



# Lincoln Metropolitan Planning Organization

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## Lincoln Planning Area Metropolitan Planning Organization Project Prioritization and Selection Process

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### **Introduction**

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The Transportation Improvement Program (TIP) for the Lincoln Metropolitan Planning Area is a staged, four-year schedule of transportation improvements using (or expected to use) Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) funding, state funds, and regionally significant projects occurring in the planning area. The TIP is developed cooperatively by the Metropolitan Planning Organization (MPO) Technical Committee and agencies within the Lincoln Metropolitan Planning Area which include the Lincoln-Lancaster Planning Department, City of Lincoln Public Works & Utilities Department, Lancaster County Engineering, Nebraska Department of Roads (NDOR), StarTran, Lincoln Airport Authority, Lincoln Parks and Recreation Department, Lower Platte South Natural Resource District, and others agencies as transportation related projects are developed.

The Lincoln Urbanized Area - Metropolitan Planning Organization's *Project Prioritization and Selection Process* fulfills several needs in the metropolitan transportation planning process. To spend federal dollars on local transportation projects and programs, a metropolitan area must have a Long Range Transportation Plan (LRTP) and Transportation Improvement Program (TIP). Both of these documents must be 'financially constrained' and must adhere to the principles and planning requirements laid out in the most recent transportation act and all federal requirements for metropolitan transportation planning. *Moving Ahead for Progress in the 21st Century Act* (MAP-21) was signed into law on July 6, 2012 which is legislation that reforms and reauthorizes surface transportation programs through 2014. This *Project Prioritization and Selection Process* brings the LRTP and TIP together during the annual review process for the purpose of coordinating priorities and programming projects.

### **Transportation Improvement Program (TIP)**

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The TIP is a programming document that identifies the timing and funding of priority highway, bridge, transit, bicycle, and pedestrian transportation projects. According to federal regulations governing transportation planning, the transportation improvement program is to be a staged multi-year program of transportation improvement projects that "*shall cover a period of not less than four years and be consistent with the urban area transportation plan.*" The program of projects depicts the MPO's priorities for the region and the expenditure of federal funds for all transportation funding categories. Additional projects considered to be regionally significant projects are also included, regardless of the funding source.

## **TIP Project Selection Process**

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For projects to proceed toward implementation and construction, they are required to be consistent with both the LRTP and the TIP. Major projects are drawn from the priority project listing in the LRTP. Other projects identified through the Congestion Management Process, safety planning, operational maintenance or enhancement project programming and a number of other sources may be considered within this process and supported for funding through the TIP. With the LRTP as a foundation, the MPO Project Programming Committee developed a five-step process to facilitate an evaluation of projects in a manner that is credible and understandable, and can be conducted within the framework of available MPO resources and capabilities.

The project evaluation process consists of five steps:

Step 1: Project Identification: The first step in the process is to identify the pool of projects that are candidates for evaluation and prioritization. For each TIP update cycle, projects may be identified based on information and input from a variety of sources.

- Projects Identified within the LRTP planning process
- Projects committed through the Congestion Management Process
- Projects committed through existing development agreements
- Projects submitted by local or state agencies within the planning area
- Annual listing of safety, operational or enhancement projects, etc.

Step 2: Project Screening: The pool of candidate projects for prioritization is screened to determine each project's basic feasibility. Key considerations include local support and potential engineering problems posing significant obstacles to project implementation. The screening of each project is to address the following.

- Projects are reviewed for consistency with LRTP and local, county and state transportation plans and land use growth plans.
- The project has any known or documented constructability, implementation or community support problems affecting project implementation.
- Available project funding or an acceptable funding plan must be in place.

The MPO Project Programming Committee will use this review to determine whether to move a project forward in the programming process. The Committee will need to consider the circumstances and context associated with a project that does not pass this screening and may decide the project is still eligible. Previously endorsed projects in the existing TIP may, at the deaccession of the Committee, be re-evaluated in light of the current planning environment.

Step 3: Project Evaluation and Technical Review: The general approach for evaluating projects for inclusion in the TIP involves assessing each candidate project against the set of goal-based criteria and using the results in determining project importance.

