

III. EXISTING TRANSPORTATION SYSTEM

SUMMARY

This chapter provides an assessment of existing traffic and roadway conditions along Hwy. 101 through downtown Wheeler; and includes a summary and inventory of the local street system. The objective of this work is to establish baseline traffic conditions and operational issues that will be used to assess future traffic volumes and needs throughout the study area. Major findings of this assessment include:

1. Capacity analyses at the major intersection of Hwy. 101 and Gregory Street found that it operates at LOS B or better during weekday peak hours during the off-season months. During peak spring and summer time hours, such as mid-day on a Saturday, this intersection is estimated to operate at LOS C by standard capacity models (*which is still a relatively high LOS*), but *observations of summertime traffic found that vehicles slow along Hwy. 101 at this intersection and congestion does occur. Reasons for the congestion include a large number of pedestrians crossing Hwy. 101 and parking maneuvers along Hwy. 101.*
2. Within the downtown study area, most of Hwy. 101 contains sidewalks on the east side. No sidewalks are present along the west side. *At the same time, the parking area, commercial activities, and marina on the west side tend to generate a significant number of pedestrian crossings.* Observations of pedestrian activities and conflicts with through traffic indicate that safe pedestrian circulation needs to be a priority.
3. Most streets in the core study area have on-street parking with marked parallel or head-in spaces along Hwy. 101. During the summer time, almost all parking spaces along Hwy. 101 and along many minor streets appear to be occupied. During off-season periods, about half the spaces appear to be occupied along Hwy. 101. Parking for large vehicles and RVs needs to be addressed.
4. During the last three years, 8 accidents were reported along Hwy. 101 through Wheeler with two being injury accidents. This equates to an overall accident rate of approximately 0.8 accidents per million entering vehicles. This rate is typical of many stretches of Hwy. 101.
5. During the TAC and Open House meetings the above issues were discussed. Other major issues included long-term versus short term parking needs, impact of the potential boat ramp relocation to the north, development of Scoval property and its impact on Wheeler, and several operational problems at minor streets (e.g. Pennsylvania), bicyclists needs, and improvements for pedestrian facilities.
6. Although existing public right-of-way identifies a comprehensive local street grid system, more than one-half of these public rights-of-way are unimproved due to topographic constraints. Therefore, local street connections are limited, particularly in a north-south direction.

Based on the above, initial key traffic operational issues in Wheeler appear to be the RV parking, sight distances and traffic operations at the Gregory/Rorvik and Rector intersections on Hwy. 101, pedestrian traffic crossing Hwy. 101, and limited local street connectivity.

The following paragraphs document the information reviewed, analyses, results, and major findings.

LAND USES

Wheeler consists of three primary land uses which are consistent with comprehensive plan map designations and zoning districts. Highway 101 primarily consists of commercial uses. The land between the highway and Nehalem Bay consists of commercial and water-related light industrial uses, and land east of Highway 101 is residential except for some commercial uses located close to the Highway and the medical facility located on Hospital Road. A significant part of the residential land located east of the highway is undeveloped due to the hillside and topography constraints.

Most of the land in the downtown core is zoned commercial. Most of the buildings in the area are general retail buildings. The City Hall and Police Station are located in the south part of downtown along Hall Street. The main traffic generator in the downtown area appears to be the Post Office, local retail stores/restaurants/motel, and the boat launch/waterfront area. To the west of Wheeler is the Nehalem River/Bay, which also provides access to the Pacific Ocean.

ROADWAY CHARACTERISTICS ALONG HWY. 101

Hwy. 101 contains two lanes (one in each direction) with a painted centerline, which varies 32-46 feet wide. No intersections have any turn lanes. Parking is permitted along most of Hwy. 101 through the downtown core. The wider section is near Gregory Street contains 22 head-in parking spaces on the west side and parallel parking on the east side. Most of the minor streets are 34-40 feet wide and striped for only two lanes of traffic. At some intersections, traffic along the minor approach does form two lanes (one for left turners and one for right turners). Parking is permitted along most minor streets through the study area. Many of these characteristics are identified in the enclosed Highway 101 Street Inventory.

