

REIMAGINED MOVE2040

Appendix 11: Environmental Justice Analysis



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What is Environmental Justice?

The U.S. Environmental Protection Agency (EPA) defines environmental justice (EJ) as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations and policies.

Environmental justice plays an important role in transportation planning. Transportation projects have long-lasting physical impacts on communities, and it is important to evaluate fairness and equity as part of the development of transportation policies and funding decisions. No group of people – by race, ethnicity or socio-economic status – should bear a disproportionate share of negative impacts as a result of decisions made at the federal, state, regional or local levels.

Measuring Environmental Justice

Incorporating non-discriminatory considerations and practices into the transportation planning and decision-making processes is one of the main focal areas of the efforts we have undertaken as part of the *REIMAGINED MOVE 2040* plan. This appendix outlines and expands on the environmental justice analysis process, which includes the following core elements:

Identification

Gathering data supported by descriptive statistics and mapping to describe and identify EJ populations in the region.

Assessment

Includes reviewing the planned projects in relation to EJ populations. Assessment also includes the implementation of outreach strategies designed to engage traditionally underserved populations.

Evaluation

Evaluating regional benefits and burdens through an overall assessment of the slate of planned transportation projects to determine if there are disproportionate/adverse impacts to the target populations. This section also includes discussion on how any findings of disproportionate and/or adverse impacts may be addressed.

For more information on Environmental Justice, visit the following US Department of Transportation web-page on the subject at <https://www.transportation.gov/transportation-policy/environmental-justice>.

Environmental Justice Populations

To identify those included in this discussion as EJ populations we consider two different Executive Orders. Executive Order 12898, discusses Federal Actions to Address Environmental Justice in Minority and Low-Income Populations. There is a separate Executive Order (13166) that addresses Improving Access to Services for Persons with Limited English Proficiency (LEP). For purposes of the analysis in this document, minority, low-income and LEP populations are defined as “EJ populations”.

Spatial and demographic data from the U.S. Census Bureau's (Census) 2013-2017 American Community Survey (ACS) Five-Year Estimates was used to identify environmental justice populations in the WAMPO region. In this document, environmental justice analysis data was evaluated at the Census tract level (census tracts include one or more Census block groups with 1,500-8,000 residents).

Race & Ethnicity

Aggregated data showing race and ethnicity was organized into the following five categories (the first four of which are classified as EJ "minority" groups):

1. Asian, which refers to people having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent - including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
2. Black or African American, which refers to people having origins in any of the Black racial groups of Africa.
3. Hispanic or Latino, which includes persons of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
4. Other, which includes:
 - a. Native Hawaiian or Other Pacific Islander, which refers to people having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
 - b. American Indian and Alaska Native, which refers to people having origins in any of the original peoples of North and South America (including Central America), and who maintain tribal affiliation or community attachment.
 - c. Other Races, and those identified by two or more races.
5. White or Caucasian, which refers to people having origins in any of the original peoples of Europe, the Middle East or North Africa.

Low-Income

Individuals included in the "low-income" category are identified in the analysis as 'Persons Below Poverty' based on the Census definition.

Limited English Proficiency

Individuals, ages five or older, with Limited English Proficiency (LEP) are identified in the Census data as speaking English less than "very well."

Thresholds & Limitations

Identifying environmental justice populations is useful in understanding the comparative effects of projects throughout all of the affected populations. Thresholds for EJ populations were established in accordance with policy guidance on environmental justice. Population thresholds establish the number or percentage of individuals within a geographic area that must be exceeded to identify an EJ population.

While a convenient and commonly used method to identify EJ populations, the use of thresholds can mask the presence of small pockets of minority populations or low-income populations. WAMPO is mindful that thresholds may exclude some populations from analysis, despite the potential for those populations to be affected by a proposed plan or program. WAMPO also recognizes that EJ determinations are made based on effects, not population size.

Therefore, WAMPO will be analyzing data based on an “EJ Threshold” as well as a regional average comparison to help identify concentrations of minority and low-income populations. Census tracts in this analysis considered to be “environmental justice census tracts” are those that meet the following criteria:

1. EJ Threshold denotes Census tracts with concentrated minority, low-income or LEP populations, specifically 50% or greater.
2. Regional Average Threshold: used for those populations that are less concentrated, but still more than 10% of the WAMPO regional average. These averages are outlined in the following section.

Environmental Justice Analysis

The following sections include the presentation of the EJ analysis organized by the three previously defined core elements (identification, assessment and evaluation).

IDENTIFICATION

Data supported by descriptive statistics and mapping to describe and identify low income, minority, and LEP populations in the region.

Regional Community Profile

The EJ analysis process begins with developing an understanding of the EJ populations present in the region. To do this, WAMPO has gathered data on the size and location of low-income, minority, and LEP populations.

The following tables (Table 1: Minority and Low-Income Populations and Table 2: Limited English Proficiency Populations) highlights the distributions of EJ populations in the WAMPO region.

