



OZARKS TRANSPORTATION ORGANIZATION

A METROPOLITAN PLANNING ORGANIZATION

2208 W. CHESTERFIELD BOULEVARD, SUITE 101, SPRINGFIELD, MO 65807
417-865-3047

LRTP Planning Committee Agenda

October 14, 2020

9:30 am to 11:00 am

Zoom via link to be provided and public viewing via Facebook

<https://www.facebook.com/ozarkstransportationorganization>

1. Welcome
2. Plan Schedule ----- Tab 1
3. Review Visioning Results ----- Tab 2
4. Demographics and Socioeconomics ----- See Email
5. Financial Projection Assumptions ----- Tab 3
6. Prior Plan Outcomes ----- Tab 4
7. Design Standards Kick-off ----- Tab 5
8. Next Meeting
9. Adjourn

Si usted necesita la ayuda de un traductor, por favor comuníquese con Andy Thomason al (417) 865-3042, al menos 48 horas antes de la reunión.

Persons who require special accommodations under the Americans with Disabilities Act or persons who require interpreter services (free of charge) should contact Andy Thomason at (417) 865-3042 at least 24 hours ahead of the meeting.

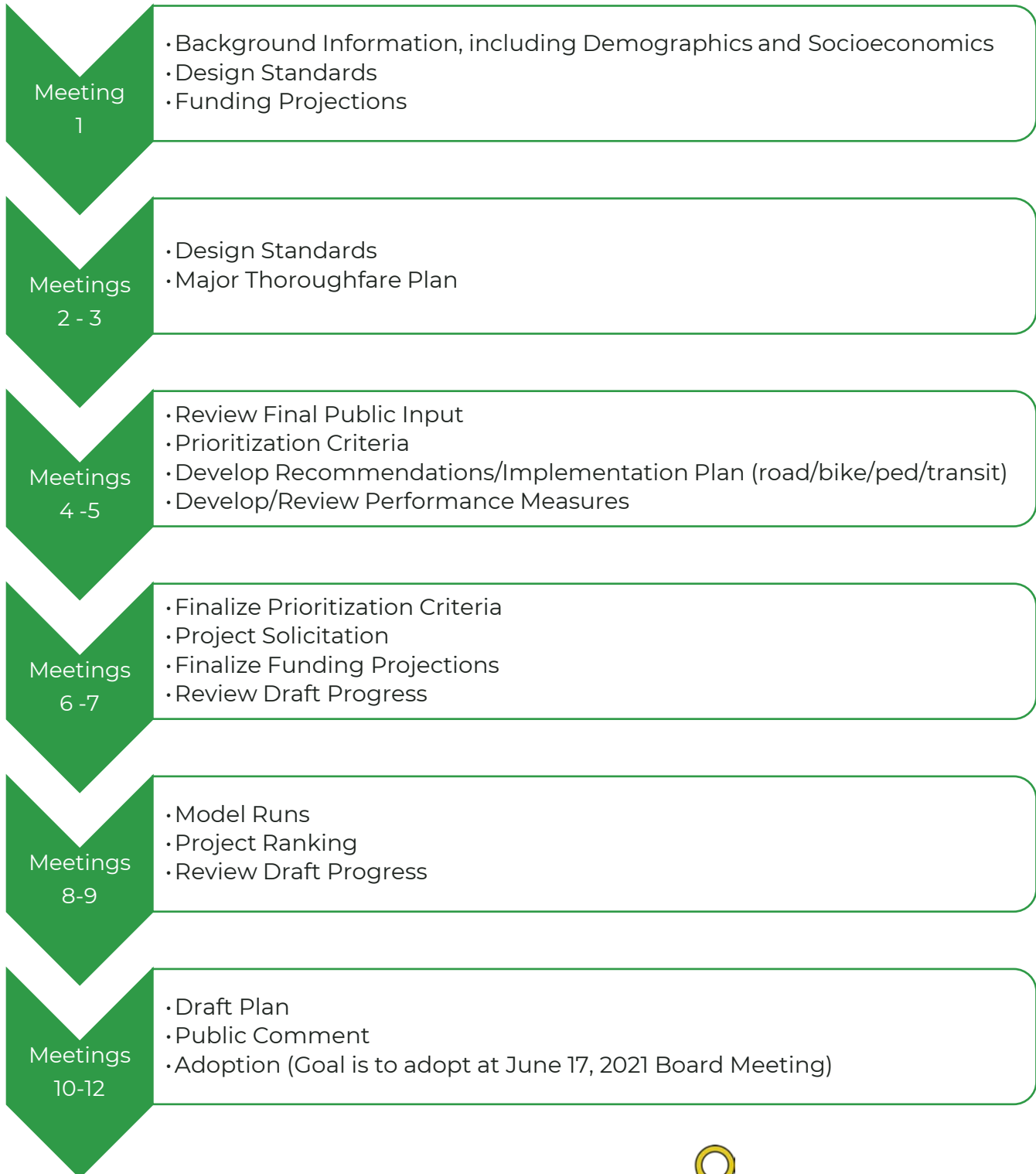
If you need relay services please call the following numbers: 711 - Nationwide relay service; 1-800-735- 2966 - Missouri TTY service; 1-800-735-0135 - Missouri voice carry-over service.

OTO fully complies with Title VI of the Civil Rights Act of 1964 and related statutes and regulations in all programs and activities. For more information or to obtain a Title VI Complaint Form, see www.ozarkstransportation.org or call (417) 865-3042.



TAB 1

DESTINATION 2045 TPC PLAN DEVELOPMENT PROCESS



Potential Meeting Schedule

For Adoption by June 17, 2021

Wednesday meetings to start at 9:30 am

October 14, 2020

November 4, 2020

November 18, 2020

December 9, 2020

January 6, 2021

January 20, 2021

February 17, 2021

March 3, 2021

March 31, 2021

April 21, 2021

May 5, 2021

TPC Recommendation – May 19, 2021

Board Adoption – June 17, 2021

Are there dates or times that are significant conflicts?

We may need to adjust as we go.



TAB 2

OTO Board of Directors and Technical Planning Committee Visioning Results

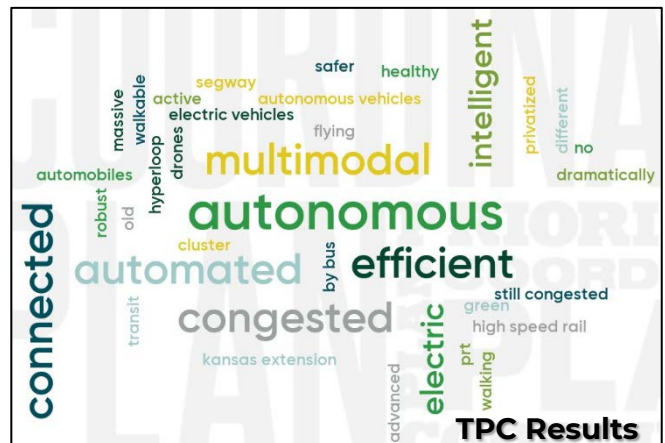
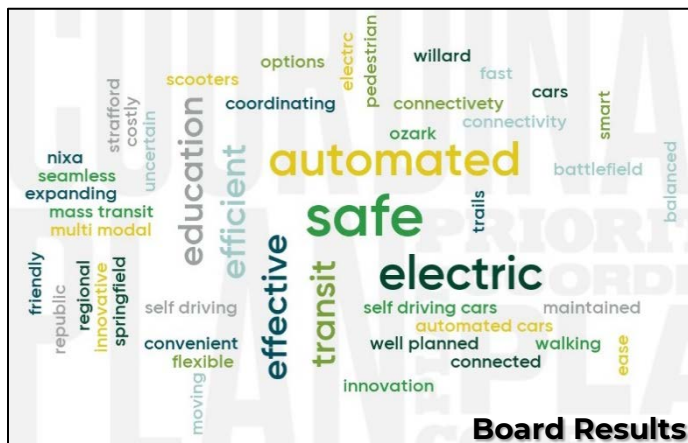
Are we there yet? This is the question the Ozarks Transportation Organization has asked its Board and Technical Planning Committee members at recent visioning workshops. The OTO kicked off a long range transportation planning process, dubbed *Destination 2045*, on January 30th by asking Board members to envision the future of transportation in the Ozarks. The Technical Planning Committee considered these same questions on February 24th.

Destination 2045 will outline actions for the next 25 years which make sure the region develops the robust transportation system needed to support growth, while effectively moving people and freight in diverse ways. OTO will build on the public input and significant effort already captured with Springfield's *Forward SGF*, Republic's *SOAR 2045*, Ozark's *Comprehensive Plan 2019*, Willard *2019 Comprehensive Plan*, and *Imagine Nixa*, as well as other planning activities from around the region.

The Plan will identify needed improvements to the transportation system and will prioritize federal and state funds allocated for these projects. Federal law requires metropolitan planning organizations, like the OTO, to update the metropolitan transportation plan every five years in order to continue receiving federal transportation dollars.

Visioning Workshops

Both the Board and TPC workshops followed the same format. Each workshop started by asking members to participate in a word cloud answering the question, “Using one word, what will the transportation system look like in 2045?” The larger the word, the more often it was submitted by members. Words that stand out relate to automated and electric vehicles.



Here are the results when the results from both workshops are combined:

Rank	Category
1	Autonomous
2	Connected/Intelligent
3	Electric
3	Efficient
5	Walkable/Active
5	Multimodal
7	Transit
7	Safe
9	Congested

There was also a variety of alternative/forward looking transportation suggestions, including personal rapid transit, drones, flying, hyperloop, and micro-mobility options such as scooters and Segways.

The word cloud exercise was followed by a presentation on current and future conditions around the region, and then the attendees were asked a series of questions to help inform *Destination 2045's* vision. Each person was given the opportunity to share their answers to the questions and then the group voted to identify a most common or important theme among the answers.

Results

Below are the questions and answers provided by workshop attendees. All topics which received votes are highlighted. These topics also informed the survey which is available through May 4, 2020.

Board of Directors - January 30, 2020

Where are we? What makes moving around the Ozarks great? What are the region's transportation strengths?

Flow of traffic on highways	7
Partnerships/collaboration	6
Airport growth	1
Roads are well maintained	1
Springfield's grid layout	1
Airport	
Alternate routes	
Collaboration between communities and agencies	
Complete streets	
Diverging diamonds	
Forward thinking	
Good, buildable transportation system	

Keeping up with growth
 OTO
 Planning
 Regional ease of movement
 Scenery
 Smooth roads
 Trails
 Variety of destinations
 Well connected with rural areas

Why can't we get there? What are the challenges facing the region today?
 What is the hardest part about getting around?

Limited funding	11
Civic knowledge/education/driver's ed	4
Infrastructure waning	3
Lack of innovation and inclusiveness	1
Access management – lack of	
Automated vehicles	
Bridges	
Capacity	
CAVE people	
Center city freeway	
Congestion	
Corridor preservation	
Culture – risk adverse	
Density	
Drivers	
Electric vehicles and supporting infrastructure	
Increased traffic	
Lack of EV charging stations	
Lack of sidewalks and crosswalks	
Loud vehicles	
Modernize	
Narrow ROW in built up areas	
No law for hands free driving	
Not pedestrian friendly/ADA	
Parking	
Politics	
Speed limits on highways	
Speeding/reckless driving and pedestrians/distracted	

Where are we going? If there were no obstacles, what would you like us to accomplish by 2045? What will the region be like in 20 years? What will help the region attract new residents, entrepreneurs, businesses, and development?

Regional Transit System	8
Proactive decision making (now)	4
Diverging diamonds and roundabouts	2
Growing population and jobs	1
Innovative and inclusive culture	1
Leverage technology	1
Additional lanes (auxiliary)	
Additional North/South/East/West primary/secondary arterials	
Enhanced transit (air and rail)	
Increase capacity	
Increase transit	
Increased density	
Maintain maintenance levels	
Maintain quality of life	
Maximize technology	
Mixed use neighborhoods	
More complete streets	
North/south express	
Perpetual pavements	
Quit playing catch-up	
Rail	
Seamless multimodal system	
Smart/Regionally coordinated landscape planning	
Transportation for the aging	

How can we get there? What opportunities should we use to our advantage? What actions are needed to ensure the region is strong and viable in the future?

Education/Analysis/Forecasting	7
Increased funding	5
Collaboration/cost shares	1
Plan ahead for projects	1
Regional planning/branding	1
Corridor preservation	
Focus on access management	
Maximize existing systems	
Strategic decision making	

Technical Planning Committee - February 24, 2020

Where are we? What makes moving around the Ozarks great? What are the region's transportation strengths?

