also mentioned to you on the phone today, there are some other circulation element streets that are not shown in the forecasts which may need to be added to the proposed circulation element figures. I'll send you a figure showing these when I'm back in the office (Done)

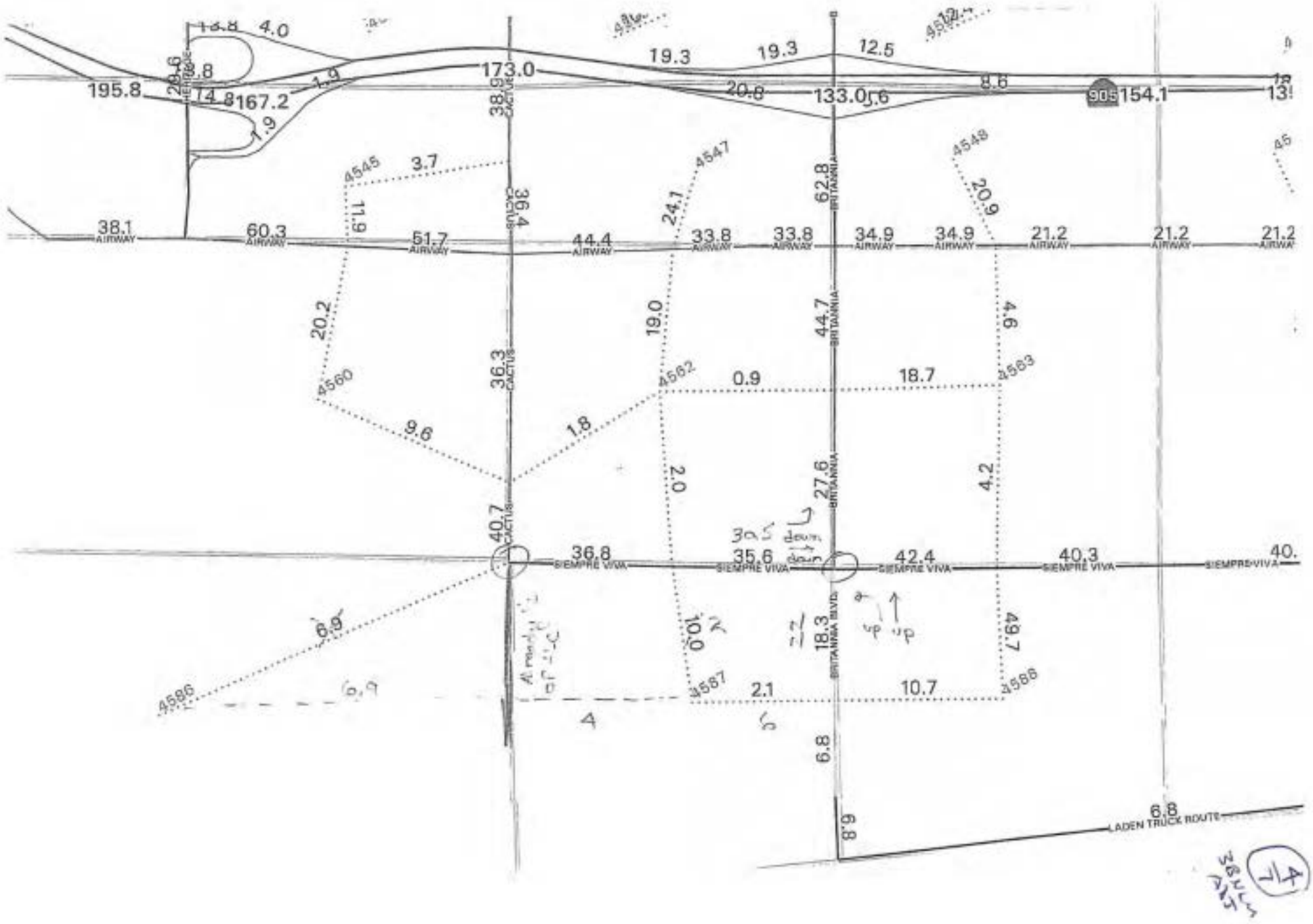
Thanks,
Victoria


Scenario w/o La Media
3B
2/1/11
5.7
4543
DTA FAMOSA
31.2
BEYER
30.8
BEYER
30.8
BEYER
30.8
BEYER
30.8
BEYER
30.4
BEYER
46.2
CALIENTE
0.6
4611
16.8
3.0
1.7
4576
18.3
EAST BEYER
40.8
CALIENTE
2.5
4.6
4558
4561
9.8
0.2
23.8
4583
17.9
EAST BEYER
9.0
6.9
3.2
4592
4594
EAST SAN YSIDRO
18.5
EAST BEYER
2.1
BORDER VILLAGE
2.1
3.3
4598
18.5
EAST BEYER
5.7
7.0
4599
28.0
SIEMPRE VIVA
17.8
4576
76.3
38.4
4600
119.2
4604
18.8
8.8
4602
28.0
12.6
135.6
5.2
2.7
3.2
CAMINO DE LA PLAZA
5.1
4601
127.7

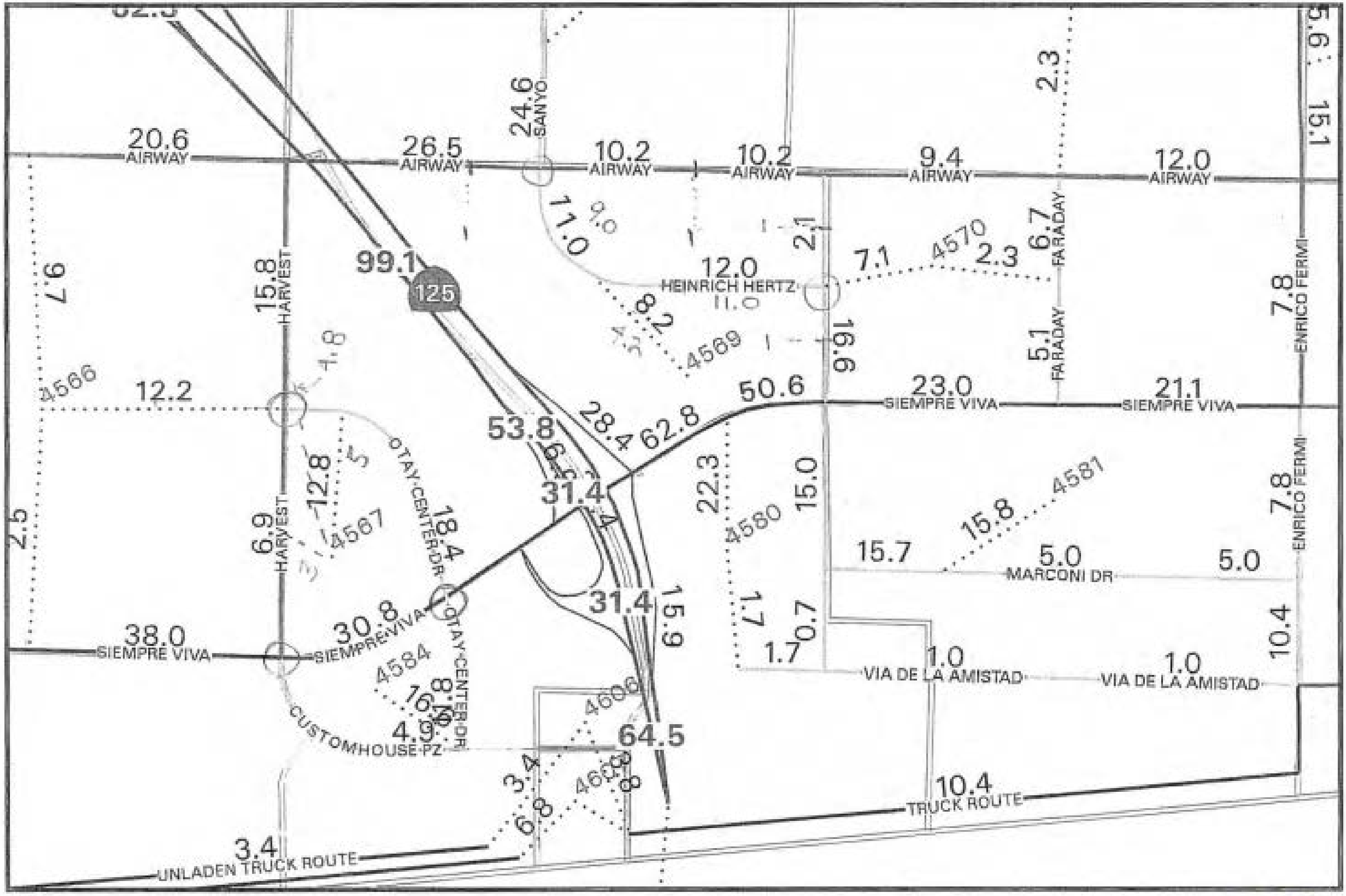
2/1/11


DENNERY RD
12.4
AVIATOR RD
23.2
4.5
7.9
4608
12.3
4497
4.5
29.8
DATSUN ST
61.5
18.2
14.8
48.1
HERITAGE
3.9
4496
8.0
CORPORATE CTR
19.5
INNOVATIVE
15.2
10.5
72.6
70.9
70.9
51.4
46.3
46.3
76.3
OTAY MESA
OTAY MESA
OTAY MESA
OTAY MESA
OTAY MESA
OTAY MESA
40.9
19.1
4520
4521
15.9
3.1
3.1
4.0
7.3
CAM MAQUILADORA
6.5
6.5
17.3
9.7
CAM MAQUILADORA
4.3
4.0
3.9
3.9
195.8
4.5
4522
13.8
4.0
4524
195.8
29.6
14.8
167.2
1.9
1.9
38.1
AIRWAY
38.1
AIRWAY

7/13


AIRWAY
CACTUS
BRITANNIA
SIEMPRE VIVA
LADEN TRUCK ROUTE
195.8
167.2
173.0
133.0
154.1
38.1
60.3
51.7
44.4
33.8
34.9
21.2
36.3
36.8
35.6
42.4
40.3
18.3
6.8

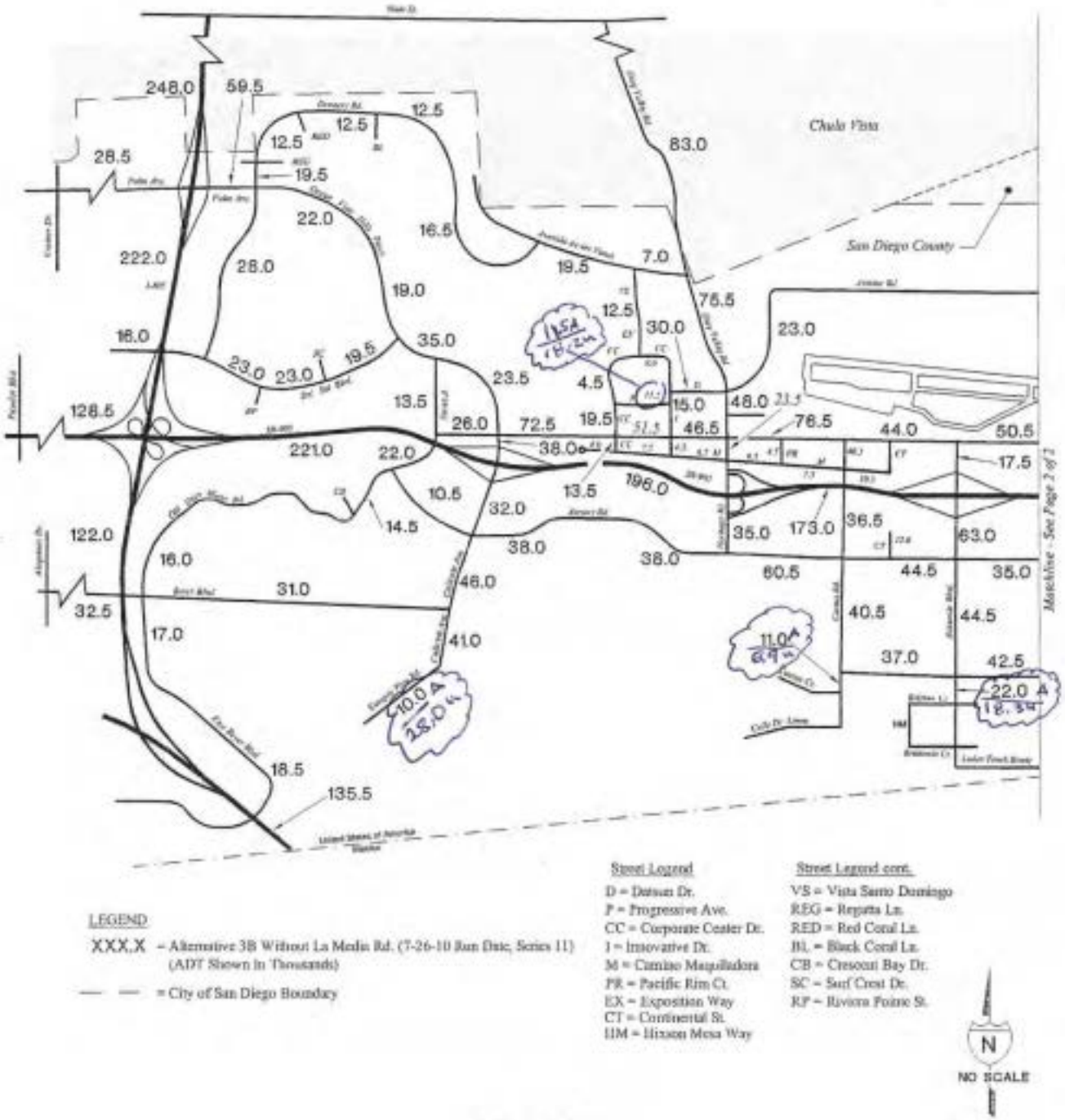
2/1/11



AIRWAY
20.6
26.5
10.2
10.2
9.4
12.0
24.6
SANYO
2.3
15.1
5.6
HARVEST
15.8
6.9
12.8
4567
4566
9.7
2.5
12.2
4.8
99.1
125
53.8
31.4
28.4
62.8
50.6
31.4
15.9
64.5
11.0
12.0
HEINRICH HERTZ
8.2
4569
2.1
7.1
4570
2.3
6.7
FARADAY
5.1
16.6
SIEMPRE VIVA
23.0
21.1
7.8
ENRICO FERMI
22.3
4580
15.0
4581
15.8
15.7
5.0
MARCONI DR
5.0
10.4
OTAY CENTER DR
18.4
30.8
38.0
4584
16.9
4.9
CUSTOMHOUSE PZ
3.4
6.8
4606
4608
1.7
0.7
1.0
VIA DE LA AMISTAD
1.0
10.4
TRUCK ROUTE
3.4
UNLADEN TRUCK ROUTE

6/7
3B NLM ADJ.

Page 1 of 2



LEGEND

XXX.X = Alternative 3B Without La Media Rd. (7-26-10 Run Date, Series 11) (ADT Shown in Thousands)

— — = City of San Diego Boundary

Street Legend

D = Datsun Dr.
P = Progressive Ave.
CC = Corporate Center Dr.
I = Innovative Dr.
M = Camino Maquiladora
PR = Pacific Rim Ct.
EX = Exposition Way
CT = Continental St.
HM = Hixson Mesa Way

Street Legend cont.

VS = Vista Santo Domingo
REG = Regatta Ln.
RED = Red Coral Ln.
BL = Black Coral Ln.
CB = Crescent Bay Dr.
SC = Surf Crest Dr.
RP = Riviera Pointe St.

FIGURE 7-1

Scenario 3B Without La Media Road Average Daily Traffic

7/7
3B NLM ADT

FIGURE 7-1

Scenario 3B Without La Media Road Average Daily Traffic

URBAN SYSTEMS ASSOCIATES, INC.
PLANNING & TRAFFIC ENGINEERING, MARKETING & PROJECT SUPPORT
CONSULTANTS TO INDUSTRY AND GOVERNMENT

E-MEMO

11/10 TUES

ATTN:	Victoria Huffman, Associate Traffic Engineer, DSD – City of San Diego	E-Mail: ▼ vhuffman@sandiego.gov	
FROM:	Sam P. Kab. II	TOTAL PAGES (including Cover):	3+7Attachments
DATE:	October 29, 2010	TIME: 9:44:48 AM	JOB NUMBER: 001309
SUBJECT:	**OMCPU Intersection Peak Hour Turn Volumes (3B Without La Media Rd.)**		

As you requested, provided below is a description of the methods used to estimate Horizon Year peak hour turn volumes at the five intersections you selected and worksheets showing peak hour directional splits and percentages.

Otay Mesa Road / Heritage Road

The existing peak hour flow on Otay Mesa Road at the west end of the community between I-805 and Heritage Road is shown in **Attachment 1**. The directional split is approximately 33:67 (WB: EB) and the peak hour is 7% of ADT in the AM peak. The PM peak split is approximately 63:37 (WB: EB) and the peak is 9% of ADT. Once the Otay Mesa Community builds out with more residential and commercial uses, the directional splits and peak hour percentage are likely to be 60:40 and between 7% and 12%. These volumes were used to estimate peak hour flows on the west approach, then distributed logically (proportional to ADT) at the intersection to add up to the directional flow at the other approaches. However, the high volume on Otay Mesa Road east of heritage Road (76,500 ADT) compared to the other approaches makes it difficult to maintain the desired peak hour percentages so that the north and south legs are higher than 10%. The Heritage Road south leg is expected to have a high peak hour percentage since the leg extends through the SR 905 interchange. Attachment 2 shows the resulting split and peak hour percentages at each leg of the intersection.

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10/29/10

Caliente Avenue / SR-905 WB Ramps

This interchange serves the Ocean View Hills residential uses to the north, future residential uses to the south (40,000 ADT from Otay Mesa South), the high volumes of industrial / commercial traffic on Otay Mesa Road, and through traffic on Airway Road to the east. These mixed uses should result in a relatively equal inbound / outbound peak flow and an approximately 10% of ADT peak hour flow.

Attachment 3 shows the full interchange with roadway and ramp ADT, and a tabulation of peak hour flows by direction. The tabulation shows the resulting peak hour flows to be approximately 10% of ADT and approximately 50/50 north south directional split on Caliente Avenue. The ramp volumes (shown on the forecast plot) are also approximately 10% of ADT. The off ramp volumes are split north – south approximately in the same proportion as the ADT volumes on Caliente Avenue to the north and to the south of the interchange (38,000 ADT north/ 32,000 ADT south / 54:46).

Britannia Blvd. / SR-905 WB Ramps

This location requires an overall volume comparison at the entire interchange. This location is unusual since the Britannia Blvd. volume south of the interchange is high (63,000 ADT) while low (17,000 ADT) north of the interchange. This interchange serves the industrial business park, IBT, CBP, and commercial uses south and east of the interchange, with very little residential uses. The westbound off-ramp also serves 700 peak hour laden truck equivalents that use Britannia Blvd. southbound to the Caltrans truck road parallel to the border. For these reasons, the peak hour percentages is estimated to be higher, approximately 12%, rather than 10% or so for a more mixed-use community access road. **Attachment 4** shows a summary of peak hour splits and percentages. **Attachment 5** shows ramp volumes at a typical high volume ramp that has a high AM peak hour and a low PM peak hour percentage(similar to these interchange ramps)

Otay Mesa Road / La Media Road

This intersection is the main cross-roads for the eastern portion of the community, with the SR-125 / Lonestar Road, Otay Mesa Road / SR-125, and La Media Rd / SR-905 interchange nearby. Therefore, high peak hour percentages are expected and an approximately 60 : 40 directional split. The north leg, La Media Road leading

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to the SR-125 / Lonestar Road interchange, functions as an extension of the Lonestar Road interchange ramps and therefore has a high peak hour percentage (20% AM, 14% PM). It should be noted that the land use assumed for the southwest quadrant of this intersection is "Community Commercial" with 37,500 loaded trips. These commercial trips, balanced in / out, tend to balance out the peaks through the intersection.

Attachment 6 shows the splits and peak percentages.

Britannia Blvd./ Siempre Viva Rd.

The south leg of this intersection currently has industrial cul-de-sac access. The forecast plot also has centroid connectors for the TAZ's each side of the road loading approximately 12,800 ADT. Peak hour trips have been assumed into / out of these TAZ's. The southbound unladen truck route has 700 peak hour truck equivalents added in. The nearby CBF has peak hour trips included that are more balanced than the typical industrial / office uses, so directional splits are closer to 45:55 along Siempre Viva Blvd.

Attachment 7 shows the splits and peak hour percentages.

Please review these locations and let me know of any adjustments to incorporate into the final report.

Cc: Kelly Broughton
Therese McMillan

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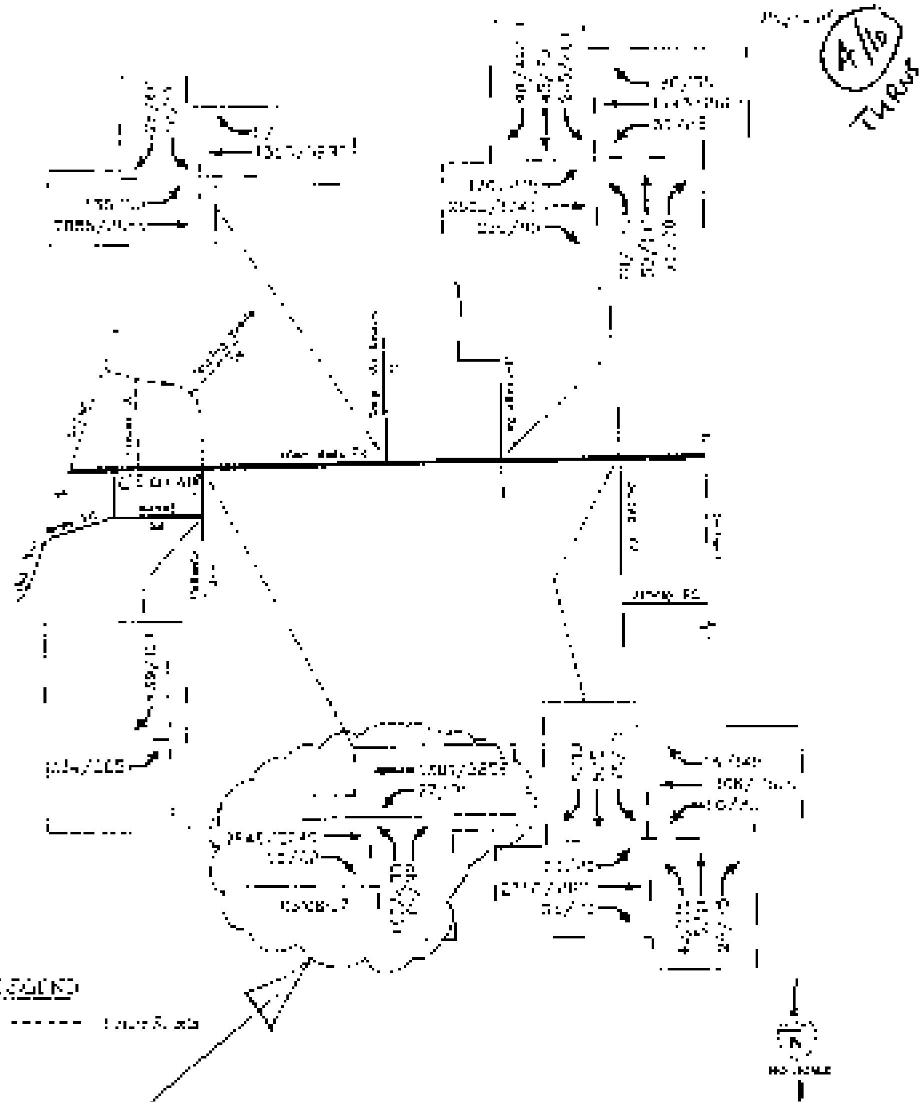


FIGURE 3.3

Existing AM / PM Peak Hour Traffic

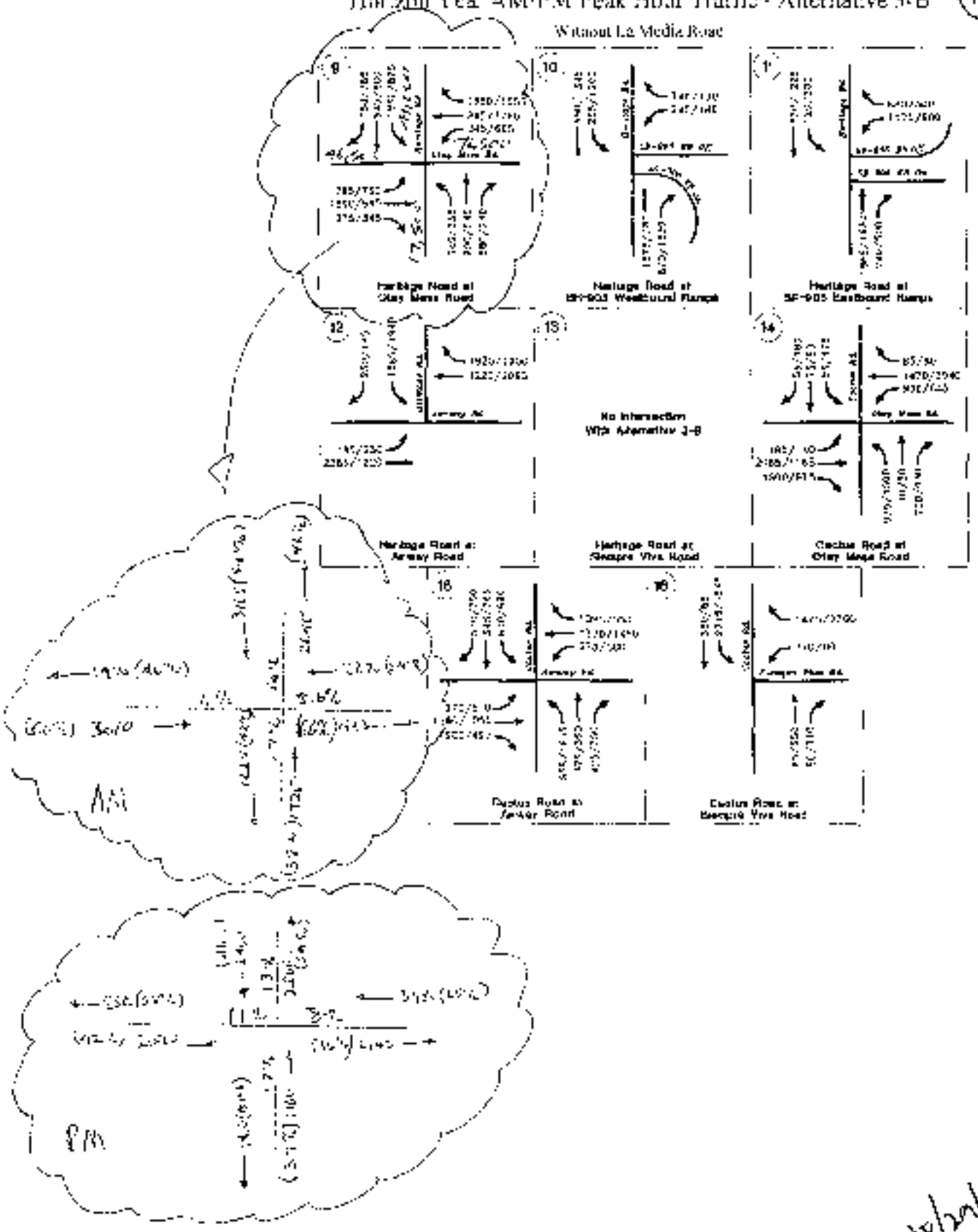
Existing Intersection Splits & Peak Hour Percentages				
	AM		PM	
WB	1,414	33%	3,492	63%
EB	[illegible]	67%	2,071	37%
Total	[illegible]		5,263	
	[illegible] / Capacity	[illegible]	5,263 / Capacity	9%

ATTACHMENT 2

ATTACHMENT 9

Horizon Year AM/PM Peak Hour Traffic - Alternative 3-B

Without La Media Road



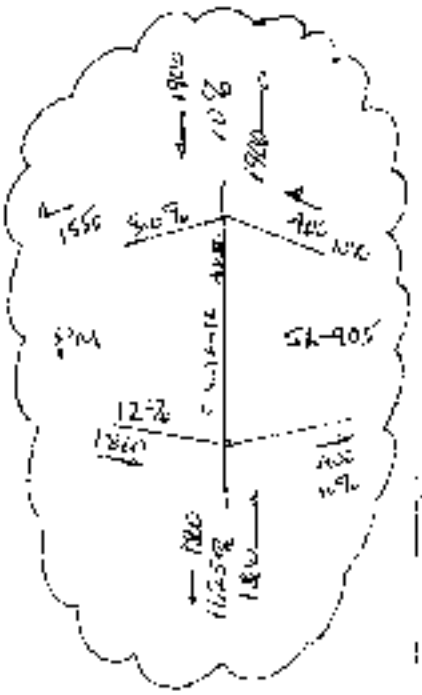
10/20/10

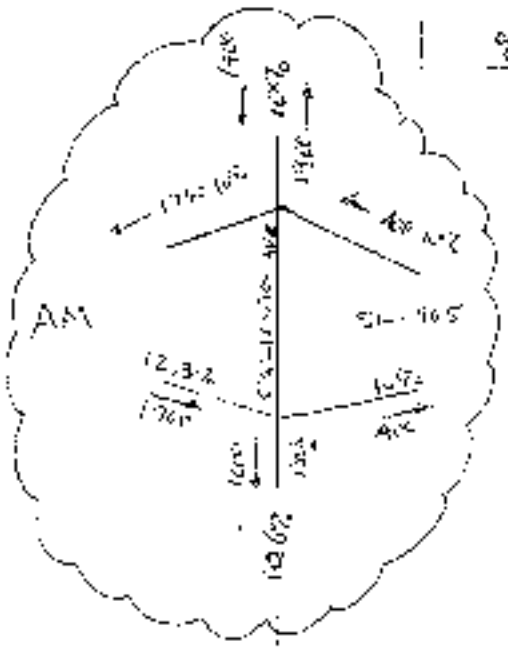
ATTACHMENT 3
CALIENTE AVE/SR-905

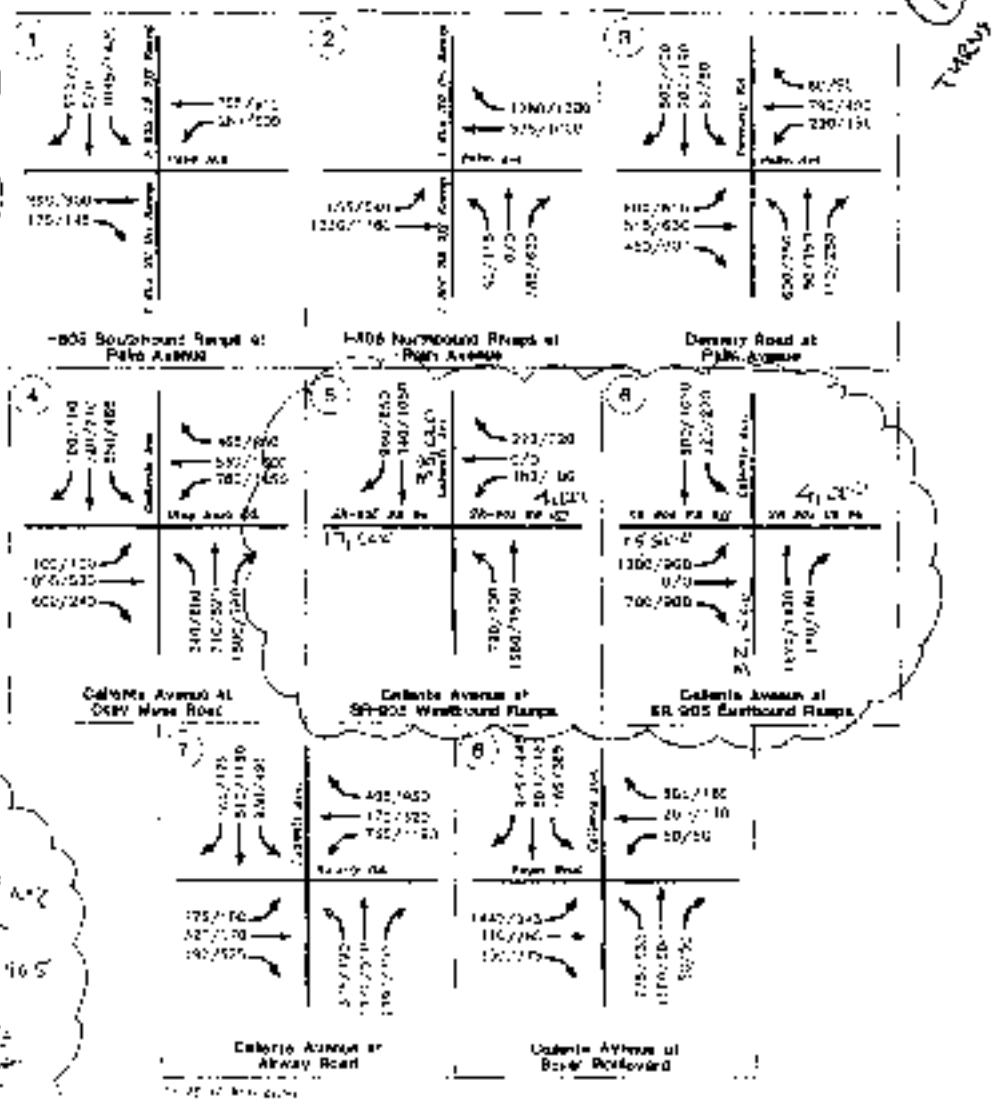
ATTACHMENT 9

Horizon Year AM/PM Peak Hour Traffic - Alternative 3-B

Without La Media Road





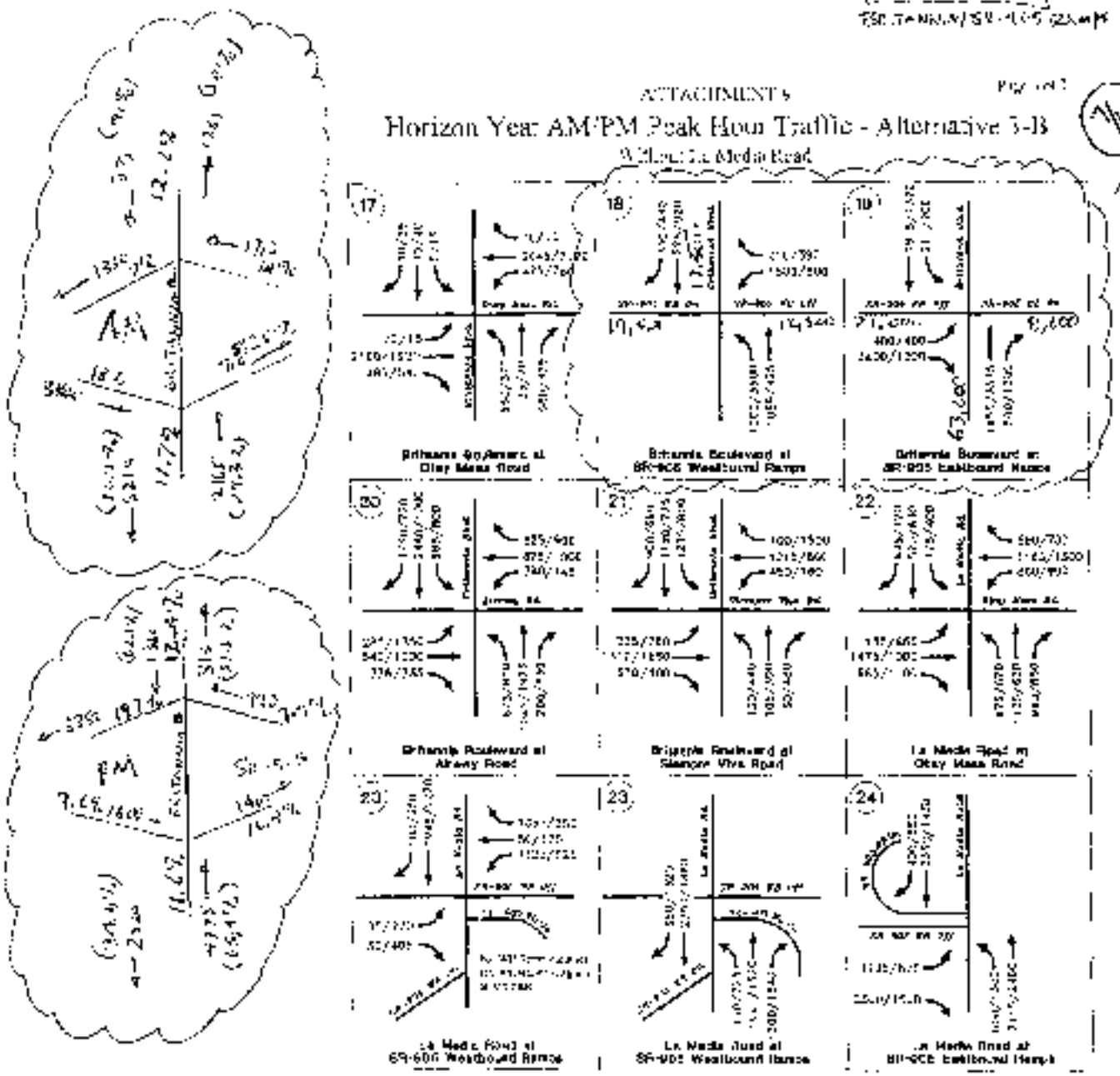


10/29/10

ATTACHMENT 4

ATTACHMENT 5

Horizon Year AM/PM Peak Hour Traffic - Alternative 3-B



11-SD-805

P POST P MILE	R S DESCRIPTION	1999 ADT	2000 ADT	2001 ADT	2002 ADT	2003 ADT	2004 ADT	2005 ADT	2006 ADT	2007 ADT	2008 ADT
[illegible]	[illegible]	[illegible]			[illegible]			[illegible]	[illegible]		[illegible]
[illegible]	[illegible] STONERIDGE DR	[illegible]			5100			[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]			[illegible]			[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]			[illegible]			[illegible]	[illegible]		[illegible]
[illegible]	[illegible]										[illegible]
[illegible]	[illegible]	[illegible]						[illegible]	[illegible]		
[illegible]	[illegible]							[illegible]	[illegible]		[illegible]
[illegible]	[illegible]							[illegible]	[illegible]		[illegible]
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[illegible]	[illegible]	[illegible]						[illegible]	[illegible]		[illegible]
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[illegible]	[illegible]										[illegible]
[illegible]	[illegible]										[illegible]
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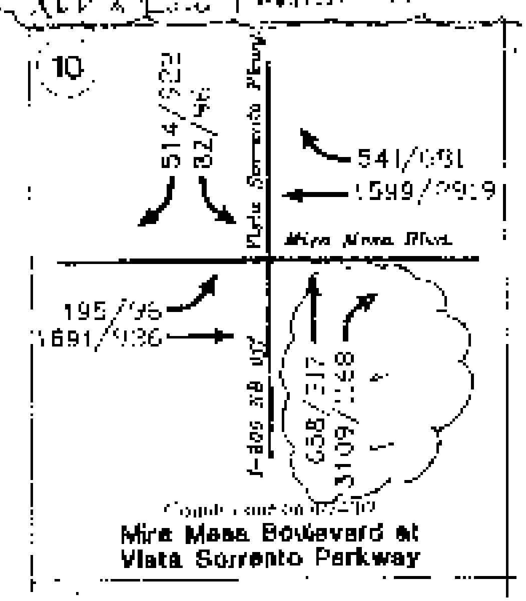


NB AM 3747 / Ramp ADT 24,300 ≅ 16% / PM 1435 / Ramp ADT 24,300 ≅ 6%

10/29/10

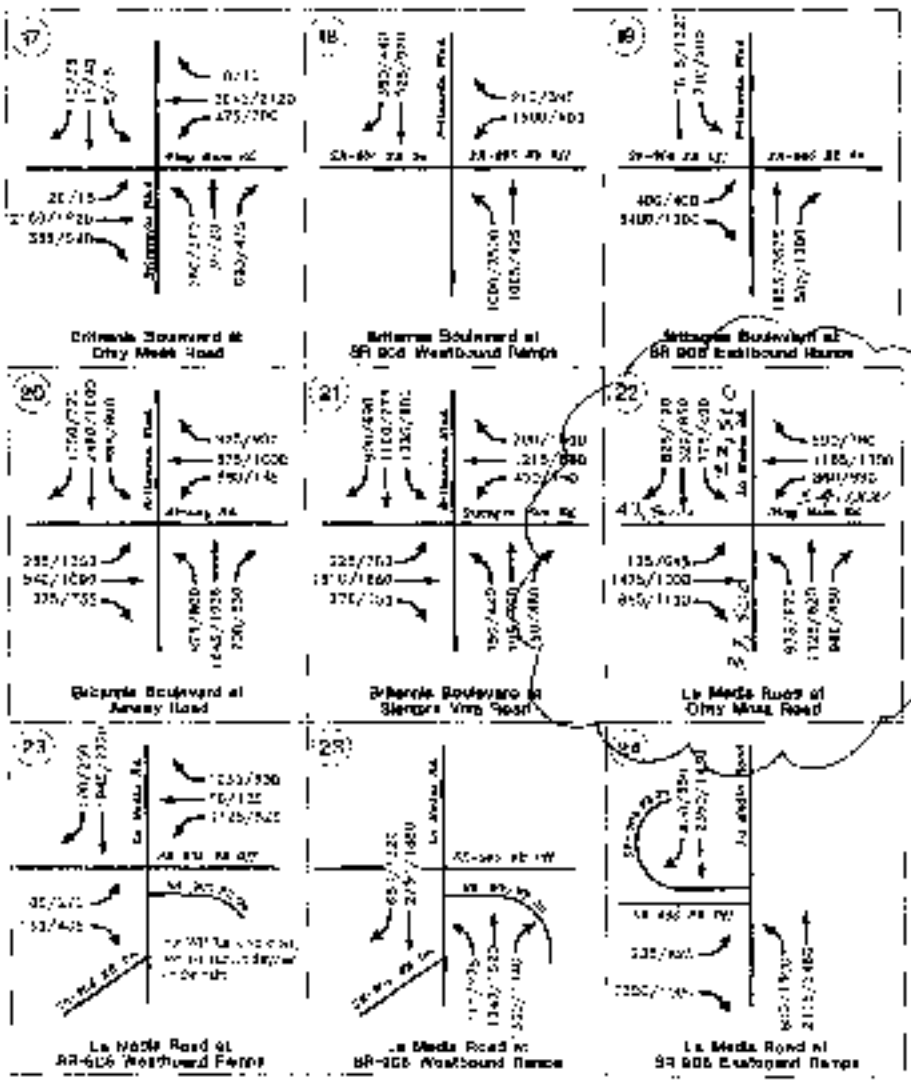
ATTACHMENT G

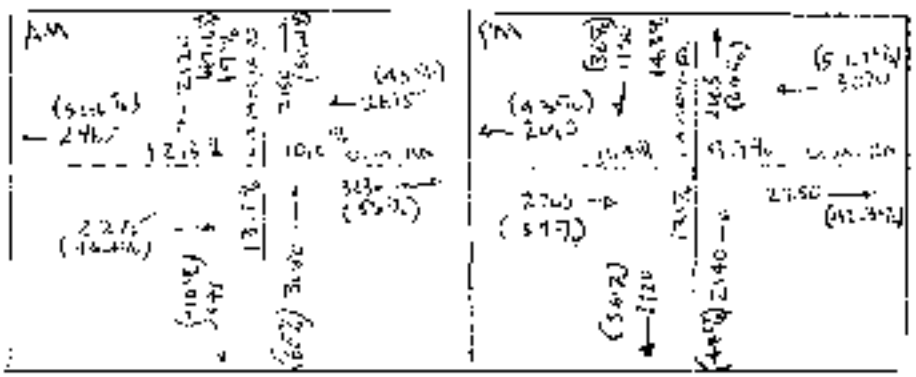
ATTACHMENT F

Page 1 of 1

Horizon Year AM/PM Peak Hour Traffic - Alternative 3-B

Without La Media Road





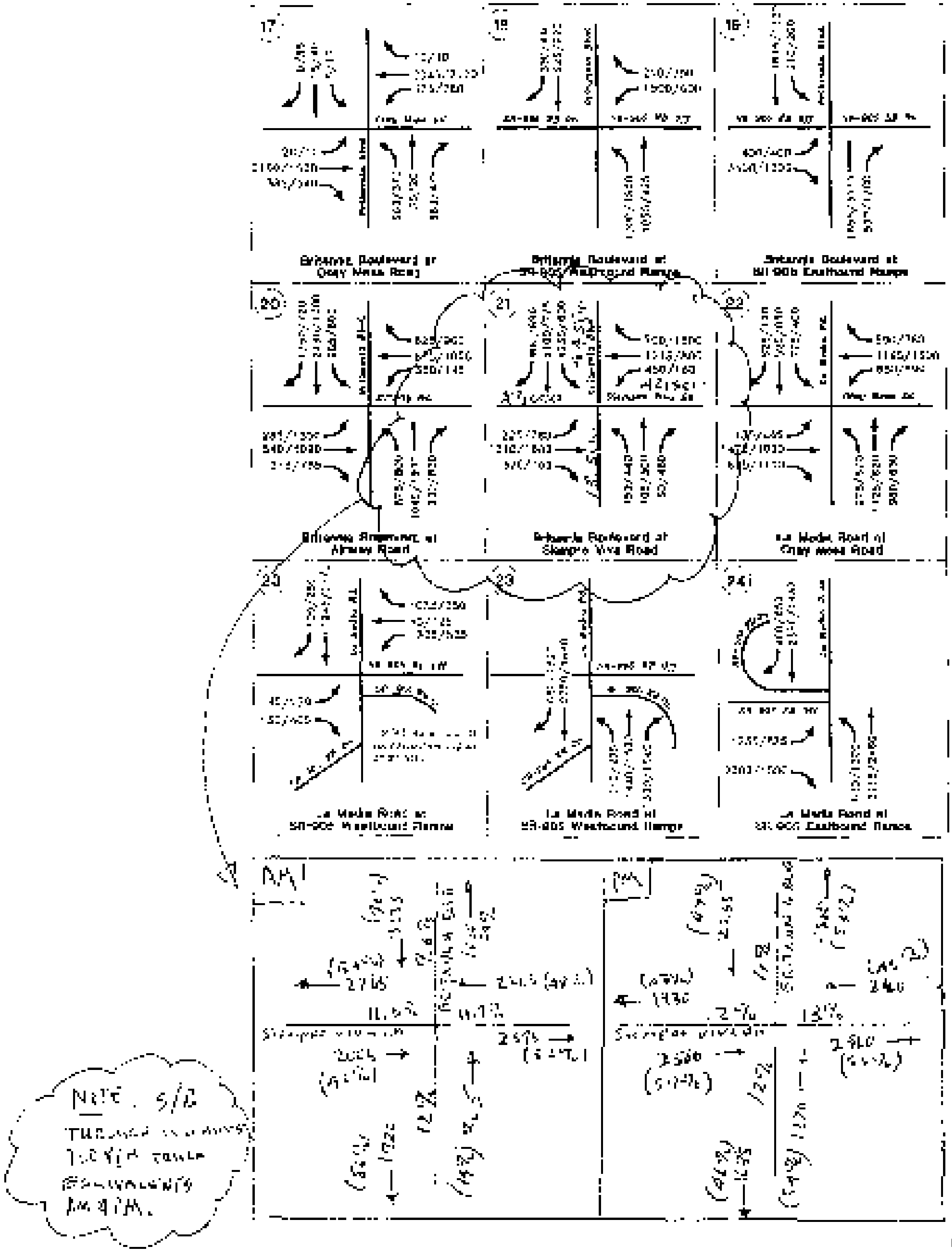
10/29/10

ATTACHMENT 7

ATTACHMENT 5

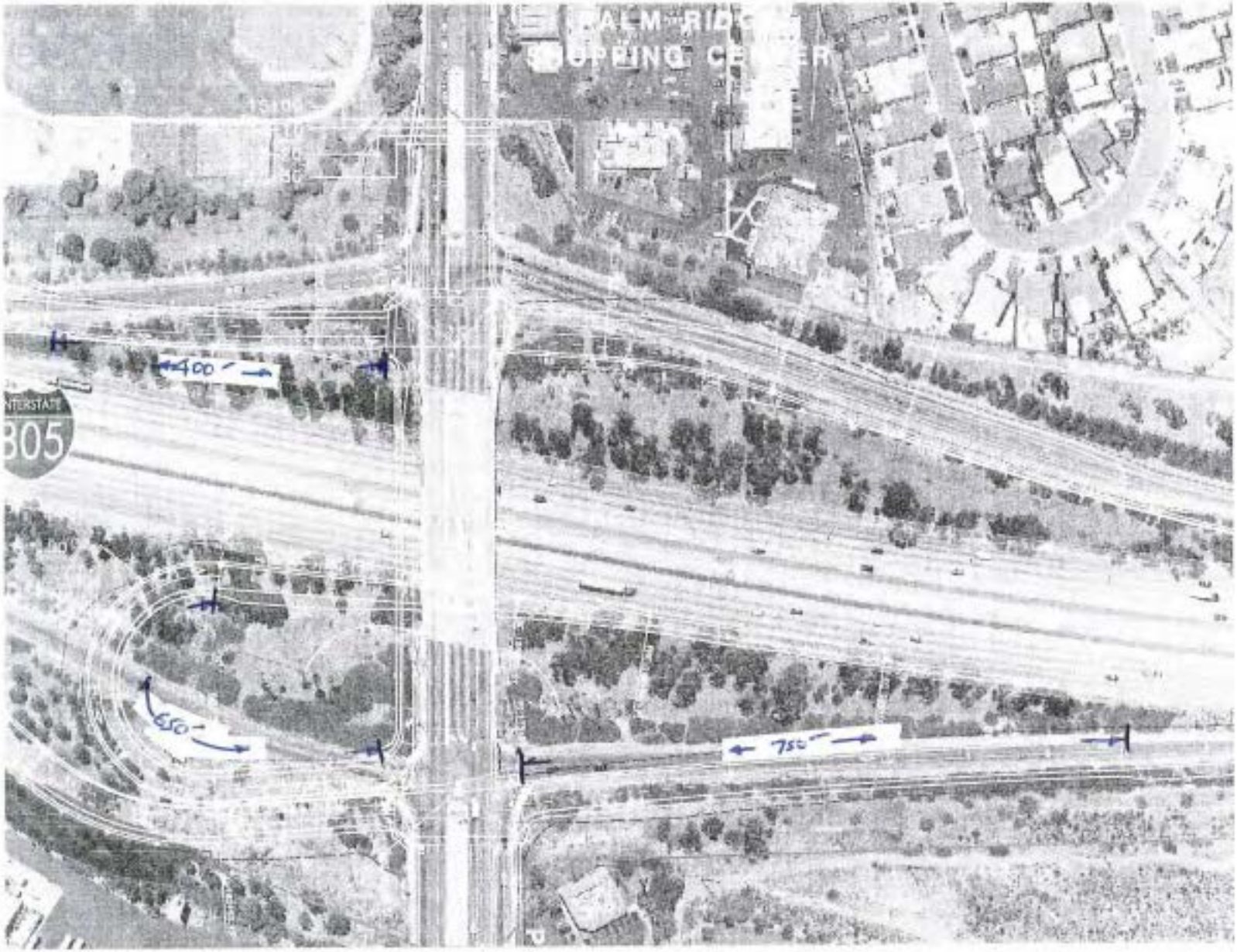
Horizon Year AM/PM Peak Hour Traffic - Alternative 3-B

Without La Media Road



10/29/10

ON-RAMP LENGTHS	
RAMP LOCATION	**APPROXIMATE LENGTH OF RAMP**
I-805/PALM AVE NORTHBOUND (FROM EB)	650 FT.
I-805 / Palm Ave. Northbound (FROM WB)	750 ft.
I-805 / Plam Ave. Southbound	400 ft.
SR-905 / Caliente Ave. Westbound	800 ft.
SR-905 / Caliente Ave. Eastbound	1,200 ft.
SR-905 / Heritage Rd. Westbound	1,000 ft.
SR-905 / Heritage Rd. Eastbound	1,200 ft.
SR-905 / Britannia Blvd. Westbound	1,000 ft.
Sr-905 / Britannia Blvd. Eastbound	650 ft.
SR-905 / La Media Rd. Westbound	1,200 ft.
SR-905 / La Media Rd. Eastbound	1,000 ft.
SR-905 / Siempre Viva Rd. Northbound	800 ft.
SR-905 / Siempre Viva Rd. Southbound	660 ft.
SR-125 / Otay Mesa Rd. Northbound	1,000 ft.
SR-125 / Lone Star Rd. Northbound	1,000 ft.



