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2025–2028 Transportation Improvement Program Selection Process

Lancaster County, Pennsylvania

February 2023



LANCASTER COUNTY
PLANNING
Lancaster, Pennsylvania

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How Does a Project Get on the TIP?

The Transportation Improvement Program (TIP) is a list of transportation projects spanning a four-year period. The Lancaster County Metropolitan Planning Organization (MPO) is federally designated to carry out planning tasks in a comprehensive, coordinated, and continuing work program.

Projects are included on the TIP based on feedback from system owners. System owners are organizations that are responsible for maintaining the transportation infrastructure of a particular area. In Lancaster County, the system owners include the county itself, individual municipalities, RRTA, and PennDOT. Each of these organizations own a portion of the transportation network and are therefore responsible for maintaining the system.

Projects are added to a pool of candidate projects, and scored on a variety of factors that help to determine whether a project should be on the TIP. To maximize limited funding, only projects that are deemed significant are listed on the TIP.

There are three ways for a project to be included on the TIP. The [Transportation Alternatives Set-Aside Program](#) (TASA) is a program sponsored by PennDOT. TASA provides funding for projects that incorporate elements of active transportation, such as pedestrian and bicycle facilities or safe routes to school. The [Connects2040 Implementation Program](#) sets aside a portion of TIP funding for projects that support or implement the transportation and land use goals of [places2040](#) and [connects2040](#). These are the two major plans produced by Lancaster County Planning, and they promote a safer and more walkable, bikeable, and transit-friendly

transportation system. Municipalities must apply to receive funding through this program. This program was previously referred to as the Smart Growth Transportation Program (SGT). Any remaining projects listed on the TIP are included following a thorough system evaluation.

What is a Project?

Before a project becomes a project, it is a problem to be addressed. These problems are identified by the MPO system evaluation, or brought to our attention by stakeholders like PennDOT.

There are three major types of problems:

Safety

“There are a lot of crashes in this area.”

Road or Bridge Infrastructure

“This road is very bumpy,” or “this bridge can’t support farm equipment and school buses anymore.”

Dependable Travel Time

“I was late because traffic was worse than usual.”

Once a problem is acknowledged, they are investigated by traffic engineers who come up with possible solutions. The solutions to these problems ultimately become a project.

Project Selection

Performance Monitoring

Just like a doctor checks a patient’s health by taking their pulse, the MPO checks the “health” of our transportation system by performing studies and generating reports. If parts of the system are not working properly or efficiently, a project may be developed to address the problem area. The MPO uses four performance measures to see how well the system is working.

Safety Performance Measures (PM1)

Safety performance measures are intended to reduce the number of crashes, deaths, and injuries that occur on roads in Lancaster County.

Projects vs. Studies

Most TIP projects include specific improvements like resurfacing a road, repairing a bridge, or upgrading a bus. However, some improvements require more than a typical project. In these instances, a study is usually conducted. Studies focus on problems that affect a whole region, like a borough’s downtown, travel corridors, or a village area like Bridgeport or Willow Street. The MPO typically funds studies when a problem is more complicated than a quick or simple fix. Studies outline a series of projects that could be completed regionally to address a problem. Projects that were originally part of a larger study are often prioritized to be listed on the TIP.

Pavement and Bridge Performance Measures (PM2)

These performance measures assess the condition of our roads and bridges. As road surfaces and bridges age, they experience wear and tear, which can cause conditions to go from “good” to “poor.” PM2 attempts to keep roads and bridges in “good” condition, and limit those that fall into “poor” condition.

System Performance Measures (PM3)

System performance measures evaluate how cars and trucks are moving along our roads. These performance measures are meant to provide reliable drive times and improve air quality. Air quality and drive time are related - the more time that cars and trucks stay on the road, the more exhaust that is produced. When traffic moves, air improves.

Transit Assessment Management Performance Measures (TAM)

Transit Assessment Management (TAM) performance measures set specific standards related to transit, such as the maximum number of miles a bus can travel before it is to be replaced.

Performance measures look at the transportation system as a whole. All roads and bridges – state and local – are monitored with these measures. Locations that score low by PM 1, 2, 3, and TAM performance measures are considered for inclusion on the TIP.

Project Review and Evaluation

After choosing the projects that will provide the best solutions to our problems, projects are scored with the Project Evaluation Tool, or TIP Tool. This tool incorporates data from Lancaster County’s Geographic Information System (GIS). By layering condition and planning data, the TIP Tool is used to objectively rank projects. The condition data relates to PM1 and PM3, and the planning data ensures that the transportation and land use goals of places2040 are supported by the project.

The scoring and point values of the TIP Tool are outlined in the “Project Scoring” section beginning on p. 8. After projects are ranked by the TIP Tool, the MPO reviews the results. If the project ranking seems appropriate to the committee, the selected projects will be matched with available funding.

