

## Environmental Justice Analysis · November 2023

The U.S. Department of Transportation (DOT) has made equity a strategic goal through its FY 2022-2026 Strategic Plan. An objective of this plan is for Metropolitan Planning Organizations, such as East-West Gateway (EWG), to adopt quantitative equity screening components as part of its Transportation Improvement Program (TIP) development processes by 2030. As a part of the transportation planning process, project sponsors should ensure that Environmental Justice (EJ) populations have access to safe, equitable, and affordable transportation, while avoiding harmful effects such as displacement or excess pollution. EWG considers areas of high concentrations of minorities, low-income residents, disabled residents, seniors, and zero-vehicle households as EJ populations.

EWG's long-range transportation plan, *Connected 2050*, includes guiding principles that help guide transportation system evaluation and decision making. These guiding principles align with goals and objectives in federal, state, and regional plans.

### Location of Environmental Justice Populations

Racial, income, disability, senior, and zero-vehicle household data has been obtained from the U.S. Census Bureau's 2020 5-Year American Community Survey. **Table 1** displays the number of people in each EJ group in each county, and the percentage of people in each county that fall within that EJ group. These categories are not mutually exclusive.

Table 1: Environmental Justice Population Groups									
Number of Population Group and Percent of County Population									
East-West Gateway Region by County, 2016-2020									
	Madison	Monroe	St. Clair	Franklin	Jefferson	St. Charles	St. Louis	City of St. Louis	EWG Region
Total Population	264,403	34,444	261,166	103,629	224,777	398,472	996,179	304,709	2,587,799
Minority Population	40,985	1,288	101,819	5,664	16,504	53,418	350,556	170,840	741,074
Percent of County Population	15.5	3.7	39.0	5.5	7.3	13.4	35.2	56.1	28.6
Poverty Population	32,152	1,061	37,001	9,787	20,106	18,683	90,637	60,598	270,025
Percent of County Population	12.4	3.1	14.4	9.6	9.1	4.8	9.3	20.4	10.4
Disabled Population	38,647	3,356	36,331	14,350	30,608	40,265	115,442	46,061	325,060
Percent of County Population	14.8	9.8	14.2	14.0	13.7	10.2	11.7	15.3	12.6
Senior Population	45,628	6,126	41,097	17,987	33,717	60,571	179,993	41,612	426,731
Percent of County Population	17.3	17.8	15.7	17.4	15.0	15.2	18.1	13.7	16.5
Zero Vehicle Households	5,954	392	9,060	1,504	2,788	4,187	25,430	26,880	76,195
Percent of County Population	5.5	2.9	8.7	3.7	3.3	2.8	6.2	18.7	7.2

Source: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2016-2020 (DP05, B01001, B16004, S1810, DP04, S1701)

