
Tulalip Tribes Strategic Transportation Plan

Tulalip Tribes
Snohomish County, WA 98271

Prepared with Assistance from:

Kimley-Horn and Associates, Inc.
Parametrix

TABLE OF CONTENTS

1.	INTRODUCTION	1-4
1.1	PURPOSE OF THE TULALIP STRATEGIC TRANSPORTATION PLAN	1-4
1.2	TRIBAL HISTORY AND BACKGROUND	1-4
1.2.1	Government	1-5
1.2.2	Land Use.....	1-5
1.2.3	Population Data.....	1-7
1.3	SCOPE AND CONTENT	1-8
1.4	GOALS, POLICIES, AND THE VISION FOR TULALIP TRIBES	1-8
2.	EXISTING CONDITIONS AND DEFICIENCIES	2-15
2.1	ROADWAY CHARACTERISTICS AND FUNCTIONAL CLASSIFICATIONS	2-15
2.2	TRAFFIC VOLUMES	2-19
2.3	LEVEL OF SERVICE	2-23
2.4	ACCIDENT INFORMATION.....	2-26
2.5	TRANSIT SERVICE	2-27
2.6	PEDESTRIAN AND BICYCLE FACILITIES.....	2-27
2.7	ROADWAY MAINTENANCE.....	2-28
2.8	INDIAN RESERVATION ROADS	2-33
3.	FUTURE CONDITIONS AND DEFICIENCIES	3-1
3.1	TRAVEL DEMAND FORECASTING FOR YEAR 2045.....	3-1
3.2	LEVEL OF SERVICE STANDARDS.....	3-1
3.3	FUTURE TRAFFIC VOLUMES AND LEVEL OF SERVICE	3-2
3.3.1	2045 Baseline Improvements.....	3-2
4.	PROPOSED TRANSPORTATION IMPROVEMENTS AND COSTS.....	4-1
4.1	ROADWAY IMPROVEMENTS.....	4-1
4.2	TRANSIT SERVICE AND FACILITY IMPROVEMENTS	4-1
4.3	PEDESTRIAN AND BICYCLE IMPROVEMENTS	4-1
4.4	TRANSPORTATION DEMAND MANAGEMENT STRATEGIES	4-3
4.5	TRANSPORTATION SYSTEM MANAGEMENT STRATEGIES	4-5
4.6	TRAFFIC CALMING.....	4-5
4.7	IMPROVEMENTS	4-7
5.	FINANCING AND IMPLEMENTATION PLAN	5-1
5.1	POTENTIAL REVENUE	5-1
5.2	ADDITIONAL WORK TO BE ADDRESSED IN FUTURE TRANSPORTATION PLANNING	5-2

TABLE OF CONTENTS (CONTINUED)

LIST OF FIGURES

FIGURE 1: EXISTING DAILY TRAFFIC VOLUMES	2-20
FIGURE 2: EXISTING PM PEAK-HOUR VOLUMES – QUIL CEDA VILLAGE AREA	2-21
FIGURE 3: EXISTING PM PEAK-HOUR VOLUMES – MARINE DRIVE CORRIDOR	2-22
FIGURE 4: TULALIP TRANSIT ROUTE	2-27
FIGURE 5: SURFACE CONDITION.....	2-29
FIGURE 6: SIDEWALKS IN NEED OF MAINTENANCE.....	2-30
FIGURE 7: CURB RAMPS IN NEED OF MAINTENANCE	2-31
FIGURE 8: GUARDRAIL DEFICIENCIES	2-32
FIGURE 9: 2045 FUTURE DAILY VOLUMES.....	3-4
FIGURE 10: 2045 PM PEAK-HOUR TURNING MOVEMENTS – QUIL CEDA VILLAGE	3-5
FIGURE 11: 2045 PM PEAK-HOUR TURNING MOVEMENTS – MARINE DRIVE CORRIDOR.....	3-6
FIGURE 12: IMPROVEMENT PROJECT LOCATIONS	4-9

LIST OF TABLES

TABLE 1. ON RESERVATION POPULATION GROWTH FORECASTS	1-7
TABLE 2. ARTERIAL STREET FUNCTIONAL CLASSIFICATION & MAINTENANCE RESPONSIBILITY	2-19
TABLE 3. LEVEL OF SERVICE DEFINITIONS FOR URBAN AND RURAL ROADWAYS.....	2-24
TABLE 4. EXISTING CORRIDOR LEVEL OF SERVICE	2-25
TABLE 5. EXISTING INTERSECTION LEVEL OF SERVICE	2-26
TABLE 6. SIGN INVENTORY SUMMARY	2-28
TABLE 7. TULALIP TRIBES NTTFI ROADS	2-33
TABLE 8. YEAR 2045 CORRIDOR LEVEL OF SERVICE.....	3-3
TABLE 9. YEAR 2045 PM PEAK HOUR INTERSECTION LEVEL OF SERVICE	3-7
TABLE 10. PEDESTRIAN AND WALKWAY FACILITIES WITHIN THE QUIL CEDA VILLAGE	4-3
TABLE 11. PLANNING LEVEL COST ESTIMATES FOR FUTURE IMPROVEMENTS.....	4-8

ACRONYMS

ADT	Average Daily Traffic
BIA	Bureau of Indian Affairs
CDP	Census Designated Place
CTR	Commute Trip Reduction
EDDS	Engineering Design and Development Standards
EIS	Environmental Impact Statement
GMA	Growth Management Act
GP	General Purpose
HCM	Highway Capacity Manual
HOV	High-Occupancy Vehicle
I-5	Interstate 5
LOS	Level of Service
MTP	Metropolitan Transportation Plan
PSRC	Puget Sound Regional Council
RPEC	Regional Project Evaluation Committee
RTID	Regional Transportation Investment District
SEPA	State Environmental Protection Agency
SOV	Single-Occupant Vehicle
SPUI	Single-Point-Urban-Interchange
SR	State Route
STP	Surface Transportation Program
TAZ	Transportation Analysis Zone
TDM	Transportation Demand Management
TEA-21	Transportation Equity Act for the 21st Century
TIA	Transportation Improvement Account
TIB	Transportation Improvement Board
TIP	Transportation Improvement Program
TPP	Transportation Partnership Program
TSM	Transportation Systems Management
TSTP	Tribes Strategic Transportation Plan
UGA	Urban Growth Area
V/C	Volume to Capacity ratio
VPD	Vehicles Per Day
WSDOT	Washington State Department of Transportation

1. INTRODUCTION

1.1 PURPOSE OF THE TULALIP STRATEGIC TRANSPORTATION PLAN

This Tulalip Strategic Transportation Plan (TSTP) is an important piece of the overall comprehensive plan. The vision, goals, and policies contained in this document are a result of tribal member's comment and participation to ensure that Tulalip Tribes' transportation system responds to the needs of the community.

The Tulalip Transportation Strategic Plan was formed to support the land use element. The plan goes beyond a discussion of how efficiently automobiles can get from one place to another to a real examination of what Tulalip Tribes transportation needs are to ensure an overall healthy, vibrant community. The result is an extensive dialogue about modes of travel other than single-occupancy vehicles. The TSTP emphasizes the need to consider pedestrians and bicycles in transportation planning, the creation of walkable centers with appealing streetscapes, and setting standards on heavily used arterials to enable efficient automobile mobility while still protecting neighborhood character and safety. Level of service (LOS) standards are established to evaluate future development for consistency with the long-term vision for growth within the Tulalip Reservation.

The Tribes are exempt from numerous state and county mandates articulated in the Washington State Growth Management Act (GMA) and the County wide planning policies. However, this transportation strategic plan serves purposes similar to transportation plans and transportation elements prepared for other cities under GMA and serves as an integral part of the regional transportation fabric. The Tulalip Tribes is dedicated to working with Washington State and Snohomish County to ensure safe, reliable, and effective transportation within the Tulalip Reservation and its surrounding areas. Quality of life for the Tulalip Tribes and the surrounding region as well as reducing urban sprawl and other undesirable development patterns is dependent upon a well-developed strategic transportation plan.

1.2 TRIBAL HISTORY AND BACKGROUND

The Tulalip Tribes are the successors in interest to the Snohomish, Snoqualmie and Skykomish Tribes and other signatory bands to the 1855 Treaty of Point Elliott. The Tulalip Tribes is organized under the Indian Reorganization Act (IRA) of 1934, and is essentially a confederation of the Indian tribes and bands, which the Tulalip Tribes is a successor. Such tribes and bands took advantage of the benefits offered to the IRA and adopted the name Tulalip from the name of the prominent Bay on the Reservation. The Tulalip's once lived on the area stretching along the eastern and southern reaches of Puget Sound and the western slopes of the Cascade Mountain Range. Their association with this geography dates to 5,000 years BC.

As with many peoples through North America, the U.S. Government actively dispossessed the Tulalip Tribes in the mid 1850's through forceful approval of the Treaty of Point Elliott. The result was that the Tribes' free ranging and regional stewardship way of life was disposed. The people were relocated to small land based reservations. They were able to continue salmon and shellfish harvesting in all of the "usual and accustomed places" as a reserved aboriginal right within the Treaties. These rights were practiced for many years, until the continued influx of settlers led to tensions between their ancestors and the new comers. Tribal Treaty rights then became an inconvenience and many were restricted and some unilaterally and illegally withdrawn by local authorities. Since the Tribes' traditional ways were so closely entwined with the salmon and shellfish resources, the withdrawal of fishing rights dealt the Tulalip Tribes' community and others in Puget Sound a crippling blow in economic vitality and spiritual well being.

1.2.1 Government

The Tulalip Tribes operates under their constitution and bylaws that were adopted January 24th, 1936. The board of directors supervises tribal affairs. The active committees administer lands, leasing, loans, education, enrollment, water resources and roads, hunting and fishing and recreation.

During the late 1920's and early 1930's, the advent of the Indian Reorganization Act based constitution and by-laws resulted in an increase in community desire and the means to once again manage resources for the tribal peoples. The goals adopted by our first Board of Directors provided guidance for the last 60 years. During the last 30 years, Puget Sound Tribes have experienced a renewal assisted, in part, through federal court reaffirmation of their Native American rights and responsibilities in natural resource management and salmon harvesting (more commonly referred to as the Boldt Fishing Decision of 1974). The subsequent growth and diversification of tribal government to once again manage natural resources assisted in building the governmental and business infrastructure for business development.

While the Indian Gaming Regulatory Act of 1988 provided a further means for economic diversification and resultant benefits to the community, the Tulalip Tribes continue to reach and strategically plan for broad based governance, social and economic structure. This planning effort shows in the strategic placement and utilization of portions of the reservation, tribal homeland, into productive business land leases.

The Consolidated Borough of Quil Ceda Village, located on the Tulalip Reservation, is a federally recognized Tribal city in the United States and was incorporated in 2001. As a municipal corporation, it is chartered under Tribal laws and governed by a council-manager form of government that enacts local ordinances, builds infrastructure, and manages economic development ventures. The Tulalip Tribes is one of the largest employers in Snohomish County, with Quil Ceda Village a major employer for Tribal and non-Tribal residents.

1.2.2 Land Use

The Tulalip Reservation is located at the mouth of the Snohomish River five miles north of the City of Everett and west of Marysville in Snohomish County, Washington. The Reservation lands are bound to the west and south by Puget Sound, to the east by Interstate 5 (I-5), and to the north by 140th Street NW (Fire Trail Road). Through its Comprehensive Plan and Zoning Ordinance the Tulalip Tribes manage this 22,552-acre parcel of which 14,325 acres is owned by the Tribe or individual Tribal members and is in trust land status with the remaining acreage owned by non-Tribal members.

To manage this vast area, it was necessary to divide it into eight-land use designations. Each designation was evaluated and planned to develop in harmony with the protection, preservation and enhancement of the environment. These eight land use designations are as follows:

- 6,322 acres designated for low density residential use;
- 3,091 acres designated for medium density residential land use;

Residential Land, with the bulk of the housing concentrated primarily along Port Susan, Tulalip Bay, Priest Point, and Marine Drive, and close to Marysville. Tulalip Shores, Spee-Bi-Dah, Tulare Beach, and Sunny Shores are individual residential communities spread out along the coastline overlooking Point Susan. Individual homes and residential communities are also scattered along Fire Trail Road, the reservation's northern boundary. The Tribal Housing Authority currently has 723 housing units, including single-family homes, transition and a senior apartment complex.

The TSTP covers all areas within the limits of Tulalip

- 211 acres designated for high density residential land use;
- 1,545 acres of Rural/Agriculture Land;
- 251 acres of mixed Residential/Commercial Land;
- 120 acres for mixed residential/Commercial/institutional lands
- 660 acres for agricultural land use;
- 9028 acres designated for Heritage Lands;
- 1,433 acres of Commercial Land (Borough of Quil Ceda) is concentrated in the /88th Street (Quil Ceda Way)/I-5 interchange, where Wal-Mart, Home-Depot, the Quil Ceda Village Business Park, as well as the New Casino are located.;
- 993 acres designated for recreation use;
- 379 acres designed for industrial development;
- 318 acres designated for institutional uses.

There are two additional land use categories currently proposed for adoption for Tribal zoning:

- Medium Density MR
 - Expanded from 2,700 acres to 4,700 acres
 - Includes both Tribal and non-Tribal owned land
 - Densities range from 2 dwelling units per acre (on public water) to 6 dwelling units per acres (on public water and sewer)
- Community Mixed CM
 - 1,100 acres
 - Tribal ownership
 - Allows a broad range of housing types ranging in density from 7 to 12 dwelling units per acre
 - Densities up to 24 dwelling units per acre are allowed as Planned Unit Development

The land ownership on the Reservation is:

- 11,903 acres – Tribal Government, trust and restricted fee
- 1,581 acres – Tribal member, trust
- 255 acres – Tribal member, fee

1.2.3 Population Data

According to the 2022 U.S. Census estimates, approximately 849,155 people lived in Snohomish County and 98.46 people lived on the Tulalip Reservation. On the Reservation, the population density was approximately 296 persons per square mile. Approximately 30 percent of the Reservation's population is Native American and 70 percent Non-Native American. Approximately 75 percent of the county's Native American populations live outside the Indian Reservation. Table 1 summarizes the breakdown of the population and provides an estimate of future population growth on the Tulalip Reservation.

Table 1. On Reservation Population Growth Forecasts

	Year		
	2015	2022	2030
Native American	2,572	2,742	3,400
Non-Native American	7,469	7,104	8,809
Total	10,041	9,846	12,209

1.3 SCOPE AND CONTENT

This TSTP contains the following:

- (1) Outline of assumptions to be used in estimating travel and travel needs for comprehensive planning.
- (2) Inventory of existing capital facilities and transportation services including:
 - (a) Land: Streets, highways, pedestrians, and bicycles.
 - (b) Public Transit: Routes and service, etc.
- (3) Proposed LOS standards for arterial streets.
- (4) Outline system improvements to bring substandard facilities up to the desired LOS.
- (5) Forecast traffic levels for the next ten years, based on the land use plans of the Tulalip Tribes and surrounding unincorporated and incorporated areas that are expected to affect local traffic demands.
 - (a) Location and capacity improvement recommendations.
 - (b) Recommendations for new facilities or routes.
- (6) Analysis of funding capability and funding sources.
- (7) Identification of additional transportation strategies and needs other than capacity improvements already identified in the TSTP.

1.4 GOALS, POLICIES, AND THE VISION FOR TULALIP TRIBES

This TSTP identifies the basic goals and objectives of the transportation system. The Tulalip Tribes have gone through an extensive visioning process and policy review in order to determine the most desirable direction and actions of this strategic plan. The TSTP will provide a strategy that will implement the Tribal vision by:

- (1) *Encouraging efficient multi-modal transportation systems based on local priorities and coordinated with the Tribal Reservation Comprehensive Plan, as well as state, local and federal plans.*
- (2) *Strategically investing in transportation facilities to support the economic and community growth of the Tulalip Reservation.*

Supporting Policies:

- Connection of residential areas with centers through expanded transit service.
- Promotion of a moderate expansion of key roadways that support centers and access to jobs.
- Promotion of programs encouraging transit and ridesharing options, modifying travel behavior.
- Development of a regionally coordinated network of facilities for pedestrians and bicycles.
- Maintaining the existing transportation system in a safe state.
- Promotion of transportation projects that get the most efficiency out of existing roads.
- Promotion of programs that shift travel demand to less congested times or reduce demand.

(3) **The Tulalip Tribal Vision:** The Tulalip Tribes Reservation wide strategic transportation plan will:

- promote convenient, accessible, safe, and environmentally responsible transportation for residents, employers, employees, visitors, and commerce.
- support alternatives to the automobile, such as walking, bicycling, public transportation, carpooling, ferries, etc.
- be integrated, convenient, and reliable, and encourage connectivity and economic vitality.
- support vibrant and healthy neighborhoods.
- incorporate aesthetic landscape and design elements to enhance neighborhood character and encourage safe and convenient walking and cycling.

(4) **Tulalip Tribes' Transportation Goals:** the following goals support the vision of the Tulalip Tribes:

Multi Modal:

T1 Encouragement of the development of an integrated multimodal transportation system that provides a variety of convenient transportation choices to improve the movement of people, goods, and freight.

T1a This step requires new development and redevelopment to incorporate transit, pedestrian, and non-motorized transportation measures during the development review process, including measures such as:

- Providing bus/transportation shelters, pullouts;
- Providing adequate sidewalks, pathways and crosswalks that allow for access by all persons;
- Minimizing walking distance between buildings, streets, sidewalks, and transit stops;
- Preserving and extending the connectivity of the pedestrian, bicycle, and grid street system;
- Minimizing neighborhood street widths to reduce speeds and crossing distances;
- Incorporating open space and green space in streetscapes.

T1b Work continues with Community Transit to coordinate transit schedules and further transportation conveniences.

T1c Identify missing sidewalk/walkway links

Community Character:

T2 Staff, with the assistance of specialized contractors, continues to develop transportation improvements that reflect Tulalip Tribes natural, historic, maritime, waterfront, and character, consistent with the short and long-term vision of the Comprehensive Plan, Zoning Ordinance and Design Build Guidelines.

T2a These guidelines will reflect the urban nature of roadways within the Tulalip Reservation by encouraging where appropriate:

- Street trees and landscaping;
- Traffic calming strategies and devices;
- Street lighting;
- Accommodations for transit stops;
- Crosswalks and sidewalks.

Environment:

T3 Work continues on an ongoing basis to develop and maintain a transportation system that respects the natural environment including the quality of Tulalip Tribes air, water and natural habitats. This is accomplished through the:

T3a Preservation and restoration of natural habitats and native vegetation.

T3b Minimizing impacts of road construction on environmentally sensitive areas; minimizing damaging storm water runoff and pollution from road use and maintenance.

T3c Implementing programs that encourage the planting of low-maintenance, vegetated groundcover and trees along roadways.

T3d Wherever possible and economically feasible create under-grounding of overhead utilities to reduce the need for removal and maintenance of roadside vegetation.

Neighborhoods:

T4 Work continues to protect residential neighborhoods from negative transportation impacts. This is accomplished through:

T4a Minimizing the impacts of traffic on residential neighborhoods through discouraging the regular use of local access streets by non-local traffic.

T4b Maintaining connectivity of the transportation system.

T4c Reducing speed on neighborhood streets through the use of street design devices such as curb bulbs, “median obstacles,” or other measures proven to be safe and effective at reducing travel speeds.

T4d Establishing and maintaining traffic control program for assessing and responding to residential neighborhood traffic control concerns. Establishing standards for maximum desirable traffic volumes and percentage of non-local traffic. Establishing a process for escalating control responses based on the severity of the disturbance to the neighborhood.

T4e Minimizing neighborhood street widths and crossing distances.

Levels of Services/Operations:

T5 Through identification and implementation of improvements that maintain strategic development standards the tribal transportation system is striving to improve mobility and conductivity. In 2003 the initial concept was taken in this direction when the Tribal Board of directors adopted the general concurrency policy. Since that time the policy has been review and updated yearly. This policy was initiated to:

- Ensure that the Tribal policy for the provision for safe and adequate access and the allocation of responsibility for immediate or future road improvements necessitated by new development is fairly and consistently applied to all developments;
- Ensures that those transportation facilities necessary to support development shall be adequate to serve the development concurrent with the time the development is occupied.

