Oregon
Theodore R. Kulongoski, Governor

Department of Land Conservation and Development
635 Capitol Street, Suite 150
Salem, OR 97301-2540
(503) 373-0050
Fax (503) 378-5518
www.lcd.state.or.us

NOTICE OF ADOPTED AMENDMENT

06/23/2009

TO: Subscribers to Notice of Adopted Plan or Land Use Regulation Amendments

FROM: Plan Amendment Program Specialist

SUBJECT: City of John Day Plan Amendment
DLCD File Number 001-09

The Department of Land Conservation and Development (DLCD) received the attached notice of adoption. A Copy of the adopted plan amendment is available for review at the DLCD office in Salem and the local government office.

Appeal Procedures*

DLCD ACKNOWLEDGMENT or DEADLINE TO APPEAL: Monday, July 06, 2009

This amendment was submitted to DLCD for review prior to adoption. Pursuant to ORS 197.830(2)(b) only persons who participated in the local government proceedings leading to adoption of the amendment are eligible to appeal this decision to the Land Use Board of Appeals (LUBA).

If you wish to appeal, you must file a notice of intent to appeal with the Land Use Board of Appeals (LUBA) no later than 21 days from the date the decision was mailed to you by the local government. If you have questions, check with the local government to determine the appeal deadline. Copies of the notice of intent to appeal must be served upon the local government and others who received written notice of the final decision from the local government. The notice of intent to appeal must be served and filed in the form and manner prescribed by LUBA, (OAR Chapter 661, Division 10). Please call LUBA at 503-373-1265, if you have questions about appeal procedures.

*NOTE: THE APPEAL DEADLINE IS BASED UPON THE DATE THE DECISION WAS MAILED BY LOCAL GOVERNMENT. A DECISION MAY HAVE BEEN MAILED TO YOU ON A DIFFERENT DATE THAT IT WAS MAILED TO DLCD. AS A RESULT, YOUR APPEAL DEADLINE MAY BE EARLIER THAN THE ABOVE DATE SPECIFIED.

Cc: Peggy Gray, City of John Day
Gloria Gardiner, DLCD Urban Planning Specialist
Grant Young, DLCD Regional Representative
Bill Holmstrom, DLCD Transportation Planner

<paa> YA

FORM 2

DLCD
Notice of Adoption

THIS FORM **MUST BE MAILED** TO DLCD
WITHIN 5 WORKING DAYS AFTER THE FINAL DECISION
PER ORS 197.610, OAR CHAPTER 660 - DIVISION 18

☐ In person ☐ electronic ☐ mailed
DATE STAMP
DEPT OF
JUN 16 2009
LAND CONSERVATION AND DEVELOPMENT
For DLCD Use Only

Jurisdiction: **City of John Day** Local file number: **Ordinance No. 09-137-03**

Date of Adoption: **6/9/2009** Date Mailed: **6/15/2009**

Was a Notice of Proposed Amendment (Form 1) mailed to DLCD? **Yes** Date: 4/9/2009

☒ Comprehensive Plan Text Amendment ☐ Comprehensive Plan Map Amendment
☒ Land Use Regulation Amendment ☐ Zoning Map Amendment
☐ New Land Use Regulation ☒ Other: **Transportation System Plan**

Summarize the adopted amendment. Do not use technical terms. Do not write "See Attached".

The City of John Day adopted comprehensive plan and transportation system plan amendments related to the TGM funded Local Street Network Plan. The amendment adds local street, sidewalk, bike lane, and pathway improvements to the TSP.

Does the Adoption differ from proposal? No, no explaination is necessary

Plan Map Changed from: to:

Zone Map Changed from: to:

Location: Acres Involved:

Specify Density: Previous: New:

Applicable statewide planning goals:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐	☐

Was an Exception Adopted? ☐ YES ☒ NO

Did DLCD receive a Notice of Proposed Amendment...

45-days prior to first evidentiary hearing?	☒ **Yes**	☐ **No**
If no, do the statewide planning goals apply?	☐ **Yes**	☐ **No**
If no, did Emergency Circumstances require immediate adoption?	☐ **Yes**	☐ **No**

DLCD FILE No. 001-09 (17495) [15562]

DLCD file No. See First Page

Please list all affected State or Federal Agencies, Local Governments or Special Districts:

City of John Day, Oregon Department of Transportation, Grant County

---

Local Contact: **Peggy Gray** Phone: **(541) 575-0028** Extension:

Address: **450 East Main Street** Fax Number: **541-575-3668**

City: **John Day** Zip: **97845-** E-mail Address: **grayp@grantcounty-or.gov**

ADOPTION SUBMITTAL REQUIREMENTS

This form **must be mailed** to DLCD **within 5 working days after the final decision**
per ORS 197.610, OAR Chapter 660 - Division 18.

1. Send this Form and **TWO Complete Copies** (documents and maps) of the Adopted Amendment to:

   ATTENTION: PLAN AMENDMENT SPECIALIST
   DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT
   635 CAPITOL STREET NE, SUITE 150
   SALEM, OREGON 97301-2540

2. Electronic Submittals: At least **one** hard copy must be sent by mail or in person, or by emailing **larry.french@state.or.us**.

3. Please Note: Adopted materials must be sent to DLCD not later than **FIVE (5) working days** following the date of the final decision on the amendment.

4. Submittal of this Notice of Adoption must include the text of the amendment plus adopted findings and supplementary information.

5. The deadline to appeal will not be extended if you submit this notice of adoption within five working days of the final decision. Appeals to LUBA may be filed within **twenty-one (21) days** of the date, the Notice of Adoption is sent to DLCD.

6. In addition to sending the Notice of Adoption to DLCD, you must notify persons who participated in the local hearing and requested notice of the final decision.

7. **Need More Copies?** You can now access these forms online at **http://www.lcd.state.or.us/**. Please print on **8-1/2x11 green paper only**. You may also call the DLCD Office at (503) 373-0050; or Fax your request to: (503) 378-5518; or Email your request to **larry.french@state.or.us - Attention: Plan Amendment Specialist.**

Updated March 17, 2009

ORDINANCE NUMBER 09-137-03

AN ORDINANCE IN THE MATTER OF ADOPTING THE JOHN DAY LOCAL STREET NETWORK PLAN AS PART OF THE JOHN DAY TRANSPORTATION SYSTEM PLAN, INCLUDING TEXT AMENDMENTS TO THE CITY OF JOHN DAY COMPREHENSIVE PLAN AND LAND USE AND DEVELOPMENT CODE ("DEVELOPMENT CODE").

WHEREAS, City of John Day adopted a Transportation System Plan in 1996;

WHEREAS, the 1996 Transportation System Plan does not provide sufficient guidance for the development of a comprehensive local street network plan;

WEREAS, the 1996 Transportation System Plan does not provide sufficient guidance for the development of a comprehensive bicycle and pedestrian network;

WHEREAS, City of John Day received a grant from Oregon's Transportation and Growth Management Program to amend the John Day Transportation System Plan with a Local Street Network Plan;

WHEREAS, a Technical Advisory Committee (TAC) consisting of interested local citizens was formed to help guide the development of the John Day Local Street Network Plan;

WHEREAS, brainstorming sessions were held with students at Humbolt Elementary to discuss potential bicycle and pedestrian improvements;

WHEREAS, a public open house was held on November 19, 2008 to solicit feedback on the development of future local street and bicycle/pedestrian projects;

WHEREAS, public input was solicited for the Local Street Network Plan through a joint Planning Commission/City Council workshop on May 26, 2009;

WHEREAS, notice to the public was advertised at least 20 days in advance of the Planning Commission/City Council hearing, and the public hearing listed below;

WHEREAS, a public hearing by the Planning Commission was held on May 26, 2009 to solicit public testimony;

WHEREAS, the Planning Commission deliberated and made a recommendation to the City Council to adopt the Local Street Network Plan;

WHEREAS, a public hearing by the City Council was held on May 26, 2009 and June 9, 2009 to solicit public testimony;

WHEREAS, the City Council deliberated and made a decision to accept the John Day Local Street Network Plan and amend the Transportation System Plan;

WHEREAS, the City Council found that the accompanying Development Code and Comprehensive Plan amendments conform to the John Day Comprehensive Plan and applicable State Planning Goals, and it is in the public interest to adopt them; and

WHEREAS, the State Department of Land Conservation and Development was duly notified of the proposed Development Code amendments no less than 45 days prior to the first hearing and did not object to the changes;

NOW THEREFORE, THE CITY OF JOHN DAY, OREGON, ORDAINS AS FOLLOWS:

Article 1: **John Day Local Street Network Plan:** The John Day Local Street Network Plan, dated May 2009, is provided in Exhibit "A". The John Day Transportation System Plan is amended to include the contents of the John Day Local Street Network Plan.

Article 2: **Comprehensive Plan Text Amendment:** Text within Goal 2 of the John Day Comprehensive Plan is hereby amended as presented in Exhibit "B".

Article 3: **Development Code Text Amendment:** Text within Articles 5-2 and 5-3 of the John Day Municipal Code are hereby amended as presented in Exhibit "C".

PASSED AND ADOPTED this 9th day of June, 2009, by City Council

Mayor

City Recorder

City Councilor

City Councilor

City Councilor

City Councilor

City Councilor

City Councilor

Exhibit "A"
John Day Local Street Network Plan

Exhibit “B”

Comprehensive Plan Text Amendment

GENERAL LAND USE ELEMENT

Goal 2 – Land Use Planning

POLICIES

3. All new developments should follow accessibility guidelines outlined in the John Day's Development Code based on Oregon's 2005 Development Code and User's Guide for Small Cities.

RESIDENTIAL AREAS

5. Residential uses should be accessible by all modes of transportation.

TRANSPORTATION POLICIES

Pedestrian and Bicycle Circulation

1. It is the policy of John Day to plan and develop and complete a continuous network of streets, accessways, and other improvements, including bikeways, walkways, and safe street crossings to promote safe, direct and convenient bicycle and pedestrian circulation within the community.

2. John Day shall require streets and accessways where appropriate to provide safe, direct and convenient access to major activity centers, including downtown, schools, shopping areas, and community centers.

7. Bicycle parking facilities shall be provided at all new ~~residential multi-family developments of four units or more, commercial, industrial, recreational, and institutional facilities.~~construction or major reconstruction sites based on recommendations set forth in the current development standards (based on ODOT's 2005 Development Code and User's Guide for Small Cities).

8. Promote bicycle safety and increased bicycling activities through education, encouragement and enforcement activities.

9. Work with local transit agencies to provide projects that improve multi-modal connections (e.g., bike racks on all public transportation vehicles) and enhance opportunities for bicycle-transit trip linking.)

10. Seek funding for bicycle transportation projects through current local, regional, state, and federal funding programs while seeking to form local partnerships to leverage those funds to maximize the use of available dollars.

11. Develop a program to routinely repair and maintain roads and other bikeway network facilities, including regular sweeping of bikeways and shared use pathways.

Exhibit “C”

John Day Development Code Text Amendment

ARTICLE 5-2 - LAND USE DISTRICTS

5-2.3.180 Commercial Districts – Pedestrian Amenities

B. Standards.

5. Transit bus shelter in accordance with the following guidelines:
   a. Three walls (a rear and two sides with a minimum covered area of 48 square feet. For areas with space limitations, other types of shelters (e.g., umbrella or halfwall or canopies) may be used.
   b. Interior seating.
   c. A minimum front clearance of four feet (five feet desirable) from the shelter to the edge of the curb.
   d. Minimum sidewalk around shelter (i.e., sides and rear) of three feet (five feet desirable).
   e. Display panel for route and schedule information, if not provided on information kiosk.

ARTICLE 5-3 – COMMUNITY DESIGN STANDARDS

5-3.1.200 Vehicular Access and Circulation

H. Joint and Cross Access – Requirement.

4. For single-family residential developments. Such joint accesses and shared driveways shall provide access to no more than two proposed or potential residential parcels.

5-3.1.300 Pedestrian Access and Circulation

C. Transit Shelter Design

New developments and major remodels may provide a bus transit shelter within a street furnishing zone. Use of the public right-of-way requires approval by the road authority.

1. Transit bus shelter in accordance with the following guidelines:
   a. Three walls (a rear and two sides with a minimum covered area of 48 square feet. For areas with space limitations, other types of shelters (e.g., umbrella or halfwall or canopies) may be used.
   b. Interior seating.
   c. A minimum front clearance of four feet (five feet desirable) from the shelter to the edge

of the curb.

d. Minimum sidewalk around shelter (i.e., sides and rear) of three feet (five feet desirable).

e. Display panel for route and schedule information, if not provided on information kiosk.

5-3.4.100 Transportation Standards

F. Minimum Rights-of-Way and Street Sections.

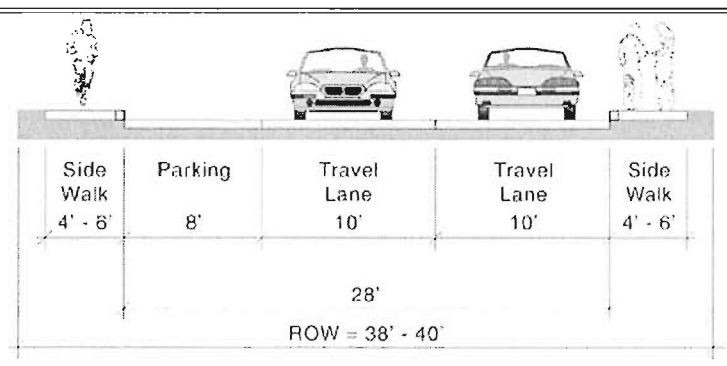
Street Type	Right-of-Way Width	Curb-to-Curb Paved Width	Within Curb-to-Curb Area				Curb	Planting Strip	Side-walks
			Motor Vehicle Travel Lanes	*Center Turn Lane*	*Bike Lanes*	*On-Street Parking*			
Local Residential									
Option A	38'-40'	28'	10'/10'	None	None	8' (one side)	Yes	None	4'-6'
Option B	40'-42'	36'	10'/10'	None	None	8'/8'	Yes	None	4'-6' (one side
Option C	38'-40'	28'	10'/10'	None	None	8' (one side)	Yes	None	4'-6' (one side
Option D	50'	36'	10'/10'	None	None	8'/8'	Yes	None	4'-6'
Option E	60'	36'	10'/10'	None	None	8'/8'	Yes	(optional) 2'-6'/2'-6'	4'-6'
Alley									
A-1	16'-20'	16'-20'	8'-10'/8'-10'	None	None	None	No	None	None
Collector									
Option A	44'-56'	30'-32'	10'-11'/ 10'-11'	None	5'/5'	None	Yes	(optional) 2'-6'/2'-6'	6'/6'
Option B	40'-44'	30'-32'	10'-11'/ 10'-11'	None	5'/5'	None	Yes	(optional) 2'-6'	6'(one side)
Option C	54'	42'	12'/12'	None	5'/5'	8' one side	Yes	None	6'/6'

Street Type	Right-of-Way Width	Curb-to-Curb Paved Width	Within Curb-to-Curb Area				Curb	Planting Strip	Side-walks
			Motor Vehicle Travel Lanes	*Center Turn Lane*	*Bike Lanes*	*On-Street Parking*			
Option D	62'-74'	50'	12'/12'	None	5'/5'	8'/8'	Yes	(optional) 2'-6'/2'-6'	6'/6'
Arterial									
Option A	62'	50'	14'/14'	12'	5'/5'	None	Yes	None	6'/6'
Option B	80'	64'	12'/12'	12'	6'/6'	8'/8'	Yes	None	6'/6'
Option C	80'	50'	12'/12'	14'	6'/6'	None	Yes	None	5'-8'/ 5'-8'
Arterial (One-Way)	60'	18'	12'	None	6'	None	Yes	None	6'/6'

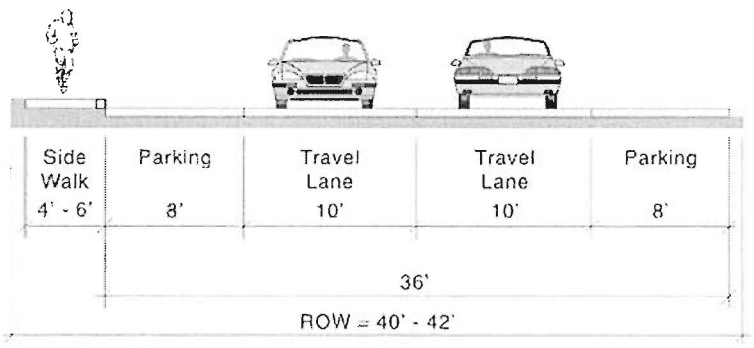
G. **Subdivision Street Connectivity.**

6. Bicycle/Pedestrian Access and Circulation. To promote safe, direct, and convenient bicycle and pedestrian circulation, a system of connected multi-use pathways should be developed to provide access to and from residential neighborhoods, business districts, schools, and recreational destinations. Development standards for non-motorized multi-use pathways should conform to the information provided in the American Association of State Highway and Transportation Officials (AASHTO) "Guide for the Development of Bicycle Facilities" or similar standards as appropriate.

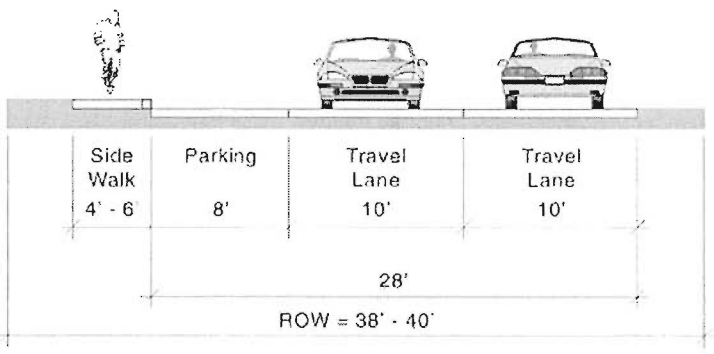
Option A



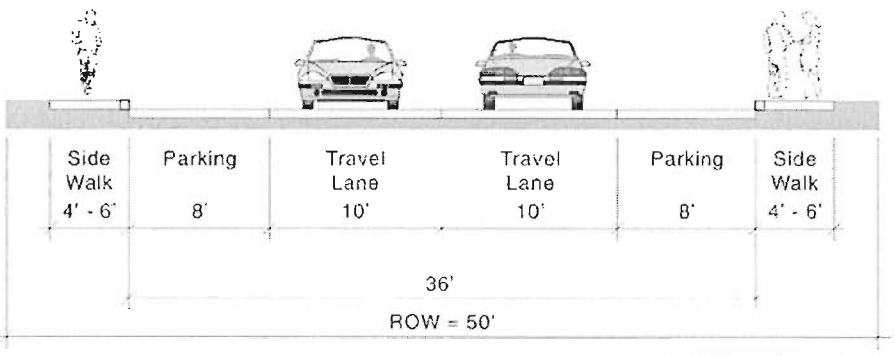
Option B



Option C

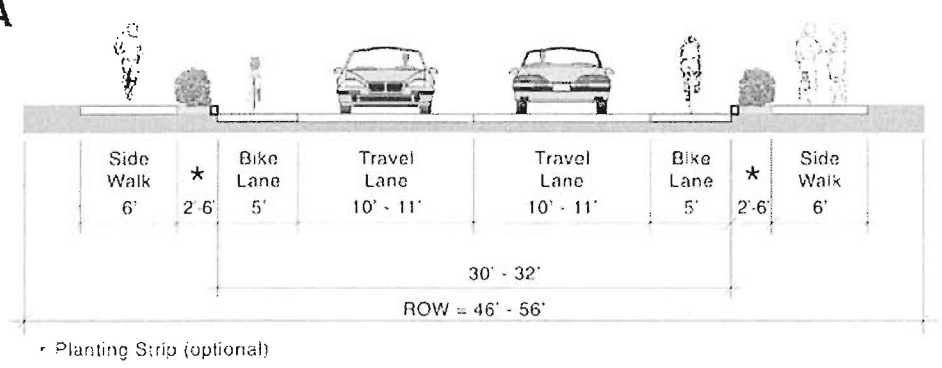


Option D



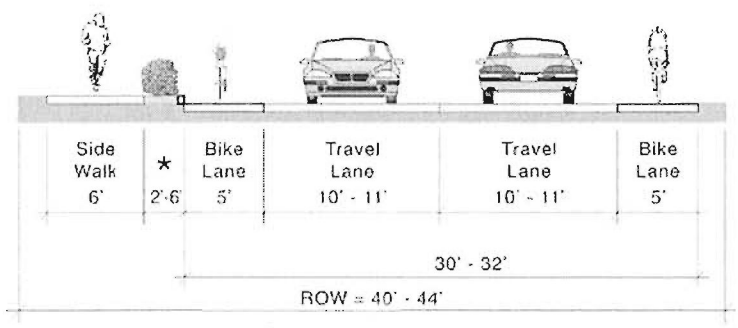
LOCAL STREET DESIGN STANDARDS
JOHN DAY, OREGON

Option A



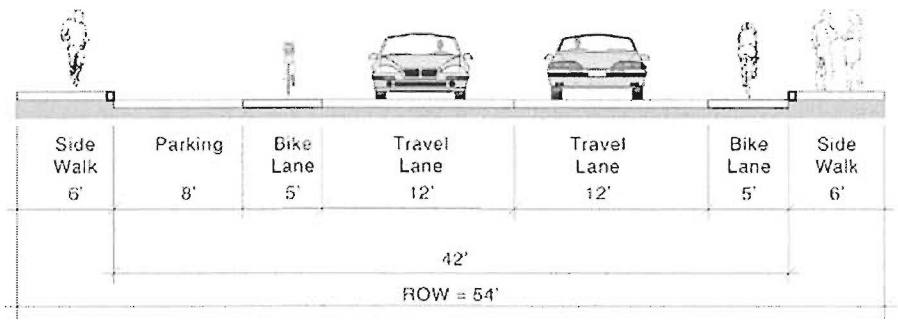
* Planting Strip (optional)

Option B

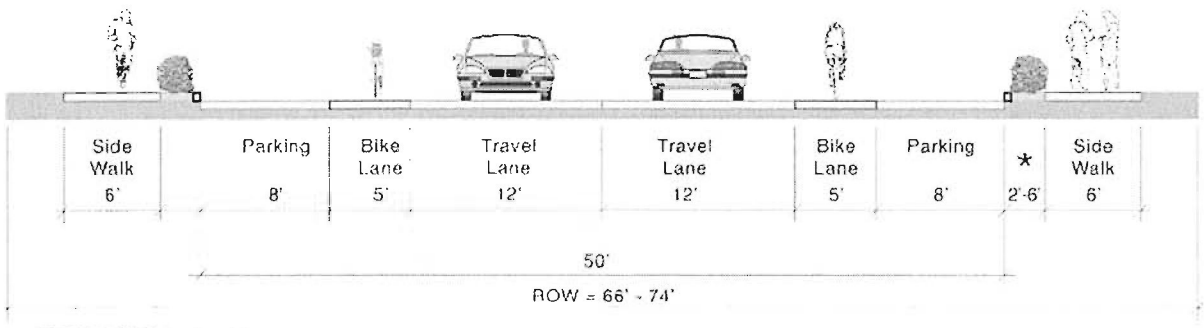


* Planting Strip (optional)

Option C



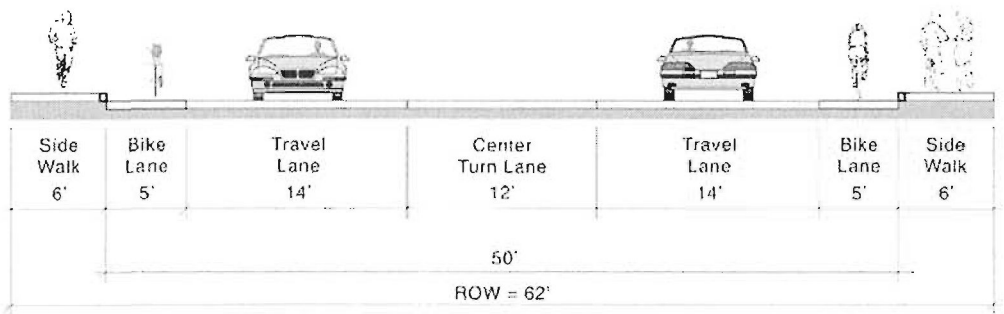
Option D



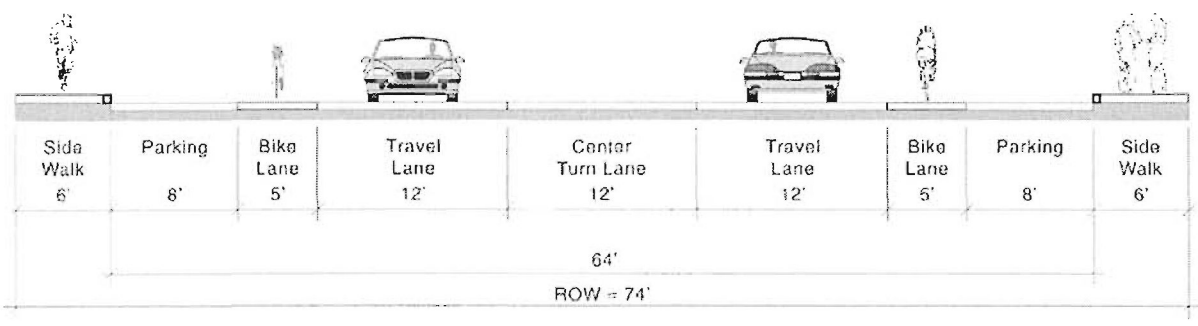
Planting Strip (optional)

COLLECTOR STREET DESIGN STANDARDS
JOHN DAY, OREGON

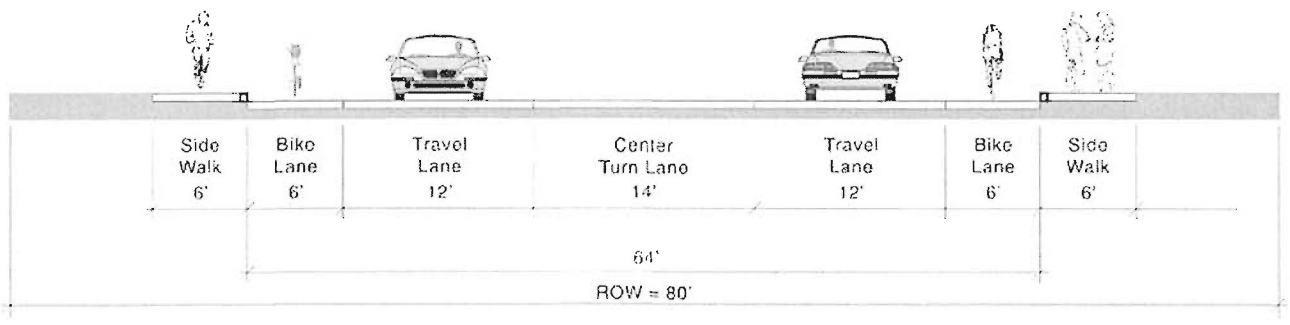
Option A



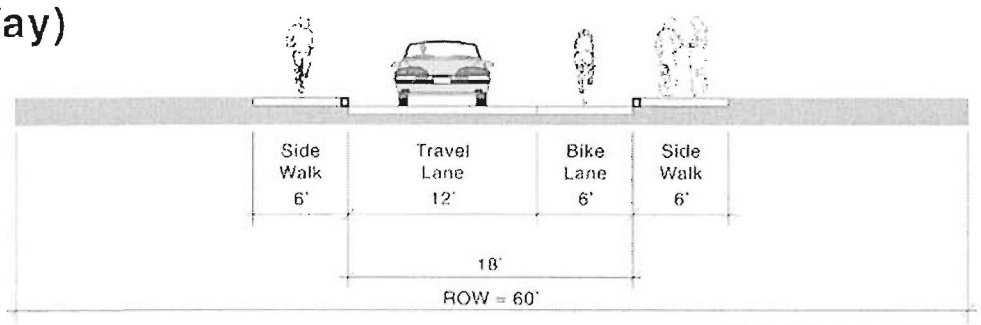
Option B



Option C

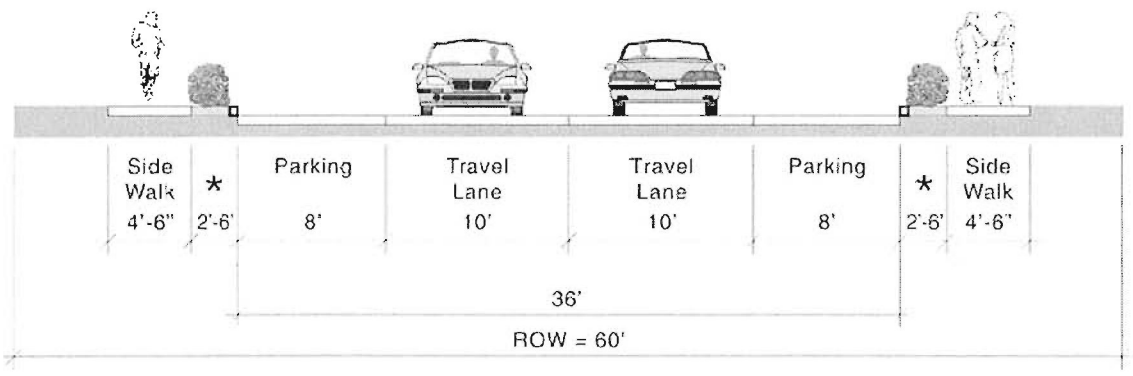


Arterial (One Way)



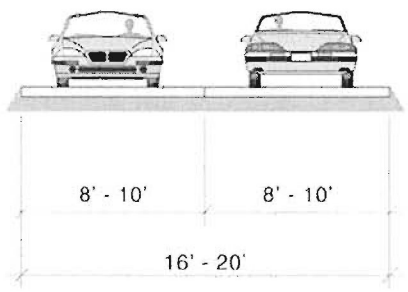
ARTERIAL STREET DESIGN STANDARDS
JOHN DAY, OREGON

Option E



* Planting Strip (optional)

Alley



TRANSMITTAL

Kittelson & Associates, Inc.
Transportation Engineering / Planning
610 SW Alder, Suite 700
Portland, OR 97205
Telephone: (503) 228-5230
FAX: (503) 273-8169

DATE: **Jun 15, 2009** PROJECT #: **9256**

PROJECT NAME: **John Day Local Street Plan**

THESE MATERIALS ARE BEING TRANSMITTED TO YOU:

x	VIA MAIL	x	FOR YOUR FILE/INFO
	COURIER		AS REQUESTED
	OVERNIGHT		FOR REVIEW AND COMMENT
	OTHER		FOR YOUR USE

COPIES SENT TO:

RECIPIENT:

NAME: **ATTN: Plan Amendment Specialist**
OF: Dept of Land Conservation and Development
635 Capitol St NE Ste 150
Salem, OR 97301

PHONE:

COPIES	DESCRIPTION
	John Day Local Street Network Plan – Notice of Adoption

COMMENTS:

This form and draft copy are being submitted on behalf of the City of John Day. If you have any questions please contact Peggy Gray at the City of John Day

Thanks!

Matt Hughart, Senior Planner

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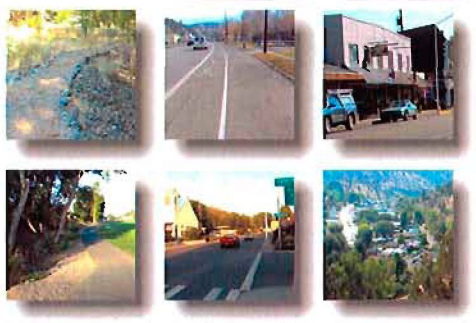
John Day Local Street Network Plan

John Day, Oregon





April 2009

CITY OF JOHN DAY

Transportation System Plan Amendment

John Day Local Street Network Plan

John Day, Oregon

April 2009

Transportation Plan

John Day Local Street Network Plan

John Day, Oregon

Prepared For:
City of John Day, Oregon
450 East Main Street
John Day, OR 97845
(541) 575-0028

Prepared By:
Kittelson & Associates, Inc.
610 SW Alder, Suite 700
Portland, OR 97205
(503) 228-5230

In Association With:
Alta Planning + Design

Project No. 9256

April 2009

This project was partially funded by a grant from the Transportation and Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation and the Oregon Department of Land Conservation and Development. This TGM grant is financed, in part, by federal Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), local government, and the State of Oregon funds.

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Preface

The progress of this plan was guided by the Project Management Team (PMT) and the Technical Advisory Committee (TAC). The PMT and TAC members are identified below, along with members of the consultant team. The TAC members devoted a substantial amount of time and effort to the development of the John Day Local Street Network Plan, and their participation was instrumental in the development of this document. The Consultant Team and PMT believe that the City of John Day's future transportation system will be better because of their commitment.

Project Management Team (PMT)

Peggy Gray
City Manager

David Holland
City *Public Works Director*

Bob Quinton
Mayor

Cheryl Jarvis-Smith
ODOT Project Manager

Technical Advisory Committee (TAC)

T.R. Hilton
Ambulance Director, Blue Mountain Hospital

Bob Houser
CEO Blue Mountain Hospital

Richard Tirico
John Day Police Chief

Valerie Luttrell
John Day Dispatch Manager

Steve Allen
John Day Fire Chief

Don Caldwell
John Day City Councilor

Shane A. Griffin
ODOT District 14

Art Thunell
John Day City Parks & Recreation District

Ken Boethin
John Day Planning Commission Chair

Sophie Cosgrove
Safe Routes to School Committee

Angel Carpenter
Safe Routes to School Committee

Cheryl Jarvis-Smith
ODOT Project Manager

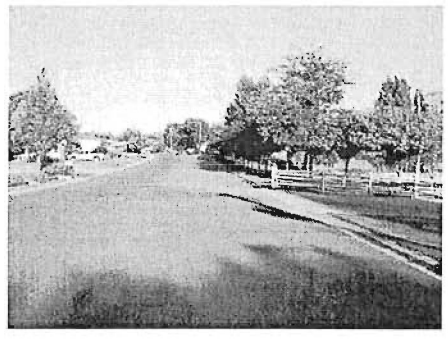
Consultant Team

Kittelson & Associates, Inc.
Matt Hughart, AICP
Marc Butorac, P.E., PTOE
Darryl Depencier

Alta Planning + Design
Chris Bernhardt

Section 1
Introduction

Introduction



The John Day Local Street Network Plan is a comprehensive plan that is intended to provide guidance for the development of a connected local street network and new bicycle and pedestrian facilities. The overall goals of the planning process are to:

- Improve and enhance safety and traffic circulation on the local street systems.
- Identify roadway system, bicycle, and pedestrian needs to accommodate developing or undeveloped areas without undermining the rural nature of the community.
- Increase the use of alternative modes of transportation (walking, bicycling, and transit) through improved access, safety, and service.
- Identify additional walking and bicycle facilities that provide connections to/from the City of Canyon City.

This report describes proposed local street and bicycle/pedestrian projects that have been formally identified as part of a collaborative process that involved City and state staff, the project's Technical Advisory Committee, and various business owners and residents. A multi-disciplinary consulting team supported the planning efforts. It was led by Kittelson & Associates with support from Alta Planning + Design.

Plan Organization

The John Day Local Street Network Plan is organized as follows:

- Section 1 – Introduction
- Section 2 – Transportation Analysis and Land Inventory Analysis
- Section 3 – Opportunities and Constraints Analysis
- Section 4 – Local Street Network Plan
- Section 5 – Funding and Implementation

EXECUTIVE SUMMARY

The John Day Local Street Network Plan is the City's long-term plan for local street, bicycle, and pedestrian improvements and includes policies and projects that could be implemented through the City Capital Improvement Plan, development review, or grant funding.

The primary purposes of creating a local street network plan is to fulfill the State of Oregon Transportation Planning Rule (TPR) requirements for local comprehensive transportation planning. The local street network plan will be used as a supplemental guiding policy document to the existing Transportation System Plan for addressing long term transportation planning.

Participation and Public Involvement

To ensure that adequate project coordination and public participation occurred throughout the development of the John Day Local Street Network Plan, an extensive outreach and involvement process was undertaken. Citizens, business owners, and members from partner agencies were invited to join a Technical Advisory Committee. Their task was to oversee and offer guidance on the development of the plan and the projects. In addition to the committee work, public participation and feedback was garnered through an extensive project advertisement process and a series of public open house meetings.

Plan Development

The process used to generate the John Day Local Street Network Plan is outlined in the following sections.

Existing Transportation and Land Use Conditions

The foundation of the planning effort focused on establishing a description of existing traffic conditions, future planned transportation infrastructure improvements within the study area, an assessment of forecast traffic growth through the year 2030 based on a land inventory/analysis, and an assessment of how the resulting traffic growth will impact the operations along the roadways and intersections located within the overall study area. Additional detail related to these topics can be found in Section 2.

Opportunities and Constraints Analysis

Based on the existing and future conditions, a preliminary set of local street and bicycle/pedestrian opportunities and constraints were developed for the City. This preliminary list of opportunities and constraints helped to establish the basis for the local street and bicycle/pedestrian network plan. Additional detail related to these topics can be found in Section 3.

Local Street Network Plan

The John Day Local Street Network Plan presents the identified local street and bicycle/pedestrian projects. These projects were developed in accordance with the findings presented in the transportation and land inventory analysis, the opportunities and constraints analysis, and the

interests of the citizens, business owners, and governmental agencies of the City of John Day. A total of 41 local street and bicycle/pedestrian projects were identified as outlined in Section 4. The following list provides an overview of each project and its identified prioritization/ranking. The following table is a listing of those projects and the identified prioritization of each. Each project has been categorized as a high, medium, or low priority project.

Proj #	Project Summary Description	Timing		
		Short-Term	Medium-Term	Long-Term
High Priority Projects				
1	7th Street Bicycle/Pedestrian Connection	X		
2	Bridge Street Path to 7th Street Recreational Complex	X		
6	Sidewalk on the South Side of Main Street (Lyons to Ford Road)		X	
11	Ford Road Sidewalk	X		
12	Sidewalks on Bridge Street North of 7th Street		X	
21	Main Street Sidewalks and Bike Lanes (east of 3rd Avenue)			X
28	Multi-Use Trail Along Canyon Creek			X
30	Brent Street Sidewalk			X
31	Sidewalk Extension Along Canyon Boulevard	X		
32	Canyon Boulevard Bicycle Lane Widening	X		
37	Inland Road Sidewalks	X		
38	US 26 Sidewalks			X
Medium Priority Projects				
3	Multi-Use Path along John Day River (east of Bridge Street)		X	
4	4th and 5th Street Sidewalks (Between Canton and Bridge Streets)		X	
5	Multi-Use Path along John Day River (west of Bridge Street)		X	
8	Multi-Use Path along Canyon Creek from John Day River to Main St			X
9	7th Street Path to 7th Street Recreational Complex			X
14	Valley View Drive Connection to Patterson Bridge Road			X
15	Extension of 4th Street Corridor to West City Limits			X
16	Development of 6th Street Corridor West of Canton Street			X
17	Main Street Pedestrian Crossing at Ford Road	X		
19	New Local Street Between the 4th and 6th Street Extensions			X
27	Street Stubs			X
34	Sidewalks on 1st, 2nd, Dayton, Trowbridge, & Elm Streets		X	
35	Bridge Street Extension to Canyon Boulevard			X
39	US 26 Bicycle Lanes		X	
41	West Bench Road Connection to Industrial Park			X

Proj #	Project Summary Description	Timing		
		Short-Term	Medium-Term	Long-Term
Lower Priority Projects				
7	Conversion of Abandoned Road to Path Serving USDA/Hospital			X
10	Conversion of Private Road to Public Road (Valley View Drive to Patterson Bridge Road)			X
13	Extension of Charolias Drive to 7th Street		X	
18	New Collector from 3rd Avenue to 7th Street			X
20	Hillcrest Road Sidewalk Extension			X
22	Enhancement of Multi-Use Trails		X	
23	3rd Avenue Sidewalks		X	
24	Subdivision Pedestrian System		X	
25	Connection East from Ferguson Road			X
26	1st/Trowbridge Road Extension		X	
29	Sidewalks Along Aviation Road			X
33	Canton and Bailey Street Sidewalks (South of Main Street)			X
36	Blue Gulch Road Extension		X	
40	Pedestrian Access Between La Costa Road and Vista Drive			X

Recognizing that funding sources, right-of-way acquisition, and other implementation factors will impact these projects, the projects have also been subcategorized in terms of how soon they are likely to be implemented (short-, medium-, or long-term). In this manner, the implementation of identified system improvements has been staged to spread investment in the City's transportation infrastructure over the life of the plan.

Section 2
Transportation Analysis
and Land Inventory
Analysis

Transportation Analysis and Land Inventory Analysis

This section documents the existing and future baseline traffic conditions analysis under a "no-build" scenario. Specifically, this section identifies how the study area transportation network will operate upon an assumption of future local and regional traffic growth through the year 2030 and no improvements or modifications to the transportation network.

Included in this section is a description of existing traffic conditions, future planned transportation infrastructure improvements within the study area, an assessment of forecast traffic growth through the year 2030 based on a land inventory/analysis, and an assessment of how the resulting traffic growth will impact the operations along the roadways and intersections located within the overall study area.

EXISTING TRAFFIC CONDITIONS

The section provides an updated inventory of existing transportation conditions relevant to the preparation of a local street network plan for John Day.

Existing Transportation Inventory

The existing transportation inventory provides a detailed description of all transportation facilities and travel modes within the City of John Day. This section is intended to update and supplement the information summarized in the current TSP.

Roadway Facilities

Traffic in John Day is served principally by US 26 (known locally as Main Street) and US 395 (known locally as Canyon Boulevard). Downtown John Day is centered on the junction of these two state highways and is served by a street grid in the area between the John Day River and Canyon Creek. Streets outside of the downtown core are patterned around the topography and geographic features of the area. Development is limited to the south of Highway 26 by steep slopes; however, John Day is developing the plateau above the slopes and will need to ensure adequate connection between the upper and lower portions of the city. Opportunities to improve the existing system will be difficult in many areas because of steep grades and limited right of way ownership.

Street Functional Classification

The City of John Day has adopted a three tiered classification system for its roadways: Arterial Streets, Collector Streets, and Residential Streets. The current street network and corresponding functional classification is illustrated on Figure 2-1.

CITY OF JOHN DAY

City of John Day

John Day River

PATTERSON BRIDGE

DAVIS CREEK

VALLEY VIEW

CHAROLAIS

BOULDER

9TH

BRIDGE

7TH

5TH

4TH

3RD

2ND

1ST

CANTON

DAYTON

ELM

FORD

OGDEN

MAIN

HILLCREST

HIGHLAND

GRANT

FRANKLIN

HIGHWAY 26

RIVER

LOWER YARD

CARPENTER POND

WILDERNESS

APPLE

HIGHWAY 26

SCREECH ALLEY

26

395

LA COSTA

GOLF CLUB

VISTA

GIBSON

SUNSET

EAST SIDE

TRAFTON

LUCE CREEK

BUMP

WEST BENCH

RNR RIDGE

VICTORIAN

RIDGE

CHIMNEY GULCH

ROCK PIT

WEST INDUSTRIAL

INDUSTRIAL PARK

AIRPORT

AVIATION

SUNRISE

BRENT

CANYON

FERGUSON

4TH

5TH

6TH

395

BLUE GULCH

Canyon Creek

Grant Union High School

City of Canyon City

HIGHLAND

BRENT

CANYON CITY

MINERS

Humboldt Elementary School

HUMBOLDT

NUGGET

ELK VIEW DRIVE

QUAIL

City of John Day

City Hall
School
Library
Post Office
Hospital
Fire Station
Kam Wah Chung Historical Park
Airport

Roads
Arterial
Collector
Proposed Collector
Local
Proposed Local
Alley
Municipal Boundary
John Day Urban Growth Boundary

N

0 300 600 1,200 1,800 Feet

Existing Roadway Functional Classification
John Day, Oregon

FIGURE 2-1

projfile/9256.0/gis/BaseMap.mxd

Arterial Streets form the backbone of the transportation network. Arterials are intended to carry higher volumes of traffic and provide regional connections within and outside the City.

