Akron Metropolitan Area Transportation Study
Policy Committee
Virtual Meeting

Thursday, March 25, 2021
1:30 p.m.

Agenda

1. **Call to Order**
   - A. Determination of a Quorum — Oral
   - B. Audience Participation*

2. **Minutes**
   - A. January 28, 2021 Meeting – **Motion Required** — Attachment 2A

3. **Staff Reports**
   - A. Financial Progress Report – **Motion Required** — Attachment 3A
   - B. Technical Progress Report — Oral
   - C. AMATS Federal Funds Report — Attachment 3C

4. **Old Business**

5. **New Business**
   - A. Draft *Transportation Outlook 2045*. – **Discussion Only** — Attachment 5A

6. **Resolutions**
   - A. **Resolution 2021-02** – To Add Ohio EPA-Awarded DERG Funds for METRO and PARTA - (FY 2021-2024 TIP Amendment #7). – **Motion Required** — Attachment 6A

7. **Other Business**

8. **Adjournment**

   Next Regular Meeting:
   Thursday, May 20, 2021 - 1:30 PM

* Please note that AMATS will be unable to provide an opportunity for live public comment regarding agenda items or other transportation-related issues due to technological limitations. AMATS Director Baker will instead read any email or written correspondence that the agency has received from the public regarding agenda items.

All mailout material is available on the AMATS Web Site at www.amatsplanning.org

Akron Metropolitan Area Transportation Study
Technical Advisory Committee
Virtual Meeting

Thursday, March 18, 2021
1:30 p.m.

Agenda

1. **Call to Order**
   A. Determination of a Quorum — Oral

2. **Minutes**
   A. January 21, 2021 Meeting – **Motion Required** — Attachment 2A

3. **Staff Reports**
   A. Financial Progress Report – **Motion Required** — Attachment 3A
   B. Technical Progress Report — Oral
   C. AMATS Federal Funds Report — Attachment 3C

4. **Old Business**

5. **New Business**
   A. Draft *Transportation Outlook 2045*. – **Discussion Only** — Attachment 5A

6. **Resolutions**
   A. **Resolution 2021-02** – To Add Ohio EPA-Awarded DERG Funds for METRO and PARTA - (FY 2021-2024 TIP Amendment #7). – **Motion Required** — Attachment 6A

7. **Other Business**

8. **Adjournment**
   Next Regular Meeting:
   Thursday, May 13, 2021 - 1:30 PM

All mailout material is available on the AMATS Web Site at www.amatsplanning.org.

Akron Metropolitan Area Transportation Study
Citizens Involvement Committee
Virtual Meeting

Thursday, March 18, 2021
6:30 p.m.

Agenda

1. **Welcome**

2. **Introductions and Virtual Webinar Orientation**

3. **Items**
   A. Presentation of Draft *Transportation Outlook 2045.*

4. **Open Discussion**

5. **Adjournment 7:45 P.M.**
   Next Regular Meeting:
   Thursday, May 13, 2021 - 6:30 p.m.

All mailout material is available on the AMATS Web Site at www.amatsplanning.org

Akron Metropolitan Area Transportation Study
Policy Committee
Thursday, January 28, 2021 – 1:30 p.m.

Minutes of Meeting

Recordings of AMATS committee meetings are available in the Podcast section of the agency web site at www.amatsplanning.org/category/meetings/.

I. Call to Order

A. Chairwoman Clark called the virtual meeting to order using Zoom, the video conferencing platform. The attending members constituted a quorum.

B. Audience Participation

None.

II. Minutes – Motion Required

A. Approval of Minutes

Members were asked to approve the minutes of the December 17, 2020 meeting.

Motion
David G. Kline *made a motion to approve the minutes and it was seconded by* ***Bobbie Beshara****. The motion was approved by a voice vote.*

III. Staff Reports

A. Financial Progress Report

Curtis Baker presented Attachment 3A.

Motion
Jim McCleary *made a motion to approve the Financial Progress Report and it was seconded by* ***Claudia Amrhein****. The motion was approved by a voice vote.*

B. Technical Progress Report

Mr. Baker said that AMATS has the Pavement Condition Index (PCI) ratings for the Greater Akron area, which will be used as scoring criteria during the next round of project funding in the fall. **Mr. Baker** said that PCI information is available through a link entitled the ***2019-2020 Pavement Condition Index*** under the *Quick Links* heading on the home page of the agency website at

amatsplanning.org. **Mr. Baker** asked the members to review the ratings for their respective communities.

Mr. Baker said that there is renewed discussion in Washington, D.C. regarding potential bipartisan federal infrastructure legislation during the Biden administration.

C. AMATS Federal Funds Report

Mr. Baker presented Attachment 3C.

Mr. Baker presented tables concerning STBG, CMAQ and TASA Funding Program and Balances dated January 11, 2021.

Mayor Kline asked what the sale date was for the Interstate 76/Central Interchange project. **Chad Root** said that the expected sale date is Feb. 21.

IV. Old Business

None.

V. New Business

A. Draft FY 2022 Transportation Planning Work Program and Budget.

Mr. Baker presented Attachment 5A.

Motion
Gerard Neugebauer *made a motion to approve the Draft FY 2022 Transportation Planning Work Program and Budget and it was seconded by* ***Larry Jenkins****. The motion was approved.*

B. Draft Transportation Outlook 2045 List of Recommendations (Not Fiscally Constrained).

Mr. Baker presented Attachment 5B.

VI. Resolutions

A. Resolution 2021- 01 – Approving Amendment #6 to the FY 2021-2024 Transportation Improvement Program to add engineering and right of way phases to an existing project. – (FY 2021-2024 TIP Amendment #6).

Mr. Baker presented Attachment 6A.

Motion
Paul Adamson *made a motion to approve Resolution 2021-01 and it was seconded by* ***Gerard Neugebauer****. The motion was approved.*

VII. Other Business

A. **Mr. Baker** said that the Office of Management and Budget (OMB) released guidance on Jan. 19 in which the office recommended no changes that would impact the current delineation of the Akron Metropolitan Statistical Areas (MSAs). **Mr. Baker** said that the guidance will be available for public review and comment for a two-month period in the *Federal Register*. **Mr. Baker** said that AMATS intends to express its support for the current rules as proposed through a written statement or letter to be signed by Policy Committee Chairwoman Linda Clark.

Mayor Neugebauer welcomed the OMB decision.

Mayor Kline praised Mr. Baker for his work opposing the NOACA MSA proposal.

VIII. Adjournment

There being no other business, the meeting was adjourned.

The next regularly scheduled Policy Committee meeting is scheduled for **1:30 p.m**. on **Thursday, March 25**, **2021.**

AMATS POLICY COMMITTEE
2021 ATTENDANCE

M Denotes Member Present **A Denotes Alternate Present**	**Jan 28**	**Mar 25**	**May 20**	**Aug 12**	**Sept 23**	**Dec 16**
AKRON - Mayor Dan Horrigan (Hardy) (DiFiore)	A					
AURORA - Mayor Ann Womer Benjamin (Stark) (Januska)	A					
BARBERTON - Mayor William B. Judge (Hunt) (Tracy)						
BOSTON HEIGHTS - Mayor Bill Goncy (Polyak)						
CLINTON - Mayor Clarissa Allega						
CUYAHOGA FALLS - Mayor Don Walters (Zumbo)	A					
DOYLESTOWN - Mayor Terry Lindeman (Kerr)						
FAIRLAWN - Mayor William Roth (Spagnuolo) (Staten)	A					
GARRETTSVILLE - Mayor Rick Patrick (Klamer)						
GREEN - Mayor Gerard Neugebauer (Wax Carr)	M					
HIRAM - Mayor Lou Bertrand (J. McGee)						
HUDSON - City Mgr. Jane Howington (Comeriato) (Hannan) (Sheridan)	A					
KENT – City Mgr. David Ruller (Baker) (Bowling)	A					
LAKEMORE – Mayor Rick Justice (Fast)						
MACEDONIA - Mayor Nick Molnar (Gigliotti) (Sheehy)						
MANTUA - Mayor Linda Clark (Iafelice) (Trew)	M					
METRO – Dawn Distler (Shea)	M					
MOGADORE - Mayor Michael Rick						
MUNROE FALLS - Mayor James W. Armstrong (Bowery)						
NEW FRANKLIN - Mayor Paul Adamson (Kepler) (Kochheiser)	M					
NORTHFIELD – Mayor Jesse Nehez (Magistrelli)						
NORTON - Mayor Mike Zita (Fowler)	A					
ODOT – Gery Noirot (Phillis) (Root)	M					
PARTA – Claudia Amrhein (Baba) (Popik) (Schrader)	M					
PENINSULA - Mayor Daniel R. Schneider, Jr.						
PORTAGE COUNTY COMM. - Anthony J. Badalamenti (Mann)						
PORTAGE COUNTY COMM. – Vicki Kline (Long)						
PORTAGE COUNTY COMM. - Sabrina Christian-Bennett (Hlad)	A					
PORTAGE COUNTY ENGINEER - Michael Marozzi (Jenkins)	A					
RAVENNA - Mayor Frank Seman (Finney)	A					
REMINDERVILLE - Mayor Sam Alonso (Krock)						
RICHFIELD - Mayor Michael Wheeler (Darwish) (Papp)						
RITTMAN – City Mgr. Bobbie Beshara (Robertson)	A					
SILVER LAKE - Mayor Bernie Hovey (Housley)						
STOW - Mayor John Pribonic (Kurtz) (McCleary)	A					
STREETSBORO - Mayor Glenn M. Broska (Cieszkowski)	A					
SUGAR BUSH KNOLLS - Mayor John Guidubaldi						
SUMMIT COUNTY ENGINEER-Al Brubaker (Fulton) (Hauber) (Paradise)	A					
SUMMIT COUNTY EXECUTIVE - Ilene Shapiro (Miller-Dawson)						
SUMMIT COUNTY COMM. & ECON. DEV. -						
SUMMIT COUNTY COMM. & ECON. DEV. – Stephen Knittel						
TALLMADGE - Mayor David G. Kline (Kidder)	M					
TWINSBURG - Mayor Ted Yates (Mohr) (Finch)						
WAYNE COUNTY COMM. BOARD - Dominic Oliverio (Broome)						
WAYNE COUNTY ENGINEER – Scott A. Miller (Jones)	M					
WINDHAM - Mayor Deborah Blewitt						

AMATS POLICY COMMITTEE
2021 ATTENDANCE

OBSERVERS AND STAFF MEMBERS PRESENT

NAME	REPRESENTING
Mr. Curtis Baker	AMATS
Mr. Jeff Gardner	AMATS
Mr. Kerry Prater	AMATS
Mr. Chuck Hauber	Summit County Engineer
Mr. Chad Root	ODOT
Ms. Carmen Stemen	FHWA

Akron Metropolitan Area Transportation Study
Technical Advisory Committee
Thursday, January 21, 2021 – 1:30 p.m.

Minutes of Meeting

Recordings of AMATS committee meetings are available in the Podcast section of the agency web site at www.amatsplanning.org/category/meetings/.

I. Call to Order

A. **Chairman John H. Cieszkowski, Jr.** called the virtual meeting to order using Zoom, the video conferencing platform. The attending members constituted a quorum.

II. Minutes – Motion Required

A. Approval of Minutes

Members were asked to approve the minutes of the December 10, 2020 meeting.

Motion
Wayne Wiethe *made a motion to approve the minutes and it was seconded by* ***Jim Bowling****. The motion was approved by a voice vote.*

III. Staff Reports

A. Financial Progress Report

Curtis Baker presented Attachment 3A.

Motion
Bobbie Beshara *made a motion to approve the Financial Progress Report and it was seconded by* ***Wayne Wiethe****. The motion was approved by a voice vote.*

B. Technical Progress Report

Mr. Baker said that the Office of Management and Budget (OMB) released guidance on Jan. 19 in which the office recommended no changes that would impact the current delineation of the Akron Metropolitan Statistical Areas (MSAs). **Mr. Baker** said that the guidance will be available for public review and comment for a two-month period in the *Federal Register*. **Mr. Baker** said that AMATS intends to express its support for the current rules as proposed through a written statement or letter to be signed by Policy Committee Chairwoman Linda Clark.

Mr. Baker noted that there is renewed discussion in Washington, D.C. regarding potential bipartisan federal infrastructure legislation during the Biden administration.

C. AMATS Federal Funds Report

David Pulay presented Attachment 3C.

Mr. Pulay presented tables concerning STBG, CMAQ and TASA Funding Program and Balances dated January 11, 2021.

Mr. Baker said that AMATS has the Pavement Condition Index (PCI) numbers for the Greater Akron area. **Mr. Baker** said that PCI information is available through a link entitled the ***2019-2020 Pavement Condition Index*** under the *Quick Links* heading on the home page of the agency website at **amatsplanning.org**.

IV. Old Business

None.

V. New Business

A. Draft FY 2022 Transportation Planning Work Program and Budget.

Mr. Baker presented Attachment 5A.

Motion
Wayne Wiethe *made a motion to approve the Draft FY 2022 Transportation Planning Work Program and Budget and it was seconded by* ***Larry Jenkins****. The motion was approved.*

B. Draft Transportation Outlook 2045 List of Recommendations (Not Fiscally Constrained).

Mr. Baker presented Attachment 5B.

VI. Resolutions

A. Resolution 2021- 01 – Approving Amendment #6 to the FY 2021-2024 Transportation Improvement Program to add engineering and right of way phases to an existing project. – (FY 2021-2024 TIP Amendment #6).

Mr. Pulay presented Attachment 6A.

Motion
Jim Bowling *made a motion to approve Resolution 2021-01 and it was seconded by* ***Chris Papp****. The motion was approved.*

VII. Other Business

A. **Mr. Baker** said that the committee members may relay their preferences to him regarding how they want to receive virtual meeting notifications. **Mr. Baker** said that the members may continue to receive Zoom meeting calendar invitations or they may opt to receive meeting notices through email.

VIII. Adjournment

A. ***Motion***

Tony Demasi *made a motion to adjourn and it was seconded by* ***John Kovacich****. The motion was approved.*

The next regularly scheduled TAC meeting will be at **1:30 p.m**. on **Thursday, March 18, 2021**.

AMATS TECHNICAL ADVISORY COMMITTEE
2021 ATTENDANCE

M Denotes Member Present **A Denotes Alternate Present**	**Jan 21**	**Mar 18**	**May 13**	**Aug 5**	**Sept 16**	**Dec 9**
AKRON ENGINEERING BUREAU- Michael J. Teodecki (Jonke)	M					
AKRON PLANNING DEPT. – Mark Moore (Tomic)						
AKRON TRAFFIC ENGINEERING - Michael Lupica	M					
AURORA - Harry Stark (Czekaj)(Cooper)	M					
BARBERTON – Trevor Hunt (Halter)	M					
BARBERTON – Greg Tracy						
CUYAHOGA FALLS - Fred Guerra (Paul)						
CUYAHOGA FALLS - Tony V. Demasi (Marko)	M					
DOYLESTOWN - Eng. Assoc. - Ronny Portz						
FAIRLAWN - Nicholas Spagnuolo (Staten)	A					
GREEN - Wayne Wiethe (Haring)	M					
GREEN - Paul Pickett (Schemansky)						
HUDSON – Nick Sugar (Hannan)	M					
HUDSON – Brad Kosco (Wonsick)	M					
KENT - Jim Bowling	M					
KENT - Jon Giaquinto (Baker)						
LAKEMORE – Mayor Richard Cole, Jr. (Fast)						
MACEDONIA - Joseph Gigliotti (Sheehy)	M					
METRO – Valerie Shea (Baarson) (Mullen)	M					
MOGADORE – Vacant						
MUNROE FALLS – Vacant						
NEFCO - Joe Hadley, Jr. (Lautzenheiser)	A					
NEW FRANKLIN - Bryan Kepler (Ganoe)	M					
NORTHFIELD - Richard S. Wasosky						
NORTON – Josh Slaga (Hess)						
ODOT – Chad Root (Bruner) (Phillis)	M					
PARTA – Claudia Amrhein (Baba) (Popik) (Schrader)	A					
PORTAGE COUNTY ENGINEER – Larry Jenkins (Kusner)	M					
PORTAGE CO. REG. PLANNING COMM. - Todd Peetz (McGee)						
PORTAGE COUNTY SMALL VILLAGES – Tom Hardesty						
PORTAGE COUNTY TOWNSHIP ASSOC – John Kovacich (Greener)	M					
RAVENNA - Robert Finney (Jeffers)	M					
RICHFIELD - Chris Papp (Frantz) (Neumeyer)	M					
RITTMAN – Bobbie Beshara (Robertson)	M					
SILVER LAKE – John Tutak						
STOW – Jim McCleary (Donovan) (Kurtz)	M					
STOW – Mike Jones (Sisson)						
STREETSBORO – John H. Cieszkowski, Jr. (Broska)	M					
SUMMIT CO. COMM. & ECON. DEV. – Dennis Tubbs (Herschel)	A					
SUMMIT COUNTY ENGINEER - Alan Brubaker (Fulton) (Hauber) (Paradise)	A					
SUMMIT COUNTY SMALL VILLAGES – Brian Gorog	M					
SUMMIT COUNTY TOWNSHIP ASSOC. - Richard Reville (Funk)	A					
TALLMADGE - Andrea Kidder (Kline)						
TWINSBURG - Amy Mohr (Muter)	M					
WAYNE COUNTY ENGINEER – Scott A. Miller (Jones)						
WINDHAM – Deborah Blewitt (Brown)						

AMATS TECHNICAL ADVISORY COMMITTEE
2021 ATTENDANCE

M Denotes Member Present A Denotes Alternate Present	Jan 21	Mar 18	May 13	Aug 5	Sept 16	Dec 9
NON-VOTING MEMBERS						
AKRON CANTON AIRPORT - Renato Camacho						
AKRON REG. AIR QUALITY MGT. DISTRICT – Sam Rubens						
AMATS - Curtis Baker	M					
CUYAHOGA VALLEY NATIONAL PARK – Vacant						
ENVIRONMENTAL COMMUNITY REP. - Kurt Princic						
GREATER AKRON CHAMBER - Gregg Cramer						
OHIO TURNPIKE COMMISSION – Anthony Yacobucci						
PORTAGE COUNTY PORT AUTHORITY – Vacant						
PORTAGE PARK DISTRICT - Christine Craycroft						
PRIVATE TRANSPORTATION PROVIDER (CYC) – Deb Stolfo (Posten)						
RAILROAD INDUSTRY REP. - William A. Callison (Davis)						
SUMMIT COUNTY PORT AUTHORITY – Vacant						
SUMMIT METRO PARKS – Mark Szeremet (King) (Saunier)						
TRUCKING INDUSTRY – Vacant						

OBSERVERS AND STAFF MEMBERS PRESENT

NAME	REPRESENTING
Ms. Lauren Phillis	ODOT

STAFF MEMBERS PRESENT

Mr. Kerry Prater	AMATS
Mr. Dave Pulay	AMATS

Akron Metropolitan Area Transportation Study
Citizens Involvement Committee
Thursday, January 21, 2021 – 6:30 p.m.

Meeting Summary

Recordings of AMATS committee meetings are available in the Podcast section of the agency web site at www.amatsplanning.org/category/podcasts/.

Attendees:

Ron Brubaker

Staff:

Curtis Baker, Director
Jeff Gardner, Planner
Darryl Kleinhenz, Transportation Planner
Heather Davis Reidl, Mobility Planner

I. Welcome

Curtis Baker welcomed the AMATS Citizens Involvement Committee (CIC) meeting attendee.

II. Discussion Items

A. Mr. Baker made a presentation regarding the *Draft Transportation Outlook 2045 List of Recommendations (Not Fiscally Constrained).*

B. Mr. Baker made a presentation regarding the *Draft FY 2022 Transportation Planning Work Program and Budget*.

C. Ron Brubaker of TascForce - Trail Advocates for Summit County - described the group's activities to promote bike and hike trails within Summit County.

III. Adjournment

There being no other business, the meeting was adjourned.

The next meeting of the CIC is scheduled for **6:30 p.m.** on **Thursday**, **March 18, 2021**.

FINANCIAL PROGRESS REPORT
AKRON METROPOLITAN AREA TRANSPORTATION STUDY
February 28, 2021

	Description	Annual Budget	Year-to-Date Expenses	% Budget Expended	February Expenses
I.	**Short Range Planning**	**$289,700**	**$85,736**	**30%**	**$7,104**
	FY2020 Carryover	14,700	14,683		0
	FY2021	275,000	71,053		7,104
II.	**Transportation Improvement Program**	**$340,100**	**$189,103**	**56%**	**$25,726**
	FY2020 Carryover	65,100	65,078		0
	FY2021	275,000	124,025		25,726
III.	**Continuing Planning & Data Collection Transportation System Update**	**$187,600**	**$81,308**	**43%**	**$0**
	FY2020 Carryover	7,600	6,874		0
	FY2021	180,000	74,433		0
IV.	**Long Range Plan Activity**	**$536,000**	**$429,874**	**80%**	**$64,870**
	FY2020 Carryover	136,000	134,060		0
	FY2021	400,000	295,815		64,870
V.	**Service**	**$463,500**	**$252,054**	**54%**	**$20,821**
	FY2020 Carryover	113,500	112,270		0
	FY2021	350,000	139,783		20,821
VI.	**OhioRideshare and AQ Advocacy**	**$347,000**	**$84,968**	**24%**	**$9,611**
	FY2020 OhioRideshare Carryover	47,000	33,588		3,363
	FY2021 OhioRideshare	80,000	0		0
	FY2020 Air Quality Carryover	100,000	51,380		6,248
	FY2021 Air Quality	120,000	0		0
VII.	**Local**	**$25,000**	**$5,004**	**20%**	**$0**
	AMATS local Costs	25,000	5,004		0
VIII.	**AMATS Transportation Quarterly**	**$73,488**	**$36,174**	**49%**	**$4,624**
	FY2020 Carryover	14,900	14,789		0
	FY2021	58,588	21,385		4,624
IX.	**GRAND TOTAL AMATS BUDGET**	**$2,262,388**	**$1,164,221**	**51%**	**$132,756**

Attachment 3C

AKRON METROPOLITAN AREA TRANSPORTATION STUDY

M E M O R A N D U M

TO: **Policy Committee**
Technical Advisory Committee
Citizens Involvement Committee

FROM: **AMATS Staff**

RE: **AMATS Federal Funds Report**

DATE: **March 10, 2021**

Since our last meeting in January two more large projects (over $1,000,000 of AMATS funding) have sold. Those projects are the Aurora Citywide Signals ($1,866,506) and the Tallmadge Road/I-76 Interchange ($1,894,498) in Brimfield Township. There are still two large projects left to sell in FY 2021. Those two are 2nd St SW/Wooster Rd North/Norton Rd Resurfacing in Barberton and SR 14 Widening in Streetsboro. In addition to these there are four resurfacing projects remaining under STBG, one CMAQ project and one CMAQ bus purchase and two TASA projects. Please let us know if you need any assistance keeping these remaining projects on schedule.

In FY 2022 we have a balance of nearly $5 million in STBG funds. The allowable carryover is $2.6 million. We are actively working to move resurfacing projects up into this year but will still have room for more. To avoid the possibility of losing any of our funding please let us know if you have any projects that could move up.

We are inching closer to another round of AMATS funding this summer. We will begin with statewide CMAQ funding and then STBG, Resurfacing, and TASA. We expect the schedule will be similar to the last time in 2019 when the CMAQ applications were due at the end of July and then all the others a month later at the end of August. We will keep you updated.

AMATS TRANSPORTATION IMPROVEMENT PROGRAM

STBG Funding Program and Balances

March 8, 2021

ODOT PID	STBG PROJECT NAME	SPONSOR	PHASE	FY 2021	Quarter	FY 2022	Quarter	FY 2023	FY 2024	FY 2025
	Sold									
103293	**Cleveland Massillon Rd**	**Fairlawn**	**(R)C**	**$477,000**	1					
84397	**Seiberling Way Ph 1**	**Akron**	**P(R)(C)**	**$48,808**	1					
103172	**Massillon Rd (SR 241) Ph 2/Corporate Woods**	**Green**	**R**	**$1,398,346**	1					
102904	**W. Steels Corners Rd-phase 1 resurfacing**	**Cuy Falls**	**C**	**$616,081**	1					
108132	**South Hawkins Ave resurfacing**	**Akron**	**C**	**$700,000**	2					
107761	**Aurora Citywide Signal Improvement**	**Aurora**	**C**	**$1,866,506**	3					
	Pending									
102701	E. Exchange St-complete street	Akron	R(C)	$240,000						
108372	2nd St SW/Wooster Rd North/Norton Rd resurfacing	Barberton	C	$1,175,602	4					
108498	Wooster Rd resurfacing	Norton	C	$169,706	2					
107689	Mill Rd/S. Diamond St Resurfacing	Ravenna	C	$268,000	3					
102234	SR 14 widening	Streetsboro	C	$2,282,005	3					
108098	Chestnut Blvd Resurfacing	Cuy Falls	C	$392,000	4					
108865	Smith Rd Resurfacing	Summit Co Eng	C	$700,000	4					
106539	Wooster Rd/State St reconstruction		C			$1,737,580	4			
108200	White Pond Dr resurfacing	Summit Co Eng	C			$600,000	3			
108454	Olde Eight Road Resurfacing	Summit Co Eng	C			$700,000	3			
108467	Cleveland Massillon Rd Part 1 Resurfacing	Summit Co Eng	C			$700,000	3			
108468	Cleveland Massillon Rd Part 2 Resurfacing	Summit Co Eng	C			$700,000	3			
108140	Ravenna Rd Part 1 Resurfacing	Summit Co Eng	C			$700,000	3			
107886	North River Rd Resurfacing	Munroe Falls	C			$558,590	1			
102701	E. Exchange St-complete street	Akron	(R)C					$3,600,000		
108084	Portage Trail Extension Turn Lane	Cuy Falls	C					$3,649,197		
106416	SR 43 Widening	Streetsboro	C					$731,225		
108453	Akron Cleveland Rd Resurfacing	Summit Co Eng	C					$700,000		
108141	Valley View Rd Resurfacing	Summit Co Eng	C					$300,000		
84397	Seiberling Way Ph 1	Akron	(P)(R)C						$4,118,390	
112755	New Milford Rd Resurfacing	Portage Co Eng	C						$590,882	
112757	Riddle St Resurfacing	Ravenna	C						$200,000	
112756	S Chestnut St Resurfacing	Ravenna	C						$192,000	
112487	Romig Rd BRT Study	METRO	P						$80,000	
112745	Gilchrist Rd Ph 1 Resurfacing	Mogadore	C						$356,264	
112741	Hopocan Av Resurfacing	Barberton	C						$281,696	
112754	Johnson Rd Resurfacing	Norton	C						$443,869	
112753	Norton Av Resurfacing	Norton	C						$390,008	
112583	Ravenna Rd Resurfacing	Twinsburg	C						$432,000	
112735	Snyder Av Resurfacing	Barberton	C						$611,976	
112743	Terex Rd Resurfacing	Hudson	C						$506,000	
112740	Wooster Rd W Resurfacing	Barberton	C						$231,808	
108240	Wooster Rd West Reconstruction	Barberton	C						$5,507,836	
112549	S Main St (CR 57-2.62) Resurfacing	Rittman	C						$336,588	
112543	E Ohio Av (CR 57-3.91) Resurfacing	Rittman	C						$459,662	
113171	Tallmadge Rd Ph 1 Resurfacing	Portage Co	C							$700,000
112026	SR 59-2.14 (E Main St)	Kent	C							$3,600,000
113175	Ravenna Rd Part 2 Resurfacing	Summit Co	C							$600,000
113176	Swartz Rd Resurfacing	Summit Co	C							$500,000
113169	Munroe Falls Av Resurfacing	Munroe Falls	C							$261,190
112716	N Main St Complete Streets	Akron	(R)C							$6,000,000
113168	W Steels Corners Rd Ph 2 Resurfacing	Cuy Falls	C							$700,000

		2021	2022	2023	2024	2025
P = Engineering	Annual STBG Expenditures	$10,524,715	$5,696,170	$8,980,422	$14,738,979	$12,361,190
R = Right-of-Way	Annual STBG Allocations	$13,384,392	$10,633,414	$10,633,414	$10,633,414	$10,633,414
C = Construction	Balance	$2,859,677	$4,937,244	$1,652,992	-$4,105,565	-$1,727,776

AMATS TRANSPORTATION IMPROVEMENT PROGRAM

CMAQ Funding Program and Balances

March 8, 2012

ODOT PID	CMAQ PROJECT NAME	SPONSOR	PHASE	FY 2021	Quarter	FY 2022	FY 2023	FY 2024	FY 2025
	Sold								
100692	**Air Quality Advocacy Program**	**AMATS**		**$120,000**	1				
100691	**Rideshare Program**	**AMATS**		**$80,000**	1				
103293	**Cleveland Massillon Rd**	**Fairlawn**	**(R)C**	**$4,462,924**	1				
103173	**Massillon Rd (SR 241) Ph 3/Boettler**	**Green**	**R(C)**	**$445,500**	1				
98585	**Tallmadge Rd Interchange**	**Portage Co Eng**	**R(C)**	**$3,396**	3				
98585	**Tallmadge Rd Interchange**	**Portage Co Eng**	**(R)C**	**$1,894,498**	3				
	Pending								
93442	SR 43 (South Water St)*	Kent	R(C)	$63,520					
93433	Canton Rd/East Market St	Akron	(R)C	$788,320					
102992	CNG Bus Replacement (2 buses)	PARTA	C	$832,000					
111426	Air Quality Advocacy Program	AMATS				$100,000			
111431	Rideshare Program	AMATS				$80,000			
103173	Massillon Rd (SR 241) Ph 3/Boettler	Green	(R)C			$2,827,675			
103172	Massillon Rd/Corporate Woods Cir PH 2	Green	C			$2,606,199			
106445	SR 91-13.53 (SR 91 South Widening Project)	Hudson	C			$2,500,000			
111777	CNG Bus Buy 2022 (2 buses)	PARTA	C			$920,000			
111428	Air Quality Advocacy Program	AMATS					$100,000		
111432	Rideshare Program	AMATS					$80,000		
108084	Portage Trail Extension Turn Lane	Cuy Falls	C				$267,202		
112270	CNG Bus Buy (3 buses)	METRO	C				$1,560,000		
106416	SR 43 Widening	Streetsboro	C				$3,300,775		
111429	Air Quality Advocacy Program	AMATS						$100,000	
111433	Rideshare Program	AMATS						$80,000	
112245	METRO CNG Replacements (3 buses)	METRO	C					$1,260,000	
112244	PARTA 2 replacement clean diesel buses	PARTA	C					$779,253	
113165	Ravenna & Shephard Improvements	Macedonia	R(C)					$80,000	
113161	Highland & Valley View Improvements	Macedonia	R(C)					$104,000	
112797	Valley View & Olde Eight Improvements	Summit Co Eng	R(C)					$32,000	
112797	Valley View & Olde Eight Improvements	Summit Co Eng	(R)C					$228,000	
112026	SR 59-2.14 (E Main St)	Kent	C						$6,000,000
113161	Highland & Valley View Improvements	Macedonia	(R)C						$1,704,811
113165	Ravenna & Shephard Improvements	Macedonia	(R)C						$1,289,288
112716	N Main St Complete Streets	Akron	C						$900,000
				2021		2022	2023	2024	2025
P = Engineering		nnual CMAQ Expenditures		$8,698,495		$9,033,874	$5,307,977	$2,663,253	$9,894,099
R = Right-of-Way		Annual CMAQ Allocations		$9,071,298		$5,591,127	$5,591,127	$5,591,127	$5,591,127
C = Construction		Balance		$372,803		-$3,442,747	$283,150	$2,927,874	-$4,302,972

AMATS TRANSPORTATION IMPROVEMENT PROGRAM

TASA Funding Program and Balances

March 8, 2021

ODOT PID	TASA PROJECT NAME	SPONSOR	PHASE	FY 2021	Quarter	FY 2022	FY 2023	FY 2024	FY 2025
103834	Portage Hike and Bike-Brady's Leap Connection	Kent	C	$700,000					
107814	Darrow Rd (SR 91) Sidewalks	Stow	(R)C	$516,050					
106539	Wooster Rd/Robinson (Towpath Trail connector)	Barberton	C			$380,376			
107797	CVNP Ped Bridge & Trail	Summit Co Eng	C			$700,000			
99729	Raber Rd sidewalks	Green	C				$500,000		
102796	Freedom Trail/Portage Trail Connector	MetroParks/Tallmadge	C				$700,000		
105556	The Portage Trail - Ravenna Rd Bridge	Portage Parks	(P)C				$313,600		
107930	Freedom Trail Phase 4	MetroParks	C				$700,000		
112788	Cleveland Massillon Rd sidewalk	Summit Co Eng	P(R)(C)				$120,000		
112788	Cleveland Massillon Rd sidewalk	Summit Co Eng	(P)R(C)					$32,000	
112788	Cleveland Massillon Rd sidewalk	Summit Co Eng	(P)(R)C						$368,000
113160	Rubber City Heritage Trail East Side Seg B	Akron	C						$700,000
113016	Stow Silver Lake Cuyahoga Falls Bike Connector	Stow	C						$700,000

		2021	2022	2023	2024	2025
P = Engineering	Annual TASA Expenditures	$1,256,004	$1,080,376	$2,333,600	$32,000	$1,768,000
R = Right-of-Way	Annual TASA Allocations	$1,468,515	$1,063,342	$1,063,342	$1,063,342	$1,063,342
C = Construction	Balance	$212,511	-$17,034	-$1,270,258	$1,031,342	-$704,658

Attachment 5A

AKRON METROPOLITAN AREA TRANSPORTATION STUDY

M E M O R A N D U M

TO: **Policy Committee**
Technical Advisory Committee
Citizens Involvement Committee

FROM: **AMATS Staff**

RE: **Draft Transportation Outlook 2045**

DATE: **March 10, 2021**

Every four years, AMATS is responsible for completing a Regional Transportation Plan. *Transportation Outlook 2045* is scheduled to be completed in May of 2021. The plan must contain project recommendations for the greater Akron region that are fiscally constrained, meaning AMATS must forecast sufficient future funds which will be available for these project recommendations. Projects identified in the plan or consistent with the plan are eligible for federal transportation funds. As in the last plan, safety and operational improvements are considered consistent with the plan.

Transportation Outlook 2045 recommends over $5.3 billion in recommendations between now and 2045, focusing the area's limited transportation funding resources on preserving the existing transportation system. Recommendations are also included for transit investment and bicycle and pedestrian investment. The recommendations contained in this document are financially constrained and analyzed for air quality.

Public participation is vital to the transportation planning process. To that end, AMATS has scheduled a public meeting on March 18th at 6:30 pm via Zoom. AMATS will take comments from members and the public until the end of the comment period on May 12, 2021. Approval of the plan is expected at the May 20, 2021 Policy Committee meeting.

Transportation Outlook 2045

Transportation Outlook 2045

May 2021

Akron Metropolitan Area Transportation Study
161 South High Street, Suite 201
Akron, Ohio 44308

DRAFT

This report is the product of a study financed (in part) by the U.S. Department of Transportation's Federal Highway Administration, Federal Transit Administration and the Ohio Department of Transportation.

Cooperative transportation planning by the Village, City and County governments of Portage and Summit Counties and the Chippewa and Milton Township areas of Wayne County; in conjunction with the U.S. Department of Transportation and the Ohio Department of Transportation.

Table of Contents

1 | Executive Summary

2 | AMATS Role In Transportation

Far more than just laying pathways to get from one place to another, AMATS works to ensure that transportation improvements meet the needs and challenges of the region in shaping the physical, social, and economic landscape in the Greater Akron area. AMATS serves as the federally-designated Metropolitan Planning Organization (MPO) for Summit and Portage counties and the Chippewa and Milton Township areas of Wayne County. The agency is one of 17 Metropolitan Planning Organizations (MPOs) in Ohio. MPOs were established in the 1962 Federal Aid Highway Act, which required urban areas greater than 50,000 residents to create a continuing, cooperative and comprehensive planning process in order to receive federal funds for transportation improvements.

AMATS is responsible for prioritizing transportation investments for funding with federal and state dollars through preparing and maintaining the long range regional transportation plan. A key function of TO2045 is to outline a vision and strategy for how the region will invest in transportation infrastructure and develop policy and project recommendations through 2045. The Plan includes long-term highway, bicycle and pedestrian, and public transportation project recommendations.

AMATS also serves as a regional forum for discussion and cooperation between elected officials, the public, planners and engineers. The agency coordinates working with these stakeholders in order to set transportation policies and implement various improvements and to ensure that federal transportation funds are used in an efficient, effective and equitable manner.

The AMATS Policy Committee is responsible for directing the transportation planning process, policy and funding decisions. It is comprised of elected representatives from municipalities, counties, villages, townships, regional transit authorities and ODOT. The AMATS staff serves all the committees and is responsible for carrying out the technical work of the agency. They are responsible for developing the Regional Transportation Plan, Transportation Improvement Program and various other reports and recommendations for the consideration of the Policy Committee. The staff is made up of individuals primarily from engineering and planning disciplines.

AMATS role in transportation planning focuses on the following responsibilities:

- Monitor the conditions of the existing transportation network.
- Identify existing capacity or safety problems through detailed planning studies to develop transportation improvements.
- Forecast future population and employment growth for the region.
- Develop alternative growth scenarios to evaluate the affects that land use and transportation choices made today will have on the region's future.
- Help plan road and bridge repairs, bicycle and pedestrian facilities, and public transportation investments that will move goods and people safely and efficiently throughout the region.
- Estimate the impact that an expanding transportation system will have on air quality.
- Develop a financial plan that identifies the costs and revenues associated with the continued operation and maintenance, and future expansion of the region's transportation system.
- Work with the public and stakeholders to determine the region's priorities for improving the transportation system with the anticipated revenue.

3 | 2045 Goals and Objectives

3.0.1 | Maintain the existing transportation system

- Give priority to resurfacing, restoration, and rehabilitation, improvements in the development of regional transportation plans and programs
- Give priority to transit vehicle replacements, preventive maintenance, and facility rehabilitations in the development of regional transportation plans and programs

3.0.2 | Maintain a safe, secure, efficient and integrated transportation system

- Minimize highway accidents and provide safe travel routes
- Minimize pedestrian, bicycle, train, and vehicle conflicts
- Improve the safety of transit facilities and operations
- Improve the security of the transportation system
- Minimize traffic congestion

3.0.3 | Integrate all modes of the transportation system where appropriate

- Encourage service coordination among METRO, PARTA, and the neighboring transit operators
- Encourage system operating efficiencies through the development of projects that provide direct connections between modes
- Encourage the development of a balanced, integrated, multimodal transportation system that includes highways, transit, bikeways, pedestrian, rail, and air facilities

3.0.4 | Increase mobility for all persons

- Encourage a public transit system that provides basic mobility for transit dependent persons and provides an alternative to automobile usage
- Encourage the development of a regional network of bicycle routes
- Encourage the placement of sidewalks and other pedestrian facilities where they are appropriate
- Implement complete streets principles

3.0.5 | The transportation system should support the economic vitality of the region

- Develop a transportation system that will provide superior mobility for the movement of freight and goods
- Encourage the implementation of transportation improvements that will promote sound economic growth

3.0.6 | Encourage smart regional land use strategies and development patterns

- Coordinate the development of transportation facilities and land use
- Minimize the adverse effects of transportation facilities on land use, in order to protect and preserve neighborhoods and communities
- Minimize the adverse effects of land use changes on the transportation system
- Transportation and land use infrastructure should consider adverse environmental impacts

4 | Current Trends and Conditions

Exploring transportation trends and conditions are an integral part to developing a long range transportation plan. It is important to understand regional demographic and traffic trends to plan for the future and develop recommendations for *TO2045*. Areas of the region exhibiting different population and employment characteristics have different transportation needs. By understanding the current trends within the Greater Akron area, transportation planners can better plan for travel needs, adequate public facilities and services, and develop recommendations. There are multiple transportation options to serve the development patterns that exist in the region.

The past decade has brought much uncertainty to the region. Development in the region has slowed over the past four years, and more recently as a result of the COVID-19 coronavirus pandemic in 2020, the Greater Akron area along with the rest of the nation and world, has been impacted. While the long-term impacts of this virus remain uncertain, vehicle miles traveled (VMT) and transit ridership have seen a major decline as the total number of people working from home in the region has risen sharply. The effects of the pandemic will create a unique set of conditions that impact society, governments, businesses and medical support systems. This Plan will discuss more fully in later sections, the pandemic's implications on transportation and ways of doing business in the Greater Akron area.

Due to the uncertainty described in the coming section, it makes sense for the region to focus its resources on preserving its existing transportation system. This includes the roadway and transit network. It also makes sense for AMATS to focus on the safety of the current system and use targeted investments to fix the worst high crash locations in the region, while foregoing projects that focus on anticipated future congestion. Akron area roadway conditions continue to be a concern as AMATS continues to invest more funds in the preservation of the existing system.

Over the past four years, AMATS has developed a number of reports to identify these trends and forecast them into the future. The trends and conditions in this section are based on the latest planning data available and provide a framework for the recommendations included in *TO2045*. By responding to distinctive transportation needs in the various developed areas, *TO2045* strives to improve mobility throughout the region.

The following trends and conditions are described:

- Demographics
- Preserving the Existing System
- COVID-19 Impacts on Mobility Trends
- Freight
- Transit
- Active Transportation
- Complete Streets
- Safety Measures
- Congestion Management Process
- Environmental Resources
- Technology

4.1 | Demographics

In December 2020, AMATS completed its *2045 Planning Data Forecast*. The purpose of the Planning Data Forecast is to project socio economic data from the base year of 2010 to 2045. The data from this report will be used to update AMATS' transportation model and to forecast air quality emissions and future traffic patterns.

The Planning Data Forecast is based on existing data and projects this data into the future based on current trends. AMATS has disaggregated traffic analysis zone (TAZ) level data for every variable, into eight different subareas. These subareas reflect the shared growth characteristics of the political units within the same geographic area. The data has also been presented at the regional and county levels, as well as for three specific larger cities: Akron, Barberton and Cuyahoga Falls. The data from these three communities *is not* included in the subarea data.

The AMATS region is divided into 837 traffic zones. The region's traffic analysis zone data are then used in the regional travel demand model to generate traffic volumes, determine where trips begin and end, define the mode of travel, and assign routes. Traffic analysis zones are the smallest unit of geography used in AMATS transportation model. The *AMATS Planning Data Forecast Report* presents 2010 and 2045 data at the following aggregated geographic levels:

- The AMATS region
- The county level
- Select larger cities – Akron, Barberton, and Cuyahoga Falls
- 8 subareas, grouped by geographic proximity and similarity

The AMATS *2045 Planning Data Forecast* projects a number of variables, each of which has a direct impact on local traffic and is therefore required for input into the regional traffic demand model. These variables include:

- Population
- Households
- Population Under 18
- Vehicles
- Workers
- Employment (25 categories)
- School Enrollment (K-12)
- University Enrollment
- Group Quarters
- Hotel Rooms
- Median Household Income

The more than 30 planning variables are placed into three categories: population-based, employment-based, and stand-alone variables to examine the impact on the transportation network. Using this data, AMATS can determine what necessary transportation improvements would be most beneficial to the region out to the 2045 horizon year.

4.1.1 | Population

The Greater Akron area's population is expected to increase by 2.4 percent between 2010 and 2045. Summit County is expected to remain stable, with an expected 0.2% growth, while Portage County is expected to grow by 9.8%. The AMATS portion of Wayne County is expected to grow 1.2% through 2045. Portage County is expected to see the most growth with the top three population growth areas in Northwest Portage (12.0%), Northeast Portage (9.9%), and Southwest Portage (9.2%). In Summit County, the Southern portion is expected to see the most growth (3.0%).

As population growth in the Greater Akron area may be slow, it can still have an impact on the transportation network. It is anticipated that the areas of population growth may have more needs for safety and congestion improvements while areas of slower growth may need to focus on the preservation of the existing roadway network.

4.1.2 | Employment

Total employment in the Greater Akron area is expected to see 17.0% growth through 2045; going from 305,544 jobs in 2010 to 357,571 jobs in 2045. The amount of employment in the region is expected to outpace the number of workers. Employment is expected to grow across the AMATS Counties:

- Summit County 21.5%
- Portage County 21.3%
- Wayne County 18.3%

The top three employment growth areas are Cuyahoga Falls (32.7%), Northern Summit (31.7%), and Northwest Portage (28.3%). Southern Summit County will see growth similar to Northwest Portage (28.0%).

Employment sectors that are expected to see the largest growth in the Greater Akron area are Health Care and Social Assistance (52.7%), Construction (46.8%), Arts, Entertainment, Recreation (44.0%), Finance and Insurance (39.7%), and Transportation and Warehousing (32.7%). Employment sectors that are anticipated to see the largest declines across the region are Manufacturing (-16.6%), Utilities (-14.9%), and Agriculture, Forestry, and Hunting (-8.9%).

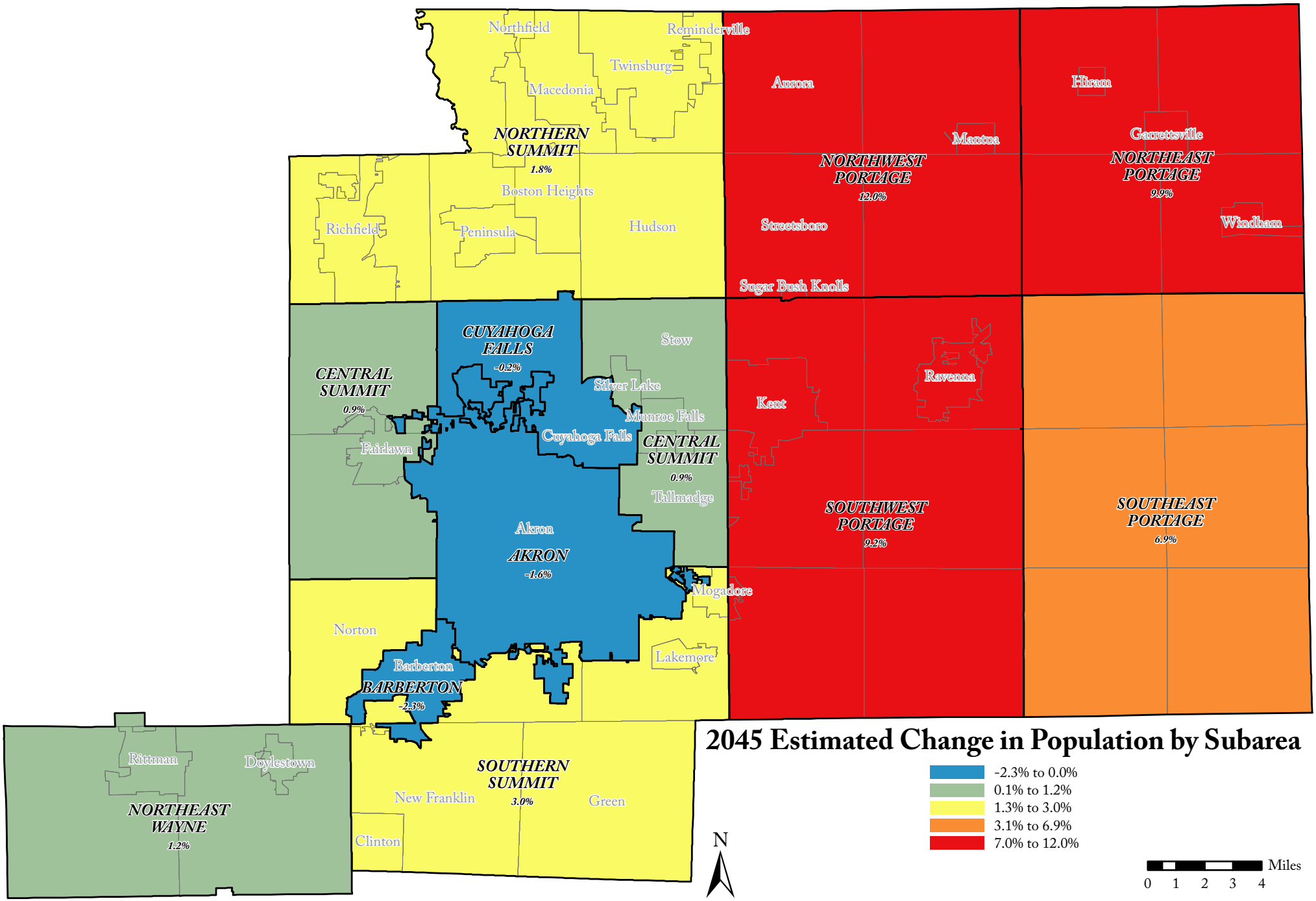
4.1.3 | Summary

The analyses contained within the Planning Data Forecast provides important planning insight and gives us a glimpse into the potential future of the Greater Akron region, in regards to the many important transportation planning variables. Each of these variables has a varying degree of impact on the local transportation system. Job growth is expected to put additional demand on the existing transportation system. The large amount of TAZ-level data generated during the Planning Data Forecast process will be input directly into the regional travel demand model. The model will then be able to generate future traffic volumes, congestion, and air quality data with the greatest possible accuracy.

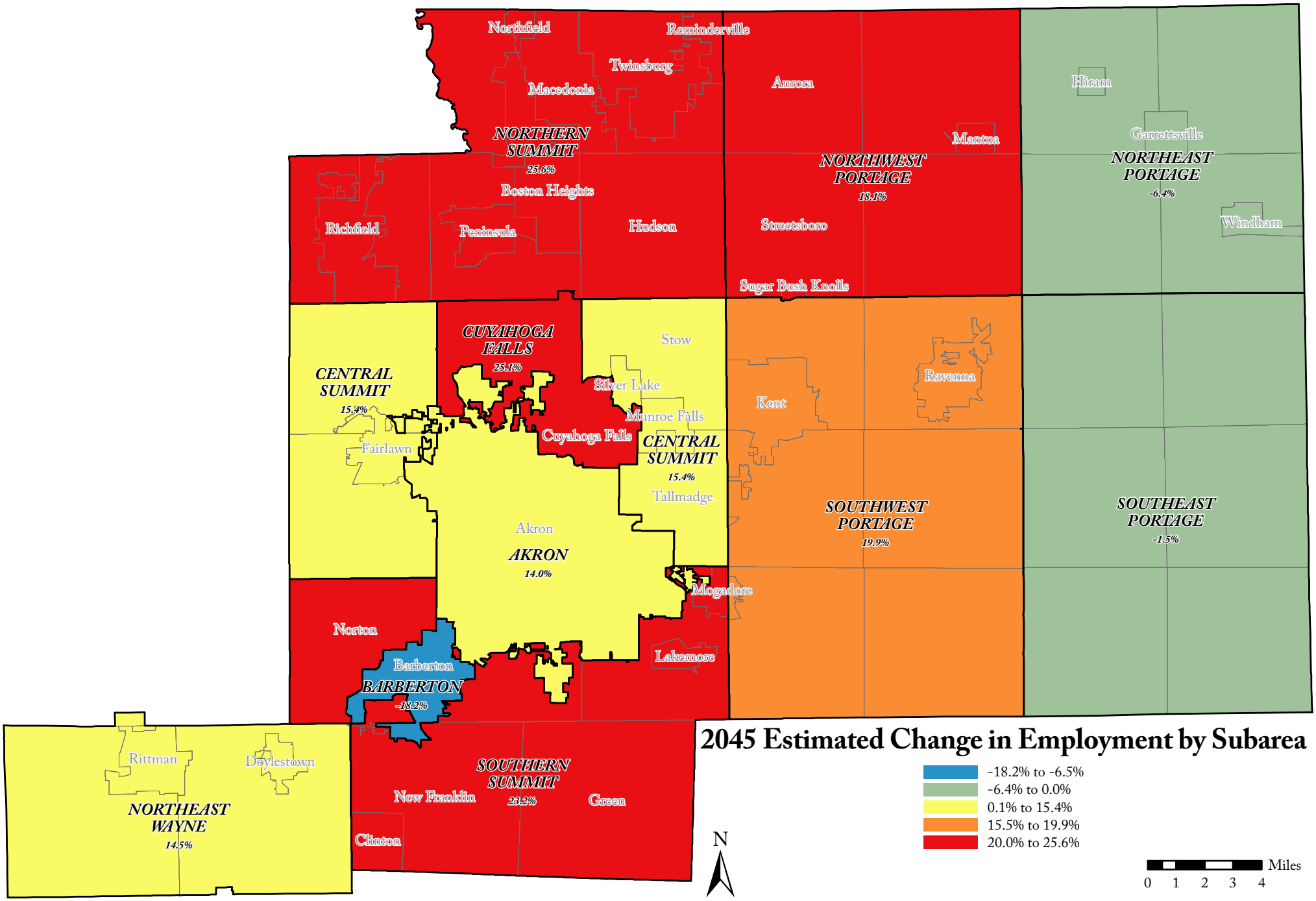
Table 4.1-1 | AMATS 2045 Forecast Characteristics

	BASE YEAR: 2010	PLAN YEAR: 2045	% CHANGE	
Population	722,788	739,885	2.4%	
Households	292,444	299,340	2.4%	
Population Under 18	161,858	165,342	2.2%	
Vehicles	523,128	534,506	2.2%	
Workers	343,133	344,603	0.4%	
Employment				
NAICS 11	371	338	-8.9%	Agriculture, Forestry and Hunting
NAICS 21	426	473	11.0%	Mining
NAICS 22	1,815	1,545	-14.9%	Utilities
NAICS 23	10,305	15,124	46.8%	Construction
NAICS 31-33	38,432	32,048	-16.6%	Manufacturing - Aggregated
NAICS 42	15,671	16,674	6.4%	Wholesale Trade
NAICS 44-45	35,243	40,791	15.7%	Retail Trade - Aggregated
NAICS 48-49	10,617	14,087	32.7%	Transportation and Warehousing - Aggregated
NAICS 51	4,987	4,817	-3.4%	Information
NAICS 52	9,438	13,184	39.7%	Finance and Insurance
NAICS 53	3,191	3,498	9.6%	Real Estate and Rental and Leasing
NAICS 54	14,766	16,913	14.5%	Professional Scientific and Technical Services
NAICS 55	14,358	18,841	31.2%	Management of Companies and Enterprises
NAICS 56	16,785	20,374	21.4%	Administrative Support, Waste Management and Remediation
NAICS 61	29,860	29,801	-0.2%	Education Services
NAICS 62	50,443	77,007	52.7%	Health Care and Social Assistance
NAICS 71	4,149	5,976	44.0%	Arts, Entertainment and Recreation
NAICS 72	25,111	26,920	7.2%	Accomodation and Food Services
NAICS 81	9,793	10,154	3.7%	Other Services (except Public Administration)
NAICS 92	9,685	8,999	-7.1%	Public Administration
NAICS 99	98	7	-92.9%	Other
Total Employment	305,544	357,571	17.0%	
K-12 School Enrollment	111,906	114,668	2.5%	
University Enrollment	56,186	46,526	-17.2%	
Group Quarters	18,186	18,422	1.3%	
Hotel Rooms	6,391	6,620	3.6%	
Median Household Income	57,851	57,900	0.1%	

Map 4.1-1 | 2045 Estimated Change in Population by Subarea



Map 4.1-2 | 2045 Estimated Change in Employment by Subarea



4.2 | The Pandemic's Impact on Transportation Systems

4.2.1 | Introduction

Throughout the United States, communities of all sizes grappled with the global pandemic in 2020. As a result, the total number of people working from home (WFH) in the US has risen sharply. Add in high unemployment numbers and lockdowns limiting permissible activities, and a clearer picture of the pandemic's current impact on transportation comes into view: Most notably, huge decreases in public transit ridership (at least 50% in most places, up to 90% in large metros) coupled with fewer VMT, overall trips and less congestion (greater decreases in areas with high infection rates/more severe lockdowns). At the same time, bike sales and usage, alongside parks visitations, have surged.

4.2.2 | Local Impact

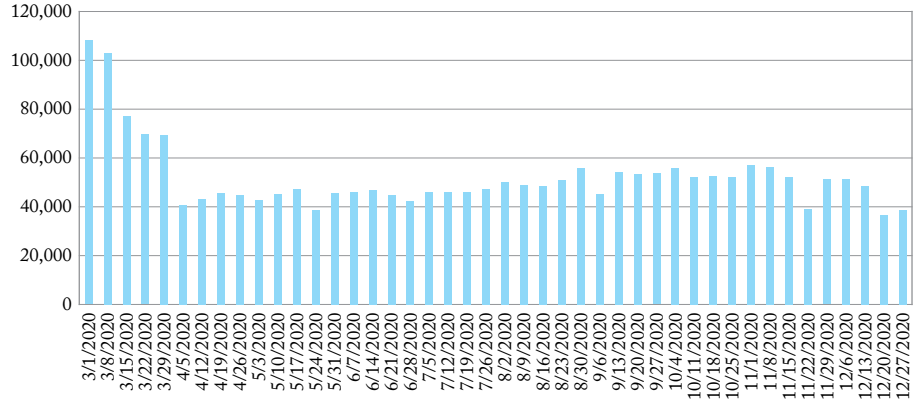
While larger metros saw much larger impacts on their transportation systems, small and mid-sized metros like Akron also experienced significant impacts. This is due to a variety of reasons, mainly that larger metros have a proportionally larger population of workers that can work from home or drive a personal vehicle to avoid transit. Cities like Akron have a larger share of workers that have no other choice but to ride transit. Still, local transit agencies suffered many challenges throughout the pandemic.

4.2.3 | Transit Impacts

METRO

- In April, service was reduced to a "Spring Contingency" schedule because of workforce constraints and the need to ensure social distancing. That service operated ***Monday-Saturday and was about 54% of full service level***.
- On June 8th, some service returned as operators were able to return to work and specific guidance about a safe passenger capacity on buses was received. That service also operated Monday-Saturday and was about ***72% of previous full service levels***.
- At the end of August, updated service was about ***84% of previous full service level.*** This included some additional trips to serve employment locations. Sunday service resumed, as well as a demand response option for suspended service on the circulator routes in the Cuyahoga Falls and Stow areas.
- Decisions were based on numerous factors, including workforce availability, social distancing requirements, ridership and productivity (prior to COVID), and customer feedback – all while being mindful of an uncertain financial impact.

March 2020 - December 2020 Weekly Ridership (METRO RTA)

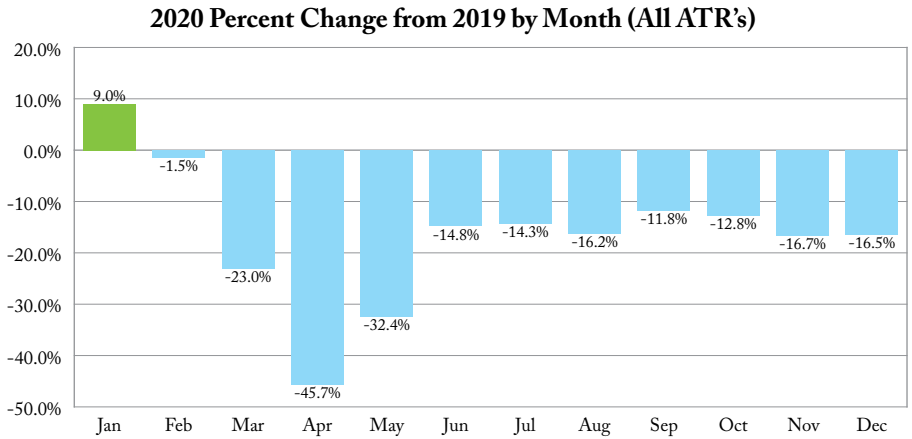


PARTA

- Once KSU sent students home, on-campus service dropped by 99.7%. Student ridership also impacts the off-campus routes as well which is why there was an immediate ***drop of 45.55% in the local off-campus fixed route ridership***. As the governor's stay at home order was initiated, off-campus fixed route service was cut with a new service plan implemented on April 1st ***reducing total service hours by 51.07%*** and suspending service of both express routes to Akron and Cleveland.
- By the first week of April local off-campus fixed route ridership was ***down by 76.29%*** when compared to pre-COVID ridership. Demand response trips dropped immediately by ***54.23% and by April, was down 70.67%***.
- As the state slowly opened, ***full local, off-campus, fixed route service was resumed on June 1st*** and began to see a slow rise in ridership. By the end of July, ridership was ***down 63.91% for local off-campus, fixed route ridership*** and ***52.80% for demand response trips*** when compared to pre-COVID ridership.
- Effective Fall 2020, the service plan for KSU, had less routes on the road, but more frequent service in the core of campus. To encourage social distancing, passenger restrictions and capacity reductions, to about 20 passengers per bus, were placed. Social distancing cut capacity by approximately 66%.
- Overall ridership on a weekly basis saw a range of loss from the greatest at -92.55% in mid-April to the lowest loss at -78.89% at the end of August and averaging -86.52% from mid-March through the last week of 2020. Finally, 2020 ridership was down 62.11% for the year when compared to 2019.

4.2.4 | Highway Impacts

- Local highway traffic decreased significantly in the beginning of the pandemic and gradually rose throughout the year until November/December (likely due to rising COVID cases).



4.2.5 | Active Transportation Impacts

Summit Metro Parks

- The Summit Metro Parks have seen a huge increase in total parks visits compared to the previous year.

