

2023 Pennsylvania Traffic Data



**Bureau of Planning and Research
Transportation Planning Division**



In cooperation with:
US Department of Transportation
Federal Highway Administration
PUB 601 (4-24)

On The Cover:
I-81 in Franklin County.

Table of Contents

Table of Contents	1
Introduction.....	2
How to Use This Booklet.....	2
New Developments	3
Site Installations	3
Traffic Data Collection	4
Type of Data Collected.....	4
Traffic Data Collection Sources	5
Permanent Sites.....	6
Permanent Traffic Recorders.....	6
Traffic Pattern Group (TPG).....	7
Permanent Site Station Locations.....	8
Permanent Site Map	12
Permanent Site ATR/CAVC Map	13
Permanent Site WIM/VWIM Map	14
Permanent Site Locations by TPG.....	15
2023 Peak Hour Summary by TPG	18
2023 30th Highest Hour Summary by TPG	21
2023 50th Highest Hour Summary by TPG	24
2023 Design Hour Summaries (Charts).....	27
Five Year Summary of Annual Average Daily Traffic (AADT) from Permanent Sites	29
Statewide Traffic Trends (Table).....	33
Statewide Traffic Trends (Chart).....	34
Heaviest Holiday Travel Periods: 2023.....	35
Factoring Process	37
Traffic Adjustment Factors	37
Table 350: Hourly Percentages Compiled for Total Vehicles	38
Table 360: Hourly Percentages Compiled for Truck Traffic.....	43
Hourly Percentages: Total Vehicles (Chart).....	45
Hourly Percentages: Truck Traffic (Chart)	45
Table 355: Average Day of Week by Month Factors Compiled for Total Vehicles	46
Monthly Variation Charts By Traffic Pattern Group (TPG).....	51
Table 365: Average Day of Week by Month Factors Compiled for Truck Traffic	52
Table 370: Yearly Growth Factors	53
Functional Class Groups (FCGs).....	54
Table 380: Axle Correction Factors	55
Table 385: Design Hour Factor Default Value	56
Table 390: Rigid Equivalent Single Axle Load (ESAL) Factors	57
Table 395: Flexible ESAL Factors	57
Roadway Management System (RMS) Factor Table Application Flow Chart.....	58
Acronyms	59
Index.....	60

Introduction

The “Pennsylvania Traffic Data Book” documents procedures for developing accurate estimates of highway traffic volumes based on sample traffic counts.

Traffic information is critical in transportation decision-making related to highway funding, traffic engineering, highway design, air quality analysis, planning and programming, as well as winter services, highway maintenance and construction.

The “Pennsylvania Traffic Data Book” provides current traffic expansion factors through the use of tables, charts, and graphs. Expansion factors allow the traffic professional to use a sample traffic count and develop reliable and comparable Annual Average Daily Traffic (AADT) estimates. All tables & charts in the “Pennsylvania Traffic Data Book” are derived from the data of permanent sites or short-term sites.

Some of the permanent sites are excluded on a year to year basis. Reasons for exclusion can be insufficient data due to construction projects or equipment malfunction.

How to Use this Booklet

This booklet provides current traffic expansion factors through the use of tables, charts, and graphs. All of the tables, charts, and graphs are listed in the Table of Contents. Refer to the description provided with each table, chart, and graph to ensure that the data presented is what you need.

Acronyms are used quite often throughout this publication. A complete list of acronyms and their meanings are located in the back of the booklet. In addition, an index was created for this booklet to help you find a particular topic quickly.

We would appreciate any comments or suggestions you can provide on information presented in this booklet. Questions or comments relating to data presented in this publication can be directed to:

Andrew O’Neill
Telephone: (717) 346-3250
Fax: (717) 783-9152
Email: andoneill@pa.gov

The 2023 Traffic Data Book and County Traffic Volume Maps are available free on our website! Traffic Volume Maps can also be purchased through our Maps and Publications Sales Store on the website.

www.penndot.gov

Select: Projects & Programs

Select: Planning

Select: Maps for the County Traffic Volume Maps or select Traffic Information for the Traffic Data Book or select Maps followed by Sales Store List to purchase a map.

New Developments

Permanent Site Installations

Three Continuous Automatic Vehicle Classification (CAVC) sites were reinstalled in the 2023 calendar year. A list of the sites is below, showing their location and when the site began collecting data.

- CAVC 205 – I 83 in Manchester Township, York County, began in November.
- CAVC 380 – PA 562 in Exeter Township, Berks County, began in August.
- CAVC 818 – I 84 in Matamoras Borough, Pike County, began in April.

Three Weigh in Motion (WIM) sites were reinstalled in the 2023 calendar year. A list of the sites is below, showing their location and when the site began collecting data.

- WIM 410 – PA 49 in Nelson Township, Tioga County, began in September.
- WIM 505 – US 22 in Howe Township, Perry County, began in September.
- WIM 703 – US 222 in Brecknock Township, Lancaster County, began in September.



Installation of WIM 703 in Lancaster County

Traffic Data Collection

Traffic data is collected on 40,000 miles of PennDOT owned roads, 78,000 miles of municipal roads, and just under 3,800 miles of local federal aid roads in Pennsylvania. Approximately 12,000 raw traffic counts are collected per year by:

- 4 Bureau of Planning and Research (BPR) Field Staff
- PennDOT Engineering Districts 2-0 and 10-0
- 8 Metropolitan Planning Organizations (MPOs)
- Contractors

Volume: The majority of the counts taken as part of our statewide count program record volume of traffic on a roadway. Volume is usually expressed as Annual Average Daily Traffic (AADT), which represents traffic volume over an average 24-hour period.

Classification: One method of data collection used for our count program is vehicle classification. Vehicles are classified into 13 classes ranging from cars to trucks in accordance with the Federal Highway Administration vehicle classification scheme.

Weight: Truck weight data is collected from WIM stations.

Speed: Speed data is collected from permanent traffic recorders.



Short-Term classification count installed.

Traffic Data Collection Sources

Automatic Traffic Recorders (ATRs)

8 ATRs strategically located throughout the state count volume and speed data on a continuous basis 365 days per year. A map showing the locations of ATRs throughout the state is provided on page 13.

Short-Term In-Pavement Sites (STIP)

Approximately 13 inductive loop sites, referred to as STIP sites are installed throughout the state of Pennsylvania. Volume data is collected from these permanent sites for a 24-hour period.

Continuous Automatic Vehicle Classifier (CAVC)

119 CAVC sites collect continuous vehicle classification data. A map showing CAVC locations are provided on page 13.

Weigh-In-Motion (WIM)

22 WIM stations provide continuous truck weight and vehicle classification data. 14 of the 22 sites are VWIM. WIM stations are shown on the map on page 14.

Pneumatic Tubes

The majority of the counts are collected using pneumatic tubes. Axle counts are collected using a traffic counting device in association with a single pneumatic tube stretched across the roadway. An axle correction factor is applied to adjust vehicle axle base data for the incidence of vehicles with more than two axles.

Two tubes are used to count and classify vehicles by type based on axle configuration.

Manual Counts

Manual counts are taken on sections of roadways that are not accessible to automated data collection equipment or have safety limitations. Observers classify vehicles by type based on axle configuration.

Artificial Intelligence (AI) Counter Classification Systems

AI counters are automated video-based traffic monitoring systems positioned on sections of roadways where traditional automated data collection equipment and manual counts both have safety limitations.

Toll Receipts

The Delaware River Joint Toll Bridge Commission and the Delaware River Port Authority document traffic between Pennsylvania and New Jersey.

The Pennsylvania Turnpike Commission toll receipt surveys provide data on the Commonwealth's toll roads.

Permanent Traffic Recorders

Pennsylvania maintains permanent traffic recorders at 149 strategically selected locations throughout the state. These permanent sites collect traffic volume data on a continuous basis throughout the year. This data is used to develop daily and seasonal factors, as well as to identify changes in traffic patterns. Based on a research study performed by Pennsylvania State University and West Virginia University, it was determined that PennDOT locations in the traffic pattern groups were acceptable according to the FHWA Traffic Monitoring Guide.



CAVC 818 in Pike County

The permanent sites use magnetic loops embedded in the pavement for vehicle detection. Additionally, CAVC sites utilize piezo sensors to classify and WIM sites utilize quartz or strip sensors to weigh. The data is stored on-site in traffic counters, prior to being automatically polled every night through the use of modems located at each permanent site.

Traffic Pattern Group (TPG)

Highway traffic characteristics can vary by geographical area, roadway type, and population density. Therefore, individual traffic volume counts are categorized into one of ten Traffic Pattern Groups (TPGs). The TPGs are based on highway functional classification, geographic area, and urban/rural characteristics. Each permanent site is associated with one of the ten TPGs listed below.

TRAFFIC PATTERN GROUP	DESCRIPTION
TPG 1	URBAN - INTERSTATE
TPG 2	RURAL - INTERSTATE
TPG 3	URBAN - OTHER PRINCIPAL ARTERIALS
TPG 4	RURAL - OTHER PRINCIPAL ARTERIALS
TPG 5	URBAN - MINOR ARTERIALS, COLLECTORS, LOCAL ROADS
TPG 6	NORTH RURAL - MINOR ARTERIALS
TPG 7	CENTRAL RURAL- MINOR ARTERIALS
TPG 8	NORTH RURAL - COLLECTORS AND LOCAL ROADS
TPG 9	CENTRAL RURAL- COLLECTORS AND LOCAL ROADS
TPG 10	SPECIAL RECREATIONAL

Permanent Site data is used in computing:

- Daily, monthly, and seasonal adjustment factors by highway functional classification and geographic location.
- Yearly growth factors which are used to update older counts in the Department's Roadway Management System (RMS).
- Design hour factors (peak hour, 30th highest, and 50th highest hour) used for the design of highways.

Permanent Site Locations

This chart lists the permanent site stations by number, county, municipality, traffic route number, state route (SR), segment, and also by a physical description of where the permanent site is located in the state.

SITE #	COUNTY	MUNICIPALITY	ROUTE	SR	SEGMENT	LOCATION
1	Erie	Springfield Twp.	US 20	20	10	0.4 mi. E of Ohio/Pennsylvania Line (West Springfield)
2	Crawford	Richmond Twp.	PA 77	77	270	0.5 mi. W of PA 408 (New Richmond)
3	Clearfield	Huston Twp.	PA 255	255	280	1.4 mi. N of PA 153 (Penfield)
4	Tioga	Delmar Twp.	US 6	6	410	0.3 mi. W of US 6/PA 287 Intersection (Wellsboro)
5	Bradford	Wysox Twp.	***	1043	10	0.1 mi. NW of SR 1041 (Towanda)
6	Clearfield	Lawrence Twp.	PA 879	879	200	1.0 mi. SW of SR 1001 (Hyde)
7	Wyoming	Eaton Twp.	PA 29	29	260	2.2 mi. S of US 6 (Tunkhannock)
8 *	Montgomery	Whitemarsh Twp.	PA 73	73	534	1.4 mi. NW of PA 309-Skipack Pike (Whitemarsh)
9	Bucks	West Rockhill Twp.	PA 563	563	50	0.4 mi. S of SR 4033 (Perkasie)
10	Chester	Lower Oxford Twp.	PA 10	10	60	0.6 mi. N of US 1 (Oxford)
11	Elk	Fox Twp.	PA 948	948	40	1.4 mi. W of PA 225 (Kersey)
12	Centre	Marion Twp.	I-80	80	1660	6.0 mi. E of I-99 (Nittany)
13	Bucks	Bensalem Twp.	I-95	95	330	1.4 mi. S of PA 63 (Torresdale)
14	Chester	East Nottingham Twp.	US 1	1	100	0.5 mi. S of PA 472 (Nottingham)
15	Fulton	Todd Twp.	US 522	522	550	1.3 mi. N of US 30 (McConnellsburg)
16	Bucks	Falls Twp.	US 1	1	190	2.0 mi. N of I-295 (Fairless Hills)
18	Butler	Summitt Twp.	PA 38	38	20	0.7 mi. NW of PA 68 (Butler)
19	Washington	Union Twp.	PA 88	88	750	0.4 mi. S of SR 1006 (Finleyville)
20	Lawrence	Shenango Twp.	PA 65	65	260	0.6 mi. S of US 422 (New Castle)
21	Lehigh	Hanover Twp.	US 22	22	220	0.8 mi. W of PA 987 (Lehigh Valley)
22	Luzerne	Hanover Twp.	PA 29	29	10	0.6 mi. N of I-81 (Sugar Notch)
24	Westmoreland	Derry Twp.	US 22	22	340	1.0 mi. E of PA 981 (New Alexandria)
27	Elk	Highland Twp.	PA 66/948	66	60	1.1 mi. E of PA 948 (Russell City)
29	Susquehanna	Rush Twp.	PA 267	267	190	0.9 mi. S of PA 706 (Lawton)
40	Schuylkill	Schuylkill Twp.	US 209	209	860	0.6 mi. S of PA 309 (Tamaqua)
48	Susquehanna	New Milford Twp.	US 11	11	420	0.8 mi. S of PA 848 (New Milford)
51	Potter	Eulalia Twp.	PA 44	44	700	1.3 mi. SW of PA 49 (Coudersport)
106 **	Berks	Windsor Twp.	I-78	78	330	2.3 mi. W of PA 143 (Hamburg)
126	Jefferson	Brookville Boro.	I-80	80	790	0.6 mi. E of PA 36 (Brookville)
158 **	Centre	Boggs Twp.	I-80	80	1580	0.6 mi. E of PA 150 (Milesburg)
203	Allegheny	Leetsdale Boro.	PA 65	65	270	0.5 mi. S of SR 4036 (Leetsdale)
205	York	Manchester Twp.	I-83	83	220	1.4 mi. S of PA 238 (North York)
206 *	Cumberland	Wormleysburg Boro.	***	1014	30	Harvey Taylor Bridge on west approach (Harvey Taylor Bridge)
208 *	Allegheny	Churchill Boro.	I-376	376	794	0.7 mi. W of PA 791 (Monroeville)
216	Susquehanna	Great Bend Twp.	I-81	81	2324	1.1 mi. N of PA 171 (Hallstead)
301 *	Erie	Lawrence Park Twp.	PA 5	5	680	0.5 mi. W of PA 955 (Erie)

* Indicates ATR site

** Indicates WIM site

*** Indicates road is not a PA, US, or Interstate Route

Permanent Site Locations (Continued)

SITE #	COUNTY	MUNICIPALITY	ROUTE	SR	SEGMENT	LOCATION
304 *	Lycoming	S. Williamsport Boro.	US 15	15	250	0.3 mi. S of I-180 (Williamsport)
306	Pike	Palmyra Twp.	PA 507	507	280	0.9 mi. S of US 6 (Hawley)
317 **	Blair	Freedom Twp.	I-99	99	214	1.0 mi. S of PA 36/PA 164 (East Freedom)
323	Bedford	Bedford Twp.	US 220	220	310	0.7 mi. S of Business US 220 (Bedford Springs)
324 **	Elk	Ridgway Boro.	PA 120	120	42	1.1 mi. E of US 219 (Ridgway)
326	Clarion	Paint Twp.	US 322	322	280	0.5 mi. E of PA 66 (Clarion)
328	Centre	Boggs Twp.	PA 150	150	194	1.1 mi. N of I -80 (Milesburg)
330 *	Bucks	Northampton Twp.	PA 532	532	130	1.4 mi. SW of PA 413 (Newtown)
334	York	W. Manchester Twp.	US 30	30	170	0.7 mi. W of PA 116 (Thomasville)
349 *	Lehigh	Upper Saucon Twp.	PA 309	309	30	0.7 mi. S of PA 378 (Coopersburg)
360	Clearfield	Bloom Twp.	US 219	219	670	3.2 mi. S of US 322 (Luthersburg)
362	York	North Codorus Twp.	PA 616	616	240	1.6 mi. N of PA 214 (New Salem)
363	McKean	Lafayette Twp.	US 219	219	290	0.1 mi. N of PA 59 (Lewis Run)
364	Lackawanna	Newton Twp.	PA 307	307	360	50 ft. W of SR 4017 (Clarks Summitt)
367	Union	West Buffalo Twp.	PA 45	45	250	0.6 mi. W of PA 104 (Mifflinburg)
370	Westmoreland	Rostraver Twp.	I-70	70	454	0.9 mi. W of PA 51 (Belle Vernon)
371	Fulton	Brush Creek Twp.	I-70	70	1522	1.1 mi. S of PA 915 (Crystal Springs)
372	Union	White Deer Twp.	I-80	80	2104	0.7 mi. E of US 15 (Milton)
374	Butler	Lancaster Twp.	I-79	79	884	1.8 mi. N of PA 68 (Zelienople)
375	Allegheny	N. Fayette Twp.	US 22/30	22	80	0.8 mi. E of PA 978 (Imperial)
376	Luzerne	Wilkes-Barre Twp.	I-81	81	1664	1.7 mi. N of PA 309-Exit 165A/165B (Wilkes-Barre)
377	Bucks	Middletown Twp.	I-295	295	10	0.6 mi. N of I 276 (Pennel)
378	Fayette	Redstone Twp.	US 40	40	160	1.0 mi. W of SR 4010 (Briar Hill)
379	Blair	Logan Twp.	***	4013	80	0.5 mi. E of SR 4015 (Altoona)
380	Berks	Exeter Twp.	PA 562	562	40	0.2 mi. W of SR 2033 (St. Lawrence)
381	Mercer	Hermitage City	***	3019	20	0.9 mi. N of PA 718 (Sharon)
382	Cambria	Lower Yoder Twp.	***	3005	30	1.5 mi. SW of PA 56 (Morrellville)
383	Clinton	Pine Creek Twp.	PA 150	150	360	0.5 mi. N of SR 1005 (Chatham Run)
384	Tioga	Lawence Twp.	***	4022	50	1.9 mi. E of PA 49 (Nelson)
385	Warren	Southwest Twp.	***	3002	30	0.7 mi. W of PA 27 (Enterprise)
386	Montour	Limestone Twp.	PA 254	254	10	2.0 mi. E of I-80 (Limestoneville)
387	Somerset	Brothers Valley Twp.	***	2031	120	2.0 mi. S of US 219 (Garrett)
388	Monroe	Ross Twp.	***	3004	170	0.4 mi. SW of SR 3015 (Saylorsburg)
389	Jefferson	Perry Twp.	PA 536	536	210	0.3 mi. W of SR 3011 (Frostburg)
390	Lancaster	Mount Joy Twp.	PA 230	230	20	1.7 mi. W of PA 743/PA 241 (Elizabethtown)
391	Chester	Warwick Twp.	PA 23	23	110	1.5 mi. E of PA 345 (Warwick Area)
392	Luzerne	Foster Twp.	I-80	80	2684	5.9 mi. E of PA 309 (White Haven)
393	Washington	Donegal Twp.	I-70	70	2	0.3 mi. E of W. Virginia/Pennsylvania Line (West Alexander)

* Indicates ATR site

** Indicates WIM site

*** Indicates road is not a PA, US, or Interstate Route

Permanent Site Locations (Continued)