5b The second step is the creation of requirements that adopted LOS standards when development occurs.

- These standards will establish LOS (Level of Service) criteria on an identified list of links and/or intersections within the Reservation.
- Through the creation of this system impacts are assessed on LOS to be established during the development permitting process.
- Enforcement of this step will allow staff to enforce a concurrency system that does not issue development permits unless and/or until maintenance of adopted LOS standards on links or at intersections impacted by a development proposal is assured.

Safety:

T6 Through maintenance of infrastructure and incorporation of safety enhancements in transportation improvement projects, public safety is ensured. This is accomplished through:

T6a Maximizing functionality and safety of the local circulation system.

- Controlling the location and spacing of commercial driveways and the design of parking lots to avoid traffic and pedestrian accidents, confusing circulation patterns, and line-of-sight obstructions.
- Designating and clearly marking appropriate routes for through truck traffic, hazardous materials transport, and oversized traffic.
- Developing and utilizing clear and uniform signage to guide traffic throughout the Reservation.
- Encouraging bus pull out lanes.
- Establishing a regular maintenance schedule for the existing transportation inventory.
- Establishing an effective accident data base.
- Identify missing pedestrian links

Through Traffic/State Highways:

- T7 Working meetings continue with Washington State Department of Transportation (WSDOT) to ensure state facility improvements meet the goals of the Tulalip Tribe transportation vision and Comprehensive Plan while minimizing the negative impacts on the local transportation system.**
- T7a Tulalip Tribes is an active participant in the cooperative regional transportation planning processes.
- T7b All efforts are taken to expand opportunities for public involvement in the identification, design, and implementation of transportation related improvements within the Tulalip Reservation. The “Work First Program” was the first program within the reservation to actively make the use of community transit a viable resource by physically issuing bus passes to its participants.
- T7c Staff continues to work with Snohomish County, WSDOT, regional transportation agencies, and transportation providers to plan, fund, and implement joint transportation projects and programs.
- T7d Executive members continue to meet, discuss and support improvements on State Highways to reduce congestion, and improve safety and access for through traffic, local traffic, and non-motorized and transit users.

Transit:

- T8 The Tulalip Tribes continues to encourage the use of public transit and encourage transportation agencies to operate and maintain local and regional service and facilities that reduce the need for single-occupant vehicles and support the needs of transit-dependent users.**
- T11a Staff continues to work with transportation providers to develop a public transportation system that allows for convenient and efficient travel between centers.
- T11b Work continues with Community Transit to designate appropriate park & ride facilities, as well as appropriate locations.
- T11c Staff continues to work towards identification of possible corridors for development of future mass transit options such as light rail, monorail, and bus rapid transit and intermodal transportation.
- T11d Support efforts continue to expand usage and infrastructure for mass transportation.
- T11e Through encouraging the use of public transit by bicyclists and pedestrians we encourage and support:
- Providing safe, attractive comfortable walkways and waiting facilities at public transit loading areas. The Quil Ceda Village pedestrian/bicycle path consisting of 3/4 of a mile is fully paved, fully lit, and heavily used by the entire surrounding community that was the first of many walkways that will be designed and constructed within the park.
 - Providing bicycle storage at transit facilities;
 - Installing bicycle racks on buses, and

- Development and distribution of information concerning local and regional non-motorized routes is a crucial element of this re-education process.

Non Motorized:

T9 Staff continues to work in this area to provide a transportation system that effectively serves the needs of and encourages pedestrian, bicycle and other non-motorized travel. This work continues in the following arenas:

T9a Developing a non-motorized transportation plan which will:

- Maximize safety when identifying pedestrian and bike paths corridors.
- Establish uniform signage to designate bike paths.

T9b Ensuring that designated centers are walk able, and encourage connectivity.

T9c Maintaining existing and create new, engineered bike lanes.

T9d Adoption of street standards, which require bike lanes on identified bike routes.

Economic:

T10 The Design Guidelines are the first step in incorporating the needs of business and commercial traffic flow in the development of transportation improvements that affect commercial and industrial centers. Work continues in the area of:

T10a Establishment and identification of a signage plan for truck and oversized load route.

T10b Applying appropriate street design standards for industrial and commercial districts, that allows for the easy movement of goods and services.

T10c Prioritizing circulation system improvements needed to address safety, maintenance, congestion relief, multi-modal projects, transit, and growth.

T10d This is the first of many six-year transportation improvement programs that the Business Park will implement.

T10e Staff continues to coordinate closely with policy makers to secure adequate funding sources for transportation improvements and services through a variety of mechanisms including traffic mitigation fees

(5) Quil Ceda Village Goals and Policies: The following goals and policies for Quil Ceda Village, the economic core on the tribal reservation, are summarized as follows:

Goals:

- To provide the community with economic growth – present and future;
- To enhance the sense of community, provide environmental quality;
- To provide long-term environmental protection and the restoration of resources for the use and enjoyment of future generations;
- To enhance the sense of tribal community; provide environmental quality, eco-system functions and open space by creating incentives to developers who provide environmentally sensitive development projects.

Policies:

- New development will be compatible with resource protection and restoration.
- New development will incorporate new urbanism concepts such as higher density mixed-use development, transit oriented design and conservation of open space.
- Landscape design will be maintained with native plants for ecosystem functions and educational purposes. Through a cooperative relationship the Quil Ceda Village and the Tulalip Tribal Natural Resource Department have preserved many of these plants for stream enhancement and site restoration. A new Tribal owned and operated Nursery within the Village assists with this preservation.
- Staff continues to work with the Tribal Natural Resources Department on all levels of ecosystem preservation including hydrology, temperate, water systems (on and off reservation and wetlands).

(6) **Relationships To Existing Plans & Policies:** In addition to the vision statements and goals, the Tribal as a whole have also reviewed the goals and policies of its existing plans, as well as the provisions of the following plans to ensure consistency:

- (a) Reservation of Tulalip Tribes Transportation Improvement Program (Six-Year TIP) – Draft 2003
- (b) Quil Ceda Visioning Charette convened at Skagit conference center, 25-26 November 2002 Report and February follow up meeting (Appendix A)
- (c) Quil Ceda Village Business Park Environmental Assessment – 2003
- (d) County Transportation Element (Snohomish Co.) – 1995
- (e) Transit First (Community Transit’s Draft Six-Year Transit Development Plan) – 2003
- (f) Snohomish County non-motorized Facilities Plan – Adopted: 2002
- (g) 116th Street Access Decision report – 2003.
- (h) Washington State Highway System Plan 2003-2022 (WSDOT)
- (i) Highways of Statewide Significance – Update 2003
- (j) Destination 2030:Metropolitan Transportation Plan (PSRC) – 2001
- (k) Tulalip Tribes Community Development Comprehensive Plan – 1994
- (l) Tulalip Reservation Access and Circulation - 2006
- (m) Tulalip Vision Plan II - 2007

2. EXISTING CONDITIONS AND DEFICIENCIES

This section of the TSTP describes the existing transportation system conditions in the study area. This includes a description of the roadway characteristics, functional classification, traffic volumes, LOS (Level of Service), accidents, transit service, and pedestrian and bicycle facilities.

2.1 ROADWAY CHARACTERISTICS AND FUNCTIONAL CLASSIFICATIONS

Table 5 lists the functional classification of the arterial roadway system serving the Tulalip Tribal Reservation. Identification of the roadway functions is the basis for planning roadway improvements and the appropriate standards (right-of-way width, roadway width, design speed) that would apply to each roadway facility. The following definitions serve as a general guide in determining street classifications:

- **Major Arterials** – Intercommunity roadways connecting primary community centers with major regional transportation facilities. Major arterials are generally intended to serve through traffic. It is desirable to limit direct access to abutting properties.
- **Minor Arterials** – Intracommunity roadways connecting community centers with major arterials. In general, minor arterials serve trips of moderate length. Access is partially controlled with infrequent access to abutting properties.
- **Collectors** – Streets connecting residential neighborhoods with smaller community centers and facilities as well as access to the minor and major arterial system. Property access is generally a higher priority for collector arterials; through-traffic movements are served as a lower priority.
- **Local Access Streets** – Area streets providing direct access to individual residential or commercial properties

The Tulalip Strategic Transportation Plan addresses primarily the arterial street system within the Tulalip Reservation since local access and collector streets typically do not have capacity deficiencies. However, collectors and local access streets are an integral part of the street network, and are important travel routes used by pedestrians and bicyclists. Creating safe travel routes for pedestrians and bicyclists are discussed in subsequent chapters.

The reservation has a fairly well developed circulation system with the county road system providing the major structure of the system. A network of roads and streets that have been privately developed and are open to public use further supplements this system. In addition, there are Bureau of Indian Affairs (BIA) roads and tribally owned roads that service the Reservation Community.

The road system on the Tulalip Reservation comprises over 128 miles of state, county, BIA, tribal, and other private roads, not all of which are paved. The maintenance/responsibility of these roads is divided such that 57 miles are maintained by Snohomish County, 26 miles by the Tulalip Tribes themselves with the remainder being private roads other than the BIA Public Road System which consists of one route (Route 52) totaling 0.7 miles of paved roadway. A physical inventory confirms that in general, roads, which serve developed areas, are paved in good condition. The majority of the arterial roads on the reservation are county roads and are in fair-to-good condition. Many of the shorter local roads need significant maintenance or reconstruction. Several roads are under threat to lose postal service if these roads are not improved.

Maintenance of BIA routes on the Tulalip Reservation is handled by sub-contracting through the Puget Sound Agency, headquartered in Portland, Oregon. Only the most critical maintenance problems have been addressed in past years because of severe funding limitations. This includes snow removal, which is often left to the county and then only done on major arterials and school bus routes.

Arterial Routes on the Tulalip Tribes Reservation

The Tulalip Reservation is bordered on the east side by I-5 and along its south and west side by Marine Drive (minor arterial)/Port Susan with 140th Street (Firetrail Road major arterial) completing a loop along the north side. Access to the area is predominantly provided either from I-5 via the Marine Drive (Major arterial), 88th Street NE (Major arterial) or 116th Street NE interchanges (Major arterial) or from the east (Marysville) across the above identified interchanges under crossings. Secondary access to the area is provided via the extension of Marine Drive to the North (Stanwood) and 136th Street under crossing that provide access to the east from 140th Street and to the northeast part of the reservation via the 136th Street NE connection to 34th Avenue NE that runs along the west side of I-5 north of the Quil Ceda Village Business Park.

Marine Drive is west of I-5 and goes 12.2 miles from the southern edge of the reservation following the west side all the way to the north side. It provides the primary access to I-5 for the residential portion of the Tulalip Tribes. The driving surface width is 30-50 feet as it varies from a 2-lane to 5-lane road with sidewalk or paved shoulder, respectively. The County is responsible for the maintenance of the road. The terrain is primarily flat with some rolling sections. There is a significant population of Tulalip Tribes tribal members that live in and around Marine View Drive and several of these tribal members own land in this area. This road also is used for recreational and employment purposes. The daily traffic on this road near its connection with I-5 is approximately 18,000 average daily trips (ADT). Along the 3-lane section west of 27th Avenue NE there are approximately 16,000 ADT and on the 2-lane section, the west section of Marine Drive, there is approximately 10,000 ADT or less. The section of roadways from 31st Avenue to 33rd Avenue has been recently improved by Tulalip Tribes with a 2 lane roundabout and an improved signal.

Quil Ceda Way (also known as 88th Street NE) is an existing arterial located south of the Quil Ceda Village Business Park. 88th Street east of I-5 is a five-lane road with curb-gutter-sidewalk both sides and an ADT volume of approximately 23,000 vehicles per day (vpd). Between the northbound ramp and southbound ramp terminals, 88th Street is a 6-lane road with curb-gutter-sidewalks both sides and includes a 215-foot long bridge structure over I-5 with pedestrian walkway. There are two lanes in each direction and two westbound left-turn lanes at the southbound ramp intersection. There are two eastbound through lanes, an eastbound left-turn lane and three westbound through lanes at the northbound ramp intersection. West of the southbound ramp terminal to 27th Avenue NE, 88th Street is a 4/5-lane roadway with shoulders and open drainage ditches. The ADT on this section is approximately 6,000 vpd. 88th Street NE ends at 27th Avenue NE, beyond 27th Avenue NE is an access to an office building. Intersection traffic controls are: traffic signals at 36th Drive NE, Quil Ceda Boulevard, the I-5 northbound ramp terminals, and the I-5 southbound ramp terminals; and, stop sign control at the intersection with 27th Avenue NE (all way stop).

116th Street NE is the existing arterial along the northerly border of the Quil Ceda Village Business Park. 116th Street NE to the east of Quil Ceda Boulevard/36th Avenue NE is a six-lane road that widens to an eight-lane road at the interchange with Interstate-5. There are approximately 13,000 vpd on the east side of Interstate-5. There are pedestrian walkways on both sides. 116th Street NE between 27th Avenue NE and Quil Ceda Boulevard widens from a three-lane section to a five-lane section; the ADT within this section is approximately 6,000 vpd. West of 27th Avenue NE, the roadway has two traffic lanes without shoulders and an ADT of less than 2,000 vpd. Intersection traffic control consists of: traffic signals at Quil Ceda Boulevard, the I-5 interchange; and, stop sign control at the intersection with 34th Avenue NE (stop on 34th Avenue NE) and 27th Avenue NE (all way stop).

Quil Ceda Boulevard is located 500 feet west of the I-5 southbound Ramp/88th Street NE intersection and east of the wetland and tributary to Quil Ceda Creek. It is constructed as a 5-lane roadway for the first 300 feet north of 88th Street NE, and then is a 4-lane roadway up to the end of the south retail center area and then as a 3-lane road (with center turn lane) up to 99th Street NE. It is a 5-lane section north of 99th Street NE up to 116th Street NE. Quil Ceda Boulevard continues north from 116th Street NE and intersects with 34th Avenue NE. Quil Ceda Boulevard has a 5-lane section north of 116th Street NE, but tapers to a 3-lane section and then to a 2-lane section at the intersection with 34th Avenue NE. The ADT on Quil Ceda Boulevard immediately north of 88th Street is approximately 21,000 ADT and approximately 9,000 ADT south of 116th Street NE. The ADT north of 116th Street NE is approximately 8,000 ADT.

140th Street (Firetrail Road) is an existing east west arterial along the northerly border of the Tulalip Tribes Reservation. It connects Marine Drive NW to the west with 34th Avenue NE and 136th Street NE to the east thus providing access south to the I-5/116th Street interchange for the Lakewood area and access to Marysville via the 136th Street NE under crossing. 140th Street NE is a two-lane road with some paved shoulders and open drainage. The ADT is approximately 9,000 vpd near I-5 and approximately 3,000 ADT near Marine Drive NW.

34th Avenue NE is an existing north south arterial along the eastern border of the northern part of the Tulalip Tribes Reservation. It connects 140th Street NE and the 136th Street NE under crossing in the north with the I-5/116th Street interchange in the south. 34th Avenue NE is a two-lane road with some paved shoulders and open drainage. The intersection of 34th Avenue NE at 128th Street NE includes a northbound left-turn lane to mitigate a previous safety issue. The ADT is approximately 4,000 vpd south of the intersection with Quil Ceda Boulevard and approximately 12,000 ADT north of the roundabout.

27th Avenue NE (also known as Quil Ceda Avenue) borders the westerly side of Quil Ceda Village Business Park. It is a two-lane arterial with shoulders and open drainage constructed to current design standards. There is a center two-way-left-turn-lane at the intersection of 27th Avenue NE and 74th Street NE. The ADT is approximately 7,000 vpd south of 88th Street and approximately 5,000 vpd south of 116th Street.

31st Avenue NE and 33rd Avenue NE are 2-lane roadways that provide north-south access to the commercial areas along Marine Drive in the vicinity of I-5. 33rd Avenue NE provides access to Marysville as an alternate to Marine Drive, but it does not have the capacity of Marine Drive. The intersection of 31st Avenue NE and 33rd Avenue NE are Marine Drive are both signalized. Both roadways are anticipated to carry 2,000 ADT or less.

105th Street NE, 99th Street NE, Herman Williams Road and Quil Ceda Parkway are internal collector arterial roads within the Quil Ceda Village Business Park. 105th Street NE and 99th Street NE are east/west roadways that are north and south of the Casino and Hotel. Quil Ceda Parkway runs parallel to Quil Ceda Boulevard and terminates at the Hotel. Herman Williams Road connects Quil Ceda Boulevard with 105th Street NE along the west side of the Seattle Premium Outlet stores. The roads have been constructed with curb and gutter and sidewalk/bike lanes. The roads currently provide access to the Seattle Premium Outlet stores, the Casino and the Hotel, but will also provide access for future development within the business park.

Meridian Avenue N, 76th Avenue NW, 64th Street NW, 19th Avenue, Turk Road, Water Works Road and Totem Beach Road are all 2 lane rural road with 18 to 20 feet of pavement with no pedestrian facilities. All existing traffic volumes are below 4,000 ADT.

I-5 Interchanges Providing Linkage to Tulalip Tribes Reservation

The I-5 interchange at **88th Street** is a standard diamond interchange. The northbound off-ramp was widened by Tulalip Tribes to include a right-turn lane, a left-turn lane and a shared left/through/right-turn lane at the ramp terminal. Also, an additional westbound through lane was added to the structure by the Tulalip Tribes. The northbound on-ramp is a single lane ramp. The southbound off-ramp was improved with the addition of a separate right-turn lane. The southbound on-ramp is a two-lane ramp at 88th Street so it can accept the two westbound-to-southbound left-turn lanes from 88th Street. The interchange has undergone an Intersection Control Evaluation (ICE) for future improvements including several roundabout options.

The I-5 interchange at **116th Street** is a single-point urban interchange (SPUI). The northbound off-ramp widens to a single right-turn lane and two left-turn lanes at the ramp terminal. The southbound off-ramp widens to a single right-turn lane and a single left-turn lane at the ramp terminal. The northbound and southbound off-ramps include bus only lanes to access the transit stops. The southbound and northbound on-ramps are single lane ramps.

The I-5 interchange at **Marine Drive** is a standard diamond interchange. The northbound off-ramp widens to a single right-turn lane, a shared through/right-turn lane and a single left-turn lane at the ramp terminal. The northbound on-ramp is a single lane ramp. The southbound off-ramp is a single-lane ramp that widens for separate left- and right-turn lanes. The southbound on-ramp is a two-lane ramp at 116th Street so it can accept the two westbound-to-southbound left-turn lanes from 4th Street NE (Marine Drive west of I-5). The Marine Drive interchange is being evaluated for improvements as part of the 88th Street Interchange ICE.

Functional Classification and Maintenance

The arterial functional classification and maintenance responsibility is shown in Table 2.