Project Eligibility

We cannot spend federal funding on projects that do not meet certain requirements. Different types of projects have different requirements to receive funding. For example, roads need to be a part of the federal aid system, and bridges must be over 20 feet long. State funding has its own limitations. Generally, state funding can only be spent on roads and bridges owned by PennDOT. Some projects are not included on the TIP because they do not meet these funding requirements.

Available Funds

Funding transportation projects can be complicated. Projects need to be paired with the appropriate funding source – there is not a singular pool of funding that can be spent on any project. Funding for transportation projects is determined by congress and state legislature, and most funds are tied to a specific category. There are separate funds for air quality, safety, bridge, and transit projects. To make the best use of available resources, the MPO matches the eligible funding to the highest ranked projects.

In some instances, projects are skipped over for projects at a lower rank because the remaining funds are not permitted for that type of project. The TIP is also financially constrained, which means that the MPO is not allowed to include more projects than available funding. This requires some larger projects to be paid for over several years.

Systemwide Evaluation: Are We Meeting Our Goals?

Projects that are included on the TIP must address goals related to environmental justice, air quality, and the performance measures. Candidate projects are checked against the needs of the system, and assessed on how the system will transform after a project has been completed. The goal of the systemwide evaluation is to create better conditions once the selected projects have been carried out.

Environmental Justice: Keeping It Fair

Environmental justice is meant to ensure that all communities are equally considered when selecting which transportation projects to address. The [2023–2026 Environmental Justice Analysis](#) includes more information about the inclusion of environmental justice in our transportation planning process. In addition to creating a fair and equitable transportation system, we strive to ensure that we are not creating new problems when addressing existing ones.

Air Quality: Breathing Easier

When making decisions about transportation projects, we also consider the potential impacts to air quality. The [2023–2026 Air Quality Conformity Analysis](#) uses models to predict the potential impacts a project may have on air quality. The analysis also includes more information about the types of pollutants it addresses.

Performance Measures

Besides “taking the pulse” of our transportation system, performance measures are used to set goals. They can be used to determine whether the projects we select will improve bridge conditions, reduce injuries and fatalities, and achieve other goals related to the performance measures.

Public Comment

Before the MPO approves the list of candidate TIP projects, the TIP is sent out for a public comment review period. During this period, the public is informed about the TIP and its process, and invited to share suggestions, questions, or concerns about the candidate projects. All comments made by the public are reviewed and responded to by the MPO.

MPO Approval

Following the public comment period, the MPO approves the TIP.

Project Scoring

Projects for the TIP are evaluated and scored in the following four categories:

Safety and Security	35 points
Congestion Management	30 points
Multimodal Connectivity	20 points
Economic Benefit	15 points

Each category has an overall goal with specific metrics that determine scoring.

Safety and Security

Creating a safe and secure transportation network for all users is our highest priority. To score projects on safety and security, they are evaluated on their ability to reduce crashes for vehicles, bicyclists, and pedestrians.

1. Is the project located along an unsafe road segment or at an unsafe intersection?

Crashes can occur anywhere, but some roads and intersections experience them more frequently. Road segments and intersections that have more crashes than expected are assigned crash ratings using PennDOT’s Highway Safety Network Screening (HSNS) tool. Projects are scored based on the four levels of crash ratings.

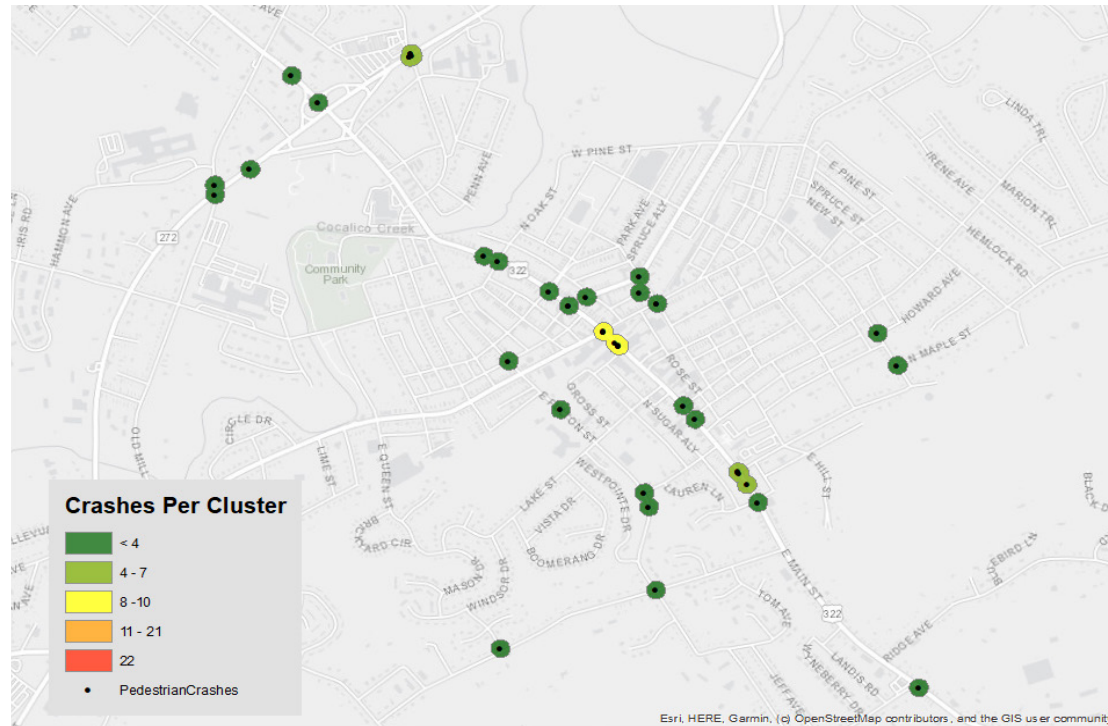
Crash Rating	Points Awarded
High (red)	14.00
Middle (orange)	10.50
Low (yellow)	7.00
Not above expected (green)	0.00