John Day has two arterial streets; US 26 and US 395. US 26 runs through the entire city from east to west via the city center. US 26 also fronts most of the John Day's commercial activity. US 395 connects downtown John Day with Canyon City to the south. Both the local elementary school and the high school servicing the study area are located along US 395.

Collector Streets serve to connect arterials to more localized land uses such as residential neighborhoods.

The collector roadways in downtown John Day are Bridge Street, Dayton Street, and 3rd Avenue. These routes allow traffic to circulate to the downtown core from adjacent residential areas. There are also collector routes in other parts of the city. Patterson Bridge Road connects the western industrial area to US 26, Screech Alley and West Bench Road provide connections to a large number of residences in the western part of the John Day Urban Growth Boundary, and 4th Avenue connects US 395 to the John Day airport and the new industrial park on the southern plateau.

Residential Streets are intended to provide direct access to residential properties. All other streets within John Day not previously identified above are classified as Residential Streets.

Pedestrian & Bicycle Facilities

Pedestrian facilities within the city, with the exception of the downtown area, are incomplete and frequently substandard as illustrated in Figure 2-2. In many places, particularly on residential streets, sidewalks do not exist, or are located in front of only some parcels and not necessarily all on one side of the street. Many existing facilities are narrow and none of the sidewalks contain planter strips to buffer their users from vehicle traffic.

Lack of sidewalks to major destinations are a particular issue. The high school and elementary school at the south end of the city do not connect to the adjacent neighborhoods or downtown area with continuous sidewalks. Other important sites, such as the 7th Street Complex and the hospital, have sidewalks leading almost all the way to them, but do not fully make the necessary connections for safety and convenience.

The steeper topography of the hills to the north and south of John Day constrain the opportunities to provide adequate pedestrian facilities. Existing development in these areas is particularly void of sidewalks, forcing people to walk in the street. Narrow rights-of-way widths may require costly acquisitions to retrofit streets with sidewalks in these neighborhoods.

Bicycle facilities, primarily intended for arterial and collector streets, exist only on Hwy 395 heading south from downtown, where a four-foot wide bike lane has been striped on both sides of the roadway. This facility does allow bicycle access from the center of the city to the aforementioned schools. Otherwise, no other bike lanes exist on arterials or collectors within the city.

CITY OF JOHN DAY

City of John Day

John Day River

PATTERSON BRIDGE

DAVIS CREEK

VALLEY VIEW

CHAROLAIS

BOULDER

9TH

BRIDGE

7TH

5TH

4TH

3RD

2ND

1ST

CANYON

DAYTON

ELM

FORD

OLIVE

MAIN

HILLCREST

HIGHWAY 26

26

395

RIVER

LOWER YARD

CARPENTER POND

WILDERNESS

APPLE

HIGHWAY 26

SCREECH ALLEY

LA COSTA

GOLF CLUB

VISTA

GIBSON

EAST SIDE

SUNSET

TRAFTON

LUCE CREEK

BUMPY

WEST BENCH

VICTORIAN

RIDGE

CHIMNEY GULCH

ROCK PIT

RNR RIDGE

WEST INDUSTRIAL

INDUSTRIAL PARK

AIRPORT

AVIATION

SPRUCE

BRENT

FERGUSON

BLUE GULCH

Grant Union High School

Canyon Creek

City of Canyon City

HIGHLAND

CANYON CITY

MINERS

Humboldt Elementary School

ELK VIEW DRIVE

QUAIL

NUGGET

HUMBOLT

City of John Day

- City Hall
- School
- Library
- Post Office
- Hospital
- Fire Station
- Kam Wah Chung Historical Park
- Airport
- Trails
- Sidewalk
- Bike Lane (Both Sides)
- Municipal Boundary
- John Day Urban Growth Boundary

N

Feet

0 300 600 1,200 1,800

profile/9256.0/gis/BaseMap.mxd

Existing Bicycle and Pedestrian Facilities
John Day, Oregon

FIGURE 2-2

In many instances, rights-of-way widths are too narrow to add bike lanes and will require that additional land be purchased, such as along Hwy 26. As such, bicyclists using existing arterials and collectors must ride without the benefit of striped bikeways, although some roadways contain sufficient shoulders to provide some margin of safety and comfort to riders.

As with pedestrians, the steep topography of the surrounding hills discourages bicycle use, particularly as a means to access the residential developments to the north and southwest. With the notable exception of the school buildings, the existing bikeway system does not provide good access to other important destinations, such as the 7th Street Complex.

Public Transportation

There is currently no fixed route transit service within the City of John Day. However, shuttle service is provided by The People Mover. This service, which is funded by a grant from ODOT, provides demand responsive shuttle trips for senior citizens, people with disabilities, and the general public for a small fee. The majority of service is local to the John Day/Canyon City vicinity, however shuttle service is provided to Bend twice a week.

Existing Traffic Volumes and Peak Hour Operations

As part of this study effort, intersection turning movement counts were conducted at a number of major intersections within the City of John Day. These intersections include:

- US 26 (Main Street) / Patterson Bridge Road
- US 26 (Main Street) / 3rd Avenue (West Side)
- US 26 (Main Street) / Canton Street
- US 26 (Main Street) / Bridge Street
- US 26 (Main Street) / US 395 (Canyon Boulevard)
- US 26 (Main Street) / 3rd Street (East Side)
- US 395 (Canyon Boulevard) / 4th Avenue

Full classification turning movement counts were conducted on a weekday in May 2008 while local schools were still in session. *Appendix A* contains summaries of the traffic count worksheets. A description of the traffic count data as it was utilized for the purposes of this report is summarized in the following sections.

System Peak Hour Intersection Volumes

From the manual intersection turning movement counts conducted in May, peak hour traffic volumes were summarized for the purposes of evaluating the existing traffic operations at the study intersections. Using the peak count data, the system peak hour was determined across all study intersections resulting in a system peak hour that occurs from 3:45 p.m. to 4:45 p.m.

Seasonal Adjustments

It is recognized that major highways in Oregon are prone to traffic volume fluctuations due to the effects of seasonal variation. Typically the summer months experience higher traffic volumes due to additional traffic from recreational enthusiasts and vacationers while the winter months tend to experience the lowest traffic volumes. Using a methodology approved by ODOT's Transportation Planning Analysis Unit (TPAU) (See *Appendix B* for the Traffic Analysis Methodologies, Procedures, and Assumptions memorandum), a seasonal adjustment factor of 1.09 was calculated for the study intersections. Using the adjustment factor, the weekday peak hour turning movement counts were adjusted to represent the 30th highest hour volume or the design volume. After accounting for the seasonal variation in traffic, the peak hour turning movement counts were summarized and rounded to the nearest five vehicles per hour as shown in Figure 2-3.

Existing Intersection Operations

All operational analyses described in this section were performed in accordance with the procedures stated in the 2000 Highway Capacity Manual. Given that all of the intersections are located along either US 26 or US 395, the operational standards are defined by the 1999 Oregon Highway Plan (OHP). The OHP outlines specific performance measures to be maintained along ODOT facilities as part of the Highway Mobility Standards. These standards are aimed at maintaining mobility along important road corridors and vary according to functional classification, location, and role within the National Highway System (NHS). The following intersection performance measures are applicable for facilities within this study given that US 26 and US 395 are Statewide Highways, part of the NHS, and have a Freight Route classification:

- Volume-to-capacity ratio of 0.85 for movements along US 26 and US 395 (located within the downtown Special Transportation Area (STA) designation[1]).
- Volume-to-capacity ratio of 0.80 for movements along US 26 and US 395 (outside of the STA).
- Volume-to-capacity ratio of 0.95 for all movements along US 26 and US 395 (located within the STA) that must stop or yield the right-of-way.
- Volume-to-capacity ratio of 0.90 for all movements along US 26 and US 395 (outside the STA) that must stop or yield the right-of-way.

Intersection Analysis

All of the intersections along US 26 and US 395 are currently unsignalized with the exception of the US 26/US 395 intersection. For unsignalized intersections, the operations assessment is typically based on the intersection's ability to accommodate the worst or critical movement. This is typically the minor-street stop-controlled movement. Figure 2-3 outlines the resulting operations for the critical movement at each intersection. To supplement this figure, Table 2-1 provides a summary of

[1] The STA designation exists along US 26 from just west of the Canyon Creek Bridge to Dayton Street and along US 395 from US 26 to 3rd Avenue.

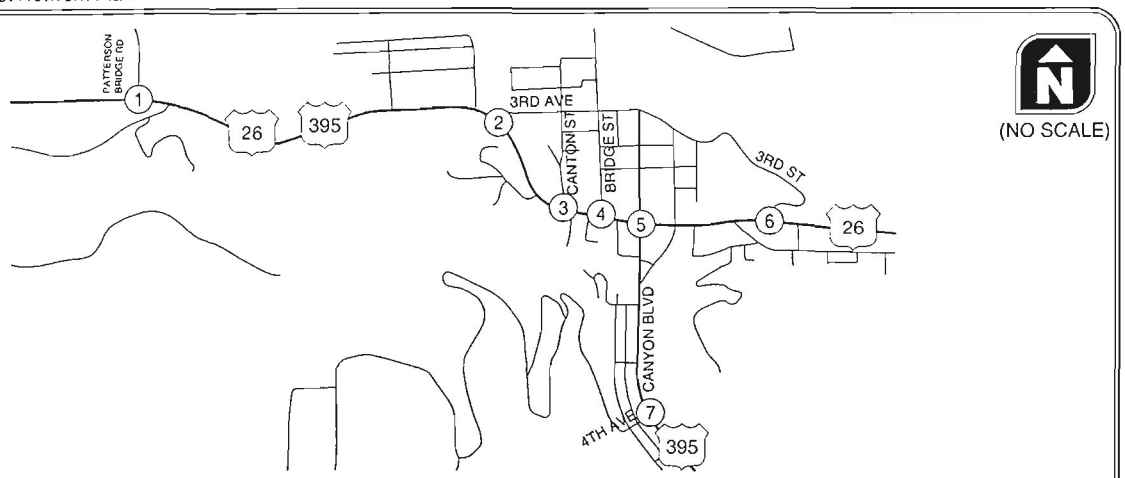
all stop-controlled or yield controlled intersection movements in order to determine how all of the critical intersection movements are operating during the existing 30th hour conditions. Table 2-1 also summarizes the intersection operations of the signalized US 26/US 395 intersection. All traffic operations summary worksheets for the study intersections are provided in *Appendix C*.

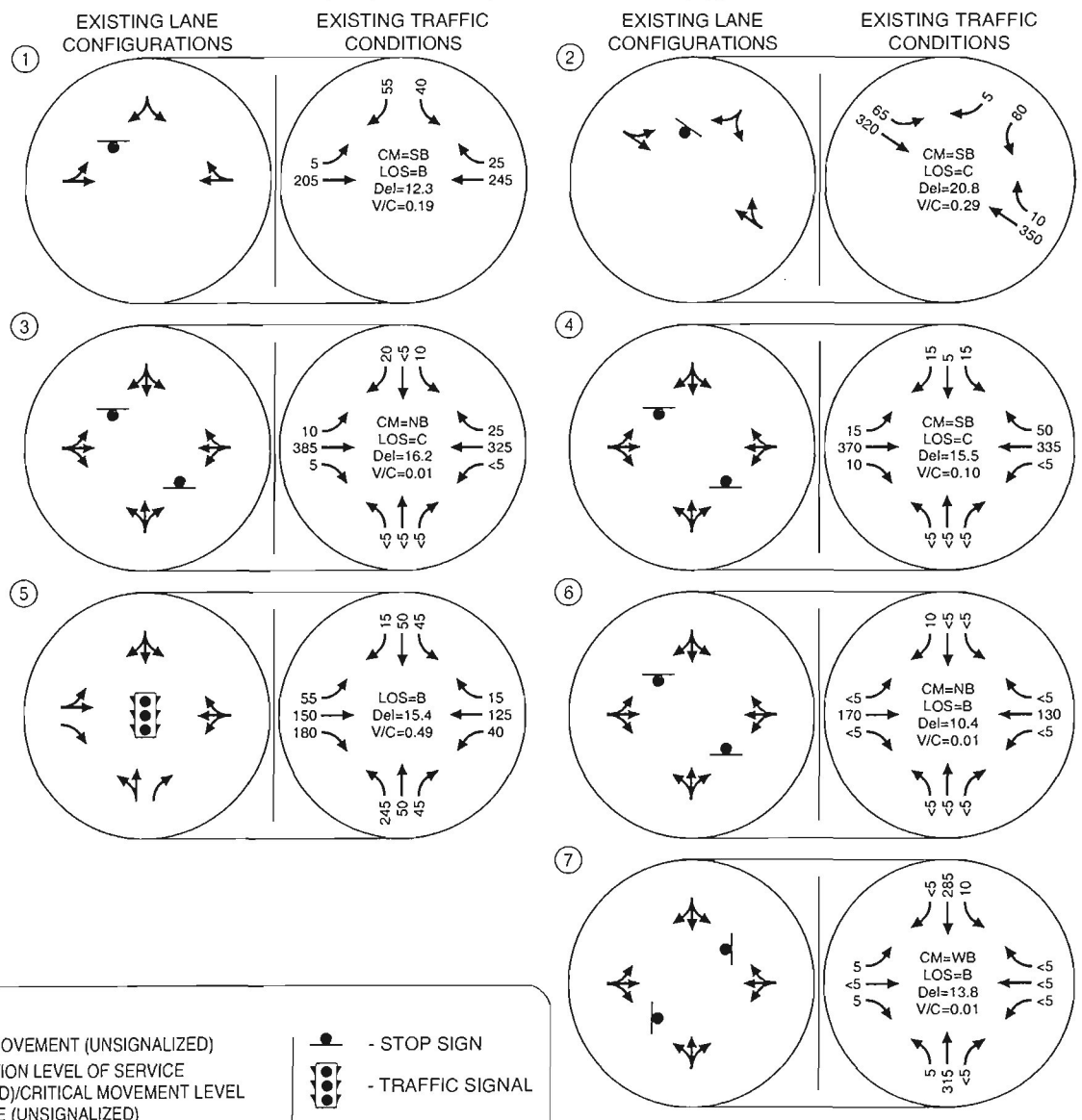
TABLE 2-1 EXISTING 30TH HIGHEST HOUR INTERSECTION OPERATIONS

Intersection	Critical Movements	V/C Ratio	Adequate	95th Percentile Queue (feet)	
				HCM Methodology	Two Minute Rule
US 26 / Patterson Bridge Road	US 26 EB TH/LT[1]	0.21	Yes	25	325
	SB Approach[2]	0..19	Yes	25	150
US 26 / 3rd Avenue	US 26 EB LT[1]	0.36	Yes	50	600
	SB Approach[2]	0.29	Yes	50	150
US 26 / Canton Street	US 26 EB LT[3]	0.39	Yes	25	625
	US 26 WB LT[3]	0.35	Yes	25	550
	NB Approach[4]	0.01	Yes	50	25
	SB Approach[4]	0.08	Yes	50	50
US 26 / Bridge Street	US 26 EB TH/LT[3]	0.37	Yes	25	610
	US 26 WB TH/LT[3]	0.36	Yes	25	600
	NB Approach[4]	0.01	Yes	50	25
	SB Approach[4]	0.10	Yes	50	50
US 26 / US 395	---	0.49	Yes	NBTHLT – 250 NBRT – 25 EBTHLT – 175 EBRT - 50 WB – 150 SB - 100	---
US 26 / 3rd Street	US 26EB LT[1]	0.14	Yes	25	275
	US 26 WB LT[1]	0.11	Yes	25	225
	NB Approach[2]	0.01	Yes	25	25
	SB Approach[2]	0.02	Yes	25	25
US 395 / 4th Avenue	US 395 NB LT[1]	0.30	Yes	50	500
	EB Approach[2]	0.03	Yes	25	25

[1] The performance standard for this movement is a v/c ratio of 0.80 or better.
[2] The performance standard for this movement is a v/c ratio of 0.90 or better.
[3] The performance standard for this movement is a v/c ratio of 0.85 or better.
[4] The performance standard for this movement is a v/c ratio of 0.95 or better.

As shown in the table, all intersections currently operate within acceptable volume-to-capacity ratios.





LEGEND

CM = CRITICAL MOVEMENT (UNSIGNALIZED)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED)/CRITICAL MOVEMENT LEVEL OF SERVICE (UNSIGNALIZED)
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED)/CRITICAL MOVEMENT CONTROL DELAY (UNSIGNALIZED)
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO

- STOP SIGN
- TRAFFIC SIGNAL

EXISTING 30TH HIGHEST HOUR TRAFFIC CONDITIONS
JOHN DAY, OREGON

FIGURE 2-3

Vehicle Queues

A 95th percentile queuing analysis was performed at each of the study intersections for the major street left-turn and minor street movements. 95th percentile queue results are presented using the standard methodology from the Highway Capacity Manual (HCM) and TPAU's "Two Minute Rule". The results of the queuing analysis are summarized in Table 2-1. As shown in the table, the vehicle queue estimates vary significantly between the two methodologies. Studies have shown that the HCM methodology typically underestimates queue lengths while the "Two-Minute Rule" methodology overestimates queue lengths given its inability to account for gaps caused by upstream traffic signals. Based on field observations, the actual existing 95th percentile queues are typically between the two sets of estimates.

At the US 26/US 395 intersection, vehicle queues are reflective of the signalized intersection operations and are consistent with peak hour field observations. ODOT TPAU's "rule of thumb" procedures were used to calculate the signalized intersection queues.

Traffic Safety

The crash histories at the study intersections were reviewed in an effort to identify potential intersection safety issues. Crash records were obtained form ODOT for the five-year period from January 1, 2003 through December 31, 2007. A summary of the crash data is provided in Table 2-2 that includes the severity and type of crashes over a five-year analysis period. It should be noted that there are no records of any crashes occurring at several of the study intersections. Reasons for this lack of data might be that the property damage limit was not exceeded or that the motorists did not report some crashes.

TABLE 2-2 STUDY INTERSECTION CRASH HISTORIES (2003-2007)

Intersection	Number of Crashes	Collision Type				Severity	
		Turning	Rear-End	Angle	Other	Property Damage Only	Personal Injury
US 26 / Patterson Bridge Road	1	0	1	0	0	1	0
US 26 / 3rd Avenue	0	0	0	0	0	0	0
US 26 / Canton Street	0	0	0	0	0	0	0
US 26 / Bridge Street	0	0	0	0	0	0	0
US 26 / US 395	3	2	0	1	0	2	1
US 26 / 3rd Street	0	0	0	0	0	0	0
US 395 / 4th Avenue	0	0	0	0	0	0	0

As illustrated in Table 2-2, the patterns amongst the crashes were evaluated to determine if there are any operational or geometric deficiencies that contribute to the crash patterns. Given the low number of crashes at the intersections, no operational or geometric deficiencies were revealed.

Crash rates for intersections are often expressed in crashes per million entering vehicles (MEV) for evaluation purposes. Generally a crash rate higher than 1.0 crashes/MEV indicates the need for further investigation at the intersection. These calculations are presented in Table 2-3 and show that all of the study intersections have relatively low crash rates.

TABLE 2-3 STUDY INTERSECTION CRASH RATES

Intersection	Number of Crashes	Crashes Per Year	Peak Hour TEV	MEV/ Year	Crashes/ MEV	>1 Crashes/ MEV?
US 26 / Patterson Bridge Road	1	0.2	685	2.50	0.08	No
US 26 / 3rd Avenue	0	0	892	3.25	0.00	No
US 26 / Canton Street	0	0	874	3.19	0.00	No
US 26 / Bridge Street	0	0	853	3.11	0.00	No
US 26 / US 395	3	0.6	1081	3.95	0.15	No
US 26 / 3rd Street	0	0	367	1.34	0.00	No
US 395 / 4th Avenue	0	0	717	2.62	0.00	No

FUTURE NO-BUILD TRAFFIC CONDITIONS

This section documents the future baseline traffic conditions analysis under a "no-build" scenario. Specifically, this section identifies how the study area network will operate upon an assumption of future local and regional traffic growth through the year 2030 and no improvements to the transportation network.

Future 2030 Traffic Volumes Forecast Methodology

Year 2030 traffic volume forecasts for intersection turning movements and street segments were developed in order to analyze the effects of traffic growth on the critical study area intersections. For this assessment, two types of traffic growth were considered:

- Future traffic related to local growth in the City of John Day and within its urban growth boundary.

- Future traffic related to regional growth in the larger study area along the two bisecting state highways.

To account for local traffic growth in the City of John Day through the year 2030, a cumulative analysis was utilized. This methodology involves an assessment of traffic increases related to approved (in-process) developments, assumed infill developments. A detailed explanation of the local and regional growth assessment areas is provided in the following sections.

Local Traffic Growth in the City of John Day

Local traffic growth in the City of John Day is anticipated to come from in-process developments and assumed/anticipated infill developments. For the purposes of this study, it is assumed that the City will achieve a reasonable level of future development in each of these areas.

Approved/In-Process Development Traffic Growth

Through consultation with staff from the City of John Day, one major near-term development project has been identified that is approved but not yet built within the existing city limits. This project is the 225 unit Strawberry View Estates residential development on the east side of the city. Although the development plan calls for full buildout over the next 10-15 years, City staff felt that a reasonable buildout level through the year 2030 is more likely to be on the order of 50% of this total.

Using this information, a trip generation estimate was prepared for this development and the expected site-generated traffic was assigned to the study area roadways. Additional details regarding this development project, trip generation estimate, and the resulting30th highest hour peak hour site-generated traffic volumes are provided in *Appendix D*.

Infill Development Traffic Growth

This analysis effort recognizes that the potential exists for some additional development occurring within the study area in the form of infill development. Based on a review of the John Day Comprehensive Plan and detailed conversations with City staff, it was determined that additional residential, commercial, and industrial development is likely to occur within the study area over the next 20 years.

Although the previously outlined Strawberry View Estates development is likely to the largest and most intensive residential growth opportunity within the City of John Day, the City anticipates continued growth in other parts of the city such as infill single family housing north of 3rd Avenue and west of Canton Street and large-acre single family housing in and around the adjacent hillsides. In total, City staff feels that it is reasonable to assume upwards of an additional 82 single family infill housing units over the next 20 years. Based on this assessment, a trip generation estimate was prepared for an assumed buildout of infill housing. Specific details regarding the infill residential development assumptions, trip generation estimates, and the resulting peak hour site-generated traffic volumes are provided in *Appendix D*.

In addition to the anticipated increase in infill housing development, the traffic forecasting effort also investigated the potential for commercial infill development, particularly along the US 26

corridor. To account for commercial infill growth, City staff was consulted regarding past commercial development trends and the likelihood for new growth in this sector. From this assessment, it was assumed that some new commercial shopping is likely given the assumed growth in residential housing units and that it would likely be limited to small to moderate sized retailers such as a Bi-Mart. Based on this assessment, a trip generation estimate was prepared for an assumed buildout of infill housing. Specific details regarding the infill residential development assumptions, trip generation estimates, and the resulting peak hour site-generated traffic volumes are provided in *Appendix D*.

Along with an anticipated increase in housing and commercial development within the existing city limits, this traffic forecasting effort also investigated the potential for industrial infill development. Although difficult to accurately quantify the amount of industrial land that may be developed over the course of the planning horizon, consultation with City staff suggests that the City could experience a 50% buildout of the airport industrial park (Phase 1) over the next 20 years. This equates to approximately 12.5-acres of new industrial park uses. In addition, City staff also anticipates a redevelopment of the old Grant Western Mill site which could include up to 6 acres of new light industrial uses. Specific details regarding the infill industrial development assumptions, trip generation estimates, and the resulting peak hour site-generated traffic volumes are provided in *Appendix D*.

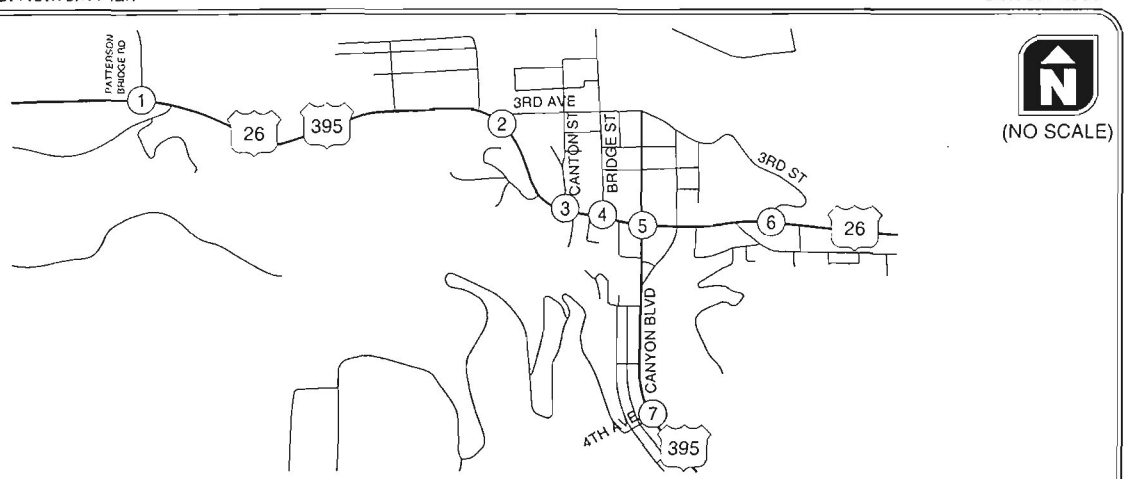
Background Growth in Regional Thru Traffic

As previously mentioned, the second form of traffic growth that will impact the study area intersections and supporting roadway network is related to growth occurring in the larger regional vicinity and from through traffic growth on the two bisecting state highways. Both US 26 and US 395 are important regional connections that carry a great deal of through traffic. Growth in other parts of the county will likely impact traffic levels on these corridors which is independent of the growth experienced by John Day itself.

To determine through traffic growth, ODOT's Future Volume Tables were reviewed. These tables contain current and future year traffic volume estimates. Based on a review of these tables, it was determined that a reasonable annual growth rate of 0.9 percent was an appropriate through traffic growth rate for US 26 and US 395. This number was reviewed and approved for use by TPAU as documented in *Appendix B*.

Future Peak Hour Traffic Volumes

Future year 2030 30th highest hour traffic volumes were determined by adding the estimated new traffic volumes from the known in-process developments, assumed infill developments, and regional growth to existing counts to account for overall traffic growth. The resulting 2030 forecast traffic volumes are shown in Figure 2-4.



LEGEND

CM = CRITICAL MOVEMENT (UNSIGNALIZED)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED)/CRITICAL MOVEMENT LEVEL OF SERVICE (UNSIGNALIZED)
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED)/CRITICAL MOVEMENT CONTROL DELAY (UNSIGNALIZED)
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO

- STOP SIGN
- TRAFFIC SIGNAL

2030 FORECAST TRAFFIC CONDITIONS
30TH HIGHEST HOUR
JOHN DAY, OREGON

FIGURE 2-4

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Intersection Operations Analysis

A traffic operations analysis was performed for the study intersections using the forecast traffic volumes shown in Figure 2-4. Table 2-4 summarizes the resulting traffic operations analysis for each of the study intersections. As shown in the table, by the year 2030, assuming no transportation improvements are made within the study area, the intersection volume-to-capacity ratios are not forecast to exceed ODOT operating standards at any of the studied intersections during weekday p.m. peak hours.

TABLE 2-4 ESTIMATED 2030 30TH HIGHEST HOUR INTERSECTION OPERATIONS

Intersection	Critical Movements	V/C Ratio	Adequate	95th Percentile Queue (feet)	
				HCM Methodology	Two Minute Rule
US 26 / Patterson Bridge Road	US 26 EB TH/LT[1]	0.27	Yes	25	400
	SB Approach[2]	0.31	Yes	50	225
US 26 / 3rd Avenue	US 26 EB LT[1]	0.54	Yes	75	800
	SB Approach[2]	0.47	Yes	75	175
US 26 / Canton Street	US 26 EB LT[3]	0.59	Yes	100	825
	US 26 WB LT[3]	0.53	Yes	75	725
	NB Approach[4]	0.02	Yes	25	25
	SB Approach[4]	0.10	Yes	25	50
US 26 / Bridge Street	US 26 EB TH/LT[3]	0.54	Yes	100	825
	US 26 WB TH/LT[3]	0.52	Yes	75	800
	NB Approach[4]	0.01	Yes	25	25
	SB Approach[4]	0.19	Yes	25	100
US 26 / US 395	---	0.68	Yes	NBTHLT – 300 NBRT – 50 EBTHLT – 225 EBRT - 75 WB – 200 SB - 100	---
US 26 / 3rd Street	US 26EB LT[1]	0.24	Yes	25	450
	US 26 WB LT[1]	0.18	Yes	25	325
	NB Approach[2]	0.01	Yes	25	25
	SB Approach[2]	0.02	Yes	25	25
US 395 / 4th Avenue	US 395 NB LT[1]	0.40	Yes	50	600
	EB Approach[2]	0.34	Yes	50	125

[1] The performance standard for this movement is a v/c ratio of 0.80 or better.
[2] The performance standard for this movement is a v/c ratio of 0.90 or better.
[3] The performance standard for this movement is a v/c ratio of 0.85 or better.
[4] The performance standard for this movement is a v/c ratio of 0.95 or better.

Section 3
Opportunities and
Constraints Report

Opportunities and Constraints

This section documents the preliminary set of opportunities and constraints developed for the establishment of a local street and bicycle/pedestrian network plan. The information contained in this section will be refined and utilized to support a recommended list of local street and bicycle/pedestrian projects.

OPPORTUNITIES AND CONSTRAINTS SUMMARY MAPS

To document the local street and bicycle/pedestrian conditions, Figures 2-1 through 2-4 provide a graphical summary of various opportunities and constraints within the John Day study area. The corresponding Table 2-1 provides a detailed description of the specific callouts illustrated in the figures. The following sections then expand upon and discuss the key infrastructure opportunities and constraints relevant to local street connectivity and bicycle/pedestrian issues within the community.

As shown in Figures 2-1 through 2-4 and subsequently described in Table 2-1, there are a number of opportunities to address local street connectivity and bicycle/pedestrian accessibility constraints within the John Day study area. The following sections address key elements of these opportunities and provide additional supporting documentation related to bike/ped design treatments and safety issues.

LOCAL STREET CONSTRAINTS AND OPPORTUNITIES

The City of John Day is naturally constrained by the narrow valley in which it resides. While the early downtown street network developed in a grid like pattern, the outward expansion of the City over time led to a series of streets and roadways that were laid out according to the natural topographic constraints of the surrounding hillsides. As such, many of the newer residential developments have limited connectivity to the City as a whole. Specific examples include the residential neighborhoods along Charolais Heights and Valley View Drive. To address this condition, the following section outlines a number of logical street extensions that could ensure that future development/redevelopment opportunities have improved connectivity to the existing John Day transportation network.

CITY OF JOHN DAY

N
W E
S

City Hall
School
Library
Post Office
Hospital
Fire Station
Kam Wah Chung Historical Park
Airport
Bicycle / Pedestrian Opportunity
Roadway / Connectivity Opporunity
Suggested Road Connection
Suggested Pedestrian Connection

Roads
Arterial
Collector
Proposed Collector
Local
Proposed Local
Alley
Trails
Sidewalk
Bike Lane (Both Sides)
Municipal Boundary
Commercial / Shopping
Parks
John Day Urban Growth Boundary

Feet
0 300 600 1,200 1,800

John Day River
RIVER
LOWER YARD
CARPENTER POND
WILDERNESS
APPLE
HIGHWAY 26
39
38
CREECH ALLEY
GOLF CLUB
VISTA
40
GIBSON
LUCE CREEK
LA COSTA
TRAFTON
SUNSET
EASTSIDE
PATTERSON BRIDGE
DAVIS CREEK
VALLEY VIEW
CHAROLAIS
BOULDER
9TH
BRIDGE
7th Street Complex
7TH
5TH
4TH
3RD
2ND
1ST
Grant County Fair Grounds
CANYON
FORD
OGILVIE
MAIN
HILLCREST
FRANCE
HIGHLAND
FERGUSON
BRENT
STRODE
41
AVIATION
WEST INDUSTRIAL
AIRPORT INDUSTRIAL PARK
BUMPY
WEST BENCH
VICTORIAN
RIDGE
CHIMNEY GULCH
ROCK PIT
RNR RIDGE
BLUE GULCH
Canyon Creek
CANYON CREEK
MINERS
RIMBOLT
ELK VIEW DRIVE
QUAIL

Opportunities and Constraints Overview
John Day, Oregon

FIGURE 3-1

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CITY OF JOHN DAY

N
W E
S

0 100 200 400 600 Feet

City Hall
School
Library
Post Office
Hospital
Fire Station
Kam Wah Chung Historical Park
Airport
Bicycle / Pedestrian Opportunity
Roadway / Connectivity Opportunity
Suggested Road Connection
Suggested Pedestrian Connection

Roads
Arterial
Collector
Proposed Collector
Local
Proposed Local
Alley
Bike Lane (Both Sides)
Trails
Sidewalk
Municipal Boundary
Commercial / Shopping
Parks
John Day Urban Growth Boundary

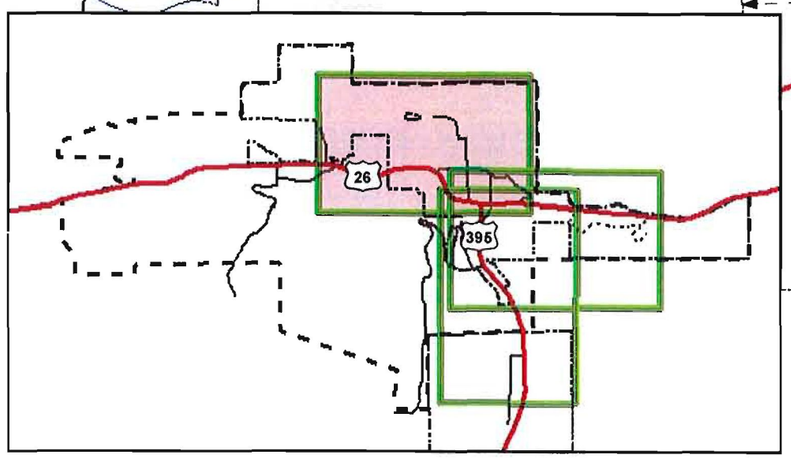
7th Street Complex

Grant County Fair Grounds

John Day River

Canyon Creek

DAVIS CREEK
CHAROLAIS
VALLEY VIEW
PATTERSON BRIDGE
BOULDER
9TH
BRIDGE
7TH
5TH
4TH
LYONS
CANTON
3RD
2ND
1ST
BOYCE
LAUREL
ELM
TROWBRIDGE
MAIN
BAILEY
GOVERNMENT
BREMNER PASS
FORD
OGILVIE
N.C. HWY



Opportunities and Constraints North Sub-Area Map
John Day, Oregon

FIGURE 3-2

profile/9256.0/gis/BaseMap.mxd

CITY OF JOHN DAY

N
W E
S

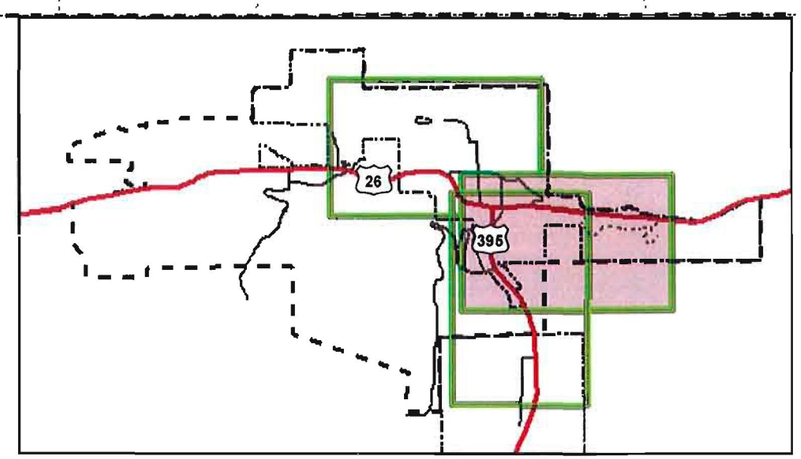
0 100 200 400 600 Feet

City Hall
School
Library
Post Office
Hospital
Fire Station
Kam Wah Chung Historical Park
Airport
Bicycle / Pedestrian Opportunity
Roadway / Connectivity Opportunity

Roads
Arterial
Collector
Proposed Collector
Local
Proposed Local
Alley
Trails
Sidewalk
Bike Lane (Both Sides)
Municipal Boundary
Commercial / Shopping
Parks
John Day Urban Growth Boundary
Suggested Road Connection

John Day River
MAIN
HIGHWAY 26
HILLCREST
2ND
1ST
3RD
4TH
5TH
6TH
BOYCE
TROWBRIDGE
ELM
CANTON
BAILEY
ROCKY
GUNTHER
HIGHLAND
FERGUSON
FRANKE
LAMFORD
BRENT
CANYON
SKYLINE

20
21
22
23
24
25
26
27



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Opportunities and Constraints Central Sub-Area Map
John Day, Oregon

FIGURE 3-3

CITY OF JOHN DAY

Grant County Fair Grounds

John Day

ICA

2ND

HUNT

GUNTHER

GUNTHER

HILLCREST

HIGHLAND

FERGUSON

ELM

ELM

TROWBRIDGE

DAYTON

2ND

1ST

34

BOYCE

BRIDGE

2ND

1ST

3RD

CANTON

CANTON

ING HAY

Canyon Creek

GOVERNMENT

BREMNER PASS

OGILVIE

FORD

MAIN

1ST

1ST

CANYON

32

30

2ND

3RD

BRENT

BRENT

LAMFORD

28

35

BAILEY

33

CANTON

29

SKYLINE

AVERTON

4TH

5TH

31

6TH

5TH

BLUE GULCH

Grant Union High School

36

CANYON CITY

37

S ISLAND

HUMBOLT

HIGHLAND

Humboldt Elementary School

N

E

W

S

0 100200 400 600 Feet

26

395

26

395

Roads

- Arterial
- Collector
- Proposed Collector
- Local
- Proposed Local
- Alley
- Trails
- Sidewalk
- Bike Lane (Both Sides)
- Municipal Boundary
- Commercial / Shopping
- Parks
- John Day Urban Growth Boundary

- City Hall
- School
- Library
- Post Office
- Hospital
- Fire Station
- Kam Wah Chung Historical Park
- Airport
- Bicycle / Pedestrian Opportunity
- Roadway / Connectivity Opportunity
- Suggested Road Connection
- Suggested Pedestrian Connection

Opportunities and Constraints South Sub-Area Map
John Day, Oregon

FIGURE 3-4

projfile/9256.0/gis/BaseMap.mxd

TABLE 3-1 OPPORTUNITIES / CONSTRAINTS DESCRIPTION TABLE

Figure ID #	Issue	Detailed Description
(4-2) **#1**	Desirable Sidewalk Location	The 7th Street Recreational Complex is not currently linked to any city bicycle or pedestrian facilities. Along with safety concerns, this encourages reliance on motorized transportation modes to access this facility. A sidewalk network along the 7th Street corridor would be a high value connection for the community.
(4-2) **#2**	Potential Pedestrian/Bicycle Right of Way	The Parks Department owns this plot of land, and could potentially offer a public throughfare for pedestrians and cyclists between Bridge Street and the 7th Street Recreational Complex.
(4-2) **#3**	Potential Pedestrian/Bicycle Right of Way	An existing storm drainage easement could possibly be used to provide pedestrian and bicyclist access to a potential John Day River trail (see project #5) from the 7th Street Recreational Complex.
(4-2) **#4**	Desirable Sidewalk Location	Both 5th Street and 4th Street lack sidewalk connections between Canton Street and Bridge Street, forcing pedestrians to walk in the street. A sidewalk network along these streets would provide fill in the sidewalk gaps.
(4-2) **#5**	Potential Pedestrian/Bicycle Right of Way	A recreational trail for bicycles and pedestrians along the north side of the John Day River would provide an alternative cross-town connection for pedestrians and cyclists.
(4-2) **#6**	Desirable Sidewalk Location	The south side of Main Street between Ford Road and Lyons Street does not currently have a sidewalk. This would be a high-value connection to improve usage of the current sidewalk network and provide continuous sidewalk facilities.
(4-2) **#7**	Potential Pedestrian/Bicycle Right of Way	The abandoned road can be made into a formalized non-motorized route to provide access to the USDA Forest Service office and the hospital.
(4-2) **#8**	Potential Pedestrian/Bicycle Right of Way	A recreational trail along the east side of Canyon Creek from Main Street to the John Day River would provide an attractive pedestrian route to Kam Wah Chung that would appeal to residents and tourists.
(4-2) **#9**	Potential Pedestrian/Bicycle Right of Way	A parcel could be purchased to provide a direct bicycle/pedestrian connection to the 7th Street complex.
(4-2) **#10**	Potential Road and Pedestrian/Bicycle Right of Way	Emergency access to Valley View Road is currently available through a private right-of-way connected to Patterson Bridge Road. This connection would be valuable to motorists, bicyclists, and pedestrians if open to the public.
(4-2) **#11**	Desirable Sidewalk Location	Ford Road is subject to periods of congestion during peak hours due to the large number of employees at the hospital and USDA Forest Services office. Sidewalks could encourage close-in employees to walk or bike to work, thinning traffic volumes.
(4-2) **#12**	Desirable Sidewalk Location	The progressive pedestrian improvements to Bridge Street could be extended beyond 7th Street to encourage more pedestrian activity from John Day's northern residents.
(4-2) **#13**	Desirable Road Connection	Charolais Drive is poised to be extended to loop around the 7th Street Recreational Complex, connecting it with 7th Street. This would open up new area for development and provide alternative access to Charolais Heights.
(4-2) **#14**	Desirable Road Connection	Valley View Drive could be connected with Patterson Bridge Road to provide alternate access and reduced emergency services response times to the northern residential areas.
(4-2) **#15**	Network Improvements Possible	Potential redevelopment of properties located west of Canyon Creek could provide an opportunity to expand the existing city grid network consisting of 4th Avenue, 5th Avenue, and 6th Avenue.