8/12

GRAPHIC REVISED APRIL 12, 2004

NOTE: ALL MEASUREMENTS ARE IN METERS UNLESS OTHERWISE SHOWN.

11-SD-905, 905

FREEWAY (PREFERRED) AND TOLLWAY CENTRAL ALIGNMENT ALTERNATIVES MIDDLE SEGMENT

SCALE 1:4000 SHEET 4 OF 25

905

PROJECT FEATURES

ESTIMATED RAMP LENGTHS

SR-905/CALIENTE AVE.

ATTACHMENT 5

KW

905

PROJECT FEATURES

ESTIMATED RAMP LENGTHS

SR-905/HERITAGE RD.

ATTACHMENT 5

5A

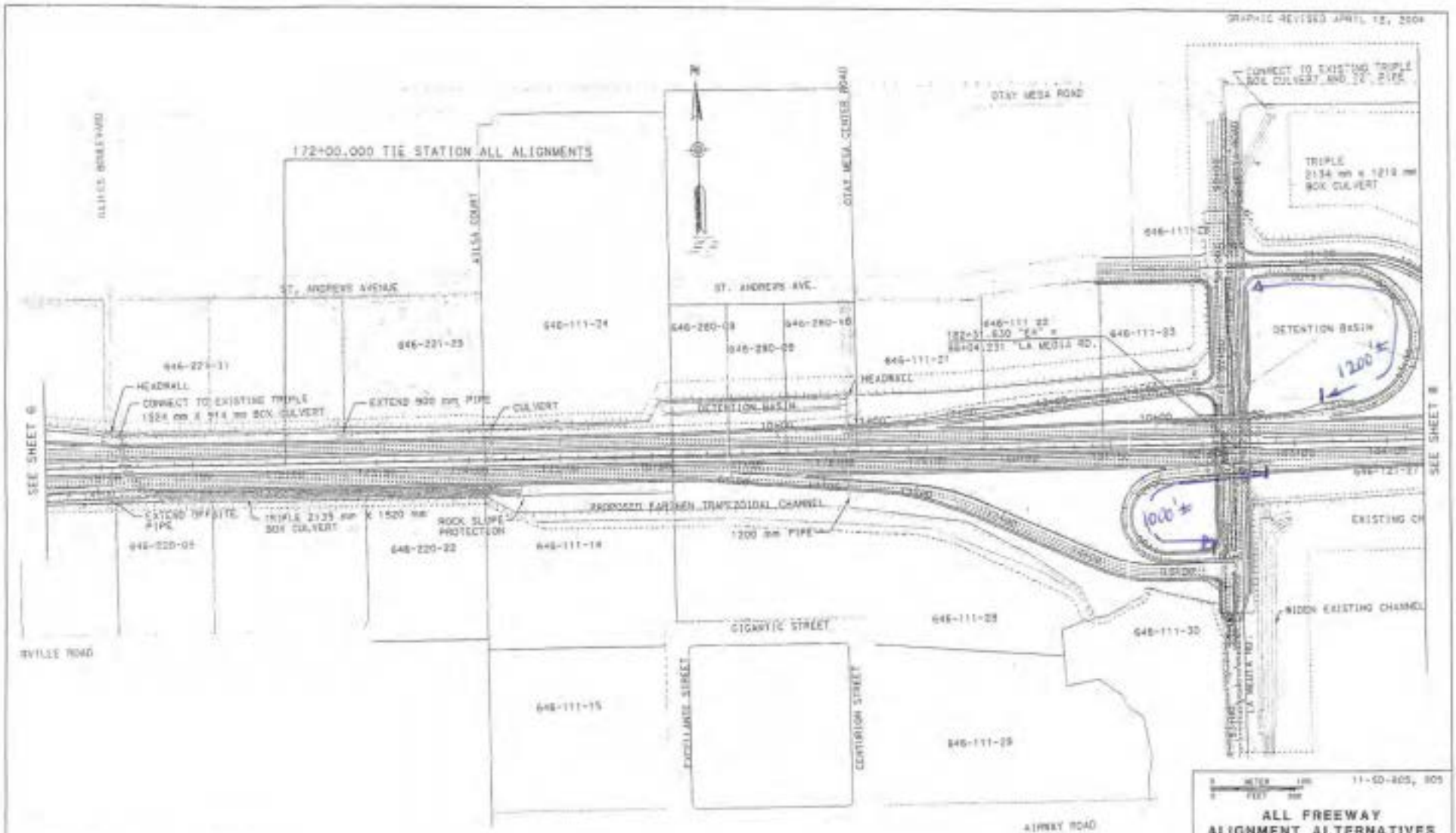
PROJECT FEATURES

(ESTIMATED RAMP LENGTHS)

SR-905 / BRITANNIA BLVD.

ATTACHMENT 5

6/17



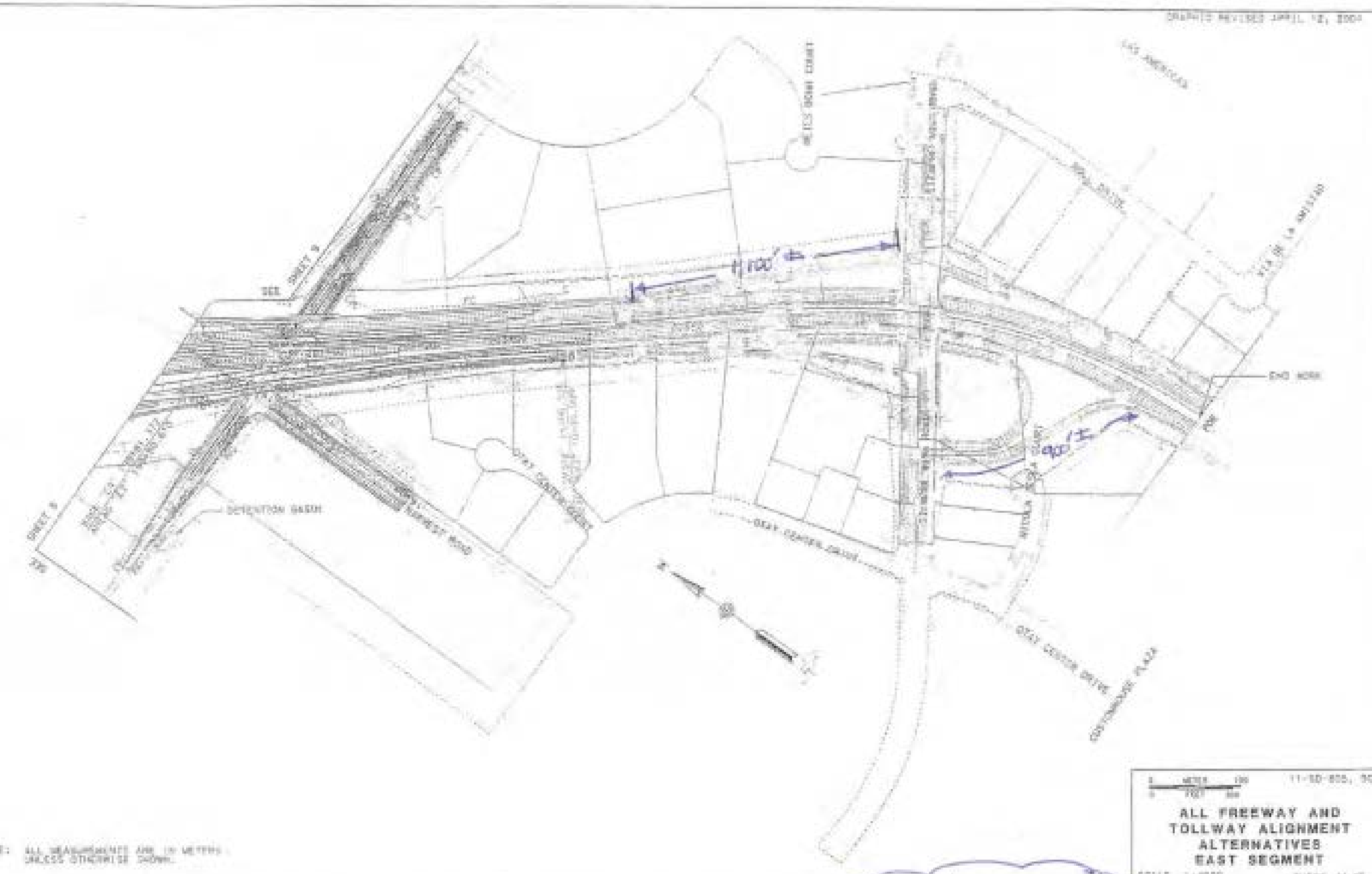
NOTE: ALL MEASUREMENTS ARE IN METERS UNLESS OTHERWISE SHOWN.

905

PROJECT FEATURES

SR-905/LA MEDIA RD

ATTACHMENT 5



NOTE: ALL MEASUREMENTS ARE IN METERS UNLESS OTHERWISE SHOWN.

11-SD-805, 905

ALL FREEWAY AND TOLLWAY ALIGNMENT ALTERNATIVES EAST SEGMENT

SCALE 1:4000 SHEET 11 OF 25

PROJECT FEATURES

SR-905/SIEMPRE VIVA RD

ESTIMATED RAMP LENGTHS

ATTACHMENT 5

7/8

SR-125/OTAY MESA RD
N/B ON-RAMP LOENGTH

NOTE: ALSO USE FOR SR-125/LONG STAR RD.

MITIGATION ASSUMPTIONS (APPENDIX D, ATTACHMENT 10)

The attached lane configurations show recommended mitigation at intersections. Intersection lane configurations without mitigation are assumed to be as shown in the City of San Diego Street Design Manual for the roadway classification at the intersection approaches.

The Design Manual requires widening for an additional 10 feet at approaches to intersecting four or six lane streets for a two lane left turn, and this additional width is not considered mitigation. Therefore, dual left turns are to be assumed at all four or six lane major and primary arterials, before mitigation, unless a supporting traffic study documents that a single left turn would be sufficient. Overlapping left-turn / right- turn phases are recommended at the high volume right turns during the traffic signal design stage.

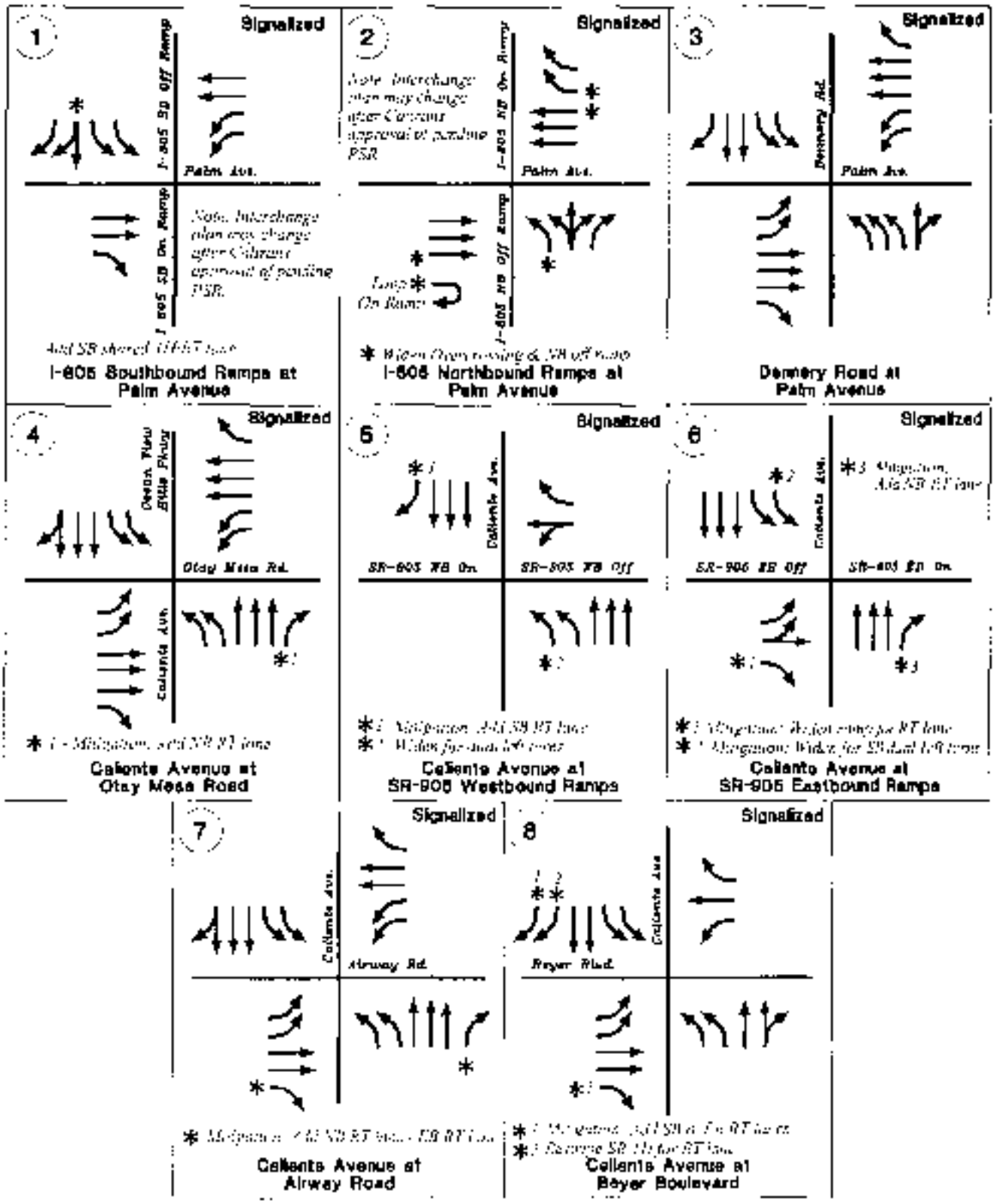
Separate single or dual right turn lanes at new intersections should be designed with appropriate right of way widths. At retrofit locations additional lanes have been reviewed for initial feasibility by on-site observations and aerial photography. In some cases additional right of way will be needed, but only during the design phase will the required widths be determined.

Improvements are recommended at the interchange ramps for SR-905 / Caliente Avenue; SR-905 / Future Heritage Road; SR-905 / Britannia Boulevard; SR-905 / La Media Rd.; SR-905 / Siempre Viva Road. Subsequent design requirements from Caltrans may change the recommended lane configurations.

APPENDIX D - ATTACHMENT 10

Buildout Recommended Lane Configurations - Alternative 3-B

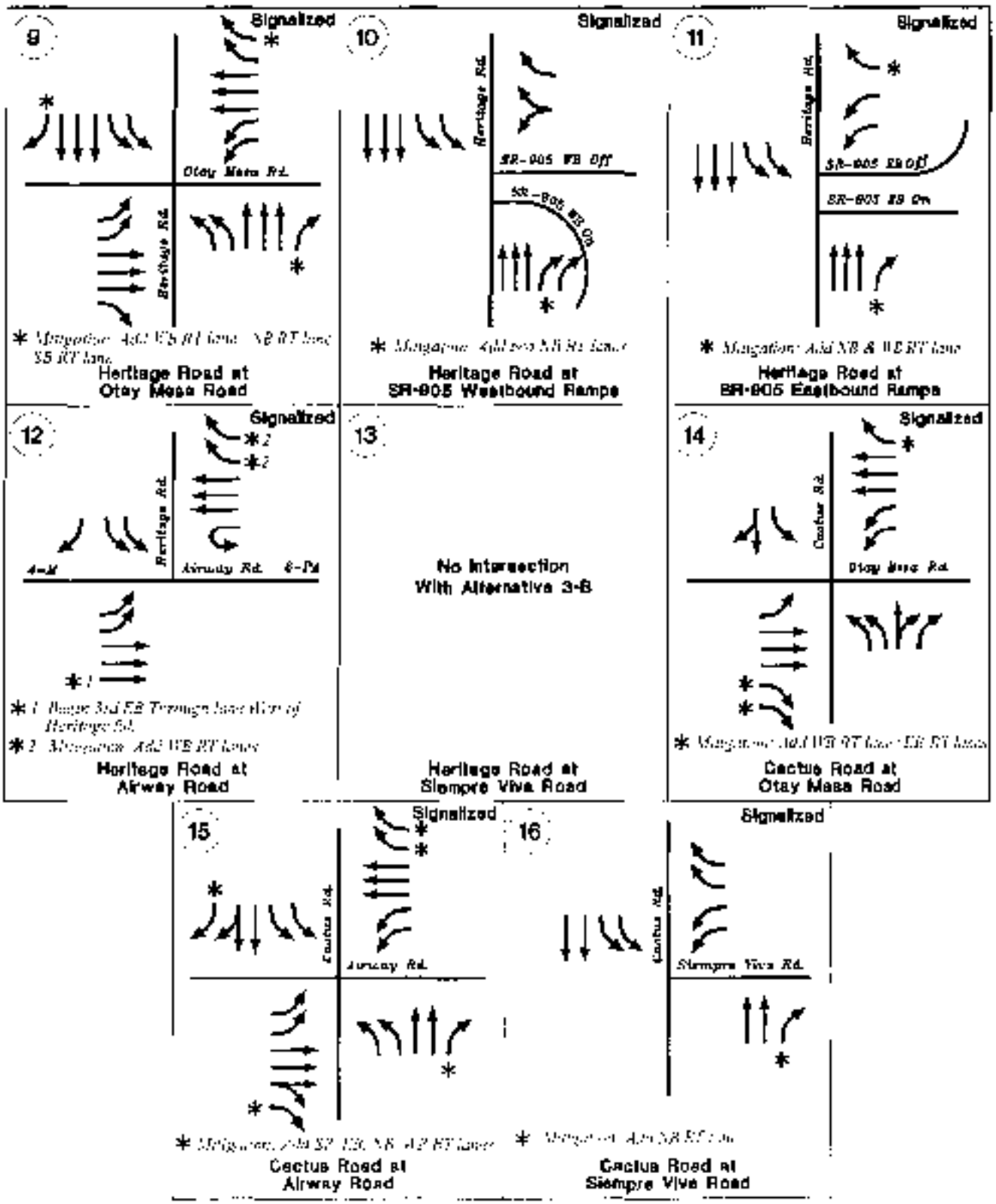
Without La Media Road



APPENDIX D - ATTACHMENT 10

Buildout Recommended Lane Configurations - Alternative 3-B

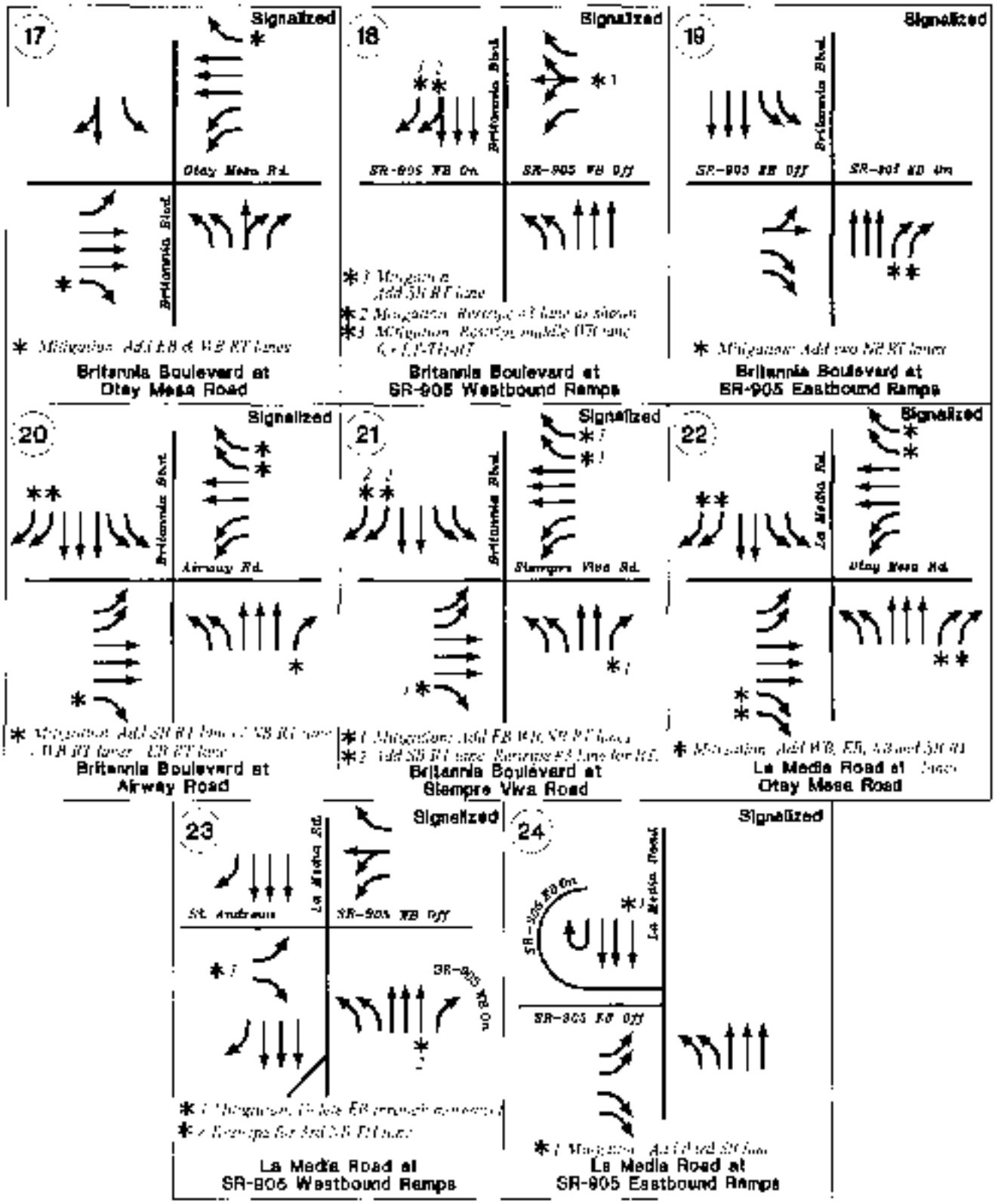
Without La Media Road



APPENDIX D - ATTACHMENT 10

Buildout Recommended Lane Configurations - Alternative 3-B

Without La Media Road



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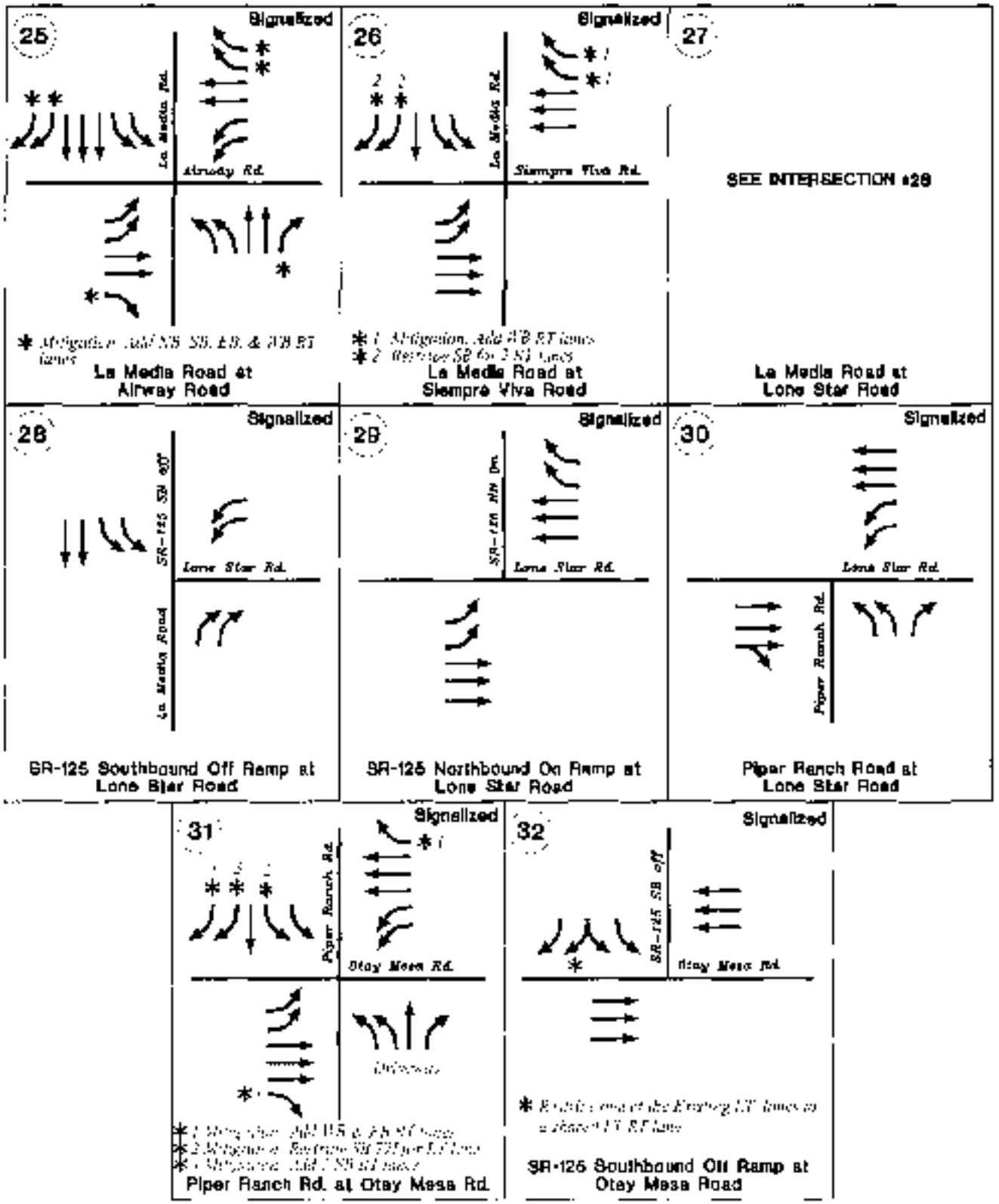
Buildout Recommended Lane Configurations - Alternative 3-B

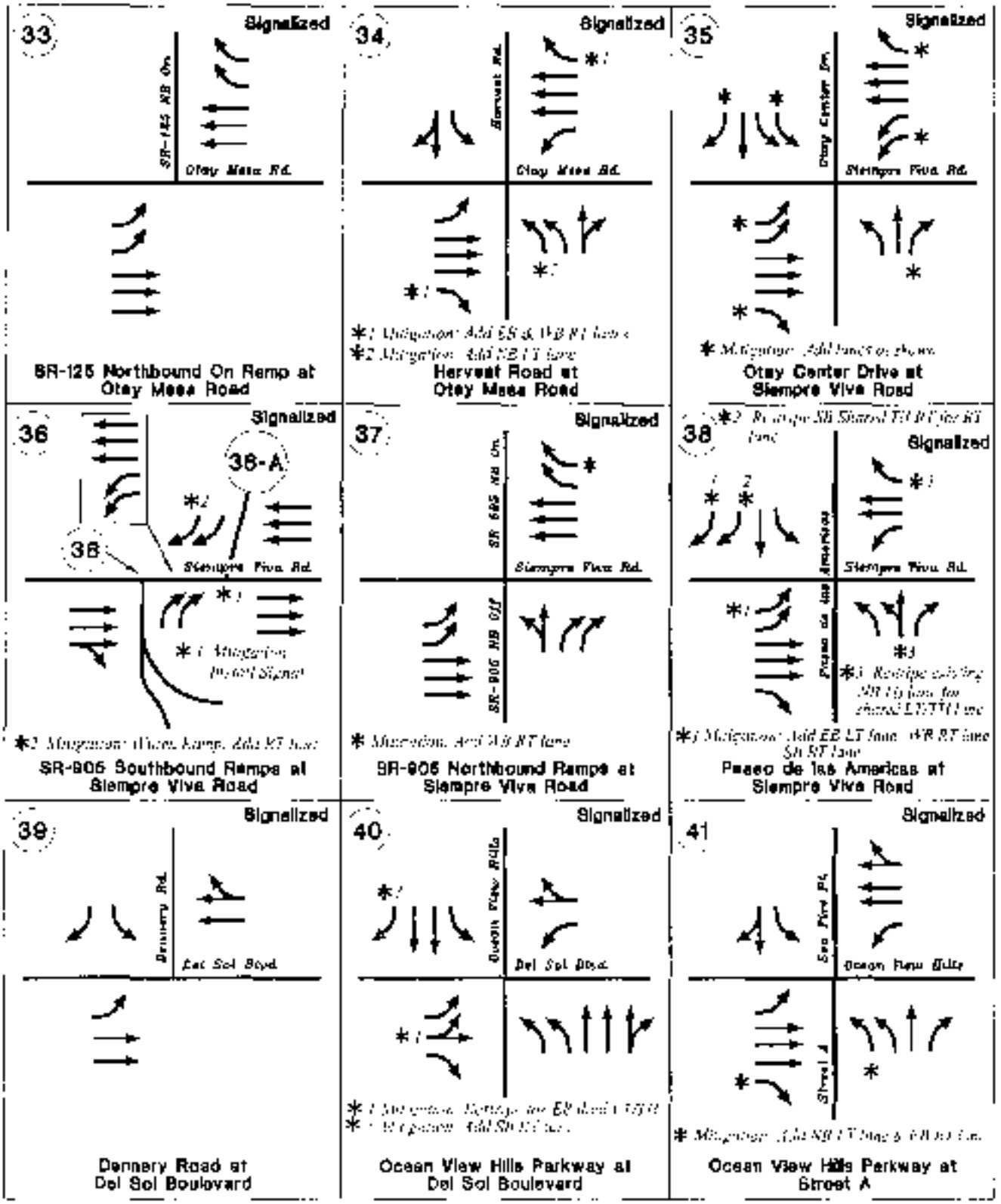
Without La Media Road



APPENDIX D - ATTACHMENT 10

Buildout Recommended Lane Configurations - Alternative 3-B

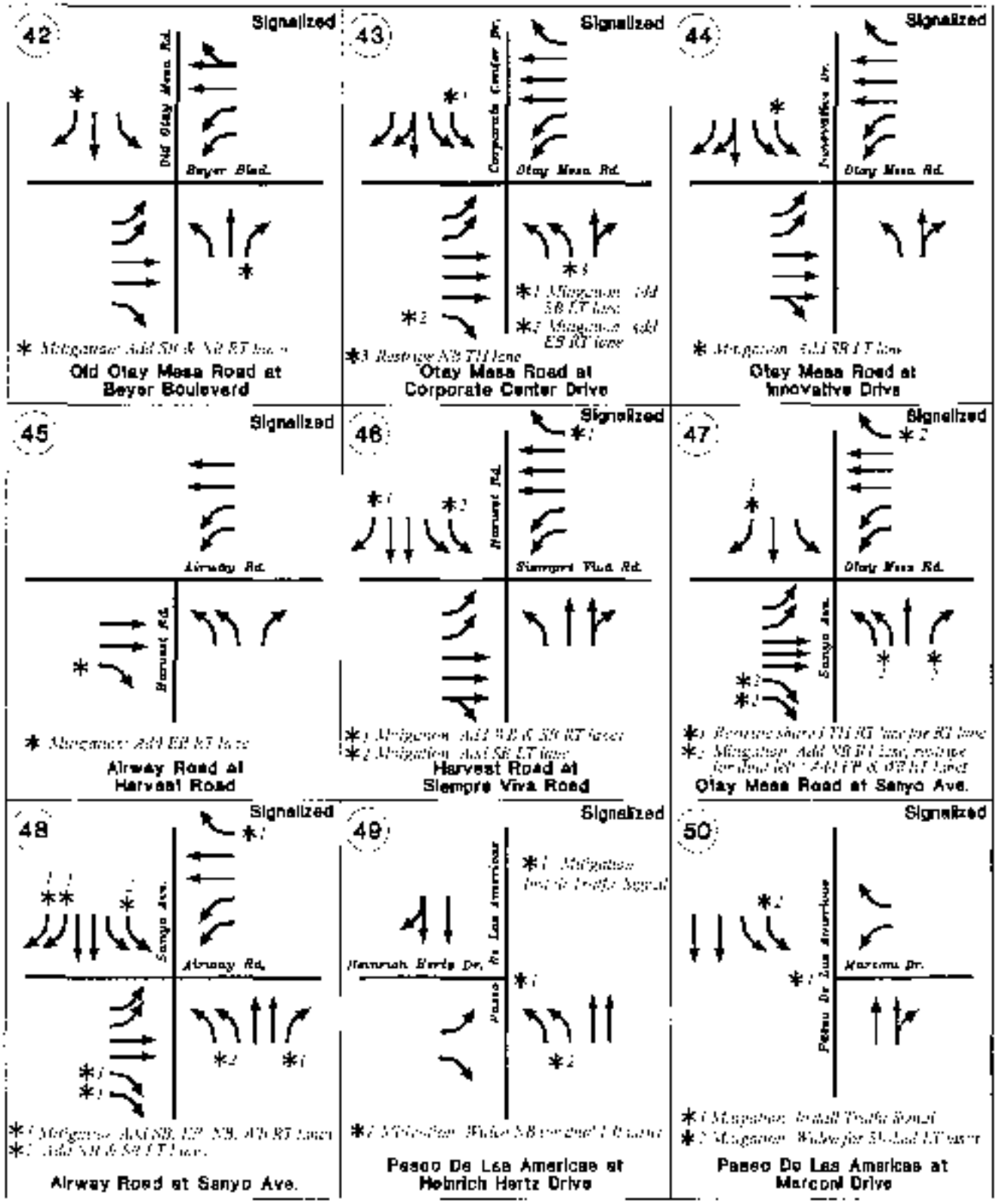
Without La Media Road



APPENDIX D - ATTACHMENT 10

Buildout Recommended Lane Configurations - Alternative 3-B

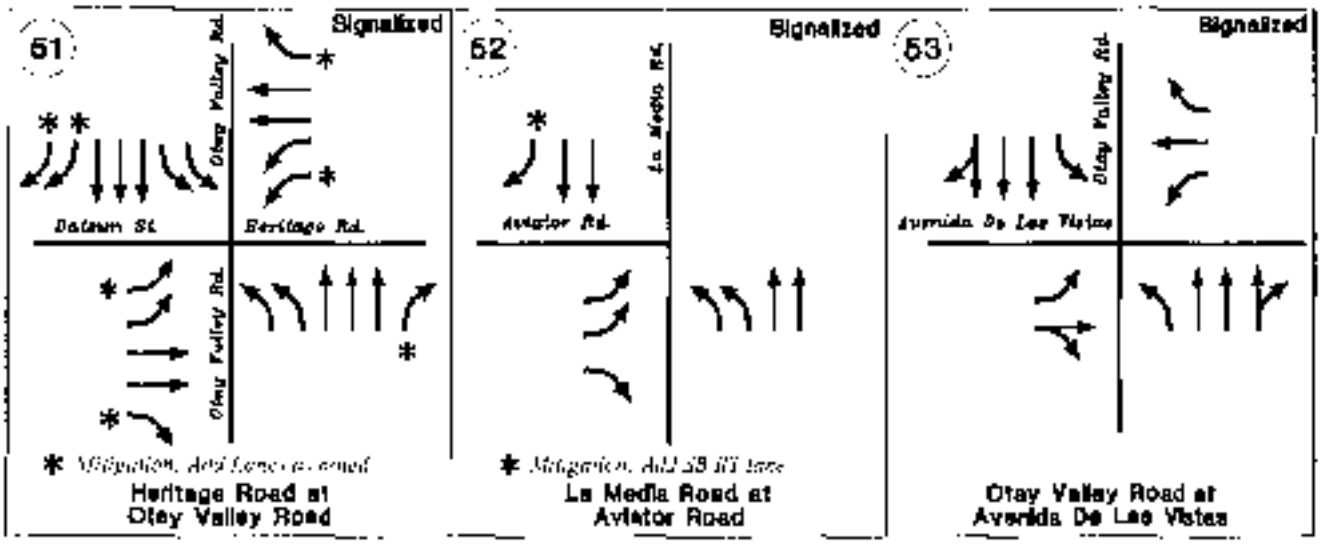
Without La Media Road



APPENDIX D - ATTACHMENT 10

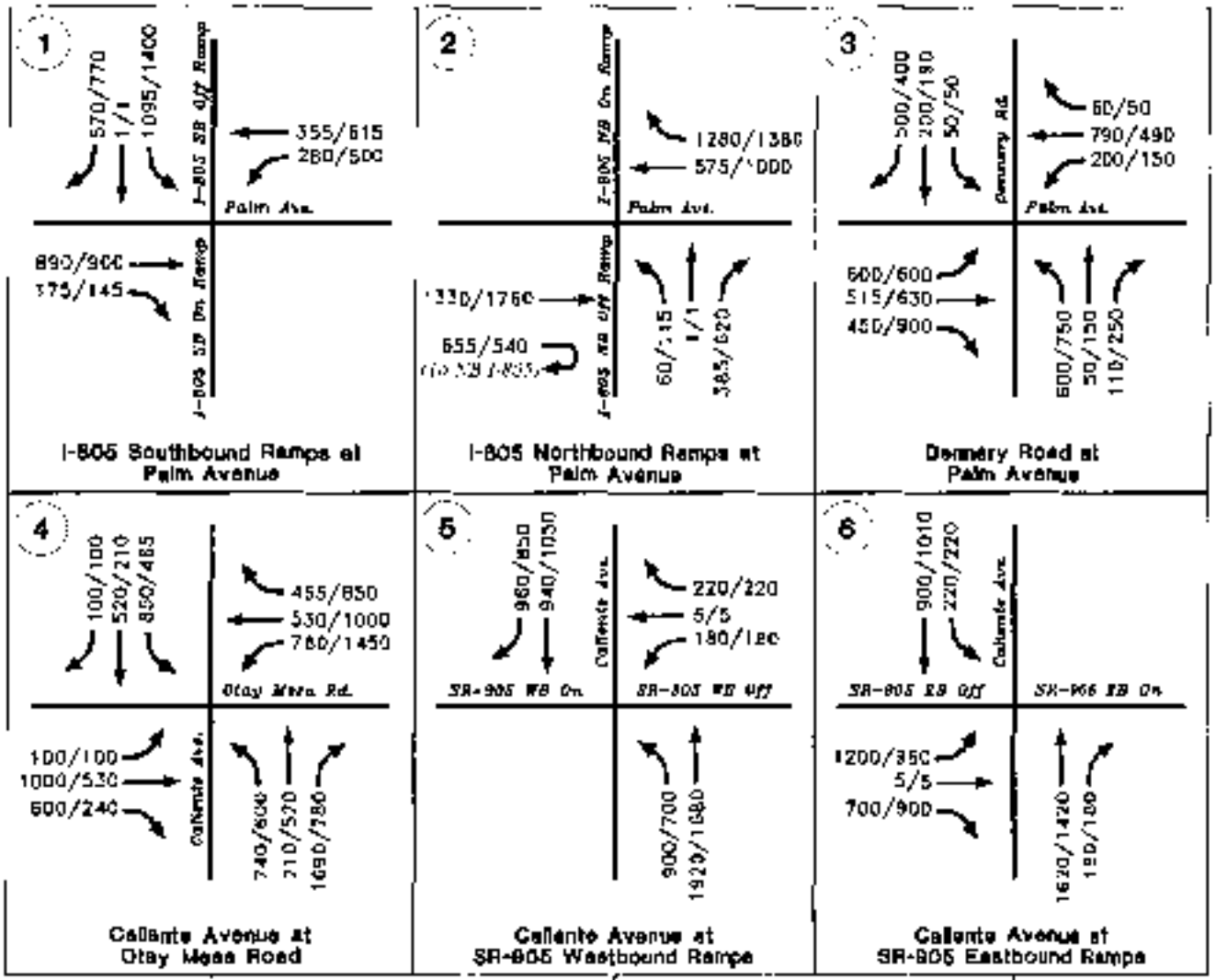
Buildout Recommended Lane Configurations - Alternative 3-B

Without La Media Road



Buildout AM/PM Peak Hour Traffic - Alternative 3-B

Without La Media Road



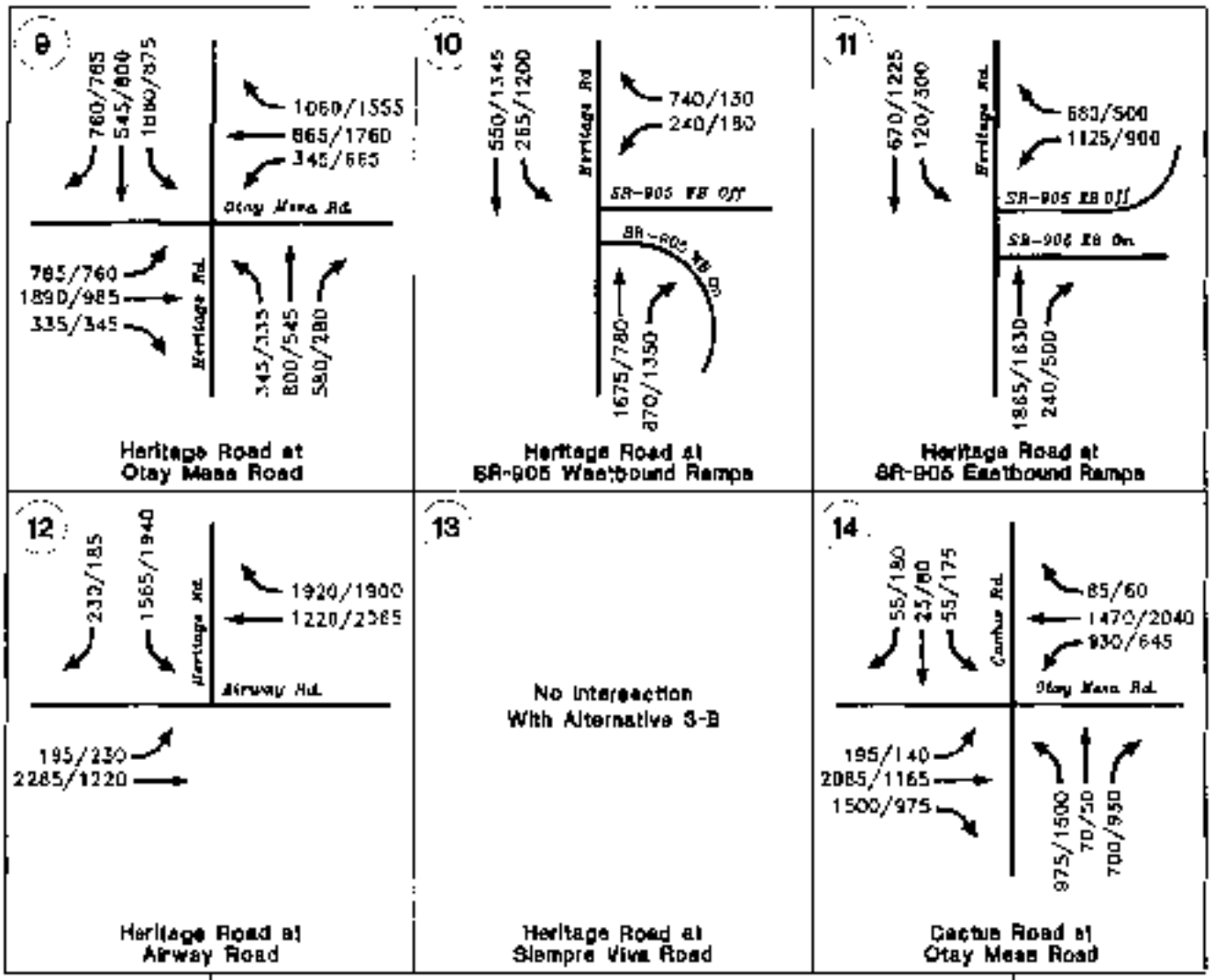
(Y 28-10 Run Date)

(Revised 7 29 11)

APPENDIX D - ATTACHMENT 11

Buildout AM/PM Peak Hour Traffic - Alternative 3-B

Without La Media Road



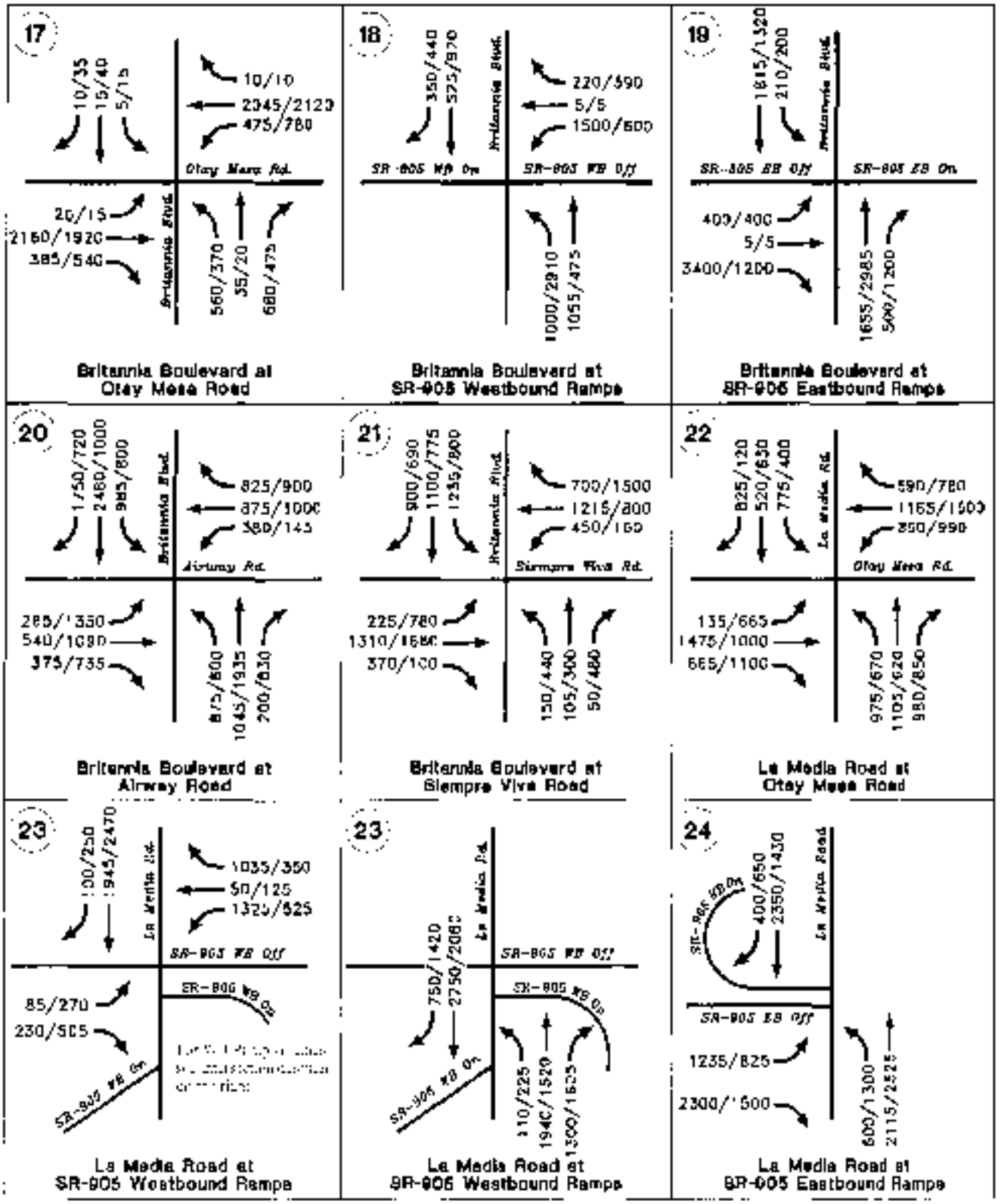
(7-26-10 Rev. Date)

