

# SOUTHWEST Missouri



## Regional transportation plan

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## 1. INTRODUCTION

### Connection to the Planning Framework

In 2003, the Missouri Department of Transportation (MoDOT) initiated a new planning framework that would be more transparent and elicit a greater amount of public participation in creating a vision for the future transportation network in the State of Missouri. In order to achieve these goals, MoDOT established partnerships with local officials around the state using Metropolitan Planning Organizations and Regional Planning Commissions (RPCs) as a conduit to develop a statewide vision when appropriate. RPCs are the vehicle through which cities and counties in Missouri's rural areas come together to work on common transportation issues. State statutes govern the formation and function of RPCs, whose boards of directors are comprised of local officials or their designees. Each RPC also has a Transportation Advisory Committee (TAC), whose membership is appointed by the board of directors. TACs provide a link to citizen involvement through local officials and stakeholders who represent the constituents of rural Missouri. MoDOT coordinates with RPCs to determine regional priorities for transportation. This improved planning process MoDOT exceeds federal and state legal requirements for involving local officials and the public in the planning and decision-making process (MoDOT – Transportation Planning – Planning Framework p.5 March 2004).

### Connection to MoDOT Long Range Transportation Plan (LRTP)

The Regional Transportation Plan (RTP) is a comprehensive, performance based, multi-modal and coordinated regional plan, which develops a basis for future needs by using existing population, employment, and land use data to identify trends critical for the development of accurate forecasts and projections on growth and development that will guide future transportation improvements. The RTP covers all modes of transportation from a regional perspective, including freeways/highways, streets, public mass transit, airports, bicycle and pedestrian facilities, goods movement and special needs transportation. In addition, the RTP addresses key transportation related activities, such as transportation demand management, transportation management systems, safety, environmental justice, and equity issues between disparate social groups. As the authorized RPC for a 10 county region in the State of Missouri, the Southwest Missouri Council of Governments (SMCOG) is responsible for the development of the RTP for the transportation network within its membership boundaries. The purpose of this document is to submit the transportation needs for this region to MoDOT for inclusion in the State Transportation Improvement Program (STIP) and the State's Long Range Transportation Plan (LRTP). The STIP includes near term projects while the LRTP deals with projects scheduled over 7-10 years.

### Study Organization

The Southwest Missouri Council of Governments (SMCOG) was established in April of 1989 in accordance with state statutes as the authorized Regional Planning Commission for a ten county region in Southwest Missouri, including the five counties of the Springfield Metropolitan Statistical Area. The SMCOG jurisdictional boundary includes 77 incorporated villages and cities within the adjacent counties of Barry, Christian, Dade, Dallas, Greene, Lawrence, Polk, Stone, Taney and Webster. SMCOG is one of 19 active regional planning commissions in the state. As the authorized

RPC for a 5,986 square mile area with wide variability in local characteristics, it is SMCOG's mission to enhance the quality of our communities through regional cooperation. One of the main services SMCOG offers is transportation planning to local governments and advisory services to area transportation advisory boards and coalitions. SMCOG also provides coordination with the Missouri Department of Transportation (MoDOT).

Within the SMCOG region is the Ozarks Transportation Planning Organization (OTO), as shown in **Figure 1.1**. This group is the Metropolitan Planning Organization (MPO) covering portions of Greene and Christian Counties. Declared a Transportation Management Area (TMA) by the U.S Department of Transportation after the 2000 Census, OTO gained the benefit of local authority to select transportation projects. According to the Federal Highway Administration, TMAs are "areas designated by the U.S. Secretary of Transportation, having an urbanized area population of over 200,000, or upon special request from the governor and the MPO, or under special circumstances designated for the area. In addition to meeting all the federal requirements for an urbanized area and MPO, TMAs are also responsible for developing congestion management systems, Transportation Improvement Program (TIP) project selection, and are subject to a joint federal certification review of the planning process at least every three years." Due to this designation, the RTP will not be able to make recommendations for the transportation network within OTO's boundaries. At the same time, though, it would be remiss if this plan did not include a discussion of the major thoroughfares in the region that reside within those boundaries. One goal of this plan is to balance the relationship between the outlying areas of the SMCOG region and the use of the road network within OTO's jurisdiction.

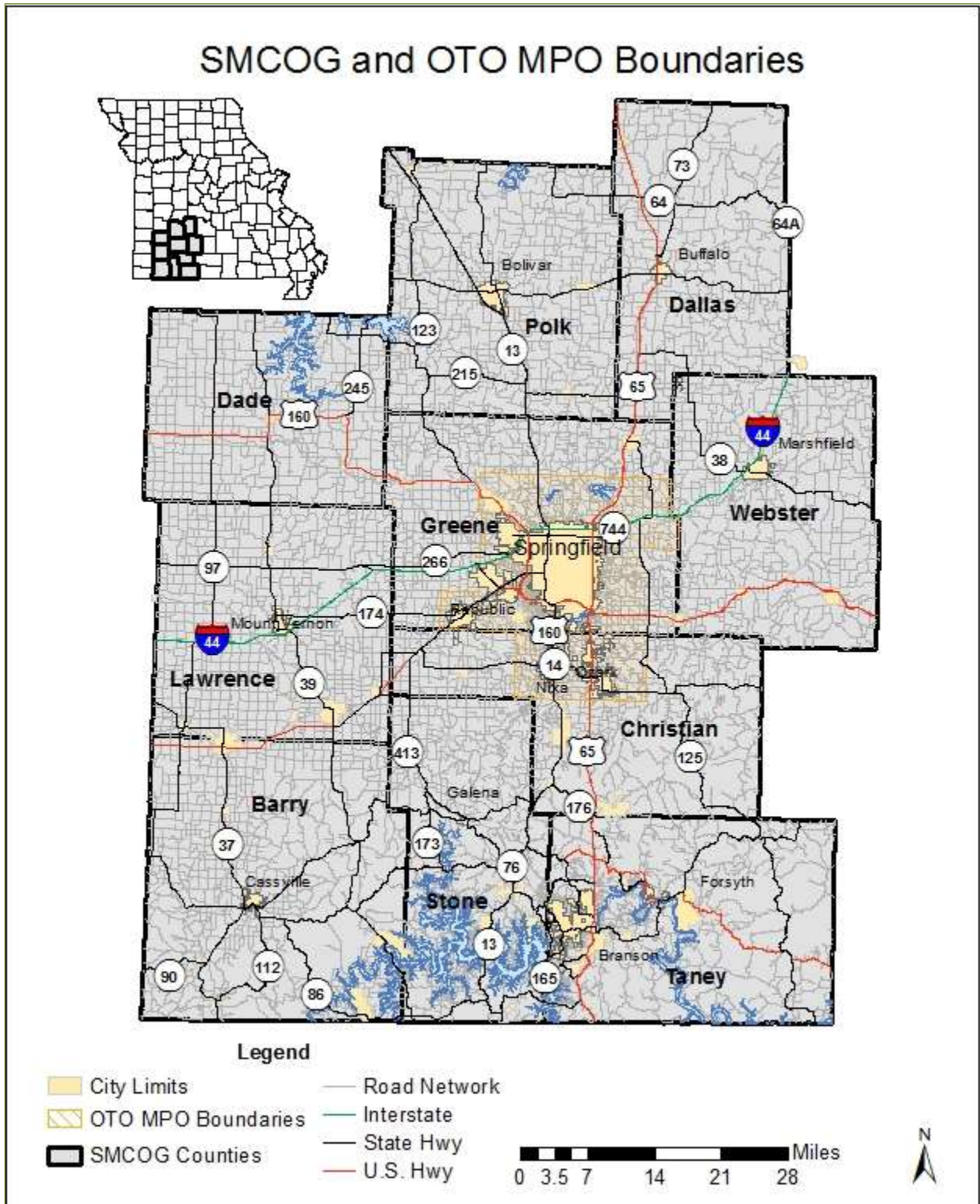


Figure 1.1 SMCOG and OTO Boundaries



### Planning Process

MoDOT's goal of incorporating public participation from local officials and regional organizations into a statewide vision for Missouri's transportation network has occurred in a phased approach. Phase One required the establishment of a Transportation Advisory Committee, joining MoDOT in public transportation meetings, assisting MoDOT in the public participation process, and keeping MoDOT informed of transportation issues in their region, while considering all modes of transportation. SMOG did some preliminary work on regional transportation activities, but did not fully participate in Phase 1. After some restructuring in the mid-1990s, MoDOT proposed to include RPCs in the needs evaluation and project prioritization process, leading to Phase 2. Phase 2 gave the RPCs increased funding and responsibilities including, an evaluation process of transportation needs, a public involvement process, development of regional data, and professional staff development. SMOG began full participation of Phase 2 in 1996.

The Missouri Association of Councils of Governments (MACOG) formed a working group to develop a common outline for this plan. Over the course of several meetings and conference calls, the content of the plan was developed. SMOG staff then compared these elements with plans from other regional planning organizations across the country, and further developed the outline for a regional transportation plan befitting the SMOG region.

The development of the RTP itself occurs in phases as well. Phase 1 includes the development of a regional plan for the state-maintained roads in Missouri. These include the interstates of the National Highway System, state highways, and the lettered county roads. Phase 2 is the continuation of the plan onto county roads and those city roads for which data exists. Phase 3 finalizes the plan by filling in the gaps for local roads.

Public input has been an important aspect in the development of the SMOG Regional Transportation Plan. The Transportation Advisory Committee provides a great deal of input from stakeholders and elected officials through frequent meetings and the formation of workgroups. SMOG staff has also pursued a proactive outreach philosophy by meeting with individual employees and officials of member communities in order to develop a rich picture of transportation issues at the local level. SMOG also maintains a website where information pertaining to ongoing projects is available to the public as well as feedback mechanisms such as downloadable surveys and electronic mail.

### Goals and Objectives

It is the overarching goal of the SMOG RPC to create a Regional Transportation Plan that represents an accurate depiction of current and projected population, employment, and land use trends. These data and public involvement will enable us to achieve a clear picture of the future needs of a transportation system for southwest Missouri that balances environmental quality, economic vitality, and equitable accessibility for all segments of the population. Diligence in this matter is imperative to the development of a sustainable transportation network for the SMOG sub-region and the State of Missouri for the 21st century and beyond. With this in mind, the following goals and objectives were developed specific to the region served by the Southwest Missouri Council of Governments.

### **Goal 1: System Preservation and Safety**

Transportation infrastructure that is properly maintained and safe, preserving past investments for the future.

#### **Objectives:**

- Provide for the continuing preservation and maintenance needs of transportation facilities and services in the region
- Promote and encourage transportation resiliency to prepare the region for the future and reduce the impact of natural or manmade emergencies and disasters.
- Provide a safe and secure environment for the traveling public, addressing roadway hazards as well as pedestrian and bicycle safety
- Create an inventory of critical infrastructure
- Integrate resiliency into planning and project development
- Encourage development of a transportation system, which can safely and efficiently accommodate unusual and unpredictable conditions.
- Promote transportation improvements, facility design and construction standards that withstand extreme demands and unexpected conditions.

### **Goal 2: Access and Mobility**

Transportation systems and services that provide accessibility, mobility and modal choices for residents, businesses and the economic development of the region.

#### **Objectives:**

- Maintain an acceptable and reliable level of service on transportation and mobility systems serving the region, taking into account performance by mode and facility type
- Provide residents of the region with access to jobs, shopping, educational, cultural, and recreational opportunities and provide employers with reasonable access to the workforce in the region
- Maintain a reasonable and reliable travel time for moving freight into, through and within the region, as well as provide high-quality access between intercity freight transportation corridors and freight terminal locations, including intermodal facilities for air, rail and truck cargo
- Provide the people of the region with transportation modal options necessary to carry out their essential daily activities and support equitable access to the region's opportunities
- Address the needs of the elderly and other population groups that may have special transportation needs, such as non-drivers or those with disabilities
- Plan and develop temporary and accessible pedestrian facilities to improve connectivity in the event of an emergency situation.

### **Goal 3: Sustaining the Environment**

Transportation improvements that help sustain our environment and quality of life.

#### **Objectives:**

- Identify and encourage implementation of mitigation measures that will reduce noise, visual and traffic impacts of transportation projects on existing neighborhoods
- Encourage programs and land use planning that advance efficient tripmaking patterns in the region
- Make transportation decisions that are compatible with air quality conformity and water quality standards, the sustainable preservation of key regional ecosystems and desired lifestyles

### **Goal 4: Partnerships**

Coordinate the regional transportation planning effort in partnership with MoDOT and represent the region in the development of state wide planning and prioritization processes.

#### **Objectives:**

- Encourage development of statewide corridors serving the region.
- Bring together elected officials and staff from cities and counties to foster regional cooperation in transportation planning

### **Goal 5: Local Outreach**

Promote and encourage public involvement in local, regional and statewide transportation planning.

#### **Objectives:**

- Monitor legislative and regulatory issues that impact transportation.
- Educate the citizens of the region on transportation issues and encourage their input.
- Improve the ability to communicate with transportation users.
- Encourage regional coordination as part of long range transportation planning to include interdependent sectors and stakeholders.

## 2. TRENDS AND CONDITIONS

### Population Growth Trends

According to the 2020 Census, the Southwest Missouri Council of Governments area population was 642,678 people. The overall population growth of the region from 2000 to 2010 was 6.63% percent, a significant decline in the growth rate from the previous decade's 17.28%. This decline may be attributable to the pandemic which affected population between 2019 and 2020. Although all ten counties have historically shown positive population growth in the past decade, except Barry, Dade, Lawrence, and Stone Counties which experienced a population decline between 2010 and 2020. SMOG's planning area is large therefore it has a great deal of intra-regional variation. Substantial growth continues to occur in the northern portion of Christian County due to rapid development in and around Nixa and Ozark, although, this growth has declined significantly from the previous decade. In 2020, Christian County ranked as one of the fastest growing counties with a population growth rate of 14.75% between 2010 and 2020. That rate of growth has declined from the 42.60% change between 2000 and 2010.

In-migration around Branson continues to drive population growth especially in Taney and surrounding counties. While this increase has declined from that of the previous decade to 8.50% population change between 2010 and 2020. Greene and Webster counties continue to have significant growth rates of 8.63% and 7.96%, respectively. Both Dallas and Polk counties had a steady population growth between 2010 and 2020. Barry, Dade, Lawrence, and Stone counties experienced a loss in population during the 2010 to 2020 time period. **Table 2.1** summarizes changes in the population of the Southwest Missouri Counties from 1980 to 2020. Although there was appreciable growth from 1980 to 1990, population growth trends throughout the region accelerated from 2000 to 2010 and slightly increased from 2010 to 2020 due to the pandemic which attributed to changes in population.

**Table 2.1 Southwest Missouri Population Growth, 1980 – 2020 and Change 2010-2020**

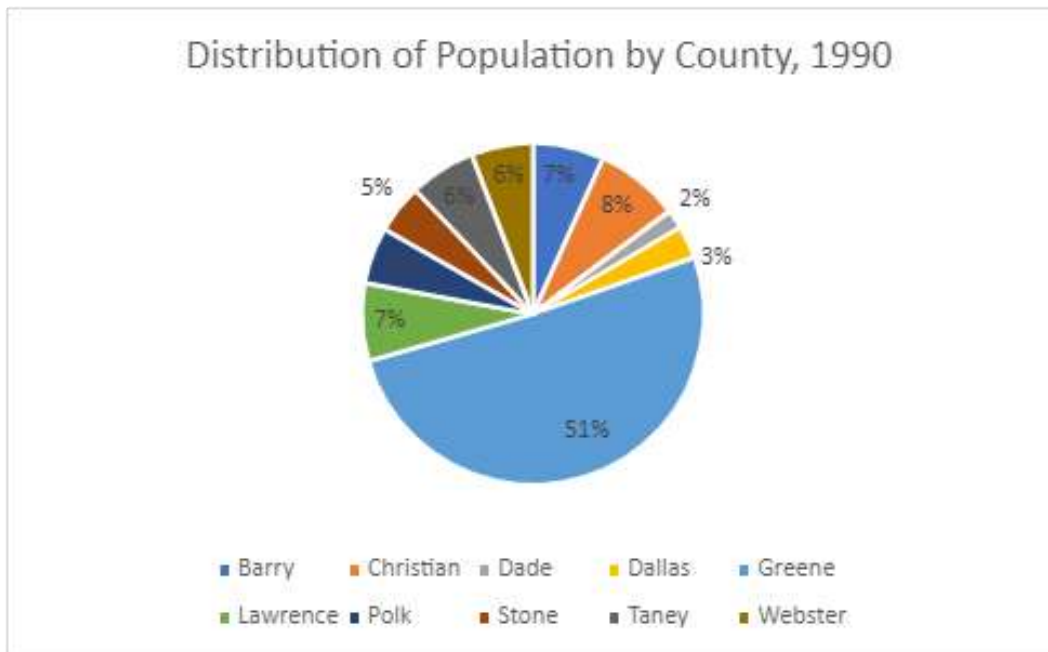
County	1980	1990	2000	2010	2020	Change 2010-2020	% Change 2010-2020
Barry	24,408	27,547	34,010	35,597	34,534	-1,063	-2.99%
Christian	22,402	32,644	54,295	77,422	88,842	11,420	14.75%
Dade	7,383	7,449	7,923	7,883	7,569	-314	-3.98%
Dallas	12,096	12,646	15,661	16,777	17,071	294	1.75%
Greene	185,302	207,949	240,391	275,174	298,915	23,741	8.63%
Lawrence	28,973	30,236	35,204	38,634	38,001	-633	-1.64%
Polk	18,822	21,826	26,992	31,137	31,519	382	1.23%