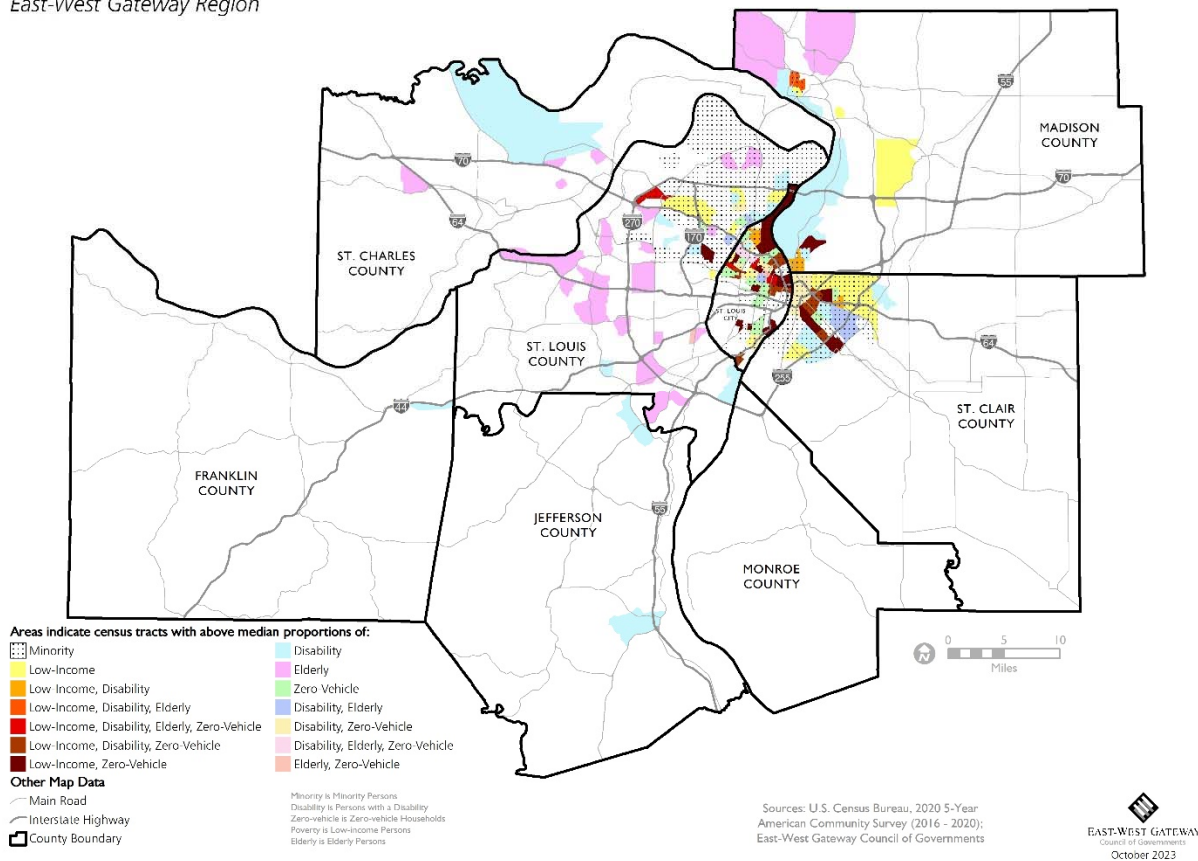
To be defined as an EJ area, Census tracts need to have a high concentration of at least one environmental justice group. Based on current data, the criteria was set at the following thresholds:

- Percent of racial minority residents: 50%
- Percent of residents in poverty: 31.6% (3 times the regional rate)
- Percent of disabled residents: 21.7% (1.5 standard deviations above the regional mean)
- Percent of residents aged 65 or over: 26.3% (1.5 standard deviations above the regional mean)
- Percent of zero-vehicle households: 23.5% (1.5 standard deviations above the regional mean)

**Map 1** displays EJ areas, symbolized by type. A large number of Census tracts fall under multiple EJ categories and are symbolized differently. This map shows that the highest concentrations of minority, low-income, disabled, and zero-vehicle populations are located in north and southeast St. Louis City, north St. Louis County, and the East St. Louis area. Elderly populations are concentrated in west and south St. Louis County along I-64 and I-270.

## Map 1: Environmental Justice Population by Census Tract

East-West Gateway Region



### EJ Analysis

Projects in the TIP were analyzed by their locations in relationship to EJ area, either in an EJ area or within ½ mile of an EJ area. The ½ mile analysis was used since adjacent projects may provide benefits to an EJ area. The amount of funding is based on the entire project cost since funding could not be split by how much was in or out of an EJ area.

**Location of FY 2024-2027 TIP Projects**

The FY 2024-2027 TIP contains 909 projects totaling \$5.44 billion. Of the 909 projects, there are 619 projects that have defined locations totaling \$4.18 billion and 290 projects that do not have defined locations totaling \$1.26 billion. There are 196 transit projects in the TIP, however many of those projects cannot be mapped (i.e., those without defined locations). Projects without defined locations include a significant number of transit projects (192 projects) including bus replacements, system-wide MetroLink right-of-way improvements, New Freedom projects, and other transit preventive maintenance projects. *Note: four transit projects do have defined locations (e.g., MetroLink extension to Mid-America Airport).* The remaining undefined locations (98 projects) include IDOT and MoDOT system-wide maintenance (i.e., pavement/guardrail) or traffic management type projects. This information is broken out below in **Table 2**.