Figure ID #	Issue	Detailed Description
(4-2) **#16**	Desirable Road Connection	A large undeveloped property located just south of the John Day River could provide an opportunity to expand the existing street grid network. This could include a northerly extension of Canton Street and a new east-west 6th Avenue corridor. As described in project #17, the 6th Avenue corridor could be extended across Canyon Creek.
(4-2) **#17**	Desirable Road Connection	Canyon Creek is a barrier between downtown John Day and existing land uses to the west. A crossing at a future 6th Avenue would provide better street connectivity and reduce east-west reliance on Main Street.
(4-2) **#18**	Desirable Road Connection	A new north-south roadway south of 7th Street could lead to a new crossing of John Day River connecting to 3rd Avenue. This would reduce traffic on Bridge Street and would make it easier to access the 7th Street Recreational Complex for residents located in the east part of the City.
(4-2) **#19**	Desirable Road Connection	Canyon Creek is a barrier between downtown John Day and existing land uses to the west. A crossing at 4th Avenue would provide better street connectivity and reduce east-west reliance on Main Street.
(4-3) **#20**	Existing Facilities Not Ideal	The sidewalk on Hillcrest Road improves pedestrian access to this neighborhood, but lack of parking enforcement and width prevent optimal pedestrian use. This sidewalk should be extended to connect with the potential future Strawberry View Estates connection.
(4-3) **#21**	Desirable Bike Lane Location	US 26 is not equipped with bike lanes. Cyclists must compete with automotive traffic when using this facility. The development of wide shoulders could improve bicycle accessibility for the eastern portions of the study area and beyond.
(4-3) **#22**	Potential Pedestrian/Bicycle Right of Way	An existing natural surface trail provides recreational opportunities. More formal adoption of this facility as part of a larger John Day River trail system would offer John Day residents an improved walking environment.
(4-3) **#23**	Desirable Sidewalk Location	3rd Avenue is not equipped with facilities for pedestrians or cyclists. There is opportunity here for connectivity between the Fairgrounds and US 26.
(4-3) **#24**	Potential Pedestrian/Bicycle Right of Way	An extensive pedestrian network is identified for future residential subdivisions in the eastern part of the City. Existing facilities should be considered for Hillcrest Road and US 26 to ensure connectivity.
(4-3) **#25**	Desirable Road Connection	Establish an east-west roadway off of Ferguson Road to connect to future residential development. This would establish a secondary parallel circulation alternative to Hillcrest Road and US 26.
(4-3) **#26**	Desirable Road Connection	A large undeveloped property located just south of 3rd Avenue could provide an opportunity to expand the existing street grid network. This could include an easterly extension of 1st Street and Trowbridge.
(4-3) **#27**	Desirable Road Connection	The proposed Strawberry Lane is planned to be extended to the east as part of potential new development. This opens up the opportunity to continue connected development to the east of the Strawberry View project and reduced reliance upon US 26 for east-west travel.
(4-4) **#28**	Potential Pedestrian/Bicycle Right of Way	Pedestrians and cyclists could be separated from Canyon Boulevard by creating a trail along Canyon Creek. This connection would provide additional connectivity between John Day, the two schools, and Canyon City.
(4-4) **#29**	Topography Constraint	Pedestrian and cyclist connectivity to the airport and industrial park are inhibited by steep terrain and greatly increased distance due to the need for switchbacks. Sidewalks would likely be cost prohibitive when measured against their likely use.

Figure ID #	Issue	Detailed Description
(4-4) **#30**	Potential Pedestrian/Bicycle Right of Way	An existing alleyway between Canyon Boulevard and Brent Street running from 2nd Avenue to 5th Avenue could be an alternative parallel route to Canyon Boulevard for cyclists and pedestrians.
(4-4) **#31**	Desirable Sidewalk Location	The sidewalk along Canyon Boulevard does not continue south of 6th Street, leaving Grant Union High School and Humbolt Elementary cut off from John Day. A sidewalk or separated walking trail would be a high value connection from 6th Street to Inland Drive.
(4-4) **#32**	Existing Facilities Constraint	Bicycle lanes and wide shoulders on Canyon Boulevard encourage bicycle use, but close proximity to busy and fast traffic make it uncomfortable for children and less-experienced riders.
(4-4) **#33**	Desirable Sidewalk Location	Downtown streets south of Main Street are lacking in sidewalk connectivity, reducing pedestrian access. New sidewalk facilities would provide better pedestrian continuity for downtown businesses.
(4-4) **#34**	Desirable Sidewalk Location	There is little east-west sidewalk continuity for pedestrians in the northern part of downtown. New sidewalk facilities would enhance the downtown walking environment.
(4-4) **#35**	Desirable Road Connection	Bridge Street can be extended across Main Street as outlined in the Downtown Plan. This connection would provide better downtown circulation.
(4-4) **#36**	Desirable Road Connection	Blue Gulch Road could be extended to provide additional access to the airport and the industrial park. This connection could also provide access to additional developable land.
(4-4) **#37**	Desirable Pedestrian Improvement	The existing Inland Road bridge over Canyon Creek is narrow and does not have sidewalks. A wider bridge with sidewalk facilities would improve accessibility and safety of students walking to Humbolt Elementary.
(4-1) **#38**	Desirable Sidewalk Location	As John Day's city limits are increased over time, an expansion of the sidewalk system along US 26 will work towards the provision of a continuous east-west sidewalk network.
(4-1) **#39**	Desirable Bike Facility Location	US 26 is not served by any bicycle facilities. Cyclists wishing to connect with adjacent towns are forced to ride with automobile traffic. The development of wide shoulders could improve bicycle accessibility for the western portions of the study area and beyond.
(4-1) **#40**	Desirable Sidewalk Location	As development moves westward, pedestrian connections between La Costa Road and Vista Drive could connect this area to the golf club and provide a pedestrian shortcut to US 26.
(4-1) **#41**	Desirable Road Connection	The industrial park and airport should be connected directly with West Bench Road to add more direct access from western John Day. This connection would also open up more developable land in areas where the topography allows it.

Logical Street Extensions

As outlined in the previous figures, the following potential street extensions that could be developed within the John Day study area to improve connectivity.

- Providing a direct connection from West Bench Road to the new Industrial Park. This connection would better serve the Industrial Park by providing an alternative to 4th Street. To accomplish this connection, right-of-way would need to be purchased and an alignment chosen that is sensitive to existing land uses, the existing urban growth boundary, and challenging topographic constraints.
- Connecting Valley View Road to Patterson Bridge Road. This connection would provide a secondary access to the Iron Wood subdivision, thereby improving circulation, reducing emergency response times, and reducing traffic along the Bridge Street corridor. This connection could be conditioned as part of future residential development occurring west of the Iron Wood subdivision. Topographic constraints will have an impact on the specific alignment of such a connection.
- Connecting Charolais Heights Drive to 7th Street. This connection would establish a loop around the 7th Street complex, providing an alternate travel route to the homes along Charolais Heights. This connection could be conditioned as part of future residential development along the east end of Charolais Heights. A new north-south corridor would be needed east of the 7th Street Complex to provide a connection to 7th Street.
- Extending the 4th, 5th, and/or 6th Street grid network across Canyon Creek. This extension of the grid network could be accomplished upon the potential redevelopment of properties located west of Canyon Creek. New bridges would need to be constructed across Canyon Creek, but the extended grid network would provide local street alternatives to Main Street.
- Extending the 1st Street and Trowbridge grid network east of Elm Street. This extension of the grid network could be accomplished upon the potential development of vacant properties and provide a new connection to 3rd Avenue.
- Connecting Hillcrest Drive to future residential development to the east. This connection will likely be established with the later phases of the future Strawberry View Estates residential development.

BICYCLE/PEDESTRIAN CONSTRAINTS AND OPPORTUNITIES

There is currently a lack of pedestrian-specific and bicycle specific facilities connecting the major origins and destinations within the John Day study area. With the exception of the downtown area, it is difficult for people to mobilize on sidewalks or separated pedestrian pathways; they instead must share the public right-of-way with motor vehicles and other users, which puts them at greater risk of conflict.

The newer residential developments to the far north and east lack adequate sidewalks, thus isolating the residents from the downtown area and from each other. The 7th Street Complex cannot be directly accessed via sidewalks, pathways, or trails. The high school and elementary

school along Canyon Boulevard are not connected to the rest of the city with sidewalks, although the sidewalk does extend south to 6th Street on the west side of this roadway. While bicycle lanes exist along Canyon Boulevard, it has been noted that high school and elementary school kids are uncomfortable using such a facility given the adjacent high-speed and high-volume highway. Other important public destinations such as the Kam Wah Chung State Historic Site and the public pool are similarly isolated.

Pedestrian and Bicycle Safety Considerations

Safety is one of the greatest concerns of bicyclists and pedestrians. Separation and visibility are therefore key to providing useful non-motorized facilities and a friendly bike/ped environment.

Raised sidewalks with curbs provide a basic measure of separation for pedestrians from motor vehicle traffic. When sidewalks are substandard or non-existent they can place users in uncomfortable or dangerous situations. According to the Oregon Bicycle and Pedestrian Plan, sidewalks should measure at least six feet wide, enabling users, including those in wheelchairs, to pass each other or walk side-by-side comfortably. In areas with higher volumes of users and/or obstacles (e.g., trash cans, benches) the width of the sidewalk should be increased. Having a planter strip between the curb and the sidewalk further distances pedestrians from moving vehicles and increases the safety and enjoyment of the user.

Intersections provide a reliable and visible location for pedestrians to cross streets. Intersections at high volume streets along routes connecting identified destinations and origins (e.g., neighborhoods to commercial centers) should receive treatments, such as signage, signals, striping, and/or curb extensions, to alert drivers to the likely presence of pedestrians. Traffic control devices for pedestrian movements create safer situations by forcing vehicle cross-traffic to stop or yield at an identified crosswalk. User-actuated devices allow more efficient flow of motor vehicle traffic when pedestrians are not present.

Signage helps alert and inform all users to regulations (e.g., speed limits), facilities (e.g., bike lanes or crosswalks), and unique situations (e.g., hazardous road conditions). Signage alerting drivers to the presence of bicyclists on the roadways or school zones, for example, creates more awareness for vehicle operators of non-motorized users in and next to the roadway system.

Striping for bike lanes create a visual separation between the vehicle and the bicycle travel lanes. While there is no barrier represented by the striping, it informs the driver of the space provided for their vehicle and encourages them to reserve the shoulder for non-motorized traffic. Bicycle lane widths should be six feet to allow adequate room to safely operate a bicycle next to higher-speed traffic. Narrower bike lanes either force bicyclists to ride too close to the curb or too close to moving vehicles. While more experienced cyclists may be comfortable with narrower lanes, children and other less skilled riders will be discouraged from using the facilities.

Higher vehicle speed limits on roadways are discouraging to both bicycle and pedestrian use, as non-motorized users feel more threatened by fast-moving cars and trucks. The potential problems caused by high-speed traffic can be compounded by limited sight distance, as motorists maneuvering around horizontal curves or over vertical curves have little time to react when

encountering foot and bicycle traffic on the roadway. Limited sightlines can also result from unpruned roadside vegetation, where tree limbs and other greenery obscure signs, signals, or people.

The maintenance of a facility, be it a sidewalk, bike lane, or path, has a direct impact on use levels. Sidewalks that are cracked and uneven pose barriers to people with limited mobility, such as the elderly, and bike lanes and bikeway shoulders that contain roadway garbage and gravel can be hazardous to users. It is therefore imperative that a maintenance schedule be maintained for non-motorized facilities as it is done for streets and that substandard facilities be upgraded.

The Americans with Disabilities Act (ADA) requires that certain public facilities such as sidewalks meet design criteria intended to facilitate accessibility for a wide range of users, included those with impaired mobility. Minimum grades, outslopes, and surfacing stability, among other standards, help to ensure that pedestrian facilities meet the needs of the greatest number of users within the community. Based upon the topography present at the north and south end of John Day it should be anticipated that not all facilities will accessible to all users, as allowed by the ADA standards, as it will extremely difficult to meet preferred running grades in hilly terrain.

Preliminary Bicycle/Pedestrian Route Locations

While connectivity is important for vehicular travel, it is also an important element for non-vehicular modes of transportation such as bicycling and walking. There are multiple potential opportunities to increase bicycle and pedestrian use throughout John Day. Potential routes that are important to the establishment of such a network but lack facilities or require improvements include the following:

Route(s): 5th Street and 4th Street between Canton Street and Bridge Street.

- Issue(s): Lack of complete sidewalk system.
- Need(s): The neighborhood in this area is a pedestrian generator for the adjacent downtown area, other neighborhoods, the nearby 7th Street Complex, and points beyond. The route should have sidewalks along both sides of the street.
- Physical Constraint(s): It is assumed that the street ROW is sufficient to implement local street improvements, including new sidewalks, along both streets.

Route(s): East and west along US 26.

- Issue(s): Lack of complete sidewalk system.
- Need(s): US 26 contains critical commercial destinations and employment centers. While the sidewalk system exists in some locations close to the core area of the City, there is a lack of sidewalks extending out to the eastern and western City Limits. As these areas develop there will be an increased need for sidewalks.
- Physical Constraint(s): It is assumed that the highway ROW is sufficient to implement sidewalk improvements along US 26.

Route(s): Bridge Street north of 7th Street

- Issue(s): Lack of complete sidewalk system.
- Need(s): Bridge Street is the primary connector between the neighborhoods north of 7th Street and all relevant destinations (e.g., the downtown area, commercial development along US 26, other neighborhoods, the 7th Street Complex, and points beyond including the grade school and high school). The lack of a complete sidewalk system to connect to the sidewalks on Bridge Street south of 7th Street prohibits residents from taking full advantage of mobility options.
- Physical Constraint(s): Development of Bridge Street to Collector standards, including the provision of sidewalks on both sides of the street, is limited by insufficient ROW. In some cases, physical improvements on private property have been made up to or inside of the area that would be needed for ROW.

Route(s): 3rd Avenue between the Fairgrounds and US 26

- Issue(s): Lack of sidewalk and/or bikeway system.
- Need(s): 3rd Avenue is an important connector from the neighborhoods southeast of downtown to open space and recreation trails along the John Day River, the Grant County Fairgrounds, and to Bridge Street with its access to the 7th Street Complex. Having sidewalks and bike lanes would facilitate these movements. The future development of Strawberry Heights will further increase the demand for these facilities.
- Physical Constraint(s): The 3rd Street ramp that connects US 26 to the at-grade portion of 3rd Street may not have sufficient space to locate sidewalks and bike lanes on both sides of the roadway.

Route(s): East to west along the John Day River

- Issue(s): Lack of non-motorized linear connection through John Day and out to adjacent communities.
- Need(s): Multi-use, non-motorized pathways are ideal for meeting the transportation and recreation needs of bicyclists and pedestrians. Having an improved-surface path along the John Day River would facilitate movement through many key destinations and trip generators, including neighborhoods, the 7th Street Complex, and the Grant County Fairgrounds. A pathway would also hold the potential to connect to adjacent communities upstream and downstream from John Day.
- Physical Constraint(s): Within the Urban Growth Boundary there exists several parcels adjacent to the John Day River that are privately owned; either property or easements would need to be obtained. In addition, it is likely that several additional river crossings would need to be implemented to allow residents on both sides of the river to utilize the trail. Finally, floodplain location and environmental impact would need to be assessed to determine the proper placement of the pathway.

Route(s): An existing storm drainage easement between the northern bank of the John Day River and the 7th Street Recreational Complex

- Issue(s): Lack of sidewalk and/or bikeway system.
- Need(s): Pedestrians and bicyclists do not have dedicated facilities to access the 7th Street Recreational Complex directly from Bridge Street or the surrounding neighborhoods. If access can be gained along the John Day River via a shared use trail, then a non-motorized connection can be provided from this pathway to 7th Street on the south side of the Complex.
- Physical Constraint(s): The connection will have to be dev to provide an all-weather surface. Restricting access to adjacent private properties will also need to be considered.

Route(s): Valley View Road to Patterson Bridge Road

- Issue(s): Lack of sidewalk and/or bikeway system north of the John Day River.
- Need(s): Emergency access to Valley View Road is currently available through a private ROW connected to Patterson Bridge Road. This connection would be valuable to bicyclists and pedestrians if open to the public as there is limited connectivity and no non-motorized routes in this area.
- Physical Constraint(s): No access legally exists at this time for bicycle/pedestrian facilities; the surface would have to be improved and it is unlikely that the route would be fully accessible due to steep grades.

Route(s): Alleyway between Canyon Boulevard and Brent Street running from 2nd Avenue to 5th Avenue.

- Issue(s): Lack of safer routes to schools.
- Need(s): There is a lack of bicycle and pedestrian routes to the grade school and high school from neighborhoods due north and to the downtown area. Even with the occasional sidewalks and complete bike lanes along Canyon Boulevard there are safety concerns related to vehicle volumes and speeds. This route does not contain sidewalks, but it likely sees extremely low traffic volumes and low speeds and could meet the need for a low speed/low volume pedestrian accessway.
- Physical Constraint(s): There is insufficient ROW and other physical barriers (e.g., driveways, buildings) to develop sidewalks, although this is likely not desired. Sight distances entering and exiting the driveways may also be limited by improvements.

Route(s): US 26.

- Issue(s): No bikeway system.
- Need(s): As the main east-west route through town, US 26 contains both generators and destinations for bicycle traffic; the roadway should therefore have bike lanes through the urban area to reduce conflicts between users.

- Physical Constraint(s): ROW along the roadway may be constrained in some areas, although there may exist the potential to restripe the travel lanes to gain the necessary bike lane width. The improvements will need to be coordinated with desired sidewalk improvements, as well, to ensure that the street design standards for the roadway can be met in all instances.

Route(s): Shoulder bikeways on US 26 outside the urban area.

- Issue(s): No bikeway system.
- Need(s): The provision of shoulder bikeways on Highway 26 outside the urban area would facilitate bicycle transportation to adjacent towns and encourage recreational riding.
- Physical Constraint(s): ROW likely exists but shoulder improvements and signage/striping would need to occur. Narrow bridges may also need signage treatment to alert cyclists and drivers to potential conflicts.

Route(s): Canyon Creek south from confluence with the John Day River.

- Issue(s): Lack of sidewalk and/or bikeway system through southern portion of John Day in vicinity of Canyon Creek.
- Need(s): Non-motorized pedestrian/bicycle routes are desirable facilities because many users feel safer when away from vehicle traffic. For children, who do not drive and are therefore less familiar with motor vehicles, non-motorized facilities remove them from sidewalks and bikeways that contain vehicle interaction. Considering the lack of complete bicycle and pedestrian improvements from the downtown area to the grade school and high school, a pathway along Canyon Creek would be a considerable asset.

- Physical Constraint(s): Steep banks, variable terrain, and private property preclude facile implementation of a pathway. The stream banks appear to have seen recent erosion, indicating that Canyon Creek will continue to change its course; sideslopes in the area are frequently steep and will require engineered solutions. These factors combine to push the ideal location of a pathway further away from the stream banks, and often the desirable terrain is on private property or will at least interfere with improvements (e.g., decks, staircases, sheds) made by adjacent property owners. There are also several bridges that may need to be improved to secure the appropriate alignment.

Route(s): 7th Street east of Bridge Street

- Issue(s): Lack of sidewalk and/or bikeway system connecting Bridge Street to the 7th Street Complex.
- Need(s): The 7th Street Complex is one of the primary destinations within John Day, especially for children. As such, it should have specific bicycle and pedestrian facilities. Some trails exist along all but the southern side, but these lack formalized connections to the surface street system. Connections mentioned earlier should be made, including a sidewalk and bike lanes along 7th Street from Bridge Street.

- Physical Constraint(s): Sufficient ROW appears to exist along 7th Street to make the improvements. City easements and property for accessway development will have to be improved to provide an all-weather surface. Restricting access to adjacent private properties will also need to be considered.

With the identification of preliminary bicycle/pedestrian route locations, opportunities for developing appropriate design treatments are outlined in the following section.

Pedestrian and Bicycle Facility Design Treatments

Several types of "bikeways" exist, as defined by Federal and State bicycle planning and design guides and manuals. Bikeways generally are distinguished as preferential roadways accommodating bicycle travel, with accommodation taking the form of bicycle route designation, bike lane striping, or shared use paths to physically separate cyclists from motorists.

Shared Roadways

John Day currently lacks an extensive formalized bikeway system, with only one street (Canyon Boulevard) having bike lanes. In all other instances, bicyclists share the streets with motorists. Most streets in John Day are local streets and can be classified as "shared roadways," as they have lower posted speeds (25 MPH or less) and lower traffic volumes (3,000 Average Daily Trips or less). As the most common type of bikeway, shared roadways accommodate vehicles and bicycles in the same travel lane. With its system of low volume/low speed local streets, John Day has the capability to take advantage of this opportunity to establish comfortable riding routes.

Bike Lanes

Although bicyclists and motorists can sufficiently share travel lanes on most streets in John Day, higher vehicle volumes and speeds on some roadways indicate a potential need for enhanced bicyclist accommodations (e.g., separation from motorists). Bike lanes are recommended for streets with motor vehicle average daily trip (ADT) counts over 3,000. Main Street and Canyon Boulevard would meet this criteria (Canyon Boulevard currently has bike lanes). These streets are often constrained by narrow rights-of-way, however, which will deter the ability of the City to easily implement them in all instances.

Shoulder Bikeways

Outside the core urban area, the use of shoulder bikeways on low-volume roadways may be an appropriate bikeway treatment. Shoulder bikeways provide a paved, clear shoulder for bicyclists to travel, allowing them some separation from cars and trucks, and are further indicated through signage to alert drivers to the presence of bicyclists. This type of facility works well with the rural nature of the John Day area, where low-density land use and lower motor vehicle/bicycle traffic volumes do not necessitate separate bike lanes.

Bicycle Racks

There exists the opportunity to provide bicycle racks in various locations throughout the City. In a few locations where bicycle racks are currently provided such as at the public pool, the bike rack

units are substandard. Secure bicycle racks could be provided at destinations as the 7th Street Complex, Grant County Fairgrounds, Kam Wah Chung State Historical Site, various locations in downtown, schools, and at major employers (e.g., hospital, USDA Forest Service offices). Installing secure bicycle racks is relatively inexpensive and having them reduces barriers to bicycle use. Bicycle racks such as the ones depicted here are the preferred form of bicycle parking.

Pathways

No pathways, also known as "shared use paths", exist within the jurisdiction. Several natural surface trails do exist, however, serving both transportation and recreation needs and separating bicyclists and pedestrians from motor vehicle traffic. The trails around the 7th Street Complex provide opportunities for running and walking, and could be extended to Bridge Street via a City-owned parcel, thus promoting access to the neighborhoods to the north and west.

The community-built trails along the John Day River east of the Fairgrounds could be extended in both directions to provide more mileage to make the system more appealing to recreationists, particularly walkers. Unfortunately, a costly bridge and private property on the north side of the river prohibit easy connectivity to the trail system at the 7th Street Complex.

Significant opportunities exist along both the John Day River and Canyon Creek to provide pedestrian/bicycle pathways or trails. This system could form a significant "backbone" for pathways/trails to connect residents within John Day and also to neighboring communities, particularly Canyon City to the south. A particularly exciting facet of this concept would be a pathway connection along Canyon Creek from the center of John Day to the high school and elementary school located along the creek. While there are significant barriers to this concept, including variable stream bank stability and private property, having such a facility would allow children to mobilize to school on a dedicated bicycle/pedestrian facility.

Section 4
Local Street Network
Plan

Local Street Network Plan

The John Day Local Street Network Plan presents the identified local street and bicycle/pedestrian projects. The projects presented in this plan were developed to address the requirements of Oregon's Transportation Planning Rule. These projects have been developed in accordance with the findings presented in the transportation and land inventory analysis, the opportunities and constraints analysis, and the interests of the citizens, business owners, and governmental agencies.

PLANNING GOALS

Established at the outset of the planning process, the planning goals provide guidance and direction for the development of the local street and bicycle/pedestrian projects over the next twenty years. The following four goals were developed to guide the planning process.

Goal 1: Improve and enhance safety and traffic circulation on the local street systems

Goal 2: Identify roadway system, bicycle, and pedestrian needs to accommodate developing or undeveloped areas without undermining the rural nature of the community.

Goal 3: Increase the use of alternative modes of transportation (walking, bicycling, and transit) through improved access, safety, and service.

Goal 4: Identify additional walking and bicycle facilities that provide connections to/from the City of Canyon City.

IDENTIFIED LOCAL STREET AND BICYCLE/PEDESTRIAN PROJECTS

The John Day Local Street Network Plan reflects anticipated circulation needs through the year 2030. Based on the results of the opportunities and constraints analysis, a total of 41 different local street and bicycle pedestrian projects have been identified for the City of John Day. These projects are graphically illustrated in Figures 4-1 through 4-4. Table 4-1 provides a detailed description of each project.

TABLE 4-1 LOCAL STREET NETWORK PLAN PROJECTS

Project ID #	Project Type	Detailed Justification and Project Description
1	New Path	The 7th Street Recreational Complex is not currently linked to any city bicycle or pedestrian facilities. Along with safety concerns, this encourages reliance on motorized transportation modes to access this facility. A 10'-wide paved multi-use path along the north side of 7th Street would be the most effective method to allow people, particularly children, to access the site. While pathways along roadways are not typically recommended, this situation is sufficiently controlled and would best meet the needs of bicyclists and pedestrians without requiring a costly restructuring of the street cross-section to accommodate sidewalks and bike lanes on both sides of the ROW.
2	New Path	The Parks Department owns this plot of land, and could potentially install a 10'-wide paved multi-use path for pedestrians and cyclists between Bridge Street and the 7th Street Recreational Complex.
3	New Path	The eastern portion of the 10'-wide paved multi-use John Day River path can provide connection from the 7th Street Recreational Complex, across the John Day River, through the Grant County Fairgrounds, and east to project #22. A City-owned property for underground storm drainage utilities would provide access from 7th Street to the John Day River. In addition, the path could be extended west from the river crossing through the Grant County Fairgrounds to connect to Bridge Street.
4	New Sidewalks	Both 4th Street and 5th Street lack sidewalk connections between Canton Street and Bridge Street, forcing pedestrians to walk in the street. Install 6'-wide sidewalks where gaps exist on both sides of east end of 4th Street and along both sides of the entire length of 5th Street to better provide safe and efficient pedestrian access.
5	New Path	The western portion of the 10'-wide paved multi-use John Day River path can provide connection from the Bridge Street/7th Street intersection west along the north side of the river to Patterson Bridge Road. The path is connected to the eastern portion by facilities along the north side of 7th Street.
6	New Sidewalk	The south side of Main Street between Ford Road and Lyons Street does not currently have a sidewalk. Install a 6'-wide sidewalk to create a high-value connection to improve usage of the current sidewalk network and provide continuous sidewalk facilities.
7	New Accessway	Convert the abandoned road into a formalized non-motorized route to provide access to the USDA Forest Service office and the hospital.
8	New Path	Install a 10'-wide paved multi-use path along the east side of Canyon Creek from Main Street to the John Day River to provide an attractive pedestrian route to Kam Wah Chung that would appeal to residents and visitors.
9	New Path	Develop a 10'-wide paved multi-use path for pedestrians and cyclists between 7th Street and the trails at the western end of the 7th Street Recreational Complex.
10	Roadway upgrade	Purchase the ROW and convert the existing private access road between Valley View Drive and Patterson Bridge Road to a public Collector Street.
11	New Sidewalk	Ford Road is subject to periods of congestion during peak hours due to the large number of employees at the hospital and USDA Forest Services office. Install a 6'-wide sidewalk on the south side of the road to provide safety to pedestrians and encourage close-in employees to walk to work, reducing traffic volumes. While sidewalks on both sides of the street would be ideal, the majority of visitors to the area will be served by a sidewalk on the south side of the road that leads to the hospital. This is a cost-effective measure designed at providing the greatest mobility for the most reasonable expenditure, considering the expense of installing two sidewalks.
12	New Sidewalk	Install 6'-wide sidewalks along both sides of Bridge Street between 7th Avenue and Charolais Heights to increase pedestrian safety and accessibility. This improvement is important because it connects a large residential area with the downtown and the 7th Street Complex. Because the roadway geometry and traffic volumes reduce the opportunities for additional crosswalks, a sidewalk should be placed on both sides of the road.

Project ID #	Project Type	Detailed Justification and Project Description
13	ROW Purchase and Upgrade	Extend Charolais Drive to the east and then south to connect to 7th Street. This extension would be developed at the Local Street standard.
14	New Roadway	Develop a new east/west Collector Street between Valley View Drive and Patterson Bridge Road. This project is shown in the existing Transportation System Plan. The northern portion of Patterson Bridge Road would need to be upgraded along with this project.
15	Roadway Extension	Develop an east-west extension of the 4th Street corridor across Canyon Creek to the west City limits. This extension would be developed at the Local Street standard.
16	New Roadway	Extend Canton Street and develop a new east-west 6th Street to provide local street access to future in-fill development south of the John Day River. The 6th Street extension would extend across Canyon Creek to the west City limits. The extension would be developed at the Local Street standard.
17	Pedestrian Crossing	Develop a formal pedestrian crossing of Main Street at the Ford Road intersection. Construct a raised pedestrian crossing island to allow for a staged crossing of Main Street.
18	New Roadway	Provide a new north-south Collector Street from 7th Street across the John Day River to 3rd Avenue.
19	New Roadway	Develop north-south local streets to serve development between the 4th and 6th Street extensions.
20	New Sidewalk	The sidewalk on Hillcrest Avenue improves pedestrian access to this neighborhood, but lack of parking enforcement and width prevent optimal pedestrian use. Install a 6'-wide sidewalk to connect the existing sidewalk with the potential future Strawberry View Estates connection.
21	New Sidewalk & Bicycle Lanes	US 26 is not equipped with bicycle or pedestrian facilities, and both users must compete with automotive traffic. Install 6'-wide bike lanes on both sides of the highway and a 6'-wide sidewalk on the south side to the eastern edge of the City's Urban Growth Boundary will help delineate usable space for bicyclists and pedestrians. In addition, the area should be treated as a Transition Zone, as defined by the Oregon Department of Transportation (ODOT) Highway Design Manual (HDM) to slow traffic and make drivers more aware of bicyclists and pedestrians. While sidewalks on both sides of the road would be ideal, the majority of pedestrians in the area will be served by a sidewalk on the south side of the road adjacent to the residential development. This is a cost-effective measure designed at providing the greatest mobility for the most reasonable expenditure, considering the widening, fill, and construction costs.
22	Trail Upgrade	An existing natural surface trail provides recreational opportunities. More formal adoption of this facility as part of a larger John Day River path system would offer John Day residents an improved walking environment. Extend this trail across the John Day River to the eastern urban growth boundary to allow for a continuous trail corridor that could be picked up by Grant County.
23	New Sidewalk	3rd Avenue is not equipped with facilities for pedestrians or cyclists. A 6'-wide sidewalk is recommended for the south and west side of the roadway; the north side will be partially served by Project #22, and possibly connected by a mid-block crosswalk.
24	New Sidewalk/Trails	Incorporate a pedestrian network associated with new residential development in the eastern part of the city. This system should connect to recommended improvements on Hillcrest Avenue (Project #20) and on US 26 (Project #21) to ensure connectivity.
25	New Roadway	Develop a new east-west local street connection between Ferguson Road and future residential development to the east.
26	Roadway Extension	Develop east-west extensions of the 1st Avenue and Trowbridge Road corridors east of Elm Street to 3rd Avenue. These streets would be developed at the local street standard.
27	Roadway Extension	Ensure future street stubs are incorporated with any new residential development in the eastern part of the City to accommodate future residential expansion/development.

Project ID #	Project Type	Detailed Justification and Project Description
28	New Trail	Pedestrians and cyclists could be separated from Canyon Boulevard by creating a natural-surface trail along Canyon Creek from Main Street to the city limits (and incorporating sidewalks from Project #30). This connection would provide additional connectivity between John Day, the two schools, and Canyon City. This option would need to overcome severely constrained rights-of-way and steep stream banks in some portions of the corridor.
29	Pedestrian Path	Aviation Rd. is a popular recreation route for walkers; however, developing a sidewalk system along it would be expensive because of steep terrain. In lieu of sidewalks a pedestrian path alongside the road could be developed.
30	New Sidewalk	A sidewalk along one side of Brent Street would connect to the proposed trail in Project #28 and create a continuous connection along Canyon Creek. This would be particularly attractive to school children who could avoid the traffic on Canyon Boulevard.
31	New Sidewalk	The sidewalk along Canyon Boulevard does not continue south of 6th Street, leaving Grant Union High School and Humbolt Elementary cut off from John Day. A 6'-wide sidewalk on the west side of the road from 6th Street to Inland Drive would provide needed safety for pedestrians, especially school children. This effort would be combined with access management and the consolidation of driveways along Canyon Boulevard to further increase pedestrian safety and decrease vehicle speeds. While sidewalks on both sides of the road would be ideal, the majority of pedestrians in the area, particularly school children, will be served by a sidewalk on the west side of the road, which is adjacent to the majority of the residential development and on the same side as the two schools. This is a cost-effective measure designed at providing the greatest mobility for the most reasonable expenditure.
32	Enhanced Bicycle Facilities	Bicycle lanes and wide shoulders on Canyon Boulevard encourage bicycle use, but close proximity to busy and fast traffic make it uncomfortable for children and less-experienced riders. Restripe bike lanes to 6 feet in width to provide added comfort to non-motorized users.
33	New sidewalk	Downtown streets south of Main Street are lacking in sidewalk connectivity, reducing pedestrian access. Install a 6'-wide sidewalk facilities on both sides of Canton St. and Bailey St. to provide better pedestrian continuity for downtown businesses.
34	New sidewalk	There is little east-west sidewalk continuity for pedestrians in the northern part of downtown. Install a 6'-wide sidewalk facilities on both sides of 1st Street, 2nd Street, Dayton Street, Trowbridge Road, and Elm Street would enhance the walking environment.
35	Extend Roadway	Extend Bridge Street south of Main Street to connect to 1st Street. This project is included in the John Day Downtown Plan.
36	Roadway Extension	Extend Blue Gulch Road west of Canyon Creek to provide additional access to the airport and the industrial park. This road extension would be developed at the Collector Street standard.
37	Sidewalk	The existing Inland Road bridge over Canyon Creek is narrow and does not have sidewalks. A wider bridge with 6'-wide sidewalk facilities would improve accessibility and safety of students walking to Humbolt Elementary. This project is currently outside of the John Day UGB, however it has been included for coordination purposes.
38	Sidewalks	As John Day's city limits are increased over time, an expansion of the sidewalk system along US 26 will work towards the provision of a continuous east-west sidewalk network. 6'-wide sidewalks should be installed on both sides of the highway as development dictates.
39	New Bike Lanes	US 26 west of the city center is not developed with bicycle facilities. Install 6'-wide bike lanes on both sides of the highway to the western edge of the City's Urban Growth Boundary to help delineate usable space for bicyclists.
40	New Accessway	As development moves westward, provide an improved pedestrian accesses between La Costa Road and Vista Drive to connect this area to the golf club and provide a pedestrian link that avoids US 26.
41	New Roadway	Develop a new east-west Collector Street roadway between the airport/industrial park and West Bench Road.

CITY OF JOHN DAY

Feet

0 450 900 1,800 2,700

See Figure 4-2

See Figure 4-3

See Figure 4-4

7th Street Complex

Grant County Fair Grounds

John Day River

Grant Union High School

RIVER
LOWER YARD
CARPENTER POND
WILDERNESS
APPLE
HIGHWAY 26
SCREECH ALLEY
GOLF CLUB
VISTA
A COSTA
GIBSON
SUNSET
EAST SIDE
TRAFTON
LUCE CREEK
BUMPY
WEST BENCH
CHIMNEY GULCH
ROCK PIT
VICTORIAN
WEST INDUSTRIAL
INDUSTRIAL PARK
AIRPORT
AVIATION
PATTERSON BRIDGE
DAVIS CREEK
VALLEY VIEW
CHAROLAIS
BOULDER
BRIDGE
9TH
7TH
5TH
4TH
3RD
2ND
1ST
CANYON
DAYTON
ELM
BRENT
FORD
OLIVINE
MAIN
HILLCREST
HIGHWAY 26
FERGUSON
SKYLINE
BLUE GULCH
HIGHLAND
CANYON CITY
HUMBOLT
MINERS
NUGGET
ELK VIEW DRIVE
QUAIL
SCENIC
Canyon Creek

39
36
26
395
40
41

LEGEND

- School
- City Hall
- Library
- Post Office
- Hospital
- Fire Station
- Kam Wah Chung Historical Park
- Airport
- River Crossing
- Pedestrian Crossing
- Existing Sidewalk
- Existing Bicycle Lane
- Arterial
- Collector
- Local
- Alley
- Trails
- New Roadway
- New Offstreet Bicycle/ Pedestrian Path
- New Sidewalk
- Future Connection Beyond UGB

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PROJECT OVERVIEW MAP
JOHN DAY, OREGON

FIGURE **4-1**

CITY OF JOHN DAY

Feet
0 150 300 600 900

14 13 12 10 9 6 5 4 3 2 1 16 19 15 39 38 26 395 18 23 34 11 17 28 7 8

DAVIS CREEK
CHAROLAIS
VALLEY VIEW
PATTERSON BRIDGE
BOULDER
9TH
7th Street Complex
BRIDGE
Grant County Fair Grounds
5TH
4TH
3RD
2ND
1ST
LAUREL
BOYCE
CANYON
DIXON
GOVERNMENT
BREMNER PASS
FORD
OCHOCO
HWY
Canyon Creek
John Day River
ROWBRIDGE

LEGEND

- School
- City Hall
- Library
- Post Office
- Hospital
- Fire Station
- Kam Wah Chung Historical Park
- Airport
- River Crossing
- Pedestrian Crossing
- Arterial
- Collector
- Local
- Alley
- Existing Sidewalk
- Existing Bicycle Lane
- Trails
- New Roadway
- New Off-Street Bicycle/ Pedestrian Path
- New Sidewalk
- Future Connection Beyond UGB

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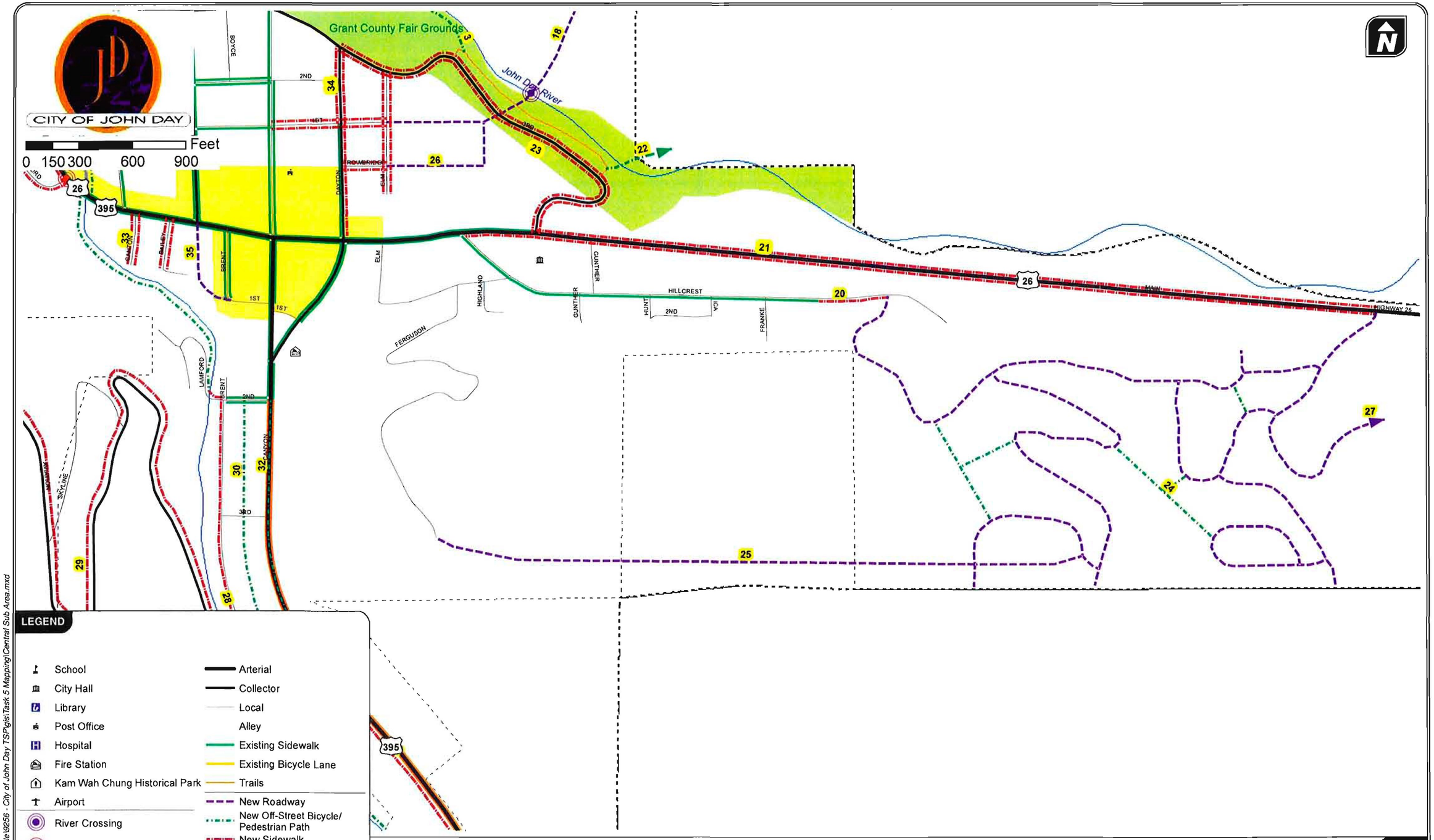
NORTH SUB-AREA PROJECT MAP
JOHN DAY, OREGON

FIGURE 4-2



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CENTRAL SUB-AREA PROJECT MAP
JOHN DAY, OREGON

FIGURE 4-3

CITY OF JOHN DAY

0 150 300 600 900 Feet

GOVERNMENT
BREMNER PASS
OGILVIE
ING HAY
CANTON
1ST
2ND
BRIDGE
DAYTON
CROOKBRIDGE
ELM
MAIN
BAILEY
BRENT
HIGHLAND
GUNTHER
HILLCREST
FERGUSON
LAMFORD
SKYLINE
AVIATION
INDUSTRIAL PARK
AIRPORT
CANYON
3RD
4TH
5TH
6TH
MILLER
BLUE GULCH
Canyon Creek
John Day River
Grant Union High School
ELK VIEW DRIVE
HUMBOLT
MINER'S
CANYON CITY

LEGEND

- School
- City Hall
- Library
- Post Office
- Hospital
- Fire Station
- Kam Wah Chung Historical Park
- Airport
- River Crossing
- Pedestrian Crossing
- Existing Sidewalk
- Existing Bicycle Lane
- Arterial
- Collector
- Local
- Alley
- Trails
- New Roadway
- New Off-Street Bicycle/ Pedestrian Path
- Sidewalk Project
- Future Connection Beyond UGB

SOUTH SUB-AREA PROJECT MAP
JOHN DAY, OREGON

FIGURE 4-4

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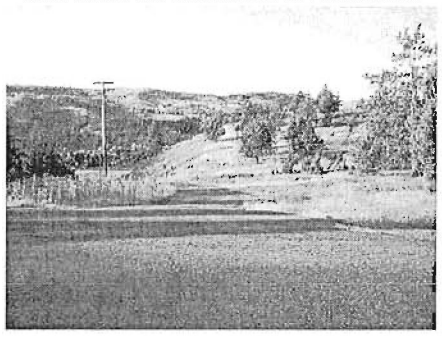
LOCAL STREET PROJECTS

Vehicular circulation in John Day is served principally by Main Street (US 26) and Canyon Boulevard (US 395). Downtown John Day is centered on the junction of these two state highways and is served by a street grid in the area between the John Day River and Canyon Creek. Streets outside the downtown core are patterned around the topography and geographic features of the area resulting in a more circuitous and isolated street network. One of the primary focus areas of the John Day Local Street Network Plan is to identify local street projects that will improve connectivity to these outside areas and identify projects that will ensure street connectivity for future developable areas. As outlined in Figures 4-1 through 4-4 and described in Table 4-1, all of the identified local street projects strive to achieve these objectives. The following sections provide additional details about each identified local street project and how they might be addressed when it comes time to potentially implementing each project.

