

Appendix B-3

Signal Warrant Analysis Worksheets



FEHR & PEERS
TRANSPORTATION CONSULTANTS

Warrant 3B: Peak Hour Volume

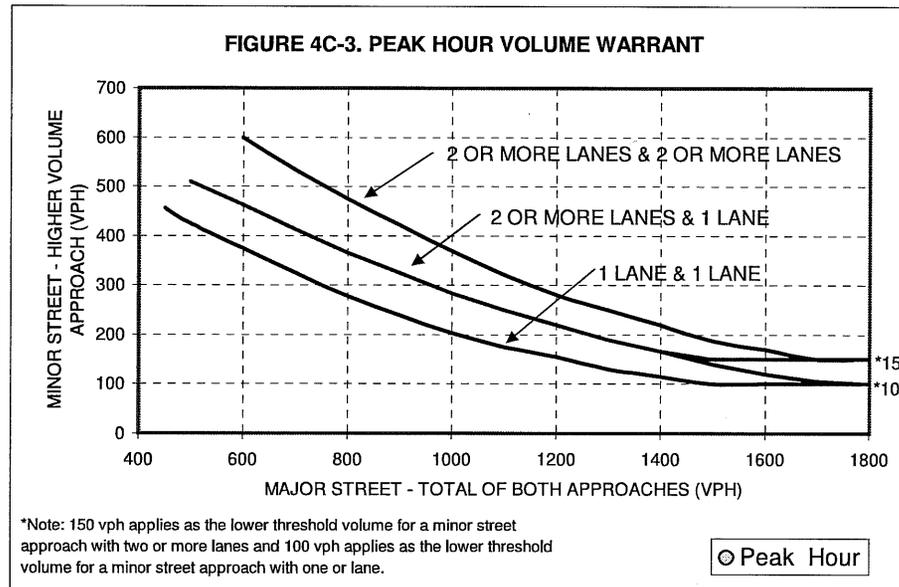
The peak hour volume warrant is satisfied when the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour of the higher volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) of an average day falls above the curve in Figure 4-5 for the existing combination of approach lanes.

Analysis

	No of lanes
Major Street	3
Minor Street	1

Time	Vehicles Per Hour	
	Major Street (Sum of both approaches)	Minor street (High volume approach)
5:00 PM	2,116	256

Major St	Minor Street			
	1 maj 1 min	1 maj 2 min	2 maj 1 min	2 maj 2 min
450	456			
500	425	510	510	
600	375	463	463	600
700	325	413	413	534
800	278	366	366	475
900	240	325	325	422
1000	203	284	284	370
1100	175	250	250	322
1200	155	220	220	280
1300	130	190	190	250
1400	115	166	166	220
1500	100	150	140	188
1600	100	150	120	170
1700	100	150	105	150
1800	100	150	100	150



Warrant **Met**

Warrant 3B: Peak Hour Volume

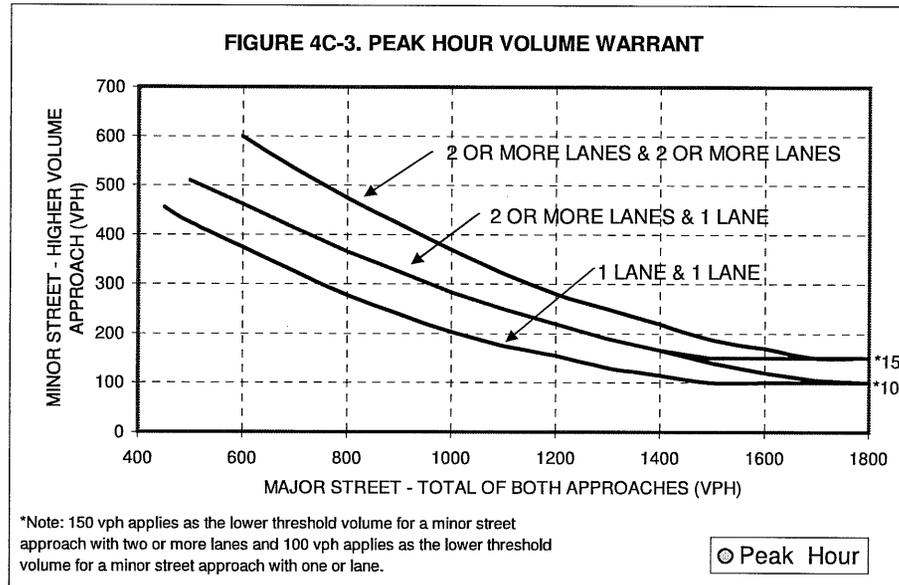
The peak hour volume warrant is satisfied when the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour of the higher volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) of an average day falls above the curve in Figure 4-5 for the existing combination of approach lanes.

Analysis

	No of lanes
Major Street	1
Minor Street	1

Time	Peak Hour Vehicles Per Hour	
	Major Street (Sum of both approaches)	Minor street (High volume approach)
1:00 PM	172	46

Major St	Minor Street			
	1 maj 1 min	1 maj 2 min	2 maj 1 min	2 maj 2 min
450	456			
500	425	510	510	
600	375	463	463	600
700	325	413	413	534
800	278	366	366	475
900	240	325	325	422
1000	203	284	284	370
1100	175	250	250	322
1200	155	220	220	280
1300	130	190	190	250
1400	115	166	166	220
1500	100	150	140	188
1600	100	150	120	170
1700	100	150	105	150
1800	100	150	100	150



Warrant **Not Met**

Warrant 3B: Peak Hour Volume

The peak hour volume warrant is satisfied when the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour of the higher volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) of an average day falls above the curve in Figure 4-5 for the existing combination of approach lanes.

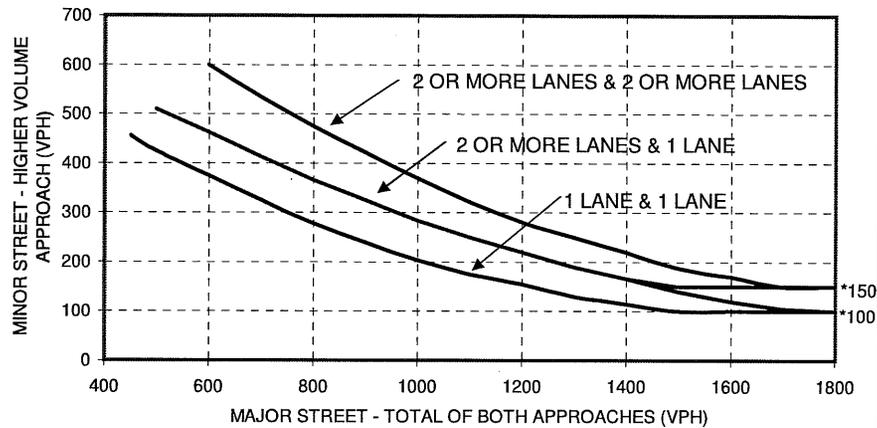
Analysis

	No of lanes
Major Street	1
Minor Street	1

Time	Vehicles Per Hour	
	Major Street (Sum of both approaches)	Minor street (High volume approach)
5:00 PM	353	93

Major St	Minor Street			
	1 maj 1 min	1 maj 2 min	2 maj 1 min	2 maj 2 min
450	456			
500	425	510	510	
600	375	463	463	600
700	325	413	413	534
800	278	366	366	475
900	240	325	325	422
1000	203	284	284	370
1100	175	250	250	322
1200	155	220	220	280
1300	130	190	190	250
1400	115	166	166	220
1500	100	150	140	188
1600	100	150	120	170
1700	100	150	105	150
1800	100	150	100	150

FIGURE 4C-3. PEAK HOUR VOLUME WARRANT



*Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with one or lane.