Connectivity	5
Growing trail system	5
Alternative routes	4
Engaged communities	2
Low travel times	2
Regional cooperation	2
Space to see and explore	2
Regional ITS	1
Suburban connection	1
Accessible	
Airport	
Auxiliary lanes	
Connection to I-44	
Continually striving to improve	
Good roadway conditions	
Grid system	
Independent mobility	
Innovation	
Local trust	
Low gas prices	
Natural environment	
Passionate planning	
Rail	
Safe travels	
Strong growth	
Strong MPO	
Uncrowded highways	
Walkable downtown	

Why can't we get there? What are the challenges facing the region today?
What is the hardest part about getting around?

Funding	21
Development	1
Gaps in connectivity	1
Land use patterns	1
Access management	
Bike/ped connectivity	
Distracted driving	
Driver education	
Environmental constraints	

Forcing change
 Growth of area
 Inconsistent local regulations
 Increased cost
 Insufficient ROW
 Lack of alternate routes
 Lack of construction competition
 Lack of state funding
 Lack of TOD (transit-oriented development)
 Lack of voice for under-resourced
 Legislative regulatory issues
 Maintain assets
 More involvement
 Poor interstate reliability
 Public buy-in
 Public education
 Public support
 Public understanding
 Railroad
 Regional transit
 Short public attention span
 Transportation for disadvantaged

Where are we going? If there were no obstacles, what would you like us to accomplish by 2045? What will the region be like in 20 years? What will help the region attract new residents, entrepreneurs, businesses, and development?

Capacity improvements equaling growth	3
Increased drone deliveries	3
Multimodal connection to the rest of the nation	3
Additional lanes on freeways and expressways	2
Connected vehicle network/early adoption	2
Increased public-buy-in	2
Lowering drive times	2
Sustainable transportation funding sources	2
Connected modes	1
Connected trail system	1
Enhanced landscaping	1
Fully accessible sidewalk system	1
Access management	
Aesthetics in design in infrastructure	
Alternative transportation modes for the aging	
Better N/S connection between Springfield and Christian County	
Decreased motor vehicle use	
Ease of access	

Hovercrafts
 Impact fees in development
 Less time behind the wheel
 Little to no fossil fuel in use
 Lower fatality rates
 Maintaining highway speeds
 Mixed-use development
 No deficient bridges
 Non-essential transportation options (e.g. a trolley)
 Regional transit
 Transit frequency

How can we get there? What opportunities should we use to our advantage?
 What actions are needed to ensure the region is strong and viable in the future?

Sustainable long-term funding	4
Traffic impact fees and gas tax	4
Future looking laws and regulations	3
Aligned policies	2
Public education strategies	2
Use fees for all modes	2
Better land use planning for density	1
Continued regional collaboration	1
Expansion of trail system	1
Reduce regulatory constraints	1
Strong city identity	1
Utilizing funds efficiently	1
Additional regional transportation funding advocacy in state capital	
Aggressively progressive transportation system	
Clear priorities	
Community engagement	
Construction workforce development	
Decision-maker buy-in	
Incentives for smart development	
Increased connectivity	
Planning for life cycle costs	
Proactive research in innovative transportation opportunities	
Public private partnerships	
Rails to trails	
Relationship between EVs and CU	
Stronger regional partnerships	
Voter education on transportation issues	

TAB 3

Financial Projection Framework

For use in Investment Plan

Revenue Sources

- State
- Federal – Statewide
 - National Highway Performance Program
 - Statewide Surface Transportation Block Grant Program
 - Highway Safety Improvement Program
 - Open Container Transfer Provision
- Federal – Special Programs
 - Various Allocated and Discretionary Programs
 - BUILD
 - INFRA
 - Recreational Trails Program
- Federal – Regional Suballocated (Amounts shown are for 2020)
 - STBG-Urban - \$6.8 million
 - STBG-Set Aside (formally TAP) - \$421,000
 - Transit Urbanized Area Formula Program (5307) - \$2.7 million
 - Enhance Mobility of Seniors and Individuals with Disabilities (5310) - \$283,000
 - Bus and Bus Facilities (5339) - \$389,000
- Local
 - Sales Tax
 - Property Tax
 - City Utilities Rate Payers and Local Human Service Agencies
 - Development Agreements
 - Missouri Transportation Finance Corporation
 - NIDs/CIDs/TIDs

Time Bands

- 2021-2025 – TIP Projects
- 2025-2030
- 2030-2035
- 2035-2045

Have previously used inflation rate of 1% for revenue (3% inflation for project costs)



TAB 4

TRANSPORTATION PLAN 2040 IMPLEMENTATION

ONGOING

- ✓ Publish annual system performance report.
- ✓ Each year, produce an additional trail implementation plan.
- ✓ Continue Ozarks Clean Air Alliance participation to help monitor air quality.
- ✓ When programming projects, report on multi-modal opportunities.
- ✓ Inform and encourage members to use OTO as a resource.
- ✓ Support existing efforts as needed.

YEAR 1 (FY 2017)

- ✓ Review Prioritization Processes to incorporate recommended priorities.
- ✓ Integrate system performance into planning process.
- ✓ Establish TIM Subcommittee.
- Establish Funding Opportunity Subcommittee.
- ✓ Participate on Southwest Regional Freight Advisory Committee.
- ✓ Re-Establish Let's Go Smart website to promote multi-modalism, safety, and TDM.
- ✓ Finalize adoption of MTP by member jurisdictions.

YEAR 2 (FY 2018)

- ✓ Add Christian County to Greene County Destination Plan and include bicycle wayfinding plan.
- ✓ Conduct hazards/environmental assessment, including engendered species and flood-vulnerable facilities, as well as a review of applicable hazard mitigation plans.
- ✓ Use contacts through SW Freight Advisory Committee to analyze local goods movement and identify freight corridors.
- Develop MTP and Bicycle/Pedestrian review process that includes land use.

YEAR 3 (FY 2019)

- Develop a series of model ordinances for complete streets, subdivision street connections, and neighborhood connectivity.
- Explore barriers to transit use.
- Create high-frequency transit corridor plan.

Developed Toolboxes on
OTO website with
resources for members.

YEARS 4 AND 5 (FYS 2020-2021)

- Encourage adoption of model ordinance concepts through prioritization process.
- ✓ Assess progress of *Transportation Plan 2040* and success of Actions in achieving Goals.
- ✓ Begin update to *Transportation Plan 2040*.

✓ **Addressed**

➤ **Not yet addressed**

*Projects with at least an agreement in place are called "COMPLETE"

*Complete/ Programmed	ID	Name	Roadway	Location	Description	2018-2022	2023-2030	2031-2040	TOTAL	CONSTRAINT
COMPLETE	SP28	BATTLEFIELD ROAD AND FREMONT AVENUE INTERSECTION IMPROVEMENTS, FREMONT AVENUE IMPROVEMENTS	BATTLEFIELD ROAD FROM BATTLEFIELD ROAD TO FREMONT AVENUE	SPRINGFIELD	INTERSECTION IMPROVEMENTS AT FREMONT AVENUE, IMPROVEMENTS ON FREMONT AVENUE FROM SUNSET STREET TO BATTLEFIELD ROAD	\$ 7,013,122	\$ -	\$ -	\$ 7,013,122	\$ 7,013,122
COMPLETE	M172	BUSINESS 65 (SOUTH STREET) IMPROVEMENTS FROM ROUTE 65 TO THIRD STREET	BUSINESS 65 FROM ROUTE 65 TO ROUTE 14	OZARK	CAPACITY IMPROVEMENTS AND PEDESTRIAN ACCOMMODATIONS ON BUSINESS 65 (SOUTH STREET) IN OZARK FROM ROUTE 65 TO ROUTE 14	\$ 3,949,115	\$ -	\$ -	\$ 3,949,115	\$ 10,962,237
	M410	BUSINESS 65 (GLENSTONE AVENUE) CAPACITY AND SAFETY CORRIDOR AND INTERSECTION IMPROVEMENTS	BUSINESS 65 FROM I-44 TO BATTLEFIELD ROAD	SPRINGFIELD	IMPROVEMENTS TO THE BUSINESS 65 (GLENSTONE) CORRIDOR AND INTERSECTIONS FROM I-44 TO BATTLEFIELD	\$ -	\$ 11,068,865	\$ 12,831,848	\$ 23,900,713	\$ 34,862,950
COMPLETE	SP24	CAMPBELL AVENUE AND REPUBLIC ROAD INTERSECTION IMPROVEMENTS	CAMPBELL AVENUE FROM CAMPBELL AVENUE TO REPUBLIC ROAD	SPRINGFIELD	INTERSECTION IMPROVEMENTS AT REPUBLIC ROAD	\$ -	\$ -	\$ 24,401,898	\$ 24,401,898	\$ 59,264,848
PARTIAL - STILL NEED TO DO 6- LANING	M88	CAMPBELL AVENUE, ROUTE 160 SAFETY AND SYSTEM IMPROVEMENTS	CAMPBELL AVENUE, ROUTE 160 FROM BATTLEFIELD ROAD TO FARM ROAD 192	SPRINGFIELD, GREENE COUNTY	SAFETY AND SYSTEM IMPROVEMENTS FROM BATTLEFIELD ROAD TO FARM ROAD 192 (STEINERT ROAD)	\$ -	\$ 7,867,503	\$ -	\$ 7,867,503	\$ 67,132,351
COMPLETE	SP401	DIVISION FROM NATIONAL TO GLENSTONE	DIVISION FROM NATIONAL AVENUE TO GLENSTONE	SPRINGFIELD	CAPACITY IMPROVEMENTS TO DIVISION FROM NATIONAL TO GLENSTONE INCLUDING BIKE LANE AND SIDEWALKS	\$ 3,004,999	\$ -	\$ -	\$ 3,004,999	\$ 70,137,350
	G11	EAST/WEST ARTERIAL - KANSAS EXTENSION TO CAMPBELL AVENUE	EAST/WEST ARTERIAL FROM KANSAS EXPRESSWAY TO	GREENE COUNTY	NEW ROADWAY INCLUDING BICYCLE AND PEDESTRIAN ACCOMMODATIONS	\$ -	\$ -	\$ 21,386,413	\$ 21,386,413	\$ 91,523,763
	G13	EAST/WEST ARTERIAL - CAMPBELL AVENUE TO NATIONAL AVENUE	EAST/WEST ARTERIAL FROM CAMPBELL AVENUE TO	GREENE COUNTY	NEW ROADWAY WITH BICYCLE AND PEDESTRIAN ACCOMMODATIONS	\$ -	\$ -	\$ 21,386,413	\$ 21,386,413	\$ 112,910,176
	G14	EAST/WEST ARTERIAL - NATIONAL AVENUE TO KISSICK AVENUE (FARM ROAD 169)	EAST/WEST ARTERIAL FROM NATIONAL AVENUE TO KISSICK AVENUE (FARM ROAD	SPRINGFIELD, GREENE COUNTY	NEW ROADWAY WITH BICYCLE AND PEDESTRIAN ACCOMMODATIONS	\$ -	\$ -	\$ 44,911,468	\$ 44,911,468	\$ 157,821,644
	SP402	EAST/WEST ARTERIAL FROM KISSICK TO EVANS	EAST/WEST ARTERIAL FROM KISSICK TO EVANS ROAD	SPRINGFIELD	EAST/WEST ARTERIAL AS A NEW CORRIDOR FROM KISSICK TO EVANS	\$ -	\$ 12,680,000	\$ -	\$ 12,680,000	\$ 170,501,644
	ST1	EVERGREEN STREET IMPROVEMENTS	EVERGREEN STREET FROM ROUTE 125 TO CAMPING WORLD (373 E EVERGREEN)	STRAFFORD, GREENE COUNTY	IMPROVEMENTS ON EVERGREEN STREET FROM ROUTE 125 TO CAMPING WORLD (373 E EVERGREEN)	\$ 1,639,091	\$ -	\$ -	\$ 1,639,091	\$ 172,140,735
	M401	IMPROVEMENTS NECESSARY TO CREATE I-244 LOOP AROUND SPRINGFIELD	I-244 FROM ROUTE 360 TO ROUTE 65	SPRINGFIELD, GREENE COUNTY	SIGNAGE AND OTHER NECESSARY IMPROVEMENTS TO CONVERT US 65, US 60, US 360, TO I-244 ALONG WITH I-44 FROM US 65 TO US 360	\$ 3,170,001	\$ -	\$ -	\$ 3,170,001	\$ 175,310,736
PARTIAL	M39	I-44 AND ROUTE 125 INTERCHANGE IMPROVEMENTS	I-44 FROM I-44 TO ROUTE 125	STRAFFORD	INTERCHANGE IMPROVEMENTS AT ROUTE 125 INCLUDING PEDESTRIAN ACCOMMODATIONS	\$ 1,347,332	\$ -	\$ -	\$ 1,347,332	\$ 176,658,068
COMPLETE	M58	I-44 AND ROUTE B/MM INTERCHANGE IMPROVEMENTS	I-44 FROM I-44 TO ROUTE B/MM	GREENE COUNTY	INTERCHANGE IMPROVEMENTS AT ROUTE B/MM	\$ -	\$ -	\$ 2,851,522	\$ 2,851,522	\$ 179,509,590
PROGRAMMED	G6	KANSAS EXPRESSWAY EXTENSION - REPUBLIC ROAD TO WEAVER ROAD	KANSAS EXPRESSWAY FROM REPUBLIC ROAD TO WEAVER ROAD	SPRINGFIELD, GREENE COUNTY	NEW ROADWAY WITH BICYCLE AND PEDESTRIAN ACCOMMODATIONS	\$ 19,592,595	\$ -	\$ -	\$ 19,592,595	\$ 199,102,185
PROGRAMMED	G7	KANSAS EXPRESSWAY EXTENSION - WEAVER ROAD TO PLAINVIEW ROAD	KANSAS EXPRESSWAY FROM WEAVER ROAD TO PLAINVIEW ROAD	GREENE COUNTY	NEW ROADWAY WITH BICYCLE AND PEDESTRIAN ACCOMMODATIONS	\$ -	\$ 7,748,205	\$ -	\$ 7,748,205	\$ 206,850,390
PROGRAMMED	G8	KANSAS EXPRESSWAY EXTENSION - PLAINVIEW ROAD TO COX	KANSAS EXPRESSWAY FROM PLAINVIEW ROAD TO EAST/WEST ARTERIAL (FARM ROAD 190)	GREENE COUNTY	NEW ROADWAY WITH BICYCLE AND PEDESTRIAN ACCOMMODATIONS	\$ -	\$ 9,224,054	\$ -	\$ 9,224,054	\$ 216,074,444

