Nashville Transportation Management Area

Federal Certification Review

Final Report

August 2018
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Executive Summary

Per Title 23 Code of Federal Regulations (CFR) Part 450.336, Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) must conduct a review of the transportation planning process for each Transportation Management Area (TMA), urban areas with population greater than 200,000 people, no less than every four years.

Based on the Federal Review Team’s review and evaluation of the TMA planning process, FHWA and FTA find that the process substantially meets the requirements of 23 CFR 450 and jointly certify the planning process subject to corrective actions (see Summary of Findings). Pending timely completion of the required corrective actions, this certification will remain in effect until August 3, 2022.
Purpose and Objective

The Fixing America’s Surface Transportation Act (FAST Act), signed into law on December 4, 2015, and Titles 23 and 49 of the United States Code (U.S.C.) uniformly direct the statewide and metropolitan transportation planning processes across the country. The United States Department of Transportation issued the “Final Rule on Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning” on May 27, 2016, to establish the Federal requirements for the statewide and metropolitan transportation planning processes in Titles 23 and 49 of the Code of Federal Regulations (CFR).

The regulations in 23 CFR Part 450 and 49 CFR Part 613 establish the national policy that each urbanized area, as defined by the U.S. Census Bureau, shall have a designated metropolitan planning organization (MPO) to carry out a continuing, cooperative, and comprehensive transportation planning process. Under the Fixing America’s Surface Transportation (FAST) Act, MPOs are responsible for considering and implementing transportation projects, strategies, and services to address ten planning 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 the accessibility and mobility of people and for 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;
8. Emphasize the preservation of the existing transportation system;
9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and
10. Enhance travel and tourism.
Per 23 U.S.C. 134(k)(5) and 49 U.S.C. 5303, the FHWA and FTA must jointly review and evaluate the transportation planning process conducted in each TMA no less than every four years. This TMA Certification Review includes an assessment of the degree to which the transportation planning process in each TMA meets the requirements of the metropolitan planning regulations.

As detailed in 23 CFR 450.336, after review and evaluation of the TMA planning process, the FHWA and FTA shall take one of the following actions:

- **Certification** if the planning process fully meets all Federal requirements;
- **Joint certification subject to corrective action(s)** if the planning process substantially meets all Federal requirements;
- **Joint limited certification** as the basis for approval of only specified categories of programs and projects, subject to corrective action(s); or
- **Decertification** if the FHWA and FTA are not able to certify the planning process.

If FHWA and FTA do not certify the metropolitan transportation planning process, or cannot certify within a four-year period, the Secretary of Transportation may issue corrective actions, restrict funding, and withhold up to 20 percent of the funds attributable to the metropolitan planning area under Title 23 U.S.C. and Title 49 U.S.C. Chapter 53.
Scope and Methodology

The TMA Federal Certification Review was led by a Federal Review Team made up of members from FHWA Office of Planning, FHWA Tennessee Division, and FTA Region 4. The team included the following members:

- **FHWA Office of Planning**
  - Tameka Macon, Transportation Planner, Oversight & Stewardship Team

- **FHWA Tennessee Division**
  - Theresa Claxton, Planning & Program Management Team Leader
  - Melissa Furlong, Operations Program Specialist
  - Joi Hamilton-Jones, Civil Rights Program Specialist
  - Pamela Heimsness, Safety & Traffic Operations Team Leader
  - Jessica Rich, Safety Engineer
  - Sean Santalla, Planning & Air Quality Specialist
  - Elizabeth Watkins, Planning & Air Quality Specialist

- **FTA Region 4**
  - Andres Ramirez, General Engineer

The TMA Certification Review is performed as a three-step process over a series of months and includes a desk review, site visit, and the certification report.

**Desk Review**: In the desk review, the Federal Review Team examines the planning process to assess compliance with 23 CFR 450, using information gleaned from the Metropolitan Planning Organization’s (MPO’s) processes and major planning products; an assessment of recent activities relevant to the TMA planning process; consideration of the findings of prior certification reviews and other oversight activities; and other observations of the TMA planning process. The desk review is invaluable to informing aspects of the review such as review focus areas, subjects to discuss at the site visit, and the findings of the review.

**Site Visit**: The site visit portion of the Federal Certification Review allows the Federal Review Team the opportunity to visit with agencies engaged in the TMA planning process, including the MPO, the State Department of Transportation, and provider(s) of public transportation. During this site visit, the Federal Review Team engages with these planning entities to discuss the planning process, with a focus on priority review topics coming out of the desk review. In addition, the site visit also includes a public engagement component, to solicit feedback from the public on the planning process. The discussion and input received at the site visit and public meeting is a primary source of information to support the Certification Review observations and findings.
The site visit for the Nashville TMA Federal Certification Review was held on May 1-3, 2018, and included representatives from the Federal Review Team, the Greater Nashville Regional Council (GNRC) acting as the Nashville Area MPO, the Tennessee Department of Transportation (TDOT), and the Nashville Metropolitan Transit Authority (MTA). An agenda for the site visit can be found in Appendix A and a list of site visit participants can be found in Appendix B.

On May 2, 2018, the Federal Review Team held a public meeting in coordination with the MPO to invite public comment feedback on the TMA planning process. In addition, the Federal Review Team solicited feedback from the MPO’s Technical Coordinating Committee on May 2, 2018 and the Transportation Policy Board on May 16, 2018. A summary of comments received through this engagement and the response to those comments appears in Appendix C.

Certification Report: The Certification Report documents and summarizes the review performed by the Federal Review Team as well as the observations and findings related to the TMA planning process stemming from the Federal Certification Review. Review findings are categorized as corrective actions, recommendations, and commendations:

- **Commendations** highlight noteworthy practices that demonstrate innovative, highly effective, or well-thought-out procedures for implementing the planning requirements.

- **Recommendations** concern the state of practice or technical improvements that would enhance existing processes and procedures. FHWA and FTA expect planning agencies to give due consideration to the implementation of recommended actions.

- **Corrective Actions** denote items that do not meet the requirements of the applicable Federal rules and regulations. FHWA and FTA expect planning agencies to address corrective actions in accordance with prescribed timelines to achieve specific outcomes.

The Federal Review Team identified 4 commendations, 5 recommendations, and 4 corrective actions related to the planning process for the Nashville TMA. These findings are detailed in the **Summary of Findings** section of this report.
Certification Review Observations & Findings

The Federal Certification Review focused on key planning processes and products related to the Nashville TMA. These include:

- Status of Prior Review Findings & Recent Activities
- Regional Overview
- MPO Organizational Structure
- Planning Agreements
- Unified Planning Work Program Development & Management
- Metropolitan Transportation Plan
- Transportation Improvement Program Development & Management
- Performance-Based Planning & Programming
- Transit Planning & Coordination
- Public Involvement
- Title VI/Environmental Justice/Limited English Proficiency
- Congestion Management Process
- Intelligent Transportation Systems
- Transportation Safety & Security
- Freight Planning

The following sections detail the regulatory basis, status, and findings for these program review areas.

Status of Prior Review Findings & Recent Activities

FHWA and FTA previously performed a Federal Certification Review for the Nashville TMA in August 2014. This certification identified 20 commendations and 20 recommendations. These findings, as well as the status of MPO’s efforts to address the recommendations, can be found in Appendix D.

The MPO undertook several significant activities and had some meaningful achievements since the August 2014 Certification Review.

Since August 2014, the MPO has received the following awards and accolades:
<table>
<thead>
<tr>
<th>Year</th>
<th>Award/ Recognition</th>
<th>Recognizing Entity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>Parthenon Award</td>
<td>Public Relations Society of America (PRSA) Nashville Chapter</td>
<td>PRSA Nashville Chapter recognized the MPO’s 2015 Annual Report, “State of Transportation in Middle Tennessee”, with a Parthenon Award for excellence in public relations.</td>
</tr>
<tr>
<td>2016</td>
<td>Abstract Recognition</td>
<td>University of London</td>
<td>The MPO’s Director of Healthy Communities, Leslie Meehan, was recognized for her work in connecting transportation and public health by the University of London. Her selection was based on an abstract titled Integrating Transportation and Health with Policy, Funding, Data Collection and Model Calibration in Nashville, TN.</td>
</tr>
<tr>
<td>2015</td>
<td>Regional Policy Fellowship</td>
<td>German Marshall Fund of the United States</td>
<td>The MPO’s Executive Director, Michael Skipper, was selected along with one other American and two Europeans for the German Marshall Fund’s Urban and Regional Policy Fellowship Program. This fellowship provided him the opportunity to study regional governance models in metro areas across Europe with the goal of developing recommendations to improve regional collaboration and coordination on transportation planning efforts across Middle Tennessee.</td>
</tr>
<tr>
<td>2015</td>
<td>Recognized as an Innovative MPO</td>
<td>Transportation for America</td>
<td>Transportation for America highlighted the MPO’s work in public health and transportation planning as a case study in their guidebook The Innovative MPO.</td>
</tr>
<tr>
<td>2014</td>
<td>Kresge Grant</td>
<td>Kresge Foundation</td>
<td>In partnership with Transportation for America, the MPO received a grant to integrate creative placemaking into the transportation planning process.</td>
</tr>
</tbody>
</table>

In addition to these awards, the MPO achieved a variety of accomplishments since August 2014, including, but not limited to:
• Adoption of the 2040 Regional Transportation Plan, *Middle Tennessee Connected*

• Adoption of the Fiscal Year (FY) 17-20 Transportation Improvement Program

• Awarded $12 million through the MPO’s Active Transportation Program, a funding program established in the 2035 Regional Transportation Plan dedicated to improving walking and bicycling infrastructure in Middle Tennessee.

• MPO staff participated in the U.S. Department of Transportation’s Every Place Counts Challenge along Jefferson Street in North Nashville.

Currently, the Nashville MPO is prioritizing work related to performance-based planning and programming, public health, creative placemaking, smart mobility, and parking management.

**Regional Overview**

*Regulatory Basis:*

23 CFR 450.312 Metropolitan Planning Area boundaries
23 CFR 470.105 Urban area boundaries and highway functional classification

*Status & Findings:*

The Nashville Area MPO evaluates the metropolitan planning area boundary after each decennial Census and upon requests from local municipalities. The Nashville Area MPO’s metropolitan planning area encompasses the Nashville-Davidson and Murfreesboro urbanized areas (as defined by the Bureau of the Census) and the entirety of Davidson, Maury, Robertson, Rutherford, Sumner, Williamson, and Wilson counties. This metropolitan planning area includes the contiguous area the MPO expects to become urbanized within the horizon of the 2040 Regional Transportation Plan, and was approved by the Governor of Tennessee on April 1, 2014.

The MPO, in partnership with TDOT, considers adjustments to the urbanized area boundary in accordance with FHWA’s Functional Classification Guidelines. The urban area boundary for the Nashville-Davidson, TN urbanized area was most recently adjusted following the 2010 Census, with FHWA concurrence on this adjustment provided on June 17, 2016. MPO and TDOT staff expect to review the urbanized area for adjustments following the 2020 Census.

The MPO adjusts the metropolitan planning area boundary in accordance with the criteria in 23 CFR 450.312, projected population densities over a 25-year horizon, and
the interconnectedness of proposed expansion areas with the existing urbanized area in terms of transportation and commuting patterns. MPO staff also consider development patterns, economic development initiatives, and input from local partners. The existing metropolitan planning area covers the entirety of Davidson, Maury, Robertson, Rutherford, Sumner, Williamson, and Wilson counties, and was approved by the Governor of Tennessee on April 1, 2014. MPO staff expect to evaluate adjustments to the metropolitan planning area following the 2020 Census.

In early 2017, the MPO initiated a region-wide update to Federal Functional Classification of the roadways in the metropolitan planning area. In doing so, the MPO considered changes in travel and development patterns, local planning efforts, requests from MPO member entities, and updates to FHWA’s Functional Classification Guidelines. Recommended changes were adopted by the MPO Executive Board in July 2017. As of the Federal Certification Review, a portion of these changes have been approved by FHWA, while TDOT and MPO staff continue to review the optimal method for moving forward in the review and decisionmaking of the bulk of the proposed changes.

Findings:

None.

MPO Organizational Structure

Regulatory Basis:

23 CFR 450.306 Scope of the metropolitan transportation planning process
23 CFR 450.310 Metropolitan planning organization designation and redesignation

Status & Findings:

The Nashville Area MPO consists of a Transportation Policy Board, a Planning Oversight Committee, a Technical Coordinating Committee, various additional committees, and staff. MPO staff are housed at the Greater Nashville Regional Council (GNRC).

The Transportation Policy Board (TPB) is the policy-making body of the Nashville Area MPO, responsible for analysis and adoption of regional transportation policies, plans, and programs in accordance with Federal requirements. The TPB consists of the
principal elected official from each local government located within the approved metropolitan planning area of the MPO to include each county government and each municipal government with a population of 5,000 or more people as of the last decennial U.S. Census. As of this certification review, the membership of the TPB totaled 33 members (including 3 non-voting members). These members represent:

- Metropolitan Government of Nashville and Davidson County (2 voting members)
- Cities of Brentwood, Columbia, Fairview, Gallatin, Franklin, Goodlettsville, Greenbrier, Hendersonville, LaVergne, Lebanon, Millersville, Mt. Juliet, Murfreesboro, Portland, Springfield, Spring Hill, and White House (1 voting member each)
- Towns of Nolensville and Smyrna (1 voting member each)
- Maury, Robertson, Rutherford, Sumner, Williamson, and Wilson counties (1 voting member each)
- State of Tennessee (1 voting member)
- County Highway Departments (1 voting member)
- Public Transit Operators (1 voting member)
- Greater Nashville Regional Council (non-voting)
- Federal Highway Administration (non-voting)
- Federal Transit Administration (non-voting)

The duties, responsibilities, operating procedures, and the other governing policies of the Transportation Policy Board are described in the MPO’s Transportation Planning Prospectus. This document was most recently updated in August 2017 by action of the MPO Executive Board. This update to the Transportation Planning Prospectus was part of a larger effort to shift the MPO sponsor agency from the Metropolitan Government of Nashville and Davidson County to the GNRC.

The Planning Oversight Committee (POC) monitors the progress of activities identified in the Unified Planning Work Program, and reviews and approves requests for reimbursement of expenses incurred by consultants contracted on behalf of the MPO by the MPO’s Sponsor Agency. The committee is tasked with drafting terms of agreement with the Sponsor Agency for the administration of the MPO planning grants and the provision of staffing support. The committee’s recommendations for this agreement must be adopted by the Transportation Policy Board to be enacted. The committee consists of the chairperson and vice-chairperson of the Transportation Policy Board, the chairperson of the Technical Coordinating Committee, Policy Board members that represent the largest city within each Census-defined Urbanized Area located within the metropolitan planning area, a member of the Policy Board representing a municipality located outside of an Urbanized Area, a member of the Policy Board representing a county government, and a representative of the Tennessee Department of Transportation.
The POC was created on the foundation of the MPO’s previous Finance & Audit Committee, which was restructured in response to the MPO program integration into the GNRC. Duties of the Planning Oversight Committee are detailed in the Transportation Planning Prospectus. Per the Prospectus, meetings of the POC are conducted in-person to “conduct business”, but approval of MPO expenditures can be performed electronically. The exact definition of “conduct business” is unclear, and has led to confusion of the role of the POC in the oversight of the transportation planning process.

Based on a review of the MPO’s website, the POC has only met once since it was established, meeting on August 30, 2017 with the purpose of reviewing the MPO’s Sponsorship Agreement with GNRC. The Federal Review Team is unable to find any documentation of this meeting or any subsequent meetings, and the meeting does not appear to have been publicly-noticed. Additional actions of the POC that the Federal Review Team is aware of include participation in the hiring process for a Transportation Planning Program Manager at the GNRC, although the format of this participation has been unclear. Per the Prospectus, the POC is also expected to provide the TPB an update on Unified Planning Work Program activities at least quarterly; as of this certification review, the POC does not appear to have done so.

The Technical Coordinating Committee (TCC) is the lead advisory committee to the Policy Board. The TCC is responsible for assisting transportation planning staff with preparing and reviewing data, analyzing trends, and developing recommendations for the Transportation Policy Board. In addition, the TCC takes a lead role in coordinating local implementation of MPO-endorsed projects and policies. The TCC consists of administrators, planning directors, and transportation engineers from MPO member governments and transportation agencies. As of this certification review, the membership of the TCC consisted of 41 members (including 3 non-voting members).

These members represent:

- Metropolitan Government of Nashville and Davidson County (6 voting members, represented below):
  - Department of Public Works
  - Planning Commission
  - Airport Authority
  - Traffic & Parking Commission
  - Department of Finance
  - Health Department Pollution Control
- City of Murfreesboro (2 voting members)
- Cities of Brentwood, Columbia, Fairview, Franklin, Gallatin, Franklin, Goodlettsville, Greenbrier, Hendersonville, LaVergne, Lebanon, Millersville, Mt.
Juliets, Portland, Springfield, Spring Hill, and White House (1 voting member each)
- Towns of Nolensville and Smyrna (1 voting member each)
- Maury, Robertson, Rutherford, Sumner, Williamson, and Wilson counties (1 voting member each)
- State of Tennessee (3 voting members, represented below):
  - TDOT Long Range Planning Division
  - TDOT Division of Multimodal Transportation Resources
  - Tennessee Department of Environment & Conservation (TDEC) Air Pollution Control Division
- Regional Transportation Authority (1 voting member)
- Nashville Metropolitan Transit Authority (1 voting member)
- Franklin Transit Authority/Transportation Management Association Group (1 voting member)
- Greater Nashville Regional Council (non-voting)
- Federal Highway Administration (non-voting)
- Federal Transit Administration (non-voting)

The TCC is not governed by a set of bylaws. A limited description exists in the Transportation Planning Prospectus and the MPO website.

