States’ Approaches to Transportation Project Prioritization
Linking Policy, Planning and Programming

Prepared by:
Metropolitan Planning Council
How should Illinois prioritize its transportation project investments?

State Capital Program

“Moving Beyond Congestion”

“The Capital Investment Accountability Proposal”

Regional Transportation & Land Use Agencies
(Downstate MPOs & Chicago Metropolitan Agency for Planning)

RTA

Pensions

CTA

Metra

Pace

Paratransit

Public-Private Partnerships

CREATE

Inter-City High Speed Rail

CREATE

Roads

School Construction

Transit

Open Space

Water & Sewer

Airports

Regional Transportation & Land Use Agencies

Authority

Housing
Illinois’ current capital project funding process

- **Regional input**
  - Transportation Improvement Program (TIP)
    - Metropolitan Planning Organizations (14 in Illinois)

- **Executive, legislative & IDOT initiatives and modifications**
  - Gubernatorial proposal e.g., “Jobs for Illinois”

- **Federal $$**
  - Transportation Improvement Program Update (TIP)
    - Metropolitan Planning Organizations (14 in Illinois)

- **State $$**
  - Highway Improvement Program Update (HIP)
    - Governor & IDOT

- **Construction**
  - State Transportation Improvement Program (STIP)
    - General Assembly

- **Defined process**

- **Malleable process**
Illinois FIRST

Illinois FIRST (1999) generated $6.3 billion in new state revenues from higher fees and taxes.

- Roads
  - $2.8 billion (state)
  - No information available
- Transit
  - $1.3 billion (state)
  - $698 million (federal)

Transit: State Funds Breakdown

- Maintenance & Improvements, 92%
- Major Capital Projects, 8%

CTA: State Funds
- Maintenance & Improvements, 96%
- Major Capital Projects, 14%

Metra: State Funds
- Maintenance & Improvements, 98%
- Major Capital Projects, 2%

Pace: State Funds
- Maintenance & Improvements, 100%
- Major Capital Projects, 0%
Key problems in the Illinois process...

- Limited coordination between regional and state plans.
- Limited transparency.
- No apparent, consistent and scalable prioritization system.
- No ongoing scientific measurement of effectiveness of investments.

...that can be solved through a prioritization process

- Ensure the integrity of our state’s transportation system.
- Promote accountability and adaptability in the planning and decision-making process.
- Increase predictability in the planning and decision-making process.
- Increase the influence and involvement of local communities in decision-making.
Featured national practices

Missouri  Ohio  Wisconsin  Washington

Texas  Alaska  Atlanta, Georgia

Not featured in this paper:

Oregon  Minnesota  Michigan  Pennsylvania  New Jersey
North Carolina  Virginia  California  Utah  Maryland  Florida
National practices (cont’d)

Illinois can learn from states that:

- Require by law a method for prioritizing transportation projects
- Define transportation goals
- Use an objective, weighted multi-criteria project scoring process based on stated goals
- Apply cost-benefit analysis, cost-effectiveness or optimization approaches to rank projects
- Involve state, regional, local and public stakeholders in all stages of the process
The Illinois Capital Investment Accountability Act

S.B. 1582 sponsored by Sen. Susan Garrett
H.B. 801 sponsored by Reps. David Miller & Michael Tryon

The surface transportation capital project prioritization process that helps Illinois get the most value from its investments.

The Illinois Capital Investment Accountability Act:

☑ Defines a statewide surface transportation vision and goals.

☑ Articulates a process for developing statewide transportation capital project evaluation criteria that are sensitive to local differences and needs.

☑ Creates a transparent and accountable investment decision making process.

☑ Strengthens local input in transportation project selection and investment.

☑ Ensures synchronization with federal transportation funding processes and requirements.

☑ Builds in ample opportunity for public review and comment.

☑ Gives final approval power to the General Assembly.
State of the Practice

Illinois
ILLINOIS

Highway Improvement Program (HIP)
“Identified needs included in the project programs shall be listed and mapped in a distinctive fashion to clearly identify the priority status of the projects: (1) projects to be committed for execution; (2) tentative projects that are dependent upon funding or other constraints; and (3) needed projects that are not programmed due to lack of funding or other constraints.

All projects shall be related to the priority systems of the master plan, and the priority criteria identified. Cost and estimated completion dates shall be included for work required to complete a useable segment or component beyond the period of the program.”
IDOT: Policy Goals

Illinois State Transportation Plan (2005)

- Support business and employment growth and enhance the economy of Illinois.
- Provide high degree of mobility in a reliable and safe fashion.
- Preserve and manage the existing system.
- Reduce congestion, improve highway safety, optimize service and operation efficiency, develop intermodal connections and utilize transportation technology advances.
- Ensure a compatible interface of the transportation system with environmental, social, community planning and energy considerations.
- Follow a comprehensive transportation planning process, promote coordination among public and private sector transportation systems, and support effort to provide stable funding for the public component of the transportation system.
- Improve traffic safety by lowering the number of fatalities in crashes on Illinois streets and roads.
- Provide a secure transportation infrastructure in conjunction with the Illinois Office of Homeland Security and other agencies.
IDOT: Process (Overview)

Step 1: Needs Identification
- IDOT Districts and MPOs
- Continuous

Step 2: Needs Prioritization
- IDOT Districts and MPOs
- 2-3 months
- Organize projects from high to low priority based on severity of need

Step 3: Programming
- IDOT (Springfield)
- 6 months
- Projects placed into specific state program for funding

Step 4: Final Approval
- Programs approved based on available funding, mode and geography
- Highway Improvement Program (HIP) – Governor & Secretary of Transportation
- State Transportation Improvement Program (STIP) - General Assembly
- 1-2 months

- Collect data on physical condition of roads and bridges
- IDOT Districts and MPOs
- Continuous
IDOT: Process (Step-by-Step)

**Step 1: Needs Identification**
- Use pavement condition, structure condition, congestion and safety obtained from pavement and bridge management systems to develop IDOT’s project backlog and accruing needs list.

**Step 2: Needs Prioritization**
- Needs-based prioritization approach
- Organize projects from high to low priority based on severity of need

**Step 3: Programming & Approval**
- Projects placed into specific state program for funding
- Highway Improvement Program (HIP) approved by Governor and Secretary of Transportation
IDOT: Pros and Cons

• Pros
  ✓ Defined goals as determined in the state’s long range transportation plan
  ✓ Public comment process
  ✓ Some quantitative criteria
  ✓ Fiscal-constraint requirements for project priority categories

• Cons
  – Projects not ranked by value
  – Too many goals lead to lack of clear, transparent direction
  – Goals are method driven, not uniformly vision driven
  – No consideration of per capita impact
  – No apparent cost-benefit analysis, cost-effectiveness or optimization approach
  – Limited MPO and stakeholder involvement
  – Process not truly multi-modal
  – No ongoing scientific measurement of effectiveness of investments.
Chicago Metropolitan Agency for Planning (CMAP)

Transportation Improvement Program (TIP)
2030 Regional Transportation Plan

Maintain the integrity of the existing transportation system

• Maintenance, reconstruction and replacement objectives:
  – Maximize the performance of existing transportation system
  – Preserve the level of service offered by existing system
  – Improve connections between facilities
  – Improve accessibility to surrounding land uses
  – Mitigate conflicts between rail and highway system

• Transportation management and operations objectives:
  – Improve system information available to travelers
  – Provide improved transportation management capabilities
  – Maximize performance benefits through intensive management
  – Improve coordination between and among different modes
  – Provide for intensive facility management and operations capabilities
  – Provide for coordinated management with other existing and planned transportation facilities
  – Improve ability to manage freight

Improve transportation system performance

• Transportation system efficiency objectives:
  – Balance allocation of financial resources among modes and improvement strategies
  – Address solutions across a variety of travel needs
  – Reduce highway congestion
  – Increase the availability of public transit
  – Encourage walking and bicycling transportation
  – Enhance the facility's multimodal potential
  – Maximize the operational effectiveness of capital improvements
CMAP: Policy Goals

• Transportation and land use interaction objectives:
  - Promote a local balance of jobs and housing
  - Facilitate efficient management of land resources
  - Support the goals and objectives of regional land use policies
  - Coordinate with regional and local development plans
  - Support industrial/commercial development with appropriate multimodal freight access
  - Facilitate preservation of historical, cultural and agricultural resources
  - Provide efficient access to exiting and anticipated land uses
  - Supports transit-oriented development

• Transportation mobility and accessibility objectives:
  - Offer travelers a choice of transportation modes
  - Foster affordable travel and short travel times
  - Increase access to job opportunities
  - Provide efficient modal alternatives for short trips
  - Reduce traffic congestion
  - Coordinate transit access to job locations

• Commercial goods movement objectives:
  - Facilitate efficient movement of commercial goods
  - Enhance the region’s eminences in the national and global freight economy
  - Stimulate commercial and industrial development that promotes local balance of housing and jobs
  - Support commercial land use in close proximity to existing major highway and rail facilities
  - Improve strategic freight connections and accessibility to freight terminals
  - Maintain and promote the value of existing public and private investments in freight transportation
  - Promotes safety at interfaces of the rail and highway system
  - Mitigate the negative effects of freight facilities on neighboring residential communities
CMAP: Policy Goals

- Minimize freight contributions to traffic congestion, air pollution, infrastructure maintenance and safety problems
- Foster efficient freight connections among rail, truck and port systems
- Facilitate safe and efficient truck operations

Employ transportation to sustain the region’s vision and values

• Transportation and natural environment objectives:
  - Help improve air and water quality and protect biodiversity
  - Reduce air pollution from mobile sources
  - Encourage reduced energy consumption
  - Improve air quality in areas with high point-source emissions
  - Employ context-sensitive solutions with regard to natural features
  - Protect natural groundwater recharge
  - Promote effective stormwater management
  - Enhance greenways, trails and open space
  - Help protect threatened and endangered species
  - Be consistent with official environmental protection and preservation plans

• Transportation and economic development objectives:
  - Enhance the region’s business environment
  - Promote the region’s position as a national transportation hub
  - Orient the benefits of commercial and industrial strength toward the long-term benefit of the region
  - Provide multimodal access to the region’s major airports, rail terminals, and industrial and commercial areas
  - Improve multimodal service to Chicago Central Business District (CBD) and other employment concentrations
  - Support the strategic needs of commercial goods shippers and carriers
  - Accommodate forecast demand
  - Provide for improved level of transportation service for workers and businesses
• Transportation and social equity objectives:
  - Provide travel choices benefits to persons of all ages, abilities, incomes, races and/or ethnicity
  - Avoid placing disproportionate burdens on minority or low-income populations
  - Reduce dependence on personal transportation assets
  - Stimulate balanced and sustainable development in communities with concentrations of disadvantaged residents
  - Support programs providing financial incentives to low-income persons residing in communities that provide a wider variety of transportation choices
  - Balance project burdens among all who benefit
  - Provide early, continuous and extended outreach effort

• Transportation and community development objectives:
  - Promote balanced land use within and among local communities
  - Promote local community quality of life
  - Be consistent with community development goals
  - Maximize the local value of regional transportation improvements to support community residential, commercial, industrial development
  - Be consistent with official historic, cultural and agricultural preservation plans

