



## Quantitative Selection

With the passage of MAP-21, states and transportation management areas are required to develop a competitive process for eligible entities to submit Transportation Alternatives projects. Many states already use competitive or quantitative processes for selecting projects to increase transparency, openness, objectivity, and to improve project quality. Processes vary from rigidly numeric to entirely qualitative and states also vary in how much local control they allow over project selection. Most states opt for a combination of local advice and state decision-making as local knowledge of both projects and applicants helps TE programs select the most successful projects, but state DOTs also possess a broad range of very specific technical expertise related to Federal-aid highway program procedures. This brief provides an overview of four states' competitive processes and offer recommendations for implementing new selection criteria.

	Comparative/Ranking	Scored/Numerical
<b>Regional</b>	Oregon (Local Support)	Ohio (District Score)
<b>State</b>	North Dakota	Arizona Oregon (Technical Rating) Ohio (State Score)

### Arizona

The Arizona Department of Transportation (ADOT) has an evaluation system which involves four separate scoring criteria. The first is ADOT Transportation Enhancement Staff Application Completeness Score which is worth up to 5 points for having the required elements included in the application. Next is the ADOT Constructability Score which is also worth up to 5 points and awards points for the accuracy of the application as reflected by observations during a staff field visit to ensure there are no possible construction and/or budgetary issues.

Evaluation Criteria	Points Possible
ADOT Completeness Score	5
ADOT Constructability Score	5
Reading Score	40 (10 each)
Description	10
Need	10
Cost Estimate	10
Appendix	10
Discussion Score	30
<b>Total</b>	<b>80</b>

The next section, the Transportation Enhancement Review Committee (TERC) reading score, has four criteria worth 10 points each. The Description Score judges whether the application clearly explains what and where the project is. The Need Score is based upon proof of community support or impact and providing details related to connectivity, safety, quality of life, and other important factors. The Cost Estimate Score judges whether all of the costs are included in the application and if the estimates match the description of the project. The Appendix Score is based upon the completeness of required appendices, quality of appendices, and whether additional appendices which improve the understanding of the project are included.

Finally, the Discussion Score is worth 30 points and is based on how well the application holds up under scrutiny and discussions at an application review meeting. More points are awarded to projects which do not need further clarification, have constructability reports which support the information as presented in the application, and do not have inconsistencies or unidentified problems arise during the discussion process.

The sum of the criteria above forms the raw score for a project which is used to create a draft list of projects prioritized by total score. This list, along with a non-numeric local agency ranking is given to the TERC on the final day of the review meeting. This draft list of projects is then used to discuss which projects can be advanced based upon funding levels and to distinguish between projects with the same score.

## Ohio

Ohio uses a 100 point system for rating applications, with 50 of those points scored at the ODOT district level and 50 scored through the Office of Local Projects. The District evaluation is more technical in nature and takes into account the technical plans, applicant's history, and includes a site visit. The Office of Local Projects' evaluation uses category-specific criteria to determine the need and quality of the project.

The District evaluation begins by reviewing the project delivery and maintenance record of the sponsor on previous projects. Sponsors with satisfactory or no experience receive no points but points can be deducted for a history of problems with delivery or maintenance. Projects that provide benefits to multiple modes of transportation or involve multiple eligible activities earn extra points. Projects are also scored based upon the quality of their cost estimates with accurate and detailed estimates scoring higher. The Project Quality and Viability section is based on the extent of the project's strengths and weaknesses, proof of public awareness of the project, and whether or not the enhancement is to planned or previously completed projects. A District Project Assessment is the final piece of the evaluation and is completed following an initial field review by district personnel. This assessment evaluates projects based upon perceived strengths and weaknesses, accuracy of estimate and schedule, appropriateness of scope, potential obstacles, experience with the sponsor, and LPA financial status with ODOT.

The second part of the evaluation is worth 50 points and is conducted by the Office of Local Projects. Projects fall into either category 1 – Historic and Archaeological, category 2 – Scenic and Environmental, or category 3 – Bicycle and Pedestrian projects. Historic and Archaeological projects are evaluated based upon project usage, historical importance, and historical characteristics. For example, a project with usage of over 20,000 people at a National Landmark which is representative of a significant period in Ohio's history would receive the full 50 points.

