Page TC4-1 Lines 15 through 22

Page TC4-2, Line 7

Page TC4-3 Lines 17 through 20

Page TC4-3, Line 24

Page TC4-3, Line 28 & 29

Page TC4-4, Line 3

Page 4A-6, Line 11

62. Signal ~~Warrant~~ Criteria-a threshold condition that, if found to be satisfied as part

Page 4B-1 Section 4B.02 Line 25

has provided a series of signal ~~warrants~~ criteria, described in Chapter 4C, that defines the ~~minimum~~

Page 4B-2, Section 4B.02, Line 9

D. Flash or cover the signal heads for a ~~minimum of 90 days~~ period of time, and install the appropriate

Page 4B-2, Section 4B.02, Line 13
control signal, the poles and cables may remain in place ~~for 1 year~~ after removal of the

Page 4B-2, Section 4B.03, Lines 24 & 25
and control measures are used, and if the signal timing is reviewed and updated, as needed, ~~on a regular basis (every 2 years)~~ to ensure that it satisfies current traffic demands.

Page 4B-2 Section 4B.03 Line 26
C. They potentially reduce the frequency and severity of certain types of crashes, especially right-angle

Page 4B-2, Section 4B.03, Line 28
D. They are capable of being coordinated to provide for continuous or nearly continuous movement of traffic

Page 4B-2, Section 4B.03, Line 30
E. They ~~are~~ can potentially be used to interrupt heavy traffic at intervals to permit other traffic, vehicular or

Page 4B-3, Section 4B.03, Line 12
Engineering ~~studies~~ reviews of operating traffic control signals ~~should be made~~ may become necessary, when operational conditions change, to determine whether

Page 4B-3, Section 4B.04, Line 19
signal ~~warrants~~ criteria has been satisfied.

Page 4B-4, Section 4B.04, Line 7
J. If the ~~warrant~~ criteria is satisfied, installing multiway Stop sign control:

Page 4B-4, Section 4B.05, Line 22 & 23
intersection is widened, consideration should be given to the additional green time pedestrians need to cross the widened roadways ~~should be considered to ensure that it will not exceed~~ as compared to the green time saved

Page 4C-1, Section 4C.01, Line 4
An engineering study of traffic conditions, pedestrian ~~characteristics~~ conditions, and

Page 4C-1, Section 4C.01, Line 8
of the applicable factors contained in the following traffic signal ~~warrants~~ criteria and other

Page 4C-1, Section 4C.01, Lines 10 through 17
~~Warrant~~ Criteria 1, Eight-Hour Vehicular Volume.
~~Warrant~~ Criteria 2, Four-Hour Vehicular Volume.
~~Warrant~~ Criteria 3, Peak Hour.
~~Warrant~~ Criteria 4, Pedestrian Volume.
~~Warrant~~ Criteria 5, School Crossing.
~~Warrant~~ Criteria 6, Coordinated Signal System.
~~Warrant~~ Criteria 7, Crash Experience.
~~Warrant~~ Criteria 8, Roadway Network.

Page 4C-1, Section 4C.01, Between Lines 17 & 18
Criteria 1 and 4 are considered warrants. Criteria 2, 3, 5, 6, 7 and 8 are considered guidelines.

Page 4C-1, Section 4C.01, Line 18
The satisfaction of ~~a~~ one or more traffic signal ~~warrant or~~ warrants or guidelines shall not in itself require

Page 4C-1, Section 4C.01, Lines 27 and 28
A traffic control signal should not be installed unless an engineering ~~study~~ analysis indicates that installing a traffic control signal will potentially improve the ~~overall~~ safety and/or operation of

Page 4C-1, Section 4C.01, Line 31
traffic flow within an existing traffic signal system.

Page 4C-2, Section 4C.01, Line 4
count against the above signal ~~warrants~~ criteria.