• Transportation and public health and safety objectives:
  - Provide safe and secure movement for all travelers
  - Promote established public health objectives
  - Promote healthy and active traveling habits
  - Enhance the safe operation of transportation facilities and services
  - Employ context-sensitive solutions with regard to promoting local community quality
  - Maximize the safety and security of all travelers
  - Minimize project-related air, water and noise pollution
  - Maximize the safety and security of adjacent populations
  - Provide opportunities to walk and bicycle for transportation
CMAP: Process (Overview)

Step 1: Project Proposals
- Develop project proposal
- IDOT, RTA, CTA, Pace, Metra, counties and municipalities
- Public participation
- 6 months – 2 years

Step 2: Project Prioritization
- Score and rank projects based on preset criteria and local fiscal constraints
- CMAP, CATS Council of Mayors, City of Chicago, transportation service operators, State of Illinois, other programmers

Step 3: Review, Revision & Conformity Analysis
- Review Proposed TIP
- CMAP staff with representatives from implementing agencies and subregional bodies
- Public comment period

Step 4: Final Approval
- CATS Policy Committee, Governor, FHWA and FTA

• CATS Policy Committee, Governor, FHWA and FTA
• Review Proposed TIP
• CMAP staff with representatives from implementing agencies and subregional bodies
• Public comment period
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• Develop project proposal
• IDOT, RTA, CTA, Pace, Metra, counties and municipalities
• Public participation
• 6 months – 2 years
### CMAP: Process (Step-by-Step)

#### Step 1: Project Proposals

- Develop specific project proposals from completed plans by local governments, transportation operators and the State of Illinois
- Factors to include:
  - Explored options and alternatives
  - Determined conditions
  - Completed design sketches
  - Completed environmental review
- Public participation is an integral part of these advanced planning stages

#### Step 2: Project Prioritization

- Subregional, regional or state implementing agencies prioritize and program proposals
  - CMAP: Transportation service operators
  - CATS Councils of Mayors: State of Illinois
  - City of Chicago: Other programmers
- Projects prioritized according to preset criteria and local fiscal constraints
- Implementing agency allocates estimated resources to the pool of project proposals and identifies in which year(s) the project will take place
- “B” list projects, for which funding is not available with the TIP programming horizon, may be moved into the TIP if funds become available and if the project meets air quality requirements
- Resulting programs are submitted to MPO for inclusion in the TIP
### Step 3: Proposed TIP Review, Revision & Conformity Analysis

- Review *Proposed TIP* for accuracy, fiscal conformity, compliance with air quality regulations, and compatibility with regional plans
- Conducted by CMAP staff with representatives from implementing agencies and subregional bodies
- *Proposed TIP* released for a formal public comment period of at least 30 days
- Solicit comments from stakeholders
- CMAP staff and the implementing agencies review the comments, respond and make any necessary revision to TIP

### Step 4: TIP Approval

- MPO endorses *Proposed TIP*
- Governor (or designee) approves *TIP*
- FHWA and FTA determine conformity of the TIP in consultation with the U.S. EPA. If the finding is positive, projects in the TIP may proceed.
State of the Practice
National
MISSOURI

Taking Care of the System Program
Revised Missouri Statutes

Title I Laws and Statutes, Chapter 21 General Assembly, Section 21.795

3. The department of transportation shall submit a written report prior to November tenth of each year to the governor, lieutenant governor, and every member of the senate and house of representatives. The report shall be posted to the department's Internet web site so that general assembly members may elect to access a copy of the report electronically. The written report shall contain the following:

[...]

(2) A detailed explanation of the methods or criteria employed to select construction projects, including a listing of any new or reprioritized projects not mentioned in a previous report, and an explanation as to how the new or reprioritized projects meet the selection methods or criteria;

[...]
MoDOT: Goals

Long Range Transportation Direction (2001)

- Ensure safety and security in travel, decreasing the risk of injury or property damage on, in and around transportation facilities.
- Take care of the existing transportation system of roads, bridges, public transportation, aviation, passenger rail and ports.
- Relieve congestion to ensure the smooth flow of people and goods throughout the entire system.
- Broaden access to opportunity and essential services for those who cannot or choose not to drive.
- Facilitate the efficient movement of goods using all modes of transportation.
- Ensure continued economic competitiveness by providing a safe, reliable and efficient transportation system.
- Protect environment and natural resources by making investments that are not only sensitive to the environment, but that also provide encourage environmentally beneficial transportation choices.
- Enhance the quality of our communities through transportation.
MoDOT: Process (Overview)

**Step 1: Needs Identification**
- Identify physical system condition needs and functional needs of system
- MoDOT, MPOs, Regional Planning Councils (RPCs) and planning partners
- 12-18 months, continuous

**Step 2: Needs Prioritization**
- Prioritize needs based on transportation investment goals, data and partners’ input
- Separate processes for physical system condition needs and functional needs
- MoDOT, MPOs, RPCs and planning partners
- 6 months

**Step 3: Project Scoping**
- Determine the appropriate means for addressing identified needs
- MoDOT
- 3-9 months

**Step 4: Project Prioritization**
- Prioritize projects to determine the best candidates for funding
- Separate processes for each category in MoDOT funding-distribution method
- MoDOT, MPOs, RPCs, and planning partners
- 6 months

**Step 5: STIP Programming**
- Select projects from high-priority list to be programmed in the Statewide Transportation Improvement Program (STIP)
- MoDOT, MPOs and RPCs
- 6-12 months

**Step 6: Final Approval**
- Missouri Highways and Transportation Commission (MHTC)
- 1 month
MoDOT: Process (Step-by-Step)

**Step 1: Needs Identification**

- **Type of Needs**
  - Physical system condition needs – condition
  - Functional needs – operational aspects of system
- **Regional**
  - MoDOT districts work with planning partners to identify regional transportation needs
- **Statewide**
  - MoDOT conducts a formal needs identification process when updating the statewide long-range transportation plan
  - MPO and RPC needs of statewide significance are included in Missouri’s LRTP

**Step 2: Needs Prioritization**

- Physical conditional needs and functional needs are prioritized using separate processes
- Determine the weights for each transportation goal; weights must total 100 percent
- Determine the appropriate factors and their point values under each transportation goal; allowable points must total 100
- MoDOT provide scores for the objective factors based on data
- MoDOT work with planning partners to determine ratings for subjective factors
- Calculate total score - multiply project score for each goal by weight of goal; add together all weighted goals
- Place needs in priority categories
  - **High** – Resources are focused on addressing these needs first; constrained to approximately 10 years of construction funds
  - **Medium** – These needs may be addressed as additional resources become available
  - **Low** – No work is in progress to address these needs at this time
MoDOT: Process (Physical System Condition Needs)

Physical System Condition Needs

This process applies to all areas of the state

Taking Care of the System

Roadway
Pavement Smoothness 30 pts
Pavement Condition 20 pts
Functional Classification 10 pts
Daily Usage (all vehicles) 10 pts
Truck Usage 10 pts
District Factors/Flexible Points 20 pts
Total 100 pts

- OR -

Bridge
Bridge Condition 50 pts
Functional Classification 10 pts
Daily Usage (all vehicles) 10 pts
Truck Usage 10 pts
District Factors/Flexible Points 20 pts
Total 100 pts

• The glossary explains how each factor is scored.
• There is no flexibility among investment goals in this prioritization process because the other goals do not have a direct effect on measuring the physical system condition needs on the transportation system.
• The flexibility lies in "district factors/flexible points," which can be used to capture unique items that are important to an individual region or can be allocated among existing factors.
### Functional Needs

This process does not apply in TMA areas

#### Access to Opportunity
- **Weight:** 5% minimum - 30% maximum
- **Vehicle Ownership:** 50 pts
- **District Factors/Flexible Points:** 50 pts
- **Total:** 100 pts

#### Congestion Relief
- **Weight:** 5% minimum - 30% maximum
- **Level of Service:** 25 pts
- **Daily Usage:** 25 pts
- **Functional Classification:** 25 pts
- **District Factors/Flexible Points:** 25 pts
- **Total:** 100 pts

#### Economic Competitiveness
- **Weight:** 5% minimum - 30% maximum
- **Level of Economic Distress:** 30 pts
- **Supports Regional Economic Development Plans:** 20 pts
- **District Factors/Flexible Points:** 50 pts
- **Total:** 100 pts

#### Efficient Movement of Freight
- **Weight:** 5% minimum - 30% maximum
- **Truck Volume:** 50 pts
- **Freight Bottlenecks:** 20 pts
- **Intermodal Freight Connectivity:** 10 pts
- **District Factors/Flexible Points:** 20 pts
- **Total:** 100 pts

#### Quality of Communities
- **Weight:** 5% minimum - 30% maximum
- **Connectivity:** 40 pts
- **Complies with Regional or Local Transportation Plans:** 30 pts
- **District Factors/Flexible Points:** 30 pts
- **Total:** 100 pts

#### Environmental Protection
- **Weight:** 0% minimum - 30% maximum
- **District Factors/Flexible Points:** 100 pts

#### Safety
- **Weight:** 20% minimum - 50% maximum
- **Safety Index:** 85 pts
- **Safety Concern:** 5 pts
- **District Factors/Flexible Points:** 10 pts
- **Total:** 100 pts

#### Taking Care of the System
- **Weight:** 5% minimum - 30% maximum
- **Substandard Roadway Features OR Substandard Bridge Features:** 75 pts
- **District Factors/Flexible Points:** 25 pts
- **Total:** 100 pts

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- The glossary explains how each factor is scored.
- MoDOT Districts will allocate 50% of the weight among investment goals.
- "District Factors/Flexible Points" may be used to capture unique items that are important to an individual region or can be allocated among existing factors.
- The weight of investment goals must meet minimum and maximum percentages noted above. The total weight of all investment goals must equal 100%.
- MPOs designated as Transportation Management Areas may develop their own functional needs prioritization process, subject to certification by MoDOT.
MoDOT: Process (Step-by-Step)

### Step 3: Project Scoping

- Determine the root causes of the transportation problems
- Develop a range of possible solutions for the problems
- Review the social, economic, energy and environmental impacts
- Evaluate and choose the best solutions
- Set the projects’ physical limits
- Accurately estimate the projects’ cost
- Forecast the projects’ delivery schedule

### Step 4: Project Prioritization

- Separate processes for each category in MoDOT’s funding-distribution method
  - Safety
  - Taking Care of the System
  - Major Projects: System Expansion
  - Regional and Emerging Needs Projects
  - Interstates
- Determine the weights for each transportation goal; weights must total 100 percent
- Determine the appropriate factors and their point values under each transportation goal; allowable points must total 100
- Districts provide scores for the objective factors based on data
- Districts work with planning partners to determine ratings for subjective factors
- Calculate total score – multiply project score for each goal by weight of goal; add together all weighted goals
- Place needs in priority categories
  - **High** – resources are focused on addressing these needs first; constrained to approximately 10 years of construction funds
  - **Medium** – these needs may be addressed as additional resources become available
  - **Low** – No work is in progress to address these needs at this time
MoDOT: Process (Weighted Criteria)