*Complete/ Programmed	ID	Name	Roadway	Location	Description	2018-2022	2023-2030	2031-2040	TOTAL	CONSTRAINT
	M409	KANSAS EXPRESSWAY AND DIVISION INTERSECTION	KANSAS EXPRESSWAY FROM KANSAS EXPRESSWAY TO DIVISION STREET	SPRINGFIELD	INTERSECTION IMPROVEMENTS	\$ 2,513,272	\$ -	\$ -	\$ 2,513,272	\$ 218,587,716
	M48	LOOP 44 (CHESTNUT EXPRESSWAY) CAPACITY, SAFETY, AND SYSTEM IMPROVEMENTS - PHASE I	LOOP 44 FROM ROUTE 160 TO BUSINESS 65	SPRINGFIELD	CAPACITY, SAFETY, AND SYSTEM IMPROVEMENTS FROM ROUTE 160 (WEST BYPASS) TO BUSINESS 65 (GLENSTONE AVENUE), INCLUDING ACCESS MANAGEMENT	\$ -	\$ -	\$ 14,257,609	\$ 14,257,609	\$ 232,845,325
	M48	LOOP 44 (CHESTNUT EXPRESSWAY) CAPACITY, SAFETY, AND SYSTEM IMPROVEMENTS - PHASE II	LOOP 44 FROM ROUTE 160 TO BUSINESS 65	SPRINGFIELD	CAPACITY, SAFETY, AND SYSTEM IMPROVEMENTS FROM ROUTE 160 (WEST BYPASS) TO BUSINESS 65 (GLENSTONE AVENUE), INCLUDING ACCESS MANAGEMENT	\$ -	\$ -	\$ 28,515,218	\$ 28,515,218	\$ 261,360,543
	W5	MILLER ROAD WIDENING PROJECT	MILLER ROAD FROM ROUTE 160 TO JACKSON STREET	WILLARD	LANE ADDITION INCLUDING BICYCLE LANE	\$ 467,687	\$ -	\$ -	\$ 467,687	\$ 261,828,230
COMPLETE	M175	ITS	N/A FROM N/A TO N/A	SPRINGFIELD	ATMS PHASE 2B - CAMERAS, SIGNS, AND COMMUNICATION INFRASTRUCTURE ALONG VARIOUS ROUTES EAST OF AND INCLUDING ROUTE 13 IN SPRINGFIELD	\$ 1,564,785	\$ -	\$ -	\$ 1,564,785	\$ 263,393,015
COMPLETE	M176	ITS	N/A FROM N/A TO N/A	SPRINGFIELD, NIXA	ATMS PHASE 3 - CAMERAS, SIGNS, AND COMMUNICATIONS INFRASTRUCTURE ALONG VARIOUS ROUTES WEST OF ROUTE 13 AND ALONG ROUTE 160 SOUTH THROUGH ROUTE 14 IN NIXA	\$ 2,106,778	\$ -	\$ -	\$ 2,106,778	\$ 265,499,793
COMPLETE	M177	ITS	N/A FROM N/A TO N/A	SPRINGFIELD, NIXA, REPUBLIC	ATMS PHASE 4 - CAMERAS, SIGNS, AND COMMUNICATIONS INFRASTRUCTURE IN VARIOUS LOCATION IN SPRINGFIELD, ALONG ROUTE 65 SOUTH THROUGH ROUTE F IN OZARK AND ALONG ROUTE 60 WEST THROUGH ROUTE P IN REPUBLIC	\$ -	\$ 1,319,655	\$ -	\$ 1,319,655	\$ 266,819,448
ONGOING	SP30	TRAFFIC MANAGEMENT CENTER OPERATIONS	N/A FROM N/A TO N/A	SPRINGFIELD	FUNDING OF ONGOING OPERATIONS	\$ 6,000,000	\$ 11,975,000	\$ 19,750,000	\$ 37,725,000	\$ 304,544,447
	C410	NATIONAL EXTENSION	NATIONAL FROM EAST-WEST ARTERIAL TO ROUTE CC	CHRISTIAN COUNTY	NATIONAL EXTENSION FROM EAST-WEST ARTERIAL TO CC	\$ -	\$ -	\$ 21,386,413	\$ 21,386,413	\$ 325,930,861
COMPLETE	R8	OAKWOOD AVENUE IMPROVEMENTS	OAKWOOD AVENUE FROM ROUTE 60 TO ELM STREET	REPUBLIC	LANE ADDITION, SIDEWALKS, UPGRADE TO MEET DESIGN STANDARDS	\$ 1,986,578	\$ -	\$ -	\$ 1,986,578	\$ 327,917,438
COMPLETE	SP403	PRIMROSE FROM SOUTH TO KIMBROUGH	PRIMROSE FROM SOUTH AVENUE (SPRINGFIELD) TO KIMBROUGH	SPRINGFIELD	CAPACITY IMPROVEMENTS TO PRIMROSE FROM SOUTH TO KIMBROUGH	\$ 2,841,090	\$ -	\$ -	\$ 2,841,090	\$ 330,758,529
COMPLETE	SP404	REPUBLIC FROM CHASE TO FAIRVIEW	REPUBLIC ROAD FROM CHASE TO FAIRVIEW	SPRINGFIELD	CAPACITY IMPROVEMENTS FROM CHASE TO FAIRVIEW	\$ 2,731,818	\$ -	\$ -	\$ 2,731,818	\$ 333,490,347
	G403	ROUTE 13 FROM WW TO NORTON	ROUTE 13 FROM ROUTE WW TO NORTON	GREENE COUNTY	SAFETY IMPROVEMENTS TO ROUTE 13 FROM WW TO NORTON	\$ 1,092,727	\$ -	\$ -	\$ 1,092,727	\$ 334,583,074
COMPLETE	M411	ROUTE 13 (KANSAS EXPRESSWAY) AND WALNUT LAWN	ROUTE 13 FROM ROUTE 13 TO WALNUT LAWN		INTERSECTION IMPROVEMENTS	\$ -	\$ 2,459,748	\$ -	\$ 2,459,748	\$ 337,042,822
COMPLETE	M85	ROUTE 13 (KANSAS EXPRESSWAY) AND SUNSET STREET INTERSECTION IMPROVEMENTS	ROUTE 13 FROM ROUTE 13 TO SUNSET STREET	SPRINGFIELD	INTERSECTION IMPROVEMENTS AT SUNSET STREET INCLUDING PEDESTRIAN CONNECTION FROM KANSAS TO SUNSET	\$ 2,185,454	\$ -	\$ -	\$ 2,185,454	\$ 339,228,276
COMPLETE	M146	ROUTE M (NICHOLAS ROAD) AND ROUTE 14 (MT. VERNON STREET) INTERSECTION IMPROVEMENTS	ROUTE 14 FROM ROUTE 14 TO ROUTE M	NIXA, CHRISTIAN COUNTY	INTERSECTION IMPROVEMENTS AT ROUTE M (NICHOLAS ROAD) AND ROUTE 14 (MT. VERNON STREET)	\$ 1,715,581	\$ -	\$ -	\$ 1,715,581	\$ 340,943,857

*Complete/ Programmed	ID	Name	Roadway	Location	Description	2018-2022	2023-2030	2031-2040	TOTAL	CONSTRAINT
COMPLETE	M147	ROUTE 14 (MT. VERNON STREET) IMPROVEMENTS	ROUTE 14 FROM ROUTE M TO GREGG ROAD	NIXA, CHRISTIAN COUNTY	CAPACITY IMPROVEMENTS FROM ROUTE M (NICHOLAS ROAD) TO GREGG ROAD INCLUDING PEDESTRIAN ACCOMMODATIONS	\$ 2,622,545	\$ -	\$ -	\$ 2,622,545	\$ 343,566,402
COMPLETE	M150	ROUTE 14 (MT. VERNON STREET) IMPROVEMENTS	ROUTE 14 FROM GREGG ROAD TO TRUMAN BOULEVARD	NIXA	CAPACITY IMPROVEMENTS FROM GREGG ROAD TO TRUMAN BOULEVARD INCLUDING PEDESTRIAN ACCOMMODATIONS	\$ 2,098,036	\$ -	\$ -	\$ 2,098,036	\$ 345,664,438
COMPLETE	M151	ROUTE 14 (MT. VERNON STREET) IMPROVEMENTS	ROUTE 14 FROM TRUMAN BOULEVARD TO ROUTE 160	NIXA	CAPACITY IMPROVEMENTS FROM TRUMAN BOULEVARD TO ROUTE 160 (MASSEY BOULEVARD) INCLUDING PEDESTRIAN ACCOMMODATIONS	\$ 2,240,090	\$ -	\$ -	\$ 2,240,090	\$ 347,904,528
COMPLETE	M156	ROUTE 14 (MT. VERNON STREET) IMPROVEMENTS	ROUTE 14 FROM ROUTE 160 TO WATER STREET	NIXA	CAPACITY IMPROVEMENTS FROM ROUTE 160 (MASSEY BOULEVARD) TO RIDGECREST STREET INCLUDING PEDESTRIAN ACCOMMODATIONS	\$ 6,685,304	\$ -	\$ -	\$ 6,685,304	\$ 354,589,832
COMPLETE	M157	ROUTE 14 (MT. VERNON STREET) IMPROVEMENTS	ROUTE 14 FROM WATER STREET TO CHEYENNE ROAD	NIXA	CAPACITY IMPROVEMENTS FROM RIDGECREST STREET TO CHEYENNE ROAD WITH PEDESTRIAN ACCOMMODATIONS TO RIDGECREST	\$ 8,741,816	\$ -	\$ -	\$ 8,741,816	\$ 363,331,648
	M158	ROUTE 14 (JACKSON STREET) IMPROVEMENTS	ROUTE 14 FROM CHEYENNE ROAD TO FREMONT ROAD	NIXA, OZARK, CHRISTIAN COUNTY	CAPACITY IMPROVEMENTS FROM CHEYENNE ROAD TO FREMONT ROAD	\$ -	\$ 13,754,909	\$ -	\$ 13,754,909	\$ 377,086,557
COMPLETE	M159	ROUTE 14 (JACKSON STREET) IMPROVEMENTS	ROUTE 14 FROM FREMONT ROAD TO 22ND STREET	OZARK	CAPACITY IMPROVEMENTS FROM FREMONT ROAD TO 22ND STREET	\$ 4,294,417	\$ -	\$ -	\$ 4,294,417	\$ 381,380,974
COMPLETE	M167	ROUTE 14 (JACKSON STREET) IMPROVEMENTS	ROUTE 14 FROM 17TH STREET TO ROUTE NN	OZARK	CAPACITY IMPROVEMENTS FROM 17TH STREET TO ROUTE NN (9TH STREET) INCLUDING PEDESTRIAN ACCOMMODATIONS	\$ 5,734,631	\$ -	\$ -	\$ 5,734,631	\$ 387,115,605
	M173	ROUTE 14 (SOUTH STREET) IMPROVEMENTS	ROUTE 14 FROM 3RD STREET/SELMORE ROAD TO ROUTE W	OZARK	CAPACITY IMPROVEMENTS AND PEDESTRIAN ACCOMMODATIONS ON SOUTH STREET FROM 3RD STREET/SELMORE ROAD TO ROUTE W	\$ -	\$ 21,522,793	\$ -	\$ 21,522,793	\$ 408,638,398
PARTIAL, EXCEPT FOR BRIDGE	M408	ROUTE 14 (JACKSON STREET) IMPROVEMENTS	ROUTE 14 FROM ROUTE NN TO 3RD STREET	OZARK	CAPACITY IMPROVEMENTS FROM ROUTE NN TO 3RD	\$ -	\$ 4,919,495	\$ -	\$ 4,919,495	\$ 413,557,893
	O13	ROUTE 14 (3RD STREET) AND CHURCH STREET INTERSECTION IMPROVEMENTS	ROUTE 14 FROM ROUTE 14 TO CHURCH STREET	OZARK	WIDEN ROUTE 14 (3RD STREET) TO INCLUDE TWO THROUGH LANES IN EACH DIRECTION WITH A CONTINUOUS CENTER TURN LANE, ADD A CENTER TURN LANE FOR THE EASTBOUND AND WESTBOUND APPROACHES OF CHURCH STREET, ADD SIGNAL	\$ -	\$ 1,885,397	\$ -	\$ 1,885,397	\$ 415,443,290
	O25	ROUTE 14 (SOUTH STREET) AND ROUTE W INTERSECTION IMPROVEMENTS	ROUTE 14 FROM ROUTE 14 TO ROUTE W	OZARK	SIGNALIZE INTERSECTION AND WIDEN ROADWAYS TO INCLUDE LEFT TURN LANES AT ALL APPROACHES	\$ -	\$ -	\$ 1,524,138	\$ 1,524,138	\$ 416,967,428
	O401	ROUTE 14 AND OAK STREET INTERSECTION IMPROVEMENTS	ROUTE 14 FROM ROUTE 14 TO OAK STREET	OZARK	IMPROVE EXISTING INTERSECTION ALIGNMENT WITH A REALIGNMENT OF OAK STREET	\$ -	\$ 1,885,397	\$ -	\$ 1,885,397	\$ 418,852,825