SITE #	COUNTY	MUNICIPALITY	ROUTE	SR	SEGMENT	LOCATION
394	Lehigh	Upper Saucon Twp.	I-78	78	614	1.1 mi. E of PA 309/PA 145/I-78 Interchange (Allentown)
395	Fayette	German Twp.	PA 21	21	230	0.1 mi. E of SR 3023 (Uniontown)
396 *	Washington	Canton Twp.	US 40	40	320	0.4 mi. E of SR 3013 (Washington)
410 **	Tioga	Nelson Twp.	PA 49	49	520	0.5 mi. W of SR 4027 (Nelson)
501 **	Tioga	Liberty Twp.	US 15	15	142	2.7 mi. N of SR 2005 (Blossburg)
502 **	Mercer	Wolf Creek Twp.	I-80	80	220	1.4 mi. W of PA 173 (Barkeyville)
503 **	Warren	Youngsville Boro.	US 6	6	420	0.6 mi. E of Railroad St (Youngsville)
504 **	Delaware	Chadds Ford Twp.	US 202	202	114	0.8 mi. N of US 1 (Dilworthtown)
505 **	Perry	Howe Twp.	US 22	22	160	0.7 mi. E of PA 34 (Newport)
506 **	Blair	Allegheny Twp.	***	1001	30	0.2 mi. N of SR 1002 (Altoona)
600	Franklin	Southampton Twp.	I-81	81	244	0.7 mi. N of PA 696 (Shippensburg)
700 **	Indiana	Armstrong Twp.	US 422	422	120	0.5 mi. W of SR 4004 (Indiana)
701 **	Dauphin	East Hanover Twp.	I-81	81	774	0.75 mi. N of PA 39 Manada Hill/Hershey Interchange (Grantville)
702 **	Dauphin	East Hanover Twp.	I-81	81	810	0.7 mi. N of SR 2025 (Grantville)
703 **	Lancaster	Brecknock Twp.	US 222	222	1034	0.3 mi. S of Lancaster/Berks County Line (Adamstown)
704 **	Fulton	Bethel Twp.	I-70	70	1702	0.1 mi. N of Maryland/Pennsylvania Line (Warfordsburg)
705 **	Northampton	Williams Twp.	I-78	78	724	1.0 mi. E of SR 33 (Easton)
706 **	Greene	Perry Twp.	I-79	79	14	1.0 mi. N of SR 2002 (Mt. Morris)
709 **	Columbia	Mifflin Twp.	I-80	80	2444	2.7 mi. E of PA 339 (Columbia)
710 **	Butler	Cranberry Twp.	I-79	79	790	1.2 mi. N of PA 228 (Butler)
712 **	Franklin	Antrim Twp.	I-81	81	64	1.75 Mi. N of PA 16 (Greencastle)
713 **	Erie	Springfield Twp.	I-90	90	10	1.1 mi. E of Ohio/Pennsylvania Line (Cherry Hill)
800	Centre	Spring Twp.	I-99	99	800	1.2 mi. N of PA 150 (Bellefonte)
801	Dauphin	Lower Paxton Twp.	I-81	81	714	0.7 mi. S of SR 3019 (Paxtonia)
802	Monroe	Coolbaugh Twp.	PA 423	423	140	0.2 mi. E of I-380 (Tobyhanna)
803	Adams	Freedom Twp.	US 15	15	10	0.5 mi. N of Maryland/Pennsylvania Line (Gettysburg)
804	Washington	Canton Twp.	I -70	70	154	1.3 mi. E of US 40 (Washington)
805	Crawford	N. Shenango Twp.	PA 285	285	20	0.1 mi. E of SR 3007 (Espyville)
806	Westmoreland	Hempfield Twp.	US 30	30	170	0.2 mi. E of Strawberry Lane (Jeannette)
807	Washington	Twilight Boro.	I-70	70	390	0.6 mi. W of Exit 39 (Speers)
808	Indiana	W. Wheatfield Twp.	US 22	22	242	0.1 mi. E of Bethel Cemetery Rd. (Clyde)
809	McKean	Foster Twp.	US 219	219	594	0.1 mi. N of Tuna Crossroads Bridge (Foster Brook)
810	Bucks	Doylestown Twp.	US 611	611	130	0.3 mi. S of SR 4202 (Doylestown)
811	Cumberland	Hampden Twp.	PA 581	581	10	Between the I-81 Junction and Creekview Rd. Exit (Creekview)
812	Westmoreland	S. Greenburg Twp.	US 30	30	300	Between Exits for SR 119 and Cedar St. (Cedar Creek)
813	Cumberland	Camp Hill Boro.	PA 581	581	120	Between US 11/15 and I-83 (Camp Hill)
815	Columbia	Hemlock Twp.	PA 44	44	10	0.25 mi. W of PA 42 (Buckhorn)
816	Lebanon	South Annville Twp.	PA 241	241	120	1.1 mi. S of US 322 (Mt. Gretna)

* Indicates ATR site

** Indicates WIM site

*** Indicates road is not a PA, US, or Interstate Route

Permanent Site Locations (Continued)

SITE #	COUNTY	MUNICIPALITY	ROUTE	SR	SEGMENT	LOCATION
817	Jefferson	Winslow Twp.	***	1002	70	0.1 mi. E of SR 2033 (Reynoldsville)
818	Pike	Matamoras Boro.	I-84	84	540	0.1 mi. W of New York/Pennsylvania Line (Matamoras)
821	Tioga	Lawrence Twp.	US 15	15	774	0.1 mi. S of T-722 Tioga River Rd overpass (Lawrenceville)
822	Dauphin	Lower Swatara Twp.	PA 300	300	30	0.8 mi. W of PA 441 (Highspire)
823	Dauphin	Swatara Twp.	PA 283	283	4	1.1 mi. S of SR 441 (Swatara)
824	Chester	Uwchlan Twp.	PA 100	100	260	Between SR 1001 and PA 113 (Exton)
825	York	Shrewsbury Twp.	I-83	83	2	0.2 mi. N of Maryland/Pennsylvania Line (New Freedom)
826	Berks	Exeter Twp.	US 422	422	450	0.7 mi. E of I-176 (Exeter)
827	Union	White Deer Twp.	US 15	15	320	1.1 mi. N of SR 1004 (New Columbia)
828	Crawford	Vernon Twp.	I-79	79	1500	3.3 mi. N of US 6 (Meadville)
829	Mercer	Shenango Twp.	I-80	80	24	1.3 mi. W of I-376 (West Middlesex)
830	Cumberland	Middlesex Twp.	I-81	81	490	1.0 mi. N of PA 641 (Carlisle)
831	Cumberland	Silver Spring Twp.	I-81	81	554	1.4 mi. S of PA 114 (Silver Spring)
832	Berks	Robeson Twp.	I-176	176	74	At Morgantown Rd Overpass (Green Hills)
833	Cumberland	E. Pennsboro Twp.	I-81	81	634	0.8 mi. North of PA 944 (Enola)
834	Erie	North East Twp.	I-90	90	450	0.5 mi. E of US 20 (North East)
835	Erie	Greenfield Twp.	I-86	86	60	2.4 mi. E of PA 89 (Erie South Tier)
836	Mercer	Findley Twp.	I-80	80	164	2.4 mi. W. of I-79 (Mercer)
837	Schuylkill	Kline Twp.	I-81	81	1364	2.5 mi. N of SR 1017 (Delano)
838	Beaver	Brighton Twp.	I-376	376	344	1.2 mi. W of PA 4035 (Brighton)
839	Monroe	Coolbaugh Twp.	I-380	380	70	Between Exits for SR 940 and SR 423 (Pocono Summit)
840	Allegheny	Franklin Park Boro.	I-279	279	122	0.1 mi. S of I 79 (Franklin Park)
841	Cumberland	Lower Allen Twp.	I-83	83	400	0.5 mi. S of Exit 40B (New Cumberland)
842	Northumberland	Delaware Twp.	I-180	180	560	At 8th St. Drive overpass (Warrior Run)
843	Union	White Deer Twp.	I-80	80	2090	1.0 mi. W of US 15 (White Deer)
844	Lackawanna	South Abington Twp.	I-81	81	1924	1.2 mi. N of US 11 (Dickson City)
845	Blair	Allegheny Twp.	I-99	99	290	0.7 mi. N of SR 8004 (Hollidaysburg)
846	Cumberland	Upper Allen Twp.	***	2013	30	0.7 mi. E of Winding Hill Rd (Winding Hill)
848	Adams	Straban Twp.	US 15	15	250	1.7 mi. N of US 30 (Hunterstown)
849	Crawford	Summit Twp.	PA 618	618	72	0.3 mi. S of PA 18 (Conneaut Lake)
850	Berks	Penn Twp.	PA 183	183	210	0.3 mi. N of SR 3006 (Bernville)
851	Northampton	Lower Nazareth Twp.	PA 33	33	50	0.7 mi. S of PA 248 (Nazareth)
853	Bucks	Haycock Twp.	PA 563	563	240	3.0 mi. W of PA 412 (Lake Nockamixon)
854	York	West Manheim Twp.	PA 216	216	60	0.3 mi. E of SR 3045 (Lake Marburg)
855	Huntingdon	Penn Twp.	***	3011	110	0.3 mi. S of PA 26 (Raystown Lake)
856	Cambria	White Twp.	***	1026	40	3.8 mi. W of PA 53 (Glendale Lake)
985	Cambria	Richland Twp.	US 219	219	120	1.6 mi. N of PA 56 (St. Michael)

* Indicates ATR site

** Indicates WIM site

*** Indicates road is not a PA, US, or Interstate Route

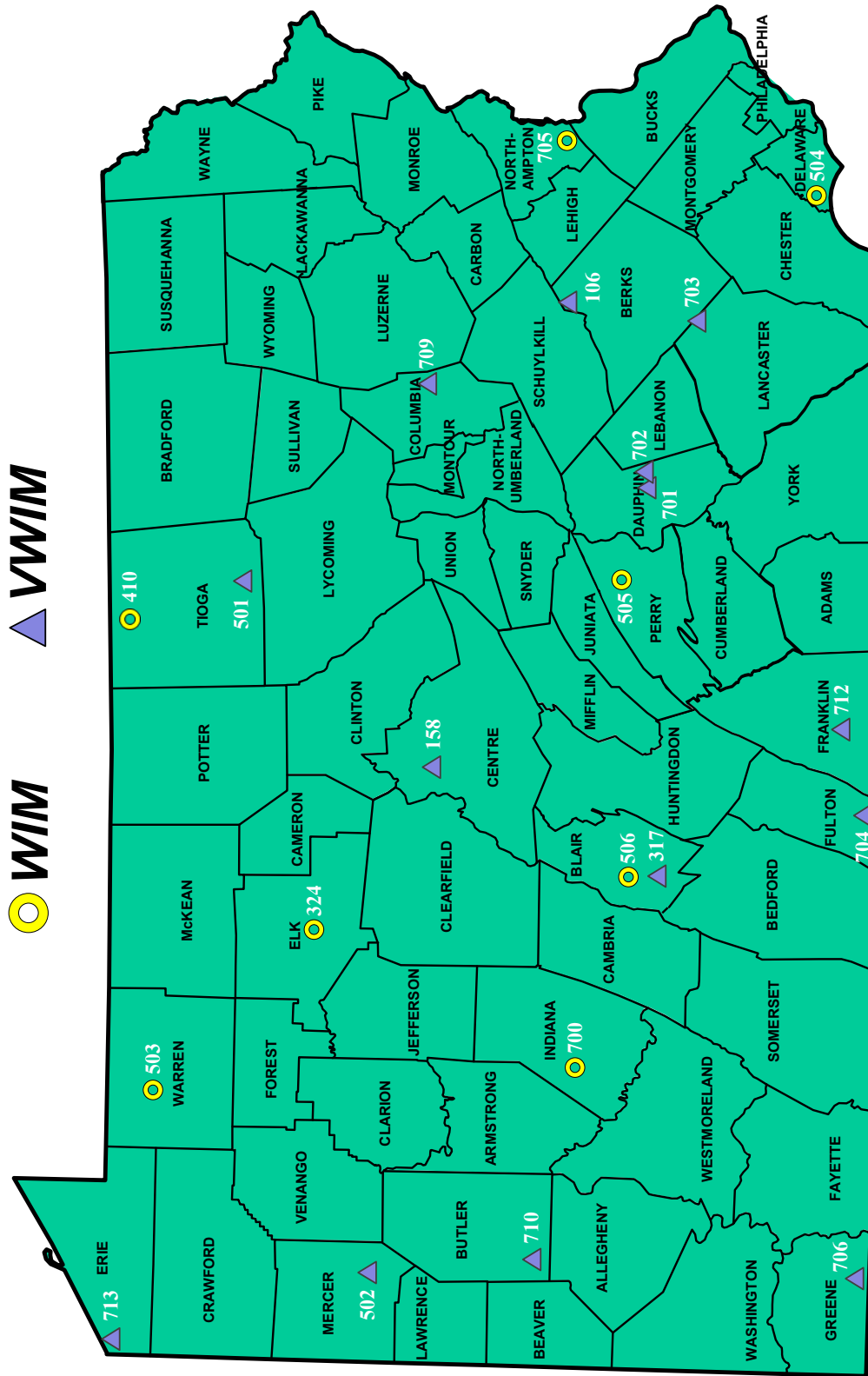
ATR, CAVC and WIM Locations Map (Opposite)

The ATR, CAVC, and WIM location maps of Pennsylvania, which are shown on the following two pages, give an overview of where all of the 149 ATR, CAVC and WIM sites are located. Symbols are used in addition to the site number to identify the location of the site.



WIM 704 Sensor Arrays on I 70 in Fulton County

CONTINUOUS MONITORING SITES



Permanent Site Locations by Traffic Pattern Group (TPG)

This chart groups the permanent site locations by Traffic Pattern Group. It gives the permanent site number, route, and the urban area or county depending on the TPG into which the permanent site falls. The Annual Average Daily Traffic (AADT) for each permanent site is also listed on this chart.

PERMANENT SITE LOCATIONS BY TPG							
TPG 1: URBAN INTERSTATE				TPG 2: RURAL INTERSTATE			
SITE #	ROUTE	URBAN AREA	AADT	SITE #	ROUTE	COUNTY	AADT
13	I-95	PHILADELPHIA	150,600	12	I-80	CENTRE	27,367
208	I-376	PITTSBURGH	87,140	106	I-78	BERKS	41,417
216	I-81	BINGHAMTON	25,988	126	I-80	JEFFERSON	26,603
317	I-99	ALTOONA	14,334	158	I-80	CENTRE	24,164
372	I-80	MILTON-LEWISBURG	35,931	392	I-80	LUZERNE	26,864
374	I-79	PITTSBURGH	34,032	393	I-70	WASHINGTON	33,170
376	I-81	SCRANTON	61,793	502	I-80	MERCER	29,810
377	I-295	PHILADELPHIA	58,399	600	I-81	FRANKLIN	45,942
394	I-78	ALLENTOWN	66,648	706	I-79	GREENE	25,839
701	I-81	HARRISBURG	63,307	709	I-80	COLUMBIA	33,726
710	I-79	PITTSBURGH	49,986	712	I-81	FRANKLIN	50,439
801	I-81	HARRISBURG	84,570	713	I-90	ERIE	23,937
804	I-70	PITTSBURGH	50,281	800	I-99	CENTRE	24,337
818	I-84	PORT JERVIS	30,919	807	I-70	WASHINGTON	28,857
823	I-283	HARRISBURG	57,140	825	I-83	YORK	44,434
830	I-81	HARRISBURG	65,989	828	I-79	CRAWFORD	19,129
831	I-81	HARRISBURG	69,999	829	I-80	MERCER	30,169
832	I-176	READING	20,827	834	I-90	ERIE	21,720
840	I-279	PITTSBURGH	50,093	835	I-86	ERIE	9,519
841	I-83	HARRISBURG	70,637	836	I-80	MERCER	28,665
844	I-81	SCRANTON	37,456	837	I-81	SCHUYLKILL	27,746
845	I-99	ALTOONA	35,520	838	I-376	BEAVER	23,688
				839	I-380	MONROE	27,904
				842	I-180	NORTHUMBERLAND	16,907
				843	I-80	UNION	24,322

Permanent Site Locations by TPG (Continued)

PERMANENT SITE LOCATIONS BY TPG							
TPG 3: URBAN PRINCIPAL ARTERIAL				TPG 4: RURAL PRINCIPAL ARTERIAL			
SITE #	ROUTE	URBAN AREA	AADT	SITE #	ROUTE	COUNTY	AADT
8	PA 73	PHILADELPHIA	18,818	4	US 6	TIOGA	2,752
14	US 1	PHILADELPHIA	16,708	19	PA 88	WASHINGTON	5,426
16	US 1	PHILADELPHIA	64,323	24	US 22	WESTMORELAND	21,582
21	US 22	ALLENTOWN	96,574	323	US 220	BEDFORD	4,606
22	PA 29	SCRANTON	25,030	360	US 219	CLEARFIELD	2,610
40	US 209	TAMAQUA	4,137	363	US 219	MCKEAN	4,886
203	PA 65	PITTSBURGH	19,712	378	US 40	FAYETTE	7,181
206	H. Taylor Br.	HARRISBURG	24,522	700	US 422	INDIANA	12,033
301	PA 5	ERIE	11,988	808	US 22	INDIANA	15,288
326	US 322	CLARION	8,116				
330	PA 532	PHILADELPHIA	10,480				
334	US 30	YORK	15,874				
349	PA 309	ALLENTOWN	36,282				
375	US 22	PITTSBURGH	25,094				
395	PA 21	UNIONTOWN	9,400				
396	US 40	PITTSBURGH	10,191				
803	US 15	EMMITSBURG	23,902				
806	US 30	PITTSBURGH	30,061				
809	US 219	BRADFORD	7,962				
811	PA 581	HARRISBURG	49,285				
812	US 30	PITTSBURGH	44,013				
813	PA 581	HARRISBURG	91,140				
821	US 15	TIOGA	11,278				
822	PA 300	HARRISBURG	59,327				
824	PA 100	PHILADELPHIA	34,046				
826	US 422	READING	49,664				
827	US 15	MILTON	16,172				
848	US 15	HANOVER	23,567				
851	PA 33	NORTHAMPTON	71,168				
985	US 219	CAMBRIA	17,264				

Permanent Site Locations by TPG (Continued)

PERMANENT SITE LOCATIONS BY TPG							
TPG 5: URBAN MINOR ARTERIAL/COLLECTOR				TPG 6: NORTH RURAL MINOR ARTERIAL			
SITE #	ROUTE	URBAN AREA	AADT	SITE #	ROUTE	COUNTY	AADT
18	PA 38	BUTLER	5,671	2	PA 77	CRAWFORD	1,953
20	PA 65	NEW CASTLE	6,689	7	PA 29	WYOMING	8,450
380	PA 562	READING	7,432	11	PA 948	ELK	5,219
381	SR 3019	YOUNGSTOWN	400	27	PA 66	ELK	2,768
390	PA 230	LANCASTER	6,570	48	US 11	SUSQUEHANNA	5,038
506	SR 1001	ALTOONA	15,631	51	PA 44	POTTER	2,788
815	PA 44	BLOOMSBURG	3,734	324	PA 120	ELK	4,184
846	SR 2013	HARRISBURG	4,348	410	PA 49	TIOGA	3,882

PERMANENT SITE LOCATIONS BY TPG							
TPG 7: CENTRAL RURAL MINOR ARTERIAL				TPG 8: NORTH RURAL COLLECTOR			
SITE #	ROUTE	COUNTY	AADT	SITE #	ROUTE	COUNTY	AADT
1	US 20	ERIE	3,647	5	SR 1043	BRADFORD	1,695
9	PA 563	BUCKS	7,372	29	PA 267	SUSQUEHANNA	1,278
15	US 522	FULTON	5,159	383	PA 150	CLINTON	3,258
367	PA 45	UNION	5,863	384	SR 4022	TIOGA	420
391	PA 23	CHESTER	8,323	385	SR 3002	WARREN	1,855
850	PA 183	BERKS	15,748	802	PA 423	MONROE	4,984
853	PA 563	BUCKS	4,131	817	SR 1002	JEFFERSON	1,620

PERMANENT SITE LOCATIONS BY TPG							
TPG 9: CENTRAL RURAL COLLECTOR				TPG 10: SPECIAL RECREATIONAL			
SITE #	ROUTE	COUNTY	AADT	SITE #	ROUTE	COUNTY	AADT
362	PA 616	YORK	6,169	306	PA 507	PIKE	5,696
364	PA 307	LACKAWANNA	4,523	805	PA 285	CRAWFORD	2,946
379	SR 4013	BLAIR	1,110	849	PA 618	CRAWFORD	1,663
382	SR 3005	CAMBRIA	1,457	855	SR 3011	HUNTINGDON	1,490
386	PA 254	MONTOUR	2,457	856	SR 1026	CAMBRIA	798
387	SR 2031	SOMERSET	400				
389	PA 536	JEFFERSON	1,804				
816	PA 241	LEBANON	3,226				
854	PA 216	YORK	8,834				