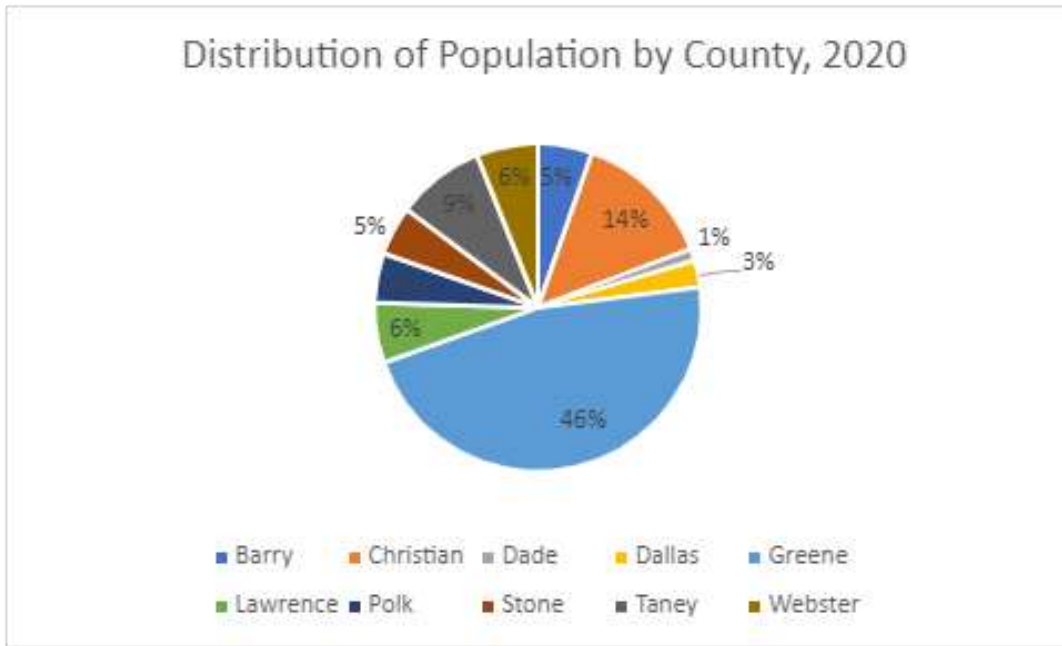
Stone	15,587	19,078	28,658	32,202	31,076	-1,126	-3.50%
Taney	20,467	25,561	39,703	51,675	56,066	4,391	8.50%
Webster	20,414	23,753	31,045	36,202	39,085	2,883	7.96%
<b>SMCOG</b>	<b>355,854</b>	<b>408,689</b>	<b>513,882</b>	<b>602,703</b>	<b>642,678</b>	<b>39,975</b>	<b>6.63%</b>
<b>Missouri</b>	<b>4,916,686</b>	<b>5,117,073</b>	<b>5,595,211</b>	<b>5,988,927</b>	<b>6,154,913</b>	<b>165,986</b>	<b>2.77%</b>

Source: U.S. Bureau of the Census. 1990 Census of Population and Housing; Census 2000; Census 2010; Census 2020

### Population Distribution

Figures 2.3 and 2.4 use the data presented in Table 2.1 to demonstrate a seemingly slight but significant redistribution of the area population from 1990 to 2020 in terms of each county’s share of the overall population.





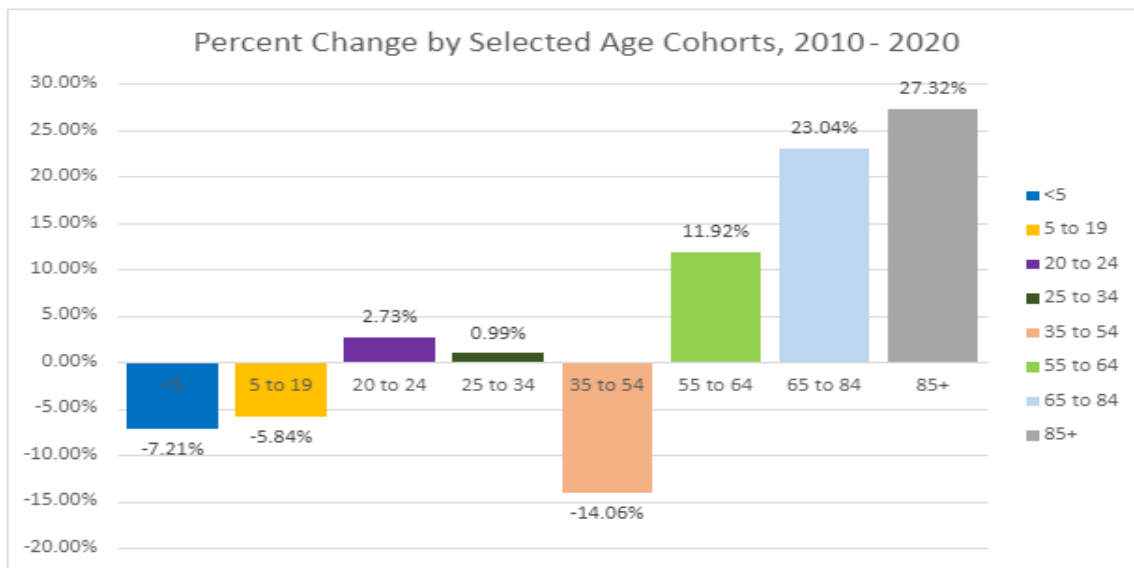
In 1990, Greene County was home to over half of the population in the SMOG region. This is indicative of Springfield’s preeminence as a central place for employment and services in the region and the predominantly rural character of the outlying counties. Greene County is growing but at a slower rate than some of the surrounding counties. By 2020, Greene County’s share of the regional population decreased to 46 percent. The preceding decades marked an era of decentralization as the attractiveness of other places in the region have grown in terms of job growth, recreation, shopping, and quality of life. Specifically, the counties of Christian, Lawrence, Taney, and Webster have taken on a greater proportion of population growth in terms of regional share.

### Components of Change

**Table 2.2** depicts the drivers of population change. Natural Increase (NI) is simply the difference between newborns added to the population and the number of deaths occurring during the same period. The majority of counties in the region show a slow moving trend in natural increase slightly above or, as in the case of Dade and Stone Counties, below population replacement levels. This is indicative of top-heavy age structures and aging rural populations. Webster and Christian had the largest natural increase at 7.41 percent and 6.98 percent respectively. While these percentages are significant in identifying younger age groups and the attractiveness of certain places in terms of family-oriented lifestyles, they do not necessarily explain the extent of population growth in the region.

Jurisdiction	Births	Deaths	Natural Increase (NI)	% Change due to NI	Net Migration (NM)	% Change due to NM
Barry Co.	4,574	4,663	-89	-0.26%	-148	-0.43%
Christian Co.	11,273	7,047	4226	4.76%	738	0.83%
Dade Co.	770	1,188	-418	-5.52%	8	0.11%
Dallas Co.	2,299	2,225	74	0.43%	19	0.11%
Greene Co.	38,238	30,990	7,248	2.42%	1,617	0.54%
Lawrence Co.	5,470	5,145	325	0.86%	-133	-0.30%
Polk Co.	4,262	3,974	288	0.91%	16	0.05%
Stone Co.	2,828	4,353	-1,525	-4.91%	37	0.12%
Taney Co.	6,909	6,319	590	1.05%	333	0.59%
Webster Co.	6,086	3,723	2,363	6.05%	71	0.18%
<b>Total</b>	<b>82,709</b>	<b>69,627</b>	<b>13,082</b>	<b>2.04%</b>	<b>2,579</b>	<b>0.40%</b>

Source: Missouri Department of Health – Births and Deaths MICA, Missouri Census Data Center – Single-County IRS Migration Profile



From 2010 to 2020, all counties except Barry, Dade, and Stone experienced positive, if modest, NI, with Webster County showing the strongest growth at 6.05 percent. Similarly, all counties except Barry and Lawrence experienced positive, modest increases in NM, with Christian County growing the fastest at 0.83 percent. The overall trends indicate that the region is experiencing modest growth due to both NI and NM.

## 3. EXISTING TRANSPORTATION FACILITIES

### State Highways

#### Nationwide Connections

##### EAST/WEST CORRIDORS

**Interstate 44:** This Interstate runs entirely across the central portion of the region. It serves as the primary transportation route from the Southwest Missouri region to the St. Louis metropolitan area in the northeast, and to Oklahoma City, OK in the southwest. It passes by four communities of the region, including Marshfield, Strafford, Springfield, and Mount Vernon. Interstate 44 is a limited access, multilane divided freeway with 25 access points in the region. It is the main road in the area and carries high volumes of cars and trucks. MoDOT data from 2020 shows an Annual Average Daily Traffic (AADT) that varies from 12,881 vehicles entering the area in Webster County to 18,469 within the City of Springfield in Greene County and 11,976 vehicles exiting the area in Lawrence County. There is a rest area located just south of the northern Webster County line and one located just inside the eastern border of Lawrence County.

**US 60:** Linking the area with Tulsa, OK in the southwest and Louisville, KY in the northeast US 60 also links 4 counties and 10 communities within the region. In the eastern section within Webster and Greene County, Highway 60 is a four-lane divided highway with vehicle traffic volumes from 8,213 in Webster County to 15,810 in Greene County. Within the City of Springfield, Greene County, this highway has been upgraded to a freeway with 7 access points and carries traffic volumes as high as 34,052 vehicles per day. The western section in Christian and Lawrence County is a two-lane undivided highway with traffic volumes of around 5,964 vehicles per day in Christian County and 4,078 in Lawrence County.

**US 160:** Highway 160 connects the Southwest Missouri area to the southeast of the country through the southern portion of Kansas and Colorado and the northern part of Arizona. It is another significant east-west connector, linking 5 of the 10 counties of the area, and eight communities. Highway 160 is a two-lane facility except in the cities of Springfield, Nixa, and Willard where it has been upgraded to four lanes. It has shoulders in most areas of the region except in Taney County where the terrain is hilly. It is the main route connecting the cities of Springfield and Nixa, and it is in this section of the road that it presents the highest traffic volume of 13,538 vehicles per day. Other sections around Willard, Highlandville, Spokane, and Forsyth encompass traffic volumes on average 4,193 cars per day. This highway has lower traffic volumes in the rural areas in Dade, Stone, and Taney Counties.

##### NORTH/SOUTH CORRIDORS

**US 65:** US 65 is the primary north-south arterial of the region and connects the region to Des Moines, IA in the north and to Little Rock, AR in the south. Highway 65 also provides a linkage for the eastern section of the area with other major routes, including Interstate 44 and Highway 60. It crosses over four counties and eight communities in the region. It is a critical route for the movement of the resident population to the Springfield MSA and the Branson Area. Two sections of this highway constitute a two-lane limited-access undivided highway with lower traffic volumes



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that fluctuate between 3,068 and 21,446 AADT. These sections are from the northern boundary of the area to just south of Buffalo, the most southern section, from Branson's city limits to the border with Arkansas. The section between Springfield and Branson is limited access, multilane divided freeway, and has 13 access points. This section involves higher traffic volumes of as high as 37,162 vehicles and 10,123 trucks per day in the south section of Greene County Springfield Area, 19,103 vehicles per day in Christian County, and 11,735 vehicles and 3,268 trucks per day in Taney County Branson Area.

## Statewide Connection

### EAST/WEST CORRIDORS

**MO 14:** This is the primary east-west traffic route through Christian County. This two-lane undivided highway connects the cities of Billings, Clever, Nixa, Ozark, and Sparta. It carries high traffic volume in the section that corresponds to the MPO area, in Nixa and Ozark with average AADT of 6,383 and 5,596 respectively, and lower volumes west of Clever (1,044 AADT) and east of Sparta (2,641 AADT).

**MO 32:** It serves as the primary east-west route for the northern portion of the region, connecting the communities of Fair Play, Bolivar, Halfway, Buffalo, and Long Lane in Polk and Dallas County. This two-lane undivided highway has traffic volumes in the city of Bolivar (3,466 AADT), decreasing considerably as they go farther to the east and the west of this area in Fair Play (2,247 AADT) and Long Lane (695 AADT) respectively.

**MO 38:** It connects Marshfield and other small rural communities from Webster and the southern section of Dallas County to I-44 to US 65. It is a two-lane undivided highway with peak traffic volumes in the city of Marshfield as high as 10,413 and an average AADT of 5,272. Low traffic volumes of 614 and 1,113 AADT in the rural areas.

**MO 76:** It serves as the primary east-west route for the southern portion of the region, connecting 11 communities in Barry, Stone, and Taney Counties. It is one of the main routes in the lakes area linking Reeds Springs, Branson West, Branson, and Forsyth. It has a major concentration of tourist attractions in the Branson area, which makes it very congested. Highway 76 is a two-lane undivided facility, and it lacks shoulders in most areas, especially where the terrain is hilly. Traffic levels have dipped in the Branson area (7,732 AADT), Branson West (5,538 AADT), decreasing considerably as they go farther to the east and the west of this area in Brownbranch (321 AADT) and Ridgeley (895 AADT) respectively. Truck volumes in 2020 were 2,163 between Branson and Branson West in Stone County, 550 between Ridgeley and Cassville in Barry County, and 1,319 between Branson and Forsyth in Taney County.

## 4. TRANSPORTATION MANAGEMENT

TMS is MoDOT's Transportation Management Systems software that was first implemented back in 1998. At that time, TMS consisted of four major business areas, which included Safety, Traffic, Bridge and Pavement.

Over the years, TMS has expanded to meet the needs of many business units and users. We continue to build applications and tools that assist MoDOT and our partners with decision making. Most TMS applications/maps are available from the TMS Homepage: <http://tms/home/>. Many of our Metropolitan Planning Organization/Regional Planning Commission (RPC) partners access TMS by using a virtual machine and logging into the MoDOT network.

TMS originated with business areas of Bridge, Pavement, Traffic and Safety but has expanded tremendously over the years.

### Bridge Management System – this system includes:

- Inventory Management
- Media Loader

TMS is the single source for all bridge data in the department. The bridge part of the system includes National Bridge Inventory (NBI) data, inspection information, as well as media for that structure. Media could include things such as photographs, plans, correspondence, inspection reports, and other data related to a bridge.

MoDOT personnel inspect state maintained bridges and culverts and the majority of all of the locally owned (referred to as non-state) bridges and culverts. A small portion of non-state bridges and culverts are inspected by local agency staff or consultant engineers. All bridges and culverts that are part of the NBI are required to have a general inspection done on a two-year inspection cycle. In addition to the general inspection, some structures require fracture critical inspections, underwater inspections, or special inspections to look at specific items. Intervals for these other inspections vary depending on what is being looked at. Structures that are in "poor" or "serious" condition may have inspections done at more frequent intervals.

Bridge and culvert condition ratings have been supplied to the RPCs for the development of their Regional Transportation Plans (RTPs). This data is being provided for the purpose of assisting the RPCs and MoDOT in identifying local needs and priorities for a region. These condition ratings are assessed by inspectors when the various types of inspections are done on a structure. These condition ratings basically describe the in-place condition of a structure. Ratings are assigned for the physical condition of the deck, superstructure and substructure components of a bridge and an overall rating is assigned for culvert structures.

The deck is the portion of the bridge that includes the riding surface. The superstructure is the girders and other span elements of the bridge that support the deck. These superstructure elements may be comprised of structural steel, concrete or timber, depending on the design of the bridge. The substructure is comprised of those elements of the structure that support the superstructure (girders, span elements, etc.). The substructure elements are the columns, footings and beam caps that the

girders rest on. The deck, superstructure and substructure are rated independently; however, the lowest rating of the three is traditionally what is considered the overall rating for a structure. Culverts are typically buried structures built out of concrete or steel. An overall condition rating is assigned for a culvert and takes into account how all of the different elements of the structure are functioning.

The following general condition ratings are used as a guide in evaluating the deck, superstructure, substructure and overall culvert.

### Bridge/Culvert Rating Description

- N NOT APPLICABLE
- 9 EXCELLENT CONDITION
- 8 VERY GOOD CONDITION – no problems noted.
- 7 GOOD CONDITION – some minor problems.
- 6 SATISFACTORY CONDITION – structural elements show some minor deterioration.
- 5 FAIR CONDITION – all primary structural elements are sound but may have minor section loss, cracking, spalling or scour.
- 4 POOR CONDITION – advanced section loss, deterioration, spalling or scour.
- 3 SERIOUS CONDITION – loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.
- 2 CRITICAL CONDITION – advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored, it may be necessary to close the bridge until corrective action is taken.
- 1 IMMINENT FAILURE COND – major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic, but corrective action may put back in light service.
- 0 FAILED CONDITION – out of service – beyond corrective action.

## Traffic Management System

### Traffic Data Acquisition System

Previously, traffic data was collected by a variety of methods. All traffic data reporting was done on the mainframe system. With the acquisition of Traffic Data Acquisition System (TRADAS), all traffic data is collected and processed uniformly. The traffic data collected includes such items as traffic volumes (both vehicular traffic and truck traffic), Level of Service (LOS) (congestion condition) and vehicle classifications. This data is used to understand traffic patterns and identify locations of need.

