

TFMS - Segment Forecast Report

Username	Email	Script Import Date	Script Version	Model Version
Vinng	Vincent.Ng@dot.ohio.gov	4/14/2020 5:30:19 PM	2020.001	2023.1900

Forecast Summary

Project ID	Project Name	Opening Year	Design Year
114484	GEA SR 087 02.73	2025	2045

Project Description **GEA-87-2.73 to 7.71**

Resurface from SR-306 to Auburn Road in Russell and Newbury Townships.

*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.

Segment Information

Segment ID	LRS ID	BMP	EMP	Length	Latitude	Longitude
1838386	SGEASR00087**C	2.071	2.735	0.664	-81.3463735576909	41.4625484968545
1838387	SGEASR00087**C	2.735	3.784	1.049	-81.3298956026012	41.4627182499062
1838389	SGEASR00087**C	3.784	5.459	1.675	-81.3037119920527	41.4630416680804
1838392	SGEASR00087**C	5.459	6.203	0.744	-81.2804408945794	41.4632055296851
1838393	SGEASR00087**C	6.203	8.592	2.389	-81.2502848371661	41.4632749842865

See Page 2

Forecast Information

Segment ID		2025 AADT	2045 AADT	DHV-30	K%	D%	T24%	TD%
1838386		4,200	4,300	500	12.1	68.0	9	5
1838387	2.73 to 3.78	6,200	6,400	750	11.9	53.9	9	5
1838389	3.78 to 5.46	6,200	6,400	750	11.9	53.9	9	5
1838392	5.46 to 6.20	6,200	6,400	750	11.9	53.9	9	5
1838393	6.20 to 8.59	6,200	6,400	750	11.9	53.9	9	5

Use 2019 count from MS2 of 6,780

Annual Growth Rate:

$$6,400 = 6,200 * (1 + x)^{20}$$

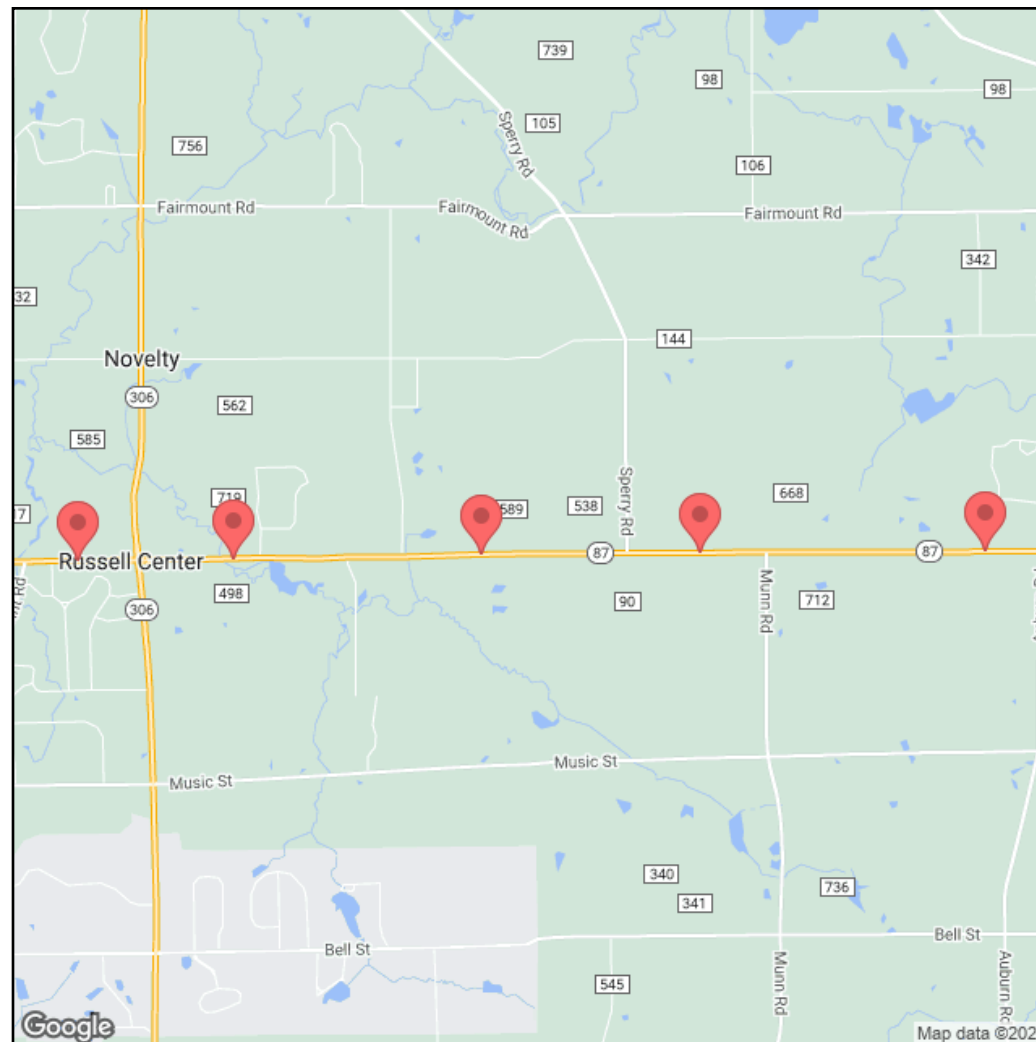
$$x = 0.001589 \text{ or } 0.16\%$$

$$\text{Growth Rate over 20 years} = 20 * 0.16\% = 3.2\%$$

Predicted 2045 AADT

$$= 6,780 * (1 + 0.0016)^{20}$$

$$= 7,000$$



Definitions:

- o AADT – Annual Average Daily Traffic
- o DHV30 – Design Hour Volume for 30th highest hour of the year
- o $DHV30 = K * AADT$
- o K % – Design Hour Factor
- o D % – Peak Direction Factor
- o T24 % – Percent Daily Trucks
- o TD % – Percent Design Hour Trucks

Forecast Segment ID	Route	BMP	EMP
1838386	SGEASR00087**C	2.071	2.735

Forecast

Year	K%	T24 % (Existing)	PA AADT	PA Method	PA Growth Rate %	PA Calculated Rate %
2050	◆ 12.1	5	4,000	Model	● -0.300	0.000
AADT	D%	TD % (Existing)	BC AADT	BC Method	BC Growth Rate %	BC Calculated Rate %
4,420	◆ 68.0	3	420	Model	■ 6.400	4.000

- Warning: The growth rate was negative and was capped.
- Warning: The truck growth rate was exceeded the maximum and was capped at 6.400%
- ◆ K/D factors from TCDS were used.

Regression

Method Number	PA AADT	BC AADT	AADT
1	650	267	917

95% Confidence Min/Max

PA Min	PA Max	BC Min	BC Max	Year
-3651	7647	-151	924	2050

Method Number	PA Growth %	BC Growth %	PA Drop Count	BC Drop Count	PA AADT	BC AADT	PA Adjustment	PA Adjustment
1	-2.99	1.22	0	0	920	292	650	267
2	-4.07	0.27	2	2	-334	237	-548	214
3	-1.61	0.66	0	0	2,659	257	2,178	236
4	-4.17	-3.36	2	2	-465	11	-665	12
5	-4.17	-3.36	0	0	-465	11	-665	12
6	-4.61	-2.91	5	4	-1,155	33	-1,148	37

Adjustment Info

ID	Adjustment Methods Name	Model vs Count AADT	Adjusted AADT	Model vs Count BC	Adjusted BC	PA Growth Rate %	BC Growth Rate %
1	DIF	-12,362	4,107	-960	924	-0.70	13.01
2	RAT	0.25	4,147	0.17	324	-0.12	2.24
3	MRAT	1.00	4,147	1.63	555	-0.33	6.39
4	RAF		4,127		739	-0.52	9.69
Adjust Method AADT		Adjust Method BC		Selected PA Growth Rate %		Selected BC Growth Rate %	
Ratio		Model Ratio		-0.300		6.400	