Table 1: Minority and Low-Income Populations

POPULATION CATEGORIES		# OF PEOPLE	PERCENTAGE
Total Population Total		642,339	100%
RACE/ETHNICITY	Minority	114,965	17.9%
	Black or African American	48,552	7.6%
	American Indian and Alaska Native	5,606	0.9%
	Asian	23,301	3.6%
	Native Hawaiian and Pacific Islander	260	0.1%
	Some other race	14,185	2.2%
	Two or more races	23,061	3.6%
	[Hispanic or Latino*]	[80,631]	[12.6%]
	White	527,374	82.1%
LOW INCOME	'Persons Below Poverty'	87,750	13.6%

* Individuals with overlapping Hispanic or Latino ethnicity have been captured among one of the above listed race categories. Source: ACS 2013-2017 5-Year Estimate

Table 2: Limited English Proficiency Populations

POPULATION CATEGORIES		# OF PEOPLE	PERCENTAGE
Total Age 5 & Over		596,637	100.0%
LIMITED ENGLISH PROFICIENCY	Speaks English Less than “Very Well” (5 Years and Over)	73,195	12.3%
Source: ACS 2013-2017 5-Year Estimate			

Mapping

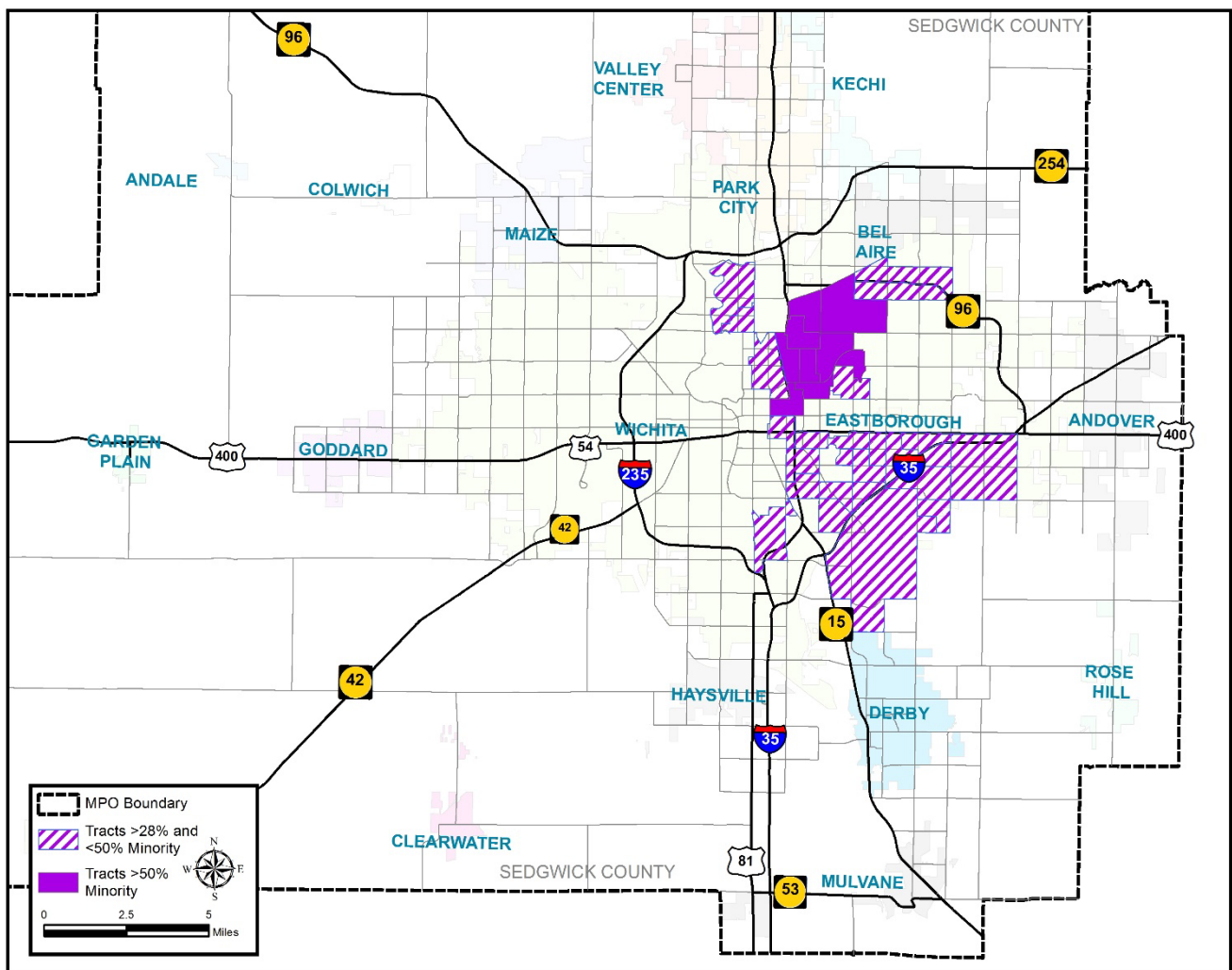
Identifying EJ populations and their locations (**Figures 1, 2, and 3**) is the first step in conducting the benefits and burdens analysis of plans, policies, and programs. Furthermore, demographic and other data collected to identify populations supports other targeted neighborhood level studies as well as the transportation funding applications and planning efforts of WAMPO regional partners.

Minority Populations

The minority population in the WAMPO region represents nearly 18% of the total population. An analysis of regional Census Tracts has identified the geographic locations of minority populations. The below **Figure 1** map illustrates the geographic locations of minority populations that are:

1. Greater than the 50% of that tract's total population (**EJ Threshold** solid purple)
2. More than 10 % greater than the regional average of 18% (**Regional Average Threshold** cross-hatched purple). Therefore, the Regional Average Threshold tracts are those with at least 28% minority but less than 50%.