Inventories in the Traffic Management System include:

- Flasher Inventory
- Lighting Inventory
- Signal Inventory
- District Defined Types
- Highway Capacity Interface
- Site ID Maintenance
- Traffic Information Segment Maintenance
- Traffic Segment Hourly Volume

### **Congestion Management**

Traffic congestion and travel delay are among the most visible signs of transportation problems. Drivers experience congestion for the most part as a personal annoyance, although traffic congestion is a problem that wastes time, consumes energy resources and contributes to poorer air quality.

Traffic congestion in the urban area is typically confined to the morning and evening peak hours of travel. Delays from congestion occur on roadways with inadequate capacity or at specific locations such as interstate ramps and signalized intersections.

Congestion in the rural area can occur at any time when the roadway is unable to handle the traffic flow. This can be related to peak hours of travel, including work and holiday travel. It can also be because the typical two-lane roadway is restricted and traffic is unable to flow freely, often times because of incidents or slow moving vehicles.

Expanding the capacity of roadways is not the sole solution to congestion. The new roadways, bridges, and highways built to relieve congestion satisfy latent and shifted demand for travel. The use of alternate modes, land use regulation, access management, and improvements to intersections and traffic signals can all contribute to an overall program to manage traffic congestion.

There are two major methods of gauging congestion: facility-based measures and travel time. The facility-based congestion method focuses on the road itself and usually is based on traffic volume and capacity comparisons. Such comparisons may include volume-to-capacity ratios and traffic volume per lane mile. The travel time method of measuring congestion indicates the same conclusion, however. These trip-based measures are tied to the individual traveler's congestion problems and oriented to the length of the trip. Average travel time to work is an example of one such measure.

A number of indicators may be used to gauge and manage congestion. These are divided into four categories.

### 1. Facility-based measures:

- Average vehicle speed in peak hour
- Ratio between peak volume & nominal capacity (V/C)
- Total vehicle hours of delay
- Proportion of daily travel by speed or V/C range
- Frequency and duration of incidents
- Average daily traffic (ADT) per freeway lane

### 2. Personal travel effects:

- Proportion of personal travel by speed range
- Delay added to average person's trips by time of day, travel purpose
- Delay added to average person's trip by place of residence
- Delay to transit vehicles
- Number of crashes due to congestion

### 3. Effects on the economy:

- Delay added to average commuter trip by place of work
- Percentage of truck travel by speed or V/C range
- Vehicle hours of delay to trucks/delivery vehicles
- Truck scheduling costs attributable to travel time uncertainty
- Market perceptions of congestion as an influence on economic activity

### 4. Environmental impacts:

- Extra vehicle emissions due to stop-and-go conditions
- Extra gas consumption due to stop-and-go conditions

LOS is defined as conditions within a traffic stream as perceived by the users of a traffic facility. MoDOT's Transportation Management System provides LOS information in the Traffic Segment Browser. In practice, LOS has been defined by measures of effectiveness for each facility type, relating more to speed, delay and density than to qualitative factors or safety. LOS is rated A, representing the best operating condition, to F, representing the worst. The following describes LOS according to the Highway Capacity Manual.

LOS A describes primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at the boundary intersections is minimal. The travel speed exceeds 80% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.

LOS B describes reasonably unimpeded operations. The ability to maneuver within the traffic stream is only slightly restricted, and control delay at the boundary intersections is not significant. The travel speed is between 67% and 80% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.

LOS C describes stable operation. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed, and the volume-to-capacity ratio is greater than 1.0.

LOS D indicates a less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections. The travel speed is between 40% and 50% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.

LOS E is characterized by unstable operation and significant delay. Such operations may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30% and 40% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.

LOS F is characterized by flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30% or less of the base free-flow speed or the volume-to-capacity ratio is greater than 1.0.

#### **Transportation Demand Management (TDM)**

This is a strategic response to roadway capacity deficiencies that involves the construction of new or expanded roadways. TDM actions are calculated to reduce vehicle demand by increasing vehicle capacity or providing an alternate mode. While new construction is the most direct and effective practice to eliminate congestion, this approach may not offer a complete solution. A variety of strategies is available to reduce congestion and may include methods to increase vehicle occupancy and promote alternative modes of transportation. Approaches may include:

- a. Ridesharing programs, local and regional.
- b. Transportation management associations which coordinate opportunities and incentives for a shared travel, usually through employers or business associations.
- c. Cash-out parking subsidies which allow employees to convert employer paid parking subsidies to transit subsidies or cash.
- d. Restricted availability and/or increased parking cost for single occupancy vehicles.
- e. Mixed use development of walking, cycling and transit alternatives.
- f. Transportation enhancements projects such as improved bicycle paths and pedestrian facilities to improve choices available to commuters.
- g. Staggered/flexible work hours to more evenly distribute the number of commuters.
- h. Telecommuting and home-based businesses.

- i. Electronic commerce that allows personal and business transactions electronically without physically making a trip.

### Signalized Intersection Management

Signalized intersections may be necessary to allow the safe movement of vehicles through intersecting roadways. However, there is a physical limit to the number of through movements and turning movements that can be safely accommodated by a signalized intersection. When the demand for any movement at the intersection exceeds the available capacity, congestion and delays ensue, reducing the average travel speed and increasing the travel time. Roundabouts can also be constructed to facilitate the safe movement of vehicles through intersecting roadways. In some cases, roundabouts can accommodate traffic volume and movements more efficiently than traffic signals.

### Safety Management System

Traffic crashes are entered into TMS by staff at the Missouri State Highway Patrol (MSHP). The crashes in the database date back to 1985, and crash images date back to 1997. MSHP enters fatal crashes into the database within 10 days of the crash. Crash data is utilized to identify where crashes occur and includes other information such as type of crash, contributing circumstances and severity of the crash. Applications in this system include:

- Crash Summary
- Crash Browser
- Intersection Expected Crash Values
- Statewide Average Crash Rates

**Travelway Safety Features** – this includes inventories for:

- Guardcable
- Rumblestrips
- Concrete Barrier
- Guardrail
- Soundwall
- Emergency Reference Markers
- Curfews
- Points of Interest
- Controlled Routes

### Travelways Management System

The travelways management system includes applications to manage the following data:

- Asset Management (Functional class, speed limit, access category, federal system class, etc.)
- Travelway Overlapping Browser

- Location Referencing System (Travelway Selection)
- Travelway Lane Inventory

### Functional Classification and Access Management

Functional classification (FC) is the process by which streets and highways are grouped into classes or systems according to the character of service they provide. FC defines the nature of this process by defining the part that any particular road or street should play in serving the flow of trips through a highway network.

Federal legislation requires the FC of roadways to determine the funding eligibility of transportation projects.

Urban and rural areas have fundamentally different characteristics as to density and land use, density of street and highway networks, nature of travel patterns and the way in which all of these elements are related in the definitions of the highway classifications.

There are three such area definitions, and they are the following:

#### AREA DEFINITIONS

**Small Urban**—Areas designated by the Bureau of the Census having a population of 5,000 (5,000 to 49,999).

**Urbanized**—Designated as such by the Bureau of the Census with a population of 50,000 or more.

**Rural**—comprise the areas outside the boundaries of small urban and urbanized.

There are three principal roadway classifications: arterial, collector and local roads. All highways and streets are grouped into one of these classes, depending on the character of the traffic and the degree of land access they allow.

The following information was taken from FHWA's website at

[https://www.fhwa.dot.gov/planning/processes/statewide/related/highway\\_functional\\_classifications/section03.cfm](https://www.fhwa.dot.gov/planning/processes/statewide/related/highway_functional_classifications/section03.cfm).

To assist transportation planners responsible for determining the FC of roadways, the charts below offer a helpful tool that can make the classification process of classifying "borderline" roadways a bit easier. **Table 4-1** illustrates the range of lane width, shoulder width, AADTs, divided/undivided status, access control and access points per mile by FC categories.



Table 4-1: VMT and Mileage Guidelines by Functional Classifications - Arterials

	Arterials			
	Interstate	Other Freeways & Expressway	Other Principal Arterial	Minor Arterial
<b>Typical Characteristics</b>				
<b>Lane Width</b>	12 feet	11 - 12 feet	11 - 12 feet	10 feet - 12 feet
<b>Inside Shoulder Width</b>	4 feet - 12 feet	0 feet - 6 feet	0 feet	0 feet
<b>Outside Shoulder Width</b>	10 feet - 12 feet	8 feet - 12 feet	8 feet - 12 feet	4 feet - 8 feet
<b>AADT<sup>1</sup> (Rural)</b>	12,000 - 34,000	4,000 - 18,500 <sup>2</sup>	2,000 - 8,500 <sup>2</sup>	1,500 - 6,000
<b>AADT<sup>1</sup> (Urban)</b>	35,000 - 129,000	13,000 - 55,000 <sup>2</sup>	7,000 - 27,000 <sup>2</sup>	3,000 - 14,000
<b>Divided/Undivided</b>	Divided	Undivided/Divided	Undivided/Divided	Undivided
<b>Access</b>	Fully Controlled	Partially/Fully Controlled	Partially/Uncontrolled	Uncontrolled
<b>Mileage/VMT Extent (Percentage Ranges)<sup>1</sup></b>				
<b>Rural System</b>				
<b>Mileage Extent for Rural States<sup>2</sup></b>	1% - 3%	0% - 2%	2% - 6%	2% - 6%

#### 4. Transportation Management

<b>Mileage Extent for Urban States</b>	1% - 2%	0% - 2%	2% - 5%	3% - 7%
<b>Mileage Extent for All States</b>	1% - 2%	0% - 2%	2% - 6%	3% - 7%
<b>VMT Extent for Rural States<sup>2</sup></b>	18% - 38%	0% - 7%	15% - 31%	9% - 20%
<b>VMT Extent for Urban States</b>	18% - 34%	0% - 8%	12% - 29%	12% - 19%
<b>VMT Extent for All States</b>	20% - 38%	0% - 8%	14% - 30%	11% - 20%
<b>Urban System</b>				
<b>Mileage Extent for Rural States<sup>2</sup></b>	1% - 3%	0% - 2%	4% - 9%	7% - 14%
<b>Mileage Extent for Urban States</b>	1% - 2%	0% - 2%	4% - 5%	7% - 12%
<b>Mileage Extent for All States</b>	1% - 3%	0% - 2%	4% - 5%	7% - 14%
<b>VMT Extent for Rural States<sup>2</sup></b>	17% - 31%	0% - 12%	16% - 33%	14% - 27%
<b>VMT Extent for Urban States</b>	17% - 30%	3% - 18%	17% - 29%	15% - 22%

4. Transportation Management

<b>VMT Extent for All States</b>	17% - 31%	0% - 17%	16% - 31%	14% - 25%
<b>Qualitative Description (Urban)</b>	<ul style="list-style-type: none"> <li>• Serve major activity centers, highest traffic volume corridors, and longest trip demands</li> <li>• Carry high proportion of total urban travel on minimum of mileage</li> <li>• Interconnect and provide continuity for major rural corridors to accommodate trips entering and leaving urban area and movements through the urban area</li> <li>• Serve demand for intra-area travel between the central business district and outlying residential areas</li> </ul>			<ul style="list-style-type: none"> <li>• Interconnect with and augment the principal arterials</li> <li>• Serve trips of moderate length at a somewhat lower level of travel mobility than principal arterials</li> <li>• Distribute traffic to smaller geographic areas than those served by principal arterials</li> <li>• Provide more land access than principal arterials without penetrating identifiable neighborhoods</li> <li>• Provide urban connections for rural collectors</li> </ul>
<b>Qualitative Description (Rural)</b>	<ul style="list-style-type: none"> <li>• Serve corridor movements having trip length and travel density characteristics indicative of substantial statewide or interstate travel</li> <li>• Serve all or nearly all urbanized areas and a large majority of urban clusters areas with 25,000 and over population</li> <li>• Provide an integrated network of continuous routes without stub connections (dead ends)</li> </ul>			<ul style="list-style-type: none"> <li>• Link cities and larger towns (and other major destinations such as resorts capable of attracting travel over long distances) and form an integrated network providing interstate and inter-county service</li> <li>• Spaced at intervals, consistent with population density, so that all developed areas within the State are within a reasonable distance of an arterial roadway</li> <li>• Provide service to corridors with trip lengths and travel density greater than those served by rural collectors and local roads and with relatively high travel speeds and minimum interference to through movement</li> </ul>

1- Ranges in this table are derived from 2011 HPMS data.

2- For this table, Rural States are defined as those with a maximum of 75 percent of their population in urban centers.

**Table 3-6: VMT and Mileage Guidelines by Functional Classifications - Collectors and Locals**

	Collectors		Local
	Major Collector <sup>2</sup>	Minor Collector <sup>2</sup>	
<b>Typical Characteristics</b>			
<b>Lane Width</b>	10 feet - 12 feet	10 - 11 feet	8 feet - 10 feet
<b>Inside Shoulder Width</b>	0 feet	0 feet	0 feet
<b>Outside Shoulder Width</b>	1 feet - 6 feet	1 feet - 4 feet	0 feet - 2 feet
<b>AADT<sup>1</sup> (Rural)</b>	300 - 2,600	150 - 1,110	15 - 400
<b>AADT<sup>1</sup> (Urban)</b>	1,100 - 6,300 <sup>2</sup>		80 - 700
<b>Divided/Undivided</b>	Undivided	Undivided	Undivided
<b>Access</b>	Uncontrolled	Uncontrolled	Uncontrolled
<b>Mileage/VMT Extent (Percentage Ranges)<sup>1</sup></b>			
<b>Rural System</b>			
<b>Mileage Extent for Rural States<sup>3</sup></b>	8% - 19%	3% - 15%	62% - 74%

#### 4. Transportation Management

<b>Mileage Extent for Urban States</b>	10% - 17%	5% - 13%	66% - 74%
<b>Mileage Extent for All States</b>	9% - 19%	4% - 15%	64% - 75%
<b>VMT Extent for Rural States<sup>3</sup></b>	10% - 23%	1% - 8%	8% - 23%
<b>VMT Extent for Urban States</b>	12% - 24%	3% - 10%	7% - 20%
<b>VMT Extent for All States</b>	12% - 23%	2% - 9%	8% - 23%
<b>Urban System</b>			
<b>Mileage Extent for Rural States<sup>3</sup></b>	3% - 16%	3% - 16% <sup>2</sup>	62% - 74%
<b>Mileage Extent for Urban States</b>	7% - 13%	7% - 13% <sup>2</sup>	67% - 76%
<b>Mileage Extent for All States</b>	7% - 15%	7% - 15% <sup>2</sup>	63% - 75%
<b>VMT Extent for Rural States<sup>3</sup></b>	2% - 13%	2% - 12% <sup>2</sup>	9% - 25%
<b>VMT Extent for Urban States</b>	7% - 13%	7% - 13% <sup>2</sup>	6% - 24%

4. Transportation Management

<b>VMT Extent for All States</b>	5% - 13%	5% - 13% <sup>2</sup>	6% - 25%
<b>Qualitative Description (Urban)</b>	<ul style="list-style-type: none"> <li>• Serve both land access and traffic circulation in higher density residential, and commercial/industrial areas</li> <li>• Penetrate residential neighborhoods, often for significant distances</li> <li>• Distribute and channel trips between local streets and arterials, usually over a distance of greater than three-quarters of a mile</li> </ul>	<ul style="list-style-type: none"> <li>• Serve both land access and traffic circulation in lower density residential, and commercial/industrial areas</li> <li>• Penetrate residential neighborhoods, often only for a short distance</li> <li>• Distribute and channel trips between local streets and arterials, usually over a distance of less than three-quarters of a mile</li> </ul>	<ul style="list-style-type: none"> <li>• Provide direct access to adjacent land</li> <li>• Provide access to higher systems</li> <li>• Carry no through traffic movement</li> </ul>
<b>Qualitative Description (Rural)</b>	<ul style="list-style-type: none"> <li>• Provide service to any county seat not on an arterial route, to the larger towns not directly served by the higher systems, and to other traffic generators of equivalent intra-county importance such as consolidated schools, shipping points, county parks, important mining and agricultural areas</li> <li>• Link these places with nearby larger towns and cities or with arterial routes</li> <li>• Serve the most important intra-county travel corridors</li> </ul>	<ul style="list-style-type: none"> <li>• Be spaced at intervals, consistent with population density, to collect traffic from local roads and bring all developed areas within reasonable distance of a minor collector</li> <li>• Provide service to smaller communities not served by a higher class facility</li> <li>• Link locally important traffic generators with their rural hinterlands</li> </ul>	<ul style="list-style-type: none"> <li>• Serve primarily to provide access to adjacent land</li> <li>• Provide service to travel over short distances as compared to higher classification categories</li> <li>• Constitute the mileage not classified as part of the arterial and collectors systems</li> </ul>

1- Ranges in this table are derived from 2011 HPMS data.

2- Information for Urban Major and Minor Collectors is approximate, based on a small number of States reporting.

3- For this table, Rural States are defined as those with a maximum of 75 percent of their population in urban centers.