Scenic and Environmental projects are evaluated on estimated user base near project and the project characteristics. Finally, bicycle and pedestrian projects are evaluated based upon relationship to the transportation system, project usage, and project characteristics.

Evaluation Criteria District Evaluation	Points Possible	
	Min.	Max
Project Delivery and Maintenance	-10	0
Multiple Enhancements Components	0	10
Cost Estimates	-5	5
Project Quality and Viability	-15	20
District Project Assessment	0	15
<b>Total</b>	-30	50

After projects have been scored, they are passed on to the project selection committee. This committee consists of Office of Local Projects’ personnel, at least three district Transportation Enhancement Coordinators, and a representative from the Federal Highway Administration. The committee reviews the combined scores and makes funding recommendations to the Deputy Director. Project selection takes into account the score but also considers merit, availability of funding, geographic distribution of funding, and whether projects are planned in conjunction with other projects.

## North Dakota

North Dakota has a unique system that works well in states with limited funding or a small pool of applications. Rather than scoring each application against a rubric, the North Dakota method allows direct comparisons of the projects with the result being a neatly ordered list of priority projects. Each project’s score is the number of projects it compared favorably to. Since there is no rubric and the rankings are more subjective, each criterion does not have a given weight, but instead contributes to the overall evaluation of a project.

NDDOT uses a worksheet like Figure 3 below to compare each project application with one another. When deciding which project is better, NDDOT considers the benefit to the community, region, and/or state, environmental impact of the proposed project, whether or not there is demonstrated support from the general public, local governmental agencies, and/or non-profit organizations, whether the project is part of an identified plan, the benefits to the existing transportation system, and if it uses Youth Conservation Service or Jobs Corps in the projects construction.

The process works by comparing each project to every other project in consideration. Imagine project A is a nice trail alongside a road with moderate traffic and project B is a bridge that would bypass the most dangerous intersection in town. NDDOT decides the safety benefit to the community of project B is a higher priority than project A, so we circle B. Next, consider project C is a visitor center for a historic highway that would boost a town’s tourism, but the transportation benefits of project A are more in line with the state’s priorities, so we circle A.

Next, project D would preserve the oldest train station in North Dakota which is threatened by a proposed development. It is both urgent and one of the state’s top priorities so we circle project D. This process continues until each project has been compared to every other one. You then tally the how many times each project was circled.

**Figure 3. Sample Scoring Sheet**

# of Times Circled

A.	<u>  3  </u>	A/ <u>B</u>	<u>A</u> /C	A/ <u>D</u>	<u>A</u> /E	<u>A</u> /F
B.	<u>  4  </u>	<u>B</u> /C	B/ <u>D</u>	<u>B</u> /E	<u>B</u> /F	
C.	<u>  2  </u>	C/ <u>D</u>	<u>C</u> /E	<u>C</u> /F		
D.	<u>  5  </u>	<u>D</u> /E	<u>D</u> /F			
E.	<u>  0  </u>	E/ <u>F</u>				
F.	<u>  1  </u>					

  15   Total Points – The sum of the points column should always equal 15

At the end, we have the order of funding priority, with the highest number indicating the highest priority project. In this case project D was circled 5 times, meaning it was selected over every other project and would be considered the highest priority project. This process becomes more complicated as you increase the number of applications. It is a great system for small states and for regions of larger states because it considers each project holistically instead of against a rigid set of criteria that may or may not reflect changing public priorities.

## Oregon

Oregon uses a hybrid approach. At the state Department of Transportation level, they have a technical rating system similar to Arizona’s and Ohio’s state-level evaluation. At the local level they use a parallel rating process that allows for public comment online. Survey results are factored into a separate “local support” score that combines public input and regional priorities. The best projects will rank well on both technical rating and local support. Secondary consideration is given to whether the project fits in a “Focus Area” adopted as a program goal.

The local support score is calculated through a free online survey. The survey allows Oregonians to comment on proposed projects in their region by indicating their level of support for the projects. For the projects they strongly support or strongly oppose, they can choose two reasons out of a list of seven as to why they feel this way. Having residents choose from a list of reasons allows for much easier processing on the part of the Oregon Department of Transportation (ODOT) while still factoring in diverse reasons for supporting or not supporting a particular project. Enhances travel options, addresses a safety concern, and provides a needed transportation connection are examples for “strongly support” responses. Costs too much, not needed, and low priority compared to other needs are examples of responses for “do not support”.