Project #10 – Existing Private Road between Valley View Drive and Patterson Bridge Road

The existing private road that connects Valley View Drive to Patterson Bridge Road is a logical future street connection that will improve circulation and access to/from the existing Iron Wood subdivision. The ability to implement this project is likely contingent upon future redevelopment of the underlying property, purchase or dedication of the street right-of-way for public use, and the roadway corridor constructed to local street standards.

Conversion of Private Road to Public Road



Project #13 – Extension of Charolais Drive

Charolais Drive is currently a dead-end local street that terminates north of the 7th Street Complex. The easterly and southerly extension of Charolais Drive will create a continuous local street extension around the 7th Street Complex to 7th Street, providing an alternate travel route for residential traffic and emergency services. This roadway extension and connection project is likely contingent upon future residential development occurring at the eastern terminus of Charolais Drive and the resulting dedication/construction of the roadway to serve this development.

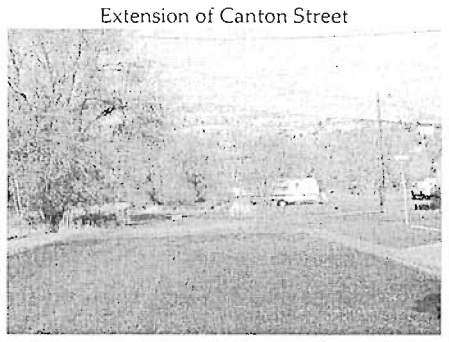
Project #14 – New Connection between Valley View Drive and Patterson Bridge Road

Currently identified in the existing John Day Transportation System Plan, a future local street connection is identified between Valley View Drive and Patterson Bridge Road. An exact alignment for this roadway will need to consider the steep hillside topography and development potential of the surrounding land. This roadway connection is likely conditioned upon future residential development and the resulting dedication/construction of the roadway to serve this development.

Projects #15, 16, #19 – Extension of 4th, 6th, and Canton Street Corridors

As properties redevelop west of Canyon Creek, a new local street network will be needed to support the development. To improve east-west travel and reduce reliance upon the US 26 corridor for local street travel, westerly extensions of the 4th and 6th Street corridors have been identified (Projects #15 and #16). These roadway extensions can be conditioned upon future redevelopment. As Canyon Creek is an existing natural barrier, the extension of these corridors will require new creek crossings. New north-south local street connections will provide access to US 26 (Project #19). The spacing of these intersections with US 26 will need to consider ODOT's access spacing criteria.

Extension of Canton Street



Project #18 – 3rd Avenue to 7th Street Connection

A new collector street connection between 3rd Avenue and 7th Street will improve accessibility to the 7th Street corridor. A new crossing of the John Day River will be required to implement this project.

Project #25 – Easterly Connection between Ferguson Road and Future Development

Potential future development east of Ferguson Road will be connected to new development to the east. An exact alignment for this roadway will need to consider the steep hillside topography and development potential of the surrounding land. This roadway connection can be conditioned upon future residential development.

Project #26 – Extension of Trowbridge and 1st Corridors

Future development east of Elm Street will be served by a continuation of the existing downtown street grid using the 1st and Trowbridge corridors. A connection to 3rd Avenue will improve east-west street continuity to downtown.

Project #27 – Future Street Stubs

Ensure street stubs are provided with any future residential development to accommodate future expansion/development to the east.

Project #35 - Bridge Street Extension to Canyon Boulevard

Extend Bridge Street south of Main Street to connect to 1st Street. This project is included in the recently adopted John Day Downtown Plan.

Project #36 – Blue Gulch Road Extension

New hillside residential development will be served by a local street extension of Blue Gulch Road with an ultimate connection to the Industrial Park Road. An exact alignment for this roadway will need to consider the steep hillside topography and development potential of the surrounding land. This roadway connection can be conditioned upon future residential development.

Project #40 – New Industrial Park Connection

Improve access to the Industrial Park with a new roadway connection to West Bench Road. An exact alignment for this roadway will need to consider the steep hillside topography and development potential of the surrounding land.

Project Impacts on Roadway/Intersection Operations

From a vehicular perspective, the identified list of local street projects will provide better connectivity for existing and future development within the City. Projects such as the Valley View Drive extension to Patterson Bridge Road and the Charolais Heights extension to 7th Street/3rd Avenue will provide alternative travel routes to the existing homes and businesses along the Bridge Street corridor north of 7th Street. Other projects such as the extension of the 4th and 6th Street corridors west of Canyon Creek will provide better east-west street continuity and reduce the reliance upon Main Street for local travel. As such, it is reasonable to expect some shifting of travel patterns at intersections along the Main Street corridor. *Appendix "E"* contains a summary memorandum that documents the resulting traffic operations that are anticipated at the study area intersections as result of the shifting travel patterns.

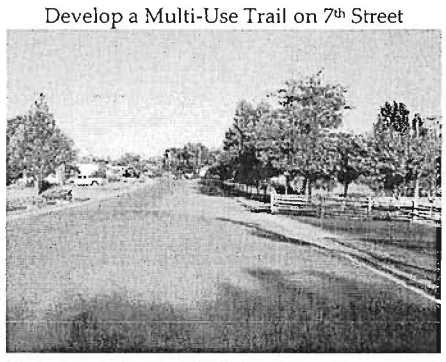
Based on the results of the traffic operations analysis, the identified local street projects are not forecast to significantly impact the operations of the study area intersection above and beyond the results of the no-build 2030 traffic operations summarized previously in Section 3. However, the east and west approaches to the US 26/Patterson Bridge Road and US 26/3rd Avenue intersections should be monitored as part of all new development projects to determine the potential need for left- and/or right-turn lanes.

Bicycle/Pedestrian Projects

Bicycle and pedestrian routes within John Day primarily follow the existing street network. Following a pattern common in most towns and cities, the older portions of John Day have more sidewalks than those areas that have developed more recently. Notable exceptions include areas where the city has made improvements, such as along Bridge Street. Bicycle transportation infrastructure is limited to the bike lanes along US 395 as it leaves downtown for Canyon City. Improving the on- and off-street options for bicyclists and pedestrians will increase non-motorized mobility, particularly for those without motor vehicles, including children. As outlined in Figures 4-1 through 4-4 and described in Table 4-1, all of the identified bicycle and pedestrian projects have been identified to strategically enhance non-motorized mobility. The following sections provide additional details about each identified local street project and how they might be addressed when it comes time to potentially implementing each project.

Project #1 - 7th Street Bicycle/Pedestrian Connection

Develop a Multi-Use Trail on 7th Street



The 7th Street Recreational Complex is not currently linked to any city bicycle or pedestrian facilities. This forces bicycles and pedestrians to share the roadway with motor vehicles. This can put people in an unsafe situation, and encourages reliance on motorized transportation modes to access this facility. A 10'-wide paved multi-use path along the north side of the road would be the most effective method to allow people, particularly children, to access the site, while minimizing impacts to the parking and travel lanes. While pathways along roadways are not typically recommended, this situation is sufficiently controlled and would best meet the needs of bicyclists and pedestrians without requiring a costly restructuring of the street cross-section to accommodate sidewalks and bike lanes on both sides of the ROW. The path could be placed on public property along the frontage of the Complex, and then in the ROW in front of private residences at the west end of the street. If there is insufficient ROW then the curbline could be moved south and the travel and parking lanes reduced in width.

Project #2 - Bridge Street Path to 7th Street Recreational Complex

The Parks Department owns this plot of land, and could potentially install a 10'-wide paved multi-use path for pedestrians and cyclists between Bridge Street and the 7th Street Recreational Complex. This would require minimal grading work as the parcel is mostly flat.

Project #3 - Multi-Use Path along John Day River (east of Bridge Street)

The creation of a 10'-wide paved multi-use path along John Day River would be a signature amenity for the community, providing both recreation and transportation benefits and allowing people to better enjoy the city's river. The eastern portion of the John Day River path would connect from the 7th Street Recreational Complex, across the John Day River, through the Grant County Fairgrounds, and east to project #22. This project would not require ROW purchase from private

homeowners, but would require a bridge across the John Day River. A City-owned property for underground storm drainage utilities would provide access from 7th Street to the John Day River.

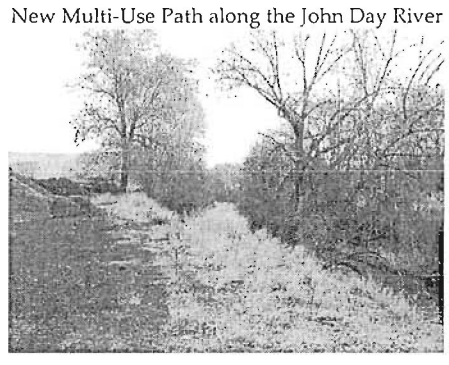
Project #4 - 4th and 5th Street Sidewalks (Between Canton and Bridge Streets)

Both 4th Street and 5th Street lack sidewalk connections between Canton Street and Bridge Street, forcing pedestrians to walk in the street. 6'-wide sidewalks are to be provided where gaps exist on both sides of east end of 4th Street and along both sides of the entire length of 5th Street.

Project #5 - Multi-Use Path along John Day River (west of Bridge Street)

The western portion the facility described in Project #3. This end of the 10'-wide paved multi-use John Day River path can provide a connection from the Bridge Street/7th Street intersection west along the north side of the river to Patterson Bridge Road. Most of this route is along public ROW or city-owned property, which simplifies implementation. A portion of the path would be over abandoned or active industrial land, but could be placed in or near lands with marginal development potential (e.g., riparian areas).

New Multi-Use Path along the John Day River



Project #6 - Sidewalk on the South Side of Main Street (Lyons to Ford Road)

The south side of Main Street between Ford Road and Lyons Street does not currently have a sidewalk. Providing a 6'-wide sidewalk would create a high-value connection to improve usage of the current sidewalk network and provide continuous sidewalk facilities. With this section in place it will eliminate the need for pedestrians to walk in the roadway and also reduce the likelihood that people will cross Main Street at these uncontrolled locations.

Project #7 - Conversion of Abandoned Road to Path Serving USDA/Hospital

The abandoned road can be made into a formalized non-motorized route to provide access to the USDA Forest Service office and the hospital. This would serve as an alternate route to Project #11, although it should not supersede it as it is not as direct. The ROW exists for this facility and would require minimal improvements.

Project #8 - Multi-Use Path along Canyon Creek from John Day River to Main Street

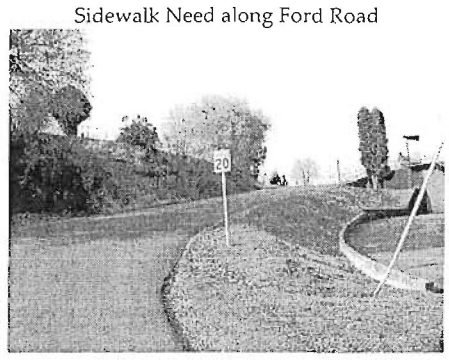
A 10'-wide paved multi-use path along the east side of Canyon Creek from Main Street to the John Day River would provide an attractive pedestrian route to Kam Wah Chung that would appeal to residents and visitors. This would provide a critical non-motorized link on a north-south axis to connect to the proposed John Day River path. This project would be integrated with Project #28 & Project #30 to reach to the southern edge of the city. A bridge would be necessary to allow people to cross the river.

Project #9 - 7th Street Path to 7th Street Recreational Complex

A parcel could be purchased to develop a 10'-wide paved multi-use path for pedestrians and cyclists between 7th Street and the trails at the western end of the 7th Street Recreational Complex. This would allow more direct access to the Complex and could reduce bicycle/pedestrian further east on 7th Street. Either two small right-of-ways could be purchased from the edges of adjoining parcels or one entire parcel could be purchased, requiring the structures to be razed or relocated.

Project #11 - Ford Road Sidewalk

Sidewalk Need along Ford Road



Ford Road is subject to periods of congestion during peak hours due to the large number of employees at the hospital and USDA Forest Services office. A 6'-wide sidewalk on the south side of the road would provide safety to pedestrians and encourage close-in employees to walk to work, thinning traffic volumes. Having safe pedestrian access to the hospital, one of the main public facilities in the city, is important because not all the people who need to access it are able to drive. While it would be ideal to have a sidewalk on both sides of Ford Road, the development costs would be more than double and not likely provided a commensurately greater mobility benefit.

Project #12 - Sidewalks on Bridge Street North of 7th Street

6'-wide sidewalks along both sides of Bridge Street between 7th Avenue and Charolais Heights will increase pedestrian safety and accessibility to the outlying residential neighborhoods. This improvement is important because it connects a large residential area with downtown and the 7th Street Complex. The roadway geometry (e.g., limited sightlines) and higher traffic volumes make it difficult to safely place a pedestrian crossing to connect the north side to the south. Therefore sidewalks should be placed on both sides of the road, although this will require purchase of ROW and extensive grading work because of the cross-slope.

Project #17 - Main Street Pedestrian Crossing at Ford Road

Develop a formal pedestrian crossing of Main Street at the Ford Road intersection to provide safer pedestrian access from the north portion of the road to Project #11 (connection to the hospital). Construct a raised pedestrian crossing island to allow for a staged crossing of Main Street as traffic volumes may discourage users from attempting the full crossing.

Project #20 - Hillcrest Avenue Sidewalk Extension

The sidewalk on Hillcrest Avenue improves pedestrian access to this neighborhood, but lack of parking enforcement and width prevent optimal pedestrian use. A 6'-wide sidewalk should be created to connect the existing sidewalk with the potential future residential development to the east.

Project #21 - Main Street Sidewalks and Bike Lanes (east of 3rd Avenue)

US 26 is not equipped with bicycle or pedestrian facilities, and both users must compete with automotive traffic. Members of the community specifically noted the hazards presented by pedestrians walking along the shoulder, as there is no other viable routes parallel to this portion of the highway. The installation of 6'-wide bike lanes on both sides of the highway and a 6'-wide sidewalk on the south side to the eastern edge of the City's Urban Growth Boundary will help delineate usable space for bicyclists and pedestrians. While a sidewalk on the north side of the highway would also be desirable, the grading necessary to achieve this in conjunction with the bike lane would be considerable, and the facility would not serve as many people as a sidewalk on the south side, adjacent to most of the residential development. In addition, the area should be treated as a Transition Zone, as defined by the Oregon Department of Transportation (ODOT) Highway Design Manual (HDM) to slow traffic and make drivers more aware of bicyclists and pedestrians

Project #22 - Enhancement of Multi-Use Trails

An existing natural surface trail provides recreational opportunities. More formal adoption of this facility as part of a larger John Day River path system would offer John Day residents an improved walking environment. An extension of this trail across the John Day River to the eastern urban growth boundary would allow for a continuous trail corridor that could be connected to by similar facilities on Grant County. Natural surface trails are relatively inexpensive to construct and maintain and are valued amenities.

Project #23 - 3rd Avenue Sidewalks

3rd Avenue is not equipped with facilities for pedestrians or cyclists. A 6'-wide sidewalk is recommended for the south and west side of the roadway; the north side will be partially served by Project #22, and possibly connected by a mid-block crosswalk. The mid-block crossing would ideally be provided as an intersection when Project #18 is constructed. The ROW for the sidewalk on the south side of the street could be obtained through conditions when the adjacent parcel is divided and/or developed.

Project #24 - Subdivision Trails

An extensive pedestrian network should be planned for any new residential development in the eastern part of the City. Due to topographic constraints the system will consist of standard and non-standard facilities. This system should connect to recommended improvements on Hillcrest Avenue (Project #20) and on US 26 (Project #21) to ensure connectivity.

Project #28 - Multi-Use Trail along Canyon Creek

Pedestrians and cyclists could be separated from Canyon Boulevard by creating a natural-surface trail along Canyon Creek from Main Street to the city limits (and incorporating sidewalks from Project #30). This connection would provide additional connectivity between John Day, the two schools, and Canyon City. This option would need to overcome severely constrained rights-of-way and steep stream banks in some portions of the corridor. In many cases, private structures would

need to be removed to make way for the trail, and the instability of the streambanks necessitates that trail be set back as far as possible.

Project #29 – Path along Aviation Road

Aviation Road is a popular recreation route for walkers; however, developing a sidewalk system along it would be expensive because of steep terrain. In lieu of sidewalks a pedestrian path alongside the road could be developed, with signage to alert drivers to their presence. This will still require grading and ROW purchase, but less than if a full 6' concrete sidewalk was installed.

Project #30 - Brent Street Sidewalk

A sidewalk along one side of Brent Street would connect to the proposed trail in Project #28 and create a continuous connection along Canyon Creek. This would be particularly attractive to school children who could avoid the traffic on Canyon Boulevard. ROW will be needed but the purchase of it can be minimized by providing the sidewalk on only one side of the street. Given with low traffic volumes and speeds of a local street this will be adequate.

Project #31 - Sidewalk Extension along Canyon Boulevard

The sidewalk along Canyon Boulevard does not continue south of 6th Street, leaving Grant Union High School and Humbolt Elementary cut off from John Day. A 6'-wide sidewalk on the west side of the road from 6th Street to Inland Drive would provide needed safety for pedestrians, especially school children. This effort would be combined with access management and the consolidation of driveways along Canyon Boulevard to further increase pedestrian safety and decrease vehicle speeds. While it would be ideal to have a sidewalk on both sides of the road, the development costs would be more than double and not likely provided a commensurately greater mobility benefit, as the majority of the development, including the two schools, are on the west side.

Project #32 - Canyon Boulevard Bicycle Lane Widening

Bicycle lanes and wide shoulders on Canyon Boulevard encourage bicycle use, but close proximity to busy and fast traffic make it uncomfortable for children and less-experienced riders. Bike lanes should be re-striped to 6' in width to provide added comfort to non-motorized users. Any additional ROW for this effort can be obtained in conjunction with Project #31.

Project #33 - Canton and Bailey Street Sidewalks (South of Main Street)

Downtown streets south of Main Street are lacking in sidewalk connectivity, reducing pedestrian access. New 6'-wide sidewalk facilities on both sides of Canton St. and Bailey St. would provide better pedestrian continuity for downtown businesses. ROW will need to be purchased to make room for the improvements, but this project will help to create a more coherent downtown sidewalk system.

Project #34 - Sidewalks on 1st, 2nd, Dayton, Trowbridge, & Elm Streets

There is little east-west sidewalk continuity for pedestrians in the northern part of downtown. New 6'-wide sidewalk facilities on both sides of 1st Street, 2nd Street, Dayton Street, Trowbridge Road,

and Elm Street would enhance the walking environment. ROW will need to be purchased to make room for the improvements, but this project will help to create a more coherent downtown sidewalk system.

Project #37 - Inland Road Sidewalks

The existing Inland Road bridge over Canyon Creek is narrow and does not have sidewalks. A wider bridge with 6'-wide sidewalk facilities would improve accessibility and safety of students walking to Humbolt Elementary. This project is currently outside of the John Day UGB, however it has been included for coordination purposes.

Project #38 - US 26 Sidewalks

As John Day's city limits are increased over time, an expansion of the sidewalk system along US 26 will work towards the provision of a continuous east-west sidewalk network. 6'-wide sidewalks should be installed on both sides of the highway as development dictates. ROW will be needed and it should be assumed that it will have to be purchased, although some portions may be able to be obtained through conditions as parcels undergo the land use review process for new or improved development.

Project #39 - US 26 Bicycle Lanes

US 26 west of the city center is not developed with bicycle facilities. The installation of 6'-wide bike lanes on both sides of the highway to the western edge of the City's Urban Growth Boundary will help delineate usable space for bicyclists. This may result in the narrowing of travel lanes, but should not impede traffic flow, and may improve safety for bicyclists by inducing drivers to slow down.

Project #40 - Pedestrian Access between La Costa Road and Vista Drive

As development moves westward, improved pedestrian accesses between La Costa Road and Vista Drive could connect this area to the golf club and provide a pedestrian link that avoids US 26. This connection could be an accessway (see below), as a sidewalk in connection with a roadway may not be necessary or appropriate. ROW will be needed and it should be assumed that it will have to be purchased, although some portions may be able to be obtained through conditions as parcels undergo the land use review process for new or improved development.

CROSS SECTIONS AND DESIGN STANDARDS

The street standards and typical sections from the City of John Day Development Code, as proposed for amendment, will provide for on- and off-street pedestrian and bicycle connectivity.

ACCESSWAYS

Pedestrian-ways (also known as "accessways"), shown in Exhibit 1, provide direct connections to schools, parks, community centers, retail areas, neighborhoods, and other paths. They are intended to be short, direct connections to reduce unnecessary out-of-direction travel for bicyclists and pedestrians. Accessways should be at least 10 feet wide, be of such a design and location to provide reasonable direct access, and shall be dedicated to the public. Accessways should be well-lit and provide adequate sight distance to maximize user safety and comfort.

Project #40 is an example of an access, as it will primarily serve a transportation purpose to connect destinations (e.g., neighborhoods) but not be associated with a roadway. Neighbors living adjacent to the accessway will likely want to be physically separated from the facility, typically with a fence, to protect their privacy. Lighting, while important for security, should similarly be directed away from residences. The accessway will be located in a public ROW and will therefore need to be maintained by the city.

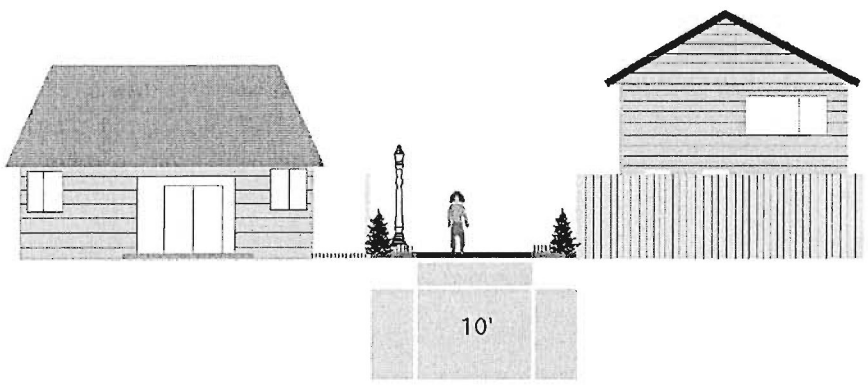


Exhibit 1 Graphical Depiction of a Typical Accessway

TRAILS

Trails are distinct from other facilities in that there are no set development standards. Trails can be as narrow as 12 inches and greater than 8 feet in width, depending on the sideslope of the surrounding terrain, but most are 2 feet to 6 feet in width. Trails are less developed than accessways or paths, and therefore do not appeal to as wide a user group. They are accessible to both bicyclists and pedestrians, and can be a low-cost alternative where a more-developed accessway or path is not desirable or feasible. Exhibit 2 provides a graphical illustration of a trail.

Trails already exist within John Day at Project #22. Project #28 is proposed to be a trail because of the constrained situation of an active stream bank and private structures near the top of the bank. A trail is appropriate because it has less of an impact, both for construction and for needed ROW; it

will still serve as a valuable non-motorized route, but will not be the only manner in which residents can move from north-to-south through the area.

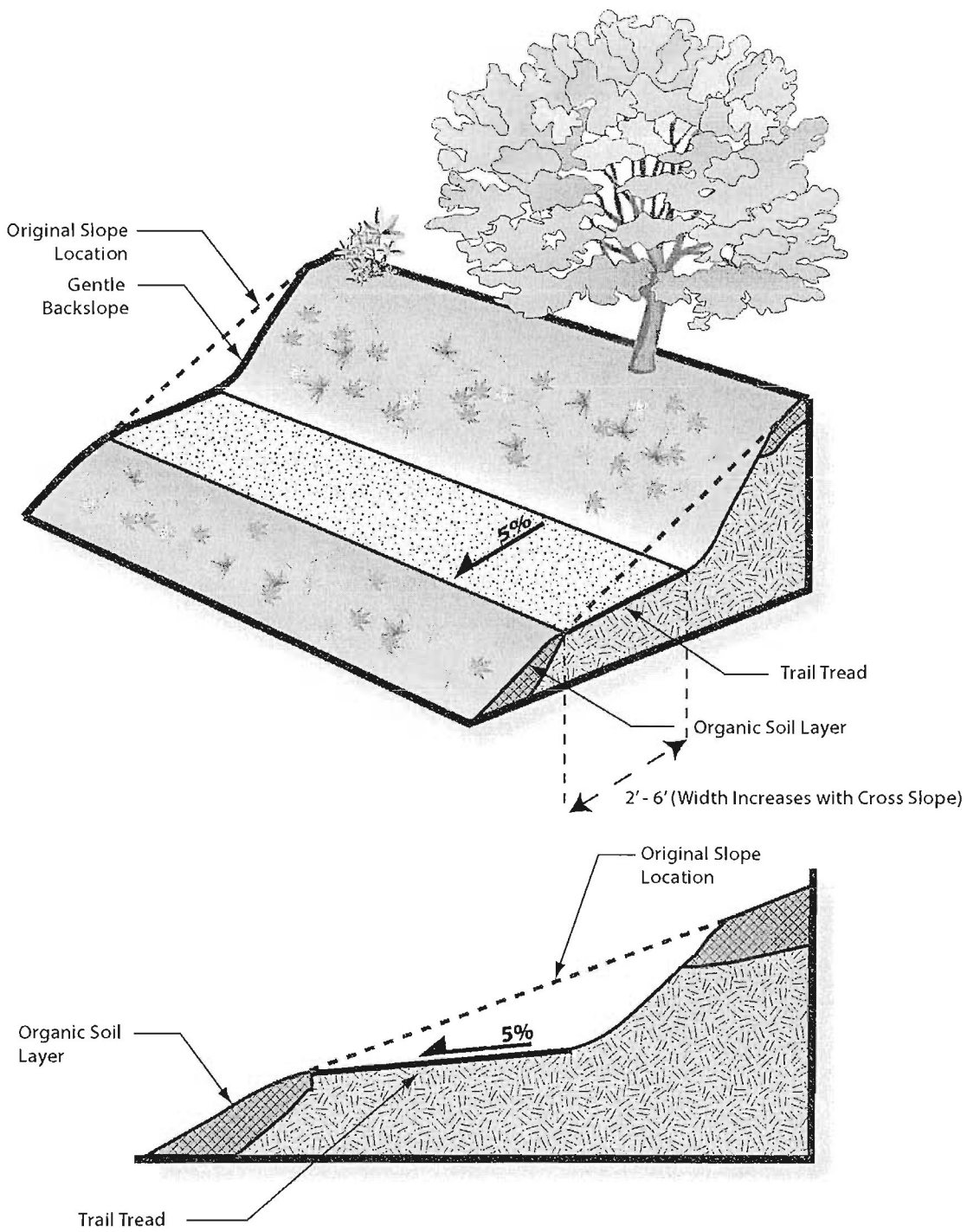


Exhibit 2 – Graphical Depiction of a Typical Trial

SHARED-USE PATHS

As the City of John Day develops its shared-use path network, several design issues should be taken into consideration. Shared-use paths should be designed to accommodate two-way bicycle and pedestrian traffic, and typically should have their own rights-of-way. Because many of the proposed paths will also serve maintenance vehicles, the surface should be asphalt or concrete (or a durable unpaved surface that is smooth and meets ADA requirements). Pathways should be well-lit and provide adequate sight distance to maximize user safety and comfort. Projects proposed as paths include #1, #2, #3, #5, #8, #9, and #29.

Exhibit 3 depicts the recommended cross-section for shared-use paths (also commonly called bike paths) in John Day. A narrower path width may be allowed (8 feet minimum) in physically constrained areas. Soft shoulders (at least 2 feet wide) should be provided on both sides of the path, and a wider shoulder should be provided to accommodate runners where space permits.

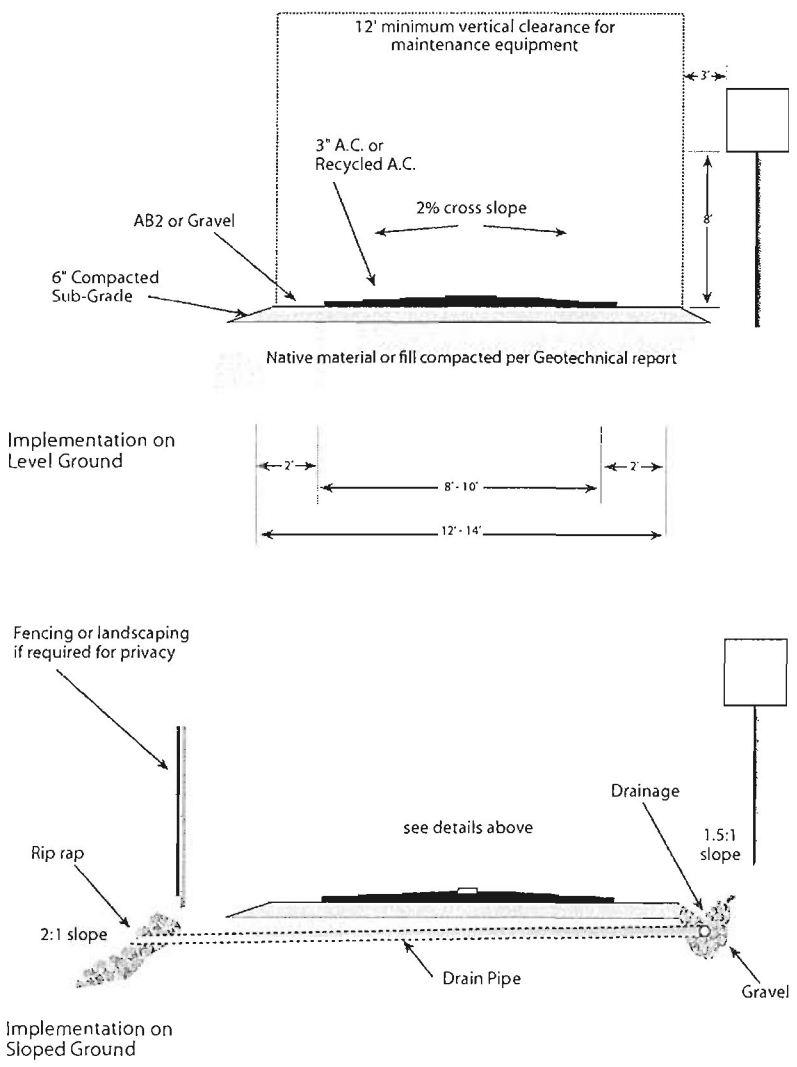


Exhibit 3 – Shared Use Path Dimension

Shared-use paths should also be designed to restrict access from unauthorized vehicles. Bollards can be placed at path/roadway crossings to permit bicycle/pedestrian access while restricting vehicle access. Removable bollards also maintain path access for maintenance and emergency vehicles.

Table 4-2 highlights additional design recommendations for John Day's shared-use path network. The recommendations are based on experience in other communities, as well as guidelines prescribed by AASHTO and the Oregon Bicycle and Pedestrian Plan.

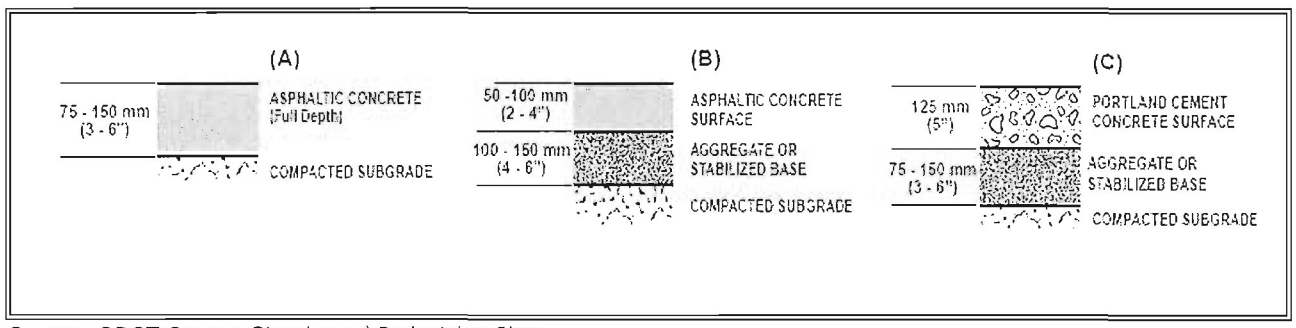
TABLE 4-2 SHARED USE PATH DESIGN PARAMETERS

Parameter	Recommendation
Paved width	10' (8' possible in constrained areas)
Soft surface width	6' minimum
Shoulder width[1]	2' minimum
Lateral clearance between path and adjacent signs	3'-6'
Overhead clearance	10' standard 8' minimum
Separation from parallel roadway	5' minimum
Grade/running slope	5% maximum
Cross-slope	2% maximum
Fence height	54 inches
Bollards	5' minimum between bollards
Bicycle Parking	Standards should be based on adjacent land uses

Source: AASHTO Guide for the Development of Bicycle Facilities; ODOT Oregon Bicycle and Pedestrian Plan
[1] A soft surface path paralleling the paved path can take the place of a shoulder on one side

For purposes of construction, Table 4-3 shows typical pavement sections for multi-use paths. This information, which can also apply to accessways, and will help ensure that the surface meets the needs of the intended bicycle and pedestrian users but can support maintenance and emergency vehicles, when needed.

TABLE 4-3 TYPICAL PAVEMENT SECTIONS FOR SHARED-USE PATHS



Source: ODOT Oregon Bicycle and Pedestrian Plan

In some instances, such as bridges or along steep embankments, fences or barricades will need to be provided to ensure that users stay on the pathway. Structures that do not contain smooth sides should be equipped with a "rub strip" that will reduce the likelihood of a bicyclist catching their handlebars on the structure. Exhibits 4 and 5 indicate typical barricade/fence features and dimensions.

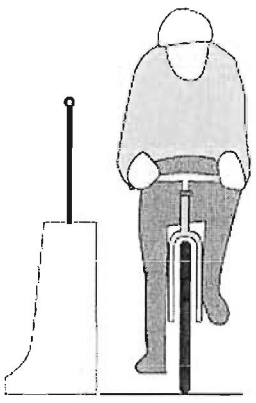


Exhibit 4 – Typical Barrier with Railing for Shared-Use Paths

Source: ODOT Oregon Bicycle and Pedestrian Plan

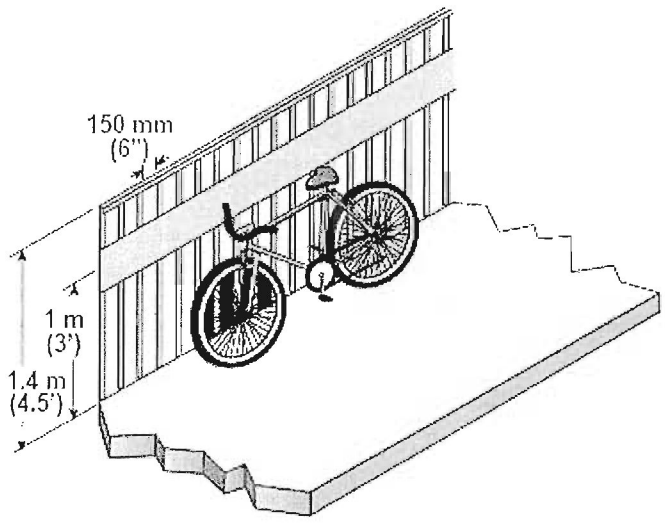


Exhibit 5 – Typical Fencing for Shared-Use Paths

Source: ODOT Oregon Bicycle and Pedestrian Plan

At-grade midblock crossings of paths require treatments to ensure that non-motorized users are afforded safe passage across the roadway. Crossings should be far enough away from other roadway intersections to allow motorists to devote their attention to the crossing. Site distances should be considered as in any other mid-block crossing, as should signage/signalization dictated by the roadway facility.

Project #17 is a midblock crossing that will serve users of both Project #8 and the sidewalks on Main Street. Although it does not flow directly from the path, the crossing is more in alignment with the Ford Street sidewalk proposed in Project #11.

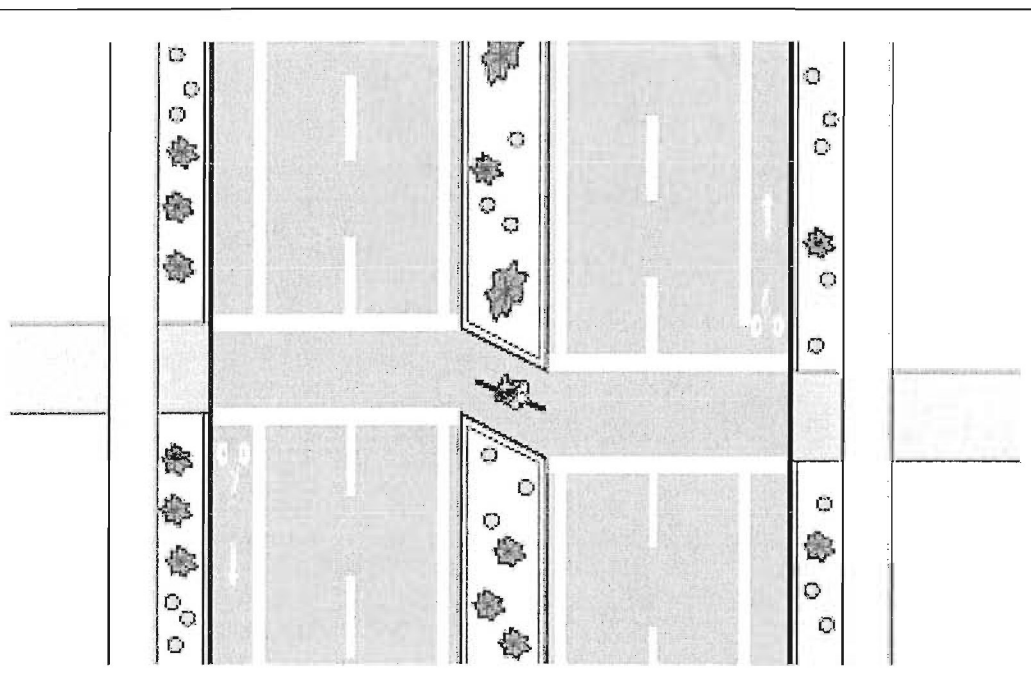


Exhibit 6 – At-Grade Crossing for Shared-Use Path (Unsignalized) with Optional Median Refuge

Source: ODOT Oregon Bicycle and Pedestrian Plan

Project #1 is a unique situation for a pathway, as it wholly replaces a sidewalk system, rather than supplementing it. A 10'-wide paved multi-use path along the north side of 7th Street would be the most effective method to allow people, particularly children, to access the site, while minimizing impacts to the parking and travel lanes. While pathways along roadways are not typically recommended, this situation is sufficiently controlled and would best meet the needs of bicyclists and pedestrians without requiring a costly restructuring of the street cross-section to accommodate sidewalks and bike lanes on both sides of the ROW. The path could be placed on public property along the frontage of the Complex, and then in the ROW in front of private residences at the west end of the street. If there is insufficient ROW then the curbline could be moved south and the travel and parking lanes reduced in width. Project #1 is shown in Exhibit 7.

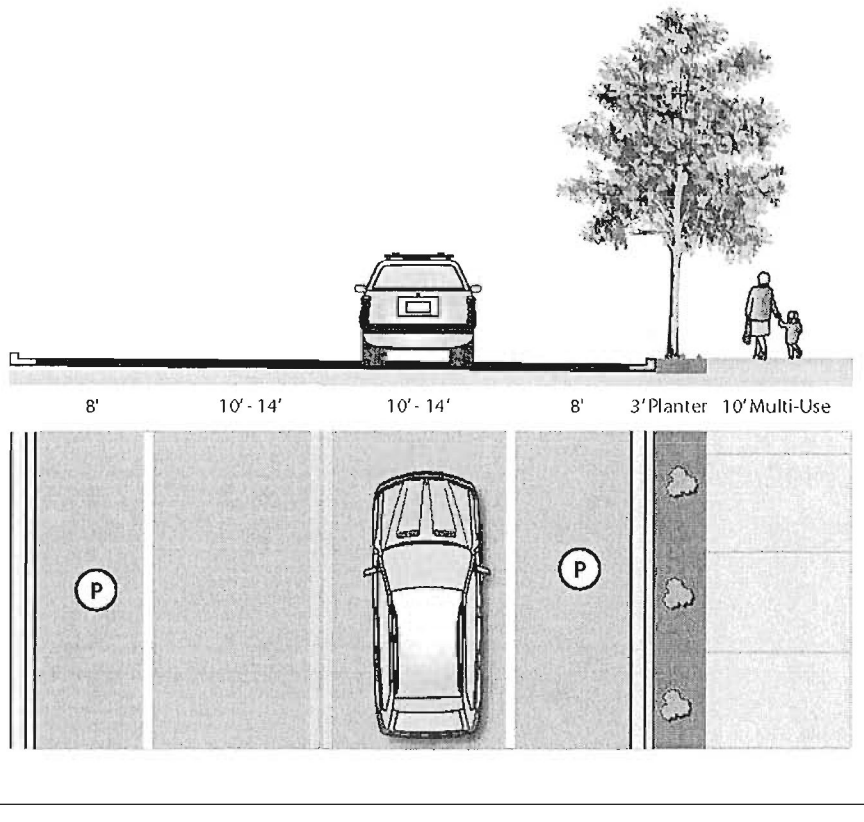


Exhibit 7 – Conceptual 7th Street Path Design

Project #29 is also a unique situation. Aviation Road is a popular recreation route for walkers; however, developing a sidewalk system along it would be expensive because of steep terrain. In lieu of sidewalks a pedestrian path alongside the road could be developed, with signage to alert drivers to their presence. This will still require grading and ROW purchase, but less than if a full 6' concrete sidewalk was installed. Project #29 is shown in Exhibit 8.

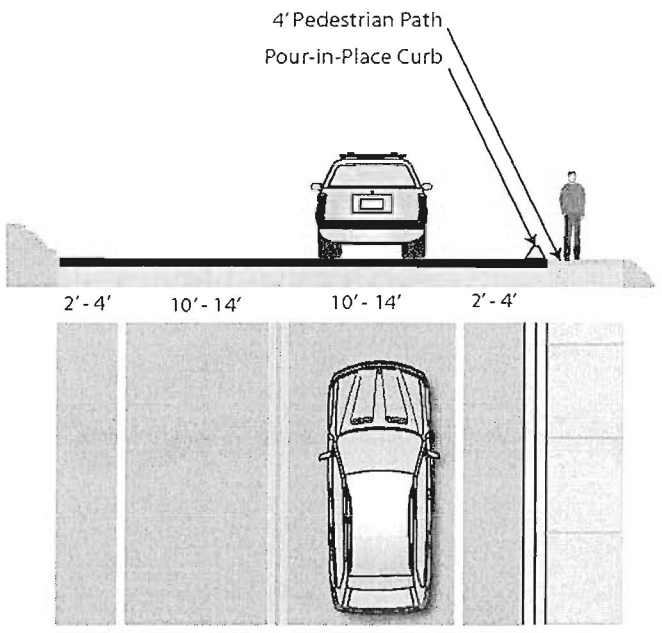
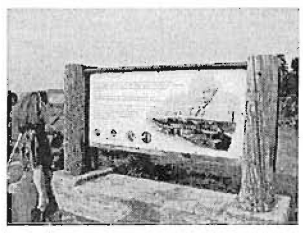


Exhibit 8 –Conceptual Design for Aviation Road Path

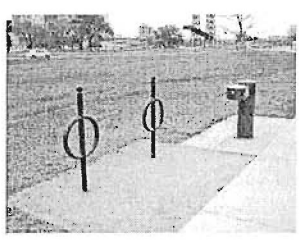
Path Amenities

A variety of amenities can make a path inviting to the user. The following table highlights some common items that make path systems work well for users. Costs vary depending on the design and materials selected for each amenity. The amenities provided for any particular facility will depend on the type of experience, length of facility, volume of users, and other factors. For example, a short path connector such as Project #2 would need minimal amenities, focusing perhaps on wayfinding signage and landscaping. However, larger project such as Project #3 and Project #5 (John Day River path) or Project #8 would benefit from a combination of these amenities.



