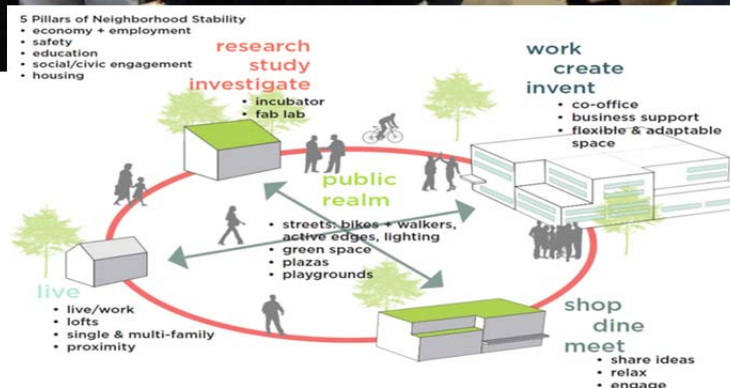
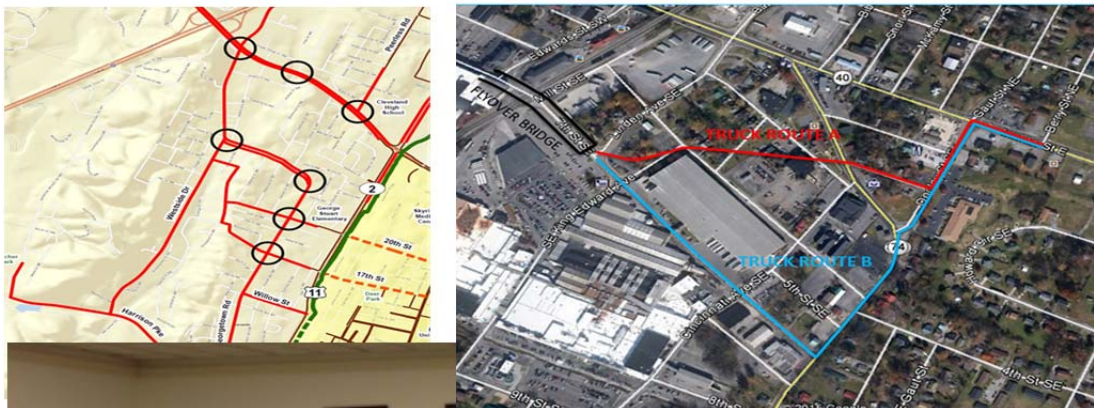


Cleveland Urban Area METROPOLITAN PLANNING ORGANIZATION

FY2016-2017 Unified Planning Work Program

This report was prepared in cooperation with the United States Department of Transportation, the Federal Highway Administration, Federal Transit Administration, the Tennessee Department of Transportation, Southeast Tennessee Human Resources Agency, and MPO area local governments. Aerial and schematic from UTK Smart Communities Initiative (08052015 for Adoption)



Cleveland MPO 2016-2017 UPWP Contents

I. Introduction, Background and MPO Processes p. 1

A. The MPO Process and the UPWP p.1

B. Regional Transportation Planning Process and the UPWP p. 5

C. Public Involvement and the UPWP p. 7

Public participation plan, Meeting schedule, amend/adjust UPWP, ADA, Title VI

II. MAP-21, MPO Planning Requirements, Challenges p.10

A. Performance Based Planning and Programming p.10

B. Federal Planning Factors, Initiatives, and Planning Emphasis Areas p.10

C. National Goals p. 17

D. FHWA's INVEST p. 18

III. On-going Challenges, Accomplishments, and Proposed Work Tasks p.18

A. On-going Challenges to Project Implementation p. 18

B. Accomplishments Under 2014-2015 UPWP p. 20

C. Work Tasks for 2016-2017 UPWP p.21

IV. Financial Tables p. 31

Financial Tables by Work Task p. 31

Financial Tables by Funding Category p. 37

Appendix A --- Acronyms p. 41

Appendix B --- Performance Based Planning p. 51

Appendix C --- INVEST p. 71

I. Introduction, Background, MPO Structure and Processes

A. The MPO Process and the UPWP

Transportation systems must be planned such that they can be built, operated, and maintained in a way that accomplishes the goals of moving people and freight while being responsible toward other societal needs that must be considered as important infrastructure is put in place. The Cleveland Urban Area Metropolitan Planning Organization (MPO) is charged with carrying out this transportation planning effort in Cleveland, Tennessee and its environs as more particularly described below. This document covers a two-year period and it comprises the Unified Planning Work Program (UPWP) which identifies the metropolitan and regional transportation and transportation-related planning activities anticipated within the area during Fiscal Years 2016 and 2017. FY2016 begins October 1, 2015, and FY2017 ends September 30, 2017.

For several decades, federal transportation legislation has required fiscally constrained transportation planning for urbanized areas in excess of 50,000 in population through a Metropolitan Planning Organization (MPO) process. MPO planning extends to the area expected to be urbanized over the next 20 to 25 years. The MPO is responsible for preparing and maintaining metropolitan transportation planning documents, more specifically the UPWP, the Long Range Transportation Plan (LRTP), and the Transportation Improvement Program (TIP). Based on these documents, Federal transportation funds are allocated, including transit funds and funds for alternative transportation, e.g. bicycle and pedestrian. The MPO is responsible for developing a long range transportation plan (LRTP) and a transportation improvement program (TIP) for the metropolitan planning area, in cooperation with the state and affected transit operators and the public. Projects in the cost-constrained long-range transportation plan must be programmed in the transportation improvement program (TIP) in order to be funded and advanced through the environmental, design, right-of-way, and construction phases.

The UPWP is done in fulfillment of the requirements at 23 CFR 450.308(b): “Metropolitan transportation planning activities performed with funds provided under title 23 U.S.C. and title 49 U.S.C. Chapter 53 shall be documented in a unified planning work program (UPWP)....” and 23 CFR 450.308(c) which requires that an MPO’s UPWP include “a discussion of the planning priorities facing the MPA (*Metropolitan Planning Area, italics mine*). The UPWP shall identify work proposed for the next one- or two-year period by major activity and task (including activities that address the planning factors in §450.306(a)), in sufficient detail to indicate who (e.g., MPO, State, public transportation

operator, local government, or consultant) will perform the work, the schedule for completing the work, the resulting products, the proposed funding by activity/task, and a summary of the total amounts and sources of Federal and matching funds.” In addition, the UPWP is to address planning emphasis area delineated by FHWA: (1) Models of Regional Cooperation; (2) Access to Essential Services; and (3) MAP-21 Implementation.

As indicated above, the planning work done under the UPWP is to address eight (8) planning factors found in 24 CFR 306(a); these planning factors are further shaped through the consideration of various Federal initiatives incorporated into the work tasks that are part of the planning process:

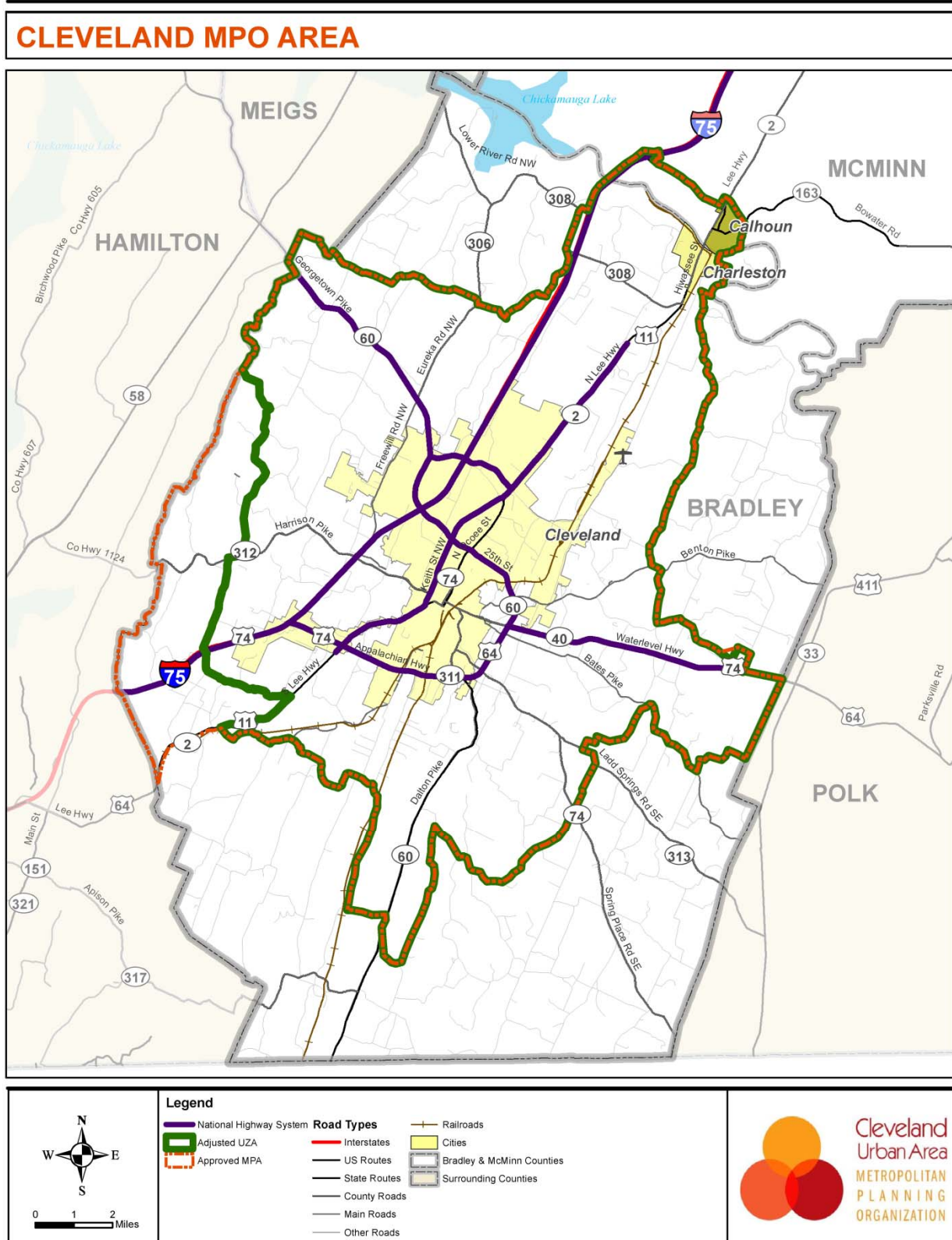
(a) The metropolitan transportation planning process shall be continuous, cooperative, and comprehensive, and provide for consideration and implementation of projects, strategies, and services that will address the following factors:

- (1) Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
- (2) Increase the safety of the transportation system for motorized and non-motorized users;
- (3) Increase the security of the transportation system for motorized and non-motorized users;
- (4) Increase accessibility and mobility of people and freight;
- (5) 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;
- (6) Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- (7) Promote efficient system management and operation; and
- (8) Emphasize the preservation of the existing transportation system.

The MPO for the City of Cleveland, Tennessee and its urbanized area is called the Cleveland Urban Area MPO (CUAMPO). The MPO was formed in 2003 following the 2000 Census when the urbanized area around Cleveland met the threshold requirements for an MPO, and the MPO has undergone some significant changes since then. There are six (6) seats on the MPO Executive Board; five (5) are held by the

following organizations: the Governor of Tennessee, the City of Cleveland (2 seats), Bradley County, and the Southeast Tennessee Human Resources Agency (SETHRA) as the operators of the Cleveland Urban Area Transit System (CUATS). The sixth seat on the MPO Executive Board, added in 2015, rotates annually among McMinn County, the Town of Calhoun, and the City of Charleston which were added as the result of the expansion of Cleveland's Urbanized Area in the 2010 Census. The MPO By-laws, Prospectus, and Public Participation Plan were updated in 2015 to reflect the addition of the 6th MPO Executive Board seat. A Technical Coordinating Committee (TCC), with a membership that was also updated in 2015, evaluates all transportation issues and reports or recommends an action on each to the MPO Executive Board. The TCC works with the MPO Coordinator to perform all of the MPO planning and programming duties. Lastly, the functionally classified street network, those roadways for which the MPO has planning and funding allocation responsibilities, was modified in 2015 to reflect the new larger Metropolitan Planning Area (MPA) that now includes Charleston, Calhoun, portions of unincorporated McMinn County, and a greater area within unincorporated Bradley County. The MPA is shown in the map on the following page.

Figure 1: Cleveland MPO Area Map



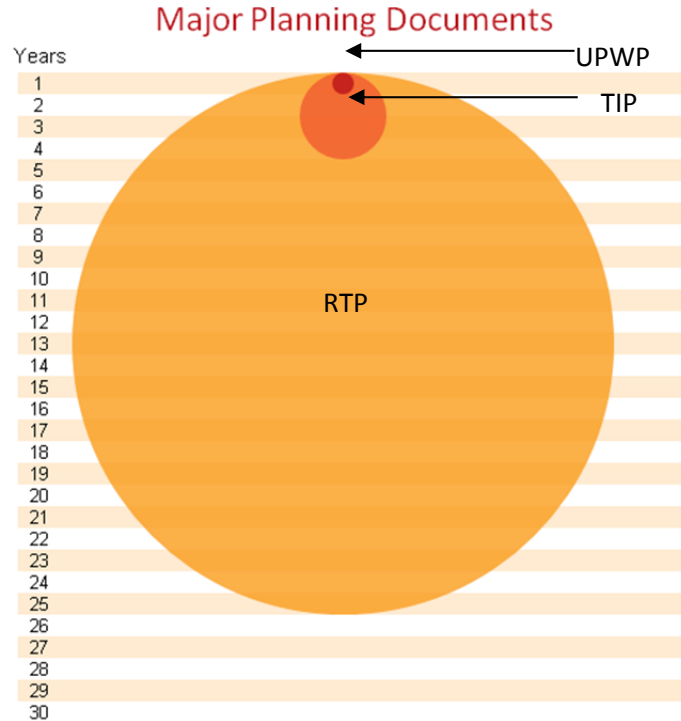
B. The Regional Transportation Planning Process and the UPWP

CUAMPO's *2035 Regional Transportation Plan* and its FY 2014-2017 TIP are expected to remain in place after this document, the FY 2016-2017 Unified Planning Work Program (UPWP), goes into effect October 1, 2015. However, during the period of the 2016-2017 UPWP, the MPO anticipates adoption of a new long range transportation plan, the 2040 Regional Transportation Plan, and a 2017-2020 Transportation Improvement Program. These documents and the work of the MPO are shaped by the current Federal transportation legislation, Moving Ahead for Progress in the 21st Century **Act**, or MAP-21. The MAP-21 legislation, as well Federal and State policies affecting its implementation, establish requirements for MPO transportation planning that are reflected in this UPWP.

The MPO works in close cooperation with officials from the State of Tennessee, the Tennessee Department of Transportation (TDOT), the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), and the Southeast Tennessee Human Resources Agency (SETHRA) to develop the Unified Planning Work Program and works closely with these agencies as well as other agencies as appropriate to carry-out the responsibilities of the MPO. The TDOT has created a Rural Planning Organization (RPO), managed by the Southeast Tennessee Development District, to help address rural transportation needs regionally. The MPO and the RPO work collaboratively with TDOT, FHWA, FTA, and SETHRA to ensure the "3-C" approach (see below) for transportation planning for the Cleveland Urban Area, and the surrounding rural area, for both short and long-range, is effectively implemented.

Since the 1960s, federal law has required that all urbanized areas with a population of at least 50,000 maintain a transportation planning process that is **C**ontinuing, **C**omprehensive, and **C**ooperative ("3-C"). To ensure that the MPO maintains a "3-C" approach to transportation planning, in addition to the UPWP, the MPO produces two other major work products to effectively and efficiently carry out the responsibilities of the MPO. The other major work products are the 20 to 25-year Regional Transportation Plan (RTP), and the 4-year Transportation Improvement Program (TIP). Each is available to the public and interested parties at the MPO's website <http://clevelandtn.gov/index.aspx?nid=153> , at the MPO office located at 185 2nd Street NE, Cleveland, Tennessee 37311, at the Cleveland Public Library, and at the Cleveland/Bradley County Chamber of Commerce. The following figure describes the relationship between the UPWP (red), the TIP (dark orange), and the RTP (light orange).