Table 2. Arterial Street Functional Classification & Maintenance Responsibility

Roadway	Section	Functional Classification & Maintenance Responsibility	
		Functional Class	Maintenance responsibility
Marine Drive NW /NE	4/5-lane urban east of 27 th Ave NE, 3-lane urban 27 th Ave to 7th Dr NW, 2-lane rural w/channelization @ major intersections west of 7th Drive NW	Arterial	County
140th Street NW /NE (Firetrail Road)	2-lane rural/long intersection spacing channelization @ major intersections	Arterial	County
88th Street NE (Quil Ceda Way)	4/5-lane with paved shoulders	Arterial	Tribes
34 th Avenue NE	2-lane rural /long intersection spacing channelization @ major intersections	Arterial	County
27 th Avenue NE	2-lane rural/long intersection spacing channelization @ major intersections	Arterial	County/Tribes
Quil Ceda Boulevard	5/3-lane with paved shoulders or sidewalk on one side	Arterial	Tribes
99th Street NE	4/5-lane with paved shoulders & sidewalk on one side	Collector	Tribes
Quil Ceda Parkway	3/4-lane with paved shoulders or sidewalk on one side	Collector	Tribes
105th Street NE	3/4-lane with paved shoulders or sidewalk on one side	Collector	Tribes
19th Avenue NE	2-lane rural minimum shoulders no channelization	Collector	County/Tribes
64 th Street NW	2-lane with some pedestrian facilities no channelization	Collector	County
Meridian Av N	2-lane rural minimum shoulders no channelization	Collector	County
Water Works Road	2-lane rural minimum shoulders no channelization	Collector	County
Turk Road	2-lane rural minimum shoulders no channelization	Collector	County
Totem Beach Road	2-lane urban type road with sidewalks on one side	Collector	County
76th PI NW	2-lane with some pedestrian facilities no channelization	Collector	BIA

2.2 TRAFFIC VOLUMES

Existing two-way daily traffic volumes are shown on Figure 1. These volumes are based on daily and PM peak-hour counts recorded primarily in the year 2021. Figure 2 and Figure 3 show the PM peak hour traffic counts recorded in the year 2021 by the Tulalip Tribes, the County, WSDOT and independent count firms. Figure 2 shows the volumes in the vicinity of the Quil Ceda Village and Figure 3 shows the volumes along the Marine Drive corridor. The average daily weekday traffic volumes shown in Figure 2 range from less than 1,000 vehicles per day on Waterworks Road to 23,000 on 88th Street NE. The PM peak hour volumes range from less than 200 peak hour directional trips on Waterworks Road to over 1,200 peak hour directional trips on 88th Street NE west of I-5.

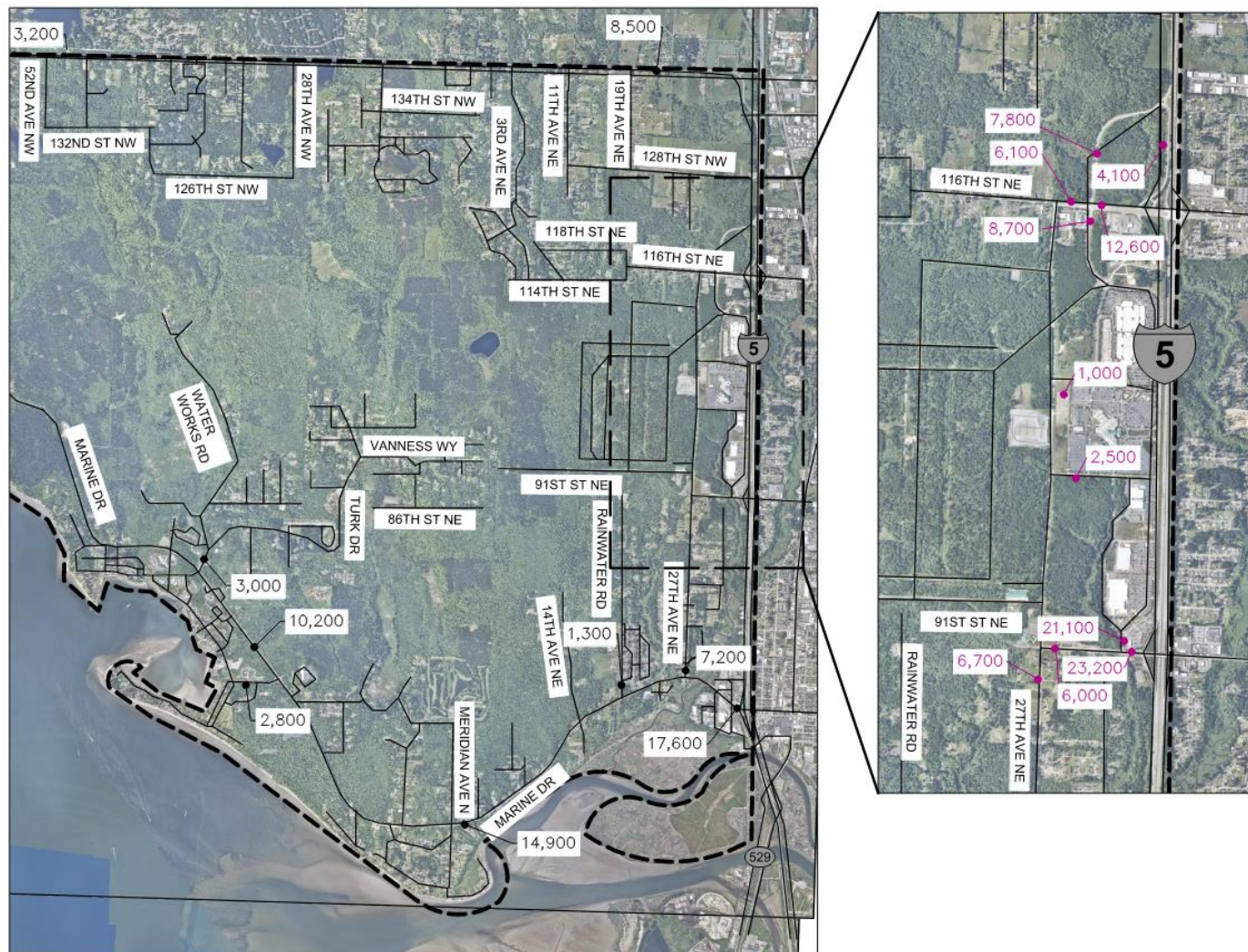


Figure 1: Existing Daily Traffic Volumes

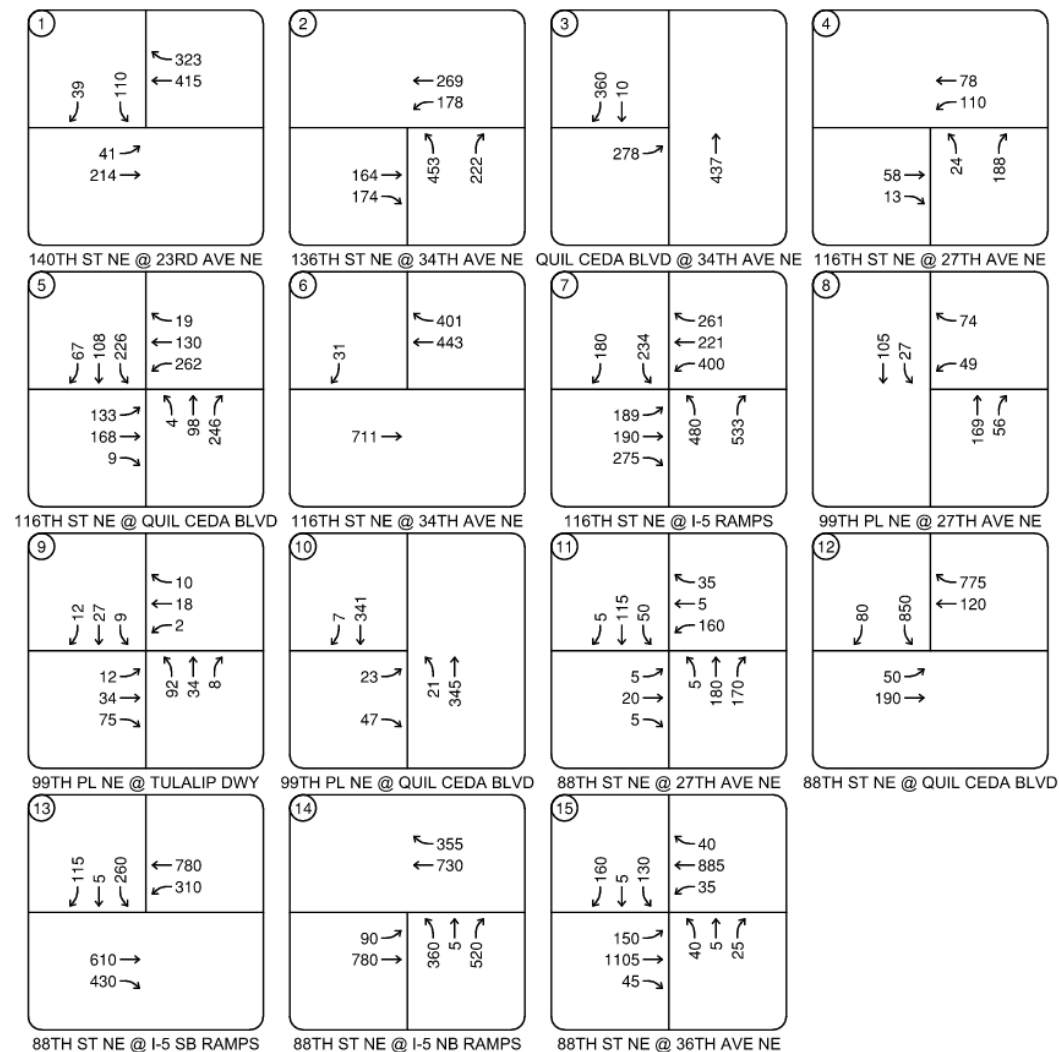


Figure 2: Existing PM Peak-Hour Volumes – Quil Ceda Village Area

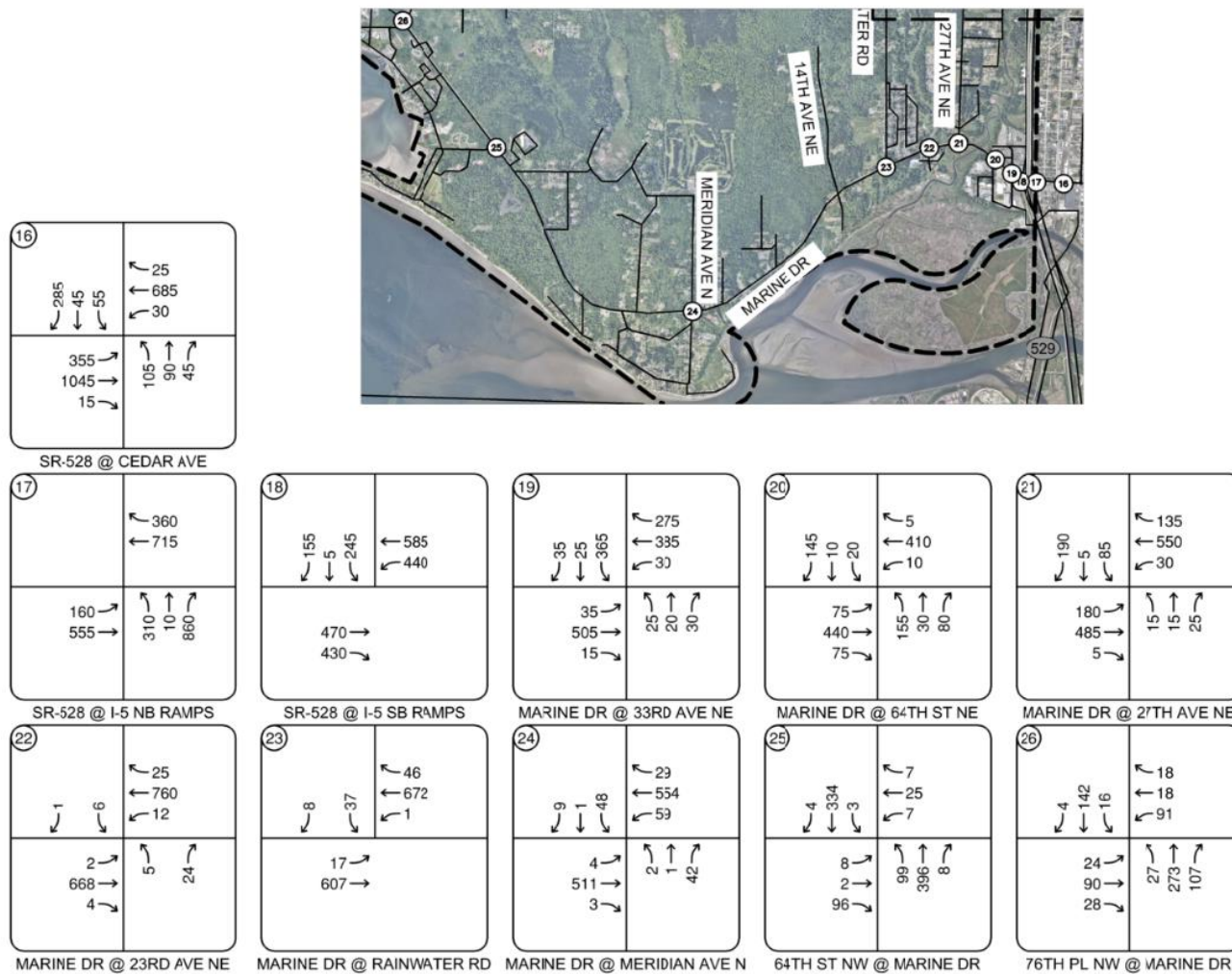


Figure 3: Existing PM Peak-Hour Volumes – Marine Drive Corridor

2.3 LEVEL OF SERVICE

The following section provides a summary of the roadway LOS standards and methodology used for the TSTP. The purpose of this information is to provide an overview of LOS and to identify its relationship to the transportation goals and policies of the Tribal Board of Directors.

(1) **Level of Service Definition:** LOS is an estimate of the quality and performance of transportation facility operations in a community. One commonly used method is the Transportation Research Board's *Highway Capacity Manual 6th Edition* (HCM) LOS system. The degree of traffic congestion and delay is rated using the letter "A" for the least amount of congestion to the letter "F" for the highest amount of congestion. The following LOS categories provide general descriptions of the different levels of service defined in the HCM. The community decides what level of traffic congestion is tolerable (i.e., decides whether their standard is "D," "E," or some other level). The choice of a particular LOS threshold can vary by planning sub area, roadway classification, or specific corridor or street.

(2) **Level of Service Categories:**

- **LOS A.** A free-flow condition. Speeds are at or near the speed limit and little to no delay exists. Freedom to select desired speeds and to make turns and maneuver within the traffic stream is extremely high.
- **LOS B.** Zone of stable flow. Drivers still have reasonable freedom to select their speed. Only minor delays of 10 to 20 seconds per vehicle at signalized intersections are experienced.
- **LOS C.** Still in the zone of stable flow, but speeds and maneuverability are more closely controlled by the higher volumes. The selection of speed is not affected by the presence of others, and maneuvering within the traffic stream requires vigilance on the part of the driver. Longer delays of 20 to 35 seconds per vehicle are experienced at signalized intersections.
- **LOS D.** Approaches unstable flow. Speed and freedom to maneuver are somewhat restricted with average delays of 35 to 55 seconds per vehicle at signalized intersections. Small increases in traffic flow can cause operational difficulties at this level.
- **LOS E.** Represents operating conditions at or near the capacity of the roadway. Low speeds (approaching 50 percent of normal) and average intersection delays of 55 to 80 seconds per vehicle exist at signalized intersections. Freedom to maneuver within the traffic stream is extremely difficult. Any incident can be expected to produce a breakdown in traffic flow with extensive queuing.
- **LOS F.** Describes forced flow operation at very low speeds. Operations are characterized by stop-and-go traffic. Vehicles may progress at reasonable speeds for several hundred feet or more, then be required to stop in a cyclic fashion. Long delays of over 80 seconds per vehicle occur at signalized intersections.

A more technical method has been developed in the Highway Capacity Manual (HCM) to measure LOS, involving the calculation of the volume to capacity ratio (V/C) of the roadway or intersection. Table 3 summarizes the V/C ranges for determining planning level mid-block LOS on urban and rural roadways.

Table 3. Level of Service Definitions for Urban and Rural Roadways

LOS	Unsignalized Intersection Delay (sec)	Signalized Intersection Delay (sec)	Volume/Capacity (V/C) Ratio
A	≤ 10	≤ 10	≤ 0.30
B	> 10 and ≤ 15	> 10 and ≤ 20	> 0.30 and ≤ 0.50
C	> 15 and ≤ 25	> 20 and ≤ 35	> 0.50 and ≤ 0.75
D	> 25 and ≤ 35	> 35 and ≤ 55	> 0.75 and ≤ 0.90
E	> 35 and ≤ 50	> 55 and ≤ 80	> 0.90 and ≤ 1.0
F	> 50	> 80	> 1.0

More detailed methodologies to calculate LOS at specific locations such as unsignalized or signalized intersections are also outlined in the HCM. LOS experienced at specific intersection locations may not necessarily be consistent with LOS along adjacent roadway links, since intersection LOS is dependent upon a variety of other factors, including intersection traffic control, signal timing/phasing, intersection geometrics, and cross-street traffic volumes.

(3) **Existing Link Level of Service:** Based on current traffic volumes, the volume to capacity ratio and LOS was calculated for mid-block arterial roadway sections throughout the Reservation. The results shown in Table 4 indicate that Marine Drive between 27th Avenue NE is already at LOS D. The link analysis indicated there are no links that exceed the proposed LOS thresholds at this time.

(4) **Existing Intersection Level of Service:** Based on current traffic volumes, the operational intersection LOS was calculated for the critical arterial/arterial signalized intersections within the reservation. Additionally, the critical minor approach LOS for non-signalized arterial intersections for critical locations was also analyzed. The results are shown in Table 5. LOS D west of 7th Drive NW and LOS E east of 7th Drive NW were selected as the initial LOS criteria to identify system deficiencies. The intersection operational analysis indicated there are two intersections that currently exceed the LOS threshold. These intersections are Marine Drive at 23rd Avenue NE and Marine Drive at Meridian Avenue N.

Table 4. Existing Corridor Level of Service

Street	Section	Two-Way Average Daily Volume	Capacity	LOS
Marine Drive	7 th Dr NW to 140 th St NW	10,200	16,000	C
27 th Avenue NE	Marine Dr NE to 88 th St NE	7,200	16,000	B
34 th Avenue NE	South of Quil Ceda Blvd	4,100	16,000	A
140 th Street NW	34 th Ave NE to 11 th Ave NE	8,500	16,000	C
140 th Street NW	11 th Ave NE to Marine Dr	3,200	16,000	A
Marine Drive NE	27 th Ave NE to 7 th Dr NE	14,900	16,800	D
116 th Street NE	Quil Ceda Blvd. to 27 th Ave NE	6,100	16,800	C
88 th Street NE	I-5 to Quil Ceda Blvd.	23,200	38,000	C
88 th Street NE	Quil Ceda Blvd to 27 th Ave NE	6,000	28,000	A
116 th Street NE	I-5 to Quil Ceda Blvd	12,600	28,000	B
Marine Drive NE	I-5 to 27 th Ave NE	17,600	28,000	C
Quil Ceda Blvd	88 th St NE to Quil Ceda Parkway.	21,100	34,000	C
Water Works Road	Entire Length	3,000	8,000	A
19 th Avenue NE	Marine Dr NE to Rainwater Rd	1,300	8,000	A
64 th Street NW	Entire Length	2,800	8,000	B
Quil Ceda Blvd	South of 116 th St NE	8,700	28,000	B
Quil Ceda Blvd	North of 116 th St NE	7,800	28,000	A

Table 5. Existing Intersection Level of Service

		2021 Existing		
		Control	LOS	Delay (sec)
Intersection				
1.	140 th St NE at 23 rd Ave NE	Minor-Leg Stop Control (SB)	D	29.7
2.	136 th St NE at 34 th Ave NE	Signal	B	17.2
3.	Quil Ceda Blvd at 34 th Ave NE	Roundabout	A	5.0
4.	116 th St NE at 27 th Ave NE	All-Way Stop Control	A	9.1
5.	116 th St NE at Quil Ceda Blvd	Signal	C	25.1
6.	116 th St NE at 34 th Ave NE	Minor-Leg Stop Control (SB)	B	13.2
7.	116 th St NE at I-5 Ramps	Signal (SPUI)	C	21.7
8.	99 th PI NE at 27 th Ave NE	Minor-Leg Stop Control (WB)	B	11.8
9.	99 th PI NE at 31 st Ave NE	Minor-Leg Stop Control (NB/SB)	B	10.5
10.	99 th PI NE at Quil Ceda Blvd	Minor-Leg Stop Control (EB)	C	16.7
11.	88 th St NE at 27 th Ave NE	All-Way Stop Control	B	15.0
12.	88 th St NE at Quil Ceda Blvd	Signal	A	9.8
13.	88 th St NE at I-5 SB Ramps	Signal	C	30.5
14.	88 th St NE at I-5 NB Ramps	Signal	C	34.3
15.	88 th St NE at 36 th Ave NE	Signal	B	19.0
16.	SR-524/4th St at Cedar Ave	Signal	D	37.0
17.	SR-524/4th St at I-5 NB Ramps	Signal	D	35.1
18.	SR-524/4th St at I-5 SB Ramps	Signal	E	59.6
19.	Marine Dr at 33 rd Ave NE	Signal	C	26.5
20.	Marine Dr at 31 st Ave NE	Roundabout	A	4.1
21.	Marine Dr at 27 th Ave NE	Signal	C	25.6
22.	Marine Dr at 23 rd Ave NE	Minor-Leg Stop Control (NB/SB)	F	51.5
23.	Marine Dr at Rainwater Rd	Minor-Leg Stop Control (SB)	C	20.7
24.	Marine Dr at Meridian Ave N	Minor-Leg Stop Control (NB/SB)	F	78.6
25.	Marine Dr at 64 th St NW	Signal	A	9.5
26.	Marine Dr at Water Works Rd	Signal	B	10.2

2.4 ACCIDENT INFORMATION

Reliable accident data is no longer available within the Tulalip Tribes, except at WSDOT intersections. The Tulalip Tribes Police now keep their own accident records and do not rely on Snohomish County Sheriffs or WSDOT State Patrol for accident data. The Tulalip Tribes Police do not have a reliable accident database. An example of this is along 27th Avenue NE. Accident records from a manual Tulalip Tribes record search shows 23 accidents, but Snohomish County records only show 6 accidents for the same period. The accident data from the Tulalip Tribes showed 18 accidents at the intersection of Marine Drive and 27th Avenue NE, while the Snohomish County data did not show any accidents at this intersection. It is therefore impossible to determine accurate data based on county records alone and therefore which Tulalip Tribes intersections and roadways have high accident rates. Tulalip Tribes is currently in the process of coordinating with WSDOT to incorporate the tribal accident data to create a reliable database.