Method 1 - 4 Volume

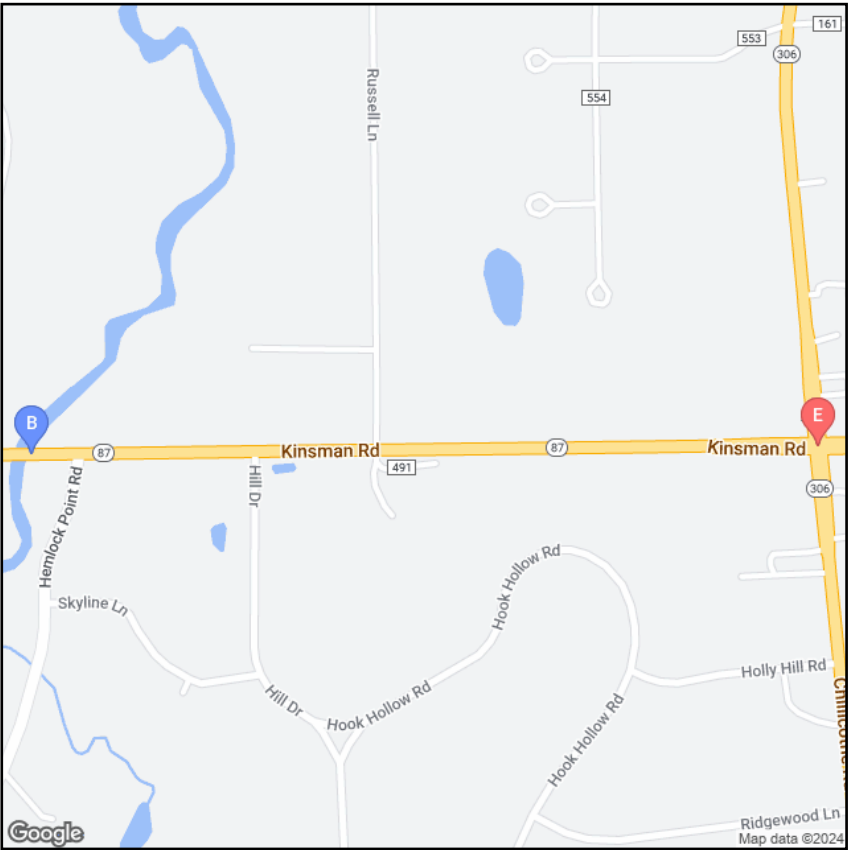
PA Min Volume	PA Max Volume	BC Min Volume	BC Max Volume	Total Min Volume	Total MaxVolume
3183	3823	324	924	3507	4747

Process Flag:	Adjusted model to counts with process per ODOT 255 spreadsheet
Comment:	No Comment

Historical Count

Year	All	Cars	Trucks
2008	6,590	6,410	180
2011	4,590	4,440	150
2013	5,860	5,610	249
2016	5,287	5,029	257
2019	5,226	5,019	207
* 2022	4,160	3,961	199

* Pivot Point



Segment ID	LRS ID	BMP	EMP	Length	Yr 2025 AADT	Yr 2045 AADT	DHV30	K %	D %	T24 %	TD %
1838386	SGEASR00087**C	2.071	2.735	0.664	4,200	4,300	500	12.1	68.0	9	5

Forecast Segment ID	Route	BMP	EMP
1838387	SGEASR00087**C	2.735	3.784

Forecast

Year	K%	T24 % (Existing)	PA AADT	PA Method	PA Growth Rate %	PA Calculated Rate %
2050	◆ 11.9	5	5,800	Model	● -0.300	0.000
AADT	D%	TD % (Existing)	BC AADT	BC Method	BC Growth Rate %	BC Calculated Rate %
6,440	◆ 53.9	3	640	Model	■ 6.300	4.000

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- ◆ K/D factors from TCDS were used.