Page 4C-2, Section 4C.01, Line 5
Engineering judgment should also be used in applying various traffic signal ~~warrants~~ criteria

Page 4C-2, Section 4C.01, Line 19
major street with minimal conflict and the right turn lane is of sufficient length to accommodate the expected right turning traffic. Under the proceeding conditions, ~~T~~the approach should be evaluated as a one-lane

Page 4C-2, Section 4C.01, Line 22
to obtain a traffic count that would represent future conditions, hourly volumes or average daily traffic

Page 4C-2, Section 4C.01, Line 24
~~warrants~~ criteria.

Page 4C-2, Section 4C.01, Line 25
For signal ~~warrant~~ criteria analysis, a location with a wide median should be considered as

Page 4C-2, Section 4C.01, Between Lines 27 & 28
The study may consider the effects of the right turn vehicles and the associated permitted movement on a "Red" signal indication after a stop, under assumed traffic signal operation, from all the approaches. Engineering judgment should be used to determine what, if any, portion of the right turn traffic is subtracted from the approach traffic count when evaluating the vehicular traffic count against the traffic signal criteria.

Satisfaction of a single traffic signal criteria, with a documented engineering study/review, can be justification for the installation of a traffic signal at a specific location.

Page 4C-2, Section 4C.01, Lines 32 through 37

B. Vehicular volumes for each traffic movement from each approach, which may be classified by vehicle type (~~heavy~~ trucks~~,~~ or passenger cars ~~and light trucks, public-transit vehicles~~, and, in some locations, ~~bicycles~~ school buses), during each 15-minute period of the 2 hours in the morning and 2 hours in the afternoon during which total traffic entering the intersection is greatest.

C. Pedestrian volume counts on each crosswalk during ~~the same periods as the vehicular counts in Paragraph B above and during~~ hours of highest pedestrian volume. Where

Page 4C-3, Section 4C.01, Line 17

severity, weather, time of day, date, and day of week for ~~at least 1 year~~ a desirable period of three or more years, if the information is available.

Page 4C-3, Section 4C.01, Line 19

the intersection, may be obtained: ~~during the periods specified in Paragraph B above~~:

Page 4C-3, Section 4C.01, Line 21

consistent with the Peak Hour ~~Warrant~~ Criteria.

Page 4C-3, Section 4C.01, Line 24

C. The posted or, if not posted, statutory speed limit or the known 85th-percentile speed on controlled approaches

Page 4C-3, Section 4C.02, Line 29

Section 4C.02 ~~Warrant~~ Criteria 1. Eight-Hour Vehicular Volume

Page 4C-3, Section 4C.02, Line 31

The Minimum Vehicular Volume, Condition A or A1, is intended for applications where a large

Page 4C-3, Section 4C.02, Line 33

The Interruption of Continuous Traffic, Condition B or B1, is intended for application where the

Page 4C-4, Section 4C.02, Between Line 14 & 15

When comparing vehicular volume of both approaches of the major street against the volume of the side street approaches, each side street approach may independently be evaluated against the criteria listed in Condition A and Condition B of Table 4C-1.

Temporary traffic signals may be installed at new intersections, on predicted hourly vehicular volumes, providing the predicted volumes meet the prescribed minimum vehicular volume levels as noted in Condition A or Condition B of TABLE 4C-1.

Temporary traffic signals may be installed at new intersections, on predicted average daily traffic volumes, providing the predicted volumes meet prescribed minimum levels as noted in Condition A1 or Condition B1 of TABLE 4C-1a. The temporary traffic signals may be placed in signal operation until proper traffic data and experience can be obtained.

Temporary traffic signals may become permanent traffic signals only after the completion of a traffic engineering investigation that verifies that permanent traffic signals are justified.

1. The traffic volumes used shall be assigned current volumes.

2. Conditions A1 or B1 lists the minimum Average Daily Traffic volumes which may justify consideration of signalization, and which are considered to be equivalent to the hourly traffic volume stipulations denoted by Condition A and Condition B respectively.
3. Surveillance should be maintained on the temporary traffic signal to assure that the signal operation is not creating any undue problems.
4. An engineering study should be conducted, normally, after six months of operation and before one year of operation as a temporary traffic signal control, to determine if the traffic signal is needed and should become a permanent installation.
5. If the temporary traffic signal is not justified by an engineering study, it may be removed immediately and the appropriate traffic control devices, commensurate to justification revealed by the engineering study, may be installed.
6. If the engineering study indicates that the traffic signal is justified, it shall remain in place and have the status of a permanent traffic signal installation.