⊙ Peak Hour

Warrant **Not Met**

Warrant 3B: Peak Hour Volume

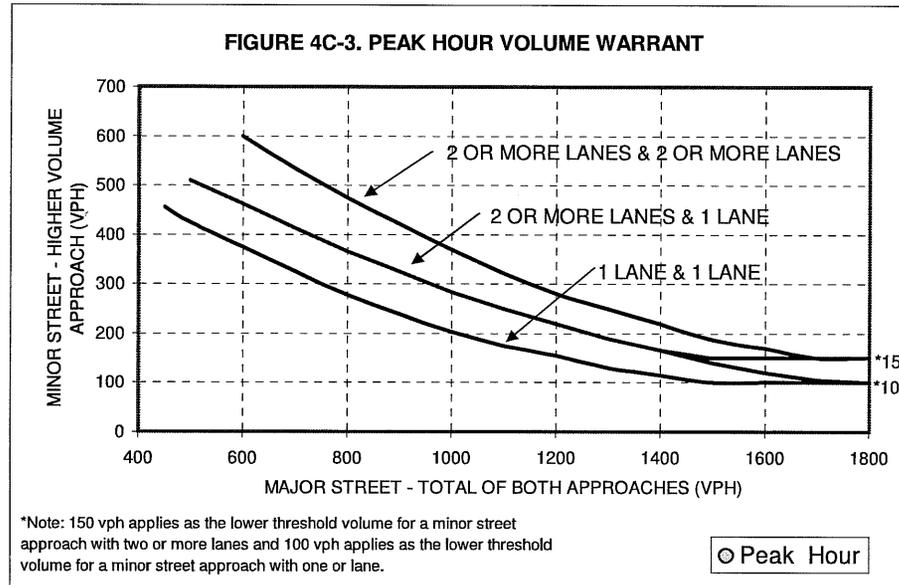
The peak hour volume warrant is satisfied when the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour of the higher volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) of an average day falls above the curve in Figure 4-5 for the existing combination of approach lanes.

Analysis

	No of lanes
Major Street	2
Minor Street	1

Time	Vehicles Per Hour	
	Major Street (Sum of both approaches)	Minor street (High volume approach)
1:00 PM	1,911	73

Major St	Minor Street			
	1 maj 1 min	1 maj 2 min	2 maj 1 min	2 maj 2 min
450	456			
500	425	510	510	
600	375	463	463	600
700	325	413	413	534
800	278	366	366	475
900	240	325	325	422
1000	203	284	284	370
1100	175	250	250	322
1200	155	220	220	280
1300	130	190	190	250
1400	115	166	166	220
1500	100	150	140	188
1600	100	150	120	170
1700	100	150	105	150
1800	100	150	100	150



Warrant **Not Met**

Warrant 3B: Peak Hour Volume

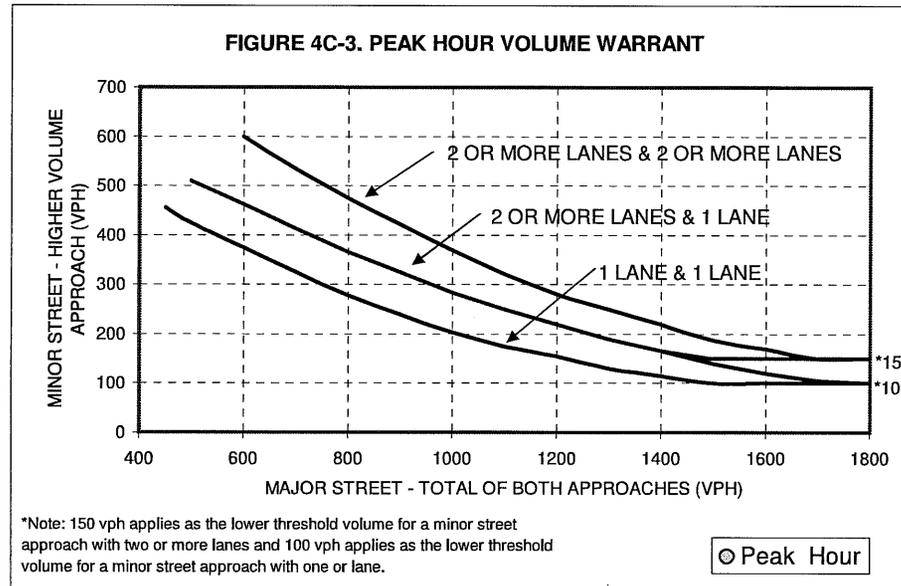
The peak hour volume warrant is satisfied when the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour of the higher volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) of an average day falls above the curve in Figure 4-5 for the existing combination of approach lanes.

Analysis

	No of lanes
Major Street	2
Minor Street	1

Time	Vehicles Per Hour	
	Major Street (Sum of both approaches)	Minor street (High volume approach)
5:00 PM	2,014	90

Major St	Minor Street			
	1 maj 1 min	1 maj 2 min	2 maj 1 min	2 maj 2 min
450	456			
500	425	510	510	
600	375	463	463	600
700	325	413	413	534
800	278	366	366	475
900	240	325	325	422
1000	203	284	284	370
1100	175	250	250	322
1200	155	220	220	280
1300	130	190	190	250
1400	115	166	166	220
1500	100	150	140	188
1600	100	150	120	170
1700	100	150	105	150
1800	100	150	100	150



Warrant **Not Met**

Warrant 3B: Peak Hour Volume

The peak hour volume warrant is satisfied when the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour of the higher volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) of an average day falls above the curve in Figure 4-5 for the existing combination of approach lanes.

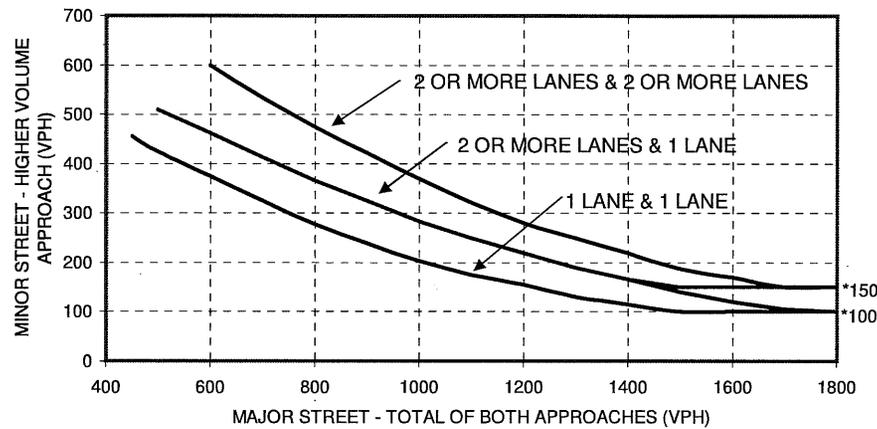
Analysis

	No of lanes
Major Street	2
Minor Street	1

Peak Hour		
Time	Vehicles Per Hour	
	Major Street (Sum of both approaches)	Minor street (High volume approach)
5:00 PM	2,089	135

Major St	Minor Street			
	1 maj 1 min	1 maj 2 min	2 maj 1 min	2 maj 2 min
450	456			
500	425	510	510	
600	375	463	463	600
700	325	413	413	534
800	278	366	366	475
900	240	325	325	422
1000	203	284	284	370
1100	175	250	250	322
1200	155	220	220	280
1300	130	190	190	250
1400	115	166	166	220
1500	100	150	140	188
1600	100	150	120	170
1700	100	150	105	150
1800	100	150	100	150

FIGURE 4C-3. PEAK HOUR VOLUME WARRANT



*Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with one or lane.

