Public Works Department

TRANSPORTATION ELEMENT

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December 2019

Section 1: Introduction

This Transportation Element (TE) provides a 20-year vision for Spokane County's transportation network. It encompasses projects and implementation measures which respect the region's character and support anticipated growth and planned land use throughout the unincorporated county. The TE is a required element in a Growth Management Act (GMA) Comprehensive Plan for a county under RCW 36.70A.070(6).

The county's transportation network is comprised of integrated road, rail, air, transit, and non-motorized modes of travel. Efficient transportation links that connect people, goods, services, and activities both within and to points outside the county are essential to sustain and grow economic activity, promote health and a sense of well-being, and support a vibrant community.

A. Purpose

The purpose of the TE is to present a plan for transportation facilities and services needed to support the county's 2017-2037 future land use map. The TE recommends specific transportation projects for the unincorporated county in order to meet safety and capacity needs.

B. Planning Requirements

The County must coordinate its transportation planning with a variety of jurisdictions, including the City of Spokane, the Spokane Regional Transportation Council (SRTC), neighboring jurisdictions, and the State of Washington as required by the Growth Management Act. **Figure 1** shows the location of Spokane County within eastern Washington.

1. Growth Management Act

The State's Growth Management Act (GMA) requires local governments to prepare a transportation plan consistent with that jurisdiction's land use plan and financial planning. This Transportation Element update fulfills that mandate.

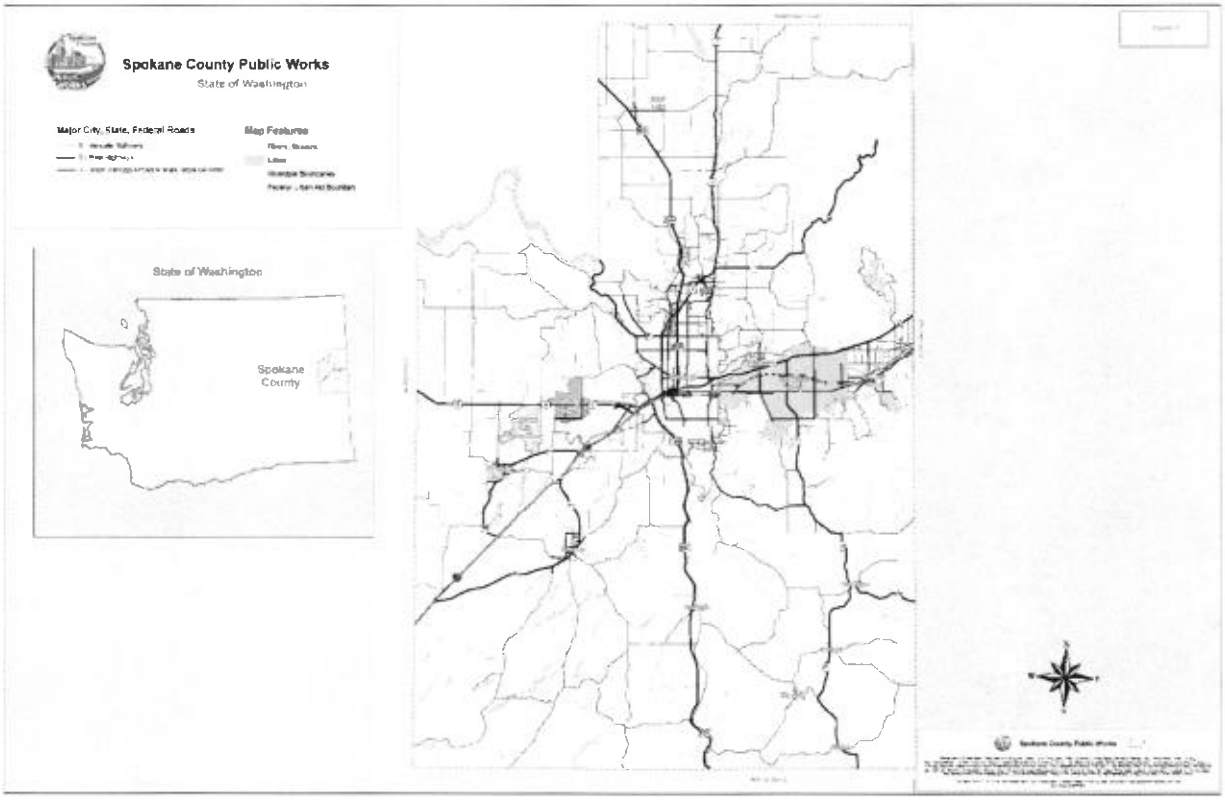
The following GMA planning goals are relevant to the TE:

- Transportation. Encourage efficient multimodal transportation systems that are based on regional priorities and coordinated with county and city comprehensive plans (Revised Code of Washington [RCW] 36.70A.020(3)).
- Urbangrowth. Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner (RCW 36.70A.020(1))
- Environment. Protect the environment and enhance the State's high quality of life, including air and water quality, and the availability of water (RCW 36.70A.020(10)).
- Citizen participation and coordination. Encourage the involvement of citizens in the planning process and ensure coordination between communities and jurisdictions to reconcile conflicts (RCW 36.70A.020(11)).
- Public facilities and services. Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards (RCW 36.70A.020(12)).

C. Role of the Transportation Element

The Transportation Element services both as a functional plan to guide the County's transportation investments, and as a required element addressing the overarching framework for transportation in Spokane County's Comprehensive Plan. The document also ensures coordination with the other elements of the County's Comprehensive Plan, including the Land Use Element.

Figure 1 - **Location of Spokane County within Eastern WA** (for larger image CLICK HERE)



The Transportation Element guides the development of the County's project planning document, the Transportation Improvement Program, by identifying the types of projects the County should undertake to support future travel needs. The plan also evaluates how these projects coincide with the community's priorities and financial resources.

D. Regional Coordination

The Spokane Regional Transportation Council (SRTC) serves as the federally-designated Metropolitan Planning Organization (MPO) for Spokane County, as well as the state-designated Regional Transportation Planning Organization (RTPO). As an MPO, SRTC provides a forum for local decision-making on transportation issues of a regional nature. Required to represent localities in all urbanized areas (UZAs) with populations over 50,000, MPOs are mandated under federal law; when submitting transportation improvement programs (TIPs) to the state for inclusion in the statewide program, MPOs self-certify that they have met all federal requirements.

SRTC is made up of cities, towns, counties, ports, tribes, transit agencies, and state agencies. The agency has created policy for Spokane County through the Metropolitan Transportation Plan titled; Horizon 2040, which lays out long-term goals and policies for growth management, economic development, and transportation infrastructure.

RCW 47.80.26 requires SRTC to certify this Transportation Element is consistent with Horizon 2040. The County's Transportation Element must:

- Reflect guidelines and principles established pursuant to RCW47.80.026;
- Be consistent with the adopted 2040 Plan; and

- Conform to the requirements of RCW 36.70A.070.

Horizon 2040 identifies Guiding Principles to achieve its vision and mission for transportation in the region:

Economic Vitality

- Focus on people, freight and goods movement to improve regional, national and global competitiveness
- Enhance accessibility and connections to economic activity centers
- Prioritize multi-modal investments

Cooperation and Leadership

- Provide a regional forum to develop priorities
- Identify funding strategies
- Coordinate with stakeholders

Stewardship

- Protect the environment
- Follow federal, state and local legislation and policies
- Measure performance
- Share the use of infrastructure

System Operations, Maintenance and Preservation

- Preserve and prolong the life of infrastructure
- Use fiscal resources prudently
- Provide adequate funding
- Improve efficiency of system operations

Safety and Security

- Draw on best-practice design
- Utilize education and outreach
- Make use of operational strategies
- Protect critical infrastructure from external threats
- Improve maintenance of the transportation system

Quality of Life

- Offer safe and convenient forms of active transportation that support public health objectives
- Consider the needs of all transportation users regardless of ability
- Increase public transit access and improve service
- Improve transportation system connections
- Design to support social, cultural and commercial activities

This Transportation Element is consistent with and supports the Horizon 2040 Guiding Principles.

Section 2: Existing and Future Conditions

A. Transportation Network

The Spokane County transportation network is comprised of roadways, freight corridors, railways and air travel facilities, pedestrian and bicycle facilities, and public transit. This network is represented in the figures below, and tables 1-11. To monitor the performance of the system, State highways are also included.

1. Existing Road and Highway Network

Highways, roads and streets are given a federal functional classification by the character of service they provide. This system was developed for transportation planning purposes by the Federal Highway Administration (FHWA). Basic to this process is the recognition that individual routes do not serve the traveling public independently in any major way. Rather, most travel involves movement through a network of roads. Comprehensive transportation planning, an integral part of total economic and social development, uses functional classification to determine how travel can be channelized within the network in a logical and efficient manner. Functional classification defines the part that any particular route should play in serving the flow of trips through a highway/roadway network. Spokane County's roadway network is comprised of an urban and rural roadway network with the following classifications:

a) Urban Road Functional Classifications (**Figure 2**)

i. Principal Arterials: The principal arterial is a two (or more)-lane, moderately fast facility designed to permit relatively unimpeded traffic flow between major traffic generators such as the central business district, major shopping centers, major employment districts, etc. They are generally in the highest-volume non-highway corridors and serve the longest trip desires. These arterials are the framework road system for the urbanized portion of the County and should be located on community and neighborhood boundaries. Frequently, the principal arterial system carries important intra-urban and intercity bus routes. Principal arterials should not bisect homogeneous areas such as residential neighborhoods, shopping centers, parks, etc. Access to principal arterials should be managed.

ii. Minor Arterials: Minor arterials interconnect and augment the principal arterial system. They are two (or more)-lane facilities, yet provide less mobility than principal arterials, with greater access to adjacent property frontage. Minor arterials may carry local bus routes and provide intra-community continuity, but should be located on community and neighborhood boundaries. They should not bisect residential neighborhoods.

iii. Collector Arterials: Collector arterials provide both access and circulation within residential neighborhoods, commercial and industrial areas. They primarily serve individual neighborhoods, distributing traffic from such generators as elementary schools and neighborhood stores to minor and principal arterials. Collector arterials are relatively low-speed, two-lane facilities that often provide for on-street parking.

iv. Local Access Roads: Local access roads provide access to adjacent property and

generally do not support through traffic. They are in the urban and rural areas. The alignment and traffic control measures on local access roads should encourage a slow, safe speed.

b) Rural Road Functional Classifications

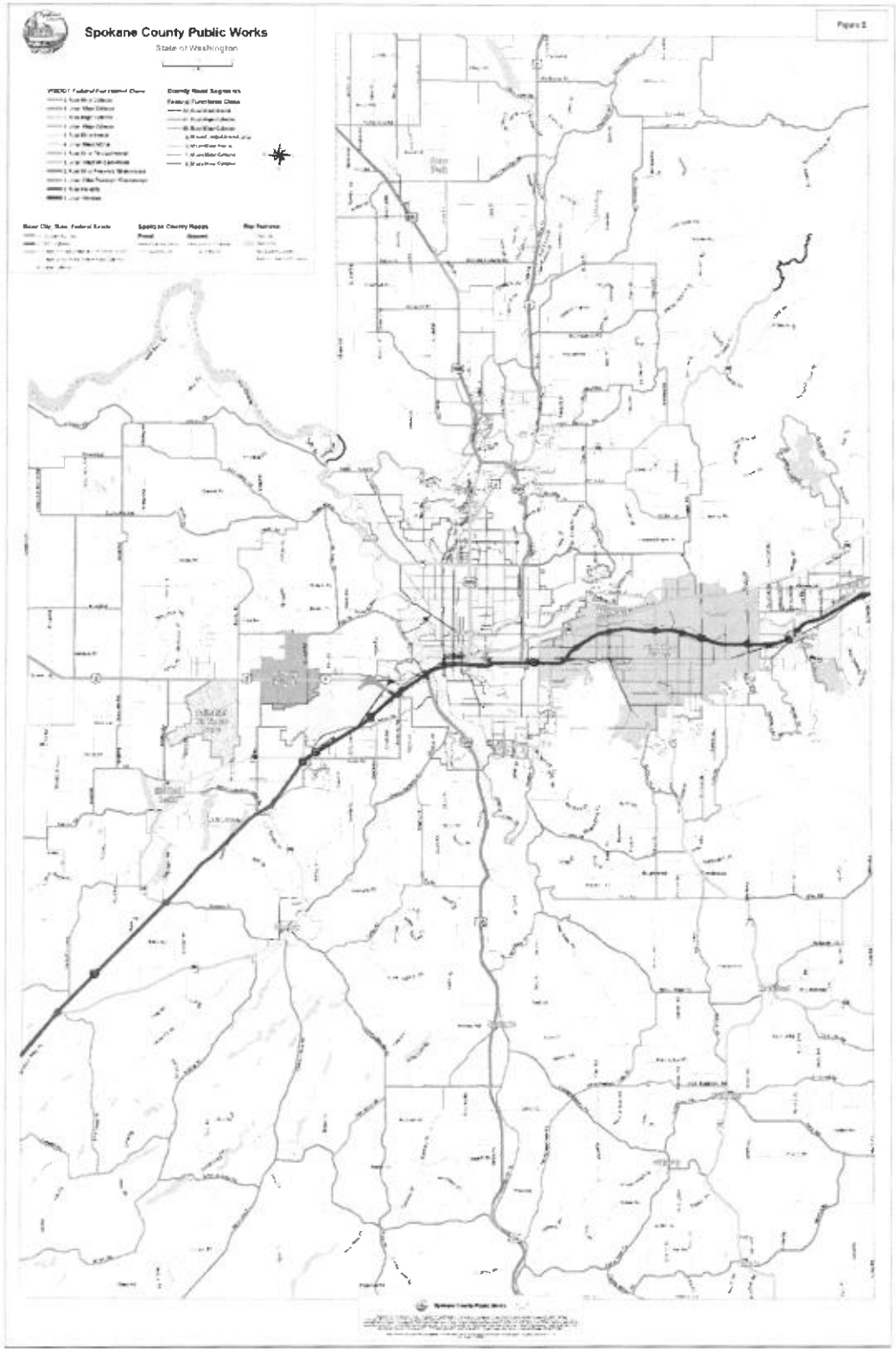
i. Minor Arterials: Minor arterials provide service for trips of moderate length, serve geographic areas that are smaller than their higher Arterial counterparts, and offer connectivity to the higher Arterial system. Minor Arterials in rural areas are typically designed to provide relatively high overall travel speeds, with minimum interference to through-movement. They also provide service to corridors with trip lengths and travel density greater than those served by Rural Collectors and Local roads.

ii. Major Collectors: Rural major collector roads serve larger towns not already served by higher class roadways. This road classification may also serve to connect one portion of the urban area to another portion of the urban area. They are moderately fast facilities that are two or four lanes wide. Rural major collector roads are wider and carry more traffic than the rural minor collectors.

iii. Minor Collectors: Rural minor collector roads are moderately fast facilities that are two lanes wide and provide a link between the major collector arterials and rural local access roads. They typically provide service to remaining smaller communities and link locally important traffic generators with their rural hinterland.

iv. Local Access Roads: Local access roads provide access to adjacent property and generally do not support through traffic. They are located in the urban and rural areas. The alignment and traffic control measures on local access roads should encourage a slow, safe speed.