Table 2: FY 2024-2027 TIP Summary		
	# of Projects	Project Cost in TIP
Projects with Defined Locations	619	\$4,182,758,155
Projects without Defined Locations	290	\$1,261,545,246
Total Projects in TIP	909	\$5,444,303,401

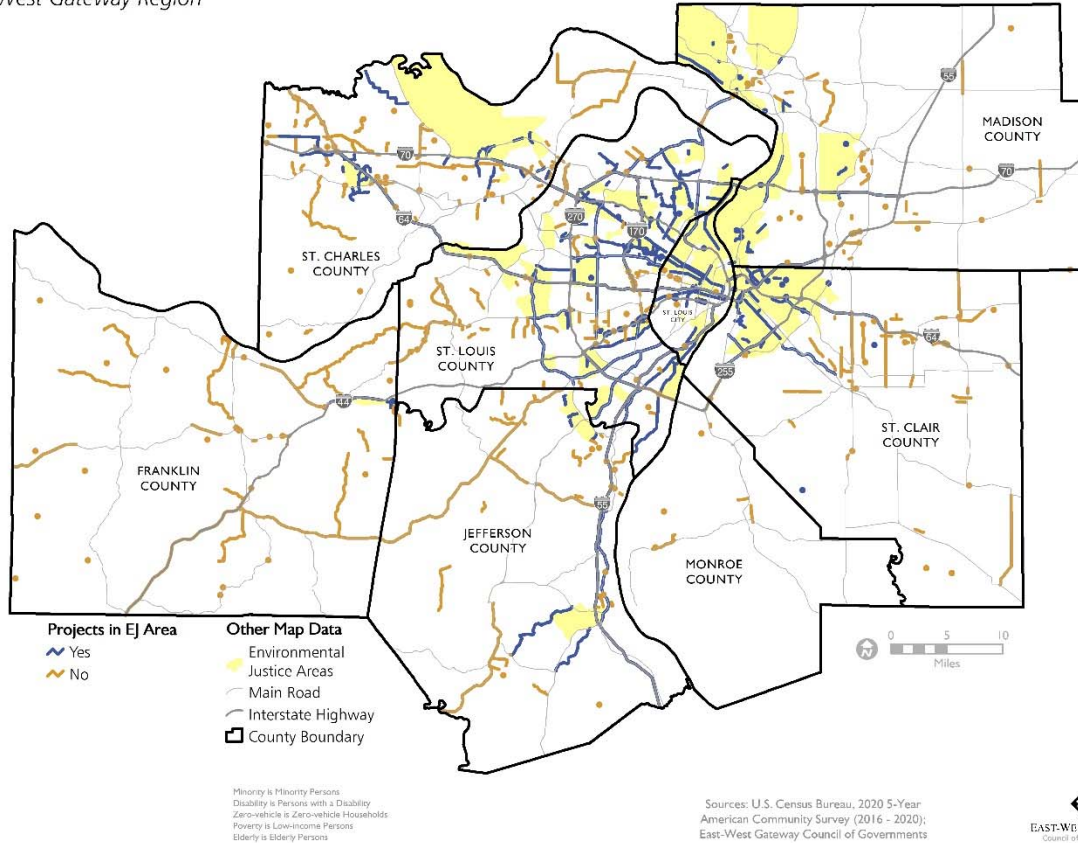
The 619 project locations with defined locations were analyzed. **Table 3** details how many of these projects are in or near EJ areas. The percentages for cost are based on \$4.18 billion in projects with defined locations.