2. Is the project located in a high vehicle-pedestrian crash area?

For this metric, points are awarded based on the number of vehicle-pedestrian collisions that occur along a road segment or intersection.

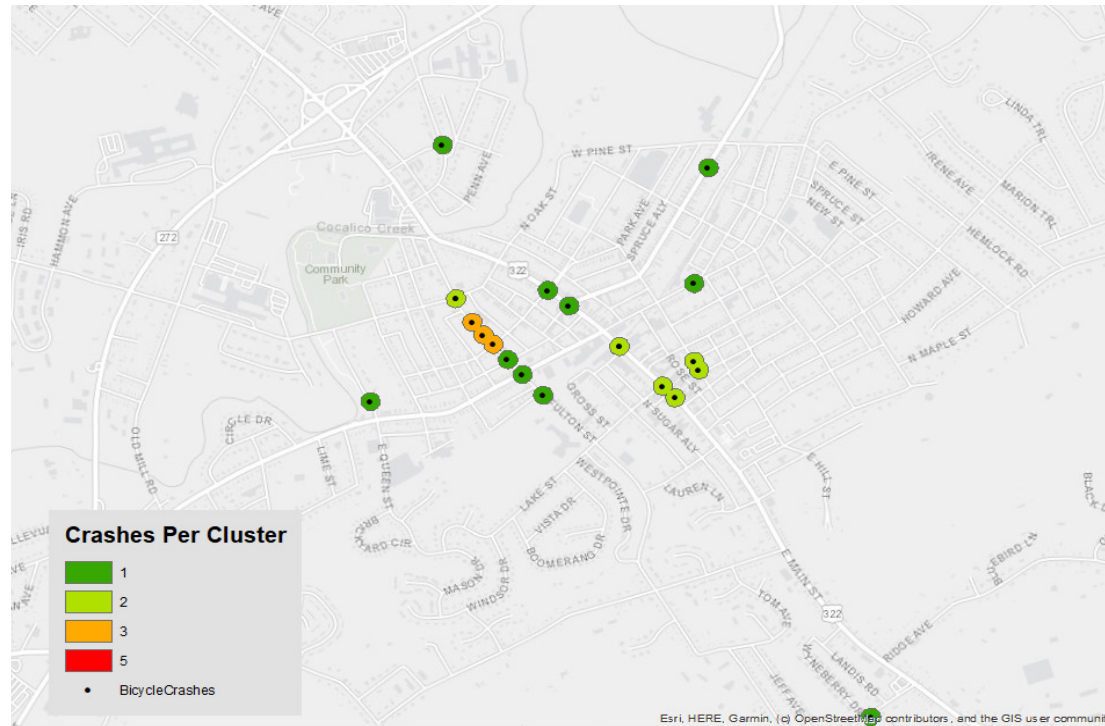
Number of Pedestrian Crashes	Points Awarded
22	10.50
16	7.64
8	3.82
4	0.18



3. Is the project located in a high vehicle-bicycle crash area?

For this metric, points are awarded based on the number of vehicle-bicycle collisions that occur along a road segment or intersection.

