

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 4) Boston Ave 2010-09-22 Major Street: Date: Minor Street: 29th St-I-5 SB On ramp Scenario: Year 2030 WARRANT 2 - Four Hour Vehicular Volume SATISFIED* YES □ NO □ Record hourly vehicular volumes for any four hours of an average day. 2 or Hour APPROACH LANES One More Both Approaches - Major Street Higher Approach - Minor Street *All plotted points fall above the curves in Figure 4C-1. (URBAN AREAS) Yes 🗌 No 🗌 OR, All plotted points fall above the curves in Figure 4C-2. (RURAL AREAS) Yes 🗍 No \square WARRANT 3 - Peak Hour SATISFIED YES 🛛 NO 🗌 (Part A or Part B must be satisfied) SATISFIED YES X NO (All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods) 1. The total delay experienced for traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane Yes 🖾 No 🗌 approach, or five vehicle-hours for a two-lane approach; AND The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; <u>AND</u> Yes ⊠ No 🗌 The total entering volume serviced during the hour equals or exceeds 800 yph for intersections with four or more approaches or 650 vph for intersections with Yes ⊠ No 🔲 three approaches. PART B SATISFIED YES I NO I 2 or Hour AM APPROACH LANES One More Both Approaches - Major Street 1076 623 Х Higher Approach - Minor Street 61 143 The plotted point falls above the curve in Figure 4C-3.

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

OR, The plotted point falls above the curve in Figure 4C-4.

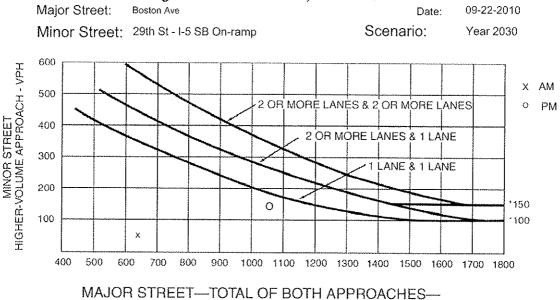
No 🗵

No 🗌

Yes 🔲

Yes 🗌

Figure 4C-3. Warrant 3, Peak Hour



*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 lane.

VEHICLES PER HOUR (VPH)

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

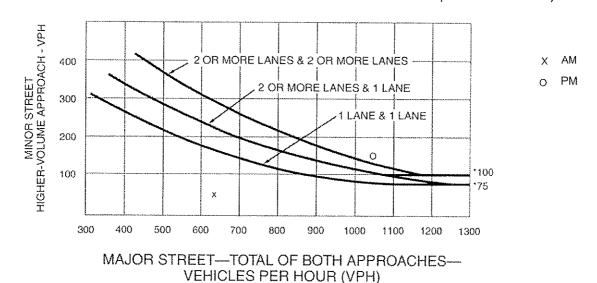


Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 4) Major Street: Harbor Dr Date: 2010-09-22 Minor Street: Sigsbee St Scenario: Year 2030 WARRANT 2 - Four Hour Vehicular Volume SATISFIED* YES □ NO □ Record hourly vehicular volumes for any four hours of an average day. 2 or Hour APPROACH LANES One More Both Approaches - Major Street Higher Approach - Minor Street *All plotted points fall above the curves in Figure 4C-1. (URBAN AREAS) Yes No 🗌 OR, All plotted points fall above the curves in Figure 4C-2. (RURAL AREAS) Yes [] No 🗌 WARRANT 3 - Peak Hour SATISFIED YES ⊠ NO □ (Part A or Part B must be satisfied) SATISFIED YES ⊠ NO □ (All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods) 1. The total delay experienced for traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane Yes ⊠ No 🗆 approach, or five vehicle-hours for a two-lane approach; AND 2. The volume on the same minor street approach (one direction only) equals or exceeds Yes 🗵 No 🔲 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with Yes 🛛 No 🗌 three approaches. PART B SATISFIED YES 🛛 NO 🗌 2 or Hour AM APPROACH LANES One More Both Approaches - Major Street Х 2955 2190 Higher Approach - Minor Street 200 х 160 The plotted point falls above the curve in Figure 4C-3.

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

OR, The plotted point falls above the curve in Figure 4C-4.