## Pavement Management System

Currently, MoDOT's emphasis is on keeping good roads good and doing the best we can with the resources available. Because resources are scarce and MoDOT desires to provide the best service possible to the most customers, we have stratified our roadways into three tiers: Major Roads, Minor Roads and Low Volume Roads. Major Roads account for almost 80% of the Vehicle Miles Traveled (VMT) on state-owned roadways. Minor Roads are other routes that are not Major but have an AADT greater than 400. Low Volume routes are all other routes with an AADT less than 400. We track performance on these routes by category. Our resulting measures are "Good" and "Not Good". They are calculated as follows:

- Major Roads speed limit > 45                      Good: IRI < 100
- Major Roads speed limit < 50                      Good: Condition\_Index >=7 (visual surface distress rating)
- Minor Roads    Good: IRI < 140
- Minor Roads    Good: IRI between 140 and 170 and Condition\_Index >=6
- Low Volume    Good: IRI < 170
- Low Volume    Good: IRI between 170 and 220 and Condition\_Index >=6

In our state of the system tables, this measurement has been calculated, and the results are maintained in the column *Tracker Condition* with the values of "Good", "Not Good" and "NA" or null.

## Additional Business Areas with TMS include the following:

**Outdoor Advertising** – this system includes:

- Adopt A Highway
- Outdoor Advertising °Billboard
- Junkyard
- Transfer Permit
- Media for billboards and junkyards

### Routine Maintenance

- Travelway Routine Maintenance is an application containing job numbers for routes and bridges throughout the state. This application enables Routine Maintenance job numbers from the Financial Management System (FMS) to be tied to a location in TMS.

### Intelligent Transportation System

**SIMS** (five-year Statewide Transportation Improvement Program)

### Realty Asset/RW Parcel Acquisition

**State of the System** (yearly summarized roadway, bridge, crash and pavement data)

**Traffic Permitting for Right-of-Way** – this application tracks the status of permits issued for conducting work on MoDOT right-of-way.

### **Traveler Information System**

These applications are used to keep information current on MoDOT's Traveler Information Map. The Traveler Information Map is essential to the safety of Missouri's traveling public. Traffic Impact

- Work Zone
- Winter Road Conditions
- Flood Condition
- OSOW Restrictions
- Traveler Information Map (TIM) Auto Editor

This application is used to choose and update layers which will display on the TIM. This application is used only by MoDOT Communications staff.

- TIM Alert Management

This application will assist users in changing the alert message for the desktop TIM and the mobile TIM apps for iOS/Android mobile phones. The desktop web application only allows one message to be displayed in the upper left corner of the map. The mobile apps allow multiple messages and will display them in a list for the user. This application is used only by MoDOT Communications staff.

The following is a list of newer applications in TMS:

#### **Stormwater**

- This application helps MoDOT regulate under a National Pollutant Discharge Elimination System storm water permit. The permit requires MoDOT to develop and implement a comprehensive program to prevent pollution of surface waters resulting from storm water run-off from MODOT's system.

#### **Local Program Application (LPA) Locations**

- The LPA is used to manage jobs located on our city streets and county roads. There is a federal mandate to assign locations to these local projects.

#### **Emergency Operations Map**

- This map is for internal use only should a natural disaster occur. It tracks the status of MoDOT roads and bridges during and after a disaster.

#### **TMS Data Zone**

This is an internal web page containing maps and other tools that allow MoDOT customers to easily retrieve data and statistics. It contains data in the following areas: Traffic, Safety, Planning, Bridge, Design, Map-21, Construction and Multimodal. The Data Zone also houses the Pavement Tool which is used for planning pavement maintenance activities and surface treatments. The intent is to eventually open this tool to the public.

For detailed information regarding MoDOT business and engineering policy, visit the Engineering Policy Guide at [http://epg.modot.org/index.php?title=Main\\_Page](http://epg.modot.org/index.php?title=Main_Page).



## 5. NEEDS IDENTIFICATION

### Surveys

At the beginning of each year's prioritization process, SMCOG staff prepare a needs survey to distribute across the region. A transportation needs letter and survey is mailed to each incorporated jurisdiction and county. The survey is also placed on the SMCOG website for online entry or printing and a press release is sent to area media. This provides local officials as well as the general public the opportunity to submit any needs within their respective areas.

Existing needs are posted on the SMCOG website, broken down by county, so that individuals may review what is already on the list prior to submitting a survey.

### County Meetings

After any new needs have been collected, SMCOG staff updates each county's list. Staff then schedules meetings with each of the ten counties. Staff attend a County Commission or Transportation Advisory Board meeting to discuss the current list of needs. Each incorporated jurisdiction is also notified of this meeting and invited to attend to provide comments or feedback. The existing list is reviewed, and the commissioners prioritize the list of needs. MoDOT staff also often attend these meetings.

### Prioritization

SMCOG staff compiles the top three road and bridge needs and the top two bike and pedestrian needs from each county. These lists are then pre-scored with MoDOT staff for the quantitative measurements used during MoDOT Southwest District prioritization. The criteria is based on MoDOT's Long Range Transportation Plan and Blue Print for Safety.

SMCOG staff then presents the top needs during a TAC meeting. Each TAC member can expand on information pertaining to the needs, but each need may only be discussed for a maximum of two minutes. The TAC then ranks the top 15 regional needs for road and bridge and top 10 regional needs for bike and pedestrian.

This process resulted in the following needs list

2022 SMOG Road and Bridge Needs

SMCOG Priority #	County	County Priority #	City	Need	Route	Location	Include bridge(s)?	Description	What problem are you trying to solve?	Status	Notes
1	Christian/Taney	1		Safety, capacity and intersection improvements	on Hwy 65	Throughout Christian County - at State Hwy A & B; at Hopkins Road; at Saddlebrook exit; Upgrade US 65 to freeway standards for the entire length across Taney County	A3804 - Fair (6) A0572 - Fair (6) A3805 - Fair (6) A0896 - Fair (6) A0895 - Fair (5) A5865 - Good (7) A5866 - Good (8) A0897 - Good (7) A0998 - Fair (5) A0899 - Fair (5) A0929 - Poor (4) NP A5827 - Good (7)	Safety and crash concerns throughout county. Concern w/ schools business being able to turn, add acceleration/deceleration lanes, add turn lane on southbound 65 to Saddlebrook; Upgrade Highway 65 to meet freeway standards throughout Taney County. Upgrades would include improving US 65 access points to grade-separated interchanges. This includes four interchanges in the southern part of the county and up to three in the northern part of the county (though some access consolidation may be necessary.) Including to 86 Hwy and Morris property. Some segment improvements and signage upgrades may also be required.	Rt A and 88 has school bus issues; Improve safety, specifically at intersections, reduce congestion, improve a freight route between Missouri and Arkansas, and improve an important roadway for economic development. Highway 65 is the primary north-south highway through Taney County. It was upgraded to 4 lanes with a median in the 1990's. Several grade-separated interchanges have been building; but seven remain. Additional traffic generated by Morris Properties and Airport on 86, need to include that intersection. 86 intersection is #1 priority.	MoDOT added funds to US 65 project 793210 in FY21 for resurfacing and safety improvements. MoDOT funds also added to US 65 project 793235 for resurfacing in FY21. MoDOT funds added to US 65 project 793352 in FY21 for high friction surface treatment near Saddlebrook.	Eventual freeway status
2	Greene	1		Safety, Economic Development, Capacity, & Intersection Improvements	on US Hwy 60	Hwy 60 Corridor; Greene county; Access on and off bypass on Hwy 60 between MIB St and Hwy 125	A8343 A8346	Improvements along the US Hwy 60 corridor in Webster County; safety improvements along entire route at lettered routes/60 intersections; Upgrading of intersection 60/125 in Greene County from at-grade to interchange. Complete freeway conversion from 125 to Rogersville. Complete intersection improvements from 125 to Rogersville (limiting access for freeway standards). Reconfigure ramp to 253 (Current design doesn't allow good ingress/egress, limited access)	Hwy 60 has seen an increase in traffic and has several locations where vehicles are traveling at high speeds, but vehicles may be turning onto/off of 60 onto/off of a lettered route (A). Deceleration/acceleration lanes and a new interchange could assist with the safety concerns. Improve safety and congestion concerns with freight traffic; current intersection at 125/60 is a bottleneck with truck traffic. 125 is a detour route for MoDOT when 60 is under water. Limited access and poor ingress and egress.	125/60 interchange to be constructed in 2022-2023. Is cost-shared with OTD and SW Rural	253+Jamestown: ingress/egress problem
3	Greene, Christian, Lawrence, Barry	1	Billings/Marionville/Aucora/Monett	Capacity and Safety Improvements	on Rte. 37 & Rte. 60	Route 60 from Republic (JOTD Boundary) to Monett and Route 37 from Monett to Gateway, AR.	A7565 - Good (7)	Route 60: 4-lane expressway, Republic to Monett and Route 37: 4-lane expressway and/or passing lanes from Monett to Gateway, AR.	Increase capacity in order to accommodate additional freight traffic and assist in economic development in Barry County. A study has already been completed. Safety improvements on narrow and dangerous portions in southern part of the county. Reduce congestion on 60, improve overall safety; increase economic development. This is a freight route for Monett's industry of EFCO/Pella Windows, Tyson Foods, etc. EFCO, a major employer in Monett has said they are about 100 employees behind but can't find employees, in part due to transportation concerns. Perhaps look at options for four laning through Marionville city limits in order to accommodate turning traffic and high speeds. Traffic turning off of FR1100 onto 60 and vice versa. Turn lanes on 60 to FR1100. Smaller improvements: improvements in Purdy, Seligman at 112, right turn lane in Georgia, FR1100 (roundabout)	MoDOT added funds to Rte. 37 resurfacing project 793130 in FY 19 for turn lanes and potential passing lanes. MoDOT added project 790881, intersection improvement at Route 60 and Route 37 in FY18. Cost share with Monett. (Not resurfaced in 18-22 STP) Some environmental work has already been completed 2020. Route 37 pavement resurfacing from Monett to Arkansas with passing lane at Washburn and various intersection improvements	Also a freight need
4	Lawrence	2	Mt. Vernon	Capacity and Safety Improvements	on I-44	I-44 and Rt. 39 interchange		Ramp Improvements	Westbound and eastbound (especially westbound) ramps need improvements.		
5	Polk	3	Bolivar	Safety and Capacity Improvements	on Rte. 83 (Springfield St)	from Rte. 32 to Rte. 13		Complete Street improvements; widen street to accommodate increased traffic. Include 5 way stop intersection with Albany, Buffalo. Need pedestrian accommodation on overpass.	Relieve congestion and add pedestrian accommodations.		Received TEAP grant and city is interested in cost sharing
6	Webster	1	Seymour	New interchange (Safety, Economic Development)	Hwy 60	Intersection of Hwy 60 & W. Clinton Ave; west edge of Seymour city limits		New interchange over 60/RR, tied to proposed outer road system, as recommended by Corridor Study (section 4)	Hwy 60 has seen an increase in traffic and has several locations where vehicles are traveling at high speeds, but vehicles may be turning onto/off of 60. Deceleration/acceleration lanes and a new interchange could assist with the safety concerns. Improve lighted intersection at Seymour. Improve safety concerns with freight traffic.		Project recommended as part of US Hwy 60 Corridor Study.
7	Dallas	1		Safety, Capacity, and Intersection Improvements	on Rte. 65	Through county; including at Kelly Rd; at Truman Rd; at 73; at Main St; at 64; S of MO32	H0822 - Fair (5) NP A4130 - Fair (6) NP A4129 A4128 - Fair (6) NP A4127 - Fair (6) NP H0837 - Fair (5) NP H0836 - Fair (5) NP H0835 - Fair (6) NP H0834 - Fair (5) NP J0113 - Fair (6) NP	Improve capacity countywide. Improve safety and reduce congestion at the following intersections: 65 & Kelly Rd, 65 & Truman Rd, 65 & 64, 65 & MO32, and 65 & Main.	Need to improve capacity countywide and improve safety and reduce congestion at various intersections. Getting worse with traffic. Bus barn and administration building moved to Rt. 65 so there is more congestion along the route. There have been accidents at Truman. There is more tractor trailer and boat traffic. People aren't slowing down when entering the city. Bus traffic goes through 65 & Main. Need caution light for 65 & 73 so people know they are entering the city. Need passing lanes closer to population center heading north on 65.	Extend four-lane or install passing lanes countywide; freight route. At Kelly Rd intersection, 100-150 trucks/week to & from grain elevators and Hostetter; owners willing to cost-share. At Truman Rd intersection, 30 busses/day creates congestion and safety concerns. At 64 intersection, install traffic-calming measures; current flashing light and high volume of speeders causes accidents. South of MO32 in front of Signal in Buffalo needs median or poles in center lane to prevent accidents when used as traffic lane. Kelly Road as potential cost share.	
8	Christian	3		Capacity & safety Improvements	on Rte. EE	from Rte. 65 to Rte. 160/13		Unsafe with lots of curves; add shoulders at least at curves, maybe add some rumble	Run off the road crashes and large lake traffic, RV and boats, meeting small cars. High accident volume. Route is busier in the summer. Usually people not familiar with the road are involved in the accidents.		
9	Barry	2	Cassville	Bridge Replacements and intersection improvements	on Rte. 76/86/112/248	Over Flat Creek & Brock Branch at 112/248 intersection	J0380 - Fair (6) J0566 - Fair (6)	Narrow Bridge, Needs pedestrian accommodations Replace and Realign; remove sharp turn	Difficult intersection to navigate, especially large trucks or trailer traffic. Near the ball parks and has heavy traffic as one of the primary entries into Cassville.		
10	Dade	1	Greenfield/Countywide	Safety/Alignment Improvements	on Rte. 160 & 39	From Barton County line to Rtes. MM/FF	T0147 J0552 - Fair (5) NP B0409 A2932 - Poor (3) NP A2931 - Poor (3) NP A2542 - Fair (6) NP A2541 - Good (7) NP	160 needs improvements throughout county; install shoulders; freight route; "Deadman's Curve" Trucks turning over between 245 and 203; freight route; Need new bridge/wider bridge at Kyle Creek & new railroad crossing; S curve between 107 and 115 needs something; head walls between Golden City and Lockwood, and Lockwood and Greenfield; Rt. 39, north of K has curves that has a lot of accidents reported	Safety concerns with commercial truck traffic and narrow, winding roads. Installation of 160 needed; 8 ft shoulders preferred. 160 is a freight route and the intersection between 245 and 203 has seen trucks turning over. Drivers must look back to see oncoming traffic on 160. To come off of 160 and onto 39 North, driver has to cross oncoming traffic.	Intersection project had previously been planned and funded by MoDOT for improvement, but City of Greenfield at the time did not want project to be completed. New leadership would like to see project happen. 160 was resurfaced in FY20 and intersection of 160/39 was restriped to see if that helped as an interim approach to reconstruction the entire intersection. September 2021: Bus wreck with 20 kids on 160 east of Lockwood where the road narrows and there's a box culvert.	Conducted traffic counts in May 2019. AADT in curves along 160 was 903. Maximum speed through curves was 77 mph, must faster than is safe. Several accidents occur at intersection, but wonder if they are not getting reported.
11	Lawrence	3	Aurora	Intersection Improvements	on Rte. 60 (Church Street)	at Rte. 39 (Elliot Street)		Upgrade intersection to better accommodate truck traffic; improved turning radius.	Trucks have to take this very wide and causes safety concerns.		

5. Needs Identification

12	Webster	2	Rural Fordland	New Interchange (Safety, Congestion/Traffic Management, Economic Development)	Hwy 60	Intersection of US Hwy 60 and State Hwy 2; east edge of Fordland city limits		New interchange over 60/RR, tied to outer road system (underway), as recommended by Corridor Study (section 2).	Hwy 60 has seen an increase in traffic and has several locations where vehicles are traveling at high speeds, but vehicles may be turning onto/off of 60 onto/off of a lettered route (2). Deceleration/acceleration lanes and a new interchange could assist with the safety concerns. Improve safety and congestion concerns with freight traffic.		Project recommended as part of US Hwy 60 Corridor Study. Preliminary engineering plans to be developed in 2021-2022.
13	Greene	3	Fair Grove	Bridge Replacement	on Rte. CC	east of Rte. H	MO560 - Fair (5) h#	Replace a low-water bridge that frequently floods. There are 3 locations on CC that need replaced. Two are low water crossing and one box culvert.	Frequent flooding occurs at these three locations on CC. Improve safety on CC to allow for travel during high water events. The county is arterial deficient on the north side and CC is used for bus and emergency vehicles. It is the only major arterial that extends east/west across the county between I-44 to the south and State Rte. 125 to the north. This is also a primary bus route. Re-routing traffic adds at least 5 miles. Part of Transamerica trail.		
14	Dallas	2	Buffalo	Capacity Improvements	on Rte. 32	at Walmart		Need for turn lane	Traffic delays while cars wait to turn into Walmart. Is a bit of a hill (going west) that limits sight of oncoming traffic. Getting worse with traffic. City is extending Azalea St to Rt. 32. This will increase traffic on 65 & 32 and 65 & Truman.		Potential cost-share with Walmart
15	Polk	2		Safety and Capacity Improvements	On Rte. 215	From 13 to H Hwy		Widening and safety improvements on 215 from H (near beef plant) to Highway 13. There has been a significant increase in truck traffic with the opening of the beef processing plant. Several trucks use the route daily creating more traffic which in turn leads to safety concerns.	Increased traffic and safety concerns with freight traffic. Pleasant Hope police sat at roadway for 8 hours and saw 82 dump trucks. Many hauling to rock quarry. The new beef plant is looking to double production which will increase traffic.		