Number of Bicycle Crashes	Points Awarded
5	10.50
3	6.30
2	4.20
1	2.10

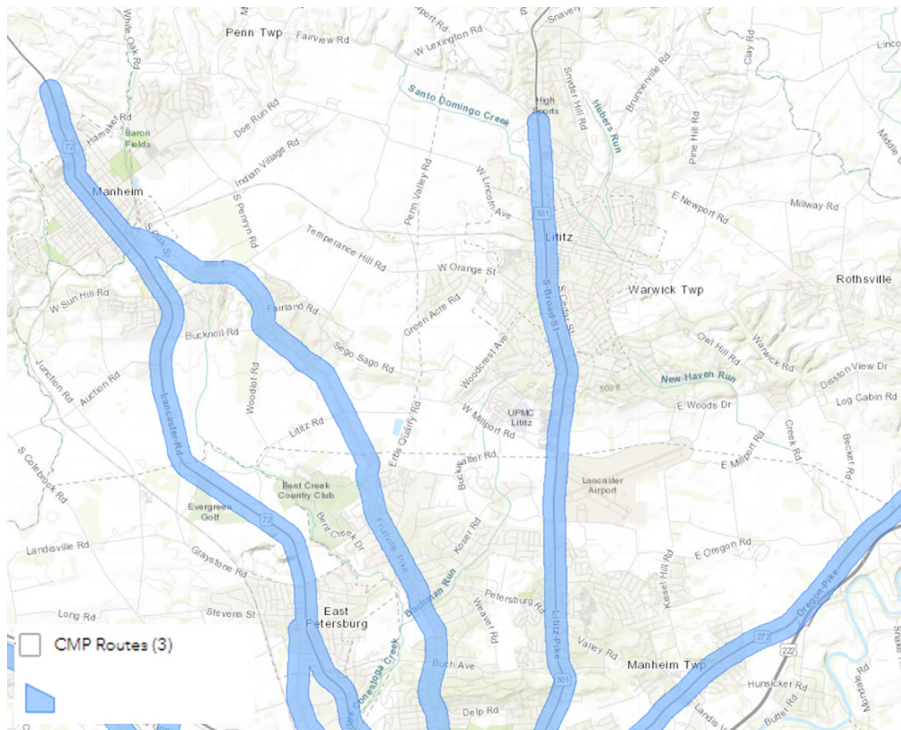


Congestion Management Process

Traffic congestion is characterized by slower speeds and longer trip times. During morning and evening commutes, experiencing heavy traffic is typical. The Congestion Management Process (CMP) studies and tracks traffic congestion throughout the county. The CMP can help to identify the portions of the transportation network where traffic frequently slows. Once a road segment or intersection is identified, those sites are analyzed and the best way to improve traffic flow is considered.

1. Is the project located on a corridor identified by the county's CMP?

If the project is located on a route included in the county's CMP, 3 points are awarded.

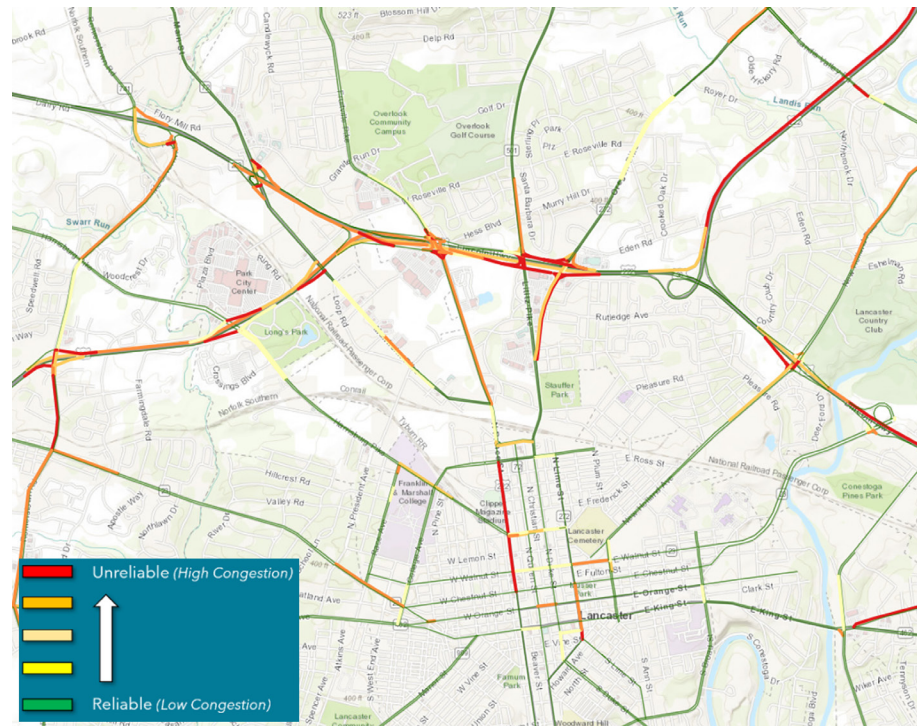


2. Is the project located in an area of high congestion at peak times?

This metric, referred to as Peak Hour Travel Time Reliability (TTR), is included in the CMP. Points are awarded based on the percentage of congestion compared to the county overall.

<i>If the project is on a road segment with ...</i>	<i>Points Awarded</i>
The highest congestion in the county	11.40
50% of the highest congestion	5.70
25% of the highest congestion	2.85
8% of the highest congestion	0.91

Note: Points are rounded to two decimal places.