*Complete/ Programmed	ID	Name	Roadway	Location	Description	2018-2022	2023-2030	2031-2040	TOTAL	CONSTRAINT
COMPLETE	O6	ROUTE 14 (JACKSON STREET) AND ROUTE NN (9TH STREET) INTERSECTION IMPROVEMENTS	ROUTE 14 FROM ROUTE 14 TO 9TH STREET	OZARK	WIDEN JACKSON STREET TO INCLUDE TWO WESTBOUND LANES (EAST OF ROUTE NN) AND REALIGNMENT OF 10TH STREET, WIDEN ROUTE NN TO INCLUDE TO A SOUTHBOUND LEFT TURN LANE AND ADD SHOULDERS, REPLACE SIGNAL	\$ 3,114,272	\$ -	\$ -	\$ 3,114,272	\$ 421,967,097
COMPLETE	O403	IMPROVEMENTS TO INTERSECTION OF ROUTE 14 AND BUSINESS 65	ROUTE 14/BUSINESS 65 FROM ROUTE 14 TO BUSINESS 65	OZARK	INTERSECTION IMPROVEMENTS	\$ 2,185,454	\$ -	\$ -	\$ 2,185,454	\$ 424,152,551
	M124	ROUTE 160 IMPROVEMENTS	ROUTE 160 FROM PLAINVIEW ROAD TO ROUTE CC RELOCATION	SPRINGFIELD, NIXA, GREENE COUNTY, CHRISTIAN COUNTY	CAPACITY AND SAFETY IMPROVEMENTS FROM FARM ROAD 192 TO RELOCATED ROUTE CC IN NIXA	\$ -	\$ 26,128,670	\$ -	\$ 26,128,670	\$ 450,281,221
COMPLETE	M127	ROUTE 160 AND FARM ROAD 192 (STEINERT ROAD) INTERSECTION IMPROVEMENTS	ROUTE 160 FROM ROUTE 160 TO FARM ROAD 192 (STEINERT ROAD)	GREENE COUNTY	INTERSECTION IMPROVEMENTS AT FARM ROAD 192 (STEINERT ROAD)	\$ 499,376	\$ -	\$ -	\$ 499,376	\$ 450,780,597
COMPLETE	M13	ROUTE 160 (WEST BYPASS) AND ROUTE 744 (KEARNEY STREET) INTERSECTION IMPROVEMENTS	ROUTE 160 FROM ROUTE 160 TO ROUTE 744	SPRINGFIELD	INTERSECTION IMPROVEMENTS AT ROUTE 744 (KEARNEY STREET)	\$ 2,921,952	\$ -	\$ -	\$ 2,921,952	\$ 453,702,549
	M132	ROUTE 160 (MASSEY BOULEVARD) AND ROUTE CC INTERSECTION IMPROVEMENTS	ROUTE 160 FROM ROUTE 160 TO ROUTE CC RELOCATION	NIXA	INTERSECTION IMPROVEMENTS AT RELOCATED ROUTE CC IN NIXA	\$ -	\$ 3,228,419	\$ -	\$ 3,228,419	\$ 456,930,968
COMPLETE	M141	ROUTE 160 (MASSEY BOULEVARD) AND TRACKER ROAD INTERSECTION IMPROVEMENTS	ROUTE 160 FROM ROUTE 160 TO TRACKER ROAD	NIXA	INTERSECTION IMPROVEMENTS AT TRACKER ROAD	\$ 1,381,207	\$ -	\$ -	\$ 1,381,207	\$ 458,312,175
	M142	ROUTE 160 (MASSEY BOULEVARD) AND KATHRYN STREET/ALDERSGATE DRIVE INTERSECTION IMPROVEMENTS	ROUTE 160 FROM ROUTE 160 TO KATHRYN STREET/ALDERSGATE DRIVE	NIXA	INTERSECTION IMPROVEMENTS AT KATHRYN STREET/ALDERSGATE DRIVE	\$ -	\$ -	\$ 1,461,405	\$ 1,461,405	\$ 459,773,580
COMPLETE	M143	ROUTE 160 (MASSEY BOULEVARD) AND NORTHVIEW ROAD INTERSECTION IMPROVEMENTS	ROUTE 160 FROM ROUTE 160 TO NORTHVIEW ROAD	NIXA	INTERSECTION IMPROVEMENTS AT NORTHVIEW ROAD	\$ 1,115,510	\$ -	\$ -	\$ 1,115,510	\$ 460,889,090
	M144	ROUTE 160 (MASSEY BOULEVARD) AND WASSON DRIVE INTERSECTION IMPROVEMENTS	ROUTE 160 FROM ROUTE 160 TO WASSON DRIVE	NIXA	INTERSECTION IMPROVEMENTS AT WASSON DRIVE	\$ -	\$ 1,259,268	\$ -	\$ 1,259,268	\$ 462,148,358
COMPLETE	M153	ROUTE 160 (MASSEY BOULEVARD) AND SOUTH STREET INTERSECTION IMPROVEMENTS	ROUTE 160 FROM ROUTE 160 TO SOUTH STREET (NIXA)	NIXA	INTERSECTION IMPROVEMENTS AT SOUTH STREET IN NIXA	\$ 1,654,061	\$ -	\$ -	\$ 1,654,061	\$ 463,802,419
COMPLETE	M3	ROUTE 160 AND HUGHES ROAD INTERSECTION IMPROVEMENTS	ROUTE 160 FROM ROUTE 160 TO HUGHES ROAD	WILLARD	INTERSECTION IMPROVEMENTS, QUARRY ACCESS IMPROVEMENTS AT HUGHES ROAD	\$ 642,523	\$ -	\$ -	\$ 642,523	\$ 464,444,942
	N401	ROUTE 160 AND ROSEDALE	ROUTE 160 FROM ROUTE 160 TO ROSEDALE ROAD	NIXA	INTERSECTION IMPROVEMENTS AT ROSEDALE	\$ -	\$ 3,074,685	\$ -	\$ 3,074,685	\$ 467,519,627
PARTIAL - STILL NEED TO DO JACKSON TO N. LIMITS	W1	ROUTE 160 EXPANSION TO FOUR LANES	ROUTE 160 FROM WILLARD TO I-44	WILLARD, GREENE COUNTY	WIDEN ROUTE 160 FROM TWO LANES TO FOUR LANES FROM WILLARD TO I-44	\$ 12,321,590	\$ -	\$ -	\$ 12,321,590	\$ 479,841,217
	M102	ROUTE 60 FREEWAY IMPROVEMENTS	ROUTE 60 FROM ROUTE 65 TO FARM ROAD 213	SPRINGFIELD, GREENE COUNTY	UPGRADE TO FREEWAY FROM ROUTE 65 TO FARM ROAD 213 (OUTER ROADS)	\$ -	\$ 36,896,216	\$ -	\$ 36,896,216	\$ 516,737,433