Table 3: FY 2024-2027 TIP Projects with Defined Locations In or Near EJ Areas				
	# of Projects	% of Projects	Project Cost in TIP	% of TIP Cost
Projects with Defined Locations	619	n/a	\$4,182,758,155	n/a
Projects in EJ Area	244	39%	\$2,383,315,465	57%
Projects within ½ Mile of EJ Area	327	53%	\$2,662,406,549	64%

Map 2 shows all EJ areas, with 2024-2027 TIP projects with defined locations. The map shows nearly every cluster of EJ tracts has a programmed project in the 2024-2027 TIP.

## Map 2: FY 2024-2027 TIP Project Locations in EJ Areas

East-West Gateway Region



### Location of FY 2024-2027 TIP Projects with Multimodal Components

One of the guiding principles in *Connected 2050* is Choices and Access for All. This principle focuses on improving public transportation, bicycling, walking, and other transportation alternatives to driving alone.

There are 198 projects with multimodal components that have defined locations. Multimodal components are defined as standalone bicycle and pedestrian facilities (e.g., shared use path or sidewalks) or roadway projects that included bicycle and pedestrian facilities (e.g., road diets including bike lanes).

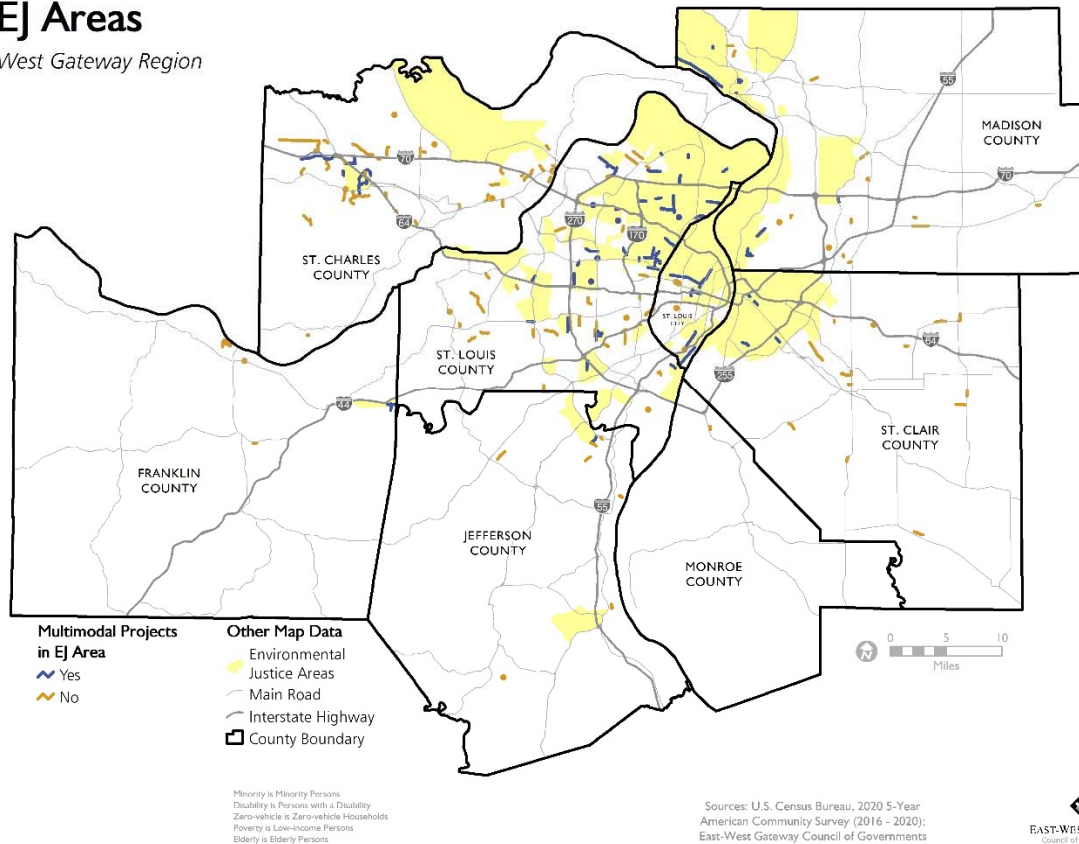
The 198 multimodal projects with defined locations were analyzed. **Table 4** details how many of those projects are in or near EJ areas. The percentages for cost are based on \$464 million in multimodal projects with defined locations.