Regression

Method Number	PA AADT	BC AADT	AADT
2	5,790	537	6,327

95% Confidence Min/Max

PA Min	PA Max	BC Min	BC Max	Year
-1005	9112	-219	1668	2050

Method Number	PA Growth %	BC Growth %	PA Drop Count	BC Drop Count	PA AADT	BC AADT	PA Adjustment	PA Adjustment
1	-0.21	4.30	0	0	5,693	709	5,477	666
2	-0.02	2.78	3	5	5,949	522	5,790	537
3	-0.43	4.54	0	0	5,276	732	5,111	686
4	0.19	2.80	3	5	6,321	524	6,124	539
5	-1.36	4.72	0	0	3,621	748	3,605	701
6	-1.80	3.07	4	5	2,977	549	2,884	562

Adjustment Info

ID	Adjustment Methods Name	Model vs Count AADT	Adjusted AADT	Model vs Count BC	Adjusted BC	PA Growth Rate %	BC Growth Rate %
1	DIF	-8,896	6,343	-1,056	1,275	-0.46	11.51
2	RAT	0.41	6,212	0.22	518	-0.08	2.55
3	MRAT	1.01	6,213	1.72	834	-0.27	6.29
4	RAF		6,278		1,054	-0.37	8.89
Adjust Method AADT		Adjust Method BC		Selected PA Growth Rate %		Selected BC Growth Rate %	
Model Ratio		Model Ratio		-0.300		6.300	

Method 1 - 4 Volume

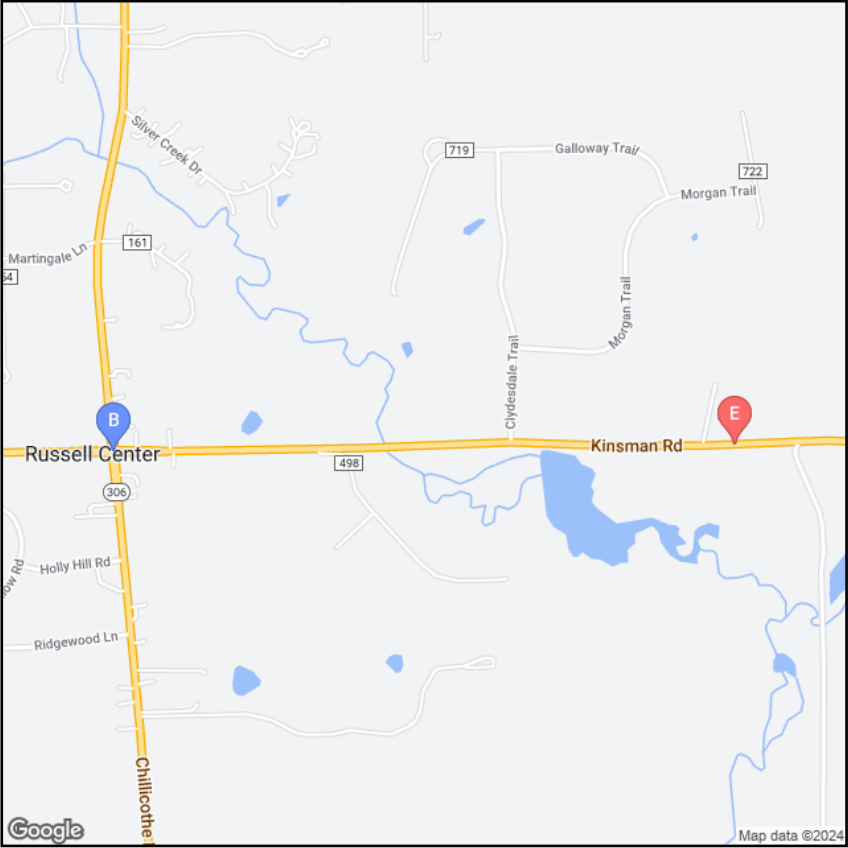
PA Min Volume	PA Max Volume	BC Min Volume	BC Max Volume	Total Min Volume	Total MaxVolume
5068	5694	518	1275	5586	6969

