NIAGARA INTERNATIONAL TRANSPORTATION TECHNOLOGY COALTION

nittec

Travel Smart.

2024 ANNUAL REPORT

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ABOUT NITTEC

Mission

The mission of NITTEC is to improve mobility, reliability and safety on the regional bi-national multimodal transportation network through information sharing and coordinated management of operations.

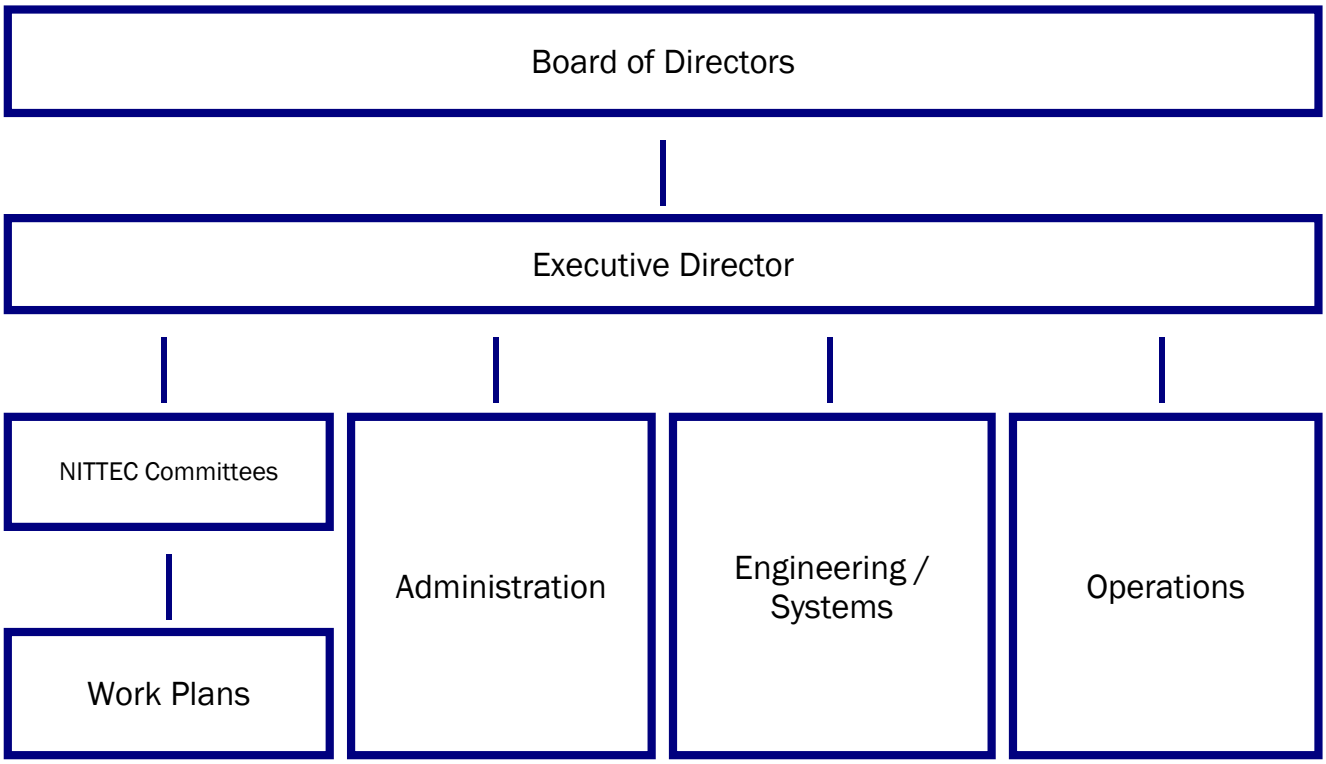
Management Objectives

- ✓ Maintain Corporate Culture as a Service Organization.
- ✓ Maintain Diverse Professional Staff of Service Providers.
- ✓ Build and Maintain Leadership Role for Implementing Technology in the Evolving Transportation Operations and Intelligent Transportation Systems (ITS) Environment.
- ✓ Maintain Organizational Hierarchy to Improve Career Development and Succession.
- ✓ Be the Focal Point for ITS Projects & Information Sharing, Coordinated Operations, Congestion Mitigation and ITS Project Delivery in the Region.

Regional Operations Functions

- ✓ Traveler Information
- ✓ Border Traffic Management
- ✓ Traffic and Congestion Management
- ✓ Incident Management
- ✓ Special Event Planning and Management
- ✓ Transportation System Monitoring
- ✓ Emergency Management
- ✓ Weather System Monitoring
- ✓ Construction Coordination
- ✓ Performance Measures Reporting
- ✓ Multi-Agency Collaboration

NITTEC Organization



NITTEC STAFF

Athena Hutchins, P.E.
Executive Director

William Lobuzzetta
Operations Manager

Timothy McGovern, P.E.
Engineering Manager

Andrew Bartlett, PhD, P.E.
Transportation Engineer

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Operations Technician

William Conway
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Robert Eberhardt
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Stephen Schnepf
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Jordan Sullivan
Operations Technician

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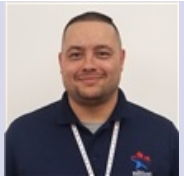
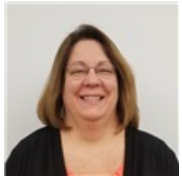


Matthew Vazquez
Systems Administrator



Lisa Walgate
Administrative Assistant

NITTEC MEMBERS

Policy Members

- Erie County
- New York State Department of Transportation
- Niagara Frontier Transportation Authority
- Ministry of Transportation Ontario
- New York State Thruway Authority

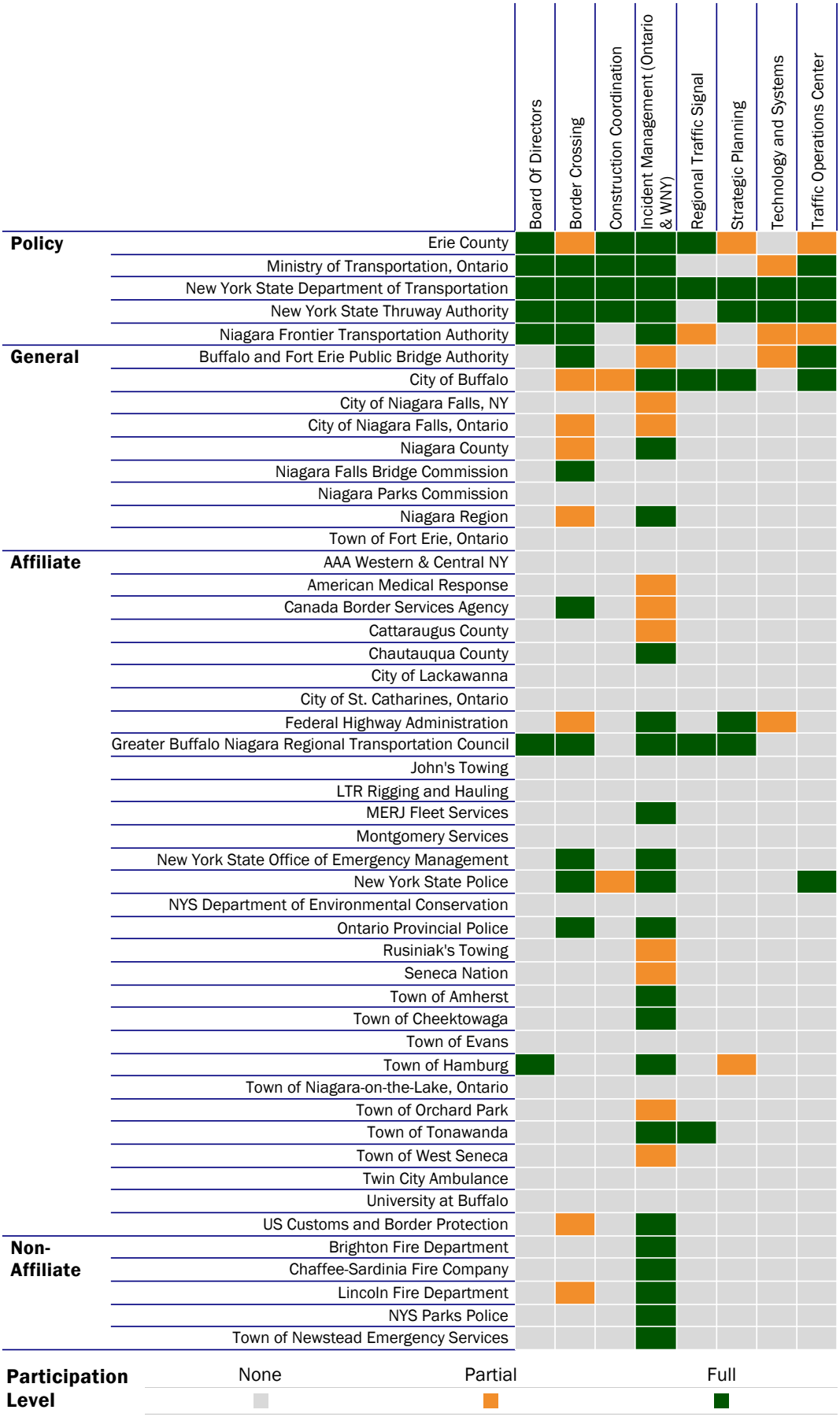
General Members

- Buffalo and Fort Erie Public Bridge Authority
- City of Niagara Falls, ON
- Niagara Parks Commission
- City of Buffalo, NY
- Niagara County
- Niagara Region
- City of Niagara Falls, NY
- Niagara Falls Bridge Commission
- Town of Fort Erie, ON

Affiliate Members

- AAA of Western and Central New York
- American Medical Response (AMR)
- Canada Border Services Agency
- Cattaraugus County
- Chautauqua County
- City of Lackawanna, NY
- City of St. Catharines, ON
- Federal Highway Administration
- Greater Buffalo Niagara Regional Transportation Council
- John's Towing
- LTR Rigging and Hauling
- MERJ Fleet Services
- Montgomery Towing
- New York State Department of Environmental Conversation
- New York State Office of Emergency Management
- New York State Police
- Ontario Provincial Police
- Rusiniak's Towing
- Seneca Nation
- Town of Amherst, NY
- Town of Cheektowaga, NY
- Town of Evans, NY
- Town of Hamburg, NY
- Town of Niagara-on-the-Lake, ON
- Town of Orchard Park, NY
- Town of Tonawanda, NY
- Town of West Seneca, NY
- Twin City Ambulance
- University at Buffalo
- US Customs and Border Protection

NITTEC COMMITTEES



Committee Participation

NITTEC currently has eight committees: Border Crossing, Construction Coordination, Incident Management - Ontario, Incident Management – Western New York, Regional Traffic Signal, Strategic Planning, Technology and Systems, and Traffic Operations Center. Each committee is comprised of representatives from a variety of organizations that meets regularly and works on establishing and executing work plans to meet their respective mandates. Additionally, the policy member agencies make up NITTEC's Board of Directors, which provide overall program and policy direction of the Coalition.

The table on this page shows the participation in NITTEC's Committees by member agencies in 2024.

Committee Mandate

To support cross border relations among member agencies and affiliates by providing a forum to address transportation related issues for the efficient movement of people and goods through the regional bi-national border crossings.

Border Crossing

2024 Highlights

- Discussed and implemented an adjustment to the traffic pattern for US bound traffic at the Rainbow Bridge.
- Documented I-190 ramp to Exit 9 (Peace Bridge) closure plans to address traffic backing up on I-190 and documented procedures for the Peace Bridge and Lewiston-Queenston Bridge to mitigate traffic delays.
- Held the first small group meeting to discuss the challenges major winter weather events cause for border crossing agencies and Southern Ontario, which included members from the Western New York Incident Management Committee, Ontario Incident Management Committee, and the Border Crossing Committee.

Initiatives

- Conduct AllRoads training with Committee members for collection of regional data and situational awareness.
- Review Solar Eclipse impact on border crossing traffic.
- Evaluate and enhance I-190 Exit 9 closure procedures and resources.

Scheduled

- Yearly review of the border related incident management plans and commercial vehicle staging, including communication and management protocols with the Incident Management Committees.
- Summer traffic and fall traffic debrief meetings.
- Seek input from freight operators regarding their needs and feedback on possible solutions.

Ongoing

- Monitor and enhance measurement and reporting of border wait times for use by all members and stakeholders. Recommend future deployment and operational procedures, of border crossing travel time technology.
- Review border crossing traveler information services and products (Nexus Program, Motorcoach Border Planner) to maintain delivery of common information to all users, and identify opportunities to enhance services (sources & notifications) and expand delivery (products & consumers).
- Enhance relationships between Coalition members and border agencies including Canadian Border Services Agency (CBSA) and U.S. Customs and Border Protection (CBP) to improve communication for travelers and balance border traffic through traffic management initiatives. Provide the opportunity for agencies to talk with each other, share knowledge and discuss border issues.
- Coordinate with other Coalition Committees on border related issues.
- Identify and address emerging border related issues to ensure the safe and efficient operation of border crossings in the future.
- Evaluate "green lane" emerging technologies and Integrated Corridor Management (ICM) Project recommendations that could be utilized with existing border related transportation strategies and improve freight processing in support of the Committee mandate.
- Support the deployment of the border travel time signage.

Construction Coordination

2024 Highlights

- Discussed ongoing and new projects to ensure that there were no conflicts throughout the year.
- Identified AllRoads as the construction coordination tool for the region. Stakeholders will be trained on how to use AllRoads for traveler advisory reports.
- Evaluated the New York State Department of Transportation (NYSDOT) Over Height Vehicle Detection system and made adjustments in order to make the system work efficiently.

Initiatives

- Conduct AllRoads training with Committee members to collect and integrate information to coordinate and assist member agencies with their planned construction activities.
- Evaluate the Overheight Vehicle Detection system deployment and analyze the safety improvements that result from the pilot program.

Scheduled

- Coordinate and manage the development and implementation of regional traffic management plans and activities related to construction projects.

Ongoing

- Have ad-hoc meetings to discuss lessons learned from the coordination issues that were not addressed through normal procedures.
- Continue a regional approach to communicate, coordinate and manage construction information, include a broader set of community stakeholders (bus operators, livery services, and delivery services).
- Monitor and report construction zone travel time and delay for major projects and coordinate with other Committees with construction related issues.
- Identify project locations to use temporary technology (speed data equipment, portable variable message signs, CCTV, etc.) to gather delay information.
- Evaluate traffic data to improve work zone efficiency.
- Continue to work with Greater Buffalo-Niagara Regional Transportation Council (GBNRTC) and member agencies to coordinate regional transportation planning and operations activities.
- Identify high incident locations and the impact of construction activities would have on them.
- Continue to evaluate the Automated Work Zone Speed Enforcement deployment and analyze the safety improvements that result from the pilot program.

Committee Mandate

To facilitate the coordinated management of regional construction activities from planning and programming through design and construction, to enhance the effectiveness of the region's construction activities and information dissemination activities and minimize impacts on mobility and travel reliability.

Committee Mandate

To develop recommendations for Board of Directors, NITTEC member agencies and other emergency services providers for the better coordination, integration, and implementation of operations to enhance the effectiveness of the region's highway incident management process.

INCIDENT MANAGEMENT - ONTARIO

2024 Highlights

- Began reintroducing a Traffic Incident Management Training Program and identifying trainers.
- Reviewed and standardized communication protocols for international border crossing closures.
- Discussed joint safety campaigns between US and Canada to implement in the upcoming year.

Initiatives

- Conduct AllRoads training with Committee members for collection of regional data and situational awareness.
- Review and update Highway Safety Awareness Training Program and identify trainers.
- Review Solar Eclipse impact on regional traffic and incident response.
- Review communication and contact information during international border crossing closures.

Scheduled

- Debrief major incidents and establish "Best Practices" for future events.
- Continue to collect and report incident information among all agencies.
- Ministry of Transportation Ontario (MTO), Ontario Provincial Police (OPP), and Niagara Region to report on the highest priority locations for collisions.
- Promote public education about "Steer It Clear It", "Move Over" Law, and incident markers first responder safety campaigns.
- Review Committee Performance Measure Report and establish/update goals.
- Share information with the NITTEC Construction Coordination Committee to track and communicate major construction projects.

Ongoing

- Participate in event planning and traveler information activities.
- Maintain outreach program to encourage local response community participation.
- Maintain communication protocols and contact information for major incidents among incident management agencies and stakeholders.
- Develop Traffic Management Plans for Special Events.
- Promote effective communication and sharing of information [video, Center-to-Center (C2C), Computer Aided Dispatch (CAD)] among all responding agencies and the other NITTEC Committees.
- Provide input to improve safety on the Garden City Skyway.
- Identify areas and roadway conditions that could result in traffic incidents to enable activities around proactive incident reduction.
- Identify best practices for Commercial Vehicle traffic control during major events.

INCIDENT MANAGEMENT - WNY

2024 Highlights

- Met with stakeholders to review and update expressway closure guidelines.
- Coordinated an emergency closure gate drill that stakeholders participated in.
- Completed the I-290 fire hydrant location project.

Initiatives

- Promote the use of and train First responders on the Integrated Incident Management System (IIMS).
- Identify best practices for Commercial Vehicle traffic control during major events.
- Establish best practices and training for response to electric vehicle incidents.
- Review the closure notification/coordination framework and the opening process of expressways.
- Review Solar Eclipse impact on regional traffic and incident response.
- Conduct AllRoads training with Committee members for collection of regional data and situational awareness.

Scheduled

- Conduct incident management training and distribute Emergency Responder Checklist cards to agencies for use by primary and secondary responders.
- Identify and review commercial vehicle staging areas and procurement.
- Promote public awareness about "Steer It Clear It", "Move Over" Law, Crash Investigation Sites, and incident markers to attendees of the Niagara County Traffic Safety Fair and other venues.
- Debrief major incidents and establish “Best Practices” for future events.
- Conduct regional training exercise.

Ongoing

- Participate in event planning and traveler information activities.
- Promote effective communication and sharing of information [video, Center-to-Center (C2C), Computer Aided Dispatch (CAD)] among all responding agencies and the other NITTEC Committees.
- Review and provide recommendations for roadside assistance program.
- Provide incident management training to towing companies and maintain an urban area towing company resource list to ensure well managed and sufficient response.
- Develop Traffic Management Plans for Special Events.
- Maintain closure responsibility guidelines for regional expressways and communicate to stakeholders.
- Evaluate the need for accident reporting areas and expand to other locations.
- Identify areas and roadway conditions that could result in traffic incidents to enable activities around proactive incident reduction.

Committee Mandate

To develop recommendations for Board of Directors, NITTEC member agencies and other emergency services providers for the better coordination, integration, and implementation of operations to enhance the effectiveness of the region’s highway incident management process.

REGIONAL TRAFFIC SIGNAL

Committee Mandate

To address current and future needs for daily management, emergency evacuation and improved efficiency on priority arterials; recommend plans for: maintaining and upgrading arterial signal equipment; coordinating signals; integrating priority corridors within the system; and identifying high quality transit corridors for implementation of Transit Signal Priority in the Buffalo Niagara Region.

2024 Highlights

- Drafted Implementation Plans for Emergency Vehicle Preemption and Transit Signal Priority (TSP).
- Updated area fiber backbone pathways from ErieNET in relation to the regional traffic signals for potential future use.
- Reviewed diversion corridors and signal locations for future coordination.

Initiatives

- Develop emergency vehicle preemption implementation plan.
- Evaluate Transit Signal Priority (TSP) and Miovision data for performance measures and begin a plan for analytics.
- Evaluate Niagara Street corridor performance related to the Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) Grant.
- Conduct AllRoads training with Committee members for collection of regional data and situational awareness.
- Collaborate with GBNRTC on developing a Regional Technology Communications Study that focuses on establishing costs and communications to all the regions traffic signals.
- Develop a Transit Signal Priority (TSP) Implementation Plan for the region to evaluate Bailey Avenue and other identified corridors.

Scheduled

- Review corridor timing plans, implementation and maintenance status as identified in the Corridor Status Matrix in conjunction with regional projects and available funding.

Ongoing

- Assess existing regional traffic system equipment and evaluate systems to enhance asset management inventory.
- Define opportunities for funding and training needs to develop skill sets, technologies, and processes.
- Maintain a Corridor Status Matrix of traffic signals along existing and proposed signal management corridors and identify and prioritize activities. The matrix shall identify signals to be upgraded based on limitations of phase plans that can be implemented along each corridor.
- Develop traffic signal performance measures reports to determine effectiveness of coordination along existing corridors. Monitor average speeds on each corridor for development of travel times.
- Identify high quality transit corridors and recommend implementation of Transit Signal Priority.
- Coordination with other Committees regarding highway closures and detours through signalized corridors.
- Monitor progress of Regional Traffic Signal projects.
- Define the Regional Traffic Signal System Concept of Operations for desired functionality of signal systems in the region.

STRATEGIC PLANNING

2024 Highlights

- Oversaw the development of the NITTEC Staffing Assessment and Space Needs Analysis.
- Developed and monitored a list of grant opportunities for funding projects within the region.
- Reviewed the progress of each Committee and their initiatives for the year.

Initiatives

- Oversee the development of the NITTEC Space Requirements and Staffing Needs Analysis.
- Oversee the development of AllRoads training with Committee members for the Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) Program.
- Oversee the development of the Buffalo Niagara Region Transportation Data Business Plan.
- Identify and coordinate regional efforts for seeking grant opportunities.

Scheduled

- Review Committee work plans for consistency with the Strategic Plan to establish priorities and identify needs.

Ongoing

- Evaluate Committee effectiveness for establishing and meeting quantifiable goals.
- Monitor progress of regional projects and initiatives.
- Continue long term Business Continuity planning.
- Continue to work with Greater Buffalo-Niagara Regional Transportation Council (GBNRTC) and member agencies to establish a process for identifying transportation corridors where operational strategies can be adopted to improve mobility and coordinate regional transportation planning and operations activities.
- Identify and pursue Revolving Loan Fund (RLF) and Grant fund project and promotion opportunities.
- Continue to coordinate with relative entities the proposed high quality transit corridors and identify needs for implementation, including transit signal priority.
- Continue to provide recommendations for NITTEC promotional opportunities.
- Continue to promote transit ridership and active transportation related to shared mobility.
- Implement Strategic Plan recommendations / action items based on available funding.
- Assess NITTEC's performance in meeting the expectations of members and stakeholders.

Committee Mandate

To assess NITTEC's performance in meeting member, stakeholder and public expectations, and make recommendations to the Board of Directors on the Coalition's long term direction.

TECHNOLOGY AND SYSTEMS

Committee Mandate

To identify and coordinate member agencies plans for use of ITS architecture and Advanced Traffic Management elements; facilitate the development and introduction of regionally compatible ITS architecture and technology for traveler information and traffic management; and review RLF project applications for consistency with Regional ITS objectives and compatibility with existing systems for integration with a view to providing recommendations to the Board of Directors on the technical aspects of these applications.

2024 Highlights

- Developed a *Needs and Requirements* document for a new NITTEC Traffic Operations Center (TOC).
- Reviewed and updated the Buffalo Niagara Region Transportation Projects and Initiatives report.
- Assisted with the development of NYSDOT's Statewide Traffic Management Center (TMC) Information and Operational Technology Current State Assessment report.
- Reviewed the NYSDOT Over Height Vehicle Detection system alarm data.

Initiatives

- Identify system support needs for the Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) Grant.
- Conduct AllRoads training with Committee members for collection of regional data and situational awareness.
- Develop data strategies to collect, store, secure and make available to member agencies the various NITTEC data.

Scheduled

- Maintain and update a Major Systems Replacement Plan to identify the areas of system risk and additional support / redundancy for the equipment at NITTEC in conjunction with monitoring current and development of proposed budgets.
- Review requirements for NITTEC systems support and identify maintenance and warranty contract requirements, including system redundancy and business continuity and disaster recovery initiatives.
- Maintain and update annually the Regional Architecture according to the Maintenance Plan.

Ongoing

- Support Technology and Systems requirements for Intelligent Transportation Systems (ITS) projects and strategic initiatives, including expanding ITS operations and coverage within the region with the goal of integrating systems and operations across modes and agencies.
- Identify System Integration opportunities, compliance with standards and technology issues.
- Support and enhance the central signal software system and support the Regional Traffic Signal Committee connectivity initiatives by evaluating technology and hardware requirements.
- Review technology aspects of any Revolving Loan Fund (RLF) and Grant Fund applications that are received.
- Report on Member Agency's systems status and activity logs monthly.
- Monitor and update the progress of the regional projects and initiatives.
- Continue to identify training opportunities available for the benefit of NITTEC and Member Agencies.
- Maintain supporting documentation for the Regional ITS Architecture.
- Maintain cyber security and systems security solutions in accordance with standards.
- Continue to identify needs and the next steps for business continuity.
- Continue to develop needs and requirements for a new Traffic Operations Center (TOC).

TRAFFIC OPERATIONS CENTER

2024 Highlights

- Worked with member agencies to coordinate after action reports as needed.
- Evaluated the NYSDOT Over Height Vehicle Detection system and made adjustments in order to make the system work efficiently.
- Worked with New York State Thruway Authority (NYSTA) to integrate the Grand Island Bridge lane designation devices for remote control by NITTEC and NYSTA.
- Developed wrong way driver messaging that can be implemented quickly by the traffic operations center.

Initiatives

- Conduct AllRoads training with Committee members and use outputs within the Traffic Operations Center.
- Review Solar Eclipse impacts on regional traffic.
- Develop Regional Traffic After Action Reports for major events within the region.
- Develop procedures and evaluate the integration of the Overheight Vehicle Detection system into the Traffic Operations Center.

Scheduled

- Coordinate periodic stakeholder meetings when transportation issues arise.
- Monitor current and develop proposed budgets.
- Review and analyze performance measures to calculate the impact of incidents, construction, and weather delays within a corridor and promote operational improvements.
- Collaborate with the Technology & Systems Committee to define and address Advanced Traffic Management System (ATMS), traffic signal systems, Communication Log and other Intelligent Transportation Systems (ITS) needs.
- Review Committee Performance Measure Report.

Ongoing

- Review Regional Event Traffic Management Plans (TMP), expressway detour routes and signing plans that will be utilized during major events.
- Continue TOC quality initiatives.
- Evaluate operational procedures, training programs and staffing levels to ensure they are adequate for implementation of new systems and initiatives.
- Continue to provide the opportunity for agencies to talk with each other, share knowledge and discuss issues.
- Review and identify additional opportunities for Center-to-Center (C2C) data sharing among member agencies and evaluate and enhance communication protocols.
- Monitor recommended strategies from Integrated Corridor Management (ICM) project and other project integration opportunities.
- Establish traffic management strategies using data driven performance outcomes to achieve optimal results.
- Support evaluation for Incident Detection Systems and promote within Member Agencies.
- Review and provide input on the enhanced Crossroads System response plans and Dynamic Message Sign (DMS) messaging.
- Identify future Intelligent Transportation System (CCTV, DMS, PVMS, Flashing Beacons, and Incident Detection) locations.

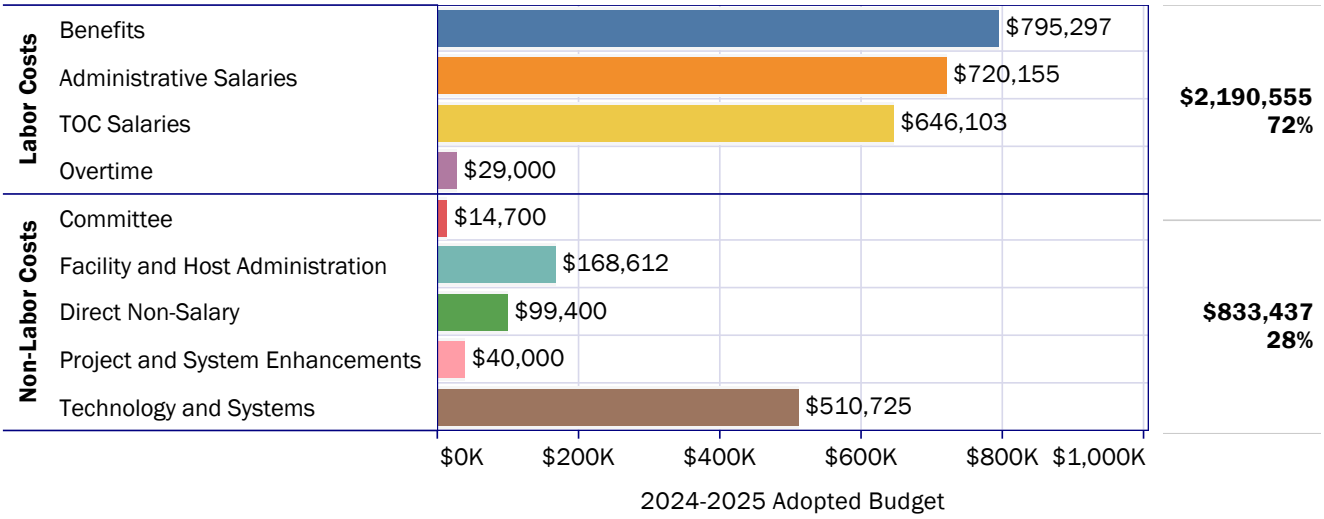
Committee Mandate

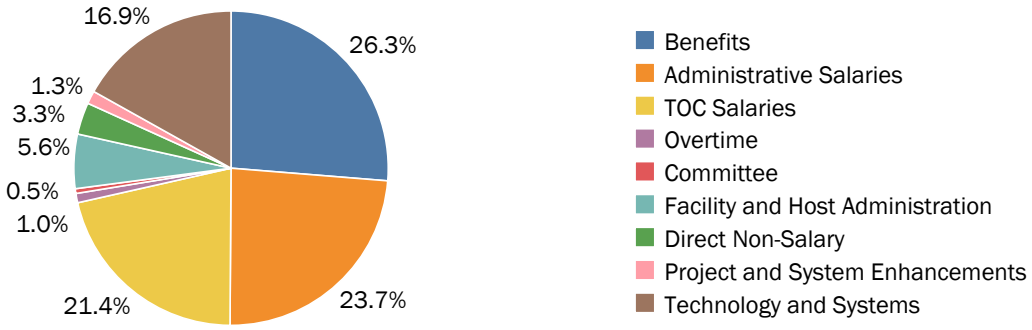
To provide policy guidance and oversight of the NITTEC TOC, develop regional bi-national operational policies and procedures for Advanced Traffic Management and Traveler Information.

FINANCIAL INFORMATION

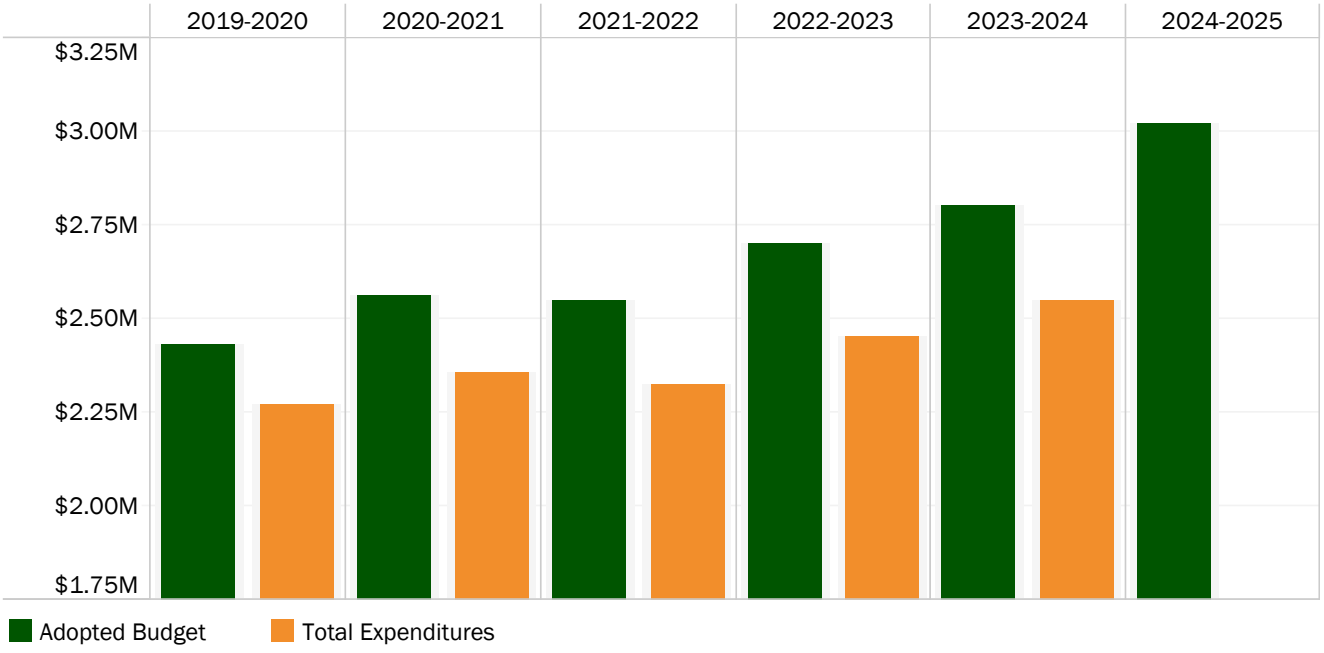
The adopted SFY 2024-2025 Operating Budget was $3,023,992, distributed as identified below.