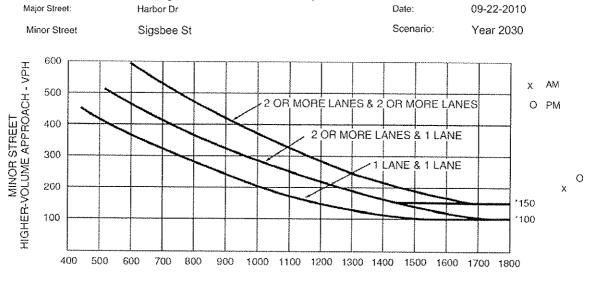
No 🗌

No \square

Yes 🗵

Yes 🗵

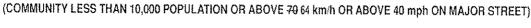
Figure 4C-3. Warrant 3, Peak Hour

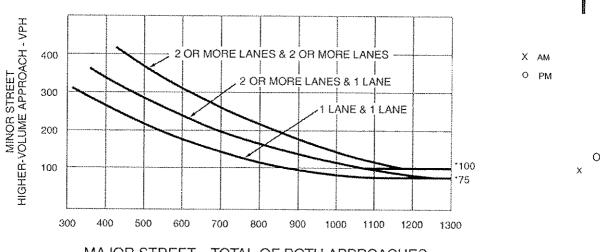


MAJOR STREET—TOTAL OF BOTH APPROACHES— VEHICLES PER HOUR (VPH)

*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 lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

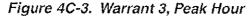


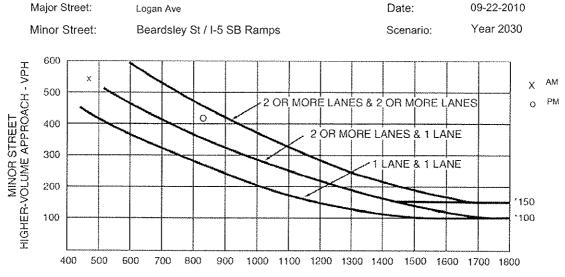


MAJOR STREET—TOTAL OF BOTH APPROACHES— VEHICLES PER HOUR (VPH)

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 4)

Major Street: Logan Ave		Date: 2010-09	0-22	
Minor Street: Beardsley St / I-5 SB Ramp	os.	Scenario: Year 20	030	
WARRANT 2 - Four Hour Vehicular	Volume	SATISFIED*	YES [NO □
Record hourly vehicular volumes for any for	our hours of an average d	ay.		
APPROACH LANES	2 or One More	Hour		
Both Approaches - Major Street				
Higher Approach - Minor Street				
*All plotted points fall above the curves in	Yes 🗌	No 🗆		
QR, All plotted points fall above the curves in Figure 4C-2. (RURAL AREAS)			Yes 🗌	No 🗆
WARRANT 3 - Peak Hour (Part A or Part B must be satisfied)		SATISFIED	YES 🗵	NO □
PART A (All parts 1, 2, and 3 below must be satistione hour, for any four consecutive 15-	sfied for the same minute periods)	SATISFIED	YES 🗵	NO 🗆
The total delay experienced for traffic or controlled by a STOP sign equals or ex approach, or five vehicle-hours for a two	n one minor street approac	ch (one direction only) or a one-lane	Yes 🗵	No 🗆
The volume on the same minor street a 100 vph for one moving lane of traffic or	pproach (one direction on 150 vph for two moving la	ly) equals or exceeds anes; <u>AND</u>	Yes ⊠	No 🗆
The total entering volume serviced during for intersections with four or more approaches.	ng the hour equals or exce paches or 650 vph for inte	eeds 800 vph rsections with	Yes ⊠	No 🗆
PART B	,	SATISFIED	YES 🏻	NO 🗆
APPROACH LANES	One More AM Ho	our		
Both Approaches - Major Street	x 498 802			
Higher Approach - Minor Street	x 544 420			
The plotted point falls above the curve in Figure 4C-3.			Yes ⊠	No 🔲
OR, The plotted point falls above the curve in Figure 4C-4.			Yes 🗵	No 🔲

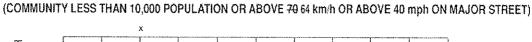


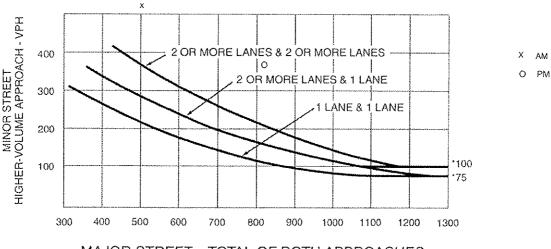


MAJOR STREET—TOTAL OF BOTH APPROACHES— VEHICLES PER HOUR (VPH)

*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 lane.