Figure 1: Minority Populations

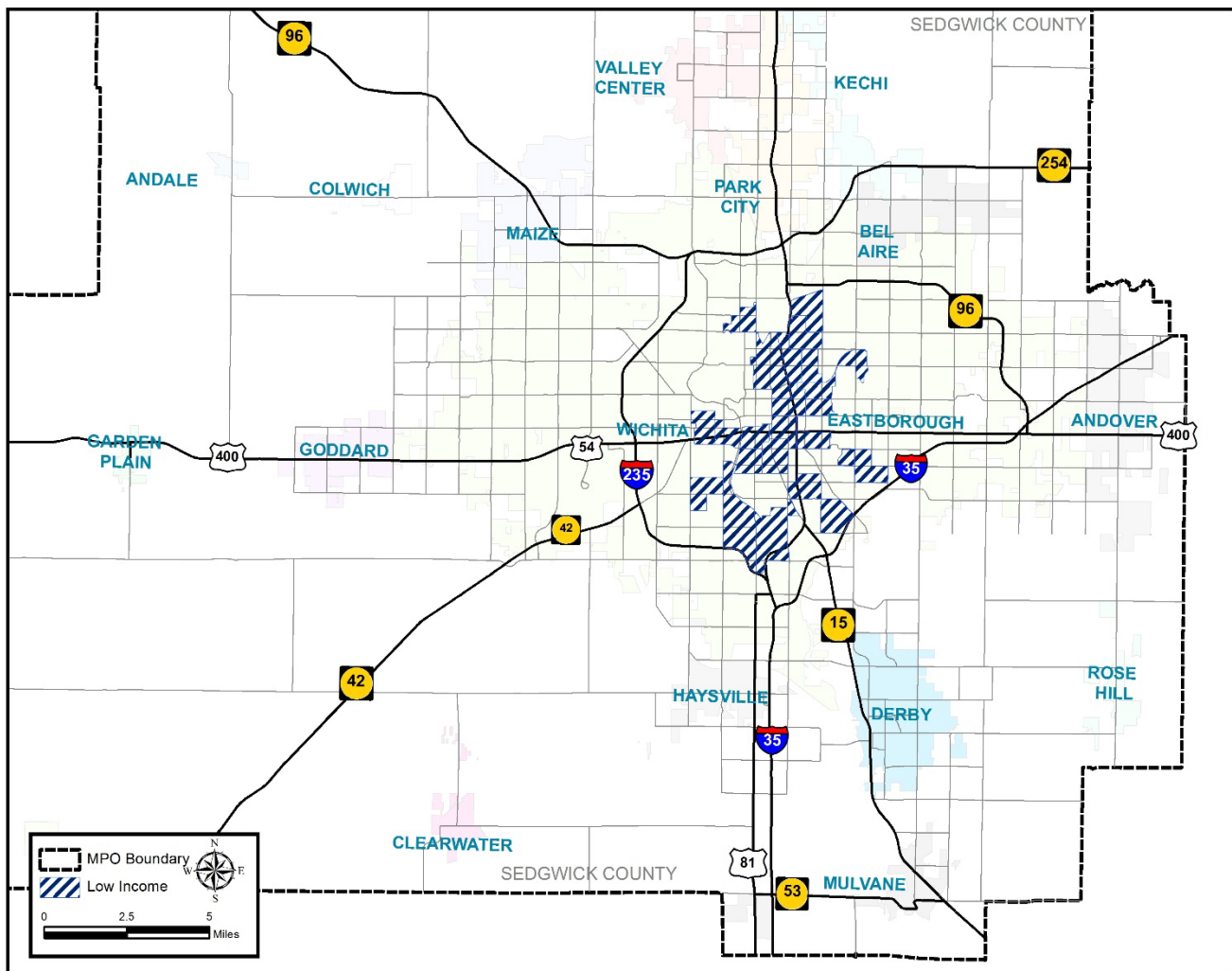


Low-Income Populations

Populations reporting low-incomes in the WAMPO region make up around 13% of the total population. An analysis of regional Census Tracts have identified the geographic locations of these low-income populations. The below **Figure 2** map illustrates the geographic locations of low-income populations that meet the previously defined analysis thresholds. The low-income population analysis has found that:

1. There are no tracts that meet the EJ Threshold, which captures any population greater than the 50% of that tract's total population.
2. Low-income populations with more than 10 % greater than the regional average of 13% are present (**Regional Average Threshold**). These tracts are illustrated in cross-hatched blue and represent those with at least 23% of the tract population but less than 50%.

Figure 2: Low-Income Populations



Limited English Proficiency Populations

Populations reporting limited English proficiency (or LEP populations) in the WAMPO region make up around 12% of the total population. An analysis of regional Census Tracts have identified the geographic locations of these LEP populations. The below **Figure 3** map illustrates the geographic locations of LEP populations that meet the previously defined analysis thresholds. The LEP population analysis has found that:

1. There are no tracts that meet the EJ Threshold, which captures any population greater than the 50% of that tract's total population.
2. LEP populations with more than 10 % greater than the regional average of 12% are present (**Regional Average Threshold**). These tracts are illustrated in cross-hatched pink and represent those with at least 22% of the tract population but less than 50%.