*Complete/ Programmed	ID	Name	Roadway	Location	Description	2018-2022	2023-2030	2031-2040	TOTAL	CONSTRAINT
COMPLETE	M113	ROUTE 60 AND ROUTE 174 (INDEPENDENCE STREET) INTERSECTION IMPROVEMENTS	ROUTE 60 FROM ROUTE 60 TO ROUTE 174	REPUBLIC	INTERSECTION IMPROVEMENTS AT ROUTE 174 IN REPUBLIC TO ELIMINATE SIGNAL SPLIT-PHASE (REMOVE MEDIAN SEPARATION, IMPROVE PEDESTRIAN CROSSING)	\$ -	\$ 2,459,748	\$ -	\$ 2,459,748	\$ 519,197,181
	M420	ROUTE 60 (JAMES RIVER FREEWAY) CAPACITY AND OPERATIONAL IMPROVEMENTS PHASE 2	ROUTE 60 FROM ROUTE 413 TO ROUTE 65	SPRINGFIELD	CAPACITY AND OPERATIONAL IMPROVEMENTS FROM ROUTE 413 (KANSAS EXPRESSWAY) TO ROUTE 65	\$ -	\$ -	\$ 28,515,218	\$ 28,515,218	\$ 547,712,398
COMPLETE - ONLY 65 TO NATIONAL	M87	ROUTE 60 (JAMES RIVER FREEWAY) CAPACITY AND OPERATIONAL IMPROVEMENTS PHASE 1	ROUTE 60 FROM ROUTE 413 TO ROUTE 65	SPRINGFIELD	CAPACITY AND OPERATIONAL IMPROVEMENTS FROM ROUTE 413 (KANSAS EXPRESSWAY) TO ROUTE 65	\$ 9,555,801	\$ 12,298,739	\$ -	\$ 21,854,540	\$ 569,566,938
COMPLETE	M128	ROUTE 65 CAPACITY IMPROVEMENTS	ROUTE 65 FROM EVANS ROAD TO ROUTE CC	SPRINGFIELD, OZARK	CAPACITY IMPROVEMENTS FROM EVANS ROAD TO ROUTE CC	\$ 7,321,271	\$ -	\$ -	\$ 7,321,271	\$ 576,888,209
	M129	ROUTE 65 AND EVANS ROAD INTERCHANGE	ROUTE 65 FROM ROUTE 65 TO EVANS ROAD	SPRINGFIELD	INTERCHANGE IMPROVEMENTS AT EVANS ROAD	\$ -	\$ -	\$ 12,200,236	\$ 12,200,236	\$ 589,088,445
	M160	ROUTE 65 IMPROVEMENTS	ROUTE 65 FROM ROUTE CC TO BUSINESS 65	OZARK	CAPACITY IMPROVEMENTS FROM ROUTE CC TO BUSINESS 65 (SOUTH STREET/F)	\$ -	\$ -	\$ 40,447,411	\$ 40,447,411	\$ 629,535,856
	W4	ROUTE AB AND ROUTE 160 INTERSECTION IMPROVEMENT	ROUTE AB FROM ROUTE AB TO ROUTE 160	WILLARD	TURN LANE AND SIGNALIZATION IMPROVEMENT	\$ 408,680	\$ -	\$ -	\$ 408,680	\$ 629,944,536
	M135	ROUTE CC IMPROVEMENTS	ROUTE CC FROM MAIN STREET (NIXA) TO ROUTE 65	NIXA, OZARK, CHRISTIAN COUNTY	CAPACITY AND SAFETY IMPROVEMENTS FROM MAIN STREET (NIXA) TO ROUTE 65	\$ -	\$ 21,483,437	\$ -	\$ 21,483,437	\$ 651,427,973
	M75	ROUTE D (SUNSHINE STREET) CAPACITY IMPROVEMENTS	ROUTE D FROM BUSINESS 65 TO ROUTE 65	SPRINGFIELD	CAPACITY AND OPERATIONAL IMPROVEMENTS FROM BUSINESS 65 (GLENSTONE AVENUE) TO ROUTE 65 - ACCESS MANAGEMENT, INTERSECTION MODIFICATIONS, ADAPTIVE SIGNALS	\$ -	\$ 2,593,804	\$ -	\$ 2,593,804	\$ 654,021,777
	M122	ROUTE FF AND WEAVER ROAD INTERSECTION IMPROVEMENTS	ROUTE FF FROM ROUTE FF TO WEAVER ROAD	BATTLEFIELD	INTERSECTION IMPROVEMENTS AND PEDESTRIAN CROSSING AT WEAVER ROAD	\$ -	\$ 348,054	\$ -	\$ 348,054	\$ 654,369,831
COMPLETE	R401	ROUTE M AND REPMO DRIVE INTERSECTION IMPROVEMENTS	ROUTE M FROM ROUTE M TO REPMO DRIVE	REPUBLIC, GREENE COUNTY	INTERSECTION IMPROVEMENTS AND PEDESTRIAN ACCOMMODATIONS AT ROUTE M, REPMO DRIVE, AND FARM ROAD 103	\$ 972,336	\$ -	\$ -	\$ 972,336	\$ 655,342,167
	M430	GRADE-SEPARATED RAILROAD CROSSING ON ROUTE MM	ROUTE MM FROM ROUTE MM TO ROUTE MM	REPUBLIC, GREENE COUNTY	ROUTE MM GRADE-SEPARATED RAILROAD CROSSING	\$ -	\$ -	\$ 14,257,609	\$ 14,257,609	\$ 669,599,776
	M59	ROUTE MM (BROOKLINE BOULEVARD) CAPACITY IMPROVEMENTS	ROUTE MM FROM I-44 TO ROUTE 360	REPUBLIC, GREENE COUNTY	CAPACITY IMPROVEMENTS FROM I-44 TO ROUTE 360 (JAMES RIVER FREEWAY)	\$ -	\$ 16,418,816	\$ -	\$ 16,418,816	\$ 686,018,592
	M60	ROUTE MM (BROOKLINE BOULEVARD) IMPROVEMENTS	ROUTE MM FROM ROUTE 360 TO ROUTE 60	REPUBLIC, GREENE COUNTY	CAPACITY IMPROVEMENTS (THREE-LANES) FROM ROUTE 360 (JAMES RIVER FREEWAY) TO ROUTE 60	\$ -	\$ 14,758,486	\$ -	\$ 14,758,486	\$ 700,777,078
	M38	ROUTE OO/125 (OLD ROUTE 66) AND WASHINGTON STREET INTERSECTION IMPROVEMENTS	ROUTE OO/125 FROM ROUTE OO/125 TO WASHINGTON STREET	STRAFFORD	INTERSECTION IMPROVEMENT AT WASHINGTON STREET, INCLUDING WIDENING OF GRADE CROSSING	\$ -	\$ 657,983	\$ -	\$ 657,983	\$ 701,435,061
COMPLETE	M45	ROUTE YY (DIVISION STREET) AND EASTGATE AVENUE INTERSECTION IMPROVEMENTS	ROUTE YY FROM ROUTE YY TO EASTGATE AVENUE	SPRINGFIELD	INTERSECTION IMPROVEMENTS AT EASTGATE AVENUE (ROUTE 65 EAST OUTER ROAD)	\$ 1,419,452	\$ -	\$ -	\$ 1,419,452	\$ 702,854,513
	O402	THIRD STREET IN OZARK FROM JACKSON TO SOUTH	THIRD STREET FROM JACKSON TO SOUTH	OZARK	CAPACITY IMPROVEMENTS AND PEDESTRIAN ACCOMMODATIONS TO THIRD STREET/ROUTE 14 THROUGH DOWNTOWN OZARK FROM JACKSON TO SOUTH	\$ -	\$ 4,919,495	\$ -	\$ 4,919,495	\$ 707,774,008
	M49	VARIOUS LOCATIONS ADAPTIVE SIGNALS	VARIOUS FROM VARIOUS TO VARIOUS	SPRINGFIELD	ADAPTIVE SIGNAL TECHNOLOGY ON VARIOUS ROADWAYS	\$ -	\$ 1,362,700	\$ -	\$ 1,362,700	\$ 709,136,708

*Complete/ Programmed	ID	Name	Roadway	Location	Description	2018-2022	2023-2030	2031-2040	TOTAL	CONSTRAINT
	ST401	REALIGNMENT OF WASHINGTON AND MADISON	WASHINGTON, MADISON FROM ROUTE 00 TO BUMGARNER	STRAFFORD	REALIGN WASHINGTON AND MADISON	\$ -	\$ 1,967,798	\$ -	\$ 1,967,798	\$ 711,104,506
	G405	WEST BYPASS AND FARM ROAD 146 INTERSECTION IMPROVEMENTS	WEST BYPASS FROM WEST BYPASS TO FARM ROAD 146	GREENE	INTERSECTION IMPROVEMENTS	\$ 546,364	\$ -	\$ -	\$ 546,364	\$ 711,650,870
COMPLETE	O14	RIVERSIDE BRIDGE	RIVERSIDE ROAD	CHRISTIAN COUNTY	RIVERSIDE BRIDGE REPLACEMENT, INCLUDING BICYCLE/PEDESTRIAN ACCOMMODATION	\$ 3,000,000	\$ -	\$ -	\$ 3,000,000	\$ 714,650,870
	M10	SPRINGFIELD, GREENE COUNTY	I-44 CAPACITY IMPROVEMENTS	I-44 FROM ROUTE 266 TO ROUTE 160	CAPACITY IMPROVEMENTS FROM ROUTE 266 TO ROUTE 160	\$ -	\$ -	\$ 25,164,680	\$ 25,164,680	\$ 739,815,550
	M12	SPRINGFIELD, GREENE COUNTY	I-44 CAPACITY IMPROVEMENTS	I-44 FROM ROUTE 160 TO ROUTE 65	CAPACITY IMPROVEMENTS FROM ROUTE 160 TO ROUTE 65	\$ -	\$ 50,432,208	\$ -	\$ 50,432,208	\$ 790,247,758
	M30	SPRINGFIELD, STRAFFORD, GREENE COUNTY	I-44 CAPACITY IMPROVEMENTS	I-44 FROM ROUTE 65 TO ROUTE 125	CAPACITY IMPROVEMENTS FROM ROUTE 65 TO ROUTE 125	\$ -	\$ 49,058,439	\$ -	\$ 49,058,439	\$ 839,306,197
	M35	SPRINGFIELD	I-44 AND ROUTE 744 (MULROY ROAD) INTERCHANGE IMPROVEMENTS	I-44 FROM I-44 TO ROUTE 744	INTERCHANGE IMPROVEMENTS AT ROUTE 744	\$ -	\$ -	\$ 27,909,269	\$ 27,909,269	\$ 867,215,466
	M7	GREENE COUNTY	I-44 CAPACITY IMPROVEMENTS	I-44 FROM ROUTE 360 TO ROUTE 266	CAPACITY IMPROVEMENTS FROM ROUTE 360 (JAMES RIVER FREEWAY) TO ROUTE 266	\$ -	\$ -	\$ 30,281,735	\$ 30,281,735	\$ 897,497,201
	M103	ROGERSVILLE	ROUTE 60 FREEWAY IMPROVEMENTS	ROUTE 60 FROM FARM ROAD 213 TO FARM ROAD 247	UPGRADE TO FREEWAY FROM FARM ROAD 213 TO FARM ROAD 247 (ROUTE 125 INTERCHANGE)	\$ 15,380,000	\$ 10,007,326	\$ -	\$ 25,387,326	\$ 922,884,527
COMPLETE	D1	SPRINGFIELD	GRANT AVENUE PARKWAY	GRANT AVENUE FROM SUNSHINE TO COLLEGE	SAFETY, BICYCLE, PEDESTRIAN AND OTHER NON-ROADWAY IMPROVEMENTS	\$ 26,201,028	\$ -	\$ -	\$ 26,201,028	\$ 949,085,555
	B2001	BATTLEFIELD	AZALEA TERRACE	AZALEA TERRACE FROM LILAC TO HONEYSUCKLE	EXTENSION OF AZALEA AND SIDEWALKS	\$ 700,163	\$ -	\$ -	\$ 700,163	\$ 949,785,718
PROGRAMMED	S2001	SPRINGFIELD	GALLOWAY STREET	GALLOWAY FROM LUSTER TO LONE PINE	CAPACITY, BICYCLE, PEDESTRIAN IMPROVEMENTS	\$ 5,000,000	\$ -	\$ -	\$ 5,000,000	\$ 954,785,718
PROGRAMMED	N2001	NIXA	MAIN STREET	MAIN STREET FROM TRACKER TO CC	CAPACITY AND PEDESTRIAN IMPROVEMENTS	\$ 2,345,000	\$ -	\$ -	\$ 2,345,000	\$ 957,130,718
PROGRAMMED NEED TO ADD CONSTRUCTION	N2002	NIXA	NORTH STREET	NORTH FROM MAPLEWOOD HILLS TO CHEYENNE	ENGINEERING	\$ 550,000	\$ -	\$ -	\$ 550,000	\$ 957,680,718
PROGRAMMED	N2003	NIXA	TRUMAN	TRUMAN FROM HEATHER GLENN TO PEMBROOK/	CAPACITY AND PEDESTRIAN IMPROVEMENTS	\$ 1,202,000	\$ -	\$ -	\$ 1,202,000	\$ 958,882,718

*Complete/ Programmed	ID	Name	Roadway	Location	Description	2018-2022	2023-2030	2031-2040	TOTAL	CONSTRAINT
PROGRAMMED	N2004	NIXA	MAIN STREET	MAIN STREET FROM ROUTE 14 TO NORTH	ROADWAY IMPROVEMENTS	\$ -	\$ 3,000,000	\$ -	\$ 3,000,000	\$ 961,882,718
	ST2001	STRAFFORD	NORTH OLD ORCHARD	NORTH OLD ORCHARD FROM FARM ROAD 84 TO EVERGREEN	ROADWAY IMPROVEMENTS	\$ 600,000	\$ -	\$ -	\$ 600,000	\$ 962,482,718

Transit Constrained List

Status	Expenses	2018-2022	2023-2027	2028-2032	2033-2037	2038-2040
Annual	Operating Expenses	\$42,620,000	\$49,408,000	\$57,277,000	\$66,400,000	\$44,814,000
Annual	Preventative Maintenance	\$5,520,000	\$6,400,000	\$7,419,000	\$8,601,000	\$5,805,000
Annual	Planning	\$1,157,000	\$1,342,000	\$1,555,000	\$1,803,000	\$1,217,000
Annual	Security	\$182,000	\$211,000	\$245,000	\$284,000	\$192,000
Ongoing	ADA Enhancements	\$1,809,000	\$2,081,000	\$2,412,000	\$2,796,000	\$1,887,000
Fixed Route: 2 Diesel, 2 Electric Paratransit – 2 by 2022	8 Fixed-Route and 4 Paratransit Buses	\$4,500,000	\$0	\$0	\$0	\$0
N/A	8 Fixed-Route and 4 Paratransit Buses	\$0	\$5,137,000	\$0	\$0	\$0
N/A	7 Fixed-Route and 1 Paratransit Buses	\$0	\$0	\$4,849,000	\$0	\$0
N/A	6 Fixed-Route Buses	\$0	\$0	\$0	\$4,673,900	\$0
N/A	2 Fixed-Route and 3 Paratransit Buses	\$0	\$0	\$0	\$0	\$2,380,000
Complete for 2018-2022	Shelter/Signs/ Amenities	\$81,000	\$63,000	\$233,000	\$168,100	\$207,000
Project Planned for 2024	ITS	\$390,000	\$453,000	\$522,000	\$603,000	\$551,000
Upcoming	Other Agency Vehicles	\$1,799,000	\$1,987,000	\$2,193,000	\$2,422,000	\$1,572,000
	TOTAL	\$58,058,000	\$67,082,000	\$76,705,000	\$87,751,000	\$58,625,000
	REMAINING FUNDING	\$0	\$0	\$0	\$0	\$0