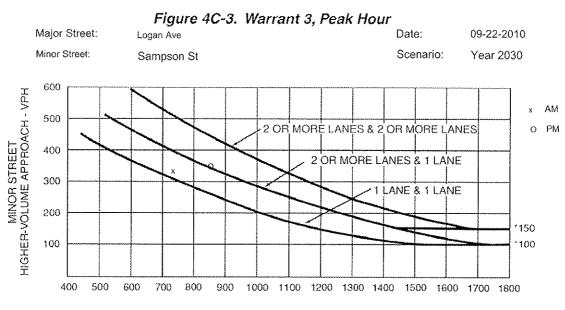
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)





MAJOR STREET—TOTAL OF BOTH APPROACHES— VEHICLES PER HOUR (VPH)

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 4) Major Street: Logan Ave Date: 2010-09-22 Minor Street: Sampson St Scenario: Year 2030 WARRANT 2 - Four Hour Vehicular Volume SATISFIED* YES □ NO □ Record hourly vehicular volumes for any four hours of an average day. 2 or Hour APPROACH LANES One More Both Approaches - Major Street Higher Approach - Minor Street *All plotted points fall above the curves in Figure 4C-1. (URBAN AREAS) Yes 🗌 No 🗌 OR, All plotted points fall above the curves in Figure 4C-2. (RURAL AREAS) Yes 🔲 No WARRANT 3 - Peak Hour SATISFIED YES ⊠ NO □ (Part A or Part B must be satisfied) SATISFIED YES ⊠ NO □ (All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods) 1. The total delay experienced for traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane Yes ⊠ No 🗌 approach, or five vehicle-hours for a two-lane approach; AND 2. The volume on the same minor street approach (one direction only) equals or exceeds Yes 🗵 No 🗌 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with Yes ⊠ No 🗌 three approaches. PART B SATISFIED YES ⊠ NO □ 2 or Hour AM APPROACH LANES One More Both Approaches - Major Street 725 854 Х Higher Approach - Minor Street 312 x 354 The plotted point falls above the curve in Figure 4C-3. Yes X No 🗌 OR, The plotted point falls above the curve in Figure 4C-4. Yes X No



MAJOR STREET—TOTAL OF BOTH APPROACHES— VEHICLES PER HOUR (VPH)

*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 lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

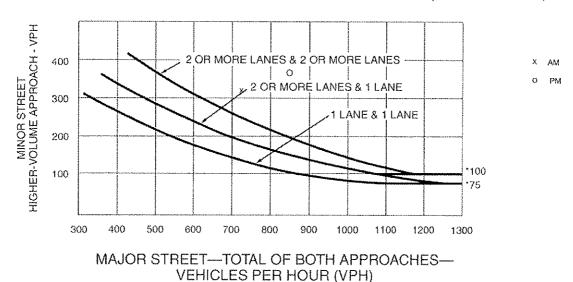
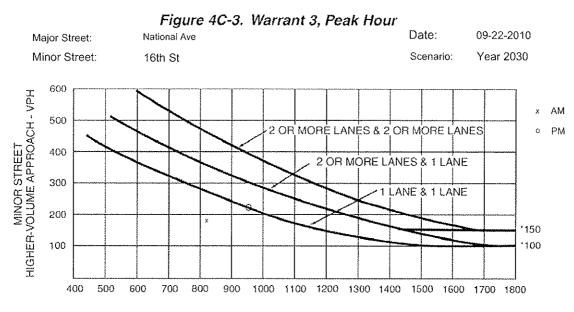


Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 4)

Major Street: National Ave	v	Date:	2010-09-22	,			
Minor Street: 16th St		Scenario:	Year 2030				
WARRANT 2 - Four Hour Vehicular	Volume	SATIS	SFIED* YES	s 🗆	NO □		
Record hourly vehicular volumes for any for	our hours of an averag	e day.					
APPROACH LANES	2 or One More		Hour				
Both Approaches - Major Street							
Higher Approach - Minor Street							
*All plotted points fall above the curves in Figure 4C-1. (URBAN AREAS)					No 🗆		
QR, All plotted points fall above the curves in Figure 4C-2. (RURAL AREAS)			Ye	s 🔲	No 🗆		