Interpretive Installations

Interpretive installations and signs can enhance the users experience by providing information about the history of John Day and the surrounding area. Installations can also discuss local ecology, environmental concerns, and other educational information.



Water Fountains and Bicycle Parking

Water fountains provide water for people (and pets, in some cases) and bicycle racks allow recreational users to safely park their bikes if they wish to stop along the way, particularly at parks and other desirable destinations.

Pedestrian-Scale Lighting and Furniture

Pedestrian-scale lighting improves safety and enables the facility to be used year-round. It also enhances the aesthetic of the pathway. Lighting fixtures should be consistent with other light fixtures in the city, possibly emulating a historic theme.

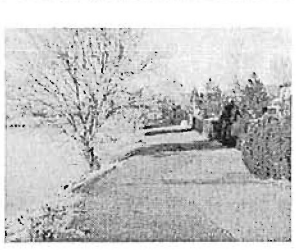
Providing benches at key rest areas and viewpoints encourages people to use the pathway by ensuring that they have a place to rest along the way. Benches can be simple (e.g., wood slats) or more ornate (e.g., stone, wrought iron, concrete).

Maps and Signage

A comprehensive signing system makes a bicycle and pedestrian system stand out. Informational kiosks with maps at trailheads and other pedestrian generators can provide enough information for someone to use the network with little introduction.

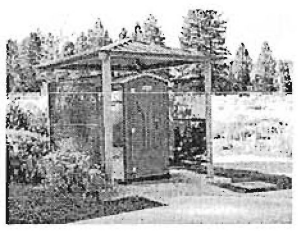
Art Installations

Local artists can be commissioned to provide art for the pathway system, making it uniquely distinct. Many pathway art installations are functional as well as aesthetic, as they may provide places to sit and play on.



Landscaping

Landscape features, including trees, can enhance the visual environment and improve the path user experience. Trees can also provide shade from heat and provide protection from rain.



Restrooms

Restrooms benefit path users, especially in more remote areas where other facilities do not exist. Restrooms can be sited at major trailheads or at other strategic locations along the path system. Utilizing restrooms at existing public facilities, such as the 7th Street Recreational Complex, will reduce the need to provide them elsewhere.

PROJECT PRIORITIZATION

Prioritizing improvements is an essential step for implementing the local street and bicycle/pedestrian projects identified in this plan. To assist in the prioritization effort, the projects were evaluated according to the following criteria:

- How relevant is the project towards achieving the planning goals of a better connected local street and bicycle/pedestrian network?
- What are the realistic costs of implementing the project?
- Are funding sources available to pay for the projects?
- Can technical issues be overcome to implement the project?
- Are there political issues that would stand in the way of the project?
- How much use will the project get?

Using these criteria, *Appendix "F"* provides the individual project evaluation and justification summary.

Based on the results of the project evaluation, a prioritization matrix has been developed. Each project has been categorized as a high, medium, or low priority project. Recognizing that funding sources, right-of-way acquisition, and other implementation factors will impact these projects, the projects have also been subcategorized in terms of how soon they are likely to be implemented (short-, medium-, or long-term). In this manner, the implementation of identified system improvements has been staged to spread investment in the City's transportation infrastructure over the life of the plan. Tables 4-4 through 4-6 provide a summation of the prioritization matrices.

In the prioritization of projects, it is recognized that only a certain amount of money will be available to fund projects. As a result, a number of lower-cost improvements that are needed immediately are shown in the near-term time frame. The longer project timelines are reflective of the fact that some projects are not needed immediately and it will take time to accumulate the funds to build those projects.

TABLE 4-4 "HIGH" PRIORITY PROJECT MATRIX

Proj #	Project Summary Description	Timing		
		Short-Term	Medium-Term	Long-Term
High Priority Projects				
1	7th Street Bicycle/Pedestrian Connection	X		
2	Bridge Street Path to 7th Street Recreational Complex	X		
6	Sidewalk on the South Side of Main Street (Lyons to Ford Road)		X	
11	Ford Road Sidewalk	X		
12	Sidewalks on Bridge Street North of 7th Street		X	
21	Main Street Sidewalks and Bike Lanes (east of 3rd Avenue)			X
28	Multi-Use Trail Along Canyon Creek			X
30	Brent Street Sidewalk			X
31	Sidewalk Extension Along Canyon Boulevard	X		
32	Canyon Boulevard Bicycle Lane Widening	X		
37	Inland Road Sidewalks	X		
38	US 26 Sidewalks			X

TABLE 4-5 "MEDIUM" PRIORITY PROJECT MATRIX

Proj #	Project Summary Description	Timing		
		Short-Term	Medium-Term	Long-Term
Medium Priority Projects				
3	Multi-Use Path along John Day River (east of Bridge Street)		X	
4	4th and 5th Street Sidewalks (Between Canton and Bridge Streets)		X	
5	Multi-Use Path along John Day River (west of Bridge Street)		X	
8	Multi-Use Path along Canyon Creek from John Day River to Main St			X
9	7th Street Path to 7th Street Recreational Complex			X
14	Valley View Drive Connection to Patterson Bridge Road			X
15	Extension of 4th Street Corridor to West City Limits			X
16	Development of 6th Street Corridor West of Canton Street			X
17	Main Street Pedestrian Crossing at Ford Road	X		
19	New Local Street Between the 4th and 6th Street Extensions			X
27	Street Stubs			X
34	Sidewalks on 1st, 2nd, Dayton, Trowbridge, & Elm Streets		X	
35	Bridge Street Extension to Canyon Boulevard			X
39	US 26 Bicycle Lanes		X	
41	West Bench Road Connection to Industrial Park			X

TABLE 4-6 "LOW" PRIORITY PROJECT MATRIX

Proj #	Project Summary Description	Timing		
		Short-Term	Medium-Term	Long-Term
Lower Priority Projects				
7	Conversion of Abandoned Road to Path Serving USDA/Hospital			X
10	Conversion of Private Road to Public Road (Valley View Drive to Patterson Bridge Road)			X
13	Extension of Charolias Drive to 7th Street		X	
18	New Collector from 3rd Avenue to 7th Street			X
20	Hillcrest Avenue Sidewalk Extension			X
22	Enhancement of Multi-Use Trails		X	
23	3rd Avenue Sidewalks		X	
24	Subdivision Pedestrian System		X	
25	Connection East from Ferguson Road			X
26	1st/Trowbridge Road Extension		X	
29	Sidewalks Along Aviation Road			X
33	Canton and Bailey Street Sidewalks (South of Main Street)			X
36	Blue Gulch Road Extension		X	
40	Pedestrian Access Between La Costa Road and Vista Drive			X

Section 5
Funding and
Implementation Plan

Funding & Implementation Plan

COST ESTIMATES

Preliminary conceptual cost estimates have been prepared for the identified local street and bicycle/pedestrian projects. Costs are based on a combination of appropriate unit cost estimates and/or experience with similar projects in other jurisdictions.

For local street improvement projects, costs have been estimated for the types of activities listed below. For bicycle and pedestrian projects, costs include overall capital costs, and those associated with mobilization and traffic control, contingency, design, engineering, and construction management:

- Paving, including new pavement, pavement rehabilitation, curb and sidewalk construction and new sidewalks.
- Mobilization and traffic control.
- Design and construction management / Contingency

Right-of-way estimates have also been included in the cost estimates. Using feedback from the City of John Day and representative estimates from past improvement projects in the region, right-of-way estimates have been prepared based on the following assumptions:

- For land zoned commercial/industrial and unimproved (vacant): $4.25 per square foot.
- For land zoned commercial/industrial and improved: $11.00 per square foot.
- For land zoned residential and unimproved: $9.75 per square foot.
- For land zoned residential and improved: $17.20 per square foot.

The resulting cost estimates are summarized in Table 5-1.

TABLE 5-1 COST ESTIMATES

Proj. #	Project Description	Estimated Construction Cost	Right-of-Way Cost	Preliminary Engineering (20%)/ Contingencies (20%)	Total Cost
1	7th Street Bicycle/Pedestrian Connection	$604,375		$241,750	**$846,125**
2	Bridge Street Path to 7th Street Recreational Complex	$91,270		$18,255	**$109,525**
3	Multi-Use Path along John Day River (*east of Bridge Street*)	$862,815		$172,565	**$1,035,380**
4	4th and 5th Street Sidewalks (Between Canton and Bridge Streets)	$47,270	$40,250	$17,505	**$105,025**
5	Multi-Use Path along John Day River (west of Bridge Street)	$1,324,700	$412,800	$347,500	**$2,085,000**

Proj. #	Project Description	Estimated Construction Cost	Right-of-Way Cost	Preliminary Engineering (20%)/ Contingencies (20%)	Total Cost
6	Sidewalk on the South Side of Main Street (Lyons to Ford Road)	$63,840		$12,770	**$76,610**
7	Conversion of Abandoned Road to Path Serving USDA/Hospital	$10,000		$2,000	**$12,000**
8	Multi-Use Path along Canyon Creek from John Day River to Main Street	$581,175	$615,760	$239,385	**$1,436,320**
9	7th Street Path to 7th Street Recreational Complex	$37,580		$7,515	**$45,095**
10	Conversion of Private Road to Public Road (Valley View Drive to Patterson Bridge Road)	$1,512,000	$510,000	$808,800	**$2,830,800**
11	Ford Road Sidewalk	$31,740		$6,350	**$38,090**
12	Sidewalks on Bridge Street North of 7th Street	$341,055	$170,280	$102,265	**$613,600**
13	Extension of Charolias Drive to 7th Street	$2,682,000	1,170,000	$1,540,800	**$5,392,800**
14	Valley View Drive Connection to Patterson Bridge Road	$2,235,000	$975,000	$1,284,000	**$4,494,000**
15	Extension of 4th Street Corridor West of Canyon Creek to West City Limits	$1,393,200	$382,500	$710,280	**$2,485,980**
16	Development of 6th Street Corridor West of Canton Street	$2,023,200	$595,000	$1,047,280	**$3,665,480**
17	Main Street Pedestrian Crossing at Ford Road	$10,000	-	$4,000	**$14,000**
18	New Collector from 3rd Avenue to 7th Street	$1,639,080	$585,000	$889,630	**$3,113,710**
19	New Local Street Between the 4th and 6th Street Extensions	$315,000	$106,250	$168,500	**$589,750**
20	Hillcrest Avenue Sidewalk Extension	$31,345	-	$6,270	**$37,615**
21	Main Street Sidewalks and Bike Lanes (east of 3rd Avenue)	$816,930	-	$163,385	**$980,315**
22	Enhancement of Multi-Use Trails	$5,000	-	$1,000	**$6,000**
23	3rd Avenue Sidewalks	$222,180	-	$44,435	**$266,615**
24	Subdivision Trails	-	-	-	**N/A – by developer**
25	Connection East from Ferguson Road	$3,294,000	$1,404,000	$1,879,200	**$6,577,200**
26	1st/Trowbridge Road Extension	$756,000	$255,000	$404,400	**$1,415,400**
27	Street Stubs	-	-	-	**N/A – by developer**
28	Multi-Use Trail Along Canyon Creek	$164,000	$430,000	$118,800	**$712,800**
29	Pedestrian Path Along Aviation Road	$726,990		$145,400	**$872,390**
30	Brent Street Sidewalk	$182,505	$197,800	$76,060	**$456,365**

Proj. #	Project Description	Estimated Construction Cost	Right-of-Way Cost	Preliminary Engineering (20%)/ Contingencies (20%)	Total Cost
31	Sidewalk Extension Along Canyon Boulevard	$263,520	$165,120	$85,730	**$514,370**
32	Canyon Boulevard Bicycle Lane Widening	$8,000	-	$1,600	**$9,600**
33	Canton and Bailey Street Sidewalks (South of Main Street)	$76,975	$75,680	$30,530	**$183,185**
34	Sidewalks on 1st, 2nd, Dayton, Trowbridge, & Elm Streets	$349,140	$302,720	$130,370	**$782,230**
35	Bridge Street Extension to Canyon Boulevard	$315,000	$106,250	$168,500	**$589,750**
36	Blue Gulch Road Extension	$1,153,200	$390,000	$617,280	**$2,160,480**
37	Inland Road Sidewalks	-	-	-	**N/A**
38	US 26 Sidewalks	$476,100	$309,600	$157,140	**$942,840**
39	US 26 Bicycle Lanes	$762,300	-	$152,460	**$914,760**
40	Pedestrian Access Between La Costa Road and Vista Drive	$116,850	$103,200	$44,010	**$264,060**
41	West Bench Road Connection to Industrial Park	$5,548,500	$2,632,500	$3,272,400	**$11,453,400**

FUNDING AND FINANCING SOURCES

Transportation projects are often paid for using a combination of funding and financing. Funding describes methods that generate revenue for transportation projects. Financing refers to how projects are paid for over time. The City of John Day can investigate a number of funding and financing sources to construct and implement local street, bicycle, and pedestrian projects.

For each of the practical alternatives listed below, there is a brief description and discussion. No effort has been made to screen alternatives according to their political or legal feasibility. The intent of the discussion is to provide an overview of a number of alternative revenue sources.

Federal Resources

SAFETEA-LU

The current federal transportation funding bill is the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (commonly known by its acronym, SAFETEA-LU) which authorizes funding for the nation's surface transportation programs. It was signed into law in August 2005 and replaced the expired Transportation Equity Act for the 21st Century (TEA-21). The law establishes funding levels and policies for the federal government's highway, highway safety, transit, motor carrier, and some rail programs administered by the U.S. Department of

Transportation (DOT). Funds to local agencies within the State of Oregon are primarily allocated by the Oregon Department of Transportation (ODOT) unless dedicated to a local agency through a specific project earmark.

In 2010, the Federal Transportation Act will be reauthorized, and programs and funding sources may change. The City of John Day should revisit these funding sources distributed through SAFETEA-LU programs, to determine if they are still applicable, and if additional sources for bicycle and pedestrian project funds become available.

Potential: The potential for John Day to take advantage of the next bill will likely be through lobbying to get their projects on the next ODOT STIP and applying for funds dedicated to specific types of projects, such as pedestrian and bicycle projects or downtown revitalization, for local agencies. No specifics are available at this time to what the future bill may include or how much funding will be available for local agencies.

Highway Safety Improvement Program

The Highway Safety Improvement Program funds projects with the intention of significantly reducing traffic fatalities and serious injuries on all public roads, bikeways and walkways. This program includes the Railway-Highway Crossings Program and the High Risk Rural Roads Program. ODOT estimates that they will receive an average of $14 million annually for this program through the lifetime of SAFETEA-LU. This program replaces the Hazard Elimination Program from TEA-21.

New Freedom Initiative

The New Freedom Initiative is a formula grant program created under SAFETEA-LU. The program provides capital and operating costs to fund transportation services and facility improvements that exceed the standards required by the Americans with Disabilities Act.

Recreational Trails Program

States can develop and maintain recreational trails, paths, and related facilities for both non-motorized and motorized recreational trail/path uses with funding from the Recreational Trails Program. Examples of trail and path uses include hiking, bicycling, in-line skating, equestrian use, and other non-motorized and motorized uses. These funds may not be used to improve roads for general passenger vehicle use or to provide shoulders or sidewalks along roads.

Recreational Trails Program funds may be used for:

- Maintaining and restoring existing trails/paths
- Purchasing and leasing trails/path construction and maintenance equipment
- Constructing new unpaved trails and paved multi-use paths
- Acquiring or procuring an easement of property for a trail/path
- Administering the program (limited to seven percent of the funds)

- Operating educational programs to promote safety and environmental protection related to trails/paths (limited to five percent of a State's funds)

Safe Routes to School (SR2S)

Federal funds for the SR2S Program are administered by ODOT. The grants can be used to identify and reduce barriers and hazards to children walking or bicycling to school. The SR2S program is supported through Oregon House Bill 3712, which states that, "City and County governing bodies shall work with school district personnel to identify barriers and hazards to children walking or cycling to and from school."

ODOT estimates that they will receive an average of $1.37 million annually for this program through the lifetime of SAFETEA-LU. Under the Oregon Safe Routes to School Program, approximately $3.7 million will be available for grants between 2006 and 2010.

Surface Transportation Program

The Surface Transportation Program (STP) provides flexible funds for projects on any Federal-aid Highway including the National Highway System, bridges on any public road, and transit facilities. ODOT estimates that they will receive an average of $84 million annually for this program through the lifetime of SAFETEA-LU.

Bicycle and pedestrian improvements are eligible activities under the STP. This covers a wide variety of projects such as on-street facilities, off-road trails, sidewalks, crosswalks, bicycle and pedestrian signals, parking, and other ancillary facilities. Modification of sidewalks to comply with the requirements of the Americans with Disabilities Act is an eligible activity according to SAFETEA-LU.

STP-funded bicycle and pedestrian facilities may be also located on local and collector roads which are not part of the Federal-aid Highway System, unlike other projects that must be on Federal-aid Highway System roads. In addition, bicycle-related non-construction projects, such as maps, coordinator positions, and encouragement programs, are eligible for STP funds.

Transportation Enhancements

The Transportation Enhancement program is administered by ODOT and funded by a set-aside of ten percent of STP funds. Transportation Enhancement Activities (TEAs) include "provision of facilities for pedestrians and bicycles, provision of safety and educational activities for pedestrians and bicyclists," and the "preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian and bicycle trails." 23 USC Section 190 (a)(35). Projects funded by this program must serve a transportation need. These funds can be used to build a variety of pedestrian, bicycle, streetscape and other improvements that enhance the cultural, aesthetic, or environmental value of transportation systems.

The statewide grant process is competitive. The funds are provided through reimbursement, and a minimum of 10.27% matching funds is required from the project sponsor. ODOT estimates that the

Transportation Enhancements program will have $6.5 million for competitive selections during fiscal years 2008-2011.

Community Development Block Grants (CDBG)

The Community Development Block Grants program provides money for streetscape revitalization, which may be largely comprised of pedestrian improvements. Federal Community Development Block Grant grantees may "use Community Development Block Grants funds for activities that include (but are not limited to): acquiring real property; reconstructing or rehabilitating housing and other property; building public facilities and improvements, such as streets, sidewalks, community and senior citizen centers and recreational facilities; paying for planning and administrative expenses, such as costs related to developing a consolidated plan and managing Community Development Block Grants funds; provide public services for youths, seniors, or the disabled; and initiatives such as neighborhood watch programs."

Land and Water Conservation Fund

The Land and Water Conservation Fund (LWCF) is a Federally-funded program, providing grants for planning and acquiring outdoor recreation areas and facilities, including trails. Funds can be used for right-of-way acquisition and construction. These funds are administered by the Oregon Parks and Recreation Department.

Rivers, Trails and Conservation Assistance Program

A National Parks Service program, the Rivers, Trails and Conservation Assistance Program (RTCA) provides technical assistance via direct staff involvement. It aids the establishment and restoration of greenways, rivers, trails, watersheds and open space. The RTCA program provides only planning assistance—there are no implementation monies available. Projects are prioritized for assistance based on criteria that include conserving significant community resources, fostering cooperation between agencies, serving a large number of users, encouraging public involvement in planning and implementation, and focusing on lasting accomplishments.

Federal Economic Development Administration (EDA)

The Federal Economic Development Administration provides annual grant funding on a competitive basis for public works improvements that directly generate or retain jobs in local communities. These funds can be used for local utilities and transportation facilities that serve new development sites.

State Funding Options

Statewide Transportation Improvement Program

ODOT's short-term capital improvement program, the Statewide Transportation Improvement Program (STIP) provides project funding and scheduling information for the department and Oregon's metropolitan planning organizations. It is a four-year program developed through the coordinated efforts of ODOT, federal and local governments, Area Commissions on Transportation,

tribal governments and the public. The bicycle and pedestrian program is managed with a combination of regional funding targets, emergency grants and a statewide competitive grant application process.

In developing this funding program, ODOT must verify that the identified projects comply with the Oregon Transportation Plan (OTP), ODOT Modal Plans, Corridor Plans, local comprehensive plans, and SAFETEA-LU planning requirements. The STIP must fulfill Federal planning requirements for a staged, multi-year, statewide, intermodal program of transportation projects. Specific transportation projects are prioritized based on Federal planning requirements and the different State plans. ODOT consults with local jurisdictions before highway-related projects are added to the STIP.

The 2010-2013 STIP is currently in draft form, and contains over $1.2 billion in projects and programs, based on federal funding levels established in 2005 under SAFETEA-LU.

State Motor Vehicle Fund

The State of Oregon currently collects the following fuel and vehicles fees for the State Motor Vehicle Fund:

- State Gas Tax - $0.24 per gallon
- Vehicle Registration Fee - $15.00 per year

In addition, a weight-mile tax is assessed on freight carriers to reflect their use of state highways. The revenue from the fund is used by ODOT and distributed to cities and counties throughout the state with each city's distribution based on a city's share of statewide population, and the county distribution based on a county's share of statewide vehicle registration.

ODOT Region 5, Grant County, and the City of John Day each receive funds from the state Motor Vehicle Fund. ODOT uses their allocation from the State Motor Vehicle Fund for maintenance and capital purposes. Grant County and the City of John Day typically use their funding allocation for street maintenance; however, it could be used for other types of projects such as pedestrian and bicycle projects.

The state distributes approximately 16 percent of the State Motor Vehicle Fund to cities and 24 percent to counties based on a per capita rate (cities) and vehicle registration (counties). The remaining amount in the State Motor Vehicle Fund is used to maintain and enhance the state highway system. The state operates a grant program available to cities for bicycle-related transportation system improvements and one percent of the fuel tax returned to cities and counties is designated for bike paths and lanes.

With an increase in population, number of registered vehicles, and fuel sales, the total revenue from the State Motor Vehicle Fund will rise but if the fees (tax per gallon) stay at current levels, there will be a reduction in buying power due to inflation. The gas tax will however continue to be a source

of funds for the City of John Day directly as well as through ODOT for highway and pedestrian and bicycle projects.

ODOT Enhancement Program

The Transportation Enhancement program provides federal highway funds for projects that strengthen the cultural, aesthetic, or environmental value of the transportation system. The funds are available for four "transportation enhancement activities," which are categorized as:

- Pedestrian and Bicycle projects;
- Historic Preservation related to surface transportation;
- Landscaping and Scenic Beautification; and
- Environmental Mitigation.

The Enhancement Program funds special or additional activities not normally required on a highway or transportation project. So far, Oregon has funded more than 150 projects for a total exceeding $60 million. The City could seek Enhancement Program funds for bicycle and sidewalk projects including the multi-use path along the railroad right-of-way.

Bicycle and Pedestrian Program Grants

The Pedestrian and Bicycle Grant Program allocates funding for the design and construction of pedestrian and bicycle facilities through a competitive grant process. The Program distributes approximately $5 million biennially to Oregon cities, counties and ODOT regional and district offices. Proposed facilities must be within public rights-of-way.

Grants are awarded by the Oregon Bicycle and Pedestrian Advisory Committee, and the next grant cycle will begin in spring 2010.

Bicyclist Safety Mini-Grant Program

The Community Cycling Center Bicyclist Mini-Grant Program provides funding to public agencies and non-profit 501(c)(3) organizations to promote the safety of bicyclists in Oregon. Funding is available statewide through a grant to the Community Cycling Center from ODOT's Transportation Safety Division.

Funding is available for projects targeting youth and/or adults, with a focus on projects that incorporate a strong educational element, especially in communities that do not currently have access to bike safety education resources. For communities that currently do have access to these resources, innovative and creative project proposals are highly encouraged. Applicants may apply for grants between $800 and $5,000.

Business Energy Tax Credits (BETC)

BETCs are administered by the Oregon Department of Energy to reward companies that invest in energy conservation, recycling, renewable energy resources and less-polluting transportation fuels. Eligible applicants include trade, business or rental property owners with business sites in Oregon or Oregon non-profit organizations, tribes, or public entities partnering with an Oregon business or resident. Non-profit organizations, schools and other public entities can use a transfer option for a cash-sum payment.

Investments in alternative fuel infrastructure projects can recoup 50 percent of eligible project costs over five years. Projects with eligible costs under $20,000 can take the tax credit in one year. Employer bicycle purchases may be eligible for a 35% of cost grant. To receive the credit, an application must be submitted prior to the beginning of the project, and again after the project is completed, indicating the resulting reduction in vehicle miles traveled.

Measure 66 Funds (Oregon State Lottery)

Ballot Measure 66 amends the Oregon Constitution to allow money from the State Lottery to be used for restoring and protecting Oregon's parks, beaches, watersheds and critical fish and wildlife habitat. Funds are coordinated by Oregon State Parks, and may be used for trail-related right-of-way acquisition and construction.

Oregon Revised Statute 366.514

This statute requires the provision of bicycle and pedestrian facilities on all Major Arterial and Collector roadway construction, reconstruction or relocation projects where conditions permit. Also called the "Oregon Bike Bill," ORS366.514 applies to pedestrian as well as bicycle facilities. The statute also requires that in any fiscal year, at least one percent of highway funds allocated to a jurisdiction must be used for bicycle/pedestrian projects. The statute's intent is to ensure that future roads be built to accommodate bicycle and pedestrian travel.

Oregon Transportation Infrastructure Bank

The Oregon Transportation Infrastructure Bank is a statewide revolving loan fund designed to promote innovative transportation funding solutions. Oregon's program was started in 1996 as part of a ten-state Federal pilot program. Additional legislation passed in 1997 by the Oregon Legislature establishes the program in State law and includes expanded authority. Eligible borrowers include cities, counties, transit districts, other special districts, port authorities, tribal governments, State agencies, and private for-profit and non-profit entities. Eligible projects include:

- Highway projects - roads, signals, intersection improvements and bridges
- Transit capital projects - buses, equipment, and maintenance or passenger facilities
- Bikeway or pedestrian access projects - on highway right-of-way

Eligible project costs include preliminary engineering, environmental studies, right-of-way acquisition, construction (including project management and engineering), inspections, financing costs, and contingencies.

Pedestrian Safety Mini-Grant Program

Administered by Oregon's Bicycle Transportation Alliance and the Willamette Pedestrian Coalition, the Pedestrian Safety Mini-Grant Program is funded through ODOT's Traffic Safety Division. The program provides funds to police departments around the state to stage crosswalk enforcement actions against motorists who fail to yield to pedestrians. In these operations, a decoy police officer attempts to cross a street at an intersection or marked crosswalk (crosswalk laws apply to unmarked crosswalks as well). If passing motorists fail to stop and yield for the pedestrian, they are issued either a warning or a citation. The operations include a media outreach component, with the purpose of raising awareness around motorists' responsibility toward pedestrians. Grant funds may also be used to offer diversion classes that violators can take in lieu of paying tickets. Applicants may apply for grants up to $5,000.

Special Transportation Fund

The State's Special Transportation Fund Program (STF) provides financial support to designated counties, transit districts and Indian tribal governments for special transportation services benefiting seniors and people with disabilities. The majority of the STF money (75 percent) is allocated on a population-based formula. The remaining funds are distributed by the Public Transportation Discretionary Grant Program.

Local Funding Options

The following programs are used by cities in the funding of transportation improvements:

General Obligation Bonds (G.O. Bonds)

Bonds are often sold by a municipal government to fund transportation (or other types) of improvements, and are repaid with property tax revenue generated by that local government. Under Measure 50, voters must approve G.O. Bond sales with at least a 50 percent voter turnout.

Cities all over the state use this method to finance the construction of transportation improvements. For smaller jurisdictions, the cost of issuing bonds *vs.* the amount that they can reasonably issue creates a problem. Underwriting costs can become a high percentage of the total cost for smaller issues. According to a representative of the League of Oregon Cities, the state is considering developing a "Bond Pool" for smaller jurisdictions. By pooling together several small bond issues, they will be able to achieve an economy of scale and lower costs.

System Development Charges/Developer Impact Fees

System Development Charges (SDCs), also known as Developer Impact Fees, represent another potential local funding source. SDCs are typically tied to trip generation rates and traffic impacts produced by a proposed project. A developer may reduce the number of trips (and hence impacts

and cost) by paying for on- or off-site pedestrian improvements that will encourage residents to walk or use transit rather than drive. In-lieu parking fees may be used to help construct new or improved pedestrian facilities. Establishing a clear nexus or connection between the impact fee and the project's impacts is critical in avoiding a potential court challenge.

Street User Fees

This fee is based on the fact that streets are utilities used by citizens and businesses just like a public water or sewer system. Fees are typically assessed by usage (e.g., average number of vehicle trips per development type). This fee is used in many Oregon cities through a monthly fee charged to local dwelling units and businesses. The formulas range from a flat rate per dwelling unit and per business (e.g. $10/month and $25/month) to rates calculated for each property individually based on the Institute for Transportation Engineers Trip Generation Handbook. Statewide the average revenue generated by local jurisdictions with a Street Utility Free is approximately $26 per year per resident (not per dwelling unit). Typically the revenue generated by these fees are used for operations and maintenance of the street, bicycle, and pedestrian system.

Local Improvement District (LID)

Under a local improvement district (LID), a street or other transportation improvement is built and the adjacent properties that benefit are assessed a fee to pay for the improvement. LID programs have wide application for funding new or reconstructed streets, sidewalks, water/sewer or other public works projects. The LID method is used primarily for local or collector roads, though arterials have been built using LID funds in certain jurisdictions.

LIDs continue to offer a good mechanism for funding projects such as new sidewalks and street surface upgrades. An example of a good application for an LID may be for sidewalk projects on collector streets. In the developed areas of John Day where there are no sidewalks in front of existing developed properties, the City may be able to fund the cost of sidewalks on collector streets to provide a connected pedestrian system for current and future residents.

Urban Renewal District

An Urban Renewal District is an area that is designated by a community as a "blighted area" to assist in revitalization. Funding for the revitalization is provided by urban renewal taxes, which are generated by the increase in total assessed values in the district from the time it was first established. Urban Renewal dollars can be used to fund infrastructure projects such as roadway, sidewalk, or transit improvements. Since funding relies on taxes from future increases in property value, the City may seek to create a District where such improvements will likely result in such an increase.

Developer Dedications of Right-of-Way and Local Street Improvements

New local streets required to serve new development areas are provided at the developer's expense to the City in accordance with the tentative and final plan approvals granted by the City Council. Current City ordinance requires local streets and utilities to be provided in accordance with the adopted Transportation System Plan and Development Code. This includes dedication of

street/utility right-of-way and construction of streets, pedestrian/bicycle facilities, and utilities to City design standards.

Private developer street dedications are an excellent means of funding new local street/utility extensions, and are most effective if guided by a local roadway network plan. This funding mechanism can apply to all new local street extensions in John Day within the 20-year planning period.

IMPLEMENTATION STRATEGIES

A variety of activities will need to be undertaken to implement the projects identified in this plan. Following is a summary of a number of specific types of strategies, including those related to funding, partnering with local businesses and residents, operation and maintenance of improvements, managing access to transportation facilities, ensuring freight mobility, and updating guiding city documents, including the city's Zoning Ordinance, Capital Improvement Plan and Comprehensive Plan.

Funding and Phasing

Cost estimates, funding sources, relative priorities and proposed phasing of projects were described previous in this section. Implementation actions related to these activities are expected to include:

- Confirm priorities, phasing and the approximate schedule for specific projects.
- Identify revenues available to pay for high priority, short-term projects.
- Apply for and obtain state, federal or other grants as needed and appropriate to fund specific projects.
- Explore and implement local funding initiatives, as needed to fund specific projects or a portion of them (e.g., urban renewal/tax increment financing, local improvement or business improvement districts, etc.).
- Obtain commitments from local community members or organizations related to in-kind donations or labor, materials or money to help implement specific projects (see following Local Partnership discussion for more detail).
- Update the City's Capital Improvement Program for the coming year and future five-year and annual cycles to incorporate short and medium-term projects.
- Use a phased approach to implement projects both in terms of time and location.

Local Partnerships

As identified in previous sections, working with local business owners, organizations and residents can be a powerful way to help cover or reduce the costs associated with downtown, bicycle and pedestrian improvement projects. Specific strategies towards this end may include:

- Work with local property owners to secure any needed property or easements.
- Establish community volunteer efforts to implement specific projects or project components (e.g., planting trees, clearing land for park or trail improvements, assisting with design activities)
- Seek donations of goods or services to construct improvements.
- Work closely with local business and property owners in exploring and potentially adopting new local financing mechanisms such as an urban renew district, tax increment financing or a local improvement district; and enlist their help in informing other residents about and supporting these efforts.
- Involve business owners, property owners and other citizens in the detailed design of future improvements.

Based on these general principles, each project has been reviewed and a potential funding source(s), implementation strategy, and responsible party identified. These recommendations are outlined in Table 5-2.

TABLE 5-2 PROJECT FUNDING SOURCE AND IMPLEMENTATION MATRIX

Figure ID #	Project Summary	Potential Funding Source(s)	Implementation Strategy	Responsible Party
1	7th Street Bicycle/Pedestrian Connection (to 7th Street Recreational Complex)	> Recreational Trails Program grant > Transportation Enhancement grant > Bicycle and Pedestrian Program grant > Measure 66 Funds	Seek funding for improvements	City of John Day
2	Bridge Street Path to the 7th Street Recreational Complex	> Recreational Trails Program grant > Bicycle and Pedestrian Program grant > Measure 66 Funds	Seek funding for improvements	City of John Day
3	John Day River path (east end)	> Recreational Trails Program grant > Bicycle and Pedestrian Program grant > Measure 66 Funds	Seek funding for improvements	City of John Day
4	4th and 5th Street Sidewalks	> Surface Transportation Program funds > Transportation Enhancement grant > Community Development Block Grant > Bicycle and Pedestrian Program grant	Seek funding for improvements	City of John Day
5	John Day River path (west end)	> Recreational Trails Program grant > Bicycle and Pedestrian Program grant > Measure 66 Funds > American Greenways Program grant	Seek funding for improvements	City of John Day
6	Main Street Sidewalk	> New Freedom Initiative grant > Surface Transportation Program funds > Transportation Enhancement grant > Community Development Block Grant > Bicycle and Pedestrian Program grant > Oregon Transportation Infrastructure Bank loan > Special Transportation Fund > Business Improvement District funds > Local Bond Measure > Local Improvement District > Tax Increment Financing	Seek funding for improvements	City of John Day
7	USDA/Hospital Route	> Recreational Trails Program grant > Transportation Enhancement Grant > Surface Transportation Program funds > Land and Water Conservation funds > Bicycle and Pedestrian Program Grant > Measure 66 Funds > Local Bond Measure > Local Improvement District > Tax Increment Financing	Seek funding for improvements	City of John Day

8	Canyon Creek Path	> New Freedom Initiative grant > Recreational Trails Program grant > Surface Transportation Program funds > Measure 66 Funds	Seek funding for improvements	City of John Day
9	7th Street Path to 7th Street Recreational Complex	> Recreational Trails Program grant > Surface Transportation Program funds > Transportation Enhancement grant > Land and Water Conservation funds > Measure 66 Funds	Seek funding for improvements	City of John Day
10	Convert Private Road to Public Road	> Transportation Enhancement grant > Land and Water Conservation funds > Measure 66 Funds > Local Bond Measure > Local Improvement District > Tax Increment Financing	Seek funding for improvements	City of John Day
11	Ford Road Sidewalk	> New Freedom Initiative grant > Surface Transportation Program funds > Transportation Enhancement grant > Community Development Block grant > Bicycle and Pedestrian Program grant > Special Transportation fund > Business Improvement District funds > Local Bond Measure > Local Improvement District > Tax Increment Financing	Seek funding for improvements	City of John Day
12	Bridget Street Sidewalk	> New Freedom Initiative grant > Surface Transportation Program funds > Transportation Enhancement grant > Community Development Block grant > Bicycle and Pedestrian Program grant > Special Transportation fund > Local Bond Measure > Local Improvement District > Tax Increment Financing	Seek funding for improvements	City of John Day
13	Charolais Heights Extension	> Development Related	Implement concurrent with development	Future Development
14	Valley View Drive Connection to Patterson Bridge Road	> Development Related	Implement concurrent with development	Future Development
15	Extension of 4th Avenue	> Development Related	Implement concurrent with development	Future Development
16	Canton Street/6th Street	> Development Related	Implement concurrent with development	Future Development

17	New Mid-Block Main Street Crossing	> New Freedom Initiative grant > Surface Transportation Program funds > Transportation Enhancement grant > Community Development Block Grant > Bicycle and Pedestrian Program grant > Oregon Transportation Infrastructure Bank loan > Special Transportation Fund > Statewide Transportation Improvement Program funds > Business Improvement District funds > Local Bond Measure > Local Improvement District > Tax Increment Financing	Seek funding for improvements	City of John Day
18	New John Day River Crossing	> Transportation Enhancement grant > Land and Water Conservation funds > Measure 66 Funds > Local Bond Measure > Local Improvement District > Tax Increment Financing	Seek funding for improvements	City of John Day
19	New North/South Local Street	> Development Related	Implement concurrent with development	Future Development
20	Hillcrest Sidewalk Extension	> New Freedom Initiative grant > Surface Transportation Program funds > Transportation Enhancement grant > Community Development Block grant > Bicycle and Pedestrian Program grant > Special Transportation fund	Seek funding for improvements	City of John Day
21	New Main Street Sidewalk	> New Freedom Initiative grant > Surface Transportation Program funds > Transportation Enhancement grant > Community Development Block grant > Bicycle and Pedestrian Program grant > Special Transportation fund > Business Improvement District > Oregon Transportation Infrastructure Bank loan	Seek funding for improvements	City of John Day
22	Formalize John Day River trails	> Recreational Trails Program grant > Land and Water Conservation funds > American Greenways Program grant	Seek funding for improvements	City of John Day
23	3rd Avenue Sidewalks	> New Freedom Initiative grant > Surface Transportation Program funds > Transportation Enhancement grant > Community Development Block grant > Bicycle and Pedestrian Program grant > Special Transportation fund	Seek funding for improvements	City of John Day

24	Subdivision Pedestrian Trails	> System Development Charges	Implement concurrent with development	Developer
25	Connection to Ferguson Road	> Development Related	Implement concurrent with development	Future Development
26	1st/Trowbridge Extension	> Development Related	Implement concurrent with development	Future Development
27	Street Stubs	> Development Related	Implement concurrent with development	Future Development
28	Canyon Creek Recreational Trail	> Recreational Trails Program grant > Transportation Enhancement grant > Land and Water Conservation funds > Measure 66 Funds > American Greenways Program grant	Seek funding for improvements	City of John Day
29	Aviation Road Pathway	> Bicycle and Pedestrian Program grant > Special Transportation fund	Seek funding for improvements	City of John Day
30	Brent Street Sidewalk	> Surface Transportation Program funds > Transportation Enhancement grant > Bicycle and Pedestrian Program grant	Seek funding for improvements	City of John Day
31	Canyon Boulevard Sidewalk Extension	> Surface Transportation Program funds > Transportation Enhancement grant > Community Development Block grant > Bicycle and Pedestrian Program grant > Special Transportation fund > Business Improvement District funds > Local Bond Measure > Local Improvement District > Tax Increment Financing > Oregon Transportation Infrastructure Bank loan	Seek funding for improvements	City of John Day
32	Canyon Boulevard Bike Lanes	> Safe Routes to School Program grant > Surface Transportation Program funds > Special Transportation fund	Seek funding for improvements	City of John Day
33	Canton Street and Bailey Street Sidewalks	> New Freedom Initiative grant > Surface Transportation Program funds > Transportation Enhancement grant > Community Development Block grant > Bicycle and Pedestrian Program grant > Special Transportation fund > Business Improvement District funds > Local Bond Measure > Local Improvement District > Tax Increment Financing > Safe Routes to Schools Program funds	Seek funding for improvements	City of John Day

34	Downtown Sidewalk Connectivity	> New Freedom Initiative grant > Surface Transportation Program funds > Transportation Enhancement grant > Bicycle and Pedestrian Program grant > Special Transportation fund > Business Improvement District funds > Local Bond Measure > Local Improvement District	Seek funding for improvements	City of John Day
35	Extension of Bridge Street to 1st Street	> Transportation Enhancement grant > Land and Water Conservation funds > Measure 66 Funds > Local Bond Measure > Local Improvement District > Tax Increment Financing	Seek funding for improvements	City of John Day
36	Extension of Blue Gulch Road	> Development Related	Implement concurrent with development	Future Development
37	Inland Road Sidewalks	Information for coordination purposes only as project is outside of the John Day City Limits and Urban Growth Boundary.	Information for coordination purposes only	N/A
38	US 26 Sidewalks	> New Freedom Initiative grant > Surface Transportation Program funds > Transportation Enhancement grant > Community Development Block grant > Oregon Transportation Infrastructure Bank loan > Special Transportation fund > Statewide Transportation Improvement Program funds	Establish System Development Charges	City of John Day
39	US 26 Bike Lanes	> Surface Transportation Program funds > Transportation Enhancement grant > Oregon Transportation Infrastructure Bank loan > Special Transportation fund > Statewide Transportation Improvement Program funds	Seek funding for improvements	City of John Day
40	La Costa Road and Vista Drive Pedestrian Access	> New Freedom Initiative grant > Recreational Trails Program grant > Bicycle and Pedestrian Program grant > Special Transportation fund > Local Bond Measure	Seek funding for improvements	City of John Day
41	New West Bench Roadway	> Transportation Enhancement grant > Land and Water Conservation funds > Measure 66 Funds > Local Bond Measure > Local Improvement District > Tax Increment Financing	Seek funding for improvements	City of John Day/Grant County

Section 6
Development Code and
Comprehensive Plan
Amendments

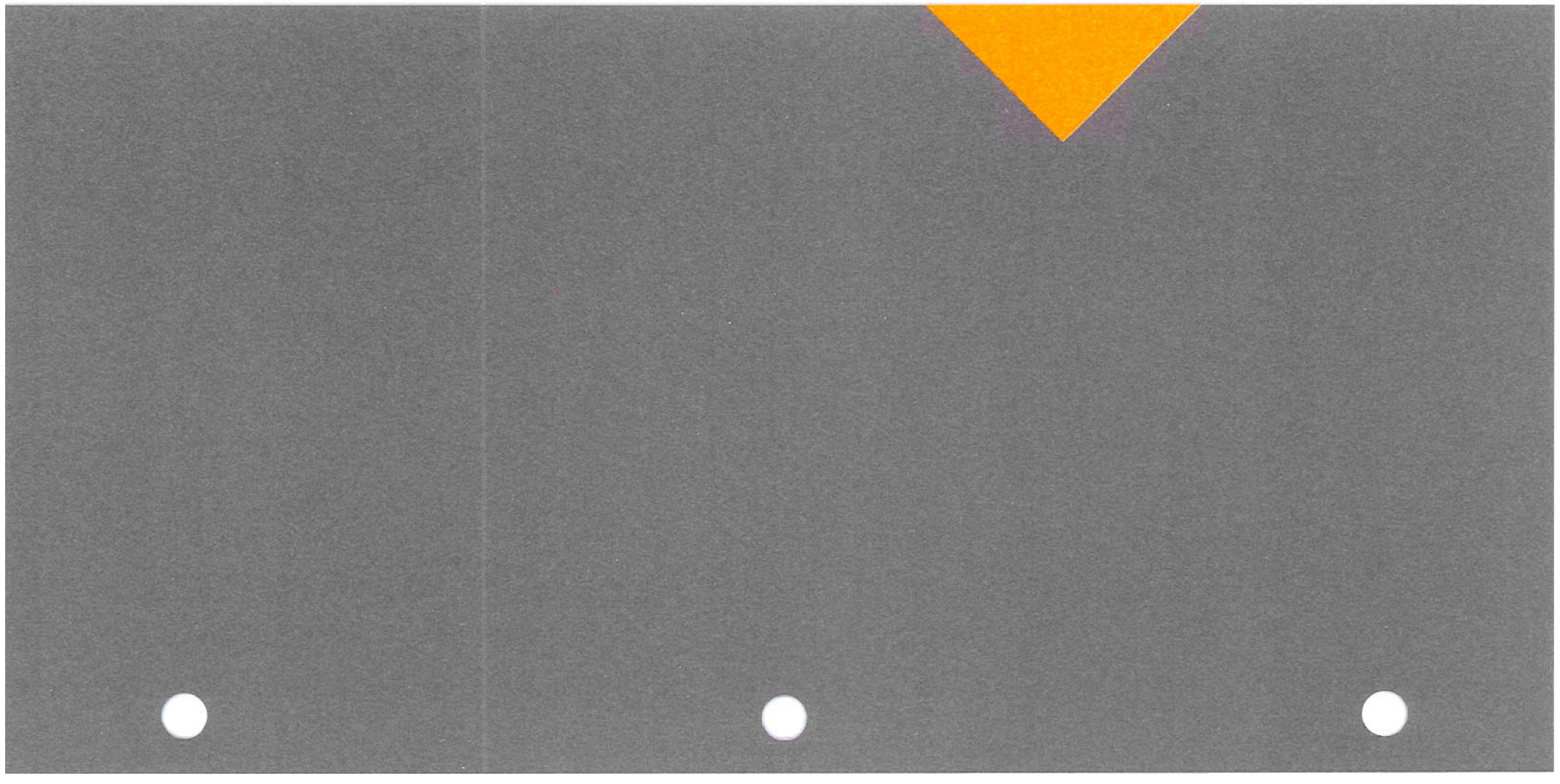
Development Code and Comprehensive Plan Amendments

The TPR, as codified in OAR 660-012-0045, requires that local jurisdictions amend land use regulations to reflect and implement the modifications to Transportation System Plans. To that end, proposed regulatory language was developed in order to comply with the TPR and to ensure that local ordinances are consistent with the Local Street Plan. Proposed implementation language can be found in *Appendix G*.