In addition to the POC and TCC, the Nashville Area MPO utilizes the following committees:

- Freight Advisory Committee – this advisory committee guides the MPO’s regional freight planning efforts. The primary responsibility of the committee is to help public-sector policymakers, planners, and engineers better understand of the complexities associated with freight movement to more effectively target public investment in the transportation infrastructure. Membership consists of experts and stakeholders from freight-related industries across Middle Tennessee. This committee meets as needed and, per the MPO website, does not appear to have met since April 11, 2016.
- Bicycle and Pedestrian Advisory Committee (BPAC) – this advisory committee guides the MPO’s bicycle and pedestrian planning efforts and helps to evaluate proposed transportation projects to ensure that they are scoped to accommodate all modes of transportation. In addition, the committee plays a key role in the project selection process associated with the MPO’s Active Transportation Program which provides dedicated federal funding for the improvement of walking and bicycling conditions across the area. The BPAC consists of representatives from MPO member jurisdictions, State agencies, area non-profit organizations, local bicycle clubs, and law enforcement. This committee meets
as needed. Per discussion with MPO staff, the BPAC has met regularly over the Certification Review period; however, no notices or agendas are available online, no meetings appear to have been publicly-noticed, and limited information on the activities of the BPAC seems to have been discussed at the TPB and TCC.

The Transportation Planning Prospectus lists a Public Transit Workgroup as an advisory committee related to the MPO’s regional transit planning efforts; however, based on a review of the MPO website and information from MPO staff, this workgroup does not appear to be active.

The MPO also uses ad-hoc study committees, bringing together local experts to inform regional planning studies. As of this certification review, the only current study committee being used by the MPO is related to the South Corridor Transit Study.

As previously mentioned, as of October 1, 2017, the Nashville Area MPO changed sponsor agencies from the Metropolitan Government of Nashville and Davidson County to the GNRC. The GNRC is an association of local governments representing 13 counties in Middle Tennessee, including 6 of the 7 Nashville Area MPO counties (Maury County excluded). The GNRC is governed by a Council made up of mayors, county executives, legislators, and minority and industry appointments representing the counties included in the GNRC, as described in the Tennessee Administrative Code. The Council empowers an Executive Committee, made up of a subset of members of the larger council, to act as the administrative body of the Council and act in the stead of the Council. The GNRC Executive Committee meets monthly.

Following the integration, the GNRC Executive Committee and MPO Transportation Policy Board elected to align the meetings of the two bodies, by holding them on the same day and immediately following one another. As of this Certification Review, the practice has become for the TPB to convene immediately following the GNRC Executive Committee. The MPO asserts that doing so better aligns the aging, economic development, and other community planning activities of the GNRC with the metropolitan transportation planning activities of the TPB.

In convening the two bodies immediately following each other, the GNRC and MPO staff, with support from the GNRC Executive Committee and the TPB, have chosen to hold transportation policy- and planning-related discussion at the GNRC meeting and limit the discussion on such subjects at the TPB meeting, although continuing to make decisions on MPO policies and products at the TPB. While FHWA and FTA fully support the linkage between the traditional activities of the GNRC (including aging services and economic development) with those of the MPO, this practice appears to have created confusion and a misunderstanding regarding the roles and authorities for each body. Such confusion is only intensified by the different establishing legislation, geographies, membership and stakeholders for each body. Both bodies have made efforts to clarify
the authorities of each, particularly as it pertains to transportation planning activities, but, in the observation of the Federal Review Team, confusion remains.

Of particular concern to the Federal Review Team is the differing geographies and membership of the two bodies. As of this certification review, there is one county (Maury County) and one municipality (City of Columbia) which are in the MPO planning area and represented on the TPB but not represented in the GNRC, and 7 counties which are outside the MPO planning area but are in the GNRC. Additionally, the GNRC Executive Committee membership includes state legislators and minority representatives which are not represented in the MPO TPB, while the TPB includes representation from the State of Tennessee (generally by TDOT), FHWA, and FTA, which are not members of the GNRC.

Another concern of the Federal Review Team is that this practice can potentially and easily lead to a situation in which members of the MPO who are not members of the GNRC and who do not attend GNRC meetings, are not included in these conversations and dissemination of information and therefore are not adequately informed in the transportation decision-making process. As an example, the GNRC’s May 16, 2018 Executive Committee meeting included a presentation and discussion on the FHWA Metropolitan Planning program (PL)-funded South Corridor Transit Study, while there was no similar discussion held at the TPB meeting immediately following the GNRC. Recommendations were made at the meeting by the GNRC Executive Committee regarding the study while affected members of the MPO, including members from the City of Columbia, were not present. These recommendations were not acted on by the GNRC Executive Committee as staff deferred them to the TPB, but the study and these recommendations were not discussed at the subsequent TPB meeting.

The Federal Review Team asserts that soliciting input on metropolitan transportation planning and policy actions at the GNRC, in advance of or in place of a discussion or decision at the TPB, subjects the metropolitan transportation planning process to influence from decision-makers with perspectives largely differing from those within the metropolitan area, potentially resulting in a planning process less focused on the needs of the metropolitan planning area.

Staff of the GNRC believe that the process is protected against this concern through two mechanisms, the first being that all members of the TPB are members of the GNRC, and therefore the interests of the TPB are adequately represented at the GNRC Executive Committee. As detailed above and through the governing documents for both bodies, this is not the case. Notwithstanding the geographic exclusion of Maury County, the City of Columbia, TDOT, FTA, and FHWA from the GRNC, the GNRC bylaws describe a process for selection of Executive Committee members which varies significantly from the identified membership of the TPB. For example, while the TPB specifically designates the county mayors for the various counties to sit on the TPB, the
GNRC designates that each county caucus on an annual basis to select a representative for their respective county, a differing process that may not result in the same representative as sits on the TPB. Although, again, decision-making on metropolitan transportation policies, plans, and programs is still being made at the TPB, the practice of holding discussion on these items at the GNRC Executive Committee meeting, combined with the diverging membership of the two bodies, still leaves a gap where TPB members, and the public, may not be adequately involved in or informed of conversations related to metropolitan transportation planning decisions.

Secondly, the MPO attempts to ensure consistent communication between the two bodies through the invitation of all TPB members to the GNRC meeting, and vice versa. For those members that are part of one body and not another, each body is now using name cards that identify each member’s role (or lack thereof), intended to assist the membership through the conversation at each meeting. While this has been a somewhat beneficial practice through the initial integration of the MPO program into the GNRC, as long as the membership and authorities of each body remain so divergent, the Federal Review Team feels that this will continue to lead to confusion regarding the metropolitan transportation planning process, inconvenience for members of the TPB, and a barrier to public engagement in the process.

Of additional concern regarding the new MPO organizational structure and practice is the public engagement associated with the GNRC Executive Committee meetings, particularly those meetings where metropolitan transportation planning activities are being discussed in place of discussion at the TPB. In the observation of the Federal Review Team, GNRC Executive Committee meetings do not appear to be publicly-noticed in accordance with the MPO Public Participation Plan, there is no opportunity for public comment at the meetings, and meeting agendas and materials are not made publicly-available on the GNRC website until well after the meeting. Such practices pose a barrier to the public to engage in the metropolitan transportation planning process through confusion and disinformation. For example, a member of the public that wished to engage in the planning process for the previously-discussed South Corridor Transit Study would not have been aware of any ongoing discussion as there was no mention of the item on the TPB meeting agenda and, would they have been able to access the GNRC meeting agenda, likely would not have been afforded the opportunity to engage at the GNRC meeting.

Informing all of this is a lack of clarity in the MPO’s Public Participation Plan, which has not been updated since July 2007 and is not adequate to properly protect the integrity of the metropolitan transportation planning process in the metropolitan planning area (see the Public Involvement section of this report).

Overall, the Federal Review Team holds serious concern about the decision-making process for the metropolitan planning area, given the procedures that are in place to
guide the process and the ongoing practices that appear to be in flux and lacking in transparency since the integration of the MPO program into the GNRC. It is important to note that these concerns are largely not new, and have been raised by FHWA and TDOT throughout the integration effort.

**Findings:**

**Recommendation:** Develop and adopt bylaws specific to the Planning Oversight Committee, the Technical Coordinating Committee, and any other committees as necessary to formalize the membership, roles, responsibilities, and expectations of these committees in the metropolitan transportation planning process.

**Recommendation:** Enforce the requirement provided in the Bylaws of the Transportation Policy Board for the Planning Oversight Committee to provide the Policy Board an update on UPWP work activities at least quarterly.

**Planning Agreements**

*Regulatory Basis:*

23 CFR 450.314 Metropolitan planning agreements

*Status & Findings:*

The Nashville Area MPO has the following Memorandums of Understanding/Agreement (MOUs/MOAs) in place:

<table>
<thead>
<tr>
<th>Effective Date</th>
<th>Executors</th>
<th>Subject of Agreement</th>
</tr>
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<tbody>
<tr>
<td>6-1-2018</td>
<td>MPO, TDOT, Transit Operators</td>
<td>Performance-Based Planning &amp; Programming</td>
</tr>
<tr>
<td>10-1-2017</td>
<td>MPO, GNRC</td>
<td>MPO Sponsorship Agreement</td>
</tr>
<tr>
<td>10-1-2017</td>
<td>MPO Members</td>
<td>Membership Dues</td>
</tr>
<tr>
<td>01-08-2014</td>
<td>MPO, TDOT</td>
<td>Definition and Need for Amendments/Administrative Adjustments to the STIP/TIP</td>
</tr>
<tr>
<td>09-18-2006</td>
<td>Franklin Transit Authority</td>
<td>Planning Coordination and Cooperation</td>
</tr>
</tbody>
</table>
In addition to these MOUs/MOAs, the MPO has a Transportation Planning Prospectus, dated October 1, 2017, which details the MPO’s partner agencies and their roles and responsibilities in carrying out the metropolitan transportation planning process.

Since the integration of the MPO program into the GNRC, all MPO agreements are being reviewed to reflect this change in organizational structure. Additionally, GNRC is working to establish an MOU with the Clarksville MPO to detail data sharing and planning activities coordination between the two agencies.

The MPO, TDOT, and transit operators across the region most recently executed an agreement related to transportation performance management, in order to satisfy the requirement of 23 CFR 450.314(h). More information on this agreement can be found in the Performance-Based Planning & Programming section of this report.

Per 23 CFR 450.314(a), the MPO, State, and providers of public transportation shall cooperatively determine and document their mutual responsibilities in carrying out the metropolitan transportation planning process, with specific provisions for the development of financial plans that support the MTP and the TIP, and the development of the annual listing of obligated projects. The Nashville Area MPO maintains four agreements with public transportation providers in the TMA (MTA, RTA, Franklin Transit Authority, and City of Murfreesboro), but these agreements are dated, do not reflect current Federal legislation or metropolitan transportation planning practices, and do not contain required specific provisions related to financial planning. The MPO does not appear to have a written agreement with TDOT that meets the provisions of 23 CFR 450.314(a).
Findings:

Corrective Action: Per 23 CFR 450.314(a), there shall be an agreement(s) between the State DOT, the MPO, and public transportation providers to cooperatively determine their mutual responsibilities in carrying out the metropolitan transportation planning process. At a minimum, FHWA expects this agreement to provide specific provisions detailing the cooperative relationship between TDOT, the Nashville Area MPO, and public transportation providers in the Nashville region in carrying out the metropolitan transportation planning process, including:

- Development and management of the MTP, including financial plans supporting the MTP;
- Development and management of the TIP, including financial plans supporting the TIP;
- Development and publication of the annual listing of obligated projects;
- Development and management of the UPWP;
- Integration of a CMP into the metropolitan transportation planning process and identification of congestion performance measures; and
- All other metropolitan planning activities taking place in the region.

Unified Planning Work Program & Planning Grant Administration

Regulatory Basis:

23 CFR 420 Administration of FHWA Planning and Research Funds
23 CFR 450.308 Funding for transportation planning and unified planning work programs

Status & Findings:

Unified Planning Work Program Development & Management

The Nashville Area MPO Executive Board adopted the Fiscal Year (FY) 2018 Unified Planning Work Program (UPWP) on August 16, 2017, and received FHWA approval on the FY18 UPWP on September 28, 2017.
The FY18 UPWP details the metropolitan transportation planning priorities and activities to be undertaken for Federal Fiscal Year 2018 (October 1, 2017 to September 30, 2018), including the activities that will be performed by the MPO and its various planning partners, timelines, and associated funding. FHWA and FTA view the UPWP as a management tool for ensuring appropriate staff and financial allocations to activities reflective of required transportation planning products and processes, as well as regional transportation planning priorities.

The UPWP is primarily funded through FHWA Metropolitan Planning (PL) funds, Statewide Planning and Research (SPR) funds, and FTA Section 5303 funds, all of which are passed through TDOT. In January 2018, TDOT implemented, with concurrence from FHWA and FTA, a Consolidated Planning Grant (CPG) program, in which FTA Section 5303 funds are flexed to FHWA and treated as PL funds, allowing for the two program funds to be administered jointly.

Both FHWA and FTA program funds for metropolitan transportation planning require a 20% non-Federal match. Through their administration of the program, TDOT requires the local subrecipient (the MPO) to provide the entire 20% non-Federal share of the FHWA (PL and SPR) funds, while TDOT provides half of the non-Federal match of the Sec. 5303 funds for an 80% Federal/10% State/10% Local share.

Throughout the bulk of the Certification Review period, funding for the non-Federal share of the metropolitan planning funds for staff and operating expenses was largely provided through in-kind contributions provided by the MPO’s previous host agency, the Metropolitan Government of Nashville and Davidson County. Matching funds for regional consultant activities were provided through MPO membership dues, while additional contributions to support smaller-scale or more-focused studies were provided through the MPO members directly affected by the study.

As a result of the integration of the MPO program into the GNRC, the MPO adopted a new policy related to non-Federal matching funds. This new policy, housed in the Transportation Planning Prospectus, details the following:

- Membership dues are determined annually through the development of the UPWP, and shall be an amount sufficient to cover the required non-Federal share of Federal metropolitan transportation planning grants.
- Dues are calculated based on a per-capita rate which is determined annually and shall be based on US Census annual estimates published two years prior to the year of development for the UPWP.
- Additional dues are expected to cover “sub-regional” studies, defined as any study that involves less than the full collection of counties in the MPO planning area. These dues are expected from each jurisdiction participating in the effort.
and are determined prior to final contract negotiation with the selected contractor for the study. The TPB has the authority to define any study involving at least two counties as “regional” in nature, and not held to this requirement.

- Any MPO member that is not current on dues will lose access to the Transportation Improvement Program, including the ability to add projects to the TIP and the risk of loss of projects already programmed but not yet obligated. This portion of the policy is unclear on whether this applies only to those TIP projects sponsored by the delinquent city/county, or if all projects within the member’s jurisdiction would be at risk (including those sponsored by other agencies, such as TDOT).

For the FY 2018 UPWP, the per capita rate for MPO membership dues was 26 cents. Population figures were based on the 2015 Census estimates.

UPWP development kicks off annually with a call-for-studies targeted at the MPO TCC and TPB, soliciting members for planning activities to be considered for funding in the next UPWP. The public is also welcome to provide input on suggested planning activities. The MPO does not directly coordinate with TDOT and the transit operators through this solicitation, but engage with them through the TCC and TPB. Following this solicitation, the MPO performs an evaluation of the suggested studies, screening the activities to ensure consistency with the regional vision, goals and objectives of the Regional Transportation Plan.

In addition to this solicitation, the MPO develops an annual work plan which details, internally, required activities, ongoing activities, timelines, expected resource needs, and the like over the next fiscal year.

Based on this project solicitation and the annual work plan, the MPO identifies planning priorities for the upcoming UPWP to guide which tasks and activities can and should be funded, and the necessary funding for each activity. The MPO maintains and track project applications that pose good candidates for funding but are unable to be funded in the given solicitation, and communicate directly to project applicants on projects that are unable to be funded.

As planning activities are prioritized and funded, MPO staff develop the draft UPWP. Traditionally, the draft UPWP progresses through both TDOT and FHWA/FTA review before being shared with members of the TCC and/or TPB. This practice was raised as a concern in the Certification Review site visit and seems to diminish the cooperative relationship between the MPO and the transit operator(s) that is expected during UPWP development. Moving forward, the MPO plans to analyze how best to cooperate on UPWP development with all MPO members, including TDOT and transit operator(s), prior to and during State and Federal reviews of the draft UPWP.
A struggle that has been faced by the MPO in development of the UPWP has been the solicitation of additional transportation planning activities in the region for inclusion in the UPWP, particularly those activities being performed by a variety of TDOT Divisions. The MPO and TDOT are committed to exploring avenues to improve the coordination in this area.

As the MPO carries out the adopted and approved UPWP, progress on planning activities is tracked through quarterly progress reporting, which is shared with TDOT and FHWA; updates to project-specific committees; the MPO’s annual report, titled *State of Transportation*; and through updates to MPO members. Traditionally, updates and presentations on final products have been shared with the TCC and the TPB; in recent practice, and as previously discussed, the setting for these discussions has shifted from the TPB to the GNRC Executive Committee. Final reports and deliverables for all MPO activities are also being detailed through the MPO’s web-based publication database, located at [http://www.nashvillempo.org/publications_docs/activities](http://www.nashvillempo.org/publications_docs/activities).

Throughout the Certification Review period, the MPO elected to develop and adopt an annual UPWP, covering one fiscal year. TDOT has requested the MPO to develop a two-year UPWP, for consistency with the other MPOs across the State of Tennessee. The MPO is considering the development of a two-year UPWP beginning with FY 2020 & 2021, but existing MPO practices and policies (including the annual call-for-studies and the membership dues policy) are set up to accommodate an annual process rather than a biennial one.

