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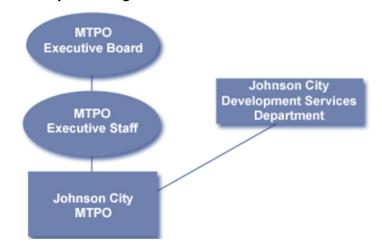
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AC	Advanced Construction
ADA	Americans with Disabilities Act
ACQ	Acquisition of vehicles or equipment
ACNHPP	Advance Construction National Highway Performance Program
CAP	Capital Expenditure
CFR	Code of Federal Regulations
CMAQ	Congestion Mitigation and Air Quality Improvement Program
CONST	Construction
E+C	Existing plus Committed
ENH	Transportation Enhancements
EPSC	Erosion Prevention and Sediment Control
FAST	Fixing America's Surface Transportation Act
FHWA	Federal Highway Administration
FLAP	Federal Lands Access Program
FLTP	Federal Lands Transportation Program
FTA	Federal Transit Administration
FFY	Federal Fiscal Year
FY	Fiscal Year
НРР	High Priority Project (Congressional Earmarks)
HSIP	Highway Safety Improvement Program
ITS	Intelligent Transportation System
JC	Johnson City
JCT	Johnson City Transit
LRTP	Long Range Transportation Plan
MAINT	Maintenance
MAP-21	Moving Ahead for Progress in the 21 st Century Act
MOA	Memorandum of Agreement
MPA	Metropolitan Planning Area
MPO	Metropolitan Planning Organization
MTPO	Metropolitan Transportation Planning Organization
NEPA	National Environment Policy Act
NHFP	National Highway Freight Program
NHPP	National Highway Performance Program
NHS	National Highway System
OP	Operating Expenditure
PE-N	Preliminary Engineering (Environmental)
PE-D	Preliminary Engineering (Design)
PHSIP	Penalty Highway Safety Improvement Program
POP	Program of Projects
PPP	Public Participation Plan
ROW	Right of Way
RTP	Recreational Trails Program
SHSP	Strategic Highway Safety Plan
SR	State Route
STBG-Local	Surface Transportation Block Grant Program – Local
STBG-State	Surface Transportation Block Grant Program – State

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RTP	Recreational Trails Program
SHSP	Strategic Highway Safety Plan
SR	State Route
STBG-Local	Surface Transportation Block Grant Program – Local

Figure 2 Johnson City MTPO Organizational Chart



1.4 Purpose of the Document

As part of the metropolitan planning requirements, the Johnson City MTPO develops and regularly updates a Transportation Improvement Program (TIP). The purpose of the TIP is to identify and program all transportation projects within the Johnson City MPA that are funded by federal programs in Titles 23 (Highways) and 49 (Transportation) of the USC. The TIP is cooperatively developed at least every four (4) years by the Johnson City MTPO administrative staff in conjunction with its member jurisdictions, Tennessee Department of Transportation (TDOT), Federal Highway Administration (FHWA), Federal Transit Administration (FTA) and Johnson City Transit (JCT). The TIP is included by reference in the Statewide Transportation Improvement Program (STIP) and adopted by the Johnson City MTPO Executive Board and the Governor of the State of Tennessee. The TIP contains all federally funded and *regionally significant locally funded* projects. The TIP includes proposed federally funded capital and non-capital surface transportation projects or project phases.

Once a draft TIP is completed, it is submitted to TDOT, FHWA, and FTA for comments. Once the comments have been adequately addressed, the TIP follows the process described in the Public Participation Plan to provide public notice and an opportunity for the public to comment. Once any public comments are addressed, the TIP is recommended for adoption by the Johnson City MTPO Executive Board. Then, the final TIP is forwarded to TDOT to be included by reference in the STIP and approved by FHWA and FTA.

2 Program Development

The projects that can be included in the TIP range from new construction and capital improvements for highway, transit, bicycle and pedestrian facilities, intercity transportation, to operational and safety improvements. Consideration is also given to operational strategies from the Johnson City MTPO Regional Intelligent Transportation System (ITS) Architecture, the Johnson City Coordinated Public Transit-Human Services Transportation Plan, Americans with Disabilities Act (ADA) Transition Plans, TDOT's Three Year Work Program and 25-Year Long-Range Transportation Policy Plan, the Johnson City Unified Planning Work Program, and the Strategic Highway Safety Plan (SHSP) for Tennessee. Also considered are subarea and corridor studies, such as the Washington County Thoroughfare Plan.