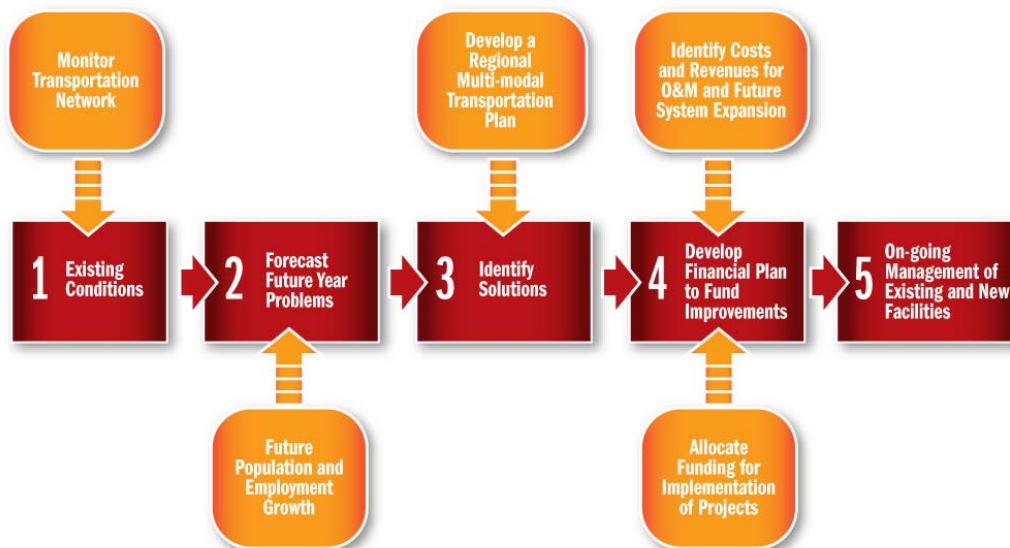
Figure 2. Major Planning Documents



Transportation Planning Process

The MPO is responsible for implementing the planning process as it relates to surface transportation for people and freight moving by different modes. The following figure illustrates the transportation planning process.

Figure 3 Transportation Planning Process



C. Public Involvement and the UPWP

Public input is a critical element in the development of the MPO's plans and programs. The UPWP is a significant document because it provides citizens, the business community, and other agencies a comprehensive understanding of the plans and programs that will be funded and implemented during that fiscal year. The figure below shows the various levels of involvement, and the increasing impact public involvement has on the overall success of transportation-related planning initiatives undertaken by the MPO.

Figure 4: Public Participation Spectrum

	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
Public Participation Goal	Provide the public with balanced and objective information to assist them in understanding the problems, alternatives, opportunities and/or solutions.	Obtain public feedback on analysis alternatives and/or decisions.	Work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	Partner with the public in each aspect of the decision including development of alternatives and the identification of the preferred solution.	Place final decision making in the hands of the public.
Promise to the Public	Keep you informed.	Keep you informed, listen to you and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	Work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	Look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	Implement what you decide.
Example Techniques to Consider	• Fact sheets • Web sites • Open houses	• Public comment • Focus groups • Surveys • Public meetings	• Workshops • Deliberate polling	• Citizen advisory committees • Consensus building • Participatory decision making	• Citizen juries • Ballots • Delegated decisions

INCREASING LEVEL OF PUBLIC IMPACT

Developed by the International Association for Public Participation

The MPO's Public Participation Plan

The Public Participation Plan (PPP) was updated to comply with the current transportation law and the expanded MPA for adoption on May 6, 2015. The FY2016-2017 Unified Planning Work Program was developed in accordance with the requirements of the adopted PPP.

Notice shall be placed in the *Cleveland Daily Banner* when the Technical Coordinating Committee (TCC) recommends the draft FY2016-2017 Unified Planning Work Program for public review and comment.

The notice shall state that copies of the draft UPWP, as endorsed by the Executive Board, are available on the MPO website <http://clevelandtn.gov/index.aspx?nid=153> and at the following locations:

1. The Development and Engineering Services Department, 185 2nd Street NE
2. City of Cleveland Municipal Building, 190 Church Street NE
3. Cleveland Main Public Library, 795 Church Street NE
4. Cleveland Bradley County Chamber of Commerce, 225 Keith Street SW

The notice shall specify the dates, times, and location of forthcoming public hearings and meetings. Special efforts shall be made to provide information on the Unified Planning Work Program to media and organizations serving the low-income and minority populations in the Cleveland Urban Area.

Scheduled Meetings

Notices of MPO meetings are published in the legal advertisement section of *The Cleveland Daily Banner*, at least one week prior to the meeting. The meeting schedule is also posted on the MPO website. The TCC and the Executive Board meet in January, March, May, July, August, September, and November—the August meeting is added to the normal bi-monthly schedule to accommodate a heavy work load near the end of the MPO year, including UPWP adoption. Meetings are generally held on the first Wednesday of the month except when the first Wednesday falls within a week with an observed holiday in which case the meeting would be held the following Wednesday.

Amendments and Adjustments to the Work Program

There may be an occasion to modify this Work Program by adding or deleting a project, or amending the scope of work or funding for a work task. On such occasion, an amendment to the Work Program must be recommended by the TCC and approved by the Executive Board. All meetings of the TCC and Executive Board are publicly advertised meetings. The Public Participation Plan further defines the process for amending or adjusting the Work Program. UPWP Adjustments are those modifications to the UPWP that do not involve a change in scope and/or adjust funding amounts by no more than 20%. UPWP Adjustments do not require a public input process.

Enabling Participation Inclusively

It is the intent of the MPO to take needed measures to assist participation in the MPO planning process. Components of the MPO planning process, such as meeting facilities and access to MPO planning documents, will be such that these are in compliance

with the Americans with Disabilities Act (ADA). Likewise, the MPO planning process will incorporate measures required by law to assist the participation of Limited English Proficiency (LEP) populations.

Implementation of the Americans With Disabilities Act:

Major planning activities should focus on complying with the key provisions of the Americans with Disabilities Act (ADA), such as: public transit authorities providing fixed route transit service must provide comparable level para-transit service to disabled individuals who cannot otherwise use the fixed route service; transit authorities providing elderly and disabled-oriented demand response service must also buy or lease accessible vehicles unless it can be demonstrated that the system provides a level of service to the disabled equivalent to that provided to the general public; key rapid rail and light rail stations must be made accessible as soon as practicable, but not later than July 1993; at least one car per train on light and rapid rail systems must be accessible by July 26, 1995; and new facilities built must be accessible and existing facilities with major alterations must be made accessible to the maximum extent feasible.

Title VI Compliance:

Section 601 of Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the grounds of race, color, or national origin, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." In compliance with Title VI, the Cleveland Urban Area Metropolitan Planning Organization will, on an ongoing basis, ensure that: any programs, services, or benefits are equally distributed without regard to race, color, or national origin; and opportunities to participate in the planning and decision making processes are provided to persons without regard to race, color, or national origin.

II. MAP-21, MPO Planning Requirements, and Challenges

A. Performance Based Planning and Programming

The Cleveland MPO's planning program must fulfill the performance based planning and programming requirements of MAP-21. To some extent the exact nature of these requirements are still being determined, but information exists that will help the MPO prepare for changes that will need to occur within the timeframe of the 2016-2017 UPWP. An analysis of performance based planning and programming requirements and challenges is included in Appendix B of this document. The requirement is described as a system with these characteristics: Strategic Direction (where do we want to go?); Programming (What will it take?); and Implementation and Evaluation (How did we do?). Various challenges to the implementation of such systems were identified by FHWA. Cleveland may look to overall guidance from FHWA regarding this process and to specific FHWA guidance for small MPOs.

As a small MPO with limited resources, the Cleveland MPO is encouraged toward establishing a "performance-ready" planning process, collaboration with TDOT, coordinated data sourcing, communication and transparency, and a cross-sectoral approach (using appropriate data from entities outside transportation planning). Key challenges are identified for the Cleveland MPO regarding performance based planning and programming: lack of an MPO Vision Statement and Mission; and lack of readiness for performance based planning and programming as evaluated using a 20-item FHWA self-assessment tool which, broadly speaking, points to considerably more data collection, analysis, and reporting than presently undertaken by the MPO (see Appendix B).

B. Federal Planning Factors, Initiatives, and Planning Emphasis Areas

MAP-21 Planning Factors

The planning work done under the UPWP is to address eight (8) planning factors found in 24 CFR 306(a) which says that "the metropolitan transportation planning process shall be continuous, cooperative, and comprehensive, and provide for consideration and implementation of projects, strategies, and services...." These planning factors are further shaped through the consideration of various Federal initiatives incorporated into the work tasks that are part of the planning process:

PLANNING FACTOR (1) Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;

ASSOCIATED INITIATIVES:

Transportation performance management
Economic development
Financial planning and forecasting
Multimodal and intermodal freight planning and performance
Public private partnerships
Strategic Highway Research Program (SHRP)
Every Day Counts (EDC)

TDOT has partnered with FHWA in various ways to implement the Every Day Counts program. Included are programmatic agreements with regulatory agencies that build relationships and speed project review time, strengthening planning and environmental linkages to help move environmental considerations forward into the earlier stages of the planning process, clarification of preliminary design that can occur before NEPA approval to streamline the identification of project issues, and other improvements. The Cleveland MPO, as a participating partner in the transportation planning process, also benefits from Every Day Counts.

The Cleveland MPO continues to work closely with local jurisdictions and economic development organizations to bring about transportation project that support economic development and job growth such as the improvements at Exit 20 and Exit 33, the new interchange on APD-40 supporting the new industrial park, the Whirlpool-related State Industrial Access (SIA) Road, the 20th Street and Michigan Avenue Road Improvements Study, and the Central City Area Brownfield Redevelopment Plan.

PLANNING FACTOR (2) Increase the safety of the transportation system for motorized and non-motorized users

ASSOCIATED INITIATIVES:

Transportation safety planning and performance

Cleveland MPO staff were involved in the processing of accident data in support of the 20th Street and Michigan Avenue Road Improvements Study and the Eastern Federal Lands grant application for improvements affecting post office access. Also, in process are a revision to the Mouse Creek Road project to include a greater safety component that will necessitate some work outside of the existing narrow ROW, and a pedestrian safety study for the 25th Street corridor.

PLANNING FACTOR (3) Increase the security of the transportation system for motorized and non-motorized users

ASSOCIATED INITIATIVES:

Disaster preparedness and Continuity of Operations (COOP) planning
Climate trends and extreme weather

Within the current 2035 RTP climate change/ extreme weather mitigation and adaptation were addressed in the planning process. Specifically, this Federal Initiative is addressed under work task group “E. TRANSPORTATION SYSTEM OPERATIONS PLANNING” that deals with issues such as maintaining traffic flow to avoid unnecessary stopping and starting, continued development of the Intelligent Transportation System (ITS), and participation in TDOT’s Extreme Weather Initiative.

PLANNING FACTOR (4) Increase accessibility and mobility of people and freight

ASSOCIATED INITIATIVES:

Access management and corridor management
Americans with Disabilities Act (ADA) accessibility
Congestion management, travel time reliability, and system performance
Active transportation and transportation alternatives
Multimodal and intermodal freight planning and performance

Operating under the 2035 RTP, the Cleveland MPO has participated in the SR60 Corridor Management Committee process. Working the University of Tennessee and its Center for Transportation Research and access management planning study is under development for SR 60 at this time and can be integrated into the 2040 RTP process. The Cleveland MPO is currently working with a variety of neighborhood organizations, professional groups, and others to develop a revised multimodal plan that will encompass revisions to the bicycle and pedestrian plan and the transit plan, both of which will be merged into one coordinated multimodal plan under the 2040 RTP.

One planning need to be addressed in the FY2016-FY2017 period is to improve the sidewalk inventory. MPO staff is looking at a model from the Johnson City MPO for assessing sidewalk conditions and rating them in terms of repairs needed and ADA-compliance issues. The MPO would like to reach out to the local college communities, where service hours are a part of the curriculum in some cases, and develop a partnership for the labor-intensive sidewalk inventory.

PLANNING FACTOR (5) 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

ASSOCIATED INITIATIVES:

Livability
Sustainability
Title VI and environmental justice
Planning and environmental linkages (PEL)
Air quality and public health
Integrating transportation and land use

The Cleveland MPO has worked to integrate the livability principles of more transportation choices, equitable-affordable housing, enhanced economic competitiveness, support for existing communities, coordinated policies, leveraging investments, and valuing communities and neighborhoods into the transportation planning process. The MPO and TDOT participated in the BCC2035 Strategic Plan process conducted in 2010 by Bradley County and the Cities of Cleveland and Charleston. That plan focused on increasing densities where supporting infrastructure, including transportation systems, already exists; it addressed meeting housing needs across the income spectrum; it addressed supporting existing neighborhoods; and it addressed economic development and freight needs. The 2035 RTP corresponds well with the BCC2035 Strategic Plan and the 2040 RTP presently under development has relied upon the BCC2035 to develop the growth distribution pattern informing the new travel demand model. Work task group “B. LONG RANGE TRANSPORTATION PLANNING” in the 2035 RTP addresses economic competitiveness through freight planning and it addresses support for existing communities, coordinated policies, equitable-affordable housing, and valuing communities and neighborhoods by supporting environmental justice, by including continued improvements to the transit system, and by supporting continued improvements to the bicycle and pedestrian systems. The 2040 RTP long range transportation plan task will likewise support these various areas. Work task group “C. TRANSPORTATION IMPROVEMENT PROGRAM” likewise supports livability by facilitating the implementation of projects in the 2035 RTP, and that will be continued in the 2040 RTP. Work task group “D. TRANSIT PLANNING” in the 2035 RTP addresses livability principles by providing for greater access to public transportation, including access in low- and moderate-income neighborhood areas and areas with higher minority populations. This trend will also continue in the 2040 RTP.

Work task groups B and C in the 2035 RTP, Long Range Transportation Planning and the Transportation Improvement Program, support sustainability by focusing on the maintenance, preservation, and improvement of existing transportation facilities in areas with existing development. During the development of the 2040 RTP, the FHWA “INVEST” (Infrastructure Voluntary Evaluation Sustainability Tool), will be utilized to evaluate the current long range transportation plan and guide in the development of the 2040 RTP as elsewhere described in this UPWP document.

PLANNING FACTOR (6) Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight

ASSOCIATED INITIATIVES:

Active transportation and transportation alternatives
Multimodal and intermodal freight planning and performance

Within the 2040 RTP there will be a combining of the bicycle pedestrian and transit plans. This will allow policy makers to identify the most critical and rational linkages between these systems. It should help to expand the reach of the transit system which suffers resource constraints along with growing demand and a much larger urbanized area for potential service.

PLANNING FACTOR (7) Promote efficient system management and operation

ASSOCIATED INITIATIVES:

Planning for operations
Congestion management, travel time reliability, and system performance
Transportation system management and operations (TSMO)

The Cleveland Utilities traffic signal operations manager regularly participates in MPO TCC meetings and other transportation activities, including consulting on pedestrian crossing planning. Signal timing on major corridors has been an on-going effort in the face on increased volumes and greater demands for access in some locations. During the upcoming FY2016-FY2017 it is likely that there will be some examination of different possibilities for allowing intersection turn movements at lower volume times when the intersection is clear.

PLANNING FACTOR (8) Emphasize the preservation of the existing transportation system

ASSOCIATED INITIATIVES:

Asset management
Pavement and bridge performance

Bridge and pavement conditions continue to be issues within the MPO. It would be useful in the FY2016-FY2017 planning period to compile the available bridge data, and review recent and planned TDOT work as well as any local work to get a better grasp on bridge issues within the MPO. Pavement conditions, both on and off the NHS routes, are a problem and they have likely been aggravated by winter weather in recent years. The Cleveland MPO and the City of Cleveland regularly program money to resurfacing but the paving cycle is extremely long. Cleveland Public Works routinely evaluates paving conditions within the City keeping an inventory of paving needs.

Planning Emphasis Areas

The U.S. Department of Transportation has identified three Planning Emphasis Areas (PEAs) for 2015 and beyond, and beginning in 2016 State DOTs and MPOs are encouraged to also emphasize public health in transportation planning:

PEA (1) Models of Regional Planning Cooperation

Promote cooperation and coordination across MPO boundaries and across State boundaries where appropriate to ensure a regional approach to transportation planning. This is particularly important where more than one MPO serves an urbanized area or adjacent urbanized areas. This cooperation could occur through the metropolitan planning agreements that identify how the planning process and planning products will be coordinated, through the development of joint planning products, and/or by other locally determined means.

Coordination includes the linkages between the transportation plans and programs, corridor studies, projects, data, and system performance measures and targets across MPO and State boundaries. It also includes collaboration between State DOT(s), MPOs, and operators of public transportation on activities such as: data collection, data storage and analysis, analytical tools, target setting, and system performance reporting in support of performance based planning. The Cleveland MPO dialogues with the Chattanooga TPO regularly and participates along with the Chattanooga TPO, the Dalton MPO, and other organizations in the transportation issues discussions sponsored by THRIVE 2055 planning process that serves a sixteen county region in Tennessee, Georgia, and Alabama.

PEA (2) Access to Essential Services--- “Ladders of Opportunity”

As part of the transportation planning process, identify transportation connectivity gaps in access to essential services. Essential services include housing, employment, health care, schools/education, and recreation. This emphasis area could include identification of performance measures and analytical methods to measure the transportation system's connectivity to essential services and the use of this information to identify gaps in transportation system connectivity that preclude access of the public, including traditionally underserved populations, to essential services. It could also involve the identification of solutions to address those gaps. The Cleveland MPO will be participating in the Coordinated Human Services Plan process being implemented on a regional basis by the TDOT Multi-modal Division. Several issues within this topic area were discussed at the March 31, 2015 2040 RTP Steering Committee meeting such as access to transit services for second and third shift workers, the disparity between shift start/end times and daycare opening/closing times, etc.

PEA (3) MAP-21 Implementation

The development and implementation of a performance management approach to transportation planning and programming includes the development and use of

performance measures, target setting, performance reporting, and transportation investments that support the achievement of performance targets. These components will ensure the achievement of transportation system performance outcomes.