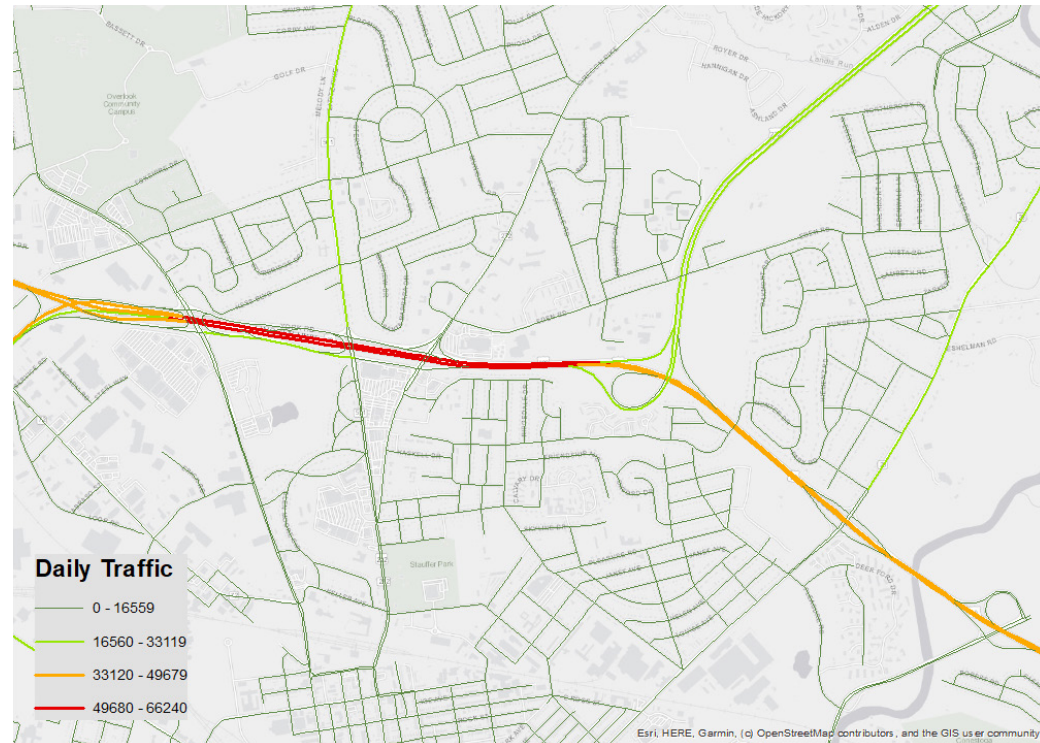


3. How many vehicles travel through the project area?

This metric is measured as Annual Average Daily Traffic (AADT). Points are awarded based on the highest AADT in the county.

<i>If the project is on a road segment with ...</i>	<i>Points Awarded</i>
66,240 vehicles/day	7.80
49,680 vehicles/day	5.85
33,120 vehicles/day	3.90
16,560 vehicles/day	1.95

Note: Points are rounded to two decimal places.