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2.1 Planning Horizon

All projects in the TIP are derived from the Johnson City MTPO 2040 Long Range Transportation Plan (LRTP), which is a plan that is required to cover at least a twenty (20) year timeframe of planning for projects in the future. TIP projects include either the LRTP Project Number or state the project is consistent with the overall objectives with the LRTP. The 2040 LRTP was adopted on March 13, 2013. At a minimum, the TIP is required to cover at least a four (4) year horizon. This TIP covers the federal fiscal years (FFYs) period of October 1, 2016 to September 30, 2020. The previous TIP covered the FFYs period of October 1, 2019 to September 30, 2022, and the development cycle will begin in early 2019.

2.2 Project Selection

The Johnson City MTPO considered many factors important to the area during its project selection process. Those factors are shown in Figure 4 on the next page. The factors are considered when projects are submitted by local jurisdictions for inclusion in the TIP. A call for projects was issued during the Executive Board meeting on December 10, 2015. Staff met individually with local jurisdictions to determine the status of projects in the current TIP, review available funding, and the capacity of the local governments to provide the required match to the federal funds for current and new projects. A draft list of submitted projects were presented to the Executive Board and Executive Staff on May 12, 2016. The final TIP will then be formally presented to the Executive Board, which has the responsibility as the governing policy board to adopt the TIP. Projects in the first year of the TIP constitute an agreed to list of projects for inclusion in the TIP.

2.3 Project Phases

The TIP is just one part of a project's journey through the planning and approval process. Projects in the TIP must first appear in the 2040 LRTP, which was adopted on March 13, 2013. One project can have many phases – preliminary engineering, environmental process, design, right-of-way purchase, and finally, construction. It can take many years for one project to complete all phases and be ready for construction, so not all phases may be included in this TIP. In order to add a project phase to the TIP, funding must be identified and be readily expected to be available in order to ensure the TIP remains fiscally constrained. Figure 3 below lists the types of project phases found in the TIP and a brief description, along with a Glossary in Appendix D that provides in-depth descriptions.

Types of Project Phases				
Project Phase	Acronym	Description		
Acquisition/Purchase	ACQ	Procuring equipment, software, or vehicles		
Capital	САР	Capital Expenditures		
Construction	CONST	Work by the agency or contractor(s) to construct the project, possibly including utility relocation		
Intelligent Transportation Systems	ITS	Procuring, developing, or integrating technology to manage transportation facilities, improve safety, or mobility		

Figure 3

2.1 Planning Horizon

All projects in the TIP are derived from the Johnson City MTPO 2045 Metropolitan Transportation Plan (MTP), which is a plan that is required to cover at least a twenty (20) year timeframe of planning for projects in the future. TIP projects include either the MTP (Regional Plan ID) Project Number or state the project is consistent with the overall objectives with the MTP. The 2045 MTP was adopted on February 22, 2018. At a minimum, the TIP is required to cover at least a four (4) year horizon. This TIP covers the federal fiscal years (FFYs) period of October 1, 2016 to September 30, 2020. The previous TIP covered the FFYs period of October 1, 2019 to September 30, 2022, and the development cycle will begin in early 2019.

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Figure 3

the LRTP and the TIP, the public and interested stakeholders are given an opportunity to comment. The full document is available on the website at <u>http://jcmpo.org/ppp.html</u>.

Throughout the development of the LRTP, significant public input was gathered from online surveys and public meetings with local civic groups and economic round tables. In addition to this, the LRTP was made available for thirty (30) calendar days for the public to comment. All projects in the TIP must either be in the LRTP or consistent with the LRTP, thus the public has already been made aware of planned projects and has been provided with the opportunity to comment.