○ Peak Hour

Warrant Not Met

Warrant 3B: Peak Hour Volume

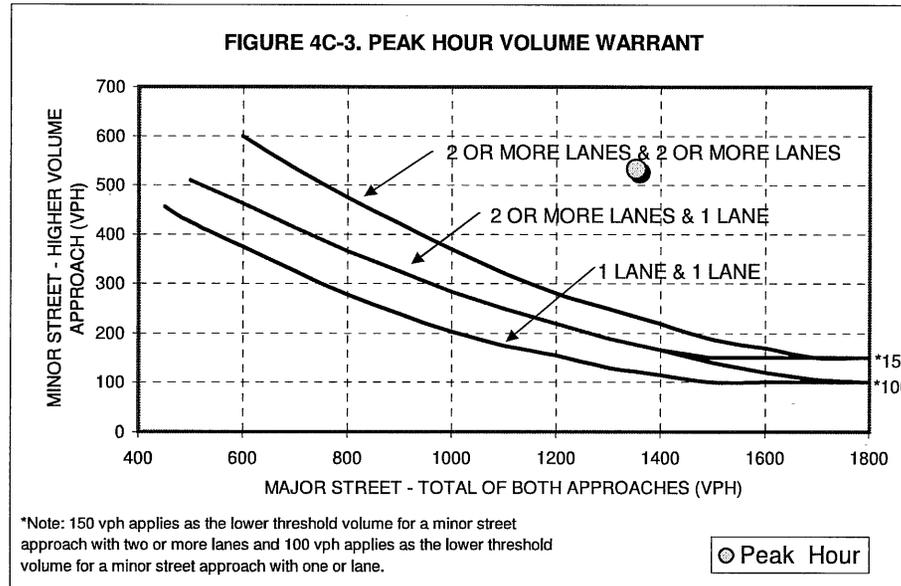
The peak hour volume warrant is satisfied when the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour of the higher volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) of an average day falls above the curve in Figure 4-5 for the existing combination of approach lanes.

Analysis

	No of lanes
Major Street	3
Minor Street	2

Peak Hour		
Time	Vehicles Per Hour	
	Major Street (Sum of both approaches)	Minor street (High volume approach)
8:00 AM	1,354	533

Major St	Minor Street			
	1 maj 1 min	1 maj 2 min	2 maj 1 min	2 maj 2 min
450	456			
500	425	510	510	
600	375	463	463	600
700	325	413	413	534
800	278	366	366	475
900	240	325	325	422
1000	203	284	284	370
1100	175	250	250	322
1200	155	220	220	280
1300	130	190	190	250
1400	115	166	166	220
1500	100	150	140	188
1600	100	150	120	170
1700	100	150	105	150
1800	100	150	100	150



Warrant	Met
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Warrant 3B: Peak Hour Volume

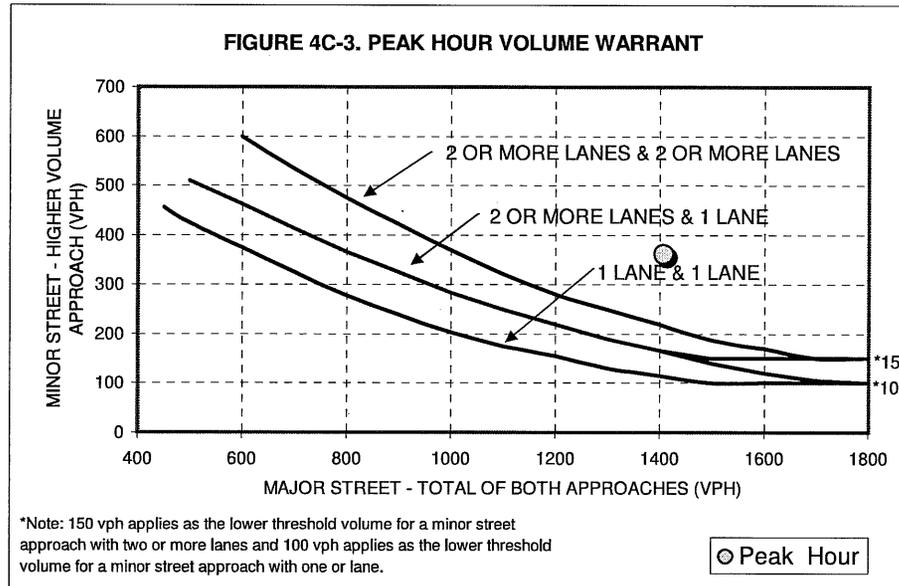
The peak hour volume warrant is satisfied when the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour of the higher volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) of an average day falls above the curve in Figure 4-5 for the existing combination of approach lanes.

Analysis

	No of lanes
Major Street	2
Minor Street	2

Peak Hour		
Time	Vehicles Per Hour	
	Major Street (Sum of both approaches)	Minor street (High volume approach)
8:00 AM	1,408	361

Major St	Minor Street			
	1 maj 1 min	1 maj 2 min	2 maj 1 min	2 maj 2 min
450	456			
500	425	510	510	
600	375	463	463	600
700	325	413	413	534
800	278	366	366	475
900	240	325	325	422
1000	203	284	284	370
1100	175	250	250	322
1200	155	220	220	280
1300	130	190	190	250
1400	115	166	166	220
1500	100	150	140	188
1600	100	150	120	170
1700	100	150	105	150
1800	100	150	100	150



Warrant	Met
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Warrant 3B: Peak Hour Volume

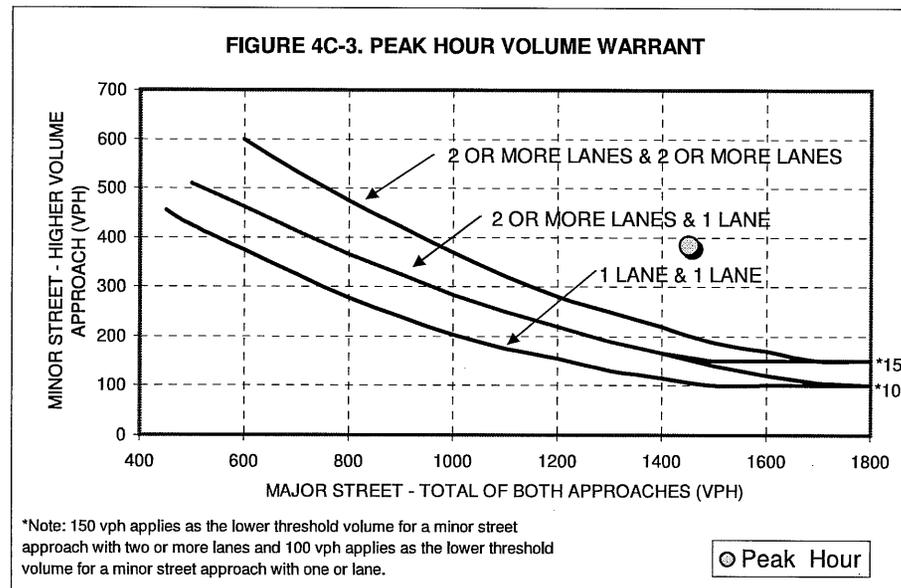
The peak hour volume warrant is satisfied when the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour of the higher volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) of an average day falls above the curve in Figure 4-5 for the existing combination of approach lanes.

Analysis

	No of lanes
Major Street	2
Minor Street	1

Time	Peak Hour Vehicles Per Hour	
	Major Street (Sum of both approaches)	Minor street (High volume approach)
8:00 AM	1,453	384

Major St	Minor Street			
	1 maj 1 min	1 maj 2 min	2 maj 1 min	2 maj 2 min
450	456			
500	425	510	510	
600	375	463	463	600
700	325	413	413	534
800	278	366	366	475
900	240	325	325	422
1000	203	284	284	370
1100	175	250	250	322
1200	155	220	220	280
1300	130	190	190	250
1400	115	166	166	220
1500	100	150	140	188
1600	100	150	120	170
1700	100	150	105	150
1800	100	150	100	150



Warrant	Met
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Warrant 3B: Peak Hour Volume

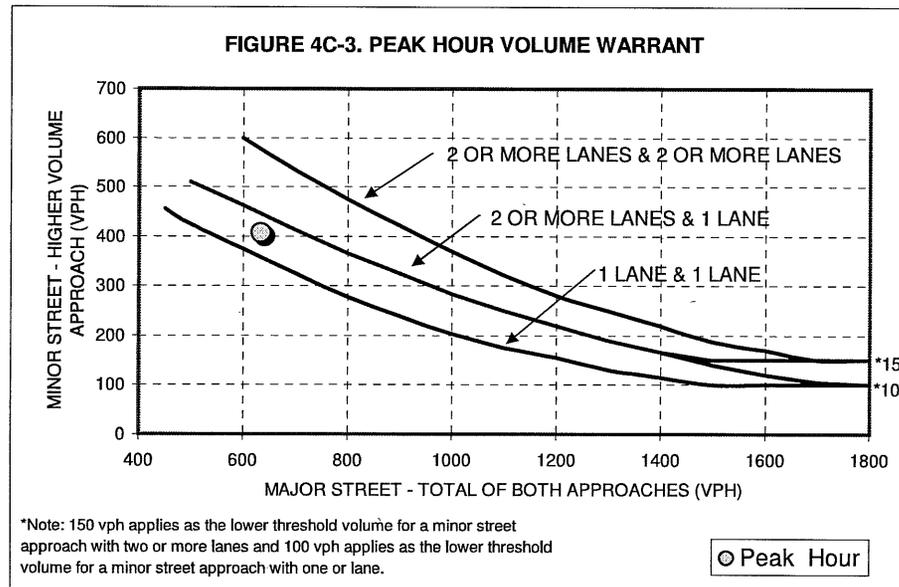
The peak hour volume warrant is satisfied when the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour of the higher volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) of an average day falls above the curve in Figure 4-5 for the existing combination of approach lanes.