This local support score is coupled with a technical rating which consists of a legacy benefit, system benefit, community benefit, user benefit, and importance & need score. The legacy benefit score considers whether the project is of lasting value and if it is an appropriate and cost-effective use of funding.

The system benefit score considers the relationship to existing bicycle and pedestrian systems, connectivity, multi-modal benefits, preservation of facilities, and safety. The community benefit score rewards projects which positively impact livable communities, economic development, environmental quality, conservation and sustainable energy, long-term employment, and healthy and active lifestyles. The user benefit score takes into account potential daily use, segments of the population served, expanded transportation choices, improvement over current conditions, and qualitative difference in the transportation experience such as comfort, convenience, or ease of access. Finally the importance & need score looks at the relative priority within the community, relationship to adopted plans, urgency, and the opportunity to match with other funding. The total amount of points available for this section is 50.

<b>Evaluation Factors</b>	<b>Points</b>
Legacy Benefit	10
System Benefit	10
Community Benefit	10
User Benefit	10
Importance & Need	10
Local Support Score	50
<b>Total</b>	<b>100</b>

Oregon Department of Transportation staff uses these combined ratings to advance projects which have high or very high local support and technical ratings. After this, projects with a high technical rating and medium local support and focus area fit or those with high local support and a medium technical rating and focus area fit are selected. Next, projects with very high technical rating or local support but medium focus area fit are considered. These rankings are used to prioritize the projects and special attention is given to ensure that at least three projects are selected from each ODOT region.

## **Advisory Committees**

In Arizona, the Transportation Enhancements Review Committee is made up of 17 voting members. This includes one non-voting Federal Highway Administration member, one Arizona State Transportation Board member, one Arizona Department of Transportation member, one Maricopa Association of Governments member, one Pima Association of Governments member, seven members from other COGs and MPOs, one Arizona Historic Advisory Commission member, one Arizona Commission on the Arts member, one Arizona Office of Tourism member, one Arizona State Parks Board member, and one Arizona Bicycle Statewide Representative member.

The Ohio DOT Project Selection Committee is made up of Office of Local Projects' personnel, at least three Transportation Enhancement Coordinators from different districts, and a representative from FHWA. The Selection Committee makes recommendations to the Deputy Director based on the scores, value, and availability of funding.

The Oregon DOT has a Transportation Enhancement Advisory Committee which assists in project selection. This committee is made up of four local government representatives nominated by the League of Oregon Cities and Association of Oregon Counties (two each), four ODOT staff selected by the ODOT Director including the TE Program Manager and ODOT Community Solutions Team Liaison, and two members from the general public with no ties to special interests groups.

The Director of the North Dakota DOT established a 10-person Task Force to aid in project selection. This Task Force consists of one member from each of the following organizations: North Dakota Department of Commerce Division of Tourism, North Dakota Department of Transportation, North Dakota Indian Affairs Commission, North Dakota Parks & Recreation, and the State Historical Society of North Dakota. One person is selected to represent all three metropolitan planning organizations in North Dakota. The remaining four members are selected based upon population with one member for cities with populations above 5,000, cities with populations below 5,000, counties with populations below 5,000, and counties with populations above 5,000.

Just as project selection criteria takes into account a mixture of technical considerations and public opinion, good project selection or advisory committees have a diverse range of members. It is important to include transportation experts or those involved with the TE program on the committee as these members have the technical knowledge to understand which projects are feasible. Second, all four of these committees include members from local government organizations. These members help view projects from a local ground level standpoint. Since the TE program includes eligibilities for the archaeological activities and historic preservation, including members from historic preservation groups or arts councils can provide additional expertise to the committee. To help judge economic impact or business concerns it is a good idea to include members from local or state chambers of commerce or tourism offices. To round out the committee and represent the interests of the general public, some states include a member from the general public with no specific interests. For selection committees to be the most successful it is important to design selection committees which are representative of all invested stakeholders.

## Conclusion

Competitive selection processes help states balance many factors in project selection. For most states, establishing this process is the most valuable part because it forces a dialogue about priorities before any projects are approved. Arizona, Ohio, Oregon, and many other states post clarified selection criteria online which improves understanding of state priorities for applicants. With this increased understanding, the quality of applications should improve, making the TA program more effective overall.