The use of scenario planning by MPOs as part of developing metropolitan transportation plans. MPOs may use scenario planning to improve decision making by providing information to the public and to decision makers on the performance outcome tradeoffs of various investment decisions when developing the metropolitan transportation plan. The Cleveland MPO has work to do in implementing a scenario planning process that will serve to evaluate the benefits of and progress toward different strategic policy bundles for the future of our area's transportation system, but it should be able to lay the groundwork as the 2040 RTP is developed for adoption.

PEA (4) Public Health

The FHWA has identified a number of tools for the integration of land use planning and transportation planning. Among these tools, those that were focused on the linkage between planning and public health were indicated as an emerging topic.

The FHWA notes "how people travel influences health in a variety of ways, due to factors such as air quality, physical activity levels, safety, and access to healthy food and medical care. Land use, transportation, and health-related decisions are made by a range of actors and agencies at different organizational levels. These entities may collaborate to develop effective planning tools, policies, and incentives in order to influence public health outcomes". Planning and policy tool examples from case studies are categorized in three groups including coordination between planning and health departments, health impact assessment tools, and statewide healthy transportation planning and coordination.

http://www.fhwa.dot.gov/planning/processes/land_use/land_use_tools/page09.cfm

The Cleveland MPO has engaged with the Bradley County Health Department in multi-modal transportation planning efforts. Working jointly with the Cleveland planning department which provides staff support for the MPO, the Bradley County Health Department participated in the University Of Tennessee's Smart Communities Initiative (SCI) program which addressed several local planning needs that integrated issues of transportation and land use. The SCI program specifically addressed proposed redesign and modernization of the health department facilities to address community needs in the existing location near sidewalks and the transit center. The MPO anticipates that it will continue to engage with the Health Department in terms of overall transportation planning and specific projects such as the location of a bus shelter to serve Health Department clients.

The Cleveland MPO is a small MPO and does not have the resources to engage in a formal Health Impact Assessment process related to its projects. However, it is known that our state and locality suffer from a high incidence of obesity and associated health problems. It is also known that accessibility of healthy food choices and the ability to walk or bicycle between various destinations within the scope of daily living

would be beneficial countermeasures. The MPO will continue to conduct transportation planning in a manner that is supportive of the Cleveland Comprehensive Plan vision of greater in-town density and mixture of uses with improved multi-modal accessibility and with Smart Communities Initiative redevelopment themes involving accessibility to local produce. Specific bicycle and pedestrian transportation planning efforts would include greenway expansion, extension of sidewalks along major corridors, and rational sidewalk connections to major corridors along local neighborhood streets.

The MPO intends to participate in the statewide healthy transportation planning and coordination effort through the Tennessee Department of Transportation's Office of Community Transportation (OCT). "The Tennessee Department of Transportation (TDOT) established the Office of Community Transportation (OCT) in early 2013 to better coordinate local land use decisions with State transportation planning. In addition to lower infrastructure costs, TDOT anticipates that OCT involvement in land use decisions will help reduce the automobile-centric focus of future growth, and improve public health by providing opportunities for active transportation such as walking and bicycling. The OCT will be supported by a current update to the State long-range transportation plan, which will elevate the importance of bicycle and pedestrian facilities in project planning and design. Four satellite offices staffed with planners from the OCT Community Planning section will work with local communities to promote regional considerations in comprehensive plans as they relate to the State transportation system. Considerations include ensuring that future growth is integrated with existing State infrastructure as much as possible, and that new infrastructure is developed in a coordinated, cost-effective manner that reduces sprawling, isolated development patterns. OCT planners assist with articulating the implications of land use and transportation decisions in the planning process as well as with establishing local partnerships, potentially with local public health agencies". http://www.fhwa.dot.gov/planning/processes/land_use/land_use_tools/page09.cfm

C. National Goals

National Goals: MAP-21 requires performance goals in the following key areas, and the MPO will need to determine how to incorporate performance goals across each of these key areas into its planning documents (see FHWA MAP-21 Fact Sheet on Performance Management <http://www.fhwa.dot.gov/map21/factsheets/pm.cfm>):

Figure 5: MAP-21 National Goals

Goal area	National goal
Safety	To achieve a significant reduction in traffic fatalities and serious injuries on all public roads
Infrastructure condition	To maintain the highway infrastructure asset system in a state of good repair
Congestion reduction	To achieve a significant reduction in congestion on the

	National Highway System
System reliability	To improve the efficiency of the surface transportation system
Freight movement and economic vitality	To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development
Environmental sustainability	To enhance the performance of the transportation system while protecting and enhancing the natural environment
Reduced project delivery delays	To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices

D. FHWA's INVEST

One aspect of the National Goals is environmental sustainability. Evaluation of the MPO's transportation planning program for environmental sustainability is a complex undertaking. FHWA has developed a voluntary program for sustainability evaluation known as INVEST, a portion of which is directed at System Planning. The Cleveland MPO is undertaking an evaluation of its 2035 Regional Transportation Plan (RTP) utilizing some of the INVEST System Planning measures in order to guide the development of the 2040 RTP. Appendix C elaborates upon this use of the INVEST tool by the Cleveland MPO.

III. On-going Challenges, Accomplishments, and Proposed Work Tasks

A. On-going Challenges to Project Implementation

1. Continued coordination with other agencies on the I-75 Exit 33, I-75 Exit 25, S.R. 60 Georgetown Road, I-75 Exit 20, LIC (Local Interstate Connector) South, LIC North, and US-64/US-74 Interchange Projects

In FY2014-2015, the MPO worked collaboratively with local officials and planning staff to ensure smart and strategic comprehensive planning practices are executed for the projects listed above, to prepare for an increase in residential, industrial and commercial growth as a result of the new Whirlpool plant, Wacker

Chemie, Amazon, and other Bradley County industry as well as the Volkswagen plant in Hamilton County. At this point the Exit 20 project is nearing completion, LIC South has been completed, the US 64/74 (APD-40) interchange is under construction, and LIC North remains to be done. Improvements are being made at I-75 Exit 33. SR60 Georgetown Road is at the ROW stage but has been postponed in the TDOT work program due to funding constraints. During the FY2016-FY2017 period the Cleveland MPO will continue to work to advance these projects. The economic growth will have an impact on the MPO area and as a result, the MPO will be faced with the challenge of updating and maintaining the existing transportation network to accommodate the anticipated growth.

2. Coordination with other agencies and planning efforts in areas affected by major growth or land use change, and in areas newly included within MPO boundaries

Cleveland, Charleston, and Bradley County worked to develop updated and coordinated comprehensive plans in FY2012 and FY2013, along with small area plans for area of high growth and/or significant land use change (Northern Growth Corridor near Mouse Creek Road, Exit 33, and Charleston; the Southern Growth Corridor near Exit 20 and McDonald; and the Cleveland Central City area including the historic downtown, parts of what has historically been considered as East Cleveland and South Cleveland, and the Wildwood/ Dalton Pike corridor.) This planning effort has a significant land use and transportation component. Additional efforts will be needed to coordinate with McMinn County and Calhoun that are within the 2010 Census urbanized area boundary for Cleveland; these communities share the U.S. 11 facility with the other MPO communities (TDOT produced a Transportation Planning Report that examines widening of the two-lane area north of Cleveland through the urbanized area to approximately Riceville in McMinn County). Coordination of this planning effort and its subsequent implementation activities is also needed with the SR60 Corridor Management project spearheaded by TDOT with other state agencies and local governments which to date has resulted in a draft Memorandum of Understanding (MOU) for the SR60 corridor. Coordination has been advanced with changes to the MPA, the MPO Prospectus and By-laws, and the MPO Public Participation Plan to include the new areas within the MPO

3. Coordination on S.R. 60 Corridor Management

TDOT and other state agencies along with the City of Cleveland and Bradley County entered a Memorandum of Understanding concerning corridor management on S.R. 60 from the Georgia state line to Eureka Road. Work has begun on a plan and process for corridor management in this area. One important item that needs to be completed is the development of access management standards for different areas along the corridor. A draft access

management planning study is nearing completion by the UT Center for Transportation Research and should be ready for the SR 60 Corridor management Committee to use in developing an access management plan for the corridor during FY2016-FY2017.

4. Management of the planning process facilitating TIP project implementation

The FY2014-FY2017 Transportation Improvement Program (TIP) has continued the shift toward more cost-conscious programming with greater emphasis on 3R (Resurfacing, Rehabilitation, or Restoration) and Pedestrian project groupings. The process of developing a new four-year TIP for FY2017-FY2020 TIP will need to be carried out in FY2016 and FY2017.

5. Management of the planning process facilitating 2035 RTP project implementation

The 2035 Regional Transportation Plan was adopted in May of 2011 and the MPO will effectively manage the Plan and process amendments to the Plan as needed. The MPO faces the challenge of maintaining on-going communication with local officials to ensure the Plan continues to demonstrate the highest priority transportation projects in the MPO area. This communication challenge is transferred to a larger MPA with more governmental jurisdictions as the 2040 RTP process moves forward.

B. Accomplishments From Under Current 2014-2015 UPWP

Under the current FY2014-FY2015 UPWP the MPO accomplished several significant planning work items. These include a consulting contract for the new 2040 RTP which is now underway, various amendments and adjustments to the 2014-2017 TIP, initiation and near completion of the 20th Street and Michigan Avenue Road Improvements Study, successful application for and completion through the NEPA stage of a TDOT Multimodal Access Grant for completion of sidewalks along the Wildwood Avenue/Dalton Pike corridor along with other improvements including the first bus shelter for CUATS, submittal of a Multimodal Access Grant application for sidewalks and a bus shelter improvement serving Peerless Road and Keith Street near Stuart School, completion through NEPA submittal of sidewalk plans for 17th and 20th Street sidewalk extension, construction initiation of Phase II and Phase III 25th Street median landscaping, and submittal of an FHWA Eastern Federal Lands Access Grant application for neighborhood connector sidewalks and street improvements serving Cleveland's main post office.

The MPO, through the City of Cleveland, has partnered with the University of Tennessee under the Smart Communities Initiative (SCI) program to develop plans for and Inman Street Road diet and bicycle/pedestrian plan, a Blythe Avenue sidewalk extension plan,

and a Woolen Mill Branch Greenway Extension plan. The SCI program just described also included a neighborhood capacity building effort and neighborhood outreach on various issues including transportation issues, and other efforts especially addressing the Environmental Justice area of the community.

A review of the Mouse Creek Road 3R project was done and it is being reconfigured as a cooperative safety project proposal to TDOT with most of the funding coming from the MPO dollars that were designated for the 3R project (analysis showed that this change would provide more benefits relative to costs). In another safety-related effort, work has also begun at the very early stages in coordinating a 25th Street Corridor Pedestrian Safety Study.

A revised MPA was studied and approved by the Governor after consultation with new communities inside the 2010 UZA about how they would be represented on the MPO. Following the MPA approval, a new draft Public Participation Plan was prepared along with a new draft Prospectus and By-laws document. A new functional classification map reflecting the expanded MPA has also been adopted.

C. Work Tasks for 2016-2017 UPWP

Work Task I --- ADMINISTRATIVE ACTIVITIES

Responsible Agencies

The responsible agencies include the Tennessee Department of Transportation (Long Range Planning Division, the Local Program Development Division, and Multimodal Transportation Resources Division) and the Cleveland Urban Area Metropolitan Planning Organization.

Purpose

To manage and administer the transportation planning program and ensure the participation and cooperation with all involved agencies, citizen groups, and individuals is a transparent and public process.

Previous Work

The MPO staff arranged, advertised, conducted and recorded all of the MPO Executive Board and TCC meetings during FY2014-FY2015. The MPO staff prepared quarterly billings for the 2014-2015 fiscal years. Each year the MPO staff prepares and manages the Unified Planning Work Program (UPWP) and attends various Federal Highway Administration and Tennessee Department of Transportation training sessions.

TDOT Multimodal Transportation Resources will administer correspondence and telephone contacts regarding river transportation, urban public transit, rail service, ridesharing, and transportation systems management. Representatives of this office will participate in MPO meetings; distribute federal guidelines and requirements; conduct seminars and work sessions; provide advice and assistance concerning feasibility of river transportation development; review study documentation and reports; administer funds for port development. This office will coordinate FTA's Section 5303 and other transit funding programs serving the MPO area.

FY2016-FY2017 Tasks

- 1.** Develop and oversee work schedules and study agreements, coordinate activities of the MPO Executive Board and TCC and provide information upon request.
- 2.** Develop and maintain agreements with appropriate parties of the planning process and update Prospectus and By-laws when needed, and any other amendments to bring the document(s) into compliance. This will include the means for remaining proactive; ensure compliance with ADA legislation; and ways to seek out the underserved. Organizational and outreach activities for the Title VI Program will continue throughout the year and the MPO will update as needed the Annual Title VI compliance report.
- 3.** Develop the FY2018-FY2019 Unified Planning Work Program for MPO Executive Board adoption and submittal to TDOT, FHWA, and FTA.
- 4.** Make amendments to the FY2016-FY2017 UPWP as required.
- 5.** Encourage a cooperative and open transportation planning process through the participation of interested individuals, organizations, and local/state governments.
- 6.** Participate in the Association of Metropolitan Planning Organizations and Tennessee Association of MPO Coordinators meetings.
- 7.** Serve as a source of state and federal policy review, study documentation and reports, and otherwise coordinate with TDOT Multimodal Transportation Resources and the SETHRA as operators of the local transit system CUATS regarding FTA funds and FTA programs 49 CFR 5309, 5303, 5307 and 5310.
- 8.** The MPO staff will provide data and transportation planning assistance for transportation projects enhancing modal choice, including project proposal development for competitive grant applications under various sources including Safe Routes to Schools and Transportation Alternatives funds.
- 9.** The MPO staff will collaborate with officials at the Cleveland Urban Area Transit System (CUATS), SETHRA's transit system in the Cleveland Urbanized Area, to pursue any transit grants available and to ensure a comprehensive and collective approach to transportation planning is practiced to guarantee the citizens public transportation.

- 10.** The Long Range Planning Division of TDOT will work jointly with the MPO to establish the administrative and technical procedures required, prepare contractual agreements as required, attend all study meetings, distribute special and annual reports and study documents, review and analyze individual transportation planning projects and studies, and undertake general administrative activities. The MPO will continually look for guidance from the Long Range Planning Division at TDOT on all issues pertaining to the MPO.

Products

Products of the MPO staff include minutes of MPO meetings, monthly meeting packets, quarterly progress reports, various contracts and agreements, files and records as required, and the UPWP. Additionally, MPO staff will perform all work necessary to maintain an ongoing transportation planning program that meets FTA, FHWA and TDOT requirements and regulations.

Figure 6: Task I Product Schedule

Product	Schedule
FY2018-FY2019 Unified Planning Work Program	Winter/Spring/Summer 2017
Amendments/Adjustments to the UPWP	As needed
Quarterly Invoices and Reports	Quarterly
Administration and Coordination of meetings	On-going task

Work Task II--- LONG RANGE TRANSPORTATION PLANNING

Responsible Agencies

The responsible agencies include the Cleveland Urban Area Metropolitan Planning Organization; City of Cleveland, Bradley County; and the Tennessee Department of Transportation, Long Range Planning Division.

Purpose

The Cleveland Area Metropolitan Planning Organization, in conjunction with Bradley County, City of Cleveland, the City of Charleston, the Town of Calhoun, McMinn County, SETHRA, FTA, FHWA, and TDOT, will work to prepare the 2040 Regional Transportation Plan for adoption and amend the adopted plan as needed. Major activities for the MPO beginning in FY2016-FY2017 will be the adoption process for the 2040 RTP, continued participation TDOT's new Statewide Long Range Plan, and preparation for the implementation of Performance Based Planning and programming.

Previous Work

The MPO hired consultants to work with staff in the development of the 2040 RTP. TDOT has worked with the MPOs to help with model development, freight planning and ITS development and implementation. The MPO, working with consultants, developed amendments to the 2035 RTP as needed to implement various projects.

FY2016-FY2017 Tasks

- 1.** The MPO staff will continue the on-going management of the 2035 RTP and the development, adoption, and implementation of the 2040 RTP. This effort will address the needs of passengers and freight encompassing highway transportation, transit, and non-motorized modes.
- 2.** Work will continue on model development, ITS architecture and planning and assistance with freight planning as needed.
- 3.** The MPO will remain proactive by addressing problems before they arise, by creating a planning network with consistent up to date data and projections to use in the travel demand model and other plans that will show a clearer picture of future needs within the MPO planning area boundary.
- 4.** The MPO will continue to manage the updates and maintenance of the new travel demand model to ensure the accuracy of the data and to ensure that the most recent data is available for input into the model.
- 5.** The MPO will continually update the Environmental Justice portion of the RTP to incorporate changes in the TIP and future projects, and to reflect available data from the 2010 Census.
- 6.** FHWA has developed INVEST (Infrastructure Voluntary Evaluation Sustainability Tool), a web-based collection of voluntary best practices. The evaluation criteria in INVEST address the “triple bottom line” principles of sustainability (social, economic, environmental) across three key areas of transportation planning: systems planning, project development criteria, and operations and maintenance criteria. The MPO will utilize the Systems Planning (SP) portion of INVEST for evaluation of the RTP.
- 7.** The MPO will continue coordinate with TDOT in the development of TDOT’s new Statewide Long Range Plan.
- 8.** The MPO will coordinate with TDOT in various aspects of MAP-21 required performance management that affect long range planning by the MPO and which contain reporting requirements applicable to the MPO.