Figure 3: LEP Populations

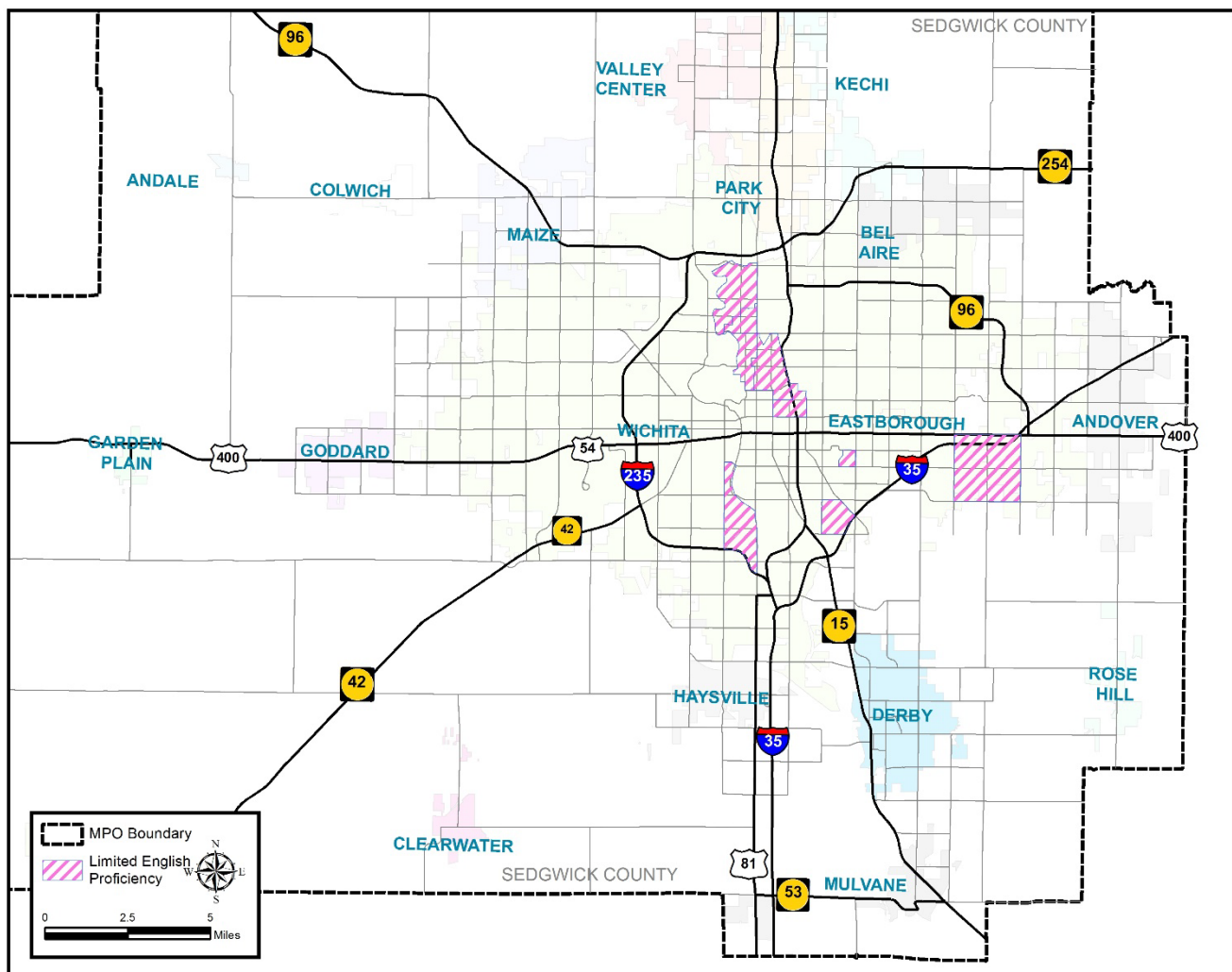


Table 3 represents the total population of the census tracts represented in the previous figures. The remainder of this document compares the number of MTP projects in proximity to the populations in EJ census tracts to the number of MTP projects in proximity to the populations that live in census tracts that do not meet the EJ thresholds.

Table 3: EJ Populations

	EJ Census Tracts	Non-EJ Census Tracts	Totals
Total Population	149,619	492,720	642,339
Percent of Total Population	23.3%	76.7%	100%

ASSESSMENT

This section documents the conditions of the system in relation to the EJ populations including traditionally underserved population engagement strategies.

Existing Conditions & Needs

The next step of the EJ analysis process involves a regional assessment that incorporates the EJ Identification findings into the assessment of regional transportation projects.

REIMAGINED MOVE 2040 Projects

The REIMAGINED MOVE 2040 project list identifies each project using following categories labels:

Projects Identifiable by Location

Traditional **roadway and bridge** projects are stratified into the following three categories:

1. Expansion projects involve adding significant new capacity.
2. Modernization projects involve: a) significant enhancements to a facility, but without any increase in the number of travel lanes. or b) changing transit routes to reflect changes in employment, school schedules or other demographic changes.
3. Rehabilitation projects involve rebuilding a roadway or other facility without changing the number of travel lanes or other features.

In addition to roadway and bridge projects, there are two other types of geographically identifiable projects found in REIMAGINED MOVE 2040; bicycle/pedestrian projects and transit.

The **bicycle and pedestrian projects** (20 total) include additional bikeways, pathways/trails, safety improvements and wayfinding.

One **transit** project, the Delano Transit Center, is included as a geographically identifiable project.

Rail projects include track expansions and the rehabilitation of rail facilities within the WAMPO region.

Projects Not Identifiable by Location

44 of the projects on the *REIMAGINED MOVE 2040* list are not geographically defined because of the nature of the projects.

This category includes 11 **transit projects** which include funding, and replacing paratransit vehicles. The other 33 projects in this category include:

- Planning projects (6) that include asset management, priority planning, travel demand model, and a bicycle master plan update.
- Technology projects (8) focused on fiber optic installations and Intelligent Transportation Systems.
- A safety project focused on railroad crossing improvements.
- The following categories also had projects that were not geographically identifiable as their extent is regionwide or they are funding set asides or similar programs: road and bridge (12) and bicycle and pedestrian (6).