LOCAL STREET SYSTEM

The enclosed Wheeler city map identifies a comprehensive local street grid system. However, many of these streets are not constructed due to topographic constraints. The public rights-of-way are in place for creating a connected local street system in those limited locations where physically possible. Streets that directly connect to Highway 101 and lead to residential areas include, from north to south, Hemlock Street, Spruce Street, Gregory Street, Hall Street, Hospital Road, Pennsylvania Avenue, and Dubois Street.

North-south access, other than Highway 101 is limited. Currently, there is no through connection from one end of Wheeler to the other without having to access Highway 101.

PEDESTRIAN AND BICYCLING FACILITIES

Within the downtown core study area, Hwy. 101 has sidewalks along most of its east side. Marked pedestrian crosswalks are present at Gregory and Rector. Handicap ramp treatment is provided at most corners on the east side of Hwy. 101 between Rector Street and Hall Street. No bicycle lanes are marked in the study area. During our summer visits, heavy pedestrian movements were observed crossing the highway to/from the head in parking on the west side of Hwy. 101 and businesses on the east side. **Figures III-2 and III-2A** present the results of pedestrian counts taken during the summer and winter 2000. It should also be noted that pedestrian crossings at the Gregory intersection were significant even during the off-season periods.

TRANSIT FACILITIES

Wheeler has several transit options. First, the Tillamook County Transportation District (TCTD) operates bus service along Hwy. 101. This route operates between Manzanita and Tillamook. At Tillamook, riders can transfer to other routes to travel further south or to travel to the Portland Metro area. This service operates Monday-Friday with 5 buses in each direction and with limited service on Saturdays. Data from the TCTD reveal that ridership is about 20-40 boardings/departings in Wheeler during a month. In addition, TCTD is starting a Dial-a Ride van service for Wheeler residents. This service will operate Monday through Friday from 8 a.m. to 5 p.m. Finally, during the summer peak season, the Port of Tillamook Bay operates a train between Nehalem and the Air Museum in Tillamook. This train ride also includes stops in Rockaway Beach and Garibaldi. Last season, over 1,800 passengers road this train through Wheeler.

WATER TRANSPORTATION

Wheeler is located adjacent to Nehalem Bay which is primarily used for recreational boating and fishing, and provides boat access to the Pacific Ocean. Currently, there is one public boat launch facility within the city, centrally located in downtown Wheeler and accessed on the west side of Hwy. 101 across from Rector Street.

RAIL

The Port of Tillamook Bay owns the railroad that passes through Wheeler and generally parallels Hwy. 101 on the west side of the highway. A passenger rail car operates during the summer travel season for tourists and visitors to Tillamook County. The passenger route operates between Wheeler and the Port of Tillamook just north of the city of Tillamook with stops in Garibaldi and Rockaway Beach. Freight transportation on the rail is primarily limited to transport of logs that occasionally occurs during peak logging periods. Two freight trips per day appears to be the maximum use of the rail.

PIPELINES

The primary pipeline existing in the area is a water line that parallels Hwy. 101. The City will be extending this water line from the north end of Wheeler through the city along Hwy. 101 which will provide water to residents and businesses throughout Wheeler. Construction of the water line is planned to begin September 2001.

Gervais Creek, which flows from the east hills to Nehalem Bay through Wheeler is currently piped through the city limits. The pipe is generally located in the unimproved Rorvik Street right-of-way and flows under Hwy. 101, entering Nehalem Bay in the downtown area just south of the boat launch facility. There has been discussion throughout the community to possibly daylight Gervais Creek.