Analysis

	No of lanes
Major Street	1
Minor Street	1

Peak Hour		
Time	Vehicles Per Hour	
	Major Street (Sum of both approaches)	Minor street (High volume approach)
8:00 AM	635	407

Major St	Minor Street			
	1 maj 1 min	1 maj 2 min	2 maj 1 min	2 maj 2 min
450	456			
500	425	510	510	
600	375	463	463	600
700	325	413	413	534
800	278	366	366	475
900	240	325	325	422
1000	203	284	284	370
1100	175	250	250	322
1200	155	220	220	280
1300	130	190	190	250
1400	115	166	166	220
1500	100	150	140	188
1600	100	150	120	170
1700	100	150	105	150
1800	100	150	100	150



Warrant	Met
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Sheet No 1 of ?

Major Street Jackson Street
 Minor Street Monroe Ave

Project University Village at San Pablo Avenue
 Scenario Existing Plus Project
 Peak Hour PM

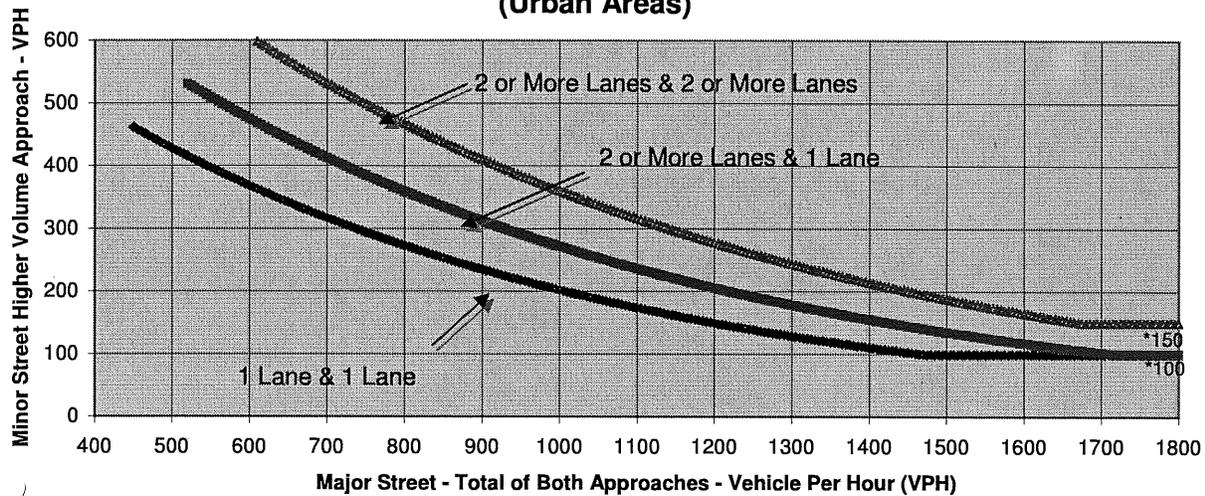
Turn Movement Volumes

	NB	SB	EB	WB
Left	3	45	7	35
Through	176	95	2	2
Right	39	4	0	66
Total	218	144	9	103

Major Street Direction

x North/South
 East/West

**Figure 4C-3
 Warrant 3, Peak Hour
 (Urban Areas)**



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street	Minor Street	<u>Warrant Met</u>
	Jackson Street	Monroe Ave	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	362	103	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Sheet No 1 of ?

Major Street San Pablo Avenue
 Minor Street Dartmouth Street

Project University Village at San Pablo Avenue
 Scenario Existing Plus Project
 Peak Hour AM

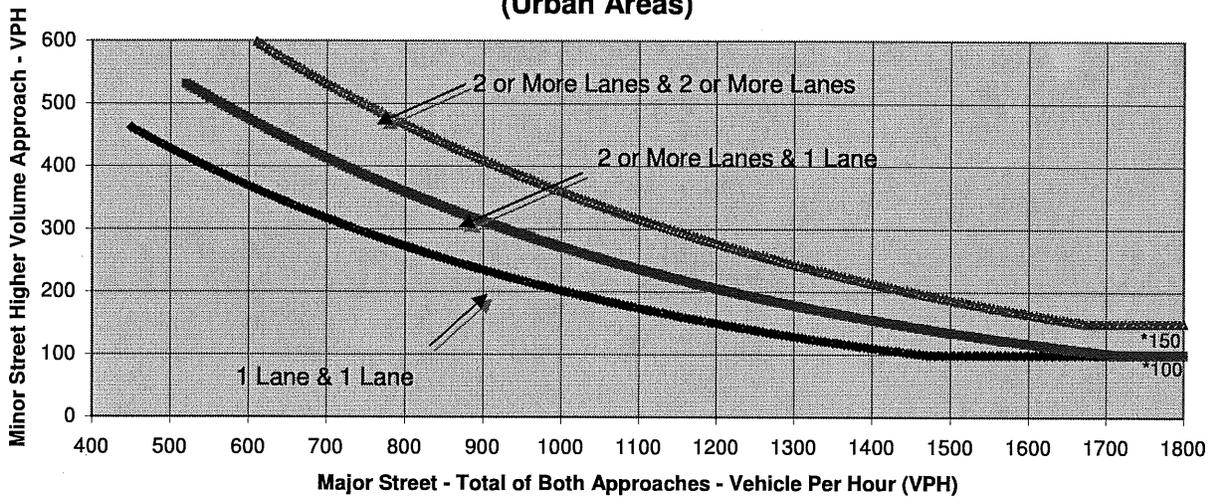
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	72	0	61
Through	432	1,356	0	0
Right	6	0	0	28
Total	438	1,428	0	89

Major Street Direction

x North/South
 East/West

**Figure 4C-3
 Warrant 3, Peak Hour
 (Urban Areas)**



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street	Minor Street	Warrant Met
	San Pablo Avenue	Dartmouth Street	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	1,866	89	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Sheet No 1 of ?

Major Street San Pablo Avenue
 Minor Street Harrison Street

Project University Village at San Pablo Avenue
 Scenario Existing Plus Project
 Peak Hour PM

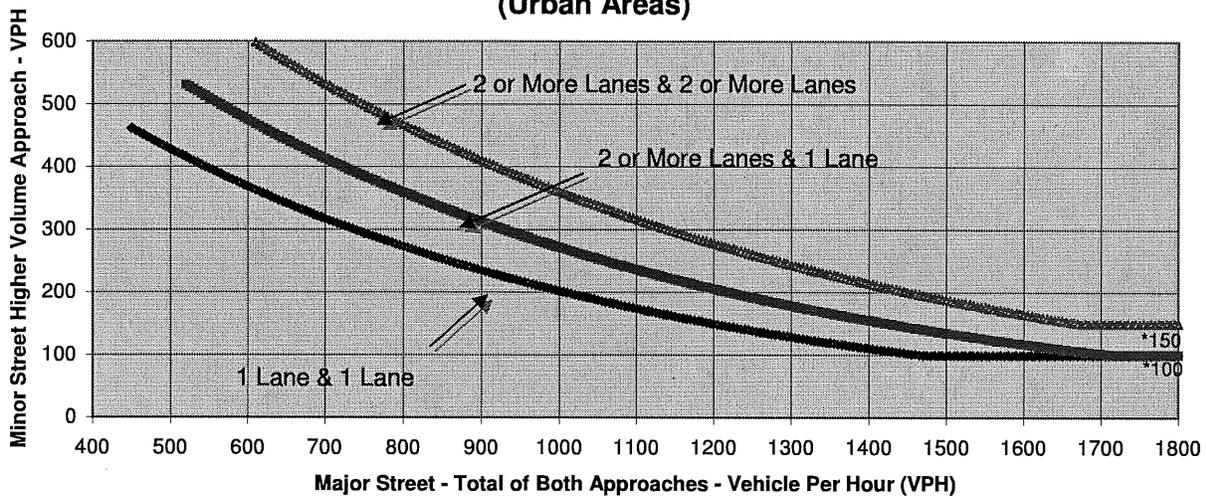
Turn Movement Volumes

	NB	SB	EB	WB
Left	52	0	65	4
Through	1,236	955	2	3
Right	8	62	0	0
Total	1,296	1,017	67	7