2023 Peak Hour by Traffic Pattern Group (TPG)

2023 Peak Hour by Traffic Pattern Group (TPG)													
TPG 1: Urban Interstate							TPG 2: Rural Interstate						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
13	12/22	2:00 PM	Fri	11,742	7.80%	150,600	12	11/26	2:00 PM	Sun	4,337	15.85%	27,367
208	11/2	5:00 PM	Thu	5,293	8.42%	87,140	106	11/26	11:00 AM	Sun	4,515	10.90%	41,417
216	5/29	2:00 PM	Mon	3,419	13.16%	25,988	126	11/26	1:00 PM	Sun	3,638	13.68%	26,603
317	9/1	4:00 PM	Fri	1,986	13.86%	14,334	158	11/26	1:00 PM	Sun	3,355	13.88%	24,164
372	11/26	2:00 PM	Sun	5,356	14.91%	35,931	392	11/26	1:00 PM	Sun	3,674	13.68%	26,864
374	6/18	11:00 AM	Sun	4,350	12.78%	34,032	393	6/30	2:00 PM	Fri	3,433	10.35%	33,170
376	9/29	3:00 PM	Fri	6,118	9.90%	61,793	502	11/26	1:00 PM	Sun	4,165	13.97%	29,810
377	9/28	4:00 PM	Thu	5,547	9.50%	58,399	600	11/26	1:00 PM	Sun	4,581	9.97%	45,942
394	10/6	3:00 PM	Fri	6,104	9.16%	66,648	706	11/26	12:00 PM	Sun	3,093	11.97%	25,839
701	7/16	12:00 PM	Sun	5,878	9.28%	63,307	709	11/26	2:00 PM	Sun	4,966	14.72%	33,726
710	8/18	4:00 PM	Fri	5,670	11.34%	49,986	712	11/26	2:00 PM	Sun	5,006	9.92%	50,439
801	5/25	4:00 PM	Thu	7,778	9.20%	84,570	713	11/26	12:00 PM	Sun	3,384	14.14%	23,937
804	6/30	4:00 PM	Fri	5,093	10.13%	50,281	800	9/22	4:00 PM	Fri	2,985	12.27%	24,337
818	7/1	11:00 AM	Sat	3,573	11.56%	30,919	807	6/14	4:00 PM	Wed	3,072	10.65%	28,857
823	11/17	2:00 PM	Fri	4,721	8.26%	57,140	825	7/1	1:00 PM	Sat	4,296	9.67%	44,434
830	11/26	1:00 PM	Sun	5,911	8.96%	65,989	828	6/17	12:00 PM	Sat	2,875	15.03%	19,129
831	11/26	1:00 PM	Sun	6,279	8.97%	69,999	829	11/26	2:00 PM	Sun	3,933	13.04%	30,169
832	6/2	5:00 PM	Fri	2,283	10.96%	20,827	834	11/26	1:00 PM	Sun	3,510	16.16%	21,720
840	8/31	4:00 PM	Thu	5,554	11.09%	50,093	835	7/1	11:00 AM	Sat	1,321	13.88%	9,519
841	4/14	4:00 PM	Fri	6,478	9.17%	70,637	836	11/26	1:00 PM	Sun	3,765	13.13%	28,665
844	11/26	2:00 PM	Sun	4,590	12.25%	37,456	837	7/7	3:00 PM	Fri	3,098	11.17%	27,746
845	9/1	4:00 PM	Fri	4,356	12.26%	35,520	838	9/1	4:00 PM	Fri	2,649	11.18%	23,688
							839	11/26	11:00 AM	Sun	3,149	11.29%	27,904
							842	10/6	3:00 PM	Fri	2,162	12.79%	16,907
							843	11/26	2:00 PM	Sun	4,087	16.80%	24,322

2023 Peak Hour by TPG (Continued)

2023 Peak Hour by Traffic Pattern Group (TPG)													
TPG 3: Urban Principal Arterial							TPG 4: Rural Principal Arterial						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
8	11/17	4:00 PM	Fri	2,016	10.71%	18,818	4	9/15	9:00 AM	Fri	351	12.75%	2,752
14	5/12	3:00 PM	Fri	1,966	11.77%	16,708	19	2/14	4:00 PM	Tue	654	12.05%	5,426
16	8/16	4:00 PM	Wed	5,762	8.96%	64,323	24	9/1	4:00 PM	Fri	2,413	11.18%	21,582
21	2/22	7:00 AM	Wed	7,262	7.54%	96,574	323	9/1	4:00 PM	Fri	763	16.57%	4,606
22	11/8	4:00 PM	Wed	2,626	10.49%	25,030	360	6/21	4:00 PM	Wed	317	12.15%	2,610
40	3/28	3:00 PM	Tue	460	11.12%	4,137	363	6/30	3:00 PM	Fri	676	13.84%	4,886
203	11/15	4:00 PM	Wed	1,971	10.00%	19,712	378	4/14	4:00 PM	Fri	796	11.08%	7,181
206	3/23	4:00 PM	Thu	3,220	13.13%	24,522	700	9/15	4:00 PM	Fri	1,395	11.59%	12,033
301	6/29	4:00 PM	Thu	1,501	12.52%	11,988	808	11/26	3:00 PM	Sun	1,970	12.89%	15,288
326	3/1	4:00 PM	Wed	977	12.04%	8,116							
330	3/15	4:00 PM	Wed	1,132	10.80%	10,480							
334	2/21	4:00 PM	Tue	1,517	9.56%	15,874							
349	4/25	5:00 PM	Tue	3,401	9.37%	36,282							
375	7/18	4:00 PM	Tue	2,966	11.82%	25,094							
395	5/12	4:00 PM	Fri	1,015	10.80%	9,400							
396	11/16	4:00 PM	Thu	1,471	14.43%	10,191							
803	11/26	2:00 PM	Sun	2,953	12.35%	23,902							
806	12/20	4:00 PM	Wed	3,023	10.06%	30,061							
809	6/30	3:00 PM	Fri	986	12.38%	7,962							
811	10/17	4:00 PM	Tue	5,145	10.44%	49,285							
812	5/17	4:00 PM	Wed	4,283	9.73%	44,013							
813	5/4	3:00 PM	Thu	7,646	8.39%	91,140							
821	11/26	2:00 PM	Sun	1,677	14.87%	11,278							
822	7/13	4:00 PM	Thu	5,509	9.29%	59,327							
824	6/13	4:00 PM	Tue	3,432	10.08%	34,046							
826	7/11	4:00 PM	Tue	5,054	10.18%	49,664							
827	5/12	4:00 PM	Fri	1,766	10.92%	16,172							
848	11/26	1:00 PM	Sun	2,871	12.18%	23,567							
851	4/5	4:00 PM	Wed	6,800	9.55%	71,168							
985	6/6	4:00 PM	Tue	2,052	11.89%	17,264							

2023 Peak Hour by TPG (Continued)

2023 Peak Hour by Traffic Pattern Group (TPG)													
TPG 5: Urban Minor Arterial/Collector							TPG 6: North Rural Minor Arterial						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
18	5/19	4:00 PM	Fri	748	13.19%	5,671	2	8/4	4:00 PM	Fri	263	13.47%	1,953
20	5/25	3:00 PM	Thu	755	11.29%	6,689	7	11/24	12:00 PM	Fri	1,026	12.14%	8,450
380	8/17	5:00 PM	Thu	1,121	15.08%	7,432	11	9/21	3:00 PM	Thu	726	13.91%	5,219
381	8/25	3:00 PM	Fri	174	43.50%	400	27	11/24	1:00 PM	Fri	448	16.18%	2,768
390	11/7	4:00 PM	Tue	855	13.01%	6,570	48	7/14	4:00 PM	Fri	762	15.13%	5,038
506	12/22	12:00 PM	Fri	1,904	12.18%	15,631	51	10/16	3:00 PM	Mon	350	12.55%	2,788
815	8/9	5:00 PM	Wed	463	12.40%	3,734	324	4/26	2:00 PM	Wed	552	13.19%	4,184
846	4/21	8:00 AM	Fri	580	13.34%	4,348	410	11/3	3:00 PM	Fri	496	12.78%	3,882

2023 Peak Hour by Traffic Pattern Group (TPG)													
TPG 7: Central Rural Minor Arterial							TPG 8: North Rural Collector						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
1	7/1	1:00 PM	Sat	833	22.84%	3,647	5	12/11	12:00 PM	Mon	382	22.54%	1,695
9	2/21	4:00 PM	Tue	1,162	15.76%	7,372	29	11/24	11:00 AM	Fri	203	15.88%	1,278
15	10/20	12:00 PM	Fri	728	14.11%	5,159	383	6/2	4:00 PM	Fri	394	12.09%	3,258
367	8/11	5:00 PM	Fri	840	14.33%	5,863	384	6/20	3:00 PM	Tue	86	20.48%	420
391	4/21	3:00 PM	Fri	1,040	12.50%	8,323	385	9/1	4:00 PM	Fri	262	14.12%	1,855
850	9/22	4:00 PM	Fri	1,589	10.09%	15,748	802	7/21	4:00 PM	Fri	913	18.32%	4,984
853	10/28	2:00 PM	Sat	590	14.28%	4,131	817	4/5	4:00 PM	Wed	222	13.70%	1,620

2023 Peak Hour by Traffic Pattern Group (TPG)													
TPG 9: Central Rural Collector							TPG 10: Special Recreational						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
362	6/5	5:00 PM	Mon	692	11.22%	6,169	306	5/28	12:00 PM	Sun	888	15.59%	5,696
364	6/2	3:00 PM	Fri	586	12.96%	4,523	805	5/27	12:00 PM	Sat	785	26.65%	2,946
379	6/19	4:00 PM	Mon	221	19.91%	1,110	849	10/13	7:00 PM	Fri	288	17.32%	1,663
382	3/31	4:00 PM	Fri	201	13.80%	1,457	855	5/29	3:00 PM	Mon	396	26.58%	1,490
386	7/17	7:00 AM	Mon	793	32.28%	2,457	856	10/1	11:00 AM	Sun	665	83.33%	798
387	8/25	5:00 PM	Fri	59	14.75%	400							
389	9/8	5:00 PM	Fri	231	12.80%	1,804							
816	11/28	4:00 PM	Tue	877	27.19%	3,226							
854	6/10	1:00 PM	Sat	1,039	11.76%	8,834							

2023 30th Highest Hour by Traffic Pattern Group (TPG)

2023 30th Highest Hour by Traffic Pattern Group													
TPG 1: Urban Interstate							TPG 2: Rural Interstate						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
13	8/29	4:00 PM	Tue	11,174	7.42%	150,600	12	10/6	3:00 PM	Fri	2,823	10.32%	27,367
208	6/9	5:00 PM	Fri	7,057	8.10%	87,140	106	12/30	1:00 PM	Sat	3,765	9.09%	41,417
216	5/26	3:00 PM	Fri	2,805	10.79%	25,988	126	12/26	2:00 PM	Tue	2,575	9.68%	26,603
317	6/30	5:00 PM	Fri	1,626	11.34%	14,334	158	6/30	3:00 PM	Fri	2,426	10.04%	24,164
372	8/17	4:00 PM	Thu	3,654	10.17%	35,931	392	8/13	11:00 AM	Sun	2,860	10.65%	26,864
374	6/17	2:00 PM	Sat	3,876	11.39%	34,032	393	7/1	11:00 AM	Sat	3,203	9.66%	33,170
376	9/1	4:00 PM	Fri	5,813	9.41%	61,793	502	8/20	1:00 PM	Sun	2,726	9.14%	29,810
377	10/5	4:00 PM	Thu	5,201	8.91%	58,399	600	6/23	4:00 PM	Fri	4,141	9.01%	45,942
394	4/20	3:00 PM	Thu	5,854	8.78%	66,648	706	9/15	5:00 PM	Fri	2,681	10.38%	25,839
701	4/7	11:00 AM	Fri	5,556	8.78%	63,307	709	11/17	4:00 PM	Fri	3,593	10.65%	33,726
710	10/6	3:00 PM	Fri	5,178	10.36%	49,986	712	7/28	3:00 PM	Fri	4,541	9.00%	50,439
801	6/2	4:00 PM	Fri	7,459	8.82%	84,570	713	8/6	1:00 PM	Sun	2,727	11.39%	23,937
804	10/6	4:00 PM	Fri	4,727	9.40%	50,281	800	10/11	4:00 PM	Wed	2,655	10.91%	24,337
818	8/20	1:00 PM	Sun	3,182	10.29%	30,919	807	10/13	3:00 PM	Fri	2,836	9.83%	28,857
823	4/7	3:00 PM	Fri	4,545	7.95%	57,140	825	6/25	4:00 PM	Sun	3,951	8.89%	44,434
830	10/6	2:00 PM	Fri	5,736	8.69%	65,989	828	6/16	12:00 PM	Fri	2,413	12.61%	19,129
831	10/26	3:00 PM	Thu	5,797	8.28%	69,999	829	7/21	2:00 PM	Fri	2,910	9.65%	30,169
832	4/14	4:00 PM	Fri	2,059	9.89%	20,827	834	7/16	2:00 PM	Sun	2,645	12.18%	21,720
840	4/11	5:00 PM	Tue	5,005	9.99%	50,093	835	7/30	1:00 PM	Sun	1,188	12.48%	9,519
841	10/25	4:00 PM	Wed	6,286	8.90%	70,637	836	6/30	5:00 PM	Fri	2,802	9.77%	28,665
844	11/25	12:00 PM	Sat	3,610	9.64%	37,456	837	7/14	2:00 PM	Fri	2,778	10.01%	27,746
845	8/4	4:00 PM	Fri	3,693	10.40%	35,520	838	5/25	4:00 PM	Thu	2,394	10.11%	23,688
							839	7/21	3:00 PM	Fri	2,725	9.77%	27,904
							842	11/24	12:00 PM	Fri	1,889	11.17%	16,907
							843	9/24	3:00 PM	Sun	2,531	10.41%	24,322

2023 30th Highest Hour by TPG (Continued)

2023 30th Highest Hour by Traffic Pattern Group													
TPG 3: Urban Principal Arterial							TPG 4: Rural Principal Arterial						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
8	2/7	7:00 AM	Tue	1,920	10.20%	18,818	4	5/27	10:00 AM	Sat	303	11.01%	2,752
14	7/28	3:00 PM	Fri	1,784	10.68%	16,708	19	11/6	4:00 PM	Mon	615	11.33%	5,426
16	6/6	5:00 PM	Tue	5,503	8.56%	64,323	24	12/15	4:00 PM	Fri	2,125	9.85%	21,582
21	3/8	4:00 PM	Wed	7,089	7.34%	96,574	323	6/30	3:00 PM	Fri	514	11.16%	4,606
22	4/14	3:00 PM	Fri	2,499	9.98%	25,030	360	4/12	3:00 PM	Wed	290	11.11%	2,610
40	4/20	3:00 PM	Thu	412	9.96%	4,137	363	7/14	3:00 PM	Fri	550	11.26%	4,886
203	12/14	3:00 PM	Thu	1,880	9.54%	19,712	378	9/22	4:00 PM	Fri	740	10.30%	7,181
206	6/6	4:00 PM	Tue	2,798	11.41%	24,522	700	11/17	3:00 PM	Fri	1,247	10.36%	12,033
301	4/13	3:00 PM	Thu	1,369	11.42%	11,988	808	11/22	3:00 PM	Wed	1,581	10.34%	15,288
326	1/24	3:00 PM	Tue	925	11.40%	8,116							
330	5/18	5:00 PM	Thu	1,040	9.92%	10,480							
334	5/23	4:00 PM	Tue	1,343	8.46%	15,874							
349	4/20	4:00 PM	Thu	3,165	8.72%	36,282							
375	7/19	4:00 PM	Wed	2,376	9.47%	25,094							
395	12/15	4:00 PM	Fri	958	10.19%	9,400							
396	10/19	3:00 PM	Thu	1,048	10.28%	10,191							
803	7/22	11:00 AM	Sat	2,597	10.87%	23,902							
806	9/22	4:00 PM	Fri	2,871	9.55%	30,061							
809	7/7	2:00 PM	Fri	842	10.58%	7,962							
811	12/7	4:00 PM	Thu	4,806	9.75%	49,285							
812	6/16	3:00 PM	Fri	4,151	9.43%	44,013							
813	5/5	4:00 PM	Fri	7,395	8.11%	91,140							
821	8/13	1:00 PM	Sun	1,482	13.14%	11,278							
822	10/13	5:00 PM	Fri	5,282	8.90%	59,327							
824	12/22	12:00 PM	Fri	3,253	9.55%	34,046							
826	3/29	4:00 PM	Wed	4,572	9.21%	49,664							
827	5/5	4:00 PM	Fri	1,581	9.78%	16,172							
848	8/20	1:00 PM	Sun	2,510	10.65%	23,567							
851	3/28	3:00 PM	Tue	6,468	9.09%	71,168							
985	12/13	4:00 PM	Wed	1,919	11.12%	17,264							

2023 30th Highest Hour by TPG (Continued)

2023 30th Highest Hour by Traffic Pattern Group													
TPG 5: Urban Minor Arterial/Collector							TPG 6: North Rural Minor Arterial						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
18	11/3	4:00 PM	Fri	644	11.36%	5,671	2	9/15	4:00 PM	Fri	226	11.57%	1,953
20	8/25	4:00 PM	Fri	700	10.46%	6,689	7	6/23	4:00 PM	Fri	856	10.13%	8,450
380	8/31	5:00 PM	Thu	893	12.02%	7,432	11	7/20	4:00 PM	Thu	620	11.88%	5,219
381	8/30	5:00 PM	Wed	55	13.75%	400	27	8/13	1:00 PM	Sun	356	12.86%	2,768
390	1/26	3:00 PM	Thu	792	12.05%	6,570	48	5/19	3:00 PM	Fri	541	10.74%	5,038
506	8/3	4:00 PM	Thu	1,628	10.42%	15,631	51	8/1	4:00 PM	Tue	321	11.51%	2,788
815	5/12	4:00 PM	Fri	396	10.61%	3,734	324	9/19	3:00 PM	Tue	504	12.05%	4,184
846	5/23	4:00 PM	Tue	511	11.75%	4,348	410	3/31	3:00 PM	Fri	425	10.95%	3,882

2023 30th Highest Hour by Traffic Pattern Group													
TPG 7: Central Rural Minor Arterial							TPG 8: North Rural Collector						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
1	7/9	1:00 PM	Sun	571	15.66%	3,647	5	7/6	3:00 PM	Thu	225	13.27%	1,695
9	2/23	4:00 PM	Thu	875	11.87%	7,372	29	11/24	3:00 PM	Fri	150	11.74%	1,278
15	10/21	9:00 AM	Sat	590	11.44%	5,159	383	4/19	4:00 PM	Wed	358	10.99%	3,258
367	10/13	4:00 PM	Fri	617	10.52%	5,863	384	8/17	5:00 PM	Thu	62	14.76%	420
391	10/28	3:00 PM	Sat	882	10.60%	8,323	385	7/1	12:00 PM	Sat	219	11.81%	1,855
850	8/17	5:00 PM	Thu	1,494	9.49%	15,748	802	10/6	4:00 PM	Fri	703	14.11%	4,984
853	10/27	4:00 PM	Fri	481	11.64%	4,131	817	10/18	4:00 PM	Wed	203	12.53%	1,620

2023 30th Highest Hour by Traffic Pattern Group													
TPG 9: Central Rural Collector							TPG 10: Special Recreational						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
362	7/21	4:00 PM	Fri	610	9.89%	6,169	306	8/5	11:00 AM	Sat	770	13.52%	5,696
364	4/14	3:00 PM	Fri	490	10.83%	4,523	805	9/3	11:00 AM	Sun	564	19.14%	2,946
379	7/27	5:00 PM	Thu	133	11.98%	1,110	849	7/29	6:00 PM	Sat	216	12.99%	1,663
382	7/12	4:00 PM	Wed	174	11.94%	1,457	855	7/23	11:00 AM	Sun	325	21.81%	1,490
386	3/5	10:00 AM	Sun	298	12.13%	2,457	856	7/4	2:00 PM	Tue	168	21.05%	798
387	10/23	3:00 PM	Mon	51	12.75%	400							
389	11/6	4:00 PM	Mon	199	11.03%	1,804							
816	3/21	4:00 PM	Tue	436	13.52%	3,226							
854	7/30	12:00 PM	Sun	929	10.52%	8,834							

2023 50th Highest Hour by Traffic Pattern Group (TPG)