Process Flag:	Adjusted model to counts with process per ODOT 255 spreadsheet
Comment:	No Comment

Historical Count

Year	All	Cars	Trucks
2008	6,250	6,080	170
2011	6,090	5,890	200
2013	7,040	6,809	231
2016	5,965	5,769	196
2019	6,778	6,367	411
* 2022	6,121	5,819	302

* Pivot Point



Segment ID	LRS ID	BMP	EMP	Length	Yr 2025 AADT	Yr 2045 AADT	DHV30	K %	D %	T24 %	TD %
1838387	SGEASR00087**C	2.735	3.784	1.049	6,200	6,400	750	11.9	53.9	9	5

Forecast Segment ID	Route	BMP	EMP
1838389	SGEASR00087**C	3.784	5.459

Forecast

Year	K%	T24 % (Existing)	PA AADT	PA Method	PA Growth Rate %	PA Calculated Rate %
2050	◆ 11.9	5	5,800	Model	● -0.300	0.000
AADT	D%	TD % (Existing)	BC AADT	BC Method	BC Growth Rate %	BC Calculated Rate %
6,440	◆ 53.9	3	640	Model	■ 7.600	4.000

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Regression

Method Number	PA AADT	BC AADT	AADT
2	5,790	537	6,327

95% Confidence Min/Max

PA Min	PA Max	BC Min	BC Max	Year
-1005	9112	-219	1668	2050

Method Number	PA Growth %	BC Growth %	PA Drop Count	BC Drop Count	PA AADT	BC AADT	PA Adjustment	PA Adjustment
1	-0.21	4.30	0	0	5,693	709	5,477	666
2	-0.02	2.78	3	5	5,949	522	5,790	537
3	-0.43	4.54	0	0	5,276	732	5,111	686
4	0.19	2.80	3	5	6,321	524	6,124	539
5	-1.36	4.72	0	0	3,621	748	3,605	701
6	-1.80	3.07	4	5	2,977	549	2,884	562

Adjustment Info

ID	Adjustment Methods Name	Model vs Count AADT	Adjusted AADT	Model vs Count BC	Adjusted BC	PA Growth Rate %	BC Growth Rate %
1	DIF	-6,459	6,428	-919	1,377	-0.47	12.71
2	RAT	0.49	6,270	0.25	568	-0.07	3.15
3	MRAT	1.02	6,274	1.88	947	-0.30	7.63
4	RAF		6,351		1,162	-0.39	10.17
Adjust Method AADT		Adjust Method BC		Selected PA Growth Rate %		Selected BC Growth Rate %	
Model Ratio		Model Ratio		-0.300		7.600	