Major Street Direction

x North/South
 East/West

**Figure 4C-3
 Warrant 3, Peak Hour
 (Urban Areas)**



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street	Minor Street	<u>Warrant Met</u>
	San Pablo Avenue	Harrison Street	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	2,313	67	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Sheet No 1 of ?

Major Street Jackson Street
 Minor Street Monroe Ave

Project University Village at San Pablo Avenue
 Scenario 2015
 Peak Hour PM

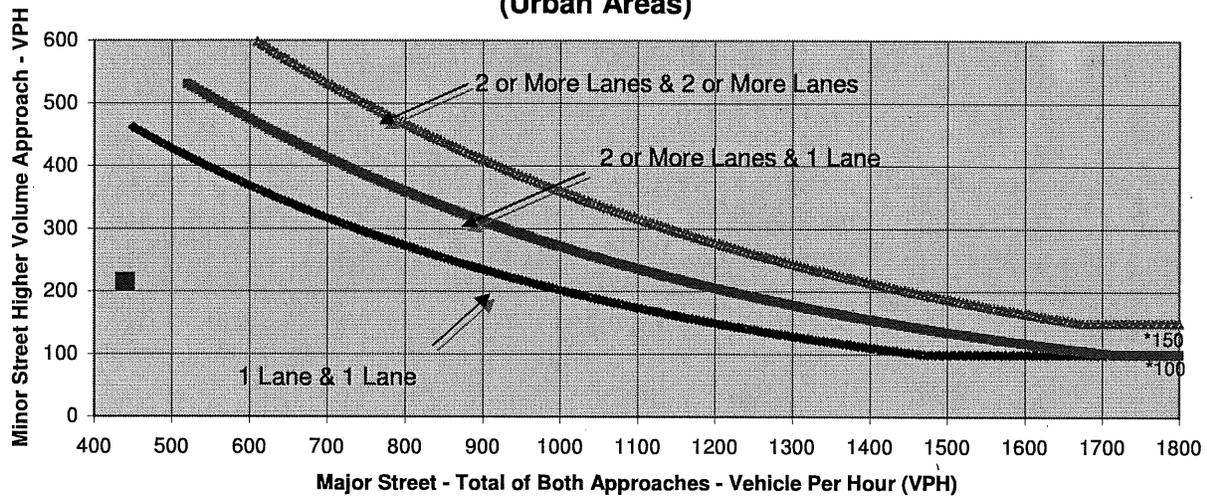
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	60	10	130
Through	180	120	5	5
Right	70	5	5	80
Total	255	185	20	215

Major Street Direction

x North/South
 East/West

**Figure 4C-3
 Warrant 3, Peak Hour
 (Urban Areas)**



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street Jackson Street	Minor Street Monroe Ave	Warrant Met
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	440	215	
* Note: Traffic Volume for Major Street is Total Volume of Both Approaches. Traffic Volume for Minor Street is the Volume of High Volume Approach.			



Sheet No 1 of ?

Major Street San Pablo Avenue
 Minor Street Dartmouth Street

Project University Village at San Pablo Avenue
 Scenario 2015
 Peak Hour AM

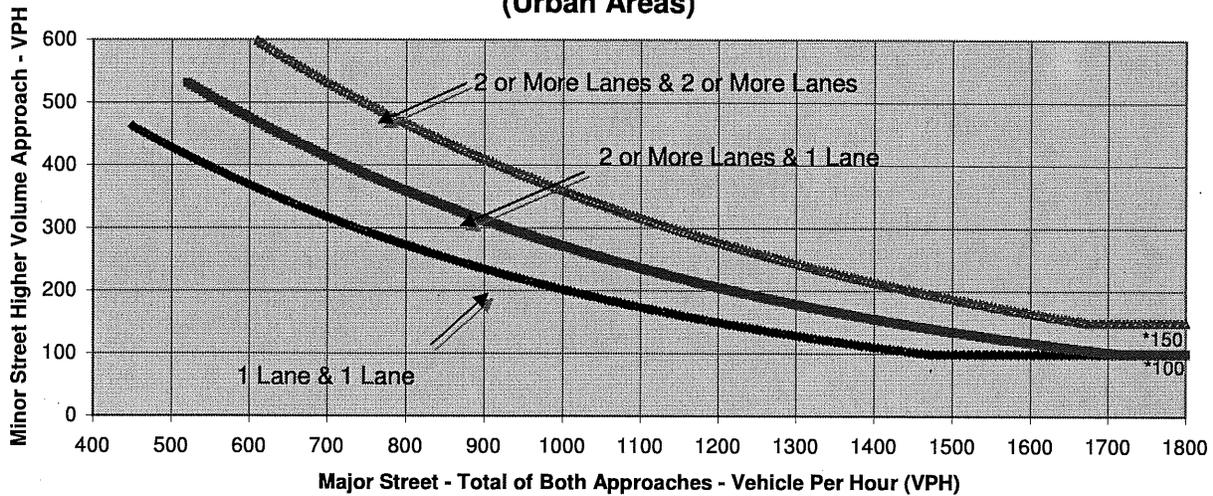
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	90	0	40
Through	440	1,380	0	0
Right	20	0	0	0
Total	460	1,470	0	40

Major Street Direction

x North/South
 East/West

**Figure 4C-3
 Warrant 3, Peak Hour
 (Urban Areas)**



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street	Minor Street	<u>Warrant Met</u>
	San Pablo Avenue	Dartmouth Street	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	1,930	40	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Sheet No 1 of ?

Major Street San Pablo Avenue
 Minor Street Harrison Street

Project University Village at San Pablo Avenue
 Scenario 2015
 Peak Hour PM

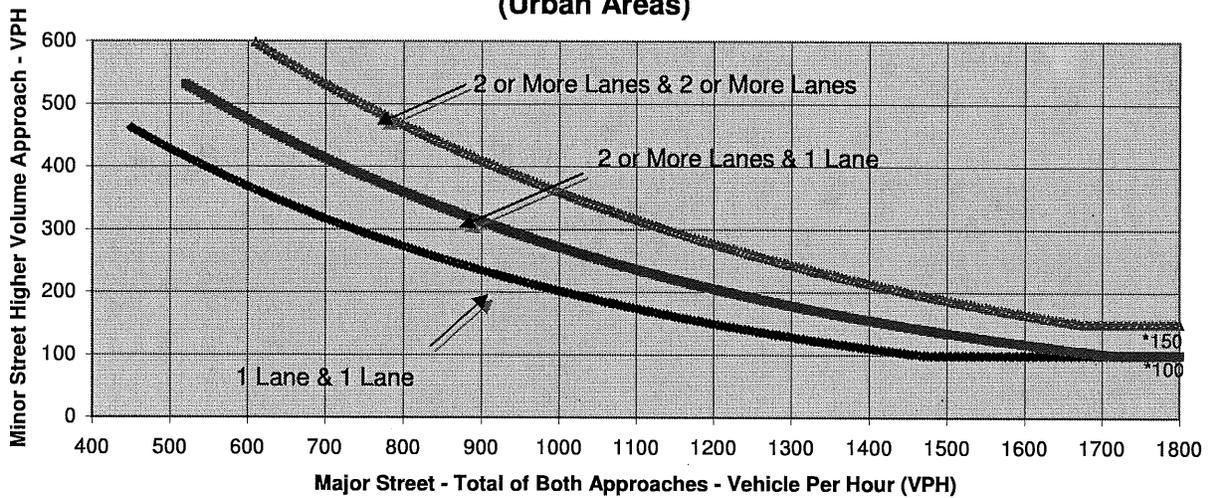
Turn Movement Volumes

	NB	SB	EB	WB
Left	70	0	90	10
Through	1,220	1,010	10	10
Right	20	100	0	0
Total	1,310	1,110	100	20

Major Street Direction

x North/South
 _____ East/West

**Figure 4C-3
 Warrant 3, Peak Hour
 (Urban Areas)**



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street	Minor Street	Warrant Met
	San Pablo Avenue	Harrison Street	
Number of Approach Lanes	2	1	No
Traffic Volume (VPH) *	2,420	100	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Sheet No 1 of ?