(Revised 7-29-11)

APPENDIX D - ATTACHMENT 11

Buildout AM/PM Peak Hour Traffic - Alternative 3-B

Without La Media Road



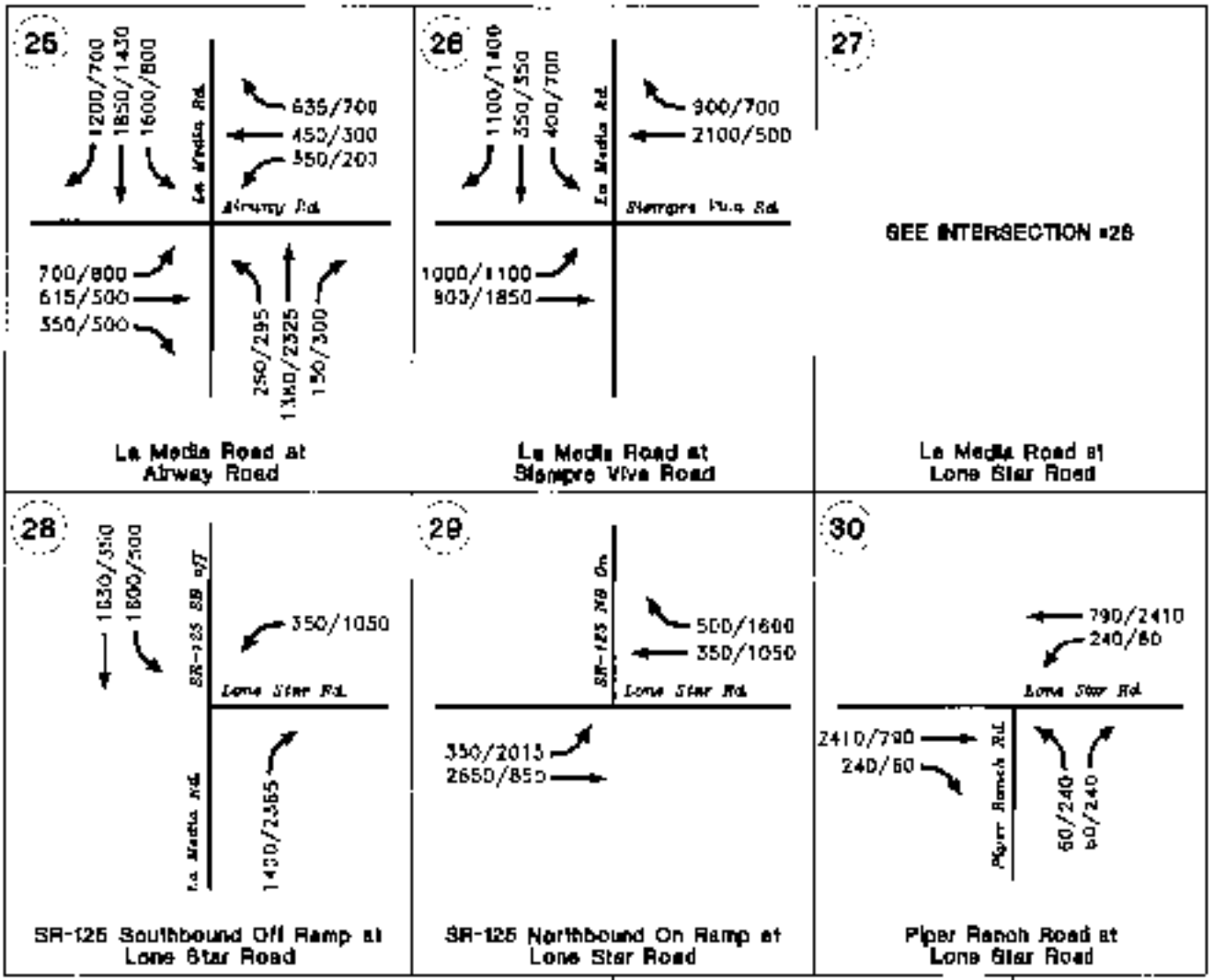
(7-26-10 Run Date)

(Revised 7 29 11)

APPENDIX D - ATTACHMENT 11

Buildout AM/PM Peak Hour Traffic - Alternative 3-B

Without La Media Road



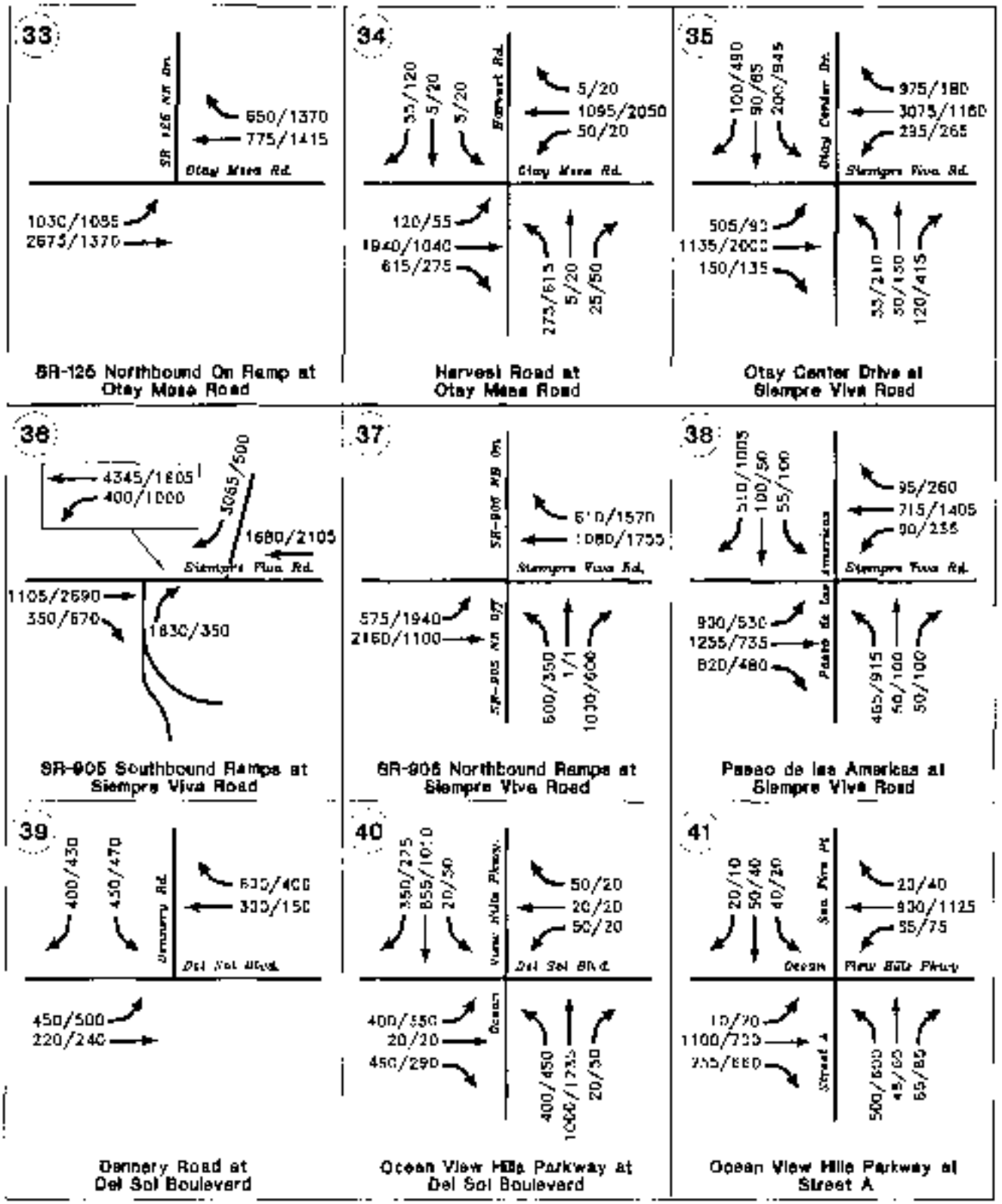
(7-26-10 Run Date)

(Revised 7-22-10)

APPENDIX D - ATTACHMENT 11

Buildout AM/PM Peak Hour Traffic - Alternative 3-B

Without La Media Road



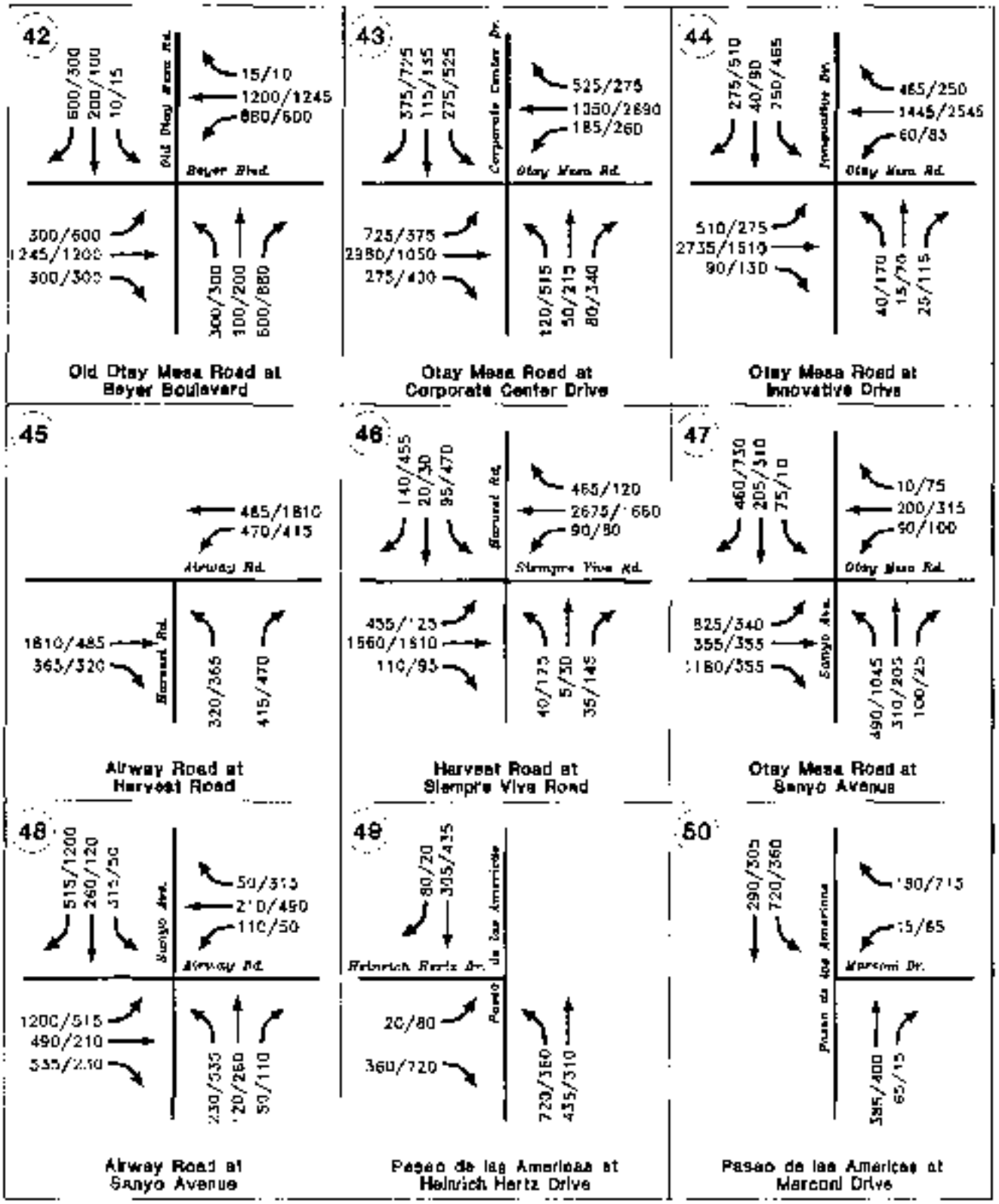
(7-26-10 from Data)

(Revised 7-28-11)

APPENDIX D - ATTACHMENT 11

Buildout AM/PM Peak Hour Traffic - Alternative 3-B

Without La Media Road



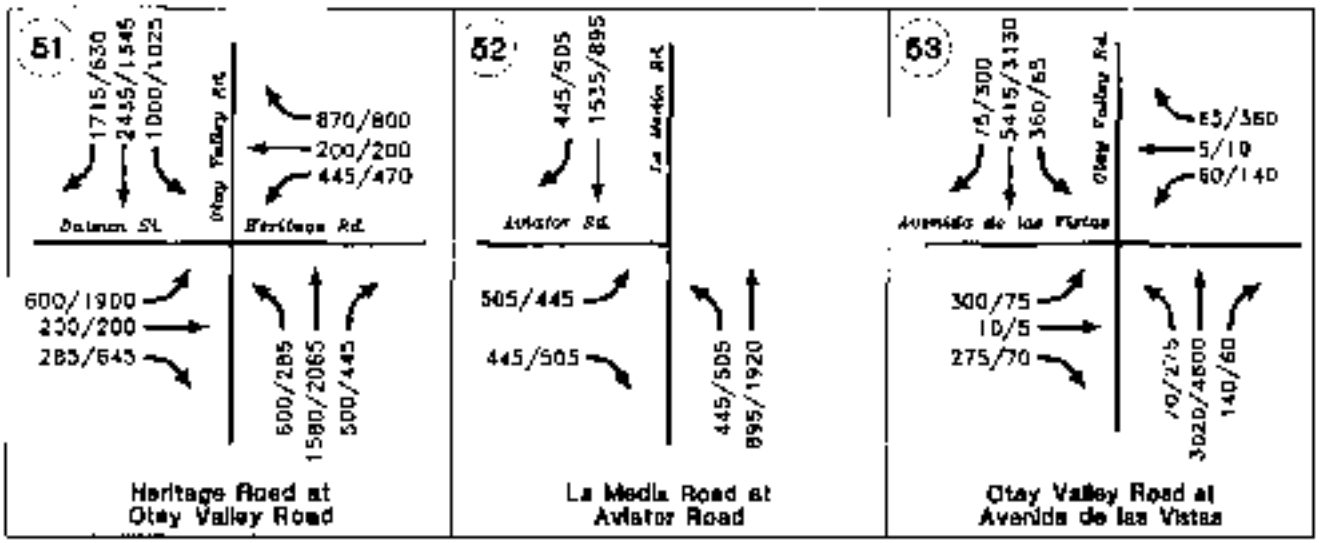
(7-22-10 Run Date)

(Revised 7-22-11)

APPENDIX D - ATTACHMENT 11

Buildout AM/PM Peak Hour Traffic - Alternative 3-B

Without La Media Road



(7-26-10 Run Date)

(Revised 7-29-11)

ATTACHMENT 9

Buildout AM/PM Peak Hour Traffic - Alternative 3-B

Without La Media Road

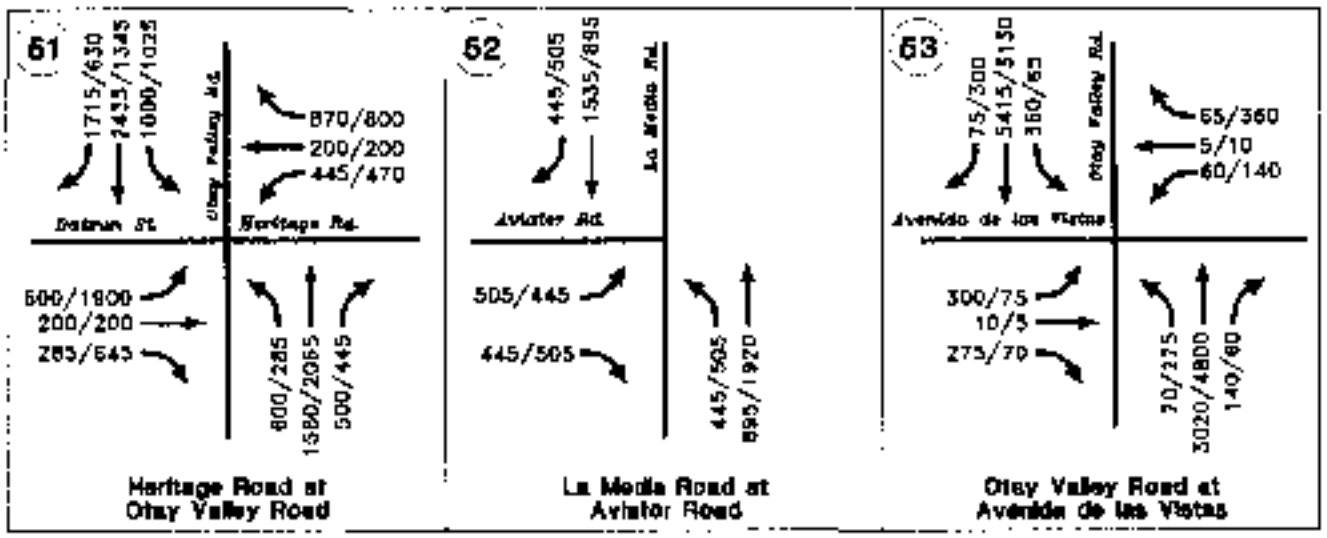


TABLE APPENDIX D-1

Traffic Signal Warrant Worksheets

Buildout Scenario 3B Without La Media Road Intersection

	Intersection	Existing Signal	Warrants Ok
1	Palm Ave. / I-805 SB Ramps	Y	-
2	Palm Ave. / I-805 NB Ramps	Y	-
3	Palm Ave. / Dairy Mart Rd.	Y	-
4	Otay Mesa Rd. / Calle de Oro	Y	-
5	Calle de Oro / SR-905 WB Ramps	N	Caltrans
6	Calle de Oro / SR-905 EB Ramps	N	Caltrans
7	Calle de Oro / Airway Rd.	N	Y
8	Calle de Oro / Beyer Blvd.	N	Y
9	Otay Mesa Rd. / Heritage Rd.	Y	-
10	Heritage Rd. / SR-905 WB Ramps	N	Y
11	Heritage Rd. / SR-905 EB Ramps	N	Y
12	Heritage Rd. / Airway Rd.	N	Y
13	Heritage Rd. / Siempre Viva Rd.	N	N/A
14	Otay Mesa Rd. / Cactus Rd.	Y	-
15	Airway Rd. / Cactus Rd.	N	Y
16	Siempre Viva Rd. / Cactus Rd.	N	Y
17	Otay Mesa Rd. / Britannia Blvd.	Y	-
18	Britannia Blvd. / SR-905 WB Ramps	Y	-
19	Britannia Blvd. / SR-905 EB Ramps	Y	-
20	Britannia Blvd. / Airway Rd.	Y	-
21	Siempre Viva Rd. / Britannia Blvd.	Y	-
22	Otay Mesa Rd. / La Media Rd.	Y	-
23	La Media Rd. / SR-905 WB Ramps	Y	-
24	La Media Rd. / SR-905 EB Ramps	Y	-
25	La Media Rd. / Airway Rd.	N	Y
26	La Media Rd. / Siempre Viva Rd.	Y	-
27	La Media Rd. / Lone Star Rd.	N	2-Way Approach
28	Lone Star Rd. / SR-125 SB Off Ramp	N	Y
29	Lone Star Rd. / SR-125 SB On Ramp	N	Y
30	Lone Star Rd. / Paper Rancho Rd.	N	Y
31	Otay Mesa Rd. / Paper Rancho Rd.	Y	-
32	Otay Mesa Rd. / SR-125 SB Off Ramp	Y	-
33	Otay Mesa Rd. / SR-125 SB On Ramp	Y	-
34	Otay Mesa Rd. / Harvest Rd.	N	Y
35	Siempre Viva Rd. / Pay Center Dr.	Y	-
36	Siempre Viva Rd. / SR-905 WB On Ramp	Y	-
36A	Siempre Viva Rd. / SR-905 SB to WB Ramp	N	Y
37	Siempre Viva Rd. / SR-905 NB Ramps	Y	-
38	Siempre Viva Rd. / Paseo de las Americas	Y	-
39	Dennery Rd. / Del Sol Blvd.	Y	-
40	Ocean View Hills Pkwy. / Del Sol Blvd.	Y	-
41	Ocean View Hills Pkwy. / Street A	Y	-
42	Old Otay Mesa Rd. / Beyer Blvd.	Y	-
43	Otay Mesa Rd. / Corporate Center Dr.	Y	-
44	Otay Mesa Rd. / Innovative Dr.	N	Y
45	Harvest Rd. / Airway Rd.	N	Y
46	Harvest Rd. / Siempre Viva Rd.	Y	-
47	Otay Mesa Rd. / Sanyo Ave.	Y	-
48	Airway Rd. / Sanyo Ave.	N	Y
49	Paseo de las Americas / Technology Dr.	N	Y
50	Paseo de las Americas / Marconi Dr.	N	Y
51	Heritage Rd. / Otay Valley Rd.	N	Y
52	Aviation Way / La Media Rd.	N	Y
53	Otay Valley Rd. / Avenida de las Vistas	N	Y

Note: 21 intersection warrant worksheets attached

3/22

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE _____
CALC _____ DATE _____
CHK _____ DATE _____

DIST ____ CO ____ RTE ____ PM ____

#7

Major St: CALIENTE AVE. (3BW/O)
Minor St: AIRWAY RD

Critical Approach Speed _____ mph
Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)..... [X]
or
In built up area of isolated community of < 10,000 population..... [ ] } RURAL (R)

[ ] URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN..... RURAL X.....

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1.....	1.....
2 or More.....	1.....
2 or More.....	2 or More.....
1.....	2 or More.....

Minimum Requirements EADT			
Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
8,000	5,600	2,400	1,680
9,600	6,720	2,400	1,680
9,600	6,720	3,200	2,240
8,000	5,600	3,200	2,240
	39,600		19,800

CONDITION B - Interruption of Continuous Traffic

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1.....	1.....
2 or More.....	1.....
2 or More.....	2 or More.....
1.....	2 or More.....

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
12,000	8,400	1,200	850
14,400	10,080	1,200	850
14,400	10,080	1,600	1,120
12,000	8,400	1,600	1,120
	39,600		19,800

Combination of CONDITIONS A + B

Satisfied _____ Not Satisfied _____

No one condition satisfied, but following conditions fulfilled 80% or more..... A _____ B _____

2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

3.22

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

COUNT DATE _____

CALC _____ DATE _____

CHK _____ DATE _____

DIST ____ CO ____ RTE ____ PM ____

#8

Major St: CALIENTE AVE. (38.4 0 L.M.) Critical Approach Speed _____ mph

Minor St: BEYER BLVD Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)..... ☒ } RURAL (R)

In built up area of isolated community of < 10,000 population..... ☐ } or

☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN..... RURAL X.....	Minimum Requirements EADT	
CONDITION A - Minimum Vehicular Volume	Vehicles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Satisfied X Not Satisfied _____		
Number of lanes for moving traffic on each approach	Urban / Rural	Urban / Rural
Major Street / Minor Street		
1 / 1	8,000 / 5,600	2,400 / 1,680
2 or More / 1	9,600 / 6,720	2,400 / 1,680
2 or More / 2 or More	9,600 / 6,720	3,200 / 2,240
1 / 2 or More	8,000 / 5,600	3,200 / 2,240
	43,500	15,500
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Satisfied X Not Satisfied _____		
Number of lanes for moving traffic on each approach	Urban / Rural	Urban / Rural
Major Street / Minor Street		
1 / 1	12,000 / 8,400	1,200 / 850
2 or More / 1	14,400 / 10,080	1,200 / 850
2 or More / 2 or More	14,400 / 10,080	1,600 / 1,120
1 / 2 or More	12,000 / 8,400	1,600 / 1,120
	43,500	15,500
Combination of CONDITIONS A + B		
Satisfied _____ Not Satisfied _____	2 CONDITIONS 80%	2 CONDITIONS 80%
No one condition satisfied, but following conditions fulfilled 80% or more..... A _____ B _____		

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE _____
CALC _____ DATE _____
CHK _____ DATE _____

DIST CO RTE PM

#10
Major St: HERITAGE ROAD
Minor St: SR-905 WB RAMPS

Critical Approach Speed _____ mph
Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) ☒
or
In built up area of isolated community of < 10,000 population ☐
} RURAL (R)

☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN _____ RURAL X

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach		Minimum Requirements EADT			
Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
		Urban	Rural	Urban	Rural
1	1	8,000	5,600	2,400	1,680
2 or More	1	9,600	6,720	2,400	1,680
(2) or More	(2) or More	9,600	(6,720)	3,200	(2,240)
1	2 or More	8,000	5,600	3,200	2,240
		39,000		3,200	

CONDITION B - Interruption of Continuous Traffic

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	1	12,000	8,400	1,200	850
2 or More	1	14,400	10,080	1,200	850
(2) or More	(2) or More	14,400	(10,080)	1,600	(1,120)
1	2 or More	12,000	8,400	1,600	1,120
		39,000		3,200	

Combination of CONDITIONS A + B

Satisfied _____ Not Satisfied _____

	Vehicles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
No one condition satisfied, but following conditions fulfilled 80% or more: A _____ B _____	2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE _____
CALC _____ DATE _____
CHK _____ DATE _____

DIST CO RTE PM

#11

Major St: HERITAGE ROAD
Minor St: SR-905 EB RAMPS

Critical Approach Speed _____ mph
Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 64 kmh (40 mph)..... ☒
or
In built up area of isolated community of < 10,000 population..... ☐
} RURAL (R)

☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN..... RURAL X.....

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach		Minimum Requirements EADT			
Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
		Urban	Rural	Urban	Rural
1	1	8,000	5,600	2,400	1,680
2 or More	1	9,600	6,720	2,400	1,680
(2) or More	(2) or More	9,600	[6,720]	3,200	[2,240]
1	2 or More	9,000	5,600	3,200	2,240
			30,500		15,000

CONDITION B - Interruption of Continuous Traffic

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	1	12,000	8,400	1,200	850
2 or More	1	14,400	10,080	1,200	850
(2) or More	(2) or More	14,400	[10,080]	1,600	[1,120]
1	2 or More	12,000	8,400	1,600	1,120
			30,500		15,000

Combination of CONDITIONS A + B

Satisfied _____ Not Satisfied _____

		Vehicles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
No one condition satisfied, but following conditions fulfilled 80% or more	A _____ B _____	2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE _____
CALC _____ DATE _____
CHK _____ DATE _____

DIST ____ CO ____ RTE ____ PM ____

#12
Major St: AIRWAY RD (SB W/O LM) Critical Approach Speed _____ mph
Minor St: HERITAGE RD Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) ☒ } RURAL (R)
In built up area of isolated community of < 10,000 population ☐ } or
☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN ____ RURAL X

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied ____

Number of lanes for moving traffic on each approach		Minimum Requirements EADT			
Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
		Urban	Rural	Urban	Rural
1	1	8,000	5,600	2,400	1,680
2 or More	1	9,600	6,720	2,400	1,680
(2) or More	(2) or More	9,600	6,720	3,200	2,240
1	2 or More	8,000	5,600	3,200	2,240
			49,250		17,500

CONDITION B - Interruption of Continuous Traffic

Satisfied X Not Satisfied ____

Number of lanes for moving traffic on each approach		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	1	12,000	8,400	1,200	850
2 or More	1	14,400	10,080	1,200	850
(2) or More	(2) or More	14,400	10,080	1,600	1,120
1	2 or More	12,000	8,400	1,600	1,120
			49,260		17,500

Combination of CONDITIONS A + B

Satisfied ____ Not Satisfied ____

No one condition satisfied, but following conditions fulfilled 80% or more	A ____	B ____	2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

COUNT DATE _____
CALC _____ DATE _____
CHK _____ DATE _____

DIST ____ CO ____ RTE ____ PM ____

#15 Major St: AIRWAY RD (SB W/O LAMSON) Critical Approach Speed _____ mph
Minor St: CACTUS RD Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) ☒
or
In built up area of isolated community of < 10,000 population ☐
} RURAL (R)

☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN ____ RURAL X

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied ____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
2 or More	1
(2 or More)	(2 or More)
1	2 or More

Minimum Requirements EADT

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
8,000	5,600	2,400	1,680
9,600	6,720	2,400	1,680
9,600	[6,720]	3,200	[2,240]
8,000	5,600	3,200	2,240
	52,500		22,250

CONDITION B - Interruption of Continuous Traffic

Satisfied X Not Satisfied ____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
2 or More	1
(2 or More)	(2 or More)
1	2 or More

Vehicles Per Day on Major Street (Total of Both Approaches)

Urban	Rural
12,000	8,400
14,400	10,080
14,400	[10,080]
12,000	8,400
	52,500

Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)

Urban	Rural
1,200	850
1,200	850
1,600	[1,120]
1,600	1,120
	22,250

Combination of CONDITIONS A + B

Satisfied ____ Not Satisfied ____

No one condition satisfied, but following conditions fulfilled 80% or more ____ (A) ____ (B)

2 CONDITIONS 80%

2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

COUNT DATE _____

DIST ____ CO ____ RTE ____ PM ____

CALC _____ DATE _____

CHK _____ DATE _____

#16

Major St: CACTUS RD. _____ Critical Approach Speed _____ mph

Minor St: SIEMPRE VIVA RD _____ Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) ☒ or ☐ } RURAL (R)

In built up area of isolated community of < 10,000 population ☐ } URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN _____ RURAL X

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
2 or More	1
(2) or More	(2) or More
1	2 or More

Minimum Requirements EADT			
Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
8,000	5,600	2,400	1,680
9,600	6,720	2,400	1,680
9,600	[6,720]	3,200	[2,240]
8,000	5,600	3,200	2,240
	25,750		18,500

CONDITION B - Interruption of Continuous Traffic

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
2 or More	1
(2) or More	(4) or More
1	2 or More

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
12,000	8,400	1,200	850
14,400	10,080	1,200	850
14,400	[10,080]	1,600	[1,120]
12,000	8,400	1,600	1,120
	25,750		18,500

Combination of CONDITIONS A + B

Satisfied _____ Not Satisfied _____

No one condition satisfied, but following conditions fulfilled 80% or more _____ A _____ B

2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE _____
CALC _____ DATE _____
CHK _____ DATE _____

DIST ____ CO ____ RTE ____ PM ____

#25

Major St: LA MEDIA RD. Critical Approach Speed 40 mph
Minor St: AIRWAY RD. Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)..... ☒ } RURAL (R)
In built up area of isolated community of < 10,000 population..... ☐ or } RURAL (R)
☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN X RURAL

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
2 or More	1
2 or More	2 or More
1	2 or More

Minimum Requirements EADT			
Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
8,000	5,600	2,400	1,680
9,600	8,720	2,400	1,680
9,600	6,720 ✓	3,200	2,240 ✓
8,000	5,600	3,200	2,240
	48,500		15,500

CONDITION B - Interruption of Continuous Traffic

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
2 or More	1
2 or More	2 or More
1	2 or More

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
12,000	8,400	1,200	850
14,400	10,080	1,200	850
14,400	10,080 ✓	1,600	1,120 ✓
12,000	8,400	1,600	1,120
	48,500		15,500

Combination of CONDITIONS A + B

Satisfied _____ Not Satisfied _____

No one condition satisfied, but following conditions fulfilled 80% or more..... A _____ B _____

2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE ______________
CALC ______________ DATE ______________
CHK ______________ DATE ______________

_____ _____ _____ _____
DIST CO RTE PM

#28

Major St: LONE STAR ROAD
Minor St: SR-125 SB OFF-RAMP

Critical Approach Speed ______________ mph
Critical Approach Speed ______________ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)........ ☒ or
In built up area of isolated community of < 10,000 population................ ☐ } RURAL (R)
☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN ______ RURAL X ______ CONDITION A - Minimum Vehicular Volume. Satisfied X ______ Not Satisfied ______	Minimum Requirements EADT			
	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach	Urban	Rural	Urban	Rural
Major Street 1 .... / Minor Street 1	8,000	5,600	2,400	1,680
2 or More .... / 1	9,600	6,720	2,400	1,680
(2) or More .... / (2) or More	9,600	[6,720]	3,200	[2,240]
1 .... / 2 or More	8,000	5,600	3,200	2,240
		19,500		9,750

CONDITION B - Interruption of Continuous Traffic. Satisfied X ______ Not Satisfied ______	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach	Urban	Rural	Urban	Rural
Major Street 1 .... / Minor Street 1	12,000	8,400	1,200	850
2 or More .... / 1	14,400	10,080	1,200	850
(2) or More .... / (2) or More	14,400	[10,080]	1,600	[1,120]
1 .... / 2 or More	12,000	8,400	1,600	1,120
		19,500		9,750
Combination of CONDITIONS A + B Satisfied ______ Not Satisfied ______ No one condition satisfied, but following conditions fulfilled 80% or more .... ______ A ______ B	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

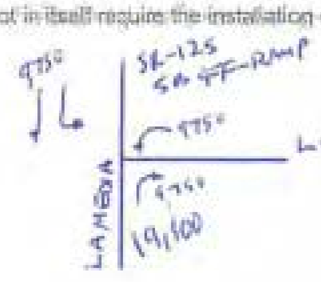


Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE _____
CALC _____ DATE _____
CHK _____ DATE _____

_____ _____ _____ _____
DIST CO RTE PM

#29
Major St: LONG STAR ROAD Critical Approach Speed _____ mph
Minor St: SR-125 NB ON-RAMP Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) ..... ☒ } RURAL (R)
In built up area of isolated community of < 10,000 population ..... or ☐ }
☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN ..... RURAL X .....

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
2 or More	1
(2) or More	(2) or More
1	2 or More

Minimum Requirements EADT

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
8,000	5,600	2,400	1,680
9,600	6,720	2,400	1,680
9,600	[6,720]	3,200	[2,240]
8,000	5,600	3,200	2,240
	27,600		3,500

CONDITION B - Interruption of Continuous Traffic

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
2 or More	1
(2) or More	(2) or More
1	2 or More

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
12,000	8,400	1,200	850
14,400	10,080	1,200	850
14,400	[10,080]	1,600	[1,120]
12,000	8,400	1,600	1,120
	27,600		3,500

Combination of CONDITIONS A + B

Satisfied _____ Not Satisfied _____

No one condition satisfied, but following conditions fulfilled 80% or more ..... A _____ B _____

2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE _____
CALC _____ DATE _____
CHK _____ DATE _____

DIST ____ CO ____ RTE ____ PM ____

#30

Major St: LONE STAR RD. (38W0 LM) Critical Approach Speed _____ mph
Minor St: PIPER RANCH RD. Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)..... ☑ } RURAL (R)
In built up area of isolated community of < 10,000 population..... ☐ } OR
☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN..... RURAL X.....

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
(2) or More	1
(2) or More	(2) or More
1	2 or More

Minimum Requirements EADT			
Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
8,000	5,600	2,400	1,680
9,600	6,720	2,400	1,680
9,600	[6,720]	3,200	[2,240]
8,000	5,600	3,200	2,240
	35,560		3,000

CONDITION B - Interruption of Continuous Traffic

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
2 or More	1
(2) or More	(2) or More
1	2 or More

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
12,000	8,400	1,200	850
14,400	10,080	1,200	850
14,400	[10,080]	1,600	[1,120]
12,000	8,400	1,600	1,120
	35,500		3,000

Combination of CONDITIONS A + B

Satisfied _____ Not Satisfied _____

No one condition satisfied, but following conditions fulfilled 80% or more..... A _____ B _____

2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE _____

CALC _____ DATE _____

CHK _____ DATE _____

DIST ____ CO ____ RTE ____ PM ____

#34,

Major St: OTAY MESA ROAD — Critical Approach Speed _____ mph

Minor St: HARVEST ROAD — Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) ..... [X] or [ ] } RURAL (R)

In built up area of isolated community of < 10,000 population ..... [ ] }

[ ] URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN ..... RURAL X

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
2 or More	1
(2) or More	(2) or More
1	2 or More

Minimum Requirements EADT

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
8,000	5,600	2,400	1,680
9,600	6,720	2,400	1,680
9,600	[6,720]	3,200	[2,240]
8,000	5,800	3,200	2,240
	34,000		4,250

CONDITION B - Interruption of Continuous Traffic

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
2 or More	1
(2) or More	(2) or More
1	2 or More

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
12,000	8,400	1,200	850
14,400	10,080	1,200	850
14,400	[10,080]	1,600	[1,120]
12,000	8,400	1,600	1,120
	34,000		4,250

Combination of CONDITIONS A + B

Satisfied _____ Not Satisfied _____

No one condition satisfied, but following conditions fulfilled 80% or more ..... A _____ B _____

2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE _____
CALC _____ DATE _____
CHK _____ DATE _____

DIST CO RTE PM

#36-A

Major St: SIEMPRE VIVA ROAD Critical Approach Speed _____ mph
Minor St: SD-905 - SB TO WB OFF-RAMP Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) ☒ or
In built up area of isolated community of < 10,000 population ☐ } RURAL (R)
☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN ____ RURAL X	Minimum Requirements ADT	
CONDITION A - Minimum Vehicular Volume Satisfied ____ Not Satisfied ____	Vehicles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach Major Street / Minor Street 1 / 1 2 or More / 1 2 or More / 2 or More 1 / 2 or More	Urban: 8,000 / 9,600 / 9,600 / 8,000 Rural: 5,600 / 6,720 / 6,720 / 5,600 26,300	Urban: 2,400 / 2,400 / 3,200 / 3,200 Rural: 1,680 / 1,680 / 2,240 / 2,240 15,360
CONDITION B - Interruption of Continuous Traffic Satisfied ____ Not Satisfied ____	Vehicles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach Major Street / Minor Street 1 / 1 2 or More / 1 2 or More / 2 or More 1 / 2 or More	Urban: 12,000 / 14,400 / 14,400 / 12,000 Rural: 8,400 / 10,080 / 10,080 / 8,400 26,300	Urban: 1,200 / 1,200 / 1,600 / 1,600 Rural: 850 / 850 / 1,120 / 1,120 15,360
Combination of CONDITIONS A + B Satisfied ____ Not Satisfied ____ No one condition satisfied, but following conditions fulfilled 80% or more: ____ A ____ B	2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE _____
CALC _____ DATE _____
CHK _____ DATE _____

DIST ____ CO ____ RTE ____ PM ____

#44
Major St: OTAY MESA RD (3B W/B)
Minor St: INNOVATIVE DR.

Critical Approach Speed _____ mph
Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) ..... [X]
or
In built up area of isolated community of < 10,000 population ..... [ ] } RURAL (R)

[ ] URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN ..... RURAL X .....

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
2 or More	1
2 or More	2 or More
1	2 or More

Minimum Requirements EADT			
Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
8,000	5,600	2,400	1,680
9,600	6,720	2,400	1,680
9,600	6,720	3,200	2,240
8,000	5,600	3,200	2,240
	49,000		7,500

CONDITION B - Interruption of Continuous Traffic

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
2 or More	1
2 or More	2 or More
1	2 or More

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
12,000	8,400	1,200	850
14,400	10,080	1,200	850
14,400	10,080	1,600	1,120
12,000	8,400	1,600	1,120
	49,000		7,500

Combination of CONDITIONS A + B

Satisfied _____ Not Satisfied _____

No one condition satisfied, but following conditions fulfilled 80% or more ..... A _____ B _____

2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE _____
CALC _____ DATE _____
CHK _____ DATE _____

DIST ____ CO ____ RTE ____ PM ____

#45
Major St: AIRWAY RD. (SB W/O L.M.) Critical Approach Speed _____ mph
Minor St: HARVEST RD. Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) ☒ or ☐ } RURAL (R)
In built up area of isolated community of < 10,000 population ☐ } URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN _____ RURAL X

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
2 or More	1
(2) or More	(2) or More
1	2 or More

Minimum Requirements EADT

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
8,000	5,600	2,400	1,680
9,600	6,720	2,400	1,680
9,600	(6,720)	3,200	(2,240)
8,000	5,600	3,200	2,240
	23,500		3,500

CONDITION B - Interruption of Continuous Traffic

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
2 or More	1
(2) or More	(2) or More
1	2 or More

Vehicles Per Day on Major Street (Total of Both Approaches) / Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)

Urban	Rural	Urban	Rural
12,000	8,400	1,200	850
14,400	10,080	1,200	850
14,400	(10,080)	1,600	(1,120)
12,000	8,400	1,600	1,120
	23,500		3,940

Combination of CONDITIONS A + B

Satisfied _____ Not Satisfied _____

No one condition satisfied, but following conditions fulfilled 80% or more _____ (A) _____ (B)

2 CONDITIONS 80% / 2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

#48.

COUNT DATE _____

DIST ____ CO ____ RTE ____ PM ____

CALC _____ DATE _____

CHK _____ DATE _____

Major St: AIRWAY ROAD — Critical Approach Speed _____ mph

Minor St: SANYO AVENUE — Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) ☒ or
In built up area of isolated community of < 10,000 population ☐ } RURAL (R)

☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN ____ RURAL X	Minimum Requirements EADT	
CONDITION A - Minimum Vehicular Volume Satisfied X Not Satisfied ____	Vehicles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach Major Street / Minor Street 1 / 1 2 or More / 1 (2) or More / (2) or More 1 / 2 or More	Urban: 8,000 / 9,600 / 9,600 / 8,000 Rural: 5,600 / 6,720 / [6,720] / 5,600 18,250	Urban: 2,400 / 2,400 / 3,200 / 3,200 Rural: 1,680 / 1,680 / [2,240] / 2,240 12,250
CONDITION B - Interruption of Continuous Traffic Satisfied X Not Satisfied ____	Vehicles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach Major Street / Minor Street 1 / 1 2 or More / 1 (2) or More / (2) or More 1 / 2 or More	Urban: 12,000 / 14,400 / 14,400 / 12,000 Rural: 8,400 / 10,080 / [10,080] / 8,400 18,250	Urban: 1,200 / 1,200 / 1,600 / 1,600 Rural: 850 / 850 / [1,120] / 1,120 12,250
Combination of CONDITIONS A + B Satisfied ____ Not Satisfied ____ No one condition satisfied, but following conditions fulfilled 80% or more ____ (A) ____ (B)	2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE _____
CALC _____ DATE _____
CHK _____ DATE _____

DIST ____ CO ____ RTE ____ PM ____

#49.
Major St: PASEO DE LAS AMERICAS — Critical Approach Speed _____ mph
Minor St: HEINRICH HERTZ DR — Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 64 kmh (40 mph) ..... ☒ or ☐ } RURAL (R)
In built up area of isolated community of < 10,000 population ..... ☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN _____ RURAL X

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
(2 or More)	(1)
2 or More	2 or More
1	2 or More

Minimum Requirements EADT

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
8,000	5,600	2,400	1,680
9,600	6,720	2,400	1,680
9,600	6,720	3,200	2,240
8,000	5,600	3,200	2,240
	9,250		5,500

CONDITION B - Interruption of Continuous Traffic

Satisfied _____ Not Satisfied Y (12%)

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
(2 or More)	(1)
2 or More	2 or More
1	2 or More

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
12,000	8,400	1,200	850
14,400	10,080	1,200	850
14,400	10,080	1,600	1,120
12,000	8,400	1,600	1,120
	9,250		5,500

Combination of CONDITIONS A + B

Satisfied X Not Satisfied _____

No one condition satisfied, but following conditions fulfilled 80% or more ..... A: _____ B: 95%

2 CONDITIONS 80%: 9,250 / 10,080 = 92%

2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE _____

DIST ____ CO ____ RTE ____ PM ____

CALC _____ DATE _____

CHK _____ DATE _____

#50. Major St: PASEO DE LAS AMERICAS — Critical Approach Speed _____ mph

Minor St: MARCONI DRIVE — Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) ..... ☒ or ☐ } RURAL (R)

In built up area of isolated community of < 10,000 population ..... ☐ } RURAL (R)

☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN _____ RURAL X

CONDITION A - Minimum Vehicular Volume

Satisfied _____ Not Satisfied _____

Number of lanes for moving traffic on each approach		Minimum Requirements EADT			
		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	1	8,000	5,600	2,400	1,680
(2) or More	(1)	9,600	6,720	2,400	(1,680)
2 or More	2 or More	9,600	6,720	3,200	2,240
1	2 or More	8,000	5,600	3,200	2,240
			8,000		4,000

CONDITION B - Interruption of Continuous Traffic

Satisfied _____ Not Satisfied X (79%)

Number of lanes for moving traffic on each approach		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	1	12,000	8,400	1,200	850
(2) or More	(1)	14,400	10,080	1,200	(850)
2 or More	2 or More	14,400	10,080	1,600	1,120
1	2 or More	12,000	8,400	1,600	1,120
			8,000		4,000

Combination of CONDITIONS A + B

Satisfied X Not Satisfied _____

No one condition satisfied, but following conditions fulfilled 80% or more ..... A: _____ B: 0.79

2 CONDITIONS 80%	2 CONDITIONS 80%
$\frac{8,000}{10,000} = 1.79$	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE _____
CALC _____ DATE _____
CHK _____ DATE _____

DIST ____ CO ____ RTE ____ PM ____

#51

Major St: HERITAGE RD (3R W/ L.M.) Critical Approach Speed _____ mph
Minor St: DATSUN ST. Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) ☒ or ☐ } RURAL (R)
In built up area of isolated community of < 10,000 population ☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN _____ RURAL X

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
2 or More	1
(2) or More	(2) or More
1	2 or More

Minimum Requirements EADT

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
8,000	5,600	2,400	1,680
9,600	6,720	2,400	1,680
9,600	[5,720]	3,200	[2,240]
8,000	5,600	3,200	2,240
	6,750		15,000

CONDITION B - Interruption of Continuous Traffic

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
2 or More	1
(2) or More	(2) or More
1	2 or More

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
12,000	8,400	1,200	850
14,400	10,080	1,200	850
14,400	[10,080]	1,600	[1,120]
12,000	8,400	1,600	1,120
	6,750		15,000

Combination of CONDITIONS A + B

Satisfied _____ Not Satisfied _____

No one condition satisfied, but following conditions fulfilled 80% or more _____ A _____ B

2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE _____
CALC _____ DATE _____
CHK _____ DATE _____

DIST ____ CO ____ RTE ____ PM ____

#52
Major St: LA MEDIA RD (3B W/O L.M.) Critical Approach Speed _____ mph
Minor St: AVIATOR WAY Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 64 kmh (40 mph)..... ☒ or ☐ } RURAL (R)
Is built up area of isolated community of < 10,000 population..... ☐ } URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN ____ RURAL X	Minimum Requirements EADT	
CONDITION A - Minimum Vehicular Volume	Vehicles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Satisfied X Not Satisfied ____	Urban / Rural	Urban / Rural
Number of lanes for moving traffic on each approach		
Major Street: 1 / 2 or More	Minor Street: 1 / 2 or More	
2 or More / 1	2 or More / 2 or More	
8,000 / 5,600	2,400 / 1,680	
9,600 / 6,720	2,400 / 1,680	
9,600 / [6,720]	3,200 / [2,240]	
8,000 / 5,600	3,200 / 2,240	
2-1,000	3,000	
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Satisfied X Not Satisfied ____	Urban / Rural	Urban / Rural
Number of lanes for moving traffic on each approach		
Major Street: 1 / 2 or More	Minor Street: 1 / 2 or More	
2 or More / 1	2 or More / 2 or More	
12,000 / 8,400	1,200 / 850	
14,400 / 10,080	1,200 / 850	
14,400 / [10,080]	1,600 / [1,120]	
12,000 / 8,400	1,600 / 1,120	
2-1,000	3,000	
Combination of CONDITIONS A + B		
Satisfied ____ Not Satisfied ____	2 CONDITIONS 80%	2 CONDITIONS 80%
No one condition satisfied, but following conditions fulfilled 80% or more: ____ A ____ B		

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE _____
CALC _____ DATE _____
CHK _____ DATE _____

DIST ____ CO ____ RTE ____ PM ____

#53
Major St: OTAY VALLEY ROAD
Minor St: AVENIDA DE LAS VISTAS

Critical Approach Speed _____ mph
Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) ..... [X]
or
In built up area of isolated community of < 10,000 population ..... [ ]
} RURAL (R)

[ ] URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN _____ RURAL X

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
(2) or More	(1)
2 or More	2 or More
1	2 or More

Minimum Requirements EADT			
Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
8,000	5,600	2,400	1,680
9,600	[6,720]	2,400	[1,680]
9,600	6,720	3,200	2,240
8,000	5,600	3,200	2,240
	7705		3500

CONDITION B - Interruption of Continuous Traffic

Satisfied X Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
(2) or More	(1)
2 or More	2 or More
1	2 or More

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
12,000	8,400	1,200	850
14,400	[10,080]	1,200	[850]
14,400	10,080	1,600	1,120
12,000	8,400	1,600	1,120
	7,250		3,500

Combination of CONDITIONS A + B

Satisfied _____ Not Satisfied _____

No one condition satisfied, but following conditions fulfilled 80% or more ..... A ____ B ____

2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

1-A

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	PALM AVA-805 SB RAMPS
Agency or Co.	SAN DIEGO	Area Type	All other areas
Date Performed	12/15/10	Jurisdiction	SAN DIEGO
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 /ALT 3B NO I A MEDIA