EXISTING TRAFFIC VOLUMES AND PEAK HOUR OPERATIONS

Traffic Volumes

Three sets of traffic volume counts were performed for this study. The first was during the August of 2000 on a Saturday afternoon (1-3 PM). Due to the timing of this count relative to the contract, this count was limited to the intersection of Hwy. 101/Gregory. It also included counts for pedestrian movements. The second and third sets of counts were taken in December of 2000 on a Friday afternoon (4-6 PM) and on Saturday afternoon again. **Figures III-2 and III-2A** present the results of these counts. Comparing the through volumes along Hwy. 101, peak summer traffic was about 2.5 times the winter counts. Interestingly, the minor street traffic at Gregory was only slightly higher during the summer compared to the winter counts. This can be attributed to the fact that the Post Office and other major uses open throughout the year are located along Gregory. For comparison, attached is data from ODOT's automatic recorder 29-001, located south of Rockaway Beach. Most traffic crossing this location would likely also travel through Wheeler. Consequently, these data will be used to track seasonal trends along Hwy. 101 through Wheeler and other volume characteristics. *These data reveal that overall traffic volumes during August (ADT= 9415) is over twice the volumes recorded during December (ADT= 4,348). This confirms the differences noted in the peak hour counts.*

Peak Hour Traffic Operations

The 1999 Oregon Highway Plan (OHP) uses volume to capacity ratios (V/C) to evaluate mobility deficiencies and needs. V/C is the ratio of peak hour traffic volume to maximum hourly volume of vehicles that a roadway section can accommodate. In other words, v/c measures the percentage of the capacity of the roadway section that is utilized during the peak hour. Through Wheeler, Highway 101 is classified as a Statewide Highway under the 1999 State Classification System (1999 SCS). The OHP states that the maximum acceptable v/c ratio for Statewide Highway outside the Portland Metro and not identified as a STA is 0.80.

Using ODOT's Mobility criteria, traffic conditions at key intersections along Hwy. 101 were analyzed during the periods shown in **Figures III-2 and III-2A**. Intersection operational analyses were conducted using the

procedures in the 1997 Highway Capacity Manual (HCM) for evaluating signalized and unsignalized intersections, which describe the traffic operations of an intersection in terms of its Level of Service (LOS). The Level of Service (LOS) criteria range from "A", which indicates little, if any, delay, to "F", which indicates that vehicles experience long delays. We also evaluated these intersections using ODOT's UNSIG intersection capacity model. (Based on our experience, the HCM models would be more accurate and allow for certain adjustments such as pedestrian crossing that are not included in the UNSIG model.) **Tables III-1 and III-2** shows the results of the intersection capacity analyses and indicates that this intersection operates at LOS C or better during the Weekend or Weekday PM peak periods. Even so, observations during the summer revealed that congestion does occur through downtown Wheeler as drivers slow down to look at the area, search for parking spaces, and/or slow for pedestrians. The standard intersection capacity models do not capture these factors well. These factors were of less an impact during our off-peak traffic operations because of readily available parking and reduced pedestrian volumes.

Table III-1: December 2000 Current Levels of Service

Intersection	SATURDAY PEAK HOUR			WEEKDAY PM PEAK HOUR		
	MINOR STREET STOP CONTROL					
	Avg Vehicle Delay (Sec/Veh)	V/C Ratio	LOS	Avg Vehicle Delay (Sec/Veh)	V/C Ratio	LOS
Highway 101/1st Street Critical Leg: WB Approach	9.6	(0.04)	A (A)	9.4	(0.07)	A (A)
Highway 101/Hall Street Critical Leg: WB Approach	9.8	(0.01)	A (A)	7.5	((0.01)	A (A)
Highway 101/Gregory St/Rorvik St Critical Leg: WB Approach	10.0	(0.04)	B (A)	9.4	(0.01)	A (A)
Highway 101/Rector Street Critical Leg: WB Approach	10.3	(0.33)	B (A)	10.6	(0.03)	B (A)

UNSIG results in parenthesis ()

Table III-2: August 2000 Levels of Service

Intersection	SATURDAY PEAK HOUR		
	MINOR STREET STOP CONTROL		
	Avg Vehicle Delay (Sec/Veh)	V/C Ratio	LOS
Highway 101/Gregory St/Rorvik St Critical Leg: WB Approach	13.6	(0.09)	C (A)

**UNSIG results in parenthesis ()*

TRAFFIC SAFETY

Accident records for the most recent three years of available data (January 1997 to December 1999) were obtained from ODOT files for the Highway 101 portion of the study corridor. The majority of reported accidents occurred between Rector and 1st Street as shown in **Figure III-3**. These data revealed that 8 accidents were reported near intersections with Hwy. 101 during this period. Four accidents involved parking maneuvers or collisions with fixed objects. Only 2 of these 8 accidents (or 25 percent) resulted in an injury, while 6 involved property damage only. The accident rate for this are is about 0.88 accidents per million

entering vehicles. This rate is typical of other urban arterial roadways, but might be considered high relative to the minor street traffic in Wheeler.