Method 1 - 4 Volume

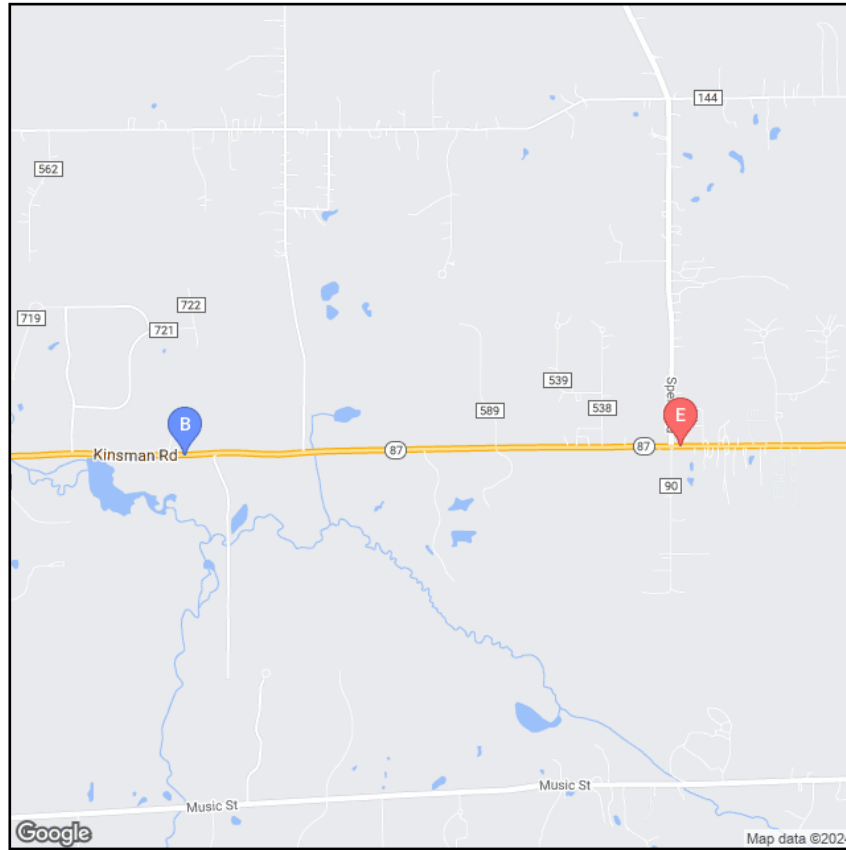
PA Min Volume	PA Max Volume	BC Min Volume	BC Max Volume	Total Min Volume	Total MaxVolume
5051	5702	568	1377	5619	7079

Process Flag:	Adjusted model to counts with process per ODOT 255 spreadsheet
Comment:	No Comment

Historical Count

Year	All	Cars	Trucks
2008	6,250	6,080	170
2011	6,090	5,890	200
2013	7,040	6,809	231
2016	5,965	5,769	196
2019	6,778	6,367	411
* 2022	6,121	5,819	302

* Pivot Point



Segment ID	LRS ID	BMP	EMP	Length	Yr 2025 AADT	Yr 2045 AADT	DHV30	K %	D %	T24 %	TD %
1838389	SGEASR00087**C	3.784	5.459	1.675	6,200	6,400	750	11.9	53.9	9	5

Forecast Segment ID	Route	BMP	EMP
1838392	SGEASR00087**C	5.459	6.203

Forecast

Year	K%	T24 % (Existing)	PA AADT	PA Method	PA Growth Rate %	PA Calculated Rate %
2050	◆ 11.9	5	5,800	Model	● -0.400	0.000
AADT	D%	TD % (Existing)	BC AADT	BC Method	BC Growth Rate %	BC Calculated Rate %
6,440	◆ 53.9	3	640	Model	■ 7.600	4.000

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Regression

Method Number	PA AADT	BC AADT	AADT
2	5,790	537	6,327

95% Confidence Min/Max

PA Min	PA Max	BC Min	BC Max	Year
-1005	9112	-219	1668	2050

Method Number	PA Growth %	BC Growth %	PA Drop Count	BC Drop Count	PA AADT	BC AADT	PA Adjustment	PA Adjustment
1	-0.21	4.30	0	0	5,693	709	5,477	666
2	-0.02	2.78	3	5	5,949	522	5,790	537
3	-0.43	4.54	0	0	5,276	732	5,111	686
4	0.19	2.80	3	5	6,321	524	6,124	539
5	-1.36	4.72	0	0	3,621	748	3,605	701
6	-1.80	3.07	4	5	2,977	549	2,884	562

Adjustment Info

ID	Adjustment Methods Name	Model vs Count AADT	Adjusted AADT	Model vs Count BC	Adjusted BC	PA Growth Rate %	BC Growth Rate %
1	DIF	-8,428	6,149	-921	1,378	-0.64	12.72
2	RAT	0.42	6,133	0.25	568	-0.16	3.15
3	MRAT	1.00	6,133	1.88	947	-0.39	7.63
4	RAF		6,141		1,163	-0.52	10.18
Adjust Method AADT		Adjust Method BC		Selected PA Growth Rate %		Selected BC Growth Rate %	
Model Ratio		Model Ratio		-0.400		7.600	