- Projects listed in the LRTP have received both project evaluation and technical review considered the first step in this process.
- Other projects are evaluated based on the goals and objectives of the LRTP and appropriate technical data and criteria for the project.
- The technical evaluation of a project is designed to be objective measures using data readily available to the Lincoln MPO.

Step 4: Technical Advisory Committee and Planning Commission Review:

- Technical Advisory Committee reviews technical analysis for accuracy and prepares comments for Planning Commission review, public hearing and Officials Committee consideration.
- Lincoln-Lancaster County Planning Commission holds a public hearing and incorporates the public comments into their review and recommendations.

Step 5: Project Selection/Implementation: The final step in the project prioritization and development process is project selection. Project selection is the pivotal step in moving projects to implementation and directly ties or obligates the programming of funds to a project in the TIP. This is an important follow-on to the LRTP project prioritization process and an element of the TIP and financing programming process.

MPO Officials Committee considers:

- Technical evaluation and project readiness assessment
- Funding availability and commitment (state/regional/local)
- Technical Committee review and recommendations
- Planning Commission recommendations
- Public Comments and Support

## **Types of Projects Included in the TIP**

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Federal regulations require that any transportation project within the metropolitan planning area that is to be funded with Federal funds must be included in the TIP. The types of projects listed below are eligible for federal funding.

- Projects on the federal aid system (road and bridge construction, reconstruction, resurfacing, restoration, rehabilitation, etc.).
- Public transportation programs and projects (vehicle maintenance and operations, capital improvement projects, mass transit system construction, etc.).
- Projects that are not on the federal aid system, but may be eligible for federal funding for other reasons (e.g., bridge projects, bicycle and pedestrian facilities, etc.). The projects, however, must be linked to the transportation network.
- Regionally significant projects requiring FHWA or FTA action or projects that may have significant system impacts.

## Methodologies & Agencies

The particular methodology used in defining project may be a result of the type of project (system or operational improvement) and the specific planning/engineering discipline. Several agencies have input into the projects considered and the projects funded or selected. Listed below are some of the primary ways a project is selected for inclusion in the TIP.

1. **Travel demand modeling and planning analysis.** Through the use of a travel demand model, the MPO staff looks at the current transportation system and future population growth and movement within the area to determine future transportation needs. Through an iterative process, the travel demand model shows where future improvements will be necessary. The socioeconomic variables that feed the model are updated during the five-year full LRTP update cycle.
2. **Traffic Engineering Needs Analysis.** Through the use of data collection, engineering studies and traffic systems analysis, improvements are identified to upgrade site specific and corridor operational traffic deficiencies. Traffic systems and operations improvements may include upgrading traffic control features and ITS type projects, improvements to manage congestion, access management controls, and safety improvements for pedestrian and bicycle traffic.
3. **Nebraska Department of Roads (NDOR) Needs Analysis.** The NDOR has several funding categories for which they must select projects throughout the State. The result of this selection process is the NDOR Needs Study. Each year NDOR formulates a list of system improvement needs throughout the State for funding resulting in their priority list of projects. NDOR requests input from the MPO in formulating a prioritized list of projects for the planning area.
4. **Selection by the MPO's Technical Advisory and Officials Committees.** The MPO has several funding categories for which projects can be selected. Other stakeholder requests should work within the committee structure in making project requests.

## Project Eligibility

The following criteria will determine which projects are eligible to be evaluated for possible inclusion in the 'financially constrained' TIP.

1. Proposed projects will be consistent with the LRTP goals.
2. Proposed projects will have a funding source and cost estimate. This will include an approved MPO/NDOR form DR 530.
3. Proposed projects will have project readiness information and other details necessary to complete the Project Selection Process.
4. Unless a full LRTP update is in progress, a proposed project will need to be identified in the LRTP and compete for limited funding in a fiscally limited program of projects. If a project is found to be of high priority outside of the normal LRTP update cycle, it may be considered as an amendment to LRTP when the TIP is considered.

## **TIP Project Identification and Selection Analysis**

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The LRTP outlines the long-term goals for the transportation system in the Metropolitan Planning Area. Projects recommended to proceed toward implementation are drawn from the priority project listing and short-range strategies programmed in the LRTP and Congestion Management Process which address current and near-term transportation improvement needs. Project selection is based upon this evaluation of alternatives to determine which projects, strategies and actions from the near-term list should move forward to implementation.

