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Transportation

Section 6.1 - Introduction

The Growth Management Act (GMA) mandates cities and counties to forecast growth within and outside urban growth boundaries, direct development into the growth boundaries, and minimize environmental and aesthetic impacts of development outside urban areas.

The Growth Management Act (GMA) requires the City to include a transportation element as part of the Comprehensive Plan. To meet GMA requirements, the transportation element must identify existing transportation system characteristics, establish standards for levels of service, identify and designate planned improvements for pedestrian and bicycle facilities and corridors that address and encourage enhanced community access and promote healthy lifestyles, and identify existing and future deficiencies based on traffic growth projections. Goals and policies must be established which guide the development of the City's transportation system in support of the City's vision for the future. These policies affect public agencies, such as the City, as well as private decisions related to individual developments.

GMA was amended in 2005 to require communities to plan for bicycle and pedestrian transportation and physical activity. The main purpose of the amendment was to address the rising levels of obesity in the United States.

GMA states that the transportation element should "encourage efficient multimodal transportation systems that are based on regional priorities and coordinated with county and city comprehensive plans." In other words, GMA requires that the local comprehensive plan, including the land use and transportation elements, be consistent and coordinated with regional programs. GMA further requires that transportation facility and service improvements be made concurrent with development. Concurrent means that the improvements or strategies are in place at the time of development, or that a financial commitment is in place to complete the improvements or strategies within six years.

In order to achieve concurrency, local jurisdictions must adopt policies and regulations which require that new development be permitted only to the extent that locally-adopted transportation service standards are maintained. GMA requires a funding analysis of the capital transportation projects. The purpose of the analysis is to ensure that each jurisdiction's transportation plan is affordable and achievable. If it is not, the plan must discuss how additional funds will be raised, or how assumptions used in the analysis must be reassessed.

Issues

It is extremely difficult to maintain transportation facilities concurrently with development. Much development is incremental -- in other words, in and of themselves, smaller development projects don't

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register much traffic impact, but taken collectively, traffic impacts may occur from these projects. Cities and counties, operating under tight budgets, may not be able to fund needed transportation improvements. Initiative 695, passed by Washington State voters in November 1999, restricts the city's ability to finance transportation-related projects. The only other funding comes from utility taxes, real estate excise taxes, and the general fund.

Even larger projects may not be reasonably able to fund or build transportation improvements. Widening a street is a major financial undertaking. Significant street improvement projects require environmental reviews of their own, which can take years. Rarely is a project so large that the entire need for major transportation improvements can be attributed to it. In this last case, requiring a project to construct major transportation improvements would probably fail the SEPA test, where mitigation must be reasonably related to the direct impact of only that project's impact.

Moses Lake also must deal with the physical constraints on travel created by the lake itself. With only two lake crossings in the City, road capacity is necessarily constrained. For instance, the intersection of Stratford/Broadway/Alder will always operate poorly, since drivers have only one other choice to cross the lake. At the present time, an additional lake crossing is not feasible for many reasons.

The standards discussed within the transportation element take these factors into consideration. The Concurrency Standards presented are set based on anticipated growth, feasible transportation improvements, and allow for some poor traffic operations at particular intersections. However, the overall system should continue to operate well with the projected increase in population. With specific improvements, driver's overall travel times should not decrease to an unacceptable level.

Purpose of Transportation Element

The purpose of the Transportation Element is to guide the development of the City's transportation system in a manner that considers all modes of transportation. It establishes a framework for the City's transportation system and focuses on the policies, goals, and actions needed to implement and manage the City's transportation infrastructure and services. Per GMA, the City must identify key arterials and have a plan to maintain concurrent traffic operations to accommodate future land use changes and growth in population and employment. The Transportation Element serves as a guide for the development of the City's Transportation Improvement Program (TIP), concurrency requirements, and other planning issues. It is the City's long-range transportation planning and policy document.

General Approach and Related Planning Assumptions

Traffic has been forecast for 20 years of growth, based on estimated household increases and shifts in traffic patterns. In addition to the traffic added from City population increases, the traffic projections include projected growth in County population.

In general, the City expects an annual 3% population increase over 20 years. This includes growth in both the City and the unincorporated UGA. Since traffic volumes increase over time even without any increase in population, a factor to account for such growth has also been applied to the traffic volumes. This percentage increase is based on historical trends in traffic growth for the U.S. and Washington State. The rate is about 0.75% per year.

Generally, development patterns in and around the City are not expected to change dramatically. At this time, no new major employment or retail centers

are foreseen. However, several areas within Moses Lake have the potential for growth and should be considered with each review. The Wheeler Road employment corridor will continue but major increases in employment have not been identified. The Port of Moses Lake continues to work to convert empty hangars left from the military and Boeing days into manufacturing, light industrial, and related uses.

By adopting a Complete Streets ordinance, the City Council has committed to building “Complete Streets”, which means accommodating all forms of transportation, including vehicles, bicycles, pedestrians, transit, and freight. Street design and location planning will need to take this into account.

Organization

The Transportation Element consists of the following sections:

Section two presents transportation goals and policies developed for the Transportation Element as well as the applicable policies of the County-wide Planning Policies and Quad County Regional Transportation Plan.

Section three describes an inventory of existing conditions of the City’s transportation system which includes non-motorized components, airport facilities, rail, and public transit options.

Section four introduces level of service standards relative to existing conditions and establishes a threshold level of service to evaluate transportation facility concurrency with new development.

Section five identifies deficiencies which are forecasted to occur during the 6-year and 20-year planning period. Improvements are recommended for each planning period which will allow the city to maintain the adopted LOS.

Section six presents the finance plan for management of the City’s transportation system for the next six-year period. Costs and revenue resources are generally identified.

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Section 6.2 - Goals and Policies

Grant County County-Wide Planning Policies

Grant County developed a regional policy plan, known as the County-Wide Planning Policies (CWPP), to provide a framework for the development and adoption of comprehensive plans for jurisdictions within the County. The framework is intended to ensure that county and city plans are consistent, as required by the GMA. The County-wide policies which relate to transportation are listed:

Policy 4 Policies for County-wide Transportation Facilities and Strategies

- I. A county-wide transportation plan developed pursuant to the Growth Management Act shall be consistent with the land use elements of the comprehensive plans developed for the jurisdictions within the transportation planning area.
- II. A county and regional review process shall be established to coordinate transportation programming decisions and to ensure consistency with the regional transportation plan.
 - A. Local six-year programs should identify all regionally significant projects meeting adopted regional criteria. These projects will be submitted to the Quad-County Regional Transportation Planning Organization for certification of consistency with the regional transportation plan.
 - B. Transportation priority programming methods should be required for all jurisdictions. This requirement should apply to the functionally classified roadway system, as well as to transit capital expenditures. Priority programming should be integrated as a standard of practice.
- C. Local governments may want to obtain ongoing technical assistance from the state (WSDOT).
- III. As a component of a county-wide transportation plan, each comprehensive plan adopted pursuant to the Growth Management Act (GMA), will contain a transportation element which includes a financial sub-element including:
 - A. A multi-year financing plan;
 - B. An analysis of the jurisdiction's ability to fund existing or potential transportation improvement which identifies existing sources and new revenue sources which may include impact fees;
 - C. If identified funding falls short, land use assumptions will be reassessed to assure that the level of service standards are being met or are adjusted to be consistent with the land use element.
- IV. Transportation improvements which are identified in the transportation plan shall be implemented concurrent with new development. Concurrent with development means that improvements or strategies are in place at the time of development, or that a financial commitment is in place to complete the improvements or strategies within six years.
- V. The county-wide transportation planning effort should produce a methodology and/or tools for jurisdictions to use in evaluating the impact of development proposals and identifying related transportation improvements.
- VI. The county-wide transportation plan should address:
 - A. Economic growth
 - B. Cost-effective accessibility for goods, services and people
 - C. The quality of life issues
 - D. Alternatives which will provide convenient and safe access to employment, educational,

- and recreational opportunities for citizens in both urban and rural environments
 - E. Transportation improvements necessary to provide for a balanced transportation system that will work effectively and safely over the next twenty years
 - F. Energy-efficiency in transportation systems
 - VII. An integrated transportation system is conceived as a cooperatively developed, integrated system of public transportation services, road facilities, transportation system management (TSM)/demand management programs, and land use policy. The integrated system should enhance mobility by providing a range of transportation choices for the public. The transportation plan element shall address air, water and land transportation facilities including but not limited to:
 - A. Airports and airstrips
 - B. Facilities related to commercial water transportation
 - C. Major and secondary arterial and collector roadways
 - D. Transit routes
 - E. Non-motorized modes of transportation including bikeways, equestrian ways, and pedestrian routes
 - F. Railroad systems
 - G. Bridges
 - H. Truck Routes
 - VIII. The Transportation Plan element will provide a summary and analysis of planning information including:
 - A. Land use assumptions which provide a summary of the current population, employment by type, recreation, and comprehensive land use designations, and the ratio of single and multi-family units to total housing units
 - B. Inventory and analysis of existing services and facilities should include:
 - 1. Function and scope of the facility (local/regional)
 - 2. Traffic and volume patterns including peak hour traffic congestion and current capacity
 - 3. Jurisdiction
 - 4. Accident problem areas
 - 5. Geometry and structural adequacy of arterial and collectors
 - 6. Traffic control devices
 - 7. Facility-specific plans and routes
 - 8. Origin and destination data and commute distance for the urban area
 - 9. Methods of evaluating changes
 - 10. Transit facilities
 - 11. Environmental and geographic limitations in the study area
 - 12. Demand management (car pools, public transit, etc.)
 - C. Level-of-service (LOS) standards for arterials and collectors
 - D. An analysis and forecast of future transportation needs including:
 - 1. An issues assessment and prioritization for the study area and for each facility
 - 2. A forecast of future travel demand for each facility
 - 3. An analysis of deficient transportation facilities based on adopted LOS standards
 - 4. An identification of facility expansion needs
- IX. Level-of-service standards for arterials, collectors and transit routes should be coordinated at a county-wide level.
- X. Transportation plans should be designed to have services that are specific to conditions to include growth, employment diversification, environmental quality, mobility needs, and quality of life and the future environment of Grant County. An integrated plan should help support the operations of buses, ride-sharing programs, para-transit, and special services within the region;

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and coordinate services that link Grant County to other counties.

- A. Air quality. Jurisdiction should be encouraged to look at a balanced approach to reduce vehicle exhaust emissions as a means of maintaining federal air quality standards. The transportation plan should address means of providing and promoting:
 - 1. Alternatives to the single occupant vehicle
 - 2. The use of cleaner fuels
 - 3. Optimum maintenance of individual vehicles
 - 4. Improved operating efficiency of the transportation system
- B. Water quality. Levels of harmful pollutants generated by transportation activities should be minimized and controlled to prevent their entry into surface and groundwater resources.
- C. Fish and Wildlife habitat. Where feasible, fish and wildlife habitat populations should be protected, restored and enhanced within transportation corridors.
- D. Wetlands. Natural wetlands which are adversely impacted by transportation-related construction, maintenance, and operations activities should be protected, restored, and enhanced in support of federal and state “no net loss” policies.
- E. Noise control. Strategies should be adopted to minimize noise impacts from transportation systems and facilities.

