

Long Range Transportation Plan Guidelines for Iowa MPOs and RPAs



September 2017

1. Purpose of the LRTP

State/Federal Background

A long-range transportation plan (LRTP) is a federally required element for Metropolitan Planning Organizations (MPOs) as part of transportation planning process. The Iowa Department of Transportation (DOT) has also extended this requirement to apply to Regional Planning Affiliations (RPAs). The federal requirements for MPO LRTPs are outlined in [23 CFR § 450.324](#). These requirements are discussed in more detail in Section 5, along with which requirements RPA LRTPs are expected to meet. The acronym LRTP is used in this document to maintain consistency between MPOs and RPAs; MPO LRTPs are referred to as metropolitan transportation plans (MTPs) in federal code.

The final rule *Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning* was issued by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) on May 27, 2016. This rule updated the regulations governing the transportation planning process for MPOs and States, and reflected changes contained in the 2012 Moving Ahead for Progress in the 21st Century Act (MAP-21) and the 2015 Fixing America's Surface Transportation (FAST) Act. This document incorporates the updated code of federal regulations (CFR) outlined in that final rule. LRTPs amended or adopted after May 27, 2018 will need to meet these requirements, which will supersede the past planning requirements of the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

Role of the LRTP in the Planning Process

The LRTP plays an important role in outlining the existing status and future needs of an area's transportation system. It helps set the direction of planning efforts and programming investments for the MPO or RPA. The development process for the LRTP enables the planning agency to evaluate demographic, economic, passenger, and freight forecasts for the area to understand how anticipated growth or decline will interact with expected land use to impact the demands on the transportation system. The LRTP planning process and document also serve as a forum for documenting existing or potential shifts in travel patterns or funding priorities. Stakeholder involvement and public input is critical during LRTP development, as it helps guide the priorities and projects that will be submitted for federal funding at the MPO/RPA level.

Planning Factors

23 U.S.C 135 (d)(1)

In general. - Each State shall carry out a statewide transportation planning process that provides for consideration and implementation of projects, strategies, and services that will –

- (A) support the **economic vitality** of the United States, the States, nonmetropolitan areas, and metropolitan areas, especially by enabling global competitiveness, productivity, and efficiency;
- (B) increase the **safety** of the transportation system for motorized and nonmotorized users;
- (C) increase the **security** of the transportation system for motorized and nonmotorized users;
- (D) increase the **accessibility and mobility** of people and freight;
- (E) 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;
- (F) enhance the **integration and connectivity** of the transportation system, across and between modes throughout the State, for people and freight;
- (G) promote efficient **system management and operation**;
- (H) emphasize the **preservation** of the existing transportation system;
- (I) improve the **resiliency and reliability** of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and
- (J) enhance **travel and tourism**.

(The same planning factors are outlined for metropolitan areas in 23 U.S.C. 134 (h)(1).)

2. Preparation and Submittal Guidelines

L RTPs are required to be **updated at least every five years** in attainment areas (which currently includes all of Iowa's MPOs and RPAs), and every four years in nonattainment areas. The L RTP needs to have a **planning horizon of at least 20 years**, which should be calculated from the end of the five year period the plan covers. For example, plans adopted in calendar year 2020 should have a minimum horizon year of 2045 (2020 adoption date + 5-year effective period + 20-year horizon = 2045). The specific plan horizon year is determined by the planning agency, but is typically a year ending in 0 or 5.

Draft L RTP

In addition to following the agency's public participation process, draft materials and chapters are required to be submitted for state/federal review as follows.

- Draft materials/chapters should be submitted as they are developed, and not solely as one final draft document at the end of the development process.
- Draft material submittals need to include a deadline for returning comments. A preferable deadline would be two to four weeks from the date the draft material is sent, depending on its volume and complexity. Requests for Iowa DOT/federal agency review need to be distinct from standard meeting agendas that include draft content.
- **RPAs** must submit draft materials electronically to Iowa DOT Office of Systems Planning and their District Transportation Planner.
- **MPOs** must submit draft materials electronically to Iowa DOT Office of Systems Planning and their District Transportation Planner, FHWA, and FTA.

Final L RTP

In addition to following the agency's public participation process, following MPO/RPA approval of the L RTP, final L RTPs are required to be submitted to state/federal partners as follows.

- The final document needs to include the date of adoption and a copy of the resolution approving it or meeting minutes showing its approval.
- The adopted plan needs to be posted on the agency's website.
- **MPOs and RPAs** must provide an electronic copy to Iowa DOT Office of Systems Planning and their District Transportation Planner, FHWA, and FTA.
- **RPAs** must submit one hard copy each to Iowa DOT Office of Systems Planning and their District Transportation Planner.
- **MPOs** must submit one hard copy each to Iowa DOT Office of Systems Planning, their District Transportation Planner, FHWA, and FTA.

Contact Information

Iowa DOT Office of Systems Planning

Andrea White, Statewide Planning Coordinator
800 Lincoln Way, Ames, IA 50010
(515) 239-1210

Andrea.White@iowadot.us

Iowa DOT District Planners

Mike Clayton – DMAMPO; RPAs 5, 6, 11

Mike.Clayton@iowadot.us

Krista Rostad – INRCOG; RPAs 1, 2, 7

Krista.Rostad@iowadot.us

Dakin Schultz – SIMPCO; RPAs 3, 4, 12

Dakin.Schultz@iowadot.us

Scott Suhr – MAPA; RPAs 13, 14, 18

Scott.Suhr@iowadot.us

Hector Torres-Cacho – RPAs 15, 16, 17

Hector.Torres-Cacho@iowadot.us

Cathy Cutler – Corridor MPO; MPOJC; RPA 10

Catherine.Cutler@iowadot.us

Sam Shea – Bi-State; DMATS; RPAs 8, 9

Sam.Shea@iowadot.us

Garrett Pedersen/Phil Mescher – AAMPO

Garrett.Pedersen@iowadot.us

Phil.Mescher@iowadot.us

Additional district planner contact information:

http://www.iowadot.gov/systems_planning/pdf/DistrictPlannersMap.pdf

FHWA Iowa Division

Darla Hugaboom, Transportation Planner
105 S. 6th St., Ames, IA 50010
(515) 233-7305

Darla.Hugaboom@dot.gov

FTA Region 7

Daniel Nguyen, Community Planner
901 Locust St., Suite 404
Kansas City, MO 64106
(816) 329-3938

Daniel.Nguyen@dot.gov

Amended LRTPs

If an amendment to the LRTP is being considered, in addition to following the agency's public participation process, the following process is to be followed for state/federal partners.

- **RPAs** notify Iowa DOT Office of Systems Planning and their District Transportation Planner of the proposed amendment and provide an opportunity to review and comment on the amendment.
- **MPOs** notify Iowa DOT Office of Systems Planning and their District Transportation Planner, FHWA, and FTA of the proposed amendment and provide an opportunity to review and comment on the amendment.
- Following Policy Board action, **MPOs and RPAs** must submit amended LRTP materials as follows.
 - Electronic submittal of amendments is preferred.
 - Amendment materials must include the following.
 - A resolution or meeting minutes showing the amendment's approval.
 - Modified section(s) of the LRTP, with changes noted/highlighted or a summary of changes from the prior version.
 - Documentation of re-demonstration of fiscal constraint, if applicable.
 - **RPAs** must submit amendment materials to Iowa DOT Office of Systems Planning and their District Transportation Planner.
 - **MPOs** must submit amendment materials to Iowa DOT Office of Systems Planning, their District Transportation Planner, FHWA, and FTA.
- The amended plan needs to be posted on the agency's website.

3. Process Overview

General Guidance

Planning is a process, not the plan document itself. A plan document is a product of planning; it simply reflects the steps in the planning process. The plan document is a very important product, but is not the way to judge success in planning. The success of any planning process can only be judged by its results: the tangible actions, changes, and benefits that result from the plan.

Aim to fully develop goals and objectives, along with performance measures and targets (if applicable). This is perhaps the most meaningful way to translate the LRTP development process and document into a guiding influence for the transportation planning and programming process. Goals and objectives should reflect the true priorities of the MPO or RPA, and should not be a generic list of idealistic statements. The goals and objectives should carry through to the discussion

Amendments and administrative modifications

[23 CFR § 450.104](#) provides definitions for amendments and administrative modifications for LRTPs and Transportation Improvement Programs. MPOs and RPAs need to follow the procedures outlined in their Public Participation Plans regarding public review and comment for LRTP amendments.

An **amendment** means a revision that involves a major change to a project, including the addition or deletion of a project or a major change in project cost, project/project phase initiation dates, or a major change in design concept or design scope (e.g., changing project termini or the number of through traffic lanes or changing the number of stations in the case of fixed guideway transit projects). Changes to projects that are included only for illustrative purposes do not require an amendment. An amendment is a revision that requires public review and comment and a re-demonstration of fiscal constraint.

An **administrative modification** means a minor revision that includes minor changes to project/project phase costs, minor changes to funding sources of previously included projects, and minor changes to project/project phase initiation dates. An administrative modification is a revision that does not require public review and comment or a re-demonstration of fiscal constraint.

of priorities, project selection, and fiscal constraint, not only in the LRTP, but in the development of the MPO/RPA TIP.

The [FHWA Performance-Based Planning and Programming Guidebook](#) provides the following definitions.

- A **goal** is a broad statement that describes a desired end state.
 - *Example: A safe transportation system.*
- An **objective** is a specific, measurable statement that supports achievement of a goal. A good objective should include or lead to development of a performance measure that can be tracked over time and is used to assess different investment or policy alternatives.
 - *Example: Reduce highway fatalities.*
- A **performance measure** is a metric used to assess progress toward meeting an objective. Performance measures can be used in strategy analysis to compare different investment or policy alternatives and can be used to track actual performance over time.
 - *Examples: Number of highway fatalities; fatality rate per vehicle miles traveled.*
- A **target** is a specific level of performance that is desired to be achieved within a certain timeframe. A target can be used as a basis for comparing progress over time toward a desired outcome or for making decisions on investments.
 - *Example: Reduce fatalities by 5% by 2015, which will save more than 150 lives.*

Structure

The way the LRTP is structured is at the discretion of the MPO/RPA, so long as it addresses the required elements that are outlined in Section 5. The most commonly used document structures fall into three categories, two of which are outlined to the right.

- **Modal** – generally provides an area overview of socioeconomic data, then provides a separate chapter or section for each mode, focusing on its current status and future needs.
- **Strengths/weakness/opportunities/threats** and variations – tend to focus on various characteristics of the transportation system in a systematic order, reviewing the current status, strengths, and weaknesses of all modes, followed by future needs, opportunities, and threats for all modes.
- **Combined LRTP/Comprehensive Economic Development Strategy** – RPAs can explore this option, which further develops the transportation section of the CEDS to include all LRTP-required items and results in one combined CEDS/LRTP for the region.

Example outline – modal structure

1. Introduction and Goals
2. Public Input
3. Community Overview
4. Roads and Highways
5. Passenger Transportation
6. Non-motorized Transportation
7. Freight, Rail, Air, and Pipeline Transportation
8. Safety and Security
9. Operations
10. Environmental Analysis
11. Financial Constraint

Example outline – SWOT structure

1. Planning Process and Stakeholders
2. Plan Goal and Objectives
3. Background and Trends
4. Existing System Strengths and Weaknesses
5. Planning and the Environment
6. Future Opportunities and Threats
7. Key Needs and Issues
8. Alternatives
9. Short-Term Action Plan
10. Long-Range Plan
11. Funding the Plan
12. Public Involvement Process and Results
13. Future Planning Activities

Schedule

Plan the planning process. Setting up a timeline before the process gets underway is critical to ensuring that the plan is delivered on-time. There are several key elements to include in a timeline.

- Detailed schedule (monthly or weekly) at the task and/or component level.
- Identify staff responsible for tasks, and whether any outside resources (such as consultants) will be required.
- Items that will require feedback from the public or stakeholders.

Example Gantt charts are available for [MPO](#) and [RPA](#) plans, and Iowa DOT staff will work with interested agencies on a one-on-one basis to develop a timeline. It is suggested that agencies begin developing their timeline 30-36 months before the plan is due. It is particularly critical that MPOs have early discussions with the Iowa DOT regarding travel demand model development, to ensure that the model is completed early enough in the planning process to be fully utilized in plan development. The Iowa Standardized Model Structure (ISMS) protocols and procedures document provides a coordination process and milestones for model development and will help guide the model development process.

Coordinate with state and federal partners throughout the LRTP development process. The Iowa DOT will touch base with agencies at regular intervals throughout the plan development process. For MPOs, a coordination meeting with Iowa DOT, FHWA, FTA, and MPO staff is recommended early in the process. For RPAs, an early coordination meeting between the Iowa DOT and RPA staff is also recommended. The Iowa DOT will generally touch base with agency staff at 30, 24, 18, 12, and 6 months out from the plan due date, unless an alternate schedule is agreed upon. Initial coordination meetings for the plan are suggested to occur 24-30 months before the plan due date; initial coordination meetings for MPO model updates are suggested to occur earlier, 30-36 months before the plan due date. An example agenda for an initial plan coordination meeting is included to the right.

Any potential delays in the document development or adoption process need to be discussed with the Iowa DOT as soon as possible. If an MPO LRTP is not adopted by its deadline (five years from the adoption date of the previous plan), the MPO's TIP will be frozen, meaning that it cannot be amended and that a new TIP cannot be adopted. This can lead to significant delays at the project level. Additionally, should an MPO or RPA LRTP be past-due, the Iowa DOT may withhold all planning fund reimbursements requested by the planning agency until a new LRTP is adopted.

Example agenda items for a coordination meeting between planning agency staff and state/federal partners

1. Discuss current Public Participation Plan and any planned updates.
2. Discuss previous LRTP and any applicable planning review recommendations
 - a. Strengths and areas for improvement
 - b. Specific components to discuss
 - i. Plan structure
 - ii. Projects and fiscal constraint
 - iii. Suballocation justification (RPAs if applicable)
 - iv. Resource agency consultation
 - v. Public and stakeholder input
 - vi. Timeline
3. Travel demand model (MPOs)
 - a. Anticipated components of model update
 - b. Socioeconomic data and forecasting methodology
 - c. Methodology for use in plan development and project selection
 - d. Needs/expectations/timeline
4. Review requirements and recommended items for LRTP
5. Discuss staffing for LRTP update
 - a. Staff responsibilities
 - b. Consultant responsibilities (if applicable)
6. Coordination with DOT, FHWA, and FTA
 - a. Immediate guidance needs
 - b. Desired level of input and oversight
 - c. Schedule regular check-ins

4. Important Considerations

Planning Documents

A **good starting point** for developing your next LRTP is reviewing your current plan. As the LRTP is updated every five years, there should be some level of consistency between documents. Reviewing the prior plan also enables planning agency staff to focus on strengths and areas for improvement, and adjust their plans and schedule for the LRTP update accordingly.

Another key early activity is to **review existing state, regional, and local plans**. State plans to review can include the Statewide Transportation Plan, the State Freight Plan, the State Asset Management Plan, the State Highway Safety Plan, and many others. Examples of regional plans to review include CEDS documents and other regional planning efforts, such as trail plans. Local plans may include comprehensive plans, land use plans, hazard mitigation plans, evacuation plans, and jurisdiction-level transportation plans. In addition to providing information that may be relevant to the MPO or RPA, these plans may offer goals, objectives, performance measures, and targets that can be incorporated into the LRTP planning effort.

Public Input and Consultation

Input from two main groups, the public and stakeholders, is critical during the LRTP planning process, and public/stakeholder input plans should be built into the LRTP development schedule. At a minimum, MPOs and RPAs must follow the guidelines for public input outlined in their Public Participation Plan (PPP), and meet the requirements of 23 CFR § 450.324 (j)-(k) (see section 5). The beginning of the LRTP update process is an ideal time for an agency to **review and update the PPP** to ensure that the PPP and planned public input activities for the LRTP align. **Consultation with environmental resource agencies** is also critical and should be planned early.

Financial Component

The financial section of an LRTP should be started early in the planning process, particularly for MPOs. Additional financial guidance will be developed by the Iowa DOT, but it is critical that the financial information in the document meets the following two criteria.

- Specific fiscal constraint requirements from 23 CFR § 450.324(f)(11) are outlined in Section 5, beginning on page 11. Items included in the checklist must be included/addressed.
- The revenue, cost, and fiscal constraint information included in the LRTP must be reasonable. Areas where reasonableness will be evaluated include those listed to the right.

Reasonableness checks for LRTP financial information

- Revenue forecasts should be based on past trends and/or committed funding. An adequate amount of revenue history needs to be considered, and outliers in past funding trends should be represented in a reasonable manner in forecasts.
- The inflation rate for project costs should be based on the area's history or indexes such as the construction cost index.
- Unless otherwise justified, inflation rates for both costs and revenues should be simple/straight-line growth, not compound growth.
- The year of expenditure (YOE) for a project should be the year the project is reasonably expected to be constructed. If project timebands are being used in outer years, the midyear of the timeband should be the YOE for all projects within it.
- The federal/non-federal split for fiscal constraint for federally-funded projects should be reasonable based on typical/anticipated funding percentages in the area.
- Funding sources should be targeted appropriately. For example, the full amount of a projection of \$50 million in bridge revenue cannot be used to help fiscally constrain a program that only identifies \$10 million in bridge projects.

Data and Information

Translate raw data into useful information and analysis. There is a hierarchy or pyramid of planning data. The hierarchy (from lowest level to highest level) is outlined to the right. Strive to translate data and information into knowledge and wisdom/intelligence, and also be sure to relate data to transportation implications. For example, data regarding the area's socioeconomic conditions should be related to transportation planning implications, such as areas more likely to need alternate modes of transportation due to limited vehicles per household, increased elderly population, or lower incomes.

Strike a balance in the planning process between what is anticipated (based on current trends and initiatives, such as complete street efforts, aggressive economic development growth, momentum for higher or lower density development, new vehicle technologies, etc.) versus what is known (based on the existing area and system as well as past trends and data). The point is to ensure that the LRTP stays grounded in the area's current reality, but also considers the long-term and big picture. It is impossible to predict exactly what an area's population, employment, and transportation will look like in 20-30 years – the purpose of the LRTP is to try to narrow in on the most likely outcomes for the area, and provide a framework that can be responsive to change.

Other data-related tips include:

- It is important that maps, graphs, and charts clearly communicate the information being conveyed. Assume that the average reader of the document is not very familiar with the planning area – will they understand what you are showing or referencing with these visual aids?
- Interpret data in large tables for the reader. Can data be better visualized with a chart, graph, or map? If not, can trends or highs and lows be identified to help the reader grasp the data?
- Cite data sources.
- Add photos or illustrations when relevant – besides adding visual interest to the document, they can help convey points more clearly than words at times, such as what good versus poor pavement condition looks like.

Transforming data

Data is an important basis for a long-range plan, but a successful planning effort means taking the next steps with data to transform it into useful, actionable information. This example helps show how raw data can become a more meaningful component of long-range planning.

- **Data:** Raw material for planning.

Example: Inventory of all the bridges in a region of Iowa.

- **Information:** Data that have been filtered and/or organized in some way so that they can be more easily understood.

Example: A table of the 50 bridges in a region that are in the worst condition.

- **Knowledge:** Integration of multiple information sources.

Example: A map that shows the 10 bridges in a region that are in poor condition and that also carry more than 1,000 vehicles per day.

- **Wisdom/Intelligence:** Careful evaluation of planning data.

Example: The three bridges in the region that are in such poor shape that they must be replaced in the next few years to avoid a significant economic impact.

5. Required Elements

The following table includes the federal requirements of [23 CFR § 450.324](#), Development and Content of the Metropolitan Transportation Plan. Highlights and color-coding in the requirement column were added by the Iowa DOT for this guidance document. Highlights note items that were added or substantively changed from the CFR that followed SAFETEA-LU. The right column of the table provides a checklist for MPOs and RPAs to follow in development of their LRTPs. Items in this list are applicable to both MPOs and RPAs, except for items labeled as specific to MPOs, TMAs, or non-attainment areas.

CFR Language	Items to include <i>(items only required for MPOs or TMAs are noted)</i>
<p>450.324 (a) The metropolitan transportation planning process shall include the development of a transportation plan addressing no less than a 20-year planning horizon as of the effective date. In formulating the transportation plan, the MPO shall consider factors described in § 450.306 as the factors relate to a minimum 20-year forecast period. In nonattainment and maintenance areas, the effective date of the transportation plan shall be the date of a conformity determination issued by the FHWA and the FTA. In attainment areas, the effective date of the transportation plan shall be its date of adoption by the MPO.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Ensure planning horizon is at least 20 years (from end of document's life) <input type="checkbox"/> 10 planning factors must be considered in the planning process
<p>450.324 (b) The transportation plan shall include both long-range and short-range strategies/actions that provide for the development of an integrated multimodal transportation system (including accessible pedestrian walkways and bicycle transportation facilities) to facilitate the safe and efficient movement of people and goods in addressing current and future transportation demand.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Goals and objectives <input type="checkbox"/> Long-range and short-range strategies/actions that lead to the development of an integrated multimodal transportation system
<p>450.324 (c) The MPO shall review and update the transportation plan at least every 4 years in air quality nonattainment and maintenance areas and at least every 5 years in attainment areas to confirm the transportation plan's validity and consistency with current and forecasted transportation and land use conditions and trends and to extend the forecast period to at least a 20-year planning horizon. In addition, the MPO may revise the transportation plan at any time using the procedures in this section without a requirement to extend the horizon year. The MPO shall approve the transportation plan (and any revisions) and submit it for information purposes to the Governor. Copies of any updated or revised transportation plans must be provided to the FHWA and the FTA.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Ensure plan is updated at least every five years <input type="checkbox"/> Ensure plan outlines revision/amendment process <input type="checkbox"/> Provide copies of LRTPs and any amendments to Iowa DOT, FHWA, and FTA as prescribed in Section 2
<p>450.324 (d) In metropolitan areas that are in nonattainment for ozone or carbon monoxide, the MPO shall coordinate the development of the metropolitan transportation plan with the process for developing transportation control measures (TCMs) in a State Implementation Plan (SIP).</p>	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Non-attainment areas only – currently not applicable</i>

450.324 (e)	The MPO, the State(s), and the public transportation operator(s) shall validate data used in preparing other existing modal plans for providing input to the transportation plan. In updating the transportation plan, the MPO shall base the update on the latest available estimates and assumptions for population, land use, travel, employment, congestion, and economic activity. The MPO shall approve transportation plan contents and supporting analyses produced by a transportation plan update.	<ul style="list-style-type: none"> <input type="checkbox"/> Use a travel demand model or other technical analysis in the development of the plan (MPOs) <input type="checkbox"/> It is recommended that the Policy Board approves forecast control totals for population and employment, as well as a calibrated model, when these items are determined/completed (prior to draft or final document approval) (MPOs) <input type="checkbox"/> Clearly articulate how the model is utilized in project prioritization and selection (MPOs)
450.324 (f) The metropolitan transportation plan shall, at a minimum, include:		
450.324 (f)(1)	The current and projected transportation demand of persons and goods in the metropolitan planning area over the period of the transportation plan.	<ul style="list-style-type: none"> <input type="checkbox"/> Current data and trends or projections for person movements. Modes can include vehicular, transit, bicycle, pedestrian, air, and rail. <input type="checkbox"/> Current data and trends or projections for freight movements. Modes can include truck, rail, water, air, and pipeline.
450.324 (f)(2)	Existing and proposed transportation facilities (including major roadways, public transportation facilities, intercity bus facilities, multimodal and intermodal facilities, nonmotorized transportation facilities (e.g., pedestrian walkways and bicycle facilities), and intermodal connectors) that should function as an integrated metropolitan transportation system, giving emphasis to those facilities that serve important national and regional transportation functions over the period of the transportation plan.	<ul style="list-style-type: none"> <input type="checkbox"/> Inventory and current conditions of infrastructure/facilities <ul style="list-style-type: none"> <input type="checkbox"/> Highways <input type="checkbox"/> Bridges <input type="checkbox"/> Bicycle facilities <input type="checkbox"/> Pedestrian facilities <input type="checkbox"/> Public transportation facilities <input type="checkbox"/> Intercity bus facilities <input type="checkbox"/> Rail <input type="checkbox"/> Aviation <input type="checkbox"/> Pipeline <input type="checkbox"/> Waterways <input type="checkbox"/> Multimodal and intermodal facilities and connectors <input type="checkbox"/> Future transportation infrastructure/facilities for regionally significant projects – major surface transportation projects that support or otherwise impact the operation of the federally-supported transportation system, including, but not limited to, capacity changes, new accesses, and new roadways <input type="checkbox"/> Current and forecasted land use <input type="checkbox"/> Freight data and trends <input type="checkbox"/> Current socioeconomic conditions (to understand system use) <input type="checkbox"/> Projected transportation demand of persons and goods over the horizon of the LRTP <input type="checkbox"/> Projections of population and employment growth/decline

450.324 (f)(3)	A description of the performance measures and performance targets used in assessing the performance of the transportation system in accordance with §450.306(d).	<input type="checkbox"/> Provide performance measures and current targets (MPOs) <i>(See list of required performance measures at the end of this document)</i>
450.324 (f)(4)	<p>A system performance report and subsequent updates evaluating the condition and performance of the transportation system with respect to the performance targets described in § 450.306(d), including—</p> <ul style="list-style-type: none"> -Progress achieved by the metropolitan planning organization in meeting the performance targets in comparison with system performance recorded in previous reports, including baseline data; and -For metropolitan planning organizations that voluntarily elect to develop multiple scenarios, an analysis of how the preferred scenario has improved the conditions and performance of the transportation system and how changes in local policies and investments have impacted the costs necessary to achieve the identified performance targets. 	<input type="checkbox"/> System performance report evaluating the condition and performance of the transportation system with respect to targets described in the LRTP, including progress towards meeting targets in comparison to baseline or prior data (MPOs) <i>Note: additional guidance is anticipated from FHWA on what needs to be included in the system performance report and differences in required items between MPOs that support the State's targets vs. MPOs that set their own targets</i> <input type="checkbox"/> If scenario planning is used (see 450.324(i)), a preferred scenario must be selected and its impacts on condition and performance of the transportation system need to be described (MPOs)
450.324 (f)(5)	Operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods.	<input type="checkbox"/> Non-capacity related strategies related to improving performance of the transportation system, such as ITS, incident management, etc. (MPOs)
450.324 (f)(6)	Consideration of the results of the congestion management process in TMAs that meet the requirements of this subpart, including the identification of SOV projects that result from a congestion management process in TMAs that are nonattainment for ozone or carbon monoxide.	<input type="checkbox"/> Results of the congestion management process, which should guide the region and the direction of the plan (TMAs)
450.324 (f)(7)	Assessment of capital investment and other strategies to preserve the existing and projected future metropolitan transportation infrastructure, provide for multimodal capacity increases based on regional priorities and needs, and reduce the vulnerability of the existing transportation infrastructure to natural disasters. The metropolitan transportation plan may consider projects and strategies that address areas or corridors where current or projected congestion threatens the efficient functioning of key elements of the metropolitan area's transportation system.	<input type="checkbox"/> Discussion of project evaluation criteria and selection process <input type="checkbox"/> Discussion of financial strategies <i>(see also 450.324 (f)(11))</i> <input type="checkbox"/> Discussion of strategies to reduce the vulnerability of transportation infrastructure to natural disasters
450.324 (f)(8)	Transportation and transit enhancement activities, including consideration of the role that intercity buses may play in reducing congestion, pollution, and energy consumption in a cost-effective manner and strategies and investments that preserve and enhance intercity bus systems, including systems that are privately owned and operated, and including transportation alternatives, as defined in 23 U.S.C. 101(a), and associated transit improvements, as described in 49 U.S.C. 5302(a), as appropriate.	<input type="checkbox"/> Discussion of transportation enhancement activities, including those related to transit and intercity buses

450.324 (f)(9)	Design concept and design scope descriptions of all existing and proposed transportation facilities in sufficient detail, regardless of funding source, in nonattainment and maintenance areas for conformity determinations under the EPA's transportation conformity regulations (40 CFR part 93, subpart A). In all areas (regardless of air quality designation), all proposed improvements shall be described in sufficient detail to develop cost estimates.	<ul style="list-style-type: none"> <input type="checkbox"/> Proposed projects should have enough detail to result in a planning-level cost estimate (MPOs) <input type="checkbox"/> <i>Detail related to conformity determinations only applies to non-attainment and maintenance areas, and thus is currently not applicable</i>
450.324 (f)(10)	A discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the metropolitan transportation plan. The discussion may focus on policies, programs, or strategies, rather than at the project level. The MPO shall develop the discussion in consultation with applicable Federal, State, and Tribal land management, wildlife, and regulatory agencies. The MPO may establish reasonable timeframes for performing this consultation;	<ul style="list-style-type: none"> <input type="checkbox"/> Program-level discussion of potential environmental mitigation activities (provide examples of activities) <input type="checkbox"/> Description of how consultation with resource agencies was carried out and any input received <input type="checkbox"/> Describe and map environmentally-sensitive areas that should be avoided <i>(see also 450.324 (g))</i>
450.324 (f)(11)	A financial plan that demonstrates how the adopted transportation plan can be implemented.	<p>MPO fiscal constraint requirements are outlined in the next eight sections (450.324 (f)(11)(i)-(viii))</p> <p>RPA fiscal constraint requirements</p> <ul style="list-style-type: none"> <input type="checkbox"/> Financial history for STP/STBG and TAP/TE funds, along with projections for the life of the plan <input type="checkbox"/> Financial history and projections for other federal, state, and local funding sources as applicable <input type="checkbox"/> Operations and maintenance costs history and projections <input type="checkbox"/> Short-term, fiscally constrained plan (first five years) <input type="checkbox"/> Long-term projects, corridors of interest/concern, or planning approach (years 6-20+) <ul style="list-style-type: none"> <input type="checkbox"/> Not required to be fiscally constrained <input type="checkbox"/> Not required to be project specific <input type="checkbox"/> Needs can be shown by providing estimates of cost to maintain the system in its current condition or improve the system to a better condition <input type="checkbox"/> For RPAs that suballocate part or all of their funding, an explanation for the reasonableness of that process within the context of regional planning
450.324 (f)(11)(i)	For purposes of transportation system operations and maintenance, the financial plan shall contain system-level estimates of costs and revenue sources that are reasonably expected to be available to adequately operate and maintain the Federal-aid highways (as defined by 23 U.S.C. 101(a)(5)) and public transportation (as defined by title 49 U.S.C. Chapter 53).	<ul style="list-style-type: none"> <input type="checkbox"/> System-level estimates of costs and revenue sources anticipated to be available for the federal aid system and public transportation; comparison of costs versus revenues (MPOs) <input type="checkbox"/> Operations and maintenance costs history and projections (MPOs)

450.324 (f)(11)(ii)	For the purpose of developing the metropolitan transportation plan, the MPO, public transportation operator(s), and State shall cooperatively develop estimates of funds that will be available to support metropolitan transportation plan implementation, as required under § 450.314(a). All necessary financial resources from public and private sources that are reasonably expected to be made available to carry out the transportation plan shall be identified.	<input type="checkbox"/> Estimates of funds reasonably expected to be available, based on historical funding levels (MPOs) <ul style="list-style-type: none"> <input type="checkbox"/> STP/STBG <input type="checkbox"/> TE/TAP <input type="checkbox"/> Other federal sources (such as CMAQ/ICAAP, STBG-HBP, NHPP, NHFP, etc.) <input type="checkbox"/> State funding sources (road use tax fund, etc.) <input type="checkbox"/> Local funding available for transportation (local option sales tax, etc.)
450.324 (f)(11)(iii)	The financial plan shall include recommendations on any additional financing strategies to fund projects and programs included in the metropolitan transportation plan. In the case of new funding sources, strategies for ensuring their availability shall be identified. The financial plan may include an assessment of the appropriateness of innovative finance techniques (for example, tolling, pricing, bonding, public private partnerships, or other strategies) as revenue sources for projects in the plan.	<input type="checkbox"/> Recommendations for other funding sources or financing strategies, such as new local option sales tax or bonding. Must provide reasonable basis for any new sources of funding considered in fiscal constraint analysis. (MPOs)
450.324 (f)(11)(iv)	In developing the financial plan, the MPO shall take into account all projects and strategies proposed for funding under title 23 U.S.C., title 49 U.S.C. Chapter 53 or with other Federal funds; State assistance; local sources; and private participation. Revenue and cost estimates that support the metropolitan transportation plan must use an inflation rate(s) to reflect “year of expenditure dollars,” based on reasonable financial principles and information, developed cooperatively by the MPO, State(s), and public transportation operator(s).	<input type="checkbox"/> Projects must be inflated to year of expenditure dollars (MPOs) <ul style="list-style-type: none"> <input type="checkbox"/> Inflation rates must be based on documented information, such as construction cost index. A rate of 4% can be used if applicable data is not available. <input type="checkbox"/> For projects in cost bands or time ranges, inflate costs to the middle year of the timeframe (MPOs)
450.324 (f)(11)(v)	For the outer years of the metropolitan transportation plan (i.e., beyond the first 10 years), the financial plan may reflect aggregate cost ranges/cost bands, as long as the future funding source(s) is reasonably expected to be available to support the projected cost ranges/cost bands.	<input type="checkbox"/> Outside of initial years of the plan, projects can be grouped into timeframes. For example, projects can be listed in five or ten-year periods. (MPOs)
450.324 (f)(11)(vi)	For nonattainment and maintenance areas, the financial plan shall address the specific financial strategies required to ensure the implementation of TCMs in the applicable SIP.	<input type="checkbox"/> <i>Non-attainment and maintenance areas only – currently not applicable</i>
450.324 (f)(11)(vii)	For illustrative purposes, the financial plan may include additional projects that would be included in the adopted transportation plan if additional resources beyond those identified in the financial plan were to become available.	<input type="checkbox"/> Illustrative projects can be included in the LRTP. They should be shown separately from the fiscally-constrained plan and are not part of it, but can be amended into the fiscally-constrained plan if additional funding is identified or priorities change. (MPOs)
450.324 (f)(11)(viii)	In cases that the FHWA and the FTA find a metropolitan transportation plan to be fiscally constrained and a revenue source is subsequently removed or substantially reduced (i.e., by legislative or administrative actions), the FHWA and the FTA will not withdraw the original determination of fiscal constraint;	<input type="checkbox"/> Fiscal constraint does not need to be redemonstrated unless a plan is amended (MPOs)

	however, in such cases, the FHWA and the FTA will not act on an updated or amended metropolitan transportation plan that does not reflect the changed revenue situation.	
450.324 (f)(12)	Pedestrian walkway and bicycle transportation facilities in accordance with 23 U.S.C. 217(g).	<ul style="list-style-type: none"> <input type="checkbox"/> Current status and potential projects/challenges related to pedestrian and bicycle facilities <ul style="list-style-type: none"> <input type="checkbox"/> Per 23 USC 217g, bicyclists and pedestrians shall be given due consideration, including with regard to safety and contiguous routes, in transportation plans; bicycle and pedestrian facilities shall be considered where appropriate
450.324 (g)	<p>The MPO shall consult, as appropriate, with State and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation concerning the development of the transportation plan. The consultation shall involve, as appropriate:</p> <ul style="list-style-type: none"> -Comparison of transportation plans with State conservation plans or maps, if available; or -Comparison of transportation plans to inventories of natural or historic resources, if available. 	<ul style="list-style-type: none"> <input type="checkbox"/> Resource agency consultation (<i>see also 450.324 (f)(10)</i>) <ul style="list-style-type: none"> <input type="checkbox"/> Consideration of environmental resources during project selection and review of potential environmental impacts due to proposed projects <input type="checkbox"/> Obtain maps/inventories for consideration/analysis in the planning process and document <input type="checkbox"/> Outreach to and coordination with resource agencies
450.324 (h)	The metropolitan transportation plan should integrate the priorities, goals, countermeasures, strategies, or projects for the metropolitan planning area contained in the HSIP, including the SHSP required under 23 U.S.C. 148, the Public Transportation Agency Safety Plan required under 49 U.S.C. 5329(d), or an Interim Agency Safety Plan in accordance with 49 CFR part 659, as in effect until completion of the Public Transportation Agency Safety Plan, and may incorporate or reference applicable emergency relief and disaster preparedness plans and strategies and policies that support homeland security, as appropriate, to safeguard the personal security of all motorized and non-motorized users.	<ul style="list-style-type: none"> <input type="checkbox"/> Reference the State Strategic Highway Safety Plan and any public transportation agency safety plans <input type="checkbox"/> Provide area crash background and analysis <input type="checkbox"/> Other safety/security elements <ul style="list-style-type: none"> <input type="checkbox"/> Multi-disciplinary safety team activities <input type="checkbox"/> Top 200 safety improvement candidate location (SICL) list locations and any planned improvements <input type="checkbox"/> Emergency preparedness/evacuation plans
450.324 (i)	<p>An MPO may, while fitting the needs and complexity of its community, voluntarily elect to develop multiple scenarios for consideration as part of the development of the metropolitan transportation plan.</p> <p>(1) An MPO that chooses to develop multiple scenarios under this paragraph (i) is encouraged to consider:</p> <ul style="list-style-type: none"> (i) Potential regional investment strategies for the planning horizon; (ii) Assumed distribution of population and employment; (iii) A scenario that, to the maximum extent practicable, maintains baseline conditions for the performance areas identified in §450.306(d) and measures established under 23 CFR part 490; (iv) A scenario that improves the baseline conditions for as many of the performance measures identified in §450.306(d) as possible; 	<ul style="list-style-type: none"> <input type="checkbox"/> (<i>Optional</i>) Consider multiple scenarios in plan development in areas such as: <ul style="list-style-type: none"> <input type="checkbox"/> Funding availability <input type="checkbox"/> Population and employment growth/decline <input type="checkbox"/> Land use <input type="checkbox"/> Modal use <input type="checkbox"/> Technology adoption <input type="checkbox"/> Outcomes for performance measures