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2022 SMCOG Bicycle and Pedestrian Needs

SMCOG Priority #	County	Priority #	City	Need	Route	Location	Description	What problem are you trying to solve?	Status	Notes
1	Webster	1	Marshfield	Bike/Ped	Elm Street	b/n Hubble Drive (Route 66) and Julian Street; possibly also from Julian to Locust Street	Phase Three: extension of bike/walking path from Route 66 to High School (Hwy DD).	provide a safe pedestrian and bicycle path that keeps people off the road		complete project, connecting new Hwy CC to city park, Route 66, and two school facilities; approximately 3,800 ft.
2	Barry	1	Roaring River State Park	Bike/Ped	on Rte. 112	over Dry Holler Branch	Pedestrian Accommodations on Bridge	High number of pedestrians use the State Park and walk on the bridge, but causes a safety concern with traffic. Used to be a pedestrian bridge, but it was washed away.		
3	Lawrence	1	Miller	Bike/Ped	on Rte. 39	from 6th to Rte. DD (Adamson Street)	Sidewalk Improvements near school; 1st & 2nd Street at Elementary School			
4	Taney	1	Kirbyville	Bike/Ped	on Rte. 76	Near elementary school and post office	Add sidewalks and pedestrian signal	Students hit after school when playing and crossing highway. Buses, teachers, and students hit even during and after school		
5	Greene	1	Fair Grove	Bike/Ped	on Rte. 125	in Fair Grove, Main Street & westward	Sidewalks are needed along State Hwy 125, a busy commercial corridor. A crosswalk on Main Street is needed to safely get students from the schools on the north side of the highway to the south side, where the new library and city park are located.	Safety concern with pedestrians/children and cyclists on 125, which becomes a busy commercial corridor in Fair Grove. Children cross 125 from the schools to the library.		
6	Dade	1	Greenfield	Bike/Ped	160/39	From Pennington Seed along 160	Need sidewalks along 39 and 160. North side of 160 from Main to 39 first.	With the new Dollar General on 160, numerous people now walk on the highway or along the side to get to Dollar General. New sidewalks along the north side of 160 could assist with this concern. A lot of foot traffic to and from Dollar Store. Lots of kids running into ditches.		Potential TAP application for sidewalks
7	Dallas	1	Buffalo	Bike/Ped/Trail Improvement	Autoscope Dr. & Hickory St.	In Buffalo City Park	Need more reliable access to Hwy 65. City looking to connect walking trail.	The low water crossing frequently floods in the Dallas county community park that blocks access to Hwy 65.		
8	Taney	2	Branson	Bike/Ped	near Convention Center	from Convention Center to Branson Landing	Pedestrian RR overpass			
9	Stone	1	Crane	Bike/Ped	on Rte. 88	through Crane	Sidewalk Improvements	Safety issues. Hwy. 88 from Commerce St./Hwy. 413 to College St.		
10	Christian	1	Chadwick	Bike / Ped	on Rte. 125	at Chadwick School	need safe pedestrian crossing on Rte. 125; flashing signal and added signage	Children cross 125 to get to and from school property: ball fields, busses, school building. Is located on a curve and can be safety concerns with traffic not slowing or watching for crossing kids.		
11	Polk	1	Bolivar	Bike/Ped	on S Albany Street	S Springfield and E Walnut	Sidewalk Improvements	Lack of sidewalks near busy commercial corridor. S Albany is frequently used by both pedestrians and vehicular traffic. Long-term residential care facilities are located along this corridor.		
12	Dallas	2		Bike/Ped	on Rte. E	from Meadow View School to Coatney Rd	Widened Sidewalk/Shoulders for bike traffic, horses and buggy			
13	Greene	2	Bois d'Arc	Bike/Ped	on Rte. T/UU	at Elementary School	1/4 mile Multi Use Trail; existing footpath	A sidewalk is needed along the state route to the elementary school and park located on the south side of Bois D' Arc.		
14	Barry	2	Cassville	Bike/Ped	Route 76/86	Pedestrian Bridge over Flat Creek.	This is an alternate to adding a pedestrian lane to Mo Hwy 76/86 bridge. Project would intersect with Greenway Trail on the east side of Flat Creek and include sidewalk connection to sidewalk along Main Street (Business 37).	13th Street Bridge is the only pedestrian crossing over Flat Creek in Cassville and it does not tie into any sidewalk or trail. Most heavily traveled corridor by pedestrians is Route 76/86.		Estimated cost: \$250k. Community willing to participate in the costs.
15	Polk	2	Bolivar	Bike/Ped	on Rte. 83	from Jackson to Mt. Gilead Road	Sidewalk Improvements (part of Springfield Ave Complete Street)	Lack of sidewalks along busy commercial corridor. Parts that do have sidewalks, need widened or improved.		

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## 6. FUTURE PROJECT PLAN

The Southwest Missouri Council of Governments is working with cities and counties in the region to identify and prioritize transportation needs that affect the regional transportation network. The process has included multiple meetings with each county's commission in order to identify the most current needs within that county. In addition to meetings, surveys are sent each year to cities and counties. In addition, during at least one Transportation Advisory Committee meeting during the year, each TAC member presents his/her county's needs to the group for informational purposes. This process helps TAC members to make more informed decisions when prioritizing projects.

## 7. FINANCE

### 7.1 Federal Funding Sources

Federal revenue sources include the 18.4 cents per gallon tax on gasoline and 24.4 cents per gallon tax on diesel fuel. Other sources include various taxes on tires, truck and trailer sales, and heavy vehicle use.

#### Infrastructure Investment and Jobs Act

The Infrastructure Investment and Jobs Act is a historic investment that will modernize our nation's roads, bridges, transit, rail, ports, airports, broadband, and drinking water and wastewater infrastructure. The bill, which was signed by President Biden on Nov. 15, 2021, will provide \$550 billion in new spending on the nation's infrastructure over the next five years. The investments in this legislation will assist in the creation of more livable communities by reducing carbon pollution from the transportation sector and helping to improve water and air quality. The following information, according to the U.S. House of Representative's Committee on Transportation and Infrastructure, provides a summary of the bill:

#### Road and Bridges

- Single largest investment in the nation's bridges since the construction of the interstate highway system
- First ever Safe Street and Roads for All programs to assist in reducing traffic fatalities
- Funding supports increased investment in a competitive grant program to assist the repair and replacement of deficient and outdated bridges called the Environment and Public Works (EPW) Bridge Investment Program
- Increases current cap on bond from \$15 billion to \$30 billion allowing state and local governments to enter additional public-private partnerships to supplement future surface transportation projects with private investment
- Investment will boost funding for Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant program

- Introduces a new program called, National Infrastructure Project Assistance grant program, that supports multi-modal, multi-jurisdictional projects of national or regional significance
- Culvert Removal, Replacement, and Restoration is a new program that will provide grants to states for the removal, replacement, and restoration of culverts to address flow of water through roads, bridges, railroad tracks, and trails

### **Public Transportation**

- Adds eligibility for a capital project for the construction of a bus rapid transit corridor or dedicated bus lanes, including the construction or installation of traffic signaling and prioritization systems, redesigned intersections that are necessary for the establishment of a bus rapid transit corridor, on-street stations, fare collection systems, information and wayfinding systems, and depots
- Allows for bus testing facilities authorized under this section to use funds for the acquisition of equipment and capital projects related to testing new bus models
- Includes provisions to enhance state safety oversight programs by strengthening rail inspection practices. The section also includes provisions to enhance practices related to the development of transit agency safety plans, improve safety training, reduce assaults on vehicle operators, and institute measures to reduce vehicular and pedestrian accidents involving buses
- Adds geographic service area coverage as a reporting requirement to the National Transit Database (NTD). The section also requires data relating to assaults on a transit worker and fatalities resulting from impact with a bus to be reported into the NTD
- Require the Secretary to establish a program to develop intercity passenger rail corridors. Development would include creating new routes, enhancing service on existing routes, or restoring former service. Each rail corridor selected for development would work with DOT and relevant States to prepare a plan outlining capital project needed to establish service
- Directs the Surface Transportation Board to hire additional full-time employees to assist in carrying out its passenger rail responsibilities
- Directs the Secretary to require all rail carriers that provide intercity passenger rail or commuter rail service to implement periodic inspection plans to ensure that passenger equipment complies with the existing regulations
- Requires the Federal Railroad Administration to complete a study on how passenger rail vehicle occupant protection systems could materially improve passenger safety

### **Highway and Motor Vehicle Safety**

- Increase funding for cooperative program to research and evaluate priority highway safety countermeasures
- Requires Secretary to conduct three high-visibility enforcement campaigns each year

- Requires the Government Accountability Office (GAO) to study efforts to improve awareness and enforcement of laws that require vehicles to change lanes or slow down when approaching an emergency vehicle on the roadside
- Would establish a grant program for metropolitan planning organizations, local governments, and Tribal governments to develop and carry out comprehensive safety plans
- Requires the Secretary to update safety standards for vehicles with keyless ignition
- Requires DOT to conduct research to examine how connected vehicle systems can safely account for bicyclists and other vulnerable road users

### **Hazardous Materials**

- Authorizes the Assistance for Local Emergency Response Training (ALERT) grant program
- Amends a requirement for Class I railroads that transport hazardous materials to share train consist information
- Authorizes appropriations to the Secretary an average of about \$130 million a year for hazardous materials emergency preparedness and other safety programs

### **Railroads**

- Authorizes \$1 billion a year for the Consolidated Rail Infrastructure and Safety Improvements grant program
- Authorizes \$50 million a year for the Restoration and Enhancement grants program

### **Airports**

- Offers \$15 billion in grant programs to use for Airport Improvement Program (AIP) projects, such as runways and taxiways, terminal development projects, noise, multimodal, or airport-owned towers
- Authorizes discretionary funding of \$5 billion (\$1 billion / year) for the Airport Terminal Program, a discretionary grant program for terminal development and other landside projects spread out over 5 years

### **Active Transportation**

- Allows for funds apportioned to a State under their apportionment to be use on a recreational trail or a related project, shall be administered as if the funds were made available to carry out the Recreational Trails Program
- Provides a definition for the class 1, 2, and 3 electric bicycles and the addition of micro-mobility as an eligible use of funds for construction of walkways and bicycle transportation facilities

- Requires the Secretary to revise crash data systems to be able to distinguish bicycles, electric scooters, and other individual personal conveyance vehicles from other vehicles involved in a crash
- Directs the Secretary to carry out a study to determine the utility of incorporating the use of bicycles into the disaster preparedness and disaster response plans of local communities. The study will look at a vulnerability assessment of the infrastructure in local communities that supports active transportation, including bicycling, walking, and personal mobility devices, with a particular focus on areas in communities that have low levels of vehicle ownership and lack sufficient active transportation infrastructure routes to public transportation
- Codifies the Safe Routes to School Program and amends it to apply the program through 12th grade to enable and encourage high school students to walk and bike to school safely
- Adds eligibility for shared micro-mobility, including bike share and shared scooter systems, as well as for the purchase of medium- or heavy-duty zero emission vehicles and related charging equipment

### General Provisions

- Allows the Secretary to develop metrics and establish performance standards that use such metrics to assess the effectiveness of grants awarded under the Act
- Requires the Secretary to coordinate with the Commissioner of U.S. Customs and Border Protection to help ensure that funding provided under the Act is not used to purchase products or materials produced with forced labor
- Requires the Secretary to study and report to Congressional committees on travel and tourism activities within DOT and how DOT evaluates travel and tourism needs in reviewing applications for grant programs
- Requires GAO to assess the resources that DOT uses to carry out travel and tourism activities
- Requires the Secretary of Transportation and Assistant Secretary of Commerce for Communications and Information to review the spectrum assigned to DOT, the purposes for which the assigned spectrum is used, and the portions of spectrum being shared with other users, among other topics

## 7.2 What the Fast Act Means for Missouri

In early January 2016, MoDOT produced an executive summary that provides an overview of the impact of the Fixing America's Surface Transportation (FAST) Act on Missouri's transportation system. The following information is taken from that executive summary:

From Fiscal Year 2016 to Fiscal Year 2020, the availability of federal funds Missouri will be able to match will be approximately \$1 billion, which is an increase of 9.8 percent over the previous federal bill – MAP 21. Federal dollars represent the largest source of funds in MoDOT's budget. With



current state revenue projections, it is anticipated that MoDOT will be able to fully match its available federal funds. The best news for Missouri is the FAST Act allows for a five-year period of funding certainty which will allow for effective project planning.

### **Safety**

The Office of Highway Safety will be required to conduct a survey every two years of all automated traffic enforcement systems to include red light running cameras and speed enforcement camera systems. The legislation requires a separate grant application for states to implement the 24-7 sobriety programs.

A study will be conducted on marijuana impaired driving including the issues of methods used to detect and measure marijuana levels and identify the role and extent of marijuana impairment in motor vehicle accidents.

States will be allowed to submit a multi-year plan detailing motor carrier safety efforts. These reports will include annual updates. States will undertake efforts to emphasize and improve enforcement of state and local traffic safety laws and regulations.

### **Freight**

The bill establishes a new competitive grant program for very large, predominantly highway projects that benefit the national freight network. One condition of this program is a project estimated cost of \$100 million or 30 percent of a state's annual federal appropriation. The minimum grant is \$25 million. However, there are some reserves (10 percent) for smaller projects of less than \$5 million and 25 percent for rural areas (population less than 200,000).

A local match will be required for funds used to support the capital needs of public ferries. FAST revises the formula for apportionment. The biggest change is the minimum fiscal year allocation of \$100,000.

Performance metrics will be developed on the nation's top 25 ports in each category of tonnage, containers and dry bulk. The St. Louis port is the only one that qualifies as a mandate on the list.

New funding is designated to improve the freight highway network. The language includes requirements to be designated as a "freight project." MoDOT will need to add these elements to its planning processes. Missouri has more than two percent of the national freight mileage so its apportionment must be spent on the primary freight network, critical urban and critical rural freight corridors instead of the broader freight system.

State Freight Plans are now mandated and must be in place within two years for Missouri to be able to access the freight funds. State Freight Advisory Committees remain as an encouraged activity, but not mandated. In 2017, MoDOT updated the Freight Plan to comply with the FAST Act requirements.

## **Transit**

The FAST Act provides transit increases of 9 to 11 percent over five years and also increases the annual statewide allocation for buses and bus facilities.

Based on the estimated apportionments, the new surface transportation bill provides modest increases of approximately 3.5 percent in the first year and approximately 2 percent per year increase through Fiscal Year 2020.

The statewide allocation for the Bus & Bus Facilities program has increased from \$1.25 million to \$1.75 million per year. This is an increase for much needed capital projects. This program also includes a new competitive grant program.

Rural Area Funding program appears to remain the same with no significant changes. The funding in Missouri appears to increase modestly in each year based in preliminary estimates from \$17.7 million in 2016 to \$19.4 million in 2020 (8.7 percent).

Enhanced Mobility of Seniors and Individuals with Disabilities program will see modest increased funding from \$4.86 million in 2016 to \$5.37 million in 2020 (9 percent). There is a provision added for a new “pilot program for innovative coordinated access and mobility.” Grant money could be available for eligible entities.

## **Environment**

The environmental provisions of the bill are intended to streamline the project delivery process and ensure interagency cooperation. New language under Efficient Environmental Review for Project Decision making changes definition of “project” to include multimodal projects and “lead federal agency” to “operating administration” so that projects benefit from review efficiencies; takes into account any source of federal funding. This should be helpful to multimodal projects. Similar streamlining of rail projects can be achieved once regulatory procedures are put in place.

Integration of Planning and Environmental Review: Clarifies and defines the planning products that can be adopted during National Environmental Policy Act development. Includes: Financing, modal choice, purpose and need, preliminary screening of alternatives, description of the environmental setting, methodology for analysis and programmatic level mitigation.

DOT and Heads of Federal Agencies will develop coordinated and concurrent environmental review and permitting process for Environmental Impact Statements.

## **Planning**

The FAST Act expands the scope of the planning process to include addressing resiliency and reliability of the transportation system, mitigating storm water impacts of surface transportation and enhancing travel and tourism of the transportation system.

The act requires state DOTs to incorporate the performance measures for rural transit agencies into its planning documents. In addition, the FAST Act requires states to establish a state freight plan in order to receive National Highway Freight Program funds. The state freight plan may be part of the state's long-range transportation plan, but is more granular in requirements than a long-range transportation plan.

### **Performance Management**

If a state DOT does not achieve or make significant progress toward achieving targets after one reporting cycle (instead of two reporting cycles), then the state DOT must include a description of the actions they plan to take to achieve their targets in the future in a report.

The penalty for falling below the minimum condition levels for pavements on the interstate system is imposed after the first reporting cycle (instead of after two reporting cycles); eliminates the need to collect safety data and information on unpaved or gravel roads.

United States Department of Transportation (USDOT) will now assess if the state DOT has made significant progress toward the achievement of freight performance targets. If the state DOT has not made significant progress, then there are additional reporting requirements but not penalties associated with obligating freight funds.

Establishes a performance management data support program to enable the USDOT to better support state DOTs, Metropolitan Planning Organizations and the Federal Highway Administration in the collection and management of data for performance-based planning and programming.

### **Motor Carrier Services**

Changes language to make sure that a tow vehicle is equal to or exceeds the gross vehicle weight of the disabled vehicle it is towing.