Products

A continually updated Long-Range Transportation Plan for the Cleveland, Tennessee MPO Area.

Figure 7: Task B Product Schedule

Product	Schedule
Regional Transportation Plan Amendments	As needed
New Long Range Transportation Plan (2040 RTP)	Complete Spring 2016
Administration and coordination of meetings required for the RTP amendment or adjustment process	As needed
Develop and Implement Performance Based Planning and Programming approach for MPO in cooperation with TDOT	On-going

Work Task III --- TRANSPORTATION IMPROVEMENT PROGRAM

Responsible Agencies

The responsible agencies include the Tennessee Department of Transportation, Long Range Planning Division; and the Cleveland Urban Area Metropolitan Planning Organization.

Purpose

The Cleveland Area Metropolitan Planning Organization, in conjunction with Bradley County, City of Cleveland, FTA, FHWA, and TDOT, will continue to work collaboratively to manage the FY2014-FY2017 Transportation Improvement Program (TIP) and coordinate with local agencies to ensure the advancement of projects in the TIP. These agencies will also work to develop and implement the FY2017-FY2020 TIP. All work to be completed on this task will be in compliance with the MPO adopted Public Participation Plan, to ensure that public involvement is included in the end products.

Previous Work

The MPO Executive Board adopted the FY2014-FY2017 TIP in October 2013. In FY2014-FY2015, working with Parson Brinkerhoff, MPO staff processed TIP amendments and adjustments to ensure successful management of the 2014-2017 TIP and effective implementation of projects programmed in the TIP, and it is expected that staff will continue to process amendments and adjustments to the 2014-2017 TIP and 2017-2020 TIP as needed.

FY2016—FY2017 Tasks

1. The MPO will amend and adjust the FY2014-FY2017 TIP as needed.
2. The MPO will review proposed projects by TDOT, local implementing agencies, CUATS, and private developers for transportation, for Title VI impacts, and consistency with the RTP.
3. The MPO will be addressing the requirements of 24 CFR 450.322 that pertain to the annual listing of obligated projects. The MPO will monitor projects that are programmed in the TIP to ensure proper funding and priorities are being met.
4. The MPO will develop the 2017-2020 TIP

Products

Products will include any amendments and adjustments to the FY2014-FY2017 TIP and the development and adoption of the 2017-2020 TIP.

Figure 8: Task C Product Schedule

Product	Schedule
Amendments / Adjustments to the TIP	On-going task
Listing of Obligated Projects	Spring 2016 and 2017
MPO Project Priority List for TDOT	Winter 2016 and 2017
Administration and Coordination of meetings for the TIP process	On-going task
Develop 2017-2020 TIP	Winter, Spring, Summer 2016

Work Task IV--- TRANSIT PLANNING**Responsible Agencies**

The responsible agencies include Tennessee Department of Transportation, Project Planning Division and Multimodal Transportation Resources Division; Cleveland Urban Area Metropolitan Planning Organization, City of Cleveland, City of Charleston, Town of Calhoun, Bradley County, McMinn County, and the Southeast Tennessee Human Resources Agency.

Purpose

The Cleveland Area Metropolitan Planning Organization will work in partnership with Bradley County, City of Cleveland, FTA, and SETHRA, to address the transit needs of the population within the MPO planning boundary.

Previous Work

The MPO adopted the Transit Plan in 2006 that was developed for the MPO by a consultant. The MPO integrated the Plan into the Regional Transportation Plan (RTP) that was adopted in August 2008. The MPO worked closely with SETHRA on the Cleveland Depot Project. The MPO and SETHRA met with PB Americas, Inc. to gather data with the purpose of reviewing and analyzing the existing transit system, to make recommendations as part of the development of the Transit System Plan element of the 2035 RTP. A Transit System Plan that recommends improvements to the existing system, projects future ridership and identifies potential future extensions of the system has been adopted as part of the 2035 RTP process. Working with PB Americas, Inc. and SETHRA, during FY2012 and FY2013 a route study was prepared to evaluate issues with existing routes, to suggest propose route changes and additions, and to consider bus stop locations and signage improvements. In FY2014 and FY2015, MPO and CUATS staff coordinated on the development and submittal of Multimodal Access grant applications to TDOT including what would be the systems first bus shelters. MPO and CUATS staff have worked through the University of Tennessee SCI program to further the process of bus shelter planning for the system during FY2015.

FY2016-FY2017 Tasks

All work to be completed on this task will be in compliance with the MPO adopted Public Participation Plan, to ensure that public involvement is included in the end products.

- 1.** The MPO will continue to work closely with the Southeast Tennessee Human Resources Agency (SETHRA) to develop a transit network that meets the needs of the public within the MPO boundary. Work will consist of, but is not limited to the following; studies needed to provide better routing of buses, changes of bus routes to meet the needs of the ridership, location of future transfer facilities and stops, the need for any additional routes, public notification of proposed transit changes.
- 2.** The MPO will continue to collaborate and assist the Cleveland Urban Area Transit System and SETHRA in the development of a plan for improving bus stops with features such as shelters, benches, and improved signage.
- 3.** The MPO staff will assist with any additional updating of the Human Service Coordination Plan required by MAP-21 or subsequent legislation (the last update was done in 2012 and a new region-wide update is underway in 2015 under the

auspices of TDOT's Multimodal Division). Activities for this task will be provided primarily by the MPO Staff or consultants, the Tennessee Department of Transportation's Division of Multimodal Transportation Resources, in conjunction with the Southeast Tennessee Human Resources Agency (SETHRA).

4. The MPO staff, CUATS staff and others will work cooperatively in the 2040 RTP planning process to consolidate the bicycle/pedestrian plan and the transit plan into a coordinated multimodal planning document.

Products

A continuously updated Transit Systems Plan that serves the current needs of the population within the MPO planning area boundary.

Product Schedule

Work tasks are a continuing collaborative effort with SETHRA and CUATS. The MPO will update or amendment the Human Services Plan as needed.

Figure 9: Task D Product Schedule

Product	Schedule
Updated Plan for bus stop improvements	Fall 2015
Updates to the Transit Systems Plan	On-going task
Updates to the Human Services Plan	On-going task
Consolidation of Transit and Bike/Ped plans	Spring 2016

Work Task V --- Data Collection

Responsible Agencies

The responsible agencies include the Tennessee Department of Transportation; Cleveland Urban Area Metropolitan Planning Organization; Cleveland Utilities Electric Division, and others.

Purpose

To maintain the current inventory of data and conduct studies appropriate to planning for transportation system design and operations within the MPO planning boundary.

Previous Work

Data was gathered from a multitude of sources for the development of the 2035 Long Range Transportation Plan. Traffic volumes have been collected at 109 annual cycle count stations. Special count data was collected for design projects as required. Accident data from Tennessee Department of Safety was coded and filed. High hazard accident data was furnished for safety studies as needed. In FY 2015 this process is being updated in preparation of the 2040 RTP

FY2016—FY2017 Tasks

All work to be completed on this task will be in compliance with the MPO adopted Public Participation Plan, to ensure that public involvement is included in the end products.

1. Continue to collect traffic count data at 109 annual cycle count stations or project-specific traffic counts will be conducted by the City of Cleveland and Bradley County and the MPO will request any special traffic counts as needed for planning and design projects from TDOT.
2. Maintain accident file and furnish high hazard listings and other safety data as required.
3. Travel time studies will be conducted if needed for special studies.
4. Working in conjunction with Cleveland Utilities Electric Division, the entity which maintains the traffic signal system and carries out traffic engineering functions within the city, the MPO will evaluate corridors in order to maintain traffic flow and mitigate congestion. The resulting information will inform the transportation planning process. Maintaining traffic flow and mitigating congestion will help to address climate change by helping to reduce stopping and starting and by helping to reduce idle time.
5. Work in cooperation with TDOT in the update of the Cleveland MPO ITS Architecture.
6. Work with TDOT and local agencies regarding other aspects of planning for operations including extreme weather (e.g. dense fog is a particularly serious issue for the MPO that involves a fog detection and closure system on I-75 that must be part of ITS and transportation operations). Other concerns could include maintenance of pavement and bridges and vulnerability of transportation systems to flooding (a new flood study is presently being produced), especially as these may be exacerbated by climate change. To this end, and subject to resource availability and any necessary approvals, the MPO would participate in TDOT's "Tennessee Extreme Weather Project".

7. Implement a program to collect and analyze sidewalk inventory and condition data, sidewalk and bicycle improvement needs data from citizen input and demographic data, pedestrian and bicycle count data, and pedestrian and bicycle accident data, in order to inform the development of a better multimodal transportation system.

Products

A constantly updated database of information to use in the planning process and system design of the roadway network of the MPO planning boundary will be developed. Average Daily Traffic, peak hour volume, vehicle classification, directional distribution, and other traffic data will be collected and stored for future planning and design studies. Vehicle miles of travel on functionally classified systems will also be collected. High hazard lists, collision diagrams, and other accident data will be collected from Police Services. Updated data will be sent to TDOT for the TDOT TRIMS File. ~~Permanent cycle counts will be collected and computed for computer storage weekly. Annual cycle counts will continue to be made.~~ The MPO conducts counts of pedestrians and bicycles on a limited basis. Accident data is collected by the police department and is available to the MPO. Work is a continuing project. Data generated in this process will lend quantitative description to existing and emerging operational issues in the transportation system, such as additional travel time delay and congestion. TDOT has proposed to utilize a contractor to update the ITS Architectures of the smaller MPOs including Cleveland; CUAMPO will be coordinating with TDOT in the update effort.

Product Schedule

Work tasks are a continuing collaborative effort with TDOT, SETHRA and CUATS, the Chattanooga TPO, the Cities of Cleveland and Charleston, Bradley County, ~~the Town of Calhoun, McMinn County,~~ and various state and local agencies.

Figure 10: Task E Product Schedule

Product	Schedule
Traffic Counts	On-going (special counts as needed)
Accident data collection	On-going task
Travel time studies	As needed
ITS Architecture Update	TDOT Schedule
Planning for Operations	On-going task
Pedestrian and Bicycle data	On-going task

IV. Financial Tables

Figure 11: Task I Administration Activities Funding Resources—FY2016

MPO	FHWA PL - 112 and Local Match	FTA - 5303
Federal	\$53,153	\$0
State	\$0	\$0
Local	\$13,288	\$0
TDOT (SPR)		
Federal	\$10,554	\$0
State	\$2,636	\$0
Total	\$79,631	\$0

Figure 12: Task I Administration Activities Funding Resources—FY2017

MPO	FHWA PL - 112 and Local Match	FTA - 5303
Federal	\$53,153	\$0
State	\$0	\$0
Local	\$13,288	\$0
TDOT (SPR)		
Federal	\$10,554	\$0
State	\$2,636	\$0
Total	\$79,631	\$0

Figure 13: Task II Long Range Transportation Planning Funding Resources—FY2016

MPO	FHWA PL - 112 and Local Match	FTA - 5303
Federal	\$56,747	\$0
State	\$0	\$0
Local	\$14,187	\$0
TDOT (SPR)		
Federal	\$21,989	\$0
State	\$5,489	\$0
Total	\$98,412	\$0

Figure 14: Task II Long Range Transportation Planning Funding Resources —FY2017

MPO	FHWA PL - 112 and Local Match	FTA - 5303
Federal	\$56,747	\$0
State	\$0	\$0
Local	\$14,187	\$0
TDOT (SPR)		
Federal	\$21,989	\$0
State	\$5,489	\$0
Total	\$98,412	\$0

Figure 15: Task III Transportation Improvement Program Funding Resources—FY2016

MPO	FHWA PL - 112 and Local Match	FTA - 5303
Federal	\$38,205	\$0
State	\$0	\$0
Local	\$9,551	\$0
TDOT (SPR)		
Federal	\$0	\$0
State	\$0	\$0
Total	\$47,756	\$0

Figure 16: Task III Transportation Improvement Program Funding Resources—FY2017

MPO	FHWA PL - 112 and Local Match	FTA - 5303
Federal	\$38,205	\$0
State	\$0	\$0
Local	\$9,551	\$0
TDOT (SPR)		
Federal	\$0	\$0
State	\$0	\$0
Total	\$47,756	\$0

Figure 17: Task IV Transit Planning Funding Resources—FY2016

MPO	FHWA PL - 112 and Local Match	FTA - 5303
Federal	\$10,000	\$27,141
State	\$0	\$3,393
Local	\$2,500	\$3,393
TDOT (SPR)		
Federal	\$0	\$0
State	\$0	\$0
Total	\$12,500	\$33,927

Figure 18: Task IV Transit Planning Funding Resources—FY2017

MPO	FHWA PL - 112 and Local Match	FTA - 5303
Federal	\$10,000	\$27,141
State	\$0	\$3,393
Local	\$2,500	\$3,393
TDOT (SPR)		
Federal	\$0	\$0
State	\$0	\$0
Total	\$12,500	\$33,927

Figure 19: Task V Transportation Data—FY2016

MPO	FHWA PL - 112 and Local Match	FTA - 5303
Federal	\$8,000	\$0
State	\$0	\$0
Local	\$2,000	\$0
TDOT (SPR)		
Federal	\$3,218	\$0
State	\$805	\$0
Total	\$14,023	\$0

Figure 20: Task V Transportation Data—FY2017

MPO	FHWA PL - 112 and Local Match	FTA - 5303
Federal	\$8,000	\$0
State	\$0	\$0
Local	\$2,000	\$0
TDOT (SPR)		
Federal	\$3,218	\$0
State	\$805	\$0
Total	\$14,023	\$0

Figure 21. Funding Sources by Category (FY2016)

Category	PL 112	Reserve Funds (PL-112) ¹	Local Match ²	FHWA SPR ³	TDOT SPR Match ³	Section 5303 Funds	State 5303 Match	Local 5303 Match	Totals ⁴
I. Administration Activities	\$53,153	\$54,000	\$13,288	\$10,554	\$2,636	\$0	\$0	\$0	\$79,631
II. Long-Range Transportation Plan	\$56,747	\$57,000	\$14,187	\$21,989	\$5,489	\$0	\$0	\$0	\$98,412
III. TIP	\$38,205	\$54,433	\$9,551	\$0	\$0	\$0	\$0	\$0	\$47,756
IV. Transit Planning	\$10,000	\$1,500	\$2,500	\$0	\$0	\$27,141	\$3,393	\$3,393	\$46,427
V. Transportation Systems Operations Planning	\$8,000	\$1,500	\$2,000	\$3,218	\$805	\$0	\$0	\$0	\$14,023
TOTALS	\$166,105	\$168,433	\$41,526	\$35,761	\$8,930	\$27,141	\$3,393	\$3,393	\$286,249

NOTES:

1. Yellow highlighted areas represent the programming of Reserve PL-112 funds.
2. Match amounts not calculated for PL Reserve
3. Grey shaded areas are funds used by TDOT
4. Totals do not include PL Reserve funds

Figure 22. Agency Funding Sources by Category (FY2016)

TASK	FHWA SPR ¹	TDOT SPR MATCH	TOTAL FHWA PL 112	FTA 5303	State 5303 Match	MPO/Local MATCH ³	TOTALS ²
I. Administration Activities	\$10,554	\$2,636	\$53,153	\$0	\$0	\$13,288	\$79,631
II. Long-Range Transportation Plan	\$21,989	\$5,489	\$56,747	\$0	\$0	\$14,187	\$98,412
III. TIP	\$0	\$0	\$38,205	\$0	\$0	\$9,551	\$47,756
IV. Transit Planning	\$0	\$0	\$10,000	\$27,141	\$3,393	\$5,893	\$46,427
V. Transportation Systems Operations Planning	\$3,218	\$805	\$8,000	\$0	\$0	\$2,000	\$14,023
TOTALS ²	\$35,761	\$8,930	\$166,105	\$27,141	\$3,393	\$44,919	\$286,249

NOTES:

1. Grey shaded areas are funds used by TDOT
2. Figures include any applicable local match for FTA funds as well

Figure 23. Total Funding by Agency (FY2016)

AGENCY	Federal Highway Administration				Federal Transit Administration			TOTALS
	PL 112	Local Match	FHWA SPR ¹	TDOT SPR Match ¹	Section 5303 Funds	5303 State Match	5303 Local Match	
TDOT-PD/PT/WRD	\$0	\$0	\$35,761	\$8,930	\$0	\$3,393	\$0	\$48,084
MPO	\$166,105	\$41,526	\$0	\$0	\$27,141	\$0	\$3,393	\$238,165
TOTALS	\$166,105	\$41,526	\$35,761	\$8,930	\$27,141	\$3,393	\$3,393	\$286,249

NOTES:

1. Grey shaded areas are funds used by TDOT

Figure 24. Funding Sources by Category (FY2017)