Complete Streets Ordinance

The City Council adopted Ordinance 2644 on March 13, 2012. This ordinance established a Complete Streets Program as follows:

The purpose of the Complete Streets Program is to ensure all users are planned for in the construction of all City transportation improvement projects. The City of Moses Lake encourages healthy, active

living, reduction of traffic congestion and fossil fuels, and improvement in the safety and quality of life.

The City of Moses Lake will plan for, design, and construct all new transportation projects to provide reasonable and appropriate accommodations for bicyclists, pedestrians, and transit users; except in the following cases:

- 1. Where the establishment would be contrary to public safety.
- 2. Where the cost would be disproportionate to the need or probably future use.
- 3. Where there is no identified need.
- 4. Where the establishment would be contrary to the Transportation Element of the Comprehensive Plan.

Goals and Policies Developed for the Comprehensive Plan

The following transportation goals and policies were developed for the Comprehensive Plan:

TRANSPORTATION FRAMEWORK GOALS

GOAL 1: THE CITY’S TRANSPORTATION SYSTEM SHOULD PROMOTE MOBILITY FOR MOSES LAKE’S CITIZENS AND WORKERS BY PROVIDING A RANGE OF TRANSPORTATION ALTERNATIVES. THE TRANSPORTATION SYSTEM SHOULD EMPHASIZE FACILITIES AND SERVICES WHICH SUPPORT AND ENCOURAGE TRANSIT, RIDE SHARING, BICYCLING, AND WALKING AS ALTERNATIVES TO THE USE OF THE AUTOMOBILE.

GOAL 2: THE CITY'S TRANSPORTATION SYSTEM SHALL PROVIDE OPPORTUNITY FOR INDIVIDUAL CHOICES AND PREFERENCES REGARDING PERSONAL TRANSPORTATION WHILE AT THE SAME TIME STRIVING TO REFLECT THE TRUE COST OF TRANSPORTATION ALTERNATIVES IN PLANS, POLICIES, AND REGULATIONS.

GOAL 3: THE CITY SHALL MAINTAIN A TRANSPORTATION PLANNING, FUNDING, AND IMPLEMENTATION FRAMEWORK WHICH ASSURES ADEQUATE PROVISION OF NEEDED INFRASTRUCTURE.

TRANSPORTATION AND LAND USE

GOAL 4: TRANSPORTATION PLANS, POLICIES, STRATEGIES, AND FACILITIES SHALL SUPPORT LOCAL LAND USE AND URBAN DESIGN OBJECTIVES.

POLICIES

- 4.1 New development and redevelopment shall encourage transit and be required to incorporate pedestrian supportive measures where appropriate, such as:
 - A. Providing pedestrian spaces
 - B. Providing adequate sidewalks, bikeways, pathways, and crosswalks
 - C. Preserving the connectivity of the pedestrian, bicycle, and street system
 - D. Traffic calming, reducing walkway crossing distances, and improving visual character of neighborhood streets
- 4.2 Emphasize planning of land uses which minimizes the demand for travel by:
 - A. Providing for a mixture of compatible and complementary uses in close proximity to

- each other
- B. Providing for a balance of employment and housing within the City limits.

4.3 Transportation improvements should be designed to include architectural features, landscaping, and artwork that compliment the surrounding natural and built environment where appropriate.

SERVICE STANDARDS AND CONCURRENCY

GOAL 5: ESTABLISH LEVEL OF SERVICE STANDARDS THAT PROVIDE SAFE AND EFFICIENT TRAFFIC MOVEMENT, INCORPORATE EVOLVING TRAFFIC PATTERNS, AND CONSIDER TRAVEL BY TRANSIT AND NON-MOTORIZED MEANS.

POLICIES

- 5.1 Evaluate and ensure the adequacy of the transportation system by establishing and monitoring transportation service standards. Service standards shall promote the following objectives:
 - A. Emphasize transportation system performance rather than focusing on individual locations
 - B. Vary to reflect differing development patterns and objectives
 - C. Vary according to the availability of alternative means of travel
- 5.2 Future updates of the Transportation Element should use multi-modal level of service, rather than exclusively vehicle level of service, since a transportation system needs to include all forms of transportation.

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- 5.3 Where no level of service is specifically adopted, the minimum level of service standard shall be D.
- 5.4 All proposed development shall be reviewed to ensure that adequate transportation facilities and/or strategies are in place or shall be in place within six years of the development's occupancy or operation, and that adopted City of Moses Lake standards will be maintained.
- A. Any development which would cause the level of service to fall below adopted service standards for any identified corridor or intersection shall not be approved.
 - B. Where the level of service is already below the adopted standard, new development shall not be approved where the result would be further degradation in the level of service.
- 5.5 The level of service standards for each intersection of concern are shown in Section 6.4, Table TE- 8 and 9.
- 5.6 Develop interlocal agreements with neighboring jurisdictions that require development within Moses Lake to mitigate significant impacts that it generates on the transportation system of neighboring jurisdictions in violation of that jurisdiction's concurrency service standard. Prior to entering into such an agreement, the City shall require that the concurrency service standards of the neighboring jurisdiction are consistent with the city's concurrency standards.
- 5.7 Develop interlocal agreements with neighboring jurisdictions that require development within the neighboring jurisdictions to mitigate significant impact that it generates on the transportation system of Moses Lake.
- 5.8 Any proposed development shall be deemed in compliance with the City's transportation concurrency requirements when the following

conditions are met:

- A. The development agrees to contribute its fair share to the prescribed corridor or intersection improvements
- B. The development is consistent with the type and size of development envisioned under the forecasted improvements plan
- C. The improvement plan for the corridor or intersection is deemed funded, feasible, and project completion is occurring consistent with the six-year TIP schedule.

TRANSPORTATION FACILITY PLAN

GOAL 6: ESTABLISH AND MAINTAIN A TRANSPORTATION FACILITY PLAN WHICH IDENTIFIES THE RECOMMENDED TRANSPORTATION IMPROVEMENTS NECESSARY TO SUPPORT THE ADOPTED LAND USE PLAN, INCLUDING FACILITIES FOR PEDESTRIANS AND BICYCLES.

POLICIES

- 6.1 Identify and implement a long-range Transportation Facility Plan which assures compliance with the City's adopted transportation level of service standards, while supporting growth consistent with the Land Use Plan. The facilities listed in Table TE-12A, TE-12B, and TE-13 represent the City of Moses Lake's Transportation Facility Plan and are incorporated into this section.
- 6.2 The Transportation Facility Plan shall serve as a guide for short-term transportation investment decisions. The transportation element of the City's Capital Improvement Program shall be consistent with the recommended improvements in the six-year Transportation Facility Plan.
- 6.3 The Transportation Facility Plan shall forecast

needed transportation improvements for the next 20-year period. The Transportation Facility Plan shall be updated at least every five years.

- 6.4 Since bicyclists and pedestrians make up 12% of all trips and 14% of traffic fatalities, the Transportation Facility Plan needs to adequately address these modes of transportation.
- 6.5 The City shall consider an additional lake crossing as an alternative to alleviate congestion on the Stratford Fill when the cost versus benefits to the public are justified. The cost and benefits shall be considered as funding alternatives become available. Staff shall continue to identify grants as potential funding sources and determine the city's eligibility.
- 6.6 Allocate resources in the City's transportation capital investment program according to the following priorities, in descending order of priorities:
 - A. Address public health and safety concerns (including neighborhood traffic protection and bicycle and/or pedestrian facilities)
 - B. Ensure adequate maintenance of existing facilities throughout the City
 - C. Provide growth-supporting improvements which support economic development
- 6.7 Identify public and private financial resources to emphasize multi-modal and non-motorized projects unless infeasible.
- 6.8 Develop and maintain financial mechanisms which assure that new development contributes its fair share to the mitigation of transportation impacts related to growth. Such mechanisms may include impact fees, local improvement districts, and transportation benefit districts.
- 6.9 Consistent with transportation priorities, the City should allocate adequate City resources to effectively compete in regional, state, and

federal grant funding programs.

- 6.10 Emphasize the development of joint projects, particularly where such partnerships will increase the likelihood of obtaining funding, such as those involving Grant County Public Works Department, the state, and/or a transit provider.

TRANSPORTATION FINANCE PLAN

GOAL 7: DEVELOP AN ADEQUATE AND EQUITABLE FUNDING PROGRAM TO IMPLEMENT TRANSPORTATION IMPROVEMENTS CONCURRENTLY WITH ANTICIPATED GROWTH.

POLICIES

- 7.1 To demonstrate the long-range adequacy of transportation revenues, the City shall maintain in the Comprehensive Plan a Transportation Element Financial Plan (TFP) which balances project costs and reasonably-expected revenue sources. The TFP Financial Element shall be updated on an annual basis to reflect changes in revenue availability and revisions to the TFP Project List.
- 7.2 In the event that the City is unable to fund the transportation capital improvements needed to maintain adopted transportation level of service standards, then the City shall take one or a combination of the three following actions:
 - A. Phase development which is consistent with the land use plan until such time that adequate resources can be identified to provide adequate transportation improvements
 - B. Reassess the City's land use plan to reduce

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the travel demand placed on the system to the degree necessary to meet adopted transportation service standards

- C. Reassess the City's adopted transportation level of service standards to reflect service levels that can be maintained given known financial resources

LOCAL PUBLIC TRANSPORTATION

GOAL 8: THE CITY SHALL ENCOURAGE DEVELOPMENT OF A PUBLIC TRANSPORTATION SYSTEM THAT ALLOWS PEOPLE TO CONVENIENTLY TRAVEL BETWEEN AND WITHIN LOCAL ACTIVITY CENTERS.

POLICIES

- 8.1 The City shall consider the need for transit facilities commensurate with planned public transit service when reviewing and issuing permits for proposed private developments and public projects.
- 8.2 Support the use of public transit for pedestrians and bicyclists by:
 - A. Encouraging safe, attractive, comfortable walkways and waiting facilities at public transit loading areas
 - B. Encouraging secure, covered, or enclosed bicycle storage facilities at future primary transfer stations
 - C. Encouraging GTA to provide for the transportation of bicycles on transit vehicles.

BICYCLE AND PEDESTRIAN TRANSPORTATION

GOAL 9A: THE CITY SHALL PROMOTE THE USE OF BICYCLE AND PEDESTRIAN TRANSPORTATION AS VIABLE ALTERNATIVES TO MOTORIZED TRANSPORTATION.

GOAL 9B: TO ALLOW PEOPLE TO BICYCLE SAFELY, CONVENIENTLY, AND PLEASURABLY TO EASILY COMPLETE TRIPS WITHIN FIVE MILES OF THEIR HOMES, AND TO MAKE STREETS AND ROADS "BICYCLE FRIENDLY" AND WELL-DESIGNED TO ACCOMMODATE BOTH MOTORIZED AND NON-MOTORIZED MODES OF TRANSPORTATION.

POLICIES

- 9.1 Consider pedestrians and bicyclists as transportation system users in the planning, design, construction, and maintenance of all roadway projects. Confirm project design prior to implementation by coordinating the planning, development, and funding of non-motorized systems with affected citizens, community councils, neighborhood associations, business groups, and other stakeholders.
- 9.2 Recognize the importance of walking, jogging, bicycling, and equestrian activities as recreational pursuits, and provide adequate opportunities for such activities.
- 9.3 Provide for adequate roadway, pedestrian, and bicycling connections in newly developing and redeveloping areas of the city, promoting both internal access and linkages with the rest of the city.