Taking Care of the System Projects

This process applies to all areas of the state

<table>
<thead>
<tr>
<th>Access to Opportunity</th>
<th>Environmental Protection</th>
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<tbody>
<tr>
<td>Weight: 0% minimum - 20% maximum</td>
<td>Weight: 0% minimum - 20% maximum</td>
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<tr>
<td>Eliminate Bike/Ped Barriers (ADA) 25 pts</td>
<td>Environmental Index 50 pts</td>
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<tr>
<td>Vehicle Ownership 25 pts</td>
<td>District Factors/Flexible Points 50 pts</td>
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<td>District Factors/Flexible Points 50 pts</td>
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<td>Total 100 pts</td>
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<td>Level of Service 75 pts</td>
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<td>District Factors/Flexible Points 25 pts</td>
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<td>Total 100 pts</td>
<td>Safety Enhancements 10 pts</td>
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<tr>
<th>Economic Competitiveness</th>
<th>Taking Care of the System</th>
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<tbody>
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<td>Weight: 0% minimum - 26% maximum</td>
<td>Weight: 75% minimum - 95% maximum</td>
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<td>Strategic Economic Corridor 30 pts</td>
<td>Roadway</td>
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<tr>
<td>Level of Economic Distress 20 pts</td>
<td>Pavement Smoothness 30 pts</td>
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<td>District Factors/Flexible Points 50 pts</td>
<td>Pavement Condition 20 pts</td>
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<td>Total 100 pts</td>
<td>Functional Classification 10 pts</td>
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<th>Efficient Movement of Freight</th>
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<td>Weight: 0% minimum - 26% maximum</td>
<td>Bridge Condition 40 pts</td>
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<td>Truck Volume 90 pts</td>
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<tr>
<td>Total 100 pts</td>
<td>Daily Usage (all vehicles) 10 pts</td>
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<th>Quality of Communities</th>
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<td>District Factors/Flexible Points 100 pts</td>
<td></td>
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<tr>
<td>Total 100 pts</td>
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- The glossary explains how each factor is scored.
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- "District Factors/Flexible Points" may be used to capture unique items that are important to an individual region or can be allocated among existing factors.
- The weight of investment goals must meet minimum and maximum percentages noted above. The total weight of all investment goals must equal 100%.
MoDOT: Pros and Cons

• Pros
  √ Clear and consistent decision-making process
  √ Defined goals as determined in the state’s long range transportation plan
  √ Weighted, locally sensitive, quantitative and qualitative criteria
  √ Cost estimate for each project
  √ Established procedures for identifying deficiencies, needs and candidate projects
  √ Fiscal-constraint requirements for project priority categories
  √ Alternative points per criteria allow adaptability to address region concerns
  √ Strong regional and local involvement
  √ All processes generate lists for a documentable process

• Cons
  – Criteria measures are not truly multi-modal
  – Local discretionary points in criteria overly dominant in some cases
  – Criteria weights can eliminate consideration of some criteria entirely
  – No consideration of per capita benefit
  – No cost-benefit analysis, cost effectiveness or optimization approaches to priority setting
  – No ongoing scientific measurement of effectiveness of investments
OHIO

Major New Construction Projects
(> $5 million)
Ohio Revised Code

Title LV “Roads, Highways, and Bridges,”
Chapter 5512, section 02

(A) The director of transportation shall develop a written project selection process for the prioritization of new transportation capacity projects. The director shall include the following in the process:

(1) A description of how strategic initiatives submitted by the director are advanced by the process;

(2) A definition of the kinds of projects to which the process applies;

(3) Criteria that are used to rank proposed projects by how effectively a project contributes to the advancement of the strategic initiatives;

(4) Data that is necessary to apply the ranking criteria;

(5) Any other provisions the director considers appropriate.

(B) In developing the project selection process, the director shall seek and consider public comment on the process. In doing so, the director may hold public hearings in various locations around the state.”
ODOT: Goals

Access Ohio 2004 (2030)

- System Preservation and Management
  - Sustain pavements so at least 93 percent of all State maintained lane miles meet the pavement condition rating standards
  - Sustain bridges so at least 97 percent of all State maintained bridges meet the general appraisal standards
  - Sustain an overall level of performance on Ohio’s roadways to meet or exceed the standard as defined by a county’s ODOT-generated composite Organizational Performance Index (OPI)
  - Complete the reconstruction of 60 percent of Interstate lane miles and sustain a preventive pavement maintenance program on 5 percent of all appropriate lane miles per year
  - Continually research and improve maintenance practices and technology, construction techniques, and the use of better materials

- Economic Development and Quality of Life
  - Complete macro-corridor projects identified in Governor Bob Taft’s August 2003, Jobs and Progress Plan
  - Reconstruct deficient urban freeway and multi-modal facilities while remaining sensitive to social, cultural, and economic aspirations of Ohio’s communities
  - Improve inter-modal connectivity to reduce congestion, improve safety, and preserve the environment
  - Protect the natural environment and historic and cultural resources by avoiding, minimizing, or mitigating the environmental impacts of transportation improvements
  - Design projects that are compatible with the essence of Ohio’s communities

- Cooperative Planning Process and Transportation Efficiency
  - Use a cooperative planning process to develop an effective and efficient transportation system and an organizational decision-making process through the use of system management programs and public participation
ODOT: Goals

Access Ohio 2004 (2030)

- Transportation Safety and Convenience
  - Reduce the frequency of crashes from current levels by 10 percent,
  - Reduce the number of rear-end crashes from current levels by 25
  - Reduce the crash fatality rate from the current rate of 1.31 fatalities per 100 million vehicle miles traveled (mvmt) to not to exceed 1 fatality per 100 mvmt
  - Target and implement all low-cost, short-term safety solutions, all medium-cost improvements, and 80 percent of the high-cost improvements at high-crash safety locations in the annual safety and congestion work plan
  - Continuously reduce the delay between problem identification and countermeasure implementation
  - Continuously improve safety and design standards
  - Sustain the highest standards and improve on snow and ice removal through new and improved technologies, materials, and operational strategies
  - Sustain the highest standards and improve on safety in work zones through new and improved technologies, materials, and operational strategies

- Funding
  - Continually review the results of the cost accounting system to improve the quality and efficiency of the department
  - Manage a construction program to get high quality, competitive prices, and efficient project administration
  - Train and equip an increasingly productive work force that does not exceed 6,031 full-time employees
  - Maintain a financial plan to meet long-term operational and capital goals
  - Continuously focus on creating a quality culture as measured by the Baldridge Criteria
ODOT: Process (Overview)

Step 1: Project Nomination
- Project sponsors submit applications
- ODOT, MPOs, Counties, and Municipalities
- 6 months, continuous

Step 2: Project Prioritization
- Prioritize projects to determine the best candidates for funding
- Separate processes for transportation scores and economic development scores
- ODOT and Transportation Review Advisory Council (TRAC)
- 6 months

Step 3: Final Approval
- Transportation Review Advisory Council (TRAC) approves final project list
- 1 month
**ODOT: Process (Step-by-Step)**

<table>
<thead>
<tr>
<th><strong>Step 1: Nomination</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Project sponsors complete and submit application</td>
</tr>
<tr>
<td>• ODOT District and MPO review and approve nominations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Step 2: Prioritization Process</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Transportation Scores</td>
</tr>
<tr>
<td>- ODOT conducts technical analyses</td>
</tr>
<tr>
<td>- ODOT develops draft transportation scores</td>
</tr>
<tr>
<td>- Public comments on the sufficiency and accuracy of scores</td>
</tr>
<tr>
<td>- ODOT makes transportation project score recommendations to TRAC</td>
</tr>
<tr>
<td>- Project advocate may appeal score</td>
</tr>
<tr>
<td>- TRAC makes final decision on project scores</td>
</tr>
<tr>
<td>• Economic Development Scores</td>
</tr>
<tr>
<td>- TRAC Economic Development Subcommittee recommends an economic score for each project</td>
</tr>
<tr>
<td>- Ohio Department of Development regional officers and ODOT district planning and program administrators review all economic scoring</td>
</tr>
<tr>
<td>- Economic Development Subcommittee present scores to TRAC</td>
</tr>
<tr>
<td>- Project advocate may appeal score</td>
</tr>
<tr>
<td>- TRAC makes final decision on project scores</td>
</tr>
<tr>
<td>• ODOT places projects into one of three priority categories</td>
</tr>
<tr>
<td>- High Priority – recommended for construction during the upcoming six-year construction period</td>
</tr>
<tr>
<td>- Medium Priority – funded for additional environmental, design or right of way development activities necessary before the projects would be available for construction</td>
</tr>
<tr>
<td>- Low Priority - reviewed by the TRAC but not recommended for further development due to lack of funding, low scores, excessive costs, etc.</td>
</tr>
</tbody>
</table>
## ODOT: Process (Weighted Criteria)

<table>
<thead>
<tr>
<th>Goal</th>
<th>Factors</th>
<th>Maximum Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transportation Efficiency</strong></td>
<td>Average Daily Traffic</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Volume to Capacity Ratio</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Roadway Classification</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Macro Corridor Completion</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>City/community size</td>
<td>-</td>
</tr>
<tr>
<td><strong>Safety</strong></td>
<td>Accident Rate</td>
<td>15</td>
</tr>
<tr>
<td><strong>Transportation Points</strong></td>
<td>Account for at least 70% of a project’s base score</td>
<td>70</td>
</tr>
<tr>
<td><strong>Economic Development</strong></td>
<td>Job Creation</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Job Retention</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Economic Distress</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Cost Effectiveness of Investment</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Level of Investment</td>
<td>5</td>
</tr>
<tr>
<td><strong>Economic Development Points</strong></td>
<td>Account for up to 30% of a project’s base score</td>
<td>30</td>
</tr>
<tr>
<td><strong>Funding</strong></td>
<td>Public/Private/Local Participation</td>
<td>15</td>
</tr>
<tr>
<td><strong>Intermodality Connectivity</strong></td>
<td>Unique Multi-Modal Impacts</td>
<td>5</td>
</tr>
<tr>
<td><strong>Urban Revitalization</strong></td>
<td>Access to underdeveloped property</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total Possible Points</strong></td>
<td>Including Transportation, Economic Development, and additional categories</td>
<td>130</td>
</tr>
</tbody>
</table>
ODOT: Pros and Cons

• Pros
  ✓ Required by law to develop a method for prioritizing projects
  ✓ Clear and consistent decision-making process
  ✓ Defined goals, including numerical goals
  ✓ Weighted quantitative and qualitative criteria
  ✓ Strong regional and local involvement
  ✓ Fiscal-constraint requirements for project priority categories

• Cons
  - Too many goals leads to lack of clear, transparent direction
  - Goals and criteria not tied to regional land use plans
  - Criteria not evaluated on a per capita basis
  - No cost-benefit analysis, cost effectiveness or optimization approaches to priority setting
  - Limited to large projects
  - Some goals are method driven, not vision based
  - Process not multi-modal
WISCONSIN

Highway and Bridge Projects
Wisconsin Statutes & Annotations

- Chapter 85.025 - Highway and bridge projects. The department shall adopt by rule criteria for selecting and evaluating all highway and bridge projects which are constructed from the appropriations under s. 20.395 (3) (bq), (bv), (bx), (cq), (cv) and (cx).