Major Street Jackson Street
 Minor Street Monroe Ave

Project University Village at San Pablo Avenue
 Scenario 2015 Plus Project
 Peak Hour PM

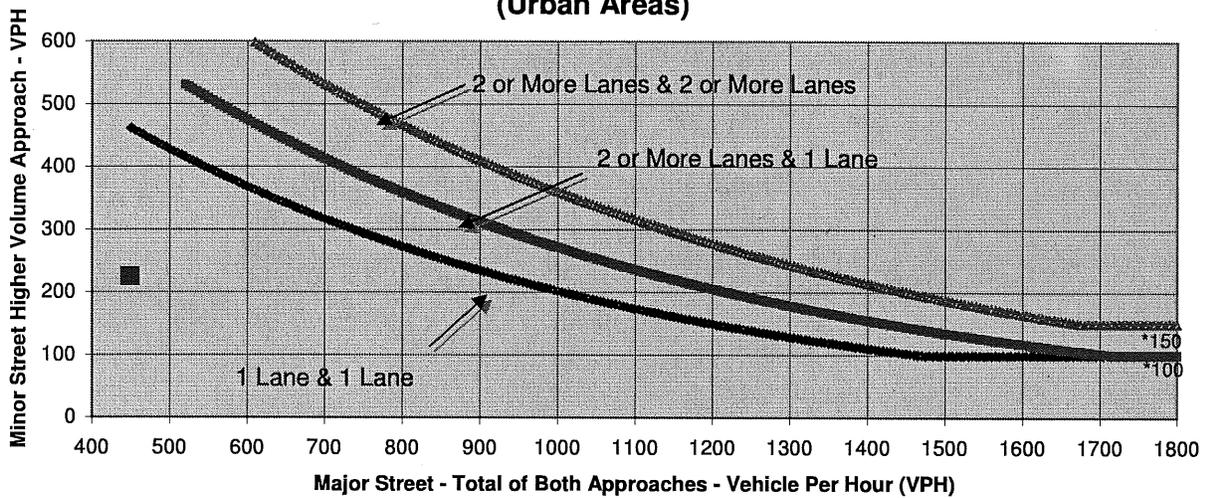
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	69	10	130
Through	180	120	5	5
Right	70	5	5	90
Total	255	194	20	225

Major Street Direction

North/South
 East/West

**Figure 4C-3
 Warrant 3, Peak Hour
 (Urban Areas)**



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street Jackson Street	Minor Street Monroe Ave	Warrant Met
Number of Approach Lanes	1	1	
Traffic Volume (VPH) *	449	225	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Sheet No 1 of ?

Major Street San Pablo Avenue
 Minor Street Dartmouth Street

Project University Village at San Pablo Avenue
 Scenario 2015 Plus Project
 Peak Hour AM

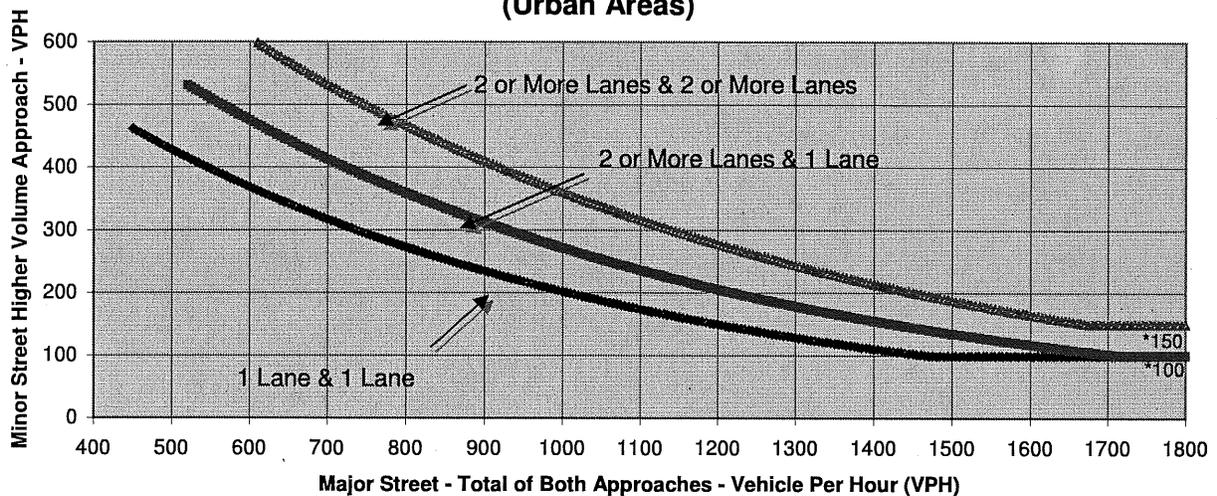
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	90	0	40
Through	504	1,414	0	0
Right	20	0	0	0
Total	524	1,504	0	40

Major Street Direction

x North/South
 East/West

**Figure 4C-3
 Warrant 3, Peak Hour
 (Urban Areas)**



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street San Pablo Avenue	Minor Street Dartmouth Street	<u>Warrant Met</u>
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	2,028	40	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Sheet No 1 of ?

Major Street San Pablo Avenue
 Minor Street Harrison Street

Project University Village at San Pablo Avenue
 Scenario 2015 Plus Project
 Peak Hour PM

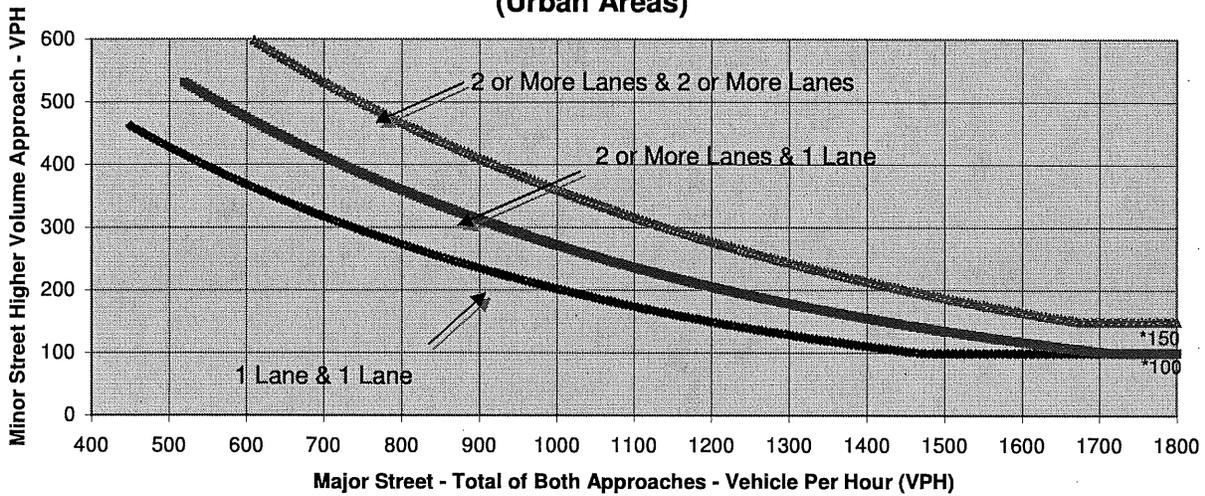
Turn Movement Volumes

	NB	SB	EB	WB
Left	70	0	90	10
Through	1,332	1,126	10	10
Right	20	100	0	0
Total	1,422	1,226	100	20

Major Street Direction

x North/South
 _____ East/West

**Figure 4C-3
 Warrant 3, Peak Hour
 (Urban Areas)**



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street	Minor Street	<u>Warrant Met</u>
	San Pablo Avenue	Harrison Street	
Number of Approach Lanes	2	1	<u>No</u>
Traffic Volume (VPH) *	2,648	100	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Sheet No 1 of ?