Table 4.2-1 | Summit Metro Parks Visits

	2019	2020
March	301,393	431,515
April	428,277	639,938
May	538,315	677,183
June	523,507	728,065
July	534,985	724,236
August	567,689	579,907
September	619,104	818,647
October	463,737	514,326
November	361,406	411,757
December	236,779	263,573
Total	4,575,192	5,789,147
% Change		26.5%

Portage Park District

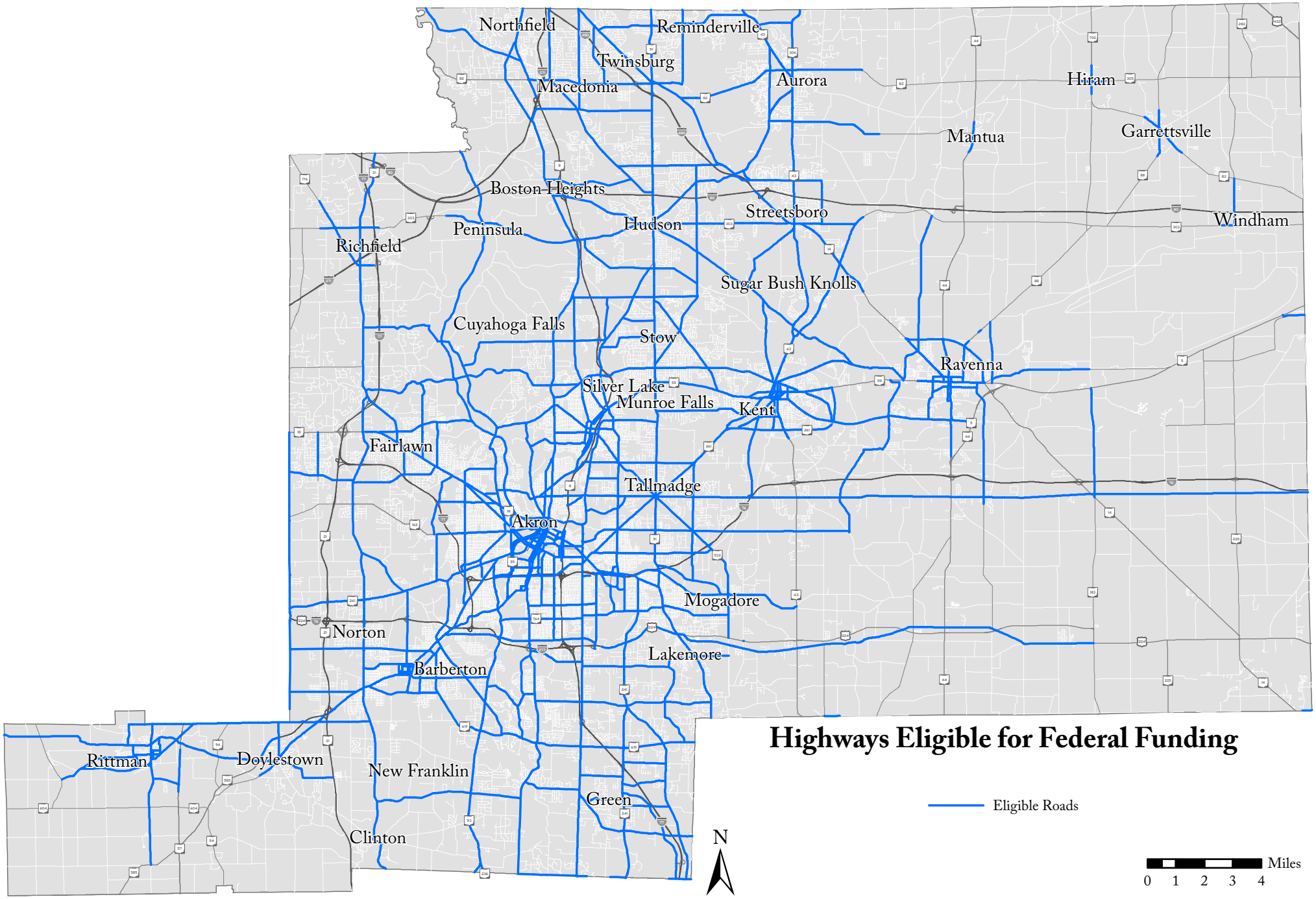
- While comparative data is not available, anecdotal data suggests that the Portage Hike & Bike trail has seen almost double the amount of users in 2020 compared to a regular year.

4.2.6 | Lasting Impacts?

The pressing question is, "How will these behaviors change once the pandemic subsides?" The answer is impossible to know for sure, and transportation experts are conflicted about the degree of change. That being said, the most likely, lasting impacts are as follows: People that can WFH will continue to do so in varying degrees, resulting in a slight permanent decrease in VMT, trips, and congestion. The decrease would be larger, except some workers will opt to use their car rather than ride transit. Particularly in larger metros, ridership will see a permanent decrease as personal vehicles are seen as safer and the WFH trend continues. In smaller metros, this decrease will likely be negligible, if any.

Transit agencies in some larger metros may face funding shortages because of lack of revenue and decide to cut back on service. Reliance on government intervention will likely increase, and/or partnerships with the private sector will become more desirable. Consequently, ridehailing, like Uber + Lyft, and micromobility, like scooter + bike shares, may see an increase in usage to fill in the gaps where transit has cut service, and because of general hesitancy to use transit. In addition, bike sales will likely return closer to normal, while usage may see a permanent increase. Further, in some cities, researchers expect renewed momentum towards active transportation, complete streets, and sustainability policies.

Map 4.3-1 | Highways Eligible for Federal Funding



4.4 | Safety and Security

4.4.1 | Safety

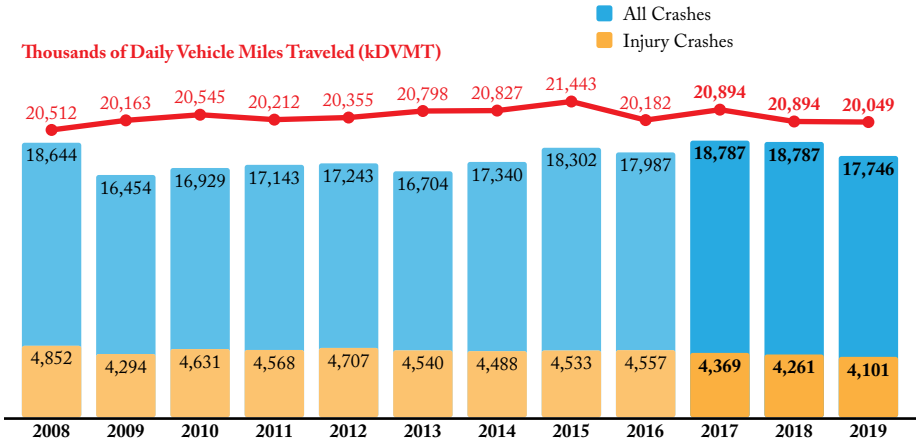
AMATS considers improving safety as one of the most important goals for the Greater Akron region and is committed to following a planning process that recognizes the importance of safety. This is accomplished by incorporating the results of safety studies into the development of transportation recommendations for *TO2045* and used as evaluation criteria for selecting projects for funding.

Every year, AMATS completes a Traffic Crash Report to analyze the high-crash locations in the Greater Akron area. The purpose of this report is to identify locations where investments can be made to improve safety. The AMATS *Traffic Crashes and Safety Performance Measures 2017-2019* report examines the last three years of available crash data for the region. This data is also used by AMATS to develop federal performance measure goals for safety.

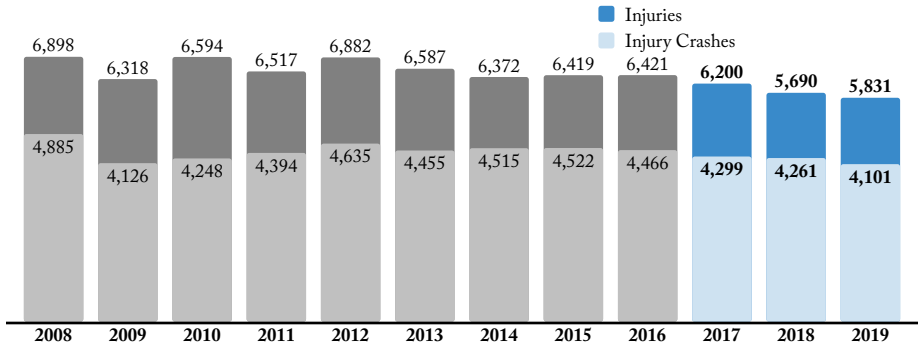
In 2019, the overall number of crashes in the AMATS area decreased by 951 or 5% from 2018. Injury crashes decreased by 160 or 4%. However, fatal crashes were up by 12 or 39%. This trend of increasing fatalities is mirrored statewide and nationwide. Safety experts are still not sure why it's happening. Some speculation is more driving in general, distracted driving such as texting, and impaired driving are the cause.

The following graphs show the number of total crashes in the AMATS area between 2008 and 2019. The red line plotted at the top of the graph shows the trend for thousands of daily vehicle miles traveled (kDVMT) in the AMATS area. In 2019, the number of daily vehicle miles traveled decreased by 1.9% from 2018. The number of fatal crashes in 2019 was 43, an increase of 39% compared to 31 in the previous year of 2018.

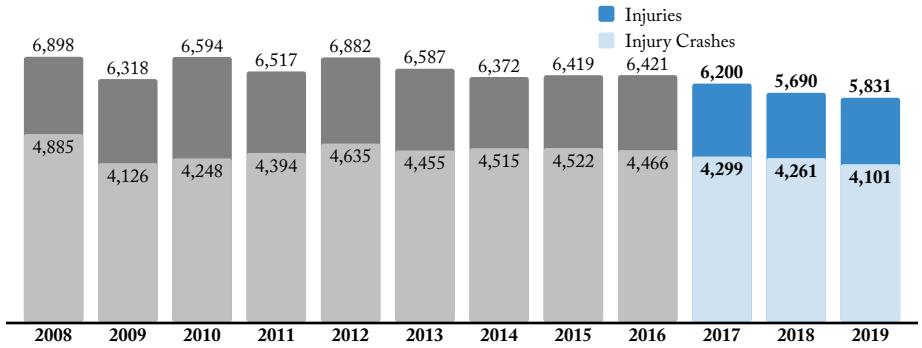
All Crashes, Injury Crashes and Vehicle Miles Traveled 2008-2019



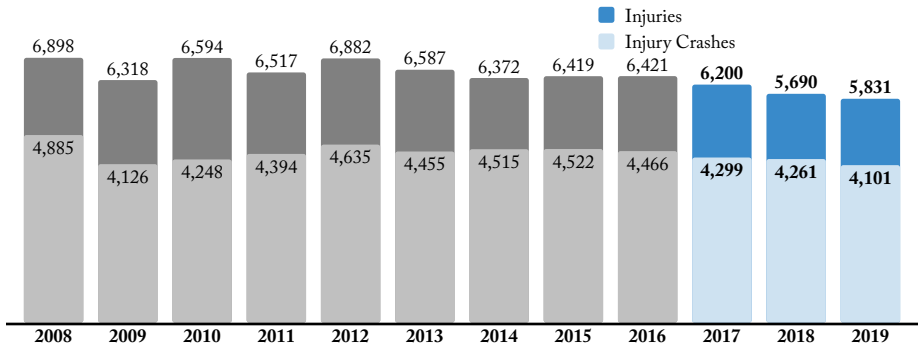
AMATS Area Injuries 2008-2019



AMATS Area Injuries 2008-2019



AMATS Area Injuries 2008-2019



4.4.2 | Security

Increasing the security of the transportation system for all users is a Federal Planning Factor, which AMATS must consider in its transportation planning process. AMATS coordinates with the Summit County Emergency Management Agency (EMA) and the Portage County EMA which are the two agencies responsible for emergency management, disaster preparedness and homeland security in the Greater Akron area.

AMATS and the EMAs share mailings, meeting notices and information regarding critical infrastructure. Both METRO and PARTA are also required to address security in their planning efforts.

4.5 | Active Transportation

AMATS considers biking and walking not only integral parts of daily life, but vital components of a first-class, multi-modal transportation system. Many Greater Akron area communities recognize the growing role of biking and walking as transportation options and are incorporating bicycle and pedestrian infrastructure into their future plans. Through various public outreach initiatives, AMATS has determined that many residents consider biking and walking to be desirable and vibrant modes of travel, but not convenient or – in some cases – safe modes.

AMATS focuses on three components for bicycle and pedestrian improvements:

- *Accessibility* – Does the system lead to people's destinations?
- *Efficiency* – Will the facility contribute to a connected regional transportation system?
- *Safety* – Does the infrastructure provide a safe environment for bicycling and walking throughout the Greater Akron area?

In December 2019, AMATS completed its *Active Transportation Plan (ATP)* to develop various strategies and recommendations for improving the Greater Akron area's bicycle and pedestrian networks. A basic principle of the ATP is to ensure that there will be transportation choices for people of all ages and abilities within the Greater Akron area.`

4.5.1 | Existing Bicycle Network

The Greater Akron area's bike network currently encompasses over 122 mile of shared-use paths and 50 miles of bike lanes, as well as 12 miles of mountain bike trails. Significant elements of this regional network include The Ohio & Erie Towpath Trail, the Summit Metro Parks Bike and Hike Trail, The Portage Hike and Bike Trail, and the Headwaters Trail. The region's network will likely continue to grow in the future as these shared-use paths present many opportunities for nearby communities to link to the current bike network. The completion of the Freedom Trail in Summit County, a shared-use path linking the downtowns of Akron and Kent via The Portage Hike and Bike Trail, is an example of the sort of connections that area communities should pursue to promote biking as a viable means of transportation. While the Greater Akron area's network has experienced significant growth in recent years, major gaps remain in the region's bicycle network. These gaps make it difficult, unsafe, and unpleasant for people to access many destinations.

On-road facilities, most notably bike lanes, are gradually beginning to fill in remaining gaps and connect people to various destinations. The *ATP* encourages AMATS member communities and project sponsors to develop lanes and other facilities that will close gaps, allowing better access to the daily needs of the area's cyclists such as employment, education, food and medical care.

4.5.2 | Existing Pedestrian Network

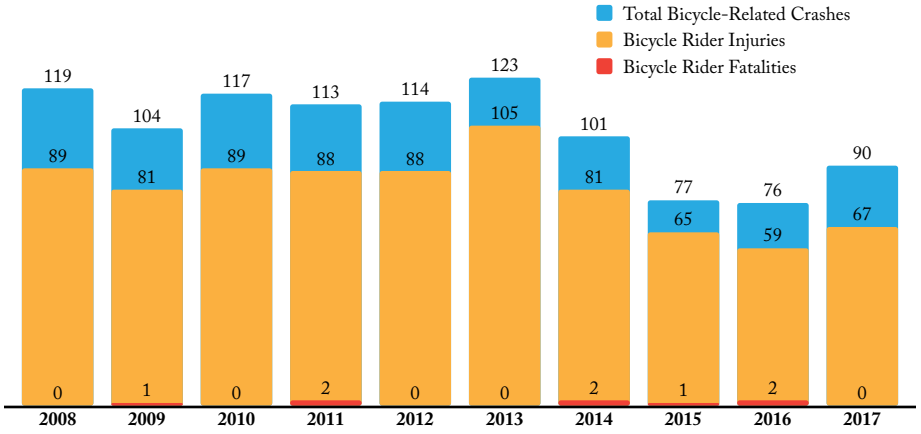
The AMATS region contains 2,860 miles of sidewalks. A number of the region's older established communities have extensive sidewalk networks that also provide access to available transit service. Unfortunately, many of these older networks also lack newer amenities and facilities that would encourage additional pedestrian travel such as crosswalks, mid-block crossings, plazas, signs, signals, illumination, benches and connections to shared-use paths.

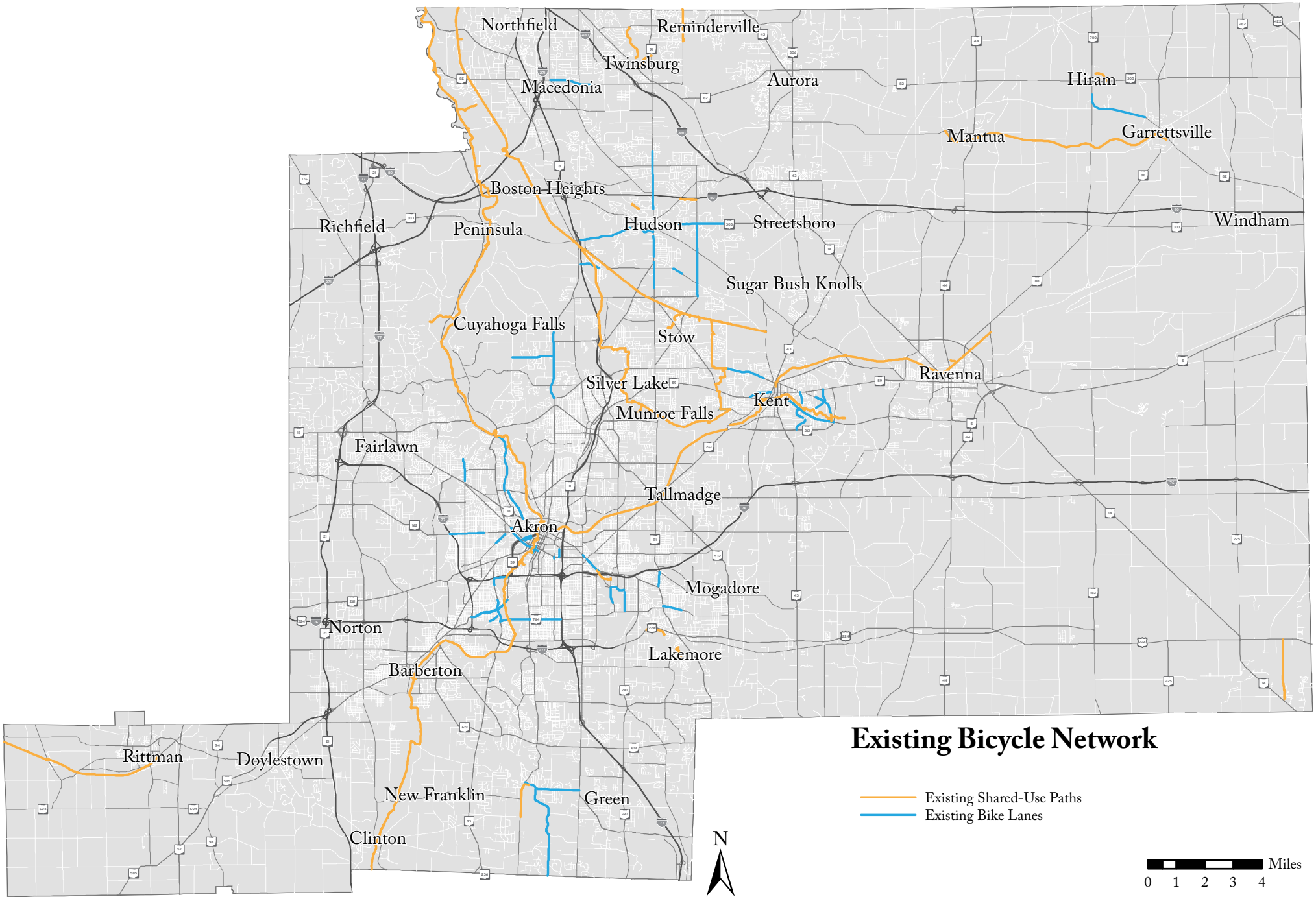
AMATS has made considerable progress in promoting pedestrian accessibility in both its older, established and newer, suburban communities through its Connecting Communities Program. The program was launched in 2011 with the intent to help communities strike a balance between their land use decisions and transportation investments. The Program provides financial grants for the development of plans and studies that promote vibrant, livable communities.

4.5.3 | Bicycle and Pedestrian Safety

AMATS also analyzed bicycle and pedestrian safety in the AMATS area *Traffic Crashes and Safety Performance Measures 2017-2019* report. According to the analysis, out of the 243 bicycle-related crashes that occurred in the Greater Akron area between 2015 and 2017, 191 crashes or 79 percent resulted in an injury. Tragically, three crashes resulted in fatalities (see chart below). AMATS has determined that many of these crashes involve younger cyclists, including children.

Bicycle-Related Crashes 2008-2017




Northfield
Reminderville
Twinsburg
Macedonia
Aurora
Hiram
Mantua
Garrettsville
Boston Heights
Richfield
Peninsula
Hudson
Streetsboro
Windham
Sugar Bush Knolls
Cuyahoga Falls
Stow
Ravenna
Silver Lake
Kent
Munroe Falls
Fairlawn
Tallmadge
Akron
Mogadore
Norton
Lakemore
Barberton
Rittman
Doylestown
New Franklin
Green
Clinton
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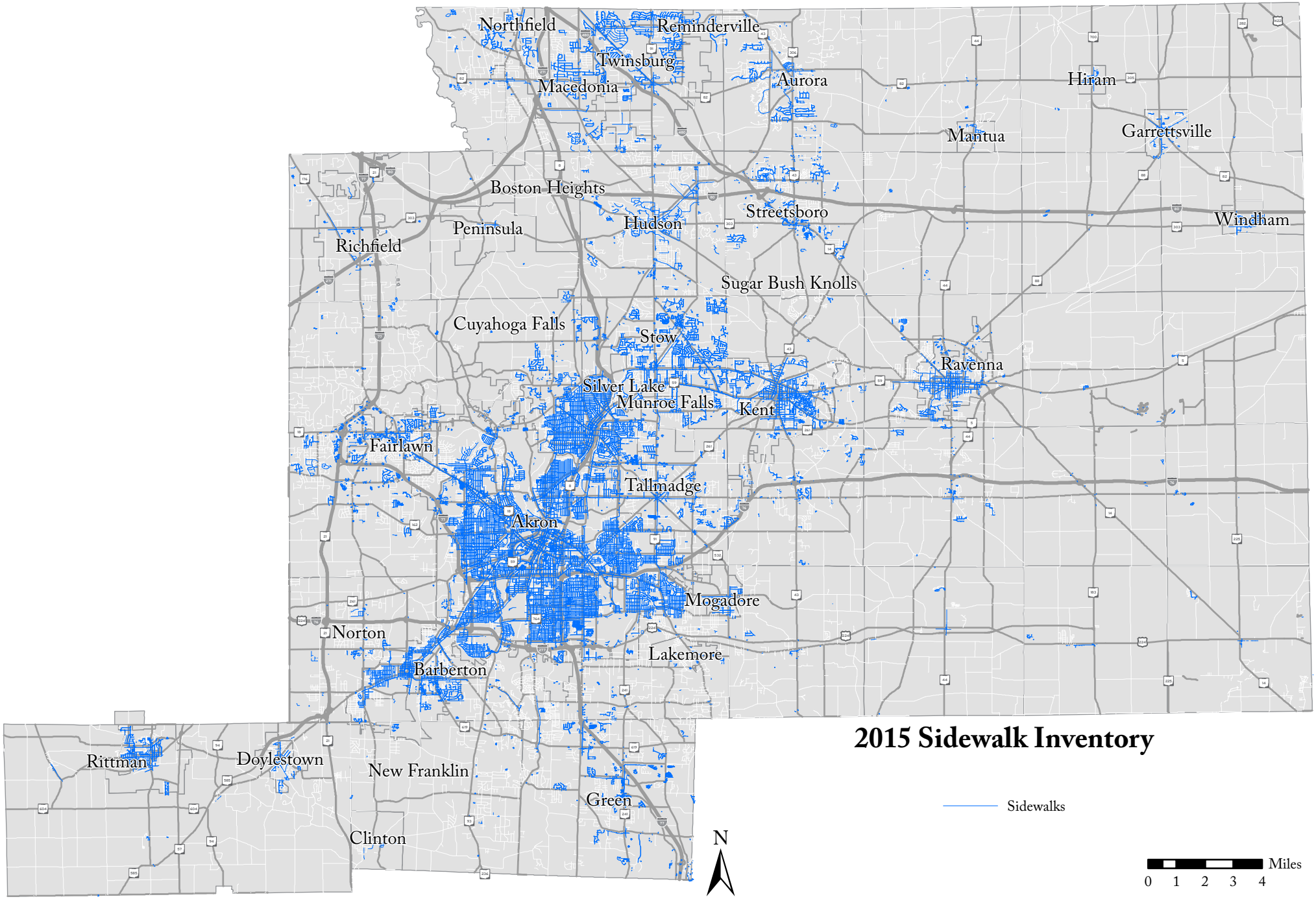
Existing Bicycle Network
Existing Shared-Use Paths
Existing Bike Lanes
Miles
0 1 2 3 4


Northfield
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Twinsburg
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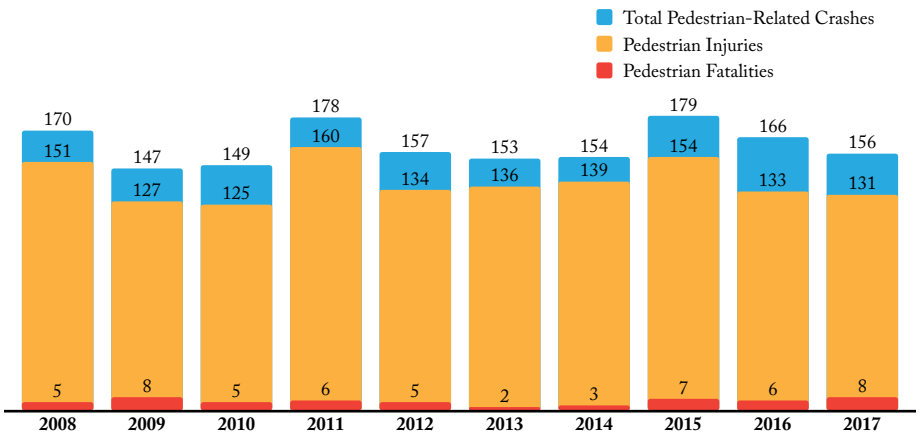
Aurora
Hiram
Mantua
Garrettsville
Boston Heights
Streetsboro
Hudson
Windham
Peninsula
Richfield
Sugar Bush Knolls
Cuyahoga Falls
Stow
Ravenna
Silver Lake
Munroe Falls
Kent
Fairlawn
Tallmadge
Akron
Mogadore
Norton
Lakemore
Barberton
Rittman
Doylestown
New Franklin
Green
Clinton
2015 Sidewalk Inventory
Sidewalks
N
Miles
0 1 2 3 4

The *ATP* recognizes that past transportation planning practices have tended to emphasize vehicular traffic rather than the needs of pedestrians. This emphasis has created built environments that are difficult and unsafe for pedestrians. The AMATS area Traffic Crashes and Safety Performance Measures 2017-2019 Report found that there were 501 pedestrian-related crashes from 2015 to 2017 with 418 (83 percent) resulting in an injury. By comparison – 24 percent of the region's vehicular-related crashes resulted in an injury during the same three-year period. Tragically, 21 of the area's pedestrian-related crashes resulted in a fatality. Among the more troubling findings from the report is that 97 (19.4 percent) of these crashes involve people under the age of 18. The following graph shows pedestrian-related crashes in the AMATS area since 2008.

Pedestrian-Related Crashes 2008-2017



4.5.4 | Goals and Strategies

The *ATP* outlines a number of goals and strategies regarding the promotion and encouragement of bicycling and walking as viable modes of active transportation. For bicycle development, AMATS embraces the five principles of Engineering, Education, Enforcement, Encouragement and Evaluation as put forth by The League of American Bicyclists as its guide to improving the area's network.

Goals and strategies for bicycle networks include:

- Promote a zero-death target for bicycle crashes
- Attract 500 new attendees to workshops and public events over the next few years
- Encourage AMATS members to invest an average of $1.1 million in TASA funds per year in additional shared-use and pedestrian infrastructure throughout the Greater Akron area between now and 2045
- Improve pavement to ensure efficient trips by investing at least $2.5 million per year in STBG and Resurfacing funds in the Greater Akron area's road surfaces between now and 2045

Goals and strategies for pedestrian networks are geared toward:

- Promote safety
- Assist AMATS member communities in seeking funding for sidewalk infrastructure
- Work in close concert with METRO RTA and PARTA when developing new sidewalk networks
- Encourage Safe Routes to School (SRTS) programs to provide high quality, safe bicycle and pedestrian infrastructure near schools

AMATS goals of improved efficiency and safety for bicyclists and pedestrians and establishing dedicated levels of funding for these modes are integral to the region's promotion of active living, sound economic development, and sustainability.

4.6 | Complete Streets

AMATS urges Greater Akron area communities to pursue Complete Streets principles in the coming years. Changing built environments to make all modes of transportation more appealing and accessible through sound land use practices and roadway design is at the core of AMATS' efforts. Complete Streets are streets that afford access to users of all ages, abilities and preferred modes of transportation. Complete Streets do not favor any mode of transportation over another. Rather, they are designed to complement multiple modes and diverse users.

All users, regardless of age or ability, should be able to reach their destinations along or across public streets safely and comfortably. Certainly, not every street can offer access to every possible mode of transportation. However, the Greater Akron area should build a network so that all modes serve all general areas, particularly those of strong attraction to non-motorized transportation, such as schools, parks, hospitals, key transit nodes and areas where dense residential uses are proximate to commercial/retail districts.

AMATS officially endorsed Complete Streets concepts and design through its Connecting Communities initiative that was launched in 2010. This initiative stresses the importance of integrating land use and transportation, and encourages communities to consider broadening their perspectives to include all potential modes of transportation in their transportation and development planning. It also aims to encourage transportation projects which support vibrant, healthy and inclusive places.

The *Connecting Communities* initiative was, and continues to be, implemented through the Connecting Communities Planning Grant program, to address specific transportation and land use challenges unique to an area. The Program also includes the principles of Connecting Communities to develop transportation plans that will

lead to projects eligible for AMATS funds. The Connecting Communities Planning Grant focuses on integrating the following Connecting Communities principles:

- Increase alternative transportation options to connect people and places
- Promote Complete Street principles to create vibrant and safe places for all users
- Leverage transportation projects to develop places which support alternative transportation and complete streets through land use and design

Since its first round of funding in 2011, the Connecting Communities Planning Grant Program initiative has completed studies in the communities of Akron, Barberton, Boston Heights, Copley and Bath Townships, Green, Hudson, Kent, Ravenna, Richfield, and Twinsburg. The 2020 Connecting Communities recipients were PARTA/Franklin Township and Stow. The total amount awarded in Consolidated Planning Grant (CPG) funds to AMATS communities for the life of the program to 2020 totals approximately $495,000. Many of the recommendations in these studies are being pursued by AMATS and their respective community sponsors.

Although AMATS has adopted and implemented Complete Streets principles throughout the Greater Akron area, the need for an official policy remains. AMATS Funding Policy Guidelines specifies that any AMATS member applying for federal transportation funding shall consider the needs, safety and comfort of all current and anticipated users, regardless of their preferred mode of transportation – in the design of all proposed projects. AMATS has recently addressed multi-modal issues more than ever in its long history by providing record amounts of funding for sidewalks, bicycle lanes, trails, transit improvements and related projects. Project sponsors and AMATS will work together through all phases of the project development process from conceptual planning to preliminary engineering and through the completion of construction, to ensure that all projects result in more Complete Streets, in accordance with the context of the local community.

4.6.1 | Context Sensitive Design

Context is important when determining what specific elements make a street "Complete" in a given community. For example, heavy trucks do not need accommodation on quiet, residential streets. Nor are bike lanes or bus routes always warranted in remote, rural communities. The type of planning area a project falls within will largely determine the appropriate Complete Streets considerations.

EXAMPLE COMPLETE STREETS TREATMENTS BY PLANNING AREA TYPE

Planning Area Type	Transportation Mode: Bike		Transportation Mode: Pedestrian		Transportation Mode: Transit	
Urban	Bike Lanes Side Paths Bike Storage Signals Grade-Separated Crossings		Enhanced Street Furniture Median Islands Curb Bulb-Outs High Visibility Crosswalks Planting Strip Buffers Mid-Block Crossings		Independent Bus Lanes Signal Prioritization Enhanced Bus Shelters	
Suburban	Community Trails Bike-Crossing Signage Bike Racks		High Visibilty Crosswalks On-Street Parking Handicapped-Accessible Sidewalks		Enhanced Shelters Along Arterials Park-and-Rides Commuter Buses	
Rural	Rails-to-Trails Wide Shoulders		Rails-to-Trails Wide Shoulders		Potential Park-and-Rides	

4.7 | Freight

Freight transportation employs millions of people in the United States, stimulates demand for goods and services, and increases competition. Freight is a cost-effective manner of shipping, as it moves a large quantity of goods all at once. It also allows goods to be transported over longer distances. Employers, employees, and consumers alike depend on the transportation of goods. The movement of freight is vital to the economy of Greater Akron, specifically to the agriculture, retail, and manufacturing industries, as well as part of an efficient transportation system. The types of freight that service the AMATS area are truck, train, and airplane.

AMATS completed its *2020 Freight Plan* in September that analyzes the highway and rail freight network. Examples of transportation projects that are freight-related or critical to goods movement that AMATS examined include bridge replacements, road operational improvements, rail-access improvements, grade separations for highway and rail, and connections for new commercial infrastructure. Regional job hubs were also identified that generate freight activity and the freight network's efficiency in these job hubs. Finally, the AMATS *2020 Freight Plan* recommends strategies that are presented here to promote freight-related commerce and delivery throughout the Greater Akron area.

AMATS's freight planning process includes three primary strategies:

- Developing and maintaining databases and analysis tools for decision-making
- Interacting with AMATS members and freight stakeholders to better understand the freight system, identify common issues, and build consensus
- Incorporating freight into the regional transportation planning process

4.7.1 | Highway-Rail Grade Crossings

There are approximately 393 grade crossings in the AMATS area. Many are on abandoned or out of service rail lines. At-grade crossings are protected either by train-activated, active warning devices (such as gates and flashing lights) or by passive warning devices (such as crossbucks, stop signs, and yield signs). Trains often require a mile or more to stop and are unable to deviate from their path. The warning devices are there to protect motorists, not trains. As a result, states, not railroads, are responsible for evaluating grade crossing risks and prioritizing grade crossings for improvement. The decision to install a specific type of warning device at a particular public grade crossing is made by ODOT, not by the railroad, with final approval by the Federal Highway Administration.

The Association of American Railroads recommends that at-grade crossing accidents can best be reduced through a mix of engineering, education and enforcement. Ohio has the fourth largest number of highway rail grade crossings in the country behind Texas, Illinois, and California. As of 2018, 5,737 at-grade vehicular public crossings are located in Ohio, with 58% have flashing lights and roadway gates, 32% have passive systems such as cross bucks, and 10% have flashing lights.

The AMATS area has a number of at-grade crossings with significant train and vehicle volumes. Between the years of 2016 and 2018, the AMATS area suffered four train-motor vehicle crashes. One of these crashes resulted in a fatality, one resulted in injury, and the remaining two only resulted in property damage. Map 4-6 shows all at-grade crossings in the AMATS area with high volume crossings highlighted. At-grade crossings are prioritized by scoring the number of trains per day and the daily traffic volume (ADT). Scores greater than 100 are shown in Table 4-3.

Table 4.7-1 | High Volume At-Grade Crossings

RANK	STREET (LOCATION)	TRAINS PER DAY	VEHICLE ADT	SCORE
1	Stow Rd (Hudson)	70	10,280	720
2	Broad Blvd (Cuyahoga Falls	32	15,385	492
3	S Main St (Munroe Falls)	27	16,694	451
4	E Twinsburg Rd (Macedonia)	74	5,550	411
5	Bailey Rd (Cuyahoga Falls)	27	13,315	360
6	E Hines Hill Rd (Hudson)	62	3,710	230
7	Hudson Run Rd (Barberton)	32	5,161	165
8	Fairview Ave (Barberton	29	5,251	152
9	W Summit St (Kent)	27	5,438	147
10	W Waterloo Rd (Twinsburg Township)	31	4,383	136
11	N Arlington St (Akron)	27	4,630	125
12	E Highland Rd (Twinsburg Township)	10	11,679	117
13	W Market St (Akron)	4	25,530	102

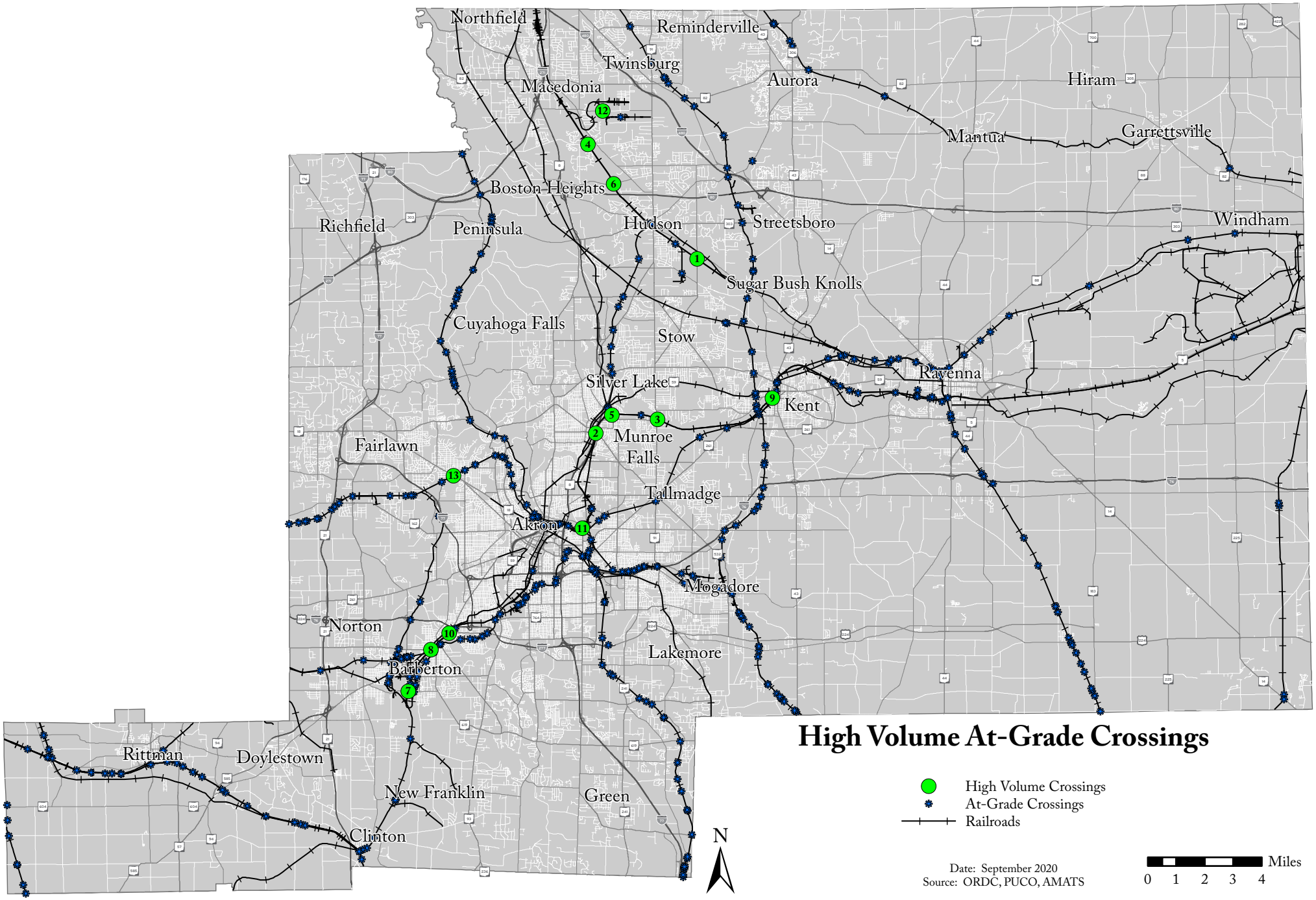
4.7.2 | Job Hubs

Several job hubs, also referred to as Freight Corridors, have been identified that show where products are being manufactured as well as where goods are being delivered, and to determine where freight may encounter traffic issues. In 2017, AMATS partnered with Fund for Our Economic Future (The Fund) to develop 14 Job Hubs in the AMATS area. According to The Fund, "Job hubs are specific places of concentrated economic activity in a region."

The Job Hubs exhibit the following four characteristics:

- High concentration of traded-sector jobs
- Multiple traded-sector employers
- Alignment with local development patterns
- Alignment with civic priorities and economic development opportunities

Map 4.7-1 | High Volume At-Grade Crossings



The 14 Job Hubs AMATS identified serve as primary origins and destinations for freight trips based upon expected demand of businesses in retail, warehousing, manufacturing and medical services, among various others. These areas are referred to as Freight Corridors. The identified corridors are:

- Firestone Park
- Downtown Akron
- Chapel Hill
- Cuyahoga Falls
- Barberton
- Green
- Akron-Canton Airport
- Brimfield
- Gilchrist Road
- Twinsburg
- Aurora / Streetsboro
- East Akron / Airport
- Richfield
- Hudson / Stow

4.7.3 | Performance Measures

Current federal regulations require performance management to ensure that state DOTs and MPOs such as AMATS choose the most efficient investments for federal transportation funds. Performance management focuses attention on national transportation goals, increases the accountability of federal fund programming, and improves project decision-making through performance-based planning. State DOTs and MPOs have established performance goals and will assess this performance over time. The USDOT requires that states and MPOs develop and assess performance measures for areas such as safety, infrastructure condition, traffic congestion, system reliability, vehicle emissions and freight movement.

The assessment of freight performance is measured in terms of mobility and efficiency (travel time, delay and safety) and accessibility and connectivity. Bottlenecks and roadways (or corridors) with particularly high levels of freight movement are singled out for more detailed analysis in terms of the adopted performance measures and goals. The end result is to use performance measures to inform goals that are part of the Regional Transportation Plan. Projects that are essential to the movement of goods are then programmed into the TIP as a part of an integral process.

4.7.4 | Recommendations

The highest priority needs in the AMATS area regarding freight movement involve improvements to the highway and rail systems. Freight movement, by way of trucks, is heavily concentrated on freeways and major state routes. The number of trucks on these roads range from 50 to 15,000 trucks per day, with I-76 through Summit and Portage counties being the busiest freeway for trucks. Highway improvements such as the Central Interchange project will help improve the efficiency of freight movement on the area's roadways. Recommended grade separations will reduce delays and eliminate conflicts between trains and automobiles.

Since the approval of AMATS *2016 Freight Plan*, ODOT has completed improvements to the ramp from I-76 EB to I-277 NB at the south end of the Kenmore Leg (safety issue related to crashes) to meet modern standards and geometrics. But the largest current project presently under construction is the new South Main/Broadway interchange with I-76/77 near downtown Akron. This $113 million project includes removing interchanges at Wolf Ledges Parkway and Grant Street, and reconstructing access points and re-aligning Main Street and Broadway.

In addition, there are several upcoming projects that will aid in the improvement of the overall freight network. These projects include:

- I-76 / I-77 / SR-8 Pavement Replacement and Lane Add Project in Akron (I-76 from Kenmore Leg to Princeton St, I-77 from Waterloo Rd to Lafollette St and Kenmore Leg to North of Vernon Odom Blvd, SR-8 from I-76 / I-77 to Perkins St).
- I-77 / I-277 / US-224 Interchange improvement and additional lanes (I-77 from Arlington Rd to US-224).
- SR-8 Bridge Replacement (SR-8 High Level Bridge over Cuyahoga River Valley).

Roadway Recommendations

- Prioritize safety improvements near heavy freight corridors to relieve non-recurring congestion in Transportation Outlook 2045.
- Prioritize operational improvements in heavy freight corridors that would improve recurring congestion in Transportation Outlook 2045.

Rail Recommendations

- Provide support or engage in public-private partnerships to alleviate congestion on rail lines identified in the *Ohio Statewide Rail Plan* and the *Ohio Freight Rail Choke Point Study*.
- Improve the CSX Lambert (Southwest Akron) to Warwick section near Clinton. This section of single track handles large amounts of two-way traffic. When trains are backed up, at-grade crossings are blocked to vehicular traffic. This situation also poses a danger to public safety in the area, as emergency vehicles cannot pass. Estimated cost: $10.9 million.
- Improve the NS Cleveland to Pennsylvania Line that passes through Macedonia, Hudson and Ravenna on its way to Alliance. The segment in Macedonia remains congested along a length of the rail line.

- Improve the Norfolk-Southern line in Hudson to prevent trains from idling on the Hines Hill Road at-grade crossing and blocking emergency vehicle access.
- Preserve out of service rail lines for future rail use or conversion to bike and pedestrian trails.
- Consider public/private partnerships with the rail companies in order to improve freight service in the area.

Railroad-Highway Grade Separation Recommendations

Railroad-highway intersections are a source of congestion and safety concerns. The strategies for alleviating congestion and improving safety were discussed earlier in the report. When feasible, separating the railroad and highway provides the greatest benefit. The highest priority grade separation locations in the AMATS area are:

- The Stow Road crossing of the Norfolk-Southern Line in Hudson
- The North Main Street (SR-91) crossing of the CSX Line in Munroe Falls

4.8 | Transit

Transit provides a necessary tool to ensure mobility access for disabled, elderly, and low income residents in the AMATS region. Providing a strong transit system is essential for a dynamic region preparing for the future. At a minimum, transit provides basic mobility to those without access to vehicles. Transit reduces emissions and congestion in metropolitan areas, which is a benefit for all users of the roadways. Lastly, transit can provide a basis for development, spurring economic development along a bus route and adding jobs to an area. Transit-oriented development is defined as a type of urban development that is designed and constructed with transit access in mind. It usually includes mixed-use development and easy access to transit.

The two primary transit providers in the AMATS region include METRO RTA in Summit County and the Portage Area Regional Transportation Authority (PARTA) in Portage County. The portions of Wayne County in the AMATS region are not currently served by a public transit provider. METRO RTA and PARTA both provide traditional fixed-route service, operating a combined 53 routes, but they also provide demand response services and express bus services. Both agencies have a Compressed Natural Gas (CNG) fueling station, as they include CNG buses in their fleet. METRO's newest station opened in 2016 and PARTA's first station opened in 2018.

4.8.1 | Existing System and Coverage

For METRO RTA, over four and a half million riders used its fixed-route service in 2019, with October being the most traveled month of the year. Two routes, West Market (#1) and Arlington (#2), were by far the most popular routes. For PARTA, over one million passengers took advantage of their fixed-routes, with one route on the Kent State University campus (Front Campus/Summit East) totaling over 350,000 passengers for the year. Tables 4.8-1 and 4.8-2 provide ridership numbers for the entire fixed-route system for both METRO RTA and PARTA.

Table 4.8-1 | METRO RTA Fixed-Route Service 2019 Monthly Ridership

ROUTE #	DESCRIPTION	MONTHLY AVERAGE
1	West Market	42,450
2	Arlington	42,143
3	Copley Rd / Hawkins	22,012
4	Delia/N Hawkins	10,102
5	East Market / Ellet	8,109
6	East Market / Lakemore	20,579
7	Cuyahoga Falls Ave	12,287
8	Kenmore / Barberton	19,947
9	Wooster / East Ave	13,561
10	Howard / Portage Trail	18,690
11	South Akron	2,503
12	Tallmadge Hill	13,472
13	Grant / Firestone Park	14,655
14	Euclid / Barberton XP	21,831
17	Brown / Inman	15,707
18	Thornton / Manchester	13,662
19	Eastland	14,268
21	South Main	2,357
24	Lakeshore	3,855
26	W Exchange / White Pond	5,397
28	Merriman Valley	3,746
30	Goodyear / Darrow	9,977
33	State Rd / Wyoga Lake	5,105
34	Cascade Village / Uhler	12,794
50	Montrose Circulator	1,573
51	Stow Circulator	1,418
53	Portage / Graham	2,114
54	DASH Circulator	10,376
59	Chapel Hill Circulator	1,145
60	NCX Chapel Hill / Cleveland	1,088
61	NCX Montrose / Cleveland	5,787
101	Richfield / Bath	1,038
102	Northfield Express	3,142
103	Stow / Hudson	3,403
104	Twinsburg Creekside	2,483
110	Green / Springfield	2,317
AVERAGE MONTHLY TOTAL		**385,093**

Table 4.8-2 | PARTA Fixed-Route Service 2019 Monthly Ridership

ROUTE #	DESCRIPTION	MONTHLY AVERAGE
30	Interurban West	5,819
35	Interurban East	13,240
40	Suburban North	2,737
45	Suburban South	3,303
51	Campus Loop	11,637
53	Reverse Loop	5,217
55	Allerton	5,964
57	Stadium Loop	948
58	Front Campus / Summit East	31,129
59	Stadium Night Loop	2,170
60	Black Squirrel	1,063
70	Windham / Garrettsville	855
80	Raven West	356
85	Raven East	965
90	Akron Express	1,573
100	Cleveland Express	448
AVERAGE MONTHLY TOTAL		**89,018**

In addition to fixed-route service, METRO provides several other options for residents of Summit County to utilize for everyday travel. METRO's Call-A-Bus service, serving Macedonia, Twinsburg, Townships of Sagamore Hills, Twinsburg, and Northfield Center and the Villages of Northfield and Reminderville, can be used by anyone who calls a day in advance and schedules the ride. The Call-A-Bus service provides curb to curb service for $4 per ride and is available Monday through Friday. Call-A-Bus services are also available in the City of Green.

SCAT service is origin-to-destination shared rides using a small bus or van. SCAT service is $2 per trip and is available to anyone 62 years old or older, or with a disability. Additionally, METRO runs a free shuttle service through downtown Akron during the week, the Downtown Akron Shuttle (DASH). DASH buses run every 10 minutes and travel a loop around downtown and the RKP Transit Center. Lastly, METRO runs two bus routes from the Akron area to Cleveland every weekday morning and evening. Called the Northcoast Express, one route starts in Cuyahoga Falls and travels through Hudson and Twinsburg on its way to Cleveland. The other route starts at the Transit Center in downtown Akron, heads out to the Fairlawn/Montrose area, and makes its way to Cleveland via the expressway.

PARTA also offers several services in addition to their regular fixed-routes. PARTA's Dial-A-Ride service creates access in areas where fixed-route service has not been expanded to or is not feasible. This service is offered throughout Portage County on small buses with equipment to assist those with disabilities and is $6 per ride, with reduced fare available for those who qualify. PARTA also provides express service from Kent to Akron seven times a day and Kent to Cleveland twice a day.

Both METRO and PARTA offer a specialized service for those with disabilities per the Americans with Disabilities Act (ADA). This complementary paratransit service provides transportation for people with disabilities who cannot use fixed-route buses.

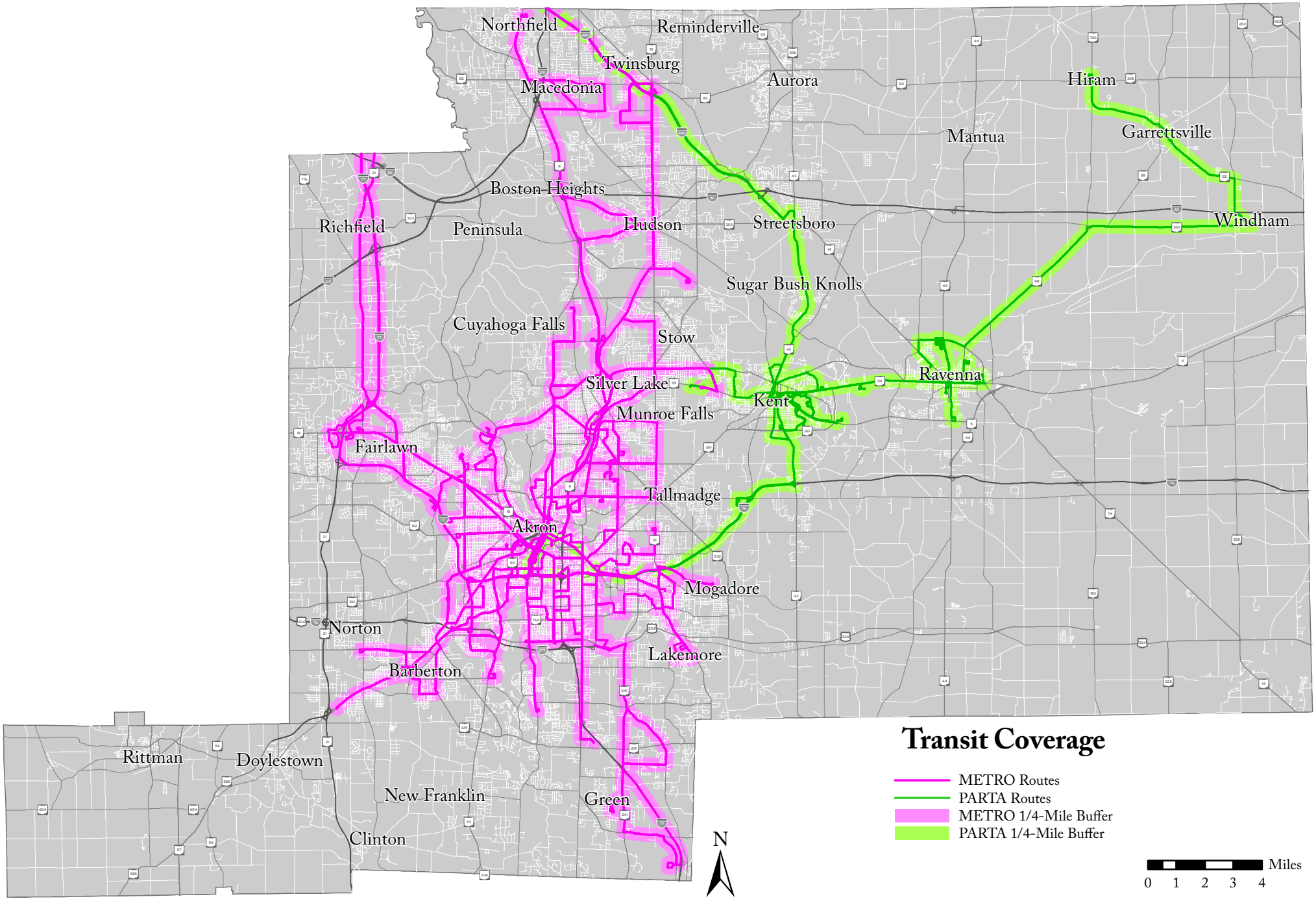
NEORide was created to encourage coordination among member transit agencies in Ohio in order to provide a more comprehensive and collaborative transit system to residents. Both METRO and PARTA are members, as well as GCRTA (Cleveland), MCPT (Medina), SARTA (Canton), WRTA (Youngstown), and several others around the state of Ohio and Northern Kentucky. Together, these agencies can apply for federal grant programs, promote transit use to the entire state and surrounding regions, combine resources to better serve the communities they represent, and implement services that benefit transit riders.

One recent initiative of NEORide was the introduction of EZFare, a mobile app that makes it easier to buy bus passes, pay your fare before you get on the bus, and even switch between different transit systems. Transit riders can download the EZfare app and purchase their bus passes using a credit card and at their own convenience. NEORide will continue to provide opportunities for collaboration and growth well into the 21st century.

4.8.2 | Transit Coverage Analysis

When determining how well the region is served by fixed-route transit, it is helpful to determine the number of residents that live within a comfortable walking distance to a transit line. A quarter mile walk is the typical standard. Comparing the population living within walking distance of a bus route to the overall population gives us a percentage of transit coverage for each community. Transit coverage data were produced using data from the American Community Survey - 2017 5 year estimates. Out of the entire AMATS region's population of 713,412 (as of 2010), 317,673 people (almost 44% of the population) have access to fixed-route transit within a quarter mile. A comprehensive multi-modal network includes bus shelters, park and ride lots, bike paths and sidewalks. This integrated approach makes access to transit stops seamless and traveling longer distances to stops more feasible.

Table 4.8-2 shows all of the communities with access to fixed-route transit. Older, established cities with a higher density of development have better transit coverage. Cities such as Akron, Kent, Ravenna, Barberton, and Cuyahoga Falls offer some of the highest levels of transit access in the area. As expected, there are very low levels of transit access in rural communities such as Charlestown, Nelson, and Shalersville


Northfield
Reminderville
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Macedonia
Aurora
Hiram
Mantua
Garrettsville
Boston Heights
Richfield
Peninsula
Hudson
Streetsboro
Windham
Sugar Bush Knolls
Cuyahoga Falls
Stow
Silver Lake
Ravenna
Kent
Munroe Falls
Fairlawn
Tallmadge
Akron
Mogadore
Norton
Lakemore
Barberton
Rittman
Doylestown
New Franklin
Green
Clinton
N
Transit Coverage
METRO Routes
PARTA Routes
METRO 1/4-Mile Buffer
PARTA 1/4-Mile Buffer
Miles
0 1 2 3 4

Table 4.8-3 | Total Population Transit Coverage by Community

(Includes Only Communities with Access to Fixed-Route Transit Service)

COMMUNITY NAME	ESTIMATED TOTAL POP.	ESTIMATED TOTAL POP. W/IN 1/4 MI OF TRANSIT	% TRANSIT COVERAGE
Akron	198,252	165,653	83.6%
Barberton	26,230	15,080	57.5%
Bath Twp	9,697	2,132	22.0%
Boston Heights	666	281	42.2%
Boston Twp	1,209	13	1.1%
Brimfield Twp	10,353	1,369	13.2%
Charlestown Twp	1,788	5	0.3%
Copley Twp	17,305	2,641	15.3%
Coventry Twp	10,911	2,730	25.0%
Cuyahoga Falls	49,329	32,149	65.2%
Fairlawn	7,463	4,426	59.3%
Franklin Twp	6,004	3,603	60.0%
Freedom Twp	2,847	236	8.3%
Garrettsville	2,991	841	28.1%
Green	25,741	6,410	24.9%
Hiram	1,294	75	5.8%
Hiram Twp	2,256	111	4.9%
Hudson	22,250	6,047	27.2%
Kent	29,771	19,850	66.7%
Lakemore	3,075	1,163	37.8%
Macedonia	11,715	3,828	32.7%
Mogadore	2,842	78	2.7%
Munroe Falls	5,065	1,101	21.7%
Nelson Twp	3,123	7	0.2%
Northfield	3,658	2,071	56.6%
Northfield Center Twp	5,840	828	14.2%
Norton	12,038	1,209	10.0%
Ravenna	11,530	7,623	66.1%
Ravenna Twp	9,172	2,550	27.8%
Richfield	3,649	937	25.7%
Richfield Twp	2,515	243	9.7%
Sagamore Hills Twp	10,956	403	3.7%
Shalersville Twp	5,643	10	0.2%
Silver Lake	2,450	1,776	72.5%
Springfield Twp	14,581	2,613	17.9%
Stow	34,743	13,317	38.3%
Streetsboro	16,305	2,686	16.5%
Sugar Bush Knolls	177	23	13.0%
Tallmadge (Summit County)	17,276	4,977	28.8%
Tallmadge (Portage County)	230	99	43.0%
Twinsburg	18,849	3,757	19.9%
Twinsburg Twp	2,879	1,311	45.5%
Windham	1,928	1,182	61.3%
Windham Twp	1,683	229	13.6%
Estimated Total Pop. with Transit Access:		317,673	43.9%

Source: American Community Survey – 2017 5-Year Estimates

Townships. There are 16 communities in the AMATS region that do not have access to fixed-route service.

4.8.3 | Capital Assets and Facilities

PARTA has 35 fixed-route buses comprised of 32 large buses and 3 small buses/light transit vehicles (LTVs). Additionally, PARTA has 23 LTVs and 5 vans/small transit vehicles (STVs) that provide demand response service.

METRO has an active fleet of 231 vehicles. Of these, 124 are Compressed Natural Gas (CNG), 103 are diesel, and 4 are hybrid. METRO's fleet is varied and includes 60-foot articulated, 40-foot diesel, 40-foot CNG, and 40- foot hybrid buses, as well as smaller vehicles for SCAT and Call-A-Bus services. All METRO buses are equipped with bike racks and are handicap accessible.

Both METRO and PARTA have their own CNG fueling stations, with METRO's original station opening in 1997 and a new one in 2016, and PARTA opening the first CNG fueling station in Portage County in 2018. METRO's fleet is approximately 50% CNG today, with a goal of being 100% alternative fuels by 2024. PARTA plans to include more CNG buses in their fleet. CNG fuel positively benefits both transit agencies due to its affordability and consistent price, as well as reducing greenhouse gas emissions significantly. With both transit agencies having their own CNG fueling stations, we should begin to see more CNG buses in the AMATS area as well as a reduction in operating costs.

4.8.4 | Transit Ridership

The people who rely on transit for most of their daily trips tend to fall into one of the following groups:

- Elderly
- Low Income
- Minority
- Disabled

Population data for the above groups was gathered using the American Community Survey (ACS) estimates that are updated annually. The definition of transit coverage is the percentage of people in the demographic group that are within a quarter mile of a bus route. The more a transit dependent population exists, the more comprehensive bus service a community should have. Unfortunately this is not always the case. Although both METRO and PARTA provide demand response services, sometimes these resources are not available to accommodate those needing assistance due to medical reasons. For that reason, it is important to examine the transit coverage in the AMATS area through the transit agencies fixed-route transit lines, and identify where improvements can be made.

Table 4.8-4 | Elderly Population Transit Coverage by Community

(Includes Only Communities with Access to Fixed-Route Transit Service)

COMMUNITY NAME	ESTIMATED ELDERLY POP.	ESTIMATED ELDERLY POP. W/IN 1/4 MI OF TRANSIT	% TRANSIT COVERAGE
Akron	28,094	22,314	79.4%
Barberton	4,727	2,566	54.3%
Bath Twp	1,843	557	30.2%
Boston Heights	141	45	31.9%
Boston Twp	200	1	0.5%
Brimfield Twp	1,493	170	11.4%
Charlestown Twp	218	1	0.5%
Copley Twp	3,041	493	16.2%
Coventry Twp	1,976	489	24.7%
Cuyahoga Falls	7,942	5,201	65.5%
Fairlawn	1,807	1,003	55.5%
Franklin Twp	848	378	44.6%
Freedom Twp	451	45	10.0%
Garrettsville	416	119	28.6%
Green	4,507	1,159	25.7%
Hiram	100	11	11.0%
Hiram Twp	448	26	5.8%
Hudson	3,604	1,161	32.2%
Kent	2,365	1,291	54.6%
Lakemore	771	233	30.2%
Macedonia	2,044	611	29.9%
Mogadore	454	17	3.7%
Munroe Falls	1,095	254	23.2%
Nelson Twp	665	1	0.2%
Northfield	532	308	57.9%
Northfield Center Twp	1,173	157	13.4%
Norton	2,128	188	8.8%
Ravenna	1,974	1,395	70.7%
Ravenna Twp	1,566	411	26.2%
Richfield	772	200	25.9%
Richfield Twp	593	53	8.9%
Sagamore Hills Twp	2,307	61	2.6%
Shalersville Twp	837	1	0.1%
Silver Lake	520	367	70.6%
Springfield Twp	2,699	477	17.7%
Stow	5,807	2,453	42.2%
Streetsboro	2,234	347	15.5%
Sugar Bush Knolls	62	4	6.5%
Tallmadge (Summit County)	3,729	949	25.4%
Tallmadge (Portage County)	24	12	50.0%
Twinsburg	3,495	656	18.8%
Twinsburg Twp	299	191	63.9%
Windham	213	113	53.1%
Windham Twp	316	42	13.3%
Estimated Elderly Pop. with Transit Access:		46,531	39.6%

Source: American Community Survey – 2017 5-Year Estimates

Table 4.8-5 | Low Income Population Transit Coverage by Community

(Includes Only Communities with Access to Fixed-Route Transit Service)

COMMUNITY NAME	ESTIMATED LOW INCOME POP.	ESTIMATED LOW INCOME POP. W/IN 1/4 MI OF TRANSIT	% TRANSIT COVERAGE
Akron	46,450	41,283	88.9%
Barberton	4,675	3,291	70.4%
Bath Twp	457	73	16.0%
Boston Heights	27	7	25.9%
Boston Twp	36	1	2.8%
Brimfield Twp	1,215	288	23.7%
Charlestown Twp	317	1	0.3%
Copley Twp	546	68	12.5%
Coventry Twp	796	235	29.5%
Cuyahoga Falls	5,105	3,659	71.7%
Fairlawn	472	297	62.9%
Franklin Twp	886	885	99.9%
Freedom Twp	412	18	4.4%
Garrettsville	315	36	11.4%
Green	2,608	732	28.1%
Hiram	14	3	21.4%
Hiram Twp	104	4	3.8%
Hudson	576	177	30.7%
Kent	8,167	5,503	67.4%
Lakemore	394	107	27.2%
Macedonia	203	110	54.2%
Mogadore	289	2	0.7%
Munroe Falls	340	34	10.0%
Nelson Twp	258	0	0.0%
Northfield	426	251	58.9%
Northfield Center Twp	68	3	4.4%
Norton	708	55	7.8%
Ravenna	2,549	1,747	68.5%
Ravenna Twp	976	439	45.0%
Richfield	96	20	20.8%
Richfield Twp	0	0	100.0%
Sagamore Hills Twp	490	5	1.0%
Shalersville Twp	677	1	0.1%
Silver Lake	74	68	91.9%
Springfield Twp	1,175	326	27.7%
Stow	1,915	754	39.4%
Streetsboro	1,605	385	24.0%
Sugar Bush Knolls	4	1	25.0%
Tallmadge (Summit County)	1,505	656	43.6%
Tallmadge (Portage County)	0	0	100.0%
Twinsburg	1,246	244	19.6%
Twinsburg Twp	586	258	44.0%
Windham	522	347	66.5%
Windham Twp	226	32	14.2%
Estimated Low Income Pop. with Transit Access:		62,406	64.7%

Source: American Community Survey – 2017 5-Year Estimates

Table 4.8-6 | Minority Population Transit Coverage by Community

(Includes Only Communities with Access to Fixed-Route Transit Service)

COMMUNITY NAME	ESTIMATED MINORITY POP.	ESTIMATED MINORITY POP. W/IN 1/4 MI OF TRANSIT	% TRANSIT COVERAGE
Akron	78,642	69,553	88.4%
Barberton	3,259	2,093	64.2%
Bath Twp	697	163	23.4%
Boston Heights	0	0	100.0%
Boston Twp	81	0	0.0%
Brimfield Twp	421	104	24.7%
Charlestown Twp	56	0	0.0%
Copley Twp	2,783	587	21.1%
Coventry Twp	426	109	25.6%
Cuyahoga Falls	4,155	3,043	73.2%
Fairlawn	1,234	823	66.7%
Franklin Twp	448	366	81.7%
Freedom Twp	26	5	19.2%
Garrettsville	77	6	7.8%
Green	1,664	485	29.1%
Hiram	234	6	2.6%
Hiram Twp	37	3	8.1%
Hudson	1,691	516	30.5%
Kent	6,338	4,816	76.0%
Lakemore	342	95	27.8%
Macedonia	1,699	705	41.5%
Mogadore	23	2	8.7%
Munroe Falls	302	40	13.2%
Nelson Twp	0	0	100.0%
Northfield	716	437	61.0%
Northfield Center Twp	1,170	184	15.7%
Norton	324	51	15.7%
Ravenna	1,020	813	79.7%
Ravenna Twp	737	337	45.7%
Richfield	126	73	57.9%
Richfield Twp	250	17	6.8%
Sagamore Hills Twp	1,134	31	2.7%
Shalersville Twp	185	1	0.5%
Silver Lake	96	63	65.6%
Springfield Twp	313	119	38.0%
Stow	2,728	823	30.2%
Streetsboro	2,268	333	14.7%
Sugar Bush Knolls	0	0	100.0%
Tallmadge (Summit County)	1,533	711	46.4%
Tallmadge (Portage County)	72	10	13.9%
Twinsburg	4,459	851	19.1%
Twinsburg Twp	1,690	563	33.3%
Windham	166	116	69.9%
Windham Twp	60	8	13.3%
Estimated Minority Pop. with Transit Access:		89,061	69.5%

Source: American Community Survey – 2017 5-Year Estimates

Table 4.8-7 | Disabled Population Over 18 Transit Coverage by Community

(Includes Only Communities with Access to Fixed-Route Transit Service)

COMMUNITY NAME	ESTIMATED DISABLED POP. OVER 18	ESTIMATED DISABLED POP. OVER 18 W/IN 1/4 MI OF TRANSIT	% TRANSIT COVERAGE
Akron	29,591	22,827	77.1%
Barberton	4,572	2,443	53.4%
Bath Twp	810	278	34.3%
Boston Heights	109	21	19.3%
Boston Twp	101	4	4.0%
Brimfield Twp	1,107	117	10.6%
Charlestown Twp	380	1	0.3%
Copley Twp	1,455	241	16.6%
Coventry Twp	1,427	405	28.4%
Cuyahoga Falls	5,867	3,844	65.5%
Fairlawn	634	356	56.2%
Franklin Twp	615	339	55.1%
Freedom Twp	479	43	9.0%
Garrettsville	296	88	29.7%
Green	2,698	648	24.0%
Hiram	135	6	4.4%
Hiram Twp	224	9	4.0%
Hudson	1,618	492	30.4%
Kent	3,521	1,552	44.1%
Lakemore	482	178	36.9%
Macedonia	1,307	422	32.3%
Mogadore	251	14	5.6%
Munroe Falls	495	53	10.7%
Nelson Twp	656	1	0.2%
Northfield	398	225	56.5%
Northfield Center Twp	441	67	15.2%
Norton	1,623	151	9.3%
Ravenna	2,025	1,385	68.4%
Ravenna Twp	1,853	466	25.1%
Richfield	315	75	23.8%
Richfield Twp	208	26	12.5%
Sagamore Hills Twp	1,256	22	1.8%
Shalersville Twp	715	1	0.1%
Silver Lake	288	185	64.2%
Springfield Twp	1,761	352	20.0%
Stow	3,368	1,349	40.1%
Streetsboro	2,134	311	14.6%
Sugar Bush Knolls	16	3	18.8%
Tallmadge (Summit County)	2,118	629	29.7%
Tallmadge (Portage County)	0	0	100.0%
Twinsburg	1,910	329	17.2%
Twinsburg Twp	185	123	66.5%
Windham	321	196	61.1%
Windham Twp	333	41	12.3%
Estimated Disabled Pop. with Transit Access:		40,318	44.2%

Source: American Community Survey – 2017 5-Year Estimates

4.8.5 | Performance Measures

Performance and asset measures are widely used in the transit industry today, with most transit agencies reporting basic information about their service to the National Transit Database (NTD); reporting data to the NTD is required for most transit agencies to receive federal transit funding. ODOT is considering the following performance measures to be used for transit development:

- Service effectiveness – passengers per hour
- Cost efficiency – cost per hour
- Cost effectiveness – cost per passenger
- Customer satisfaction – portion of riders with high levels of satisfaction
- Transit asset management – fleet and infrastructure capital maintenance.

Transit asset management (TAM) is the strategic and systematic practice of procuring, operating, maintaining, and replacing transit capital assets to manage their performance over their life cycles. TAM uses transit asset condition to guide how to manage capital assets and prioritize funding to improve or maintain a state of good repair. In July 2016, FTA published a final rule for TAM requiring FTA grantees to develop asset management plans for their public transportation assets. Federal regulations require the Federal Transit Administration (FTA) to develop a rule to establish a strategic and systematic process of operating, maintaining and improving public transportation capital assets effectively through their entire life cycle.

A state of good repair (SGR) is a threshold that identifies the desired performance condition of a capital asset, such as a bus, transfer facility, or office building. An asset is in a state of good repair when it is able to operate at a full level of performance.
PARTA has set a goal to maintain their fleet with at least 100 percent of the vehicles in fair or good condition. METRO has set targets for SGR and determined that their overall revenue vehicles should be less than 15% over their useful life benchmark, on average. METRO also reviews its Bus Improvement Plan (BIP) annually to ensure the buses are within the ULB of 12 years.

4.8.6 | Conditions

Overall coverage in Summit and Portage Counties is excellent compared to similar transit agencies nationwide. However, there are still several pockets or gaps in coverage that need improvement. In Summit County, Stow and Twinsburg are two communities that show a large population of elderly, low income, minority, and disabled, and yet have poor transit coverage. The communities of Green and Tallmadge also showed gaps in their transit coverage. These communities would benefit from a discussion and potential coordination with METRO RTA regarding travel patterns and what amenities would better serve the needs of the community.

In Portage County, Streetsboro has larger populations of low income, minority, and disabled people. Due to being far from the bulk of PARTA's fixed route coverage (throughout the KSU campus and City of Kent), there is limited transit coverage for the low income riders, and very poor coverage for both minority and disabled populations. Streetsboro has insufficient pedestrian amenities that assist with transit use. Kent tends to have strong transit coverage; however, improvements could be made for the disabled population that is only 44% covered by fixed-route service in that city.

4.8.7 | Access

Wait Times

For both METRO and PARTA, the majority of their routes are those that require riders to consult a schedule to know when the next bus will arrive. We can see that at a certain point, ridership increases exponentially when transit riders no longer have to plan their lives around a bus schedule. Some transit riders consider frequent service as arriving every 15 minutes or less. In bigger cities with large populations using transit, the timeframe is even less, down to 6 minutes. A rider taking a shorter trip will consider walking if the wait time for a bus is too long. Therefore, transit agencies should consider studying what the average wait time should be to increase their ridership.

PARTA implemented their real-time application – SpotPARTA, in 2016 to make transit more attractive. This app allows passengers waiting for a bus to see where their bus is either by looking at a map on a smart phone or texting the stop ID.

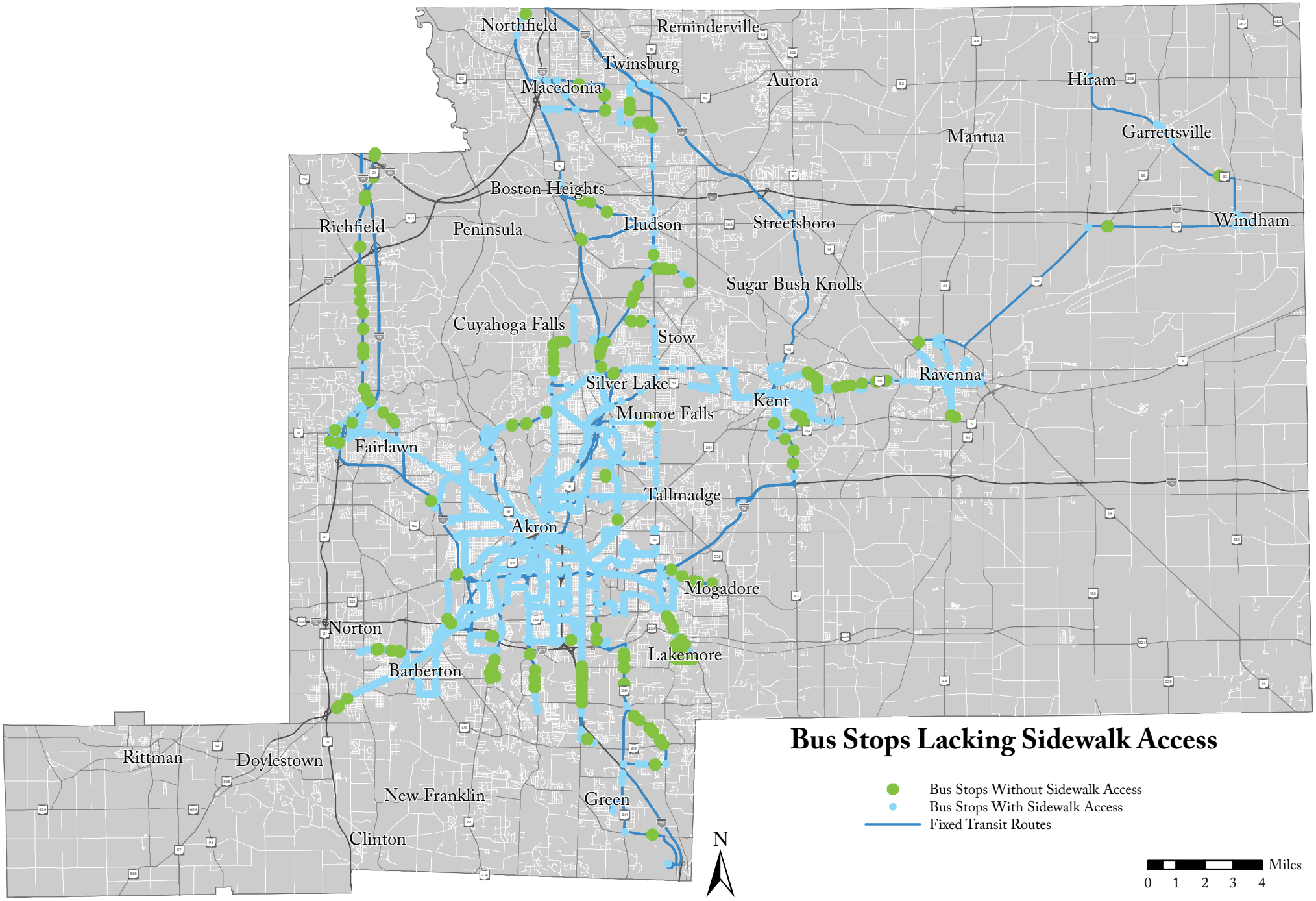
Bus Rapid Transit (BRT) is characterized as frequent service along a specific corridor, potentially with signal preemption, dedicated lanes, and other features to speed up access. The idea behind BRT is that riders can expect reliable and fast service on a specific route. Both METRO and PARTA have route corridors with the potential to become BRT systems.

Sidewalks

Sidewalks provide the best available means for many transit-dependent populations – such as people with disabilities, the elderly, and low income persons - to access bus routes and service. It is not a coincidence that most transit stops are located on or near sidewalks. Access to these stops is especially critical for persons using mobility devices. Currently, the Greater Akron area has **2,625 stops** located throughout Portage and Summit counties. Of those 2,625 stops, 610 (23 percent) are located in areas without sidewalks.

Bus Shelters

Using data from both PARTA and METRO RTA, transit stops were analyzed for location and amenities. It was determined that there are a total of 2,625 stops in the AMATS region, 366 belonging to PARTA and 2,259 belonging to METRO RTA. Of these, PARTA has 53 stops with bus shelters while METRO RTA has 114. Current policies suggest adding shelters at stops where there are at least 30 boarding a day. Transit shelters have been shown to have a positive impact on ridership and rider satisfaction as they improve the public's perception of transit. Ridership numbers have


Northfield
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Macedonia
Aurora
Hiram
Mantua
Garrettsville
Boston Heights
Richfield
Peninsula
Hudson
Streetsboro
Windham
Sugar Bush Knolls
Cuyahoga Falls
Stow
Silver Lake
Ravenna
Kent
Munroe Falls
Fairlawn
Tallmadge
Akron
Mogadore
Norton
Lakemore
Barberton
Rittman
Doylestown
New Franklin
Green
Clinton
N
Bus Stops Lacking Sidewalk Access
Bus Stops Without Sidewalk Access
Bus Stops With Sidewalk Access
Fixed Transit Routes
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0 1 2 3 4

been known to increase where bus shelters are added. With this information, it is obvious that improvements can be made in the AMATS area. Transit agencies are careful about where to place shelters since they cost around $5,500 per shelter, with additional costs for the ADA-accessible concrete pad. A strong multimodal network that includes bike paths, sidewalks, crosswalks, and lighting as well as stops with frequent and reliable service have been shown to attract more transit riders.

Transit-Oriented Development
The identification of transit corridors is essential in best determining where to concentrate limited funding. Transit corridors can guide overall community development and investment. Popular transit corridors and the heavy foot traffic they generate create an opportunity to develop complementary land uses (for example: residential, retail, office, etc.) within close proximity to each other.

4.8.8 | Recommendations

Improve Coverage in Stow, Twinsburg, Green, and Tallmadge
The communities of Stow and Twinsburg have larger populations of minority, elderly, low income, and disabled populations, yet have lower transit coverage. Green and Tallmadge both have larger populations of elderly, low income, and disabled, but provide limited transit coverage. These pockets of development at the outer edges of the METRO and PARTA service areas need improved service. Unfortunately, remoteness from the central service area makes additional coverage expensive. Additionally, traditional bus service may not be the best solution for these communities. Finding solutions that meet the needs of the residents in an efficient manner should be the ultimate goal.

Coverage in Streetsboro
Streetsboro has limited coverage for the minority, low income, and disabled riders in its community. PARTA and Streetsboro should explore opportunities to better serve these transit riders and improve coverage.

Access
The point where riders no longer have to memorize a bus schedule is where we see ridership increase. Comparing both METRO's and PARTA's ridership numbers to their Headway Performance proves this point. Each transit agency has a route with frequent service that sees large ridership numbers. For this reason, it is recommended that both transit agencies review their routes and consider adding more frequent service to certain busy routes, especially those that include shorter trips. Each transit agency has express routes that should be reviewed for potential improvements. Adding a midday trip to Cleveland for both METRO and PARTA would be helpful for many who may not be commuting, but instead may be traveling north for a doctor appointment for example.

Sidewalks
Since most transit trips include a pedestrian trip at one or both ends, it is important to create good walking conditions near transit routes. According to AMATS' Active Transportation Plan (December 2019), communities should seek improvements in the areas of providing pedestrian access to transit service and eliminating gaps in network connections. Many of the Greater Akron area's existing walking networks consist of community sidewalks that are along busy roadways that also serve as transit routes. Communities and project sponsors should make pedestrian safety improvements a priority on those routes and streets with high traffic volumes and speeds.

The Greater Akron area communities and transit authorities should:

- Increase the number of bus stops with a sidewalk connection
- Ensure that networks include pedestrian-friendly bus stops and related amenities
- Provide convenient transit access in those locations where there is known heavy pedestrian traffic
- Consider convenient pedestrian access when identifying new transit connections and routes
- Conduct in-depth, periodic analyses of bus stop locations and route connections within the Greater Akron area

Improvements for Transit Stops
Both AMATS area transit agencies have specific policies regarding when a shelter or other amenity can be added to a stop. For METRO RTA, there must be at least 30 boardings a day at a stop to trigger a review for a shelter. Additional considerations include proximity to community facilities, hospitals/medical centers and other key destinations. Although a small percentage of METRO's stops have shelters, the majority of stops that meet the criteria already have shelters in place. PARTA has executed agreements with some communities to place shelters where needed. These communities recognized that their residents would benefit if shelters were in place, and partnered with PARTA to share the expense. Additionally, PARTA has extended this type of agreement to private sector developers in those communities, with some businesses choosing to place their own concrete pads and shelters. AMATS encourages this type of cooperation for the benefit of citizens and communities alike.

In the AMATS area, a small amount of stops have bus shelters, while the vast majority of stops are simply a sign on the sidewalk, with many different versions in between. Although the best stop will protect riders from the elements, having a place to sit is helpful as well. We know that riders want higher frequency and faster service, but providing a place to rest while waiting for the bus would go far for many people. Less expensive than a shelter, a Simme Seat ™ can provide seating for a couple of people per stop at a fraction of the cost. These seats could be added to the

existing bus stop sign posts. Shelters can be used to brand the transit agency and make it more appealing to the community. However, the cost of shelters may prevent their installation. Therefore, ensuring all stops are on concrete pads, adding sidewalks where needed, incorporating seating, lighting, trash cans, and schedules wherever possible would go a long way in making public transit more appealing.

Transit-Oriented Development
As METRO looks into the possibility of adding a Bus Rapid Transit (BRT) line to their fixed-route service, development along the corridor should be considered fundamental to the success of the line. Transit-Oriented Development (TOD) is the growth of businesses and residential units within walking distance of a transit stop. Transit use near places to live, restaurants, parks, grocery stores, coffee shops, and the like can promote vibrant businesses. Pairing a BRT line with a conscious effort to develop places people want and need encourages less auto-dependency.

PARTA would also benefit from a transit-oriented development in their area. Although the automobile is fully accommodated for in TOD, these developments are designed to be comfortable for non-motorized transportation, such as walking or bicycling.

4.8.9 | Implementation

Transit agencies have access to federal, state, and local funding sources. The local sources primarily include their dedicated sales tax revenue. For METRO RTA, this amounts to a .50% sales tax while PARTA benefits from a .25% sales tax. These sales tax funds can be used for operations as well as a match for federal funds. Another local source of funding is the fare box revenue, which are the funds received from riders. This revenue makes up a small (10%-20%) part of the operating budget, and can vary by month and by route, making it difficult to plan ahead using this source. The transit agency's operating expenses are funded mainly through these two local sources.

Need for Additional State Funding
Currently, besides the small amount of OTP2, the State of Ohio has no stable or dedicated funding for transit service. The urban transit program has seen a reduction from $30 million in 2000 to $1.6 million in 2014. Similarly, the rural transit program has seen funding reduce from $4.2 million in 2000 to just over $3 million in 2014. Transit agencies rely on federal funds for their capital, maintenance, and planning expenses, but these aren't always sufficient. The small amount of local funding transit agencies receive from sales tax may not cover their operations.

As the State of Ohio demonstrated in 2019 with the gas tax increase, there is a need for increased and dedicated funding at the state level. Since state general revenue funds for transit have been declining since their peak in 2000, and Ohio's population is continuing to age, a dedicated source of funding at the state level to provide a reliable source of funding for operations for our transit agencies is long overdue.

AMATS Policy Committee discussed the state funding support of transit at their May 16, 2019 meeting and approved a motion for the AMATS staff to provide a letter of support. On June 18, 2019, AMATS signed a letter of support that was sent to Governor Mike DeWine requesting that the governor support a $70 million investment beginning with the 2020-21 budget. This amount was substantially smaller than the recommendation that came out of the Ohio Statewide Transit Needs Study in 2015. That study, produced by ODOT, recommended the state invest $120 million a year in transit, rising to $185 million in 2025, in order to cover 10% of the costs to preserve Ohio's transit system and provide the stable and reliable funding source that is so greatly needed.

4.9 | Congestion Management Process

One of the primary duties of AMATS is to identify congestion in the region, as well as to provide solutions to reduce or eliminate it. More than just a daily inconvenience, congestion affects the overall economy, reducing our ability to travel reliably to work, school and to complete the timely delivery of goods and services.

The *AMATS 2020 Congestion Management Process (CMP)* report analyzes existing congestion on our region's freeways, arterials and intersections in order to identify roadways which may need improvements to alleviate congestion. It also examines public transit levels of service availability, freight needs, and the impact that crashes have on congestion. The report discusses performance measures for travel time reliability, truck travel time reliability, peak hour excessive delay and non-single occupancy vehicle travel. It identifies demand and supply-side strategies to manage regional congestion. And lastly, it defines specific recommendations to address congested locations and evaluates strategy effectiveness based on past projects.

In 2020, the COVID-19 pandemic rapidly altered future transportation assumptions. In the opening months of the pandemic, many businesses were forced to temporarily close or radically change their operations. Statewide stay-at-home orders encouraged people to stay home, schools shifted to virtual classes and employees worked from home if they were able.

Data collected during the first half of 2020 indicated that traffic volumes fell over 40 percent. Transit ridership fell 60 percent. Demand for bicycles left stores with empty shelves and park usage increased. Many normally congested highways flowed smoothly as adjacent parking lots for malls, plazas, schools, and office buildings were nearly empty. While most stay-at-home orders have expired, the question has become what does the future look like? Many businesses have committed to keeping employees home for the foreseeable future. Others have returned to business as usual. What will be the long term impacts of the COVID-19 pandemic on transportation?

AMATS utilized a GPS device tracking technology for the first time in its *CMP* called INRIX, to calculate congestion. INRIX data is made available to AMATS through the Ohio Department of Transportation (ODOT). As real-time data is collected it is then stored and becomes historical data. The data used for the *CMP* report was collected over the calendar year of 2017. Historically, traffic congestion was measured using a volume-to-capacity (V/C) ratio. This ratio is based on the volume of traffic during peak hours versus the capacity of the roadway. New technology has enabled traffic engineers and planners to obtain traffic data through tracking actual vehicle movement using cell phone and other GPS devices in vehicles. Traffic data collected in this manner is done over months or years and is more representative than data collected over just one or two days.

The roadway network considered for the *CMP* analysis is made up of 540 miles of roadways in the Akron metropolitan area and is shown on Map 4.9-1. The following roadways are included in the network for the *CMP* analysis:

- All roadways included on the National Highway System
- All roadways classified as Principal Arterials in the Federal Functional Classification System
- Major intersections that experience high traffic volumes
- All roadways identified as potential congestion problems by the AMATS Policy Committee
- Other roadways to ensure a continuous *CMP* highway system

4.9.1 | Incident-Related Traffic Congestion

Incident-related traffic congestion is congestion that occurs due to a non-recurring incident. In most cases, this incident is a traffic crash. While crashes can happen anywhere at any time, some locations are more prone to crashes than others. Locations with both frequent crashes and recurrent congestion will be significantly more congested. Effective transportation planning requires that incident-related congestion be analyzed.

Arterials
Areas of incident-related congestion are determined based on a composite score which considers both number of crashes and their severity to determine locations where incident-related congestion is most likely to occur. For a complete description of how the composite score is determined, please review the methodology in the AMATS Traffic Crashes and Safety Performance Measures 2017-2019 report. Table 4.9-1 and Map 4.9-2 identify the top 50 arterial locations.

Intersections
Similar to arterial segments, areas of incident-related intersection congestion are determined based on composite score. The top 50 high crash intersections are identified on Map 4.9-3.

Freeways
The analysis of freeway crashes in the AMATS area is done by the central office of the Ohio Department of Transportation (ODOT) in Columbus. ODOT's analysis of freeways is done using their own methodology which is derived from the Highway Safety Manual. The freeway system is divided into rural and urban and is analyzed by examining segments that are one-tenth of a mile long.

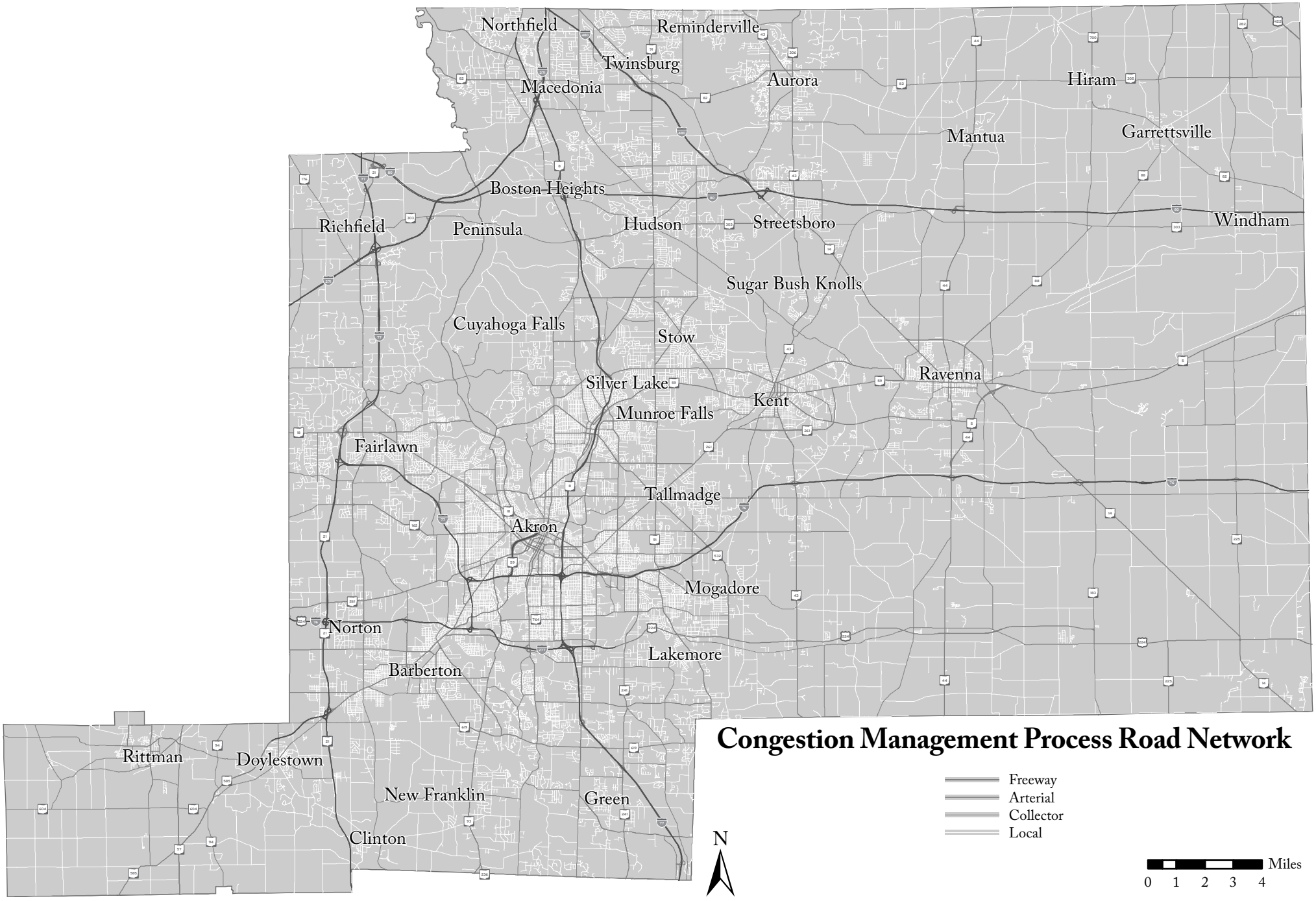
In an effort to make data-driven decisions and determine operationally sensitive corridors throughout the state, ODOT has developed the Traffic Operations Assessment Systems Tool (TOAST). In TOAST routes are segmented into the State Priority System with breaks at the urban area boundaries, interchange center points, and road functional class changes. The data categories that make up TOAST are listed below:

- **Travel Time Performance** – Percent of time motorists can travel at or near (90%) of the reference speed (free-flow speed defined by data provider).
- **Bottlenecks** – A potential bottleneck is detected when speeds on a segment drop to 65% of reference speeds and cause at least a two-minute delay.
- **Incident Clearance** – The time from report of an incident until the entire scene is cleared.
- **Secondary Crashes** – Percent of crashes that occurred as a result of a previous incident.
- **Volume Per Lane** – Calculated based on a weighted average for each segment.
- **Freight Corridors** – Weighted average of percent trucks (average daily truck volume ÷ average daily total volume).
- **Safety Performance** – A route's potential for safety improvement by density based on its peer group.

4.9.2 | Performance Measures

Transportation Performance Management is required by MPOs as stated in MAP-21 and continued in the FAST Act. Transportation Performance Management is defined as a strategic approach that uses system information to make investment and policy decisions to achieve national performance goals. Performance measures related to the *CMP* include Level of Travel Time Reliability (LOTTR) and Level of Truck Travel Time Reliability (LOTTTR), Peak Hour Excessive Delay (PHED) and Mode Share or Non Single Occupancy Vehicle (Non-SOV) travel. Each of these performance measures has their own respective targets.

Travel Time Reliability and Freight Movement Performance Measures
Federal rules 23 CFR 490.507 and 23 CFR 490.607 establish National Highway System travel time reliability and Interstate System freight reliability measures. For both personal travel time reliability and freight travel time reliability measures, ODOT is required to establish 2-year and 4-year targets within a four year performance period.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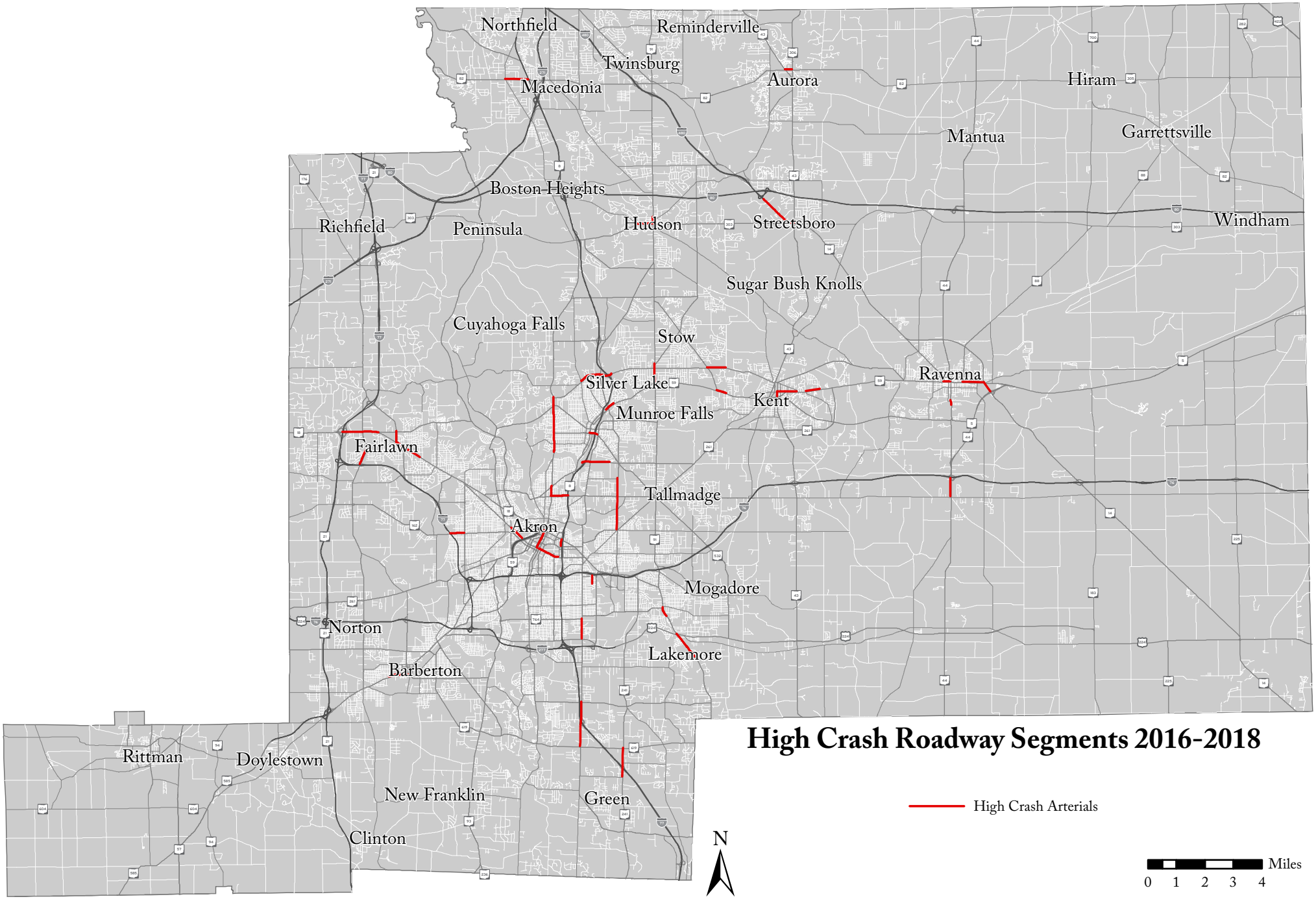
Twinsburg
Macedonia
Aurora
Hiram
Mantua
Garrettsville
Boston Heights
Richfield
Peninsula
Hudson
Streetsboro
Windham
Sugar Bush Knolls
Cuyahoga Falls
Stow
Ravenna
Silver Lake
Kent
Munroe Falls
Fairlawn
Tallmadge
Akron
Mogadore
Norton
Lakemore
Barberton
Rittman
Doylestown
New Franklin
Green
Clinton
N
Congestion Management Process Road Network
Freeway
Arterial
Collector
Local
Miles
0 1 2 3 4

Table 4.9-1 | High Crash Roadway Segments 2016-2018

RANK	ROADWAY SECTION	FROM	TO	LENGTH (MILES)	AVERAGE DAILY TRAFFIC	TOTAL CRASHES	CRASHES PER MILE PER YEAR	CRASH RATE	SEVERITY INDEX	BIKE REL.	PED REL.	LOCATION
1	E Main St (SR-59)	Willow St	Luther Ave	0.41	18,195	86	69	10.46	1.53		2	Kent
2	S Cleveland-Massillon Rd	IR-77	Rosemont Blvd / Elgin Dr	0.53	21,780	65	41	5.15	1.71			Fairlawn
3	Medina Rd (SR-18)	IR-77	Cleveland-Massillon Rd (CR-17)	0.69	30,889	149	71	6.34	1.54			Copley Twp
4	W Market St (SR-18)	Cleveland-Massillon Rd	Smith Rd	0.57	24,530	95	56	6.21	1.53		2	Fairlawn
5	Copley Rd (SR-162)	St Micheals	S Hawkins Ave	0.49	9,328	39	26	7.78	1.62		1	Akron
6	S Prospect St	Ravenna SCL	Lake Ave	0.18	9,640	11	21	5.84	2.09			Ravenna
7	E Aurora Rd (SR-82)	Olde Eight Rd	SR-8	0.82	15,150	76	31	5.61	1.50			Macedonia
8	Canton Rd (CR-66)	Sanitarium Rd (CR-136)	Waterloo Rd (US-224)	1.01	14,870	85	28	5.19	1.56		2	Springfield Twp
9	Ghent Rd	W Market St (SR-18)	Smith Rd	0.38	9,230	36	31	9.31	1.44			Fairlawn
10	SR-14	SR-303 (W)	SR-303 (E)	0.36	25,578	51	48	5.10	1.47			Streetsboro
11	SR-14 / SR-44	SR-59	SR-5 (end SR-14 overlap)	0.39	17,345	34	29	4.63	1.59			Ravenna Twp
12	Arlington Rd	Turkeyfoot Lake Rd (SR-619)	Green North Corp Line	0.95	20,305	145	51	6.86	1.37		1	Green
13	W&E Main St (SR-59)	Sycamore St	Prospect St	0.26	14,100	39	50	9.81	1.36		1	Ravenna
14	Massillon Rd (SR-241)	Boettler Rd	Turkeyfoot Lake Rd (SR-619)	1.01	21,609	130	43	5.46	1.38			Green
15	Kent Rd (SR-59)	Fishcreek Rd	Stow East Corp Line	0.35	18,730	26	25	3.62	1.69			Stow
16	State Rd	Portage Trail	Graham Rd	0.27	22,210	24	30	3.70	1.50	2	2	Cuyahoga Falls
17	Howe Ave	Cuyahoga Falls Corp Line	Main St	0.27	29,263	42	51	4.77	1.38		1	Cuyahoga Falls
18	E Main St (SR-59)	Horning Rd	Kent East Corp Line	0.52	19,184	48	31	4.44	1.46		2	Kent
19	State Rd	Cuyahoga Falls Corp Line	Broad Blvd	0.70	14,700	43	21	3.83	1.70			Cuyahoga Falls
20	Graham Rd	Fishcreek Rd	Stow East Corp Line	0.66	14,750	53	27	5.00	1.45			Stow
21	SR-44	Tallmadge Rd (CR-18)	SR 5 (NB off from IR-76)	0.66	27,333	56	28	2.84	1.68			Rootstown Twp
22	Brittain Rd	Eastwood Ave	E Tallmadge Ave (SR-261)	1.19	12,350	73	21	4.55	1.62		2	Akron
23	W Market St (SR-18)	Miller Rd	Fairlawn East Corp Line	0.68	17,540	73	36	5.61	1.36			Fairlawn
24	S Arlington St	E Waterloo Rd	E Wilbeth Rd (SR-764)	0.70	12,800	49	23	4.96	1.45		3	Akron
25	Howe Ave	Main St	Buchholzer Blvd	0.69	24,551	58	28	3.13	1.52			Cuyahoga Falls
26	W Exchange St	Rhodes Ave	Dart Ave	0.54	8,040	32	20	6.67	1.44			Akron
27	E Main St (SR-59)	Freedom St (SR 88)	SR 14/SR 44	0.76	13,724	57	25	5.01	1.39			Ravenna
28	S Water St	Haymaker Pkwy (SR 59)	E Main St	0.18	5,260	14	26	13.78	1.29		1	Kent
29	Broad Blvd / Broadway East	Second St	Newberry St	0.29	16,170	36	41	6.90	1.17			Cuyahoga Falls
29	Arlington Rd (CR-15)	IR-77 / Green NCL	Killian Rd (CR-135)	0.61	18,130	55	30	4.52	1.36		1	Springfield Twp
31	Fuller Rd	7th Ave	5th Ave	0.28	1,000	14	17	45.99	1.43			Akron
32	W Streetsboro St (SR-303)	Boston Mills Rd	Main St (SR-91)	0.55	14,446	42	26	4.86	1.38	1		Hudson
33	E Tallmadge Ave (SR-261)	N Main St	Gorge Blvd	0.60	16,610	53	29	4.84	1.34		1	Akron
34	SR-14	IR-480 ramp to Turnpike	SR 303 (W)	1.18	31,551	113	32	2.77	1.48			Streetsboro
35	Goodkirk St	Buchtel Ave	E Market St (SR-18)	0.24	29,263	31	43	4.02	1.32			Akron
36	E Exchange St	S Broadway St (SR-261)	Spicer St	0.76	21,113	95	42	5.43	1.21	1	3	Akron
37	Graham Rd	Hudson Dr	Silver Lake West Corp Line	0.44	28,680	42	32	3.05	1.43			Stow
38	W Market St (SR-18)	Ghent Rd	Miller Rd	0.29	28,390	44	50	4.83	1.27			Fairlawn
39	Graham Rd	Oakwood Dr / Wyoga Lake Rd	Hudson Dr	0.72	21,205	45	21	2.70	1.67			Stow
40	E Main St	Water St	Willow St	0.27	9,070	22	27	8.20	1.18			Kent
41	Brittain Rd	E Tallmadge Ave (SR-261)	Independence Ave	0.61	12,614	45	24	5.31	1.31		2	Akron
42	Wooster Rd W	14th St NW	Wooster Rd N	0.75	10,919	35	16	3.91	1.63		1	Barberton
43	N Main St	E Tallmadge Ave	E Cuyahoga Falls Ave	0.36	10,420	17	16	4.14	1.59		2	Akron
44	Front St / Kent Rd (SR-59)	Bailey Rd	Oak Park Blvd	0.36	12,791	26	24	5.20	1.31			Cuyahoga Falls
45	Canton Rd (SR-91)	Akron SCL	Triplett Blvd	0.35	15,180	21	20	3.58	1.48			Akron
46	N Main St (SR-91)	Streetsboro St (SR-303)	Owen Brown St	0.23	20,220	25	36	4.88	1.16			Hudson
47	Darrow Rd (SR-91)	Kent Rd (SR-59)	Stow Rd	0.65	14,896	41	21	3.88	1.39			Stow
48	State Rd	Broad Blvd	Portage Trail	0.96	15,343	61	21	3.78	1.39	2	1	Cuyahoga Falls
49	S High St (SR-261)	E Exchange St	E Market St (SR-18)	0.67	7,771	46	23	8.11	1.13			Akron
50	Garfield Rd W (SR-82)	Aurora Rd (SR-43)	Chillicothe Rd (SR-306)	0.24	9,885	16	22	6.19	1.25			Aurora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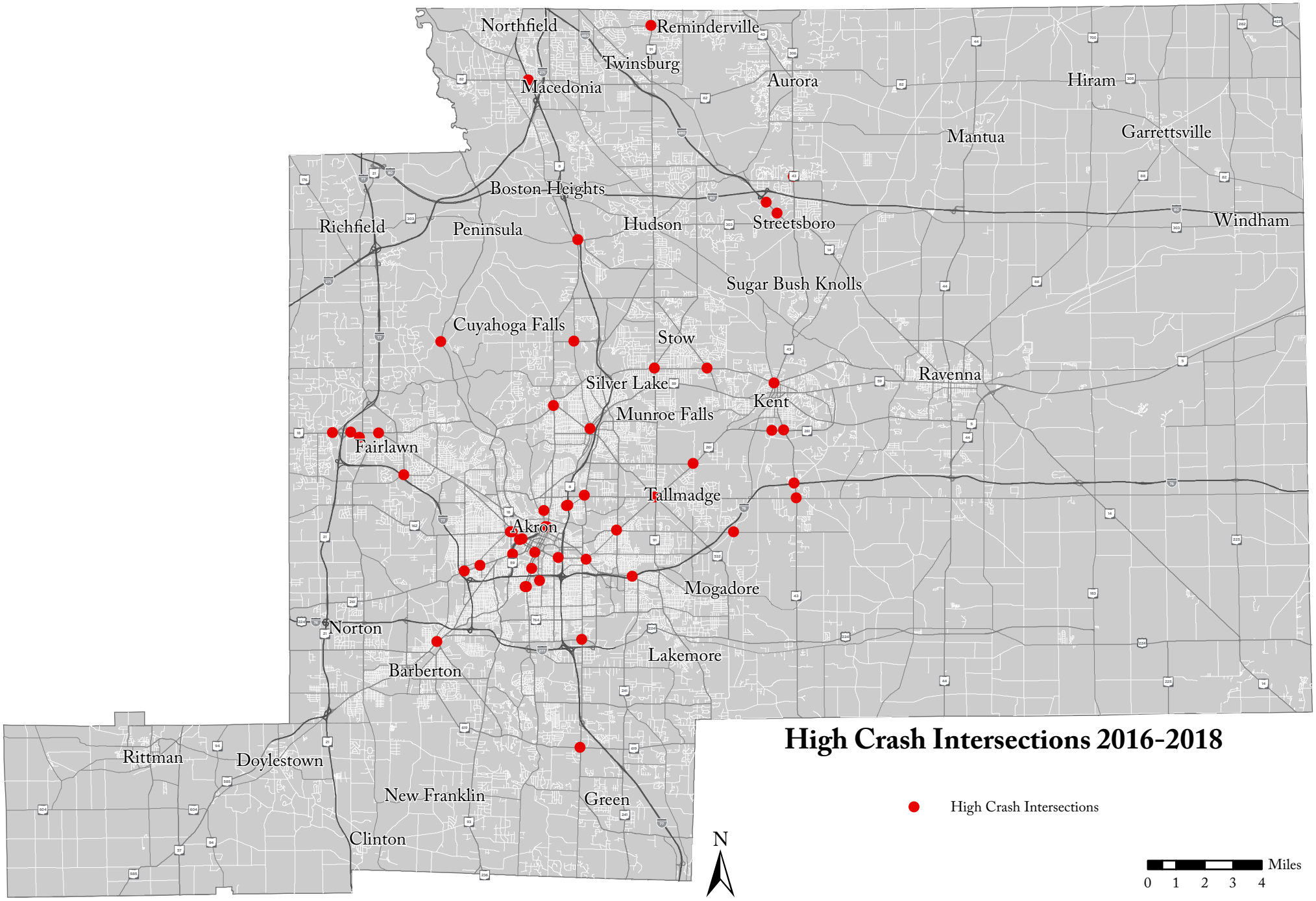
Reminderville
Twinsburg
Macedonia
Aurora
Hiram
Mantua
Garrettsville
Boston Heights
Richfield
Peninsula
Hudson
Streetsboro
Windham
Sugar Bush Knolls
Cuyahoga Falls
Stow
Silver Lake
Ravenna
Kent
Munroe Falls
Fairlawn
Tallmadge
Akron
Mogadore
Norton
Lakemore
Barberton
Rittman
Doylestown
New Franklin
Green
Clinton
High Crash Roadway Segments 2016-2018
High Crash Arterials
N
Miles
0 1 2 3 4

Table 4.9-2 | High Crash Intersections 2016-2018

RANK	STREET	INTERSECTING STREET(S)	APPROACH AVERAGE DAILY TRAFFIC	TOTAL CRASHES	CRASH RATE	SEVERITY INDEX	BIKE REL.	PED REL.	LOCATION
1	S Maple St (SR-162)	Rhodes Ave	13,195	43	2.98	1.84	1		Akron
2	S Maple St (SR-162)	W Cedar St	13,820	36	2.38	1.83	1		Akron
3	SR-14 / SR-303	SR-43	41,044	135	3.00	1.47			Streetsboro
4	Darrow Rd (SR-91)	Graham Rd	34,456	80	2.12	1.53			Stow
5	S Broadway St	E Miller Ave	16,680	40	2.19	1.65		2	Akron
6	Portage Trail	2nd St	29,350	61	1.90	1.56			Cuyahoga Falls
7	W Market St (SR-18)	Smith Rd	24,604	44	1.63	1.77			Fairlawn
8	Vernon Odom Blvd (SR-261)	Superior Ave	13,265	32	2.20	1.75			Akron
9	E Tallmadge Ave (SR-261)	Home Ave	29,800	57	1.75	1.56			Akron
10	SR-14	Brook Valley Trail / Shady Lake Dr	31,551	49	1.42	1.94			Streetsboro
11	S Broadway St	E Thornton St	19,670	53	2.46	1.45			Akron
12	Graham Rd	Fishcreek Rd	28,940	55	1.74	1.55	1		Stow
13	Opportunity Pkwy (SR-261)	Dart Ave	12,938	31	2.19	1.71			Akron
14	MLK Jr. Blvd (SR-59)	N Broadway St (SR-261)	22,402	46	1.88	1.57			Akron
15	S Miller Rd	Ridgewood Rd / IR-77 Ramps	28,552	52	1.66	1.58			Fairlawn
16	SR-43	Tallmadge Rd	19,640	34	1.58	2.09		2	Brimfield Twp
17	Bellows St	Crosier St	3,230	27	7.63	1.67			Akron
18	N Howard St	Glenwood Ave	10,360	25	2.20	1.80			Akron
18	SR-14	Mondial Pkwy / Singletary Dr	31,551	53	1.53	1.57			Streetsboro
20	Riverview Rd	Ira Rd	5,266	22	3.82	1.82			Cuyahoga Falls
21	MLK Jr. Blvd (SR-59)	N High St (SR-261)	25,308	40	1.44	1.75		1	Akron
22	W Exchange St	Rand Ave	14,630	31	1.94	1.65			Akron
23	Vernon Odom Blvd (SR-261)	S Hawkins Ave	18,960	45	2.17	1.44			Akron
24	E Exchange St	Spicer St	22,975	46	1.83	1.48	1		Akron
25	Darrow Rd (SR-91)	Glenwood Dr	19,320	64	3.03	1.28			Twinsburg
26	E Market St (SR-18)	Case Ave	19,260	44	2.09	1.45		2	Akron
27	SR-261	Franklin Ave / Sunnybrook Rd	10,762	23	1.95	2.22			Kent
28	Brookmont Dr	Brookwall Dr	6,020	20	3.03	1.80			Fairlawn
29	E Turkeyfoot Lake Rd (SR-619)	Arlington Rd	29,089	50	1.57	1.52			Green
30	Mantua St (SR-43)	SR-261	28,953	56	1.77	1.43			Kent
31	Steels Corners Rd	Wyoga Lake Rd	16,569	38	2.09	1.47			Cuyahoga Falls
32	Old Forge Rd	Mogadore Rd	2,320	20	7.87	1.70			Brimfield Twp
33	S Arlington St	E Waterloo Rd	21,783	40	1.68	1.50			Akron
34	SR-43	IR-76 Ramps / Edson Rd	51,626	59	3.24	1.24			Brimfield Twp
34	Portage Trail	State Rd	34,965	86	2.25	1.26		1	Cuyahoga Falls
36	Tallmadge Circle		38,034	249	5.98	1.15	1		Tallmadge
37	SR-303	Akron Cleveland Rd / SR-8 Ramps	20,971	50	2.18	1.36			Boston Heights
38	Medina Rd (SR-18)	Springside Dr	37,789	51	1.23	1.71			Bath Twp
39	Glenwood Ave	SR-8 Ramps / Gorge Blvd	10,988	38	3.16	1.37			Akron
40	N Mantua St (SR-43)	Fairchild Ave	28,500	49	1.57	1.49	1		Kent
41	E Market St (SR-18)	Mogadore Rd / IR-76 Ramps	37,408	63	1.54	1.44	1	1	Akron
41	S Main St	Miller Ave / Old Main St	10,010	29	2.65	1.52	1		Akron
43	Northeast Ave (SR-261)	E Howe Rd / N Munroe Ave	18,426	57	2.83	1.25			Tallmadge
44	W Cedar St	Rand Ave	13,120	24	1.67	2.00			Akron
45	Medina Rd (SR-18)	Crystal Lake Rd / Montrose West Ave	48,380	66	1.25	1.58			Bath Twp
46	Brittain Rd	Eastland Ave / Eastwood Ave	21,735	48	2.02	1.38		1	Akron
47	State St (SR-619)	Wooster Rd N (SR-619)	23,600	39	1.51	1.56			Barberton
48	S High St	Selle St	14,420	28	1.77	1.64			Akron
49	SR-8	Aurora Rd (SR-82)	35,035	80	2.09	1.25			Macedonia
50	Tallmadge Ave	N Howard St	16,050	33	1.88	1.48	1	1	Akron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Macedonia
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Garrettsville
Boston Heights
Richfield
Peninsula
Hudson
Streetsboro
Windham
Sugar Bush Knolls
Cuyahoga Falls
Stow
Silver Lake
Ravenna
Kent
Munroe Falls
Fairlawn
Tallmadge
Akron
Mogadore
Norton
Lakemore
Barberton
Rittman
Doylestown
New Franklin
Green
Clinton
High Crash Intersections 2016-2018
High Crash Intersections
N
Miles
0 1 2 3 4

The data used to assess travel time reliability and establish targets is sourced from FHWA's National Performance Management Research Data Set (NPMRDS). ODOT is participating in FHWA's Performance Management Analytical Tool pooled fund where a contractor assists states in calculating NPMRDS travel time reliability metrics. AMATS' current performance is documented in the following Table 4.9-3:

Table 4.9-3 | AMATS Travel Time Reliability

Level of Travel Time Reliability						
YEAR	2014	2015	2016	2017	2018	AVERAGE
Interstate TTR	97.6%	96.5%	97.6%	98.6%	98.5%	97.8%
Non-Interstate NHS TTR	60.7%	63.1%	59.8%	89.3#	90.4%	72.7%
Interstate TTTR Index	0.01	0.01	0.01	0.01	0.01	0.01

AMATS meets the performance targets for travel time reliability on the interstate system and on truck travel time. The AMATS non-interstate system meets the target as of 2017. Overall state of Ohio performance is documented in Table 4.9-4 below:

Table 4.9-4 | Ohio Travel Time Reliability

Level of Travel Time Reliability						
YEAR	2014	2015	2016	2017	2018	AVERAGE
Interstate TTR	92.4%	90.3%	90.6%	90.7%	89.1%	90.6%
Non-Interstate NHS TTR	68.5%	67.4%	66.8%	90.5%	90.1%	76.7%
Interstate TTTR Index	1.46	1.48	1.45	1.34	1.38	1.42

4.9.3 | Congestion Management Strategies

AMATS has established generalized strategies that best match the Code of Federal Regulations (CFR), FHWA guidance, and regional transportation planning context. A strategy or combination of strategies that are appropriate for deficient corridors and segments are selected based on the type of congestion and their effectiveness and feasibility.

The strategies are categorized into five tiers, ranked generally by the efficacy of mitigating congestion. The strategies in the top tiers should be given priority over the lower ones. The tiers are:

- Tier 1: Demand management
- Tier 2: Traffic and roadway operational improvements
- Tier 3: Public Transportation improvements
- Tier 4: ITS Strategies
- Tier 5: Capacity expansion

The strategies were reviewed by examining regional characteristics, previous local success of the strategies and examples from other urban areas. The effectiveness of each strategy was made based on the data collected and staff input. Feasibility was rated by the degree to which the strategy could be realistically implemented in the region. Table 4.9-5 lists the strategies along with their corresponding effectiveness and feasibility.

4.9.4 | Congestion Management Recommendations

Freeway Segments

Each freeway segment was analyzed by direction throughout the 2017 year, (the latest full year of data available for this analysis). Then, the peak-hour with the lowest speed percent was used to determine congestion levels for each segment. Given that the data was taken from calendar year 2017, a few locations have had projects completed or have upcoming projects soon; therefore, the recommendation for these locations is to monitor them in the future.

Overall, the freeways within the AMATS region function well, and most will continue to do so into the future. ODOT coordinates with AMATS on a regular basis to define potential projects. This coordination helps maintain good traffic flow throughout the region.

Freeway Ramps

Each freeway ramp was analyzed throughout the 2017 year. Those freeway ramps that had a speed of 65 percent or less of free-flow speed are considered congested. Many of these ramps are related to I-80, the Ohio Turnpike, and are therefore controlled and maintained by their commission.

Freeway Interchanges

Each freeway interchange was analyzed throughout the 2017 year. Freeway interchange segments are typically segments on arterial roadway that are between freeway interchange ramps. The freeway interchange segments that had a speed of 65 percent or less than free-flow speed are considered congested. Many of these segments are adjacent to congested arterial segments or intersections.

Arterial Segments

Each arterial segment on the network was analyzed by direction throughout the 2017 year. Then, the peak-hour with the lowest speed was used to determine whether a segment is congested. 89 arterial segment locations were identified that have a speed of 65 percent or lower of free-flow speed, i.e., congested. Recommendations are listed for each congested segment. Given that the data was taken from calendar year 2017, a few locations have had projects completed or have upcoming projects soon; therefore, the recommendation for these locations is to monitor them in the future.

Intersections

Intersections were analyzed throughout the 2017 year to determine congested approaches. Intersections were considered congested if the peak-hour speed was 65 percent or less of the free-flow speed. Each congested segment includes a recommendation, even if that recommendation is to monitor the intersection in the future, similar to arterials.

Table 4.9-5 | Congestion Management Strategies

TIER	STRATEGY	BENEFITS	EFFECTIVENESS	FEASIBILITY
Tier 1: Demand Management	Telecommuting	Reduces traffic, especially during peak hours	Medium / High	Medium
	Flexible / Alternative Work Hours	Reduces traffic, especially during peak hours	Medium	Low / Medium
	Carpooling	Reduces traffic, especially during peak hours	Medium / High	High
	Employer Incentive Program	Reduces traffic, especially during peak hours	Medium / High	Low
	Alternative Modes of Transportation	Reduces traffic	Low / Medium	Low
Tier 2: Operational Improvements	Adding Exclusive Left Turning Lanes	Improves traffic flow / safety	Medium / High	Medium
	Reversible Commuter Lanes on Freeways	Improves traffic capacity / flow	Medium / High	Low
	Variable Speed Limits	Improves traffic capacity / flow	Low / Medium	Low
	Variable Message Signs	Improves traffic flow and reduces additional congestion	Low / Medium	Medium
	Exclusive Shoulder Lanes for Buses	Improves traffic flow / safety	Medium	Low
	Geometric Improvements to Road and Intersections	Improves traffic flow / safety	Medium / High	High
	Channelization	Improves traffic flow / safety	Low / Medium	Medium
	Median Barriers (Moveable) to Facilitate More Capacity During Peak Period	Improves traffic capacity / flow	Medium / High	Low
	Traveler Information	Improves traffic flow / safety	Low / Medium	High
	Complete Streets	Improves capacity for alternative modes of transportation	Low / Medium	Medium
	Overpasses or Underpasses at Congested Intersections or Railroads	Improves traffic flow / safety	High	Low / Medium
Tier 3: Public Transit Improvements	Expanding Transit Services	Encourage transit use / reduces SOV vehicles	Low	Low
	Optimal Control of Headways by Realigning Transit Service Schedules and Stop Locations	Makes transit easier to use / reduces SOV vehicles	Low	Medium
	Providing Real-Time Information on Transit Schedules and Arrivals Using Various ITS Strategies	Makes transit easier to use / reduces SOV vehicles	Low	Medium
	Universal Transit Fare Cards and Incentives	Makes transit easier to use / reduces SOV vehicles	Low	High
	Bus Rapid Transit	Makes transit easier to use / reduces SOV vehicles	Medium	Medium
	Prioritizing Transit Vehicles at Traffic Signals	Makes transit easier to use / reduces SOV vehicles	Medium	Medium
Tier 4: ITS Strategies	Traffic Signal Improvements	Improves traffic flow / safety	Medium / High	High
	Simulation Models	Helps determine and fund projects with the most impact	Medium / High	Medium
	Cars Connected to Cars / Cars Connected to Infrastructure	Improves traffic flow / safety	Medium / High	Low
	Real-Time Traffic Feedback	Improves traffic flow / reduces additional congestion	Medium / High	High
Tier 5: Capacity Expansion	Removing Bottlenecks by Constructing New Lanes	Improves traffic flow / safety	Medium	Low
	Closing Gaps in the Existing Network	Improves traffic flow / safety	Medium	Low
	Add Travel Lanes on Major Freeways and Streets (Including Truck Climbing Lanes on Grades)	Improves traffic flow / safety	Medium	Low

4.10 | Environmental Resources

Transportation improvements generally stimulate new development and therefore can have potential adverse impacts on the natural environment. The National Environmental Policy Act (NEPA) and the FAST-Act transportation bill requires transportation planning agencies like AMATS to consider potential impacts to the natural and social environment. Because the recommendations in *TO2045* are eligible for federal transportation funds, all proposed federally funded projects are subject to federal environmental laws and rules including NEPA, Endangered Species Act, Fish and Wildlife Coordination Act, and the Clean Water Act. AMATS is required to take into account the impacts on the surrounding environment whether for new construction projects or maintenance activities in the Greater Akron area.

The ODOT Office of Environmental Services (OES) takes a lead role in consulting with environmental resource agencies to obtain the data and discuss review of MPO transportation plans. To address environmental impacts on transportation projects, AMATS includes a discussion of the types of potential environmental mitigation activities, to be developed in consultation with appropriate federal, state and tribal wildlife, land management, and regulatory agencies.

AMATS completed an Environmental Mitigation Analysis that is provided in Appendix D. Through ODOT's consultation with the environmental resource agencies and AMATS own data collection activities, the analysis includes maps of the most common environmental features and a discussion of environmental mitigation strategies as well as an environmental resource agencies contact list.

It is important to note that environmental studies are very conceptual at the transportation planning stage; hence AMATS has developed a discussion of environmental mitigation in accord with federal requirements at the policy and/or strategic levels, not at the project-specific level. To advance any project to construction, additional studies and detailed design will need to be completed. For projects that use

state or federal funds, this will include a detailed environmental study in compliance with NEPA and other federal and ODOT requirements.

Environmental issues that have been identified for discussion in this Plan include:

- Air Quality
- Water Resources and Wetlands
- Threatened and Endangered Species
- Section 4(f) Parkland
- Stormwater
- Social and Economic Impacts
- Cultural Resources
- Climate Change

The following sections provide a brief description of each of the environmental issues and ends with a discussion of mitigation in considering potential mitigation activities that are regional in scope in the planning stage of development. AMATS analyzed the *TO2045* projects for potential environmental impacts using GIS overlay techniques. When available, OES databases were enhanced with local or internal data sources.

4.10.1 | Air Quality

The effect of vehicle emissions on air quality is a major consideration in transportation planning for the region. Individual vehicle trips may seem insignificant, but their cumulative effect is a major determinant in the region's air quality.

Summit and Portage counties are part of the eight-county Cleveland-Akron- Elyria Combined Statistical Area (CSA). The AMATS region is required to participate in air quality conformity to attain the National Ambient Air Quality Standards (NAAQS) for various criteria pollutants. These include carbon monoxide, ozone, oxides of nitrogen, lead, sulfur dioxide and particulate matter. The conformity analysis demonstrates that the transportation programs in the region conform to applicable air quality standards. The complete air quality conformity document and the associated results of the transportation conformity analyses for *TO2045* are discussed in detail in Appendix A.

4.10.2 | Water Resources and Wetlands

The region includes numerous streams and rivers, lakes, reservoirs, and wetlands. The Upper Cuyahoga River is a designated State Scenic River that runs through the AMATS area and extends from State Route 14 in Portage County to the north end at the Troy-Burton Township line in Geauga County. The 2 major rivers in the region are the Cuyahoga and the Tuscarawas.

The OES and project consultants coordinate all stream and wetland mitigation projects. This usually begins with a determination of mitigation needs in an Ecological Survey Report (ESR). A final mitigation plan would then be developed for submission to agencies prior to permit authorization.

Wetland mitigation measures may include mitigation banking, stream and wetland creation, restoration, or preservation. The region's water resources are shown on Map 4.10-1.

4.10.3 | Threatened and Endangered Species

A great diversity of wildlife and plant communities exists throughout the state of Ohio as well as the Greater Akron area. Many species receiving federal or state protection are tied closely to their habitats. Land use changes have been the most common cause for decline in species range and diversity. Contamination and degradation of natural waters has also contributed to loss of habitat. Ohio law allows the Ohio Department of Natural Resources (ODNR) Division of Wildlife, to adopt rules restricting the taking or possessing of native wildlife threatened with statewide removal and to periodically update a list of endangered species as required by Ohio Revised Code 1531.25. The ODNR uses six categories: endangered, threatened, species of concern, special interest, extirpated, and extinct, to further define the status of selected wildlife. The Plan addresses the first two categories of which a specific survey is often undertaken if a threatened or endangered species is suspected of existing within the project area.

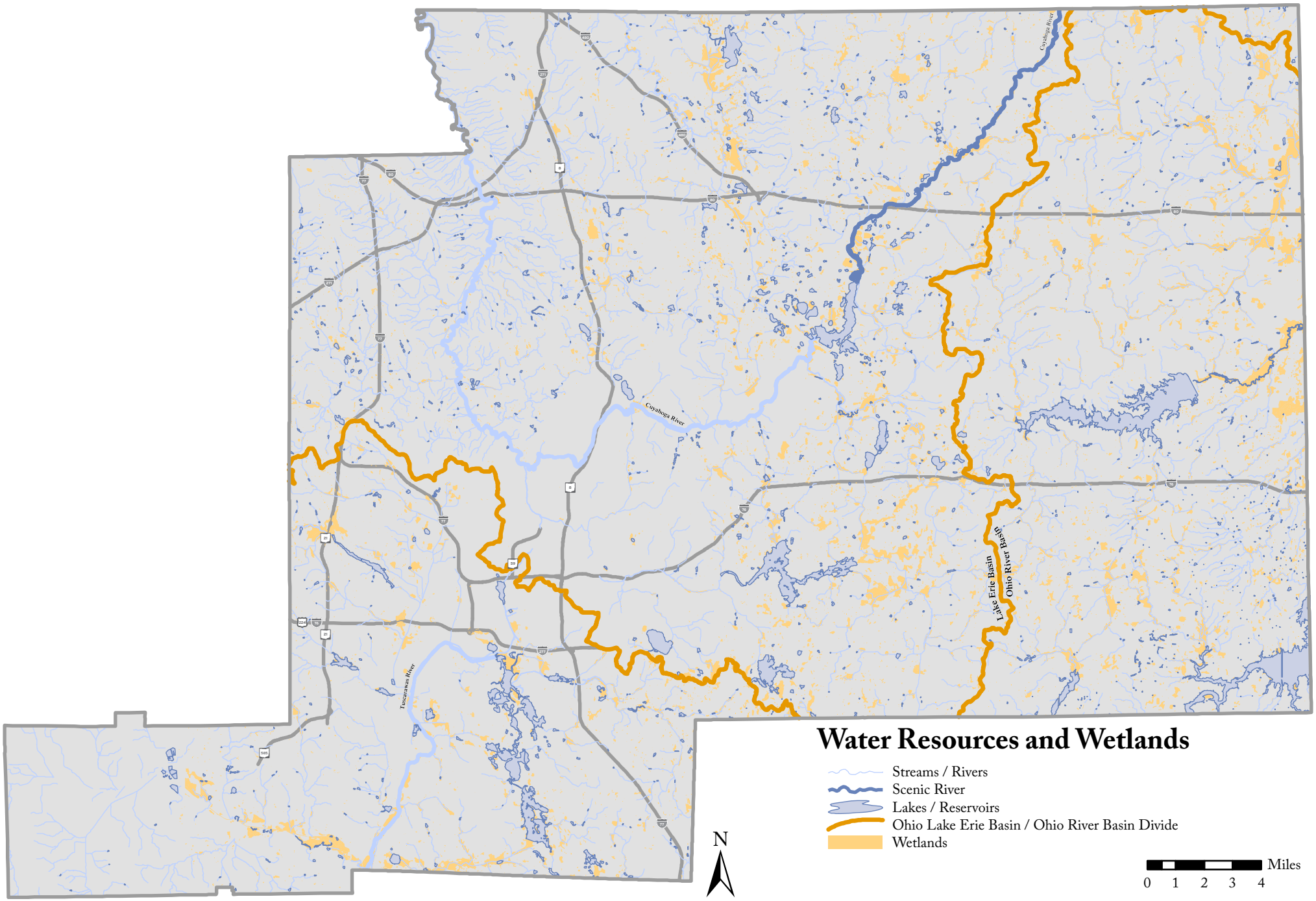
Endangered – A native species or subspecies threatened with extirpation from the state. The danger may result from one or more causes, such as habitat loss, pollution, predation, interspecific competition, or disease.

Threatened – A species of subspecies whose survival in Ohio is not in immediate jeopardy, but to which a threat exists. Continued or increased stress will result in its becoming endangered.

The region's ecosystem supports endangered and threatened plant and wildlife species such as the Northern Monkshood, Prairie Fringed Orchid, American Bittern, Indiana Bat, Sandhill Crane, Spotted Turtle and a few other federal and state species. These species are identified in a table provided in the Environmental Mitigation Analysis, Appendix D.

4.10.4 | Section 4(f) Parkland

Section 4(f) of the United States Department of Transportation (USDOT) Act requires that special effort be made to preserve Public Park and recreation lands, wildlife and waterfowl refuges, and public or privately owned historic sites. Section 4(f) specifies that federally funded transportation projects requiring the use of land from a public park, recreation area, wildlife and waterfowl refuge or land of significant historic site can only occur if there is no feasible and prudent alternative. Using Section 4(f) land requires all possible planning to minimize harm.


Cuyahoga River
Cuyahoga River
Tuscarawas River
Lake Erie Basin
Ohio River Basin
Water Resources and Wetlands
Streams / Rivers
Scenic River
Lakes / Reservoirs
Ohio Lake Erie Basin / Ohio River Basin Divide
Wetlands
N
Miles
0 1 2 3 4

The AMATS area is home to the Cuyahoga Valley National Park and Portage Lakes State Park in Summit County, several state and local parks, wildlife and waterfowl preserves, and several nature preserves. The state parks in Portage County include Nelson Ledges, Tinkers Creek, and West Branch. These sites are important to our communities and heritage. However, at times, transportation projects impact Section 4(f) resources and require specific measures to minimize harm or mitigate the impacts. These activities involve close coordination with the officials that have jurisdiction of the specific resources.

It is important to identify Section 4(f) properties as early as feasible in the planning and project development phase in order that complete avoidance of the protected resources is given full and fair consideration. The region's parkland is identified in the Environmental Mitigation Analysis in Appendix D.

4.10.5 | Stormwater

Storm water runoff occurs when precipitation from rain or snowmelt flows over the ground that can pick up debris, chemicals, dirt, and other pollutants. This material flows into a storm sewer system or directly to a lake, stream, river, or wetland. Impervious surfaces like driveways, sidewalks, and streets prevent storm water runoff from naturally soaking into the ground. Anything that enters a storm sewer system is discharged untreated into the waterbodies we use for swimming, fishing, and providing drinking water.

The impacts of storm water upon transportation projects may need to be assessed in further stages of project development. Storm water management should be incorporated into the construction phase of a project to prevent the direct runoff of water containing sediment into waterways and reduce sediment entering the storm drainage system. There are a number of mitigation techniques that can be used to curb stormwater runoff, including grass swales, filter strips, detention basins and retention ponds. These are low cost stormwater management activities that should be used where possible. Mitigation activities are further described in the Environmental Mitigation document in Appendix D.

The City of Akron broke ground on a project in late 2014 to address combined sewer overflows (CSOs), named *Akron Waterways Renewed!* This sewer project will become the largest single investment in city infrastructure in Akron's 190 year history.

The Cascade Village Storage Basin was the first project in the new construction initiative that addressed the City's Combined Sewer Overflows (CSOs), with the potential to restore Akron waterways and the health of its environment and the protection of its water to a level not seen in six generations.

In December 2013, the City of Akron began taking advantage of new USEPA policies that allowed cities to develop an "Integrated Plan." The Integrated Plan would help to prioritize and re-evaluate the extensive capital investments that the City needs to make to its wastewater and stormwater systems over the next several years. The largest costs are associated with a federal Consent Decree and the City's CSO Long-Term Control Plan (LTCP) that requires the City to implement substantial upgrades to the City's combined sewer system and Water Pollution Control Station (WPCS). In order to help offset the cost of implementing the LTCP Projects, the City had to integrate and prioritize all of the wastewater and storm costs, and simultaneously develop and implement sustainable and cost saving solutions, such as green infrastructure elements, in-line storage and increased conveyance.

In December 2020, the Towpath Trail from Mustill Store to Memorial Parkway officially reopened. This section had been detoured for the past five years due to construction related to the Ohio Canal Interceptor Tunnel.

The Ohio Canal Interceptor Tunnel (OCIT) broke ground on November 6, 2015. This was the largest project under the *Akron Waterways Renewed!* program. The location of the tunnel construction site required closure of a section of the Towpath Trail. The City of Akron worked with local stakeholders to come up with a safe, easily identifiable and accessible detour. In early 2016, an alternate route was developed to detour around the tunnel construction site. The one-mile alternate route was between Memorial Parkway and Mustill Store Trailheads. Along with the trail, the section of Hickory Street has now been reopened to vehicle traffic.

In June of 2020, the OCIT's final sections were placed into service, providing for storage capacity of 26 million gallons of combined sewer overflow. In the spring of 2021, final work will be completed, including site renewal, paving of the affected section of trail, landscaping, and Little Cuyahoga River restoration.
Akron has now completed 85% of the major consent decree projects with two projects currently under construction. The two remaining projects include the Northside Project and the remote treatment facility (EHRT), which is the subject of current negotiations with the EPA, on a third amendment to the consent decree. If successful, this amendment will facilitate the removal of the Gorge Dam on the Cuyahoga River, one of the last major impediments on the river.

A positive environmental impact reflected by Akron's waterways project, is the return of wildlife that has been evident as not seen in the area for some time. The most noticeable example of this is the resurgence of the Great Blue Heron along the Cuyahoga River.

4.10.6 | Social and Economic Impacts

Transportation projects frequently affect the social and economic environment and may change the physical layout, demographics, and sense of place in local communities. Project sponsors should work with local planning agencies and conduct public outreach to determine the impacts a proposed project may have on communities and identify methods to avoid, minimize, and mitigate impacts. These community impacts

are addressed in environmental assessments at later stages of planning development. Community impacts to consider include hospitals, places of worship, nursing homes, public housing, schools, libraries, industrial areas and shopping centers. The region's community facilities are shown on maps in the Environmental Mitigation Analysis, Appendix D.

4.10.7 | Cultural Resources

Cultural resources review during the preliminary development phase are planned and designed to comply with the National Environmental Policy Act (NEPA), the National Historic Preservation Act, the Department of Transportation Act, the Ohio Revised Code and 36 CFR Part 800 (the implementing regulations for Section 106 of the National Historic Preservation Act). All of these require that cultural resources be considered during the development of all highway projects in Ohio. An element of that consideration involves consulting with various entities, including the Federal Highway Administration (FHWA), the State Historic Preservation Office (SHPO), and the Advisory Council on Historic Preservation (ACHP), City Historic Preservation Offices, local public officials, local organizations, and the public.

The types of resources to review include National Register historic sites, cultural and archaeological sites, or cemeteries. Historic sites are spread throughout the region with the greatest concentration in the urban areas of Akron, Hudson, Kent, and Ravenna. The region's National Register Historic sites and cemeteries are shown on a map in Appendix D.

Mitigation measures developed through a Section 106 Memorandum of Agreement consultation process provide ways to avoid, minimize, or mitigate adverse effects to historic properties (i.e., those listed in or eligible for listing in the National Register of Historic Places (NRHP)) impacted by projects. These mitigation measures are carried through as environmental document commitments and must be completed and accounted for with SHPO and FHWA.

4.10.8 | Climate Change

The effect of climate change on the environment is a major consideration in transportation planning for the AMATS area. Issues such as weather extremes and increasing temperatures in various regions may change the road network that could eventually require adaption strategies to respond to the impacts.

While transportation is a significant contributor of greenhouse gas emissions (GHGs), there are opportunities for the sector to deliver greenhouse gas reductions. Low carbon fuels, new and improved vehicle technologies, strategies to reduce the number of vehicle miles traveled, and operating vehicles more efficiently are all approaches to reducing GHGs from transportation. In combination, these strategies can reduce transportation-related emissions significantly.

AMATS is working closely with officials throughout the state and at the federal level in order to prepare for climate change impacts on the regional transportation system. The AMATS area is making an effort by considering bicycle, pedestrian and transit recommendations.

Park and Ride lots and rideshare programs will also aid in reducing GHGs through carpooling. Gohio Commute is a unique ride-sharing program primarily designed for commuters and was launched in May 2017. It is a free, web-based program sponsored by AMATS and several other MPOs across the state. It is the premier ride planning, matching, and logging tool available for free to anyone who lives, works, or attends school in Ohio. Users can log trips on Gohio Commute's website to find transportation matches for cars, biking, transit or walking. This interactive platform gives one the information needed to make smart choices – and save money, improve your health, and improve air quality.

In 2021 AMATS plans to develop a vulnerability assessment to identify infrastructure vulnerable to changes in climate. This assessment will utilize Federal Highway Administration's Vulnerability Assessment and Adaptation Framework.

The assessment and adaptation framework includes defining the scope and objectives of the assessment, assessing vulnerabilities and integrating vulnerabilities into AMATS decision making process.

AMATS expects to complete the assessment by the end of 2021.

4.10.9 | Environmental Mitigation

Environmental mitigation guidelines and activities are required for projects that use federal funds and that may have adverse impacts on certain natural resources or environmental functions. Impacts are to be avoided, minimized or, as a last resort, reduced, eliminated or compensated for by replacing or providing substitute resources. AMATS is responsible for developing a discussion of environmental mitigation as part of its regional transportation planning process and the regulations of 23 CFR 450. Furthermore, AMATS requires that all federally funded projects comply with applicable environmental rules as a condition to receiving funding.

Mitigation measures are intended to help public officials make decisions about the environmental consequences with its transportation projects and related planning and to take actions that protect, restore and enhance the environment.

A detailed assessment of individual projects in future stages of development may emphasize the importance of certain mitigation efforts, where needed. Potential environmental impacts and mitigation activities are considered for projects recommended in *TO2045* through consultation with state agencies. These discussions will help to identify activities that have the greatest potential to protect, restore and enhance the environmental factors affected by the recommendations in *TO2045*.

4.11 | Access Ohio 2045

In December of 2020, the Ohio Department of Transportation (ODOT) released *Access Ohio 2045*, the State's long range transportation plan. The plan outlines several goals to improve the transportation system in Ohio. Each of the goals listed below have additional objectives to measure progress on improvement.

- Safety
- Efficiency and Reliability
- Economic Competitiveness
- Environmental Stewardship
- Preservation
- Mobility and Accessibility
- Quality of Life

AMATS strongly supports the Access Ohio 2045. In fact the goals of Access Ohio are in complete alignment with AMATS goals. AMATS has maintained as a top priority preservation for the transportation system. Safety, is also a top goal of the *Transportation Outlook 2045*. AMATS CMP process and plan recommendations consider system efficiency and reliability. The AMATS Connecting Communities program considers quality of life, mobility and accessibility and environmental stewardship as do the AMATS transit recommendations. AMATS will continue to support the state in meeting the goals of Access Ohio 2045.

4.12 | Technology

Transportation technology is an area of growing interest and investment. Fully integrated innovative technologies – self-driving cars, connected vehicles, drones, and smart sensors have captivated government, business and citizen interest with optimism that these technologies can improve the transportation network. Many believe that technology being developed today could reduce traffic fatalities, crashes and congestion. It could also help with issues such as parking and transit last mile connections. Further, there are numerous commercial applications that will bolster the economy.

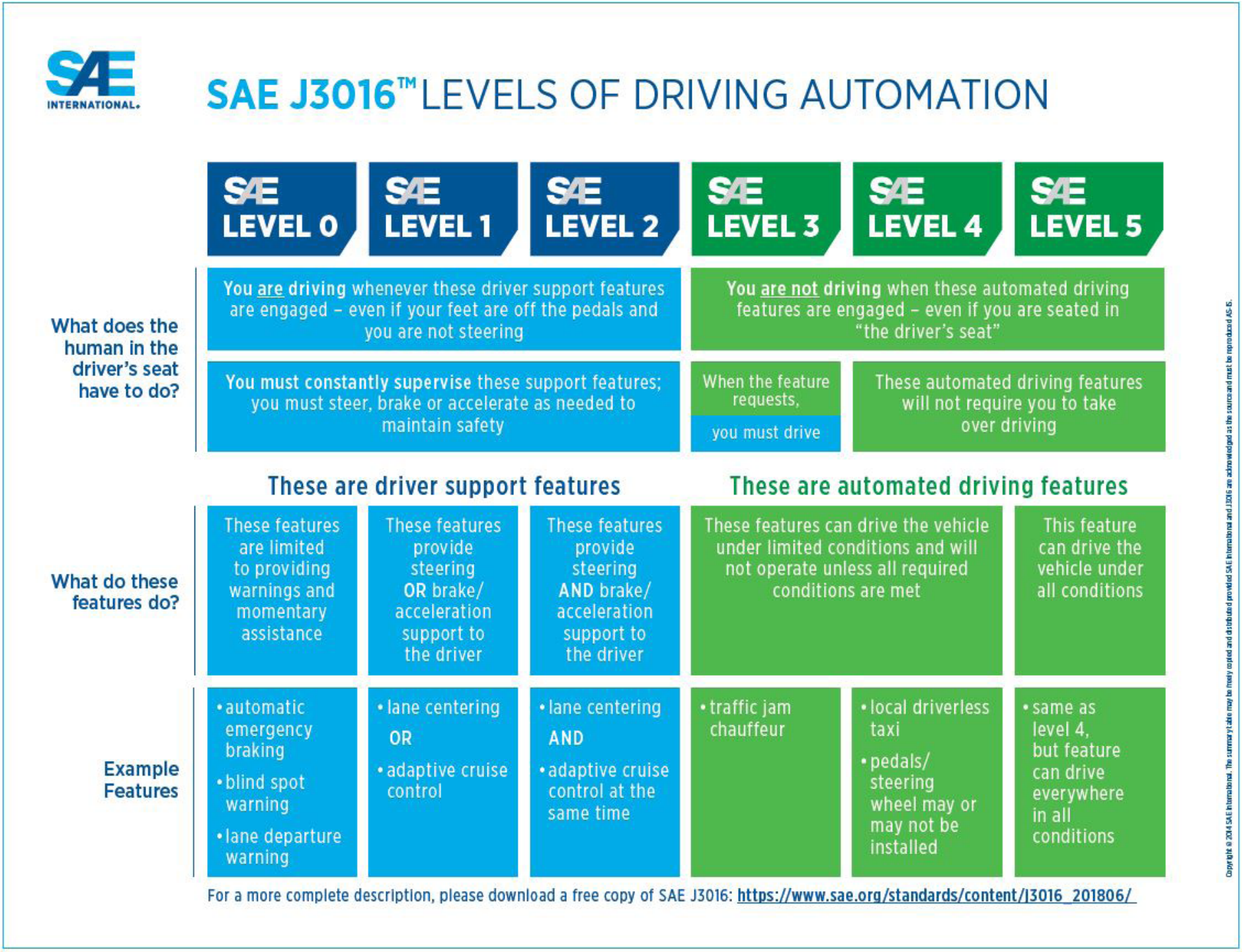
The state of Ohio has been very active in promoting transportation technology. In June of 2016, Columbus, OH received a $40 million Federal Smart Cities grant to become a test city for new transportation technologies. Since the award, the State of Ohio and the Ohio Turnpike and Infrastructure Commission (OTIC) have set sites on testing autonomous vehicles in corridors throughout the state.
In late 2016, the Ohio Department of Transportation (ODOT) announced a $15 million investment in the "33 Smart Mobility Corridor". The corridor is 35 miles of four-lane, limited access highway between Dublin and East Liberty, northwest of Columbus, and will be equipped with high-capacity fiber optic cable to instantaneously link researchers and traffic monitors with data from embedded and wireless sensors along the roadway. This corridor will be the testing grounds of not only ground vehicles, but drones as well. The state is also partnering with The Ohio State University (OSU) and others on a three-year research project along the 33 Smart Mobility Corridor to develop the low-altitude air traffic management system needed to ensure unmanned aircraft can be operated safely. This will allow state government to better use unmanned aircraft for its own purposes, such as for traffic management, and will eventually allow the state to enable the private sector to begin deploying drones for numerous commercial uses.

Another project, on I-70, will deploy smart logistics solutions along a stretch of the highway between Columbus, Ohio and Indianapolis, Indiana. The US Department of Transportation (USDOT) Federal Highway Administration (FHWA) awarded $4.4 million to a team led by DriveOhio through the Advanced Transportation and Congestion Management Technologies (ATCMTD) Program. Additionally, OTIC holds a partnership with the company OTTO to test self-driving trucks on the Ohio Turnpike (I-80) and ODOT is equipping 60 miles of I-90 with short-range digital communication units that will send data about weather and traffic conditions.

In 2018, the USDOT awarded a $10.85 million BUILD (Better Utilizing Investments to Leverage Development) grant to the Youngstown SMART2 Network. The regional MPO, Eastgate, is leading the network along with partners at the City of Youngstown, Youngstown State University, Mercy Health, Youngstown Business Incubator and Eastern Gateway Community College. The goal of the $30 million project is to enhance mobility, improve safety and create a modern transportation system in downtown Youngstown. The project will improve Fifth Avenue and several streets adjacent to downtown by updating existing roads to include improved pedestrian and bicycle facilities, transit waiting environments, green infrastructure, streetscaping, and most notably- autonomous transit shuttles.

Regionally, Ohio is situated in the middle of an exciting new partnership. ODOT, along with OSU, OTIC and the Transportation Research Center, partnered with government agencies and academic institutions in Pennsylvania and Michigan to form the Smart Belt Coalition. Ohio is a centerpiece in this first-of-its-kind cooperative effort created to ensure interoperability between these three smart mobility powerhouses and to work toward the creation of a smart corridor that will eventually stretch from the East Coast to Detroit and Chicago.

While the timeline of widespread technological adoption is uncertain, the future direction of transportation is at a crossroads where policy and technical guidance play an especially critical role in shaping change. Impacts are not limited to transportation, but have widespread implications for land use, housing, urban design, economic development, equity, and environmental sustainability. AMATS will continue to monitor the trends in innovation and carefully consider their role in transportation planning in the future.


SAE INTERNATIONAL
SAE J3016™ LEVELS OF DRIVING AUTOMATION
SAE LEVEL 0
SAE LEVEL 1
SAE LEVEL 2
SAE LEVEL 3
SAE LEVEL 4
SAE LEVEL 5
What does the human in the driver's seat have to do?
You are driving whenever these driver support features are engaged – even if your feet are off the pedals and you are not steering
You are not driving when these automated driving features are engaged – even if you are seated in "the driver's seat"
You must constantly supervise these support features; you must steer, brake or accelerate as needed to maintain safety
When the feature requests, you must drive
These automated driving features will not require you to take over driving
These are driver support features
These are automated driving features
What do these features do?
These features are limited to providing warnings and momentary assistance
These features provide steering OR brake/ acceleration support to the driver
These features provide steering AND brake/ acceleration support to the driver
These features can drive the vehicle under limited conditions and will not operate unless all required conditions are met
This feature can drive the vehicle under all conditions
Example Features
• automatic emergency braking
• blind spot warning
• lane departure warning
• lane centering OR
• adaptive cruise control
• lane centering AND
• adaptive cruise control at the same time
• traffic jam chauffeur
• local driverless taxi
• pedals/ steering wheel may or may not be installed
• same as level 4, but feature can drive everywhere in all conditions
For a more complete description, please download a free copy of SAE J3016: https://www.sae.org/standards/content/j3016_201806/
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5 | Transportation Performance Measures

Federal transportation legislation places an emphasis on performance measurement in the planning process. This focus is consistent with AMATS' goals and objectives, which promote the transparency of public data and decision-making and seeks to improve the accountability of public spending by better linking investments to outcomes.

Performance measures are central to implementing a Performance-Based Planning Process (PBPP) that guides decision making. How performance is defined and measured can significantly affect the types of projects and strategies that are advanced by decision makers. Moreover, performance results inform agencies whether the types of projects and strategies they are implementing are in fact helping them achieve their goals. Performance measures aim to answer questions about whether the performance of the transportation system is getting better or worse over time. Performance measures also aim to demonstrate whether transportation investments are correlated or linked to stated goals and whether they produce desired outcomes.

Introducing a performance management approach to planning is intended to improve project and program delivery, inform investment decision making, focus staff efforts on priorities, and provide greater transparency and accountability to the public. Federal legislation applies performance measurement at the programmatic, rather than project level and links performance measures and targets to funding decisions by way of performance-based funding. The purpose of this approach is to move towards performance-based decision-making for project selection in the future.

State and local investments of federal funds must make progress toward these performance targets, and MPOs must incorporate these performance measures and targets into their Transportation Improvement Programs (TIPs) and long range Regional Transportation Plans. Federal guidance imposes financial penalties on states that fail to make progress toward these performance goals.

There are seven areas for which the US DOT has established national performance goals. These areas are:

- Safety
- Infrastructure Condition
- Congestion Reduction
- System Reliability
- Freight Movement and Economic Vitality
- Environmental Sustainability
- Reduced Project Delivery Delays

To implement performance measure goals, US DOT has developed measures and minimum standards for states to follow for the various core programs established in MAP-21. US DOT has issued performance measure goals for each of the above areas.

In the transportation planning process, the public and other stakeholders articulate a strategic direction that is based on a shared vision for the future.

- **Goals and Objectives** stem from the area's vision and goals, and they address key desired outcomes. Agencies like AMATS create objectives—which are specific, measurable statements—that shape planning priorities.
- **Performance Measures** support objectives and are the basis for comparing alternative improvement strategies, investment and policy strategies, and tracking results.

Driven by data on performance, along with public involvement and policy considerations, AMATS will conduct analyses that inform investment and policy priorities.

- **Identify Trends and Targets** – Trends and targets let agencies compare alternative strategies. This step relies on baseline data from past trends, tools to forecast future performance, and information on possible strategies, available funding, and other constraints.
- **Identify Strategies and Analyze Alternatives** –Scenario analysis may also be used to compare alternative strategies and funding levels, or to explore funding levels required to achieve certain performance goals.
- **Develop Investment Priorities** – To reach investment targets, AMATS will create a TIP and a Regional Transportation Plan that consider priorities and tradeoffs.

Programming involves selecting specific projects to include in the TIP. In a performance based planning approach, agencies make programming decisions based on whether those decisions support performance targets or contribute to desired trends.

Performance based planning is founded on evidence that the process leads agencies to their goals. The following evaluation activities happen throughout implementation and when needed throughout performance based planning.

- **Monitoring** – Gathering information on actual conditions.
- **Evaluation** – Conducting analysis to understand whether implemented strategies have been effective.
- **Reporting** – Communicating information about system performance and whether policymakers, stakeholders, and the public think plans and programs are effective.

In a performance based planning approach, each step in the process is clearly connected to the next so that goals translate into specific measures. Those measures then become the basis for selecting and analyzing strategies for the long range plan. Ultimately, project selection decisions are influenced by expected performance results. Keeping the next step in the process in mind is critical to each subsequent step.

Public involvement and data are critical throughout the process. The public's vision for their transportation system plays a central role in determining goals, performance measures, and investment priorities. Agencies also decide on priorities using data and information on how potential strategies performed in the past, are performing now, and how they are projected to perform in the future.

Like all planning, the performance based planning process is cyclical. As planning cycles evolve, goals and objectives may be adjusted and performance measures and targets may be refined. Making adjustments ensures that agencies focus on the most important priorities and that those priorities remain achievable.

Federal regulations have now placed a greater emphasis on the use of performance measures. ODOT will continue to develop statewide performance targets on a continuing basis. And MPOs such as AMATS are coordinating with ODOT on this process. AMATS and ODOT will continue to monitor and develop factors that influence the level of performance of various transportation modes, and refine the performance targets that will be necessary to maintain or improve operational efficiency.

Table 5.0-1 summarizes project funding **by performance group category for *Transportation Outlook 2045* (FY 2025-2045).** Highway, bicycle and pedestrian projects are estimated to receive approximately $4.6 billion in funds over the life of the Plan.

Table 5.0-1 | 2025-2045 Project Funding by Performance Group Category

	2025-2045 PROJECT FUNDING
PM1 — Safety	$174,574,666.67
PM2 — Infrastructure	$4,289,161,469.66
PM3 — System Performance	$151,785,666.67
TOTAL	$4,615,521,803.00

Notes –
Performance Measures Group One (PM1): Safety
Performance Measures Group Two (PM2): Infrastructure - Pavement and Bridges
Performance Measures Group Three (PM3): System Performance - Congestion and Air Quality, Travel Time Reliability, Peak-Hour Excessive Delay (PHED), Mobile Source Emissions, and Non-Single Occupancy Vehicle (Non-SOV) Travel
Transit Asset Management (TAM) Funding - Listed under Transit Agencies (Vehicle Replacements and Rehab)
Projects may be listed with multiple PM categories. Summary above includes Line Item Projects. Line Items are a category of projects with federal funding sources which may be used for federal authorization purposes in place of an individual listing for each project.

5.1 | PM1 - Safety

Federal legislation requires MPOs like AMATS to establish performance targets and set targets that demonstrate fatal and serious injury reductions on all public roads. The required performance measures for safety are:
Number of fatalities
Fatality rate
Number of serious injuries
Serious injury rate
Number of non-motorized fatalities and serious injuries

In accordance with federal legislation, AMATS uses a five-year average to calculate baseline safety targets. These baseline targets are the benchmarks to which all future calculations will be compared. All future values will also be calculated using five years of data. This five-year rolling average is used to smooth out short-term year-to-year fluctuations. A full discussion of safety planning and the identification of safety needs for the AMATS area is found in the *Traffic Crashes and Safety Performance Measures 2017-2019 Report*, approved in December 2020. This technical memorandum also includes analyses of bicycle and pedestrian safety data.

AMATS is also required to establish safety performance targets. There are two options available for satisfying this requirement: commit to a quantifiable target for each measure within the metropolitan area, or approve of ODOT's statewide targets and agree to plan and program projects so that they contribute toward the accomplishment of these targets. Ohio has adopted a 2% reduction target across all five safety measures; and AMATS supports the goals set forth by ODOT for the entire state, rather than develop separate targets for our area (See AMATS Policy Resolution 2020-20, approved December 2020).

The current USDOT rules for safety performance measures were developed to support the Highway Safety Improvement Program (HSIP), as it establishes safety performance measure requirements for the purpose of carrying out the HSIP and to assess fatalities and serious injuries on all public roads. The use of performance measures for safety will impact AMATS member applications for funding at the local, state and federal level. The AMATS Funding Policy Guidelines are amended in order to support the safety goals in the HSIP, as noted in the current federal program rules.

In accordance with federal regulations, AMATS used a five-year average to calculate the initial safety targets in 2015. These averages become the benchmark to which all future calculations will be compared. All future values will also be calculated using five years of data. This five-year rolling average is used to smooth out short term year-to-year fluctuations in data.

The table below (5.1-1) shows the calculation of the AMATS rolling averages for the five safety performance measures. The 2015 averages are the benchmark values to which the 2019 averages are compared. In each of the safety performance measures, AMATS has exceeded the ODOT reduction target in three of the five categories. Unfortunately, fatalities have increased four percent over the same time period. These figures are comparable to statewide trends.

Table 7.1-1 lists all of the projects in *Transportation Outlook 2045* (FY 2025-2045) that are anticipated to improve performance measures in the AMATS area and contribute to ODOT's statewide performance measures goals (see Chapter 7 for project listings). These projects were selected based on Plan goals and objectives, community strategic planning and feedback, and the AMATS Funding Policy Guidelines, which contributes additional scoring for safety-related improvements. Safety projects are listed as Performance Measure Group One (PM1), and are often funded with Ohio Highway Safety Improvement Program (HSIP) funds.

AMATS will continue to pursue safety goals and support ODOT targets through the twenty-year Plan horizon.

Table 5.1-1 | Safety Performance Data

YEAR	2014	2015	2016	2017	2018	2019	2015 5 YEAR AVG	2016 5 YEAR AVG	2017 5 YEAR AVG	2018 5 YEAR AVG	2019 5 YEAR AVG	PERCENT CHANGE 2015-2019
Number of Fatalities	40	49	54	60	35	44	46	46	49	48	48	4%
1,000 Daily VMT (from ODOT)	20,827	21,702	20,182	20,894	20,087	20,049						
100 Million VMT	76.02	79.21	73.66	76.26	73.32	73.18						
Fatalities per 100M VMT	0.53	0.62	0.73	0.79	0.48	0.60	0.60	0.61	0.64	0.63	0.64	7%
Number of Serious Injuries	549	522	499	450	331	355	590	574	529	470	431	-27%
1,000 Daily VMT (from ODOT)	20,827	21,702	20,182	20,894	20,087	20,049						
100 Million VMT	76.02	79.21	73.66	76.26	73.32	73.18						
Serious Injuries per 100M VMT	7.22	6.59	6.77	5.90	4.51	4.85	7.79	7.58	6.94	6.20	5.73	-26%
Number of Non-Motorized Fatalities and Serious Injuries	57	27	46	46	51	47	57.4	54.4	51.4	50.8	48.8	-15%

5.2 | PM2 - Infrastructure Condition

Part of the Performance Based Planning and Programming rules are to examine Infrastructure Condition and monitor the condition of pavement and bridges and culverts.

Federal rules 23 CFR 490.307 and 23 CFR 490.407 establish measures to evaluate the condition of Ohio's National Highway System (NHS) pavements and bridges. ODOT established 2-year and 4-year statewide targets for both metrics within a four year performance period. Additionally, ODOT must establish only 4-year targets for interstate pavements. There are four targets for highways and two for bridges. These measures are listed in Table 5.2-1 as follows:

Table 5.2-1 | Ohio's National Highway System (NHS) Pavement and Bridge Condition Targets

NATIONAL HIGHWAY SYSTEM PAVEMENT CONDITION		
PAVEMENTS	**2-YEAR TARGET**	**4-YEAR TARGET**
Percentage of Interstate Pavements in Good Condition	N/A	50%
Percentage of Interstate Pavements in Poor Condition	N/A	1%
Percentage of Non-Interstate Pavements in Good Condition	35%	35%
Percentage of Non-Interstate Pavements in Poor Condition	3%	3%
NATIONAL HIGHWAY SYSTEM BRIDGE CONDITION		
BRIDGES	**2-YEAR TARGET**	**4-YEAR TARGET**
Percentage of NHS Bridges in Good Condition	50%	50%
Percentage of NHS Bridges in Poor Condition	5%	5%

The targets reflect ODOT's review of eight years of HPMS submitted NHS pavement data and 10 years of bridge condition data. Highways and bridges are both rated as good, fair, or poor. Statewide targets are only required for the poor and good conditions. ODOT's review confirms that a high percentage of Ohio's NHS and Interstate pavements and bridges are in good condition with low percentages of poor conditions. ODOT's Pavement and Bridge Management Systems predict these patterns to continue.

AMATS current NHS pavement condition ratings are identified in Table 5.2-2 as follows:

Table 5.2-2 | AMATS Pavement Condition

AMATS INTERSTATE LANE MILES PAVEMENT CONDITION (%)				
YEAR	GOOD	FAIR	POOR	TOTAL
2014	30.68%	68.85%	0.47%	100%
2015	12.35%	87.13%	0.52%	100%
2016	42.93%	57.01%	0.06%	100%
2017	55.00%	44.50%	0.50%	100%
2018	54.65%	45.17%	0.19%	100%
2019	46.00%	53.70%	0.30%	100%
5-Year Average (2015-2019)	42.19%	57.50%	0.31%	100%
AMATS NON-INTERSTATE LANE MILES PAVEMENT CONDITION (%)				
YEAR	GOOD	FAIR	POOR	TOTAL
2014	18.75%	80.19%	1.05%	100%
2015	17.71%	80.78%	1.51%	100%
2016	28.70%	68.40%	2.90%	100%
2017	32.00%	64.00%	4.00%	100%
2018	30.66%	66.91%	2.42%	100%
2019	28.40%	68.70%	2.90%	100%
5-Year Average (2015-2019)	27.49%	69.76%	2.75%	100%

AMATS Interstate and Non-Interstate pavement conditions remain near the targets set by ODOT for the two-year and four-year periods. AMATS continues to support these ODOT targets, and works to maintain them through its dedicated resurfacing program and funding policy guidelines.

Table 5.2-3 below illustrates that 9 projects in *Transportation Outlook 2045* directly relate to pavement condition improvement. AMATS places an emphasis in its funding policy not only for pavement condition but also for communities that take preventative maintenance measures for local pavement.

Table 5.2-3 | Transportation Outlook Projects Improving Pavements

ROAD TYPE	NUMBER OF PROJECTS	CONSTRUCTION $
Interstate	4	$419,791,000
Non-Interstate NHS	5*	$22,000,000

**Only includes specific projects, not funding reserved for pavement projects yet to be identified*

AMATS current NHS bridge ratings as of 2019 are listed in Table 5.2-4 as follows:

Table 5.2-4 | AMATS National Highway System Bridges NBI (2019)

METRIC	TOTAL	PERCENT OF TOTAL	TOTAL DECK AREA (SQ FT)	PERCENT OF AREA
Good	248	57.81%	3,173,674	52.89%
Fair	179	41.72%	2,807,486	46.78%
Poor	2	0.47%	19,828	0.33%
Total	429	100.00%	6,000,988	100.00%

ODOT sets targets for bridges at 50.0% or greater of bridging be rated as "good", and less than 5.0% of bridging be rated as "poor". AMATS supports these targets. The AMATS area's National Highway System (NHS) bridge conditions are currently exceeding the targets set by ODOT.

Table 5.2-5 below summarizes 2 projects in *Transportation Outlook 2045* directly related to bridge conditions, with a total investment of $186.3 million.

Table 5.2-5 | Transportation Outlook Projects Improving NHS Bridges

NUMBER OF PROJECTS	BRIDGES IMPROVED	CONSTRUCTION $
2	2	$186,291,000

The AMATS Policy Committee has previously approved support for ODOT's statewide goals for pavement and bridge conditions. (See AMATS Policy Resolution 2018-17).

5.3 | PM3 - System Reliability, Freight Reliability, and CMAQ

US DOT requires agencies to adopt travel time reliability measures to better manage and operate their transportation system. Traffic professionals have come to recognize the importance of travel time reliability because it better quantifies the benefits of traffic management and operation activities than simple averages over a twenty-four hour period.

Federal rule 23 CFR 490.707 establishes Congestion Mitigation and Air Quality (CMAQ) Traffic Congestion performance measures for large urbanized areas in Ohio. One measure focuses on monitoring the Peak Hour Excessive Delay (PHED), which is the effort to monitor the time people spend in traffic delays. Another measure focuses on decreasing single occupant vehicle trips (Percent of Non-Single Occupancy Vehicle (Non-SOV) Travel). See the AMATS CMAQ Program Performance Plan for further discussion.

5.3.1 | Peak Hour Excessive Delay (PHED)

ODOT and the Ohio MPOs collectively established a single target for each applicable urbanized area for the first performance period by May 20, 2018. As part of a phased implementation approach, only four-year targets were reported in ODOT's baseline performance period report submitted prior to October 1, 2018. There is no requirement for states to report two-year targets or baseline condition for this specific measure in the report for the first performance period. The first mid-performance period progress report was due October 1, 2020. Four-year targets remained the same, and two-year conditions/performance were reported as baselines. The AMATS CMAQ Mid-Period Report was approved with AMATS Resolution 2020-16 (September 24, 2020).

Traffic congestion will be measured by the annual hours of peak hour excessive delay (PHED) per capita on the National Highway System (NHS). The threshold for excessive delay will be based on the travel time at 20 miles per hour or 60% of the posted speed limit travel time, whichever is greater, and will be measured in 15-minute intervals. Peak travel hours are defined as 6-10 am local time on weekday mornings; the weekday afternoon period is 3-7 pm, providing flexibility to state DOTs and MPOs. The total excessive delay metric will be weighted by vehicle volumes and occupancy.

5.3.2 | Mode Share (Non-SOV Travel)

ODOT and the Ohio MPOs established a single, unified two-year and four-year target for each applicable urbanized area for the first performance period of May 20, 2018. A baseline report for the first performance period was due October 1, 2018 and included two and four-year targets and a description of the data collection method used.

Mode Share is a calculation of the percent of Non-SOV travel within the urbanized area. Non-SOV travel, defined by the FHWA, applies to travel occurring on modes other than driving alone in a motorized vehicle (Single Occupancy Vehicle) and includes travel that is avoided by telecommuting. It is a measure of the percentage of all surface transportation occurring in the urbanized area.

The PHED and Non-SOV measures and targets are listed in Table 5.3-1 as follows:

Table 5.3-1 | Peak Hour Excessive Delay and Non-Single Occupancy Vehicle Travel

PEAK HOUR EXCESSIVE DELAY (PHED)		
URBANIZED AREA PEAK HOUR EXCESSIVE DELAY	**2-YEAR TARGET**	**4-YEAR TARGET**
Peak Hour Excessive Delay per Capita - Cincinnati	N/A	< 12 hrs / yr
Peak Hour Excessive Delay per Capita - Cleveland	N/A	< 10 hrs / yr
Peak Hour Excessive Delay per Capita - Columbus	N/A	< 12 hrs / yr
NON-SINGLE OCCUPANCY VEHICLE (NON-SOV TRAVEL)		
URBANIZED AREA PERCENT OF NON-SOV TRAVEL	**2-YEAR TARGET**	**4-YEAR TARGET**
Percent of Non-SOV Travel - Cincinnati	17.4%	17.4%
Percent of Non-SOV Travel - Cleveland	18.0%	18.5%
Percent of Non-SOV Travel - Columbus	18.2%	19.0%

For the establishment of the PHED measure, ODOT and its partner agencies reviewed data from 2017 using the RITIS Analytics Tool, which draws data from the NPMRDS. For the establishment of the Percent of Non-SOV Travel Measure, ODOT and its partner agencies used the American Community Survey data's estimates of the percentage of people that travel to work by means other than driving alone (i.e. carpooling, telework, biking, walking, or taking the bus). ODOT was able to review five years of data, noting stable travel patterns for this measure. Upon analysis, ODOT and its partner agencies adopted targets based on recent travel trends and future expected performance.

Table 5.3-2 shows the baseline and four-year target for peak hours of excessive delay (PHED) per person, per year for the Cleveland urbanized area. The data for this metric was derived from FHWA vehicle occupancy factors, HPMS traffic count data, and the NPMRDS travel time data set. Federal rules required that the Cleveland, Cincinnati and Columbus urbanized areas set air quality related targets in 2018 (performance period 1). The northern portions of the AMATS area are located in the Cleveland urbanized area. Consequently, AMATS must coordinate with the Northeast Ohio Areawide Coordinating Agency (NOACA) to set targets for the Cleveland urbanized area.

Peak Hour Excessive Delay (PHED) is based on the calculation of all segments of the National Highway System. PHED is defined as the extra amount of time spent in congested conditions defined by speed thresholds that are lower than a normal delay threshold. For this measure, the speed threshold is 20 mph or 60% of the posted speed limit, or whichever is greater. The FHWA requires that the data collected must occur during weekdays (Monday through Friday), with a required morning peak timeframe

of 6:00am-10:00am, and a variable evening peak timeframe. This metric measures the number of hours of excessive traffic delay (per capita) each year.

The PHED measure currently only applies to metropolitan areas with one million or more in population. However, in 2022, urbanized areas of 200,000 or greater will also be subject to the PHED measure. For this metric, excess delay is defined as travel time at 20 mph or 60% of the posted speed limit, whichever is greater, measured in 15 minute intervals during key travel windows.

Table 5.3-2 | Traffic Congestion Measures: Target for Peak Hour Excessive Delay (PHED) Annual Hours per Person

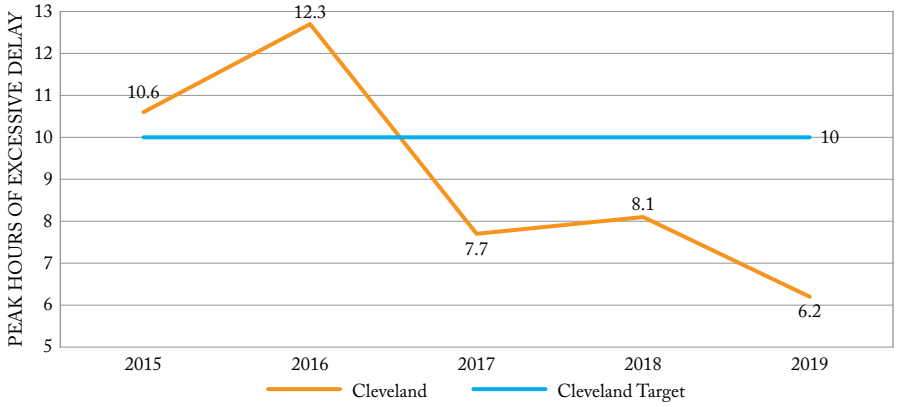
CLEVELAND URBANIZED AREA		
PHED 2017 BASELINE	**PHED 2020 2-YEAR TARGET**	**PHED 2020 4-YEAR TARGET**
7.7 Hours per Person	N/A	< 10.0 Hours per Person

Table H-5.3-3, and the graph that follows, show the progress made toward achieving the PHED target. Note the trend in the declining amount of delay during the period of analysis (2015-2019). The Cleveland Urban Area has successfully met the target for traffic delay during the peak hour for the last three years.

Table 5.3-3 | Traffic Congestion Measures: Target for Peak Hour Excessive Delay (PHED) Annual Hours per Person

CLEVELAND URBANIZED AREA PROGRESS 2014-2019						
YEAR	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Actual Data	9.1	10.6	12.3	7.7	8.1	6.2
Target	10.0	10.0	10.0	10.0	10.0	10.0

Annual Peak Hours of Excessive Delay (PHED): Cleveland



Mode share is a measure of the percentage by mode of all surface transportation occurring in the urbanized area. Modes of surface transportation include driving alone in a motorized vehicle (Single Occupancy Vehicle), car or van pooling, public transportation, commuter rail, walking, or bicycling, as well as travel that is avoided by telecommuting. Non-SOV travel, defined by the FHWA, applies to any travel occurring on modes other than driving alone in a motorized vehicle. An analysis of mode share includes a calculation of the percent of Non-SOV travel within the urbanized area. This metric, which is derived from the U.S. Census Bureau's American Community Survey (ACS) data, illustrates the percentage of an urbanized area's traffic in which multiple people are in a vehicle. Higher levels of Non-SOV travel can reduce an area's traffic congestion by removing additional vehicles from the roadways, and also lowering the amount of mobile emissions.

Table 5.3-4 shows the baseline, two-year, and four-year targets for non-single occupancy vehicle travel (Non-SOV) in the Cleveland urbanized area. The data for this metric was derived from the American Community Survey Economic Characteristics table.

Table 5.3-4 | Traffic Congestion Measures: Target for Non-Single Occupancy Vehicle (Non-SOV) Travel

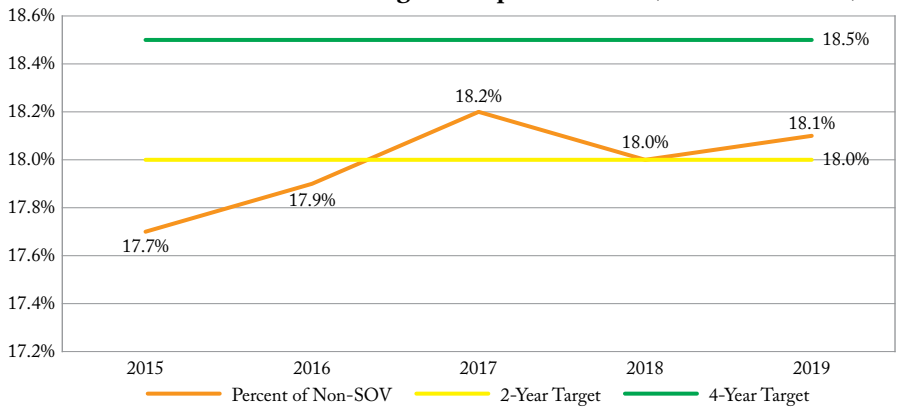
PERCENT OF TOTAL TRAVEL MODES		
% OF NON-SOV TRAVEL 2016 BASELINE	**% OF NON-SOV TRAVEL 2020 2-YEAR TARGET**	**% OF NON-SOV TRAVEL 2020 4-YEAR TARGET**
17.9%	≥ 18.0%	≥ 18.5%

Table 5.3-5, and the graph that follows, show the progress made toward reaching the target for non-SOV travel. For the period 2012-2019, non-SOV travel hovers near the two-year target of 18.0 percent, showing slight improvement towards the four-year target of 18.5 percent or greater. Thus, the Cleveland urbanized area is currently meeting the PHED target and the 2 year non-SOV target. The Cleveland urbanized area is not currently meeting the 4 year non-SOV target of 18.5%. The trend is flat and hovering around the two-year target of 18.00%.

Table 5.3-5 | Traffic Congestion Measures: Non-Single Occupancy Vehicle (Non-SOV) Travel

PERCENT OF NON-SOV TRAVEL PROGRESS					
YEAR	PERCENT DRIVE ALONE (SOV)	PERCENT NON-SOV	2-YEAR TARGET	4-YEAR TARGET	ACS 5-YR ESTIMATES
2012	82.00%	18.00%	18.00%	18.50%	DP03
2013	82.20%	17.80%	18.00%	18.50%	DP03
2014	82.40%	17.60%	18.00%	18.50%	DP03
2015	82.30%	17.70%	18.00%	18.50%	DP03
2016	82.10%	17.90%	18.00%	18.50%	DP03
2017	81.80%	18.20%	18.00%	18.50%	ACS 2016 5-Year DP03
2018	82.00%	18.00%	18.00%	18.50%	ACS 2017 5-Year DP03
2019	81.90%	18.10%	18.00%	18.50%	ACS 2018 5-Year DP03

Cleveland: Annual % of Non-Single Occupant Vehicles (ACS 5-Year Data)



The Cleveland urbanized area is currently meeting the PHED target and is near the 2 year non-SOV target. The Cleveland urbanized area is not currently meeting the 4 year non-SOV target of 18.5%.

AMATS has identified 1 project totaling $31.2 million that will contribute to the non-SOV travel performance measure and 54 projects totaling $151.8 million that will contribute to the PHED performance measure. These numbers are reflected in tables 5.3-6 and 5.3-7 below.

Table 5.3-6 | Transportation Outlook Projects Improving Non-SOV Travel

NUMBER OF PROJECTS	CONSTRUCTION $
1	$31,209,191

Table 5.3-7 | Transportation Outlook Projects Improving PHED

NUMBER OFPROJECTS	CONSTRUCTION $
54	$151,785,667

5.3.3 | Travel Time Reliability and Freight Movement

Federal rules 23 CFR 490.507 and 23 CFR 490.607 establish National Highway System travel time reliability and Interstate System freight reliability measures. For both personal travel time reliability and freight travel time reliability measures, ODOT is required to establish 2-year and 4-year targets within a four year performance period. The two measures are listed in Table 5.3-8 below:

Table 5.3-8 | ODOT Travel Time Reliability Targets

LEVEL OF TRAVEL TIME RELIABILITY		
TRAVEL TIME RELIABILITY	2-YEAR TARGET	4-YEAR TARGET
Interstate Travel Time Reliability	85%	85%
Non-Interstate NHS Travel Time Reliability	N/A	80%
LEVEL OF TRUCK TRAVEL TIME RELIABILITY		
TRUCK TRAVEL TIME RELIABILITY	2-YEAR TARGET	4-YEAR TARGET
Interstate Truck Travel Time Reliability Index	< 1.50	< 1.50

Level of Travel Time Reliability (LOTTR) is defined as the ratio of the longer travel times (80th percentile) to a "normal" travel time (50th percentile). The measures are the percent of person-miles traveled on the relevant portion of the NHS that are reliable.

Truck Travel Time Reliability (TTTR) is the ratio generated by dividing the 95th percentile travel time by the normal time (50th percentile) for each Interstate segment. The TTTR Index is established by multiplying each segment's largest ratio of five reporting periods by its length then dividing the sum of all length-weighted segments by the total length of Interstate.

The data to assess travel time reliability and establish targets is sourced from FHWA's National Performance Management Research Data Set (NPMRDS). ODOT is participating in FHWA's Performance Management Analytical Tool pooled fund where a contractor assists states in calculating NPMRDS travel time reliability metrics.

AMATS current performance is documented in the following Table 5.3-9:

Table 5.3-9 | AMATS Travel Time Reliability

LEVEL OF TRAVEL TIME RELIABILITY								
TRAVEL TIME RELIABILITY	2014	2015	2016	2017	2018	2019	5-YEAR AVERAGE	TARGET
Interstate TTR	97.6%	96.5%	97.6%	98.6%	98.5%	98.8%	98.0%	85.0%
Non-Interstate NHS TTR	60.7%	63.1%	59.8%	89.3%	90.4%	89.3%	78.4%	80.0%
Interstate TTTR Index	0.01	0.01	0.01	0.01	0.01	1.30	1.30	< 1.50

AMATS has met the performance targets for travel time reliability on the interstate system and on truck travel time since the beginning of the analysis period. The AMATS non-interstate system continues to meet the target as of 2017. Overall state of Ohio performance is documented in Table 5.3-10 below:

Table 5.3-10 | Ohio Travel Time Reliability

LEVEL OF TRAVEL TIME RELIABILITY								
TRAVEL TIME RELIABILITY	2014	2015	2016	2017	2018	2019	5-YEAR AVERAGE	TARGET
Interstate TTR	92.4%	90.3%	90.6%	90.7%	89.1%	96.0%	91.34%	85.0%
Non-Interstate NHS TTR	68.5%	67.4%	66.8%	90.5%	90.1%	90.0%	80.96%	80.0%
Interstate TTTR Index	1.46	1.48	1.45	1.34	1.38	1.30	1.42	< 1.50

AMATS identifies 54 projects that will improve travel time reliability in the greater Akron area. The projects total $151.8 million (Table 5.3-11). These projects are also anticipated to benefit truck travel time reliability as well.

Table 5.3-11 | Transportation Outlook Projects Improving Travel Time Reliability

ROAD TYPE	NUMBER OF PROJECTS	CONSTRUCTION $
Interstate	1	$44,500,000
Non-Interstate NHS	53	$107,285,667

**Only includes specified projects with already known CMAQ funds. Future projects funding sources not determined.*

5.3.4 | Total CMAQ Emission Reduction

Federal rule 23 CFR 490.807 establishes Total CMAQ Emission Reduction performance measures for Ohio's US EPA designated air quality nonattainment and maintenance areas. There are three mobile source pollutants Ohio is required to set performance targets for: Volatile Organic Compounds (VOCs), Nitrous Oxide (NO_x), and Particulate Matter at 2.5 micrometers in diameter ($PM_{2.5}$). For all three measures, ODOT is required to set both 2-year and 4-year targets within a four year performance period.

Emissions Reduction

ODOT, in coordination with the Ohio MPOs, established statewide two and four-year targets for total emissions reduction of on-road mobile source emissions for each performance period for all non-attainment and maintenance areas within the state boundary, for each applicable criteria pollutants and precursors.

Emissions reduction is defined as the total on-road mobile source total emission reductions for each applicable criteria pollutant and precursor for a nonattainment area. For nonattainment and maintenance areas, the applicable criteria pollutants are Volatile Organic Compounds (VOCs), Nitrogen Oxides (NO_x) and Particulate Matter having a diameter of less than 2.5 micrometers ($PM_{2.5}$). This performance measure applies to projects that receive or are programmed for CMAQ funding. Data was collected from the CMAQ Public Access System, as specified in the federal rulemaking.

The measures and targets are shown in Table 5.3-12 below:

Table 5.3-12 | Total CMAQ Emission Reduction Targets

ON-ROAD MOBILE SOURCE EMISSIONS (kg/day)			
	NOx	VOC	$PM_{2.5}$
2014-2017 AMATS Baseline	18.850	125.061	5.903
2020 ODOT (Statewide) 2-Year Target	537	69	36
2022 ODOT (Statewide) 4-Year Target	537	69	36

The targets reflect ODOT's estimate of the emission reductions anticipated from future CMAQ projects in the 21 affected Ohio counties. The targets are based on review of the 2013 – 2016 project emissions data recorded in the Federal Highway Administration's CMAQ Public Access Database and were averaged to form a trend analysis. AMATS has approved support for ODOT's statewide targets.

Table 5.3-13 aggregates the emission reduction benefits for the CMAQ funded projects for the AMATS area for the period 2015-2019. These figures were provided by ODOT Central Office, and were derived from the FHWA CMAQ Public Access System. The AMATS area CMAQ projects make a significant contribution towards the state's air quality targets.

Table 5.3-13 | AMATS Area - CMAQ Funded Projects

EMISSIONS REDUCTION BENEFIT 2015-2019									
	Total VOC Emissions Reduction			Total NOx Emissions Reduction			Total $PM_{2.5}$ Emissions Reduction		
Year	Total Reduction (kg/day)	5-Year Avg.	Ohio 2 & 4-Yr Targets	Total Reduction (kg/day)	5-Year Avg.	Ohio 2 & 4-Yr Targets	Total Reduction (kg/day)	5-Year Avg.	Ohio 2 & 4-Yr Targets
2015	5.417	8.332	69.000	19.512	31.869	537.000	1.170	1.359	36.000
2016	2.187	8.332	69.000	1.485	31.869	537.000	0.038	1.359	36.000
2017	7.265	8.332	69.000	85.655	31.869	537.000	3.745	1.359	36.000
2018	15.740	8.332	69.000	26.300	31.869	537.000	0.739	1.359	36.000
2019	11.053	8.332	69.000	26.395	31.869	537.000	1.101	1.359	36.000

AMATS as part of the Statewide CMAQ Subcommittee continues to program CMAQ projects with an emphasis on reducing emissions. The Statewide CMAQ Subcommittee Funding Policy places a high level of importance on emission reductions per project.

In *Transportation Outlook 2045*, AMATS has proposed 4 projects totaling $9.9 million that will contribute to emissions reductions in the region.

Table 5.3-14 | Transportation Outlook Projects with CMAQ Funding

NUMBER OF PROJECTS	CMAQ $
4	$9,894,099

5.3.5 | Public Transit

In terms of public transportation, US DOT is developing both performance measures and a formal definition for "state of good repair," (asset measures). Within three months of the US DOT's rulemaking, transit agencies are required to develop performance targets for state of good repair. Transit agencies are also required to develop transit asset management (TAM) plans, which in turn must include capital asset inventories, condition assessments, decision support tools, and investment prioritization. Transit agencies must also report annually on the progress made toward performance targets, as well as define new performance targets for the coming fiscal year. Ultimately, funding will be linked to meeting these goals.

Performance and asset measures are widely used in the transit industry today, with most transit agencies reporting basic information about their service to the National Transit Database (NTD); reporting data to the NTD is required for most transit agencies to receive federal transit funding.

ODOT is considering the following performance measures to be used for transit development:

- Service effectiveness – passengers per hour
- Cost efficiency – cost per hour
- Cost effectiveness – cost per passenger
- Customer satisfaction – portion of riders with high levels of satisfaction
- Transit asset management – fleet and infrastructure capital maintenance

Transit Asset Management Planning – METRO RTA and PARTA

Transit Asset Management (TAM) is the strategic and systematic practice of procuring, operating, inspecting, maintaining, rehabilitating, and replacing transit capital assets to manage their performance, risks, and costs over their life cycles to provide safe, cost-effective, and reliable public transportation. TAM uses transit asset condition to guide how to manage capital assets and prioritize funding to improve or maintain a state of good repair.

Federal legislation requires the Federal Transit Administration (FTA) to develop rules establishing a strategic and systematic process of operating, maintaining and improving public transportation capital assets effectively through their entire life cycle. FTA's national Transit Asset Management system rule defines the term, "state of good repair," requires grantees to develop a TAM plan, establishes performance measures, establishes annual reporting requirements, and requires FTA to provide technical assistance.

Effective January 1, 2017, direct recipients of FTA Section 5307 and 5310 funding (METRO RTA and PARTA) were required to establish their initial Transportation Performance Management (TPM) rolling stock and infrastructure useful life targets. Metropolitan Planning Organizations (MPOs) such as AMATS were required to set public transit rolling stock and infrastructure useful life targets 180 days following the transit operators' action.

A state of good repair (SGR) is a threshold that identifies the desired performance condition of a capital asset, such as a bus, transfer facility, or office building. An asset is in a state of good repair when it is able to operate at a full level of performance. This means:

- The asset is able to perform its designed function;
- Does not pose a known or unacceptable safety risk (condition); and
- Its life cycle investments have been met or recovered (useful life benchmark-ULB)

SGR performance targets are based on realistic expectations derived from the most recent available data (condition and ULB), FTA performance measure criteria, and

the financial resources from all sources that the area reasonably expects to be available during the TAM plan horizon period for capital planning purposes.

To that end, METRO RTA and PARTA have certified that they have developed and adopted the required performance targets for all rolling stock, equipment, facilities, and infrastructure, as required by federal guidance. The area RTAs have also shared their agency's performance targets for all rolling stock, equipment, facilities, and infrastructure with AMATS.

METRO and PARTA have certified that their agencies have implemented and will maintain a Transit Asset Management Plan in accordance with 49 CFR part 625 (the current federal guidance, designated as "The TAM Rule"). METRO and PARTA capital assets are reported as presently meeting their targets for state of good repair.

Table 5.3-15 | PARTA TAM Plan Targets

Asset Category - Performance Measure	Asset Class	2019 Target	2020 Target	2020 Report
Age - % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)	*AB - Articulated Bus*			
	AO - Automobile			
	BR - Over-the-road Bus			
	BU - Bus (12 Year Useful Life)	0%	0%	0%
	CU - Cutaway Bus (5 Year Useful Life)	25%	0%	0%
	DB - Double Decked Bus			
	FB - Ferryboat			
	MB - Mini-bus			
	MV - Mini-van			
	RT - Rubber-tire Vintage Trolley			
	SB - School Bus			
	SV - Sport Utility Vehicle (SUV)			
	TB - Trolleybus			
	VN - Van (4 Year Useful Life)	0%	0%	0%
Age - % of vehicles that have met or exceeded their Useful Life Benchmark (ULB)	*Non Revenue / Service Automobile*	50%	50%	50%
	Steel Wheel Vehicles			
	Trucks and other Rubber Tire	50%	50%	50%
Condition - % of facilities with a condition rating below the Transit Economic Requirements Model (TERM) Scale	*Administration*	0%	0%	0%
	Maintenance	0%	0%	0%
	Parking Structures	0%	0%	0%
	Passenger Facilities	0%	0%	0%

**These targets depend largely on available funding from the Federal Transit Administration*

Table 5.3-16 | METRO RTA TAM Plan Targets

Asset Category - Performance Measure	Asset Class	2019 Target	2020 Target	2020 Report
Age - % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)	*AB - Articulated Bus*			
	AO - Automobile			
	BR - Over-the-road Bus			
	BU - Bus (12 Year Useful Life)	0%	0%	0%
	CU - Cutaway Bus (5 Year Useful Life)	25%	0%	0%
	DB - Double Decked Bus			
	FB - Ferryboat			
	MB - Mini-bus			
	MV - Mini-van	25%	0%	0%
	RT - Rubber-tire Vintage Trolley			
	SB - School Bus			
	SV - Sport Utility Vehicle (SUV)			
	TB - Trolleybus			
	VN - Van (4 Year Useful Life)	0%	0%	0%
Age - % of vehicles that have met or exceeded their Useful Life Benchmark (ULB)	*Non Revenue / Service Automobile*	50%	50%	50%
	Steel Wheel Vehicles			
	Trucks and other Rubber Tire	50%	50%	50%
Condition - % of facilities with a condition rating below the Transit Economic Requirements Model (TERM) Scale	*Administration*	0%	0%	0%
	Maintenance	0%	0%	0%
	Parking Structures	0%	0%	0%
	Passenger Facilities	0%	0%	0%

**These targets depend largely on available funding from the Federal Transit Administration*

Investment prioritization assists AMATS area stakeholders in making more informed investment decisions to improve the SGR of capital assets, and defines when assets need overhaul or replacement. The investment prioritization list, is a list containing the work plans and schedules of proposed METRO RTA and PARTA projects and programs, how METRO and PARTA estimates achieving their SGR goals, and ranks projects and programs based on implementation priority over the TAM Plan horizon period of four years. METRO is designated as a Tier I TAM agency. PARTA is designated Tier II. Each agency is tracking their own capital assets and setting targets in coordination with AMATS. *Transportation Outlook 2045* prioritizes transit funding for preventive maintenance, bus replacements, elderly and disabled transportation, and passenger amenities.

Approximately $11.0 million in federal funds for elderly and disabled transportation is expected to be made available from the FTA Section 5310 program over the life of *Transportation Outlook 2045*. Projects intended to assist in the transportation of the

elderly and disabled are derived from the AMATS Coordinated Public Transit Human Services Transportation Plan (approved May 2018). The goal of the plan is to better coordinate services among regional agencies in order to reduce costs, eliminate the duplication of services and provide assistance to those who are underserved. AMATS has recently awarded nearly $1 million in federal funds to area social service agencies through METRO RTA and PARTA.

The RTAs, in coordination with AMATS, rank selected projects and programs to improve or manage the SGR of capital assets for which the RTAs have a direct capital responsibility. The ranking criteria of projects and programs will be consistent throughout the TAM Plan. Priority consideration will be given to local projects and programs that both improve SGR and correct an identified unacceptable safety risk; and also take into consideration Americans with Disabilities Act (ADA) requirements (49 CFR Part 37) concerning maintenance of accessible features and the alteration of transit facilities. Furthermore, when developing an investment prioritization list, the region takes into consideration its estimation of funding levels from all sources that it reasonably expects to be available in each fiscal year during the TAM Plan horizon period.

5.3.6 | Freight Movement and Economic Vitality

Ultimately, the assessment of freight performance will be measured in terms of mobility and efficiency (travel time, delay and safety) and accessibility and connectivity. Bottlenecks and roadways (or corridors) with particularly high levels of freight movement may be singled out for more detailed analysis once performance measures and goals are adopted. The end result is to use performance measures to reach goals that are part of the Regional Transportation Plan. Projects that are essential to the movement of goods would then be programmed into the TIP as a part of an integral process. A full discussion of freight in the AMATS area can be found in the Freight Plan (approved in September 2020).

Environmental Sustainability
AMATS is committed to enhancing the performance of the transportation system while protecting and enhancing the natural environment. Both the AMATS Transportation Improvement Program (TIP) and Regional Transportation Plan meet US DOT requirements for air quality conformity. In the future, AMATS will further the goal of improved air quality by developing a transportation system that meets the intent of federal requirements.

Reduced Project Delivery Delays
It is a priority of AMATS to ensure that projects are completed on schedule. AMATS continues to dedicate efforts to reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

The project scoring and evaluation criteria in the AMATS Funding Policy Guidelines are intended to effectively allocate the region's resources. In addition, AMATS coordinates its efforts with other MPOs, along with ODOT, to ensure that projects are fully funded and completed on time.

6 | Public Participation and Initiatives

As part of its pursuit of an active and innovative plan development process, AMATS continued many of its proven public participation strategies while launching new initiatives over the last three years. These strategies and initiatives are used by the agency to encourage members of the public to become active players in the regional transportation planning process within the Greater Akron area.

Through the years 2018 through 2020, AMATS vigorously identified and pursued new opportunities to engage the public throughout the planning process. Among the most significant of the agency's pursuits was the development of a new *Public Participation Plan* or *"3P,"* in which AMATS recognized the many changing demographics transpiring within the region and embraced the Internet and social media as resources to empower the public.

Also during this period, the agency utilized a variety of "active" public meetings in its planning approach such as Better Block, Bike-N-Brainstorm and Jane's Walk events. These events offer the public the opportunity to participate in the planning process by sharing their insights with local and regional planners.

Even more recently, AMATS has embraced a mix of unique cycling and pedestrian initiatives to foster new perspectives regarding the planning process, not only among the public, but agency personnel and local and regional stakeholders. These initiatives have the added benefit of promoting active transportation concepts such as biking and walking among those who are largely responsible for their development and implementation. Examples of these initiatives include walking tours, community bike rides, and Safe Routes to School events.

The Connecting Communities Planning Grant Program continues to promote smart growth and "livability" concepts among local and regional planners as viable multimodal alternatives to the automobile. The program provides grants to project sponsors for planning studies that promote connectivity and livability within given areas and locales through sound land use policies and innovative combinations of pedestrian, cycling and public transportation.

The following chapter highlights the agency's public participation strategies and initiatives and describes how they have helped support a broad range of livability-related projects in the AMATS area. The ultimate goal of these agency endeavors is to develop active transportation alternatives with public insight while supporting sound land use patterns through targeted investments.

6.1 | Public Participation Plan - 3P

In December 2018, AMATS completed a significant update of its *Public Participation Plan* also commonly referred to as its *"3P."* The *3P* identifies the strategies that the agency uses to engage and empower the public throughout the regional transportation planning process. A notable aspect of the latest *3P* is that it recognizes the changing demographic composition of the Greater Akron area and defines how the agency will establish dialogues with these populations.

The new *3P* is the result of an extensive update process that the agency began in July 2018. The item was available for review and comment by the public during a 45-day period that concluded in November 2018. The Draft *3P* was also presented to the AMATS Citizens Involvement Committee as a discussion item during the committee's December 2018 meeting.

The *3P* includes a *Language Assistance Plan for Limited English Proficient Populations (LEP)*. While AMATS freely offers language and translator assistance for those populations that do not utilize English as their primary language and for those with special needs, the new *3P* is the first such public participation plan by the agency to include a detailed policy recognizing the need for such assistance in the region.

The formal inclusion of an LEP is an acknowledgement by the agency that the Greater Akron area's Asian, Hispanic and various immigrant populations are growing. AMATS also recognizes that language can be a barrier to some when they attempt to access services and exercise their rights. The LEP brings the agency more fully into alignment with federal laws that seek to eliminate such barriers.

6.2 | Better Block

Better Block is a demonstration tool that rebuilds an area using grassroots efforts to show the potential to create a bikeable and vibrant neighborhood center. Better Block projects are collaborative sessions in which groups develop solutions to design problems. These events allow communities to engage in the "complete streets" buildout process and provide feedback to community stakeholders in real time. Better Block projects show how communities can come together to transform blighted blocks into vibrant neighborhood destinations.

During Better Block projects, event organizers use available community resources to convert downtrodden locales into pedestrian-friendly and bike-friendly destinations for people of all ages. These projects typically involve establishing temporary facilities

such as makeshift bike lanes, cafe seating, trees, plants, lighting, and pop-up businesses to show the potential for revitalized economic activity in an area.

In May 2019, AMATS participated in a two-day Better Block event in the city of Akron's Copley Road area. Akron's Copley Road, between Hawkins and Nome avenues, was reimagined as a neighborhood destination during the event.

City of Akron officials, The Knight Foundation, Summit County Think Tank Coalition, and the Progressive Alliance CDC partnered with The Better Block Foundation for the event. The Better Block Foundation is a non-profit organization that educates, equips, and empowers communities and their leaders to reshape and reactivate built environments to promote the growth of healthy and vibrant neighborhoods. AMATS participated in the event with personnel hosting a table to distribute information including the agency's new *Bike Map*.

The site chosen for this Better Block event was a strip of buildings in the Maple Valley district of West Akron along Copley Road. The district is home to long-standing local businesses that are integral to the vitality and livability of the surrounding neighborhood.

Community meetings and surveys found that residents harbor safety concerns and that the area's design is not conducive to people spending time on Copley Road, but rather brief transitory visits by people travelling in motor vehicles, i.e., "drive-in, drive-out" stops by would-be patrons and visitors. During the event, parking in front of buildings was removed to create a public space. In the newly reclaimed space, three parklets provided seating for attendees and performance areas for local artists and bands. There was even café seating for people to relax and other temporary aesthetic changes such as string lights and plants.

For more information, visit the Better Block web site at **betterblock.org** or contact the group via email at **info@teambetterblock.com**.

6.3 | Bicycle and Pedestrian Count Program

Bicycle and pedestrian counting is an important aspect of bicycle planning. It helps target the location for future bicycle facilities in areas where land use and development promote frequent use. The data also helps determine trends in bicycling and walking by measuring the benefits of these investments.

In 2018, AMATS completed bicycle and pedestrian counts in 12 locations. Eleven of the locations were in the Akron area and one was located in Barberton near the Magic Mile trail section (a leg of the Towpath Trail near Robinson Avenue). The locations were prioritized based on demographics and land use in urban settings, proximity to retail, business and university areas. Locations were also chosen where bike lanes already exist in order to develop exposure rates.

The highest volumes of bicycle and pedestrian activity in 2018 were at the Firestone Park location at Aster Avenue and Reed Street where the agency recorded 20 bicycle counts and 910 pedestrian counts during the year. The Kenmore location had the highest bicycle counts while the Firestone Park location had the highest pedestrian counts. The next highest volume bicycle counts were at the Ellet location with 38 bicyclists counted.

Pedestrian counts at Exchange and Main Street were the second highest of AMATS count locations with 614 pedestrian counts recorded. Totals for bicycle and pedestrian counts at Exchange and Main streets in downtown Akron were down about 12 percent from 2014 for the same location and times. Totals at Market Street and Portage Path were down 50 percent for bicyclists from 2014 and totals for pedestrians were the same compared to 2014.

In 2019, the agency conducted 364 counts at various area roadway segments. In June 2019, AMATS completed bike and pedestrian counts over a two-day period in the Merriman Road-Liberty Commons Crossing area of Akron. The agency counted 167 cyclists and 128 pedestrians traveling in the area during the period.

In 2020, despite the challenges posed by the COVID-19 Pandemic and the commensurate statewide lockdown that began in March, the agency conducted 20 counts at various area roadway segments using radar counters. However, the agency was unable to conduct extensive counts throughout the region due to staff unavailability and traffic pattern changes resulting from the lockdown.

6.4 | Bike-N-Brainstorms

AMATS developed the Bike-N-Brainstorm concept in 2012 to serve as a tool for public outreach by engaging cyclists in a chosen bike route for the purpose of improving biking conditions in a local community. In a Bike-N-Brainstorm, participants meet for a ride along a designated route in a community. At the end of the ride, cyclists share their thoughts on how to make a community more bike and pedestrian friendly.

More than 75 cyclists have participated in eight Bike-N-Brainstorm events from 2018-2020. AMATS continues to partner with other communities in encouraging the development of bicycle infrastructure to make cycling a viable and safe active transportation option. Below is a summary of Bike-N-Brainstorm events that have taken place in the AMATS area since 2018.

Table 6.4-1 | Bike-N-Brainstorm Participation

DATE	LOCATION / EVENT	# OF CYCLISTS
June 2018	Akron	8
July 2018	Ravenna	13
August 2018	Green	18
September 2018	Tallmadge	20
June 2019	Hudson	5
June 2019	Akron	6
September 2019	Akron	6
September 2020	Munroe Falls	10

6.5 | Connecting Communities Planning Grants

AMATS developed *Connecting Communities - A Guide to Integrating Land Use and Transportation* as a way to better understand the relationship between land use and transportation. The program encourages the pursuit of transportation projects which support vibrant, healthy and inclusive places by communities and project sponsors. The purpose of the Connecting Communities Planning Grant Program is to include connectivity principles during the development of transportation plans that will lead to projects eligible for AMATS funds. The program focuses on integrating the following Connecting Communities principles:

- Increase alternative transportation options to connect people and places.
- Promote Complete Street principles to create vibrant and safe places for all users.
- Leverage transportation projects to develop places which support alternative transportation and complete streets through land use and design.

Since its launch in 2010, the Connecting Communities Planning Grant Program initiative has funded connectivity studies throughout the Greater Akron area. The years 2018-2020 were a period of significant achievements by the program despite unexpected challenges.

In 2018 and 2019, three past grant recipients - the cities of Green, Twinsburg and Kent - crafted their respective studies in consultation and cooperative development with AMATS. In 2020, the program awarded two new grants to the Portage Area Regional Transportation Authority (PARTA) and the city of Stow.

In 2018, the agency, Green, and its study consultant, Environmental Design Group (EDG), developed the *Green Master Connectivity Plan*. The plan provides a framework for Green in identifying and prioritizing where and how bicycle and pedestrian connections should be pursued as development and transportation projects occur in the southern Summit County community.

Recognizing that active public participation fosters quality planning, Green frequently published updates on its website - cityofgreen.org - and various social media regarding the plan's progress. Green also hosted three unique public engagement events as part of its efforts to receive community feedback. These events encouraged public dialogue regarding potential bicycle and pedestrian facilities, locations and routes throughout the community.

These public exchanges of information aided stakeholders in identifying the top five destinations for potential bicycle and pedestrian networks. Boettler Park, the Green Schools Campus, Central Park, Nimisila Reservoir, and the Massillon Road Corridor were selected as the city's top five destinations.

The Green study project team, which included representatives from AMATS, met six times to provide crucial technical advice during the development of the plan. The *Green Master Connectivity Plan* was completed and adopted by Green in January 2019.

Twinsburg developed its *First Mile/Last Mile Community Connections Plan* throughout 2018. Prepared by City Architecture, the plan identifies alternatives for critical connections between existing trails and how to link these connections with important destinations within the northern Summit County community and its central area.

AMATS was actively involved in the plan's development during the course of the year. Agency officials - together with city and consultant representatives - met with the Twinsburg Planning Commission in February and the Twinsburg Board of Education in June 2018 to address concerns regarding the plan's preparation, scope and related issues.

The agency was also a key player in a month-long, communitywide survey regarding the plan's proposed bicycle and pedestrian trail networks. Survey participants were asked to weigh in on key points such as where better connections are needed, the types of amenities that would make new and existing paths more usable, and a potential name with which to market the system.

The top five destinations identified by survey respondents as potential network connections were Liberty Park, the Twinsburg Town Square, the Twinsburg Fitness Center, the Twinsburg Public Library, and Glen Chamberlin Park. Survey information provided by residents will help guide future community infrastructure investment decisions.

Twinsburg approved the final *First Mile/Last Mile Community Connections Plan* in August 2018.

In September 2019, another grant recipient, the city of Kent, completed the *SR 261 Corridor Planning Study*. Working with the consulting firms, GPD Group and NBBJ, Kent used the study to identify several transportation issues within the state Route 261 corridor in Portage County. These issues included problems caused by underdeveloped high-volume, high-speed facilities, disconnected bike facilities, and poor pedestrian facilities. The study identifies strategies to increase connectivity and improve livability within the corridor.

In December 2020, the program approved two separate $40,000 grants to PARTA and the city of Stow to study livability issues in Franklin Township and in the east-central Summit County community.

PARTA will use its grant to identify transit, pedestrian and bicycle improvements along state Route 59, between Horning Road and state Route 261, in Portage County's Franklin Township. Due to the lack of sidewalks, crosswalks and signage, it is difficult for pedestrians who live, work, and travel this area to navigate it amongst the higher speed single-occupancy automobiles.

The PARTA study will identify areas where sidewalks could be extended, crosswalks installed, crossing signals implemented, mid-block crossing areas highlighted, and better transit passenger amenities added. This study will determine what strategies and improvements are feasible to make the roadway safer and more navigable for alternative modes of transportation such as walking and cycling.

Stow will use its grant to establish a framework for a city-wide, multi-modal trail network to accommodate all users. This network will not only serve Stow's various populations, businesses and visitors, but will connect the city to adjacent and regional destinations and multi-modal networks.

The Stow study will explore the potential of shared-use paths and sidepaths as the primary facilities for the city's trail network. The study will also determine the viability of placing trails within one-quarter mile of every resident and business. Among Stow's goals is to construct its trail network over the next 20 years.

6.6 | Initiatives

6.6.1 | Cycling Initiatives

During the period of 2018-2020, AMATS – through its *Switching-Gears* Program – hosted or was a key participant in several unique cycling initiatives beyond its own Bike-and-Brainstorm events.

Summit Bike Share 2019
In May 2019, AMATS joined Akron-Summit County Public Library, the Ohio & Erie Canalway Coalition, and Summit County Public Health officials to launch Summit Bike Share 2019, a free bicycle share system offered by the coalition. Under the system, bikes are available for free use at nine stations across Summit County, including downtown Akron and Barberton. AMATS promoted the program on its *Switching-Gears* web site and participated in a ribbon-cutting ceremony for a bike share station at the Akron-Summit County Maple Valley Branch Library in Akron.

Move With The Mayor
In July 2020, AMATS joined three Greater Akron area mayors in the *Move With The Mayor* initiative. The initiative is part of a nationwide effort to promote heart health by encouraging people to stay active, especially during the COVID-19 outbreak. Akron Mayor Dan Horrigan, Cuyahoga Falls Mayor Don Walters, and Tallmadge Mayor David Kline used GoPro cameras to record their individual rides on the Greater Akron area's Towpath and Freedom bike and hike trails. The mayors narrated their journeys, which were later posted online as virtual rides. Agency personnel organized the rides on behalf of the mayors.

Experience the New Main Street in DT Akron
In October 2020, AMATS and city of Akron personnel were on the move with the Downtown Akron Partnership (DAP). DAP is a non-profit organization whose mission is to enhance Akron's downtown through innovative programs to promote the area as a vibrant destination.

Beginning in early October, agency staff participated in the DAP-hosted *Experience the New Main Street in DT Akron* bike rides, a series of three weekly rides through downtown. The rides showcased the many bike and pedestrian improvements underway in Akron as part of the city's ongoing Main Street Corridor Project. The staff experienced Akron's new dedicated bike lanes, Mill Street Roundabout, and Lock 4 bike ramps as cyclists, not just planners.

6.6.2 | Pedestrian Initiatives

Between 2018-2020, AMATS utilized several pedestrian-oriented events for the benefit of agency personnel and other key participants in the regional transportation planning process.

Howe Avenue Walking Tour
In June 2019, Cuyahoga Falls Engineer Tony Demasi and Planning Director Fred Guerra led the AMATS staff on an extensive tour of the Howe Avenue Improvement Project area. Phases 2 and 3 of the project were completed in October 2019. AMATS programmed more than $5.5 million in Surface Transportation Block Grant funds for the more than $7 million project.

Jane's Walk
Jane's Walk is a global walking initiative held annually on the first weekend in May. The initiative began in Toronto in 2007 to honor the legacy and ideas of urban planner

and writer, Jane Jacobs. Every year, cities around the world participate in the Jane's Walk festival of free walking tours that get people to explore their cities, tell stories about their neighborhood and connect with neighbors. Because AMATS promotes connectivity principles in transportation planning, the agency relies on these events as a planning resource.

In May 2018, AMATS brought Jane's Walk back to the Greater Akron area for a fifth successful year by hosting 17 walking tours. Downtown Akron, Kenmore Boulevard and Summit Lake Park were among the walking route locales. Tours highlighted unique artistic, engineering and historical aspects along routes. Feedback from 2018's events was used to prepare the region's *2019 Active Transportation Plan*.

In May 2019, author Jason Prufer led 30 participants on a Jane's Walk tour through Kent. Prufer's book, *Small Town, Big Music: The Outsized Influence of Kent, Ohio, on the History of Rock and Roll*, explores Kent's rock music heritage and spotlights such acts as DEVO, Joe Walsh, Patrick Carney, and Chrissie Hynde. Prufer led his Jane's Walk group to significant locations in Kent's musical legacy. AMATS was one of the coordinators of the Kent tour as part of its efforts to promote connectivity principles in transportation planning throughout the Greater Akron area.

TIGER Walk

In April 2019, The Downtown Akron Partnership (DAP) hosted a walking tour for the AMATS staff. DAP is a non-profit organization whose mission is to enhance Akron's downtown through innovative programs to promote the area as a vibrant destination.

Led by DAP Director of Business Relations Kimberly Beckett, the walk gave the staff a firsthand view of how the city of Akron is using its $8 million Transportation Investment Generating Economic Recovery (TIGER) grant to transform its downtown. The tour showed how Akron is incorporating connectivity principles, such as bicycle and pedestrian-friendly facilities, into its Main Street Corridor Project.

6.6.3 | DriveOhio Workshop

In October 2018, AMATS, together with its sister agency, the Stark County Area Transportation Study (SCATS), co-hosted a DriveOhio Workshop in October at the Central Park Community Hall in Green. DriveOhio is an initiative of the Ohio Department of Transportation (ODOT) to bring together government, industry and research partners to enhance the state's infrastructure for autonomous and connected vehicles (AV/CVs) and the development of smart mobility technologies. Workshop attendees were a mix of Greater Akron area leaders, planners, engineers, emergency service providers and transit operators.

The workshop was the sixth in a series across the state organized by DriveOhio consultant, AECOM. ODOT and DriveOhio relied on the workshops to gather insights as to what AV/CV projects are being considered across regions and what safety, traffic or quality of life issues could AV/CV technology help address in communities. AMATS prepared a video feature, *An 'Auto' Auto Workshop*, regarding this event for posting on the agency's YouTube channel.

6.6.4 | Internet and Social Media

The Internet and social media have fast become some of AMATS' most utilized tools for public outreach. Both allow agency personnel to interact with the public regarding transportation-related topics on a sustained basis and in a timely manner.

Along with its two web sites - **amatsplanning.org** and **Switching-Gears.org** - AMATS uses web posting and social media sites such as Twitter, Facebook, YouTube and – more recently – Instagram, to provide citizens with up-to-the-minute information. Below are some of the ways that AMATS harnesses the power of these still-developing technologies.

AMATSPLANNING.ORG

AMATS routinely updates its website to make the site even more user-friendly. The agency web site includes an easy-to-use interactive *Transportation Improvement Program (TIP)*, which provides details about AMATS-funded projects and includes map images of TIP project locations.

Among the agency's goals for its site have been to make it easier to inform the public about events while providing opportunities for them to become more engaged and involved in the planning process. Visitors to the AMATS web site can find timely features under *What's New*, access the agency's social media, or search the entire site for a specific topic.

From the site's *Home* and *Meetings* pages, visitors can determine dates and times for upcoming Policy Committee, Technical Advisory Committee (TAC), and Citizens Involvement Committee (CIC) meetings. Visitors can also view the most recent committee meeting packet, listen to an MP3 meeting podcast, or complete an *Audience Participation Form* to address the Policy Committee.

In 2018, the web site *Meetings* page was updated to include a *Survey* link dedicated to collecting demographic and community-specific information. Visitors may complete an online survey form and answer questions regarding their preferred mode of transportation, household data and planning issues of concern to them, their neighborhoods and their communities.

The *Meetings* page includes a section devoted to the *AMATS Nondiscrimination Policy Statement*, which addresses how the agency will incorporate the best practices identified in Title VI of the federal Civil Rights Act of 1964.

Agencies such as AMATS, serving a population of 100,000 or more, are required to have a Title VI Plan. Title VI requires that AMATS shall not, on the basis of race, color, religion, national origin or sex, exclude anyone from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. The *AMATS Nondiscrimination Policy Statement* section includes a link to the *AMATS Title VI Plan – June 2019*, which details how the agency complies with Title VI and U.S. Department of Transportation (USDOT) implementing regulations contained in 49 CFR Part 21 and 23 CFR 200. These USDOT regulations require affirmative action considerations on the part of local agencies seeking federal aid for programs and activities. The regulations also require that aid recipients execute Title VI assurances as a condition of such aid from agencies such as AMATS.

Additionally, in the event that a member of the public believes that they are the victim of an alleged discriminatory practice by AMATS during the planning process, the *AMATS Nondiscrimination Policy Statement* section presents *Civil Rights Complaint Forms* in both English and Spanish. Using these forms, citizens may describe in detail why they believe that their concerns or needs are not being addressed by the agency.

The website also includes a link to language interpretation software to assist those for whom English is not their first language. Using this link, website visitors may translate pages into other languages including Chinese, French and Spanish. The *AMATS Title VI Plan – June 2019* outlines other steps to include limited-English proficient persons in the planning process.

SWITCHING-GEARS.ORG
This agency-sponsored website provides information to people on ways to enjoy the Greater Akron area's growing network of bicycle and hiking trails. This site also informs on how to utilize cycling as a means of transportation. Switching-Gears.org also has a calendar announcing organized bike rides and events in the region and provides an easy-to-use *Bike Map*.

Twitter
Twitter is an online tool that allows AMATS to send concise messages to its followers in 280 characters or less. With this social media platform, followers of the agency may stay up to date with the most relevant news in transportation and land use planning. Members of the public may follow **@amatsplanning** on Twitter to receive tweets about developments in transportation news.

Facebook
Facebook is a popular social media tool that is increasingly being used by agencies to reach new and growing audiences and AMATS is no exception. The agency's page - **facebook.com/AMATSPlanning** - is updated frequently with the agency's latest tweets, news features and pictures of the region. It is also linked to the AMATS website where the public can get more information.

YouTube
YouTube is a social media site that allows users to post videos and share them with subscribers and the public. Through its channel - **AMATSPlanning** - the agency presents many special video features highlighting transportation topics. Topics include announcements, meeting recaps, speaker presentations, and informative features.

Instagram
Instagram is a photo and video sharing social networking service owned by Facebook. AMATS' new Instagram account for Switching-Gears allows users to view images of active transportation projects and helps promote cycling as an alternative mode of transportation.

Podcasts
In 2019, AMATS began making use of agency-produced podcast programs with the launch of *Fast Track* and *Transportation Talk*. Followers of AMATS now have two additional social media options to stay informed about transportation happenings in the Greater Akron area.

In March 2019, the agency began producing *Fast Track* podcast summaries of its various committee agendas. Hosted by AMATS Director Curtis Baker, *Fast Track* podcasts describe upcoming agenda items in three minutes or less. The public can now listen to agenda summaries in addition to downloading pdfs of meeting materials. *Fast Track* is part of the agency's push to promote public awareness while providing transparency regarding its activities.

In November 2019, *Transportation Talk* made its debut. Also hosted by Baker, *Transportation Talk* is a podcast series that presents interviews with important figures in local, regional and state transportation planning. The series also presents features on transportation-related issues impacting the Greater Akron area. Guests on the podcast series have included METRO Planning Director Valerie Shea and City Architecture Principal Alex Pesta.
Visitors to the agency's web site – **amatsplanning.org** – can listen to and download *Fast Track* and *Transportation Talk* podcasts. Agency podcasts are available on *Anchor*, *Apple Podcasts*, *Breaker*, *Google Podcasts*, *Overcast*, *Pocket Casts*, *RadioPublic*, and *Spotify*.

6.6.5 | Safe Routes To School

Since 2018, AMATS has been an active proponent of the many Safe Routes to School (SRTS) programs operating within the Greater Akron area. The agency is a member of the Akron-based SRTS Committee along with the Akron Public Schools, the city of Akron Engineering and Planning departments, and Akron Children's Hospital.

AMATS routinely assists would-be sponsors with their applications for infrastructure projects that are designed to provide and improve safe access for children and families

near area schools. Examples of such projects include bus stops, curb cuts, mid-block crossings, road diets, sidewalks, and dedicated bicycle lanes.

In 2018 and 2019, AMATS helped organize and participated in four SRTS events per school year. These events included:

- **Walk-N-Rolls** – In these events, students ae encouraged to walk or bike to school for a week to earn a prize.
- **The Walking School Bus** - In this event, children meet at a location and are led to and from their school by a volunteer adult leader.
- **Challenges/Games** – AMATS provides prize giveaways such as helmets, locks and stickers for events that encourage safe active transportation to school such as walking and biking.
- **Presentations** – AMATS personnel host presentations to educate students regarding the importance of being active by walking and riding to and from school.

AMATS' participation in SRTS events was halted in 2020 due to the COVID-19 Pandemic. The agency plans to resume its participation in such events when deemed appropriate by local, state and federal health and safety officials.

6.6.6 | Speed Tables Pilot Program

In August 2020, AMATS and the city of Akron installed speed tables on Akron's Edgewood Avenue and Schocalog Road. Speed tables are raised areas placed at mid-block points across roadways and are designed to limit the speed at which vehicles travel. Unlike speed bumps, tables have tapered ends and long flat tops to accommodate the entire wheelbase of most passenger cars. Akron's tables were interlocking pieces made from recycled rubberized material and are fastened into place on street surfaces.

The city and the agency launched the pilot program in response to residents in those areas who voiced concerns regarding vehicles speeding through their neighborhoods.

Akron installed one temporary table on Edgewood Avenue and two on Schocalog Road. The city and AMATS tested the effectiveness of the tables as a traffic calming measure from early September through early November. The agency also collected speed data on vehicles travelling over the tables using the agency's MioVision cameras and radar counters.

As part of this project, AMATS and Akron developed a comprehensive public outreach program that included reaching out to Akron City Council members, a web page detailing the program with a comment form, a survey for the general public, multiple neighborhood mailings, and engagement with the Akron Public Schools, Akron Police Department, the Akron Fire Department and METRO. AMATS also collected public feedback regarding the tables through its web site.

Public engagement efforts led to over 300 requests for future speed table locations and over 100 survey takers. Public response based on these surveys and feedback to the agency was favorable to the concept of and the installation of speed tables.

In December 2020, the agency released its *2020 Temporary Speed Table Pilot Program Evaluation Report*. In this report, the agency recommended that the Temporary Speed Table Pilot Program continue in 2021 at a new location.

6.7 | Crafting an 'Outlook' with Public Insight

AMATS outlined a public engagement process to update the Greater Akron area's Regional Transportation Plan (RTP), currently entitled *Transportation Outlook 2045*, in the agency's *3P – Public Participation Plan*. Unanimously adopted by the AMATS Policy Committee in December 2018, the *3P* was also the first such public participation plan put forth by AMATS to recognize the sweeping demographic and technological changes unfolding in the region and nation at large.

AMATS regards the *3P* as a type of "living" document that provides initial guidance to the agency with regards to public participation, but permits flexibility as to which approaches that the agency may opt to use for the purposes of public dialogue and engagement. This flexibility allows AMATS to pursue new initiatives and strategies in public engagement throughout the planning process.

The passages below detail AMATS' efforts to update *Transportation Outlook* to the year 2045 under the strategies contained in the agency's *3P*. The passages summarize: the agency's update process; recognition of demographic changes unfolding in the Greater Akron area; and use of technological resources during the update process. Additionally, *Appendix* ___ documents the process and resources that AMATS utilized during the compilation and preparation of *Transportation Outlook 2045*.

6.7.1 | Update Process

Public participation is an integral part of preparing and maintaining *Transportation Outlook 2045*. Comments that AMATS receives during the review of the draft version of its plan will be presented to the Policy Committee and other stakeholder planning agencies for consideration before final adoption of an RTP by the Policy Committee.

The *3P* stipulates that, once a Draft RTP is created, AMATS will:

- Make copies of the draft available to the public at:
  - AMATS website – **amatsplanning.org**
  - AMATS office
- Tweet on **@amatsplanning**
- Post on **facebook.com/amatsplanning**
- Schedule at least one public meeting for review and comment

- Place advertisements in newspapers including the *Akron Beacon Journal*, the *Record-Courier* and *The Reporter* and other publications deemed as appropriate by the AMATS staff.
- Send news releases
- Regularly maintain and update its lists of those interested parties and transportation stakeholders that receive information pertaining to the area's transportation planning process.

Please note that AMATS will not limit itself to the activities identified above to promote awareness of the Draft *Transportation Outlook 2045* and will actively pursue additional opportunities to do so.

6.7.2 | Demographic Changes

Through the *3P*, AMATS began the process to identify more fully those unique populations who heretofore may not have been fully engaged in the regional transportation planning process. Chief among the unique populations identified in the *3P* are the elderly, low-income, minority groups, and persons with disabilities. The *3P* also observes that the Greater Akron area's Asian and Hispanic populations are growing and that these populations harbor communities whose needs and values will impact the planning process.

AMATS recognizes this and strives to foster a dialogue with these and other diverse communities within the area. Recently, the agency has increased its outreach efforts to these populations by initiating a dialogue with various organizations including:

- the Akron Urban League
- Asian Services in Action, Inc.
- the International Institute of Akron
- the National Association for the Advancement of Colored People (NAACP) – Akron Chapter
- the Ohio Latino Affairs Commission
- Torchbearers
- United Disability Services
- and other community and neighborhood groups.

The *3P* states that AMATS adheres to and recognizes the necessity of key federal laws concerning these unique populations during the planning process. These laws include:

- Title VI of the Civil Rights Act of 1964
- Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- Executive Order 13166 - Improving Access to Services for Persons with Limited English Proficiency (LEP)
- Americans with Disabilities Act of 1990

The *3P* states that the agency recognizes where low-income and minority populations are located throughout the Greater Akron area based on 2010 U.S. Census Bureau data. In this plan, the agency states that it will seek the involvement of these populations throughout the planning process using a mix of outreach strategies involving advertisements, community groups, press releases, social media and other available means.

6.7.3 | Technological Resources

In the few years since AMATS adopted its *3P*, the agency and the public have benefitted from a wave of new technological resources. The agency has embraced the use of these new digital and social media resources to encourage public dialogue and participation throughout the planning process.

In 2019, the agency launched two new MP3 podcast programs, *Fast Track* and *Transportation Talk* (See page __). That same year, the agency began producing brief Adobe Spark videos for posting on its Facebook page, Twitter feed and YouTube channel and distribution through Outlook and Mailchimp email campaigns. These videos have largely been used to promote meetings of the AMATS Citizens Involvement Committee (CIC) and various agenda items, including elements of the Draft *Transportation Outlook 2045*. The agency posted a Spark video to promote the March 2021 CIC meeting during which the Draft *Transportation Outlook 2045* made its public debut.

Also in 2019, the agency began corresponding with *Socially Good TV* (SGTV), a YouTube channel devoted to coverage of social and community issues within the Greater Akron area. This correspondence now includes regular meeting mailings, newsletters, press releases and media inquiries. In September 2020, agency personnel were interviewed by SGTV regarding AMATS' participation in the Speed Tables Pilot Program in Akron.

The COVID-19 Pandemic spurred the most significant technological innovation utilized by the AMATS in recent years. With the onset of the statewide lockdown ordered by Ohio Gov. Mike DeWine in March 2020, the agency suddenly had to master the intricacies of virtual meetings in order to fulfill its mission as the metropolitan planning organization for the Greater Akron area. The agency began hosting virtual meetings of its Policy Committee, Technical Advisory Committee (TAC) and Citizens Involvement Committee (CIC) relying on a combination of the online videoconferencing and streaming services, Zoom and Facebook Live.

Since that time, the agency continues to host virtual meetings and distributes meeting invitations and materials via email and social media to its committee members and the public. In May 2020, AMATS created a page - **amatsplanning.org/cic-webinar/** - specifically for CIC meeting attendees to register their intent to attend and participate

in committee meetings during which regionally significant items will be presented, including the Draft *Transportation Outlook 2045*.

6.8 | Conclusion

Conclusion

The *Public and Participation and Initiatives* section of the AMATS *Transportation Outlook 2045* presents the various approaches and procedures that the agency utilizes to engage and empower the public within the Greater Akron area during the regional transportation planning process. The agency regards the approaches and procedures presented herein as initial steps in fostering public dialogue.

Since the adoption of its *3P – Public Participation Plan* in 2018, AMATS strives to be an innovator in public outreach strategies and is receptive to new approaches practiced by other councils of governments, metropolitan planning organizations and regional planning agencies. The agency is also receptive to comments and suggestions offered by citizens, committee members, and communities with regards to its public outreach efforts. Persons wishing to discuss the agency's public participation and related initiatives are advised to contact:

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Public Information Coordinator
Akron Metropolitan Area Transportation Study (AMATS)
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Akron, Ohio 44308

Phone – 330-375-2436
Fax – 330-375-2275
E-mail – kprater@akronohio.gov

7 | Recommendations

AMATS has completed a number of reports and studies analyzing greater Akron's transportation system. This analysis advanced recommendations to improve and strengthen the area's transportation network. Recommendations included in *Transportation Outlook 2045* include infrastructure improvements as well as policies intended to ensure our system remains a benefit to the region from now until 2045.

Transportation Outlook 2045 includes highway, transit, bicycle and pedestrian infrastructure and policy recommendations. The recommendations included in *Transportation Outlook 2045* are financially constrained and conform to federal air quality requirements.

7.1 | Highway Recommendations

Highways are the most critical element of the region's transportation system. The recommendations contained in *Transportation Outlook 2045* aim to preserve the existing system as well as improve the safety of the system. The following section contains policy and highway infrastructure recommendations to improve and maintain the region's highway network.

7.1.1 | Funding

AMATS receives federal transportation dollars to fund highway improvements. These funds can be used for many types of projects including: resurfacing, turn lanes and traffic signals, and major widening projects.

The agency's funding comes from two major sources, the Surface Transportation Block Grant (STBG) and the Congestion Mitigation/Air Quality Program (CMAQ). The STBG program is the most versatile type of funding and can be used on any type of project. CMAQ funding can only be used on projects which improve air quality and relieve congestion.

Federal funds may only be invested on roadways that are contained in the Federal Functional Classification of Highways (page 66). Local roadways (like streets in a residential subdivision) are not eligible for funding.

AMATS receives around $15 million annually for highway improvements. While this funding is a substantial source of revenue for highway projects, it is not the only funding available. ODOT receives funds from federal and state gasoline taxes. Counties and municipalities also receive federal and state funding. Discretionary funding, also known as earmarks, can be made available for highway projects when written into federal legislation.

Any highway project using federal funding must be consistent with *Transportation Outlook*, regardless of whether AMATS provided the funding. *Transportation Outlook* is important because it gives the authority to local officials to collectively determine how federal funds are spent.

7.1.2 | Recommendations

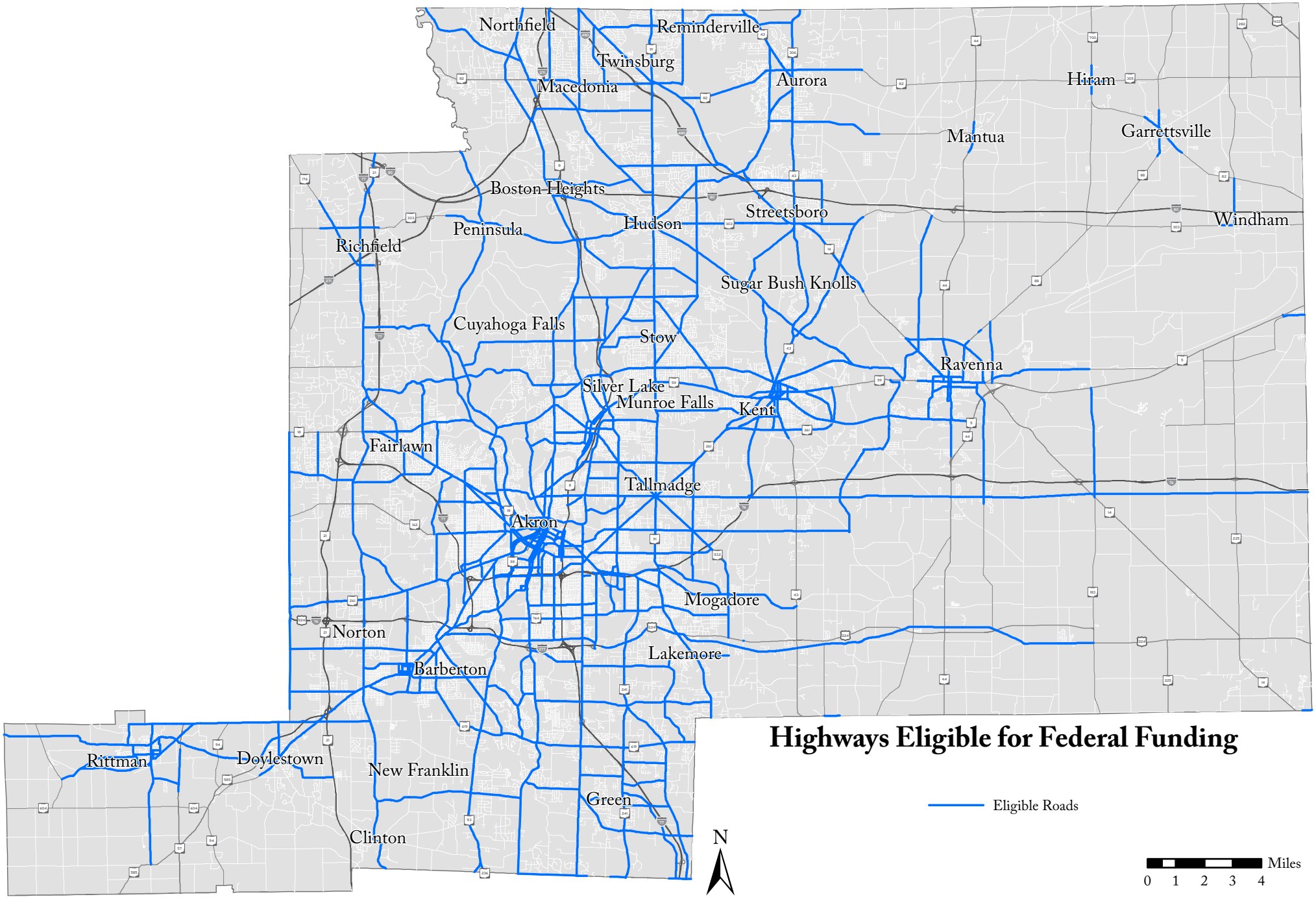
Preservation
In 2019, AMATS estimated that to maintain the existing system through 2045 would cost $3.78 billion dollars. The longer large preservation projects are put off, the more expensive they become.

Transportation Outlook 2045 recommends a regional preservation policy. Since 2008, AMATS has devoted a minimum of 20 percent of its funds for a local resurfacing program. This program has been incredibly successful and popular throughout the region. AMATS will continue this program and recommends providing additional AMATS Surface Transportation Funds for the program.

Operational and Safety Projects are consistent with Transportation Outlook 2045
While it is important to develop a plan for the next 20 plus years, it is also necessary to provide flexibility to the planning process to allow for unseen developments. To that end, AMATS maintains its policy that projects that improve safety conditions or contain operational improvements are consistent with *Transportation Outlook 2045*. This includes railroad grade separation projects. AMATS has set aside $40 million over the life of the plan for unspecified safety and operation improvements.

Reduce Congestion by Promoting Carpooling and other Alternative Modes of Transportation
While congestion is not the main focus of *Transportation Outlook 2045*, it is still an important issue that can negatively impact the transportation system. In order to help reduce congestion, AMATS will continue to promote Gohio Commute and Switching-Gears.org. Gohio Commute is a website that allows users to find carpool partners to share rides to and from work. Switching-Gears.org is a bicycle advocacy website that promotes bicycle commuting in the region.

Signal Timing Optimization Program
AMATS has invested heavily in coordinated signals throughout greater Akron over the past 15 years. As part of an ongoing effort to continue to ensure that traffic signals are appropriately timed, AMATS will consider developing a signal timing optimization program to provide grant funding for communities to invest in signal operation improvements.


Northfield
Reminderville
Twinsburg
Macedonia
Aurora
Hiram
Mantua
Garrettsville
Boston Heights
Streetsboro
Windham
Peninsula
Hudson
Richfield
Sugar Bush Knolls
Cuyahoga Falls
Stow
Ravenna
Silver Lake
Munroe Falls
Kent
Fairlawn
Tallmadge
Akron
Mogadore
Norton
Lakemore
Barberton
Rittman
Doylestown
New Franklin
Green
Clinton
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Highways Eligible for Federal Funding
Eligible Roads
Miles
0 1 2 3 4

Connecting Communities Program

For the last ten years AMATS has maintained its Connecting Communities Planning Grant Program. This program is focused on providing funds for studies that emphasize land use and transportation planning integration. The program has led to multiple infrastructure investments in the greater Akron area. AMATS will continue administering the Connecting Communities Planning Grant Program and continue emphasizing the integration of land use and transportation planning.

$5 Billion of Highway Transportation Infrastructure Investments

Transportation Outlook 2045 recommends over $5 billion dollars of highway infrastructure investments through 2045 in year of expenditure dollars. This funding includes over $4.7 billion for preservation of the existing system, $419 million specifically for freeway recommendations, $350 million for specific roadway projects, and approximately $100 million in bike/pedestrian, transit, safety and other operational improvements in the AMATS area.

The following table shows projects recommended in *Transportation Outlook 2045*. All projects are financially constrained and conform to air quality requirements.

Table 7.1-1 | Long Term Highway Recommendations

FREEWAY RECOMMENDATIONS

ID	*Freeway*	*Location*	*Recommendation*	*Current Cost*	*Performance Measure*
1	I-76	"Braid" (Central Interchange)		$ 55,000,000	PM1, PM2
2	I-76	Kenmore Leg	Upgrade	$ 85,000,000	PM1, PM2
3	I-77	between Ghent Rd and I-80 (Ohio Turnpike)	Add Additional Travel Lane	$ 133,500,000	PM1, PM2, PM3
4	SR 8	between Perkins St Interchange and Glenwood Ave Interchange	Bridge Replacement and Auxiliary Lane	$ 146,291,000	PM2
			Freeway Total Cost	$ 419,791,000	

ARTERIAL AND INTERSECTION RECOMMENDATIONS

ID	*Community*	*Location*	*Recommendation*	*Current Cost*	*Performance Measure*
5	Akron	Arlington Rd from Waterloo Rd to E Market St	Reconstruction	$ 21,904,000	PM2
6	Akron	Copley Rd from I-77 to Cedar St	Reconstruction	$ 13,400,000	PM2
7	Akron	E Market St from SR 8 to Case Ave	Reconstruction	$ 7,900,000	PM2
8	Akron	Memorial Pkwy / Hickory St (Intersection)	Roundabout	$ 2,750,000	PM1, PM3
9	Akron	Mull Ave from White Pond Dr to S Hawkins Ave	Reconstruction	$ 4,800,000	PM2
10	Aurora	Bissell Rd / Pioneer Trl (Intersection)	Operational Improvements at Intersection	$ 2,100,000	PM3
11	Aurora	Mennonite Rd / Page Rd (Intersection)	Intersection Improvements	$ 2,100,000	PM3
12	Aurora	SR 43 / Kingston Dr (Intersection)	Left Turn Lane at Intersection	$ 2,100,000	PM3
13	Aurora	SR 43 / Mennonite Rd (Intersection)	Intersection Safety Improvements	$ 2,100,000	PM1, PM3
14	Barberton	4th St from Lake Ave to Norton Ave	Widening to 3 Lanes	$ 2,670,000	PM1, PM3
15	Barberton	Barber Rd / 4th St / Norton Ave (Intersection)	Roundabout	$ 2,500,000	PM1, PM3
16	Barberton	SR 619 (Wooster Rd N) from Hopocan Ave to I-76 Interchange	Road Diet with Bike Lanes	$ 4,512,000	PM1, PM2
17	Cuyahoga Falls	Barney's Busy Corners (Intersection)	Intersection Improvements	$ 13,430,000	PM3
18	Cuyahoga Falls	Portage Trail from 13th St to Front St	Road Improvements, Possible Road Diet	$ 2,424,000	PM1, PM3
19	Cuyahoga Falls	Steels Corners Rd from State Rd to Bridgewater Pkwy	Widening, Add Shared-Use Path	$ 6,500,000	PM2
20	Green	Arlington Rd from Boettler Rd to September Dr	Widening, Roundabout at Southwood, Roundabout at Boettler, 4-Lane Divided Median	$ 12,300,000	PM1, PM2, PM3
21	Green	Arlington Rd / Greensburg Rd (Intersection)	Roundabout	$ 2,500,000	PM1, PM3

Table 7.1-1 | Long Term Highway Recommendations

ARTERIAL AND INTERSECTION RECOMMENDATIONS (Continued)					
ID	*Community*	*Location*	*Recommendation*	*Current Cost*	*Performance Measure*
22	Green	Mayfair Rd / Graybill Rd (Intersection)	Roundabout	$ 2,500,000	PM1, PM3
23	Green	Raber Rd / Mayfair Rd (Intersection)	Roundabout	$ 2,500,000	PM1, PM3
24	Green	SR 241 (Massillon Rd) / Graybill Rd (Intersection)	Roundabout	$ 2,500,000	PM1, PM3
25	Green	SR 619 (E Turkeyfoot Lake Rd) / Mayfair Rd (Intersection)	Roundabout	$ 2,500,000	PM1, PM3
	Hudson	Citywide	Smart Signals	$ 3,650,000	PM1, PM3
26	Kent	Main St from SR 43 (Mantua St) to Depeyster St	Signalization, Four Signals Replaced & Interconnected	$ 600,000	PM1, PM3
27	Kent	SR 261 from Cherry St to SR 59 (Kent-Ravenna Rd)	Road Diet and Shared-Use Path	$ 10,000,000	PM1, PM2, PM3
28	Kent	SR 43 (N Mantua St) from Kent High School to Davey Tree Entrance	Access Management	$ 750,000	PM1, PM3
29	Kent	SR 43 (River St & Gougler St) from SR 59 (Haymaker Pkwy) to Fairchild Ave	Safety Issues: Restriping, Add Parking, Sidewalks, Reduce to One Lane	$ 1,000,000	PM1, PM3
30	Kent	SR 59 (W Main St) from Kent West Corp Limit to Longmere Dr / Main St	Upgrade Signals, Streetscape, 6-Foot Sidewalk	$ 6,000,000	PM1, PM2, PM3
31	Macedonia	SR 8 from Highland Rd to Valley View Rd	Safety Improvements	$ 5,000,000	PM1
32	New Franklin	SR 619 (W Turkeyfoot Lake Rd) from Howland Ave to S Turkeyfoot Rd	Improvements, Sidewalks	$ 2,000,000	PM2
33	New Franklin	SR 93 (Manchester Rd) from Nimisila Rd to SR 619 (W Turkeyfoot Lake Rd)	Improvements, Sidewalks	$ 11,664,000	PM2
34	New Franklin	SR 93 (Manchester Rd) / Nimisila Rd (Intersection)	Roundabout	$ 2,500,000	PM1, PM3
35	Norton	Barber Rd from I-76 to SR 261 (Wadsworth Rd)	Center Turn Lane	$ 5,000,000	PM1, PM2, PM3
36	Norton	Barber Rd from Norton South Corp Limit to I-76	Capacity Improvements	$ 3,300,000	PM2, PM3
37	Norton	S. Medina Line Rd / Greenwich Rd (Intersection)	Intersection Improvements	$ 2,100,000	PM1, PM3
38	Norton	SR 261 / Hametown Rd (Intersection)	Intersection Improvements	$ 2,100,000	PM1, PM3
39	Portage County Engineer	Cleveland Rd / Infirmary Rd / Wall St (Intersection)	Intersection Improvements	$ 2,100,000	PM1, PM3
40	Portage County Engineer	Knapp Rd over West Branch	Bridge Replacement	$ 1,100,000	PM2
41	Portage County Engineer	Mogadore Rd / Old Forge Rd (Intersection)	Roundabout	$ 2,500,000	PM1, PM3
42	Portage County Engineer	SR 14 / Price Rd (Intersection)	Intersection Improvements	$ 2,100,000	PM3
43	Portage County Engineer	SR 82 / Chamberlain Rd (Intersection)	Intersection Improvements	$ 2,100,000	PM3
44	Portage County Engineer	US 224 / Waterloo Rd from SR 44 to New Milford Rd	Lane Reduction from 4 Lanes to 2	$ 2,000,000	PM1
45	Ravenna	Cleveland Rd / Sycamore St / Highland Ave (Intersection)	Roundabout	$ 2,750,000	PM1, PM3
46	Ravenna	SR 59 (W Main St) from Ravenna West Corp Limit to Grant St	1 Lane, Bike Lanes in Each Direction	$ 4,100,000	PM2, PM3
47	Richfield	Brecksville Rd / Broadview Rd / Wheatley Rd (Intersection)	Sidewalk, Intersection Improvements	$ 2,100,000	PM3
48	Richfield	SR 303 (W. Streetsboro St) / SR 176 (Broadview Rd) (Intersection)	Intersection Improvements	$ 2,500,000	PM3
49	Rittman	Industrial St from Ohio St to Sunset Dr	Reconstruction	$ 1,000,000	PM2
50	Rittman	N Main St / E Ohio Ave (Intersection)	Intersection Improvements, Streetscape	$ 2,100,000	PM3
51	Rittman	Ohio Ct / E Ohio Ave (Intersection)	Intersection Improvements	$ 1,900,000	PM3
52	Rittman	Sunset Dr from Main St to Gish Rd	Reconstruction	$ 800,000	PM2
53	Stow	Call Rd / Young Rd (Intersection)	Roundabout	$ 750,000	PM1, PM3
54	Stow	Fishcreek Rd from SR 91 (Darrow Rd) to Laurel Woods Dr	Turn Lane Improvements	$ 500,000	PM2,PM3

Table 7.1-1 | Long Term Highway Recommendations

ARTERIAL AND INTERSECTION RECOMMENDATIONS (Continued)					
ID	*Community*	*Location*	*Recommendation*	*Current Cost*	*Performance Measure*
55	Stow	Seasons Rd / Norton Rd from SR 8 to SR 91 (Darrow Rd)	Two Full Lanes with Bike Lanes	$ 7,000,000	PM1, PM2
56	Stow	Seasons Rd / Norton Rd / Hudson Dr (Intersection)	Roundabout	$ 2,000,000	PM1, PM3
	Stow	Citywide	Traffic Signal Interconnection	$ 4,500,000	PM1, PM3
57	Streetsboro	Frost Rd from Greentree Pkwy to Sunny Ln	Sidewalks, Road Improvements	$ 6,500,000	PM2
58	Streetsboro	SR 14 / SR 43 / SR 303 (Intersection)	Intersection Reconstruction	$ 1,600,000	PM1, PM3
59	Streetsboro	SR 303 from SR 14 to Kirby Ln	Curb, Gutters, Sidewalks	$ 6,750,000	PM2
60	Streetsboro	SR 43 from Jude Ave to Seasons Rd	Widening with 2-Way Left Turn Lane	$ 5,000,000	PM1, PM2, PM3
61	Streetsboro	SR 43 from Frost Rd to Streetsboro North Corp Limit	Widening with 2-Way Left Turn Lane	$ 5,000,000	PM1, PM2, PM3
62	Summit County Engineer	Killian Rd from Arlington Rd to Canton Rd	Widening (Done in Three Phases)	$ 5,500,000	PM2, PM3
63	Summit County Engineer	Krumroy Rd from Arlington Rd to Swinehart Rd	Widening (Done in Three Phases)	$ 4,100,000	PM2, PM3
64	Summit County Engineer	N. Main St / State Rd from Howard St to High Bridge Rd	Bridge Replacement	$ 40,000,000	PM2
65	Summit County Engineer	Riverview Rd over Yellow Creek (North of Bath Rd)	Bridge Replacement	$ 1,100,000	PM2
66	Summit County Engineer	S. Main St from Portage Lakes Dr to Axline Ave	Widening	$ 10,250,000	PM2, PM3
67	Summit County Engineer	Steels Corners Rd Bridge from Windham Ridge Dr to Bridgewater Pkwy	Bridge Repair	$ 6,000,000	PM2
68	Summit County Engineer	Valley View Rd from Boyden Rd to Olde Eight Rd	Improvements	$ 1,000,000	PM2
69	Tallmadge	East Ave from Rec Center Drive to Parliament Dr	Improvements	$ 8,600,000	PM1, PM2, PM3
70	Tallmadge	Howe Rd from SR 91 (North Ave) to SR 261 Roundabout	Road Diet (Three Lanes), Bike Lanes	$ 8,200,000	PM1, PM2, PM3
71	Tallmadge	Southeast Ave / Eastwood Ave / S Munroe Rd	Roundabout	$ 5,000,000	PM3
72	Twinsburg	Ravenna Rd / Broadway Ave / Shepard Rd / Richmond Rd	Intersection Improvements	$ 1,712,000	PM3
73	Twinsburg	SR 91 (Darrow Rd) from Ravenna Rd to Tinkers Creek Bridge near Twin Plaza	Widening	$ 2,500,000	PM1, PM2, PM3
	Twinsburg	Citywide	Signalization Update	$ 3,600,000	PM3
			Arterial and Intersection Total Cost	$ 337,966,000	
			Highway Recommendations Total Cost	$ 757,757,000	

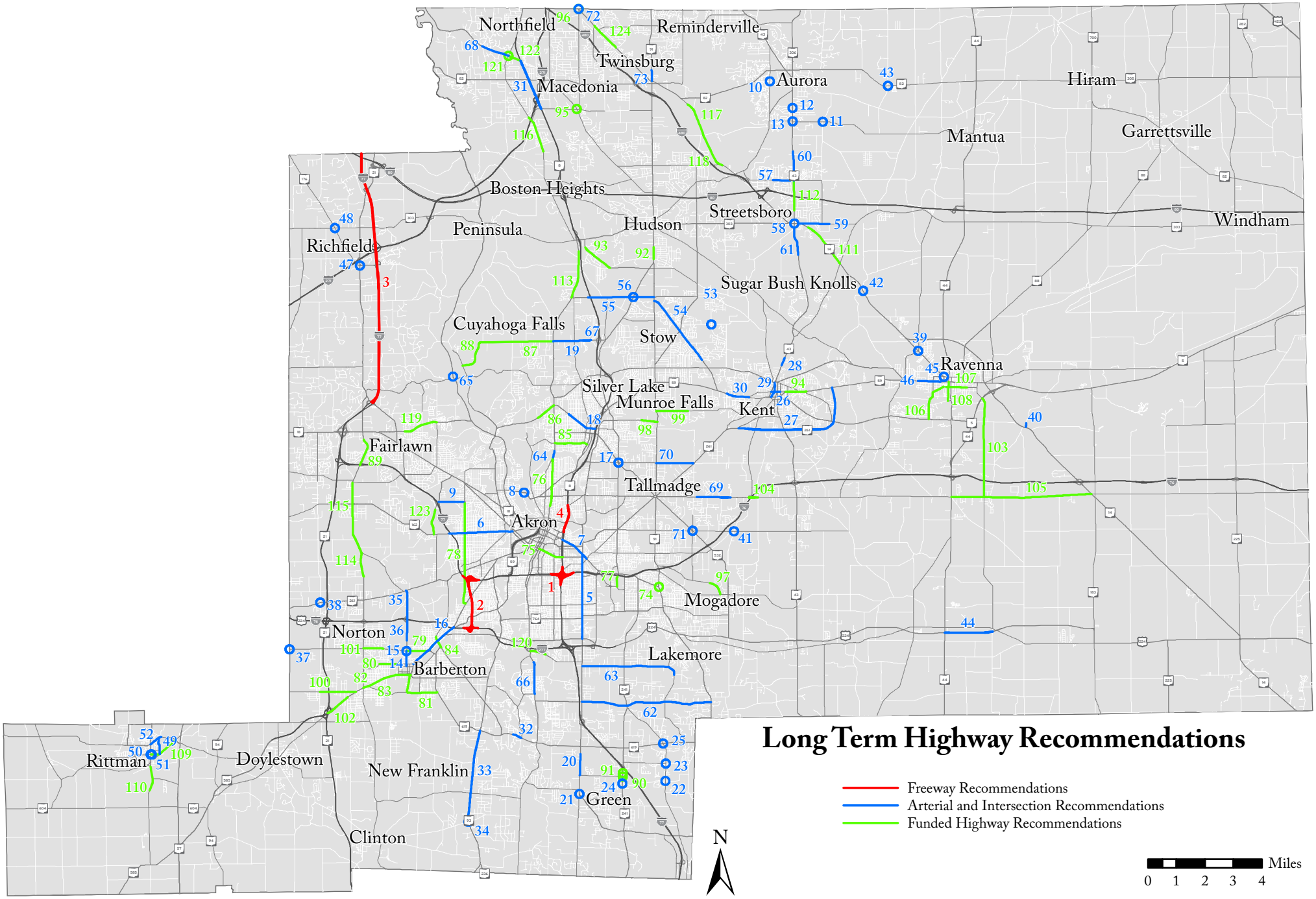
REGIONWIDE RECOMMENDATIONS				
ID	*Community*	*Recommendation*	*Current Cost*	*Performance Measure*
	Regionwide	Pavement Resurfacing	$ 1,248,780,000	PM2
	Regionwide	Pavement Replacement	$ 163,271,250	PM2
	Regionwide	Bridge Preservation	$ 2,369,525,047	PM2
	Regionwide	Bike and Pedestrian	$ 35,000,000	PM3
	Regionwide	Safety and Operational	$ 41,188,506	PM1
		Regionwide Recommendations Total Cost	$ 3,857,764,803	

Table 7.1-1 | Long Term Highway Recommendations

FUNDED HIGHWAY RECOMMENDATIONS					
ID	*Community*	*Location*	*Recommendation*	*Current Cost*	
74	Akron	SR 91 (Canton Rd) / SR 18 (E Market St) (Intersection)	Roundabout	$ 4,937,959	
75	Akron	E Exchange St from Broadway St to Fountain St	Complete Streets, Signal Upgrade	$ 4,962,000	
76	Akron	N Main St from Olive St to Riverside Dr	Complete Streets	$ 12,386,100	
77	Akron	Seiberling Way from Eagle St to Englewood St	New road	$ 14,256,732	
78	Akron	South Hawkins Rd from East Ave to Mull Ave	Resurfacing	$ 1,122,680	
	Aurora	Citywide	Signal Improvements	$ 3,605,410	
79	Barberton	2nd St SW from Hudson Run Rd to Wooster Rd W / Norton Rd from Barber Rd to Wooster Rd / Wooster Rd N from Norton Rd to Burt St	Resurfacing	$ 1,689,591	
80	Barberton	Hopocan Av from Hillsdale Ave to 8th St NW	Resurfacing	$ 358,520	
81	Barberton	Snyder Av from 2nd St SW to 5th St SE	Resurfacing	$ 778,770	
82	Barberton	Wooster Rd W from 31st St to Hudson Run Rd	Resurfacing	$ 294,960	
83	Barberton	Wooster Rd W from Hudson Run Rd to 2nd St NW	Reconstruction, Possible Road Diet	$ 9,667,257	
84	Barberton	Wooster Rd / State St / Robinson Ave from 4th St to 2nd St and from 2nd St to Robinson Ave	Shared-Use Path, Reconstruction, Signal Coordination	$ 4,446,220	
85	Cuyahoga Falls	Chestnut Blvd from State Rd to 2nd St	Resurfacing	$ 498,820	
86	Cuyahoga Falls	Portage Trail Extension from Albertson Pkwy to State Rd	Widening with 2-Way Left Turn Lane, Shared-Use Path, Traffic Signals	$ 7,726,375	
87	Cuyahoga Falls	W Steels Corners Rd from Northampton Rd to State Rd	Resurfacing	$ 785,850	
88	Cuyahoga Falls	W Steels Corners Rd from Akron Peninsula Rd to Northampton Rd	Resurfacing	$ 890,800	
89	Fairlawn	Cleveland Massillon Rd from I-77 to Bywood Dr	Widening, rounabout at Rothrock Rd	$ 11,489,629	
90	Green	SR 241 (Massillon Rd) / Boettler Rd (Intersection)	Roundabout	$ 4,858,452	
91	Green	SR 241 (Massillon Rd) / Corporate Woods Cir (Intersection)	Roundabout	$ 5,317,398	
92	Hudson	SR 91 (Darrow Rd) from Barlow Rd to Stoney Hill Dr	Widening with TWLTL, Bike Lanes	$ 5,062,864	
93	Hudson	Terex Rd from Londonairy Blvd to Barlow Rd (West)	Resurfacing	$ 643,900	
94	Kent	SR 59 (E Main St) from Willow St to Horning Rd	Complete Streets with Raised Median, Roundabouts, Bus Pull-Offs	$ 17,198,260	
95	Macedonia	Highland Rd / Valley View Rd (Intersection)	Intersection Imrovements	$ 2,452,814	
96	Macedonia	Ravenna Rd / Shephard Rd (Intersection)	Intersection Imrovements	$ 3,513,020	
97	Mogadore	Gilchrist Rd from Mogadore West Corp Limit to Mogadore Rd	Resurfacing	$ 453,330	
98	Munroe Falls	Munroe Falls Ave from Munroe Falls West Corp Limit to SR 59 (Main St)	Resurfacing	$ 332,387	
99	Munroe Falls	North River Rd from SR 91 (N Main St) to Munroe Falls East Corp Limit	Resurfacing	$ 710,518	
100	Norton	Johnson Rd from Hametown Rd to Norton East Corp Limit	Resurfacing	$ 564,836	
101	Norton	Norton Ave from Cleveland Massillon Rd to Norton East Corp Limit	Resurfacing	$ 496,310	
102	Norton	Wooster Rd from SR 21 to Taylor St	Resurfacing	$ 303,592	
103	Portage County Engineer	New Milford Rd from Tallmadge Rd to SR 5/44	Resurfacing	$ 752,802	
104	Portage County Engineer	Tallmadge Rd and I-76 Interchange from Mogadore Rd to Sunnybrook Rd	Operational Improvements	$ 8,309,445	
105	Portage County Engineer	Tallmadge Rd from SR 44 to SR 14	Resurfacing	$ 890,800	

Table 7.1-1 | Long Term Highway Recommendations

FUNDED HIGHWAY RECOMMENDATIONS (Continued)					
ID	*Community*	*Location*	*Recommendation*	*Current Cost*	
106	Ravenna	Mill Rd from Diamond St to Sycamore St / S Diamond St from Summit St to Mill St	Resurfacing	$ 410,182	
107	Ravenna	Riddle St from Meridian St to Liberty St	Resurfacing	$ 254,500	
108	Ravenna	S Chestnut St from Lake St to Main St	Resurfacing	$ 244,300	
109	Rittman	E Ohio Av from Main St to Sunset St	Resurfacing	$ 574,578	
110	Rittman	S Main St from Rittman South Corp Limit to Front St	Resurfacing	$ 420,735	
111	Streetsboro	SR 14 from Portage Point Dr to Diagonal Rd	Widening with 2-Way Left Turn Lane, New Sidewalk	$ 7,045,648	
112	Streetsboro	SR 43 from Market Square Dr to Frost Rd	Widening	$ 7,595,556	
113	Summit County Engineer	Akron Cleveland Rd from Cuyahoga Falls North Corp Limit to Boston Heights South Corp Limit	Resurfacing	$ 890,800	
114	Summit County Engineer	Cleveland Massillon Rd from Norton North Corp Limit to Minor Rd	Resurfacing	$ 1,119,800	
115	Summit County Engineer	Cleveland Massillon Rd from Minor Rd to Ridgewood Rd (South Intersection)	Resurfacing	$ 1,167,100	
116	Summit County Engineer	Olde Eight Rd from Boston Heights North Corp Limit to E Highland Rd	Resurfacing	$ 890,800	
117	Summit County Engineer	Ravenna Rd from Twinsburg South Corp Limit to Old Mill Rd	Resurfacing	$ 941,640	
118	Summit County Engineer	Ravenna Rd from Old Mill Rd to Portage County Line	Resurfacing	$ 763,500	
119	Summit County Engineer	Smith Rd from Fairlawn East Corp Limit to Sand Run Rd	Resurfacing	$ 1,018,000	
120	Summit County Engineer	Swartz Rd from S Main St to Glenmount Ave	Resurfacing	$ 636,300	
121	Summit County Engineer	Valley View Rd / Olde Eight Rd (Intersection)	Intersection Improvements	$ 333,200	
122	Summit County Engineer	Valley View Rd from SR 8 to Olde Eight Rd	Resurfacing	$ 381,740	
123	Summit County Engineer	White Pond Dr from SR 162 (Copley Rd) to Akron South Corp Limit	Resurfacing	$ 763,490	
124	Twinsburg	Ravenna Rd from Chamberlin Rd to E Idlewood Dr	Resurfacing	$ 549,800	
				Funded Total Cost $ 170,146,170	


Northfield
Reminderville
Twinsburg
Macedonia
Aurora
Hiram
Mantua
Garrettsville
Boston Heights
Streetsboro
Windham
Peninsula
Hudson
Richfield
Sugar Bush Knolls
Cuyahoga Falls
Stow
Ravenna
Silver Lake
Munroe Falls
Kent
Fairlawn
Tallmadge
Akron
Mogadore
Norton
Barberton
Lakemore
Rittman
Doylestown
New Franklin
Green
Clinton
Long Term Highway Recommendations
Freeway Recommendations
Arterial and Intersection Recommendations
Funded Highway Recommendations
N
Miles
0 1 2 3 4

7.2 | Bicycle and Pedestrian Recommendations

Bicycle and pedestrian facilities are an essential part of an active transportation system throughout the Greater Akron area in providing a low-cost means of transportation and serving as a recreational amenity. Bicycling and walking are efficient transportation modes for short trips and, where convenient intermodal systems exist, these non-motorized trips can easily be linked with transit to significantly increase trip distance. Because of the benefits they provide, bicycle and pedestrian facilities should be given the same priority as is given to other transportation modes. Cycling and walking should not be an afterthought in roadway design.