TIP Evaluation Criteria: Evaluation criteria were developed within the LRTP process by the LPlan Advisory Committee (LPAC), planning stakeholders and Technical Advisory Committee. These were used, along with the eight planning factors and the six Federal Livability Principles, to select and prioritize projects for the LRTP. Performance statements and ratings developed for each goal were multiplied by the related weights, resulting in a weighted score for each project. Specific data used to form these valuations are detailed in the LRTP Technical Report.

Project Selection Criteria: The criteria used to evaluate projects includes a mix of quantitative criteria (objective) and expertise-based criteria (objective and subjective). Alternatives were reviewed and evaluated using the technical scoring system. The criteria are weighted within a category and evaluated considering technical, safety, congestion indicators and the other factors listed below. The selection of the projects is accomplished through a coordinated effort to advance projects from the top tier projects listed in the LRTP which preserve the existing system needs, meet system growth demands, relieve congestion, and improve quality of life.

Below are the primary transportation goals and the objective project evaluation criteria used in developing the Lincoln MPO LRTP and TIP.

<b>Long Range Transportation Goals</b>	<b>Weight</b>
1. Maintain the existing transportation system to maximize the value of these assets	18.3
2. Improve the efficiency, performance and connectivity of a balanced transportation system	18.0
3. Promote consistency between land use and transportation plans to enhance mobility and accessibility	10.1
4. Provide a safe and secure transportation system	9.8
5. Support economic vitality of the community	14.6
6. Protect and enhance environmental sustainability, provide opportunities for active lifestyles, and conserve natural resources	17.7
7. Maximize the cost effectiveness of transportation	11.6

## **Objective Project Evaluation Criteria and Performance Measures**

The project evaluation criteria and performance measures are used to assist the Project Programming Committee in selecting and prioritizing projects that support the LRTP goals and objectives and provide guidance for the effective allocations of available funding. Planners, engineers and stakeholders rely on evaluation criteria and performance measures to identify projects that support planned growth while mitigating existing and projected system level and corridor specific congestion. Selection criteria are used to compare project alternatives and ultimately to recommend high-value projects for inclusion in the TIP. Performance measures are used to evaluate the effectiveness and success of selected projects in addressing existing system deficiencies while preparing for future growth within the system.

The Transportation project performance measures and corridor objectives were developed from the existing and projected system data and with assistance from the Project Programming Committee. Below are the seven objective evaluation performance measures used for the existing, and 2025 and 2040 forecast time frame.

### **Transportation System Evaluation Tools:**

- Existing Traffic Volume
- Existing Level-of-Service / Network Congestion
- 2025 & 2040 Forecast Traffic Volumes
- 2025 & 2040 Forecast Level-of-Service / Network Congestion
- Project Descriptions and Cost Estimates
- Public Benefit / Social and Environmental Impacts
- 2025 & 2040 Land Use Maps and Priority Growth Area Map

### **Congestion Indicators / Measures:**

The Congestion Management Process (CMP) provides a systematic way for transportation planning to identify congestion in a multi-modal manner. Through performance measures the CMP is supportive of the overall metropolitan transportation planning process and assists in setting local priorities and directing funding toward projects and strategies that are most effective for addressing safety and congestion.

The use of performance measures, analytical tools, and available data enables the identification of congested locations. However, congestion may be recurring or nonrecurring and the performance measures that tend to be the most appropriate at the project level are an “average congestion” measure and a “travel time reliability” measure. A single measure may be used to discuss the problems, but focused action often requires several measures.

The general Performance Measures include:

- **Travel Delay** – A measure of the amount of extra time experienced by travelers within a designated roadway segment or intersection. This indicates specific traffic issues and travel delay per commuter and a good measure system traffic bottlenecks and congestion.