- 9.4 Provide short-term bicycle parking with racks at destination locations throughout the City including retail and recreation areas, parks, schools, and employment centers, so that bicyclists can be confident there will be a secure location to lock their bike when they reach their destination.
- 9.5 Promote bicycle parking in all new commercial, industrial, and multi-unit housing developments.
- 9.6 When reconstructing or reconfiguring a roadway or right-of-way, strive to maintain or improve existing pedestrian and bicycle non-motorized facilities.
- 9.7 Implement the Bicycle and Pedestrian Master Plan which provides for a safe, coordinated system of bikeways, walkways, and trails, including through routes, to meet existing and anticipated needs for non-motorized transportation.
- 9.8 Consistently sign on-street and off-street bicycle and pedestrian facilities to provide users with directional and distance information; on-street signage should comply with the Manual of Uniform Traffic Control Devices.
- 9.9 Update the Bicycle and Pedestrian Master Plan by 2014, and every five years thereafter.
- 9.10 During the review process for new development or redevelopment, ensure that sufficient right-of-way for bicycle improvements is secured consistent with the adopted Bicycle Plan.

CIRCULATION SYSTEM MANAGEMENT

GOAL 10: DEVELOP AND MAINTAIN A FUNCTIONAL CIRCULATION SYSTEM THAT SERVES THE EXISTING AND FUTURE POPULATION, CONSIDERS VEHICLE, BICYCLE, AND PEDESTRIAN SAFETY, TRAVELING EFFICIENCY, AND IMPACTS TO NEIGHBORHOODS AND ADJACENT PROPERTY.

POLICIES

- 10.1 Develop and maintain a cost-effective street system that serves the existing and future population, minimizes transportation delays and impacts to neighborhoods, and minimizes the disruption of the natural environment. All streets should include facilities for pedestrians and bicycles that are appropriate for the street classification and local conditions.
- 10.2 Maintain the master street plan for the City limits to guide both private and public development design decisions. The plan, shown in Figure TE-6, should be reviewed at least every two years, and updated when necessary.
- 10.3 Assure the provision of street and walkways as land is developed, by requiring property owners to install street improvements based on a minimum standard for the street classification.
- 10.4 Assure safe and convenient access by all travel modes to residential neighborhoods, employment and retail centers, and major community and government facilities from arterial streets. Development approval

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- should:
- A. Require that all property in the City be accessible from streets.
 - B. Maintain continuity of the street pattern by avoiding half streets and dead-end streets not having turnaround provisions.
 - C. Avoid the creation of excessively large blocks and long local access residential streets.
 - D. Encourage grid street patterns to provide better connections for all travel modes and reduce traffic congestion by spreading traffic among many available routes.
 - E. Provide for bicycle and pedestrian facilities.
- 10.5 Maximize the functionality and safety of the local circulation system while minimizing environmental impacts by observing the following guidelines:
- A. Control the location and spacing of commercial driveways and the design of parking lots to avoid traffic and pedestrian conflicts and confusing circulation patterns.
 - B. Emphasize property access to streets with lower classifications.
 - C. Discourage through traffic on local access streets.
 - D. Designate special routes for through truck traffic.
 - E. Extend uncompleted dead-end streets in order to improve access and circulation as development or redevelopment occurs.
 - F. Minimize grades by allowing the street alignment to follow the existing topography subject to environmental limitations.
 - G. Place high priority on the access needs of public safety vehicles.
 - H. Incorporate natural landscape features
- in the design of circulation elements.
- I. Incorporate sight distance requirements in new street design.
 - J. Expand and improve the pedestrian and bicycle network, especially on lower-volume streets and off-street trails.
- 10.6 When designing new or reconstructed arterial intersections and associated facilities (such as approach and turn lanes, lane channelization, and traffic control hardware/software), the facilities should be designed with the objective of providing a level of service consistent with the intersection operation for a minimum of 20 years into the future, as well as meeting the needs of pedestrians and bicycles.
- 10.7 The City shall support the safe and efficient movement of freight and goods within and through the City by incorporating the following into the City's development regulations:
- A. Identifying special truck routes within the City which provide adequate access to commercial areas.
 - B. Identifying special through routes for transporting hazardous material to minimize impacts of accidents.
 - C. Assuring that freight routing and movement is compatible with nearby land uses and does not conflict unreasonably with other types of travel.
 - D. Requiring that new private development provide for freight loading and unloading on site rather than on the public right-of-way.

REGIONAL COORDINATION

GOAL 11: THE CITY SHALL SUPPORT THE CONTINUOUS, COMPREHENSIVE, AND COOPERATIVE TRANSPORTATION PLANNING PROCESS CONDUCTED BY THE QUAD COUNTY REGIONAL TRANSPORTATION PLANNING ORGANIZATION (RTPO).

POLICIES

11.1 The City shall submit its local transportation plan to the RTPO for review and certification of conformity with the Regional Transportation Plan.

Coulee Corridor Scenic Byway Corridor Management Plan

The Coulee Corridor, including SR 17 through Moses Lake, was designated a Washington State Scenic Byway in 1967. In 1997, a Corridor Management Plan (CMP) was adopted which describes the byway's intrinsic qualities and how they are to be managed and interpreted, describes marketing strategies for the byway, identifies existing visitor services and strategies for future accommodations, describes the current condition of the route, discusses highway design standards, reviews the highway safety record and makes recommendations for improvements; and describes individual responsibilities for plan implementation and progress review. One of the purposes of the Corridor Management Plan was to receive recognition as a National Scenic Byway, which was achieved in 2005. The Coulee Corridor extends from Othello north to Omak.

CMP Goals

The Corridor Management Plan includes the following goals for the Coulee Corridor:

1. Support and contribute to a sustainable tourism

economy.

2. Collect and share corridor stories.
3. Provide a safe and enjoyable journey.
4. Leave a legacy of improvements.
5. Preserve and enhance corridor resources.
6. Contribute to a greater sense of community and region.
7. Develop and maintain an open and participatory planning process.

State Plans

The Washington Transportation Plan (WTP) is a comprehensive and balanced statewide transportation plan that establishes a 20-year vision for the development of the statewide transportation system, from state highways and ferries to sidewalks and bike paths, county roads, city streets, public transit, air and rail. The WTP identifies the total unfunded statewide need over 20 years, identifies significant statewide transportation issues, and recommends statewide transportation policies and strategies to the legislature and Governor (RCW 47.01.071(4)).

By law, the WTP is required to be consistent with the state's growth management goals, reflect the priorities of government, and address regional needs, including multimodal transportation planning. The WTP is based on the following six transportation policy goals established by the Legislature:

Economic Vitality: To promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy;

Preservation: To maintain, preserve, and extend the life and utility of prior investments in transportation systems and services;

Safety: To provide for and improve the safety and security of transportation customers and the transportation system;

Mobility: To improve the predictable movement

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of goods and people throughout Washington state;

Environment: To enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities, and protect the environment; and

Stewardship: To continuously improve the quality, effectiveness, and efficiency of the transportation system

Other Relevant Plans

Quad County Regional Transportation Planning Organization

The Quad County (QUADCO) Regional Transportation Planning Organization (RTPO) was formed in 1992 and encompasses Adams, Grant, Kittitas and Lincoln Counties. Its mandate is based on the RTPO planning provision of the Growth Management Act. QUADCO's role is to foster an ongoing planning and decision-making process that shapes the transportation system within that region, ensures that needs are addressed within the available resources, and coordinates among jurisdictions as well as between the public and private sectors.

In 2007, QUADCO updated the Regional Transportation Plan which describes the regional transportation system as it exists and projects its function 20 years into the future. The QUADCO plan compares the projected system with the system that is required to meet the mobility, economic, social, and environmental goals of the region, and provides strategies to shape the transportation system so that it can support those goals. The 2007 update added some new goals and objectives to the objectives adopted in the original 1994 plan.

QUADCO Goals

The Regional Transportation Strategy for the QUADCO region is to provide for all modes of transportation that can be developed, maintained,

and utilized in the most cost-effective manner. Therefore, the following Regional Transportation Goals and Policies have been created to guide the funding of QUADCO projects:

Goal #1: Encourage GMA counties to document that urban development is in areas where adequate public facilities and services exist or can be provided in an efficient manner.

Objective: Select projects in GMA counties that plan and make provisions for public facilities and services, such as transportation, so that they will be available at the same time as the development.

Goal #2: When appropriate, plan for multimodal transportation systems that are based on regional or sub-regional priorities and are coordinated with county and city comprehensive plans.

Objective: Select projects that insure that the RTP reflects the link between transportation facilities (roads, buses, trains, paths, waterways and trails), or that utilize more than one mode or which provide more opportunities to choose between modes.

Goal #3: Encourage economic development throughout the region that is consistent with adopted comprehensive plans, promote economic opportunity for all citizens of the region, especially unemployed and disadvantaged persons, and encourage growth in areas experiencing insufficient economic growth.

Objective: Projects should be economically viable. The project must meet the criteria specified for the funding source and must offer a viable solution to a recognized problem in a cost-effective manner.

Goal #4: Protect the environment and enhance the planning area's high quality of life, including air and water quality, and the availability of water.

Objective: Select projects that are consistent with a jurisdiction's environmental and/or critical areas standards.

Goal #5: Encourage involvement of citizens in the planning process and ensure coordination between communities and jurisdictions to reconcile conflicts.

Objective: Select projects that demonstrate consistency with locally-adopted public review policies.

Goal #6: Provide access to transportation for all citizens within the four counties.

Objective: Select projects that comply with local requirements of Title VI of the 1964 Civil Rights Act.

The QUADCO Regional Transportation Plan objectives retained from 1994 are:

1. General Objectives

- A. *Support economic growth and vitality.*
- B. *Ensure that growth and change in the transportation system within and near local jurisdictions are consistent with the regional and local comprehensive and transportation plans for those jurisdictions.*
- C. *Provide a tool for the communities to use that will guide transportation system development to make it consistent with and supportive of area comprehensive plans.*
- D. *Ensure consistency with environmental rules and regulations.*
- E. *Emphasize the movement of goods and people rather than the movement of vehicles.*
- F. *Wherever possible, preserve existing rail lines and reserve abandoned rail lines through compatible use in accordance with the Washington State Rail Transportation Plan.*
- G. *Consider the most cost-effective mode or*

modes of transportation for the overall good of the region.