2.5 TRANSIT SERVICE

Tulalip Transit operates transit services Monday through Friday. The service is primarily around Tulalip Bay. The route is shown in Figure 4.



Figure 4: Tulalip Transit Route

The Tulalip Transit route operates continuously between 8:50 AM and approximately 3:30 PM, Monday through Friday.

Community Transit operates bus routes 209 and 222 within the Tulalip Tribes Reservation. Route 209 provides service between the Smokey Point Transit Center in Arlington and the Lake Stevens Transit Center with service through Quil Ceda Business Park. Route 222 originates near Silver Village in Tulalip Tribes Reservation and continues east on Marine Drive, north to the Tulalip Casino, and across I-5 into Marysville. The route terminates at State Avenue/Grove Street.

2.6 PEDESTRIAN AND BICYCLE FACILITIES

On the Reservation, sidewalks currently exist on arterial streets within the Quil Ceda Village Business Park, Marine Drive east of 7th Avenue NW, sections of 64th Street NW, 76th Place NW, 27th Avenue NE in front of the school, and within recent residential and cultural development areas. There is a pedestrian overpass above Marine Drive at 36th Avenue NW that provides access between the education, health, and cultural areas south of Marine Drive and the residential areas north of Marine Drive. The other major streets on the reservation either have paved, gravel or dirt shoulders.

Expanding the Reservations non-motorized road network is consistent with the Tulalip Tribe's overall Transportation Goals to encourage an integrated multi-modal transportation system and to provide a transportation system that effectively encourages pedestrian, bicycle and other non-motorized travel. Both pedestrian and bicycle facilities have been and will continue to be an integral part of the transportation network, and the provision for these facilities should be incorporated in the transportation improvement program to encourage non-motorized trips.

The Tulalip Tribes have adopted Snohomish County's Bike plan; in addition, they have identified 27th Avenue NE from Marine Drive to 116th Street as a bicycle route.

2.7 ROADWAY MAINTENANCE

The Tulalip Tribes acknowledges the importance of regular maintenance of the public facilities. The surface conditions of the public roadways were evaluated in December 2021 and classified between excellent, good, fair, poor, and failed. The surface conditions are summarized in Figure 5.

The roadway signed were also evaluated. The sign inventory is summarized in Table 6.

Table 6. Sign Inventory Summary

Sign Type	Total Signs	Needs Maintenance, Repair, or Replacement	In Good Condition
Regulatory Signs	810	218	592
Warning Signs	664	154	510
Guide Signs	399	96	303
Custom Signs	417	101	316
TOTAL	2,290	569	1,721

The sidewalks and curb ramps with need have also been evaluated. The sidewalks and curb ramps in need of maintenance are shown in Figure 6 and Figure 7, respectively.

The guardrails along public facilities have also been evaluated. The guardrail deficiencies are shown in Figure 8.

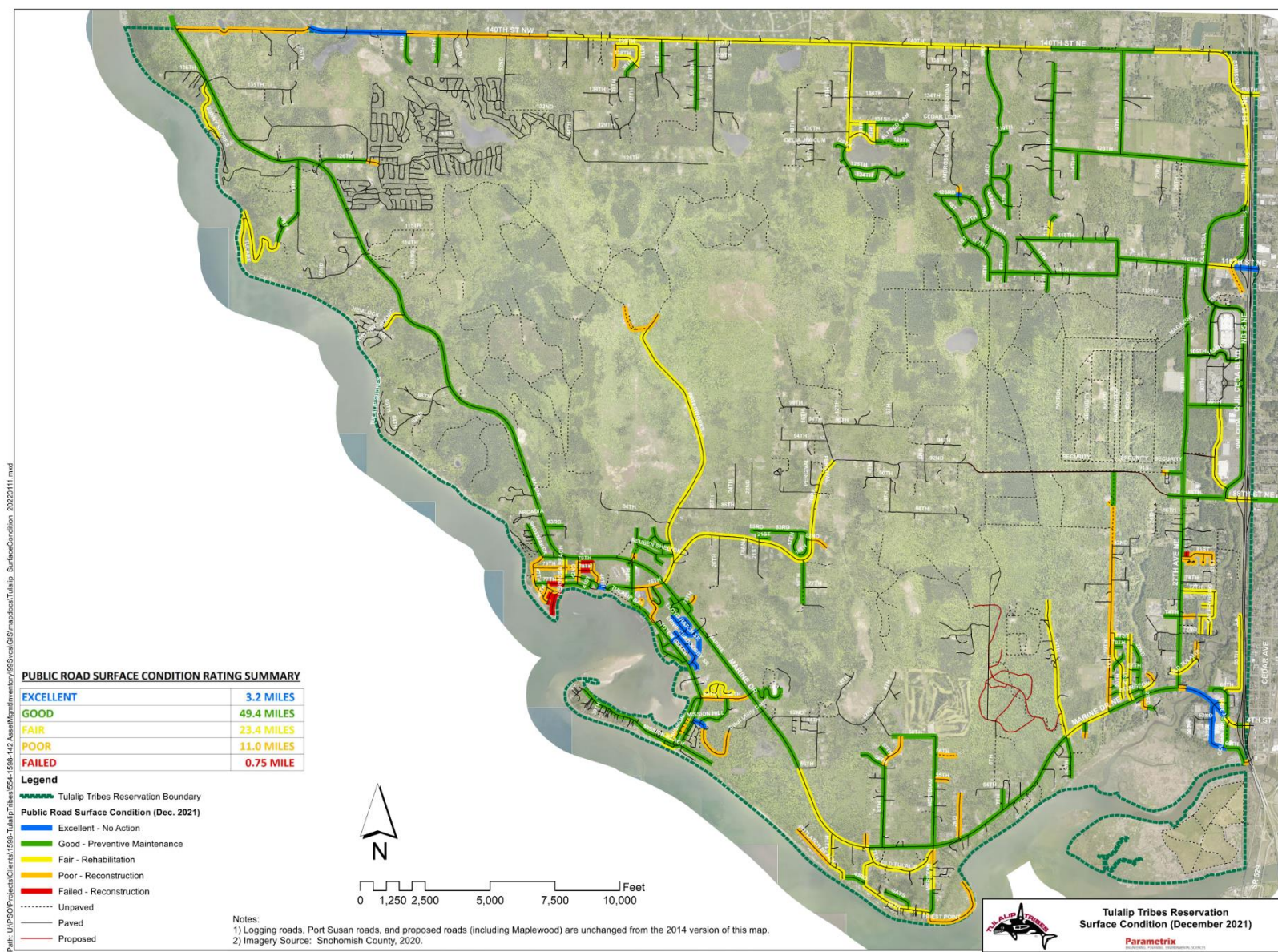


Figure 5: Surface Condition

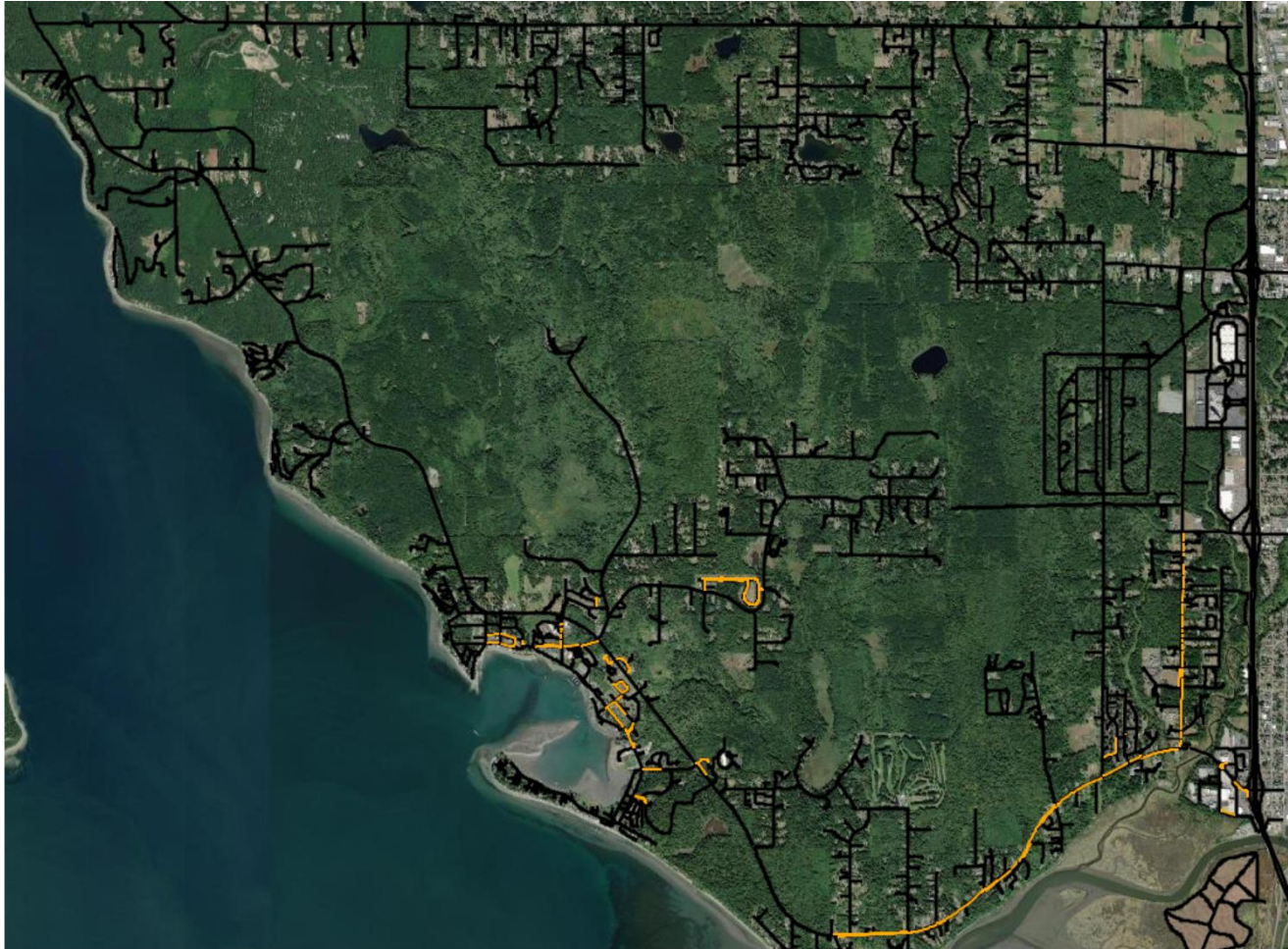


Figure 6: Sidewalks in Need of Maintenance

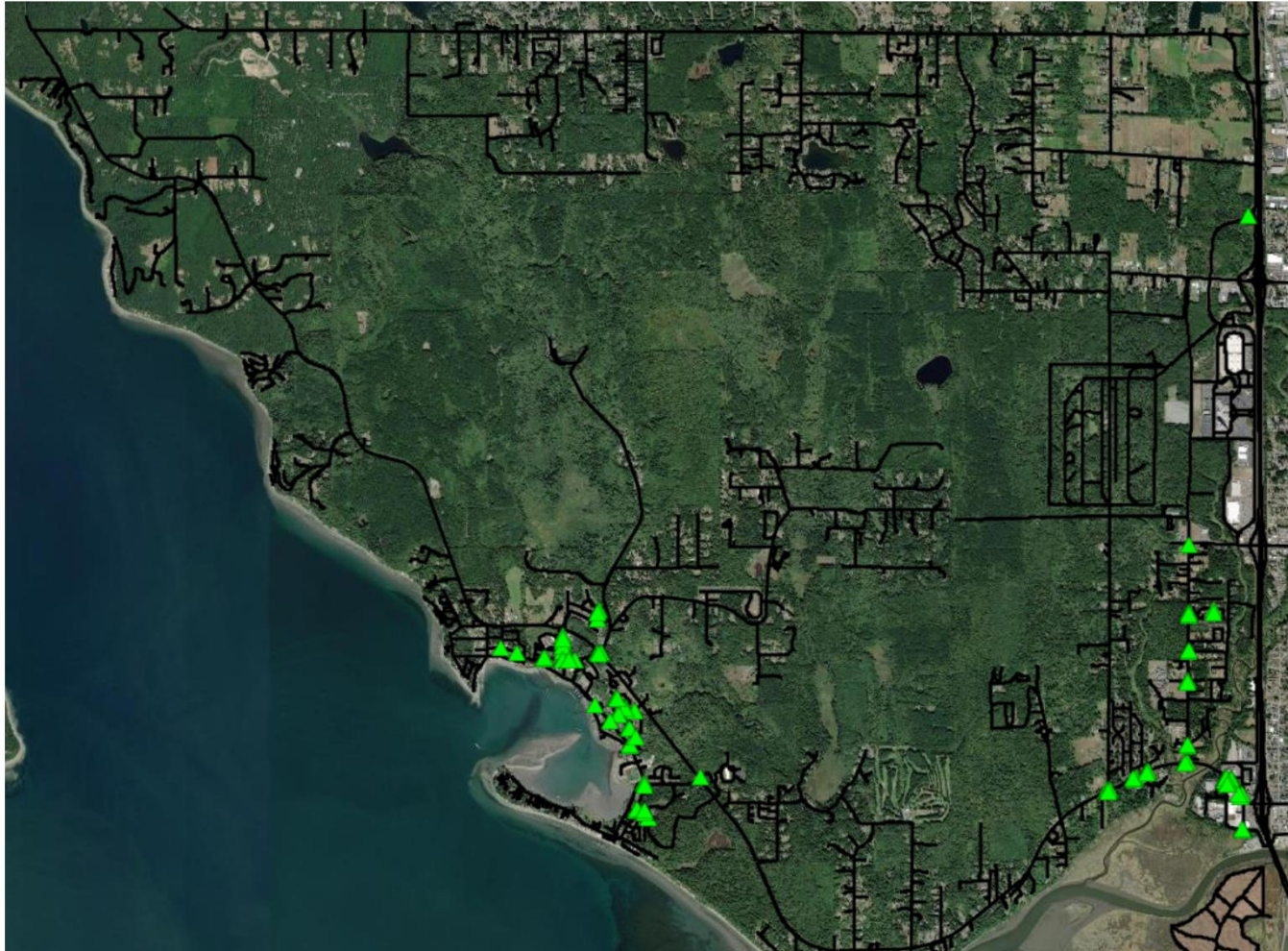


Figure 7: Curb Ramps in Need of Maintenance

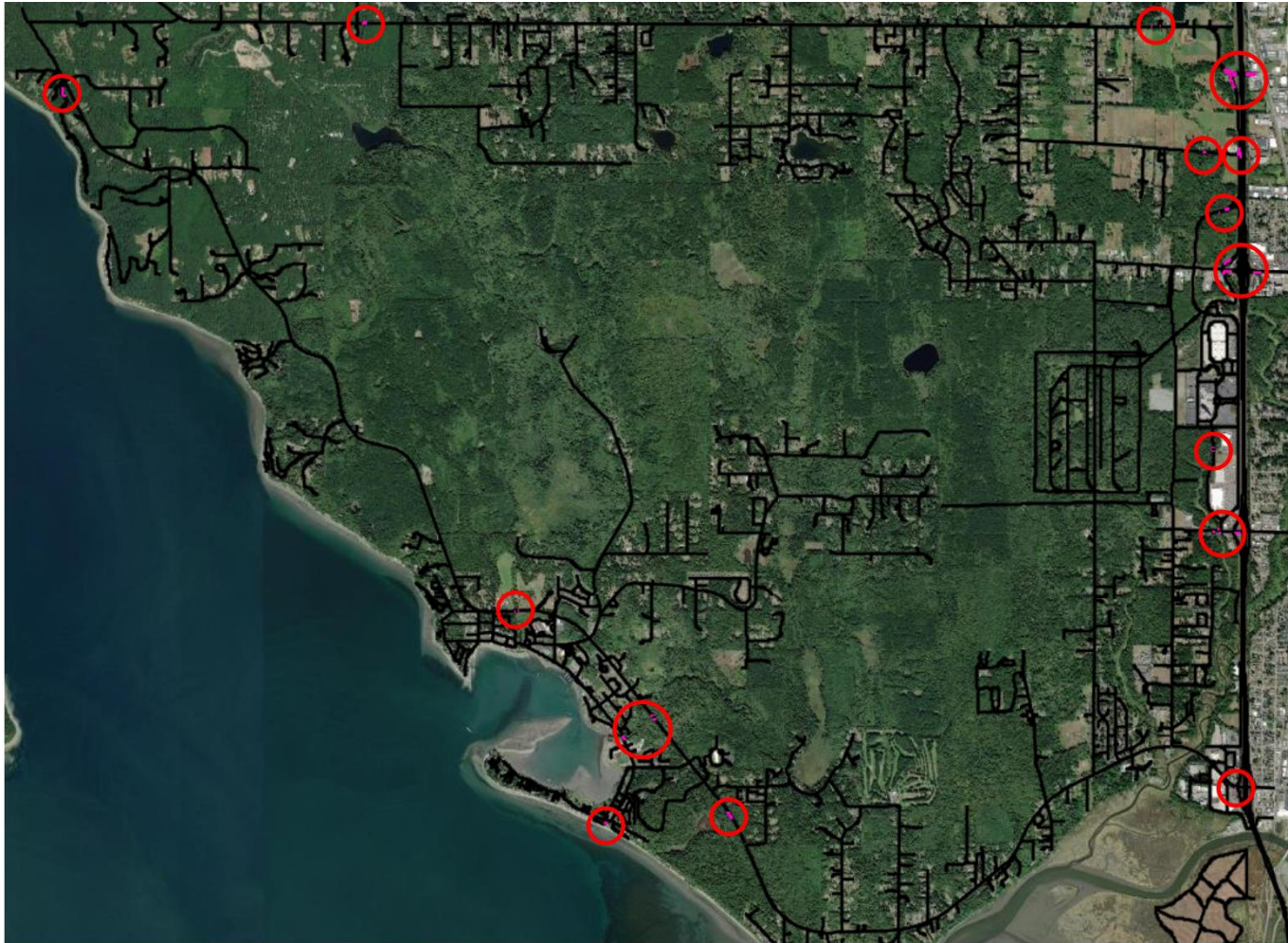


Figure 8: Guardrail Deficiencies

2.8 INDIAN RESERVATION ROADS

The Bureau of Indian Affairs (BIA) uses the inter tribal National Tribal Transportation Facility Inventory (NTTFI) to determine funding for planning and construction of roads within the Tulalip Tribes. A list of the roads that are currently on the NTTFI, need to be updated or need to be added to the NTTFI are listed in Table 7.