Major Street Jackson Street
 Minor Street Monroe Ave

Project University Village at San Pablo Avenue
 Scenario 2035
 Peak Hour PM

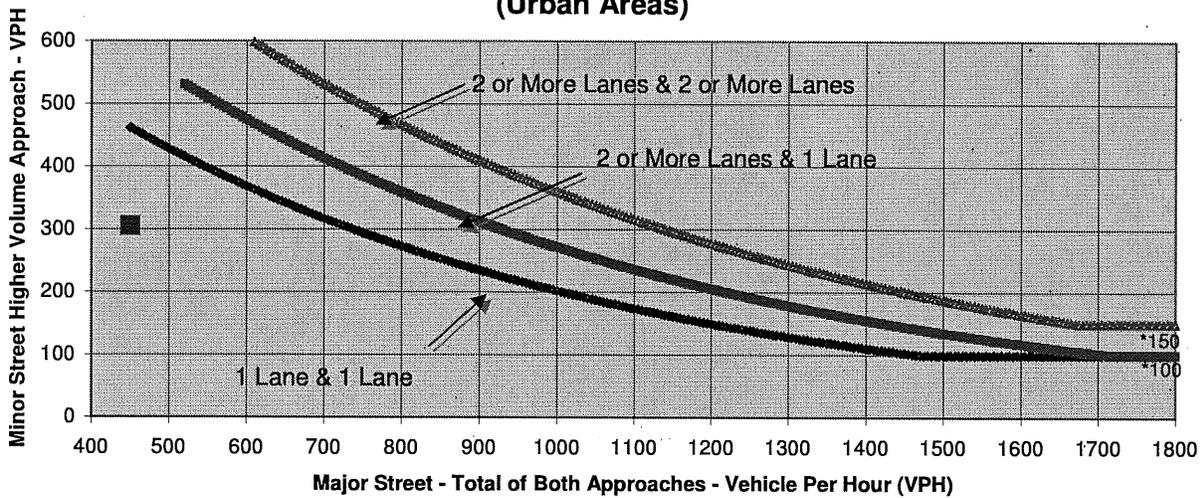
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	90	10	170
Through	130	120	5	5
Right	100	5	5	130
Total	235	215	20	305

Major Street Direction

x North/South
 East/West

**Figure 4C-3
 Warrant 3, Peak Hour
 (Urban Areas)**



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street Jackson Street	Minor Street Monroe Ave	Warrant Met
Number of Approach Lanes	1	1	
Traffic Volume (VPH) *	450	305	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Sheet No 1 of ?

Major Street San Pablo Avenue
 Minor Street Dartmouth Street

Project University Village at San Pablo Avenue
 Scenario 2035
 Peak Hour AM

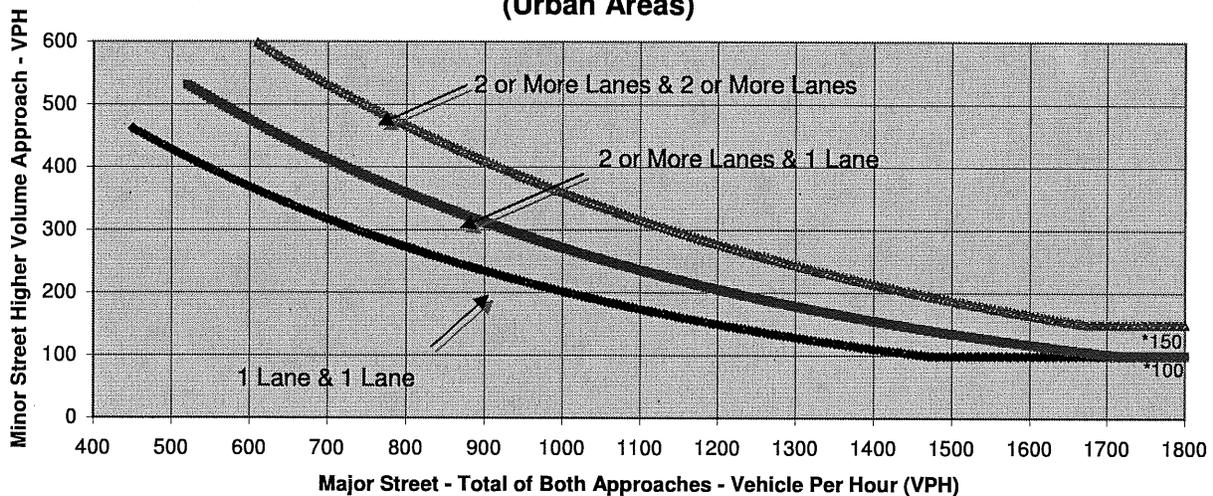
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	100	0	50
Through	850	1,540	0	0
Right	0	0	0	0
Total	850	1,640	0	50

Major Street Direction

x North/South
 East/West

**Figure 4C-3
 Warrant 3, Peak Hour
 (Urban Areas)**



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street	Minor Street	<u>Warrant Met</u>
	San Pablo Avenue	Dartmouth Street	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	2,490	50	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Sheet No 1 of ?

Major Street San Pablo Avenue
 Minor Street Harrison Street

Project University Village at San Pablo Avenue
 Scenario 2035
 Peak Hour PM

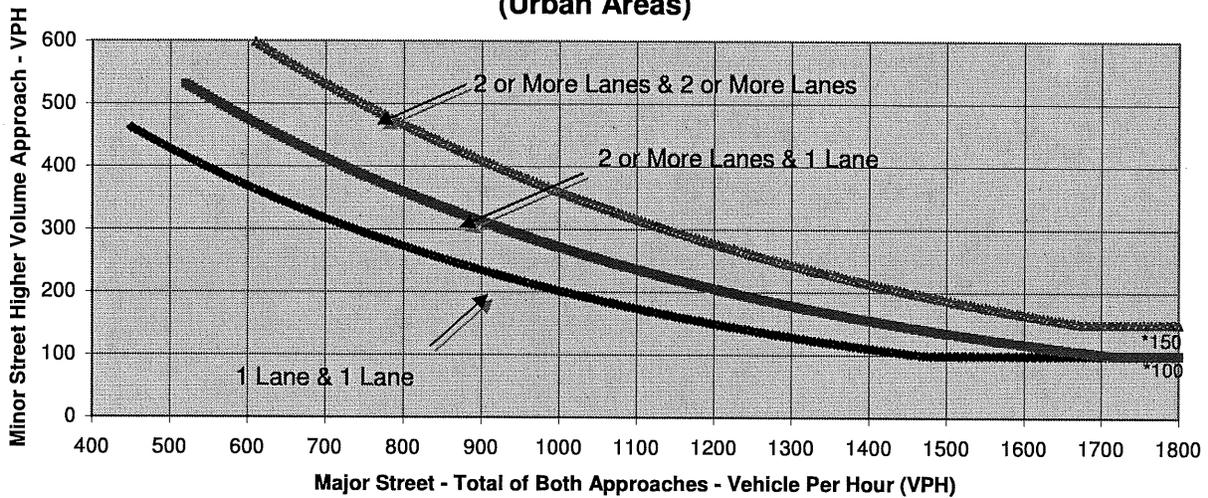
Turn Movement Volumes

	NB	SB	EB	WB
Left	90	0	100	20
Through	1,270	1,240	10	20
Right	0	0	0	0
Total	1,360	1,240	110	40

Major Street Direction

x North/South
 _____ East/West

**Figure 4C-3
 Warrant 3, Peak Hour
 (Urban Areas)**



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street	Minor Street	Warrant Met
	San Pablo Avenue	Harrison Street	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	2,600	110	
* Note: Traffic Volume for Major Street is Total Volume of Both Approaches. Traffic Volume for Minor Street is the Volume of High Volume Approach.			