- **Level of Service (LOS)** – Measures include evaluating volume/capacity, density, delay, number of stops, among other performance measures. This is a good indicator of the effect of congestion in a corridor and a good measure of regional traffic congestion.
- **Crash Rates** – Crashes can either be the cause of congestion or the result of congestion, and Crash Rates is a good indicator of congestion and can establish the most highly congested roadways.
- **Freight Movement Measures** – These include the percent of trucks using a roadway and the travel time or travel delay experienced which indicate the reliability of freight routes.
- **Pavement Management System** – A systematic planning tool that identifies pavement conditions and surface deterioration due to traffic and weather, and recommends maintenance and repairs based on various tests that provide rankings for road sections. Roads identified in need of immediate reconstruction may be advanced in project priority.
- **Functional Classification** – The grouping of roads, streets, and highways into integrated systems that ranks each road by its importance to travel and the land-use access. It defines the role a particular road will play in serving the principal functions of a road: mobility for through movements and access to adjoining land. The basic idea is the more important roads serve more critical needs and deserve the most attention. This also identifies streets and highways that are eligible for federal funds and may contribute in project selection and program management. Generally, roads fall into one of four broad categories — principal arterials, minor arterials, collector roads, and local roads.

## **Engineering, Safety and Maintenance & Rehabilitation Project Selection**

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The typical **traffic engineering project** involves designing traffic control device installations and modifications, including traffic signals, signs, and pavement markings. Traffic engineering also considers traffic safety by investigating locations with high crash rates and developing countermeasures to reduce crashes. Traffic flow management can be short-term (preparing construction traffic control plans for pedestrian and vehicular traffic) or long-term (estimating the impacts of proposed commercial developments). Other traffic problems are addressed by implementing systems for intelligent transportation systems (ITS) that may be implemented in conjunction with other engineering projects. Generally, these projects are not specifically identified in the LRTP but are included as programmed system improvements for engineering, safety and system preservation. These projects tend to be smaller in scale and not have a negative impact fiscal constraint or trigger the need for a new regional transportation analysis.

**Highway Safety Improvement Projects.** The Project Selection Committee will assist in selection of proposed local safety infrastructure projects proposed for federal funding based upon the statement of project intent and project elements, work type, project justification (based upon current data), project timeline and financial analysis/available funding. Project review requires identifying either high crash locations that have an over representation of severe crashes or a systematic application of proven measures to address

system-wide safety needs. Safety and capacity improvements to existing intersections may include, but are not limited to signal prioritization or synchronization, intersection lighting or signage, geometric improvements or safety design measures and railroad crossing improvements.

**Pavement Management Program.** The City of Lincoln has the responsibility for upkeep of approximately 1200 miles of paved streets. This includes seasonal maintenance activities such as snow removal, crack sealing, street patching, sweeping, as well as structural maintenance of the street system. Lincoln has placed a much greater emphasis on pavement preservation in recent years, and Public Works & Utilities staff have developed an enhanced, data-driven management system for identifying and prioritizing needed maintenance and rehabilitation projects for the city's road network. System maintenance or rehabilitation involves a wide range of preservation projects for the existing transportation infrastructure. These projects may include pavement resurfacing, replacement, reconstruction and/or rehabilitation, pavement management system, bridge restoration and/or operational improvements. The pavement management system has standardized the process in ranking projects eligible for certain types of program funding.

All eligible projects will be reviewed and evaluated by the MPO Project Programming Committee based on project criteria and the data provided the project programming committee. These projects will be placed in the financially constrained TIP based on projected available funding, the project evaluation, the project implementation timeline (readiness) and input from interagency consultation and coordination.

### **Transportation Alternative Program Project Selection Process**

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The Transportation Alternatives Program (TAP) is a new program identified in MAP-21 which consolidates programs and transfers new authority and responsibilities to metropolitan areas. This program provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility and support recreational trail program projects and safe routes to school projects. The Lincoln MPO has developed a competitive project selection process with a project selection committee to fit within the new guidelines. Recommendations from the MPO's TAP Committee are forwarded separately to the MPO Technical and Officials Committees for review and acceptance.

### **Public Transportation Project Selection Process**

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MAP-21 also increases flexibility in transit program funding with reforms in Federal Transit Administration (FTA) programs. These consolidate two former programs into two primary categories for project funding within the Lincoln planning area.