Figure 2 - Federal Functional Classification (for larger image CLICK HERE)



c) Interstates and highways

i. Interstates: Interstates provide high speed, highly managed access control, and generally the highest volume free-flow travel between regional and national destinations. These facilities are typically managed by State Department of Transportations and are guided by federal guidelines.

ii. State Highways: State highways generally provide limited managed access control free-flow travel between regional destinations. These facilities within Spokane County generally connect smaller towns and cities and typically have higher speeds in the rural settings.

B. Motorized Vehicles

The majority of travel within unincorporated Spokane County consists of motor vehicles as their primary mode of transportation. The motor vehicles travel along roadway segments and pass through intersections, both of which have been evaluated based on their ability to accommodate travel demands. Each corridor and intersection studied have been rated into one of six level of service (LOS) categories based on the volume of traffic that they accommodate compared to the general threshold of similar type of facilities. Ratings from an LOS A to a LOS F correspond to a typical range of uncongested/free-flowing to congested facilities. The LOS definitions, as described in Chapter 16 of the Highway Capacity Manual (HCM), are utilized by Spokane County and are summarized below:

- LOS A: Primarily free flow conditions. Motorists are completed unimpeded and can maneuver freely.
- LOS B: Reasonably unimpeded conditions. Motorist maneuvers may be slightly restricted.
- LOS C: Stable conditions. Motorist maneuvers may be more restricted by other vehicles.
- LOS D: Less stable conditions. Motorists can still maneuver, but may incorporate additional delays.
- LOS E: Unstable and near capacity conditions. Motorists will experience significant delays and reduced speeds.
- LOS F: At or over capacity conditions. Motorists will experience significant delays and extremely slow speeds.

Spokane County has established LOS criteria for County owned facilities:

- LOS D for signalized intersections
- LOS E for unsignalized intersections
- For evaluation of system performance, LOS D for roadway segments

WSDOT establishes LOS standards for interstates and highways of statewide significance (HSS).

LOS for Non-HSS		LOS for HSS	
Urban	D	Urban	D
Rural	C	Rural	C

1. Existing segment volumes and Level of Service (LOS)

Spokane County, in conjunction with WSDOT, compiled traffic counts along roadways segments and at arterial intersections throughout the unincorporated County. **Figure 3, Figure 5 and Figure 7** illustrate the existing rural, urban arterial and state highway traffic volumes as well as the corresponding segment LOS.

a) Intersection Level of Service (LOS)

The County arterial intersections and County road/state highway intersections were evaluated utilizing the latest traffic counts conducted by Spokane County and WSDOT. The results of this analysis are contained in intersection inventory **Tables 1-12**.

2. Existing Deficiencies

A review of the existing Spokane County road system and state highway system indicates an overall good LOS on roadway/highway segments. The segments of county arterials and state highways indicating LOS deficiencies are listed below. The review of existing intersections LOS is covered in **Tables 1-12**. For urban arterials and urban state highways, the standard is set at LOS D; for rural arterials and rural state highways, the standard is set at LOS C.

a) Urban area county arterials that show existing LOS deficiencies are:

-Country Homes Boulevard from Excel Drive to Wall Street

This segment has one lane in each direction with a landscaped median. Traffic signals control traffic on each end, these signalized intersections have multi-lane approaches. With this configuration, a special LOS table specifically for this segment was developed which indicates an LOS D.

-Argonne Road from Spokane River Bridge to Maringo Drive

See section B.

-Hawthorne Road from US 395 to US 2

The existing traffic volumes do indicate an unsatisfactory segment LOS, however, the signals on each end of the segment indicate an acceptable LOS D.

b) Rural area county arterials that show existing LOS deficiencies are:

-Bigelow Gulch Road from Palmer Road to Weile Road

projects for Bigelow Gulch/Forker Connector are planned and in the current six-year TIP.

-Freya Street from Francis Avenue to North Spokane Corridor ramp roundabout

This segment has very high existing volume of traffic, this is due to the NSC terminating at Francis Avenue. With the planned extension of the NSC to I-90, this will reduce traffic on Freya to an acceptable LOS.

-Forker Road from Bigelow Gulch to Palmer Road

projects for Bigelow Gulch/Forker Connector are planned and in the current six-year TIP.

-Trails Road from Hayford Road to Government Way

This segment is not over capacity but has an unsatisfactory LOS.

3. Future Conditions

The Transportation Element forecasts future traffic volumes and impacts to the county arterial and state highway system assuming the development described in the Land Use Element. There is a direct link between land use and subsequent transportation impacts, and this element captures the relationship.

The future forecasting (year 2040) documented in this element reflects the approved land uses as described in the Land Use Element of the Comprehensive Plan. Land uses are closely tied to future forecasting of traffic on the roadways and are further explained below. For further information on land use, see Chapter 2 and Chapter 3 of the Spokane County Comprehensive Plan.

Spokane County uses the Regional Demand Model to forecast future travel behavior. The Regional Demand Model is developed by SRTC, utilizing computer software to analyze future travel behavior. After a base travel demand model is created, population and employment numbers are adjusted to represent future conditions (anticipated for the year 2040). Forecast year for this Transportation Element is 2037; by using the 2040 regional transportation model, this analysis offers a more conservative look into travel in Spokane County. This growth is then overlaid into the base model to forecast future travel demand.

The Regional Demand Model is post-processed to account for known population and employment growth that could not have been foreseen in the forecast model inputs. This is achieved by reviewing current land actions, including building permits, preliminary plats, binding site plans and other land actions that have been approved.

The post-processing of the Regional Demand Model results in a forecast of average daily traffic on county arterial and state highway segments. The daily forecast traffic volumes show overall increases on the road and highway system. Capacity improvement projects such as the North Spokane Corridor (NSC) and Bigelow Gulch, offer relief to arterials in areas around the NSC.

Future segment volumes and Level of Service (LOS):
Figure 4 and **Figure 6** illustrate the existing rural and urban arterial traffic volumes as well as the corresponding segment LOS. Detailed discussion and methodology, of the future traffic forecasting are provided in the Appendix to this element.

Figure 3 - Existing LOS - Rural (for larger image CLICK HERE)

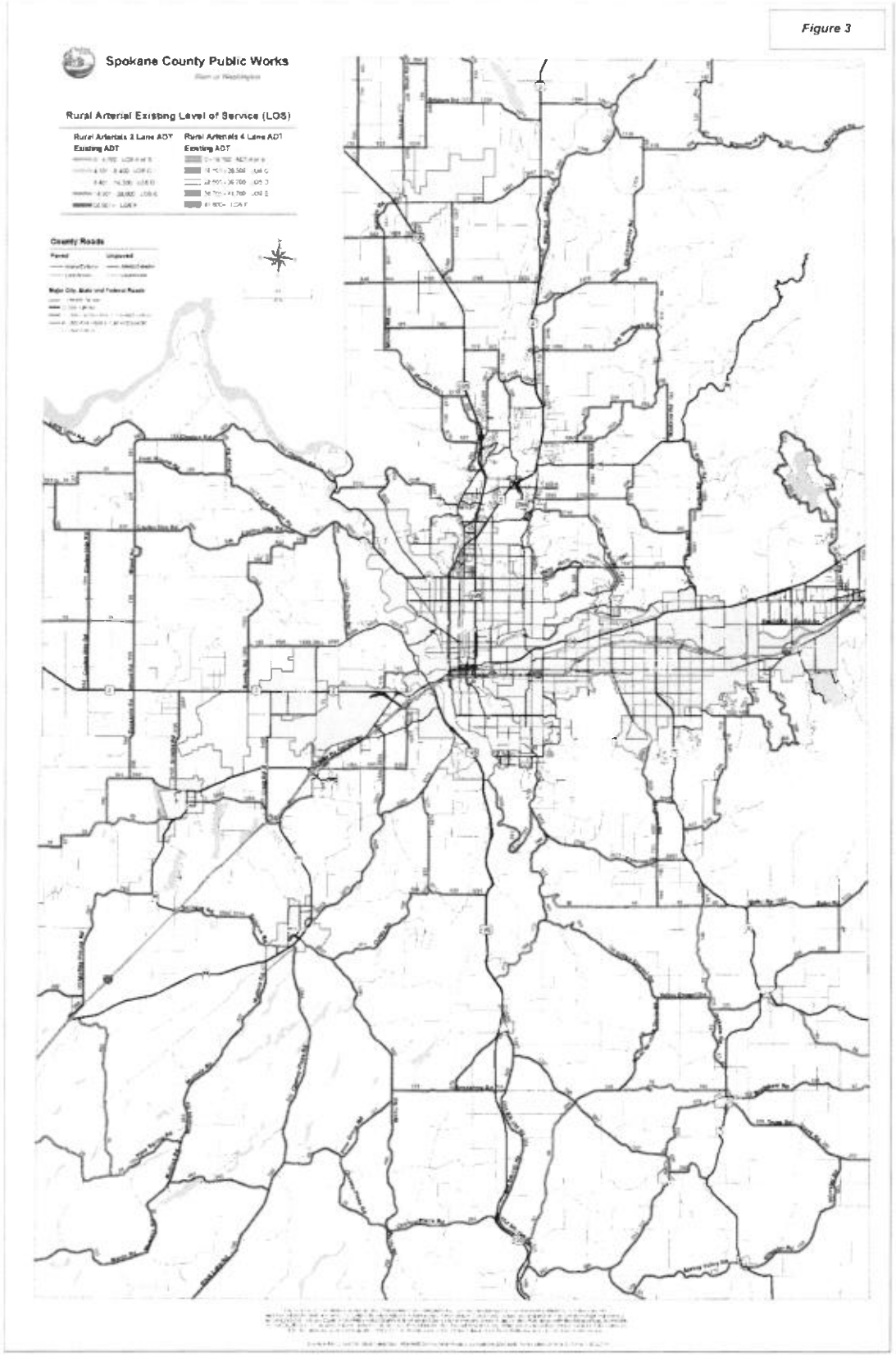


Figure 4 - 2040 LOS - Rural (for larger image CLICK HERE)

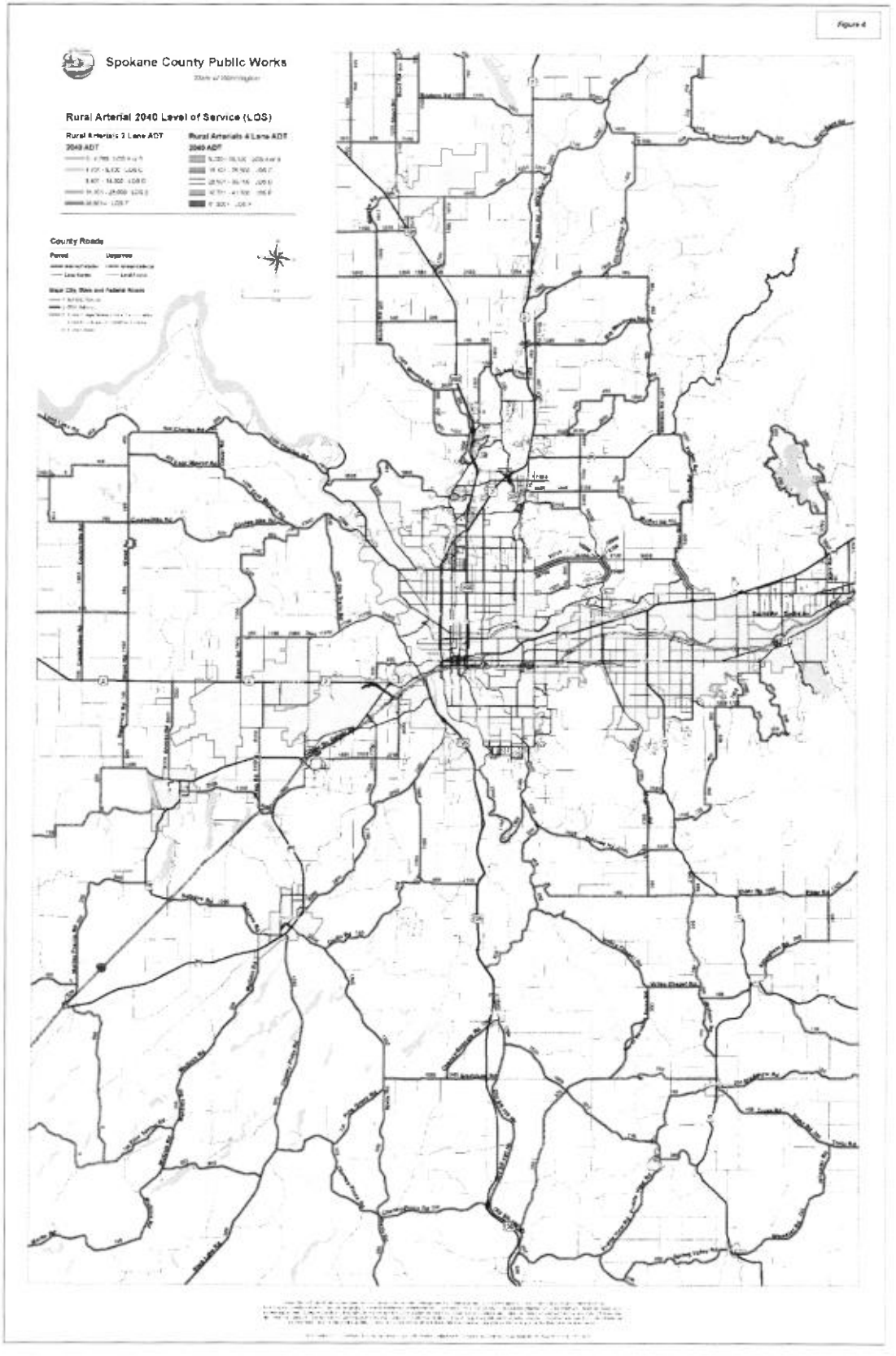


Figure 5 - Existing LOS Urban (for larger image CLICK HERE)