The act will allow emergency vehicles that travel the interstate to weigh 86,000 pounds.

The act increases the length limit of some automobile transport trucks; this will require legislative action.

### **Research**

Every Day Counts Program has been continued.

The FAST Act establishes a new National Surface Transportation and Innovative Finance Bureau. Highway Research, Technology and Education Authorization Program funding mostly stays the same or has small increases.

The Innovative Pavement Research and Deployment Program have been expanded. It now requires the Secretary to develop a program to stimulate deployment of advanced transportation technologies to improve system safety, efficiency and performance.

The goals for the Intelligent Transportation System have been expanded, but are mostly freight-related.

ITS program funds for operational tests can't be used for building physical surface infrastructure unless the construction is incidental and critically necessary to implement the ITS project.

The new Assistant Secretary for Research and Technology's responsibilities would include coordinating departmental Research & Technology activities, advancing innovative technologies, developing comprehensive statistics and data and coordinating multimodal and multidisciplinary research. The Secretary can enter into cooperative contracts with federal, state and local and other agencies to conduct departmental research on a 50/50 cost share basis.

The Transportation Research Board will be required to do a study (\$5 million; report due in 3 years) on how to restore the interstate highway system to premier status.

University Transportation Center funding has been increased; funding levels within ranges will be flexible instead of fixed. No change in matching requirements.

### Rail

This is the first surface transportation bill to include a rail title; passenger rail and other rail investments total \$10.4 billion over the five-year life of the legislation. Federal funding for intercity passenger rail does not begin until Federal Fiscal Year 2017.

FAST Act's most significant language to Missouri pertains to operating assistance. For the first time, Congress has provided states a chance to compete for \$20 million per year to offset costs for state-sponsored service. This primarily targets states' new cost from the Passenger Rail Investment and Improvement Act of 2009 (PRIIA).

In Missouri's case, costs were relatively the same after PRIIA. Therefore, it is uncertain how much Missouri will be able to obtain from this new funding source. States can compete for this funding to improve infrastructure and vehicles used in the delivery of intercity passenger rail. This is similar to what Congress did through ARRA and the creation of the High Speed and Improved Passenger Rail Program – which delivered much needed projects like the Osage River Railroad Bridge.

Grade crossing safety remained a distinct safety program targeting improvements at highway rail grade crossings.

Congress also put funding towards a committee currently working on costs. This committee stems is made up of the Federal Railroad Administration, states, and Amtrak. The committee continues to work to help ensure states are paying only their fair share of costs. For example, this committee is addressing call center costs.

Missouri has identified to Amtrak for years that its call center costs are too high and they need a better system to track where these costs are allocated. It seems they are primarily allocated to states, instead of Amtrak, where appropriate. This should continue to help lower costs to Missouri and other states.

## Highway and Bridge Revenue Sources

### State motor fuel tax

The largest source of revenue from Missouri user fees is the state fuel tax. Assessed at a rate of 17-cents per gallon, it produced over 45 percent of state transportation revenues in 2016. However, the motor fuel tax is not indexed to keep pace with inflation, and there has been no rate increase since 1996. History shows that even when fuel prices rise dramatically, Missourians are generally unwilling or unable to turn to other modes of transportation, continuing to drive their personal vehicles and to purchase fuel to do so. Trends show motor fuel tax revenues increase about one percent annually. However, if fuel prices rise and stay at higher rates, more Missourians may turn to more fuel-efficient vehicles, make fewer trips or seek other transportation options they had previously avoided. While good for the environment, these actions erode motor fuel tax revenues.

### Motor vehicle sales and use taxes

Motor vehicle sales and use taxes provided approximately 26 percent of state transportation revenues in 2016. This is the one source of state revenue that has recently provided substantial additional resources for transportation. In November 2004, Missouri voters passed Amendment 3. This set in motion a four-year phase in, redirecting motor vehicle sales taxes previously deposited in the state's General Revenue Fund to a newly created State Road Bond Fund. In accordance with this constitutional change, MoDOT began selling bonds to fund road improvements. From 2000-2010, MoDOT sold bonds that provided additional resources for highway improvements. Bonds are debt and similar to a home mortgage – this debt must be repaid over time. The total debt payment in fiscal year 2016 totaled \$280 million.

MoDOT has three kinds of bonds: senior bonds that were authorized by the Missouri General Assembly in 2000; Amendment 3 bonds that were authorized by Missouri voters in 2004; and federal GARVEE (Grant Anticipation Revenue Vehicle) bonds that financed specific projects. Borrowing accelerated construction and allowed MoDOT to avoid inflation in labor and materials costs. It gave Missourians improvements that would not have been built for many years with pay-as-you-go funding. Without borrowing, many of those projects still would not be completed. Senior bonds will be paid off by 2023, Amendment 3 bonds will be paid off by 2029 and GARVEE bonds will be paid off by 2033. The average interest rate on all outstanding debt combined is 2.98 percent.

### Motor vehicle and driver's licensing fees

Motor vehicle and driver's licensing fees also provided approximately 21 percent of Missouri's state transportation revenue in 2016. Similar to motor fuel tax, these fees are not indexed to keep pace with inflation, and there have been no annual registration fee increases since 1984. This revenue source increases at a rate of about 2.5 percent annually.

### Transportation revenues are shared

It is important to remember that cities and counties receive a substantial portion of these state transportation revenues. For example, cities and counties receive approximately 4.5 cents of the state's 17-cent per gallon fuel tax. They also receive approximately 14 percent of the remaining state transportation revenues discussed earlier. These funds go directly to cities and counties to fund local transportation.

### Interest earned on invested funds and other miscellaneous collections

The remaining 8 percent of state transportation revenues comes from interest earned on invested funds and other miscellaneous collections in 2016. During the Amendment 3 bonding program, cash balances in state transportation funds have been unusually high. Bond proceeds are received in large increments and are paid out over time as project costs are incurred. When the Amendment 3 projects are completed, the balance of state transportation funds will be substantially less, and interest income will also decline.

### **Funding for Alternative Modes of Transportation**

Transportation funding for alternative modes has historically been less than 5 percent of all MoDOT transportation revenue (approximately \$96 million annually). Funding for alternate modes of transportation comes from a variety of sources including motor vehicle sales taxes, aviation fuel and sales taxes, railroad regulation fees, state general revenue funds and federal grants. MoDOT Multimodal Operations is responsible for supporting alternative transportation programs within the state. The division functions to continue the advancement and strategic planning for Aviation, Rail, Transit, Waterways, and Freight Development initiatives designed to expand Missouri's infrastructure and facilitate travel and commerce. Through the integration of the various modes, the traveling public enjoys greater accessibility to the resources of the state while industry capitalizes on improved transportation efficiencies.

#### Multimodal Operations Functional Overview

- Assists in the development of port authorities through the distribution of capital and administrative funding while championing the efficiencies of waterborne transportation to industry and the general public.
- Administers federal and state capital improvement funding for Missouri's eligible public aviation facilities.
- Conducts airports safety inspections.
- Provides financial and technical assistance to public transit and specialized mobility providers across the state.
- Partners with industry and local communities to promote economic development and improved freight traffic efficiency by examining existing infrastructure obstructions and proactively assessing potential obstacles.
- Regulates freight and passenger rail operations, oversees rail crossing safety and construction projects, conducts railroad safety inspections, and provides outreach educational opportunities.

- Supports the continued operation of Amtrak in the state and provides direction for the development of expanded passenger rail service.

The amalgamation of the non-highway transportation modes into a single regulatory division traces its lineage back to the formation of the Missouri Highways and Transportation Department in 1980. With the subsequent merger and reorganization, Multimodal Operations assumed charge of consolidated authority over Aviation, Rail, Transit, and Waterway operations within the state as the definitive administrative body. The division has since evolved into a very specialized organization, centered on engaging partnership participation that focuses on safe, accessible, efficient, and environmentally responsible alternative transportation solutions. In fiscal year 2012, Multimodal Operations functioned with an operating budget of \$2.5 million and a staff of 31, maintained over 4,000 internal and external partnership contacts, and cumulatively delivered over \$79 million in multimodal projects with partners across the state (nearly \$47 million federal funds, over \$14 million in state funds, and over \$18 million in local match funds).

### Multimodal Operations Profile – Activities by Mode

- Aviation
  - Administer grants and provide guidance for public use airports (State Block Grant Program & State Aviation Trust Fund Program)
  - Conduct airport safety inspections
  - Publish Aeronautical Chart, Airport Directory, and Show Me Flyer
  - Maintain State Airport System Plan (SASP)
  - Approve Airport Master Plans (AMP) and Airport Layout Plans (ALP)
  - Maintain Automated Weather Observing System (AWOS) equipment
  - Promote education to the aviation community and other enthusiasts
- Rail
  - Conduct railroad infrastructure safety inspections (including track, grade crossing signals, and operating practices)
  - Support Amtrak passenger rail service through Missouri and promote ridership both through operations and project delivery
  - Maintain Statewide Rail Plan to identify the framework for freight and passenger rail development in Missouri for the next twenty years (including High Speed Intercity Passenger Rail (HSPiR))
  - Regulate safety for freight rail and passenger rail in Missouri
  - Enforce safety regulations for light rail operations (Metrolink)
  - Administer the Missouri Highway/Rail Crossing Safety Program
  - Plan and administer funding for rail/highway construction projects
  - Present outreach seminars on railroad grade crossing safety in conjunction with Missouri Operation Lifesaver
  - Catalog freight and passenger rail maps of Missouri
- Transit
  - Administer federal grant funding under Section 5310 Agencies Serving Seniors and Persons with Disabilities

- Transportation Assistance Vehicle Program
- Administer federal grant funding under Section 5311 Non-Urbanized Transit Assistance Formula Grant Program, Section 5311(b) Rural Transit Assistance Program (RTAP), and 5311(f) Intercity Bus Program
- Administer federal grant funding under Section 5316 Job Access and Reverse Commute Program (JARC)
- Administer federal grant funding under Section 5317 New Freedom Program
- Administer federal grant funding under Section 5309 Discretionary Transit Capital Program
- Administer federal grant funding under Section 5305 Statewide Transit Planning Grant Program
- Administer federal grant funding under Section 5339 Bus & Bus Facilities Grant Program
- Administer state funded Missouri Elderly and Handicapped Transportation Assistance Program (MEHTAP)(RSMo 208.250-208.265)
- Administer state funded Missouri State Transit Assistance Program (RSMo 226.195)
- Administer federal grant funding consistent with the new MAP-21 transportation funding provisions
- Provide technical support and program assistance to partners and external customers
- Waterways
  - Assist in the formation and operation of port authorities in Missouri
  - Provide technical assistance and promote use of Missouri's navigable rivers
  - Represent port interests in industry and governmental bodies
  - Assist in distributing capital and administrative funding for port improvements
  - Provide financial assistance to two ferryboat operations
  - Maintain waterways map of port authorities
- Freight Development
  - Encourage freight initiatives that promote economic development and efficient movement of goods
  - Conduct studies to determine opportunities for enhanced system capacity
  - Evaluate performance of state infrastructure to improve efficiencies
  - Host public forums and outreach opportunities for public comment and contribution

Unlike highways, MoDOT does not own multimodal facilities. Instead, MoDOT's role is to administer funding and provide an oversight role for multimodal improvements. Many of the multimodal entities receive local tax revenue and direct federal funding, which are not included in these amounts. MoDOT administered \$35 million of aviation funds in fiscal year 2016. Missouri has dedicated taxes on aviation fuel to fund improvements to public use airports in Missouri. MoDOT also administers federal funding to improve airfield pavement conditions and lighting systems, eliminate obstructions and for expansion projects.

In fiscal year 2016, MoDOT administered \$34 million of transit funds. The majority of these funds are from federal programs that support operating costs and bus purchases for transit agencies



across the state. There is a small amount of state and General Revenue funding to support operating costs for transit agencies. MoDOT administered \$19 million of rail funds in fiscal year 2016. These funds are used to support two programs – the Amtrak passenger rail service between St. Louis and Kansas City, and safety improvements at railroad crossings. The Amtrak funding is from General Revenue, and safety improvements at railroad crossings are from state and federal sources.

Waterways funding totaled \$6 million in fiscal year 2016. These funds provided operating and capital assistance to Missouri’s river ports and ferry boat operators. MoDOT also administers a \$1 million freight enhancement program that provides assistance to public, private or not-for-profit entities for non-highway capital projects that improve the efficient flow of freight in Missouri.

Internal operating costs to administer the various multimodal programs totaled \$3 million, including salaries, wages and fringe benefits. In fiscal year 2016, MoDOT administered \$98 million for multimodal needs. Since only \$96 million was available, MoDOT used \$2 million of cash balances dedicated by law to multimodal activities to provide these projects and services.

Missouri’s transportation needs are substantial, and the costs of the needs are enormous. Yet, the sources that have traditionally provided transportation funding in Missouri and in the nation are not adequate. They do not keep pace with the rising cost of construction and maintenance, and they provide little for alternative modes of transportation. Another complicating factor is that Missouri’s transportation revenues are small in comparison to many other states. Missouri’s revenue per mile of state highway is one of the lowest in the region and in the country. Missouri ranks 47<sup>th</sup> nationally in revenue per mile which leads to significant unfunded transportation needs across the state. Missouri receives both state and federal transportation funds. Much of the funding comes with strings attached, limiting the activities for which it can be used. For example, the state motor fuel tax can only be spent on highways and bridges. It is not available for alternative modes of transportation. Federal funds may be earmarked for specific projects or limited to specific types of construction such as interstate maintenance. Some federal and state funds are allocated to specific modes of transportation such as transit or passenger rail.

### 7.3 Funding Tools for the Local or Regional Level

Funding for local county and municipal roadway maintenance and construction comes primarily from the state-distributed motor fuel tax, individual city and county capital improvement sales taxes and transportation sales taxes. Additional potential revenue options are available for local or regional transportation projects.

#### **Economic Development Administration - Public Works and Economic Development Program**

Through the Public Works and Economic Development Act of 1965, the United States Department of Commerce, through its EDA branch, offers project grants to enhance regional competitiveness and promote long-term economic development in regions experiencing substantial economic distress. EDA provides Public Works investments to help distressed communities and regions revitalize, expand, and upgrade their physical infrastructure to attract new industry, encourage business expansion, diversify local economies and generate or retain long-term private sector jobs

and investment. Current priorities include proposals that help support existing industry clusters, develop emerging new clusters or attract new economic drivers.

Project grants may be used for investments in facilities such as water and sewer systems, industrial access roads, industrial and business parks, port facilities, railroad sidings, distance learning facilities, skill-training facilities, business incubator facilities, redevelopment of brownfields, eco-industrial facilities and telecommunications infrastructure improvements needed for business retention and expansion. Eligible activities include the acquisition or development of public land and improvements for use for a public works, public service or development facility, and acquisition, design and engineering, construction, rehabilitation, alteration, expansion, or improvement of publicly-owned and operated development facilities, including related machinery and equipment. A project must be located in a region that, on the date EDA receives an application for investment assistance, satisfies one or more of the economic distress criteria set forth in 13 C.F.R. 301.3(a). In addition the project must fulfill a pressing need of the region and must:

1. Improve the opportunities for the successful establishment or expansion of industrial or commercial plants or facilities in the region;
2. Assist in the creation of additional long-term employment opportunities in the region; or
3. Primarily benefit the long-term unemployed and members of low-income families.

In addition, all proposed investments must be consistent with the currently approved Comprehensive Economic Development Strategy (CEDS) for the region in which the project will be located, and the applicant must have the required local share of funds committed, available and unencumbered. Also, the project must be capable of being started and completed in a timely manner.

### **USDA Rural Development**

Community Programs, a division of the Housing and Community Facilities Programs, is part of the United States Department of Agriculture's Rural Development mission area. Community Programs administers programs designed to develop essential community facilities for public use in rural areas. These facilities include schools, libraries, childcare, hospitals, medical clinics, assisted living facilities, fire and rescue stations, police stations, community centers, public buildings and transportation. Through its Community Programs, the Department of Agriculture is striving to ensure that such facilities are readily available to all rural communities. Community Programs utilizes three flexible financial tools to achieve this goal: the Community Facilities Guaranteed Loan Program, the Community Facilities Direct Loan Program, and the Community Facilities Grant Program.

Community Programs can make and guarantee loans to develop essential community facilities in rural areas and towns of up to 20,000 in population. Loans and guarantees are available to public entities such as municipalities, counties, and special-purpose districts, as well as to non-profit corporations and tribal governments. Applicants must have the legal authority to borrow and repay loans, to pledge security for loans, and to construct, operate and maintain the facilities. They must also be financially sound and able to organize and manage the facility effectively. Repayment of

the loan must be based on tax assessments, revenues, fees, or other sources of money sufficient for operation and maintenance, reserves and debt retirement. Feasibility studies are normally required when loans are for start-up facilities or existing facilities when the project will significantly change the borrower's financial operations. The feasibility study should be prepared by an independent consultant with recognized expertise in the type of facility being financed.

Community Programs can guarantee loans made and serviced by lenders such as banks, savings and loans, mortgage companies which are part of bank holding companies, banks of the Farm Credit System or insurance companies regulated by the National Association of Insurance Commissioners. Community Programs may guarantee up to 90percent of any loss of interest or principal on the loan. Community Programs can also make direct loans to applicants who are unable to obtain commercial credit. Loan funds may be used to construct, enlarge, or improve community facilities for health care, public safety and public services. This can include costs to acquire land needed for a facility, pay necessary professional fees and purchase equipment required for its operation. Refinancing existing debts may be considered an eligible direct or guaranteed loan purpose if the debt being refinanced is a secondary part of the loan, is associated with the project facility and if the applicant's creditors are unwilling to extend or modify terms in order for the new loan to be feasible.

