



# Simplified Highway Forecasting Tool (SHIFT) Design Designation

Ver 3.1, 5-19-2017 Modeling & Forecasting

7/11/2017 1:30:30 PM

lfeudner

CMS DB Version December 2016

103854

PID 103854 - Pavement and curb replacement from slm 4.35 to 5.68 (E Calla Road) in the Village of New Middletown, includes upgrading drainage system and implementing access management.

Opening Year: 2023                      Design Year: 2043

Route ID	Log			Opening	Design	DHV	K	D	T24	TD
	From	To	Length	ADT	ADT					
SMAH00170R	3.74	4.46	0.72	3,500	3,600	320	0.09	0.52	0.15	0.07

**DEFINITIONS:**

ADT: Average Daily Traffic,                      K: Design Hour Factor,                      DHV: Design Hour Traffic  
 DHV: K\*ADT,    D: Peak Direction Factor                      T24: Daily Trucks Fraction  
 TD: Design Hour Truck Fraction

\* This symbol (\*) is shown next to TD if a daily count override was used, \*\* if hourly count override was used.

**LIMITATIONS**

Users of this data need to be aware that there are limitations to the forecasts generated by this product that make it suitable only for roadway design projects which are low risk meaning the design is relatively insensitive to forecasted traffic such as with resurfacing projects. Please take time to read this carefully.

1. There is no attempt to provide any consistency between the forecasts on one segment and another or between a forecast produced previously by others and one produced by this program. Each segment is analyzed independently based on the data for that segment. It is left up to the user to apply professional judgment and common sense to the applicability and usability of the forecasts. If in doubt, contact Modeling & Forecasting 614-752-5747.
2. There is no attempt to provide consistency with recently planned developments or projects occurring in the vicinity of the segment. If the forecast needs must account for such things, send Modeling Forecasting a request accompanied by the usual required information so the requisite model runs can be conducted for the project.
3. This tool only provides forecasts on state mainline road segments (anything contained in the state traffic survey report which is a primary data source). For local roads and ramps, submit a request accompanied by some counts to Modeling & Forecasting.
4. This is unsuitable for intersection design since turning movements are not included.



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## TRAFFIC FORECAST DETAILS

ROUTE MILE PT LENGTH  
ID 15929 SMAH00170R 3.74 0.72

FORECAST			
YEAR	ADT	CAR	TRUCK
2040	3,520	3,000	520
GROWTH RATE		0	0.0156
METHOD TYPE		AVG	AVG
CAP CODE		-1	0

REGRESSION METHODS			
SELECTED METHOD NUMBER	FORECAST PA VOL.	BC VOL.	Total
1	-15	659	644

COUNT vs REGRESS. ADJUSTMT VOLUMES

COUNT				
	YEAR	VOLUME	PA COML	BC COML
1	0	0	0	0
2	2005	4,560	4,320	240
3	2008	3,910	3,570	340
4	2011	3,852	3,512	340
5	2014	3,367	3,000	367
6	2015	3,417	3,045	372

DROPPED COUNT						2040	
GROWTH RATES		PA	BC	PA COML	BC COML	PA COML	BC COML
I	-0.0402	0.0309				-109	668
II	-0.0444	0.0363	3	3		-415	717
III	-0.0291	0.0133				801	494
IV	-0.0269	0.0122	4	4		936	485
V	-0.0424	0.0223				-259	579
VI	-9999	-9999	0	0		0	0
95% CONFIDENCE MIN						-2,561	412
MAX						2,211	866

Process Flag **A** Adjusted model to counts with process per ODOT 255 spreadsheet.

### NCHRP 255 ADJUSTMENT INFORMATION

M = Model, C = Count

ADJUSTMENT METHOD	M vs C TOTAL	2040 TOTAL	M vs C TRUCK	2040 TRUCK	CAR GRTH RT	TRUCK GRTH RT
1) C-M VOLUME DIFFERENCE	-37	3,238	323	375	-0.0024	0.0003
2) C/M RATIO	0.99	3,240	7.64	397	-0.0027	0.0027
3) RAF		3,239		386	-0.0025	0.0015
4) MDL VOL. FORC. YR/BASE YR	0.95	3,240	1.07	396	-0.0026	0.0026
SELECTED ADJ METHOD	RAT		DIF	SELECTED	-0.0024	0.0003

METHOD 1-4 VOLUME	CAR MIN / MAX	TRUCK MIN / MAX	CAR+TRUCK MIN / MAX
	2,843 / 2,865	375 / 397	3,218 / 3,262

2040 DESIGNATION	
ADT	3,520
K	0.09
D	0.52
T24	0.15
TD/T24	0.49
TD	0.07

#### Process Flag

- A: Adjusted model to counts with process per ODOT 255 spreadsheet,
- N: No model volumes were joined to TSR segment,
- R: No counts available use raw model. Note: all sections should have counts.
- 0: Neither model nor counts

Note: 95% Confidence level was computed by adding and subtracting 2X Standard Error from each of 12 regression estimates

#### Cap Code

- 1 means calculated rate was less than 0, so growth rate used = 0.
- 1 means calculated rate was > 3% for cars or 4% for Trucks

#### Regression Method

- I - Uses all counts available (up to 6)
- II - Method 1 without the count with the highest residual error from the regression line. it is only calculated if there were originally at least 4 counts.
- III - Oldest count is dropped from the calculation. it is only calculated if there were originally at least 4 counts.
- IV - Method 3 without the count with the highest residual error from the regression line. Only calculated if there were at least 5 counts.
- V - Oldest 2 counts are dropped from the calculation. It is only calculated if there were originally at least 5 counts.
- VI - Method 5 without the count with the highest residual error from the regression line. Only calculated if all 6 counts are were originally available.



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ADT Over-Ride Traffic Counts Used:

Hourly Traffic Count Over-Rides Used: