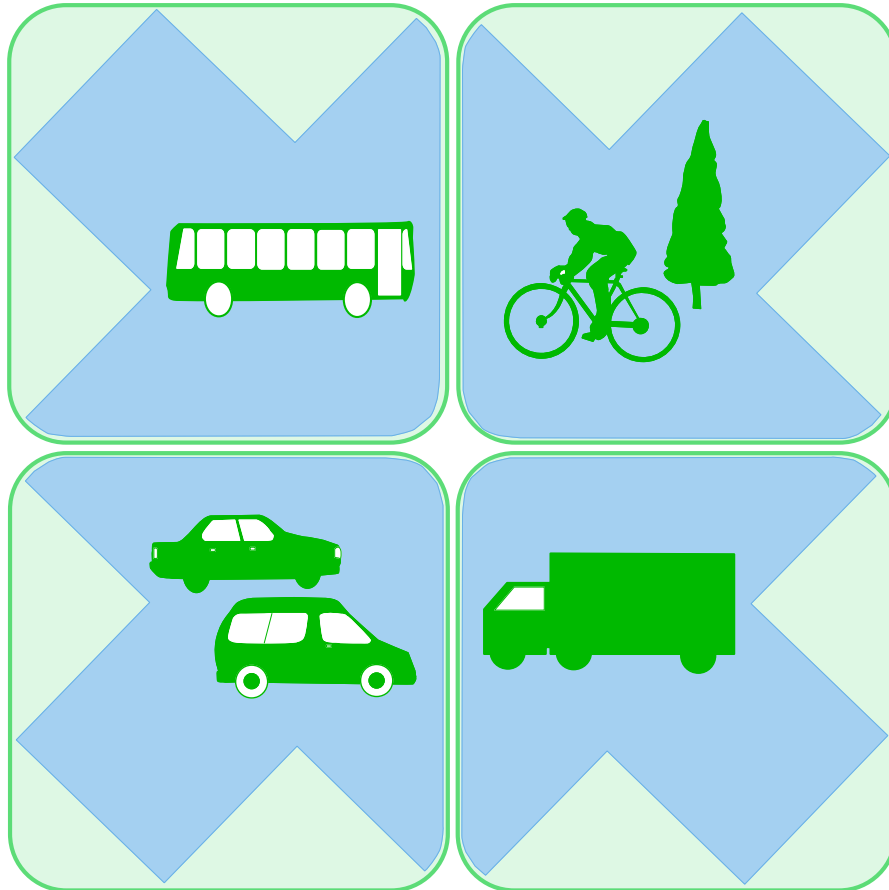


**Connections 2030**  
**A Framework for the 2030 Transportation System**  
**2009 Update**



**CONNECTIONS**  
**2030**

**As adopted by NOACA Governing Board Resolution 2009-013**  
**May 8, 2009**

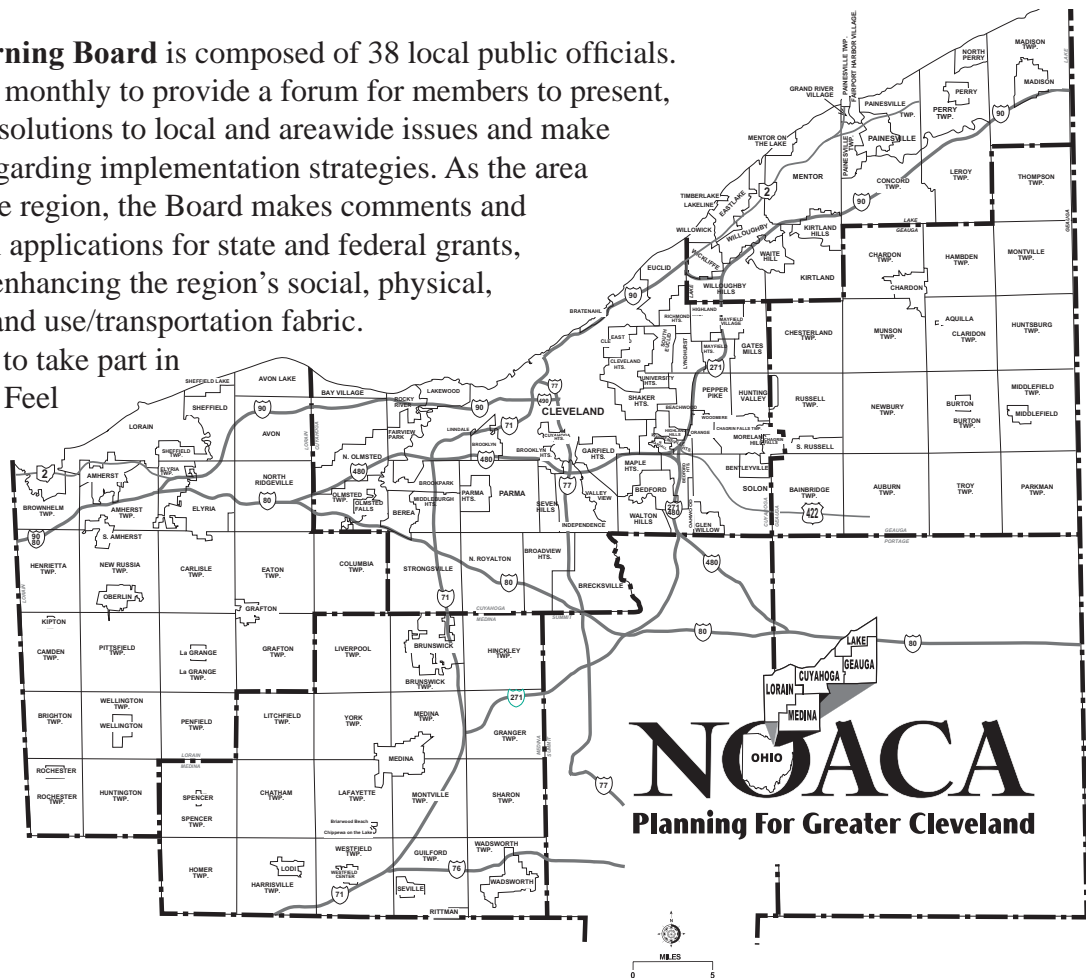
**The Northeast Ohio Areawide Coordinating Agency (NOACA)** is a public organization serving the counties of and municipalities and townships within Cuyahoga, Geauga, Lake, Lorain and Medina (covering an area with 2.1 million people). NOACA is the agency designated or recognized to perform the following functions:

- Serve as the Metropolitan Planning Organization (MPO), with responsibility for comprehensive, cooperative and continuous planning for highways, public transit, and bikeways, as defined in the current transportation law.
- Perform continuous water quality, transportation-related air quality and other environmental planning functions.
- Administer the area clearinghouse function, which includes providing local government with the opportunity to review a wide variety of local or state applications for federal funds.
- Conduct transportation and environmental planning and related demographic, economic and land use research.
- Serve as an information center for transportation and environmental and related planning.
- At NOACA Governing Board direction, provide transportation and environmental planning assistance to the 172 units of local, general purpose government.

**The NOACA Governing Board** is composed of 38 local public officials. The Board convenes monthly to provide a forum for members to present, discuss and develop solutions to local and areawide issues and make recommendations regarding implementation strategies. As the area clearinghouse for the region, the Board makes comments and recommendations on applications for state and federal grants, with the purpose of enhancing the region’s social, physical, environmental and land use/transportation fabric.

NOACA invites you to take part in its planning process. Feel free to participate, to ask questions and to learn more about areawide planning. For more information, call:

(216) 241-2414 or  
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**RESOLUTION NO. 2009-013  
(2009 UPDATE OF CONNECTIONS 2030  
WITH AMENDMENT OF OPPORTUNITY CORRIDOR)**

**RESOLUTION OF THE GOVERNING BOARD  
OF THE  
NORTHEAST OHIO AREAWIDE COORDINATING AGENCY**

**WHEREAS**, the Northeast Ohio Areawide Coordinating Agency (NOACA) is the Metropolitan Planning Organization (MPO) for the counties of Cuyahoga, Geauga, Lake, Lorain, and Medina; and

**WHEREAS**, the Congress of the United States, through law has determined that an MPO must develop a long range transportation plan (LRTP); and

**WHEREAS**, the U.S. Department of Transportation (USDOT), through regulation, requires an LRTP update according to an agreed upon schedule; and

**WHEREAS**, the development of this Plan must meet numerous federal and state requirements in order to ensure continued access to federal financing for transportation projects; and

**WHEREAS**, *Connections 2030: A Framework for the 2030 Transportation System* was adopted in June 2005; and

**WHEREAS**, the requirements mentioned previously require its update by June 2009; and

**WHEREAS**, staff has updated *Connections 2030* to be consistent with current planning requirements, and in response to Board, Committee, local and state government, and public involvement inputs; and

**WHEREAS**, Ohio has asked NOACA to move the Opportunity Corridor project in the City of Cleveland from the illustrative list of projects to the fiscally constrained plan so that said project can access American Recovery and Reinvestment Act (ARRA) funds awarded to it in the State's ARRA selection process; and

**WHEREAS**, NOACA would like to express its concern that it did not have a role in selecting the state-controlled ARRA projects for the region; and

**WHEREAS**, NOACA has amended the fiscally constrained portion of *Connections 2030* with the Opportunity Corridor project in the City of Cleveland per the State's request; and

**WHEREAS**, NOACA is explicitly incorporating climate change language in its long range transportation plan for the first time with this amendment; and

**RESOLUTION NO. 2009-013  
(2009 UPDATE OF CONNECTIONS 2030  
WITH AMENDMENT OF OPPORTUNITY CORRIDOR)**

**WHEREAS**, the 2009 Update of *Connections 2030* meets the transportation conformity requirements as demonstrated in the attached tables; and

**WHEREAS**, the 2009 Update of *Connections 2030* has had sufficient public involvement in accordance with the Board's Public Interaction Policy; and

**WHEREAS**, NOACA will continue to accept and respond to public involvement comments on the Opportunity Corridor amendment until June 11, 2009 and will inform the Board of any comments received pursuant to it; and

**WHEREAS**, the NOACA Transportation Advisory Committee (TAC) has reviewed the 2009 Update of *Connections 2030* and recommends its adoption as the region's current long range transportation plan.

**NOW, THEREFORE, BE IT RESOLVED** by the Governing Board of the Northeast Ohio Areawide Coordinating Agency, consisting of thirty-eight principal elected and other officials of general purpose local government throughout and within the Counties of Cuyahoga, Geauga, Lake, Lorain, and Medina, that:

**Section 1:** The 2009 Update of *Connections 2030* is approved.

**Section 2:** The Transportation Air Quality Conformity analysis for the update is approved.

**Section 3:** The Executive Director is hereby authorized to transmit a certified copy of this resolution to appropriate Federal, State and local agencies.

Certified to be a true copy of a Resolution of the Governing Board of the Northeast Ohio Areawide Coordinating Agency adopted this 8th day of May 2009.

Secretary: Steph O. Hardy

Date Signed: 5/8/09

## 1-Hour Ozone Conformity Test Results

### Ozone Precursor Emissions

#### HYDROCARBON EMISSIONS (TONS/DAY)

	Budget	2012	2020	2030
NOACA		24.65	17.11	15.13
AMATS		9.32	5.93	5.78
Ashtabula		2.58	1.92	1.65
<b>TOTAL</b>	<b>92.70</b>	36.55	24.96	22.56

#### NO<sub>x</sub> EMISSIONS (TONS/DAY)

	Budget	2012	2020	2030
NOACA		50.69	23.21	13.43
AMATS		25.32	10.13	6.88
Ashtabula		4.14	1.81	1.55
<b>TOTAL</b>	<b>104.40</b>	80.15	35.15	22.90

---

## 8-Hour Ozone Conformity Test Results

### Ozone Precursor Emissions

#### HYDROCARBON EMISSIONS (TONS/DAY)

	Budget	2012	Budget	2020	2030
NOACA		23.72		16.59	14.73
AMATS		12.42		7.37	7.06
Ashtabula		2.49		1.69	1.63
<b>TOTAL</b>	<b>46.64</b>	38.63	<b>31.48</b>	25.65	23.42

#### NO<sub>x</sub> EMISSIONS (TONS/DAY)

	2012		2020		
	Budget	2012	Budget	2020	2030
NOACA		50.48		23.10	13.32
AMATS		25.22		10.06	6.81
Ashtabula		4.12		2.01	1.55
<b>TOTAL</b>	<b>95.89</b>	79.82	<b>42.75</b>	35.17	21.68

## Fine Particulate Matter Conformity Test Results

### PM<sub>2.5</sub> Direct and Precursor Emissions

PM <sub>2.5</sub> EMISSIONS (TONS/YEAR)				
	2002	2010	2020	2030
NOACA		523.10	327.44	282.26
AMATS		212.21	131.76	132.13
Ashtabula Twp.		2.56	1.24	1.24
<b>TOTAL</b>	<b>1,317.02</b>	737.87	460.44	415.63

NO <sub>x</sub> EMISSIONS (TONS/YEAR)				
	2002	2010	2020	2030
NOACA TOTAL		26,780.85	8,933.19	4,888.55
AMATS		11,463.37	3,445.60	2,246.90
Ashtabula Twp.		130.67	49.38	37.28
<b>TOTAL</b>	<b>77,458.98</b>	38,374.89	12,428.17	7172.73

# NORTHEAST OHIO AREAWIDE COORDINATING AGENCY

## MEMORANDUM

**TO:** NOACA Governing Board Members

**FROM:** Howard R. Maier, Executive Director

**DATE:** April 29, 2009

**RE:** **Resolution No. 2009-013: 2009 Update of *Connections 2030* Including Amendment of Opportunity Corridor Project**

### **Background**

Federal law requires that NOACA's Long Range Transportation Plan (LRTP) must be updated at this time due to an agreed upon schedule. That is, to remain eligible to receive federal transportation dollars, NOACA must submit a minor update to its LRTP this spring.

*Connections 2030*, NOACA's LRTP, was last updated in 2007 to make it consistent with the planning requirements of SAFETEA-LU. The revised document will bring NOACA's transportation planning efforts up to date. Due to ongoing fiscal uncertainties, no additional projects are proposed to be added to the Plan. As explained below, this update does include the addition of language about climate change and the movement of Opportunity Corridor from the illustrative list of projects to the fiscally constrained transportation plan.

With a new transportation law scheduled for October 2009, the next Plan update in 2013 will be a major undertaking. It should also be noted that the Plan can be amended in the interim to include additional policy changes or agreed-upon projects that come from the planning process.

### **Climate Change Discussion**

I have had discussions with a number of Board members and staff regarding NOACA adding climate change language to this update. Several public involvement comments have suggested a similar inclusion. NOACA staff believes that existing planning goals already capture most aspects of transportation related climate change concerns. The document, however, does not state this explicitly. The Transportation Advisory Committee (TAC) was provided with a draft language revision for Goal 2 from *Connections 2030* which incorporated climate change at its April meeting. The TAC recommended that the explanation portion of that revision be augmented with additional detail about NOACA's next steps on this issue. It recommended that the amended language be approved by the Governing Board as part of the 2009 Update of *Connections 2030*. The following language reflects these recommendations.

**Goal 2 is recommended to read:**

Enhance the natural environment and ecology of the region by improving air, land and water quality, conserving transportation energy, **addressing climate change**, and by identifying and preserving existing critical natural resources and environmentally sensitive areas.

**The explanation for Goal 2 will be expanded to include:**

*There is a growing scientific consensus that climate change is a real phenomenon that will have consequences for humankind and the environment. There is also a growing belief that greenhouse gas emissions from the transportation sector are playing a significant role in contributing to climate change. It is likely that MPOs will be asked to consider climate change by future transportation planning regulations. NOACA's efforts to preserve and maintain existing infrastructure, reduce congestion, promote alternative modes of transportation, and support clean vehicle technologies already actively contribute to the reduction of greenhouse gas emissions in the region. NOACA has chosen to update this goal to specifically reflect climate change, however.*

*NOACA considers this to be the initiation of an effort to develop a transportation related climate change policy for the region that can expand upon its existing emission reduction efforts. In cooperation with NOACA's Governing Board and its committees, staff will identify strategies for reducing the region's transportation related greenhouse gas emissions and incorporate the resulting strategies into the agency's project review, selection, and funding processes. These strategies could include:*

- *Efforts to reduce total Vehicle Miles of Travel (VMT) in the region in order to reduce fuel consumption;*
- *Expanded efforts to reduce congestion in the region in order to reduce fuel consumption;*
- *Efforts to support expansion of alternative fuel choices and availability in the region;*
- *Efforts to increase the rate of conversion of public fleets to alternative fueling choices;*
- *Expanded efforts to promote employer support of alternative transportation choices for their employees;*
- *Tracking of the impacts of the above efforts on the region's transportation related carbon footprint.*

**Opportunity Corridor**

Opportunity Corridor, a proposed travel connection between the end of IR-490 and University Circle, was part of the illustrative list of projects in the 2005 version of *Connections 2030*. Recently, Ohio selected this project as a recipient of American Recovery and Reinvestment Act funding. Subsequent to that selection, the State asked NOACA to amend its fiscally constrained plan and TIP with this project. This request was made because in order for this project to access ARRA funds, it must be on the fiscally constrained long range transportation plan and TIP.

NOACA staff has undertaken the necessary steps to allow for its addition to the fiscally constrained plan and TIP. This included a financial analysis and an update of the conformity analysis for the 2009 Update of *Connections 2030*.

The April TAC recommended the amendment of the 2009 Update of *Connections 2030* with this project per the State's request. It also recommended that the resolution include language that expressed NOACA's concern that its input was not sought as part of the State's selection process for ARRA projects in this region. The attached resolution includes language reflecting the TAC's recommendation.

Several TAC members expressed concern about the potential for the Opportunity Corridor project to negatively impact transit usage. Staff analyzed the outputs from the travel demand model related to transit and determined that no significant impact to transit usage is predicted by the model as a result of Opportunity Corridor's construction.

### **Conclusion**

Staff is seeking Governing Board approval of **Resolution No. 2009-013**, which adopts the 2009 Update of *Connections 2030* with the discussed amendments. This update will ensure that NOACA remains at the forefront of governmental agencies planning for the future of the region's infrastructure, economy and environment.

<b>1) Title &amp; Subtitle</b> Connections 2030: A Framework for the 2030 Transportation System 2009 Update	<b>2) NOACA Report No.</b> TR-09-12
<b>3) Author(s)</b> Bill Davis  <b>Contributors:</b> Staff	<b>4) Report Date</b> May 2009
<b>5) Performing Organization Name &amp; Address</b>  Northeast Ohio Areawide Coordinating Agency 1299 Superior Avenue, Cleveland, OH 44114-3204 Phone: (216) 241-2414 FAX: (216) 621-3024 Web site: www.noaca.org	<b>6) Project/Task No.</b> 610501 (FY 2009)
	<b>7) NOACA Contract/Grant No.</b> ODOT/FHWA
<b>8) Sponsoring Agency Name &amp; Address</b>  Ohio Department of Transportation 1980 W. Broad St., Box 899 Columbus, OH 43216-0899	<b>9) Type of Report &amp; Period Covered</b> (July 1 2008 – June 30 2009)
	<b>10) Sponsoring Agency Code</b>
<b>11) Supplementary Notes</b>  Federal funding for this project was provided by the Federal Highway Administration and administered by the Ohio Department of Transportation.	
<b>12) Abstracts</b>  2009 update of Connections 2030, the region's federally required long range transportation plan update.	
<b>13) Key Words &amp; Document Analysis</b>  A. Descriptors  B. Identifiers/Open Ended Terms	
<b>14) Availability Statement</b> NOACA	<b>15) No. Pages</b> 160
	<b>16) Price</b>

**Connections 2030**  
**A Framework for the 2030 Transportation System**  
**2009 Update**

**May, 2009**

Prepared by

**NORTHEAST OHIO AREAWIDE COORDINATING AGENCY**

Principal Author:

Bill Davis

**WILLIAM M. GRACE, MAYOR**  
**BOARD PRESIDENT**

**HOWARD R. MAIER, FAICP**  
**EXECUTIVE DIRECTOR**

*The preparation of this publication was financed through grants received from the Federal Highway Administration and the Ohio Department of Transportation and appropriations from the counties of and municipalities within Cuyahoga, Geauga, Lake, Lorain and Medina. The contents do not necessarily reflect official views or policies of the U.S. Department of Transportation or the Ohio Department of Transportation. This report does not constitute a standard or regulation.*

**Connections 2030**  
**A Framework for the 2030 Transportation System**  
**2009 Update**

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## **Executive Summary**

### **Overview**

#### 2009 Update

Since Connections 2030 was adopted in June 2005, NOACA has continued its efforts to address the transportation needs of its constituent local governments. It has done this by continuing to pursue the strategies outlined in Connections 2030 and also by continuing to address changes in the federal regulations impacting its efforts.

Foremost among the regulatory changes, the Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), the current surface transportation law, significantly amended NOACA's transportation planning responsibilities in August 2005. NOACA implemented the necessary revisions to its transportation planning process via the SAFETEA-LU Gap Analysis and Closure Document (Gap Closure Document) in May 2007.

SAFETEA-LU also changed the former triennial planning cycle for NOACA's transportation planning efforts to a four year cycle. This update completes NOACA's first four year planning cycle. It documents NOACA's continued efforts to meet its planning responsibilities related to the region's transportation infrastructure.

Throughout this document, the reader will see section updates similar to this one. Where pertinent, Gap Closure Document sections have been incorporated. In most cases, Connections 2030 text from 2005 has been left unaltered. In a few instances, it or Gap Closure Document sections will be marked as amended. In these cases the amendments are necessary because intervening updates have altered the original text in a substantive way.

Two amendments to this document have occurred during its adoption. The first is the amendment of the Opportunity Corridor project to the fiscally constrained long range transportation plan. The second is the addition of language related to the issue of climate change to Goal 2 and its discussion.

#### Connections 2030 Original

The NOACA Transportation Plan, "Connections 2030", contains policies, programs, and projects that set the course for transportation in northeast Ohio in the 21<sup>st</sup> Century. The Plan examines where we are now, where we are heading, and offers strategies for effecting beneficial changes in the region's transportation infrastructure.

This Plan, a triennial milestone in the 3C Metropolitan Planning Process, examines changes in population and settlement patterns to determine their effect on travel in the region. The Plan further examines the condition and performance of the transportation system in meeting these travel needs. In short, the Plan explores the viability or sustainability of the transportation system within the present and future landscape.

## **Plan Goals and Strategies**

### 2009 Update

NOACA continues its efforts to implement the strategies outlined for the goals in Connections 2030. Efforts related to individual goals can be found in Chapter III.

### Connections 2030 Original

In 1999, the Governing Board set ten Transportation Plan goals that are intended to allow for the development of an integrated transportation system. The goals have been used ever since to guide policies, develop programs and select projects. The goals were last reviewed and updated in June 2002.

This Plan reviews the progress made in advancing each goal. Additionally each goal contains strategies and actions to help further advance the goals. Sixty-seven new strategies in the Plan were developed to reward and offer incentives to actions that benefit the region.

## **Technical Issues**

### *Travel Demand Model Updates*

#### 2009 Update

NOACA is in the midst of a two step effort to dramatically update its travel demand modeling efforts. The first phase is the conversion of the existing travel demand model (TDM) from one platform to another. The second will be the development of an updated model in preparation for the 2013 long range transportation plan.

### Connections 2030 Original

NOACA has completed a significant update of its travel demand model to reflect information from the 2000 Census. This involved not only data updates but updates to the underlying structure of the model to reflect the changing demographics of our region.

### *Regional Transportation System*

#### 2009 Update

NOACA continues its efforts to understand, define, and plan for the region's transportation system. Most notably it has launched an Asset Management Council to aid it in planning for the long term maintenance of the region's transportation assets. The council will be aided by improved information from NOACA's congestion management process, pavement management system, accident and safety analysis efforts, and various system component inventories.

Connections 2030 was amended with NOACA's Regional Bicycle Transportation Plan in March 2008. This plan, the outgrowth of many years of inventorying and studying of existing bicycle

accommodations in the region, identifies planned and proposed bicycle facilities; goals and strategies for the promotion of bicycling as a transportation mode; and estimates for the cost of planned and proposed bicycle accommodations.

NOACA is currently in the midst of an effort to inventory existing pedestrian facilities in the region. This effort will allow for the development of plans to improve the ability of the region's citizens to use walking as a mode of transportation. Additionally it has conducted a series of "walkable" community workshops geared towards improving the pedestrian mode in several specific locations in the region.

NOACA is also in the process of reinvigorating its freight planning efforts. It has recently completed an update of its National Highway Intermodal Connectors inventory. It is developing approaches to better understand how freight moves through the region and how to maximize the efficiency of that movement. These efforts have become increasingly vital as both local and through shipments by both truck and rail have increased significantly in recent years.

### Connections 2030 Original

The Regional Transportation System is a complex of modes, roads, transit ways, waterways, bicycle and pedestrian ways, connected increasingly by communication devices. There is an international airport and reliever system, water ports on Lake Erie at the Black, Cuyahoga and Grand Rivers, intermodal rail facilities operated by CSX and NS, and truck terminals all woven into a freight logistics network.

The Regional Transportation System is subject to ongoing evaluation based upon the following subsystems and planning initiatives in varying stages of development and use by NOACA and its public and private partners:

- Asset Management System
- Intelligent Transportation System
- Congestion Management System
- Pavement Management System
- Bridge Management System
- Passenger and Freight Intermodal System
- Transit System
- Bicycle and Pedestrian Network
- Waterways

Updates on the status of each of these system efforts are provided in the main plan document.

### **Planning Issues**

#### 2009 Update

As noted previously, NOACA amended Connections 2030 with a Regional Bicycle Plan Element in March 2008. It has also continued its efforts to expand on the pedestrian planning components of its efforts.

The Transportation for Livable Communities Initiative (TLCI) launched as part of the Connections 2030 effort, has been well received by local governments. To date, NOACA has funded almost 30 local planning efforts geared at identifying how to improve the transportation at specific locations within the region.

NOACA has also expanded its safety planning efforts considerably since Connections 2030 was adopted. The expanded efforts include improved mapping of accident data in a geographic information system (GIS) format; the conduct of road safety audits (RSAs) at intersections with known safety concerns; and the initiation of an effort to identify and mitigate problems associated with the interaction of wildlife with the transportation system.

NOACA successfully became the designated recipient for Job Access and Reverse Commute (JARC) and New Freedom funding following the development of a Coordinated Public Transit – Human Services Transportation Plan for Northeast Ohio. These efforts significantly expanded the agency’s former role in local transit planning efforts.

### Connections 2030 Original

Connections 2030 identifies some specific long-range issues, including bicycle and pedestrian planning. Additionally, there is an explanation of a new initiative (Transportation for Livable Communities) that has been undertaken in order to strengthen community livability.

## **Projects**

### 2009 Update

Since the adoption of the original Connections 2030 document, two regionally significant projects have been amended to it. The first is the Avon Interchange project. The second is the Opportunity Corridor project. The latter project was moved from the illustrative list of projects (tier 3) to the fiscally constrained transportation plan.

### Connections 2030 Original

The Projects contained in this document were selected using the Governing Board’s Regional Transportation Investment Policy (RTIP). There are four tiers of projects in the Plan:

- Tier 1 projects are at an advanced stage of planning and have identified federal funding. These projects are on the fiscally balanced part of the Plan and are used to perform the federally required air quality analysis. Project sponsors intend to construct these capacity and non-capacity projects within the next four years. Projects in this Tier are normally also on the Transportation Improvement Program.
- Tier 2 projects are those at an advanced stage of planning and includes the following projects:

- Projects that have successfully completed an MIS (if required). This includes capacity projects whose funding has been guaranteed by the project sponsor, but for which no federal funds have been identified at this time. Since the project sponsor has agreed they will finance these projects, they are also on the fiscally balanced part of the Plan and are used to perform the federally required air quality analysis. Project sponsors intend to construct these major regional transportation investments within the next 6 to 20 years.
- Non-capacity projects that are expected to encumber funds within the next six to eight years. To be placed on this Tier, the non-capacity project must have undergone successful scope review (See Section III.C.)
- Tier 3 projects are those capacity projects undergoing an MIS (or equivalent) or needing an MIS (or equivalent). Tier 3 projects also contain Board approved non-capacity Plan projects that are currently undergoing additional planning and design prior to successful scope review.
- Tier 4 projects are projects or concepts that may be part of a visionary plan.

## **Plan Impacts**

### *Air Quality*

#### 2009 Update

The analyses for this update were performed in keeping with NOACA's ongoing interagency consultation efforts and are for those transportation related air pollutants for which analyses are required.

#### Connections 2030 Original

The highway and transit networks used for travel demand modeling purposes and related air quality analysis include capacity adding projects from Plan Tiers 1 and 2 so as to permit conformity determinations under the U.S. EPA conformity regulations at 40 CFR part 51 for non-attainment and maintenance areas.

The results of these air quality analyses for hydrocarbons and oxides of nitrogen is that the considered Transportation Plans and Transportation Improvement Programs conform to Ohio's State Implementation Plan for Ozone.

### *Social Justice*

#### 2009 Update

NOACA had the opportunity to revisit the needs of the disadvantaged during the development of the Coordinated Public Transit-Human Services Transportation Plan for Northeast Ohio. This plan, adopted in March 2008, was a pre-requisite to becoming the designated recipient for the

Job Access and Reverse Commute (JARC) and New Freedom transportation funding programs. Based on the available Census 2000 data, the analysis and the resulting plan will lead to new transportation options for some of the region's neediest travelers.

### Connection 2030 Original

While the region expects little population growth over the next 30 years, jobs will be dispersed throughout the region. Employment data continue to show a shift of jobs to suburban areas. This decentralization of jobs will pose challenges for the transportation system. The region must struggle to meet the growing demand for new infrastructure while maintaining the existing infrastructure.

At the same time, much of the projected population growth is expected to occur in unincorporated areas that have limited powers to generate revenues to address social and economic concerns. This growth in suburban areas will mean a loss for the urban areas, as the region's total population is projected to remain constant. Therefore, urban centers will struggle to support services in the face of a declining resource base.

When these trends are projected to the future, the separation of Environmental Justice (EJ) populations from jobs is expected to increase considerably. Minority and/or low-income populations disproportionately reside in urban areas. The car-less populations closely trace the low-income population areas. The elderly and disabled are more widely dispersed with greater concentrations residing in the outer suburbs and exurbs. Additionally, much of the growth is projected to occur in unincorporated areas that have limited powers to generate revenues to address social and economic concerns.

As shifts in job growth occur, minority and/or low-income populations are isolated from employment. The elderly and disabled living in auto-oriented communities cannot easily be served by transit. Therefore, EJ populations are now isolated from critical destinations, or will be when one of these factors is missing.

Using the travel demand model NOACA staff has calculated relative accessibility provided by highway and transit for E.J. areas. These comparisons are based on all possible, not all probable work trips for the years 2000 and 2030. They provide a means of measuring change and do not reflect actual travel time, but rather measure increase or decreases in performance.

The salient point is that highway travel will slightly improve, while transit travel will significantly degrade. So, to the extent that one owns a reliable vehicle, commute time will be improved. However, since a disproportionate number of the minority, low-income populations are car-less and must use transit, they will only benefit from these improvements if their trip and service remain the same. Neither will go unchanged due to job-sprawl resulting in longer trips, and less frequent transit service.

## *Financial Plan*

### 2009 Update

The status of transportation financing is at what is likely its most complex state since the initiation of the financial planning requirements for transportation plans. Inflation in costs of fuels and construction materials, a general recession, and multiple government sponsored stimulus efforts result in a complex funding picture. The updated financial plan takes a fresh look at transportation revenues and costs in light of this complex situation.

### Connections 2030 Original

The financial analysis for Connections 2030 demonstrates that the region's transportation revenues and expenditures are sufficiently balanced to allow achievement of the region's transportation plans.

## *Public Involvement*

### 2009 Update

NOACA adopted an updated Public Interaction Policy in March 2006. This policy covers NOACA's public involvement, public information and public access efforts. Public involvement for this plan update was conducted in accordance with that policy.

### Connections 2030 Original

NOACA conducted public involvement during the development of Connections 2030 in accordance with NOACA's public involvement policies, which are consistent with federal guidelines. Additionally, NOACA conducted two specific survey efforts in an effort to gain additional input.

## Chapter I: Connections 2030: The Regional Context

### 2009 Update

The 2005 version of Connections 2030 introduced population and employment projections based on the 2000 Census. These projections, based on existing trends in the region, suggested that both population and employment would migrate out of most of the region's core cities. These trends were projected to be strongest within Cuyahoga County.

The population projections also suggested that NOACA's five counties would continue an unusual trend of maintaining roughly the same total population over the time line of the transportation plan.

The American Community Survey (ACS), a new Census Bureau effort which is intended to replace the decennial long form of the census with more regular updates, now allows for interim checks on the region's population and employment figures against the forecasts. The table below provides 2007 Census estimates, and/or 2005-2007 average ACS estimates for those geographies discussed explicitly in the 2005 version of Connections 2030 where they are available. Additional data and explanations of the methods used to derive the data can be found at <http://factfinder.census.gov>.

Place 2000	Population Employment			
		2007	2000	2005-2007
<b>Cuyahoga County</b>	1,393,978	1,295,958	676,874	661,238
<b>Geauga County</b>	90,985	95,029	46,454	49,962
<b>Lake County</b>	227,511	233,392	123,182	126,240
<b>Lorain County</b>	284,664	302,260	141,833	153,140
<b>Medina County</b>	151,095	169,832	80,564	92,392
<b>NOACA Region</b>	<b>2,148,233</b>	<b>2,096,471</b>	<b>1,068,907</b>	<b>1,082,972</b>
<b>Beachwood</b>	12,186	11,197	5,190	NA
<b>Brecksville</b>	13,382	12,957	6,650	NA
<b>Cleveland</b>	478,403	438,042	203,545	186,814
<b>Cleveland Heights</b>	49,958	46,321	27,633	24,171
<b>Euclid</b>	52,717	47,940	26,304	27,189
<b>Independence</b>	7,109	6,820	3,448	NA
<b>Lakewood</b>	56,646	51,305	33,269	32,240
<b>North Royalton</b>	28,648	29,373	16,392	17,903
<b>Parma</b>	85,655	78,785	43,208	43,273
<b>Solon</b>	21,802	22,032	11,045	12,999
<b>Strongsville</b>	43,858	42,874	24,072	25,471
<b>Westlake</b>	31,719	30,710	16,188	16,636
<b>Mentor</b>	50,278	51,739	28,173	27,005
<b>Painesville</b>	17,503	18,109	8,696	NA

<b>Avon</b>	11,446	16,717	5,725	NA
<b>Elyria</b>	55,953	55,059	28,477	27,757
<b>Lorain (city)</b>	68,652	70,124	31,095	30,848
<b>North Ridgeville</b>	22,338	25,578	12,747	15,355
<b>Brunswick</b>	33,388	34,880	18,084	21,063
<b>Medina (city)</b>	25,139	26,206	12,866	14,966
<b>Wadsworth</b>	18,437	20,417	9,299	10,742
<b>Solon</b>	21,802	22,032	11,045	12,999

Available data suggest that the forecasts used in developing Connections 2030 remain relevant. In some cases short term trends may have been more extreme than 2030 forecasts suggest. As additional ACS data is released, and when 2010 decennial Census data becomes available, NOACA staff will be in a better position to determine how future forecasts should be adjusted to reflect regional trends.

### Connections 2030 Original

The NOACA Transportation Plan, “Connections 2030”, contains regional transportation policies, programs, and projects through the year 2030. These projects provide the regional supply of transportation facilities and services. The demand for these items is derived from the projected number, composition and location of people and jobs in the region.

This chapter is a discussion of regional demand. It is a chapter that looks ahead to the year 2030 through projections developed both by the State and NOACA. These projections are the fundamental step in transportation modeling. Clearly projections are subject to uncertainty, and those used here are unlikely to be realized to the final number. However, the trend lines of these projections have a long and established history that lends credence to the direction indicated.

NOACA used population projections issued by the Ohio Department of Development<sup>1</sup> for this effort. These are county level projections which NOACA staff disaggregated to community and traffic zone geography. NOACA staff developed the employment projections.<sup>2</sup>

The projections that NOACA staff developed for the plan update offer a glimpse into a future not much different from the past. Absent significant social, economic or political changes, regional population and employment growth will be slight and what increases are projected will be scattered throughout the region.

### **Population**

In the past decade, 1990 to 2000, regional population increased 46,000 or two percent. This growth reversed a twenty-year decline from the region’s all time peak population of 2.3 million

<sup>1</sup> The Ohio Department of Transportation (ODOT) requires use of these projections.

<sup>2</sup> NOACA, “Certified Community-Level Population and Employment Allocations for the Northeast Ohio Areawide Coordinating Agency”. December 2004.

people in 1970. As shown in Table 1 the regional increase occurred because population gain in the four outer counties exceeded the loss in Cuyahoga County.

The county level projections issued by the state generally continue this pattern.<sup>1</sup> Cuyahoga County’s population is projected to decline to the year 2030. In Lake County, population is projected to be stable from 2010 on, while the remaining counties, Geauga, Lorain and Medina, are projected to experience continuous growth. The regional summation varies little from one time increment to another, and can essentially be considered constant at 2.1 million people. Over the 30-year horizon, Cuyahoga County is projected to lose 120,000 people, while the remaining counties gain 107,000. This population shift will lower the central county’s share of the region from 65 percent in 2000 to 60 percent in 2030.

Recent estimates of current population issued by the Census Bureau, show the extent of change is even more pronounced than the state projected.<sup>2</sup> According to the estimates, as of mid-2004 Cuyahoga County was declining more rapidly than had been projected, while population in the four remaining counties was increasing more than had been projected. The regional sum, however, is on track with the trend noted in Table 1.

**Table 1**  
**County and Regional Population**

	Cuyahoga	Geauga	Lake	Lorain	Medina	NOACA
1990	1,412,140	81,129	215,499	271,126	122,354	2,102,248
2000	1,393,845	90,895	227,511	284,664	151,095	2,148,010
2005	1,356,860	94,440	230,510	288,400	161,670	2,131,880
2010	1,332,540	98,820	233,890	290,840	173,760	2,129,850
2015	1,309,640	101,290	233,760	295,660	181,890	2,122,240
2020	1,301,870	104,810	234,520	299,630	191,850	2,132,680
2025	1,289,960	106,790	233,290	306,720	198,470	2,135,230
2030	1,274,020	109,180	232,340	312,540	206,770	2,134,850
Change 2000 to 2030:						
Number	-119,825	18,285	4,829	27,876	55,675	-13,160
Percent	-9	20	2	10	37	-1
Source: Ohio Department of Development, Office of Strategic Research						

The state projections are the starting point for NOACA to distribute projected county population among each county’s communities. In Cuyahoga County the state’s projected population

<sup>1</sup> For information on projections, see: Ohio Department of Development, Office of Strategic Research, “Population Projection Methodology”. March 2004.

<sup>2</sup> U. S. Census Bureau, Population Division, “Annual Estimates of the Population for Counties: April 1, 2000 to July 1, 2004”. Released April 14, 2005

decline, 120,000 in 30 years, was distributed along lines of historic change. Clearly communities on the county's fringe will continue to grow, meaning the losses must be allocated among the older communities. In some cases, e.g., Cleveland, large declines are projected; however, the projected change from 2000 to 2030 (96,000 or 20 percent) is less than the previous 30 years (273,000 or 36 percent). Further, the ratio of Cleveland-to-Cuyahoga County change projected from 2000 to 2030 is consistent with the 1970 to 2000 pattern.

Table 2 summarizes population changes for selected communities in the NOACA region. These communities are representative of regional trends. Given the county total, the city of Cleveland, as noted, is projected to decline 96,000 people by the year 2030. Other significant losses are projected in Cleveland Heights, Parma, Euclid, and Lakewood. These are communities with an increasingly elderly population that have experienced recent net population out migration.

Two communities, Strongsville and Westlake, are forecasted to record significant increases. In total, 41 of Cuyahoga County's 59 communities are forecasted to experience population decline through the forecast horizon.

**Table 2**  
**Selected Community Population Changes 2000 to 2030**

Community (County)	Gain/Loss	Percent Gain/Loss
Cleveland (Cuyahoga)	-96,000	-20
Cleveland Heights (Cuyahoga)	-10,000	-20
Parma (Cuyahoga)	-10,000	-12
Euclid (Cuyahoga)	-8,300	-16
Lakewood (Cuyahoga)	-8,500	-15
Strongsville (Cuyahoga)	13,000	30
Westlake (Cuyahoga)	10,000	32
Montville Township (Medina)	7,200	134
Lafayette Township (Medina)	5,300	96
Medina Township (Medina)	5,300	88
Brunswick Hills Township (Medina)	4,600	106
Brunswick (Medina)	7,500	22
Wadsworth (Medina)	5,600	28
Solon (Cuyahoga)	6,500	30
Bainbridge Township (Geauga)	2,200	20
Auburn Township (Geauga)	3,600	69

As shown in Figure 1, the major thrust of the region's population change is west and south. In Lorain County two cities are projected to receive significant gains. Avon is projected to almost double its 2000 population, increasing from 11,400 to 20,700, a gain of 81 percent. Immediately to its south, North Ridgeville is projected to grow by 7,200 or 32 percent. Medina County's

population is projected to increase by 55,600 by 2030. A significant proportion of this gain is projected to occur in unincorporated areas of the county: Montville Township, Lafayette Township, Medina Township, and Brunswick Hills Township are projected to grow substantially. Two cities, Brunswick and Wadsworth are also projected to record large gains.

A lesser salient of growth is expected to the southeast. Along the US 422 corridor, growth is projected in Solon and in Geauga County's Bainbridge Township and Auburn Township.

To understand one defining characteristic of northeast Ohio, it is important to note that the population changes projected here occur in what is essentially a stable regional total population. Over the 30-year horizon, regional population is projected to decline 13,000, or one percent. Yet this change is composed of 94 communities gaining 181,000 people and 63 communities losing 194,000. On balance, a lot of community churning occurs in a regional zero sum game.

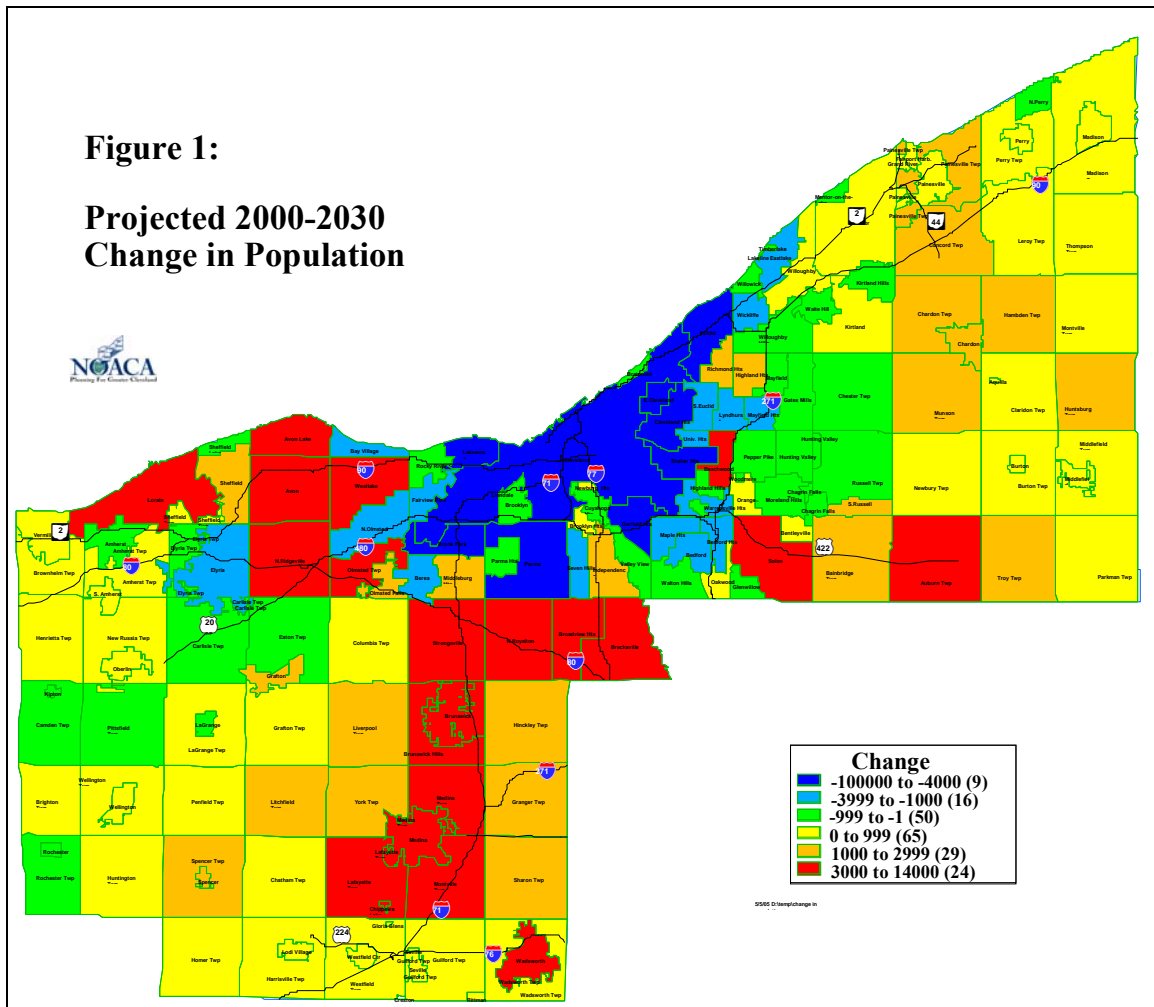


Table 3 presents existing and projected population by broad age groups. The first, 0 – 19, can be considered school age population. The second, 20 – 64 approximates working age population and the 65+ would be retired. The table shows real differences among counties as they go

through 30 years of change. Depending upon the county, projected age group change suggests significant social, economic and transportation issues.

Note population in the youngest age group, 0 – 19, is projected to decline in three Counties: Cuyahoga, Lake and Lorain. By far the largest decline, 20 percent, is in Cuyahoga County. Depending upon how these changes play out among school districts, communities could face challenging land use and re-use decisions concerning educational facilities.

The elderly population, 65+, is projected to increase in all counties. At the regional level, this segment is projected to increase from 15 percent of total population in 1990 to 21 percent in 2030. It is the only population segment of the three addressed that is projected to grow, and two-thirds of that growth will be in the outer counties. To the extent the elderly become more transit dependent, the challenge and cost of providing such services in low-density environs will increase.

**Table 3**  
**Population by Age Group**

County	Year	Age Group			
		0-19	20-64	65+	Total
Cuyahoga	2000	381,570	795,260	217,160	1,393,990
	2030	299,800	710,850	263,380	1,274,030
Geauga	2000	27,910	52,100	10,880	90,890
	2030	29,850	55,900	23,430	109,180
Lake	2000	60,170	135,320	32,030	227,520
	2030	55,020	122,780	54,560	232,360
Lorain	2000	82,480	166,610	35,580	284,670
	2030	79,660	174,370	58,500	312,530
Medina	2000	45,040	90,150	15,920	151,110
	2030	55,760	112,830	38,200	206,790
Source: Ohio Department of Development, Office of Strategic Research					

Finally, and most interesting, are projected trends in the working age population, 20 – 64 years. In two Counties, Cuyahoga and Lake, population in this age group is projected to decline approximately ten percent. The loss of resident workers would result in lower total earnings of

county residents leading to consumer spending reductions as well as loss of sales and community income tax receipts.

At the regional level, working age population is projected to decline five percent. As a result, this population will not be sufficient to accommodate the limited projected growth in regional employment (to be discussed below). As a consequence, inter-regional commuting will likely increase and ever more income earned in the region will leave and spur growth elsewhere.<sup>1</sup>

## Employment

Projected employment in northeast Ohio shows a limited gain over the plan horizon, Table 4. The projection to 2030 shows an increase of 74,000 jobs, a seven percent increase from 2000. In the 1990s the regional economy added 65,000 jobs, also a seven percent gain, however this was a time of extraordinary national growth and the longest period of economic expansion in the nation's history. However, during this period regional employment grew only half the national rate of increase.<sup>2</sup>

**Table 4**  
**County and Regional Employment**

Year	Cuyahoga	Geauga	Lake	Lorain	Medina	NOACA
1990	730,788	24,626	87,493	99,508	40,919	983,334
2000	747,933	34,451	102,836	107,607	55,289	1,048,116
2005	722,023	35,995	111,634	107,225	56,404	1,033,281
2010	727,764	39,962	120,750	111,574	62,618	1,062,668
2015	727,267	43,742	129,222	115,129	68,547	1,083,906
2020	718,803	47,192	136,684	117,606	73,968	1,094,253
2025	710,340	50,640	144,146	120,083	79,389	1,104,599
2030	706,340	54,365	152,732	123,388	85,468	1,122,293
Change 2000 to 2030:						
Number	-41,593	19,914	49,896	15,781	30,179	74,177
Percent	-6	58	49	15	55	7
Source: U. S. Census Bureau, Census Transportation Planning Package (CTPP), 1990 and 2000 data. Regional projection and county allocation by NOACA staff.						

More current data covering the years 2000 to 2004 have shown a regional employment loss of four percent. These data confirm the projected trend lines in Table 4 for all counties save Lake,

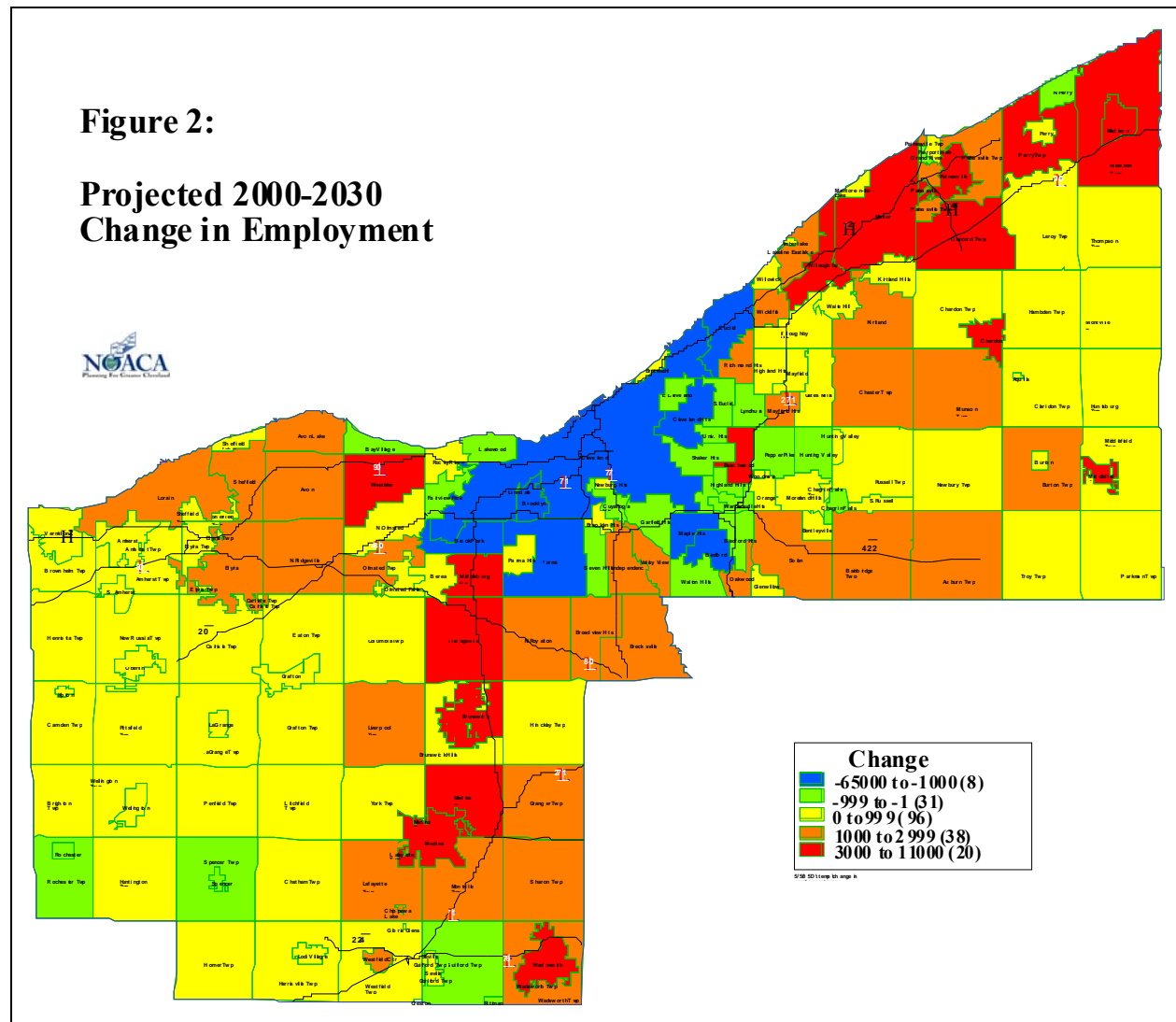
<sup>1</sup> According to the U. S. Bureau of Economic Analysis, in 2000 commuters took \$3.4 billion (net) in income from the NOACA region. This was an increase of 104 percent over the 1990 figure. Source: U. S. Bureau of Economic Analysis, "Regional Economic Information System 1969 – 2002"

<sup>2</sup> U. S. Bureau of Economic Analysis, "Regional Economic Information System 1969 – 2001"

which experienced employment decline rather than growth over this period.<sup>1</sup> This pattern will be monitored for possible future revision.

Figure 2 shows that similar to population, employment is projected to continue dispersing throughout the region. Table 5 summarizes employment changes for selected communities in the NOACA region. These communities are representative of regional trends. Over the projection horizon, Cuyahoga County is projected to lose 42,000 jobs while the outer four gain 116,000. As a result, the central county's share of regional employment is projected to fall from 71 percent in 2000 to 63 percent by 2030.

Within Cuyahoga County, employment is projected to decline in the central city and older suburbs and move to the county's border. Employment in Cleveland is projected to decline from 295,000 in 2000 to 230,000 in 2030, a loss of 22 percent. Significant losses are projected also for Euclid, Brook Park and Parma.



<sup>1</sup> Ohio Department of Jobs & Family Services, "Quarterly Census of Employment and Wages"

To the west, employment gains are projected along the I-90 corridor in Westlake, Olmsted Township, and in Lorain County in Avon and North Ridgeville. In addition, employment is projected to increase in Lorain County's central cities: Lorain and Elyria.

To the Southwest, along the I-71 corridor, increases are forecasted for Strongsville, North Royalton, Brecksville, and in Medina County in Brunswick, Medina City, Medina Township, and Wadsworth City.

To the south, employment gain is projected in Independence and to the south and east in Beachwood, Solon, and into Geauga County in Bainbridge Township, Auburn Township and Middlefield Village.

In Lake County, employment gains are projected in Mentor, and east in Painesville City, and Perry Township and Concord Township.

In addition to its continuing dispersal throughout the region, the composition of regional employment is projected to continue its evolution from manufacturing to service orientation.

**Table 5  
Selected Community Employment Changes 2000 to 2030**

Community (County)	Gain/Loss	Percent Gain/Loss
Cleveland	-65,000	-22
Euclid	-5,100	-27
Brook Park	-3,500	-22
Parma	-2,600	-9
Westlake	7,300	34
Olmsted Township	2,100	53
Avon	2,700	55
North Ridgeville	2,000	32
Lorain	2,800	13
Elyria	2,100	7
Strongsville	6,300	31
North Royalton	5,500	31
Brecksville	5,600	24
Brunswick	4,000	55
Medina City	5,100	32
Medina Township	3,100	89
Wadsworth City	3,400	48
Independence	2,500	14
Beachwood	6,000	30
Solon	2,500	10
Bainbridge Township	2,100	47
Auburn Township	1,000	80
Middlefield Village	3,600	60
Mentor	10,000	30

**Table 5**  
**Selected Community Employment Changes 2000 to 2030**

Community (County)	Gain/Loss	Percent Gain/Loss
Painesville City	6,400	70
Perry Township	3,800	138
Concord Township	5,700	157

Table 6 presents regional employment aggregated to employment classes compatible with the NOACA transportation forecasting (or Travel Demand) Model.<sup>1</sup>

As shown, the regional employment gain of 74,000 is composed of a decline in Basic industries and increases in Retail and Services. This pattern of change explains the geographic dispersal of employment just noted. The majority of Basic employment is located in Cuyahoga County and its projected decline is felt in cities such as Cleveland, Brook Park, and Euclid. Retail and Service employment tend to be “people oriented” and follow population movement. Thus these industries account for the employment growth projected in the outer counties.

**Table 6**  
**Regional Employment by Industry Group**

	Basic	Retail	Service	Total
1990	408,916	156,353	418,065	985,324
2000	358,307	155,534	534,275	1,048,116
2005	332,473	155,920	544,887	1,033,281
2010	329,792	160,064	572,812	1,062,668
2015	326,601	162,958	594,347	1,083,906
2020	322,900	164,529	606,824	1,094,253
2025	319,199	166,099	619,301	1,104,599
2030	318,172	168,781	635,340	1,122,293
Change 2000 to 2030:				
Number	-40,135	13,247	101,065	74,177
Percent	-11	9	19	7
Source: U. S. Census Bureau, Census Transportation Planning Package (CTPP), 1990 and 2000 data. Regional projection and county allocation by NOACA staff.				

<sup>1</sup> Basic employment includes categories of Construction, Manufacturing, Wholesale Trade, Transportation warehousing and utilities. Retail is Retail Trade. Service includes Information, Finance, insurance, real estate, rental and leasing, Professional, scientific, management, administrative and waste, Educational, health and social services, Arts, entertainment, recreation, accommodation and food services, Public Administration.

## Impacts

The total population of Northeast Ohio has remained virtually constant since 1960, and is projected to retain this consistency through 2030. From a base of 2.1 million people in 1960, regional population achieved a peak in 1970 at 2.3 million, declined to 2.1 million in 1990 and 2000, and is projected to hold that number through 2030. If this projection comes to pass, the region will have recorded 70 years of stable population, an event unique among U. S. metropolitan areas.

The region's employment picture is only slightly better. Despite recent growth that occurred during the country's strongest economic expansion, the agency forecast shows an employment increase of only 75,000 over the next 30 years.

In addition to a slowing job growth, the composition of employment is forecasted to shift from higher-to-lower paying sectors. Employment in basic industries is forecasted to fall from 34 percent of employment in 2000 to 28 percent by 2030. The generally lower paying service sector is forecasted to pick up this shift and account for 57 percent of the region's jobs by 2030.<sup>1</sup>

Spatially, economic activity, i.e., jobs and housing, continues its seemingly inexorable movement to suburban areas; however the rate of outward movement seems to slow some over the projection horizon. As presented below, this movement presages a dramatic shift of the region's fiscal resources from its core communities.

Tables 7 through 9 present regional employment, population and households distributed among three distinct sets of geography: the NOACA Urban Core<sup>2</sup>, the remaining incorporated communities in the region, and the unincorporated communities.

Table 7 shows that the projected employment change between 2000 and 2030 is only slightly greater than the gain observed between 1990 and 2000, while the distribution continues its drift away from the region's center. The allocations show employment in the urban core declining 66,000 by the forecast end. If the forecasts hold, the core communities' share of regional employment will have fallen from two-thirds to less than half in 40 years. The remaining incorporated communities are projected to add over 90,000 jobs, while the unincorporated areas will increase by half that number.

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<sup>1</sup> In 2000, the average wage paid to a job in Basic Industries was \$53,700, Retail Trade was \$24,300 and Services was \$38,700. Source: U.S. Bureau of Economic Analysis, "Regional Economic Information System 1969 – 2002"

<sup>2</sup>Urban core communities, by county are: Cuyahoga County – Bay village, Bedford, Berea, Brooklyn, Brook Park, Chagrin Falls Village, Cleveland, Cleveland Heights, East Cleveland, Euclid, Fairview Park, Garfield Heights, Lakewood, Linndale, Lyndhurst, Maple Heights, Mayfield Heights, Newburgh Heights, Parma, Parma Heights, Rocky River, Shaker Heights, South Euclid, University Heights, Warrensville Heights, Woodmere; Lake County – Eastlake, Fairport Harbor, Mentor-on-the-Lake, Painesville City, Timberlake, Wickliffe, Willowick; Lorain County – Elyria, Lorain, Oberlin, Sheffield Lake City. Medina County – Lodi.

**Table 7  
Regional Employment**

	1990	2000	Change	2030	Change
Total Employment	983,334	1,048,116	64,782	1,122,294	74,178
In Urban Core	634,497	599,625	-34,872	533,719	-65,906
Percent of Total	65	57		48	
In Other Incorporated Communities	288,110	372,035	83,925	465,615	93,580
Percent of Total	29	35		41	
In Unincorporated Communities	60,727	76,456	15,729	122,959	46,503
Percent of Total	6	7		11	

The trend and distribution of population, Table 8, is a similar pattern. Projected regional population shows a slight decline to 2030; however the urban core communities are expected to decline by 14 percent. The remaining incorporated communities are projected to gain almost 100,000 while the unincorporated areas will increase by almost 60,000.

**Table 8  
Regional Population**

	1990	2000	Change	2030	Change
Total Population	2,102,248	2,148,010	45,762	2,134,846	-13,164
In Urban Core	1,298,142	1,242,509	-55,633	1,073,726	-168,783
Percent of Total	62	58		50	
In Other Incorporated Communities	536,719	612,497	75,778	709,503	97,006
Percent of Total	26	29		33	
In Unincorporated Communities	267,387	293,004	25,617	351,618	58,614
Percent of Total	13	14		16	

Population change, of course, translates into household change. Given projected population in Table 8 and despite a reduction in household size, the number of occupied households will be lower in 2030 than in 2000. The geographic distribution of construction will likely not change from its 1990-2000 patterns, and the result is more construction in the “newer” communities and corresponding decline in occupied units in the core areas, Table 9.

**Table 9**  
**Regional Households**

	1990	2000	Change	2030	Change
Total Households	808,235	853,123	44,888	847,481	-5,642
In Urban Core	541,150	533,584	-7,566	461,476	-72,108
Percent of Total	67	63		54	
In Other Incorporated Communities	189,153	226,214	37,061	267,415	41,201
Percent of Total	23	27		32	
In Unincorporated Communities	77,932	93,325	15,393	118,590	25,265
Percent of Total	10	11		14	

Using the municipal income tax as an example, it is possible to illustrate the fiscal impact that accompanies these projections. NOACA research has shown a close relationship between municipal income tax receipts and the number of jobs and households in the community.<sup>1</sup> This model, combined with the NOACA projections, suggests by 2030 municipal income tax receipts collected by urban core communities could be on the order of \$70 million (12 percent) lower than in 2000. Given the projected shift in employment and households from the core to incorporated areas outside the core, the model shows these communities receiving an income tax gain of \$87 million, or 30 percent, by that time.

This is an extreme transfer of resources among communities in the region and exemplifies a fundamental long-term issue facing northeast Ohio. The region is projected to have only minimal growth, but its economy is being dispersed throughout the region. Townships, which cannot levy an income tax, are projected to hold ten percent of the region's economy by 2030 and a significant part of the remainder will shift from the core to outer incorporated communities.

It is from this window to the future the NOACA Board must adopt a transportation plan, and if the future unfolds as projected, it is the environment in which the plan will be implemented. The basic projections presented here represent a continuation of well-established patterns of change. If realized, they will transfer a large share of economic resources away from the region's core areas. While the numbers are daunting, they are the product of three trends, long in the making, incremental in impact, and seemingly immune to resolution.

The first trend is slow-to-no regional growth. As noted previously, regional population has been stuck at 2.1 million people since 1960. While employment growth has been a positive number, it lags the U. S. growth rate and that of many comparable metropolitan areas.

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<sup>1</sup> The work referenced here is a statistical model (multiple regression analysis) that relates community income tax revenues to three variables: the community's municipal income tax rate, employment in the community, and the number of households.

A second trend is the spreading of the economy. Year after year, updates of population and employment data show a slow but inexorable shift to suburban areas.

The third trend is the evolution of the region's economic base from a manufacturing to services orientation and the attendant wage changes that lead to slow growth in regional income. In sum, there is virtually no growth, and what does occur tends to be lower paying jobs, which are being dispersed throughout the region.

In the future presented here, every local government (city, village, township, school district, special district and others) will seek revenue from an increasingly insufficient resource base, and every level of government will face fiscal problems that attend the economic conundrum of northeast Ohio. For some, the problem will be supporting services in the face of a declining resource base, while others, the recipients of the regional churn, will attempt to provide new or expanded services supported by their expanding resource base.

The trends implied in this chapter suggest a transportation future that will continue to chase sprawl. Projected employment gains are in outer suburbs and townships where infrastructure, especially in the latter, may not be of sufficient quality to accommodate future demand. To the extent improvements are provided, the region will continue its habit of expending ever more resources to serve a fixed size. Transit users may well experience increasing difficulty commuting to employment sites in such locations and thus be shut out of the job market.

## Chapter II: Foundation

### Federal Requirements (amended)

The following table has been updated from its original Connections 2030 version to reflect the changes in the federal transportation planning requirements made by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in August 2005. The table identifies the federal requirements for NOACA's transportation planning efforts. It also indicates where in the document that materials related to those requirements can be found.

#### Federal Requirements and Status

Based on 23 CFR Section 450.322: Metropolitan transportation planning process:  
Transportation Plan  
(06-09-2006 edition)

Federal Requirement	Comment / Reference
(a) The metropolitan transportation planning process shall include the development of a transportation plan addressing at least a twenty-year planning horizon...	2030 Horizon Year meets this requirement.
(b) The plan shall include both long-range and short-range strategies/ actions that lead to the development of an integrated intermodal transportation system that facilitates the efficient movement of people and goods.	See Chapter III.  Board Resolution 2005-006 adopted a Goals Review, Strategies, and Actions plan that fulfills this requirement.
(c) The MPO shall be review and update the transportation plan at least every four years in air quality nonattainment and maintenance areas and at least every five years in attainment areas to conform the transportation plan's validity and consistency with current and forecasted transportation and land use conditions and trends and to extend the forecast period, ...	This update meets the requirement.

Federal Requirement	Comment / Reference
<p>(d) In metropolitan areas that are in nonattainment for ozone or carbon monoxide, the State air quality agency shall coordinate the development of the transportation control measures (TCMs) in a State Implementation Plan (SIP) with the MPO.....</p>	<p>See Chapter VII.</p>
<p>(e) The transportation plan update process shall include a mechanism for ensuring that the MPO, the State(s), and the public transportation operator(s) agree that the data utilized in preparing other existing modal plans providing input to the transportation plan are valid. In updating the transportation plan, the MPO shall base the update on the latest available estimates for population, land use, travel, employment, congestion, and economic activity. The MPO shall approve transportation plan contents and supporting analyses produced by a transportation plan update.</p>	<p>See Chapters I, IV, and V.</p> <p>NOACA Governing Board adopted this update to Connections 2030 at its May 2009 Board meeting via Resolution 2009-2013.</p>
<p>(f) The metropolitan transportation plan shall, at a minimum, include:</p> <p>(f)(1) The projected transportation demand of persons and goods in the metropolitan planning area over the period of the transportation plan;</p>	<p>See Chapters IV and V.</p>

Federal Requirement	Comment / Reference
<p>(f)(2) Existing and proposed transportation facilities (including major roadways, transit, multimodal and intermodal facilities, and intermodal connectors) that should function as an integrated metropolitan transportation system, giving emphasis to those facilities that serve important national and regional transportation functions over the period of the transportation plan. In addition, the locally preferred alternative selected from an Alternatives Analysis under the FTA's Capital Investment Grant program (49 U.S.C. 5309 and 49 CFR part 611) needs to be adopted as part of the metropolitan transportation plan as a condition for funding under 49 U.S.C. 5309;</p>	<p>See Chapter IV.</p>
<p>(f)(3) Operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods;</p>	<p>See Chapters IV and V.</p>
<p>(f)(4) Consideration of the results of the congestion management process in TMAs that meet the requirements of this subpart, including the identification of SOV projects that result from a congestion management process in TMAs that are nonattainment for carbon monoxide or ozone;</p>	<p>See Chapters IV and V.</p>
<p>(f)(5) Assessment of capital investment and other strategies to preserve the existing and projected future metropolitan transportation infrastructure and provide for multimodal capacity increases based on regional priorities and needs;</p>	<p>See Chapter VII.</p>

Federal Requirement	Comment / Reference
<p>(f)(6) Design concept and design scope descriptions of all existing and proposed transportation facilities in sufficient detail, regardless of funding source, in nonattainment and maintenance areas for conformity determinations under the EPA’s transportation conformity rule (40 CFR part 93). In all areas (regardless of air quality designation), all proposed improvements shall be described in sufficient detail to develop cost estimates;</p>	<p>See Chapter VII.</p>
<p>(f)(7) A discussion of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the metropolitan transportation plan. The discussion shall be developed in consultation with Federal, State, and Tribal land management, wildlife, and regulatory agencies. The MPO may establish reasonable timelines for performing this consultation;</p>	<p>See Chapter V.</p>
<p>(f)(8) Pedestrian walkway and bicycle transportation facilities in accordance with 23 U.S.C. 217(g);</p>	<p>See Chapter V.</p>
<p>(f)(9) Transportation and transit enhancement activities as appropriate; and</p>	<p>See Chapter V.</p>
<p>(f)(10) A financial plan that demonstrates how the adopted transportation plan can be implemented, while operating and maintaining existing facilities and services.....</p>	<p>See Chapter VII.</p>

Federal Requirement	Comment / Reference
<p>(g) The MPO shall consult, as appropriate, with State and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation concerning the development of the transportation plan. The consultation shall involve as appropriate:</p> <p>(1) Comparison of transportation plans with State conservation plans or maps, if available; or</p> <p>(2) Comparison of transportation plans to inventories of natural or historic resources, if available.</p>	<p>See Chapter V.</p>
<p>(h) The metropolitan transportation plan should include a safety element that incorporates or summarizes the priorities, goals, countermeasures, or projects for the MPA contained in the Strategic Highway Safety Plan required under 23 U.S.C. 148, as well as (as appropriate) emergency relief and disaster preparedness plans and strategies and policies that support homeland security and safeguard the personal security of all motorized and non-motorized users.</p>	<p>See Chapter V.</p>
<p>(i) The MPO shall provide citizens, affected public agencies, representatives of public transportation employees, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with a reasonable opportunity to comment on the transportation plan using the participation plan developed under section 450.316(a).</p>	<p>See Chapter VIII.</p>

Federal Requirement	Comment / Reference
(j) The metropolitan transportation plan shall be published or otherwise made readily available by the MPO for public review, including (to the extent practicable) in electronically accessible formats and means such as the World Wide Web.	See Chapter VIII.
(k) A State or MPO shall not be required to select any project from the illustrative list of additional projects included in the financial plan under paragraph (f)(9) of this section.	See Chapters VI and VII.
(l) In nonattainment and maintenance areas for transportation-related pollutants, the MPO, as well as the FHWA and the FTA, must make a conformity determination on any updated or amended transportation plan in accordance with the Clean Air Act and the EPA transportation conformity regulations (40 CFR part 93)....	See Chapter VII.

### **NOACA Policies**

NOACA planning efforts are also founded upon the following set of Governing Board adopted planning principles.

**STATEMENT OF PRINCIPLES  
RESOLUTION 99-015  
Revised 2/19/99**

As the Metropolitan Planning Organization for Northeast Ohio, NOACA is responsible for continuing, cooperative, and comprehensive transportation planning designed to meet the needs, requirements, goals and objectives of national, state and local governments. To advance its mission, the NOACA Governing Board has developed this Statement of Principles to guide the decisions of the Governing Board, its advisory committees, and its staff.

1. It is the intent of the NOACA Board to comply with the language and spirit of the Transportation Equity Act for the 21st Century (TEA21).
2. It is the intent of the NOACA Board to comply with the language and spirit of the Clean Air Act of 1990, the Clean Water Act and any amendments to these Acts.

3. It is the intent of the NOACA Board to enhance the natural environment of the NOACA region and to minimize the adverse impact of incremental transportation investments on the environment. To this end, the NOACA Board will:
  - 1) request staff identify the anticipated impacts of the proposed projects on the natural environment and available methods to mitigate adverse impacts,
  - 2) consider anticipated impacts and available mitigation when evaluating Transportation Plan and TIP amendments, and
  - 3) request sponsors provide adequate information to facilitate analysis and decisions.
4. It is the intent of the NOACA Board to enhance the quality of life of communities within the NOACA region and to minimize the adverse impact of incremental transportation investments on existing communities within the region. To this end, the NOACA Board will:
  - 1) request staff identify the anticipated impacts of the proposed projects on existing communities and available methods to mitigate adverse impacts;
  - 2) consider anticipated impacts and available mitigation when evaluating Transportation Plan and TIP amendments, and
  - 3) request sponsors provide adequate information to facilitate analysis and decisions.
5. It is the intent of the NOACA Board to support the planning activities of the counties and communities within the NOACA region and to ensure that transportation investments authorized by the Board are consistent with the policies and plans adopted by these agencies both individually and severally. To this end, the NOACA Board will direct staff to consult with these agencies when evaluating incremental transportation investments. In cases where there exist conflicts between the policies or plans adopted by communities within the region, the Board will use its good offices to seek resolution of these conflicts in order that a consensus regarding the incremental transportation investment may be achieved.
6. It is the intent of the NOACA Board to ensure that all transportation investment funds potentially available to the NOACA region are sought and that these funds are used prudently to meet the transportation needs of the region. To this end, the Board will use its TIP Preparation and Management Policy and Major Regional Transportation Investment Policy to select and manage transportation investments.
7. It is the intent of the NOACA Board to improve the efficiency of the existing transportation system, using all available methods.
8. It is the intent of the NOACA Board to encourage the use of public transportation within the region. To this end, the NOACA Board will:
  - 1) evaluate the impact of capacity adding highway improvements on the operations of transit systems;
  - 2) encourage transportation investments (such as H.O.V. lanes, light rail and commuter rail) which improve the efficiency of public transit,

- 3) encourage communities within the region to adopt pedestrian amenities, land use plans and zoning codes which result in development densities that support the efficient use of public transportation, and
  - 4) encourage cooperation between the region's several counties, communities, and transit systems to improve transit services, region-wide.
9. It is the intent of the NOACA Board that decisions regarding amendments to the Transportation Plan and Transportation Improvement Program be fully informed and deliberated. To this end, the Board will request of project sponsors that all necessary information regarding a proposed Transportation Plan or TIP amendment be furnished to staff in sufficient time for staff to provide the Board with a reasonable evaluation. Except in cases of emergency or other urgent need, the Board will table for further consideration any proposed TIP amendments which fail to timely provide the information requested by the Board.
10. It is the intent of the NOACA Board to encourage efficient, compact land use development that facilitates mobility, saves infrastructure costs, preserves environmentally-sensitive and agricultural lands, and enhances the economic viability of existing communities within the region. To this end, the NOACA Board, in cooperation with ODOT and the planning commissions of the constituent communities and counties, will periodically review existing land use plans and zoning maps, highway and transit modeling methodologies, and economic and demographic trends to ensure that land use and transportation planning policies applied by NOACA are consistent with this objective.
11. It is the intent of the NOACA Board to ensure that transportation system investments enhance racial and cultural harmony. NOACA encourages communities to:
- 1) institute programs combating discrimination, and
  - 2) pursue open housing patterns. NOACA also encourages all public bodies, especially schools, to improve understanding and harmony among the racial, ethnic and cultural minorities.

## Chapter III: Plan Goals and Strategies

(as adopted via Resolution No. 2005-016 at April 8, 2005 Governing Board)

### Introduction

#### 2009 Update

Brief updates of the successes and challenges descriptions and of NOACA's efforts toward implementing the strategies developed as part of the Connections 2030 effort are incorporated within the goal's section.

In response to community and public input, language related to the issue of climate change has been added to Goal 2 and its discussion.

#### Connections 2030 Original

The federal requirements (23 CFR 450.322) for transportation plans require that:

*The plan shall include both long-range and short-range strategies/actions that lead to the development of an integrated intermodal transportation system that facilitates the efficient movement of people and goods*

In 1999, the Governing Board set ten Transportation Plan goals that are intended to allow for the development of an integrated transportation system. The goals have been used ever since to guide policies, develop programs and select projects. The goals were last reviewed and updated in June 2002.

Annually, NOACA's State of the Region Report (SRR) assesses progress in advancing the goals. With this plan update, it was a good time to take a more detailed look at the regional progress made toward the goals. Additionally, a thoughtful review of the 2000—2004 State of the Region Reports helped develop workable strategies and actions for furthering goal attainment.

The theme of this Plan is *Connections*. The Plan goals are strongly interconnected. For example, economic competitiveness (goal 1) cannot be achieved without partnerships (goal 8). Improving people's transportation mobility (goal 5) can only be achieved with a balanced transportation system (goal 4).

Below, each goal is listed and explained. A brief review of the progress made in advancing each goal is given, followed by strategies and actions to help further advance the goals. The recommended actions and policies were developed to reward and offer incentives to actions that benefit the region. The goals, strategies, and actions accomplish the federal requirement noted above.



## **Goal 1**

***Advance the region's economic competitiveness based upon a sustainable development approach integrating environmental, social equity and economic perspectives.***

### **Explanation**

As stated in the goal, sustainable development is rooted in the three “E’s”: environment, equity and economics. Sustainable economic development is development that does not compromise the ability of future generations to meet their needs. It also places value on nature and natural systems.

A sustainable northeast Ohio economy is one that encourages intergovernmental cooperation, resource sharing, and job growth that does not harm the region's peoples or increase governmental and infrastructure costs.

Non-sustainable development creates a “boom and bust” cycle of transportation investments caused by a mismatch of supply and demand for transportation facilities and services. Transportation funding decisions may be made to serve current, and frequently temporary, pressure points in the system.

Intra-regional competition for existing businesses does not advance sustainable economic development and contributes to higher overall infrastructure maintenance and governmental costs. For example, since the region is not projected to significantly increase in population, new retail development, in particular, often transfers benefits (tax revenues) and burdens (increased infrastructure maintenance) from one community to another.

The Ohio Department of Transportation, when evaluating major new project proposals, does not recognize retail development as economic development in their major project scoring system. At times, there may be justifiable reasons why new retail is planned. For example, some neighborhoods may have poor access to retail. However, new retail developments often result in the need for transportation system changes and increased transportation system maintenance to serve them. As a result, it is vital that retail proposals consider the transportation improvements that will likely be necessary to accommodate full use of the proposed facility as part their upfront analyses. Transportation planning departments and agencies already work to identify the impacts of development, but new research, data gathering and additional analyses techniques may be beneficial.

Similarly, proposed new housing/development sites, planned without attention to conservation development ideas, may not advance regional sustainable economic development. While the region's population remains steady, new housing often simply transfers the benefits and burdens from one community to another. From a regional perspective, the result is the same as above: higher infrastructure and governmental costs. Additionally, care must be taken to ensure that new development does not damage the ecological system. Subdivision design could be enhanced by an early evaluation of long-term transportation and ecological impacts of the proposed development.

The Board has previously commissioned specific studies (e.g. the Retail Study) to help understand the regional economy. And it is understood that regional economic competitiveness can only be advanced through a broad economic partnership that includes the business community, civic groups, educational institutions and government, as implied by Goal 8.

However, the NOACA region competes in the state, national and international economies, and the Board does not currently have an overall appraisal of the regional economy from this perspective. Understanding how the diverse regional economy competes at the state, national and international level is vital in developing future sustainable economic development strategies within the NOACA region.

Finally, sustainable development recognizes the need for a sustainable transit system. Traditional transit systems can only operate where population density is sufficient to provide ridership. As overall regional population density declines, transit agencies are faced with reducing service, cutting routes, and, at times, creating routes for new density centers. They are also facing the challenge of an increased need for non-traditional service options (e.g. dial-a-ride) for the elderly and disabled who may not live near available routes. Additionally, as population disperses, the truly transit dependent may have to deal with reduced access to routes that take them to work, shop, and play. Incorporating transit considerations into new development design could aid in preserving the vitality of transit as a transportation option.

## **Successes and Challenges: Goal 1**

### 2009 Update

Since the adoption of these goals during the development of Framework for Action 2025, one of NOACA's prior long range transportation plans, this goal has likely been the most challenging for the region. This is largely because NOACA's region encompasses 172 units of government. Achieving regional consensus on the meaning and intent of this goal has been difficult to say the least.

During the past four years, the discussions that occurred regarding the construction of a new interchange on Interstate 90 in the City of Avon exemplify the difficulties in achieving consensus on this goal. Many local governments saw the proposed interchange and its associated proposed developments as a benefit to the region. Others saw it as a continuation of urban outmigration that jeopardizes some governments existing economies. In the end, amongst considerable acrimony on both sides, a compromise was reached and the interchange was approved by Resolution 2007-035.

NOACA will have to continue to explore the meaning of this goal to its region.

### Connection 2030 Original

Since the last Plan update, there have been governmental and private sector efforts to improve the regional economy. For example, the BioEnterprise Corporation is serving as an incubator for young biomedical technologies in the region and the Great Lakes Innovation and Development Enterprise (GLIDE) is working to support entrepreneurs. However, the need for community cooperation continues. As one community works to establish new employment centers or attract

jobs, that community may often, unfortunately compete for existing jobs that are in neighboring communities.

At the same time, regional employment has been static. Some of this is the result of the increased globalization of manufacturing. While educational institutions are working hard to educate and train the workforce to adapt to the economy, most schools are struggling with decreased financial support. Additionally, surveys have shown that graduates with masters' degrees were much more likely to leave the region.

### **Strategies (Status as of 2009 incorporated where progress has occurred)**

In light of the above review, NOACA will seek to implement the following strategies. (After each strategy, an indicator identifies the primary means available for its implementation. OWP = NOACA's Overall Work Program, RTIP = Regional Transportation Investment Policy, PubEd = Public Education efforts.)

- Continue to advocate sustainable economic development at the regional level. (PubEd)
- Projects that advance regional sustainable economic development could receive special attention and consideration. (RTIP)
  - NOACA staff and the Regional Transportation Investment Subcommittee continue discussions on how to identify and support these types of projects.
- Coordinate and cooperate with ongoing regional advocacy efforts. (OWP)
  - NOACA continues participate with both local (e.g. Northeast Ohio Mayors and Managers Association, Team NEO), State (e.g. Ohio Association of Regional Councils), and National (e.g. National Association of Regional Councils) groups that focus on advancing the region's competitiveness.
- Coordinate with local, state and federal elected officials and transportation planning agencies on the development of strategies to ensure that legislative earmarks do not interfere with regional transportation planning efforts. (OWP and RTIP)
  - NOACA continues these efforts. Most recently efforts to guide the expenditure of stimulus monies have become a local priority.
- Encourage intra-regional cooperation that promotes growth that does not increase overall infrastructure maintenance and governmental costs. (PubEd)
- Develop RTIP policies that encourage new business creation rather than existing business relocation within the region. For example, project sponsors for a relocated business could be required to absorb more of the transportation infrastructure costs than those for a new business to the region. (RTIP)
- Encourage communities to locate new housing subdivisions in areas with existing infrastructure to serve them. (Infrastructure is defined as roads, proximity to schools, hospitals, retail, and emergency services.) Growth planned in such a manner will decrease impacts on natural areas, and should result in reduced governmental and infrastructure costs in the long run. Project sponsors addressing transportation needs for subdivisions in existing service areas could receive more funding for their project efforts (PubEd, RTIP)
  - NOACA staff are working to improve mapping and database sets for the region's assets in an effort to develop a means to support this strategies implementation.
- Consider commissioning a study of the regional economy that:

- assesses the regional economy's performance against other major metropolitan economies in the state and US;
- assesses trends and sources of structural change;
- assesses the strengths and weaknesses that impact regional economic performance;
- provides recommendations on how the NOACA Board might positively impact the regional economy within the next five and ten year periods. (OWP)
  - A regional economic analysis related to the IR-90 interchange discussion was NOACA's first effort at this type of analysis. That effort will be valuable in shaping future efforts in this regard.
- Enter into WIN agreements with all governments, key public agencies, businesses, civic groups and educational institutions in the NOACA region. (OWP, PubEd)
- Develop a program that informs and educates the public regarding sustainable economic development. (PubEd)
- Continue with the Transportation for Livable Communities Initiative (TLCI). (OWP, RTIP)
  - The TLCI program has become one of NOACA's most popular efforts. See Chapter V for an update on this program.

## Goal 2 (amended)

*Enhance the natural environment and ecology of the region by improving air, land and water quality, conserving transportation energy, addressing climate change, and by identifying and preserving existing critical natural resources and environmentally sensitive areas.*

### Explanation

Preserving and promoting the natural environment and ecology of the region increases public appreciation for the place they live. Populations living in balance with their environment are healthy populations. Public accessibility to high quality natural areas is a desired benefit for everyone.

The sustainable development that is the focus of Goal One is in fact a subset of a larger and increasingly global goal to have sustainable ecological systems. In an urban setting, a sustainable ecological system is one in which human impacts are mitigated to allow plants and animals to live in balance, i.e. to have a relatively equal number of births and deaths per year.

There is a growing scientific consensus that climate change is a real phenomenon that will have real consequences for humankind and the environment. There is also a growing belief that greenhouse gas emissions from the transportation sector are playing a significant role in contributing to climate change. It is likely that MPOs will be asked to consider climate change by future transportation planning regulations. NOACA's efforts to preserve and maintain existing infrastructure, reduce congestion, promote alternative modes of transportation, and support clean vehicle technologies already actively contribute to the reduction of greenhouse gas emissions in the region. NOACA has chosen to update this goal to specifically reflect climate change, however.

NOACA considers this to be the initiation of an effort to develop a transportation related climate change policy for the region that can expand upon its existing emission reduction efforts. In cooperation with NOACA's Governing Board and its committees, staff will identify strategies for reducing the region's transportation related greenhouse gas emissions and incorporate the resulting strategies into the agency's project review, selection, and funding processes. These strategies could include:

- Efforts to reduce total Vehicle Miles of Travel (VMT) in the region in order to reduce fuel consumption;
- Expanded efforts to reduce congestion in the region in order to reduce fuel consumption;
- Efforts to support expansion of alternative fuel choices and availability in the region;
- Efforts to increase the rate of conversion of public fleets to alternative fueling choices;
- Expanded efforts to promote employer support of alternative transportation choices for their employees;
- Tracking of the impacts of the above efforts on the region's transportation related carbon footprint.

## **Successes and Challenges: Goal 2**

### 2009 Update

NOACA has continued its efforts to enhance its region's environment. The agency's air quality programs focus on reducing fine particle pollution and the precursors of ozone. NOACA continues to work with state and federal agencies on developing and achieving the goals of State Implementation Plan (SIP) and conformity efforts.

On the water side, NOACA continues to work with local communities to achieve stormwater control goals; with water service providers to maintain compliance with Facility Planning Area (FPA) requirements; and with various watershed groups to achieve improvements in the conditions of the area's waterways.

### Connection 2030 Original

NOACA continues to recognize and consider the environmental and ecological resources of the region in its day-to-day planning through many activities.

The region already devotes considerable energy to developing and updating plans to improve air quality in the region. Through State Implementation Plans (SIPs), efforts are made to reduce air pollution from transportation, industry, and other sources. The transportation conformity process allows for the development of transportation plans, programs and projects that will not decrease air quality. The Ozone Action Day program increases public awareness of the health impacts of current air pollutant levels.

NOACA's 208 Water Quality Plan, Remedial Action Plan, and stormwater planning efforts have all aided in the preserving water quality in the region. The efforts of the newly formed Transportation Water Quality Advisory Council, and its predecessor the Transportation Water Quality Task Force, have begun to formally address the direct linkages between transportation planning efforts and their water quality impacts.

These existing efforts are still just a start toward meeting the essence of this goal. All areas have unique, and often irreplaceable, natural features and/or populations worthy of preservation. These features and populations must be considered early in the planning process in order for their concerns to be recognized, preserved and protected. When projects develop, NOACA should honor plans that include not only the "do no harm" scenario, but also improve the environment. Toward this effort, NOACA should strive to identify critical resources in order to guide these decisions.

Additionally, project sponsors often do not consider how the plants they are using for landscaping will interact with the existing ecosystem. For example, a non-native species, purple loosestrife was used as a pretty ornamental in wet environments until it was discovered that it spreads easily and is eradicating many native species in its path. Efforts to control its spread continue.

Many aspects of the transportation system have not been addressed by regional planning efforts to date. For example, the location of truck idling facilities that may affect air quality, water

quality, noise, and quality of life has not been considered in a regional context. A good definition of how transportation energy could be conserved in our region through the coordination of passenger and goods movement has yet to be developed.

### **Strategies (Status as of 2009 incorporated where progress has occurred)**

In light of the above review, NOACA will seek to implement the following strategies. (After each strategy, an indicator identifies the primary means available for its implementation. OWP = NOACA's Overall Work Program, RTIP = Regional Transportation Investment Policy, PubEd = Public Education efforts.)

- Participate in the SIP planning effort for the eight hour ozone standard. (OWP)
  - NOACA participated in the development of the eight-hour SIP under its original form, and will likely participate in planning for the revised more stringent version as well.
- Participate in the SIP planning effort for the fine particulates standard. (OWP)
  - Accomplished.
- Continue Ozone Action Day (OAD) program. (OWP)
  - Ongoing. This program has been augmented with fine particle forecasting and advisories and now operates continuously throughout the year.
- Consider incorporation of a fine particulates component in the OAD program. (OWP)
  - Accomplished.
- Have the Transportation Water Quality Advisory Council (TRANSWAC) consider the following tasks:
  - Create a definition of critical natural resources and environmentally sensitive areas for use in guiding the transportation funding process.
  - Catalog and map the areas identified using the above definition and create explicit policies related to their preservation.
  - Identify the project engineering methods that are most beneficial to stream habitat protection and restoration. (OWP)
- Promote the development of transportation projects that avoid habitat fragmentation and incorporate wildlife passageways into their construction or reconstruction. (RTIP)
  - NOACA is exploring how to reduce the number and severity of vehicle/wildlife accidents on our area's transportation system.
- Require that transportation projects involving landscaping coordinate their plant selections with authorities such as the Cooperative Extension Service on local plant ecology. (RTIP)
- Consider developing a definition and implementation strategy for conserving transportation energy. (OWP)
- Reward transportation projects that increase public access to natural systems that allow time away from urban pressures. (RTIP)
- Encourage transportation projects that not only minimize and mitigate but, more importantly, improve the streams and habitats impacted by them. (RTIP)
- Encourage transportation project sponsors to include county soil and water conservation districts in the project development process. (RTIP)

- Coordinate with other local initiatives such as Cuyahoga County's Green Space planning effort to preserve, protect, and promote the preservation of natural amenities. (OWP, PubEd)

### **Goal 3**

*Preserve and improve the efficiency and safety of the existing transportation system, prioritize elements of the system identified as significant and ensure the system serves homeland security.*

#### **Explanation**

New roads and development are often linked to growth and prosperity. At the same time, the old may be neglected while focusing on the new. In the NOACA region, the new growth areas are still connected to and dependent on the existing and older infrastructure.

Essentially all of the most important transportation roadways and systems are completed. From a homeland security perspective, it is imperative that these systems are preserved and operate well.

Improving the efficiency of the highway system by employing strategies that do not add lanes to the system can also save significant public money. By improving vehicle flow, capacity can be increased without the need for costly lane additions. Not only are up front construction costs saved, but long-term maintenance costs are avoided also. Applying the latest engineering and safety design methods can significantly improve the existing transportation system when rehabilitating existing infrastructure.

#### **Successes and Challenges: Goal 3**

##### 2009 Update

NOACA has made significant progress towards this goal through the development of a Pavement Management System (PMS); improvements to its Congestion Management Process; identification of safety issues and beginning the remediation process through Roadway Safety Audits (RSAs); and the initiation of an Asset Management Council to aid in developing future spending priorities on the transportation system.

##### Connection 2030 Original

NOACA has partnered with other agencies to help develop several initiatives that improve the efficiency and safety of the region's transportation system. These include incorporation of an ITS system in the Innerbelt project, the region-wide Regional Pavement Management (RPM) system, community signal upgrades, the railroad grade separation program, and the Road Crewzers program.

Project sponsors and NOACA are better integrating the consideration of bicycle and pedestrian safety in their planning efforts. NOACA's bicycle maps identify routes for various rider skill levels using route safety as a determining factor.

Ride sharing decreases total vehicles on the road, saves energy and may also reduce or delay the need for additional capacity increases. Unfortunately, as jobs, retail and businesses spread out in the region, opportunities for ride sharing are diminished.

Despite transit agency and NOACA efforts, transit is often overlooked as a way to improve efficiency and safety in the transportation system. Full buses would reduce the number of vehicles on the road. This would translate to a reduced need for capacity improvements and perhaps improve safety through reduced accidents as well. Overcoming the general local aversion for transit as a transportation option remains a formidable challenge for NOACA and local transit service providers.

### **Strategies (Status as of 2009 incorporated where progress has occurred)**

In light of the above review, NOACA will seek to implement the following strategies. (After each strategy, an indicator identifies the primary means available for its implementation. OWP = NOACA's Overall Work Program, RTIP = Regional Transportation Investment Policy, PubEd = Public Education efforts.)

- Identify benchmarks and improvement goals for pavement condition and accident reduction to help:
  - Direct and prioritize the use federal funds
  - Reduce vehicle accidents
  - Reduce vehicle-pedestrian accidents
  - Reduce vehicle-bicycle accidents
  - Reduce vehicle-wildlife accidents (RTIP)
    - NOACA has developed and begun to utilize a Pavement Management System (PMS) which will allow for improved expenditure planning for system improvements over time.
    - NOACA has expended its safety efforts by identifying high accident locations and conducting Roadway Safety Audits (RSAs) to aid in remediating the causes of those accidents.
    - NOACA continues efforts to provide safe bicycle routes through signage, lane and path construction, and public education efforts.
    - NOACA has initiated efforts to identify locations where a significant number of vehicle-wildlife accidents occur and is researching mechanisms for remediating the causes of those accidents.
- Endorse efficiency in project designs. (RTIP)
- Prioritize funding for projects based on replacing and maintaining existing facilities in preference to building new ones. (RTIP)
  - This remains a priority in the agency's project identification and funding discussions. The Regional Transportation Investment Subcommittee (RTIS) serves an ongoing role in ensuring that his goal is met.

- Incorporate best practices when possible (e.g. using ITS). (RTIP)
  - NOACA is exploring Geographic Positioning System, and Geographic Information System (GIS) methods for improving its data collection, review, and analysis efforts.
- Work with partners to update the evacuation plan when necessary. (OWP)
- Maintain an updated contacts listing for those involved in implementing the evacuation plan. (OWP)
- Continue bicycle and pedestrian planning efforts. (OWP)
  - NOACA adopted an updated regional bicycle plan in March 2008. It identifies priority routes for providing bicycle accommodation.
  - NOACA continues to provide assistance to local governments in their bicycle planning efforts.
  - NOACA continues to provide educational opportunities for local governments and the public to increase their understanding of the role of bicycles as a transportation choice.
- Continue coordination with regional transit agencies in promoting the consideration of transit in project planning. (OWP, RTIP, PubED)
  - NOACA continues to work with and on the behalf of local transit agencies to improve the visibility of transit as a transportation choice.
  - NOACA has become the designated recipient for the Job Access and Reverse Commute (JARC) and New Freedom programs. It has developed a plan to guide the expenditure of the monies received through these programs.
- Continue promotion of ridesharing, bicycling, walking, and transit as alternatives to single occupancy vehicle use. (OWP)
  - This message is a standard component of virtually all of the agency's public outreach efforts.

## Goal 4

***Establish a more balanced transportation system which enhances modal choices by prioritizing goods movement, transit, pedestrian and bicycle travel instead of just single occupancy vehicle movement and highways.***

### Explanation

The discussion of Goal 3 already identified the efficiency and safety benefits of non-single occupancy vehicle modes. Goal 4 focuses on improving access to these modes by developing a balanced transportation system. In a balanced system, people have the opportunity to choose between a number of travel options to their destinations.

The explicit consideration of goods movement in the transportation planning process could further improve the system both in terms of safety and user satisfaction. Trucks and railroads are sometimes considered to be at odds with other system users. Considering how a project decision will impact them early in the planning process helps diminish these conflicts.

### Successes and Challenges: Goal 4

#### 2009 Update

NOACA's regional bicycle plan, pedestrian planning and transit planning efforts aid in achieving a balanced transportation system. NOACA has recently completed an evaluation of the region's Nation Highway System (NHS) Intermodal Connectors as a preface to expanded efforts to improve our understanding of and ability to plan for freight movements in the area.

#### Connection 2030 Original

NOACA has continued its efforts to improve the modal balance within the system. It continues to support, and collaborate with the existing large and small transit agencies in the region. For example, NOACA has helped fund bicycle racks on most buses in Cuyahoga, Lake and Lorain counties. NOACA has helped fund the construction of numerous park and ride lots, transit centers and garages throughout the region. Community circulators add additional transit availability to areas that were not served by its existing fixed route system.

NOACA has promoted the bicycle mode by developing bicycle route maps for every county in the region. It has funded bicycle and pedestrian improvements through the Transportation Enhancement Program. The Detroit Superior Bridge pedestrian bicycle project is one highly visible example of these funding efforts. This project also required a significant amount of coordination between industries involved in goods movement and the project sponsors in order to realize a mutually beneficial project.

Significant challenges remain in promoting a balanced system. Some elements of the public continue to think of transit as an "only if you have to" option and generally considers bicycle and pedestrian modes as purely recreational. Significant education efforts will be necessary to overcome these preconceptions.

## Strategies (Status as of 2009 incorporated where progress has occurred)

In light of the above review, NOACA will seek to implement the following strategies. (After each strategy, an indicator identifies the primary means available for its implementation. OWP = NOACA's Overall Work Program, RTIP = Regional Transportation Investment Policy, PubEd = Public Education efforts.)

- Continue efforts of the Bicycle Advisory Committee (BAC). (OWP, PubEd)
  - The BAC continues to meet regularly. It aided substantially in the completion of the bicycle plan update. Its efforts in the Project Planning and Review (PPR) process aid in improving transportation outcomes for pedestrians and bicyclists.
- In partnership with transit operators, expand the public education effort and consider developing a new program to advocate less reliance on the auto for various types of trips to:
  - enhance neighborhood safety by reducing short distance vehicle trips that make neighborhood streets dangerous for kids, bicyclists, joggers, and pedestrians;
  - ease environmental pressures by decreasing air and water quality impacts associated with the fuel powered modes; and
  - restore a healthful level of physical activity into people's lives. (OWP, PubEd)
- Identify priority bicycle routes and/or trail systems that connect residential areas to various "attractors" such as jobs, shopping, schools, libraries and other communities. (OWP)
  - NOACA's regional bicycle plan update identified large scale transportation options for bicyclists.
  - NOACA has also worked directly with some communities, like Shaker Heights, to plan for neighborhood level bicycle and/or pedestrian transportation.
- Generate a system for encouraging construction/completion of identified routes and prioritize funding for them. (RTIP)
- Encourage communities to develop plans related to pedestrian movement and bicycle commuting within their community. (OWP, PubEd)
  - NOACA worked with Shaker Heights to develop a community level bicycle transportation plan. It has met with other communities to discuss similar efforts.
  - Several of the Transportation for Livable Communities Initiative (TLCI) efforts have focused on improving the non-automobile modes within those communities.
  - NOACA has participated in several walkable community workshops which were geared toward eliminating barriers to using walking as a means of transportation in their subject areas.
- Establish benchmarks re: carpooling, vanpooling, and similar modes. (OWP)
- Require project sponsors to consider project impacts on transit and goods movement as part of the funding application process. (RTIP)
- Partner with transit agencies in public education efforts. (PubEd)

## Goal 5

*Improve the transportation mobility of the transit-dependent and low-income individuals to jobs, housing and other trip purposes.*

### Explanation

As some businesses relocate to areas not served by transit, transit-dependent and low-income individuals frequently lose the linkage to their worksites. In addition, the workers may be unable to afford relocating to the more expensive neighborhood of the new business locations.

The reduced density of populations and employers within the region may also result in difficulty maintaining existing services and in creating new services. This phenomenon can lead to the termination of entire routes as decreased ridership leads to reduced service, which further reduces ridership, and so on.

### Successes and Challenges: Goal 5

#### 2009 Update

NOACA successfully bid to become the designated recipient for the Job Access and Reverse Commute (JARC) and New Freedom transportation funding during 2008. It prepared the Coordinated Public Transit – Human Services Transportation Plan for Northeast Ohio (March 2008) as part of that designation effort. NOACA also developed a JARC and New Freedom Program Management Plan (July 2008) to govern its management of these new funds.

NOACA has also witnessed the beginning of operation for the Health Line, the region's first bus rapid transit (BRT) system. Operating like a rail car on wheels, the BRT vehicles represent the end of a transit planning discussion and process begun almost 50 years ago. This line provides fast and efficient service along Euclid Avenue between two of the region's largest employment hubs, and for some of the region's most transit dependent individuals.

NOACA's ongoing efforts in the administration of these funds will continue these significant advances in providing for the mobility of the transit dependent.

#### Connection 2030 Original

The Rideshare and Welfare to Work efforts have made some inroads towards addressing this goal. However, the transit-dependent still find it necessary to spend long periods of time in the daily commute to and from jobs that have relocated to new locations, which are not directly accessible. These commutes often end up involving multiple transfers.

Regional efforts like the Euclid Corridor Project, Cuyahoga County's Strategic Transportation Plan for Senior Adults, and Work Access Programs in Cuyahoga and Lorain Counties are also working to aid the transit dependent.

If current trends continue, the future appears complicated. A large elderly population may live in areas not served by transit. If they lose the ability to drive, they will increasingly demand access to services like Dial-a-Ride that are very expensive to provide.

Additionally, more and more of the transit-dependent in older cities may have to commute to work in the suburban areas. The existing transit systems have traditionally focused at the downtown commute and are working to adapt to this new commuting need. However, if destinations are too wide spread, direct route service will be non-sustainable.

Finally, new developments are often not transit-friendly. Dead ends, frequent curves, and tight corners make it impractical to provide bus service to them.

### **Strategies (Status as of 2009 incorporated where progress has occurred)**

In light of the above review, NOACA will seek to implement the following strategies. (After each strategy, an indicator identifies the primary means available for its implementation. OWP = NOACA's Overall Work Program, RTIP = Regional Transportation Investment Policy, PubEd = Public Education efforts.)

- Prioritize transportation projects that provide direct service to the transit-dependent and low-income individuals (RTIP).
  - Plan and program development for the JARC and New Freedom efforts has significantly improved NOACA's ability to target these populations.
  - NOACA has additionally worked with the State of Ohio to provide operational assistance to the region's transit agencies following an extended period of high fuel prices. This unique effort spared the transit dependent from some service cuts and/or fare increases.
- Working with transit agencies:
  - Identify the regional locations with the largest concentrations of transit-dependent residents. (OWP)
    - This was accomplished during the development of the Coordinated Public Transit – Human Services Transportation Plan for Northeast Ohio.
  - Establish benchmarks to facilitate evaluation of the growth or loss of service to these populations. (OWP)
  - Suggest possible transit service options that could improve service to these populations. (OWP)
    - This is part of the regions ongoing JARC and New Freedom efforts.
  - Research and evaluate the numbers and service needs of other special populations (e.g. physically handicapped) in the region. (OWP)
    - This effort was begun with the Coordinated Public Transit – Human Services Transportation Plan for Northeast Ohio and will continue as NOACA participates in and administers the funding for the JARC and New Freedom program efforts.
- Work with the transit agencies, and counties to explore a “brokerage system” to assist people in identifying the best transportation service options for their transportation needs. NOACA has already assisted Lorain County Health and Human Services and Lorain

County Transit to establish such a brokerage for welfare-to-work and disabled transportation services. (OWP)



## Goal 6

*Provide additional transportation system capacity to move people and goods only when such capacity improvements promote the NOACA Principles, minimizing the adverse impacts of the investments on existing communities within the region.*

### Explanation

This goal both contributes to and draws from the other goals in a dynamic way. Many additions to the system's capacity have regional impacts because the region's population and employment have remained relatively stable for over thirty years. Relocating populations and businesses result in population and employment gains for some communities, and losses for others. The resulting changes in tax base, school, hospital, retail and other needs frequently have large impacts on the quality of life within the affected communities. Unfortunately, the regional balance sheet generally remains unchanged throughout these migrations.

### Successes and Challenges: Goal 6

#### 2009 Update

Similar to Goal 1, the determination of when new transportation system capacity is needed is difficult decision point on which to achieve consensus. The region's continued stable population base generally results in few requests for large capacity additions, however. When capacity requests are made they are generally geared towards serving the needs of a new population, business, or employment concentration in a recently developed area of the region.

#### Connection 2030 Original

This goal is the most challenging in many ways. NOACA is succeeding through its RTIP policies in minimizing the expenditure of federal dollars on capacity increases to the system. In fact, there are relatively few capacity projects in relation to all the other projects that are locally funded.

However, NOACA does not operate in a vacuum. Capacity projects not using federal funds are not required to go through the Agency. Additionally, legislative earmarks, the Transportation Review Advisory Council (TRAC) selection process, and local, state, and federal elected officials working for their constituents all influence project development in unexpected ways. Projects like the widenings along I-71 and I-90 demonstrate the complexities of these issues. Need, demand, and timing of projects become fertile ground for discussion and debate.

It seems clear that as the regional population and its businesses remix and relocate, transportation solutions will be needed to meet new needs. Balancing these new needs with the existing system will remain an ongoing challenge.

### Strategies (Status as of 2009 incorporated where progress has occurred)

In light of the above review, NOACA will seek to implement the following strategies. (After each strategy, an indicator identifies the primary means available for its implementation. OWP =

NOACA's Overall Work Program, RTIP = Regional Transportation Investment Policy, PubEd = Public Education efforts.)

- Continue to review and revise the scoring system used for major new project applications. (RTIP)
- Work with local, state, and federal officials to help align the TRAC process with other transportation planning efforts. (OWP)
  - This effort is ongoing.
- Develop public education effort to inform the public about the regional costs, benefits and impacts of additional system capacity. (OWP, PubEd)
- Develop a policy regarding projects that occur as a result of legislative earmarks. (RTIP)
  - Discussions regarding how to handle earmarks continue within NOACA's committees and with state and federal agencies.

## **Goal 7**

*Foster reinvestment in existing urban core areas throughout the region, and work to target and manage transportation investments to implement Plan goals.*

### **Explanation**

Despite ongoing growth in residences, retail, and businesses throughout the NOACA region, the majority of people still lives and works within the urban core communities. These communities also continue to house many of the public institutions, recreational and entertainment facilities, and historic structures that create the sense of place that tie all the region's people together. Many of the region's amenities (e.g. the Cleveland Museum of Art) would be unaffordable to relocate. Similarly, the construction of another Playhouse Square would likely be cost prohibitive. Many smaller, but equally irreplaceable, structures exist in other older core communities in the region.

Given the value of these resources to the public, it only makes sense that the transportation system supporting them be maintained. If it is not, the public may eventually abandon them and these amenities may be lost to the region.

A healthy and vibrant transportation system is a valued amenity. Roads, sidewalks, bike paths, and transit stations/stops in decline and disrepair decrease the vitality and desirability of their surroundings. NOACA aids in preserving and increasing the vibrancy of its urban core areas by promoting improvements in the transportation infrastructure within them.

### **Successes and Challenges: Goal 7**

#### 2009 Update

The Transportation for Livable Communities Initiative (TLCI) and the opening of the region's first bus rapid transit (BRT) line are the major successes for the region under this goal.

The challenges to this goal remain many, however. People and jobs are continuing to relocate within the region. As they do, some urban core areas lose the economic vitality necessary to adequately maintain them. Additionally, transportation funding, in general, is no longer being generated in sufficient amounts to maintain the Federal Aid System adequately.

Efforts like NOACA's Pavement Management System (PMS) and the Asset Management Council are striving to prioritize transportation expenditures so that the region gets the greatest benefit possible from a limited funding stream.

#### Connection 2030 Original

There are many efforts to maintain and revitalize transportation systems in urban core areas. Some of the larger scale efforts include the Cleveland Innerbelt Project, the Cleveland Lakefront effort, and the Euclid Corridor Project. Smaller efforts like the replacement and rehabilitation of bridges are also occurring in numerous locations.

The recently launched Transportation for Livable Communities Initiative provides a number of mechanisms for NOACA to provide assistance to communities interested in preserving urban core efforts through their planning efforts. There are also ongoing Neighborhood Studies geared at the preservation and restoration of historic neighborhood areas.

A great challenge for the region's core areas is its housing stock. Older electrical systems, plumbing, heating, and ventilation systems are often deterrents to reinvestment in areas in the region. Several communities, perhaps most notably Lorain and Cleveland, are investing heavily in building new housing opportunities. They have recognized the need to provide houses that have the modern amenities sought by young professionals today.

### **Strategies (Status as of 2009 incorporated where progress has occurred)**

In light of the above review, NOACA will seek to implement the following strategies. (After each strategy, an indicator identifies the primary means available for its implementation. OWP = NOACA's Overall Work Program, RTIP = Regional Transportation Investment Policy, PubEd = Public Education efforts.)

- Help revitalize urban core communities by implementing and maintaining the Transportation for Livable Communities Initiative (TLCI) program. (OWP)
  - The TLCI program has become one of NOACA's most popular efforts. Almost 30 communities have received funding to date. The funding supports their efforts to maintain and improve existing communities through planning.
- Consider giving additional priority to projects for urban core communities. (RTIP)
- Continue managing investments through the Regional Transportation Investment Subcommittee (RTIS). (RTIP)
  - The RTIS remains vital to transportation fund management at NOACA.

## **Goal 8**

*Foster intergovernmental and private sector relationships to strengthen the regional community and assist in Plan implementation.*

### **Explanation**

NOACA plays a significant role in the federal-aid portion of the regional transportation equation. Other agencies, governments, institutions, and businesses play equally significant roles in shaping the region's future. Coordination between all participants is necessary if mutually beneficial results are to be gained for all residents of the region.

### **Successes and Challenges: Goal 8**

#### 2009 Update

There are a growing number of tables at which regional issues are being discussed within Ohio. These include: county planning commissions; neighborhood, community, county and regionally based development agencies; various consortiums of elected officials and/or business interests; and associations of MPOS and regional councils. NOACA's staff and/or leadership are participants in many, if not all, of these forums.

As discussed under some previous goals, the difficult component of all these discussions is the absence of a uniformly agreed to understanding of regionalism. NOACA will continue to participate in the development of that understanding.

#### Connection 2030 Original

Cuyahoga County Commissioner Peter Lawson Jones developed definitions of regionalism for northeast Ohio that provide a useful framework for discussing the successes and challenges facing the region on these goals. Regionalism under the Commissioner's definition has four elements:

- Intra-County Cooperation – cities helping cities;
- Inter-County Cooperation – counties working together;
- Functional Regionalism – cooperative operation of governmental functions like sewers and water;
- All Encompassing Regional Government – A single government covering multiple units and levels of government.

In the past few years, various groups (e.g. First Suburbs Consortium) have explored discussions of these issues in detail. Cities and counties are engaged in discussions about the merger of services such as garbage collection and emergency response, as well as discussing possible tax-base sharing to decrease the need to persuade local businesses to relocate to their jurisdictions.

The region is also pursuing the realization of this goal through various Memorandums of Understanding (MOUs). These include NOACA's Working to Improve the NOACA region

(WIN) agreements with member communities and agencies, as well as agreements specific to efforts such as the Towpath Trail and the Euclid Avenue Corridor.

The Regional Transportation Investment Policy (RTIP) aids in promoting this goal through its specifications regarding funding targets and goals, as well as its efforts to promote regional coordination between transportation system providers.

In spite of these efforts, the region faces continual challenges. For example, Ohio's home rule principles add complexities. For many good reasons, most local governments, businesses, and developers play their cards very close to the vest. Initial and even detailed planning and goal setting are sometimes done using processes that reduce NOACA's flexibility and potential positive response. Frequently, planning is too advanced by the time it is revealed to provide for meaningful public input on their outcomes. Developers also may negotiate for their own best interests and not for the region, its communities and publics.

### **Strategies (Status as of 2009 incorporated where progress has occurred)**

In light of the above review, NOACA will seek to implement the following strategies. (After each strategy, an indicator identifies the primary means available for its implementation. OWP = NOACA's Overall Work Program, RTIP = Regional Transportation Investment Policy, PubEd = Public Education efforts.)

- Participate in regional forums dedicated to fostering regional solutions to the area's problems. (OWP)
  - Ongoing
- Consider restructuring Inter Governmental Review (IGR) to improve its effectiveness. (OWP)
  - Some revisions have been made to the way this process is administered. Additional changes remain under discussion.
- Consider creating a business outreach program that explores methods for increasing early interaction between the business community and the transportation planning process. (OWP)
- Continue efforts to promote NOACA certification of local community plans in order to provide early awareness of possible future transportation needs. (OWP)

## Goal 9

*Direct the Plan and its investments toward efficient, compact land use development/redevelopment that facilitates accessibility, saves infrastructure costs, preserves and enhances farmland, forests and open space and enhances the economic viability of existing communities within the region.*

### Explanation

Goal 9 essentially brings virtually all the other goals together in a unified whole. It creates an ideal of the region that would result from the full implementation of the goals. It does not suggest a region without growth. It asks for a region that grows intelligently by keeping the bigger picture at the heart of its planning decisions.

### Successes and Challenges: Goal 9

#### 2009 Update

NOACA's priorities remain in the maintenance and preservation of existing areas and their infrastructure. However, continued growth of population and employment in areas outside the core cities, inevitably results in additional transportation needs on the Federal Aid System in the vicinity of the new growth. Control of this pattern appears to be outside the reach of the MPO's authorities.

#### Connection 2030 Original

The successes and challenges stated for other goals could all be re-listed here. Suffice it to say that both NOACA and its communities are making strides in the right direction. However, the region faces additional hurdles and challenges on its way to a balanced region.

### Strategies (Status as of 2009 incorporated where progress has occurred)

In light of the above review, NOACA will seek to implement the following strategies in addition to the many already identified for other goals. (After each strategy, an indicator identifies the primary means available for its implementation. OWP = NOACA's Overall Work Program, RTIP = Regional Transportation Investment Policy, PubEd = Public Education efforts.)

- Explore options for adjusting RTIP policies to provide:
  - incentives to preserve habitat, farmland, forests and open space;
  - incentives to reward the conversion of abandoned industrial sites to other uses;
  - incentives to introduce/reintroduce housing, retail, and employment opportunities along routes with existing transit service. Prioritize efforts including existing rail service. (RTIP)
- Encourage communities to develop land use plans that identify targeted areas of development and infrastructure needs. (OWP, PubEd)

- Continue TLCI efforts to emphasize preservation and improvement of existing communities and their transportation infrastructure. (OWP)
  - The TLCI program has become one of NOACA's most popular programs.

## **Goal 10**

*Foster improvement in the quality of life of residents in the region through attention to aesthetics in the planning of the transportation system.*

### **Explanation**

People decorate and modify their homes to create pleasant living environments for themselves. Businesses attract customers and employees by being pleasant places to be. People buy cars that are much more than simple means of transportation. An aesthetically designed transportation system can improve the quality of life of the region's residents.

### **Successes and Challenges: Goal 10**

#### 2009 Update

The TLCI program is aiding local communities to produce aesthetically pleasing transportation routes and communities. Never-the-less current fiscal uncertainties make this a difficult goal to advance towards. Sky-rocketing costs and dwindling financial resources have made it difficult for many project sponsors to focus on aesthetics. The transportation enhancement program (TE) remains an attractive funding opportunity to these sponsors, but its funding does not support a large number of projects.

When fiscal circumstances become more secure, NOACA will be able pursue this goal with renewed vigor.

#### Connection 2030 Original

The Federal Transportation Enhancement (TE) program has gone a long way toward encouraging the consideration of aesthetics in project design. By making money available for aesthetics, the TE program immediately ignited a flurry of activity on this issue. Unfortunately, TE funds are limited, and, at times, aesthetics may not be thought of as integral to transportation projects.

In recent years, more money is being spent on enhancements, and projects are planned with aesthetics in mind. Projects may bring in an aesthetic component by allowing access to an existing asset. For example, the Cleveland Lakefront Plan set a goal to connect people to the water. Project sponsors frequently ask about the availability of TE funds. Sadly, however, when TE funds are not available, the aesthetic components of the transportation system itself are often overlooked.

### **Strategies (Status as of 2009 incorporated where progress has occurred)**

In light of the above review, NOACA will seek to implement the following strategies. (After each strategy, an indicator identifies the primary means available for its implementation. OWP = NOACA's Overall Work Program, RTIP = Regional Transportation Investment Policy, PubEd = Public Education efforts.)

- Continue to select and fund regionally significant transportation enhancements as federal funds become available. (OWP, RTIP)
- Consider using other federal funding categories (e.g. STP) for enhancement purposes. (RTIP)
- Coordinate with the Ohio Department of Transportation regarding their approach to TE project solicitation and selection. (RTIP)
- Promote consideration of aesthetics (e.g. “viewscales,” walking trails, access to water resources) in transportation project design. (OWP, PubEd)
- Promote the integration of projects with their environments. (OWP, PubEd)
- Explore the possibility of dedicating a portion of NOACA’s funds for aiding in the achievement of these project design additions by project sponsors. (RTIP)
- Promote landscaping as a standard element in project planning and construction. (RTIP, OWP, PubEd)
- Promote recreational trail development as a quality of life asset to the region. (OWP, PubEd)
- Promote incorporation of public art in transportation project design. (OWP, PubEd)
- Discourage hiding, covering, filling, creating culverts, or otherwise destroying regional water resources. (RTIP)

## Chapter IV: Technical Issues

### Travel Demand Model Updates

#### *2009 Update*

NOACA is in the midst of a two step effort to dramatically update its travel demand modeling efforts. The first step is the conversion of the existing travel demand model (TDM) from one platform to another. Similar to operating systems for most computer software, travel demand models can run on different platforms. NOACA is converting its model from the TRANPLAN platform to the CUBE platform. The CUBE platform is being used by ODOT and many other MPOs. Converting to this platform will allow for better coordination of our modeling efforts with those of adjacent MPOs and the State of Ohio. This conversion has the additional benefit of allowing for the debugging of model components. Improved components result in improving the ability of the model to accurately portray regional travel patterns.

The second step is the development of an updated model. NOACA hopes to update the model with 2010 Census data, new household travel and transit survey data, and state-of-the-art modeling methodologies in time for its next long range transportation plan update in 2013.

#### Connections 2030 Original

The federal requirements (23 CFR 450.322) for transportation plans require that Connection 2030:

*Identify the projected transportation demand of persons and goods in the metropolitan planning area over the period of the plan.*

This requirement is met through the application of NOACA's Travel Demand Model. NOACA has updated its Travel Demand Model (TDM) based on data received from the 2000 Census. Population, employment and other baseline and forecast data were allocated to 1318 Traffic Analysis Zones (TAZs). TAZs are the basic geographic building blocks of the TDM process. Traffic movements between them along the transportation systems are the basis for generating vehicle miles of travel in the region.

Following this data update, NOACA conducted base year 2000 validation of its travel demand model over the TAZs to determine the reasonableness of traffic assignments as compared to actual traffic counts. The base year model results were expected to replicate observed conditions within an acceptable range of differences. If this condition is met the model is believed able to produce reliable forecasts out to the 2030 horizon year based on the updated data inputs.

The validation technique employs screenlines (imaginary lines that trace county borders, rivers, valleys, etc.) to compare actual traffic counts with model assigned traffic crossing these lines. Percent deviation from desired values is then calculated for all roadway groups. The results were found to be acceptable for all roadway groups. Therefore, NOACA staff can now forecast future traffic for use in the metropolitan planning process.

## Regional Transportation System

### 2009 Update

NOACA updated its analyses of the Regional Transportation System (RTS) during 2007 and 2008. It utilized these analyses to identify and rank portions of the RTS for deficiencies in the following categories:

- Bridge data for those in poor or critical condition - major deficiency, bridge in need of repair to continue functioning as designed (poor) or bridge no longer functioning as designed (critical);
- Pavement data - segments of pavement on the federal-aid eligible system with a pavement condition rating (PCR) less than 60 (poor condition);
- Congestion data - segments of roadways with a volume to capacity ratio (V/C)  $\geq 1.0$  (congested segments);
- Safety data - Ohio Department of Transportation (ODOT) identified Safety Hot Spots on the state highway system as those with 250 or more accidents over three years on a two mile stretch of roadway for freeways or non-freeways; and
- NOACA-identified high accident intersection locations - top 10 percent of accident locations by county.

These rankings aid in focusing NOACA's transportation planning efforts on the neediest areas/projects. The general findings of this RTS update were:

#### **2006 Pavement Condition Data – Pavement deficiency considered at Pavement Condition Rating (PCR) < 60. One of NOACA's Board-adopted goals states that 90 percent of the federal-aid eligible roadway system will have a PCR of 60 or better by 2010.**

- In the NOACA region, nine percent of the roadways had a pavement condition rating in the poor category.
- Cuyahoga County had seven percent of its roadways in poor condition and 67 percent in good or very good condition.
- Geauga County had six percent of its roadways in poor condition and 65 percent in good or very good condition.
- Lake County had nine percent of its roadways in poor condition and 56 percent in good or very good condition.
- Lorain County had 15 percent of its roadways in poor condition and 59 percent in good or very good condition.
- Medina County had nine percent in poor condition and 70 percent in good or very good condition.

#### **2002 Traffic Congestion Data – Congestion deficiency considered at Volume-to-Capacity Ratio (V/C) $\geq 1.0$**

- Cuyahoga County contained the highest number of congested segments.
- The top 10 congested segments in the NOACA region were located in Cuyahoga County.

- Arterials accounted for the highest percentage of congested miles traveled of any functional category (12 percent). Freeways accounted for nine percent of congested miles traveled, while collectors represented one percent.
- Nearly nine percent of all roadway segments evaluated under existing conditions experienced congestion.

### **2003 - 2005 Safety Hot Spots**

- ODOT identified 85 Safety Hot Spot locations in NOACA's planning area.
- Safety Hot Spots tend to occur more frequently in areas of high traffic volume.
- The number one Safety Hot Spot location in Ohio was located on I-90 (Innerbelt) in Cleveland.

### **2004 - 2005 Intersection Accident Analysis**

- NOACA identified intersections with high accident frequencies in all its counties in 2004 and 2005 accident reports. The area included a radius of one-tenth of a mile from each intersection.
- In each county, the top 10 percent of these intersections were identified as having a deficiency.

### **2006 ODOT Bridge Condition Data – Bridge deficiency considered at general appraisal (GA) =< 4.0**

- About 10 percent of the 2,924 bridges inspected in the NOACA region were in poor or critical conditions in 2006.
- Overall, the total number of bridges in the poor and critical categories was reduced by three-tenths of a percent in the NOACA region between 2003 and 2006.

### **2006 Bicycle System Data**

- In March 2008, the NOACA Governing Board approved the Regional Bicycle Transportation Plan, an update to the 1997 Regional Bicycle Plan. Included was a Bicycle Facility Priority Plan.
- Regional bicycle facilities increased 179 percent from the 1997 inventory to the 2006 inventory.
- Bicycle lanes increased five-fold, from eight miles to 40 miles.
- Multipurpose paths increased about 90 percent, from about 105 miles to nearly 195 miles.
- There were no signed bicycle routes in 1997, and there were 80 miles in the NOACA region in 2006.
- Between May 2005 and December 2006, 18.4 miles of paths and 8.2 miles of bike lanes were constructed.
- Despite the progress made in miles of bikeways in the region, there is still only limited access to desired destinations for cyclists on the arterial roadway system (shopping, work, etc.).

### **2006 Pedestrian Planning Data**

- ODOT's 2006 inventory of sidewalks on the non-state portion of the federal-aid eligible system indicated that 649 out of 1,365 miles of roadways (48 percent) had sidewalks on at least one side.

- Seventy-two percent of the region's roadways were classified as local roads and were not included in this inventory.
- Cuyahoga County had 85 percent of these sidewalks.
- About 41 percent of these sidewalks were in good condition, 55 percent were in fair condition, and three percent were in poor condition.

### **2005 Transit System Data**

- The NOACA region has five fixed route transit operators: The Greater Cleveland Regional Transit Authority (GCRTA), LAKETRAN, Lorain County Transit (LCT), Brunswick Transit Alternative (BTA), and Metro RTA's Express Routes to Cleveland from the Akron area.
- Approximately 27 percent of the region's, and about 45 percent of Cuyahoga County's, federal-aid eligible roads carried a fixed route bus.
- About 17 percent of the region's federal-aid eligible road segments or links that carried a fixed route bus had average daily bus counts of 101 or more (in both directions).

### **2004 Intermodal Freight Inventory**

- Cleveland, Fairport Harbor, and Lorain are the three major Lake Erie water ports.
- Norfolk Southern (NS) and CSX Transportation (CSXT) are the two major Class I railroads, and the one Class III railroad is the Wheeling and Lake Erie (W&LE).
- Three intermodal facilities are located in the NOACA area: CSX operates one terminal in Collinwood, and NS operates a terminal in Maple Heights and has a dormant terminal in downtown Cleveland.
- Cleveland Hopkins International Airport is the major air facility for both passengers and freight.
- The freeway system that connects at various points with the Ohio Turnpike throughout the region includes I-90, I-71, I-77, I-480 and SR-2.

The complete evaluation can be found at <http://www.noaca.org/rtsstudy.pdf>.

### Connections 2030 Original

The federal requirements (23 CFR 450.322) for transportation plans require that Connection 2030:

*Reflect the consideration given to the results of the management systems, including in TMAs that are nonattainment areas for carbon monoxide and ozone, identification of SOV projects that result from a congestion management system that meets the requirements of 23 CFR part 500.*

And that it:

*Identify adopted congestion management strategies including, as appropriate, traffic operations, ridesharing, pedestrian and bicycle facilities, alternative work schedules, freight movement options, high occupancy vehicle treatments, telecommuting, and public transportation improvements (including regulatory,*

*pricing, management, and operational options), that demonstrate a systematic approach in addressing current and future transportation demand;*

NOACA defines the regional transportation system (RTS) as all elements of the public transportation infrastructure. This includes all public roads, highways, transit facilities and capital equipment, bikeways, trails and pedestrian facilities.