Additionally, Community Programs also provides grants to assist in the development of essential community facilities in rural areas and towns of up to 20,000 in population. Grants are authorized on a graduated scale. Applicants located in small communities with low populations and low incomes will receive a higher percentage of grants. Grants are available to public entities such as municipalities, counties, and special-purpose districts, as well as non-profit corporations and tribal governments. In addition, applicants must have the legal authority necessary for construction, operation, and maintenance of the proposed facility and also be unable to obtain needed funds from commercial sources at reasonable rates and terms.

Grant funds may be used to assist in the development of essential community facilities. Grant funds can be used to construct, enlarge, or improve community facilities for health care, public safety and community and public services. This can include the purchase of equipment required for a facility's operation. A grant may be made in combination with other Community Facilities financial assistance such as a direct or guaranteed loan, applicant contributions or loans and grants from other sources. The Community Facilities Grant Program is typically used to fund projects under special initiatives, such as Native American community development efforts, child care centers linked with the Federal government's Welfare-to-Work initiative, Federally-designated Enterprise and Champion Communities and the Northwest Economic Adjustment Initiative area.

### **Statewide Transportation Assistance Revolving (STAR) Fund**

The STAR Fund, authorized by the Missouri General Assembly in 1997, provides loans to local entities for non-highway projects such as rail, waterway and air travel infrastructure. The STAR fund can also provide loans to fund rolling stock for transit and the purchase of vehicles for elderly or handicapped persons. The STAR fund can assist in the planning, acquisition, development and construction of facilities for transportation by air, water, rail or mass transit; however, STAR fund monies cannot fund operating expenses. The local district engineer must endorse projects in

cooperation with MoDOT's Multimodal Team. The Cost Share Committee evaluates STAR applications and provides a recommendation to the Missouri Highways and Transportation Commission (MHTC), which is the deciding body.

### **Delta Regional Authority - Delta Development Highway System**

The Delta Regional Authority (DRA) was established by Congress in 2000 to enhance economic development and improve the quality of life for residents of this region. The DRA encompasses 252 counties and parishes in Alabama, Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri and Tennessee.

There are 29 counties in Missouri that are a part of the DRA region. The counties are in the southeast part of the state and make up the Eighth Congressional District. They are: Bollinger, Butler, Cape Girardeau, Carter, Crawford, Dent, Douglas, Dunklin, Howell, Iron, Madison, Mississippi, New Madrid, Ozark, Pemiscot, Perry, Phelps, Oregon, Reynolds, Ripley, Scott, Shannon, St. Francois, Ste. Genevieve, Stoddard, Texas, Washington, Wayne and Wright. There are a total of 566 DDHS miles identified in Missouri, which constitutes 14.7 percent of the total DDHS miles, of which 346 miles are 2-lane facilities. The Missouri DDHS improvements consist of widening and upgrading portions of US 60, US 63, US 67, US 412 and MO 8.

As a key part of its effort to improve the lives of Delta residents, the DRA operates a grant program in the eight states it serves. The DRA works closely with local development districts, which provide technical assistance to grant applicants. Once grant applications are submitted each year, the federal co-chairman determines which applications are eligible for funding and which are ineligible. There is an appeals process for those applicants whose submissions are deemed ineligible. From the list of eligible applicants, the governors of the eight states then make recommendations to the full board. The board decides which projects are funded based on the funds available. Congress has mandated that transportation and basic public infrastructure projects must receive at least 50 percent of appropriated funds. The authority may provide matching funds for other state and federal programs.

During a planning retreat in February 2005, the Delta Regional Authority board voted to make transportation one of the authority's three major policy development areas. The DRA Highway Transportation Plan/Delta Development Highway System Plan (DDHS) was developed following input from transportation executives and local organizations in the eight states covered by the DRA. Public meetings were held throughout the region in the fall of 2006. The plan was presented to the President and Congress. The DDHS consists of 3,843 miles of roads throughout the region. The estimated cost to complete the planned improvement projects for these roads is \$18.5 billion. Of the roads in the plan, 27 percent provide four or more travel lanes already and the remainder is two-lane roads.

### **Missouri Department of Economic Development - Community Development Block Grants**

Through the Missouri Department of Economic Development, the Community Development Block Grant Program (CDBG), a federal program through HUD, offers grants to small Missouri communities to improve local facilities, address critical health and safety concerns and develop a greater capacity for growth. The program offers funds for projects that can range from housing and street repairs to industrial loans and job training. State CDBG funds are only available to non-entitlement areas (incorporated municipalities under 50,000 and counties under 200,000 in population).

Larger cities receive funds directly through the Entitlement Communities Grants program. The entitlement program provides annual grants on a formula basis to entitled cities and counties to develop viable urban communities by providing decent housing and a suitable living environment, and by expanding economic opportunities, principally for low-income and moderate-income persons. HUD awards grants to entitlement community grantees to carry out a wide range of community development activities directed toward revitalizing neighborhoods, economic development and providing improved community facilities and services. Entitlement communities develop their own programs and funding priorities. However, grantees must give maximum feasible priority to activities which benefit low- and moderate-income persons. A grantee may also carry out activities which aid in the prevention or elimination of slums or blight. Additionally, grantees may fund activities when the grantee certifies that the activities meet other community development needs having a particular urgency because existing conditions pose a serious and immediate threat to the health or welfare of the community where other financial resources are not available to meet such needs. CDBG funds may not be used for activities which do not meet these broad national objectives.

### **Sales Tax**

The 4.225 percent state sales/use tax rate in Missouri is lower than the rates in 38 other states, as of Jan. 1, 2017, according to Taxfoundation.org. Missouri communities have the option of adopting a local sales tax, generally ranging from one-half to one percent. Counties may also adopt a sales tax generally ranging from one-fourth to one percent that can be used for transportation.

### **Use Tax**

Use tax is similar to sales tax, but is imposed when tangible personal property comes into the state and is stored, used or consumed in Missouri. Communities have the option of adopting a local use tax equal to the local sales tax for that community to use for transportation expense.

### **Local Option Economic Development Sales Tax**

The Local Option Economic Development Sales Tax, approved by the Missouri General Assembly in 2005, allows citizens to authorize a supplemental sales tax dedicated exclusively for certain economic development initiatives in their home municipality. The state statute section governing this program is found at 67.1305 RSMo. The voter-approved tax of not more than one half per cent is charged on all retail sales made in the municipality that are subject to sales taxes under Ch.144 RSMo. Missouri statutes define “municipality” as an incorporated city, town, village or county. Revenues generated by the tax may not be used for retail developments unless such retail projects are limited exclusively to the redevelopment of downtown areas and historic districts. A

portion of the revenues may be used for project administration, staff and facilities, and at least twenty per cent of the funds raised must be used for projects directly related to long-term economic preparation, such as land acquisition, installation of infrastructure for industrial or business parks, water and wastewater treatment capacity, street extensions and for matching state or federal grants related to such long-term projects. Any remaining funds may also be used for marketing, training for advanced technology jobs, grants and loans to companies for employee training, equipment and infrastructure and other specified uses.

### **Neighborhood Improvement District**

A Neighborhood Improvement District (NID) may be created in an area desiring certain public-use improvements that are paid for by special tax assessments to property owners in the area in which the improvements are made. The kinds of projects that can be financed through an NID must be for facilities used by the public, and must confer a benefit on property within the NID. An NID is created by election or petition of voters and/or property owners within the boundaries of the proposed district. Election or petition is authorized by a resolution of the governing body of the municipality in which the proposed NID is located. Language contained in the petition narrative or ballot question must include certain information including, but not limited to a full disclosure of the scope of the project, its cost, repayment and assessment parameters to affected property owners within the NID.

### **Community Improvement District**

A Community Improvement District (CID) may be either a political subdivision or a not-for-profit corporation. CIDs are organized for the purpose of financing a wide range of public-use facilities and establishing and managing policies and public services relative to the needs of the district. By request petition, signed by property owners owning at least 50 percent of the assessed value of the real property, and more than 50 percent per capita of all owners of real property within the proposed CID, presented for authorizing ordinance to the governing body of the local municipality in which the proposed CID would be located. Unlike a Neighborhood Improvement District, a CID is a separate legal entity, and is distinct and apart from the municipality that creates the district. A CID is, however, created by ordinance of the governing body of the municipality in which the CID is located, and may have other direct organizational or operational ties to the local government, depending upon the charter of the CID.

### **Tax Increment Financing**

Local Tax Increment Financing (Local TIF) permits the use of a portion of local property and sales taxes to assist funding the redevelopment of certain designated areas within your community. Areas eligible for Local TIF must contain property classified as a "Blighted", "Conservation" or an "Economic Development" area, or any combination thereof, as defined by Missouri Statutes. The idea behind Local TIF is the assumption that property and/or local sales taxes (depending upon the type of redevelopment project) will increase in the designated area after redevelopment, and a portion of the increase of these taxes collected in the future (up to 23 years) may be allocated by the municipality to help pay the certain project costs, partially listed above.

### **Transportation Development Districts**

Transportation Development Districts (TDDs) are organized under the Missouri Transportation Development District Act, Sections 238.200 to 238.275 of the Missouri State Statutes. The district may be created to fund, promote, plan, design, construct, improve, maintain and operate one or more projects or to assist in such activity.

### **Transportation Development Corporations**

Transportation Development Corporations (TDCs) are organized under the Missouri Transportation Corporation Act, Sections 238.300 to 238.367 of the Missouri State Statutes. TDCs act in promoting and developing public transportation facilities and systems and in promoting economic development. Demands for transportation improvements have greatly outpaced the funds available to meet them. In response to this demand, the Missouri Department of Transportation has established various mechanisms for successful public/public and public/private partnerships. These expand financing options for transportation projects that serve a public purpose, including: highway and rail projects, transit equipment, air and water transportation facilities and elderly/handicapped vehicles. The benefits to a project assisted by these partnerships may include: inflation cost savings, early economic and public benefits, financing tailored to the project's needs and a reduced cost of project financing.

### **Partnership Debt-Financing Programs**

Debt-financing programs make loans to a project that has to be repaid. The Missouri Transportation Finance Corporation's (MTFC) authority to form and operate is initially derived from the Transportation Equity Act for the 21st Century (TEA-21). The MTFC incorporated in August 1996, adopted bylaws and subsequently entered into a Cooperative Agreement with the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the Federal Railroad Administration (FRA), agencies of the United States Department of Transportation (USDOT) and the Missouri Highways and Transportation Commission (Commission). Under the authority granted initially by TEA-21, as amended by 23 U.S.C. 610, the Missouri Non Profit Corporation Act, Chapter 355, RSMo, and pursuant to the Cooperative Agreement, the Commission organized the MTFC to assist in financing transportation improvements.

The MTFC provides direct loans for transportation projects within the state of Missouri. Loans are funded from available MTFC resources. The MTFC assistance may be any type authorized by 23 U.S.C. 610. The following are examples of potential financing options included in 23 U.S.C. 610: Primary or subordinated loans, Credit enhancements, Debt reserve financing, Subsidized interest rates, Purchase and lease agreements for transit projects, and Bond security. These direct loans must help assist the Commission to achieve continued economic, social and commercial growth of Missouri, act in the public interest, or promote the health, safety and general welfare of Missouri citizens.

### **Bridge Replacement Off-System (BRO)**

The Off-System Bridge Replacement and Rehabilitation (BRO) program provides funding to counties for replacement and rehab of bridges. A minimum amount of approach roadway construction may be allowed under the program. Federal Funds are available to finance up to 80%

of the eligible project cost, but may be increased with the use of credit earned from replacing an eligible bridge that is not on the federal-aid system. It will be necessary for the local agency to provide the necessary matching funds. The fair market value of donated right-of-way may be credited to the local agency's matching share with the amount not to exceed the local agency's share. Both Missouri Department of Economic Development CDBG funds and EDA Local Public Works funds can be used to match BRO funds, if used on the project.

BRO Funds are administered according to the following policy:

- The current Highway Act requires that at least 15% and no more than 35% of the state's total bridge appropriation be allocated to the counties and the City of St. Louis for use on off-system bridges (BRO). The Missouri Highway and Transportation Commission approves the amount of bridge funds allocated to this program. Off-system bridges are bridges that are on roads that are functionally classified as a local road or street and rural minor collectors.

### **Federal Aviation Administration - Airport Improvement Program**

The Airport Improvement Program (AIP) provides grants to public agencies - and, in some cases, to private owners and entities - for the planning and development of public-use airports that are included in the [National Plan of Integrated Airport Systems \(NPIAS\)](#). For large and medium primary hub airports, the grant covers 75 percent of eligible costs (or 80 percent for noise program implementation). For small primary, reliever, and general aviation airports, the grant covers 95 percent of eligible costs. AIP grants for planning, development or noise compatibility projects are at or associated with individual public-use airports (including heliports and seaplane bases). A public-use airport is an airport open to the public that also meets the following criteria:

1. Publicly owned, or
2. Privately owned but designated by the FAA as a reliever, or
3. Privately owned but having scheduled service and at least 2,500 annual enplanements.

Further, to be eligible for a grant, an airport must be included in the NPIAS. The NPIAS, which is prepared and published every two years, identifies public-use airports that are important to public transportation and contribute to the needs of civil aviation, national defense, and the postal service. The description of eligible grant activities is described in the authorizing legislation and relates to capital items serving to develop and improve the airport in areas of safety, capacity and noise compatibility. In addition to these basic principles, a grantee must be legally, financially and otherwise able to carry out the assurances and obligations contained in the project application and grant agreement.

Eligible projects include those improvements related to enhancing airport safety, capacity, security and environmental concerns. In general, sponsors can use AIP funds on most airfield capital improvements or repairs except those for terminals, hangars, and non-aviation development. Any professional services that are necessary for eligible projects - such as planning, surveying and design - are eligible as is runway, taxiway and apron pavement maintenance. Aviation demand at the airport must justify the projects, which must also meet Federal environmental and procurement requirements. Projects related to airport operations and revenue-generating improvements are



typically not eligible for funding. Operational costs - such as salaries, maintenance services, equipment and supplies - are also not eligible for AIP grants.

### **FAA Airport and Airway Trust Fund (AATF)**

The Airport and Airway Trust Fund (AATF), created by the Airport and Airway Revenue Act of 1970, provides funding for the federal commitment to the nation's aviation system through several aviation-related excise taxes. Funding currently comes from collections related to passenger tickets, passenger flight segments, international arrivals/ departures, cargo waybills, aviation fuels and frequent flyer mile awards from non-airline sources like credit cards.

### **Transportation Alternatives Program (TAP) Funding**

Transportation Alternatives Program (TAP) was authorized under the Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21) to provide for a variety of alternative transportation projects, including many that were previously eligible activities under separately funded programs. The TAP replaces the funding from pre-MAP-21 programs including Transportation Enhancements, Recreational Trails, Safe Routes to School, and Scenic Byways, wrapping them into a single funding source. The TAP remains in place with the 2015 passage of the FAST ACT. The mission of the Transportation Alternatives Program is to improve our nation's communities through leadership, innovation, and program delivery. The funds are available to develop a variety of project types located in both rural and urban communities to create safe, accessible, attractive, and environmentally sensitive communities where people want to live, work, and recreate. The Transportation Alternatives Program consists of: Transportation Enhancement (TE) activities, Recreational Trails Program (RTP), Safe Routes to School (SRTS) activities, and Boulevards from Divided Highways.

### **Traffic Engineering Assistance Program (TEAP)**

The Traffic Engineering Assistance Program (TEAP) allows local public agencies (LPA) to receive engineering assistance for studying traffic engineering problems. Typical traffic engineering related projects include: corridor safety and/or operational analysis, intersection(s) safety and/or operational analysis, speed limit review, sign inventory, pedestrian/bike route analysis, parking issues, and other traffic studies, etc. Local public agencies are reimbursed for eligible project costs at a rate of 80 percent with the local agency providing a 20-percent match. Funds administered by MoDOT, will provide 80 percent of the TEAP project costs, up to \$8,000 per project. If the total cost is greater than \$10,000, the local agency can pay more than 20 percent to complete the TEAP project, if desired.

### **Federal Lands Access Program (FLAP)**

The Federal Lands Access Program (FLAP) provides funds for projects on Federal Lands Access Transportation Facilities that are located on or adjacent to, or that provide access to Federal lands as provided for in the FAST Act. The FLAP, as an adjunct to the Federal-Aid Highway Program, covers highway programs in cooperation with federal-land managing agencies. It provides transportation-engineering services for planning, design, construction and rehabilitation of the highways and bridges providing access to federally owned lands. The Federal Highway Administration (FHWA) also provides training, technology, deployment, engineering services and

products to other customers. The FHWA administers the Federal Lands Access Program, including survey, design and construction of forest highway system roads, parkways and park roads, Indian reservation roads, defense access roads and other federal-lands roads. The FHWA, through cooperative agreements with federal-land managing agencies such as the National Park Service, Forest Service, Military Traffic Management Command, Fish and Wildlife Service and the Bureau of Indian Affairs, administers a coordinated federal-lands program consisting of forest highways, public-lands highways, park roads and parkways, refuge roads and Indian reservation roads. This program provides support for approximately 30,000 miles of public roads serving Federal and Indian lands to support the economic vitality of adjacent communities and regions.