Category	PL 112	Reserve Funds (PL-112) ¹	Local Match ²	FHWA SPR ³	TDOT SPR Match ³	Section 5303 Funds	State 5303 Match	Local 5303 Match	Totals ⁴
I. Administration Activities	\$53,153	\$54,000	\$13,288	\$10,554	\$2,636	\$0	\$0	\$0	\$79,631
II. Long-Range Transportation Plan	\$56,747	\$57,000	\$14,187	\$21,989	\$5,489	\$0	\$0	\$0	\$98,412
III. TIP	\$38,205	\$54,433	\$9,551	\$0	\$0	\$0	\$0	\$0	\$47,756
IV. Transit Planning	\$10,000	\$1,500	\$2,500	\$0	\$0	\$27,141	\$3,393	\$3,393	\$46,427
V. Transportation Systems Operations Planning	\$8,000	\$1,500	\$2,000	\$3,218	\$805	\$0	\$0	\$0	\$14,023
TOTALS	\$166,105	\$168,433	\$41,526	\$35,761	\$8,930	\$27,141	\$3,393	\$3,393	\$286,249

NOTES:

1. Yellow highlighted areas represent the programming of Reserve PL-112 funds.
2. Match amounts not calculated for PL Reserve
3. Grey shaded areas are funds used by TDOT
4. Totals do not include PL Reserve funds

Figure 25. Agency Funding Sources by Category (FY2017)

TASK	FHWA SPR ¹	TDOT SPR MATCH	TOTAL FHWA PL 112	FTA 5303	State 5303 Match	MPO/Local MATCH ³	TOTALS ²
I. Administration Activities	\$10,554	\$2,636	\$53,153	\$0	\$0	\$13,288	\$79,631
II. Long-Range Transportation Plan	\$21,989	\$5,489	\$56,747	\$0	\$0	\$14,187	\$98,412
III. TIP	\$0	\$0	\$38,205	\$0	\$0	\$9,551	\$47,756
IV. Transit Planning	\$0	\$0	\$10,000	\$27,141	\$3,393	\$5,893	\$46,427
V. Transportation Systems Operations Planning	\$3,218	\$805	\$8,000	\$0	\$0	\$2,000	\$14,023
TOTALS ²	\$35,761	\$8,930	\$166,105	\$27,141	\$3,393	\$44,919	\$286,249

NOTES:

1. Grey shaded areas are funds used by TDOT
2. Figures include any applicable local match for FTA funds as well

Figure 26. Total Funding by Agency (FY2017)

AGENCY	Federal Highway Administration				Federal Transit Administration			TOTALS
	PL 112	Local Match	FHWA SPR ¹	TDOT SPR Match ¹	Section 5303 Funds	5303 State Match ¹	5303 Local Match	
TDOT-PD/PT/WRD	\$0	\$0	\$35,761	\$8,930	\$0	\$3,393	\$0	\$48,084
MPO	\$166,105	\$41,526	\$0	\$0	\$27,141	\$0	\$3,393	\$238,165
TOTALS	\$166,105	\$41,526	\$35,761	\$8,930	\$27,141	\$3,393	\$3,393	\$286,249

NOTES:

1. Grey shaded areas are funds used by TDOT

Appendix A

Acronyms

<u>ADA</u>	Americans with Disabilities Act of 1990: Federal law that requires public facilities (including transportation services) to be accessible to persons with disabilities including those with mental disabilities, temporary disabilities, and the conditions related to substance abuse.
<u>CAAA</u>	Clean Air Act Amendments: 1990 amendments to the federal Clean Air Act which classify non-attainment areas and provide for rules dealing with air pollution in such areas; specifically brought transportation decisions into the context of air quality control.
<u>CDBG</u>	Community Development Block Grant: a federal program begun in 1974 and administered by HUD. A portion of the available funds are allocated to qualifying “entitlement” communities each year to spend on one or more allowable activities (projects) chosen by the local government and benefiting primarily low- and moderate-income persons. Some transportation-related activities, such as sidewalks in a low-income neighborhood, can be funded with CDBG.
<u>CONST</u>	Construction (phase of a project): The phase of a project after the preliminary environmental and engineering work is completed, where the project is being built and the improvements are prepared for implementation.
<u>CUAMPO</u>	Cleveland Urban Area Metropolitan Planning Organization: MPO for the Cleveland, Tennessee urban area.
<u>CUATS</u>	Cleveland Urban Area Transit System: Transit provider for the CUAMPO area. CUATS is administered by SETHRA which provides rural and urban transit services in various locations throughout southeast Tennessee.
<u>DOT</u>	Department of Transportation: Agency responsible for transportation at the local, state, or federal level. For title 23 U.S.C. federal-aid highway actions, this would mean the Federal Highway Administration and for federal-aid transit actions under title 49 U.S.C, this would mean the Federal Transit Administration.

- EB** **Executive Board:** A standing committee created for the purpose of serving as spokespersons for the citizens of the metropolitan area and is the designated MPO to prioritize and direct federal transportation funds to local projects. The Board is comprised of elected officials from the cities over 5,000 population and the counties of Nashville-Davidson, Rutherford, Sumner, Williamson and Wilson in the urbanized area. The Executive Board also has representatives from TDOT, representing the Governor. The Board is responsible for creating policies regarding transportation planning issues. The Executive Board meetings are open to the public and where any member of the public can address the MPO on any transportation issue.
- E+C** **Existing plus Committed Project List:** A list of projects that are located in the MPO area that includes projects that have been recently constructed, or projects for which funds are already committed.
- EIA** **Environmental Impact Assessment:** The process of identifying, predicting, evaluating and mitigating the biophysical, social, and other relevant effects of development proposals prior to major decisions being taken and commitments made. The purpose of the assessment is to ensure that decision-makers consider environmental impacts before deciding whether to proceed with new projects.
- EIS** **Environmental Impact Statement:** A National Environmental Policy Act (NEPA) document that explains the purpose and need for a project, presents project alternatives, analyzes the likely impact of each, explains the choice of a preferred alternative, and finally details measures to be taken in order to mitigate the impacts of the preferred alternative.
- EJ** **Environmental Justice:** Derived from Title VI of the Civil Rights Act of 1964, and established by Executive Order, EJ requires federally funded plans and programs to assess their impact, either positive or negative, on traditionally underserved (e.g., low-income, minority, etc.) communities or segments of the population. The goal of EJ is to ensure public involvement of low income and minority groups in decision making to prevent disproportionately high and adverse impacts on low income and minority groups, and to ensure that these groups receive equal benefits from transportation improvements.
- EPA** **U.S. Environmental Protection Agency:** is an agency of the federal government of the United States charged with protecting human health and with safeguarding the natural environment: air, water, and land.

<u>FEMA</u>	U.S. Federal Emergency Management: is an agency of the federal government of the United States charged with protecting citizens from natural and man-made disasters and with disaster recovery.
<u>FHPP</u>	Federal High Priority Projects: Discretionary projects earmarked by the U.S. Congress as high priorities at the federal level during the Congressional appropriations and re-authorization process. This amounts to roughly 5% of the total transportation budget.
<u>FHWA</u>	Federal Highway Administration: Division of the U.S. Department of Transportation responsible for administering federal highway transportation programs under title 23 U.S.C.
<u>Fiscal Constraint</u>	Fiscal Constraint: A requirement, originally of ISTEA, that all plans be financially-constrained, balanced expenditures to reasonably expected sources of funding over the period of the TIP or Long-Range Transportation Plan.
<u>FRA</u>	Federal Railroad Administration: an administrative agency of the United States federal government charged with implementing federal policies and programs pertaining to railroads.
<u>FTA</u>	Federal Transit Administration: This program makes Federal resources available to urbanized areas and to Governors for transit capital and operating assistance in urbanized areas and for transportation related planning.
<u>FTA-5307</u>	Federal Transit Administration Section 5307 (FTA-5307): Eligible purposes include planning, engineering design and evaluation of transit projects and other technical transportation-related studies; capital investments in bus and bus-related activities such as replacement of buses, overhaul of buses, rebuilding of buses, crime prevention and security equipment and construction of maintenance and passenger facilities; and capital investments in new and existing fixed guideway systems including rolling stock, overhaul and rebuilding of vehicles, track, signals, communications, and computer hardware and software. All preventive maintenance and some Americans with Disabilities Act complementary paratransit service costs are considered capital costs.
<u>FY</u>	Fiscal Year: A federal fiscal or budget year; runs from October 1 through September 30 for the MPO and the federal government.
<u>GIS</u>	Geographic Information System: A system for capturing, storing, analyzing and managing data which is spatially referenced to the earth. GIS is a

tool that allows users to create interactive queries (user created searches), analyze the spatial information, edit data, maps, and present the results of all these operations.

HSIP **The Highway Safety Improvement Program:** This program was formally defined in an FHWA regulation titled Federal-Aid Highway Program Manual, Volume 8, Chapter 2, Section 3 (FHPM 8-2-3), dated March 5, 1979. The primary purpose of FHPM 8-2-3 was to establish the policy for the development and implementation of a comprehensive highway safety program in each state.

HUD **U.S. Department of Housing and Urban Development:** is a department of the federal government of the United States charged with housing and urban development programs of the United States.

ISTEA **Inter-modal Surface Transportation Efficiency Act of 1991:** the federal transportation bill that, among other things, guided the transportation planning work of MPOs prior to TEA-21 and SAFETEA-LU.

ITS **Intelligent Transportation System:** Use of computer and communications technology to facilitate the flow of information between travelers and system operators to improve mobility and transportation productivity, enhance safety, maximize the use of existing transportation facilities, conserve energy resources and reduce adverse environmental effects; includes concepts such as “freeway management systems,” “automated fare collection” and “transit information kiosks.”

LIC **Local Interstate Connector:** a roadway built under a special TDOT program to connect areas of development with an Interstate highway using State and local funds

LOS **Level of Service:** A qualitative assessment of a road’s operating condition, generally described using a scale of A (little congestion) to E/F (severe congestion).

L RTP **Long-Range Transportation Plan:** A document resulting from regional or statewide collaboration and consensus on a region or state's transportation system, and serving as the defining vision for the region's or state's transportation systems and services. In metropolitan areas, the plan indicates all of the transportation improvements scheduled for funding over the next 20 years. It is fiscally constrained, i.e., a given program or

project can reasonably expect to receive funding within the time allotted for its implementation.

MAP-21 **Moving Ahead for Progress in the 21st Century Act:** is a funding and authorization bill that governs United States federal surface transportation spending, including the federal transportation funds spent by the Cleveland MPO. MAP-21 has updated and amended SAFETEA-LU which is defined herein.

MOU **Memorandum of Understanding:** a document describing a mutual understanding between agencies regarding which agency does which things in a certain project or process and describing the content, purposes, resources, etc. related to that project or process.

MPO **Metropolitan Planning Organization:** The forum for cooperative transportation decision making; required for urbanized areas with populations over 50,000.

NEPA **National Environmental Policy Act:** Passed in 1970, NEPA requires federal agencies to integrate environmental values into their decision making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions.

NHS **National Highway System:** This system comprises the Interstates, the Expressways and those surface arterial roads which are a critical link in the regional transportation system. Funds from this program may be used for all types of transportation improvements, including construction, reconstruction, operational improvements and planning.

Obligated

Funds **Obligated Funds:** Funds that have been authorized by and committed to legally by a federal agency to pay for the federal share of the project cost.

Officials **Officials:** Are people who have governmental decision-making, planning or administrative responsibilities that relate to MPO activities.

PE **Preliminary Engineering (phase of project):** a process to begin developing the design of the facilities and system, to analyze the function and operation of the system, evaluation cost efficiencies and prepare for the final design of the project.

PL-112 **FHWA Section 112 Planning Funds:** the primary source of funding for transportation planning activities undertaken by MPOs. These funds

require a 20% local government match. Other federal sources may include FTA 5303 funds for transit planning activities.

Public **Public:** Includes citizens, public agencies, advocacy groups and the private sectors that have an interest in or may be affected by MPO activities.

PPP **Public Participation Plan:** Describes the process in which the MPO will provide opportunities for the public to be involved with the MPO in an exchange of data and ideas. Public participation offers an open process in which the rights of the community, to be informed to provide comments to the Government and to receive a response from the Government, are met through a full opportunity to be involved and to express needs and goals.

ROW **Right-of-Way:** Real property that is used for transportation purposes; defines the extent of the corridor that can be used for the road and associated drainage.

RPO **Rural Planning Organization:** Transportation planning organizations with boundaries roughly corresponding to the several multi-county development districts within Tennessee. The RPO boards comprise elected officials from member jurisdictions who vote upon transportation spending priorities for rural non-MPO area projects within their respective RPO boundaries.

RTP **Regional Transportation Plan:** A long-range transportation plan covering a multi-jurisdictional region which is the long-range transportation plan for the MPO and its planning region.

SAFETEA-LU **Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users** - legislation enacted August 10, 2005, as Public Law 109-59. SAFETEA-LU authorizes the Federal surface transportation programs for highways, highway safety, and transit for the 5-year period 2005-2009. The nation's transportation programs, including those of TDOT and CUAMPO, have continued to operate as a result of continuing authorizations under this legislation. A new transportation bill is being considered by Congress as this UPWP is being prepared.

Sec. 5303 **FTA Section 5303 Technical and Planning Funds:** a section of title 23 USC pertaining to the Federal Transit Administration that provides funding and related guidance under which MPOs carry out transportation planning.

Sec. 5307 **FTA Section 5307 Funds:** a section of title 23 USC pertaining to the Federal Transit Administration that provides funding and related guidance for transit capital and operating expenses.

SETDD **Southeast Tennessee Development District:** A ten-county development district serving southeast Tennessee including Bradley County and Cleveland and Charleston. SETDD serves various planning, grant administration, economic development, and other functions within the region and its governing board comprises elected officials from its member jurisdictions. SETDD administers the RPO for southeast Tennessee.

SETHRA **Southeast Tennessee Human Resources Agency:** A regional human services agency and transit provider which administers CUATS. Similar multi-county regional human service agencies provide transit and other services for different areas of Tennessee.

SIP **State Implementation Plan (for air quality):** the regulations and other materials for meeting clean air standards and associated Clean Air Act requirements.

SPR **FHWA State Planning and Research Funds:** Federal funds retained made available to state DOTs for a broad variety of research, studies, investigations, and the like on different aspects of the transportation system, including funds which may be spent by the DOTs in support of the various work tasks within the Unified Planning Work Programs of MPOs.

SR **State Route:** a roadway owned, financed and maintained by a state.

SRTS **Safe Routes to School Program:** The purpose of this program is to address problems with children being able to walk to school. At its heart, the SRTS Program empowers communities to make walking and bicycling to school a safe and routine activity once again. The Program makes funding available for a wide variety of programs and projects, from building safer street crossings to establishing programs that encourage children and their parents to walk and bicycle safely to school.

STA **State Gas Tax Fund:** Also called motor fuel excise tax, this is a tax charged by the gallon and collected as consumers pay at the pump. These are state funds which are used for transportation projects that are on routes designated as part of the Tennessee or Kentucky State Highway Systems. Funds for these programs are one hundred percent State monies and may be used for all types of transportation

improvements, including construction, reconstruction, operational improvements and planning.

STIP **State Transportation Improvement Program (STIP):** The TDOT Four Year Work Program as prescribed by federal law.

STP **Surface Transportation Program (L-STP or U-STP):** These funds may be used for the same broad range of improvements as NHS funds. The significant difference in the two programs is that STP funds may be used to improve the design or operation of any road which is not a local street or a rural minor collector. As a result, the Surface Transportation Program funds a large number of projects in the TIP.

L-STP **Local Surface Transportation Program:** Provides funding to areas of 5,000 to 50,000 in population for improvements on routes functionally classified urban collectors or higher.

U-STP **Urban Surface Transportation Program:** Provides funding to Census designated urbanized areas over 50,000 in population (e.g. MPO areas based on US Census) for improvements on routes functionally classified urban collectors or higher.

TAP **Transportation Alternatives Program:** Transportation Alternatives Program funds may be used for most of the same projects and activities for which funding was provided through the Transportation Enhancement (TE), Recreational Trails (RTF) and Safe Routes to School programs prior to MAP-21. They may be used to help expand transportation choices such as new or improved bicycle and pedestrian facilities (including near schools); add turnouts and pulloffs to scenic routes; mitigate environmental impacts from other transportation projects, provide streetscaping, and similar activities. In Tennessee, the state sets aside some TAP funds for its Roadscapes grant program.

TCC **Technical Coordinating Committee:** A standing committee of most metropolitan planning organizations (MPOs); function is to provide advice on plans or actions of the MPO from planners, engineers and other staff members (not general citizens).

TDM **Travel Demand Model:** This is a tool for forecasting impacts of urban developments on travel patterns as well as testing various transportation alternative solutions to traffic patterns. The travel patterns are determined from US Census results and in simple terms tell where residents live and where they go to work or school on a regional wide basis.

Transportation

Disadvantaged Transportation Disadvantaged: People who are unable to transport themselves or to purchase transportation due to disability, income status or age.

TDEC **Tennessee Department of Energy and Conservation:** A department of Tennessee state government charged with implementing various federal environmental laws and with regulatory functions related to air quality, water quality, solid waste, etc.

TDOT **Tennessee Department of Transportation:** State agency responsible for transportation issues in Tennessee.

TDOT/MTR **Multimodal Transportation Resources:** multimodal funding arises through various Federal Transit Administration sources and is supplemented with state and local matching funds. The administration of multimodal programs within TDOT is distinct from that of highway programs funded by FHWA and other federal, state, and local sources.

TEA-21 **Transportation Equity Act for the 21st Century:** federal transportation legislation arising after ISTEA and before SAFETEA-LU.