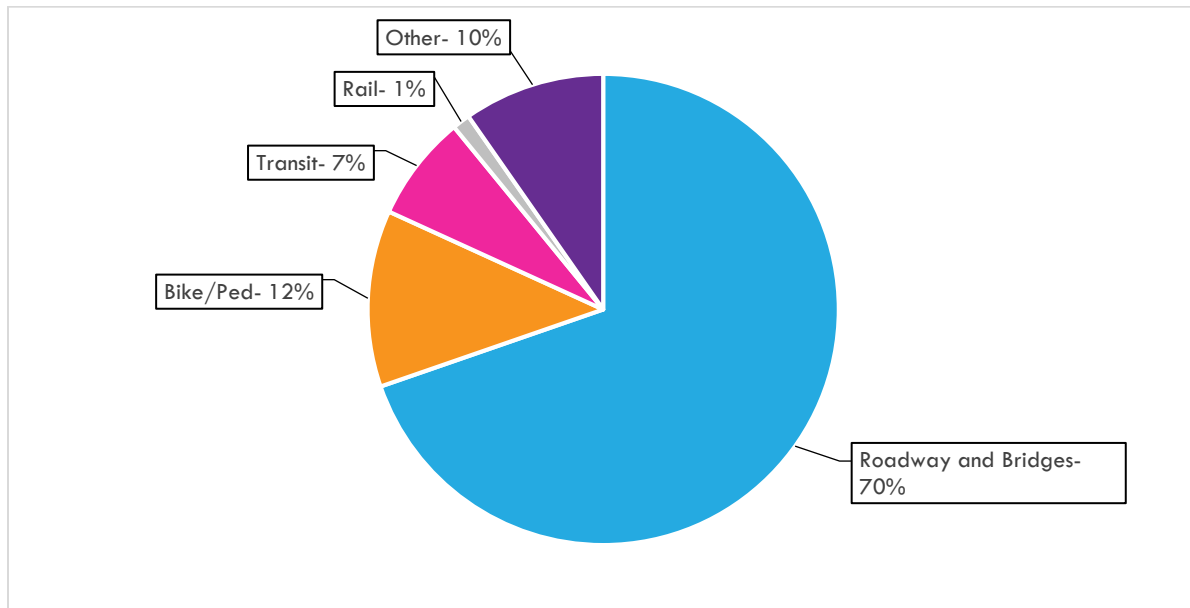
The below **Table 4** shows a frequency distribution of regional projects by category and type.

Table 4: Project Distribution by Category/Type

Category/Type	# of Projects	Percent of Total
Expansion	8	4.8%
Modernization	55	33.3%
Rehabilitation	52	31.5%
Bicycle/Pedestrian	20	12.1%
Transit	12	7.3%
Rail	2	1.2%
Other	16	9.7%
Total	165	100.0%

Figure 4 shows the overall split of *REIMAGINED MOVE 2040* project types by mode.