1) Urbanized Area Formula Funding (5307): MAP-21 maintains the basic structure for urbanized area grants under Section 5307. Eligible activities include planning, engineering design and evaluation of transit projects and other technical transportation-related studies; capital investments in bus and related activities such as replacement of buses, security



equipment and maintenance and passenger facilities. Preventive maintenance and Americans with Disabilities Act complementary paratransit service costs are allowed as capital costs.

The Public Transportation Element of the TIP includes the capital improvement programs of the City of Lincoln, StarTran. The prioritization process of transit projects originate from StarTran replacement programs, analysis of future needs and recommendations from the Transit Development Plan (TDP). The TDP includes a list of major findings and prescribed service delivery enhancements that are based on analyses of route performance, employment growth and ridership trends

The “Job Access and Reverse Commute” program (JARC) has been moved into Section 5307 and the set-aside for JARC has been removed. The Lincoln MPO will continue to initiate a competitive Call for Projects to allocate funds to private non-profit organizations and public agencies to provide partial funding for local programs that offer job access and reverse commute transportation.

2) Transportation for Elderly Person and Persons with Disabilities (5310): MAP-21 also reforms and consolidates the “Elderly and Disabled” (Section 5310) program with the “New Freedom” (Section 5317) program into a single program. The consolidated program will continue to ensure support for non-profit providers of transportation, and it will continue to make funds available for public transportation services that exceed the requirements of the Americans with Disabilities Act, as previously provided under the “New Freedom” program.

These programs provide funding to assist private nonprofit groups in meeting the transportation needs of the elderly and persons with disabilities when the transportation service provided is unavailable, insufficient, or inappropriate to meeting these needs. Projects are funded in the form of formula grant programs that allocates funds to private non-profit organizations that fund capital or operating expenses for local programs based upon a competitive Call for Projects.

## **Project Coordination Process**

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Projects initiated locally are advanced according to the type of activity scheduled in the TIP and the Federal funding category. The process of prioritizing projects is also influenced by state and local policy-level decision making and the availability of Federal, state, and local funds. Project coordination is also an important element of the TIP project selection process, especially since the demand for Federal-aid transportation projects usually exceeds available Federal funds.

Local Federal-aid highway improvement projects programmed by the City of Lincoln, Lancaster County and coordinating agencies are prioritized according to available resources. State highway projects are prioritized by the Nebraska Department of Roads and coordinated with the MPO. Other projects may be dependent on the availability of competitive funding that may include federal Surface Transportation Program, Transportation Alternatives, and FTA program funds. Project selection is accomplished through a coordinated effort among all agencies to advance projects which further develop the transportation system, preserve existing facilities, relieve congestion, improve air quality, preserve the quality of life and promote economic development.

## **Project Programming Committee Documentation Report**

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Recommendations derived from the Programming Committee a Project Selection Analysis is documented and forwarded to the MPO Technical Committee for review and acceptance. Committee worksheets and discussion are produced to provide the implicit and explicit understanding of available data and facts from which the conclusions are drawn.

### **Lincoln MPO Project Programming Committee**

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The *Lincoln MPO Management Plan* identifies the MPO organizational structure and related responsibilities of participating agencies in carrying out the federally-mandated transportation planning process in the Lincoln Planning Area. The MPO planning process includes regular Technical Committee meetings and Advisory Subcommittees to assist in the transportation planning process and in developing the required programs and documents. Recommendations from the Project Programming Committee are forwarded to the MPO Technical Committee for review and acceptance.

### **Transportation Improvements Programming Committee**

Agency:

Lincoln-Lancaster County Planning Department  
Lincoln-Lancaster County Planning Department  
Lincoln Public Works: Engineering Services  
Lincoln Public Works: Engineering Services  
Lincoln Parks and Recreation Department  
Public Works and Utilities: StarTran  
Lancaster County Engineering  
Nebraska Department of Roads  
Nebraska Department of Roads

Staff:

Transportation Planner  
Multi-Modal Transportation Planner  
Assistant City Engineer  
Design/Construction Manager  
Greenways and Trails Manager  
Transit Planner  
Design Division Head  
MPO Liaison Planner  
Local Projects Engineer

Other agencies as needed:

Lincoln Urban Development  
Lincoln-Lancaster County Health Department

Planner / Parking Manager  
Air Quality Division