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	1	2	2	0	0	0	0	1	1	1
Lane group		T	R	L	T					L	LTR	R
Volume (vph)		890	175	280	355					1095	1	570
% Heavy veh		2	2	2	2					2	2	2
PHF		0.95	0.95	0.95	0.95					0.95	0.95	0.95
Actuated (P/A)		A	A	A	A					A	A	A
Startup lost time		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Ext. eff. green		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Arrival type		5	5	5	5					5	5	5
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0				10			10	5	150
Lane Width		12.0	12.0	12.0	12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0	0	0	0					0	0	0
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0

Phasing	WB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 30.0	G = 30.0	G =	G =	G = 45.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		937	184	295	374					692	572	332
Lane group cap.		887	405	959	2032					664	647	572
v/c ratio		1.06	0.45	0.34	0.18					1.04	0.88	0.58
Green ratio		0.25	0.25	0.25	0.54					0.38	0.38	0.38
Uni. delay d1		45.0	38.1	36.9	14.0					37.5	35.1	30.0
Delay factor k		0.50	0.11	0.11	0.11					0.50	0.41	0.17
Increm. delay d2		46.2	0.8	0.2	0.0					46.4	13.8	1.5
PF factor		0.778	0.778	0.778	0.212					0.500	0.500	0.500
Control delay		81.2	30.4	29.0	3.0					56.9	34.8	16.5
Lane group LOS		F	C	C	A					E	C	B
Approach delay		72.9		14.5						46.4		
Approach LOS		E		B						D		
Intersec. delay		48.9		Intersection LOS						D		

1-A
N2
AM

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT 3-B NO LA MEDIA AM PEAK HOUR

Average Back of Queue

	EB			WB			NS			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		T	R	L	T					L	LTR	R
Init. queue/lane		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Flow rate/lane		937	194	295	374					692	572	332
Satflow per lane		1862	1620	1770	1960					1770	1725	1524
Capacity/lane		867	405	859	2022					564	647	572
Flow ratio		0.26	0.11	0.09	0.10					0.39	0.33	0.22
v/c ratio		1.06	0.45	0.34	0.18					1.04	0.88	0.58
I factor		1.000	1.000	1.000	1.000					1.000	1.000	1.000
Arrival type		5	5	5	5					5	5	5
Platoon ratio		1.67	1.67	1.67	1.67					1.67	1.67	1.67
PF factor		1.00	0.85	0.83	0.23					1.00	0.90	0.74
Q1		16.4	4.4	3.4	0.8					23.1	16.0	6.5
k2		0.5	0.5	0.5	0.8					0.6	0.5	0.6
Q2		7.6	0.4	0.3	0.2					9.4	3.5	0.8
Q avg.		24.0	4.8	3.7	1.0					32.5	19.5	7.3
Percentile Back of Queue (95th percentile)												
f95		1.7	2.0	2.0	2.1					1.6	1.7	1.9
BOQ. Q95		39.8	9.4	7.3	2.0					51.9	33.2	13.9
Queue Storage Ratio												
Q spacing		24.9	24.9	24.9	24.9					24.9	24.9	24.9
Q storage		0	0	0	0					0	0	0
Avg. Rq												
95% Rq												

1-A
W
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	PALM AV./I-805 SB RAMPS
Agency or Co.	SAN DIEGO	Area Type	All other areas
Date Performed	03/06/12	Jurisdiction	SAN DIEGO/WITH MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 /ALT.3B NO LA MEDIA/

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	1	2	2	0	0	0	0	2	1	1
Lane group		T	R	L	T					L	TR	R
Volume (vph)		890	175	280	355					1095	1	570
% Heavy veh		2	2	2	2					2	2	2
PHF		0.95	0.95	0.95	0.95					0.95	0.95	0.95
Actuated (P/A)		A	A	A	A					A	A	A
Startup lost time		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Ext. eff. green		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Arrival type		5	5	5	5					5	5	5
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0				10			10	5	0
Lane Width		12.0	12.0	12.0	12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0	0	0	0					0	0	0
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0

Phasing	WB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 20.0	G = 35.0	G =	G =	G = 50.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 120.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		937	184	295	374					1153	301	300
Lane group cap.		1035	474	573	1867					1432	636	636
v/c ratio		0.91	0.39	0.51	0.20					0.81	0.47	0.47
Green ratio		0.29	0.29	0.17	0.50					0.42	0.42	0.42
Unif. delay d1		40.9	33.9	45.6	16.7					30.7	25.4	25.4
Delay factor k		0.43	0.11	0.12	0.11					0.35	0.11	0.11
Increm. delay d2		11.2	0.5	0.8	0.1					3.5	0.6	0.6
PF factor		0.725	0.725	0.867	0.333					0.524	0.524	0.524
Control delay		40.9	25.2	40.3	5.6					19.6	13.9	13.9
Lane group LOS		D	C	D	A					B	B	B
Apprch. delay	38.3			20.9						17.6		
Approach LOS	D			C						B		
Intersec. delay	24.8			Intersection LOS						C		

1-A W MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3-B NO LA MEDIA AM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		*T*	*R*	*L*	*T*					*L*	*TR*	*R*
Init. queue/lane		*0.0*	*0.0*	*0.0*	*0.0*					*0.0*	*0.0*	*0.0*
Flow rate/lane		*937*	*184*	*295*	*374*					*1153*	*301*	*300*
Satflow per lane		*1862*	*1624*	*1770*	*1960*					*1770*	*1527*	*1526*
Capacity/lane		*1035*	*474*	*573*	*1867*					*1432*	*636*	*636*
Flow ratio		*0.26*	*0.11*	*0.09*	*0.10*					*0.34*	*0.20*	*0.20*
v/c ratio		*0.91*	*0.39*	*0.51*	*0.20*					*0.81*	*0.47*	*0.47*
I factor		*1.000*	*1.000*	*1.000*	*1.000*					*1.000*	*1.000*	*1.000*
Arrival type		*5*	*5*	*5*	*5*					*5*	*5*	*5*
Platoon ratio		*1.67*	*1.67*	*1.67*	*1.67*					*1.67*	*1.67*	*1.67*
PF factor		*0.95*	*0.79*	*0.92*	*0.36*					*0.79*	*0.63*	*0.63*
Q_1		*15.1*	*3.9*	*4.2*	*1.3*					*13.7*	*4.6*	*4.5*
k_B		*0.6*	*0.5*	*0.4*	*0.8*					*0.7*	*0.6*	*0.6*
Q_2		*3.5*	*0.3*	*0.4*	*0.2*					*2.5*	*0.6*	*0.6*
Q avg.		*18.6*	*4.2*	*4.6*	*1.5*					*16.2*	*5.1*	*5.1*
Percentile Back of Queue (95th percentile)												
$f_{B\%}$		*1.7*	*2.0*	*2.0*	*2.1*					*1.7*	*2.0*	*2.0*
BOQ, $Q_{\%}$		*31.9*	*8.3*	*9.1*	*3.1*					*28.2*	*10.0*	*9.9*
Queue Storage Ratio												
Q spacing		*24.9*	*24.9*	*24.9*	*24.9*					*24.9*	*24.9*	*24.9*
Q storage		*0*	*0*	*0*	*0*					*0*	*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

1-P
NO MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	PALM AV./I-805 SB RAMPS
Agency or Co	SAN DIEGO	Area Type	All other areas
Date Performed	12/16/10	Jurisdiction	NO MITIGATION
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 /ALT.3B NO LA MEDIA

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	1	2	2	0	0	0	0	1	1	1
Lane group		T	R	L	T					L	LTR	R
Volume (vph)		900	145	500	615					1400	1	775
% Heavy veh		2	2	2	2					2	2	2
PHF		0.95	0.95	0.95	0.95					0.95	0.95	0.95
Actuated (P/A)		A	A	A	A					A	A	A
Startup lost time		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Ext. eff. green		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Arrival type		5	5	5	5					5	5	5
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0				10			10	5	150
Lane Width		12.0	12.0	12.0	12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0	0	0	0					0	0	0
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0

Phasing	WB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 25.0	G = 35.0	G =	G =	G = 60.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 135.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		947	153	526	647					625	813	490
Lane group cap		920	425	636	1797					787	767	679
v/c ratio		1.03	0.36	0.83	0.36					1.05	1.06	0.72
Green ratio		0.26	0.26	0.19	0.46					0.44	0.44	0.44
Unif. delay d1		50.0	40.8	52.6	22.5					37.5	37.5	30.7
Delay factor k		0.50	0.11	0.37	0.11					0.50	0.50	0.28
Increm. delay d2		37.4	0.5	8.9	0.1					45.5	49.6	3.8
PF factor		0.767	0.767	0.848	0.381					0.467	0.467	0.467
Control delay		75.8	31.9	53.8	8.6					63.0	67.1	18.1
Lane group LOS		E	C	D	A					E	E	B
Apprch. delay	69.7			28.8						54.2		
Approach LOS	E			C						D		
Intersec. delay	51.3			Intersection LOS						D		

1-2 NB ALT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT. 3-2 NO LA MESA PM PEAK HOUR/NO MITIGATION

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		T	R	L	T					L	LTR	R
Init queue/lane		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Flow rate/lane		947	153	526	847					825	913	490
Satflow per lane		1662	1621	1770	1960					1775	1725	1528
Capacity/lane		920	420	636	1797					787	767	679
Flow ratio		0.27	0.09	0.15	0.17					0.47	0.47	0.32
v/c ratio		1.03	0.36	0.83	0.36					1.05	1.06	0.72
f factor		1.000	1.000	1.000	1.000					1.000	1.000	1.000
Arriva type		5	5	5	5					5	5	5
Platoon ratio		1.67	1.67	1.67	1.67					1.67	1.67	1.67
PF factor		1.00	0.92	0.96	0.44					1.00	1.00	0.68
Q1		18.6	3.9	9.4	3.5					35.9	30.5	10.2
k5		0.6	0.5	0.5	0.8					0.8	0.8	0.7
Q2		6.9	0.3	1.7	0.5					11.6	12.1	1.7
Q avg		25.5	4.2	11.1	4.0					42.5	42.6	11.9

Percentile Back of Queue (95th percentile)

f95		1.6	2.0	1.8	2.0					1.6	1.6	1.8
BOQ. Q%		42.0	8.2	20.3	7.9					68.1	68.2	21.8

Queue Storage Ratio

Q spacing		24.9	24.9	24.9	24.9					24.9	24.9	24.9
Q storage		0	0	0	0					0	0	0
Avg. Ro												
95% Ro%												

1-P
W
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	PALM AV./I-805 SB RAMPS
Agency or Co.	SAN DIEGO	Area Type	All other areas
Date Performed	03/06/12	Jurisdiction	WITH MITIGATION
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 /ALT.3B NO LA MEDIA

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	1	2	2	0	0	0	0	2	1	1
Lane group		T	R	L	T					L	TR	R
Volume (vph)		900	145	500	615					1400	1	770
% Heavy veh		2	2	2	2					2	2	2
PHF		0.95	0.95	0.95	0.95					0.95	0.95	0.95
Actuated (P/A)		A	A	A	A					A	A	A
Startup lost time		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Ext. eff. green		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Arrival type		5	5	5	5					5	5	5
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0				10			10	5	0
Lane Width		12.0	12.0	12.0	12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0	0	0	0					0	0	0
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0

Phasing	WB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 20.0	G = 40.0	G =	G =	G = 60.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 135.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		947	153	526	647					1474	406	406
Lane group cap.		1051	481	509	1797					1528	680	679
v/c ratio		0.90	0.32	1.03	0.36					0.96	0.60	0.60
Green ratio		0.30	0.30	0.15	0.48					0.44	0.44	0.44
Unif. delay d1		45.6	36.9	57.5	22.0					36.5	28.4	28.4
Delay factor k		0.42	0.11	0.50	0.11					0.47	0.19	0.19
Increm. delay d2		10.6	0.4	48.8	0.1					15.4	1.4	1.5
PF factor		0.719	0.719	0.884	0.381					0.467	0.467	0.467
Control delay		43.4	26.9	99.6	8.5					32.4	14.7	14.7
Lane group LOS		D	C	F	A					C	B	B
Apprch. delay		41.1			49.3						26.1	
Approach LOS		D			D						C	
Intersec. delay		35.7			Intersection LOS						D	

1P W MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3-B NO LA MEDIA PM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		T	R	L	T					L	TR	R
Init. queue/lane		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Flow rate/lane		947	153	500	647					1474	406	406
Satflow per lane		1862	1624	1770	1960					1770	1529	1528
Capacity/lane		1043	478	531	1812					1516	675	674
Flow ratio		0.27	0.09	0.15	0.17					0.43	0.27	0.27
v/c ratio		0.91	0.32	0.94	0.36					0.97	0.60	0.60
I factor		1.000	1.000	1.000	1.000					1.000	1.000	1.000
Arrival type		5	5	5	5					5	5	5
Platoon ratio		1.67	1.67	1.67	1.67					1.67	1.67	1.67
PF factor		0.95	0.78	0.99	0.43					0.95	0.62	0.62
Q_1		17.2	3.5	9.5	3.4					26.6	7.3	7.3
k_B		0.6	0.6	0.4	0.9					0.8	0.7	0.7
Q_2		3.8	0.3	2.7	0.5					7.3	1.0	1.0
Q avg.		21.1	3.8	12.3	3.9					33.9	8.3	8.3
Percentile Back of Queue (95th percentile)												
$f_{B\%}$		1.7	2.0	1.8	2.0					1.6	1.9	1.9
BOQ, $Q_{\%}$		35.5	7.5	22.1	7.8					54.0	15.6	15.6
Queue Storage Ratio												
Q spacing		24.9	24.9	24.9	24.9					24.9	24.9	24.9
Q storage		0	0	0	0					0	0	0
Avg. R_Q												
95% $R_{Q\%}$												

2A NO MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	PALM AV./I-805 NB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/08/10	Jurisdiction	SAN DIEGO
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030/ 3B NO LM/NO MI

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	0	2	1	0	1	1	0	0	0
Lane group	L	T			T	R		LTR	R			
Volume (vph)	655	1330			575	1280	60	1	385			
% Heavy veh	2	2			2	2	2	2	2			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0	2.0		2.0	2.0			
Ext. eff. green	2.0	2.0			2.0	2.0		2.0	2.0			
Arrival type	5	5			5	5		5	5			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			
Ped/Bike/RTOR Volume				10	5	200	10	5	0	10		
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0	0		0	0			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 25.0	G = 50.0	G =	G =	G = 31.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	689	1400			605	1137		185	284			
Lane group cap.	716	2458			1555	645		414	390			
v/c ratio	0.96	0.57			0.39	1.76		0.45	0.73			
Green ratio	0.21	0.66			0.42	0.42		0.26	0.26			
Unif. delay d1	47.0	11.2			24.4	35.0		37.3	40.7			
Delay factor k	0.47	0.16			0.11	0.50		0.11	0.29			
Increm. delay d2	24.6	0.3			0.2	349.6		0.8	6.8			
PF factor	0.825	0.146			0.524	0.790		0.768	0.768			
Control delay	63.4	2.0			12.9	377.2		29.4	38.0			
Lane group LOS	E	A			B	F		C	D			
Apprch. delay	22.2			250.7			34.6					
Approach LOS	C			F			C					
Intersec. delay	116.1			Intersection LOS						F		

2-A NO MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LA MEDIA AM PEAK HOUR/NO MIT/#2*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*			*T*	*R*		*LTR*	*R*			
Init. queue/lane	*0.0*	*0.0*			*0.0*	*0.0*		*0.0*	*0.0*			
Flow rate/lane	*689*	*1400*			*605*	*1137*		*185*	*284*			
Satflow per lane	*1770*	*1960*			*1960*	*1549*		*1602*	*1511*			
Capacity/lane	*716*	*2458*			*1555*	*645*		*414*	*390*			
Flow ratio	*0.20*	*0.38*			*0.16*	*0.73*		*0.12*	*0.19*			
v/c ratio	*0.96*	*0.57*			*0.39*	*1.76*		*0.45*	*0.73*			
I factor	*1.000*	*1.000*			*1.000*	*1.000*		*1.000*	*1.000*			
Arrival type	*5*	*5*			*5*	*5*		*5*	*5*			
Platoon ratio	*1.67*	*1.44*			*1.67*	*1.29*		*1.67*	*1.67*			
PF factor	*0.99*	*0.20*			*0.60*	*1.00*		*0.84*	*0.91*			
Q_1	*11.6*	*2.7*			*4.4*	*37.9*		*4.3*	*7.9*			
K_B	*0.5*	*1.0*			*0.7*	*0.6*		*0.5*	*0.5*			
Q_2	*3.7*	*1.2*			*0.5*	*62.9*		*0.4*	*1.1*			
Q avg.	*15.2*	*3.9*			*4.9*	*100.8*		*4.7*	*9.0*			

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*1.8*	*2.0*			*2.0*	*1.5*		*2.0*	*1.9*			
BOQ, $Q_{\%}$	*26.8*	*7.8*			*9.6*	*151*		*9.3*	*16.8*			

Queue Storage Ratio

Q spacing	*24.9*	*24.9*			*24.9*	*24.9*		*24.9*	*24.9*			
Q storage	*0*	*0*			*0*	*0*		*0*	*0*			
Avg. R_Q												
95% $R_{Q\%}$												

2-A W MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	PALM AV./I-805 NB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/06/12	Jurisdiction	WITH MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR YEAR 2030/ ALT. 3B-NO LA

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	3	1	0	3	2	1	1	1	0	0	0
Lane group		T	R		T	R	L	LTR	R			
Volume (vph)		1330	655		575	1280	60	1	385			
% Heavy veh		2	0		2	2	2	2	2			
PHF		0.95	0.95		0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)		A	A		A	A	A	A	A			
Startup lost time		2.0	2.0		2.0	2.0	2.0	2.0	2.0			
Ext. eff. green		2.0	2.0		2.0	2.0	2.0	2.0	2.0			
Arrival type		5	5		5	5	5	5	5			
Unit Extension		3.0	3.0		3.0	3.0	3.0	3.0	3.0			
Ped/Bike/RTOR Volume	0	0	0	10		200	10	5	0	10		
Lane Width		12.0	12.0		12.0	12.0	12.0	12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0	0		0	0	0	0	0			
Unit Extension		3.0	3.0		3.0	3.0	3.0	3.0	3.0			

Phasing	Thru & RT	02	03	04	NB Only	06	07	08
Timing	G = 50.0	G =	G =	G =	G = 31.0	G =	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 90.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1400	689		605	1137	44	141	284			
Lane group cap.		2967	944		2967	1557	610	544	533			
v/c ratio		0.47	0.73		0.20	0.73	0.07	0.26	0.53			
Green ratio		0.56	0.56		0.56	0.56	0.34	0.34	0.34			
Unif. delay d1		12.0	15.0		10.0	15.0	19.8	21.2	23.7			
Delay factor k		0.11	0.29		0.11	0.29	0.11	0.11	0.14			
Increm. delay d2		0.1	2.9		0.0	1.8	0.1	0.3	1.0			
PF factor		0.167	0.167		0.167	0.167	0.650	0.650	0.650			
Control delay		2.1	5.4		1.7	4.3	12.9	14.1	16.4			
Lane group LOS		A	A		A	A	B	B	B			
Apprch. delay	3.2			3.4			15.4					
Approach LOS	A			A			B					
Intersec. delay	4.6			Intersection LOS						A		

2-A W MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LA MEDIA AM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		T	R		T	R	L	LTR	R			
Init. queue/lane		0.0	0.0		0.0	0.0	0.0	0.0	0.0			
Flow rate/lane		1400	689		605	1137	44	141	284			
Satflow per lane		1960	1700		1960	1584	1770	1578	1546			
Capacity/lane		2967	944		2967	1557	610	544	533			
Flow ratio		0.26	0.41		0.11	0.41	0.02	0.09	0.18			
v/c ratio		0.47	0.73		0.20	0.73	0.07	0.26	0.53			
I factor		1.000	1.000		1.000	1.000	1.000	1.000	1.000			
Arrival type		5	5		5	5	5	5	5			
Platoon ratio		1.67	1.67		1.67	1.67	1.67	1.67	1.67			
PF factor		0.22	0.31		0.18	0.31	0.66	0.70	0.76			
Q_1		1.7	3.9		0.5	3.7	0.5	1.8	4.4			
k_B		0.7	0.7		0.7	0.6	0.5	0.5	0.5			
Q_2		0.6	1.7		0.2	1.6	0.0	0.2	0.5			
Q avg.		2.3	5.6		0.7	5.3	0.5	1.9	4.9			
Percentile Back of Queue (95th percentile)												
$f_{B\%}$		2.0	1.9		2.1	1.9	2.1	2.0	2.0			
BOQ, $Q_{\%}$		4.7	10.9		1.4	10.3	1.1	3.9	9.6			
Queue Storage Ratio												
Q spacing		24.9	24.9		24.9	24.9	24.9	24.9	24.9			
Q storage		0	0		0	0	0	0	0			
Avg. R_Q												
95% $R_{Q\%}$												

2P NO MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	PALM AV./I-805 NB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/08/10	Jurisdiction	SAN DIEGO
Time Period	PM PEAK HOUR	Analysis Year	YEAR YEAR 2030/ 3B NO LM/NO MI

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	0	2	1	0	1	1	0	0	0
Lane group	L	T			T	R		LTR	R			
Volume (vph)	540	1760			1000	1380	115	1	620			
% Heavy veh	2	2			2	2	2	2	2			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0	2.0		2.0	2.0			
Ext. eff. green	2.0	2.0			2.0	2.0		2.0	2.0			
Arrival type	5	5			5	5		5	5			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			
Ped/Bike/RTOR Volume				10	5	200	10	5	0	10		
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0	0		0	0			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 25.0	G = 50.0	G =	G =	G = 31.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	568	1853			1053	1242		448	327			
Lane group cap.	716	2458			1555	645		409	390			
v/c ratio	0.79	0.75			0.68	1.93		1.10	0.84			
Green ratio	0.21	0.66			0.42	0.42		0.26	0.26			
Unif. delay d1	45.0	13.9			28.4	35.0		44.5	42.1			
Delay factor k	0.34	0.31			0.25	0.50		0.50	0.37			
Increm. delay d2	6.1	1.4			1.2	422.2		72.7	14.9			
PF factor	0.825	0.146			0.524	0.868		0.768	0.768			
Control delay	43.3	3.4			16.1	452.6		106.9	47.2			
Lane group LOS	D	A			B	F		F	D			
Apprch. delay	12.8			252.3			81.7					
Approach LOS	B			F			F					
Intersec. delay	122.6			Intersection LOS						F		

2-P NO MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LA MEDIA PM PEAK HOUR/NO MIT/#2*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*			*T*	*R*		*LTR*	*R*			
Init. queue/lane	*0.0*	*0.0*			*0.0*	*0.0*		*0.0*	*0.0*			
Flow rate/lane	*568*	*1853*			*1053*	*1242*		*448*	*327*			
Satflow per lane	*1770*	*1960*			*1960*	*1549*		*1583*	*1511*			
Capacity/lane	*716*	*2458*			*1555*	*645*		*409*	*390*			
Flow ratio	*0.16*	*0.50*			*0.28*	*0.80*		*0.28*	*0.22*			
v/c ratio	*0.79*	*0.75*			*0.68*	*1.93*		*1.10*	*0.84*			
I factor	*1.000*	*1.000*			*1.000*	*1.000*		*1.000*	*1.000*			
Arrival type	*5*	*5*			*5*	*5*		*5*	*5*			
Platoon ratio	*1.67*	*1.44*			*1.67*	*1.18*		*1.67*	*1.67*			
PF factor	*0.95*	*0.26*			*0.71*	*1.00*		*1.00*	*0.94*			
Q_1	*8.8*	*5.7*			*10.6*	*41.4*		*14.9*	*9.7*			
k_B	*0.5*	*1.0*			*0.7*	*0.6*		*0.5*	*0.5*			
Q_2	*1.5*	*2.7*			*1.5*	*75.9*		*8.2*	*1.9*			
Q avg.	*10.3*	*8.5*			*12.1*	*117.3*		*23.1*	*11.7*			
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.8*	*1.9*			*1.8*	*1.5*		*1.7*	*1.8*			
BOQ, $Q_{\%}$	*18.9*	*15.9*			*21.9*	*176*		*38.5*	*21.1*			
Queue Storage Ratio												
Q spacing	*24.9*	*24.9*			*24.9*	*24.9*		*24.9*	*24.9*			
Q storage	*0*	*0*			*0*	*0*		*0*	*0*			
Avg. R_Q												
95% $R_{Q\%}$												

2-P
W
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	PALM AV./I-805 NB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/06/12	Jurisdiction	WITH MITIGATION
Time Period	PM PEAK HOUR	Analysis Year	YEAR YEAR 2030/ ALT. 3B-NO LA

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	3	1	0	3	2	1	1	1	0	0	0
Lane group		T	R		T	R	L	LTR	R			
Volume (vph)		1760	540		1000	1380	115	1	620			
% Heavy veh		2	0		2	2	2	2	2			
PHF		0.95	0.95		0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)		A	A		A	A	A	A	A			
Startup lost time		2.0	2.0		2.0	2.0	2.0	2.0	2.0			
Ext. eff. green		2.0	2.0		2.0	2.0	2.0	2.0	2.0			
Arrival type		5	5		5	5	5	5	5			
Unit Extension		3.0	3.0		3.0	3.0	3.0	3.0	3.0			
Ped/Bike/RTOR Volume	0	0	0	10		200	10	5	0	10		
Lane Width		12.0	12.0		12.0	12.0	12.0	12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0	0		0	0	0	0	0			
Unit Extension		3.0	3.0		3.0	3.0	3.0	3.0	3.0			

Phasing	Thru & RT	02	03	04	NB Only	06	07	08
Timing	G = 50.0	G =	G =	G =	G = 31.0	G =	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1853	568		1053	1242	73	375	327			
Lane group cap.		2967	944		2967	1557	610	543	533			
v/c ratio		0.62	0.60		0.35	0.80	0.12	0.69	0.61			
Green ratio		0.56	0.56		0.56	0.56	0.34	0.34	0.34			
Unif. delay d1		13.6	13.4		11.1	16.0	20.2	25.4	24.5			
Delay factor k		0.21	0.19		0.11	0.34	0.11	0.26	0.20			
Increm. delay d2		0.4	1.1		0.1	3.0	0.1	3.7	2.1			
PF factor		0.167	0.167		0.167	0.167	0.650	0.650	0.650			
Control delay		2.7	3.3		1.9	5.7	13.2	20.2	18.0			
Lane group LOS		A	A		A	A	B	C	B			
Apprch. delay	2.8			4.0			18.6					
Approach LOS	A			A			B					
Intersec. delay	5.5			Intersection LOS						A		

2-P W MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LA MEDIA PM PEAK HOUR/WITH MIT.*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		T	R		T	R	L	LTR	R			
Init. queue/lane		0.0	0.0		0.0	0.0	0.0	0.0	0.0			
Flow rate/lane		1853	568		1053	1242	73	375	327			
Satflow per lane		1960	1700		1960	1584	1770	1576	1546			
Capacity/lane		2967	944		2967	1557	610	543	533			
Flow ratio		0.35	0.33		0.20	0.44	0.04	0.24	0.21			
v/c ratio		0.62	0.60		0.35	0.80	0.12	0.69	0.61			
I factor		1.000	1.000		1.000	1.000	1.000	1.000	1.000			
Arrival type		5	5		5	5	5	5	5			
Platoon ratio		1.67	1.67		1.67	1.67	1.67	1.67	1.67			
PF factor		0.26	0.25		0.20	0.35	0.67	0.82	0.79			
Q_1		3.0	2.4		1.1	5.0	0.8	6.6	5.4			
k_B		0.7	0.7		0.7	0.6	0.5	0.5	0.5			
Q_2		1.2	1.0		0.4	2.3	0.1	1.0	0.7			
Q avg.		4.2	3.4		1.5	7.2	0.9	7.6	6.1			
Percentile Back of Queue (95th percentile)												
$f_{B\%}$		2.0	2.0		2.1	1.9	2.1	1.9	1.9			
BOQ, $Q_{\%}$		8.2	6.7		3.0	13.8	1.9	14.4	11.8			
Queue Storage Ratio												
Q spacing		24.9	24.9		24.9	24.9	24.9	24.9	24.9			
Q storage		0	0		0	0	0	0	0			
Avg. R_Q												
95% $R_{Q\%}$												

3A

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	PALM AVE./DENNERY ROAD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/07/10	Jurisdiction	SAN DIEGO
Time Period	AM PEAK	Analysis Year	YEAR 2030/ALT-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	3	1	0	2	2	1
Lane group	L	T	R	L	T	R	L	TR		L	T	R
Volume (vph)	600	515	450	200	790	60	600	150	110	50	200	500
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.90	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	50	10		0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Thru & RT	Exc.. Left	07	08
Timing	G = 29.0	G = 35.0	G =	G =	G = 16.0	G = 21.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 4	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length: C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	632	542	474	211	832	57	632	221		53	211	526
Lane group cap.	831	1558	721	631	1558	450	843	247		501	498	594
v/c ratio	0.76	0.35	0.66	0.25	0.53	0.15	0.75	0.89		0.09	0.42	0.89
Green ratio	0.24	0.29	0.47	0.24	0.29	0.29	0.17	0.13		0.17	0.13	0.38
Unif. delay d1	42.3	33.5	24.6	35.6	35.7	31.5	47.0	51.2		41.5	47.6	35.1
Delay factor k	0.31	0.11	0.23	0.11	0.14	0.11	0.30	0.42		0.11	0.11	0.41
Increm. delay d2	4.1	0.1	2.2	0.2	0.4	0.2	3.8	31.2		0.1	0.6	14.9
PF factor	0.788	0.725	0.417	0.788	0.725	0.725	0.859	0.897		0.859	0.897	0.600
Control delay	37.4	24.4	12.5	29.1	26.2	23.0	44.1	77.1		35.7	43.4	36.0
Lane group LOS	D	C	B	C	C	C	D	E		D	D	D
Approh. delay	26.0			26.6			52.7			38.0		
Approach LOS	C			C			D			D		
Intersec. delay	33.5			Intersection LOS						C		

3A-

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT. 3B NO LA MEDIA AM PEAK HOUR

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L	T	R	L	T	R	L	TR		L	T	R
Init queue/lane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Flow rate/lane	632	542	474	211	832	67	632	221		53	211	526
Satflow per lane	1770	1960	1545	1770	1960	1543	1769	1854		1770	1960	1563
Capacity/lane	831	1558	721	831	1558	450	843	247		691	498	594
Flow ratio	0.18	0.10	0.31	0.06	0.16	0.04	0.13	0.12		0.02	0.06	0.33
v/c ratio	0.76	0.35	0.66	0.25	0.53	0.15	0.75	0.89		0.09	0.42	0.89
I factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		1.000	1.000	1.000
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Platoon ratio	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67		1.67	1.67	1.67
PF factor	0.93	0.78	0.59	0.82	0.83	0.75	0.95	0.99		0.87	0.93	0.90
Q1	9.3	4.1	7.2	2.4	7.1	1.2	7.0	7.2		0.7	3.1	14.7
k8	0.5	0.6	0.7	0.5	0.6	0.5	0.4	0.4		0.4	0.4	0.6
Q2	1.4	0.3	1.2	0.2	0.7	0.1	1.1	1.9		0.0	0.3	3.3
Q avg.	10.7	4.4	8.4	2.6	7.7	1.3	8.1	9.1		0.7	3.4	18.1

Percentile Back of Queue (95th percentile)

f95	1.8	2.0	1.9	2.0	1.9	2.1	1.9	1.8		2.1	2.0	1.7
BOQ, Q95	19.7	8.6	15.8	5.2	14.6	2.7	15.3	16.9		1.4	6.8	31.1

Queue Storage Ratio

Q spacing												
Q storage												
Avg. R9												
95% R95												

SHORT REPORT

General Information		Site Information	
Analyst:	USAI	Intersection	PALM AVE./DENNERY ROAD
Agency or Co	USAI	Area Type	All other areas
Date Performed	11/07/10	Jurisdiction	SAN DIEGO
Time Period	PM PEAK	Analysis Year	YEAR 2030/ALT-3B-NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num of Lanes	2	3	1	2	3	1	3	1	0	2	2	1
Lane group	L	T	R	L	T	R	L	TR		L	T	R
Volume (vph)	600	630	900	150	495	50	750	150	250	50	150	400
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.90	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arriva type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	75	10		0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Exc. Left	Thru & RT	03	04	Thru & RT	Exc. Left	07	08
Timing	G = 25.0	G = 37.0	G =	G =	G = 25.0	G = 29.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 4	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 135.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	632	663	947	158	516	56	789	342		53	209	421
Lane group cap	636	1464	755	636	1464	422	1035	328		736	691	586
v/c ratio	0.99	0.45	1.25	0.25	0.35	0.13	0.76	1.04		0.07	0.29	0.72
Green ratio	0.19	0.27	0.49	0.19	0.27	0.27	0.21	0.19		0.21	0.19	0.37
Unif. delay d1	54.9	40.6	34.5	47.0	39.4	36.9	49.8	55.0		42.3	47.4	36.5
Delay factor k	0.50	0.11	0.50	0.11	0.11	0.11	0.31	0.50		0.11	0.11	0.28
Increm. delay d2	34.0	0.2	125.2	0.2	0.1	0.1	3.4	61.2		0.0	0.2	4.3
PF factor	0.848	0.748	0.475	0.848	0.748	0.748	0.818	0.848		0.818	0.848	0.508
Control delay	90.5	30.6	141.6	40.1	29.6	27.8	44.1	107.9		34.6	40.4	23.4
Lane group LOS	F	C	F	D	C	C	D	F		C	D	C
Apprch. delay	91.6			31.7			63.4			31.2		
Approach LOS	F			C			E			C		
Intersec. delay	67.2			Intersection LOS			E					

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LA MEDIA PM PEAK HOUR*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L	T	R	L	T	R	L	TR		L	T	R
Init. queue/lane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Flow rate/lane	632	663	947	158	516	56	789	342		53	200	421
Satflow per lane	1770	1960	1544	1770	1960	1541	1769	1770		1770	1960	1583
Capacity/lane	636	1464	755	636	1464	422	1035	328		738	691	586
Flow ratio	0.18	0.12	0.61	0.05	0.10	0.04	0.16	0.19		0.02	0.05	0.27
v/c ratio	0.99	0.45	1.25	0.25	0.35	0.13	0.76	1.04		0.07	0.29	0.72
I factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		1.000	1.000	1.000
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Platoon ratio	1.67	1.67	1.55	1.67	1.67	1.67	1.67	1.67		1.67	1.67	1.67
PF factor	1.00	0.83	1.00	0.88	0.81	0.77	0.94	1.00		0.83	0.88	0.80
Q_1	12.1	6.2	35.5	2.3	4.6	1.2	9.6	12.8		0.7	3.0	10.9
K_B	0.5	0.6	0.7	0.5	0.6	0.5	0.5	0.5		0.5	0.5	0.6
Q_2	4.2	0.5	27.2	0.1	0.3	0.1	1.4	5.4		0.0	0.2	1.5
Q avg.	16.3	5.7	62.7	2.4	4.9	1.3	11.0	18.2		0.7	3.2	12.4

Percentile Back of Queue (95th percentile)

f95%	1.7	1.9	1.5	2.0	2.0	2.1	1.8	1.7		2.1	2.0	1.8
BOQ Q_{95}	28.4	12.9	95.3	4.9	9.6	2.7	20.0	31.2		1.5	6.4	22.3

Queue Storage Ratio

Q spacing												
Q storage												
Avg. Ro												
95% Ro95												

A-A
N
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD/OCEAN VIEW HILLS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	07/06/11	Jurisdiction	NO MITIGATION
Time Period	YEAR 2030 AM PEAK HOUR	Analysis Year	YEAR 2030/ALT. 3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	3	0	2	3	0
Lane group	L	T	R	L	T	R	L	TR		L	TR	
Volume (vph)	100	1000	600	780	530	465	240	210	1690	850	520	100
% Heavy veh	2	2	2	5	2	2	2	2	5	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	3.0	2.0	2.0	3.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	100	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 26.0	G = 25.0	G =	G = 35.0	G = 26.0	G =	G =
	Y = 4	Y = 5	Y = 5	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	105	1053	526	821	558	489	253	2000		895	652	
Lane group cap.	344	926	664	1031	2030	991	802	757		802	898	
v/c ratio	0.31	1.14	0.79	0.80	0.27	0.49	0.32	2.64		1.12	0.73	
Green ratio	0.10	0.17	0.43	0.30	0.38	0.64	0.23	0.17		0.23	0.17	
Unif. delay d1	62.7	62.0	36.7	48.3	32.2	14.2	47.6	62.0		57.5	58.6	
Delay factor k	0.11	0.50	0.34	0.34	0.11	0.11	0.11	0.50		0.50	0.29	
Increm. delay d2	0.5	75.0	6.5	4.4	0.1	0.4	0.2	742.7		68.6	3.0	
PF factor	0.926	0.860	0.490	0.714	0.591	0.139	0.797	0.860		0.797	0.860	
Control delay	58.5	128.3	24.5	38.9	19.1	2.4	38.2	796.0		114.4	53.4	
Lane group LOS	E	F	C	D	B	A	D	F		F	D	
Apprch. delay	91.5			23.4			710.9			88.7		
Approach LOS	F			C			F			F		
Intersec. delay	263.5			Intersection LOS						F		

4-A N MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT 3B NO LA MEDIA AM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*105*	*1053*	*526*	*821*	*558*	*489*	*253*	*2000*		*895*	*652*	
Satflow per lane	*1770*	*1960*	*1532*	*1769*	*1960*	*1549*	*1770*	*1604*		*1770*	*1902*	
Capacity/lane	*344*	*926*	*664*	*1031*	*2030*	*991*	*802*	*757*		*802*	*898*	
Flow ratio	*0.03*	*0.20*	*0.34*	*0.24*	*0.10*	*0.32*	*0.07*	*0.46*		*0.26*	*0.13*	
v/c ratio	*0.31*	*1.14*	*0.79*	*0.80*	*0.27*	*0.49*	*0.32*	*2.64*		*1.12*	*0.73*	
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*		*5*	*5*	
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.48*	*1.67*	*1.67*		*1.67*	*1.67*	
PF factor	*0.95*	*1.00*	*0.75*	*0.90*	*0.64*	*0.18*	*0.84*	*1.00*		*1.00*	*0.95*	
Q_1	*2.0*	*16.1*	*14.2*	*14.6*	*3.8*	*1.9*	*3.8*	*30.6*		*19.2*	*9.0*	
k_B	*0.3*	*0.5*	*0.7*	*0.6*	*0.8*	*0.9*	*0.6*	*0.4*		*0.6*	*0.5*	
Q_2	*0.1*	*8.6*	*2.4*	*2.2*	*0.3*	*0.9*	*0.3*	*57.8*		*9.4*	*1.2*	
Q avg.	*2.1*	*24.7*	*16.7*	*16.8*	*4.1*	*2.8*	*4.0*	*88.4*		*28.5*	*10.1*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*2.0*	*1.7*	*1.7*	*1.7*	*2.0*	*2.0*	*2.0*	*1.5*		*1.6*	*1.8*	
BOQ, $Q_{\%}$	*4.3*	*40.8*	*29.0*	*29.1*	*8.0*	*5.7*	*8.0*	*133*		*46.3*	*18.6*	

Queue Storage Ratio

Q spacing	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*		*24.9*	*24.9*	
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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Version 4.1f

4-A W MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD/OCEAN VIEW HILLS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	07/06/11	Jurisdiction	WITH MITIGATION
Time Period	YEAR 2030 AM PEAK HOUR	Analysis Year	YEAR 2030/ALT. 3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	3	1	2	3	0
Lane group	L	T	R	L	T	R	L	T	R	L	TR	
Volume (vph)	100	1000	600	780	530	465	240	210	1690	850	520	100
% Heavy veh	2	2	2	5	2	2	2	2	5	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	3.0	2.0	2.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	100	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 26.0	G = 25.0	G =	G = 35.0	G = 26.0	G =	G =
	Y = 4	Y = 5	Y = 5	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	105	1053	526	821	558	489	253	221	1779	895	652	
Lane group cap.	344	926	664	1031	2030	991	802	926	755	802	898	
v/c ratio	0.31	1.14	0.79	0.80	0.27	0.49	0.32	0.24	2.36	1.12	0.73	
Green ratio	0.10	0.17	0.43	0.30	0.38	0.64	0.23	0.17	0.51	0.23	0.17	
Unif. delay d1	62.7	62.0	36.7	48.3	32.2	14.2	47.6	53.5	37.0	57.5	58.6	
Delay factor k	0.11	0.50	0.34	0.34	0.11	0.11	0.11	0.11	0.50	0.50	0.29	
Increm. delay d2	0.5	75.0	6.5	4.4	0.1	0.4	0.2	0.1	614.4	68.6	3.0	
PF factor	0.926	0.860	0.490	0.714	0.591	0.139	0.797	0.860	1.000	0.797	0.860	
Control delay	58.5	128.3	24.5	38.9	19.1	2.4	38.2	46.1	551.4	114.4	53.4	
Lane group LOS	E	F	C	D	B	A	D	D	F	F	D	
Apprch. delay	91.5			23.4			523.2			88.7		
Approach LOS	F			C			F			F		
Intersec. delay	205.9			Intersection LOS						F		

A-A W MT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT 3B NO LA MEDIA AM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane	*105*	*1053*	*526*	*821*	*558*	*489*	*253*	*221*	*1779*	*895*	*652*	
Satflow per lane	*1770*	*1960*	*1532*	*1769*	*1960*	*1549*	*1770*	*1960*	*1491*	*1770*	*1902*	
Capacity/lane	*344*	*926*	*664*	*1031*	*2030*	*991*	*802*	*926*	*755*	*802*	*898*	
Flow ratio	*0.03*	*0.20*	*0.34*	*0.24*	*0.10*	*0.32*	*0.07*	*0.04*	*1.19*	*0.26*	*0.13*	
v/c ratio	*0.31*	*1.14*	*0.79*	*0.80*	*0.27*	*0.49*	*0.32*	*0.24*	*2.36*	*1.12*	*0.73*	
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.48*	*1.67*	*1.67*	*1.00*	*1.67*	*1.67*	
PF factor	*0.95*	*1.00*	*0.75*	*0.90*	*0.64*	*0.18*	*0.84*	*0.89*	*1.00*	*1.00*	*0.95*	
Q_1	*2.0*	*16.1*	*14.2*	*14.6*	*3.8*	*1.9*	*3.8*	*2.6*	*74.1*	*19.2*	*9.0*	
k_B	*0.3*	*0.5*	*0.7*	*0.6*	*0.8*	*0.9*	*0.6*	*0.5*	*0.8*	*0.6*	*0.5*	
Q_2	*0.1*	*8.6*	*2.4*	*2.2*	*0.3*	*0.9*	*0.3*	*0.2*	*129.4*	*9.4*	*1.2*	
Q avg.	*2.1*	*24.7*	*16.7*	*16.8*	*4.1*	*2.8*	*4.0*	*2.7*	*203.5*	*28.5*	*10.1*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*2.0*	*1.7*	*1.7*	*1.7*	*2.0*	*2.0*	*2.0*	*2.0*	*1.5*	*1.6*	*1.8*	
BOQ, $Q_{\%}$	*4.3*	*40.8*	*29.0*	*29.1*	*8.0*	*5.7*	*8.0*	*5.5*	*305*	*46.3*	*18.6*	

Queue Storage Ratio

Q spacing	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

4-P NMT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD/OCEAN VIEW HILLS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	07/06/11	Jurisdiction	NO MITIGATION
Time Period	YEAR 2030 PM PEAK HOUR	Analysis Year	YEAR 2030/ALT. 3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	3	0	2	3	0
Lane group	L	T	R	L	T	R	L	TR		L	TR	
Volume (vph)	100	530	240	1450	1000	850	600	520	780	465	210	100
% Heavy veh	2	2	2	5	2	2	2	2	5	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	3.0	2.0	2.0	3.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	100	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 26.0	G = 25.0	G =	G = 35.0	G = 26.0	G =	G =
	Y = 4	Y = 5	Y = 5	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	105	558	147	1526	1053	895	632	1368		489	326	
Lane group cap.	344	926	664	1031	2030	991	802	811		802	871	
v/c ratio	0.31	0.60	0.22	1.48	0.52	0.90	0.79	1.69		0.61	0.37	
Green ratio	0.10	0.17	0.43	0.30	0.38	0.64	0.23	0.17		0.23	0.17	
Unif. delay d1	62.7	57.2	26.6	52.5	35.9	23.0	54.0	62.0		51.4	54.8	
Delay factor k	0.11	0.19	0.11	0.50	0.12	0.42	0.33	0.50		0.20	0.11	
Increm. delay d2	0.5	1.1	0.2	221.3	0.2	11.4	5.3	314.4		1.4	0.3	
PF factor	0.926	0.860	0.490	0.714	0.591	0.139	0.797	0.860		0.797	0.860	
Control delay	58.5	50.3	13.2	258.8	21.5	14.6	48.3	367.8		42.3	47.4	
Lane group LOS	E	D	B	F	C	B	D	F		D	D	
Apprch. delay	44.7			124.0			266.8			44.4		
Approach LOS	D			F			F			D		
Intersec. delay	146.0			Intersection LOS						F		

A-9 w MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT 3B NO LA MEDIA PM PEAK HOUR/NO MITIGATION/#4*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*105*	*558*	*147*	*1526*	*1053*	*895*	*632*	*1368*		*489*	*326*	
Satflow per lane	*1770*	*1960*	*1532*	*1769*	*1960*	*1549*	*1770*	*1716*		*1770*	*1845*	
Capacity/lane	*344*	*926*	*664*	*1031*	*2030*	*991*	*802*	*811*		*802*	*871*	
Flow ratio	*0.03*	*0.10*	*0.10*	*0.44*	*0.20*	*0.58*	*0.18*	*0.29*		*0.14*	0.06	
v/c ratio	*0.31*	*0.60*	*0.22*	*1.48*	*0.52*	*0.90*	*0.79*	*1.69*		*0.61*	*0.37*	
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*		*5*	*5*	
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.48*	*1.67*	*1.67*		*1.67*	*1.67*	
PF factor	*0.95*	*0.93*	*0.53*	*1.00*	*0.71*	*0.41*	*0.94*	*1.00*		*0.90*	*0.90*	
Q_1	*2.0*	*7.3*	*2.0*	*32.7*	*8.8*	*13.1*	*11.9*	*20.9*		*8.4*	*4.0*	
k_B	*0.3*	*0.5*	*0.7*	*0.6*	*0.8*	*0.9*	*0.6*	*0.5*		*0.6*	*0.5*	
Q_2	*0.1*	*0.7*	*0.2*	*33.7*	*0.8*	*5.8*	*1.8*	*26.7*		*0.8*	*0.3*	
Q avg.	*2.1*	*8.0*	*2.2*	*66.4*	*9.6*	*19.0*	*13.7*	*47.6*		*9.2*	*4.2*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*2.0*	*1.9*	*2.0*	*1.5*	*1.9*	*1.7*	*1.8*	*1.5*		*1.9*	*2.0*	
BOQ, $Q_{\%}$	*4.3*	*15.1*	*4.5*	*101*	*17.8*	*32.4*	*24.4*	*73.4*		*17.1*	*8.4*	

Queue Storage Ratio

Q spacing	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*		*24.9*	*24.9*	
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

4-P
3
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD/OCEAN VIEW HILLS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	07/06/11	Jurisdiction	WITH MITIGATION
Time Period	YEAR 2030 PM PEAK HOUR	Analysis Year	YEAR 2030/ALT. 3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	3	1	2	3	0
Lane group	L	T	R	L	T	R	L	T	R	L	TR	
Volume (vph)	100	530	240	1450	1000	850	600	520	780	465	210	100
% Heavy veh	2	2	2	5	2	2	2	2	5	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	3.0	2.0	2.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	100	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 26.0	G = 25.0	G =	G = 35.0	G = 26.0	G =	G =
	Y = 4	Y = 5	Y = 5	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	105	558	147	1526	1053	895	632	547	821	489	326	
Lane group cap.	344	926	664	1031	2030	991	802	926	755	802	871	
v/c ratio	0.31	0.60	0.22	1.48	0.52	0.90	0.79	0.59	1.09	0.61	0.37	
Green ratio	0.10	0.17	0.43	0.30	0.38	0.64	0.23	0.17	0.51	0.23	0.17	
Unif. delay d1	62.7	57.2	26.6	52.5	35.9	23.0	54.0	57.1	37.0	51.4	54.8	
Delay factor k	0.11	0.19	0.11	0.50	0.12	0.42	0.33	0.18	0.50	0.20	0.11	
Increm. delay d2	0.5	1.1	0.2	221.3	0.2	11.4	5.3	1.0	59.1	1.4	0.3	
PF factor	0.926	0.860	0.490	0.714	0.591	0.139	0.797	0.860	0.315	0.797	0.860	
Control delay	58.5	50.3	13.2	258.8	21.5	14.6	48.3	50.1	70.7	42.3	47.4	
Lane group LOS	E	D	B	F	C	B	D	D	E	D	D	
Apprch. delay	44.7			124.0			58.0			44.4		
Approach LOS	D			F			E			D		
Intersec. delay	87.2			Intersection LOS						F		