TAB 5

Major Thoroughfare Plan

Map 8-1

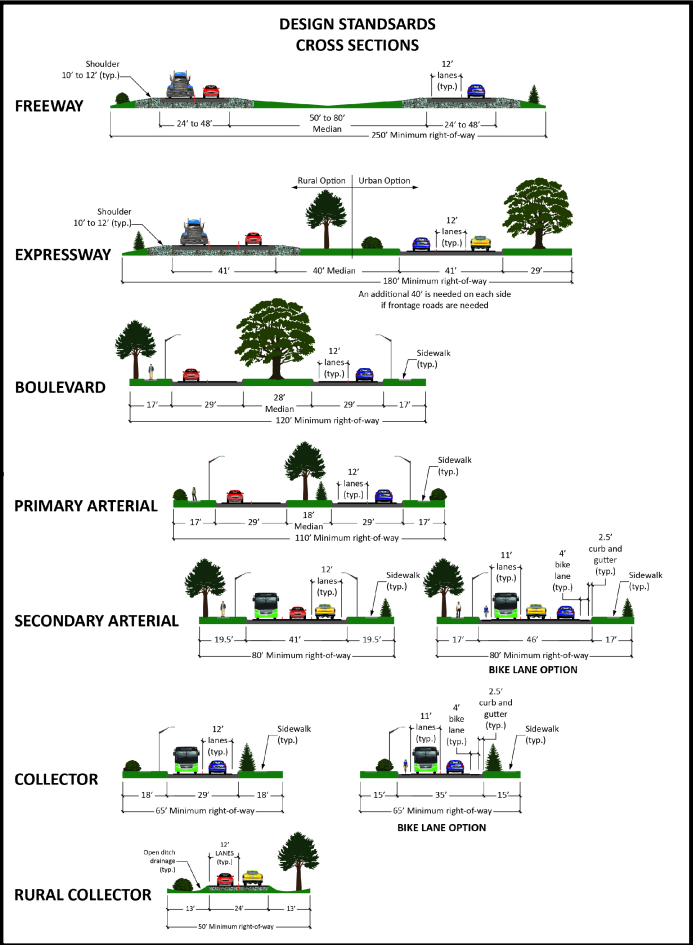
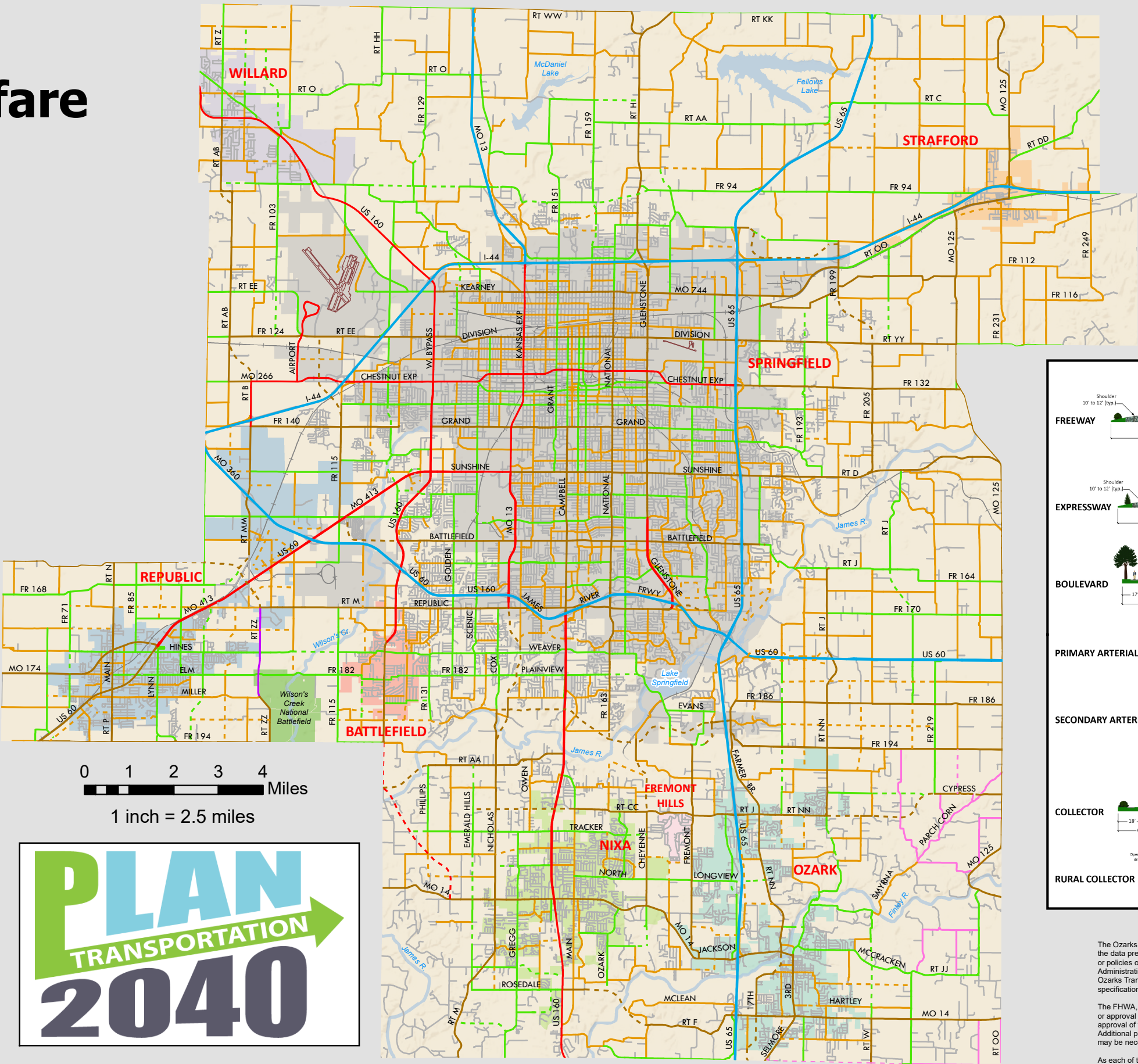
Legend

Existing Roads

- Freeway
- Expressway
- Primary Arterial
- Boulevard
- Secondary Arterial
- Collector
- Rural Collector
- Local
- Railroad

Proposed Roads

- Future Expressway
- Future Primary Arterial
- Future Secondary Arterial
- Future Collector
- Future Rural Collector
- Future Local Street



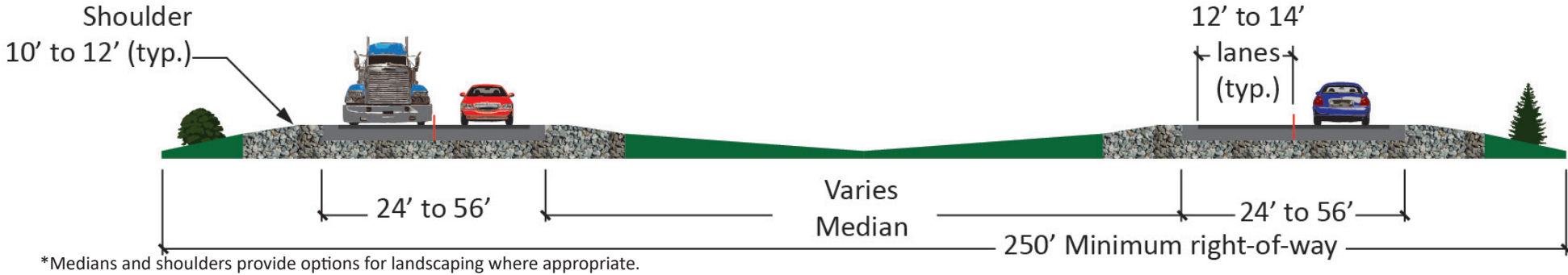
DISCLAIMER

The Ozarks Transportation Organization is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the Missouri Department of Transportation (MoDOT), or the Ozarks Transportation Organization. This map does not constitute a standard, specification, or regulation.

The FHWA, FTA, OR MoDOT acceptance of this map does not constitute endorsement or approval of the need for any recommended improvements nor does it constitute approval of their location and design or a commitment to fund any such improvements. Additional project level environmental impact assessments and/or studies of alternatives may be necessary.

As each of the projects in the Major Thoroughfare Plan (MTP) is implemented, coordination, agreement, and independent approval of the participating local jurisdiction is required. No part of this MTP is to be interpreted as to diminish the authority of local jurisdictions in the area of land use and transportation.

Freeway



Description

Design Service Volume	20,000 - 100,000
Design Speed	55 - 70 mph
Traffic Flow/Access Priority	99/1
Facility Spacing	4 - 8 miles
Trip Length	Between cities and across metropolitan area (2+ miles)

Basics

Minimum Right-of-Way	250' minimum
Number of Lanes	4 - 8
Lane Width	12' to 14' per lane
Drainage/Shoulders	Variable. Minimum 10' - 12' shoulder

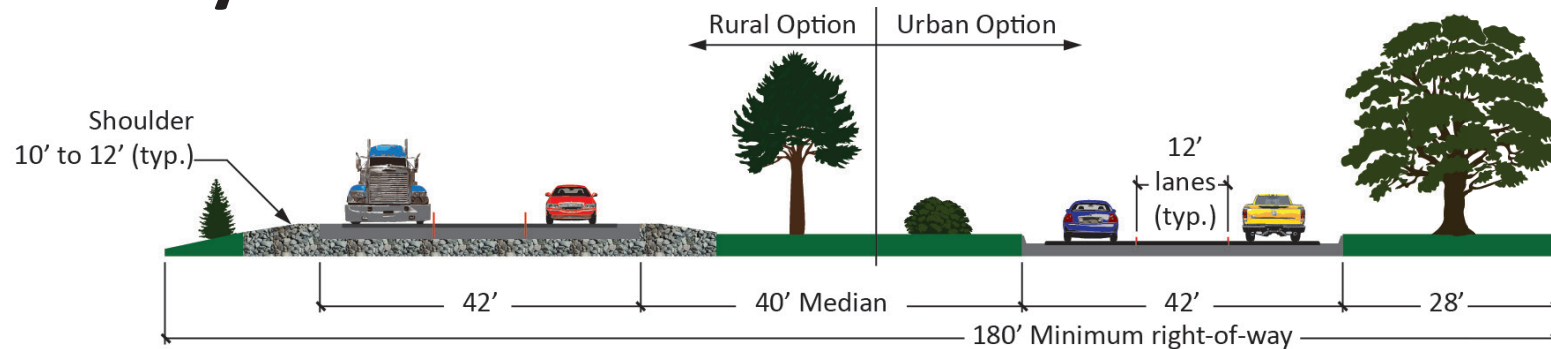
Access

Median	Varies
Full Median Break Spacing	Not permitted
Directional Median Break Spacing	Not permitted
Interchange Spacing	1 - 3 miles
Full Access Intersection Spacing	Not permitted
Residential Driveway Spacing	Not permitted
Commercial Driveway Spacing	Not permitted

Multi-Modal

On-Street Parking	Not permitted
Pedestrian Provisions	Pedestrians prohibited (no sidewalks required)
Bicycle Provisions	Bicycles not recommended
Transit Provisions	No stops, express routes only

Expressway



*Medians and shoulders provide options for landscaping where appropriate.