There are many attributes which can make up selection criteria. Incorporating some degree of local input or comment provides a number of benefits. Since these projects are usually local, small-scale projects, inviting public comment will help to determine which projects are most important to each community. To balance this local opinion, including technical criteria such as feasibility, quality of cost estimates, or safety improvements will help rank projects which are locally popular and are designed for success. While many of the above examples are quantitative, almost all contain some degree of subjectivity. Prioritizing and ranking projects is great but attention should still be paid to the applicant's history, geographic distribution of funding, and completeness or quality of the application.

The combination of regional influence, geographic distribution, technical merit, and public support help to create a project selection process that reflects each state's own priorities.

**DISCLAIMER:** The information presented in this brief is representative of current or past state practices and in no way reflects the future policies of each state's Department of Transportation. This brief is intended for educational purposes only.

## Appendix 1 – Ohio Evaluation Criteria

### TRANSPORTATION ENHANCEMENT SCORING CRITERIA 2008 DISTRICT EVALUATION

District Evaluation – 50 total points.

- a. Project Delivery and Maintenance. Sponsor's past performance on the delivery and maintenance of ODOT projects. The total point value is 0 to -10.

0	Satisfactory past project performance, or no project delivery experience
-5	Major problems or unsatisfactory performance with delivery
-5	Major problems or unsatisfactory performance with maintenance

Comment on Score:

- b. Multiple Enhancement Components. The proposed project provides benefits to users of multiple transportation modes and/or incorporates elements of more than one eligible Transportation Enhancement activity. The maximum total point value is 10 points.

10	Provides benefits to users of multiple transportation modes AND incorporates elements of more than one eligible Transportation Enhancement activity.
5	Provides benefits to users of multiple transportation modes OR incorporates elements of more than one eligible Transportation Enhancement activity
0	Project does not have multiple enhancement components.

Comment on Score:

- c. Cost Estimates. Determination as to accuracy and detail of cost estimates. The maximum total point value is 5.

5	Cost estimates are accurate and have sufficient detail
3	Cost estimates are moderately high or low and have sufficient detail
-5	Cost estimates are not accurate and/or have insufficient detail, and/or contain ineligible costs

Comment on Score:



## Appendix 1 – Ohio Evaluation Criteria

- d. Project Quality and Viability. Extent of project=s strengths or weaknesses; show of public support; and the proposed project is in conjunction with a planned or previously completed project. The maximum total point value is 20.

Project Strengths/Weaknesses	
5	Project has no obstacles
3	Project has minor obstacles
-5	Project has major obstacles

Demonstration of public awareness	
5	Sponsor has used various methods to inform public of project (e.g. news articles, website, support letters, part of local or regional plan) and virtually no known public opposition
3	Sponsor has made some effort to inform public and minimal opposition
0	Minimal awareness and/or some well documented opposition
-5	No awareness and/or demonstration of strong opposition from citizens, agencies or groups

Enhancement to Planned or Previously Completed Project	
10	Proposed project is an enhancement to a planned or recently completed project
0	Proposed project is a stand alone project, not in conjunction with a planned or recently completed project
-5	Proposed project negatively affects a planned or recently completed project

Comment on Score:

- e. District Project Assessment Form (attached). The ODOT District may allocate 0-15 points based on the District Project Assessment. The Project Assessment is completed following the initial field review by district personnel. The Project Assessment evaluates the project based on perceived strengths and weaknesses, accuracy of estimate and schedule, appropriateness of scope, potential obstacles, and experience with the sponsor and LPA financial status with ODOT. Provide a brief explanation of the basis for point determination. The maximum total point value is 15.

Points: \_\_\_\_\_

**Appendix 1 – Ohio Evaluation Criteria**

**DISTRICT PROJECT ASSESSMENT**  
**Item (e.) of the District Scoring Criteria (0-15 points)**

<b>District</b>	<b>Program</b>	<b>Sponsoring Agency</b>
<b>Date</b>	<b>Reviewer</b>	<b>Project Name</b>

<b>FY Funds Are Requested:</b>	
<b>Amount Requested:</b>	
<b>Project Description and Development:</b>	
<b>Strengths and Weaknesses of the Project:</b>	
<b>Is the Project Estimate Realistic?</b>	
<b>If not wholly funded, can this project be successful with partial funding?</b>	
<b>Is the Project Schedule Realistic?</b>	
<b>Is the Project Scope Appropriate?</b>	
<b>Potential Obstacles?</b>	
<b>Experience with Sponsor?</b>	
<b>LPA Financial Status with ODOT</b>	
<b>Does the District Recommend Funding?</b>	

<b>Additional Comments:</b>

## Appendix 1 – Ohio Evaluation Criteria

### Category I – Bicycle and Pedestrian – 50 Points

**Relationship to Transportation System.** Need(s) the proposed project will address. The maximum total point value is 25.