- Chapter 85.05 - Evaluation of proposed major highway projects. The department by rule shall establish a procedure for numerically evaluating projects considered for enumeration under s. 84.013 (3) as a major highway project. The evaluation procedure may include any criteria that the department considers relevant. The rules shall establish a minimum score that a project shall meet or exceed when evaluated under the procedure established under this section before the department may recommend the project to the transportation projects commission for consideration under s. 13.489 (4).

Wisconsin Administrative Code

- Chapter Trans 209: Highway and Bridge Project Selection Process

  • Purpose. In accordance with s. 85.025, Stats., this rule sets forth the process and criteria used by the department of transportation for evaluating and selecting state trunk highway and bridge improvement (construction) projects.

- Chapter Trans 210: Major Highway Project Numerical Evaluation Process

  • Purpose. In accordance with s. 85.05, Stats., this chapter sets forth the process and criteria used by the department to numerically evaluate projects considered for enumeration. This process for evaluating candidate major highway projects is used to advise the transportation projects commission. This chapter establishes a minimum score that a project shall meet or exceed in order to be eligible for recommendation to the transportation projects commission.
WisDOT: Policy Goals

Connections 2030 (draft version)*

- Enhance Economy
- Improve Transit and Highway Service
- Improve Safety
- Minimize Environmental Impacts
- Serve Community Objectives

* WisDOT is currently developing Connections 2030, a multi-modal transportation plan, that focuses on prioritizing transportation investments.
WisDOT: Process (Overview)

Step 1: Project Nomination
- Nominate candidate projects
- WisDOT, MPOs, and planning partners
- 6 months, continuous

Step 2: Environmental and Engineering Studies
- Conduct technical studies prior to funding consideration
- WisDOT
- 3-6 months

Step 3: Project Prioritization
- Evaluate and rank projects based on criteria and standards
- WisDOT and Transportation Projects Commission (TPC)
- 6 months

Step 4: Final Approval & Programming
- Project recommendations and funding levels amended and approved
- Governor and Legislature
- 1-2 months
## WisDOT: Process (Step-by-Step)

### Step 1: Needs Identification
- MPOs, WisDOT, municipalities and regions identify emerging needs and recommends projects
- WisDOT reviews recommendations and develops a candidate list to the TPC for evaluation

### Step 2: Environmental and Engineering Studies
- TPC approves candidate projects for environmental study
- WisDOT conducts an environmental impact statement or an environmental assessment so all projects brought before the TPC will have undergone a draft environmental analysis

### Step 3: Prioritization Process
- TPC holds hearing to receive public comment on the candidate projects
- WisDOT analyzes each candidate project using objective criteria and weighted measures
- WisDOT ranks each candidate project based on score

### Step 4: Recommendations and Decision-Making
- TPC, with WisDOT’s analysis and public comments, recommends to the Governor and Legislature a list of projects and an appropriate annual funding level to support the ongoing program
- The Legislature may add or delete projects, and may change the recommended funding levels
WisDOT: Process (Weighted Criteria)

40% Economic Measure

50% Identify Competitiveness of Existing Business

25% Identify Attractiveness For New Business

25% Identify Routes That Provide Connections

20% Traffic Flow Measure

100% Identify Traffic Flow Problems

20% Safety Measure

100% Identify Crash Problems

10% Environmental Measure

50% Identify Affected Natural and Physical Resources

50% Identify Affected Socio-economic and Cultural Resources

10% Community Input Measure

100% Identify Community Input

% WEIGHT OF TOTAL

– Reduction in Travel Costs vs. Construction Costs
  15%
– Businesses That Will Benefit
  5%

– Economic Growth Potential
  5%
– Unique Reasons Why Project Will Attract New Businesses
  5%

– Part of Corridors 2020 or NHS Network
  10%

– Level of Service
  20%

– Crash Rate
  – Severity Proportion
  – Pedestrian and Bicycle Considerations
  20%

– Natural Resources
  2.5%
– Physical Resources
  2.5%

– Socio-economic Resources
  2.5%
– Cultural Resources
  2.5%

– Public Support or Opposition
  5%
– Relationship to Adopted Plans
  5%

History: Cr. Register, January, 1999, No. 517, eff. 2–1–99.
WisDOT: Pros and Cons

• Pros
  √ Required by law to develop a method for evaluating, selecting and prioritizing projects
  √ Clear and consistent decision-making process
  √ Measurable quantitative and qualitative criteria
  √ Some regional and local involvement
  √ Legislative oversight

• Cons
  – No defined policy goals
  – Limited to highway and bridge projects
  – Criteria not multi-modal
  – Criteria and performance measures have narrow interpretations of goals
  – No cost-benefit analysis, cost effectiveness or optimization approaches to priority setting
  – Goals not tied to regional or land use plans
  – No ongoing scientific measurement of effectiveness of investments
Revised Code of Washington (RCW) 47.05 (1993)

– Enacted new objectives and approaches to priority programming of highway capital construction projects

– Changed both the structure and the process

Chapter 47.05 RCW: Priority programming for highway development

“It is the intent of the legislature that investment of state transportation funds to address deficiencies on the state highway system be based on a policy of priority programming having as its basis the rational selection of projects and services according to factual need and an evaluation of life cycle costs and benefits that are systematically scheduled to carry out defined objectives within available revenue. The state must develop analytic tools to use a common methodology to measure benefits and costs for all modes.

The priority programming system must ensure preservation of the existing state highway system, relieve congestion, provide mobility for people and goods, support the state's economy, and promote environmental protection and energy conservation.

The priority programming system must implement the state-owned highway component of the statewide transportation plan, consistent with local and regional transportation plans, by targeting state transportation investment to appropriate multimodal solutions that address identified state highway system deficiencies.

The priority programming system for improvements must incorporate a broad range of solutions that are identified in the statewide transportation plan as appropriate to address state highway system deficiencies, including but not limited to highway expansion, efficiency improvements, nonmotorized transportation facilities, high occupancy vehicle facilities, transit facilities and services, rail facilities and services, and transportation demand management programs.”
WSDOT: Goals

Policy Objectives - RCW 47.05 (1993)

- *Preservation* of existing state highway system
- Relieve congestion
- Provide *mobility* for people and goods
- Support the state’s *economy*
- Promote *environmental protection* and energy conservation

Investment Guidelines - Washington Transportation Plan (2007-2026)

- *Preservation* – preserve and extend prior investments in existing transportation facilities and the services they provide to people and commerce
- *Safety & Security* – target construction projects, enforcement and education to save lives, reduce injuries, and protect property
- *Economic Vitality* – Improve freight movement and support economic sectors that rely on the transportation system, such as agriculture, tourism and manufacturing
- *Mobility* – Facilitate movement of people and goods to contribute to a strong economy and a better quality of life for citizens
- *Environmental Quality and Health* – Bring benefits to the environment and our citizens’ health by improving the existing transportation infrastructure
Step 6: Final Approval
- Washington State Legislature
- 1-2 month

Step 5: Project Prioritization
- Compare benefit-cost ratio of projects to determine its order of rank and priority
- WSDOT
- 1-3 months

Step 4: Benefit-Cost Ratio
- Compare potential benefit of proposed solution to cost estimate
- WSDOT
- 1-3 months

Step 3: Cost Estimation
- Develop a cost estimate based on scope of project
- WSDOT
- 1-3 months

Step 2: Alternative Solutions
- Explore possible solutions, tradeoffs and comparisons
- WSDOT
- 3-6 months

Step 1: Needs Identification
- Identify a problem, need or deficiency
- WSDOT, MPOs, planning partners
- Continuous
### WSDOT: Process (Step-by-Step)

#### Step 1: Needs Identification

- Identify problems, needs or deficiencies on state highway based on inconsistency with policy goals or information from transportation management system
  - “Mobility level of service is below the adopted service objective”
  - “Pavement condition rating is projected to drop below the adopted standard”
- Incorporate identified needs into Highway System Plan

#### Step 2: Project Scoping

- Identify and evaluate alternative solutions to find the most cost-effective and beneficial solution for the community
- **Project Definition** - Identifies the project purpose and need, proposed solution, estimated cost, and a benefit/cost ratio for the project, which includes the projected change in system performance.
- **Design Decisions Summary** - Identifies the current conditions and general design parameters for a proposed solution (e.g. route, length of road segment, lane width, paving depth). It also lists any deviations from design standards for the type of project. Projects must meet design standards with approved deviations in order to be eligible for federal funding.
- **Environmental Review Summary** - Identifies potential environmental issues and impacts, any proposed mitigation, and any NEPA/SEPA documents and permits that are likely to be required. A preliminary project delivery schedule is also developed at this time in order to determine the duration of the pre-construction and construction phases for the project. A Cost Risk Assessment may be conducted (primarily on major projects) to determine the full range of potential costs.
Step 3: Cost Estimate

- Prepare a cost estimate for the approved scope of work
- Use Cost Estimating Validation Process (CEVP) to determine the cost range of major transportation projects
  - CEVP considers probabilities and risk events in estimating costs and time required for large public projects
  - Scaled-back version of the CEVP will be used on all projects estimated at over $100 million total cost

Steps 4 & 5: Benefit / Cost Ratio & Project Prioritization

- Compare the estimated cost to the potential benefit in order to determine which projects are most beneficial to construct
- B/C ratio value derived from Priority Array Tracking System (PATS)
  - PATS is a centralized database that allows tracking of highway needs and their solutions
  - It ensures that WSDOT addresses the highest ranked transportation needs
- Compare benefit-cost ratio of projects to determine its order of rank and priority
WSDOT: Pros and Cons

• Pros
  √ Required by law to develop a method for evaluating, selecting and prioritizing projects
  √ Defined policy goals that are consistent with state’s long range transportation plan
  √ Measurable objectives related to each policy goal
  √ Established procedures for identifying deficiencies, needs and candidate projects
  √ Cost estimate conducted for each project
  √ Cost-benefit analysis approach to priority setting
  √ Some regional and local involvement

• Cons
  – Limited to highway program
  – Use mode-specific criteria to evaluate and prioritize same mode projects; no criteria to compare projects across modes
  – Limited regional and MPO involvement
  – Goals not tied to regional or land use plans
  – No ongoing scientific measurement of effectiveness of investments
TEXAS

Highway Projects
§ 201.602. PROJECT SELECTION HEARINGS. The commission annually shall hold hearings on its highway project selection process and the relative importance of the various criteria on which the commission bases its project selection decisions.
Texas Strategic Plan for 2007-2011

- Goals and Objectives
  - Reliable mobility – Ensure that people and goods move efficiently
  - Improved safety – Reduce roadway fatalities
  - Responsible systems preservation – Maintain and improve existing roads and bridges
  - Streamlined project delivery – Complete projects faster
  - Economic vitality – Attract and retain businesses and industry