Table 7. Tulalip Tribes NTTFI Roads

Roadway	Length	Route-Section #	Status	Ownership
64th St NW	0.4 Miles	0003-10	Official	County
	0.4 Miles	0003-20	Official	Tribes
Interstate-5	4.9 Miles	0005-810	Official	WSDOT
Totem Beach Road	0.2 Miles	0052-10	Official	County
	Bridge	0052-15		County
	0.3 Miles	0052-20		County
	0.4 Miles	0052-30		Tribes
Marina Road	0.2 Miles	0053-810	Official	Tribes
Elders Road	0.3 Miles	0054-810	In-Process	Tribes
Joseph Charles Loop	0.1 Miles	1000-810	Official	Tribes
	0.1 Miles	1000-820		
	0.2 Miles	1000-830		
	0.1 Miles	1000-840		
Mission Avenue	0.4 miles	1005-810	Official	Tribes
Mission Beach Heights Road	0.3 Miles	1005-820	Official	
31st Avenue NW	0.1 Miles	1006-810	Official	Tribes
59th Place NW	0.1 Miles	1007-810	Official	Tribes
31st Avenue NE	0.6 Miles	1010-810	Official	Tribes
	0.1 Miles	1010-820	Official	
62 nd Street NW	0.2 Miles	1011-010	In-Process	Tribes
29 th Drive NE	0.1 Miles	1011-020		
Ray Fryberg Drive	0.3 Miles	1040-810	Official	Tribes
George C Jones Jr. Place	0.1 Miles	1040-820		
Harold Joseph Road	0.1 Miles	1040-830		
Ray Fryberg Drive	0.1 Miles	1040-840		
81st Street NE	0.2 Miles	1050-810	Official	Tribes
30th Drive NE	0.1 Miles	1050-820		
29th Drive NE	0.1 Miles	1050-830		
81st Street NE	0.1 Miles	1050-840		
Ed Williams Road	0.1 Miles	1050-850		
Larry Price Loop Road	0.2 Miles	1060-810	Official	Tribes
Ezra Hetch Road	0.1 Miles	1061-810	Official	Tribes
Lloyd Hatch Senior Drive	0.3 Miles	1070-810	Official	Tribes
Alphonsus Bob Loop Road	0.2 Miles	1070-820		
Alphonsus Bob Loop Road	0.1 Miles	1070-830		
Wesley Charles/Ernie Cladoosby	0.4 Miles	1070-840		
Thomas Gobin Lane	0.1 Miles	1070-850		
Dog Alley	0.1 Miles	1070-860	Official	Tribes
Totem Beach Loop Road	0.1 Miles	1075-810		
	0.1 Miles	1075-820		
	0.2 Miles	1075-830		

Table 7. Tulalip Tribes NTTFI Roads (continued)

Roadway	Length	Route-Section #	Status	Ownership
Walter Moses Jr. Drive	0.2 Miles 0.1 Miles	1080-810 1080-820	Official	Tribes
Ellison James Road	0.1 Miles	1090-810	Official	Tribes
Rueben Shelton Drive	0.4 Miles	1091-810	Official	Tribes
Verle Hatch Drive	0.2 Miles	1092-810	Official	Tribes
Gus Smith Drive	0.1 Miles	1093-810	Official	Tribes
Steve Williams Drive	0.2 Miles	1094-810	Official	Tribes
Ernie Cladoosby Jr. Street	0.1 Miles	1095-810	Official	Tribes
Alfred Sam Drive	0.1 Miles	1100-810	Official	Tribes
47th Avenue NW	0.4 Miles	1101-810	Official	Tribes
79th Street NW	0.1 Miles	1102-810	Official	Tribes
78th Place NW	0.1 Miles	1103-810	Official	Tribes
77th Street NW	0.2 Miles	1104-810	Official	Tribes
76th Street NW	0.1 Miles	1105-810	Official	Tribes
46th Avenue NW	0.1 Miles	1106-810	Official	Tribes
45th Avenue NW	0.1 Miles	1107-810	Official	Tribes
76th Place NW	0.2 Miles 0.6 Miles	1110-810 1110-820	Official	BIA
40th Drive NW	0.2 Miles	1111-810	Official	Tribes
77th Place NW	0.2 Miles	1112-810	Official	Tribes
78th Place NW	0.1 Miles	1113-810	Official	Tribes
78th Street NW	0.1 Miles	1114-810	Official	Tribes
78th Place NW	0.1 Miles	1115-810	Official	Tribes
42nd Drive NW	0.2 Miles	1116-810	Official	Tribes
88th Street NE (Quil Ceda Way)	0.8 Miles	1120-810	Official	Tribes
88th Street NE	0.1 Miles Bridge	1121-810 1121-815	Official	Tribes
99th Street NE	0.4 Miles	1130-10	Official	Tribes
105th Street NE	0.4 Miles	1140-10	Official	Tribes
Quil Ceda Boulevard	0.7 Miles 1.2 Miles 0.6 Miles	1150-10 1150-20 1150-30	Official	Tribes
93rd Street NE	0.2 Miles	1160-10	Official	Tribes
Quil Ceda Parkway	0.7 Miles	1170-10	Official	Tribes
Herman Williams Senior Drive	0.4 Miles	1180-10	Official	Tribes
88th Street NE	0.3 Miles	1200-810	Official	Tribes
East-West Roadway	1.4 Miles	1200-820	Official	Tribes
6th Avenue NW	0.3 Miles	1220-810	Official	Tribes
56th Street NW	0.2 Miles	1220-820	Official	Tribes
57th Place NW	0.1 Miles	1220-830	Official	Tribes
Mission Hill Road	0.1 Miles 0.3 Miles	1230-810 1230-820	Official	Tribes
SR-528	0.1 Miles	2000-10	Official	Tribes
4th Street NE	0.7 Miles	2000-20	Official	City
47th Avenue NE	0.4 Miles	2000-30	Official	City

Table 7. Tulalip Tribes NTTFI Roads (continued)

Roadway	Length	Route-Section #	Status	Ownership
SR-203	0.9 Miles Bridge 2.5 Miles	2100-40 2100-41 2100-42	Official	WSDOT
116th Street NE	0.2 Miles Bridge 0.2 Miles	2200-10 2200-15 2200-20	Official	Tribes Tribes County
Interstate-5 SR-532 NE Camano Drive SE Camano Drive	10.3 Miles 9.8 Miles 2.8 Miles 12.5 Miles	2300-10 2300-20 2300-30 2300-40	In-Process	WSDOT WSDOT County County
Interstate-5 SR-526 SR-525 SR-525 (ferry) SR-525 Main Street E Harbor Road	4.7 Miles 5.9 Miles 2.0 Miles --- 8.8 Miles 0.6 Miles 5.6 Miles	2400-10 2400-20 2400-30 2400-40 2400-50 2400-60 2400-70	In-Process	WSDOT WSDOT WSDOT WSDOT WSDOT County County
33rd Avenue NE	0.3 Miles 0.2 Miles	6002-810 6002-820	Official	Tribes Tribes
66th Street NE 35th Avenue NE	0.2 Miles 0.4 Miles	6005-810 6005-820	Official	County
74th Street NE	0.1 Miles 0.2 Miles	6009-810 6009-820	Official	County
19th Avenue NE	0.9 Miles 0.4 Miles	6011-810 6011-820	Official	County Tribes
77th Street NE	0.4 Miles	6012-810	Official	County
27th Avenue NE	1.4 Miles 1.7 Miles	6015-810 6015-810	Official Official	County Tribes
Sturgeon Drive	0.1 Miles	6016-810	Official	County
21st Drive NE	0.1 Miles 0.1 Miles 0.3 Miles 0.1 Miles	6017-810 6017-820 6017-830 6017-840	Official	County
65th Place NE	0.1 Miles	6018-810	Official	County
66th Place NE	0.1 Miles 0.1 Miles	6019-810 6019-820	Official	County
Old Tulalip Road	0.2 Miles 0.1 Miles	6020-810 6020-820	Official	County Tribes
67th Place NE	0.1 Miles	6021-810	Official	County
14th Avenue NE	0.3 Miles 1.0 Miles	6023-810 6023-820	Official	County
Old Tulalip Road	0.1 Miles 0.3 Miles	6024-810 6024-820	Official	County
23rd Avenue NE 23rd Avenue NE 22nd Drive NE 22nd Drive NE	0.2 Miles 0.1 Miles 0.1 Miles 0.2 Miles	6025-810 6025-820 6025-830 6025-840	Official	County
77st Street NE	0.1 Miles	6026-810	Official	County

Table 7. Tulalip Tribes NTTFI Roads (continued)

Roadway	Length	Route-Section #	Status	Ownership
20th Drive NE	0.1 Miles	6027-810	Official	County
20th Drive NE	0.2 Miles	6027-820		
19th Drive NE	0.2 Miles	6027-830		
19th Drive NE	0.1 Miles	6027-840		
65th Street NE	0.1 Miles	6027-850		
Priest Point Drive NW	0.2 Miles 0.5 Miles	6028-810 6028-820	Official	County
2nd Avenue NE	0.3 Miles	6029-810	Official	County
19th Drive NE	0.1 Miles	6031-810	Official	County
70th Place NE	0.1 Miles	6032-810	Official	County
20th Drive NE	0.1 Miles	6033-810	Official	County
7th Avenue NE	0.2 Miles	6037-810	Official	County
43rd Place NE	0.1 Miles	6038-810	Official	County
Meridian Avenue	0.3 Miles	6039-810	Official	County
Meridian Avenue	0.8 Miles	6039-820		
60th Street NW	0.3 Miles	6039-830		
Priest Point Drive NE	0.6 Miles	6042-810	Official	County
Gays Drive	0.2 Miles	6046-810	Official	County
43rd Street NW	0.2 Miles	6050-810	Official	County
7th Drive NW	0.1 Miles	6054-810	Official	County
Old Tulalip Road	0.5 Miles	6054-820		
6th Avenue NW	0.5 Miles	6059-810	Official	County
12th Avenue NW	0.2 Miles	6061-810	Official	County
Potlatch Beach Road	0.3 Miles 0.1 Miles	6062-810 6062-820	Official	County
Water Works Road	2.1 Miles	6075-810	Official	County
Water Works Road	0.1 Miles	6075-820		County
Hatchery Road	0.2 Miles	6075-830		Tribes
Turk Drive	1.9 Miles	6076-10	Official	County
83rd Street NW	0.5 Miles	6077-810	Official	Tribes
17th Avenue NW	0.3 Miles	6077-820		
82nd Street NW	0.1 Miles	6077-830		
Lager Lane	0.3 Miles	6078-810	Official	County
36th Avenue NW	0.2 Miles 0.1 Miles	6081-810 6081-820	Official	County
Marine Drive Pedestrian Path	0.2 Miles	6082-810	Official	Tribes
Hermosa Beach Road	0.3 Miles 0.2 Miles	6085-810 6085-820	Official	Tribes
Mission Beach Road	1.2 Miles	6088-810	Official	County
Mission Beach Walk Road	0.1 Miles	6089-810	Official	County
80th Street NW	0.2 Miles	6094-810	Official	County
Shoemaker Road	0.3 Miles	6094-820		
83rd Place NW	0.1 Miles	6096-810	Official	County
116th Street NE	1.6 Miles 1.6 Miles	6100-810 6100-820	Official	Tribes County
114th Street NE	1.0 Miles	6101-810	Official	Tribes
126th Street NW	0.1 Miles 0.1 Miles 0.1 Miles	6102-810 6102-820 6102-830	Official	County

Table 7. Tulalip Tribes NTTFI Roads (continued)

Roadway	Length	Route-Section #	Status	Ownership
108th Street NW	0.1 Miles	6103-810	Official	County
Tulare Way	0.4 Miles	6105-810	Official	County
Tulare Way	1.3 Miles	6105-820		
View Place	0.1 Miles	6105-830		
Sunny Shores Road	0.2 Miles	6106-810	Official	County
11th Drive NE	0.3 Miles	6107-810	Official	County
118th Street NE	0.8 Miles	6108-810	Official	Tribes
	0.1 Miles	6108-820		
11th Avenue NE	0.1 Miles	6109-810	Official	County
11th Avenue NE	0.1 Miles	6111-810	Official	County
38th Avenue NW	0.1 Miles	6112-810	Official	County
39th Drive NW	0.2 Miles	6112-820		
34th Avenue NW	0.3 Miles	6113-810	Official	County
138th Street NW	0.2 Miles	6114-810	Official	County
30th Avenue NW	0.5 Miles	6115-810	Official	County
139th Street NW	0.1 Miles	6116-810	Official	County
139th Street NW/36th Drive NW	0.3 Miles	6116-820		
125th Place NW	0.2 Miles	6118-810	Official	County Tribes
	0.2 Miles	6118-820		
8th Drive NW	0.3 Miles	6119-810	Official	County
128th Street NW	0.1 Miles	6121-810	Official	County
126th Place NW	0.1 Miles	6122-810	Official	County
12th Avenue NW	0.7 Miles	6123-810	Official	County
	0.3 Miles	6123-820		
129th Place NW	0.3 Miles	6124-810	Official	County Tribes
	0.2 Miles	6124-820		
11th Avenue NE	0.3 Miles	6125-810	Official	County
	0.6 Miles	6125-820		
131st Street NW	0.2 Miles	6126-810	Official	County Tribes
	0.3 Miles	6126-820		
10th Avenue NW	0.1 Miles	6127-810	Official	County
11th Avenue NW	0.1 Miles	6128-810	Official	County
8th Drive NW	0.1 Miles	6129-810	Official	County
128th Street NE	1.4 Miles	6130-820	Official	County
14th Avenue NE	0.2 Miles	6131-810	Official	County
34th Avenue NE	1.3 Miles	6133-810	Official	County
19th Avenue NE	0.8 Miles	6135-810	Official	County
140th Street NW /NE (Firetrail Road)	0.9 Miles	6143-810	Official	County Tribes WSDOT
136th Street NE	0.1 Miles	6143-820		
	Bridge	6143-825		
3rd Avenue NE	1.0 Miles	6150-810	Official	County
3rd Avenue NE	0.2 Miles	6150-820		
Aspen Drive	0.3 Miles	6150-830		
120th Street NE	0.2 Miles	6150-840		
6th Avenue NE	0.3 Miles	6151-810	Official	County
	0.1 Miles	6151-820		
	0.1 Miles	6151-830		
2nd Drive NE	0.4 Miles	6152-810	Official	County
	0.6 Miles	6152-820		

Table 7. Tulalip Tribes NTTFI Roads (continued)

Roadway	Length	Route-Section #	Status	Ownership
1st Drive NW	0.3 Miles 0.5 Miles	6153-810 6153-820	Official	County
4th Avenue NE	0.2 Miles	6154-810	Official	County
63rd Drive NW	0.2 Miles	6173-810	Official	County
60th Avenue NW	0.3 Miles	6174-810	Official	County
Maplewood Drive	0.8 Miles 0.8 Miles	6200-810 6200-820	Official	Tribes
Good Walk Way	0.8 Miles	6201-810	Official	Tribes
Story Pole Drive	0.3 Miles	6202-810	Official	Tribes
Black Fish Drive	0.5 Miles	6203.810	Official	Tribes
Canoe Loop Way	0.3 Miles	6204-810	Official	Tribes
Elder Lane	0.1 Miles	6205-810	Official	Tribes
Orca Way	0.2 Miles	6206-810	Official	Tribes
Tulalip Market Parking	Parking	8000-001 8000-002 8000-003	Official	Tribes
TERO Parking	Parking	8001-001 8001-002 8001-003 8001-004 8001-005	Official	Tribes
Outlet Mall Parking	Parking	8002-001 8002-002 8002-003 8002-004 8002-005 8002-006 8002-007 8002-008 8002-009 8002-010 8002-011 8002-012 8002-013 8002-014 8002-015	In-Process	Tribes

Table 7. Tulalip Tribes NTTFI Roads (continued)

Roadway	Length	Route-Section #	Status	Ownership
Tulalip Hotel and Casino Parking Lots	Parking	8003-001	Official	Tribes
		8003-002		
		8003-003		
		8003-004		
		8003-005		
		8003-006		
		8003-007		
		8003-008		
		8003-009		
		8003-010		
		8003-011		
		8003-012		
		8003-013		
		8003-014		
		8003-015		
		8003-016		
		8003-017		
		8003-018		
		8003-019		
		8003-020		
		8003-021		
		8003-022		
		8003-023		
		8003-024		
		8003-025		
		8003-026		
		8003-027		
		8003-028		
		8003-029		
		8003-030		
Retail Parking	Parking	8004-001	In-Process	Tribes
		8004-002		
		8004-003		
		8004-004		
		8004-005		
		8004-006		
		8004-007		
Retail Parking	Parking	8005-001	In-Process	Tribes
		8005-002		
		8005-003		
		8005-004		
		8005-005		
		8005-006		
		8005-007		
		8005-008		
		8005-009		
		8005-010		
		8005-011		
		8005-012		
		8005-013		
		8005-014		
		8005-015		
		8005-016		
		8005-017		
		8005-018		
		8005-019		

Table 7. Tulalip Tribes NTTFI Roads (continued)

Roadway	Length	Route-Section #	Status	Ownership
Retail Parking	Parking	8006-001 8006-002 8006-003 8006-004 8006-005 8006-006 8006-007 8006-008 8006-009 8006-010 8006-011 8006-012	Official	Tribes
Bingo Parking	Parking	8007-001 8007-002 8007-003 8007-004 8007-005	Official	Tribes
Warehouse Parking	Parking	8008-001 8008-002 8008-003 8008-004	Official	Tribes
Admin Parking	Parking	8009-001 8009-002 8009-003 8009-004 8009-005	Official	Tribes
Quil Ceda Elementary	Parking	8010-001 8010-002 8010-003 8010-004 8010-005 8010-006	Official	Tribes
Heritage School	Parking	8011-001 8011-002 8011-003 8011-004 8011-005 8011-006 8011-007 8011-008 8011-009 8011-010	Official	Tribes
QCC Casino Parking	Parking	8012-001 8012-002 8012-003 8012-004 8012-005 8012-006 8012-007 8012-008 8012-009 8012-010	Official	Tribes

Table 7. Tulalip Tribes NTTFI Roads (continued)

Roadway	Length	Route-Section #	Status	Ownership
Tribal Gas and Liquor Parking	Parking	8013-001 8013-002 8013-003 8013-004 8013-005 8013-006	Official	Tribes
Tribal Police and Court Parking	Parking	8014-001	Official	Tribes
Hibulb Cultural Center	Parking	8015-001 8015-002 8015-003	Official	Tribes
Admin Building Parking	Parking	8016-001 8016-002 8016-003 8016-004 8016-005 8016-006 8016-007	Official	Tribes
Beda?chelh Social Services	Parking	8017-001 8017-002 8017-003	Official	Tribes
Homeless Shelter	Parking	8018-001	Official	Tribes
Daycare Parking	Parking	8019-001 8019-002 8019-003	Official	Tribes
Family Center Parking	Parking	8020-001 8020-002 8020-003 8020-004 8020-005 8020-006	Official	Tribes
Utilities Parking	Parking	8021-001	Official	Tribes
Cultural Building Parking	Parking	8022-001 8022-002 8022-003	Official	Tribes
Long House Parking	Parking	8023-001 8023-002 8023-003 8023-004 8023-005 8023-006 8023-007 8023-008 8023-009 8023-010 8023-011	Official	Tribes
Senior Center Parking	Parking	8024-001 8024-002 8024-003	Official	Tribes
Elder Parking	Parking	8025-001 8025-002 8025-003	Official	Tribes
Marina Building Parking	Parking	8026-001 8026-002 8026-003 8026-004	Official	Tribes

Table 7. Tulalip Tribes NTTFI Roads (continued)

Roadway	Length	Route-Section #	Status	Ownership
Health and Wellness Parking	Parking	8027-001 8027-002 8027-003 8027-004 8027-005 8027-006 8027-007 8027-008 8027-009 8027-010 8027-011	Official	Tribes
Safe House Parking	Parking	8028-001 8028-002 8028-003	Official	Tribes
Early Learning Academy Parking	Parking	8029-001 8029-002 8029-003 8029-004 8029-005 8029-006 8029-007 8029-008	Official	Tribes
Boys & Girls Parking	Parking	8030-001 8030-002 8030-003 8030-004 8030-005 8030-006 8030-007 8030-008 8030-009	Official	Tribes
Legacy of Healing Parking	Parking	8031-001 8031-002	Official	Tribes
Fire Station Parking	Parking	8032-001	Official	Tribes
Housing Parking	Parking	8033-001 8033-002 8033-003	Official	Tribes
Community Center Parking	Parking	8034-001	Official	Tribes
140th Street NW /NE (Firetrail Road)	7.2 Miles	9630-810	Official	County
Marine Drive NE	0.5 Miles Bridge 0.1 Miles Bridge 2.6 Miles 5.7 Miles 3.1 Miles	9682-810 9682-815 9682-820 9682-825 9682-830 9682-840 9682-850	Official	County

The routes, including official routes, on the NTTFI are intended to be updated annually to account for changes in daily trip volumes, surface wear and changes in other aspects of the roadway. In addition, routes may be updated for length and sectioning to better represent the roadway.