Budget Distribution





Budget Performance



Revolving Loan Fund and Direct Grant Programs

Total RLF Summary	Amount
RLF Principal	$5,000,000
Interest	$1,265,983
RLF Principal & Interest	**$6,265,983**
Grant Monies Paid	$662,592
Remaining Allocated Grant Monies	$206,000
Other - Write Off	$244,739
Available Balance	**$5,152,652**

RLF Summary

NITTEC manages a Revolving Loan Fund (RLF) established to support and enhance innovation and development of ITS and transportation operations solutions to improve mobility in the region.

There is approximately $5,152,652 in available monies for regional ITS, operations, and mobility projects for loan through the NITTEC RLF. Based on the established guidelines, loans are available for member agency sponsored organizations that wish to pursue project funding in the region in accordance with the established Project Selection Criteria.

The financial status of the RLF as of December 31, 2024 is presented here.

Revolving Loan Fund Grant

Project	Details	Organization	Grant Amount
Niagara Street Corridor Signal Controllers	Installation of 26 traffic signal controllers to implement transit signal prioritization along the corridor	City of Buffalo	$182,000
Border Crossing Traveler Information System	Installation of 9 hybrid message signs displaying border crossing information for the three international bridges	NITTEC Border Crossing Committee	$206,000
Smart Camera Technology	Installation of 5 smart cameras and 2 ATC controllers	Town of Tonawanda	$120,000
Fiber Optic Diagnostic Equipment	Purchase of Fiber Optic Diagnostic equipment, repair tools, and a specialized trailer	NYSTA	$75,000
Crossroads ATMS Enhancement	Improvements to NITTEC's Advanced Traffic Management System	NITTEC	$300,000
		Total	**$883,000**

RLF Grant Overview

Interest earned on the RLF has been distributed as grants to fund multiple ITS projects in the region. A brief overview of these grant awards is provided here.

REGIONAL INITIATIVES

2024 Solar Eclipse

On April 8, 2024, a total solar eclipse moved across North America from Mexico to Canada. A total of 15 states got to experience this special event, with Buffalo, New York directly in the path of totality.

The first meeting to discuss planning for the eclipse in the NITTEC region took place in 2019 and then extensive planning began a little more than a year before the eclipse. The expectation was an influx of people in Western New York and Southern Ontario ranging between 500,000 to 1,000,000 visitors. Niagara Falls was designated as a prime viewing location and was an area of focus in the region for traffic management.

Total Solar Eclipse Timeline

Partial eclipse began at approximatly 2:00 PM and lasted until approximately 4:30 PM.

Totality Start Times:
- ***Chautauqua County:*** 3:17:23 PM (Duration: 3 minutes, 25 seconds)
- ***Buffalo, New York:*** 3:18:20 PM (Duration: 3 minutes, 45 secodns)
- ***Niagara Falls, New York*:** 3:18:21 PM (Duration: 3 minutes, 32 seconds)

Objectives

- Provide motorists with safe and efficient ingress/egress throughout Western New York and Southern Ontario.
- Provide satisfactory levels of service to all transportation system users.
- Ensure first responders are able to reach their necessary destinations.
- Provide a quick response from transportation partners as needed.
- Reduce/mitigate delays and queueing on state highways and expressways.

Preparations

- Organized and participated in many planning meetings that included all agencies that would be affected.
- Developed a well-thought-out traffic management plan for the entire region, this included Western New York and Southern Ontario.
- Established a communication plan for the NITTEC Traffic Operations Center (TOC).
- Created an Operations Plan for NITTEC that defined tasks for employees outside of their normal duties.
- Defined areas of concern and dedicated time to meet with member agencies at these locations to discuss plans to mitigate traffic issues.
- Participated in press conferences and welcomed reporters into the NITTEC TOC for interviews.
- Emphasized the message “Arrive Early, Stay Late.”
- Added portable variable message signs (PVMS) to strategic locations to supplement the already expansive network of semi-permanent PVMS.
- Started messaging on the Dynamic Message Signs (DMS) and Portable Variable Message Signs (PVMS) on March 27th. The week before the eclipse was spring break and it was expected that a lot of people would be on vacation. NITTEC wanted to ensure the message got out in advance so the public could be informed prior to leaving for vacation.
- Started region-wide conference calls on Friday April 5th and continued daily.
- Closed specific off-ramps and had strategic lane closures to aid in traffic management.
- Utilized intelligent transportation systems (ITS), NITTEC website, 511NY, and 511Ontario to keep motorists up to date with conditions.
- Coordinated with agencies to adjust signal timing.
- Schools were closed and many agencies/businesses encouraged people to work from home.
- New York State Department of Transportation (NYSDOT) added Highway Emergency Local Patrols (HELP) to additional roadways and extended hours of operation. Coordinated with HELP teams to ensure the dispatch process was seamless.

Lessons Learned

- Weather played a major role in how the region was impacted. Significant cloud cover in the region made for an uneventful day. A lot of people left the region to find areas with a clear sky.
- NITTEC and member agencies prepared for the worst, and it was very valuable to the entire region to go through this planning process.
- Will continue to use the NITTEC conference call framework for events/incidents/weather and work on distribution lists to include the necessary participants.
- Local residents listened to the message and stayed home.
- Border crossings between Canada and US did not have any delays until Tuesday April 9th.
- Significant traffic was moving through the region on Tuesday April 9th.
- Did not include enough local law enforcement in planning for the event.
- Did not have the amount of boat traffic anticipated on Lake Erie and Lake Ontario.
- Shuttle services might have been beneficial in Niagara Falls if the region got the amount of people they were expecting.

Equipment Updates and Responsive Timing

- 26 Traffic Signals equipped with remote signal operation devices and communications
- 8 traffic signals equipped with cameras for vehicle detection and data collection
- Equipment used to re-time each intersection to better meet normal day-to-day operations
- Integrated with NITTEC Decision Support System, AllRoads, to allow for alternate timing plans in response to traffic events on I-190

Transit Signal Priority

Transit Signal Priority (TSP) is the strategy of giving preferential treatment to transit vehicles at signalized intersections. Since transit vehicles can hold many people, giving priority to transit can potentially increase the person throughput of an intersection.

This can be implemented for all transit vehicles, or only for vehicles which are behind schedule.

In addition to the 26 traffic signals which were equipped with upgraded equipment, 28 transit vehicles were upgraded to allow for TSP to be enacted along Niagara Street.

Installation and testing of this equipment began in 2024 and is expected to conclude in 2025. Pending results, these strategies may be duplicated on other identified corridors.

Transit Signal Priority Benefits

Niagara Street

The Niagara Street corridor in the City of Buffalo has been the target of technology deployments and initiatives to improve throughput for passenger and transit vehicles.

This corridor was chosen to pilot these initiatives as it:

1) Serves as a primary diversion route for the I-190 expressway

2) Is directly adjacent to the Peace Bridge border crossing

3) Contains densely grouped, uncoordinated traffic signals

4) Serves some of the highest ridership transit routes

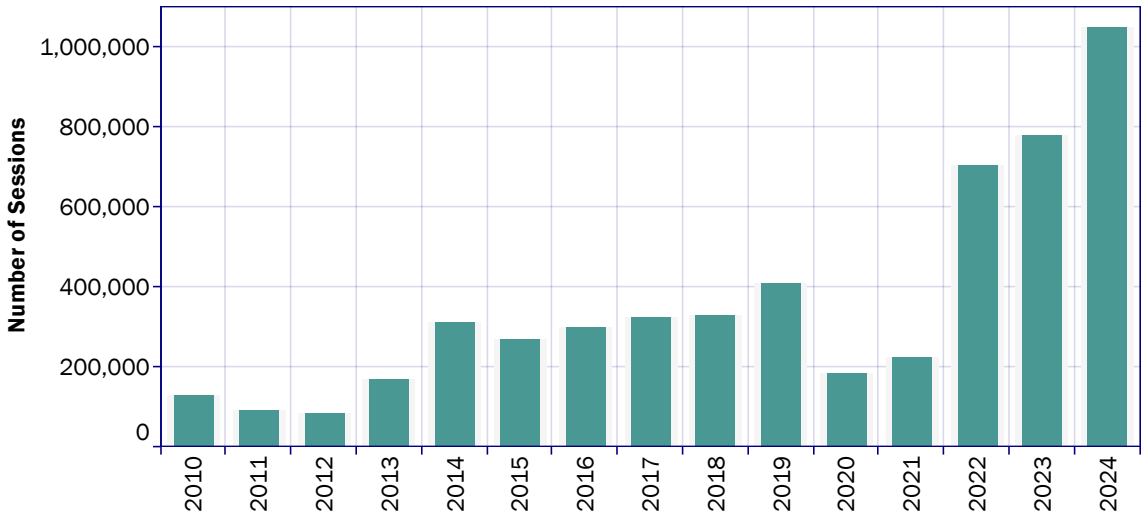
5) Serves multiple transit routes which struggle to meet targets for on-time performance

PUBLIC ENGAGEMENT STATISTICS

Annual Website Traffic

This graph shows the total number of visits to the NITTEC website per year since 2010.

Annual Website Traffic



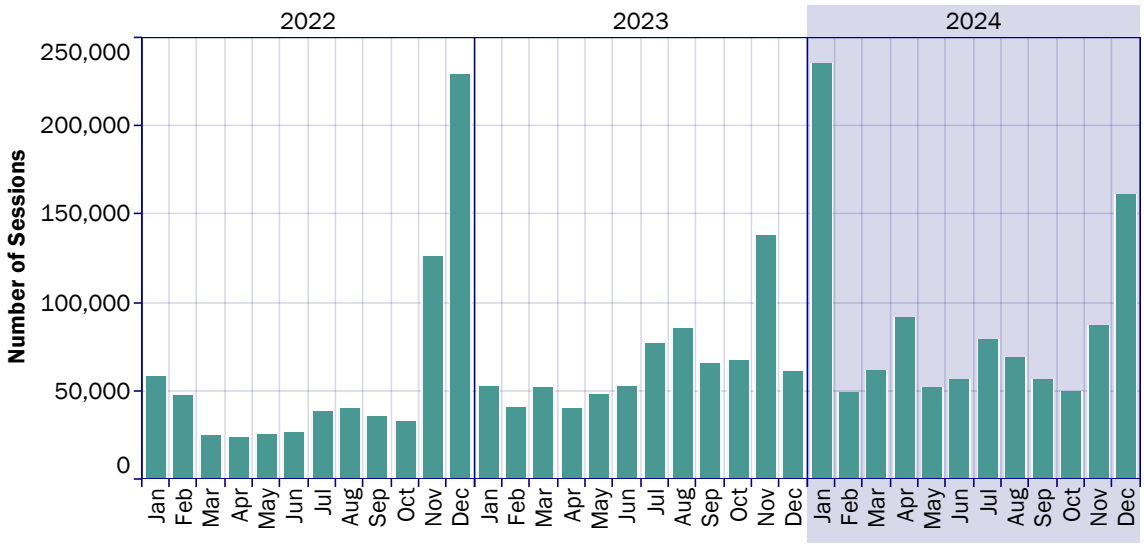
Sessions and Users

These graphs show the number of website sessions and users on the NITTEC website each month from January 2022 to December 2024.

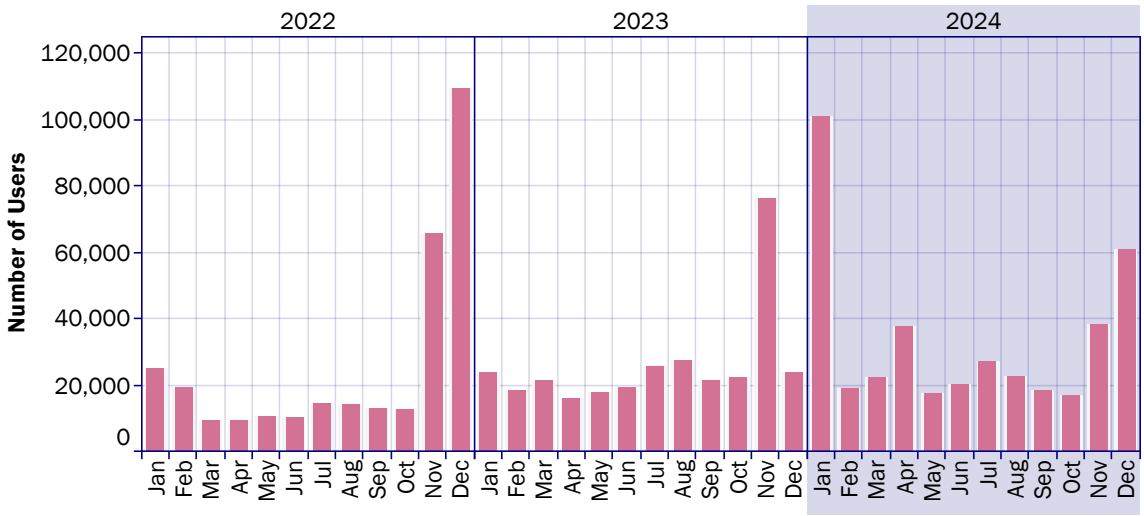
Session: A session is the period of time a user is actively engaged with the website.

User: A user is a unique visitor to the website.

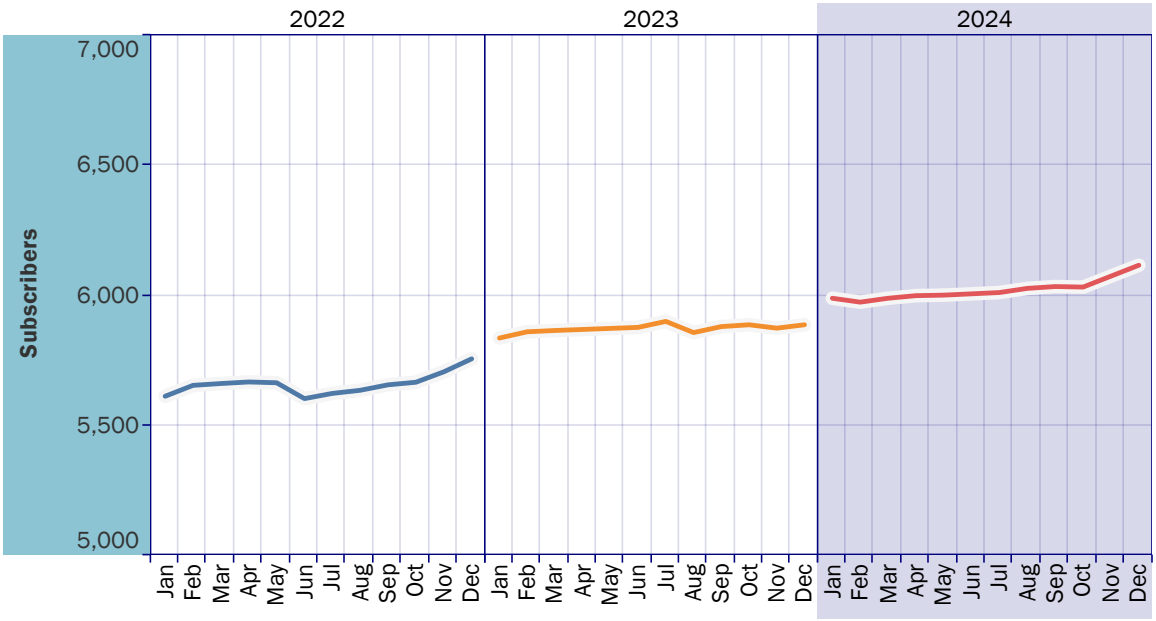
Sessions



Users



MYNITTEC Subscribers

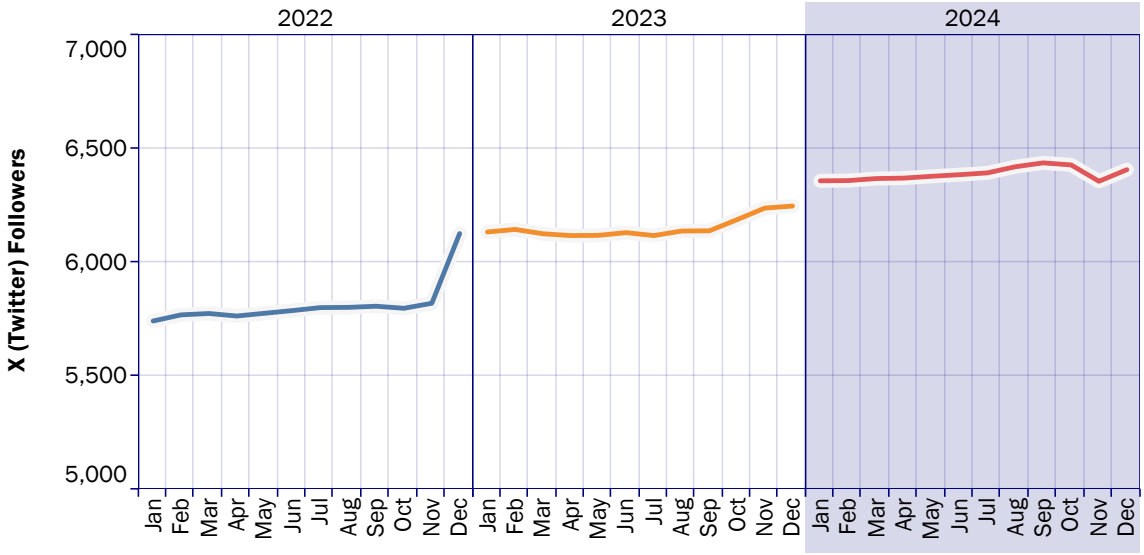


MYNITTEC Subscribers

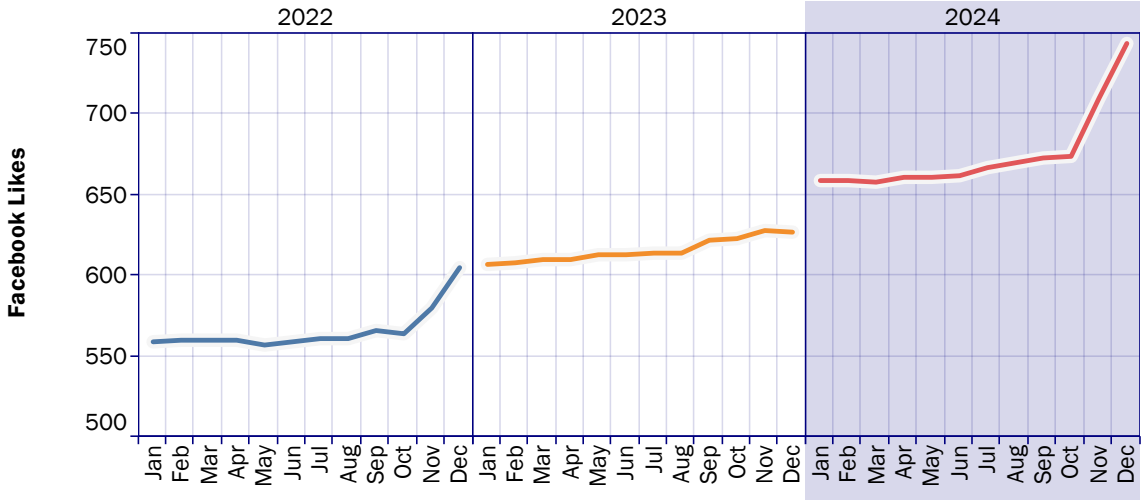
This graph shows the number of MYNITTEC Subscribers from January 2022 to December 2024.

MYNITTEC is a free service that allows users to subscribe to individual routes during specified time periods and receive traffic alerts through text messages, email, or NITTEC app notifications.

X (Twitter) Followers



Facebook Likes



X (Twitter) Followers & Facebook Likes

The graphs below show the number of X (Twitter) "Followers" and Facebook "Likes" from January 2022 to December 2024.

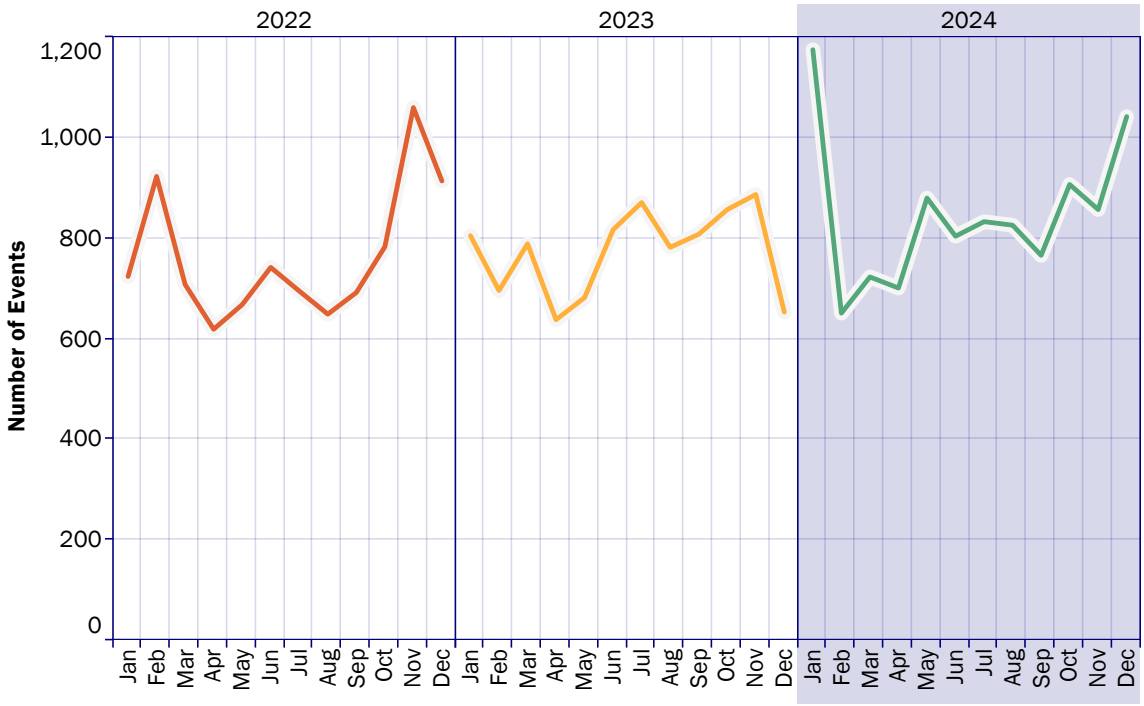
MONTHLY INCIDENT ACTIVITY

This table compares the differences in activity distribution during 2022, 2023, & 2024.

	2022	2023	2024	% Change (2023 to 2024)
Border Crossing	158	304	286	-6%
Congestion	341	847	1,040	23%
Construction/Maintenance	1,711	1,339	1,544	15%
Crashes	1,291	1,543	1,502	-3%
Debris	2,405	2,382	2,757	16%
Disabled Vehicles	1,329	1,487	1,360	-9%
Signal Malfunction	1,331	1,110	1,286	16%
Snow & Ice	611	273	390	43%
Total	**9,177**	**9,285**	**10,165**	**9%**

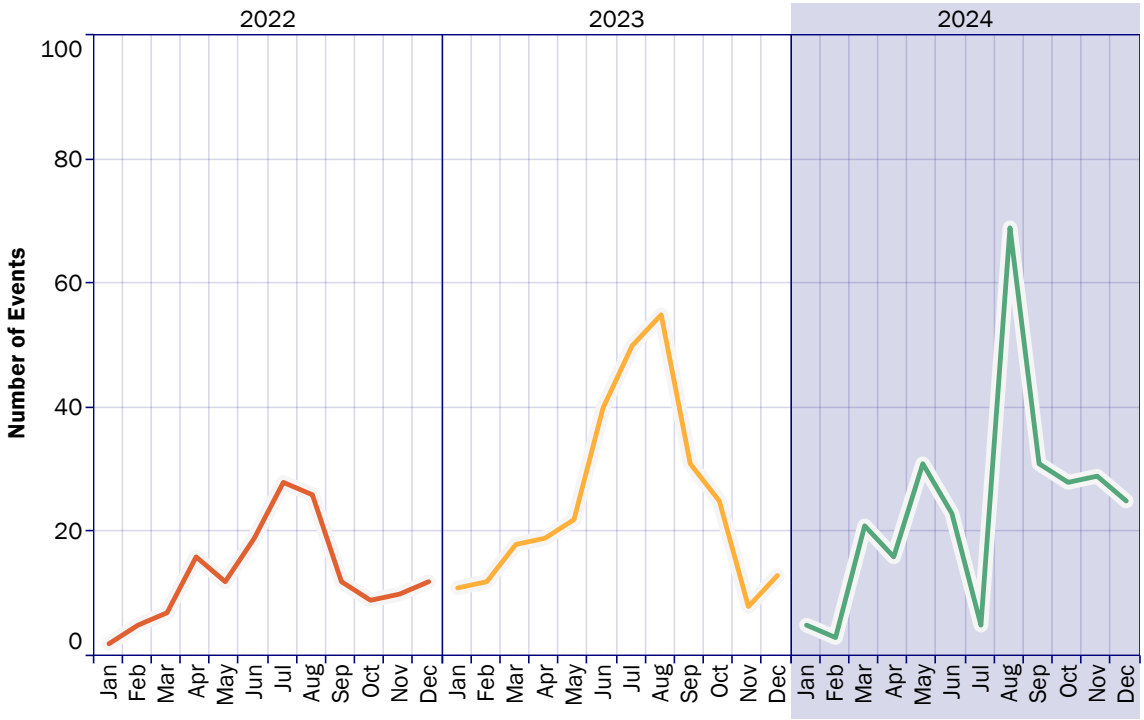
Total Activity

This graph shows the combined total number of events from the other eight categories that occurred during each month.



	2022	2023	2024
Total / % Change	**9,177 6%**	**9,285 1%**	**10,165 9%**

Border Crossing

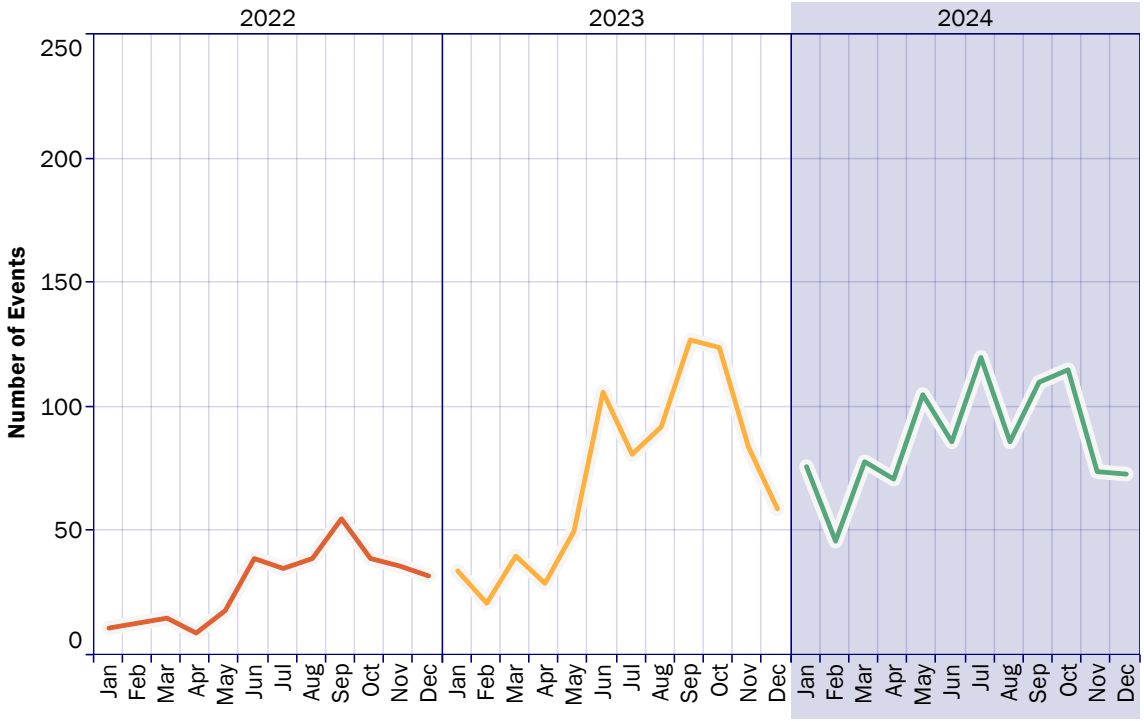


	2022	2023	2024
Total / % Change	**158 204%**	**304 92%**	**286 -6%**

Border Crossing

This graph shows the number of border crossing delay events that occurred during each month.

Congestion



	2022	2023	2024
Total / % Change	**341 29%**	**847 148%**	**1,040 23%**

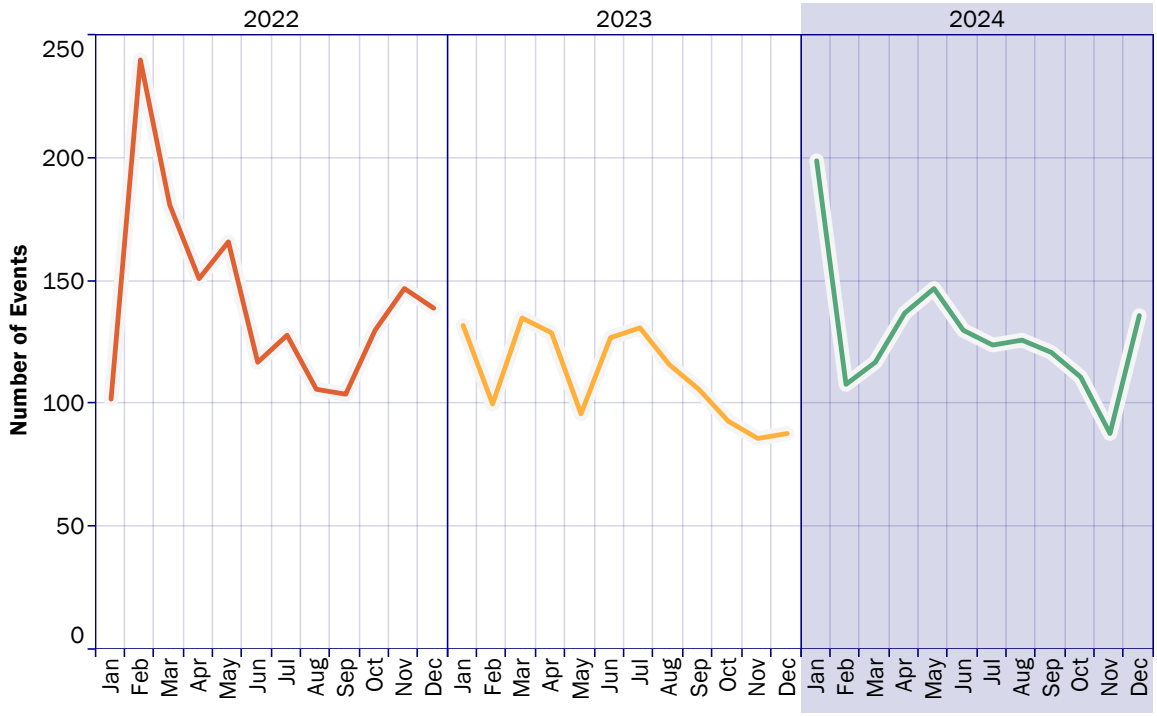
Congestion

This graph shows the number of non-recurrent congestion events (i.e. congestion that does not typically occur as a result of peak hour travel) that occurred during each month.