2023 50th Highest Hour by Traffic Pattern Group													
TPG 1: Urban Interstate							TPG 2: Rural Interstate						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
13	3/31	4:00 PM	Fri	11,088	7.36%	150,600	12	7/16	1:00 PM	Sun	2,728	9.97%	27,367
208	7/13	6:00 PM	Thu	6,987	8.02%	87,140	106	7/1	11:00 AM	Sat	3,667	8.85%	41,417
216	5/26	5:00 PM	Fri	2,734	10.52%	25,988	126	7/9	1:00 PM	Sun	2,501	9.40%	26,603
317	8/18	2:00 PM	Fri	1,560	10.88%	14,334	158	8/20	2:00 PM	Sun	2,340	9.68%	24,164
372	7/23	12:00 PM	Sun	3,557	9.90%	35,931	392	10/13	3:00 PM	Fri	2,750	10.24%	26,864
374	5/5	2:00 PM	Fri	3,754	11.03%	34,032	393	7/7	3:00 PM	Fri	3,111	9.38%	33,170
376	7/28	4:00 PM	Fri	5,710	9.24%	61,793	502	8/13	5:00 PM	Sun	2,583	8.66%	29,810
377	4/11	5:00 PM	Tue	5,144	8.81%	58,399	600	7/7	4:00 PM	Fri	4,048	8.81%	45,942
394	3/21	4:00 PM	Tue	5,796	8.70%	66,648	706	9/17	11:00AM	Sun	2,614	10.12%	25,839
701	9/22	2:00 PM	Fri	5,463	8.63%	63,307	709	11/22	3:00 PM	Wed	3,476	10.31%	33,726
710	8/17	4:00 PM	Thu	5,015	10.03%	49,986	712	10/13	3:00 PM	Fri	4,464	8.85%	50,439
801	8/16	4:00 PM	Wed	7,369	8.71%	84,570	713	9/4	3:00 PM	Mon	2,623	10.96%	23,937
804	8/18	4:00 PM	Fri	4,656	9.26%	50,281	800	11/3	4:00 PM	Fri	2,592	10.65%	24,337
818	11/22	3:00 PM	Wed	3,087	9.98%	30,919	807	6/7	4:00 PM	Wed	2,793	9.68%	28,857
823	10/27	2:00 PM	Fri	4,506	7.89%	57,140	825	5/27	12:00 PM	Sat	3,875	8.72%	44,434
830	7/21	3:00 PM	Fri	5,687	8.62%	65,989	828	6/23	4:00 PM	Fri	2,337	12.22%	19,129
831	8/11	2:00 PM	Fri	5,745	8.21%	69,999	829	7/16	2:00 PM	Sun	2,816	9.33%	30,169
832	3/16	4:00 PM	Thu	2,029	9.74%	20,827	834	6/17	11:00 AM	Sat	2,587	11.91%	21,720
840	9/20	7:00 AM	Wed	4,949	9.88%	50,093	835	7/2	1:00 PM	Sun	1,159	12.18%	9,519
841	6/1	4:00 PM	Thu	6,240	8.83%	70,637	836	7/9	1:00 PM	Sun	2,724	9.50%	28,665
844	4/10	2:00 PM	Mon	3,456	9.23%	37,456	837	7/1	12:00 PM	Sat	2,661	9.59%	27,746
845	3/2	4:00 PM	Thu	3,630	10.22%	35,520	838	5/18	4:00 PM	Thu	2,337	9.87%	23,688
							839	7/21	5:00 PM	Fri	2,663	9.54%	27,904
							842	5/26	2:00 PM	Fri	1,842	10.89%	16,907
							843	8/6	1:00 PM	Sun	2,456	10.10%	24,322

2023 50th Highest Hour by TPG (Continued)

2023 50th Highest Hour by Traffic Pattern Group													
TPG 3: Urban Principal Arterial							TPG 4: Rural Principal Arterial						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
8	1/31	8:00 AM	Tue	1,901	10.10%	18,818	4	9/15	8:00 AM	Fri	285	10.36%	2,752
14	6/16	3:00 PM	Fri	1,746	10.45%	16,708	19	4/14	4:00 PM	Fri	602	11.09%	5,426
16	8/3	5:00 PM	Thu	5,467	8.50%	64,323	24	8/18	3:00 PM	Fri	2,045	9.48%	21,582
21	5/2	4:00 PM	Tue	7,054	7.30%	96,574	323	5/26	2:00 PM	Fri	498	10.81%	4,606
22	10/17	3:00 PM	Tue	2,472	9.88%	25,030	360	6/29	4:00 PM	Thu	284	10.88%	2,610
40	5/11	3:00 PM	Thu	405	9.79%	4,137	363	9/22	2:00 PM	Fri	533	10.91%	4,886
203	6/22	4:00 PM	Thu	1,862	9.45%	19,712	378	8/31	4:00 PM	Thu	731	10.18%	7,181
206	11/9	4:00 PM	Thu	2,748	11.21%	24,522	700	9/28	4:00 PM	Thu	1,214	10.09%	12,033
301	4/27	4:00 PM	Thu	1,357	11.32%	11,988	808	7/14	3:00 PM	Fri	1,526	9.98%	15,288
326	10/27	3:00 PM	Fri	911	11.22%	8,116							
330	12/19	4:00 PM	Tue	1,027	9.80%	10,480							
334	10/12	3:00 PM	Thu	1,325	8.35%	15,874							
349	4/17	5:00 PM	Mon	3,130	8.63%	36,282							
375	9/20	4:00 PM	Wed	2,321	9.25%	25,094							
395	6/1	4:00 PM	Thu	937	9.97%	9,400							
396	11/22	1:00 PM	Wed	1,030	10.11%	10,191							
803	7/8	11:00 AM	Sat	2,527	10.57%	23,902							
806	7/20	4:00 PM	Thu	2,838	9.44%	30,061							
809	3/24	3:00 PM	Fri	828	10.40%	7,962							
811	9/28	4:00 PM	Thu	4,761	9.66%	49,285							
812	2/17	4:00 PM	Fri	4,103	9.32%	44,013							
813	3/7	7:00 AM	Tue	7,363	8.08%	91,140							
821	7/7	3:00 PM	Fri	1,421	12.60%	11,278							
822	4/21	3:00 PM	Fri	5,218	8.80%	59,327							
824	11/9	4:00 PM	Thu	3,208	9.42%	34,046							
826	10/13	3:00 PM	Fri	4,507	9.07%	49,664							
827	7/19	4:00 PM	Wed	1,549	9.58%	16,172							
848	6/30	4:00 PM	Fri	2,458	10.43%	23,567							
851	4/14	3:00 PM	Fri	6,407	9.00%	71,168							
985	6/20	4:00 PM	Tue	1,897	10.99%	17,264							

2023 50th Highest Hour by TPG (Continued)

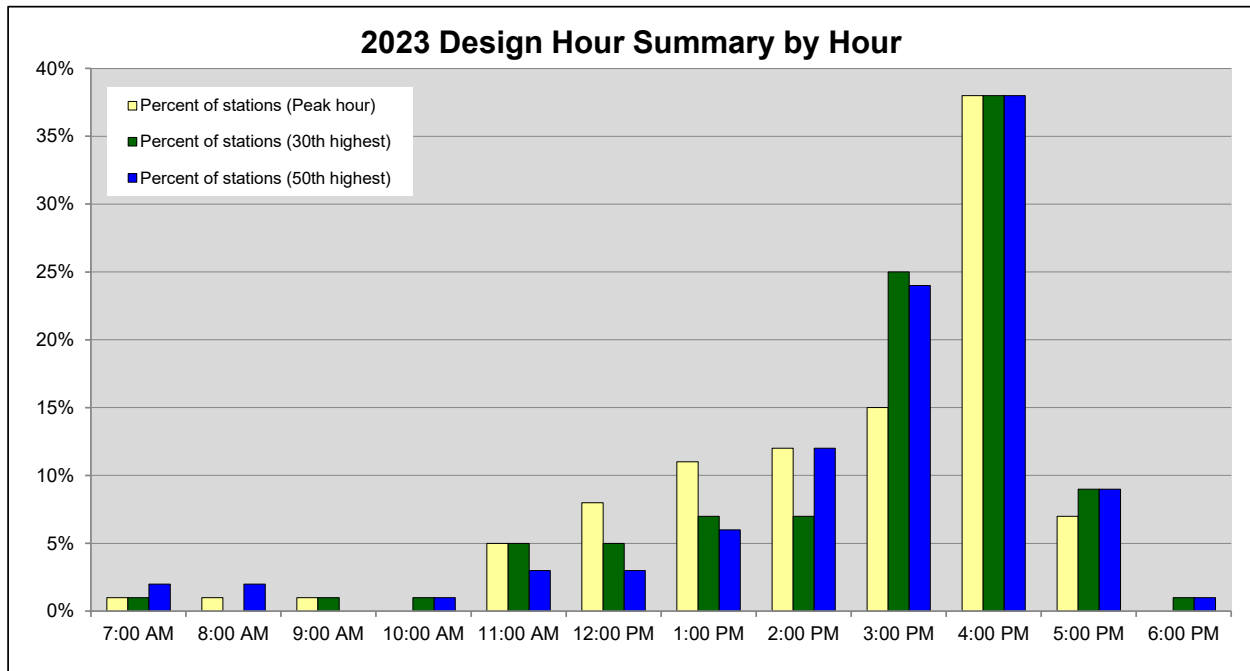
2023 50th Highest Hour by Traffic Pattern Group													
TPG 5: Urban Minor Arterial/Collector							TPG 6: North Rural Minor Arterial						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
18	3/16	4:00 PM	Thu	631	11.13%	5,671	2	4/13	4:00 PM	Thu	219	11.21%	1,953
20	5/9	3:00 PM	Tue	682	10.20%	6,689	7	8/31	5:00 PM	Thu	834	9.87%	8,450
380	3/29	4:00 PM	Wed	872	11.73%	7,432	11	9/6	3:00 PM	Wed	609	11.67%	5,219
381	3/24	5:00 PM	Fri	51	12.75%	400	27	9/1	2:00 PM	Fri	349	12.61%	2,768
390	1/5	3:00 PM	Thu	775	11.80%	6,570	48	5/11	3:00 PM	Thu	524	10.40%	5,038
506	5/10	4:00 PM	Wed	1,606	10.27%	15,631	51	8/31	3:00 PM	Thu	315	11.30%	2,788
815	5/25	4:00 PM	Thu	386	10.34%	3,734	324	4/26	3:00 PM	Wed	493	11.78%	4,184
846	3/30	8:00 AM	Thu	501	11.52%	4,348	410	5/12	3:00 PM	Fri	418	10.77%	3,882

2023 50th Highest Hour by Traffic Pattern Group													
TPG 7: Central Rural Minor Arterial							TPG 8: North Rural Collector						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
1	8/5	1:00 PM	Sat	508	13.93%	3,647	5	5/2	4:00 PM	Tue	219	12.92%	1,695
9	12/13	4:00 PM	Wed	855	11.60%	7,372	29	5/19	4:00 PM	Fri	142	11.11%	1,278
15	10/26	3:00 PM	Thu	580	11.24%	5,159	383	2/24	4:00 PM	Fri	350	10.74%	3,258
367	9/1	3:00 PM	Fri	598	10.20%	5,863	384	10/26	3:00 PM	Thu	59	14.05%	420
391	7/21	4:00 PM	Fri	860	10.33%	8,323	385	8/11	5:00 PM	Fri	213	11.48%	1,855
850	12/8	5:00 PM	Fri	1,467	9.32%	15,748	802	5/30	4:00 PM	Tue	667	13.38%	4,984
853	6/10	12:00 PM	Sat	467	11.30%	4,131	817	11/6	4:00 PM	Mon	196	12.10%	1,620

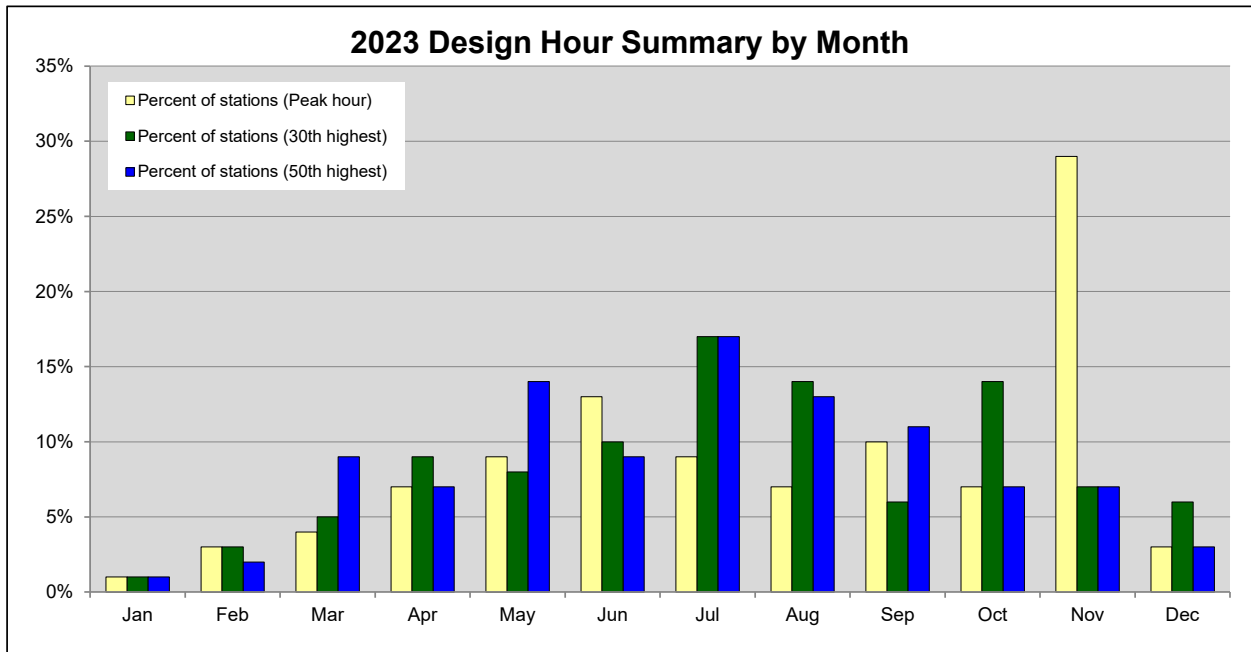
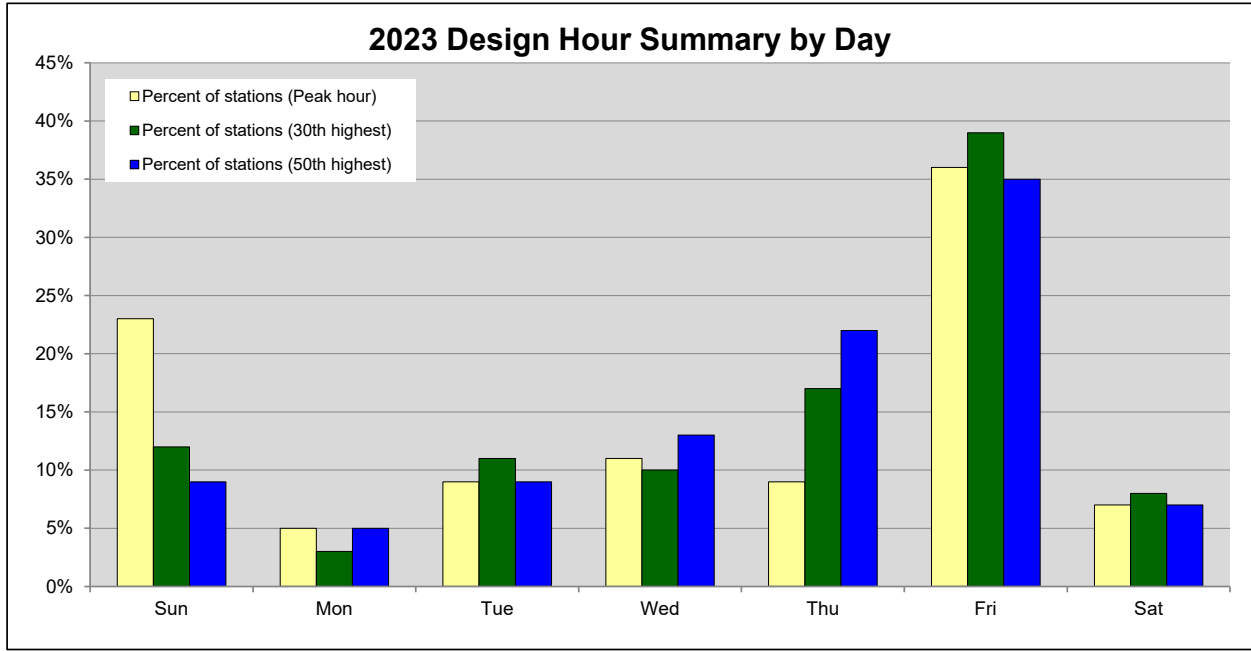
2023 50th Highest Hour by Traffic Pattern Group													
TPG 9: Central Rural Collector							TPG 10: Special Recreational						
Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT	Site #	Date	Hour (start)	DOW	Volume	% AADT	AADT
362	8/25	3:00 PM	Fri	601	9.74%	6,169	306	7/1	10:00 AM	Sat	722	12.68%	5,696
364	6/22	4:00 PM	Thu	480	10.61%	4,523	805	9/2	2:00 PM	Sat	510	17.31%	2,946
379	8/8	5:00 PM	Tue	128	11.53%	1,110	849	5/12	4:00 PM	Fri	205	12.33%	1,663
382	7/10	4:00 PM	Mon	168	11.53%	1,457	855	5/28	2:00 PM	Sun	312	20.94%	1,490
386	9/18	4:00 PM	Mon	283	11.52%	2,457	856	5/28	1:00 PM	Sun	158	19.80%	798
387	3/27	7:00 AM	Mon	48	12.00%	400							
389	9/20	3:00 PM	Wed	194	10.75%	1,804							
816	11/1	4:00 PM	Wed	423	13.11%	3,226							
854	8/9	5:00 PM	Wed	917	10.38%	8,834							

2023 Design Hour Summaries: Peak, 30th and 50th Highest Hour

Design Hour Volume (DHV) is the hourly traffic volume used in the design of highways. The DHV is usually represented by the 30th highest hourly volume of the future year chosen for design. The following three graphs show the peak, 30th and 50th highest hour summary by hour, day, and month.



2023 Design Hour Summaries: Peak, 30th and 50th Highest Hour



Five Year Summary of Annual Average Daily Traffic (AADT) from Permanent Sites

This chart shows the permanent site station numbers and their Annual Average Daily Traffic (AADT) for the past five years, 2019 through 2023. The percent change is also given for 2022 to 2023 and 2019 to 2023, showing where traffic has increased or decreased.

**Indicates there is no data available.*

Site #	Annual Average Daily Traffic (AADT)					Percent Change	
	2019	2020	2021	2022	2023	2022-2023	2019-2023
1	3,799	3,655	3,741	3,637	3,647	0.3%	-4.0%
2	1,916	1,871	2,017	1,869	1,953	4.5%	1.9%
3	5,226	4,864	4,989	**	**	N/A	-4.5%
4	2,736	2,301	2,486	2,615	2,752	5.2%	0.6%
5	1,737	1,602	1,640	1,692	1,695	0.2%	-2.4%
6	*	*	7,593	**	**	N/A	N/A
7	*	*	8,271	8,062	8,450	4.8%	2.2%
8	20,849	14,940	17,202	18,352	18,818	2.5%	-9.7%
9	*	*	7,722	7,454	7,372	-1.1%	-4.5%
10	*	*	9,728	9,572	**	N/A	-1.6%
11	*	*	5,231	5,218	5,219	0.0%	-0.2%
12	*	*	*	26,234	27,367	4.3%	4.3%
13	*	*	*	145,981	150,600	3.2%	3.2%
14	*	*	*	17,281	16,708	-3.3%	-3.3%
15	5,429	4,616	4,927	4,981	5,159	3.6%	-5.0%
16	*	*	*	61,448	64,323	4.7%	4.7%
18	5,760	5,271	5,759	5,662	5,671	0.2%	-1.5%
19	5,770	4,675	5,195	5,332	5,426	1.8%	-6.0%
20	7,166	6,294	6,662	6,563	6,689	1.9%	-6.7%
21	*	*	*	96,804	96,574	-0.2%	-0.2%
22	*	*	*	24,191	25,030	3.5%	3.5%
24	21,779	17,440	20,238	20,449	21,582	5.5%	-0.9%
27	2,778	2,489	2,680	2,712	2,768	2.1%	-0.4%
29	1,275	1,234	1,327	1,395	1,278	-8.4%	0.2%
40	4,304	3,958	4,116	4,108	4,137	0.7%	-3.9%
48	5,581	4,596	4,810	4,864	5,038	3.6%	-9.7%
51	3,025	2,702	2,859	2,781	2,788	0.3%	-7.8%
106	46,436	35,828	40,146	38,664	41,417	7.1%	-10.8%
126	24,731	23,132	25,765	24,103	26,603	10.4%	7.6%
158	**	**	24,999	24,306	24,164	-0.6%	-3.3%
203	21,290	17,107	18,872	18,411	19,712	7.1%	-7.4%
205	58,874	48,723	**	**	**	N/A	-17.2%
206	27,534	19,888	21,972	23,286	24,522	5.3%	-10.9%
208	96,610	76,180	85,580	85,935	87,140	1.4%	-9.8%
216	26,777	21,317	25,726	29,096	25,988	-10.7%	-2.9%
301	13,168	11,200	**	11,576	11,988	3.6%	-9.0%

Five Year Summary of AADT from Permanent Sites (Continued)

*Indicates there is no data available.