AP W MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT 3B NO LA MEDIA PM PEAK HOUR/WITH MITIGATION/#4*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane	*105*	*558*	*147*	*1526*	*1053*	*895*	*632*	*547*	*821*	*489*	*326*	
Satflow per lane	*1770*	*1960*	*1532*	*1769*	*1960*	*1549*	*1770*	*1960*	*1491*	*1770*	*1845*	
Capacity/lane	*344*	*926*	*664*	*1031*	*2030*	*991*	*802*	*926*	*755*	*802*	*871*	
Flow ratio	*0.03*	*0.10*	*0.10*	*0.44*	*0.20*	*0.58*	*0.18*	*0.10*	*0.55*	*0.14*	0.06	
v/c ratio	*0.31*	*0.60*	*0.22*	*1.48*	*0.52*	*0.90*	*0.79*	*0.59*	*1.09*	*0.61*	*0.37*	
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.48*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	
PF factor	*0.95*	*0.93*	*0.53*	*1.00*	*0.71*	*0.41*	*0.94*	*0.93*	*1.00*	*0.90*	*0.90*	
Q_1	*2.0*	*7.3*	*2.0*	*32.7*	*8.8*	*13.1*	*11.9*	*7.1*	*34.2*	*8.4*	*4.0*	
k_B	*0.3*	*0.5*	*0.7*	*0.6*	*0.8*	*0.9*	*0.6*	*0.5*	*0.8*	*0.6*	*0.5*	
Q_2	*0.1*	*0.7*	*0.2*	*33.7*	*0.8*	*5.8*	*1.8*	*0.7*	*14.0*	*0.8*	*0.3*	
Q avg.	*2.1*	*8.0*	*2.2*	*66.4*	*9.6*	*19.0*	*13.7*	*7.8*	*48.2*	*9.2*	*4.2*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*2.0*	*1.9*	*2.0*	*1.5*	*1.9*	*1.7*	*1.8*	*1.9*	*1.5*	*1.9*	*2.0*	
BOQ, $Q_{\%}$	*4.3*	*15.1*	*4.5*	*101*	*17.8*	*32.4*	*24.4*	*14.8*	*74.4*	*17.1*	*8.4*	

Queue Storage Ratio

Q spacing	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

5-A

N MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905 WB/CALIENTE
Agency or Co.	905CALW30A3BNLM	Area Type	All other areas
Date Performed	07/06/11	Jurisdiction	NO MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030/ALT. 3B/NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	0	1	1	1	3	0	0	3	0
Lane group					LT	R	L	T			TR	
Volume (vph)				180	5	220	900	1920			940	960
% Heavy veh				5	5	5	5	5			5	5
PHF				0.95	0.95	0.95	0.95	0.95			0.95	0.95
Actuated (P/A)				A	A	A	A	A			A	A
Startup lost time					2.0	2.0	2.0	2.0			2.0	
Ext. eff. green					2.0	2.0	2.0	2.0			2.0	
Arrival type					5	5	5	5			5	
Unit Extension					3.0	3.0	3.0	3.0			3.0	
Ped/Bike/RTOR Volume	10			10	5	0				10	5	350
Lane Width					12.0	12.0	12.0	12.0			12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr					0	0	0	0			0	
Unit Extension					3.0	3.0	3.0	3.0			3.0	

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 20.0	G =	G =	G =	G = 57.0	G = 50.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				194	232		947	2021			1631	
Lane group cap.				246	859		700	1853			1717	
v/c ratio				0.79	0.27		1.35	1.09			0.95	
Green ratio				0.14	0.58		0.41	0.36			0.36	
Unif. delay d1				58.0	14.7		41.5	45.0			43.8	
Delay factor k				0.34	0.11		0.50	0.50			0.46	
Increm. delay d2				15.7	0.2		168.1	50.3			12.0	
PF factor				0.889	0.119		0.542	0.630			0.630	
Control delay				67.2	1.9		190.6	78.6			39.5	
Lane group LOS				E	A		F	E			D	
Apprch. delay				31.7			114.3			39.5		
Approach LOS				C			F			D		
Intersec. delay	83.1			Intersection LOS						F		

5-A
N
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LAMEDIA AM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group					*LT*	*R*	*L*	*T*			*TR*	
Init. queue/lane					*0.0*	*0.0*	*0.0*	*0.0*			*0.0*	
Flow rate/lane					*194*	*232*	*947*	*2021*			*1631*	
Satflow per lane					*1725*	*1485*	*1719*	*1904*			*1765*	
Capacity/lane					*246*	*859*	*700*	*1853*			*1717*	
Flow ratio					*0.11*	*0.16*	*0.55*	*0.39*			0.34	
v/c ratio					*0.79*	*0.27*	*1.35*	*1.09*			*0.95*	
I factor					*1.000*	*1.000*	*1.000*	*1.000*			*1.000*	
Arrival type					*5*	*5*	*5*	*5*			*5*	
Platoon ratio					*1.67*	*1.64*	*1.67*	*1.67*			*1.67*	
PF factor					*0.97*	*0.13*	*1.00*	*1.00*			*0.96*	
Q_1					*7.1*	*0.6*	*36.8*	*28.8*			*21.6*	
K_B					*0.4*	*0.8*	*0.7*	*0.7*			*0.7*	
Q_2					*1.2*	*0.3*	*33.4*	*12.8*			*5.4*	
Q avg.					*8.3*	*0.9*	*70.3*	*41.6*			*27.0*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$					*1.9*	*2.1*	*1.5*	*1.6*			*1.6*	
BOQ, $Q_{\%}$					*15.6*	*1.9*	*106*	*64.9*			*44.2*	

Queue Storage Ratio

Q spacing					*24.9*	*24.9*	*24.9*	*24.9*			*24.9*	
Q storage					*0*	*0*	*0*	*0*			*0*	
Avg. R_Q												
95% $R_{Q\%}$												

5-A W MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905 WB/CALIENTE
Agency or Co.	905CALW30A3BNLM	Area Type	All other areas
Date Performed	07/7/11	Jurisdiction	WITH MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030/ALT. 3B/NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	0	1	1	2	3	0	0	3	1
Lane group					LT	R	L	T			T	R
Volume (vph)				180	5	220	900	1920			940	960
% Heavy veh				5	5	5	5	5			5	5
PHF				0.95	0.95	0.95	0.95	0.95			0.95	0.95
Actuated (P/A)				A	A	A	A	A			A	A
Startup lost time					2.0	2.0	2.0	2.0			2.0	2.0
Ext. eff. green					2.0	2.0	2.0	2.0			2.0	2.0
Arrival type					5	5	5	5			5	5
Unit Extension					3.0	3.0	3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	10			10	5	0				10	5	350
Lane Width					12.0	12.0	12.0	12.0			12.0	12.0
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr					0	0	0	0			0	0
Unit Extension					3.0	3.0	3.0	3.0			3.0	3.0

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 20.0	G =	G =	G =	G = 50.0	G = 57.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB		NB			SB	
Adj. flow rate				194	232	947	2021		989	642
Lane group cap.				246	785	1192	2113		2113	613
v/c ratio				0.79	0.30	0.79	0.96		0.47	1.05
Green ratio				0.14	0.53	0.36	0.41		0.41	0.41
Unif. delay d1				58.0	18.4	40.4	40.3		30.4	41.5
Delay factor k				0.34	0.11	0.34	0.47		0.11	0.50
Increm. delay d2				15.7	0.2	3.8	11.1		0.2	49.3
PF factor				0.889	0.253	0.630	0.542		0.542	0.542
Control delay				67.2	4.9	29.2	33.0		16.6	71.8
Lane group LOS				E	A	C	C		B	E
Apprch. delay				33.3		31.8			38.4	
Approach LOS				C		C			D	
Intersec. delay	34.0			Intersection LOS					C	

5-A W MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LAMEDIA AM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group					*LT*	*R*	*L*	*T*			*T*	*R*
Init. queue/lane					*0.0*	*0.0*	*0.0*	*0.0*			*0.0*	*0.0*
Flow rate/lane					*194*	*232*	*947*	*2021*			*989*	*642*
Satflow per lane					*1725*	*1485*	*1719*	*1904*			*1904*	*1505*
Capacity/lane					*246*	*785*	*1192*	*2113*			*2113*	*613*
Flow ratio					*0.11*	*0.16*	*0.28*	*0.39*			0.19	*0.43*
v/c ratio					*0.79*	*0.30*	*0.79*	*0.96*			*0.47*	*1.05*
I factor					*1.000*	*1.000*	*1.000*	*1.000*			*1.000*	*1.000*
Arrival type					*5*	*5*	*5*	*5*			*5*	*5*
Platoon ratio					*1.67*	*1.67*	*1.67*	*1.67*			*1.67*	*1.67*
PF factor					*0.97*	*0.29*	*0.85*	*0.94*			*0.64*	*1.00*
Q_1					*7.1*	*1.5*	*14.5*	*26.4*			*6.7*	*25.0*
k_B					*0.4*	*0.8*	*0.7*	*0.8*			*0.8*	*0.7*
Q_2					*1.2*	*0.3*	*2.3*	*6.6*			*0.7*	*9.4*
Q avg.					*8.3*	*1.8*	*16.8*	*33.0*			*7.3*	*34.3*
Percentile Back of Queue (95th percentile)												
$f_{B\%}$					*1.9*	*2.0*	*1.7*	*1.6*			*1.9*	*1.6*
BOQ, $Q_{\%}$					*15.6*	*3.6*	*29.2*	*52.6*			*13.9*	*54.6*
Queue Storage Ratio												
Q spacing					*24.9*	*24.9*	*24.9*	*24.9*			*24.9*	*24.9*
Q storage					*0*	*0*	*0*	*0*			*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

5P N MT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905 WB/CALIENTE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	07/07/11	Jurisdiction	NO MITIGATION
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030/ALT. 3B/NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	0	1	1	1	3	0	0	3	0
Lane group					LT	R	L	T			TR	
Volume (vph)				180	5	220	700	1680			1050	850
% Heavy veh				5	5	5	5	5			5	5
PHF				0.95	0.95	0.95	0.95	0.95			0.95	0.95
Actuated (P/A)				A	A	A	A	A			A	A
Startup lost time					2.0	2.0	2.0	2.0			2.0	
Ext. eff. green					2.0	2.0	2.0	2.0			2.0	
Arrival type					5	5	5	5			5	
Unit Extension					3.0	3.0	3.0	3.0			3.0	
Ped/Bike/RTOR Volume	10			10	5	0				10	5	350
Lane Width					12.0	12.0	12.0	12.0			12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr					0	0	0	0			0	
Unit Extension					3.0	3.0	3.0	3.0			3.0	

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 20.0	G =	G =	G =	G = 57.0	G = 50.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate					194	232	737	1768			1631	
Lane group cap.					246	859	700	1853			1741	
v/c ratio					0.79	0.27	1.05	0.95			0.94	
Green ratio					0.14	0.58	0.41	0.36			0.36	
Unif. delay d1					58.0	14.7	41.5	43.9			43.5	
Delay factor k					0.34	0.11	0.50	0.46			0.45	
Increm. delay d2					15.7	0.2	48.8	11.9			10.2	
PF factor					0.889	0.119	0.542	0.630			0.630	
Control delay					67.2	1.9	71.3	39.5			37.5	
Lane group LOS					E	A	E	D			D	
Apprch. delay				31.7			48.9			37.5		
Approach LOS				C			D			D		
Intersec. delay	43.2			Intersection LOS						D		

5B N MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LAMEDIA PM PEAK HOUR/NO MITATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group					*LT*	*R*	*L*	*T*			*TR*	
Init. queue/lane					*0.0*	*0.0*	*0.0*	*0.0*			*0.0*	
Flow rate/lane					*194*	*232*	*737*	*1768*			*1631*	
Satflow per lane					*1725*	*1485*	*1719*	*1904*			*1790*	
Capacity/lane					*246*	*859*	*700*	*1853*			*1741*	
Flow ratio					*0.11*	*0.16*	*0.43*	*0.34*			0.33	
v/c ratio					*0.79*	*0.27*	*1.05*	*0.95*			*0.94*	
I factor					*1.000*	*1.000*	*1.000*	*1.000*			*1.000*	
Arrival type					*5*	*5*	*5*	*5*			*5*	
Platoon ratio					*1.67*	*1.64*	*1.67*	*1.67*			*1.67*	
PF factor					*0.97*	*0.13*	*1.00*	*0.96*			*0.95*	
Q_1					*7.1*	*0.6*	*28.7*	*23.7*			*21.2*	
k_B					*0.4*	*0.8*	*0.7*	*0.7*			*0.7*	
Q_2					*1.2*	*0.3*	*10.8*	*5.9*			*5.1*	
Q avg.					*8.3*	*0.9*	*39.5*	*29.6*			*26.3*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$					*1.9*	*2.1*	*1.6*	*1.6*			*1.6*	
BOQ, $Q_{\%}$					*15.6*	*1.9*	*61.9*	*47.8*			*43.1*	
Queue Storage Ratio												
Q spacing					*24.9*	*24.9*	*24.9*	*24.9*			*24.9*	
Q storage					*0*	*0*	*0*	*0*			*0*	
Avg. R_Q												
95% $R_{Q\%}$												

5-P
W
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905 WB/CALIENTE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	07/07/11	Jurisdiction	WITH MITIGATION
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030/ALT. 3B/NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	0	1	1	2	3	0	0	3	1
Lane group					LT	R	L	T			T	R
Volume (vph)				180	5	220	700	1680			1050	850
% Heavy veh				5	5	5	5	5			5	5
PHF				0.95	0.95	0.95	0.95	0.95			0.95	0.95
Actuated (P/A)				A	A	A	A	A			A	A
Startup lost time					2.0	2.0	2.0	2.0			2.0	2.0
Ext. eff. green					2.0	2.0	2.0	2.0			2.0	2.0
Arrival type					5	5	5	5			5	5
Unit Extension					3.0	3.0	3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	10			10	5	0				10	5	350
Lane Width					12.0	12.0	12.0	12.0			12.0	12.0
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr					0	0	0	0			0	0
Unit Extension					3.0	3.0	3.0	3.0			3.0	3.0

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 20.0	G =	G =	G =	G = 57.0	G = 50.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB		NB			SB	
Adj. flow rate				194	232	737	1768		1105	526
Lane group cap.				246	859	1359	1853		1853	536
v/c ratio				0.79	0.27	0.54	0.95		0.60	0.98
Green ratio				0.14	0.58	0.41	0.36		0.36	0.36
Unif. delay d1				58.0	14.7	31.6	43.9		36.8	44.5
Delay factor k				0.34	0.11	0.14	0.46		0.19	0.49
Increm. delay d2				15.7	0.2	0.4	11.9		0.5	34.0
PF factor				0.889	0.119	0.542	0.630		0.630	0.630
Control delay				67.2	1.9	17.6	39.5		23.7	62.0
Lane group LOS				E	A	B	D		C	E
Apprch. delay				31.7		33.1			36.0	
Approach LOS				C		C			D	
Intersec. delay	34.0			Intersection LOS					C	

5-P w MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3B NO LAMEDIA PM PEAK HOUR/WITH MTIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group					*LT*	*R*	*L*	*T*			*T*	*R*
Init. queue/lane					*0.0*	*0.0*	*0.0*	*0.0*			*0.0*	*0.0*
Flow rate/lane					*194*	*232*	*737*	*1768*			*1105*	*526*
Satflow per lane					*1725*	*1485*	*1719*	*1904*			*1904*	*1502*
Capacity/lane					*246*	*859*	*1359*	*1853*			*1853*	*536*
Flow ratio					*0.11*	*0.16*	*0.22*	*0.34*			0.21	*0.35*
v/c ratio					*0.79*	*0.27*	*0.54*	*0.95*			*0.60*	*0.98*
I factor					*1.000*	*1.000*	*1.000*	*1.000*			*1.000*	*1.000*
Arrival type					*5*	*5*	*5*	*5*			*5*	*5*
Platoon ratio					*1.67*	*1.64*	*1.67*	*1.67*			*1.67*	*1.67*
PF factor					*0.97*	*0.13*	*0.67*	*0.96*			*0.77*	*0.98*
Q_1					*7.1*	*0.6*	*7.5*	*23.7*			*9.9*	*19.9*
k_B					*0.4*	*0.8*	*0.7*	*0.7*			*0.7*	*0.6*
Q_2					*1.2*	*0.3*	*0.8*	*5.9*			*1.0*	*5.8*
Q avg.					*8.3*	*0.9*	*8.3*	*29.6*			*10.9*	*25.7*
Percentile Back of Queue (95th percentile)												
$f_{B\%}$					*1.9*	*2.1*	*1.9*	*1.6*			*1.8*	*1.6*
BOQ, $Q_{\%}$					*15.6*	*1.9*	*15.6*	*47.8*			*19.9*	*42.2*
Queue Storage Ratio												
Q spacing					*24.9*	*24.9*	*24.9*	*24.9*			*24.9*	*24.9*
Q storage					*0*	*0*	*0*	*0*			*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

6-A
NMIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905 EB/CALIENTE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	07/07/11	Jurisdiction	NO MITIGATION
Time Period	YEAR 2030 AM PEAK	Analysis Year	YEAR 2030 /ALT. 3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	0	0	0	0	3	0	1	3	0
Lane group	L	LTR						TR		L	T	
Volume (vph)	1200	5	700					1620	180	220	900	
% Heavy veh	10	10	10					10	10	10	10	
PHF	0.95	0.95	0.95					0.95	0.95	0.95	0.95	
Actuated (P/A)	A	A	A					A	A	A	A	
Startup lost time	2.0	2.0						2.0		2.0	2.0	
Ext. eff. green	2.0	2.0						2.0		2.0	2.0	
Arrival type	3	3						5		5	5	
Unit Extension	3.0	3.0						3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	0	100	0			10	5	0			
Lane Width	12.0	12.0						12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0						0		0	0	
Unit Extension	3.0	3.0						3.0		3.0	3.0	

Phasing	EB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 51.0	G =	G =	G =	G = 20.0	G = 46.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	707	1193						1894		232	947	
Lane group cap.	644	607						1720		252	2667	
v/c ratio	1.10	1.97						1.10		0.92	0.36	
Green ratio	0.39	0.39						0.35		0.15	0.54	
Unif. delay d1	39.5	39.5						42.0		54.2	17.1	
Delay factor k	0.50	0.50						0.50		0.44	0.11	
Increm. delay d2	65.2	440.4						55.0		36.1	0.1	
PF factor	1.000	1.000						0.635		0.879	0.222	
Control delay	104.7	479.9						81.6		83.7	3.9	
Lane group LOS	F	F						F		F	A	
Apprch. delay	340.3						81.6			19.6		
Approach LOS	F						F			B		
Intersec. delay	165.7			Intersection LOS						F		

6-A N MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT-3B WITHOUT LA MEDIA AM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*LTR*						*TR*		*L*	*T*	
Init. queue/lane	*0.0*	*0.0*						*0.0*		*0.0*	*0.0*	
Flow rate/lane	*707*	*1193*						*1894*		*232*	*947*	
Satflow per lane	*1641*	*1548*						*1784*		*1641*	*1818*	
Capacity/lane	*644*	*607*						*1720*		*252*	*2667*	
Flow ratio	*0.43*	*0.77*						*0.39*		*0.14*	0.19	
v/c ratio	*1.10*	*1.97*						*1.10*		*0.92*	*0.36*	
I factor	*1.000*	*1.000*						*1.000*		*1.000*	*1.000*	
Arrival type	*3*	*3*						*5*		*5*	*5*	
Platoon ratio	*1.00*	*1.00*						*1.67*		*1.67*	*1.67*	
PF factor	*1.00*	*1.00*						*1.00*		*0.99*	*0.26*	
Q_1	*25.5*	*43.1*						*25.1*		*8.2*	*1.9*	
k_B	*0.7*	*0.6*						*0.7*		*0.4*	*0.8*	
Q_2	*12.5*	*74.5*						*12.5*		*2.3*	*0.5*	
Q avg.	*38.1*	*117.6*						*37.6*		*10.4*	*2.3*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.6*	*1.5*						*1.6*		*1.8*	*2.0*	
BOQ, $Q_{\%}$	*59.9*	*177*						*59.2*		*19.2*	*4.8*	
Queue Storage Ratio												
Q spacing	*24.9*	*24.9*						*24.9*		*24.9*	*24.9*	
Q storage	*0*	*0*						*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

6-A W MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905 EB/CALIENTE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	07/07/11	Jurisdiction	WITH MITIGATION
Time Period	YEAR 2030 AM PEAK	Analysis Year	YEAR 2030 /ALT. 3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	0	0	0	0	3	1	2	3	0
Lane group	L	LT	R					T	R	L	T	
Volume (vph)	1200	5	700					1620	180	220	900	
% Heavy veh	10	10	10					10	10	10	10	
PHF	0.95	0.95	0.95					0.95	0.95	0.95	0.95	
Actuated (P/A)	A	A	A					A	A	A	A	
Startup lost time	2.0	2.0	2.0					2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0					2.0	2.0	2.0	2.0	
Arrival type	3	3	3					5	5	5	5	
Unit Extension	3.0	3.0	3.0					3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	0	100	0			10	5	0			
Lane Width	12.0	12.0	12.0					12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0					0	0	0	0	
Unit Extension	3.0	3.0	3.0					3.0	3.0	3.0	3.0	

Phasing	EB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 57.0	G =	G =	G =	G = 19.0	G = 41.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	707	561	632					1705	189	232	947	
Lane group cap.	720	722	639					1562	452	466	2438	
v/c ratio	0.98	0.78	0.99					1.09	0.42	0.50	0.39	
Green ratio	0.44	0.44	0.44					0.32	0.32	0.15	0.49	
Unif. delay d1	36.0	31.1	36.2					44.5	35.1	51.1	20.7	
Delay factor k	0.49	0.33	0.49					0.50	0.11	0.11	0.11	
Increm. delay d2	29.0	5.4	32.7					52.1	0.6	0.8	0.1	
PF factor	1.000	1.000	1.000					0.693	0.693	0.886	0.354	
Control delay	64.9	36.5	68.9					82.9	24.9	46.1	7.4	
Lane group LOS	E	D	E					F	C	D	A	
Apprch. delay	57.9						77.1			15.0		
Approach LOS	E						E			B		
Intersec. delay	55.0			Intersection LOS						E		

G-A
3 MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT-3B WITHOUT LA MEDIA AM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*LT*	*R*					*T*	*R*	*L*	*T*	
Init. queue/lane	*0.0*	*0.0*	*0.0*					*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane	*707*	*561*	*632*					*1705*	*189*	*232*	*947*	
Satflow per lane	*1641*	*1646*	*1458*					*1818*	*1432*	*1641*	*1818*	
Capacity/lane	*720*	*722*	*639*					*1562*	*452*	*466*	*2438*	
Flow ratio	*0.43*	*0.34*	*0.43*					*0.34*	*0.13*	*0.07*	0.19	
v/c ratio	*0.98*	*0.78*	*0.99*					*1.09*	*0.42*	*0.50*	*0.39*	
I factor	*1.000*	*1.000*	*1.000*					*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type	*3*	*3*	*3*					*5*	*5*	*5*	*5*	
Platoon ratio	*1.00*	*1.00*	*1.00*					*1.67*	*1.67*	*1.67*	*1.67*	
PF factor	*1.00*	*1.00*	*1.00*					*1.00*	*0.77*	*0.93*	*0.42*	
Q_1	*25.2*	*17.3*	*22.6*					*22.6*	*4.1*	*3.7*	*3.3*	
k_B	*0.7*	*0.7*	*0.7*					*0.6*	*0.5*	*0.4*	*0.8*	
Q_2	*7.1*	*2.2*	*6.8*					*10.9*	*0.4*	*0.4*	*0.5*	
Q avg.	*32.3*	*19.5*	*29.4*					*33.5*	*4.5*	*4.1*	*3.8*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.6*	*1.7*	*1.6*					*1.6*	*2.0*	*2.0*	*2.0*	
BOQ, $Q_{\%}$	*51.7*	*33.2*	*47.6*					*53.3*	*8.9*	*8.0*	*7.6*	
Queue Storage Ratio												
Q spacing	*24.9*	*24.9*	*24.9*					*24.9*	*24.9*	*24.9*	*24.9*	
Q storage	*0*	*0*	*0*					*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

6-P
2
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905 EB/CALIENTE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	07/07/11	Jurisdiction	NO MITIGATION
Time Period	YEAR 2030 PM PEAK	Analysis Year	YEAR 2030 /ALT. 3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	0	0	0	0	3	0	1	3	0
Lane group	L	LTR						TR		L	T	
Volume (vph)	960	5	900					1420	180	220	1010	
% Heavy veh	10	10	10					10	10	10	10	
PHF	0.95	0.95	0.95					0.95	0.95	0.95	0.95	
Actuated (P/A)	A	A	A					A	A	A	A	
Startup lost time	2.0	2.0						2.0		2.0	2.0	
Ext. eff. green	2.0	2.0						2.0		2.0	2.0	
Arrival type	3	3						5		5	5	
Unit Extension	3.0	3.0						3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	100	10			10	5	0			
Lane Width	12.0	12.0						12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0						0		0	0	
Unit Extension	3.0	3.0						3.0		3.0	3.0	

Phasing	EB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 53.0	G =	G =	G =	G = 28.0	G = 46.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1011	847						1684		232	1063	
Lane group cap.	621	544						1593		328	2760	
v/c ratio	1.63	1.56						1.06		0.71	0.39	
Green ratio	0.38	0.38						0.33		0.20	0.56	
Unif. delay d1	43.5	43.5						47.0		52.2	17.5	
Delay factor k	0.50	0.50						0.50		0.27	0.11	
Increm. delay d2	289.9	259.6						39.4		6.9	0.1	
PF factor	1.000	1.000						0.674		0.833	0.161	
Control delay	333.4	303.1						71.0		50.3	2.9	
Lane group LOS	F	F						E		D	A	
Apprch. delay	319.6						71.0			11.4		
Approach LOS	F						E			B		
Intersec. delay	150.5			Intersection LOS						F		

G-P N MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT-3B WITHOUT LA MEDIA PM PEAK HOUR/NO MIT.*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*LTR*						*TR*		*L*	*T*	
Init. queue/lane	*0.0*	*0.0*						*0.0*		*0.0*	*0.0*	
Flow rate/lane	*1011*	*847*						*1684*		*232*	*1063*	
Satflow per lane	*1641*	*1437*						*1779*		*1641*	*1818*	
Capacity/lane	*621*	*544*						*1593*		*328*	*2760*	
Flow ratio	*0.62*	*0.59*						*0.35*		*0.14*	*0.21*	
v/c ratio	*1.63*	*1.56*						*1.06*		*0.71*	*0.39*	
I factor	*1.000*	*1.000*						*1.000*		*1.000*	*1.000*	
Arrival type	*3*	*3*						*5*		*5*	*5*	
Platoon ratio	*1.00*	*1.00*						*1.67*		*1.67*	*1.67*	
PF factor	*1.00*	*1.00*						*1.00*		*0.94*	*0.20*	
Q_1	*39.3*	*32.9*						*24.0*		*7.9*	*1.7*	
k_B	*0.7*	*0.6*						*0.7*		*0.5*	*0.9*	
Q_2	*50.4*	*39.5*						*9.5*		*1.0*	*0.6*	
Q avg.	*89.8*	*72.5*						*33.6*		*8.9*	*2.2*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.5*	*1.5*						*1.6*		*1.9*	*2.0*	
BOQ, $Q_{\%}$	*135*	*110*						*53.5*		*16.6*	*4.6*	
Queue Storage Ratio												
Q spacing	*24.9*	*24.9*						*24.9*		*24.9*	*24.9*	
Q storage	*0*	*0*						*0*		*0*	*0*	
Avg. Rq												
95% $R_{Q\%}$												

6-P
3
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905 EB/CALIENTE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	07/07/11	Jurisdiction	WITH MITIGATION
Time Period	YEAR 2030 PM PEAK	Analysis Year	YEAR 2030 /ALT. 3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	0	0	0	0	3	1	2	3	0
Lane group	L	LT	R					T	R	L	T	
Volume (vph)	960	5	900					1420	180	220	1010	
% Heavy veh	10	10	10					10	10	10	10	
PHF	0.95	0.95	0.95					0.95	0.95	0.95	0.95	
Actuated (P/A)	A	A	A					A	A	A	A	
Startup lost time	2.0	2.0	2.0					2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0					2.0	2.0	2.0	2.0	
Arrival type	3	3	3					5	5	5	5	
Unit Extension	3.0	3.0	3.0					3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	100	10			10	5	0			
Lane Width	12.0	12.0	12.0					12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0					0	0	0	0	
Unit Extension	3.0	3.0	3.0					3.0	3.0	3.0	3.0	

Phasing	EB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 62.0	G =	G =	G =	G = 25.0	G = 40.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	556	460	842					1495	189	232	1063	
Lane group cap.	727	729	637					1415	409	569	2441	
v/c ratio	0.76	0.63	1.32					1.06	0.46	0.41	0.44	
Green ratio	0.44	0.44	0.44					0.29	0.29	0.18	0.49	
Unif. delay d1	32.9	30.2	39.0					50.0	41.1	50.9	22.9	
Delay factor k	0.32	0.21	0.50					0.50	0.11	0.11	0.11	
Increm. delay d2	4.9	1.8	155.6					40.4	0.8	0.5	0.1	
PF factor	1.000	1.000	1.000					0.733	0.733	0.855	0.352	
Control delay	37.7	31.9	194.6					77.1	31.0	44.0	8.2	
Lane group LOS	D	C	F					E	C	D	A	
Apprch. delay	107.4						71.9			14.6		
Approach LOS	F						E			B		
Intersec. delay	70.2			Intersection LOS						E		

G-P w MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT-3B WITHOUT LA MEDIA PM PEAK HOUR/WITH MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*LT*	*R*					*T*	*R*	*L*	*T*	
Init. queue/lane	*0.0*	*0.0*	*0.0*					*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane	*556*	*460*	*842*					*1495*	*189*	*232*	*1063*	
Satflow per lane	*1641*	*1646*	*1438*					*1818*	*1430*	*1641*	*1818*	
Capacity/lane	*727*	*729*	*637*					*1415*	*409*	*569*	*2441*	
Flow ratio	*0.34*	*0.28*	*0.59*					*0.30*	*0.13*	*0.07*	*0.21*	
v/c ratio	*0.76*	*0.63*	*1.32*					*1.06*	*0.46*	*0.41*	*0.44*	
I factor	*1.000*	*1.000*	*1.000*					*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type	*3*	*3*	*3*					*5*	*5*	*5*	*5*	
Platoon ratio	*1.00*	*1.00*	*1.00*					*1.67*	*1.67*	*1.67*	*1.67*	
PF factor	*1.00*	*1.00*	*1.00*					*1.00*	*0.82*	*0.90*	*0.43*	
Q_1	*18.2*	*13.8*	*32.7*					*21.3*	*4.9*	*3.7*	*4.2*	
k_B	*0.7*	*0.7*	*0.7*					*0.6*	*0.5*	*0.4*	*0.8*	
Q_2	*2.2*	*1.2*	*28.2*					*8.5*	*0.4*	*0.3*	*0.6*	
Q avg.	*20.4*	*15.1*	*60.9*					*29.8*	*5.4*	*4.0*	*4.9*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.7*	*1.8*	*1.5*					*1.6*	*1.9*	*2.0*	*2.0*	
BOQ, $Q_{\%}$	*34.6*	*26.5*	*92.6*					*48.1*	*10.5*	*7.9*	*9.5*	
Queue Storage Ratio												
Q spacing	*24.9*	*24.9*	*24.9*					*24.9*	*24.9*	*24.9*	*24.9*	
Q storage	*0*	*0*	*0*					*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

7-A
N
M'T

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD.@CALIENTE BLVD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/11/11	Jurisdiction	NO MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030//ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	2	2	1	2	3	0	2	3	0
Lane group	L	TR		L	T	R	L	TR		L	TR	
Volume (vph)	175	320	190	755	170	495	375	1130	1190	930	510	160
% Heavy veh	5	5	5	10	5	10	5	10	10	10	10	5
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5	5	5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Thru & RT	Excl. Left	07	08
Timing	G = 30.0	G = 20.0	G =	G =	G = 41.0	G = 30.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 4	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	184	537		795	179	521	395	2442		979	705	
Lane group cap.	715	482		683	518	506	715	1321		683	1405	
v/c ratio	0.26	1.11		1.16	0.35	1.03	0.55	1.85		1.43	0.50	
Green ratio	0.21	0.14		0.21	0.14	0.36	0.21	0.29		0.21	0.29	
Unif. delay d1	45.7	60.0		55.0	54.1	45.0	49.0	49.5		55.0	41.0	
Delay factor k	0.11	0.50		0.50	0.11	0.50	0.15	0.50		0.50	0.11	
Increm. delay d2	0.2	76.0		89.3	0.4	47.8	0.9	384.8		203.4	0.3	
PF factor	0.818	0.889		0.818	0.889	0.630	0.818	0.724		0.818	0.724	
Control delay	37.6	129.3		134.3	48.5	76.1	41.0	420.6		248.4	30.0	
Lane group LOS	D	F		F	D	E	D	F		F	C	
Apprch. delay	105.9			103.7			367.8			157.0		
Approach LOS	F			F			F			F		
Intersec. delay	228.5			Intersection LOS						F		

7-A
N
M-T

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LAMEDIA AM PEAK HOUR*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*TR*		*L*	*T*	*R*	*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*184*	*537*		*795*	*179*	*521*	*395*	*2442*		*979*	*705*	
Satflow per lane	*1719*	*1771*		*1641*	*1904*	*1416*	*1719*	*1656*		*1641*	*1761*	
Capacity/lane	*715*	*482*		*683*	*518*	*506*	*715*	*1321*		*683*	*1405*	
Flow ratio	*0.05*	*0.16*		*0.25*	*0.05*	*0.37*	*0.12*	*0.54*		*0.31*	0.15	
v/c ratio	*0.26*	*1.11*		*1.16*	*0.35*	*1.03*	*0.55*	*1.85*		*1.43*	*0.50*	
I factor	*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*		*5*	*5*	*5*	*5*	*5*		*5*	*5*	
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.67*	*1.67*	*1.67*	*1.67*		*1.67*	*1.67*	
PF factor	*0.85*	*1.00*		*1.00*	*0.92*	*1.00*	*0.90*	*1.00*		*1.00*	*0.82*	
Q_1	*2.6*	*11.0*		*15.9*	*3.0*	*20.3*	*6.3*	*34.8*		*19.6*	*6.8*	
k_B	*0.5*	*0.4*		*0.5*	*0.4*	*0.6*	*0.5*	*0.6*		*0.5*	*0.6*	
Q_2	*0.2*	*6.0*		*9.8*	*0.2*	*7.2*	*0.6*	*52.7*		*20.6*	*0.6*	
Q avg.	*2.8*	*16.9*		*25.7*	*3.3*	*27.5*	*6.9*	*87.6*		*40.2*	*7.4*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*2.0*	*1.7*		*1.6*	*2.0*	*1.6*	*1.9*	*1.5*		*1.6*	*1.9*	
BOQ, $Q_{\%}$	*5.5*	*29.4*		*42.2*	*6.5*	*44.8*	*13.2*	*132*		*62.9*	*14.0*	
Queue Storage Ratio												
Q spacing	*24.9*	*24.9*		*24.9*	*24.9*	*24.9*	*24.9*	*24.9*		*24.9*	*24.9*	
Q storage	*0*	*0*		*0*	*0*	*0*	*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

7-A
W
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD.@CALIENTE BLVD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/11/11	Jurisdiction	WITH MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030//ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	1	2	3	1	2	3	0
Lane group	L	T	R	L	T	R	L	T	R	L	TR	
Volume (vph)	175	320	190	755	170	495	375	1130	1190	930	510	160
% Heavy veh	5	5	5	10	5	10	5	10	10	10	10	5
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Thru & RT	Excl. Left	07	08
Timing	G = 30.0	G = 20.0	G =	G =	G = 41.0	G = 30.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	184	337	200	795	179	521	395	1189	1253	979	705	
Lane group cap.	715	518	530	683	518	506	715	1451	727	683	1405	
v/c ratio	0.26	0.65	0.38	1.16	0.35	1.03	0.55	0.82	1.72	1.43	0.50	
Green ratio	0.21	0.14	0.36	0.21	0.14	0.36	0.21	0.29	0.51	0.21	0.29	
Unif. delay d1	45.7	56.7	33.4	55.0	54.1	45.0	49.0	46.1	34.5	55.0	41.0	
Delay factor k	0.11	0.23	0.11	0.50	0.11	0.50	0.15	0.36	0.50	0.50	0.11	
Increm. delay d2	0.2	2.9	0.5	89.3	0.4	47.8	0.9	3.9	331.4	203.4	0.3	
PF factor	0.818	0.889	0.630	0.818	0.889	0.630	0.818	0.724	0.911	0.818	0.724	
Control delay	37.6	53.3	21.5	134.3	48.5	76.1	41.0	37.2	362.8	248.4	30.0	
Lane group LOS	D	D	C	F	D	E	D	D	F	F	C	
Apprch. delay	40.5			103.7			181.5			157.0		
Approach LOS	D			F			F			F		
Intersec. delay	143.0			Intersection LOS						F		

1-A W MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LAMEDIA AM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane	*184*	*337*	*200*	*795*	*179*	*521*	*395*	*1189*	*1253*	*979*	*705*	
Satflow per lane	*1719*	*1904*	*1483*	*1641*	*1904*	*1416*	*1719*	*1818*	*1433*	*1641*	*1761*	
Capacity/lane	*715*	*518*	*530*	*683*	*518*	*506*	*715*	*1451*	*727*	*683*	*1405*	
Flow ratio	*0.05*	*0.09*	*0.13*	*0.25*	*0.05*	*0.37*	*0.12*	*0.24*	*0.87*	*0.31*	*0.15*	
v/c ratio	*0.26*	*0.65*	*0.38*	*1.16*	*0.35*	*1.03*	*0.55*	*0.82*	*1.72*	*1.43*	*0.50*	
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.09*	*1.67*	*1.67*	
PF factor	*0.85*	*0.95*	*0.70*	*1.00*	*0.92*	*1.00*	*0.90*	*0.92*	*1.00*	*1.00*	*0.82*	
Q_1	*2.6*	*6.2*	*4.1*	*15.9*	*3.0*	*20.3*	*6.3*	*14.5*	*48.7*	*19.6*	*6.8*	
k_B	*0.5*	*0.4*	*0.6*	*0.5*	*0.4*	*0.6*	*0.5*	*0.6*	*0.7*	*0.5*	*0.6*	
Q_2	*0.2*	*0.7*	*0.4*	*9.8*	*0.2*	*7.2*	*0.6*	*2.3*	*67.5*	*20.6*	*0.6*	
Q avg.	*2.8*	*6.9*	*4.4*	*25.7*	*3.3*	*27.5*	*6.9*	*16.8*	*116.2*	*40.2*	*7.4*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*2.0*	*1.9*	*2.0*	*1.6*	*2.0*	*1.6*	*1.9*	*1.7*	*1.5*	*1.6*	*1.9*	
BOQ, $Q_{\%}$	*5.5*	*13.1*	*8.7*	*42.2*	*6.5*	*44.8*	*13.2*	*29.2*	*174*	*62.9*	*14.0*	

Queue Storage Ratio

Q spacing	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

7-8
N
MT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD.@CALIENTE BLVD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/11/11	Jurisdiction	NO MITIGATION
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030//ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	2	2	1	2	3	0	2	3	0
Lane group	L	TR		L	T	R	L	TR		L	TR	
Volume (vph)	160	170	375	1190	320	930	190	510	755	495	1240	175
% Heavy veh	5	5	5	10	5	10	5	10	10	10	10	5
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5	5	5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Thru & RT	Excl. Left	07	08
Timing	G = 30.0	G = 30.0	G =	G =	G = 31.0	G = 30.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 4	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	168	574		1253	337	979	200	1332		521	1489	
Lane group cap.	715	682		683	777	612	715	980		683	1078	
v/c ratio	0.23	0.84		1.83	0.43	1.60	0.28	1.36		0.76	1.38	
Green ratio	0.21	0.21		0.21	0.21	0.43	0.21	0.22		0.21	0.22	
Unif. delay d1	45.5	52.7		55.0	47.6	40.0	46.0	54.5		51.7	54.5	
Delay factor k	0.11	0.38		0.50	0.11	0.50	0.11	0.50		0.31	0.50	
Increm. delay d2	0.2	9.3		381.3	0.4	277.5	0.2	168.3		5.1	177.4	
PF factor	0.818	0.818		0.818	0.818	0.711	0.818	0.810		0.818	0.810	
Control delay	37.4	52.5		426.3	39.4	305.9	37.8	212.5		47.4	221.6	
Lane group LOS	D	D		F	D	F	D	F		D	F	
Apprch. delay	49.1			329.7			189.7			176.4		
Approach LOS	D			F			F			F		
Intersec. delay	223.0			Intersection LOS						F		

T-P N MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LAMEDIA PM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*TR*		*L*	*T*	*R*	*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*168*	*574*		*1253*	*337*	*979*	*200*	*1332*		*521*	*1489*	
Satflow per lane	*1719*	*1672*		*1641*	*1904*	*1427*	*1719*	*1625*		*1641*	*1787*	
Capacity/lane	*715*	*682*		*683*	*777*	*612*	*715*	*980*		*683*	*1078*	
Flow ratio	*0.05*	*0.18*		*0.39*	*0.09*	*0.69*	*0.06*	*0.30*		*0.16*	0.31	
v/c ratio	*0.23*	*0.84*		*1.83*	*0.43*	*1.60*	*0.28*	*1.36*		*0.76*	*1.38*	
I factor	*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*		*5*	*5*	*5*	*5*	*5*		*5*	*5*	
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.67*	*1.38*	*1.67*	*1.67*		*1.67*	*1.67*	
PF factor	*0.85*	*0.96*		*1.00*	*0.88*	*1.00*	*0.85*	*1.00*		*0.94*	*1.00*	
Q_1	*2.3*	*10.8*		*25.1*	*5.2*	*38.1*	*2.8*	*19.0*		*9.2*	*21.2*	
k_B	*0.5*	*0.5*		*0.5*	*0.5*	*0.7*	*0.5*	*0.5*		*0.5*	*0.5*	
Q_2	*0.1*	*2.0*		*37.8*	*0.4*	*47.6*	*0.2*	*17.8*		*1.4*	*20.6*	
Q avg.	*2.5*	*12.8*		*62.9*	*5.6*	*85.7*	*3.0*	*36.8*		*10.6*	*41.8*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*2.0*	*1.8*		*1.5*	*1.9*	*1.5*	*2.0*	*1.6*		*1.8*	*1.6*	
BOQ, $Q_{\%}$	*5.0*	*22.9*		*95.4*	*10.9*	*129*	*6.1*	*58.0*		*19.4*	*65.2*	

Queue Storage Ratio

Q spacing	*24.9*	*24.9*		*24.9*	*24.9*	*24.9*	*24.9*	*24.9*		*24.9*	*24.9*	
Q storage	*0*	*0*		*0*	*0*	*0*	*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

7-P W MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD.@CALIENTE BLVD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/11/11	Jurisdiction	WITH MITIGATION
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030//ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	1	2	3	1	2	3	0
Lane group	L	T	R	L	T	R	L	T	R	L	TR	
Volume (vph)	160	170	375	1190	320	930	190	510	755	495	1240	175
% Heavy veh	5	5	5	10	5	10	5	10	10	10	10	5
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Thru & RT	Excl. Left	07	08
Timing	G = 30.0	G = 30.0	G =	G =	G = 31.0	G = 30.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	168	179	395	1253	337	979	200	537	795	521	1489	
Lane group cap.	715	777	641	683	777	612	715	1097	622	683	1078	
v/c ratio	0.23	0.23	0.62	1.83	0.43	1.60	0.28	0.49	1.28	0.76	1.38	
Green ratio	0.21	0.21	0.43	0.21	0.21	0.43	0.21	0.22	0.44	0.21	0.22	
Unif. delay d1	45.5	45.5	31.1	55.0	47.6	40.0	46.0	47.6	39.5	51.7	54.5	
Delay factor k	0.11	0.11	0.20	0.50	0.11	0.50	0.11	0.11	0.50	0.31	0.50	
Increm. delay d2	0.2	0.2	1.8	381.3	0.4	277.5	0.2	0.3	137.3	5.1	177.4	
PF factor	0.818	0.818	0.500	0.818	0.818	0.711	0.818	0.810	0.485	0.818	0.810	
Control delay	37.4	37.3	17.3	426.3	39.4	305.9	37.8	38.9	156.5	47.4	221.6	
Lane group LOS	D	D	B	F	D	F	D	D	F	D	F	
Apprch. delay	26.7			329.7			99.8			176.4		
Approach LOS	C			F			F			F		
Intersec. delay	200.5			Intersection LOS						F		

7-P W MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LAMEDIA PM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane	*168*	*179*	*395*	*1253*	*337*	*979*	*200*	*537*	*795*	*521*	*1489*	
Satflow per lane	*1719*	*1904*	*1495*	*1641*	*1904*	*1427*	*1719*	*1818*	*1428*	*1641*	*1787*	
Capacity/lane	*715*	*777*	*641*	*683*	*777*	*612*	*715*	*1097*	*622*	*683*	*1078*	
Flow ratio	*0.05*	*0.05*	*0.26*	*0.39*	*0.09*	*0.69*	*0.06*	*0.11*	*0.56*	*0.16*	0.31	
v/c ratio	*0.23*	*0.23*	*0.62*	*1.83*	*0.43*	*1.60*	*0.28*	*0.49*	*1.28*	*0.76*	*1.38*	
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.38*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	
PF factor	*0.85*	*0.85*	*0.66*	*1.00*	*0.88*	*1.00*	*0.85*	*0.88*	*1.00*	*0.94*	*1.00*	
Q_1	*2.3*	*2.6*	*7.8*	*25.1*	*5.2*	*38.1*	*2.8*	*5.9*	*30.9*	*9.2*	*21.2*	
k_B	*0.5*	*0.5*	*0.7*	*0.5*	*0.5*	*0.7*	*0.5*	*0.5*	*0.7*	*0.5*	*0.5*	
Q_2	*0.1*	*0.2*	*1.1*	*37.8*	*0.4*	*47.6*	*0.2*	*0.5*	*24.4*	*1.4*	*20.6*	
Q avg.	*2.5*	*2.7*	*8.9*	*62.9*	*5.6*	*85.7*	*3.0*	*6.4*	*55.3*	*10.6*	*41.8*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*2.0*	*2.0*	*1.9*	*1.5*	*1.9*	*1.5*	*2.0*	*1.9*	*1.5*	*1.8*	*1.6*	
BOQ, $Q_{\%}$	*5.0*	*5.5*	*16.6*	*95.4*	*10.9*	*129*	*6.1*	*12.3*	*84.5*	*19.4*	*65.2*	

Queue Storage Ratio

Q spacing	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

8-A
N
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	CALIENTE AV./BEYER BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/11/11	Jurisdiction	NO MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030/ALT-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	1	1	1	2	2	0	2	3	0
Lane group	L	TR		L	T	R	L	TR		L	TR	
Volume (vph)	1445	110	330	50	260	385	775	1160	50	165	500	945
% Heavy veh	10	5	5	5	5	5	5	5	5	5	5	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3	3	3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	50	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 37.0	G = 15.0	G =	G =	G = 30.0	G = 49.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1521	463		53	274	353	816	1274		174	1521	
Lane group cap.	786	309		424	191	146	668	1176		668	1459	
v/c ratio	1.94	1.50		0.13	1.43	2.42	1.22	1.08		0.26	1.04	
Green ratio	0.25	0.10		0.25	0.10	0.10	0.20	0.33		0.20	0.33	
Unif. delay d1	56.5	67.5		43.9	67.5	67.5	60.0	50.5		50.6	50.5	
Delay factor k	0.50	0.50		0.11	0.50	0.50	0.50	0.50		0.11	0.50	
Increm. delay d2	425.5	240.6		0.1	222.8	658.4	112.8	51.9		0.2	35.4	
PF factor	1.000	1.000		1.000	1.000	1.000	1.000	1.000		1.000	1.000	
Control delay	482.0	308.1		44.1	290.3	725.9	172.8	102.4		50.8	85.9	
Lane group LOS	F	F		D	F	F	F	F		D	F	
Apprch. delay	441.4			497.2			129.9			82.3		
Approach LOS	F			F			F			F		
Intersec. delay	252.0			Intersection LOS						F		

8-A
W
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	CALIENTE AV./BEYER BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/11/11	Jurisdiction	WITH MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030/ALT-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	1	1	1	2	2	0	2	2	2
Lane group	L	T	R	L	T	R	L	TR		L	T	R
Volume (vph)	1445	110	330	50	260	385	775	1160	50	165	500	945
% Heavy veh	10	5	5	5	5	5	5	5	5	5	5	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	3	3	3	3	3	3	3	3		3	3	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	50	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 39.0	G = 15.0	G =	G =	G = 30.0	G = 47.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1521	116	347	53	274	353	816	1274		174	526	995
Lane group cap.	829	363	490	447	191	146	668	1128		668	1136	1517
v/c ratio	1.83	0.32	0.71	0.12	1.43	2.42	1.22	1.13		0.26	0.46	0.66
Green ratio	0.26	0.10	0.33	0.26	0.10	0.10	0.20	0.31		0.20	0.31	0.61
Unif. delay d1	55.5	62.8	43.6	42.4	67.5	67.5	60.0	51.5		50.6	41.4	19.3
Delay factor k	0.50	0.11	0.27	0.11	0.50	0.50	0.50	0.50		0.11	0.11	0.23
Increm. delay d2	380.3	0.5	4.7	0.1	222.8	658.4	112.8	69.9		0.2	0.3	1.0
PF factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		1.000	1.000	1.000
Control delay	435.8	63.3	48.3	42.5	290.3	725.9	172.8	121.4		50.8	41.7	20.3
Lane group LOS	F	E	D	D	F	F	F	F		D	D	C
Apprch. delay	346.3			497.1			141.5			30.1		
Approach LOS	F			F			F			C		
Intersec. delay	212.7			Intersection LOS						F		