Construction & Maintenance

This graph shows the number of construction and maintenance events that occurred during each month, including planned and unplanned roadwork, repairs to damaged signs and guardrails, and instances of flooding.

Construction & Maintenance

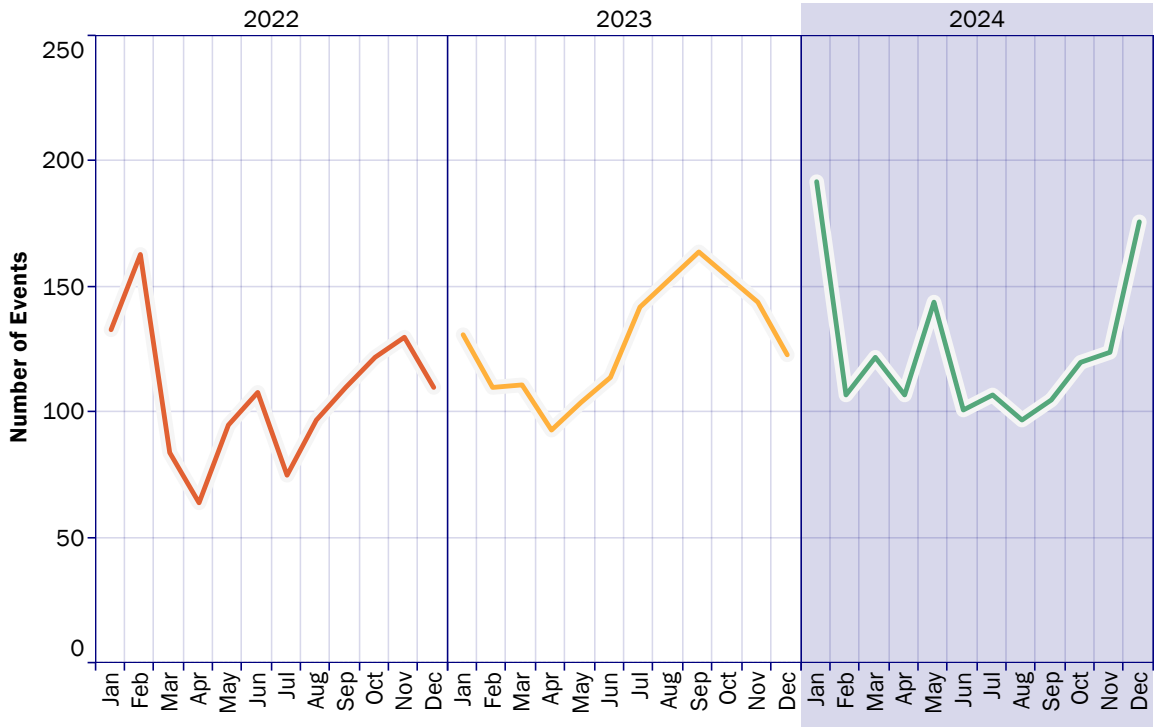


	2022	2023	2024
Total / % Change	**1,711 10%**	**1,339 -22%**	**1,544 15%**

Crashes

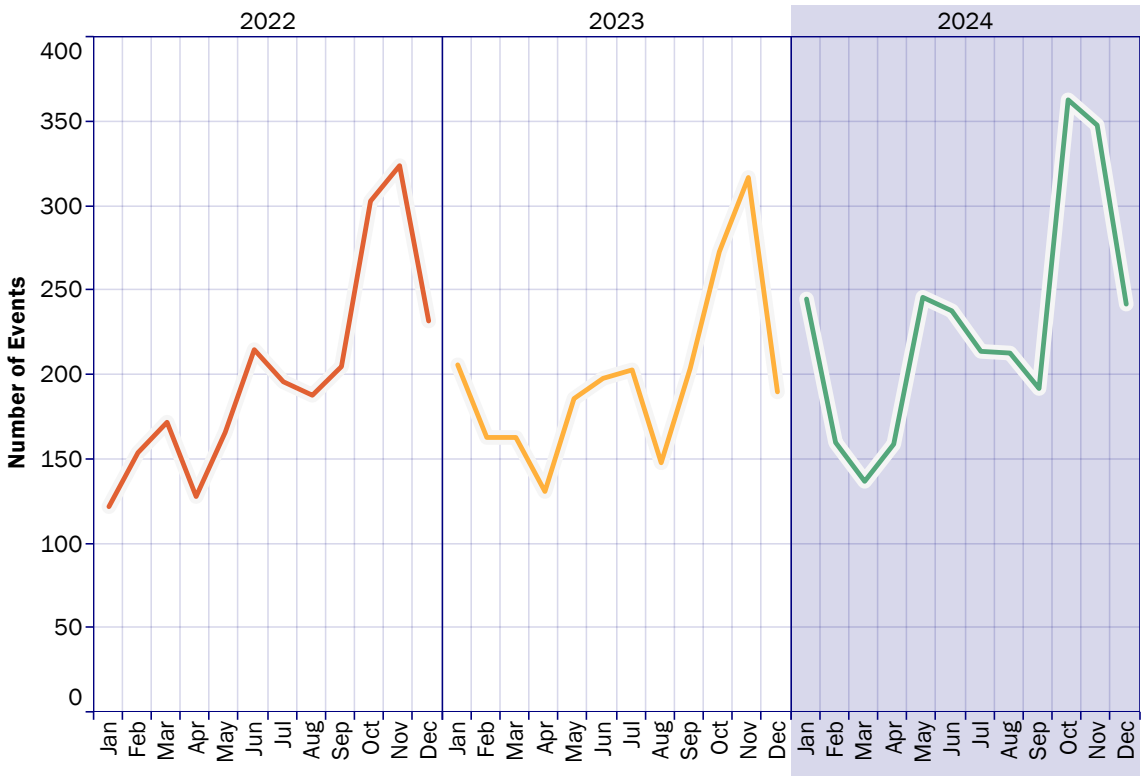
This graph shows the number of crashes involving one or more vehicles that occurred during each month.

Crashes



	2022	2023	2024
Total / % Change	**1,291 4%**	**1,543 20%**	**1,502 -3%**

Debris

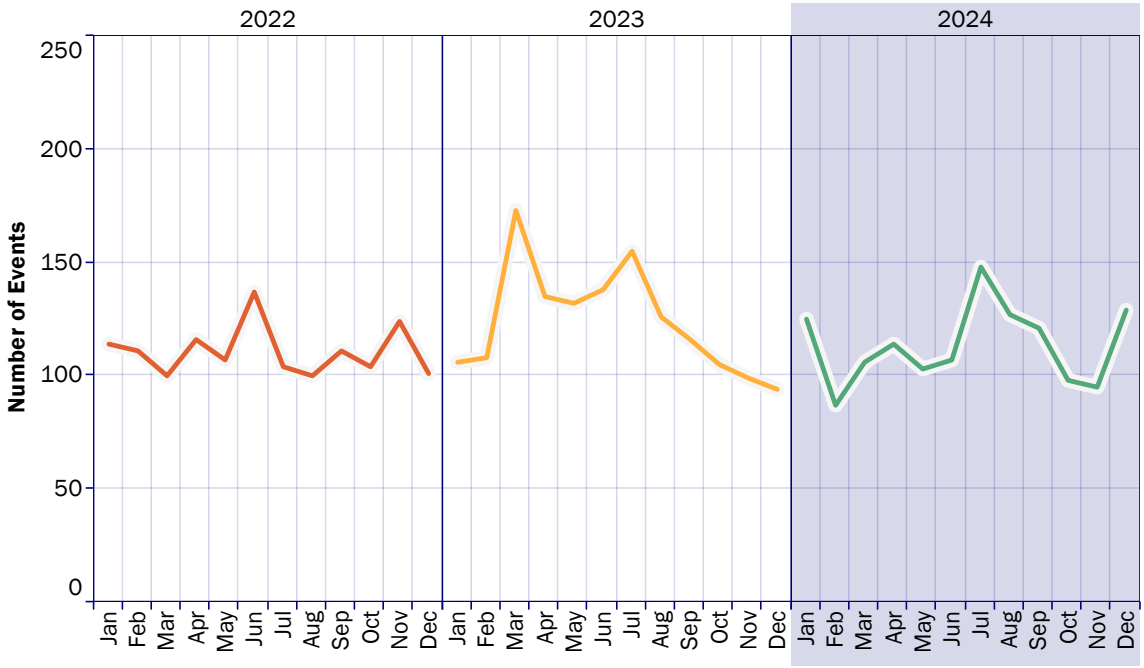


	2022	2023	2024
Total / % Change	**2,405 0%**	**2,382 -1%**	**2,757 16%**

Debris

This graph shows the number of debris events that occurred during each month, including instances of dead animals or objects obstructing travel lanes.

Disabled Vehicles



	2022	2023	2024
Total / % Change	**1,329 -7%**	**1,487 12%**	**1,360 -9%**

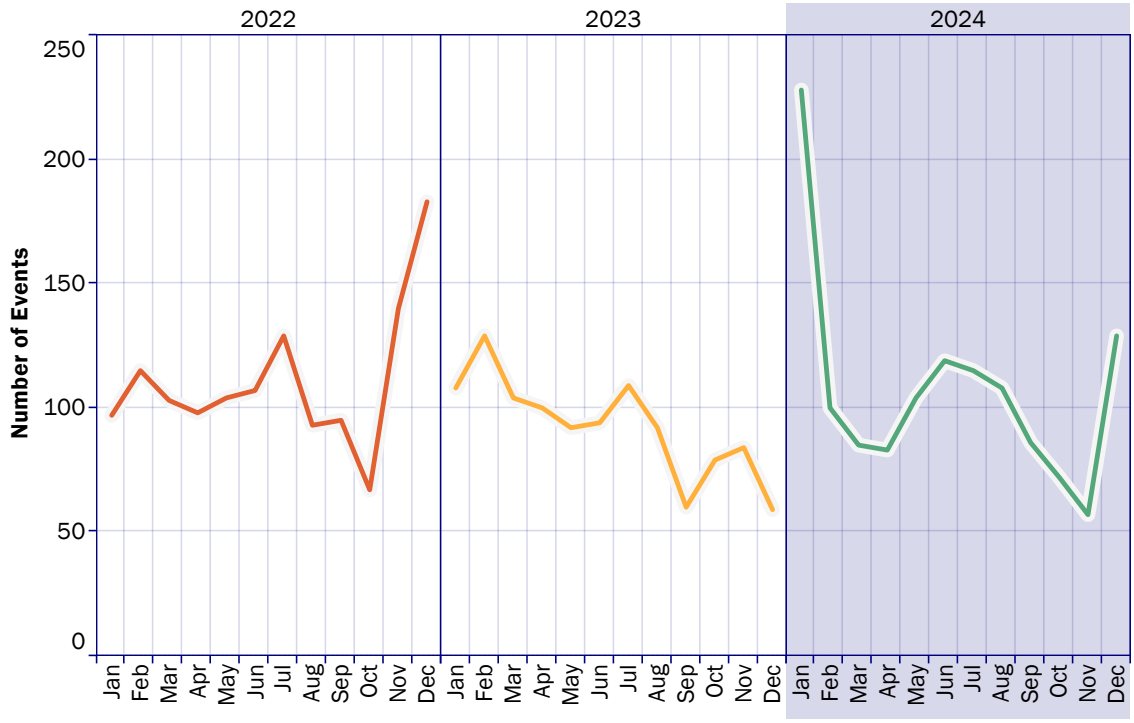
Disabled Vehicles

This graph shows the number of disabled vehicles (i.e. vehicles stopped in a travel lane or shoulder for reasons other than a crash) that occurred during each month.

Signal Malfunction

This graph shows the number of signal malfunction events that occurred during each month, including signals in flash, losses of power, and issues with signal timing.

Signal Malfunction

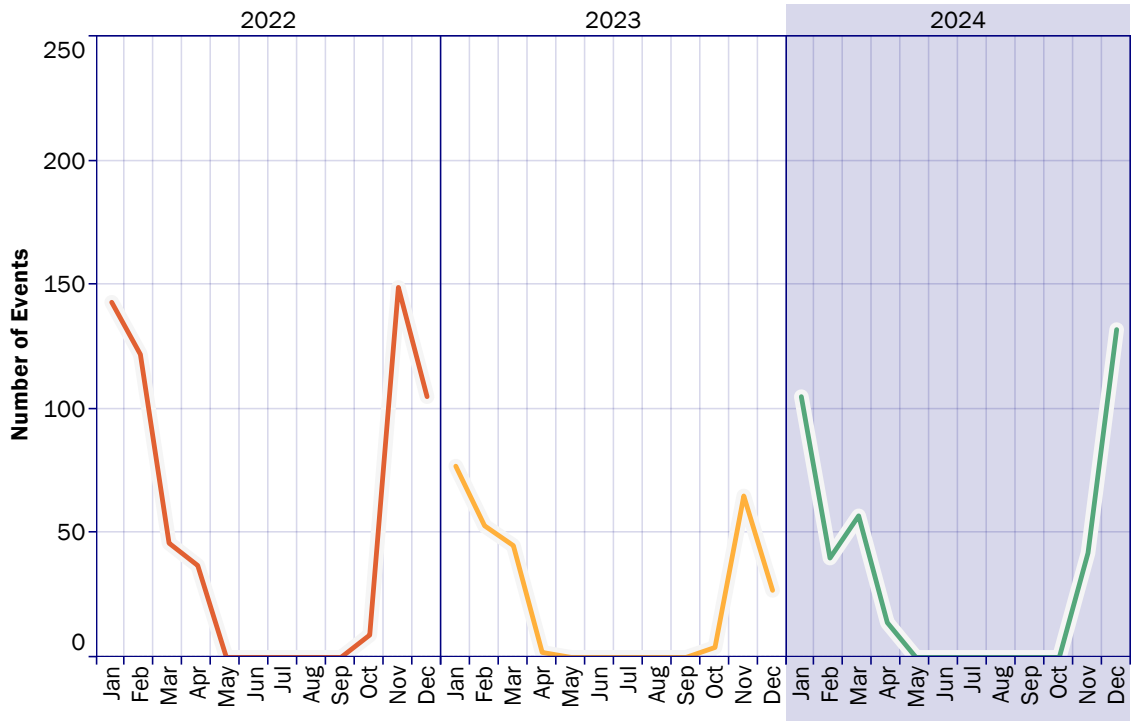


	2022	2023	2024
Total / % Change	**1,331 7%**	**1,110 -17%**	**1,286 16%**

Snow & Ice

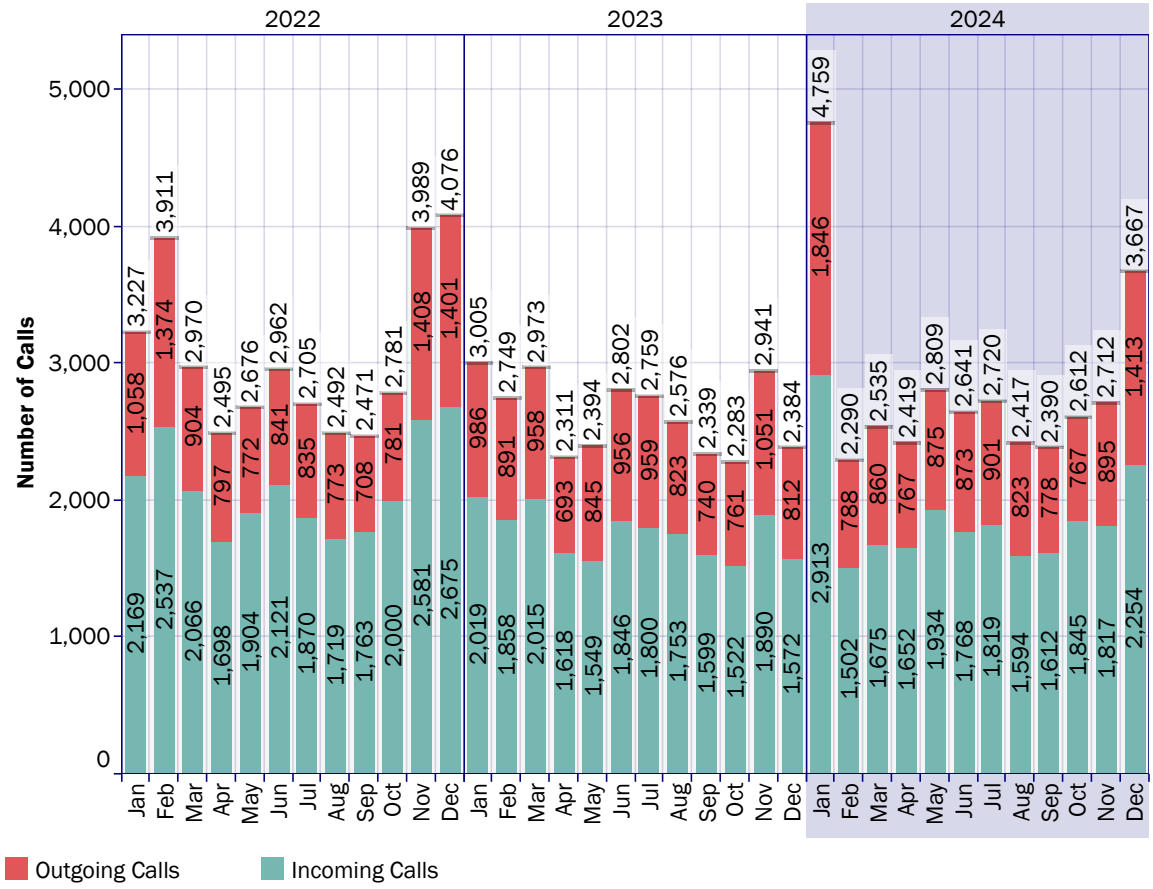
This graph shows the number of snow and ice events that occurred during each month, including weather advisories, inclement weather conditions, and requests for pavement treatment.

Snow & Ice



	2022	2023	2024
Total / % Change	**611 39%**	**273 -55%**	**390 43%**

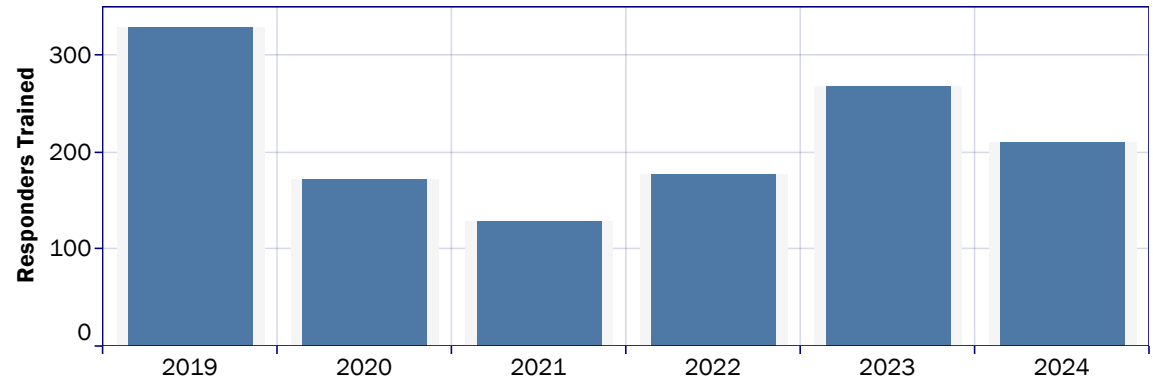
TOC Incoming/Outgoing Calls



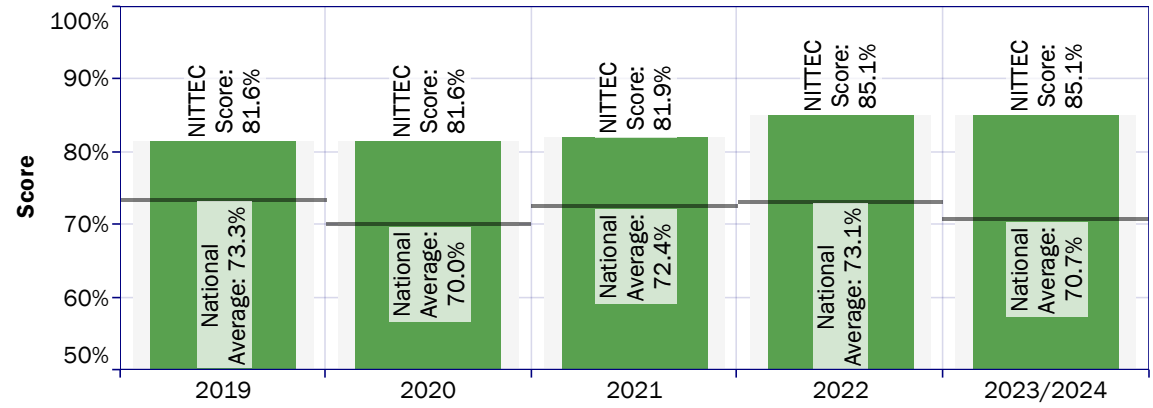
TOC Incoming/Outgoing Calls

This chart shows the number of incoming and outgoing calls to and from the TOC from January 2022 to December 2024.

Highway Safety Awareness Training



Traffic Incident Management Self Assessment



Response Training

These graphs show the results of the region's Highway Safety Awareness Training and Traffic Incident Management Self-Assessment.

MONTHLY INCIDENT ACTIVITY BY ROUTE

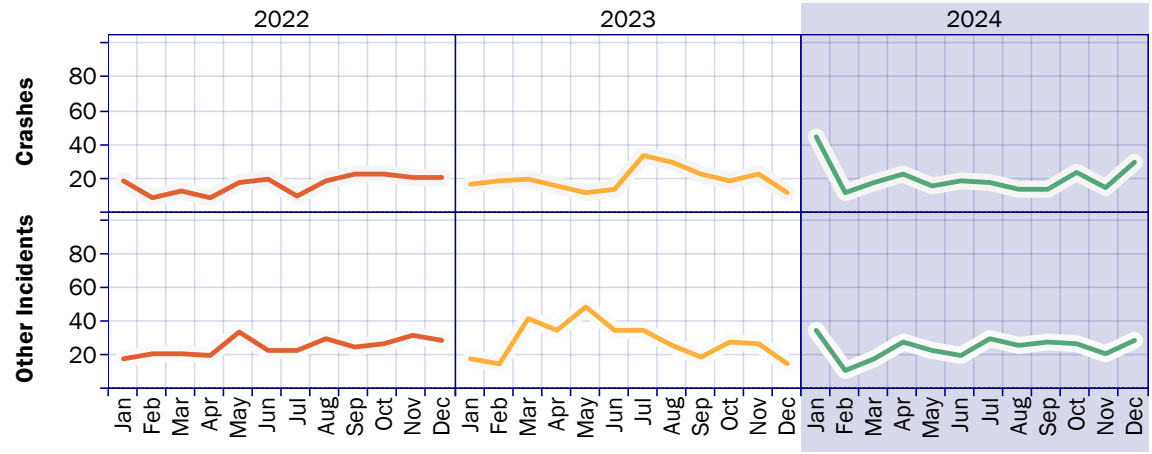
Western New York

This table below shows the total activity (crashes and other incidents) for each route in Western New York from January 2022 to December 2024.

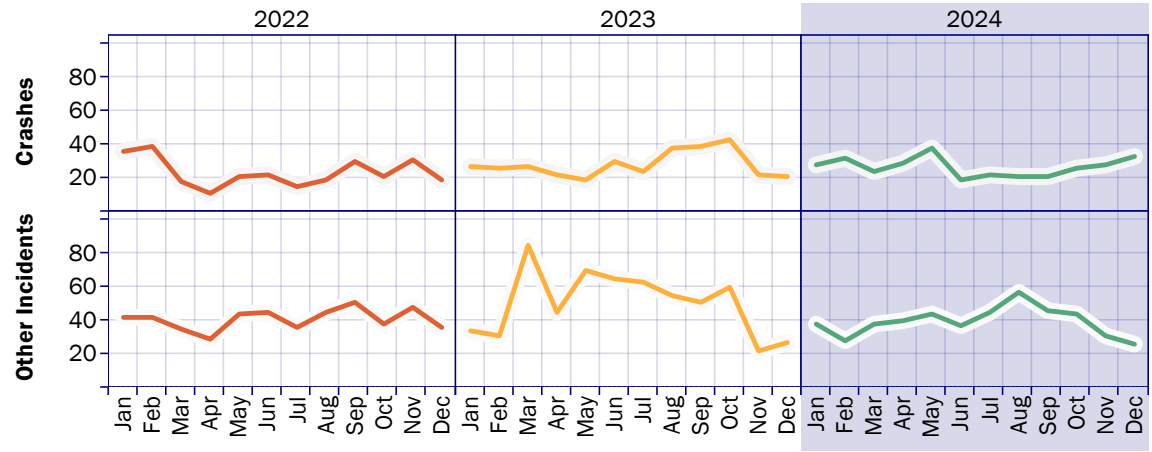
The graphs show the activity, broken out into crashes and other incidents, for the same time period.

	2022	2023	2024	% Change (2023 to 2024)
I-90	508	583	544	-7%
I-190	773	946	795	-16%
I-290	1,114	1,056	1,029	-3%
Route 33	981	1,089	1,029	-6%
Route 198	68	91	89	-2%
Route 219	216	205	270	32%
Route 400	105	101	121	20%
I-990	60	66	75	14%
Total	**3,825**	**4,137**	**3,952**	**-4%**