Site #	Annual Average Daily Traffic (AADT)					Percent Change	
	2019	2020	2021	2022	2023	2022-2023	2019-2023
304	29,300	25,126	27,917	27,501	**	N/A	-6.1%
306	5,830	5,473	5,886	5,660	5,696	0.6%	-2.3%
317	14,685	11,856	12,559	13,735	14,334	4.4%	-2.4%
323	4,728	3,920	4,481	4,475	4,606	2.9%	-2.6%
324	4,422	3,974	4,158	4,131	4,184	1.3%	-5.4%
326	8,334	7,348	8,498	8,276	8,116	-1.9%	-2.6%
328	4,974	4,488	4,909	**	**	N/A	-1.3%
330	11,012	8,504	9,714	10,240	10,480	2.3%	-4.8%
334	16,247	13,998	15,237	15,500	15,874	2.4%	-2.3%
349	37,646	31,363	34,305	34,248	36,282	5.9%	-3.6%
360	2,721	2,496	2,650	2,626	2,610	-0.6%	-4.1%
362	6,355	5,572	5,882	5,840	6,169	5.6%	-2.9%
363	5,058	4,024	4,441	4,724	4,886	3.4%	-3.4%
364	4,912	4,310	4,649	4,576	4,523	-1.2%	-7.9%
367	6,059	5,457	6,047	5,909	5,863	-0.8%	-3.2%
370	31,856	25,949	29,416	29,196	**	N/A	-8.4%
371	17,618	15,103	18,582	18,003	**	N/A	2.2%
372	32,643	27,006	32,058	32,811	35,931	9.5%	10.1%
374	**	27,523	32,309	32,128	34,032	5.9%	23.6%
375	27,101	22,903	24,852	24,176	25,094	3.8%	-7.4%
376	61,955	**	**	60,260	61,793	2.5%	-0.3%
377	60,341	45,871	53,517	55,410	58,399	5.4%	-3.2%
378	7,849	6,877	7,116	6,950	7,181	3.3%	-8.5%
379	1,339	1,250	1,246	**	1,110	N/A	-17.1%
380	**	6,742	6,850	6,974	7,432	6.6%	10.2%
381	374	335	339	369	400	8.4%	7.0%
382	1,688	1,432	1,545	1,494	1,457	-2.5%	-13.7%
383	3,306	3,202	3,339	3,298	3,258	-1.2%	-1.5%
384	429	460	441	417	420	0.7%	-2.1%
385	1,698	1,641	1,761	1,781	1,855	4.2%	9.2%
386	2,243	2,178	2,262	2,333	2,457	5.3%	9.5%
387	542	504	**	405	400	-1.2%	-26.2%
388	2,721	2,350	2,548	2,508	**	N/A	-7.8%
389	1,824	1,712	1,811	1,776	1,804	1.6%	-1.1%
390	7,840	6,939	7,105	6,487	6,570	1.3%	-16.2%
391	8,131	7,196	8,090	7,575	8,323	9.9%	2.4%
392	**	**	27,688	24,246	26,864	10.8%	-3.0%
393	**	28,708	31,682	30,163	33,170	10.0%	15.5%
394	68,947	55,957	65,964	66,623	66,648	0.0%	-3.3%
395	10,522	**	8,846	9,218	9,400	2.0%	-10.7%

Five Year Summary of AADT from Permanent Sites (Continued)

*Indicates there is no data available.

Site #	Annual Average Daily Traffic (AADT)					Percent Change	
	2019	2020	2021	2022	2023	2022-2023	2019-2023
396	12,017	10,258	10,977	10,167	10,191	0.2%	-15.2%
410	**	3,862	4,272	3,965	3,882	-2.1%	0.5%
501	**	**	**	**	**	N/A	N/A
502	27,817	24,764	**	28,012	29,810	6.4%	7.2%
503	**	**	**	**	**	N/A	N/A
504	**	**	**	**	**	N/A	N/A
505	**	**	**	**	**	N/A	N/A
506	16,071	14,783	16,174	16,158	15,631	-3.3%	-2.7%
600	42,091	35,814	43,497	44,909	45,942	2.3%	9.1%
700	12,557	**	**	11,732	12,033	2.6%	-4.2%
701	**	54,467	**	65,279	63,307	-3.0%	16.2%
702	**	51,887	60,061	58,845	**	N/A	13.4%
703	**	**	**	**	**	N/A	N/A
704	21,844	**	**	**	**	N/A	N/A
705	74,850	58,501	68,052	**	**	N/A	-9.1%
706	27,142	20,638	23,455	**	25,839	N/A	-4.8%
709	33,112	27,697	32,635	32,332	33,726	4.3%	1.9%
710	50,833	**	**	47,577	49,986	5.1%	-1.7%
712	49,661	42,383	49,155	49,490	50,439	1.9%	1.6%
713	*	*	*	23,641	23,937	1.3%	1.3%
800	24,500	19,685	21,590	22,928	24,337	6.1%	-0.7%
801	82,240	69,787	**	79,718	84,570	6.1%	2.8%
802	5,157	4,910	5,256	4,915	4,984	1.4%	-3.4%
803	23,726	18,148	22,532	23,085	23,902	3.5%	0.7%
804	52,336	42,655	47,346	47,943	50,281	4.9%	-3.9%
805	2,865	2,761	2,921	2,889	2,946	2.0%	2.8%
806	30,394	25,537	28,774	29,221	30,061	2.9%	-1.1%
807	30,559	23,741	28,556	28,358	28,857	1.8%	-5.6%
808	**	11,945	13,925	14,341	15,288	6.6%	28.0%
809	7,783	6,385	**	7,683	7,962	3.6%	2.3%
810	35,695	28,306	32,930	**	**	N/A	-7.7%
811	50,556	42,172	46,475	47,171	49,285	4.5%	-2.5%
812	46,453	37,069	43,672	43,939	44,013	0.2%	-5.3%
813	91,164	78,163	89,372	89,833	91,140	1.5%	0.0%
815	3,830	3,308	3,710	3,663	3,734	1.9%	-2.5%
816	3,388	2,852	3,060	3,070	3,226	5.1%	-4.8%
817	1,730	1,577	1,611	1,588	1,620	2.0%	-6.4%
818	30,527	26,420	30,421	28,833	30,919	7.2%	1.3%
821	11,050	8,677	10,581	10,788	11,278	4.5%	2.1%
822	*	*	53,581	56,629	59,327	4.8%	10.7%

Five Year Summary of AADT from Permanent Sites (Continued)

*Indicates there is no data available.

Site #	Annual Average Daily Traffic (AADT)					Percent Change	
	2019	2020	2021	2022	2023	2022-2023	2019-2023
823	55,002	44,618	51,153	56,341	57,140	1.4%	3.9%
824	39,092	29,937	33,576	33,006	34,046	3.2%	-12.9%
825	46,301	35,944	41,298	42,275	44,434	5.1%	-4.0%
826	49,469	42,297	47,944	48,044	49,664	3.4%	0.4%
827	23,758	18,379	20,375	18,944	16,172	-14.6%	-31.9%
828	20,319	15,099	17,526	17,724	19,129	7.9%	-5.9%
829	29,318	26,305	30,127	29,829	30,169	1.1%	2.9%
830	63,401	54,411	63,671	63,470	65,989	4.0%	4.1%
831	64,932	58,628	66,545	66,449	69,999	5.3%	7.8%
832	21,822	17,230	19,028	19,557	20,827	6.5%	-4.6%
833	67,245	58,598	67,290	70,295	**	N/A	4.5%
834	20,998	15,230	20,015	16,338	21,720	32.9%	3.4%
835	**	**	9,457	9,263	9,519	2.8%	0.7%
836	28,622	25,152	28,287	27,917	28,665	2.7%	0.2%
837	**	21,699	26,160	26,114	27,746	6.2%	27.9%
838	**	19,334	22,638	22,802	23,688	3.9%	22.5%
839	27,239	23,093	26,990	27,584	27,904	1.2%	2.4%
840	52,715	38,346	44,134	47,687	50,093	5.0%	-5.0%
841	**	59,581	68,081	68,626	70,637	2.9%	18.6%
842	15,241	13,561	**	15,379	16,907	9.9%	10.9%
843	22,860	20,081	23,504	23,528	24,322	3.4%	6.4%
844	**	**	39,318	38,620	37,456	-3.0%	-4.7%
845	34,785	29,805	34,259	33,666	35,520	5.5%	2.1%
846	5,197	3,827	4,140	4,234	4,348	2.7%	-16.3%
848	*	19,168	22,169	22,359	23,567	5.4%	22.9%
849	*	1,665	1,850	1,694	1,663	-1.8%	-0.1%
850	*	13,232	15,344	15,667	15,748	0.5%	19.0%
851	*	63,960	74,206	72,698	71,168	-2.1%	11.3%
853	*	3,792	4,134	4,111	4,131	0.5%	8.9%
854	*	8,170	8,802	8,640	8,834	2.2%	8.1%
855	*	1,909	1,601	1,475	1,490	1.0%	-21.9%
856	*	981	830	789	798	1.1%	-18.7%
985	18,124	16,269	17,323	16,789	17,264	2.8%	-4.7%

* 848, 849, 850, 851, 853, 854, 855, & 856 2020 was first full year of data

* 6, 7, 9, 10, 11, & 822 2021 was first full year of data

* 12, 13, 14, 16, 21, 22, & 713 2022 was first full year of data

** Site inactive or full year of data unavailable.

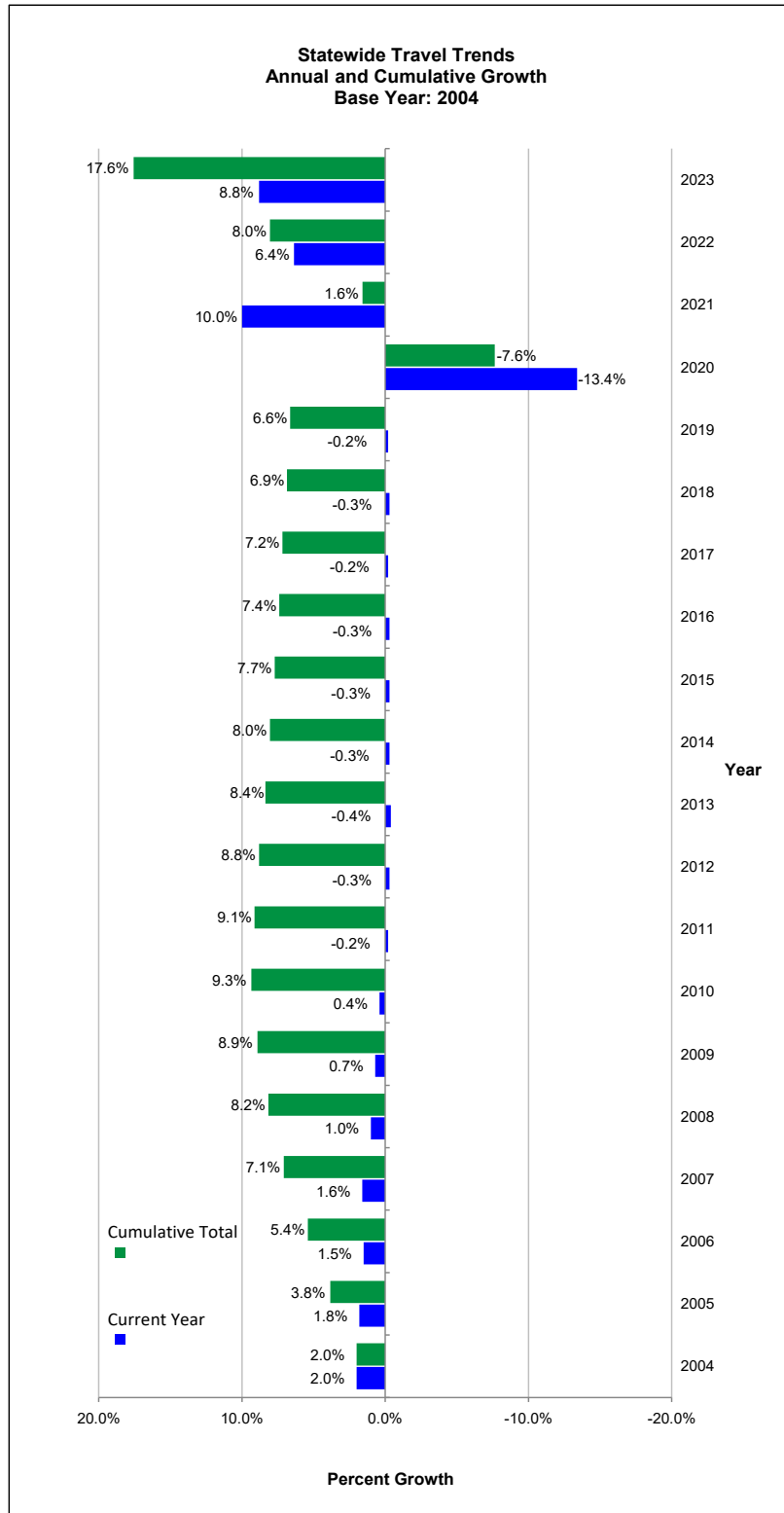
Statewide Traffic Trends: Annual and Multi-Year Change By Traffic Pattern Group

This table shows percent change for the traffic pattern groups at one-year intervals starting with 2018/2019 up to 2022/2023. An overall change in growth over the 5 year period for the traffic pattern groups is also shown on this table.

Percent Change Per Year, 2018 - 2023						
TRAFFIC PATTERN GROUPS	2018-19	2019-20	2020-21	2021-22	2022-23	2018-23
TPG 1 Urban Interstate	0.8%	-19.0%	14.3%	8.8%	11.5%	16.5%
TPG 2 Rural Interstate	1.2%	-18.0%	16.5%	6.4%	9.3%	15.4%
TPG 3 Urban Principal Arterial	-0.7%	-18.7%	13.2%	8.4%	8.8%	11.0%
TPG 4 Rural Principal Arterial	-0.5%	-15.8%	13.2%	8.7%	10.6%	16.2%
TPG 5 Urban Minor Arterials or Collectors	-0.7%	-17.2%	7.8%	5.4%	7.5%	2.8%
TPG 6 North Rural Minor Arterials	-0.5%	-11.8%	6.9%	4.3%	8.9%	7.8%
TPG 7 Central Rural Minor Arterials	-0.5%	-10.6%	10.0%	6.6%	8.4%	13.9%
TPG 8 North Rural Collectors	-0.5%	-5.8%	4.9%	4.9%	6.6%	10.2%
TPG 9 Central Rural Collectors	-0.5%	-11.5%	6.5%	3.3%	9.0%	6.8%
TPG 10 Special Recreational	-0.5%	-6.0%	6.9%	6.8%	7.3%	14.5%
Statewide	-0.2%	-13.4%	10.0%	6.4%	8.8%	11.5%

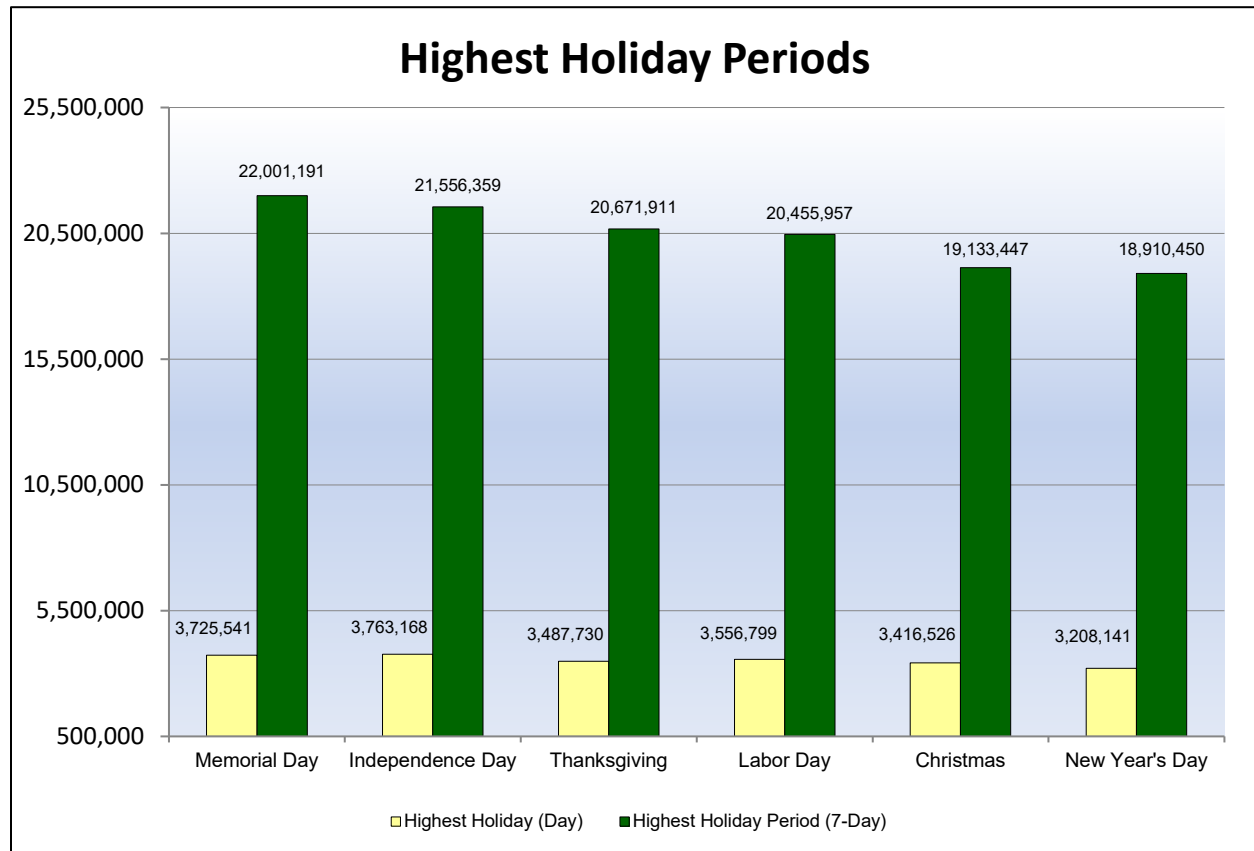
Statewide Traffic Trends

This chart shows yearly changes from 2004 to 2023 and a 20-year cumulative trend for the same period.



Heaviest Holiday Travel Periods: 2023

The permanent sites were used to calculate the holidays having the highest seven-day periods of traffic. The highest seven-day holiday periods and the highest day within the seven-day holiday period (total traffic at all permanent site stations) are shown on the chart below:



The chart indicates that Memorial Day had the highest seven-day holiday period in 2023 with a total volume of 22,001,191. Independence Day ranked second (21,556,359) followed by Thanksgiving Day (20,671,911) and Labor Day (20,455,957). Christmas Day and New Year's Day ranked fifth (19,133,447) and sixth (18,910,450) respectively.