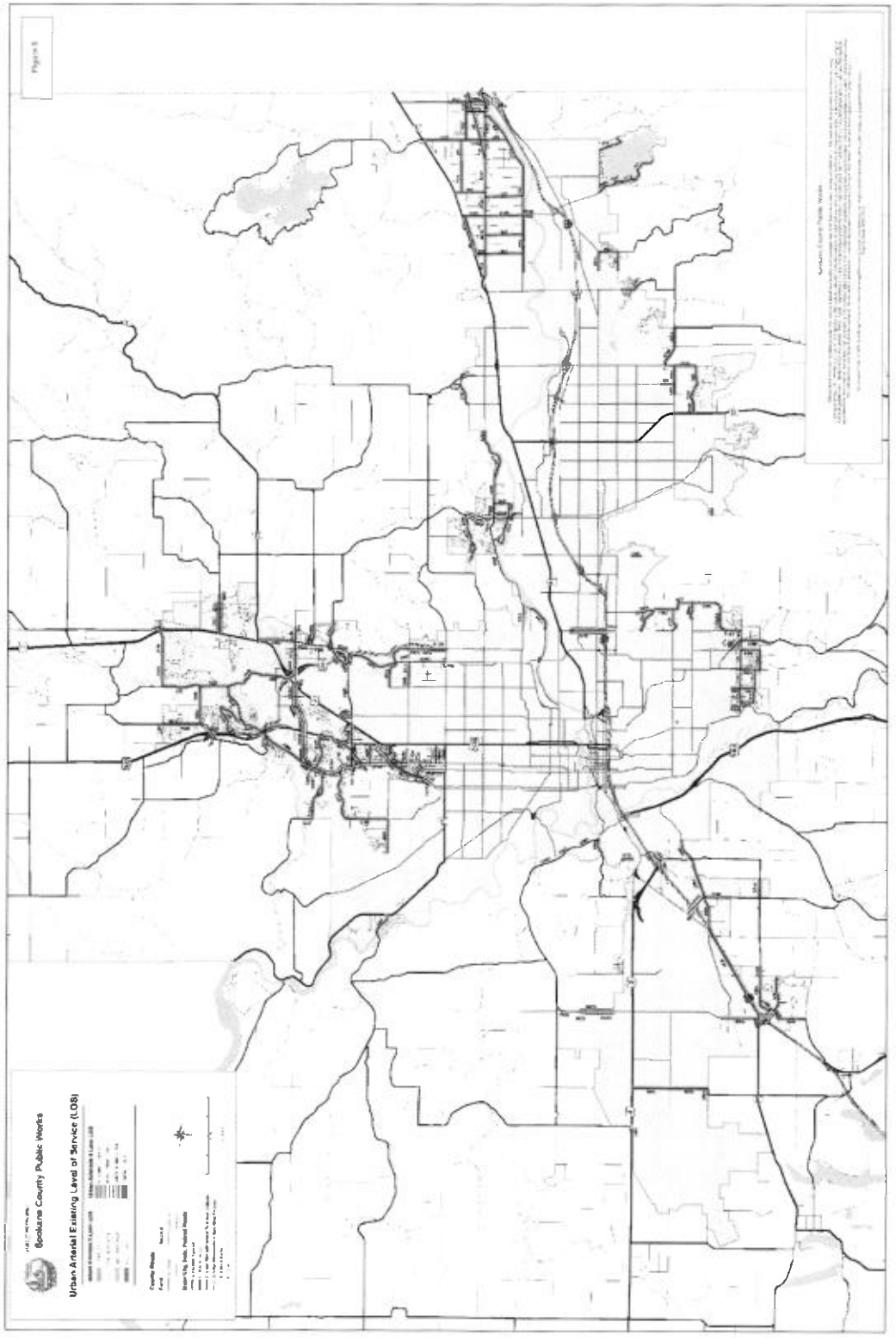


Figure 6 - 2040 LOS Urban (for larger image CLICK HERE)

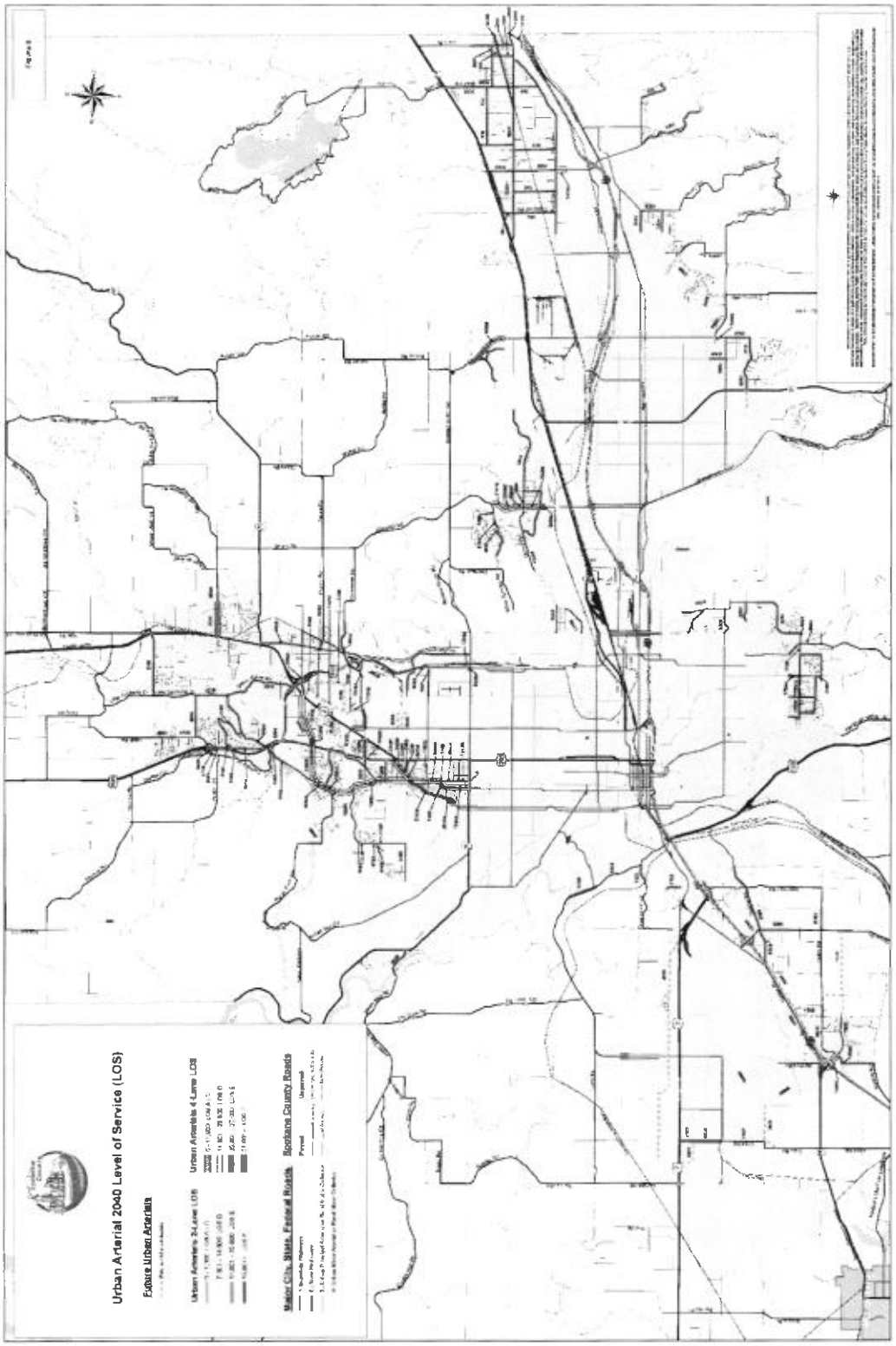


Figure 7 - Existing LOS State Highways (for larger image CLICK HERE)

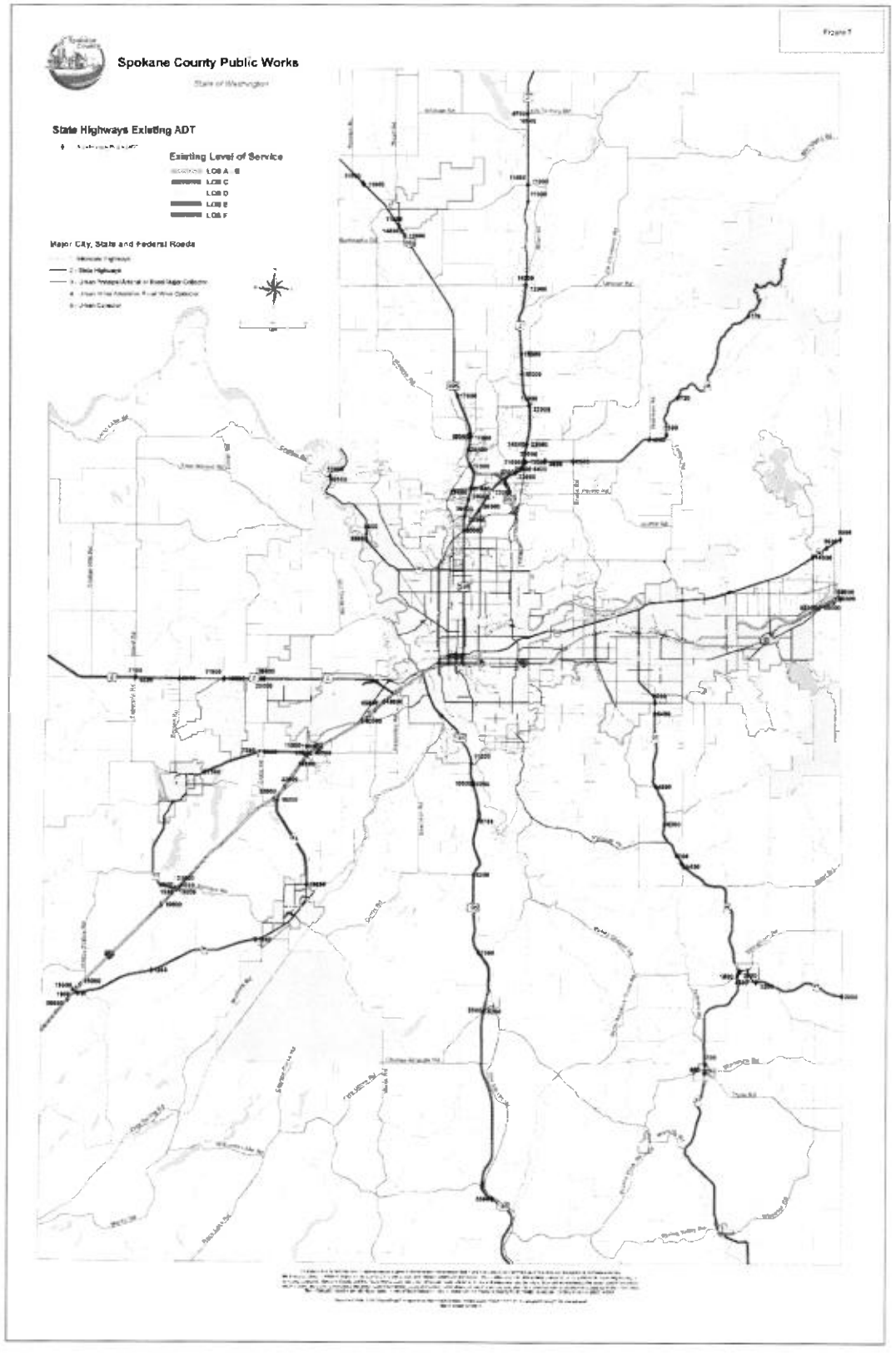
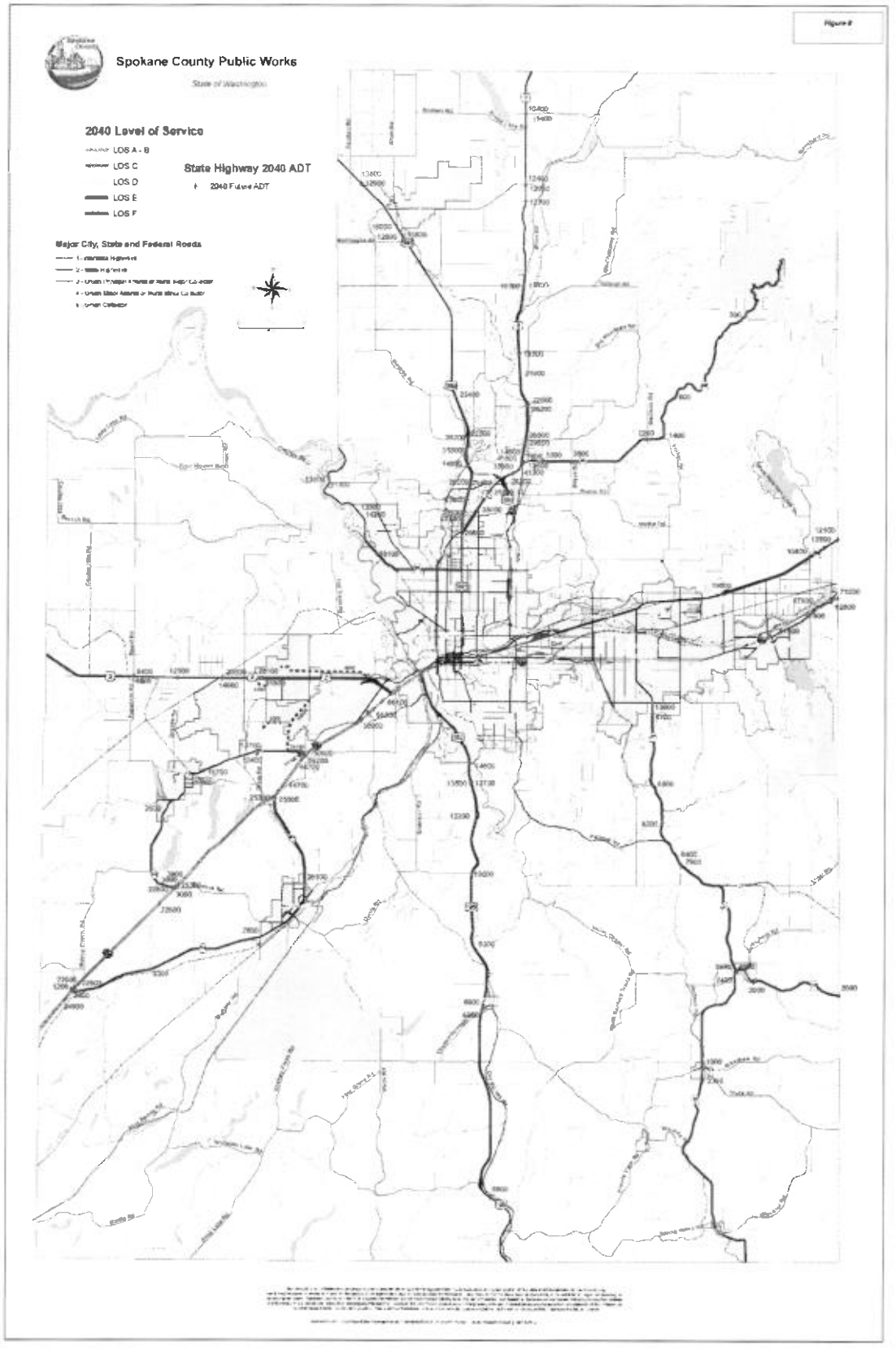


Figure 8 - 2040 LOS State Highways (for larger image CLICK HERE)



A. Intersection Level of Service (LOS)

The County arterial intersections and County road/state highway intersections were evaluated for future conditions in both the 6-year forecast and for the year 2040. The results of this analysis are contained in intersection inventory **tables 1-12**. Where deficiencies were identified by the analysis, mitigation projects were proposed and listed in the footnotes in the tables for both the 6-year forecast and in the year 2040.