- H. *Apply minimum standards for operating conditions, classification schemes, and performance measures uniformly on the regional system.*
- I. *Identify and implement strategies to resolve constraints to intermodal connections.*
- J. *Identify and implement strategies to take advantage of opportunities for new and enhanced intermodal connections and alternative transportation modes.*

2. Coordination

- A. *Ensure that transportation decisions and improvements crossing county boundaries or affecting more than one county or jurisdictions outside the region are coordinated across all affected counties and jurisdictions.*
- B. *Coordinate transportation decisions with affected agencies.*
- C. *Provide for coordination between the state and region on major transportation decisions with regard to all modes.*
- D. *Ensure that transportation decisions leading to the development of the nonmotorized component of the regional transportation system are coordinated.*
- E. *Communicate with the private sector to ensure that transportation decisions which have an impact on private facilities are coordinated with the affected industries.*

3. System Capacity and Improvement

- A. *Focus on minimizing inefficient routing and lowering travel time.*
- B. *Whenever possible and practical, improve the existing facilities in the transportation system rather than provide new facilities, except where new facilities promote alternatives to the Single Occupant Vehicle (SOV) and/or are otherwise demonstrated to have a lower cost and higher benefit.*

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- C. *Encourage major employers, activity centers, and others to establish programs for ridesharing and other transportation demand management systems.*
 - D. *Encourage consolidation of freight facilities wherever feasible and the location of freight facilities adjacent to appropriate existing arterials and transportation hubs.*
 - E. *Improve the safety and capacity of roadways, while retaining aesthetic features on tourist roads, particularly in Lincoln, Kittitas, and Grant Counties.*
 - F. *Focus on supporting and accommodating movement within the region and between the region and its adjacent areas, rather than traffic movements merely passing through the region or movements within limited local areas.*
4. Roadway
- A. *Guide changes in classification and future reclassification of roadways.*
 - B. *Accommodate the type of user most likely to benefit from improvements to the particular transportation facility.*
 - C. *Match the available funding with the necessary improvements.*
 - D. *Ensure consistency of roadway classification when jurisdiction changes between state, county, and municipal control.*
 - E. *Ensure that facilities with a higher level of classification enhance movement through the region while lower level classifications encourage access to and from the transportation facilities within the region.*
5. Public Transportation
- A. *Maximize mobility for population segments dependent on public transportation such as the disabled and elderly.*
 - B. *Provide a viable alternative to the single occupant vehicle (SOV).*
 - C. *Provide effective intermodal connections between passenger modes.*
 - D. *Raise awareness within the region of the role of public transportation.*
6. Land Use
- A. *Support urban growth boundaries, urban nodes, residential centers, and employment centers identified in the comprehensive plans of Kittitas and Grant Counties, and the Cities of Ellensburg and Moses Lake.*
 - B. *Address conditions under which access to adjacent land uses is to be enhanced and conversely, conditions under which movement between the regional transportation system and adjacent land uses is to be discouraged.*
 - C. *Identify and encourage preservation of transportation corridors for future rights-of-way.*
 - D. *Implement transportation improvements which enhance the likelihood that improvement of inadequate regional infrastructure, in particular, water, sewer, and other utility systems will occur.*

Key Regional Transportation Issues

In addition to setting goals and objectives, the 2007 QUADCO plan also identifies key transportation issues for the region. The relevant issues for the Moses Lake area are as follows:

1. Maintenance and preservation of roadways and bridges to maintain vital transportation links. This is the largest transportation expense anticipated in the next 20 years. Timing of maintenance and preservation investments is important to achieve the lowest life-cycle costs.
2. Safety, including narrow travel lanes and shoulders, poor sight distance and alignments. Roadway safety projects may focus on the following types of improvements:
 - A. Reducing head-on and across-median crashes
 - B. Improving design and operation of highway intersections
 - C. Reducing congestion-related crashes

- D. Reducing bicycle and pedestrian crashes
- E. Reducing speed limits to fit changing uses and conditions impacting the roadway.
- 3. Movement of freight and goods, especially agricultural products to market. Widening of SR 17 from I-90 south to US 395 has been identified as a major issue, since a north-south freight corridor is needed and widening would have the additional benefit of reducing the current high accident rate.
- 4. Funding, including that maintenance must compete with many other local needs such as law enforcement, parks, etc.
- 5. Railroads, including the abandonment of short-line rail service and the resulting higher volume of truck traffic or closure of businesses, and the possibility of rerouting rail service to the industrial areas on the north and east sides of Moses Lake.
- 6. Stormwater, especially the additional expense to comply with state and federal requirements, diluting existing transportation funding.
- 7. Airports, including commercial air service to Moses Lake, maintenance and preservation of runways and taxiways, and preventing incompatible land uses that would pressure airports to relocate.
- 8. Non-motorized facilities, including bicycle and pedestrian facilities to serve the populations even in the smaller communities.
- 9. Transit, especially for older adults, persons with disabilities, low-income individuals, and youth.
- 10. New facilities to accommodate growth in the Moses Lake area, including a connection from I-90 to SR 17 west of Moses Lake to serve growth on that side of the lake as well as provide alternate routes to the north and relieve congestion through Moses Lake, and an additional bridge over Moses Lake to improve access between the southeast and northwest portions of the City and relieve the many hours each day of congested conditions on SR 17 and Neppel Crossing.

QUADCO also adopted a Coordinated Public Transit Human Services Transportation Plan in 2014 with the goals of achieving mobility, providing quality transportation services, and ensuring efficiency through coordination. The Plan supports the following goals and objectives to provide access to transportation that strengthens communities and protects self sufficiency and general welfare of special needs populations:

- 1. Sustain and increase transportation services to the special needs populations.
 - A. Demand-Response Paratransit Services: Provide persons with disabilities, older adults, youth, veterans, and individuals with low income with transportation to access healthcare, nutrition, employment, shopping, and activities that improve their quality of life, where current ADA and fixed route and route-deviated transportation does not meet the needs of the vulnerable populations.
 - B. Fixed Route and Route-Deviated Transportation: Provide special needs populations and general public with consistent and reliable transportation to access core human services, healthcare, shopping, employment, and social activities by connecting isolated communities and connecting across counties, where current ADA and fixed route and route-deviated transportation does not meet the needs of the general public.
 - C. Worker Transportation: Provide transportation services through fixed route, route-deviated, demand-response, van pools, and worker driver programs to provide employees with cost-efficient transportation to employment.
 - D. Medicaid Transportation: Provide transportation to non-emergency medical services to eligible clients with fixed route, route-deviated, paratransit, and volunteer driver transportation.
- 2. Promote safe and accessible transportation services for special needs populations by

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educating and advocating specific benefits to the consumers.

- A. Client education and Advocacy: Provide one-on-one, group, and community training on transportation services that are available and how to access services.
 - B. Capital Equipment that Promotes Access and Safety: Purchase and maintain ADA-compliant vehicles, facilities and real estate, shelters, technology, and signage to accommodate special needs
3. Accommodate consumer needs by linking and coordinating transportation and human services for efficient utilization of resources.
- A. Special Needs Coalition: Provide on-going evaluation, coordination and integration of social service and transportation resources to serve more people with special needs.
 - B. Transportation Coordination and Integration: Create an integrated community transportation system through coordination of public transit and private/public transportation providers with human service providers.
 - C. Coalition to Coalition: Build partnerships with the surrounding Regional Transportation Planning Organizations to collaborate across jurisdictions.
4. Capital Equipment and Technology that Promotes Transportation Efficiencies: Maintain, update, and purchase technology that coordinates and integrates transportation and human service resources for mobility options.

Section 6.3 - Existing Conditions

This section provides an inventory of the existing transportation system which will be used as the baseline for assessing future system development. Recommendations to address deficiencies will be scheduled across the 20-year planning horizon.

Data Collection and Review

This element focuses on facilities operated by the City of Moses Lake as well as those operated by others within the UGA. Additional facilities and services that operate outside this area by other jurisdictions that are critical to the functioning of the transportation system are briefly described. Data for this section was obtained from the City of Moses Lake Municipal Services Department. Data for non-City-operated transportation systems was obtained from service providers and secondary documents.

Existing Transportation System

The City of Moses Lake and surrounding Grant County transportation system is unique because of the topography defined primarily by Moses Lake and the connecting arms. These areas have developed as a result of the transportation system, utility services, and topographic conditions.

The transportation system is built around the principal highways serving the area. I-90 on the south end of the area is the primary east-west highway serving the state as well as access to Moses Lake. SR 17 is a north-south highway connecting the Tri-Cities to Moses Lake and continuing on to the north. This route intersects I-90 at the southeast corner of Moses Lake and proceeds as a bypass route east and north of the downtown area, crossing the northerly end of Parker Horn and providing access

to the Grant County Airport before proceeding north to Ephrata. SR 171 (Broadway) provides a connection from I-90 to SR 17 through the peninsula area. This street connects the commercial area located south on the peninsula to the downtown area and continues northerly to the connection with SR 17. Access to the Westlake area is via I-90. WSDOT is responsible for maintaining an adequate Level of Service for I-90 and SR 17.

Moses Lake's transportation network is depicted in Figure TE-1. Stratford Road is a north-south arterial connecting the downtown area with the commercial and residential area north of Parker Horn and then continuing north as a county road. Pioneer Way is an arterial extending from the downtown area south through the residential area east of Pelican Horn and continuing south to I-90. Valley Road is an east-west arterial street serving the north side of Parker Horn in the residential area south of SR 17. Patton Boulevard, on the east side of the Grant County Airport, is a north-south arterial street which provides the main access to the Larson Subdivision, Big Bend Community College, and the Grant County International Airport. Wheeler Road connects the northeast side of the downtown area at Pioneer Way and extends easterly to the Wheeler Industrial area. West Broadway and Third Avenue are Moses Lake's main business streets in the central business district; however, the City has made some changes on Third Avenue to improve the pedestrian environment and discourage through traffic, which encourages through traffic to use West Broadway and Fourth Avenue instead. Traffic signals on Third Avenue were replaced with four-way stops, the four travel lanes with parallel parking were replaced by two travel lanes and either angle parking or wider sidewalks, with bump-outs at the corners and a mid-block crossing.

The county road system in the area provides a grid system east of Moses Lake with the principle routes being Road "L" NE, Road "N" NE, and Road "O" NE. East-west roads include Baseline Road located

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two miles south of I-90, and Road 7 NE on the north side of the urban area.

Functional Classifications

A functional classification defines the major role that a street serves within the total existing and future street network. In simple terms, highways, streets, and roads function as arterials, collectors, or local access. Arterials provide the highest degree of mobility and limited access to local property. Collectors generally provide equal emphasis upon mobility and land access. Local roads and streets emphasize land access in lieu of mobility. The following functional classifications are defined by the Washington State Department of Transportation (WSDOT):

Urban Principal Arterials carry the major portion of trips entering and leaving the urban areas as well as the majority of through movements desiring to bypass the central city. Principal arterials have either fully controlled or partially controlled access. Facilities within this category include interstate highways and state highways.

Minor Arterials distribute trips of moderate lengths within relatively smaller geographic areas and includes all arterials not classified as principal. Facilities provide land access but do not enter into identifiable neighborhoods.

Urban Collector streets provide land access and traffic circulation within residential neighborhoods, commercial, and industrial areas. Collectors differ from arterials as they may enter residential neighborhoods distributing trips from arterials through the area to the ultimate destination. Collectors also collect traffic from local streets in residential neighborhoods and channel it to arterials.

Local (residential) streets provide direct access to abutting land and access to the higher classification facilities. They offer the lowest level of mobility and through traffic is discouraged.

The City adopted a uniform standard for all work performed in the City. Moses Lake's Community Street and Utility Standards lists the following classifications of City streets:

- Primary streets are arterial streets that carry the majority of the traffic that enters and exits urban areas and that carry the majority of through traffic.
- Secondary streets are arterial streets that distribute trips of moderate lengths between different geographic areas of the city. Secondary streets include all arterials that are not otherwise classified as primary streets. Secondary streets provide access to identifiable areas of the city, but they do not enter identifiable areas of the city.
- Tertiary streets are streets that provide land access and traffic circulation within residential, commercial, and industrial areas of the city.