AMATS has a long history of planning for active and multi-modal transportation systems. *TO2045* will build on recent and past efforts including the *2019 Active Transportation Plan*. AMATS envisions a Greater Akron area in which biking and walking are not only integral parts of daily life, but vital components of a first-class, multimodal transportation system. The goals for the region's bicycle and pedestrian network are to improve safety, increase connectivity, create a friendly bicycle network and promote quality of life throughout the region. AMATS also understand that, for those who do not own cars, a quality network will increase equity goals as well. Additionally, rather than viewing these networks as generally separate entities as has been done in the past, AMATS urges area communities and project sponsors to identify and pursue opportunities to link these networks to transit networks for the benefit of all transportation users.

A variety of bicycle and pedestrian facilities exist throughout the Greater Akron area with the Ohio and Erie Towpath Trail serving as the spine for the regional bicycle network. There are more than 122 miles of shared-use paths in the region with over 42 miles that have been developed since 2000. On-road facilities, such as bike lanes, are being added at a steady pace to help fill in the gaps and connect people to places. There are approximately 50 miles of bike lanes in the Greater Akron area.

The recommendations contained in *TO2045* will expand the off-road bicycle system and the pedestrian system through additional facilities as well as make safety improvements to the region's bicycle and pedestrian network.

7.2.1 | Funding

AMATS receives federal funding for bicycle and pedestrian improvements through the Transportation Alternatives Set-Aside Program (TASA), formerly known as the Transportation Alternatives Program (TAP). This funding provides approximately $1 million each year that can be used for bicycle and pedestrian improvements. All TA projects must relate to surface transportation and address a transportation need, use or benefit. Preliminary engineering, right-of-way and construction are eligible project costs. Planning is an eligible project phase only for Safe Routes to School (SRTS) District Travel Plans provided that the sponsor has first pursued and secured funding from the Ohio Department of Transportation SRTS Program. Many bicycle and pedestrian improvements are most effectively implemented at the outset of roadway or transit project funding and construction. While all projects represent important steps for improving AMATS bicycle and pedestrian environment, limited financial resources require that most regional bicycle and pedestrian projects use a variety of federal, state and local sources. It is therefore suggested that many regional off road trails rely on local initiative and commitment where member communities seek additional funding. Any bicycle or pedestrian project using federal funds must be consistent with *TO2045*, regardless of whether AMATS provides the funding. *TO2045* gives local officials the authority to collectively determine how federal funds are allocated.

7.2.2 | Recommendations

The bicycle and pedestrian recommendations focus implementation efforts where they will provide the greatest community benefit. While it is important to develop a long-range plan, it is also necessary to provide flexibility in the planning process to allow for unseen developments. *TO2045* ensures that transportation improvements are planned and coordinated on a regional basis. It is AMATS policy that projects coupled with safety improvements, such as bicycle and pedestrian amenities, must be consistent with *TO2045*, in order to be eligible for federal funding.

Complete Streets

When planning a street or neighborhood, it is important to consider all users of the roadway. People like to have options for getting around town. According to Smart Growth America, a complete street is one that is designed with safety in mind for all users - pedestrians, cyclists, transit riders, and vehicles. No two complete streets look alike as each neighborhood or district will have different needs. Bike lanes, bus lanes, bus shelters, sidewalks, crosswalks, refuge islands, curb bump-outs, and roundabouts are all components of a complete street that can improve safety for everyone. Making a street welcome to everyone can improve the vitality of an area and make it a place where people want to be. Communities throughout the Greater Akron area should consider complete streets when planning their transportation projects.

Safe Routes to Schools

Communities should place a special emphasis on providing high-quality, safe bicycle and pedestrian infrastructure near schools. The Ohio Safe Routes to School (SRTS) Program supports projects and programs that improve the health and well-being of children by enabling and encouraging them to walk and bicycle to school. SRTS programs examine conditions around schools and conduct projects and activities that work to improve safety and accessibility in the vicinity of schools. The most successful SRTS programs incorporate the Five E's: Engineering, Education, Enforcement, Encouragement, and Evaluation. The development of a School Travel Plan (STP) is a requirement of the SRTS Program in order to be eligible for infrastructure improvements. The STP outlines a community's plans for engaging students in active transportation. The STP involves key community stakeholders to identify barriers to

active transportation and develop a set of solutions to address them. In 2014, the Akron Public Schools completed its first District-Wide Travel Plan. Akron's plan became one of the first districtwide STPs for a large school district in Ohio and one of the first nationwide. It was created through a team-based approach in cooperation with ODOT, Akron Public Schools, City of Akron, AMATS and The University of Akron. Prioritizing pedestrian safety and improvements near schools provides an opportunity to work closely with schools, communities, and local government to create a healthy lifestyle for children—and a safer and cleaner environment for everyone.

Traffic Calming

AMATS supports communities considering ways to make their streets safer for pedestrians/bicyclists. Traffic calming measures should be considered in areas that experience high volumes of pedestrian and bicycle traffic. Traffic calming is a concept that reduces the speed and volume of vehicular traffic through an area to make neighborhoods safer, more pleasant, and more livable. This can be achieved either by physical means such as reducing the number of lanes; textured pavements and bump-outs, also known as "curb extensions" that extend an intersection corner; or psychological means such as adding street trees, on-street parking and the narrowing of lanes to slow drivers down. Over decades of use, these measures have been proven to reduce accidents, collisions, noise, vibration, pollution, and crime. Traffic calming is most often found in downtowns or urban centers due to their high levels of pedestrian activity. They may also be implemented in less dense planning areas.

Road Diets

A road diet is a technique that can be used to achieve traffic calming and improve safety. Road diets occur when numbers of lanes or lane widths are reduced to promote a slower vehicle speed and accommodate other uses such as bike lanes, bus lanes, parking, pedestrian refuge islands, or more sidewalk space. In 2015, AMATS compiled the Road Diet Analysis, which identified 60 candidates for road diets across the Greater Akron area. The analysis is a useful planning resource that defines the road diet concept, identifies potential road diet locations, and serves as a guide to member communities to consider the design and application of road diets in certain locations.

Projects

AMATS recommends $35 million dollars of bicycle and pedestrian improvements in the greater Akron area between now and 2045.

The Long Term Bicycle and Pedestrian Recommendations tables and maps on the following pages contain many recommendations for promoting bicycle and pedestrian transportation in the region. Project costs are shown in current dollars for the entire project. Appendix B (page 87) shows costs inflated to year of expenditure and federal share, totaling $35 million in federal investment. All projects are financially constrained and conform to air quality requirements.

Table 7.2-1 | Long Term Bicycle Recommendations

BICYCLE RECOMMENDATIONS					
ID	*Community*	*Location*	*Facility*	*Mileage*	*Current Cost*
1	Akron	Rubber City Heritage Trail - West (from Exchange St to Towpath Trail)	Shared-Use Path	3.92	$ 3,920,000.00
2	Akron	Rubber City Heritage Trail - East (from Seiberling St to Spartan Trail)	Shared-Use Path	4.09	$ 4,090,000.00
3	Akron / Cuyahoga Falls / Silver Lake / Stow	Veterans Trail / Akron Secondary (from Freedom Trail to Graham Rd)	Shared-Use Path	7.14	$ 7,140,000
4	Aurora	Aurora Trail Connection (from Sunny Lake to RECOMMENDED Headwaters Trail)	Shared-Use Path	1.02	$ 1,020,000.00
5	Aurora	Aurora Trail Connection (from Treat Rd Quarry to RECOMMENDED Headwaters Trail)	Shared-Use Path	0.75	$ 750,000.00
6	Aurora / Mantua Twp	Headwaters Trail (from Mantua Center Rd to Cuyahoga County Line)	Shared-Use Path	7.93	$ 7,930,000.00
7	Barberton	3 Creeks - Silver Creek Trail (from Magic Mile to Lake Dorothy)	Shared-Use Path	2.49	$ 2,490,000
8	Barberton	Magic Mile (from Lake Anna to Robinson Ave)	Shared-Use Path	0.63	$ 630,000
9	Barberton / Copley / Norton	3 Creeks - Pigeon Creek / Wolf Creek / Wadsworth Trail (from Hopocan Ave to I-77)	Shared-Use Path	7.37	$ 7,370,000
10	Chippewa Twp / Clinton	Heartland Trail (from Heartland Trail - Marshallville Terminus to Towpath Trail)	Shared-Use Path	6.54	$ 6,540,000
11	Green	Greensburg Trail (from Greensburg Rd to Shriver / Steese Split)	Shared-Use Path	0.79	$ 790,000
12	Green	Greensburg Trail Extension (from Shriver / Steese Split to Shriver Rd)	Shared-Use Path	0.26	$ 260,000
13	Green	Greensburg Trail Extension (from Shriver / Steese Split to Steese Rd)	Shared-Use Path	0.51	$ 510,000
14	Green	Koons Bike Trail (from Koons Rd to Roydean Dr)	Shared-Use Path	0.69	$ 690,000
15	Green	Roydean Trail (from Roydean Dr to Greensburg Rd)	Shared-Use Path	0.18	$ 180,000

Table 7.2-1 | Long Term Bicycle Recommendations

BICYCLE RECOMMENDATIONS (Continued)					
ID	*Community*	*Location*	*Facility*	*Mileage*	*Current Cost*
16	Green	Willadale Trail (from Thursby Rd / Southgate Park to Koons Rd)	Shared-Use Path	1.07	$ 1,070,000
17	Hudson / Stow	Veterans Trail / Akron Secondary (from Springdale Rd to Veterans Park)	Shared-Use Path	4.6	$ 4,600,000
18	Kent	East Main St Sidepath (from Willow St to Horning Rd)	Shared-Use Path	0.72	$ 720,000
19	Kent	Freedom Trail Extension (from Middlebury Rd to SR 43)	Shared-Use Path	2.73	$ 2,730,000
20	Kent	The Portage Trail - Mill Run Segment (from The Portage at Tannery Park to The Portage at Brady's Leap)	Shared-Use Path	0.26	$ 260,000
21	New Franklin	Portage Lakes Trail (from Towpath Trail to Metro-Sandyville Local RR)	Shared-Use Path	5.31	$ 5,310,000
22	Norton	Medina Line Trail (from Medina Line Rd to Lake Dorothy)	Shared-Use Path	2.13	$ 2,130,000
23	Norton	Norton Trail (from Silver Creek to RECOMMENDED Medina Line Trail)	Shared-Use Path	1.06	$ 1,060,000
24	Portage Park District	Franklin Connector (from Hudson Rd to Cuyahoga River)	Shared-Use Path	2.95	$ 2,950,000
25	Portage Park District	The Portage Trail East - N of the Arsenal (from Peck Rd to Trumbull County Line)	Shared-Use Path	11.88	$ 11,880,000
26	Portage Park District	The Portage Trail East - S of the Arsenal (from Peck Rd to Trumbull County Line)	Shared-Use Path	14.82	$ 14,820,000
27	Ravenna	Hike & Bike Downtown Connection (from Prospect St to The Portage Hike & Bike Trail)	Shared-Use Path	0.68	$ 680,000
28	Rittman / Chippewa Twp	County Line Trail - North Extension (from County Line Trail terminus to Medina County Line)	Shared-Use Path	1.64	$ 1,640,000
29	Streetsboro	Streetsboro Trail Connection (from Tinkers Creek/Old Mill Rd to Clare Wilcox Park)	Shared-Use Path	4.58	$ 4,580,000
30	Summit Metroparks	Highbridge Trail (from Towpath Trail to Front St)	Shared-Use Path	2.65	$ 8,350,000
31	Summit Metroparks	Liberty Trail (from SR 82 to Cuyahoga County Line)	Shared-Use Path	2.75	$ 2,650,000
32	Summit Metroparks	Ohio-to-Erie Trail (from Wayne County Line to Towpath Trail)	Shared-Use Path	7.2	$ 5,796,000
33	Summit Metroparks	Sagamore Connector Trail (Towpath Trail to Bike & Hike Trail near Valley View)	Shared-Use Path	1.5	$ 2,700,000
34	Summit Metroparks	Stanford Trail (from Towpath Trail to Bike & Hike Trail)	Shared-Use Path	1.68	$ 1,352,400
35	Twinsburg	Park Loop Trail (from Center Valley Bikeway to Center Valley Bikeway)	Shared-Use Path	0.92	$ 920,000
				Bicycle Total Cost	$ 120,508,400

FUNDED BICYCLE RECOMMENDATIONS					
ID	*Community*	*Location*	*Facility*	*Mileage*	*Current Cost*
36	Akron	Rubber City Heritage Trail (from 3rd Ave to Exchange St)	Shared-Use Path		$ 1,593,650
37	Barberton	Wooster Rd / State St / Robinson Ave (from 4th St / 2nd St to 2nd St / Robinson Ave)	Shared-Use Path		$ 4,446,220
38	Green	Raber Rd (from Troon Dr to Mayfair Rd)	Shared-Use Path		$ 1,372,710
39	Kent	The Portage Trail - Brady's Leap Connection (from W Main St to West of Fairchild Ave)	Shared-Use Path		$ 1,434,044
40	Portage Park District	The Portage Trail - Ravenna Rd Bridge (over Norfolk Southern RR)	Shared-Use Path		$ 1,683,099
41	Stow	Stow - Silver Lake - Cuyahoga Falls Bike Connector (from SR 8 Pedestrian Bridge to Springdale Rd)	Shared-Use Path		$ 1,017,600
42	Summit County Engineer	CVNP Pedestrian Bridge & Trail (from Boston Mills Trailhead to Riverview Rd)	Shared-Use Path		$ 975,709
43	Summit Metroparks	Freedom Trail - Phase 4 (from Mill St to Rosa Parks Blvd)	Shared-Use Path		$ 4,277,377
44	Summit Metroparks	Freedom Trail - Phase 5 (from Freedom Trail - Middlebury Rd Trailhead to The Portage Trail - Middlebury Rd Terminus)	Shared-Use Path		$ 2,700,330
				Funded Total Cost	$ 19,500,739

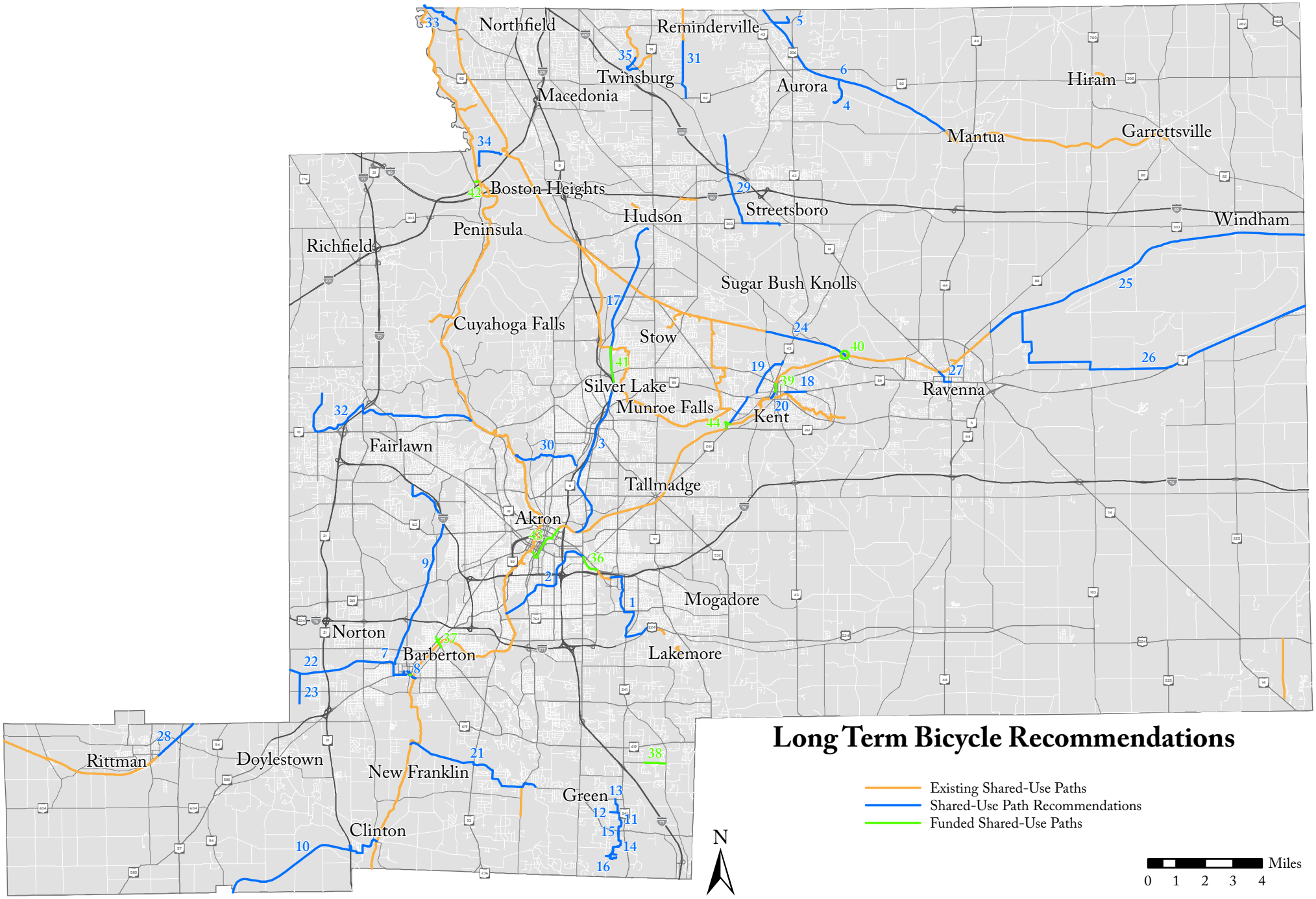
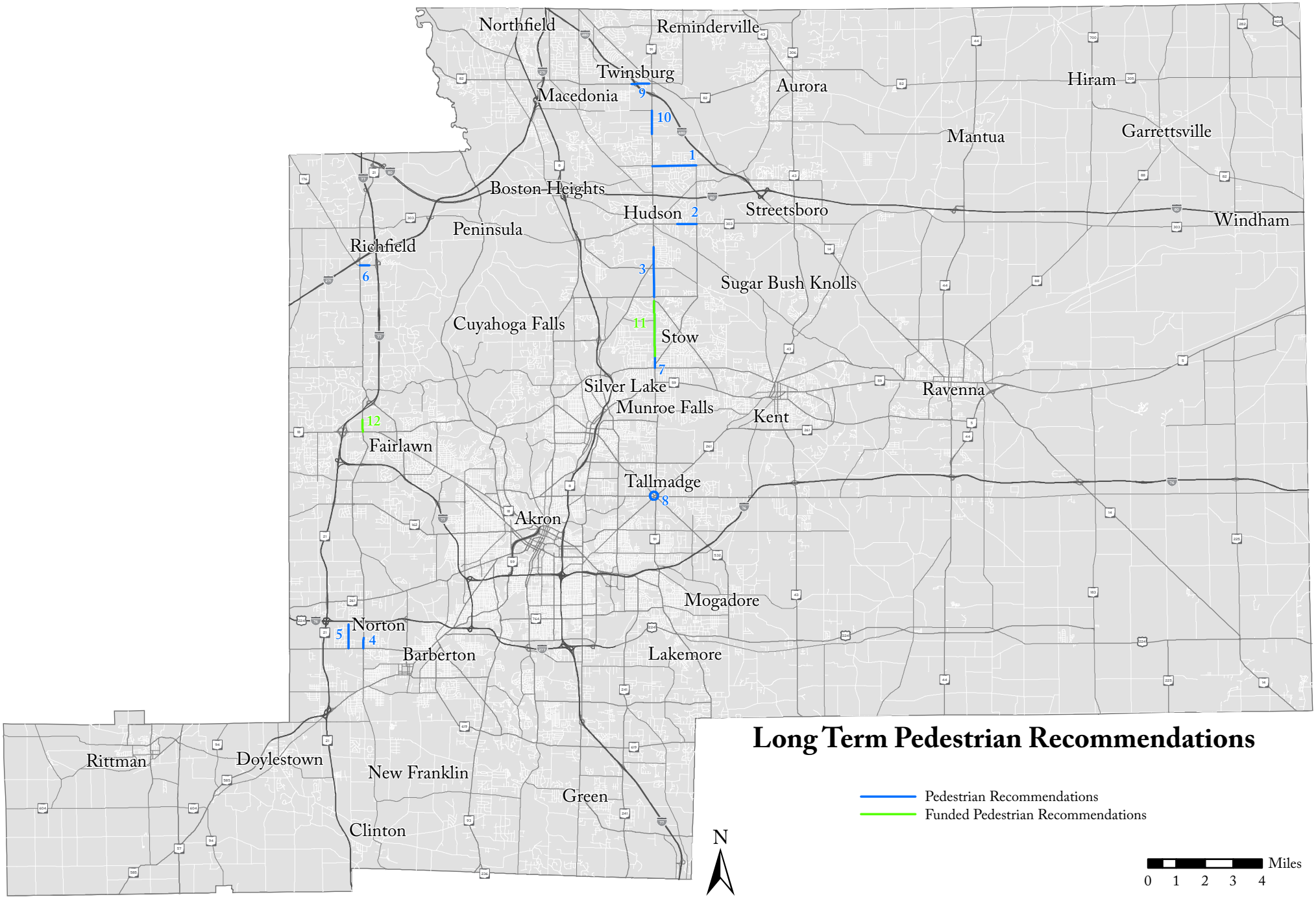

Northfield
Reminderville
Twinsburg
Macedonia
Aurora
Hiram
Mantua
Garrettsville
Boston Heights
Hudson
Streetsboro
Windham
Peninsula
Richfield
Sugar Bush Knolls
Cuyahoga Falls
Stow
Silver Lake
Munroe Falls
Kent
Ravenna
Fairlawn
Tallmadge
Akron
Mogadore
Norton
Barberton
Lakemore
Rittman
Doylestown
New Franklin
Green
Clinton
Long Term Bicycle Recommendations
Existing Shared-Use Paths
Shared-Use Path Recommendations
Funded Shared-Use Paths
N
Miles
0 1 2 3 4

Table 7.2-2 | Long Term Pedestrian Recommendations

PEDESTRIAN RECOMMENDATIONS					
ID	*Community*	*Location*	*Facility*	*Mileage*	*Current Cost*
1	Hudson	Middleton Rd (from SR 91 to Stow Rd)	Sidewalks	1.54	$ 1,848,000
2	Hudson	SR 303 (from Hayden Pkwy to Stow Rd)	Sidewalks	0.68	$ 816,000
3	Hudson	SR 91 (from Norton Rd to Stoney Hill Dr)	Sidewalks	1.75	$ 2,100,000
4	Norton	Cleveland Massillon Rd (from Greenwich Rd to Norton Branch Library)	Sidewalks	0.37	$ 444,000
5	Norton	Easton Rd (from Greenwich Rd to Oser Rd)	Sidewalks	0.85	$ 1,020,000
6	Richfield	Wheatley Rd (from Brecksville Rd to Kinross Lakes Pkwy)	Sidewalks	0.32	$ 384,000
7	Stow	SR 91 / Darrow Rd (from Graham Rd to Fishcreek Rd)	Sidewalks	2.35	$ 850,542
8	Tallmadge	Pedestrian Tunnel (from between West Ave and Northwest Ave to center of Tallmadge Circle)	Tunnel	0.1	$ 1,000,000
9	Twinsburg	SR 82 (from Hadden Rd to Church St)	Sidewalks	0.63	$ 756,000
10	Twinsburg	SR 91 (from Summit Commerce Park to Highland Rd)	Sidewalks	0.82	$ 984,000
				Pedestrian Total Cost	$ 10,202,542

FUNDED PEDESTRIAN RECOMMENDATIONS					
ID	*Community*	*Location*	*Facility*	*Mileage*	*Current Cost*
11	Stow	SR 91 / Darrow Rd (from Conwill Rd to Fishcreek Rd)	Sidewalks		$ 1,007,704
12	Summit County Engineer	Cleveland Massillon Rd (from SR 18 / Medina Rd to Springside Dr)	Sidewalks		$ 650,000
				Funded Total Cost	$ 1,657,704


Northfield
Reminderville
Twinsburg
Macedonia
Aurora
Hiram
Mantua
Garrettsville
Boston Heights
Hudson
Streetsboro
Windham
Peninsula
Richfield
Sugar Bush Knolls
Cuyahoga Falls
Stow
Silver Lake
Munroe Falls
Kent
Ravenna
Fairlawn
Tallmadge
Akron
Mogadore
Norton
Barberton
Lakemore
Rittman
Doylestown
New Franklin
Green
Clinton
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8
9
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11
12
Long Term Pedestrian Recommendations
Pedestrian Recommendations
Funded Pedestrian Recommendations
N
Miles
0 1 2 3 4

7.3 | Transit Recommendations

The availability of a comprehensive, reliable transit network is key to helping those who lack (or are unable to use) automobile transportation get to work, have access to shopping and services, and complete other important daily tasks. A convenient transit network can also draw choice-riders: those who have access to automobiles, but choose to use transit for reasons of ease, affordability and convenience. The recommendations contained in *Transportation Outlook 2045* will work to preserve the existing transit system, provide enhanced service in key high-volume corridors and allow for strategic expansion into new communities that contain high densities of jobs, retail and other attractions.

7.3.1 | Funding

AMATS receives federal transportation dollars to fund transit projects and improvements. Most of this federal transit funding comes from programs specifically dedicated to transit, although transit may also receive a portion of the funds from certain programs designed for highway and transit funding.

Federal transit funds are typically used only for capital expenses, such as for the purchase of new buses, bus shelters and maintenance, garage or office facilities. Operating expenses, such as bus operator salaries and a portion of preventive maintenance, are typically paid for through local sources (fare box revenues, transit-dedicated sales tax, etc.). However, certain funding programs may be used to supplement operating expenses, on a limited basis.

The Federal Transit Administration's (FTA) Urbanized Area Formula Program (Section 5307), along with the Bus and Bus Facilities Program (Section 5339), are the largest sources of federal transit funding. The 5307 and 5339 programs use a formula to allocate funding to urbanized areas. AMATS receives nearly $9 million annually for the Akron Urbanized Area, and an additional $800,000 portion for areas lying within the Cleveland Urbanized Area. These funds are split between METRO RTA and PARTA, generally in proportion to their respective county's share of the total regional population.

The Federal Highway Administration's (FHWA) Congestion Mitigation/Air Quality Program (CMAQ) provides funds that may be used on projects demonstrating an improvement in air quality and congestion reduction. Although the majority of this funding is typically allocated towards regional highway projects, AMATS traditionally obtains a portion for local transit projects.

Other federal transit funding programs include the Specialized Transportation Program (Section 5310), which allocates funding to public transit agencies and non-profit providers of transportation to aid in the transportation of older or disabled individuals, and the Transportation Alternatives Program (TAP), which may be used by transit agencies to improve non-driver access to public transportation.

Other sources of transit funding are periodically made available from the federal government or the Ohio Department of Transportation, often in the form of competitive grant programs. The FTA's State of Good Repair program is one such example, and has been used by METRO and PARTA to purchase new replacement buses in recent years.

Any transit project using federal funding must be consistent with Transportation Outlook, regardless of whether AMATS provided the funding.

7.3.2 | Recommendations

Fix it First

The majority of federal transit funding will be used to preserve the existing transit network, assets and supporting facilities in the AMATS region. Transit service is not useful unless it is predictable and dependable. *Transportation Outlook 2045* continues AMATS' longstanding policy of working with METRO and PARTA to ensure that they have the resources necessary to maintain their existing levels of service and to serve their existing customer base efficiently. To that end, AMATS will continue to support the preservation and maintenance of METRO and PARTA's bus fleets and other capital assets and facilities.

Bus Rapid Transit

To achieve the most efficient use of the existing public transportation system, additional ridership needs to be developed. Enhancing the existing service, with bus rapid transit, where appropriate is the best way of attracting additional ridership. Bus rapid transit provides dedicated service routes with higher speeds, improved wait times and more reliability. It can take the shape of dedicated bus lanes, additional stop infrastructure or signal prioritization. Bus rapid transit works particularly well in corridors containing dense employment, attractions and residential areas. Decreasing the waiting time between buses, expanding the hours and days of service, and providing safe, attractive and comfortable waiting environments are all potential strategies to attract additional transit users. *Transportation Outlook 2045* recommends that transit agencies continue to work towards development of bus rapid transit. Currently Metro RTA is studying a number of potential corridors for bus rapid transit and working to identify a priority corridor for the service.

Microtransit

Microtransit can be defined as a demand response type service with integrated web applications that can provide flexibility for ridership where fixed route transit service isn't warranted. Microtransit hubs can provide a more nimble service allowing riders to schedule services on the same day and pay a fixed cost to ride. Both Metro RTA and PARTA will look to expand or develop microtransit hubs over the life of *Transportation*

Outlook 2045. Microtransit is expected to potentially replace some fixed line service and costs associated with changes to the route structure would be absorbed into existing operation costs and be considered revenue/cost neutral.

Coordination

At the local level, most transit agencies are funded primarily through transit-dedicated sales taxes. Consequently, they face significant political pressure to confine service within their county borders. Philosophically, the primary role of a transit agency should be to transport their ridership to whatever destination is necessary. Northeast Ohio is a region of many counties and overlapping urban areas, and the demand to travel between them is significant. METRO, PARTA and SARTA (the Stark County/ Canton public transit agency) currently provide service to limited cross-county destinations. *Transportation Outlook 2045* recommends a more integrated, regional transit network – between Summit and Portage Counties and beyond.

Transit Oriented Development / Joint Development

Development of bus rapid transit service creates an attractive opportunity for transit oriented development. Transit oriented development is typically high density development along a transit line that benefits from the having consistent transit presence on the corridor. With the potential of bus rapid transit in the greater Akron area, the transit agencies should also pursue joint development opportunities with private investors to create transit oriented development near fixed route service. Metro RTA recently received a FTA grant to explore potential opportunities for transit oriented development in Akron.

While very similar, joint development (JD) and transit-oriented development (TOD) are not synonymous. In joint development, the transit agency needs to be an active partner in a development project and receive a "fair share" of revenues to support public transportation. Joint development leverages transit investment – whether real estate or facilities – for such partnerships but does not have to be transit-oriented.

Transit-oriented development is often coordinated with joint development, but is not necessitated by it. For example, an area near a transit station or facility can be well designed and built by a private developer to support live, work and play activities without the need for a car (transit-oriented). While easy access to transit was the impetus for the development opportunity, the transit agency does not have to be in partnership with the developer for TOD to result. In this case, the transit agency does not have any direct investment return but would likely see increased ridership because of supportive adjacent land use.

Using both joint development and transit-oriented development together can create a virtuous cycle for transit investment. Recognizing that these tools have the potential to enhance transit ridership and even create a revenue stream to support additional investment, the Federal Transit Administration (FTA) encourages transit agencies "to work with the private sector and others to pursue joint development." (FTA Joint Development Circular - C 7050.1B). As the list of successful joint development and transit oriented development projects continues to grow, FTA continues to advocate for new ways to fund projects. Understanding the feasibility of and aligning resources to support such projects will improve federal investment opportunities in Northeast Ohio in the years to come.

$2.4 Billion of Public Transit Investment

Transportation Outlook recommends just under $2.4 billion of investment in the region's public transportation system through 2045. Of that investment, $2.0 billion will be dedicated to general operating expenses of the existing system, $250 million will be reinvested to preserve the existing bus fleet, and approximately $68 million will be allocated toward expansion of the regional public transportation system.

The following table shows the projects recommended in *Transportation Outlook 2045*. All projects are financially constrained and conform to air quality requirements.

Table 7.3-1 | Long Term Transit Recommendations

METRO	
Operating Expenses - Base Service (per year)	**$57,000,000**
Microtransit - Demand Response	
Capital Costs - Base Service (per year)	**$8,625,000**
Annual Bus Fleet Expenditures	
Bus Shelter and Stop Enhancements	
Operating Expenses - Additional Service (per year)	**$500,000**
BRT Service Priority Corridor	
Capital Expenses - Additional Service (one time expense)	**$53,000,000**
BRT Buses	
Maintenance Facility	
Administration Facility	
BRT Capital Expenses	

PARTA	
Operating Expenses - Base Service (per year)	**$9,800,000**
Microtransit - Demand Response	
Capital Costs - Base Service (per year)	**$1,205,000**
Annual Bus Fleet Expenditures	
Bus Shelter and Stop Enhancements	
Capital Expenses - Additional Service (one time expense)	**$1,300,000**
Fare Collection - Pay on Foot EZ Fare	
Ravenna Hub	

Appendix A | Air Quality Conformity Analysis

The purpose of this appendix is to document the manner in which mobile emissions have been forecasted for *Transportation Outlook 2045*.

Summit County and Portage County are part of the U.S. Census-designated eight-county Cleveland-Akron-Lorain Combined Statistical Area (CSA). This area includes: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, and Summit counties. Based on air quality readings, the United States Environmental Protection Agency (USEPA) designated this area for the 8-hour ozone standard as a maintenance area for the 2008 and nonattainment for the 2015 standard.

USEPA also designated several of the counties in this area (including Summit and Portage) as a maintenance area for $PM_{2.5}$ (fine particulate matter) under the 2006 standard. This area includes Cuyahoga, Lake, Lorain, Medina, Portage, and Summit Counties, and a portion of Ashtabula County. In addition, Cuyahoga and Lorain Counties have been designated as a maintenance area under the 2012 standard for $PM_{2.5.}$

Two Metropolitan Planning Organizations (MPOs) serve seven of these counties. The Northeast Ohio Areawide Coordinating Agency (NOACA) serves Cuyahoga, Geauga, Lake, Lorain, and Medina counties. The Akron Metropolitan Area Transportation Study (AMATS) serves Summit and Portage counties. The Erie Regional Planning Commission serves the City of Vermilion in Lorain County. Ashtabula County is not part of a Metropolitan Planning Organization.

New United States Department of Transportation (USDOT) conformity determinations are required every time a new Transportation Improvement Program (TIP) or Regional Transportation Plan is completed. New emissions analyses are required to meet the conformity rule requirement of using the latest planning assumptions. AMATS has updated its travel demand model to conduct this analysis taking into account the latest planning assumptions.

This conformity analysis reflects the aggregate regional mobile emissions generated by vehicles using the transportation system recommended in the Regional Transportation Plan and TIP. Conformity is demonstrated when the forecasted regional emissions are below the applicable State Implementation Plan (SIP) budgets that have been established by Ohio EPA.

Before analysis began an interagency consultation call took place on February 26, 2021. The notes from this call are listed beginning on page 84.

A.1 | Methodology

In order for the Cleveland-Akron-Lorain area to complete the regional emissions analysis, the overall level of pollution (both ozone and $PM_{2.5}$) resulting from mobile sources must be forecasted.

The ozone-related portion of this air quality analysis has to demonstrate that daily Volatile organic compounds (VOC) and nitrogen oxides (NO_x) emissions from mobile sources will not exceed those established in the budget contained in the SIP for ozone, which sets the allowable limits for each pollutant in the Cleveland-Akron-Lorain area. Those budgets were set in January 2017 for the 2008 ozone and in June 2018 for the 2015 ozone standard. These are listed in Tables 1 and 2.

Similarly, the $PM_{2.5}$-related portion of this air quality analysis has to demonstrate that annual direct $PM_{2.5}$ and nitrogen oxides (NO_x) emissions from mobile sources will not exceed those found in the budget established by the Ohio Environmental Protection Agency (OEPA). Those budgets were set in July 2013 for the 2006 $PM_{2.5}$ standard and in January 2015 for the 2012 $PM_{2.5}$ standard as listed in Tables 3 and 4.

NOACA and ODOT are jointly responsible for travel demand modeling and air quality analysis for its area. Emissions for Ashtabula County are generated using current ODOT traffic volume data and growth rates.

The AMATS and ODOT are jointly responsible for travel demand modeling and air quality analysis for the Akron area. In May 2015, forecasted variables were approved as inputs to the model. In _____ 2020, AMATS updated its travel demand model. The air quality analyses documented in this appendix involve the use of the travel demand and emissions models to analyze future regional mobile source emissions. Trip tables have been created using the latest planning assumptions and are based on the most recent forecasts of land use and socioeconomic data produced by AMATS.

In order to determine mobile source impacts on regional ozone and $PM_{2.5}$ levels, all non-exempt (in keeping with 40 CFR 93) TIP projects have been coded into the regional transportation plan travel demand model networks for the analysis years of 2021, 2030, 2040, 2045 and 2050 for ozone and 2022, 2030, 2040, 2045 and 2050 for $PM_{2.5}$. The projects coded in each network are listed in Exhibit A-1 through A-4. Once the AMATS travel demand model was run for each of the analysis years described above, the traffic assignment results were post-processed and input into MOVES2014a.

The AMATS area results have been combined with the NOACA and Ashtabula

County results to complete the conformity analysis for the entire Cleveland-Akron-Lorain ozone and $PM_{2.5}$ non-attainment area. The conformity analysis results for the entire region are available for public comment at the March 30, 2021 Transportation Outlook public meeting.

A.2 | Results

Table A.2-1 shows the results of the MOVES2014a analysis for the entire Cleveland-Akron-Lorain 2008 ozone maintenance area. This analysis must show that VOC and NO_x emissions from mobile sources will not exceed those established in the budget contained in the SIP, which sets the allowable limits for each pollutant. Table A.2-1 confirms ozone precursor emissions do not exceed the budgets for either VOC or NO_x.

Table A.2-1 | Cleveland-Akron-Lorain Mobile Source Ozone Precursor Emissions Forecasts

2008 Volatile Organic Compounds (VOC) (tons/day)					
	2021 Attainment	2030 Budget	2040 Emissions	2045 Emissions	2050 Horizon
NOACA		21.13		13.57	
AMATS		6.22		4.20	
Ashtabula County		0.93		0.58	
TOTAL	**38.85**	**28.28**	**30.80**	**18.35**	

Nitrogen Oxides (NOx) (tons/day)					
	2021 Attainment	2030 Budget	2040 Emissions	2045 Emissions	2050 Horizon
NOACA		26.10		11.71	
AMATS		9.37		5.24	
Ashtabula County		1.56		0.84	
TOTAL	**61.56**	**37.03**	**43.82**	**17.80**	

Table A.2-2 shows the results of the MOVES2014a analysis for the entire Cleveland-Akron-Lorain 2015 ozone non-attainment area. This analysis must show that VOC and NO_x emissions from mobile sources will not exceed those established in the budget contained in the SIP, which sets the allowable limits for each pollutant. Table A.2-2 confirms ozone precursor emissions do not exceed the budgets for either VOC or NO_x.

Table A.2-2 | Cleveland-Akron-Lorain Mobile Source Ozone Precursor Emissions Forecasts

2015 Volatile Organic Compounds (VOC) (tons/day)					
	2021 Attainment	2030 Budget	2040 Emissions	2045 Emissions	2050 Horizon
NOACA		21.13		13.57	
AMATS		6.22		4.20	
Ashtabula County		0.93		0.58	
TOTAL	**38.85**	**28.28**	**30.80**	**18.35**	

Nitrogen Oxides (NOx) (tons/day)					
	2021 Attainment	2030 Budget	2040 Emissions	2045 Emissions	2050 Horizon
NOACA		26.10		11.71	
AMATS		9.37		5.24	
Ashtabula County		1.56		0.84	
TOTAL	**61.56**	**37.03**	**43.82**	**17.80**	

Table A.2-3 shows the results of the MOVES2014a analysis for the Cleveland-Akron-Lorain 2006 $PM_{2.5}$ maintenance area. This analysis must show that direct $PM_{2.5}$ and NO_X emissions from mobile sources will not exceed those found in the 2022 budget. Table A.2-3 confirms emissions do not exceed the budgets for both direct $PM_{2.5}$ and NO_x.

Table A.2-3 | Northeast Ohio Mobile Source $PM_{2.5}$ and Precursor Emissions Forecasts

2006 Direct $PM_{2.5}$ Emissions (Annual Tons)					
	2022 Budget	2030 Emissions	2040 Emissions	2045 Emissions	2050 Horizon
NOACA			505.99	367.7	
AMATS			133.4	106.36	
Ashtabula County			2.19	1.68	
TOTAL	**1,371.35**	**880.89**	**641.58**	**475.74**	

Nitrogen Oxides (NOx) Precursor (Annual Tons)					
	2022 Budget	2030 Budget	2040 Emissions	2045 Emissions	2050 Horizon
NOACA			11,532.80	11.71	
AMATS			2,730.51	5.24	
Ashtabula County			50.33	0.84	
TOTAL	**35,094.70**	**17,263.65**	**14,313.64**	**17.80**	

Table A.2-4 shows the results of the MOVES2014a analysis for the Cleveland-Akron-Lorain 2012 $PM_{2.5}$ maintenance area. This analysis must show that direct $PM_{2.5}$ and NO_X emissions from mobile sources will not exceed those found in the 2022 budget. Table A.2-4 confirms emissions do not exceed the budgets for both direct $PM_{2.5}$ and NO_x.

Table A.2-4 | Northeast Ohio Mobile Source $PM_{2.5}$ and Precursor Emissions Forecasts

2012 Direct $PM_{2.5}$ Emissions (Annual Tons)					
	2022 Budget	2030 Emissions	2040 Emissions	2045 Emissions	2050 Horizon
NOACA			505.99	367.7	
AMATS			133.4	106.36	
Ashtabula County			2.19	1.68	
TOTAL	**1,371.35**	**880.89**	**641.58**	**475.74**	

Nitrogen Oxides (NOx) Precursor (Annual Tons)					
	2022 Budget	2030 Budget	2040 Emissions	2045 Emissions	2050 Horizon
NOACA			11,532.80	11.71	
AMATS			2,730.51	5.24	
Ashtabula County			50.33	0.84	
TOTAL	**35,094.70**	**17,263.65**	**14,313.64**	**17.80**	

Exhibit A.2-1 | 2022 Network

The 2022 Network includes all existing facilities plus the following projects:

Project	Location & Termini	Type of Work
Cleveland-Massillon Rd	NORTON Weber Dr to I-76	Median Turn Lane
Cleveland-Massillon Rd	COPLEY TWP/FAIRLAWN I-77 to Bywood Ave	Widen to 4 Lanes, Roundabout
I-76 / US 224	BARBERTON State Rd / Wooster Rd Interchanges	Reconfigure Interchanges
Massillon Rd (SR 241)	GREEN Raber Rd to SR 619	Widen to 5 Lanes Improve Safety
Massillon Rd (SR 241)	GREEN At Corporate Woods Circle	Roundabout
SR 91	TWINSBURG North of Glenwood Blvd to Cuyahoga County Line	Widen to 4 lanes
Tallmadge Ave (SR 261)	AKRON N. Main St to SR 8	Road Diet, Realign Dayton

Note: All of these projects are assumed 2020 for ozone, however for $PM_{2.5}$ they would move to 2022.

Please note that the following locations were added to all networks due to maintenance of traffic stripping:

Project	Location & Termini	Type of Work
I-76	AKRON US 224 to I-77 (Kenmore Leg)	6 Lanes w/ Interchange Modifications from MOT
I-77	SPRINGFIELD TWP / AKRON Arlington Rd to I-277	8 Lanes w/ Interchange Modifications from MOT

Exhibit A.2-2 | 2022 Network

The 2022 Network includes those projects in the 2020 network plus the following projects:

Project	Location & Termini	Type of Work
I-76 / I-77	AKRON Central Interchange	Reconfigure Interchange
SR 8	AKRON Perkins St to Glenwood Ave	Reconstruct Bridge, Improve Perkins St Ramp Operation
SR 14	STREETSBORO Portage Pointe to Diagonal Rd	Median Turn Lane
Tallmadge Rd	BRIMFIELD TWP At I-76 Interchange	Reconfigure Interchange

Note: All of these projects are assumed 2022 for $PM_{2.5}$; however they would move to 2030 for ozone.

Exhibit A.2-3 | 2030 Network

The 2030 Network includes those projects in the 2022 network plus the following projects:

Project	Location & Termini	Type of Work
SR 91 (Darrow Rd)	HUDSON Ravenna Rd to SR 303	Add a Bypass
SR 91 (Darrow Rd)	TWINSBURG At I-480 Interchange	Reconfigure Interchange
Evans Ave	AKRON CSX Rail Line	RR Grade Separation
Howe Rd	CUYAHOGA FALLS At SR 8 Interchange	Reconfigure Interchange
Arlington Rd	GREEN Boettler Rd to September Dr	Widen to 4 Lanes, Intersection Improvements
I-77	SPRINGFIELD TWP / AKRON Arlington Rd to I-277	Widen to 8 Lanes
I-77	BATH TWP / RICHFIELD / RICHFIELD TWP Ghent Rd to Cuyahoga County Line	Widen to 6 Lanes

Exhibit A.2-4 | 2040 Network

The 2040 Network includes those projects in the 2030 network plus the following projects:

Project	Location & Termini	Type of Work
SR 59 (Kent Rd)	STOW At SR 91 (Darrow Rd)	Additional Capacity, Operational Improvements, Traffic Study, Enhance Transit
Town Park Blvd	GREEN SR 241 (Massillon Rd) to Wise Rd	New Roadway
Town Park Blvd	GREEN Lauby Rd to Wise Rd	New Roadway

A.2.1 | Cleveland & Akron MPOs Transportation Plan and TIP Interagency Consultation Minutes

Present: Akron Metropolitan Area Transportation Study (AMATS)
Erie County Regional Planning Commission (ERPC)
Northeast Ohio Areawide Coordinating Agency (NOACA)
Federal Highway Administration, Ohio Division (FHWA)
Ohio Department of Transportation, Statewide Planning (ODOT)
Ohio Environmental Protection Agency (Ohio EPA)
United States Environmental Protection Agency (U.S. EPA)

Logistics: January 24, 2017, 3:00 p.m., Conference Call

Purpose

A formal interagency consultation process is required in each nonattainment area to address technical and procedural issues related to air quality planning. The Cleveland, Akron, and Erie County Ohio MPOs (NOACA, AMATS and ERPC) are updating their Transportation Plans and 2021-2024 TIPs to accommodate reflect ODOT TRAC major new projects and new construction schedules for existing Plan projects. Plans' horizon year is 2045.

Conformity Analysis Summary

8-Hour Ozone

Attainment Status:

2008 8-Hour Ozone standard – nonattainment area (Federal Register / Vol. 77, No. 98 / Monday, May 21, 2012)
1997 8-Hour Ozone Standard - maintenance area (Federal Register Notice Final Rule 9/15/09)

SIP Status:

Federal Register / Vol. 78, No. 53 / Tuesday, March 19, 2013 – direct final rule adequacy finding for MOVES based 1997 Ozone standard MVEBs

No submittals required under 2008 8-Hour Ozone standard until approved budgets are received. The budgets found adequate for the 1997 standard will satisfy both 1997 and 2008 tests for the time being per USEPA.

8-Hour Geography:

Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, & Summit Counties, OH

Conformity Tests:

1997 Standard 8-Hour budget tests

Analysis Years:

2015 1st Analysis year (a year in the current TIP)
2020 Interim year
2030 Interim year
2040 Plan(s) horizon year

8-Hour Ozone Test	2020 8-Hour Budget	2020 Emissions	2030 8-Hour Budget	2030 Emissions	2040 Emissions
AMATS					
VOC					
NOx					
NOACA					
VOC					
NOx					
Ashtabula County					
VOC					
NOx					
Totals					
VOC	38.85		30.80		
NOx	61.56		43.82		

$PM_{2.5}$

Attainment Status:

Federal Register / Vol. 78, No. 144 / Friday, July 26, 2013 – Proposal to redesignate

SIP Status:

Cleveland Area to attainment for 1997 and 2006 $PM_{2.5}$ Standards – FR notice included an adequacy finding for the MOVES based MVEBs

Geography:

Cuyahoga, Lake, Lorain, Medina, Portage, & Summit Counties and Ashtabula Township, Ashtabula County, OH

Conformity Tests:

Budget tests

Analysis Years:

2015 $PM_{2.5}$ Budget Year and year in current TIP
2022 $PM_{2.5}$ Budget Year
2030 Interim year
2040 Plan(s) horizon year

$PM_{2.5}$ Test	2015 Budget	2020 Emissions	2022 Budget	2022 Emissions	2030 Emissions	2040 Emissions
AMATS						
Direct PM						
NOx						
NOACA						
Direct PM						
NOx						
Ashtabula Township						
Direct PM						
NOx						
Area Totals						
Direct PM	1,371.35		880.89			
NOx	35,094.70		17,263.65			

$PM_{2.5}$ 2012 Standard

Attainment Status:

$PM_{2.5}$ Moderate Nonattainment Area (80 FR 2205 / January 14, 2015 – Cuyahoga and Lorain Counties designated moderate nonattainment area for 2012 Standards)

SIP Status:

Attainment demonstration not due at this time

Geography:

Cuyahoga and Lorain Counties, OH

Conformity Tests:

1997/2006 SIP Maintenance Plan Budget - CUY & LOR subset - tests

Analysis Years:

2021 Attainment year – 1st Analysis year
2022 Budget year
2030 Interim year
2040 Plan(s) horizon year

$PM_{2.5}$ Test	2015* Budget	2020 Emissions	2022* Budget	2022 Emissions	2030 Emissions	2040 Emissions
NOACA						
Direct PM	659.35		463.02			
NOx	18,202.07		8,957.18			

*Cuyahoga and Lorain County budget totals from the 1997/2006 PM2.5 SIP Maintenance Plan

For additional detail on these topics, visit the USEPA Web site at:

http://www.epa.gov/air/ozonepollution/
(general ozone information)
http://www.epa.gov/ttn/naaqs/ozone/ozonetech/
(technical ozone information)
http://www.epa.gov/air/particlepollution/fastfacts.html
(fast facts on particulate matter)
http://www.epa.gov/air/particlepollution/basic.html
(general particulate matter information)
http://www.epa.gov/ttn/naaqs/standards/pm/s_pm_index.html
(technical particulate matter information)

Discussion

- All parties agreed that MOVES2014a model will be used for the analysis
- The horizon year for the plan is 2045.
- NOACA is amending its Transportation Plan and 2017-2019 TIP to accommodate CUY IR 480-18.42 (L&R) Deck: PID 90591 and performed the required conformity analysis. The proposed amendment of NOACA's long-range transportation plan (Plan) and the Transportation Improvement Program (TIP) will be presented to the Board of Directors at its meeting on March 10, 2017.
- NOACA has reviewed old and new project lists and the TRAC major new projects and construction schedules for existing Plan projects. NOACA received confirmation from ODOT District 3and 12 that their priorities are represented.
- CUY IR 480-18.42 (L&R) Deck: PID 90591 will be reflected in the 2022 network. There have been no other changes from the 2035 Plan.
- Analyses for ozone – current SIP budgets (d 2020) for analysis year networks 2020, 2022, 2035 and 2040
- Consistent with the regulations, have existing networks for 2030 and plan horizon year of 2040
- All agreed that analysis for 2035 is not needed.
- Tables for 2006 $PM_{2.5}$ NAAQS – current SIP budgets for (1997, 2006), for analysis year networks 2020, 2022, 2030, and 2040
- Need to run analysis for 2012 $PM_{2.5}$ NAAQS in Cuyahoga and Lorain Counties – using analysis years 2020, 2021, 2022, 2030 and 2040
- Send interagency consultation minutes to OEPA and US EPA for concurrence

- PM requires 2022 but not 2020
- Need to confirm with Tony Maietta at EPA that budgets are correct
- NOACA inquired if the current changes can be considered to be consistent with the LRTPs current fiscal constraint analysis. FHWA/ODOT responded that fiscal constraint can be handled that way for NOACA, but that it may not be possible to do the same for AMATS
- Ozone analysis for Ashtabula County and PM Ashtabula Township will be performed by ODOT
- There will also need to be concurring legislation passed by the Erie Regional Planning Commission (ERPC)
- Public involvement processes for each agency shall be followed. Public involvement of the TIP will be concurrent with the STIP public involvement. Public involvement will include the plan and TIP project documentation, interagency consultation minutes, and conformity analysis results
- Comments received as a result of public involvement will be addressed and added to the documentation
- NOACA and AMATS Boards will pass resolutions to adopt the plan and TIP amendments. Tentative dates for Board resolution are AMATS – May 18th (TAC) and 25th (Policy) and NOACA- June 9th. NOACA will coordinate with ERPC to secure its resolution.

Appendix B | AMATS Financial Plan

It is critical that *Transportation Outlook 2045* provide a vision for the future while also maintaining a realistic perspective on the costs of transportation projects and anticipated revenues. The purpose of the Financial Plan is to ensure that *TO2045* is in fiscal constraint. Fiscal constrain means that future projects in the plan do not exceed expected revenues.

The Financial Plan forecasts revenues and project costs. Project costs and revenues must be projected in year of expenditure dollars. This means that both costs and revenues needed to be assigned inflation rates.

Overall, AMATS projected $7,706,815,926 of funds to be available. This analysis ensures *Transportation Outlook 2040* is in fiscal constraint.

B.1 | Highway Recommendation Methodology

In order to maintain fiscal constraint for future highway projects, AMATS first developed an estimate of highway revenues. The revenues are shown below:

Table B.1-1 | Highway Revenues Through 2045

Federal	$2,083,085,095
State	$1,495,095,569
Local	$1,755,683,697
Total Revenue	**$5,334,584,361**

The growth rates used to project federal and state funding were based on estimates provided by ODOT. These growth rates were applied to the historical average and compounded to determine the financial forecast projections for short, medium, and long term years of the Plan.

For local funds historical data from the BMV for license plate registration fees and permissive taxes was obtained for 2019 to 2020 for Summit, Portage, and Wayne Counties. Historic fuel tax data distributed to the counties, municipalities, and townships was obtained for 2019 to 2020 from the Ohio Department of Taxation. Due to the pandemic, AMATS averaged 2019 and 2020 and then applied a 10 percent growth rate for 2022 and 5 percent in 2023. In 2024 through 2045 a 0% growth rate was applied to that historical average and all years were totaled to determine the 2045 financial forecast.

With revenues established, it was necessary to assign inflation costs to each project recommendation. The table below shows the rates of inflation used to forecast project costs. Highway projects were assigned inflation rates based on the Ohio Department of Transportation's (ODOT) January of 2021 Construction Cost Outlook and Forecast through 2025. AMATS assumed a flat 2.0% per year for the out years. All projects are shown in 2021 costs so the inflation rate is 0.0%.

Table B.1-2 | Inflation Rate Per Year

2021	0.0%
2022	4.7%
2023	3.0%
2024	2.1%
2025	2.5%
2026-2045	2.0% per year

With inflation rates established, the next step was to estimate what year projects would take place to get an accurate inflated cost. The table on the following page shows project cost in year of expenditure dollar and the time band for which the project is expected to occur.

Preservation funds were estimated over the life of the plan and were assumed to be distributed equally over the life of the plan. The AMATS program is included in total and considered to be in year of expenditure dollars. Because the SR 8 bridge project is a preservation project, its costs were assumed to be part of the overall preservation funds. The I-77 widening from Ghent Rd to the Ohio Turnpike is made up of 80 percent preservation funds and 20 percent for the additional lane. The plan also shows funds reserved for unspecified safety and operation projects, as well as $35 million reserved for bicycle and pedestrian enhancements. The table above demonstrates fiscal constraint for highway recommendations in *Transportation Outlook 2045*.