**Planning Grant Administration**

On May 5, 2017, the Nashville Area MPO was issued an audit finding related to oversight of an MPO contract with the Nashville Civic Design Center. This audit finding detailed a deficiency at the MPO in oversight of the MPO’s grant contracts stemming from a lack of documentation of the actual costs incurred and reimbursed to the Nashville Civic Design Center by the MPO using FHWA PL funds. Through a series of correspondence between TDOT and MPO/Metro Nashville staff, the finding resolved with the payback of $17,702.71 in FHWA PL funds from the MPO to TDOT/FHWA and associated corrective actions regarding oversight of grant contracts and internal controls. In the time between the audit finding and the resolution, the MPO’s host agency has shifted to GNRC, who has committed to carrying out the corrective action plan associated with this audit finding.

On June 30, 2016, the GNRC issued its annual Single Audit, performed in accordance with Federal regulations. This audit included a finding detailing the condition, accuracy, and timeliness of the agency’s financial records, noting that at year end, accounting records required numerous entries to present them materially in accordance with US...
Generally Accepted Accounting Principles. There were instances in which accounting tasks such as monthly reconciliations of certain accounts and subsidiary ledgers to the general ledger, preparation of journal entries, period end closings, and reviews were not performed. This audit also noted that such deficiencies can impact financial analysis, budgetary control, and cash flow, and jeopardize access to government-funded grants. This audit finding was a repeated finding from the 2015 audit. In response, the GNRC noted a planned corrective action which detailed new accounting procedures to be implemented, a streamlining of processes, a reorganization of duties, and needed training.

The change in a grant subrecipient’s host agency and financial management system is a risk to Federal grant management, and is only compounded in situations where both agencies have a history of audit findings and payback of Federal funds. Moving forward, FHWA will work with TDOT and the GNRC to understand the financial management and internal controls that are in place at the GNRC, and ensure consistency with FHWA expectations for planning grant administration.

Findings:

**Recommendation:** Engage in more direct coordination between TDOT, the transit providers, and the MPO in development of activities to be included within the UPWP. Activities funded with FTA Section 5307 funds also need to be incorporated into the body of the UPWP and the financial summary tables, rather than appearing as an Appendix to the UPWP with limited detail.

**Metropolitan Transportation Plan**

**Regulatory Basis:**

23 CFR 450.324 Development and content of the metropolitan transportation plan

**Status & Findings:**

The Nashville Area MPO Executive Board adopted the 2040 Metropolitan Transportation Plan/Regional Transportation Plan (RTP), titled *Middle Tennessee Connected*, on February 17, 2016. The adoption of this plan occurred approximately 2 months after the regulatory deadline of December 17, 2015, based on the adoption date of the previous update to the RTP.
The 2040 RTP established guiding principles, goals, and objectives for the Nashville region’s multimodal transportation system over the planning horizon from 2016-2040. The 2040 RTP carries forward the guiding principles from the 2035 RTP, which are:

- Livability – Enhance quality of life by prioritizing initiatives that increase opportunities for housing, learning, employment, recreation, and civic involvement while maintaining affordability.
- Sustainability – Encourage growth and prosperity without sacrificing the health, natural environment, historical and cultural assets, or financial stability of future generations.
- Prosperity – Contribute to the region’s economic well-being by targeting solutions that attract talent, connect workforce with jobs, reduce the cost of doing business, and leverage additional investment.
- Diversity – respect the multitude of backgrounds and the variety of perspectives of Middle Tennesseans by pursuing an array of strategies that are customized to local community needs and character.

Building off these guiding principles, the MPO developed the following 4 goals and 23 objectives to further guide the identification of transportation needs and priorities:

- **Goal 1: Maintain a Safe and Reliable Transportation System for People and Goods**
  - Continue with a “fix-it-first” mentality to keep existing infrastructure in a state of good repair.
  - Reduce the number and severity of crashes by designing roadways to accommodate all users.
  - Incorporate information technologies to improve traffic operations and help optimize traveler decisions.
  - Manage the negative impact of traffic congestion by providing alternatives to driving.
  - Designate and implement a regional freight network to efficiently move goods and minimize negative impacts on local communities.
  - Ensure the security of transportation assets from natural or man-made disasters and acts of terrorism.

- **Goal 2: Help Local Communities Grow in a Healthy and Sustainable Way**
  - Align transportation decisions with economic development initiatives, land use planning, and open space conservation efforts.
  - Integrate healthy community design strategies and promote active transportation to improve the public health outcomes of the built environment.
- Encourage the deployment of context-sensitive solutions to ensure that community values are not sacrificed for a mobility improvement.
- Incorporate the arts and creative placemaking into planning and public works projects to foster innovative solutions and to enhance the sense of place and belonging.
- Pursue solutions that promote social equity and contain costs for transportation and housing.

• Goal 3: Enhance Economic Competitiveness by Improving Private Sector Performance
  - Recognize major shifts in demographics and market preferences for transportation and housing and respond with solutions that keep Middle Tennessee an attractive place to live and do business.
  - Improve the connectivity between workforce and jobs by offering a range of options to manage commuting distances and travel times.
  - Improve mobility within and between centers of commerce across the region by providing a diversified transportation system, rather than relying solely on roadway capacity.
  - Keep the region connected to national and global markets by improving travel times on US Interstates, upgrading intermodal connections to water, air, and rail freight systems, and by ensuring Middle Tennessee is included in plans for national high speed passenger rail.

• Goal 4: Spend Public Funds Wisely by Ensuring a Return on Investment
  - Increase public participation in the planning process to help identify the most significant problems.
  - Foster interdisciplinary collaboration to prioritize the most effective solutions.
  - Evaluate the full costs and benefits of public investment in infrastructure.
  - Strive for quality over quantity by implementing all elements of priority projects to maximize value.
  - Consider public-private partnerships to encourage innovative approaches to project design and delivery.
  - Accelerate project delivery schedules by involving the public early and often, minimizing bureaucratic delay, and ensuring that funding is available to implement projects once designed.
  - Monitor and track the performance of public investments to demonstrate accountability.
  - Find ways to bridge the gap between revenue shortfalls and the growing cost of transportation needs.
Building on these guiding principles, goals, and objectives, and carrying forward the investment strategies in the 2035 RTP, the 2040 RTP includes a vision based on the following strategies:

- **Implement the Region’s Bold Vision for Public Transit** – Expand and modernize the region’s mass transit system in preparation for an increasingly competitive global economy, and to proactively address growing concerns about traffic congestion, increasing energy costs, public health outcomes, and encroachment upon the area’s rural countryside.
- **Create Active and Walkable Communities** – Improve connectivity between people and places to improve the health of Middle Tennesseans, and to serve as the backbone of investments in mass transit.
- **Reinvest in Strategic Transportation Corridors** – Repair aging roadways and bridges to ensure the safety of the traveling public and freight carriers, improve operations through the integration of new technologies, and implement complete streets to provide a balanced system that works for all users.

These guiding principles, goals, objectives, major strategies were adopted by the MPO Executive Board on November 12, 2014.

From these visioning policies, the RTP outlines a series of core strategies to guide investment in the transportation system over the life of the plan. These strategies include:

- **Maintain the Safety and Reliability of the Existing System**
- **Increase Coordination between Transportation Decisions and Economic and Community Development Efforts**
- **Focus Short- and Mid-Term Investments on “Complete Streets” and the Deployment of New Technologies to Improve Roadway Safety, Traffic Operations, and Customer Information**
- **Pursue a Combination of Projects, Incentives, and Regulations to Reduce Transportation Costs for Freight Carriers, and Minimize Impacts of Heavy Truck and Rail on the Urban Core and Surrounding Communities**
- **Establish Consensus to Fund and Implement Projects of Regional Significance Including Multi-Modal Upgrades to Key Corridors and Major Improvements to Aging Interstate Loop around Downtown Nashville**
- **Engage the Public in New and Innovative Ways, including Creative Placemaking, to Enhance Community Buy-In and to Minimize Impacts of Construction on Neighborhoods**

More information on the vision and these strategies is detailed in the 2040 RTP. The sections below specifically detail a variety of aspects of the RTP and its development.
Public Involvement

Public involvement for the 2040 RTP was performed in accordance with the MPO’s adopted Public Participation Plan.

As detailed in the RTP, one of the more significant inputs into the plan was an attitudinal survey performed in 2014 by the MPO, which was intended to gauge the public opinion on a variety of transportation issues. This survey was administered by telephone on a sample of 1,100 citizens across a 10-county region expanding beyond the metropolitan planning area.

This survey detailed public attitudes towards transportation in the context of quality of life, public satisfaction with transportation, and problems with the transportation system. The survey also solicited feedback on the most important transportation problems to solve, the support for a regional transit system, and attitudes towards transportation funding. Further exploring public opinions on transportation funding, the survey solicited input on the support for potential transportation funding options and the support for paying for a regional transit system. The information gleaned from this survey was especially valuable when compared against a similar survey performed in 2010, to analyze changing public viewpoints.

As detailed in Section 8.4 of the RTP, the RTP development process was “kicked-off” in July 2014 with a call-for-projects to MPO members, including TDOT, city and county governments, and public transit agencies. Following this call-for-projects, staff performed a series of workshops with MPO members, planning partners, and the public. Three rounds of workshops were held to discuss the project proposals and local priorities, with one workshop in each of the MPO member counties. These workshops occurred in the periods of November-December, 2014; May-June, 2015; and August, 2015. An additional round of workshops was held in November-December, 2015. Limited information is available on the MPO website or in the RTP documenting public comment received during these workshops; given this, public engagement during the development of the plan, i.e. how the public informed the plan vision, goals, objectives, priorities and strategies, is difficult to discern, outside of the use of the attitudinal survey. More information is available on the public engagement that took place after development of a draft plan, as detailed below.

As described in the PPP, after development of the draft RTP, MPO staff held a series of public meetings in each MPO member county during the public comment period of the RTP, in late January and early February, 2016. During this time, the draft plan was also provided to a list of stakeholder resource agencies for input. More information, including public notices for these meetings, is detailed in the RTP.
As documented in the RTP, the MPO received approximately 80 public comments at the public meetings held during the draft RTP public comment period and 1 stakeholder comment from the Southern Environmental Law Center. It is unclear what responses the MPO made to these comments and what changes, if any, were incorporated into the draft RTP. Per the PPP, the MPO Executive Board has the authority to determine what constitutes significant comment and whether any response, analysis, or revision to the plan is warranted. Per the minutes of the February 17, 2016 MPO Executive Board meeting, these outreach efforts do not appear to have been considered in the adoption of the 2040 RTP.

Conditions and Performance Measurement

The RTP is built on a foundation of performance measures and an abundance of data relating to and informing the transportation system.

As detailed in the RTP, the MPO used the following performance measures in development of the RTP:

- Number of people residing within the region
- Number of occupied jobs across the region
- Total daily trips of major roadways per day
- One-way trips per capita each day
- Total vehicle miles traveled per day
- Miles traveled per capita each day
- Time spent traveling per capita each day
- Average speed across all major roadways
- Percent of miles traveled on congested route
- Percent of freight truck travel on congested routes
- Daily transit ridership

The RTP details the existing conditions for these measures and forecasted conditions for 2040 under a no-build scenario. These measures were used to inform the MPO’s project prioritization process, detailed below. The MPO measures performance of these indicators through routine data collection and publishes performance through annual reports, such as the State of Transportation annual report and Vital Signs, a report of data indicators for Middle Tennessee published in partnership between the MPO and the Nashville Area Chamber of Commerce. The RTP does not contain further detail on targets for these measures or the anticipated effect of the RTP on the future performance of these measures.

The development of the RTP was informed by a variety of regional data indicators relating to the transportation system and other relevant data, including:
• Roadway lane/centerline miles by functional classification and county
• Roadway ownership, speed limits, and number of lanes
• Roadway volumes, level of service, and peak hour speed
• Travel times
• Transit information
• Bicycle and pedestrian facilities and level of service
• Crash counts, rates, locations, and modes
• Freight networks and volumes
• Commuting patterns & modes
• Roadway and bridge condition
• Demographic information, including vulnerable populations
• Areas of environmental sensitivity

Many of these data indicators are projected forward to 2040, which, when paired with the MPO’s goals, objectives, and performance measures, informs the investment priorities of the RTP.

On June 1, 2018, the MPO performed an administrative adjustment to the 2040 RTP to incorporate Addendum #2 to the Regional Transportation Plan. This addendum, which was shared with FHWA and TDOT for comment prior to action, details the MPO’s efforts to implement a performance-based planning process in accordance with 23 CFR 450. The addendum outlines the baseline performance and targets set by the MPO for the five federally-required safety performance measures. As the MPO elected to support the State targets, these numbers match those of TDOT. The addendum also details the process by which the RTP development, including project prioritization and selection, addresses these safety measures and targets.

Incorporation of this addendum to the RTP satisfies the performance-based planning requirements of 23 CFR 450.324(f)(3) and (4) for the safety performance measures.

Socioeconomic, Travel Demand and Land Use Modeling

Also informing the development of the RTP is a wide array of forecasted data. In development of the RTP, the MPO forecasted population, employment, land use, and travel patterns. This information is invaluable to the MPO’s project prioritization and selection process.

The MPO employs Woods and Poole Economics, Inc. for county-level population and employment forecasts. Information collected and forecasted includes county-level population growth to 2040, ethnic and racial diversity by county to 2040, job growth by county to 2040, and employment by industry/sector by county to 2040.
In addition, the MPO has developed a sophisticated land use model for more detailed application of this population and employment growth. As further detailed in the RTP, this model has four steps:

1. Identify land available for future development – identify land that can physically accommodate growth, through identification of parcels that are already developed, have natural barriers, or are protected by public policy or regulation. This analysis identifies vacant greenfield parcels with the capacity for growth.
2. Identify the development capacity of that land – by analyzing, at the parcel level, land area, topography, and land development regulations, spatially identify each parcel.
3. Assess the market potential for development – using input from real estate developers on attractive attributes for development, generate a market suitability measuring attractiveness for development by parcel.
4. Allocate new growth to suitable land – using a combination of market potential, land use policies, and capacity for growth, distribute future land development across the region, within the bounds of forecasted demand for growth (as expressed through county-level population and employment forecasts).

From this land use model, the MPO can forecast land development and intensity, at the parcel level, to 2040, including the distribution of people and jobs. This information informs the understanding of future travel patterns and congestion.

As detailed to the Federal Review Team by MPO staff, the MPO has three travel models that it uses for evaluating travel needs across the region:

- The MPO has a traditional 4-step model that predicts travel between traffic zones across the region for each mode of transportation and across multiple times of the day.
- The MPO has a new activity-based model that is used to supplement the finding of the 4-step model. This model simulates the daily travel of a synthetic population and provides more insight into the travel behaviors of specific populations.
- The MPO has a non-motorized latent demand model which provides an estimation of the likely number of trips that would be taken by a pedestrian or cyclists.

The first two travel demand models are calibrated in order to predict existing base year traffic counts and travel speeds from data acquired from third-party vendors and TDOT. The model is considered validated once its predictions are determined to be within the
margin of error tolerances published by TDOT. TDOT staff review the MPO’s model performance prior to its formal use in the RTP process.

The MPO uses a combination of in-house modeling and data staff and consultants for model development and calibration.

For the 2045 RTP, the MPO is anticipating moving away from the 4-step model and more fully utilizing the activity-based model, to provide more detail on travel demand and patterns.

**Project Solicitation, Prioritization, and Selection**

As previously detailed, the RTP development process “kicks-off” with a call-for-projects, where the MPO solicits projects from its member jurisdictions, TDOT, transit operators, and the public.

The MPO utilizes a web-based project application system, found at [http://apply.nashvillempo.org](http://apply.nashvillempo.org). This application system is protected behind a login screen, requiring project applicants, interested stakeholders and members of the public to create an account and login to access the tool and project information.

Through this system, project sponsors and applicants are asked for a variety of information regarding their proposed project(s), including general project information, such as location, termini, roadway geometry; a scope of work, which includes proposed improvements, features, non-motorized accommodations, and transit accommodations; a purpose and need statement; project history, including inclusion in prior MTPs and TIPs; project costs, funding needs, and timing; and project point-of-contact.

Based on the RTP goals, objectives, and strategies, the MPO identified a series of evaluation factors for project scoring. MPO staff then administered a pairwise survey to TCC members to determine the relative weighting of each factor. Based on a review of MPO materials, including the RTP documentation and MPO meeting minutes, these evaluation factors and the associated weighting appear to have been solely endorsed by the TCC; it does not appear that these factors were open for consideration by the MPO Executive Board, other stakeholders, or members of the public, and does not appear to have been endorsed by the MPO Executive Board.

The evaluation factors and their associated weighting are:

- System preservation & enhancement (10 points)
- Quality growth, sustainable land development, & economic prosperity (15 points)
- Expansion of multi-modal options (15 points)
• Roadway congestion management (15 points)
• Safety and security (20 points)
• Freight & goods movement (5 points)
• Health & environment (15 points)
• Project support & history (5 points)

Based on each of these evaluation factors, and based on the multitude of data points gathered by the MPO, MPO staff quantitatively score each proposed project for priority for funding in the RTP. More information on project scoring and evaluation is found in Appendix E of the 2040 RTP, although this discussion is very high-level in nature. More detail on project elements and project scores are not readily available in the RTP or on the MPO’s website, but are housed in the MPO’s web-based project application system for those that have an account.