8 P

N M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	CALIENTE AV./BEYER BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	05/13/14	Jurisdiction	NO MITIGATION
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030/ALT-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	1	1	1	2	2	0	2	3	0
Lane group	L	TR		L	T	R	L	TR		L	TR	
Volume (vph)	945	260	775	50	110	165	330	500	50	385	1160	1445
% Heavy veh	10	5	5	5	5	5	5	5	5	5	5	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3	3	3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	50	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 37.0	G = 15.0	G =	G =	G = 30.0	G = 49.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	995	1090		53	116	121	347	579		405	2742	
Lane group cap.	786	309		424	191	146	668	1166		668	1494	
v/c ratio	1.27	3.53		0.13	0.61	0.83	0.52	0.50		0.61	1.84	
Green ratio	0.25	0.10		0.25	0.10	0.10	0.20	0.33		0.20	0.33	
Unif. delay d1	56.5	67.5		43.9	64.7	66.2	53.6	40.6		54.6	50.5	
Delay factor k	0.50	0.50		0.11	0.19	0.37	0.13	0.11		0.19	0.50	
Increm. delay d2	129.7	1145		0.1	5.5	31.1	0.7	0.3		1.6	378.5	
PF factor	1.000	1.000		1.000	1.000	1.000	1.000	1.000		1.000	1.000	
Control delay	186.2	1213		44.1	70.2	97.4	54.3	40.9		56.2	429.0	
Lane group LOS	F	F		D	E	F	D	D		E	F	
Apprch. delay	723.0			76.7			45.9			381.1		
Approach LOS	F			E			D			F		
Intersec. delay	429.8			Intersection LOS						F		

9-A

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./HERITAGE RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	05/13/12	Jurisdiction	NO MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	3	0	2	3	0
Lane group	L	T	R	L	T	R	L	TR		L	TR	
Volume (vph)	785	1890	335	345	865	1060	345	800	580	1860	545	760
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 33.0	G = 40.0	G =	G =	G = 32.0	G = 30.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 155.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	826	1989	353	363	911	1116	363	1453		1958	1374	
Lane group cap.	679	1278	711	679	1278	711	658	886		658	858	
v/c ratio	1.22	1.56	0.50	0.53	0.71	1.57	0.55	1.64		2.98	1.60	
Green ratio	0.21	0.26	0.50	0.21	0.26	0.50	0.21	0.19		0.21	0.19	
Unif. delay d1	61.0	57.5	26.1	54.2	52.3	39.0	55.1	62.5		61.5	62.5	
Delay factor k	0.50	0.50	0.11	0.14	0.28	0.50	0.15	0.50		0.50	0.50	
Increm. delay d2	110.5	254.2	0.5	0.8	1.9	263.1	1.0	293.1		893.2	276.1	
PF factor	0.820	0.768	0.342	0.820	0.768	0.785	0.827	0.840		0.858	0.840	
Control delay	160.5	298.4	9.5	45.2	42.1	293.7	46.5	345.6		945.9	328.6	
Lane group LOS	F	F	A	D	D	F	D	F		F	F	
Apprch. delay	230.3			160.1			285.8			691.4		
Approach LOS	F			F			F			F		
Intersec. delay	367.5			Intersection LOS						F		

9-A WITH MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./HERITAGE RD.
Agency or Co	USAI	Area Type	All other areas
Date Performed	12/09/10	Jurisdiction	WITH MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT - 3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	2	2	3	1	2	3	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	785	1690	335	345	865	1060	345	800	580	1850	545	780
% heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 33.0	G = 46.0	G =	G =	G = 32.0	G = 30.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 155.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	826	1989	353	363	911	1116	363	842	611	1958	574	800
Lane group cap.	679	1278	711	679	1278	1258	658	959	625	658	959	625
v/c ratio	1.22	1.56	0.50	0.53	0.71	0.89	0.55	0.89	0.98	2.98	0.60	1.28
Green ratio	0.21	0.26	0.50	0.21	0.26	0.50	0.21	0.19	0.44	0.21	0.13	0.44
Unif. delay d1	61.0	57.5	26.1	54.2	52.3	35.1	55.1	60.7	42.8	61.5	57.0	43.5
Delay factor k	0.50	0.50	0.11	0.14	0.28	0.41	0.15	0.40	0.48	0.50	0.13	0.50
Increm. delay d2	110.5	254.2	0.5	0.9	1.9	8.0	1.0	9.3	30.3	893.2	1.5	138.0
PF factor	0.820	0.766	0.342	0.820	0.766	0.342	0.827	0.840	0.479	0.858	0.840	0.479
Control delay	160.5	298.4	9.5	45.2	42.1	20.0	46.5	60.4	50.8	945.9	49.9	158.9
Lane group LOS	F	F	A	D	D	C	D	E	D	F	D	F
Approch. delay	230.3			32.2			54.4			602.4		
Approach LOS	F			C			D			F		
Intersec. delay	272.6			Intersection LOS						F		

9-A WITH MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: *ALT.-3B NO LA MEDIA AM PEAK HOUR*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Init. queue/lane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow rate/lane	826	1989	353	363	911	1116	353	942	611	1958	574	800
Satflow per lane	1641	1818	1431	1641	1818	1431	1641	1819	1425	1541	1819	1425
Capacity/lane	679	1278	711	679	1278	1258	658	959	625	658	959	625
Flow ratio	0.25	0.40	0.25	0.11	0.18	0.44	0.11	0.17	0.43	0.61	0.12	0.56
v/c ratio	1.22	1.56	0.50	0.53	0.71	0.89	0.55	0.98	0.98	2.98	0.60	1.28
I factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Platoon ratio	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.55	1.67	1.67
PF factor	1.00	1.00	0.44	0.90	0.90	0.72	0.90	0.97	0.96	1.00	0.92	1.00
Q1	10.3	31.4	4.4	6.4	11.9	17.5	6.5	12.6	24.9	43.4	7.6	34.4
k(p)	0.5	0.6	0.8	0.5	0.6	0.8	0.5	0.5	0.7	0.5	0.5	0.7
Q2	11.8	34.2	0.8	0.6	1.4	4.3	0.6	2.5	5.6	84.5	0.7	24.8
Q avg.	35.1	65.7	5.2	6.9	13.2	21.8	7.1	15.1	31.4	127.9	8.3	59.2

Percentile Back of Queue (95th percentile)

f(95)	1.6	1.5	1.9	1.9	1.8	1.7	1.9	1.8	1.6	1.5	1.9	1.5
95Q, Q95	48.5	99.5	10.1	13.7	23.6	36.6	13.5	26.5	50.4	192	15.6	90.2

Queue Storage Ratio

Q spacing	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Q storage	0	0	0	0	0	0	0	0	0	0	0	0
Avg. Rq												
95% Rq%												

9-P
NO
MIT

SHORT REPORT

General Information		Site Information	
Analyst:	USAI	Intersection	OTAY MESA RD./HERITAGE RD
Agency or Co	USAI	Area Type	All other areas
Date Performed	12/07/10	Jurisdiction	NO MITIGATION
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	0	2	3	0	2	3	0
Lane group	L	T	R	L	TR		L	TR		L	TR	
Volume (vph)	760	985	345	665	1760	1555	335	545	280	975	800	785
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RT OR Volume	10	5	0	10	5	50	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 25.0	G = 37.0	G =	G =	G = 30.0	G = 40.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	800	1037	363	700	3437		353	969		921	1668	
Lane group cap.	531	1222	686	531	1123		637	1242		637	1206	
v/c ratio	1.51	0.85	0.53	1.32	3.06		0.55	0.70		1.45	1.38	
Green ratio	0.17	0.25	0.46	0.17	0.25		0.20	0.27		0.20	0.27	
Unif. delay d1	62.5	53.8	27.2	62.5	56.5		54.0	49.6		60.0	55.0	
Delay factor k	0.50	0.39	0.13	0.50	0.50		0.15	0.27		0.50	0.50	
Increm. delay d2	237.6	5.6	0.8	156.1	929.6		1.1	1.8		209.4	177.6	
PF factor	0.867	0.782	0.385	0.667	0.915		0.833	0.758		0.833	0.758	
Control delay	291.8	47.9	11.2	210.3	981.3		46.0	39.3		259.4	219.3	
Lane group LOS	F	D	B	F	F		D	D		F	F	
Approach delay	130.5			850.9			41.3			233.6		
Approach LOS	F			F			D			F		
Intersec. delay	439.7			Intersection LOS						F		

9-P
M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./HERITAGE RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	05/13/12	Jurisdiction	NO MITIGATION
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	3	0	2	3	0
Lane group	L	T	R	L	T	R	L	TR		L	TR	
Volume (vph)	760	985	345	665	1760	1555	335	545	280	875	800	785
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	50	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 25.0	G = 37.0	G =	G =	G = 30.0	G = 40.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	800	1037	363	700	1853	1584	353	869		921	1668	
Lane group cap.	531	1222	686	531	1222	686	637	1242		637	1206	
v/c ratio	1.51	0.85	0.53	1.32	1.52	2.31	0.55	0.70		1.45	1.38	
Green ratio	0.17	0.25	0.48	0.17	0.25	0.48	0.20	0.27		0.20	0.27	
Unif. delay d1	62.5	53.8	27.2	62.5	56.5	39.0	54.0	49.6		60.0	55.0	
Delay factor k	0.50	0.38	0.13	0.50	0.50	0.50	0.15	0.27		0.50	0.50	
Increm. delay d2	237.6	5.8	0.8	156.1	236.6	593.7	1.1	1.8		209.4	177.6	
PF factor	0.867	0.782	0.385	0.867	0.782	1.000	0.833	0.758		0.833	0.758	
Control delay	291.8	47.9	11.2	210.3	280.8	632.7	46.0	39.3		259.4	219.3	
Lane group LOS	F	D	B	F	F	F	D	D		F	F	
Apprch. delay	130.5			403.6			41.3			233.6		
Approach LOS	F			F			D			F		
Intersec. delay	257.4			Intersection LOS						F		

9-P
N
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*800*	*1037*	*363*	*700*	*1853*	*1584*	*353*	*869*		*921*	*1668*	
Satflow per lane	*1641*	*1818*	*1430*	*1641*	*1818*	*1430*	*1641*	*1709*		*1641*	*1660*	
Capacity/lane	*531*	*1222*	*686*	*531*	*1222*	*686*	*637*	*1242*		*637*	*1206*	
Flow ratio	*0.25*	*0.21*	*0.25*	*0.22*	*0.37*	*1.11*	*0.11*	*0.19*		*0.29*	0.37	
v/c ratio	*1.51*	*0.85*	*0.53*	*1.32*	*1.52*	*2.31*	*0.55*	*0.70*		*1.45*	*1.38*	
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*		*5*	*5*	
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.00*	*1.67*	*1.67*		*1.67*	*1.67*	
PF factor	*1.00*	*0.95*	*0.50*	*1.00*	*1.00*	*1.00*	*0.91*	*0.89*		*1.00*	*1.00*	
Q_1	*17.1*	*14.3*	*5.2*	*15.0*	*28.3*	*66.0*	*6.2*	*10.7*		*19.8*	*25.5*	
k_B	*0.4*	*0.6*	*0.7*	*0.4*	*0.6*	*0.7*	*0.5*	*0.6*		*0.5*	*0.6*	
Q_2	*18.4*	*2.5*	*0.8*	*12.4*	*30.6*	*113.6*	*0.6*	*1.3*		*19.7*	*23.1*	
Q avg.	*35.6*	*16.8*	*6.1*	*27.4*	*58.9*	*179.6*	*6.7*	*12.0*		*39.4*	*48.6*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*1.6*	*1.7*	*1.9*	*1.6*	*1.5*	*1.5*	*1.9*	*1.8*		*1.6*	*1.5*	
BOQ, $Q_{\%}$	*56.3*	*29.2*	*11.7*	*44.7*	*89.8*	*269*	*12.9*	*21.7*		*61.8*	*74.9*	

Queue Storage Ratio

Q spacing	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*		*25.0*	*25.0*	
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

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WITH MIT

SHORT REPORT

General Information		Site Information	
Analyst	USA!	Intersection	OTAY MESA RD /HERITAGE RD.
Agency or Co.	USA!	Area Type	All other areas
Date Performed	11/07/10	Jurisdiction	WITH MITIGATION
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num of Lanes	2	3	1	2	3	2	2	3	1	2	3	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	760	965	345	665	1765	1555	335	545	280	875	800	785
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	50	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 25.0	G = 37.0	G =	G =	G = 30.0	G = 40.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	800	1037	363	700	1853	1564	353	574	295	921	842	826
Lane group cap.	531	1222	686	531	1222	1215	637	1321	668	637	1321	668
v/c ratio	1.51	0.85	0.53	1.32	1.52	1.30	0.55	0.43	0.44	1.45	0.64	1.24
Green ratio	0.17	0.25	0.48	0.17	0.25	0.48	0.20	0.27	0.47	0.20	0.27	0.47
Unif. delay d1	62.5	53.8	27.2	62.5	56.5	39.0	54.0	45.6	26.9	60.0	48.6	40.0
Delay factor k	0.50	0.36	0.13	0.50	0.50	0.50	0.15	0.11	0.11	0.50	0.22	0.50
Increm. delay d2	237.6	5.8	0.8	156.1	236.6	142.8	1.1	0.2	0.5	209.4	1.5	119.0
PF factor	0.867	0.782	0.595	0.867	0.782	0.520	0.933	0.758	0.417	0.633	0.759	0.435
Control delay	291.8	47.9	11.2	210.3	280.8	163.1	46.9	34.8	11.7	259.4	37.8	136.4
Lane group LOS	F	D	B	F	F	F	D	C	B	F	D	F
Approch. delay	130.5			223.6			32.5			148.1		
Approach LOS	F			F			C			F		
Intersec. delay	161.2			Intersection LOS						F		

9-9 WITH MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT.-3B NO LA MEDIA PM PEAK HOUR/WITH MITIGATION

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Init. queue/lane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow rate/lane	890	1037	363	700	1853	1584	353	574	295	921	842	826
Sat flow per lane	1641	1818	1430	1641	1818	1430	1641	1818	1431	1641	1818	1431
Capacity/lane	531	1222	696	531	1222	1215	537	1321	668	637	1321	668
Flow ratio	0.25	0.21	0.25	0.22	0.37	0.63	0.11	0.12	0.21	0.29	0.17	0.59
v/c ratio	1.51	0.85	0.53	1.32	1.52	1.30	0.55	0.43	0.44	1.45	0.64	1.24
I factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Platoon ratio	1.67	1.67	1.67	1.67	1.67	1.52	1.67	1.67	1.67	1.67	1.67	1.65
PF factor	1.00	0.95	0.50	1.00	1.00	1.00	0.91	0.52	0.50	1.00	0.88	1.00
Q_1	17.1	14.3	5.2	15.0	28.3	37.3	5.2	6.0	4.2	19.9	10.0	34.4
k_B	0.4	0.6	0.7	0.4	0.6	0.7	0.5	0.6	0.7	0.5	0.6	0.7
Q_2	18.4	2.5	0.8	12.4	30.6	28.9	0.6	0.5	0.6	19.7	1.5	23.0
Q avg.	35.6	16.8	6.1	27.4	58.9	66.1	6.7	6.5	4.7	39.4	11.0	57.5

Percentile Back of Queue (95th percentile)

$f_{B\%}$	1.6	1.7	1.9	1.6	1.5	1.5	1.9	1.9	2.0	1.6	1.8	1.5
95Q, Q_{95}	56.3	29.2	11.7	44.7	89.8	100	12.9	12.4	9.3	61.6	20.1	87.6

Queue Storage Ratio

Q spacing	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Q storage	0	0	0	0	0	0	0	0	0	0	0	0
Avg. Rq												
95% Rq95												

10-A N MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	HERITAGE RD./ SR-905 WB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	905WBHER30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	0	0	2	0	3	0	2	3	0
Lane group					LR	R		TR		L	T	
Volume (vph)				240		740		1675	870	265	550	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time					2.0	2.0		2.0		2.0	2.0	
Ext. eff. green					2.0	2.0		2.0		2.0	2.0	
Arrival type					5	5		5		5	5	
Unit Extension					3.0	3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10			10		300	10	5	0			
Lane Width					12.0	12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr					0	0		0		0	0	
Unit Extension					3.0	3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 30.0	G =	G =	G =	G = 20.0	G = 60.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 123.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate					253	463		2679		279	579	
Lane group cap.					422	634		2276		518	3383	
v/c ratio					0.60	0.73		1.18		0.54	0.17	
Green ratio					0.24	0.24		0.49		0.16	0.68	
Unif. delay d1					41.2	42.8		31.5		47.3	7.0	
Delay factor k					0.19	0.29		0.50		0.14	0.11	
Increm. delay d2					2.4	4.3		84.6		1.1	0.0	
PF factor					0.785	0.785		0.377		0.871	0.158	
Control delay					34.7	37.9		96.5		42.3	1.1	
Lane group LOS					C	D		F		D	A	
Apprch. delay				36.8			96.5			14.5		
Approach LOS				D			F			B		
Intersec. delay	69.9			Intersection LOS						E		

10-A
N
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group					*LR*	*R*		*TR*		*L*	*T*	
Init. queue/lane					*0.0*	*0.0*		*0.0*		*0.0*	*0.0*	
Flow rate/lane					*253*	*463*		*2679*		*279*	*579*	
Satflow per lane					*1732*	*1468*		*1712*		*1641*	*1818*	
Capacity/lane					*422*	*634*		*2276*		*518*	*3383*	
Flow ratio					*0.15*	*0.18*		*0.57*		*0.09*	0.12	
v/c ratio					*0.60*	*0.73*		*1.18*		*0.54*	*0.17*	
I factor					*1.000*	*1.000*		*1.000*		*1.000*	*1.000*	
Arrival type					*5*	*5*		*5*		*5*	*5*	
Platoon ratio					*1.67*	*1.67*		*1.65*		*1.67*	*1.39*	
PF factor					*0.89*	*0.92*		*1.00*		*0.93*	*0.17*	
Q_1					*6.8*	*7.5*		*33.6*		*4.2*	*0.4*	
k_B					*0.5*	*0.4*		*0.7*		*0.4*	*0.9*	
Q_2					*0.7*	*1.1*		*22.6*		*0.4*	*0.2*	
Q avg.					*7.5*	*8.6*		*56.2*		*4.6*	*0.6*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$					*1.9*	*1.9*		*1.5*		*2.0*	*2.1*	
BOQ, $Q_{\%}$					*14.2*	*16.1*		*85.7*		*9.0*	*1.3*	
Queue Storage Ratio												
Q spacing					*25.0*	*25.0*		*25.0*		*25.0*	*25.0*	
Q storage					*0*	*0*		*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

10 A W MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	HERITAGE RD./ SR-905 WB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	905WBHER30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/WITH M

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	0	0	2	0	3	2	2	3	0
Lane group					LR	R		T	R	L	T	
Volume (vph)				240		740		1675	870	265	550	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time					2.0	2.0		2.0	2.0	2.0	2.0	
Ext. eff. green					2.0	2.0		2.0	2.0	2.0	2.0	
Arrival type					5	5		5	5	5	5	
Unit Extension					3.0	3.0		3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10			10		300	10	5	0			
Lane Width					12.0	12.0		12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr					0	0		0	0	0	0	
Unit Extension					3.0	3.0		3.0	3.0	3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 30.0	G =	G =	G =	G = 20.0	G = 60.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 123.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				253	463		1763	916		279	579	
Lane group cap.				422	634		2416	1225		518	3383	
v/c ratio				0.60	0.73		0.73	0.75		0.54	0.17	
Green ratio				0.24	0.24		0.49	0.49		0.16	0.68	
Unif. delay d1				41.2	42.8		25.1	25.4		47.3	7.0	
Delay factor k				0.19	0.29		0.29	0.30		0.14	0.11	
Increm. delay d2				2.4	4.3		1.2	2.6		1.1	0.0	
PF factor				0.785	0.785		0.365	0.365		0.871	0.158	
Control delay				34.7	37.9		10.3	11.9		42.3	1.1	
Lane group LOS				C	D		B	B		D	A	
Apprch. delay				36.8			10.8			14.5		
Approach LOS				D			B			B		
Intersec. delay	15.9			Intersection LOS						B		

10A W MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group					LR	R		T	R	L	T	
Init. queue/lane					0.0	0.0		0.0	0.0	0.0	0.0	
Flow rate/lane					253	463		1763	916	279	579	
Satflow per lane					1732	1468		1818	1419	1641	1818	
Capacity/lane					422	634		2416	1225	518	3383	
Flow ratio					0.15	0.18		0.36	0.36	0.09	0.12	
v/c ratio					0.60	0.73		0.73	0.75	0.54	0.17	
I factor					1.000	1.000		1.000	1.000	1.000	1.000	
Arrival type					5	5		5	5	5	5	
Platoon ratio					1.67	1.67		1.67	1.67	1.67	1.39	
PF factor					0.89	0.92		0.58	0.59	0.93	0.17	
Q_1					6.8	7.5		10.2	8.4	4.2	0.4	
k_B					0.5	0.4		0.8	0.7	0.4	0.9	
Q_2					0.7	1.1		2.0	1.8	0.4	0.2	
Q avg.					7.5	8.6		12.1	10.2	4.6	0.6	

Percentile Back of Queue (95th percentile)

$f_{B\%}$					1.9	1.9		1.8	1.8	2.0	2.1	
BOQ, $Q_{\%}$					14.2	16.1		21.9	18.8	9.0	1.3	

Queue Storage Ratio

Q spacing					25.0	25.0		25.0	25.0	25.0	25.0	
Q storage					0	0		0	0	0	0	
Avg. R_Q												
95% $R_{Q\%}$												

10 P
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MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	HERITAGE RD./ SR-905 WB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	905WBHER30P3BNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	0	0	2	0	3	0	2	3	0
Lane group					LR	R		TR		L	T	
Volume (vph)				180		130		780	1350	1200	1345	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time					2.0	2.0		2.0		2.0	2.0	
Ext. eff. green					2.0	2.0		2.0		2.0	2.0	
Arrival type					5	5		5		5	5	
Unit Extension					3.0	3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0			0		0	0	0	0			
Lane Width					12.0	12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr					0	0		0		0	0	
Unit Extension					3.0	3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 20.0	G =	G =	G =	G = 57.0	G = 60.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate					189	137		2242		1263	1416	
Lane group cap.					231	347		1793		1211	3995	
v/c ratio					0.82	0.39		1.25		1.04	0.35	
Green ratio					0.13	0.13		0.40		0.38	0.81	
Unif. delay d1					63.2	59.5		45.0		46.5	3.9	
Delay factor k					0.36	0.11		0.50		0.50	0.11	
Increm. delay d2					20.2	0.7		117.5		37.8	0.1	
PF factor					0.897	0.897		0.556		0.591	0.259	
Control delay					76.9	54.1		142.5		65.3	1.1	
Lane group LOS					E	D		F		E	A	
Apprch. delay				67.3			142.5			31.3		
Approach LOS				E			F			C		
Intersec. delay	81.1			Intersection LOS						F		

10 of MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group					*LR*	*R*		*TR*		*L*	*T*	
Init. queue/lane					*0.0*	*0.0*		*0.0*		*0.0*	*0.0*	
Flow rate/lane					*189*	*137*		*2242*		*1263*	*1416*	
Satflow per lane					*1732*	*1468*		*1645*		*1641*	*1818*	
Capacity/lane					*231*	*347*		*1793*		*1211*	*3995*	
Flow ratio					*0.11*	*0.05*		*0.50*		*0.40*	0.29	
v/c ratio					*0.82*	*0.39*		*1.25*		*1.04*	*0.35*	
I factor					*1.000*	*1.000*		*1.000*		*1.000*	*1.000*	
Arrival type					*5*	*5*		*5*		*5*	*5*	
Platoon ratio					*1.67*	*1.67*		*1.67*		*1.67*	*1.18*	
PF factor					*0.98*	*0.93*		*1.00*		*1.00*	*0.28*	
Q_1					*7.5*	*2.7*		*34.3*		*27.1*	*1.6*	
k_B					*0.4*	*0.4*		*0.7*		*0.7*	*1.2*	
Q_2					*1.4*	*0.2*		*23.8*		*9.4*	*0.6*	
Q avg.					*8.9*	*3.0*		*58.1*		*36.5*	*2.3*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$					*1.9*	*2.0*		*1.5*		*1.6*	*2.0*	
BOQ, $Q_{\%}$					*16.6*	*5.9*		*88.5*		*57.7*	*4.6*	

Queue Storage Ratio

Q spacing					*25.0*	*25.0*		*25.0*		*25.0*	*25.0*	
Q storage					*0*	*0*		*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	HERITAGE RD./ SR-905 WB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	905WBHER30P3BNLM/WITH MITIGATI
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	0	0	2	0	3	2	2	3	0
Lane group					LR	R		T	R	L	T	
Volume (vph)				180		130		780	1350	1200	1345	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time					2.0	2.0		2.0	2.0	2.0	2.0	
Ext. eff. green					2.0	2.0		2.0	2.0	2.0	2.0	
Arrival type					5	5		5	5	5	5	
Unit Extension					3.0	3.0		3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	0			0		0	0	0	0			
Lane Width					12.0	12.0		12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr					0	0		0	0	0	0	
Unit Extension					3.0	3.0		3.0	3.0	3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 20.0	G =	G =	G =	G = 57.0	G = 60.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				189	137		821	1421		1263	1416	
Lane group cap.				231	347		1981	1473		1211	3995	
v/c ratio				0.82	0.39		0.41	0.96		1.04	0.35	
Green ratio				0.13	0.13		0.40	0.57		0.38	0.81	
Unif. delay d1				63.2	59.5		32.4	31.1		46.5	3.9	
Delay factor k				0.36	0.11		0.11	0.47		0.50	0.11	
Increm. delay d2				20.2	0.7		0.1	15.8		37.8	0.1	
PF factor				0.897	0.897		0.556	0.128		0.591	0.259	
Control delay				76.9	54.1		18.1	19.8		65.3	1.1	
Lane group LOS				E	D		B	B		E	A	
Apprch. delay				67.3			19.2			31.3		
Approach LOS				E			B			C		
Intersec. delay	28.4			Intersection LOS						C		

10 P
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MT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group					*LR*	*R*		*T*	*R*	*L*	*T*	
Init. queue/lane					*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane					*189*	*137*		*821*	*1421*	*1263*	*1416*	
Satflow per lane					*1732*	*1468*		*1818*	*1468*	*1641*	*1818*	
Capacity/lane					*231*	*347*		*1981*	*1473*	*1211*	*3995*	
Flow ratio					*0.11*	*0.05*		*0.17*	*0.55*	*0.40*	*0.29*	
v/c ratio					*0.82*	*0.39*		*0.41*	*0.96*	*1.04*	*0.35*	
I factor					*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type					*5*	*5*		*5*	*5*	*5*	*5*	
Platoon ratio					*1.67*	*1.67*		*1.67*	*1.67*	*1.67*	*1.18*	
PF factor					*0.98*	*0.93*		*0.64*	*0.65*	*1.00*	*0.28*	
Q_1					*7.5*	*2.7*		*5.8*	*20.7*	*27.1*	*1.6*	
k_B					*0.4*	*0.4*		*0.8*	*0.8*	*0.7*	*1.2*	
Q_2					*1.4*	*0.2*		*0.5*	*7.5*	*9.4*	*0.6*	
Q avg.					*8.9*	*3.0*		*6.3*	*28.2*	*36.5*	*2.3*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$					*1.9*	*2.0*		*1.9*	*1.6*	*1.6*	*2.0*	
BOQ, $Q_{\%}$					*16.6*	*5.9*		*12.1*	*45.9*	*57.7*	*4.6*	

Queue Storage Ratio

Q spacing					*25.0*	*25.0*		*25.0*	*25.0*	*25.0*	*25.0*	
Q storage					*0*	*0*		*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

11 AM

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	HERITAGE RD./ SR-905 EB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/07/10	Jurisdiction	905EBHER30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	0	0	3	0	2	3	0
Lane group				L	LR			TR		L	T	
Volume (vph)				1125		680		1865	240	120	670	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0	2.0			2.0		2.0	2.0	
Ext. eff. green				2.0	2.0			2.0		2.0	2.0	
Arrival type				5	5			5		5	5	
Unit Extension				3.0	3.0			3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10			10		0	10	5	0			
Lane Width				12.0	12.0			12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0	0			0		0	0	
Unit Extension				3.0	3.0			3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 67.0	G =	G =	G =	G = 15.0	G = 55.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				900	1000			2216		126	705	
Lane group cap.				1424	715			1780		319	2443	
v/c ratio				0.63	1.40			1.24		0.39	0.29	
Green ratio				0.45	0.45			0.37		0.10	0.49	
Unif. delay d1				32.0	41.5			47.5		63.2	22.4	
Delay factor k				0.21	0.50			0.50		0.11	0.11	
Increm. delay d2				0.9	187.8			115.1		0.8	0.1	
PF factor				0.462	0.580			0.614		0.926	0.351	
Control delay				15.7	211.9			144.3		59.4	7.9	
Lane group LOS				B	F			F		E	A	
Apprch. delay				119.0			144.3			15.7		
Approach LOS				F			F			B		
Intersec. delay	113.0			Intersection LOS						F		

11 A N M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group				*L*	*LR*			*TR*		*L*	*T*	
Init. queue/lane				*0.0*	*0.0*			*0.0*		*0.0*	*0.0*	
Flow rate/lane				*900*	*1000*			*2216*		*126*	*705*	
Satflow per lane				*1641*	*1600*			*1782*		*1641*	*1818*	
Capacity/lane				*1424*	*715*			*1780*		*319*	*2443*	
Flow ratio				*0.28*	*0.63*			*0.46*		*0.04*	0.14	
v/c ratio				*0.63*	*1.40*			*1.24*		*0.39*	*0.29*	
I factor				*1.000*	*1.000*			*1.000*		*1.000*	*1.000*	
Arrival type				*5*	*5*			*5*		*5*	*5*	
Platoon ratio				*1.67*	*1.52*			*1.67*		*1.67*	*1.67*	
PF factor				*0.63*	*1.00*			*1.00*		*0.95*	*0.39*	
Q_1				*9.3*	*41.7*			*33.9*		*2.4*	*2.5*	
k_B				*0.8*	*0.8*			*0.7*		*0.3*	*0.9*	
Q_2				*1.3*	*38.1*			*23.2*		*0.2*	*0.4*	
Q avg.				*10.6*	*79.8*			*57.1*		*2.6*	*2.9*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$				*1.8*	*1.5*			*1.5*		*2.0*	*2.0*	
BOQ, $Q_{\%}$				*19.4*	*120*			*87.0*		*5.2*	*5.7*	

Queue Storage Ratio

Q spacing				*25.0*	*25.0*			*25.0*		*25.0*	*25.0*	
Q storage				*0*	*0*			*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

11 A
W
M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	HERITAGE RD./ SR-905 EB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/07/10	Jurisdiction	905EBHER30A3BNLM/WITH MITIGATI
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	1	0	3	1	2	3	0
Lane group				L		R		T	R	L	T	
Volume (vph)				1125		680		1865	240	120	670	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0	2.0	2.0	2.0	
Ext. eff. green				2.0		2.0		2.0	2.0	2.0	2.0	
Arrival type				5		5		5	5	5	5	
Unit Extension				3.0		3.0		3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10			10		0	10	5	0			
Lane Width				12.0		12.0		12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0	0	0	0	
Unit Extension				3.0		3.0		3.0	3.0	3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 67.0	G =	G =	G =	G = 15.0	G = 55.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				1184		716		1963	253	126	705	
Lane group cap.				1424		842		1816	1217	319	2443	
v/c ratio				0.83		0.85		1.08	0.21	0.39	0.29	
Green ratio				0.45		0.57		0.37	0.85	0.10	0.49	
Unif. delay d1				36.5		26.6		47.5	2.1	63.2	22.4	
Delay factor k				0.37		0.38		0.50	0.11	0.11	0.11	
Increm. delay d2				4.3		8.3		46.7	0.1	0.8	0.1	
PF factor				0.462		0.117		0.614	0.326	0.926	0.351	
Control delay				21.2		11.4		75.9	0.8	59.4	7.9	
Lane group LOS				C		B		E	A	E	A	
Apprch. delay				17.5			67.3			15.7		
Approach LOS				B			E			B		
Intersec. delay	39.5			Intersection LOS						D		

11 A

W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group				*L*		*R*		*T*	*R*	*L*	*T*	
Init. queue/lane				*0.0*		*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane				*1184*		*716*		*1963*	*253*	*126*	*705*	
Satflow per lane				*1641*		*1468*		*1818*	*1437*	*1641*	*1818*	
Capacity/lane				*1424*		*842*		*1816*	*1217*	*319*	*2443*	
Flow ratio				*0.37*		*0.49*		*0.40*	*0.18*	*0.04*	0.14	
v/c ratio				*0.83*		*0.85*		*1.08*	*0.21*	*0.39*	*0.29*	
I factor				*1.000*	*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type				*5*		*5*		*5*	*5*	*5*	*5*	
Platoon ratio				*1.67*		*1.66*		*1.67*	*1.12*	*1.67*	*1.67*	
PF factor				*0.76*		*0.31*		*1.00*	*0.33*	*0.95*	*0.39*	
Q_1				*17.0*		*7.8*		*30.0*	*0.7*	*2.4*	*2.5*	
k_B				*0.8*		*0.8*		*0.7*	*1.1*	*0.3*	*0.9*	
Q_2				*3.2*		*3.9*		*12.2*	*0.3*	*0.2*	*0.4*	
Q avg.				*20.2*		*11.6*		*42.2*	*0.9*	*2.6*	*2.9*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$				*1.7*		*1.8*		*1.6*	*2.1*	*2.0*	*2.0*	
BOQ, $Q_{\%}$				*34.2*		*21.1*		*65.7*	*1.9*	*5.2*	*5.7*	
Queue Storage Ratio												
Q spacing				*25.0*		*25.0*		*25.0*	*25.0*	*25.0*	*25.0*	
Q storage				*0*		*0*		*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

11-P
N
M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	HERITAGE RD./ SR-905 EB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	905EBHER30P3BNLM/NO MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	0	0	3	0	2	3	0
Lane group				L	LR			TR		L	T	
Volume (vph)				900		500		1630	500	300	1225	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0	2.0			2.0		2.0	2.0	
Ext. eff. green				2.0	2.0			2.0		2.0	2.0	
Arrival type				5	5			5		5	5	
Unit Extension				3.0	3.0			3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0			0		0	0	0	0			
Lane Width				12.0	12.0			12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0	0			0		0	0	
Unit Extension				3.0	3.0			3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 60.0	G =	G =	G =	G = 22.0	G = 55.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				777	696			2242		316	1289	
Lane group cap.				1275	637			1752		467	2675	
v/c ratio				0.61	1.09			1.28		0.68	0.48	
Green ratio				0.40	0.40			0.37		0.15	0.54	
Unif. delay d1				35.7	45.0			47.5		60.6	21.5	
Delay factor k				0.20	0.50			0.50		0.25	0.11	
Increm. delay d2				0.9	63.5			130.4		3.9	0.1	
PF factor				0.556	0.556			0.614		0.885	0.217	
Control delay				20.7	88.5			159.6		57.6	4.8	
Lane group LOS				C	F			F		E	A	
Apprch. delay				52.8			159.6			15.2		
Approach LOS				D			F			B		
Intersec. delay	86.4			Intersection LOS						F		

11P

NN

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/NO MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group				*L*	*LR*			*TR*		*L*	*T*	
Init. queue/lane				*0.0*	*0.0*			*0.0*		*0.0*	*0.0*	
Flow rate/lane				*777*	*696*			*2242*		*316*	*1289*	
Satflow per lane				*1641*	*1593*			*1754*		*1641*	*1818*	
Capacity/lane				*1275*	*637*			*1752*		*467*	*2675*	
Flow ratio				*0.24*	*0.44*			*0.47*		*0.10*	*0.26*	
v/c ratio				*0.61*	*1.09*			*1.28*		*0.68*	*0.48*	
I factor				*1.000*	*1.000*			*1.000*		*1.000*	*1.000*	
Arrival type				*5*	*5*			*5*		*5*	*5*	
Platoon ratio				*1.67*	*1.67*			*1.67*		*1.67*	*1.67*	
PF factor				*0.71*	*1.00*			*1.00*		*0.96*	*0.28*	
Q_1				*9.4*	*29.0*			*34.3*		*6.1*	*3.5*	
k_B				*0.7*	*0.7*			*0.7*		*0.4*	*0.9*	
Q_2				*1.1*	*12.4*			*25.4*		*0.8*	*0.9*	
Q avg.				*10.5*	*41.4*			*59.7*		*6.9*	*4.3*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$				*1.8*	*1.6*			*1.5*		*1.9*	*2.0*	
BOQ, $Q_{\%}$				*19.2*	*64.6*			*90.9*		*13.1*	*8.5*	
Queue Storage Ratio												
Q spacing				*25.0*	*25.0*			*25.0*		*25.0*	*25.0*	
Q storage				*0*	*0*			*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

11-P W MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	HERITAGE RD./ SR-905 EB RAMPS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	905EBHER30P3BNLM/WITH MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	1	0	3	1	2	3	0
Lane group				L		R		T	R	L	T	
Volume (vph)				900		500		1630	500	300	1225	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0	2.0	2.0	2.0	
Ext. eff. green				2.0		2.0		2.0	2.0	2.0	2.0	
Arrival type				5		5		5	5	5	5	
Unit Extension				3.0		3.0		3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	0			0		0	0	0	0			
Lane Width				12.0		12.0		12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0	0	0	0	
Unit Extension				3.0		3.0		3.0	3.0	3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 60.0	G =	G =	G =	G = 22.0	G = 55.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				947		526		1716	526	316	1289	
Lane group cap.				1275		587		1816	1174	467	2675	
v/c ratio				0.74		0.90		0.94	0.45	0.68	0.48	
Green ratio				0.40		0.40		0.37	0.80	0.15	0.54	
Unif. delay d1				38.4		42.1		46.0	4.7	60.6	21.5	
Delay factor k				0.30		0.42		0.46	0.11	0.25	0.11	
Increm. delay d2				2.4		16.4		10.8	0.3	3.9	0.1	
PF factor				0.556		0.556		0.614	0.250	0.885	0.217	
Control delay				23.7		39.8		39.1	1.4	57.6	4.8	
Lane group LOS				C		D		D	A	E	A	
Apprch. delay				29.5			30.3			15.2		
Approach LOS				C			C			B		
Intersec. delay	25.5			Intersection LOS						C		

11P w MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/WITH MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group				*L*		*R*		*T*	*R*	*L*	*T*	
Init. queue/lane				*0.0*		*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane				*947*		*526*		*1716*	*526*	*316*	*1289*	
Satflow per lane				*1641*		*1468*		*1818*	*1468*	*1641*	*1818*	
Capacity/lane				*1275*		*587*		*1816*	*1174*	*467*	*2675*	
Flow ratio				*0.30*		*0.36*		*0.35*	*0.36*	*0.10*	*0.26*	
v/c ratio				*0.74*		*0.90*		*0.94*	*0.45*	*0.68*	*0.48*	
I factor				*1.000*	*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type				*5*		*5*		*5*	*5*	*5*	*5*	
Platoon ratio				*1.67*		*1.67*		*1.67*	*1.19*	*1.67*	*1.67*	
PF factor				*0.77*		*0.89*		*0.95*	*0.28*	*0.96*	*0.28*	
Q_1				*13.4*		*18.1*		*24.1*	*1.9*	*6.1*	*3.5*	
k_B				*0.7*		*0.7*		*0.7*	*1.0*	*0.4*	*0.9*	
Q_2				*1.9*		*3.9*		*5.6*	*0.8*	*0.8*	*0.9*	
Q avg.				*15.3*		*22.0*		*29.7*	*2.7*	*6.9*	*4.3*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$				*1.8*		*1.7*		*1.6*	*2.0*	*1.9*	*2.0*	
BOQ, $Q_{\%}$				*26.9*		*36.9*		*48.0*	*5.5*	*13.1*	*8.5*	
Queue Storage Ratio												
Q spacing				*25.0*		*25.0*		*25.0*	*25.0*	*25.0*	*25.0*	
Q storage				*0*		*0*		*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

12-A
NM

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	HERITAGE RD./AIRWAY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	HERAIR30A3BNLM/NO MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	1	3	0	0	0	0	2	0	1
Lane group	L	T		L	TR					L		R
Volume (vph)	185	2285		10	1220	1920				1565		230
% Heavy veh	10	10		1	10	10				10		10
PHF	0.95	0.95		0.95	0.95	0.95				0.95		0.95
Actuated (P/A)	A	A		A	A	A				A		A
Startup lost time	2.0	2.0		2.0	2.0					2.0		2.0
Ext. eff. green	2.0	2.0		2.0	2.0					2.0		2.0
Arrival type	5	5		5	5					5		5
Unit Extension	3.0	3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0			10	5	0	10			10	5	0
Lane Width	12.0	12.0		12.0	12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0					0		0
Unit Extension	3.0	3.0		3.0	3.0					3.0		3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 10.0	G = 80.0	G =	G =	G = 47.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	195	2405		11	3305					1647		242
Lane group cap.	212	2642		119	2371					999		583
v/c ratio	0.92	0.91		0.09	1.39					1.65		0.42
Green ratio	0.07	0.53		0.07	0.53					0.31		0.41
Unif. delay d1	69.6	31.7		65.7	35.0					51.5		31.8
Delay factor k	0.44	0.43		0.11	0.50					0.50		0.11
Increm. delay d2	31.7	3.8		0.2	179.1					296.4		0.5
PF factor	0.952	0.238		0.952	0.683					0.696		0.543
Control delay	98.0	11.4		62.8	203.0					332.2		17.7
Lane group LOS	F	B		E	F					F		B
Apprch. delay	17.9			202.6						291.9		
Approach LOS	B			F						F		
Intersec. delay	162.7			Intersection LOS						F		

12 AM

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR/NO MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*		*L*	*TR*					*L*		*R*
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*					*0.0*		*0.0*
Flow rate/lane	*195*	*2405*		*11*	*3305*					*1647*		*242*
Satflow per lane	*1641*	*1818*		*1787*	*1631*					*1641*		*1433*
Capacity/lane	*212*	*2642*		*119*	*2371*					*999*		*583*
Flow ratio	*0.06*	*0.49*		*0.01*	*0.74*					*0.52*		*0.17*
v/c ratio	*0.92*	*0.91*		*0.09*	*1.39*					*1.65*		*0.42*
I factor	*0.700*	*0.700*		*0.700*	*0.700*					*1.000*	*1.000*	*1.000*
Arrival type	*5*	*5*		*5*	*5*					*5*		*5*
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.28*					*1.67*		*1.67*
PF factor	*1.00*	*0.64*		*0.96*	*1.00*					*1.00*		*0.63*
Q_1	*4.1*	*21.3*		*0.4*	*50.5*					*35.3*		*4.5*
k_B	*0.2*	*0.6*		*0.2*	*0.6*					*0.6*		*0.7*
Q_2	*1.0*	*4.6*		*0.0*	*44.9*					*43.3*		*0.5*
Q avg.	*5.1*	*25.9*		*0.4*	*95.5*					*78.6*		*5.0*
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*2.0*	*1.6*		*2.1*	*1.5*					*1.5*		*2.0*
BOQ, $Q_{\%}$	*10.0*	*42.6*		*0.9*	*143*					*119*		*9.8*
Queue Storage Ratio												
Q spacing	*25.0*	*25.0*		*25.0*	*25.0*					*25.0*		*25.0*
Q storage	*0*	*0*		*0*	*0*					*0*		*0*
Avg. R_Q												
95% $R_{Q\%}$												

12-A
W
M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	HERITAGE RD./AIRWAY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	HERAIR30A3BNLM/WITH MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	1	3	2	0	0	0	2	0	1
Lane group	L	T		L	T	R				L		R
Volume (vph)	185	2285		10	1220	1920				1565		230
% Heavy veh	10	10		1	10	10				10		10
PHF	0.95	0.95		0.95	0.95	0.95				0.95		0.95
Actuated (P/A)	A	A		A	A	A				A		A
Startup lost time	2.0	2.0		2.0	2.0	2.0				2.0		2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0				2.0		2.0
Arrival type	5	5		5	5	5				5		5
Unit Extension	3.0	3.0		3.0	3.0	3.0				3.0		3.0
Ped/Bike/RTOR Volume	0			10	5	0	10			10	5	0
Lane Width	12.0	12.0		12.0	12.0	12.0				12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0				0		0
Unit Extension	3.0	3.0		3.0	3.0	3.0				3.0		3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 10.0	G = 80.0	G =	G =	G = 47.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	195	2405		11	1284	2021				1647		242
Lane group cap.	212	2642		119	2642	1341				999		583
v/c ratio	0.92	0.91		0.09	0.49	1.51				1.65		0.42
Green ratio	0.07	0.53		0.07	0.53	0.53				0.31		0.41
Unif. delay d1	69.6	31.7		65.7	22.0	35.0				51.5		31.8
Delay factor k	0.44	0.43		0.11	0.11	0.50				0.50		0.11
Increm. delay d2	31.7	3.8		0.2	0.1	230.9				296.4		0.5
PF factor	0.952	0.238		0.952	0.238	0.791				0.696		0.543
Control delay	98.0	11.4		62.8	5.3	258.6				332.2		17.7
Lane group LOS	F	B		E	A	F				F		B
Apprch. delay	17.9			159.9						291.9		
Approach LOS	B			F						F		
Intersec. delay	144.5			Intersection LOS						F		

12-A
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*		*L*	*T*	*R*				*L*		*R*
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*	*0.0*				*0.0*		*0.0*
Flow rate/lane	*195*	*2405*		*11*	*1284*	*2021*				*1647*		*242*
Satflow per lane	*1641*	*1818*		*1787*	*1818*	*1421*				*1641*		*1433*
Capacity/lane	*212*	*2642*		*119*	*2642*	*1341*				*999*		*583*
Flow ratio	*0.06*	*0.49*		*0.01*	*0.26*	*0.80*				*0.52*		*0.17*
v/c ratio	*0.92*	*0.91*		*0.09*	*0.49*	*1.51*				*1.65*		*0.42*
I factor	*0.700*	*0.700*		*0.700*	*0.700*	*0.700*				*1.000*	*1.000*	*1.000*
Arrival type	*5*	*5*		*5*	*5*	*5*				*5*		*5*
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.67*	*1.18*				*1.67*		*1.67*
PF factor	*1.00*	*0.64*		*0.96*	*0.31*	*1.00*				*1.00*		*0.63*
Q_1	*4.1*	*21.3*		*0.4*	*3.8*	*47.5*				*35.3*		*4.5*
k_B	*0.2*	*0.6*		*0.2*	*0.6*	*0.6*				*0.6*		*0.7*
Q_2	*1.0*	*4.6*		*0.0*	*0.6*	*49.6*				*43.3*		*0.5*
Q avg.	*5.1*	*25.9*		*0.4*	*4.4*	*97.1*				*78.6*		*5.0*
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*2.0*	*1.6*		*2.1*	*2.0*	*1.5*				*1.5*		*2.0*
BOQ, $Q_{\%}$	*10.0*	*42.6*		*0.9*	*8.7*	*146*				*119*		*9.8*
Queue Storage Ratio												
Q spacing	*25.0*	*25.0*		*25.0*	*25.0*	*25.0*				*25.0*		*25.0*
Q storage	*0*	*0*		*0*	*0*	*0*				*0*		*0*
Avg. R_Q												
95% $R_{Q\%}$												

12- P
N
M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	HERITAGE RD./AIRWAY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	HERAIR30P3BNLM/NO MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B/NO MIT.