TEMA **Tennessee Emergency Management Agency:** this agency, TEMA, is responsible for emergency planning, hazard mitigation, and disaster response within Tennessee.

TIP **Transportation Improvement Program:** A priority list of transportation projects developed by a metropolitan planning organization that is to be carried out within the four (4) year period following its adoption; must include documentation of federal and state funding sources for each project and be consistent with adopted MPO long range transportation plans and local government comprehensive plans.

TMA **Transportation Management Area:** An area designated by the U.S. Department of Transportation given to all urbanized areas with a population over 200,000 (or other area when requested by the Governor and MPO); these areas must comply with special transportation planning requirements regarding congestion management systems, project selection and certification; requirements identified in 23 CFR - 450.300-33.6.

<u>TRIMS</u>	Tennessee Roadway Information Management System: a computerized database of roadway data, crash data, and the like maintained by TDOT and supported by a uniform data collection system carried out by the Tennessee department of safety and local law enforcement.
<u>TSM</u>	Transportation Systems Management: Strategies to improve the efficiency of the transportation system through operational improvements such as the use of bus priority or reserved lanes, signalization, access management, turn restrictions, etc.
<u>TN SPR</u>	State Planning and Research Funds: funding used by TDOT to study problems in the transportation system and to identify appropriate alternative solutions.
<u>UPWP</u>	Unified Planning Work Program: Developed by Metropolitan Planning Organization (MPOs); identifies all transportation and planning activities anticipated within the next one to two years, including a schedule for the completion of the identified tasks and activities.
<u>USC</u>	United States Code: the codified laws of the United States as they are changed by the Congress from time to time.
<u>V/C Ratio</u>	Volume over Capacity Ratio: This is a roadway performance measure to show how a highway volume compares with a highway's capacity.
<u>VMT</u>	Vehicle Miles Traveled: This is an output of the travel demand model and is a measure of traffic flow over a highway segment. While 1000 vehicles traveling over a mile road and 1 vehicle traveling over 1000 miles are mathematically.
<u>VOC</u>	Volatile Organic Compounds: Organic chemical compounds that have high enough vapor pressures under normal conditions to significantly vaporize and enter the atmosphere. Included among these compounds are dry-cleaning solvents and some constituents of petroleum fuels.

Appendix B

Performance Based Planning and Programming Analysis

MAP-21 and Performance Based Planning and Programming Background

Figure B1: MAP-21 and Performance Management

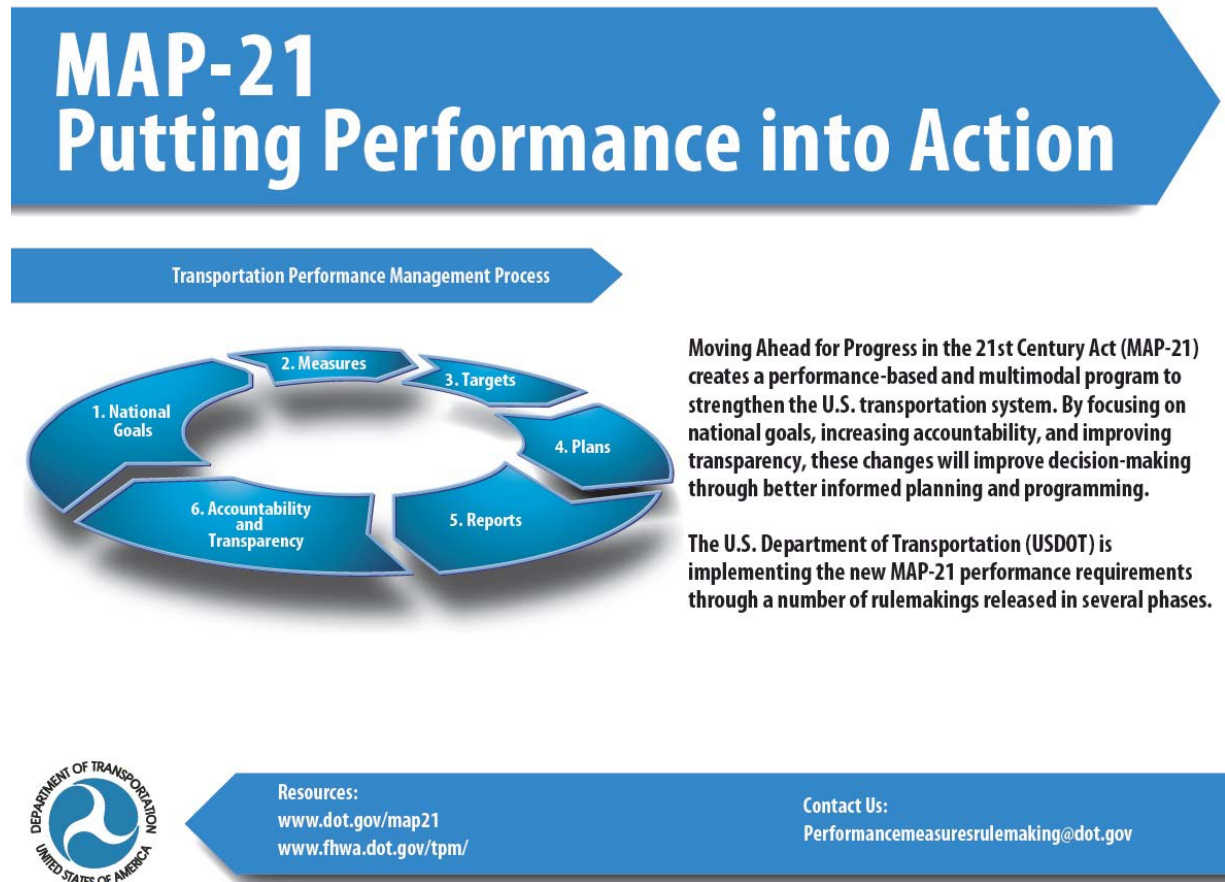
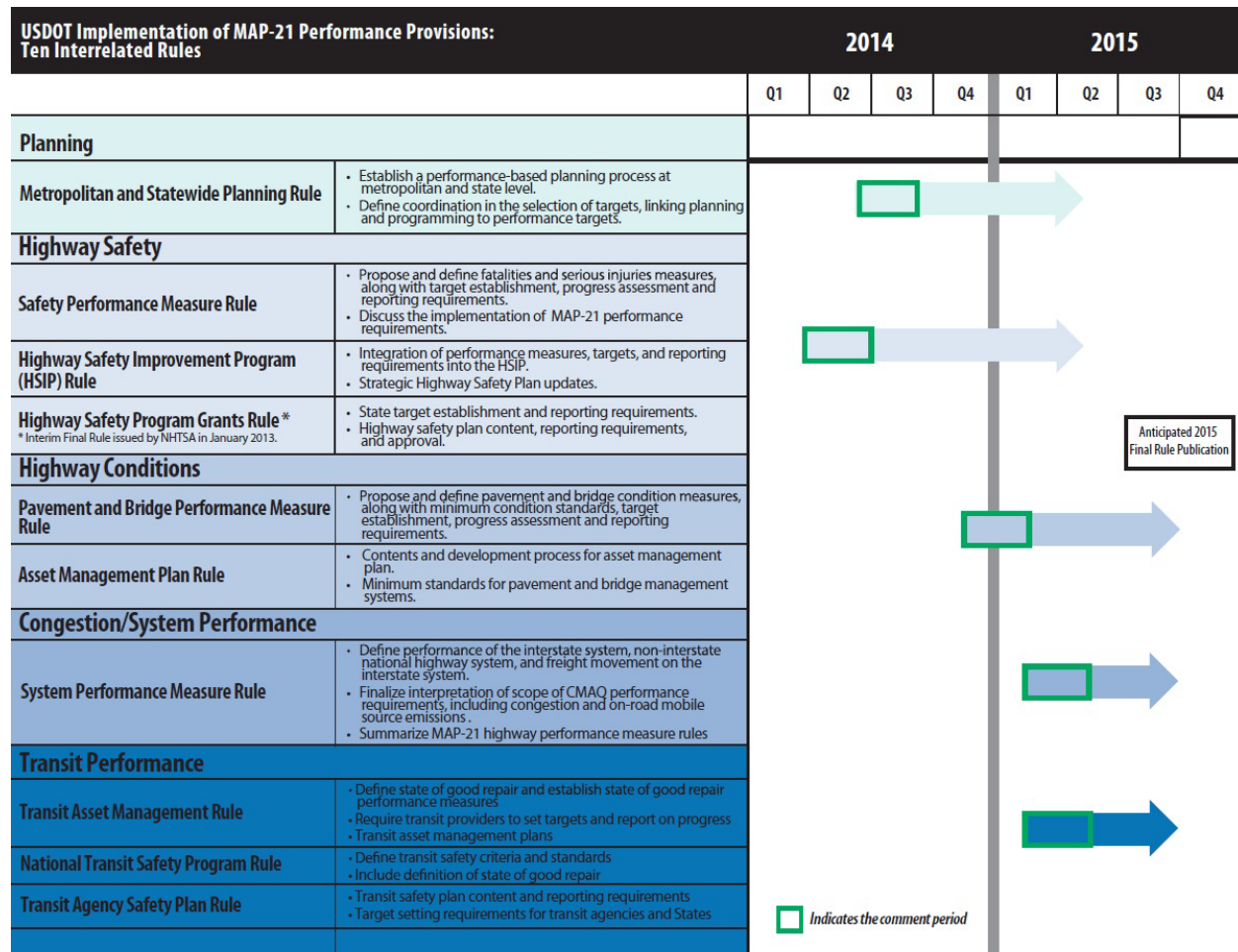


Figure B2: MAP-21 Performance Requirements

FHWA's *Performance Based Planning and Programming Guidebook* (September 2013) provides the MAP-21 requirement for performance based planning, an explanation of the performance based framework, and some of the challenges of performance based planning that have particular bearing on the Cleveland MPO (the following information is taken from pages 1-7):

The requirement for MPOs to engage in performance based planning and programming is derived from the MAP-21 language: "[MPOs]..., in cooperation with the State and public transportation operators, shall develop long-range transportation plans and transportation improvement programs through a performance-driven, outcome-based approach to planning." 23 USC Section 134(c)(1); 49 USC Section 5303(c)(1). "The metropolitan transportation planning process shall provide for the establishment and use of a performance-based approach to transportation decisionmaking to support the national goals...." 23 USC Section 134(h)(2); 49 USC Section 5303(h)(2).....

Figure B3: MAP-21 Performance Based Planning Process



Strategic Direction (*Where do we want to go?*) - In the transportation planning process, strategic direction is based upon a vision for the future, as articulated by the public and stakeholders. PBPP includes:

- **Goals and Objectives** - Stemming from a state or region's vision, goals address key desired outcomes, and supporting objectives (specific, measurable statements that support achievement of goals) play a key role in shaping planning priorities.
- **Performance Measures** - Performance measures support objectives and serve as a basis for comparing alternative improvement strategies (investment and policy approaches) and for tracking results over time.
- **Planning Analysis (*How are we going to get there?*)** - Driven by data on performance, along with public involvement and policy considerations, agencies conduct analysis in order to develop investment and policy priorities.
- **Identify Trends and Targets** - Preferred trends (direction of results) or targets (specific levels of performance desired to be achieved within a certain

timeframe) are established for each measure to provide a basis for comparing alternative packages of strategies. This step relies upon baseline data on past trends, tools to forecast future performance, and information on possible strategies, available funding, and other constraints.

- **Identify Strategies and Analyze Alternatives** - Performance measures are used to assess strategies and to prioritize options. Scenario analysis may be used to compare alternative packages of strategies, to consider alternative funding levels, or to explore what level of funding would be required to achieve a certain level of performance.
- **Develop Investment Priorities** - Packages of strategies for the LRTP are selected that support attainment of targets, considering tradeoffs between different goal areas, as well as policy priorities.

Programming (*What will it take?*) Programming involves selecting specific investments to include in an agency capital plan and/or in a TIP or STIP. In a PBPP approach, programming decisions are made based on their ability to support attainment of performance targets or contribute to desired trends, and account for a range of factors.

- **Investment Plan** - In order to connect the LRTP, which has an outlook of at least 20 years, to selection of projects in a TIP/STIP, some areas develop a mid-range (e.g., 10 year) investment plan or investment program.
- **Resource Allocation / Program of Projects** - Project prioritization or selection criteria are used to identify specific investments or strategies for a capital plan or TIP/STIP. Projects included in the TIP/STIP are selected on the basis of performance, and show a clear link to meeting performance objectives.

Implementation and Evaluation (*How did we do?*) - These activities occur throughout implementation on an on-going basis, and include:

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

Challenges to Performance Based Planning and Programming Identified by FHWA

FHWA identified numerous challenges to PBPP in its publication *Performance Based Planning and Programming Guidebook* (September 2013):

- Although State DOTs, transit agencies, MPOs, and RTPOs collect and analyze large amounts of data, turning data into information that can guide planning and programming decisions remains a complex issue.
- Many transportation agencies are concerned about risks involved with setting targets. Limited funding levels or external factors, such as faster than anticipated population growth, can result in situations where transportation performance can worsen despite valuable investments. At many states and MPOs, there is a large gap between projected needs and projected revenues for transportation projects and services. Agencies express anxiety regarding the undetermined consequences of failure to achieve targets, particularly given the influence of external factors beyond their control.
- Collecting data, monitoring performance, conducting baseline assessments, and re-evaluating programs and policies - all fundamental components of PBPP - can be resource-intensive. Some agencies may not have staff or funding resources to implement a robust data collection system. While it is important that performance measures are not chosen solely on already-available data, the cost of obtaining new data and the effort required to analyze it must be taken into account. If there are questions about whether data will be available in the future for a chosen measure, an agency may want to consider the alternative measure it will use if data is not available.
- Tools to accurately predict future performance outcomes from investments and strategies are not well developed for many performance areas.
- The many different transportation agencies, levels of government, and stakeholders involved in transportation decision-making can create challenges in developing agreement on common goals, objectives, and targets. Moreover, restrictions on project funding using different funding sources can add further challenges in selecting investments to support goals and objectives.
- A desire to spread funding geographically and the variety of funding sources (both by jurisdiction and specific modal programs) can also be a barrier to linking performance measures to program area investments.
- A time lag exists between the implementation of many transportation improvements and the resulting changes to performance indicators, making the connection between decision making and results unclear. Moreover, system-wide measures used for monitoring performance may be different than measures or criteria that can be used for prioritizing strategies or projects.

Challenge: Limited Resources for Performance Based Planning and Programming

As a small MPO, the Cleveland MPO may find PBPP guidance in the FHWA's December 2014 publication *Performance Based Planning for Small Metropolitan Areas*. "The research team concluded that small MPOs have unique characteristics and needs that may distinguish how they develop effective approaches to performance based planning. These approaches may entail some differences from the approaches taken by MPOs planning for larger metropolitan areas. Performance based planning for non-

TMA MPOs is not simply a more basic version of the approach practiced by MPOs planning for large TMAs. Effective approaches build on the goals and attributes that are often particular to small metropolitan areas and the MPOs that serve them”(p2).... From page 8 of the Small Metropolitan Area report: “Based on discussions with the MPOs and DOTs listed in Chapter 1, the June 2013 Bismarck Peer Exchange, and other documented examples, the project team identified five key themes in how small MPOs are successfully moving towards performance based planning:

- Establishing a "performance-ready" planning process
- Collaboration with State DOTs
- Coordinated data sourcing
- Performance as a key tool for public and stakeholder engagement
- Cross sectoral planning”

Establishing a "performance-ready" planning process

Small MPOs may lack the resources to rapidly and substantially restructure their planning processes in response to evolving Federal and State shifts toward performance based planning. Instead, many are taking incremental steps to integrate performance concepts and methods into the existing planning practice, preparing data, processes, and staff for future implementation of performance based planning. With this incremental approach, non-TMAs are nonetheless developing innovative approaches to PBPP of interest to their small MPO peers as well as possibly to larger MPOs. The approaches of non-TMAs described in this report are not basic or limited versions of TMA approaches, but represent distinctive strategies that respond to the different context for planning by small MPOs”. Citing examples from various small MPOs participating in the 2013 Bismarck Peer Exchange, the *Small Metropolitan Area* report recommended regional visioning or scenario planning as tools for engaging in discussions of trade-offs and choices in reaching long-term transportation goals (p.8). It was also suggested that project prioritization criteria would help in determining which projects are programmed in the TIP (p. 10). Public reporting of progress on performance measures was recommended as a means of engaging the public in an on-going way (p.13). Scenario planning as a means of evaluating different transportation policies for the future was discussed in the Cleveland MPO’s March 31, 2015 2040 RTP Steering Committee meeting.

Collaboration with State DOTs

FHWAs *Small Metropolitan Area* report notes: “DOT-MPO coordination is an important feature of transportation planning processes. This relationship is particularly crucial for small MPOs. DOT expertise and resources can be valuable for non-TMA MPOs, which often have small staffs and may not maintain their own GIS infrastructure or travel demand models. DOTs and MPOs benefit from the consistency that this coordination allows; compatible data and measures across State planning boundaries help with the implementation of a consistent performance framework. In addition, DOTs may be further advanced than their non-TMA MPOs in preparing a performance management approach to transportation planning”. (p.14) Among the State DOT collaboration

benefits noted were travel demand modeling assistance (p.14); shared statewide data (p.15); cooperative development of goals, targets, and measures (p.16). The Tennessee Department of Transportation (TDOT) has initiated a data sharing process through the Tennessee Model Users Group (TNMUG) and the Cleveland MPO will benefit from participating in this effort.