Table 4: FY 2024-2027 Multimodal TIP Projects with Defined Locations In or Near EJ Areas				
	# of Projects	% of Projects	Project Cost in TIP	% of TIP Cost
Multimodal Projects	198	n/a	\$463,895,459	n/a
Projects in EJ Area	71	36%	\$223,120,309	48%
Projects within ½ Mile of EJ Area	101	51%	\$283,192,318	61%

Map 3 displays a map of EJ Census tracts with 2024-2027 TIP projects with multimodal components.

## Map 3: FY 2024-2027 TIP Multimodal Project Locations in EJ Areas

East-West Gateway Region

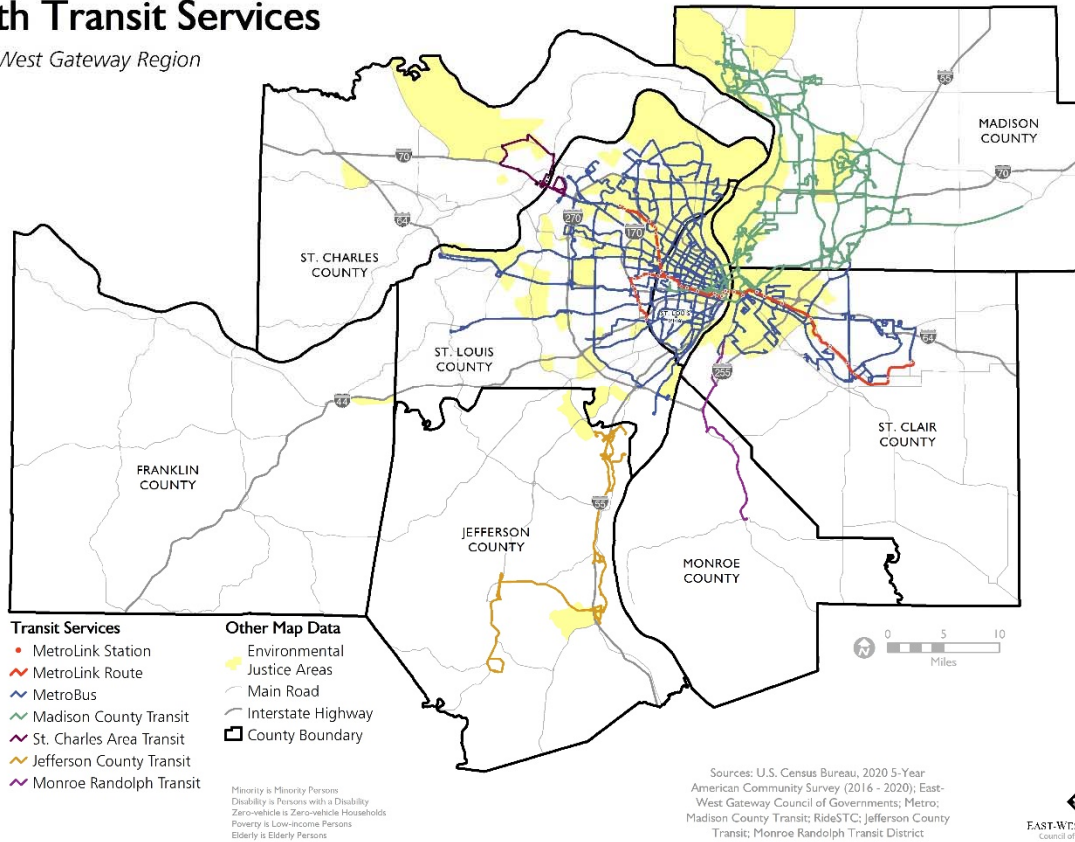


### FY 2024-2027 TIP - Transit

Investments in transit benefit EJ populations who that are more likely to rely on transit. Across the region, 55% of transit stops are located in EJ areas. This includes 59% of MetroBus stops, which serve the three counties (St. Louis City, St. Louis, and St. Clair) with the highest concentrations of EJ populations. **Map 4** displays a map of EJ Census tracts along the transit routes. Transit routes are most concentrated in EJ areas and in places with high concentrations of employment, such as the Central Corridor and heavy industrial riverfront areas in both Missouri and Illinois. Investments in transit provide crucial connections between working EJ populations and their places of employment. The FY 2024-2027 TIP has 196 transit projects totaling \$1 billion.

# Map 4: Environmental Justice Population by Census Tract with Transit Services

East-West Gateway Region



## **FY 2024-2027 TIP – Transit & Projects with Defined Locations**

There are 811 projects including transit projects and projects with defined locations that were analyzed. This includes 192 transit projects that do not have defined locations and 619 projects with defined locations in the TIP (*note: this includes the four transit project that have defined locations*).

Table 5 details how many of the 811 transit projects and projects with defined locations are in or near EJ areas. The percentages for cost are based on \$5.01 billion in transit projects or projects with defined locations.

Table 5: FY 2024-2027 Transit & Projects with Defined Locations In or Near EJ Areas				
	# of Projects	% of Projects	Project Cost in TIP	% of TIP Cost
Transit & Projects with Defined Locations	811	n/a	\$5,014,924,159	n/a
Projects in EJ Area	440	54%	\$3,434,147,533	68%
Projects within ½ Mile of EJ Area	514	63%	\$3,713,258,617	74%