An additional 40' is needed on each side if frontage roads are needed

Description

Design Service Volume	20,000 - 50,000
Design Speed	40 - 55 mph
Traffic Flow/Access Priority	90/10
Facility Spacing	3 - 5 miles
Trip Length	Across metropolitan area and between major activity centers (2+ miles)

Basics

Minimum Right-of-Way	180' + 40' each side if frontage roads are needed
Number of Lanes	4 - 6
Turning Lanes	At intersections only
Lane Width	12' (plus shoulders in rural areas only)
Drainage/Shoulders	Curb and gutter or shoulders (rural areas)

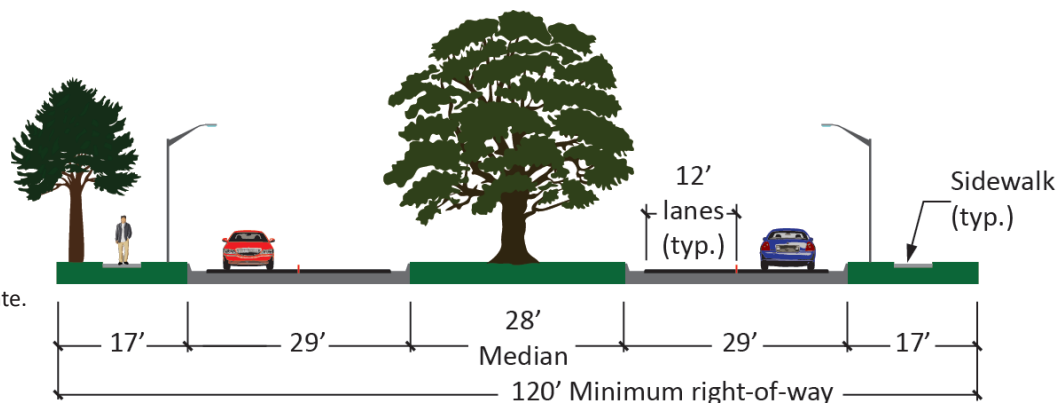
Access

Median	40' landscaped
Median Breaks	Allowed at signalized intersections only
Full Access Intersection Spacing	1/2 mile
Intersection	Left and right turn lanes desired
Residential Driveway Spacing	No residential drives permitted
Commercial Driveway Spacing	660' (right-in/right-out only)

Multi-Modal

On-Street Parking	Not permitted
Pedestrian Provisions	Sidewalks required on frontage roads
Bicycle Provisions	Bicycle lane provided on frontage roads
Transit Provisions	Turnouts at major generators

Boulevard



- *Medians and shoulders provide options for landscaping where appropriate.
- *Utility and greenspace areas may switch locations if needed.
- *Utilities may be placed under sidewalks.

Description

Design Service Volume	10,000 - 40,000
Design Speed	35 - 45 mph
Traffic Flow/Access Priority	70/30
Facility Spacing	3 - 5 miles
Trip Length	Across metropolitan area and between major activity centers (2+ miles)

Basics

Minimum Right-of-Way	120' plus intersection triangles
Number of Lanes	4
Turning Lanes	At intersections only; left and right turn lanes desired
Lane Width	12' per lane
Minimum Area Behind Curb	17' used for sidewalks, utilities, and landscaping (where appropriate)
Drainage/Shoulders	Curb and gutter; 6' -10' for shoulders (if used)

Access

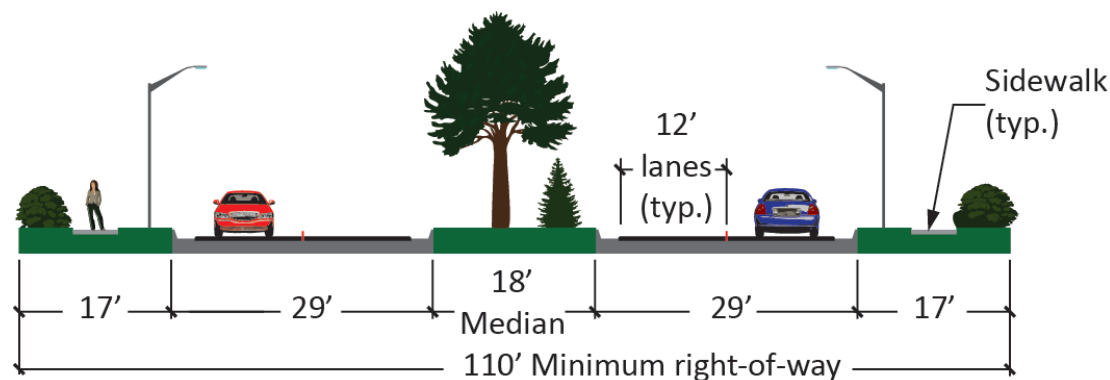
Median	28' (landscaping desired)
Median Breaks	Allowed at signalized intersections only
Directional Median Break Spacing	660'
Full Access Intersection Spacing	1/4 mile
Intersection	Left and right turn lanes desired
Residential Driveway Spacing	No residential drives permitted
Commercial Driveway Spacing	330' center-to-center (right-in/right-out only). Allowed only if internal circulation, cross access, and minimum driveway radii and grade are provided.

Multi-Modal

On-Street Parking	Not permitted
Pedestrian Provisions	4' - 6' (minimum) sidewalks on both sides
Bicycle Provisions	Bicycle facilities provided according to adopted bicycle plan
Transit Provisions	Turnouts at major generators

Primary Arterial

- *Medians and shoulders provide options for landscaping where appropriate.
- *Utility and greenspace areas may switch locations if needed.
- *Utilities may be placed under sidewalks.



Description

Design Service Volume	10,000 - 30,000
Design Speed	35 - 45 mph
Traffic Flow/Access Priority	70/30
Facility Spacing	1 - 2 miles
Trip Length	Between and through major activity centers (2 - 8 miles)

Basics

Minimum Right-of-Way	110' plus intersection triangles
Number of Lanes	4 - 6
Turning Lanes	At intersections only
Lane Width	12' per lane
Minimum Area Behind Curb	17' used for sidewalks, utilities, and landscaping (where appropriate)
Drainage/Shoulders	Curb and gutter; shoulders permitted in rural areas (6' - 10')

Access

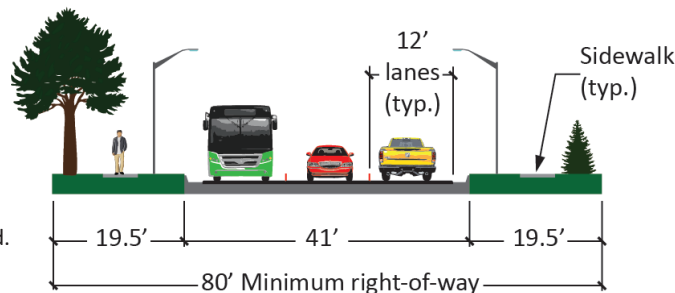
Median	18'
Median Breaks	Allowed at signalized intersections only
Directional Median Break Spacing	660'
Full Access Intersection Spacing	1/4 mile
Intersection	Left and right turn lanes desired
Residential Driveway Spacing	No residential drives permitted
Commercial Driveway Spacing	330' center-to-center (right-in/right-out only). Allowed only if internal circulation, cross access, and minimum driveway radii and grade are provided.

Multi-Modal

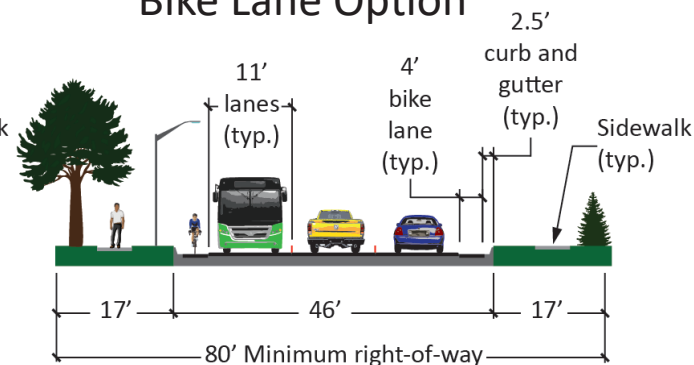
On-Street Parking	Not permitted
Pedestrian Provisions	4' - 5' (minimum) sidewalks on both sides
Bicycle Provisions	Bicycle facilities provided according to adopted bicycle plan
Transit Provisions	Scheduled stops every 1/4 mile (where transit service is provided)

Secondary Arterial

- *Medians and greenspace provide options for landscaping where appropriate.
- *Utility and greenspace areas may switch locations if needed.
- *Utilities may be placed under sidewalks.



Bike Lane Option



Description

Design Service Volume	6,000 - 20,000
Design Speed	30 - 35 mph
Traffic Flow/Access Priority	60/40
Facility Spacing	1/2 - 1 mile
Trip Length	Between and within activity centers (1 - 4 miles)

Basics

Minimum Right-of-Way	80' plus intersection triangles
Number of Lanes	2 - 3
Turning Lanes	Left turn lane
Lane Width	12' (bicycle routes: 11' vehicle and 4' bicycle lanes)
Minimum Area Behind Curb	19.5' (17' when bicycle lanes are provided) used for sidewalks, utilities, and landscaping (where appropriate)
Drainage/Shoulders	Curb and gutter; shoulders permitted in rural areas (6' - 10')

Access

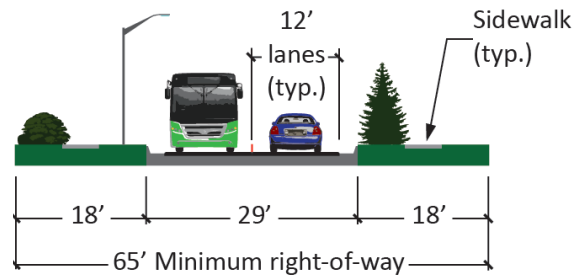
Median	Not required
Full Access Intersection Spacing	660'
Intersection	4 lanes
Residential Driveway Spacing	No residential drives permitted
Commercial Driveway Spacing	210' center-to-center. Allowed only if internal circulation, cross access, and minimum driveway radii and grade are provided.

Multi-Modal

On-Street Parking	Not permitted
Pedestrian Provisions	4' - 5' (minimum) sidewalks on both sides
Bicycle Provisions	Bicycle facilities provided according to adopted bicycle plan
Transit Provisions	Scheduled stops every 1/4 mile (where transit service is provided)

Collector

- *Medians and greenspace provide options for landscaping where appropriate.
- *Utility and greenspace areas may switch locations if needed.
- *Utilities may be placed under sidewalks.



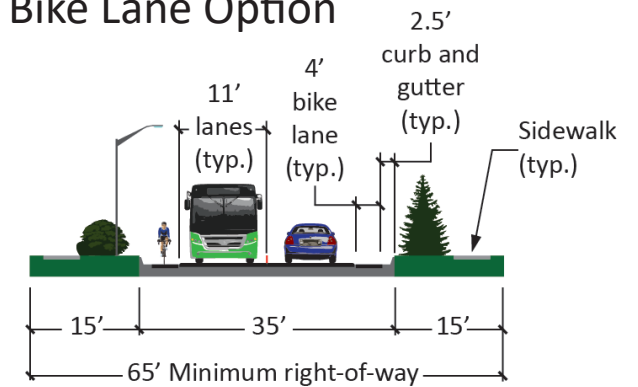
Description

Design Service Volume	1,500 - 8,000
Design Speed	30 mph
Traffic Flow/Access Priority	30/70
Facility Spacing	1/4 - 1/2 mile
Trip Length	Local street to arterial street (1/2 to 2 miles)

Basics

Minimum Right-of-Way	65' plus intersection triangles
Number of Lanes	2
Turning Lanes	Left turn lane when needed
Lane Width	12' (bicycle routes: 11' vehicle and 4' bicycle lanes)
Minimum Area Behind Curb	18' (15' when bicycle lanes are provided) used for sidewalks, utilities, and landscaping (where appropriate)
Drainage/Shoulders	Curb and gutter; shoulders permitted in rural areas (6' - 10')

Bike Lane Option



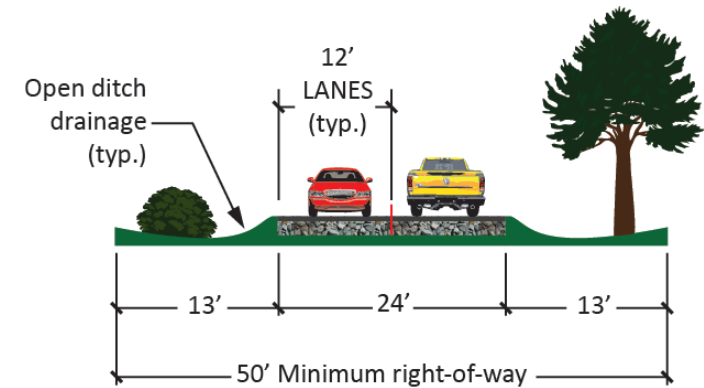
Access

Median	Not required
Full Access Intersection Spacing	660'
Intersection	Up to 4 lanes
Residential Driveway Spacing	No residential drives permitted
Commercial Driveway Spacing	160' center-to-center