	<p>(v) Revenue constrained scenarios based on the total revenues expected to be available over the forecast period of the plan; and</p> <p>(vi) Estimated costs and potential revenues available to support each scenario.</p> <p>(2) In addition to the performance areas identified in 23 U.S.C. 150(c), 49 U.S.C. 5326(c), and 5329(d), and the measures established under 23 CFR part 490, MPOs may evaluate scenarios developed under this paragraph using locally developed measures.</p>	
450.324 (j)	<p>The MPO shall provide individuals, affected public agencies, representatives of public transportation employees, public ports, freight shippers, providers of freight transportation services, private providers of transportation (including intercity bus operators, employer-based commuting programs, such as carpool program, vanpool program, transit benefit program, parking cashout program, shuttle program, or telework program), representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with a reasonable opportunity to comment on the transportation plan using the participation plan developed under § 450.316(a).</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Follow the participation process outlined in agency’s Public Participation Plan <input type="checkbox"/> Provide interested parties with a reasonable opportunity to comment on the plan, including, but not limited to: <ul style="list-style-type: none"> <input type="checkbox"/> Individuals <input type="checkbox"/> Affected public agencies <input type="checkbox"/> Representatives of public transportation employees <input type="checkbox"/> Public ports <input type="checkbox"/> Freight shippers <input type="checkbox"/> Providers of freight transportation services <input type="checkbox"/> Private providers of transportation, including intercity bus operators and employer-based commuting programs <input type="checkbox"/> Representatives of users of public transportation <input type="checkbox"/> Representatives of users of pedestrian walkways and bicycle transportation facilities <input type="checkbox"/> Representatives of the disabled <input type="checkbox"/> Other interested parties <input type="checkbox"/> Have the draft and final documents readily available for public review, including electronically accessible formats <input type="checkbox"/> Follow the requirements in section 2 for state and federal partner review
450.324 (k)	<p>The MPO shall publish or otherwise make readily available the metropolitan transportation plan for public review, including (to the maximum extent practicable) in electronically accessible formats and means, such as the World Wide Web.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Draft and final plan must be readily available to the public, including physical copies and electronic copies
450.324 (l)	<p>A State or MPO is not required to select any project from the illustrative list of additional projects included in the financial plan under paragraph (f)(11) of this section.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Illustrative projects are not required to be selected

450.324 (m) In nonattainment and maintenance areas for transportation-related pollutants, the MPO, as well as the FHWA and the FTA, **must** make a conformity determination on any updated or amended transportation plan in accordance with the Clean Air Act and the EPA transportation conformity regulations (40 CFR part 93, subpart A). A 12-month conformity lapse grace period will be implemented when an area misses an applicable deadline, in accordance with the Clean Air Act and the transportation conformity regulations (40 CFR part 93, subpart A). At the end of this 12-month grace period, the existing conformity determination will lapse. During a conformity lapse, MPOs can prepare an interim metropolitan transportation plan as a basis for advancing projects that are eligible to proceed under a conformity lapse. An interim metropolitan transportation plan consisting of eligible projects from, or consistent with, the most recent conforming transportation plan and TIP may proceed immediately without revisiting the requirements of this section, subject to interagency consultation defined in 40 CFR part 93, subpart A. An interim metropolitan transportation plan containing eligible projects that are not from, or consistent with, the most recent conforming transportation plan and TIP **must** meet all the requirements of this section.

Non-attainment and maintenance areas only – currently not applicable

6. FHWA and FTA performance measures

Topic	Performance measure(s)	MPO LRTPs that are amended or adopted after this date need to include associate performance measure and target information
Safety 23 § 490.207	<ul style="list-style-type: none"> • Number of fatalities • Rate of fatalities • Number of serious injuries • Rate of serious injuries • Number of non-motorized fatalities and non-motorized serious injuries 	May 27, 2018
Transit Asset Management 49 § 625.43	<ul style="list-style-type: none"> • Percentage of non-revenue vehicles met or exceeded Useful Life • Percentage of revenue vehicles met or exceeded Useful Life • Percentage of track segments with performance restrictions • Percentage of assets with condition rating below 3.0 on FTA TERM Scale 	October 1, 2018
Pavement 23 § 490.307	<ul style="list-style-type: none"> • Percentage of pavements of the Interstate System in Good condition • Percentage of pavements of the Interstate System in in Poor condition • Percentage of pavements of the non-Interstate NHS in Good condition • Percentage of pavements of the non-Interstate NHS in Poor condition 	May 20, 2019
Bridge 23 § 490.407	<ul style="list-style-type: none"> • Percentage of NHS bridges classified as in Good condition • Percentage of NHS bridges classified as in Poor condition 	May 20, 2019
System Performance 23 § 490.507	<ul style="list-style-type: none"> • Percent of person-miles traveled on the Interstate that are reliable • Percent of person-miles traveled on the non-Interstate NHS that are reliable 	May 20, 2019
Freight 23 § 490.607	<ul style="list-style-type: none"> • Truck Travel Time Reliability Index 	May 20, 2019
CMAQ Traffic Congestion and Emissions 23 § 490.707 and 23 § 490.807	<ul style="list-style-type: none"> • <i>Annual hours of peak hour excessive delay per capita</i> • <i>Percent of non-SOV travel</i> • <i>Total tons of emissions reduced from CMAQ projects for applicable criteria pollutants and precursors</i> 	<i>Would be May 20, 2019; not currently applicable to Iowa or its MPOs</i>
Transit safety Safety rulemaking	<ul style="list-style-type: none"> • <i>Total number of reportable fatalities and rate per total vehicle revenue miles by mode</i> • <i>Total number of reportable injuries and rate per total vehicle revenue miles by mode</i> • <i>Total number of reportable events and rate per total vehicle revenue miles by mode</i> • <i>Mean distance between major mechanical failures by mode</i> 	<i>Proposed measures – not applicable until final rule on public transportation agency safety plans is published</i>