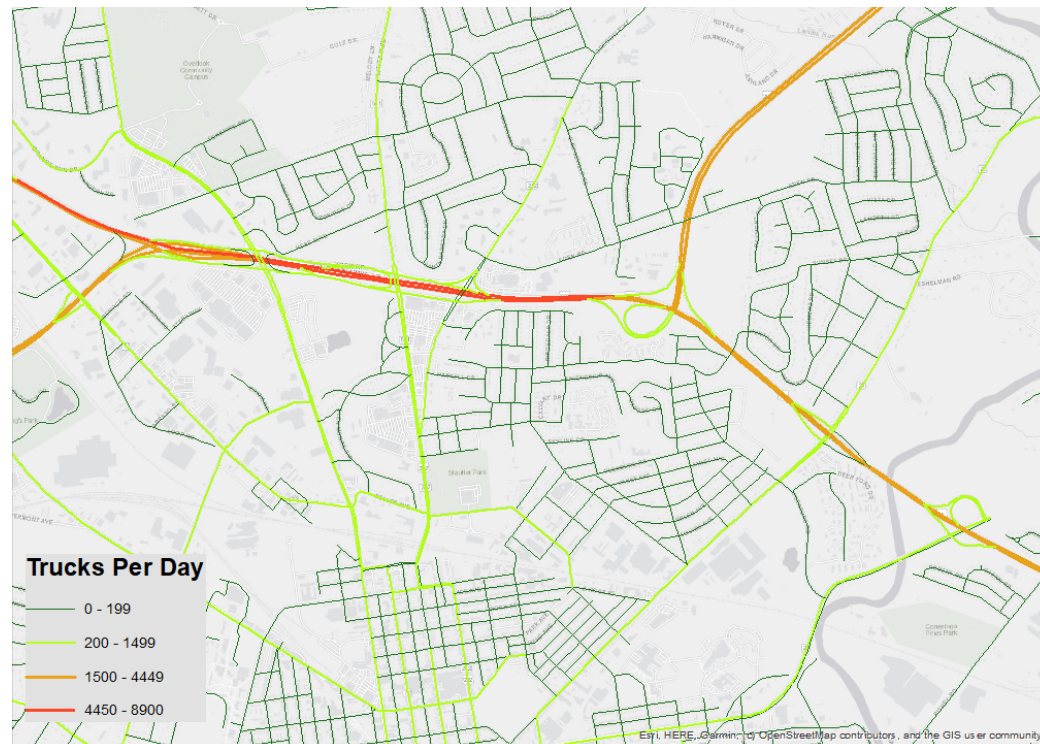


4. How many trucks travel through the project area?

This metric is measured as Annual Average Daily Truck Traffic (AADTT). Points are awarded based on the highest AADTT in the county.

If the project is on a road segment with ...	Points Awarded
8,900 trucks/day	7.80
4,450 trucks/day	3.90
1,500 trucks/day	1.31
200 trucks/day	0.18

Note: Points are rounded to two decimal places.

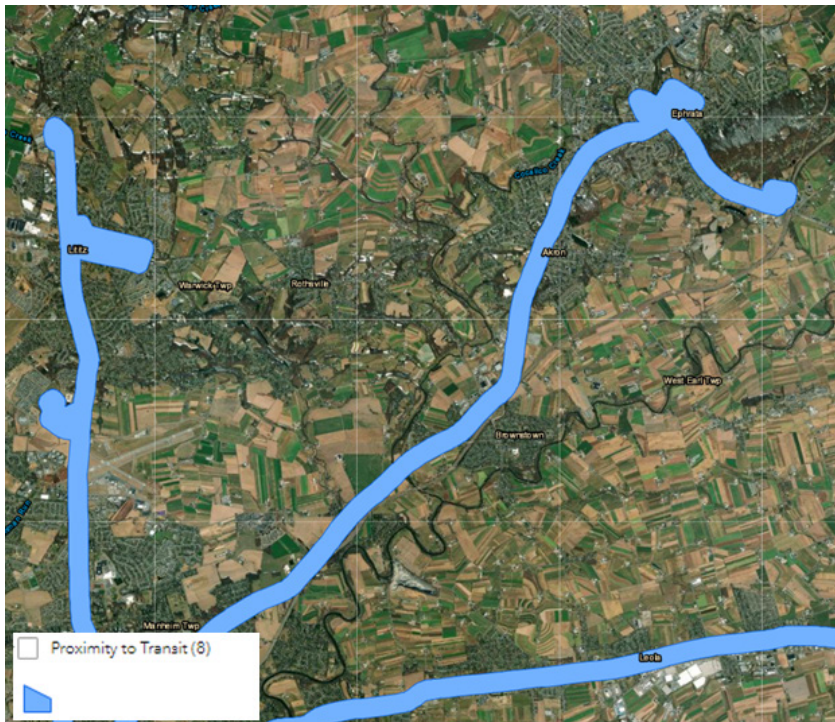


Multimodal Connectivity

Multimodal connectivity is about travel choice, including walking, bicycling, using transit, and driving. A connected multimodal network allows people to travel whether they own a personal vehicle or not.

1. Is the project close to transit?

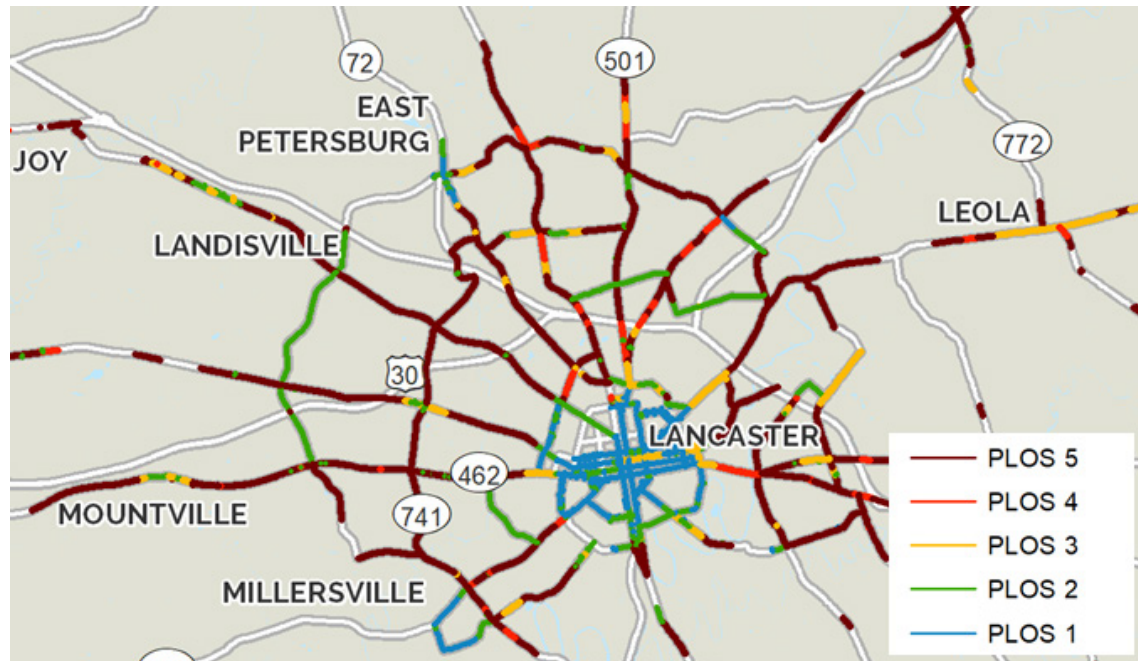
If the project is along a route established by Red Rose Transit Authority (RRTA), 8 points are awarded.