3. FUTURE CONDITIONS AND DEFICIENCIES

This section of the TSTP describes future conditions in the year 2045. The methodology used to estimate traffic volumes is described. Level of service standards and future transportation system deficiencies are also discussed in this section.

3.1 TRAVEL DEMAND FORECASTING FOR YEAR 2045

Regional travel demand and roadway network traffic volumes on the Tulalip Tribes Reservation are forecast for the year 2045. The volumes are a combination of anticipated development on the Tulalip Tribes Reservation, one Snohomish County development, an annually compounding growth rate, and forecast data from the 88th Street NE and SR-528/4th Street interchange studies. The following potential developments on the Tulalip Tribes Reservation have been included in the 2045 forecast volumes:

1. Q Hotel – 185 Rooms
2. Quil Ceda Creek Counseling Offices – 60,300 SF
3. Old Q Casino Retail – 42,000 SF
4. Mission Beach Tiny Home Village – 17 units
5. Totem Beach Duplex Units – 8 Duplexes (16 units total)
6. Totem Beach Senior Duplex Units – 8 Duplexes (16 units total)
7. Turk Trails – 80 single-family units
8. Marine Dr Development – 26 single-family units
9. Undeveloped 80 acres south of 12th Ave – 60 single family units
10. Brown Bear Car Wash
11. Auto Sales (Quil Ceda Village) – 8,500 SF
12. 27th Avenue Development – 500 low-rise apartments

An annually compounding growth rate of 0.5% is also included in the 2045 volume forecasts.

3.2 LEVEL OF SERVICE STANDARDS

Tribal staff continues to work on established LOS standards for arterial streets to measure the performance of the transportation system. This TSTP methodology used to calculate LOS is a two tier system involving links and intersections. The LOS standards for streets links is based on the daily link LOS volume to capacity ratio while intersection LOS is based on the PM peak hour operational calculations. This methodology is described in the existing conditions section of the plan.

Although there is no formal adopted policy, the Tulalip Tribes historically have required transportation improvements to be made before development occupancy and have historically followed Snohomish County or WSDOT standards for the area, which is basically LOS C in the rural areas and LOS E in the Quil Ceda Village influence area or at WSDOT intersections. The State's Growth Management Act (GMA) only requires that a transportation facility must be planned for improvement within six years to a level that does not exceed the standard. Tribal policy makers are still in the process of determining whether to bring the Tribes LOS policy in line with the State GMA concurrency 6-year timeframe; thus, if construction to improve the transportation facility is not planned for completion within the six-year timeframe the development will not be allowed to proceed.

In order to encourage growth in targeted areas of the Reservation, a LOS standard E is recommended along several arterial corridors and LOS exception for some others. The following preliminary LOS standards are recommended for the Reservation. Approval from the Tribal Council will be required in order for these standards to be put in effect:

- Maintain intersection LOS E along 27th Avenue NE and east of 27th Avenue NE
- Maintain intersection LOS D or better west of 27th Avenue NE
- Maintain link LOS E from 7th Drive NW east to I-5 with the exception of Quil Ceda Boulevard south of Quil Ceda Parkway and 88th Street NE between Quil Ceda Boulevard and I-5 that should maintain LOS E outside of the PM peak 2 hour period but is exempt for LOS standards for the 2 hour PM peak period.

3.3 FUTURE TRAFFIC VOLUMES AND LEVEL OF SERVICE

PM peak hour traffic volume forecasts were prepared for the year 2045 and assumed to be the same with or without the improvements identified in the analysis section. These peak hour volumes were converted to daily volumes using a ratio of PM peak to daily of 1:12, which is consistent with the existing ratios across the Reservation. The estimated daily volumes were used to calculate V/C ratios and to determine the link LOS of arterial streets in the Reservation. The year 2045 traffic volume forecasts were also prepared assuming that future travel characteristics would continue to be the same as they are today. The 2045 traffic volumes are shown in Figure 9. Note that there are potential changes that have not been taken into account, such as: increased transit use; spreading of the peak hour as a facility becomes increasingly congested; shift in travel patterns with new interchanges or arterial improvements in other jurisdictions; increased bicycle and pedestrian facility use; and, other transportation demand management strategies such as telecommuting. These non-traditional travel demand adjustments could reduce the total peak hour volumes by as much as 10 percent. The largest reductions could occur from increased transit use and peak hour spreading. The LOS for 2045 is summarized in Table 8.

3.3.1 2045 Baseline Improvements

The Tulalip Tribes is already planning improvements at the 88th Street NE and SR-528/4th Street interchanges in coordination with WSDOT. These improvements may include construction of new roundabouts at the following intersections:

12. 88th Street NE at Quil Ceda Boulevard
13. 88th Street NE at Interstate-5 Southbound Ramps
14. 88th Street NE at Interstate-5 Northbound Ramps
15. 88th Street NE at 36th Avenue NE
16. SR-528/4th Street NE at Cedar Avenue
17. SR-528/4th Street NE at Interstate-5 Northbound Ramps
18. SR-528/4th Street NE at Interstate-5 Southbound Ramps
19. Marine Drive at 33rd Avenue NE

Additionally, Snohomish County's Transportation Needs Report was reviewed for planned capacity improvements at the study intersections. The only intersection with planned capacity improvements is 140th Street NE at 23rd Avenue NE. This intersection will have additional eastbound and westbound turn lane channelization as well as a construction of a signal or roundabout to improve southbound LOS operations.

Table 8. Year 2045 Corridor Level of Service

Street	Section	Capacity	2021 Existing		2045 Future	
			Volume	LOS	Volume	LOS
Marine Drive	7 th Dr NW to 140 th St NW	16,000	10,200	C	3,800	A
27 th Avenue NE	Marine Dr NE to 88 th St NE	16,000	7,200	B	11,100	C
34 th Avenue NE	South of Quil Ceda Blvd	16,000	4,100	A	5,800	B
140 th Street NW	34 th Ave NE to 11 th Ave NE	16,000	8,500	C	10,400	C
140 th Street NW	11 th Ave NE to Marine Dr	16,000	3,200	A	4,600	A
Marine Drive NE	27 th Ave NE to 7 th Dr NE	16,800	14,900	D	18,600	F
116 th Street NE	Quil Ceda Blvd. to 27 th Ave NE	16,800	6,100	C	2,500	A
88 th Street NE	I-5 to Quil Ceda Blvd.	38,000	23,200	C	35,700	E
88 th Street NE	Quil Ceda Blvd to 27 th Ave NE	28,000	6,000	A	15,000	C
116 th Street NE	I-5 to Quil Ceda Blvd	28,000	12,600	B	16,600	C
Marine Drive NE	I-5 to 27 th Ave NE	28,000	17,600	C	24,700	D
Quil Ceda Blvd	88 th St NE to Quil Ceda Parkway.	34,000	21,100	C	24,100	C
Water Works Road	Entire Length	8,000	3,000	A	6,800	D
19 th Avenue NE	Marine Dr NE to Rainwater Rd	8,000	1,300	A	1,500	A
64 th Street NW	Entire Length	8,000	2,800	B	3,800	B
Quil Ceda Blvd	South of 116 th St NE	28,000	8,700	B	10,700	B
Quil Ceda Blvd	North of 116 th St NE	28,000	7,800	A	9,500	B

Table 8 summarizes the LOS that is expected to result on the designated roadway segments. The roadway link analysis indicates that the only link that is anticipated to experience LOS F conditions in the Tulalip Tribes is Marine Drive between 27th Avenue NE and 7th Drive NE. Improvements at intersections within this section are discussed below.

Table 9 summarizes the LOS that is expected from the operational intersection analysis. Figures 10 shows the forecasted 2045 turning movement volumes in the Quil Ceda Village area and Figure 11 shows the forecasted 2045 turning movement volumes along the Marine Drive corridor. The LOS for these locations are shown in Table 9.

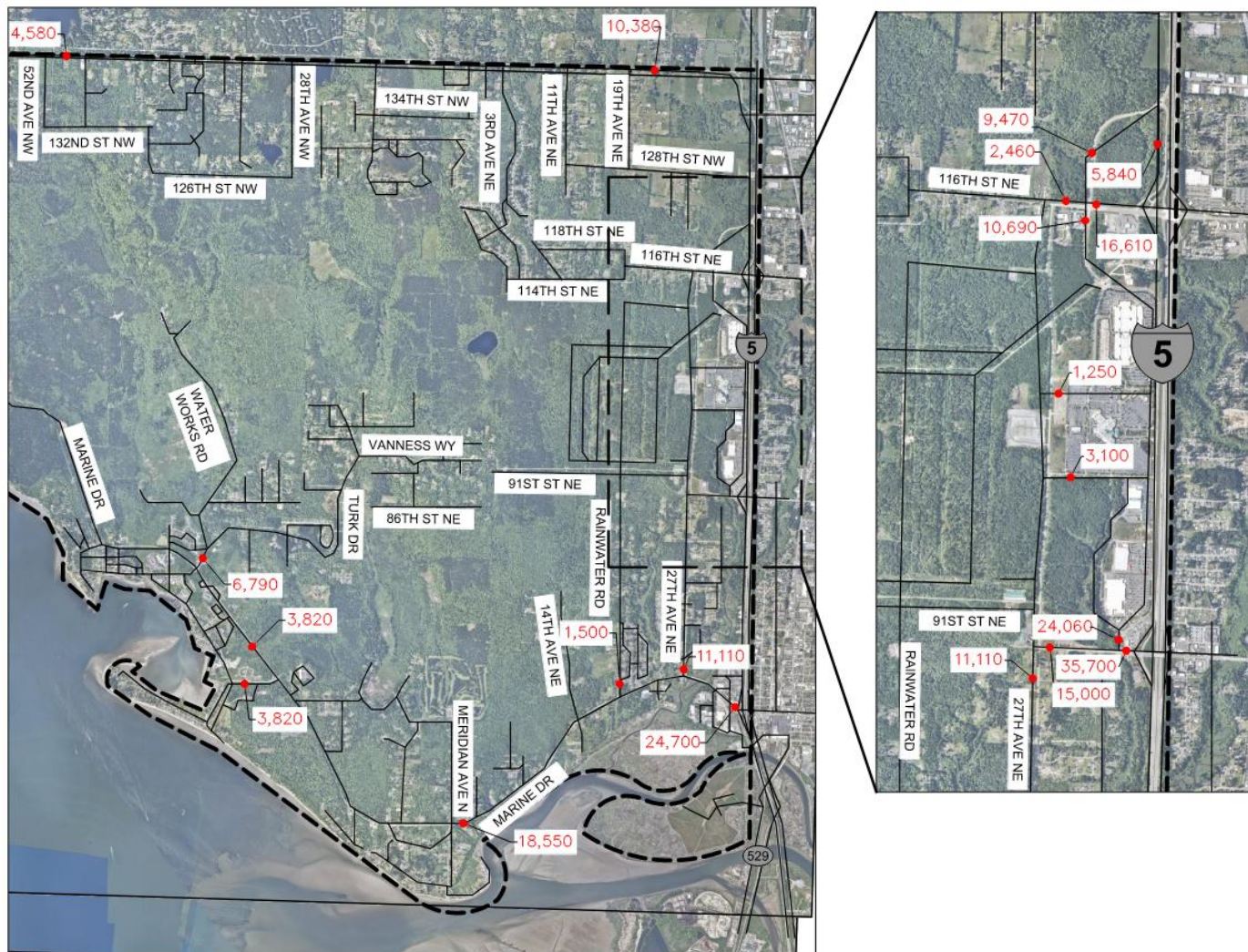


Figure 9: 2045 Future Daily Volumes

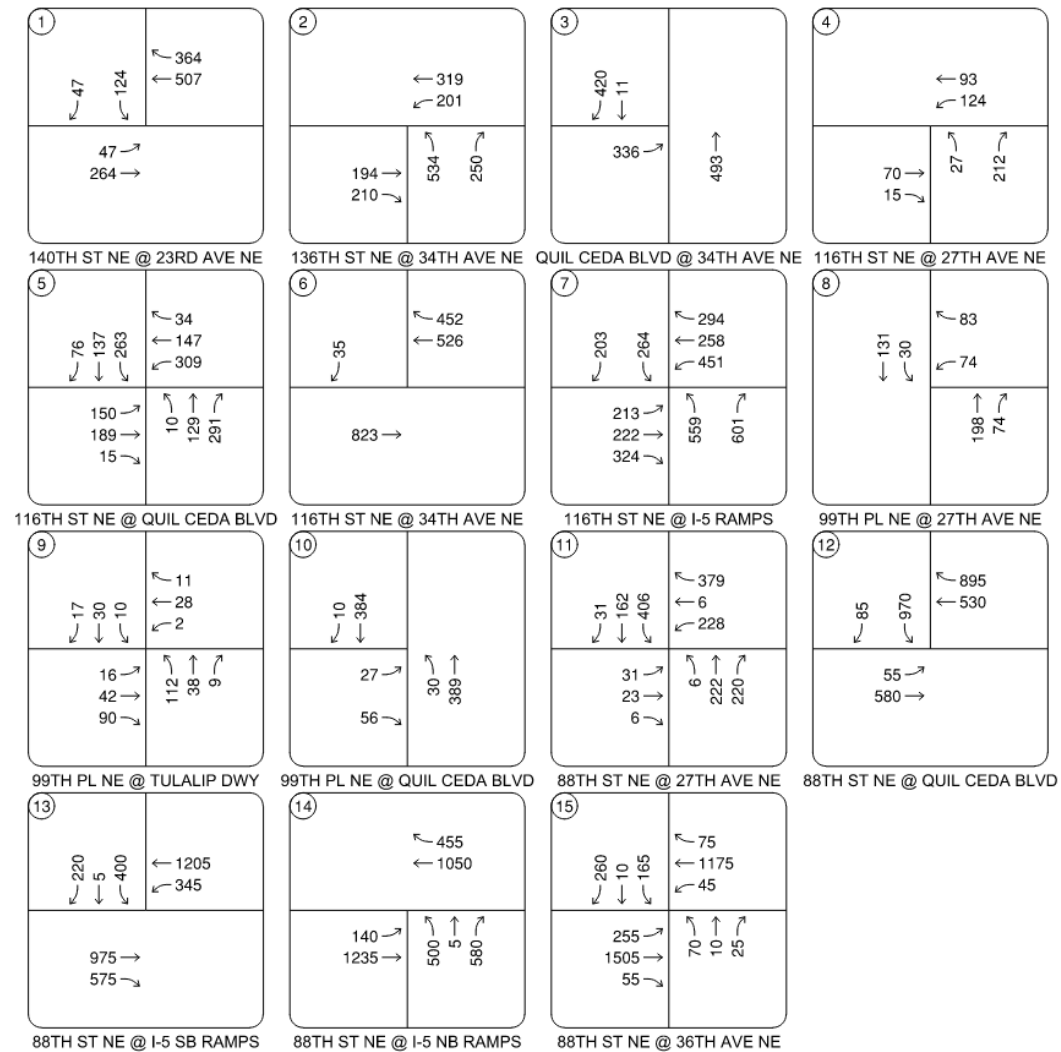
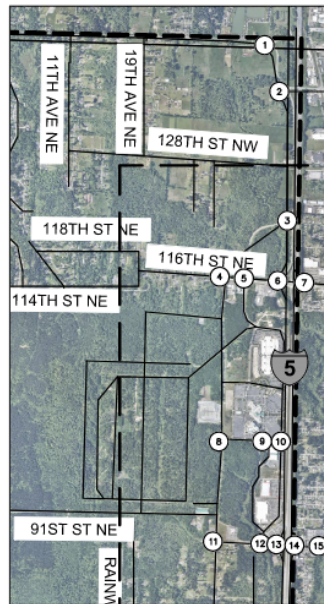