I - 90

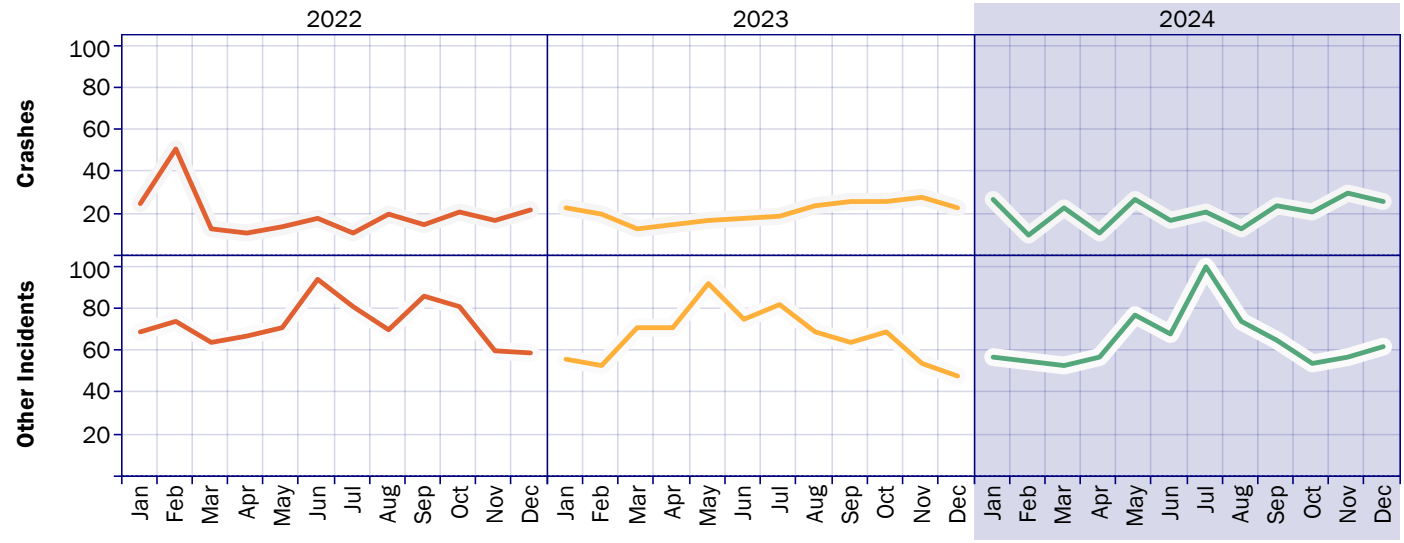


I - 190

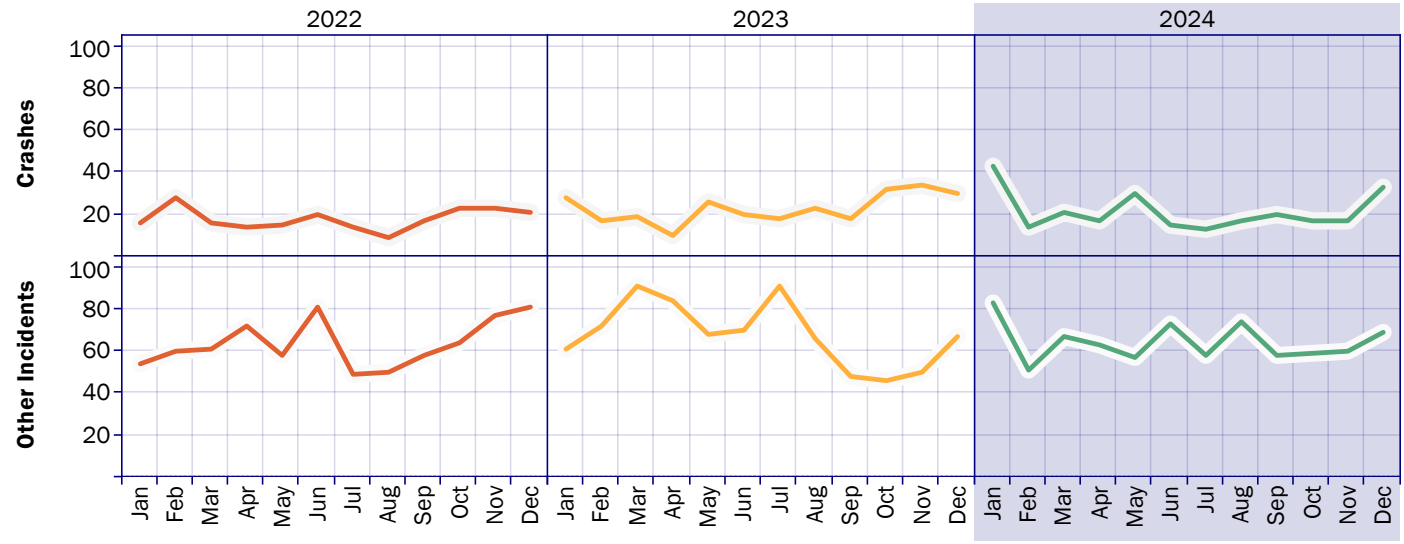


2022 2023 2024

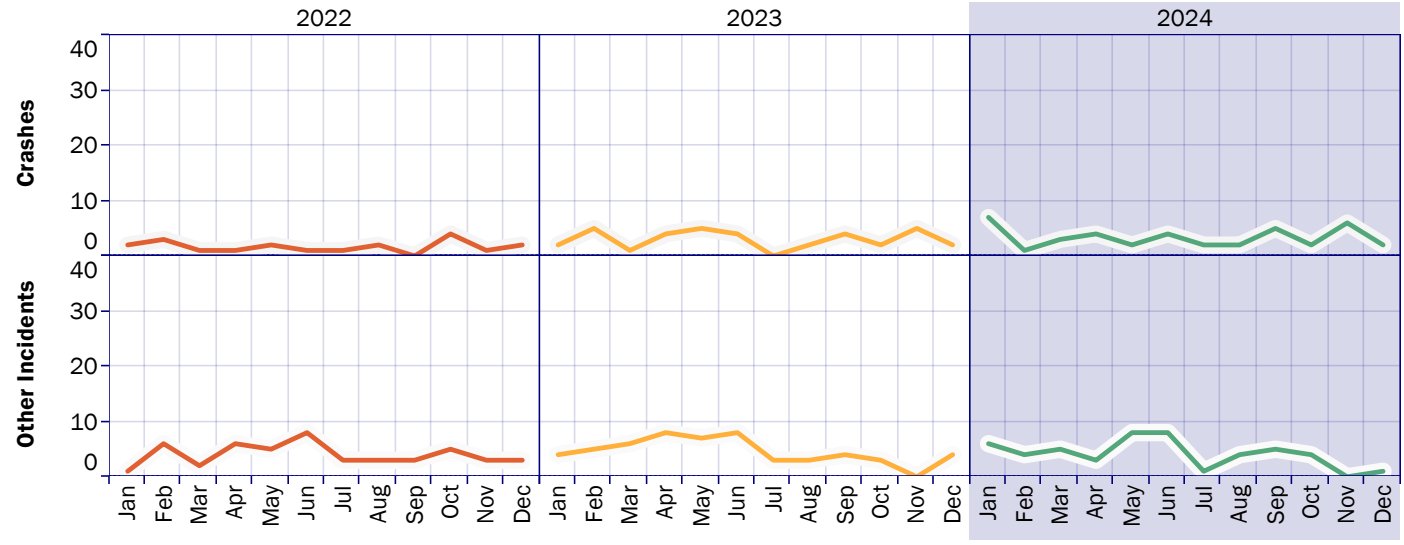
I - 290



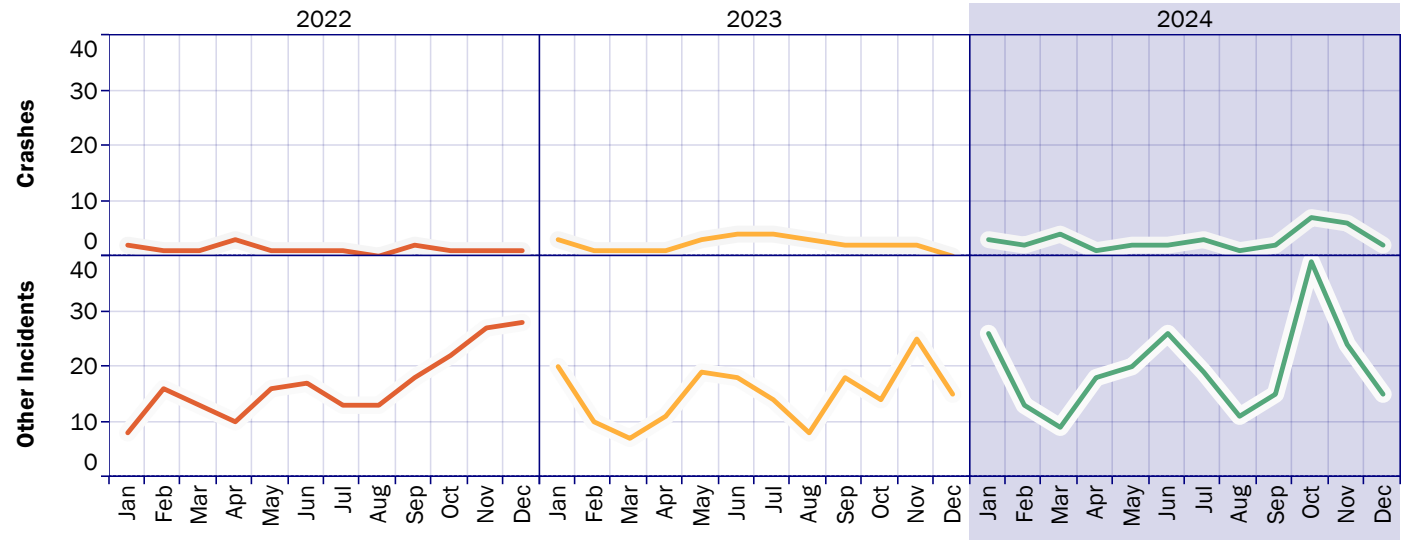
Route 33



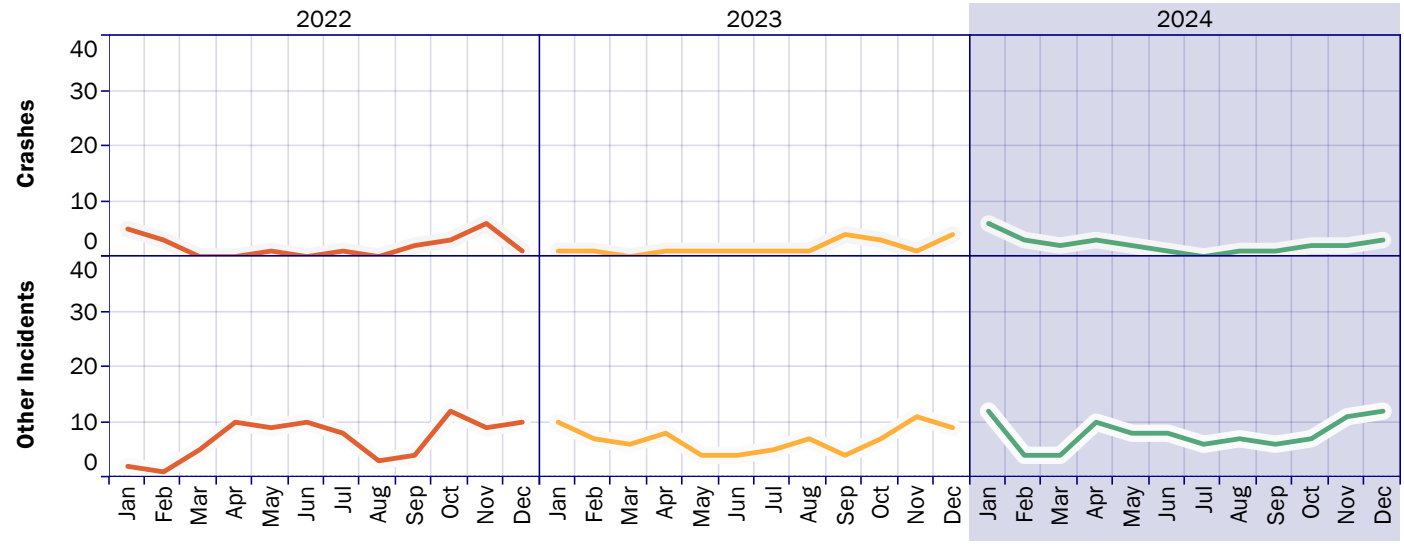
Route 198



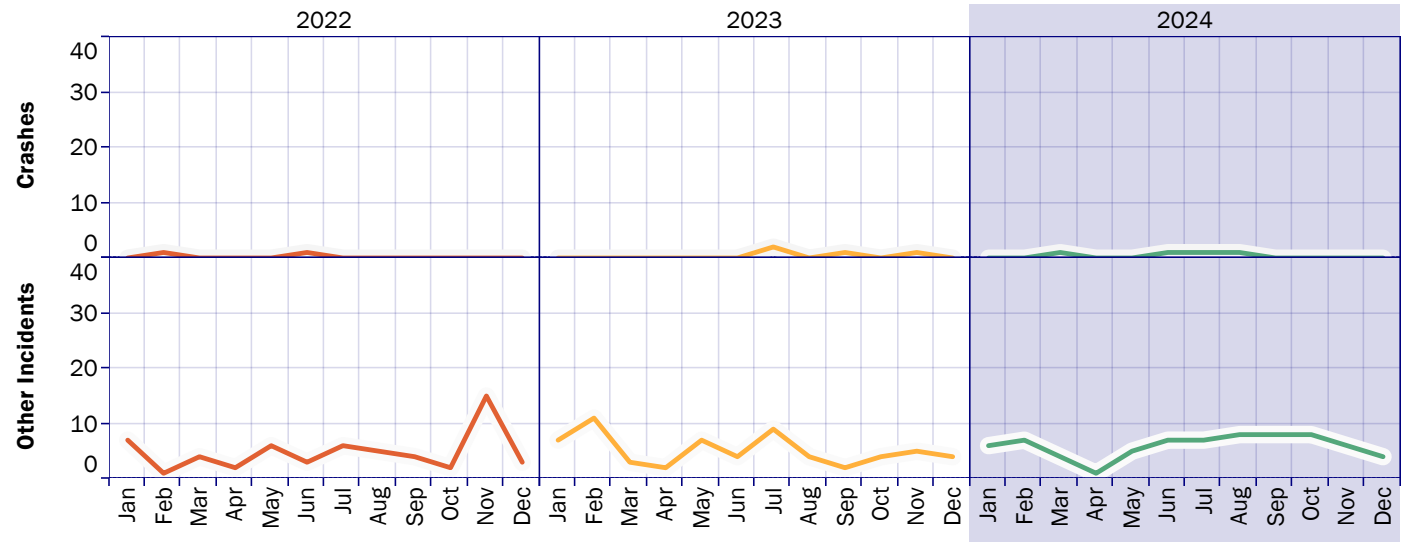
Route 219



Route 400



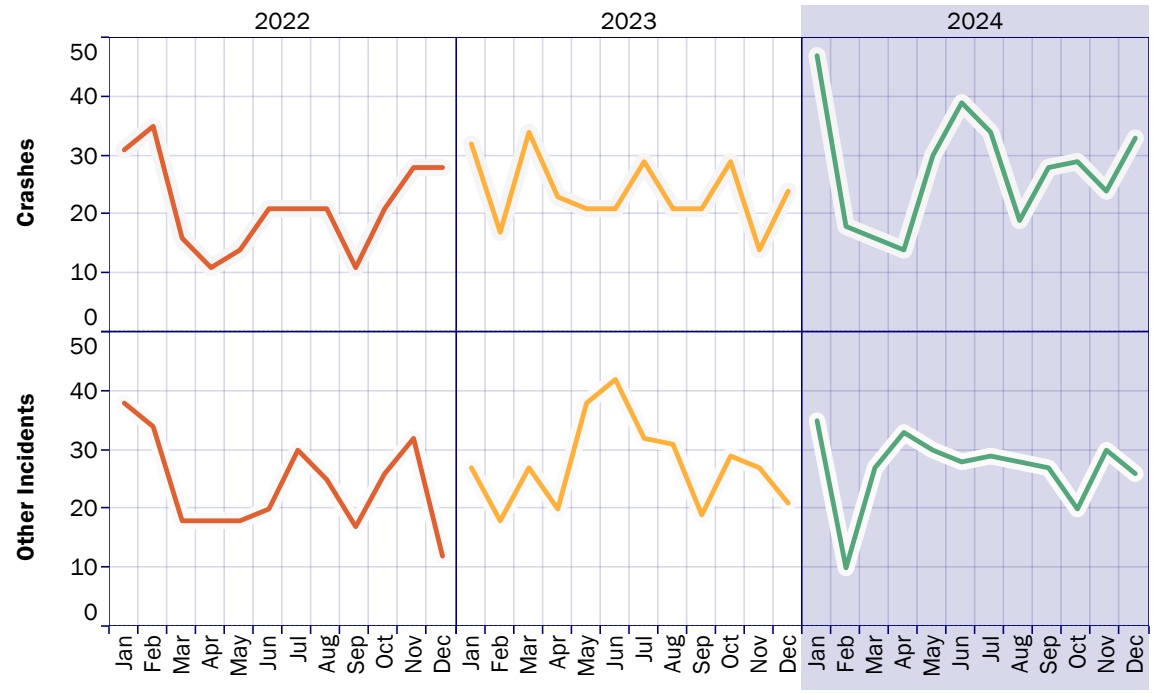
I - 990



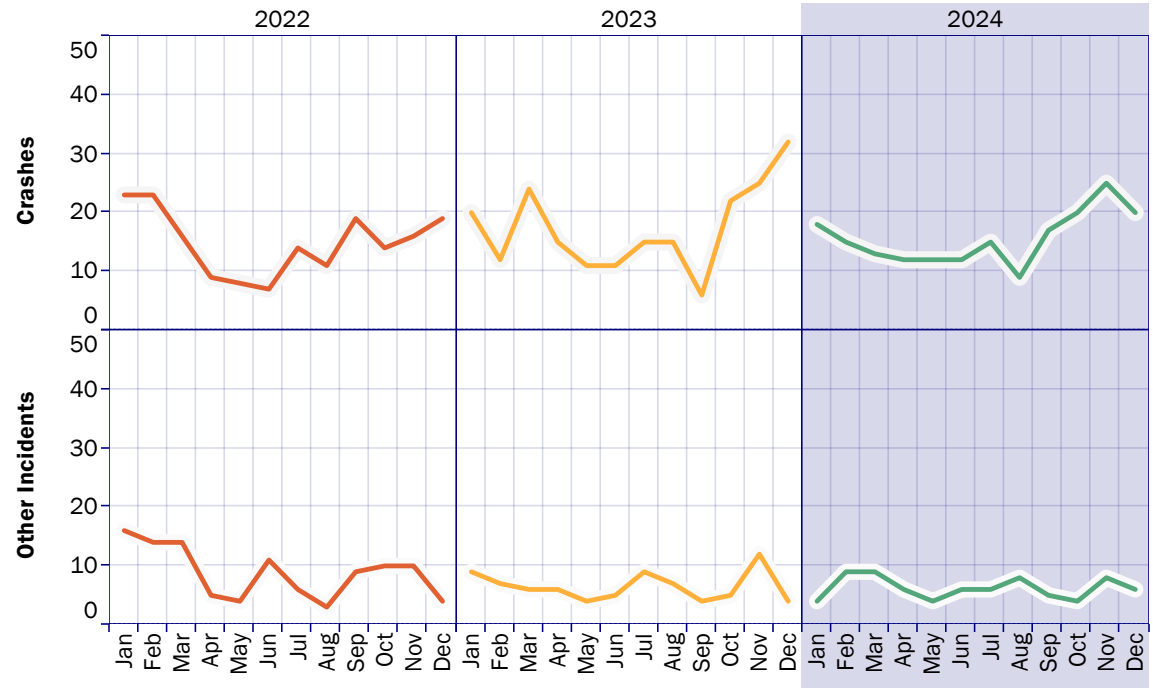
2022 2023 2024

	2022	2023	2024	% Change (2023 to 2024)
QEW	75	98	104	6%
HWY 405 / 406 / 420	52	37	46	24%
Total	**127**	**135**	**150**	**11%**

QEW



HWY 405 / 406 / 420



2022 2023 2024

Southern Ontario

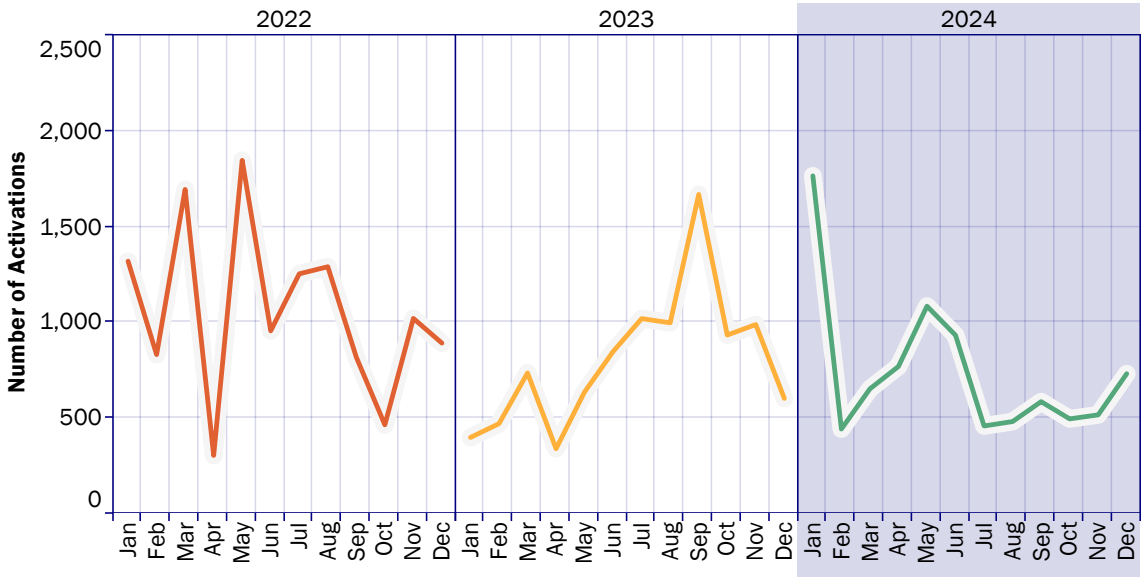
This table below shows the total activity (crashes and other incidents) for each route in Southern Ontario from January 2022 to December 2024.

The graphs show the activity, broken out into crashes and other incidents, for the same time period.

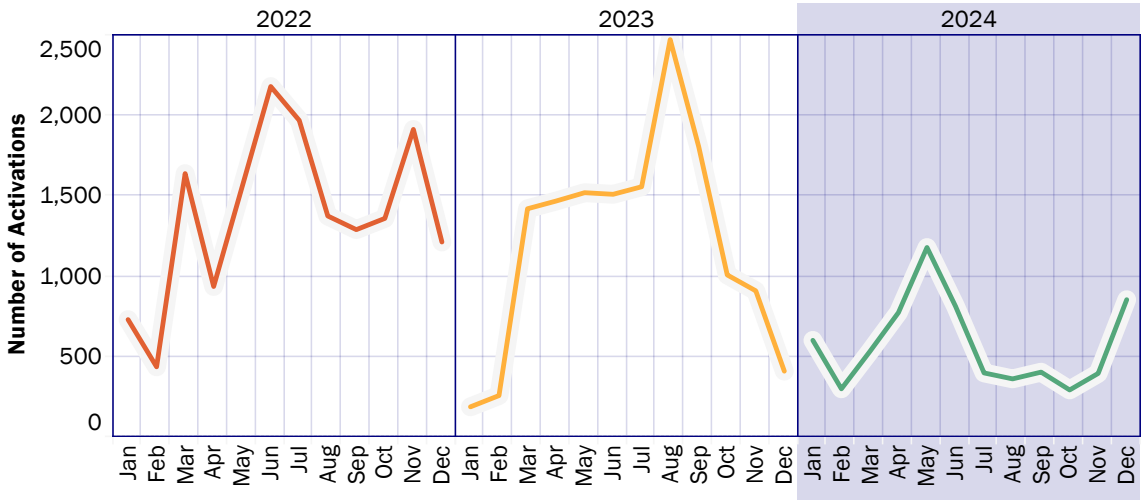
DYNAMIC & PORTABLE MESSAGE SIGN ACTIVITY

The graphs on this page display the total number of DMS & PVMS activations for crashes, construction, border crossing, weather conditions, and special events.

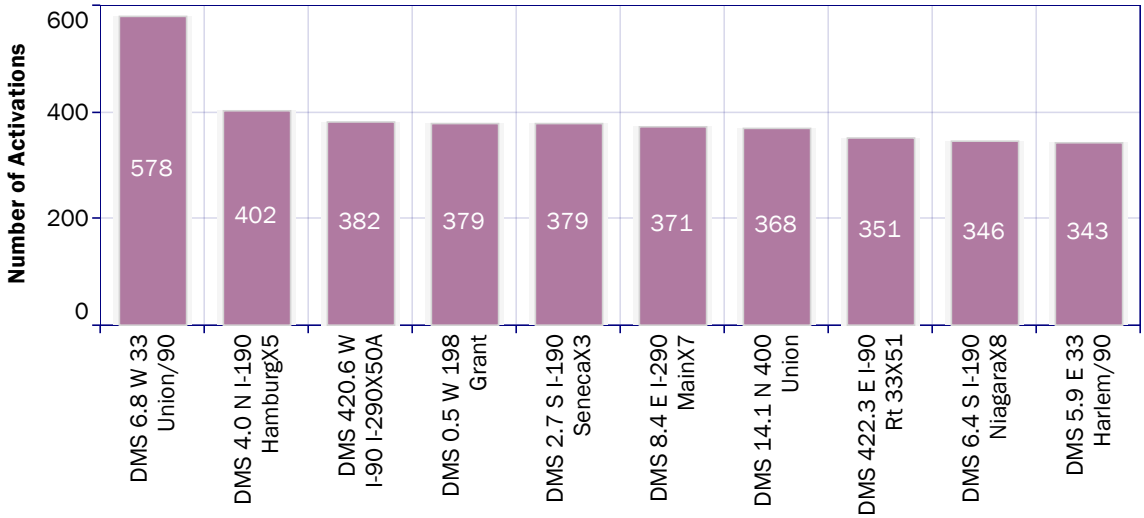
DMS Activations



PVMS Activations

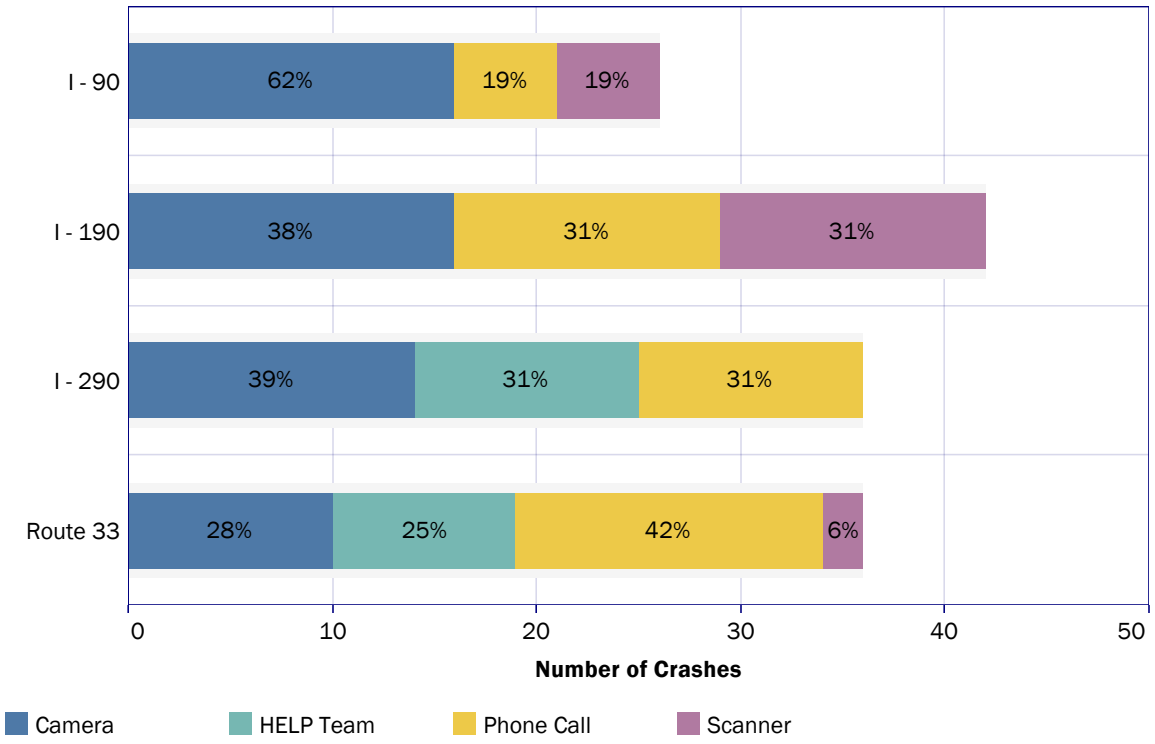


Top 10 Activations by Sign



CRASH DETECTION AND RESPONSE

Incident Detection by Roadway



Incident Detection Table

Route/ Street	Camera	HELP Team	Phone Call	Scanner
I - 90	16		5	5
I - 190	16		13	13
I - 290	14	11	11	
Route 33	10	9	15	2
Route 198	4		1	2
Route 219	2		1	
Route 400	2			
Total	**64**	**20**	**46**	**22**

Incident Detection

The charts on this page show how crashes on the region's expressways were detected by the NITTEC TOC in 2024. The top graph shows the total number of crashes for each roadway and the percentage of each that were detected by the different methods. The bottom table gives the total number of detections for each route and method.

Camera: The CCTV devices present along the roadway

HELP Team: the Highway Emergency Local Patrol (HELP) vehicles which are present on I-290 and Route 33 during peak hours

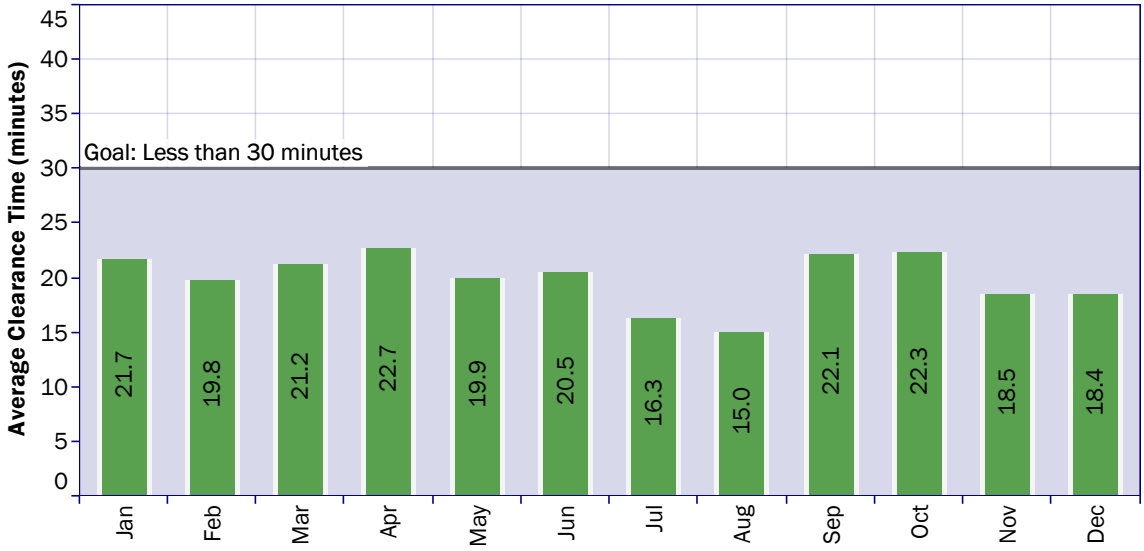
Phone Call: Calls to the TOC from dispatchers, responders, or the public

Scanner: Internal broadcasts from responding agencies

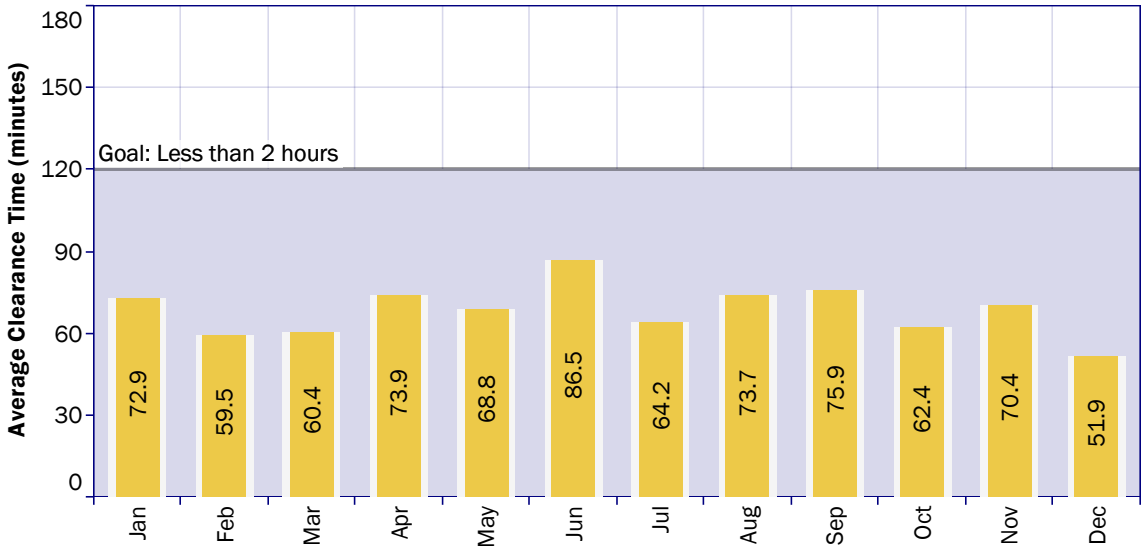
Clearance Times

The graphs on the following page show the average clearance time for minor and intermediate crashes, as well and all crashes combined, for each month of 2024. The reference lines repesents the target clearance time for each crash classification.