To the extent possible, proposed amendments to the Development Code and Comprehensive Plan were developed and formatted to be consistent with the existing structure of this regulatory document in order to expedite a code amendment process. In addition to the recommended changes, further amendments to the Development Code may be necessary to ensure consistency within the document and to more seamlessly integrate new criteria with existing requirements. For this reason, the plan includes proposed amendments to the adopted ordinance but final recommended changes will be part of a separate local adoption action.

Appendix A
Traffic Count Summary
Worksheets

	Burns Hwy & Jol	3rd Ave & John Day Hwy	Burns Hwy & 4th Ave	3rd St & John Day Hwy	Canton St & John Day Hwy	Patterson Bridge Rd & John Day Hwy	Bridge St & John Day Hwy	Total	
6:00 AM	50	29	39	25	35	24	40	242	6:00 AM
6:15 AM	45	35	24	26	35	30	36	231	6:15 AM
6:30 AM	51	51	40	20	43	47	46	298	6:30 AM
6:45 AM	99	86	60	39	86	87	90	547	6:45 AM
7:00 AM	87	97	43	30	77	83	81	498	7:00 AM
7:15 AM	106	95	72	41	93	78	94	579	7:15 AM
7:30 AM	165	162	141	54	138	150	138	948	7:30 AM
7:45 AM	232	188	175	56	198	137	198	1184	7:45 AM
8:00 AM	125	112	93	35	97	78	101	641	8:00 AM
8:15 AM	105	102	88	40	91	78	89	593	8:15 AM
8:30 AM	128	113	60	43	102	83	108	637	8:30 AM
8:45 AM	132	115	79	41	105	83	109	664	8:45 AM
9:00 AM	118	133	67	31	119	87	123	678	9:00 AM
9:15 AM	122	126	72	34	113	92	116	675	9:15 AM
9:30 AM	156	136	72	55	124	89	128	760	9:30 AM
9:45 AM	161	148	66	60	135	83	137	790	9:45 AM
10:00 AM	160	150	86	67	139	103	154	859	10:00 AM
10:15 AM	182	175	101	42	145	101	146	892	10:15 AM
10:30 AM	148	155	92	40	126	98	134	793	10:30 AM
10:45 AM	171	176	97	46	144	102	144	880	10:45 AM
11:00 AM	215	198	121	57	184	124	192	1091	11:00 AM
11:15 AM	188	159	110	52	155	99	154	917	11:15 AM
11:30 AM	200	194	108	56	162	117	168	1005	11:30 AM
11:45 AM	237	221	168	50	203	137	203	1228	11:45 AM
12:00 PM	261	201	145	65	216	128	217	1233	12:00 PM
12:15 PM	210	206	134	50	173	109	188	1070	12:15 PM
12:30 PM	227	208	133	60	190	136	192	1146	12:30 PM
12:45 PM	228	202	144	75	180	121	194	1144	12:45 PM
1:00 PM	247	213	133	84	209	135	205	1217	1:00 PM
1:15 PM	187	166	106	53	143	104	167	926	1:15 PM
1:30 PM	199	173	186	56	158	105	162	1039	1:30 PM
1:45 PM	209	201	128	62	179	121	184	1084	1:45 PM
2:00 PM	207	194	137	58	180	119	189	1084	2:00 PM
2:15 PM	218	179	141	56	160	125	177	1056	2:15 PM
2:30 PM	173	190	124	72	149	112	154	974	2:30 PM
2:45 PM	227	199	149	61	187	113	191	1127	2:45 PM
3:00 PM	246	197	157	63	188	124	194	1169	3:00 PM
3:15 PM	186	160	110	56	144	103	154	913	3:15 PM
3:30 PM	223	228	168	65	202	141	209	1236	3:30 PM
3:45 PM	245	210	164	84	203	140	204	1250	3:45 PM
4:00 PM	237	208	153	65	179	126	197	1165	4:00 PM
4:15 PM	221	218	125	66	189	152	197	1168	4:15 PM
4:30 PM	220	179	132	77	160	120	182	1070	4:30 PM
4:45 PM	220	172	113	64	157	110	170	1006	4:45 PM
5:00 PM	230	204	116	82	184	96	199	1111	5:00 PM
5:15 PM	188	158	132	53	149	101	160	941	5:15 PM
5:30 PM	183	166	90	68	149	73	151	880	5:30 PM
5:45 PM	157	149	91	61	139	77	140	814	5:45 PM
6:00 PM	137	111	80	52	105	74	112	671	6:00 PM
6:15 PM	99	100	57	42	87	58	89	532	6:15 PM
6:30 PM	106	91	52	45	88	54	101	537	6:30 PM
6:45 PM	89	77	40	31	61	52	67	417	6:45 PM
7:00 PM	87	111	41	30	94	59	94	516	7:00 PM
7:15 PM	103	84	54	38	79	54	86	498	7:15 PM
7:30 PM	89	73	64	30	70	43	75	444	7:30 PM
7:45 PM	75	63	46	33	61	34	71	383	7:45 PM
8:00 PM	66	66	32	22	55	38	58	337	8:00 PM
8:15 PM	85	72	36	41	67	42	77	420	8:15 PM
8:30 PM	86	66	37	28	59	34	70	380	8:30 PM
8:45 PM	77	54	44	24	54	26	66	345	8:45 PM
9:00 PM	61	58	26	29	53	35	57	319	9:00 PM
9:15 PM	56	54	31	19	44	33	46	283	9:15 PM
9:30 PM	48	34	31	30	29	18	44	234	9:30 PM
9:45 PM	46	41	17	31	35	25	47	242	9:45 PM
Peak Hour Factors	0.94	0.95	0.91	0.87	0.95	0.92	0.97	0.98	
								Sytem Peak Hour	3:45 PM



Appendix B
TPAU Coordination Memo

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING
610 SW Alder Street, Suite 700, Portland, OR 97205 503.228.5230 503.273.8169

MEMORANDUM

Date: September 23, 2008 Project #: 9256

To: Joseph Meek
ODOT TPAU
555 13th Street NE, Suite 2
Salem, OR 97301-4178

From: Matt Hughart and Darryl DePencier
Project: John Day Local Street Connectivity Plan
Subject: Traffic Analysis Methodologies, Procedures, and Assumptions

Per the scope of work for the John Day Local Street Connectivity Plan, this memorandum documents the traffic analysis methodologies, procedures, and assumptions that are proposed to be utilized over the course of the project.

TRAFFIC COUNTS

The traffic counts for this project were selected based on feedback from ODOT TPAU. An e-mail summarizing this feedback is provided in Attachment "A". In order to properly analyze the traffic counts, the procedures outlined in the ODOT Analysis Procedures Manual will be followed. This includes the determination of peak hour factors and adjusting for seasonal variation. Specific elements of these procedures are outlined in the following sections.

Peak Hour Selection

Per the Analysis Procedures Manual, all intersection traffic counts will be adjusted to a single system peak hour for the purposes for typical operational analysis purposes. Given that all the study intersections are located within a close proximity to one another, it is proposed that a system peak hour be utilized. Based on an analysis of the traffic count data collected at the study intersections in 15-minute intervals, it has been determined that the system peak hour occurs from 3:30 to 4:30 p.m.

Peak Hour Factors

Peak hour factors (PHF) have been calculated for each intersection within this system peak hour. These factors range from 0.87 to 0.97 during the system peak hour. Attachment "B" includes the traffic count data summary sheets.

Seasonal Factoring / Converting to 30th Highest Hour

Per standard practice, the traffic counts collected at the study intersections will be adjusted to the 30th highest hour by factoring for seasonal variation. An in depth review of the three main methodologies for determining a season factor was undertaken as part of this process. This included the On-Site ATR Method, the ATR Characteristic Table Method, and the Seasonal Trend Table.

On-Site ATR Method

There are three ATR stations located within a regional proximity to the City of John Day (#12-003, #12-006, and #12-009). #12-003 is located approximately 25 miles west of John Day on Highway 26. #12-006 is located north of John Day on US 395 near the town of Long Creek. #12-009 is located approximately 15 miles east of John Day on Highway 26. In general, all three of these ATR locations are located on rural stretches of highway and are not representative of traffic conditions within John Day. Following the standard procedures, seasonal adjustment calculations were made for all three ATR stations. Detailed calculations are provided in *Appendix "C"*. From these calculations, a 1.14 seasonal adjustment factor was calculated for ATR #12-003, a 1.17 seasonal adjustment factor was calculated for ATR #12-006, and a 1.26 seasonal adjustment factor was calculated for ATR #12-009. Given the range of results and the fact that there isn't an ATR that is more exactly representative of the urban sections of John Day, the *ATR Characteristics Table* method was explored as outlined in the following section.

ATR Characteristics Table Method

Given that the three ATRs are not located directly in or near the urban areas of John Day, the *ATR Characteristics Table* method was explored to try and find a more representative ATR. However, with an average study area ADT of approximately 6,000, the sorting process did not come up with an ATR that is representative of John Day nor one that has an ADT within +/-10%. As such, the Seasonal Trend Method was explored as outlined in the following section.

Seasonal Trend Method

For comparison purposes, a seasonal adjustment factor was determined using the *Seasonal Trend* method. Looking at a number of possible descriptive categories, the "Summer" category resulted in a 1.09 adjustment factor, the "Summer <2500" category resulted in a 1.06 adjustment factor, the "Recreational Summer" category resulted in 1.26, and "Commuter" category resulted in a 1.02 adjustment factor.

Proposed Seasonal Factor

Based on the three different seasonal adjustment methodologies, there is not one single approach that produces an adjustment that is directly applicable to the study area. All three nearby ATR locations are located outside of the City of John Day on rural segments of highway with ADTs

that are significantly less than ADTs in the City of John Day. This rules out the direct use of the *On-Site ATR* method and the *ATR Characteristics Table* method. Looking at the *Seasonal Trend Method,* a number of different descriptive categories were explored. The "Summer <2500" and "Commuter" categories are not representative of John Day and the "Recreational Summer" category appears to be too high of a peaking pattern for individual intersections located within John Day. As such, the "Summer" category appears to offer a reasonable 1.09 adjustment factor that won't severely overestimate the side-street/non-highway movements at the study intersections.

intersection turning movement volumes

Figure 1 summarizes the 30th highest-hour turning movement volumes at the John Day study intersections. These volumes represent the system peak hour and have been adjusted by the seasonal adjustment factor described above.

FUTURE GROWTH

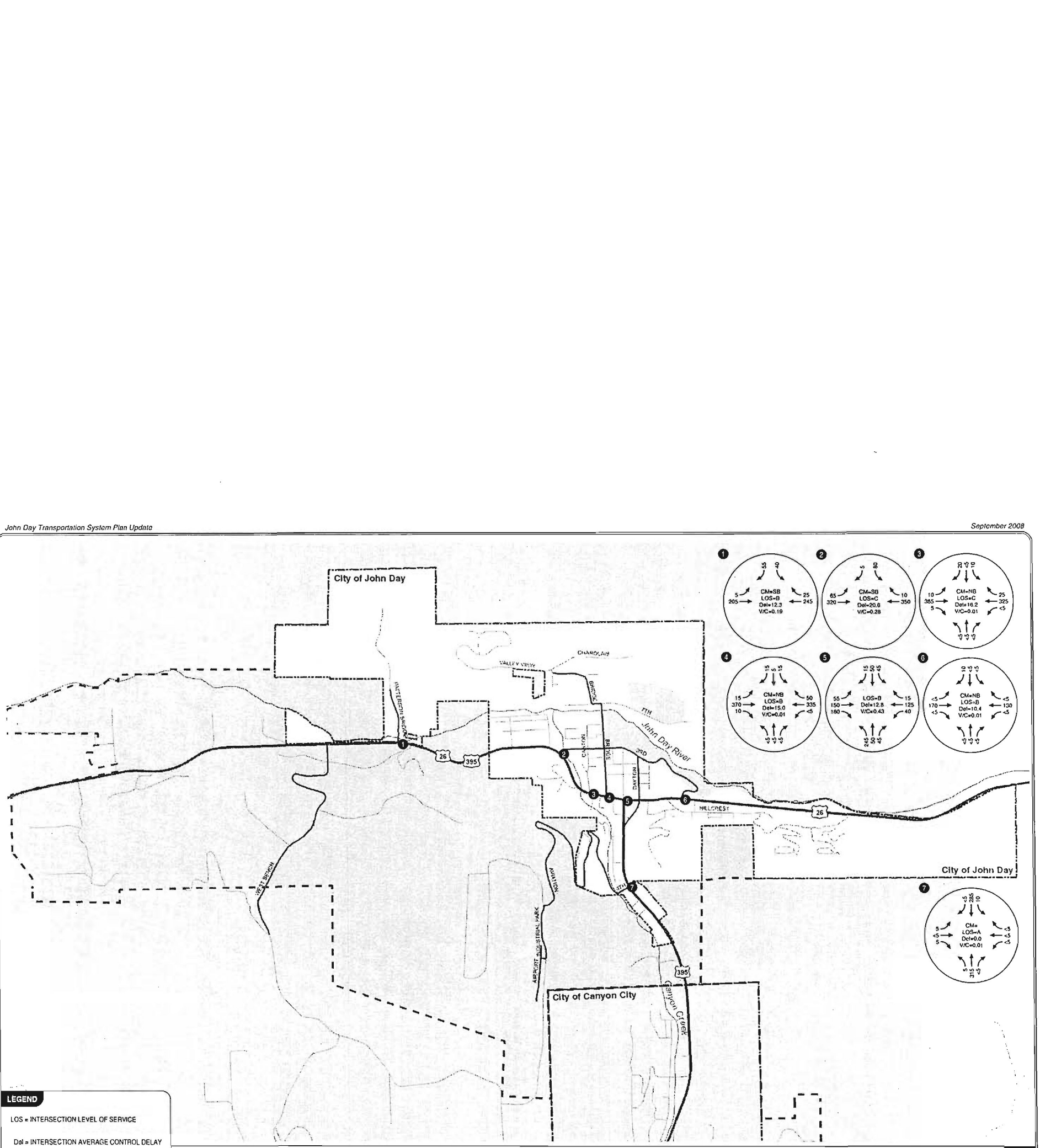
The proposed annual growth rate that will be applied to the volumes shown in Figure 1 to obtain future year forecast volumes will be determined based on a review of ODOT's Future Year Volume Tables, historical ADT counts, and the land inventory analysis as outlined in the scope of work.

Through Traffic Growth

A review of the three ATR stations mentioned in the previous section of this memorandum indicates that regional highway traffic volumes over the past 9 years are either holding steady or decreasing. Furthermore, ODOT's Future Year Volume Tables for these locations either do not have reliable RSQs (all values are less than 0.50) or are projecting insignificant growth rates. As such, it is concluded that regional growth in through traffic is likely to be an insignificant component of John Day's future traffic projections at the study intersections. However, for conservative purposes, it is proposed that a 0.09% annual growth rate (calculated from an average of the three nearby ATR projections in the Future Year Volume Tables) be utilized to account for future through traffic growth on the two state highways bisecting John Day.

Local John Day Growth

To complete the local traffic growth component for this study, it is proposed that the Cumulative Analysis method be utilized as outlined in the ODOT Analysis Procedures Manual. Based on discussions with City staff, there are a number of approved residential and industrial developments that are either under construction or anticipated to be under construction in the near future. In addition, the scope of work calls for a land inventory analysis that will determine the potential for additional development related growth. Using these approved developments and assumed vacant land development, future development related traffic will be quantified and



Existing 30th Highest Hour Volumes
John Day, Oregon

FIGURE 1

applied to the study area intersections. Full documentation of this process will be provided in the Land Inventory memo and Transportation Analysis memo.

We trust that this memorandum adequately documents the traffic analysis methodologies, procedures, and assumptions that are proposed to be utilized over the course of the project. Please do not hesitate to contact us at (503) 228-5230 if you have any questions.

Attachment A
Traffic Count Location
Selection E-Mail

Matt Hughart

From: JARVIS-SMITH Cheryl [Cheryl.JARVIS-SMITH@odot.state.or.us]
Sent: Thursday, May 22, 2008 1:57 PM
To: Matt Hughart; MEEK Joseph L; FINE Donald G; DAVIS Thomas J *Tom
Cc: Peggy Gray; Dave Holland
Subject: FW: John Day Traffic Counts
Attachments: JohnDay.ppt

Matt--

ODOT is in agreement with the traffic count locations for John Day (marked on the map from TPAU) which are consistent with the WOC Subtask 1.4. Please proceed with scheduling the counts for next week while school is in session.

Thanks!

cjs
-----Original Message-----
From: MEEK Joseph L
Sent: Wednesday, May 21, 2008 9:00 AM
To: 'Matt Hughart'
Cc: NORVAL Douglas D; UPTON Dorothy J; JARVIS-SMITH Cheryl
Subject: RE: John Day Traffic Counts

Goodmorning.

I have consulted others and we feel that Friday will be the higher volume day. Through volumes will need to be addressed in how local traffic crosses or interacts with these volumes. There are other days that I would prefer, but with the holiday, early release of school (seniors as well) and award date of contract, Friday is the prefered day (May 30th). 48 hour tube counts could be taken on Thursday and Friday. If you would like to inquire (project leader/monetary), please ask for a comparative count (or tube count) on Thursday at or near one of the Friday count locations.

Please call with any questions.

Thanks,

Joseph Lafayette Meek III, P.E.
Transportation Analyst
ODOT, Transportation Planning Analysis Unit
555 13th Street NE, Suite 2
Salem, OR 97301-4178
503-986-4112; Fax: 503-986-4174
joseph.l.meek@odot.state.or.us

From: MEEK Joseph L
Sent: Tuesday, May 20, 2008 11:41 AM
To: 'Matt Hughart'
Cc: NORVAL Douglas D; UPTON Dorothy J
Subject: RE: John Day Traffic Counts

Good morning.

I am not sure exactly what the clarification you need is.

The last email I recieved stated that count #5 was to be taken at John Day Hwy at 4th Ave. The email/word document I sent earlier, asked for a count Hwy #48 US 395 at 4th Avenue. I have talked with Doug Norval in Dorothy Upton's absense. We feel it is appropriate to go forward with a count at Hwy #48 US 395 at 4th Avenue.

You did not mention 15 minute intervals or day (Sunday?).

Attached is a map, I hope it helps.

I hope this helps. Please contact me with any further questions. Sorry we didn't connect earlier on this.

Joseph Lafayette Meek III, P.E.
Transportation Analyst
ODOT, Transportation Planning Analysis Unit
555 13th Street NE, Suite 2
Salem, OR 97301-4178
503-986-4112; Fax: 503-986-4174
joseph.l.meek@odot.state.or.us

From: Matt Hughart [mailto:MHUGHART@kittelson.com]
Sent: Tuesday, May 20, 2008 10:44 AM
To: MEEK Joseph L
Cc: Jamie Parks
Subject: FW: John Day Traffic Counts

Joseph,

Got your voicemail. See below for the list of intersections identified in the John Day RFP. Do you have a map (or can you prepare something) that clearly identifies the locations of these intersections? Since we were just authorized to proceed on these counts, I don't have access to good base mapping yet. Furthermore, the maps I can find on-line don't share the same street name nomenclature. As such, I need some clarification as we are scrambling to get the traffic counts completed before the end of the school year (which ends the week of June 2nd). Please call or e-mail if you need more information. Thanks in advance for your help.

Matt

Matt Hughart, AICP
Senior Planner
Kittelson & Associates, Inc.
610 SW Alder Street, Suite 700
Portland, OR 97205
www.kittelson.com
mhughart@kittelson.com
503.228.5230 (telephone)
503.273.8169 (fax)
Transportation Engineering / Planning
Baltimore | Boise | Fort Lauderdale | Orlando | Phoenix | Portland | Tucson

From: Matt Hughart
Sent: Monday, May 19, 2008 3:37 PM
To: 'Peggy Gray'
Cc: Jamie Parks
Subject: John Day Traffic Counts

Peggy,

Here is a list of the intersections that ODOT wants counted as part of the John Day Local Street Network Plan. To the best of your knowledge, please let me know if there are any construction projects or detours at these locations over the next two weeks that might change normal travel patterns. Thanks.

Matt

Full Classification John Day Hwy at John-Day Burns Hwy
John Day Hwy at Patterson Bridge Road
Full Classification John Day Hwy at 3rd Avenue
John Day Hwy at Bridge Street
Full Classification John Day Hwy at 4th Avenue
Full Classification John Day Hwy at 3rd Street
John Day Hwy at Canton Street

48 hour directional hose counts shall be taken at the following locations:

John Day Hwy at Ford Road (Hospital)
John Day Hwy at Screech Alley Loop

Matt Hughart, AICP
Senior Planner
Kittelson & Associates, Inc.
610 SW Alder Street, Suite 700
Portland, OR 97205
www.kittelson.com
mhughart@kittelson.com
503.226.5230 (telephone)
503.273.8169 (fax)
Transportation Engineering / Planning
Baltimore | Boise | Fort Lauderdale | Orlando | Phoenix | Portland | Tucson

Attachment B
Traffic Count Data

	Burns Hwy & Jol	3rd Ave & John Day Hwy	Burns Hwy & 4th Ave	3rd St & John Day Hwy	Canton St & John Day Hwy	Patterson Bridge Rd & John Day Hwy	Bridge St & John Day Hwy	Total	
6:00 AM	50	29	39	25	35	24	40	242	6:00 AM
6:15 AM	45	35	24	26	35	30	36	231	6:15 AM
6:30 AM	51	51	40	20	43	47	46	298	6:30 AM
6:45 AM	99	86	60	39	86	87	90	547	6:45 AM
7:00 AM	87	97	43	30	77	83	81	498	7:00 AM
7:15 AM	106	95	72	41	93	78	94	579	7:15 AM
7:30 AM	165	162	141	54	138	150	138	948	7:30 AM
7:45 AM	232	188	175	56	198	137	198	1184	7:45 AM
8:00 AM	125	112	93	35	97	78	101	641	8:00 AM
8:15 AM	105	102	88	40	91	78	89	593	8:15 AM
8:30 AM	128	113	60	43	102	83	108	637	8:30 AM
8:45 AM	132	115	79	41	105	83	109	664	8:45 AM
9:00 AM	118	133	67	31	119	87	123	678	9:00 AM
9:15 AM	122	126	72	34	113	92	116	675	9:15 AM
9:30 AM	156	136	72	55	124	89	128	760	9:30 AM
9:45 AM	161	148	66	60	135	83	137	790	9:45 AM
10:00 AM	160	150	86	67	139	103	154	859	10:00 AM
10:15 AM	182	175	101	42	145	101	146	892	10:15 AM
10:30 AM	148	155	92	40	126	98	134	793	10:30 AM
10:45 AM	171	176	97	46	144	102	144	880	10:45 AM
11:00 AM	215	198	121	57	184	124	192	1091	11:00 AM
11:15 AM	188	159	110	52	155	99	154	917	11:15 AM
11:30 AM	200	194	108	56	162	117	168	1005	11:30 AM
11:45 AM	237	221	168	59	203	137	203	1228	11:45 AM
12:00 PM	261	201	145	65	216	128	217	1233	12:00 PM
12:15 PM	210	206	134	50	173	109	188	1070	12:15 PM
12:30 PM	227	208	133	60	190	136	192	1146	12:30 PM
12:45 PM	228	202	144	75	180	121	194	1144	12:45 PM
1:00 PM	247	213	133	84	200	135	205	1217	1:00 PM
1:15 PM	187	166	106	53	143	104	167	926	1:15 PM
1:30 PM	199	173	186	56	158	105	162	1039	1:30 PM
1:45 PM	209	201	128	62	179	121	184	1084	1:45 PM
2:00 PM	207	194	137	58	180	119	189	1084	2:00 PM
2:15 PM	218	179	141	56	160	125	177	1056	2:15 PM
2:30 PM	173	190	124	72	149	112	154	974	2:30 PM
2:45 PM	227	199	149	61	187	113	191	1127	2:45 PM
3:00 PM	246	197	157	63	188	124	194	1169	3:00 PM
3:15 PM	186	160	110	56	144	103	154	913	3:15 PM
3:30 PM	223	228	168	65	202	141	209	1236	3:30 PM
3:45 PM	245	210	164	84	203	140	204	1250	3:45 PM
4:00 PM	237	208	153	65	179	126	197	1165	4:00 PM
4:15 PM	221	218	125	66	189	152	197	1168	4:15 PM
4:30 PM	220	179	132	77	160	120	182	1070	4:30 PM
4:45 PM	220	172	113	64	157	110	170	1006	4:45 PM
5:00 PM	230	204	116	82	184	96	199	1111	5:00 PM
5:15 PM	188	158	132	53	149	101	160	941	5:15 PM
5:30 PM	183	166	90	68	149	73	151	880	5:30 PM
5:45 PM	157	149	91	61	139	77	140	814	5:45 PM
6:00 PM	137	111	80	52	105	74	112	671	6:00 PM
6:15 PM	99	100	57	42	87	58	89	532	6:15 PM
6:30 PM	106	91	52	45	88	54	101	537	6:30 PM
6:45 PM	89	77	40	31	61	52	67	417	6:45 PM
7:00 PM	87	111	41	30	94	59	94	516	7:00 PM
7:15 PM	103	84	54	38	79	54	86	498	7:15 PM
7:30 PM	89	73	64	30	70	43	75	444	7:30 PM
7:45 PM	75	63	46	33	61	34	71	383	7:45 PM
8:00 PM	66	66	32	22	55	38	58	337	8:00 PM
8:15 PM	85	72	36	41	67	42	77	420	8:15 PM
8:30 PM	86	66	37	28	59	34	70	380	8:30 PM
8:45 PM	77	54	44	24	54	26	66	345	8:45 PM
9:00 PM	61	58	26	29	53	35	57	319	9:00 PM
9:15 PM	56	54	31	19	44	33	46	283	9:15 PM
9:30 PM	48	34	31	30	29	18	44	234	9:30 PM
9:45 PM	46	41	17	31	35	25	47	242	9:45 PM
Peak Hour Factors	0.94	0.95	0.91	0.87	0.95	0.92	0.97	0.96	
								Sytem Peak Hour	3:45 PM

Attachment C
Seasonal Adjustment
Calculations

CALCULATION/DESIGN RECORD

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING
Baltimore ▸ Boise ▸ Fort Lauderdale ▸ Phoenix ▸ Portland ▸ Orlando ▸ Tucson
www.kittelson.com

DATE 7/1/08 PROJECT # 9256

PROJECT NAME JOHN DAY

SUBJECT ON-SITE AADT METHOD BY JXH SHEET # OF

JOHN DAY COUNT DATE: 5/30/08

THREE ATR STATIONS IN VICINITY: #12-003, #12-006, #12-009

ATR # 12-003

	2006	2005	2004	2003	2002
PEAK MONTH (SEPT)	~~141~~	128	131	127	~~126~~
COUNT MONTH (MAY*)	109	108	114	118	116

128 + 131 + 127/3 = 129
109 + 108 + 116/3 = 113
129/113 = (1.14)

ATR # 12-006

	2006	2005	2004	2003	2002
PEAK MONTH (SEPT,	128	130	130	124	~~131~~
COUNT MONTH (MAY*)	113	107	113	110	~~106~~

128 + 130 + 130/3 = 129
113 + 107 + 110/3 = 110
129/110 = (1.17)

ATR # 12-009

	2006	2005	2004	2003	2002
PEAK MONTH (JULY)	138	~~131~~	144	138	~~146~~
COUNT MONTH (MAY*)	114	110	109	~~121~~	~~109~~

138 + 144 + 138/3 = 140
114 + 110 + 109/3 = 111
140/111 = (1.26)

* COUNT DATE "TYPICAL" BETWEEN MAY + JUNE AS ACTUAL COUNT DATE WAS ON MAY 30TH

CALCULATION/DESIGN RECORD

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING
Baltimore ▸ Boise ▸ Fort Lauderdale ▸ Phoenix ▸ Portland ▸ Orlando ▸ Tucson
www.kittelson.com

DATE PROJECT #

PROJECT NAME

SUBJECT ATR CHARACTERISTICS TABLE METHOD

BY SHEET # OF

STUDY AREA ADT

↳ 6000 - 6500

3000 (EAST CITY LIMITS)
4700 (WEST CITY LIMITS)
1100 (SOUTH SALMON CITY LIMITS)

ASSUME: SUMMER / 2500

2008 SEASONAL TREND TABLE

TREND	1-Jan	15-Jan	1-Feb	15-Feb	1-Mar	15-Mar	1-Apr	15-Apr	1-May	15-May	1-Jun	15-Jun	1-Jul	15-Jul	1-Aug	15-Aug	1-Sep	15-Sep	1-Oct	15-Oct	1-Nov	15-Nov	1-Dec	15-Dec	Peak Period Seasonal Factor
INTERSTATE URBANIZED	1.0464	1.0740	1.0170	0.9801	0.9494	0.9368	0.9336	0.9283	0.9337	0.9391	0.9242	0.9094	0.9190	0.9268	0.9174	0.9082	0.9243	0.9425	0.9405	0.9385	0.9533	0.9880	0.9935	1.0189	0.9052
INTERSTATE NONURBANIZED	1.2289	1.2793	1.2242	1.1691	1.1138	1.0884	1.0488	1.0388	1.0236	1.0088	0.9882	0.9277	0.9043	0.8810	0.8702	0.8594	0.9079	0.9564	0.9953	1.0342	1.0447	1.0551	1.1168	1.1788	0.8594
COMMUTER	1.0636	1.0755	1.0331	0.9908	0.9727	0.9547	0.9418	0.9288	0.9279	0.9270	0.9141	0.9013	0.9088	0.9162	0.9091	0.8999	0.9113	0.9227	0.9272	0.9317	0.9603	0.9889	1.0203	1.0518	0.9099
COASTAL DESTINATION	1.2282	1.2478	1.1999	1.1521	1.1037	1.0553	1.0573	1.0593	1.0438	1.0283	0.9918	0.9562	0.8973	0.8394	0.8378	0.8362	0.8781	0.9220	0.9877	1.0534	1.1031	1.1527	1.1807	1.2088	0.8362
COASTAL DESTINATION ROUTE	1.5212	1.5414	1.4800	1.3788	1.2893	1.2000	1.2007	1.2013	1.1397	1.0780	1.0265	0.9750	0.8774	0.7797	0.7826	0.7853	0.8578	0.9302	1.0488	1.1674	1.2190	1.2704	1.3857	1.5010	0.7797
AGRICULTURE	1.1476	1.1873	1.1228	1.0783	1.0349	0.9915	0.9789	0.9664	0.9525	0.9386	0.9131	0.8876	0.8851	0.8826	0.8741	0.8656	0.8649	0.9043	0.9280	0.9517	0.9900	1.0284	1.0781	1.1278	0.8655
RECREATIONAL SUMMER	1.8170	1.8345	1.8099	1.8253	1.6477	1.4702	1.4136	1.3570	1.1978	1.0385	0.9668	0.8951	0.8302	0.7654	0.7714	0.7775	0.8249	0.8724	0.9976	1.1228	1.2833	1.4438	1.8218	1.7995	0.7654
RECREATIONAL SUMMER WINTER	1.2160	1.3564	1.4344	1.5124	1.5058	1.4992	1.8281	1.7571	1.8195	1.4819	1.2650	1.0484	0.9617	0.8742	0.8874	0.9006	1.0685	1.2364	1.5359	1.8354	1.8531	1.8709	1.4722	1.0736	0.8742
RECREATIONAL WINTER	0.9113	0.9980	1.0552	1.1123	1.2042	1.2960	1.8436	1.9910	2.0578	2.1242	1.8994	1.6745	1.4749	1.2753	1.2369	1.2025	1.3123	1.4222	1.8319	2.2408	2.5939	2.9470	1.8858	0.8245	0.8245
SUMMER	1.2293	1.2413	1.2077	1.1741	1.1122	1.0503	1.0313	1.0123	0.9843	0.9564	0.9252	0.8940	0.8701	0.8462	0.8458	0.8454	0.8780	0.9107	0.9523	0.9939	1.0408	1.0877	1.1525	1.2174	0.8454
SUMMER < 2500	1.3501	1.3371	1.3140	1.2910	1.1987	1.1064	1.0601	1.0137	0.9600	0.9062	0.8798	0.8535	0.8401	0.8267	0.8291	0.8315	0.8371	0.8427	0.8941	0.9454	1.0283	1.1112	1.2372	1.3633	0.8267

SUMMER < 2500

.8798/.8267

= 1.06

RECREATIONAL SUMMER

.9668 / .7654

= 1.26

Recorder: DAYVILLE, 12-003

Location: US26, JOHN DAY HIGHWAY, NO. 5
1.9 miles east of Dayville
Installed: October, 1957

HISTORICAL TRAFFIC DATA

		Percent_of_ADT				
Year	Average Daily Traffic	Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
1993	975	223	20.7	18.9	17.3	16.3
1994	1004	194	21.4	18.5	16.2	15.4
1995	1031	196	21.2	17.6	15.7	15.0
1996	1021	186	21.2	16.2	14.9	14.3
1997	1104	200	18.9	16.9	16.0	15.3
1998	1049	207	22.2	17.7	16.5	15.1
1999	1030	212	20.2	18.5	16.3	15.6
2000	1009	216	21.8	18.3	16.6	16.1
2001	1073	207	27.5	19.7	17.1	15.9
2002	1073	216	30.1	19.2	16.5	15.2

2002 TRAFFIC DATA

	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT
January	787	73	744	69
February	851	79	807	75
March	833	78	831	77
April	921	86	917	85
May	1180	110	1221	114
June	1180	110	1256	117
July	1313	122	1388	129
August	1314	122	1378	128
September	1357	126	1438	134
October	1193	111	1230	115
November	960	89	941	88
December	731	68	719	67

Vehicle Classification Breakdown	Percent of ADT
Passenger Cars	42.50
Other 2 axle 4 tire vehicles	40.10
Single Unit 2 axle 6 tire	3.80
Single Unit 3 axle	1.70
Single Unit 4 axle or more	0.20
Single Trailer Truck 4 axle or less	4.60
Single Trailer Truck 5 axle	3.30

Single Trailer Truck 6 axle or more..	1.40
Dbl-Trailer Truck 5 axle or less.....	0.00
Dbl-Trailer Truck 6 axle.....	0.00
Dbl-Trailer Truck 7 axle or more.....	0.90
Triple Trailer Trucks.....	0.00
Buses.....	1.30
Motorcycles & Scooters.....	0.20

Recorder: LONG CREEK, 12-006

Location: US395, PENDLETON-JOHN DAY HIGHWAY, NO. 28
0.5 mile north of Long Creek
Installed: October, 1957

HISTORICAL TRAFFIC DATA

		Percent of ADT				
Year	Average Daily Traffic	Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
1993	563	218	20.8	16.5	15.1	14.6
1994	588	163	17.3	13.9	13.3	12.6
1995	537	226	20.9	17.7	15.5	14.3
1996	512	179	18.0	15.1	14.3	13.7
1997	535	180	21.3	16.4	15.7	14.8
1998	552	207	23.5	16.5	15.2	14.3
1999	527	195	19.9	16.3	15.2	14.6
2000	516	192	19.2	15.9	14.7	14.3
2001	498	195	22.1	17.5	16.3	15.7
2002	521	206	24.4	16.3	15.7	15.2

2002 TRAFFIC DATA

	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT
January	293	56	291	56
February	348	67	349	67
March	396	76	399	77
April	438	84	459	88
May	525	101	549	105
June	573	110	613	118
July	659	126	676	130
August	676	130	684	131
September	683	131	705	135
October	644	124	644	124
November	536	103	518	99
December	377	72	368	71

Vehicle Classification Breakdown	Percent of ADT
Passenger Cars	36.10
Other 2 axle 4 tire vehicles	49.30
Single Unit 2 axle 6 tire	2.30
Single Unit 3 axle	1.30
Single Unit 4 axle or more	0.30
Single Trailer Truck 4 axle or less	0.00
Single Trailer Truck 5 axle	6.20
Single Trailer Truck 6 axle or more	3.40
Dbl-Trailer Truck 5 axle or less	0.00
Dbl-Trailer Truck 6 axle	0.00
Dbl-Trailer Truck 7 axle or more	0.30
Triple Trailer Trucks	0.00
Buses	0.80
Motorcycles & Scooters	0.00

Recorder: PRAIRIE CITY, 12-009

Location: US26, JOHN DAY HIGHWAY, NO. 5
0.2 mile east of Prairie City
Installed: January, 1981

HISTORICAL TRAFFIC DATA

		Percent of ADT				
Year	Average Daily Traffic	Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
1993	1446	***	****	****	****	****
1994	1453	***	****	****	****	****
1995	1194	195	17.7	15.7	14.5	13.9
1996	1179	187	16.4	14.5	13.3	12.6
1997	1184	***	****	****	****	****
1998	1189	195	17.7	15.4	14.3	13.4
1999	1185	194	18.3	15.9	14.9	14.3
2000	1112	195	18.9	16.9	15.3	14.8
2001	1062	198	18.7	16.7	15.9	15.3
2002	1084	201	19.8	16.9	16.2	15.0

2002 TRAFFIC DATA

	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT
January	645	60	658	61
February	765	71	745	69

March	761	70	772	71
April	827	76	871	80
May	1091	101	1194	110
June	1265	117	1306	120
July	1588	146	1662	153
August	1404	130	1469	136
September	1356	125	1417	131
October	1191	110	1238	114
November	949	88	949	88
December	716	66	721	67

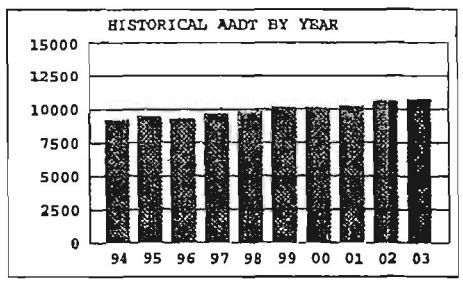
Vehicle Classification Breakdown	Percent of ADT
Passenger Cars	32.20
Other 2 axle 4 tire vehicles	45.50
Single Unit 2 axle 6 tire	3.50
Single Unit 3 axle	3.60
Single Unit 4 axle or more	0.20
Single Trailer Truck 4 axle or less	3.80
Single Trailer Truck 5 axle	4.10
Single Trailer Truck 6 axle or more	1.00
Dbl-Trailer Truck 5 axle or less	0.00
Dbl-Trailer Truck 6 axle	0.00
Dbl-Trailer Truck 7 axle or more	4.60
Triple Trailer Trucks	0.00
Buses	0.80
Motorcycles & Scooters	0.70

Location: I-84 MP 146.16, COLUMBIA RIVER HIGHWAY, NO. 2
1 mile west of Heppner Highway, No. 52, OR 74

Recorder: ARLINGTON, 11-008
Installed: September, 1957

HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent_of_ADT Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
1994	9160	199	23.1	17.1	15.1	14.4
1995	9453	199	22.9	17.1	14.9	14.5
1996	9273	185	18.9	15.0	13.9	13.3
1997	9629	206	22.4	18.4	16.1	15.0
1998	9781	196	22.2	17.3	15.8	14.7
1999	10138	193	22.0	17.0	15.4	14.6
2000	10097	197	18.2	15.6	14.6	14.1
2001	10196	210	24.3	16.9	15.7	14.6
2002	10619	207	23.5	17.5	16.0	15.1
2003	10735	205	22.5	17.7	16.2	14.7



2003 TRAFFIC DATA

	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT
January	6876	64	7334	68
February	7337	68	7949	74
March	8492	79	9468	88
April	8828	82	9845	92
May	10093	94	10870	101
June	12006	112	13127	122
July	12909	120	14102	131
August	12940	121	14329	133
September	10786	100	11837	110
October	9845	92	10918	102
November	9558	89	10268	96
December	8062	75	8775	82

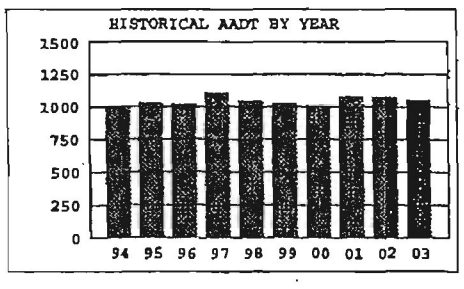
Classification Breakdown	Percent of ADT
Passenger Cars	26.2
Other 2 axle 4 tire vehicles	33.4
Single Unit 2 axle 6 tire	3.9
Single Unit 3 axle	0.5
Single Unit 4 axle or more	0.0
Single Trailer Truck 4 axle or less	0.2
Single Trailer Truck 5 axle	27.4
Single Trailer Truck 6 axle or more	3.4
Dbl-Trailer Truck 5 axle or less	0.3
Dbl-Trailer Truck 6 axle	0.5
Dbl-Trailer Truck 7 axle or more	2.2
Triple Trailer Trucks	1.3
Buses	0.4
Motorcycles & Scooters	0.3