As previously mentioned, the MPO houses an array of data points that inform project feasibility. A benefit of this practice is the development of a list of Projects with Potential Impacts to Vulnerable Populations or Environmental Features, found in Appendix C of the 2040 RTP. This information, combined with the requesting of a purpose & need statement from the local project sponsor, provides a foundation for the implementation of Planning & Environmental Linkages (PEL), linking the planning process with the environmental review process, opening up opportunities for greater analysis of project impacts and alternatives analyses in the planning stages, lending to more accurate cost estimation, and streamlining and strengthening the environmental review and project development processes. While this is not currently the practice, this data collection and analysis effort puts the MPO in a position to begin to partner with TDOT and other local project sponsors to more fully implement PEL.

Financial Planning

Chapter 8.0 of the 2040 RTP details the financial planning undertaken by the MPO in the development of the RTP.

As detailed in the RTP, the MPO based financial revenue forecasts based on historical information. In revenue forecasting, the MPO projected a revenue growth rate of 2% for the period of 2016-2020, a 4% annual growth rate from 2021-2030, and a 6% annual growth rate from 2031-2040. Supporting information for these growth rates was not readily available at the time of this Federal Certification Review.

The MPO solicits project applicants and sponsors for project cost estimates, and requests detail on the source of the estimate (i.e. historical analysis, cost estimating tools, environmental/design analysis, etc.). In cases where a cost is unsure, MPO staff use TDOT’s cost estimating tool to determine/verify a cost estimate.
As with revenues, all project cost estimates are similarly inflated through the life of the plan, using differing growth rates. For the period of 2016-2020, project cost estimates are inflated to the expected program year, using a 2% annual growth rate, as detailed in the MPO’s Transportation Improvement Program (TIP). For the periods from 2021-2030 and 2031-2040, project cost estimates are inflated by 4% annually to the midpoint of the horizon (2025 & 2035 respectively). Again, supporting information for these growth rates was not readily available at the time of this Federal Certification Review. Of note is the inconsistency between the cost inflation rate and revenue growth rate, resulting in revenue increasing at a faster pace than cost inflation, especially in the outer years of the plan.

The cooperative relationship between the MPO, TDOT, and transit operator(s) in developing these financial plans is difficult to discern, apart from the TDOT and transit representation on the MPO’s TCC and Executive Board.

Integration of Safety & Security

The Nashville MPO considers safety in the planning and programming process during the project submission process. The MPO collects crash data on a regular basis, and utilizes this information in project evaluation.

During the Certification Review Site Visit, it was noted that Nashville MPO would like to continue conversations about performance-based planning and discuss opportunities to gain additional support for training, peer exchanges, and access data. The MPO may wish to consider discussing future training needs with FHWA and exploring opportunities for safety training, such as through the Tennessee Transportation Assistance Program.

Amendment Thresholds and Process

The MPO performs MTP amendments in accordance with requirements of the MPO’s existing public participation plan (PPP), adopted July 18, 2007. This PPP requires that MTP amendments follow the same process for an MTP update, except for the need for public meetings in each MPO member county.

The 2040 RTP details RTP revisions that would require an amendment, including:

- The addition of major roadway projects that add vehicular capacity which were not included in the adopted RTP.
- The addition of a major roadway or transit project whose federal share of funding was not accounted for in the adopted RTP.
• Changes to the financial plan that are required due to significant differences in assumed revenue and actual appropriations.
• Any changes requiring a regional air quality conformity (not currently applicable).

Appendix E of the PPP details an MTP adjustment process which does not appear to be applicable to the structure of the 2040 and does not appear to be currently in practice.

**Findings:**

**Commendation:** MPO’s use of a data-intensive Land Use modeling tool to forecast future population and job growth at the parcel level as a data source to inform the MPO’s travel demand modeling and understanding of future travel patterns and congestion.

**Commendation:** MPO’s data-rich identification of potential environmental resources within the planning area for consideration of potential environmental impacts in the project screening process.

**Recommendation:** Consider incorporating a public-facing component to the project application tool to allow the public to more transparently and readily provide meaningful input on the project solicitation and selection process prior to decisionmaking.

**Transportation Improvement Program Development & Management**

**Regulatory Basis:**

23 CFR 450.326 Development and content of the transportation improvement program

**Status & Findings:**

The Nashville Area MPO Executive Board adopted the FY 17 – 20 Transportation Improvement Program (TIP) on November 16, 2016. This TIP details the investment of Federal, state, and local infrastructure funding on roadway and public transportation improvements in the Nashville region, including State- and locally-delivered roadway, bridge, bicycle, pedestrian, safety, and transit projects.

As expressed in previous TIPs, the FY 17-20 TIP was guided by a series of fifteen programming policies to assist in the development and maintenance of the TIP and the
effective administration of MPO-managed federal grant funds. These policies are detailed in Section 2.4 of the FY 17-20 TIP, and are listed below:

1. Compliance with the Regional Plan
2. Compliance with Air Quality Standards
3. Compliance with State Transportation Work Program
4. Fiscal Constraint Limitations
5. Illustrative Priorities
6. Eligibility for MPO-Managed Federal Grant Funds
7. MPO Commitment to Projects
8. Project Sponsor Commitment to Projects
9. Construction Funding
10. Dormant or Inactive Projects
11. Inflation Adjustments
12. Cost Increases/Cost Overruns
13. Changes in the Scope of Work
14. Project Tracking
15. TIP Amendment Cycles

More information on the use of these TIP policies in program and project management and delivery is available below.

Beginning with the FY 14-17 TIP, the MPO used an electronic TIP application, available at http://tip.nashvillempo.org. This application provides for both a database and spatial analysis of all projects programmed in the TIP, detailing all required TIP project information as well as, when available, any construction reserve funds committed to the project, project documentation, and amendments that have been processed. The MPO hopes to link this database with TDOT databases in the future to capture information such as Federal obligations on a project. This TIP database, while a valuable tool for the MPO and the public, is very data-rich and requires a significant amount of resources for the MPO to manage and keep up-to-date.

Project Solicitation, Prioritization, and Selection

The Nashville Area MPO solicited and evaluated projects for the FY 17-20 TIP through the project solicitation and evaluation performed for the 2040 RTP. Accordingly, all projects being programmed in the TIP were evaluated through the RTP project prioritization and selection process and determined to be short-term priorities for the RTP.

More information on this project solicitation, prioritization, and selection can be found in the Metropolitan Transportation Plan section of this report.
Public Involvement

As with the project prioritization and selection process, the public involvement for the development of the TIP was largely performed through the development of the 2040 RTP.

The MPO’s Public Participation Plan (PPP), adopted in July 2007, details the public engagement requirements for the TIP. In accordance with the PPP, the MPO solicited feedback on the development and adoption of the FY 17-20 TIP from the public through a public review period and two public hearings with the MPO TCC and Executive Board. The MPO Executive Board opened the draft FY 17-20 TIP for public review and comment on September 21, 2016. The MPO solicited feedback during this public review period through the MPO website and newspaper advertisements. Following this public review period, the MPO held public hearings at both the October 5, 2016 TCC meeting and the October 19, 2016 MPO Executive Board meeting. The FY 17-20 TIP was adopted at the November 16, 2016 MPO Executive Board meeting.

One public comment is provided in the documentation for the 17-20 TIP. Limited detail is available on the consideration of this comment in TIP development and adoption.

Financial Planning

The MPO’s financial planning processes and policies for the FY 17-20 TIP are described in Section 3.0 of the TIP, which details the funding programs available for the TIP, the financial planning assumptions, operations and maintenance needs, and a financial summary.

In developing the revenue projections for the TIP, the MPO used revenue projections provided by TDOT for the TDOT-managed federal grant programs (such as the National Highway Performance Program [NHPP], the State-allocated Surface Transportation Block Grant Program [STBG], etc.) and assumed an annual growth rate of 2 percent for MPO-managed federal grant programs (such as MPO-allocated STBG, FTA Sec. 5307 funds, etc.).

As with the RTP, project cost estimates were sourced from project sponsors. For the TIP, project cost inflation was left to the judgement of the sponsor agency, rather than the MPO applying an annual inflation rate to cost estimates. It is unclear how this expectation was communicated to project sponsors, and how MPO staff oversaw compliance to ensure that this was being carried out effectively.

Performance-Based Planning Requirements
On June 1, 2018, the MPO performed an administrative adjustment to the FY 17-20 TIP to incorporate Addendum #2 to the Transportation Improvement Program. This addendum, which was shared with FHWA and TDOT for comment prior to action, details the MPO’s efforts to implement a performance-based planning process in accordance with 23 CFR 450. The addendum outlines the baseline performance and targets set by the MPO for the five federally-required safety performance measures. As the MPO elected to support the State targets, these numbers match those of TDOT. The addendum also details the process by which the TIP development, including project prioritization and selection, addresses these safety measures and targets.

Incorporation of this addendum to the TIP satisfies the performance-based planning requirements of 23 CFR 450.326(c) and (d) for the safety performance measures.

TIP Project Delivery

In recent months, TDOT and the MPOs across Tennessee have initiated a renewed focus on delivery of projects within the TIP(s). This activity was prompted by a TDOT review of unobligated balances of federal-aid program funds in preparation for the FY 2020 rescission. In part, this analysis found that the State of Tennessee has an unusually high amount of unobligated TMA-allocated Surface Transportation Block Grant (STBG) funds. While not subject to the rescission, this high balance highlighted a weakness in the delivery of those projects identified for programming by the TMA MPOs with their suballocated STBG funding.

In response to this concern, TDOT and the MPOs have embarked on a joint effort to identify opportunities for more effective management of the TIP and delivery of TIP projects. In the Nashville region, specifically, TDOT and the MPO have performed a review of the MPO’s TIP policies to support project delivery, held a series of meetings with project sponsors to discuss specific issues impacting project delivery, and are committing to more effective communication of project statuses to the MPO TCC and TPB.

Although all the TIP policies are designed to guide the development, maintenance, and administration of the TIP, there are certain policies which are more effective in this subject than others, and which have been highlighted by TDOT as strong practices. These include:

- Policy 8. Project Sponsor Commitment to Projects

  Project sponsors hold ultimate responsibility for ensuring that project information contained in the TIP is correct, that it accurately represents the scope of work being performed, and the amount of funding being requested. The sponsor is
responsible for providing to the MPO an honest accounting of project details including: costs, implementation schedules, and local matching fund sources, at the time of the application for federal funds and anytime such details change, or at the request of the MPO.

For a project funded with MPO-managed federal funds to remain eligible for those funds, the project’s sponsor must provide proof of stated local matching funds at least 3-months prior to the beginning of the federal fiscal year for which the funds are programmed for use. Should a sponsor fail to satisfy the requirement, the project may be allowed a one-year grace period (see Policy 10).

- Policy 10. Dormant or Inactive Projects

Project sponsors are given a one-year grace period to obligate funding on projects beyond the originally programmed year of work. Failure to do so may cause federal funds to be returned to the MPO general fund and re-programmed to the next highest eligible MPO priority as identified by the MPO’s annual list of priorities (see Policy 5).

Project phases which have been obligated, but have not realized any activity within a 12-month timeframe, may be subject to de-obligation and grant funds returned to the MPO general fund. Returned funds will be reprogrammed to the next-highest eligible MPO priority, as identified by the MPO’s annual list of priorities.

- Policy 14. Project Tracking

To facilitate the implementation of the TIP policies, the MPO will work with TDOT and project sponsors to present to MPO members, at least quarterly, a full accounting of the funds obligated for each project and any changes in the status of those projects.

At the December 13, 2017 meeting of the MPO TPB, Board members were presented with information related to the MPO’s unobligated balance, a project status report which detailed the status of each project programmed with MPO funding in the TIP, and the TIP policies related to this subject. MPO staff also expressed a commitment to stronger enforcement of these policies and more active management of the TIP with a goal of delivering on the projects programmed within it. Based on the reaction of the MPO TPB to the information being presented and discussion at subsequent meetings of the MPO TCC on this subject, there is a need for further education of the MPO membership on the TIP policies. Additionally, continued enforcement of these policies should assist the membership in refamiliarizing
themselves with the TIP policies and in understanding the use of these policies in supporting project tracking and delivery.

The Federal Review Team received one comment from a Technical Coordinating Committee member on this subject. This comment, which can be found in Appendix C, states that the unobligated balances issues can be traced back to a lack of project-specific discussion at the MPO TPB and TCC meetings. The comment recommends that the MPO spend more time focusing on projects, and to dedicate a portion of each meeting on a monthly-to-quarterly basis to discussion by TDOT and local project sponsors on project updates and issues. As of this review, it does not appear that MPO staff have discussed project status at the TPB and/or TCC meetings on a quarterly basis as required in TIP Policy 14.

Per ongoing discussion with MPO and TDOT staff on this subject, including at the Certification Review Site Visit, the MPO is committed to enforcing these policies and dedicating additional resources to ensure the success of this effort.

Amendments and Adjustments

In January 2014, TDOT and the MPO executed a Memorandum of Agreement (MOA) regarding the Definition and Need for Amendments/Administrative Adjustments to the Statewide Transportation Improvement Program/Transportation Improvement Program. This MOA establishes the definitions and differences between TIP amendments and administrative adjustments, the documentation requirements for each action, and the use of project groupings in the STIP/TIP.

Per this MOA, the following revisions to the TIP require a formal TIP amendment:

- A major change in the total project cost (excluding groupings). More detailed information is available in the MOA.
- Adding a new project or deleting a project from the TIP.
- A major change of project scope; examples include, but are not limited to, changing the number of through lanes, adding/deleting non-motorized facilities, changing mode (e.g., rolling stock or facility type for transit), changing capital category (i.e., transit funding), or changing termini.
- Any change requiring a new regional air quality conformity finding, where applicable (including a grouping).

The MPO processes all TIP amendments on a quarterly basis, as detailed in TIP Policy 15. Section 4.3 of the FY 17-20 TIP details the 8-step process that is used by the MPO to process and perform TIP amendments:
1. MPO staff shall prepare amendments in consultation with the TCC for consideration by the Executive Board. The Executive Board shall then review, amend if necessary and concur with the TIP for public review and comment.

2. After concurrence by the Executive Board of the TIP, the MPO shall publish the TIP Amendment and place copies in public libraries in the region. These copies must be distributed to the libraries a minimum of twenty-one (21) days prior to final consideration and adoption by the Executive Board.

3. A notice stating that the Executive Board has endorsed a TIP Amendment for public review and comment shall be placed in the notice newspapers listed in the Public Participation Plan of the MPO. The notice shall specify the dates, times and location of forthcoming public hearings. Similar press releases shall be furnished to all news organizations registered with the Transportation Planning Coordinator. Special efforts shall be made to provide information on the TIP to media and organizations serving the low-income and minority populations in the region. This notice and press release shall be published/mailed a minimum of twenty-one (21) days prior to the meeting at which the TIP Amendment will be considered by the Executive Board.

4. A public hearing shall be held by the TCC following the Executive Board’s endorsement of the TIP Amendment. Comments received at this public hearing shall be provided to the Executive Board prior to the final public hearing.

5. A final public hearing shall be held by the Executive Board prior to voting on the TIP Amendment.

6. At the public meetings, the MPO Director shall report to the Board all comments received in writing prior to the meetings.

7. The public shall be afforded the opportunity for comment at the public meetings. The Executive Board may establish reasonable time limits for each presentation, considering the time constraints of the meeting and complexity of the issue.

8. At the time of adoption of the amendment by the Executive Board, the MPO Director/staff shall request that TDOT include the amendment into the STIP. TIP amendments will need final approval from FHWA and FTA before becoming official.

Following the process described, the timeframe for processing a TIP amendment often takes 6 weeks or longer from the time of the initial endorsement by the TCC to approval by FHWA/FTA.

For those changes that do not warrant a TIP amendment, the MPO can process a TIP administrative adjustment. Adjustments are performed at the staff level, and communicated directly between TDOT, the MPO, and FHWA/FTA, with no Board action required.
In recent months, FHWA/FTA, TDOT, and the MPOs have recognized certain deficiencies in the understanding of TIP amendments and adjustments, the associated processes, the roles and responsibilities of each organization, and communication chains. Accordingly, FHWA and FTA are working with TDOT and the MPOs to revise the FHWA/FTA/TDOT MOA related to STIP amendments and adjustments, as well as to develop formalized expectations, roles, and responsibilities for the processing of these TIP revisions.

Self-Certification

The MPO Executive Board adopted the self-certification in conjunction with the adoption of the FY 17-20 TIP on November 16, 2016.

Annual Listing of Obligated Projects

After each Federal fiscal year, the Nashville Area MPO collaborates with TDOT and the region’s public transportation providers to develop a listing of projects for which federal funds were obligated in the preceding program year. The MPO strives to publish these listings no later than 90 calendar days following the end of the fiscal year. The MPO publishes these listings on the MPO website and reviews the projects with the Executive Board and Technical Coordinating Committee.

Findings:

**Commendation:** Partnering with TDOT, Johnson City MTPO, and other interested MPOs to share knowledge of the development and use of electronic TIP/STIP systems.

**Recommendation:** Enforce approved TIP policies related to TIP project status and funds obligations to support timely and effective delivery of projects in the TIP, particularly through regular updates on project status to MPO members.

Performance-Based Planning & Programming

**Regulatory Basis:**

- 23 CFR 450.306 Scope of the metropolitan transportation planning process
- 23 CFR 450.314 Metropolitan planning agreements
- 23 CFR 450.324 Development and content of the metropolitan transportation plan
23 CFR 450.326 Development and content of the transportation improvement program
23 CFR 490 National Performance Management Measures

Status & Findings:

On May 27, 2016, FHWA and FTA jointly published the Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning Final Rule in the Federal Register. This rule updates the regulations governing the statewide/nonmetropolitan and metropolitan transportation planning process to reflect the passage of the Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Fixing America’s Surface Transportation (FAST) Act.