The highest day during a seven-day holiday period in 2023 was the Friday before Independence Day (June 30, 2023), which had a volume of 3,763,168. The second highest day was the Friday before Memorial Day (May 26, 2023), which had a volume of 3,725,541. The Friday before Labor Day (September 1, 2023) ranked third with 3,556,799, while the Wednesday before Thanksgiving Day (November 22, 2023), ranked fourth with 3,487,730. The Friday before Christmas (December 22, 2023) ranked fifth with 3,416,526, while the Friday before New Year's Day (December 30, 2022) ranked sixth with 3,208,141.

Heaviest Holiday Travel Period Comparisons: 2022-2023

Highest Holiday (Day)			
2022		2023	
Holiday	Total Volume	Holiday	Total Volume
1. Independence Day	3,883,595	1. Independence Day	3,763,168
2. Labor Day	3,870,753	2. Memorial Day	3,725,541
3. Thanksgiving	3,801,705	3. Labor Day	3,556,799
4. Memorial Day	3,662,918	4. Thanksgiving	3,487,730
5. Christmas	3,348,107	5. Christmas	3,416,526
6. New Year's Day	2,797,440	6. New Year's Day	3,208,141

Highest Holiday Period (7-Day)			
2022		2023	
Holiday	Total Volume	Holiday	Total Volume
1. Independence Day	22,594,854	1. Memorial Day	22,001,191
2. Labor Day	22,173,704	2. Independence Day	21,556,359
3. Memorial Day	21,931,198	3. Thanksgiving	20,671,911
4. Thanksgiving	21,760,356	4. Labor Day	20,455,957
5. Christmas	19,400,215	5. Christmas	19,133,447
6. New Year's Day	16,617,687	6. New Year's Day	18,910,450

Factoring Process: Traffic Adjustment Factors

Traffic Adjustment Factors

Traffic Adjustment Factors are numbers that are used to create traffic statistics representing an average day. Factors are generated by applying statistical methods and programs to raw traffic counts. The different procedures used to factor counts depend on the following outcomes:

24-Hour Total Traffic and Truck Traffic Estimation

Count data less than 24-hours (short term counts) must first be expanded to a 24-hour total, which is accomplished through the use of hourly percentage tables. Separate tables are utilized for total vehicles and truck data application.

AADT and ADTT Estimation

A 24-hour count is processed to an Annual Average Daily Traffic (AADT) and Average Daily Truck Traffic (ADTT) through the application of a "day of week by month" factor. Separate tables are utilized for total vehicle and truck data application.

Axle Correction

Axle volume count data is collected by counting the number of axles striking a single pneumatic tube stretched across a section of highway and dividing by two. This type of data must be corrected to compensate for vehicles containing more than two axles (specifically truck data) to obtain a representative number of vehicles actually traveling that road section. This representation is obtained through the application of an axle correction factor.

Equivalent Single Axle Load Adjustment (ESAL)

ESAL adjustment factors are applied to the ADTT for each type of truck classification, to determine the loading effect these truck classes have on the pavement. Two separate calculations are performed: one for rigid type pavement (concrete) and one for flexible type pavement (bituminous). The AASHTO Mechanistic Empirical Pavement Design Guide has incorporated improved methods of determining loading effects of traffic termed axle-load spectra. In the future, these new methods will supersede the use of ESAL factors.

Growth Factor

If the count to be analyzed was taken earlier than the current year, a county growth trend is applied to project the older count data to a representative current year estimate. County growth trends are established based on Traffic Pattern Group (TPG).

Design Hour Volume Factor, DHV (K)

The K-factor represents the percentage of AADT during the design hour. It is calculated by dividing the peak hour volume by the AADT. A 24-hour count is required to calculate the K-factor. If this condition is not met (in the case of manual counts), a default value is applied. The default value is calculated from permanent site stations using the 30th highest hour and is established based on TPG.

Table 350
Hourly Percentages Compiled for Total Vehicles

The following table shows hourly percentages of total vehicles sorted by Traffic Pattern Group (TPG) for the year 2023. Factors from this table are applied to raw traffic counts of less than 24 hours, which may include volume counts (axle and loop), automatic vehicle classification (AVC), or manual classification counts. Hourly percentages from this table are applied to the known hour periods of the raw count, converting it to a 24-hour total.

The factors were developed using the Department's Traffic Data System (TDS) Statistical Analysis tool. Raw count data from AVC counts, collected statewide, was assigned to the respective TPG and a summary was produced showing the hourly percentage tables by direction (applied to divided roadways).

Hourly Percentages: Total Vehicles							
TPG 1				TPG 2			
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL
1	1.23%	1.11%	1.17%	1	1.42%	1.32%	1.37%
2	0.90%	0.82%	0.86%	2	1.15%	1.03%	1.09%
3	0.83%	0.74%	0.78%	3	1.07%	0.94%	1.00%
4	0.91%	0.86%	0.88%	4	1.17%	1.06%	1.11%
5	1.27%	1.32%	1.30%	5	1.52%	1.49%	1.51%
6	2.31%	2.57%	2.45%	6	2.36%	2.46%	2.41%
7	3.97%	4.22%	4.10%	7	3.44%	3.68%	3.56%
8	5.35%	5.35%	5.35%	8	4.20%	4.69%	4.45%
9	5.39%	5.27%	5.33%	9	4.58%	4.95%	4.76%
10	5.30%	5.28%	5.29%	10	5.14%	5.38%	5.26%
11	5.61%	5.54%	5.57%	11	5.75%	5.97%	5.86%
12	5.96%	5.88%	5.92%	12	6.22%	6.38%	6.30%
13	6.19%	6.17%	6.18%	13	6.47%	6.56%	6.52%
14	6.34%	6.34%	6.34%	14	6.68%	6.71%	6.69%
15	6.82%	6.79%	6.80%	15	7.04%	6.93%	6.98%
16	7.30%	7.23%	7.27%	16	7.35%	7.20%	7.28%
17	7.39%	7.37%	7.38%	17	7.33%	7.10%	7.22%
18	6.84%	6.83%	6.83%	18	6.67%	6.46%	6.57%
19	5.43%	5.46%	5.45%	19	5.33%	5.23%	5.28%
20	4.23%	4.38%	4.30%	20	4.36%	4.23%	4.29%
21	3.46%	3.61%	3.54%	21	3.63%	3.49%	3.56%
22	2.85%	2.91%	2.88%	22	2.96%	2.82%	2.89%
23	2.34%	2.28%	2.31%	23	2.35%	2.21%	2.28%
24	1.78%	1.67%	1.72%	24	1.81%	1.71%	1.76%
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%

Table 350
Hourly Percentages Compiled for Total Vehicles (Continued)

Hourly Percentages: Total Vehicles							
TPG 3				TPG 4			
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL
1	0.86%	0.82%	0.84%	1	0.88%	0.72%	0.79%
2	0.60%	0.57%	0.58%	2	0.64%	0.50%	0.57%
3	0.54%	0.55%	0.54%	3	0.53%	0.48%	0.51%
4	0.65%	0.68%	0.66%	4	0.66%	0.61%	0.63%
5	1.09%	1.22%	1.16%	5	1.11%	1.31%	1.21%
6	2.37%	2.53%	2.45%	6	2.13%	2.89%	2.53%
7	4.20%	4.43%	4.31%	7	3.81%	4.07%	3.95%
8	5.57%	5.87%	5.72%	8	5.40%	4.82%	5.09%
9	5.48%	5.67%	5.58%	9	5.55%	4.89%	5.20%
10	5.33%	5.42%	5.38%	10	5.85%	5.20%	5.51%
11	5.59%	5.65%	5.62%	11	6.31%	5.76%	6.02%
12	6.02%	6.06%	6.04%	12	6.52%	6.28%	6.39%
13	6.35%	6.36%	6.36%	13	6.71%	6.71%	6.71%
14	6.44%	6.38%	6.41%	14	6.82%	6.93%	6.88%
15	6.92%	6.86%	6.89%	15	7.29%	7.37%	7.33%
16	7.57%	7.38%	7.48%	16	7.78%	8.03%	7.91%
17	7.76%	7.54%	7.65%	17	7.80%	8.16%	7.99%
18	7.18%	6.98%	7.08%	18	6.81%	7.20%	7.02%
19	5.58%	5.45%	5.51%	19	5.15%	5.31%	5.24%
20	4.33%	4.20%	4.26%	20	3.89%	4.16%	4.03%
21	3.48%	3.41%	3.45%	21	3.03%	3.31%	3.18%
22	2.67%	2.66%	2.67%	22	2.30%	2.44%	2.38%
23	1.99%	1.98%	1.98%	23	1.75%	1.72%	1.73%
24	1.43%	1.33%	1.38%	24	1.28%	1.13%	1.20%
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%

Table 350
Hourly Percentages Compiled for Total Vehicles (Continued)

Hourly Percentages: Total Vehicles							
TPG 5				TPG 6			
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL
1	0.42%	0.42%	0.42%	1	0.51%	0.50%	0.51%
2	0.27%	0.29%	0.28%	2	0.34%	0.34%	0.34%
3	0.24%	0.42%	0.35%	3	0.31%	0.34%	0.33%
4	0.27%	0.34%	0.31%	4	0.48%	0.56%	0.52%
5	0.53%	0.73%	0.65%	5	1.01%	1.02%	1.02%
6	1.88%	1.90%	1.89%	6	2.59%	2.45%	2.52%
7	3.07%	3.69%	3.45%	7	4.61%	4.55%	4.58%
8	5.12%	5.58%	5.40%	8	5.80%	6.20%	6.01%
9	5.41%	5.47%	5.45%	9	5.30%	5.52%	5.42%
10	5.67%	5.32%	5.45%	10	5.70%	5.53%	5.61%
11	6.11%	5.69%	5.86%	11	6.32%	6.09%	6.20%
12	6.73%	6.40%	6.53%	12	6.59%	6.50%	6.54%
13	7.25%	6.87%	7.03%	13	6.86%	6.83%	6.85%
14	6.92%	6.70%	6.79%	14	6.81%	6.93%	6.87%
15	7.59%	7.35%	7.44%	15	7.69%	7.47%	7.57%
16	8.66%	8.17%	8.36%	16	8.44%	8.51%	8.48%
17	8.64%	8.51%	8.56%	17	8.37%	7.95%	8.14%
18	7.82%	7.69%	7.74%	18	6.90%	6.69%	6.79%
19	5.65%	5.85%	5.77%	19	4.86%	4.82%	4.84%
20	4.23%	4.56%	4.43%	20	3.54%	3.87%	3.71%
21	3.21%	3.49%	3.38%	21	2.68%	2.80%	2.74%
22	2.17%	2.32%	2.26%	22	1.97%	2.04%	2.00%
23	1.34%	1.41%	1.38%	23	1.41%	1.48%	1.45%
24	0.80%	0.83%	0.82%	24	0.91%	1.01%	0.96%
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%

Table 350
Hourly Percentages Compiled for Total Vehicles (Continued)

Hourly Percentages: Total Vehicles							
TPG 7				TPG 8			
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL
1	0.54%	0.53%	0.54%	1	0.57%	0.55%	0.56%
2	0.35%	0.35%	0.35%	2	0.40%	0.36%	0.38%
3	0.38%	0.40%	0.39%	3	0.33%	0.39%	0.36%
4	0.41%	0.60%	0.51%	4	0.41%	0.49%	0.45%
5	1.11%	1.51%	1.33%	5	1.15%	1.06%	1.10%
6	2.56%	3.34%	2.99%	6	3.27%	1.91%	2.56%
7	5.06%	4.60%	4.81%	7	5.38%	3.78%	4.55%
8	5.66%	5.96%	5.82%	8	5.56%	5.28%	5.42%
9	5.19%	5.60%	5.42%	9	5.05%	5.16%	5.11%
10	5.12%	5.47%	5.31%	10	5.29%	5.47%	5.38%
11	5.59%	5.72%	5.66%	11	5.79%	6.06%	5.93%
12	5.98%	6.06%	6.02%	12	6.26%	6.67%	6.48%
13	6.34%	6.31%	6.32%	13	6.48%	6.89%	6.70%
14	6.49%	6.34%	6.41%	14	6.49%	6.83%	6.66%
15	7.18%	6.85%	7.00%	15	7.12%	7.47%	7.30%
16	8.35%	7.95%	8.14%	16	8.37%	8.74%	8.56%
17	8.69%	8.24%	8.44%	17	8.37%	9.77%	9.10%
18	7.70%	7.56%	7.63%	18	7.21%	7.46%	7.34%
19	5.69%	5.68%	5.68%	19	5.28%	5.06%	5.16%
20	3.92%	3.78%	3.84%	20	4.06%	3.78%	3.91%
21	3.10%	2.89%	2.98%	21	2.96%	2.90%	2.93%
22	2.20%	2.09%	2.14%	22	1.96%	1.90%	1.93%
23	1.50%	1.35%	1.42%	23	1.32%	1.21%	1.27%
24	0.89%	0.82%	0.85%	24	0.92%	0.81%	0.86%
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%

Table 350
Hourly Percentages Compiled for Total Vehicles (Continued)

Hourly Percentages: Total Vehicles							
TPG 9				TPG 10			
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL
1	0.51%	0.41%	0.45%	1	0.35%	0.34%	0.35%
2	0.29%	0.27%	0.28%	2	0.19%	0.19%	0.19%
3	0.28%	0.28%	0.28%	3	0.15%	0.15%	0.15%
4	0.44%	0.50%	0.48%	4	0.16%	0.16%	0.16%
5	1.04%	1.11%	1.08%	5	0.40%	0.29%	0.34%
6	2.52%	3.02%	2.79%	6	1.24%	0.74%	0.98%
7	4.12%	5.12%	4.66%	7	2.74%	1.97%	2.36%
8	5.35%	6.52%	5.99%	8	5.71%	3.92%	4.81%
9	4.98%	5.85%	5.45%	9	5.39%	4.55%	4.96%
10	5.02%	5.58%	5.33%	10	6.35%	5.26%	5.80%
11	5.38%	5.71%	5.56%	11	7.19%	6.46%	6.82%
12	6.08%	6.10%	6.09%	12	7.78%	7.44%	7.61%
13	6.57%	6.29%	6.42%	13	7.96%	8.01%	7.98%
14	6.52%	6.26%	6.38%	14	7.91%	7.99%	7.95%
15	7.18%	6.96%	7.06%	15	7.79%	8.49%	8.15%
16	8.61%	7.88%	8.21%	16	7.74%	8.94%	8.34%
17	9.18%	8.43%	8.77%	17	7.91%	8.54%	8.23%
18	7.87%	7.52%	7.68%	18	7.07%	7.88%	7.48%
19	5.65%	5.37%	5.50%	19	5.37%	5.91%	5.64%
20	4.29%	3.80%	4.02%	20	4.07%	4.74%	4.41%
21	3.38%	2.94%	3.14%	21	2.92%	3.64%	3.29%
22	2.32%	1.96%	2.12%	22	1.89%	2.28%	2.09%
23	1.44%	1.35%	1.39%	23	1.10%	1.40%	1.25%
24	0.98%	0.77%	0.87%	24	0.62%	0.71%	0.66%
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%

Table 360
Hourly Percentages Compiled for Truck Traffic

The following four tables and two charts show hourly percentages of truck traffic sorted by Maintenance Functional Class (MFC). These tables are applied separately to raw truck data of less than 24-hours, including both automatic vehicle classification (AVC) and manual counts. Manual classification counts are the primary source of data using these tables. The hourly percentages are calculated from these tables and applied to the sum of the known hour periods and in turn converted to a 24-hour truck total.

The factors were developed using AVC counts that were collected and verified. The raw count data was assigned to the respective Traffic Pattern Group (TPG), the truck data was extracted by vehicle type, and the TDS Statistical Analysis tool generated a summary showing the hourly percentage table by direction (applied to divided roadways). Truck data is tabulated according to MFC. Hourly weekday truck distribution provides evidence that the hourly percentage changes by MFC provide a valid breakdown of groups. Therefore, a summary was produced converting the TPGs to comparable MFC groups to be consistent with the characteristics of the 2023 Hourly Percentages (Truck Traffic) tables.

TPG 1 & 2				TPG 3 & 4			
MAINTENANCE FUNCTIONAL CLASS A (INTERSTATES)				MAINTENANCE FUNCTIONAL CLASS B (PRINCIPAL ARTERIALS)			
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL
1	1.81%	1.59%	1.70%	1	0.96%	0.90%	0.93%
2	1.49%	1.30%	1.40%	2	0.73%	0.69%	0.71%
3	1.43%	1.23%	1.33%	3	0.69%	0.69%	0.69%
4	1.56%	1.41%	1.49%	4	0.81%	0.88%	0.85%
5	1.89%	1.89%	1.89%	5	1.25%	1.48%	1.36%
6	2.60%	2.83%	2.71%	6	2.54%	2.75%	2.64%
7	3.71%	4.08%	3.89%	7	4.47%	4.62%	4.54%
8	4.65%	4.91%	4.78%	8	5.96%	6.07%	6.01%
9	5.08%	5.14%	5.11%	9	5.82%	5.91%	5.86%
10	5.36%	5.36%	5.36%	10	5.61%	5.56%	5.58%
11	5.69%	5.68%	5.68%	11	5.75%	5.68%	5.71%
12	5.94%	5.94%	5.94%	12	6.07%	6.07%	6.07%
13	6.06%	6.13%	6.10%	13	6.35%	6.36%	6.35%
14	6.15%	6.28%	6.22%	14	6.36%	6.35%	6.36%
15	6.35%	6.45%	6.40%	15	6.75%	6.80%	6.78%
16	6.56%	6.59%	6.57%	16	7.30%	7.14%	7.22%
17	6.53%	6.52%	6.52%	17	7.31%	7.22%	7.27%
18	6.07%	6.03%	6.05%	18	6.69%	6.56%	6.63%
19	5.13%	5.15%	5.14%	19	5.22%	5.09%	5.16%
20	4.28%	4.31%	4.30%	20	4.09%	3.96%	4.03%
21	3.66%	3.63%	3.65%	21	3.31%	3.25%	3.28%
22	3.13%	3.04%	3.09%	22	2.55%	2.60%	2.57%
23	2.67%	2.50%	2.58%	23	1.91%	2.00%	1.96%
24	2.20%	2.01%	2.10%	24	1.50%	1.37%	1.44%
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%

Table 360
Hourly Percentages Compiled for Truck Traffic (Continued)

TPG 5, 6 & 7				TPG 8 & 9			
MAINTENANCE FUNCTIONAL CLASS C (MINOR ARTERIALS)				MAINTENANCE FUNCTIONAL CLASS D, E & F (RURAL COLLECTORS)			
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL
1	0.55%	0.61%	0.58%	1	0.68%	0.52%	0.59%
2	0.48%	0.52%	0.50%	2	0.50%	0.50%	0.50%
3	0.51%	0.60%	0.56%	3	0.59%	0.56%	0.57%
4	0.70%	0.91%	0.82%	4	0.87%	0.97%	0.93%
5	1.20%	1.65%	1.45%	5	1.57%	1.44%	1.50%
6	2.77%	3.11%	2.96%	6	3.77%	3.04%	3.39%
7	4.99%	5.42%	5.23%	7	4.63%	5.51%	5.10%
8	6.55%	6.70%	6.63%	8	5.92%	7.26%	6.62%
9	6.45%	6.76%	6.62%	9	6.19%	6.88%	6.55%
10	6.66%	6.59%	6.62%	10	6.11%	6.68%	6.41%
11	6.91%	6.85%	6.88%	11	6.51%	6.88%	6.70%
12	7.01%	7.13%	7.08%	12	6.76%	7.05%	6.91%
13	7.07%	7.00%	7.03%	13	6.90%	6.95%	6.93%
14	6.98%	6.98%	6.98%	14	6.74%	6.78%	6.76%
15	7.40%	7.20%	7.29%	15	7.00%	7.03%	7.02%
16	7.79%	7.48%	7.62%	16	7.66%	7.25%	7.44%
17	7.48%	6.60%	6.99%	17	7.58%	7.37%	7.47%
18	5.88%	5.45%	5.64%	18	6.09%	5.62%	5.84%
19	4.06%	3.86%	3.95%	19	4.40%	3.96%	4.17%
20	2.94%	2.87%	2.90%	20	3.17%	2.69%	2.92%
21	2.24%	2.20%	2.22%	21	2.46%	1.97%	2.21%
22	1.62%	1.55%	1.58%	22	1.75%	1.39%	1.56%
23	1.05%	1.11%	1.08%	23	1.24%	1.00%	1.11%
24	0.71%	0.85%	0.79%	24	0.91%	0.70%	0.80%
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%