The federal-aid system is a subset of the RTS. For example, approximately 25 percent of the public roads in the region are eligible for federal aid. In accordance with federal law, NOACA’s responsibilities rest with the federal aid transportation system. However, at times, federal regulations require that NOACA monitor the entire public transportation system. (For example, in developing this Transportation Plan, NOACA is required to provide evidence that the entire public infrastructure is being adequately maintained. This analysis is contained in the financial analysis chapter.)

NOACA plans for the federal-aid RTS by creating and maintaining various management systems. This includes the Congestion Management, Pavement Management and Bridge Management Systems. These systems are created and developed in coordination with system operators, including the Ohio Department of Transportation, County Engineers and other transportation partners.

### **Congestion Management Process**

#### 2009 Update

NOACA updated its analysis of congestion on the RTS during 2008. The table on the following page displays the new list of ten most congested locations in the region identified by that analysis. The table following it displays the top ten most congested freeway locations in the region. Both tables include information related to possible causes of and/or solutions for the identified congestion.

<b>Top Ten Congested Sections in the NOACA Region</b>			
<b>Ran k</b>	<b>Location</b>	<b>Wors t V/C</b>	<b>Project - Related Activities</b>
1	Cedar Road Between Richmond Road and I-271 Southbound On-Ramp	1.662	<ul style="list-style-type: none"> <li>• A regional “lifestyle center” (Legacy Village) opened in October, 2003 with additional turn lanes at Cedar/Richmond intersection</li> </ul>
2	Cedar Road Between Brainard Road and Landerbrook Drive	1.635	<ul style="list-style-type: none"> <li>• Cuyahoga County Engineer widening project between Richmond and Lander Roads – completed</li> <li>• I-271/Cedar Road interchange modification – ODOT Project ID #21029 – project completed in 2005</li> </ul>

### Top Ten Congested Sections in the NOACA Region

Rank	Location	Worst V/C	Project - Related Activities
3	SR-252 Between US-20 to Hilliard Boulevard	1.589	<ul style="list-style-type: none"> <li>• SR-252 widening project – City of Westlake; under construction</li> </ul>
4	MLK Drive From Liberty Blvd to 0.05 mile south of I-90 Ramp-South	1.576	<ul style="list-style-type: none"> <li>• One of the Innerbelt alternatives that involves a connection to University Circle might ease congestion on this roadway section</li> </ul>
5	Clague Road Between I-480 North Ramp and Lorain Road	1.559	<ul style="list-style-type: none"> <li>• No projects on the road</li> <li>• Detroit Road widening project from Clague to Bradley Roads- City of Westlake</li> <li>• Crocker-Stearns Roads Connector - Cities of Westlake and North Olmsted;</li> </ul>
6	SR-254 Between Crocker Road and SR-252	1.548	<ul style="list-style-type: none"> <li>• Detroit Road widening project from Clague to Bradley Roads- City of Westlake.</li> <li>• Crocker-Stearns Roads Connector – Cities of Westlake and North Olmsted; under construction</li> </ul>
7	I-480 Between Broadway (SR-14) Ramps	1.516	<ul style="list-style-type: none"> <li>• Intelligent Transportation System (ITS) – ODOT Project ID # 77331</li> <li>• No projects on the road</li> </ul>
8	Clague Road Between Lorain Road and Westwood Road	1.514	<ul style="list-style-type: none"> <li>• No projects on the road.</li> <li>• Detroit Road widening project from Clague to Bradley Roads- City of Westlake.</li> <li>• Crocker-Stearns Roads Connector - Cities of Westlake and North Olmsted;</li> </ul>
9	US-42 From 0.67 mile south of Drake Road to Shurmer Road	1.491	<ul style="list-style-type: none"> <li>• TRAC project to widen US-42 from Boston Road to Shurmer Road, Strongsville – Planning underway</li> </ul>
10	Howe Road Between Shurmer Road and South Entrance of South Park Center Mall	1.466	<ul style="list-style-type: none"> <li>• No projects on the road</li> </ul>

<b>Top Ten Congested Freeway Sections in the NOACA Region</b>		
<b>Location</b>	<b>Worst V/C</b>	<b>Project - Related Activities</b>
<b><u>Segments Along I-271</u></b>		
- From Miles Road to I-480 North	1.257	<ul style="list-style-type: none"> <li>• Intelligent Transportation System (ITS), ODOT</li> <li>• TRAC project to widen I-271 from I-480 East Overpass to I-480 North</li> </ul>
- From I-480 Ramps South of Columbus Road to Rockside Road	1.213	
<b><u>Segments Along I-480</u></b>		
- Between Broadway (SR-14) Ramps	1.516	<ul style="list-style-type: none"> <li>• ITS, ODOT</li> <li>• No projects on the road</li> </ul>
- From I-71 Ramps to I-480 Eastbound On-Ramp from SR-237	1.300	
- From I-480 West Ramps at Warrensville Center Road to I-480 North	1.283	
- From Lee Road to Warrensville Center Road West Ramps	1.203	
<b><u>Segments Along I-90</u></b>		
- At I-490 Junction to I-71	1.310	<ul style="list-style-type: none"> <li>• Innerbelt Major Investment Study (MIS), ODOT</li> </ul>
- From I-77 to East 22 <sup>nd</sup> Street	1.209	
<b><u>Segments Along I-77</u></b>		
- From Wallings Road to Pleasant Valley Road	1.286	<ul style="list-style-type: none"> <li>• ITS, ODOT</li> <li>• I-77 lane addition project from Rockside Road in Independence to Oakes Road in Broadview Heights - ODOT Project ID # 22222 under construction</li> </ul>
- From I-480 to I-490 South Ramps	1.279	

In addition to updating its congestion analysis for the RTS system, NOACA is expanding the tools it uses to evaluate congestion. It has conducted several freeway and arterial travel time studies to evaluate the components of congestion. It is considering expanding these efforts further with the use of Geographic Positioning System (GPS) equipment. It is using the results of these efforts to aid in identifying additional options for reducing congestion on the RTS.

## GAP Closure Document

SAFETEA-LU takes a broader process based view of the former congestion management system requirements. Most of the changes appear to be in coordination with partners in these efforts.

*NOACA's Congestion Management System (CMS) is already a process. The first CMS Manual of Practice defining this process was adopted in October 1997 via Governing Board Resolution 97-077. In the second edition of this manual which was published in September 2002, the executive summary contains the following sentence which highlights NOACA's view of this effort as process oriented long before the SAFETEA-LU requirement: "The Congestion Management System (CMS) provides for a systematic process to address traffic congestion on the region's transportation network." It further describes the CMS by stating:*

*"Because a CMS could mean different things to different people, and because the development, establishment and implementation of a CMS is not only intricate but also large in scope, a manual of practice to help achieve the establishment and implementation of a CMS became necessary. The manual represents the blueprint upon which the construction of a CMS will be based. It contains NOACA's goals and objectives, the criteria for defining the transportation network, specific congestion management and mobility enhancement strategies, and measures of performance for evaluating the transportation system. Future expansion of or modification to the CMS will be necessary as new information and technology become available. Therefore, the CMS manual of practice will be a dynamic document."*

*NOACA uses the processes described in the manual to evaluate not only its current but future road networks in: CMS Volume-to-Capacity Ratio Evaluation (June 2003); Existing Traffic Congestion in the NOACA Region (September 2004); and Future Traffic Congestion in the NOACA Region (September 2005). The needs identified by these evaluations feed directly into NOACA's efforts with project sponsors to promote projects addressing solutions to the most congested locations. Additionally the process provides input into regional planning efforts through, among other things, NOACA's Project Planning Review process. That is, in selecting projects for the plan, the Governing Board considers congestion performance measures in relationship to NOACA's goals.*

*NOACA formally renamed the CMS as a congestion management process in Governing Board Resolution 2007-017 which makes NOACA's practice fully consistent with the requirement.*

## Connections 2030 Original

The Congestion Management System (CMS) is a systematic process that addresses traffic congestion. The Transportation Equity Act for the 21<sup>st</sup> Century (TEA 21) requires that a Congestion Management System process be implemented by the MPOs in cooperation with their respective States as part of the transportation planning process. The primary purpose of the Congestion Management System (CMS) process is to identify, evaluate and implement multi-modal congestion management strategies to improve the efficiency of the existing transportation system.

In September 2004, NOACA Staff produced a technical memorandum that evaluated and provided a summary of existing operating conditions for all roadways on the CMS network within the NOACA five-county area. This document included an update to the ranking of the most congested segments on the CMS network that were identified in the 2003 CMS Technical Memorandum. The ranking is based on the Volume-to-Capacity (V/C) ratio, which serves as a tool for identifying areas where travel demand exceeds available capacity. Results of the analysis were used as input into the 2030 Transportation Plan Update.

The table below shows a ranking of the top ten congested roadways in the NOACA region. This table also shows the related activities that are being done to address the congestion, and other activities that might affect congestion.

<b>Top Ten Congested Sections in the NOACA Region</b>			
<b>Rank</b>	<b>Location</b>	<b>Worst V/C</b>	<b>Project - Related Activities</b>
1	Rockside Road Between I-77 and Brecksville Road	1.798	<ul style="list-style-type: none"> <li>• Widening and access management, Cuyahoga County Engineer and City of Independence</li> <li>• E. 98th St connection to Rockside Road, Garfield Heights</li> <li>• A major commercial development at I-480/East98th St might worsen the congestion</li> </ul>
2	SR-82 From 0.10 mile East of I-71 Northbound Off-Ramp to West 130th Street	1.754	<ul style="list-style-type: none"> <li>• SR-82 widening project from I-71 to West 130th Street, Strongsville – Project under construction</li> </ul>
3	Cedar Road Between Richmond Road and I-271 Southbound On-Ramp	1.748	<ul style="list-style-type: none"> <li>• A regional “lifestyle center” (Legacy Village) opened recently with additional turn lanes at Cedar/Richmond intersection</li> </ul>
4	Cedar Road Between Brainard and Lander Roads	1.735	<ul style="list-style-type: none"> <li>• Cuyahoga County Engineer widening project between Brainard and Lander Roads.</li> <li>• ODOT I-271/Cedar Road interchange modification – ODOT Project ID#21029</li> <li>• A regional mall opened recently</li> </ul>
5	Clague Road Between I-480 North Ramp and Lorain Road	1.667	<ul style="list-style-type: none"> <li>• The Clague/Lorain Roads intersection has recently been upgraded.</li> <li>• Detroit Road widening project from Clague to Bradley Roads- City of Westlake</li> <li>• Crocker-Stearns Roads Connector - Cities of Westlake and North Olmsted</li> </ul>
6	MLK Drive From Liberty Boulevard to 0.05 mile south of I-90 Ramp-South	1.647	<ul style="list-style-type: none"> <li>• One of the Innerbelt alternatives that involves a connection to University Circle might ease congestion on this roadway section</li> </ul>
7	E. 55th Street Between I-490 and Grand Avenue	1.614	<ul style="list-style-type: none"> <li>• One of the Innerbelt alternatives that involves a connection to University Circle might ease congestion on this roadway section</li> </ul>

<b>Top Ten Congested Sections in the NOACA Region</b>			
<b>Rank</b>	<b>Location</b>	<b>Worst V/C</b>	<b>Project - Related Activities</b>
8	E. 30 <sup>th</sup> Street Between Central Avenue and Cedar Avenue	1.598	<ul style="list-style-type: none"> <li>One of the Innerbelt alternatives that involves improving the freeway connections to the downtown area might address this problem along this section</li> </ul>
9	US-42 From 0.67 mile south of Drake Road to Shurmer Road	1.557	<ul style="list-style-type: none"> <li>TRAC project to widen US-42 from Boston Road to Shurmer Road, Strongsville – Planning underway</li> </ul>
10	Cedar Road Between I-271 Southbound On-Ramp and I-271 Northbound Off-Ramp	1.551	<ul style="list-style-type: none"> <li>Replacement and widening of the Cedar Road bridge over I-271 including ramp modifications - ODOT Project ID#21029</li> </ul>

## **Pavement Management System**

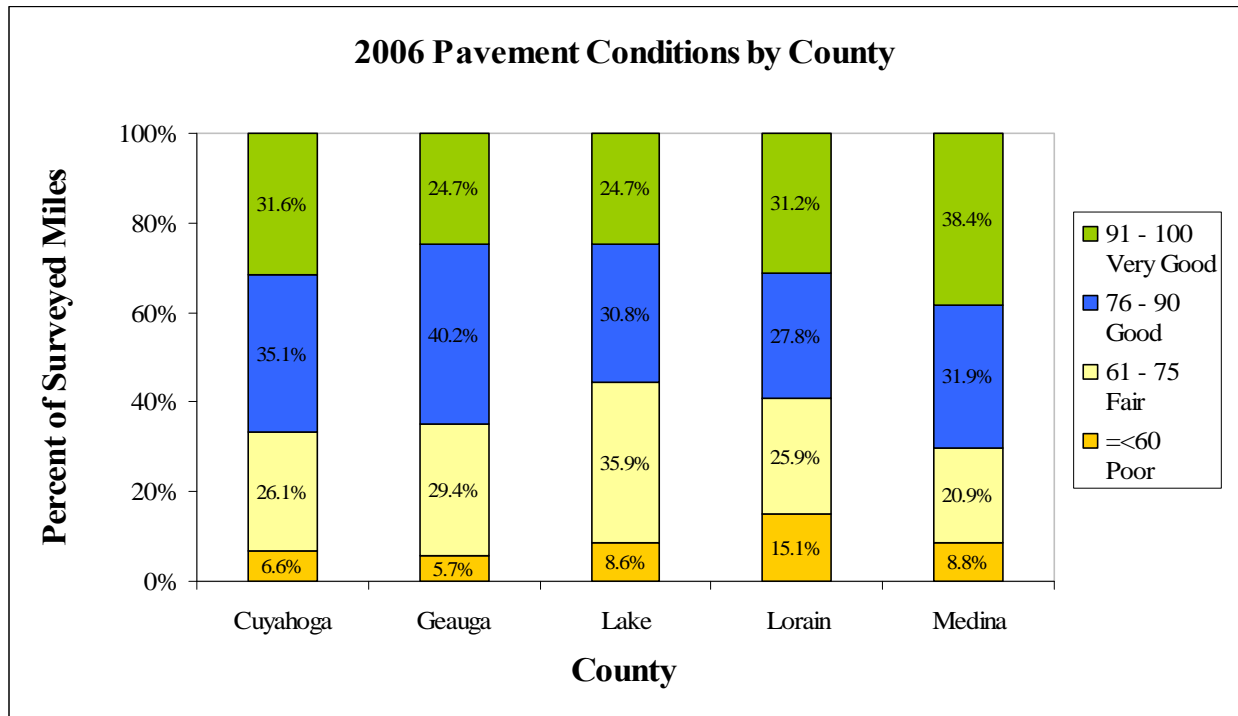
### 2009 Update

NOACA has launched and is exploring the potential uses for the Regional Pavement Management System planning tool discussed in the original version of Connections 2030. The tool is an ArcMap GIS based geodatabase that allows NOACA to track the pavement condition of the region's roads. It also allows for the development of pavement rehabilitation programs that will maximize the benefit gained from the expenditure of transportation dollars. NOACA has used this system to aid Lorain County in the evaluation of its roadways (<http://www.noaca.org/lorainpavement.pdf>).

NOACA also updated its overall analysis of pavement conditions in the region. The following table and chart provide updates to the information provided in the original version of Connections 2030.

### **NOACA 5-County 2006 Road Condition on the Federal-Aid System by County** (Miles of Roadway by PCR)

<b>County</b>	<b>≤60 Poor</b>	<b>61 - 75 Fair</b>	<b>76 - 90 Good</b>	<b>91 - 100 Very Good</b>	<b>Total (Miles)</b>	<b>Percentage of Miles &gt;60</b>
Cuyahoga	95.26	381.97	502.72	453.63	1,433.58	93.4%
Geauga	19.34	99.04	135.52	83.16	337.06	94.3%
Lake	36.37	151.32	129.77	104.44	421.90	91.4%
Lorain	92.86	159.65	171.16	191.65	615.32	84.9%
Medina	39.73	94.70	144.71	174.02	453.16	91.2%
<b>Total</b>	<b>283.56</b>	<b>886.68</b>	<b>1,083.88</b>	<b>1,006.90</b>	<b>3,261.02</b>	<b>91.3%</b>



#### Connections 2030 Original

A goal of the Regional Transportation System (RTS) project is to identify pavement infrastructure assets that improve the mobility of people and goods in the NOACA region. The condition of these assets must constantly be monitored and kept in a good state of repair to serve the public need.

NOACA Staff prepared a technical memo that looked at the more than 3,000 miles of roadways surveyed for pavement condition ratings (PCR). In the spring of 2004, NOACA received these PCR's from Ohio Department of Transportation (ODOT), which had collected PCR information for many years on the federal-aid elements of the State, US and Interstate systems. In addition, ODOT's pavement engineering staff now collects PCR information on non-state highways that have a federal functional classification higher than a local road on both the urban and rural systems. ODOT has agreed to re-inspect all functionally classified roadways in the NOACA region every 2-3 years. The technical memo summarizes the data received from ODOT at a county level on the state and non-state systems.

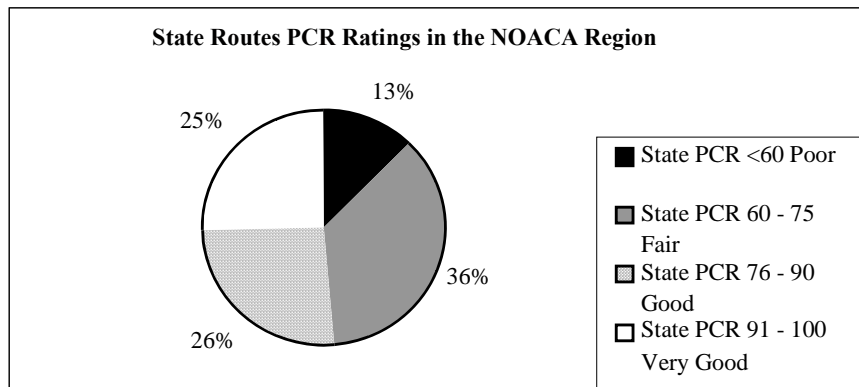
#### *Findings*

The Pavement Condition Rating is a mathematical expression in which different pavement distress types, severity and extent of the distresses are rated. This formula will deduct points from a perfect PCR rating of 100.

The tables and graphs below show the pavement conditions on the state system in 2003.

**Road Condition on the State System by County  
(Miles of roadway, by PCR rating)**

	<60 Poor	60 - 75 Fair	76 - 90 Good	91 - 100 Very Good	Total
Cuyahoga	52.25	197.1	196.65	157.24	603.24
Geauga	11.67	91.33	44.42	61.13	208.55
Lake	21.97	112.31	79.31	54.9	268.49
Lorain	81.16	120.19	62.4	70.71	334.46
Medina	49.8	100.86	63.31	95.74	309.71
<b>Total</b>	<b>216.85</b>	<b>621.79</b>	<b>446.09</b>	<b>439.72</b>	<b>1,724.45</b>

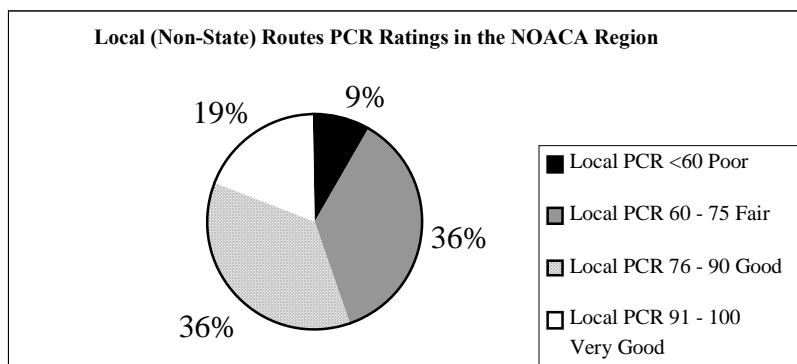


The table and graphs above show 2003 pavement condition ratings for state highways in the NOACA region. Overall, the data show that 13% of state highways in NOACA's region had a condition rating in the poor category, while over 50% of the state highways had a PCR rating within the good and very good range.

The table and graph below show similar data for the local system.

**Road Condition on the Local (Non-State) System by County  
(Miles of roadway, by PCR rating)**

	<60 Poor	60 - 75 Fair	76 - 90 Good	91 - 100 Very Good	Total
Cuyahoga	107.55	278.48	302.33	177.55	865.91
Geauga	1.12	11.32	71.08	21.36	104.88
Lake	5.69	27.22	64.21	25.23	122.35
Lorain	7.34	141.02	32.72	30.59	211.67
Medina	2.01	51.13	45.53	18.81	117.48
Total	123.71	509.17	515.87	273.54	1,422.29



Overall, non-state highways show fewer roadways with PCR values in the poor category than state highways. Less than 9% of non-state roads were in the poor category. Non-state roadways had 19% of their total mileage with a PCR value greater than 90 in the very good range. The county analysis shows that Cuyahoga County had over 12% of its non-state roads in poor condition while both Geauga and Medina Counties had less than 2% of their local roads in poor condition.

When looking at both state and non-state highways that have PCR data in the NOACA Region, over 50% of the roadways have PCR ratings in the good or very good range. Only 10% of the region's roadways fell into the poor category. Geauga County's roads are in the best condition with over 63% of its surveyed roads in the very good or good range. Conversely, Lorain County only has 36% of its surveyed roads in the very good to good category. The other counties in our region (Cuyahoga, Lake and Medina) had over 50% of their roadways in the good or very good categories.

*Next Steps*

In addition to the pavement condition ratings, the NOACA Governing Board adopted a Regional Pavement Management Program in 2002 to help planners identify pavements in the region that most urgently need repair. Since that time the NOACA Governing Board formed a task force to oversee the development of a Regional Pavement Management System (RPMS).

In May 2005, NOACA hired a consultant to develop the RPMS. The goal of this system is to assist decision makers in developing strategies to minimize the long-term costs of maintaining the region's pavement network. In addition, the RPMS will help the NOACA Governing Board and local governments prioritize the region's reconstruction and resurfacing projects. This system will be operational in late 2005 or early 2006.

## Bridges

### 2009 Update

NOACA updated its inventory of bridge conditions as part of the RTS update process. The table below displays the updated condition information for the region.

A comparison of bridge condition data between 2006 and 2003 data displayed in the original version of Connections 2030 shows little change. In 2006, 2,924 bridges in the NOACA region were rated and 2,930 were rated in 2003. The bridge inventory is dynamic and the difference in the number of bridges was due to the cycle of bridge retirement and replacement. In 2006, 90.1 percent of all bridges region-wide were categorized as being in fair or better condition, and in 2003, 89.9 percent of all bridges were in this category. In 2006, Cuyahoga, Lake, and Medina counties had approximately 87 percent of their bridges in good to fair condition, while Geauga and Lorain counties had over 95 percent of their bridges in the fair to good category. The number of bridges considered in critical condition region-wide decreased to 17 in 2006 from 20 in 2003.

**Table 1**  
**2006 - Bridge Condition by County**

Rating	Cuyahoga	Gauga	Lake	Lorain	Medina	NOACA Total
Good	477 38.1%	146 53.7%	79 28.3%	345 57.8%	234 44.7%	1,281 43.8%
Fair	623 49.7%	118 43.4%	166 59.5%	224 37.5%	223 42.6%	1,354 46.3%
Poor	139 11.1%	8 2.9%	32 11.5%	27 4.5%	66 12.6%	272 9.3%
Critical	14 1.1%	0 0.0%	2 0.7%	1 0.2%	0 0.0%	17 0.6%
<b>Total</b>	<b>1,253</b>	<b>272</b>	<b>279</b>	<b>597</b>	<b>523</b>	<b>2,924</b>

Source: Data received from ODOT, November 2006

### Connections 2030 Original

NOACA staff conducted a review of the more than 2,900 bridges in the NOACA Region in 2004. These data are maintained by the Ohio Department of Transportation. State law dictates that any bridge over ten feet in length must be inspected on an annual basis.

A June 2004 technical memo analyzed 2003 data alongside 1997 data on the condition of bridges by owner (State, County, Local), as well as by each of NOACA's five counties. Special attention was given to bridges in either poor or critical condition.

A comparison of the two tables below shows that Cuyahoga, Geauga, Lake and Medina counties have reduced the number of bridges in the poor and critical categories between 1997 and 2003. During the same time period, Lorain County shows a slightly larger percentage of bridges in poor and critical condition. Overall, the total number and percentage of bridges in the poor and critical categories have been reduced between 1997 and 2003 in the NOACA region.

### 2003 - Bridge Condition by County

	Cuyahoga	Gauga	Lake	Lorain	Medina	NOACA
Good	493 39.0%	130 46.3%	74 26.5%	384 63.6%	242 48.3%	1,323 45.2%
Fair	627 49.6%	136 48.4%	170 60.9%	187 31.0%	190 37.9%	1,310 44.7%
Poor	131 10.4%	14 5.0%	34 12.2%	29 4.8%	69 13.8%	277 9.5%
Critical	14 1.1%	1 0.4%	1 0.4%	4 0.7%	0 0.0%	20 0.7%
Total	1,265	281	279	604	501	2,930

Data received from ODOT, February 2004

K:\RTS\Bridge Data\General Appraisalby county.xls

### 1997 - Bridge Condition by County

	Cuyahoga	Gauga	Lake	Lorain	Medina	NOACA
Good	401 33.4%	118 41.4%	71 26.5%	357 59.5%	192 38.0%	1,139 39.8%
Fair	610 50.7%	145 50.9%	162 60.4%	197 32.8%	222 44.0%	1,336 46.7%
Poor	164 13.6%	18 6.3%	29 10.8%	30 5.0%	88 17.4%	329 11.5%
Critical	13 1.1%	0 0.0%	0 0.0%	2 0.3%	1 0.2%	16 0.6%
Blank*	14 1.2%	4 1.4%	6 2.2%	14 2.3%	2 0.4%	40 1.4%
Total	1,202	285	268	600	505	2,860

\* No data available

## Passengers and Freight

### *Intermodal Freight Planning*

#### 2009 Update

NOACA staff inventoried the National Highway System (NHS) intermodal connectors during 2008 as the beginning of an effort to reinvigorate the agency's freight planning efforts. Their recommendations regarding existing and newly proposed connectors were adopted by the NOACA Governing Board in March 2009. A summary of the adopted recommendations follows:

<b>Recommendation</b>	<b>Facility ID</b>	<b>Connector Number</b>	<b>Facility Name</b>	<b>Connector Miles Change</b>
Delete	OH54R	1	Norfolk Southern Class 1 Warehouse	-0.90
Delete	OH54R	2	Norfolk Southern Class 1 Warehouse	-1.00
Delete	OH48R	1	Norfolk Southern Container Facility	-0.10
Delete	OH53T	2	Strongsville Park and Ride facility	-0.20
Modify	OH52T	1	Triskett Rapid Transit Park and Ride station	-0.70
Modify	OH43P	2	Port of Cleveland (east basin)	-0.30
Modify	OH44P	1	Port of Cleveland (west basin)	+0.30
Modify	OH47P	1	Port of Cleveland (Cuyahoga River Berths (off Broadway Ave.))	+0.80
Modify	OH57T	2	Municipal Park and Ride Lot	-0.20
Modify	OH52T	2	Triskett Rapid Transit Park and Ride Station	-0.20
Modify	OH60T	1	Windermere Rapid Transit Park and Ride Station	+1.00
Modify	OH59T	1	Cleveland State University RTA Station	+1.50
Modify	OH62T	1	Green Road Rapid Transit Park and Ride Station	+0.50

<b>Recommendation</b>	<b>Facility ID</b>	<b>Connector Number</b>	<b>Facility Name</b>	<b>Connector Miles Change</b>
Modify	OH53T	1	Strongsville Park and Ride Facility	+0.30
Modify	OH56T	1	Tower City Rapid Transit Station	+0.10
Modify	OH45P	1	Port of Cleveland-Cuyahoga River Berths (W. 3 <sup>rd</sup> St. Peninsula)	+0.20
Add	OH46P	new	Port of Cleveland - Cuyahoga River berths (W. 3 <sup>rd</sup> Street industrial area) (proposed new connector to facility)	+0.90
Add	OH62T	new	Green Road Rapid Transit Park and Ride Station (proposed new connector to facility)	+1.10
Add	new	new	Norfolk Southern intermodal facility in Maple Heights	+1.00
Add	new	new	Westlake Park and Ride Facility	+0.30
Add	new	new	North Olmsted Park and Ride Facility	+0.20
Add	OH55B	new	Greyhound Terminal (proposed new connector to facility)	+0.60
Add	OH47P	new	Port of Cleveland, Cuyahoga River berths (east bank) (proposed new connector to facility)	+0.50

The proposed changes to the NHS intermodal connector system in the region would result in approximately 5.7 additional connector miles, or an 18% increase. All proposed connector modifications are in Cuyahoga County.

#### Connection 2030 Original

NOACA's intermodal freight planning works to integrate freight logistics into NOACA's planning processes. In 1996, NOACA formed a public/private partnership with the Greater Cleveland Partnership, which is the chamber of commerce for Greater Cleveland. This public/private partnership led to the creation of the Freight Logistics Advisory Council, which included elected officials, shippers, carriers, (air, water, highways, and rail) and other stakeholders.

Greater Cleveland possesses many advantages that could make it an important logistics hub. In 2005 Logistics Today ranked Greater Cleveland the most logistics-friendly city in the United States. This ranking was based on criteria such as interstate highway access, access to Class 1 railroads and waterborne commerce. Greater Cleveland ranked 10<sup>th</sup>, 11<sup>th</sup> and 17<sup>th</sup> respectively on these items among 331 U.S. cities.

Greater Cleveland is the nexus where two Class 1 railroads converge with five interstate highways, two major Great Lakes ports, an international airport and some of the lowest highway traffic congestion in the country. If the Port of Cleveland's proposal to develop ferry service to Canada for passenger cars and large trucks comes to fruition, this could be another important boost to freight logistics in Greater Cleveland.

The American Association of State Highway Transportation Officials (AASHTO) predicts that with modest economic growth, freight movement in the United States will increase 67 percent by the year 2020. In that same time period, they predict a 57 percent increase in domestic freight and a doubling of import/export freight movements. Greater Cleveland is well poised to benefit from this growth.

In the last several years, both CSX and Norfolk Southern Railroads have built intermodal facilities in Greater Cleveland. Those facilities have done quite well and appear to be at or near capacity. Given the growth that AASHTO is projecting, it may be time to start talking about additional facilities.

The existence of two major Great Lakes ports in Cleveland and Lorain is also no trivial matter when it comes to freight logistics. While water is currently a very underutilized mode of freight movement in the United States, it can have significant benefits. Water is one of the least expensive modes, has a relatively low impact on air quality, is very fuel-efficient and requires minimal infrastructure. Approximately 47 percent of all the container ships at major U.S. ports can travel down the St. Lawrence Seaway directly into the Port of Cleveland.

Some logistical experts believe a public/private partnership should be established to construct a new intermodal facility that serves both major Class 1 railroads on or near the Port of Cleveland. With good intermodal connectivity, water could potentially play a major role in the future movement of freight in Northeast Ohio. A solid intermodal connection with the Port of Cleveland could greatly enhance freight logistics in the region.

### *Transit Needs*

#### 2009 Update

NOACA has continued its efforts to address the transit needs of the area's residents, especially those with special transportation needs. It sought to become and became the designated recipient for Job Access and Reverse Commute (JARC) and New Freedom transportation program funding in addition to the funding for the Section 5310 program it was already operating.

Toward this goal, NOACA developed the Coordinated Public Transit-Human Services Transportation Plan for Northeast Ohio (Coordinated Plan). The Coordinated Plan is a document

that includes information on the existing transportation options and unmet needs of the three target population groups served by the JARC, New Freedom, and Section 5310 programs: people with low income, individuals with disabilities, and older adults. Development of the Coordinated Plan helps ensure that resources are used efficiently and effectively by eliminating gaps and redundancies in transportation services.

The Coordinated Plan includes a priority system that assigns each of nine identified recurring transportation needs or overarching themes to a tier structure. This structure, which includes a top tier, second tier, and third tier, provides guidance for allocating resources to projects that address the most pressing needs and that will provide the most benefit to improving the regional transportation system. The plan not only prioritizes these needs but also suggests strategies for addressing them. The results of this effort are summarized below.

### **Top Tier Priorities and Strategies:**

- Improve Coordination of Services
  - Possible strategies, projects, or activities:
    - Quarterly meeting to address issues
    - Facilitate inter-county travel.
    - Let everyone know what other people are doing
    - Increase the ease of referral and access of services
    - Formal assessment of transportation services across the county to see what people are doing and to see where the duplications are and where efficiencies can be made
    - Create a development plan with all transit agencies to identify, coordinate, and provide services across county lines for all eligible recipients
- Reduce Costs for Transportation Providers
  - Possible strategies, projects, or activities:
    - Strong advocacy to get resources out-of-state
    - Increase coordination among providers
    - Promote private and public partnerships to better serve all the riders
    - Offer and promote travel training programs as a way of reducing reliance on more expensive transportation options
    - Create insurance pool for non-profit organizations to be better able to purchase insurance for vehicles in operation at better price
    - Bulk purchase of fuel at a discounted rate or without a fuel tax. Non-profit organizations should have that benefit
    - Find specialists who do the services and let them be the experts
    - The existing public transportation network should be considered in the evaluation of locations sites, especially for those entities that will require the transport of citizens with disabilities
    - Whenever possible, social service agencies should include a provision and funding for transportation in their program budgets to get clients to and from needed services
    - Establish a program to provide fare subsidies to clients of social service agencies that cannot afford transit fares to get to needed services

- Reduce Costs for End Users
  - Possible strategies, projects, or activities:
    - Businesses purchase bulk bus passes and tickets through RTA for the users in the community
    - Transportation agencies should work with local businesses to assist with transportation costs for their workers
    - Apply for grants through charity organizations to assist with cost or possibly levies to assist with funding

### **Second Tier Priorities and Strategies:**

- Improve Outreach, Education, and Travel Training
  - Possible strategies, projects, or activities:
    - Hold public forums and provide training on fixed routes. Have more provider small group education
    - Get providers together
    - Use the media more to inform the public about the transit system
    - Resources need to be brought together to provide affordable transportation to the people
    - More information needs to be distributed to the agencies. For example, use United Way's 2-1-1 to get information to the public
- Improve Weekend and Evening Service
  - Possible strategies, projects, or activities:
    - Provide transportation to elderly, the disabled, and those with low income
    - More services on short notice need to be available for people, especially for people with a mental disability who don't know how to plan ahead of time
    - Need more money for resources to pay operators and administration staff who work during non-peak hours
- Improve Last-minute Transportation Options
  - Possible strategies, projects, or activities:
    - Multi-vendor/multi-county transportation voucher or pass that would be good for private vendors, public transit systems throughout Northeast Ohio, taxis, and GCRTA
    - Improve communication of transportation options
    - Improved travel training would allow people to better utilize fixed routes and lessen the dependence on Paratransit or other options
    - Improve the accessibility of fixed routes (example: using audio bus stop information for visually impaired people)
    - Better education and training of bus drivers (routes, transfers, working with special needs passengers)
    - Better communication among vendors/providers
    - Centralized transportation line, such as 5-1-1 line in Cuyahoga County or Northeast Ohio through an agency or vendor to provide transportation information and options to the public. Also, the service would provide dispatch information to the public on how to get from point A to point B

### Third Tier Priorities and Strategies:

- Improve Paratransit Services
  - Possible strategies, projects, or activities:
    - Employ mobility managers in each county to coordinate and organize mobility management services, including tangible resources (vehicles and drivers) and funding
    - Travel training for personnel who work with and/or transport seniors and persons with disabilities to improve communication so they will better understand how transit is working for their clients. This will assist in the best way to transport people. It will also help with outreach and education in the community and strengthen partnerships within it
    - Ability to make online reservations or reservations beyond two to three weeks into the future
    - Reduce the window and travel time for sub-populations with delicate medical conditions, like those on dialysis
    - Create and/or improve relationships with and commitment by both public and private specialized transportation providers to strengthen outreach and partnerships in the community
    - Sunday service and extended hours on evenings and weekends
    - Explore the use of taxis or other forms of transportation for more mobile paratransit populations
- Improve Safety
  - Possible strategies, projects, or activities:
    - Bus drivers need to be educated on making the bus safe for all riders. Positioning of the wheelchair is critical for other people who use the buses. It is hard for people, specifically disabled people, to maneuver around wheelchairs on the bus. For example, someone who uses a cane may have a hard time getting around a wheelchair.
    - Drivers need to be trained on the proper tie-down method for scooters.
    - Make organizations aware that securement training is available and free to drivers
    - Drivers should be trained on how to work with visually impaired passengers
    - Individual agencies need to collaborate more to help each other
    - Environmental barriers need to be removed
    - Additional services need to be available for frail elderly people. Elderly people need an escort/assistant to walk them to and from the buses or vehicles
    - Create incentives for more people to become volunteers without the fear of liability issues. Provide volunteers with the facts about liability
- Improve Out-of-County Service
  - Possible strategies, projects, or activities:
    - Develop a regional transit agency that has no county boundaries
    - Establish satellites to serve regions through fixed routes or demand services.
    - Work out the financial aspects with each county

- Find out what agreements are already in place for each county and get state representatives involved. Counties have inter-transportation agreements with each other. For example, people can use transfers when going from an RTA route to Laketrans route to Lorain County or Geauga County, etc.
- Partner with Greyhound to save people money on long-distance travel, especially older adults and those with disabilities
- Partner with private transportation companies. Utilize the private sector more effectively. Make it easier for the private sector to get involved in the process
- Create a development plan with all transit agencies to identify, coordinate, and provide services across county lines for all eligible recipients

The complete Coordinated Plan can be found at <http://www.noaca.org/jarcnffinal.pdf>.

Similar to its ongoing efforts in the 5310 program, NOACA now conducts a competitive selection process for funding through the JARC and New Freedom programs based on the priority system described above.

### Connections 2030 Original

The NOACA Region consists of five public transit systems: The Greater Cleveland Regional Transit Authority (GCRTA), Geauga County Transit, LAKETRAN, Lorain County Transit (LCT), Brunswick Transit Alternative (BTA) and Medina County Transit (MCT). Each of the transit systems have unique service areas and fare structures.

All of the agencies, except Geauga County Transit, participate in a regional fare agreement that allows a transit user to transfer between transit systems with no additional cost to the rider. A passenger pays the boarding fare on the system where the trip originates and receives a transfer. These transfers are accepted by other transit systems where their service areas meet or overlap with one another.

NOACA staff prepared a Technical Memo in 2004 that analyzes the fiscal requirements of the transit agencies from the data they have supplied to NOACA. Most of the agencies provided NOACA with five years of detailed operational and capital requirements. This information can be extrapolated to estimate transit needs to the NOACA Long Range Plan horizon (2030).

NOACA staff reviewed various sources concerning operational and capital expenditures for the public transit agencies in the region. GCRTA has detailed financial information available in a number of different documents. Some of the other transit agencies had very limited information, and as a result, information was taken from the NOACA Transportation Improvement Program.

The tables below show estimates of basic transit needs over the life of the NOACA Long Range Plan. The first table shows that almost 120 transit vehicles need to be replaced on an annual basis throughout the NOACA five-county region at a cost of more than \$24 million a year. Over the life of the Long Range Plan this amounts to more than 3,000 public transit vehicles, at a cost of \$638 million.

**Estimated Number of Public Transit Replacement Vehicles  
Needed for NOACA's Long Range Plan 2004 - 2030**

	Projected Annual Vehicle Replacements	Annual Cost for Vehicle Replacements (in millions)	Projected Vehicle Replacements over the Life of NOACA's LRP	Projected Vehicle Replacement Cost over the Life of NOACA's LRP (in millions)
GCRTA Fixed Route	55	\$18.700	1,430	\$486.200
GCRTA Paratransit	25	\$2.000	650	\$52.000
LAKETRAN Fixed	4	\$1.333	104	\$34.663
LAKETRAN	18	\$1.350	468	\$35.100
Geauga County Transit	3	\$0.235	78	\$6.110
Medina County Transit	4	\$0.221	104	\$5.740
Lorain County Transit	9	\$0.600	234	\$15.600
Brunswick Transit Alternative	0.5	\$0.104	13	\$2.699
<b>Total for NOACA Region</b>	<b>118.5</b>	<b>\$24.543</b>	<b>3,081</b>	<b>\$638.112</b>

**Note:** The above estimates of transit vehicles are based upon current vehicle replacement schedules in the TIP and from other sources and extrapolated out to 2030, the life of NOACA's LRP. The expense estimates listed on this table are included in following table, which shows estimates for total capital expenses.

The second table shows total projected operating and capital needs by year and over the life of the NOACA Long Range Plan. The data show that, at a minimum, almost \$239 million will be needed annually to operate our region's transit systems (unadjusted for inflation). GCRTA accounts for more than 92% of the region's operational needs.

Capital requirements are \$108 million per year throughout the region. GCRTA accounts for more than 92% of the region's capital needs, approximately the same percentage they required of the region's operational needs. Vehicle replacements are less than 25% of the annual capital expenditures region wide. For some of the smaller systems, vehicle replacements are the only capital requirements forecasted.

**Summary of Operating and Capital Needs 2004 - 2030 (by transit agency)**

	Projected Annual Operating Expenses (in millions)	Operating Expenses Over the Life of NOACA's LRP (in millions)	Projected Annual Capital Expenses (in millions)	Capital Expenses Over the Life of NOACA's LRP (in millions)
Greater Cleveland Regional Transit Authority	\$220.000	\$5,720.000	\$100.000	\$2,600.000
LAKETRAN	\$10.820	\$281.307	\$5.022	\$130.572
Geauga County Transit	\$1.052	\$27.352	\$0.235	\$6.110
Medina County Transit	\$1.147	\$29.822	\$0.253	\$6.578
Lorain County Transit	\$5.654	\$147.011	\$2.558	\$66.495
Brunswick Transit Alternative	\$0.245	\$6.370	\$0.104	\$2.699
<b>Total for NOACA region</b>	<b>\$238.918</b>	<b>\$6,211.862</b>	<b>\$108.171</b>	<b>\$2,812.454</b>

As our society ages, the type of transit service may have to be adjusted. Currently, all transit agencies in our area offer paratransit service or provide similar type service in conjunction with their fixed route service. In the future, additional paratransit type service may be required to meet the demands of an aging population. Within the NOACA region, forecasts show that the

65+ age group is projected to grow by more than 40% by the year 2030. Medina and Geauga counties show increases in the 65+ category of more than 100% between 2000 and 2030.