10	Included in the regional bicycle plan
5	<b>OR</b> Included in an adopted local bicycle or pedestrian plan
10	Completion /maintain of a missing link on a national or statewide facility
5	<b>OR</b> Completion/maintain of a missing link on a local facility, or extension to existing trail
3	Provides new, or maintains, access to major destinations such as schools, shops, transit facilities, park and ride lots and other major community facilities
2	Enhances existing facility (e.g. benches, lighting, etc.)

**Project Usage.** The user base is a factor of census and employment data. A three-mile area is used for bicycle projects and a one-mile area is used for pedestrian projects. The maximum total point value is 10.

10	> 20,000
8	15,001 to 20,000
6	10,001 to 15,000
4	5,000 to 10,000
2	< 5,000

**Project Characteristics.** Degree to which the project addresses existing or future safety problems for bicyclists and/or pedestrians along the existing corridor. The maximum total point value is 15.

Legal Speed Limit 0-5	5	> 50 MPH
	4	40 to 50 MPH
	3	30 to 40 MPH
	1	<30 MPH
	0	No alternative roadway

Conflict Factor 0-10	4	Provide/maintains safe crossing at railroads, roadways or rivers
	4	Provide/maintain safe accommodation for bicyclists and/or pedestrians parallel to railroads, freeways or rivers
	1	Eliminates one or more intersections
	1	Eliminates ten or more driveways

## Appendix 1 – Ohio Evaluation Criteria

### Category II - Scenic and Environmental – 50 points

**Estimated user base within a logical distance from the project.** The user base is a factor of census and employment data for individuals within a one-mile area surrounding the project. An alternative user base is the number of vehicles that pass the location on a daily basis (ADT). The maximum total point value is 15.

Residents & Workers		<b>OR</b>	Vehicles	
5	<5,000		5	<10,000
10	5,000 to 20,000		10	10,000 to 20,000
15	>20,000		15	>20,000

**Project Characteristics.** Degree of the project=s environmental and visual impact. The maximum total point value is 35.

10	The project will remove an existing visual blighting influence or will substantially enhance the visual environment (i.e. context sensitive design).
10	The project is a good use of public dollars that can be quantified with short- and long-range economic benefits (i.e. promotion of tourism, enhancement of central/downtown business district, context sensitive design).
5	The project is unique to the area’s identity
5	The project will have a positive influence and/or mitigate a site that is at risk of continued deterioration
5	The project is located within a historic district currently listed on the National Register of Historic Places

## Appendix 1 – Ohio Evaluation Criteria

### Category III - Historic and Archaeological – 50 Points

**Project Usage.** Estimated user base within a logical distance from the project. This is the approximate number of people who may have a direct benefit from the proposed project on an annual basis (e.g. the number of visitors to the site or facility, or the number of vehicles driving past a site). The maximum total point value is 15.

15	>20,000
10	5,000 to 20,000
5	<5,000

**Historical Importance.** Extent that the project preserves a historically or archaeologically significant site. The maximum total point value is 15.

15	Site is a National Landmark
10	Site is on National Register
5	Site is eligible for inclusion on National Register

#### OR New Transportation Museums

15	Construction of a new facility or wing to an existing facility (enhances existing facility)
10	Conversion of an existing facility, such as railroad stations or historic properties (stand-alone)
5	The purchase of artifacts or displays for the creation and operation of the facility.

**Historical Characteristics.** Number of historic characteristics the project possesses. The maximum total point value is 20.

5	The site is representative of a significant period in Ohio's history
5	The site involves the use of materials or techniques that are historically or archaeologically unique.
5	The site was designed, constructed or occupied by a person of historic significance
5	The site is one of only a few remaining examples of a once common structure/site in Ohio