Hourly Percentages Charts

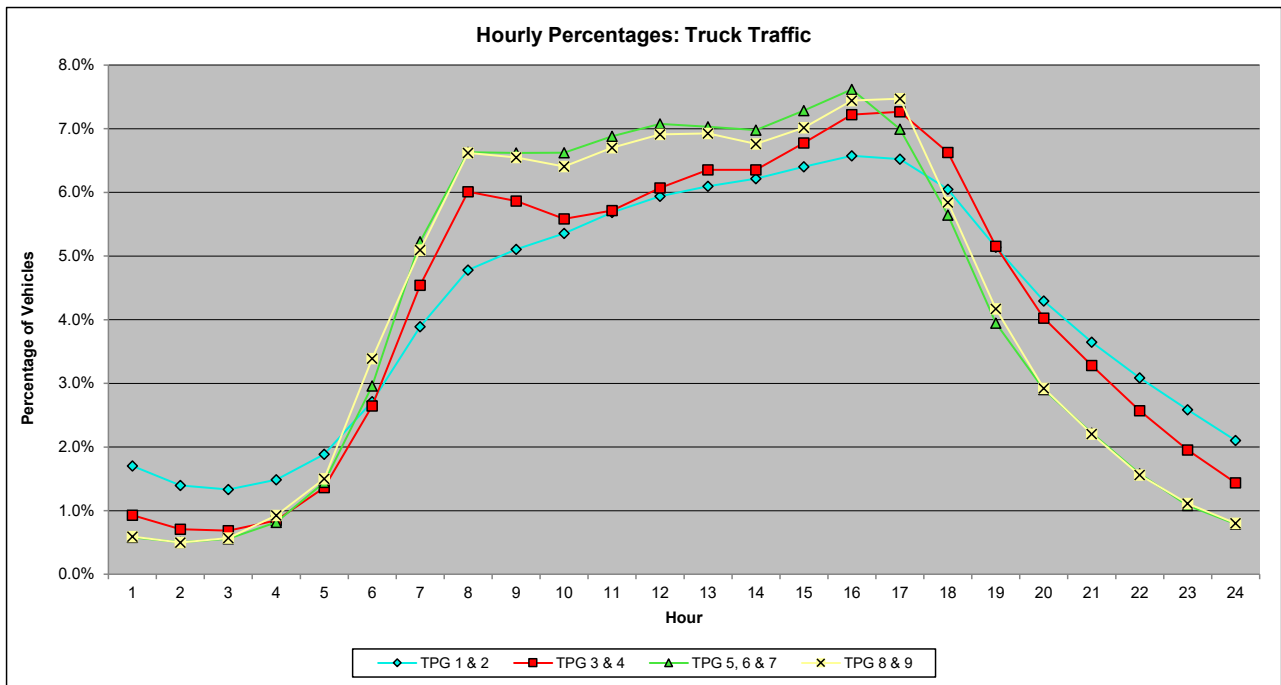
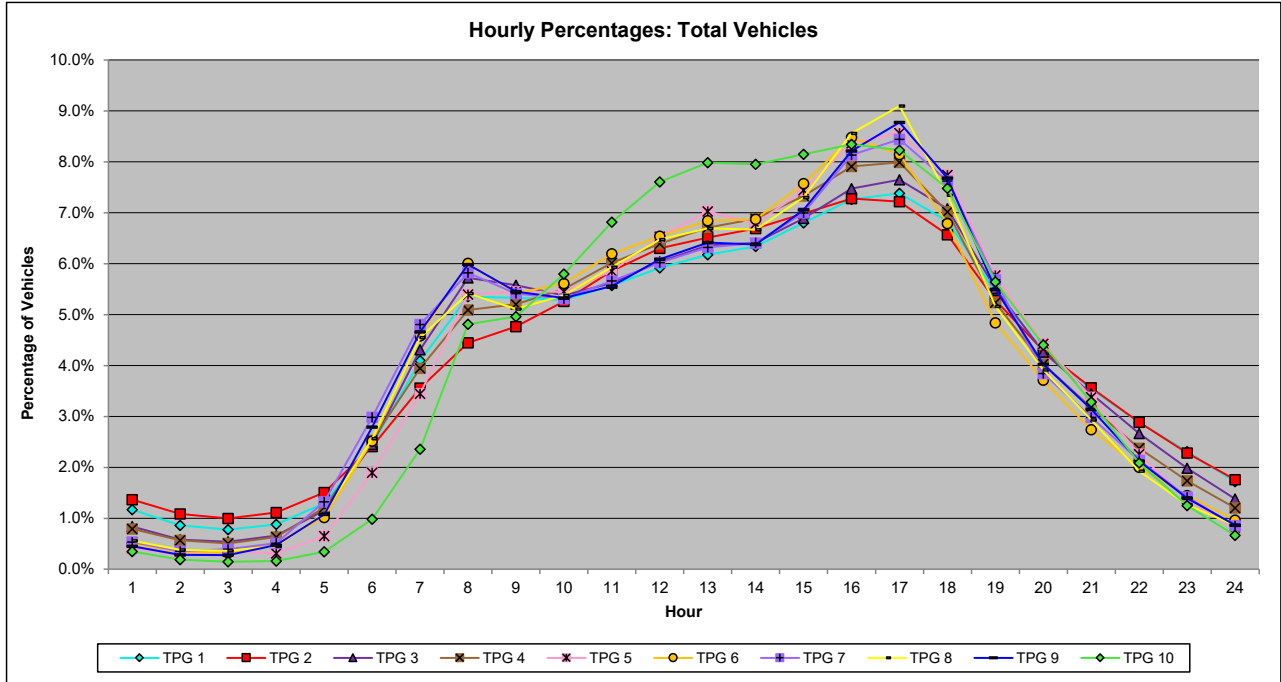


Table 355
Average Day of Week by Month Factors Compiled for Total Vehicles

The following 12 tables show average day of week factors by month compiled for total vehicles for the year 2023. Current year permanent site traffic data is assembled and the data is placed in the respective TPG. Annual Average Daily Traffic (AADT) is tabulated individually for each of permanent site stations utilized in 2023. A factor is calculated for each day from each station and a list is tabulated by month and day of the week. This data is assembled by day and TPG for each station. The result is a group factor, which can be applied to a 24-hour raw traffic count taken during any day of the year to develop an AADT volume.

January 2023										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	1.000	1.067	1.045	1.143	1.041	1.074	1.157	1.184	1.146	1.581
Tuesday	0.922	1.058	0.943	1.067	0.918	0.976	1.049	1.055	1.007	1.517
Wednesday	0.956	1.097	0.958	1.079	0.991	1.041	1.058	1.166	1.070	1.520
Thursday	0.913	1.049	0.930	1.019	0.869	0.953	1.030	1.084	0.991	1.474
Friday	0.858	0.964	0.880	0.973	0.856	0.901	0.968	0.960	0.962	1.371
Saturday	1.063	1.204	1.111	1.242	1.108	1.244	1.194	1.355	1.273	1.544
Sunday	1.269	1.315	1.465	1.555	1.427	1.611	1.595	1.597	1.586	1.933
DAY OF MONTH	0.997	1.108	1.047	1.154	1.030	1.114	1.150	1.200	1.148	1.563

February 2023										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.929	1.042	0.958	1.066	0.962	0.971	1.065	1.081	1.022	1.473
Tuesday	0.913	1.023	0.925	1.046	0.892	0.960	1.019	1.075	0.981	1.418
Wednesday	0.910	1.037	0.921	1.044	0.911	0.970	0.980	1.065	0.970	1.426
Thursday	0.881	0.988	0.896	0.998	0.857	0.916	0.986	1.023	0.949	1.355
Friday	0.833	0.921	0.861	0.944	0.867	0.900	0.953	0.996	0.941	1.354
Saturday	1.027	1.170	1.073	1.212	1.097	1.241	1.170	1.367	1.239	1.393
Sunday	1.172	1.208	1.304	1.381	1.280	1.428	1.419	1.455	1.436	1.562
DAY OF MONTH	0.952	1.056	0.991	1.099	0.981	1.055	1.085	1.152	1.077	1.426

Table 355
Average Day of Week by Month Factors Compiled for Total Vehicles
(Continued)

March 2023										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.913	1.034	0.941	1.039	0.904	0.948	1.039	1.076	1.003	1.391
Tuesday	0.900	1.040	0.918	1.038	0.864	0.954	1.006	1.086	0.988	1.409
Wednesday	0.862	0.975	0.880	0.989	0.828	0.902	0.947	0.987	0.925	1.287
Thursday	0.822	0.917	0.867	0.943	0.806	0.870	0.954	0.968	0.920	1.253
Friday	0.808	0.895	0.850	0.942	0.844	0.893	0.952	0.994	0.937	1.300
Saturday	1.007	1.152	1.070	1.189	1.090	1.259	1.156	1.370	1.238	1.458
Sunday	1.064	1.089	1.246	1.289	1.257	1.437	1.338	1.429	1.353	1.559
DAY OF MONTH	0.911	1.015	0.967	1.061	0.942	1.038	1.056	1.130	1.052	1.380

April 2023										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.851	0.924	0.898	0.956	0.852	0.874	0.972	0.944	0.925	1.148
Tuesday	0.846	0.934	0.868	0.952	0.815	0.853	0.931	0.926	0.879	1.101
Wednesday	0.818	0.896	0.852	0.928	0.801	0.819	0.901	0.905	0.850	1.037
Thursday	0.778	0.832	0.832	0.874	0.764	0.790	0.884	0.850	0.823	0.959
Friday	0.745	0.793	0.818	0.832	0.785	0.789	0.873	0.847	0.844	0.859
Saturday	0.938	1.043	1.034	1.081	1.011	1.062	1.073	1.121	1.107	0.931
Sunday	0.997	1.008	1.230	1.199	1.212	1.266	1.267	1.238	1.285	1.187
DAY OF MONTH	0.854	0.919	0.933	0.975	0.891	0.922	0.986	0.976	0.959	1.032

May 2023										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.861	0.909	0.975	0.967	0.915	0.876	0.958	0.907	0.952	0.902
Tuesday	0.822	0.893	0.873	0.928	0.814	0.813	0.899	0.866	0.860	0.950
Wednesday	0.793	0.866	0.854	0.910	0.800	0.801	0.870	0.849	0.837	0.931
Thursday	0.754	0.805	0.827	0.861	0.752	0.771	0.862	0.806	0.825	0.865
Friday	0.708	0.730	0.786	0.776	0.755	0.719	0.794	0.742	0.796	0.690
Saturday	0.865	0.954	0.992	1.000	0.963	0.965	0.937	0.943	1.019	0.659
Sunday	0.937	0.951	1.138	1.080	1.099	1.089	1.066	1.044	1.113	0.744
DAY OF MONTH	0.820	0.872	0.921	0.932	0.871	0.862	0.912	0.880	0.915	0.820

Table 355
Average Day of Week by Month Factors Compiled for Total Vehicles
(Continued)

June 2023										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.826	0.835	0.908	0.925	0.903	0.850	0.957	0.924	0.908	0.927
Tuesday	0.804	0.847	0.872	0.920	0.852	0.838	0.916	0.884	0.863	0.912
Wednesday	0.794	0.820	0.852	0.886	0.847	0.821	0.889	0.880	0.860	0.889
Thursday	0.752	0.768	0.832	0.843	0.811	0.776	0.862	0.827	0.837	0.819
Friday	0.712	0.719	0.808	0.792	0.818	0.733	0.822	0.773	0.830	0.684
Saturday	0.864	0.908	0.989	0.974	0.996	0.939	0.922	0.957	1.003	0.606
Sunday	0.908	0.878	1.134	1.042	1.135	1.078	1.059	1.040	1.098	0.682
DAY OF MONTH	0.809	0.825	0.914	0.912	0.909	0.862	0.918	0.898	0.914	0.789

July 2023										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.829	0.824	0.906	0.911	0.882	0.834	0.929	0.872	0.902	0.800
Tuesday	0.892	0.899	0.981	0.974	0.963	0.901	0.959	0.927	0.938	0.762
Wednesday	0.787	0.817	0.851	0.867	0.859	0.799	0.858	0.829	0.831	0.773
Thursday	0.762	0.764	0.838	0.843	0.819	0.785	0.864	0.810	0.820	0.773
Friday	0.719	0.698	0.809	0.778	0.828	0.741	0.824	0.758	0.810	0.648
Saturday	0.842	0.824	1.006	0.954	1.032	0.987	0.956	0.933	1.013	0.551
Sunday	0.933	0.848	1.193	1.076	1.211	1.145	1.136	1.053	1.205	0.659
DAY OF MONTH	0.823	0.810	0.940	0.915	0.942	0.885	0.932	0.883	0.931	0.710

August 2023										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.851	0.816	0.922	0.919	0.852	0.839	0.945	0.903	0.926	0.967
Tuesday	0.836	0.816	0.881	0.898	0.817	0.811	0.891	0.875	0.861	0.918
Wednesday	0.814	0.789	0.863	0.872	0.811	0.805	0.858	0.865	0.846	0.895
Thursday	0.795	0.733	0.849	0.832	0.779	0.783	0.869	0.824	0.858	0.864
Friday	0.742	0.684	0.815	0.772	0.754	0.734	0.810	0.761	0.814	0.683
Saturday	0.865	0.819	0.994	0.934	0.970	0.980	0.909	0.956	0.987	0.591
Sunday	0.926	0.803	1.143	1.013	1.106	1.117	1.056	1.005	1.124	0.689
DAY OF MONTH	0.833	0.780	0.924	0.892	0.870	0.867	0.905	0.884	0.917	0.801

Table 355
Average Day of Week by Month Factors Compiled for Total Vehicles
(Continued)

September 2023										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.911	0.853	1.020	0.965	0.952	0.951	1.037	0.967	1.006	0.991
Tuesday	0.857	0.862	0.902	0.922	0.828	0.848	0.957	0.907	0.891	1.062
Wednesday	0.857	0.841	0.883	0.893	0.793	0.825	0.897	0.877	0.851	1.012
Thursday	0.820	0.793	0.865	0.858	0.768	0.802	0.896	0.866	0.850	0.989
Friday	0.751	0.697	0.806	0.753	0.755	0.727	0.818	0.776	0.813	0.778
Saturday	0.943	0.891	1.043	0.968	0.983	0.988	1.015	1.022	1.072	0.751
Sunday	1.026	0.920	1.259	1.115	1.224	1.239	1.252	1.182	1.335	0.977
DAY OF MONTH	0.881	0.837	0.968	0.925	0.900	0.911	0.982	0.942	0.974	0.937

October 2023										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.871	0.862	0.924	0.923	0.859	0.883	0.976	0.968	0.945	1.147
Tuesday	0.870	0.876	0.895	0.921	0.812	0.823	0.933	0.918	0.897	1.111
Wednesday	0.841	0.871	0.872	0.884	0.788	0.807	0.878	0.899	0.840	1.017
Thursday	0.801	0.799	0.852	0.845	0.779	0.785	0.879	0.862	0.839	0.990
Friday	0.745	0.712	0.813	0.782	0.769	0.750	0.822	0.823	0.817	0.841
Saturday	0.935	0.952	1.049	1.008	1.036	1.071	1.023	1.141	1.105	0.894
Sunday	0.970	0.902	1.214	1.109	1.183	1.219	1.202	1.237	1.271	1.100
DAY OF MONTH	0.862	0.854	0.946	0.925	0.889	0.906	0.959	0.978	0.959	1.014

Table 355
Average Day of Week by Month Factors Compiled for Total Vehicles
(Continued)

November 2023										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.873	0.893	0.937	0.961	0.874	0.900	1.016	1.008	0.965	1.346
Tuesday	0.871	0.870	0.920	0.966	0.842	0.883	0.975	1.017	0.933	1.379
Wednesday	0.843	0.842	0.890	0.914	0.827	0.850	0.937	0.970	0.916	1.287
Thursday	0.921	0.924	1.002	1.006	0.962	0.960	1.027	1.026	0.986	1.359
Friday	0.802	0.791	0.881	0.861	0.833	0.815	0.911	0.886	0.913	1.125
Saturday	0.924	0.935	1.067	1.055	1.063	1.105	1.065	1.166	1.114	1.193
Sunday	0.974	0.882	1.282	1.119	1.161	1.286	1.294	1.326	1.349	1.528
DAY OF MONTH	0.887	0.877	0.997	0.983	0.938	0.971	1.032	1.057	1.025	1.317

December 2023										
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	1.088	1.136	1.202	1.189	1.142	1.192	1.213	1.264	1.168	1.672
Tuesday	0.895	0.918	0.960	1.020	0.902	0.961	1.039	1.104	1.033	1.509
Wednesday	0.866	0.869	0.915	0.960	0.864	0.886	0.977	1.038	0.959	1.421
Thursday	0.832	0.832	0.894	0.919	0.828	0.881	0.959	1.008	0.950	1.275
Friday	0.801	0.806	0.858	0.878	0.814	0.852	0.904	0.940	0.906	1.216
Saturday	0.972	0.990	1.066	1.105	1.053	1.162	1.092	1.227	1.162	1.379
Sunday	1.281	1.294	1.406	1.422	1.315	1.499	1.494	1.512	1.433	1.845
DAY OF MONTH	0.962	0.978	1.043	1.070	0.988	1.062	1.097	1.156	1.087	1.474

Monthly Variation Charts by Traffic Pattern Group (TPG)

The chart below shows the different variations between months and traffic pattern groups (TPG). The seasonal factors, which are the data this chart is derived from, show the percentage difference between the raw data count and the annual average daily traffic (AADT). The seasonal factors data can be found in Table 355.

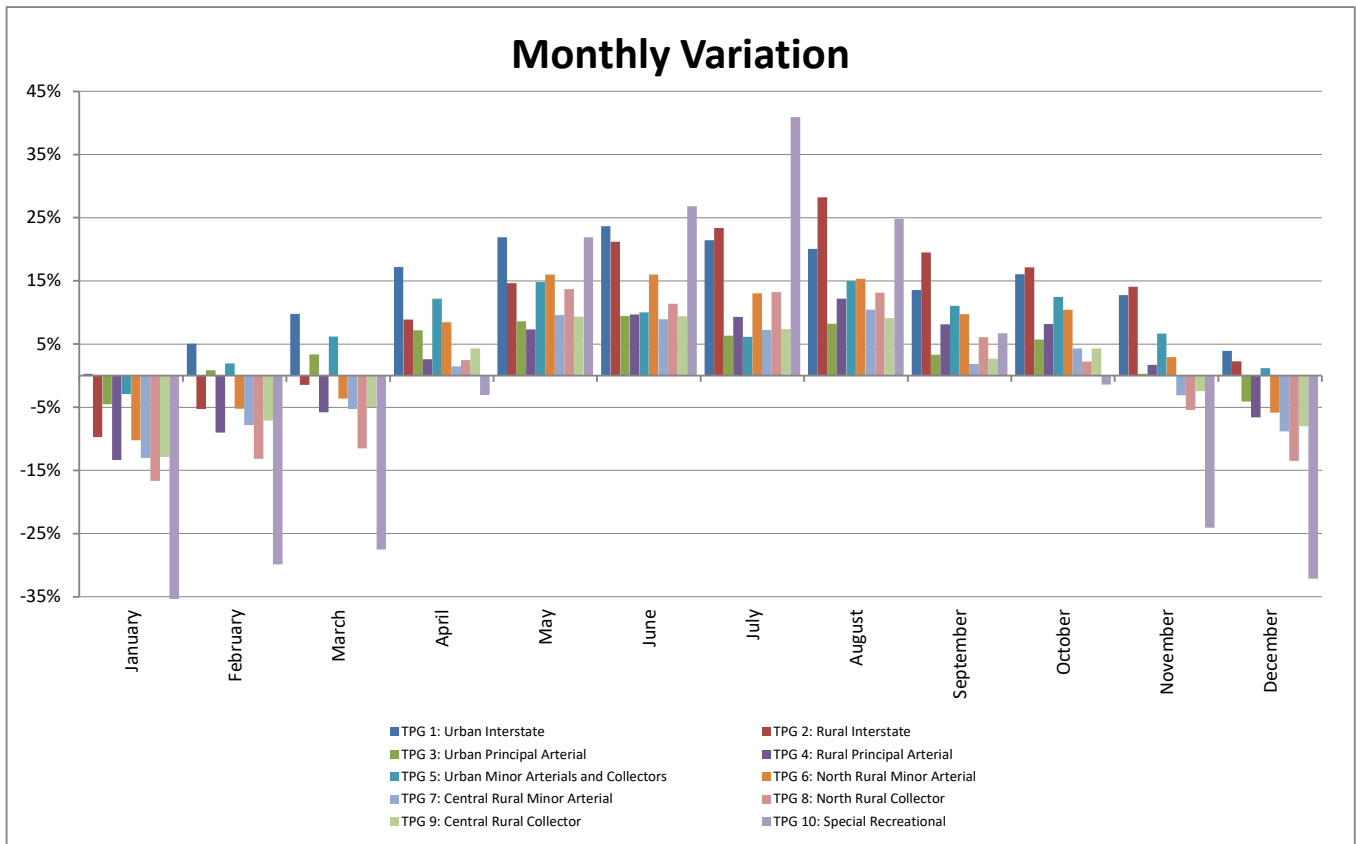


Table 365
Average Day of Week by Month Factors Compiled for Truck Traffic

The following table shows average day of week factors by month compiled for truck traffic. This data is used to convert 24-hour truck data to Average Daily Truck Traffic (ADTT). The ADTT is determined by applying the appropriate factor for the day of week and month to the truck traffic. Truck seasonal variation charts, which are based on truck traffic studies, indicate that truck traffic varies little for both the Interstate and Non-Interstate systems. On the other hand, day of week distribution does indicate a variation between weekdays (Monday through Friday) versus weekend (Saturday through Sunday) truck flow.