2. Does the project make travel safer and more accessible for pedestrians?

Projects are awarded points for incorporating pedestrian-friendly improvements along road segments included in the county's active transportation corridor network, as defined in the Lancaster Active Transportation Plan (ATP). Points are awarded based on the level of pedestrian stress along a corridor.

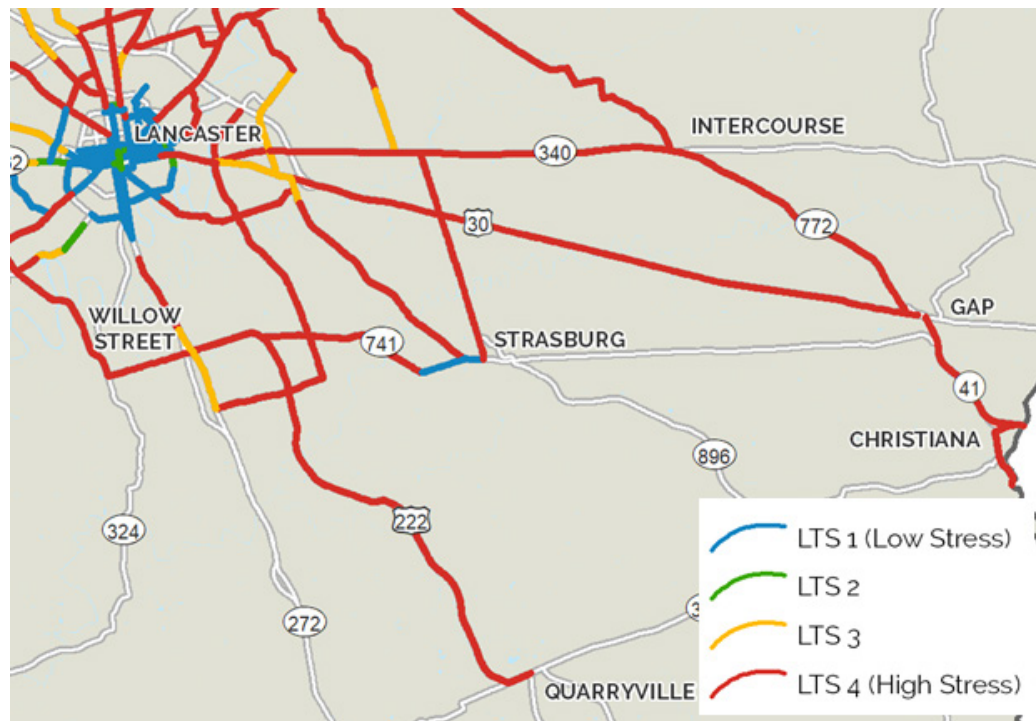
<i>Pedestrian Level of Stress (PLOS)</i>	<i>Points Awarded</i>
5 (highest stress)	6.00
4 (high stress)	4.00
3	2.00
2 (low stress)	0.00
1 (lowest stress)	0.00



3. Does the project make travel safer and more accessible for bicyclists?

Projects are also awarded points for incorporating bicycle-friendly improvements along road segments included in the county's active transportation corridor network. Points are awarded based on the level of bicycle traffic stress along a corridor.

Bicycle Level of Traffic Stress (LTS)	Points Awarded
4 (high stress)	6.00
3	4.00
2	2.00
1 (low stress)	0.00



Economic Benefit

If the right projects are implemented, improvements to our transportation system can also grow and diversify our local economy and make better connections between the places where people live and work.

1. Is the project located within an urban growth area or village growth area?

According to places2040, growth areas are where we should direct most of the county's growth and development. These are areas that already have the public infrastructure (roads, utilities, and services) to support more development.