Method 1 - 4 Volume

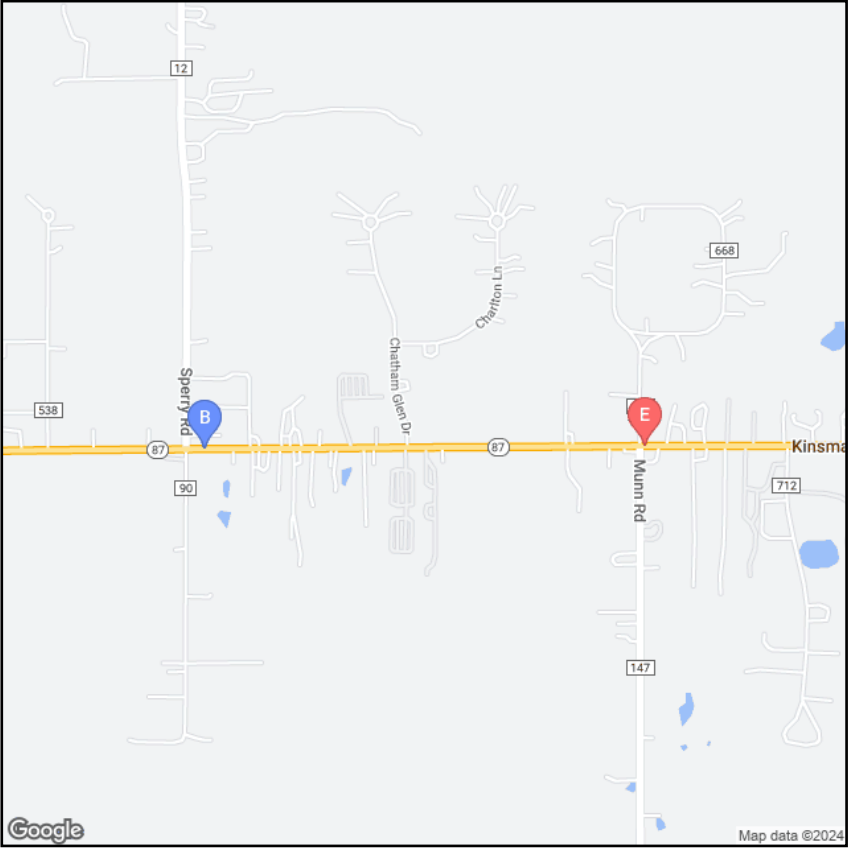
PA Min Volume	PA Max Volume	BC Min Volume	BC Max Volume	Total Min Volume	Total MaxVolume
4771	5565	568	1378	5339	6943

Process Flag:	Adjusted model to counts with process per ODOT 255 spreadsheet
Comment:	No Comment

Historical Count

Year	All	Cars	Trucks
2008	6,250	6,080	170
2011	6,090	5,890	200
2013	7,040	6,809	231
2016	5,965	5,769	196
2019	6,778	6,367	411
* 2022	6,121	5,819	302

* Pivot Point



Segment ID	LRS ID	BMP	EMP	Length	Yr 2025 AADT	Yr 2045 AADT	DHV30	K %	D %	T24 %	TD %
1838392	SGEASR00087**C	5.459	6.203	0.744	6,200	6,400	750	11.9	53.9	9	5

Forecast Segment ID	Route	BMP	EMP
1838393	SGEASR00087**C	6.203	8.592

Forecast

Year	K%	T24 % (Existing)	PA AADT	PA Method	PA Growth Rate %	PA Calculated Rate %
2050	◆ 11.9	5	5,800	Model	● -0.200	0.000
AADT	D%	TD % (Existing)	BC AADT	BC Method	BC Growth Rate %	BC Calculated Rate %
6,440	◆ 53.9	3	640	Model	■ 7.600	4.000