Table 1: Principal Arterial Intersecting Principal Arterial

Principal Arterial		Principal Arterial	Existing Intersection Control / Proposed mitigation	Current LOS (2017)	6-Year Projected LOS (2022)	20-Year Projected LOS (2037)
Market St.	@	Hawthorne Rd.	Stop	B	C	D
Market St.	@	Farwell Rd.	Signal	A	B	B
Mill Rd.	@	Hastings Rd.	Signal	C	C	D
Sullivan Rd.	@	32nd Ave.	Stop	B	B	C
Wall St.	@	Country Homes	Signal / add turn lanes	E	F/D[1]	D

Table 2: Principal Arterial Intersecting Minor Arterial

Principal Arterial		Minor Arterial	Existing Intersection Control / Proposed mitigation	Current LOS (2017)	6-Year Projected LOS (2022)	20-Year Projected LOS (2037)
Adams Rd.	@	32nd Ave.	Stop	B	B	C
Argonne Rd.	@	Upriver Dr.	Signal / add turn lanes	E	E/D[2]	D
Harvard Rd.	@	Euclid Ave.	Stop / add Channelization	F	F/E[3]	E
Waikiki Rd.	@	Hawthorne Rd.	Signal	B	C	D
Hawthorne Rd.	@	Parksmith Dr.	Stop	A	B	C
Market St.	@	Parksmith Dr.	Signal	B	C	D
Market St.	@	Magnesium Rd.	Signal	B	B	C
Mill Rd. / Waikiki	@	Waikiki Rd.	Roundabout/ add slip lane	C	E/C[4]	C
Monroe St.	@	Wall St.	Signal	B	C	D
Palouse Hwy.	@	57th Ave.	Signal	A	B	C
Sullivan Rd.	@	Saltese Ave.	Stop/Signal or roundabout	D	E	F/C[5]
Harvard Rd.	@	Wellesley Ave.	all-way/ Signal	D	E	F/C[6]
Appleway Ave	@	Wellesley Ave. Extension	Stop / roundabout	D	E	F/C[7]
Hawthorne Rd.	@	Kaiser Blvd. (New)	roundabout	N/A	N/A	A[8]

Table 3: Minor Arterial Intersecting Minor Arterial						
Minor Arterial		**Minor Arterial**	**Existing Intersection Control / Proposed mitigation**	**Current LOS (2017)**	**6-Year Projected LOS (2022)**	**20-Year Projected LOS (2037)**
Forker Rd.	@	Progress Rd. / Evergreen	Stop	C	C	D
Glenrose Rd.	@	Carnahan	Yield / Roundabout	C	C/B[9]	C
Glenrose Rd.	@	29th Ave.	Stop	B	C	D
Grove Rd.	@	Thorpe Rd.	4 Way Stop / Roundabout	B	D	F/A[10]
Regal Rd.	@	57th Ave.	Signal	C	C	D
Wellesley Ave.	@	River Rd.	Stop	B	C	D
Wellesley Ave.	@	Starr	Stop	B	B	C
Geiger	@	Hayford	Stop/Signal	B	F/D[11]	D
Wandermere	@	Dartford	Stop	B	C	D
Mill / Dartford	@	Little Spokane Drive	All-way Stop	A	B	C
Little Spokane Drive	@	Colbert	Stop	A	A	B

Table 4: Principal Arterial Intersecting Collector						
Principal Arterial		**Collector Arterial**	**Existing Intersection Control / Proposed mitigation**	**Current LOS (2017)**	**6-Year Projected LOS (2022)**	**20-Year Projected LOS (2037)**
Wall St.	@	Cascade Way	Signal	B	C	D
Argonne Rd.	@	Columbia	Stop	D	D	E
Wall St.	@	Whitworth Dr.	Stop / channelization	F	F/C[12]	D
Argonne	@	Maringo	Stop	B	C	D
Market	@	Peone	Stop	B	B	C
Monroe	@	Eastmont	Stop	C	D	E
Wall St.	@	Holland	Stop	B	D	E
Mill	@	Regina	Stop	C	D	E
Market	@	Lincoln	Stop	B	B	C
Waikiki	@	Five Mile	Signal	B	C	D
Country Homes Blvd.	@	Warn Way	Stop	C	C	D
Country Homes Blvd.	@	Weipert Dr.	Stop	C	C	D

Table 5: Minor Arterial Intersecting Collector						
Minor Arterial		**Collector Arterial**	**Existing Intersection Control / Proposed mitigation**	**Current LOS (2017)**	**6-Year Projected LOS (2022)**	**20-Year Projected LOS (2037)**
Upriver	@	Maringo Dr.	Stop	A	B	C
Upriver	@	Farr Road	Stop	A	A	B
Wall	@	Lyons	Stop	B	C	D
Aero	@	Westbow	Stop / Roundabout	D	D/B[13]	C
57th	@	Freya	Stop / Roundabout	E	E/B[14]	C
57th	@	Crestline	Stop	B	C	D
57th	@	Helena	Stop	B	C	D
37th	@	Glenrose	Stop / improvement	B	C	F/C[15]
Mill	@	Dartford	Stop	A	B	C
Wellesley Ave.	@	McKinzie Rd.	Stop	A	B	C
Hawthorne Rd.	@	Whitworth Dr.	Signal	B	C	D
Idaho Rd.	@	Rowan Ave.	Stop	A	B	C
Starr Rd.	@	Rowan Ave.	Stop	A	A	B
Starr Rd.	@	Joseph	Stop	A	A	B
Wellesley Ave.	@	Idaho Rd.	Stop	B	B	C
Wellesley Ave.	@	Campbell Rd.	Stop	B	B	C
River Road	@	Starr Rd.	Stop	A	A	B
Euclid Road	@	Lynden	Stop	A	A	B
Starr Rd.	@	Kildea	Stop	A	A	B
Idaho Rd.	@	Kildea	Stop	A	A	B
Wellesley Ave.	@	Kenney	Stop	B	B	C
Wellesley Ave.	@	Lynden	Stop	B	B	C
Wellesley Ave.	@	Chase	Stop	B	B	C
Regal	@	63rd	Stop	B	B	C
Thorpe	@	Assembly	All-way Stop	A	A	B
Little Spokane Dr.	@	Midway	Stop	A	A	B
Little Spokane Dr.	@	Cincinnati Dr.	Stop	A	A	B
Wandermere	@	Glencrest Dr.	Stop	B	B	C
21st. Ave (New)	@	Craig Rd.	Stop / improvement	N/A	N/A	F/B[16]

Table 6: Principal Arterial Intersecting Local Access (Signalized)						
Principal Arterial		**Local Access Road**	**Existing Intersection Control / Proposed mitigation**	**Current LOS (2017)**	**6-Year Projected LOS (2022)**	**20-Year Projected LOS (2037)**
Argonne	@	Wellesley	Signal	B	C	D

Table 7: Selected Urban Arterial Intersecting Rural Arterial						
Urban Arterial		**Rural Arterial**	**Existing Intersection Control / Proposed mitigation**	**Current LOS (2017)**	**6-Year Projected LOS (2022)**	**20-Year Projected LOS (2037)**
Hayford	@	Deno	Stop	B	B	C

Table 8: Selected Rural Arterial Intersecting Rural Arterial						
Rural Arterial		**Rural Arterial**	**Existing Intersection Control / Proposed mitigation**	**Current LOS (2017)**	**6-Year Projected LOS (2022)**	**20-Year Projected LOS (2037)**
Argonne	@	Bigelow Gulch	Signal	C	C	D
Barker Rd.	@	32nd Ave.	All Way Stop	A	A	B
Appleway Ave.	@	Spokane Bridge Road	Stop / improvement	C	E	F/D[17]

Table 9: Urban Arterial Intersecting future arterial						
Urban Arterial		**Future Arterial**	**Existing Intersection Control / Proposed mitigation**	**Current LOS (2017)**	**6-Year Projected LOS (2022)**	**20-Year Projected LOS (2037)**
Barker Road	@	Chapman Road	Stop / Roundabout	B	C	F/A[18]
32st	@	Chapman Road	Stop	B	B	C
New Hayford	@	Thorpe Rd.	Stop	N/A	N/A	D
Hawthorne Rd.	@	Kaiser Blvd. (New)	roundabout	N/A	N/A	A

Table 10: Urban Minor Arterial Intersecting City Street						
Urban Minor Arterial		**City Street / Private Access**	**Existing Intersection Control / Proposed mitigation**	**Current LOS (2017)**	**6-Year Projected LOS (2022)**	**20-Year Projected LOS (2037)**
Hayford Rd.	@	Northern Quest Drive	Signal	A	B	C
Government Way	@	Ft. George Wright Dr.	Signal	B	C	D

Table 11: Urban collector intersecting Urban collector						
Urban Collector		**Urban Collector**	**Existing Intersection Control / Proposed mitigation**	**Current LOS (2017)**	**6-Year Projected LOS (2022)**	**20-Year Projected LOS (2037)**
Westbow	@	Hayford	Stop	A	C	D
Craig	@	Thorpe (east)	Stop / improvement	C	F/D[19]	F/C[20]
Wandermere	@	Hatch	Stop / Roundabout	C	F/B[21]	C
Liberty Lake Road	@	Liberty Dr.	Stop	B	B	C
Campbell	@	Euclid	Stop	A	B	B
Kenney	@	Euclid	Stop	A	B	B
Chase	@	Rowan	All-way Stop	B	B	C
McKenzie	@	Joseph	Stop	A	A	B
Crestline	@	63rd	Stop	A	A	B
Helena	@	63th	Stop	A	A	B
Freya	@	65th	Stop	A	A	B
Farr	@	Maringo	Stop	A	A	B
Sullivan	@	Belle Terre	Stop	A	B	B
Starr	@	Kildea	Stop	B	B	B
Hatch	@	Midway	Stop	C	D	E
8th	@	Sprague	Stop	C	D	E
8th	@	Henry	Stop	B	B	C
Weipert	@	Price	All-way Stop	B	B	C

Table 12: State highway Intersecting County Arterial						
State Highway		**County Arterial**	**Existing Intersection Control / Proposed mitigation**	**Current LOS (2017)**	**6-Year Projected LOS (2022)**	**20-Year Projected LOS (2037)**
US 2 (Newport Hwy)	@	Farwell Rd.	Signal	D	D	E/D[22]
US 2 (Newport Hwy)	@	Nevada Rd.	Signal	D	D	D
SR 206 (Mt. Spokane Park Dr)	@	Market	Stop	A	A	B
SR 290	@	McKenzie Rd.	Stop	B	B	N/A[23]
US 395 (Division St.)	@	Hawthorne Rd.	Signal / NSC	D	D	F
US 395 (Division St.)	@	Hastings Rd.	Signal / NSC	*D	D	F
US 395 (Division St.)	@	Whitworth Dr. / Regina Dr.	Stop / channelization	B	D	F/C[24]
US 2 (Newport Hwy)	@	Day Mt. Spokane Road	Signal	C	C	D
SR 290 (Trent)	@	Harvard	Stop / BTV	*E	E	F/C[25]
SR 290 (Trent)	@	Starr	Stop / roundabout	D	E	F/B[26]
US 2 (Newport Hwy)	@	Costco Access Road	roundabout	C	C	D
US 2 (Newport Hwy)	@	Aluminum Ave. (New)	N/A /Roundabout	N/A	N/A	D
Farwell Road	@	Altamont (New)	N/A / Channelization	N/A	N/A	B
US 2 (Newport Hwy)	@	Colbert	Stop	A	B	D
SR 902	@	Geiger	Stop / roundabout	F/B[27]	B	F/B[28]
SR 902	@	Craig	Roundabout	A	A	A
SR 902	@	Hayford (New)	Roundabout	N/A	N/A	B
US 2	@	21st (New)	Roundabout	N/A	N/A	A
SR 27	@	40th	Stop	B	B	C
US 2 (Newport Hwy)	@	SR 206	Signal	C	C	E/D[29]
US 2 (Newport Hwy)	@	Green Bluff Rd.	Stop	C	C	D
North Spokane Corridor	@	Farwell Rd.	Stop	A	B	B
North Spokane Corridor	@	Parksmith Road	Stop	B	B	C
SR 291	@	Seven Mile Rd.	Stop / improvement	B	C	F/D[30]

Footnote number	Proposed mitigation project to achieve acceptable LOS	Footnote number	Proposed mitigation project to achieve acceptable LOS
1	add E/W Lt turn lanes, add N/S Rt. turn lanes, replace signal & revise signal phasing	17	Realign intersection
2	add E/W left turn lanes, replace signal & revise signal phasing	18	install roundabout
3	install channelization	19	Realign intersection
4	add northbound slip lane to roundabout	20	intersection improvement
5	install traffic signal or roundabout	21	install roundabout
6	Replace all-way stop with traffic signal	22	Add second NB Left Turn Lane and intersection improvement
7	install roundabout	23	Road Closure
8	New intersection, install roundabout	24	Channelization - Right in / Right out
9	install roundabout (safety project)	25	Bridging the Valley
10	install roundabout	26	Install Roundabout
11	install traffic signal	27	Install Roundabout (2019)
12	install channelization	28	Roundabout Reconfiguration
13	install roundabout	29	intersection improvement
14	install roundabout (safety project)	30	intersection improvement
15	intersection improvement	Other notes	
16	intersection improvement	*	Turning counts estimated from ADT
		underlined	Estimated

B. Future Mitigation

i. Urban area County arterials requiring future mitigation strategies are:

-Country Homes Boulevard from Excel Drive to Wall Street

The increase in forecast volumes does lower the LOS on this segment, the LOS table indicates a forecast LOS F. The traffic signal improvement indicated in **Table 1** for the intersection of Country Homes and Wall will improve the operation to acceptable LOS.