### *Special Transit*

The Special Transit Planning Technical Memorandum deals primarily with transportation services for those individuals that are considered seniors 60 and over, and/or disabled of any age. Demand for transportation services for these special populations continues to increase due to urban sprawl issues, better health care, and improvements in medical technology. This results in a growing number of seniors living longer and demanding more transportation services, which strain fiscally constrained budgets for transportation providers. A weak economy and reduced funding at the state and federal levels mean significant challenges for these transportation providers. As the baby boomers (those individuals born between 1946 and 1964) begin reaching age 60 in the year 2006, the number of seniors will increase dramatically, and the impacts on transportation service providers will be significant.

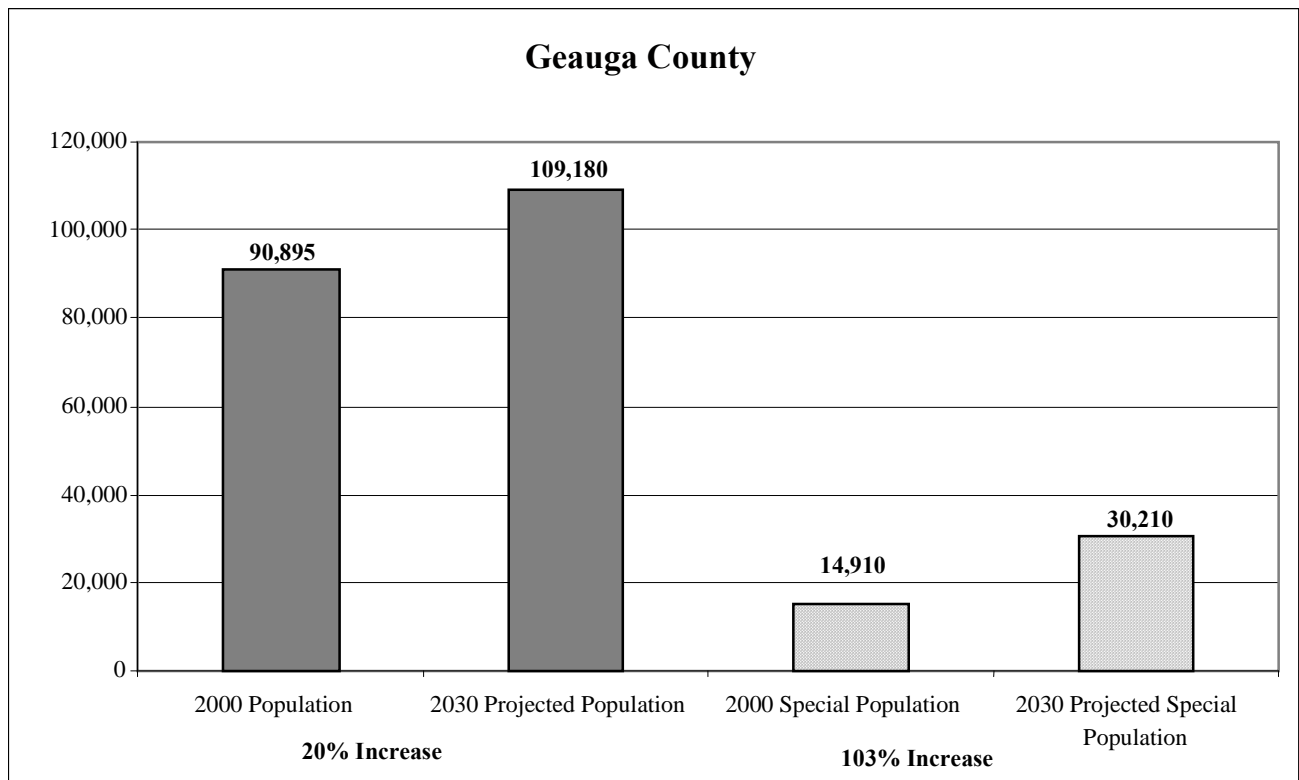
The attached graphs depict the explosive growth throughout the region in the special populations by the year 2030. The projected increased number of seniors, coupled with diminishing revenue streams for the transportation providers, present significant challenges.

## GCRTA (Cuyahoga County)

Type of service: fixed route, community circulator, demand response and rail  
 Square miles of service area: 459

	<b>2000</b>	<b>Projected 2030</b>	<b>% Change</b>
Census population	1,393,845	1,274,020	-9%
Special population	273,380	335,460	23%
	<b>2003</b>	<b>Projected 2030</b>	<b>% Change</b>
Total E & D costs	\$16,724,569	\$20,571,219	23%
Total E & D passengers	327,575	402,917	23%
cost per passenger	\$51.06	\$51.06	

Computerized dispatch software utilized: Trapeze



## LAKETRAN (Lake County)

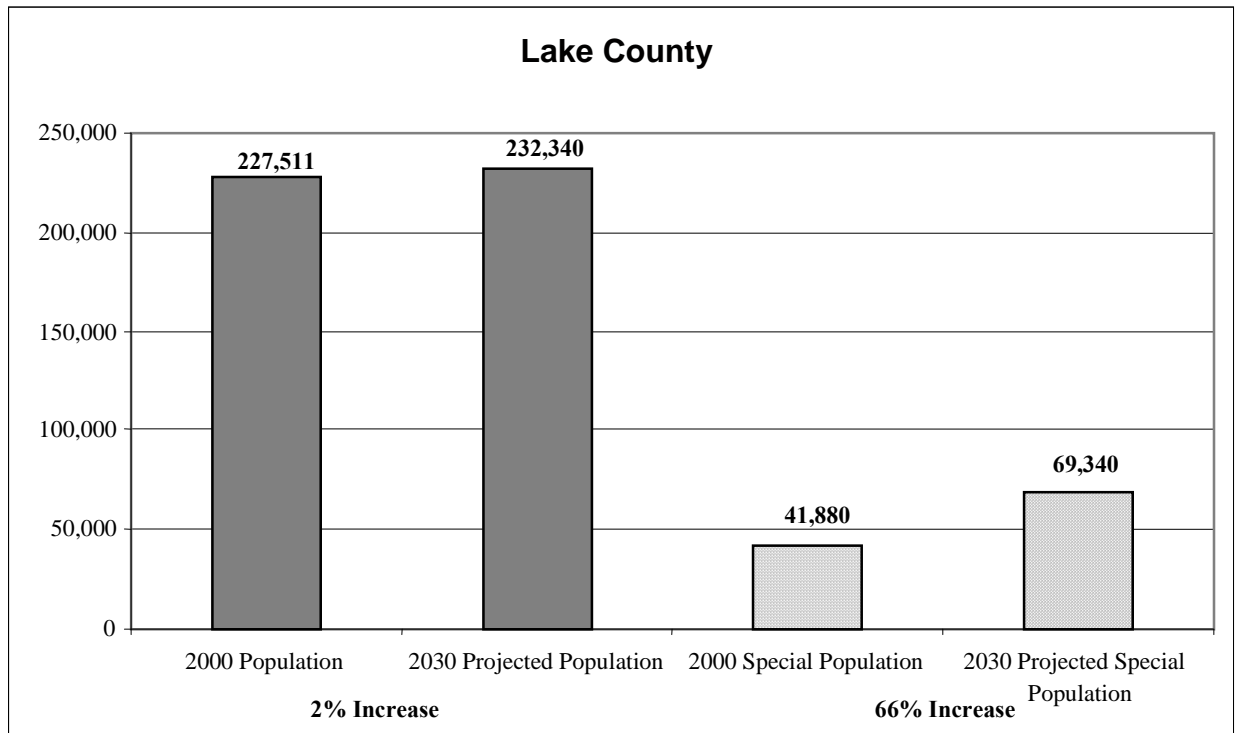
Type of service: Fixed Route and Demand Response Only

Square miles of service area: 231\*

	<b>2000</b>	<b>Projected 2030</b>	<b>% Change</b>
Census population	227,511	232,340	2%
Special population	41,880	69,340	66%
	<b>2003</b>	<b>Projected 2030</b>	<b>% Change</b>
Total E & D costs	\$6,121,035	\$10,134,494	66%
Total E & D passengers	265,963	440,350	66%
cost per passenger	\$23.01	\$23.01	

Computerized dispatch software utilized: Trapeze

\*Actual service area of LAKETRAN is 231 Square miles, however 'Status of Public Transit in Ohio' document showed 295 Square miles.



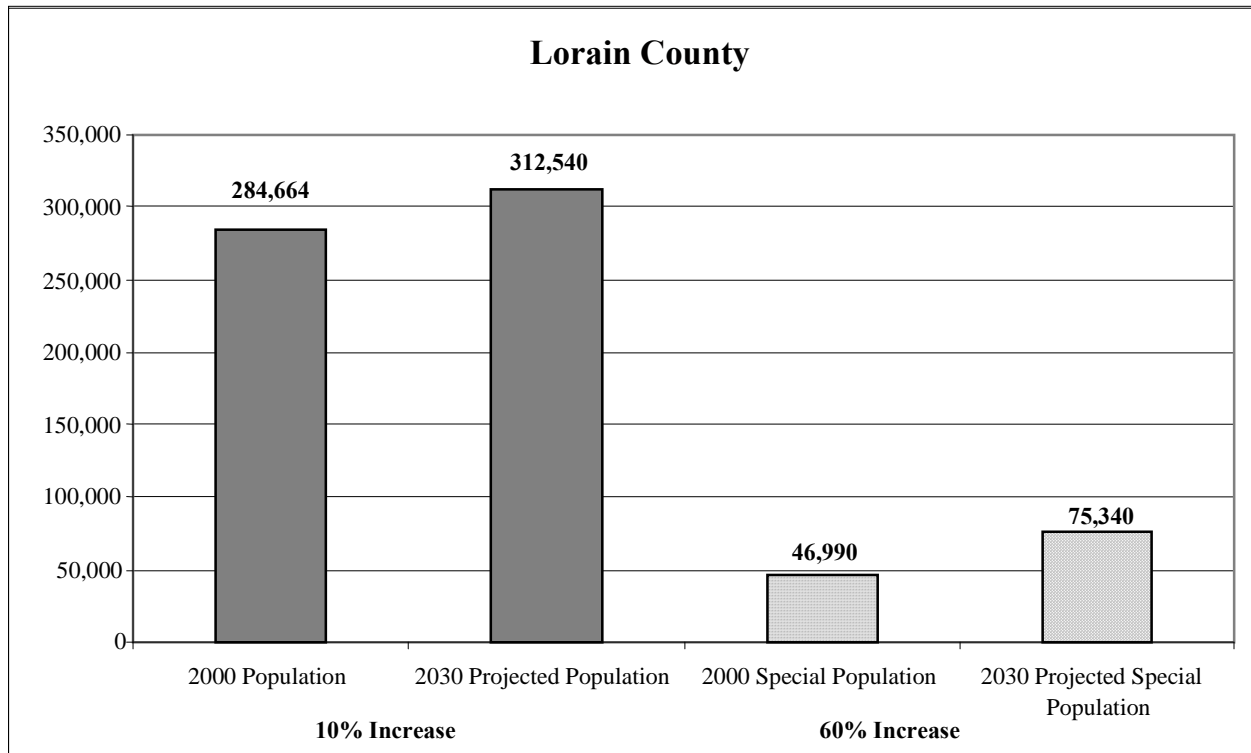
## Lorain County Transit (Lorain County)

Type of service: Fixed Route and Demand Response Only

Square miles of service area: 495

	<b>2000</b>	<b>Projected 2030</b>	<b>% Change</b>
Census population	284,664	312,540	10%
Special population	46,990	75,340	60%
	<b>2003</b>	<b>Projected 2030</b>	<b>% Change</b>
Total E & D costs	\$1,205,527	\$1,932,846	60%
Total E & D passengers	16,088	25,794	60%
cost per passenger	\$74.93	\$74.93	

Computerized dispatch software utilized: Logic



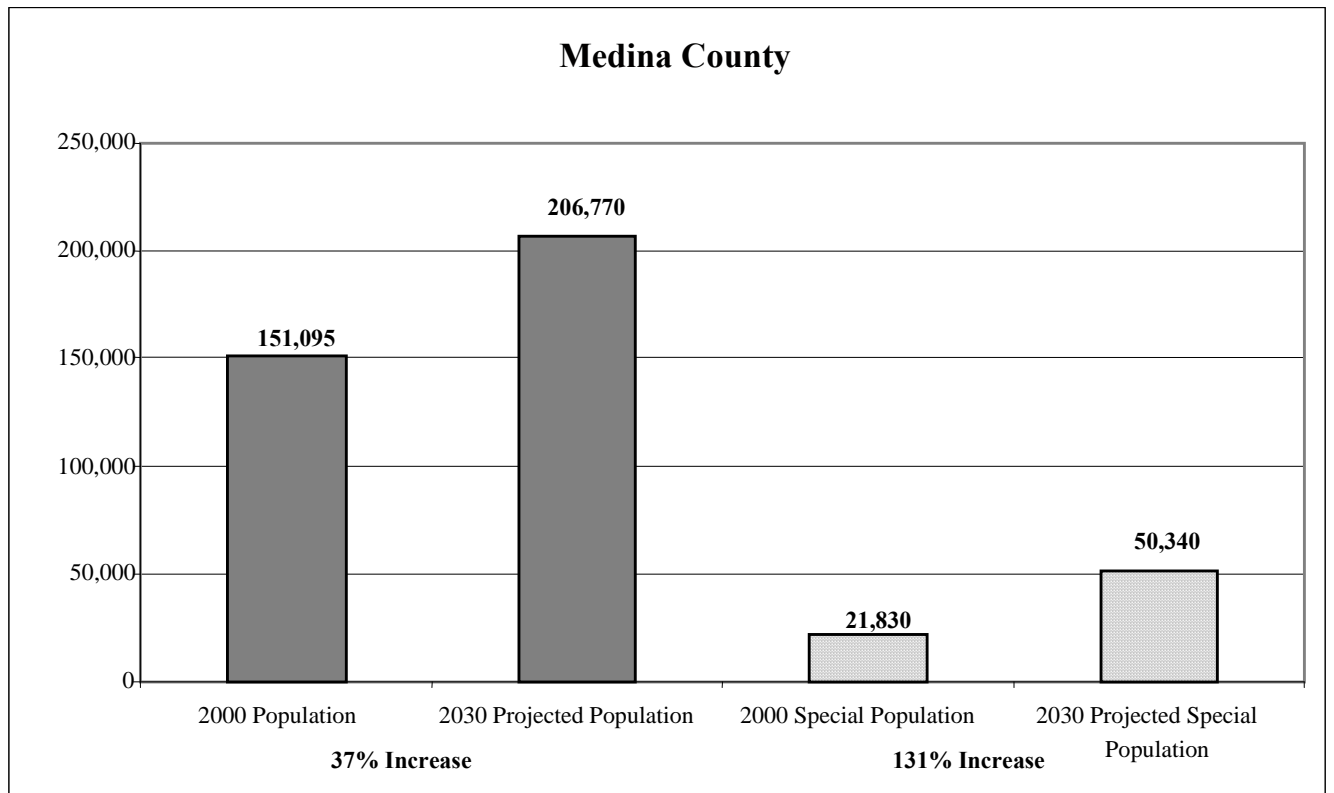
## Medina County Transit (Medina County)

Type of service: Demand Response Only

Square miles of service area: 422

	<b>2000</b>	<b>Projected 2030</b>	<b>% Change</b>
Census population	151,095	206,770	37%
Special population	21,830	50,340	131%
	<b>2003</b>	<b>Projected 2030</b>	<b>% Change</b>
Total E & D costs	\$1,028,277	\$2,371,208	131%
Total E & D passengers	71,228	164,252	131%
cost per passenger	\$14.44	\$14.44	

Computerized dispatch software utilized: PTMS



### Asset Management

Gap Closure Document

*During 2007 NOACA established an Asset Management Council (AMC). Among other tasks, the AMC is to:*

- o Proactively work and coordinate with communities and agencies regarding the development and selection of projects that will help to achieve Board-approved pavement management benchmarks.*
- o Every two years (to coincide with the development of the Transportation Improvement Program (TIP); develop a recommended list of projects to be programmed. Multiple scenarios should be developed to account for changing financial and project planning circumstances. The multiple scenarios are to be delivered to the Regional Transportation Investment Subcommittee (RTIS) and the TAC.*

## **Visualization**

### Gap Closure Document

SAFETEA-LU requires visualization techniques to be used in the development of transportation plans and TIPs.

*NOACA has always sought to use visualizations in an effort to provide better opportunities for communication with its committees and the public. Among these are:*

- 1) NOACA mapped its entire TIP in ARCMAP utilizing ODOT's LRS system and project data related to that system.*
- 2) It pursued and is beginning to implement a web based pavement management system tool that will not only allow internal staff but external transportation planners to visualize pavement conditions in their jurisdictions and used as tool to prioritize work based on that data.*
- 3) It uses mapping to highlight congested areas and to aid in planning fixes for those areas.*
- 4) It has used GIS based mapping for over a decade to aid in the identification of environmental justice and other special populations.*
- 5) Uses PowerPoint presentations containing charts, diagrams, and maps to explain planning efforts, requirements and other information to committees and the public.*
- 6) Sub area mapping is often used (particularly related to environmental efforts) to aid and inform discussions at committees and task forces.*
- 7) Completes user friendly versions of complex documents so that they are more attractive and accessible to the general public.*
- 8) Operates an air quality website that allows for near real-time views of the ambient air conditions in the region.*

*NOACA will continue to aggressively pursue GIS-based options for providing increased opportunities for public input and feedback. ARCIMS options initially explored for the pavement management system may allow for a much stronger presence for many of NOACA's mapping materials on its website. Because of these efforts and many more like them, NOACA believes its current efforts are compliant with this requirement.*



## Chapter V: Planning Issues

### Transit

#### 2009 Update

##### *Coordinated Public Transit Human Services Transportation Plans*

SAFETEA-LU requires a written plan for agencies that will receive funding for transit programs serving the disadvantaged.

*NOACA sought and received Board authorization (Resolution 2006-043) to pursue designation as the recipient of Job Access Reverse Commute (JARC) and New Freedom monies for distribution of funds to eligible transit projects in the Cleveland urbanized area. It also hired staff to develop the required plans for the distribution of those funds. Those plans were adopted in conjunction with other materials pursuant to this SAFETEA-LU update. These efforts make NOACA's planning practice compliant with this requirement.*

See discussion under Transit Needs in Chapter IV.

### Bicycle and Pedestrian Planning

#### 2009 Update

Connections 2030 was amended with NOACA's Regional Bicycle Transportation Plan in March 2008. This plan, the outgrowth of many years of inventorying and studying of existing bicycle accommodations in the region, identifies planned and proposed bicycle facilities; goals and strategies for the promotion of bicycling as a transportation mode; and estimates for the cost of planned and proposed bicycle accommodations.

The complete bicycle plan can be found at <http://www.noaca.org/finalbikeplan.pdf>.

NOACA has continued its other bicycle planning activities as well. These include updating and distributing bicycle transportation maps, hosting and/or sponsoring local bicycle events, conferences, and workshops, and serving as an information resource for local governments and the public on bicycle transportation issues.

NOACA has also demonstrated its ability to aid a local community in planning for bicycle transportation at the community level. Staff worked directly with the City of Shaker Heights to develop a plan for improving bicycle accommodations in that city. The result of that effort can be found at <http://www.noaca.org/sheightsbikeroute.pdf>.

NOACA is expanding its pedestrian planning efforts as well. It is currently completing an inventory of sidewalks in the region in an effort to establish a baseline for improving pedestrian accommodations. In 2006 and 2008, NOACA conducted walkable community workshops for a number of neighborhoods and small communities. The goal of these workshops was to allow

local representatives to identify possible mechanisms for improving the ability to use walking as a mode of transportation within the study areas.

Additional information on these workshops can be found at <http://www.noaca.org/transrept.html> under the bicycle and pedestrian planning section.

### Connections 2030 Original

The federal requirements (23 CFR 450.322) for transportation plans require that Connection 2030:

*Identify pedestrian walkway and bicycle transportation facilities in accordance with 23 U.S.C. 217(g).*

Staff's ongoing efforts related to bicycle and pedestrian planning are summarized below.

### *Bicycle Planning*

NOACA is in the process of updating the Regional Bike Plan (RBP). A goal is to continue advancements in making bicycles a viable transportation option in the region. It is expected that the draft RBP, discussed below, will be presented to NOACA committees and Board for approval within the next quarter.

The draft RBP encompasses many issues, some of which are highlighted below.

- Accomplishments over the life of the former plan. These include implementing a process to review road and bridge projects from the perspective of cyclist accommodation, resulting in some improvement of the road and bridge infrastructure; creating and distributing a bike transportation map for each of NOACA's 5 counties; conducting three workshops to train engineers and planners in facility design and planning; NOACA Governing Board adoption of Bicycle and Pedestrian Planning Policies, and working with the Cities of Avon Lake, Mentor, and Oberlin to become designated as "Bicycle Friendly Communities" by the League of American Bicyclists.
- An updated bicycle facility inventory including bikeways installed or constructed since 1997, as well as planned and proposed facilities. Since the 1997 Plan, numerous bicycle facilities have been installed throughout the region, resulting in a 4-fold increase in miles of bicycle lanes, while the miles of multipurpose paths have increased over 280%. Additionally, there are now over 80 miles of officially designated bicycle routes in the region. The draft RBP maps these routes and has inventories of each county.
- A discussion of the status of bicycle facilities and planning in the region, including a list of bike projects implemented since the last RBP. The projects include the Cleveland Lakefront Bikeway, major new multipurpose trails in Lake and Geauga Counties, and citywide bikeway systems implemented in Avon Lake and Mentor, with Solon working towards implementing its bike plan. These are only some of the many bikeway projects implemented in the last several years.

- An evaluation of the adequacy of the current system. Despite the large increase in miles of facilities mentioned above, the draft RPB states that the current Bikeway System is seriously deficient. The current system provides only very limited access to the many places where people need to go: employment, shopping, schools, libraries, etc.
- NOACA's Regional Bikeway Priority Plan for the Federal Aid System. As stated above, the federal aid system includes about 3500 miles of roadway (including freeways) in the region. The Plan, which was put together by NOACA staff and the Bicycle Advisory Council, with input from county engineers, planners, and park districts, and various city agencies and others, includes 1,470 miles of roadways, or about 40% of the federal aid system. Until a good portion of these roadways undergo reconstruction and/or widening and provide bike accommodation at that time, it can be argued that the NOACA Region will not have an adequate bikeway system.
- Bicycle projects planned and/or programmed in NOACA's Transportation Improvement Plan (TIP). Approximately 83 miles of bikeways are programmed for construction in the next few years, and hundreds of miles more are proposed for the next 10 years.
- Goals, strategies, and priorities for increasing bicycle transportation in the future. These are briefly discussed below.
- A preliminary financial assessment bicycle planning funding and expenditures in the region.

### *Bicycling Goals and Strategies*

The five goals that were adopted with the previous RBP to make biking a more viable transportation choice have been kept, with some minor word changes. The strategies in the 1997 Plan were reviewed to see which had been carried out, and which were good strategies to keep for future implementation or ongoing efforts. As discussed above, many of the strategies in the 1997 Plan were implemented. Additionally, through brainstorming sessions and discussions by staff and at BAC meetings, new strategies have been added to this draft Plan Update.

This is an abbreviated version of the draft goals and strategies in the RBP:

- 1) Create a regional network of safe bikeways and supporting bicycle facilities.
  - Refine and continue to review transportation projects submitted to NOACA for federal funding and make recommendations for cyclist accommodation.
  - Continue to obtain bicycle counts throughout the region in order to assess where more facilities are needed, and to gauge progress.
  - Continue to promote the League of American Bicyclists' "Bicycle Friendly Communities" program throughout the five-county region.
  - Implement a system to track compliance with NOACA/BAC recommendations for road and bridge projects to better accommodate bicycle transportation.
  - Continue to provide technical assistance on bicycle issues.

- Encourage ODOT to accommodate bicycle transportation in its projects.
  - Identify state, county, and municipal highway design practices that are hostile to bicycle safety and recommend bicycle-safe alternatives.
- 2) Increase bicycle planning and provision of facilities at the local level.
- Conduct training workshops on planning, design, and other issues for local officials.
  - Create a “how to” bicycle planning manual which includes model ordinances and subdivision regulations to be distributed to all local jurisdictions.
  - Continue to promote the League of American Bicyclists’ “Bicycle Friendly Communities” program throughout the five-county region.
- 3) Increase bicycle ridership in the region, in particular, for transportation.
- Continue to produce and distribute Bicycle Transportation Maps for the five counties.
  - Work with other public agencies, bicycle groups, or others as appropriate to assist with and promote a Bicycle to Work event within the NOACA region.
  - Participate in Bicycle Expos and other appropriate events.
- 4) Promote safer bicycling in the region and reduce accidents.
- Continue to produce and distribute Bicycle Transportation Maps.
  - Produce a bicycle safety brochure and to bicycle shops, libraries, and other venues.
  - Change driver’s education classes to include sharing the road with bicyclists.
  - Encourage the Bureau of Motor Vehicles to include more information about the bicycle/auto interface in the Ohio Drivers Manual.
  - Sponsor or support two safe bicycling classes per year, offered in each of the 5 counties of the region on a rotating basis.
  - Provide training to law enforcement officials about the bicyclist’s rights to the road and proper enforcement of the laws for both bicyclists and motorists.
  - Obtain more media coverage regarding safety and other bicycle issues through Public Service Announcements on radio, TV, and cable.
- 5) Encourage involvement of the private sector and other support for bicycling for transportation and recreation.
- Obtain corporate sponsorship for bicycle promotion events.
  - Encourage wider participation by employers, particularly large employers, in a Bicycle to Work event.
  - Promote the development and implementation of *Safe Routes to Schools* programs throughout the NOACA region.
  - Encourage commercial and industrial centers to accommodate bicyclists with safe and adequate facilities.

## *Conclusions*

There has been an increase in bicycle facilities in the region, as well as a more positive attitude about bike transportation by the public and local officials. By all indications, the region will see more growth in the bikeway system and other projects and programs to help the people of the region choose to use a bicycle to get to their destinations.

On the other hand, it appears that much work needs to be done before the 5 counties within the NOACA region can be considered bicycle friendly. The percentage of people using bicycles for transportation is perceived to be low. While local roads, which account for approximately 85% of the total roadway miles, tend to be safe for cyclists, many of the jobs, shopping, and other destinations where people want to go are inaccessible by local roads alone.

Along with major improvements in infrastructure, many other issues must be worked on. One of the themes of the 1997 Plan was that in order to achieve widespread use of the bicycle as a transportation vehicle, many players in addition to NOACA would be necessary: planners, city and county engineers, political leaders, local transit authorities, bicycle advocacy groups, employers, and others. This is still true. Motor vehicle drivers and cyclists must learn to coexist and both need education about driving/cycling laws. Many cyclists need cycling training to gain the riding skills to enable them to share the road safely with cars. Police are sometimes not aware of bicyclists' right to the road and need training in the law as it applies to cyclists. And in addition to education and safety issues, somehow the other benefits of bicycle transportation need to be made known to the non-cycling population: the exercise, health benefits, and the enjoyment.

## *Pedestrian Planning*

Transportation Goal 4 calls for the establishment a more balanced transportation system that enhances pedestrian travel. Additionally, federal law requires states and Metropolitan Planning Organizations to consider pedestrians in transportation projects and have plans and strategies to increase walking as a transportation mode. National data indicate that 25% of all trips (to work, shopping, recreation, school, etc.) are one mile or less.<sup>1</sup> Yet, the share of walking as a mode of transportation nationally is only 7% of all trips, and in the NOACA region, 6% of all trips.

These are some issues in the region that need to be addressed if pedestrian travel is to increase:

- **Poor or no sidewalks**-There are important destinations that are not accessible to pedestrians because there are no sidewalks leading to them, or the sidewalks are in poor condition. It can be the case that there are sidewalks along the roadway, but none lead to the destination.
- **Poor pedestrian design**- Even when there are sidewalks in the vicinity of important destinations, other factors, such as a lack of enough crossing opportunities, or confusing intersections, can discourage walking.
- **Safety perceptions**- A person's perception of safety can affect their choice to walk.

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<sup>1</sup> 1990 Nationwide Personal Transportation Study

- **Accessibility for all populations-** Many roadways must undergo improvements to comply with the requirements of the Americans with Disabilities Act (ADA), which allows people of differing abilities to travel, including people in wheelchairs. This is especially important as the region’s population ages and has more difficulty with mobility.
- **Public attitudes-** The public must embrace walking as an alternative mode of transportation. Public officials and public agencies need to prioritize the planning and funding of this mode.

A rudimentary sidewalk inventory has been supplied by the Ohio Department of Transportation. It includes the location and condition of sidewalks for the non-state part of the federal-aid system. At this time, ODOT does not have data on sidewalks on the state highway system. Additionally, the federal-aid system does not include roads functionally classified as “local.” Because approximately 85% of the roadway system is local roads, this inventory is of limited usefulness; however, NOACA has hired a consultant to develop and implement pavement management system software that will encompass the entire federal-aid system. Eventually, the system may be expanded to include other roadways and their sidewalks, including local streets, and the rudimentary inventory in the pedestrian technical memo could then be expanded. Staff will employ other methods to supplement this inventory, such as surveys of local jurisdiction.

Another limitation of ODOT’s current sidewalk inventory is that it shows when a sidewalk is present on a roadway, but does not indicate if sidewalks are on both sides of the roadway or on one side only. Therefore, the sidewalk condition rating is for a sidewalk located on one side only or indicates the poorest condition of a pair of sidewalks. The condition ratings for sidewalks are “Good,” “Fair,” and “Poor.” ODOT’s data also has codes that indicate when there is no sidewalk and when there is no data recorded about sidewalks. The latter category means that there may or may not be sidewalks, but the data was not recorded in the field.

ODOT data indicate that approximately 581 miles of roadway, out of a regional total of 1,291 miles,<sup>1</sup> have sidewalks on at least one side; that there are 659 miles of these roadways with no sidewalks; and that there is no data for 51 miles of roadways. Table 1 summarizes the miles of sidewalks in the region and in each county (in miles of roadway with a sidewalk on one or both sides) and their condition, as well as the amount without or unknown.

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<sup>1</sup> The inventory includes the non-state portions of the federal-aid system. The federal-aid system does not include roads that are functionally classified as “local.”

**Table 1: Regional Summary  
Inventory of Sidewalks on Non-State Federal-Aid System (Miles and Condition)**

	Good	Fair	Poor	Total Rated	No Side-Walks	No Data	County Total
Cuyahoga	203	223	76	502	218	32	752
Geauga	0	1	0	1	103	0	104
Lake	5	13	<1	19	79	19	117
Lorain	12	34	3	49	157	0	206
Medina	2	8	0	10	102	0	112
Region	222	279	80	581	659	51	1,291

The database/inventory could be used in several ways. NOACA will be purchasing pavement manage software that will offer various alternatives for prioritizing roadway projects. When road and bridge projects are prioritized to be constructed or undergo major rehabilitation, the sidewalks could be considered for upgrade or installation.

Another approach would be to prioritize the upgrade of sidewalks as projects on their own through a process of defining high pedestrian priority areas (such as schools, shopping, parks, etc.) and targeting them for improvement. This approach could be combined with RPMS prioritization and is discussed further in the technical memorandum that this summary is based on. The inventory could also be used with data from local public transit providers to see if sidewalks serve transit stations and bus stops.

*Pedestrian Projects in the TIP*

The current TIP includes the following pedestrian-related projects. Some are multipurpose paths, and others are enhancements to the pedestrian experience, such as landscaping design features and benches, to encourage more people to walk in a certain area. These types of projects can indirectly cause an increase in walking for transportation.

- Bagley Road Pedestrian Project – Construct median and pedestrian crossing
- Broadway Avenue Streetscape Project in Bedford (Phase II)
- Chagrin Boulevard Streetscape Enhancements – In Shaker Heights
- Chagrin Falls Scenic & Watershed Enhancements
- Cleveland Racks/City Seats Program – Install bike racks and benches in the City
- Coventry Road Business District Landscape Enhancements
- East 9<sup>th</sup> Street & Prospect Plaza in Cleveland – Develop pedestrian and bike plaza
- Euclid Avenue Corridor Project – Transit, pedestrian, and bicycle enhancements
- Grant and Fleet Avenue Pedestrian Enhancements – Enhancements on bridge
- Kinsman Road Streetscape Enhancements – In Cleveland
- Lake Greenway Multipurpose Path Extension – Colburn Road to Girdled Road
- Lee Road Enhancement Project – Pedestrian, bike and scenic enhancements
- Oakwood Village Fitness Trail (Phase III) – Richmond Road
- Veterans Memorial Bridge Enhancements – Pedestrian and bicycle enhancements
- West Creek Connector Trail – Multipurpose path in Seven Hills

- Wheeling & Lake Erie Trail/bikeway – Construct trail and create bikeways
- Wickliffe Euclid Avenue Streetscape Project

There are at least two other major pedestrian-related initiatives underway in Cuyahoga County: The Slavic Village Development Corporation program called *Connecting Cleveland's Communities* and Parkworks initiative called *Clevelanders in Motion*. Both efforts include working to increase pedestrian and bicycle facilities as one strategy to increase healthy lifestyles.

Additionally, NOACA has received 36 applications for its Transportation for Livable Communities Initiative (TLCI) program, almost all of which have pedestrian components. Many of these will undoubtedly be implemented over the life of the Transportation Plan.

In the future, additional research and planning strategies will be presented to NOACA Committees and Governing Board, to improve the walkability of the region. Below are a few examples to consider:

- Identify important destinations and delineate radii of reasonable walking distances to important destinations.
- Investigate methodologies in use by other MPOs to prioritize pedestrian needs.
- Use the results of the future Pavement Management System to prioritize needs.
- Conduct a survey of the local jurisdictions in the region to gather any sidewalk inventories they may have. Research design treatments for street crossings, in particular large and complicated ones.
- Implement (or assist in the implementation of) a Safe Routes to School program.
- Encourage conformance with ADA requirements.

## **Transportation for Livable Communities Initiative (TLCI)**

### 2009 Update

The TCLI program has been a popular program amongst NOACA's local jurisdictions. It provides an increased capacity for communities to accomplish planning efforts to improve transportation choices and outcomes for their residents. To date, almost 30 community efforts have been funded, and many have already been completed. Among these are:

- [City of Chardon: Comprehensive Plan Update](#)
- [City of Cleveland: EcoVillage Multi-Modal Connection Plan](#)
- [City of Cleveland: Slavic Village Bike, Pedestrian and Transit Master Plan](#)
- [City of Cleveland: University Circle Incorporated East 105th and Martin Luther King Blvd Corridor Planning Study](#)
- [City of Cleveland: Waterloo Streetscape and Corridor Plan](#)
- [City of Cleveland Heights: Cedar Lee District Streetscape Plan](#)
- [Cleveland Metroparks: Greenway Trail and Neighborhood Connector Plan](#)
- Concord Township:  
[SR 44 Corridor Transportation Study](#) Volume 1)  
[SR 44 Corridor Transportation Study](#) Volume 2
- [City of Euclid: Downtown Redevelopment Plan](#)
- [City of Fairview Park: Lorain Road Streetscape](#)

- Greater Cleveland Regional Transit Authority:  
[Transit Oriented Development Best Practices \(1.5 MB - February 2007\)](#)  
[Transit Oriented Development Guidelines](#)
- [City of Lakewood: Detroit Road Corridor and Streetscape Enhancement Study](#)
- [City of Lakewood: Hogsback Lane Study](#)
- [Lorain County S.R. 58 Traffic Study](#)
- [City of North Royalton: Town Center Transportation Plan](#)
- [City of Painesville: Transit Hub Center Plan](#)
- [City of Parma: Day Drive Corridor Enhancement](#)
- City of Rocky River: Lake Road Corridor Enhancement:  
[Final Report](#)  
[Appendices 1-6](#)
- City of Shaker Heights: Lee Road and Van Aken Road Transit Oriented Development Study:  
[Plan and Implementation Strategies](#)  
[Technical Analysis and Community Input](#)
- City of Sheffield Lake Central Shopping District and Transportation Master Plan:  
[Aerial Delineation Study](#)  
[Lakefront Redevelopment](#)  
[Lake Central Shopping District](#)
- City of South Euclid: South Green Road  
[Operational Analysis Study](#)  
[Traffic Signal Warrant Study](#)
- City of Warrensville Heights: Richmond Road Corridor Transportation Study  
[Strategic Plan Report](#)  
[Appendix A](#)
- [City of Wickliffe: Euclid Avenue Corridor Enhancement](#)

## Connections 2030 Original

### *Description*

The NOACA Transportation for Livable Communities Initiative (TLCI) provides assistance to communities and public agencies for transportation projects that strengthen community livability.

### *TLCI Goals*

The goal of the TLCI is to provide federal funding or technical assistance for the planning of transportation projects that:

- Enhance the economic viability of existing communities within the region
- Enhance the region's quality of life
- Enhance a community's identity
- Foster compact land use development/redevelopment
- Facilitate accessibility by improving the range of transportation choices by adding or improving pedestrian, transit or bicycle facilities.
- Preserve and enhance farmland, forests and open space
- Assist the redevelopment of urban core communities
- Result in projects that can compete at the regional level for capital funds through NOACA's regional transportation investment process

- Enhance the historic, archaeological, scenic and environmental elements of the transportation system.
- Improve the safety and efficiency of the existing transportation system.

### *TLCI Components*

To achieve the above goals, NOACA offers a menu of competitive transportation incentive programs through the TLCI.

#### TLC Planning Grant Program

The TLC Planning Grant Program provides federal funding assistance for communities and public agencies to conduct or contract for the planning of transportation improvements that help advance the Initiative's goals.

#### TLC Neighborhood Planning Technical Assistance Program

The TLC Neighborhood Planning Program provides NOACA staff technical assistance for the planning of medium to large-scale transportation improvements that help advance the Initiative's goals. See Section III for more information on the Neighborhood Planning Program.

#### TLC Links Technical Assistance Program

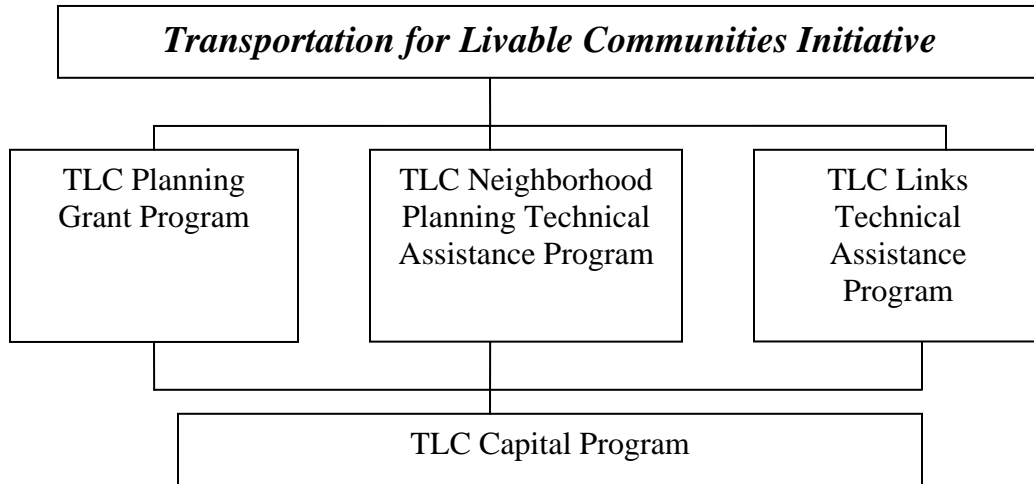
The TLC Links Program provides NOACA staff technical assistance for the planning of small-scale traffic studies that help advance the Initiative's goals.

#### TLC Capital Program

The TLC Capital Program provides federal funding assistance for infrastructure improvements that help implement recommendations from the Grant, Neighborhood Planning and Links Programs. Proposed projects will be eligible to apply for the TLC Capital Program after the planning studies are completed. For more information about Capital Program's see NOACA's Regional Transportation Investment Policy at <http://www.noaca.org/RTIPfinal.pdf>

### *TLC Initiative Graphic*

The graphic below illustrates the TLCI and its programs.



*First Round Recipients*

The tables on the following pages identify the recipients of planning grants and neighborhood planning assistance from the first round of the TLCI process as adopted by the NOACA Governing Board via Resolution 2005-021 on May 13, 2005.