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	1	3	0	0	0	0	2	0	1
Lane group	L	T		L	TR					L		R
Volume (vph)	230	1220		10	2065	1900				1940		185
% Heavy veh	10	10		1	10	10				10		10
PHF	0.95	0.95		0.95	0.95	0.95				0.95		0.95
Actuated (P/A)	A	A		A	A	A				A		A
Startup lost time	2.0	2.0		2.0	2.0					2.0		2.0
Ext. eff. green	2.0	2.0		2.0	2.0					2.0		2.0
Arrival type	5	5		5	5					5		5
Unit Extension	3.0	3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0			10	5	0	10			10	5	0
Lane Width	12.0	12.0		12.0	12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0					0		0
Unit Extension	3.0	3.0		3.0	3.0					3.0		3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 10.0	G = 59.0	G =	G =	G = 68.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	242	1284		11	4174					2042		195
Lane group cap.	212	1948		119	1789					1445		786
v/c ratio	1.14	0.66		0.09	2.33					1.41		0.25
Green ratio	0.07	0.39		0.07	0.39					0.45		0.55
Unif. delay d1	70.0	37.3		65.7	45.5					41.0		17.8
Delay factor k	0.50	0.23		0.11	0.50					0.50		0.11
Increm. delay d2	95.6	0.6		0.2	601.1					190.1		0.2
PF factor	0.952	0.568		0.952	0.977					0.599		0.196
Control delay	162.3	21.7		62.8	645.6					214.7		3.7
Lane group LOS	F	C		E	F					F		A
Apprch. delay	44.0			644.1						196.3		
Approach LOS	D			F						F		
Intersec. delay	402.8			Intersection LOS						F		

12-9
N3

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT.-3B NO LA MEDIA PM PEAK HOUR/NO MITIGATION

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	L	T		L	TR					L		R
Init. queue/lane	0.0	0.0		0.0	0.0					0.0		0.0
Flow rate/lane	242	1284		11	4174					2042		135
Satflow per lane	1641	1915		1787	1869					1641		1438
Capacity/lane	212	1948		119	1789					1445		786
Flow ratio	0.08	0.26		0.01	0.92					0.64		0.14
v/c ratio	1.14	0.66		0.09	2.33					1.41		0.25
I factor	0.700	0.700		0.700	0.700					1.000	1.000	1.000
Arrival type	5	5		5	5					5		5
Platoon ratio	1.67	1.67		1.67	1.03					1.48		1.67
PF factor	1.00	0.74		0.96	1.00					1.00		0.22
Q1	5.2	11.9		0.4	62.6					43.6		0.9
ke	0.2	0.5		0.2	0.5					0.8		0.8
Q2	2.8	1.0		0.0	110.4					40.9		0.3
Q avg.	8.0	12.9		0.4	174.2					84.7		1.2
Percentile Back of Queue (95th percentile)												
fes	1.9	1.6		2.1	1.5					1.5		2.1
BOQ, Q%	15.1	23.1		0.9	261					127		2.5
Queue Storage Ratio												
Q spacing	25.0	25.0		25.0	25.0					25.0		25.0
Q storage	0	0		0	0					0		0
Avg. Rq												
95% Rq%												

12-P
W/
M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	HERITAGE RD./AIRWAY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	HERAIR30P3BNLM/WITH MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B/WITH MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	1	3	2	0	0	0	2	0	1
Lane group	L	T		L	T	R				L		R
Volume (vph)	230	1220		10	2065	1900				1940		185
% Heavy veh	10	10		1	10	10				10		10
PHF	0.95	0.95		0.95	0.95	0.95				0.95		0.95
Actuated (P/A)	A	A		A	A	A				A		A
Startup lost time	2.0	2.0		2.0	2.0	2.0				2.0		2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0				2.0		2.0
Arrival type	5	5		5	5	5				5		5
Unit Extension	3.0	3.0		3.0	3.0	3.0				3.0		3.0
Ped/Bike/RTOR Volume	0			10	5	0	10			10	5	0
Lane Width	12.0	12.0		12.0	12.0	12.0				12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0				0		0
Unit Extension	3.0	3.0		3.0	3.0	3.0				3.0		3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 10.0	G = 59.0	G =	G =	G = 68.0	G =	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	242	1284		11	2174	2000				2042		195
Lane group cap.	212	1948		119	1948	2208				1445		786
v/c ratio	1.14	0.66		0.09	1.12	0.91				1.41		0.25
Green ratio	0.07	0.39		0.07	0.39	0.88				0.45		0.55
Unif. delay d1	70.0	37.3		65.7	45.5	5.3				41.0		17.8
Delay factor k	0.50	0.23		0.11	0.50	0.43				0.50		0.11
Increm. delay d2	95.6	0.6		0.2	57.8	4.3				190.1		0.2
PF factor	0.952	0.568		0.952	0.568	0.417				0.599		0.196
Control delay	162.3	21.7		62.8	83.7	6.5				214.7		3.7
Lane group LOS	F	C		E	F	A				F		A
Apprch. delay	44.0			46.7						196.3		
Approach LOS	D			D						F		
Intersec. delay	88.3			Intersection LOS						F		

12-P W M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

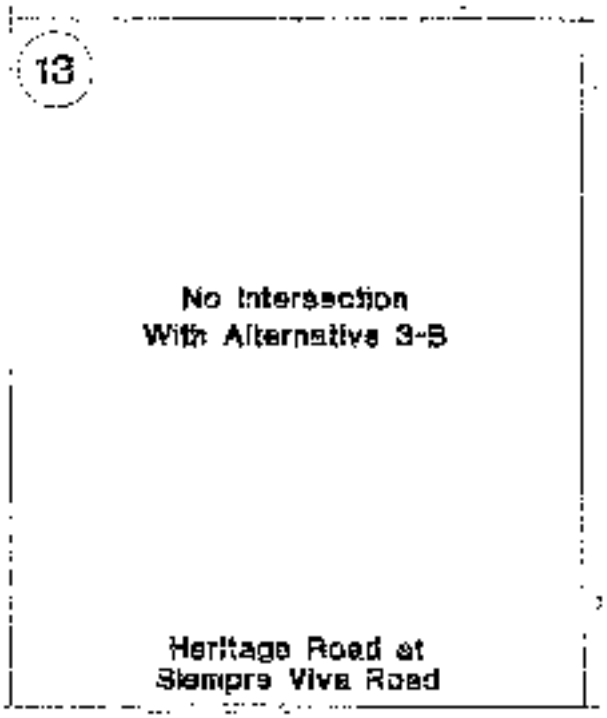
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*		*L*	*T*	*R*				*L*		*R*
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*	*0.0*				*0.0*		*0.0*
Flow rate/lane	*242*	*1284*		*11*	*2174*	*2000*				*2042*		*195*
Satflow per lane	*1641*	*1818*		*1787*	*1818*	*1418*				*1641*		*1438*
Capacity/lane	*212*	*1948*		*119*	*1948*	*2208*				*1445*		*786*
Flow ratio	*0.08*	*0.26*		*0.01*	*0.44*	*0.80*				*0.64*		*0.14*
v/c ratio	*1.14*	*0.66*		*0.09*	*1.12*	*0.91*				*1.41*		*0.25*
I factor	*0.700*	*0.700*		*0.700*	*0.700*	*0.700*				*1.000*	*1.000*	*1.000*
Arrival type	*5*	*5*		*5*	*5*	*5*				*5*		*5*
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.67*	*1.08*				*1.48*		*1.67*
PF factor	*1.00*	*0.74*		*0.96*	*1.00*	*0.60*				*1.00*		*0.22*
Q_1	*5.2*	*11.9*		*0.4*	*33.3*	*16.8*				*43.8*		*0.9*
k_B	*0.2*	*0.5*		*0.2*	*0.5*	*0.7*				*0.8*		*0.8*
Q_2	*2.8*	*1.0*		*0.0*	*14.2*	*5.3*				*40.9*		*0.3*
Q avg.	*8.0*	*12.9*		*0.4*	*47.4*	*22.1*				*84.7*		*1.2*

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*1.9*	*1.8*		*2.1*	*1.5*	*1.7*				*1.5*		*2.1*
BOQ, $Q_{\%}$	*15.1*	*23.1*		*0.9*	*73.2*	*37.0*				*127*		*2.5*

Queue Storage Ratio

Q spacing	*25.0*	*25.0*		*25.0*	*25.0*	*25.0*				*25.0*		*25.0*
Q storage	*0*	*0*		*0*	*0*	*0*				*0*		*0*
Avg. R_Q												
95% $R_{Q\%}$												


13
No Intersection
With Alternative 3-B
Heritage Road at
Siempre Viva Road

14 A
NO
MT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./CACTUS RD.
Agency or Co	USAI	Area Type	All other areas
Date Performed	12/07/10	Jurisdiction	OMCAC30A3BNLMNM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 3B NC LA MFDA

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	Th	RT
Num. of Lanes	1	3	0	2	3	0	2	1	1	1	1	0
Lane group	L	TR		L	TR		L	TR	R	L	TR	
Volume (vph)	195	2065	1500	930	1470	85	975	70	700	55	25	55
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5		5	5		5	5	5	5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	NB Only	SB Only	07	08
Timing	G = 33.0	G = 45.0	G =	G =	G = 40.0	G = 15.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 4	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	205	3774		979	1636		1026	74	737	58	84	
Lane group cap.	361	1376		701	1470		850	485	696	164	157	
v/c ratio	0.57	2.74		1.40	1.11		1.21	0.15	1.06	0.35	0.54	
Green ratio	0.22	0.30		0.22	0.30		0.27	0.27	0.49	0.10	0.10	
Unif. delay d1	52.1	52.5		58.5	52.5		55.0	42.0	38.5	63.0	64.2	
Delay factor k	0.16	0.50		0.50	0.50		0.50	0.11	0.50	0.11	0.14	
Increm. delay d2	2.1	734.5		187.1	60.9		104.2	0.1	50.8	1.3	3.6	
PF factor	0.812	0.933		0.812	0.714		0.756	0.756	0.366	0.925	0.926	
Control delay	44.5	833.5		234.6	98.4		145.9	32.0	64.9	59.6	63.0	
Lane group LOS	D	F		F	F		F	C	E	E	E	
Approch delay	792.8			149.4			109.6			61.6		
Approach LOS	F			F			F			E		
Intersec. delay	437.9			Intersection LOS						F		

14A WITH MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./CACTUS RD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	12/09/10	Jurisdiction	OMCAC30A3BNLMWM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 3B NO LA MEDIA/WITH

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	2	2	3	1	2	1	1	1	1	0
Lane group	L	T	R	L	T	R	L	TR	R	L	TR	
Volume (vph)	195	2085	1500	935	1470	85	975	70	700	55	25	55
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	

Phasing	Exc. Left	Thru & RT	03	04	NB Only	SB Only	07	08
Timing	G = 33.0	G = 45.0	G =	G =	G = 40.0	G = 15.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 4	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	205	2195	1579	979	1547	89	1026	74	737	58	84	
Lane group cap.	361	1489	1498	701	1486	422	850	485	698	184	157	
v/c ratio	0.57	1.48	1.05	1.40	1.04	0.21	1.21	0.15	1.06	0.35	0.54	
Green ratio	0.22	0.30	0.60	0.22	0.30	0.30	0.27	0.27	0.49	0.10	0.10	
Unif. delay d1	62.1	52.5	30.0	68.5	52.5	39.2	55.0	42.0	38.5	63.0	64.2	
Delay factor k	0.16	0.50	0.50	0.50	0.50	0.11	0.50	0.11	0.50	0.11	0.14	
Increm. delay d2	2.1	216.4	39.0	187.1	34.8	0.3	104.2	0.1	50.8	1.3	3.6	
PF factor	0.812	0.714	0.248	0.812	0.714	0.714	0.756	0.758	0.369	0.926	0.926	
Control delay	44.5	255.9	46.3	234.5	72.3	28.3	145.9	32.0	64.9	59.5	63.0	
Lane group LOS	D	F	D	F	E	C	F	C	E	E	E	
Approach delay	161.8			131.5			109.6			61.6		
Approach LOS	F			F			F			E		
Intersec. delay	139.6			Intersection LOS						F		

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NO MIT

SHORT REPORT

General Information		Site Information	
Analyst:	USAI	Intersection	OTAY MESA RD./CACTUS RD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	12/07/10	Jurisdiction	CMCAC30P3BNLMNM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	2	3	0	2	1	1	1	1	0
Lane group	L	TR		L	TR		L	TR	R	L	TR	
Volume (vph)	140	1165	975	645	2040	60	1500	50	930	175	80	180
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5		5	5		5	5	5	5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	NB Only	SB Only	07	08
Timing	G = 33.0	G = 45.0	G =	G =	G = 40.0	G = 15.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 4	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	147	2252		679	2210		1579	53	979	184	273	
Lane group cap.	361	1368		701	1476		850	485	696	164	157	
v/c ratio	0.41	1.65		0.97	1.50		1.86	0.11	1.41	1.12	1.74	
Green ratio	0.22	0.30		0.22	0.30		0.27	0.27	0.49	0.10	0.10	
Unif. delay d1	50.1	52.5		58.0	52.5		55.0	41.5	36.5	67.5	67.5	
Delay factor k	0.11	0.50		0.48	0.50		0.50	0.11	0.50	0.50	0.50	
Increm. delay d2	0.8	294.1		26.3	226.5		390.5	0.1	191.5	106.8	357.6	
PF factor	0.812	0.714		0.812	0.714		0.758	0.758	0.632	0.926	0.926	
Control delay	41.4	331.6		73.4	264.0		432.1	31.6	215.8	169.3	420.1	
Lane group LOS	D	F		E	F		F	C	F	F	F	
Approch delay	313.8			219.2			342.9			319.1		
Approach LOS	F			F			F			F		
Intersec. delay	295.5			Intersection LOS						F		

1PP WITH MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./CACTUS RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	12/09/10	Jurisdiction	OMCAC30P3BNLMMM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT-3B NO LM/WITH M

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num of Lanes	1	3	2	2	3	1	2	1	1	1	1	0
Lane group	L	T	R	L	T	R	L	TR	R	L	TR	
Volume (vph)	140	1165	975	645	2040	60	1500	50	930	175	80	180
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	

Phasing	Exclusive Left	Thru & RT	03	04	NB Only	SB Only	07	08
Timing	G = 33.0	G = 45.0	G =	G =	G = 45.0	G = 15.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 4	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj flow rate	147	1226	1026	679	2147	63	1579	53	979	184	273	
Lane group cap.	361	1466	1498	701	1486	422	850	485	696	164	157	
v/c ratio	0.41	0.83	0.68	0.97	1.44	0.15	1.86	0.11	1.41	1.12	1.74	
Green ratio	0.22	0.30	0.60	0.22	0.30	0.30	0.27	0.27	0.49	0.10	0.10	
Unif. delay d1	50.1	48.5	20.4	58.0	52.5	38.5	56.0	41.5	36.5	67.5	67.5	
Delay factor k	0.11	0.36	0.25	0.46	0.52	0.11	0.50	0.11	0.50	0.50	0.50	
Increm. delay d2	0.8	4.0	1.3	26.3	204.0	0.2	395.5	0.1	191.5	106.8	357.6	
PF factor	0.912	0.714	0.125	0.912	0.714	0.714	0.758	0.758	0.632	0.926	0.926	
Control delay	41.4	38.8	3.9	73.4	241.5	27.6	432.1	31.6	215.8	169.3	420.1	
Lane group LOS	D	D	A	E	F	C	F	C	F	F	F	
Approach delay	24.0			197.3			342.9			319.1		
Approach LOS	C			F			F			F		
Intersec. delay	199.7			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD./CACTUS RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	12/07/10	Jurisdiction	AIRCAC30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	0	2	2	0	2	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	770	1260	1900	275	1370	1095	855	375	425	800	345	510
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	50
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 22.0	G = 55.0	G =	G =	G = 32.0	G = 23.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	811	3326		289	2595		900	842		842	847	
Lane group cap.	467	1629		467	1678		680	479		680	475	
v/c ratio	1.74	2.04		0.62	1.55		1.32	1.76		1.24	1.78	
Green ratio	0.15	0.37		0.15	0.37		0.21	0.15		0.21	0.15	
Unif. delay d1	64.0	47.5		60.1	47.5		59.0	63.5		59.0	63.5	
Delay factor k	0.50	0.50		0.20	0.50		0.50	0.50		0.50	0.50	
Increm. delay d2	340.3	470.9		2.5	248.9		155.7	349.5		119.5	360.8	
PF factor	0.885	0.844		0.885	0.614		0.819	0.879		0.819	0.879	
Control delay	397.0	511.0		55.7	278.1		204.0	405.4		167.9	416.7	
Lane group LOS	F	F		E	F		F	F		F	F	
Apprch. delay	488.7			255.8			301.4			292.6		
Approach LOS	F			F			F			F		
Intersec. delay	361.5			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD./CACTUS RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	AIRCAC30A3BNLMM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/WITH M

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	2	2	2	1	2	2	1
Lane group	L	TR	R	L	T	R	L	T	R	L	TR	R
Volume (vph)	770	1260	1900	275	1370	1095	855	375	425	800	345	510
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	50
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 22.0	G = 55.0	G =	G =	G = 32.0	G = 23.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	811	2226	1100	289	1442	1153	900	395	447	842	460	387
Lane group cap.	467	1679	518	467	1816	1536	680	531	473	680	510	217
v/c ratio	1.74	1.33	2.12	0.62	0.79	0.75	1.32	0.74	0.95	1.24	0.90	1.78
Green ratio	0.15	0.37	0.37	0.15	0.37	0.61	0.21	0.15	0.33	0.21	0.15	0.15
Unif. delay d1	64.0	47.5	47.5	60.1	42.4	20.8	59.0	60.7	48.7	59.0	62.4	63.5
Delay factor k	0.50	0.50	0.50	0.20	0.34	0.31	0.50	0.30	0.46	0.50	0.42	0.50
Increm. delay d2	340.3	150.8	512.1	2.5	2.5	2.1	155.7	5.6	28.0	119.5	19.2	370.5
PF factor	0.885	0.614	0.873	0.885	0.614	0.129	0.819	0.879	0.667	0.819	0.879	1.000
Control delay	397.0	180.0	553.5	55.7	28.6	4.8	204.0	59.0	60.5	167.9	74.0	434.0
Lane group LOS	F	F	F	E	C	A	F	E	E	F	E	F
Apprch. delay	321.9			21.8			134.3			203.3		
Approach LOS	F			C			F			F		
Intersec. delay	188.6			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD./CACTUS RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	AIRCAC30P3BNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	0	2	2	0	2	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	510	1055	495	500	1450	550	1665	350	750	690	765	750
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	50
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 22.0	G = 55.0	G =	G =	G = 32.0	G = 23.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	537	1632		526	2105		1753	1157		726	1542	
Lane group cap.	467	1716		467	1730		680	464		680	484	
v/c ratio	1.15	0.95		1.13	1.22		2.58	2.49		1.07	3.19	
Green ratio	0.15	0.37		0.15	0.37		0.21	0.15		0.21	0.15	
Unif. delay d1	64.0	46.2		64.0	47.5		59.0	63.5		59.0	63.5	
Delay factor k	0.50	0.46		0.50	0.50		0.50	0.50		0.50	0.50	
Increm. delay d2	89.7	12.1		81.0	103.1		714.4	678.5		54.0	989.1	
PF factor	0.885	0.614		0.885	0.614		0.819	0.879		0.819	0.879	
Control delay	146.4	40.5		137.6	132.2		762.7	734.3		102.3	1045	
Lane group LOS	F	D		F	F		F	F		F	F	
Apprch. delay	66.7			133.3			751.4			743.2		
Approach LOS	E			F			F			F		
Intersec. delay	437.7			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD./CACTUS RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	AIRCAC30P3BNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/WITH M

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	2	2	2	1	2	2	1
Lane group	L	TR	R	L	T	R	L	T	R	L	TR	R
Volume (vph)	510	1055	495	500	1450	550	1665	350	750	690	765	750
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	50
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 22.0	G = 55.0	G =	G =	G = 32.0	G = 23.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	537	1111	521	526	1526	579	1753	368	789	726	805	737
Lane group cap.	467	1816	518	467	1816	1536	680	531	473	680	531	217
v/c ratio	1.15	0.61	1.01	1.13	0.84	0.38	2.58	0.69	1.67	1.07	1.52	3.40
Green ratio	0.15	0.37	0.37	0.15	0.37	0.61	0.21	0.15	0.33	0.21	0.15	0.15
Unif. delay d1	64.0	38.8	47.5	64.0	43.5	14.6	59.0	60.2	50.0	59.0	63.5	63.5
Delay factor k	0.50	0.20	0.50	0.50	0.38	0.11	0.50	0.26	0.50	0.50	0.50	0.50
Increm. delay d2	89.7	0.6	41.0	81.0	3.7	0.2	714.4	3.9	309.9	54.0	241.8	1090
PF factor	0.885	0.614	0.614	0.885	0.614	0.129	0.819	0.879	0.667	0.819	0.879	1.000
Control delay	146.4	24.4	70.1	137.6	30.4	2.0	762.7	56.8	343.2	102.3	297.6	1153
Lane group LOS	F	C	E	F	C	A	F	E	F	F	F	F
Apprch. delay	65.6			45.6			559.7			513.2		
Approach LOS	E			D			F			F		
Intersec. delay	306.2			Intersection LOS						F		

16-A

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SIEMPRE VIVA RD./CACTUS ROAD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	SIEMPCAC30A3BNLM/NO MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	2	0	2	0	2	2	0
Lane group				L		R		TR		L	TR	
Volume (vph)				310		1475		85	80	2215	350	130
% Heavy veh				10		10		10	10	10	10	5
PHF				0.95		0.95		0.95	0.95	0.95	0.95	0.95
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10			10		0	10		0	0		50
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 30.0	G =	G =	G =	G = 90.0	G = 10.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 4	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 142.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				326		1553		173		2332	452	
Lane group cap.				673		2270		226		2020	2486	
v/c ratio				0.48		0.68		0.77		1.15	0.18	
Green ratio				0.21		0.87		0.07		0.63	0.73	
Unif. delay d1				49.2		2.8		64.8		26.0	5.9	
Delay factor k				0.11		0.25		0.32		0.50	0.11	
Increm. delay d2				0.6		0.9		14.5		75.6	0.0	
PF factor				0.821		0.394		0.949		0.482	0.187	
Control delay				41.0		2.0		76.1		88.2	1.1	
Lane group LOS				D		A		E		F	A	
Apprch. delay				8.7			76.1			74.0		
Approach LOS				A			E			E		
Intersec. delay	48.7			Intersection LOS						D		

16-A
WM

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SIEMPRE VIVA RD./CACTUS ROAD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	SIEMPCAC30A3BNLM/WITH MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	2	0	2	1	2	2	0
Lane group				L		R		T	R	L	TR	
Volume (vph)				310		1475		85	80	2215	350	130
% Heavy veh				10		10		10	10	10	10	5
PHF				0.95		0.95		0.95	0.95	0.95	0.95	0.95
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0	2.0	2.0	2.0	
Ext. eff. green				2.0		2.0		2.0	2.0	2.0	2.0	
Arrival type				5		5		5	5	5	5	
Unit Extension				3.0		3.0		3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10			10		0	10		0	0		50
Lane Width				12.0		12.0		12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0	0	0	0	
Unit Extension				3.0		3.0		3.0	3.0	3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 30.0	G =	G =	G =	G = 90.0	G = 10.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 4	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 142.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				326		1553		89	84	2332	452	
Lane group cap.				673		2270		244	455	2020	2486	
v/c ratio				0.48		0.68		0.36	0.18	1.15	0.18	
Green ratio				0.21		0.87		0.07	0.31	0.63	0.73	
Unif. delay d1				49.2		2.8		63.0	35.9	26.0	5.9	
Delay factor k				0.11		0.25		0.11	0.11	0.50	0.11	
Increm. delay d2				0.6		0.9		0.9	0.2	75.6	0.0	
PF factor				0.821		0.394		0.949	0.701	0.482	0.187	
Control delay				41.0		2.0		60.7	25.3	88.2	1.1	
Lane group LOS				D		A		E	C	F	A	
Apprch. delay				8.7			43.5			74.0		
Approach LOS				A			D			E		
Intersec. delay	47.6			Intersection LOS						D		

16 P
NM

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SIEMPRE VIVA RD./CACTUS ROAD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	SIEMPCAC30P3BNLM/NO MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	2	0	2	0	2	2	0
Lane group				L		R		TR		L	T	
Volume (vph)				80		2300		350	310	1845	85	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10			10		0	10		0			
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 35.0	G =	G =	G =	G = 73.0	G = 30.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 4	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				84		2421		694		1942	89	
Lane group cap.				744		1941		644		1551	2470	
v/c ratio				0.11		1.25		1.08		1.25	0.04	
Green ratio				0.23		0.75		0.20		0.49	0.71	
Unif. delay d1				45.3		19.0		60.0		38.5	6.3	
Delay factor k				0.11		0.50		0.50		0.50	0.11	
Increm. delay d2				0.1		115.8		58.2		118.9	0.0	
PF factor				0.797		0.940		0.833		0.469	0.174	
Control delay				36.2		133.6		108.2		137.0	1.1	
Lane group LOS				D		F		F		F	A	
Apprch. delay				130.4			108.2			131.0		
Approach LOS				F			F			F		
Intersec. delay	127.7			Intersection LOS						F		

16-P 3 M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SIEMPRE VIVA RD./CACTUS ROAD
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	SIEMPCAC30P3BNLM/WITH MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	2	0	2	1	2	2	0
Lane group				L		R		T	R	L	T	
Volume (vph)				80		2300		350	310	1845	85	
% Heavy veh				10		10		10	10	10	10	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0	2.0	2.0	2.0	
Ext. eff. green				2.0		2.0		2.0	2.0	2.0	2.0	
Arrival type				5		5		5	5	5	5	
Unit Extension				3.0		3.0		3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10			10		0	10		0			
Lane Width				12.0		12.0		12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0	0	0	0	
Unit Extension				3.0		3.0		3.0	3.0	3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 35.0	G =	G =	G =	G = 73.0	G = 30.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 4	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				84		2421		368	326	1942	89	
Lane group cap.				744		1941		692	675	1551	2470	
v/c ratio				0.11		1.25		0.53	0.48	1.25	0.04	
Green ratio				0.23		0.75		0.20	0.46	0.49	0.71	
Unif. delay d1				45.3		19.0		53.7	28.1	38.5	6.3	
Delay factor k				0.11		0.50		0.13	0.11	0.50	0.11	
Increm. delay d2				0.1		115.8		0.8	0.5	118.9	0.0	
PF factor				0.797		0.940		0.833	0.432	0.469	0.174	
Control delay				36.2		133.6		45.6	12.7	137.0	1.1	
Lane group LOS				D		F		D	B	F	A	
Apprch. delay				130.4			30.1			131.0		
Approach LOS				F			C			F		
Intersec. delay	117.3			Intersection LOS						F		

17-A
NM

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/06/11	Jurisdiction	OMBRIT30A3BNLM/NO MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT. -3B WITH LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	0	2	3	0	2	1	1	1	1	0
Lane group	L	TR		L	TR		L	TR	R	L	TR	
Volume (vph)	20	2160	385	475	2045	10	560	35	680	5	15	10
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5		5	5		5	5	5	5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	NB Only	SB Only	07	08
Timing	G = 5.0	G = 25.0	G = 60.0	G =	G = 30.0	G = 8.0	G =	G =
	Y = 4	Y = 5	Y = 5	Y =	Y = 4	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	21	2679		500	2164		589	359	394	5	27	
Lane group cap.	55	1936		722	2969		637	306	332	88	91	
v/c ratio	0.38	1.38		0.69	0.73		0.92	1.17	1.19	0.06	0.30	
Green ratio	0.03	0.40		0.23	0.60		0.20	0.20	0.23	0.05	0.05	
Unif. delay d1	71.0	45.0		53.2	21.3		58.9	60.0	57.5	67.4	68.3	
Delay factor k	0.11	0.50		0.26	0.29		0.44	0.50	0.50	0.11	0.11	
Increm. delay d2	4.4	176.0		2.9	0.9		19.4	107.0	110.3	0.3	1.8	
PF factor	0.977	0.556		0.805	0.125		0.833	0.833	0.797	0.962	0.962	
Control delay	73.7	201.0		45.7	3.6		68.5	157.0	156.1	65.2	67.6	
Lane group LOS	E	F		D	A		E	F	F	E	E	
Apprch. delay	200.0			11.5			117.9			67.2		
Approach LOS	F			B			F			E		
Intersec. delay	108.5			Intersection LOS						F		

17-A

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR/NO MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*TR*		*L*	*TR*		*L*	*TR*	*R*	*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane	*21*	*2679*		*500*	*2164*		*589*	*359*	*394*	*5*	*27*	
Satflow per lane	*1641*	*1776*		*1641*	*1816*		*1641*	*1529*	*1422*	*1641*	*1707*	
Capacity/lane	*55*	*1936*		*722*	*2969*		*637*	*306*	*332*	*88*	*91*	
Flow ratio	*0.01*	*0.55*		*0.16*	*0.44*		*0.18*	*0.23*	*0.28*	*0.00*	0.02	
v/c ratio	*0.38*	*1.38*		*0.69*	*0.73*		*0.92*	*1.17*	*1.19*	*0.06*	*0.30*	
I factor	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type	*5*	*5*		*5*	*5*		*5*	*5*	*5*	*5*	*5*	
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.58*		*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	
PF factor	*0.99*	*1.00*		*0.92*	*0.23*		*0.98*	*1.00*	*1.00*	*0.96*	*0.97*	
Q_1	*0.8*	*41.0*		*9.0*	*5.4*		*12.2*	*15.0*	*16.4*	*0.2*	*1.1*	
k_B	*0.2*	*0.8*		*0.5*	*1.0*		*0.5*	*0.5*	*0.5*	*0.2*	*0.2*	
Q_2	*0.1*	*36.7*		*1.1*	*2.5*		*3.0*	*8.9*	*10.1*	*0.0*	*0.1*	
Q avg.	*0.9*	*77.6*		*10.1*	*7.9*		*15.1*	*23.9*	*26.5*	*0.2*	*1.1*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*2.1*	*1.5*		*1.8*	*1.9*		*1.8*	*1.7*	*1.6*	*2.1*	*2.1*	
BOQ, $Q_{\%}$	*2.0*	*117*		*18.6*	*14.8*		*26.6*	*39.6*	*43.4*	*0.4*	*2.4*	

Queue Storage Ratio

Q spacing	*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	
Q storage	*0*	*0*		*0*	*0*		*0*	*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

17-A W M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/06/11	Jurisdiction	OMBRIT30A3BNLM/WITH MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B WITH LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	1	2	3	1	2	1	1	1	1	0
Lane group	L	T	R	L	T	R	L	TR	R	L	TR	
Volume (vph)	20	2160	385	475	2045	10	560	35	680	5	15	10
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10		0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	NB Only	SB Only	07	08
Timing	G = 5.0	G = 25.0	G = 60.0	G =	G = 30.0	G = 8.0	G =	G =
	Y = 4	Y = 5	Y = 5	Y =	Y = 4	Y = 4	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	21	2274	405	500	2153	11	589	359	394	5	27	
Lane group cap.	55	1981	587	722	2972	566	637	306	332	88	91	
v/c ratio	0.38	1.15	0.69	0.69	0.72	0.02	0.92	1.17	1.19	0.06	0.30	
Green ratio	0.03	0.40	0.40	0.23	0.60	0.40	0.20	0.20	0.23	0.05	0.05	
Unif. delay d1	71.0	45.0	37.3	53.2	21.2	27.2	58.9	60.0	57.5	67.4	68.3	
Delay factor k	0.11	0.50	0.26	0.26	0.29	0.11	0.44	0.50	0.50	0.11	0.11	
Increm. delay d2	4.4	73.0	3.4	2.9	0.9	0.0	19.4	107.0	110.3	0.3	1.8	
PF factor	0.977	0.556	0.556	0.805	0.125	0.556	0.833	0.833	0.797	0.962	0.962	
Control delay	73.7	98.0	24.2	45.7	3.6	15.1	68.5	157.0	156.1	65.2	67.6	
Lane group LOS	E	F	C	D	A	B	E	F	F	E	E	
Apprch. delay	86.7			11.5			117.9			67.2		
Approach LOS	F			B			F			E		
Intersec. delay	63.1			Intersection LOS						E		

17-A
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA AM PEAK HOUR/WITH MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*TR*	*R*	*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane	*21*	*2274*	*405*	*500*	*2153*	*11*	*589*	*359*	*394*	*5*	*27*	
Satflow per lane	*1641*	*1818*	*1468*	*1641*	*1818*	*1414*	*1641*	*1529*	*1422*	*1641*	*1707*	
Capacity/lane	*55*	*1981*	*587*	*722*	*2972*	*566*	*637*	*306*	*332*	*88*	*91*	
Flow ratio	*0.01*	*0.46*	*0.28*	*0.16*	*0.43*	*0.01*	*0.18*	*0.23*	*0.28*	*0.00*	0.02	
v/c ratio	*0.38*	*1.15*	*0.69*	*0.69*	*0.72*	*0.02*	*0.92*	*1.17*	*1.19*	*0.06*	*0.30*	
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.58*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	
PF factor	*0.99*	*1.00*	*0.74*	*0.92*	*0.23*	*0.56*	*0.98*	*1.00*	*1.00*	*0.96*	*0.97*	
Q_1	*0.8*	*34.8*	*10.4*	*9.0*	*5.3*	*0.2*	*12.2*	*15.0*	*16.4*	*0.2*	*1.1*	
k_B	*0.2*	*0.8*	*0.7*	*0.5*	*1.0*	*0.7*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*	
Q_2	*0.1*	*17.9*	*1.4*	*1.1*	*2.4*	*0.0*	*3.0*	*8.9*	*10.1*	*0.0*	*0.1*	
Q avg.	*0.9*	*52.6*	*11.8*	*10.1*	*7.7*	*0.2*	*15.1*	*23.9*	*26.5*	*0.2*	*1.1*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*2.1*	*1.5*	*1.8*	*1.8*	*1.9*	*2.1*	*1.8*	*1.7*	*1.6*	*2.1*	*2.1*	
BOQ, $Q_{\%}$	*2.0*	*80.7*	*21.4*	*18.6*	*14.6*	*0.4*	*26.6*	*39.6*	*43.4*	*0.4*	*2.4*	

Queue Storage Ratio

Q spacing	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

17-8

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	OMBRIT30P3BNLM/NO MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	0	2	3	0	2	1	1	1	1	0
Lane group	L	TR		L	TR		L	TR	R	L	TR	
Volume (vph)	15	1920	540	780	2120	10	370	20	475	15	40	35
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5		5	5		5	5	5	5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	150	10		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	NB Only	SB Only	07	08
Timing	G = 10.0	G = 25.0	G = 55.0	G =	G = 23.0	G = 15.0	G =	G =
	Y = 4	Y = 5	Y = 5	Y =	Y = 4	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	16	2589		821	2243		389	192	171	16	79	
Lane group cap.	109	1756		829	2804		489	233	217	164	169	
v/c ratio	0.15	1.47		0.99	0.80		0.80	0.82	0.79	0.10	0.47	
Green ratio	0.07	0.37		0.26	0.57		0.15	0.15	0.15	0.10	0.10	
Unif. delay d1	66.0	47.5		55.3	25.8		61.2	61.5	61.2	61.3	63.7	
Delay factor k	0.11	0.50		0.49	0.34		0.34	0.36	0.33	0.11	0.11	
Increm. delay d2	0.6	216.6		28.8	1.7		8.9	20.8	17.4	0.3	2.0	
PF factor	0.952	0.614		0.766	0.128		0.879	0.879	0.879	0.926	0.926	
Control delay	63.5	245.8		71.1	5.0		62.7	74.9	71.2	57.1	61.0	
Lane group LOS	E	F		E	A		E	E	E	E	E	
Apprch. delay	244.7			22.7			67.8			60.4		
Approach LOS	F			C			E			E		
Intersec. delay	117.2			Intersection LOS						F		

17-8
N
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/NO MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*TR*		*L*	*TR*		*L*	*TR*	*R*	*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane	*16*	*2589*		*821*	*2243*		*389*	*192*	*171*	*16*	*79*	
Satflow per lane	*1641*	*1758*		*1641*	*1816*		*1641*	*1522*	*1412*	*1641*	*1690*	
Capacity/lane	*109*	*1756*		*829*	*2804*		*489*	*233*	*217*	*164*	*169*	
Flow ratio	*0.01*	*0.54*		*0.26*	*0.45*		*0.12*	*0.13*	*0.12*	*0.01*	0.05	
v/c ratio	*0.15*	*1.47*		*0.99*	*0.80*		*0.80*	*0.82*	*0.79*	*0.10*	*0.47*	
I factor	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type	*5*	*5*		*5*	*5*		*5*	*5*	*5*	*5*	*5*	
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.67*		*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	
PF factor	*0.96*	*1.00*		*1.00*	*0.29*		*0.97*	*0.97*	*0.97*	*0.93*	*0.96*	
Q_1	*0.6*	*39.6*		*17.4*	*7.8*		*7.8*	*7.5*	*6.6*	*0.6*	*3.0*	
k_B	*0.2*	*0.7*		*0.6*	*1.0*		*0.4*	*0.4*	*0.4*	*0.3*	*0.3*	
Q_2	*0.0*	*40.4*		*5.2*	*3.4*		*1.3*	*1.4*	*1.2*	*0.0*	*0.3*	
Q avg.	*0.6*	*80.0*		*22.6*	*11.2*		*9.1*	*9.0*	*7.8*	*0.6*	*3.3*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*2.1*	*1.5*		*1.7*	*1.8*		*1.9*	*1.9*	*1.9*	*2.1*	*2.0*	
BOQ, $Q_{\%}$	*1.3*	*120*		*37.8*	*20.3*		*17.0*	*16.7*	*14.7*	*1.2*	*6.5*	
Queue Storage Ratio												
Q spacing	*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	
Q storage	*0*	*0*		*0*	*0*		*0*	*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

17-P W M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD./BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	OMBRIT30P3BNLM/WITH MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	1	2	3	1	2	1	1	1	1	0
Lane group	L	T	R	L	T	R	L	TR	R	L	TR	
Volume (vph)	15	1920	540	780	2120	10	370	20	475	15	40	35
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	150	10		0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	NB Only	SB Only	07	08
Timing	G = 10.0	G = 25.0	G = 55.0	G =	G = 23.0	G = 15.0	G =	G =
	Y = 4	Y = 5	Y = 5	Y =	Y = 4	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	16	2021	568	821	2232	11	389	192	171	16	79	
Lane group cap.	109	1816	812	829	2807	659	489	233	217	164	169	
v/c ratio	0.15	1.11	0.70	0.99	0.80	0.02	0.80	0.82	0.79	0.10	0.47	
Green ratio	0.07	0.37	0.55	0.26	0.57	0.47	0.15	0.15	0.15	0.10	0.10	
Unif. delay d1	66.0	47.5	24.4	55.3	25.6	21.5	61.2	61.5	61.2	61.3	63.7	
Delay factor k	0.11	0.50	0.27	0.49	0.34	0.11	0.34	0.36	0.33	0.11	0.11	
Increm. delay d2	0.6	59.2	2.7	28.8	1.7	0.0	8.9	20.8	17.4	0.3	2.0	
PF factor	0.952	0.614	0.174	0.766	0.128	0.417	0.879	0.879	0.879	0.926	0.926	
Control delay	63.5	88.4	6.9	71.1	5.0	9.0	62.7	74.9	71.2	57.1	61.0	
Lane group LOS	E	F	A	E	A	A	E	E	E	E	E	
Apprch. delay	70.4			22.7			67.8			60.4		
Approach LOS	E			C			E			E		
Intersec. delay	47.5			Intersection LOS						D		

17-P
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B NO LA MEDIA PM PEAK HOUR/WITH MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*TR*	*R*	*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane	*16*	*2021*	*568*	*821*	*2232*	*11*	*389*	*192*	*171*	*16*	*79*	
Satflow per lane	*1641*	*1818*	*1468*	*1641*	*1818*	*1413*	*1641*	*1522*	*1412*	*1641*	*1690*	
Capacity/lane	*109*	*1816*	*812*	*829*	*2807*	*659*	*489*	*233*	*217*	*164*	*169*	
Flow ratio	*0.01*	*0.41*	*0.39*	*0.26*	*0.45*	*0.01*	*0.12*	*0.13*	*0.12*	*0.01*	0.05	
v/c ratio	*0.15*	*1.11*	*0.70*	*0.99*	*0.80*	*0.02*	*0.80*	*0.82*	*0.79*	*0.10*	*0.47*	
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	
PF factor	*0.96*	*1.00*	*0.30*	*1.00*	*0.28*	*0.42*	*0.97*	*0.97*	*0.97*	*0.93*	*0.96*	
Q_1	*0.6*	*30.9*	*5.2*	*17.4*	*7.6*	*0.1*	*7.8*	*7.5*	*6.6*	*0.6*	*3.0*	
k_B	*0.2*	*0.7*	*0.8*	*0.6*	*1.0*	*0.7*	*0.4*	*0.4*	*0.4*	*0.3*	*0.3*	
Q_2	*0.0*	*14.2*	*1.8*	*5.2*	*3.3*	*0.0*	*1.3*	*1.4*	*1.2*	*0.0*	*0.3*	
Q avg.	*0.6*	*45.1*	*7.0*	*22.6*	*10.9*	*0.1*	*9.1*	*9.0*	*7.8*	*0.6*	*3.3*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*2.1*	*1.5*	*1.9*	*1.7*	*1.8*	*2.1*	*1.9*	*1.9*	*1.9*	*2.1*	*2.0*	
BOQ, $Q_{\%}$	*1.3*	*69.8*	*13.4*	*37.8*	*19.9*	*0.2*	*17.0*	*16.7*	*14.7*	*1.2*	*6.5*	

Queue Storage Ratio

Q spacing	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™

Version 4.1f

18-A

N
M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905WB RAMPS/BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	NO MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	1	1	2	3	0	0	2	1
Lane group				L	TR	R	L	T			TR	R
Volume (vph)				1500	5	220	1000	1055			525	350
% Heavy veh				10	10	10	10	10			10	10
PHF				0.95	0.95	0.95	0.95	0.95			0.95	0.95
Actuated (P/A)				A	A	A	A	A			A	A
Startup lost time				2.0	2.0	2.0	2.0	2.0			2.0	2.0
Ext. eff. green				2.0	2.0	2.0	2.0	2.0			2.0	2.0
Arrival type				5	5	5	5	5			5	3
Unit Extension				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	10			10		0				10	5	0
Lane Width				12.0	12.0	12.0	12.0	12.0			12.0	12.0
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0	0	0	0	0			0	0
Unit Extension				3.0	3.0	3.0	3.0	3.0			3.0	3.0

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 60.0	G =	G =	G =	G = 42.0	G = 25.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				1579	5	232	1053	1111			645	276
Lane group cap.				703	779	629	956	2512			600	247
v/c ratio				2.25	0.01	0.37	1.10	0.44			1.08	1.12
Green ratio				0.43	0.43	0.43	0.30	0.51			0.18	0.18
Unif. delay d1				40.0	22.9	27.1	49.0	21.9			57.5	57.5
Delay factor k				0.50	0.11	0.11	0.50	0.11			0.50	0.50
Increm. delay d2				565.3	0.0	0.4	61.0	0.1			58.5	92.5
PF factor				1.000	0.500	0.500	0.714	0.314			0.855	1.000
Control delay				605.3	11.5	13.9	96.0	7.0			107.7	150.0
Lane group LOS				F	B	B	F	A			F	F
Apprch. delay				528.1			50.3			120.4		
Approach LOS				F			D			F		
Intersec. delay	240.5			Intersection LOS						F		

18-A
N
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-AM-NO LA MEDIA-SR905WB RAMPS/BRITANNIA BLVD*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group				*L*	*TR*	*R*	*L*	*T*			*TR*	*R*
Init. queue/lane				*0.0*	*0.0*	*0.0*	*0.0*	*0.0*			*0.0*	*0.0*
Flow rate/lane				*1579*	*0*	*232*	*1053*	*1111*			*645*	*276*
Satflow per lane				*1641*	*1818*	*1468*	*1641*	*1818*			*1764*	*1384*
Capacity/lane				*703*	*779*	*629*	*956*	*2512*			*600*	*247*
Flow ratio				*0.96*	*0.00*	*0.16*	*0.33*	*0.22*			*0.19*	*0.20*
v/c ratio				*2.25*	*0.00*	*0.37*	*1.10*	*0.44*			*1.08*	*1.12*
I factor				*1.000*	*1.000*	*1.000*	*1.000*	*1.000*			*1.000*	*1.000*
Arrival type				*5*	*5*	*5*	*5*	*5*			*5*	*3*
Platoon ratio				*1.00*	*1.00*	*1.67*	*1.67*	*1.67*			*1.67*	*1.00*
PF factor				*1.00*	*1.00*	*0.57*	*1.00*	*0.39*			*1.00*	*1.00*
Q_1				*61.4*	*0.0*	*3.5*	*21.1*	*3.9*			*13.1*	*10.7*
k_B				*0.7*	*0.8*	*0.7*	*0.6*	*0.9*			*0.4*	*0.4*
Q_2				*110.8*	*0.0*	*0.4*	*10.2*	*0.7*			*6.0*	*5.9*
Q avg.				*172.2*	*0.0*	*3.9*	*31.2*	*4.6*			*19.2*	*16.6*

Percentile Back of Queue (95th percentile)

$f_{B\%}$				*1.5*	*2.1*	*2.0*	*1.6*	*2.0*			*1.7*	*1.7*
BOQ, $Q_{\%}$				*258*	*0.0*	*7.7*	*50.2*	*9.0*			*32.7*	*28.9*

Queue Storage Ratio

Q spacing				*25.0*	*25.0*	*25.0*	*25.0*	*25.0*			*25.0*	*25.0*
Q storage				*0*	*0*	*0*	*0*	*0*			*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

18-A
W/M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905WB RAMPS/BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	WITH MITIGATION
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	1	1	2	3	0	0	3	1
Lane group				L	LTR	R	L	T			TR	R
Volume (vph)				1500	5	220	1000	1055			525	350
% Heavy veh				10	10	10	10	10			10	10
PHF				0.95	0.95	0.95	0.95	0.95			0.95	0.95
Actuated (P/A)				A	A	A	A	A			A	A
Startup lost time				2.0	2.0	2.0	2.0	2.0			2.0	2.0
Ext. eff. green				2.0	2.0	2.0	2.0	2.0			2.0	2.0
Arrival type				5	5	5	5	5			5	3
Unit Extension				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	10			10		0				10	5	0
Lane Width				12.0	12.0	12.0	12.0	12.0			12.0	12.0
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0	0	0	0	0			0	0
Unit Extension				3.0	3.0	3.0	3.0	3.0			3.0	3.0

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 60.0	G =	G =	G =	G = 42.0	G = 25.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				868	716	232	1053	1111			737	184
Lane group cap.				703	742	629	956	2512			839	247
v/c ratio				1.23	0.96	0.37	1.10	0.44			0.88	0.74
Green ratio				0.43	0.43	0.43	0.30	0.51			0.18	0.18
Unif. delay d1				40.0	39.0	27.1	49.0	21.9			56.0	54.5
Delay factor k				0.50	0.47	0.11	0.50	0.11			0.41	0.30
Increm. delay d2				117.7	24.6	0.4	61.0	0.1			10.5	11.6
PF factor				0.500	0.500	0.500	0.714	0.314			0.855	1.000
Control delay				137.7	44.1	13.9	96.0	7.0			58.4	66.1
Lane group LOS				F	D	B	F	A			E	E
Apprch. delay				85.0			50.3			60.0		
Approach LOS				F			D			E		
Intersec. delay	65.0			Intersection LOS						E		

18-A
WM

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-AM-NO LA MEDIA-SR905WB RAMPS/BRITANNIA BLVD/W-MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group				*L*	*LTR*	*R*	*L*	*T*			*TR*	*R*
Init. queue/lane				*0.0*	*0.0*	*0.0*	*0.0*	*0.0*			*0.0*	*0.0*
Flow rate/lane				*868*	*711*	*232*	*1053*	*1111*			*737*	*184*
Satflow per lane				*1641*	*1732*	*1468*	*1641*	*1818*			*1725*	*1384*
Capacity/lane				*703*	*742*	*629*	*956*	*2512*			*839*	*247*
Flow ratio				*0.53*	*0.41*	*0.16*	*0.33*	*0.22*			0.16	*0.13*
v/c ratio				*1.23*	*0.96*	*0.37*	*1.10*	*0.44*			*0.88*	*0.74*
I factor				*1.000*	*1.000*	*1.000*	*1.000*	*1.000*			*1.000*	*1.000*
Arrival type				*5*	*5*	*5*	*5*	*5*			*5*	*3*
Platoon ratio				*1.67*	*1.67*	*1.67*	*1.67*	*1.67*			*1.67*	*1.00*
PF factor				*1.00*	*0.93*	*0.57*	*1.00*	*0.39*			*0.98*	*1.00*
Q_1				*33.8*	*25.0*	*3.5*	*21.1*	*3.9*			*10.0*	*6.8*
k_B				*0.7*	*0.8*	*0.7*	*0.6*	*0.9*			*0.4*	*0.4*
Q_2				*23.9*	*6.5*	*0.4*	*10.2*	*0.7*			*2.2*	*1.0*
Q avg.				*57.7*	*31.5*	*3.9*	*31.2*	*4.6*			*12.1*	*7.8*

Percentile Back of Queue (95th percentile)

$f_{B\%}$				*1.5*	*1.6*	*2.0*	*1.6*	*2.0*			*1.8*	*1.9*
BOQ, $Q_{\%}$				*87.9*	*50.5*	*7.7*	*50.2*	*9.0*			*21.9*	*14.7*

Queue Storage Ratio

Q spacing				*25.0*	*25.0*	*25.0*	*25.0*	*25.0*			*25.0*	*25.0*
Q storage				*0*	*0*	*0*	*0*	*0*			*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

18-P
N
M17

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905WB RAMPS/BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	905WBBRIT30PNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	1	1	2	3	0	0	2	1
Lane group				L	TR	R	L	T			TR	R
Volume (vph)				600	5	390	2910	475			920	440
% Heavy veh				10	10	10	10	10			10	10
PHF				0.95	0.95	0.95	0.95	0.95			0.95	0.95
Actuated (P/A)				A	A	A	A	A			A	A
Startup lost time				2.0	2.0	2.0	2.0	2.0			2.0	2.0
Ext. eff. green				2.0	2.0	2.0	2.0	2.0			2.0	2.0
Arrival type				5	5	5	5	5			5	3
Unit Extension				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	10			10		0				10	5	0
Lane Width				12.0	12.0	12.0	12.0	12.0			12.0	12.0
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0	0	0	0	0			0	0
Unit Extension				3.0	3.0	3.0	3.0	3.0			3.0	3.0

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 35.0	G =	G =	G =	G = 42.0	G = 50.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				632	5	411	3063	500			1084	347
Lane group cap.				410	455	367	956	3396			1211	504
v/c ratio				1.54	0.01	1.12	3.20	0.15			0.90	0.69
Green ratio				0.25	0.25	0.25	0.30	0.69			0.36	0.36
Unif. delay d1				52.5	39.5	52.5	49.0	7.7			42.5	38.4
Delay factor k				0.50	0.11	0.50	0.50	0.11			0.42	0.26
Increm. delay d2				255.6	0.0	83.5	994.5	0.0			8.9	3.9
PF factor				0.778	0.778	0.778	1.000	0.159			0.630	1.000
Control delay				296.4	30.7	124.4	1044	1.2			35.7	42.3
Lane group LOS				F	C	F	F	A			D	D
Apprch. delay				227.7			897.3			37.3		
Approach LOS				F			F			D		
Intersec. delay	577.4			Intersection LOS						F		