Country Homes Boulevard from Excel Drive to Wall Street	
Mitigation measure	Add turn lanes and replace traffic signal.
Planning level costs	$902,000
Funding status	unfunded
Potential funding sources	Development financed

-Argonne Road from Spokane River Bridge to Maringo Drive (LOS F)

This segment of Argonne indicates a failing existing LOS. The future traffic volume is influenced by the construction of the NSC. Traffic volumes decrease in the forecast year to 30,000 vehicles per day, bringing the segment to an acceptable LOS D.

-Hawthorne Road from US 395 to US 2

The traffic volumes do increase in the forecast year, however, the signals indicate an acceptable LOS D. Since the traffic signals are the controlling capacity factor on segments, no capacity improvements are recommended to the segment. Spokane County will continue to monitor this roadway segment into the future.

-Hawthorne Road from Nevada to Kaiser Blvd.

Future forecast volumes (18,900 vehicles per day) will degrade LOS below acceptable standards. Therefore, a capacity improvement project will need to be planned to coordinate with the area's development and growth as warranted.

Hawthorne Road from Nevada Street to Kaiser Blvd	
Mitigation measure	Capacity improvement project. Construct 5 lane urban arterial.
Planning level costs	$2,800,000
Funding status	unfunded
Potential funding sources	Tax increment financing, State/Federal grants, Development contribution

ii. Rural area county arterials that show forecast LOS deficiencies are:

-Trails Road from Hayford Road to Government Way

This segment is not expected to be over capacity but will have an unsatisfactory LOS.

iii. State highways that show forecast LOS deficiencies are:

-US 395 from Monroe Road to Stevens County Line

This segment has a future forecast LOS D

There are northbound and southbound passing lanes that were not reflected in the LOS analysis that may indicate an acceptable LOS for this segment. No mitigation measure is proposed for this segment.

-US 2 from Nevada to North Access Road (Costco)

This segment has a future forecast LOS E/F, and is currently governed by the traffic signal at Nevada and the roundabout at North Access Road (Costco).

The completion of the NSC will have an impact to this segment of highway, many commuter trip and the majority of freight trips will be shifted to the NSC. Area development will also add arterial and collectors in the surrounding area that will improve local circulation, and thus, reduce stress on this segment of US 2. The future extension of transit service north of Hawthorne should be studied for the beneficial impacts to this highway segment. Additionally, a transit center park and ride is planned at Farwell and the North Spokane Corridor, this may also impact travel demand on this segment of US 2.

US 2 from Nevada to North Access Road (Costco)	
Mitigation measure	Construct local area arterial and collector network
Planning level costs	$15,000,000
Funding status	Unfunded
Potential funding sources	Tax increment financing, Development contribution, State/Federal grants

-US 2 from Milan Road to Pend Oreille county line

This segment has a future forecast LOS D

This segment of 2-lane highway, is served by 4-lane highways at the north (in Pend Oreille County) and south (at Westwood Ave.). There are northbound and southbound passing lanes that were not reflected in the LOS analysis that may indicate an acceptable LOS for this segment. No mitigation measure is proposed for this segment.

-US 2 from Espanola Road to Fairchild Airforce Base

This segment has a future forecast LOS D

Improving local area network and circulation will improve highway performance.

US 2 from Espanola Road to Fairchild Airforce Base	
Mitigation measure	Explore improvements local area arterial and collector network (such as Brooks road)
Planning level costs	$7,000,000
Funding status	Partially funded
Potential funding sources	State/Federal grants

-US 2 from Fairchild Airforce Base to Craig

This segment has a future forecast LOS E

21st Avenue is currently being planned by Spokane County, Airway Heights and City of Spokane. This parallel arterial to US 2 has the potential to relieve congestion on US 2 and provide improved circulation. 10th and 12th Avenue in Airway Heights, City of Spokane and Spokane County are planned to be improved / constructed by the year 2040, Deno Road is also being planned for improvement, these parallel routes to US 2 are part of the plan to reduce future congestion on US 2 and improve circulation. The West Plains / US 2 transportation study is currently underway in 2019/2020, this study will also explore opportunities for maintaining the highways performance to acceptable LOS.

US 2 from Fairchild Airforce Base to Craig	
Mitigation measure	Explore improvements local area arterial and collector network (such as Deno and 21st in Spokane County)
Planning level costs	$5,500,000
Funding status	unfunded
Potential funding sources	State/Federal grants

-SR 290 from Barker Road to Starr Road

This segment has a future forecast LOS E

Adding passing lanes on 2-lane highways improves LOS. Bridging the Valley (BTV) will also improve the highways performance by removing friction at intersections, by both grade separation and closing low volume at-grand railroad crossing at adjacent intersection.

SR 290 from Barker Road to Starr Road	
Mitigation measure	Construct passing lanes at appropriate intervals & BTV
Planning level costs	Passing lanes: $9,300,000 BTV: See State Highway/County Rd intersections below
Funding status	Unfunded
Potential funding sources	State/Federal grant funding, safety funding, regional legislative request for funding

-SR 904 from Cheney City Limits to I-90

This segment has a future forecast LOS E

Adding passing lanes on 2-lane highways improves LOS. STA has express transit service from Downtown Spokane to City of Cheney, and this is on STA's High Performance Transit (HPT) Network. The HPT and additional transit service should be studied to improve LOS on this highway.

SR 904 from Cheney City Limits to I-90	
Mitigation measure	Construct passing lanes at appropriate intervals & HPT Network
Planning level costs	Passing lanes: $29,200,000 HPT Network: See section F below for STA comp plan
Funding status	Unfunded
Potential funding sources	State/Federal grant funding, sales tax (transit), regional legislative request for funding

-SR 902 from Medical Lake City Limits to Hayford (New)

This segment has a future forecast LOS D

This segment of highway is on the Urban / Rural border. It is anticipated by the year 2040, SR 902 will be in the Urban area. LOS D is acceptable LOS for Urban Highways, therefore, no mitigation would be required.

SR 902 from Medical Lake City Limits to Hayford (New)	
Mitigation measure	Change classification
Planning level costs	$0
Funding status	Unfunded
Potential funding sources	N/A

-SR 902 from Hayford (New) to I-90

This segment has a future forecast LOS F

With the realigning of Hayford Road around the proposed SIA 3rd runway, this segment is forecast to have failing level of service and a capacity improvement project should be planned.

SR 902 from Hayford (New) to I-90	
Mitigation measure	Capacity improvement project. Widen highway to 4 lanes.
Planning level costs	$4,500,000
Funding status	unfunded
Potential funding sources	State/Federal grant funding, safety funding, regional legislative request for funding

- State Highway / County Road intersections

Table 12 outlines the 6-year and 2040 forecast LOS for each State Highway / County Road intersection. The footnotes to the table list the mitigation projects that should be planned to mitigate the LOS deficiency. Intersections requiring mitigation are covered below. Two intersections; US 395 at Hawthorne and US 395 at Hastings, do not show mitigation for the forecast LOS deficiency. These two intersections will be greatly influenced by the completion on the NSC and should not plan or allocate future funding to improve capacity at these intersections until the full effect of a completed NSC is known. Intersections with a "(New)" designation on the County Road name in Table 12, indicates proposed State/County intersections, these will also be covered in the mitigation measures listed below.

US 2 (Newport Highway) @ Farwell Road	
Mitigation measure	Add second northbound left turn lane and intersection improvement.
Planning level costs	$953,000
Funding status	Unfunded (contingent on development)
Potential funding sources	Development financed

SR 290 @ McKenzie Road	
Mitigation measure	Intersection closure in coordination with BTV.
Planning level costs	$250,000
Funding status	Unfunded
Potential funding sources	State/Federal grant funding, safety funding, regional legislative request for funding

US 395 (Division St.) @ Whitworth Dr. / Regina Dr.	
Mitigation measure	Turn restrictions and channelization.
Planning level costs	$200,000
Funding status	Unfunded (contingent on development)
Potential funding sources	Development financed

SR 290 (Trent) @ Harvard Road	
Mitigation measure	Grade separation of highway/roadway and Railroad crossing.
Planning level costs	$30,000,000
Funding status	Unfunded
Potential funding sources	State/Federal grant funding, safety funding, regional legislative request for funding

SR 290 (Trent) @ Starr Road	
Mitigation measure	Install roundabout.
Planning level costs	$2,300,000
Funding status	Unfunded
Potential funding sources	State/Federal grant funding, safety funding, regional legislative request for funding

SR 902 @ Geiger Blvd. (2019)	
Mitigation measure	Install roundabout.
Planning level costs	$2,500,000
Funding status	funded
Potential funding sources	This project is funded by state gas tax.

SR 902 @ Geiger Blvd. (After realignment of Hayford Road)	
Mitigation measure	Reconfigure roundabout.
Planning level costs	$1,500,000
Funding status	unfunded
Potential funding sources	State/Federal grant funding, regional legislative request for funding and development contribution.

US 2 (Newport Highway) @ SR 206	
Mitigation measure	Local roadway network circulation improvements and intersection LOS & safety improvement.
Planning level costs	Local area network: $7,350,000 Intersection improvement: $2,000,000
Funding status	Unfunded
Potential funding sources	State/Federal grant funding, safety funding, Tax increment financing and developer contribution.

US 2 @ 21st Ave. (New)	
Mitigation measure	Install roundabout
Planning level costs	$2,500,000
Funding status	Unfunded
Potential funding sources	State/Federal grant funding, regional legislative request for funding and development contribution.

SR 902 @ Hayford Road (New)	
Mitigation measure	Install roundabout.
Planning level costs	$2,500,000
Funding status	Unfunded
Potential funding sources	State/Federal grant funding, regional legislative request for funding and development contribution.

US 2 @ Aluminum Ave. (New – Kaiser US 2 south entrance)	
Mitigation measure	Install roundabout.
Planning level costs	$2,800,000
Funding status	Unfunded
Potential funding sources	Tax increment financing and development contribution.

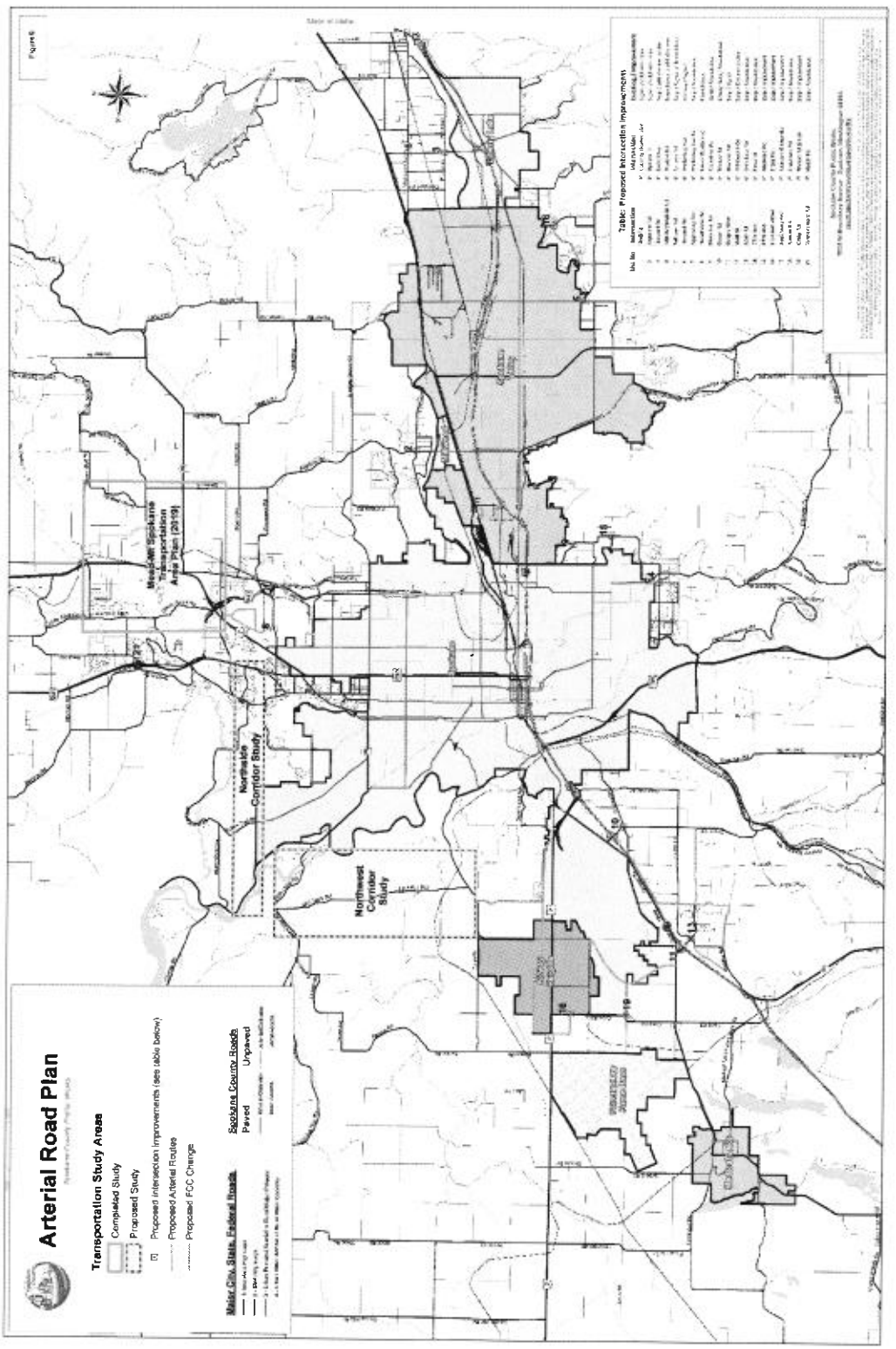
Farwell Road @ Altamont (New – Kaiser Farwell entrance)	
Mitigation measure	Turn Restrictions and Channelization.
Planning level costs	$250,000
Funding status	Unfunded
Potential funding sources	Tax increment financing and development contribution.