Figure 4. Projects by Mode



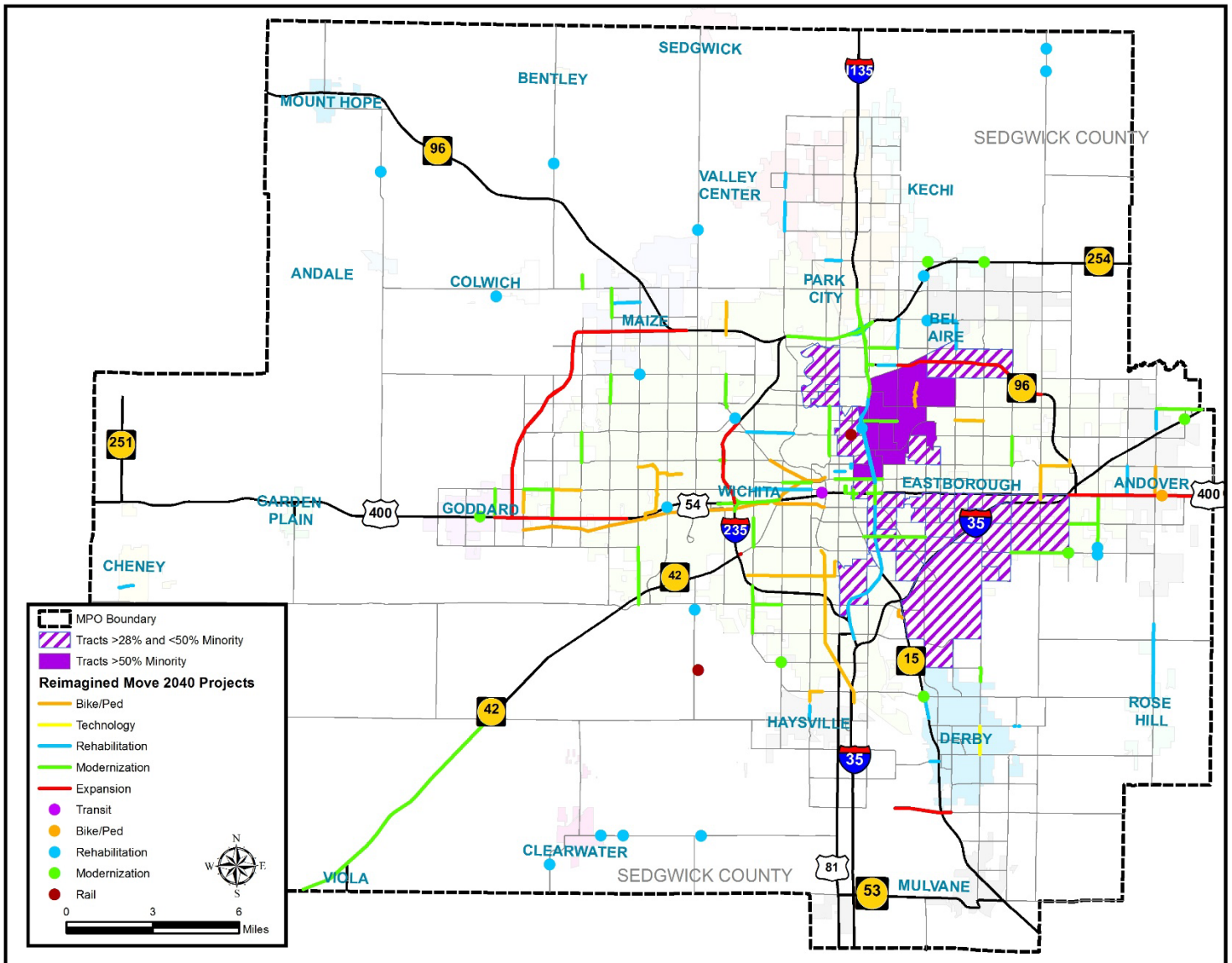
Project Distribution

The following analysis featured in **Figure 5** through **Figure 7** will illustrate the regional EJ populations in comparison to these projects combined with additional population distribution tables (**Tables 5 through 7**) by EJ category (minority, low-income, and LEP). Groups of projects not generally identifiable by location (mappable) are not included in project distributions.

Minority Populations

As a reminder, the identification analysis shown previously in **Figure 1** illustrated both the minority EJ Threshold (populations greater than 50%) and the Regional Average Threshold (greater than 28%). The following **Figure 5** map overlays the geographic locations of the different mappable projects with the identified thresholds.

Figure 5: Minority Populations and Project Areas



The project distribution **Table 5** shows that 14.0% of all mappable projects fall into areas where more than 28% of the population identify with a minority group.

Table 5: Project Distribution in Minority Areas

Project Category	Total Number of Mappable Projects	Percentage of Mappable Total Projects	Number of Mappable Projects in Minority Areas	Percentage of Mappable Projects located in Minority Areas
Expansion	8	6.6%	1	0.8%
Modernization	49	40.5%	7	5.8%
Rehabilitation	46	38.0%	7	5.8%
Bicycle/Pedestrian	14	11.6%	1	0.8%
Rail	2	1.7%	1	0.8%
Transit	1	0.8%	0	0.0%
Other	1	0.8%	0	0.0%
Total*	121	100%	17	14.0%

*Unmappable projects are not included in the total.

Low-Income Populations

As a reminder, the identification analysis shown previously in **Figure 2** illustrated that only the Regional Average Threshold for low-income was reached (i.e. low-income populations ranged from greater than 23%, but less than the 50% EJ Threshold). The following **Figure 6** map overlays the geographic locations of the different mappable projects with the identified threshold.

The project distribution **Table 6** shows that 14.0% of all mappable projects fall into areas where greater than 23%, but less than 50% of the population reported a low-income.

Table 6: Project Distribution in Low-Income Areas

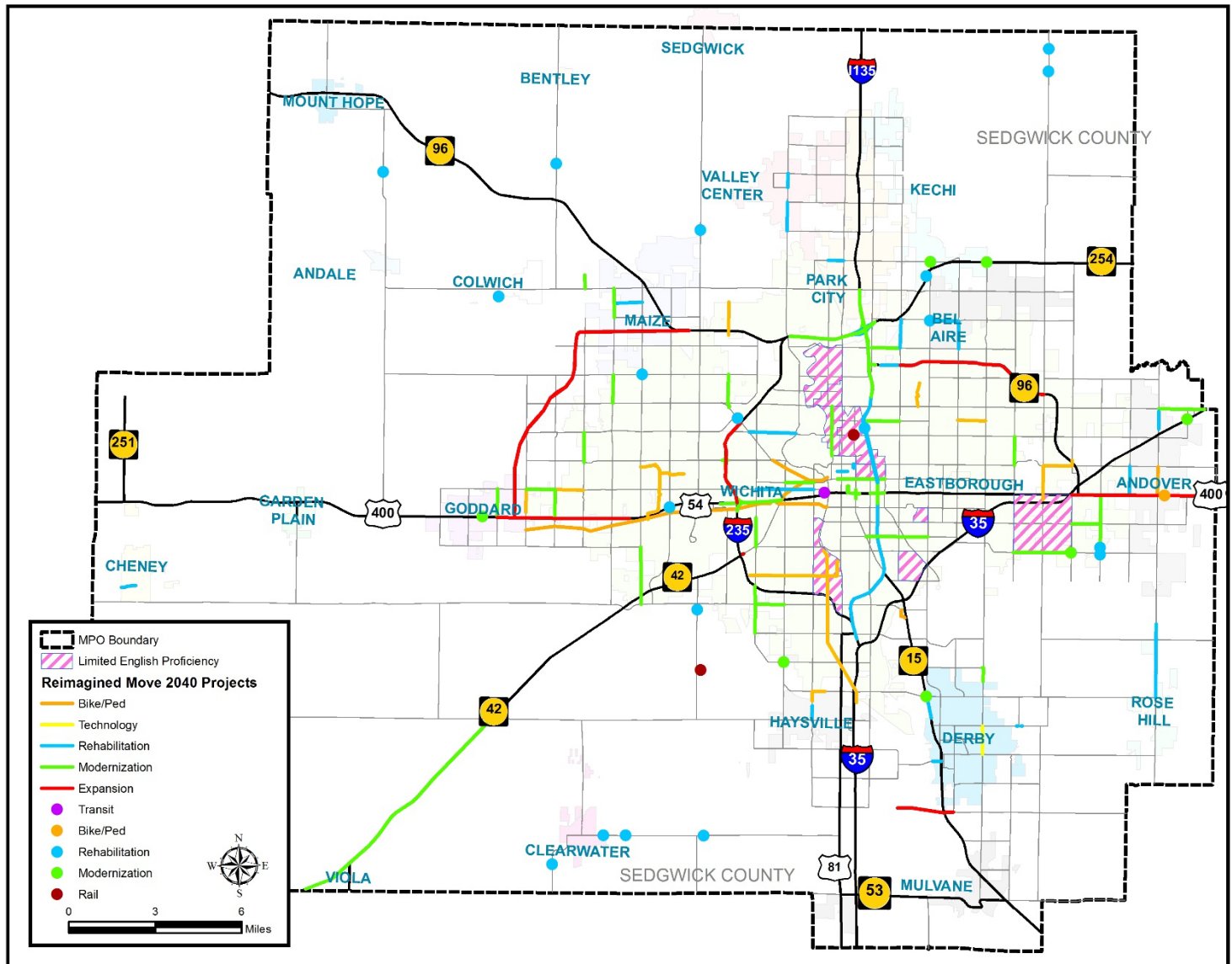
Project Category	Total Number of Mappable Projects	Percentage of Mappable Projects	Number of Mappable Projects in Low-Income Areas	Percentage of Mappable Projects located in Low-Income Areas
Expansion	8	6.6%	0	0.0%
Modernization	49	40.5%	7	5.8%
Rehabilitation	46	38.0%	7	5.8%
Bicycle/Pedestrian	14	11.6%	1	0.8%
Rail	2	1.7%	1	0.8%
Transit	1	0.8%	1	0.8%
Other	1	0.8%	0	0.0%
Total*	121	100%	17	14.0%