- Evaluation Criteria
  - Reduce congestion
  - Enhance safety
  - Expand economic opportunity
  - Improve air quality
  - Increase the value of transportation assets
  - Addresses local, regional or statewide transportation issues
  - Provides a short-term, mid-term or long-term solution
TxDOT: Process (Overview)

Step 1: Needs Identification
- Nominate projects
- TxDOT, MPOs, and planning partners
- 6 months

Step 2: Project Evaluation
- Evaluate candidate projects
- TxDOT
- 3-6 months

Step 3: Project Selection
- Apply criteria & standards to rank projects
- TxDOT and Texas Transportation Commission (TCC)
- 6 months

Step 4: Final Approval & Programming
- Final decision and authorization of projects
- Texas Transportation Commission (TCC)
- 1-2 months
TxDOT: Process (Step-by-Step)

<table>
<thead>
<tr>
<th>Step 1: Needs Identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Identify a need or propose an idea</td>
</tr>
<tr>
<td>• Originate from community, state or federal level</td>
</tr>
<tr>
<td>• Project sponsors approach TxDOT district office or local MPO for support and approval</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 2: Funding Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>• TxDOT district staff devise funding strategy for suggested projects</td>
</tr>
<tr>
<td>• Evaluate project’s viability and environmental implications</td>
</tr>
<tr>
<td>• Determine alternative solutions</td>
</tr>
<tr>
<td>• Complete cost-estimate for each project</td>
</tr>
<tr>
<td>• Solicit public input and support</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 3: Project Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Selection authority rests with the Texas Transportation Commission (TCC) and local officials</td>
</tr>
<tr>
<td>• Bulk of TxDOT budget funds projects through a comprehensive plan called the Unified Transportation Program (UTP)</td>
</tr>
<tr>
<td>• TCC establishes criteria and standards for different kinds of projects</td>
</tr>
<tr>
<td>• Small percentage of budget is left to the discretion of TCC</td>
</tr>
</tbody>
</table>
TxDOT: Pros and Cons

• Pros
  √ Required by law to develop a method for evaluating, selecting and prioritizing projects
  √ Defined policy goals
  √ Cost estimate completed for each project
  √ Determines alternative funding and solutions
  √ Average regional and local involvement

• Cons
  – Limited to highway projects
  – Not evaluated on a per capita basis
  – System is not multi-modal
  – Limited regional involvement
  – Some goals are process driven, not vision based
  – Criteria not directly related to goals
  – No per capita criteria
  – No cost-benefit analysis, cost effectiveness or optimization approach to priority setting
  – No ongoing scientific measurement of effectiveness of investments
ALASKA

Statewide Transportation Improvement Program (STIP)

- **System Character**
  - Develop multi-modal facilities and connections to ensure that Alaska’s transportation system is safe, integrated, coordinated, cost-effective and energy-efficient to effectively move people and freight
  - Bring the state’s National Highway System and Alaska Highway System up to current national standards and similarly improve aviation and marine systems

- **Economic Development**
  - Plan and accomplish transportation and economic development projects by partnering early with communities, private and commercial organizations, and federal and state agencies
  - Provide new road or rail access to communities and resources when public need is shown and when economically, socially, and environmentally justified, taking into account diverse public values
  - Develop and improve the transportation system in a way that preserves and enhances Alaska’s unique character and takes advantage of Alaska’s unique global position

- **Public Involvement**
  - Involve Alaskans, potentially affected communities and Tribal governments proactively and continuously in the entire transportation planning, design, and construction and maintenance process to ensure that policies and projects reflect public knowledge and values
  - Effectively provide timely and accurate public information about department responsibilities, accomplishments, available resources, and constraints

- Livability
  - Coordinate transportation planning with local land use planning to the benefit of quality of life as expressed in local planning documents
  - Strive to preserve the natural beauty of the state, limit the negative impacts and enhance the positive attributes – environmental, social, economic and human health
  - Ensure that the benefits of transportation improvements are gained by all Alaska citizens
  - Along with economic costs and benefits, consider both positive and negative intangible values, including aesthetics, when making major transportation investments
  - Ensure that all department projects and facilities are fully compliant with Americans with Disabilities Act
  - Provide transportation enhancements such as rest areas, restrooms, trailheads, and trails for residents and visitors

- Funding
  - Make transportation investment decisions based on statewide assessment of transportation needs for surface transportation, marine highways, and ports and harbors, and aviation
  - Reduce long-term maintenance and operational costs through incorporation of new technologies, improvement of sub-standard roads, and other strategies
  - Adequately operate and maintain the transportation system; advocate for and develop mechanisms that provide sufficient and stable levels of funding
  - Urge continues federal funding contributions commensurate with Alaska’s federal land ownership and impacts

- Safety and Security
  - Provide a safe and secure transportation system to ensure freedom of movement for people and commerce
AKDOT: Process (Overview)

Step 1: Project Nomination
- Solicit transportation-related projects
- AKDOT, MPOs, and planning partners
- Continuous

Step 2: AKDOT Regional Office - Ranking and Scoring
- Prioritize needs based on transportation investment goals, data and partners’ input
- Separate scoring system for different programs
- AKDOT regional offices
- 3 months

Step 3: Project Evaluation Board - Ranking and Scoring
- Top-ranked projects from AKDOT regional office receive final scoring and ranking
- Separate scoring system for different programs
- Project Evaluation Board
- 3 months

Step 4: Project Prioritization
- Prioritize projects based on scores from evaluation criteria
- Project Evaluation Board
- 3 months

Step 5: STIP Programming
- Select projects from high-priority list to be programmed in the Statewide Transportation Improvement Program (STIP)
- AKDOT and Project Evaluation Board
- 6 months

Step 6: Final Approval
- Legislature, FHWA, FTA
- 1 month
## AKDOT: Process (Step-by-Step)

### Step 1: Project Nomination

- Discuss candidate project with Area Planner in the DOT Regional Office
- Prepare Nomination Form
- Obtain “Resolution of Support” for elected local governing body
- Submit project and forms to DOT Regional Office

### Step 2: AKDOT Regional Offices – Ranking and Scoring

- Nominate projects are evaluated and scored using mode-specific system based on a matrix of standards, scoring criteria and weight factors
- Separate “Evaluation Process Standards and Scoring Criteria” are established for the following infrastructure types:
  - Rural and urban streets and roads on the contiguous roadway system or Alaska Marin Highway System but not on the NHS system (14 Standards)
  - Remote roads and trails (12 standards)
  - Transit projects (14 standards)
  - Alaska Marine Highway System (14 standards)
  - Stand-alone Trails and Recreational Access for Alaska (TRAACK) projects (12 standards)
- Highest-scoring projects are forwarded to a statewide Project Evaluation Board for final scoring and ranking
- Selection criteria may be updated routinely
# AKDOT: Process (Rural & Urban Roads Weighted Criteria)

<table>
<thead>
<tr>
<th>Urban and Rural Projects Criteria</th>
<th>Standards</th>
<th>(5)</th>
<th>(6)</th>
<th>Scoring Criteria</th>
<th>(7)</th>
<th>(8)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1a. Economic benefits if not new mode or facility.</strong></td>
<td>Supports economic benefit; endorsed in an economic development project by regional governmental agency or representative group.</td>
<td></td>
<td></td>
<td>Supports minimal, speculative or temporary economic opportunities or benefits or provides non-crucial benefit to existing economic activity.</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Weighting: 0 or 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>1b. Economic benefits if new mode or facility.</strong></td>
<td>Consideration of costs and benefits via an analysis demonstrates:</td>
<td></td>
<td></td>
<td>No documentation provided.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Weighting: 0 or 4</td>
<td>project has very significant monetary and/or non-monetary benefits.</td>
<td>project has average monetary and/or non-monetary benefits.</td>
<td>project has below average monetary and/or non-monetary benefits.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Economic benefits analysis in 1a. and 1b. shall not consider benefits due to project construction.

**2. Health and quality of life (Air and water quality, neighborhood continuity, access to basic necessities):**

Weighting: 1

<table>
<thead>
<tr>
<th>Standards</th>
<th>Scoring Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project provides a significant contribution to improved health or quality of life, or reduces or removes a significant existing negative factor.</td>
<td>Project will have no effect either positive or negative on quality of life issues.</td>
</tr>
</tbody>
</table>

**3. Safety.**

<table>
<thead>
<tr>
<th>Standards</th>
<th>Scoring Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposes mitigation which is recognized in practice to address A) a major portion of crashes on a segment or intersection with a crash rate exceeding the Critical Rate defined in the HSIP Program, or, B) historical crash patterns identified from 3 or more crashes, at least two of which involve deaths or major injuries, or C) documented high accident potential or risk between a rural non-motorized use facility and vehicular traffic.</td>
<td>No mitigation is demonstrated to address a crash problem or potential in other categories. A) crashes on the project's segments or intersections have a crash rate below the statewide average, or, B) historical crash patterns identified from 3 or more crashes per year, or C) traffic conflicts between a primary rural non-motorized use facility and vehicular traffic.</td>
</tr>
</tbody>
</table>

Weighting: 5

**4. Improves intermodal transportation or lessens redundant facilities.**

<table>
<thead>
<tr>
<th>Standards</th>
<th>Scoring Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would clearly reduce the need for capital investment in another mode and result in a reduction in operating costs by reducing redundancy in our system or greatly improves the connection between modes for travelers or freight.</td>
<td>May reduce the need for capital investment in another mode and result in a reduction in operating costs by reducing redundancy in our system or would moderately improve the connection between modes for travelers or freight.</td>
</tr>
</tbody>
</table>

Weighting: 3

Minimum latest available 10 year record. When using anecdotal crash information from first hand (EMS, Fire, Police, M&O - on-scene responsibility) = maximum score is 4 points. When using anecdotal safety information from second hand sources (not on-scene responsibility) or data not recognized in practice = maximum score is 2 points.
### AKDOT: Process (Rural & Urban Roads Weighted Criteria)

<table>
<thead>
<tr>
<th>Urban and Rural Projects Criteria</th>
<th>Standards</th>
<th>(5)</th>
<th>(3)</th>
<th>Scoring Criteria</th>
<th>(0)</th>
<th>(-3)</th>
<th>(-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Local, other agency or user contribution to fund capital costs. Weighting: 5</td>
<td>Contribution of state match, design, right-of-way, and/or materials: 1 pt per each 5% of project cost.</td>
<td></td>
<td></td>
<td>Contribution covers no capital costs; contributes nothing.</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

Match required by state match policy shall not be considered in this question. Only contributions that exceed the required match contribution shall be considered.

| 6a. Local, other agency or user contribution to fund M&O costs. (For non-DOT or DOT unsuited to long-term ownership.) Weighting: 0 or 5 | Sponsor will assume ownership if currently a DOT&PF facility; or sponsor will assume ownership of another DOT&PF facility of similar M&O cost. | Sponsor will assume full M&O responsibility; or sponsor will assume full M&O of another DOT&PF facility of similar M&O cost. | Sponsor contributes nothing. | Continued sponsor ownership & operation of locally owned facility = 1 pt; And results in significant local maintenance savings ≥ 2 yrs. | N/A | N/A |