SR 291 @ Seven Mile Road	
Mitigation measure	Intersection improvement (mini roundabout).
Planning level costs	$450,000
Funding status	Unfunded
Potential funding sources	State/Federal grant funding, regional legislative request for funding and development contribution.

iv. Arterial Road Plan

The Arterial Road Plan (ARP) is a map of existing and proposed Spokane County Arterials. The ARP shows; existing roadways, future proposed roadway changes, future proposed County arterials and Transportation Study Areas. See **Figure 9**.

Figure 9 - Arterial Road Plan (for larger image CLICK HERE)



C. Freight Movement, Rail Facilities, & Air Travel Facilities

1. Freight and Good Transportation System (FGTS)

The Washington State Freight and Goods Transportation System (FGTS) is a classification system for roadways, railways, and waterways based on freight tonnage. The FGTS is updated every two years to establish funding eligibility for Freight Mobility Strategic Investment Board grants, support transportation planning processes, and support freight investment decisions. (WSDOT, 2019)

FGTS truck freight corridors are classified into five categories, T-1 through T-5, based on annual gross truck tonnage:

T-1 more than 10 million tons per year

T-2 4 million to 10 million tons per year

T-3 300,000 to 4 million tons per year

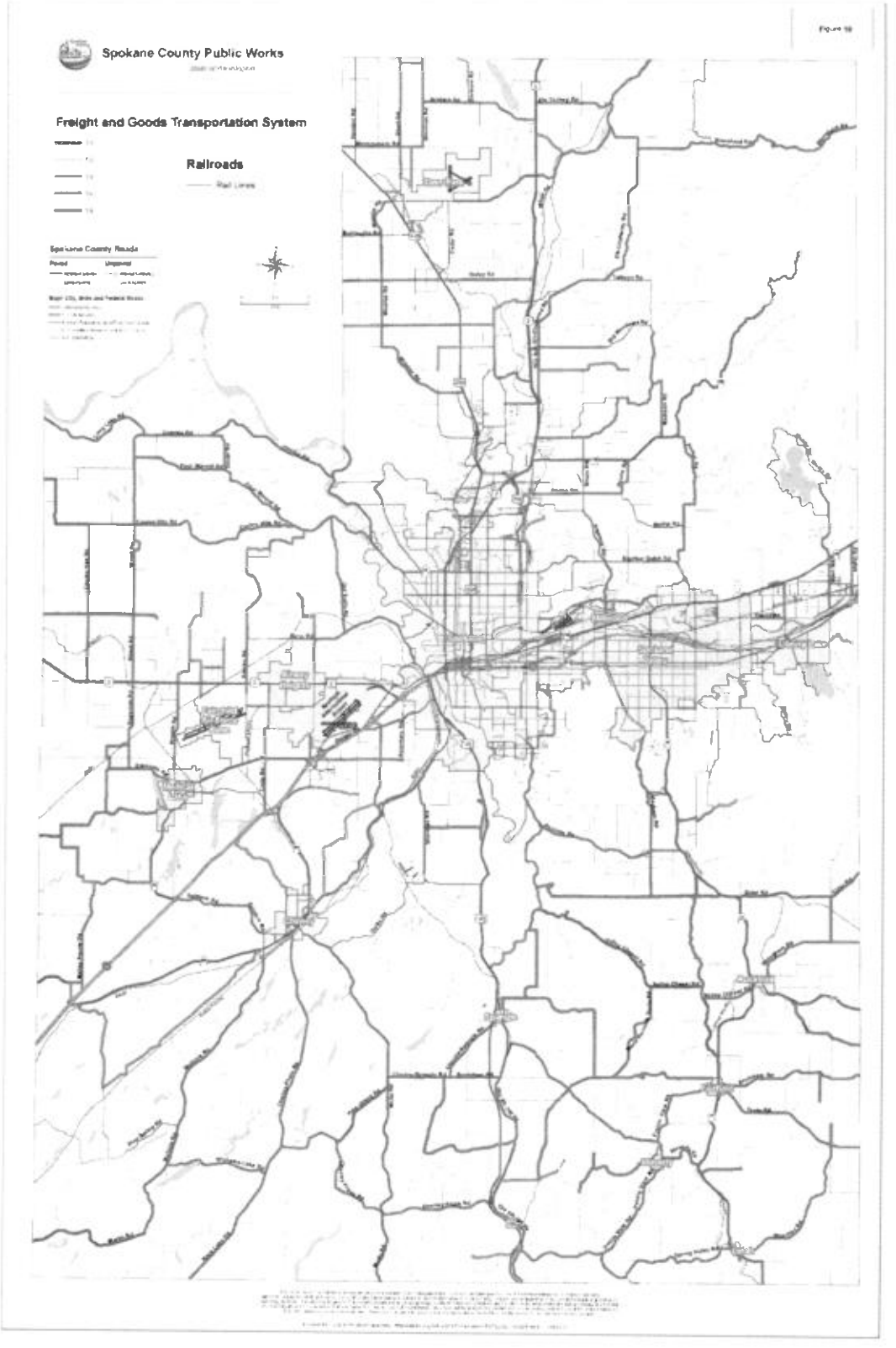
T-4 100,000 to 300,000 tons per year

T-5 at least 20,000 tons in 60 days and less than 100,000 tons per year

T1 corridors are the most heavily used freight corridors; T1 corridors within Spokane County include I-90 and Argonne Road from I-90 to Bigelow Gulch Road. T2 corridors have high freight movement and include corridors such as Bigelow Gulch, Bruce Road and US 195. The Spokane County Freight and Goods System is shown in **Figure 10.** Spokane County Road Standards support freight movement and are consistent with SRTC's regional freight network.

a) Future Conditions: Freight movement is vital to a region's economy. Reducing bottlenecks and monitoring congestion are essential steps to maintaining efficient movement of goods, allowing freighters to avoid shipping delays, keep costs down, and maintain delivery reliability. The Bigelow Gulch/Forker Road Connector is an important project for freight movement in Spokane County: this project is currently underway, with a scheduled completion date of 2022. Bridging the Valley (BTV), another significant freight project, will construct grade separation at SR 290 and Harvard Road. Spokane County will coordinate with SRTC, BNSF and WSDOT as funding becomes available.

Figure 10 - Frieght & Goods Transportation System and Air Travel Facilities
(for larger image CLICK HERE)



2. Rail Facilities

The Union Pacific Railroad (UPRR), the Burlington Northern Santa Fe Railway (BNSF), the Geiger Spur (Spokane County), Washington Idaho Railway (WSDOT), and the Eastern Washington Gateway (WSDOT) operate rail facilities within Spokane County. All railway lines have crossings at county infrastructure intersections; the county continuously reviews opportunities to enhance safety for at-grade crossings to further enhance the movement of goods throughout the region.

3. Air Travel Facilities

Spokane County supports air transportation by coordinating regionally the roads and railways that serve Spokane International Airport (SIA). SIA is planning an expansion through the construction of a 3rd runway. To accommodate this development, Spokane County and regional partners are planning a Hayford Road realignment project. Long range planning efforts which include air transportation are essential to supporting the movement of goods and people.

D. Pedestrian Facilities

1. Existing Facilities

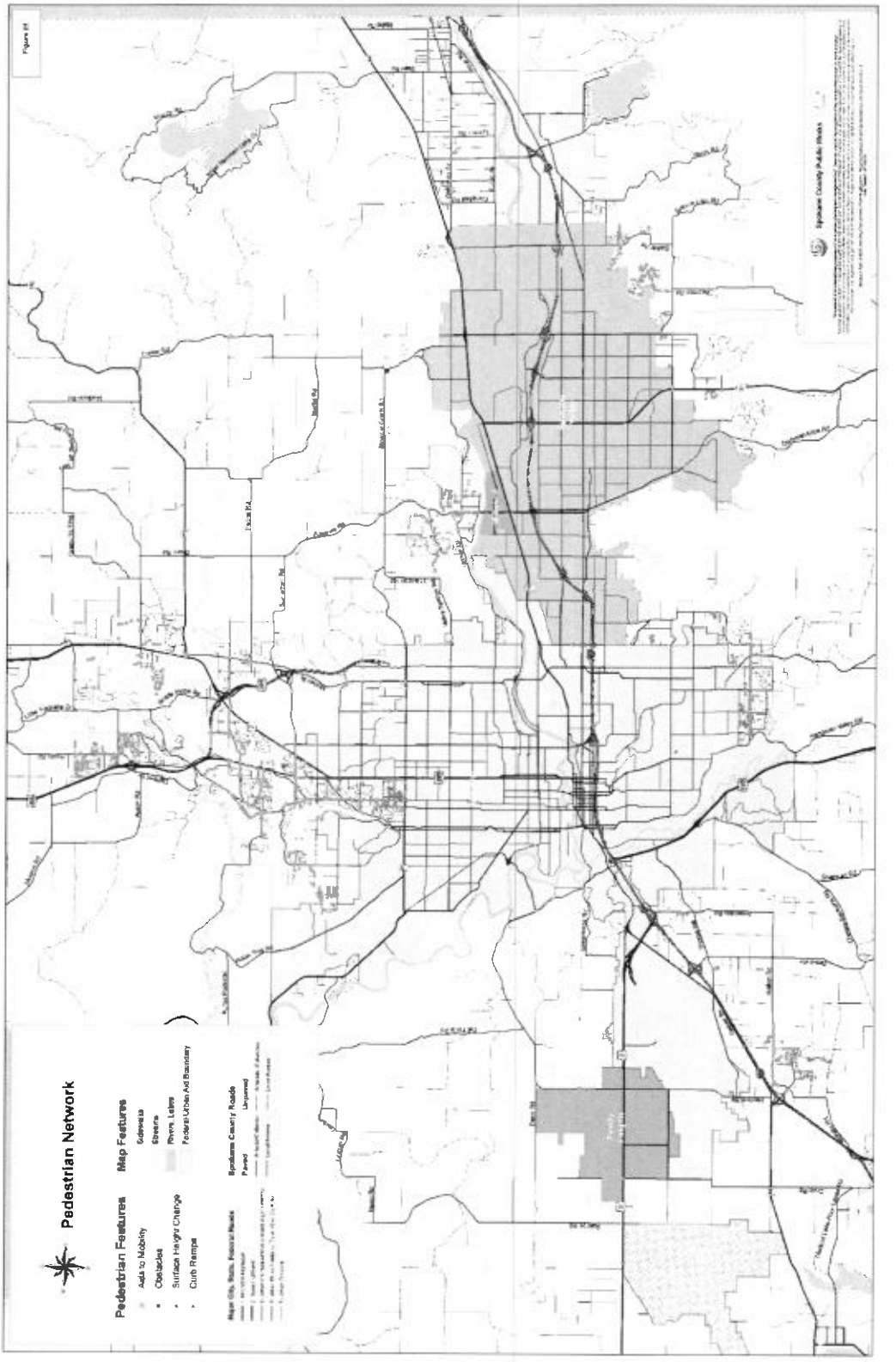
Spokane County is comprised of both rural and urban characteristics. As such, rural roadways may not have sidewalk but may have a gravel or paved shoulder for pedestrians use. Urban roadways may include sidewalks, curb ramps, and crosswalks along the facilities for pedestrians. These facilities aid in the safety of pedestrian users of all ages and abilities, including children attending schools, commuters taking the bus or connecting with a carpool to get to work, and senior citizens making midday trips.

Generally, sidewalks are provided along many of the principal and minor arterials within the urban limits of the county. Separated sidewalks are desired along roadways. Spokane County Road Standards help to facilitate the development of such accommodations as new development occurs. Generally, wide paved or gravel shoulders are provided along the rural arterials to aid in pedestrian access, although pedestrian activity typically occurs at a lesser rate in rural areas than urban.

Both the rural and urban systems contain gaps which may cause an increase in short vehicle trips due to lack of pedestrian facilities. Gaps may include the lack of curb ramps, the lack of adequate shoulders between destinations, and the interruption of sidewalk due to lack of connectivity. **Figure 11** illustrates the existing pedestrian facilities within Spokane County.

The county also has an ADA Transition Plan, to enhance the pedestrian facilities across the county.

Figure 11 - Pedestrian Facilities (for larger image CLICK HERE)



2. Pedestrian Plan
   The development of a pedestrian plan, see **Figure 11**, is important to the goals outlined in the Spokane County Comprehensive Plan. This plan shows the inventory of sidewalks, barriers to pedestrians, and potential gaps in paths of travel. A pedestrian plan is a vital piece in identifying planning improvements where they are most needed, such as developing routes to priority destinations, including transit bus stops and schools.

3. Americans with Disabilities Act (ADA)
   As a federal mandate, the ADA requires public facilities to be made accessible to all users regardless of ability. This requirement includes public sidewalks and pathways. Public agencies possessing non-compliant facilities must develop an ADA transition plan. In compliance with ADA, Spokane County developed an ADA transition plan in 2015; this document guides the improvement of the county's public facilities. It inventories barriers to individuals with disabilities, and outlines an infrastructure and financial plan to bring these facilities into compliance.

4. Existing Deficiencies
   The Pedestrian Plan plays a vital role in the improvement of pedestrian facilities. The plan indicates barriers and gaps in the system for pedestrian travel, facilitating the develop of projects to correct these deficiencies. Gaps in pedestrian facilities, limited and/or inadequate crossings, and other deficiencies may isolate areas of the County and lead to individuals driving for short trips which may otherwise be made on foot or bicycle, adding unnecessary trips to the County roadway network. Federal and state grant funding sources may be sought to fund the improvement of existing gaps and other deficiencies.

5. Future Conditions
   The Pedestrian Plan, see **Figure 11**, guides short-term (6-year TIP) and long-range (7 to 20-year) planning efforts, allowing for the identification of needed improvements of Spokane County's pedestrian facilities. Spokane County Public Works will continue to coordinate with school districts in planning and seeking grant funds to facilitate safe walking routes to school. To encourage transit ridership, pedestrian routes to transit stops will be reviewed for feasibility and integrated into planning and capital project development when appropriate. The pedestrian plan will be used for supporting regional trails such as the Centennial Trail and the Children of the Sun Trail; Spokane County will continue to work to develop plans and seek funding for eliminating gaps in the multi-use path system of the Centennial trail, such as the Argonne Road gap. To support the Children of the Sun Trail, Spokane County will identify local system and development needs to improve connectivity to the Children of the Sun Trail.