Location: US 26 MP 131.40, JOHN DAY HIGHWAY, NO. 5
1.9 miles east of Dayville

Recorder: DAYVILLE, 12-003
Installed: October, 1957

HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent_of_ADT Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
1994	1004	194	21.4	18.5	16.2	15.4
1995	1031	196	21.2	17.6	15.7	15.0
1996	1021	186	21.2	16.2	14.9	14.3
1997	1104	200	18.9	16.9	16.0	15.3
1998	1049	207	22.2	17.7	16.5	15.1
1999	1030	212	20.2	18.5	16.3	15.6
2000	1009	216	21.8	18.3	16.6	16.1
2001	1073	207	27.5	19.7	17.1	15.9
2002	1073	216	30.1	19.2	16.5	15.2
2003	1052	***	****	****	****	****



2003 TRAFFIC DATA

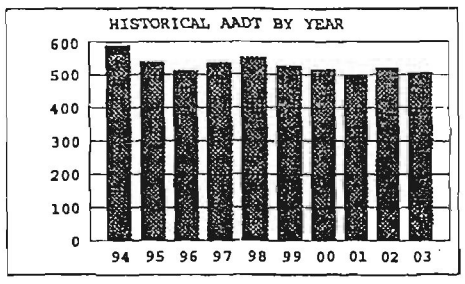
	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT
January	716	68	707	67
February	811	77	792	75
March	800	76	810	77
April	880	84	880	84
May	1150	109	1200	114
June	1333	127	1366	130
July	1305	124	1422	135
August	1203	114	1315	125
September	1300	124	1400	133
October	1110	106	1154	110
November	892	85	917	87
December	681	65	666	63

Classification Breakdown	Percent of ADT
Passenger Cars	34.1
Other 2 axle 4 tire vehicles	52.7
Single Unit 2 axle 6 tire	3.1
Single Unit 3 axle	2.5
Single Unit 4 axle or more	0.2
Single Trailer Truck 4 axle or less	0.0
Single Trailer Truck 5 axle	3.0
Single Trailer Truck 6 axle or more	1.1
Dbl-Trailer Truck 5 axle or less	0.0
Dbl-Trailer Truck 6 axle	1.0
Dbl-Trailer Truck 7 axle or more	1.3
Triple Trailer Trucks	0.0
Buses	0.7
Motorcycles & Scooters	0.3

Location: US 395 MP 89.20, PENDLETON-JOHN DAY HIGHWAY, NO. 2 Recorder: LONG CREEK, 12-006
0.5 mile north of Long Creek Installed: October, 1957

HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent_of_ADT Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
1994	588	163	17.3	13.9	13.3	12.6
1995	537	226	20.9	17.7	15.5	14.3
1996	512	179	18.0	15.1	14.3	13.7
1997	535	180	21.3	16.4	15.7	14.8
1998	552	207	23.5	16.5	15.2	14.3
1999	527	195	19.9	16.3	15.2	14.6
2000	516	192	19.2	15.9	14.7	14.3
2001	498	195	22.1	17.5	16.3	15.7
2002	521	206	24.4	16.3	15.7	15.2
2003	508	181	19.5	16.1	14.8	14.4



2003 TRAFFIC DATA

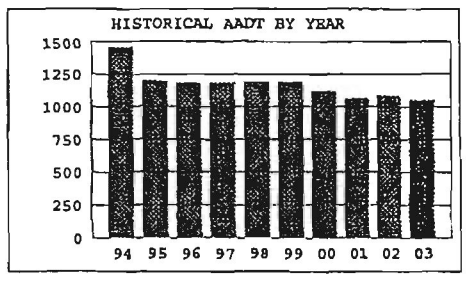
	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT
January	382	75	360	71
February	429	84	411	81
March	455	90	443	87
April	424	83	433	85
May	509	100	532	105
June	605	119	624	123
July	632	124	639	126
August	607	119	622	122
September	626	123	652	128
October	590	116	598	118
November	461	91	475	94
December	316	62	306	60

Classification Breakdown	Percent of ADT
Passenger Cars	21.6
Other 2 axle 4 tire vehicles	69.1
Single Unit 2 axle 6 tire	2.6
Single Unit 3 axle	1.1
Single Unit 4 axle or more	0.1
Single Trailer Truck 4 axle or less	0.0
Single Trailer Truck 5 axle	1.4
Single Trailer Truck 6 axle or more	1.0
Dbl-Trailer Truck 5 axle or less	0.2
Dbl-Trailer Truck 6 axle	2.3
Dbl-Trailer Truck 7 axle or more	0.1
Triple Trailer Trucks	0.1
Buses	0.1
Motorcycles & Scooters	0.3

Location: US 26 MP 175.79, JOHN DAY HIGHWAY, NO. 5 Recorder: PRAIRIE CITY, 12-009
0.2 mile east of Prairie City Installed: January, 1981

HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent_of_ADT Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
1994	1453	***	****	****	****	****
1995	1194	195	17.7	15.7	14.5	13.9
1996	1179	187	16.4	14.5	13.3	12.6
1997	1184	***	****	****	****	****
1998	1189	195	17.7	15.4	14.3	13.4
1999	1185	194	18.3	15.9	14.9	14.3
2000	1112	195	18.9	16.9	15.3	14.8
2001	1062	198	18.7	16.7	15.9	15.3
2002	1084	201	19.8	16.9	16.2	15.0
2003	1051	204	19.8	17.4	16.0	15.2



2003 TRAFFIC DATA

	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT
January	615	59	634	60
February	691	66	713	68
March	674	64	695	66
April	798	76	827	79
May	1089	104	1167	111
June	1453	138	1517	144
July	1409	134	1497	142
August	1312	125	1385	132
September	1332	127	1390	132
October	1211	115	1250	119
November	837	80	863	82
December	665	63	671	64

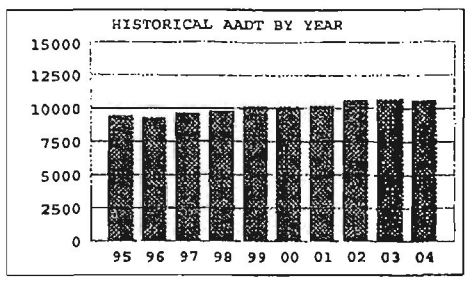
Classification Breakdown	Percent of ADT
Passenger Cars	21.4
Other 2 axle 4 tire vehicles	67.3
Single Unit 2 axle 6 tire	2.8
Single Unit 3 axle	1.3
Single Unit 4 axle or more	0.4
Single Trailer Truck 4 axle or less	0.2
Single Trailer Truck 5 axle	2.2
Single Trailer Truck 6 axle or more	0.9
Dbl-Trailer Truck 5 axle or less	0.2
Dbl-Trailer Truck 6 axle	0.1
Dbl-Trailer Truck 7 axle or more	2.8
Triple Trailer Trucks	0.0
Buses	0.4
Motorcycles & Scooters	0.0

Location: I-84 MP 146.16, COLUMBIA RIVER HIGHWAY, NO. 2
1 mile west of Heppner Highway, No. 52, OR 74

Recorder: ARLINGTON, 11-008
Installed: September, 1957

HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent_of_ADT Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
1995	9453	199	22.9	17.1	14.9	14.5
1996	9273	185	18.9	15.0	13.9	13.3
1997	9629	206	22.4	18.4	16.1	15.0
1998	9781	196	22.2	17.3	15.8	14.7
1999	10138	193	22.0	17.0	15.4	14.6
2000	10097	197	18.2	15.6	14.6	14.1
2001	10196	210	24.3	16.9	15.7	14.6
2002	10619	207	23.5	17.5	16.0	15.1
2003	10735	205	22.5	17.7	16.2	14.7
2004	10649	***	****	****	****	****



2004 TRAFFIC DATA

	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT
January	5735	54	6232	59
February	7474	70	7950	75
March	8700	82	9800	92
April	9400	88	10100	95
May	10100	95	10800	101
June	11000	103	12100	114
July	13900	131	14200	133
August	13300	125	14400	135
September	10800	101	11900	112
October	9900	93	11000	103
November	9900	93	10500	99
December	8100	76	8800	83

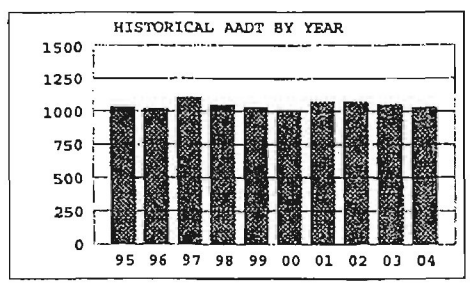
Classification Breakdown	Percent of ADT
Passenger Cars	26.2
Other 2 axle 4 tire vehicles	33.4
Single Unit 2 axle 6 tire	3.9
Single Unit 3 axle	0.5
Single Unit 4 axle or more	0.0
Single Trailer Truck 4 axle or less	0.2
Single Trailer Truck 5 axle	27.4
Single Trailer Truck 6 axle or more	3.4
Dbl-Trailer Truck 5 axle or less	0.3
Dbl-Trailer Truck 6 axle	0.5
Dbl-Trailer Truck 7 axle or more	2.2
Triple Trailer Trucks	1.3
Buses	0.4
Motorcycles & Scooters	0.3

Location: US 26 MP 131.40, JOHN DAY HIGHWAY, NO. 5
1.9 miles east of Dayville

Recorder: DAYVILLE, 12-003
Installed: October, 1957

HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent_of_ADT Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
1995	1031	196	21.2	17.6	15.7	15.0
1996	1021	186	21.2	16.2	14.9	14.3
1997	1104	200	18.9	16.9	16.0	15.3
1998	1049	207	22.2	17.7	16.5	15.1
1999	1030	212	20.2	18.5	16.3	15.6
2000	1009	216	21.8	18.3	16.6	16.1
2001	1073	207	27.5	19.7	17.1	15.9
2002	1073	216	30.1	19.2	16.5	15.2
2003	1052	***	****	****	****	****
2004	1031	191	19.4	15.7	14.6	14.2



2004 TRAFFIC DATA

	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT
January	598	58	589	57
February	712	69	714	69
March	855	83	882	86
April	915	89	925	90
May	1050	102	1100	107
June	1300	126	1350	131
July	1350	131	1450	141
August	1174	114	1259	122
September	1237	120	1308	127
October	1051	102	1102	107
November	945	92	946	92
December	788	76	742	72

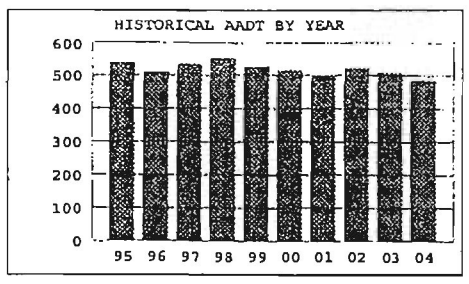
Classification Breakdown	Percent of ADT
Passenger Cars	34.1
Other 2 axle 4 tire vehicles	52.7
Single Unit 2 axle 6 tire	3.1
Single Unit 3 axle	2.5
Single Unit 4 axle or more	0.2
Single Trailer Truck 4 axle or less	0.0
Single Trailer Truck 5 axle	3.0
Single Trailer Truck 6 axle or more	1.1
Dbl-Trailer Truck 5 axle or less	0.0
Dbl-Trailer Truck 6 axle	1.0
Dbl-Trailer Truck 7 axle or more	1.3
Triple Trailer Trucks	0.0
Buses	0.7
Motorcycles & Scooters	0.3

Location: US 395 MP 89.20, PENDLETON-JOHN DAY HWY, NO. 28
0.5 mile north of Long Creek

Recorder: LONG CREEK, 12-006
Installed: October, 1957

HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent_of_ADT: Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
1995	537	226	20.9	17.7	15.5	14.3
1996	512	179	18.0	15.1	14.3	13.7
1997	535	180	21.3	16.4	15.7	14.8
1998	552	207	23.5	16.5	15.2	14.3
1999	527	195	19.9	16.3	15.2	14.6
2000	516	192	19.2	15.9	14.7	14.3
2001	498	195	22.1	17.5	16.3	15.7
2002	521	206	24.4	16.3	15.7	15.2
2003	508	181	19.5	16.1	14.8	14.4
2004	485	197	19.0	15.7	14.6	13.8



2004 TRAFFIC DATA

	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT
January	278	57	278	57
February	311	64	314	65
March	405	84	419	86
April	444	92	450	93
May	490	101	520	107
June	600	124	620	128
July	630	130	640	132
August	585	121	591	122
September	607	125	634	131
October	568	117	580	120
November	453	93	458	94
December	344	71	321	66

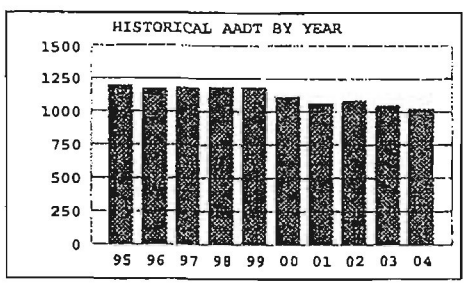
Classification Breakdown	Percent of ADT
Passenger Cars	21.6
Other 2 axle 4 tire vehicles	69.1
Single Unit 2 axle 6 tire	2.6
Single Unit 3 axle	1.1
Single Unit 4 axle or more	0.1
Single Trailer Truck 4 axle or less	0.0
Single Trailer Truck 5 axle	1.4
Single Trailer Truck 6 axle or more	1.0
Dbl-Trailer Truck 5 axle or less	0.2
Dbl-Trailer Truck 6 axle	2.3
Dbl-Trailer Truck 7 axle or more	0.1
Triple Trailer Trucks	0.1
Buses	0.1
Motorcycles & Scooters	0.3

Location: US 26 MP 175.79, JOHN DAY HIGHWAY, NO. 5
0.2 mile east of Prairie City

Recorder: PRAIRIE CITY, 12-009
Installed: January, 1981

HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent_of_ADT: Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
1995	1194	195	17.7	15.7	14.5	13.9
1996	1179	187	16.4	14.5	13.3	12.6
1997	1184	***	****	****	****	****
1998	1189	195	17.7	15.4	14.3	13.4
1999	1185	194	18.3	15.9	14.9	14.3
2000	1112	195	18.9	16.9	15.3	14.8
2001	1062	198	18.7	16.7	15.9	15.3
2002	1084	201	19.8	16.9	16.2	15.0
2003	1051	204	19.8	17.4	16.0	15.2
2004	1025	201	19.9	16.4	15.7	15.2



2004 TRAFFIC DATA

	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT
January	581	57	586	57
February	696	68	709	69
March	752	73	782	76
April	827	81	862	84
May	982	96	1075	105
June	1247	122	1302	127
July	1479	144	1487	145
August	1345	131	1370	134
September	1386	135	1433	140
October	1115	109	1131	110
November	873	85	894	87
December	678	66	665	65

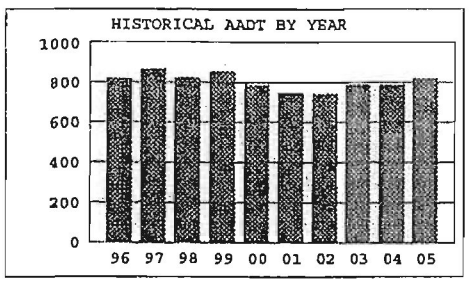
Classification Breakdown	Percent of ADT
Passenger Cars	21.4
Other 2 axle 4 tire vehicles	67.3
Single Unit 2 axle 6 tire	2.8
Single Unit 3 axle	1.3
Single Unit 4 axle or more	0.4
Single Trailer Truck 4 axle or less	0.2
Single Trailer Truck 5 axle	2.2
Single Trailer Truck 6 axle or more	0.9
Dbl-Trailer Truck 5 axle or less	0.2
Dbl-Trailer Truck 6 axle	0.1
Dbl-Trailer Truck 7 axle or more	2.8
Triple Trailer Trucks	0.0
Buses	0.4
Motorcycles & Scooters	0.0

Location: ORE19 MP 6.30, JOHN DAY HIGHWAY, NO. 5
4.2 miles south of Arlington

Recorder: SHUTLER, 11-007
Installed: April, 1957

HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent_of_ADT Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
1996	820	165	14.3	12.8	12.3	12.0
1997	866	167	17.3	12.8	12.4	12.0
1998	822	146	14.4	12.4	11.8	11.6
1999	855	155	13.6	12.3	11.9	11.6
2000	788	161	14.3	12.8	12.2	11.9
2001	749	163	15.9	13.5	12.6	12.3
2002	744	153	21.6	12.8	12.1	11.7
2003	787	149	14.6	13.3	12.6	12.2
2004	787	163	15.6	12.8	12.3	12.1
2005	819	157	16.7	13.3	12.8	12.6



2005 TRAFFIC DATA

	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT
January	816	100	656	80
February	911	111	731	89
March	1015	124	821	100
April	1003	122	805	98
May	1058	129	866	106
June	1084	132	890	109
July	1134	138	924	113
August	1096	134	885	108
September	1060	129	878	107
October	1076	131	889	109
November	952	116	775	95
December	900	110	710	87

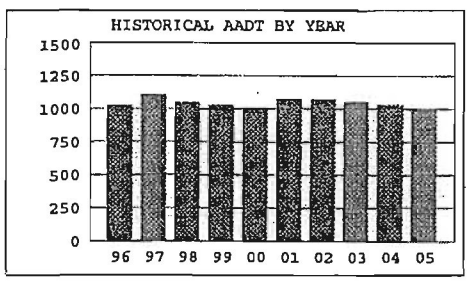
Classification Breakdown	Percent of ADT
Passenger Cars	27.5
Other 2 axle 4 tire vehicles	37.5
Single Unit 2 axle 6 tire	1.3
Single Unit 3 axle	1.1
Single Unit 4 axle or more	0.1
Single Trailer Truck 4 axle or less	0.3
Single Trailer Truck 5 axle	1.6
Single Trailer Truck 6 axle or more	29.9
Dbl-Trailer Truck 5 axle or less	0.0
Dbl-Trailer Truck 6 axle	0.0
Dbl-Trailer Truck 7 axle or more	0.0
Triple Trailer Trucks	0.0
Buses	0.7
Motorcycles & Scooters	0.0

Location: US26 MP 131.40, JOHN DAY HIGHWAY, NO. 5
1.9 miles east of Dayville

Recorder: DAYVILLE, 12-003
Installed: October, 1957

HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent_of_ADT Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
1996	1021	186	21.2	16.2	14.9	14.3
1997	1104	200	18.9	16.9	16.0	15.3
1998	1049	207	22.2	17.7	16.5	15.1
1999	1030	212	20.2	18.5	16.3	15.6
2000	1009	216	21.8	18.3	16.6	16.1
2001	1073	207	27.5	19.7	17.1	15.9
2002	1073	216	30.1	19.2	16.5	15.2
2003	1052	***	****	****	****	****
2004	1031	191	19.4	15.7	14.6	14.2
2005	997	222	32.4	19.1	17.3	16.5



2005 TRAFFIC DATA

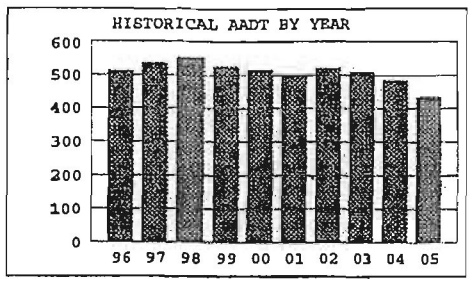
	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT
January	752	75	705	71
February	850	85	810	81
March	793	80	826	83
April	791	79	801	80
May	982	98	1033	104
June	1174	118	1238	124
July	1276	128	1384	139
August	1171	117	1270	127
September	1238	124	1293	130
October	1023	103	1057	106
November	872	87	860	86
December	744	75	686	69

Classification Breakdown	Percent of ADT
Passenger Cars	34.1
Other 2 axle 4 tire vehicles	52.7
Single Unit 2 axle 6 tire	3.1
Single Unit 3 axle	2.5
Single Unit 4 axle or more	0.2
Single Trailer Truck 4 axle or less	0.0
Single Trailer Truck 5 axle	3.0
Single Trailer Truck 6 axle or more	1.1
Dbl-Trailer Truck 5 axle or less	0.0
Dbl-Trailer Truck 6 axle	1.0
Dbl-Trailer Truck 7 axle or more	1.3
Triple Trailer Trucks	0.0
Buses	0.7
Motorcycles & Scooters	0.3

Location: US395 MP 89.20, PENDLETON-JOHN DAY HIGHWAY, NO. 28 Recorder: LONG CREEK, 12-006
0.5 mile north of Long Creek Installed: October, 1957

HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent_of_ADT Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
1996	512	179	18.0	15.1	14.3	13.7
1997	535	180	21.3	16.4	15.7	14.8
1998	552	207	23.5	16.5	15.2	14.3
1999	527	195	19.9	16.3	15.2	14.6
2000	516	192	19.2	15.9	14.7	14.3
2001	498	195	22.1	17.5	16.3	15.7
2002	521	206	24.4	16.3	15.7	15.2
2003	508	181	19.5	16.1	14.8	14.4
2004	485	197	19.0	15.7	14.6	13.8
2005	433	205	18.9	16.9	15.7	15.2



2005 TRAFFIC DATA

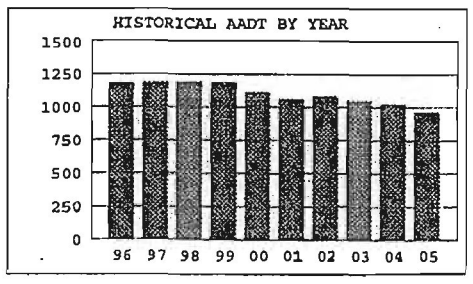
	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT
January	276	64	267	62
February	326	75	323	75
March	382	88	385	89
April	370	85	383	88
May	430	99	460	106
June	492	114	526	121
July	565	130	580	134
August	532	123	560	129
September	554	128	595	137
October	459	106	480	111
November	387	89	389	90
December	262	61	247	57

Classification Breakdown	Percent of ADT
Passenger Cars	21.6
Other 2 axle 4 tire vehicles	69.1
Single Unit 2 axle 6 tire	2.6
Single Unit 3 axle	1.1
Single Unit 4 axle or more	0.1
Single Trailer Truck 4 axle or less	0.0
Single Trailer Truck 5 axle	1.4
Single Trailer Truck 6 axle or more	1.0
Dbl-Trailer Truck 5 axle or less	0.2
Dbl-Trailer Truck 6 axle	2.3
Dbl-Trailer Truck 7 axle or more	0.1
Triple Trailer Trucks	0.1
Buses	0.1
Motorcycles & Scooters	0.3

Location: *US26 MP 175.79, JOHN DAY HIGHWAY, NO. 5* Recorder: PRAIRIE CITY, 12-009
0.2 mile east of Prairie City Installed: January, 1981

HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent_of_ADT Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
1996	1179	187	16.4	14.5	13.3	12.6
1997	1184	***	****	****	****	****
1998	1189	195	17.7	15.4	14.3	13.4
1999	1185	194	18.3	15.9	14.9	14.3
2000	1112	195	18.9	16.9	15.3	14.8
2001	1062	198	18.7	16.7	15.9	15.3
2002	1084	201	19.8	16.9	16.2	15.0
2003	1051	204	19.8	17.4	16.0	15.2
2004	1025	201	19.9	16.4	15.7	15.2
2005	966	211	20.4	17.3	15.6	15.0



2005 TRAFFIC DATA

	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT
January	588	61	591	61
February	664	69	684	71
March	707	73	736	76
April	790	82	821	85
May	996	103	1087	113
June	1124	116	1169	121
July	1266	131	1332	138
August	1265	131	1305	135
September	1225	127	1281	133
October	1046	108	1060	110
November	837	87	823	85
December	768	80	700	72

Classification Breakdown	Percent of ADT
Passenger Cars	21.4
Other 2 axle 4 tire vehicles	67.3
Single Unit 2 axle 6 tire	2.8
Single Unit 3 axle	1.3
Single Unit 4 axle or more	0.4
Single Trailer Truck 4 axle or less	0.2
Single Trailer Truck 5 axle	2.2
Single Trailer Truck 6 axle or more	0.9
Dbl-Trailer Truck 5 axle or less	0.2
Dbl-Trailer Truck 6 axle	0.1
Dbl-Trailer Truck 7 axle or more	2.8
Triple Trailer Trucks	0.0
Buses	0.4
Motorcycles & Scooters	0.0

TPAU would like to see simplify the future growth item. Items to discuss: Counts (Missing), Peak Hour Factor (Clarification), Seasonal Factor (Clarification), and Annual Future Growth Rate (Change). Software Use and Inputs is also needed (Clarification).

1. Counts (Missing) Please add counts to Attachment B for documentation.
We only provided a summary in Attachment B. The full count summary sheets (which will obviously be available throughout the project) are attached for your reference.

2. Peak Hour Factor (Clarification)
What PHF will be used where? System vs intersection.
Per HCM and APM preferred methodology, individual intersection PHFs were calculated. As stated in the previous memo, these ranged from 0.87 to 0.97.

3. Seasonal Factor (Clarification)
Seasonal Factor: 1.09

I thought this was the result of using "summer". Attachment C seems to assume summer <2500, with study area ADT 6000 - 6500 (2nd sheet). On next sheet I see summer calculation equaling 1.09.
Per pages 2 and 3 of the memo, the 1.09 is calculated from the "summer" category. We did not use the "summer <2500" category for reasons already documented. Regarding the reference to "summer <2500" in Attachment C, it had no bearing on the outcome as we did not find a representative ATR with an ADT within +/-10% of the 6,000 ADT within the study area.

4. Annual Growth Rate / Future Growth Rate (Change)

Annual Growth Rate: 0.09% = 0.0009

Quoted from Through Traffic Growth section:

"ODOT's Future Year Volume Tables for these locations either do not have reliable RSQs (all values are less than 0.50) or are projecting insignificant growth rates."

Was this future year volume table used? This could be placed in an attachment.

http://www.oregon.gov/ODOT/TD/TP/docs/TADR/2027FVT.pdf

0.8487 RSQ value seems above 0.50 and yields a growth rate over the ATR 0.09%.
Per our previous correspondence (see e-mail chain dated 8/27/08), you asked for confirmation that we were using the latest version of the Future Year Volume Tables (which happened to be the version with the 2026 horizon year). The link above is now referencing a newer version with 2027 as the horizon year. As such, our numbers will not be consistent.

Regarding the 0.8487 RSQ... You are correct, that number (which was not available to us in the 2026 version) does have a good RSQ and represents an annual growth rate of 0.9% per year. As such, we will utilize an annual growth rate of 0.9% per year for background through traffic growth.

Bicycle and pedestrian issues are main issues to be looked at, correct? Cumulative analysis may not be needed for just bicycle and pedestrian issues; there may be a simpler approach. One

percent (both through and local growth) seems reasonable when looking at points west of Old John Day Highway and north of Washington Street.
Agree, however, please clarify as our mapping does not have Washington Street listed in the City.

5. Software Use and Inputs (Clarification)

This methodology does not cover software use: Synchro, HCS..., nor inputs: Sat flow...
The only signalized intersection is the US 26/US 395 intersection. Although the focus of this project is not detailed intersection operations (for which Synchro is a excellent tool) we will use this program as it is the preferred operations software package. All other intersections are unsignalized, and as such, we will use the Highway Capacity Software. Rather than list out all input parameters, we will be consistent with the requirements and procedures listed in the latest version of the ODOT APM.

Thank you,

Joseph Lafayette Meek *III, P.E.*
Transportation Analyst
ODOT, Transportation Planning Analysis Unit
555 13th Street NE, Suite 2
Salem, OR 97301-4178
503-986-4112; Fax: 503-986-4174
joseph.l.meek@odot.state.or.us

Appendix C

Existing & Future Traffic Operations Summary Worksheets

Kittelson & Associates, Inc. -- Project # 9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
PM Peak Hour Existing Conditions

Scenario Report

Scenario:	Peak
Command:	Default Command
Volume:	Peak
Geometry:	Peak
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Kittelson & Associates, Inc. -- Project # 9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
PM Peak Hour Existing Conditions

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 Hwy 26 / Patterson Bridge. Roa	B	12.3	0.000	B	12.3	0.000	+ 0.000 D/V
# 2 Hwy 26 / 3rd Ave (West)	C	20.8	0.000	C	20.8	0.000	+ 0.000 D/V
# 3 Hwy 26 / Canton St.	C	16.2	0.000	C	16.2	0.000	+ 0.000 D/V
# 4 Hwy 26 / Bridge St.	C	15.5	0.000	C	15.5	0.000	+ 0.000 D/V
# 5 Hwy 26 / Canyon Blvd	B	13.2	0.479	B	13.2	0.479	+ 0.000 D/V
# 6 Hwy 26 / 3rd Street (East)	B	10.4	0.000	B	10.4	0.000	+ 0.000 D/V
# 7 Canyon Blvd / 4th Ave (South)	B	13.8	0.000	B	13.8	0.000	+ 0.000 D/V

Kittelson & Associates, Inc. -- Project # 9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
PM Peak Hour Existing Conditions

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Hwy 26 / Patterson Bridge. Road

Average Delay (sec/veh): 2.1 Worst Case Level Of Service: B[12.3]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	0	0 0	0	0	0	0 1!	0	0	0	1 0	0	0	0	0 0	1	0
Volume Module:																
Base Vol:	0	0	0	40	0	55	5	205	0	0	245	25				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	0	0	40	0	55	5	205	0	0	245	25				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84				
PHF Volume:	0	0	0	48	0	65	6	244	0	0	292	30				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
FinalVolume:	0	0	0	48	0	65	6	244	0	0	292	30				
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx	564	564	308	322	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	491	438	737	1199	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	488	435	737	1198	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	0.10	0.00	0.09	0.00	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*				
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT				
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	607	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.7	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	12.3	xxxxx	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*				
ApproachDel:	xxxxxx			12.3			xxxxxx			xxxxxx						
ApproachLOS:	*			B			*			*						

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. -- Project # 9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
PM Peak Hour Existing Conditions

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #1 Hwy 26 / Patterson Bridge. Road

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	0%	9%	9%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	1	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet
Time Period: 0.25 hour				

Upstream Signals:																
Link Index:													#8			
Dist(miles):													0.090	(	0.180)	
Speed (mph):													35.00	(	35.00)	
SignalIndex:													#5			
Cycle Time:															0	secs
InitVolume:													0	0		
Saturation:													0	0		
ArrivalType:													0	0		
G/C:													0.00	0.00		
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection																
P:													0.000	0.000		
gq1:													0.00	0.00		
gq2:													0.00	0.00		
gq:													0.00	0.00		
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons																
alpha:													0.000			
beta:													0.000			
ta (secs):													0.000			
F:													0.000			
f:													0.000	0.000		
vcmax:													0	0		
vcg:													0	0		
vcmin:													0	0		
tp:													0.0	0.0		
p:														0.000		
*** Computation 3: Platoon Event Periods																
pdom/psubo:													0.000/0.000/Unconstrained			
*** Computation 4: Conflicting Flows During Each Unblocked Period																
InitCnflVol:	595	578	244	564	564	308	322	xxxxx	xxxxx	0	xxxxx	xxxxx				
AdjCnflVol:	595	578	244	564	564	308	322	xxxxx	xxxxx	0	xxxxx	xxxxx				
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx				
ConflictVol:	595	578	244	564	564	308	322	xxxxx	xxxxx	0	xxxxx	xxxxx				
*** Computation 5: Capacity for Subject Movement During Unblocked Period																
InitPotCap:	419	429	800	491	438	737	1199	xxxxx	xxxxx	900	xxxxx	xxxxx				
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx				

Kittelson & Associates, Inc. -- Project # 9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
PM Peak Hour Existing Conditions

Potent Cap.: 419 429 800 491 438 737 1199 xxxxx xxxxx 900 xxxxx xxxxx

Kittelson & Associates, Inc. -- Project # 9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
PM Peak Hour Existing Conditions

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 Hwy 26 / 3rd Ave (West)

Average Delay (sec/veh): 2.8 Worst Case Level Of Service: C[20.8]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	0	0 0	0	0	1!	0 0	0	1	0	0 0	0	0	0	1 0
Volume Module:																
Base Vol:	0	0	0		80	0	5		65	320	0		0	350		10
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
Initial Bse:	0	0	0		80	0	5		65	320	0		0	350		10
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
PHF Adj:	0.93	0.93	0.93		0.93	0.93	0.93		0.93	0.93	0.93		0.93	0.93		0.93
PHF Volume:	0	0	0		86	0	5		70	344	0		0	376		11
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0		0
FinalVolume:	0	0	0		86	0	5		70	344	0		0	376		11
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx		6.4	6.5	6.2		4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx		3.5	4.0	3.3		2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx		866	866	382		387	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Potent Cap.:	xxxx	xxxx	xxxxx		324	291	666		1161	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Move Cap.:	xxxx	xxxx	xxxxx		308	273	666		1161	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Volume/Cap:	xxxx	xxxx	xxxx		0.28	0.00	0.01		0.06	xxxx	xxxx		xxxx	xxxx	xxxx	
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.2	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Control Del:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		8.3	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
LOS by Move:	*	*	*		*	*	*		A	*	*		*	*	*	
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	318	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	1.2	xxxxx		0.2	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	20.8	xxxxx		8.3	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shared LOS:	*	*	*		*	C	*		A	*	*		*	*	*	
ApproachDel:	xxxxxx					20.8			xxxxxx				xxxxxx			
ApproachLOS:	*					C			*				*			

Note: Queue reported is the number of cars per lane.

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Kittelson & Associates, Inc. -- Project # 9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
PM Peak Hour Existing Conditions

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

****

Intersection #2 Hwy 26 / 3rd Ave (West)

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:		2%			2%			4%			3%	
Grade:		0%			0%			0%			0%	
Peds/Hour:		0			0			0			0	

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Upstream Signals:												
Link Index:											#8	
Dist(miles):											0.090	(0.180)
Speed (mph):											35.00	(35.00)
SignalIndex:											#5	
Cycle Time:												0 secs
InitVolume:										0	0	
Saturation:										0	0	
ArrivalType:										0	0	
G/C:										0.00	0.00	
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:										0.000	0.000	
gq1:										0.00	0.00	
gq2:										0.00	0.00	
gq:										0.00	0.00	
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:											0.000	
beta:											0.000	
ta (secs):											0.000	
F:											0.000	
f:										0.000	0.000	
vcmax:										0	0	
vcg:										0	0	
vcmin:										0	0	
tp:										0.0	0.0	
p:											0.000	
*** Computation 3: Platoon Event Periods												
pdom/psubo:									0.000/0.000/Unconstrained			
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	868	871	344	866	866	382	387	xxxxx	xxxxx	0	xxxxx	xxxxx
AdjCnflVol:	868	871	344	866	866	382	387	xxxxx	xxxxx	0	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	868	871	344	866	866	382	387	xxxxx	xxxxx	0	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	273	289	699	324	291	666	1161	xxxxx	xxxxx	900	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx

Kittelson & Associates, Inc. -- Project # 9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
PM Peak Hour Existing Conditions

Potent Cap.:	273	289	699	324	291	666	1161	xxxxx	xxxxx	900	xxxxx	xxxxx

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Kittelson & Associates, Inc. -- Project # 9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
PM Peak Hour Existing Conditions

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Hwy 26 / Canton St.

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: C[16.2]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	0	0 1!	0	0	0	0 1!	0	0	0	0 1!	0	0	0	0 1!	0	0
Volume Module:																
Base Vol:	2	1	1		10	1	20		10	385	5		2	325	25	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	2	1	1		10	1	20		10	385	5		2	325	25	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.90	0.90	0.90		0.90	0.90	0.90		0.90	0.90	0.90		0.90	0.90	0.90	
PHF Volume:	2	1	1		11	1	22		11	428	6		2	361	28	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
FinalVolume:	2	1	1		11	1	22		11	428	6		2	361	28	
Critical Gap Module:																
Critical Gp:	7.1	6.5	6.2		7.1	6.5	6.2		4.2	xxxx	xxxxx		4.2	xxxx	xxxxx	
FollowUpTim:	3.5	4.0	3.3		3.5	4.0	3.3		2.3	xxxx	xxxxx		2.3	xxxx	xxxxx	
Capacity Module:																
Cnflict Vol:	844	851	431		838	840	380		394	xxxx	xxxxx		433	xxxx	xxxxx	
Potent Cap.:	285	299	629		288	304	671		1138	xxxx	xxxxx		1105	xxxx	xxxxx	
Move Cap.:	273	295	629		283	299	669		1133	xxxx	xxxxx		1105	xxxx	xxxxx	
Volume/Cap:	0.01	0.00	0.00		0.04	0.00	0.03		0.01	xxxx	xxxx		0.00	xxxx	xxxx	
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.0	xxxx	xxxxx		0.0	xxxx	xxxxx	
Control Del:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		8.2	xxxx	xxxxx		8.3	xxxx	xxxxx	
LOS by Move:	*	*	*		*	*	*		A	*	*		A	*	*	
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared Cap.:	xxxx	325	xxxxx		xxxx	452	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
SharedQueue:	xxxxx	0.0	xxxxx		xxxxx	0.2	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shrd ConDel:	xxxxx	16.2	xxxxx		xxxxx	13.6	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shared LOS:	*	C	*		*	B	*		*	*	*		*	*	*	
ApproachDel:		16.2				13.6				xxxxxx				xxxxxx		
ApproachLOS:		C				B				*				*		

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. -- Project # 9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
PM Peak Hour Existing Conditions

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #3 Hwy 26 / Canton St.

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
HevVeh:	0%				0%				7%				6%			
Grade:	0%				0%				0%				0%			
Peds/Hour:	0				5				0				0			
Pedestrian Walk Speed: 4.00 feet/sec																
LaneWidth:	12 feet				12 feet				12 feet				12 feet			
Time Period: 0.25 hour																
Upstream Signals:																
Link Index:													#8			
Dist(miles):													0.090	(	0.180)	
Speed (mph):													35.00	(	35.00)	
SignalIndex:													#5			
Cycle Time:															0	secs
InitVolume:													0		0	
Saturation:													0		0	
ArrivalType:													0		0	
G/C:													0.00		0.00	
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection																
P:													0.000		0.000	
gq1:													0.00		0.00	
gq2:													0.00		0.00	
gq:													0.00		0.00	
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons																
alpha:															0.000	
beta:															0.000	
ta (secs):															0.000	
F:															0.000	
f:													0.000		0.000	
vcmax:													0		0	
vcg:													0		0	
vcmin:													0		0	
tp:													0.0		0.0	
p:															0.000	
*** Computation 3: Platoon Event Periods																
pdom/psubo:														0.000/0.000/Unconstrained		
*** Computation 4: Conflicting Flows During Each Unblocked Period																
InitCnflVol:	844	851	431	838	840	380	394	xxxxx	xxxxx	433	xxxxx	xxxxx				
AdjCnflVol:	844	851	431	838	840	380	394	xxxxx	xxxxx	433	xxxxx	xxxxx				
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx				
ConflictVol:	844	851	431	838	840	380	394	xxxxx	xxxxx	433	xxxxx	xxxxx				
*** Computation 5: Capacity for Subject Movement During Unblocked Period																
InitPotCap:	285	299	629	288	304	671	1138	xxxxx	xxxxx	1105	xxxxx	xxxxx				
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx				

Potent Cap.:	285	299	629	288	304	671	1138	xxxxx	xxxxx	1105	xxxxx	xxxxx

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 Hwy 26 / Bridge St.

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: C[15.5]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	1	1	1	15	5	15	15	370	10	1	335	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	1	1	15	5	15	15	370	10	1	335	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	1	1	1	16	5	16	16	385	10	1	349	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	1	1	16	5	16	16	385	10	1	349	52
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.2	6.6	6.3	4.2	xxxx	xxxxx	4.2	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.6	4.1	3.4	2.3	xxxx	xxxxx	2.3	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	819	841	406	813	820	383	408	xxxx	xxxxx	405	xxxx	xxxxx
Potent Cap.:	296	303	650	292	305	656	1124	xxxx	xxxxx	1133	xxxx	xxxxx
Move Cap.:	280	295	641	285	297	651	1118	xxxx	xxxxx	1124	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	0.05	0.02	0.02	0.01	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.3	xxxx	xxxxx	8.2	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	352	xxxxx	xxxx	378	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.0	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	15.3	xxxxx	xxxxx	15.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	C	*	*	*	*	*	*	*
ApproachDel:		15.3			15.5			xxxxxx			xxxxxx	
ApproachLOS:		C			C			*			*	

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. -- Project # 9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
PM Peak Hour Existing Conditions

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

****

Intersection #4 Hwy 26 / Bridge St.