Table B.1-3 | Highway Financial Constraint Analysis (2022-2045 Fiscal Year)

Total Revenue				**$5,334,585,361**
Maintenance Recommendations		**Year of Expenditure**	**Current Cost**	**Year of Expenditure Cost**
	Pavement Resurfacing	Ongoing	$ (1,248,780,000)	$ (1,575,482,653)
	Pavement Replacement	Ongoing	$ (163,271,250)	$ (205,985,860)
	Bridge Preservation	Ongoing	$ (2,369,525,047)	$ (2,989,434,164)
AMATS Program 2017-2022	2022-2025			
	AMATS Programmed Projects	2022-2025	$ (90,890,822)	$ (90,890,822)
AMATS Ongoing Regionwide Improvements				
	Bike and Pedestrian	Ongoing	$ (35,000,000)	$ (35,000,000)
	Transit Improvements	Ongoing	$ (20,000,000)	$ (20,000,000)
	Safety and Operational	Ongoing	$ (41,188,505)	$ (41,188,505)
Freeway Recommendations				
	Recommendation	*Year of Expenditure*	*Current Cost*	*Year of Expenditure Cost*
	I-76 "Braid" (Central Interchange)	2027	$ (55,000,000)	Included in Preservation
	I-76 Kenmore Leg	2027	$ (85,000,000)	Included in Preservation
	I-77 between Ghent Rd and I-80 (Ohio Turnpike)	2026	$ (133,500,000)	$ (26,700,000)
	SR 8 between Perkins St Interchange and Glenwood Ave Interchange	2026	$ (146,291,000)	Included in Preservation
Highway Recommendations				
Community	*Recommendation*	*Year of Expenditure*	*Current Cost*	*Year of Expenditure Cost*
Akron	Arlington Rd from Waterloo Rd to E Market St	2032-2037	$ (21,904,000)	$ (27,518,258)
Akron	Copley Rd from I-77 to Cedar St	2032-2037	$ (13,400,000)	$ (16,834,581)
Akron	E Market St from SR 8 to Case Ave	2026-2031	$ (7,900,000)	$ (8,812,996)
Akron	Memorial Pkwy / Hickory St (Intersection)	2026-2031	$ (2,750,000)	$ (3,067,815)
Akron	Mull Ave from White Pond Dr to S Hawkins Ave	2026-2031	$ (4,800,000)	$ (5,354,732)
Aurora	Bissell Rd / Pioneer Trl (Intersection)	2026-2031	$ (2,100,000)	$ (2,342,695)
Aurora	Mennonite Rd / Page Rd (Intersection)	2026-2031	$ (2,100,000)	$ (2,342,695)
Aurora	SR 43 / Kingston Dr (Intersection)	2032-2037	$ (2,100,000)	$ (2,638,255)
Aurora	SR 43 / Mennonite Rd (Intersection)	2026-2031	$ (2,100,000)	$ (2,342,695)
Barberton	4th St from Lake Ave to Norton Ave	2026-2031	$ (2,670,000)	$ (2,978,570)
Barberton	Barber Rd / 4th St / Norton Ave (Intersection)	2026-2031	$ (2,500,000)	$ (2,788,923)
Barberton	SR 619 (Wooster Rd N) from Hopocan Ave to I-76 Interchange	2038-2045	$ (4,512,000)	$ (6,383,629)
Cuyahoga Falls	Barney's Busy Corners (Intersection)	2032-2037	$ (13,430,000)	$ (16,872,270)
Cuyahoga Falls	Portage Trail from 13th St to Front St	2026-2031	$ (2,424,000)	$ (2,704,140)
Cuyahoga Falls	Steels Corners Rd from State Rd to Bridgewater Pkwy	2038-2045	$ (6,500,000)	$ (9,196,274)
Green	Arlington Rd from Boettler Rd to September Dr	2026-2031	$ (12,300,000)	$ (13,721,500)

Table B.1-3 | Highway Financial Constraint Analysis (2022-2045 Fiscal Year)

Highway Recommendations (Continued)				
Community	*Recommendation*	*Year of Expenditure*	*Current Cost*	*Year of Expenditure Cost*
Green	Arlington Rd / Greensburg Rd (Intersection)	2026-2031	$ (2,500,000)	$ (2,788,923)
Green	Mayfair Rd / Graybill Rd (Intersection)	2026-2031	$ (2,500,000)	$ (2,788,923)
Green	Raber Rd / Mayfair Rd (Intersection)	2031-2037	$ (2,500,000)	$ (2,788,923)
Green	SR 241 (Massillon Rd) / Graybill Rd (Intersection)	2031-2037	$ (2,500,000)	$ (2,788,923)
Green	SR 619 (E Turkeyfoot Lake Rd) / Mayfair Rd (Intersection)	2026-2031	$ (2,500,000)	$ (2,788,923)
Hudson	Citywide	2026-2031	$ (3,650,000)	$ (4,071,827)
Kent	Main St from SR 43 (Mantua St) to Depeyster St	2038-2045	$ (600,000)	$ (848,887)
Kent	SR 261 from Cherry St to SR 59 (Kent-Ravenna Rd)	2032-2037	$ (10,000,000)	$ (12,563,120)
Kent	SR 43 (N Mantua St) from Kent High School to Davey Tree Entrance	2038-2045	$ (750,000)	$ (1,061,109)
Kent	SR 43 (River St & Gougler St) from SR 59 (Haymaker Pkwy) to Fairchild Ave	2038-2045	$ (1,000,000)	$ (1,414,811)
Kent	SR 59 (W Main St) from Kent West Corp Limit to Longmere Dr / Main St	2032-2037	$ (6,000,000)	$ (7,537,872)
Macedonia	SR 8 from Highland Rd to Valley View Rd	2026-2031	$ (5,000,000)	$ (5,577,846)
New Franklin	SR 619 (W Turkeyfoot Lake Rd) from Howland Ave to S Turkeyfoot Rd	2038-3045	$ (2,000,000)	$ (2,829,623)
New Franklin	SR 93 (Manchester Rd) from Nimisila Rd to SR 619 (W Turkeyfoot Lake Rd)	2032-2037	$ (2,500,000)	$ (3,140,780)
New Franklin	SR 93 (Manchester Rd) / Nimisila Rd (Intersection)	2026-2031	$ (11,664,000)	$ (13,011,998)
Norton	Barber Rd from I-76 to SR 261 (Wadsworth Rd)	2032-2037	$ (5,000,000)	$ (6,281,560)
Norton	Barber Rd from Norton South Corp Limit to I-76	2026-2031	$ (3,300,000)	$ (3,681,378)
Norton	S. Medina Line Rd / Greenwich Rd (Intersection)	2032-2037	$ (2,100,000)	$ (2,638,255)
Norton	SR 261 / Hametown Rd (Intersection)	2032-2037	$ (2,100,000)	$ (2,638,255)
Portage County Engineer	Cleveland Rd / Infirmary Rd / Wall St (Intersection)	2032-2037	$ (2,100,000)	$ (2,342,695)
Portage County Engineer	Knapp Rd over West Branch	2026-2031	$ (1,100,000)	Included in Preservation
Portage County Engineer	Mogadore Rd / Old Forge Rd (Intersection)	2038-2045	$ (2,500,000)	$ (3,537,028)
Portage County Engineer	SR 14 / Price Rd (Intersection)	2026-2031	$ (2,100,000)	$ (2,342,695)
Portage County Engineer	SR 82 / Chamberlain Rd (Intersection)	2038-2045	$ (2,100,000)	$ (2,971,104)
Portage County Engineer	US 224 / Waterloo Rd from SR 44 to New Milford Rd	2026-2031	$ (2,000,000)	$ (2,231,138)
Ravenna	Cleveland Rd / Sycamore St / Highland Ave (Intersection)	2032-2037	$ (2,750,000)	$ (3,454,858)
Ravenna	SR 59 (W Main St) from Ravenna West Corp Limit to Grant St	2026-2031	$ (4,100,000)	$ (4,573,833)
Richfield	Brecksville Rd / Broadview Rd / Wheatley Rd (Intersection)	2026-2031	$ (2,100,000)	$ (2,342,695)
Richfield	SR 303 (W. Streetsboro St) / SR 176 (Broadview Rd) (Intersection)	2026-2031	$ (2,500,000)	$ (2,788,923)
Rittman	Industrial St from Ohio St to Sunset Dr	2038-2045	$ (1,000,000)	$ (1,414,811)
Rittman	N Main St / E Ohio Ave (Intersection)	2038-2045	$ (2,100,000)	$ (2,971,104)
Rittman	Ohio Ct / E Ohio Ave (Intersection)	2032-2037	$ (1,900,000)	$ (2,386,993)
Rittman	Sunset Dr from Main St to Gish Rd	2026-2031	$ (800,000)	$ (892,455)
Stow	Call Rd / Young Rd (Intersection)	2038-2045	$ (750,000)	$ (1,061,109)

Table B.1-3 | Highway Financial Constraint Analysis (2022-2045 Fiscal Year)

Highway Recommendations (Continued)				
Community	*Recommendation*	*Year of Expenditure*	*Current Cost*	*Year of Expenditure Cost*
Stow	Fishcreek Rd from SR 91 (Darrow Rd) to Laurel Woods Dr	2032-2037	$ (500,000)	$ (628,156)
Stow	Seasons Rd / Norton Rd from SR 8 to SR 91 (Darrow Rd)	2026-2031	$ (7,000,000)	$ (7,808,984)
Stow	Seasons Rd / Norton Rd / Hudson Dr (Intersection)	2026-2031	$ (2,000,000)	$ (2,231,138)
Stow	Citywide	2032-2037	$ (4,500,000)	$ (5,653,404)
Streetsboro	Frost Rd from Greentree Pkwy to Sunny Ln	2032-2037	$ (6,500,000)	$ (8,166,028)
Streetsboro	SR 14 / SR 43 / SR 303 (Intersection)	2038-2045	$ (1,600,000)	$ (2,263,698)
Streetsboro	SR 303 from SR 14 to Kirby Ln	2026-2031	$ (6,750,000)	$ (7,530,091)
Streetsboro	SR 43 from Jude Ave to Seasons Rd	2038-2045	$ (5,000,000)	$ (7,074,057)
Streetsboro	SR 43 from Frost Rd to Streetsboro North Corp Limit	2026-2032	$ (5,000,000)	$ (6,281,560)
Summit County Engineer	Killian Rd from Arlington Rd to Canton Rd	2026-2031	$ (5,500,000)	$ (6,135,630)
Summit County Engineer	Krumroy Rd from Arlington Rd to Swinehart Rd	2032-2037	$ (4,100,000)	$ (5,150,879)
Summit County Engineer	N. Main St / State Rd from Howard St to High Bridge Rd	2026-2031	$ (40,000,000)	Included in Preservation
Summit County Engineer	Riverview Rd over Yellow Creek (North of Bath Rd)	2032-2037	$ (1,100,000)	$ (1,227,126)
Summit County Engineer	S. Main St from Portage Lakes Dr to Axline Ave	2026-2031	$ (10,250,000)	$ (11,434,583)
Summit County Engineer	Steels Corners Rd Bridge from Windham Ridge Dr to Bridgewater Pkwy	2038-2045	$ (6,000,000)	Included in Preservation
Summit County Engineer	Valley View Rd from Boyden Rd to Olde Eight Rd	2032-2037	$ (1,000,000)	$ (1,256,312)
Tallmadge	East Ave from Rec Center Drive to Parliament Dr	2026-2031	$ (8,600,000)	$ (9,593,894)
Tallmadge	Howe Rd from SR 91 (North Ave) to SR 261 Roundabout	2026-2031	$ (8,200,000)	$ (9,147,667)
Tallmadge	Southeast Ave / Eastwood Ave / S Munroe Rd	2032-2037	$ (5,000,000)	$ (6,281,560)
Twinsburg	Ravenna Rd / Broadway Ave / Shepard Rd / Richmond Rd	2032-2037	$ (1,712,000)	$ (2,150,806)
Twinsburg	SR 91 (Darrow Rd) from Ravenna Rd to Tinkers Creek Bridge near Twin Plaza	2026-2031	$ (2,500,000)	$ (2,788,923)
Twinsburg	Citywide	2026-2031	$ (3,600,000)	$ (4,016,049)
		Total Expenses	$ (4,726,412,624)	$ (5,334,584,361)
		Balance		$ (0)

B.2 | Transit Recommendation Methodology

Transit funding data for both Metro RTA and PARTA was collected over the last five years to estimate the amount of federal, state and local funding expected to be available. The growth rates used to forecast transit funding were difficult to project due to the ongoing pandemic and the amount of funding transit agencies received through the CARES Act as well as potential for future stimulus funds. AMATS assumed federal funds would grow by 10 percent in 2022, 5 percent in 2023 and then 0 percent through 2045.

Local funds were projected based on past transit financials reported in each agencies' CAFR. The 2020 estimated totals for METRO and PARTA were added together and were used as the baseline for future projections. The growth rates used to forecast local transit funding were assumed to be 10 percent in 2022, 5 percent in 2023, 2.5 percent in 2024 and then 0% through 2045.

Table B.2-1 | Transit Revenues Through 2045

Federal and State	$2,083,085,095
Local	$1,755,683,697
AMATS Revenue	$5,334,584,361

Transit costs were inflated based on ODOT's January of 2021 Construction Cost Outlook and Forecast through 2025. AMATS used ODOT's short term inflation rate for transit projects through 2025. A 2 percent inflation rate was estimated for years 2026-2045. The inflation rate applied to projects is as follows:

Table B.2-2 | Inflation Rate Per Year

2021	0.0%
2022	4.7%
2023	3.0%
2024	2.1%
2025	2.5%
2026-2045	2.0% per year

With inflation rates established, the next step was to estimate what year projects would take place to get an accurate inflated cost. The following table shows project cost in year of expenditure dollar and the time band for which the project is expected to occur. Operating expenses to maintain the system were projected annually and operation expenses for additional new service were added when service is projected to start. Some recommendations for Metro and PARTA are considered revenue neutral as they will include reworking existing route structure to provide new types of service within the same operating costs. With all the recommendations included and placed in the year of expenditure, the following table demonstrates fiscal constraint.

Table B.2-3 | Transit Fiscal Constraint Analysis (2022-2045 Fiscal Year)

REVENUE			
Federal and State Revenue	$	529,231,450	
Local Revenue	$	1,843,000,115	
AMATS Revenue	$	20,000,000	
METRO			
Operating Expenses - Base Service	$	(1,782,892,686)	2022-2045
Microtransit - Demand Response			
Capital Costs - Base Service			
Annual Bus Fleet Expenditures	$	(207,314,785)	2022-2045
Bus Shelter and Stop Enhancements	$	(5,500,000)	2022-2045
Operating Expenses - Additional Service			
BRT Service Priority Corridor	$	(12,425,973)	2028-2045
Capital Expenses - Additional Service			
BRT Buses	$	(5,803,190)	2028
Maintenance Facility	$	(18,000,174)	2030
Administration Facility	$	(5,001,070)	2030
BRT Capital Expenses	$	(25,406,001)	2028
PARTA			
Operating Expenses - Base Service	$	(290,605,726)	2022-2045
Microtransit - Demand Response			
Capital Costs - Base Service			
Annual Bus Fleet Expenditures	$	(37,534,583)	2022-2045
Bus Shelter and Stop Enhancements	$	(156,394)	2022-2045
Capital Expenses - Additional Service			
Fare Collection - Pay on Foot EZ Fare	$	(334,671)	2026
Ravenna Hub	$	(1,256,312)	2032-2037
Balance	$	(0)	

B.3 | Bicycle and Pedestrian Recommendation Methodology

Bicycle and Pedestrian improvements are funded through the estimated highway revenues. AMATS reserved over $35 million for potential bicycle and pedestrian improvements in the greater Akron area. Bicycle and pedestrian project costs are inflated based on the highway methodology. The table below demonstrates how funds reserved for bicycle and pedestrian projects will be spent and are inflated to year of expenditure. Bicycle and Pedestrian improvements are assumed to be covered mostly through additional local or state funds outside of funding projected by AMATS. According to the AMATS Funding Policy, only $700,000 may be used on bicycle or pedestrian project per round of funding, therefore AMATS assumes that bicycle and pedestrian projects will either receive funds in multiple rounds or local or state funds will cover the remaining construction cost.

Table B.2-1 | Bicycle and Pedestrian Financial Constraint Analysis (2022-2045 Fiscal Year)

Bicycle and Pedestrian Recommendations					**AMATS Funds Available**	**$ 35,000,000**
Community	*Recommendation*	*Distance (Miles)*	*Current Cost*	*Time Band*	*Year of Expenditure Cost*	
Akron	Rubber City Heritage Trail - West (from Exchange St to Towpath Trail)	4.09	$ 4,090,000	2026-2031	$ (1,561,796.75)	$ (1,400,000)
Akron	Rubber City Heritage Trail - East (from Seiberling St to Spartan Trail)	3.92	$ 3,920,000	2032-2037	$ (4,924,743)	$ (700,000)
Aurora / Mantua Twp	Headwaters Trail (from Mantua Center Rd to Cuyahoga County Line)	7.93	$ 7,930,000	2026-2031	$ (8,846,463)	$ (1,400,000)
Aurora	Aurora Trail Connection (from Sunny Lake to RECOMMENDED Headwaters Trail)	1.02	$ 1,020,000	2032-2037	$ (1,281,438)	$ (700,000)
Aurora	Aurora Trail Connection (from Treat Rd Quarry to RECOMMENDED Headwaters Trail)	0.75	$ 750,000	2038-2045	$ (1,061,109)	$ (700,000)
Barberton	3 Creeks - Silver Creek Trail (from Magic Mile to Lake Dorothy)	2.49	$ 2,490,000	2038-2045	$ (3,522,880)	$ (700,000)
Barberton	Magic Mile (from Lake Anna to Robinson Ave)	0.63	$ 630,000	2032-2037	$ (791,477)	$ (700,000)
New Franklin	Portage Lakes Trail (from Towpath Trail to Metro-Sandyville Local RR)	5.31	$ 5,310,000	2038-2045	$ (7,512,648)	$ (700,000)
Chippewa Twp / Clinton	Heartland Trail (from Heartland Trail - Marshallville Terminus to Towpath Trail)	6.54	$ 6,540,000	2038-2045	$ (9,252,866)	$ (700,000)
Green	Willadale Trail (from Thursby Rd / Southgate Park to Koons Rd)	1.07	$ 1,070,000	2026-2031	$ (1,193,659)	$ (700,000)
Green	Koons Bike Trail (from Koons Rd to Roydean Dr)	0.69	$ 690,000	2026-2031	$ (769,743)	$ (690,000)
Green	Roydean Trail (from Roydean Dr to Greensburg Rd)	0.18	$ 180,000	2026-2031	$ (200,802)	$ (200,802)
Green	Greensburg Trail (from Greensburg Rd to Shriver / Steese Split)	0.79	$ 790,000	2032-2037	$ (881,300)	$ (700,000)
Green	Greensburg Trail Extension (from Shriver / Steese Split to Shriver Rd)	0.26	$ 260,000	2032-2037	$ (326,641)	$ (326,641)
Green	Greensburg Trail Extension (from Shriver / Steese Split to Steese Rd)	0.51	$ 510,000	2032-2037	$ (640,719)	$ (640,719)
Hudson	Middleton Rd (from SR 91 to Stow Rd)	1.54	$ 1,848,000	2032-2037	$ (2,321,665)	$ (700,000)
Hudson	SR 91 (from Norton Rd to Stone Hill Dr)	1.75	$ 2,100,000	2032-2037	$ (2,638,255)	$ (700,000)
Hudson	SR 303 (from Hayden Pkwy toStow Rd)	0.68	$ 816,000	2032-2037	$ (1,025,151)	$ (700,000)
Kent	Freedom Trail Extension (from Middlebury Rd to SR 43)	2.73	$ 2,730,000	2038-2045	$ (3,862,435)	$ (700,000)
Kent	East Main St Sidepath (from Willow St to Horning Rd)	0.72	$ 720,000	2026-2031	$ (803,210)	$ (700,000)
Kent	The Portage Trail - Mill Run Segment (from The Portage at Tannery Park to The Portage at Brady's Leap)	0.26	$ 260,000	2026-2031	$ (290,048)	$ (290,048)
Barberton / Copley / Norton	3 Creeks - Pigeon Creek / Wolf Creek / Wadsworth Trail (from Hopocan Ave to I-77)	7.37	$ 7,370,000	2038-2045	$ (10,427,160)	$ (1,400,000)
Norton	Medina Line Trail (from Medina Line Rd to Lake Dorothy)	2.13	$ 2,130,000	2038-2045	$ (3,013,548)	$ (700,000)
Norton	Norton Trail (from Silver Creek to RECOMMENDED Medina Line Trail)	1.06	$ 1,060,000	2032-2037	$ (1,331,691)	$ (700,000)
Norton	Easton Rd (from Greenwich Rd to Oser Rd)	0.85	$ 1,020,000	2038-2045	$ (1,443,108)	$ (700,000)
Norton	Cleveland Massillon Rd (from Greenwich Rd to Norton Branch Library)	0.37	$ 444,000	2038-2045	$ (628,176)	$ (628,176)
Portage Park District	The Portage Trail East - N of the Arsenal (from Peck Rd to Trumbull County Line)	11.88	$ 11,880,000	2038-2045	$ (16,807,959)	$ (1,400,000)

Table B.2-1 | Bicycle and Pedistrian Financial Constraint Analysis (2022-2045 Fiscal Year)

Bicycle and Pedestrian Recommendations (Continued)						
Community	Recommendation	*Distance (Miles)*	*Current Cost*	*Time Band*	*Year of Expenditure Cost*	
Portage Park District	The Portage Trail East - S of the Arsenal (from Peck Rd to Trumbull County Line)	14.82	$ 14,820,000	2038-2045	$ (20,967,504)	$ (1,695,235)
Portage Park District	Franklin Connector (from Hudson Rd to Cuyahoga River)	2.95	$ 2,950,000	2032-2037	$ (3,706,120)	$ (700,000)
Ravenna	Hike & Bike Downtown Connection (from Prospect St to The Portage Hike & Bike Trail)	0.68	$ 680,000	2038-2045	$ (962,072)	$ (700,000)
Richfield	Wheatley Rd (from Brecksville Rd to Kinross Lakes Pkwy)	0.32	$ 384,000	2026-2031	$ (428,379)	$ (428,379)
Rittman / Chippewa Twp	County Line Trail - North Extension (from County Line Trail terminus to Medina County Line)	1.64	$ 1,640,000	2038-2045	$ (2,320,291)	$ (700,000)
Hudson / Stow	Veterans Trail / Akron Secondary (from Springdale Rd to Veterans Park)	4.60	$ 4,600,000	2038-2045	$ (6,508,132)	$ (700,000)
Akron / Cuyahoga Falls / Silver Lake / Stow	Veterans Trail / Akron Secondary (from Freedom Trail to Graham Rd)	7.14	$ 7,140,000	2038-2045	$ (10,101,753)	$ (1,400,000)
Stow	SR 91 / Darrow Rd (from Graham Rd to Fishcreek Rd)	2.35	$ 850,542	2038-2045	$ (1,203,356)	$ (700,000)
Streetsboro	Streetsboro Trail Connection (from Tinkers Creek/Old Mill Rd to Clare Wilcox Park)	4.58	$ 4,580,000	2038-2045	$ (6,479,836)	$ (700,000)
Summit Metroparks	Highbridge Trail (from Towpath Trail to Front St)	2.65	$ 8,350,000	2026-2031	$ (9,315,002)	$ (1,400,000)
Summit Metroparks	Sagamore Connector Trail (Towpath Trail to Bike & Hike Trail near Valley View)	1.50	$ 2,700,000	2032-2037	$ (3,392,042)	$ (700,000)
Summit Metroparks	Liberty Trail (from SR 82 to Cuyahoga County Line)	2.75	$ 2,650,000	2038-2045	$ (3,749,250)	$ (700,000)
Summit Metroparks	Stanford Trail (from Towpath Trail to Bike & Hike Trail)	1.68	$ 1,352,400	2038-2045	$ (1,913,391)	$ (700,000)
Summit Metroparks	Ohio-to-Erie Trail (from Wayne County Line to Towpath Trail)	7.20	$ 5,796,000	2032-2037	$ (7,281,584)	$ (700,000)
Tallmadge	Pedestrian Tunnel (from between West Ave and Northwest Ave to center of Tallmadge Circle)	0.10	$ 1,000,000	2038-2045	$ (1,414,811)	$ (700,000)
Twinsburg	SR 91 (from Summit Commerce Park to Highland Rd	0.82	$ 984,000	2038-2045	$ (1,392,174)	$ (700,000)
Twinsburg	SR 82 (from Hadden Rd to Church St)	0.63	$ 756,000	2032-2037	$ (949,772)	$ (700,000)
Twinsburg	Park Loop Trail (from Center Valley Bikeway to Center Valley Bikeway)	0.92	$ 920,000	2038-2045	$ (1,301,626)	$ (700,000)
					$ (170,747,787)	$ (0)

Appendix C | Environmental Justice Analysis

C.1 | Introduction

In accordance with the Goals and Objectives of the AMATS Regional Transportation Plan, *Transportation Outlook*, the transportation system should reflect and support the values and planning objectives of area communities and neighborhoods by ensuring that the planning process is conducted in conformance with Title VI of the Civil Rights Act of 1964 and the environmental justice requirements of Presidential Executive Order #12898 of 1994.

The United States Environmental Protection Agency (EPA) Office of Environmental Justice defines environmental justice as:

The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including racial, ethnic, or socio-economic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local and tribal programs and policies.

Consequently, programs or activities that use federal funds must make a meaningful effort to involve low-income and minority groups in the process to make decisions regarding the use of federal funds. It also means that agencies using federal funds must attempt to identify and address any disproportionately high and adverse human health and environmental effects on minority and low-income groups, which may result from the implementation of their plans and programs.

Meaningful public involvement means that people have an opportunity to participate in decisions about activities that may affect their environment or health. The public's contribution should influence the decision-making process. And the public's concerns should be considered in the decision making process. Accordingly, the decision-makers should seek out and facilitate the involvement of those persons potentially affected.

According to Presidential Executive Order #12898, disproportionately high and adverse effects are those that will be predominately borne by minority or low-income groups; or those which will be suffered by minority and low-income groups in a manner that is appreciably more severe or greater in magnitude than those which will be suffered by non-minority and non-low-income groups.

In keeping with the environmental justice requirements that the recipients of federal funds make greater efforts to involve low-income and minority populations in the decision-making process, the public involvement activities conducted by AMATS ensure that low-income, minority individuals, and community groups have the opportunity to participate in the transportation planning process.

Community groups and social service agencies representing minority and low-income populations are included on the AMATS public notifications list. These groups are made aware of opportunities to participate in the planning process by advertising public meetings in three newspapers: 1) The Akron Beacon Journal; 2) The Kent-Ravenna Record Courier; and 3) The Reporter (a publication that serves the African-American community). Draft planning documents and meeting notices are provided directly to AMATS members and social service agencies via e-mail, and are made available on the AMATS website, amatsplanning.org. In addition, the AMATS website can be viewed in a number of different languages. AMATS has also enhanced its presence on several social media platforms such as Facebook and Twitter, where public meetings are advertised and comments may be submitted. These efforts include live and recorded meetings with opportunities to submit questions and feedback directly to the staff.

The purpose of environmental justice principles and procedures is to improve all levels of transportation decision making. This approach hopes to:

- make better transportation decisions that meet the needs of all people
- design transportation facilities that fit more harmoniously into communities;
- enhance the public-involvement process; and provide minority and low-income populations with opportunities to learn about and improve transportation
- improve data collection, monitoring, and analysis tools that assess the needs of, and analyze the potential impacts on minority and low-income populations;
- cooperate with other public and private programs on a continuous basis in order to achieve a comprehensive vision for communities
- avoid disproportionately high and adverse impacts on minority and low-income populations
- minimize or mitigate unavoidable impacts by identifying concerns early in the planning phase and providing offsetting initiatives and enhancement measures to benefit affected communities and neighborhoods

Current efforts to support environmental justice are a consequence of Title VI of the Civil Rights Act, as amended, and subsequent statutes, executive orders and federal and state guidance to promote and enforce non-discrimination and the fair distribution of benefits and burdens associated with federal programs, policies and activities. Both Title VI and environmental justice aim to ensure full and fair participation and integration

of the public into the planning process. The Federal Transit Administration's (FTA) most recent release of guidance found in Circular 4703.1 (August 2012) reiterates the federal government's long-standing principles of environmental justice:

- To avoid, minimize, and mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations

C.2 | Methodology

In addition to involving low-income and minority populations in the planning process, environmental justice also means assessing the impact of transportation plans, programs, and policies on low-income and minority populations. In order to accomplish this, the following questions must be considered:

- What are low-income and minority populations?
- How should these populations be identified?
- Which environmental impacts should be considered?
- What are the potential impacts of recommended projects on low-income and minority populations?
- What is the overall level of accessibility in low-income and minority neighborhoods?
- What is the overall level of investment in transportation infrastructure in areas with above average concentrations of minority and low-income populations?

C.2.1 | Definitions

According to the latest United States Department of Transportation (USDOT) *Order 5610.2(a) on Environmental Justice*, contained in the *Federal Register* (May 2, 2012):

Low-Income is defined as a person whose median household income is at or below the Department of Health and Human Services (HHS) poverty guidelines. The Federal Highway Administration (FHWA) reiterates this definition with Order 6640.23A (issued in June 2012). The 2010 poverty level for median household income for a family of four is equal to or less than $22,350. The *low-income population* means any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed project, program, policy or activity.

Minority is defined as a person who is: 1) Black (a person having origins in any of the black racial groups of Africa); 2) Hispanic or Latin (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race); 3) Asian (a person having origins in any of the original peoples of the Far East, Southeast Asia or the Indian subcontinent); 4) American Indian and Alaskan Native (a person having origins in any of the original people of North America, South America (including Central America), and who maintain cultural identification through tribal affiliation or community recognition; or 5) Native Hawaiian or other Pacific Islander (a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands). *Minority population* means any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed project, program, policy or activity.

Adverse effects is defined as the totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to: bodily impairment, infirmity, illness or death; air, noise, and water pollution and soil contamination; destruction or disruption of man-made or natural resources; destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community's economic vitality; destruction or disruption of the availability of public and private facilities and services; vibration; adverse employment effects; displacement of persons, businesses, farms, or nonprofit organizations; increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community; and the denial of, reduction in, or significant delay in the receipt of, benefits of US DOT programs, policies, or activities.

A disproportionately high and adverse effect on minority and low-income populations means an adverse effect that is predominately borne by a minority population and/or a low-income population, or will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

Programs, policies, and/or activities mean all projects, programs, policies, and activities that affect human health or the environment, and which are undertaken or approved by the US DOT. These include, but are not limited to, permits, licenses, and financial assistance provided by the US DOT. Interrelated projects within a system may be considered to be a single project, program, policy or activity for purposes of this Order. *Regulations* and *guidance* refer to regulations, programs, policies, guidance, and procedures promulgated, issued, or approved by the US DOT.

C.2.2 | Identifying Concentrations of Low-Income and Minority Population

Although low-income and minority persons live throughout the AMATS area, many are concentrated in specific locations and neighborhoods. The following methodology was used to identify above average concentrations of low-income and minority groups:

- Concentrations of low-income population were identified by comparing the percentage of the population at or below the poverty level in each Census block group to the percentage of the population in the entire AMATS area. The data used in this analysis were obtained from the 2017 American Community Survey (ACS) 5-year estimates. Census block groups with a percentage of population considered low-income that were at least the regional rate of 13.64% were considered to be above average concentrations of low-income populations. These Census block groups are shown on Map C.2-1.
- Concentrations of minority population were identified by comparing the percentage of minorities living in each Census block group to the percentage of such persons living in the entire AMATS area. The data used in this analysis were obtained from the 2017 American Community Survey (ACS) 5-year estimates. Census block groups with a percentage of minorities that were at least the regional rate of 17.69% were considered to be above average concentrations of minority population. These census block groups are shown on Map C.2-2.

C.2.3 | Environmental Impacts

According to the U.S. Department of Transportation, adverse impacts are defined as significant individual or cumulative negative human health or environmental effects, resulting from the implementation of federal, state, or local transportation policies, plans, or projects.

By reviewing environmental justice guidance developed by ODOT, the following ten variables have been identified as a means of qualitatively evaluating the environmental impacts of projects in *Transportation Outlook 2045* that are located in low-income or minority areas:

1) *Safety* - How will the project affect the relative safety of those using the facility and living in the target area?
2) *Pollution* - How will the project affect the overall air quality, water quality, noise level or soil quality of the target area?
3) *Natural Resources* - How will the project affect vegetation, streams, parks or other aspects of the natural environment in the target area?
4) *Aesthetics* - How will the project affect the appearance and physical attractiveness of the target area?
5) *Community Cohesion* - How will the project affect the identity and cohesiveness of the target area?
6) *Economic Vitality* - How will the project affect the economic health of the target area?
7) *Accessibility* - How will the project affect the level of access to, or from, the target area?
8) *Displacement of Businesses or Residents* - How will the project affect businesses, residents and institutions in the target area? Will it displace any of them?
9) *Traffic Congestion* - How will the project affect existing levels of traffic congestion?
10) *Equal Access to Improvement* - Will the overall benefits of the project be as available to residents of the target area as they will be to the region as a whole?

C.3 | Analyses

Three analyses were developed to evaluate the potential adverse human health or environmental impacts of projects in the *Transportation Outlook 2045* upon minority and low-income populations. These analyses examine: 1) the potential environmental impacts of projects; and 2) transportation accessibility in low-income and minority neighborhoods; and 3) transportation investment in low-income and minority neighborhoods.

C.3.1 | Potential Environmental Impacts of Projects

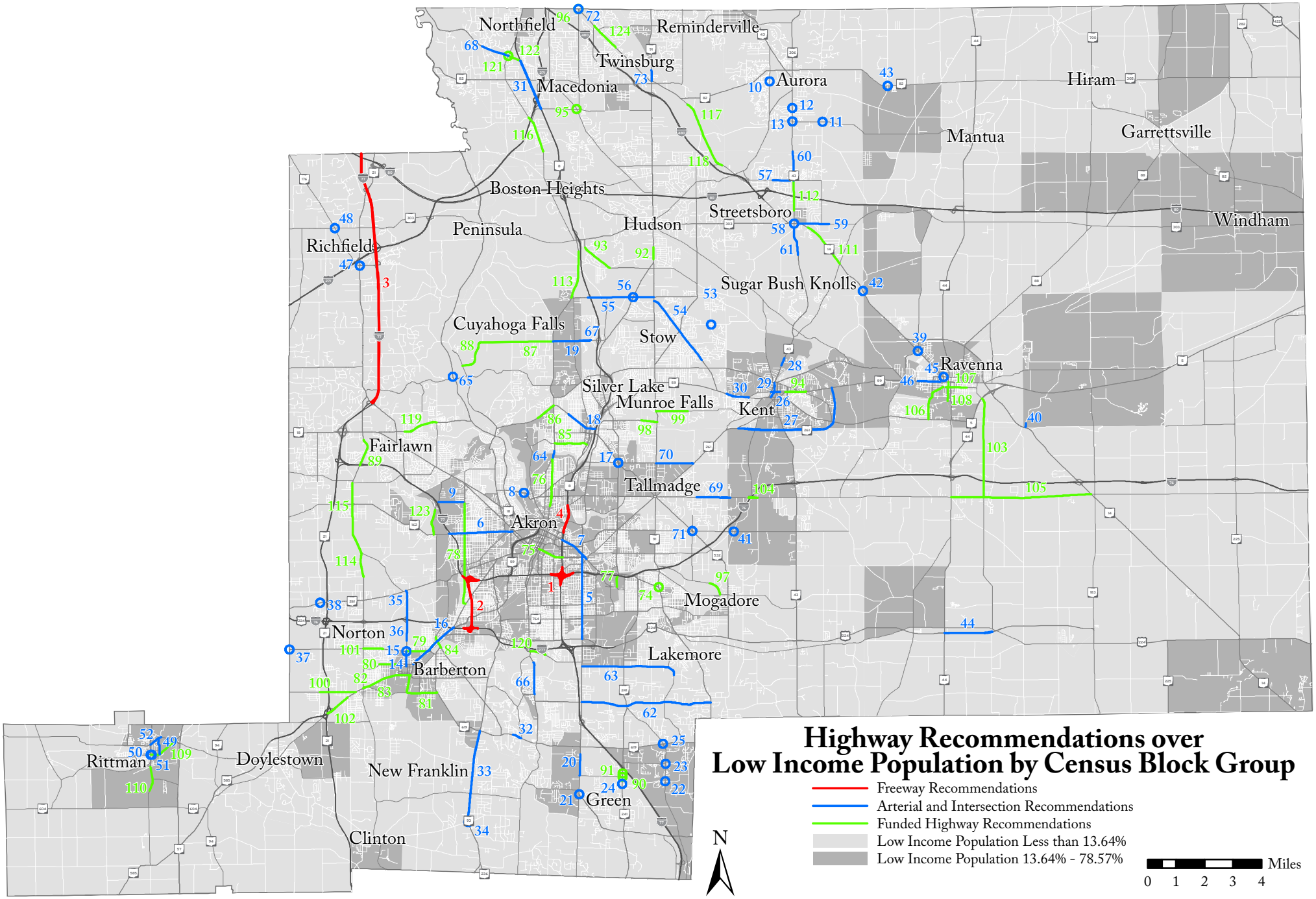
Highway, public transportation, and transportation enhancement projects in *Transportation Outlook 2045* were analyzed in order to determine potential impacts on low-income populations and minority populations.

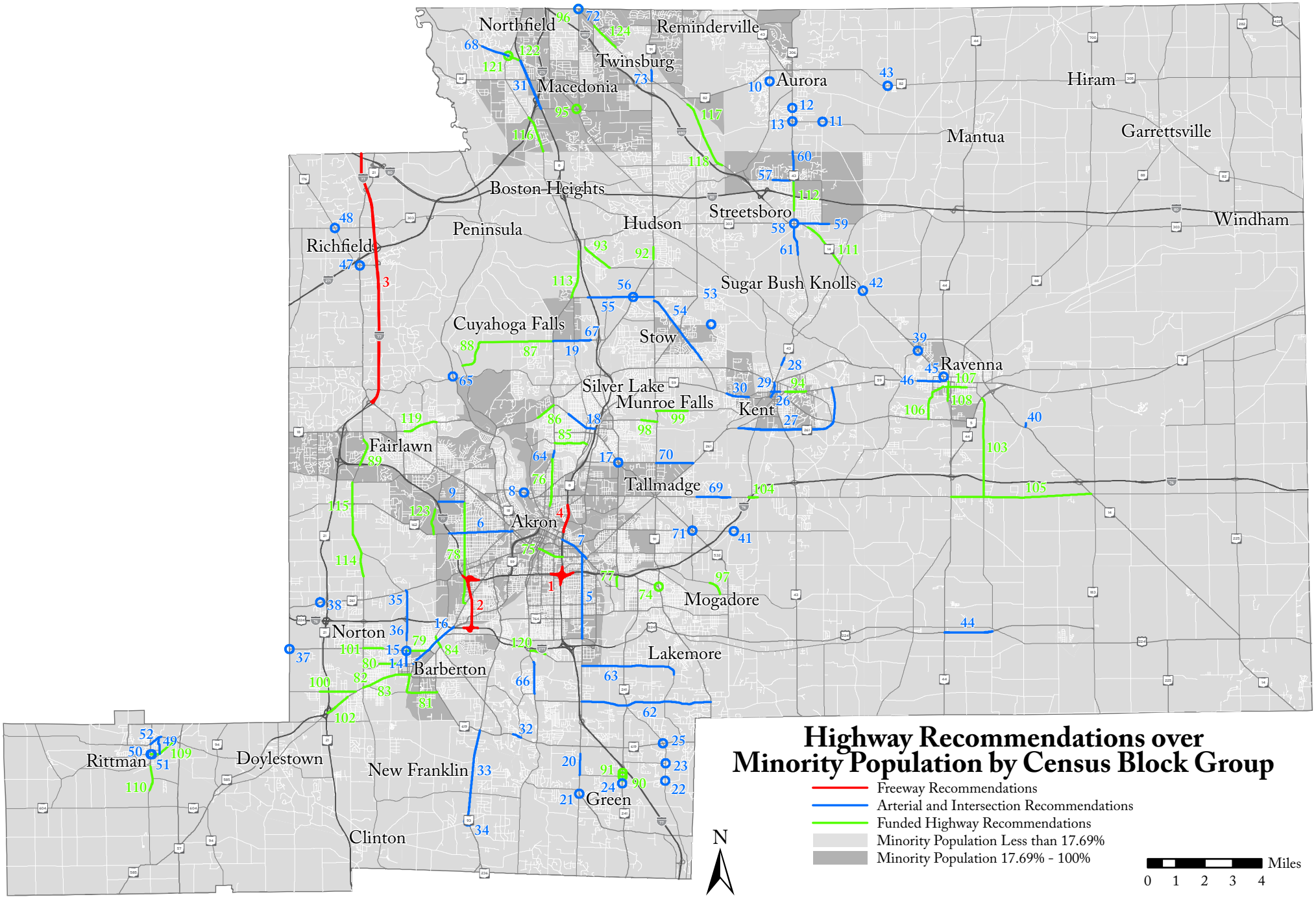
AMATS has a "fix-it-first" preservation policy, focusing on preserving the existing transportation infrastructure rather than building new roads. The policy of prioritizing the preservation of the existing system is a result of deteriorating, aging infrastructure and rapidly increasing construction costs. The decrease in capacity expansion projects, such as new roads and road widenings, reduces the potential for negative adverse impacts.

The analysis of potential impacts was completed according to the following procedures:

Step 1 - Projects were divided into two categories: 1) capacity projects; and 2) non-capacity projects. Non-capacity projects were exempted from further analysis because they are not expected to have any disproportionately high adverse human health and environmental effects on minority and low-income groups.

Step 2 - Projects were then examined to determine whether they were located in or bordering on a census block group containing an above average concentration of low-income or minority populations. Projects that were not located in or bordering on these areas were exempted from further environmental justice analysis. These block groups are shown on Maps C.2-1 and C.2-2.


Northfield
Reminderville
Twinsburg
Macedonia
Aurora
Hiram
Mantua
Garrettsville
Boston Heights
Streetsboro
Windham
Peninsula
Hudson
Richfield
Sugar Bush Knolls
Cuyahoga Falls
Stow
Ravenna
Silver Lake
Munroe Falls
Kent
Fairlawn
Tallmadge
Akron
Mogadore
Norton
Lakemore
Barberton
Rittman
Doylestown
New Franklin
Green
Clinton
Highway Recommendations over
Low Income Population by Census Block Group
Freeway Recommendations
Arterial and Intersection Recommendations
Funded Highway Recommendations
Low Income Population Less than 13.64%
Low Income Population 13.64% - 78.57%
N
Miles
0 1 2 3 4


Northfield
Reminderville
Twinsburg
Macedonia
Aurora
Hiram
Mantua
Garrettsville
Boston Heights
Streetsboro
Windham
Peninsula
Hudson
Richfield
Sugar Bush Knolls
Cuyahoga Falls
Stow
Ravenna
Silver Lake
Munroe Falls
Kent
Fairlawn
Tallmadge
Akron
Mogadore
Norton
Barberton
Lakemore
Rittman
Doylestown
New Franklin
Green
Clinton
Highway Recommendations over Minority Population by Census Block Group
Freeway Recommendations
Arterial and Intersection Recommendations
Funded Highway Recommendations
Minority Population Less than 17.69%
Minority Population 17.69% - 100%
N
Miles
0 1 2 3 4

The following project categories were exempted from further analysis because they are not expected to have any disproportionately high and adverse human health and environmental effects on minority and low-income groups:

- Highway operational improvements
- Public transportation system preservation
- Pedestrian facilities / bicycle lanes
- Scenic/environmental enhancements

Step 3 - The remaining categories were qualitatively evaluated as to their environmental impacts because they have the potential for disproportionately high and adverse human health and environmental effects on minority and low-income groups:

- Major capacity improvements
- Realignment or reconfiguration
- Public transportation system expansion
- Bikeway/Multi-purpose facilities

The potential environmental impacts of highway, public transportation and transportation enhancement projects are displayed in Table C.3-1. Projects that are expected to impact a variable in a positive manner are indicated by a "+." Projects that are expected to impact a variable in a neutral manner are indicated by an "n." Projects that could potentially impact a variable in a negative manner are indicated by a "-."

All of the projects shown in Table C.3-1 should be analyzed more closely as they move into the stages of development. Projects with potential negative impacts should be closely scrutinized as more detailed environmental analyses are completed. A determination can then be made as to whether negative impacts will be disproportionately borne by low-income or minority individuals or communities.

Table C.3-1 | Potential Environmental Impacts of Projects

Project	From	To	Category	Location	POTENTIAL IMPACTS*									
					Safety	Pollution	Natural Resources	Aesthetics	Community Cohesion	Economic Vitality	Accessibility	Displacement of Residents / Businesses	Traffic Congestion	Equal Access to Improvement
Exchange St	Broadway St	Fountain St	Reconfiguration	Low Income	+	n	n	+	+	n	n	n	n	n
I-76/77/SR 8	I-76 Kenmore leg to Princeton and Grant to School; I-77 from Waterloo to Lafayette and Kenmore leg to Vernon Odom; SR 8 from I-76 to Perkins		Reconfiguration / Capacity	Low Income / Minority	+	-	n	+		+	+	n	+	n
Seiberling Way	Eagle St	Englewood Ave	New Roadway	Low Income	n	-	n	+	n	+	+	n	n	n
SR 8 High Bridge	Perkins St	Glenwood Ave	Reconfiguration	Low Income / Minority	+	n	n	+		n	+	-	+	n
SR 43	SR 14	Frost Rd	Reconfiguration / Capacity	Low Income	+	-	n	+	+	+	+	n	+	n
SR 59	Willow St	Horning Rd	Reconfiguration	Low Income	+	+	n	+	+	+	n	n	+	n
Tallmadge Rd Interchange	At I-76		Reconfiguration	Low Income	+	n	n	+	n	+	+	n	+	n
Freedom Trail PH 4	Rosa Parks Blvd	Mill St	Bikeway / Multi-purpose Facilities	Low Income / Minority	+	+	n	+	+	+	+	n	+	n
Raber Rd	Troon Dr	Mayfair Rd	Bikeway / Multi-purpose Facilities	Low Income	+	+	n	+	+	+	+	n	+	n
Wooster Rd	2nd St SW	4th St NW	Bikeway / Multi-purpose Facilities	Low Income	+	+	n	+	+	+	+	n	+	n
The Portage Hike & Bike Trail - Brady's Leap Segment	W. Main St	South of Fairchild	Bikeway / Multi-purpose Facilities	Low Income / Minority	+	+	n	+	+	+	+	n	+	n

**KEY: + denotes Positive Impact, n denotes Neutral Impact, - denotes Negative Impact*

C.3.2 | Transportation Accessibility in Low-Income and Minority Neighborhoods

The Fixing America's Surface Transportation (FAST) Act (Pub. L. No. 114-94), signed into law on December 4, 2015, provides provisions that support transportation programming, planning and funding. These provisions provide increased opportunities to enhance pedestrian and bicycle safety and mobility, reduce traffic congestion, improve efficiency in freight movement, increase intermodal connectivity and create more complete transportation systems that foster healthier, more livable communities. This is especially crucial in low-income and minority communities, which sometimes lack adequate access and mobility to recreational, shopping, and employment opportunities.

Two analyses have been completed in order to determine the overall level of accessibility in low-income and minority neighborhoods. The first analysis focuses on the area's highway projects. The second analysis focuses on the existing public transportation system. Transportation enhancement projects were exempted from the transportation accessibility analysis because these projects are used mostly for recreational purposes and are difficult to analyze quantitatively.

Highway Accessibility Analysis

The first step in the highway accessibility analysis was to identify a sample of six traffic analysis zones that represent low-income and minority neighborhoods: 1) East Akron; 2) West Akron; 3) North Akron; 4) Barberton; 5) Kent; and 6) Twinsburg.

The second step in the analysis was to identify traffic analysis zones that contain major activity centers. Altogether, 13 traffic analysis zones containing major commercial, industrial, medical, educational, transportation and recreational facilities were identified:

1) Akron-Canton Airport
2) Downtown Akron Transit Center
3) Akron Central Business District
4) Akron City Hospital
5) Akron General Hospital
6) Goodyear
7) Northeast Ohio Medical University
8) Chapel Hill Mall
9) Summit Mall
10) Montrose
11) Macedonia Commons
12) University of Akron
13) Kent State University

In the third step, the AMATS travel-demand model network, representing the highway system as it is planned to operate in 2022, was used to estimate the average travel time from each low-income and minority neighborhood to each of the 13 major activity centers. In order to provide a valid comparison, a similar analysis was conducted to estimate the average travel time to each major activity center from a sample of six traffic analysis zones, representing neighborhoods with below average concentrations of low-income and minority population:

1) Cuyahoga Falls
2) Hudson
3) Stow
4) Green
5) Macedonia
6) Aurora

The results of the highway accessibility analysis are shown in Table C.3-2. According to this analysis, the highway projects in *Transportation Outlook 2045* provide low-income and minority neighborhoods with slightly better accessibility to major activity centers located throughout the AMATS area, than non-low-income and non-minority neighborhoods. The average travel time to major activity centers is 16 minutes for low-income and minority neighborhoods, versus 20 minutes for non-low-income and non-minority neighborhoods.

Public Transportation Accessibility Analysis

It is AMATS' goal that the regional transportation system provides adequate mobility for all persons. Public transportation is especially important in low-income and minority communities, which often lack adequate access to employment opportunities, retail, recreational and social/cultural activities. In 2020, the *AMATS 2020 Transit Plan* analyzed the overall level of accessibility that the existing public transit network offered to the Akron metropolitan area and specifically to low-income, minority, elderly and disabled persons in the region. Those results were used to analyze public transportation accessibility in *Transportation Outlook 2045*.

The first step in the public transportation accessibility analysis determined the percentage of the total population in Summit and Portage counties living within a 0.25 mile walking distance of existing fixed route transit service. The second step of the analysis determined the percentage of minority population and low-income population living within a 0.25 mile walking distance of existing fixed route transit service. The third step compared the percentage of minority population and low-income population to the percentage of the total population having access to fixed route transit service.

The definition of low-income used for the *AMATS 2020 Transit Plan* is a household income at or below the poverty level. Based on 2010 census data, this threshold would be set at $34,999 or below. Data were collected at the block group level for low-income and minority populations. Data illustrating the distribution of those with disabilities was only available at the county level at the time of the analysis.

The results of the transit accessibility analysis are shown in Table C.3-3. According to

Table C.3-2 | Average Highway Travel Time to Major Activity Centers

	Akron-Canton Airport	Downtown Akron Transit Center	Akron CBD	Akron City Summa Hospital	Akron General Hospital	Goodyear	Northeast Ohio Medical University	Chapel Hill Mall	Summit Mall	Montrose	Macedonia Commons	University of Akron	Kent State University	OVERALL AVERAGE (minutes)
Traffic Zone Number	**452**	**46**	**21**	**8**	**43**	**96**	**749**	**55**	**522**	**39**	**566**	**32**	**720**	
Low Income or Minority Zones	**22**	**13**	**13**	**13**	**13**	**14**	**22**	**14**	**17**	**18**	**23**	**13**	**19**	**16**
East Akron (zone 93)	14	7	7	5	8	3	17	9	15	16	24	6	17	**12**
West Akron (zone 181)	20	7	6	8	4	10	23	13	9	10	25	6	23	**13**
North Akron (zone 222)	18	6	4	5	5	9	21	6	12	14	20	5	18	**11**
Barberton (zone 259)	17	14	14	16	14	16	29	20	17	18	33	15	29	**19**
Kent (zone 718)	27	19	19	18	20	15	12	13	27	28	26	19	1	**19**
Twinsburg Township (zone 343)	38	28	26	25	28	29	27	23	23	22	7	27	23	**25**
Non-Low Income and Minority Zones	**27**	**20**	**19**	**17**	**20**	**20**	**25**	**15**	**22**	**23**	**16**	**19**	**20**	**20**
Cuyahoga Falls (zone 302)	21	11	9	8	11	12	22	6	14	16	18	10	17	**13**
Hudson (zone 368)	32	22	20	19	22	22	25	17	25	24	11	20	17	**21**
Stow (zone 375)	25	15	13	12	15	16	21	10	20	22	17	14	10	**16**
Green (zone 447)	7	15	15	14	17	14	27	19	23	24	32	15	27	**19**
Macedonia (zone 568)	35	25	24	22	25	26	31	10	20	19	3	24	27	**22**
Aurora (zone 612)	42	32	30	29	32	33	27	27	33	32	15	31	23	**30**

Analyzed using the 2022 AQ network

this analysis, a greater percentage of minority and low-income groups in both Summit County and Portage County have access to fixed route transit service than the general population.

In Summit County, 72.8% of the minority population lives within walking distance to fixed route transit service, as compared to 51.2% of the total population. The total number of low-income population in Summit County within walking distance of fixed route transit service is 73.0%.

In Portage County, 47.4% of the minority population lives within walking distance of fixed route transit service, as compared to 25.0% of the total population. The total number of low-income population in Portage County that lives within walking distance of fixed route transit service is 43.1%.

Many low-income and minority individuals rely on public transportation to access employment opportunities. Both METRO and PARTA work diligently to provide transit service to key employment zones throughout the AMATS region. Both agencies speak regularly with local employers and attempt to not only serve businesses with transit service, but to coordinate bus runs with shift start or ending times. AMATS encourages coordination between employers and local transit providers to increase the access of low-income and minority individuals to concentrated employment destinations.

Most of the areas with the greatest concentrations of employment are accessible through fixed-route transit. In Akron, the Downtown, Montrose, Market Street and South Arlington Street corridors have among the highest concentrations of employment in the AMATS region, and also enjoy the most frequent transit service available. Other

cities with major employment centers, such as Barberton, Cuyahoga Falls, Hudson, Kent and Ravenna have varying degrees of fixed-route transit service.

Notable gaps in transit service to key employment areas are found in Aurora, portions of Green and Streetsboro, the Village of Mantua and Copley Township. The Village of Richfield and the cities of Streetsboro, Twinsburg and Macedonia have very large employment concentrations, but are only served by infrequent express or commuter bus routes. Each of these communities could benefit from more regular transit or new transit service to connect the region's employment base to these key employment zones. The *AMATS 2020 Transit Plan* analyzes and discusses these issues more fully.

Table C.3-3 | Transit Acccessibility Analysis

FIXED ROUTE TRANSIT COVERAGE IN THE AMATS AREA						
	Summit County			Portage County		
Population Group	Total	Total Covered by Transit	% Covered by Transit	Total	Total Covered by Transit	% Covered by Transit
Total Population	541,318	277,174	51.2%	162,080	40,499	25.0%
Minority Population	112,900	82,137	72.8%	14,607	6,924	47.4%
Low Income Population	72,232	52,716	73.0%	22,493	9,680	43.1%

Source: *2017 American Community Survey (ACS)*
Notes: *A full discussion of transit coverage and performance can be found in the AMATS 2020 Transit Plan (December 2020)*
Fixed Route Transit service in Summit County is provided by METRO RTA. PARTA provides transit service in Portage County

Non-Motorized Transportation Accessibility Analysis
Low-income and minority neighborhoods benefit greatly from non-vehicular modes of transportation. Walking and bicycling are free or low cost, have few negative externalities (noise, air and other pollution, congestion, etc.) and produce positive health benefits. For short-distance trips in compact neighborhoods, these modes may actually prove the most efficient. These transportation modes are available on-demand. Rather than being constrained by a bus schedule or waiting for a ride in an automobile, a person can bicycle or walk at will.

In recent years, AMATS has focused on non-motorized transportation modes, and is committed to building a network that allows all residents to travel safely between key regional communities and destinations. Further discussion and analysis of non-motorized transportation can be found in the AMATS *Active Transportation Plan* (December 2019). It remains AMATS' policy to integrate multiple modes of travel and to develop complete streets through its Connecting Communities Initiative and TIP project funding policies.

Bicycle
Sixty-six percent (29 of the 44) of the bicycle recommendations listed in *Transportation Outlook 2045* are located in, or next to, low-income or minority census block groups. Multi-purpose trails are included in the recommendations, and have the additional benefit of serving pedestrians as well as bicyclists. Maps C.3-1 (low-income) and C.3-2 (minority) show the bicycle recommendations in relation to these block groups.

Pedestrian
Of the twelve total pedestrian recommendations in *Transportation Outlook 2045*, five (42%) are located in, or next to, low-income or minority census block groups. In addition to these pedestrian recommendations and the multi-purpose trail recommendations, it should be noted that most of the low-income and minority block groups are located in the highest density communities within the AMATS area. These areas are currently served well by existing sidewalks, crosswalks and other pedestrian infrastructure. Maps C.3-1 (low-income) and C.3-2 (minority) show the pedestrian recommendations in relation to these block groups.

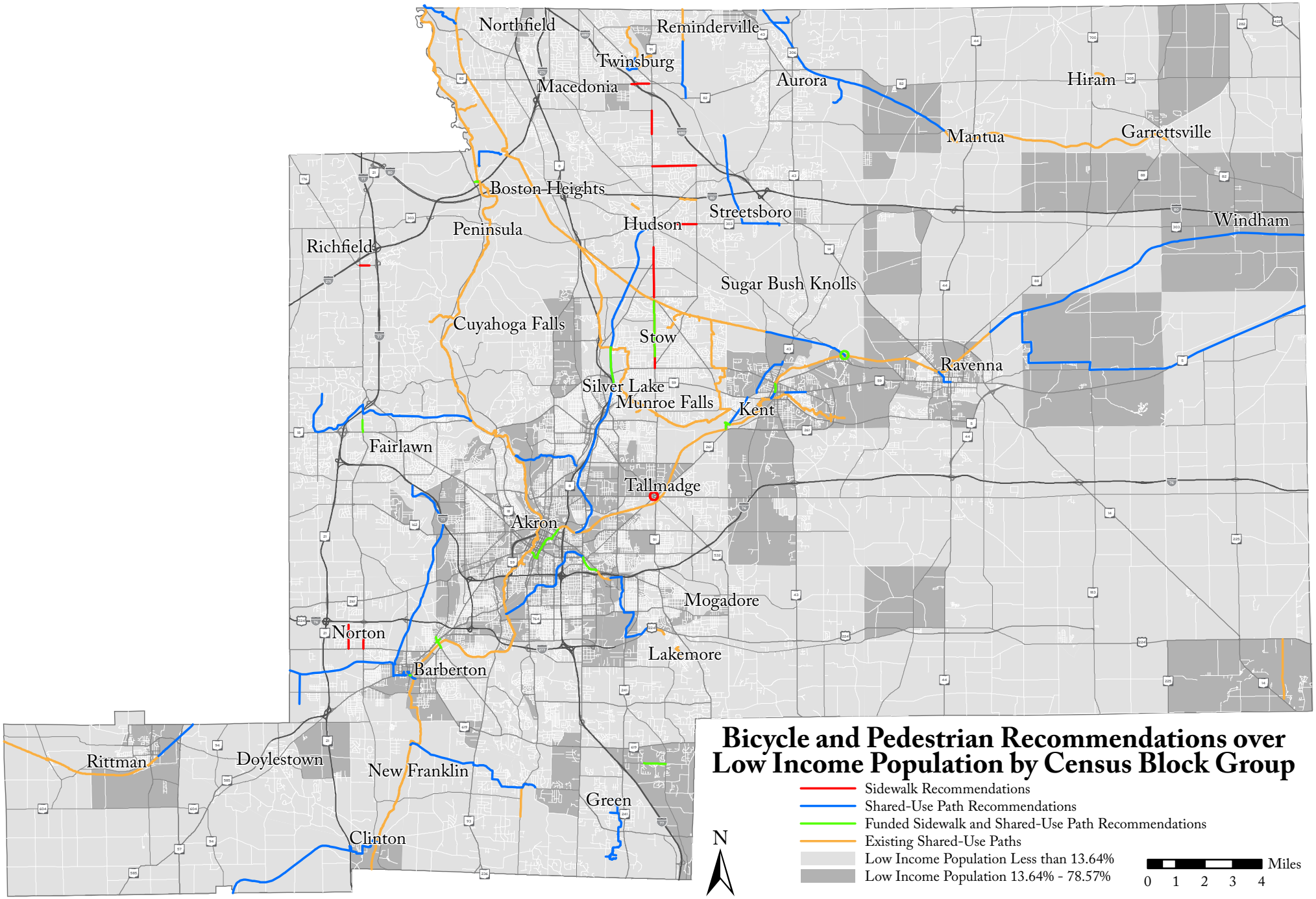
C.4 | Conclusion

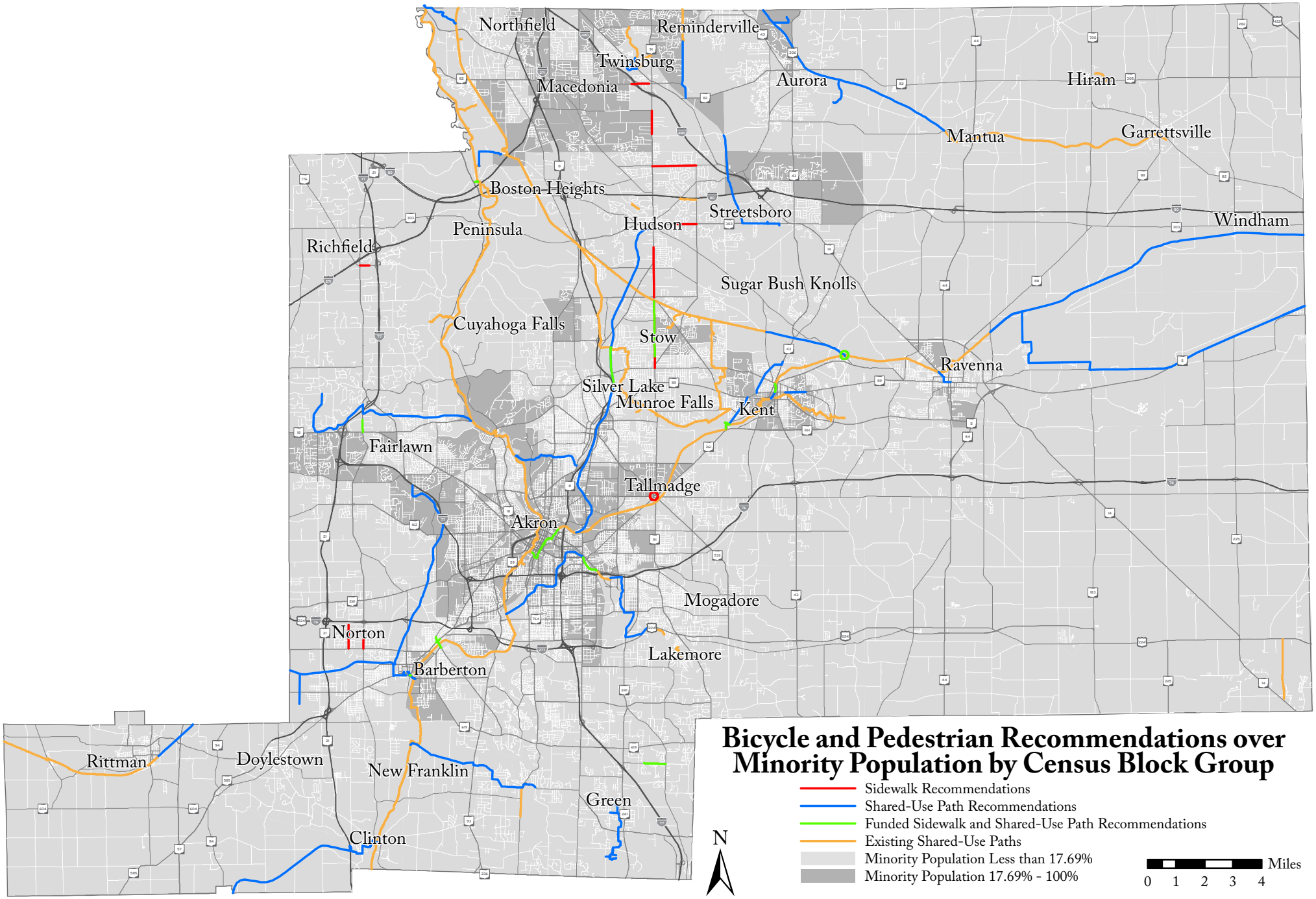
In keeping with the environmental justice requirements of Presidential Executive Order #12898, *Transportation Outlook 2045* has been analyzed to ensure that the projects will not have disproportionately high and adverse effects on low-income and minority groups. Target environmental justice census block groups included those in which the minority population percentage exceeded the AMATS area average (17.69%) or the percentage of the population in poverty was greater than the AMATS area level (13.64%). AMATS' analysis of disproportionately high and adverse impacts compared property acquisitions, project investments by cost, bridge project investments, and transit project investments in target environmental justice census block groups to statewide levels. Based on this analysis, AMATS did not identify a disproportionate burden on any targeted population in the area and concluded that a reasonable distribution of benefits is planned to be made with this regional transportation plan. This includes all projects, transit, maintenance and new construction.