E. Bicycle Facilities

1. Existing Facilities
   Bicycle facilities are crucial to the facilitation of safe non-motorized travel throughout Spokane County. These facilities are accessed by a variety of users, from school-age bicyclists and families, to commuter cyclists and those who travel over 20 miles in one cycling outing. A variety of bicycle facilities exist throughout the county, including dedicated bike lanes, shared-use paths, and shared-bike friendly routes. Much like the pedestrian facilities, there are gaps in the bicycle network that may cause bicyclists to cross, or travel with, vehicle traffic.

2. Bicycle Plan

The Bicycle Plan serves to promote bicycle transportation countywide, as well as increasing safety and convenience for non-motorized modes of travel (Goal T.3e). In addition, supporting the regional trail system is a cornerstone of Spokane County bicycle facilities goals and policies.

The Spokane County Comprehensive Plan supports the development of a bicycle plan. This plan shows the inventory of bike routes, and facilities including bike lanes and pathways, as well as potential gaps in bike routes. The plan is also critical to identifying and planning improvements where they are most needed. The Spokane County Bicycle Plan was developed through coordination with the regional bike plan (published by SRTC), area city bicycle plans (City of Spokane and City of Spokane Valley), and WSDOT. The Spokane County Bicycle Plan is shown in **Figure 12**.

i. Planning for Growth

To plan for growth, promote a healthy community, and to provide for alternative modes of travel, Spokane County Road Standards require new urban developments located on bike routes to accommodate bicycles through frontage developments.

3. Existing Deficiencies

The Bicycle Plan plays a vital role in planning the improvement of bike facilities. The plan indicates barriers and gaps in the system for bicycle travel, laying the groundwork for planning projects to address deficiencies. Gaps in the network may create "high stress" environments in which cyclists must navigate through vehicle traffic or difficult arterial crossings to complete their journey. Federal and state grant funding sources may be sought to fund the improvement of existing gaps and other deficiencies.

4. Future Conditions

The Bicycle Plan helps to guide short-term (6-year TIP) and long-range (7 to 20-year plan) bicycle infrastructure needs, identifying and planning for the improvement of Spokane County's bike facilities. Spokane County will continue support regional trails such as the Centennial Trail and the Children of the Sun Trail. To support the Centennial Trail, Spokane County will continue planning efforts to develop plans and projects, and seek funding for gaps in the multi-use path system, such as at Argonne Road. To support the Children of the Sun Trail, Spokane County will plan local system and development activities to allow for connectivity to the trail.

F. Public Transit

Public transit within Spokane County is provided by Spokane Transit Authority (STA), a municipal corporation operating within the voter-established Public Transportation Benefit Area. This is a vital service for many county residents, connecting commercial and activity centers to residential areas, and is crucial to the reduction of trips on the County roadway network. STA routes within Spokane County are illustrated in **Figure 13**. Spokane County coordinates closely with STA on current and planned routes to serve existing and future development. The STA Comprehensive Plan contains the development of a High Performance Transit (HPT) Network, shown in **Figure 14. The STA Comprehensive Plan can be found at;**

https://www.spokanetransit.com/projects-plans/comprehensive-plan

Figure 12 - Bicycle Plan (for larger image CLICK HERE)

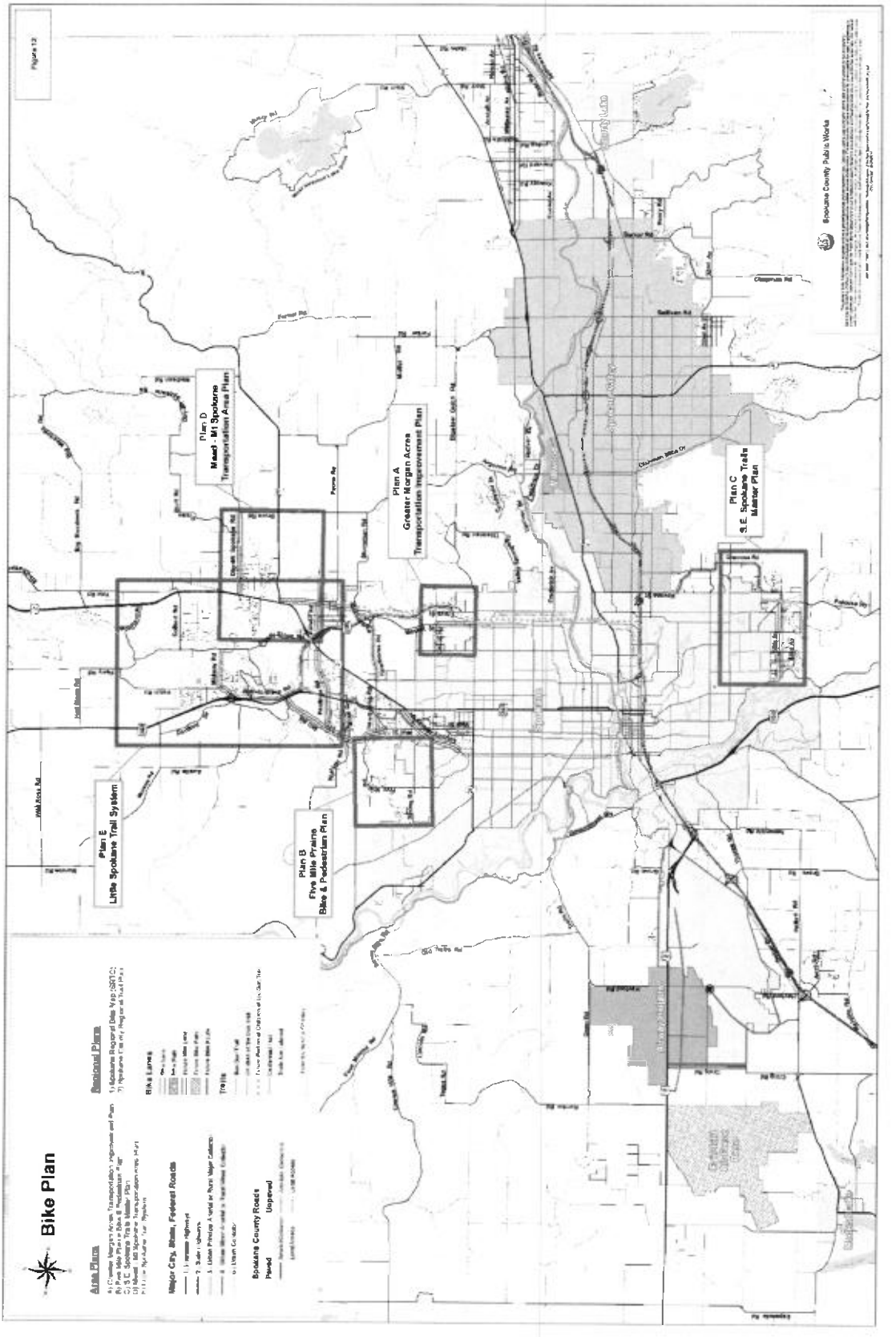


Figure 13 - STA Existing Routes (for larger image CLICK HERE)

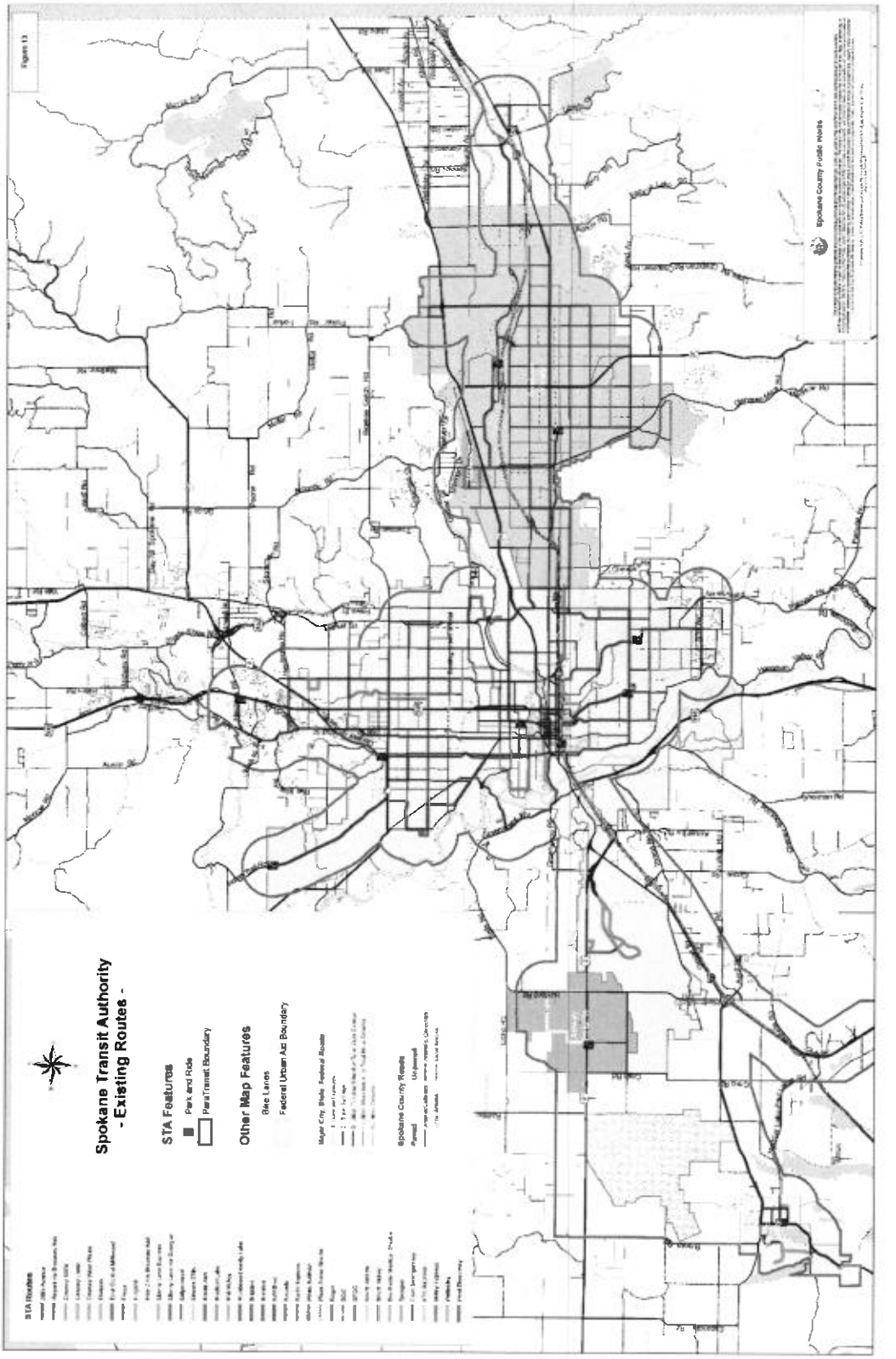
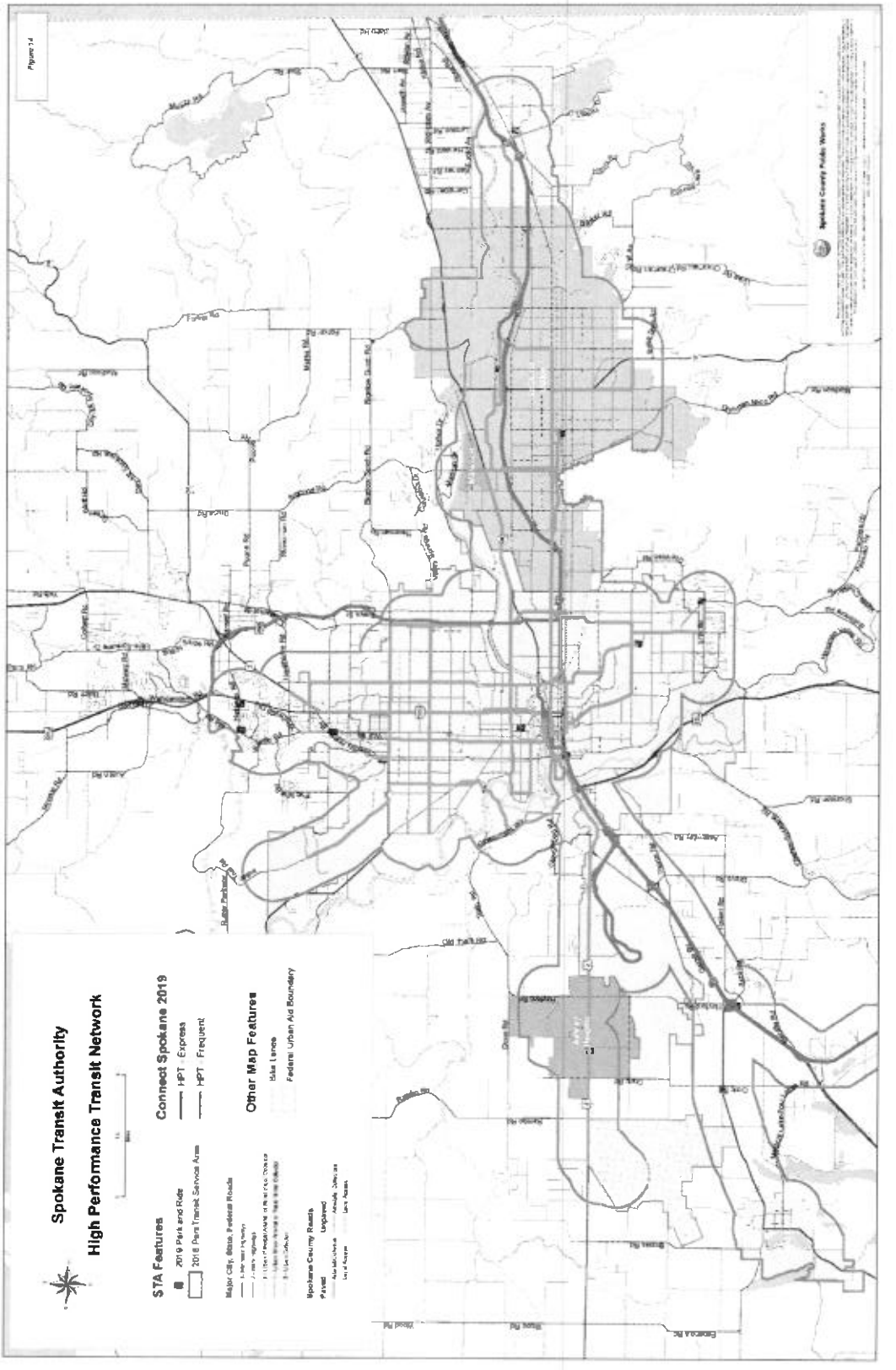


Figure 14 - STA High Performance Transit Network (for larger image CLICK HERE)



G. Commute Trip Reduction

In 1993, Spokane County implemented the Commute Trip Reduction (CTR) Law (RCW 70.94.521-5 5 1) to reduce traffic congestion, air pollution and petroleum consumption through employer-based programs that encourage the use of alternatives to driving alone. Alternatives include riding the bus, carpooling, vanpooling, bicycling, walking, working a compressed work week or teleworking.