TLCI Grant Recipients					
	Sponsor	Co-Sponsor (if applicable)	Project Title	Project Overview	Funding Amount Requested (Not to Exceed \$75,000)
1	City of Painesville		Transit Center Location and Connections	Transportation study that will focus on locating a transit center in downtown Painesville.	75,000
2	City of Cleveland	University Circle Inc.	University Circle-MLK Corridor Planning Study	Increase transportation options and pedestrian access to University Circle institutions.	75,000
3	City of Cleveland	EcoVillage/Detroit Shoreway Community Dev.	EcoVillage Rapid Station Ped., Bicycle, and Bus Connections Plan	Develop a plan for improvements to enable car-free living in the Cleveland EcoVillage neighborhood through better pedestrian, bicycle and bus connections to the West 65th-Lorain-EcoVillage Rapid Station.	12,000
4	GCRTA	Bellaire-Puritas Development Corp.	Puritas Rapid Transit Station Area Plan	Land-use analysis of the rapid transit site and continuous commercial corridor at West 150th Street and Puritas Avenue with the goals of innovative design, enhanced pedestrian amenities, improved access, public safety, and exploring ancillary development options.	70,000
5	City of Parma		Day Drive Corridor Enhancement	The planning project will explore ways to improve access to businesses along the south side of Day Drive and also analyze pedestrian and transit access, safety, and utilization.	72,000
6	Cuyahoga Engineer's Office	City of Brook Park	Snow Rd. & Engle Rd. Intersection Improvement Study	The intersection of Snow Road and Engle Road will be studied to determine recommendations to improve the accessibility, safety and efficiency.	56,000
7	City of North Royalton		City of North Royalton Mixed-Use Town Center District Project	Develop a plan to revitalize and redevelop the central business district with a pedestrian friendly design that encourages pedestrian traffic in the Town Center/Main Street district.	75,000
8	City of Sheffield Lake		Sheffield Lake's Central Shopping District Transportation Master Plan	City Master Plan that addresses ways to revitalize Sheffield Lake city center.	75,000
9	Village of Oakwood		Richmond Road Corridor Study	Traffic study of Richmond Road and fitness trail feasibility study.	40,000

<b>TLCI Grant Recipients</b>					
	<b>Sponsor</b>	<b>Co-Sponsor (if applicable)</b>	<b>Project Title</b>	<b>Project Overview</b>	<b>Funding Amount Requested (Not to Exceed \$75,000)</b>
10	GCRTA		Transit Oriented Development Implementation Strategy	The project will create a set of guidelines for Transit-Oriented Development (TOD) that GCRTA, developers, and stakeholders can use to implement TOD opportunities.	50,000
11	City of Cleveland	Northeast Shores Development Corp.	Downtown Waterloo Streetscape Plan	A master plan of roadway and right-of-way improvements will developed for the Downtown Waterloo neighborhood.	24,000
12	City of Chardon		The City of Chardon-Comprehensive/Transportation Plan	Formulate a comprehensive plan to help the city prioritize transportation projects related to the various plan components, including a thoroughfare plan and alternative means of transportation.	75,000
13	City of Wickliffe		Euclid Ave. Corridor Enhancement	The city will undertake a planning study to determine potential plan improvements to Euclid Avenue (U.S Route 20) for motor vehicles and pedestrians.	75,000
14	City of Warrensville Heights		The Richmond Road Project	Planning study for attainable measures for traffic solutions for the residential, retail, and commercial development on Richmond Road.	52,000
15	City of Cleveland	Slavic Village Development Corp.	Broadway-Slavic Village Bike/Ped/Transit Master Plan	Incorporate various independent bike studies into a master plan.	55,000
16	City of Euclid		Downtown Euclid Redevelopment Plan	Further evaluation and prioritizing recommendations from previous studies to elevate planning efforts to the next level.	75,000
17	City of South Euclid		S. Green Road Traffic Signal Coordination Project	A planning study to analyze the benefits and needs of upgrading the traffic control system along South Green Road.	20,000

TLCI Neighborhood Recipients				
	Sponsor	Co-Sponsor (if applicable)	Project Title	Project Overview
1	City of Cleveland	Cleveland Neighborhood Development Coalition/ Cleveland. Industrial Initiative/ Collinwood & Nottingham Development Corp.	South Collinwood Connections	Study future traffic patterns from alternative routes for industrial and commerce traffic traveling within the neighborhood's manufacturing centers.
2	City of Shaker Heights		In-Road Bike Route System Within Shaker Heights	Develop a series of bike routes along city streets to connect major city economic and recreation centers.
3	City of Berea		Bagley Corridor/Bagley Rd./N. Rocky River, Valley Parkway Intersection Traffic Analysis	Comprehensive traffic study along Bagley Road. Development of a revised traffic response system for current and future traffic needs.

## **Transportation Enhancements**

### 2009 Update

NOACA has not conducted another transportation enhancement activity (TEA) round yet. Although SAFETEA-LU included additional funding set asides for TEA projects, these were largely consumed by existing project selections from the prior TEA rounds. NOACA is considering another TEA round on the assumption that TEA funding will continue in the next transportation funding bill.

### Connections 2030 Original

The federal requirements (23 CFR 450.322) for transportation plans require that Connection 2030:

*Indicate, as appropriate, proposed transportation enhancement activities(TEA) as defined in 23 U.S.C. 101*

The absence of a new federal transportation law has prevented new project solicitation rounds for Transportation Enhancements since December of 2002. The area continues to implement enhancements selected in previous rounds. NOACA will resume TEA efforts when future funding is more certain.

## **Safety**

### 2009 Update

NOACA is continuing its efforts to address safety issues on its transportation system. It is continuing to expand its use of Geographic Information System (GIS) methods to plot and analyze accident data. It has begun to explore mechanisms for reducing vehicle/wildlife collisions. It has also begun to conduct roadway safety audits (RSAs) at high accident locations in an effort to identify mechanisms for reducing the frequency and severity of accidents at those locations. The RSA effort is being done in coordination with the Ohio Department of Transportation (ODOT). ODOT is making funding available for easy to implement fixes to conditions that increase accidents at the RSA locations.

### GAP Closure Document

SAFETEA-LU separated safety and security (a single factor in TEA-21) into stand alone factors. NOACA's planning process should consider projects that "increase the safety of the transportation system for motorized and non-motorized users." Guidance suggests that this includes the incorporation of the Strategic Highway Safety Plan (SHSP) into our metropolitan transportation plan.

*Safety is already a priority in NOACA's transportation planning efforts. It includes evaluation of accident statistics and conducting safety studies for high risk intersections or corridors in its*

*annual OWP efforts. It also maintains a congestion management process and utilizes it to aid in identifying at-risk corridors. Additionally, on November 29, 2006, NOACA hosted ODOT's Ohio Department of Public Safety's "Roadway Safety Workshop" at which ODOT shared its safety goals and discussed the state's Comprehensive Highway Safety Plan (CMHP).*

*NOACA incorporated the CMHP into Connections 2030 by reference in Governing Board Resolution 2007-017 which makes NOACA's practice fully consistent with the requirement.*

## **Security**

### GAP Closure Document

SAFETEA-LU separated safety and security (a single factor in TEA-21) into stand alone factors. NOACA's planning process should consider projects that "increase the security of the transportation system for motorized and non-motorized users." Guidance suggests that this includes the incorporation of the transit system security program (TSSP) into our metropolitan transportation plan.

*The NOACA area contains many critical structures from a transportation security perspective. The region contains several deep valleys (e.g. the Cuyahoga River valley) that result in long bridge expanses at high levels. Damage to any of these structures would result in significant transportation delays and costs for repair and/or replacement.*

*Additionally, the region's mass transit systems, particularly its rail lines, could either be disrupted by security threats and/or may be necessary services in the event of the need to implement an evacuation plan. NOACA is coordinating with the region's transit agencies to ensure that their security needs are accounted for to the fullest extent practicable within its planning process.*

*The region also is an intermodal hub for truck, rail, shipping, and airborne commerce. The identification of intermodal transfer points and the assessment of how they fit into our transportation system is a renewed priority in NOACA's planning efforts. NOACA will do whatever it can to consider intermodal security concerns in its planning efforts.*

*Finally, the region contains several major and some minor airports with their associated security concerns. NOACA has been a minor participant in the region's homeland security efforts and will do whatever is within its ability to address airport security concerns where they intersect with its planning efforts.*

*At this time there is not a transit system security program (TSSP) in place. NOACA will incorporate any such program into its planning efforts as it becomes available. NOACA believes its current project planning and review processes allow it to be consistent with the intents of SAFETEA-LU on the issue of transportation security.*

## **Environment**

### GAP Closure Document

SAFETEA-LU expanded this factor description to state that metropolitan planning processes should consider projects that “protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns. Note that the major change here is the addition of planned growth and development patterns to the mix.

*Connections 2030 does not explicitly compare projects in it with local planned growth and economic development patterns. In fact, few if any political subdivisions in Northeast Ohio have adopted growth or development plans that would allow for that comparison. Several of NOACA’s goals do address the importance that planned transportation projects promote consistency with these local efforts. Community short and long term goals are considered during the project planning review process and throughout the project selection and identification process. NOACA will continue to promote consistency during project identification and development and believes these efforts are compliant with SAFETEA-LU’s intent.*

## **Environmental Mitigation**

### *General*

### GAP Closure Document

SAFETEA-LU requires that we “include a textual discussion of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the plan.” Guidance suggests comparing plan with available state conservation plans, maps, and inventories.

*NOACA has mapped its SFY 2008-2011 Transportation Improvement Program against the environmental resource layers compiled by the Ohio Department of Transportation. Attachment A includes a low resolution example of one of these maps. Generally speaking, water and water related resources (e.g. wetlands) are the most likely issues to require attention during project planning for virtually every project in the region. The majority of the NOACA region is part of the glacial till plain which is dominated by water features. NOACA has been involved in efforts to protect its aquatic resources for many years. Most recently, it has formed a Transportation Water/Quality Council to focus specifically how to improve transportation outcomes related to aquatic resources.*

*The region has many national, state, and local park areas that are similarly involved in efforts to protect and acquire significant resource areas. There are also a number of conservancy efforts in place with the goal of preserving critical land areas. NOACA participates directly with these efforts through some of its committee structures.*

*Additionally, NOACA's committee structure which includes several committees committed to environmental concerns (Environmental Advisory Committee, Water Quality Subcommittee, Air Quality Subcommittee, and the Transportation/Water Quality Council) provide ample opportunities for discussion and review of these issues during project planning.*

*Beyond NOACA's efforts, ODOT has well established mitigation efforts as part of its project development process. The following excerpt provided by the ODOT Department of Environmental Services provides its description of these mitigation efforts:*

*"ODOT strives to avoid, to the fullest extent practicable, any activity that adversely impacts streams or wetlands during the design, construction, or maintenance of the state transportation system. ODOT takes appropriate action throughout the project development process to avoid, minimize, and mitigate impacts as required by federal, state, and local law. In the event that impacts to streams and wetlands are unavoidable, ODOT considers a wide variety of mitigation strategies, which always begins with evaluation of on-site opportunities (e.g. natural channel design techniques, bankfull culverts, wetland creation, etc.) within the project work area. Once the on-site (within the project area) resources are exhausted, the search for mitigation opportunities may shift to on-site, within one mile of the project area, followed by a search within a specific 8 Digit Hydrological Unit Code (HUC) watershed. Mitigation opportunities may include mitigation banking, stream and wetland creation, restoration, and/or preservation, and possibly even preservation of upland buffer adjacent to stream and wetland resources.*

*"Impact analysis and mitigation are integral parts of the project development process. 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.*

*"ODOT follows guidelines for the development of mitigation as required by the U.S. Army Corps of Engineers (USACE) and Ohio Environmental Protection Agency (OEPA). The USACE mitigation guidelines are outlined in the latest USACE Regulatory Guidance Letter (RGL) 02-02, dated December 24, 2002. This guidance can be located in Appendix T. Ohio EPA has specific guidelines for wetland mitigation which is included in the Ohio Administrative Code Sections 3745-1-50 through 3745-1-54, "The Wetland Water Quality Standards." Although mitigation is now being required for unavoidable impacts to streams there are currently no formal rules in Ohio. Stream mitigation for ODOT projects is being accomplished on a case-by-case basis and is negotiated with OEPA and USACE by OES through the pre-application/coordination and waterway permit processes.*

*"Development of Mitigation Projects:*

*"ODOT's general procedure for securing required mitigation for stream and wetland impacts includes:*

*“A. Determination of mitigation needs. The Ecological Survey Report (ESR) documents these potential project impacts.*

*“B. Analyze potential mitigation opportunities within the project area and/or close proximity (one mile) or within a specific 8 Digit Hydrological Unit Code (HUC) watershed (See Appendix O for 8 Digit HUC Watershed Map) where the impacts are anticipated to occur. This may require a partnership between ODOT and various organizations or individuals such as a watershed groups, conservation groups, a local park districts, the Ohio Department of Natural Resources, or even a private landowner to secure appropriate mitigation.*

*“C. Develop preferred plan of action for mitigation*

- Select mitigation site(s); [on-site, off-site, or mitigation banks*
- Provide funds to partnering organization for mitigation projects*
- Pursue conservation easements*

*“D. Develop conceptual mitigation plan/report.*

*“E. Coordinate conceptual mitigation plan/report with resource and regulatory agencies.*

*“F. Submit approved conceptual mitigation plan/report with waterway permit applications.*

*“G. Develop final mitigation plan, for submission to agencies prior to permit authorization.*

- Develop construction plans*
- Procure conservation easements*
- Provide funds to partnering agencies*
- Procure credits at Mitigation Banks*

*“H. Construct Mitigation Project.*

*“I. Monitor Mitigation Project. ODOT performs post construction monitoring on all mitigation sites for a minimum of 5years to assure successful development and to meet waterway permit conditions.*

*“ODOT-Office of Environmental Services in cooperation with ODOT Districts, the ODOT- Office of Real Estate, the ODOT- Office of Aerial Engineering, and project consultants coordinate to develop all stream and wetland mitigation projects.”*

*NOACA staff believes these efforts make its planning practice consistent with SAFETEA-LU’s requirements.*

## *Consultation*

### GAP Closure Document (amended)

SAFETEA-LU states that the discussion described above “shall be developed in consultation with Federal, State, and tribal wildlife, land management, and regulatory agencies. Guidance suggests that this list should include environmental protection and historic preservation agencies as well. Guidance also suggests that we could refer to the procedure used to consult with these agencies.

*In addition to the existing committee structure identified above, NOACA updated its public interaction policy in December of 2005 to make it consistent with SAFETEA-LU. This included the addition of consultation to the agency’s Intergovernmental Review Process. Formerly known as the IGR process, it is now referred to as the IGRC process to reflect the incorporation of consultation. This effort allows for consultation with the interested parties and incorporation of their plans within our efforts where intersections occur. For example, NOACA has been actively involved in discussions with several groups related to the use of the former canal towpath for a variety of transportation related uses. The Cuyahoga Valley National Recreational Area (CVNRA) and the National Park Service are interested in extending rail service along their existing rail line to Lake Erie. They have presented these plans to NOACA’s Transportation Advisory Committee, and NOACA will continue to coordinate with them as they pursue making these plans a reality.*

*NOACA is also pursuing further improvements in these consultation efforts through its development of a public participation plan.*

*NOACA formally incorporated the revised Public Interaction Policy (PIP) into Connections 2030 by reference in Governing Board Resolution 2006-006. The PIP’s adoption completed the process of making NOACA’s consultation efforts consistent with SAFETEA-LU.*

## Chapter VI: Projects

The federal requirements (23 CFR 450.322) for transportation plans require that:

*Include design concept and scope descriptions of all existing and proposed transportation facilities in sufficient detail, regardless of the source of funding, in nonattainment and maintenance areas to permit conformity determinations under the U.S. EPA conformity regulations at 40 CFR part 51. In all areas, all proposed improvements shall be described in sufficient detail to develop cost estimates.*

And that:

*For major transportation investments for which analyses are not complete, indicate that the design concept and scope (mode and alignment) have not been fully determined and will require further analysis. The plan shall identify such study corridors and subareas and may stipulate either a set of assumptions (assumed alternatives) concerning the proposed improvements or a no-build condition pending the completion of a corridor or subarea level analysis under § 450.318. In nonattainment and maintenance areas, the set of assumed alternatives shall be in sufficient detail to permit plan conformity determinations under the U.S. EPA conformity regulations (40 CFR part 51).*

The Governing Board adopted Resolution 2005-005 at its February 2005 meeting. This resolution adopted the Tier I and Tier II projects lists. These lists satisfy the first requirement noted above. These projects will be included in the conformity analyses for Connections 2030.

Subsequently, the Governing Board adopted Resolution 2005-017 at its April 8, 2005 meeting. This resolution adopted the Tier III and IV project lists. These lists identify projects with a no-build condition pending the completion of further analysis or financial planning. The tables on the following pages display the Tier I through IV project lists.

The Tier definitions are part of NOACA's Regional Transportation Investment Policy.

### 2009 Update

Three capacity project amendments have been made to Connections 2030 since its adoption:

- 1) The Innerbelt Project – a significant redesign and expansion of the Innerbelt in the City of Cleveland;
- 2) The Avon Interchange Project – the addition of a new interchange on IR-90 in the City of Avon at Nagel Road; and
- 3) The Opportunity Corridor Project – the construction of a new connecting facility between the end of IR-490 and University Circle in Cleveland.

The Opportunity Corridor project was amended the Connections 2030 as part of the current update effort. Below is a brief discussion of information related to this project which was considered during this amendment.

Opportunity Corridor, a transportation facility connecting I-490 with University Circle, was part of the illustrative list of projects in the June 10, 2005 version of Connections 2030, a Framework for the 2030 Transportation System. The American Recovery and Reinvestment Act of 2009 (ARRA) has provided an unexpected opportunity to move this project from the illustrative list to the list of project commitments in the 2009 Update of Connections 2030. The following sections discuss how Opportunity Corridor fits into NOACA's long range planning process and with federal requirements.

### Planning

Different versions of the Opportunity Corridor concept have been in many of NOACA's transportation plans. It initially appeared as a freeway extension in Framework for Action, NOACA's first adopted transportation in 1969. Reduced population projections and community resistance led to abandoning the concept for a time during the 80s and early 90s.

Increased use of the interstate system and heavy usage of the Innerbelt led to renewed discussions of the potential benefits of this corridor in the past decade. As a boulevard instead of a freeway, the corridor would provide for a substantial realization of NOACA's adopted planning goals. A transportation investment in an urban core community which will help to alleviate congestion and support economic growth along its length achieves most, if not all of NOACA's planning goals.

### Federal Aid System

In order to be eligible for ARRA and future federal transportation funding, the Opportunity Corridor must be on the federal aid system as an urban collector or above. NOACA staff is working with ODOT and FHWA to accomplish the necessary revisions to the region's federal aid system definitions.

### Fiscal Constraint

In order to be amended to the long range transportation plan, NOACA must demonstrate that there are sufficient financial resources to complete it during the life of the transportation plan. NOACA has completed a fiscal analysis of the Connections 2030 Update with the amendment of Opportunity Corridor included. It evaluated its amendment under three different revenue scenarios – no revenue growth, low revenue growth, and high revenue growth. The growth scenarios were based on an analysis of long term trends in FHWA construction price indices.

The fiscal analysis assumed continued expenditure of money on preservation, replacement, operations, efficiency, and enhancements over the life of the plan at rates similar to the region's historic trends.

In the final analysis, there will be sufficient revenue under any of the scenarios to accomplish the project's construction.

## Conformity

The 2009 Update of Connections with Opportunity Corridor included must meet transportation conformity requirements. The construction of Opportunity Corridor is consistent with transportation conformity requirements.

In fact the addition of Opportunity Corridor to the system results in significant emission reductions in 2030 over the system without it. The following emission impacts are expected in 2030 as a result of its construction:

- A 1/3 ton per day reduction in hydrocarbon emissions which contribute to ground level ozone formation.
- A 1 ton per day reduction in nitrous oxide emissions (NO<sub>x</sub>) which contribute to ground level ozone and fine particulate matter formation.
- A 14 ton per year reduction in fine particulate matter emissions.
- A 403 ton per year reduction in nitrous oxide (NO<sub>x</sub>) emissions which contribute to fine particulate matter formation. The annual sum for NO<sub>x</sub> is greater from the daily sum multiplied by 365 because varying temperatures result in different rates of NO<sub>x</sub> production.

Significant emission reductions from a capacity addition suggest that significant reductions in congestion and/or trip lengths are occurring as a result of the facility's construction. These congestion impacts are discussed in more detail in the next section.

## Connections 2030 Original

**TABLE 1**  
**TIER I: CAPACITY INCREASING PROJECT LIST**  
**MAJOR REGIONAL TRANSPORTATION INVESTMENTS**  
(These projects will be considered in Transportation/Air Quality Conformity Analyses.)

<b>PROJECT</b>	<b>EST. TOTAL COST \$MM</b>	<b>Localities: Co MCD(s)</b>	<b>Sponsors</b>	<b>Status (SFY)</b>
<b>Innerbelt Curve</b> Reconstruction and Add Lanes PID 77413, 79580	155.0	<b>Cuyahoga:</b> Cleveland	ODOT	Draft TRAC Selection RW 2007
<b>Quigley Rd. Connector</b> New Construction PID 76941	10.0	<b>Cuyahoga:</b> Cleveland	ODOT	Draft TRAC Selection Construction 2007
<b>SR-237/Hopkins Airport</b> Access Ramps Upgrade SR 237 – 07.160 PID 23051	23.9	<b>Cuyahoga:</b> Cleveland	Cleveland	PE 2005 Construction 2008
<b>West Shoreway</b> Lakefront West Reconstruct SR-2 from Lake Rd. to Main Ave. US006-12.20 PID 25043, 77330	48.2	<b>Cuyahoga:</b> Cleveland	ODOT, Cleveland	RW 2007 Construction 2008
<b>Snow/Rockside Roads (Phase 2)</b> Reconstruct and Widen: Lombardo Ct. to IR-77 PID 78091	7.5	<b>Cuyahoga:</b> Independence	Independence	Construction 2007
<b>Cedar Road</b> Reconstruct and Add Lanes: Brainard Rd to Lander Rd.	3.8	<b>Cuyahoga:</b> Mayfield Hts., Pepper Pike, Lyndhurst	Cuyahoga County Issue II Funds	Construction 2006

PID – ODOT Project Identification Number, PE – Preliminary Engineering, RW – Right of Way Purchase

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<b>IR-271 &amp; Mayfield Rd</b> Upgrade Interchange, Reconstruct Mayfield Road and Add Lanes East of IR-271 IR-271/US 322 – 13.15/12.50 US-322/I-271 PID 12472	15.3	<b>Cuyahoga:</b> Mayfield Hts.	Mayfield Hts.	Draft TRAC Selection Construction 2007
<b>Bagley/Pleasant Valley Roads</b> Add Lanes and Replace Bridge and Roads Pearl Rd to York Rd PID 10900	17.2	<b>Cuyahoga:</b> Middleburg Hts, Parma	Cuyahoga Co. Engineer	Construction 2009
<b>Crocker/Stearns Roads (PH I, II and III)</b> Add Lanes from I-480 to SR-10, New construction from SR-10 to Center Ridge PID 8517	18.8	<b>Cuyahoga:</b> Westlake, North Olmsted	Cuyahoga Co. Engineer	Construction 2007
<b>US-20 - Mentor Ave</b> Add Lanes and Reconstruct: Mentor ECL to Fern Dr US020-12.21 PID 8411	9.8	<b>Lake:</b> Painesville Twp., Painesville	ODOT	Draft TRAC Selection Construction 2006

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<b>SR-84 - IR-90 &amp; Bishop Rd</b> Add Lanes to Bishop Rd: US-6 to I-90; Upgrade I-90 Ramps SR 084/IR90-00.43/00.54 PID 9247	9.9	<b>Lake:</b> Wickliffe, Willoughby Hills	Wickliffe, Willoughby Hills	Draft TRAC Selection Construction 2006
<b>IR-90</b> Add Lanes and Repair West of SR-306 to Morley Rd. EB and WB IR090 – 06.71 PID 5774	24.8	<b>Lake:</b> Willoughby, Mentor, Kirtland Hills	ODOT	Draft TRAC Selection Construction 2006
<b>SR-2</b> Reconstruction and Add Lanes from E. 361 <sup>st</sup> St to St. Clair St. SR 002-03.63 PID 13486	82.4	<b>Lake:</b> Willoughby, Mentor, Painesville, Painesville Twp	ODOT	Draft TRAC Selection PE 2007 Construction 2009
<b>IR-71</b> Reconstruct and Add Lanes: Way/Med Co Line to Leroy Rd. (TR 57) IR071-00.00 PID 14017	42.0	<b>Medina:</b> Harrisville Twp; Westfield Twp	ODOT	Draft TRAC Selection Construction 2005
<b>IR-71</b> Reconstruct and Add Lanes: SR-3 to SR-18 IR071-09.21 PID 14018	39.6	<b>Medina:</b> Westfield Twp, Guilford Twp, Montville Twp	ODOT	Construction 2006

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<b>IR-71</b> Reconstruct and Add Lanes: Leroy Rd (TR-57) to SR-3 (includes modifications to the I-76/I-71 interchange) IR071-06.06 PID 75657	46.5	<b>Medina:</b> Westfield Twp, Westfield Center Guilford	ODOT	Draft TRAC Selection Construction 2006

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**TABLE 2**  
**TIER I and II: MAJOR REGIONAL TRANSPORTATION INVESTMENTS**  
**OPERATIONAL AND EFFICIENCY IMPROVEMENTS\***

(These projects are exempt from AQ analysis. They will not be considered in Transportation/Air Quality Conformity Analyses.)

<b>PROJECT</b>	<b>EST. TOTAL COST \$MM</b>	<b>Localities: Co MCD(s)</b>	<b>Sponsors</b>	<b>Status (SFY)</b>
<b>Freeway Management System Intelligent Transportation System (ITS)</b> PID 77331	28.1	<b>Cuyahoga</b>	ODOT	Draft TRAC Selection Construction 2006
<b>Heavy/Light Rail Vehicles</b> Fleet Modifications/Mid-Life Overhaul	42.4	<b>Cuyahoga</b>	GCRTA	GCRTA Capital Improvement Plan – Development Fund – 2004-2008
<b>Mayfield Rd</b> Reconstruct/Widen Lanes from Gates Mills WCL to 0.63 Miles E of Geauga Co. Line. Cuy/Gea US-322 – 14.14 PID 9299	9.6	<b>Cuyahoga, Geauga:</b> Gates Mills, Chester Twp.	ODOT	Construction TBD
<b>Eastland Rd</b> Major Rehabilitation from Bagley Rd to SR-237 PID 5410	16.2	<b>Cuyahoga:</b> Berea, Brook Park, Middleburg Hts.	Cuyahoga County Engineer	Construction 2007
<b>Southwest Bus Garage</b> Construct New Bus Garage	10.2	<b>Cuyahoga:</b> Cleveland	GCRTA	GCRTA Capital Improvement Plan – Development Fund – 2004-2008

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<b>Nottingham/Dille Rd</b> Construct new R.R. Underpass	7.2	<b>Cuyahoga:</b> Cleveland, Euclid	Cleveland	Construction TBD
<b>Hillside Road</b> Reconstruct and Widen Lanes: Broadview Rd. to Brecksville Rd. PID 13991	13.5	<b>Cuyahoga:</b> Seven Hills, Independence	Independence	RW and Construction TBD
<b>Emery Rd</b> Reconstruct/Widen Lanes from Miles Rd to Warrensville Center Rd. PID 5404	5.0	<b>Cuyahoga:</b> Warrensville Hts., North Randall	Cuyahoga Co., Issue II Funds	Construction 2005
<b>SR-237 Front St.</b> Construct RR Grade Separations at CSX and NS RRs SR 237-04.93 PID 21272	26.9	<b>Cuyahoga:</b> Berea	Berea	Construction 2007
<b>Snow Rd.</b> Construct Railroad Grade Separation at CSX RR W. of W. 130 St. PID 5251	7.2	<b>Cuyahoga:</b> Brook Park	ODOT, Brook Park	Construction 2007
<b>Columbus Rd</b> Replace Lift Bridge over Cuyahoga River PID 5383	10.6	<b>Cuyahoga:</b> Cleveland	ODOT, Cleveland	Construction 2007

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<b>E. 55 St. Bridge Replacement</b> Replace CSX RR bridge over E. 55 St. S. of Shoreway PID 77613	6.0	<b>Cuyahoga:</b> Cleveland	ODOT Cleveland	Draft TRAC Selection Construction 2007
<b>Fulton Road Bridge</b> Reconstruct bridge over Zoo, Brookside Park and Big Creek PID 5394	50.0	<b>Cuyahoga:</b> Cleveland	Cuyahoga Co. Engineer	Construction 2007
<b>Innerbelt Corridor</b> Environmental Docs. and Preliminary Design PID 77510	16.0	<b>Cuyahoga:</b> Cleveland	ODOT	Draft TRAC Selection PE 2006
<b>IR 77/US422</b> Add Auxiliary Southbound Lane Cuy IR-077/US-422-15.18/00.84 PID 13568	12.4	<b>Cuyahoga:</b> Cleveland	ODOT	Construction TBD
<b>Rail Station Renovations</b> Continuing renovation efforts along Red, Blue, and Green Lines.	50.2	<b>Cuyahoga:</b> Cleveland	GCRTA	GCRTA Capital Improvement Plan – Development Fund – 2004-2008

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<b>Rail Track/Bridge Rehabilitation</b> Ongoing maintenance and repair effort system wide.	44.2	<b>Cuyahoga:</b> Cleveland, East Cleveland	GCRTA	GCRTA Capital Improvement Plan – Development Fund – 2004-2008
<b>Hillside Rd.</b> Reconstruct and Widen Lanes: Brecksville Rd. to CVNRA RR PID 12500	4.6	<b>Cuyahoga:</b> Independence	Independence	Construction 2007
<b>SR-252 Columbia Rd.</b> Construct New Grade Separation at CSXT SR 252-00.05 PID 25482	9.0	<b>Cuyahoga:</b> Olmsted Falls	ODOT Olmsted Falls	Construction 2007
<b>Fitch Rd.</b> Construct New Grade Separation at NS PID 78074	9.0	<b>Cuyahoga:</b> Olmsted Twp	Cuyahoga County Engineer	RW 2006
<b>Parmatown Shopping Center</b> Construct New Transit Center	3.1	<b>Cuyahoga:</b> Parma	GCRTA	GCRTA Capital Improvement Plan – Development Fund – 2004-2008

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<b>Towpath Trail Overpass Bridges</b> Construct Bridges at Warner Rd. and Granger Rd. PID 24288	3.2	<b>Cuyahoga:</b> Valley View	Cleveland Metroparks	Construction 2005
<b>Main Market Rd.</b> Safety Upgrade and Reconstruction from E. Farmington Rd. to Portage Co. Line US 422-18.31 PID 19181	5.4	<b>Geauga:</b> Parkman Twp	ODOT	Construction 2007
<b>SR-2</b> Major Rehabilitation from Cuyahoga County Line to E 361 <sup>st</sup> Lak SR002—0.00 PID 21778	22.0	<b>Lake:</b> Eastlake, Wickliffe, Willowick	ODOT	Construction 2006
<b>Walnut St</b> Bridge Replacement over Grand River SR-084-18.88 PID 19686	6.4	<b>Lake:</b> Painesville	ODOT	Construction 2005
<b>SR-86</b> Relocate Roadways and Replace Bridge over Big Creek SR-86-01.32 PID 12832, 22907	6.6	<b>Lake:</b> Painesville Twp	ODOT	Construction 2007

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<b>Elm Street</b> Construct New Grade Separation at CSXT Elm St (CR 50) PID 23107	3.3	<b>Lorain:</b> Grafton	ODOT Grafton	Construction 2005
<b>Lear Nagle Rd.</b> Reconstruct and widen: Lorain Rd. to Center Ridge Rd. PID 16319	4.7	<b>Lorain:</b> North Ridgeville	North Ridgeville	RW 2009 Construction 2010
<b>SR-83 Wooster-Avon Lake Rd.</b> Grade Separation at NS RR Lor SR083-12.17 PID 23066	3.8	<b>Lorain:</b> North Ridgeville	ODOT North Ridgeville	Construction 2005
<b>SR-58 N. Main St.</b> Construct New Grade Separation at CSXT SR 058-07.36 PID 23104	10.6	<b>Lorain:</b> Wellington	ODOT Wellington	RW 2007 Construction 2008
<b>Boston Rd.</b> Reconstruct and widen lanes Pearl Rd to W. 130 St. PID 4067	14.6	<b>Medina:</b> Brunswick, Brunswick Twp., Strongsville	Med Co. Brunswick Strongsville	RW 2007 Construction 2008

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(These projects are exempt from AQ analysis. They will not be considered in Transportation/Air Quality Conformity Analyses.)

<b>PROJECT</b>	<b>EST. TOTAL COST \$MM</b>	<b>Localities: Co MCD(s)</b>	<b>Sponsors</b>	<b>Status (SFY)</b>
<b>SR-18</b> Reconstruct and Widen Windfall Rd. to Med/Sum Co. Line Med SR018-16.03 PID 4082	19.4	<b>Medina:</b> Sharon Twp Granger Twp	Medina Co. ODOT-3	Draft TRAC Selection Construction 2005

**PID – ODOT Project Identification Number, PE – Preliminary Engineering, RW – Right of Way Purchase**

\* Because operational and efficiency improvements do not impact required air quality analyses, the long range transportation plan and transportation improvement program can be continuously updated with new projects. Project recently amended to the Plan or TIP may not have been added to this list yet.

**PID – ODOT Project Identification Number, PE – Preliminary Engineering, RW – Right of Way Purchase**

\* Because operational and efficiency improvements do not impact required air quality analyses, the long range transportation plan and transportation improvement program can be continuously updated with new projects. Project recently amended to the Plan or TIP may not have been added to this list yet.

**TABLE 3**  
**TIER II PROJECT LIST**  
**MAJOR REGIONAL TRANSPORTATION INVESTMENTS**  
(These projects will be considered in Transportation/Air Quality Conformity Analyses)

<b>PROJECT</b>	<b>EST. TOTAL COST \$MM</b>	<b>Localities: Co MCD(s)</b>	<b>Sponsors</b>	<b>Status (SFY)</b>
<b>Bessemer Ave. Extension Phase 2</b> E. 87 <sup>th</sup> St. to E. 93 <sup>rd</sup> St. or Aetna PID 78076	3.5	<b>Cuyahoga:</b> Cleveland	Cleveland	Draft TRAC Selection RW 2007 Construction 2008
<b>SR-87 Chagrin Boulevard Corridor:</b> Reconstruct and Add Lanes from I-271 to Lander Rd. SR087/US322-11.88/11.22 Former PID 16533	18.5	<b>Cuyahoga:</b> Beachwood, Orange, Woodmere, Pepper Pike	ODOT-12	Draft TRAC Selection Woodmere's TCSP Corridor Study Active
<b>I-77</b> Reconstruct and Add Lanes from I-80 to SR-82 PID 76760	10.5	<b>Cuyahoga:</b> Brecksville	ODOT	Draft TRAC Selection CAC MIS
<b>I-77</b> Reconstruct and Add Lanes from SR-82 TO I-480 PID 22222	58.9	<b>Cuyahoga:</b> Broadview Hts., Independence	ODOT	Draft TRAC Selection CAC MIS Construction 2008
<b>Innerbelt Trench</b> Reconstruction and Access Modification PID 25795	188.0	<b>Cuyahoga:</b> Cleveland	ODOT	Draft TRAC Selection Construction 2013

PID – ODOT Project Identification Number

**TABLE 3**  
**TIER II PROJECT LIST**  
**MAJOR REGIONAL TRANSPORTATION INVESTMENTS**  
(These projects will be considered in Transportation/Air Quality Conformity Analyses)

<b>PROJECT</b>	<b>EST. TOTAL COST \$MM</b>	<b>Localities: Co MCD(s)</b>	<b>Sponsors</b>	<b>Status (SFY)</b>
<b>Innerbelt Bridge</b> Reconstruction and Add Lanes IR090-15.24 PID 77332	333.0	<b>Cuyahoga:</b> Cleveland	ODOT	Draft TRAC Selection RW 2007 Construction 2011
<b>SR-84 Johnny Cake Ridge Road</b> Reconstruct and Add Lanes from SR-306 to Garfield Road Lak SR-084 – 07.81 PID 9670	9.3	<b>Lake:</b> Mentor	Mentor	Construction 2011
<b>Heisley Road</b> Reconstruct and add Lanes: Phase II: Hendricks Rd to SR-2 Phase III: US-20 to Jackson St.	9.4	<b>Lake:</b> Mentor	Mentor	Construction 2006
<b>Tower Boulevard (Phase I)</b> Extension from Falbo Ave to Elyria Ave. PID 7311	3.7	<b>Lorain:</b> Lorain	Lorain	RW 2006 Construction TBD
<b>US-42</b> Reconstruct and Add Lanes from Harding St. to Fenn Rd. PID 75995	28.0	<b>Medina:</b> Medina, Medina Twp	ODOT Medina	TRAC Proposal

PID – ODOT Project Identification Number

**TABLE 4****Major Projects Meeting TIER III Definition**

(Projects appearing on previous Plan Tier listings are highlighted)

<b>Tier</b>	<b>PROJECT/PURPOSE</b>	<b>LOCATION County: MCD(s)</b>	<b>SPONSORS</b>	<b>STATUS (ODOT PDP)/HISTORY</b>
III	Cleveland Akron Canton (CAC) Study  Evaluation of transportation improvement options for numerous communities along I-77, I-480, I-271 and railroad corridor joining the CAC communities	(Multiple): multiple	Akron Metro RTA	Step 4  Previous Tier III Project
III	Transit Centers and Park-n-Ride Lots  Identifying five locations for transit centers and/or park-n-ride lots in the identified communities.	Cuyahoga: Brecksville, Solon Mayfield, Independence, Oakwood.	GCRTA	Step 3  Previous Tier III Project
III	IR-480 / Tiedeman Interchange  Evaluating possible interchange improvements and Tiedeman Road widening to improve traffic conditions at this interchange.	Cuyahoga: Brooklyn	Brooklyn, City of	Step 3  Completed PPR

PID – ODOT Project Identification Number

5706t

**TABLE 4****Major Projects Meeting TIER III Definition**

(Projects appearing on previous Plan Tier listings are highlighted)

<b>Tier</b>	<b>PROJECT/PURPOSE</b>	<b>LOCATION County: MCD(s)</b>	<b>SPONSORS</b>	<b>STATUS (ODOT PDP)/HISTORY</b>
III	Broadway/Miles/Turney/Warner  Developing intersection improvements and pedestrian bridge to improve traffic flow and safety at these intersections. PID 22209	Cuyahoga: Cleveland	Cleveland, City of	Step 4
III	Eagle Avenue Viaduct in Flats  Study to determine future replacement and/or alternative routes to substitute for the Eagle Avenue Viaduct. Currently identified possibilities include: Canal Road Rehabilitation W. 3 <sup>rd</sup> Street Lift Bridge Reconstruction West Bank Connector Interchange Upgrades associated with Innerbelt East Bank Connector PID 14111	Cuyahoga: Cleveland	Cleveland	Step 4

PID – ODOT Project Identification Number

**TABLE 4****Major Projects Meeting TIER III Definition**

(Projects appearing on previous Plan Tier listings are highlighted)

<b>Tier</b>	<b>PROJECT/PURPOSE</b>	<b>LOCATION County: MCD(s)</b>	<b>SPONSORS</b>	<b>STATUS (ODOT PDP)/HISTORY</b>
III	Flats Intermodal Connector  Development of improved intermodal route between and among industrial areas from Harvard Avenue to the Lakefront. PID 77334	Cuyahoga: Cleveland	Cleveland ODOT	Step 2  Developed out of Innerbelt Study.
III	Lakefront E. Shoreway  Identify transportation and access improvements along the lakefront from the Innerbelt Curve to MLK Jr. Blvd.	Cuyahoga: Cleveland	Cleveland/ODOT	Step 3
III	Rockport Congestion Study IR-480 Safety Study  Evaluate flow and safety improvement options for IR-480 from Grayton Rd to W 150 <sup>th</sup> St near airport	Cuyahoga: Cleveland	ODOT	Step 1  Part of IR-71 MIS

PID – ODOT Project Identification Number

**TABLE 4****Major Projects Meeting TIER III Definition**

(Projects appearing on previous Plan Tier listings are highlighted)

<b>Tier</b>	<b>PROJECT/PURPOSE</b>	<b>LOCATION County: MCD(s)</b>	<b>SPONSORS</b>	<b>STATUS (ODOT PDP)/HISTORY</b>
III	University Circle Connector (Opportunity Boulevard)  Development of connecting route between I-490 and E. 105 <sup>th</sup> St. PID 77333	Cuyahoga: Cleveland	Cleveland ODOT	Step 5  Developed out of Innerbelt Study
III	E 98th St. Extension/ Transportation Boulevard  Development of new route between IR-480 and Rockside Rd. to expand access to area.	Cuyahoga: Garfield Heights	Garfield Heights	Step 2
III	I-480/SR 14  Development of interchange modifications to accommodate truck movements to the intermodal yard in the vicinity of this interchange.	Cuyahoga: Garfield Heights	Garfield Heights	Step 1

PID – ODOT Project Identification Number

**TABLE 4****Major Projects Meeting TIER III Definition**

(Projects appearing on previous Plan Tier listings are highlighted)

<b>Tier</b>	<b>PROJECT/PURPOSE</b>	<b>LOCATION County: MCD(s)</b>	<b>SPONSORS</b>	<b>STATUS (ODOT PDP)/HISTORY</b>
III	Green Road  Plan to widen Green Road from Miles Avenue to Emery Rd. PID 9698	Cuyahoga: Highland Hills	Cuyahoga Co. Engineer	Step 2  Previous Tier III Project
III	US-42 Pearl Road  Widen Pearl Rd. from Boston Road to Shurmer Rd.	Cuyahoga: Strongsville	Strongsville	Step 4  Undergoing PPR
III	SR-254, Detroit Road  Widen Detroit Rd. between Crocker Rd. and Clague Rd.	Cuyahoga: Westlake	Westlake	Step 2  Previous Tier III Project
III	US-422/ SR-306  Interchange improvements.	Geauga: Bainbridge Twp	ODOT	Step 3

PID – ODOT Project Identification Number

**TABLE 4****Major Projects Meeting TIER III Definition**

(Projects appearing on previous Plan Tier listings are highlighted)

<b>Tier</b>	<b>PROJECT/PURPOSE</b>	<b>LOCATION County: MCD(s)</b>	<b>SPONSORS</b>	<b>STATUS (ODOT PDP)/HISTORY</b>
III	Vrooman Road  Planned improvements from I-90 to SR 84 including bridge replacement and possible realignment over Grand River.	Lake: Leroy Twp, Perry Twp	Lake Co. Engineer	Step 3
III	SR 2 Interchange coordination  Improvements to and completion of interchanges at Heisley Rd, Jackson St, and SR 44 to improve traffic flow and access.	Lake: Mentor, Painesville	Lake Co. Engineer	Step 2  Previous Tier III Project
III	IR-90 Avon Access  Evaluation of improved access options for IR-90 in the City of Avon.	Lorain, Cuyahoga: Avon, Avon Lake Westlake	Avon, City of	Step 2  Undergoing PPR
III	IR-90 in Lorain County  Addition of auxiliary lane from SR-57 to IR90/SR-2 split.	Lorain: Elyria and Elyria Twp	ODOT	Step 4  Outgrowth of IR-90 Study

PID – ODOT Project Identification Number

**TABLE 4****Major Projects Meeting TIER III Definition**

(Projects appearing on previous Plan Tier listings are highlighted)