Coordinated Data Sourcing

In *Performance Based Planning for Small Metropolitan Areas*, the FHWA researchers explained “while State DOTs are a primary partner for non-TMA MPOs in obtaining the data needed for performance planning, there are other sources that may be especially useful for small MPOs. Using existing data helps limit the strain on agency resources. For example, MPOs planning for non-TMAs may benefit from access to data maintained by other offices or agencies that may be co-located within councils of government or regional planning organizations. In smaller communities, staff or planners with transportation responsibilities may also have responsibilities for planning economic development, health, land use, or education. This feature of small planning organizations can make it easier to bring data required for non-traditional goals and performance measures, for example, increasing physical activity to meet health goals, or improving access to new developments, into transportation planning.” (p.17) Data already generated through travel demand models, or maintained by local transit agencies or municipalities could be useful to the MPO’s performance based planning (pp.17-18). The Cleveland MPO has begun to examine the reports developed in conjunction with TDOT’s most recent statewide long range transportation plan effort as well as other data sources such as local comprehensive plan data. It appears that some very useful data can be developed through the growing public involvement process, especially as this pertains to multi-modal issues; neighborhood organizations, university students, professional organizations and others are beginning to provide input and engage in activities such as pedestrian counts as MPO staff engages them in meetings.

Communication and Transparency

The *Small Metropolitan Areas* report continues (p. 18): “performance based planning can support a highly transparent and easily communicated form of policy setting, including important components such as monitoring of results. Once a region has established goals and objectives and developed strategies and investments to meet them, policymakers and the public can see the progress that the region may or may not be making as a result of these decisions. Performance based planning connects all of the individual components of planning from visioning to goal and objective-setting to implementation and evaluation into a coherent and credible story that the public can follow. For this reason, the best communicated plans tend to be organized around performance principles”. The Cleveland MPO needs to develop goals, objectives,

performance measures, and targets useful to a performance based planning process in order to make it happen, but it should create the opportunity to engage the public in more of an on-going and “hands-on” way in transportation planning.

Cross-Sectoral Approach

“Smaller MPOs benefit tremendously from partnerships with local agencies and organizations outside of the transportation sector. Beyond being simply a good comprehensive planning approach, such partnerships allow under-resourced MPOs to leverage the resources of other organizations in implementing strategies that cut across many policy areas like health or affordable housing and land use planning. For the same reasons, these partnerships also make sophisticated performance measurement more attainable”, *Performance Based Planning for Small Metropolitan Areas*, p.20. Reaching out to organizations such as the University of Tennessee, Lee University, the UT Center for Transportation Research, the River Counties Realtors Association, Impact Cleveland, the Cleveland Bradley County Greenway Board, the Bradley County health Department, the Bradley County NAACP, and others, is providing the Cleveland MPO with a much stronger basis for transportation planning, especially on multimodal issues.

Challenge: Lack of Cleveland MPO Vision and Mission

Performance based planning and programming, as required by MAP-21, can be more readily accomplished where a vision statement and mission statement exist. The Cleveland MPO lacks a vision statement and mission statement. In order to correct that deficiency, the following working vision statement and working mission statement are proposed, subject to further input from policy makers and the public:

Working Cleveland MPO Vision Statement: An excellent and sustainable multi-modal transportation system meeting the mobility and access needs for people and goods now and in the future as part of a high quality environment

Working Cleveland MPO Mission: Serving the public by providing multi-modal transportation planning services within the Metropolitan Planning Area to further the implementation of transportation projects that meet transportation needs of people and business; to meet the requirements of Federal and State transportation laws and policies applicable to our MPO; and conducting transportation planning so as to involve and serve all segments of the community in creating and sustaining a high quality environment

Challenge: Assessing Readiness for Performance Based Planning and Programming

The quick description of the MPO’s progress in this area would be “minimal”. Determining what needs to be done to shift the Cleveland MPO toward a performance based model. The FHWA has provided a *Performance Based Planning and*

Programming: Self-Assessment tool that should help with this need. The voluntary tool notes several areas for MPO self-evaluation.

Question 1: Assess your agency's coordination processes within/with:

- Your agency and/or department
- External partners,
- Traditional
- Non-traditional partners

What challenges does your agency face and how do you plan to overcome them?
How can you improve your processes?

The Cleveland MPO has a full-time staffing level of 0.5 persons, and that makes communication challenging given that it takes staff time. The relatively small size of the Cleveland Development and Engineering Services Department that houses the MPO can be beneficial for internal communication but the expanded Metropolitan Planning Area (MPA) now served by the MPO also requires communication with other governments represented on the MPO. Communication with TDOT and FHWA partners is good. The Cleveland MPO is beginning to work more closely with non-traditional partners in various ways and these include: the University of Tennessee (development of alternatives for a road diet, greenway extension, sidewalk planning, bus shelter planning, etc.), the UT Center for Transportation Research (SR 60 Corridor Access management planning), Impact Cleveland and Lee University (neighborhood capacity building for transportation planning in EJ communities), and others.

Question 2 (modified): Considering the following performance based plans from different partners, and their associated processes that include objectives, performance measures, data collection and monitoring, selection of strategies, and evaluation, were these performance-based planning documents developed within the framework of goals, objectives, and performance measures as established in the LRTP? What challenges does your agency face and how do you plan to overcome them? How can you improve your processes?

- State [Highway] Asset Management Plan
- State Strategic Highway Safety Plan
- MPO Congestion Management Process
- Transit Asset Management Plan
- Transit Agency Safety Plan
- State Freight Plans
- Corridor planning efforts
- Transit agency capital program development
- Operations plans
- Other plans/studies

The current answer to Question 2 for the Cleveland MPO would be that this has happened more fully in some areas than in others. Coordination with the TDOT Strategic Highway Safety Plan is a priority need, though some coordination is beginning on Mouse Creek Road (addressing curves and lack of shoulders in a short section where accidents have occurred) and for a pedestrian safety study in the 25th Street corridor (need for sidewalks and pedestrian crossings from west of Candies Lane to east of Keith Street and the Greenway entrance). Congestion management coordination will likely remain minimal as long as the MPO is not in an air quality non-attainment area. The transit agency is Cleveland Urban Area Transit (CUATS) and it will be necessary to coordinate with them on the asset management plan and safety plan. A new regional process has been proposed by TDOT Multimodal for the Coordinated Human Services Plan and it is now underway. A closely coordinated corridor planning effort is now underway for SR60 involving TDOT and others in a corridor management committee now working to develop a corridor management plan. The long range transportation plan is developed in consideration of “other plans/studies”, for example, Cleveland’s land use plan, especially as it relates to facilitating increased density and multi-modal transportation in the downtown Cleveland redevelopment area.

Question 3: Assess your agency’s process for engaging the public, stakeholders, and elected officials in the various stages of the PBPP process

- Development of goals
- Development of objectives
- Development of performance measures
- Selection of targets
- Assessment of strategies that feed into planning and programming decisions

What challenges does your agency face and how do you plan to overcome them? How can you improve your processes?

Question 4: Data and analytical tools play a *critical* role in a PBPP approach. Conducting system or project analysis will require a suite of approaches, tools, and methodologies. Data is the foundation for:

- Selecting feasible performance measures
- Understanding current system performance (developing a base line)
- Developing and tracking performance changes over time (monitoring conditions)
- Setting targets
- Evaluating the effectiveness of implemented strategies

Data Collection:

What data does your agency collect? What data do your partners collect? Assess the process utilized to share data. What data might you need to collect? Do you have/need a resource for this data? What are your limitations to obtaining and/or using data? How can you overcome these limitations?

Question 5: Compile and Analyze Data:

- Assess your agency's process to compile and analyze data (collected by your agency and/or partners)
- Assess the analysis tools your agency uses to:
 - o Forecast future performance
 - o Conduct an analysis of alternative investments or scenarios.
- What challenges does your agency face and how do you plan to overcome them? How can you improve your processes?

In response to questions 4 and 5, data collection and analysis present significant challenges for the Cleveland MPO. Because of limited staff and other resources, it will be necessary to strategically organize data collection and analysis effort. This is an area where FHWA's *Small Metropolitan Areas* report recommendations will be particularly important: using TDOT data (data available through TRIMS, etc.); municipal government data (City and County GIS data; data from comprehensive plans); Census data; data from the traffic model; data from the transit agency CUATS (ridership data; periodic passenger survey data); data from non-traditional sources (EJ community needs data including transportation being developed by Lee University and Impact Cleveland; citizen volunteer developed data on bicycle-pedestrian usage)

Question 6: The 3-C process and programming process is by nature an on-going and cyclical process, and correspondingly, PBPP is by nature an iterative process that is refined over time. Assess your agency's feedback mechanisms and your method to refine your processes over time? What challenges does your agency face and how do you plan to overcome them? How can you improve your processes?

The Cleveland MPO staff receives feedback from the MPO Board primarily at regular MPO meetings. Some level of feedback is received from the public in response to public notices regarding various MPO planning activities. Project specific activities related to Right-of-Way plans typically generate a response from within the affected area. The topic of more citizen interest and input has been bicycle and pedestrian planning.

Question 7: a goal is a broad statement that describes a desired end state. In a PBPP process, goals should be developed with a focus on outcomes, rather than on activities or policies. In the transportation planning process, goals stem from the values inherent in the community's vision for the future. These outcome-oriented goals set the strategic direction for a PBPP process, answering the questions "*what do we want our area to look like*" and "*what do we want to achieve*".

Once goals have been identified, the next component of a PBPP process is developing objectives. Goals relate to the "big picture" or desired end-result and objectives should

be specific and measurable. An objective is a specific, measurable statement that supports achievement of a goal. An objective is not just a sub-goal, but provides a level of specificity necessary to fully implement broader based goals.

Does your LRTP/MTP have outcome-focused goals? Assess your process for developing LRTP/MTP goals:

- What outcome(s) we are trying to achieve
- Your agency's role in creating or supporting that outcome(s)
- What kind of data and analysis would be needed to develop measurable objectives to assess progress toward meeting the goal (see the Data section, above)
- What challenges does your agency face and how do you plan to overcome them?
- How can you improve your processes?

The Cleveland MPO's current long range transportation plan, the 2035 RTP, contains the Goals and Objectives shown in the graphic below. The four goals shown below are somewhat outcome-based but these could be improved. It is difficult to move from the established goal statements to specific and measurable objectives. Goal statements could be improved to more directly reflect aspects of the eight planning factors found in MAP-21. Goals could also be better defined to each mode and to specific concerns such as environmental justice.

Figure B4: 2035 RTP Goals and Objectives



Question 8: Does your LRTP/MTP have “SMART” (specific, measurable, agreed-upon, realistic, time-bound) objectives? Assess your process for developing SMART objectives. What challenges does your agency face and how do you plan to overcome them? How can you improve your processes?

Before developing “SMART” objectives, the Cleveland MPO will need to re-visit the goals in the long range transportation plan. Ideally, the goals and objectives can be developed at the same time. It will be important that the measurement of the objectives rely on data that is readily available, that it not result in an overwhelming burden of data management and analysis, and that the objectives and their measurement be relevant and understandable by the public and policy makers. As noted in the FHWA *Small Metropolitan Areas* report the measurement and reporting of progress on objectives can be an opportunity for building public engagement in the transportation planning process and this would be an important improvement for the Cleveland MPO.

Question 9: Performance measures support objectives and serve as a basis for comparing alternative improvement strategies (investment and policy approaches) and for tracking results over time. Selection of performance measures is closely tied to development of goals and objectives, since performance measures are used to assess progress toward meeting objectives and in turn goals. Therefore, performance measures are central to implementing a performance-based planning process, since how performance is defined and measured will significantly affect the types of projects and strategies that are advanced. Moreover, performance results inform agencies if the types of projects and strategies that are implemented are in fact helping them achieve their strategic goals.

Assess your agency’s process for developing and setting performance measures. Did you consider / how did you consider:

- If it represents a key concern?
- Is it a clear process?
- Is data available?
- Can it be forecasted?
- If the measure is something the agency and its investments can influence?
- Is the measure meaningful for the types of services or area?
- Improvement direction is clear.
- What challenges does your agency face and how do you plan to overcome them?
- How can you improve your processes?

Performance measures do not exist for the Cleveland MPO. These need to be developed when goals and objectives are refined in the development of the 2040 RTP. At a minimum, the 2040 RTP goals and objectives will cover the issues required by MAP-21. It may be important to a clear and well-rounded plan, to include multiple objectives for each goal but the overall list should be kept within a manageable range and avoid

significant overlap. Ideally, most of the objectives would be addressed by one performance measure that meets the criteria outlined above.

Question 10: Assess how your performance measures meet the five critical purposes:

1. Clarify the definition of goals
2. To monitor or track performance over time
3. A reference for target setting
4. A basis for supporting policy and investment decisions
5. To assess the effectiveness of projects and strategies
 - What challenges does your agency face and how do you plan to overcome them?
 - How can you improve your processes?

When performance measures are crafted for the new 2040 RTP goals and objectives of the Cleveland MPO, the performance measures need to be checked, and adjusted as necessary, to meet these five criteria.

Question 11: Assess your process for developing performance measures for sustainability, livability, quality of life, and other related topics that are dependent upon public input and may be difficult to collect data for. What challenges does your agency face and how do you plan to overcome them? How can you improve your processes?

There is some experience regionally and by Cleveland MPO partner communities in planning and goal setting in these areas, such as through comprehensive plans. However, greater specificity to the requirements of MPO planning and the establishment of performance measures is needed. The Cleveland MPO should look to case studies of other smaller MPOs that are further along in this process. Some sort of community forum or focus group process could be useful in developing related goals and objectives as well as performance measures to address sustainability, livability, and quality of life. Finding a representative cross-section of participants will be important for a number of reasons; for example, livability in terms of transportation may have a different meaning or emphasis for the population over age 65.

Question 12: while a performance measure itself provides a metric for comparison, a PBPP process requires identification of desired trends (e.g., reduce, increase, maintain) or targets (specific numerical figures) associated with the performance measure in order to provide direction to strategy analysis and performance tracking.

In order to develop a target, it is important to analyze baseline data to understand past trends in performance, as well as conduct analysis of expected performance to account for factors that will affect performance in the future, including levels of available funding. As transportation agencies go through multiple cycles and iterations of planning, the agency will have more information to develop realistic targets.

Assess your agency's process to:

- Analyze baseline data

- Develop assumptions
- Identify trends
- Set targets
- What challenges does your agency face and how do you plan to overcome them?
- How can you improve your processes?

The Cleveland MPO staff has experience in the development of metrics for other planning processes. A key focus in the development of desired trends and targets will be in keeping the data collection and analysis manageable. This is an area in which the MPO will likely reach out to TDOT and other agencies for technical assistance with broad scale data and trend analysis. TDOT's most recent statewide long range transportation plan process contains a series of technical reports useful to performance based transportation planning, and among these is a trends report. TDOT has collected data and made observations about trends statewide and their implications for transportation needs, e.g. aging population.

Question 13: In a PBPP process, the performance measures and targets that are established, together with policy considerations and principles agreed upon by policymakers, should be used as a basis for prioritizing and selecting transportation investments and policies. This step relies on data and analysis tools to help support informed analysis of strategies and predict performance outcomes.

Assess the process your agency uses to identify potential packages of strategies to achieve performance-based objectives and determine which strategies may be most effective.

- How do you consider a full range of strategy options?
- How do you incorporate non-capacity increasing strategies, as they are often difficult to analyze with traditional transportation modeling and analysis tools?
- How do you utilize scenario planning in comparing different packages of investments and strategies?
- What challenges does your agency face and how do you plan to overcome them?
- How can you improve your processes?

Cleveland MPO staff have some prior experience with scenario planning through the development of growth scenarios for the comprehensive planning process. Given limited resources for transportation improvements, one possibility for the development of strategies to achieve the identified goals might be to begin with policy axes along which to evaluate alternative strategies and their ability to meet the stated objectives and otherwise satisfy program requirements: few big projects/many small projects; clustered projects/scattered projects; focus equally on all modes/ concentrate on one or two modes; evenly divided emphasis between passengers and freight/ weighted

emphasis on passengers or freight; primary emphasis on capacity expansion/primary emphasis on system preservation and enhancement; primary project benefit (safety, mobility, etc.)/ multiple project benefits, focus on few primary routes/focus on larger network, etc. Scenarios should comprise some package of strategies and should probably be limited to three at the most and include the “no-build” option.

Question 14: Investment priorities are made through policy-level discussions about what packages of investments will be adopted and supported for implementation by the agency. These policy discussions culminate in the development of the LRTP/MTP. This decision-making process is iterative, and may involve going back to technical staff to answer questions, re-examine options, or assess hybrid scenarios. A key element of a PBPP approach is that the LRTP/MTP is founded on an understanding of anticipated performance outcomes, and consideration of tradeoffs that may need to be made across various goal areas given resource constraints. While performance measures guide investment priorities in the LRTP/MTP, other factors, such as equity and consideration of qualitative factors inform the resulting plan.