STIP commitment must be in writing and passed by the governing body of the community or tribe before points will be assigned.

| 6b. Departmental M&O costs and priority (Use for DOT facilities.) Weighting: 0 or 5 | Very high M&O priority. | Moderate M&O priority. | Not an M&O priority; little effect on M&O costs. | Not an M&O priority; would increase M&O costs moderately. | Not an M&O priority; would increase M&O costs significantly. |

| 7. Public support? Weighting: 3 | Preponderance of public record including a resolution from the local elected body shows support for project and fully supported in official state or local plans. | Majority of public record shows support for project; and nominally supported in official state or local plans. | Public record is divided or undocumented toward project; and not supported in official state or local plans. | Majority of public record shows opposition to project; and not supported in official state/local plans. | Preponderance of public record shows opposition to project including a resolution from the local elected body and/or contravenes official state/local plans. |

AKDOT: Process  
*(Rural & Urban Roads Weighted Criteria)*

<table>
<thead>
<tr>
<th>Urban and Rural Projects Criteria</th>
<th>Standards</th>
<th>Scoring Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. Surface rehabilitation or deficient width/grade/alignment (w/g/a).</td>
<td>Primarily 3-R and a PMS recommendation for rehab within 2 years, or a gravel surface badly deteriorated or serious surface deformation, or Significantly deficient w/g/a relative to standards.</td>
<td>Primarily major reconstruction; addresses longer-range rehabilitation. or No w/g/a deficiencies.</td>
</tr>
<tr>
<td>Weighting: 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weighting: 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Deficient bridges?</td>
<td>Deficient bridge(s) needing replacement*.</td>
<td>Deficient bridge(s) eligible for rehabilitation**</td>
</tr>
<tr>
<td>Weighting: 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* &quot;Eligible for replacement&quot; means the bridge has a sufficiency rating of less than 50 points and has been determined to be eligible for replacement by ADOT&amp;PF Bridge section.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>** &quot;Eligible for rehabilitation&quot; means the bridge has a sufficiency rating between 50 and 80 points and has been determined to be eligible for rehabilitation by ADOT&amp;PF Bridge section.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Functional class.</td>
<td>Major Arterial = 5</td>
<td>Major Collector or Urban Collector = 3</td>
</tr>
<tr>
<td>Weighting: 5</td>
<td>Minor Arterial = 4</td>
<td>Minor Collector = 1</td>
</tr>
<tr>
<td>13. Other factors not specified.</td>
<td>Each PEB member is allocated 2 points for each project scored. Between 0-5 points may be allocated to each project from this &quot;pool&quot; of points. Points from Remote, Rural/Urban and other STIP categories must be used for projects within the same category.</td>
<td></td>
</tr>
</tbody>
</table>

- Weighting: 2
# AKDOT: Process (Transit Weighted Criteria)

<table>
<thead>
<tr>
<th>Transit Projects Criteria</th>
<th>Standards</th>
<th>(5)</th>
<th>(3)</th>
<th>(0)</th>
<th>(-3)</th>
<th>(-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Health and quality of life</strong>&lt;br&gt;(Neighborhood continuity, access to basic necessities)&lt;br&gt;Weighting: 3</td>
<td>Project provides significant contribution to improved health or quality of life.</td>
<td>Project provides moderate contribution to improved health or quality of life.</td>
<td>Project will have no effect, either positive or negative, on quality of life issues.</td>
<td>Project provides a moderate degradation to health or quality of life.</td>
<td>Project provides a significant degradation to health or quality of life.</td>
<td></td>
</tr>
<tr>
<td><strong>2. Safety.</strong>&lt;br&gt;Weighting: 2</td>
<td>Strongly addresses a significant and existing safety problem.</td>
<td>Addresses demonstrated existing safety problem of moderate nature.</td>
<td>No record of safety issues addressed by project or it is not primary purpose of project.</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>3. Improves intermodal transportation or reduces redundant facilities.</strong>&lt;br&gt;Weighting: 3</td>
<td>Greatly improves connectivity between modes and coordination and integration of passenger systems and/or would clearly reduce the need for significant capital investment in another mode.</td>
<td>Moderately improves connectivity between modes and coordination and integration of passenger systems and/or would clearly reduce the need for capital investment in another mode.</td>
<td>Minimal to no effect on transportation system connectivity or coordination and integration of passenger systems and services, and does not change the requirement for Investment in other modes.</td>
<td>Moderately decreases the connectivity between modes or coordination and integration of passenger systems, and/or results in redundant investments.</td>
<td>Greatly decreases the connectivity between modes or coordination and integration of passenger systems, and/or results in redundant investments.</td>
<td></td>
</tr>
<tr>
<td><strong>4. Local, other agency or user contribution to fund capital costs.</strong>&lt;br&gt;Weighting: 5</td>
<td>Contribution of state match, design, right-of-way, and/or materials: 1 pt per each 8% of project cost exceeding required match.</td>
<td>Contribution covers no capital costs; contributes nothing.</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>5. Local contribution to fund operations and maintenance (O&amp;M) costs.</strong>&lt;br&gt;Weighting: 5</td>
<td>Local or user contributions cover 100% of O&amp;M costs, and includes ownership of facility.</td>
<td>One point for each 20% of local support of O&amp;M costs.</td>
<td>Local or user contributions cover none of O&amp;M costs.</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

*Match required by state match policy shall not be considered in this question. Only contributions that exceed the required match contribution shall be considered.*
# AKDOT: Process
## (Transit Weighted Criteria)

<table>
<thead>
<tr>
<th>Transit Projects Criteria</th>
<th>Standards</th>
<th>Scoring Criteria</th>
<th>(5)</th>
<th>(3)</th>
<th>(6)</th>
<th>(3)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>6. Public support.</strong></td>
<td>Preponderance of public record including a resolution from the local elected body showing support for project and fully supported in official state/local plans.</td>
<td>Majority of public record shows support for project and nominally supported in official state/local plans.</td>
<td>Public record is divided or undocumented toward project.</td>
<td>Majority of public record shows opposition to project and not supported in official state/local plans.</td>
<td>Preponderance of public record shows opposition to project including a resolution from the local elected body and contravenes official state/local plans.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weighting: 3</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weighting: 1</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td><strong>8. System continuity and maintenance (vehicles).</strong></td>
<td>Project replaces currently operating vehicles that are at or beyond FTA replacement standards.</td>
<td>Project provides vehicles to expand service.</td>
<td>Vehicles will neither replace currently operating vehicles nor expand service.</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weighting: 4</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>9. Is the project listed in State Air Quality Implementation Plan?</strong></td>
<td>Yes, a required element.</td>
<td>Yes, a contingency element = 4. No, but qualifies for CMAQ funds = 2-3.</td>
<td>Not listed in plan; does not qualify for CMAQ funds; no significant air quality impacts.</td>
<td>No, and project will have moderate negative air quality impacts.</td>
<td>No, and project will have significant negative air quality impacts.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weighting: 2</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td><strong>10. Has local agency exhausted FTA/other funding sources?</strong></td>
<td>Yes, including filing of FTA 5309 application.</td>
<td>Yes, excluding FTA 5309 funding.</td>
<td>No, but FTA funding unlikely.</td>
<td>No, and FTA funding a possibility.</td>
<td>No, and FTA funding a strong possibility.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weighting: 3</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>11. Does project support private-non-profit (PNP) providers?</strong></td>
<td>Yes, new vehicle for PNP provider that scored above 90 on FTA 5310 ranking.</td>
<td>No.</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weighting: 4</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>12. Will project support coordinated service or brokerage?</strong></td>
<td>Yes, with 5 or more agencies participating.</td>
<td>Yes, with 3 agencies participating.</td>
<td>No.</td>
<td>No, even though coordinated system/brokerage is in operation in community.</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weighting: 5</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>13. Increased mobility for the disadvantaged.</strong></td>
<td>Increased mobility for elderly, persons with disabilities, or economically disadvantaged is a major benefit of project and/or necessary for existing facility or system to comply with ADA.</td>
<td>Increased mobility for elderly, persons with disabilities, or economically disadvantaged is a moderate benefit of project.</td>
<td>Meets ADA requirements and has limited benefits for mobility disadvantaged.</td>
<td>Will require substantial cost to meet ADA requirements.</td>
<td>No Intention/Impossible to meet ADA requirements.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weighting: 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>13. Other factors not specified.</strong></td>
<td>Each PEB member is allocated 2 points for each project scored. Between 0-5 points may be allocated to each project from this &quot;pool&quot; of points. Points from Transit, Remote, Rural/Urban and other STIP categories must be used for projects within the same category.</td>
<td>Negative points may be assigned to projects that are excessive in scope, cost or deemed not in state’s interest. If negative points assigned, 4 or more PEB members must jointly agree and identify the reasons for this decision.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weighting: 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Maximum Weight: 47
**Step 3: Project Evaluation Board – Ranking and Scoring**

- Project Evaluation Board (PEB) consists of 6 senior members of AKDOT
  - Deputy Commissioner, Operations (Chair)
  - Director, Statewide Planning
  - 3 Regional Directors, Northern, Central, Southeast
  - Director, Statewide Design & Engineering Services
- Each member scores projects after presentation
- Average of scores used to select projects

**Step 4: Project Prioritization**

- Prioritization based on average of project scores received from PEB
- Assemble ranked projects into list
- Public review of project list

**Step 5: STIP Programming & Approval**

- Prepare Draft STIP
- Public comment on Draft STIP
- Prepare Final STIP amended with public input
- Final STIP attached to State Capital Budget
AKDOT: Pros and Cons

• Pros
  √ Clear and consistent decision-making process
  √ Defined policy goals
  √ Weighted and measurable qualitative and quantitative criteria
  √ Cost estimate conducted for each project
  √ Average regional and local involvement

• Cons
  – Too many goals dilutes focus
  – Goals and criteria are reactive, not based on proactive vision
  – Not evaluated on per capita basis
  – No cost-benefit analysis, cost effectiveness or optimization approach to priority setting
  – No ongoing scientific measurement of effectiveness of investments
ATLANTA, GEORGIA

Atlanta Regional Commission: Long-Range Projects
(6+ years)
Aspirations Plan
- Phase I of the regional planning process
- Not financially constrained
- Comprises a comprehensive list of all the transportation investment strategies needed in the Atlanta region to truly battle congestion and to improve mobility
- Forecasted about $74 billion in total investment needed

Regional Transportation Plan: Mobility 2030
- Phase II of the regional planning process
- Financially constrained
- Identified $53 billion in available funding sources
- Four goals for Mobility 2030:
  1. Improve accessibility and mobility options for all people and goods.
  2. Maintain and improve system performance and preservation.
  3. Protect and improve the region’s environment and quality of life.
  4. Increase the safety and security of the transportation system.
Mobility 2030: Evaluation Criteria*

1. Major system scan
2. Retain active projects with financial commitment
3. Focus on developed areas
4. Regional Development Plan policy support
5. Connectivity among centers
6. Benefit/Cost Ratio**
7. Congestion relief**
8. Level of safety improvement
9. Environmental benefits
10. Regional equity scan

* All evaluation criteria weighted at 9-11%

** Criteria definition and weights altered by policy recommendations in 2006
Governor’s Congestion Mitigation Task Force

• Organized in 2006 to develop policy recommendations to alleviate rapidly growing congestion in Atlanta metropolitan region

• Task Force offers the following recommendations for adoption by the Georgia Department of Transportation (GDOT), Atlanta Regional Commission, the Georgia Regional Transportation Authority, and the State Road and Tollway Authority:
  – Refining the current project selection process for the financially constrained Atlanta Regional Transportation Plan to increase the weighting of the congestion factor to 70% from 11%.
  – All four agencies develop and implement a technically consistent and transparent methodology for benefit/cost analysis.
  – Travel Time Index be used to measure improvement in congestion, and a regional Travel Time Index goal of 1.35 by 2030 for the Atlanta nonattainment area.