Tertiary streets differ from primary and secondary streets in that they may enter geographic areas of the city, to distribute traffic from the primary and secondary streets to their ultimate destination within the neighborhood.

Residential streets are all streets that are not classified as either a primary street, secondary street, or tertiary street.

Traffic Volumes

Average daily traffic (ADT) volumes for recent years are shown in Tables TE-2, TE-3, and TE-4, and the 2015 volumes are shown in Figure TE-2. These counts are essential in determining the use and importance of streets/arterials in the network. Traffic volumes establish the basis for the installation of traffic signals, lane widening, pedestrian and bicycle facilities, and channelization. Additionally they serve as a valuable tool in determining the existing levels of service of a street and/or intersection and the corresponding average total delay.

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TABLE TE-2 TRAFFIC COUNTS FOR PRINCIPAL ARTERIALS									
SITE CODE	STREET NAME	LOCATION	2015	2014	2013	2010	2009	2008	2007
0171-1	EAST BROADWAY	200' E/O BLOCK ST.				5,850	5,630	5,590	5,600
0171-2		50' W/O DATE ST.				3,860	4,340	4,760	4,730
0171-8		600' E/O THIRD AVE.	8,257	6,420	6,536	6,070	3,550	3,620	
0171-9		200' S/O ROAD 4 NE.	5,727	4,925	4,874	4,830	5,510	5,680	
0171-3	WEST BROADWAY	600' E/O THIRD AVE.	21,992	18,684	20,212	16,210	19,650	18,600	17,350
0171-4		250' W/O LOCUST LN.				16,015	18,770	18,120	
0171-5		300' E/O YAKIMA AVE.	16,237	14,765	14,887	13,540	14,840	13,260	13,960
0171-6		200' N/O BRIDGE				no ct.	14,520	13,540	13,440
6071-1	PIONEER WAY	200' S/O THIRD AVE.				14,890	12,530	17,038	19,760
6071-2		100' N/O WALNUT AVE.	15,641	10,844	15,671	14,680	16,170	15,870	8870*
6071-3		300' S/O WALNUT AVE.				14,590	13,100	16,460	18,780
6071-4		300' S/O OLIVE AVE.				10,970	15,460	15,040	12,910
6071-5		300' N/O NELSON RD.				13,780	15,870	13,280	16,760
6071-6		800' S/O NELSON RD.				no ct.	12,080	11,420	14,190
6071-7		300' S/O SHARON AVE.	13,618	10,274	12,723	12,390	14,260	13,030	14,350
6067-1	STRATFORD ROAD	150' S/O WAL-MART ENTR.	23,126	20,302	23,923	21,300	24,950	21,280	
6067-2		100' N/O SR 17	14,377	16,813	16,009	14,600	15,830	16,660	17,050
6067-3		NEPPEL CROSSING	28,817	28,399	28,612	29,274	29,630	30,120	36,000
6070-1	WHEELER ROAD	300' W/O SR-17	10,336	9,194	9,763	8,820	10,040	10,160	
6070-2		500' W/O WISER LANE	10,366	10,120	10,849	8,950	9,860	10,520	10,120

TABLE TE - 3 TRAFFIC COUNTS FOR MINOR ARTERIALS									
SITE CODE	STREET NAME	LOCATION	2015	2014	2013	2010	2009	2008	2007
6083-3	CLOVER DRIVE	300' S/O SR-17				1,641	1,790	1,560	
6055-1	DIVISION STREET	150' S/O FOURTH AVE.	7,830	9,868	9,176	8,030	9,020	9,260	4700*
6055-2		50' S/O EIGHTH ST.				no ct.	12,300	12,300	12,290
6055-3		400' N/O NELSON RD.	9,303	5,776	9,113	6,760	8,850	7,910	9,430
6055-4		400' S/O NELSON RD.				no ct.	6,520	6,850	3540*
6055-5		200' S/O I-90	5,390	5,323	4,221	4,390	4,920	4,850	
6052-1	JONES AVENUE	300' E/O DIVISION ST.				510	650	710	
6087-1	KITTELSON ROAD	150' E/O SR 17	7,870	8,048	9,362	6,400	9,320	7,920	8,540
6087-2		200' W/O SR 17				6,850	7,720	8,050	8,770
6058-1	NELSON ROAD	150' E/O PIONEER WAY	5,988	7,275	6,784	4,900	5,300	5,830	
6058-2		200' W/O PIONEER WAY	8,063	8,648	6,172	4,950	5,450	5,420	
6058-3		200' W/O BALSAM ST.				4,750	4,900	5,640	
6066-1	ROAD 4 NE.	100' E/O EAST BROADWAY.				1,680	2,180	2,250	
6066-2	ROAD K NE	500' N/O ROAD 4 NE.				3,540	3,540	3,471	
6053-4	THIRD AVE.	200' E/O W. BROADWAY	6,246	5,847	6,631	5,760	7,190	7,250	6,580
6065-1	VALLEY ROAD	500' W/O STRATFORD	15,380	16,472	16,458	14,880	15,450	15,670	15,750
6065-2		800' E/O PAXSON DR.	9,694	6,848	9,131	8,960	10,000	9,580	9,360
6077-1		200' E/O PARK ENTR.	5,421	5,772	5,940	5,180	6,180	6,000	5,590
6053-1	YONEZAWA BLVD.	600' E/O DIVISION STREET				2,680	2,820	2,500	
6053-2		180' W/O SR-17	4,577	3,914	4,307	2,540	3,480	2,190	1,100

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TABLE TE - 4 TRAFFIC COUNTS FOR URBAN COLLECTORS									
SITE CODE	STREET NAME	LOCATION	2015	2014	2013	2010	2009	2008	2007
6067- 4	ALDER STREET	150' S/O BROADWAY	6,385	5,955	9,259	7,680	8,820	9,510	
6062- 1	BURRESS AVENUE	100' S/O MAIN ST.				2,480	2,510	3,080	3,150
6056- 1	CENTRAL DRIVE	100' S/O LOOP DR.				3,060	3,390	2,830	2,930
6056- 2		50' S/O PINE DR.				2,680	2,500	2,170	1,000
6056- 3		800' N/O VALLEY RD.	2,916	1,505	2,806	2,440	2,930	3,000	
6056- 4		200' W/O EVELYN DR.				2,540	2,930	2,170	3,400
6083- 1	CLOVER DRIVE	200' N/O NELSON RD.				1,110	1,230	1,250	
6083- 2		200' N/O FAIRBANKS DR.				910	930	900	
6051- 1	DOGWOOD ST.	150' S/O THIRD AVE.	5,151	5,711	5,531	4,330		5,720	4,770
6051- 2		250' N/O 'A' STREET				3,800	4,050		2,960
6059- 1	FIFTH AVENUE	800' E/O BALSAM ST.	5,133	5,020	4,845	4,930	5,120	2,850	
6057- 1	GRAPE DRIVE	200' S/O GARY ST.	8,962	9,637	9,499	7,820	8,500	6,950	
6057- 2		600' N/O VALLEY RD.	5,010	5,175	5,385	4,540	4,720	4,160	3,970
6057- 3		200' S/O VALLEY RD.				2,400	2,320	1,000	2,070
6057- 4		200' S/O DALE RD.				1,060	1,190		2,300
6069-4	HANSEN ROAD	300' S/O WESTSHORE DR.	2,723	2,608	2,345	2,150	2,530	2,550	2,460
6060- 1	HILL AVENUE	150' W/O PIONEER WAY	3,603	3,680	3,435	3,840	4,170	3,890	
6060- 2		150' E/O PIONEER WAY				4,070	3,990	6,270	
6073- 1	IVY AVENUE	150' S/O THIRD AVE.				no ct.	4,510	3,430	3,200
6073- 2		300' S/O 'C' STREET				1,200	1,980	1,530	1,330
6061- 1	LAKESHORE DRIVE	100' S/O HERMIT ST.				720			
6061- 2		50' S/O WANAPUM DR.	3,877	3,820	3,546	2,240	3,060	1,930	1,650
6054- 1	LOCUST LANE	400' E/O BROADWAY				1,990	2,810	2,560	2,540
6061- 7	PENINSULA DRIVE	150' S/O LOCUST LN.				960	1,120	1020	1,100
6061- 6		100 ' S/O BURRESS				1,880		1,920	2,150
6061- 3		100' NORTH OF I - 90	1,947	1,901	1,753	no ct.	1,650	1,580	1,550
6061- 5		4106 PENINSULA DR.				250			
6061- 4		150' S/O WANAPUM DR.	2,080	1,872	1,937	1,730		1,820	1,790
6075- 1	PRICHARD DRIVE	300' W/O LAGUNA DR.	3,956	3,840	3,670	3,350	3,780	3,680	3,740
6064- 1	WANAPUM DRIVE	400' W/O WAPATO DR.				1,210		1,260	1,520
6068- 1	WESTLAKE DRIVE	700' W/O MONTANA ST.				300	310	300	300
6069- 1	WESTSHORE DR.	100' S/O PARK ENTR.	2,517	2,481	2,345	2,160	2,430	2,430	2,340
6069-2		150' N/O FAIRWAY DR.	2,398	3,183	3,310	2,960	3,600	3,560	3,440
6069-3		50' S/O HANSEN ROAD	2,519	2,473	2,578	2,060	2,430	2,450	2,430

State Highways

Several Department of Transportation highways are located with the City of Moses Lake, including Interstate 90, State Route 17, and State

Route 171 (East and West Broadway.) These facilities have all been maintained, repaired, or improved recently as shown in Table TE-5.

Table TE - 5		
Year Completed	Project	Description
2011	SR 171 - Moses Lake - Paving	Repaved 3.68 miles of SR 171 (East and West Broadway from I-90 to SR 17) to preserve the load-carrying capacity of the roadway and upgraded sidewalk ramps to comply with ADA
2009	I-90 Paving	Repaved 5 miles of I-90 from Broadway to 2 miles east of SR 17 interchange, restoring load-carrying capacity.
2009	SR 17 - Moses Lake North Paving	Repaved 5 miles of SR 17 from I-90 to Randolph Road (not including the 3-mile section from Pioneer Way to Stratford Road that was widened in 2007)
2009	SR 17/SR 282 - Moses Lake to Ephrata - Paving & Passing Lanes	Added 4 1/2 miles of passing lanes on the main route from Moses Lake to Ephrata
2009	SR 17 - Grant County Airport North Paving	Resurfaced 8 miles of SR 17 north of the Grant County Airport to increase weight-carrying capacity and provide a smoother and safer ride.
2009	SR 282 - Ephrata South Paving	Repaved 5 miles of the main route from Moses Lake to Ephrata
2007	SR 17 - Pioneer Way to Stratford Road	Widened 3 miles of SR 17 from 2 lanes to 4. Prevented a 2020 predicted average afternoon travel speed of 15 mph. Increased the average afternoon travel speed from 30 mph (2006) to 42 mph (2010).
2001	SR 171 - Moses Lake Paving	Repaved 3.68 miles of West and East Broadway, from I-90 to Pioneer, with stronger asphalt to preserve the load-carrying capacity of the roadway.