<b>Tier</b>	<b>PROJECT/PURPOSE</b>	<b>LOCATION County: MCD(s)</b>	<b>SPONSORS</b>	<b>STATUS (ODOT PDP)/HISTORY</b>
III	SR 57 Corridor Study  Development of improved operations for the SR-57 system between US 20 (Cleveland Ave.) and Fairless Ave.	Lorain: Elyria, Lorain	Elyria	Step 3  Previous Tier IV Project.
III	Cooper Foster Park Rd  Identification of possible widening and other improvements between SR-58 and S. Broadway.	Lorain: Lorain, Amherst	Lorain, City of	Step 2  Previous Tier III Project
III	US-20 (Center Ridge Road)  Plans to improve capacity between west and east city limits.	Lorain: North Ridgeville	North Ridgeville	Step 2  Previous Tier IV Project
III	SR 18  Plans for capacity improvements between IR-71 and the City of Medina.	Medina: Medina Twp, Montville Twp	Medina TID	Step 2

PID – ODOT Project Identification Number

**TABLE 4**

**Major Projects Meeting TIER III Definition**

(Projects appearing on previous Plan Tier listings are highlighted)

<b>Tier</b>	<b>PROJECT/PURPOSE</b>	<b>LOCATION County: MCD(s)</b>	<b>SPONSORS</b>	<b>STATUS (ODOT PDP)/HISTORY</b>
III	IR-76 at SR-94 and SR-57  Interchange improvements at identified locations.	Medina: Wadsworth and Wadsworth Twp	ODOT	Step 4

**TABLE 5****Major Projects Meeting TIER IV Definition**

(Projects appearing on previous Plan Tier listings are highlighted)

<b>Tier</b>	<b>PROJECT/PURPOSE</b>	<b>LOCATION County: MCD(s)</b>	<b>SPONSORS</b>	<b>STATUS (ODOT PDP)/HISTORY</b>
IV	Cuyahoga Co. Airport Clear Zone Study  Assessment of possible modifications to Richmond Rd and Bishop Rd between Highland and Chardon Rd to maintain adequate clear zone for flight take-offs and landings.	Cuyahoga, Lake: Richmond Hts, Highland Hts, Willoughby Hills	C&S Engineers	Step 1
IV	Cleveland Airport Transit Study  Determine convenient transportation for Red Line passengers, airline passengers, airport employees, and other persons needing to move between existing Red Line transit service, airport terminal, airport activity centers.	Cuyahoga: Cleveland		Step 3  Red Line Extension was previously a Tier III project.
IV	Collinwood Access Study  Identifying mechanisms for improving access from industrial areas in Collinwood to the interstate system.	Cuyahoga: Cleveland		

PID – ODOT Project Identification Number

5706t

**TABLE 5****Major Projects Meeting TIER IV Definition**

(Projects appearing on previous Plan Tier listings are highlighted)

<b>Tier</b>	<b>PROJECT/PURPOSE</b>	<b>LOCATION County: MCD(s)</b>	<b>SPONSORS</b>	<b>STATUS (ODOT PDP)/HISTORY</b>
IV	Fleet Avenue Corridor Study  Identifying methods to improve access from Slavic Village and Washington Park.	Cuyahoga: Cleveland		Outgrowth of CAC Study
IV	Kingsbury Run Greenway  Developing Bicycle/Pedestrian Access from E. 79 <sup>th</sup> Street to the Towpath Trail along Kingsbury Run.	Cuyahoga: Cleveland		
IV	Lakefront / CBD /Shoreway  Identify transportation and access improvements along the lakefront from the west edge of the Main Ave Bridge to the Innerbelt Curve	Cuyahoga: Cleveland		Step 3
IV	Pearl Road  Reevaluate operation and needs for Pearl Rd between State Rd. and the IR-71 Ramps following the opening of the Jennings' Freeway	Cuyahoga: Cleveland	NOACA	Step 1

**PID – ODOT Project Identification Number**

**TABLE 5****Major Projects Meeting TIER IV Definition**

(Projects appearing on previous Plan Tier listings are highlighted)

<b>Tier</b>	<b>PROJECT/PURPOSE</b>	<b>LOCATION County: MCD(s)</b>	<b>SPONSORS</b>	<b>STATUS (ODOT PDP)/HISTORY</b>
IV	Scenic Railroad Extension  Plan extension of Cuyahoga Valley Scenic Railroad from Harvard Rd to Lakefront.	Cuyahoga: Cleveland		Step 2
IV	Steelyard Commons Access  Evaluation of access options for the proposed Steelyard Commons retail development via a Harvard to Quigley connector.	Cuyahoga: Cleveland		Step 1
IV	Towpath Extension  Developing extension of Towpath Trail from Harvard Avenue to the lakefront.	Cuyahoga: Cleveland		Step 3
IV	Uptown Cleveland Transportation Study  Evaluation of traffic flow improvements in the Heights area by redirecting traffic along a new preferred route along MLK Dr and E.116 <sup>th</sup> St.	Cuyahoga: Cleveland		Step 4

PID – ODOT Project Identification Number

**TABLE 5****Major Projects Meeting TIER IV Definition**

(Projects appearing on previous Plan Tier listings are highlighted)

<b>Tier</b>	<b>PROJECT/PURPOSE</b>	<b>LOCATION County: MCD(s)</b>	<b>SPONSORS</b>	<b>STATUS (ODOT PDP)/HISTORY</b>
IV	W 121 <sup>st</sup> Street Access Study  Developing access to potential development area bordered by I-90 West 117 <sup>th</sup> , Berea Rd., and W 121 <sup>st</sup> .	Cuyahoga: Cleveland		
IV	Waterfront Line Extension  Evaluate extension of Water Front Line from current terminus to various points to improve Cleveland CBD circulation.	Cuyahoga: Cleveland		Step 4  Previous Tier IV Project
IV	Western Reserve Heritage Trail and Greenway  Development of Bicycle/Pedestrian Trail along CSX Railroad alignment (former Randall Secondary/Erie Lackawana Railroad).	Cuyahoga: Cleveland, Solon		Step 3
IV	SR 44  Access Management Study for SR-44 between Geauga Co Line and SR-84.	Lake: Concord Twp	Baker	Step 1

PID – ODOT Project Identification Number

**TABLE 5**

**Major Projects Meeting TIER IV Definition**

(Projects appearing on previous Plan Tier listings are highlighted)

<b>Tier</b>	<b>PROJECT/PURPOSE</b>	<b>LOCATION County: MCD(s)</b>	<b>SPONSORS</b>	<b>STATUS (ODOT PDP)/HISTORY</b>
IV	SR 82 Safety Study  Evaluation of possible safety improvements for SR-82 between Cuyahoga Co. Line and SR-57.	Lorain: Eaton Twp, Columbia Twp	NOACA	Step 2

**PID – ODOT Project Identification Number**

5706t

## **Chapter VII: Impacts**

### **Financial**

#### 2009 Update

NOACA must demonstrate that there are sufficient financial resources to complete it during the life of the transportation plan. NOACA has completed a fiscal analysis of the 2009 Update of Connections 2030 Update of Connections 2030. It evaluated plan projects under three different revenue scenarios – no revenue growth, low revenue growth, and high revenue growth (See attached tables). The growth scenarios were based on an analysis of long term trends in FHWA construction price indices.

The fiscal analysis assumed continued expenditure of money on preservation, replacement, operations, efficiency, and enhancements over the life of the plan at rates similar to the region's historic trends.

In the final analysis, there will be sufficient revenue under any of the scenarios to accomplish the project's construction.

Obligation	Total	County Funds	Federal	Local	NOACA_CMAQ	NOACA_Other	NOACA_STP	NOACA_TE	Other	State	Transit
2008 Total	329,274,367	11,054,967	-	28,061,384	7,098,889	303,722	33,715,720	-	7,689,000	240,678,686	672,000
2009 Total	332,961,569	11,629,400	-	14,295,021	9,581,048	-	16,734,793	1,600,000	1,332,500	286,560,835	1,327,972
2010 Total	763,170,092	28,382,401	-	87,960,004	13,132,000	-	26,911,744	-	-	606,783,943	-
2011 Total	538,390,847	15,942,734	-	20,430,819	1,822,800	-	24,288,401	-	-	475,906,093	-
2012 Total	281,036,777	18,002,082	-	45,153,378	1,160,000	-	60,899,060	-	-	155,822,257	-
2013 Total	421,263,400	-	-	2,357,400	1,200,000	-	-	-	-	417,706,000	-
2014 Total	7,730,000	-	-	-	-	-	-	-	-	7,730,000	-
2015 Total	277,119,579	-	-	35,396,019	-	-	2,833,000	-	4,128,000	234,764,560	-
2020 Total	7,580,000	-	-	459,600	-	-	-	-	-	7,120,400	-
9999 Total	176,278,928	7,299,293	-	78,347,583	4,660,000	2,126,716	25,308,356	507,348	5,585,088	51,760,380	684,164
Grand Total	3,134,805,558	82,210,877	-	312,461,208	38,654,737	2,430,438	190,691,074	2,107,348	18,732,588	2,484,833,153	2,684,136

2008-2012 avg

2006 Base	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	
Revenue Projection (High)	813,920,000	406,960,000	406,960,000	406,960,000	406,960,000	441,535,506	441,535,506	441,535,506	441,535,506	441,535,506	501,249,479	501,249,479	501,249,479	501,249,479	501,249,479	595,410,693	595,410,693	595,410,693	595,410,693	595,410,693	740,037,484	
In TIP explicitly	763,170,092	538,390,847	281,036,777	421,263,400	7,730,000	277,119,579	-	-	-	-	7,580,000	176,278,928	-	-	-	-	-	-	-	-	-	
Programming Adj	50,749,908	(80,680,939)	43,173,148	28,869,748	428,099,748	592,515,674	1,034,051,180	1,475,586,686	1,917,122,192	2,358,657,698	2,852,327,177	3,177,297,729	3,678,547,208	4,179,796,687	4,681,046,166	5,276,456,859	5,871,867,551	6,467,278,244	7,062,688,936	7,658,099,629	8,398,137,113	
Net TIP	763,170,092	457,709,908	363,786,852	421,263,400	7,730,000	277,119,579	-	-	-	-	7,580,000	176,278,928	-	-	-	-	-	-	-	-	-	
rev adj (High)	813,920,000	457,709,908	406,960,000	450,133,148	435,829,748	596,972,053	465,559,191	539,337,047	538,972,847	572,913,180	778,333,870	936,166,198	925,299,599	1,090,711,927	1,256,124,255	1,515,697,796	1,712,183,325	1,908,668,854	2,105,154,382	2,301,639,911	2,642,752,231	
Balance A - High R	50,749,908	-	43,173,148	28,869,748	428,099,748	319,852,474	465,559,191	539,337,047	538,972,847	572,913,180	770,753,870	759,887,271	925,299,599	1,090,711,927	1,256,124,255	1,515,697,796	1,712,183,325	1,908,668,854	2,105,154,382	2,301,639,911	2,642,752,231	
OC	-	-	-	-	-	71,928,861	146,070,918	111,766,384	-	-	-	-	-	-	-	-	-	-	-	-	-	
Balance B - High R	50,749,908	-	43,173,148	28,869,748	428,099,748	319,852,474	393,630,330	393,266,130	427,206,463	572,913,180	770,753,870	759,887,271	925,299,599	1,090,711,927	1,256,124,255	1,515,697,796	1,712,183,325	1,908,668,854	2,105,154,382	2,301,639,911	2,642,752,231	
P&R&O&E (62%)	-	-	-	-	-	252,315,200	273,752,014	273,752,014	273,752,014	273,752,014	310,774,677	310,774,677	310,774,677	310,774,677	310,774,677	369,154,629	369,154,629	369,154,629	369,154,629	369,154,629	369,154,629	458,823,240
Balance C - High R	50,749,908	-	43,173,148	28,869,748	175,784,548	46,100,461	119,878,317	119,514,116	153,454,449	299,161,166	459,979,193	449,112,593	614,524,922	779,937,250	945,349,578	1,146,543,167	1,343,028,696	1,539,514,224	1,735,999,753	1,932,485,281	2,183,928,991	
Enhancements (5%)	-	-	-	-	20,348,000	22,076,775	22,076,775	22,076,775	22,076,775	22,076,775	25,062,474	25,062,474	25,062,474	25,062,474	25,062,474	29,770,535	29,770,535	29,770,535	29,770,535	29,770,535	37,001,874	
Balance D	50,749,908	-	43,173,148	28,869,748	155,436,548	24,023,686	97,801,542	97,437,341	131,377,674	277,084,391	434,916,719	424,050,119	589,462,448	754,874,776	920,287,104	1,116,772,632	1,313,258,161	1,509,743,690	1,706,229,218	1,902,714,747	2,146,927,116	

2006 Base	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	
Revenue Projection (Low)	813,920,000	406,960,000	406,960,000	406,960,000	406,960,000	414,401,656	414,401,656	414,401,656	414,401,656	414,401,656	421,979,399	421,979,399	421,979,399	421,979,399	421,979,399	429,695,689	429,695,689	429,695,689	429,695,689	429,695,689	437,553,089	
In TIP explicitly	763,170,092	538,390,847	281,036,777	421,263,400	7,730,000	277,119,579	-	-	-	-	7,580,000	176,278,928	-	-	-	-	-	-	-	-	-	
Programming Adj	50,749,908	(80,680,939)	44,507,962	30,204,562	429,434,562	566,716,639	981,118,294	1,395,519,950	1,809,921,606	2,224,323,262	2,638,722,661	2,884,423,133	3,306,402,532	3,728,381,932	4,150,361,331	4,580,057,020	5,009,752,710	5,439,448,399	5,869,144,088	6,298,839,777	6,736,392,866	
Net TIP	763,170,092	457,709,908	362,452,038	421,263,400	7,730,000	277,119,579	-	-	-	-	7,580,000	176,278,928	-	-	-	-	-	-	-	-	-	
rev adj (High)	813,920,000	457,709,908	406,960,000	451,467,962	437,164,562	571,173,018	430,805,985	495,629,671	486,311,299	511,297,462	655,627,752	787,300,954	750,275,228	889,528,430	1,028,781,632	1,175,751,123	1,317,550,701	1,459,350,278	1,601,149,855	1,742,949,433	1,892,606,410	
Balance A - High R	50,749,908	-	44,507,962	30,204,562	429,434,562	294,053,439	430,805,985	495,629,671	486,311,299	511,297,462	648,047,752	611,022,026	750,275,228	889,528,430	1,028,781,632	1,175,751,123	1,317,550,701	1,459,350,278	1,601,149,855	1,742,949,433	1,892,606,410	
OC	-	-	-	-	-	71,928,861	146,070,918	111,766,384	-	-	-	-	-	-	-	-	-	-	-	-	-	
Balance B - High R	50,749,908	-	44,507,962	30,204,562	429,434,562	294,053,439	358,877,124	349,558,753	374,544,915	511,297,462	648,047,752	611,022,026	750,275,228	889,528,430	1,028,781,632	1,175,751,123	1,317,550,701	1,459,350,278	1,601,149,855	1,742,949,433	1,892,606,410	
P&R&O&E (62%)	-	-	-	-	-	252,315,200	256,929,027	256,929,027	256,929,027	256,929,027	261,627,228	261,627,228	261,627,228	261,627,228	261,627,228	266,411,327	266,411,327	266,411,327	266,411,327	266,411,327	266,411,327	271,282,915
Balance C - High R	50,749,908	-	44,507,962	30,204,562	177,119,362	37,124,412	101,948,098	92,629,726	117,615,889	254,368,435	386,420,524	349,394,798	488,648,000	627,901,202	767,154,404	909,339,796	1,051,139,373	1,192,938,951	1,334,738,528	1,476,538,106	1,621,323,495	
Enhancements (5%)	-	-	-	-	20,348,000	20,720,083	20,720,083	20,720,083	20,720,083	20,720,083	21,098,970	21,098,970	21,098,970	21,098,970	21,098,970	21,484,784	21,484,784	21,484,784	21,484,784	21,484,784	21,877,654	
Balance D	50,749,908	-	44,507,962	30,204,562	156,771,362	16,404,329	81,228,015	71,909,644	96,895,806	233,648,352	365,321,554	328,295,829	467,549,030	606,802,232	746,055,434	887,855,011	1,029,654,589	1,171,454,166	1,313,253,744	1,455,053,321	1,599,445,840	

2006 Base	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Revenue Projection (None)	813,920,000	406,960,000	406,960,000	406,960,000	406,960,000	406,960,000	406,960,000	406,960,000	406,960,000	406,960,000	406,960,000	406,960,000	406,960,000	406,960,000	406,960,000	406,960,000	406,960,000	406,960,000	406,960,000	406,960,000	406,960,000
In TIP explicitly	763,170,092	538,390,847	281,036,777	421,263,400	7,730,000	277,119,579	-	-	-	-	7,580,000	176,278,928	-	-	-	-	-	-	-	-	-
Programming Adj	50,749,908	(80,680,939)	45,242,285	30,938,885	430,168,885	560,009,306	966,969,306	1,373,929,306	1,780,889,306	2,187,849,306	2,587,229,306	2,817,910,378	3,224,870,378	3,631,830,378	4,038,790,378	4,445,750,378	4,852,710,378	5,259,670,378	5,666,630,378	6,073,590,378	6,480,550,378
Net TIP	763,170,092	457,709,908	361,717,716	421,263,400	7,730,000	277,119,579	-	-	-	-	7,580,000	176,278,928	-	-	-	-	-	-	-	-	-
rev adj (High)	813,920,000	457,709,908	406,960,000	452,202,285	437,898,885	564,465,685	421,642,906	484,010,845	472,236,727	494,767,143	629,063,943	755,780,743	713,798,615	848,095,415	982,392,215	1,116,689,015	1,250,985,815	1,385,282,615	1,519,579,415	1,653,876,215	1,788,173,015
Balance A - High R	50,749,908	-	45,242,285	30,938,885	430,168,885	287,346,106	421,642,906	484,010,845	472,236,727	494,767,143	621,483,943	579,501,815	713,798,615	848,095,415	982,392,215	1,116,689,015					

## Connections 2030 Original

The federal requirements (23 CFR 450.322) for transportation plans require that Connection 2030:

*Include a financial plan that demonstrates the consistency of proposed transportation investments with already available and projected sources of revenue. The financial plan shall compare the estimated revenue from existing and proposed funding sources that can reasonably be expected to be available for transportation uses, and the estimated costs of constructing, maintaining and operating the total (existing plus planned) transportation system over the period of the plan. The estimated revenue by existing revenue source (local, State, and Federal and private) available for transportation projects shall be determined and any shortfalls identified. Proposed new revenues and/or revenue sources to cover shortfalls shall be identified, including strategies for ensuring their availability for proposed investments. Existing and proposed revenues shall cover all forecasted capital, operating, and maintenance costs. All cost and revenue projections shall be based on the data reflecting the existing situation and historical trends. For nonattainment and maintenance areas, the financial plan shall address the specific financial strategies required to ensure the implementation of projects and programs to reach air quality compliance.*

And that it:

*Assess capital investment and other measures necessary to preserve the existing transportation system (including requirements for operational improvements, resurfacing, restoration, and rehabilitation of existing and future major roadways, as well as operations, maintenance, modernization, and rehabilitation of existing and future transit facilities) and make the most efficient use of existing transportation facilities to relieve vehicular congestion and enhance the mobility of people and goods.*

The following is a summary of the financial analysis for Connection 2030.

### **Overview**

As noted in previous plans the financing of transportation projects in Northeast Ohio is a cooperative process. Funds are generated at the federal, state, and local level. Blends of funds from these different funding sources are utilized to accomplish transportation projects in the region. A significant requirement that forces substantial coordination between local, state, and federal governments and agencies with NOACA is that projects utilizing federal funds must appear in the region's transportation improvement program (TIP).

NOACA’s transportation planning efforts are founded upon its adopted Principles and Goals. In addition to evaluating whether or not there are sufficient resources to accomplish the major project efforts identified in our Plans, NOACA also evaluates the region’s capacity to continue operating, maintaining, and preserving its transportation infrastructure.

## Revenue Overview

Staff researched and summarized revenue sources for the region across two broad categories. The first, “Preservation and Replacements”, deals with revenues generated for preserving and replacing portions of the existing transportation systems. The second, “Operation and Efficiency”, addresses revenues generated to address operational costs (like snow removal), and efficiency costs (like signalization of corridors) that improve the efficiency of a transportation system.

Since Transportation Enhancement Program (TEP) funding in the future is uncertain as of this writing, staff did not create revenue or expenditure forecasts for this program. It is assumed that since TEP funding is administered in accordance with federal requirements when it is received, that future allocations will be handled in a fiscally constrained fashion.

Major capacity and other major projects as they appear in the Tier I and Tier II project lists in Chapter IV are considered fiscally constrained because they have a defined major funding source and have a pledged local matching share to cover their expected cost. The Regional Transportation Investment Subcommittee (RTIS) monitors project costs and expenditures in keeping with NOACA’s Regional Transportation Investment Policy (RTIP). A purpose of the RTIS is to maintain fiscal balance for these projects.

The table below displays average annual revenues and 25 year projected revenues for operations and efficiency projects in 2005 dollars.

<b>Operations and Efficiency Revenues (1,000s of dollars)</b>		
<b>Source</b>	<b>Annual Revenue</b>	<b>25 Year Revenue</b>
Local Governments:		
Motor Vehicle Fuel Tax	46,848	1,171,200
Motor Vehicle License Tax	52,491	1,312,275
ODOT District Allocation Program:		
Maintenance (MVFT)	12,461	311,525
Ohio Turnpike Commission	18,035	450,875
Local Transit Agencies		
Operating Revenues	46,053	1,151,325
Federal Subsidy	16,055	401,375
State Subsidy	3,508	87,700
Local Sources	187,779	4,694,475
NOACA Federal CMAQ	6,319	157,975
Local CMAQ match	1,264	31,600
<b>O&amp;E Total Revenues</b>	<b>390,813</b>	<b>9,770,325</b>

The table below displays average annual revenues and 25 year projected revenues for preservation and replacement projects in 2005 dollars.

<b>Preservation and Replacement Revenues (1,000s of dollars)</b>		
<b>Source</b>	<b>Annual Revenue</b>	<b>25 Year Revenue</b>
<b>Local Governments:</b>		
Motor Vehicle License Tax (Permissive)	31,383	784,575
ODPW LTIP	15,274	381,850
ODPW SCIP	15,834	395,850
NOACA Federal STP	29,857	746,425
CEAO Federal STP and LBR	9,115	227,875
Local General Funds/Levies - Match	7,794	194,850
Local General Funds/Levies – Direct Use	28,939	723,475
<b>Ohio District Allocation Program</b>		
<b>Using Federal and State Funds</b>		
Bridge Program	30,541	763,525
Pavement Program	52,030	1,300,750
Major Bridge Program	13,957	348,925
<b>Ohio Turnpike Commission</b>		
Tolls and Other Revenues	18,035	450,875
<b>Local Transit Agencies</b>		
Local Sources (Various)	23,730	593,250
Federal Transit Allocations	49,110	1,227,750
State Transit Funds	9,962	249,050
<b>P&amp;R Total Revenues</b>	<b>335,561</b>	<b>8,389,025</b>

### Cost Overview

Staff derived cost estimates from a variety of sources including its TIPs, State ratio analyses for local units of government, Status of Public Transit in Ohio annual reports, Ohio Turnpike Commission annual reports et al.

The table below displays average annual costs and 25 year projected costs for operations and efficiency projects in 2005 dollars. Since the reports utilized to identify local government expenditures do not distinguish by project type, expenditures for local governments were apportioned based on percentage of total revenues from each revenue category.

<b>Operations and Efficiency Costs (1,000s of dollars)</b>		
<b>Source</b>	<b>Annual Cost</b>	<b>25 Year Cost</b>
Local Governments	13,285	332,125
ODOT District Allocation Program	22,499	562,475
Ohio Turnpike Commission	15,859	396,475
Local Transit Agencies	209,782	5,244,550
<b>O&amp;E Total Costs</b>	<b>261,425</b>	<b>6,535,625</b>

The table below displays average annual costs and 25 year projected costs for preservation and efficiency projects in 2005 dollars. Since the referenced local government expenditure reports do not distinguish by project type, expenditures for local governments were apportioned based on percentage of total revenues from each revenue category. Ohio Turnpike Commission figures include both normal preservation and replacement efforts and major capital projects since their funding analyses do not distinguish between the two.

<b>Preservation and Replacement Costs (1,000s of dollars)</b>		
<b>Source</b>	<b>Annual Cost</b>	<b>25 Year Cost</b>
Local Governments	18,346	458,650
Ohio District Allocation Program	98,460	2,461,500
Using Federal and State Funds		
Bridge Program	21,325	533,125
Pavement Program	121,470	3,036,750
Major Bridge Program	19,319	482,975
Ohio Turnpike Commission	15,600	390,000
Local Transit Agencies	77,829	1,945,725
<b>P&amp;R Total Costs</b>	<b>372,349</b>	<b>9,308,725</b>

### Revenue/Cost Comparison

The table below compares total expected revenues against total expected transportation costs for operations, efficiency, preservation, and replacement efforts in the region. The table demonstrates there are, in total, sufficient funds to cover projected costs in the region. However, careful consideration of the previous tables and the negative balances for P&R below suggest that efforts will have to be made to shift more funding to preservation and replacement efforts over the life of this plan. It is expected that NOACA's Regional Pavement Management Program will help facilitate this shift.

<b>Revenue/Cost Summary (1,000s of dollars)</b>						
<b>Type Annual</b>				<b>25 Year</b>		
	Revenue	Cost	Balance	Revenue	Cost	Balance
O&E	390,813	261,425	129,388	9,770,325	6,535,625	3,234,700
P&R	335,561	372,349	-36,788	8,389,025	9,308,725	-919,700
Total	726,374	633,774	92,600	18,159,350	15,844,350	2,315,000

### Conclusions

Connections 2030 is fiscally balanced in accordance with federal guidance and regulations. It is recommended that the assumptions should be reviewed once a new federal transportation law is enacted.

## **Environmental Justice**

The federal requirements (23 CFR 450.322) for transportation plans require that Connection 2030:

*Reflect a multimodal evaluation of the transportation, socioeconomic, environmental, and financial impact of the overall plan, including all major transportation investments in accordance with § 450.318.*

And that it:

*Reflect, to the extent that they exist, consideration of: the area's comprehensive long-range land use plan and metropolitan development objectives; national, State, and local housing goals and strategies, community development and employment plans and strategies, and environmental resource plans; local, State, and national goals and objectives such as linking low income households with employment opportunities; and the area's overall social, economic, environmental, and energy conservation goals and objectives.*

### *Overview and Requirements*

Metropolitan Planning Organizations (MPOs) serve as the primary forum for State DOTs, transit providers, local agencies, and the public to develop transportation plans and programs that address regional needs. In that regard, MPOs can help local public officials understand how Title VI and environmental justice requirements improve transportation planning and decision-making.

To accomplish this and to certify compliance with Title VI of the Civil Rights Act of 1964 and address Executive Order 12898 (1994) on Environmental Justice, NOACA, as the MPO for northeast Ohio, uses its analytical capability to identify residential, employment, and transportation patterns of minority, low-income, disabled, car-less and elderly populations. Once identified, NOACA's role is to highlight the EJ population's needs, determine ways to address the needs, and to insure that the benefits and burdens of transportation investments are more fairly distributed among them. NOACA also evaluates its public involvement processes to eliminate participation barriers and to engage minority, low-income, disabled, car-less and elderly populations in transportation decision-making.

Most recently, NOACA staff analyzed its 2005 Transportation Plan Update, Connections 2030, and by extension its 2006-2009 TIP. In the analyses that immediately follow, NOACA staff examined demographic trends and their regional impacts on trip making for E.J. populations. Delays in the receipt of the CTPP and therefore in travel demand model readiness have limited staff's ability to provide more complex analyses. NOACA staff will expand these analyses in preparation for the 2008 Update in SFY2006. See the Next Steps section for details.

## Target Populations

According to the 2000 Census, the minority and low-income or primary E.J. populations will remain concentrated in NOACA's Core Communities<sup>1</sup>, hereafter referred to as The Core. The secondary E.J. populations are the car-less, the elderly, and the disabled. The car-less populations mirror the low-income boundaries, except for outlying Amish areas. The elderly are primarily located in the suburbs and exurbs. The disabled<sup>2</sup> are scattered throughout the region.

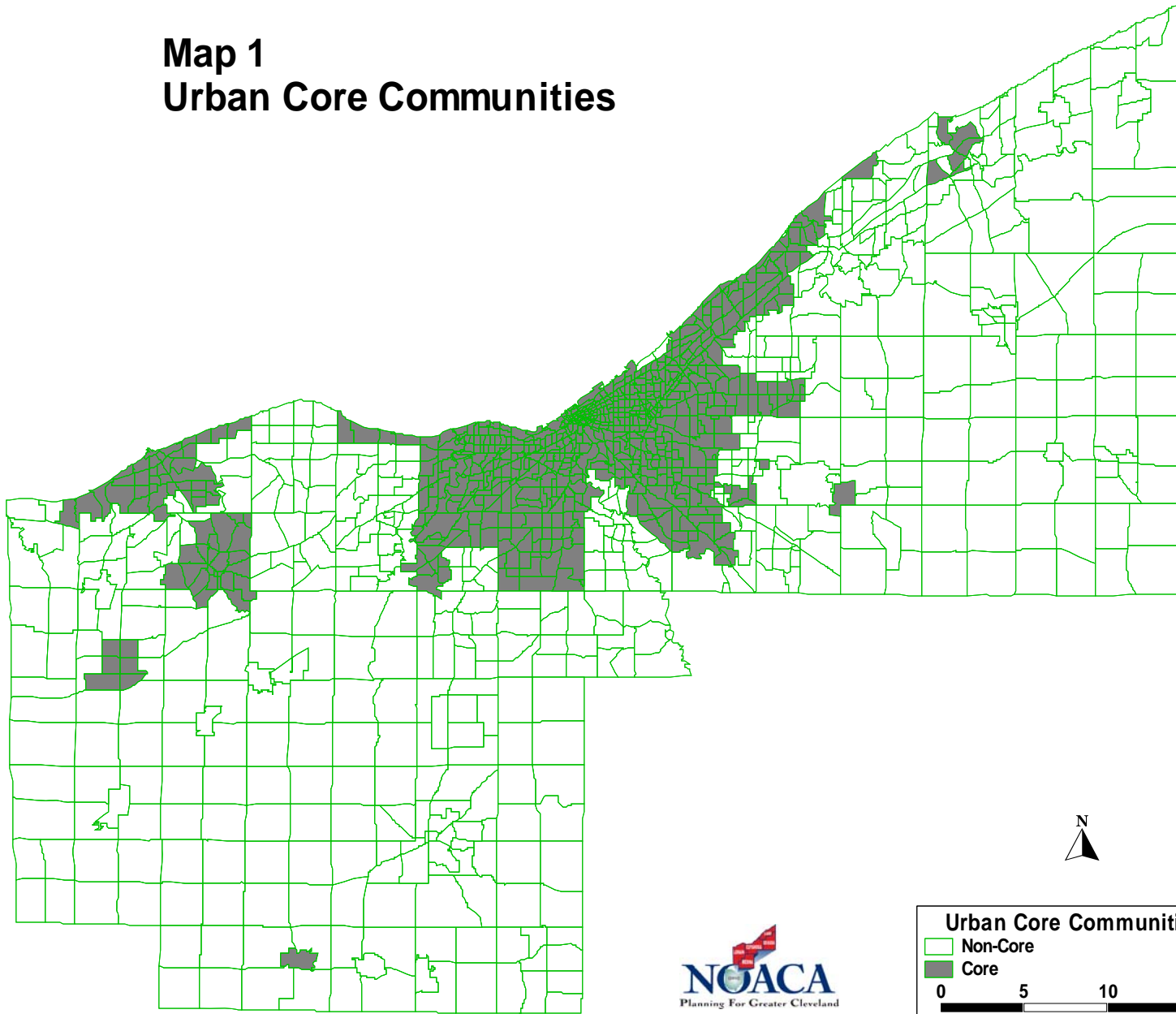
Primary and secondary environmental justice target populations are summarized in the table below and in Maps 1 through 8. The maximum EJ area contains a 25% or greater non-white population, a 10.6% or greater number of impoverished households, or a combination thereof. The minimum EJ area contains a 50% or greater non-white population, a 21.2% or greater number of impoverished households, or a combination thereof. Map 9 identifies the number of times a Traffic Analysis Zone (TAZ) met an E.J. condition in the preceding maps.

<b>Environmental Justice Populations Summary Table</b>		
<b>Population Number</b>		<b>Percent of Total</b>
<b>Total 2,148,163</b>		<b>100%</b>
<b>White 1,602,596</b>		<b>75%</b>
<b>Non-White 545,555</b>		<b>25%</b>
<b>Elderly 311,748</b>		<b>14.5%</b>
<b>Disabled 374,085</b>		<b>17%</b>
<b>Total Households</b>	<b>853,413</b>	<b>100%</b>
<b>Impoverished HHs</b>	<b>90,213</b>	<b>10.6%</b>
<b>No car HHs</b>	<b>92,550</b>	<b>4%</b>

<sup>1</sup> As identified in *Framework for Action 2025*, NOACA 1999

<sup>2</sup> 2000 Census questionnaire has made tracking the disabled more difficult.

# Map 1 Urban Core Communities

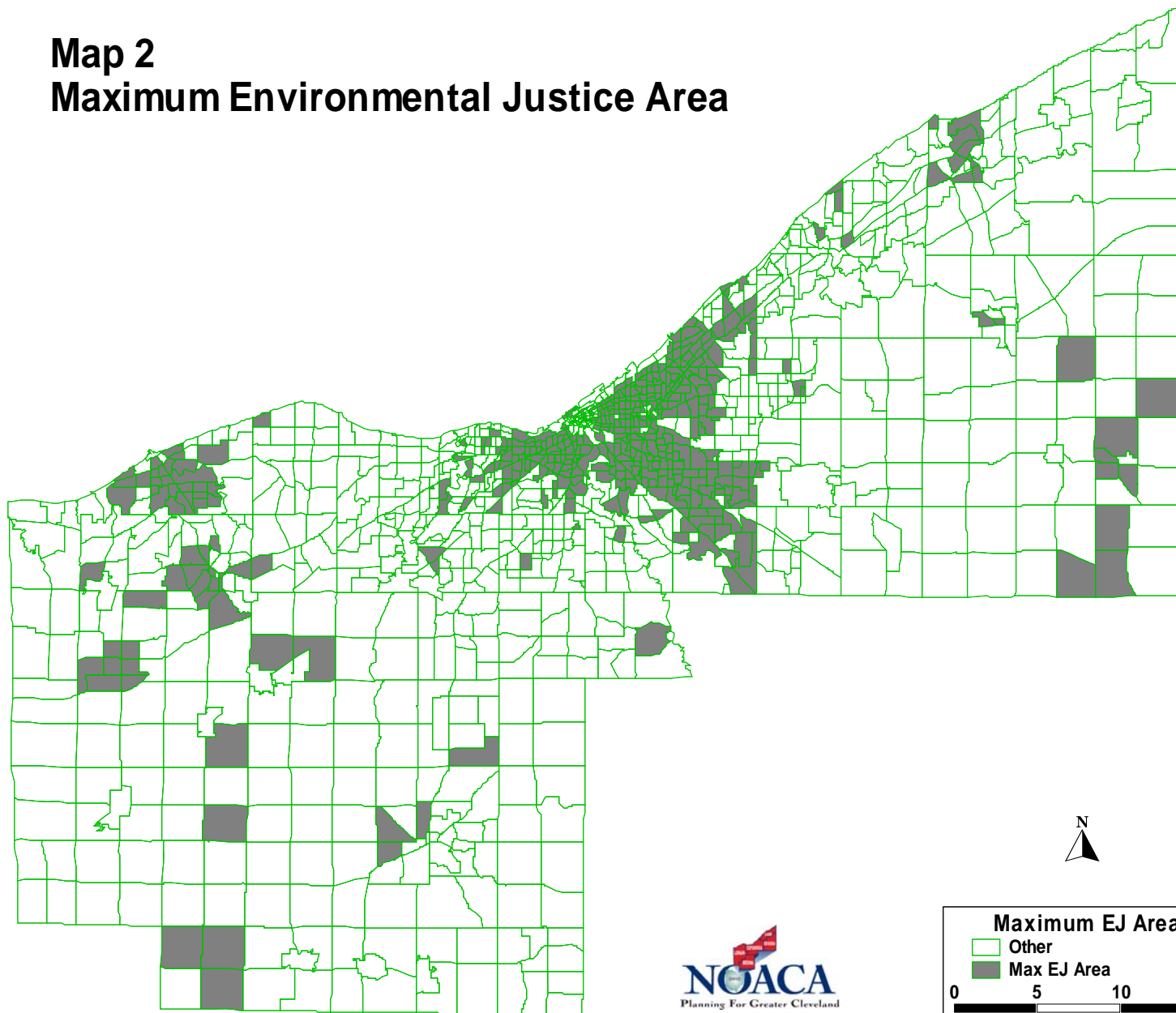


**Urban Core Communities**

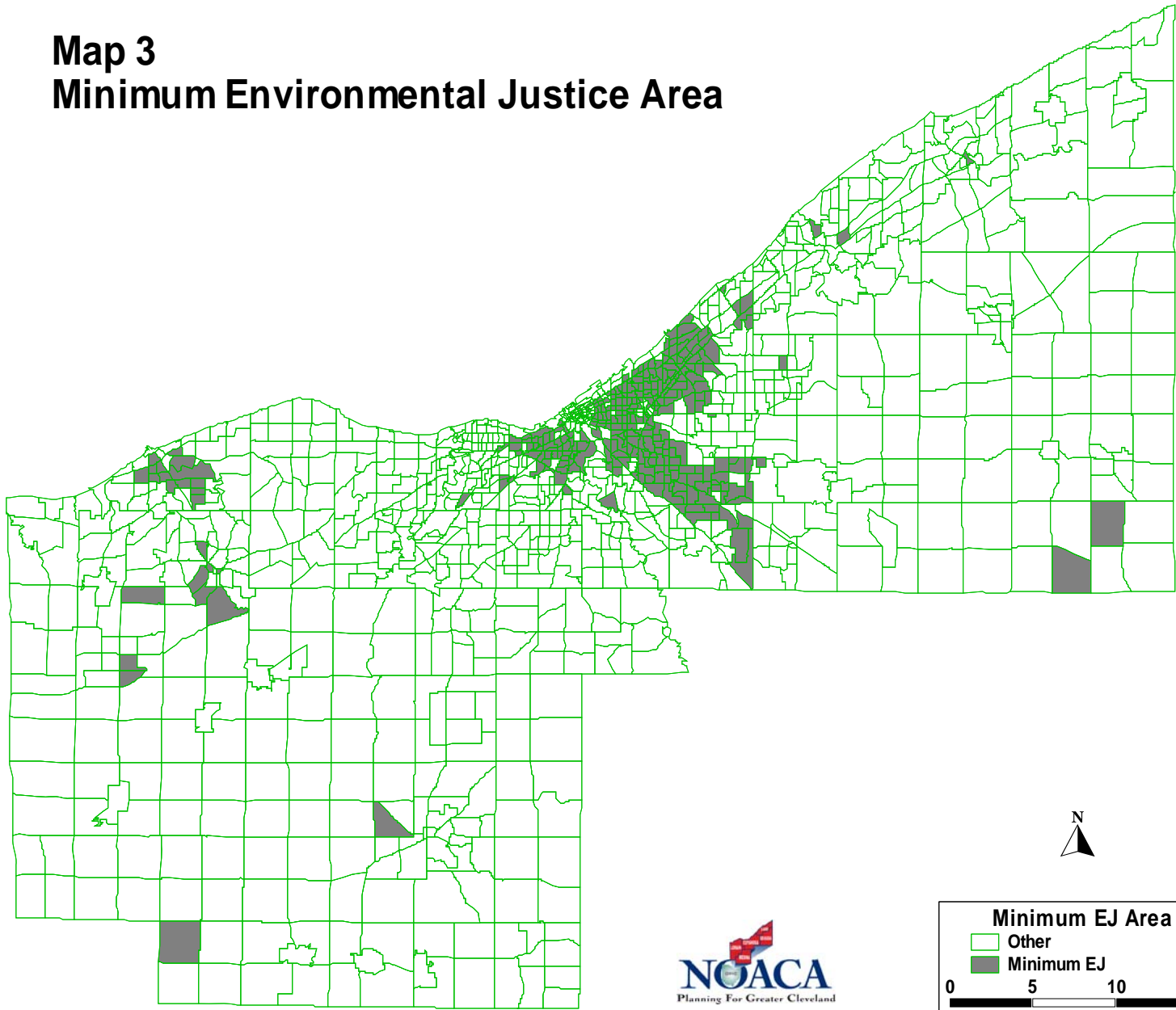
Non-Core  
Core

0 5 10 15  
Miles

## Map 2 Maximum Environmental Justice Area



# Map 3 Minimum Environmental Justice Area

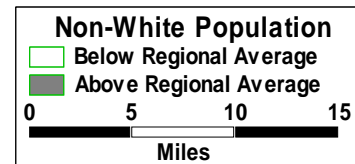
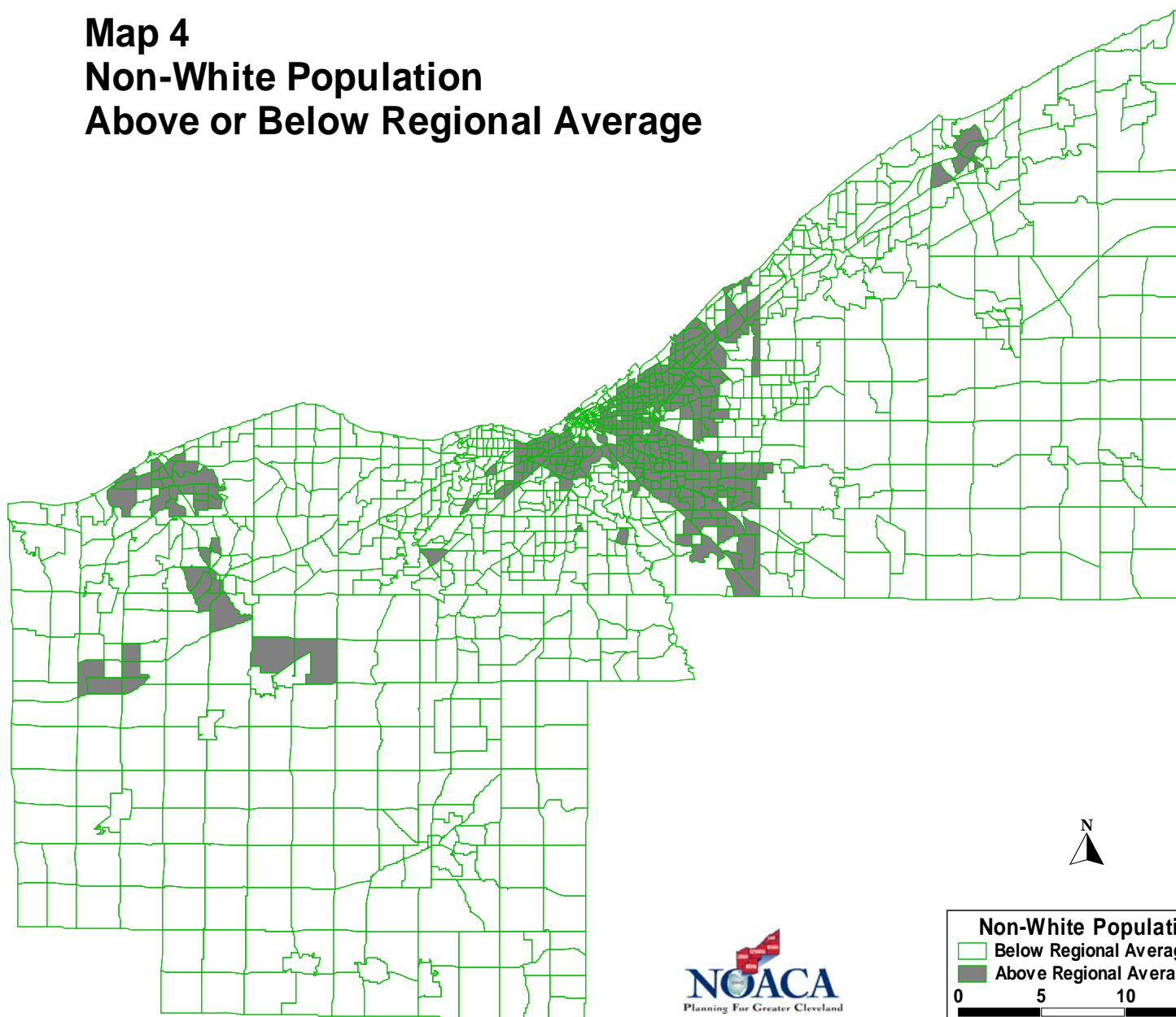