To build on this process, the TIP process includes additional opportunities for the public to be involved. The workshop to develop the TIP is open to the public. Following the process outlined in the PPP, the draft TIP is available to the public for review and comment for fourteen (14) calendar days from the date of the public notice in the regional newspaper. The notices and document is made available on the Johnson City MTPO website and posted on Twitter account @JohnsonCityMTPO. During this review period, a public hearing is held to present the TIP to the public and provide an opportunity for comments. All public participation documentation and comments are compiled for inclusion in Appendix A of the TIP document and presented to the Executive Board. If there are significant comments, the Executive Board may choose to postpone the adoption of the TIP until such time these comments can be addressed. If the TIP document changes significantly, the Executive Board may decide to request an additional review period to afford the public the opportunity to comment on the revisions.

3.1 Coordination and Consultation Process

As part of the "Consultation Process" required by Section 450.316 of the CFR, the Johnson City MTPO has established contact with federal and state agencies. Formal coordination with these agencies will help to identify effective mitigation strategies for potential impacts of projects included in the Johnson City MTPO's LRTP and TIP. The Johnson City MTPO public participation processes shall be coordinated with the statewide transportation public involvement process through review and communication wherever possible. The Johnson City MTPO Interagency Consultation List is available as Appendix C in the PPP. A checklist from the PPP for adoption of the TIP is shown as Figure 5 on the next page.

3.2 Title VI / Environmental Justice / ADA

As with all processes and projects in the Johnson City MTPO, Title VI, Environmental Justice, and the ADA are a priority. Title VI of the Civil Rights Act of 1964 prohibits discrimination based upon race, color, sex, and national origin. Specifically, Title 42 of the USC, Section 2000d states, "No person in the United States, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Environmental Justice, Executive Order 12898 of 1994 states, "Each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." As part of FHWA's regulatory responsibility under Title II of the ADA and Section 504 of the Rehabilitation Act of 1973, the FHWA ensures that recipients of Federal aid and State and local entities that are responsible for roadways and pedestrian facilities do not discriminate on the basis of disability in any highway transportation program activity, service, or benefit they provide to the general public; and to ensure that people with disabilities have equitable opportunities

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3.4 Annual Listing of Obligated Projects

At the end of each federal fiscal year, an annual listing of obligated projects, including investments in pedestrian walkways and bicycle transportation facilities, for which federal funds have been obligated in the preceding year, will be published or otherwise made available by the cooperative effort of the state, transit operator and metropolitan planning organization for public review. The listing will be consistent with the categories identified in the TIP. The listing includes both highway (FHWA) and transit (FTA) projects. Notice will be given through the website, under the "Projects & Info" tab, and on the Twitter account @JohnsonCityMTPO. The listing will be distributed and discussed at the Executive Board/Staff meetings, along with the listing emailed to the members.

4 Financial Plan

4.1 Fiscal Constraint

The TIP is required to include a financial plan that demonstrates how the program of projects can be implemented. This includes identifying eligible federal, state, and local funding sources. Member jurisdictions of the Johnson City MTPO, TDOT and other agencies that reside in the Johnson City MTPO MPA boundary have submitted projects and indicated they have the financial resources to provide the necessary local matching funds to complete their projects. If funding revenues change, either in the positive or negative level, the TIP will be adjusted or amended when necessary.

Detailed financial breakdowns are included in the Summary Tables in Section H of this document. The total amount of money available in each funding category is shown, as well as the total amount of programmed expenditures and remaining funds by funding source by year. The tables show that programmed expenditures are within the balance of expected fund allocations in accordance with the requirements of the FAST Act. Therefore, the TIP is "fiscally constrained."

4.2 Revenue Sources

Each project listed in this TIP has a cost estimate assigned to it. These cost estimates were derived through consultation with local jurisdictions, consultants, the Johnson City MTPO staff, Johnson City Transit (JCT) staff, and TDOT, as was done in developing the LRTP. The Johnson City MTPO staff also uses a conceptual planning cost estimation tool provided by TDOT. The Johnson City MTPO used Year of Expenditure (YOE) to calculate future costs. Johnson City MTPO funding requirements are compiled from available data for future expected capital, operating, and maintenance expenditures for highways, transit, and bike/pedestrian transportation modes, as well as from historical expenditures, which have been projected with a 2.5% inflation rate. This rate was provided by TDOT. The annual allocation of Surface Transportation Block Grant Program – Local funds (STBG-Local) for the Johnson City Urbanized Area is estimated at \$1,527,028 for FFY 2016 and increase by 4% for each year thereafter. The Johnson City MTPO used this figure to ensure projects, covering multiple years in the TIP, do not exceed projections; however, the annual allocation can vary from year to year, depending upon revenue from the highway trust fund, changes to the gas tax, congressional rescissions, or other external influences. If this occurs, the Johnson City MTPO will adjust the TIP accordingly. The Johnson City MTPO works closely with JCT in forecasting transit revenue to include in the TIP, taking into consideration historic funding from the Governor's allocation of Section 5307 funds and discretionary grant funding in other programs, such as Section 5339.

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Detailed financial breakdowns are included in the Summary Tables in Section H of this document. The total amount of money available in each funding category is shown, as well as the total amount of programmed expenditures and remaining funds by funding source by year. The tables show that programmed expenditures are within the balance of expected fund allocations in accordance with the requirements of the FAST Act. Therefore, the TIP is "fiscally constrained."

4.2 Revenue Sources

Each project listed in this TIP has a cost estimate assigned to it. These cost estimates were derived through consultation with local jurisdictions, consultants, the Johnson City MTPO staff, JCT staff, and TDOT, as was done in developing the MTP. The Johnson City MTPO staff also uses a conceptual planning cost estimation tool provided by TDOT. The Johnson City MTPO used Year of Expenditure (YOE) to calculate future costs. Johnson City MTPO funding requirements are compiled from available data for future expected capital, operating, and maintenance expenditures for highways, transit, and bike/pedestrian transportation modes, as well as from historical expenditures, which have been projected with a 2.5% inflation rate. This rate was provided by TDOT. The annual allocation of Surface Transportation Block Grant Program – Local funds (STBG-Local) for the Johnson City Urbanized Area is estimated at \$1,527,028 for FFY 2016 and increase by 4% for each year thereafter. The Johnson City MTPO used this figure to ensure projects, covering multiple years in the TIP, do not exceed projections; however, the annual allocation can vary from year to year, depending upon revenue from the highway trust fund, changes to the gas tax, congressional rescissions, or other external influences. If this occurs, the Johnson City MTPO will adjust the TIP accordingly. The Johnson City MTPO works closely with JCT in forecasting transit revenue to include in the TIP, taking into consideration historic funding from the Governor's allocation of Section 5307 funds and discretionary grant funding in other programs, such as Section 5339.

8 Performance Measures and Targets

8.1 What is Performance-Based Planning?

This section of the TIP outlines performance measures and targets as part of the performance-based approach to planning and programming activities that were first established by MAP-21 in 2012, then continued by the FAST Act. Performance-based planning requirements will ensure that the selection of transportation and transit projects show progress toward meeting national goals established to improve the overall transportation and transit system. The Johnson City MTPO has partnered with TDOT and the two local transit providers, JCT and NET Trans, by signing a Memorandum of Understanding to establish a cooperative process to develop, share and report information related to performance measures and performance targets that will show progress toward national goals, which are explained in more detail below.

8.2 Transportation National Goals with Performance Measures and Targets

Section 2.5 on page 15 of this TIP document defines the seven (7) national goals that were established to address safety, infrastructure, traffic congestion, efficiency, environment, transportation delays, and project delivery delays. Figure 12 on the next page outlines each national goal, the performance measures that have been established by FHWA to make progress toward meeting those goals, along with their corresponding performance targets (if available), and their status of establishment by TDOT and the Johnson City MTPO. Please note that at this time, only the performance targets for safety have been established by TDOT and the Johnson City MTPO.

Figure 12

	Transportation National Goals, Performance Measures and Targets					
National Goal	Performance Measure	Baseline (2012-2016)	Performance Target for 2014-2018 ¹	Status for TDOT/MTPO		
	Total number of traffic-related fatalities on all public roads	995.6	1,021.4			
	Rate of traffic-related fatalities on all public roads per 100 million VMT^2	1.358	1.337	Targets established by TDOT on August		
Safety	Total number of traffic-related serious injuries on all public roads	7,319.4	7,630.8	31, 2017 and by Johnson City MTPO on December 21, 2017		
	Rate of traffic-related serious injuries on all public roads per 100 million VMT	9.976	9.982			
	Total number of non-motorized fatalities and serious injuries on all public roads	434.6	493.2			
	Percentage of pavements on the Interstate System in	To be	To be			
	Good condition	determined	determined			
Infrastructure Condition -	Percentage of pavements on the Interstate System in Poor condition	To be determined	To be determined	Targets established		
	Percentage of the non-interstate National Highway	To be	To be	by TDOT on May		
Pavement	System in Good condition	determined	determined	20, 2018; Johnson		
	Percentage of the non-interstate National Highway	To be	To be	City MTPO to establish before		
	System in Poor condition	determined	determined	November 16,		
Infrastructure	Percentage of National Highway System bridges classified	To be	To be	2018		
Condition -	as in Good condition	determined	determined	2010		
	Percentage of National Highway System bridges classified	To be	To be			
Bridge	as in Poor condition	determined	determined			

¹ The five-year rolling average is calculated by adding the number of fatalities for the consecutive five-year period, dividing by five, and rounding to the tenth decimal place.

² VMT – Vehicle Miles Traveled

Congestion Reduction	Annual Hours of Peak Hour Excessive Delay Per Capita		To be determined	Targets established by TDOT on May 20, 2018; Johnson City MTPO to establish before	
	Percentage of Non-Single Occupancy Vehicle (SOV) Travel		To be determined	November 16, 2018	
System Reliability	Percentage of the Person-Miles Traveled on the Interstate that are reliable		To be determined	Targets established by TDOT on May 20, 2018; Johnson City MTPO to establish before	
	Percentage of the Person-Miles Traveled on the Non- Interstate National Highway System that are reliable		To be determined	November 16, 2018	
Freight Movement & Economic Vitality	Percentage of Interstate System mileage providing reliable truck travel time		To be determined	Targets established by TDOT on May 20, 2018; Johnson City MTPO to establish before November 16, 2018	
Environmental Sustainability	Total emissions reductions by applicable pollutants under the CMAQ program	Not applicable to the Johnson City MTPO Area, which is in attainment and is not eligible for CMAQ funding	MTPO – not applicable	TDOT to establish before May 20, 2018; Johnson City MTPO – not applicable	

8.3 Transit National Goals with Performance Measures and Targets

FTA has also established performance measures and targets for the public transit agencies for a strategic and systematic process of operating, maintaining, and improvement public capital assets effectively through their entire life cycle, along with requirements for safety management systems. At this time, the final rule for Public Transportation Agency Safety Plans (new Part 673 for Title 49 of the CFR) has not been issued by FTA.

Figure	13
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Transit National Goals, Performance Measures and Targets						
National Goal	Performance Measure	Performance Target	Status for JCT/MTPO			
	Rolling Stock: The percentage of revenue vehicles (by type) that exceed the useful life benchmark (ULB)Equipment: The percentage of non- revenue service vehicles (by type) that	Buses: 50% Cutaway: 45% Minivan: 45% 75%	Transit Agencies established targets on May 22, 2017;			
Transit Asset Management	exceed the ULB Facilities : The percentage of facilities (by group) that are rated less than 3.0 on the Transit Economic Requirements Model (TERM) Scale	100%	Johnson City MTPO established targets on May 23, 2017			
	Infrastructure : The percentage of track segments (by mode) that have performance restrictions	Not applicable as JCT does not operate passenger trains	Not applicable			

8.4 Linking Performance Measures and Targets to Project Selection from the MTP to the TIP

Section 2.2 on page 13 of this TIP document describes the process and the criteria that are used to select projects to include in the TIP. As stated earlier in this document, projects are derived from the Johnson City MTPO 2045 Metropolitan Transportation Plan (MTP), which was last updated in 2018. The MTPO considers the ten (10) federal planning factors (page 15) when creating the criteria to select projects to include in the MTP and the TIP. Future updates to the MTP will also include the aforementioned performance measures and the selection of projects will show progress toward meeting the established performance targets.

Figure 14 below demonstrates the linkage between the goals and objectives within the 2045 MTP to the federal planning factors and national goals in the FAST Act. As you can see, the four goals and corresponding objectives in the MTP support achievement of each of the seven (7) national goals and each of the ten (10) federal planning factors. Current projects in the TIP can be shown to support improving safety and congestion, as they improve safety at intersections, improve traffic flow in congested corridors, and improve bridges.