* Unmappable projects are not included in the total.

Limited English Proficiency Populations

As a reminder, the identification analysis shown previously in **Figure 3** illustrated that only the Regional Average Threshold for LEP was reached (i.e. LEP populations ranged from greater than 22%, but less than the 50% EJ Threshold). The following **Figure 7** map overlays the geographic locations of the different mappable projects with the identified threshold.

Figure 7: LEP Populations and Project Areas



The project distribution **Table 7** shows that 7.4% of all mappable projects fall into the areas where greater than 22%, but less than 50% of the population have LEP.

Table 7: Project Distribution in LEP Areas

Project Category	Total Number of Mappable Projects	Percentage of Mappable Projects	Number of Mappable Projects in LEP Areas	Percentage of Total Mappable Projects located in LEP Areas
Expansion	8	6.6%	0	0.0%
Modernization	49	40.5%	5	4.1%
Rehabilitation	46	38.0%	3	2.5%
Bicycle/Pedestrian	14	11.6%	0	0.0%
Rail	2	1.7%	1	0.8%
Transit	1	0.8%	0	0.0%
Other	1	0.8%	0	0.0%
Total*	121	100%	9	7.4%

* Unmappable projects are not included in the total.

Engagement Strategies

WAMPO has used the information gathered from mapping to inform the engagement strategies for the *REIMAGINED MOVE 2040* plan update. With a focused strategy designed to “going to them” the WAMPO staff, board and committees took a proactive approach to recognizing the potential barriers to involvement, which include language barriers. The below **Table 8** highlights outreach approaches by population characteristic:

Table 8: Traditionally Underserved Outreach Procedures

Outreach Approach	Minority	Low-Income	LEP	Disabled	Older Adults	Zero-Car Household
Targeted Ads & Notices	X	X			X	
Language Outreach Strategies	X		X			
Transit-Accessible Meetings		X		X		X
Convenient Meeting Times & Locales		X			X	X
Partnerships	X	X	X	X	X	X
Coordination	X	X		X	X	

EVALUATION

This section documents the assumptions related to regional benefits and burdens of specific project types followed by an assessment of anticipated disproportionate and/or adverse impacts associated with the slated REIMAGINED MOVE 2040 projects.

Benefits and Burdens

There are benefits and burdens to any transportation project and while some may be project-specific, there are assumptions that can be made about those that come a certain project type. Those assumptions are outlined here.

Expansion Projects

It can be anticipated that with the construction of a new road facility or widening project, there is a potential for increased air and noise pollution, physical barriers to community connectivity, and safety issues that accompany construction. Impacts to community cohesion are of particular concern in EJ communities. The major benefit of these projects is serving through traffic but not necessarily local access.

Modernization Projects

Modernization projects often include features such as turn lanes, deceleration lanes, intersection improvements, and/or enhancements specifically aimed at improving safety all of which provide benefits to local travelers without imposing significant burdens. Projects like these are likely to provide benefits in terms of accessibility and safety.

Rehabilitation Projects

The potential impacts to Rehabilitation Projects will likely be temporary as they relate to construction, for example, possible delays and temporary increases in air pollution while construction is occurring. The benefits of these projects will be the improved usability and comfort of the transportation facilities.

Multi-Modal Projects

There are few potential impacts, with the exception of right of way needs, that would accompany multi-modal projects. Projects like bicycle/pedestrian trails and travel lanes, as well as transit improvements and route maintenance provide the benefit of choice in transportation modes. This can be especially important for EJ populations which tend to have a lower percentage of car ownership and are in greater need of economical choices for getting to school, work, etc.

The proposed transit projects, as discussed earlier are not easily identifiable on a map since they involve funding transit programs and paratransit services. Transit projects make up 7% of the total projects in the WAMPO area. These would not be expected to adversely impact EJ areas in the region.

Rail Projects

Impacts related to rail projects are similar to those associated with roadway expansion and widening projects. Potential for air and noise pollution, reduced community connectivity, and safety issues are all present with the construction of new rail facilities.