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Non-motorized system components

Pedestrian Facilities

Pedestrian facilities within the City of Moses Lake are mainly composed of sidewalks constructed in association with streets. For many years, the design standard was for the sidewalk to abut the curb. However, that standard was changed in 2005 to require a 5-foot planter strip with street trees for all new residential streets, to provide a buffer for pedestrians and to visually narrow the street to slow traffic. Minimum right-of-way widths were also reduced. Current design standards for residential streets include provisions for a minimum five-foot-wide sidewalk, and minimum six-foot-wide sidewalk for arterials. New streets in commercial or industrial areas may be built with a 5-foot-wide planter strip adjacent to a 5-foot-wide sidewalk, or with no planter strip and an 8-foot-wide sidewalk. Areas developed in the C-1, Central Business District must provide sidewalk from back of curb to front property line, typically at least 10 feet. Many but not all existing residential, commercial, or industrial areas have sidewalks. Some bicycle paths, described below, also serve as pedestrian pathways. Some areas have been developed with Activity Trails, usually consisting of a 10-foot or wider sidewalk. See Figure TE-3.

Pedestrian and bicycle facilities that provide access to schools are eligible for grants through the Safe Routes to Schools (SRTS) program. This state program provides technical assistance and resources for cities, counties, schools, school districts, and state agencies for improvements that get more children walking and bicycling to school safely, reduce congestion around schools, and improve air quality. The area around 13 Moses Lake schools have been improved through this program, including the high school, both

middle schools, and nine elementary schools. Improvements can include sidewalks, flashing pedestrian beacons, curb extensions, pedestrian refuge islands, and education programs.

Bicycle Facilities

The City's Activity Trail Map in Figure TE-3 shows the existing and future bicycle facilities within the City and surrounding area. The bicycle network was designed to serve and interconnect various sectors of the City and County with major points of interest. The trail map shows existing and future bicycling facilities, including bike lanes, multi-use paths, sharrows, and wide shoulders.

In February 2012, the Moses Lake City Council adopted a resolution to use the NACTO Urban Bikeway Design Guide as a reference in the development and improvement of new and existing bicycle facilities.

In 2016, Division Street was restriped with bike lanes after the scheduled chip seal project eliminated the previous striping. Restriping to two travel lanes and a center turn lane is a safety improvement for all users of the street, and in this case, the street was wide enough to accommodate bike lanes as well.

Park and Ride Lots

WSDOT operates two Park and Ride Lots in the Moses Lake UGA. The lot located on SR 17 just south of I-90 has 56 regular spaces and 3 handicapped spaces. The second lot located north of the city on SR 17 along Randolph Road near the entrance to the Grant County International Airport has 21 spaces and 2 handicapped spaces. Both Park and Ride lots would benefit from additional parking spaces, striping, and improved lighting at night for better security.

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TABLE TE-6 Activity Trail Counts (Weekly Average)							
	2015	2014	2013	2012	2011	2010	2009
Yonezawa Blvd & Leanne North Side	222	308	318	607	330	568	36
Yonezawa Blvd & Leanne South Side	111	117	192	258	173	279	59
East Side of Division St 200' south of 7th	387	518	466	2051	1416	732	76
Nelson Rd. & Mail box at 515 Nelson	930	665	505	948	1247	939	121
Neppel Park	358	333	453	1236	717	845	146
I-90 Fishing Bridge	1016	1131	828	1752	2040	---	---
Blue Heron Park				---	---	753	223
Gavinski Trail at Blue Heron Park	514						
Stratford Rd on Neppel Crossing	1446	783	1073	1790	1296	1966	354
West side of Peninsula Dr. 100' south of Pacific		583	189	551	597	403	39
West side of Stratford Rd. 100' south of Highway 17 overpass				460	537	132	96
Wanapum Dr. west of Wapato Dr.	80	80	122	303	192	105	21
Wanapum Dr. east of Wapato Dr.		135	162	210	283	178	28
Broadway and I-90				312	369	258	42
Larsen Trail				---	---	58	31
Peninsula & Lakshore		99	54	158	448	---	---

Other transportation systems

Airport Facilities

The Moses Lake Municipal Airport is classified as a General Aviation Airport and is located in the Wheeler industrial area east of town. The facility has one north-south asphalt runway of 2,500 feet in length by 50 feet in width (See figure TE - 4 for location). The airport uses a uniform communication frequency (UNICOM), has medium intensity runway lighting (MIRL), and precision approach path indicators (PAPI), a system designed to furnish the pilot visual approach slope information to provide safe descent guidance for runway 16/34.

The airport serves general aviation aircraft and commercial crop spraying operations. The airport has a Layout Plan completed in 2010 by airport planning firm Airside.

Fixed-base operators also run a small flight training operation and an aircraft repair facility. According to the 2010 Layout Plan, there are 49 aircraft based at the Municipal Airport, and approximately 25,000 annual aircraft operations. Future projections indicate as many as 75 based aircraft and 32,000 aircraft operations.

The Port of Moses Lake operates the Grant County International Airport located north of town (See figure TE-4 for location). The facility

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is classified as a Commercial Service facility. Formerly the Larson Air Force Base, this is now a world-class heavy jet training and testing facility used by the Boeing Company, Mitsubishi, the U.S. Military, and many air carriers from around the world. The airport has 4,700 acres and five runways. The main runway is 13,500 feet long and 200 feet wide. The remaining four runways range from 10,000 feet by 100 feet down to 2936 feet by 75 feet. Because of the acreage and the length of the runways, it is one of the largest airports in the nation.

There is currently no passenger service at the airport. The WSDOT Aviation System Plan Database records 117 general aviation aircraft based at the site, 63,315 aircraft operations (including general aviation, military, air carrier, and air taxi), and 530 tons of air cargo in 2011.

Airside facilities also include 21 taxiways, 3.5 million square feet of aprons, fuel distribution and storage systems, airport surveillance, radar, and a fire training facility. Landside facilities include a terminal building with capacity for 132 passengers, control tower, and over 40 buildings totaling about 1,000,000 square feet.

Rail Freight Facilities

Moses Lake is served directly by one railroad operated by Columbia Basin Railroad. This is a freight line which dead ends at the Port of Moses Lake. Columbia Basin also has a line running east of the City through Wheeler serving the Wheeler industrial corridor. Freight service is provided to the Wheeler Corridor as needed by the industries.

Passenger service is available in Ephrata, approximately 22 miles northwest of Moses Lake.

Public Transit System

Grant Transit Authority (GTA), the public transportation provider for Grant County, started with a demonstration project in 1995. In 1996, voters approved a 2/10 of one percent tax increase to fund public transit services in Grant County. GTA provides bus service throughout the City of Moses Lake and into the County (see Figure TE-5). Currently seven weekday routes and two weekend routes are operational. Local weekday service is provided by routes 50, 51, and 53, while weekend routes are 54, 55, and 56. Intra-county service is provided from Moses Lake to the cities of Warden, Royal City, George, Quincy, Ephrata, and Soap Lake. In 2013, GTA had 287,722 boardings including fixed routes and paratransit for special needs individuals. Current fares are \$1.00 for adults and \$0.50 for seniors and people with disabilities. Monthly passes are also available for \$15 to \$25. Routes are operated weekdays throughout the day with three routes on weekends. Currently, all GTA buses can accommodate 3 bicycles. At this time the Surf 'n Slide Water Park, located at 401 West 4th Avenue, functions as a transfer station, although no facilities are present other than a bus shelter.

In 2011, GTA completed a new Operations and Maintenance facility located at 8392 W. Westover Blvd. In 2015, GTA submitted permits to build an intermodal Transit Center to be located in the downtown area on 5th Avenue, between Division Street and Ash Street. The proposed facility will serve as a hub for cyclists, pedestrians, and public transit, and will have an electric vehicle charging station, bicycle storage lockers, public restrooms, enclosed waiting area, and a taxi drop-off/pick-up area.

A second GTA transfer location is at Big Bend Community College, to the north of Moses Lake..

In 2005, GTA developed a vanpool program.

Currently, there are 15 vanpool groups for commuters who share similar commute patterns where transit is not an option.

Connections with the urban public transportation systems available outside the county are provided by Greyhound and Northwest Trailways. Greyhound has 8 passenger service buses daily: four to Seattle and four to Spokane, while Trailways provides four buses daily to the smaller cities. The depot for both bus lines is located at 1819 E. Kittelson Road.

Other public transportation is primarily human-services related. People for People Community Services offers transportation services and connector services for the general public, low-income individual, seniors, and those with disabilities. They also provide employment training and transportation assistance. Serving Grant, Adams, and Lincoln counties with transportation services, People for People coordinates transportation services through contracts with GTA, WSDOT, Aging and Adult Care of Central Washington, Moses Lake Clinic, Columbia Basin Cancer Foundation, and federal, state, and local funding.

Trucking Lines

Grant County and Moses Lake are served by at least six major and several smaller trucking companies that serve the industrial, agricultural, and commercial needs of the area.

A telephone survey conducted in 2012 indicated that the majority of the trucking companies do not follow any established routing, but instead use a point “A” to point “B” most direct route approach. Part of the trucking business is agriculturally-based, and hours of operation fluctuate with the agricultural seasons. From this it would appear that the greater presence of farm-based truck traffic would occur during the spring, late summer, and early fall months versus the late fall and winter months. Ordinance 1399 of the Moses Lake Municipal Code establishes limits on truck loads and routes. Routes approved as “through truck routes” are SR 17 and I-90 within the Moses Lake City limits. Truck traffic on other arterials or residential streets are specifically authorized by this ordinance.

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Section 6.4 - Level of Service and Concurrency

LOS Development

Level of Service (LOS) standards are a mechanism for establishing the community’s expectations for the performance of specific aspects of the transportation system. Service standards have been typically associated with performance measures for congestion at signalized intersections which focus on the performance of the transportation system from the point of view of the auto motorist. The city has chosen other types of service standards for streets, such as those which measure corridor system speed and delays, to establish service standards and concurrency.

The Growth Management Act requires that jurisdictions forecast traffic volumes associated with growth and determine transportation concurrency levels. The concurrency tests are intended to insure that the development of transportation facilities and operations are occurring consistently with growth and develop-

ment. A jurisdiction must show that it is physically and financially feasible to accommodate traffic from new development.

The Highway Capacity Software (HCS) traffic model program was used to review concurrency at individual unsignalized intersections.

LOS is expressed using a scale with letter designations ranging from A to F. Level A represents the highest level and the best operating conditions, and LOS F is the lowest level. The computerized traffic model replicates the operating conditions of the network and is used to assign an LOS to each street segment and intersection. Table TE - 7 generally defines the LOS rating scale.

Concurrency and LOS Measurement

Methodology

HCS (Highway Capacity Software) 2010 was used which implements the 2010 Highway Capacity Manual procedures for analyzing various types of intersections, roadways, and highways. The primary standard is delay time

Table TE - 7 Street Level of Service Rating Scale			
LOS	Signalized Intersections	Two-Way Stop-Controlled	General Description (Signalized Intersections)
	Average Total Delay (Seconds)	Average Control Delay to Minor Street Traffic (Seconds)	
A	< or = 10	< or = 10	Free flow
B	>10 and < or = 20	>10 and < or = 15	Stable flow (slight delays)
C	>20 and < or = 35	>15 and < or = 25	Stable flow (acceptable delays)
D	> 35 and < or = 55	> 25 and < or = 35	Approaching unstable flow (tolerable delay)
E	> 55 and < or = 80	> 35 and < or = 50	Unstable flow (intolerable delay)
F	> 80	> 50	Force flow (jammed)
Source: Highway Capacity Manual 2000			

at intersections.