AVERAGE DAY OF WEEK BY MONTH FOR TRUCK TRAFFIC							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
JANUARY	1.10	0.87	0.89	0.86	0.90	2.09	3.43
FEBRUARY	0.94	0.88	0.89	0.88	0.93	2.19	3.09
MARCH	0.89	0.85	0.83	0.82	0.91	2.13	2.81
APRIL	0.79	0.75	0.73	0.72	0.80	1.75	2.42
MAY	0.94	0.72	0.70	0.68	0.70	1.52	2.00
JUNE	0.77	0.73	0.73	0.69	0.73	1.49	1.85
JULY	0.79	1.00	0.71	0.70	0.73	1.50	1.94
AUGUST	0.78	0.74	0.73	0.72	0.75	1.54	1.86
SEPTEMBER	1.01	0.74	0.71	0.70	0.71	1.60	2.19
OCTOBER	0.78	0.74	0.71	0.69	0.75	1.69	2.07
NOVEMBER	0.86	0.82	0.80	1.36	0.96	1.83	2.35
DECEMBER	2.43	0.98	0.90	0.87	0.93	2.07	3.34

Table 370
Yearly Growth Factors

The yearly growth factors (shown in the following tables) are used to compute the current estimated average daily traffic for count data that is older than the current year. The factor application is applied by Traffic Pattern Group (TPG) and is used to calculate total vehicles and truck estimates. A limited amount of count data is processed through the Yearly Growth Factor table, since most traffic counts are for the current year.

To use this table, select the base year of the count from the "YEAR" column and multiply it by the percentage under the corresponding "TPG" row.

For example, to determine the current year estimate (2023) of a 2013 base year count having a TPG 5, multiply 0.968 (-3.2%) by the AADT of the 2013 count.

Yearly Growth Factors: 2014-2023										
TPG	13-14 (2014)	14-15 (2015)	15-16 (2016)	16-17 (2017)	17-18 (2018)	18-19 (2019)	19-20 (2020)	20-21 (2021)	21-22 (2022)	22-23 (2023)
TPG 1	0.1%	0.5%	0.8%	0.9%	1.1%	0.8%	-19.0%	14.3%	8.8%	11.5%
TPG 2	1.2%	1.3%	1.0%	1.1%	1.1%	1.2%	-18.0%	16.5%	6.4%	9.3%
TPG 3	-0.7%	-0.8%	-0.7%	-0.7%	-0.8%	-0.7%	-18.7%	13.2%	8.4%	8.8%
TPG 4	-0.5%	-0.5%	-0.5%	-0.5%	-0.6%	-0.5%	-15.8%	13.2%	8.7%	10.6%
TPG 5	-0.7%	-0.8%	-0.7%	-0.7%	-0.8%	-0.7%	-17.2%	7.8%	5.4%	7.5%
TPG 6	-0.5%	-0.5%	-0.5%	-0.5%	-0.6%	-0.5%	-11.8%	6.9%	4.3%	8.9%
TPG 7	-0.5%	-0.5%	-0.5%	-0.5%	-0.6%	-0.5%	-10.6%	10.0%	6.6%	8.4%
TPG 8	-0.5%	-0.5%	-0.5%	-0.5%	-0.6%	-0.5%	-5.8%	4.9%	4.9%	6.6%
TPG 9	-0.5%	-0.5%	-0.5%	-0.5%	-0.6%	-0.5%	-11.5%	6.5%	3.3%	9.0%
TPG 10	-0.5%	-0.5%	-0.5%	-0.5%	-0.6%	-0.5%	-6.0%	6.9%	6.8%	7.3%

The table below shows yearly growth percentages by TPG for 2014 through 2023.

Percent Growth: 2014-2023										
TPG	13-22 (2014)	14-22 (2015)	15-22 (2016)	16-22 (2017)	17-22 (2018)	18-22 (2019)	19-22 (2020)	20-22 (2021)	21-22 (2022)	22-23 (2023)
TPG 1	17.1%	17.0%	16.4%	15.5%	14.5%	13.2%	12.3%	38.7%	21.3%	11.5%
TPG 2	18.9%	17.5%	16.0%	14.9%	13.6%	12.4%	11.0%	35.5%	16.3%	9.3%
TPG 3	3.9%	4.6%	5.5%	6.2%	7.0%	7.8%	8.6%	33.6%	18.0%	8.8%
TPG 4	11.1%	11.7%	12.3%	12.8%	13.4%	14.1%	14.6%	36.1%	20.3%	10.6%
TPG 5	-3.2%	-2.5%	-1.8%	-1.1%	-0.4%	0.4%	1.1%	22.1%	13.3%	7.5%
TPG 6	3.8%	4.3%	4.9%	5.4%	5.9%	6.6%	7.1%	21.4%	13.6%	8.9%
TPG 7	10.1%	10.7%	11.2%	11.8%	12.4%	13.0%	13.6%	27.1%	15.5%	8.4%
TPG 8	7.2%	7.8%	8.3%	8.8%	9.4%	10.0%	10.6%	17.3%	11.9%	6.6%
TPG 9	2.8%	3.3%	3.9%	4.4%	4.9%	5.5%	6.1%	19.9%	12.6%	9.0%
TPG 10	11.6%	12.2%	12.7%	13.3%	13.9%	14.5%	15.1%	22.4%	14.5%	7.3%

Functional Class Groups

Traffic volume data displayed in PennDOT's Roadway Management System (RMS) is projected to a current estimate year (2023) based on County/Functional Class Group (FCG). This provides the user with trends relative to a specific county. The factors are applied annually to the Department's Roadway Management System (RMS) to produce the current year traffic volume estimate values.

The first table shows the PennDOT FCG's with a description and corresponding Functional Class Codes (FCCs). The second table shows the FHWA revision of highway functional classifications. FHWA finalized the functional class guidelines in 2013. RMS was updated to reflect these changes in late summer 2016.

FCG	DESCRIPTIVE NAME	FCC
FCG 1	URBAN INTERSTATE	FCC 11
FCG 2	RURAL INTERSTATE	FCC 01
FCG 3	URBAN - OTHER FREEWAYS/EXPRESSWAYS	FCC 12
	URBAN - OTHER PRINCIPAL ARTERIALS	FCC 14
	URBAN - MINOR ARTERIALS	FCC 16
	RAMPS	FCC 99
FCG 4	RURAL - OTHER FREEWAYS/EXPRESSWAYS	FCC 03
	RURAL - OTHER PRINCIPAL ARTERIALS	FCC 02
	RURAL - MINOR ARTERIAL	FCC 06
FCG 5	URBAN - MAJOR COLLECTOR	FCC 17
	URBAN - MINOR COLLECTOR	FCC 18
	URBAN - LOCAL	FCC 19
FCG 6	RURAL - MAJOR COLLECTOR	FCC 07
	RURAL - MINOR COLLECTOR	FCC 08
	RURAL - LOCAL	FCC 09

FCC	DESCRIPTIVE NAME	OLD FCC
1	INTERSTATE	01-11
2	OTHER FREEWAY / EXPRESSWAY	03-12
3	OTHER PRINCIPAL ARTERIAL	02-14
4	MINOR ARTERIAL	06-16
5	MAJOR COLLECTOR	07-17
6	MINOR COLLECTOR	08-18
7	LOCAL	09-19

** The Federal Functional Classification of a ramp reflects the highest order of Federal Functional Classification of the roadways to which the ramp connects. As an example, Adams County, SR 8001 is the interchange at US 15, a principal arterial, and SR 3001, a minor arterial; therefore, the segments associated with SR 8001 are assigned a Federal Functional Classification of principal arterial.

Table 380 Axle Correction Factors

Axle volume count data is collected by counting vehicle axles (two axle strikes equals one vehicle).

Since these counts may include a number of trucks with more than two axles, they must be corrected to represent the actual volume of total vehicles. The axle correction factors are applied to raw axle volume count data, adjusting it to a correct representative volume.

2023 Axle Correction Factors are shown in the table below.

TPG	Axle Correction Factor
1	82.57%
2	69.34%
3	91.85%
4	89.01%
5	97.62%
6	90.76%
7	94.61%
8	93.18%
9	96.85%
10	96.60%

Table 385 Design Hour Factor Default Values

The design hour factor (K-factor) represents the percent of Annual Average Daily Traffic (AADT) occurring in the peak hour. This value is important in the design of roadways and capacity analysis studies.

Count data less than 24-hours and/or data not having directional volumes will not have the necessary raw data required to compute actual K-factor values. The K-factor default values were produced to complete unknown values not generated through the raw count factoring process, and to satisfy Highway Performance Monitoring System (HPMS) reporting requirements. They were developed by processing the actual hourly data from permanent site stations to identify the 30th highest hour; this hourly volume was divided by the AADT for each station, producing a K-factor. The factors were then averaged by Traffic Pattern Group (TPG).

During the raw count factoring process, the K-factor value is programmatically inserted into the Roadway Management System (RMS) database if the raw count data is insufficient to calculate an actual K-factor.

2023 K-Factors and corresponding TPGs are shown in the table below.

TPG	K factor default value
1	9%
2	10%
3	9%
4	10%
5	11%
6	11%
7	11%
8	13%
9	11%
10	16%

Tables 390 and 395 Equivalent Single Axle Load Factors

Equivalent Single Axle Load (ESAL) tables are used to calculate pavement loadings (rigid and flexible types) to produce a common parameter for design and planning purposes.

ESAL factors used in RMS were derived through a composite of data obtained from AASHTO guidelines and test data collected from historical Loadometer Surveys. Data obtained through WIM equipment is under review at this time and will be considered in development of future ESAL factors. The AASHTO Mechanistic Empirical Design Guide (MEPDG) has incorporated improved methods of determining loading effects of traffic termed axle-load spectra. In the future, these new methods will supersede the use of ESAL factors.

2023 ESAL factors for rigid pavements are shown by Traffic Pattern Group (TPG) and vehicle classification in **Table 390**, below.

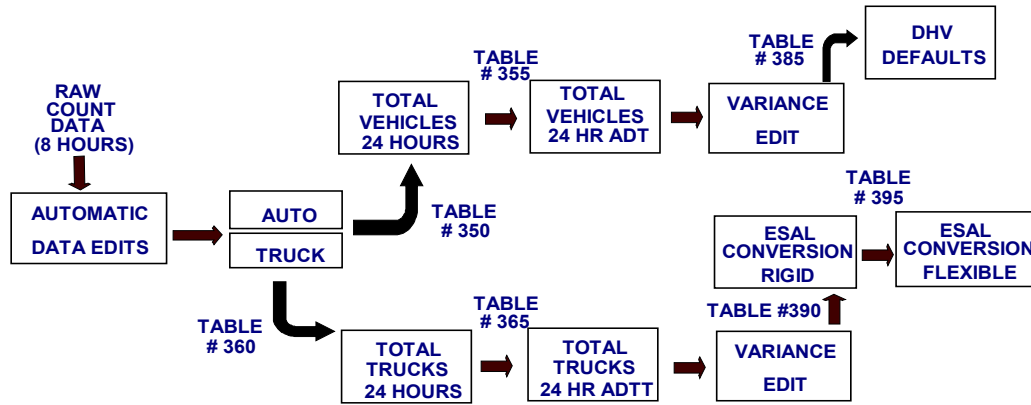
RIGID ESAL FACTORS										
CLASS	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
BUS	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240
2 AXLE SIX TIRE	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240
3 AXLE SINGLE UNIT	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150
4 AXLE SINGLE UNIT	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000
3 AXLE WITH TRAILER	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600
3 AXLE MULTI-AXLE TRAILER	1.590	1.590	1.590	1.590	1.590	1.590	1.590	1.590	1.590	1.590
6 AXLE SINGLE TRAILER	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421
5 AXLE MULTI TRAILER	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400
6 AXLE MULTI TRAILER	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421
7 AXLE MULTI TRAILER	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421

2023 ESAL factors for flexible pavements are shown by Traffic Pattern Group (TPG) and vehicle classification in **Table 395**, below.

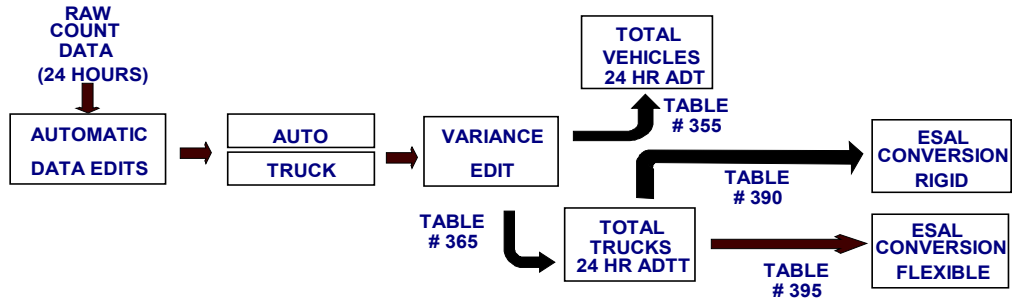
FLEXIBLE ESAL FACTORS										
CLASS	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
BUS	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240
2 AXLE SIX TIRE	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240
3 AXLE SINGLE UNIT	0.820	0.820	0.820	0.820	0.820	0.820	0.820	0.820	0.820	0.820
4 AXLE SINGLE UNIT	4.500	4.500	4.500	4.500	4.500	4.500	4.500	4.500	4.500	4.500
3 AXLE WITH TRAILER	0.440	0.440	0.440	0.440	0.440	0.440	0.440	0.440	0.440	0.440
3 AXLE MULTI-AXLE TRAILER	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6 AXLE SINGLE TRAILER	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750
5 AXLE MULTI TRAILER	2.330	2.330	2.330	2.330	2.330	2.330	2.330	2.330	2.330	2.330
6 AXLE MULTI TRAILER	1.276	1.276	1.276	1.276	1.276	1.276	1.276	1.276	1.276	1.276
7 AXLE MULTI TRAILER	1.276	1.276	1.276	1.276	1.276	1.276	1.276	1.276	1.276	1.276

Roadway Management System Factor Table Application Flow Chart

I. MANUAL COUNT (LESS THAN 24 HOURS)

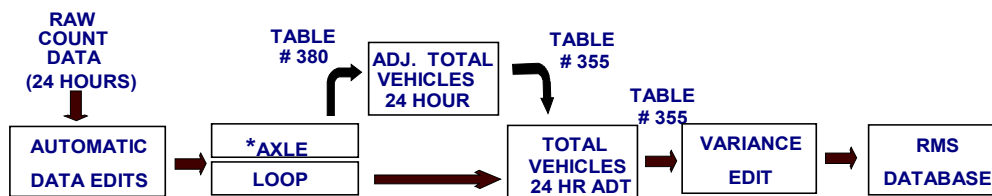


II. AUTOMATIC VEHICLE CLASSIFICATION COUNT



Note: DHV is computed from the raw count data.

III. AXLE AND LOOP VOLUME COUNTS



* Total Vehicles are computed by counting axles (2 axles equals 1 Vehicle)

Acronyms

AADT	Annual Average Daily Traffic
AASHTO	American Association of State Highway & Transportation Officials
ADT	Average Daily Traffic
ADTT	Average Daily Truck Traffic
AI	Artificial Intelligence
ATR	Automatic Traffic Recorder
AVC	Automatic Vehicle Classification
BPR	Bureau of Planning and Research
CAVC	Continuous Automatic Vehicle Classification
DHV	Design Hour Volume
DOW	Day of Week
DRJTBC	Delaware River Joint Toll Bridge Commission
ESAL	Equivalent Single Axle Load
FCC	Functional Classification Code
FCG	Functional Classification Group
FHWA	Federal Highway Administration
HPMS	Highway Performance Monitoring System
MEPDG	Mechanistic Empirical Design Guide
MFC	Maintenance Functional Classification
MPO	Metropolitan Planning Organization
RPO	Rural Planning Organization
RMS	Roadway Management System
SR	State Route
STIP	Short-Term In-Pavement
TDS	Traffic Data System
TMG	Traffic Monitoring Guide
TPG	Traffic Pattern Group
WIM	Weigh-in-Motion
VWIM	Virtual Weigh-in-Motion

Index

<p>AADT..... 2, 4, 29, 30, 31, 32, 37, 46, 51, 56, 59</p> <p>ADTT..... 37, 52, 59</p> <p>Artificial Intelligence Counter Classification Systems 5</p> <p>Automatic Traffic Recorder..... 5, 12, 13, 59</p> <p>Permanent Traffic Recorders 6</p> <p style="padding-left: 20px;">Site Locations..... 8, 9, 10, 11, 13, 14</p> <p style="padding-left: 20px;">Locations by Traffic Pattern Group..... 15, 16, 17</p> <p style="padding-left: 20px;">Five Year AADT Summary..... 29, 30, 31, 32</p> <p style="padding-left: 20px;">Peak Hour 18, 19, 20</p> <p style="padding-left: 20px;">Statewide Traffic Trends 33, 34</p> <p style="padding-left: 20px;">30th Highest Hour 21, 22, 23</p> <p style="padding-left: 20px;">50th Highest Hour 24, 25, 26</p> <p>Axle Counts..... 5</p> <p>Continuous Automatic Vehicle Classification 5, 6, 12, 13, 59</p> <p>Data Collection..... 4, 5</p> <p>Design Hour Volume 27, 28, 37, 59</p> <p>Design Hour Summaries 27, 28</p> <p>Factors 37</p> <p style="padding-left: 20px;">Average Day of Week for Total Vehicles... 46, 47, 48, 49, 50</p> <p style="padding-left: 20px;">Average Day of Week for Truck Traffic 52</p> <p style="padding-left: 20px;">Axle Correction..... 37, 55</p> <p style="padding-left: 20px;">County Functional Class Groups..... 54</p> <p style="padding-left: 20px;">Factor Table Application Flowchart..... 58</p> <p style="padding-left: 20px;">Growth Factor 37, 53</p> <p style="padding-left: 20px;">Hourly Percentages for Total Vehicles 38, 39, 40, 41, 42, 45</p> <p style="padding-left: 20px;">Hourly Percentages for Truck Traffic..... 43, 44, 45</p> <p>ESAL..... 37, 57, 59</p> <p>Rigid..... 37, 57</p> <p>Flexible..... 37, 57</p>	<p>K-Factor 37, 56</p> <p>Monthly Variation 51</p> <p>Yearly Growth 53</p> <p>Functional Class Groups 54, 59</p> <p>Heaviest Holiday Period 35, 36</p> <p>Inductive Loops 5</p> <p>Manual Counts 5</p> <p>Pneumatic Tubes 5</p> <p>Toll Receipts 5</p> <p>Traffic Pattern Group..... 7, 15, 59</p> <p>Weigh-In-Motion 5, 6, 12, 14, 59</p>
--	--