Temporary traffic signals installed under this procedure must conform to the design requirements for traffic signals as stipulated in this manual.

Page 4C-5, Section 4C.02, Line 1

Table 4C-1. ~~Warrant~~ Criteria 1, Eight-Hour Vehicular Volume

Page 4C-5, Section 4C.02, Line 23

[b] Used for combination of Conditions A and B after ~~adequate trial~~ consideration of other remedial measures.

Page 4C-5, Section 4C.02, After Line 25

TABLE 4C-1a, Eight-Hour Vehicular Volume (ADT Equivalent)

Condition A1 – Minimum Vehicular Volume (ADT Equivalent)			
Number of lanes on each approach		Equivalent Average Daily Traffic Volumes Approaching From Both Directions On:	
Major Street	Minor Street	Major Street	Minor Street
1	1	8,300	4,600
2 or more	1	10,000	4,600
2 or more	2 or more	10,000	6,000
1	2 or more	8,300	6,000

Condition B1 – Interruption of Continuous Traffic (ADT Equivalent)			
Number of lanes on each approach		Equivalent Average Daily Traffic Volumes Approaching From Both Directions On:	
Major Street	Minor Street	Major Street	Minor Street
1	1	12,500	2,300
2 or more	1	15,000	2,300
2 or more	2 or more	15,000	3,100
1	2 or more	12,500	3,100

Page 4C-6, Section 4C.02, Lines 2 through 4

The combination of Conditions A and B should be applied only after ~~an adequate trial~~ consideration of other alternatives that could cause less delay and inconvenience to traffic ~~has failed to solve the traffic problems~~.

Page 4C-6, Section 4C.03, Lines 5

Section 4C.03 ~~Warrant~~ Criteria 2, Four-Hour Vehicular Volume

Page 4C-6, Section 4C.03, Lines 7

The Four-Hour Vehicular Volume signal ~~warrant~~ criteria conditions are intended to be applied where

Page 4C-6, Section 4C.03, Between Lines 18 & 19

When comparing vehicular volumes depicted in Figure 4C-1, the appropriate equations, as listed in Table 4C-2, may be used.

Table 4C-2. Mathematical Equation Equivalency to Figure 4C-1

X = sum of both major street approach volumes		
Y = volume of a)single minor street approach or b) minor street high volume approach		
Number of Lanes		
Minor Street(Y)	Major Street(X)	Equation
2 or more	2 or more	If X => 1295, Y = 115 or Y = 879.232228-1.011380233X +0.0003253082X^2
2 or more	1	If X => 1118, Y = 115 or Y = 651.50622395-0.7483745392X+0.000240228X^2
1	2 or more	If X => 1340, Y = 80 or Y = 651.50622395-0.7483745392X+0.000240228X^2
1	1	If X => 1142, Y = 80 or Y = 554.1310944-0.7134267844X+0.0002312157X^2

Page 4C-6, Section 4C.03, Between Lines 21 & 22

When comparing vehicular volumes depicted in Figure 4C-2, the appropriate equations, as listed in Table 4C-3, may be used.

Table 4C-3. Mathematical Equation Equivalency to Figure 4C-2

X = sum of both major street approach volumes		
Y = volume of a)single minor street approach or b) minor street high volume approach		
Number of Lanes		
Minor Street(Y)	Major Street(X)	Equation
2 or more	2 or more	If X => 890, Y = 80 or Y = 613.77772474-0.9893678281X +0.0004377428X^2
2 or more	1	If X => 797, Y = 80 or Y = 460.53837044-0.7635806818X+0.0003591016X^2
1	2 or more	If X => 940, Y = 60 or Y = 460.53837044-0.7635806818X+0.0003591016X^2
1	1	If X => 782, Y = 60 or Y = 377.22710663-0.6793503652X+0.0003501046X^2

When comparing vehicular volume of both approaches of the major street against the volume of the side street approaches, each side street approach may independently be evaluated against the criteria listed in Figure 4C-1, 4C-2, Table 4C-2 or Table 4C-3, as appropriate.