Multi-Modal

On-Street Parking	Not permitted
Pedestrian Provisions	4' - 5' (minimum) sidewalks on both sides
Bicycle Provisions	Bicycle facilities provided according to adopted bicycle plan
Transit Provisions	Scheduled regular and paratransit service

Rural Collector



Description

Design Service Volume	1,500 - 8,000
Design Speed	30 mph
Traffic Flow/Access Priority	30/70
Facility Spacing	1/4 - 1/2 mile
Trip Length	Local street to arterial street (1/2 to 2 miles)

Basics

Minimum Right-of-Way	50'
Number of Lanes	2
Turning Lanes	Left turn lane when needed
Lane Width	12'
Minimum Area Behind Curb	13' used for utilities and open ditch (where appropriate)
Drainage/Shoulders	Open ditch

Access

Median	Not required
Full Access Intersection Spacing	660'
Intersection	up to 4 lanes
Residential Driveway Spacing	Residential driveways are discouraged; 200' center-to-center if no other alternative is available
Commercial Driveway Spacing	160' center-to-center

Multi-Modal

On-Street Parking	Not permitted
Pedestrian Provisions	No sidewalks required
Bicycle Provisions	Bicycle facilities provided according to adopted bicycle plan

Bicycle and Pedestrian Design Standards (*excerpted from Journey 2035*)

Many national organizations define and describe differing types of bicycle facilities and continually improve these definitions and standards to match current best practices. In the past, OTO has recommended following those promoted in the AASHTO Guide for the Development of Bicycle Facilities, the Manual on Uniform Traffic Control Devices, and FHWA's Designing Sidewalks and Trails for Access. The 2011 Edition of the AASHTO Guide for Development of Bicycle Facilities should be released by January of 2012. The FHWA Guide is becoming dated, however, and other documents provide more current information. NACTO, the National Association of City Transportation Officials, has recently published an online and printed Urban Bikeway Design Guide. This includes best practices, but many recommendations are for environments more urban than Springfield. As new guidelines are introduced by varying organizations, the OTO region should assess their suitability for local implementation.

OTO would like to encourage best practices as future bicycle and pedestrian improvements are implemented, but at the same time, would like to provide some general criteria to be followed. The OTO Roadway Design Standards do not provide for bicycle accommodations on freeways, but do allow for them on all other roadway classifications. Sidewalks are required along Boulevards and all other roadways classified Primary Arterial down to Collector. Local roadways should meet the standards set by each jurisdiction. The schematics for secondary arterials and collectors demonstrate how a bicycle lane can be incorporated into the roadway design. The recommended design guidelines apply not only to city streets, but can be utilized along county roadways. Additional standards were set within the prior Comprehensive OTO Area Bicycle-Pedestrian Plan. These standards, however, have not kept pace with current practice. OTO and the Bicycle Pedestrian Advisory Committee have revised these standards to reflect lessons learned to accommodate future best practices.

Pedestrian

- The OTO Minimum Design Standards requires sidewalks to be a minimum of 4 feet wide. The recommended width stated in the Comprehensive OTO Area Bicycle-Pedestrian Plan was 5-feet wide. This plan continues to recommend 5-foot widths for sidewalks.
- Sidewalks should be constructed with a barrier separating pedestrians from the roadway. Where right-of-way allows, this should be accomplished with planting strips and street trees. In more urban areas, on-street parking can also separate the pedestrian from motor vehicles.
- Overall, improved streetscapes, including lighting, can improve safety and security for pedestrians.
- Sidewalks should be built to current ADA (Americans with Disabilities Act) standards. This includes considering the slope, cross-slope, and intersection/crosswalk treatments of all sidewalks. ADA standards should also be taken into account when constructing multi-use trails.
- At intersections and crosswalks, the MUTCD (Manual on Uniform Traffic Control Devices) sets the standards for pedestrian signals and crosswalk markings.
- Pedestrian Level of Service is most impacted by lane width, distance from traffic (including presence of buffers), and motor vehicle speed

Bicycle

Off-Street Bicycle Paths

Paths made of asphalt or other materials on exclusive rights-of-way with minimal cross flow by motor vehicles.

- Minimum width should be 10 feet with 2-foot shoulders.
- Surface should be smooth and preferably paved.
- Maximum grade should be 5 percent.
- Bikeways should be clearly marked by “Bike Route” or similarly appropriate signs.
- Equine and motor vehicles (including mopeds, but excluding motorized assistive devices and path service vehicles) should be prohibited.

On-Street Bicycle Lanes

Striped lanes (pavement markings) with signing along streets.

- Minimum width should be 4-feet on roadways with a shoulder
- Minimum width should be five feet from face of curb and three feet from edge of gutter for curb-and-gutter streets.
- Where the street is too narrow for bike lanes, sharrows should be marked in the outside lanes at intervals of 250 feet or less.
- Bike lanes should be a smooth paved surface, free of bumps and dips.
- A solid white line should delineate lanes.
- Positive guidance should be given to bicyclists and motorists for crossing intersections and describing how bicyclists interact with right-turning motorists.
- Lanes should be one-way facilities carrying traffic in the same direction as motor traffic.
- Drainage grates should be flush with the surface and of a bicycle tire-friendly design.
- Lanes should be clearly marked by standard “Bike Route” signs mounted on posts.
- Bicycles should be considered in the timing of traffic signal cycles and in the placement of stop signs.

On-Street Signed Shared Roadways

Streets and county roads shared with motor vehicles and designated by signs. They are intended to provide continuity to other facilities or to designate preferred routes through high-demand corridors.

- On streets with moderate traffic volumes, a 14-foot curb lane can accommodate both bicycles and motor vehicles.
- Streets with low traffic volumes (5,400 vehicles per day) and speed limits of 30 mph or less are adequate for designation as a bike route.
- Bicyclists and pedestrians can be accommodated on shoulders of roadways with adequate continuous shoulder width.
- Streets designed as bike routes should have a smooth paved surface, free of bumps and dips.
- Drainage grates should be flush with the surface and of a design that will not allow bicycle tires to drop into the grate.

- Bike routes should be designated by standard “Bike Route” signs, which should be mounted on posts.
- County roadways designated as shared roadways should have mounted “Share the Road” signs.
- Sharrows and other on-street markings may be used to provide additional guidance and awareness.
- Bicycles should be considered in the timing of traffic signal cycles and in the placement of stop signs.

Bicycle Boulevards

A system of local and collector streets with low speeds and low traffic volumes that provide connections to off-street bicycle and multipurpose paths and local attractions.

- Streets identified as bicycle boulevards provide continuity for bicyclists while discouraging use by through motor vehicles with geometric changes in the roadway such as traffic calming devices and diverters.
- Traffic control devices, warning devices, and refuge spaces are used where bicycle boulevards cross major streets.
- Streets identified as bicycle boulevards should normally have standard 12-foot traffic lanes with curbs and gutters.
- Speed limits should generally be 25 mph or less.
- Streets identified as bicycle boulevards should have a smooth paved surface, free of bumps and dips.
- Drainage grates should be flush with the surface and of a design that will not allow bicycle tires to drop into the grate.
- A system of signing and marking should be used to provide identification of the route and guidance along the route. Sharrows should be used to show the joint use by bicyclists and motor vehicles.

Suitable Local Streets

All local streets with low traffic volume and low speeds may be used to provide connections among specific destinations. Local streets are not designated by signs or markings.

Additional Guidelines

General

- Off-street paths are a suitable place for children, seniors, recreational riders, and commuters.
- The on-street system, consisting of striped lanes, sharrows, and signed-only routes, will be primarily oriented to utilitarian trips.
- Connections will be provided between the linear paths and the on-street system.
- Whenever space allows on the designated on-street system, striped lanes or sharrows will be used instead of merely erecting signs.
- If spacing does not allow for a striped lane, sharrows are another way to provide bicycle accommodation.

- The edge of the road must be kept well swept and maintained for both streets with bicycle lanes and signed routes.
- Sidewalks are not appropriate for bicycling except by very slow riders and young children. Bicyclists using sidewalks should yield to pedestrians and act as pedestrians when crossing driveways and streets.
- Bicyclists on sidewalks are often not seen by motorists at intersections/driveways and can be more effectively seen when acting as a vehicle in the roadway.
- Bicycle Level of Service calculations support wider bike lanes, minimal truck traffic, reduced traffic speed, and reduced traffic volumes.

Off-Street Bicycle and Multipurpose Paths

- Where usage is low-to-moderate, bicycles are permitted on paths that also permit uses such as walking, running, and roller-blading.
- Where usage is high, a separate path is needed for commuter bicyclists who often travel at speeds six times that of other users or a width of 16 feet or more is needed to provide adequate separation on the path.
- In corridors serving a high volume of cyclists, bicycle paths are the preferred type of bikeway when land is available for their development.
- Bicycle paths are generally two-way facilities or a pair of one-way paths.
- Paths provide the best mobility where the path is between two major trip generators or between a major trip generator and a service area for that trip generator.
- Paths function best when isolated from motor vehicles, such as along floodways, abandoned railways, or in parks, campuses, or other vehicle-free areas.
- Intersecting roadways and driveways create hazards and delays on bicycle paths and should be minimized.
- Bicycle path crossings for streets function best at mid-block locations (desirably more than 300 feet from an intersection) when grade separated crossings cannot be provided so that both bicyclists and motorists can see all movements and be aware of the crossing point.
- Use of a crosswalk at intersections requires the user to be aware of motorists turning right and left from the parallel street as well as all movements on the cross street and functions best when bicyclists dismount and act as pedestrians.
- The recommended all-paved width for a two-directional bike path is 10 feet. Whenever possible 12-foot paths will be built for comfort and safety. An 8-foot width should only be used when there is low bicycle use, little expected pedestrian use, and no anticipated maintenance vehicles. Bicycle paths may use narrow facilities on bridges and tunnels for short distances where a facility with adequate width is not available.
- A minimum of a 2-foot clear zone should be maintained adjacent to both sides of a bicycle path.
- The recommended width of bicycle path structures (overpasses, underpasses, long bridges) is 12-feet (8-foot minimum with 2-foot clear zone on each side).
- The minimum width for one-directional bicycle paths is 5-feet.

On-Street Bicycle Lanes

- There are two locations for on-street bicycle lanes (assuming parallel parking) –
 - Adjacent to the curb
 - Adjacent to paved shoulders
- When parking is permitted on streets with bicycle lanes, lanes should always be placed between the parking lane and motor vehicle lanes, but a 3-foot door zone should be painted between the outside parking edge and the start of the bicycle lane.
- Bicycle lanes should always be one-way facilities and carry traffic in the same direction as motor vehicle traffic.
- Contra-flow lanes can be considered on one-way streets when marked with a double yellow stripe and consideration is given at all intersections that the roadway functions as a two-way roadway.
- Two-way bicycle lanes on one side of the roadway are not acceptable as they promote riding against the flow of motor vehicle traffic.
- Bicycle lanes should be 5-feet wide (the gutter pan plus 3-feet).
- If the bicycle lane is a combined bicycle/parking lane, it should be at least 13-feet wide and shall not be less than 12-feet.
- Combined bicycle lane/parking lanes should only be used in locations where parking is already at a minimum.
- Paved shoulders intended for use by bicyclists should not exceed 8-feet because they tend to look like auto driving lanes and could inadvertently be used as such.

On-Street Shared Roadways

- There are two types of on-street signed bicycle routes –
 - Wide curb lanes
 - Signed-only routes
- Wide Curb Lanes
 - On arterials and collector streets with high motor vehicle volumes, truck traffic and/or bus traffic, the outside travel lane should at least be 14-feet wide with two feet of gutter so it can accommodate cyclists.
 - A wide curb lane is not striped as a “bicycle route” unless the roadway is designated as part of the regional bicycle route system.
 - Safety would be greatly enhanced if shoulders were added to the paved county roadways, even if just 3-feet wide.
- Signed-only routes
 - When the volume and speed of motorized traffic is low and intersections are widely spaced, bicyclists can be safely accommodated. This often includes local and collector residential streets.
 - On streets designated as bicycle routes, signs will be erected to indicate that the street is suitable for bicycling and to alert motorists to the possible presence of bicyclists.
 - Pavement markings should be used as well. Sharrows may be used to provide additional guidance and awareness.

Other Local and Collector Streets

- Low-volume local and collector streets do not require markings or signage to be considered suitable for bicycle travel.
- Local residential streets should be interconnected with collector streets.
- When bicyclists and motorists will be sharing the same travel lane, design standards should offer street widths that promote traffic calming and safety.