Grant County opted to use a volume to capacity method to evaluate the existing and future transportation system. The Transportation Element of the Grant County Comprehensive Plan identified all roadways in the county with an existing and future Level of Service “A”. The element further sets a LOS standard at “D” for Roads Within Urban Areas/Urban Non-Interstate Highways. Because this method only measures the theoretical capacity of the roadway, it is not an appropriate method for urban roadways because the amount of turn traffic and intersections which reduce the theoretical capacity of the roadway are not considered.

The Washington State Department of Transportation sets the Level of Service standard for highways of statewide significance in Grant County, including I-90 and SR 17 north to the Grant County Airport, as D for urban and C for rural. Highways of statewide significance are statutorily exempt from the concurrency requirement.

Concurrency

The City has determined two arterials and four intersections of concern which shall be used to measure concurrency for the 20-year Comprehensive Plan. These are discussed below:

Valley Road Corridor

Valley Road connects the Cascade Valley area with Stratford Road (a major retail arterial and major route into downtown Moses Lake). Vacant land adjacent to Valley Road, located both in the County and the City, is expected to be developed with residential uses. Valley Road is essentially the only route between Cascade Valley and the rest of Moses Lake. Therefore, this street has been chosen for concurrency evaluation.

Pioneer Way Corridor

A major route through downtown Moses Lake, Pioneer Way connects downtown businesses, area residences, medical facilities, and schools. The route also carries some tourism traffic. This route has been included for concurrency evaluation from Wheeler Road to Nelson Road.

Wheeler Road Intersections at Road “L” NE and Road “N” NE

Wheeler Road provides access to major employers for both employees and trucks. Although the road generally allows for free-flowing travel, operations become impacted during peak hours. The concurrency evaluation includes the intersections of Road “L” NE and Road “N” NE with Wheeler Road. This corridor was studied in the October 2012 Wheeler Road Corridor Analysis by Gibson Traffic Consultants and Forsgren Associates.

Westshore Drive/Hansen Road/Fairway Drive Intersection

Most existing and expected future traffic on the far west side of the lake (north of I-90) passes through this intersection. The concern is that future development in the area will overwhelm the intersection. This is a “Y” intersection that needs to be reconstructed into a T-intersection. Westshore Drive needs to “T” into Hansen Road south of the existing intersection.

Westlake/Hansen Road/Frontage Road Intersection

Considering the full build-out in this area, the need for significant improvements at the Hansen Road/I-90 interchange becomes apparent. Assuming the existing infrastructure is not improved, these intersections will have a “F” level of service when the surrounding area is built out. There are many potential solutions to improve the operation of this interchange. At this point it would be premature to eliminate or promote any particular potential alternative.

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Any future interchange project should attempt to address the intersection spacing issue between the ramps on the north side of I-90 and N. Frontage Road, along with the capacity issues.

Threshold LOS and Concurrency Standard

The level of service identified in Tables TE-8 and TE-9 will serve as the Concurrency Standard for the intersections of concern. Any specific development which reduces the LOS below those identified will be required to either rectify the situation, present an alternative development plan, or not be allowed to proceed until a financially sound strategy is in place and approved by all parties to ameliorate the condition.

RCW 47.06.140 states the interstate highway system and interregional state principal arterials (I-90 and SR-17) are facilities of statewide significance. GMA requires that LOS standards for state-owned transportation facilities

be included in the plan. The Washington State Department of Transportation retains authority to set the LOS standards for these facilities, and has set them at D for urban highways and C for rural highways. However, the concurrency requirements of the Act do not apply to these state facilities.

GMA and SEPA

The standards contained in this document are intended to measure concurrency of traffic operations along arterials of concern based on planning-level forecasts. These standards do not, however, substitute for SEPA reviews as deemed necessary by the City. SEPA traffic reviews may entail additional analyses of traffic operations affected by specific projects. The City may request proponent analysis of intersections and arterials not included in the Transportation Element of the Comprehensive Plan and may require mitigation measures to ameliorate unacceptable traffic operations that are caused by their development.

Table TE - 8 Level of Service Standard for Signalized Corridors		
Corridor/Intersections	Intersection Average Delay (sec.)	LOS
Valley Road Corridor¹		
Valley Rd./Grape Dr.	37.5	D
Valley Rd./Central Dr.	28.6	C
Valley Rd./Stratford Rd	132.2	F
Pioneer Way Corridor		
Pioneer/Wheeler /Fifth	48.6	D
Pioneer/Hill Ave.	23.2	C
Pioneer/Nelson Rd.	37.3	D
¹ Poor operations at Valley Rd/Stratford Rd account for the reduced speed and increased average delay. Over time, drivers may choose to divert to another route, reducing demand at this congested intersection. However, without careful study, it is not prudent to identify an alternative corridor; doing so might impact area residents by circulating unwanted traffic through neighborhoods.		

Table TE-9 Level of Service Standards for Unsignalized Intersections	
Intersections	LOS
Wheeler Rd/Road "L" NE	C
Wheeler Rd/Road "N" NE	C
Westshore Dr/Hansen Rd/ Fairway Drive ¹	B
Westlake/Hansen/Frontage	B
¹ Note: This intersection is an existing safety concern that requires correction in the near future and is not driven by LOS.	

Impact Fees

The concurrency standards are not tied specifically to impact fees or mitigation measures. Currently the City does not have an adopted traffic impact fee ordinance. The City prefers to analyze impacts directly related to a project through SEPA and GMA review and request specific mitigation measures for traffic impacts.

These concurrency standards do not preclude future adoption of a traffic impact fee ordinance. Such fees may become necessary over time to mitigate growth impacts for which State and Federal funding may be unavailable.

Existing Conditions

Analysis Results

Traffic along the corridors and at the study intersections discussed above has been analyzed for 2010 conditions, with some updates to 2015-16. This provides the baseline for concurrency evaluations of future traffic and projects.

The results of existing conditions analysis is shown in Tables TE-10 and TE-11. Table TE-10 describes the results for the signalized corridors. As conditions change at the intersec-

tion, the signal timing will continually need adjusting in order to maintain signal light optimization.

Existing Corridor Deficiencies

Table TE-10 indicates that, with optimized signal timing, the corridors can operate quite well with existing traffic volumes. Average delays are low and system speeds reasonable. The analysis of existing conditions indicated no deficiencies in the corridors identified.

Intersection Analysis

Tables TE- 11 and 12 describe the results for the three intersections that have been studied individually. Two of these intersections are along Wheeler Road.

The Wheeler Corridor intersections are important to the City’s economic health. Many people who live in the City and County are employed by industries along Wheeler Road. If their commute times were significantly increased in the future, then the spirit of concurrency would not be met.

Table TE-12 shows the results of the 2012 analysis of the Wheeler Corridor intersections. The LOS was based on the average for the stopped approach with the highest delay. It should be noted that Wheeler/Road L is already at the specified LOS standard, so improvements will be needed soon to accommodate future growth without dropping the LOS.

The individual intersection analyses were done with the HCS methodology.

Table TE -11 indicates the level of service for two movements at the unsignalized intersections. At unsignalized intersections, there is no “overall” intersection level of service. Levels of service are only provided for those movements that conflict, such as left turns, since those

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cars are the ones that experience delay. The average delay for each of the movements is also shown. Only the movements of concern are

identified in the table.

Table TE - 10 Existing Conditions of Signalized Corridor Analysis (2010)		
Corridor/Intersections	Intersection Average Delay (sec.)	LOS
<i>Valley Road Corridor</i> Valley Rd./Grape Dr. Valley Rd./Central Dr. Valley Rd./Stratford Rd (2015)	14.3 14.2 39.6	B B D
<i>Pioneer Way Corridor</i> Pioneer/Wheeler /Fifth Pioneer/Hill Ave. Pioneer/Nelson Rd.	25.9 13.2 15.9	C B B
Note: Data assumes optimal signal timing. Although not all corridors operate optimally, the signal timing will be improved.		

Table TE - 11 Existing Conditions of Individual Intersection Analysis (2010)			
Intersections	Intersection Average Delay	Movement	LOS
Westshore Dr/Hansen Rd/Fairway	10.9	Hansen Rd. Northbound	B
	10.0	Fairway Dr. Eastbound	A

Table TE-12 Existing Conditions of Wheeler Road Intersections (2012)			
Intersections	Intersection Average Delay	Time	LOS
Wheeler Rd. / Road "L" NE	15.9	AM Peak Hour	C
	17.6	PM Peak Hour	C
Wheeler Rd/Road "N" NE	12.4	AM Peak Hour	B
	12.6	PM Peak Hour	B

Existing Intersection Deficiencies

The analysis of existing conditions at the identified intersections did not indicate deficiencies.

Section 6.5 - Future Deficiencies and Recommendations

Traffic operations were analyzed after the addition of future traffic growth and changes in land use patterns for two periods. Both six year and twenty year forecasts were evaluated. The new traffic volumes were tested using the HCS methodology for intersections.

Future Deficiencies

The six year forecast done in 2010 indicated three intersections would fall to LOS E or F by the year 2016: Valley/Stratford, Wheeler/Road L, and Wheeler/Road N. However, as of 2016,

these intersections are functioning at LOS D, C, and B, respectively.

The twenty year projections indicate poor levels of service at several additional intersections. Improvements to streets and intersections will be needed to handle future traffic growth. Table TE-13 identifies Intersection Delay and LOS for signalized corridors. Table TE-14 and 15 identifies the projected LOS for the individually analyzed intersections. The Wheeler Road intersections were analyzed both at 3% annual growth and also assuming build out of undeveloped property along the corridor. As of 2012, there were 719 developed acres and 1,750 undeveloped acres in the study area, so there is significant potential for future growth. Higher build out rates would decrease the LOS more than show in Table TE-15.

Table TE - 13 Twenty - Year Projected Conditions (2030) Signalized Corridor Analysis		
Corridor/Intersections	Intersection Average Delay (sec.)	LOS
<i>Valley Road Corridor</i>		
Valley Rd./Grape Dr.	20.9	C
Valley Rd./Central Dr.	21.8	C
Valley Rd./Stratford Rd	*	*
<i>Pioneer Way Corridor</i>		
Pioneer/Wheeler /Fifth	207.6	F
Pioneer/Hill Ave.	101.9	F
Pioneer/Nelson Rd.	132.8	F
*Unable to calculate; beyond the program parameters. Below LOS F.		

Table TE - 14 Twenty-Year Projected Conditions (2030) Individual Intersection Analysis			
Intersections	Intersection Average Delay	Movement	LOS
Westshore Dr/Hansen Rd/Fairway	15.2	Hansen Rd. Northbound	C
	12.9	Fairway Dr. Eastbound	B

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Table TE -15 Wheeler Corridor Projected Conditions						
Year	Intersection	Growth Assumptions	AM Peak Hour		PM Peak Hour	
			LOS	Delay (sec)	LOS	Delay
2022	Wheeler Rd. /"L" NE	3% annual growth	D	25.3	D	31.0
	Wheeler Rd /"N" NE		B	14.7	C	15.2
2032	Wheeler Rd. /"L" NE	3% annual growth + 25% build out	F	65.8	F	104.4
	Wheeler Rd /"N" NE		C	18.8	C	19.5
2042	Wheeler Rd. /"L" NE	3% annual growth + 50% build out	F	---	F	---
	Wheeler Rd /"N" NE		D	26.7	D	28.0

Source: Wheeler Road Corridor Analysis, Gibson Traffic Consultants & Forsgren Associates, Oct. 2012

Recommendations

The preliminary improvements listed in Table TE-16 were recommended to address the LOS deficiencies at the intersections in the first six year period.