Page 4C-6, Section 4C.04, Line 22

Section 4C.04 ~~Warrant~~ Criteria 3, Peak Hour

Page 4C-6, Section 4C.04, Line 24

The Peak Hour signal ~~warrant~~ criteria is intended for use at a location where traffic conditions are

Page 4C-6, Section 4C.04, Line 28

This signal ~~warrant~~ criteria shall be applied only in unusual cases, Such cases include,

Page 4C-7, Section 4C.03, Line 1
Figure 4C-1. ~~Warrant~~ Criteria 2 – Four-Hour Vehicular Volume

Page 4C-7, Section 4C.03, Line 30
Figure 4C-2. ~~Warrant~~ Criteria 2 – Four-Hour Vehicular Volume (70% Factor)

Page 4C-8, Section 4C.04, Line 5
1. **The total stopped time delay experienced, or estimated by the method described in the Highway Capacity Manual for unsignalized intersections, by the traffic on one minor-**

Page 4C-8, Section 4C.04, Between Lines 21 & 22
When comparing vehicular volumes depicted in Figure 4C-3, the appropriate equations, as listed in Table 4C-4 may be used.

Table 4C-4. Mathematical Equation Equivalency to Figure 4C-3

X = sum of both major street approach volumes		
Y = volume of a)single minor street approach or b) minor street high volume approach		
Number of Lanes		
Minor Street(Y)	Major Street(X)	Equation
2 or more	2 or more	If X => 1672, Y = 150 or Y =1060.5405451–0.889969286X+0.0002059999X^2
2 or more	1	If X => 1461, Y = 150 or Y =837.59424427-0.7219511908X+0.0001720248X^2
1	2 or more	If X => 1759, Y = 100 or Y =837.59424427-0.7219511908X+0.0001720248X^2
1	1	If X => 1516, Y = 100 or Y =745.652000052-0.7548866636X+0.00021703X^2

Page 4C-8, Section 4C.04, Between Lines 25 & 26
When comparing vehicular volumes depicted in Figure 4C-4, the appropriate equations, as listed in Table 4C-5 may be used.

Table 4C-5. Mathematical Equation Equivalency to Figure 4C-4

X = sum of both major street approach volumes		
Y = volume of a)single minor street approach or b) minor street high volume approach		
Number of Lanes		
Minor Street(Y)	Major Street(X)	Equation
2 or more	2 or more	If X => 1183, Y = 100 or Y =771.842673–0.9817221615X+0.0003498922X^2
2 or more	1	If X => 1040, Y = 100 or Y =593.38729059-0.7471500045X+0.000262383X^2
1	2 or more	If X => 1196, Y = 75 or Y =593.38729059-0.7471500045X+0.000262383X^2
1	1	If X => 1054, Y = 75 or Y =520.01155026-0.7647561999X+0.0003250549X^2

When comparing vehicular volume of both approaches of the major street against the volume of the side street approaches, each side street approach may independently be evaluated against the criteria listed in Figure 4C-3, 4C-4, Table 4C-4 or Table 4C-5, as appropriate.

Page 4C-8, Section 4C.05, Line 26
Section 4C.05 ~~Warrant~~ Criteria 4, Pedestrian Volume

Page 4C-8, Section 4C.05, Line 28
The Pedestrian Volume signal ~~warrant~~ criteria is intended for applications where the traffic volume on

Page 4C-9, Section 4C.04, Line 1
Figure 4C-3. ~~Warrant~~ Criteria 3 – Peak Hour

Page 4C-9, Section 4C.04, Line 31
Figure 4C-2. ~~Warrant~~ Criteria 3 – Peak Hour (70% Factor)

Page 4C-10, Section 4C.05, Line 13
The Pedestrian Volume signal ~~warrant~~ criteria shall not be applied at locations where