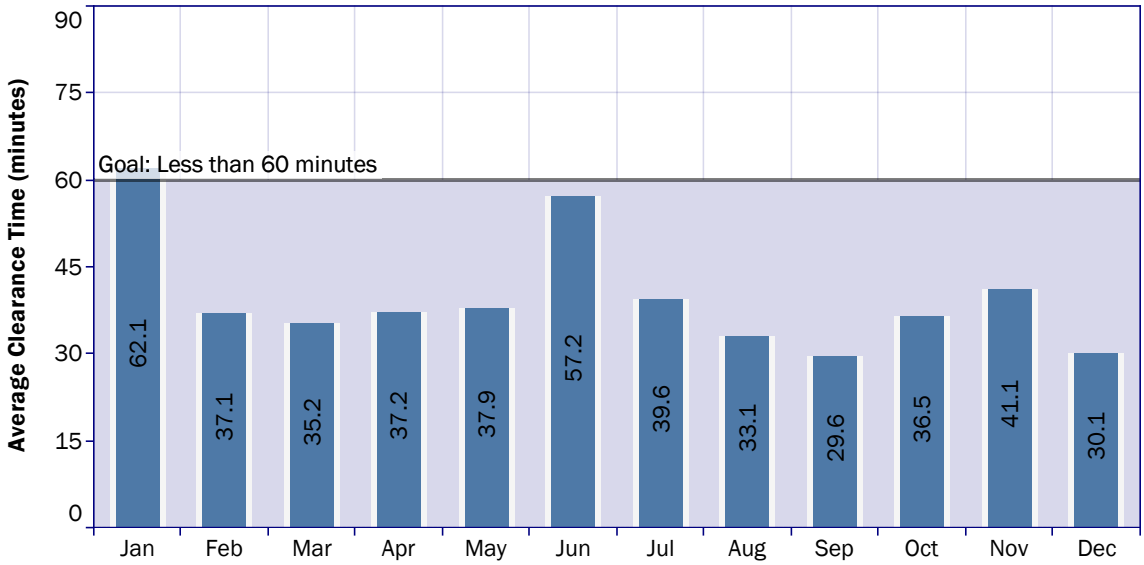
Minor Incidents



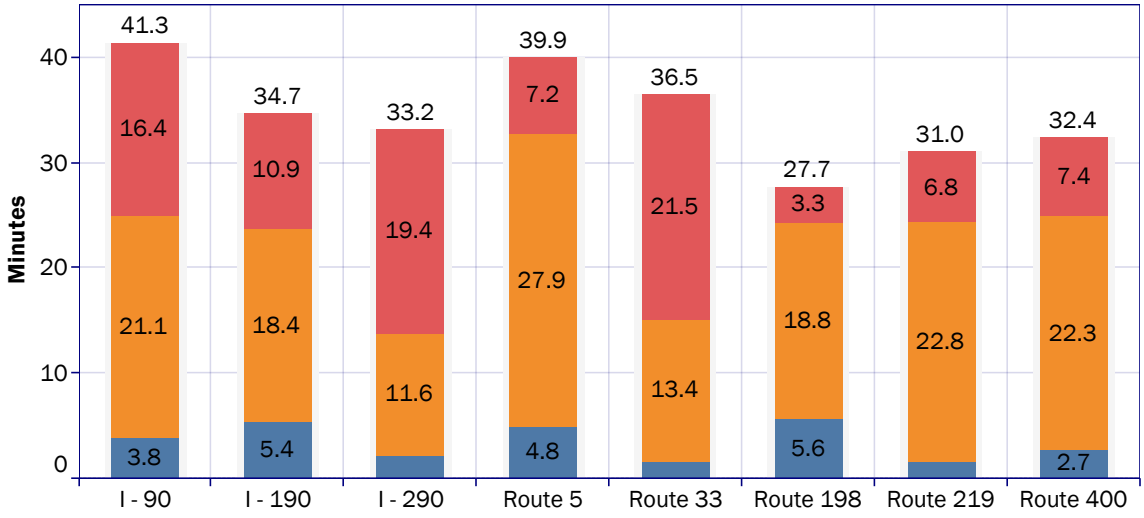
Intermediate Incidents



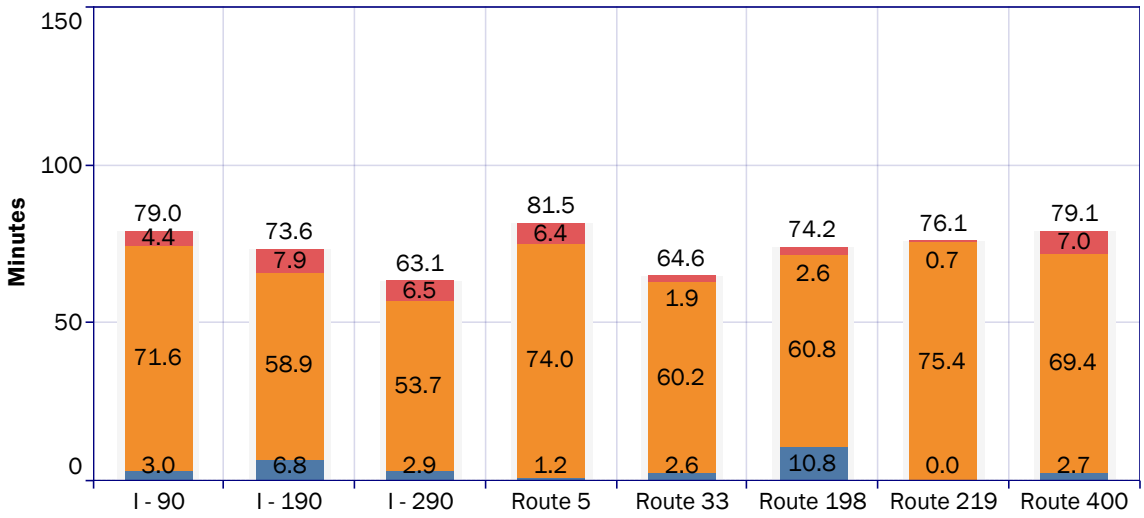
All Incidents



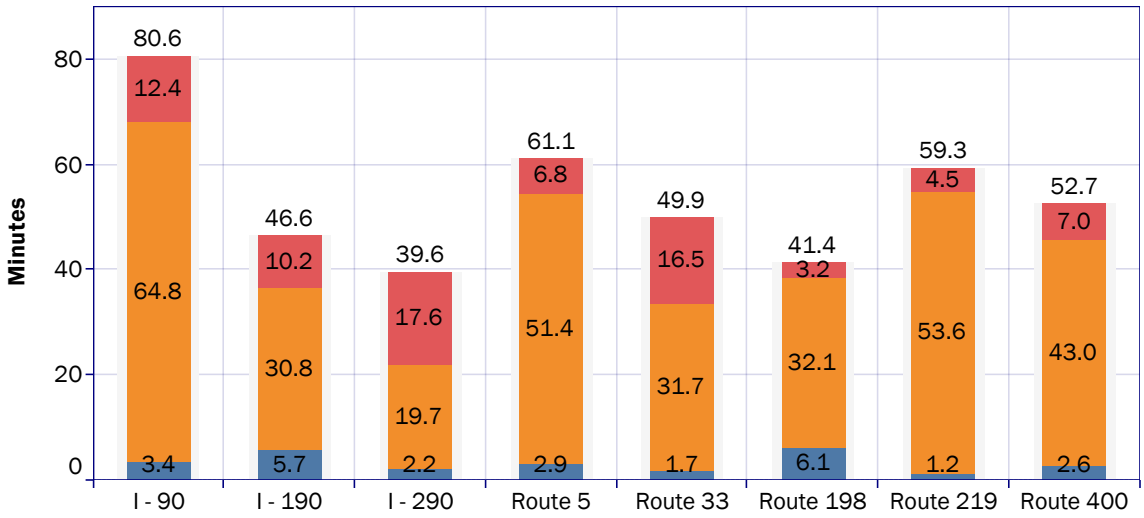
Minor Incident Response Timeline



Intermediate Incident Response Timeline



All Incident Response Timeline



Lane Clearance to Return to Normal Time | Arrival to Lane Clearance Time | Detection to Arrival Time

Incident Response

The graphs on this page show the average incident response timeline measures for minor and intermediate crashes, as well and all crashes combined, for the region's major roadways during 2024.

The number at the top of each bar represents the combined total incident duration in minutes.

Detection to Arrival Time: The length of time between when an incident was first detected and when the first responder arrives at the scene

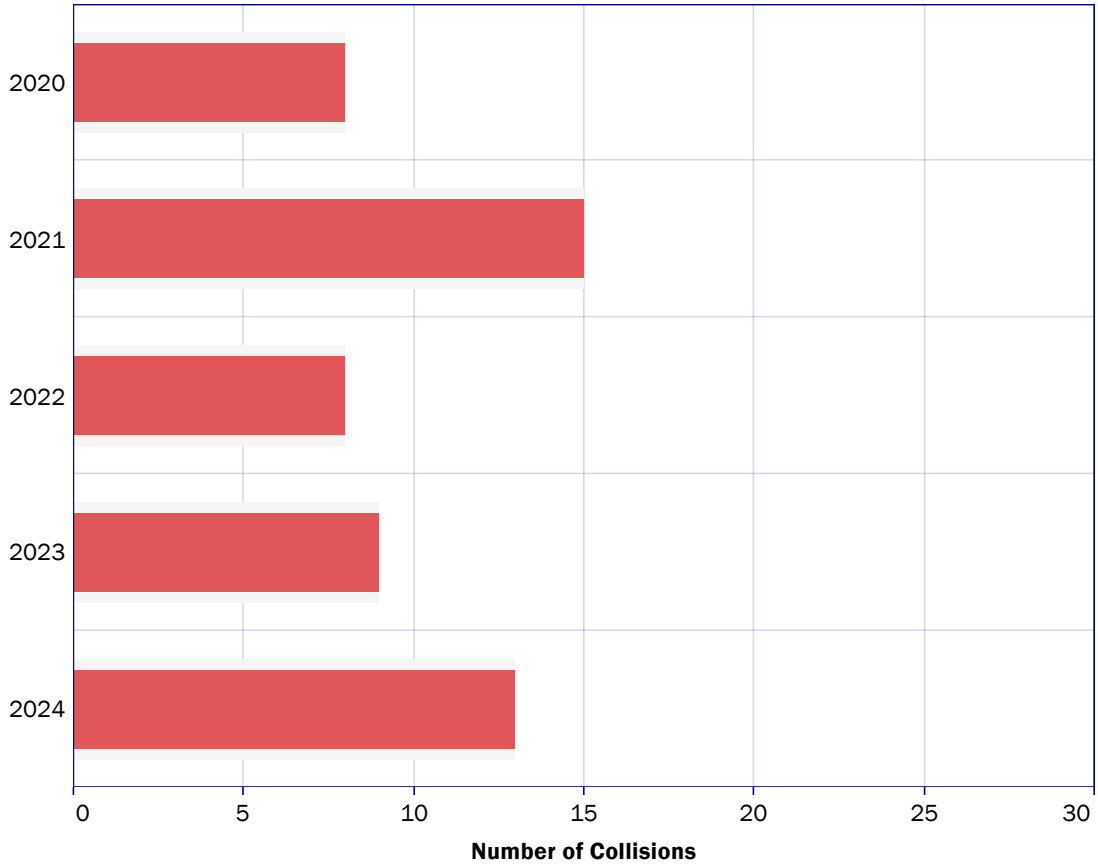
Arrival to Lane Clearance Time: The length of time between when the responder arrived and when the lane(s) are no longer blocked by the incident

Lane Clearance to Return to Normal Time: The length of time between when the lane(s) are clear and when traffic conditions have returned to normal.

Secondary Collisions

A secondary collision is a collision that occured as a result of a prior collision, where the collision occurs either within the collision scene or within the queue (including the opposite direction) of the original collision. The graph on this page shows the number of secondary collisions that occurred on major expressways in Western New York.

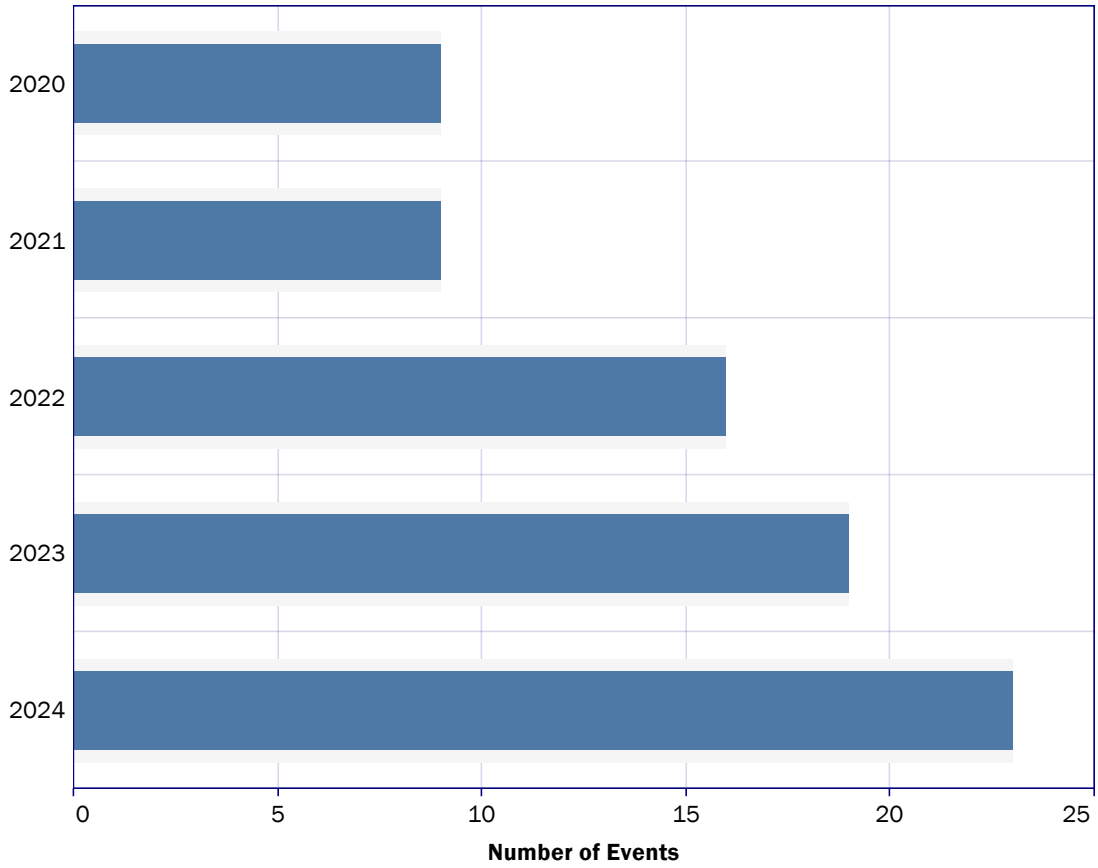
Secondary Collisions



Wrong Way Drivers

Vehicles driving the wrong direction on highways create extremely dangerous conditions for themselves and other drivers. The graph below shows the number of wrong way driving incidents detected on major expressways in Western New York.

Wrong Way Drivers



HELP TEAM PERFORMANCE REPORT

HELP Timeline

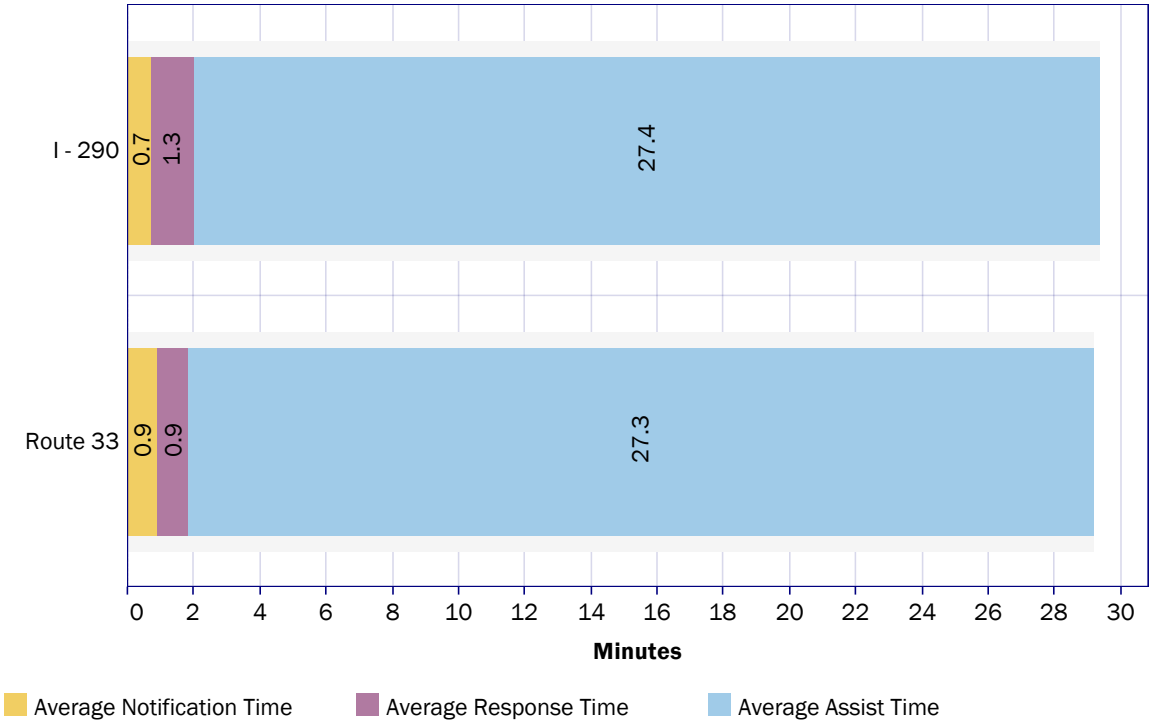
This graph shows the average response timeline for incidents in which HELP vehicles were involved during 2024 on I-290 and Route 33.

Average Notification Time: The Time between when an incident occurred and the responder was notified.

Average Response Time: The time between incident notification and scene arrival.

Average Assist Time: The time between arrival at the scene and to scene departure.

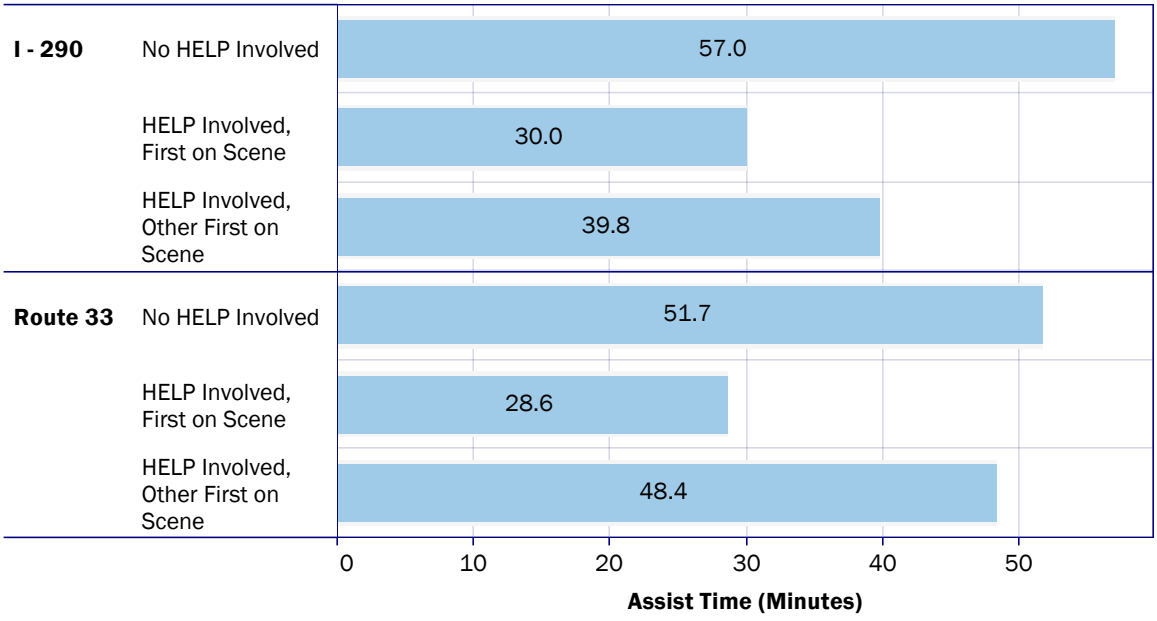
Average HELP Incident Timeline



HELP Comparison

This graph compares the average assist time for incidents during 2024 on I-290 and Route 33 in which HELP was involved and the first to respond, arrived later, and were not involved at all.

Average Assist Time Comparison



HELP Statistics

This table provides the overall annual HELP statistics for 2024.

	I-290	Route 33	**Total**
Total HELP Assists	765	657	**1,422**
Total First on Scene	670	600	**1,270**
First on Scene %	88%	91%	**89%**

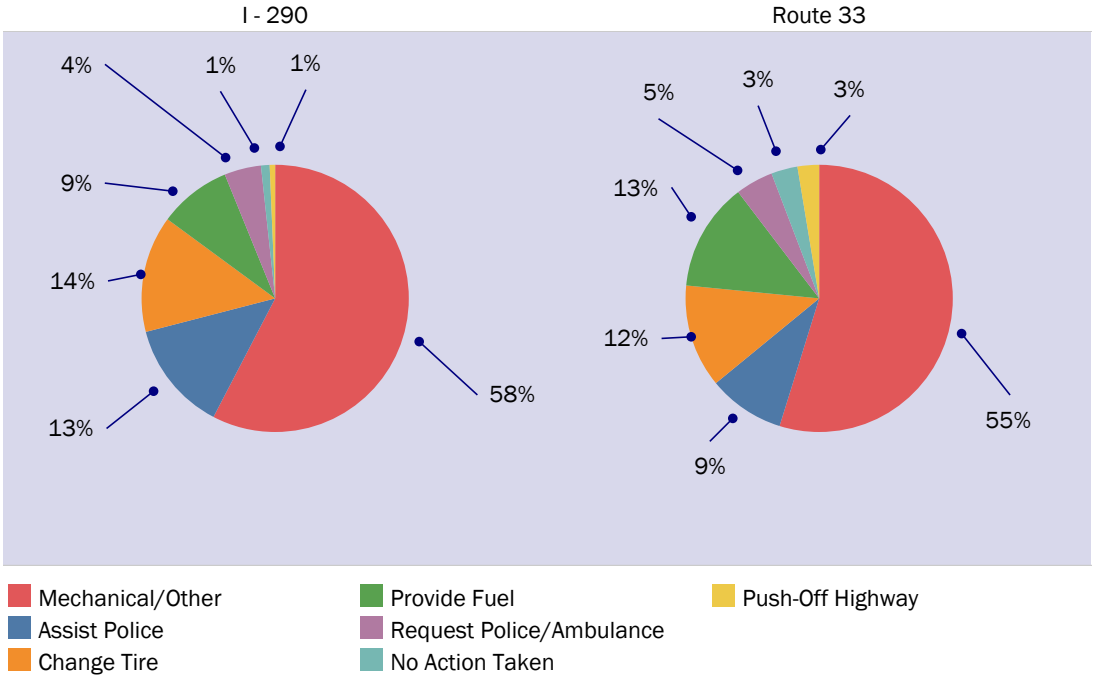
HELP Assistance

The graphs below show the percentage breakdown for each type of action taken by the HELP team during 2024, and the average assist time for each month.

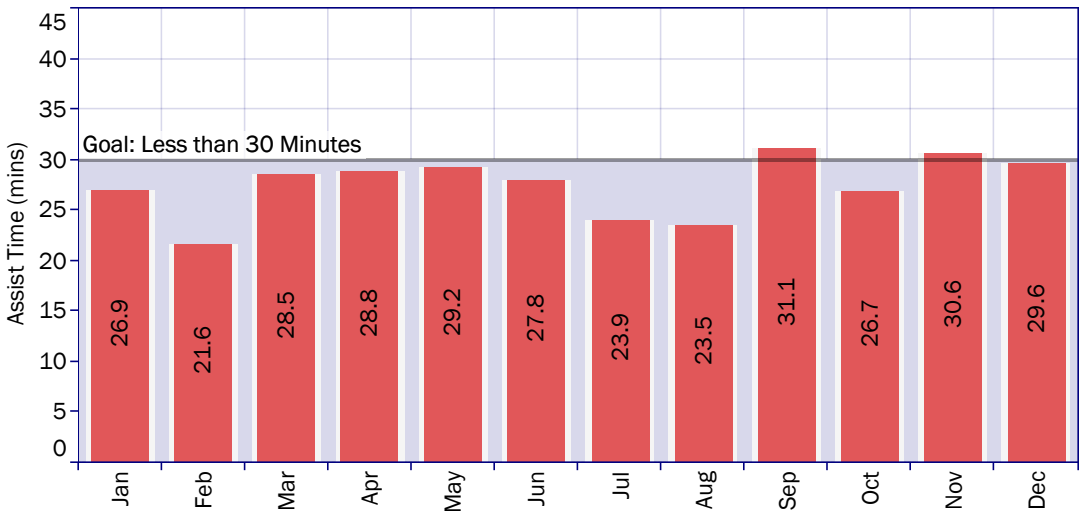
HELP Assist Types

	I - 290	Route 33
Assist Police	102	61
Change Tire	108	82
Mechanical/Other	441	360
No Action Taken	8	21
Provide Fuel	67	86
Push-Off Highway	5	17
Request Police/Ambulance	34	30
Total	**765**	**657**

HELP Assist Types Graph



Average HELP Assist Time



TRAVEL TIME STATISTICS

The graphs on the following pages show the travel time related performance measures for several roadway sections in the Buffalo-Niagara Region. The measures shown are defined below.

Travel Time Index (TTI): The measure of average conditions that indicates how much longer, on average, travel times are during congestion compared to during the free-flow travel time. The objective benchmark for peak TTI is below 1.50. For all highways, Free Flow Travel Time calculated using 55 mile per hour (mph).

Planning Time Index (PTI) (95th Percentile): The amount of time a traveler should allow ensuring on-time arrival 95% of the time. This measure indicates the travel time reliability of a route. The objective benchmark for peak PTI is below 2.50.

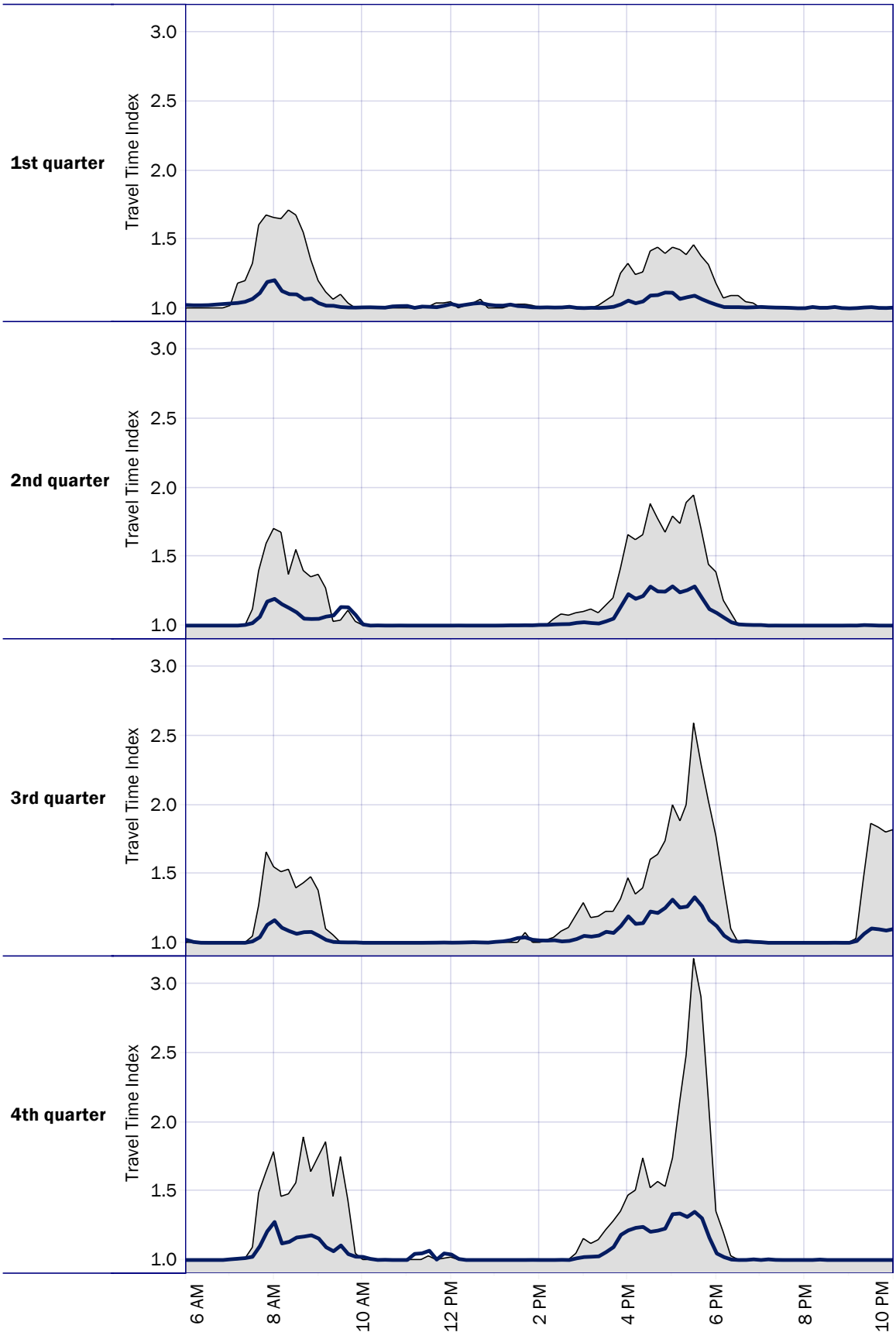
Congested Hours: The average number of hours per day that congestion occurred.

Each performance measure was calculated from speed data collected at ten-minute intervals between 6:00 AM and 10:00 PM on non-holiday weekdays.

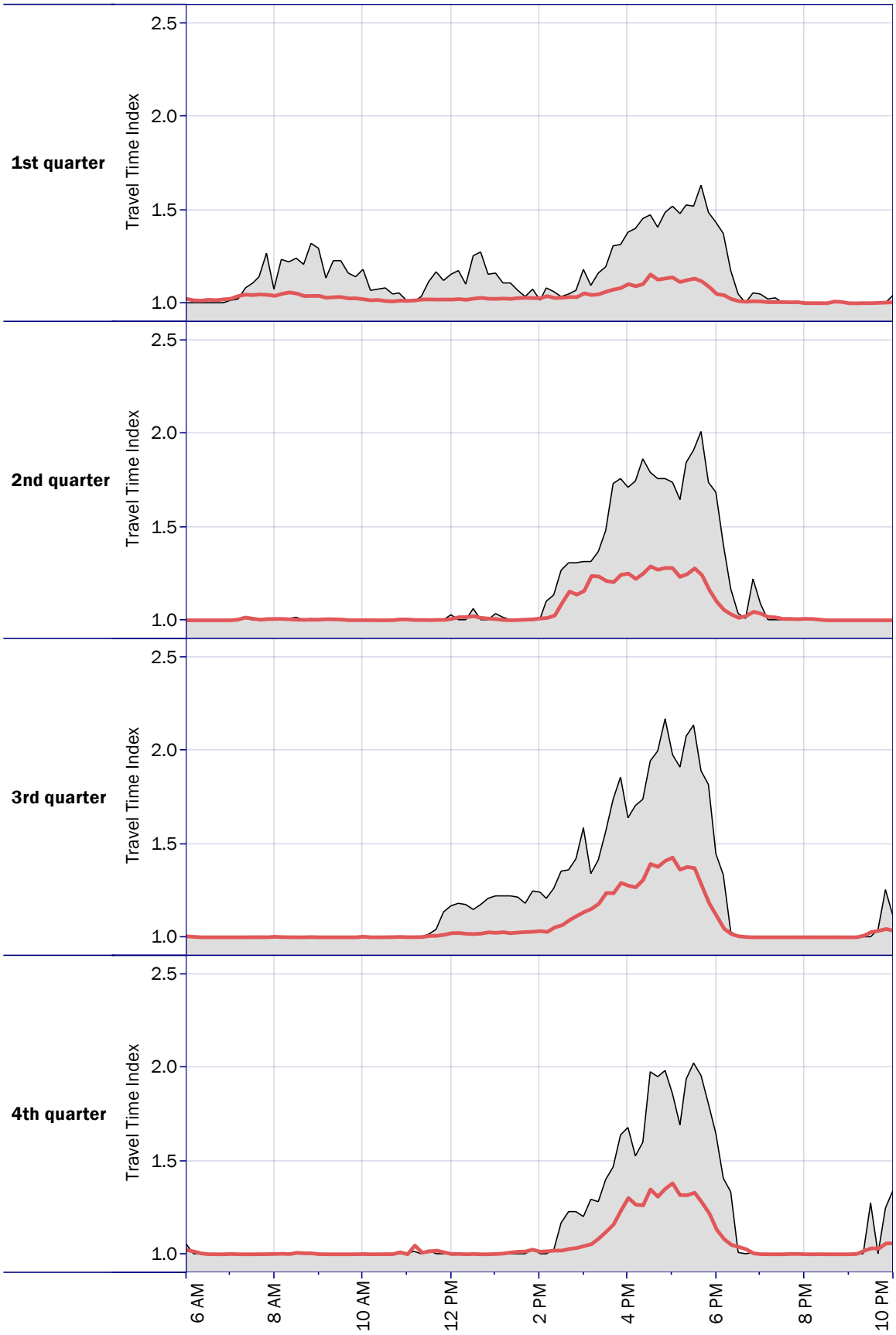
I-90 Eastbound Travel Time Statistics

These charts show the Travel Time Index (average) as a solid line and Planning Time Index (95th Percentile) as a shaded gray area by time of day for each quarter of 2024. This page shows data for I-90 Eastbound from Exit 55 to Exit 50.

