

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION



69<sup>th</sup>

# Annual Consulting Engineer Inspection Report

October 1, 2024



PREPARED FOR:

The Ohio Turnpike and Infrastructure Commission  
682 Prospect Street, Berea, Ohio 44017

PREPARED BY:

**Michael Baker**  
INTERNATIONAL

# OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

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# 1.0 EXECUTIVE SUMMARY

This report presents Michael Baker International's annual field inspection findings for Ohio Turnpike and Infrastructure Commission (OTIC) infrastructure assets, focusing on bridges, culverts, pavement, signs, and buildings. It includes a summary of observations related to new construction, maintenance, revenues, traffic, and safety. Detailed 2024 field inspection notes have been delivered to OTIC staff via Microsoft Access database, geographic information system (GIS) input, or other digital files. This data can be used to support planning for maintenance and repair programs beyond 2024. Additionally, all routine bridge inspection reports have been completed per the requirements of the Ohio Revised Code and submitted to the Ohio Department of Transportation (ODOT)'s AssetWise platform. **Overall, OTIC assets are well maintained, and the Commission is proactive in identifying and fixing deficiencies.**

On April 10, 2024, the OTIC successfully launched its new modernized hybrid open barrier/ticket system and back-office tolling system. Combining technology and construction under more than twenty separate projects, this was the largest project undertaken by OTIC since the toll road opened in 1955.

## Pavement and Bridges

In 2024, the OTIC allocated over \$254,000,000 for the Capital Improvement Program. During this year, work was performed on seventeen (17) bridges, including the westbound removal of one (1) bridge, deck replacements for five (5) mainline bridges and seven (7) overhead bridges, and bridge repair work on two (2) bridges. Additionally, one bridge was raised to increase vertical height clearance and work continued on the Tinker's Creek mainline bridge replacement project.

Currently, the Turnpike mainline consists of three lanes eastbound and westbound for approximately one hundred and sixty (160) miles (from MP 59.52 to MP 218.70) across Ohio, narrowing to two lanes near both state borders. To facilitate future third lane widening of the mainline pavement, existing two-lane bridges are typically widened during rehabilitation projects. Similarly, overhead dual-median pier bridges are converted to single-median pier bridges as part of their reconstruction. Multiple locations on the Mainline now feature overhead Open Road Tolling (ORT) gantries, contributing to the modernization of the toll collection system. Many toll plazas have supplemented personnel-operated toll booths with self-pay kiosks. A 2009 OTIC study created the plan to replace the original concrete pavement. To date, approximately three hundred and twenty-two (322) lane miles have been reconstructed. This is approximately 33% of the total originally constructed lane miles on the Turnpike. Approximately one hundred and sixty-one (161) centerline miles of the original composite pavement remain on the mainline, while approximately eighty (80) centerline miles now consist of flexible pavement. The Pavement Replacement Program is expected to resume in 2025, with an estimated completion by 2042.



[Reconstruction of Tinkers Creek Bridges](#)

In 2024, 92 lane miles of mainline pavement was resurfaced under three (3) separate projects and one interchange was completely reconstructed with full-depth asphalt.

## Facilities

Between 1998 and 2013, fourteen (14) of the original sixteen (16) service plazas were replaced, while two (2) were taken out of service and demolished. Since then, the OTIC service plaza program has maintained high standards of service and excellent facility conditions. Currently, four (4) out of the seven (7) pairs of service plazas constructed during the early phases of the replacement program have been updated. *These modern, state-of-the-art facilities prioritize energy efficiency and cater to the growing number of Turnpike travelers.*

Service plaza amenities include food courts, food vendors with sit-down restaurants, multiple fast-food vendors, electronic travel and weather information centers, and retail outlets. Special areas for truck drivers, complete with lounges, laundry facilities, and showers have also been incorporated.

In 2023, the Commission expanded its electric vehicle charging stations, now providing the service at eight (8) of the Turnpike's service plazas. Additionally, in 2017, OTIC engaged a consultant to develop a comprehensive strategic plan covering all facilities including maintenance buildings, service plazas, toll plazas, and the administration building. The strategic plan for maintenance buildings has been completed, and the ongoing implementation includes planned demolition and rebuilding, expected to begin in 2028. The strategic plan for other facilities is still in development.

As part of the Toll Modernization project, three new mainline toll plazas were constructed. Toll Plaza 49 (MP 49) was completed in 2021, while Toll Plazas 4 (MP 3.5) and 211 (MP 211) finished construction in 2023. Furthermore, the existing Westgate Toll Gate (TP 2 – MP 2.7) was demolished in 2024 when the new TCS Tool Plaza 4 (MP 3.5) became operational.

## Highway Safety

The OTIC highway safety record continues to compare favorably with other similar interstate type facilities. The accident rate per one-hundred million vehicle-miles decreased from 82.1 in 2022 to 66.2 in 2023 (2,459 total accidents in 2022 compared to 2,106 in 2023). The rate of accidents resulting in fatalities decreased from 0.5 to 0.3 per one-hundred million vehicle-miles in 2022 and 2023. Data for 2024 is not yet available. Total miles traveled by patrons is to be determined as a result of the new Toll Collection System.

## Revenue

Total revenues for the OTIC from all sources in 2023 were approximately \$418,839,000, up 7.3% compared to 2022. The revenue increase was primarily the result of increased toll and investment revenue. Meanwhile, total expenses decreased 5.1%. There was a decrease of \$36.9 million in the ODOT Infrastructure Project expense. The decrease was offset by a \$25.2 million increase in fringe benefit expenses allocated to each area based on wages relating to an increase in the non-cash Governmental Accounting Standards Board (GASB) 68 pension expense and GASB 75 other post-employment benefit expense. The total miles traveled for passenger vehicles increased by 5.2% and commercial vehicle total miles traveled decreased 2.2% in 2023 compared to 2022. The toll rate increase combined with an increase in total vehicles and average vehicle mileage, resulted in an approximate 2.7% increase in 2023 toll revenue. The revenue data for the first seven months of 2024 shows that, when compared to the same period in 2023, toll revenues from passenger cars was up 8.3% and toll revenues from commercial vehicles were up 7.5%. Total toll revenues were up 7.8% for the first seven months of 2024. Total revenues for the first seven months of 2024 were up 7.0% compared to January-July 2023.

The total number of vehicles using the Turnpike during January-July 2024 was 8.2% higher than for this same period in 2023. Upon implementation of the new toll system in April 2024, a full-length trip is now three (3) transactions westbound and two (2) transactions eastbound due to the open road tolling/barrier system structure. Based on current trends to date, total revenues from all sources for 2024 are estimated at approximately \$450,400,000.

## 2.0 REPORT OF FINDINGS AND RECOMMENDATIONS FOR MAINTENANCE AND REPAIR

### 2.1 Pavement and Shoulders

During the annual visual inspection, all 241.26 miles of the Turnpike mainline, and all exit/entrance ramps underwent evaluation for pavement condition. The Mainline Pavement Condition Rating (PCR) was provided by ODOT, while Michael Baker assessed the ramps. Based on the 2024 ODOT PCR scores and ongoing visual inspections, all mainline pavement on the Turnpike is now either composite or flexible. These inspections, combined with the 2009 OTIC pavement condition evaluation, help guide the fifty (50)-year capital plan toward areas in need of upgrades. The OTIC is funding a robust program related to pavement replacement and resurfacing.

In 2024, three mainline resurfacing projects were completed, totaling 92 lane-miles of resurfacing. Pavement replacement was completed on all ramps at Exit 34. Additionally, two pavement replacement projects were completed from prior years: one to replace the pavement at the former Westgate Toll Plaza, and the other to replace the pavement at the toll lanes at the Eastgate Toll Plaza.

MP Range	2.60	2.80	14.80	27.55	50.85	55.45	230.35	236.00	239.00
Project	PR 2		R14		R 50		R 230		PR 236

*Overall, the mainline travel lanes on the Turnpike remain well-maintained, with an average PCR score of 83.47/100 in Spring 2024* (a decrease from 84.75/100 in 2023). The lowest-rated section of mainline pavement, spanning MP 15.0 to 27.0, was resurfaced in 2024. Given OTIC’s continued investment in pavement improvements, it is anticipated that the average PCR score for 2025 will improve. Figure 2.1.1 illustrates the changes in PCR scores over time.



End Terminal Assembly Replacement

Eastbound shoulders generally meet ODOT’s pavement condition rating criteria, ranging from good to fair. However, there are a few short sections of poor right shoulders, and a single long section of the left shoulder (MP 223.0 to 230.0) which are rated as poor. The westbound shoulders exhibit similar scoring with a few short, interspersed sections of poor left shoulders and two long sections of poor right shoulder (MP 140.0 to 142.0 and 205.5 to 206.5).

The major deficiencies of the shoulders primarily result from excessive cracking, although most of these cracks have been partially or mostly sealed. *The current Resurfacing and Pavement Replacement Programs continue to prove effective, ensuring consistent and reliable driving experience across the entire Turnpike.* It is recommended that the OTIC maintain these programs as outlined in the current fifty (50)-year capital plan. Approximately 170 lane miles of mainline roadway is planned to be resurfaced or replaced in 2025.

**Figure 2.2.1 – PCR Score 2015-2024**



*Changes in Pavement Condition Rating Scores from 2015-2024*



## 2.2 Landscaping

The OTIC oversees landscaping maintenance within the Turnpike's right-of-way. Their responsibilities include managing the herbicide spray program, service plaza plantings, and mainline/interchange landscaping. Notably, major landscaping changes, such as large tree removal, should be coordinated with pavement replacement projects and maintenance contracts. While sight distance concerns were generally absent at interchanges, some minor tree trimming near signs has been necessary. Additionally, pollinator gardens featuring Ohio native plant species were established at various service plazas between 2016 and 2022 through a partnership with Keep Ohio Beautiful and the Davey Resource Group.

*Overall, the right-of-way remains well maintained, and the current maintenance schedule should be upheld.*



OTIC Pollinator Garden

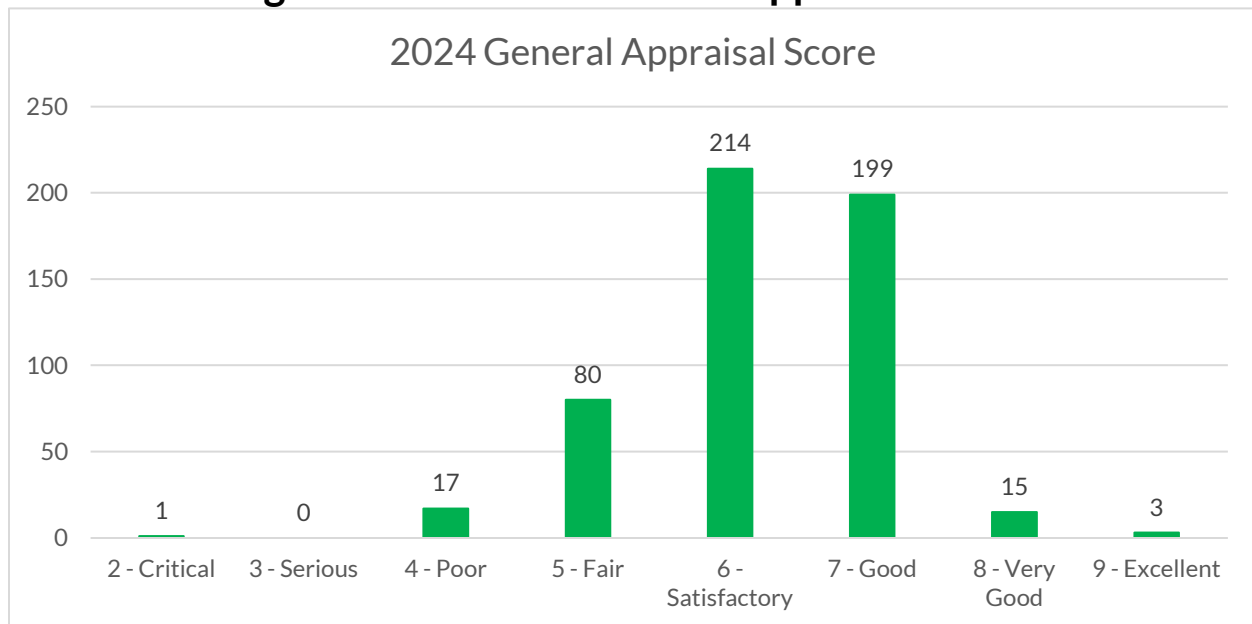
## 2.3 Bridges

In June 2022, the Federal Highway Administration (FHWA) published an update to the National Bridge Inspection Standards (NBIS), which applies to all bridge owners. The most impactful change was related to coding requirements for the Specifications for the National Bridge Inventory (SNBI). Bridge owners must comply with new SNBI requirements before March 2028. The OTIC is implementing SNBI in a phased approach. In 2024, bridges in the Kunkle and Swanton maintenance areas were inventoried according to SNBI requirements. Remaining bridges were inventoried per previous NBIS requirements in 2024 and will be transitioned to SNBI in 2025 and 2026.

*According to the bridge condition inspections conducted in 2024, the vast majority of the OTIC's bridges are in satisfactory to good condition, scoring 6-7 based on the NBIS.* The OTIC maintains a total of 529 bridges, including 413 bridges and 116 culverts classified as bridges, as per the policy of the ODOT and OTIC.

Out of these, 18.5% of the structures (98 in total, comprised of 82 bridges and 16 culverts classified as bridges) are rated below satisfactory condition. The primary deficiencies in these structures are related to low-rated superstructures. Although the percentage of bridges rated as good has decreased by 8% since 2023, there has been a 4% increase in fair ratings and a 3% increase in satisfactory ratings.

**Figure 2.3.1: 2024 General Appraisal Score**



*Graph showing distribution of overall NBIS Condition Ratings for bridges maintained by the OTIC. NBIS Scoring criteria based on 0-9 evaluation with 0 being Failed and 9 being Excellent. Ratings of 5 or greater indicate structural elements may or may not show deterioration but remain sound with no significant affects to the load path capacity.*

The most downgraded element impacting the overall structure rating is section loss in the lower webs and bottom flanges of bridges spanning the Turnpike mainline. Some of these ratings are due to active corrosion, while others are due to section loss despite the beams being cleaned and painted. The failure of expansion joint seals is also a common deficiency that has resulted in element downgrades of structural steel, bearings, and bearing pedestals due to exposures to deicing chemicals. These downgraded elements do not currently pose a safety hazard to the public. However, continued deterioration could potentially increase maintenance and repair costs and decrease the overall service life of the structures. The OTIC is actively planning maintenance projects to address more pressing needs that are outside of capital planning projects.

In 2024, one bridge (MP 236.7 Beard Road) received a superstructure rating of 2 – Critical, as a direct result of damage from vehicle impact. The lanes above the damaged portion of this bridge were closed during inspection. The bridge has since been repaired and was re-opened in August 2024.

## MAJOR AND/OR FRACTURE CRITICAL BRIDGES

An in-depth inspection of the Maumee River Bridge was performed in June 2024. The assessment included hands-on inspection of bridge elements and an underwater inspection. The inspection was performed in accordance with FHWA and ODOT guidelines and was submitted under separate cover to the OTIC. Overall, the Maumee River Bridge is in Satisfactory Condition [6-SNBI] and open with no restrictions. Deficiencies in the concrete wearing surface of this bridge are to be addressed by a patching contract in fall 2024. A full rehabilitation, including deck replacement, is slated for 2026.

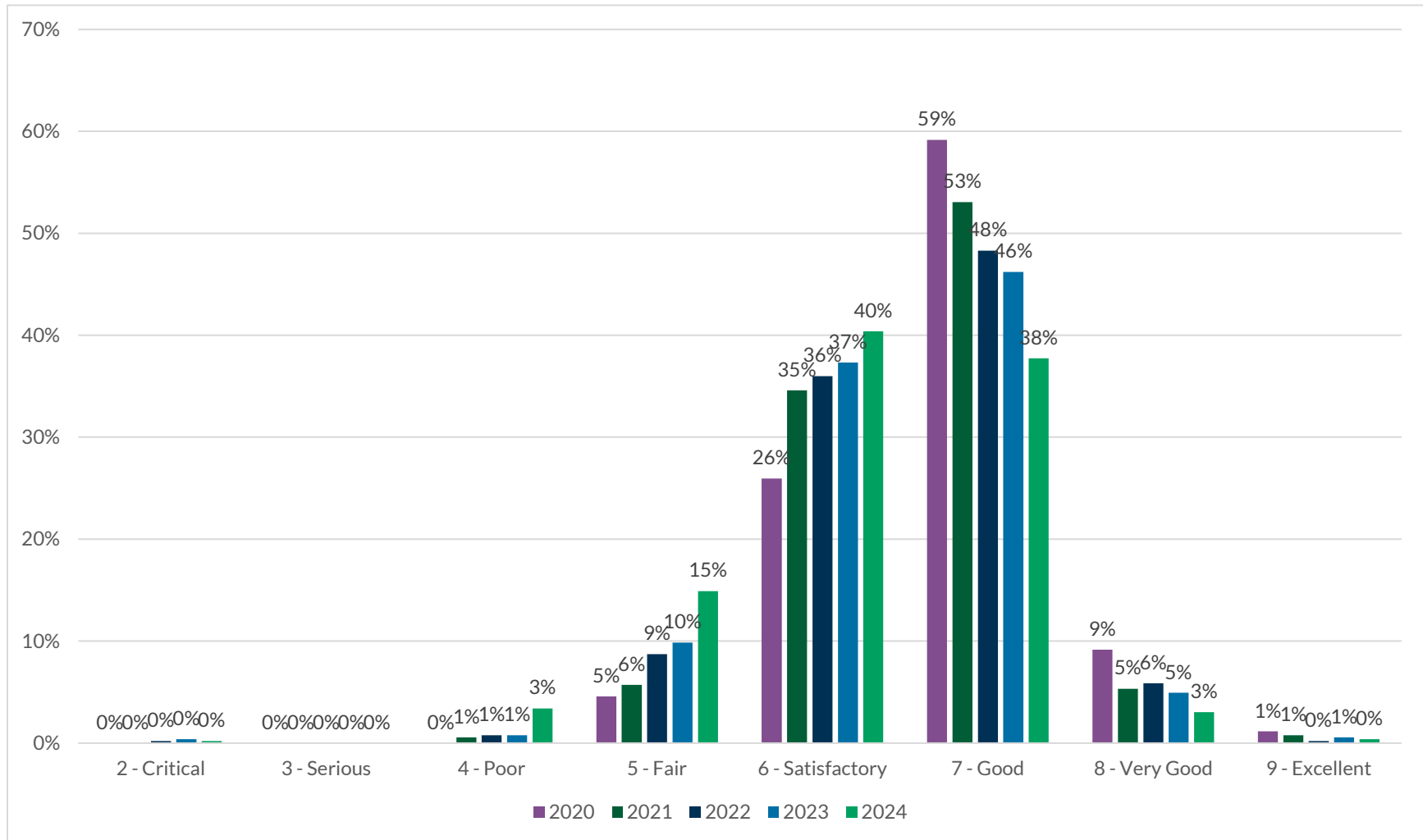


[Maumee River Bridge](#)

An in-depth inspection of the Sandusky River Bridge was performed in June and July 2024. The inspection included hands-on inspection of bridge elements and an underwater inspection. The inspection was performed in accordance with FHWA and ODOT guidelines and the report was submitted under separate cover to the OTIC. Overall, the Sandusky River Bridge is in Satisfactory Condition [6-SNBI] and open with no restrictions.

A Non-Redundant Steel Tension Member (NSTM) inspection will be performed at the bridge carrying Turnpike mainline over Kelley Road and Norfolk Southern in October 2024. This timing coincides with previous inspection cycles at this location. The inspection will be performed in accordance with FHWA and ODOT guidelines with the report submitted to the OTIC under separate cover.

**Figure 2.3.2: Comparison of General Appraisal Scores**



*Graph showing distribution of General Appraisal ratings for bridges maintained by the OTIC from 2020-2024. (Note due to rounding for clarity total may not equal 100% & OTIC inventory total differs every year)*



## 2024 STRUCTURE IMPROVEMENTS

The OTIC 2024 Capital Program includes multiple repairs and rehabilitations to structures along the Turnpike. Work was performed on a total of seventeen (17) bridges in 2024. This includes the westbound removal of one (1) bridge, deck replacement of five (5) mainline bridges and seven (7) overhead bridges, and bridge repair work on two (2) bridges. Additionally, one (1) bridge was raised to increase vertical height clearance and work continued on the Tinker's Creek mainline bridge replacement project. Deck replacement and overlay projects include improvement of other deficient elements in addition to the main work items.

## MAINTENANCE AND REPAIR RECOMMENDATIONS

The overall condition of each structure is described by the "General Appraisal and Operational Status" rating. This rating, based on a scale of 0 through 9, is primarily determined by the conditions of the Substructure or Superstructure (beams).

The summary ratings from the 2024 bridge safety inspections reveal that superstructure elements are the main controlling factor for the majority of the OTIC bridges in the overall General Appraisal ratings. Specifically, 8.2% of the OTIC substructure summaries (35 structures) received a NBIS rating of 6 or below, while 12.4% (53 structures) of the superstructure summaries received a rating below the NBIS rating of 6. It is recommended that repairs and rehabilitation prioritize the lowest-rated structures first.

In general, a below satisfactory summary rating does not indicate a condition that is unsafe for either of these elements. *The distribution of ratings and general trends are generally consistent with an inventory of bridges constructed in the 1950's amid a rehabilitation program.* OTIC structures are safe and well maintained.

Superstructure ratings for steel structures (the predominant type of superstructure on the Turnpike) are typically controlled by the amount of steel section loss, cracking in bearing stiffeners and secondary diaphragm members, and floating bearings. Overall, the majority of bridges rate Good (NBIS rating of 7) or better regarding section loss. Estimating the extent of section loss from the ground during routine inspections is challenging. The OTIC should perform a review of current load ratings on file correlating with observed section loss. Hands-on inspection of bridges should be included as necessary to ensure conservative load rating models.

The impacts of steel corrosion at the original expansion bearings beneath expansion joints in the bridge decks throughout the Turnpike are significant. The development of large quantities of pack rust between the bearing components has created significant problems with bearing alignment and function in some locations. Bearing issues of this nature reduce the functionality of the bearing and create significant problems in adjacent members including floating bearings, vertical misalignment

of the expansion joints (leading to snowplow blade impact damage), and out of plane bending cracks at beam ends and stiffeners/diaphragms. Under past and ongoing bridge repair contracts, the OTIC rehabilitated and replaced many of these deficient bearings with an elastomeric type. Elastomeric bearings are less prone to this type of deterioration and should alleviate many of these issues in the future. Despite the completed work, many original and rehabilitated bearings that were not replaced with elastomeric bearings still exhibit significant issues. OTIC should develop an aggressive bearing rehabilitation and/or replacement program to improve long-term serviceability and performance.



Typical OTIC Elastomeric Bearing

Over the past several years, many bridges have exhibited delaminating haunch, parapet and deck concrete over the mainline roadways. The potential for falling concrete poses a significant threat to the traveling public and, when discovered, is immediately addressed by both bridge inspectors and the OTIC maintenance crews. Bridge safety inspections occur only once a year and reveal many of these issues. However, these problems develop year-round, and as such, the OTIC should implement a parapet monitoring program to minimize these public safety hazards. These parapet deficiencies typically occur at vandal fence anchor locations.

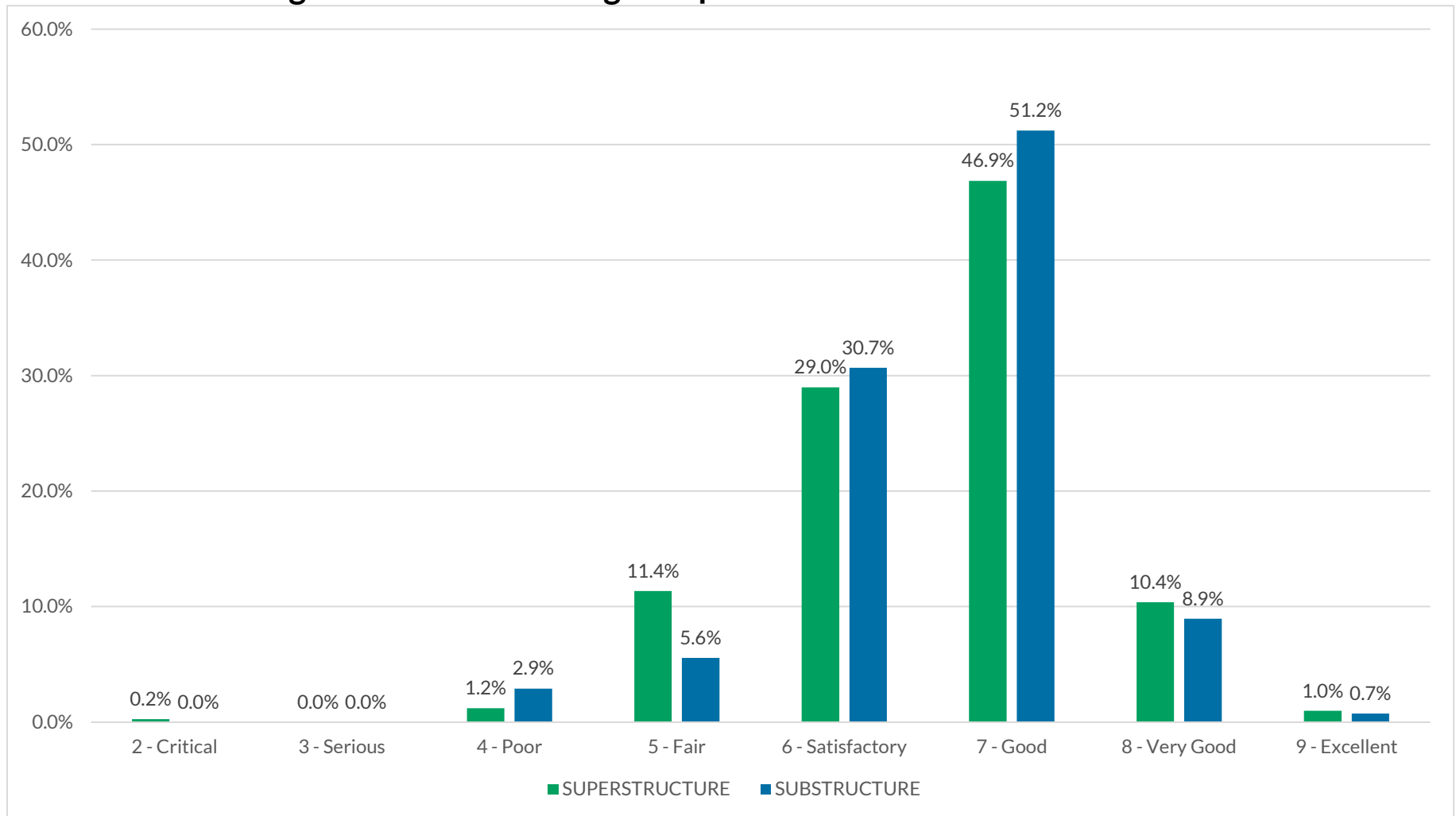
The OTIC is making changes to new and rehabilitation design policies to address common deficiencies in its bridges. Expansion joints are being eliminated where feasible. This includes link slabs at piers and semi-integral abutments. Reconstruction of abutment seats is being performed in lieu of individual pedestal reconstruction. The OTIC is also planning to invest more significantly in the bridge painting program in the coming years.

It is recommended that the OTIC continue to closely monitor its bridge inventory and budget for bridge maintenance and replacement projects including bridge painting, deck overlays, deck replacements, and complete bridge replacements.

## DOCUMENTATION

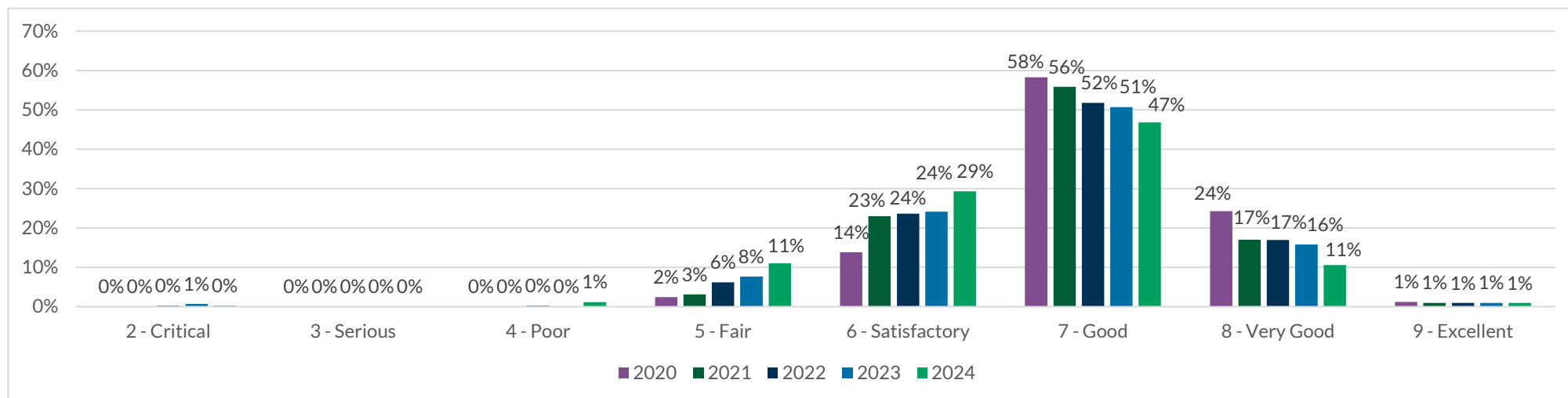
As required by the FHWA and ODOT, inspection reports for 2024 have been prepared for the OTIC on all Turnpike bridges. All inspection reports were finalized in ODOT's AssetWise system prior to October 2024. These reports include element level planning data, inspector notes, and inventory data that can be used for planning future maintenance and repair programs.

**Figure 2.3.3: 2024 Bridges Superstructure & Substructure**

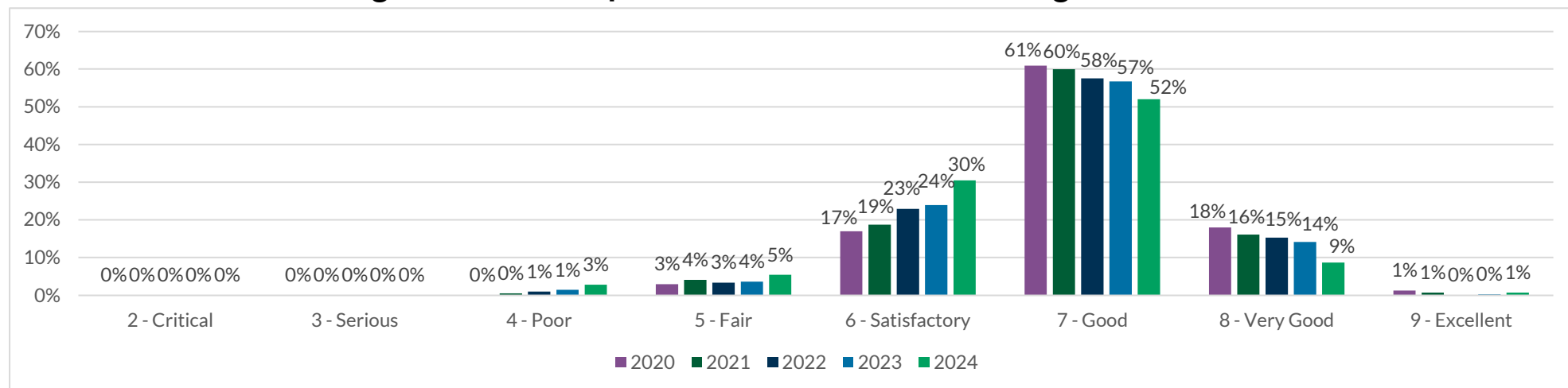


*Graph showing distribution of Superstructure and Substructure summary ratings for bridges maintained by the OTIC. (Note due to rounding for clarity total may not equal 100% & OTIC inventory total differs every year)*

**Figure 2.3.4: Comparison of Superstructure Rating Summaries**



**Figure 2.3.5: Comparison of Substructure Rating Summaries**



*Graphs showing distribution of Superstructure and Substructure summary ratings for bridges maintained by the OTIC from 2020-2024. (Note due to rounding for clarity total may not equal 100% in some years & OTIC inventory total differs every year)*



## 2.4 CULVERTS

### Culverts Classified as Bridges

Structures with a clear span of ten (10) feet or more are inspected and classified as bridges according to Ohio Revised Code Section 5501.74 (the federal definition considers spans of twenty (20) feet or more). Currently, the OTIC owns and maintains 116 culverts falling into this category (thus classified as bridges). Most of these culverts are cast-in-place reinforced concrete box shapes with single or multiple cells. Common deficiencies include deteriorated headwalls and wingwalls as well as obstructions and scour in the waterways. Figure 2.4.1 provides a summary of element-level ratings for culverts (classified as bridges) maintained by the OTIC from 2020 through 2024.

### CULVERTS NOT CLASSIFIED AS BRIDGES (CULVERTS LESS THAN 10 FEET)

Structures with a clear span of less than ten (10) feet are not classified as bridges. However, their proper function is tied to the long-term performance of the OTIC's assets.

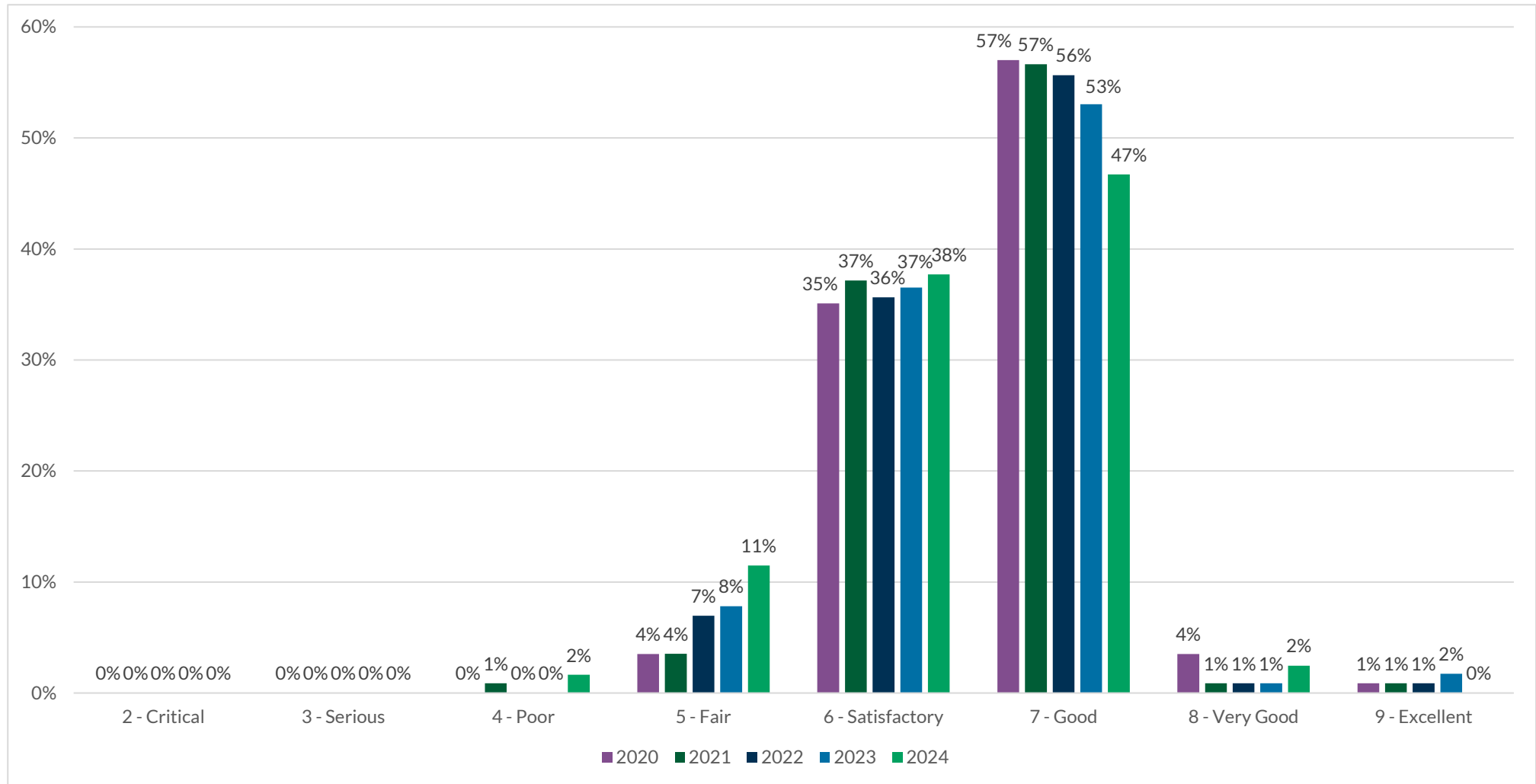
Through 2023, the OTIC's culverts had been inspected on an annual basis. Frequency of inspection was modified in 2024 to be more in line with ODOT and other agencies. Additionally, ODOT's Culvert Maintenance Manual is more closely followed for the inspection process. Culverts thirty (30) inches and larger will be inspected once every five (5) years if the general appraisal rating is higher than 4. Any culverts with general appraisal ratings 4 or less will be inspected annually until they are improved. The inventory of culverts will be split into fifths and a different set of culverts inspected each year. In 2024, a test section of culverts in the Amherst maintenance section was inspected and inventoried. Once the inspections were completed, the inspection information along with the current culvert inventory data was transitioned from Microsoft Access to GIS in 2024.

The historic inventoried and inspected culverts Turnpike-wide range in size from thirty (30) inches to one hundred and eight (108) inches and are typically constructed of corrugated steel and reinforced concrete pipes. We closely inspect culvert barrels to detect early signs of deterioration that may require repair or replacement. Common deficiencies in small culverts include broken channel and ditch protection, headwall deterioration, erosion, obstruction, and scour of the waterways. The 2024 test Amherst section inspections included seventy-one (71) culverts. Refer to Figure 2.4.2 for General Appraisal ratings.

### CULVERT CONSTRUCTION AND REHABILITATION

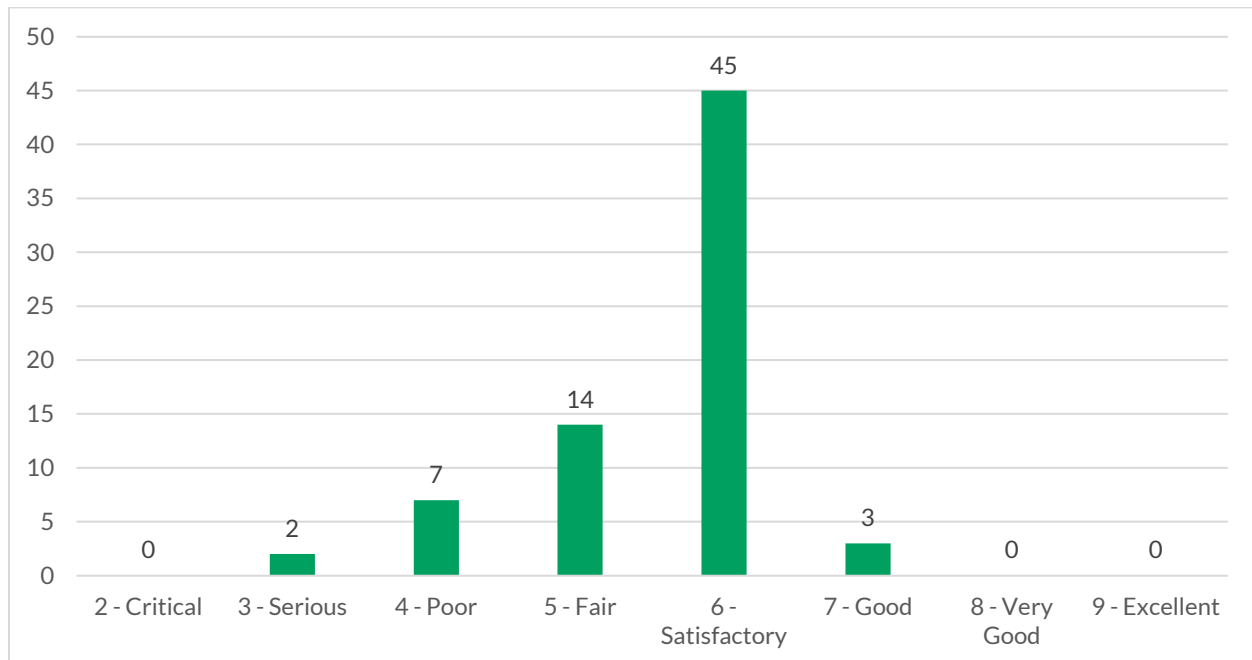
Starting in 1995, in conjunction with the Third Lane Program (MP 59.52 to 218.70), and more recently with the Pavement Replacement program, design consultants inspected all culverts within a design contract section. Any necessary repairs were then incorporated into the Third Lane or Pavement Replacement construction plans. These repairs included tasks such as installing pipe liners, recoating bituminous pipes, realigning barrels, and repairing or reconstructing wingwalls and headwalls with new flared end sections. Additionally, ditch improvements were part of these construction contracts.

**Figure 2.4.1: Culvert Component Ratings for Culverts Classified as Bridges**



*Graph showing element ratings for all OTIC culverts classified as bridges maintained by the OTIC from 2020-2024 (Note due to rounding for clarity total may not equal 100% in some years & OTIC inventory total differs every year). Current AssetWise ratings used for culverts not inspected in 2024.*

**Figure 2.4.2: 2024 General Appraisal Ratings for Culverts Less than 10 feet\***



\* Culverts inspected in 2024 are those between MP 127.0 and MP 145.5

It is important to note that culverts outside the scope of the Third Lane and Pavement Replacement Programs are now nearly seventy (70) years old. According to the current ODOT Location and Design manual, pipe materials should have a design lifespan of 75 years or should be rehabilitated or replaced when a General Appraisal reaches 4. Nine (9) culverts in the Amherst maintenance area were rated 4 or below in 2024. Twelve (12) culverts were rated 4 or lower in 2023 inspections. One of these culverts was inspected with others in the Amherst maintenance area. The other poorly rated culverts outside of Amherst were inspected in accordance with ODOT policy of inspections annually when rated at a 4 or lower. It is recommended that rehabilitation and/or replacement of these poorly rated culverts be prioritized.

### **CULVERTS LESS THAN 30 INCHES**

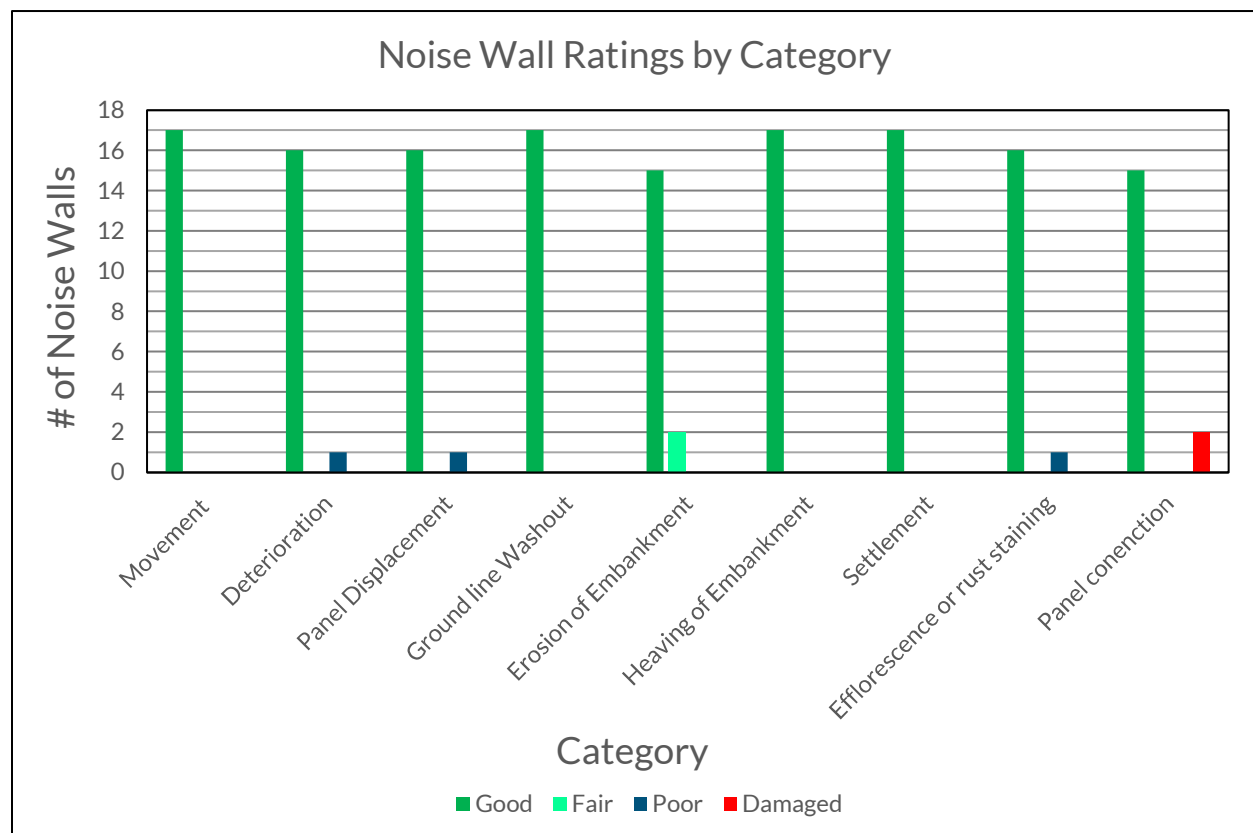
In recent years, the failure of smaller culverts necessitated slope repairs or dedicated slope repair projects. In 2024, OTIC expanded the culvert program to include culverts ranging from twelve (12) inches to thirty (30) inches. Work in 2024 involved inventory of these smaller culverts in GIS. The intent is to field-verify and inspect these inventoried culverts starting in 2025. These smaller culverts will be inspected once every ten (10) years if their general appraisal rating is higher than 4. Any culvert with a general appraisal rating of 4 or less will be inspected annually until improved. Additionally, culverts within an upcoming project will also be inspected ahead of the project by the contracted Design Consultant. Developing a repair program for the aging storm sewer system will help protect connected and adjacent facilities and roadways from potential failure.

## 2.5 GUARDRAIL, MEDIAN BARRIERS, NOISE WALLS, AND FENCES

The guardrail along the entire length of the Turnpike's mainline is generally in good condition, with minor rusting. Ongoing efforts include upgrading end terminals and impact attenuators to meet current AASHTO Manual for Assessing Safety Hardware (MASH) crash standards as part of the OTIC's pavement projects and the annual guardrail upgrade program. In anticipated areas of Turnpike projects, existing guardrails should be evaluated for replacement and upgrades as part of other capital improvements.

The median barrier spans approximately one hundred and sixty-six (166) miles (3<sup>rd</sup> lane and ORT barrier wall) of the Turnpike and is generally in good condition, although some isolated vertical and horizontal cracking exists. Repairs and upgrades should be incorporated into other capital improvement projects within the Pavement Replacement Program and Resurfacing Projects.

In 1994, the first noise wall along the Turnpike was built by the Brecksville Reserve homeowners. The wall was built independently of Turnpike funds, it was granted an easement with the understanding the maintenance would stay with the HOA. As of 2024, approximately 18,380 linear feet of noise wall exist, comprised of seventeen (17) individual walls at nine (9) locations that are maintained by Turnpike or ODOT forces. There are no noise wall inspection and management programs for the State of Ohio to rely on for periodic assessments. Assessments were performed in 2024 based on best practices for noise wall inspections from other states. Overall, the state of the seventeen (17) noise walls falls into the "Good" category.





The Turnpike's right-of-way fencing serves to prevent animals and pedestrians from entering the traveled way. Typically, this fence consists of welded wire farm fencing. The originally installed fence was replaced beginning in 1987 and the complete fence replacement program is approximately 95% complete as of 2024, with only the most challenging areas remaining. We recommend continuing fence replacement as part of pavement projects and ongoing maintenance by the OTIC's forces.

As development progresses along the Turnpike, some sections of the fence have been upgraded from welded wire to standard chain-link style fences. Overall, the fence is in good condition, although minor damages near fence terminals at bridges and culvert stream crossings have been observed (please refer to the bridge and culvert inspection reports for specific locations).

To ensure continued safety and functionality, we advise the OTIC to allocate budget for fence maintenance, replacement, and improvements to guardrail and barrier systems as part of other capital projects.

## 2.6 INTERCHANGES

The number of interchanges on the Turnpike is currently at thirty-four (34), including the interchange at State Route 49 and the nine un-tolled interchanges. Twenty-four (24) of the interchanges are operating toll plazas. Twenty (20) of those operating toll plazas are at interchanges and four (4) are along the mainline.

On April 10, 2024, the OTIC successfully launched its new modernized hybrid open barrier/ticket system and back-office tolling system. Combining technology and construction under more than twenty separate projects, this was the largest project undertaken by OTIC since the toll road opened in 1955. This achievement was the realization of the 2016 Strategic Plan to enhance safe and efficient travel, enhance customer service, protect toll revenue, minimize revenue leakage, and further stimulate economic activity and growth across the two hundred and forty-one (241)-mile Turnpike and I-80 Midwest corridor. The launch of the new system included the introduction of non-stop open road tolling (ORT) at highway speeds, the removal of all gates in E-ZPass entrance and exit lanes, building three new barrier plazas, significant road construction and lane conversions, license plate image capture for violation processing, enhancements to the customer service center, and the ability for customers to choose multiple convenient payment options via multi-protocol transponders, cash, credit, or payment online.



[New Westgate Toll Plaza](#)

The new modernized hybrid open road tolling (ORT) roadside and back-office tolling system, delivered under budget, has transformed toll collection on the two hundred and forty-one (241)-mile Turnpike from a closed ticket system to a hybrid open barrier/ticket system. The new system

offers non-stop highway speed tolling for E-ZPass customers traveling on the Turnpike mainline, non-stop entrance onto the Turnpike at low speeds at more than twenty interchanges and eliminates toll collection at nine (9) interchanges. The elimination of tolling furthers economic growth in surrounding communities by providing both residents and visitors free access to businesses, attractions, and restaurants in proximity to these previously tolled interchanges. With the closing of facilities, the OTIC will realize cost savings with a reduction in utility and maintenance costs at these nine (9) locations. The OTIC is developing plans to eliminate toll booths at the nine (9) locations. A design template is being prepared with two (2) pilot projects to take place with design starting Fall of 2024. The intent of this project is to allow for a free flow of traffic at thirty-five (35) miles per hour at these interchanges.

This new system also introduced a modernized back-office system and a new self-service mobile-friendly website. Customers have multiple payment options via online payment and multi-protocol transponders, as well as in-lane cash and credit cards. The hybrid system aims to protect the OTIC's toll revenue without introducing significant revenue risk to the OTIC's financial position, while promoting economic activity and enhancing safe and efficient travel. The introduction of multi-protocol transponders in more than two hundred (200) tolled conventional and ORT lanes across the system positions the Turnpike and its customers for future upcoming nationwide electric tolling interoperability.

The final capital cost for the entire tolling collection system (TCS) project is estimated at approximately \$263.6 million. The new TCS is expected to save about \$257 million in operating costs over thirty (30) years. The operational savings is a result of the reduction in the number of toll plazas from thirty-one (31) to twenty-four (24); the addition of automatic toll payment machines at all toll plazas; the elimination of toll gates at all entry lanes; and a projected increase in E-ZPass usage.

The pavement of each interchange was rated as part of this year's report with many interchanges having high PCR scores. The pavement resurfacing program should continue to be implemented to maintain safe and smooth pavement. LED luminaire upgrades are on-going as part of Turnpike capital improvement projects to lower energy costs for the OTIC.

This year, a review began of the existing geometry of interchanges and the associated ramps with each were evaluated as part of the 2024 Interchange Design Report. Existing historical design information for ten interchange locations were provided and subsequently reviewed. Additional existing design information or survey will be required to provide a complete horizontal and vertical review of all the OTIC interchange ramps. For the information provided, design criteria was developed based upon the current ODOT Location and Design Manual, Volume 1 (July 19, 2024) and the current posted speed. The design plans for each ramp were then compared against the design criteria to determine if the geometry "Meets" or "Does not Meet" current design standards. Crash data for each ramp location was then downloaded from the ODOT GIS Crash Analysis Tool (GCAT). This raw data was imported into the ODOT Crash Analysis Module (CAM) and had a Crash Analysis run. The crash data summary, pre-crash actions, and contributing circumstances were added to each ramp evaluation to add context of overall safety of the interchange. While the interchange ramps do not meet current design standards, the substandard designs are not typically the contributing factor in crashes.

Despite the age of the facility infrastructure, the interchanges and toll plazas are serving their intended function. The pavement resurfacing program for the Turnpike ramps is required to continue to keep the ramp pavement safe and smooth. Some of the tolling equipment, such as the

toll booths frame and siding, toll booth HVAC, server room HVAC, and the utility building HVAC system, are in need of dedicated maintenance or replacement. Capital funds have been appropriated for replacement of the aforementioned items on an as-needed basis and it is recommended this continue. An overview of the toll plaza utility buildings and toll booths inspection findings and the Facility Plans is included in Section 2.8 Buildings.

## 2.7 TECHNOLOGY

The OTIC Technology Department is a team of twenty-four (24) individuals, responsible for managing, maintaining, implementing, and supporting all information technology and telecommunications related needs throughout the OTIC's fifty-nine (59) facilities. The team is based out of the OTIC's Berea headquarters, the Swanton Maintenance Building (West), and Toll Plaza 232 (East).

The OTIC Technology Building, completed in 1999, serves as the central hub for all the OTIC's technology systems. It houses the OTIC Information Systems Department and Data Center, and provides office space for the Technology Department operations, Communication Center operations, and Ohio State Highway Patrol staff. An expansion and remodeling contract of the Berea complex is expected to begin design in 2024 with anticipated completion in 2026.

Telecommunications Network: The OTIC has a private telecommunications network, including twenty-four fiber strands reserved by Lumen between MP 40 and MP 228. In 1998, the OTIC installed its own fiber optic cable (MP 40 to Westgate and MP 228 to Eastgate) to provide complete paths to all fifty-five (55) facilities. This fiber supports a SONET fiber optic system, which was installed in 1999. In 2020, an assessment of the existing fiber optic cabling was completed. This led to the purchase of replacement fiber optic equipment in 2021, which converted the existing SONET network to a Dense Wavelength Division Multiplexing (DWDM) packet network. This upgrade supported the 2024 Go Live of the new Toll Collection System.

Communication Systems: In 2015, the OTIC decided to transition from its VHF high-band system to the State of Ohio's MARCS system. This project included the procurement of Motorola dispatch consoles and control points and was completed in 2016. The Toll Intercom was migrated to MARCS in 2020 and further upgraded in 2022. The OTIC uses a voice logging recorder to record all radio calls processed by the OTIC communications center. Replacement of antiquated front-end components of existing intercom system is scheduled for completion in 2024.

Intelligent Transportation Systems (ITS): In 2005, a strategic plan for the implementation of intelligent transportation systems (ITS) components was developed. This led to the replacement of the existing SONET system with new switchgear to provide higher bandwidth capacity. The OTIC also implemented a GIS in 2008, and upgrades to the system were performed in 2014. Other ITS components include mainline variable message signs, a messaging and alarm system, a pavement weather monitoring system, and an integrated video monitoring system. Recommendations from a 2016 study continue to be implemented. OTIC has initiated the design of Variable Speed Limits (VSL) to enhance safety in zero-visibility prone areas. The installation of Dynamic Message Signs and CCTV will be included in this work, to provide customers information and situational awareness.

Web and Data Systems: In 2014, the OTIC replaced its network attached storage (NAS) system and obsolete data servers with a converged network infrastructure (CNI). In 2016, a new voice over internet protocol (VoIP) phone system was implemented which included Wi-Fi access points for all

maintenance facilities, toll plazas, and services plazas to provide connectivity for wireless VoIP phones and future mobile data needs.

Telephony Systems: In 2015, the OTIC reviewed options for replacement of its PBX, voicemail and call accounting systems. As a result, the OTIC contracted with Cincinnati Bell Technology Solutions (CBTS) to subscribe to its Next Generation Telephony System (NGTS). In January 2022, the OTIC went live with a new Intelligent Voice Response (IVR) System for the Customer Service Center. Enhancements to the system were made in January 2024 to better support the new TCS. This system includes features such as voice recognition, courtesy call back, and support of Spanish as a second language.

Future Projects planned for 2024 and beyond include:

- Continued upgrade and replacement of the existing 48V VDC batteries, rectifiers, and inverters
- Contract Management Systems are expected to be transitioned to Periscope in 2024.
- An Invoicing System transition to SmartDocs is scheduled for completion by the end of 2024. This will allow for centralized approvals and linkages to the OTIC's enterprise resource planning (ERP) system.
- Construction Management Systems are scheduled to be converted to AASHTOWare in 2024.
- Upgrades to the OTIC's Kronos Human Resource and Payroll Systems are scheduled for implementation by January 2026.
- Upgrades to Timekeeping Systems are scheduled for 2024
- Distribution of additional security awareness training programs for all employees
- Continued upgrade and further enhancement of Video Surveillance Systems. Phase 1 across all buildings is complete. Additional cameras are planned for 2025.
- Installation of ITS cameras is scheduled for fall 2024.
- Upgrades to the website are planned in 2025 to include a general refresh as well as permitting and claims tools.
- An upgrade of the HCI hardware is planned for 2025 or later.
- Hardware replacement and reconfiguration of the OTIC's wireless network
- Lifecycle replacement of administration computers is scheduled to be completed by the end of 2024.
- Upgrades to the OTIC's ERP system will be evaluated after 2025.

It is recommended that OTIC continue to fund these projects to maintain modern technology systems that support efficient operations.

## 2.8 BUILDINGS

### Inspection

The Michael Baker team conducted the annual visual inspection of all building structures maintained by the OTIC. This comprehensive inspection covered both interior and exterior conditions including storage facilities. It also assessed potential health and safety risks related to structural conditions, and the performance of roofing, electrical, plumbing, and HVAC systems. The field inspection notes, along with the Microsoft Access database, have been provided to the OTIC to assist in current and future construction planning and maintenance priorities. For a complete list of building structures along the Turnpike, please refer to Table 2.8.1.

In 2017, the Facilities Strategic Plan for the OTIC's maintenance buildings, administration buildings, Service, and toll plazas began development. The strategic plan evaluated the replacement of existing maintenance buildings, a process since completed. The subsequent implementation is currently underway, with planned demolition and rebuilding expected to commence in 2028.

**Table 2.8.1: Total\* number of buildings on the Ohio Turnpike**

Category	Quantity
Administration Building	1
Technology Building & Vehicle Maintenance Garage	1
Maintenance Buildings	8
Sign Shop	1
Ohio State Highway Patrol Post Buildings	1
Toll Plaza/Interchanges	33
Service Plaza Buildings	14
Total	59

*\*The total does not include ancillary buildings, such as vehicle storage garages, salt domes, equipment storage buildings, individual toll booths as well as sewage and water treatment plant buildings and sites. There are a total of 34 interchanges including the State Route 49 interchange, but that location does not have a building.*

### Administration Building Complex

The OTIC's Administrative Complex, which includes the administrative building (MP 159.4), technology buildings (MP 159.41), and a vehicle maintenance garage (MP 159.41), is situated near the City of Berea, adjacent to the Turnpike. At this location, various administrative departments operate, including executive, legal, chief financial officer/comptroller, human resources, accounting, procurement, contract administration, audit, marketing and communications, payroll, office services, safety services, service plaza operations, toll operations, customer service center, maintenance, and engineering. Located to the east of the administration building, the technology building and the vehicle maintenance garage house the technology staff, computer center, turnpike radio communications center, and the Ohio State Highway Patrol (OSHP) turnpike operations center.



Recent improvements include replacement of the administration building's north wing boiler with a high-efficiency model in 2017, communications equipment HVAC upgrades in 2018, technology building boiler replacement in 2019, and new roofs to both buildings between 2020 and 2023.

While the administration building, vehicle maintenance garage, and technology building are generally in good condition, there are some issues with the administration building's building envelope, south wing mechanical systems, and office space availability. An architect is currently being selected to provide design plans for renovations to the buildings and the grounds, and construction is expected to begin in late 2025.

## Maintenance Buildings

Maintenance facilities consist of eight (8) primary structures constructed from steel and masonry, spaced approximately 30 miles apart along the turnpike. These buildings house central main bays,



Hiram Maintenance Garage

supporting offices, restrooms/locker rooms, break rooms, mechanic bays, supply areas, and storage spaces. Each maintenance facility complex includes a concrete and wood salt dome, along with additional storage buildings and salt sheds made from metal, wood, or a combination of materials. Overall, the maintenance buildings are in good condition, although deficiencies have been observed and current operations are exceeding the current capacity and efficiency of the buildings.

Several common conditions were noted in 2024 inspections. These include minor damage and potentially hazardous cracking in the exterior brick facades, varying degrees of surface rust on both interior and exterior steel surfaces, and cracks in the concrete floors across maintenance areas. Historically, the roofs of nearly all maintenance buildings were deteriorating, leading to water leakage and damage. The Facilities Strategic Plan for maintenance buildings recommends a complete replacement of these structures, scheduled to begin in 2028. To address the decaying and leaking roofs, roof replacements and overlays were carried out between 2018 and 2020,

backed by a fifteen (15)-year warranty.

The additional structures within the maintenance facility complexes exhibit conditions ranging from good to deteriorating. Common issues include varying degrees of structural damage to exteriors due to impacts and corrosion. Several aging storage garages dispersed along the Turnpike show moderate to severe signs of decay. As outlined in the previously mentioned Facilities Strategic Plan, these facilities are slated for demolition and reconstruction, with work set to commence in 2028.

## Highway Patrol Facilities

The OSHP facilities, including Milan Patrol Post 90 (located at MP 118.6) and OSHP Turnpike Operations (situated at MP 159.5 in the Admin Complex), are generally in good condition.



Milan Patrol Post 90

Additionally, there are other OSHP posts within maintenance buildings at the following locations: Swanton Patrol Post 89 (at MP 48.4 in the Swanton Maintenance Garage) and Hiram Patrol Post 91 (at MP 198.6 in the Hiram Maintenance Garage). Notably, some holes in the roof and leaks were observed at Milan Patrol Post 90, which should be addressed. The patrol posts for Swanton and Hiram will be incorporated into the design plans for the raze and rebuild of the maintenance facilities.

## Toll Plaza Buildings

With a few exceptions, the overall condition of toll plazas—encompassing toll booths, canopies, utility buildings, and relevant additional structures—was deemed satisfactory. However, a significant number of toll booths are approaching moderate decay, with complete section loss in some lower areas, necessitating consideration of repair or replacement. Toll plazas that have recently undergone renovation or are newly built are generally in good condition and well-maintained.

Regarding the existing mechanical systems serving toll plazas, booths, open road tolling, and utility buildings, upgrades and improvements are needed. The HVAC technology is outdated, relying on constant volume air handling units (AHUs) and pumps, along with inefficient control schemes. Upgrades are typically implemented as these systems fail. Additionally, the plumbing systems exhibit varying degrees of corrosion and leakage from equipment and service lines.



TP211 Toll Plaza

As part of this Toll Modernization project, three new mainline toll plazas were constructed. Toll Plaza 49 (MP 49) was completed in 2021, while Toll Plazas 4 (MP 3.5) and 211 (MP 211) finished construction in 2023. Furthermore, the existing Westgate Toll Gate (TP 2 – MP 2.7) was demolished in 2024 when the new TCS Toll Plaza 4 (MP 3.5) became operational.

## Service Plaza Buildings

Currently, there are fourteen (14) service plazas operating along the Turnpike. For a complete list of these service plazas, please refer to Table 2.8.2. Overall, the service plazas are in good condition.

As of 2013, the 16 original service plaza facilities, dating back to the early 1950s, have been demolished, with fourteen (14) of them being replaced. The newly constructed service plazas are designed to meet the needs of Turnpike travelers and professional drivers. They offer a variety of amenities, including food courts with sit-down restaurants and fast-food vendors, electronic



Erie Islands Service Plaza

centers providing travel and weather information, and retail outlets. Additionally, special areas dedicated to truckers, such as lounges, laundry facilities, and showers, have been integrated.

A pair of service plazas—Oak Openings and Fallen Timbers at Mile Post (MP) 49.0—were demolished in 2012 and have not been rebuilt. This location now serves as Toll Plaza 49, part of the modernization of the TCS.

**Table 2.8.2: Service Plazas in Operation on the Turnpike**

Eastbound Service Plazas		Westbound Services Plazas	
Tiffin River (MP 20.8)		Indian Meadow (MP 20.8)	
Wyandot (MP 76.9)		Blue Heron (MP 76.9)	
Commodore Perry (MP 100.0)		Erie Islands (MP 100.0)	
Vermilion Valley (MP 139.5)		Middle Ridge (MP 139.5)	
Towpath (MP 170.1)		Great Lakes (MP 170.1)	
Brady's Leap (MP 197.0)		Portage (MP 197.0)	
Mahoning Valley (MP 237.2)		Glacier Hills (MP 237.3)	

The OTIC has successfully completed refurbishment and updates for the interiors, exteriors, mechanical systems, and lighting at several service plazas. Specifically, the following plazas received attention: Erie Islands, Commodore Perry, Middle Ridge, Vermilion Valley, Great Lakes, Towpath, Portage, and Brady's Leap. Between 2014 and 2018, a program replaced the existing flexible underground gasoline and diesel lines with fiberglass at these same service plazas. Additionally, roof membrane replacements were carried out at Commodore Perry and Erie Islands in 2019. The systematic upgrade and replacement of mechanical components continued into 2023, including the substitution of hot water tanks with tankless systems. It is recommended that the OTIC persist with periodic upgrades and rehabilitation of these facilities.

The wastewater treatment plant at Erie Islands Service Plaza (Mile Post 100.0) was taken out of service in July 2024 and replaced with a sanitary sewer lift station and sewer line that runs to the City of Clyde.

Furthermore, the sanitary pump station at the Portage Service Plaza (Mile Post 197.0) underwent an upgrade in 2020. This upgrade involved replacing existing pumps, equipment and controls, and enhancing the pump house. Additionally, a pigging station was incorporated for future maintenance purposes.



Waste Water Treatment Plant

In 2019, electric vehicle charging stations were introduced at the Indian Meadow, Tiffin River, Blue Heron, and Wyandot Service Plazas. Each station is equipped with four (4) charging stalls and provided by Electrify America. These stations offer CCS, CHAdeMO, and J1772™ connectors, featuring 50 kilowatt (kW), 150 kW, and 350 kW DC fast chargers. In subsequent years, Tesla Supercharger stations were installed at the Blue Heron and Wyandot Service Plazas (2021), followed by additional installations at the

Indian Meadow, Tiffin River, Great Lakes, Towpath, Mahoning Valley, and Glacier Hills Service Plazas (2023). The expansion of electric vehicle charging stations is projected to continue in 2024/2025, with plans to add non-proprietary charging facilities at the Great Lakes, Towpath, Mahoning Valley, and Glacier Hills service plazas.

## General

In 2019, the OTIC introduced a facility management software called Asset Essentials. This software enhances the overall process of facility management by establishing a tracking system for handling maintenance requests, carrying out preventative maintenance work, managing compliance comprehensively, and providing insight into asset costs. By making key performance indicators more visible, Asset Essentials enables the Turnpike to operate more efficiently in terms of facility management. Currently, the timely completion of work orders is monitored and reported monthly, serving as a measure for determining best practices in effective resource management.



## 2.9 COMMUNICATION TOWERS

The OTIC owns thirty-four (34) communication towers throughout the length of the Turnpike. Diamond Communications is the current leasing agent regarding equipment housed on the towers. The OTIC initiated a program in 2024 to inspect each tower once every five (5) years in accordance with Telecommunications Industry Association Standards (TIA-222-G and TIA-222-H). Towers located from Milepost 2.70 to 39.80 were inspected in 2024, including MB-1, TP-2, TP-13, TP-25, TP-34 and TP-39. Tower inspection reports were submitted to the OTIC under separate cover. The inspected towers are generally in good condition with only minor deficiencies.



TP-2 Westgate Tower Inspection



## 2.10 MAINTENANCE ORGANIZATION AND EQUIPMENT

The Turnpike is divided into eight (8) maintenance sections, each approximately 30 miles in length. Eight (8) maintenance buildings are located at approximately 30-mile intervals along the Turnpike. Each building serves as the headquarters for a maintenance section and is overseen by a section foreman. Maintenance equipment and supplies are stored in these buildings and the adjacent yards.

The OTIC maintenance organization is divided into two (2) divisions, each under the direction of a division superintendent. Each division consists of four (4) maintenance sections. The western division's personnel and equipment is housed in the Elmore maintenance building, while the eastern division is housed in the Hiram maintenance building.

The maintenance section personnel perform tasks such as snow removal, mowing, pavement and minor bridge repairs and maintenance, joint sealing of roadways, right-of-way fence repair and replacement, guardrail repair and replacement, storm water and sanitary sewer repairs and replacements, policing the right-of-way, and maintenance and repair of vehicles and equipment.

The division personnel consist of tradesmen and mechanics who perform duties such as mechanical and electrical work, equipment repair, operation and maintenance of utilities, and perform major (non-routine) work items, with the assistance of the maintenance section, not performed under contract.



OTIC Fleet is Well Maintained

Mobile equipment such as trucks, excavators, backhoes, rollers, front-end and skid steer loaders, conveyors, and other construction and maintenance equipment continues to be well maintained by the maintenance personnel and replaced at the end of their service life cycle.

It is recommended that OTIC continue to fund the Renewal and Replacement Program to ensure maintenance operations and equipment needs are met.

## 2.11 SAFETY AND SIGNS

The OSHP developed an electronic OH-1 crash reporting system that was instituted on the Turnpike in March 2008. To accommodate the changes, the OTIC developed a file transfer system in cooperation with the OSHP. The combination of these changes significantly reduced the amount of time between the actual crash and the OTIC's ability to process crash data. This electronic system allows for a greater level of accuracy in the OTIC reporting system.

The OTIC Safety Services Department documented a decrease in crashes over the past couple years. The crash rate per one hundred million vehicle miles decreased from 82.1 in 2022 to 66.2 in 2023, and the fatality rate decreased from 0.5 in 2022 to 0.3 in 2023. Of special note for 2024, four (4) fatalities and numerous injuries occurred during three separate crashes in Lucas and Fulton Counties on August 15. The crashes remain under investigation by National Transportation Safety Board (NTSB). Appendix E contains crash statistics including traffic accidents and fatalities and annual accident rates and fatality rates per one hundred million vehicle miles of travel.

As part of the 2024 inspections, a comprehensive inventory and evaluation of the retro-reflectivity of all OTIC-maintained signs were conducted. The sign inventory covered both the mainline and all interchanges, with approximate mile-post locations. Nighttime dashboard inspections were performed by two inspectors in a vehicle equipped with a high-resolution dash camera. Signs were categorized as Good, Fair, or Poor. Good signs were completely retroreflective and easily visible at night, while Poor signs lacked reflectivity or had significant non-reflective portions. Fair signs fell in between, mostly reflective with minor un-reflective elements (such as IR Shields).

In general, mainline signs were in Good condition, although cross-street signs on overhead bridges tended to be in Poor condition. Interchange signs were also generally in Good condition. Signs in Fair/Poor condition on interchanges were often offset due to ample overhead lighting. It is recommended that sign evaluation and upgrades be integrated into pavement rehabilitation projects.

The OTIC maintains its own sign shop, responsible for routine maintenance, fabrication, and certain upgrades to mainline, ramp, and plaza signs. The 2024 retro-reflectivity inventory results could be correlated with the OTIC sign shop fabrication dates to implement a sign upgrade program. This program could complement signage upgrades completed as part of other capital improvement projects.

Starting in 2016, the OTIC initiated an overhead sign replacement program, addressing all deficient overhead sign structures. Additionally, a ten (10)-year program aims to replace all overhead sign structures throughout the two (2)-lane portions of the Turnpike. In 2022, a visual inspection of all overhead sign structures occurred as part of the five (5)-year schedule. Overall, the sign structures were in good condition, with minor damage to lettering/panels and some surface corrosion noted. The detailed 2022 report influenced sign maintenance and improvement, with the next inspection planned for 2027.

Similarly, in 2020, the OTIC conducted a visual inspection of all light tower poles and foundations, following the ODOT/OTIC's inspection procedures. The light towers were generally found to be in good condition. The detailed 2020 report guided light tower maintenance and improvement, with the next report scheduled for completion in 2025.

Regarding pavement markings, annual replacements occur on a contract basis for mainline, interchange ramps, service plaza acceleration, and deceleration ramps. The OTIC sign shop handles pavement marking replacement within service plazas, maintenance buildings, and toll plazas annually. The OTIC currently specifies high-quality, fast-dry, water-based acrylic paint systems with retro-reflective glass beads for dark and wet conditions. Long lasting, durable, wet-night reflective pavement marking systems are currently being evaluated for incorporation into future projects.

Lastly, raised pavement markers, object markers, and barrier delineators continue to be replaced by the OTIC's maintenance personnel. Funding for maintaining and upgrading safety items such as signs, markings, and delineators should remain a budget priority to ensure a safe travel experience.

Traffic incident management (TIM) is the coordinated detection, response to and removal of traffic incidents and the restoration of traffic capacity as quickly and safely as possible. TIM is a coordinated effort both internally and externally.

TIM depends on communication among responsible personnel (e.g., in incident reporting, response dispatch, and traffic management). Experience gained from each incident provides opportunities to improve TIM performance. Both communication and learning from experience are being enhanced by new technology and management practices, such as crowd sourced map applications (Google Maps, AppleMaps, Waze, etc.), geo-located device inventory (GIS), communication procedures (e.g., standardization of terminology and adoption of shared radio frequencies), and channels for communicating with travelers (Facebook, Twitter, Instagram, etc.). The OTIC has partnered with the ODOT on the wireless emergency alert system (WEA) that can provide geo-located emergency text alerts in the event of a major incident.

The OTIC currently contracts services for incident response purposes. Freeway patrol is performed across the turnpike during off-shift hours and disabled vehicle services contracts are in place to ensure motorists with vehicular problems are quickly responded to.

The OTIC is committed to the efficient operation of the Turnpike. While various police and fire agencies have the statutory authority to close travel lanes, the OTIC works to minimize the disruption to the traveling public by assisting with traffic control, developing pre-planned diversion routes, and advocating quick clearance of major traffic crashes.

To this end, the OTIC continues to refine their Incident Management Playbook. The Playbook can be downloaded at: <https://www.ohioturnpike.org/ohio-turnpike-and-infrastructure-commissionincident-management-playbook>

As a means of decreasing the likelihood and severity of crashes and reducing queuing and delay, the OTIC Permitted Lane Closure Schedule (PLC) provides pre-approved lane closure schedules for each segment of the Turnpike. Some segments are deemed to be so sensitive that even a single lane can be closed only when authorized by the OTIC's upper management. For other segments, a lane or multiple lanes may not be closed except during certain times of the day and/or days of the week. Such segments require an approved waiver to extend lane closures outside the specified times. Other segments have enough surplus capacity that single lane closures are allowed at any time without special approval.

While the OTIC strives to eliminate queuing in work zones, the pre-approved closure schedules are based on threshold queuing values which were chosen realizing that this is not always possible to achieve. Special Provision 104 Section H6, utilized in OTIC's construction contracts, stipulates "Approval of any Lane Closure is conditional that the zone must be removed anytime traffic backups extend one half (1/2) mile beyond the first transitional arrow board."

## 2.12 STATE HIGHWAY PATROL

The OSHP continues to patrol the Turnpike under an agreement between the OTIC and the Director of the Department of Public Safety of Ohio. The OTIC, under this agreement, reimburses the state for all costs of the OSHP. Table 2.12.1 shows the contingent of officers designated to the Turnpike.

**Table 2.12.1: Officers designated to the Ohio Turnpike**

Category	Count
Captain / Staff Lieutenant	1
Lieutenants	3
Sergeants	12
Dispatchers	10
Troopers	47
Total	73

The OSHP utilizes patrol vehicles and aircraft from Columbus to accomplish their duties on the Turnpike. Along with traffic enforcement, some of the duties they perform include removing the criminal element from the Turnpike by targeting drug traffickers, weapons violations, and other criminal behavior. OSHP also provides additional security and assistance at the service plazas to vehicles and drivers along the Turnpike. Commercial motor vehicle troopers are assigned to each post and work on the Turnpike daily along with motor carrier enforcement officers taking enforcement on commercial motor vehicles traveling the Turnpike to assure equipment safety, driver restrictions, and height and weight laws are followed.



The OSHP is the Official Law Enforcement Agency on the Turnpike

**Table 2.12.2: Activities of the Patrol (2019-2023)**

Activity	2019	2020	2021	2022	2023	Total 2019-2023
Enforcement Stops	41,410	26,015	31,830	21,617	20,448	141,320
Non-Enforcement Stops	49,590	42,219	44,660	40,766	34,793	212,028
Warnings	17,004	10,672	13,511	10,378	8,742	60,307
Motorist Assists	15,977	13,006	12,592	12,100	9,506	63,181
Crashes Investigated	2,235	1,912	2,390	2,459	2,109	11,105
OVI Enforcement	252	244	224	130	160	1,010
Driving Under Suspension Enforcement	668	648	772	435	402	2,925
Speed Violations	35,125	22,253	26,623	17,497	16,256	117,754
Aggressive Driving Enforcement	8,492	4,181	3,374	1,877	1,657	19,581
Seat Belt Violations†	2,081	1,243	2,048	903	998	7,273
Distracted Driving Violations‡	200	497	864	568	533	2,662
Commercial Vehicle Enforcement	4,227	2,034	3,145	2,625	2,600	14,631
Vehicle Defect Notifications	2,491	1,648	1,865	1,190	994	8,188
Motor Vehicle Inspections	8	29	12	7	9	65
Case Investigations Initiated	748	818	650	396	505	3,117
Felony Arrests	109	168	145	71	99	592
Felony Warrants Served	27	25	24	24	27	127
Misdemeanor Summons Issued	464	538	348	152	208	1,710
Misdemeanor Warrants Served	45	49	87	79	93	353
Drug Violations	433	536	332	142	216	1,659
Identity Theft Enforcements	3	5	3	1	2	14
Response to Resistance Cases	17	19	33	14	28	111
Weapons Violations	16	35	39	13	10	113
Criminal Patrol Points	111	166	103	36	88	504
Blue Max Points	16	11	20	19	19	85

† Seat belt includes both adult and child safety seat violations.

‡ Distracted driving includes incidents with one of the following violations: 4511.204, 4511.205, 4511.991, and 392.82A1 (federal motor carrier violation).



## 2.13 TRAFFIC, REVENUES AND EXPENSES

Total revenues for the OTIC from all sources in 2023 were \$418,839,000, which is a 7.3% increase compared to 2022. This revenue increase was primarily the result of increased toll and investment revenues.

**Table 2.13.1: Comparison of Traffic, Revenue & Expenses, 2023 with 2022**

<b>Passenger Vehicle-Miles of Travel</b>	Increased	5.2%
<b>Commercial Vehicle-Miles of Travel</b>	Decreased	2.2%
<b>Toll Revenues</b>	Increased	2.7%
<b>Total All Revenue</b>	Increased	7.3%
<b>Operating Expense*</b>	Increased	0.92%
<b>Total Expenses, Including Interest Expense and ODOT Infrastructure Project Expense</b>	Decreased	5.1%

*\*Excludes non-cash GASB 68 & 75 Pension & OPEB Expense*

The revenue data for the first seven (7) months of 2024 shows that, when compared to the same period in 2023, toll revenues from passenger cars were up 8.3% and toll revenues from commercial vehicles were up 7.5%. Total toll revenues were up 7.8% for the first seven (7) months of 2024, concession revenues were up 11.4%, and investment income was up 0.6%. Total revenues for the first seven (7) months of 2024 were up 7.0% compared to January-July 2022. The total number of vehicles using the Turnpike during January-July 2024 was 8.2% higher than for this same period in 2023. Upon implementation of the new toll system in April 2024, a full-length trip is now three (3) transactions westbound and two (2) transactions eastbound due to the open road tolling/barrier system structure. Based on current trends to date, total revenues from all sources for 2024 are estimated at approximately \$450,400,000.

### 3.0 ESTIMATE OF CURRENT EXPENSES

The OTIC fiscal year is based on a January through December period. Summarized below is an estimate of the amount of money required to maintain and operate the Turnpike during the calendar year 2024.

<b>SUMMARY</b>	
Administration and Insurance.....	\$ 20,500,000
Maintenance and Operations Expense .....	\$ 113,400,000
Bond Interest and Principal .....	\$ 120,600,000
<b>ESTIMATE OF CURRENT EXPENSES</b>	
Fiscal Year 2024.....	\$254,500,000

Michael Baker International, in its role as Consulting Engineer, reviewed the historical OTIC data related to pledged revenues, expenses, and debt service payments. Pursuant to Article IV, Section 4.08 (b)(ii) of the Amended and Restated Master Trust Agreement dated April 08, 2013, as amended by the Twenty-Fourth Supplemental Trust Agreement dated as of February 15, 2021, between the OTIC and The Huntington National Bank, Michael Baker International expresses its agreement with the Commission’s practice of maintaining the Expense Reserve Account in an amount equal to one-twelfth (1/12) of the annual operating, maintenance and administrative expenses to be paid from pledged revenues, as set forth in the Commission’s annual budget for such Fiscal Year. Michael Baker International recommends that the OTIC continue this practice for 2025.

## 4.0 SCHEDULE OF INSURANCE


The Schedule of Insurance currently in force is shown in **Appendix F**.

The Ohio Turnpike and Infrastructure Commission is required to maintain comprehensive property and casualty insurance coverage in accordance with Article 5, Sections 5.05, 5.06 and 5.07 of the Amended and Restated Master Trust Agreement dated April 8, 2013, as amended by the Twentieth Supplemental Trust Agreement dated as of August 21, 2017, as well as the Junior Lien Master Trust Agreement dated August 1, 2013 (collectively, the “Trust Agreements”). These consist of policies on Major Bridges, Use and Occupancy, and Commercial Liability. In addition to the required policies, a number of other insurance policies are carried in accordance with prudent business practices.

As Consulting Engineer, Michael Baker International has reviewed the current insurance policies held by the OTIC and confirmed that they meet and, in several cases, exceed the minimum insurance requirements stated in Article V, Section 5.05 of the Amended and Restated Master Trust Agreement Dated April 08, 2013, as amended by the Twentieth Supplemental Trust Agreement dated as of August 21, 2017.

## 5.0 RENEWAL, REPLACEMENT AND SYSTEM PROJECT FUNDS

Pledged revenues exceeding those required for operations, maintenance, and administration, bond interest and principal, and the required deposit to the expense reserve account, are deposited into the Renewal and Replacement and System Projects Funds. The revenues in the Renewal and Replacement Fund are used for the purchase of replacement vehicles and equipment and routine annual maintenance operations, while the System Projects Fund is used for the rehabilitation and upgrading of the Turnpike bridges, roadways, buildings, and for construction of new interchanges and other facilities. It is estimated that total pledged revenues in 2025 will amount to approximately \$457,800,000, of which approximately \$163,900,000 will be needed for the operations, maintenance, and administration of the Turnpike and \$131,900,000 will be required for bond interest and principal expense. Of the remaining amount, approximately \$11,500,000 will likely be deposited into the Renewal and Replacement Fund, leaving a total of approximately \$150,500,000 to be deposited into the System Projects Fund.



# APPENDIX A: OHIO TURNPIKE STRAIGHT LINE DIAGRAM (STRIP MAP)



TOLL PLAZAS

- FULL INTERCHANGE
- PARTIAL INTERCHANGE

SERVICE PLAZAS

- SERVICE PLAZA (OPEN)
- SERVICE PLAZA (CLOSED)

MAINTENANCE ZONES

- MAINTENANCE BUILDING
- 3 LANES
- 2 LANES

SNOW AND ICE LIMITS

- SALT STORAGE
- MAINTENANCE BUILDING
- 3 LANES
- 2 LANES

COUNTY LINES

- MAJOR BRIDGE/ RIVER CROSSING

DISABLED VEHICLE SERVICE ZONES

EMERGENCY MEDICAL SERVICE ZONES

- OTHER COVERAGE AREA (contact Comm. Center for more information)

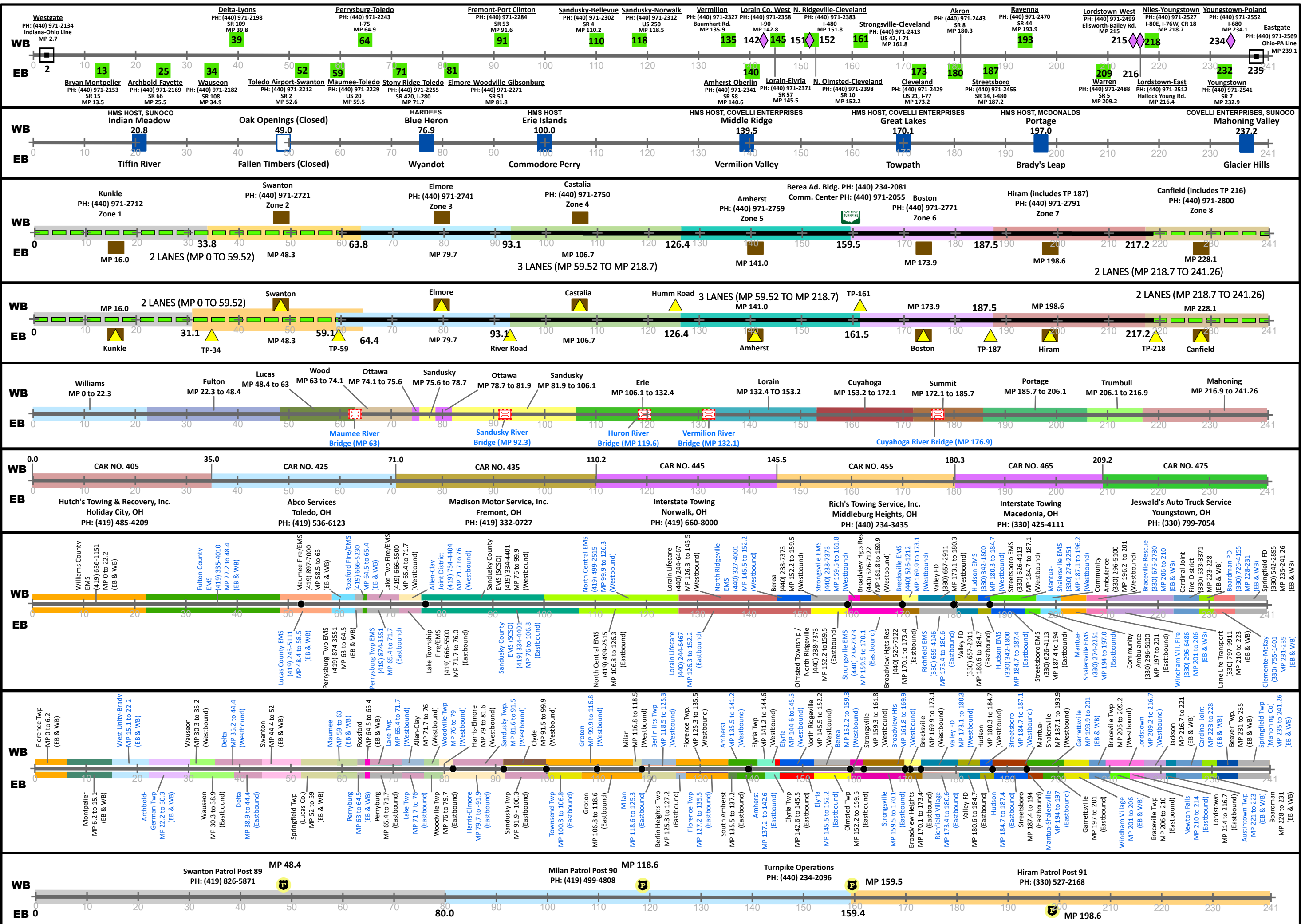
FIRE DEPARTMENT SERVICE ZONES


- OTHER COVERAGE AREA (contact Comm. Center for more information)

STATE HIGHWAY PATROL ZONES



Date: 9/24/2021





# APPENDIX B: PAVEMENT RESURFACING & REPLACEMENT

**Table B.1: Third Resurfacing**

Year	Milepost Limits		Length (Miles)	Total Length for Year (Miles)
	Start	End		
1980	144.0	153.5	9.5	20.1
	230.6	241.2	10.6	
1981	132.3	144.0	11.7	11.7
1983	92.4	101.4	9.0	25.7
	186.9	196.3	9.4	
	223.3	230.6	7.3	
1985	153.5	161.6	8.1	19.4
	161.6	172.9	11.3	
1986	214.2	223.3	9.1	9.1
1987	71.0	80.7	9.7	19.5
	111.7	118.7	7.0	
	177.4	180.2	2.8	
1988	27.5	38.9	11.4	18.3
	180.1	187.0	6.9	
1989	205.4	214.3	8.9	8.9
1990	39.0	48.6	9.6	14.0
	173.0	177.4	4.4	
1991	118.8	132.3	13.5	13.5
1992	62.5	71.1	8.6	18.9
	101.4	111.7	10.3	
1993	0.0	5.7	5.7	5.7
1994	5.7	14.8	9.1	20.7
	80.8	92.4	11.6	
1996	14.8	27.5	12.7	19.7
	55.5	62.5	7.0	
1998	48.6	55.5	6.9	6.9
2006(*)	196.3	205.4	9.1	9.1
2007(**)	196.3	205.4	9.1	
			<b>Total to Date</b>	<b>241.2</b>

(\*) - Eastbound lanes only.

(\*\*) - Westbound lanes only.

**Table B.2: Fourth Resurfacing**

Year	Milepost Limits		Length (Miles)	Total Length for Year (Miles)
	Start	End		
1989	144.0	153.0	9.0	9.0
1990	230.6	234.9	4.3	4.3
1991	234.9	241.2	6.3	6.3
1992	132.0	144.0	12.0	12.0
1993	91.2	101.4	10.2	20.6
	161.6	172.0	10.4	
1994	214.2	223.3	9.1	9.1
1995	111.7	118.8	7.1	23.8
	186.9	196.3	9.4	
	223.3	230.6	7.3	
1996	153.5	160.0	6.5	6.5
1997	71.1	80.8	9.7	14.0
	160.0	161.6	1.6	
	177.4	180.1	2.7	
1998	27.5	38.9	11.4	11.4
1999	38.9	48.6	9.7	16.5
	180.1	186.9	6.8	
2000	101.4	111.7	10.3	21.3
	172.9	177.0	4.1	
	207.4	214.3	6.9	
2001	118.8	127.2	8.4	8.4
2002	0.0	5.7	5.7	5.7
2003	62.5	69.3	6.8	6.8
2004	55.5	63.8	8.3	8.3
2007	80.9	91.2	10.3	10.3
2008	5.7	14.8	9.1	9.1
2011	14.8	27.5	12.7	12.7
2012	69.3	71.1	1.8	1.8
2013	127.3	132.1	4.8	4.8
2014	48.6	55.5	6.9	6.9
2018	196.3	205.2	8.9	9.7
	172.0	172.8	0.8	
Total to Date				239.3

Table B.3: Fifth Resurfacing

Year	Milepost Limits		Length (Miles)	Total Length for Year (Miles)
	Start	End		
1997	144.0	153.5	9.5	9.5
2001	230.6	241.3	10.7	10.7
2002	92.4	101.4	9.0	12.2
	161.6	164.8	3.2	
2003	132.1	144.4	12.3	12.3
2004	168.6	172.0	3.4	11.9
	214.8	223.3	8.5	
2006	111.2	111.7	0.5	0.5
2006(*)	186.9	196.3	9.4	9.4
2007(**)	186.9	196.3	9.4	
2008	111.7	118.8	7.1	7.1
2010	223.3	230.6	7.3	7.3
2011	205.0	210.0	5.0	12.0
	153.0	160.0	7.0	
2012	101.2	109.2	8.0	8.0
2012	118.8	127.3	8.5	8.5
2012	209.6	214.4	4.8	4.8
2013	27.5	38.9	11.4	21.2
	127.2	127.3	0.1	
	176.3	186.0	9.7	
2014	43.3	48.6	5.3	5.3
2015	0.0	5.7	5.7	12.1
	74.1	80.5	6.4	
2016	38.9	43.3	4.4	18.3
	55.5	69.3	13.9	
2017	69.3	74.1	4.8	4.8
2018	127.2	132.1	4.9	4.9
2019	8.2	14.8	6.6	6.6
2020	80.5	90.0	9.5	9.5
2021(**)	7.3	8.2	0.9	0.9
2024	14.8	27.5	12.7	17.3
2024	50.9	55.5	4.6	
Total to Date				215.1

(\*) - Eastbound lanes only. (\*\*) - Westbound lanes only.



**Table B.4: Sixth Resurfacing**

Year	Milepost Limits		Length (Miles)	Total Length for Year (Miles)
	Start	End		
2006	144.4	153.5	9.1	9.1
2010	91.2	101.5	10.3	14.4
	132.1	136.2	4.1	
2011	160.0	161.6	1.6	1.6
2012	172.0	176.3	4.3	4.3
2013	136.2	144.4	8.2	13.9
	230.4	236.0	5.7	
2014(*)	217.3	218.3	1.0	6.3
2014	236.0	241.3	5.3	
2015(**)	221.0	223.0	2.0	4.0
	214.0	216.0	2.0	
2016(*)	221.0	223.0	2.0	2.0
2018	191.4	196.3	4.9	4.9
2020	118.8	127.2	8.4	10.2
	176.3	178.1	1.8	
2021	112.5	118.8	6.3	6.3
2022	74.0	80.5	6.6	14.2
	178.1	185.7	7.6	
			<b>Total to Date</b>	<b>91.2</b>

(\*) - Eastbound lanes only.

(\*\*) - Westbound lanes only.

**Table B.5: Seventh Resurfacing**

Year	Milepost Limits		Length (Miles)	Total Length for Year (Miles)
	Start	End		
2011	152.0	153.5	1.5	1.5
2013	132.1	132.2	0.1	0.1
2017	136.0	144.1	8.1	8.1
2018	132.1	136.2	4.1	4.1
2024	230.3	236.0	5.7	5.7
			<b>Total to Date</b>	<b>19.5</b>

**Table B.6: Third Lane - First Resurfacing**

Year	Milepost Limits		Length (Miles)	Total Length for Year (Miles)
	Start	End		
2003	193.4	199.0	5.6	5.6
2005	145.0	152.0	7.0	7.0
2006(*)	199.0	205.4	6.4	6.4
2007(**)	199.0	205.4	6.4	6.4
2015	141.1	145.4	4.3	7.3
2015	215.0	218.0	3.0	
2016	187.4	193.4	5.9	5.9
2017	160.1	169.1	9.0	14.1
2017	136.0	141.1	5.1	
2018	127.2	136.2	9.0	21.1
2018	149.2	154.1	4.9	
2018*	169.1	176.3	7.2	
2019	205.2	215.9	10.7	10.7
2020	80.5	90.0	9.5	20.2
2020(*)	176.3	178.1	1.7	
2020(**)	169.1	178.1	9.0	
2021	112.5	118.8	6.3	6.3
2022	74.0	80.5	6.6	6.6
			<b>Total to Date</b>	<b>117.6</b>

(\*) - Eastbound lanes only.

(\*\*) - Westbound lanes only.

**Table B.7: Third Lane - Second Resurfacing**

Year	Milepost Limits		Length (Miles)	Total Length for Year (Miles)
	Start	End		
2018	193.39	205.2	11.81	11.8
			<b>Total to Date</b>	<b>11.8</b>

Table B.8: Full Depth Replacement

Year	Direction	Milepost Limits		Length (Miles)	Total Length for Year (Miles)
		Start	End		
2011	WB	95.90	101.20	5.30	5.3
2012	EB	95.90	101.20	5.30	10.2
	WB	164.82	169.74	4.92	
2013	WB	90.00	95.90	5.90	10.8
	EB	164.82	169.74	4.92	
2014	EB	159.80	164.82	5.02	11.1
	EB	101.20	107.30	6.10	
2015	WB	159.80	164.82	5.02	21.4
	WB	101.20	107.30	6.10	
	EB	144.10	149.24	5.14	
	WB	216.10	221.26	5.16	
2016	EB	107.30	112.50	5.20	20.5
	WB	144.10	149.24	5.14	
	EB	186.35	191.39	5.04	
	EB	216.10	221.26	5.16	
2017	EB	90.00	95.90	5.90	16.1
	WB	107.30	112.50	5.20	
	WB	186.35	191.39	5.04	
2018	EB	149.24	154.10	4.86	11.5
	EB	169.74	176.34	6.60	
2019	WB	149.24	154.10	4.86	11.7
	WB	169.74	176.57	6.83	
2020	WB	46.50	50.92	4.42	4.4
2021	WB	2.80	7.26	4.46	18.4
	EB	46.50	50.92	4.42	
	WB	208.17	212.76	4.59	
	EB	236.34	241.25	4.91	
2022	EB	2.80	7.26	4.46	14.0
	EB	208.17	212.76	4.59	
	WB	236.34	241.25	4.91	
2023	EB	0.00	2.60	2.60	5.2
	WB	0.00	2.60	2.60	
2024	EB	2.6	2.8	0.2	0.4
	WB	2.6	2.8	0.2	
Total to Date					161.0

Right two lanes and shoulder only included in full depth replacement limits shown in Table 8



# APPENDIX C: BRIDGE DECK REPLACEMENTS, REHABILITATION, REPLACEMENTS, & REMOVALS

**Table C.1: Mainline Bridge Deck Replacements (1/5)**

Year	Bridge	Milepost
1983	Maumee River – EBL	63
1983	Cuyahoga River – WBL	176.9
1984	S.R. 109	40.3
1984	D T & I Railroad	40.5
1984	Bad Creek	41.3
1984	Maumee River - WBL	63
1984	S.R. 53	92
1984	Sandusky River	92.3
1984	N & S Railroad	98.9
1984	S.R. 510	99.1
1984	S.R. 412	99.7
1984	S.R. 99	111.2
1984	Vermilion River	132.1
1984	Quarry Road	138
1984	Penn Central Railroad	138.2
1984	Black River	145.9
1984	S.R. 301	147.3
1984	Chestnut Ridge Road	152
1984	Over Ramp at Exit 152	152.2
1984	Lorain Road	152.3
1984	Conrail Railroad	152.6
1984	S.R. 82 (Royalton Road)	165.4
1984	York Road	165.5
1984	Bennett Road	166.2
1984	Cuyahoga River – EBL	176.9
1984	Tinkers Creek	185.6
1984	S.R. 45	217.3
1984	Penn Central Railroad	217.3
1984	Meander Reservoir	221.3
1984	Evans Lake-Yellow Creek	234.4
1984	Poland-Unity Road	237.8
1984	Columbiana Road	238.1
1984	Garfield Road	240.8
1985	S.R. 49	2.1
1985	Swan Creek	47.4
1985	S.R. 64	47.5
1985	Little Muddy Creek	90.2
1985	S.R. 19	90.3



**Table C.1: Mainline Bridge Deck Replacements (2/5)**

Year	Bridge	Milepost
1985	N & W Railroad	90.7
1985	Green Creek	96.2
1985	Branch of South Creek	96.7
1985	Erlin Road and South Creek	97.1
1985	Raccoon Creek	97.9
1985	S.R. 58 (Oberlin N. Road)	140.2
1985	N & W Railroad	140.6
1985	Penn Central Railroad	141.7
1985	Cuyahoga River	191.4
1985	Bryant Road	202.8
1985	Tumor Road	222.7
1985	Kirk Road	222.8
1985	Erie Lackwanna Railroad	223
1986	Sugar Creek	81.3
1986	Wolf Creek	82
1986	Wagoner Road	83.3
1986	Penn Central Railroad	83.3
1986	Berlin Road	124
1986	S.R. 61 & Ceylon-Norwalk Rd.	124.5
1986	Humm Road	125.3
1986	Ditch	126.6
1986	Baumhart Road	136.2
1986	Lake Avenue	144.4
1986	B & O Railroad	144.6
1986	S.R. 57	145.1
1986	Penn Central Railroad	147.9
1986	U.S. 20	148
1986	W. Branch of Rocky River	157.4
1986	Lindbergh Blvd.	157.5
1986	N. Royalton-Brecksville Pkwy.	168.6
1986	Western Reserve Road	230.7
1986	Sharott Road	232
1986	S.R. 7	232
1987	Grand Trunk Western Railroad	34.2
1987	S.R. 108	34.5
1987	S.R. 295	51.4
1987	Penn Central Railroad	52.3
1987	Albion Road	56.1

**Table C.1: Mainline Bridge Deck Replacements (3/5)**

Year	Bridge	Milepost
1987	Penn Central Railroad	56.3
1987	Swan Creek	58.5
1987	S.R. 65	63.3
1987	B & O Railroad	63.5
1987	White Road	63.6
1987	Simmons Road	63.9
1987	East Branch Grassy Creek	64.2
1987	Nine Mile Creek	85.3
1987	Muddy Creek	87.3
1987	Fuller Creek	101.5
1987	Dirt Access Road	103.4
1987	Pickel Street	103.5
1987	Mills Creek	108.3
1987	Penn Central Railroad	109.1
1987	Portland Road	109.2
1987	Hudson Aurora Road	184.2
1987	Norfolk and Western Railroad	186
1987	Erie Lackawanna and Penn Central Railroads	208.1
1987	Penn Central Railroad	208.7
1987	Newton Falls - Braceville Road	208.9
1987	Newton Falls - Bailey Road	211.5
1987	B & O and Penn Central Railroads	211.7
1987	Branch of Duck Creek	212.6
1987	Carson - Salt Springs Road	213.6
1987	Tippecanoe Road	228.4
1987	Indian Run	228.6
1987	Mill Creek	230.4
1988	Nettle Creek	10.6
1988	St. Joseph River	11.3
1988	Conrail	19.6
1988	U.S. 127	20.1
1988	U.S. 20	59.8
1988	Eastgate Road	61.1
1988	Norfolk & Western Railroad & Stengel Avenue	61.5
1988	Glenwood Road	66
1988	Conrail Railroad	66.2
1988	Cedar Creek	68
1988	Conrail Railroad & C.R. 10	68.8

**Table C.1: Mainline Bridge Deck Replacements (4/5)**

Year	Bridge	Milepost
1988	S.R. 163	73
1988	Conrail Railroad	74
1988	County Line Road	74.1
1988	Trapp Road	77.4
1988	Toussaint Creek	77.5
1988	Lime Road	77.6
1988	Bark Creek	94.2
1988	U.S. 6	95.4
1988	N & W Railroad - Kelley Road	117.3
1988	U.S. 250	118.1
1988	Huron River - N & W Railroad	119.6
1988	Infirmity Road	193.1
1988	Parkman Road	203.7
1988	South Fork Eagle Creek	205.2
1988	Ohio Turnpike over Interchange 16 Ramps	232.9
1989	St. Joseph Beaver Road	14.1
1989	N & W Railroad	14.2
1989	Tiffin River	24.7
1989	C & O Railroad	70.2
1989	Cummins Road	70.3
1989	S.R. 420 & I-280	71.4
1989	S.R. 43	188.2
1989	Mahoning Avenue	219.8
1990	Portage River	80.5
1990	B & O Railroad	113.7
1990	Ransom Road	114
1990	S.R. 5	209.6
1990	Mahoning River	209.9
1990	Ravenna-Warren Road	210.1
1990	B & O Railroad	210.3
1991	Eastland Road	160.4
1991	East Branch of Rocky River	160.7
1991	Rocky River Road	160.7
2002	Turnpike over I-76	219
2006	Turnpike over Meander Reservoir	221.3
2017	Garfield Road – CR8 (WB)	240.8
2018	Garfield Road – CR8 (EB)	240.8
2018	Wheeling & Lake Erie RR (WB)	186.0

**Table C.1: Mainline Bridge Deck Replacements (5/5)**

Year	Bridge	Milepost
2019	Ai Creek	47.4
2019	State Route 64	47.5
2019	Wheeling & Lake Erie RR (EB)	186.0
2019	Poland-Unity Road	237.8
2019	Columbiana-New Castle	238.1
2020	State Route 108	34.5
2021	Turner Road	222.7
2021	Kirk Road	222.8
2023	S.R. 109	40.3
2023	DT&I Railroad	40.5
2023	S.R. 510	99.1
2024	Waggoner Road – CR 82 (WB)	83.3
2024	Skadden Road – SR 99 (WB)	111.1
2024	Turnpike over TP 152 Ramp (EB)	152.1
2024	Lorain Road – SR 10/CR 12 (EB)	152.3
2024	Cleveland-Canton Road – SR 43 (WB)	188.2
Total to Date:		160 Pairs

**Table C.2: Overhead & Ramp Deck Replacements (1/6)**

Year	Bridge	Milepost
1980	Gulf Road	146.4
1983	Bagley Road	152.9
1983	Sprague Road	159
1983	U.S. 42 (Pearl Road)	161.1
1983	S.R. 91	183.2
1984	Holland Road	59
1984	Ramp over Chestnut Ridge Road at Exit 152	152
1984	Usher Road	156.1
1984	Webster Road	162.9
1984	Abbey Road	164.4
1984	Ramp over S.R. 21 at Exit 173	172.9
1984	S.R. 303	207.3
1985	Ramp over Turnpike at Exit 13	13.4
1985	Ramp over Turnpike at Exit 173	173.2
1985	S.R. 21	172.9
1986	Ramp over Turnpike at Exit 34	34.9
1986	Ramp over S.R. 57 at Exit 145	145.1
1986	Jennings Road over Turnpike	154
1986	W. 130th Street over Turnpike	163.8
1986	Turnpike Ramp over S.R. 8	180
1987	Ramp over US 250 at Exit 118	118.1
1987	Ramp over Turnpike at Exit 118	118.6
1987	West Ridge Road	142.6
1987	Ramp over Turnpike at Exit 145	145.5
1987	S.R. 83	150.5
1987	S.R. 252	156.9
1987	Edgerton Road	169.6
1987	Highland Road	171.1
1987	Barr Road	171.6
1987	Raccoon Road	226.7
1988	Race Road	149.2
1988	Maddock Road	149.8
1988	Ramp over C.R. 12 at Exit 152	152.3
1988	Old Exit 161 Ramp over Turnpike	161.5
1988	S.R. 3	166.8
1988	Ramp over S.R. 7 at Exit 232	232.6
1988	S.R. 164	233.8
1989	S.R. 66	26.3



**Table C.2: Overhead & Ramp Deck Replacements (2/6)**

Year	Bridge	Milepost
1989	Wilkins Road	50.4
1989	S.R. 2	52.9
1989	Eber Road	53.5
1989	Crissey Road	54.8
1989	Manley Road	58.6
1989	S.R. 590	85.5
1989	Fought Road	86.6
1989	Four Mile House Road	88.1
1989	Fangbonner Road	91.1
1989	Ramp over Turnpike at Exit 91	91.6
1989	Ramp over S.R. 53 at Exit 91	92
1989	Shannon Road	93
1989	Carley Road	94.7
1989	Northwest Road	106.1
1989	S.R. 269	106.8
1989	Deyo Road	107.5
1989	Billings Road	108.7
1989	Patten-Tract Road	112.5
1989	Thomas Road	115.1
1989	S.R. 13	119.3
1989	Gore-Orphanage Road	133.1
1989	Vermilion Road	135
1989	South Amherst Road	138.7
1989	Oberlin Road	141.3
1989	Stearns Road	154.6
1989	Big Creek Parkway	161
1989	Black Road over EB Turnpike	174.1
1989	Black Road over WB Turnpike	174.1
1989	Boston Mills Road	178
1989	S.R. 8 Northbound	180
1989	S.R. 8 Southbound	180
1989	Ramp over Turnpike at Exit 180	180.3
1989	Stow Road	184.7
1989	U.S. 224	227.6
1989	New Springfield Road	235.6
1989	Beard Road	236.7
1989	S.R. 170	240.4
1990	Nettle Creek Road	6.2

**Table C.2: Overhead & Ramp Deck Replacements (3/6)**

Year	Bridge	Milepost
1990	Farmer Center Road	9
1990	S.R. 576	10.2
1990	Townline Road	12.1
1990	S.R. 15 over Exit 13 Ramp	13.2
1990	S.R. 15	13.2
1990	Pleasant Hill Road	15.1
1990	Holloway Road	57.3
1990	Camper Road	75.6
1990	Gibbs Road	97.6
1990	Karbler Road	98.1
1990	Yorktown Road	100.2
1990	Vickery Road	101.2
1990	Mugg Road	102.3
1990	Albion Road	162.2
1990	S.R. 94	167.3
1990	S.R.176	169.5
1990	Old S.R. 8	179.5
1991	Exit 59 Ramp over US 20	59.8
1991	Portage River-South Road	80.6
1991	Murray Ridge Road	143.4
1991	West River Road	145.8
1991	Page Road	189.2
1991	Diagonal Road	191.2
1992	Harrison Road	130.8
1992	Prospect Road	182.1
1992	Exit 187 Ramp over Turnpike	187.2
1992	Exit 187 Ramp over S.R. 14	187.2
1992	Peck Road	195.2
1993	S.R. 105	79.5
1993	Joppa Road	128.5
1993	S.R. 60	131.6
1993	Coit Road	192.4
1993	Limeridge Road	196.7
1993	S.R. 534	207.6
1993	Exit 209 Ramp over Turnpike	209.2
1993	Exit 209 Ramp over S.R. 5	209.6
1994	Township Line Road	94.1
1994	S.R. 101	104.2

**Table C.2: Overhead & Ramp Deck Replacements (4/6)**

Year	Bridge	Milepost
1994	Exit 161 over Turnpike	161.8
1994	S.R. 88	199.5
1994	S.R. 4 over Turnpike	110.7
1994	S.R. 44 over Turnpike	194.2
1995	River Road	62.8
1996	EB I-480 over Turnpike	186.8
1996	WB I-480 over Turnpike	186.8
1999	Gibson Road	223.9
1999	US 62/S.R. 46	225.2
2000	Shiets Road	96.1
2000	Jacobs Road	96.5
2000	Vickery Road	101.2
2000	Dirt Access Road	103.4
2000	S.R. 101 Bridge	104.2
2000	EB I-90 over West Ridge Road	142.6
2000	EB I-90 over Turnpike	142.8
2001	Stanley Road	201.8
2001	Lintz Road	214.5
2002	Pemberville Road	72
2002	Prospect Street	159.5
2002	Ramp over I-71	161.5
2002	Lipkey Road	220.3
2003	Slagle Road	200.2
2003	Horn Road	204.7
2004	Shiloh-Whiteville Road	44.4
2004	Scott Road	49.4
2004	Ramp over Turnpike at Exit 234	234.1
2004	Ramp over Yellow Creek at Exit 234	234.1
2005	Fulton-Lucas County Road	48.4
2005	Cass Road	60.3
2005	Ramp Over Turnpike at Exit 71	71.7
2007	Reighard-Whiteville	43.9
2007	Utah Road	45.4
2012	Gulf Road	146.4
2014	Fish Creek Road	0.9
2014	Stryker-Lockport Road	22
2014	Werth Road	93.5
2015	Old SR596 – CR 17	16.1

**Table C.2: Overhead & Ramp Deck Replacements (5/6)**

Year	Bridge	Milepost
2015	Clay's Church Road – TR 19	18.1
2015	Liberty-Adrian Road – CR 8-1	41.1
2015	Key Street – CR 101	60.8
2015	Gibson Road – TR118	223.9
2016	Eberly-Home Road	17.1
2016	Alvordton Road	19.1
2016	Clifton-Gunn Road	21.4
2016	Rueger-Shetler Road	23.9
2016	Fulton-Williams Road	24.4
2016	Spies-Handy Corners Road	27.3
2016	Raker-Barden Road	41.9
2016	Delta-Santee Road	42.4
2016	Brigham-Fraker Road	42.9
2016	SR 83	150.5
2016	Asbury Road	197.8
2016	SR 700	198.5
2017	Arlington Road - TR 130	122.3
2017	Joppa Road - CR 140	128.5
2017	Dean Road - TR 66 (County Line)	132.4
2017	West River Road	145.8
2017	State Route 252 - Columbia Road	156.9
2017	Boston Mills Road - CR 32	178
2017	Olde Eight Road	179.5
2017	Nichols Road - CR 225	199.2
2018	USR 42 - Pearl Road	161.1
2018	I-480 EB - Exit 187	186.8
2019	Ramp over State Route 420	71.4
2019	South Billman Road	75.2
2019	Hessville Road	84.4
2019	River Road	120
2019	Wikel Road	121.9
2019	Chapin Road	123.1
2019	State Route 60	131.6
2019	Gifford Road	135.4
2020	Tedrow-Morenci Road	31.4
2020	Wauseon-Ottokee Road – CR 14	35.2
2020	Winameg-Lyons Road	38.3
2020	Heller-Lyons Road	39.3
2020	Webster Road	162.9

**Table C.2: Overhead & Ramp Deck Replacements (6/6)**

Year	Bridge	Milepost
2020	Abbey Road	164.4
2021	Fangboner Road – TR 166	91.1
2021	Ohio Turnpike Ramp over Turnpike	91.6
2022	Ohio Turnpike Ramp over Lorain Road	152.3
2022	Jennings Road – CR 234	153.9
2022	East Edgerton Road – CR 63	169.6
2023	Ohio Turnpike Ramp over S.R. 57	145.1
2023	Race Road	149.2
2023	Stearns Road	154.6
2024	Hartman-Inlet Road – TR 17	32.3
2024	Biddle-Scott Road – TR 12-1	37.1
2024	Brailey Road – TR 3	46.4
2024	Northwest Road / Southwest Road – CR 312	106.1
2024	Deyo Road – TR 102	107.5
2024	Mudbrook Road – SR 13	119.3
2024	Berea-Bagley Road	152.9
<b>Total to Date:</b>		<b>207</b>



**Table C.3: Bridge Deck Overlay Projects (1/3)**

Year	Bridge	Type	Milepost
1982	Prospect Street (S.R. 237)	Latex	159.5
1983	Key Street	Latex	60.8
1983	Ramp over I-71 at Exit 161	Latex	161.5
1983	Ramp over Turnpike at Exit 161	Latex	161.5
1984	S.R. 101	Latex	104.2
1984	U.S. 62 – S.R. 46	Latex	225.2
1985	EB Turnpike over I-77	Latex	172.5
1985	WB Turnpike over I-77	Latex	172.5
1985	EB Turnpike over I-271	Latex	175.3
1985	Ramp over Turnpike at Exit 218	Latex	219
1985	EB Turnpike over I-76	Latex	219
1985	WB Turnpike over I-76	Latex	219
1988	Root Road over Turnpike	Latex	151.1
1989	Heller Lyon Road over Turnpike	Latex	39.3
1989	Liberty-Adrian Road over Turnpike	Latex	41.1
1989	Raker-Barden Road over Turnpike	Latex	41.9
1989	Delta-Santee Road over Turnpike	Latex	42.4
1989	Lime City Road over Turnpike	Latex	65.4
1989	Oregon Road	Latex	67.2
1989	Ramp under Toll Plaza, Exit 161	Latex	162
1990	Pettisville-Morenci Road	Latex	30.3
1990	Tedrow-Morenci Road	Latex	31.4
1990	Hartman-Inlet Road	Latex	32.5
1990	Lena-Morenci Road	Latex	33.2
1990	Exit 71 Ramp over S.R. 420	Latex	71.4
1990	Pemberville Road	Latex	72
1990	Billman Road	Latex	75.2
1991	Fish Creek Road	Latex	0.9
1991	Malcolm Church Road	Latex	3.1
1991	Ricketts Bridge Road	Latex	4.1
1991	West Eagle Church Road	Latex	5.1
1991	White Bridge Road	Latex	6.9
1991	Champion Road	Latex	7.6
1991	Cummins Road	Latex	11.6
1991	Old State Route 259	Latex	16.1
1991	Eberly Home Road	Latex	17.1
1991	Clays Church Road	Latex	18.1
1991	Alvordton Road	Latex	19.1

**Table C.3: Bridge Deck Overlay Projects (2/3)**

Year	Bridge	Type	Milepost
1991	Clifton Gunn Road	Latex	21.4
1991	Zone-Southern Road	Latex	25.3
1991	Spies Handy Corners Road	Latex	27.3
1991	Lauber Hill-Ritter Road	Latex	28.3
1991	Eckley-Powers Road	Latex	29.3
1991	Reighard-Whiteville Road	Latex	43.9
1991	Shiloh-Whiteville Road	Latex	44.4
1991	Utah Road	Latex	45.4
1991	Brailey Road	Latex	46.6
1991	Fulton-Lucas Road	Latex	48.4
1991	Scott Road	Latex	49.4
1991	Exit 59 Ramp	Latex	59.5
1991	Cass Road	Latex	60.3
1991	Crystal Street	Latex	62
1991	US 24 – SR 25	Latex	62.3
1991	Swartzman Road	Latex	82.2
1991	Hessville Road	Latex	84.4
1991	Dean Road	Latex	132.4
1991	Gifford Road	Latex	135.4
1991	Exit 142 Eastbound Ramp over West Ridge Road	Latex	142.6
1991	Lipkey Road	Latex	220.3
1991	Herbert Road	Latex	225
1991	Exit 234 Eastbound Ramp over Turnpike	Latex	234.1
1991	Exit 234 SB Ramp over the Yellow Creek	Latex	234.4
1992	Asbury Road	Latex	197.8
1992	Nichols Road	Latex	199.2
1992	Jewel-North Road	Latex	206.3
1993	Stryker-Lockport Road	Latex	22
1993	Shilling-Ely Road	Latex	22.7
1993	Ruegar Shelter Road	Latex	23.9
1993	Fulton-Williams Road	Latex	24.4
1993	Wauseon-Ottokee Road	Latex	35.2
1993	W. Barre-Advance Road	Latex	36.3
1993	Biddle Scott Road	Latex	37.1
1993	Winnemeg-Lyons Road	Latex	38.3
1993	Brigham-Fraker Road	Latex	42.9
1993	Dutch Road	Latex	76.3
1993	Martin- Williston Road	Latex	78.7

**Table C.3: Bridge Deck Overlay Projects (3/3)**

Year	Bridge	Type	Milepost
1993	Dishinger Road	Latex	81.5
1993	River Road	Latex	120.1
1993	Wikel Road	Latex	121.9
1993	Arlington Road	Latex	122.3
1993	Chapin Road	Latex	123.1
1993	Frailey Main Road	Latex	126.3
1993	Angling Road	Latex	129
1993	S.R. 700	Latex	198.5
1995	Copp Road	Latex	104.3
2012	Royalton Road	Micro-Silica	165.4
2012	York Road	Micro-Silica	165.5
2012	Bennet Road	Micro-Silica	166.2
2013	Turnpike Ramp over Turnpike	Micro-Silica	161.5
2013	Turnpike Ramp over Turnpike	Micro-Silica	161.8
2013	Turnpike Ramp over Turnpike	Micro-Silica	173.2
2014	Maddock Road	Type K	149.8
2014	State Route 3	Type K	166.8
2015	Turnpike Ramp over Turnpike	Type K	34.9
2015	NS RR (Conrail) (NYC RR) (EB)	Type K	147.9
2015	Turnpike Ramp over Turnpike	Type K	218.7
2016	EB & WB Turnpike over Kelly Road	Micro-Silica	117.3
2016	EB & WB Turnpike over SR 250	Micro-Silica	118.1
2016	NS RR (Conrail) (NYC RR) (WB)	Micro-Silica	147.9
2018	Turnpike Ramp over Turnpike	Micro-Silica	218.7
2019	Quarry Road	Micro-Silica	138
2022	EB Turnpike over Western Reserve Road – CR 32	Micro-Silica	230.7
<b>Total to Date:</b>			<b>102</b>

**Table C.4: Overhead Bridge Replacement/Reconstruction (1/2)**

Year	Bridge	Milepost
1996	Dishinger Road	81.5
1996	Billings Road	108.7
1996	Root Road	151.2
1996	S.R. 88	199.5
1997	Lime City Road	65.4
1997	Tracy Road	67.7
1997	Lemoyne Road	70.8
1997	Billman Road	75.2
1997	Dutch Road	76.3
1997	Martin-Williston Road	78.7
1997	Swartzman Road	82.2
1997	Kingsway Road	89.4
1997	Patten-Tract Road	112.5
1997	Thomas Road	115.1
1997	Gate 7 Ramp	118.6
1997	Gate 8 Ramp	145.5
1997	West 130th Street	163.8
1997	S.R. 176	169.5
1997	Black Road	174.1
1997	Metroparks Bikeway	179.2
1997	Selkirk-Bush Road	212.5
1998	Crystal Avenue	62
1998	Detroit Avenue	62.3
1998	Vermilion Road	135
1998	Albion Road	162.2
1999	Camper Road	75.6
1999	S.R. 105	79.5
1999	Angling Road	129
1999	S.R. 60	131.6
1999	Abbey road	164.4
1999	Edgerton Road	169.6
2000	Oregon Road	67.2
2000	Luckey Road	69.7
2000	Harrison Road	130.8
2000	Berea-Bagley Road	152.9
2000	Sprague Road	159
2000	Elsworth Bailey NB	215.4
2000	Elsworth Bailey SB	215.4

**Table C.4: Overhead Bridge Replacement/Reconstruction (2/2)**

Year	Bridge	Milepost
2000	Exit 218 Ramp Over Turnpike	219
2002	S.R. 795 Over Turnpike	65.1
2002	Pemberville Road	72
2003	Ramp over Turnpike	59.5
2003	CSX Railroad	157.2
2006	Norfolk Southern Railroad	182
2019	Perrysburg-Holland Road	59
2023	S.R. 21 over Turnpike	172.9
<b>Total to Date:</b>		<b>46</b>

**Table C.5: Bridge Removals (1/1)**

Year	Bridge	Milepost
2019	Ohio Turnpike over Inactive Railroad	138
2020	Ohio Turnpike over Inactive Railroad	34.2
2020	Ohio Turnpike over Millcreek Bikeway*	223
2021	Ohio Turnpike Ramp over S.R. 53	92
2022	Ohio Turnpike Ramp over French Creek*	151.3
2023	Ohio Turnpike over Inactive Railroad	98.9
<b>Total to Date:</b>		<b>6</b>

\* Replaced with precast concrete culvert

**Table C.6: Pedestrian Bridges (1/1)**

Year	Bridge	Milepost
2021	Toll Plaza 49 Pedestrian Bridge over the Ohio Turnpike	49
2022	Toll Plaza 4 Pedestrian Bridge over the Ohio Turnpike	4.6
2022	Toll Plaza 211 Pedestrian Bridge over the Ohio Turnpike	211
<b>Total to Date:</b>		<b>3</b>



# APPENDIX D: CURRENT & ANTICIPATED 2025 BRIDGE REPAIRS, REHABILITATIONS, & REPLACEMENTS

**Table D.1: Major Rehabilitation/Removal Projects**

Milepost	Bridge	Scope	Status
83.3	Waggoner Road	Mainline Deck Replacement & Rehab	Completion Scheduled - 2025
111.2	Skadden Road - SR 99	Mainline Deck Replacement & Rehab	Completion Scheduled - 2025
152.1	Turnpike Ramp - Exit 152	Mainline Deck Replacement & Rehab	Completion Scheduled - 2025
152.3	Lorain Road - SR 10/CR 12	Mainline Deck Replacement & Rehab	Completion Scheduled - 2025
188.2	Cleveland-Canton Road- SR 43	Mainline Deck Replacement & Rehab	Completion Scheduled - 2025
202.8	Bryant Road	Mainline Deck Replacement & Rehab	Completion Scheduled - 2025
104.3	Copp Road	Overhead Deck Replacement & Rehab	Completion Scheduled - 2025
106.8	SR 269	Overhead Deck Replacement & Rehab	Completion Scheduled - 2025
203.7	N. Main Street - CR 229	Mainline Deck Overlay & Rehab	Completion Scheduled - 2025
83.3	N. Coast Trail - Abandoned RR	Mainline Bridge Removal	Completion Scheduled - 2025
185.6	Tinkers Creek	Mainline Bridge Replacement	Completion Scheduled - 2026
199.5	SR 88	Overhead Bridge Replacement	Completion Scheduled - 2025
227.6	Board-Canfield Road	Overhead Bridge Replacement	Completion Scheduled - 2026





# APPENDIX E: CRASH STATISTICS

**Table E.1: Crash Statistics (1955 to 2023)**

<b>Year</b>	<b>Crashes</b>	<b>Crash Rate</b>	<b>No. of Fatalities</b>	<b>Fatality Rate</b>
1955	233	147	4	2.5
1956	806	102.5	16	2
1957	775	85	28	3.1
1958	666	72.5	29	3.1
1959	763	77.7	18	1.8
1960	756	73.2	20	1.9
1961	735	72.3	23	2.3
1962	773	72.6	13	1.2
1963	778	71.6	16	1.5
1964	966	83.3	35	3
1965	1,039	86.3	32	2.6
1966	1,193	93.4	40	3.1
1967	1,268	98.7	27	2.1
1968	1,485	108.4	35	2.6
1969	1,502	104.1	40	2.8
1970	1,478	100.2	24	1.6
1971	1,542	101.3	34	2.2
1972	1,832	114.9	26	1.6
1973	1,902	115.4	28	1.7
1974	1,491	98.1	10	0.7
1975	1,366	88.5	24	1.6
1976	1,496	90.7	21	1.3
1977	1,770	103.4	26	1.5
1978	1,726	98.4	19	1.1
1979	1,543	95.5	38	2.4
1980	1,393	88.4	26	1.7
1981	1,583	94.6	20	1.2
1982	1,552	98.3	12	0.8
1983	1,625	98.6	13	0.8
1984	1,821	107.8	11	0.7
1985	1,814	104.8	19	1.1
1986	1,698	93	8	0.4
1987	1,944	101.7	12	0.6
1988	1,874	93	18	0.9
1989	1,944	92.7	21	1
1990	1,847	84.6	13	0.6
1991	1,759	81.5	13	0.6
1992	1,755	78.5	21	0.9
1993	1,846	80	12	0.5

**Table E.1: Crash Statistics (1955 to 2023)**

<b>Year</b>	<b>Crashes</b>	<b>Crash Rate</b>	<b>No. of Fatalities</b>	<b>Fatality Rate</b>
1994	1,978	81.8	19	0.8
1995	2,019	80.3	12	0.5
1996	2,248	90.5	13	0.5
1997	2,035	82.9	10	0.4
1998	1,889	73.5	8	0.3
1999	2,303	86.7	8	0.3
2000	2,443	90.4	12	0.4
2001	2092	77	14	0.5
2002	2373	84.5	10	0.4
2003	2433	85.9	11	0.4
2004	2609	89.6	17	0.6
2005	2858	95.6	14	0.5
2006	2342	77	8	0.3
2007	2532	85	11	0.5
2008	2689	95	5	0.2
2009	2125	81.6	8	0.3
2010	2268	80.9	7	0.2
2011	2583	92.7	6	0.2
2012	2598	92.7	7	0.2
2013	2380	83.5	8	0.3
2014	2642	91.1	9	0.4
2015	2459	90.2	11	0.4
2016	5367	91.7	12	0.5
2017	2238	73.0	5	0.2
2018	2397	78.3	9	0.3
2019	2235	74.4	14	0.5
2020	1912	76.9	12	0.5
2021	2390	77.9	11	0.4
2022	2459	82.1	15	0.5
2023	2106	66.2	11	0.3



# APPENDIX F: SCHEDULE OF INSURANCE

## OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

EFFECTIVE 09/01/2024 THROUGH 09/01/2025

LINE OF COVERAGE	AGENT/BROKER	CARRIER
<b>General Liability (\$5 M)</b> Slip/Fall on Commission Property	Jackson Dieken & Associates	Old Republic Union Insurance
<b>Public Officials Liability</b> Covers Elected and Appointed Officials		
<b>Automobile</b> Auto Accidents		
<b>1st Layer Umbrella (\$3M)</b> Sits Over General Liability, Public Officials, Auto	Jackson Dieken & Associates	Gemini Insurance Company (Berkley Public Entity)
<b>2nd Layer Umbrella (\$3M)</b> Sits Over General Liability, Public Officials, Auto	Jackson Dieken & Associates	General Star Indemnity (Genesis)
<b>3rd Layer Excess Liability (\$5M)</b> Sits Over General Liability, Public Officials, Auto	Arthur J. Gallagher Risk Mgmt Services	Arch
<b>4th Layer Excess Liability (\$5M)</b> Sits Over General Liability, Auto	Arthur J. Gallagher Risk Mgmt Services	Startstone
<b>5th Layer Excess Liability (\$10M)</b> Sits Over General Liability, Auto	Arthur J. Gallagher Risk Mgmt Services	Group Ark/Arcadian
<b>6th Layer Excess Liability (\$5M)</b> Sits Over General Liability, Auto	Arthur J. Gallagher Risk Mgmt Services	Allied World
<b>7th Layer Excess Liability (\$5 M)</b> Sits Over General Liability, Auto	Arthur J. Gallagher Risk Mgmt Services	Vantage
<b>8th Layer Excess Liability (\$5M)</b> Sits Over General Liability, Auto	Arthur J. Gallagher Risk Mgmt Services	HDI Global
<b>9th Layer Excess Liability (\$5M)</b> Sits Over General Liability, Auto	Arthur J. Gallagher Risk Mgmt Services	Great American
<b>10th Layer Excess Liability (\$15M)</b> Sits Over General Liability, Auto	Acrisure	Navigators
<b>Property</b> Service Plazas, Toll Booths, Maintenance Buildings	Arthur J. Gallagher Risk Mgmt Services	Travelers
<b>Bridges</b> High value bridges	Arthur J. Gallagher Risk Mgmt Services	CNA
<b>Crime</b> Employee Theft, Embezzlement	Arthur J. Gallagher Risk Mgmt Services	Travelers
<b>Pollution</b> Environmental Contamination (3 yr. paid in 2023)	Arthur J. Gallagher Risk Mgmt Services	Ironshore
<b>Cyber</b> Hacking, Expose Credit Card Information	Arthur J. Gallagher Risk Mgmt Services	Crum & Forster