Page 4C-10, Section 4C.05, Line 17
If a traffic signal control signal is justified by both this signal ~~warrant~~ criteria and a traffic

Page 4C-10, Section 4C.05, Line 21
If a traffic signal control signal is justified by both this signal ~~warrant~~ criteria and a traffic

Page 4C-10, Section 4C.05, Lines 25 through 27
B. At an intersection, the traffic control signal ~~should be traffic actuated and~~ should include pedestrian detectors if semi-actuated. ~~As a minimum, it should have semi-actuated operation, but f~~.Full-actuated operation with detectors on all approaches might also

Page 4C-11, Section 4C.06, Line 7
Section 4C.06 ~~Warrant~~ Criteria 5, School Crossing

Page 4C-11, Section 4C.06, Line 9
The School Crossing signal ~~warrant~~ criteria is intended for application where the fact that school

Page 4C-11, Section 4C.06, Line 23
The School Crossing signal ~~warrant~~ criteria shall not be applied at locations where the

Page 4C-11, Section 4C.06, Between Lines 27 & 28
As an alternate to obtaining the actual number of available gaps, of adequate length, to permit for the safe crossing of the street by school children, actual vehicular volumes traversing the school cross-walk can be compared to the conditions denoted in Table 4C-6 for the purpose of determining the potential need for a traffic signal.

Table 4C-6. Vehicular Volume Equivalency For Insufficient Gaps In Vehicular Flow

Average Number of Children Per Minute	Width of Street Vehicular Volume (v.p.h.)			
	30'	40'	50'	60'
1 - 5	645	610	570	530
6 – 10	620	580	545	505
11 – 15	590	555	515	480
16 – 20	565	530	490	450
21 – 25	540	500	465	425
26 – 30	510	475	435	400
31 – 35	485	450	410	370

Page 4C-11, Section 4C.06, Line 28

If a traffic control signal is justified by both this signal ~~warrant~~ criteria and an engineering

Page 4C-12, Section 4C.06, Lines 1 through 3

B. At an intersection, the traffic control signal ~~should be traffic actuated and~~ should include pedestrian detectors if semi-actuated. ~~As a minimum, it should have semi-actuated operation, but f~~Full-actuated operation with detectors on all approaches might also

Page 4C-12, Section 4C.07 Line 9

Section 4C.07 ~~Warrant~~ Criteria 6, Coordinated Signal Systems

Page 4C-12 Section 4C.07, Line 16

finds that one of the following ~~criteria is~~ conditions is met:

Page 4C-12, Section 4C.07, Line 24

The Coordinated Signal System signal ~~warrant~~ criteria should not be applied where the

Page 4C-12 Section 4C.07 Between Lines 25 & 26

The Coordinated Signal System signal criteria should not be applied where the resultant traffic signal would be the first signal in the signal system.

Page 4C-12, Section 4C.08, Line 26

Section 4C.08 ~~Warrant~~ Criteria 7, Crash Experience

Page 4C-12, Section 4C.08, Line 28

The Crash Experience signal ~~warrant~~ criteria conditions are intended for application where the

Page 4C-13, Section 4C.08, Line 3

finds that all of the following ~~criteria~~ conditions are met:

Page 4C-13, Section 4C.09, Line 19
Section 4C.09 ~~Warrant~~ Criteria 8, Roadway Network

Page 4C-13, Section 4C.09, Line 26
of the following ~~criteria~~ conditions:

Page 4C-14, Section 4C.09, Line 1
A major route as used in this signal ~~warrant~~ criteria shall have one or more of the following

Page 4C-14, Section 4C.09, Line 5
B. It includes rural or suburban highways which are ~~outside~~ adjacent to, entering, or traversing a

Page 4D-1, Section 4D.01, Line 26
control signal, the signal faces shall be covered, ~~turned,~~ or taken down to clearly

Page 4D-2, Section 4D.01, Line 3
should be ~~re-evaluated regularly and updated if needed~~ reviewed and updated, as needed to ensure that it satisfies current traffic demand.

Page 4D-5, Section 4D.04, Lines 3 & 4
Except when a sign is in place prohibiting a turn on red ~~or a RED ARROW signal indication is displayed~~, vehicular traffic facing a

Page 4D-5, Section 4D.04, Lines 10 through 18
~~2. Vehicular traffic facing a steady RED ARROW signal indication shall not enter the intersection to make the movement indicated by the arrow (except as described in the Option below) and, unless entering the intersection to make another movement permitted by another signal indication, shall stop at a clearly marked stop line; but if there is no stop line, before entering the crosswalk on the near side of the intersection, or if there is no crosswalk, then before entering the intersection, and shall remain stopped until a signal indication permitting the movement indicated by such RED ARROW is shown.~~

Page 4D-5, Section 4D.04, Line 20
a steady CIRCULAR RED ~~or RED ARROW~~ signal indication alone shall

Page 4D-5, Section 4D.04, Lines 34 through 36
3. ~~Flashing RED ARROW and~~ A flashing YELLOW ARROW signal indications ~~have~~ has the same meaning as the corresponding flashing circular signal indication, except ~~they apply~~ it applies only to the vehicular traffic

Page 4D-6, Section 4D.04, Lines 1 through 3

~~Option:~~

~~Where turns are allowed on red and the signal indication is an arrow, a sing may be used to indicate that turns are allowed on red after stopping.~~

Page 4D-7, Section 4D.05, Lines 4 through 8

~~D. **A steady RED ARROW signal indication shall be displayed when it is intended to prohibit traffic, except pedestrians directed by a pedestrian signal head, from entering the intersection or other controlled area to make the indicated turn. Turning on a steady RED ARROW signal indication shall not be permitted.**~~

Page 4D-7, Section 4D.05, Lines 17 & 18

2. **Shall not be displayed in conjunction with the change from a <u>CIRCULAR</u> RED ~~ARROW~~ signal indication to a GREEN ARROW signal indication.**

Page 4D-7 Section 4D.05 Lines 23 & 24

4. Shall be terminated by ~~a RED ARROW signal indication for the same direction or~~ a CIRCULAR RED signal indication except:

Page 4D-7, Section 4D.05, Line 27

YELLOW ARROW signal indication. <u>(see Section 4D.13)</u>

Page 4D-8, Section 4D.05, Line 14

Steady ~~RED ARROW~~, YELLOW ARROW, and GREEN ARROW signal indications, if not

Page 4D-9, Section 4D.06, Lines 12 through 18

~~**1. Left-turn RED ARROW, YELLOW ARROW, and GREEN ARROW signal indications only. At least one left-turn signal face shall be provided in addition to the two approach signal faces required in Section 4D.15 for the through movement. Only one of the three colors shall be illuminated at any given time. A signal instruction sign shall not be required with this set of signal indications. If used, it shall be a LEFT ON GREEN ARROW ONLY sign (R10-5); or**~~

Page 4D-9, Section 4D.06, Lines 25 through 27

it cannot be seen by drivers in the through lane(s), either a LEFT TURN SIGNAL sign (R10-10) or a LEFT ON ARROW ONLY sign (R10-Y5) ~~or a visibility limited CIRCULAR RED signal indication~~ shall be used.

Page 4D-12, Section 4D.07, Lines 15 through17

through traffic~~, except that if the right turn is held to provide an exclusive pedestrian movement, a separate right-turn RED ARROW signal indication shall be provided~~.

Page 4D-12, Section 4D.07, Lines 20 through 26

~~**1. Right-turn RED ARROW, YELLOW ARROW, and GREEN ARROW signal indications only. At least one right-turn signal face shall be provided in addition to the two approach signal faces required in Section 4D.15 for the through movement. Only one of the three colors shall be illuminated at any given time. A signal instruction sign shall not be required with this set of signal indications. If used, it shall be a RIGHT ON GREEN ARROW ONLY sign (R10-5a); or**~~

Page 4D-14, Section 4D.08, Line 16

A ~~straight-through RED ARROW signal indication or a~~ straight-through

Page 4D-15, Section 4D.09, Lines 4 through 12

~~Guidance:~~

~~No movement that creates an unexpected crossing of pathways of moving vehicles or pedestrians should be allowed during any green or yellow interval, except when all three of the following conditions are met:~~

~~A. The movement involves only slight conflict, and~~

~~B. Serious traffic delays are substantially reduced by permitting the conflicting movements, and~~

~~C. Drivers and pedestrians subjected to the unexpected conflict are effectively warned thereof by a sign.~~

Page 4D-15, Section 4D.10, Line 16

GREEN or GREEN ARROW signal indication<u>, except as noted in section 4H.02</u>.

