

LANE CLOSURE WORKSHEET

DATE: April 30, 2025

FINANCIAL PROJECT ID: 446204-1-52-01

FEDERAL AID PROJECT NO: TBD

COUNTY: HARDEE

DESIGNER: TOKI TAHMID

NO. OF EXISTING LANES: 4

LOCATION: STATE ROAD NO . 35 (US 17)

SCOPE OF WORK: FROM STA. 1052+82.07 TO STA . 1254+36.31 & STA. 1257+76.07 TO STA . 1294+64.47

Calculate the peak hour traffic volume (V):

$$V = ATC \underline{9500} \times P/D \underline{0.073} \times D \underline{0.60} \times PSCF \underline{1.06} \times RTF \underline{1.00} = \underline{441}$$

LANE CLOSURE CAPACITY TABLE

Capacity (C) of an Existing 2-Lane – Converted to 2-Way, 1-Lane = 1400 VPH

Capacity (C) of an Existing 4-Lane – Converted to 1-Way, 1-Lane = 1800 VPH

Capacity (C) of an Existing 6-Lane – Converted to 1-Way, 2-Lane = 3600 VPH

Capacity (C) of an Existing 8-Lane – Converted to 1-Way, 3-Lane = 5400 VPH

User Defined Capacity (C) of Existing 2-Lane - Converted to 2-Way, 1-Lane =

User Defined Capacity (C) of an Existing Multi-Lane - Converted to 1-Way, 1-Lane =

Factors restricting Capacity:

$$TLW \underline{11} \quad LC \underline{4} \quad WZL \underline{5280} \quad G/C \underline{0.44}$$

Calculate the Restricted Capacity (RC) at the Lane Closure Site by multiplying the appropriate 2L, 4L, or 6L Capacity (C) from the Table above by the Obstruction Factor (OF) and the Work Zone Factor (WZF). If the Lane Closure is through or within 600 ft. of a signalized intersection, multiply the RC by the G/C Ratio.

$$RC \text{ (Open Road)} = C \underline{1800} \times OF \underline{0.94} \times WZF \underline{1.00} = \underline{1692}$$

$$RC \text{ (Signalized)} = RC \text{ (Open Road)} \underline{1692} \times G/C \underline{0.44} = \underline{744}$$

If $V \leq RC$, there is no restriction on Lane Closure

If $V > RC$, calculate the hourly percentage of ADT at which Lane Closure will be permitted

$$\text{Open Road \%} = \frac{RC \text{ (Open Road)} \underline{1692}}{(ATC \underline{9500} \times D \underline{0.6} \times PSCF \underline{1.06} \times RTF \underline{1})} = \underline{28.00 \%}$$

$$\text{Signalized \%} = \text{Open Road \%} \underline{28.00} \times G/C \underline{0.44} = \underline{12.32 \%}$$

Plot 24 hour traffic to determine when Lane Closure permitted.

NOTE: For Existing 2-Lane Roadways, D = 1.00.

Work Zone Factor (WZF) applies only to 2-Lane Roadways.

For $RTF < 1.00$, briefly describe alternate route:

LANE CLOSURES

24 HOUR COUNTS

	AM		PM	
	Hourly		Hourly	
	Volume	ATC %	Volume	ATC %
12 - 1	82	0.9	548	5.8
1 - 2	85	0.9	629	6.6
2 - 3	72	0.8	617	6.5
3 - 4	83	0.9	683	7.2
4 - 5	138	1.5	683	7.2
5 - 6	286	3.0	694	7.3
6 - 7	446	4.7	526	5.5
7 - 8	483	5.1	467	4.9
8 - 9	419	4.4	357	3.8
9 - 10	446	4.7	258	2.7
10 - 11	474	5.0	245	2.6
11 - 12	628	6.6	151	1.6
TOTAL			9,500	100

COUNT DATE:

May 6, 2024

Designer:

TOKI TAHMID

Financial Project ID No.:

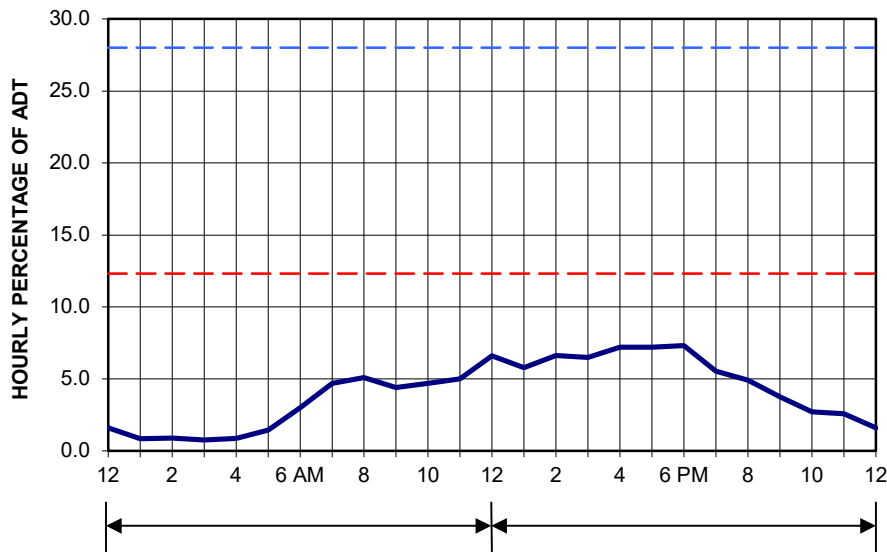
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Location:

STATE ROAD NO . 35 (US 17)

P/D = 0.073

HOURLY VARIATION OF DAILY TRAFFIC



- CONCLUSION -

ROUND TO THE NEAREST
1/2 HOUR
CONSERVATIVELY

OPEN ROAD LANE CLOSURE

0:00 M to 0:00 M

SIGNALIZED LANE CLOSURE

0:00 M to 0:00 M