I-90 Eastbound Travel Time Index (Exit 55 to Exit 50)



I-90 Westbound Travel Time Index (Exit 50 to Exit 55)



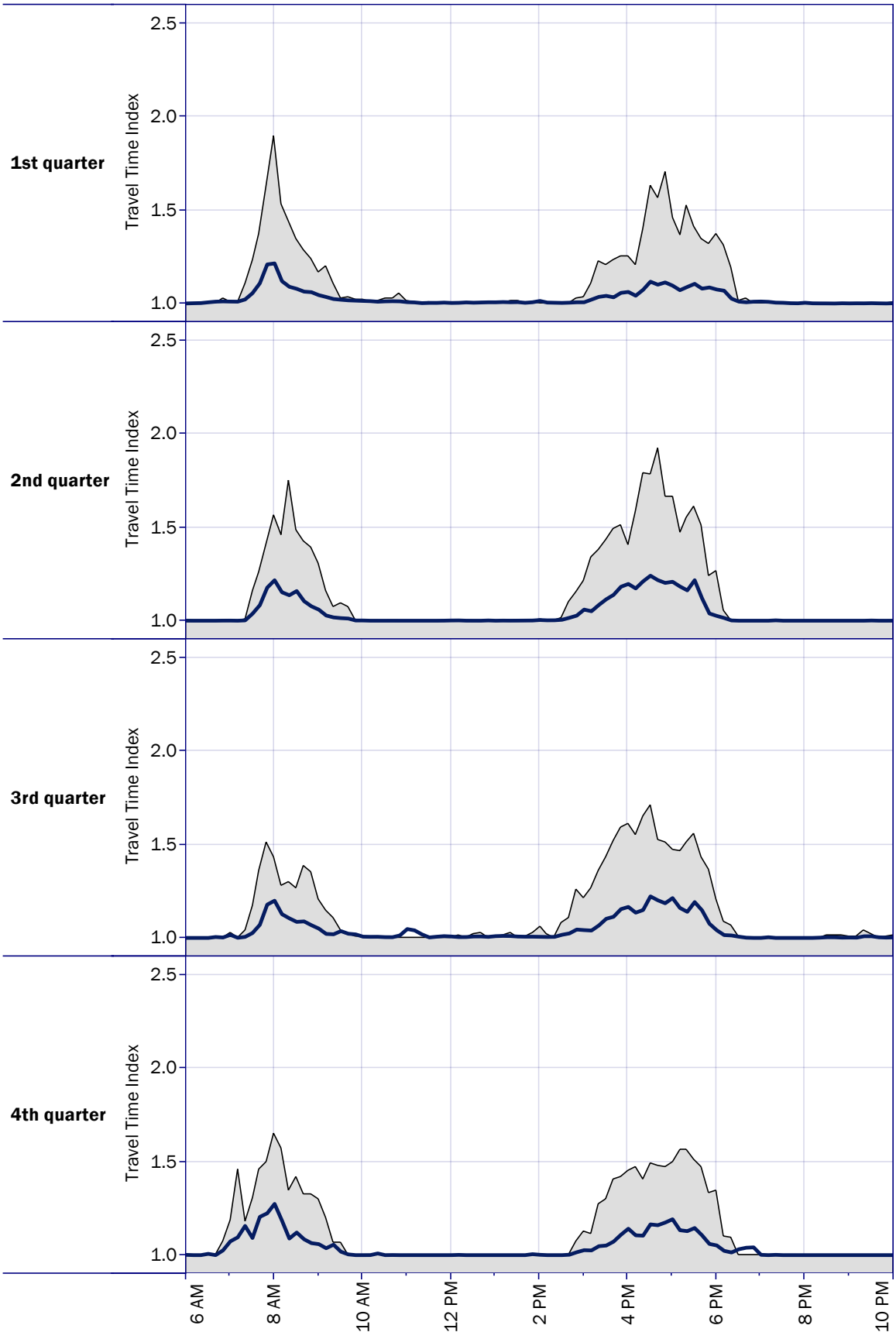
I-90 Westbound Travel Time Statistics

These charts show the Travel Time Index (average) as a solid line and Planning Time Index (95th Percentile) as a shaded gray area by time of day for each quarter of 2024. This page shows data for I-90 Westbound from Exit 50 to Exit 55.

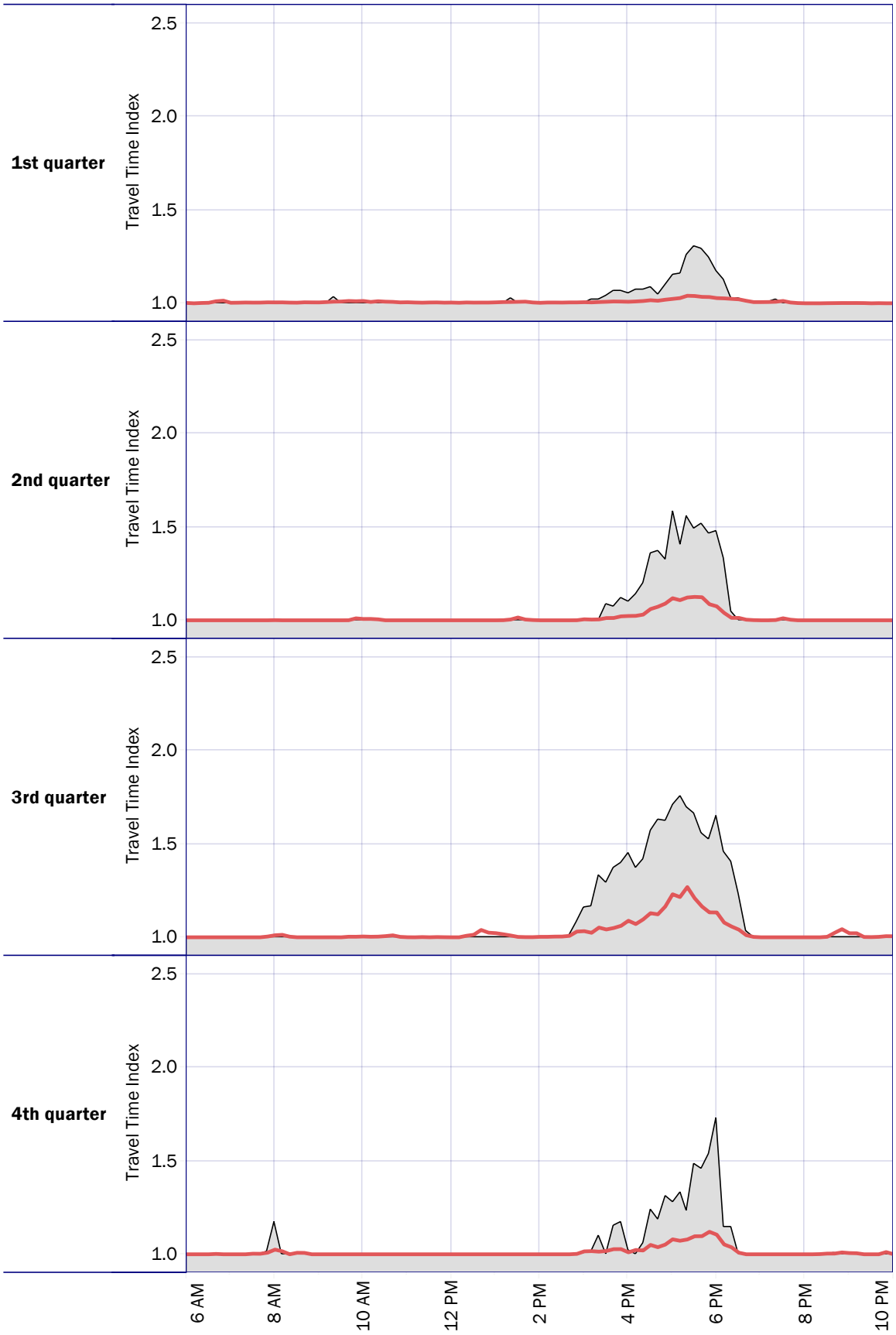
I-290 Eastbound Travel Time Statistics

These charts show the Travel Time Index (average) as a solid line and Planning Time Index (95th Percentile) as a shaded gray area by time of day for each quarter of 2024. This page shows data for I-290 Eastbound from I-190 to I-90.

I-290 Eastbound Travel Time Index (I-190 to I-90)



I-290 Westbound Travel Time Index (I-90 to I-190)



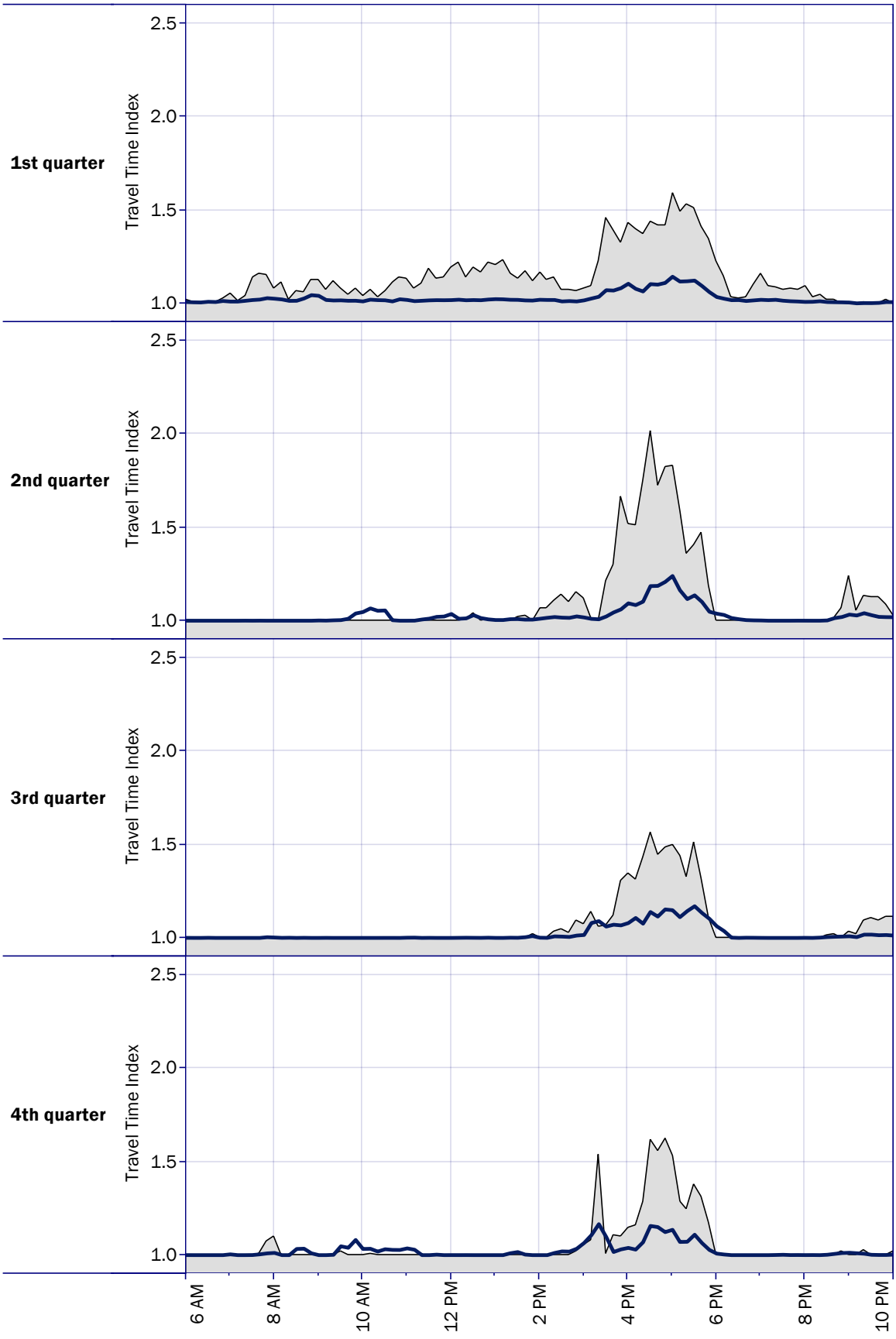
I-290 Westbound Travel Time Statistics

These charts show the Travel Time Index (average) as a solid line and Planning Time Index (95th Percentile) as a shaded gray area by time of day for each quarter of 2024. This page shows data for I-290 Westbound from I-90 to I-190.

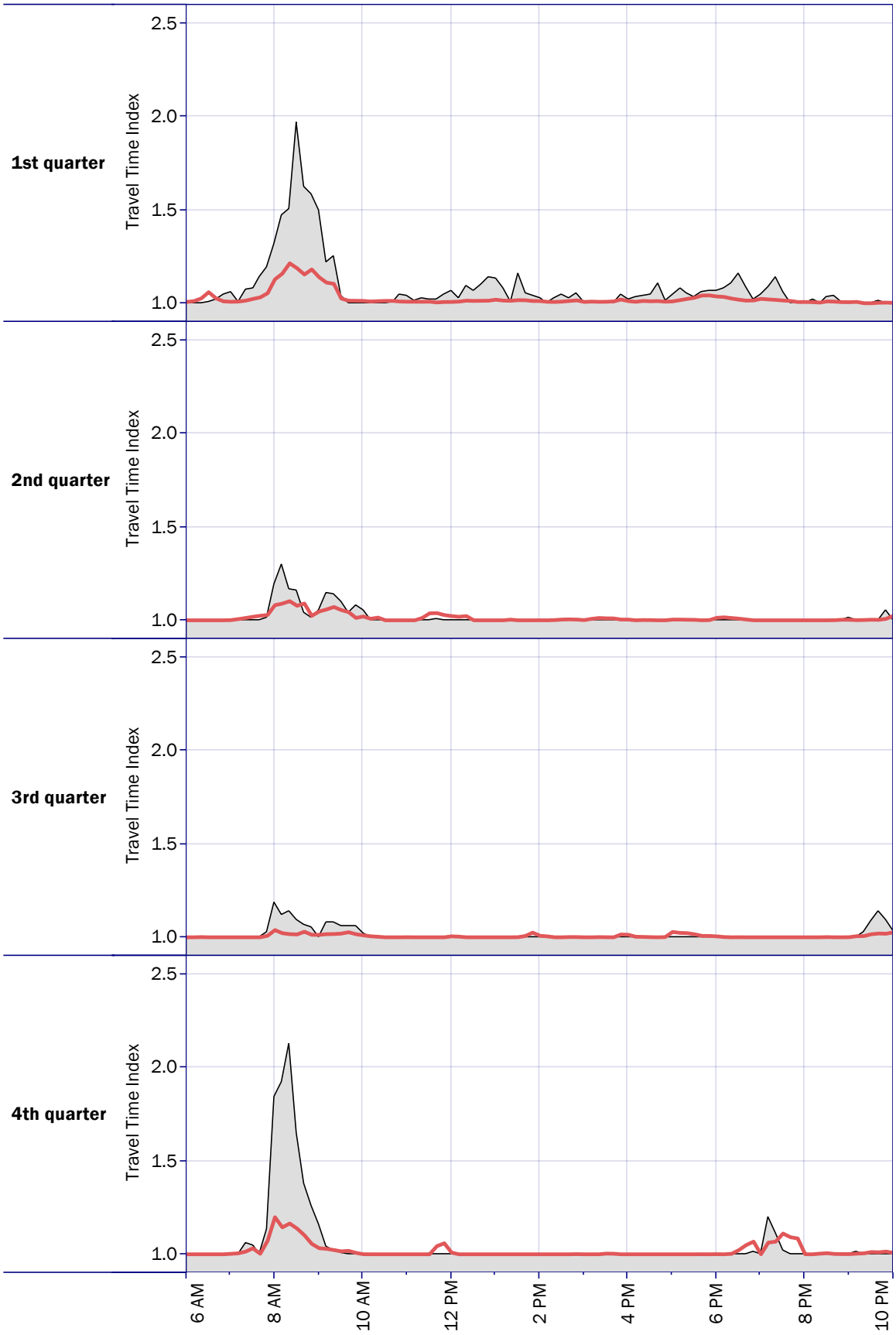
Route 33 Eastbound Travel Time Statistics

These charts show the Travel Time Index (average) as a solid line and Planning Time Index (95th Percentile) as a shaded gray area by time of day for each quarter of 2024. This page shows data for Route 33 Eastbound from Oak Street/Elm Street to Union Road.

Route 33 Eastbound Travel Time Index (Oak/Elm Street to Union Road)



Route 33 Westbound Travel Time Index (Union Road to Oak/Elm Street)



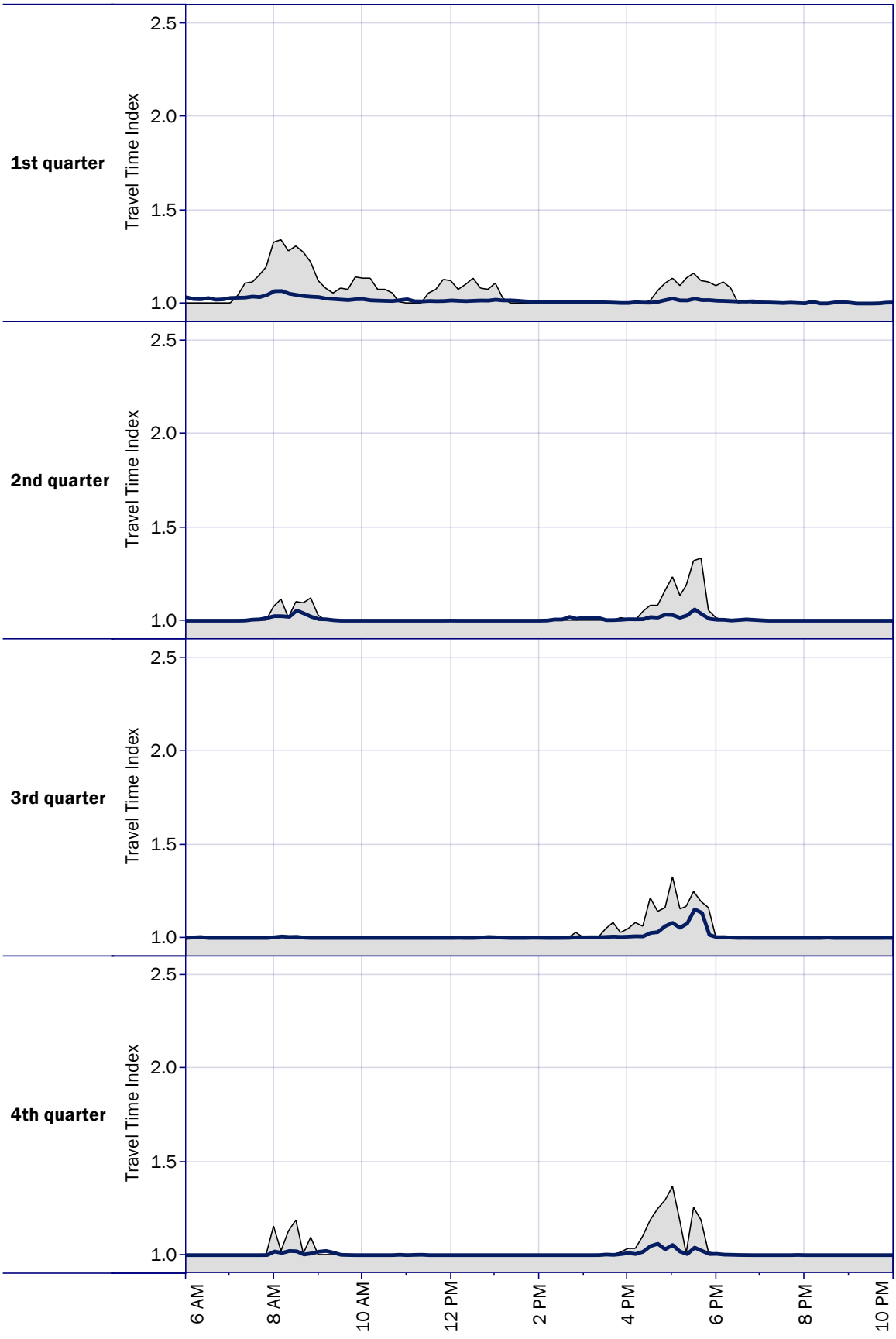
Route 33 Westbound Travel Time Statistics

These charts show the Travel Time Index (average) as a solid line and Planning Time Index (95th Percentile) as a shaded gray area by time of day for each quarter of 2024. This page shows data for Route 33 Westbound from Union Road to Oak Street/Elm Street.

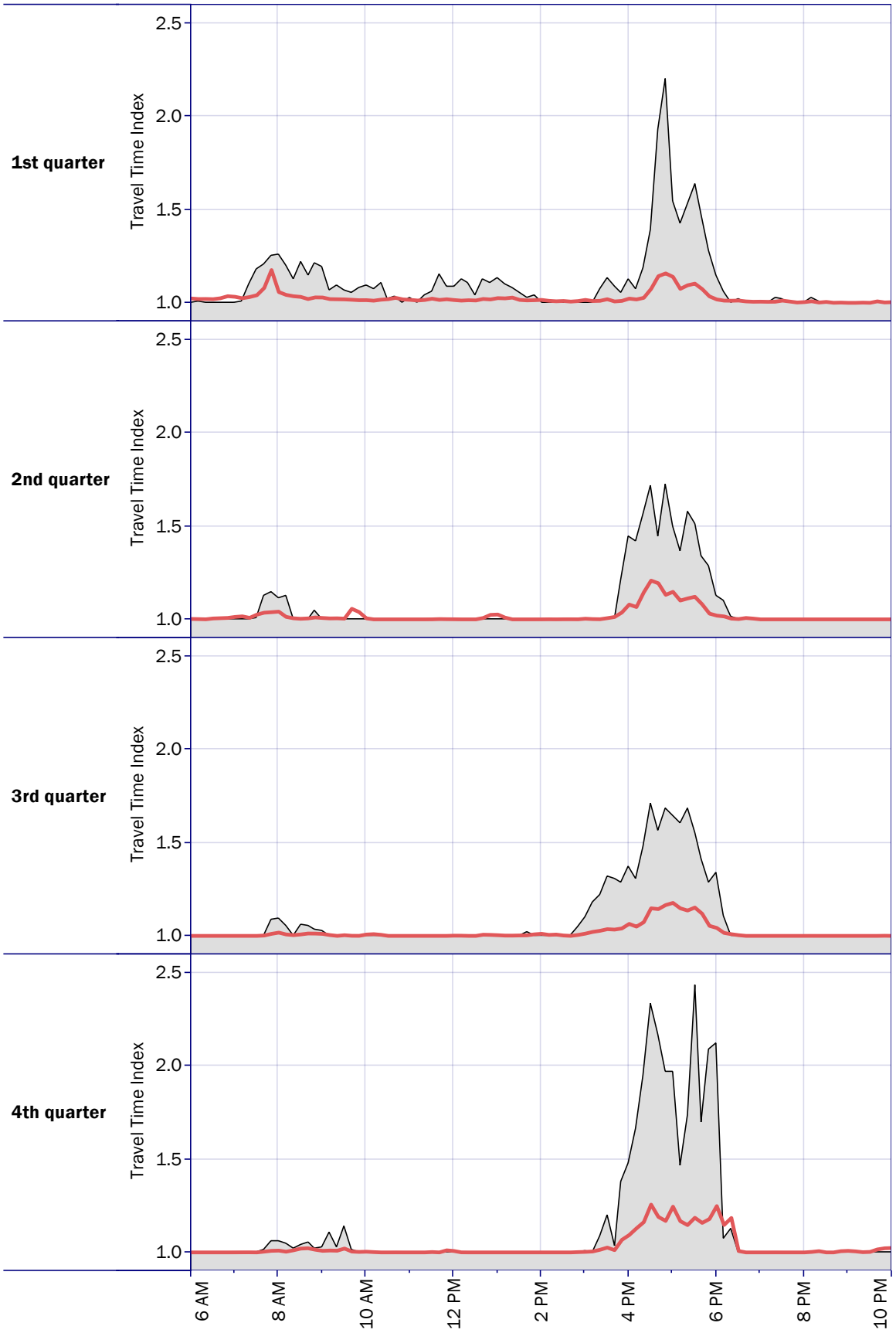
I-190 Northbound Travel Time Statistics

These charts show the Travel Time Index (average) as a solid line and Planning Time Index (95th Percentile) as a shaded gray area by time of day for each quarter of 2024. This page shows data for I-190 Northbound from I-90 to the Skyway.

I-190 Northbound Travel Time Index (I-90 to Skyway)



I-190 Southbound Travel Time Index (Skyway to I-90)



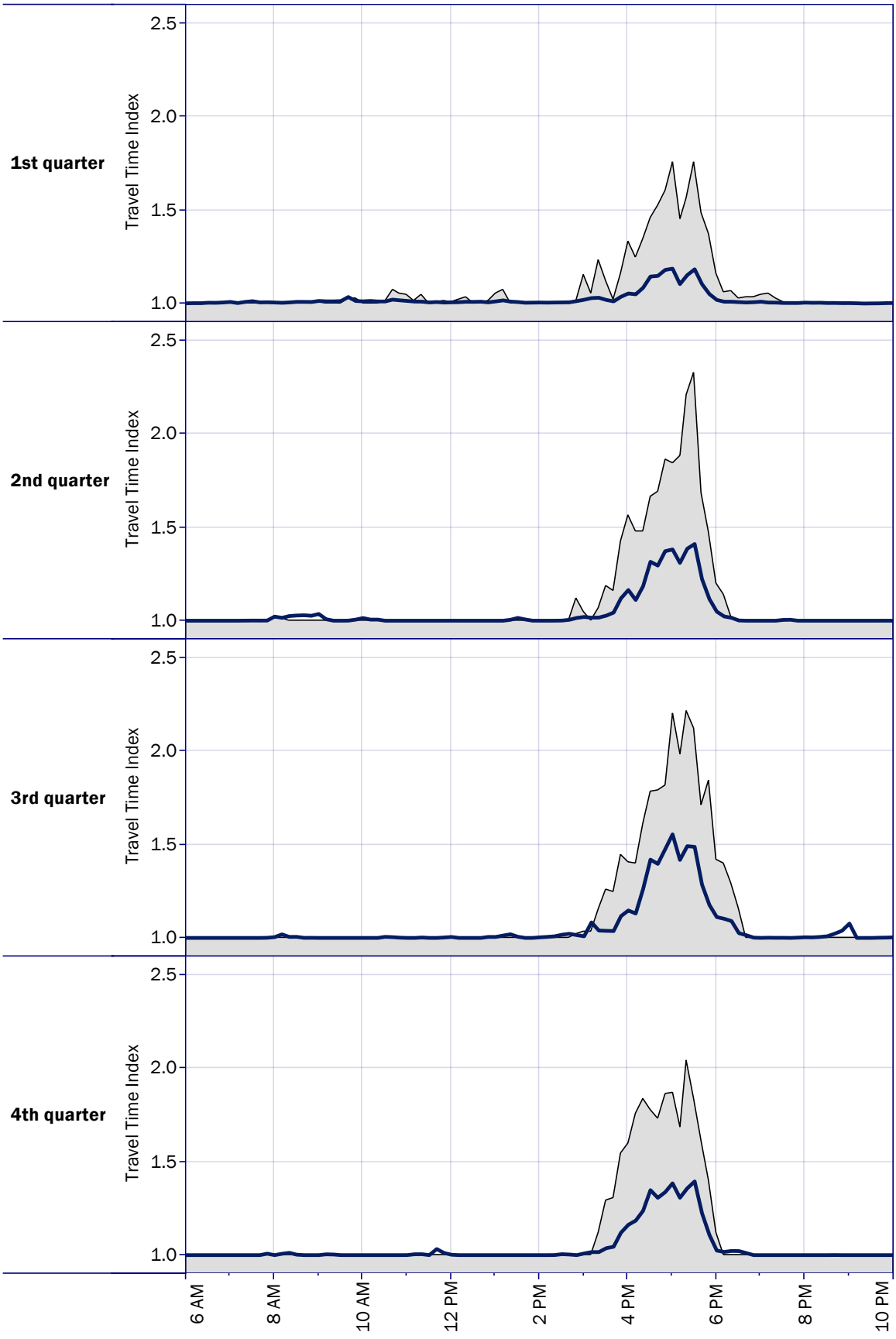
I-190 Southbound Travel Time Statistics

These charts show the Travel Time Index (average) as a solid line and Planning Time Index (95th Percentile) as a shaded gray area by time of day for each quarter of 2024. This page shows data for I-190 Southbound from the Skyway to I-90.

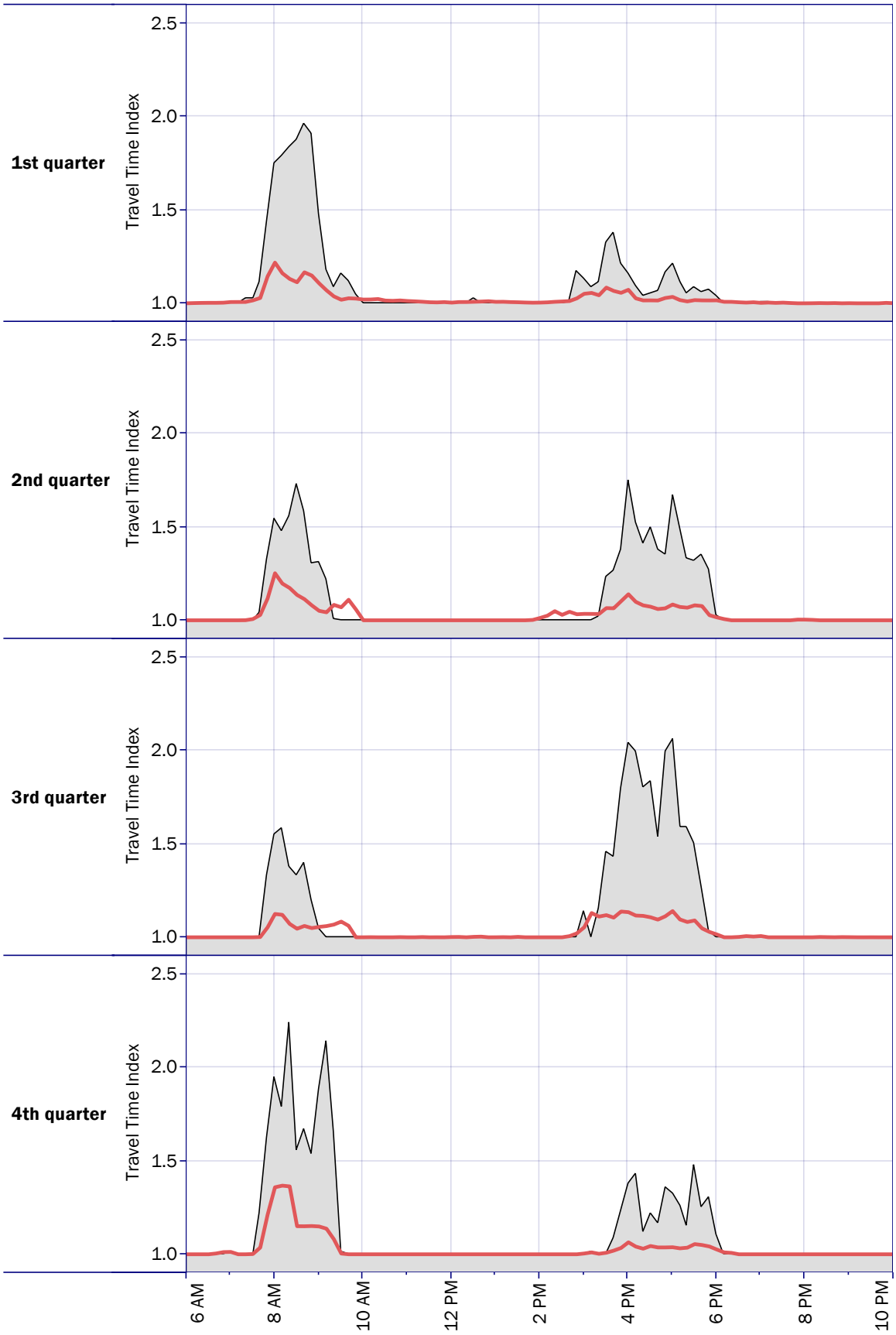
I-190 Northbound Travel Time Statistics

These charts show the Travel Time Index (average) as a solid line and Planning Time Index (95th Percentile) as a shaded gray area by time of day for each quarter of 2024. This page shows data for I-190 Northbound from the Skyway to I-290.