Page 4D-16, Section 4D.11, Lines 22 and 23

left turn movements shall be permitted to flash a CIRCULAR RED ~~or RED ARROW~~ signal indication when the through signal indications are flashed

Page 4D-16, Section 4D.11, Lines 27 and 28

~~**C. The appropriate RED ARROW or YELLOW ARROW signal indication shall be flashed when a signal face consists entirely of arrow lenses.**~~

Page 4D-23, Section 4D.15, Line 17

D. Locations where ~~there is significant percentage of~~ elderly drivers <u>are of special concern</u>.

Page 4D-23, Section 4D.15, Line 22

the approach~~, even if the major movement is a turning movement~~.

Page 4D-26, Section 4D.15, Line 1

Figure 4D-2. <u>Typical</u> Horizontal <u>and Longitudinal</u> Location of Signal Faces

Page 4D-27, Section 4D.15, Lines 15 and 16

mode left-turn movement~~, or if a left-turn movement represents the major movement from an approach,~~ two left-turn signal faces should be provided.

Page 4D-27, Section 4D.15, Lines 18 and 19
movement, ~~or if a right-turn movement represents the major movement from an approach,~~ two right-turn signal faces should be provided.

Page 4D-27, Section 4D.15, Line 21
If a signal face controls a specific movement from a lane or lanes of an approach, its position should make

Page 4D-28, Section 4D.16, Lines 9 and 10
Each signal face at a signalized location shall have ~~either three, four, or~~ one to five signal sections. For usage of a two section signal face, see section 4H.02.