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2	-0.02	2.78	3	5	5,949	522	5,790	537
3	-0.43	4.54	0	0	5,276	732	5,111	686
4	0.19	2.80	3	5	6,321	524	6,124	539
5	-1.36	4.72	0	0	3,621	748	3,605	701
6	-1.80	3.07	4	5	2,977	549	2,884	562

Adjustment Info

ID	Adjustment Methods Name	Model vs Count AADT	Adjusted AADT	Model vs Count BC	Adjusted BC	PA Growth Rate %	BC Growth Rate %
1	DIF	-7,446	6,653	-917	1,378	-0.33	12.72
2	RAT	0.45	6,361	0.25	569	-0.02	3.16
3	MRAT	1.04	6,372	1.88	948	-0.24	7.64
4	RAF		6,513		1,163	-0.29	10.18
Adjust Method AADT		Adjust Method BC		Selected PA Growth Rate %		Selected BC Growth Rate %	
Model Ratio		Model Ratio		-0.200		7.600	

Method 1 - 4 Volume

PA Min Volume	PA Max Volume	BC Min Volume	BC Max Volume	Total Min Volume	Total MaxVolume
5275	5792	569	1378	5844	7170

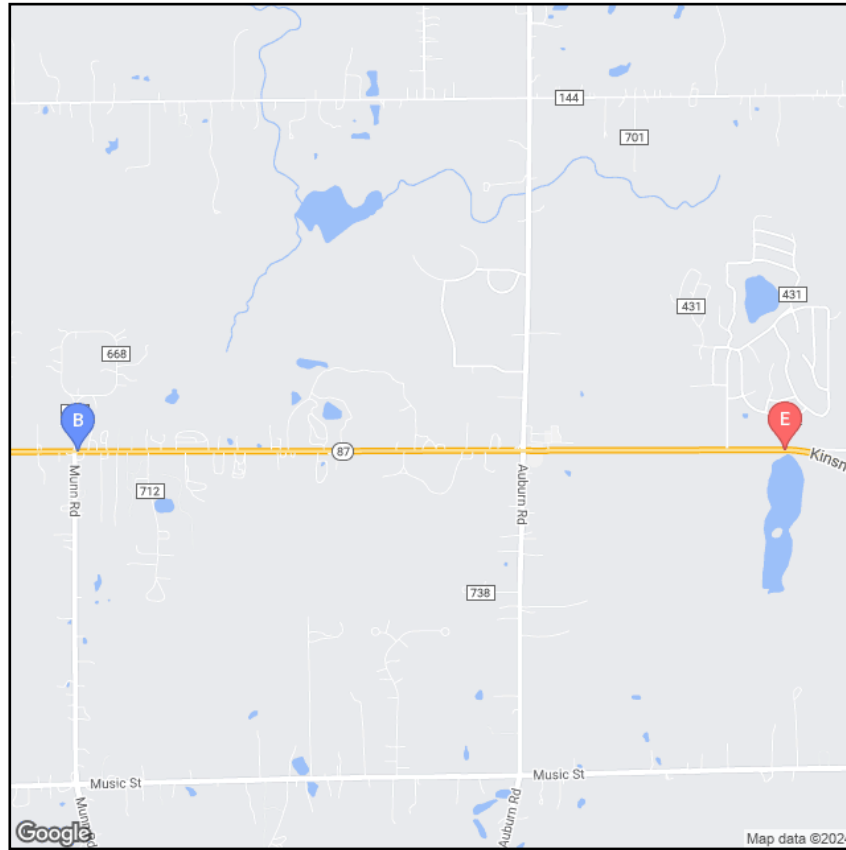
Process Flag: Adjusted model to counts with process per ODOT 255 spreadsheet

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Segment ID	LRS ID	BMP	EMP	Length	Yr 2025 AADT	Yr 2045 AADT	DHV30	K %	D %	T24 %	TD %
1838393	SGEASR00087**C	6.203	8.592	2.389	6,200	6,400	750	11.9	53.9	9	5