The two analyses completed for this Environmental Justice analysis are summarized below:

Potential Environmental Impacts of Projects
- None of the projects in *Transportation Outlook 2045* appear to have any fatal flaws from an environmental justice standpoint.
- It is recommended that all of the projects shown in Table C-1, be analyzed more closely as they move into future stages of development.
- Projects which were shown to have potential negative impacts should be closely scrutinized as more detailed environmental analyses are completed, in order to determine whether these negative impacts will be disproportionately borne by low-income or minority individuals or communities.

Map C.3-1 | Bicycle and Pedestrian Recommedations over Low Income Population by Census Block Group

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Sugar Bush Knolls
Cuyahoga Falls
Stow
Ravenna
Silver Lake
Munroe Falls
Kent
Fairlawn
Tallmadge
Akron
Mogadore
Norton
Lakemore
Barberton
Rittman
Doylestown
New Franklin
Green
Clinton
N
Bicycle and Pedestrian Recommendations over Minority Population by Census Block Group
Sidewalk Recommendations
Shared-Use Path Recommendations
Funded Sidewalk and Shared-Use Path Recommendations
Existing Shared-Use Paths
Minority Population Less than 17.69%
Minority Population 17.69% - 100%
Miles
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Transportation Accessibility in Low-Income and Minority Neighborhoods

- Highway projects in *Transportation Outlook 2045* provide low-income and minority neighborhoods with adequate and equitable accessibility to major activity centers located throughout the AMATS area.
- Low-income and minority groups in both Summit and Portage counties are well served by public transportation, having greater access to fixed route transit service than the general population.
- Low-income and minority groups in both Summit and Portage counties currently have good access to existing bicycle and pedestrian facilities, including sidewalks and crosswalks. Furthermore, *Transportation Outlook 2045* recommends additional improvements.

C.5 | References

Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations; *Federal Register*, vol. 59 no. 32, February 16, 1994.

DOT Order on Environmental Justice to Address Environmental Justice in Minority Populations and Low-Income Populations (DOT Order 5610.2(a)); May 2, 2012.

FHWA, Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, (Order 6640.23A); June 14, 2012

Federal Transit Administration (FTA) Circular 4703.1, Environmental Justice Policy Guidance for Federal Transit Administration Recipients, August 15, 2012

FTA Environmental Justice Frequently Asked Questions (FAQs): https://www.transit.dot.gov/regulations-and-guidance/environmental-programs/environmental-justice/environmental-justice-faqs

ODOT Guidance and Best Practices for Incorporating Environmental Justice into Ohio Transportation Planning and Environmental Processes, June 2016

ODOT Office of Environmental Services (OES), Underserved Populations Guidance, revised July 2019

Title VI Requirements in Metropolitan and Statewide Planning

Title VI of the 1964 Civil Rights Act

Title 23 of the U.S. Code (U.S.C.), Section 109(h)

Title 49 of the U.S. Code of Federal Regulations, part 21 (Department of Transportation Regulations for the implementation of Title VI of the Civil Rights Act of 1964

The Americans with Disabilities Act (ADA) of 1990, as amended

Title 29 of the U.S. Code of Federal Regulations, part 1600-1699

Ohio Administrative Code § 123:1-49-02

Ohio Revised Code § 4112.02

Appendix D | Environmental Mitigation

D.1 | Introduction

Long range regional transportation plans must include a discussion of types of potential environmental mitigation activities, to be developed in consultation with appropriate federal, state and tribal wildlife, land management, and regulatory agencies. The Fixing America's Surface Transportation Act (FAST Act) maintains this requirement, and AMATS continues to develop a discussion of environmental mitigation in accord with federal requirements. This initial review is completed during the planning process stage. Detailed environmental mitigation studies and activities would occur during future stages of project development. By identifying regionally significant environmental resources in the planning stage of development, local jurisdictions can be informed early to avoid or at least reduce impacts to these resources. This in turn, could reduce project delays and increased costs of addressing regulatory requirements related to mitigation of environmental impacts.

AMATS has prepared this environmental mitigation document to the *Transportation Outlook 2045* plan, which maps the common environmental issues and discusses environmental mitigation strategies. AMATS analyzed the transportation plan projects for potential environmental impacts using GIS overlay maps. The ODOT Office of Environmental Services (OES) takes a lead role in consulting with environmental resource agencies to obtain the data and to discuss review of MPO Transportation Plans. As part of AMATS public participation process, an environmental resource agencies list is included as well in this document for review and contact.

D.2 | Methodology

There are three parts to AMATS methodology to address the environmental mitigation requirement. *First*, through ODOT's consultation with the environmental resource agencies and AMATS own data collection activities, maps and tables of the most common environmental features have been developed. *Second*, a discussion of the various environmental resources in the region is provided. *Third*, mitigation techniques for various types of environmental effects are discussed along with any applicable local mitigation resources.

Many of the recommendations in *Transportation Outlook 2045* adjoin sensitive environmental resources. When improving and expanding transportation infrastructure in the AMATS area, the goal is to protect and sustain manmade and natural environments in communities and take into account the impacts on the surrounding environment. It should be noted that precise assessments of potential environmental impacts cannot be made until project details are further refined. All proposed federally funded projects are subject to federal environmental laws and rules including the National Environmental Policy Act (NEPA), Endangered Species Act, Fish and Wildlife Coordination Act, and the Clean Water Act. To advance any project to construction, these projects must undergo detailed environmental studies in compliance with NEPA and other federal and ODOT requirements to determine the degree and impact they may have on the natural environment.

Environmental mitigation involves activities that, over time, will serve to avoid, minimize, or compensate for by replacing or providing substitute resources. To "mitigate" means to make less harsh or hostile. The environmental mitigation includes an overview of potential environmental impacts about the types of actions that may be needed to guard against or reduce those impacts. The discussion of potential mitigation activities is the basis for considering the cumulative impacts of the recommended projects during the planning process. These projects will be managed by or completed by a local jurisdiction under the supervision of the Ohio Department of Transportation (ODOT).

Use of best management practices, environmentally sensitive project design, adequate notice to environmental agencies, and adherence to applicable regulations should address most of these potential impacts through avoidance and mitigation strategies that allow beneficial infrastructure improvements while protecting valuable natural resources.

D.3 | Environmental Resources for Mitigation

D.3.1 | Air Quality

Air quality conformity demonstrates that the transportation programs in the region conform to applicable air quality standards. Individual vehicle trips may seem insignificant, but their cumulative effect is a major determinant in the region's air quality.

The AMATS region is required to participate in air quality conformity to attain the National Ambient Air Quality Standards (NAAQS) for various criteria pollutants. Summit and Portage counties are part of the eight-county Cleveland-Akron-Lorain Combined Statistical Area (CSA). This area includes: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage and Summit counties.

The MPOs and ODOT must reestablish conformity for the ozone standards and fine particulate matter ($PM_{2.5}$) standards as a result of adopting a new TIP and LRP amendments. The conformity analysis demonstrates that emissions from vehicles

traveling on the planned transportation system are less than the area's emissions budget (or other emissions target in the absence of an approved budget). AMATS updates its travel demand model to conduct this analysis taking into account the latest planning assumptions.

As the United States Environmental Protection Agency (USEPA) continues to tighten the current ozone and fine particulate matter (PM2.5) standards, the region may be required to implement more control measures on ozone and PM2.5. While more controls may be necessary, much of the area's pollution originates outside the area and is carried by wind patterns into the region. AMATS provides the work necessary to support the Clean Air Act Amendments of 1990 and to satisfy any changes resulting from the newly proposed air quality standards.

AMATS participates in the region's Ozone Action Day Program in partnership with NOACA, Akron Regional Air Quality Management District, Cleveland Division of Environment, Lake County General Health District, USEPA, and Ohio EPA to inform the public about the problem of ground-level ozone pollution. The Ozone Action Day Program informs Northeast Ohio residents when ozone pollution reaches unhealthy levels.

D.3.2 | Water Resources and Wetlands

Lakes, rivers and streams are an integral part of the ecosystem and regional watersheds. They provide a link between land and water resources, curb flooding by slowing down and absorbing excess rainwater, and provide a habitat for numerous plants and animals.

Wetlands are low-lying areas where the water table stands near, at, or above the land surface for at least part of the year. This results in specialized wet soil types and water dependent plants. Wetlands also provide important habitat for many plants and animals.

The Greater Akron area includes numerous streams and rivers, lakes, reservoirs, and wetlands. The two major rivers in the region are the Cuyahoga and the Tuscarawas. Additionally, the Upper Cuyahoga River is a designated State Scenic River that runs through the AMATS area and extends from State Route 14 in Portage County to the north end at the Troy-Burton Township line in Geauga County. The region's water resources are shown on Map D.3-1.

D.3.3 | Threatened and Endangered Species

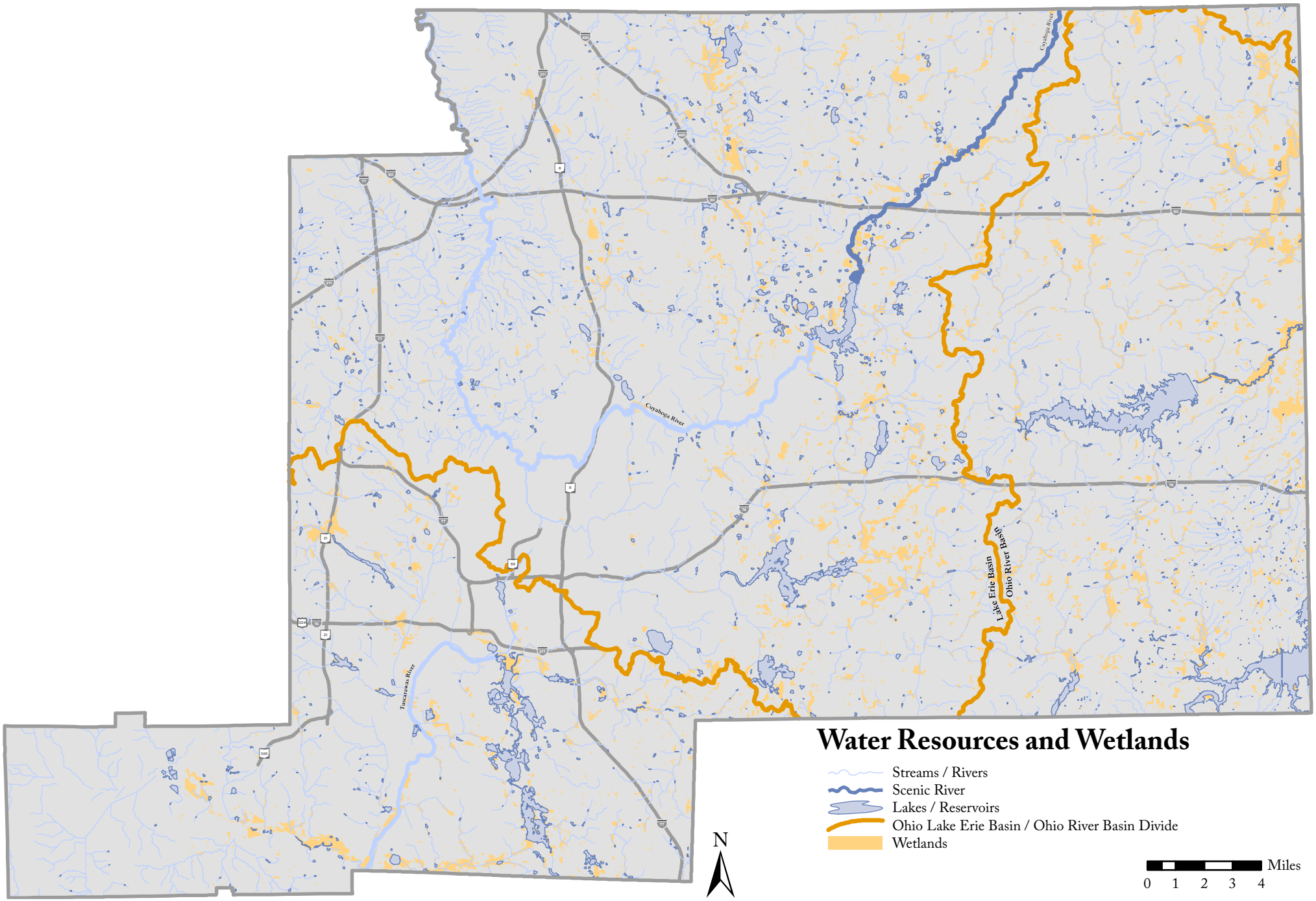
Ohio harbors a great diversity of wildlife and plant communities. Many endangered species that receive federal or state protection are tied closely to their habitats. Land use changes have been the most common cause for decline in species range and diversity. Contamination and degradation of natural waters have also contributed to loss of habitat. Loss of wetlands and forests has contributed largely to the federal and/or state listing of over 500 plants and animals within Ohio, including a variety of mammals, birds, reptiles and amphibians, mollusks, insects, fishes, and plants.

Ohio law allows the Ohio Department of Natural Resources (ODNR) Division of Wildlife to adopt rules restricting the taking or possessing of native wildlife threatened with statewide extirpation and to develop and periodically update a list of endangered species as required by Ohio Revised Code 1531.25. The ODNR uses six categories: endangered, threatened, species of concern, special interest, extirpated, and extinct, to further define the status of selected wildlife. A specific survey is often undertaken during later stages of project development. ODOT coordinates with numerous regulatory agencies to determine if a threatened or endangered species is suspected of existing within the project area.

> **Endangered** – A native species or subspecies threatened with extirpation from the state. The danger may result from one or more causes, such as habitat loss, pollution, predation, interspecific competition, or disease.
>
> **Threatened** – A species of subspecies whose survival in Ohio is not in immediate jeopardy, but to which a threat exists. Continued or increased stress will result in its becoming endangered.

Projects going through the planning development process are planned and designed to comply with the National Environmental Policy Act, Endangered Species Act, Clean Water Act, and Ohio Revised Code to name a few. The Endangered Species Act and Ohio Revised Code are the specific federal and state legislation that provide for the protection and conservation of plants and animals within Ohio. The rules and regulations associated with these laws dictate that ODOT will build and operate their roadway projects with no, or minimal impacts to protected species and their habitat including potentially unoccupied habitat.

The Greater Akron area's ecosystem supports endangered and threatened plant and wildlife species such as the Northern Monkshood, Prairie Fringed Orchid, American Bittern, Indiana Bat, Sandhill Crane, Smooth Greensnake, Spotted Turtle, Upland Sandpiper and many other federal and state species. The federal list of threatened and endangered species for the region includes 5 threatened plants and 9 species of threatened and endangered wildlife. The state list for the region from ODNR includes 150 threatened and endangered plants and over 60 different species of threatened and endangered wildlife. A detailed list of threatened and endangered species for the region can be viewed on the US Fish and Wildlife and the ODNR Division of Wildlife websites at: www.fws.gov/endangered and www.ohiodnr.gov/wps/portal/gov/odnr.


Water Resources and Wetlands
Streams / Rivers
Scenic River
Lakes / Reservoirs
Ohio Lake Erie Basin / Ohio River Basin Divide
Wetlands
N
Miles
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Cuyahoga River
Tuscarawas River
Lake Erie Basin
Ohio River Basin

Amongst some of the Federally Threatened and Endangered species, the AMATS area includes:

PLANTS

Northern Monkshood

Prairie Fringed Orchid

WILDLIFE

American Bittern

Bald Eagle

Eastern Massasauga Rattlesnake

Indiana Bat

Mitchell's Satyr Butterfly

Northern Harrier

D.3.4 | Section 4(f) Parkland

Section 4(f) of the Department of Transportation Act requires that special effort be made to preserve and protect Public Park and recreational lands, wildlife and waterfowl refuges, and historic sites listed or eligible for listing on the National Register of Historic Places from adverse impacts resulting from the construction of federally funded transportation facilities.

Use of a Section 4(f) property occurs: (1) when land is permanently incorporated into a transportation facility; or (2) when there is a temporary occupancy of land that is adverse in terms of the statute's preservation purpose; or (3) when there is a constructive use (a project's proximity impacts are so severe that the protected activities, features, or attributes of a property are substantially impaired). The regulation lists various exceptions and limitations applicable to this general definition.

Section 4(f) resources in the Greater Akron area include the Cuyahoga Valley National Park in Summit County, Portage Lakes State Park, several local parks and nature preserves, and wildlife and waterfowl preserves. The state parks in Portage County include Nelson Ledges, Tinkers Creek, and West Branch.

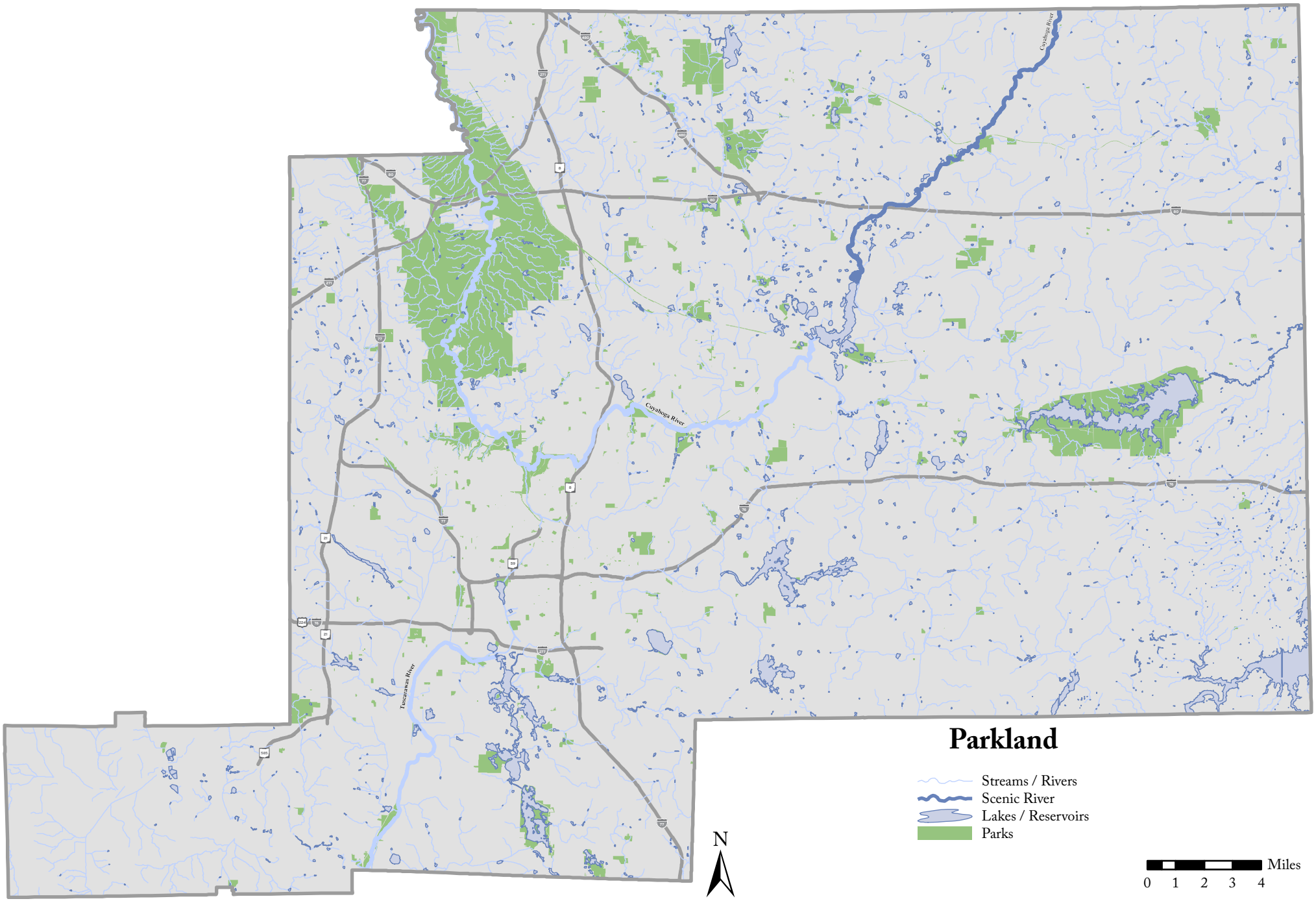
It is important to identify Section 4(f) properties as early as practicable in the planning and project development process in order that complete avoidance of the protected resources is given full and fair consideration. Map D.3-2 identifies the region's parkland.

D.3.5 | Storm Water

Storm water runoff occurs when precipitation from rain or snowmelt flows over the ground that can pick up debris, chemicals, dirt, and other pollutants. This material flows into a storm sewer system or directly to a lake, stream, river, or wetland. Impervious surfaces like driveways, sidewalks, and streets prevent storm water runoff from naturally soaking into the ground. Anything that enters a storm sewer system is discharged untreated into the waterbodies we use for swimming, fishing, and providing drinking water.

It is important that the impacts of storm water upon transportation projects be assessed in further stages of project development. Storm water management should be incorporated into the construction phase of a project to prevent the direct runoff of water containing sediment into waterways and reduce sediment entering the storm drainage system.

Storm water management should be incorporated into the construction phase of a project to prevent the direct runoff of water containing sediment into waterways and reduce sediment entering the storm drainage system. Best management practices designed to infiltrate storm water such as bioswales, permeable pavement, and reducing curb-and-gutter, are additional techniques that can help protect the environment and transportation infrastructure from disaster. The region's sewer system is shown on Map D.3-3.


Cuyahoga River
Cuyahoga River
Tuscarawas River
Parkland
Streams / Rivers
Scenic River
Lakes / Reservoirs
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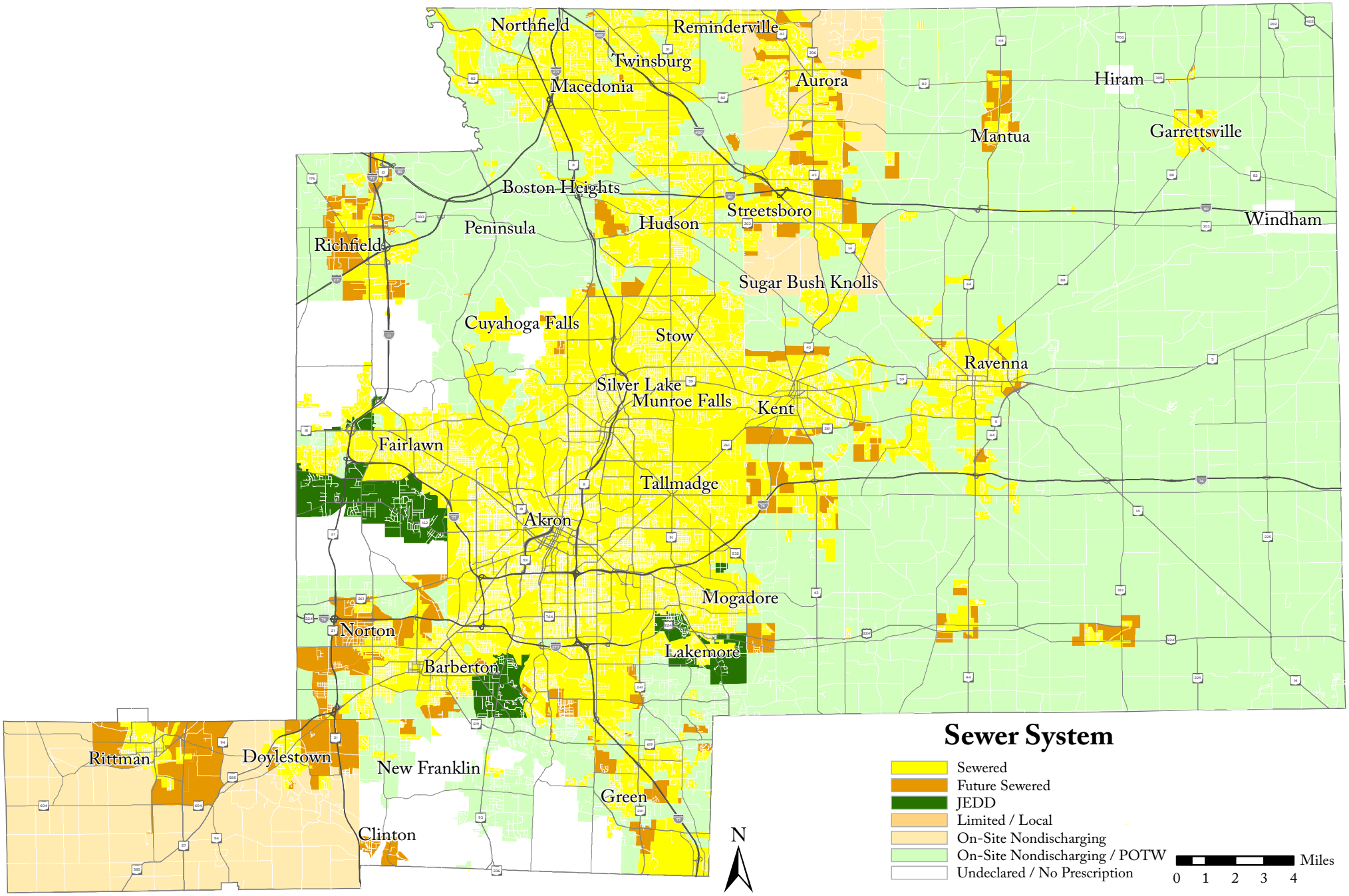
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Windham
Sugar Bush Knolls
Cuyahoga Falls
Stow
Ravenna
Silver Lake
Munroe Falls
Kent
Fairlawn
Tallmadge
Akron
Mogadore
Norton
Lakemore
Barberton
Rittman
Doylestown
New Franklin
Green
Clinton
N
Sewer System
Sewered
Future Sewered
JEDD
Limited / Local
On-Site Nondischarging
On-Site Nondischarging / POTW
Undeclared / No Prescription
Miles
0 1 2 3 4

D.3.6 | City of Akron Sewer Project

The City of Akron developed an initiative in late 2014, named *Akron Waterways Renewed!* to address combined sewer overflows (CSOs). This sewer project is the largest single investment in city infrastructure in Akron's 190 year history.

The Cascade Village Storage Basin was the first project in the new construction initiative that addressed the City's Combined Sewer Overflows (CSOs), with the potential to restore Akron waterways and the health of its environment and the protection of its water to a level not seen in six generations.

In December 2013, the City of Akron began taking advantage of new USEPA policies that allowed cities to develop an "Integrated Plan." The Integrated Plan would help to prioritize and re-evaluate the extensive capital investments that the City needs to make to its wastewater and stormwater systems over the next several years. The largest costs are associated with a federal Consent Decree and the City's CSO Long-Term Control Plan (LTCP) that requires the City to implement substantial upgrades to the City's combined sewer system and Water Pollution Control Station (WPCS).

The Ohio Canal Interceptor Tunnel (OCIT) broke ground on November 6, 2015. This was the largest project under the *Akron Waterways Renewed!* program. The location of the tunnel construction site required closure of a section of the Towpath Trail. The City of Akron worked with local stakeholders to come up with a safe, easily identifiable and accessible detour. In early 2016, a one-mile alternate route between Memorial Parkway and Mustill Store Trailheads was developed to detour around the tunnel construction site. In June of 2020, the OCIT's final sections were placed into service, providing for storage capacity of 26 million gallons of combined sewer overflow.

In December 2020, the Towpath Trail from Mustill Store to Memorial Parkway officially reopened. This section had been detoured for the past five years due to construction related to the Ohio Canal Interceptor Tunnel. It is anticipated that by spring of 2021, final work will be completed, including site renewal, paving of the affected section of trail, landscaping, and Little Cuyahoga River restoration.

Akron has now completed 85% of the major consent decree projects with two projects currently under construction. The two remaining projects include the Northside Project and the remote treatment facility (EHRT), which is the subject of current negotiations with the EPA. If successful, these projects will facilitate the removal of the Gorge Dam on the Cuyahoga River, one of the last major impediments on the river.

As the conditions of Akron's waterways continue to improve, the return of wildlife has been evident as not seen in the area for some time. The most noticeable example of this is the resurgence of the Great Blue Heron along the Cuyahoga River. These magnificent four-foot-tall wading birds nest in the Cuyahoga Valley National Park. The Great Blue Heron Viewing Area, located on West Bath Road in the Merriman Valley, gives the public an opportunity to view the heron, which nests from February through May.

D.3.7 | Green Infrastructure

Green infrastructure is an approach to water management that protects, restores, or mimics the natural water cycle by reducing peak flows to streets and storm sewers. AMATS encourages the use of green infrastructure to reduce potential negative impacts of storm water runoff such as rain gardens, permeable pavements, green roofs, infiltration planters, trees, and rainwater harvesting systems.

D.3.8 | Social and Economic Impacts

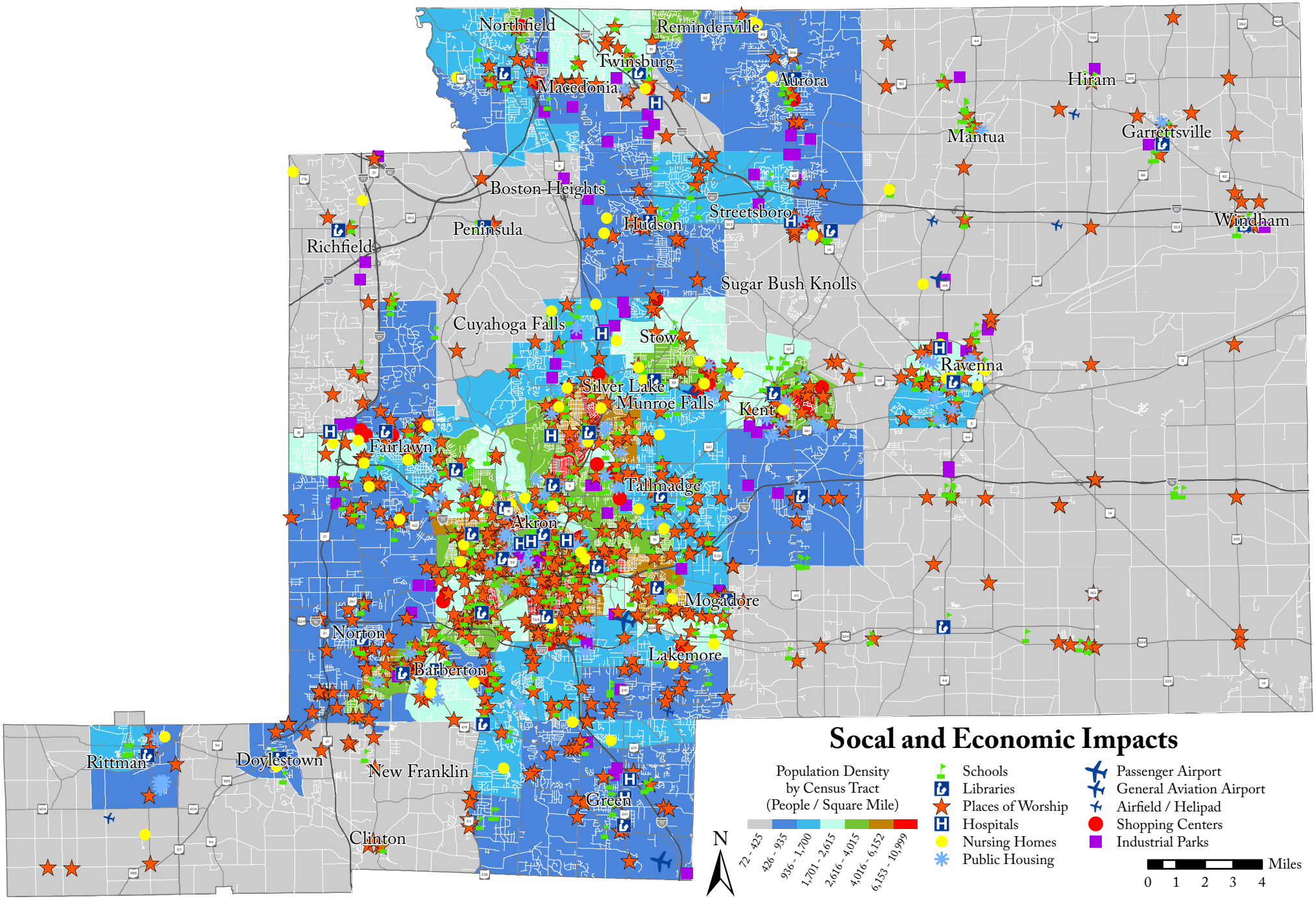
Transportation projects frequently affect the social and economic environment and may change the physical layout, demographics, and sense of place in local communities. These impacts should be addressed in an economic impact analysis included in environmental documentation for transportation projects. Community impacts to consider include hospitals, places of worship, nursing homes, public housing, schools, libraries, industrial areas and shopping centers.

Project sponsors should work with local planning agencies and conduct public outreach to determine the impacts a proposed project may have on communities and identify methods to avoid, minimize, and mitigate impacts. Specific impacts may include: physical and psychological barriers, changes in land use patterns, substantial displacement of businesses and individuals, disruption of business activities, circulation patterns and access to services, changes in population densities, effects on neighborhood cohesiveness, and influence on regional construction costs. Map D.3-4 identifies the region's community facilities.

D.3.9 | Cultural Resources

Cultural resources review for all federal and state funded projects in the AMATS area are planned and designed to comply with the National Environmental Policy Act (NEPA), the National Historic Preservation Act, Section 4(f) of the Department of Transportation Act, the Ohio Revised Code, and 36 CFR Part 800 (the implementing regulations for Section 106 of the National Historic Preservation Act).

The various agencies mentioned require that cultural resources be considered during the development of all highway projects in Ohio. This consideration involves consulting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Doylestown
New Franklin
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Socal and Economic Impacts
Population Density
by Census Tract
(People / Square Mile)
72 - 425
426 - 935
936 - 1,700
1,701 - 2,615
2,616 - 4,015
4,016 - 6,152
6,153 - 10,999
N
Schools
Libraries
Places of Worship
Hospitals
Nursing Homes
Public Housing
Passenger Airport
General Aviation Airport
Airfield / Helipad
Shopping Centers
Industrial Parks
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with various entities, including the Federal Highway Administration (FHWA), the State Historic Preservation Office (SHPO), and the Advisory Council on Historic Preservation (ACHP), City Historic Preservation Offices, local public officials, local organizations, and the public. Mitigation measures developed through a Section 106 Memorandum of Agreement consultation process with SHPO and FHWA provide ways to avoid, minimize, or mitigate adverse effects to historic properties.

The types of cultural resources to identify and review the impact on transportation projects include National Register historic sites, cultural and archaeological sites, or cemeteries. Historic sites are spread throughout the region with the greatest concentration in the urban areas of Akron, Hudson, Kent, and Ravenna. These sites are important to our communities and heritage. The region's National Register Historic sites and cemeteries are shown on Map D.3-5.

D.4 | Environmental Mitigation Activities

Environmental mitigation guidelines provide a framework to address environmental impacts of the recommendations in *Transportation Outlook 2045*, while implementing the goals and policies of the Plan. The section below discusses general mitigation strategies for transportation plans during the Project Development Process (PDP). FAST Act requires that the Regional Transportation Plan contain a discussion of types of potential environmental mitigation activities and potential areas to carry out these activities. Mitigation measures are intended to help public officials make decisions about the environmental consequences with its transportation projects and related planning and to take actions that protect, restore and enhance the environment.

Impact analysis and mitigation are integral parts of the PDP. Early review and analysis of project alternatives by regulatory and resource agencies combined with effective inter-office coordination are required to develop successful transportation projects. The ODOT Office of Environmental Services (OES) in cooperation with ODOT Districts, the ODOT Office of Real Estate, the ODOT Office of Aerial Engineering, and project consultants coordinate to develop mitigation projects.

A detailed assessment of individual projects in future stages of development may emphasize the importance of certain mitigation efforts, where needed. It is the policy of AMATS to require that all federally funded projects comply with applicable environmental rules as a condition to receiving funding.

Mitigation activities should involve the following measures:

- **Avoid** the impact altogether by not taking a certain action or parts of an action
- **Minimize** impacts by limiting the degree or magnitude of the action and its implementation
- **Rectify** the impact by repairing, rehabilitating, or restoring the affected environment
- **Reduce or eliminate** the impact over time by preservation and maintenance operations during the life of the action
- **Compensate** for the impact by replacing or providing substitute resources or environments

Additional information about guidance for preparation of compliance documentation to ensure the environment is protected during transportation projects is available at ODOT's OES website:
www.transportation.ohio.gov/wps/portal/gov/odot/programs/environmental-services

D.4.1 | Water Resources and Wetlands Mitigation

The ODOT-Office of Environmental Services (OES) in cooperation with ODOT districts and project consultants coordinate all stream and wetland mitigation projects. The general procedures for establishing required mitigation for water resources and wetlands begins with a determination of mitigation needs. The Ecological Survey Report (ESR) documents these potential project impacts. An analysis of potential mitigation opportunities would be performed within one mile of the project area. A final mitigation plan would then be developed for submission to agencies prior to permit authorization. Once construction of the mitigation project begins, monitoring and post-construction monitoring would be performed by ODOT to assure successful development and to meet waterway permit conditions.

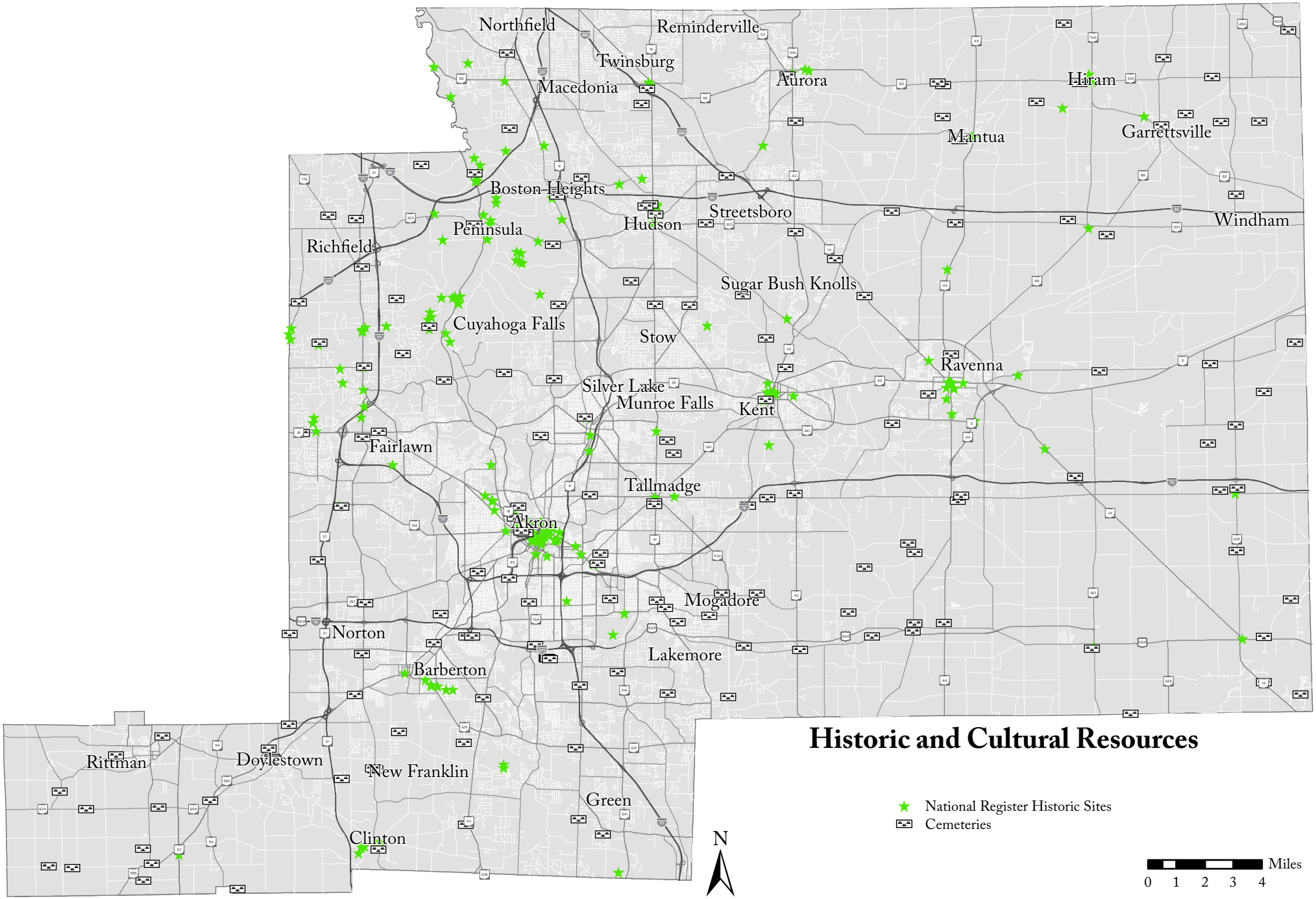
Wetland mitigation measures may include mitigation banking, stream and wetland creation, restoration, or preservation, and possibly even preservation of upland buffer adjacent to stream and wetland resources. Wetland mitigation banking is a process that helps limit negative impacts to wetland resources. Banking can be used when affected wetlands cannot be preserved, allowing for the restoration, creation, or enhancement of wetlands or other aquatic resources at a different location as compensation.

D.4.2 | Threatened and Endangered Species Mitigation

Many species of animal and plant life that receive federal or state protection are tied closely to their habitats. Land use change has been the most common cause for decline in species range and diversity. Contamination and degradation of natural waters has also contributed to loss of habitat.

The Endangered Species Act and the Ohio Revised Code are the specific federal and state legislation that provide for the protection and conservation of plants and animals within Ohio. The laws dictate that ODOT will build and operate their roadway projects with no, or minimal impacts to protected species and their habitats.

There are a variety of commitments and mitigation techniques that ODOT utilizes for projects to protect listed species, depending on the habitat and the species that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Stow
Ravenna
Silver Lake
Munroe Falls
Kent
Fairlawn
Tallmadge
Akron
Mogadore
Norton
Lakemore
Barberton
Rittman
Doylestown
New Franklin
Green
Clinton
N
Historic and Cultural Resources
National Register Historic Sites
Cemeteries
Miles
0 1 2 3 4

are to be protected. The more common commitments and project mitigation options available to protect federal- and state-listed species include:

- Restrict the clearing of trees to the period between September 15 and April 15 to avoid potential impacts to roosting Indiana bats
- Prevention of disturbance of Indiana bats from blasting activities near sensitive areas
- Relocation of listed mussel and plant species out of construction areas
- Survey to identify the presence or absence of endangered animal and plant species near construction areas
- Preserve habitat through an acquisition or a conservation easement
- Enhance or restore degraded or former habitat
- Establishing buffer areas around existing habitat
- Restrict access to habitat
- Create new habitat
- Modify land use practices
- Measures to ensure that all equipment is in proper working order to minimize construction noise and reduce the risk of equipment spills and leaks
- Include construction and post construction plan notes requiring adherence to ODOT's Construction and Material Specifications for Sedimentation and Erosion Control

D.4.3 | Parkland Mitigation

Section 4(f) of the Department of Transportation Act requires that special effort be made to preserve public park and recreation lands, wildlife and waterfowl refuges, and historic sites where federal funds for transportation projects are involved. Project sponsors, ODOT-OES, FHWA, and officials with jurisdiction over Section 4(f) resources closely coordinate throughout the project development process to minimize harm or mitigate impacts on protected resources. Long-range planning should account for well-known Section 4(f) resources throughout the region that would pose a significant loss if affected. It should be noted that it is premature to analyze Section 4(f) impacts on individual projects early in the planning process.

The FHWA is responsible for making all decisions related to Section 4(f) compliance. In cases where projects do have Section 4(f) impacts and there is no feasible and prudent alternative to avoid use of the resource, the Planning Development Process requires the consideration of "all possible planning to minimize harm." Minimization of harm may entail both alternative design modifications that lessen the impact on 4(f) resources and mitigation measures that compensate for residual impacts. Minimization and mitigation measures should be determined through consultation with the official or the agency owning or administering the resource. Neither the Section 4(f) statute nor regulation requires the replacement of 4(f) resources used for transportation projects, but this option is appropriate as a mitigation measure for direct project impacts.

Mitigation measures may involve a replacement of land and/or facilities of comparable value and function, or monetary compensation that could be used to enhance the remaining land. Mitigation of historic sites usually consists of measures to preserve the historic integrity of the site and is agreed to with FHWA. Mitigation measures for common Section 4(f) resource impacts may include:

- Improve access or expansion of parking areas
- Landscape or screening of resource
- Installation of beautification enhancements such as park benches, trash receptacles, signage, etc.
- Maintenance of traffic accommodation or rerouting of traffic
- Direct compensation for improvements to on-site resources
- Design refinements

D.4.4 | Storm Water Mitigation

Storm water, wetlands, and stream corridors are vital environmental features that are extremely sensitive to transportation project construction. Few activities alter a watershed more or have more potential to permanently lower the quality of streams than road construction. Efforts to offset these impacts should focus on strategies to control peak flow from large, infrequent storm events (i.e., flood control) in order to minimize erosion and capture eroded sediment at construction sites.

Various sources of pollutants contribute to storm water runoff, including vehicle wear and tear, littering, construction and maintenance activities and atmospheric deposition. Storm water discharges are regulated by federal and state requirements, namely the Clean Water Act.

Highway storm water management systems include providing runoff treatment to meet water quality standards, recharging groundwater, preventing instream erosion and controlling the rate and duration of storm flows from the highway right-of-way. Planning of transportation projects involves avoiding and minimizing storm water and water quality impacts. Storm water runoff is usually addressed on a project-by-project basis, which may be nearly impossible at times. A watershed approach is another strategy that could be used to target specific storm water issues in a watershed and provide solutions. This strategy would include partnering with other agencies to achieve a broader water quality concern and to examine retrofit opportunities.

Mitigation measures may be considered prior to construction as well as implementation of post-construction storm water practices. It is advised to involve Ohio EPA early on in the planning of projects that have involvement related to storm water, wetlands, and stream corridors. The Ohio EPA assures that schedules can be maintained and that the permitting process starts early enough to align with construction schedules.

This section presents best management practices and mitigation activities that should be implemented for managing storm water runoff and protecting water resource integrity that minimize erosion, sediment and storm water impacts.

Best Management Practices that can be implemented during project design and construction include:

- Add temporary sediment and erosion controls during construction to limit the amount of sediment-laden runoff from construction sites. Examples include - **silt fence** and **sediment settling ponds.**
- Minimize the extent and duration of exposed bare ground to prevent erosion.
- Establish permanent vegetative cover immediately after grading is complete.
- Avoid stockpiling materials within sensitive areas.
- Install permanent sedimentation control devices for storm water management after construction is complete. These controls are aimed at treating water quality by removing pollutants and treating water quantity by slowing down the path of storm water to a stream. Examples include - **specially designed ditches** and **structural treatment devices**.

A few examples of ***Mitigation Activities*** that can be used to reduce environmental impacts from storm water runoff of roadways and facilities include:

- **Grass swales and filter strips** - These are grasses and other vegetation that line a ditch or channel near impervious surfaces to capture storm water runoff and filter it into the ground. They are low cost storm water management activities that should be used where possible.
- **Detention basins and retention ponds** – These are generally used in large residential or commercial development to capture large amounts of water temporarily and slowly filter it back into the ground.
- **Road sweepings** - During and after construction activities, road sweeping can help clear debris, prevent tracking of sediment onto paved surfaces and reduce sediment entering the storm drainage system.

The City of Akron's sewer project is an example of a storm water mitigation measure in the region to eliminate much of the combined sewer overflows that empty into the Cuyahoga and Little Cuyahoga rivers and the Ohio & Erie Canal. This project, *Akron Waterways Renewed!* broke ground in late 2014. The sewer project is the largest single investment in city infrastructure in Akron's 190 year history. Most of Akron's sewers were designed to carry both storm water and sanitary wastes in one pipe. During dry weather, all the sanitary sewage is transported to Akron's Water Reclamation Facility in Cuyahoga Valley off Akron-Peninsula Road. During a rain event, the storm water contribution exceeds the capacity of the combined sewer and the storm water, along with a small contribution of sanitary sewage overflows to the stream or river. These are called "Combined Sewer Overflows (CSO's)."

The City's CSO "Long Term Control Plan" will improve the sewer system by attempting to achieve zero untreated overflows in a typical year, thereby improving water quality in our streams and rivers. The largest single project that broke ground in November, 2015 is the construction of the 6,000 foot long Ohio Canal Interceptor Tunnel (OCIT). The OCIT begins at the Little Cuyahoga River north of the Mustill Store on the Ohio & Erie Canal Towpath and will extend to Lock 1 of the canal at West Exchange Street in Downtown Akron. The tunnel will store more than 25 million gallons of CSO. In June of 2020, the OCIT's final sections were placed into service, providing for storage capacity of 26 million gallons of CSO's. In December 2020, the Towpath Trail from the Mustill Store to Memorial Parkway officially reopened. It is anticipated that by the spring of 2021, final work will be completed, including site renewal, paving of the affected section of trail, landscaping, and Little Cuyahoga River restoration.

In all, *Akron Waterways Renewed!* project includes the construction of seven sewer separation projects, two large tunnels, ten storage basins, and improvements and expansion to the Water Reclamation Facility. Akron has now completed 85% of the major projects with two projects currently under construction. The two remaining projects include the Northside Project and the remote treatment facility (EHRT), which is the subject of current negotiations with the EPA. If successful, this amendment will facilitate the removal of the Gorge Dam on the Cuyahoga River, one of the last major impediments on the river.

D.4.5 | Cultural Resources Mitigation

Cultural Resources in the Greater Akron area are primarily concentrated in Akron, Hudson, Kent and Ravenna. There are a number of individual historic buildings in the region with notable clusters centered in the older downtowns. Older transportation structures, such as canals and railroad and highway bridges, are also part of the history of the region. Consultation with various entities including the FHWA, the State Historic Preservation Office (SHPO), the Advisory Council on Historic Preservation (ACHP), city historic preservation offices, local public officials, local organizations, and the public is required during the project development process.

A mitigation plan is developed with stakeholders through the Section 106 Memorandum of Agreement (MOA) consultation process in order to provide ways to avoid, minimize, or mitigate adverse effects to historic properties (i.e., those listed in or eligible for listing in the National Register of Historic Places (NRHP)) impacted by projects. These mitigation measures are carried through as environmental document commitments and must be completed and accounted for with SHPO and FHWA. Furthermore, the MOA is not closed until all stipulations are fulfilled. A failure to meet all stipulations can potentially jeopardize a project sponsor's funding or other agreements or projects.

A plan for mitigating an adverse effect is site/property specific and requires a separate research design or approach for each historic property impacted by the project. It

should be based on the context development and refinement through the preceding Phase I and Phase II work.

Measures vary depending on the projected impact and may include aesthetic treatments, avoidance, archaeological data recovery, creative mitigation, salvage/re-use of historic materials, informing/educating the public, and Historic American Buildings Survey (HABS)/Historic American Engineering Record (HAER) documentation. Mitigation plans are developed in consultation with ODOT, SHPO, FHWA, consulting parties (i.e., local officials, organizations, public), federally recognized Native American Indian tribes, and on occasion, the Advisory Council on Historic Preservation.
For additional information on documenting cultural resources go to: www.nps.gov/history.

D.5 | Regional Mitigation and Consultation Resources

Various mitigation resources and local environmental conservation organizations are provided in the following section. These agencies were notified of the availability of the Draft *Transportation Outlook 2045* and are encouraged to review The Plan recommendations.

D.5.1 | Environmental Resource Agencies Contact List

Akron Combined Sewer Overflow (CSO) Program
(330) 375-2949
www.akronwaterwaysrenewed.com

Akron Engineering Bureau
166 S. High St.
Akron, OH 44308
https://www.akronohio.gov/cms/engineering/main
akronengineering@akronohio.gov

Akron Environmental Division
166 S. High St., Rm. 701
Akron, OH 44308
www.akronohio.gov/cms/engineering/environmental

Akron Regional Air Quality Management District
1867 W Market St.
Akron, OH 44313
www.araqmd.org
ARAQMD@schd.org

Cuyahoga Valley National Park
15610 Vaughn Rd.
Brecksville, OH 44141
www.nps.gov/cuva

Federal Highway Administration
200 N. High St., Rm. 328
Columbus, OH 43215-2408
www.fhwa.dot.gov

Metro Parks, serving Summit County
975 Treaty Line Rd.
Akron, OH 44313
www.summitmetroparks.org

Ohio Department of Natural Resources (ODNR)
2045 Morse Rd., Building G
Columbus, OH 43229
www.wildlife.ohiodnr.gov
Divisions: Wildlife, Ohio State Parks, Natural Areas and Preserves, Water Resources, Oil and Gas Resources, and Geological Survey

Ohio Department of Transportation (ODOT)
Office of Environmental Services
1980 W. Broad St.
Columbus, OH 43223
www.transportation.ohio.gov/wps/portal/gov/odot/programs/environmental-services

Ohio Environmental Protection Agency (OEPA)
Central District Office
Lazarus Government Center
50 W. Town St., Suite 700
Columbus, OH 43215
www.epa.state.oh.us
Divisions: Drinking and Ground Waters, Environmental Response and Revitalization

Ohio EPA
Northeast District Office
2110 E. Aurora Rd.
Twinsburg, OH 44087
www.epa.state.oh.us/districts

Ohio & Erie Canalway Coalition
47 W. Exchange St.
Akron, OH 44308
(330) 374-5657
www.ohioeriecanal.org
info@ohioeriecanal.org

Ohio Historic Preservation Office Ohio History Center
800 E. 17th Ave.
Columbus, OH 43211
www.ohiohistory.org/preserve/state-historic-preservation-office

Portage County Health Department Environmental Services
705 Oakwood St., 2nd Floor
Ravenna, OH 44266
www.portagecounty-oh.gov/portage-county-health-district

Portage County Soil & Water Conservation District
6970 SR 88
Ravenna, OH 44266
www.portageswcd.org

Portage County Water Resources
8116 Infirmary Rd.
Ravenna, OH 44266
www.portagecounty-oh.gov/water-resources

Portage Park District
705 Oakwood St., Suite G-4
Ravenna, OH 44266
www.portageparkdistrict.org

Summit County Department of Sanitary Sewer Services
1180 S. Main St., Suite 201
Akron, OH 44301
www.co.summitoh.net/departments/Sanitary-Sewer-Services.html

Summit County Engineer Storm Water Management
538 E. South St.
Akron, OH 44311
www.summitengineer.net/home/Summit-County-Engineer.html

Summit County Public Health Division of Environmental Health
1867 W. Market St.
Akron, OH 44313
www.scph.org

Summit Soil & Water Conservation District
1180 S. Main St., Suite 241
Akron, OH 44301
www.summitswcd.org

U.S. Army Corps of Engineers Great Lakes & Ohio River Division
550 Main St., Room 10-714
Cincinnati, OH 45202
www.lrd.usace.army.mil

U.S. Department of Agriculture Natural Resources Conservation Service
Local Service Center
6970 SR 88
Ravenna, OH 44266
www.nrcs.usda.gov/wps/portal/nrcs/oh/home

U.S. Environmental Protection Agency Region 5 – Cleveland Office
25063 Center Ridge Rd.
Westlake, OH 44145
www.epa.gov/aboutepa/epa-region-5

U.S. Fish & Wildlife Service Ohio Ecological Services Field Office
4625 Morse Rd., Suite 104
Columbus, OH 43230
www.fws.gov/midwest/Ohio

U.S. Geological Survey Ohio District
6480 Doubletree Ave.
Columbus, OH 43229
www.usgs.gov/science/regions/midwest/ohio

U.S. National Park Service Midwest Regional Office
601 Riverfront Dr.
Omaha, NE 68102
www.nps.gov

Wayne County Soil & Water Conservation District
County Administration Bldg.
428 W. Liberty St.
Wooster, OH 44691
www.wayneswcd.org
www.wayneohio.org/agencies-departments





Transportation Outlook 2045 is published by:
Akron Metropolitan Area Transportation Study
161 S High St | Suite 201
Akron, Ohio 44308-1423
Editorial comments are welcome.

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This report was prepared by the Akron Metropolitan Area Transportation Study (AMATS) in cooperation with the U.S. Department of Transportation, the Ohio Department of Transportation, and the Village, City and County governemtns of Portage and Summit Counties and a portion of Wayne County.

AKRON METROPOLITAN AREA TRANSPORTATION STUDY

M E M O R A N D U M

TO: **Policy Committee**
Technical Advisory Committee
Citizens Involvement Committee

FROM: **AMATS Staff**

RE: **Resolution 2021-02 – To Add Ohio EPA-Awarded DERG Funds for METRO and PARTA - (FY 2021-2024 TIP Amendment #7).**

DATE: **March 10, 2021**

Executive Summary

This memorandum discusses a TIP amendment to the FY 2021-2024 program of projects for METRO RTA and PARTA, adding two CMAQ-funded projects.

Annually, the Ohio Department of Transportation (ODOT) in coordination with the Ohio Environmental Protection Agency (OEPA), offers funds from the Diesel Emissions Reduction Grant (DERG) Program to public and private sector diesel fleets (motor vehicle, marine, locomotive and highway construction equipment) that are eligible under the Federal Highway Administration's (FHWA) Congestion Mitigation and Air Quality Improvement Program (CMAQ).

On January 13, 2021, METRO RTA and PARTA were each awarded funds through the DERG Program. Consequently, METRO and PARTA are requesting that these additional funds be added to the Transportation Improvement Program (TIP) to include replacement buses using compressed natural gas (CNG). These funds will be used for the maintenance of METRO and PARTA bus fleets.

Consequently, PARTA and METRO are requesting that these additional funds be added to the TIP to include the recently awarded DERG funds.

PARTA is requesting the following changes to the TIP:

- **Add Capital Funds for the Purchase of Two Large CNG Buses (PID 114450)**

  PARTA has been awarded $722,876 in state-attributable CMAQ funds through the DERG Program and requests the purchase of two large (35-foot) diesel buses in FY 2023. The project will be matched with forty percent local funds ($481,918). The total cost for this new project is $1,204,794.

METRO RTA is requesting the following changes to the TIP:

- **Add Capital Funds for the Purchase of Two Large CNG Buses (PID 114452)**

  METRO has been awarded $854,522 in state-attributable CMAQ funds through the DERG Program and requests the purchase of two large (40-foot) CNG buses in FY 2022. The project will be matched with twenty percent local funds ($213,631). The total cost for this new project is $1,068,153.

STAFF COMMENTS

As with all TIP amendments, considerations with respect to consistency with the Regional Transportation Plan, financial capability, air quality conformity, public involvement, and environmental justice are important.

Regional Transportation Plan

The projects proposed in this amendment are consistent with *Transportation Outlook*, the area's Regional Transportation Plan.

Financial Capability

With respect to financial capability, there are sufficient funds available for this amendment.

Air Quality

The project can be viewed as either exempt from air quality or has been analyzed as part of the air quality networks and has resulted in a finding of compliance with the Clean Air Act. Therefore, this amendment will not affect adversely the air quality conformity approval of *Transportation Outlook* or the TIP.

Public Involvement

The Staff is recommending that the Policy Committee consider this action as not regionally significant. As a result, the modified procedures in the AMATS *Public Participation Plan* are appropriate.

Environmental Justice

Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations states that, "each federal agency shall make achieving environmental justice part of its mission by identifying and addressing as appropriate, disproportionately high and adverse human health or environmental effects of its programs policies and activities on minority and low-income populations." This requirement also applies to recipients of federal funds, such as METRO RTA and PARTA.

The projects that will result from this TIP amendment do not appear to impose disproportionately high and adverse human health or environmental effects on minorities and/or low-income people who reside in the METRO RTA or PARTA service areas.

STAFF RECOMMENDATION

Attached to this memo is Resolution 2021-02. This resolution approves the requested changes to the FY 2021-2024 TIP as described above. The Staff recommends approval.

RESOLUTION NUMBER 2021-02

OF THE METROPOLITAN TRANSPORTATION POLICY COMMITTEE OF THE AKRON METROPOLITAN AREA TRANSPORTATION STUDY

TO ADD OHIO EPA-AWARDED DERG FUNDS FOR METRO AND PARTA - (FY 2021-2024 TIP AMENDMENT #7)

WHEREAS, the Akron Metropolitan Area Transportation Study (AMATS) is designated as the Metropolitan Planning Organization (MPO) by the Governor, acting through the Ohio Department of Transportation and in cooperation with locally elected officials in Summit and Portage Counties and the Chippewa Township and Milton Township areas of Wayne County; and

WHEREAS, it is the responsibility of this Committee to develop and maintain the area's Transportation Improvement Program (TIP); and

WHEREAS, METRO RTA and PARTA provide public transportation services in the AMATS area; and

WHEREAS, METRO RTA and PARTA intend to maintain their capital assets in a state of good repair as described more fully in their Transit Asset Management (TAM) Plans; and

WHEREAS, METRO RTA and PARTA are eligible recipients of Federal Transit Administration (FTA) funds; and

WHEREAS, METRO RTA and PARTA are eligible recipients of Federal Highway Administration (FHWA) Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds; and

WHEREAS, PARTA has requested that FY 2023 of the TIP be amended to add CMAQ funds awarded through the DERG Program; and

WHEREAS, METRO RTA has requested that FY 2022 of the TIP be amended to add CMAQ funds awarded through the DERG Program; and

WHEREAS, METRO RTA and PARTA are eligible recipients of state of Ohio General Revenue Funds (GRF); and

WHEREAS, this Committee has analyzed this request and found it to be consistent with *Transportation Outlook*, the area's Regional Transportation Plan; and

WHEREAS, this project has been determined to be in conformity with the State Implementation Plan for air quality; and

RESOLUTION NUMBER 2021-02 Continued

WHEREAS, this Committee has determined that the effects of this amendment are consistent with *Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*.

NOW THEREFORE BE IT RESOLVED:

1. That this Committee amends the FY 2021-2024 Transportation Improvement Program as previously specified in the attached memorandum.

2. That this Committee affirms that the FY 2021-2024 Transportation Improvement Program is in reasonable fiscal constraint.

3. That this Committee affirms consistency with *Transportation Outlook*, the Regional Transportation Plan.

4. That this Committee reaffirms the air quality conformity determination of *Transportation Outlook*.

5. That this Committee considers the necessary public involvement has been carried out as described in the AMATS Public Participation Plan.

6. That this Committee affirms consistency with environmental justice requirements.

7. That this Committee authorizes the Staff to provide copies of this Resolution to the appropriate agencies as evidence of action by the Metropolitan Planning Organization.

_____

Mayor Linda Clark, 2021 Chairwoman
Metropolitan Transportation Policy Committee

_____

Date