The law requires major employers to develop and implement an employee commute program to reduce the number and length of drive-alone commute trips made to the worksite. Local jurisdictions implemented ordinances to define how the law would apply to employers in their area.

To further the Goals (T.11) and Policies (T.11.1 – T.11.6) of the Spokane County Comprehensive plan, Spokane County operates the Smart Commute Northwest Program (formerly the Commute Trip Reduction Program).

H. Forecast of Future Needs and Financing Plan

1. Six-Year Transportation Improvement Program (TIP)

Spokane County adopts a six-year transportation improvement program (TIP) each year. In addition, Spokane County amends this plan throughout the year for a variety of reasons, including updating funding sources and project estimates. This allows Spokane County to program projects based upon need and funding.

County intersections showing deficiencies in the 6-year horizon of the TIP, are listed in the footnotes to Tables 1-11 as mitigation projects. The projects have been added to the six-year TIP, and potential funding sources are also identified for the projects.

The current Six-Year TIP can be found at;

https://www.spokanecounty.org/983/Program-Development

2. 20-year Financing plan and proposed mitigation financing – Transportation

The yearly adoption of the TIP as mentioned above will continue for the foreseeable future to the end of the 20-year financing plan. The 20-year financing plan outlines the expected revenue for the years beyond the current 6-year TIP, which would be the years 7 through 20.
This 20-year financing plan outlines the expected average revenue for the years beyond the six-year TIP. **Table 13** below shows the average yearly projected revenue by revenue source to finance the 20-year transportation program.

TABLE 13

Yearly average transportation projected improvement revenue						
	Federal	State	Local	Other	County	Total
Yearly average ($1,000's)	$11,387	$6,684	$85	$2,153	$5,653	$25,962
Total (Years 7 – 20)						$363,500

The 20-year financing shows revenue that will be spent on capital projects, such as; improvements projects, pavement preservation, stormwater, safety improvements, multi-modal (Ped/Bike) projects and proposed mitigation for level-of-service (LOS) deficiencies shown in this Transportation Element. The projects to mitigate the intersection LOS deficiencies shown Tables 1-11 for the 20-year financing plan total approximately $5 million. For County road segment projects, such as; Hawthorne Road, Deno Road and 21st Avenue, a combination of County revenue and grant funding is projected to be used to construct the projects. For the 20-year financing plan, these projects total approximately $8.3 million. The sources of revenue shown in Table 13 will be projected to be used to fund intersection LOS deficiency projects and road segment projects.

Expenditures for the 20-year financing plan are expected to fall within the yearly average and the total revenue shown in Table 13. The 20-year financing includes financial commitments from the impacts of development that are made concurrent with the development. Spokane County will continue to balance anticipated expenditures and revenues against the needs of the community and to appropriately accommodate current and future growth through the use of funding mechanisms aforementioned over the 20-year horizon.

Spokane County Public Works Department

2019 Comprehensive Plan Transportation Element Update Methodology

May 2019

Overview

To update the Spokane County Comprehensive Plan Transportation Element, the transportation system is inventoried in its existing condition and shown in its future condition (year 2040). This document describes the methods used to update the Transportation Element.

Transportation Element Maps

For the update, maps of the transportation system have been developed. Level of Service (LOS) intersection inventory tables that were developed for the Capital Facilities Plan (CFP) are also being brought into the transportation element update by reference. The maps show the existing condition and the future year 2040 condition. The list of maps developed are;

Existing conditions map of the entire county showing rural arterial roadway level of service (LOS)

Existing conditions map of the county's urban area showing arterial roadway LOS

Future conditions (year 2040) map of the entire county showing rural arterial roadway LOS

Future conditions (year 2040) map of the county's urban area showing arterial roadway LOS

State highways existing condition

State Highways future condition (year 2040)

Arterial Road Plan (ARP)

STA routes; existing condition

STA routes future conditions (STA High Performance Transit Network)

Bike plan Map

Pedestrian Plan Map

Freight and Goods Transportation System (FGTS) and Rail Facilities Map

Transportation Element Existing and Future conditions

The following describes the process taken to develop the maps and LOS mentioned above.

Existing conditions

1. Provide Volume & LOS maps (segments)
2. Provide LOS at intersections (table and map in Capital Facilities Plan)
3. Provide text to summarize existing conditions

Future forecasting

1. Provide Volume & LOS maps (segments)
    a) *Use SRTC 2040 model*
        (1) Only if model volumes exceed existing and are appropriate
        (2) If not, use appropriate linear growth rate applied to existing volumes
            (a) Show map for Urban area
            (b) Show map for Rural area
            (c) Show map for State highways
2. Provide LOS at intersections (table and map currently prepared for CFP)
3. Provide future transit route map
4. Provide pedestrian and bicycle map
5. Provide text to summarize future forecasting

2040 post-processing forecast methodology

For links that have undeveloped areas or areas of know development that has not been captured in the regional model, trip generation was developed for the undeveloped area and distributed to the roadway volumes. Generally, the area of influence around a road segment will be reviewed for vested/known development. These trips will be added to the existing if not accounted for in the model. Flow Bundles from the model are then generated and subtracted from the added trip generation to avoid double counting (see below). The SRTC regional growth is stated in Horizon 2040 (the Spokane regional metropolitan transportation plan) at 23% by the year 2040. This 23% growth rate will be used for general forecast growth on roadways that are not anticipated to see anything more than general growth and the growth is not reflected in the model outputs. If the trips appear to be accounted for in the model, the models growth will be reviewed and applied accordantly.

List of land uses reviewed in the Spokane County Transportation Element (for the purposes of post-processing forecast volumes)	
Project name	**Project type**
Kaiser	Comprehensive Plan Amendment
Aspen Park	Subdivision
City of Spokane Valley Northeast industrial area	Planned Action Ordinance
City of Spokane Valley South Barker	Corridor Study
Spokane Tribe Casino	Mixed Use Development
XL 5657 SR902 & Geiger Interchanges - Memo	Balanced volumes for Post-processing
Project Rose (Amazon distribution center)	Commercial development
Country View Meadows	Subdivision
Thomas Mallen PUD	Subdivision
Kidd's Dental	Commercial development
Takoda Park West	Subdivision
Beau west Apartments	Multifamily
Aero Road PUD	Subdivision
Needham Hill	Subdivision
West Terrace 5th - 3rd Addition	Subdivision
Fairmont Cemetery	Comprehensive Plan Amendment
Mead / Mt. Spokane area	Estimated growth (Mixed Use & MFDU)
Village at Midway	Binding site plan
Sundance	Subdivision
Adams & 28th	Subdivision
Adams & 31st	Subdivision
Valley Springs South	Subdivision
Waikiki / Five mile apartments	Comprehensive Plan Amendment
Twin Bridges	Subdivision
Morningside Heights	Subdivision
Southridge	Subdivision
Twisted Willows	Subdivision
Trickle Creek	Subdivision
Parcels 34031.9018 & 34031.9014	Estimated Growth (SFDU)
Belle Terre	Comprehensive Plan Amendment
Morrison Ranch	Subdivision
New Mead SD Middle School	Education
Garden Springs Villa	Subdivision

Canterbury Bluff	Subdivision
Mead SD new Market campus	Education
Bidwell Estates	Subdivision
Northern Quest Casino	Mixed Use Development
Windsor Estates	Subdivision
CPA 01-16	Comprehensive Plan Amendment
Taylor Cottages	Subdivision
Taylor Mt.	Subdivision
Ponderosa PUD	Subdivision
FAFB growth	Government
Sunset Woods	Subdivision
parcels 24063.0501 & 24065.0507	Estimated Growth (industrial)
Wellington Heights	Subdivision
Thomas Mallen TIF	Estimated Growth (industrial)
West Plains area management plan phase 1 US 2 vicinity	New Development
Whitetail Ridge	Subdivision

Ambient Growth and Flow Bundles

Ambient growth will be reviewed in areas that are mostly built out but have some known developable land remaining. For example, an area has a known development, these trips will be added to the system, but the 23% regional growth will not be added in all cases. As the system gets more congested, growth in trips slows, therefore, would expect roads with good LOS, would see more growth so adding the full regional growth may be appropriate, as the LOS reaches LOS F (capacity) there is no room for vehicle trip growth. Ambient growth is used sparingly.

LOS	% growth above known development
A – B	23%
C	17.25%
D	11.5%
E	5.75%
F	0%

Flow bundles in Visum (Transportation Forecast modeling software) will be used to eliminate double counting of trips. Projects not accounted for in Transportation Analysis Zones (TAZ's) growth is estimated using Institute of Transportation Engineer (ITE) Trip generation rates, the model growth is then added, then areas TAZ flow bundles are analyzed, link volumes are then reduced by flow bundles to strip out trips accounted for in the growth from the TAZ.

Arterial Segment LOS tables

The arterial LOS tables were produced using Florida DOT Quality/Level of Service Handbook tables. The table were adjusted by the divided/undivided, Median & turn lane adjustments. Individual arterials with unique characteristics were adjusted if necessary and these adjustments are indicated specifically below. The segment LOS shown on the Transportation Element maps are developed using these tables.

Rural County Arterial Road system

Rural 2-lane arterials*		Rural 4-lane arterials*	
ADT	LOS	ADT	LOS
0 – 4,700	A or B	0 – 18,100	A or B
4,800 – 8,400	C	18,200 – 28500	C
8,500 – 14,300	D	28,600 – 36,700	D
14,400 – 28,600	E	36,800 – 41,700	E
28,700+	F	41,800+	F

*2-lane base table data was used, for 4-lane the table data was adjusted by the undivided adjustment

Urban County Arterial Road system

Urban 2-lane arterials*		Urban 3-lane arterials**	
ADT	LOS	ADT	LOS
0 – 7,300	A - C	0 – 7,670	A - C
7,400 – 14,800	D	7,671 – 15,540	D
14,801 – 15,600	E	15,541 – 16,380	E
15,700+	F	16,381+	F

*Class II signalized arterial table used, 2-lane base table data was used

**Class II signalized arterial table used, 2-lane the table data was adjusted by the left turn lane adjustment.

Urban 4-lane arterials*		Urban 5-lane arterials**	
ADT	LOS	ADT	LOS
0 – 10,880	A - C	0 – 13,780	A - C
10,880 – 24,300	D	13,781 – 30,780	D
24,301 – 25,350	E	30,781 – 32,110	E
25,351+	F	32,111+	F

*Class II signalized arterial table used, 4-lane table data was adjusted by the undivided adjustment.

** Class II signalized arterial table used, 5-lane table data was adjusted by the undivided with left turn lane adjustment.

LOS Tables for Developed for Specific Arterials

There are County arterials that have unique characteristics, specific LOS and ADT tables had to be calculated individually for these arterials;

Country Homes Blvd. A divided 2-lane arterial, on each end is 4-lane signalized termini's. Country homes capacity is metered by the upstream and downstream signals. The Class II will be used with the non-state adjustment of -10% and the no turn lane adjustment (net -15%)

Country Homes Blvd. (MP 0.24 – 1.10)	
ADT	LOS
0 – 12,300	A - C
12,301 – 27,500	D
27,501 – 28,700	E
28,701+	F

Argonne road, north of Bigelow Gulch to Lindgren Road. An undivided 3 lane arterial, the 2 and 4 lane undivided tables were used with ½ of daily volumes and then summed;

Argonne Road (MP 2.50 – 4.40)	
ADT	LOS
0 – 11,400	A - B
11,401 – 18,450	C
18,451 – 23,700	D
23,701 – 35,150	E
35,151+	F

State Highway System

Rural 2-lane Highway*		Rural 4-lane Divided Highways*	
ADT	LOS	ADT	LOS
0 – 4,700	A - B	0 – 25,700	A - B
4,800 – 8,400	C	25,701 – 40,300	C
8,500 – 14,300	D	40,301 – 51,000	D
14,400 – 28,600	E	51,001 – 57,900	E
28,700+	F	57,900+	F

*2-lane and 4-lane base table data was used

Urban 4-lane Signalized Divided Highway*		Urban 4-lane Signalized Undivided Highways**	
ADT	LOS	ADT	LOS
N/A	A - B	N/A	A - B
0 – 37,900	C	0 – 36,005	C
37,901 – 39,800	D	36,006 – 37,810	D
N/A	E	N/A	E
N/A	F	N/A	F

*Class I

** Class I with exclusive left turns lanes

Urban 2-lane Highway*		Urban 4-lane Highways (divided)*	
ADT	LOS	ADT	LOS
0 -8,600	A - B	0 – 36,700	A - B
8,601 – 17,000	C	36,701 – 51,800	C
17,001 – 24,200	D	51,801 – 65,600	D
24,201 – 33,300	E	65,601 – 72,600	E
33,301+	F	72,600+	F

*2-lane and 4-lane base table data was used

Urban 6-lane Highway*		Urban 4-lane Freeway*	
ADT	LOS	ADT	LOS
0 – 55,000	A - B	0 – 45,800	A - B
55,001 – 77,700	C	45,801 – 61,500	C
77,701 – 98,300	D	61,501 – 74,400	D
98,301 – 108,800	E	74,401 – 79,900	E
108,801+	F	79,901+	F

*base table data was used

Rural 4-lane Freeway*				
ADT	LOS			
0 – 28,800	A - B			
28,801 – 43,000	C			
43,001 – 52,300	D			
52,301 – 60,000	E			
60,001+	F			

*base table data was used

Spokane County Public Works Department

2019 Mead / Mt. Spokane Transportation Area Plan

The Mead / Mt. Spokane Transportation Area Plan can be found at;

https://www.spokanecounty.org/4356/Mead-Mt-Spokane-Transportation-Area-Plan