Sheet No 1 of ?

Major Street Jackson Street
 Minor Street Monroe Ave

Project University Village at San Pablo Avenue
 Scenario 2035 Plus Project
 Peak Hour PM

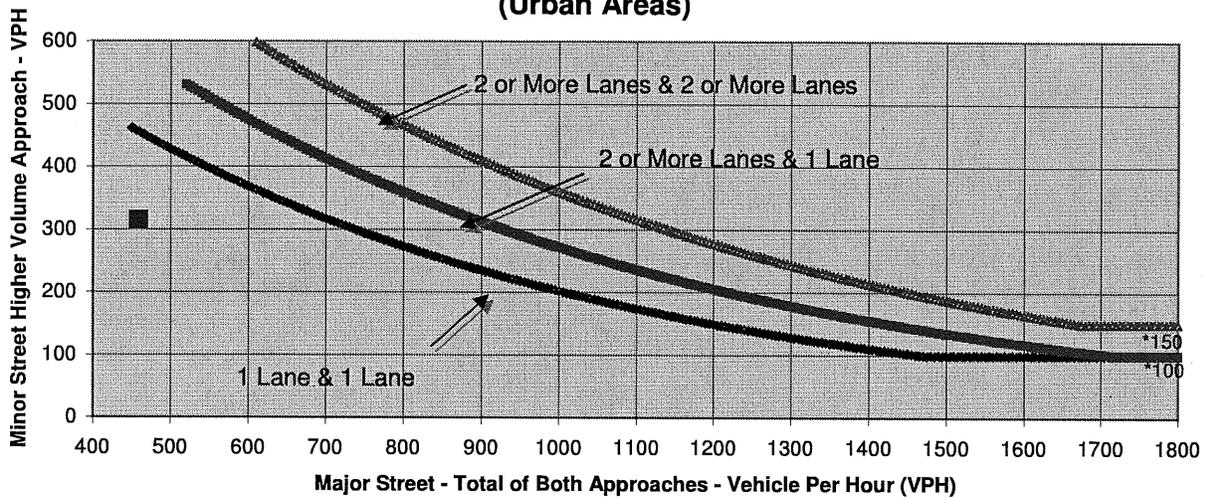
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	99	10	170
Through	130	120	5	5
Right	100	5	5	140
Total	235	224	20	315

Major Street Direction

North/South
 East/West

**Figure 4C-3
 Warrant 3, Peak Hour
 (Urban Areas)**



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street	Minor Street	<u>Warrant Met</u>
	Jackson Street	Monroe Ave	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	459	315	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Sheet No 1 of ?

Major Street San Pablo Avenue
 Minor Street Dartmouth Street

Project University Village at San Pablo Avenue
 Scenario 2035 Plus Project
 Peak Hour AM

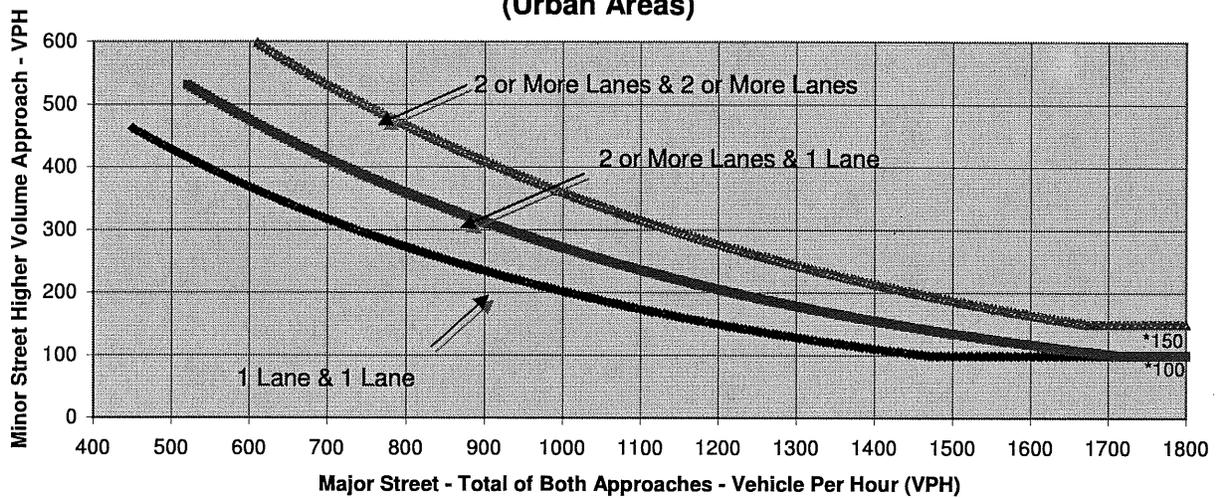
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	100	0	50
Through	914	1,574	0	0
Right	0	0	0	0
Total	914	1,674	0	50

Major Street Direction

x North/South
 _____ East/West

**Figure 4C-3
 Warrant 3, Peak Hour
 (Urban Areas)**



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street	Minor Street	<u>Warrant Met</u>
	San Pablo Avenue	Dartmouth Street	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	2,588	50	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Sheet No 1 of ?

Major Street San Pablo Avenue
 Minor Street Harrison Street

Project University Village at San Pablo Avenue
 Scenario 2035 Plus Project
 Peak Hour PM

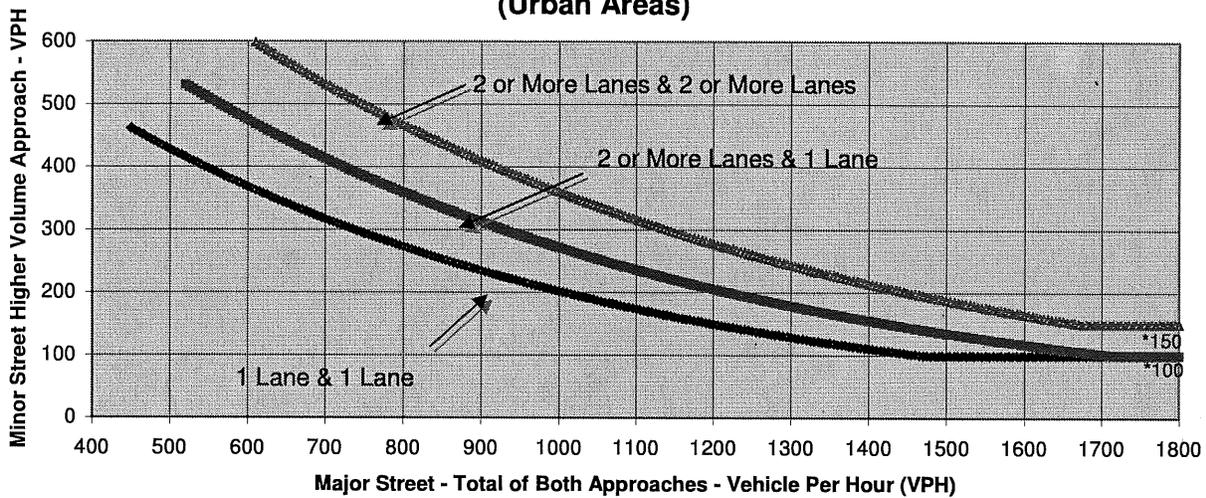
Turn Movement Volumes

	NB	SB	EB	WB
Left	90	0	100	20
Through	1,382	1,364	10	20
Right	0	0	0	0
Total	1,472	1,364	110	40

Major Street Direction

x North/South
 _____ East/West

**Figure 4C-3
 Warrant 3, Peak Hour
 (Urban Areas)**



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street San Pablo Avenue	Minor Street Harrison Street	Warrant Met
Number of Approach Lanes	2	1	
Traffic Volume (VPH) *	2,836	110	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.