MAP-21 established, and the FAST Act continued, a new mandate for State DOTs and MPOs to implement a performance-based approach to planning and programming. Regulations regarding this approach are found throughout 23 CFR 450.

23 CFR 450.306(d) details the performance-based approach expected of the metropolitan transportation planning and programming process, including the requirement to establish targets for the federally-required performance measures and the incorporation of performance measurement and target-setting into the MPO’s process, plans, and programs. As detailed in other portions of this report, particularly the MTP and TIP sections, the Nashville Area MPO used a performance-based approach throughout the development of the RTP and TIP. While the MPO did establish performance measures which informed the planning process and project prioritization, the MPO does not appear to have set targets for these measures, fully developed a connection between the planning process and these measures and targets. The MPO does not appear to have established a formal process for measuring actual system performance of these measures, and the feedback loop for how system performance is influencing performance targets and planning strategies is unclear. As these measure pre-date establishment of the MAP-21 performance measures, the existing MPO measures, while related to the national goals established in MAP-21 and the FAST Act, do not align with the federally-required performance measures. Moving forward, continued implementation of the federally-required performance-based approach will be a focus area for the FHWA, FTA, TDOT, and the MPO.

Per 23 CFR 450.314(h), MPOs, States, and providers of public transportation shall jointly agree upon and develop specific written provisions for:

- cooperatively developing and sharing information related to transportation performance data;
- the selection of performance targets;
- the reporting of performance targets;
• the reporting of performance to be used in tracking progress toward attainment of critical outcomes for the region of the MPO; and
• the collection of data for the State asset management plan for the NHS.

On June 1, 2018, TDOT, the Nashville Area MPO, the Nashville Metropolitan Transit Authority, the Regional Transportation Authority of Middle Tennessee, the Franklin Transit Authority, and City of Murfreesboro Transportation Department fully executed a written Memorandum of Understanding (MOU) to comply with this requirement. This MOU details the roles of each of the signatories in carrying out the performance-based planning and programming process, a commitment to data sharing, requirements related to development and reporting of performance targets, and incorporation of targets and performance into the various statewide and metropolitan plans and programs. This MOU was shared with FHWA and FTA for review and comment prior to execution.

As of this Certification Review, the only Federal performance measures for which the MPO has been required to set targets for has been the five safety performance measures. TDOT established statewide targets for these measures through the State’s Highway Safety Improvement Program (HSIP) Annual Report on August 31, 2017. Per this deadline, Tennessee’s MPOs were required to establish safety performance targets on or before February 27, 2018. The Nashville Area MPO Transportation Policy Board established targets for these measures by agreeing to support the TDOT targets on February 21, 2018.

The target-setting process for the safety performance measures was preceded by an intensive exercise on the part of TDOT and the MPO staff in advance of the MPO’s target-setting deadline. Following TDOT’s establishment of safety performance targets, TDOT Long Range Planning staff presented the information to MPO policy boards across the state except for the Nashville Area MPO Transportation Policy Board. Rather, this information was presented at the September 6, 2017 meeting of the MPO Technical Coordinating Committee.

No further discussion on the subject appears to have taken place at the TCC or TPB following this presentation until a January 24, 2018 workshop held by Nashville MPO staff on the safety performance measures. Although this meeting was open to the public and to TPB members, the workshop was primarily attended by MPO TCC members. Subjects discussed included an explanation of the Federal performance measures, performance in each of the measures in the MPO’s planning area, the targets set by TDOT, and the desired path forward in target-setting for the MPO area.

Discussion at this workshop, as well as at the following February 7, 2018 TCC meeting and February 21, 2018 TPB meeting where targets were set, was at times contentious...
and largely reflective of the difficulty of implementing a coordinated and informed target-setting process. Both the TCC and TPB appeared torn and confused on how to react to and understand TDOT’s targets, the appropriate path forward in target-setting for the MPO area, and the implications of these targets. Although this cannot be traced as a definitive cause, it appears that stronger and earlier education of both the TPB and TCC on these federal requirements and coordination between the MPO and TDOT in target-setting, including the justification and basis of the targets, could have helped to allay the concerns and confusion. TDOT and MPO staff both appear to be taking a more proactive approach to coordinated target-setting for the bridge, pavement, and safety performance measures.

Findings:

None.

Transit Planning & Coordination

Regulatory Basis:

49 CFR 615 Metropolitan and Statewide and Nonmetropolitan Planning

Status & Findings:

The MPO actively engages in multi-modal transportation planning in collaboration with transit providers by proactively supporting, improving, and expanding transit mobility and accessibility in the Nashville metropolitan planning area. The following transit operators serve the Nashville Region:

- **Nashville Metropolitan Transit Authority (MTA)** - operates fixed-route buses and paratransit vehicles in Nashville-Davidson County.
- **Regional Transportation Authority (RTA)** - oversees the operation of a variety of regional transit services including the area’s only commuter rail line, express bus routes between Nashville and surrounding counties, and the regional ridesharing and vanpool program.
- **Franklin Transit Authority (FTA)** – operates fixed route buses, demand-responsive transit, and vanpool services within the City of Franklin through a contract with the TMA group.
- **City of Murfreesboro (Rover)** – local fixed-route bus service and paratransit services within the City of Murfreesboro.
Mid-Cumberland Human Resources Agency (MCHRA) – provides rural mobility service to people residing in Cheatham, Dickson, Houston, Humphreys, Montgomery, Robertson, Rutherford, Stewart, Sumner, Trousdale, Williamson, and Wilson Counties.

Multi-modal transportation coordination is demonstrated in both MPO-led and provider-led planning initiatives. Transit providers are involved with the development of the Regional Transportation Plan (RTP) and other planning products through their participation on the Technical Coordination Committee and Transportation Policy Board. MTA, RTA, FTA, and Rover are members of the TCC. MTA is a voting member of the TPB. Transit planning needs such as potential transit circulators study and the South Corridor transit feasibility study are included in the FY2018 UPWP. The MPO engages and consults MCHRA and other rural transit providers in planning initiatives, as appropriate. As referenced in the UPWP section of this report, enhancements to transit coordination could be made by the MPO staff coordinating with transit operators earlier in UPWP development, rather than waiting until the draft UPWP is under State and Federal review.

The MPO participated in nMotion, Nashville MTA and RTA’s strategic plan, for improving transit service across Middle Tennessee. nMotion leveraged the MPO’s transit vision first adopted in the 2010 RTP which envisioned the future with improved service, system enhancements, and attracting and retaining riders.

In September 2016, the MPO in partnership with regional transit providers and Clarksville MPO updated the Mid-Cumberland Public Transit – Human Services Transportation Plan (CPT-HSTP). Mobility needs and strategies were prioritized in the CPT-HSTP and linked to investments in the RTP and TIP.

Transit projects and programs are prioritized through the MPO’s programming process and funding is committed in the TIP. A portion of the MPO’s Surface Transportation Block Grant funds are set aside to fund transit projects including vehicle replacements, facility improvements, technology, etc. MTA is the designated recipient of FTA 5307 funds for the Nashville-Davidson urbanized area. As part of the process, the MPO staff holds specific workshops with transit agencies each year so that each are allowed an opportunity to discuss their individual priorities for FTA 5307 funds. Currently, the UPWP includes a general list of activities including major transit-related studies to be funded with FTA 5307 funds in an appendix. In the future, activities funded with FTA Section 5307 funds need to be incorporated also into the body of the UPWP and listed in the Annual Program Budget financial summary tables.

Transit providers are actively developing their respective Transit Asset Management (TAM) plans. Collectively, they are aiming to provide their TAM plans with a focus on state of good repair to the MPO by October 1, 2018. The MPO is working with local
At the time of this report the MPO, in partnership with TDOT, RTA, and local partners, kicked off the South Corridor Transit Study to evaluate the feasibility of major transit investments in the region’s south corridor between Nashville and Spring Hill.

### Findings:

None. See recommendations in UPWP findings related to transit planning coordination and documentation of FTA 5307 funded activities in the UPWP.

### Public Involvement

#### Regulatory Basis:

23 CFR 450.316 Interested parties, participation, and consultation

#### Status & Findings:

The Nashville Area MPO Executive Board adopted the Public Participation Plan (PPP) on July 18, 2007. The MPO published an addendum to the 2007 PPP effective October 1, 2017. The addendum was prepared to document the change in sponsor agency for the MPO to GNRC; to update points of contact for the MPO, website, and email addresses; to reference the FAST Act as the latest federal transportation legislation; and to establish a schedule for fully updating the PPP beginning in October 2017. No other changes were made to the content of the 2007 PPP. Federal regulation requires updates to the PPP be done through a formal amendment in coordination with TDOT, FHWA, and FTA.

The PPP includes an overview of the MPO's general public involvement techniques. It outlines methods to identify and outreach to underserved populations, such as low-income, minority or limited English proficiency populations. The PPP also establishes the typical venues for public engagement and the requirements for public notice and information availability. The MPO also maintains a contact list for members of the public, interested agencies, key businesses, and other stakeholders in the region with an interest in the transportation planning process. The current stakeholder list is dated.

Appendix A of the PPP documents a formal process for the MPO to evaluate the effectiveness of their public participation process and includes specific performance
goals and measures. During the Certification Review meeting, the MPO staff described a more informal process in practice to assess the effectiveness of their public involvement opportunities and procedures. Typically, the MPO staff will hold a debriefing after larger public meetings to discuss what worked and what did not work in soliciting feedback and engaging the public. The staff then adjusts processes based on this discussion for future opportunities to attempt to improve public engagement.

While the October 2017 addendum to the PPP updated contacts for the MPO, the PPP currently in effect is reflective of the public involvement process used prior to the transition of the MPO to GNRC as the sponsor agency. As previously mentioned, FHWA and FTA are concerned with the newly adopted practice of discussing metropolitan transportation planning and policy-making activities at the GNRC Executive Committee meetings, with limited discussion of these items at the TPB. FHWA and FTA cannot confidently assert that adequate public involvement opportunities are available through this approach or that the policies of the PPP are being satisfied. Additionally, FHWA, FTA, and TDOT have observed recent incidences of insufficient advanced notice being provided for meetings. For example, the MPO distributed to TCC members the agenda packet for the May 2, 2018 TCC meeting on April 30, 2018. Such short notice limits attendees’ abilities to adequately prepare to contribute to agenda items during the meeting and to assess the relevance of agenda topics for their attendance.

The MPO maintains a variety of datasets on demographic information across the planning area. This information has been compiled into an ‘Equity Atlas’ that expands on the analysis of demographic information to ensure that the planning process is inclusive to the range of diversity of the region. As of this Certification Review, this Equity Atlas is still in draft form and has not been published publicly.

The Federal Review Team received one stakeholder comment concerning the lack of public engagement and comment during the MPO’s Technical Coordinating Committee. This comment can be found in Appendix C. As detailed in this comment, while there is an opportunity for public comment at each TCC and each TPB meeting, comments from the public are a rarity. The comment recommends that the MPO take a more aggressive role in soliciting public feedback and consider meeting on topics that would interest the public and advocacy groups to spur enhanced public participation in the planning process. The Federal Review Team concurs with the recommendation for the MPO to actively engage with the public in carrying out the transportation planning process.
Findings:

**Corrective Action:** Per 23 CFR 450.316, the MPO shall adhere to the policies and practices described in the existing PPP to ensure adequate opportunity for full participation of the entire MPO membership and the public in a transparent, comprehensive, and collaborative decisionmaking process.

Areas of particular concern to FHWA and FTA include:

- Providing sufficient advanced public notice of and an opportunity for public comment at all meetings of governing bodies and committees of the MPO and the GNRC in which information relating to the metropolitan transportation planning process is to be presented and/or discussed, regardless of whether an action is proposed to be taken on the subject at said meeting, and documenting how public input is considered in the decisionmaking process;
- Ensuring that the MPO TPB act as the primary forum for discussion on metropolitan transportation planning activities to ensure full MPO member jurisdiction participation, ensure that all MPO members are well-informed of the authorities and responsibilities of the TPB, and maintain the integrity of the metropolitan transportation planning process; and
- Compliance with the Tennessee Open Meetings Act, particularly as it relates to openness in electronic communication for the Planning Oversight Committee.

**Corrective Action:** Per the MPO’s existing PPP, the PPP shall be updated every four years. The PPP was most recently updated in 2007. Accordingly, the MPO shall perform an evaluation of the effectiveness of its public involvement strategies and update the PPP appropriately. This update shall address all requirements of 23 CFR 450.316, shall be fully reflective of the change in the MPO’s organizational structure, and shall undergo a minimum public comment period of 45 days before adoption by the MPO.

**Title VI/Environmental Justice/Limited English Proficiency**

*Regulatory Basis:*

23 CFR 450.336 Self-certifications and Federal certifications
Status & Findings:

The Nashville Area MPO submitted their Title VI Compliance report through the completion of a questionnaire sent by the TDOT Civil Rights Office. The MPO staff also completed required Title VI training. GNRC’s Legal Counsel serves as the Title VI and ADA Coordinator for the Nashville Area MPO. All MPO meeting materials, websites, and documents display contact information and instructions for persons who are interested in filing a Title VI complaint. As of this Certification Review, there have not been any Title VI or ADA complaints filed against the MPO.

During the Certification Review site visit, the MPO indicated that their website will be updated soon. They committed to improving the ADA/Title VI webpage by better highlighting to the public the required complaint form, grievance procedure, and description of the public’s rights.

Finally, MPO staff are aware of the requirements related to the ADA Transition Plan, and maintain a database of ADA grievance policies, contacts, and transition plans for MPO member jurisdictions. MPO staff are committed to effectively communicating these requirements to members and the need for all applicable local project sponsors to have an ADA Transition Plan in place prior to the next TIP.

Findings:

None.

Congestion Management Process

Regulatory Basis:

23 CFR 450.322 Congestion management process in transportation management areas
23 CFR 500.109 CMS

Status & Findings:

23 CFR 450.322 details the regulatory requirements for the transportation planning process to address congestion management through the use of a process that provides for safe and effective integrated management and operation of the multimodal transportation system, based on a cooperatively developed and implemented metropolitan-wide strategy, of new and existing transportation facilities eligible for
funding under title 23 U.S.C. and title 49 U.S.C. Chapter 53 through the use of travel demand reduction, job access projects, and operational management strategies. These regulations detail that the congestion management process (CMP) shall be developed, established, and implemented as part of the metropolitan transportation planning process that includes coordination with transportation system management and operations activities. A separate congestion management plan is not a requirement; rather, the metropolitan transportation planning process is required to address congestion management by including the following, each of which come from 23 CFR 450.322(d):

- Methods to monitor and evaluate the performance of the multimodal transportation system, identify the underlying causes of recurring and non-recurring congestion, identify and evaluate alternative strategies, provide information supporting the implementation of actions, and evaluate the effectiveness of implemented actions;

- Definition of congestion management objectives and appropriate performance measures to assess the extent of congestion and support the evaluation of the effectiveness of congestion reduction and mobility enhancement strategies for the movement of people and goods. Since levels of acceptable system performance may vary among local communities, performance measures should be tailored to the specific needs of the area and established cooperatively by the State(s), affected MPO(s), and local officials in consultation with the operators of major modes of transportation in the coverage area, including providers of public transportation;

- Establishment of a coordinated program for data collection and system performance monitoring to define the extent and duration of congestion, to contribute in determining the causes of congestion, and evaluate the efficiency and effectiveness of implemented actions. To the extent possible, this data collection program should be coordinated with existing data sources (including archived operational/ITS data) and coordinated with operations managers in the metropolitan area;

- Identification and evaluation of the anticipated performance and expected benefits of appropriate congestion management strategies that will contribute to the more effective use and improved safety of existing and future transportation systems based on the established performance measures. The following categories of strategies, or combinations of strategies, are some examples of what should be appropriately considered for each area:
  - Demand management measures, including growth management, and congestion pricing;
- Traffic operational improvements;
- Public transportation improvements;
- ITS technologies as related to the regional ITS architecture; and
- Where necessary, additional system capacity.

- Identification of an implementation schedule, implementation responsibilities, and possible funding sources for each strategy (or combination of strategies) proposed for implementation; and

- Implementation of a process for periodic assessment of the effectiveness of implemented strategies, in terms of the area's established performance measures. The results of this evaluation shall be provided to decision makers and the public to provide guidance on selection of effective strategies for future implementation.

In addition to the guidance provided in the regulations, FHWA has developed the Congestion Management Process Guidebook, which provides additional detail on how to develop and implement a congestion management process in accordance with these regulations and FHWA expectations. This guidebook provides an 8-step "process model" of actions which must be implemented to comply with Federal regulations. These steps are as follows, with the corresponding regulatory requirement(s) identified:

- Develop Regional Objectives for Congestion Management [23 CFR 450.322(d)(2)]
- Define CMP Network [23 CFR 450.322(d)(1) - (6)]
- Develop Multimodal Performance Measures [23 CFR 450.322(d)(2)]
- Collect Data/Monitor System Performance [23 CFR 450.322(d)(3)]
- Analyze Congestion Problems and Needs [23 CFR 450.322(d)(3)]
- Identify and Assess Strategies [23 CFR 450.322(d)(4)]
- Program and Implement Strategies [23 CFR 450.322(d)(5)]
- Evaluate Strategy Effectiveness [23 CFR 450.322(d)(6)]

These CMP regulations and this process model guided the Federal Review Team's review of the CMP in Nashville.