### **FY 2024-2027 TIP – Transit & Multimodal Projects with Defined Locations**

There are 394 transit projects and multimodal projects with defined locations that were analyzed. This included 196 transit projects (including 192 transit projects without defined locations and four transit projects with defined locations) and 198 multimodal projects with defined locations.

**Table 6** details how many of the 394 transit projects and multimodal projects with defined locations are in or near EJ areas. The percentages for cost are based on \$1.51 billion in transit projects or multimodal projects with defined locations.

<b>Table 6: FY 2024-2027 Transit &amp; Multimodal Projects with Defined Locations In or Near EJ Areas</b>				
	<b># of Projects</b>	<b>% of Projects</b>	<b>Project Cost in TIP</b>	<b>% of TIP Cost</b>
<b>Transit &amp; Multimodal Projects</b>	394	n/a	\$1,514,727,527	n/a
<b>Projects in EJ Area</b>	267	67%	\$1,273,852,377	84%
<b>Projects within ½ Mile of EJ Area</b>	297	75%	\$1,334,024,386	88%

### **Shortcomings of EJ Analysis**

With a simple spatial analysis, the amount of spending in EJ areas can be identified, but a more advanced analysis would be needed to determine the effectiveness of these projects. Since all of the projects in the TIP do not have defined locations, it is difficult to ascertain how all projects would benefit EJ areas.

For the multimodal project analysis, projects were considered to either be multimodal or not multimodal. Because different EJ groups may have different transportation needs, further categorizing multimodal projects as pedestrian, bicycle, crossing improvements, etc. could be useful. Also, bicycle and pedestrian costs could not be broken out of roadway projects with bicycle and pedestrian components. For these projects, the total project cost was used for the analysis.

EJ areas contain high concentrations of EJ populations, but the majority of most EJ populations do not live in these areas. Thresholds for being considered an EJ area could be lowered, but there is no way to separate out these dispersed populations from their lower-concentration Census tracts.

EWG's long-range transportation plan, *Connected 2050*, has proposed a new approach to considering equity focused on transportation equity populations (TEPs). This focus broadens past methodologies focused on EJ populations. Most programs at EWG, including the FY 2024-2027 TIP, continue to use EJ populations for analysis but plan on migrating to using TEPs over the next few years to align the approach with the *Connected 2050*.