• Implications of policy recommendations:
  – Make congestion relief the priority in selecting projects.
  – Maintain consistency across the board for evaluation criteria weights and projects selection methodology.
  – Set benchmark against which congestion improvement will be measured.

• All four organizations are currently negotiating details of agreement for implementation of policy recommendations
ARC: Process (Overview)

Step 6: Final Approval
- ARC staff and committees
- 1 month

Step 5: Project Prioritization
- Compare composite score of projects to determine its order of rank and priority
- ARC
- 12 months

Step 4: Benefit/Cost Ratio Score
- Determine benefit/cost ratio of projects for congestion relief criteria only
- ARC
- 1 month

Step 3: Project Scoring
- Determine the score of project for each criterion
- ARC
- 1-2 months

Step 2: Project Evaluation
- Develop regional typology map for each evaluation criterion
- Analyze project’s location in relation to geographies of evaluation criteria map
- ARC
- 1-3 months

Step 1: Project Nomination
- Submit candidate projects and add projects to GIS map and database
- GDOT, ARC, Fulton County, municipalities and planning partners
- Continuous
## ARC: Process (Step-by-Step)

### Step 1: Project Nomination
- Submit projects to be included in the Regional Transportation Plan
- Incorporate project into an electronic map using Geographic Information System (GIS)

### Step 2: Project Evaluation
- Develop GIS map for each criterion
- Overlay all criterion maps with project map
- Analyze projects on the basis of their location with respect to the location of the geographies defined in the detailed descriptions of the evaluation criteria
- Determine which projects were active with financial commitment and received authorization for at least one project phase

### Step 3: Project Scoring*
- All criteria except congestion relief
  - Give each project a score of 0, 1, 2, or 3 which corresponds to a low, medium, or high score for each criterion
  - Score of 0 means the project did not receive a score for this criterion and this criterion did not factor into the average core and consequently the final score
  - The low, medium, or high score for each criterion are based on pre-defined standards
- Congestion relief score
  - Give project a score of 0 – 70 which corresponds to ARC and GDOT standards as yet to-be-determined
- * Scoring process is currently being reviewed by ARC and GDOT
### Step 4: Benefit/Cost Ratio Score

- Focuses exclusively on congestion relief criterion
- Benefit: congestion savings + wasted fuel reduction
- Cost: estimated engineering + estimated construction
- Benefit/cost ratio converted into numerical score and added to additional components of total congestion score

### Step 5: Project Prioritization

- Add numerical scores for all evaluation criteria to determine composite score for each project
- Calculate mean and standard deviation of this distribution of average scores
- Convert average scores to a score of low, medium, or high (i.e. 1, 2, or 3) using the mean and standard deviation of the distribution of average scores
- Prioritize projects
  - High score – any project with an average score higher than one standard deviation above the mean
  - Medium score – any project with an average score one standard deviation above and below the mean
  - Low score – any project with a score lower than one standard deviation below the mean
- Scores for the projects are absolute in the sense that they are not relative to the scores for other projects on the same or any other criterion
Appendices
Appendix 1.
National practices comparisons definitions

• Maintenance First – maintain system in a state of good repair
• Transportation Efficiency - ensure the efficient movement of people and goods
• Economic Development - ensure continued economic competitiveness
• Safety, Security & Health - ensure safety and security in travel and increase use of physically active modes
• Modal Split - goals that move state towards increased public transit use and intermodality and decrease single car use
• MPO Involvement - supports a cooperative transportation planning process
• Public Process - commitment to public involvement in planning process
• Weighted Criteria - quantitative and qualitative measures of transportation goals
• Per Capita Congestion Reduction - comprehensive indicators that consider benefits of shifts to alternative modes and more accessible land use rather than just impact on motorists
• Categorize Priorities (High, Medium, Low) - projects placed into three fiscally constrained priority categories
• Innovative Funding - leveraged federal dollars, public-private partnerships, etc., to maximize dollars allocated to projects
Appendix 2. MoDOT: Criteria and Measures

Access to Opportunity
- Eliminate bike/ped barriers (ADA) - points for improved bike connections, improved pedestrian connections or brings into compliance with Americans with Disabilities Act
- Vehicle ownership - percentage of households without a vehicle
- District factors/flexible points - MoDOT Districts can designate additional factors to be used to evaluate each investment goal

Congestion Relief
- Level of service - describes operational conditions within a traffic stream
- Daily Usage - annual average daily traffic/number of through lanes
- Functional Classification - greater character of service the more points awarded
- System Efficiency - promotes improved traffic flow without adding lanes to roadway
- District factors/flexible points - additional factors to be used to evaluate each goal

Economic Competitiveness
- Supports strategic economic corridor - whether the project improves strategic economic corridor
- Level of economic distress - poverty rates and unemployment levels within the project area or corridor
- Supports regional economic development plans - does this project or need comply with a Regional Economic Development Plan
- District factors/flexible points - additional factors to be used to evaluate each goal

Efficient Movement of Freight
- Truck volume - total commercial volume
- Freight Bottlenecks - does the project eliminate one or more freight bottlenecks
- District factors/flexible points - additional factors to be used to evaluate each goal
Quality of Communities
- Complies with Local/Regional Land Use Plans - does project comply with regional and local land use plans
- Connectivity - does the project improve a connection between activity centers or between cities and regions
- District factors/flexible points - additional factors to be used to evaluate each goal

Environmental Protection
- Environmental index - does the project require environmental mitigation
- District factors/flexible points - additional factors to be used to evaluate each goal

Safety
- Safety index - accident index, severity index, wet/dry index
- Accident severity - severity ratio (equivalent property damage only crashes/total number of crashes)
- Accident rate - average accident rate/statewide accident rate
- Safety concern - trends in customer service and public input
- Safety enhancements - needs for safety enhancements
- District factors/flexible points - additional factors to be used to evaluate each goal

Taking Care of the System (Roadway/Bridge)
- Pavement smoothness - smoothness of roadway
- Pavement condition - distresses in pavement condition
- Bridge condition - rating from best to worst for deck, substructure and superstructure
- Exceptional bridge - does the project rehabilitate or replace an exceptional bridge
- Truck usage - estimated volume of trucks/number of driving lanes
- Substandard roadway features - must meet standards of long-range transportation plan
- Substandard bridge features - must meet standards of long-range transportation plan
- District factors/flexible points - additional factors to be used to evaluate each goal
Appendix 3.
ODOT: Criteria and Measures

**Transportation Efficiency**
- **Average daily traffic** - volume of traffic on a daily average
- **Volume to capacity ratio** - a measure of a highways congestion
- **Roadway classification** - a measure of highways importance
- **Macro corridor competition** - Whether the project contribute to the completion of a macro corridor
- **Percentage of vehicles diverted** - percentage of vehicles projected to be diverted from current location in twenty years
- **Number of impediments avoided** - the number of recurrent congestion points that would be avoided by the bypass
- **City size** - population of city/cities of project location

**Safety**
- **Accident Rate** - number of accidents per 1 million miles of travel during a 3-year period

**Economic Development**
- **Job Creation** - level of non-retail jobs the project creates
- **Job Retention** - evidence that the job will retain existing jobs
- **Economic Distress** - points based upon the severity of the unemployment rate of the country
- **Cost Effectiveness of Investment**
  - ratio of the cost of the jobs created and investment attracted
  - determined by dividing the cost to the Ohio for the transportation project by the number of jobs created
- **Level of Investment** - level of private sector, non-retail capital attracted to Ohio because of the project

**Funding**
- Public/Private/Local Participation
- Does this project leverage additional funds which allow state funds to be augmented?

**Intermodality Connectivity**
- Does this project have some unique multi-modal impact?

**Urban Revitalization**
- Does this project provide direct access to cap zone areas or Brownfield sites?
Appendix 4.
ARC: Criteria and Measures

### Active Projects with Financial Commitment

The planning process is structured to allow for shifts in regional priority. However, it is expected that not all the region’s priorities will change from one RTP update to the next. There must be some continuity of priorities across various iterations of regional transportation plans otherwise projects never get implemented. ARC has placed an emphasis on continuity between the 2025 RTP and the 2030 RTP. Projects in the 2025 RTP have a level of priority consideration in selecting projects for the 2030 RTP.

The method used to define continuity between plans is the TIP. ARC will give priority to projects in the TIP that have received funding authorization for one or more phases. This funding authorization will also be interpreted as continued local political and financial commitment to the project.

<table>
<thead>
<tr>
<th>Project Score</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>The project has to have had at least one phase (PE, ROW, or CST) authorized.</td>
</tr>
<tr>
<td>Low</td>
<td>The project has not had a phase (PE, ROW, or CST) authorized.</td>
</tr>
</tbody>
</table>

### Regional Development Plan Policy Support

The Atlanta region has in place a Regional Development Plan (RDP) that provides a blueprint for coordinated regional development. The RDP has at its core a set of polices that set the framework for the plan. ARC understands that the location of transportation investments can have significant impact on how land is used and where development is located. ARC seeks to reinforce the policies of the RDP via the long range Regional Transportation Plan. One significant method of tying the two plans together is by making transportation funding decisions based in part on an evaluation of how well each project does at implementing the policies of the RDP.

ARC’s comprehensive planning staff reviewed the policies in the RDP and concluded that those listed below are directly applicable to the evaluation of transportation projects. The evaluation of projects against these policies will be based on existing regional GIS coverages, the RDP Guidebook, and the staff’s knowledge of the land use regulations in each of the region’s local jurisdictions.

<table>
<thead>
<tr>
<th>Policy #</th>
<th>Policy Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Provide development strategies and infrastructure investments to accommodate forecast population and employment growth more efficiently.</td>
</tr>
<tr>
<td>2</td>
<td>Increase opportunities for mixed-use development, infill and redevelopment.</td>
</tr>
<tr>
<td>3</td>
<td>Guide an increased share of new development to the Central Business District, transportation corridors, activity centers and town centers.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Score</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>At a minimum, the project must meet policy 3 and either 1 or 2</td>
</tr>
<tr>
<td>Medium</td>
<td>At a minimum, the project must meet either policy 1 or 2</td>
</tr>
<tr>
<td>Low</td>
<td>Project does not meet either policy 1 or 2</td>
</tr>
</tbody>
</table>
**ARC: Criteria and Measures**

### Connectivity Among Centers

In the 2025 RTP, ARC placed a new and significant emphasis on the development and redevelopment of the activity centers and town centers in the region. The Livable Centers Initiative (LCI) was a program in the last RTP which dedicated $5 million over five years for localized comprehensive plan development in the region’s activity and town centers. These planning studies were backed up with $350 million committed to the implementation of transportation projects identified in the studies. It is the intent of ARC to continue this commitment to the region’s centers in this RTP. ARC has included as a project evaluation criterion for this plan the level of connectivity among activity centers, town centers, designated LCI areas, and transit stations provided by the transportation project.