I-190 Northbound Travel Time Index (Skyway to I-290)



I-190 Southbound Travel Time Index (I-290 to Skyway)



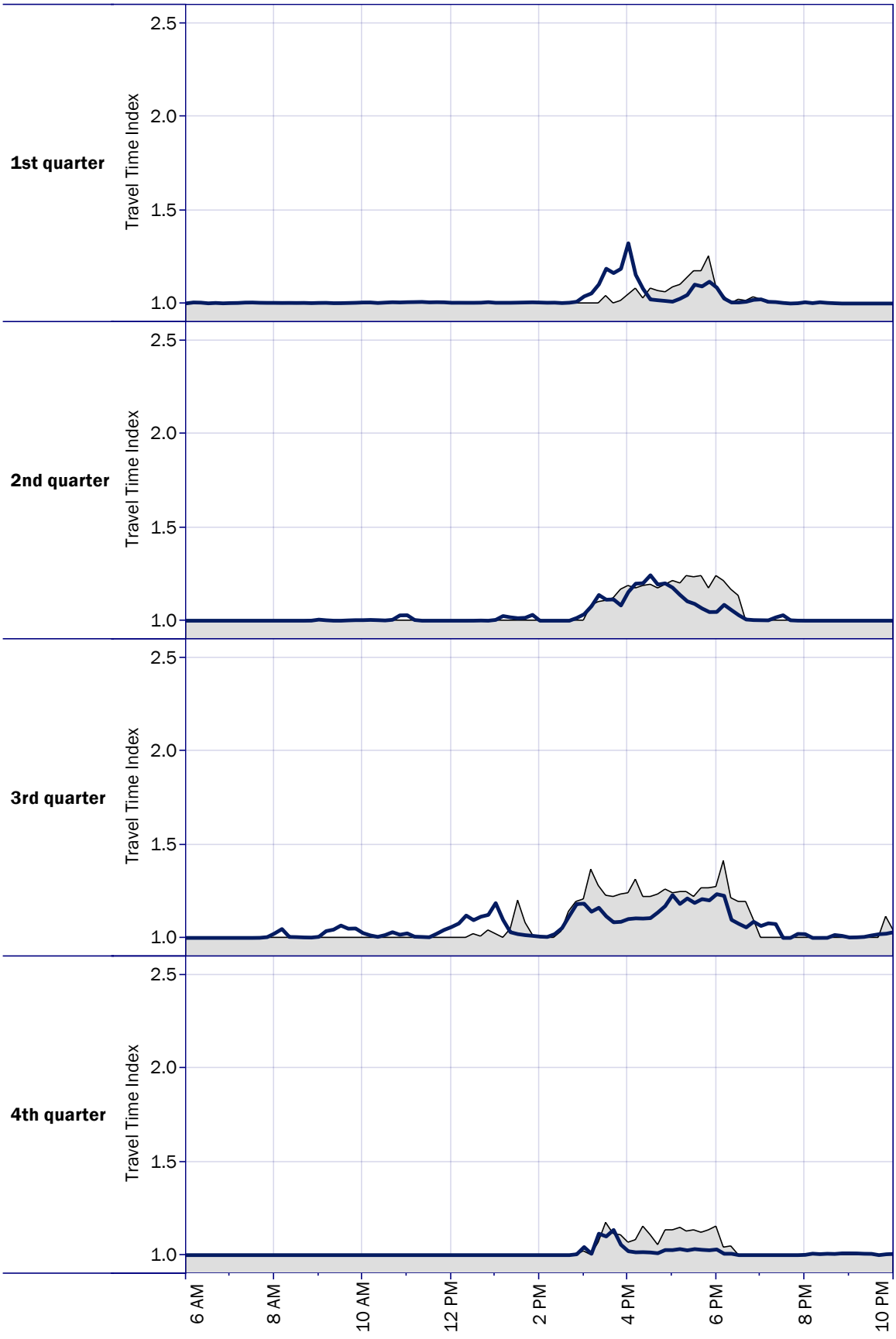
I-190 Southbound Travel Time Statistics

These charts show the Travel Time Index (average) as a solid line and Planning Time Index (95th Percentile) as a shaded gray area by time of day for each quarter of 2024. This page shows data for I-190 Southbound from I-290 to the Skyway.

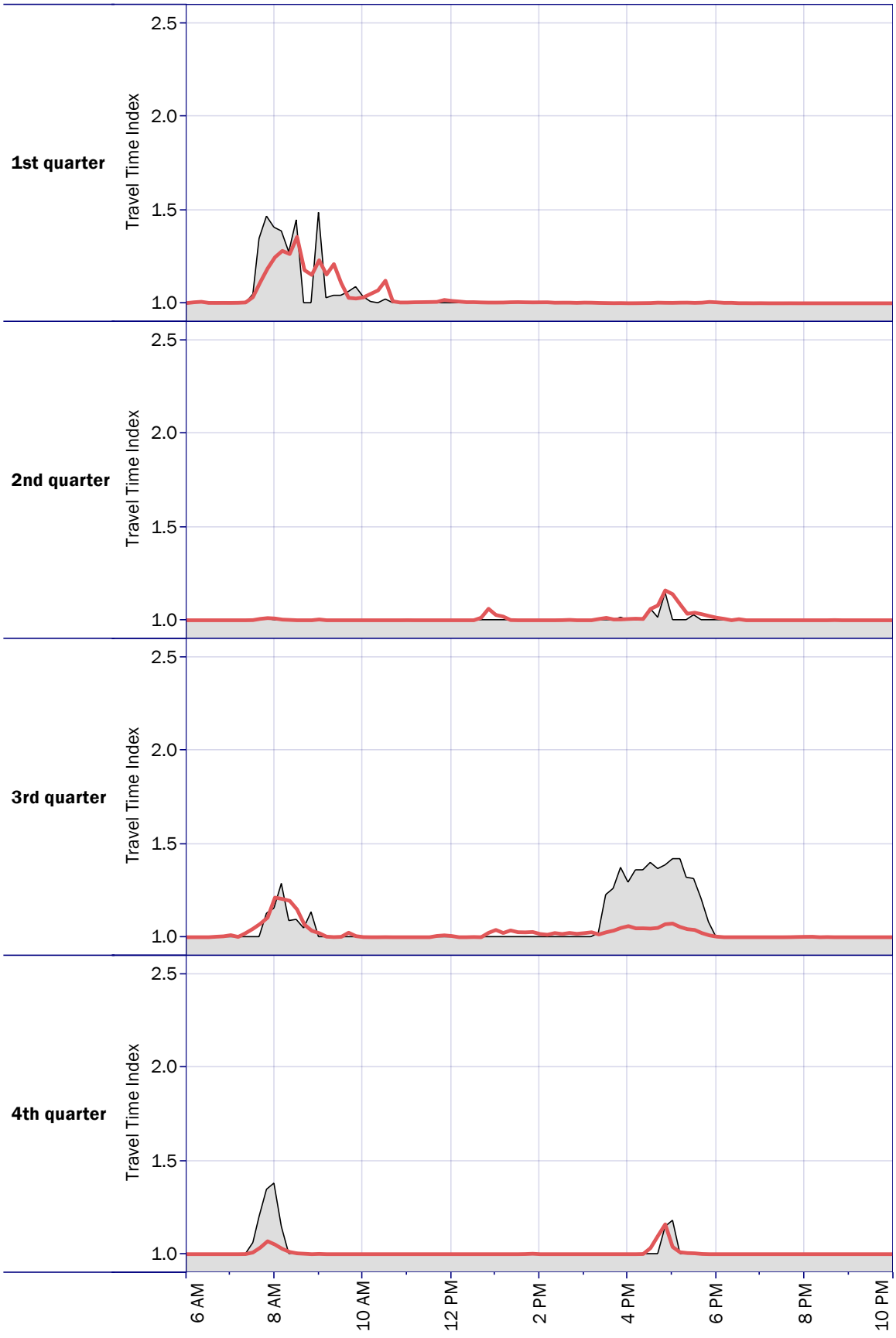
I-190 Northbound Travel Time Statistics

These charts show the Travel Time Index (average) as a solid line and Planning Time Index (95th Percentile) as a shaded gray area by time of day for each quarter of 2024. This page shows data for I-190 Northbound from I-290 to Buffalo Avenue.

I-190 Northbound Travel Time Index (I-290 to Buffalo Avenue)



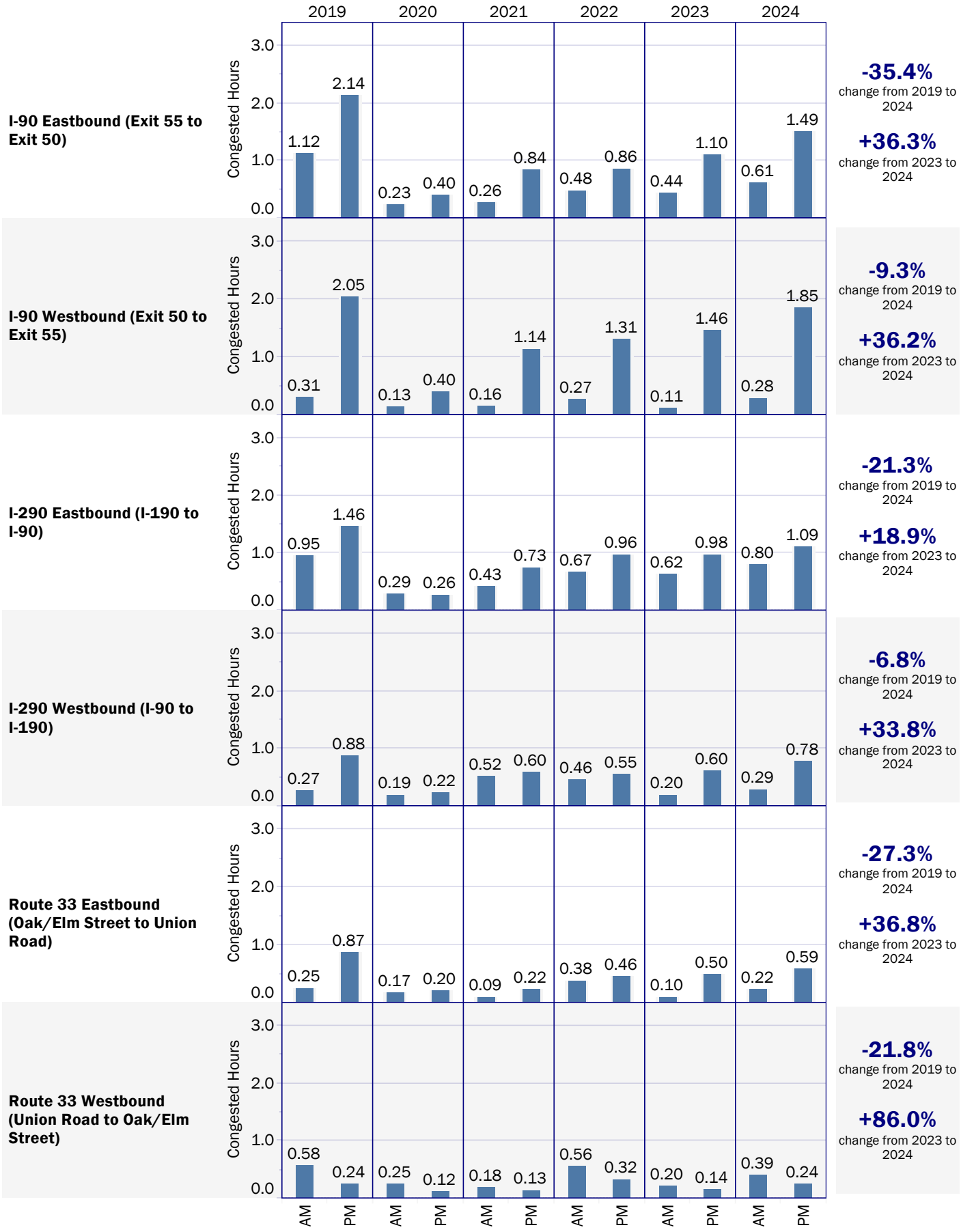
I-190 Southbound Travel Time Index (Buffalo Avenue to I-290)



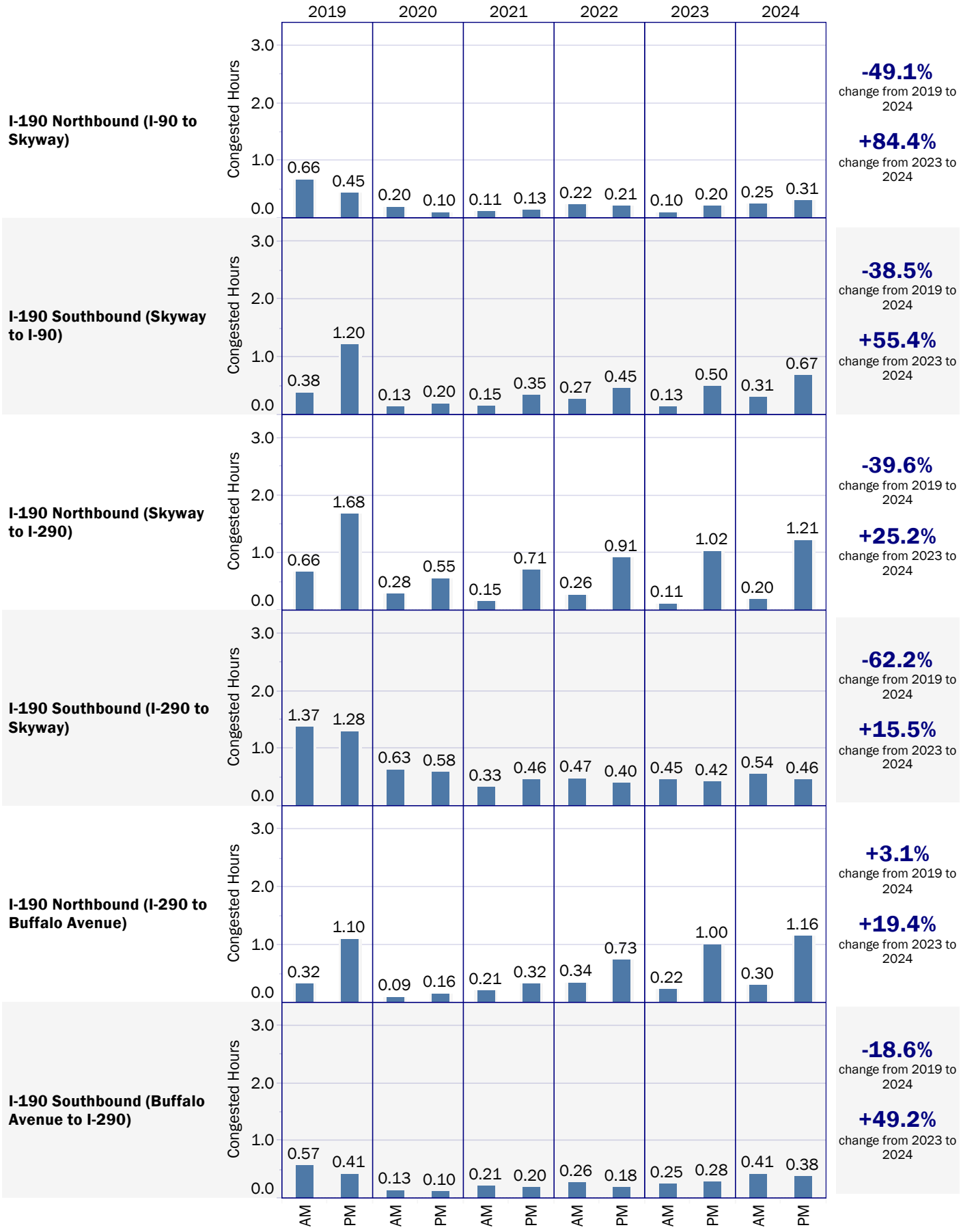
I-190 Southbound Travel Time Statistics

These charts show the Travel Time Index (average) as a solid line and Planning Time Index (95th Percentile) as a shaded gray area by time of day for each quarter of 2024. This page shows data for I-190 Southbound from Buffalo Avenue to I-290.

Congested Hours



Congested Hours



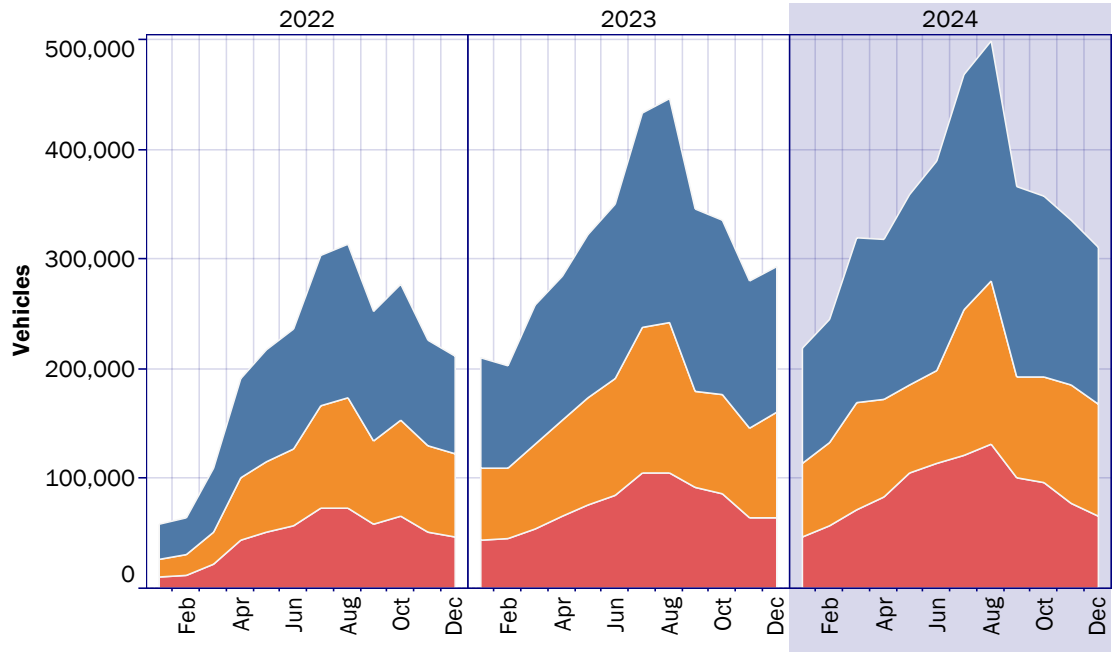
BORDER CROSSING VOLUMES

Passenger Vehicle Border Crossings

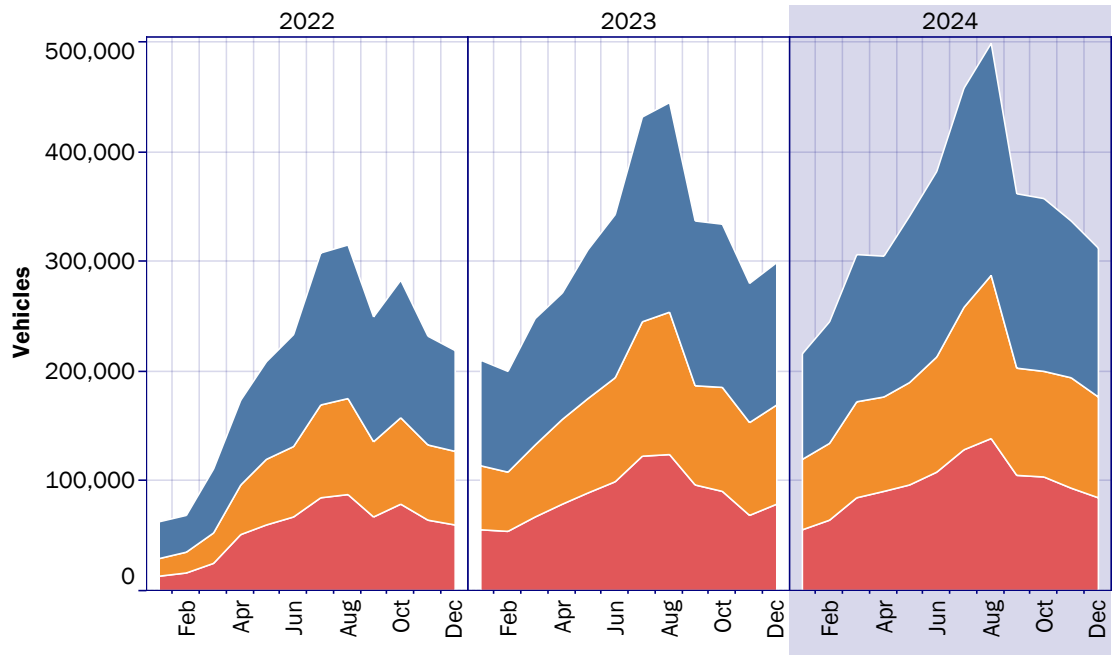
The graphs on this page show the total number of passenger vehicles crossing at the Peace Bridge, Lewiston-Queenston Bridge, and Rainbow Bridge in both the Canada-bound and U.S.-bound directions.

The table shows the passenger vehicle totals for each year, the percent change from the previous year, and the percent change from 2019.

Passenger Vehicle Volumes - to Canada



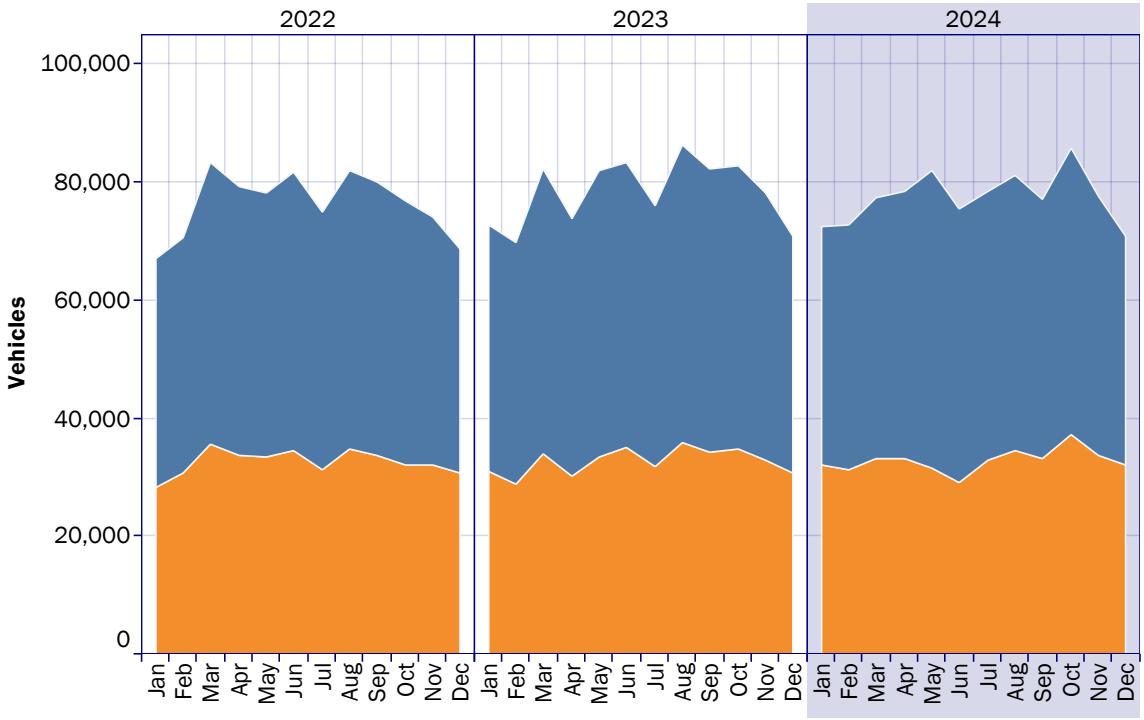
Passenger Vehicle Volumes - to U.S.



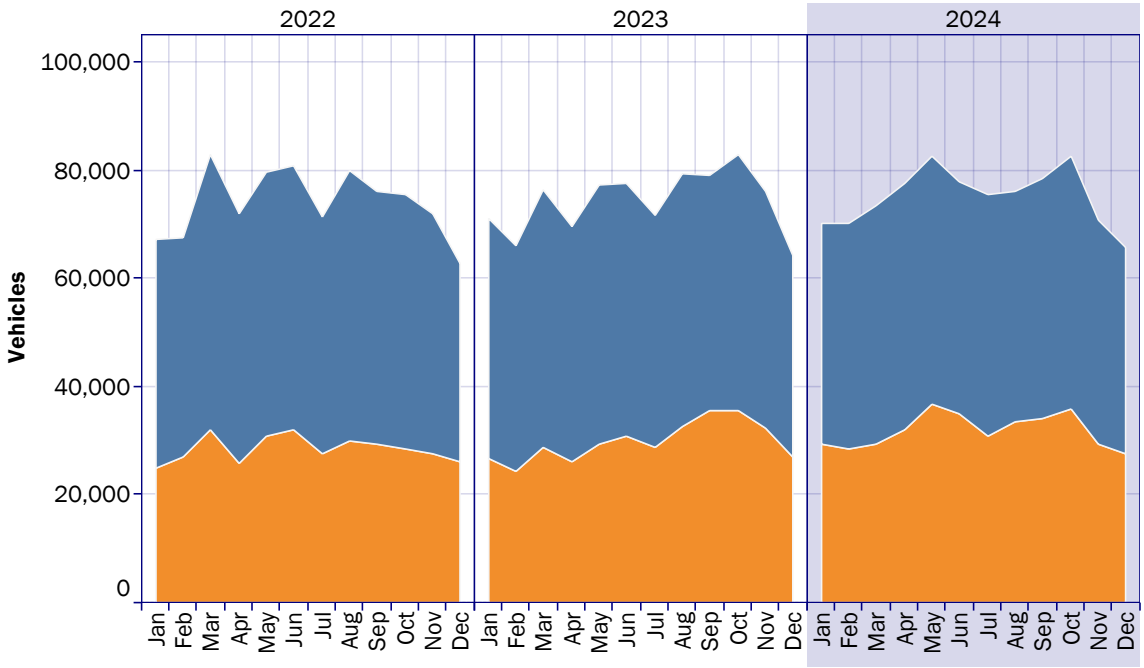
Peace Bridge Lewiston-Queenston Bridge Rainbow Bridge

	2022	2023	2024
Passenger Vehicle Total	4,927,400	7,475,906	8,310,142
% Change from Prev. Year	277.8%	51.7%	11.2%
% Change from 2019	-46.5%	-18.9%	-9.8%

Truck Volumes - to Canada



Truck Volumes - to U.S.



Peace Bridge Lewiston-Queenston Bridge

	2022	2023	2024
Truck Total	1,803,702	1,830,237	1,828,940
% Change from Prev. Year	-1.1%	1.5%	-0.1%
% Change from 2019	-0.8%	0.6%	0.5%

Truck Border Crossings

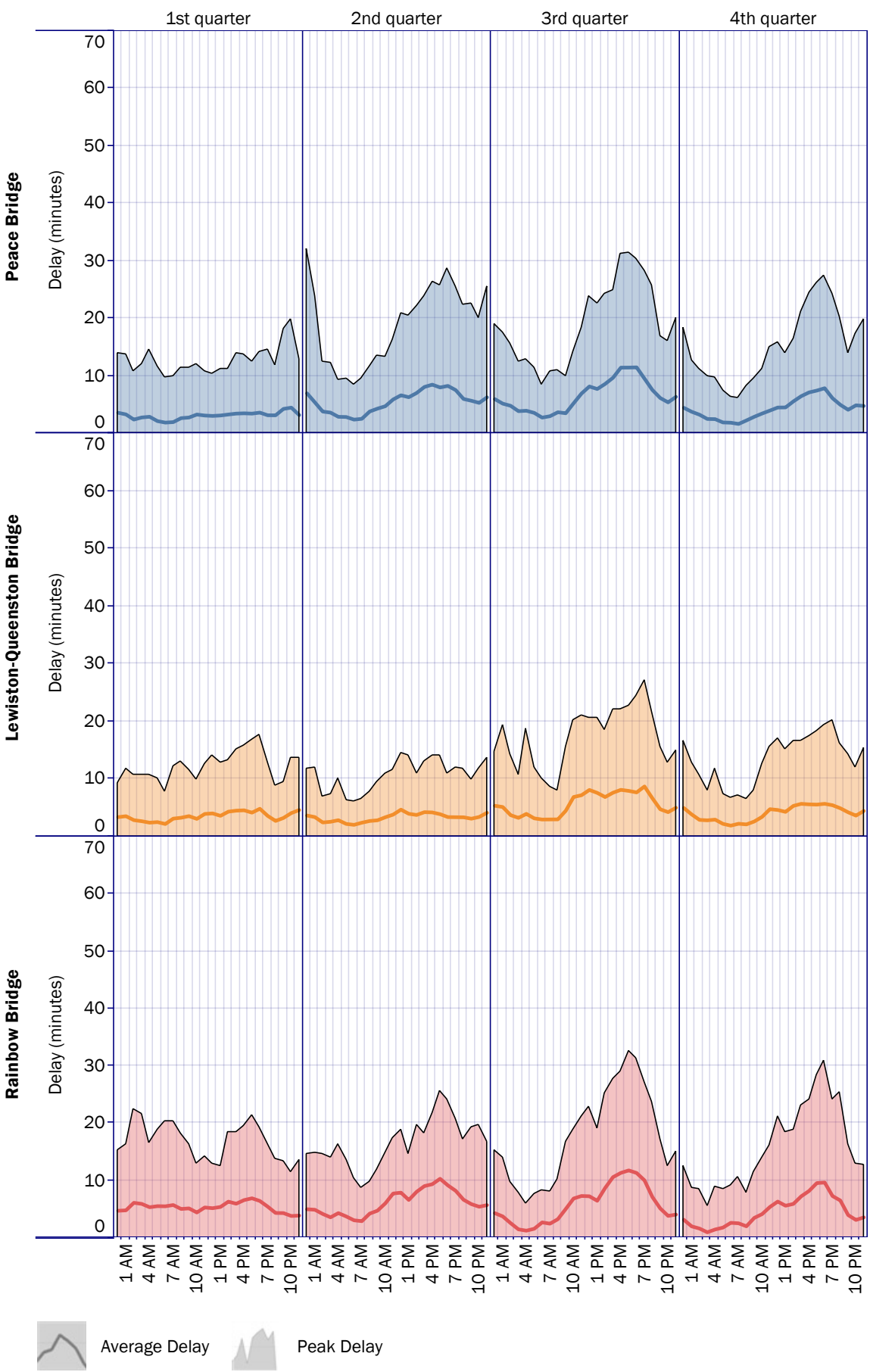
The graphs on this page show the total number of trucks crossing at the Peace Bridge and Lewiston-Queenston Bridge in both the Canada-bound and U.S.-bound directions.

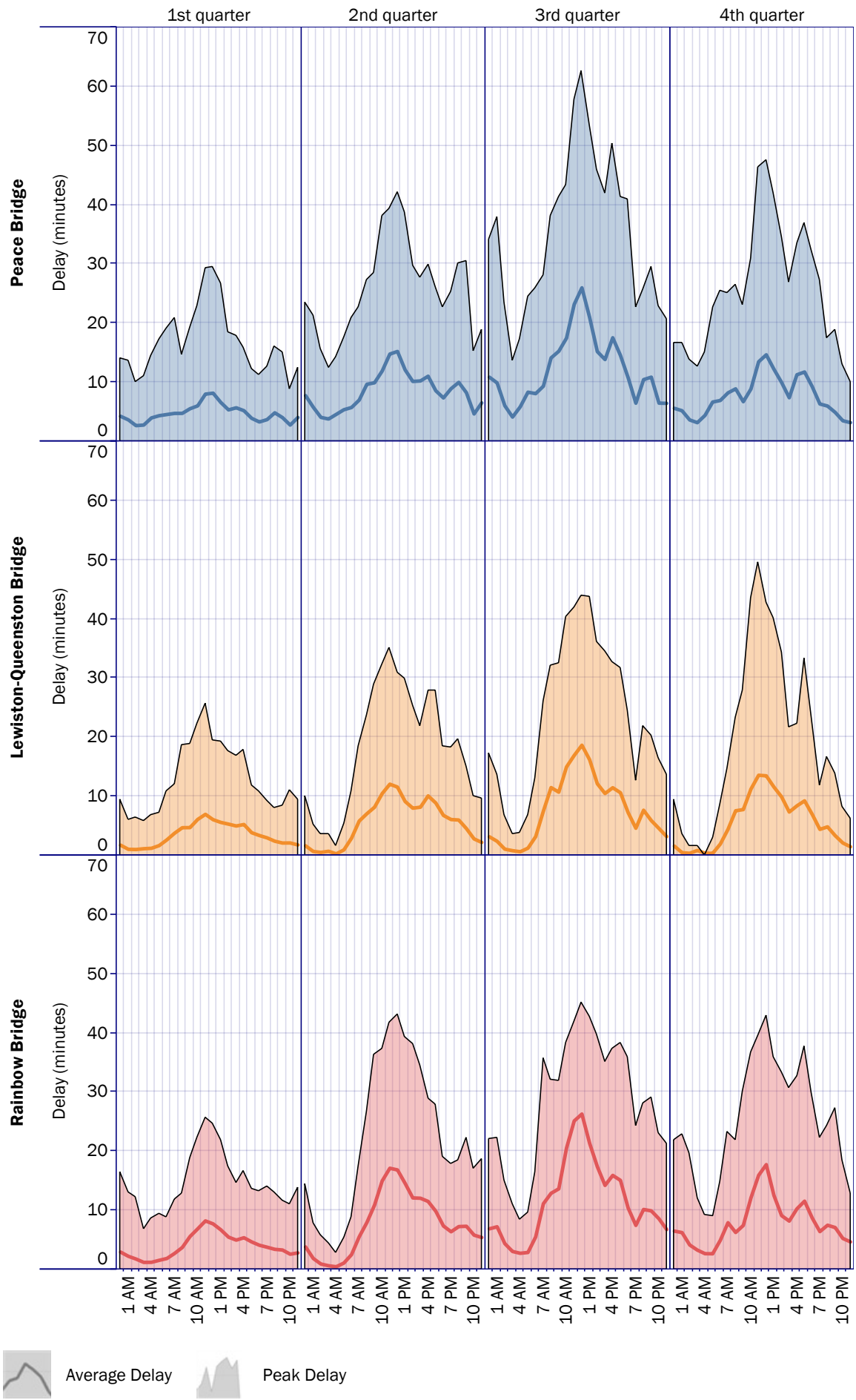
The table shows the truck totals for each year, the percent change from the previous year, and the percent change from 2019.