Figure 14

Linking MTP Goals to National Goals					
2045 MTP		FAST Act			
Goals	2045 MTP Objectives	Federal Planning Factors	National Goals		
Goal #1: Improve Safety and Security throughout the Transportation System of the MTPO Area	 Objective: Encourage partnerships with other transportation and non- transportation agencies to enhance transportation safety and security Objective: Reduce secondary traffic accidents Objective: Establish initiatives (projects and programs) to improve the safety and security of vulnerable roadway users (e.g. pedestrians, cyclists, transit riders, and the young and old) 	Increase the safety of the transportation system for motorized and non-motorized users. Increase the security of the transportation system for motorized and non-motorized users.	Safety - Achieve a significant reduction in traffic fatalities and serious injuries on all public roads.		
Goal # 2: Reduce Traffic Congestion along Major Routes of the MTPO Area	 Objective: Reduce travel delays between major areas of attractions in the MTPO study area Objective: Seek cost-effective management solutions and new technologies as a means of addressing congestion, reducing transportation delay, improving travel time reliability, and improving system operations Objective: Increase transit and other transportation demand management opportunities Objective: Enhance the flow of raw materials and manufactured products 	Increase accessibility and mobility of people and freight. Promote efficient system management and operation .	Congestion reduction - Achieve a significant reduction in congestion on the National Highway System. System reliability - Improve the efficiency of the surface transportation system.		

2045 MTP	2045 MTP Objectives	FAST Act		
Goals		Federal Planning Factors	National Goals	
Goal # 3: Promote Economic Growth and Livability by Enhancing the Transportation System for the MTPO Area	 Objective: Maintain what we have – take a "state of good repair" approach to our community's transportation assets Objective: Remove obstacles to economic growth through improved transportation facilities and the integration and connectivity of the transportation system, across and between modes, for people and freight thus allowing for the continued expansion of the business community Objective: Promote alternative forms of transportation (such as walking, biking, and transit) where possible Objective: Seek improvement options and strategies which minimize adverse impacts of surface transportation to historical, social, cultural, and natural environments, including stormwater impacts, and reduce transportation impacts on air-quality 	Emphasize the preservation of the existing transportation system. Improve the resiliency of the transportation system and reduce or mitigate stormwater impacts of surface transportation. 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.	Infrastructure condition - Maintain the highway infrastructure asset system in a state of good repair. Environmental sustainability - Enhance the performance of the transportation system while protecting and enhancing the natural environment.	
Goal # 4: Enhance Regional Access to and from the MTPO Area	Objective: Maintain and improve access to regional areas outside of the MTPO study area Objective: Support transportation investments and policies that work to create jobs and improve access to people, tourism, places, and goods while embracing access management and corridor management strategies that preserve the long-term functionality of a roadway's capacity and safety Objective: Strategically target transportation investments to areas supportive and conducive to growth and redevelopment initiatives	Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight. Enhance travel and tourism Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.	Freight movement and economic vitality - Improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development. (continued next page)	

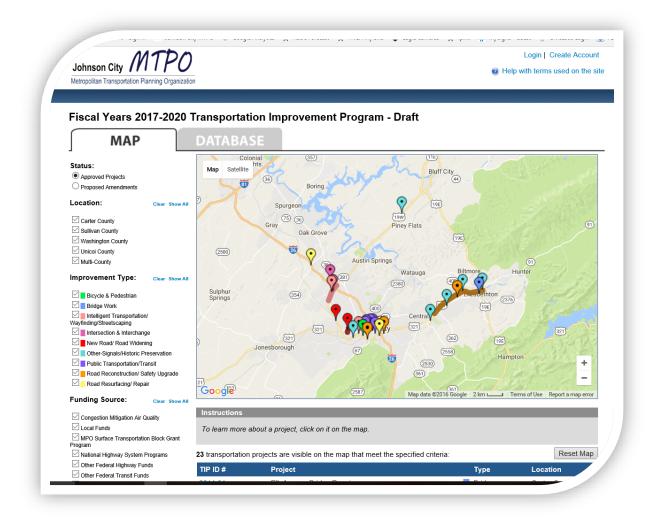
New Section

	Reduced project
	delivery delays -
	Reduce project
	costs, promote
	jobs and the
	economy, and
	expedite the
	movement of
	people and
	goods by
	accelerating
	project
	completion
	through
	eliminating
	delays in the
	project
	development and
	delivery process,
	including
	reducing
	regulatory
	burdens and
	improving
	agencies' work
	practices.