### **Cost Share Program Guidelines**

The purpose of the Cost Share Program is to build partnerships with local entities to pool efforts and resources to deliver state highway and bridge projects. The Missouri Department of Transportation (MoDOT) allocates Cost Share funds based on the Missouri Highways and Transportation Commission's (MHTC) approved funding distribution formula. At least 10 percent is set-aside for projects that demonstrate economic development through job creation. Projects are selected by the Cost Share Committee, which consists of the Chief Engineer, Chief Financial Officer and the Assistant Chief Engineer. They are then recommended for approval by the MHTC via a STIP amendment.

MoDOT participates up to 50 percent of the total project costs on the state highway system. While contributions are expected on economic development projects, the Cost Share Committee may increase MoDOT's participation up to 100 percent for economic development projects that create new jobs. Job creation will be verified by the Department of Economic Development. The project agreement will identify requirements for returning funds if jobs are not created as planned. Retail development projects do not qualify as economic development.

MoDOT's participation includes the amount of Cost Share funds allocated to the project, District STIP or Operating Budget funds and activities performed by MoDOT such as preliminary engineering, right of way incidentals and construction engineering.

Generally, the Cost Share funding per project is limited to \$10 million in total and \$2.5 million per year. However, projects exceeding this limit can be considered based on factors such as project need, the opportunity for economic development and the willingness of the local partners to be flexible and bring resources to the table. Project applications should not expand the state highway system or increase maintenance costs for MoDOT. Project applications that significantly expand the state highway system or increase maintenance costs for MoDOT must seek pre-approval by the Chief Engineer prior to submittal.

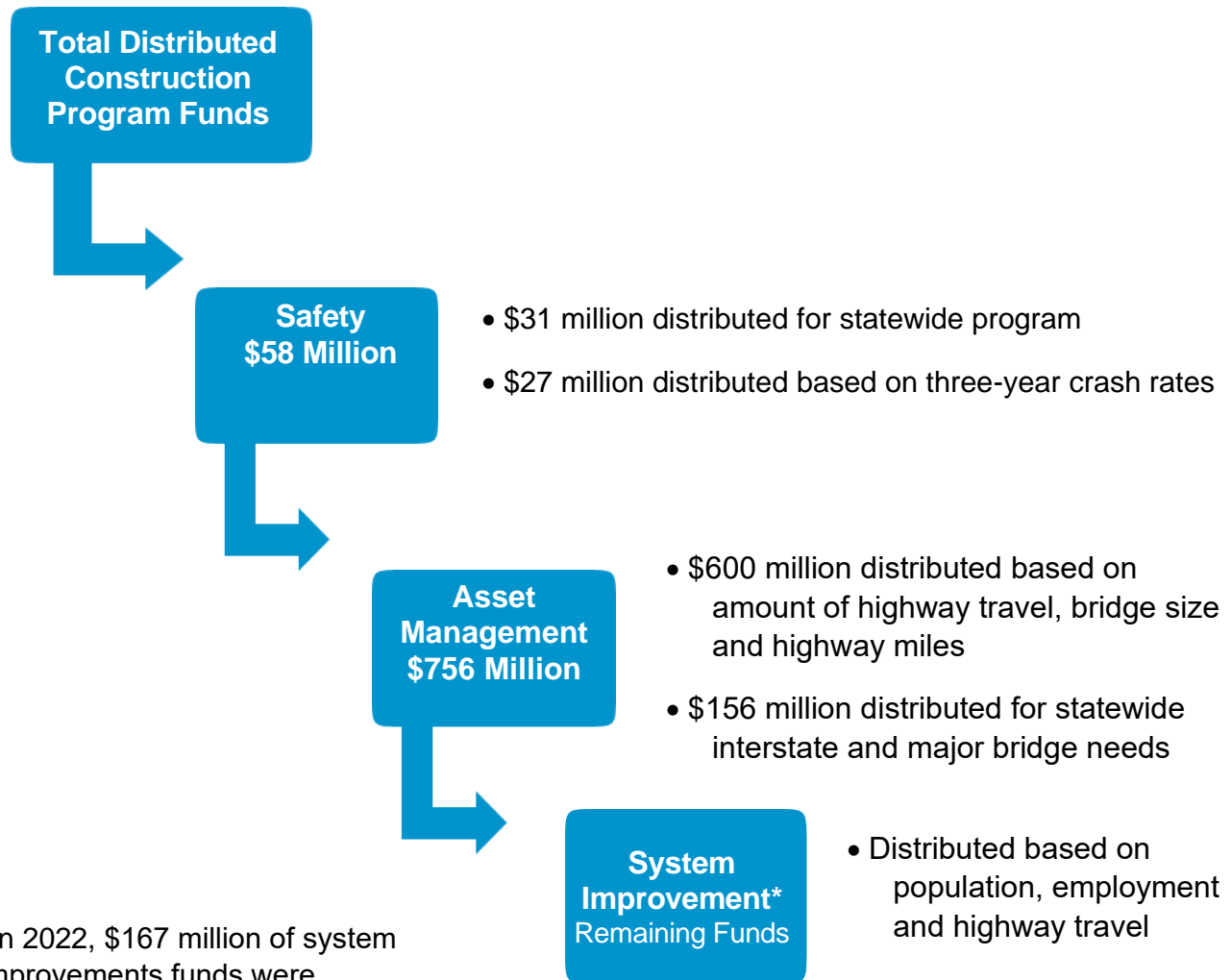
### **7.5 Funding Distribution**

On Jan. 10, 2003, the Missouri Highways and Transportation Commission adopted an objective method to distribute transportation funds using factors reflecting system size and usage and where people live and work. The distribution of funds has been the subject of debate for over a decade. The method for determining where and on what to spend limited transportation dollars has

changed several times. Changes have been a result of both long-term project plans and political pressure centered on dividing funds between the urban and rural areas of the state. This method goes beyond the narrow discussions of geography and allows for allocation of funding based on objective, transportation-related factors that are representative indicators of physical system needs.

Since 2003, the Missouri Highways and Transportation Commission has used a formula to distribute construction program funds for road and bridge improvements to each of its districts (seven since 2011). This is the largest area of MoDOT's budget that provides funding for safety improvements, taking care of the system and flexible funds that districts can use to take care of the system or invest in major projects that relieve congestion and spur economic growth. In many districts, taking care of the system funds are not sufficient to maintain current system conditions. Districts use flexible funds to make up the difference, but often times still fall short. Figure 7.1 identifies how construction program funds are allocated annually to districts using the following formula:

Figure 7.1 MoDOT Funding Distribution for Construction Funds



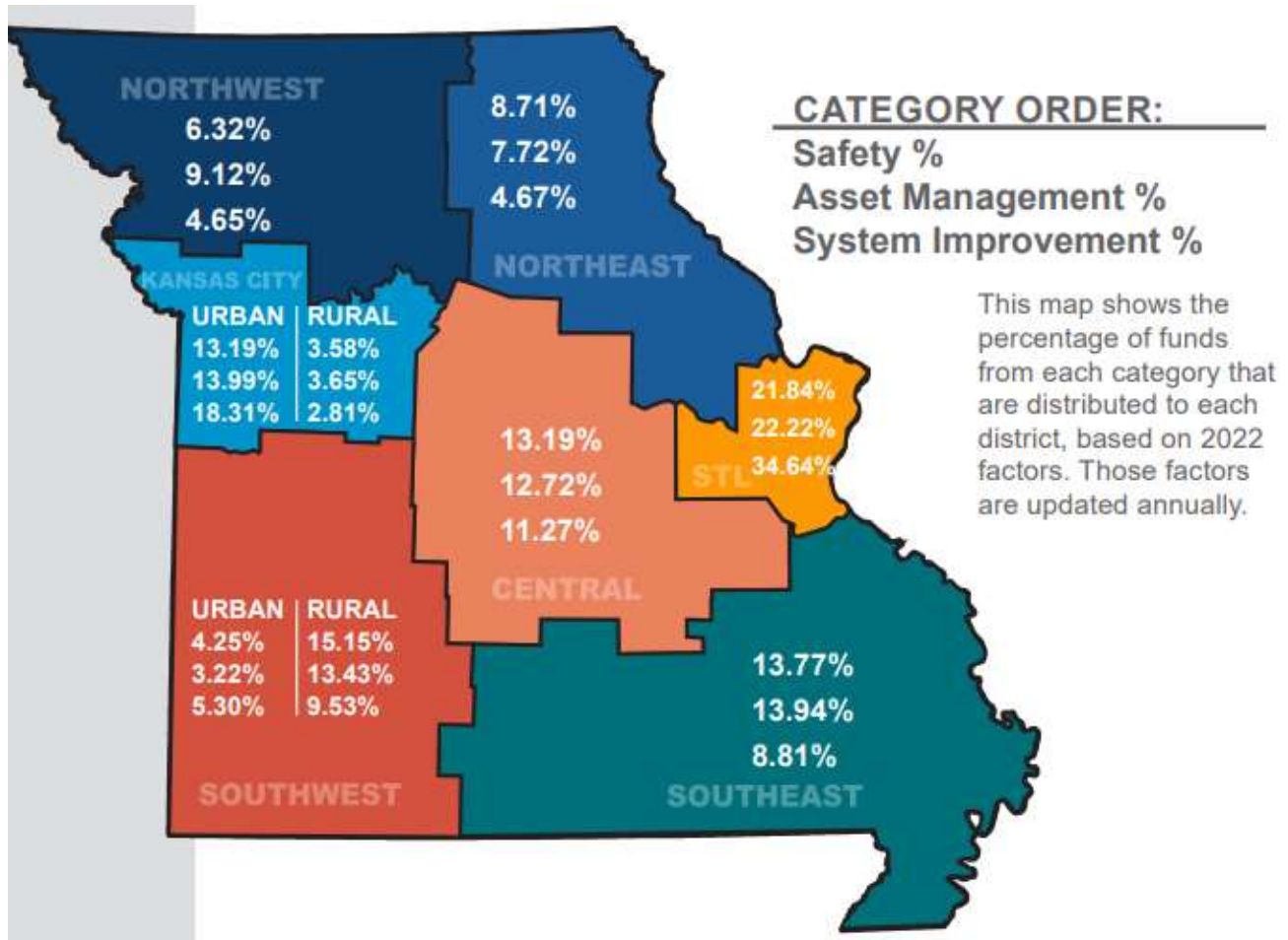
\*In 2022, \$167 million of system improvements funds were distributed, of which \$149 million was used for asset management.

Source: MoDOT’s Citizen’s Guide to Transportation Funding in Missouri, 2022

### Funding Distribution Overview

Once construction program funds are distributed to districts, MoDOT collaborates with regional planning groups to identify local priorities based on projected available funding. The regional transportation improvement plans are brought together to form the department’s Statewide Transportation Improvement Program, which outlines five years of transportation improvements. As one year of the plan is accomplished, another year is added.

**Figure 7.2 MoDOT Funding Distribution by District**



Source: MoDOT’s Citizen’s Guide to Transportation Funding in Missouri, 2022

When adding the construction program, operations, administration and highway safety programs together, the following amounts were spent in districts for fiscal year 2022:

**Table 7.1 MoDOT Funding Distribution – Total by District (\$ Millions)**

District	Construction Program	Operations*	Admin**	HWY Safety Programs	Total
Northwest	\$88	\$74	\$2	\$0	\$164
Northeast	\$55	\$65	\$2	\$0	\$122
Kansas City	\$235	\$60	\$3	\$3	\$301
Central	\$200	\$77	\$2	\$1	\$280
St. Louis	\$239	\$69	\$3	\$4	\$315
Southwest	\$153	\$88	\$2	\$1	\$241
Southeast	\$121	\$87	\$2	\$0	\$210
Central***	\$43	\$74	\$36	\$11	\$164
<b>Total</b>	<b>\$1,134</b>	<b>\$591</b>	<b>\$52</b>	<b>\$20</b>	<b>\$1,797</b>

Source: MoDOT's Citizen's Guide to Transportation Funding in Missouri, 2022

\*Includes \$494 million of maintenance expenditures and \$97 million of fleet, facilities and information system expenditures.

\*\*According to the Reason Foundation, MoDOT's administrative costs are 13th lowest in the nation for state departments of transportation.

\*\*\*Statewide administrative costs include \$17 million for medical insurance costs for MoDOT retirees.

## 8. PLAN IMPLEMENTATION

The Southwest Missouri Council of Government's Regional Transportation Plan conforms MoDOT's planning framework. The process of creating the prioritized lists is an exhaustive exercise to include the community at large, commissioners, local community leaders, and members of the TAC. Through surveys, numerous meetings and the SMCOG website, the community has been engaged in an attempt to produce a list that is both publically driven and useful to MoDOT in their decision-making process. The process of prioritizing needs is guided by the investment goals put forth in the Framework for Transportation Planning and Decision Making:

- Safety
- Taking Care of the System
- Congestion
- Access to Opportunity
- Efficient Movement of Goods
- Economic Competitiveness
- Environmental Protection
- Quality of Communities

### Environmental Justice

The SMCOG Regional Transportation Plan includes projects that have the potential to help those who are at a disadvantage either economically or physically. With a large region, the percentage of disadvantaged population varies. The rural elderly population in SMCOG greater than 64 is an average of 14%; although, there are pockets where that percentage is dramatically higher. The disabled population ranges between 16% and 59%. The number of zero car households also varies per county with the high being 7.5% in Dallas County to 4% in Christian County. With the population of our region only expected to grow in the next 10 years, it is important that this plan take into account projects that will help these often-overlooked populations. We must find a way to expand public transportation into the rural areas of Southwest Missouri.

### Social and Economic Impacts

Many of the needs included in this plan may reduce the number of fatalities on Missouri's roadways. Projects such as adding shoulders, better striping, guard cables, reducing the number of at-grade crossings and improving site distance issues will make thousands of Missourians travelling the roadways of Southwest Missouri safer. Upgrading and redesigning major corridors in our region will make the transportation system not only safer but also more efficient. Due to the high rate of growth in our region, working with local communities and land use and zoning authorities to accommodate higher densities for both residential and commercial uses near major arterials makes the transition from lower travelled, lower speed rural routes to higher speed corridors smoother and safer by redesigning key intersections and including merge and turn lanes. Additionally, SMCOG promotes an increase in public transit funds for the increasing numbers of disadvantaged persons.

## Conclusion

The Southwest Missouri Council of Governments recognizes that the Regional Transportation Plan is a static document attempting to describe ever-changing conditions. Considering the changes in land use and development and the overall dynamic nature of transportation planning, makes it necessary to make continual updates to this document. As conditions change, so do the needs of our region and it is the intent of this document to stay as current as possible by working with local communities, local zoning and planning authorities, and the TAC in creating a meaningful planning tool.



## Abbreviation Key

AATF	Airport and Airway Trust Fund
AIP	Airport Improvement Program
ALP	Airport Layout Plans
ALERT	Assistance for Local Emergency Response Training
AMP	Airport Master Plans
AWOS	Automated Weather Observing System
BRO	Off-System Bridge Replacement and Rehabilitation
CDBG	Community Development Block Grant Program
CEDS	Comprehensive Economic Development Strategy
CID	Community Improvement District
DDHS	Delta Development Highway System Plan
DRA	Delta Regional Authority
EDA	Economic Development Administration
EPW	Environment and Public Works
FAST	Fixing America's Surface Transportation
FC	Functional Classification
FHWA	Federal Highway Administration
FLAP	Federal Lands Access Program
FMS	Financial Management System
FTA	Federal Transit Administration
GAO	Government Accountability Office
HSPiR	High Speed Intercity Passenger Rail
JARC	Job Access and Reverse Commute Program
LOS	Level of Service
Local TIF	Local Tax Increment Financing
LPA	Local Program Application
L RTP	Long Range Transportation Plan
MACOG	Missouri Association of Councils of Governments
MHTC	Missouri Highways and Transportation Commission
MoDOT	Missouri Department of Transportation
MPO	Metropolitan Planning Organization
MSHP	Missouri State Highway Patrol
MTFC	Missouri Transportation Finance Corporation's
NBI	National Bridge Inventory
NI	Natural Increase

NID	Neighborhood Improvement District
NPIAS	National Plan of Integrated Airport Systems
NTD	National Transit Database
OTO	Ozarks Transportation Planning Organization
PRIIA	Passenger Rail Investment and Improvement Act
RAISE	Rebuilding American Infrastructure with Sustainability and Equity
RPCs	Regional Planning Commissions
RTP	Recreational Trails Program
SASP	State Airport System Plan
SMCOG	Southwest Missouri Council of Governments
SRTS	Safe Routes to School
STAR	Statewide Transportation Assistance Revolving
STIP	State Transportation Improvement Program
TAC	Transportation Advisory Committee
TAP	Transportation Alternatives Program
TDCs	Transportation Development Corporations
TDDs	Transportation Development Districts
TDM	Transportation Demand Management
TE	Transportation Enhancement
TEAP	Traffic Engineering Assistance Program
TIM	Traveler Information Map
TIP	Transportation Improvement Program
TMA	Transportation Management Area
TRADAS	Traffic Data Acquisition System
USDOT	United States Department of Transportation
VMT	Vehicle Miles Traveled