Federal review of the CMP in the Nashville region proved somewhat difficult, in large part due to the limited technical information available to the Review Team in the carrying out of the CMP. As part of this review, the Federal Review Team requested additional information from the MPO through a questionnaire on the regulatory consistency of the MPO's CMP.
The Federal Review Team’s observations of the CMP in Nashville are found below, and are grouped by the process model outlined in the FHWA *Congestion Management Process Guidebook* for ease of understanding and implementation:

**Develop Regional Objectives for Congestion Management**

Congestion management objectives define what the region wants to achieve regarding congestion management. These objectives should draw from the regional vision and goals in the MTP. Ideal objectives should have a sound foundation in public and stakeholder involvement and be specific, measurable, agreed-upon, realistic, and time-bound.

The Nashville MPO defines objectives for the region’s transportation system in Section 6.1 of the 2040 RTP, which details the Regional Goals and Objectives. The objectives identified are not of a specific enough nature to be considered objectives as expected in the CMP. Instead, these are policy-level considerations designed to guide the RTP planning process. Additionally, the MPO does not appear to have in place any objectives specific to congestion management, a linkage of congestion-specific objectives to the congested network, or a connection between congestion-specific objectives and strategies considered in the CMP.

**Define CMP Network**

The CMP should involve analysis within a specific geographic area and network of surface transportation facilities.

Through the intended integration of the CMP into the RTP development process, the CMP network can be considered to be all surface transportation facilities for which the MPO is planning for within the metropolitan planning area.

In addition to this network, the MPO does define congestion as a roadway segment either having a travel speed that is 30% slower at any time of day than expected during free flow conditions or a volume to capacity ratio of 1.0 or greater. Congested corridors based on these criteria are then identified in Figure 5-11 of the 2040 RTP in a map, although no listing of these corridors is provided. A list of projects on congested corridors can be found in Appendix B of the 2040 RTP; however, the list is not prioritized and underlying causes of congestion in the region are not defined.

**Develop Multimodal Performance Measures**

The overarching purpose of using performance measures in the CMP is to characterize current and future conditions on the multimodal transportation system in the region. Developing performance measures to identify, assess, and communicate about
congestion is a critical element to the CMP; understanding system performance is necessary to identify problem areas for congestion, affecting project selection.

There are roughly three performance measures detailed in Section 5.1 of the 2040 RTP that relate directly to congestion, particularly with the MPO’s definition of congestion (Average Speed across all Major Roadways, Percent of Miles Traveled on Congested Route, and Percent of Freight Truck Travel on Congested Routes), and other measures can readily be indirectly linked to congestion. In addition to these measures, the RTP details, primarily through maps, existing and projected performance in roadway volumes, level of service, travel speeds, congested routes, congestion severity, and travel times.

Federal regulations detail that CMP performance measures should be “appropriate” to the CMP objectives. With limited CMP objectives in place, this appropriateness is difficult to determine.

Additionally, as detailed previously, the performance-based planning and programming process being undertaken by the MPO continues to be somewhat undeveloped, with an unclear linkage between performance measures/targets and planning and programming strategies, as well as processes for reporting on system performance and incorporating system performance back into the planning process.

Collect Data/Monitor System Performance

A comprehensive data collection is necessary for a well-informed CMP. Performance measurement, network identification, strategy evaluation, and other portions of the CMP all depend on a deep well of data.

As detailed throughout the MTP section of this report, the MPO maintains a wide variety of collected and forecasted data. Congestion-related data that is detailed in the MPO includes, but is not limited to, commuting patterns; roadway lane miles; vehicle miles traveled; roadway volumes; travel speeds; and roadway, bicycle, pedestrian, and transit levels of service.

Analyze Congestion Problems and Needs

Before congestion management strategies can be identified, it is necessary to identify what the problems are, where they are located, and what is causing them. Part of the purpose of the CMP is to identify specific locations with congestion problems and to identify the sources of these problems.

As previously stated, the Nashville MPO defines a congested roadway as one either with a travel speed that is 30% slower at any time of day than expected during free flow
conditions or a volume to capacity ratio of 1.0 or greater. Based on this definition, the MPO can produce an inventory of congested corridors in the Nashville region (see Figure 5-11 in the 2040 RTP).

The RTP does not include an explicit analysis of the causes of this congestion. Factors such as the nature of the congestion, time-of-day variations, the impact of major trip generators on congestion, trip types and the like are all necessary to the identification of appropriate congestion management strategies. Additionally, the RTP does not provide for a prioritization of these congested corridors, a beneficial strategy to the identification of regional priorities. Finally, the RTP also provides limited detail on how this definition of congestion was come to. As the definition of congestion can vary widely from region to region, even within the MPO’s planning area, it is unclear what analysis, stakeholder engagement, and public outreach was performed to come to this definition for congestion.

Identify and Assess CMP Strategies

As described in Federal regulations, the CMP is required to include an “identification and evaluation of the anticipated performance benefits of appropriate congestion management strategies.” Once the MPO has secured the necessary congestion data, identified congested corridors, and understands the sources of congestion, then all this information can be turned into a set of recommended solutions to effectively manage congestion and achieve the previously-defined congestion management objectives.

As detailed in FHWA’s CMP Guidebook, the identification of congestion management strategies requires several important considerations, including the contribution to meeting regional congestion management objectives, local context, contribution to other goals and objectives, and jurisdiction over CMP strategies.

Regulations provide guidance on example congestion management strategies for consideration, including demand management measures, including growth management and congestion pricing; traffic operational improvements; public transportation improvements; Intelligent Transportation Systems (ITS) technologies as related to the regional ITS architecture; and, where necessary, additional system capacity.

As detailed by the MPO, the MPO’s call-for-projects for the RTP is intended to suffice for the requirement to identify and assess CMP strategies. In addition, the RTP details a “toolbox” of strategies available to planners to mitigate congestion. As detailed in Section 7.3 of the RTP, these tools include site access treatments, median treatments, intersection and minor street treatments, and collector street connectivity and spacing.
Without regarding the disconnect between these strategies and the strategies detailed in Federal regulations, the congestion management strategies identified are very high-level in nature and do not appear to align with any of the other components of the congestion management process. There is no readily-apparent linkage between these strategies and the congestion management objectives, congestion performance measures, the data that the MPO is collecting to monitor congestion, and the definition and sources of congestion across the region. There is no linkage to how these strategies are being applied throughout the region with the goal of managing congestion. Rather, the strategies are simply described in high-level narrative form as options available to planners that wish to manage congestions, with no linkage to the rest of the CMP or the transportation planning and programming process as a whole.

Of additional concern is the lack of evaluation and assessment of congestion management strategies. As the strategies provided do not appear to be considered in the transportation planning and programming process, there is accordingly limited value to their assessment. However, even the strategies provided are not being assessed for effectiveness and do not further inform the MPO’s identification of project priorities and how best to address congestion in the Nashville region.

Based on information provided, the MPO evaluates proposed projects that are submitted through the RTP call-for-projects for the projects ability to address congestion. However, information on this analysis is not readily available, and this analysis does not appear to be informing the larger congestion management process as a whole. Rather, it is simply a scoring criteria for project selection.

FHWA’s CMP Guidebook provides a variety of example congestion management strategies for consideration by MPOs in developing the CMP.

Program and Implement Strategies

Federal regulations require that the CMP include an “identification of an implementation schedule, implementation responsibilities, and possible funding sources for each strategy (or combination of strategies) proposed for implementation.” Upon identification of congestion needs and strategies, MPOs are expected to incorporate this information into the planning and programming process, using the CMP to inform the project prioritization and selection in the MTP and TIP.

The CMP objectives, data, and strategies do not appear to be incorporated into the Nashville MPO’s planning and programming process. As previously detailed, the RTP process is kicked-off by a call-for-projects in which the MPO solicits projects from member jurisdictions, stakeholders, and the public. Using solely the scope of the projects received by the MPO, staff are then able to prioritize the projects for funding. While congestion is one scoring criteria among many for project prioritization, this
practice of letting project programming “drive” the planning process greatly limits the
ability of the MPO to be able effectively implement the CMP, particularly when there is
no clear connection between the project solicitation and the objectives and strategies in
the CMP.

Regardless of this concern, the MPO does identify and provide a list of projects on
congested corridors in Appendix B of the 2040 RTP. This list details the project, the
improvement type, the congested horizon (the year in which the MPO projects the
facility to be congested, as previously defined), and whether the project includes
multimodal improvements. Of the improvement types listed in this appendix, none align
with the congestion management strategies previously identified, and there is no clear
explanation of how these projects address the source of the congestion or align with the
CMP objectives.

**Evaluate Strategy Effectiveness**

Finally, Federal regulations call for the “implementation of a process for periodic
assessment of the effectiveness of implemented strategies, in terms of the area’s
established performance measures.” This analysis can be performed at a system-level
or the project-level.

This, again, does not appear to be happening effectively in the Nashville region.
Notwithstanding the disconnect between the identified congestion management
strategies and the projects being implemented on congested corridors, the 2040 RTP
details that “the MPO plans to continually update the CMP through regular data
collection that should provide information about the change in conditions over time and
whether the mitigation strategies that are being employed are keeping pace with the
congestion.” Limited additional information on strategy effectiveness evaluation is
provided.

Per discussion with the MPO, the MPO performs the evaluation of CMP strategies
through planning studies, data collection, model development, analysis of data and
model results, communication of findings, and revenue projections. Without further
detail on the analysis being performed, and given the other weaknesses of the CMP
and the transportation planning and programming process detailed throughout this
section, there does not appear to be a framework for formal evaluation of CMP strategy
effectiveness.

In the observations of the Federal Review Team, as detailed above and based on
information collected and reviewed, there is not a compliant congestion management
process being carried out in the Nashville region.
Findings:

Corrective Action: Per 23 CFR 450.322, the MPO shall develop and integrate a CMP into the metropolitan transportation planning process. The CMP is expected to be incorporated into all activities of the MPO, including the update to the MTP and TIP, all MTP and TIP amendments, and all additional planning activities.

Intelligent Transportation Systems

Regulatory Basis:

23 CFR 450.306 Scope of the metropolitan transportation planning process
23 CFR 940.9 Regional ITS Architecture

Status & Findings:

Federal regulation 23 CFR 450.306(f) states that “The metropolitan planning process shall (to the maximum extent practicable) be consistent with the development of applicable regional intelligent transportation systems (ITS) architectures, as defined in 23 CFR part 940.

The MPO most recently updated the Nashville Area Regional Intelligent Transportation Systems (ITS) Architecture in June 2010, with TDOT issuing an approval and acceptance on July 8, 2010. This update did not require consideration and adoption by the MPO Executive Board. This update included the development of an ITS architecture report and a regional ITS deployment plan.

In the time since the development of the existing Regional ITS Architecture, much has changed at the national, state and regional levels in regards to ITS. For example, the current Regional ITS Architecture was developed using Turbo Architecture Version 4.1, which was developed to support Version 6.1 of the National ITS Architecture. The National ITS Architecture Version 7.0 was released in 2012, and Version 7.1 was released in 2015. In June 2017, the National ITS Architecture Version 7.1 and the Connected Vehicle Reference Implementation Architecture (CVRIA) Version 2.2 were upgraded and combined into the Architecture Reference for Cooperative and Intelligent Transportation (ARC-IT), which acted as Version 8.0 the national ITS reference architecture. Additionally, Turbo Architecture was upgraded in June 2017 and renamed to the Regional Architecture Development Tool for Intelligent Transportation, or RAD-IT, and a project architecture tool was released called the Systems Engineering Tool for...
Intelligent Transportation (SET-IT). In February 2018, ARC-IT, RAD-IT, and SET-IT were upgraded to Version 8.1. With each of these subsequent upgrades has come a review of service packages, a new organization of service areas, and clarification on terminology.

There have been significant shifts at a statewide and regional level as well since the June 2010 update to the Regional ITS Architecture. Investments in ITS have been significant and TDOT continues to advance large- and small-scale ITS projects across the state (despite this, the statewide ITS architecture has not been updated since 2006). Additionally, geography of the existing regional ITS architecture does not align with the existing MPO planning area, with the exclusion of Maury County, and the MPO has significantly invested in ITS as well, establishing ITS set-asides in both the 2035 and 2040 RTPs.

Section 5.3 of the Regional ITS Architecture calls for a major update to the entire Regional ITS Architecture approximately every four years. Considering this recommendation, and the changing ITS landscape, FHWA, TDOT, and the MPO have recently been discussing the somewhat critical need for an update to the Regional ITS Architecture for the Nashville region. In late October and early November 2017, FHWA, TDOT, and the MPO participated in a “Quick-Starting Your Regional ITS Architecture Update” workshop, led by FHWA’s Resource Center. This workshop was designed to assist public and private sector professionals responsible for developing and maintaining the Regional ITS Architecture with a “plan of action” for the update of an older regional ITS architecture. Based on conversations with the MPO and TDOT staff, both agencies felt that the workshop was beneficial, particularly in how to use the ITS architecture and the roles of each of the agencies involved in the architecture and programming and delivering ITS projects. Moving forward, FHWA will work with TDOT and the MPO to document expectations, roles, and responsibilities in ITS architecture updates and enforcement as well as ITS project delivery, including the systems engineering process.

Moving forward, the MPO has committed to updating the Regional ITS Architecture throughout FY 2019. This will be done concurrently with a Regional Smart Mobility Assessment which is intended to assess how emerging technologies can improve transportation system efficiency and traveler information. Resources have been identified for this activity in the draft FY 2019 UPWP and the MPO expects this study to be completed within 6-9 months of kickoff. The study is in the request for proposals stage currently.
**Freight Planning**

*Regulatory Basis:*

23 CFR 450.306 Scope of the metropolitan transportation planning process

*Status & Findings:*

The Nashville Area MPO has performed three freight studies in recent years, spanning a period from 2003 to 2016. These studies were performed as three phases of a larger-scale Regional Freight & Goods Movement Study.

Phase III of the Regional Freight & Goods Movement Study was conducted between 2014 and 2016. Per the Project Management Plan, this study included:

- A review and analysis of historic trends and existing conditions in the region including an analysis of commodity flows, import/export trading partners, local freight attractors and generators, freight networks and routing, economic impact of freight and logistics, etc.;
- A review and analysis of future conditions including a forecast of future commodity flows and freight movements, and an evaluation of programmed and planned transportation improvements, future land use policies, economic and community development plans, etc. that may affect or be affected by freight and goods movement;
- Development of a guiding vision for the region's freight system, including a designated truck route network, and supporting polices, strategies, and regulations to facilitate its implementation;
- Recommendations for optimizing local land use plans and land development policies, codes, and ordinances in support of improved freight access and delivery; and
- Print and web-based communication tools that help promote awareness of freight movements, associated benefits and challenges, proposed strategies, and proposed improvements across the region.

This study was delivered through four distinct reports. Details on these deliverables can be found below:
Technical Memorandum #1 – Analysis of Historic, Existing, and Future Conditions (December 2014): Uses historic, current, and future data to describe the conditions and trends related to the regional freight economy and the travel patterns and flows associated with these trends. Includes information on economic and market conditions, freight generators, commodity flows, truck speeds, rail movements, and water and airport movement.

Technical Memorandum #2 – Future Performance of Freight Systems and Designated Truck Route Network (April 2015): Discusses the implications of future trends on freight and goods movement. Introduces a regional designated truck route network as a strategy to help address changes based on the region’s current trajectory.

Technical Memorandum #3 – Land Use Planning and Urban Design Recommendations (May 2015): Reviews national best practices and local plans, policies, and regulations for land use and urban design to develop a set of recommendations to improve the efficiency of goods movement across and within the region while minimizing its impact on local quality of life.

Technical Memorandum #4 – Regional Freight and Goods Movement Strategies (April 2016): Describes strategies that may be used in coordination with a regional freight vision for the Nashville Area MPO, and is focused on three primary strategies: implementing a regional truck network, optimizing the location of rail operations, and coordinating economic development and land use decisions with planning investments.

Following these reports, the MPO produced a *Freight in Middle Tennessee* brochure which details the highlights of these studies in a streamlined format. This brochure includes information on existing freight generators and movements, future growth, issues associated with freight growth, and strategies to improve freight transportation.

Information gained from these studies informed the development of the 2040 RTP, including information on current conditions of the transportation system, future growth, and consideration of freight as a project evaluation criteria.

Information from these studies also helped to inform the MPO’s coordination with TDOT on the designation of critical urban and critical rural freight corridors. On November 15, 2017, the Chair of the MPO Transportation Policy Board provided TDOT with a concurrence letter for the proposed critical urban and critical rural freight corridors in the MPO planning area. This concurrence satisfies the requirement for MPOs serving an urbanized area with a population over 500,000 to designate the critical urban freight corridors within the urbanized area. Per feedback from TDOT, the MPO was an active and engaged partner in the designation of these corridors.
In addition to coordinating with TDOT on the designation of critical urban and rural freight corridors, the MPO is also an active participant on TDOT’s Statewide Freight Advisory Committee. As detailed above, limited information is available on the MPO Freight Advisory Committee.

**Findings:**

**Commendation:** Partnering with TDOT in the identification and designation of Critical Urban Freight Corridors. The MPO also aligned the data and designations made with their Phase III Regional Freight & Goods Movement Study.
Summary of Findings

The Federal Review Team identified several findings through the certification review of the metropolitan transportation planning process for the Nashville TMA. These findings are intended to not only ensure continuing regulatory compliance of the metropolitan transportation planning process, but also to foster high-quality planning practices and improve the transportation planning in the Nashville TMA.

Review findings are categorized as commendations, recommendations, and corrective actions. Through its review, the Federal Review Team identified 4 commendations, 5 recommendations, and 4 corrective actions related to the planning process for the Nashville TMA. These findings are detailed below.