**Minimum EJ Area**

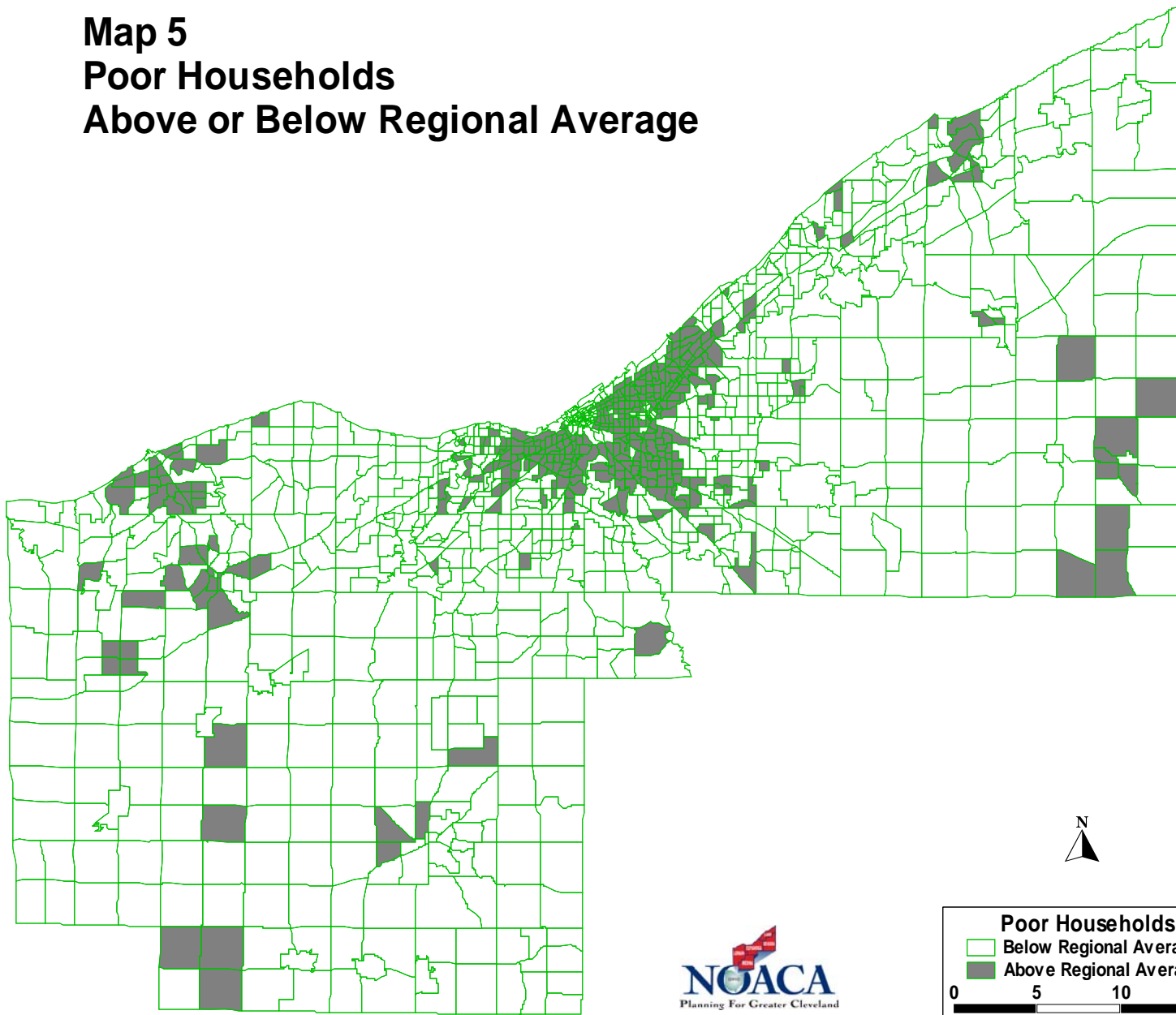
- Other
- Minimum EJ

0 5 10 15  
Miles

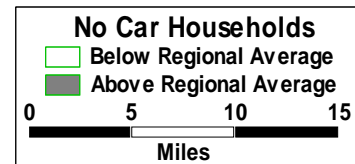
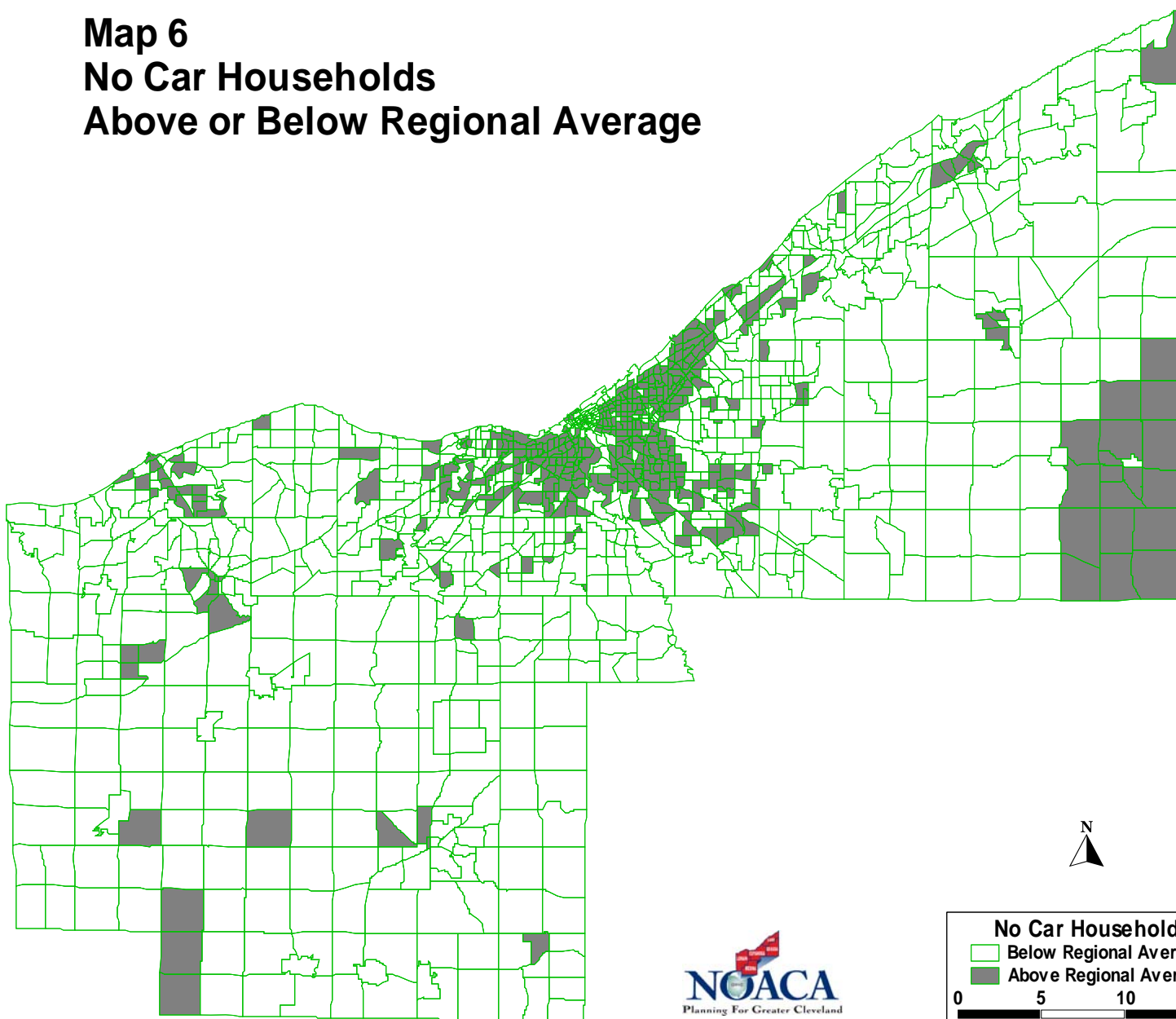
# Map 4 Non-White Population Above or Below Regional Average



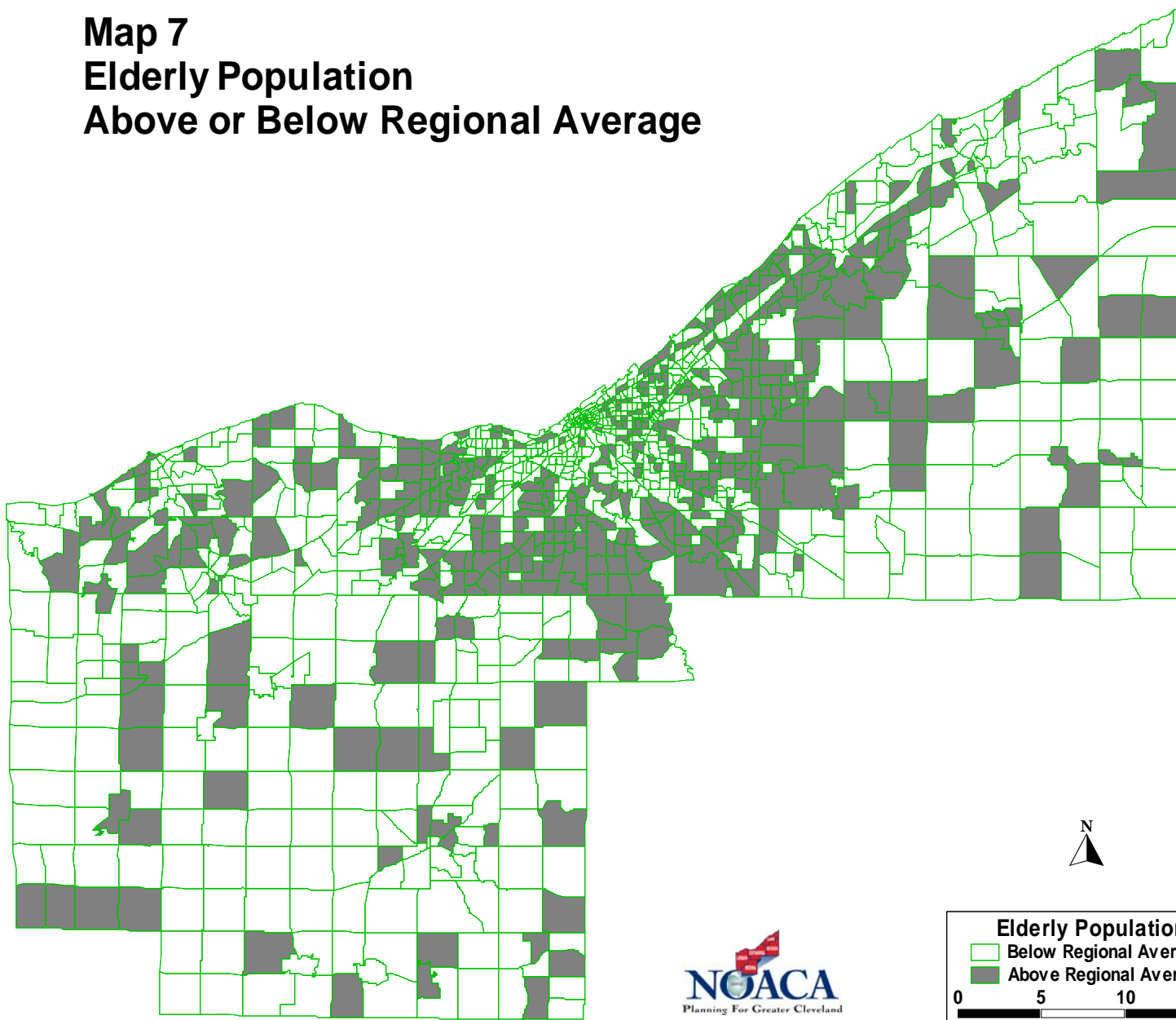
# Map 5 Poor Households Above or Below Regional Average



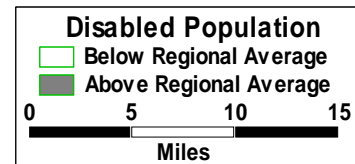
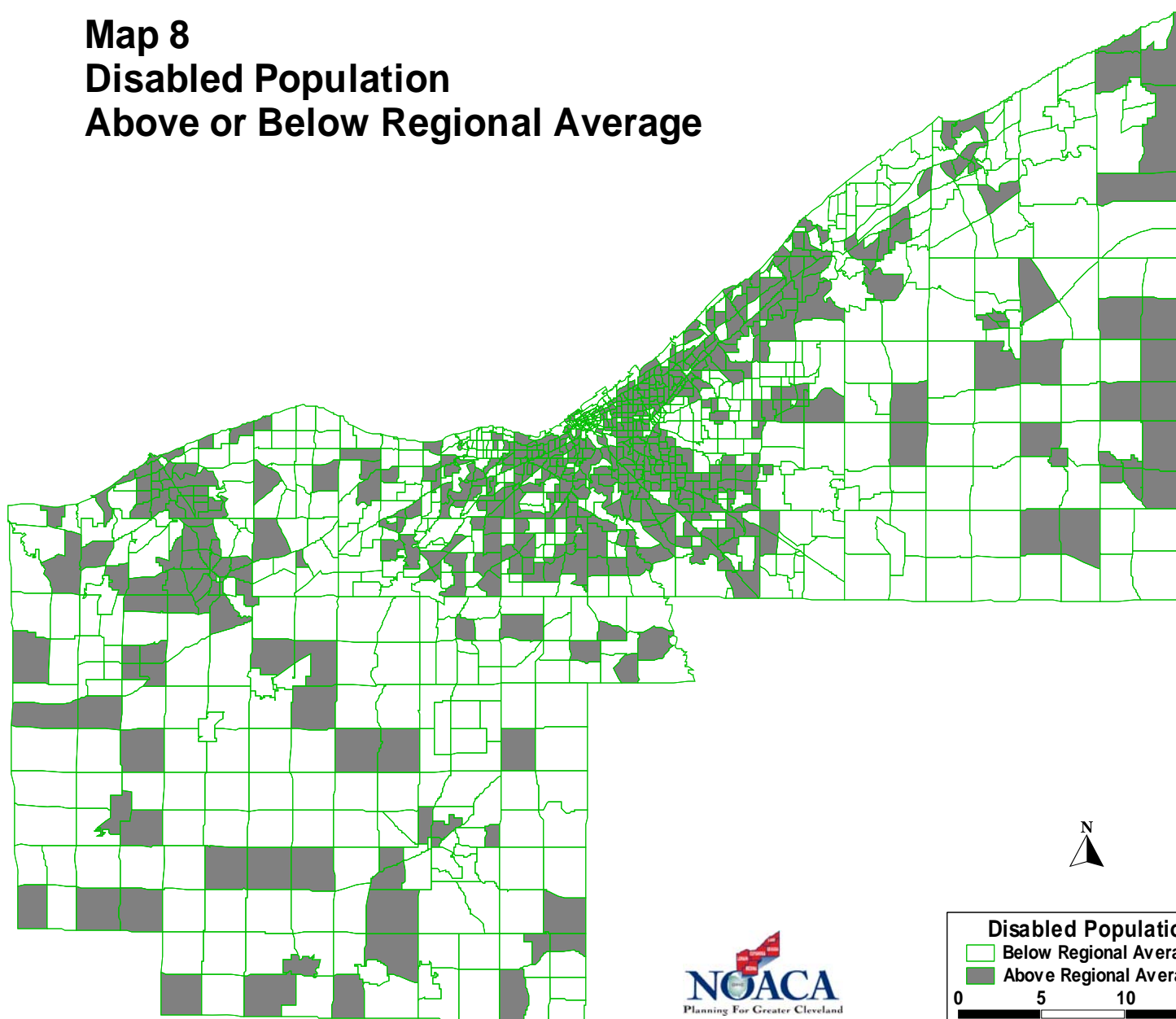
# Map 6 No Car Households Above or Below Regional Average



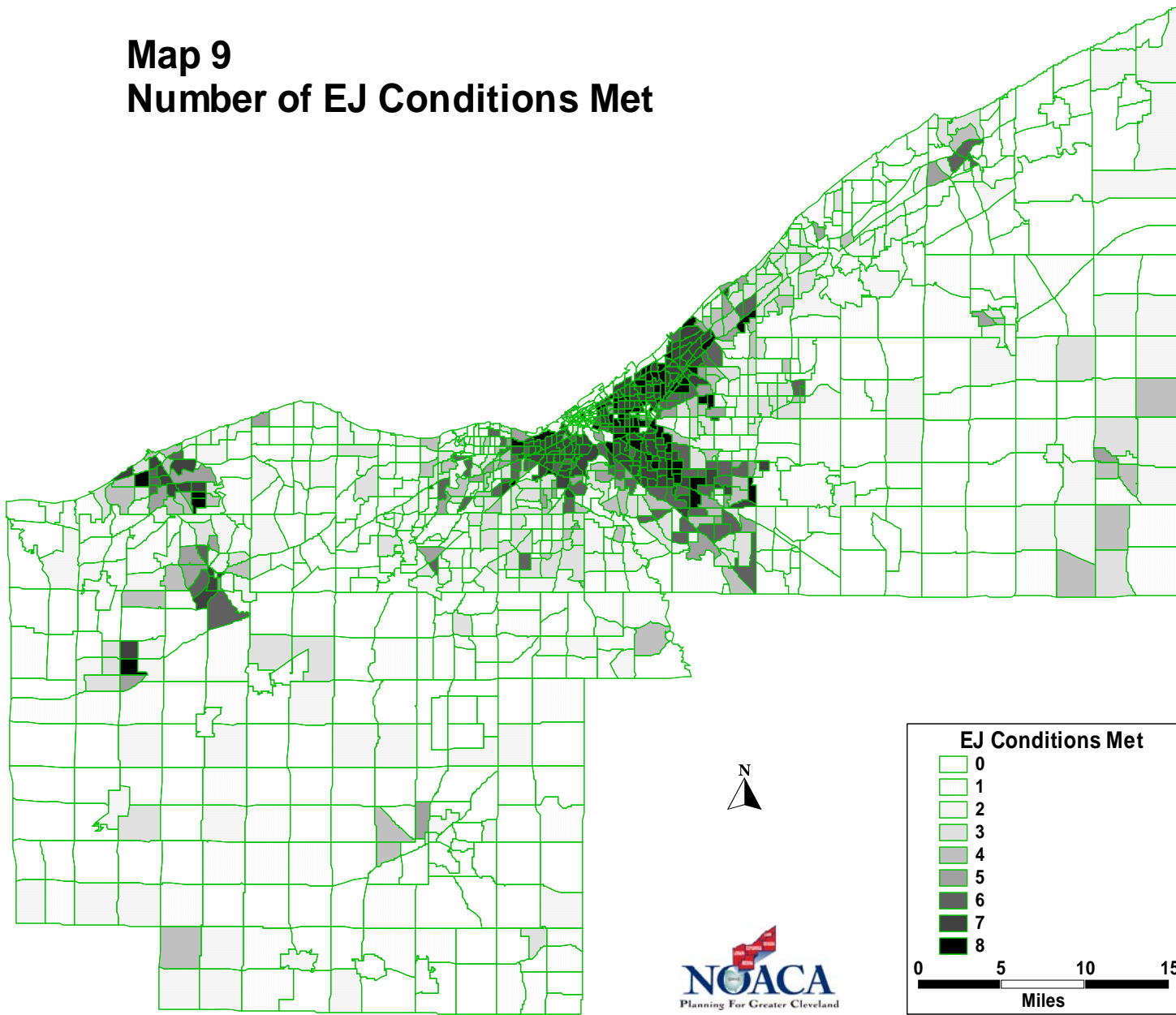
# Map 7 Elderly Population Above or Below Regional Average



# Map 8 Disabled Population Above or Below Regional Average



# Map 9 Number of EJ Conditions Met



## *Transportation Plan Impacts*

### Trip Making

#### *Origins and Destinations*

Minority and/or low-income populations disproportionately reside in The Core, while white and/or affluent people disproportionately reside in the outer suburbs and exurbs. The car-less populations closely trace the low-income population areas. The elderly and disabled are more widely dispersed with greater concentrations residing in the outer suburbs and exurbs. See preceding maps.

Job growth in all categories is almost exclusively occurring in the outer suburbs and exurbs. Medical facilities are expanding into suburban and exurban satellites, however the concentrations are still in The Core.

When current trends are projected to the future, the separation of EJ populations from jobs is expected to increase considerably. Additionally, much of the growth is projected to occur in unincorporated areas that have limited powers to generate revenues to address social concerns.

#### **Projected Change in Employment and Population between 2000 and 2030**

	Employment	Population
NOACA Core	-11%	-14%
Other Incorporated Jurisdictions	25%	16%
Unincorporated Jurisdictions	61%	29%

#### *Accessibility Comparison*

As shifts in job growth occur, minority and/or low-income populations are isolated from employment. The elderly and disabled living in auto-oriented communities cannot easily be served by transit. In fact, there appears to be a spatial mismatch for all populations. However, to the extent that one has a home, an income and reliable transportation, one is more viable. Therefore, E.J. populations are now isolated from critical destinations, or will be when one of these factors is missing.

Using the travel demand model, NOACA staff has calculated relative accessibility provided by highway and transit for E.J. areas. These comparisons are based on all possible, not all probable work trips for the years 2000 and 2030. They provide a means of measuring change and do not reflect actual travel time, but rather measure increase or decreases in performance.

The salient point revealed from the tables that follow is that highway travel will slightly improve, while transit travel will significantly degrade. So, to the extent that one owns a reliable vehicle and a job, ones commute time will be improved. However, since a disproportionate number of the minority, low-income, and, needless-to-say, car-less populations are tied to transit, they will

only benefit from these improvements if their trip and service remain the same. Neither will go unchanged due to job-sprawl resulting in longer trips, and less frequent transit service.

### Comparison of Overall System Travel Demand Model Highway Travel Times 2000 and 2030

	2000 Count of O/D connections	2000 Sum of Total Time	2000 Average Time	2030 Count of O/D connections	2030 Sum of Total Time	2030 Average Time	% Change from 2000
Total Time	1,735,804	79,662,391	<b>45.89</b>	1,735,804	77,074,014	<b>44.40</b>	<b>-3.25%</b>
Maximum EJ Area 20 %	625,575	24,443,929	<b>39.07</b>	625,575	23,527,127	<b>37.61</b>	<b>-3.75%</b>
Minimum EJ Area 40 %	429,342	15,758,587	<b>36.70</b>	429,342	15,165,591	<b>35.32</b>	<b>-3.76%</b>
Urban Core Area	919,266	34,807,972	<b>37.86</b>	919,266	33,409,379	<b>36.34</b>	<b>-4.02%</b>
Older Population Area	633,477	27,350,617	<b>43.18</b>	633,477	26,359,460	<b>41.61</b>	<b>-3.62%</b>
No Car Area	558,408	21,851,598	<b>39.13</b>	558,408	21,041,059	<b>37.68</b>	<b>-3.71%</b>
Disabled Area	795,468	33,190,098	<b>41.72</b>	795,468	31,969,419	<b>40.19</b>	<b>-3.68%</b>

### Comparison of Overall System travel Demand Model Transit Travel Times 2000 and 2030

	2000 Count of O/D connections	2000 Sum of Total Time	2000 Average Time	2030 Count of O/D connections	2030 Sum of Total Time	2030 Average Time	% Change from 2000
Total Time	645,485	33,175,991	<b>51.40</b>	547,110	40,623,493	<b>74.25</b>	<b>44.47%</b>
Maximum EJ Area 20 %	320,103	15,105,766	<b>47.19</b>	279,685	19,997,878	<b>71.50</b>	<b>51.52%</b>
Minimum EJ Area 40 %	238,959	10,688,055	<b>44.73</b>	212,315	14,862,060	<b>70.00</b>	<b>56.50%</b>
Urban Core Area	500,653	23,985,696	<b>47.91</b>	437,514	31,552,970	<b>72.12</b>	<b>50.53%</b>
Older Population Area	284,012	14,813,787	<b>52.16</b>	240,114	18,350,588	<b>76.42</b>	<b>46.52%</b>
No Car Area	290,004	13,489,920	<b>46.52</b>	255,170	18,212,247	<b>71.37</b>	<b>53.44%</b>
Disabled Area	376,384	18,897,484	<b>50.21</b>	319,237	23,640,133	<b>74.05</b>	<b>47.49%</b>

Travel times come from AM transit networks created for the NOACA travel demand model for 2000 and 2030.

### Findings and Recommendations

NOACA staff forecasts the region to remain static in terms of population with the same number of people occupying more land area. Mobile affluent white people continue to live in the outer suburbs and exurbs, while minority and low-income people remain in the central cities and inner suburbs. Jobs are following the flow of people, with new jobs locating in the suburbs and exurbs, isolating E.J. populations from them.

The elderly are more scattered, however they are more concentrated in the outer suburbs and exurbs, isolating them from medical facility concentrations in The Core. The mobility disabled are difficult to track due to some changes in the census questionnaire. Suffice it to say that the truly disabled population has great obstacles to overcome in its trip making. In general, E.J. populations are isolated due to social, economic, physical and mental impairment, and/or transportation mobility issues.

There are those, including John Powell, Executive Director for the Kirwan Institute for the Study of Race and Ethnicity, who believe this phenomenon to be an Environmental Justice issue. NOACA, as the Metropolitan Planning Agency for northeast Ohio must explore options for addressing the transportation inequities realized by the region's growth patterns. However, at this stage of development, transportation is more responding to rather than generating these apparently unsustainable trip-making patterns. A more equitable distribution of the benefits and burdens of transportation system, or indeed any public investment for the regions diverse populations, hangs in the balance.

Recent studies by the Brookings Institution and CWRU's Center for Urban Poverty and Social Change offer findings that are consistent with the population and job-sprawl phenomena. NOACA staff will continue to explore new ideas and strategic investment throughout the region to better serve E.J. populations, and, in so doing, increase the region's viability in a 21<sup>st</sup> Century economy that will need to be much more ecosystem-based.

### *Next Steps*

In the succeeding three state fiscal years, SFY2006-SFY2009, NOACA staff will explore ways to make the planning process more responsive to Environmental Justice populations, and, in so doing, increase the regions economic viability.

- Explore more creative and effective methods to involve E.J. populations in transportation decision making, including focus and peer groups;
- Continue transportation system analysis, both model-base and otherwise, designed to measure accessibility for E.J. populations for all purposes in ways that more reflect their daily travel experience;
- Explore ways to improve coordination of special transportation service for the disabled and the elderly;
- Expand the activities of the work access program for the low-income populations;
- Use CMS, PMS, BMS, and ITS to measure comparative infrastructure condition and performance for E.J. populations;
- Use RTIP to target funding to better respond to the needs of E.J. populations;
- Develop educational materials for staff, committees, board and public.

## Transportation/Air Quality Conformity

### 2009 Update

The existing conformity analyses for Connections 2030 have been updated to reflect the construction of Opportunity Corridor. The results of the tests, as displayed in the following tables, are that the area's existing plans, programs, and projects meet the conformity requirements.

## 1-Hour Ozone Conformity Test Results

### Ozone Precursor Emissions

HYDROCARBON EMISSIONS (TONS/DAY)				
	Budget	2012	2020	2030
NOACA		24.65	17.11	15.13
AMATS		9.32	5.93	5.78
Ashtabula		2.58	1.92	1.65
<b>TOTAL</b>	<b>92.70</b>	36.55	24.96	22.56
NO <sub>x</sub> EMISSIONS (TONS/DAY)				
	Budget	2012	2020	2030
NOACA		50.69	23.21	13.43
AMATS		25.32	10.13	6.88
Ashtabula		4.14	1.81	1.55
<b>TOTAL</b>	<b>104.40</b>	80.15	35.15	22.90

## 8-Hour Ozone Conformity Test Results

### Ozone Precursor Emissions

HYDROCARBON EMISSIONS (TONS/DAY)					
	Budget	2012	Budget	2020	2030
NOACA		23.72		16.59	14.73
AMATS		12.42		7.37	7.06
Ashtabula		2.49		1.69	1.63
<b>TOTAL</b>	<b>46.64</b>	38.63	<b>31.48</b>	25.65	23.42

NO <sub>x</sub> EMISSIONS (TONS/DAY)					
	2012		2020		
	Budget	2012	Budget	2020	2030
NOACA		50.48		23.10	13.32
AMATS		25.22		10.06	6.81
Ashtabula		4.12		2.01	1.55
<b>TOTAL</b>	<b>95.89</b>	79.82	<b>42.75</b>	35.17	21.68

## Fine Particulate Matter Conformity Test Results

### PM<sub>2.5</sub> Direct and Precursor Emissions

PM <sub>2.5</sub> EMISSIONS (TONS/YEAR)				
	2002	2010	2020	2030
NOACA			523.10	327.44
AMATS			212.21	131.76
Ashtabula Twp.			2.56	1.24
<b>TOTAL</b>	<b>1,317.02</b>		737.87	460.44

NO <sub>x</sub> EMISSIONS (TONS/YEAR)				
	2002	2010	2020	2030
NOACA TOTAL			26,780.85	8,933.19
AMATS			11,463.37	3,445.60
Ashtabula Twp.			130.67	49.38
<b>TOTAL</b>	<b>77,458.98</b>		38,374.89	12,428.17

Connections 2030 Original

The federal requirements (23 CFR 450.322) for transportation plans require that:

*In nonattainment and maintenance areas for transportation related pollutants, the FHWA and the FTA, as well as the MPO, must make a conformity determination on any new/revised plan in accordance with the Clean Air Act and the EPA conformity regulations (40 CFR part 51).*

The projects identified in the following tables were considered in the conformity analyses for Connections 2030. The summary of the analyses follows the tables.

**NOACA Connections 2030  
Highway Networks Summary**

<b>2006:</b> In addition to the existing system, the 2006 network contains the following capacity projects that will be open by 2006 or that have recently opened.		
County	Project	Identifier
Cuyahoga	Aerospace Parkway Extension	PID 16802
Cuyahoga	Bessemer Avenue Extension: E 65 <sup>th</sup> St to E 55 <sup>th</sup> St	PID 20239
Cuyahoga	Pleasant Valley Road – York Rd to State Rd	PID 10901
Cuyahoga	Euclid Corridor Transit: CBD Transit Zone	PID 20332
Cuyahoga	SR-82 – Lorain/Cuyahoga Co. Line to US-42	PID 7848
Cuyahoga	SR-82 – 0.12 Mi E of IR-71 to Strongsville ECL	PID 9222 & 5557
Cuyahoga	SR-91 – Sandalwood Dr to White Rd	PID 20334
Lake	IR-90 – SR-306 to SR-615	PID 5774
Lake	Heisley Road Phase I – Jackson St to Hendricks Rd	PID 22412
Lorain	Cooper Foster Park Rd Phase III – Kolbe Rd to SR-58	PID 20670
Lorain	Industrial Parkway Extension – Murray Ridge Rd to Existing	PID 3938
Lorain/Cuyahoga	IR-80 – Exit 9A (IR-480) to Exit 10 (IR-71)	TURNPIKE
Lorain	SR-611 Colorado Ave – Henderson Dr to Lorain ECL	PID 4062
Medina	SR-18 – Windfall Rd to Medina/Summit County Line	PID 4082

<b>2010:</b> In addition to the existing system and the projects identified in the 2006 network, the 2010 network contains the following additional capacity projects.		
County	Project	Identifier
Cuyahoga	IR-271/US-322 – IR-271 to Mayfield Heights ECL	PID 12472
Cuyahoga	Crocker/Stearns Rd – Extend SR-10 to US-20, Widen IR-480	PID 8517
Cuyahoga	Rockside Rd – Lombardo Center to IR-77	PID 78091

<b>2010:</b> In addition to the existing system and the projects identified in the 2006 network, the 2010 network contains the following additional capacity projects.		
County	Project	Identifier
Cuyahoga	Innerbelt Curve	PID 77413
Cuyahoga	Quigley Rd. Connector	PID 76941
Cuyahoga	SR-237/Hopkins Airport	PID 23051
Cuyahoga	West Shoreway	PID 25043. 77330
Cuyahoga	Cedar Rd	NA
Cuyahoga	Euclid Corridor Transit – Busway	20332
Cuyahoga	Bessemer Phase II	78076
Lake	US-20 – Mentor ECL to Fern Dr	PID 8411
Lake	IR-90/SR-84 – Bishop Rd: US-6 to 0.25 Mi N of IR-90	PID 9247
Lake	Heisley Rd Phases II & III	NA
Lorain	Tower Blvd Extension – Falbo Ave to Elyria Ave	PID 7311
Medina	IR-71 – Wayne/Medina Co Line to IR-76	PID 14017
Medina	IR-71 – S of SR-3 to S of SR-18	PID 14018
Medina	IR-71 – N of Leroy Rd to S of SR-3	PID 75657

<b>2020/2030:</b> In addition to the existing system and the projects identified in the 2006 and 2010 networks, the 2020 and 2030 networks contains the following additional capacity projects.		
County	Project	Identifier
Cuyahoga	Bagley/Pleasant Valley Rd – Pearl Rd to York Rd	PID 10900
Cuyahoga	SR-87 - IR-271 to Lander Rd	NA
Cuyahoga	IR-77 - IR-80 to SR-82	PID 76760
Cuyahoga	IR-77 – Oakes Rd to IR-480	PID 22222
Cuyahoga	Innerbelt Trench	PID 25795
Cuyahoga	Innerbelt Bridge	PID 77332
Lake	SR-2 Corridor – E 361 <sup>st</sup> St to St. Clair St	PID 13486
Lake	SR-84 Johnny Cake Ridge Rd – SR_306 to Garfield Rd	PID 9670
Medina	US-42 - Harding Rd to Fenn Rd	PID 75995

The NOACA and AMATS Governing Boards are adopting new Transportation Plans and Transportation Improvement Programs. The conformity analyses summarized below document that the air quality impacts of these new plans and programs remain in conformance with the interim conformity regulations for 8-Hour Ozone NAAQS.

Because these amendments affect capacity on the region’s transportation systems, it is necessary, per the 1990 Clean Air Act Amendments and subsequent regulations, to perform the required analyses to ensure:

*Conformity to the (air quality implementation) plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards and achieving expeditious attainment of such standards; and that such activities will not (i) cause or contribute to any new violations of any standards in any area, (ii) increase the frequency or severity of any existing violation of any standard in any areas, or (iii) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.*

The complete conformity document includes documentation for all aspects of these analyses. This summary covers main points. The conformity analyses were conducted in accordance with the *Criteria and Procedures for Determining Conformity to State or Federal Implementation Plans of Transportation Plans, Programs and Projects Funded or Approved Under Title 23 U.S.C. or the Federal Transit Act*, 40 CFR Parts 51 and 93, issued November 24, 1993 and subsequent applicable revisions, and in accordance with the *Ohio State Transportation Conformity Rules, Ohio Administration Code Part 3745-101-01 through 20*, issued August 21, 1995 and subsequent applicable revisions.

The results of the analyses, as displayed in Tables 1 and 2 for Hydrocarbons and Oxides of Nitrogen respectively, is that the considered Transportation Plans and Transportation Improvement Programs conform to Ohio's State Implementation Plan because the projects:

- ◆ Contribute to the State Implementation Plan's purpose of eliminating and reducing ozone violations;
- ◆ Produce emission burdens that are below the applicable budgets established in the State Implementation Plan;
- ◆ Were prepared in accordance with current federal and state conformity guidance.

**Table 1  
Hydrocarbons Emissions Budget Test**

<b>Hydrocarbons (Tons/Day) NOACA</b>		<b>Ashtabula</b>	<b>AMATS</b>	<b>Total</b>
1993 Attainment Year	115.71	12.30	53.39	181.40
<b>2006 Budget</b>				92.70
2006 Emissions	45.20	3.88	22.22	71.30
<b>2010 Emissions</b>	31.15	2.88	16.11	50.14
<b>2020 Emissions</b>	15.11	1.62	8.24	24.97
2030 Emissions	13.48	1.59	7.74	22.81

**Table 2  
Oxides of Nitrogen Emissions Budget Test**

<b>Oxides Of Nitrogen (Tons/Day) NOACA</b>		<b>Ashtabula</b>	<b>AMATS</b>	<b>Total</b>
1993 Attainment Year	102.25	12.10	45.55	159.90
<b>2006 Budget</b>				104.40
<b>2006 Emissions</b>	59.37	5.09	33.61	98.07
<b>2010 Emissions</b>	38.04	3.70	23.76	65.50
<b>2020 Emissions</b>	11.97	1.55	9.33	22.85
<b>2030 Emissions</b>	8.06	1.20	6.84	16.10

## Chapter VIII: Public Involvement

### 2009 Update

Connections 2030 was updated consistent with NOACA's public interaction policy. Limited public comment was received. That which was received was in favor of addressing climate change in the long range transportation planning process.

### Gap Closure Document

SAFETEA-LU requires a separate stand-alone plan for collecting public comments on its planning efforts. The section contains a requirement that “a participation plan—

“(i) shall be developed in consultation with all interested parties; and

“(ii) shall provide that all interested parties have reasonable opportunities to comment on the contents of the transportation plan.”

It also requires that “to the maximum extent practicable— “(i) hold any public meetings at convenient and accessible locations and times;

“(ii) employ visualization techniques to describe plans; and

“(iii) make public information available in electronically accessible format and means, such as the World Wide Web, as appropriate to afford reasonable opportunity for consideration of public information.”

*NOACA developed a participation plan compliant with these requirements for its transportation planning efforts related to this analysis, the SFY 2008-2011 TIP, and the SFY 2008 Overall Work Program. It will continue to update and amend this plan as necessary in response to feedback from interested parties about its effectiveness in meeting their participation needs. NOACA believes this effort makes it compliant with this requirement.*

### Connections 2030 Original

The federal requirements (23 CFR 450.322) for transportation plans require that:

*There must be adequate opportunity for public official (including elected officials) and citizen involvement in the development of the transportation plan before it is approved by the MPO, in accordance with the requirements of § 450.316(b)(1). Such procedures shall include opportunities for interested parties (including citizens, affected public agencies, representatives of transportation agency employees, and private providers of transportation) to be involved in the early stages of the plan development/update process. The procedures shall include publication of the proposed plan or other methods to make it readily available for public review and comment and, in nonattainment TMAs, an opportunity for at least one formal public meeting annually to review planning assumptions and the plan development process with interested parties and the general public. The procedures also shall include publication of the approved plan or other methods to make it readily available for information purposes.*

NOACA conducted public involvement for Connections 2030 consistent with its Public Interaction Policy (PIP), which meets all federal requirements. The PIP provides for public comment opportunities at all of NOACA's meetings. In addition to its regularly scheduled meetings, NOACA also made special effort to provide additional opportunities for input into the development of this plan. These efforts are summarized below.

In April and May of 2004, all communities in Northeast Ohio were sent a “Community Transportation Vision Questionnaire” that asked them to provide input to our planning efforts around several broad topic areas. In addition to responding by mail they were also given the opportunity to respond on our web site. Unfortunately,

only twenty communities responded to this effort despite several follow-up attempts. Their input was and will continue to be considered in our planning efforts.

From May 2004 through the present, NOACA has made a “Public Transportation Vision Questionnaire” available at the agency’s public meetings, at the “Breakfast Break” events for local employers in which NOACA participates, and on our web site. These questionnaires asked several general questions about the region’s transportation facilities and services. Response to this effort has been limited as well. We intend however to continue to give the public this opportunity to provide feedback in the hope that over time we can begin to see trends in the input received.

NOACA worked to partner with other transportation providers. While success was limited, it is our assessment that these partnering activities are beneficial.

Finally, NOACA has shared plan information with the public at two agency events. One was held during our federal certification review. The other was held in concert with our TIP development process.

Attachment A: Example of Generalized Environmental Mitigation Mapping.

# SFY 2008 - 2011 Transportation Improvement Program Programmed Projects (Wetlands)