PARKING

Our field reconnaissance found that 64 parking spaces are available along Hwy. 101 (parallel spaces on east side and head-in spaces on west side) throughout the downtown core of Wheeler. A parking lot is also available on the west of Hwy. 101 in the boat launch area that also has an adjacent restaurant. The capacity of this lot is estimated to be 30-50 spaces. Parking is also available along most of the minor streets. Other nearby parking areas include lots at City Hall on the south side of downtown and the Masonic Lodge on the north side of downtown. Our observations during the summer time found most parking spaces throughout the entire downtown area were occupied during a typical Saturday afternoon. During our off-season observations, about half the parking spaces along Hwy. 101 were occupied during the weekend afternoon. Although no formal study was performed, our general impression is that most vehicles were typically parked for about 1 hour. A parking issue that must be addressed is available parking spaces for large trucks and RV vehicles. Finally, with parking full along Hwy. 101, a driver's line of sight from the minor streets is restricted.

OTHER TRANSPORTATION ISSUES

During the TAC and Open House meetings several transportation issues were raised that either expand on the information reviewed above or are additional concerns. These issues are noted below by travel mode:

Traffic Flow

- 1) At the Post Office, people turn around and do not park safely
- 2) Northbound traffic travels too fast at south end of Wheeler
- 3) Drivers use City Hall Parking area as turn around

Roadway Network

- 1) Improve upper portion of Rorvik
- 2) Need alternative N/S route to Hwy. 101, possibly 3rd
- 3) Issues regarding ROW along Hwy. 101 and railroad. Hwy. 101 may be within RR ROW 50 feet wide each side of tracks?
- 4) Largest developable parcel north of Marina-privately owned by Scoval, who has submitted development proposals in past. County would like to obtain site for public uses.

Safety

- 1) Logging trucks too noisy and pass on right
- 2) E/W streets steep and can be slick with ice and frozen fog
- 3) Drivers along minor streets, particularly at Gregory, have problems seeing along Hwy. 101-possible solutions curb extensions.
- 4) Angle of Pennsylvania is too curved and dangerous, roadway does freeze (see additional picture)

Parking

- 1) Need parking areas for RVs and vehicles with trailers
- 2) Majority of parking on west side of Hwy. 101 creating pedestrian problems
- 3) Fisherman park all-day. This takes up space that could be used by people throughout the day. They also drive poorly with their trailers.

Pedestrian

- 1) Extend sidewalks through entire downtown core to Pennsylvania
- 2) Steep minor streets difficult to walk particularly when wet. Construct steps with railing
- 3) Improve shoulders along Hwy. 101
- 4) Crosswalks along Hwy. 101 need to be upgraded, perhaps with overhead sign like Rockaway Beach

***Wheeler Transportation System Plan
2000-2001***

- 5) Create walking path loop throughout Wheeler, could include boardwalk along River to Paradise Cove. Could include bike path.

Bicycling

- 1) Create bike path throughout Wheeler
- 2) Biking along Hwy. 101 is dangerous
- 3) Create biker rest area and provide bike racks

Transit/Bus

- 1) Stops poorly located (i.e. southbound) and conflict with parking along west side of Hwy. 101.
- 2) Need handicap access, safe waiting area, connection to sidewalks/safe walking areas.

Marine

- 1) River needs to be dredged. It floods marine area and streets become drainage
- 2) Daylight Gervais, when culvert plugged city floods
- 3) Boat Ramp may move to north and will impact on downtown business and loss of business. City gets \$2500 to maintain marina park. Fee based on features available.

Tourist Train

- 1) Train line connects to Port of Tillamook near Air Museum. In future it could connect to Portland via Hillsboro and Max Light Rail