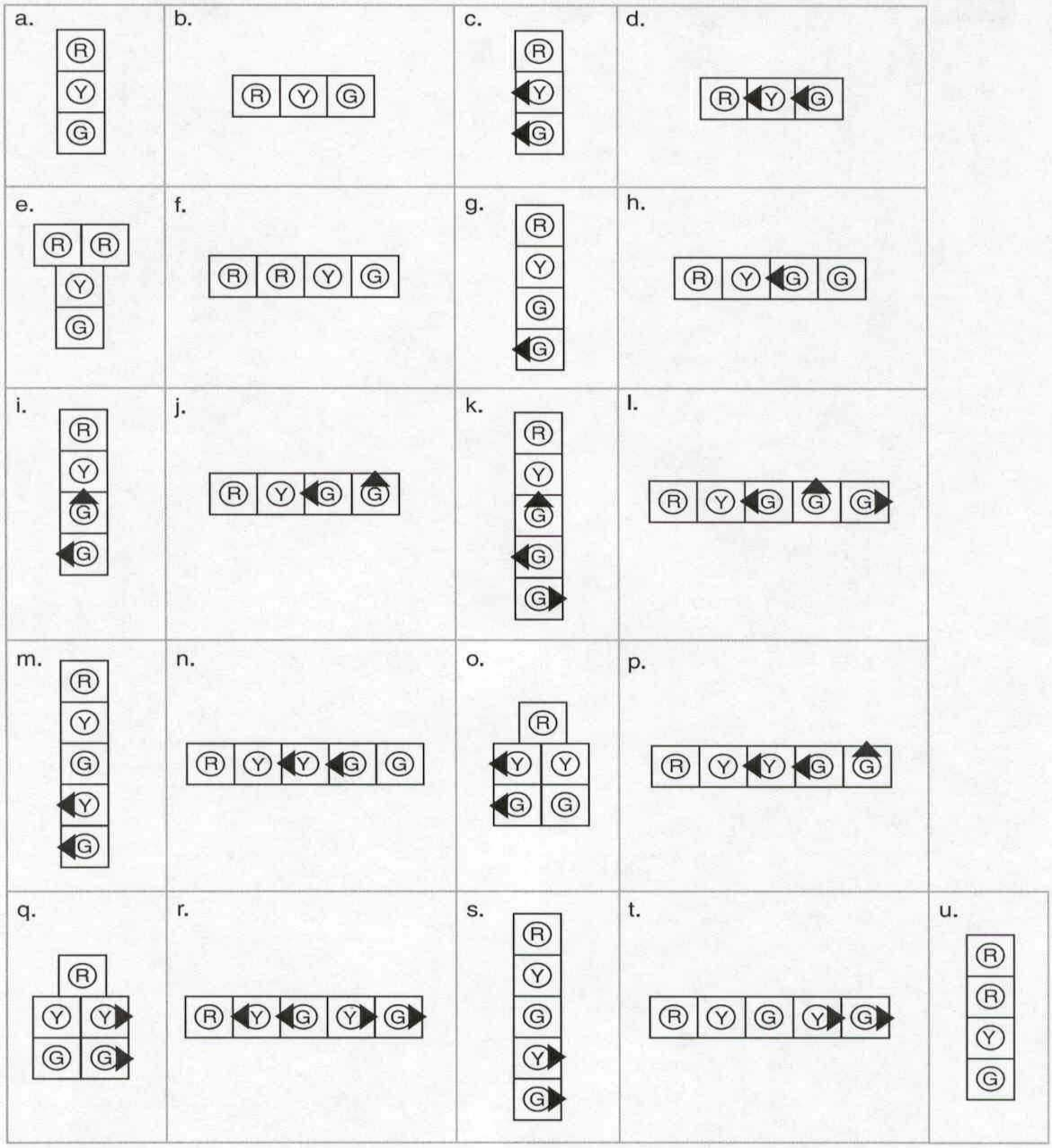
Page 4D-28, Section 4D.16, Line 11
A single-section signal face shall only be permitted at a traffic control signal if it

Page 4D-29, Section 4D.16, Lines 16 and 17
~~**Left-turn RED ARROW**~~
~~**Right-turn RED ARROW**~~

Page 4D-29, Section 4D.16, Lines 27 and 28
~~**Left-turn RED ARROW**~~
~~**Right-turn RED ARROW**~~

Page 4D-31, Section 4D.17, Arrangements c. & d.

Figure 4D-3. Typical Arrangements of Signal Lenses in Signal Faces



Page 4D-35, Section 4D.20, Line 16
transported and used at different locations. Portable traffic control signals shall not be permitted upon the roadway system.

Page 4D-36, Section 4D.20, Line 2
operate the signal, or the signal heads shall be covered~~, turned,~~ or taken

Page 4D-36, Section 4D.21, Lines 19 and 20
The minimum clearance of the total assembly of traffic ~~signal~~ signs ~~(see Section 2B.40)~~ shall conform to the provisions of Section 4D.17.

Page 4D-36, Section 4D.21, Line 21
If used, illuminated traffic ~~signal~~ signs shall be designed and mounted in such a

Page 4D-36, Section 4D.21, Line 26
When a traffic ~~signal~~ sign at a highway traffic signal is applicable to a particular

Page 4E-2, Section 4E.03, Line 6
either ~~Warrant~~ Criteria 4, Pedestrian Volume or ~~Warrant~~ Criteria 5, School Crossing (see

Page 4-2, Section 4E.03, Lines 12 & 13
~~D. When multiphase signal indications (as with split phasing) would tend to confuse pedestrians guided only by vehicular signal indications.~~

Page 4E-3, Section 4E.04, Line 27
Pedestrian signal indications should be ~~conspicuous~~ visible and recognizable to pedestrians

Page 4E-6, Section 4E.06, Line 8
Under ~~stop-and-go~~ steady mode operation, accessible pedestrian signals shall not be limited

Page 4E-11, Section 4E.08, Line 1
Figure 4E-2. ~~Recommended~~ Typical Pushbutton Locations