Impacts to Minority Populations

As identified previously in **Table 5**, 14% of the mappable projects listed in the MTP are located within or adjacent to census tracts that meet minority population thresholds. The remaining 86% of those mappable projects fall within non-minority census tracts. This percentage of mappable projects in minority census tracts is overall relatively consistent with the regional minority population of 18%.

One Expansion project fell within identified minority areas which will mean only small impacts are anticipated. The Expansion project that falls within the minority areas are not expected to have additional impacts to community cohesion.

Nearly 6% of Modernization projects fall within or adjacent to minority census tracts. Modernization projects make up roughly 41% of the total mappable projects in the WAMPO area. These projects are not expected to disproportionately impact minority areas. There may be significant benefits in terms of accessibility and safety from the relatively high proportion of total Modernization projects.

Similarly, about 6% of the Rehabilitation projects fall within minority areas. Rehabilitation projects make up 38% of the total mappable projects on the MTP list. These projects are expected to have a negligible effect on minority areas.

There is one bicycle/pedestrian project that falls within the identified minority areas, accounting for around 1% of the mappable projects. This project is not expected to have a disproportionate impact on minority populations and has the potential to benefit populations that may utilize multiple modes of transportation more often to reach their destination.

One rail project is located within a minority area, comprising 0.8% of mappable projects. This project is anticipated to have impact on the community owing to the construction of new rail track that could likely impact connectivity within the community.

Impacts to Low-Income Populations

As identified in **Table 6**, 14.0% of the mappable projects listed in the MTP are located within or adjacent to census tracts that meet low-income population thresholds. Roughly 86% of those mappable projects fall within areas not considered to be low-income census tracts. This percentage of mappable projects in low-income census tracts is overall relatively consistent with the regional low-income population of 13%.

There are no Expansion projects in the low-income areas so there would be no impacts or benefits to low-income populations.

Modernization projects make up around 6% of the mappable projects within the low-income census tracts. Overall Modernization projects account for nearly 41% of the region's mappable projects. These projects are not expected to disproportionately impact low-income areas.

There are also a similar percentage of Rehabilitation projects (5.8%) which are not expected to have great benefits or burdens. The percentage of mappable Rehabilitation projects overall in the region is 38%. The relatively low proportion of Rehabilitation projects is not anticipated to impact low-income populations.

Of the 11.6% of mappable projects that are dedicated to bicyclists and pedestrians, 1 is located in low-income areas. Disproportionate impacts are not expected from these projects and are likely to benefit low-income populations.

One of the two rail projects is located within a low-income area, making up 0.8% of the mappable projects.

The Delano Transit Center is located within a low-income area, making up an additional 0.8% of the mappable projects.

Impacts to LEP Populations

As identified in **Table 7**, 7.4% of the mappable projects listed in the MTP are located within or adjacent to census tracts that meet LEP population thresholds. Around 93% of those mappable projects fall within areas not considered to be LEP census tracts. This percentage of mappable projects in LEP census tracts is lower, but on the whole relatively consistent with the regional LEP population of 12%.

There are no Expansion projects in the LEP population areas which could benefit these portions of the region and would need to be considered in relation to any potential negative impacts that might result from this type of project.

Modernization projects make up about 4% of the mappable projects within the LEP census tracts. Overall Modernization projects account for about 41% of the region's mappable projects. These projects are not expected to disproportionately impact LEP areas.

Around 3% of the mappable Rehabilitation projects on the MTP list fall within or adjacent to LEP census tracts. There is thought to be limited negative impacts from these projects in LEP areas of the region.

There are no bicycle/pedestrian projects in LEP areas.

Impacts on LEP populations from rail projects are expected as one project (0.8% of all mappable projects) is within an LEP area.

Addressing Disproportionate and Adverse Effects

This analysis indicates that the fiscally constrained transportation investments included in this plan do not disproportionately burden or deny benefits to EJ communities. As discussed in the previous sections, between roughly 7% and 14% of mappable projects fall within EJ areas with the WAMPO region. This is compared with 86 to 93% of mappable projects that are planned within non EJ areas.

It is important to WAMPO to continue emphasizing geographic equity in its federal-aid transportation programming processes. This is especially important when considering multimodal projects like bicycle/pedestrian and transit projects.

In the event that there are disproportionate and adverse impacts identified, WAMPO will work with our member jurisdictions, planning partners (Kansas Department of Transportation and Wichita Transit) and USDOT to identify and document strategies to avoid, mitigate, or minimize the impacts. This may include modifying or selecting additional projects that can be programmed prior to the adoption of the WAMPO Transportation Improvement Program (TIP) or MTP through line items and amendments. Individual project sponsors will consider

potential project-level environmental justice impacts for federally funded transportation projects in conjunction with the National Environmental Policy Act (NEPA) process.

Environmental Justice Integration

Environmental Justice considerations are integrated into all of WAMPO's planning processes, not just the MTP update. This includes the Transportation Improvement Program (TIP), Public Participation Plan (PPP), and the Unified Planning Work Program (UPWP). WAMPO has integrated EJ considerations into the development of the TIP in a number of ways. The TIP implements the long-range transportation plan, *REIMAGINED MOVE 2040*, the development of which included focused attention on burdens and benefits to EJ populations. All projects in the TIP must first be included in *REIMAGINED MOVE 2040*, either as explicitly identified regionally significant projects or as part of the plan's programmatic elements. *REIMAGINED MOVE 2040* was developed with input from community members, leaders, and individuals representing low-income, minority and LEP populations.

During the plan's development over 50 public presentations were given at over 20 locations in the planning area, to local leaders and other members of the public, in order to best understand the perceptions of possible effects that *REIMAGINED MOVE 2040* might have on low-income or minority populations. A summary of these proceedings, along with results and conclusions, can be found in the Public Engagement Appendix.