Commendations

Commendations highlight noteworthy practices that demonstrate innovative, highly effective, or well-thought-out procedures for implementing the planning requirements. Commendations for the planning process in the Nashville TMA include:

1. **Metropolitan Transportation Plan:** MPO’s use of a data-intensive Land Use modeling tool to forecast future population and job growth at the parcel level as a data source to inform the MPO’s travel demand modeling and understanding of future travel patterns and congestion.

2. **Metropolitan Transportation Plan:** MPO’s data-rich identification of potential environmental resources within the planning area for consideration of potential environmental impacts in the project screening process.

3. **Transportation Improvement Program:** Partnering with TDOT, Johnson City MTP, and other interested MPOs to share knowledge of the development and use of electronic TIP/STIP systems.

4. **Freight Planning:** Partnering with TDOT in the identification and designation of Critical Urban Freight Corridors. The MPO also aligned the data and designations made with their Phase III Regional Freight & Goods Movement Study.

Recommendations

Recommendations concern the state of practice or technical improvements that would enhance existing processes and procedures. FHWA and FTA expect planning agencies
Recommendations for the planning process in the Nashville TMA include:

1. **MPO Organizational Structure**: Develop and adopt bylaws specific to the Planning Oversight Committee, the Technical Coordinating Committee, and any other committees as necessary to formalize the membership, roles, responsibilities, and expectations of these committees in the metropolitan transportation planning process.

2. **MPO Organizational Structure**: Enforce the requirement provided in the Bylaws of the Transportation Policy Board for the Planning Oversight Committee to provide the Policy Board an update on UPWP work activities at least quarterly.

3. **Unified Planning Work Program**: Engage in more direct coordination between TDOT, the transit providers, and the MPO in development of activities to be included within the UPWP. Activities funded with FTA Section 5307 funds also need to be incorporated into the body of the UPWP and the financial summary tables, rather than appearing as an Appendix to the UPWP with limited detail.

4. **Metropolitan Transportation Plan**: Consider incorporating a public-facing component to the project application tool to allow the public to more transparently and readily provide meaningful input on the project solicitation and selection process prior to decisionmaking.

5. **Transportation Improvement Program**: Enforce approved TIP policies related to TIP project status and funds obligations to support timely and effective delivery of projects in the TIP, particularly through regular updates on project status to MPO members.

**Corrective Actions**

Corrective Actions denote items that do not meet the requirements of the applicable Federal rules and regulations. FHWA and FTA expect agencies tasked with carrying out the metropolitan planning process in a TMA to address corrective actions in accordance with prescribed timelines to achieve specific outcomes. Corrective actions for the planning process in the Nashville TMA are provided below, including prescribed steps and timelines for compliance with the applicable regulatory requirement(s).

1. **Planning Agreements**: Per 23 CFR 450.314(a), there shall be an agreement(s) between the State DOT, the MPO, and public transportation providers to cooperatively determine their mutual responsibilities in carrying out the metropolitan transportation planning process. At a minimum, FHWA expects this agreement to provide specific provisions detailing the cooperative relationship
between TDOT, the Nashville Area MPO, and public transportation providers in the Nashville region in carrying out the metropolitan transportation planning process, including:

- Development and management of the MTP, including financial plans supporting the MTP;
- Development and management of the TIP, including financial plans supporting the TIP;
- Development and publication of the annual listing of obligated projects;
- Development and management of the UPWP;
- Integration of a CMP into the metropolitan transportation planning process and identification of congestion performance measures; and
- All other metropolitan planning activities taking place in the region.

This corrective action must be addressed no later than February 4, 2019. FHWA and FTA will issue a determination of the compliance with this corrective action no later than March 4, 2019.

2. Public Involvement: Per 23 CFR 450.316, the MPO shall adhere to the policies and practices described in the existing PPP to ensure adequate opportunity for full participation of the entire MPO membership and the public in a transparent, comprehensive, and collaborative decisionmaking process.

Areas of particular concern to FHWA and FTA include:

- Providing sufficient advanced public notice of and an opportunity for public comment at all meetings of governing bodies and committees of the MPO and the GNRC in which information relating to the metropolitan transportation planning process is to be presented and/or discussed, regardless of whether an action is proposed to be taken on the subject at said meeting, and documenting how public input is considered in the decisionmaking process;
- Ensuring that the MPO TPB act as the primary forum for discussion on metropolitan transportation planning activities to ensure full MPO member jurisdiction participation, ensure that all MPO members are well-informed of the authorities and responsibilities of the TPB, and maintain the integrity of the metropolitan transportation planning process; and
- Compliance with the Tennessee Open Meetings Act, particularly as it relates to openness in electronic communication for the Planning Oversight Committee.
This corrective action must be addressed prior to the next MPO TPB meeting, scheduled for August 15, 2018. FHWA and FTA will issue a determination of the compliance with this corrective action no later than February 4, 2019.

3. **Public Involvement**: Per the MPO’s existing PPP, the PPP shall be updated every four years. The PPP was most recently updated in 2007. Accordingly, the MPO shall perform an evaluation of the effectiveness of its public involvement strategies and update the PPP appropriately. This update shall address all requirements of 23 CFR 450.316, shall be fully reflective of the change in the MPO’s organizational structure, and shall undergo a minimum public comment period of 45 days before adoption by the MPO.

This corrective action must be addressed no later than May 3, 2019. FHWA and FTA will issue a determination of the compliance with this corrective action no later than June 3, 2019.

4. **Congestion Management Process**: Per 23 CFR 450.322, the MPO shall develop and integrate a CMP into the metropolitan transportation planning process. The CMP is expected to be incorporated into all activities of the MPO, including the update to the MTP and TIP, all MTP and TIP amendments, and all additional planning activities.

No later than **February 4, 2019**, the MPO shall develop an action plan to guide the development and integration of a compliant CMP into the metropolitan transportation planning process. This action plan shall be developed in cooperation with TDOT and FHWA, shall detail the steps necessary to develop and implement a CMP, and shall act as a commitment by the MPO to carry out this corrective action.

**FHWA and FTA will review and approve or disapprove the work plan prior to the MPO taking further action on this corrective action. This review will occur no later than 30 days following receipt of the action plan.**

Based on the approved action plan, the MPO shall fully integrate a compliant CMP into the metropolitan transportation planning process no later than the time of Federal approval of the FY 2020 – 2023 STIP.

**FHWA and FTA will issue a determination of the compliance with this corrective action prior to approval of the Nashville TMA portion of the FY 2020-2023 STIP, anticipated in January 2020.**
Conclusion

Based on the Federal Review Team’s review and evaluation of the metropolitan planning process for the Nashville TMA, FHWA and FTA find that the process substantially meets the requirements of 23 CFR 450 and jointly certify the planning process subject to corrective actions. Pending timely completion of the required corrective actions, this certification will remain in effect until August 3, 2022.
Appendix A:
Certification Review Site Visit Agenda

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<tr>
<th>Time</th>
<th>Item</th>
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<tr>
<td>1:00 – 4:45 pm</td>
<td><strong>ON-SITE REVIEW SESSION</strong></td>
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<td>1:00 – 1:15 pm</td>
<td>Welcome &amp; Introductions</td>
<td>Federal Team</td>
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<td>Purpose of the Certification Review</td>
<td>Lead: Sean Santalla</td>
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<td>Agenda Overview</td>
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<td>1:15 – 1:45 pm</td>
<td>Discussion of Previous Review Findings</td>
<td>Federal Team &amp; MPO Staff</td>
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<td>Lead: Sean Santalla</td>
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<td>1:45 – 2:15 pm</td>
<td>Best Practices, Lessons Learned &amp; Recent Activities</td>
<td>MPO Staff</td>
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<td>2:15 – 2:30 pm</td>
<td>MPO Overview</td>
<td>Federal Team &amp; MPO Staff</td>
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<td>MPO Boundaries</td>
<td>Lead: Sean Santalla</td>
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<td>Program/Process Changes</td>
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<td>2:30 – 2:45 pm</td>
<td>Break</td>
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<td>2:45 – 3:15 pm</td>
<td>MPO Organizational Structure</td>
<td>Federal Team &amp; MPO Staff</td>
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<td>Planning Agreements</td>
<td>Lead: Sean Santalla</td>
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<td>Sponsorship Agreement</td>
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<td>Staffing &amp; Resources</td>
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<td>3:15 – 3:45 pm</td>
<td>Unified Planning Work Program</td>
<td>Federal Team &amp; MPO Staff</td>
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<td>Development &amp; Management</td>
<td>Lead: Sean Santalla,</td>
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<td>Theresa Claxton</td>
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<td>3:45 – 4:30 pm</td>
<td>Planning Grant Administration</td>
<td>Federal Team, MPO, TDOT</td>
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<td>Financial Management</td>
<td>Lead: Sean Santalla</td>
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<td>Administrative Requirements</td>
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<td>Audit Requirements</td>
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<td>4:30 – 4:45 pm</td>
<td>Questions, Comments &amp; Next steps</td>
<td>Federal Team &amp; MPO Staff</td>
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<td>4:45 pm</td>
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### May 2, 2018

#### MPO TECHNICAL COORDINATING COMMITTEE MEETING

**10:30 am – 12:00 pm**  
MPO Technical Coordinating Committee Meeting  
**Lead:** MPO Staff

**12:00 pm**  
Adjourn/Lunch

### May 2, 2018

#### ON-SITE REVIEW SESSION

**1:00 – 4:45 pm**  
ON-SITE REVIEW SESSION  
**Lead:** Federal Team  
**Lead:** Sean Santalla  
**Lead:** Jessica Rich, Pam Heimsness

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<td>1:00 – 1:10 pm</td>
<td>Prior Day Recap</td>
<td>Federal Team</td>
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<td><strong>Lead:</strong> Sean Santalla</td>
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<td>1:10 – 1:40 pm</td>
<td>Metropolitan Transportation Plan</td>
<td>Federal Team &amp; MPO Staff</td>
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<td><strong>Lead:</strong> Jessica Rich, Pam Heimsness</td>
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<td>1:40 – 2:15 pm</td>
<td>Transportation Improvement Program TIP Development &amp; Management Self-Certification Listing of Obligated Projects</td>
<td>Federal Team &amp; MPO Staff</td>
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<td><strong>Lead:</strong> Sean Santalla, Theresa Claxton</td>
</tr>
<tr>
<td>2:15 – 2:30 pm</td>
<td>Break</td>
<td>Federal Team &amp; MPO Staff</td>
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<tr>
<td></td>
<td></td>
<td><strong>Lead:</strong> Pam Heimsness, Tameka Macon, Sean Santalla</td>
</tr>
<tr>
<td>2:30 – 3:00 pm</td>
<td>Congestion Management Process</td>
<td>Federal Team &amp; MPO Staff</td>
</tr>
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<td></td>
<td></td>
<td><strong>Lead:</strong> Pam Heimsness, Sean Santalla</td>
</tr>
<tr>
<td>3:00 – 3:30 pm</td>
<td>Intelligent Transportation Systems</td>
<td>Federal Team &amp; MPO Staff</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Lead:</strong> Pam Heimsness, Sean Santalla</td>
</tr>
<tr>
<td>3:30 – 4:30 pm</td>
<td>Transit Planning &amp; Coordination</td>
<td>Federal Team, MPO, MTA</td>
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<td></td>
<td><strong>Lead:</strong> Andres Ramirez</td>
</tr>
<tr>
<td>4:30 – 4:45 pm</td>
<td>Questions, Comments, Next Steps</td>
<td>Federal Team &amp; MPO Staff</td>
</tr>
<tr>
<td>4:45 pm</td>
<td>Adjourn</td>
<td>Federal Team &amp; MPO Staff</td>
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</tbody>
</table>

### May 2, 2018

#### PUBLIC MEETING

**6:00 – 7:00 pm**  
PUBLIC MEETING  
**Lead:** Sean Santalla

<table>
<thead>
<tr>
<th>Time</th>
<th>Item</th>
<th>Lead</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:00 – 6:15 pm</td>
<td>Welcome, Introductions &amp; Overview</td>
<td>Federal Team</td>
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<td><strong>Lead:</strong> Sean Santalla</td>
</tr>
<tr>
<td>6:15 – 7:00 pm</td>
<td>Public Comment &amp; Feedback</td>
<td>Public</td>
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<tr>
<td>7:00 pm</td>
<td>Adjourn</td>
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<tr>
<td>Time</td>
<td>Activity</td>
<td>Presenter(s)</td>
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<tr>
<td>8:30 am – 2:00 pm</td>
<td><strong>ON-SITE REVIEW SESSION</strong></td>
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</tr>
<tr>
<td>8:30 – 8:45 am</td>
<td>Prior Day Recap</td>
<td>Federal Team&lt;br&gt;&lt;i&gt;Lead: Sean Santalla&lt;/i&gt;</td>
</tr>
<tr>
<td>8:45 – 9:15 am</td>
<td>Public Involvement&lt;br&gt;- Public Participation Plan&lt;br&gt;- Title VI&lt;br&gt;- Environmental Justice&lt;br&gt;- Limited English Proficiency</td>
<td>Federal Team &amp; MPO Staff&lt;br&gt;&lt;i&gt;Lead: Joi Hamilton-Jones, Tameka Macon&lt;/i&gt;</td>
</tr>
<tr>
<td>9:15 – 10:15 am</td>
<td>Transportation Performance Management &amp; Performance-based Planning and Programming</td>
<td>Federal Team &amp; MPO Staff&lt;br&gt;&lt;i&gt;Lead: Tameka Macon, Jessica Rich, Pam Heimsness, Andres Ramirez&lt;/i&gt;</td>
</tr>
<tr>
<td>10:15 – 10:30 am</td>
<td>Break</td>
<td>Federal Team &amp; MPO Staff&lt;br&gt;&lt;i&gt;Lead: Sean Santalla&lt;/i&gt;</td>
</tr>
<tr>
<td>10:30 – 10:45 am</td>
<td>Air Quality &amp; Transportation Conformity</td>
<td>Federal Team &amp; MPO Staff&lt;br&gt;&lt;i&gt;Lead: Sean Santalla&lt;/i&gt;</td>
</tr>
<tr>
<td>10:45 – 11:15 am</td>
<td>Transportation Safety &amp; Security</td>
<td>Federal Team &amp; MPO Staff&lt;br&gt;&lt;i&gt;Lead: Tameka Macon, Jessica Rich, Pam Heimsness&lt;/i&gt;</td>
</tr>
<tr>
<td>11:15 – 11:30 am</td>
<td>Freight Planning &amp; Consultation</td>
<td>Federal Team &amp; MPO Staff&lt;br&gt;&lt;i&gt;Lead: Sean Santalla, Pam Heimsness&lt;/i&gt;</td>
</tr>
<tr>
<td>11:30 am – 12:00 pm</td>
<td>FHWA/FTA/MPO/TDOT Initiatives</td>
<td>Federal Team, MPO, TDOT&lt;br&gt;&lt;i&gt;Lead: Various&lt;/i&gt;</td>
</tr>
<tr>
<td>12:00 – 1:15 pm</td>
<td>Lunch&lt;br&gt;&lt;i&gt;Federal Review Team Closed-Session Discussion of Preliminary Findings&lt;/i&gt;</td>
<td>Federal Team&lt;br&gt;&lt;i&gt;Lead: Various&lt;/i&gt;</td>
</tr>
<tr>
<td>1:15 – 2:00 pm</td>
<td>Close Out&lt;br&gt;- Review of Preliminary Findings Questions, comments, and next steps</td>
<td>Federal Team&lt;br&gt;&lt;i&gt;Lead: Sean Santalla&lt;/i&gt;</td>
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<tr>
<td>2:00 pm</td>
<td>Adjourn</td>
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Appendix B:
Certification Review Site Visit Participants

The following individuals participated in the Nashville TMA Certification Review Site Visit held on May 1-3, 2018 in Nashville, TN:

Federal Highway Administration, Tennessee Division:
Theresa Claxton, Planning & Program Management Team Leader
Joi Hamilton-Jones, Civil Rights Program Specialist
Pamela Heimsness, Safety & Traffic Operations Team Leader
Jessica Rich, Safety Engineer
Sean Santalla, Planning & Air Quality Specialist
Elizabeth Watkins, Planning & Air Quality Specialist

Federal Highway Administration, Office of Planning, Environment, and Realty:
Tameka Macon, Transportation Planner, Planning Oversight & Stewardship Team

Federal Transit Administration, Region IV:
Andres Ramirez, General Engineer

Tennessee Department of Transportation:
Cynthia Howard, Title VI Director, Civil Rights Division
Pamela Sharp, Region 3 Title VI Specialist, Civil Rights Division
Deborah Fleming, Senior Regional Planner, Long Range Planning Division
Larry McGoogin, Comprehensive Planning Assistant Director, Long Range Planning Division
Ian Preston, OCT Region 3 Community Planning Specialist, Long Range Planning Division
Jonathan Russell, OCT Region 3 Planning Supervisor, Long Range Planning Division
Kevin Teagarden, OCT Region 3 Community Planner, Long Range Planning Division
Brandon Darks, Transportation Manager 2, Strategic Transportation Investments Division
Jeff Murphy, Transportation Manager 1, Strategic Transportation Investments Division
Brad Freeze, Director, Traffic Operations Division
Veda Nguyen, Civil Engineering Manager II, Traffic Operations Division

Greater Nashville Regional Council:
Max Baker, Director of Research and Analytics
Craig Casper, Director of Community & Regional Planning
Mary Connelly, Transportation Planning Manager
Anna Emerson, Senior Planner
Michelle Lacewell, Deputy Director & Communications Officer
Michael Skipper, Executive Director

**Nashville Metropolitan Transit Authority:**
Stephen Bland, Chief Executive Officer
Julie Navarrete, Chief Development Officer
Felix Castrodad, Director of Planning and Grants
Appendix C: Summary of Comments Received

The Federal Review Team held a public meeting on May 2, 2018 to solicit input from the general public on the effectiveness of the region’s transportation planning process. The meeting was held in the Metropolitan Government of Nashville and Davidson County’s Richard H. Fulton Campus in Nashville. The meeting location was transit- and ADA-accessible. The MPO published notice for the meeting in area newspapers and online in accordance with the Public Participation Plan. No members of the public attended the meeting and no comments were received.