Assess how the primary outputs of your long range transportation planning process provide a direct connection to project level decision-making by identifying:

- Program level investment priorities
- Major projects or priority corridors for improvement
- Identification and consensus on expected performance levels
- Policy level discussion and decisions and stakeholder input that can help inform the development of project selection criteria that are linked to the plan
- What challenges does your agency face and how do you plan to overcome them?
- How can you improve your processes?

The Cleveland MPO has significant work to do in addressing this area, project priorities within the RTP. Prior RTP work has evaluated RTP projects and attempted to rank them relative to the planning factors in the highway legislation. With the establishment of goals and objectives that are more clear and measurable in the 2040 RTP, the process for identifying investment priorities within the 2040 RTP should be made somewhat easier. Projects have been ranked in the past and this helped established a first and second planning horizon within the long range transportation plan. The prioritization within the long range plan should not overlook the fact that the MPO may be met with unforeseen opportunities, or actively develop opportunities, for additional funding that is unanticipated and/or available only for projects with specific characteristics.

Question 15: Assess your LRTP/MTP project prioritization procedures and their relationship to the LRTP/MTP goals and objectives? What challenges does your agency face and how do you plan to overcome them? How can you improve your processes?

The Cleveland MPO will need to significantly expand its procedures for such prioritization and their needs to be a clear relationship between the strategies selected for achieving goals and objectives, and the project prioritization that occurs. Training and technical assistance from TDOT and FHWA, and case studies from other small MPOs that identify best practices could be helpful.

Question 16: Assess your process to monitor implementation of these other federally-required plans, incorporate strategies into subsequent planning and programming efforts, and periodically update these. What challenges does your agency face and how do you plan to overcome them? How can you improve your processes?

This process is not now in place with the Cleveland MPO but it is required by MAP-21. The amount of data and analysis and reporting from the MPO is significant.

The MPO will be required to coordinate with TDOT concerning the selection of a performance target(s) for the National Highway Performance Program (NHPP) for which the USDOT specifies performance measures that the states must use to assess condition of pavement, condition of bridges, and system performance for the Interstate system and Non-Interstate NHS system. The MPO will also be required to provide a Metropolitan System Performance Report every four or five years that evaluates the condition and performance of the transportation system, that reports progress achieved in meeting performance targets since the last report, that evaluates how the preferred scenario has improved conditions where applicable, and that evaluates how local policies and investments have impacted costs necessary to achieve performance targets where applicable.

Concerning the Highway Safety Improvement Program (HSIP), the MPO will be required to coordinate with TDOT regarding selections of a performance target(s). The USDOT will promulgate performance measures for the states that assess: serious injuries per vehicle mile travelled, fatalities per vehicle mile travelled, number of serious injuries, number of fatalities, and measures to assess safety on all public roads. For the HSIP the MPO will also be required to provide a Metropolitan System Performance Report every four or five years that evaluates the condition and performance of the transportation system, that reports progress achieved in meeting performance targets since the last report, that evaluates how the preferred scenario has improved conditions where applicable, and that evaluates how local policies and investments have impacted costs necessary to achieve performance targets where applicable.

Performance requirements for freight movement are also required by MAP-21. Again the USDOT will establish the performance measures and the Cleveland MPO is obligated to coordinate with TDOT on the establishment of a performance target(s). For

fright movement the MPO will also be required to provide a Metropolitan System Performance Report every four or five years that evaluates the condition and performance of the transportation system, that reports progress achieved in meeting performance targets since the last report, that evaluates how the preferred scenario has improved conditions where applicable, and that evaluates how local policies and investments have impacted costs necessary to achieve performance targets where applicable.

Question 17: Programming consists of resource allocation to specific projects and strategies. It is the culmination of the PBPP process, and thus plays a critical role in the PBPP approach. Under a PBPP framework, the TIP/STIP documents can serve as information rich documents that communicate the specifics of investments, their funding sources, and how they are contributing to transportation system performance improvements. Within a PBPP approach, the process for selecting projects and strategies for programming should tie directly to the goals in the LRTP/MTP. A successful PBPP plan or strategy requires projects be prioritized based on their ability to meet desired outcomes. The key is prioritization of projects through project selection criteria that are based on performance measures.

Assess your TIP/STIP project prioritization procedures its ability to:

- Track consistency of projects in the TIP/STIP with investment levels identified in the LRTP
- Provide qualitative information on the connections between projects and goals or objectives in the LRTP/MTP
- Identify project scores or rankings conducted in order to select projects for funding
- Provide information to enable summaries of the number and funding of projects of different types addressing different system performance factors or goals
- Include information on the evaluated impacts of projects in terms of performance improvements
- What challenges does your agency face and how do you plan to overcome them?
- How can you improve your processes?

Question 18: Monitoring, evaluating, and reporting performance is a cornerstone part of PBPP. The purpose of PBPP is to ensure that results of previous investments and policies inform future decision-making so that transportation agencies can better understand approaches that work best given constraints and conditions. In order for performance to inform future decisions about investments and priorities, data must be collected, assessed, and reported on an on-going basis. Monitoring, evaluation, and performance reporting plays a critical role throughout the PBPP planning process by providing information to inform each step.

Assess your agency's process for monitoring actual conditions on a periodic basis (annually, quarterly, monthly, etc.).

- Does it allow for periodic assessment of whether targets have been or are likely to be attained?
- Is it an ongoing process, with data being combined on various metrics and performance areas?
- Does this monitoring effectively update transportation officials with information about progress made toward goals, relative to targets and resource allocation efforts?
- Assess your agency's process for evaluating whether implemented strategies have been effective in contributing toward positive performance outcomes for systems-level evaluations and project-level or program-level analysis.
- What challenges does your agency face and how do you plan to overcome them?
- How can you improve your processes?

Question 19: Assess your agency's process for evaluating program effectiveness:

- System-level performance (regional analysis to assess the extent to which transportation investments and policies have contributed toward a target)
- Project-level or program-level performance (to assess impacts of specific strategies)
- What challenges does your agency face and how do you plan to overcome them?
- How can you improve your processes?

Question 20: Assess your agency's process for performance reporting.

- Who are your audiences for performance reporting?
- Is your reporting done in a clear and concise manner to meet the needs of each of your audiences?
- What visualization techniques do you use to convey your message to your audiences?
- What information do you report? Is there additional information you should be reporting?
- Do you report both current conditions and, where appropriate, provide counterfactual information, for example, about performance that would have been expected without the investments that were made?
- Do you use data to show the link between funding levels and performance, as well as the long-term cost savings of investing in infrastructure now to prevent costly repairs down the road?
- Do you use "performance journalism" in order to clearly communicate information about performance, combining quantitative reporting using charts, tables, and measurements, along with narrative storytelling?
- What challenges does your agency face and how do you plan to overcome them?
- How can you improve your processes?

Questions 18, 19, and 20 address different aspects of the system for performance reporting: monitoring conditions; evaluating program effectiveness; and the process for performance reporting. The Cleveland MPO has none of these in place and would appear to be a few steps removed from having them in place due to the need to develop goals, objectives, and performance measures. As mentioned earlier, this type and level of performance reporting can carry the benefit of dramatically enhancing public involvement in the transportation planning process. However, it is going to contribute significantly to the MPO workload.

Appendix C

FHWA's INVEST Tool and its Application by the Cleveland MPO

Information on FHWA's INVEST tool for evaluating sustainability can be found at <https://www.sustainablehighways.org/868/what-is-invest.html>. Sustainability is defined in the following way: "the goal of sustainability can be described with the "triple bottom line", which includes giving consideration to three principles: Social (also known as equity or people), Environmental (also known as ecology or planet), and Economic (also known as money or profit). The goal of sustainability is the satisfaction of basic social and economic needs, both present and future, and the responsible use of natural resources, all while maintaining or improving the well-being of the environment on which life depends."

A sustainable highway is described in these terms: "a sustainable highway should satisfy lifecycle functional requirements of societal development and economic growth while striving to enhance the natural environment and reduce consumption of natural resources.... Sustainability in highways should be addressed with the understanding that highways are one part of transportation infrastructure, and transportation is one aspect of meeting human needs. In addition to addressing environmental and natural resource needs, the development of a sustainable highway should focus on access (not just mobility), moving people and goods (not just vehicles), and providing people with transportation choices, such as safe and comfortable routes for walking, cycling, and transit."

The Cleveland MPO has examined the INVEST tool. Staffing and other resource limitations make implementation difficult. However, a limited application of INVEST has been included in the scope of work for the 2040 Regional Transportation Plan. INVEST consists of three components which are the System Planning (SP), Project Development (PD), and Operations and Maintenance (OM) modules. The Cleveland MPO intends to utilize a selected set of criteria from the System Planning (SP) module for a brief evaluation of the 2035 RTP. Use of the Project Development (PD) and Operations and Maintenance modules will be reevaluated as the MPO moves further into the Performance Based Planning and Programming approach. A score sheet is being developed by the Cleveland MPO that follows the INVEST tool scoring criteria. It is being done for the set of System Planning (SP) criteria chosen to evaluate the 2035 RTP in preparation of the 2040 RTP.

The following INVEST Systems Planning (SP) criteria were chosen for the 2035 RTP evaluation:

SP-01 Integrated Planning: Economic Development and Land Use

The goal of SP-01 is to "Integrate statewide and metropolitan Long Range Transportation Plans (LRTP) with statewide, regional, and/or local land use plans and economic development forecasts and goals. Proactively encourage and facilitate

sustainability through the coordination of transportation, land use, and economic development planning”. The sustainability linkage for SP-01 is that “integrating transportation planning with economic development and land use supports the economic triple bottom line principle by creating opportunities to improve access and mobility, and increase the social, environmental, and economic returns on both public and private investments in transportation projects and programs”.

FHWA provides definitions for applying SP-01. "Integration" - In this case, "integration" means developing transportation, land use, and economic development plans consistently and collaboratively. "Sustainable" - Actions are sustainable when they maintain or enhance our capacity to endure. The goal of sustainability is the satisfaction of basic social and economic needs, both present and future, and the responsible use of natural resources, all while maintaining or improving the well-being of the environment on which life depends. "Sustainability Principles" - For the purposes of the INVEST tool, "sustainability principles" refers to the economic, environmental, and social principles of the triple bottom line. "Economic development and land use plans" - These include policies, plans, maps, regulations, or programs that focus on the use, design, location, density, or related features of land. These include growth strategies, comprehensive plans, zoning plans, downtown revitalization plans, visioning plans, and urban renewal plans, among others.

SP-02 Integrated Planning: Natural Environment

The goal of SP-02 is to “integrate ecological considerations into the transportation planning process, including the development of the long range transportation plan (LRTP) and TIP/STIP. Proactively support and enhance long-term ecological function through the coordination of transportation and natural resource planning”. The sustainability linkage for SP-02 is that “integrating transportation planning with natural resource planning supports the environmental triple bottom line principle by ensuring the transportation system supports and enhances sustainable ecological function.”

FHWA provides definitions for applying SP-02. “Integrated” - For the purposes of this criterion, plans and planning are considered “integrated” when their means and ends are consistent, internally and with each other, and when they are developed in a collaborative manner. “Sustainable” - Actions are sustainable when they maintain or enhance our capacity to endure. The goal of sustainability is thus the satisfaction of basic social and economic needs, both present and future, and the responsible use of natural resources, all while maintaining or improving the well-being of the environment on which life depends. “Ecological” - In this case, it refers to the natural environment—specifically the ecosystems and natural resources on which life depends. “Environmental plans, policies, and goals” - These include air quality management plans, watershed and/or stormwater management plans, integrated natural resource management plans, climate change and energy plans, and/or habitat conservation or connectivity plans, among others.

SP-03 Integrated Planning: Social

The goal of SP-03 is that “the agency's Long Range Transportation Plan (LRTP) is consistent with and supportive of the community's vision and goals. When considered in an integrated fashion, these plans, goals and visions support for sustainability principles. The agency applies context-sensitive principles to the planning process to achieve solutions that balance multiple objectives to meet stakeholder needs”. The sustainability linkage for SP-03 is that “integrating transportation planning with the community's vision and goals for sustainability supports the social triple bottom line principle by ensuring transportation investments reflect the unique vision, goals, and values of the community”.

FHWA provides definitions for applying SP-02. “Community” - In this case, the term “community” refers to persons, public agencies, and private or non-profit organizations within the agency's jurisdiction that are affected by changes to the transportation system. “Vision and Goals” - In this case, “visions and goals” refers to desired outcomes for the future that are determined by the community through an inclusive, comprehensive, and collaborative process. “Sustainability” - Actions are sustainable when they maintain or enhance our capacity to endure. The goal of sustainability is the satisfaction of basic social and economic needs, both present and future, and the responsible use of natural resources, all while maintaining or improving the well-being of the environment on which life depends.

SP-04 Integrated Planning: Bonus

The goal of SP-04 is that “the agency has a continuing, cooperative, and comprehensive (3-C) transportation planning process. Planners and professionals from multiple disciplines and agencies (e.g., land use, transportation, economic development, energy, natural resources, community development, equity, housing, and public health) work together to incorporate and apply all three sustainability principles when preparing and evaluating plans”. The sustainability linkage for SP-04 is described in this way: “long-range, integrated planning at the state and metropolitan levels provides the most robust framework for responding to sustainability goals. This integration supports all of the triple bottom line principles”. It seems that this goal is beyond the transportation mission of MPOs, hence it is labeled “bonus”, but it is obvious that important interrelationships exist between these broader planning topics and addressing them in a somewhat congruous manner should be beneficial.

SP-05 Access and Affordability

The goal of SP-05 is to “enhance accessibility and affordability of the transportation system to all users and by multiple modes.” The sustainability linkage for SP-05 is that “improved access and affordability benefit the social and economic sustainability principles by improving employment opportunities and enhancing opportunities to interact with the community. Increasing the modal choices available to the public supports the environmental principle by offering alternatives to motorized travel”.

FHWA provides some definitions and guidance in the application of SP-05. “In the context of this self-evaluation tool, accessibility refers to three distinct and complementary issues—physical access, equitable access, and affordable access. To support and inform decision-making, agencies should conduct evaluations and analyses with regard to accessibility and affordability, and should use the results in the programming of transportation improvements.”

SP-06 Safety Planning

The goal of SP-06 is that the “agency integrates quantitative measures of safety into the transportation planning process, across all modes and jurisdictions”. The sustainability linkage for SP-06 is that “reducing fatal and serious injuries contributes to the social and economic triple bottom line principles by reducing the impacts associated with personal and public property damage, injury, and loss of life”.

SP-07 Multimodal Transportation and Public Health

The goal of SP-07 is to “expand travel choices and modal options by enhancing the extent and connectivity of multimodal infrastructure. Support and enhance public health by investing in active transportation modes”. The sustainability linkage for SP-07 is that “a multimodal transportation network supports the social and economic triple bottom line principles by increasing transportation options, reducing traffic congestion and emissions, and encouraging the use of active modes to enhance public health”.

FHWA provides some definitions and guidance in the application of SP-07. “Multimodal” - Multimodal refers to a transportation system that provides travelers with well-connected and integrated bicycle, pedestrian, and transit networks, in addition to automobile infrastructure. Multimodal can also refer to the provision of travel options for inter-city passenger travel, such as rail, train, bus, or ferry as alternatives to air travel. “Active transportation modes” - Active transportation modes refer to modes of transportation that increase levels of physical activity and are considered to primarily include biking, walking, and transit (Approximately 30% of transit users receive the CDC recommended amount of daily physical activity. Source: Besser, L. and A. Dannenberg, Walking to Public Transit: Steps to Help Meet Physical Activity Recommendations, American Journal of Preventative Medicine, 2005.)

SP-08 Freight and Goods Movement

The goal of SP-08 is to “implement a transportation system plan that meets freight access and mobility needs while also supporting triple bottom line sustainability principles”. The sustainability linkage for SP-08 is that “freight and goods movement planning benefits all of the triple bottom line principles by supporting economic prosperity through improved freight efficiency and reliability, reducing fuel consumption and related emissions, and reducing adverse impacts of freight on communities”. The

FHWA further notes that “a more sustainable freight system provides convenient access to goods and markets, allows for multiple freight modes, reduces congestion on roadways, and reduces freight inefficiencies and adverse impacts on communities (noise, emissions, vibrations, etc.)”.

SP-15 Linking Asset Management and Planning

The goal of SP-15 is to “leverage transportation asset management data and methods within the transportation planning process to make informed, cost-effective program decisions and better use existing transportation assets”. The sustainability linkage for SP-15 is that “Incorporating transportation asset management data and economic analysis methods throughout system planning supports the environmental and economic triple bottom line principles by improving the cost effectiveness of decisions, extending the life of assets, and reducing the demand for raw materials”.

SP-17 Linking Planning and NEPA

The goal of SP-17 is to “integrate transportation system planning process information, analysis, and decisions with the project-level environmental review process, and reference it in NEPA documentation”. The sustainability linkage of SP-17 is described in these terms “the NEPA process encompasses all of the triple bottom line principles, typically at the project level. This criterion ensures that information and decisions made in the system planning process generate useful information regarding sustainability impacts, and that data and those sources are consistent between system-level and project-level planning”.