ARC staff will conduct a GIS based overlay analysis on the RTP projects with respect to a regional typology map on which activity centers, town centers, LCI area, and transit station areas have been identified. Below is a textual description of each of these areas.

<table>
<thead>
<tr>
<th>Area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity Center</td>
<td>An activity center is an area that includes office, retail, service, residential, or civic uses that create a central focus for a larger area. Activity centers may or may not have a historical or political jurisdiction as the basis of their location. Large activity centers have significant amounts of office, retail industrial, or service employment. An activity center also has generally recognizable boundaries.</td>
</tr>
<tr>
<td>Town Center</td>
<td>A town center typically represents the historic center of a municipality. These areas were historically the center of the community and had a mix of commercial and civic uses. A town center should have a recognizable boundary.</td>
</tr>
<tr>
<td>LCI Area</td>
<td>An LCI area is a geographical locality to which ARC has granted funds for the purpose of small scale comprehensive planning. An LCI area has definite boundaries.</td>
</tr>
<tr>
<td>Transit Station Area</td>
<td>A transit station area is defined as a one-half mile buffer around a fixed guideway transit station.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Score</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Project must link two or more of the defined areas AND At least one of those areas must have a rail station, BRT station, or significant bus transfer station</td>
</tr>
<tr>
<td>Medium</td>
<td>Project must link at least two of the defined areas</td>
</tr>
<tr>
<td>Low</td>
<td>Project does not connect at least two of the defined centers</td>
</tr>
</tbody>
</table>
ARC: Criteria and Measures

**Congestion Relief**

The Atlanta region’s Congestion Management System (CMS) maintains an inventory of the most congested corridors in the region as well as offering context appropriate solutions to that congestion. The CMS demonstrates that congestion continues to be a problem for the Atlanta region. The relief of congestion remains a central tenant of the RTP. The degree to which a project reduces congestion is one of the criteria against which ARC measures and selects projects for the RTP.

ARC’s most recent CMS identified 73 priority corridors in the region for improvement. Additionally it contains a congestion monitoring network of congested facilities in the region. These aspects of the CMS are the defining attributes for determining how a project will score on the congestion relief criterion.

<table>
<thead>
<tr>
<th>Project Score</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Project is on one of the 73 priority facilities identified in the CMS</td>
</tr>
<tr>
<td>Medium</td>
<td>Project is on a congested facility contained in the congestion monitoring network as defined in the CMS</td>
</tr>
<tr>
<td>Low</td>
<td>Project is neither on a priority corridor nor the congestion monitoring network</td>
</tr>
</tbody>
</table>

**Safety Improvement**

ISTEA and TEA-21 both placed heavy emphasis on protecting the safety of the users of the transportation system. It is expected that the upcoming federal transportation reauthorization bill will place even greater emphasis on improving the safety of the transportation system. Because ARC believes that safety is one of the greatest concerns to be considered when planning the region’s transportation system, it is included it as a project evaluation criterion.

ARC obtained accident data from the Georgia Department of Transportation in a GIS shapefile format. The accident data with overlaid on a shapefile of the transportation projects being considered for the plan. The number of accidents per mile was determined for each of the project under consideration -- and projects ranked against one another on the basis of this number.

<table>
<thead>
<tr>
<th>Project Score</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>The number of accidents per mile along the project was higher than one standard deviation above the mean for the distribution of the number of accidents per mile for all projects under consideration.</td>
</tr>
<tr>
<td>Medium</td>
<td>The number of accidents per mile along the project was within one standard deviation above or below the mean for the distribution of the number of accidents per mile for all projects under consideration.</td>
</tr>
<tr>
<td>Low</td>
<td>The number of accidents per mile along the project was lower than one standard deviation below the mean for the distribution of the number of accidents per mile for all projects under consideration.</td>
</tr>
</tbody>
</table>
**Environmental Considerations**

With the passage of TEA-21, the federal government attempted to better integrate the considerations of the environmental/project implementation process into the planning process. ARC has investigated, at a regional scale, the potential impacts of transportation projects to the built and natural environments. ARC has incorporated these impacts into the evaluation process for projects. This process is a rather cursory examination and detailed design of projects in the preliminary engineering phases could yield further environmental impacts.

ARC used existing regional GIS coverages to perform a spatial analysis of potential impacts to the built and natural environments. ARC has taken into account the following resources in its analysis:

- National Parks
- State Parks
- Regional Parks
- National Forests
- Historic Resources
- Threatened and Endangered Species Habitat
- Water Supply Watersheds
- Chattahoochee River Corridor

<table>
<thead>
<tr>
<th>Project Score</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High</strong></td>
<td>Project does not impact any of the above mentioned resources</td>
</tr>
<tr>
<td><strong>Medium</strong></td>
<td>Project impacts only one of the following: regional park, historic resource, threatened and endangered species habitat, water supply watershed, or Chattahoochee River corridor <strong>AND</strong> Project has the ability to minimize and/or mitigate its impacts</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td>Project impacts a National Park, State Park, National Forest, water supply watershed, or Chattahoochee River corridor <strong>OR</strong> Project impacts more than one of the other resources mentioned above <strong>AND</strong> Project is unable to minimize and/or mitigate its impacts</td>
</tr>
</tbody>
</table>
ARC: Criteria and Measures

Regional Equity

One of ARC’s guiding principles is Environmental Justice (EJ). ARC is concerned with the equitable distribution of transportation investments on both a geographic and demographic dimension. Staff included regional equity concerns in the development of the draft 2030 RTP in the form of a project evaluation criterion.

ARC, in conjunction with its EJ Planning Team, has identified three factors which will be used to evaluate the projects on the basis of regional equity:

- The location of the project with respect to geographic areas defined as EJ communities;
- The connectivity of the project with respect to EJ communities and the larger transportation network; and
- The connectivity of the project with respect to EJ communities and Activity Centers in the region.

For the purposes of this evaluation criterion, the terms EJ community, transportation network, and Activity Center will be defined in the following way.

**EJ Community** – Any census block group that has a concentration of minority populations (African American, Hispanic, or Asian) and households below the poverty line that exceeds the regional average. Regional averages are listed below and based on 2000 Census data.

- African American – 30.4%
- Hispanic – 7%
- Asian – 3.6%
- Poverty – 9.1%

**Transportation Network** – Any minor arterial, major arterial, interstate, or fixed guideway or fixed route transit service.

**Activity Center** – The same set of geographic areas identified under the Connectivity Among Centers evaluation criterion.

<table>
<thead>
<tr>
<th>Project Score</th>
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</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>The project is in an EJ area and connects to either the transportation network or an activity center.</td>
</tr>
<tr>
<td>Medium</td>
<td>The project is in an EJ area and does not connect to either the transportation network or an Activity Center.</td>
</tr>
<tr>
<td>Low</td>
<td>The project is not located in an EJ area.</td>
</tr>
</tbody>
</table>
This evaluation criteria has changed to benefit/cost ratio pursuant to Congestion Mitigation Task Force policy recommendations.

**Cost Effectiveness**

Cost Effectiveness calculates the forecast amount of savings a project yields. This statistics is based on “cost of congestion.”

**Methodology**

1. **Travel Demand Model Testing** – The Aspirations Plan network (a build scenario) is tested. The results from two model runs are used to conduct the project level cost effectiveness analysis:
   - 2030 Plan
   - 2030 No-build
2. **Identification of Projects** – Each roadway link that corresponds to project is identified to allow for technical analysis.
3. **Calculate Project Area Congestion Delay Costs** – Delay and costs of congestion are calculated for each facility:
   - Congested (loaded network) time minus free-flow time of travel (unloaded network) = total hours of delay for the facility
   - SOV trips + (HOV trips*average persons per vehicle) + (Truck trips*average persons per vehicle) = person trips using the facility
   - Total hours of delay for the facility * person trips using the facility * delay cost per hour ($13.25) * number of work days per year (250) = DELAY COSTS
4. **Calculate Project Area Wasted Fuel Costs** – Estimated wasted fuel costs are calculated based on:
   - Travel delay for the facility * congested peak period speed for the facility / average fuel economy (18.03) * 250 working days per year = WASTED FUEL COSTS
5. **Calculate Total Costs of Congestion for the Facility**
   - DELAY COSTS + WASTED FUEL COSTS = COSTS OF CONGESTION
6. **Calculate the Benefits of the Implemented Project Vs. the No-Build**
   - No-Build costs of congestion (for the facility) – Plan costs of congestion (for the facility) = Net Annual Benefit for Project Implementation
7. **Compare Net Annual Benefit Against Project Costs** – Payback periods for each project are developed.

<table>
<thead>
<tr>
<th>Project Score</th>
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</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Higher scoring projects are those that pay for themselves in congestion savings during 6 years or less.</td>
</tr>
<tr>
<td>Medium</td>
<td>Medium scoring projects are those that pay for themselves in congestion savings between 6 and 25 years.</td>
</tr>
<tr>
<td>Low</td>
<td>Lower scoring projects are those that pay for themselves in congestion savings beyond 25 years.</td>
</tr>
</tbody>
</table>
Appendix 5.
How Illinois spent Illinois FIRST

In 1999, the Illinois General Assembly approved a 5-year statewide capital improvement program, called "Illinois FIRST - "Fund for Infrastructure, Roads, Schools & Transit." Governor George Ryan called it a $12 billion program to rebuild the State's crumbling infrastructure. But in reality the program raised about $6.3 billion in new state revenues from higher fees and taxes.

The Metropolitan Planning Council conducted an investigation into where and how the Illinois FIRST $4.1 billion transportation dollars were spent to inform the development of a new state transportation capital program.

1. Roads: Key Findings
Roads received $2.8 billion.

No information on the breakdown of Illinois FIRST road dollars is publicly available nor could be obtained from Illinois Department of Transportation or other state administrative office.

2. Transit: Key Findings
Transit, primarily the Regional Transportation Authority, received $1.3 billion.

Transit agencies used Illinois FIRST funding to leverage federal grants to build or repair transit infrastructure, buses and rail cars.

- **State funds** – $1.3 billion
- **Federal funds** - $698 million
- **Total funds** - $1.998 billion
Appendix 5.

A. CTA Projects

State - $650 million

Federal - $644 million

Total - $1.294 billion

B. Metra Projects

State - $585 million

Federal - $48 million

Total - $633 million
Appendix 5.

C. Pace Projects

State - $65 million

Federal - $6.3 million

Total - $71.3 million