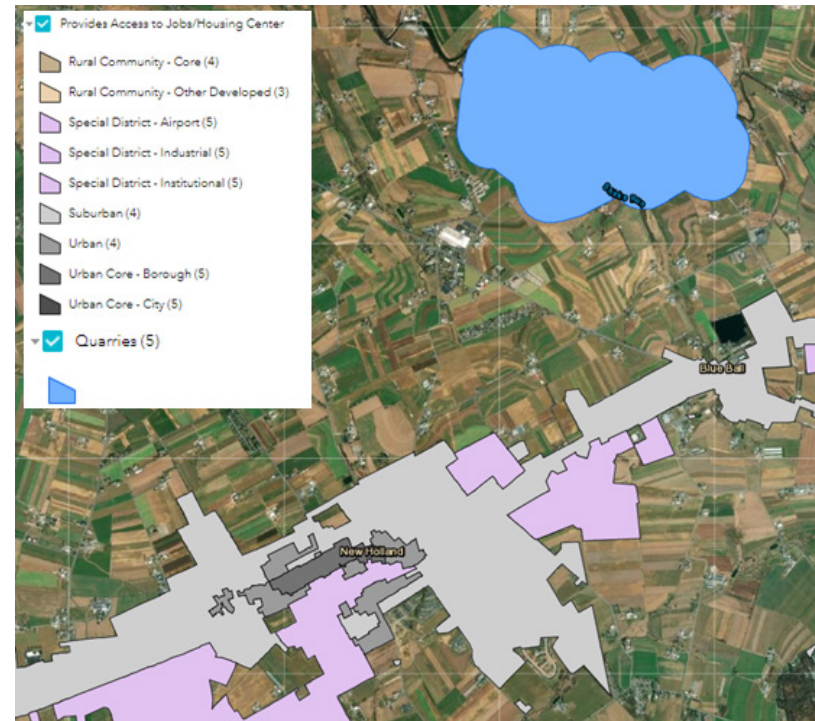
<i>If the project is ...</i>	<i>Points Awarded</i>
Within an urban growth area (blue)	5.00
Within a village growth area (blue)	5.00
Outside a growth area	0.00



2. Will the project create connections between housing and jobs?

In places2040, character zones are broad categories that reflect different land use patterns. Character zones are shown on the places2040 Future Land Use and Transportation Map. Most of the county's population live and work in the urban, suburban, and special district zones. For this metric, projects are awarded points based on which places2040 character zone the project is in.

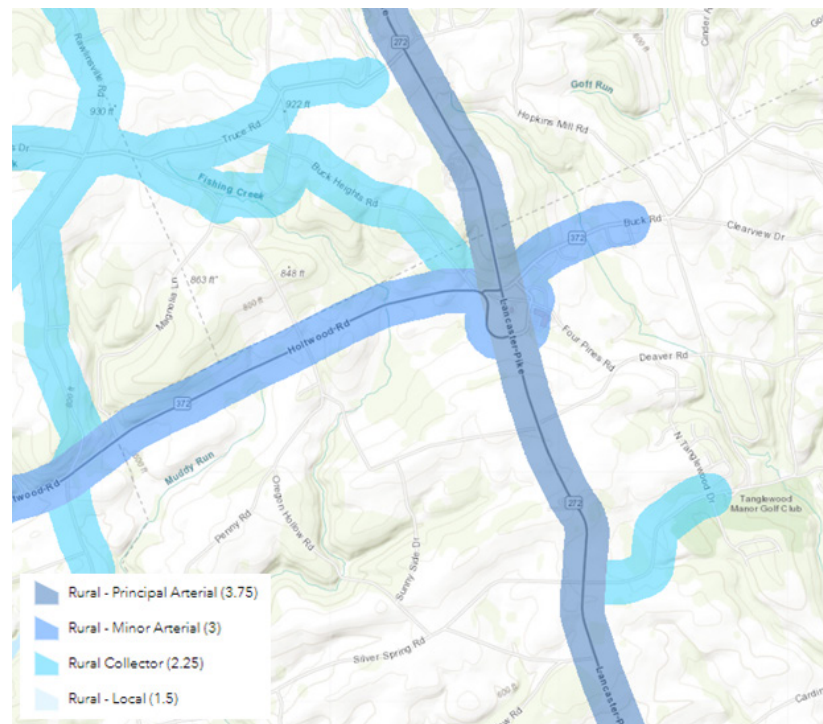
Character Zone(s)	Points Awarded
Urban Core – City, Urban Core – Borough, or Special District (Airport, Industrial, or Institutional)	5.00
Urban, Suburban, or Rural Community – Core	4.00
Rural Community – Other Developed	3.00
All other character zones, but within 1,000 feet of a quarry	5.00
All other character zones	0.00



3. Is the project on a road or bridge important to the rural economy?

To determine if a project is important to the rural economy, scoring is based on the type of service the road is intended to provide, as determined by the federal functional classification system. Points are awarded based on the functional classifications of rural roads.

Functional Classification	Points Awarded
Rural Principal Arterial	5.00
Rural Minor Arterial	4.00
Rural Collector	3.00
Rural Local	2.00
All other classifications	0.00





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