Figure 10: 2045 PM Peak-Hour Turning Movements – Quil Ceda Village

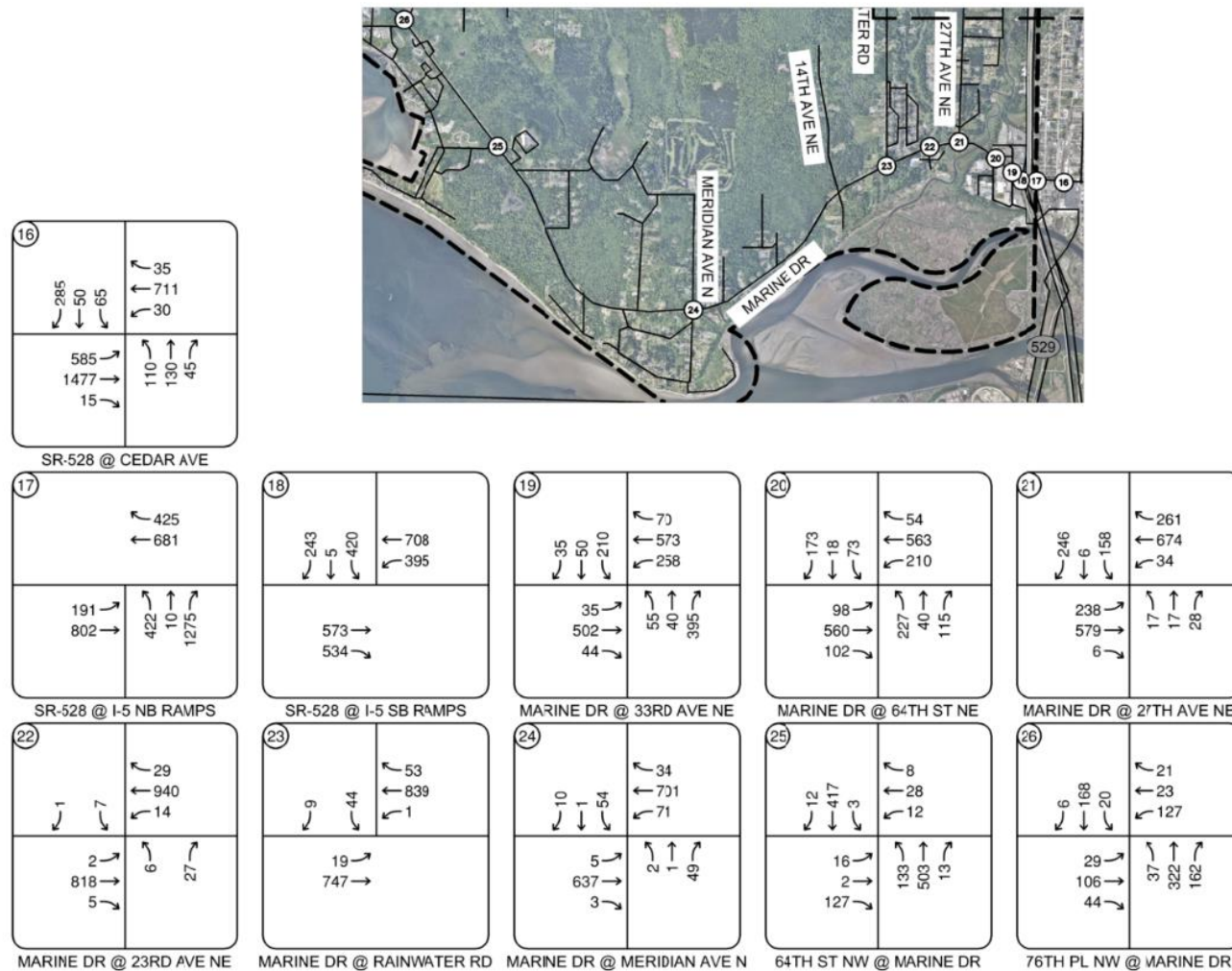


Figure 11: 2045 PM Peak-Hour Turning Movements – Marine Drive Corridor

Table 9. Year 2045 PM Peak Hour Intersection Level of Service

Intersection		2021 Existing		2045 No Improvements		2045 With Improvements	
		LOS	Delay	LOS	Delay	LOS	Delay
1.	140 th St NE at 23 rd Ave NE	D	29.7	---	---	A	5.1
2.	136 th St NE at 34 th Ave NE	B	17.2	C	20.1		
3.	Quil Ceda Blvd at 34 th Ave NE	A	5.0	A	5.2		
4.	116 th St NE at 27 th Ave NE	A	9.1	A	9.7		
5.	116 th St NE at Quil Ceda Blvd	C	25.1	C	27.5		
6.	116 th St NE at 34 th Ave NE	B	13.2	B	14.3		
7.	116 th St NE at I-5 Ramps	C	21.7	C	22.8		
8.	99 th PI NE at 27 th Ave NE	B	11.8	B	13.1		
9.	99 th PI NE at 31 st Ave NE	B	10.5	B	11.2		
10.	99 th PI NE at Quil Ceda Blvd	C	16.7	C	19.4		
11.	88 th St NE at 27 th Ave NE	B	15.0	F	177.8	C	33.2
12.	88 th St NE at Quil Ceda Blvd	A	9.8	---	---	A	7.5
13.	88 th St NE at I-5 SB Ramps	C	30.5	---	---	A	8.3
14.	88 th St NE at I-5 NB Ramps	C	34.3	---	---	A	6.5
15.	88 th St NE at 36 th Ave NE	B	19.0	---	---	A	7.6
16.	SR-524/4th St at Cedar Ave	D	37.0	---	---	D	39.8
17.	SR-524/4th St at I-5 NB Ramps	D	35.1	---	---	A	5.4
18.	SR-524/4th St at I-5 SB Ramps	E	59.6	---	---	B	10.5
19.	Marine Dr at 33 rd Ave NE	C	26.5	---	---	A	5.5
20.	Marine Dr at 31 st Ave NE	A	4.1	A	5.3		
21.	Marine Dr at 27 th Ave NE	C	25.6	D	53.8		
22.	Marine Dr at 23 rd Ave NE	F	51.5	F	106.2		
23.	Marine Dr at Rainwater Rd	C	20.7	D	27.6		
24.	Marine Dr at Meridian Ave N	F	78.6	F	>300	C	9.8
25.	Marine Dr at 64 th St NW	A	9.5	B	10.3		
26.	Marine Dr at Water Works Rd	B	10.2	B	15.1		

The 2045 horizon year analysis shows three intersections are expected to operate at LOS E or worse after baseline improvements have been constructed:

- 11. 88th Street NE at 27th Avenue NE
- 22. Marine Drive at 23rd Avenue NE
- 24. Marine Drive at Meridian Avenue N

The intersection of 88th Street NE at 27th Avenue NE is expected to operate at LOS F with the existing all-way stop control configuration. Construction of a signal with additional southbound left turn channelization would allow the intersection to operate at an acceptable LOS C in the 2045 horizon year.

The intersection of Marine Drive at 23rd Avenue NE/Cultural Center Driveway is expected to operate at LOS F in the southbound direction and LOS E in the northbound direction. Total volume on the southbound approach is expected to be less than 10 trips. Vehicles on this approach also have alternative intersections to the west to make southbound left turns into the existing two-way left turn lane on Marine Drive. Therefore, no mitigation is proposed for the southbound approach. The northbound approach is expected to have over 30 vehicle trips in the 2045 weekday PM peak hour. Striping the northbound approach with separate left/right turn lanes would improve the overall northbound approach delay to LOS D, however northbound left turns would still operate at LOS F. There are anticipated to be less than 10 northbound left turns in the weekday PM peak hour. It is recommended the intersection continued to be monitored so see if future projected cross-traffic on Marine Drive contributes to significant delay for northbound trips at the intersection.

The intersection of Marine Drive at Meridian Avenue N is expected to operate at LOS F in the southbound direction with the existing minor-leg stop-control channelization. Construction of a signal is required to mitigate the southbound delay. A signal constructed with the existing channelization would operate at LOS A in the 2045 horizon year.

4. PROPOSED TRANSPORTATION IMPROVEMENTS AND COSTS

This section of the report describes the transportation facility improvements and costs needed to accommodate the future travel demand resulting from increased growth on the Tulalip Tribes Reservation. In addition to the roadway facility improvements, transit, pedestrian, bicycle, and transportation demand management strategies are also identified in this section of the plan.

4.1 ROADWAY IMPROVEMENTS

The following improvements are those assumed in the “With Improvements” analysis:

- 88th Street NE at 27th Avenue NE – Signal/Roundabout
- Marine Drive at 23rd Avenue NE – Signal/Roundabout
- Marine Drive at Meridian Avenue NE – Signal/Roundabout

4.2 TRANSIT SERVICE AND FACILITY IMPROVEMENTS

Tulalip Tribes is continuously evaluating improvements to the existing transit service and facilities and continues to work with surrounding transit agencies to improve service outside the tribal boundaries.

4.3 PEDESTRIAN AND BICYCLE IMPROVEMENTS

Expanding the Reservation’s non-motorized network is consistent with the Tribes overall transportation goal to encourage the development of an integrated multi-modal transportation system and to effectively encourage non-motorized travel. The provisions for the pedestrian, bicycle and other nonmotorized facilities should be incorporated in the transportation improvement program, as these facilities are becoming increasingly important to compliment other elements of the transportation system. For Tulalip Tribes, the trips that have the greatest potential for shifting to a non-motorized travel mode include trips to and from bus transit and short trips for shopping, errands, and other purposes. Improving safety for pedestrians and bicyclists is also critical to advance this form of transportation.

The first category of pedestrian and bicycle facilities that provide access to transit and shopping areas can improve the viability and increase the usage of both transit and non-motorized travel modes. The main transit transfer area is between the Marine Drive NE/33rd Avenue NE bus stop and the I-5/4th Street flyer stop. Presently, Tulalip Tribes has nonmotorized routes in the eastern portion of the reservation, beginning near the Quil Ceda Village Business Park and extending south to Marine Drive NE, and east to 64th Street SW.

The goal of the second category of pedestrian and bicycle facilities would be to provide a safe, convenient and interconnected environment for bicycling and walking. Providing safe and convenient local facilities would offer opportunities for substituting bicycling and walking for short, intra-community vehicle trips. Facility improvements in this category would include safety improvements at crosswalks in central areas, access to and across major arterials, and removal of barriers to pedestrian and bicycle travel. Other improvements could include the provision of new sidewalks where they are currently nonexistent, too narrow, or deficient.

Projects and Improvements Planned for Non-Motorized Facilities

Snohomish County

Snohomish County has prepared a Transportation Needs Report that summarizes improvements identified by citizens and public officials. The report prioritizes these projects from high to low priority. There were three low priority projects identified in Tulalip Tribes, including:

- A walkway or paved shoulder at Marine Drive between Shoemaker Road and 140th Street NW.
- A bicycle lane on Marine Drive between 7th Drive NW and Shoemaker Road

In addition, Snohomish County has proposed future bicycle improvements in the Transportation Element of their Comprehensive Plan. Identifying these projects occurred independently of the bicycle routes reported in the Transportation Needs Report. The following are the three routes identified in the Transportation Element:

- Marine Drive from I-5 to 140th Street NE (the portion of Marine Drive from 44th Avenue NW to I-5 is within their long-range phase between 2001-2012).
- 140th Street NW from Marine Drive to 16th Avenue NW
- 140th Street NE from 23rd Avenue NE to 34th Avenue NE

Construction of these bicycle routes is dependent on future road improvements listed in the Major Road Improvement – Concurrency Projects and Safety Projects in the Transportation Needs Report, since the construction of bicycle lanes will occur concurrently with roadway improvements. It is the goal of policymakers to make roadway improvements ranked high priority in the Transportation Needs Report. The segment between 19th Avenue NW and 7th Drive NW is recently construction. The roadway segments on Marine Drive between 7th Drive NW and 64th Street NW and between 64th Street NW and 83rd Place NW, and on 140th Street NE between 23rd Avenue NW and 34th Avenue NE are ranked medium priority. Therefore, the construction of these projects is slated to occur beyond the 6-year horizon.

Tulalip Tribes

The primary focus of non-motorized facilities by the Tulalip Tribes has been with new development, which has primarily occurred in the Quil Ceda Village Business Park. The master plan for the business park/ Quil Ceda Village proposes new pedestrian and walkway improvements, including crosswalks, connections to the regional bicycle path/trail and a new pedestrian bridge. Table 10 summarizes the pedestrian facilities in the Quil Ceda Village Business Park.

Table 10. Pedestrian and Walkway Facilities within the Quil Ceda Village

Roadway	Section	Improvement
99th St NE	Quil Ceda /27 th Ave NE	Add a crosswalk
104th St NE	Quil Ceda Blvd	Add a crosswalk
110th St NE	West Chelsea Rd	Add a crosswalk
Quil Ceda Blvd	West Chelsea Rd	Add a crosswalk
Quil Ceda Blvd	north of West Chelsea Rd	Add a crosswalk
Quil Ceda Blvd	south of I-5	Add a crosswalk
27th Ave NE/Quil Ceda	From Marine Drive to 88 th Street NE.	Provide a bicycle/pedestrian path
Quil Ceda Blvd.	East of West Chelsea Rd to East of I-5 in Marysville	Provide a bicycle/pedestrian path that connects to the City of Marysville's 116th St NE road improvement project via the existing rail Bridge
I-5 Overpass	Quil Ceda Blvd	Construct a pedestrian bridge at the existing railroad bridge.

To complete the north-south non-motorized trail near the Quil Ceda Village Development, Tulalip Tribes has plans to extend the proposed/existing nonmotorized route south of the development. This new nonmotorized facility would extend west on 88th Street NE, from the Quil Ceda Parkway to 27th Avenue NE, and south on 27th Avenue NE from 88th Street NE to Marine Drive.

Tulalip Tribes has taken an “opportunistic” approach to enhance the bicycling and walking environment by considering non-motorized improvements as part of regular maintenance or capital improvement projects. Public awareness and education campaigns are planned to encourage pedestrians and bicyclists, and improve the awareness of safety issues and concerns.

Policy for Frontage Improvements for New Developments or Redevelopments

Staff is reviewing the pros and cons of a policy that would require frontage improvements for all new developments and redevelopments that occur in the Tulalip Tribes Reservation. This policy would create more continuity between the existing non-motorized facility network and future developments and redevelopments.

The policy could be as simple as adopting Snohomish County’s EDDS and identifying where the Tribes would want the urban or rural standards to apply. Improvements may include curb, gutter, sidewalk, storm drainage, street lighting, traffic signal equipment, utility installation or relocation, landscaping strip, trail, street trees and landscaping, irrigation, street widening, turn pockets, and channelization or other improvements deemed necessary. Additional improvements beyond the property frontage (i.e. ramps from the new sidewalk or walkway to the property frontage, ramps from the new sidewalk or walkway to the existing shoulder, and pavement and channelization tapering back to the existing pavement and channelization) will be as needed for safety and in accordance with accepted engineering practices.

4.4 TRANSPORTATION DEMAND MANAGEMENT STRATEGIES

All communities in the Puget Sound region, including the Tribal Reservation, have inadequate funds to continue to expand roadways for single-occupant vehicles. Since the region can no longer rely exclusively on “building our way out” of congestion problems, (TDM) Transportation Demand Management strategies

have received increasing attention during the last 20 to 25 years. The goal of any TDM strategy is to reduce the amount of vehicle travel on roadways (and ferries). This can be accomplished by:

- Shifting single-occupant vehicle trips to carpools, transit, or non-motorized travel modes.
- Eliminating trips entirely—telecommuting and home shopping are common examples of trip elimination.
- Shortening trip lengths and “trip-chaining”—combining a series of multi-purpose trips into a longer chain of trips can improve efficiency and reduce vehicle miles traveled.

Most TDM programs need to be initiated at the state or regional level since most trips cross many jurisdictional boundaries. The Tulalip staff continues to research and initiate, with the support of policy makers at the local level, programs that can enhance and support these larger statewide and regional programs.

The full-range of TDM strategies that are being reviewed by the Tribes, for possible incorporation to its internal long range plans, have been grouped into four categories: employer-based strategies, land use strategies, telecommunications, and capital facilities that support TDM. Historically, TDM strategies have focused solely on the work trip; more recently, however, TDM has been broadened to cover all trip types since work trips account for only 20 to 30 percent of all trips made in the region. Specific TDM activities in each of the five categories are described in more detail below.

- (1) **Employer-Based Strategies:** This is the category of TDM strategies that comes to mind most often because of the statewide Commute Trip Reduction (CTR) requirements that affect employers with more than 100 employees. Work trips are the only trip type affected by employer-based strategies and programs.
- (2) **Land-Use Strategies:** Concentrating population and employment growth in centers, as well as providing a mix of land use types, can be an effective TDM strategy.
- (3) **Telecommunications:** This category encompasses the broad range of telecommunications strategies that can reduce or eliminate certain types of trips. This goes beyond telecommuting which focuses solely on the work trip. While the trip reduction potential of these strategies are currently difficult to quantify, they’re potential for reducing or eliminating certain trip types is nearly unlimited.
- (4) **Capital Facilities that Support TDM:** Transportation facilities that support the other TDM strategies by providing alternative travel options are included in this category. These include transit, pedestrian, bicycle, and High Occupancy Vehicle (HOV) facilities. While these facilities are also identified in other sections of the TSTP, they are repeated in the TDM element because of their importance in helping to reduce overall travel demand within the tribal reservation community.

Even though it is recognized that much of the direct work on TDM strategies needs to occur at the state and regional level, the Tribal community continues to be involved in TDM activities by:

- Supporting statewide and regional TDM initiatives and programs.
- Implementing local public awareness and education program designed to promote the TDM strategies outlined above.
- Supporting and implementing capital facility improvements that support TDM such as transit, HOV, bicycle and pedestrian facility improvements.
- Cooperating with Community Transit on implementation of the State’s CTR program.

4.5 TRANSPORTATION SYSTEM MANAGEMENT STRATEGIES

Transportation systems management or TSM refer to strategies that improve facility operations, traffic flow, or safety without adding lanes to increase capacity. TSM strategies are generally low-cost improvements since they do not involve major construction of new or expanded capital facilities. The following lists some of the more common TSM strategies that have been used by Tulalip Tribes as well as other jurisdictions in the Puget Sound region.

- **Access control** – Left turn restrictions or consolidating driveways to individual businesses can improve facility operations and safety by increasing roadway capacity and reducing the potential for vehicle conflicts. Closing or restricting access driveways improves through traffic movement; however, this strategy can be controversial due to potential side street traffic increases.
- **Traffic signal timing coordination** – Interconnecting a series of traffic signals can improve traffic flow progression through an arterial corridor. This strategy is particularly useful in areas with closely spaced signalized intersections such as freeway interchanges.
- **Wayfinding** – There are several different strategies that could fall under wayfinding, including Intelligent Transportation System (ITS), signing, and data collection so travelers can utilize the most efficient routes. The ITS could include such improvements as signs indicating travel times for different routes. Wayfinding signage can help direct travelers to the most direct route. Data collection in the form of smart cities data or the existing permanent counters can be used to efficiently route vehicles, adjust signal timing data, and other methods to improve operations along the roadways.

These and other TSM strategies will be evaluated as part of all planned transportation improvements in the Quil Ceda Village Business Park.

4.6 TRAFFIC CALMING

The purpose of traffic calming is to reduce the speed and volume of traffic to acceptable levels to support livability, safety, and community character within residential neighborhoods. By implementing various design features and strategies to meet these objectives, traffic calming measures can result in more pedestrian-friendly and desirable neighborhoods.

Traffic calming measures can be separated into two groups based on the intended impact. Speed control measures are primarily used to address speeding problems by changing vertical alignment, changing horizontal alignment, or narrowing the roadway. Volume control measures are primarily used to address cut-through traffic problems by blocking certain movements and diverting traffic to streets more appropriate for higher traffic volumes. Some of the more commonly used traffic calming measures used throughout the region are listed in the following sections and could be considered by Tulalip for addressing speeding and cut-through traffic as appropriate.

Speed Control Measures

Vertical deflections, horizontal deflections, and roadway narrowing are measures used to reduce speed and enhance the street environment for non-motorists. The following are descriptions of typical examples of such measures:

Vertical Deflection Measures

- **Speed Humps** are rounded raised pavement devices placed across roadways to slow and/or discourage traffic.
- **Speed Tables** are flat-topped speed humps often constructed with a brick or other textured material to slow traffic.
- **Raised Crosswalks** are speed tables outfitted with crosswalk markings and signage to canalize pedestrian crossings, providing pedestrians with a level street crossing.
- **Raised Intersections** are flat raised areas covering an entire intersection, with ramps on all approaches and often with brick or other textured materials on the flat section.
- **Textured Pavements** include the use of stamped pavement or distinctive paving materials to create an uneven surface for vehicles to traverse. They may be used to emphasize either an entire intersection or a pedestrian crossing, and are sometimes used along entire street blocks.

Horizontal Deflection Measures

- **Traffic Circles** are raised islands, placed in intersections, around which traffic circulates.
- **Roundabouts** are similar to traffic circles but are used on higher volume streets to allocate right-of-way between competing movements.
- **Chicanes** are curb extensions that alternate from one side of the street to the other, forming S-shaped curves.
- **Realigned Intersections** are changes in alignments that convert T-intersections with straight approaches into curving roadways meeting at right angles.

Horizontal Narrowing Measures

- **Neck downs** are curb extensions at intersections that reduce the roadway width from curb to curb. They "pedestrianize" intersections by shortening crossing distances for pedestrians and drawing attention to pedestrians via raised peninsulas. They also tighten the curb radii at the corners, reducing the speeds of turning vehicles.
- **Center Island Narrowings** - A center island narrowing is a raised island located along the centerline of a street that narrow the travel lanes at that location. Center island narrowings are often landscaped to provide a visual amenity. Placed at the entrance to a neighborhood, and often combined with textured pavement, they are often called "gateway islands." Fitted with a gap to allow pedestrians to walk through at a crosswalk, they are often called "pedestrian refuges."
- **Chokers** are curb extensions at midblock locations that narrow a street by widening the sidewalk or planting strip. If marked as crosswalks, they can also improve pedestrian safety. Two-lane chokers leave the street cross section with two lanes that are narrower than the normal cross section. One-lane chokers narrow the width to allow travel in only one direction at a time, operating similarly to one-lane bridges.

Other Speed Control Measures

- **Educating** residents on safe on-street vehicle travel.
- **Tribal Police** impose the local safe vehicle laws, including those for posted speeds and traffic signal/signs.

- **Speed Trailers/Reader Boards** placed so that vehicle travel speeds are displayed when vehicles approach the trailer/reader board. These devices can be moved from location to location or installed permanently at locations where travel speeds are a significant concern.