BORDER CROSSING DELAYS

Passenger Vehicle Delay to Canada

The following charts show the average and 95th percentile passenger vehicle delays to Canada for each hour of the day during 2024.



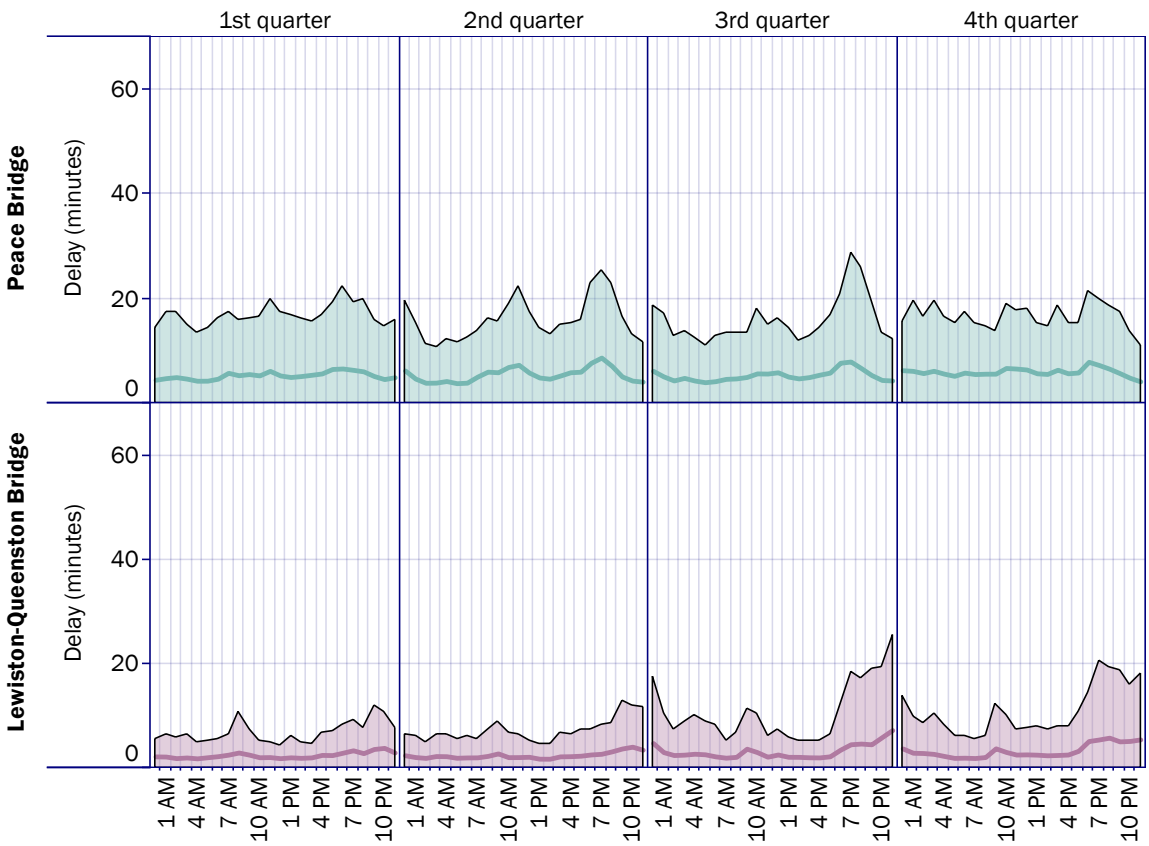


Passenger Vehicle Delay to U.S.

The following charts show the average and 95th percentile passenger vehicle delays to the U.S. for each hour of the day during 2024.

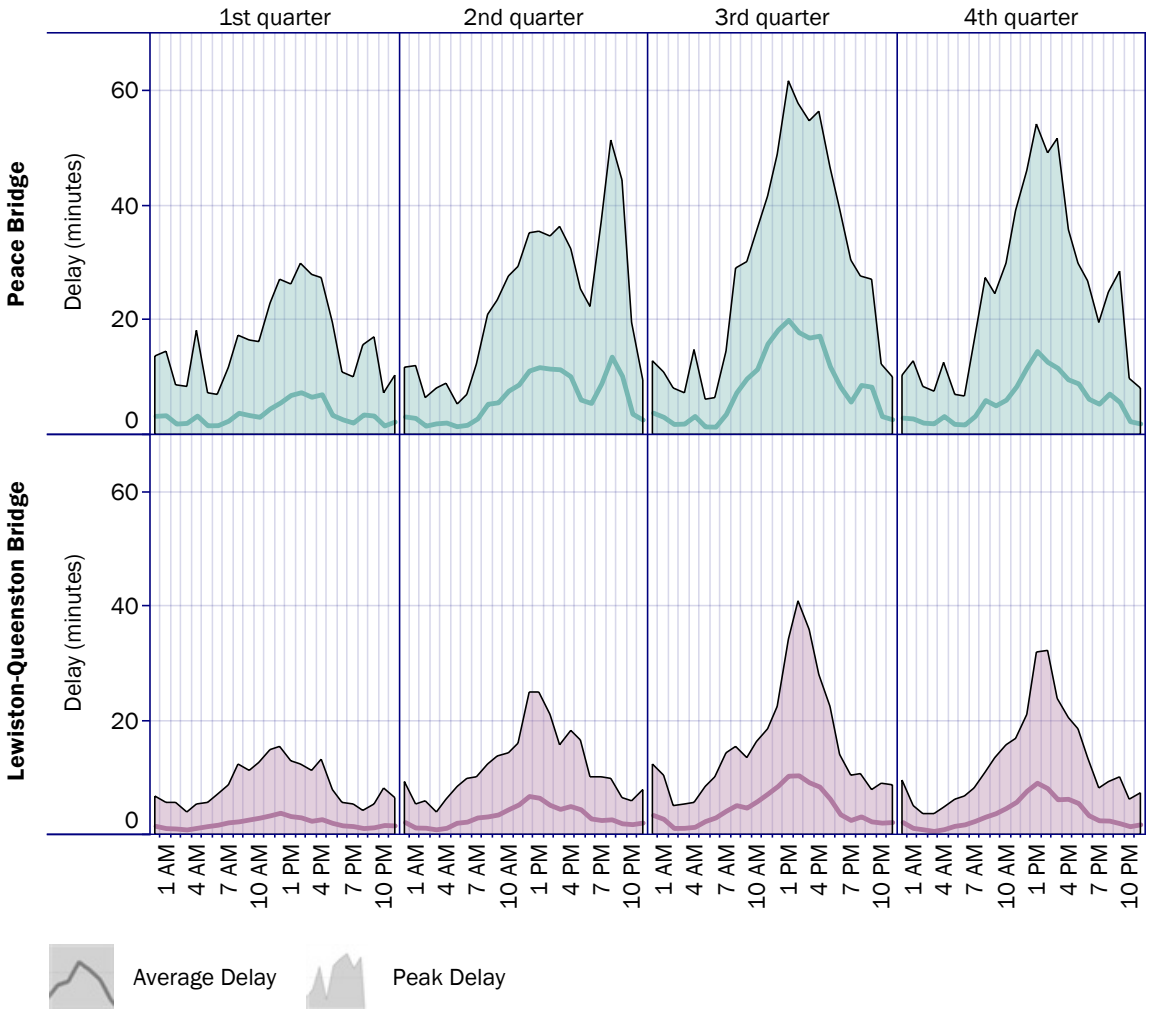
Truck Delay to Canada

The following charts show the average and 95th percentile truck delays to Canada for each hour of the day during 2024.

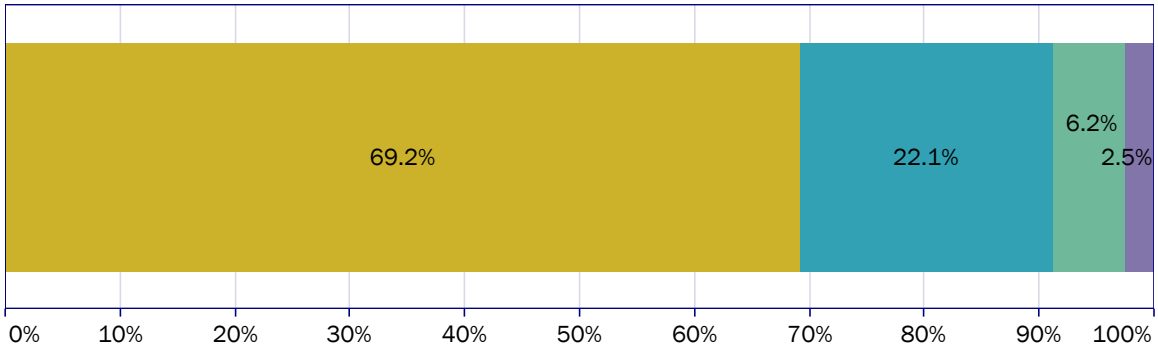


Truck Delay to U.S.

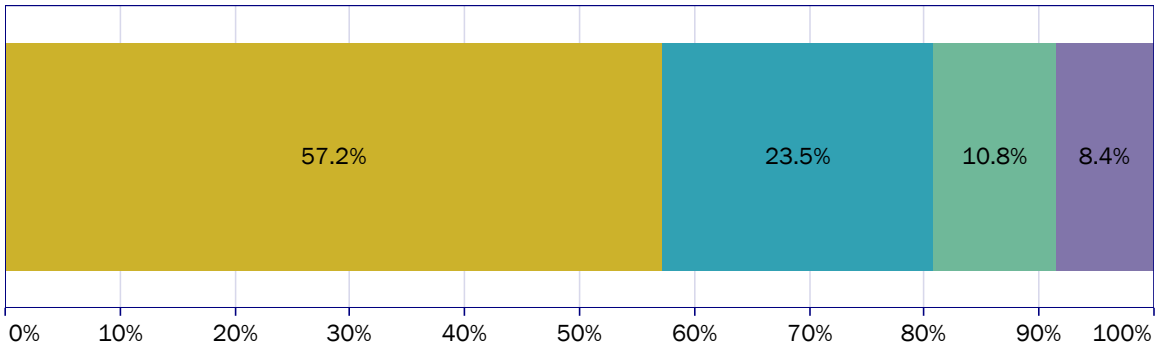
The following charts show the average and 95th percentile truck delays to the U.S. for each hour of the day during 2024.



Passenger Vehicle Delay to Canada



Passenger Vehicle Delay to U.S.

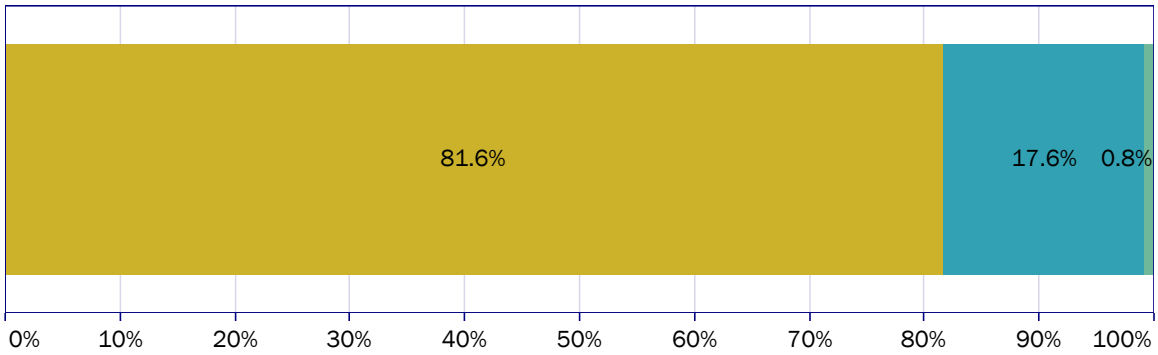


Number of Bridges
0 1 2 3

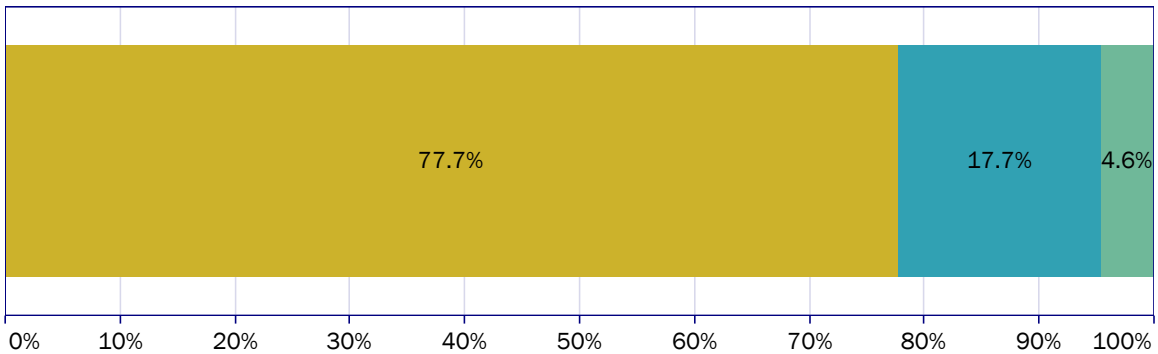
Simultaneous Delay - Passenger Vehicles

These graphs show the percentage of time during 2024 that delays occurred simultaneously across multiple crossings for passenger vehicles.

Truck Delay to Canada



Truck Delay to U.S.



Number of Bridges
0 1 2

Simultaneous Delay - Trucks

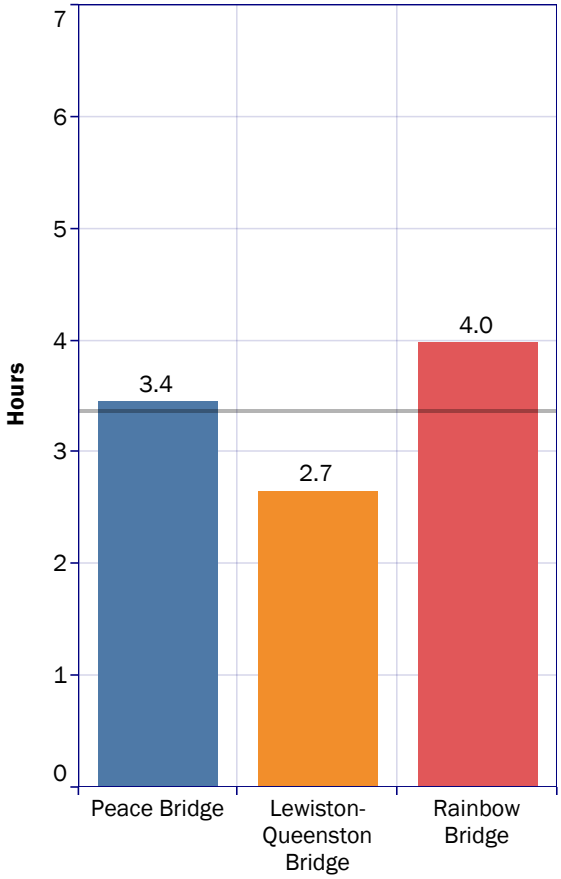
These graphs show the percentage of time during 2024 that delays occurred simultaneously across multiple crossings for trucks.

Average Daily Hours of Delay

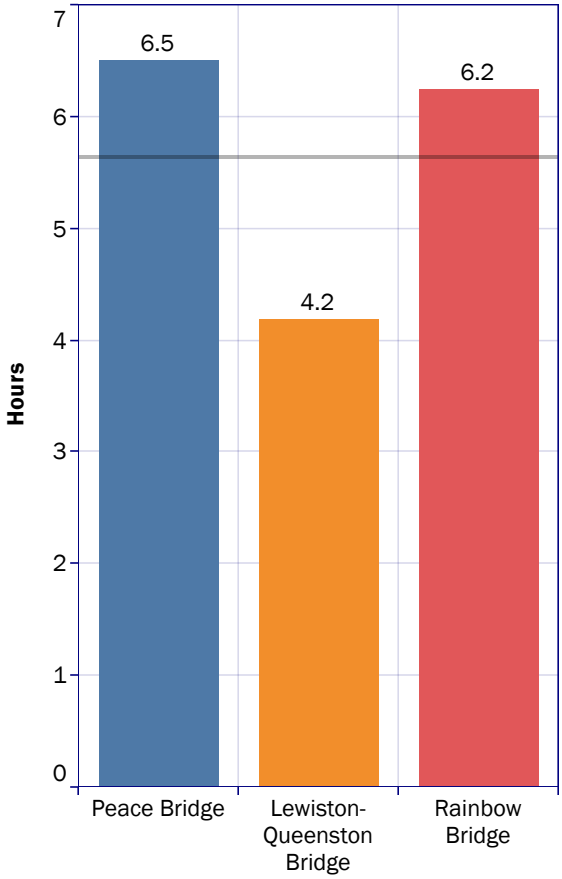
These graphs show the average amount of time (in hours) per day in 2024 during which delays of greater than 10 minutes occurred for each crossing, direction, and vehicle type.

The horizontal line represents the average of all three crossings.

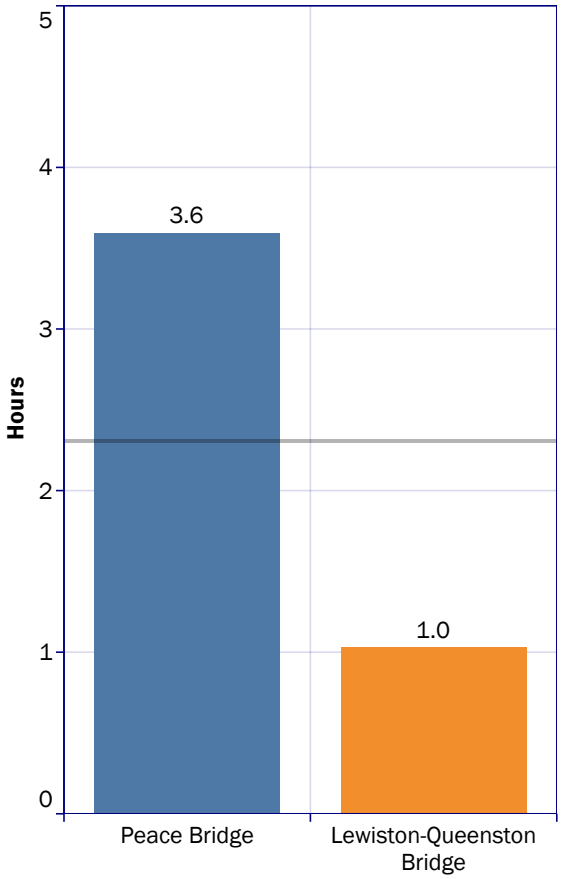
Passenger Vehicles to Canada



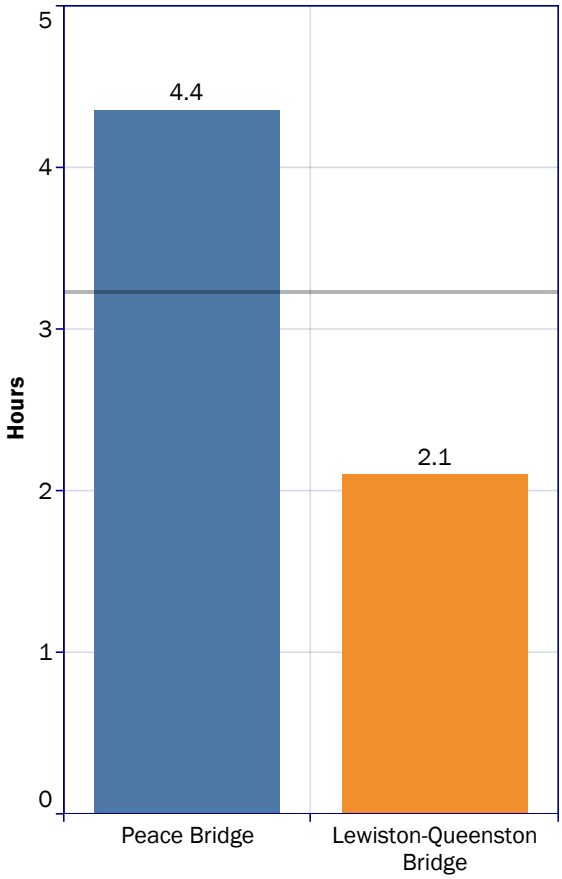
Passenger Vehicles to U.S.



Trucks to Canada



Trucks to U.S.



SYSTEMS RELIABILITY

Equipment Inventory

Organization	CCTV	DMS	Flashing Signs
Buffalo and Fort Erie Public Bridge Authority	4	0	0
New York State Department of Transportation	76	15	10
New York State Thruway Authority	63	25	2
Niagara Falls Bridge Commission	4	0	0
Total	**147**	**40**	**12**

Crossroads: NITTEC's Advanced Traffic Management System (ATMS) (Uptime goal: 99%)

Website: www.nittec.org and www.nittec.ca (Uptime goal: 99%)

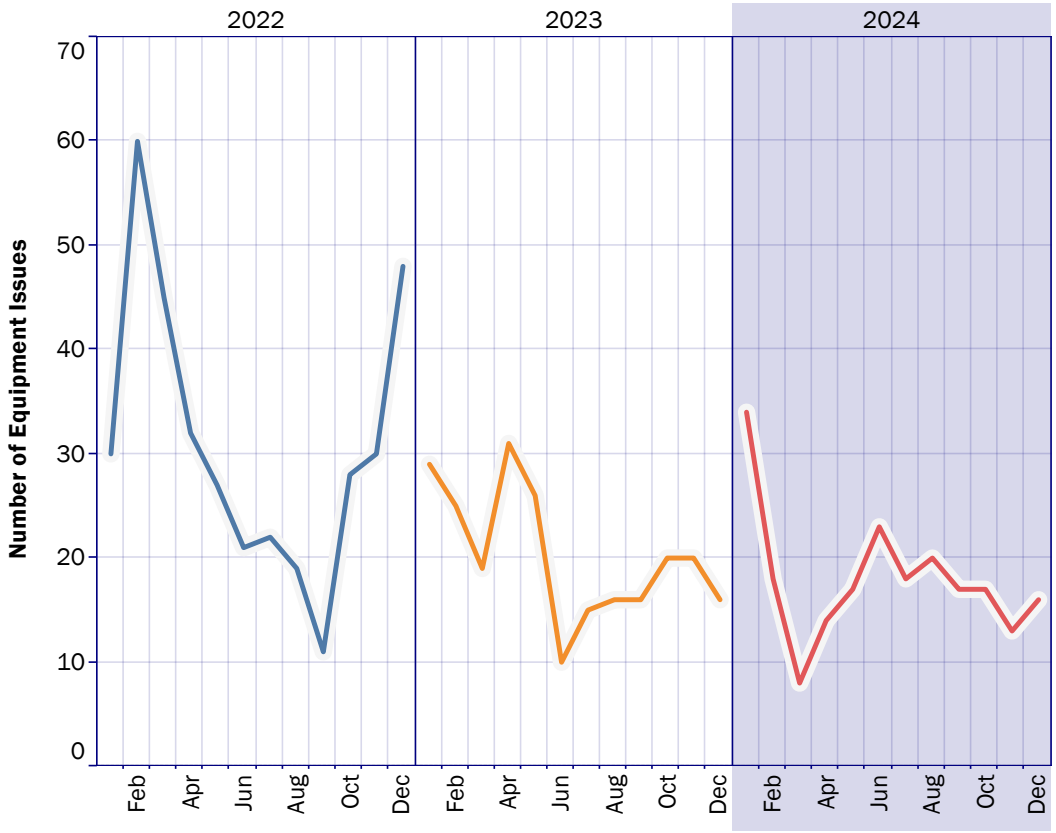
CCTV: Traffic cameras in the region (Uptime goal: 95%)

DMS: All overhead and permanent roadside message signs in the region (Uptime goal: 95%)

Flashing Signs: All static signs with flashing beacons

Reliability: Measure of the uptime of an equipment type or system

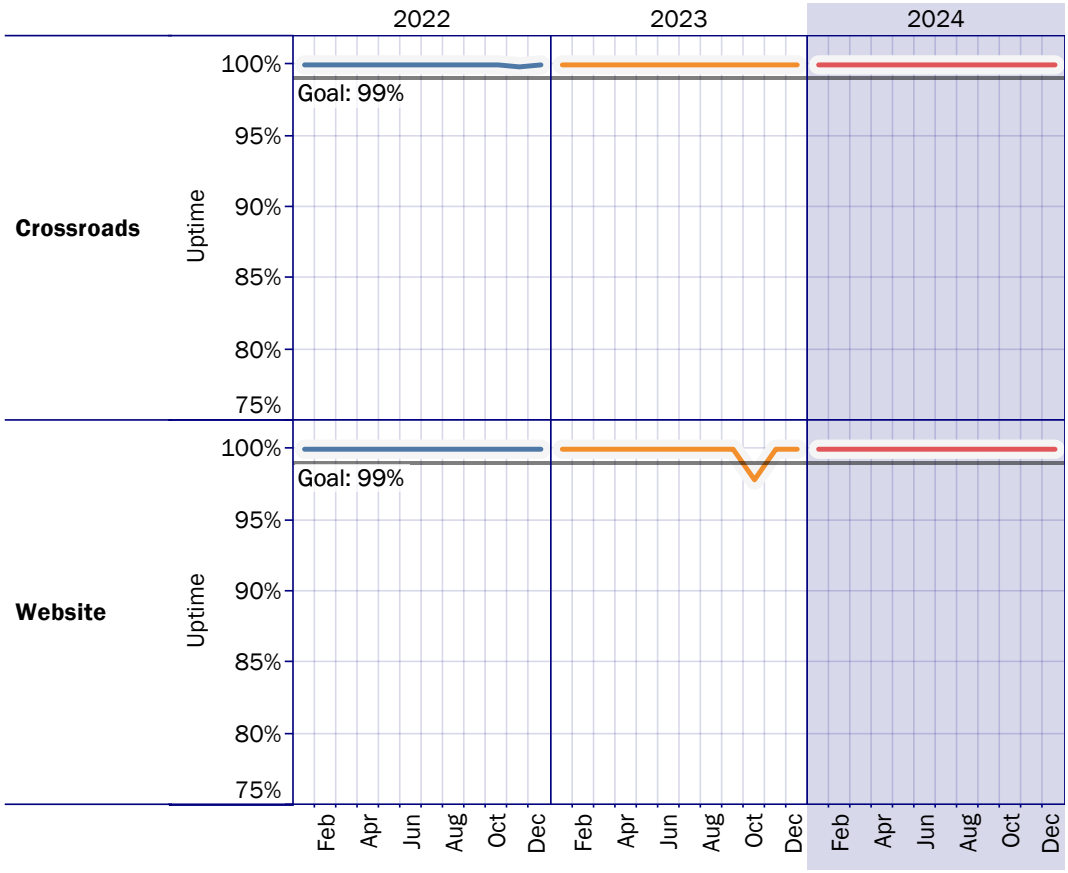
Equipment Issues



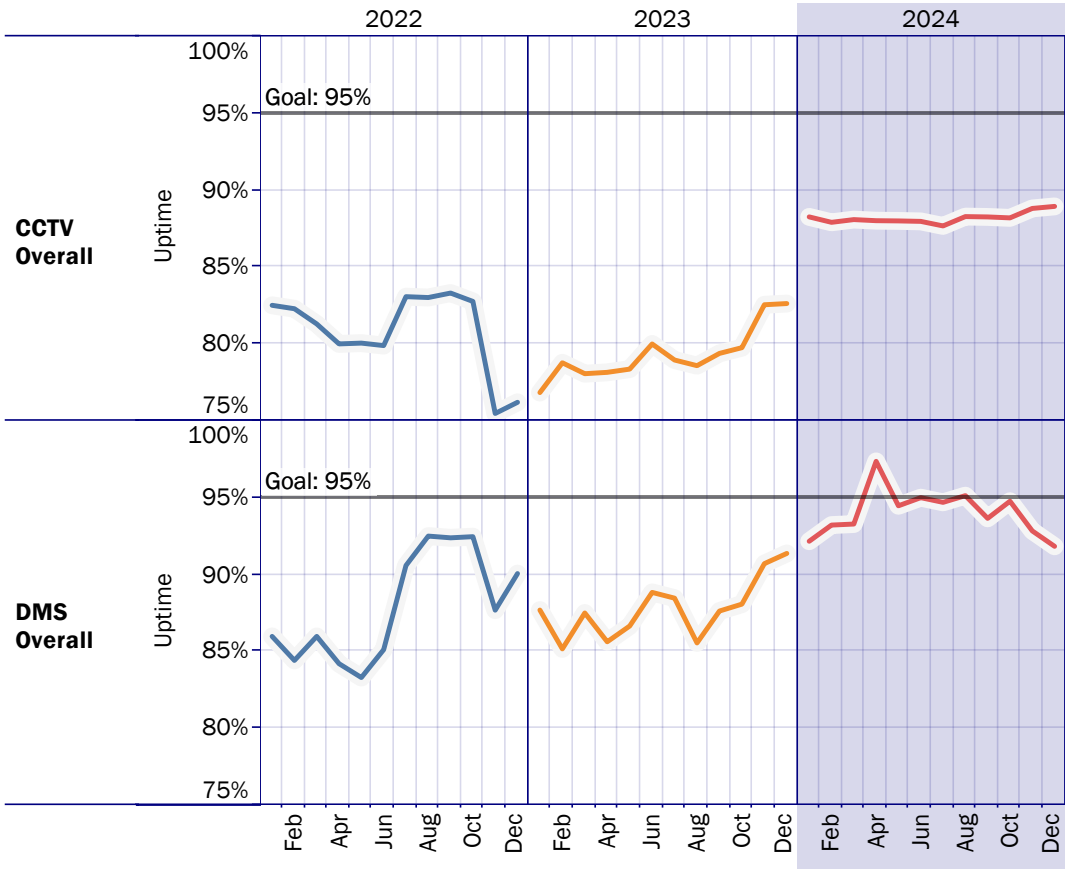
Systems Uptime

These graphs show the average uptime of various systems and types of equipment in the region for each month from January 2022 to December 2024. The horizontal lines represent the goal for uptime for each system/equipment type.

NITTEC Systems Uptime



Agency Equipment Uptime



Niagara International Transportation Technology Coalition

93 Oak Street

Buffalo, New York

www.nittec.org | www.nittec.ca