WARRANT 3 - Peak Hour		SATIS	FIED YES	S 🗵	NO 🗆		
(Part A or Part B must be satisfied)							
PART A (All narte 1 2 and 3 helow must be eatis	efied for the came	SATIS	FIED YES	S X	NO 🗆		
(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)							
The total delay experienced for traffic or controlled by a STOP sign equals or exapproach, or five vehicle-hours for a two	ceeds four vehicle-hou	roach (one directi irs for a one-lane	on only) Ye:	s 🗵	No 🗆		
The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND					No 🔲		
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.				s 🛛	No 🗆		
PART B		SATIS	FIED YES	S 🛛	по □		
APPROACH LANES	2 or One More AM /	Hour					
Both Approaches - Major Street		55					
Higher Approach - Minor Street	x 192 2	220					
The plotted point falls above the curve in Figure 4C-3.			Yes	s 🗵	No 🔲		
OR, The plotted point falls above the curve in Figure 4C-4.			Yes	3 X	No 🗆		



MAJOR STREET—TOTAL OF BOTH APPROACHES— VEHICLES PER HOUR (VPH)

*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 lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

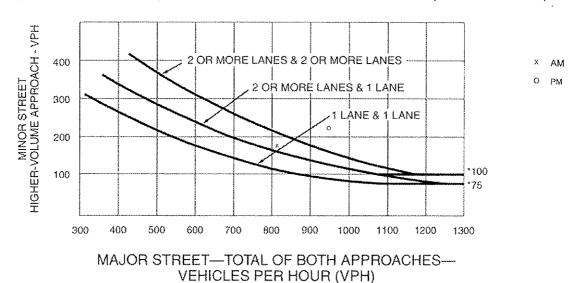
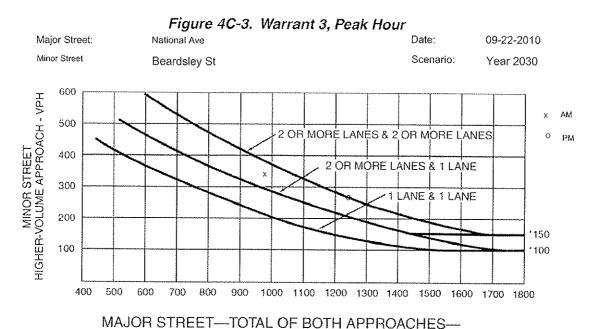


Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 4)

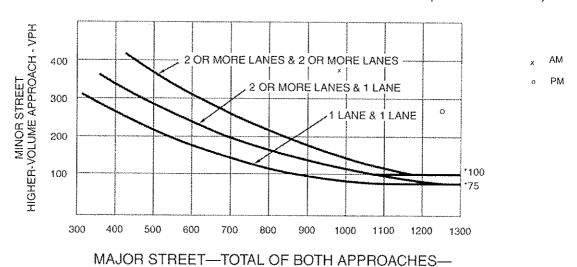
Major Street: National Ave	Date: 2010-09-22
Minor Street: Beardsley St	Scenario: Year 2030
WARRANT 2 - Four Hour Vehicular Volume	SATISFIED* YES ☐ NO ☐
Record hourly vehicular volumes for any four hours of an a	average day.
2 or APPROACH LANES One More	Hour
Both Approaches - Major Street	
Higher Approach - Minor Street	
*All plotted points fall above the curves in Figure 4C-1. (\)	JRBAN AREAS) Yes ☐ No ☐
QR, All plotted points fall above the curves in Figure 4C-2	2. (RURAL AREAS) Yes No 🗆
WARRANT 3 - Peak Hour (Part A or Part B must be satisfied)	SATISFIED YES IN O
PART A (All parts 1, 2, and 3 below must be satisfied for the sa one hour, for any four consecutive 15-minute period	SATISFIED YES NO CI
The total delay experienced for traffic on one minor stre- controlled by a STOP sign equals or exceeds four vehic approach, or five vehicle-hours for a two-lane approach	et approach (one direction only)
The volume on the same minor street approach (one did 100 vph for one moving lane of traffic or 150 vph for two	rection only) equals or exceeds Yes X No C
The total entering volume serviced during the hour equator intersections with four or more approaches or 650 vp three approaches.	als or exceeds 800 vph oh for intersections with Yes X No C
PART B	SATISFIED YES NO
2 or APPROACH LANES One More	M Hour
Both Approaches - Major Street x 99	
Higher Approach - Minor Street x 37	282
The plotted point falls above the curve in Figure 4C-3.	Yes ⊠ No □
OR, The plotted point falls above the curve in Figure 4C-4	Yes 🗵 No 🗍



VEHICLES PER HOUR (VPH)

'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 lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

VEHICLES PER HOUR (VPH)