8 Individual Project Sheets for the FYs 2017 – 2020 TIP

The following sections constitute the program of projects to be included in the FYs 2017-2020 TIP. Figure 12 on the next page demonstrates how to read the TIP project pages.

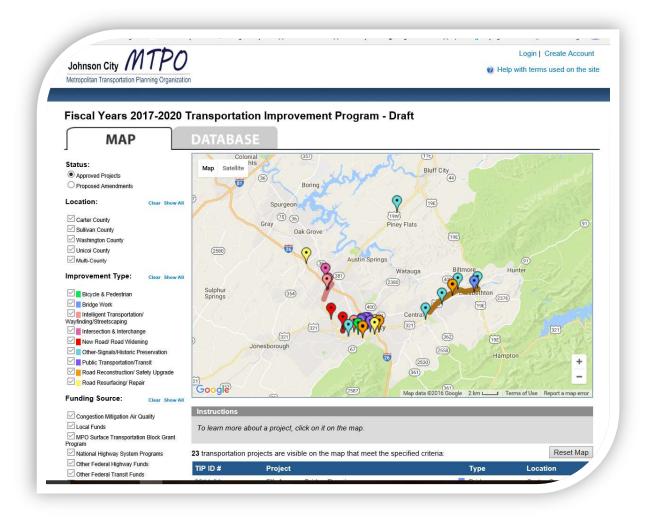
An interactive version of the FYs 2017-2020 TIP, with a map and database, is available online at http://jcmpotip.johnsoncitytn.org/.



9 Individual Project Sheets for the FYs 2017 – 2020 TIP

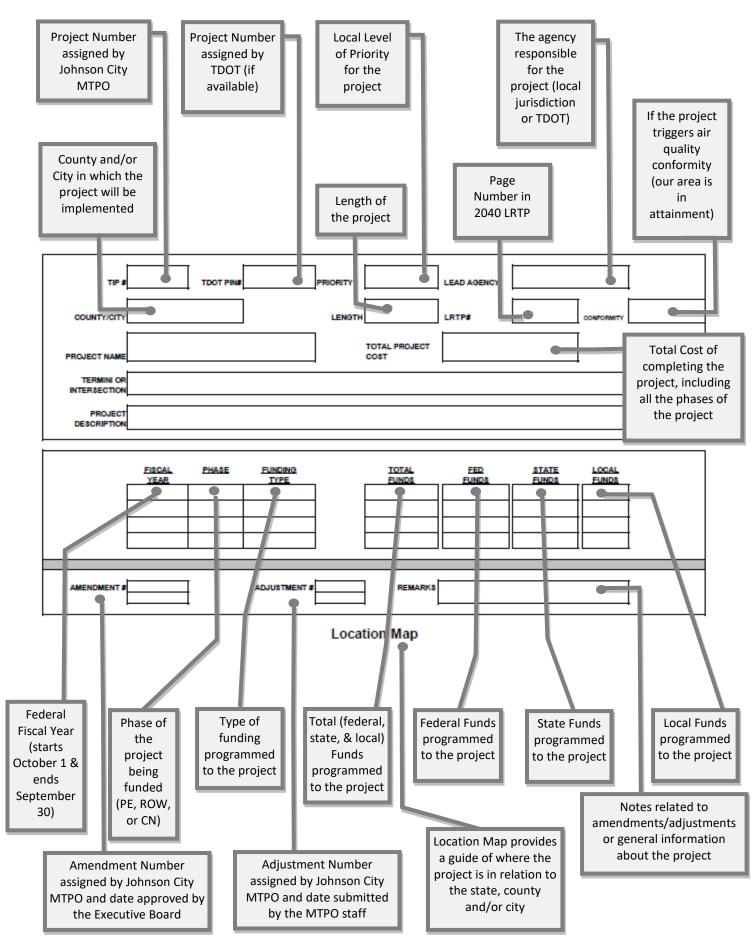
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Old Page

Figure 12: How to Read a TIP Project Page



Adjusted Page

Figure 15: How to Read a TIP Project Page