Volume Control Measures

Volume control measures are intended to reduce cut-through traffic by obstructing traffic movements in one or more directions. The following is a list of typical measures used for volume control:

- **Full Closures** are barriers placed across a street to completely close the street to through-traffic, usually leaving only sidewalks open.
- **Half Closures** are barriers that block travel in one direction for a short distance on otherwise two-way streets.
- **Diagonal Diverters** are barriers placed diagonally across an intersection, blocking through movements and creating two separate, L-shaped streets. Like half closures, diagonal diverters are often staggered to create circuitous routes through the neighborhood as a whole, discouraging non-local traffic while maintaining access for local residents.
- **Median Barriers** are islands located along the centerline of a street and continuing through an intersection so as to block through movement at a cross street.
- **Forced Turn Islands** are raised islands that block certain movements on approaches to an intersection.

4.7 IMPROVEMENTS

Table 11 summarizes the planning-level improvements identified in the Reservation Transportation Strategic Plan.

Table 11. Planning Level Cost Estimates for Future Improvements

Project Description	Improvement	Note
42 nd Drive NW, 78 th Place NW, 79 th Place NW Improvements	Rehabilitation	Roadway/sidewalk improvements
28 th Drive NW Improvements	Rehabilitation	Restore pavement and illumination
81 st Street NE Improvements	Rehabilitation	Restore pavement and illumination
Totem Beach Road	Rehabilitation	Restore pavement and illumination
Quil Ceda Boulevard Improvements	Rehabilitation	Restore pavement and illumination
88 th Street NE/27 th Avenue NE Signal/Roundabout	Intersection	Signal/Roundabout improvement
Marine Drive/23 rd Avenue NE Signal/Roundabout	Intersection	Signal/Roundabout improvement
Marine Drive/Meridian Avenue Signal/Roundabout	Intersection	Signal/Roundabout improvement
64 th Street NW Pedestrian Improvements	Pedestrian	Construct sidewalk and ADA ramps
Big Shot Pedestrian Improvements	Pedestrian	Widen pedestrian facility
Marine Drive Pedestrian Improvements – Phase II	Pedestrian	Construct sidewalk and ADA ramps
Meridian Avenue N Pedestrian Improvements	Pedestrian	Construct sidewalk and ADA ramps
Tulalip Bay Pedestrian Improvements	Pedestrian	Construct sidewalk and ADA ramps
Turk Drive Roadway and Safety Improvements	Safety	High Priority Project Funding
Water Works Road Roadway and Safety Improvements	Rehabilitation	Restore pavement and illumination
Quil Ceda Parkway Roadway and Safety Improvements	Rehabilitation	Restore pavement and illumination
Tulalip Bay Outfalls Improvements	Rehabilitation	Improve roadway drainage
Admin Building Parking Lot Expansion	Rehabilitation	add parking and pedestrian facilities
Marine Drive/31 st Avenue NW Roundabout Landscaping	Rehabilitation	Finalize landscaping and signage

The projects identified in Table 11 are also shown in Figure 12 with addition descriptions in Figure 13.

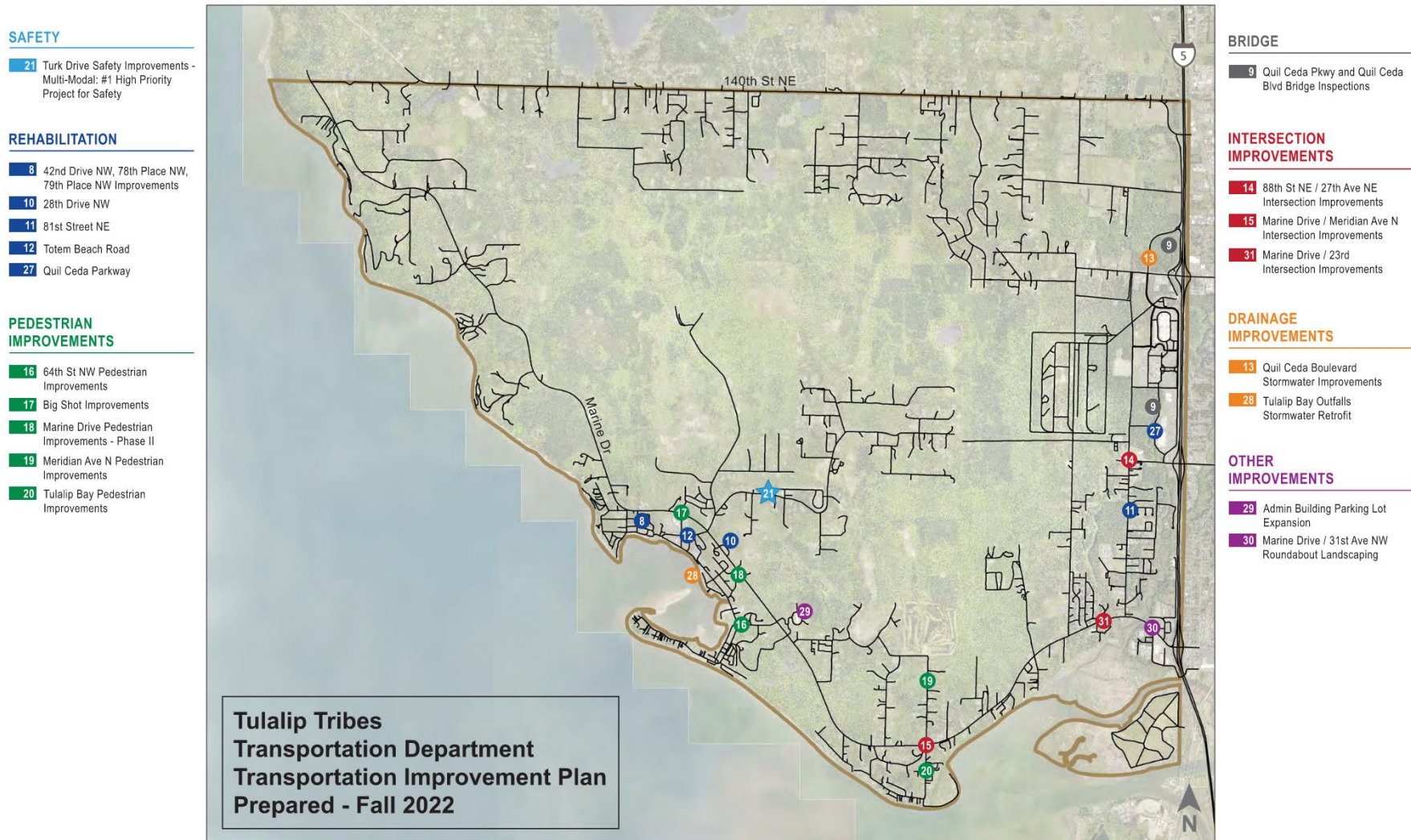


Figure 12: Improvement Project Locations

SAFETY		
21	Turk Drive Safety Improvements - Multi-Modal	Constructs sidewalk, ada ramps, drainage, and signing for pedestrian improvements for approximately 0.44 miles of Water Works Road and approximately 1.66 miles of Turk Drive. This project also includes pavement reconstruction of the entire roadway.
REHABILITATION		
8	42nd Drive NW, 78th Place NW, 79th Place NW Improvements	Constructs sidewalk, ada ramps, drainage, signing, and pavement preservation improvements for approximately 0.2 miles of 42nd Dr NW, 0.1 miles of 78th Pl NW, and 0.1 miles of 79th Pl NW.
10	28th Drive NW	Restore the pavement to new condition, improve safety with illumination and traffic calming strategies, and improve accessibility. Needed improvements include pavement restoration and drainage improvements. Safety improvements include making illumination consistent and introducing traffic calming measures, such as speed tables/bumps.
11	81st Street NE	Restore the pavement to new condition, improve safety with illumination and traffic calming strategies, and improve accessibility. Needed improvements include pavement restoration and drainage improvements. Safety improvements include making illumination consistent and introducing traffic calming measures, such as speed tables/bumps.
12	Totem Beach Road	Restore the pavement to new condition, improve safety with illumination and traffic calming strategies, and improve accessibility. Needed improvements include pavement restoration and drainage improvements. Safety improvements include making illumination consistent and introducing traffic calming measures, such as speed tables/bumps.
27	Quil Ceda Parkway	Restore the pavement to new condition, improve safety with illumination and traffic calming strategies, and improve accessibility.
PEDESTRIAN IMPROVEMENTS		
16	64th St NW Pedestrian Improvements	Constructs sidewalk, ada ramps, drainage, and signing for pedestrian improvements for approximately 0.25 miles of 64th St NW. Completes missing link for pedestrian use on this roadway.
17	Big Shot Improvements	Construct HMA pedestrian path in order to widen the existing narrow 7' path to 12' path. There will be no work on pedestrian bridge crossing.
18	Marine Drive Pedestrian Improvements - Phase II	Constructs sidewalk, ada ramps, drainage, and signing for pedestrian improvements for approximately 1.8 miles of Marine Drive.
19	Meridian Ave N Pedestrian Improvements	Constructs sidewalk, ada ramps, drainage, and signing for pedestrian improvements for approximately 1.1 miles of Meridian Ave N. Completes missing link for pedestrian use on this roadway.
20	Tulalip Bay Pedestrian Improvements	Constructs sidewalk, ada ramps, drainage, and signing for pedestrian improvements for approximately 0.43 miles of Meridian Ave N. Completes missing link for pedestrian use on this roadway.
OTHER IMPROVEMENTS		
29	Admin Building Parking Lot Expansion	Addition of 50 additional paved parking stalls in the gravel area nw of the admin building. Project includes paving driveway from 64th St NW to new parking area, parking area and connection to existing parking lot. This project includes stormwater runoff collection and treatment, lighting, ped walkways, landscaping, EV charging stations and other items.
30	Marine Drive / 31st Ave NW Roundabout landscaping	This project will complete the landscaping for the center island in the roundabout at 31st Ave NW and Marine Drive. Project work could also include signage, water features, tribal art or other features (not included in this estimate).
BRIDGE		
9	Quil Ceda Pkwy and Quil Ceda Blvd Bridge Inspections	Perform bridge inspection on both bridges and prepare a load rating on the Quil Ceda Blvd Bridge. In accordance with National Bridge Inventory Standards (NBIS) and for inclusion in the Tribes' BIA inventory and National Bridge Inventory (NBI).

INTERSECTION IMPROVEMENTS		
14	88th St NE / 27th Ave NE Intersection Improvements	Construct intersection improvements (signal or roundabout), sidewalk, ada ramps, drainage, and signing. Relocate utilities to new condition, improve safety with illumination.
15	Marine Drive / Meridian Ave N Intersection Improvements	Construct intersection improvements (signal or roundabout), sidewalk, ada ramps, drainage, and signing. Relocate utilities to new condition, improve safety with illumination.
31	Marine Drive / 23rd Intersection Improvements	Construct intersection improvements (signal or roundabout), sidewalk, ada ramps, drainage, and signing. Relocate utilities to new condition, improve safety with illumination.
DRAINAGE IMPROVEMENTS		
13	Quil Ceda Boulevard Stormwater Improvements	This project will make drainage improvements by installing new cross culverts on Quil Ceda Blvd. This project will also add additional illumination and repairs to shoulder rock. This project's purpose is to alleviate stormwater runoff over the roadway in extreme rain events.
28	Tulalip Bay Outfalls Stormwater Retrofit	This project will make improvements to several existing outfalls to Tulalip Bay by installing energy dissipation/diffusing structures to disperse runoff to the Bay reducing risk of erosion. This project will also install water quality treatment devices to provide basic water quality prior to discharge to the Bay.
RESERVATION-WIDE ACTIVITIES		
PLANNING		
1	Planning	Planning efforts include performing traffic counts, traffic studies, coordination with other departments, project definition and development, Transportation Plan updates and BIA Control schedule Transportation Improvement Plan (CSTIP) preparation.
2	Asset Management	Asset management efforts to transition Roadsoft inventory data to tribal GIS database, update inventory information for pavement condition, sidewalks, ramps, signs, guardrail, ADA ramps, etc. Prepare reports and maps for use in developing Trans Plan and CSTIP.
3	Right of Way Inventory	This work includes continuing the Right of way inventory and conversion to tribal GIS and inventory system in the near term. Longer term, this work includes preparing right of way plans for roads where the information is missing or needs updating, and addressing ownership, operation and maintenance responsibilities with the city, county and state.
4	Safety	Define and address needed safety improvements thru coordination with tribal departments, members, emergency services and coordination with other jurisdictions. Including collection and analysis of collision data with tribal and other law enforcement.
5	Transit	This includes planning and coordination efforts on transit needs with tribal transit and non-tribal transit providers and users to fill gaps in needs.
6	Administration	Administrative activities including costs for office equipment, field equipment, vehicles, supplies, attendance at training and conferences.
7	Maintenance	Striping, signs, mowing, luminaires, guardrail, repair, replacement and maintenance.
MAINTENANCE		
22	Sign Maintenance	Maintain, repair, or replace deficient signs (as indicated in Road Asset Inventory WAB) throughout Tulalip Tribes Reservation.
23	Guardrail Maintenance	Maintain, repair, or replace deficient guardrail (as indicated in Road Asset Inventory WAB) throughout Tulalip Tribes Reservation.
24	Curb Ramp Upgrade	Maintain or upgrade deficient or non-ADA compliant curb ramp (as indicated in Road Asset Inventory WAB) throughout Tulalip Tribes Reservation.

Figure 13: Improvement Project Descriptions

5. FINANCING AND IMPLEMENTATION PLAN

The Tulalip Tribes have set aside funds in 2004 to develop a financial element to be included as part of future updates to the TSTP. The financial plan will include a comparison of estimated transportation improvement costs against the potential revenue generated from existing and future sources. Future revenues will include development impact fees, revenues from state and federal fuel taxes, and grants from federal, state, or county agencies if applicable.

It is critical that whatever plan developed it must be sufficient to fund the improvements identified in the plan. If additional funding sources cannot be identified the LOS standard or land use assumptions contained in the plan should be adjusted to maintain a balance between costs and revenues.

5.1 POTENTIAL REVENUE

Potential funding sources in the federal and state categories include:

- **High Priority Projects (HPP):** The HPP provides funding for the highest priority project when there are insufficient funds. HPP funds are also available for emergency or disaster situations when a facility is impassible or unusable. The HPP funds are available to Indian Tribes and government subdivisions of an Indian Tribe.
- **Surface Transportation Program (STP):** For local agencies, most of the potential for federal transportation funding is from the STP of the Transportation Equity Act for the 21st Century (TEA-21). For local agencies, STP funding is available in the following categories: regional competition, statewide competition, transportation enhancements and safety (hazard elimination and railroad grade crossings). TEA-21 authorized the Federal surface transportation programs for highways, highway safety, and transit for the 6-year period 1998-2003. On September 30, 2003, the Surface Transportation Extension Act of 2003 (Public Law No. 108-88) was passed, extending Federal highway, highway safety, motor carrier safety, and transit programs for five months, and authorizing appropriations through February 29, 2004.
- **Arterial Improvement Program:** These are statewide competitive grants allocated through the Transportation Improvement Board (TIB) for streets and arterials within urban areas. Funds are distributed regionally based on roadway miles, population, and needs.
- **Transportation Partnership Program (TPP):** The TPP is funded from the Transportation Improvement Account and is also administered through the TIB with minimum percentages to certain areas. Through its city selection process, the TIB requires multi-agency planning and coordination and public/private cooperation to further the goal of achieving a balanced transportation system in Washington State.

Other potential funding sources include:

- **Local Sales Tax:** Sales tax is currently collected on retail sales at the rate of 2 percent within the Tulalip Tribal Reservation and paid to the State of Washington. The state typically distributes these within its state general fund with a portion going to the city in which the taxes are being collected. The City of Quil Ceda Village is currently not receiving any of these funds.
- **Mitigation Fees:** These are fees paid by development to mitigate the impacts on the transportation system.

- **Real Estate Excise Tax:** This is a tax applied to the sale of real estate within the Reservation. The funds are required to be expended on capital improvements.
- **Loan Proceeds:** Policy makers may fund capital improvement projects through the issuance of bonds of loan funds. These loans allow the cost of large projects to be spread over several years.

5.2 ADDITIONAL WORK TO BE ADDRESSED IN FUTURE TRANSPORTATION PLANNING

This chapter describes the additional non-capacity related work that future TSTP updates need to address.

Establish a Concurrency Policy

Staff/Consultants have been researching a Concurrency Management System policy procedure to determine whether adequate facilities are available to support new development and to implement transportation improvements concurrent with the development. In most jurisdictions, the adoption of concurrency policies allows for development to occur as long as there are financial strategies in place to meet the adopted LOS within 6 years of the proposed development. Additionally a concurrency policy allows a jurisdiction to exempt certain facilities from LOS standard if the facility is deemed to be at its ultimate capacity or financially unsupportable for improvement.

Identification of facilities to be monitored or for Reduced LOS Standards

Several arterial links have been identified for potential capacity issues in 2018 even with the identified improvements. The following roadways show future daily volumes that exceed the LOS E threshold:

- Marine Drive west of 7th Avenue NW
- Marine Drive between 27th Avenue NE and 7th Avenue NW
- Marine Drive between I-5 and 27th Avenue NW

As already stated in the body of this report, additional improvements to alternative routes may reduce the actual future volumes on Marine Drive. Therefore careful monitoring of Marine Drive is underway rather than actual improvements at this time.

Additionally, the roadway links of 88th Street NE between Quil Ceda Boulevard and I-5 as well as Quil Ceda Boulevard from Quil Ceda Parkway to 88th Street NE demonstrates over capacity conditions in 2018, even though the adjacent intersection operational analysis indicates acceptable LOS E conditions. A future concurrency policy or tribal policy/resolution accepting LOS F on these specific links, as the subject roadway has been build to their ultimate configuration, would need to be passed. Road funds could be allocated to improving alternative routes to Quil Ceda Village such as 116th Street NE and 27th Avenue NE.

Rationing of Transportation Capacity

This step involves establishing a process to ration transportation capacity available to potential development, and monitor its consumption as new development is approved.

Monitoring

Periodic adjustments to LOS standards as part of the annual *Comprehensive Plan* amendment process will take place as well as analyzing external influences on the Concurrency Management System.

Mitigation Fee System

Effective July 1, 1990, the 51st Legislature authorized cities to impose impact fees as a method of obtaining financing for projects to ensure that adequate facilities are available to serve new growth and development. Impact fees are intended to promote orderly growth and development by establishing standards by which cities may require new growth and development to pay a proportionate share of the cost of new facilities. Impact fees are to provide a balance with other sources of public funds and not intended to be a sole source of project funding.

The Tribes presently uses Snohomish County's Unified Development Code 66B to establish the traffic mitigation fee. The present fee is \$227 per new daily commercial trip generated or \$264 per new residential daily trip generated by new development.

The transportation impact fee should be recalculated to more closely relate to the capacity needs of the Tulalip Reservation. During any update the following principles must be observed: Impact fees will be imposed on new development only for transportation system improvements that are directly related to the new development. Impact fees do not exceed an equitable share of the cost of system improvements that directly relate to the new development and they are used for system improvements that directly benefit new developments and mitigate their adverse traffic impacts

Establish an Accident Data Base and Reporting Procedure

Due to the combination of jurisdictions in this area (Tribe, WSDOT, County) there is no one single accident database or consistent reporting format. To clearly identify safety issues and accident patterns it is imperative that a consistent methodology for developing a reservation accident database is determined.

Establish Consistent Development Standards That Support the Tribes Zoning and Transportation Goals

Staff/consultants have been looking at the identification of engineering and development standards in one document that promotes the goals identified in the TSTP and the tribes land use plan. The standards should be consistent for private and tribal developments. The standards should address urban and rural development standards as well as residential and commercial.

Establish a Road Maintenance Procedure that is More Preventative than Reactive

The July 2002 Tulalip Business Park Roadway Maintenance Plan & Schedule was extended to include all tribal roads. A funding mechanism for its implementation will be identified in the New Year.

Interjurisdictional Coordination

Tulalip Tribes should increase interjurisdictional cooperation to obtain fund and coordination projects need for regional priority.