Table TE-16 shows the preliminary recommended improvements expected to be required during the 20-year planning period to address LOS, safety, or system speed deficiencies.

Table TE - 16 Transportation Facility Plan B Projects to Address LOS Deficiencies 2022-2042
Project Description
<p>Valley Road/Stratford Road - Separate left turn lanes for the eastbound approaches (Valley Road). Add second northbound left turn lane. Note: This intersection will still operate at LOS F. Poor operations contribute to lower overall system speed on the Valley Road corridor. However, it is unlikely that the intersection can be widened any more than as discussed above. As noted previously in the element, some intersections cannot be improved beyond a certain point.</p> <p>Westlake/Hansen/Frontage Road - The intersection of the I-90 westbound on and off ramps with Hanson Road is in near proximity to the intersection of Hanson Road with Westlake Drive and the Frontage Road. This will cause the level of service of these intersections to lower to a level of F when the area in the City's UGA to the north and west is developed. One solution is to realign the North Frontage Road so it would intersect with Hansen Road approximately 350 feet north of its present intersection.</p> <p>Wheeler Rd/Road N - Because of the proximity of the railroad tracks, a roundabout will not work, since southbound traffic would be blocked, backing up traffic into the roundabout. A traffic signal is expected to be needed by 2042.</p>

Table TE- 16A Transportation Facility Plan A Projects to Address LOS Deficiencies 2016-2022
Project Description
Wheeler Rd/Rd. "L" NE: Roundabout or 3-lane signalized intersection

Table TE- 16B Transportation Facility Plan A Alternative Transportation Projects to Address Deficiencies 2016-2036
Project Description
<ol style="list-style-type: none"> 1. Wheeler Road -Bike Lanes 2. Randolph Road Bike Lanes

General Street Plans

General street plans for vacant parcels of land in the city’s corporate limits are necessary to provide streets that meet the following five criteria:

- 1) Connection between neighborhoods, and to commercial areas.
- 2) Limit access points on nonresidential streets.
- 3) Provide public access to all properties.
- 4) Access for police and emergency services.
- 5) Intertie streets to limit the use of cul-de-sacs and provide good traffic circulation.

These plans provide important information to citizens who are planning to develop property. Maps showing the general street plan for the vacant parcels within the city are shown in Figure TE-6. Developers may propose alterations to the general street plans provided that their alteration meets the five criteria listed above.

Future Transportation Plan Revisions

Over time, significant employment or retail projects will be broached for the City of Moses Lake. When such projects come to light, the concurrency evaluation and standards may have to be modified to account for such projects. Since transportation in the area is naturally constrained by the lake, there may be few travel route options

for accessing some projects. In other words, standards may have to be adjusted to be realistic given geographical constraints and potential future project traffic impacts.

Recreational activities usually create higher summer traffic volumes in Moses Lake, especially on weekends. However, data is not readily available to determine whether recreational travel volumes will increase significantly with time. During future updates to the Comprehensive Plan, the City may undertake revisions to the concurrency standards to deal with recreational travel. This may include surveys of visitors, working with State and Federal agencies to forecast future tourism increases, and possibly modifying concurrency standards to deal specifically with summer and/or weekend traffic operations. The City may also wish to increase or change the arterials measured for concurrency.

Approximately 1/3 of the traffic on Valley Road originates in Cascade Valley. Recent traffic counts (2015), located 200 feet east of the Cascade Park entrance, were 5,421 trips/day. Total vehicle trips at Valley Road 500' west of Stratford Road were 15,380. The additional traffic generated from Cascade Valley significantly impacts the Stratford/Valley Road intersection. This County traffic will play a large part in the future requirement for a signal at Valley Road and Paxson Drive.

Another factor to consider is the development potential of Cascade Valley. Cascade Valley has been developed at a low density, so in addition to undeveloped land, there is also significant potential for redevelopment at a higher density once sewer and water are available. In the past, the County and City have jointly pursued grant monies to develop a sub area plan for Cascade Valley. The funding request was denied; however, the city and county

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planned to continue to make application as each agency is eligible. Transportation issues specific to Cascade Valley and the resulting impacts to the intersection of Valley and Stratford Road will be considered within this analysis. More than likely, an additional arterial will be necessary to provide adequate access and alleviate unacceptable LOS conditions at the Stratford and Valley Road intersection. Because Cascade Valley lies within the unincorporated UGA, a joint city/county project is anticipated.

Another issue that will require further study is the capacity of I-90 to continue to serve as a link between the main portion of the City and the growing residential area west of the lake. The on and off ramps for this connection are sub-standard, and local traffic at some point may affect through traffic on the interstate. Potential ways to address this include additional lanes on I-90, an alternative lake crossing, increasing bike commuting using the existing activity trail on the current bridge, and providing more retail and services on the west side of the lake to reduce trips for residents on the west side of the lake.

In 2016, the City received a \$25,000 grant to study which streets would benefit from a conversion to three lanes, and which intersections would function better with mini-roundabouts. The study is expected to be completed in 2016 or 2017.

Section 6.6 - Transportation Finance Plan

The ability of the Transportation Facility Plan to adequately support expected growth in Moses Lake relies on the availability of funding for the required transportation facilities. To comply with one of the most fundamental principals of effective growth management, the City must demonstrate that sufficient revenues are available to make the Transportation Facility Plan a reality.

The finance plan prepared for the Moses Lake 2017-2022 Six Year Transportation Improvement Program (TIP) was adopted by the Council on July 26, 2016 and was used for this element. The TIP will continue to be updated yearly. Included in the TIP is a listing of transportation improvement projects, a schedule of program expenditures, and a summary of revenue sources (local, federal, or state) available to fund the identified costs. The TIP is summarized in Table TE-17.

TABLE TE - 17						
Six Year Transportation Improvement Program 2017-2022						
Project Description	Expenditure Schedule (\$1,000's)					
	Total Cost	2017	2018	2019	2020	2021-2022
Overlay and/or Seal Coat Projects - Overlay various streets in the City	\$5,400	\$900	\$900	\$900	\$900	\$1,800
Lakeshore Reconstruction	\$1,200		\$1,200			
Additional Lake Crossing	\$42,000					\$42,000
New Street Construction - Build Lark from Kiefer Dr to Pioneer Way	\$500		\$500			
3 rd Avenue Reconstruction	\$1,200				\$1,200	
Yonezawa East	\$750					\$750
Block & Penn street & sidewalk improvements	\$1,000			\$1,000		
Railroad Right-of-Way Acquisition	\$2,000					\$2,000
Wheeler Road Improvements SR17 to Road N	\$1,000			\$1,000		
Longview Street & Kinder Road - curb, gutter, sidewalk	\$1,000		\$500	\$500		
Virginia & Luta reconstruction	\$600			\$600		
Westlake & Hansen reconstruction	\$2,000			\$2,000		
Total	\$58,650	\$900	\$3,100	\$6,000	\$2,100	\$46,550

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TABLE TE - 17A Six Year Transportation Improvement Program - Pedestrian & Bicycle 2017-2022						
Project Description	Total Cost	Expenditure Schedule (\$1,000's)				
		2017	2018	2019	2020	2021-2022
Wheeler Road -Bike Lanes	\$10					\$10
Randolph Road - Bike Lanes	\$10		\$10			
Way Finding Signs for Existing Trails	\$20		\$20			
Connect Pioneer Way to Japanese Garden and Division Street	\$400		\$400			
Total	\$440		\$430			\$10

Long Term Alternative Transportation Projects:

A. Road 4 NE:

Mark bike lanes on both sides of Road 4 NE from Road L NE to Road N NE. This would enhance bicycle commuting access to the Wheeler Industrial Area. There are existing bike lanes on Road 4 NE from Road K to Road L.

B. Convert the current use of Central Washington Railroad to a trail:

This would provide a commuter and recreational path extending from the Pelican Point area, through the City Center, and to Highway 17. The trail would allow pedestrian and bicycle crossings on I-90 and two crossings on Moses Lake.

C. Stratford Road Bridge crossing Hwy 17: Construct usable sidewalks on the Stratford Road bridge. The current sidewalk is heavily used by pedestrians who walk between the retail area south of Highway

17 and the residential area north of Highway 17. The current "sidewalk" is only about 2 feet wide and is dangerous. The Washington State Department of Transportation is currently obtaining information looking at options to improve the interchange, which would also provide safe sidewalks.

D. McCosh Trail:

Extend the existing trail in McCosh Park to connect West Lakeside Drive with West Sixth Street.

E. Montlake Trail:

Construct a trail that would start at the Montlake Park entrance road then extend south to I-90 along a current undeveloped roadway, then it would run west along I-90 right-of-way and turn north to connect to W. Lakeside Drive. This project would require right-of-way acquisition from adjacent property owners. It would also require a pedestrian bridge.

The TIP describes the slated transportation improvement projects for the next 6-year period. Thus, the Transportation Finance Plan (TFP) covers a like time-frame. The Financial Element describes a package of transportation revenues which the City can reasonably expect to receive over the six-year planning time frame. Revenue sources contained in the Transportation Element Finance Plan vary widely in terms of the amounts available and the types of projects for which they may be used. In most cases, individual transportation projects are funded by a combination of funding sources, reflecting the fact that transportation projects have multiple purposes and serve multiple beneficiaries.

The Transportation Element Finance Plan is designed to serve as an ongoing demonstration of general adequacy of financial resources to support the Transportation Facility Plan. Due to the nature of the Financial Element and the volatility of some of its revenue sources, the Financial Plan will require continuous monitoring and adaptation. Over time it is likely that there will occur some shifting and re-balancing of expected revenues as the availability of funding sources evolves and as the composition of the Transportation Element project list changes. Tables TE -18A and 18B summarize the six year project costs and revenue sources.

Table TE-18A		
Transportation Element Financial Plan 2016-2021		
Projects by type	Costs	Total
Existing street enhancements	\$13,400,000	
New street construction	\$43,250,000	
Right-of-way acquisition (railroad)	\$2,000,000	
Total Project Costs		\$58,650,000
Project Revenues, by source	Revenue Amount	Total
Local transportation revenues		
Utility Taxes	\$6,310,000	
Real Estate Excise Taxes	\$2,420,000	
General Fund	\$7,920,000	
Developer Contributions	\$1,000,000	
TIB	\$1,000,000	
Federal	\$40,000,000	
Total Projected Revenues		\$58,650,000

MOSES LAKE PLANNING COMMISSION RECOMMENDED COMPREHENSIVE PLAN

Transportation

Table TE- 18B		
Transportation Element Financial Plan - Bicycle & Pedestrian - 2016-2021		
Projects by type	Costs	Total
Existing and new enhancements	\$440,000	
Total Project Costs		\$440,000
Project Revenues, by source	Revenue Amount	Total
Gas Taxes	\$6,000	
Private/Developer Contributions	\$14,000	
Grants	\$400,000	
Paths & Trails Fund	\$20,000	
Total Projected Revenues		\$440,000