The Federal Review Team also presented information on the Federal Certification Review to and solicited feedback from the MPO Technical Coordinating Committee members and members of the public in attendance at the MPO TCC Meeting on May 2, 2018. The Review Team received two written comments. Those comments and responses are summarized below:

**Comment**: Since coming to Metro over two years ago and quickly becoming a member of the MPO TCC, I’ve witnessed on many occasions the call for public comments on the meeting agenda and never having any. Either the TCC remove this from the agenda or take a more aggressive role in advertising meetings and topics that would most certainly interest the public, particularly advocacy groups for certain public concerns (e.g. transit, safety, bike lanes, etc.). How this can be done, I’m not sure at this time, but would be willing to participate in a discussion about having more public participation.

**Response**: Thank you for your input on the transportation planning process and the public engagement for the TCC meetings. Your comment has been considered in the Federal Certification Review (see Public Involvement).

**Comment**: The MPO should spend more time focusing on projects. The Tech & Exec meetings tend to revolve around the administrative aspects of the program rather than on its actual purpose – identifying, prioritizing, initiating tracking and completing transportation investments. I think this tendency to stay away from project specifics has led to the unobligated balances issue. The MPO staff seems to always be in such a hurry to get meetings completed that there just doesn’t seem to be much time for this kind of discussion.

It would be great to see a portion of each meeting dedicated to TDOT project updates & to local agencies discussing issues they are facing. Maybe monthly discussions of this type would be too much, but I see no reason they couldn’t be done quarterly.
Response: Thank you for your input on the transportation planning process and the MPO’s role in programming and project delivery. Your comment has been considered in the Federal Certification Review (see Transportation Improvement Program Development and Management).

The Federal Review Team also presented information on the Federal Certification Review to and solicited feedback from the MPO Transportation Policy Board members and members of the public in attendance at the MPO TPB Meeting on May 16, 2018. No comments were received.
## Appendix D:
Summary of Findings and Status from the 2014 Nashville TMA Federal Certification Review

<table>
<thead>
<tr>
<th>2014 Commendations</th>
<th>Commendation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overview of recent activities</strong></td>
<td>Incorporating public health considerations into the MPO’s planning process via policies, funding, and research.</td>
</tr>
<tr>
<td></td>
<td>Integrating transportation and land use considerations into the MPO’s planning process via corridor management agreements, access management studies, subarea studies, and other planning activities.</td>
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<td></td>
<td>Creating a forum for collaboration and innovation among local, regional, statewide and national transportation stakeholders.</td>
</tr>
<tr>
<td><strong>Organizational structure</strong></td>
<td>Designating transit representation on the Executive Board prior to the MAP-21 requirement.</td>
</tr>
<tr>
<td><strong>Unified Planning Work Program</strong></td>
<td>Continuously planning for the preservation, management, operation, and expansion of the regional multimodal transportation network.</td>
</tr>
<tr>
<td></td>
<td>Leveraging annual membership dues to build local support and commitment for regional planning efforts.</td>
</tr>
<tr>
<td><strong>Metropolitan Transportation Plan</strong></td>
<td>Establishing an investment strategy to ensure that the MPO-managed federal grant funds are aligned with regional goals and objectives for multimodal roadway capacity and safety; active transportation and walkable communities; public transportation; and system management and operations.</td>
</tr>
<tr>
<td></td>
<td>Developing a web-based project application and evaluation tool to facilitate a transparent, documented, collaborative, and analytical project selection process.</td>
</tr>
<tr>
<td>Task</td>
<td>Description</td>
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<td>---------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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<tr>
<td>Conducting a comprehensive data collection effort for the travel demand model and including regional data for travel speeds, bicycle level of service, vehicle ownership, household income, physical activity, and public health.</td>
<td>Participating on the Strategic Highway Safety Plan (SHSP) Committee, staying informed of regional and statewide safety needs, and providing valuable contributions to the State of Tennessee’s effort to improve highway safety.</td>
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<tr>
<td></td>
<td>Participating on the Traffic Records Coordinating Committee, networking with State and local law enforcement agencies, and contributing to the overall improvement of traffic records in Tennessee.</td>
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<tr>
<td>Transportation Improvement Program</td>
<td>Implementing programming policies to assist in the effective administration of MPO-managed federal grant funds.</td>
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<td>Developing a web-based application to manage the TIP and track project information.</td>
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<td>Amending the TIP to include individual line-items for projects that have been selected for funding under a MPO-managed project grouping.</td>
</tr>
<tr>
<td>Interested parties, participation, and consultation</td>
<td>Employing visualization tools in public meetings and on the MPO website to describe the metropolitan planning process and solicit participation.</td>
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<td></td>
<td>Consistently including Title VI assurance statements in publications.</td>
</tr>
<tr>
<td>Transit</td>
<td>Examining best practices for transit mapping and creating an investment vision for short and long term multimodal transportation choices.</td>
</tr>
<tr>
<td>Congestion Management Process</td>
<td>Evaluating congestion through tiered aggregation areas, such as regional corridors, districts, neighborhood/communities, and at the system level, and producing measures of effectiveness.</td>
</tr>
</tbody>
</table>
Proactively addressing congestion through non-traditional travel demand management strategies, including complete streets design, transit services, and Intelligent Transportation Systems (ITS).

Regional Intelligent Transportation Systems (ITS) Architecture

Implementing a user-friendly process for updating the Regional ITS Architecture as transportation projects are developed.

<table>
<thead>
<tr>
<th>2014 Recommendations</th>
<th>MPO Implementation (as provided by MPO Staff)</th>
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<tbody>
<tr>
<td>Continue evaluating connectivity gaps regarding access to essential services, including housing, employment, health care, education, and recreation.</td>
<td>The MPO has continued to evaluate gaps in connectivity across the region through its formal process to evaluate and prioritize candidate projects for the 2040 RTP. This is done using information gained from planning studies and input received through the MPO network of community partners. The MPO also implemented a custom web-based RTP project evaluation platform used by staff to evaluate transportation projects for their ability to address a variety of issues including those referenced in the recommendation. (Apply.NashvilleMPO.org) Additionally, in August 2016, the executive boards of the Nashville Area MPO and the Greater Nashville Regional Council (GNRC) entered into a Memorandum of Agreement (MOA) that established a framework for the two organizations to explore ways to enhance coordination among local communities and between regional organizations in Middle Tennessee. As part of that agreement, a joint committee was created to develop recommendations for improving the efficiency and effectiveness of regional decision-making and to better align transportation planning programs with other regional activities related to economic development, infrastructure investment, and quality of life. This effort led to the MPO’s sponsor agency being redesignated from Metro Nashville to the GNRC</td>
</tr>
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</table>
which has created a forum for mayors and stakeholders to be better served through a holistic planning process across the region.

GNRC serves as the federally-designated Area Agency on Aging and Disability for Middle Tennessee and coordinates decisions regarding funding for programs aimed at improving access to transportation, food, health care, and long-term care services of older residents across the region.

The integration of the MPO program into GNRC fosters greater collaboration among staff to these programs to improve plans that influence community outcomes.

<table>
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<tr>
<th>Continue to coordinate with Federal and State planning partners on expectations for documenting major planning priorities and carryover activities/funds during the development of the FY 2016 Unified Planning Work Program.</th>
<th>The MPO works with federal and state partners to improve the documentation of major planning activities through the FY2016 UPWP and continued to improve the UPWPs for FY17 and FY18 in response to TDOT and federal input and comments.</th>
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<tr>
<td>Prioritize the review of the region’s urban areas and Federal-aid highway system for consistency with the 2013 Edition of FHWA’s <em>Highway Functional Classification Concepts, Criteria and Procedures</em>.</td>
<td>A comprehensive review and update to the MPO’s federal-aid highway system was completed in September 2013 to ensure consistency with the revised FHWA Highway Functional Classification System. The MPO relied guidance available on the FHWA website at the time. A subsequent call for revisions were reviewed and formally adopted by the MPO in August 2017.</td>
</tr>
<tr>
<td>Explore the application of safety analysis tools from the Highway Safety Manual, including the Interactive Highway Safety Design Module, Safety Analyst, and the Crash Modification Factors</td>
<td>MPO staff has a strong partnership with the Tennessee Department of Safety and Homeland Security, TITAN Division. The MPO leverages this working relationship, and the data made available a result, to perform a variety of safety analyses. MPO staff are currently exploring the development or</td>
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<thead>
<tr>
<th>Clearinghouse.</th>
<th>acquisition of predictive analytics and crash models for MPO region and will evaluate the Interactive Highway Safety Design Module and other tools referenced by FHWA.</th>
</tr>
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<tbody>
<tr>
<td>Include local safety initiatives in the 2040 Regional Transportation Plan that coincide with emphasis areas of the SHSP to show progress with safety performance measures and SHSP initiatives.</td>
<td>The MPO 2040 RTP incorporates and builds on the safety recommendations of the SHSP. The Plan includes a variety of crash data and safety measures to serve as a baseline against which to track progress towards improvement. In addition, the MPO participates in Roadway Safety Audit Reviews in conjunction with TDOT and affected local governments and has developed a RSAR database and map of RSAR reports and locations. The database includes information about the specific safety issues, proposed solutions, and status (completed, under construction, etc.).</td>
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<tr>
<td>Continue formalizing relationships with TDOT and the Tennessee Department of Safety to facilitate the continuous sharing of safety information and to ensure the MPO is involved in future SHSP updates and the development of specific safety strategies and performance targets for the Nashville metropolitan planning area.</td>
<td>The Nashville Area MPO utilizes information gained from participation in the TN Traffic Records Coordinating Committee, and data maintained by the Department of Safety TITAN division to develop policies that support a reduction in crashes in our planning area. The MPO uses safety as a criteria in its project evaluation that coincides with its 2040 RTP.</td>
</tr>
<tr>
<td>Continue to involve TDOT in the development of the 2040 Regional Transportation Plan to integrate the results of the Tennessee Extreme Weather Project.</td>
<td>The MPO participated in the state’s Extreme Weather Project. In addition, the MPO coordinated that effort with its own participation in the Model Forest Policy Program’s (MFPP) national Climate Solutions University (CSU) alongside El Paso, TX; Fayetteville, NC; and Sierra Business Council, CA. The program’s goal was to develop a specific and thorough Climate Adaptation Plan (CPA) for Davidson, Wilson, Williamson, Sumner, Rutherford, Robertson, and Maury Counties in Middle Tennessee.</td>
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</table>
This work was conducted in partnership with the Cumberland River Compact (CRC) and incorporated the Tennessee Extreme Weather Project.

Recommendations from the CPA informed the development of project scoring criteria for the 2040 RTP through evaluation of system preservation, environment and quality growth factors.

<table>
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<tr>
<th>Engage TDOT and public transit agencies on MAP-21 requirements, especially the Transportation Performance Management elements on performance measures and performance targets.</th>
<th>The MPO is currently engaging stakeholders, including TDOT and public transit agencies, on performance measures and performance targets required through MAP-21. The MPO has presented PBPP and TPM requirements to TCC members, worked with TDOT and TDOSHS to analyze safety measures, and is collaborating with TDOT on upcoming target setting deadlines. In addition, the MPO is working to update its planning agreements with TDOT and transit providers to include requirements related to data sharing and performance-based planning and programming.</th>
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<tr>
<td>Continue to work with TDOT to enable the continuous sharing of project/program obligations and expenditures so the MPO has the best available information for programming decisions.</td>
<td>The MPO has a variety of resources to aid in the tracking of project/program obligations and coordinates with TDOT on a regular basis to ensure information is current. The MPO TIP Coordinator is responsible for surveying TDOT and local jurisdictions for projects status updates and for obtaining regular obligations reports from TDOT. The MPO uses this information to enforce its programming policies which are intended to ensure that project delays do not slow the overall rate of obligations. The MPO recently completed a project to expand its web-based TIP application to allow the importing of project obligation information and will begin uses the expanded tool in 2018.</td>
</tr>
<tr>
<td>Explore the potential to establish connections between the MPO’s web-based TIP application and TDOT’s Statewide Environmental Management System (SEMS).</td>
<td>The MPO has supported the efforts of TDOT to implement a state-sponsored application, as the state continues to pursue this upgrade, it is possible that adjacent state systems, such as SEMS, could be integrated in order to provide even higher levels of project information to all stakeholders. The MPO is willing to update the web-based TIP application, where possible, to ensure coordination with SEMS.</td>
</tr>
<tr>
<td>Ensure public meeting notices and agendas are published in accordance to the MPO’s Public Participation Plan so the general public and other interested parties can prepare for participation.</td>
<td>The MPO publishes a complete list of public meetings for its Transportation Policy Board and Technical Coordinating Committee prior to the first meeting of the calendar year. Meeting agenda are scheduled to be distributed one week prior to each meeting.</td>
</tr>
<tr>
<td>Update the Public Participation Plan to reflect changes in membership, demographic and U.S. Census information, and Federal legislation.</td>
<td>The MPO published addendum to the PPP on October 1, 2017 to communicate recent changes resulting from the integration with GNRC and to reference the most recent federal transportation legislation (FAST Act). The addendum also included information about the upcoming major update to the PPP scheduled for the first half of calendar year 2018. <a href="http://www.nashvillempo.org/docs/PPP_Adopted_addendum1.pdf">http://www.nashvillempo.org/docs/PPP_Adopted_addendum1.pdf</a></td>
</tr>
<tr>
<td>During the update and implementation of the Public Participation Plan, continue to seek opportunities to educate interested parties and stakeholders on the MPO’s planning processes and local public participation activities in the region.</td>
<td>Since the 2014 certification the MPO has continued to seek opportunities to expand its outreach related to stakeholders across Middle Tennessee. The MPO continues to have a high volume of speaking engagements that provide an opportunity to inform and solicit feedback from stakeholders and the public. Recent forums/speaker series include the Moving Forward and Let’s Move Nashville Speakers Bureau, Transit Alliance, chambers, Leadership Middle Tennessee, rotary and other civic blubs.</td>
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The MPO will continue to broaden its outreach activities through resources provided by the GNRC. The MPO began the process of updating the PPP in late 2017, expecting adoption prior to completion of the 2018 Federal Certification.

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<tr>
<th>Consider collecting demographic data at public meetings using TDOT’s Data Collection Toolkit to better understand audience participation.</th>
<th>The MPO collects information about participants of public meetings via a participant information survey card. TDOT’s Data Collection Toolkit is under review as the PPP is updated.</th>
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<tr>
<td>Continue facilitating regional forums for multimodal transportation decision-making.</td>
<td>In addition to the regional forum provided by the its board and committee structure and the Middle Tennessee Mayors Caucus, the MPO collaborates routinely with private sector organizations like Cumberland Region Tomorrow and chambers of commerce to host regional events and symposiums dedicated to supporting conversations related to growth and development, social inclusion and equity, and transportation decision-making. The MPO also participates in national dialogue through organizations like the Association of MPOs, National Association of Regional Councils, and Transportation for America, and recently participated in the National Transportation Innovation Academy to broaden education of transit needs and funding to influential community leaders.</td>
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<tr>
<td>Explore travel time reliability as a performance measure for the congestion management process, including travel time index, planning index, and buffer index.</td>
<td>MPO technical staff have had ongoing conversations with TDOT staff about the use of data to measure travel time reliability. While CMP requirements are fulfilled through the development of the RTP, the MPO also showcases select performance measures in a variety of publications including the annual “State of Transportation” report and the annual “Nashville Region’s Vital Signs,” published in partnership with the Nashville Area Chamber of Commerce. These</td>
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publications are an ideal place to incorporate additional measures related to travel times and reliability.

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<tr>
<th>Leverage opportunities with TDOT, especially the Transportation Systems Management and Operations (TSM&amp;O) Committee, to provide the best travel time reliability for the region’s surface transportation networks.</th>
<th>The MPO has increased its level of collaboration with TDOT, in particular Brad Freeze’s group, to study and promote traffic operations and smart mobility solutions to improve regional travel time reliability. The MPO is coordinating with TDOT on a major update to the state and regional ITS architecture and in the commissioning of a regional smart mobility assessment. Additionally staff has attended trainings with FHWA and state regarding TSMO operations and been involved in the on-going I24- Smart Corridor Study lead by TDOT which includes consideration of TSMO strategies to alleviate congestion on the I-24 Corridor.</th>
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<tr>
<td>Engage FHWA for resources concerning travel time reliability prediction models for project evaluation and comparison.</td>
<td>The MPO is currently scoping the development of its 2045 RTP which includes the identification of data tools and models to produce meaningful forecasts of future conditions and will engage FHWA on travel time reliability prediction models as part of this effort.</td>
</tr>
<tr>
<td>Coordinate with Federal, State and local partners to find opportunities to align the Regional ITS Architecture with the regional vision and objectives.</td>
<td>In addition to the Regional ITS Architecture, the MPO has facilitated regional conversations related to Smart City applications, participated in ITS pilot projects and chaired the mobility committee for Metro Nashville’s Connected Nashville initiative.</td>
</tr>
<tr>
<td>Ensure the next update of the Regional ITS Architecture includes the seven-county metropolitan planning area boundary and the planning horizon for the 2040 Regional Transportation Plan.</td>
<td>The MPO is coordinating with TDOT and FHWA on a major update to the state and regional ITS architecture. This update will ensure that the architecture includes the entire MPA and planning horizons associated with the current/next RTP documents.</td>
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