## PE Civil Transportation Practice Exam ISBN 978-1-932613-73-5

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Errata posted 3-6-2017

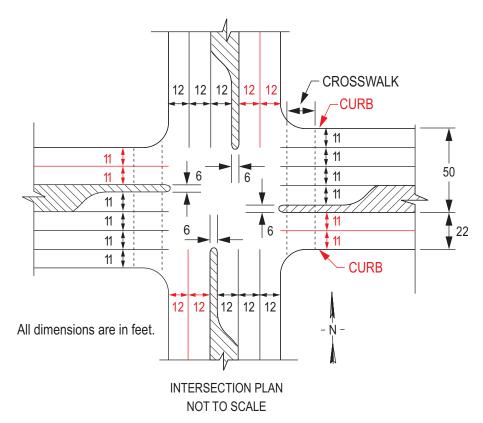
## Revisions are shown in red.

# **Question 528, p. 45:**

Question 528 should read as follows:

The signalized intersection shown has basic pedestrian pushbuttons. Using curb-to-curb distances, the pedestrian clearance time for the north-south direction per the MUTCD is most nearly:

- (A) 17
- (B) 18
- (C) 19
- (D) 21



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# **Solution 528, p. 88:**

Solution 528 should read as follows:

Reference: MUTCD, p. 497, 2009.

$$PCT = \frac{width}{walking speed}$$

Walking speed = 3.5 ft/sec

Width (curb to curb) = 11 + 11 + 6 + 11 + 11 + 11 + 11

$$PCT = \frac{72}{3.5 \text{ ft/sec}} = 20.6 \text{ sec} \approx 21$$

THE CORRECT ANSWER IS: (D)

Previously posted errata begins on the next page.

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#### Revisions are shown in red.

## Question 501, p. 34:

Question 501 should read as follows:

The following information applies to a four-lane freeway.

Volume 2,400 vph (in one direction)

Peak hour factor

0.90

Free-flow speed (measured)

55 mph

5% truck traffic in peak hour

12-ft lanes

10-ft outside shoulders

Level terrain

No recreational vehicles

Commuter traffic familiar with facility

The level of service (LOS) for the freeway is most nearly:

## **Solution 501, p. 77:**

Solution 501 should read as follows:

Reference: Transportation Research Board, *Highway Capacity Manual*, 2010, pp. 11-7 to 11-19.

## FFS = 55 mph

Compute  $f_{HV}$ , p. 11-13, level terrain  $E_T = 1.5$ :

$$f_{HV} = \frac{1}{1 + P_T(E_T - 1)} = \frac{1}{1 + 0.05(1.5 - 1)} = 0.9756$$

Compute flow rate:

$$v_p = {V \over (PHF)(N)(f_{HV})(f_p)} = {2,400 \over 0.9 \times 2 \times 0.976 \times 1.00} = 1,366 \text{ pcphpl}$$

Compute density:

Density = 
$$\frac{V_p}{\text{speed}} = \frac{1,366}{55} = 24.8 \text{ pcpmpl}$$

Find LOS:

From p. 11-7, 
$$LOS = C$$

## THE CORRECT ANSWER IS: (C)

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## **Question 530, p. 47:**

The ninth line should read as follows:

2 left-turning

## Solution 530, p. 89:

Warrant 7 should read as follows:

Warrant 7: Crash Experience

Condition A is met; alternatives have not reduced crash frequency.

Condition B is met; 5 accidents are subject to correction by a signal; 5 in 9 months exceeds 5 in 12 months.

Condition C is met; since speed exceeds 40 mph, use the 56% column and the second row of Table 4C-1; major and minor volumes exceed table values for 8 hours or more. Therefore, Warrant 7 is met.

THE CORRECT ANSWER IS: (D)