18-P NO MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-PM-NO LA MEDIA-SR905WB RAMPS/BRITANNIA BLVD/CALTRANS*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group				*L*	*TR*	*R*	*L*	*T*			*TR*	*R*
Init. queue/lane				*0.0*	*0.0*	*0.0*	*0.0*	*0.0*			*0.0*	*0.0*
Flow rate/lane				*632*	*0*	*411*	*3063*	*500*			*1084*	*347*
Satflow per lane				*1641*	*1818*	*1468*	*1641*	*1818*			*1781*	*1411*
Capacity/lane				*410*	*455*	*367*	*956*	*3396*			*1211*	*504*
Flow ratio				*0.39*	*0.00*	*0.28*	*0.96*	*0.10*			0.32	*0.25*
v/c ratio				*1.54*	*0.00*	*1.12*	*3.20*	*0.15*			*0.90*	*0.69*
I factor				*1.000*	*1.000*	*1.000*	*1.000*	*1.000*			*1.000*	*1.000*
Arrival type				*5*	*5*	*5*	*5*	*5*			*5*	*3*
Platoon ratio				*1.67*	*1.00*	*1.67*	*1.00*	*1.39*			*1.67*	*1.00*
PF factor				*1.00*	*1.00*	*1.00*	*1.00*	*0.17*			*0.92*	*1.00*
Q_1				*24.6*	*0.0*	*16.0*	*61.3*	*0.4*			*19.2*	*11.5*
K_B				*0.5*	*0.6*	*0.5*	*0.6*	*1.0*			*0.7*	*0.6*
Q_2				*29.2*	*0.0*	*8.5*	*136.5*	*0.2*			*4.0*	*1.2*
Q avg.				*53.8*	*0.0*	*24.5*	*197.8*	*0.6*			*23.1*	*12.7*
Percentile Back of Queue (95th percentile)												
$f_{B\%}$				*1.5*	*2.1*	*1.7*	*1.5*	*2.1*			*1.7*	*1.8*
BOQ, $Q_{\%}$				*82.3*	*0.0*	*40.5*	*297*	*1.2*			*38.5*	*22.9*
Queue Storage Ratio												
Q spacing				*25.0*	*25.0*	*25.0*	*25.0*	*25.0*			*25.0*	*25.0*
Q storage				*0*	*0*	*0*	*0*	*0*			*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

18-P
W
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905WB RAMPS/BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	905WBBRIT30PNLM/MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	1	1	2	3	0	0	3	1
Lane group				L	LTR	R	L	T			TR	R
Volume (vph)				600	5	390	2910	475			920	440
% Heavy veh				10	10	10	10	10			10	10
PHF				0.95	0.95	0.95	0.95	0.95			0.95	0.95
Actuated (P/A)				A	A	A	A	A			A	A
Startup lost time				2.0	2.0	2.0	2.0	2.0			2.0	2.0
Ext. eff. green				2.0	2.0	2.0	2.0	2.0			2.0	2.0
Arrival type				5	5	5	5	5			5	3
Unit Extension				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	10			10		0				10	5	0
Lane Width				12.0	12.0	12.0	12.0	12.0			12.0	12.0
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0	0	0	0	0			0	0
Unit Extension				3.0	3.0	3.0	3.0	3.0			3.0	3.0

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 35.0	G =	G =	G =	G = 42.0	G = 50.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				411	349	288	3063	500			1084	347
Lane group cap.				410	417	367	956	3396			1733	504
v/c ratio				1.00	0.84	0.78	3.20	0.15			0.63	0.69
Green ratio				0.25	0.25	0.25	0.30	0.69			0.36	0.36
Unif. delay d1				52.5	49.8	49.0	49.0	7.7			37.3	38.4
Delay factor k				0.50	0.37	0.33	0.50	0.11			0.21	0.26
Increm. delay d2				45.1	13.9	10.7	994.5	0.0			0.7	3.9
PF factor				0.778	0.778	0.778	1.000	0.159			0.630	1.000
Control delay				85.9	52.6	48.8	1044	1.2			24.2	42.3
Lane group LOS				F	D	D	F	A			C	D
Apprch. delay				64.6			897.3			28.6		
Approach LOS				E			F			C		
Intersec. delay	547.1			Intersection LOS						F		

18-P
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-PM-NO LA MEDIA-SR905WB RAMPS/BRITANNIA BLVD/MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group				*L*	*LTR*	*R*	*L*	*T*			*TR*	*R*
Init. queue/lane				*0.0*	*0.0*	*0.0*	*0.0*	*0.0*			*0.0*	*0.0*
Flow rate/lane				*411*	*344*	*288*	*3063*	*500*			*1084*	*347*
Satflow per lane				*1641*	*1667*	*1468*	*1641*	*1818*			*1781*	*1411*
Capacity/lane				*410*	*417*	*367*	*956*	*3396*			*1733*	*504*
Flow ratio				*0.25*	*0.21*	*0.20*	*0.96*	*0.10*			0.22	*0.25*
v/c ratio				*1.00*	*0.82*	*0.78*	*3.20*	*0.15*			*0.63*	*0.69*
I factor				*1.000*	*1.000*	*1.000*	*1.000*	*1.000*			*1.000*	*1.000*
Arrival type				*5*	*5*	*5*	*5*	*5*			*5*	*3*
Platoon ratio				*1.67*	*1.67*	*1.67*	*1.00*	*1.39*			*1.67*	*1.00*
PF factor				*1.00*	*0.94*	*0.93*	*1.00*	*0.17*			*0.78*	*1.00*
Q_1				*16.0*	*11.9*	*9.7*	*61.3*	*0.4*			*9.9*	*11.5*
K_B				*0.5*	*0.5*	*0.5*	*0.6*	*1.0*			*0.7*	*0.6*
Q_2				*5.3*	*2.0*	*1.6*	*136.5*	*0.2*			*1.1*	*1.2*
Q avg.				*21.2*	*13.9*	*11.3*	*197.8*	*0.6*			*11.0*	*12.7*
Percentile Back of Queue (95th percentile)												
$f_{B\%}$				*1.7*	*1.8*	*1.8*	*1.5*	*2.1*			*1.8*	*1.8*
BOQ, $Q_{\%}$				*35.8*	*24.8*	*20.5*	*297*	*1.2*			*20.1*	*22.9*
Queue Storage Ratio												
Q spacing				*25.0*	*25.0*	*25.0*	*25.0*	*25.0*			*25.0*	*25.0*
Q storage				*0*	*0*	*0*	*0*	*0*			*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

19-A NO MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905EB RAMPS/BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/07/10	Jurisdiction	905EBBRIT30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	2	0	0	0	0	3	0	2	3	0
Lane group		LT	R					TR		L	T	
Volume (vph)	400	5	3400					1655	500	210	1815	
% Heavy veh	10	10	10					10	10	10	10	
PHF	0.95	0.95	0.95					0.95	0.95	0.95	0.95	
Actuated (P/A)	A	A	A					A	A	A	A	
Startup lost time		2.0	2.0					2.0		2.0	2.0	
Ext. eff. green		2.0	2.0					2.0		2.0	2.0	
Arrival type		5	5					5		5	5	
Unit Extension		3.0	3.0					3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10		300	10			10	5	0			
Lane Width		12.0	12.0					12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0	0					0		0	0	
Unit Extension		3.0	3.0					3.0		3.0	3.0	

Phasing	EB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 77.0	G =	G =	G =	G = 10.0	G = 50.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		426	3263					2268		221	1911	
Lane group cap.		890	1334					1585		212	2113	
v/c ratio		0.48	2.45					1.43		1.04	0.90	
Green ratio		0.51	0.51					0.33		0.07	0.43	
Unif. delay d1		23.5	36.5					50.0		70.0	40.1	
Delay factor k		0.11	0.50					0.50		0.50	0.43	
Increm. delay d2		0.4	653.0					197.6		73.4	6.0	
PF factor		0.297	1.000					0.667		0.952	0.504	
Control delay		7.4	689.5					230.9		140.0	26.2	
Lane group LOS		A	F					F		F	C	
Apprch. delay	610.7						230.9			38.0		
Approach LOS	F						F			D		
Intersec. delay	353.3			Intersection LOS						F		

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT -3B AM NO LA MEDIA - ---SR905EB RAMPS/BRITANNIA

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		LT	R					TR		L	T	
Init. queue/lane		0.0	0.0					0.0		0.0	0.0	
Flow rate/lane		421	3263					2268		221	1911	
Satflow per lane		1732	1468					1745		1641	1818	
Capacity/lane		889	1334					1585		212	2113	
Flow ratio		0.24	1.26					0.48		0.07	0.39	
v/c ratio		0.47	2.45					1.43		1.04	0.90	
I factor		1.000	1.000					1.000		1.000	1.000	
Arrival type		5	5					5		5	5	
Platoon ratio		1.67	1.00					1.67		1.67	1.67	
PF factor		0.38	1.00					1.00		1.00	0.87	
Q_1		4.3	76.8					34.7		4.7	23.6	
k_B		0.9	0.8					0.7		0.2	0.8	
Q_2		0.8	137.6					33.5		2.1	5.0	
Q avg.		5.0	214.4					68.1		6.8	28.6	

Percentile Back of Queue (95th percentile)

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
$f_{B\%}$		2.0	1.5					1.5		1.9	1.6	
BOQ, $Q_{\%}$		9.8	322					103		13.1	46.4	

Queue Storage Ratio

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Q spacing		25.0	25.0					25.0		25.0	25.0	
Q storage		0	0					0		0	0	
Avg. R_Q												
95% $R_{Q\%}$												

19-A W MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905EB RAMPS/BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	905EBBRIT30A3BNLM/WITH MIT
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	2	0	0	0	0	3	2	2	3	0
Lane group		LT	R					T	R	L	T	
Volume (vph)	400	5	3400					1655	500	210	1815	
% Heavy veh	10	10	10					10	10	10	10	
PHF	0.95	0.95	0.95					0.95	0.95	0.95	0.95	
Actuated (P/A)	A	A	A					A	A	A	A	
Startup lost time		2.0	2.0					2.0	2.0	2.0	2.0	
Ext. eff. green		2.0	2.0					2.0	2.0	2.0	2.0	
Arrival type		5	5					5	5	5	5	
Unit Extension		3.0	3.0					3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10		300	10			10	5	0			
Lane Width		12.0	12.0					12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0	0					0	0	0	0	
Unit Extension		3.0	3.0					3.0	3.0	3.0	3.0	

Phasing	EB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 77.0	G =	G =	G =	G = 10.0	G = 50.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		426	3263					1742	526	221	1911	
Lane group cap.		890	1334					1651	831	212	2113	
v/c ratio		0.48	2.45					1.06	0.63	1.04	0.90	
Green ratio		0.51	0.51					0.33	0.33	0.07	0.43	
Unif. delay d1		23.5	36.5					50.0	42.2	70.0	40.1	
Delay factor k		0.11	0.50					0.50	0.21	0.50	0.43	
Increm. delay d2		0.4	653.0					38.3	1.6	73.4	6.0	
PF factor		0.297	1.000					0.667	0.667	0.952	0.504	
Control delay		7.4	689.5					71.6	29.7	140.0	26.2	
Lane group LOS		A	F					E	C	F	C	
Apprch. delay	610.7						61.9			38.0		
Approach LOS	F						E			D		
Intersec. delay	305.9			Intersection LOS						F		

19-A W MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B AM NO LA MEDIA - ---SR905EB RAMPS/BRITANNIA/WITH MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		*LT*	*R*					*T*	*R*	*L*	*T*	
Init. queue/lane		*0.0*	*0.0*					*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane		*421*	*3263*					*1742*	*526*	*221*	*1911*	
Satflow per lane		*1732*	*1468*					*1818*	*1409*	*1641*	*1818*	
Capacity/lane		*889*	*1334*					*1651*	*831*	*212*	*2113*	
Flow ratio		*0.24*	*1.26*					*0.35*	*0.21*	*0.07*	*0.39*	
v/c ratio		*0.47*	*2.45*					*1.06*	*0.63*	*1.04*	*0.90*	
I factor		*1.000*	*1.000*					*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type		*5*	*5*					*5*	*5*	*5*	*5*	
Platoon ratio		*1.67*	*1.00*					*1.67*	*1.67*	*1.67*	*1.67*	
PF factor		*0.38*	*1.00*					*1.00*	*0.81*	*1.00*	*0.87*	
Q_1		*4.3*	*76.8*					*26.6*	*8.5*	*4.7*	*23.6*	
k_B		*0.9*	*0.8*					*0.7*	*0.6*	*0.2*	*0.8*	
Q_2		*0.8*	*137.6*					*9.8*	*1.0*	*2.1*	*5.0*	
Q avg.		*5.0*	*214.4*					*36.4*	*9.5*	*6.8*	*28.6*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$		*2.0*	*1.5*					*1.6*	*1.9*	*1.9*	*1.6*	
BOQ, $Q_{\%}$		*9.8*	*322*					*57.5*	*17.6*	*13.1*	*46.4*	

Queue Storage Ratio

Q spacing		*25.0*	*25.0*					*25.0*	*25.0*	*25.0*	*25.0*	
Q storage		*0*	*0*					*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

19-P
NO MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905EB RAMPS/BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	12/13/10	Jurisdiction	905EBBRIT30P3BNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	2	0	0	0	0	3	0	2	3	0
Lane group		LT	R					TR		L	T	
Volume (vph)	400	5	1200					2985	1200	200	1320	
% Heavy veh	10	10	10					10	10	10	10	
PHF	0.95	0.95	0.95					0.95	0.95	0.95	0.95	
Actuated (P/A)	A	A	A					A	A	A	A	
Startup lost time		2.0	2.0					2.0		2.0	2.0	
Ext. eff. green		2.0	2.0					2.0		2.0	2.0	
Arrival type		5	5					5		5	5	
Unit Extension		3.0	3.0					3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10		300	10			10	5	0			
Lane Width		12.0	12.0					12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0	0					0		0	0	
Unit Extension		3.0	3.0					3.0		3.0	3.0	

Phasing	EB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 40.0	G =	G =	G =	G = 10.0	G = 77.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		426	947					4405		211	1389	
Lane group cap.		495	743					2593		228	3219	
v/c ratio		0.86	1.27					1.70		0.93	0.43	
Green ratio		0.29	0.29					0.55		0.07	0.65	
Unif. delay d1		47.4	50.0					31.5		64.6	11.9	
Delay factor k		0.39	0.50					0.50		0.44	0.11	
Increm. delay d2		14.3	133.9					316.1		39.7	0.1	
PF factor		0.733	0.733					0.980		0.949	0.143	
Control delay		49.0	170.6					347.0		101.0	1.8	
Lane group LOS		D	F					F		F	A	
Apprch. delay	132.9						347.0			14.9		
Approach LOS	F						F			B		
Intersec. delay	235.1			Intersection LOS						F		

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT.-2B PM NO LA MESA - ---SR905EB RAMPS/BRITANNIA

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		LT	R					TR		L	T	
Crit. queue/lane		0.0	0.0					0.0		0.0	0.0	
Flow rate/ lane		421	947					4405		211	1389	
Satflow per lane		1722	1468					1730		1641	1818	
Capacity/Lane		495	743					2593		228	3219	
Flow ratio		0.24	0.36					0.93		0.07	0.28	
v/c ratio		0.85	1.27					1.70		0.93	0.43	
I factor		1.000	1.000					1.000		1.000	1.000	
Arrival type		5	5					5		5	5	
Platoon ratio		1.67	1.67					1.02		1.67	1.46	
PF factor		0.93	1.00					1.00		1.00	0.17	
Q1		14.4	20.6					62.9		4.2	1.7	
Rb		0.6	0.5					0.9		0.2	1.0	
Q2		2.6	16.6					85.3		1.4	0.7	
Q avg		17.0	37.5					148.2		5.5	2.4	

Percentile Back of Queue (95th percentile)

N95		1.7	1.6					1.5		1.9	2.0	
BOQ, Q95		29.5	59.0					222		10.7	4.9	

Queue Storage Ratio

Q spacing		25.0	25.0					25.0		25.0	25.0	
Q storage		0	0					0		0	0	
Avg Rb												
95% Rb%												

19-P
AM
MIT

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SR-905EB RAMPS/BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	905EBBRIT30P3BNLM/WITH MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	2	0	0	0	0	3	2	2	3	0
Lane group		LT	R					T	R	L	T	
Volume (vph)	400	5	1200					2985	1200	200	1320	
% Heavy veh	10	10	10					10	10	10	10	
PHF	0.95	0.95	0.95					0.95	0.95	0.95	0.95	
Actuated (P/A)	A	A	A					A	A	A	A	
Startup lost time		2.0	2.0					2.0	2.0	2.0	2.0	
Ext. eff. green		2.0	2.0					2.0	2.0	2.0	2.0	
Arrival type		5	5					5	5	5	5	
Unit Extension		3.0	3.0					3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	10		300	10			10	5	0			
Lane Width		12.0	12.0					12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0	0					0	0	0	0	
Unit Extension		3.0	3.0					3.0	3.0	3.0	3.0	

Phasing	EB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 40.0	G =	G =	G =	G = 10.0	G = 77.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		426	947					3142	1263	211	1389	
Lane group cap.		495	743					2724	1383	228	3219	
v/c ratio		0.86	1.27					1.15	0.91	0.93	0.43	
Green ratio		0.29	0.29					0.55	0.55	0.07	0.65	
Unif. delay d1		47.4	50.0					31.5	28.5	64.6	11.9	
Delay factor k		0.39	0.50					0.50	0.43	0.44	0.11	
Increm. delay d2		14.3	133.9					73.7	9.5	39.7	0.1	
PF factor		0.733	0.733					0.391	0.185	0.949	0.143	
Control delay		49.0	170.6					86.0	14.8	101.0	1.8	
Lane group LOS		D	F					F	B	F	A	
Apprch. delay		132.9						65.6			14.9	
Approach LOS		F						E			B	
Intersec. delay		67.1			Intersection LOS						E	

19-1P
W
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B PM NO LA MEDIA - ---SR905EB RAMPS/BRITANNIA/WITH MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group		*LT*	*R*					*T*	*R*	*L*	*T*	
Init. queue/lane		*0.0*	*0.0*					*0.0*	*0.0*	*0.0*	*0.0*	
Flow rate/lane		*421*	*947*					*3142*	*1263*	*211*	*1389*	
Satflow per lane		*1732*	*1468*					*1818*	*1421*	*1641*	*1818*	
Capacity/lane		*495*	*743*					*2724*	*1383*	*228*	*3219*	
Flow ratio		*0.24*	*0.36*					*0.63*	*0.50*	*0.07*	*0.28*	
v/c ratio		*0.85*	*1.27*					*1.15*	*0.91*	*0.93*	*0.43*	
I factor		*1.000*	*1.000*					*1.000*	*1.000*	*1.000*	*1.000*	
Arrival type		*5*	*5*					*5*	*5*	*5*	*5*	
Platoon ratio		*1.67*	*1.67*					*1.50*	*1.67*	*1.67*	*1.46*	
PF factor		*0.93*	*1.00*					*1.00*	*0.56*	*1.00*	*0.17*	
Q_1		*14.4*	*20.8*					*44.8*	*14.1*	*4.2*	*1.7*	
k_B		*0.6*	*0.5*					*0.9*	*0.8*	*0.2*	*1.0*	
Q_2		*2.6*	*16.6*					*24.4*	*5.1*	*1.4*	*0.7*	
Q avg.		*17.0*	*37.5*					*69.3*	*19.2*	*5.5*	*2.4*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$		*1.7*	*1.6*					*1.5*	*1.7*	*1.9*	*2.0*	
BOQ, $Q_{\%}$		*29.5*	*59.0*					*105*	*32.8*	*10.7*	*4.9*	

Queue Storage Ratio

Q spacing		*25.0*	*25.0*					*25.0*	*25.0*	*25.0*	*25.0*	
Q storage		*0*	*0*					*0*	*0*	*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

20-A
NM

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD./BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/15/11	Jurisdiction	AIRBRIT30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	2	0	2	3	0	2	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	285	540	375	380	875	825	875	1045	200	985	2480	1750
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 25.0	G = 23.0	G =	G =	G = 32.0	G = 52.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	300	963		400	1789		921	1311		1037	4453	
Lane group cap.	531	702		531	483		680	1669		680	1595	
v/c ratio	0.56	1.37		0.75	3.70		1.35	0.79		1.52	2.79	
Green ratio	0.17	0.15		0.17	0.15		0.21	0.35		0.21	0.35	
Unif. delay d1	57.5	63.5		59.6	63.5		59.0	44.0		59.0	49.0	
Delay factor k	0.16	0.50		0.31	0.50		0.50	0.33		0.50	0.50	
Increm. delay d2	1.4	176.3		6.0	1222		169.0	2.6		243.7	808.1	
PF factor	0.867	0.879		0.867	0.879		0.819	0.646		0.819	1.000	
Control delay	51.2	232.1		57.7	1278		217.4	31.0		292.0	857.1	
Lane group LOS	D	F		E	F		F	C		F	F	
Apprch. delay	189.2			1055			107.9			750.4		
Approach LOS	F			F			F			F		
Intersec. delay	618.2			Intersection LOS						F		

20-A NM

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-AM NO LA MEDIA-AIRWAY RD./BRITANNIA BLVD./NO MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*TR*		*L*	*TR*		*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*300*	*963*		*400*	*1789*		*921*	*1311*		*1037*	*4453*	
Satflow per lane	*1641*	*1679*		*1641*	*1654*		*1641*	*1767*		*1641*	*1689*	
Capacity/lane	*531*	*702*		*531*	*483*		*680*	*1669*		*680*	*1595*	
Flow ratio	*0.09*	*0.21*		*0.12*	*0.57*		*0.29*	*0.27*		*0.32*	*0.97*	
v/c ratio	*0.56*	*1.37*		*0.75*	*3.70*		*1.35*	*0.79*		*1.52*	*2.79*	
I factor	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*		*5*	*5*		*5*	*5*		*5*	*5*	
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.67*		*1.67*	*1.67*		*1.67*	*1.00*	
PF factor	*0.93*	*1.00*		*0.96*	*1.00*		*1.00*	*0.86*		*1.00*	*1.00*	
Q_1	*5.5*	*14.7*		*7.8*	*39.1*		*19.8*	*15.5*		*22.2*	*68.1*	
k_B	*0.4*	*0.4*		*0.4*	*0.4*		*0.5*	*0.7*		*0.5*	*0.7*	
Q_2	*0.5*	*13.4*		*1.1*	*86.3*		*17.2*	*2.3*		*24.2*	*132.2*	
Q avg.	*6.0*	*28.1*		*8.9*	*125.4*		*37.0*	*17.7*		*46.5*	*200.3*	
Percentile Back of Queue (95th percentile)												
$f_{B\%}$	*1.9*	*1.6*		*1.9*	*1.5*		*1.6*	*1.7*		*1.5*	*1.5*	
BOQ, $Q_{\%}$	*11.6*	*45.7*		*16.7*	*188*		*58.3*	*30.6*		*71.8*	*300*	
Queue Storage Ratio												
Q spacing	*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*	
Q storage	*0*	*0*		*0*	*0*		*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

20A WM

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD./BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/15/11	Jurisdiction	AIRBRIT30A3BNLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B/WITH MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	2	2	2	3	1	2	3	2
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	285	540	375	380	875	825	875	1045	200	985	2480	1750
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 25.0	G = 23.0	G =	G =	G = 32.0	G = 52.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	300	568	395	400	921	868	921	1100	211	1037	2611	1842
Lane group cap.	531	759	568	531	531	1004	680	1717	785	680	1717	1368
v/c ratio	0.56	0.75	0.70	0.75	1.73	0.86	1.35	0.64	0.27	1.52	1.52	1.35
Green ratio	0.17	0.15	0.40	0.17	0.15	0.40	0.21	0.35	0.55	0.21	0.35	0.55
Unif. delay d1	57.5	60.7	37.4	59.6	63.5	41.3	59.0	41.2	18.1	59.0	49.0	34.0
Delay factor k	0.16	0.30	0.26	0.31	0.50	0.39	0.50	0.22	0.11	0.50	0.50	0.50
Increm. delay d2	1.4	4.1	3.7	6.0	338.3	8.0	169.0	0.8	0.2	243.7	237.3	160.9
PF factor	0.867	0.879	0.556	0.867	0.879	0.556	0.819	0.646	0.196	0.819	0.646	1.000
Control delay	51.2	57.5	24.5	57.7	394.2	30.9	217.4	27.4	3.7	292.0	269.0	194.9
Lane group LOS	D	E	C	E	F	C	F	C	A	F	F	F
Apprch. delay	45.7			188.6			103.6			248.5		
Approach LOS	D			F			F			F		
Intersec. delay	184.9			Intersection LOS						F		

20A WM

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-AM NO LA MEDIA-AIRWAY RD./BRITANNIA BLVD./WITH*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Flow rate/lane	*300*	*568*	*395*	*400*	*921*	*868*	*921*	*1100*	*211*	*1037*	*2611*	*1842*
Satflow per lane	*1641*	*1818*	*1419*	*1641*	*1818*	*1419*	*1641*	*1818*	*1436*	*1641*	*1818*	*1414*
Capacity/lane	*531*	*759*	*568*	*531*	*531*	*1004*	*680*	*1717*	*785*	*680*	*1717*	*1368*
Flow ratio	*0.09*	*0.11*	*0.28*	*0.12*	*0.27*	*0.35*	*0.29*	*0.22*	*0.15*	*0.32*	*0.53*	*0.74*
v/c ratio	*0.56*	*0.75*	*0.70*	*0.75*	*1.73*	*0.86*	*1.35*	*0.64*	*0.27*	*1.52*	*1.52*	*1.35*
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*3*
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.00*
PF factor	*0.93*	*0.96*	*0.75*	*0.96*	*1.00*	*0.86*	*1.00*	*0.80*	*0.22*	*1.00*	*1.00*	*1.00*
Q_1	*5.5*	*8.0*	*10.2*	*7.8*	*20.1*	*16.0*	*19.8*	*11.2*	*1.0*	*22.2*	*39.9*	*43.3*
k_B	*0.4*	*0.4*	*0.7*	*0.4*	*0.4*	*0.7*	*0.5*	*0.7*	*0.8*	*0.5*	*0.7*	*0.8*
Q_2	*0.5*	*1.1*	*1.4*	*1.1*	*26.6*	*3.2*	*17.2*	*1.2*	*0.3*	*24.2*	*43.0*	*36.4*
Q avg.	*6.0*	*9.1*	*11.7*	*8.9*	*46.7*	*19.2*	*37.0*	*12.5*	*1.3*	*46.5*	*82.9*	*79.7*

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*1.9*	*1.9*	*1.8*	*1.9*	*1.5*	*1.7*	*1.6*	*1.8*	*2.1*	*1.5*	*1.5*	*1.5*
BOQ, $Q_{\%}$	*11.6*	*17.0*	*21.2*	*16.7*	*72.2*	*32.8*	*58.3*	*22.4*	*2.7*	*71.8*	*125*	*120*

Queue Storage Ratio

Q spacing	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

20P
NM

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD./BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/15/11	Jurisdiction	AIRBRIT30P3BNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	2	0	2	3	0	2	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	1350	1090	735	145	1000	900	800	1935	830	800	1000	720
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 25.0	G = 23.0	G =	G =	G = 32.0	G = 52.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1421	1921		153	2000		842	2911		842	1811	
Lane group cap.	531	703		531	484		680	1628		680	1594	
v/c ratio	2.68	2.73		0.29	4.13		1.24	1.79		1.24	1.14	
Green ratio	0.17	0.15		0.17	0.15		0.21	0.35		0.21	0.35	
Unif. delay d1	62.5	63.5		54.7	63.5		59.0	49.0		59.0	49.0	
Delay factor k	0.50	0.50		0.11	0.50		0.50	0.50		0.50	0.50	
Increm. delay d2	759.6	783.7		0.3	1414		119.5	357.1		119.5	69.6	
PF factor	0.867	0.879		0.867	0.909		0.819	0.717		0.819	0.646	
Control delay	813.8	839.5		47.7	1472		167.9	392.3		167.9	101.2	
Lane group LOS	F	F		D	F		F	F		F	F	
Apprch. delay	828.6			1371			341.9			122.4		
Approach LOS	F			F			F			F		
Intersec. delay	615.8			Intersection LOS						F		

DR NM

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-PM NO LA MEDIA-AIRWAY RD./BRITANNIA BLVD.*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*TR*		*L*	*TR*		*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*1421*	*1921*		*153*	*2000*		*842*	*2911*		*842*	*1811*	
Satflow per lane	*1641*	*1682*		*1641*	*1658*		*1641*	*1724*		*1641*	*1687*	
Capacity/lane	*531*	*703*		*531*	*484*		*680*	*1628*		*680*	*1594*	
Flow ratio	*0.45*	*0.42*		*0.05*	*0.63*		*0.26*	*0.62*		*0.26*	0.39	
v/c ratio	*2.68*	*2.73*		*0.29*	*4.13*		*1.24*	*1.79*		*1.24*	*1.14*	
I factor	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*		*5*	*5*		*5*	*5*		*5*	*5*	
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.50*		*1.67*	*1.53*		*1.67*	*1.67*	
PF factor	*1.00*	*1.00*		*0.90*	*1.00*		*1.00*	*1.00*		*1.00*	*1.00*	
Q_1	*30.5*	*29.4*		*2.5*	*43.8*		*18.0*	*44.5*		*18.0*	*27.7*	
k_B	*0.4*	*0.4*		*0.4*	*0.4*		*0.5*	*0.7*		*0.5*	*0.7*	
Q_2	*57.9*	*56.5*		*0.2*	*100.0*		*12.5*	*60.4*		*12.5*	*13.9*	
Q avg.	*88.4*	*85.9*		*2.7*	*143.8*		*30.6*	*104.9*		*30.6*	*41.6*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*1.5*	*1.5*		*2.0*	*1.5*		*1.6*	*1.5*		*1.6*	*1.6*	
BOQ, $Q_{\%}$	*133*	*129*		*5.5*	*216*		*49.2*	*158*		*49.2*	*64.9*	

Queue Storage Ratio

Q spacing	*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*		*25.0*	*25.0*	
Q storage	*0*	*0*		*0*	*0*		*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

20P WM

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	AIRWAY RD./BRITANNIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	11/15/11	Jurisdiction	AIRBRIT30P3BNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B/WITH MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	2	2	2	3	1	2	3	2
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	1350	1090	735	145	1000	900	800	1935	830	800	1000	720
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 25.0	G = 23.0	G =	G =	G = 32.0	G = 52.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1421	1147	774	153	1053	947	842	2037	874	842	1053	758
Lane group cap.	531	759	568	531	531	1004	680	1717	785	680	1717	1368
v/c ratio	2.68	1.51	1.36	0.29	1.98	0.94	1.24	1.19	1.11	1.24	0.61	0.55
Green ratio	0.17	0.15	0.40	0.17	0.15	0.40	0.21	0.35	0.55	0.21	0.35	0.55
Unif. delay d1	62.5	63.5	45.0	54.7	63.5	43.4	59.0	49.0	34.0	59.0	40.7	22.1
Delay factor k	0.50	0.50	0.50	0.11	0.50	0.46	0.50	0.50	0.50	0.50	0.20	0.15
Increm. delay d2	759.6	236.8	174.3	0.3	449.1	16.5	119.5	90.1	67.9	119.5	0.7	0.5
PF factor	0.867	0.879	0.556	0.867	0.879	0.556	0.819	0.646	0.324	0.819	0.646	1.000
Control delay	813.8	292.7	199.3	47.7	504.9	40.6	167.9	121.7	78.9	167.9	26.9	22.6
Lane group LOS	F	F	F	D	F	D	F	F	E	F	C	C
Apprch. delay	492.6			268.2			122.1			70.4		
Approach LOS	F			F			F			E		
Intersec. delay	241.1			Intersection LOS						F		

20P WM

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-PM NO LA MEDIA-AIRWAY RD./BRITANNIA BLVD./WITH MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Flow rate/lane	*1421*	*1147*	*774*	*153*	*1053*	*947*	*842*	*2037*	*874*	*842*	*1053*	*758*
Satflow per lane	*1641*	*1818*	*1419*	*1641*	*1818*	*1419*	*1641*	*1818*	*1436*	*1641*	*1818*	*1414*
Capacity/lane	*531*	*759*	*568*	*531*	*531*	*1004*	*680*	*1717*	*785*	*680*	*1717*	*1368*
Flow ratio	*0.45*	*0.23*	*0.55*	*0.05*	*0.30*	*0.38*	*0.26*	*0.41*	*0.61*	*0.26*	0.21	*0.30*
v/c ratio	*2.68*	*1.51*	*1.36*	*0.29*	*1.98*	*0.94*	*1.24*	*1.19*	*1.11*	*1.24*	*0.61*	*0.55*
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*3*
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.56*	*1.67*	*1.67*	*1.00*
PF factor	*1.00*	*1.00*	*1.00*	*0.90*	*1.00*	*0.93*	*1.00*	*1.00*	*1.00*	*1.00*	*0.79*	*1.00*
Q_1	*30.5*	*17.5*	*32.3*	*2.5*	*23.0*	*20.0*	*18.0*	*31.1*	*36.4*	*18.0*	*10.5*	*11.6*
k_B	*0.4*	*0.4*	*0.7*	*0.4*	*0.4*	*0.7*	*0.5*	*0.7*	*0.8*	*0.5*	*0.7*	*0.8*
Q_2	*57.9*	*19.1*	*28.1*	*0.2*	*35.2*	*5.0*	*12.5*	*18.3*	*16.5*	*12.5*	*1.1*	*1.0*
Q avg.	*88.4*	*36.6*	*60.3*	*2.7*	*58.3*	*25.0*	*30.6*	*49.4*	*52.9*	*30.6*	*11.6*	*12.6*

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*1.5*	*1.6*	*1.5*	*2.0*	*1.5*	*1.6*	*1.6*	*1.5*	*1.5*	*1.6*	*1.8*	*1.8*
BOQ, $Q_{\%}$	*133*	*57.8*	*91.7*	*5.5*	*88.8*	*41.2*	*49.2*	*76.0*	*81.0*	*49.2*	*21.0*	*22.6*

Queue Storage Ratio

Q spacing	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

HCS2000™

Version 4.1f

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SIEMPRE VIVA RD./BRITANNIA BLV
Agency or Co.	USAI	Area Type	All other areas
Date Performed	05/13/12	Jurisdiction	SIEMBRIT3BANLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	0	2	2	0	2	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	225	1310	370	450	1215	700	150	105	50	1235	1100	900
% Heavy veh	10	10	10	10	10	10	10	10	10	10	50	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 20.0	G = 38.0	G =	G =	G = 36.0	G = 38.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	237	1768		474	2016		158	164		1300	2105	
Lane group cap.	425	1206		425	1174		765	827		765	963	
v/c ratio	0.56	1.47		1.12	1.72		0.21	0.20		1.70	2.19	
Green ratio	0.13	0.25		0.13	0.25		0.24	0.25		0.24	0.25	
Unif. delay d1	60.9	56.0		65.0	56.0		45.6	44.0		57.0	56.0	
Delay factor k	0.15	0.50		0.50	0.50		0.11	0.11		0.50	0.50	
Increm. delay d2	1.6	214.3		78.8	326.4		0.1	0.1		320.3	537.1	
PF factor	0.897	0.774		0.897	0.774		0.789	0.774		0.789	0.774	
Control delay	56.3	257.6		137.2	369.7		36.1	34.2		365.3	580.4	
Lane group LOS	E	F		F	F		D	C		F	F	
Apprch. delay	233.8			325.4			35.1			498.3		
Approach LOS	F			F			D			F		
Intersec. delay	363.3			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SIEMPRE VIVA RD./BRITANNIA BLV
Agency or Co.	USAI	Area Type	All other areas
Date Performed	04/10/11	Jurisdiction	SIEMBRIT3BANLM
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/WITH M

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	2	2	2	1	2	2	2
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	225	1310	370	450	1215	700	150	105	50	1235	1100	900
% Heavy veh	10	10	10	10	10	10	10	10	10	10	50	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 24.0	G = 36.0	G =	G =	G = 40.0	G = 30.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	237	1379	389	474	1279	737	158	111	53	1300	1158	947
Lane group cap.	510	1255	792	510	1255	1377	850	692	561	850	508	992
v/c ratio	0.46	1.10	0.49	0.93	1.02	0.54	0.19	0.16	0.09	1.53	2.28	0.95
Green ratio	0.16	0.25	0.55	0.16	0.25	0.55	0.27	0.20	0.39	0.27	0.20	0.39
Unif. delay d1	57.2	56.0	20.5	62.2	56.0	21.3	42.4	49.6	28.7	55.0	60.0	44.2
Delay factor k	0.11	0.50	0.11	0.44	0.50	0.14	0.11	0.11	0.11	0.50	0.50	0.46
Increm. delay d2	0.7	56.9	0.5	23.7	30.3	0.4	0.1	0.1	0.1	244.2	582.0	18.6
PF factor	0.873	0.774	0.174	0.873	0.774	0.174	0.758	0.833	0.568	0.758	0.833	1.000
Control delay	50.6	100.3	4.1	78.0	73.6	4.1	32.3	41.4	16.4	285.9	632.0	62.8
Lane group LOS	D	F	A	E	E	A	C	D	B	F	F	E
Apprch. delay	75.7			53.9			32.8			341.5		
Approach LOS	E			D			C			F		
Intersec. delay	177.5			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SIEMPRE VIVA RD./BRITANNIA BLV
Agency or Co.	USAI	Area Type	All other areas
Date Performed	05/13/12	Jurisdiction	SIEMBRIT3BPNLM/NO MIT
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/NO MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	0	2	2	0	2	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	780	1680	100	160	800	1500	440	300	480	800	775	690
% Heavy veh	10	10	10	10	10	10	10	10	10	10	50	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 24.0	G = 38.0	G =	G =	G = 40.0	G = 30.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	821	1873		168	2421		463	821		842	1542	
Lane group cap.	510	1242		510	1111		850	616		850	760	
v/c ratio	1.61	1.51		0.33	2.18		0.54	1.33		0.99	2.03	
Green ratio	0.16	0.25		0.16	0.25		0.27	0.20		0.27	0.20	
Unif. delay d1	63.0	56.0		55.9	56.0		47.2	60.0		54.8	60.0	
Delay factor k	0.50	0.50		0.11	0.50		0.14	0.50		0.49	0.50	
Increm. delay d2	283.4	232.8		0.4	533.6		0.7	160.7		28.5	467.7	
PF factor	0.873	0.774		0.873	0.774		0.758	0.833		0.758	0.833	
Control delay	338.4	276.2		49.2	576.9		36.5	210.7		70.0	517.7	
Lane group LOS	F	F		D	F		D	F		E	F	
Apprch. delay	295.2			542.7			147.9			359.5		
Approach LOS	F			F			F			F		
Intersec. delay	362.8			Intersection LOS						F		

21-P
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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	SIEMPRE VIVA RD./BRITANNIA BLV
Agency or Co.	USAI	Area Type	All other areas
Date Performed	04/10/11	Jurisdiction	SIEMBRIT3BPNLM
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 ALT.-3B NO LM/WITH M

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	2	2	2	1	2	2	2
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	780	1680	100	160	800	1500	440	300	480	800	775	690
% Heavy veh	10	10	10	10	10	10	10	10	10	10	50	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	5	0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 24.0	G = 38.0	G =	G =	G = 40.0	G = 30.0	G =	G =
	Y = 4	Y = 5	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	821	1768	105	168	842	1579	463	316	505	842	816	726
Lane group cap.	510	1255	792	510	1255	1377	850	692	561	850	508	992
v/c ratio	1.61	1.41	0.13	0.33	0.67	1.15	0.54	0.46	0.90	0.99	1.61	0.73
Green ratio	0.16	0.25	0.55	0.16	0.25	0.55	0.27	0.20	0.39	0.27	0.20	0.39
Unif. delay d1	63.0	56.0	16.1	55.9	50.4	33.5	47.2	52.8	42.7	54.8	60.0	38.8
Delay factor k	0.50	0.50	0.11	0.11	0.24	0.50	0.14	0.11	0.42	0.49	0.50	0.29
Increm. delay d2	283.4	188.8	0.1	0.4	1.4	75.0	0.7	0.5	17.6	28.5	281.9	2.8
PF factor	0.873	0.774	0.174	0.873	0.774	0.384	0.758	0.833	0.568	0.758	0.833	1.000
Control delay	338.4	232.1	2.9	49.2	40.4	87.9	36.5	44.5	41.8	70.0	331.9	41.6
Lane group LOS	F	F	A	D	D	F	D	D	D	E	F	D
Apprch. delay	255.6			69.9			40.6			151.0		
Approach LOS	F			E			D			F		
Intersec. delay	143.2			Intersection LOS						F		

22-A
N
M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD/LA MEDIA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	OMLM30A3BNLM/NO MIT.
Time Period	YEAR 2030 AM PEAK HOUR	Analysis Year	YEAR 2030 - ALT-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	0	2	3	0	2	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	135	1475	665	860	1165	590	975	1105	980	775	520	825
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10		0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 30.0	G =	G =	G = 35.0	G = 35.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	142	2253		905	1847		1026	2195		816	1415	
Lane group cap.	637	944		637	930		744	1060		744	721	
v/c ratio	0.22	2.39		1.42	1.99		1.38	2.07		1.10	1.96	
Green ratio	0.20	0.20		0.20	0.20		0.23	0.23		0.23	0.23	
Unif. delay d1	50.2	60.0		60.0	60.0		57.5	57.5		57.5	57.5	
Delay factor k	0.11	0.50		0.50	0.50		0.50	0.50		0.50	0.50	
Increm. delay d2	0.2	627.3		198.4	447.6		179.0	485.1		62.6	438.2	
PF factor	0.833	0.833		0.833	0.833		0.797	0.797		0.797	0.797	
Control delay	42.0	677.3		248.4	497.6		224.8	530.9		108.5	484.0	
Lane group LOS	D	F		F	F		F	F		F	F	
Apprch. delay	639.6			415.6			433.4			346.6		
Approach LOS	F			F			F			F		
Intersec. delay	457.1			Intersection LOS						F		

22-A

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *AM OM/LM 3B NO LM/ NO MIT.*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*TR*		*L*	*TR*		*L*	*TR*		*L*	*TR*	
Init. queue/lane	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	
Flow rate/lane	*142*	*2253*		*905*	*1847*		*1026*	*2195*		*816*	*1415*	
Satflow per lane	*1641*	*1733*		*1641*	*1707*		*1641*	*1667*		*1641*	*1621*	
Capacity/lane	*637*	*944*		*637*	*930*		*744*	*1060*		*744*	*721*	
Flow ratio	*0.04*	*0.48*		*0.28*	*0.40*		*0.32*	*0.48*		*0.26*	0.46	
v/c ratio	*0.22*	*2.39*		*1.42*	*1.99*		*1.38*	*2.07*		*1.10*	*1.96*	
I factor	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	
Arrival type	*5*	*5*		*5*	*5*		*5*	*5*		*5*	*5*	
Platoon ratio	*1.67*	*1.67*		*1.67*	*1.67*		*1.67*	*1.67*		*1.67*	*1.67*	
PF factor	*0.86*	*1.00*		*1.00*	*1.00*		*1.00*	*1.00*		*1.00*	*1.00*	
Q_1	*2.2*	*34.5*		*19.4*	*28.3*		*22.0*	*33.5*		*17.5*	*31.0*	
k_B	*0.5*	*0.5*		*0.5*	*0.5*		*0.5*	*0.5*		*0.5*	*0.5*	
Q_2	*0.1*	*61.0*		*18.7*	*43.1*		*19.9*	*53.0*		*8.1*	*46.7*	
Q avg.	*2.3*	*95.4*		*38.2*	*71.3*		*41.9*	*86.6*		*25.6*	*77.6*	

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*2.0*	*1.5*		*1.6*	*1.5*		*1.6*	*1.5*		*1.6*	*1.5*	
BOQ, $Q_{\%}$	*4.7*	*143*		*60.0*	*108*		*65.3*	*130*		*42.0*	*117*	

Queue Storage Ratio

Q spacing	*24.9*	*24.9*		*24.9*	*24.9*		*24.9*	*24.9*		*24.9*	*24.9*	
Q storage	*0*	*0*		*0*	*0*		*0*	*0*		*0*	*0*	
Avg. R_Q												
95% $R_{Q\%}$												

22A WM

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD/LA MEDIA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	05/13/12	Jurisdiction	OMLM30A3BNLM/WITH MIT
Time Period	YEAR 2030 AM PEAK HOUR	Analysis Year	YEAR 2030 - ALT-3B NO LM

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	2	2	3	2	2	3	2	2	2	2
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	135	1475	665	860	1165	590	975	1105	980	775	520	825
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	10		0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 30.0	G =	G =	G = 35.0	G = 35.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 150.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	142	1553	700	905	1226	621	1026	1163	1032	816	547	868
Lane group cap.	637	991	1213	637	991	1177	744	1156	1180	744	808	1180
v/c ratio	0.22	1.57	0.58	1.42	1.24	0.53	1.38	1.01	0.87	1.10	0.68	0.74
Green ratio	0.20	0.20	0.47	0.20	0.20	0.47	0.23	0.23	0.47	0.23	0.23	0.47
Unif. delay d1	50.2	60.0	29.2	60.0	60.0	28.3	57.5	57.5	36.0	57.5	52.4	32.5
Delay factor k	0.11	0.50	0.17	0.50	0.50	0.13	0.50	0.50	0.40	0.50	0.25	0.29
Increm. delay d2	0.2	260.1	0.7	198.4	115.5	0.4	179.0	27.9	7.5	62.6	2.3	2.4
PF factor	0.833	0.833	0.417	0.833	0.833	0.417	0.797	0.797	0.417	0.797	0.797	0.417
Control delay	42.0	310.1	12.9	248.4	165.5	12.2	224.8	73.8	22.6	108.5	44.0	16.0
Lane group LOS	D	F	B	F	F	B	F	E	C	F	D	B
Apprch. delay	207.3			158.2			105.5			56.7		
Approach LOS	F			F			F			E		
Intersec. delay	131.9			Intersection LOS						F		

22A

WM

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *AM OM/LM 3B NO LM/ WITH MIT*

Average Back of Queue

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Lane group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*
Init. queue/lane	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Flow rate/lane	*142*	*1553*	*700*	*905*	*1226*	*621*	*1026*	*1163*	*1032*	*816*	*547*	*868*
Satflow per lane	*1641*	*1818*	*1468*	*1641*	*1818*	*1425*	*1641*	*1818*	*1429*	*1641*	*1818*	*1429*
Capacity/lane	*637*	*991*	*1213*	*637*	*991*	*1177*	*744*	*1156*	*1180*	*744*	*808*	*1180*
Flow ratio	*0.04*	*0.31*	*0.27*	*0.28*	*0.25*	*0.25*	*0.32*	*0.23*	*0.41*	*0.26*	0.16	*0.34*
v/c ratio	*0.22*	*1.57*	*0.58*	*1.42*	*1.24*	*0.53*	*1.38*	*1.01*	*0.87*	*1.10*	*0.68*	*0.74*
I factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Arrival type	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*
Platoon ratio	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*	*1.67*
PF factor	*0.86*	*1.00*	*0.55*	*1.00*	*1.00*	*0.53*	*1.00*	*1.00*	*0.77*	*1.00*	*0.91*	*0.64*
Q_1	*2.2*	*23.8*	*6.6*	*19.4*	*18.8*	*5.5*	*22.0*	*17.8*	*16.9*	*17.5*	*9.9*	*10.6*
k_B	*0.5*	*0.5*	*0.7*	*0.5*	*0.5*	*0.7*	*0.5*	*0.6*	*0.7*	*0.5*	*0.6*	*0.7*
Q_2	*0.1*	*27.2*	*1.0*	*18.7*	*13.1*	*0.8*	*19.9*	*5.6*	*3.8*	*8.1*	*1.1*	*1.9*
Q avg.	*2.3*	*51.0*	*7.6*	*38.2*	*31.8*	*6.3*	*41.9*	*23.3*	*20.7*	*25.6*	*11.0*	*12.5*

Percentile Back of Queue (95th percentile)

$f_{B\%}$	*2.0*	*1.5*	*1.9*	*1.6*	*1.6*	*1.9*	*1.6*	*1.7*	*1.7*	*1.6*	*1.8*	*1.8*
BOQ, $Q_{\%}$	*4.7*	*78.2*	*14.4*	*60.0*	*51.0*	*12.1*	*65.3*	*38.8*	*34.9*	*42.0*	*20.1*	*22.5*

Queue Storage Ratio

Q spacing	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*	*24.9*
Q storage	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Avg. R_Q												
95% $R_{Q\%}$												

22-P
N
M

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OTAY MESA RD/LA MEDIA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	03/13/11	Jurisdiction	OMLM30P3BNLM/NO MIT.
Time Period	YEAR 2030 PM PEAK HOUR	Analysis Year	YEAR 2030 - ALT-3B NO LM/NO MI

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	0	2	3	0	2	3	0	2	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	665	1000	1100	990	1500	780	670	620	850	400	630	120
% Heavy veh	10	10	10	10	10	10	10	10	10	10	10	10
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10		0	10	5	0	10	5	0	10	5	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 30.0	G =	G =	G = 35.0	G = 35.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 150.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	700	2211		1042	2400		705	1548		421	789	
Lane group cap.	637	913		637	929		744	1038		744	785	
v/c ratio	1.10	2.42		1.64	2.58		0.95	1.49		0.57	1.01	
Green ratio	0.20	0.20		0.20	0.20		0.23	0.23		0.23	0.23	
Unif. delay d1	60.0	60.0		60.0	60.0		56.6	57.5		50.8	57.5	
Delay factor k	0.50	0.50		0.50	0.50		0.46	0.50		0.16	0.50	
Increm. delay d2	65.8	643.1		293.2	715.7		21.2	226.2		1.0	33.4	
PF factor	0.833	0.833		0.833	0.833		0.797	0.797		0.797	0.797	
Control delay	115.8	693.1		343.2	765.7		66.3	272.1		41.5	79.2	
Lane group LOS	F	F		F	F		E	F		D	E	
Apprch. delay	554.3			637.8			207.7			66.1		
Approach LOS	F			F			F			E		
Intersec. delay	443.8			Intersection LOS						F		