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	0%			6%			7%			6%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	9			7			1			6		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:										#8		
Dist(miles):										0.090		
Speed (mph):										35.00		
SignalIndex:										#5		
Cycle Time:										60 secs		
InitVolume:										0	125	
Saturation:										0	1050	
ArrivalType:										0	3	
G/C:										0.00	0.30	
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:										0.000	0.302	
gq1:										0.00	4.98	
gq2:										0.00	0.67	
gq:										0.00	5.66	
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:										0.550		
beta:										0.645		
ta (secs):										9.257		
F:										0.233		
f:										1.000	1.000	
vcmax:										0	817	
vcg:										0	150	
vcmin:										1000	1000	
tp:										0.0	0.0	
p:										0.000		
*** Computation 3: Platoon Event Periods												
pdom/psubo:										0.000/0.000/Unconstrained		
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	819	841	406	813	820	383	408	xxxxx	xxxxx	405	xxxxx	xxxxx
AdjCnflVol:	819	841	406	813	820	383	408	xxxxx	xxxxx	405	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.00	1.00	1.000	1.00	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	819	841	406	813	820	383	408	xxxxx	xxxxx	405	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	296	303	650	292	305	656	1124	xxxxx	xxxxx	1133	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx

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Transportation System Plan Update, Street Connectivity -- John Day, Oregon
PM Peak Hour Existing Conditions

Potent Cap.:	296	303	650	292	305	656	1124	xxxxx	xxxxx	1133	xxxxx	xxxxx

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Kittelson & Associates, Inc. -- Project # 9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
PM Peak Hour Existing Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Hwy 26 / Canyon Blvd

Cycle (sec):	60	Critical Vol./Cap.(X):	0.479
Loss Time (sec):	8 (Y+R=4.0 sec)	Average Delay (sec/veh):	13.2
Optimal Cycle:	29	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1 0 0 1			0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0		
Volume Module:												
Base Vol:	245	50	45	45	50	15	55	150	180	40	125	15
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	245	50	45	45	50	15	55	150	180	40	125	15
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	261	53	48	48	53	16	59	160	191	43	133	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	261	53	48	48	53	16	59	160	191	43	133	16
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	261	53	48	48	53	16	59	160	191	43	133	16
Saturation Flow Module:												
Sat/Lane:	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Adjustment:	0.66	0.66	0.83	0.77	0.77	0.77	0.86	0.86	0.83	0.86	0.86	0.86
Lanes:	0.83	0.17	1.00	0.41	0.45	0.14	0.27	0.73	1.00	0.22	0.70	0.08
Final Sat.:	964	197	1458	551	612	184	405	1104	1458	336	1050	126
Capacity Analysis Module:												
Vol/Sat:	0.27	0.27	0.03	0.09	0.09	0.09	0.14	0.14	0.13	0.13	0.13	0.13
Crit Moves:		****						****				
Green/Cycle:	0.56	0.56	0.56	0.56	0.56	0.56	0.30	0.30	0.30	0.30	0.30	0.30
Volume/Cap:	0.48	0.48	0.06	0.15	0.15	0.15	0.48	0.48	0.44	0.42	0.42	0.42
Delay/Veh:	8.3	8.3	5.9	6.3	6.3	6.3	17.9	17.9	17.5	17.4	17.4	17.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.3	8.3	5.9	6.3	6.3	6.3	17.9	17.9	17.5	17.4	17.4	17.4
LOS by Move:	A	A	A	A	A	A	B	B	B	B	B	B
HCM2kAvgQ:	4	4	0	1	1	1	4	4	3	3	3	3

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. -- Project # 9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
PM Peak Hour Existing Conditions

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #5 Hwy 26 / Canyon Blvd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0 1 0 0 1			0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0		
Lane Group:	LT	LT	R	LTR	LTR	LTR	LT	LT	R	LTR	LTR	LTR
#LnsInGrps:	1	1	1	1	1	1	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			5			2			3		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	5	5	xxxx	5	5	5	5	5	xxxx	5	5	5
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.95	0.95	0.95	0.98	0.98	0.98	0.97	0.97	0.97
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	1.00	1.00	1.00	xxxx	xxxx	1.00	1.00	1.00	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	1.00	1.00	1.00	xxxx	xxxx	1.00	1.00	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	0.98	0.98	0.98	xxxx	xxxx	0.85	0.99	0.99	0.99
LT Adj:	0.68	0.68	xxxxx	0.82	0.82	0.82	0.88	0.88	xxxxx	0.90	0.90	0.90
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.66	0.66	0.83	0.77	0.77	0.77	0.86	0.86	0.83	0.86	0.86	0.86
Usr Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	0.66	0.66	0.83	0.77	0.77	0.77	0.86	0.86	0.83	0.86	0.86	0.86
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < Actuated > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

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Kittelson & Associates, Inc. -- Project # 9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
PM Peak Hour Existing Conditions

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #5 Hwy 26 / Canyon Blvd

Approach:	North	South	East	West
Cycle Length, C:	60	60	60	60
Actual Green Time Per Lane Group, G:	33.88	33.88	18.12	18.12
Effective Green Time Per Lane Group, g:	33.88	33.88	18.12	18.12
Opposing Effective Green Time, go:	33.88	33.88	18.12	18.12
Number Of Opposing Lanes, No:	1	1	1	1
Number Of Lanes In Lane Group, N:	1	1	1	1
Adjusted Left-Turn Flow Rate, Vlt:	261	48	59	43
Proportion of Left Turns in Lane Group, Plt:	0.83	0.41	0.27	0.22
Proportion of Left Turns in Opp Flow, Plto:	0.41	xxxxxx	0.22	xxxxxx
Left Turns Per Cycle, LTC:	4.34	0.80	0.98	0.71
Adjusted Opposing Flow Rate, Vo:	117	314	191	218
Opposing Flow Per Lane Per Cycle, Volc:	1.95	5.23	3.18	3.63
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	1.00
Lost Time Per Phase, tl:	4.00	4.00	4.00	4.00
Eff grn until arrival of left-turn car, gf:	0.00	12.07	3.62	5.06
Opposing Queue Ratio, qro:	0.44	0.44	0.70	0.70
Eff grn blocked by opposing queue, gq:	0.00	1.52	4.16	1.77
Eff grn while left turns filter thru, gu:	33.88	21.81	13.96	13.06
Max opposing cars arriving during gq-gf, n:	0.00	xxxxxx	0.27	xxxxxx
Proportion of Opposing Thru & RT cars, ptho:	0.59	xxxxxx	0.78	xxxxxx
Left-turn Saturation Factor, fs:	xxxxxx	0.68	xxxxxx	0.74
Proportion of Left Turns in Shared Lane, pl:	0.83	0.41	0.27	0.22
Through-car Equivalents, ell:	1.58	1.93	1.69	1.74
Single Lane Through-car Equivalents, el2:	1.00	xxxxxx	1.00	xxxxxx
Minimum Left Turn Adjustment Factor, fmin:	0.11	0.08	0.14	0.13
Single Lane Left Turn Adjustment Factor, fm:	0.68	0.82	0.88	0.90
Left Turn Adjustment Factor, flt:	0.68	0.82	0.88	0.90

Kittelson & Associates, Inc. -- Project # 9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
PM Peak Hour Existing Conditions

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #5 Hwy 26 / Canyon Blvd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.56	0.56	0.56	0.56	0.56	0.56	0.30	0.30	0.30	0.30	0.30	0.30
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	3.1	3.1	0.4	0.9	0.9	0.9	3.0	3.0	2.6	2.6	2.6	2.6
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	0.9	0.9	0.1	0.2	0.2	0.2	0.9	0.9	0.8	0.7	0.7	0.7
HCM2KQueue:	4.0	4.0	0.4	1.1	1.1	1.1	3.9	3.9	3.3	3.3	3.3	3.3
70th%Factor:	1.19	1.19	1.20	1.20	1.20	1.20	1.19	1.19	1.19	1.19	1.19	1.19
HCM2k70thQ:	4.8	4.8	0.5	1.3	1.3	1.3	4.6	4.6	4.0	3.9	3.9	3.9
85th%Factor:	1.56	1.56	1.60	1.59	1.59	1.59	1.56	1.56	1.57	1.57	1.57	1.57
HCM2k85thQ:	6.3	6.3	0.7	1.8	1.8	1.8	6.0	6.0	5.2	5.1	5.1	5.1
90th%Factor:	1.73	1.73	1.79	1.78	1.78	1.78	1.73	1.73	1.74	1.74	1.74	1.74
HCM2k90thQ:	6.9	6.9	0.8	2.0	2.0	2.0	6.7	6.7	5.8	5.7	5.7	5.7
95th%Factor:	1.98	1.98	2.09	2.06	2.06	2.06	1.98	1.98	2.00	2.00	2.00	2.00
HCM2k95thQ:	8.0	8.0	0.9	2.3	2.3	2.3	7.7	7.7	6.6	6.5	6.5	6.5
98th%Factor:	2.43	2.43	2.67	2.62	2.62	2.62	2.44	2.44	2.47	2.48	2.48	2.48
HCM2k98thQ:	9.8	9.8	1.1	2.9	2.9	2.9	9.4	9.4	8.2	8.1	8.1	8.1

Kittelson & Associates, Inc. -- Project # 9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
PM Peak Hour Existing Conditions

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

Intersection #5 Hwy 26 / Canyon Blvd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Run Speed:	30 MPH			30 MPH			30 MPH			30 MPH		
NumOfStops:	38.9	7.9	5.4	5.7	6.3	1.9	11.9	32.6	38.5	8.5	26.6	3.2

Name: year 1995 composite fleet
Fuel Consumption: 23.067 pounds
3.737 gallons
Carbon Dioxide: 71.968 pounds
Carbon Monoxide: 5.273 pounds
Hydrocarbons: 0.833 pounds
Nitrogen Oxides: 0.279 pounds

Name: year 2000 composite fleet
Fuel Consumption: 21.146 pounds
3.426 gallons
Carbon Dioxide: 65.975 pounds
Carbon Monoxide: 5.123 pounds
Hydrocarbons: 0.803 pounds
Nitrogen Oxides: 0.247 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Kittelson & Associates, Inc. -- Project # 9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
PM Peak Hour Existing Conditions

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #6 Hwy 26 / 3rd Street (East)

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B(10.4)

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	1!	0	0	0	0	1!	0	0	0	0	1!	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	2	1	2			1	1	10			1	170	2			1	130	1		
Growth Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	2	1	2			1	1	10			1	170	2			1	130	1		
User Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Adj:	0.87	0.87	0.87			0.87	0.87	0.87			0.87	0.87	0.87			0.87	0.87	0.87		
PHF Volume:	2	1	2			1	1	11			1	195	2			1	149	1		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
FinalVolume:	2	1	2			1	1	11			1	195	2			1	149	1		
Critical Gap Module:																				
Critical Gp:	7.1	6.5	6.2			7.1	6.5	6.2			4.1	xxxx	xxxxx			4.1	xxxx	xxxxx		
FollowUpTim:	3.5	4.0	3.3			3.5	4.0	3.3			2.2	xxxx	xxxxx			2.2	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	357	352	197			353	352	150			151	xxxx	xxxxx			198	xxxx	xxxxx		
Potent Cap.:	602	576	850			606	576	902			1431	xxxx	xxxxx			1363	xxxx	xxxxx		
Move Cap.:	592	575	850			603	575	902			1431	xxxx	xxxxx			1363	xxxx	xxxxx		
Volume/Cap:	0.00	0.00	0.00			0.00	0.00	0.01			0.00	xxxx	xxxx			0.00	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			0.0	xxxx	xxxxx			0.0	xxxx	xxxxx		
Control Del:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			7.5	xxxx	xxxxx			7.6	xxxx	xxxxx		
LOS by Move:	*	*	*			*	*	*			A	*	*			A	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx		669	xxxxx		xxxx		828	xxxxx		xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx		0.0	xxxxx		xxxxx		0.1	xxxxx		xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx		10.4	xxxxx		xxxxx		9.4	xxxxx		xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*		B	*		*		A	*		*	*	*			*	*	*		
ApproachDel:			10.4					9.4				xxxxxx					xxxxxx			
ApproachLOS:			B					A				*					*			

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. -- Project # 9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
PM Peak Hour Existing Conditions

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #6 Hwy 26 / 3rd Street (East)

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	0%			0%			2%			4%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
LaneWidth:	12 feet			12 feet			12 feet			12 feet		

Pedestrian Walk Speed: 4.00 feet/sec
Time Period: 0.25 hour

Upstream Signals:		
Link Index:	#9	
Dist(miles):	0.000	
Speed (mph):	0.00	
SignalIndex:	#5	
Cycle Time:	0 secs	
InitVolume:	0	0
Saturation:	0	0
ArrivalType:	0	0
G/C:	0.00	0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection		
P:	0.000	0.000
gq1:	0.00	0.00
gq2:	0.00	0.00
gq:	0.00	0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons		
alpha:	0.000	
beta:	0.000	
ta (secs):	0.000	
F:	0.000	
f:	0.000	0.000
vcmax:	0	0
vcg:	0	0
vcmin:	0	0
tp:	0.0	0.0
p:	0.000	
*** Computation 3: Platoon Event Periods		
pdom/psubo:	0.000/0.000/Unconstrained	

*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	357	352	197	353	352	150	151	xxxxx	xxxxx	198	xxxxx	xxxxx
AdjCnflVol:	357	352	197	353	352	150	151	xxxxx	xxxxx	198	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	357	352	197	353	352	150	151	xxxxx	xxxxx	198	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	602	576	850	606	576	902	1431	xxxxx	xxxxx	1363	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx

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Potent Cap.:	602	576	850	606	576	902	1431	xxxxx	xxxxx	1363	xxxxx	xxxxx

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PM Peak Hour Existing Conditions

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Canyon Blvd / 4th Ave (South)

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[13.8]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0 1!	0	0	0	0 1!	0	0	0	0 1!	0	0	0	0 1!	0	0
Volume Module:																
Base Vol:	5	315	1		10	285	1		5	1	5		1	1	1	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	5	315	1		10	285	1		5	1	5		1	1	1	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.88	0.88	0.88		0.88	0.88	0.88		0.88	0.88	0.88		0.88	0.88	0.88	
PHF Volume:	6	358	1		11	324	1		6	1	6		1	1	1	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
FinalVolume:	6	358	1		11	324	1		6	1	6		1	1	1	
Critical Gap Module:																
Critical Gp:	4.1	xxxx	xxxxx		4.2	xxxx	xxxxx		7.1	6.5	6.2		7.1	6.5	6.2	
FollowUpTim:	2.2	xxxx	xxxxx		2.3	xxxx	xxxxx		3.5	4.0	3.3		3.5	4.0	3.3	
Capacity Module:																
Cnflict Vol:	325	xxxx	xxxxx		359	xxxx	xxxxx		718	718	324		720	718	359	
Potent Cap.:	1218	xxxx	xxxxx		1178	xxxx	xxxxx		342	353	712		345	357	690	
Move Cap.:	1218	xxxx	xxxxx		1178	xxxx	xxxxx		336	347	712		338	352	690	
Volume/Cap:	0.00	xxxx	xxxx		0.01	xxxx	xxxx		0.02	0.00	0.01		0.00	0.00	0.00	
Level Of Service Module:																
2Way95thQ:	0.0	xxxx	xxxxx		0.0	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Control Del:	8.0	xxxx	xxxxx		8.1	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
LOS by Move:	A	*	*		A	*	*		*	*	*		*	*	*	
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	444	xxxxx		xxxx	414	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	0.1	xxxxx		xxxxx	0.0	xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	13.3	xxxxx		xxxxx	13.8	xxxxx	
Shared LOS:	*	*	*		*	*	*		*	B	*		*	B	*	
ApproachDel:	xxxxxx				xxxxxx				13.3				13.8			
ApproachLOS:	*				*				B				B			

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. -- Project # 9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
PM Peak Hour Existing Conditions

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #7 Canyon Blvd / 4th Ave (South)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
HevVeh:	5%				6%				4%				0%			
Grade:	0%				0%				0%				0%			
Peds/Hour:	0				0				0				0			
Pedestrian Walk Speed: 4.00 feet/sec																
LaneWidth:	12 feet				12 feet				12 feet				12 feet			
Time Period: 0.25 hour																
Upstream Signals:																
Link Index:					#11											
Dist(miles):					0.000											
Speed (mph):					0.00											
SignalIndex:					#5											
Cycle Time:					0 secs											
InitVolume:					0	0										
Saturation:					0	0										
ArrivalType:					0	0										
G/C:					0.00	0.00										
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection																
P:					0.000	0.000										
gq1:					0.00	0.00										
gq2:					0.00	0.00										
gq:					0.00	0.00										
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons																
alpha:					0.000											
beta:					0.000											
ta (secs):					0.000											
F:					0.000											
f:					0.000	0.000										
vcmax:					0	0										
vcg:					0	0										
vcmin:					0	0										
tp:					0.0	0.0										
p:					0.000											
*** Computation 3: Platoon Event Periods																
pdom/psubo:	0.000/0.000/Unconstrained															
*** Computation 4: Conflicting Flows During Each Unblocked Period																
InitCnflVol:	325	xxxxx	xxxxx		359	xxxxx	xxxxx		718	718	324		720	718	359	
AdjCnflVol:	325	xxxxx	xxxxx		359	xxxxx	xxxxx		718	718	324		720	718	359	
UpstreamAdj:	1.00	x.xxx	x.xxx		1.00	x.xxx	x.xxx		1.00	1.000	1.000		1.00	1.000	1.000	
ConflictVol:	325	xxxxx	xxxxx		359	xxxxx	xxxxx		718	718	324		720	718	359	
*** Computation 5: Capacity for Subject Movement During Unblocked Period																
InitPotCap:	1218	xxxxx	xxxxx		1178	xxxxx	xxxxx		342	353	712		345	357	690	
UpstreamAdj:	1.00	x.xxx	x.xxx		1.00	x.xxx	x.xxx		1.00	1.000	1.000		1.00	1.000	1.000	

HCS2000™ DETAILED REPORT

General Information		*Site Information*	
Analyst	*jxh*	Intersection	*US 26/US 395*
Agency or Co.		Area Type	*All other areas*
Date Performed	*10/13/2008*	Jurisdiction	*ODOT*
Time Period	*Existing 30th Hour*	Analysis Year	*2008*
		Project ID	*John Day Local Street Network Plan*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	*0*	*1*	*1*	*0*	*1*	*0*	*0*	*1*	*1*	*0*	*1*	*0*
Lane group		*LT*	*R*		*LTR*			*LT*	*R*		*LTR*	
Volume, V (vph)	*55*	*150*	*185*	*40*	*125*	*15*	*245*	*50*	*45*	*45*	*50*	*15*
% Heavy vehicles, %HV	*2*	*2*	*2*	*3*	*3*	*3*	*5*	*5*	*5*	*2*	*2*	*2*
Peak-hour factor, PHF	*0.94*	*0.94*	*0.94*	*0.94*	*0.94*	*0.94*	*0.94*	*0.94*	*0.94*	*0.94*	*0.94*	*0.94*
Pretimed (P) or actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up lost time, l_1		*2.0*	*2.0*		*2.0*			*2.0*	*2.0*		*2.0*	
Extension of effective green, e		*2.0*	*2.0*		*2.0*			*2.0*	*2.0*		*2.0*	
Arrival type, AT		*3*	*3*		*3*			*3*	*3*		*3*	
Unit extension, UE		*3.0*	*3.0*		*3.0*			*3.0*	*3.0*		*3.0*	
Filtering/metering, I		*1.000*	*1.000*		*1.000*			*1.000*	*1.000*		*1.000*	
Initial unmet demand, Q_b		*0.0*	*0.0*		*0.0*			*0.0*	*0.0*		*0.0*	
Ped / Bike / RTOR volumes	*2*	*0*	*0*	*3*	*0*	*0*	*3*	*0*	*0*	*2*	*0*	*0*
Lane width		*12.0*	*12.0*		*12.0*			*12.0*	*12.0*		*12.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking maneuvers, N_m												
Buses stopping, N_B		*0*	*0*		*0*			*0*	*0*		*0*	
Min. time for pedestrians, G_p		*3.2*			*3.2*			*3.2*			*3.2*	

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = *18.0*	G =	G =	G =	G = *34.0*	G =	G =	G =
	Y = *4*	Y =	Y =	Y =	Y = *4*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *60.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		*219*	*197*		*192*			*314*	*48*		*117*	
Lane group capacity, c		*453*	*436*		*450*			*645*	*801*		*786*	
v/c ratio, X		*0.48*	*0.45*		*0.43*			*0.49*	*0.06*		*0.15*	
Total green ratio, g/C		*0.30*	*0.30*		*0.30*			*0.57*	*0.57*		*0.57*	
Uniform delay, d_1		*17.2*	*17.0*		*16.9*			*7.8*	*5.8*		*6.2*	
		1.000	*1.000*		*1.000*			*1.000*	*1.000*		*1.000*	

Progression factor, PF												
Delay calibration, k		0.50	0.50		0.50			0.50	0.50		0.50	
Incremental delay, d_2		3.7	3.4		2.9			2.6	0.1		0.4	
Initial queue delay, d_3		0.0	0.0		0.0			0.0	0.0		0.0	
Control delay		20.9	20.4		19.8			10.4	6.0		6.6	
Lane group LOS		C	C		B			B	A		A	
Approach delay	20.6			19.8			9.8			6.6		
Approach LOS	C			B			A			A		
Intersection delay	15.4			X_c = 0.49			Intersection LOS			B		

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Transportation System Plan Update, Street Connectivity -- John Day, Oregon
2030 No Build Future Conditions

Scenario Report

Scenario:	Peak
Command:	Default Command
Volume:	Peak
Geometry:	Peak
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

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Transportation System Plan Update, Street Connectivity -- John Day, Oregon
2030 No Build Future Conditions

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 Hwy 26 / Patterson Bridge. Roa	B	13.3	0.000	C	15.0	0.000	+ 1.746 D/V
# 2 Hwy 26 / 3rd Ave (West)	D	25.4	0.000	D	32.1	0.000	+ 6.712 D/V
# 3 Hwy 26 / Canton St.	C	18.8	0.000	C	21.6	0.000	+ 2.850 D/V
# 4 Hwy 26 / Bridge St.	C	17.8	0.000	C	20.8	0.000	+ 3.010 D/V
# 5 Hwy 26 / Canyon Blvd	B	14.2	0.547	B	15.0	0.613	+ 0.790 D/V
# 6 Hwy 26 / 3rd Street (East)	B	10.9	0.000	B	11.9	0.000	+ 1.027 D/V
# 7 Canyon Blvd / 4th Ave (South)	C	15.3	0.000	C	24.7	0.000	+ 9.449 D/V

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Transportation System Plan Update, Street Connectivity -- John Day, Oregon
2030 No Build Future Conditions

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Hwy 26 / Patterson Bridge. Road

Average Delay (sec/veh): 2.9 Worst Case Level Of Service: C[15.0]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0	0 0	0 0	1! 0	0	0 1	0	0 0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	40	0	55	5	205	0	0	245	25
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.18	1.00	1.00	1.18	1.00
Initial Bse:	0	0	0	40	0	55	5	242	0	0	289	25
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	29	0	10	0	0	0	0	0	16
Initial Fut:	0	0	0	69	0	65	5	242	0	0	289	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
PHF Volume:	0	0	0	82	0	77	6	288	0	0	344	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	82	0	77	6	288	0	0	344	49
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	669	669	370	394	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	426	381	681	1127	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	424	379	680	1127	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.19	0.00	0.11	0.01	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	518	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	1.3	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	15.0	xxxxx	8.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	C	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			15.0			xxxxxx			xxxxxx		
ApproachLOS:	*			C			*			*		

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. -- Project #9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
2030 No Build Future Conditions

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #1 Hwy 26 / Patterson Bridge. Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	0%			0%			9%			9%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			1			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												

Upstream Signals:												
Link Index:										#8		
Dist(miles):										0.090	(	0.180)
Speed (mph):										35.00	(	35.00)
SignalIndex:										#5		
Cycle Time:											0	secs
InitVolume:										0	0	
Saturation:										0	0	
ArrivalType:										0	0	
G/C:										0.00	0.00	
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:										0.000	0.000	
gq1:										0.00	0.00	
gq2:										0.00	0.00	
gq:										0.00	0.00	
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:											0.000	
beta:											0.000	
ta (secs):											0.000	
F:											0.000	
f:										0.000	0.000	
vcmax:										0	0	
vcg:										0	0	
vcmin:										0	0	
tp:										0.0	0.0	
p:											0.000	
*** Computation 3: Platoon Event Periods												
pdom/psubo:										0.000/0.000/Unconstrained		
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	707	694	288	669	669	370	394	xxxxx	xxxxx	0	xxxxx	xxxxx
AdjCnflVol:	707	694	288	669	669	370	394	xxxxx	xxxxx	0	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	707	694	288	669	669	370	394	xxxxx	xxxxx	0	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	353	369	756	426	381	681	1127	xxxxx	xxxxx	900	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx

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Potent Cap.:	353	369	756	426	381	681	1127	xxxxx	xxxxx	900	xxxxx	xxxxx

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Transportation System Plan Update, Street Connectivity -- John Day, Oregon
2030 No Build Future Conditions

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Hwy 26 / 3rd Ave (West)

Average Delay (sec/veh): 3.6 Worst Case Level Of Service: D[32.1]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	0	0 0	0	0	1!	0 0	0	1	0	0 0	0	0	0	1 0
Volume Module:																
Base Vol:	0	0	0		80	0	5		65	320	0		0	350	10	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.18	1.00		1.00	1.18	1.00	
Initial Bse:	0	0	0		80	0	5		65	378	0		0	413	10	
Added Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
PasserByVol:	0	0	0		0	0	16		15	55	0		0	51	0	
Initial Fut:	0	0	0		80	0	21		80	433	0		0	464	10	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.93	0.93	0.93		0.93	0.93	0.93		0.93	0.93	0.93		0.93	0.93	0.93	
PHF Volume:	0	0	0		86	0	23		86	465	0		0	499	11	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
FinalVolume:	0	0	0		86	0	23		86	465	0		0	499	11	
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx		6.4	6.5	6.2		4.1	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
FollowUpTim:	xxxxx	xxxx	xxxxx		3.5	4.0	3.3		2.2	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx		1142	1142	504		510	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Potent Cap.:	xxxx	xxxx	xxxxx		222	200	568		1045	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Move Cap.:	xxxx	xxxx	xxxxx		207	183	568		1045	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Volume/Cap:	xxxx	xxxx	xxxx		0.42	0.00	0.04		0.08	xxxx	xxxx		xxxx	xxxx	xxxx	
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.3	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Control Del:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		8.8	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
LOS by Move:	*	*	*		*	*	*		A	*	*		*	*	*	
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	239	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	2.2	xxxxx		0.3	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	32.1	xxxxx		8.8	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shared LOS:	*	*	*		*	D	*		A	*	*		*	*	*	
ApproachDel:	xxxxxx				32.1				xxxxxx				xxxxxx			
ApproachLOS:	*				D				*				*			

Note: Queue reported is the number of cars per lane.

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

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Intersection #2 Hwy 26 / 3rd Ave (West)

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
HevVeh:		2%			2%			4%			3%	
Grade:		0%			0%			0%			0%	
Peds/Hour:		0			0			0			0	
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:		12 feet			12 feet			12 feet			12 feet	
Time Period: 0.25 hour												

Upstream Signals:												
Link Index:											#8	
Dist(miles):											0.090 (0.180)	
Speed (mph):											35.00 (35.00)	
SignalIndex:											#5	
Cycle Time:												0 secs
InitVolume:										0	0	
Saturation:										0	0	
ArrivalType:										0	0	
G/C:										0.00	0.00	
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:										0.000	0.000	
gq1:										0.00	0.00	
gq2:										0.00	0.00	
gq:										0.00	0.00	
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:											0.000	
beta:											0.000	
ta (secs):											0.000	
F:											0.000	
f:										0.000	0.000	
vcmax:										0	0	
vcq:										0	0	
vcmin:										0	0	
tp:										0.0	0.0	
p:											0.000	
*** Computation 3: Platoon Event Periods												
pdom/psubo:										0.000/0.000/Unconstrained		
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	1153	1147	465	1142	1142	504	510	xxxxx	xxxxx	0	xxxxx	xxxxx
AdjCnflVol:	1153	1147	465	1142	1142	504	510	xxxxx	xxxxx	0	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	1153	1147	465	1142	1142	504	510	xxxxx	xxxxx	0	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	174	199	597	222	200	568	1045	xxxxx	xxxxx	900	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx

Potent Cap.:	174	199	597	222	200	568	1045	xxxxx	xxxxx	900	xxxxx	xxxxx

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Hwy 26 / Canton St.

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: C[21.6]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1! 0	0	0	0	1! 0	0	0	0	1! 0	0	0	0	1! 0	0
Volume Module:																
Base Vol:	2	1	1		10	1	20		10	385	5		2	325	25	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.18	1.00		1.00	1.18	1.00	
Initial Bse:	2	1	1		10	1	20		10	454	5		2	384	25	
Added Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
PasserByVol:	0	0	0		0	0	0		5	50	0		0	51	5	
Initial Fut:	2	1	1		10	1	20		15	504	5		2	435	30	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.90	0.90	0.90		0.90	0.90	0.90		0.90	0.90	0.90		0.90	0.90	0.90	
PHF Volume:	2	1	1		11	1	22		17	560	6		2	483	33	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
FinalVolume:	2	1	1		11	1	22		17	560	6		2	483	33	
Critical Gap Module:																
Critical Gp:	7.1	6.5	6.2		7.1	6.5	6.2		4.2	xxxx	xxxxx		4.2	xxxx	xxxxx	
FollowUpTim:	3.5	4.0	3.3		3.5	4.0	3.3		2.3	xxxx	xxxxx		2.3	xxxx	xxxxx	
Capacity Module:																
Cnflict Vol:	1112	1122	563		1106	1108	504		521	xxxx	xxxxx		566	xxxx	xxxxx	
Potent Cap.:	188	208	530		189	212	572		1020	xxxx	xxxxx		986	xxxx	xxxxx	
Move Cap.:	177	203	530		185	207	569		1016	xxxx	xxxxx		986	xxxx	xxxxx	
Volume/Cap:	0.01	0.01	0.00		0.06	0.01	0.04		0.02	xxxx	xxxx		0.00	xxxx	xxxx	
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.1	xxxx	xxxxx		0.0	xxxx	xxxxx	
Control Del:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		8.6	xxxx	xxxxx		8.7	xxxx	xxxxx	
LOS by Move:	*	*	*		*	*	*		A	*	*		A	*	*	
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared Cap.:	xxxx	221	xxxxx		xxxx	329	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
SharedQueue:	xxxxx	0.1	xxxxx		xxxxx	0.3	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shrd ConDel:	xxxxx	21.6	xxxxx		xxxxx	17.2	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shared LOS:	*	C	*		*	C	*		*	*	*		*	*	*	
ApproachDel:		21.6				17.2			xxxxxx				xxxxxx			
ApproachLOS:		C				C			*				*			

Note: Queue reported is the number of cars per lane.

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Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #3 Hwy 26 / Canton St.

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
HevVeh:	0%				0%				7%				6%			
Grade:	0%				0%				0%				0%			
Peds/Hour:	0				5				0				0			
Pedestrian Walk Speed: 4.00 feet/sec																
LaneWidth:	12 feet				12 feet				12 feet				12 feet			
Time Period: 0.25 hour																
Upstream Signals:																
Link Index:													#8			
Dist(miles):													0.090	(	0.180)	
Speed (mph):													35.00	(	35.00)	
SignalIndex:													#5			
Cycle Time:															0	secs
InitVolume:													0		0	
Saturation:													0		0	
ArrivalType:													0		0	
G/C:													0.00		0.00	
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection																
P:													0.000		0.000	
gq1:													0.00		0.00	
gq2:													0.00		0.00	
gq:													0.00		0.00	
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons																
alpha:															0.000	
beta:															0.000	
ta (secs):															0.000	
F:															0.000	
f:													0.000		0.000	
vcmax:													0		0	
vcg:													0		0	
vcmin:													0		0	
tp:													0.0		0.0	
p:															0.000	
*** Computation 3: Platoon Event Periods																
pdom/psubo:														0.000/0.000/Unconstrained		
*** Computation 4: Conflicting Flows During Each Unblocked Period																
InitCnflVol:	1112	1122	563		1106	1108	504		521	xxxxx	xxxxx		566	xxxxx	xxxxx	
AdjCnflVol:	1112	1122	563		1106	1108	504		521	xxxxx	xxxxx		566	xxxxx	xxxxx	
UpstreamAdj:	1.00	1.000	1.000		1.00	1.000	1.000		1.00	x.xxx	x.xxx		1.00	x.xxx	x.xxx	
ConflictVol:	1112	1122	563		1106	1108	504		521	xxxxx	xxxxx		566	xxxxx	xxxxx	
*** Computation 5: Capacity for Subject Movement During Unblocked Period																
InitPotCap:	188	208	530		189	212	572		1020	xxxxx	xxxxx		986	xxxxx	xxxxx	
UpstreamAdj:	1.00	1.000	1.000		1.00	1.000	1.000		1.00	x.xxx	x.xxx		1.00	x.xxx	x.xxx	

Potent Cap.:	188	208	530	189	212	572	1020	xxxxx	xxxxx	986	xxxxx	xxxxx

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Hwy 26 / Bridge St.

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: C[20.8]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	1	1	1	15	5	15	15	370	10	1	335	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.18	1.00	1.00	1.18	1.00
Initial Bse:	1	1	1	15	5	15	15	437	10	1	395	50
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	6	0	8	10	45	0	0	48	4
Initial Fut:	1	1	1	21	5	23	25	482	10	1	443	54
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	1	1	1	22	5	24	26	502	10	1	462	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	1	1	22	5	24	26	502	10	1	462	56
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.2	6.6	6.3	4.2	xxxx	xxxxx	4.2	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.6	4.1	3.4	2.3	xxxx	xxxxx	2.3	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1076	1095	522	1065	1072	498	525	xxxx	xxxxx	521	xxxx	xxxxx
Potent Cap.:	199	215	559	197	217	564	1017	xxxx	xxxxx	1025	xxxx	xxxxx
Move Cap.:	181	207	552	190	208	561	1011	xxxx	xxxxx	1017	xxxx	xxxxx
Volume/Cap:	0.01	0.01	0.00	0.12	0.03	0.04	0.03	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.7	xxxx	xxxxx	8.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	247	xxxxx	xxxx	279	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.0	xxxxx	xxxxx	0.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	19.8	xxxxx	xxxxx	20.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	C	*	*	*	*	*	*	*
ApproachDel:		19.8			20.8			xxxxxx			xxxxxx	
ApproachLOS:		C			C			*			*	

Note: Queue reported is the number of cars per lane.

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Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

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Intersection #4 Hwy 26 / Bridge St.

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
HevVeh:		0%			6%			7%			6%	
Grade:		0%			0%			0%			0%	
Peds/Hour:		9			7			1			6	
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:		12 feet			12 feet			12 feet			12 feet	
Time Period: 0.25 hour												

Upstream Signals:												
Link Index:											#8	
Dist(miles):											0.090	
Speed (mph):											35.00	
SignalIndex:											#5	
Cycle Time:											60 secs	
InitVolume:										0	171	
Saturation:										0	952	
ArrivalType:										0	3	
G/C:										0.00	0.31	
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:										0.000	0.311	
gq1:										0.00	7.40	
gq2:										0.00	1.62	
gq:										0.00	9.02	
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:											0.550	
beta:											0.645	
ta (secs):											9.257	
F:											0.233	
f:										1.000	1.000	
vcmax:										0	865	
vcg:										0	224	
vcmin:										1000	1000	
tp:										0.0	0.0	
p:											0.000	
*** Computation 3: Platoon Event Periods												
pdom/psubo:										0.000/0.000/Unconstrained		
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	1076	1095	522	1065	1072	498	525	xxxxx	xxxxx	521	xxxxx	xxxxx
AdjCnflVol:	1076	1095	522	1065	1072	498	525	xxxxx	xxxxx	521	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	1076	1095	522	1065	1072	498	525	xxxxx	xxxxx	521	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	199	215	559	197	217	564	1017	xxxxx	xxxxx	1025	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx

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Potent Cap.:	199	215	559	197	217	564	1017	xxxxx	xxxxx	1025	xxxxx	xxxxx

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Hwy 26 / Canyon Blvd

Cycle (sec): 60 Critical Vol./Cap.(X): 0.613
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 15.0
Optimal Cycle: 37 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	0	1	0	0	1	0	0	1!	0	0	0	1	0	0	1!	0
Volume Module:																
Base Vol:	245	50	45	45	50	15	55	150	180	40	125	15				
Growth Adj:	1.18	1.00	1.18	1.00	1.00	1.00	1.00	1.18	1.18	1.18	1.18	1.00				
Initial Bse:	289	50	53	45	50	15	55	177	212	47	148	15				
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
PasserByVol:	24	4	46	0	0	5	5	24	22	19	23	0				
Initial Fut:	313	54	99	45	50	20	60	201	234	66	171	15				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94				
PHF Volume:	333	57	105	48	53	21	64	214	249	70	181	16				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	333	57	105	48	53	21	64	214	249	70	181	16				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	333	57	105	48	53	21	64	214	249	70	181	16				
Saturation Flow Module:																
Sat/Lane:	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750				
Adjustment:	0.66	0.66	0.83	0.75	0.75	0.75	0.86	0.86	0.83	0.80	0.80	0.80				
Lanes:	0.85	0.15	1.00	0.39	0.44	0.17	0.23	0.77	1.00	0.26	0.68	0.06				
Final Sat.:	978	169	1458	515	572	229	347	1163	1458	370	952	84				
Capacity Analysis Module:																
Vol/Sat:	0.34	0.34	0.07	0.09	0.09	0.09	0.18	0.18	0.17	0.19	0.19	0.19				
Crit Moves:		****									****					
Green/Cycle:	0.56	0.56	0.56	0.56	0.56	0.56	0.31	0.31	0.31	0.31	0.31	0.31				
Volume/Cap:	0.61	0.61	0.13	0.17	0.17	0.17	0.59	0.59	0.55	0.61	0.61	0.61				
Delay/Veh:	10.7	10.7	6.5	6.6	6.6	6.6	19.5	19.5	18.6	20.2	20.2	20.2				
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
AdjDel/Veh:	10.7	10.7	6.5	6.6	6.6	6.6	19.5	19.5	18.6	20.2	20.2	20.2				
LOS by Move:	B	B	A	A	A	A	B	B	B	C	C	C				
HCM2kAvgQ:	6	6	1	1	1	1	5	5	5	5	5	5				

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. -- Project #9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
2030 No Build Future Conditions

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 Hwy 26 / Canyon Blvd

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	0	1	0	0	1	0	0	1!	0	0	1	0	0	0	1	0
Lane Group:	LT	LT	R		LTR	LTR	LTR		LT	LT	R		LTR	LTR	LTR	
#LnsInGrps:	1	1	1		1	1	1		1	1	1		1	1	1	
HCM Ops Input Saturation Adj Module:																
Lane Width:	12	12	12		12	12	12		12	12	12		12	12	12	
CrsswalkWid:		8				8				8				8		
% Hev Veh:		2				5				2				3		
Grade:		0%				0%				0%				0%		
Parking/Hr:		No				No				No				No		
Bus Stp/Hr:		0				0				0				0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:		0				0				0				0		
ExclusiveRT:		Include				Include				Include				Include		
% RT Prtct:		0				0				0				0		
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	5	5	5		5	5	5		5	5	5		5	5	5	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Hev Veh Adj:	0.98	0.98	0.98		0.95	0.95	0.95		0.98	0.98	0.98		0.97	0.97	0.97	
Grade Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Parking Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Bus Stp Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Area Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
RT Adj:		1.00	1.00		0.85	0.98	0.98		1.00	1.00	0.85		0.99	0.99	0.99	
LT Adj:	0.67	0.67	1.00		0.81	0.81	0.81		0.88	0.88	1.00		0.83	0.83	0.83	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	0.66	0.66	0.83		0.75	0.75	0.75		0.86	0.86	0.83		0.80	0.80	0.80	
Usr Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	0.66	0.66	0.83		0.75	0.75	0.75		0.86	0.86	0.83		0.80	0.80	0.80	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >															
DelAdjFctr:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	

Kittelson & Associates, Inc. -- Project #9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
2030 No Build Future Conditions

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 Hwy 26 / Canyon Blvd

Approach:	North	South	East	West
Cycle Length, C:	60	60	60	60
Actual Green Time Per Lane Group, G:	33.35	33.35	18.65	18.65
Effective Green Time Per Lane Group, g:	33.35	33.35	18.65	18.65
Opposing Effective Green Time, go:	33.35	33.35	18.65	18.65
Number Of Opposing Lanes, No:	1	1	1	1
Number Of Lanes In Lane Group, N:	1	1	1	1
Adjusted Left-Turn Flow Rate, Vlt:	333	48	64	70
Proportion of Left Turns in Lane Group, Plt:	0.85	0.39	0.23	0.26
Proportion of Left Turns in Opp Flow, Plto:	0.39	xxxxxx	0.26	xxxxxx
Left Turns Per Cycle, LTC:	5.55	0.80	1.06	1.17
Adjusted Opposing Flow Rate, Vo:	122	391	268	278
Opposing Flow Per Lane Per Cycle, Volc:	2.03	6.52	4.47	4.63
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	1.00
Lost Time Per Phase, tl:	4.00	4.00	4.00	4.00
Eff grn until arrival of left-turn car, gf:	0.00	11.82	3.42	3.20
Opposing Queue Ratio, qro:	0.44	0.44	0.69	0.69
Eff grn blocked by opposing queue, gq:	0.00	3.39	6.42	3.55
Eff grn while left turns filter thru, gu:	33.35	21.53	12.23	15.10
Max opposing cars arriving during gq-gf, n:	0.00	xxxxxx	1.50	xxxxxx
Proportion of Opposing Thru & RT cars, ptho:	0.61	xxxxxx	0.74	xxxxxx
Left-turn Saturation Factor, fs:	xxxxxx	0.63	xxxxxx	0.70
Proportion of Left Turns in Shared Lane, pl:	0.85	0.39	0.23	0.26
Through-car Equivalents, el1:	1.58	2.08	1.84	1.86
Single Lane Through-car Equivalents, el2:	1.00	xxxxxx	1.40	xxxxxx
Minimum Left Turn Adjustment Factor, fmin:	0.11	0.08	0.13	0.14
Single Lane Left Turn Adjustment Factor, fm:	0.67	0.81	0.88	0.83
Left Turn Adjustment Factor, flt:	0.67	0.81	0.88	0.83

Kittelson & Associates, Inc. -- Project #9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
2030 No Build Future Conditions

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 Hwy 26 / Canyon Blvd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.56	0.56	0.56	0.56	0.56	0.56	0.31	0.31	0.31	0.31	0.31	0.31
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	4.4	4.4	0.8	1.0	1.0	1.0	3.9	3.9	3.5	3.8	3.8	3.8
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	1.5	1.5	0.1	0.2	0.2	0.2	1.4	1.4	1.2	1.5	1.5	1.5
HCM2KQueue:	5.9	5.9	1.0	1.2	1.2	1.2	5.3	5.3	4.6	5.3	5.3	5.3
70th%Factor:	1.19	1.19	1.20	1.20	1.20	1.20	1.19	1.19	1.19	1.19	1.19	1.19
HCM2k70thQ:	7.0	7.0	1.2	1.4	1.4	1.4	6.3	6.3	5.5	6.3	6.3	6.3
85th%Factor:	1.55	1.55	1.59	1.59	1.59	1.59	1.55	1.55	1.56	1.55	1.55	1.55
HCM2k85thQ:	9.1	9.1	1.6	1.9	1.9	1.9	8.2	8.2	7.2	8.2	8.2	8.2
90th%Factor:	1.70	1.70	1.78	1.78	1.78	1.78	1.71	1.71	1.72	1.71	1.71	1.71
HCM2k90thQ:	10.0	10.0	1.8	2.1	2.1	2.1	9.0	9.0	7.9	9.0	9.0	9.0
95th%Factor:	1.93	1.93	2.07	2.06	2.06	2.06	1.95	1.95	1.96	1.95	1.95	1.95
HCM2k95thQ:	11.4	11.4	2.0	2.5	2.5	2.5	10.3	10.3	9.1	10.3	10.3	10.3
98th%Factor:	2.34	2.34	2.63	2.61	2.61	2.61	2.37	2.37	2.40	2.37	2.37	2.37
HCM2k98thQ:	13.8	13.8	2.6	3.1	3.1	3.1	12.5	12.5	11.1	12.5	12.5	12.5

Kittelson & Associates, Inc. -- Project #9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
2030 No Build Future Conditions

Fuel Consumption and Emissions
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 Hwy 26 / Canyon Blvd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Run Speed:	30 MPH			30 MPH			30 MPH			30 MPH		
NumOfStops:	56.1	9.7	12.6	5.9	6.5	2.6	13.5	45.1	51.8	15.0	38.6	3.4

Name: year 1995 composite fleet
Fuel Consumption: 32.128 pounds
5.205 gallons
Carbon Dioxide: 100.240 pounds
Carbon Monoxide: 7.439 pounds
Hydrocarbons: 1.204 pounds
Nitrogen Oxides: 0.388 pounds

Name: year 2000 composite fleet
Fuel Consumption: 29.585 pounds
4.793 gallons
Carbon Dioxide: 92.306 pounds
Carbon Monoxide: 7.240 pounds
Hydrocarbons: 1.164 pounds
Nitrogen Oxides: 0.345 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Kittelson & Associates, Inc. -- Project #9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
2030 No Build Future Conditions

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #6 Hwy 26 / 3rd Street (East)

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[11.9]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	1!	0	0		0	0	1!	0	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	2		1		2		1		1		10		1		170		2		1		130		1	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.18		1.00		1.00		1.18		1.00	
Initial Bse:	2		1		2		1		1		10		1		201		2		1		153		1	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		70		0		0		40		0	
Initial Fut:	2		1		2		1		1		10		1		271		2		1		193		1	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	0.87		0.87		0.87		0.87		0.87		0.87		0.87		0.87		0.87		0.87		0.87		0.87	
PHF Volume:	2		1		2		1		1		11		1		311		2		1		222		1	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
FinalVolume:	2		1		2		1		1		11		1		311		2		1		222		1	
Critical Gap Module:																								
Critical Gp:	7.1		6.5		6.2		7.1		6.5		6.2		4.1		xxxx		xxxxx		4.1		xxxx		xxxxx	
FollowUpTim:	3.5		4.0		3.3		3.5		4.0		3.3		2.2		xxxx		xxxxx		2.2		xxxx		xxxxx	
Capacity Module:																								
Cnflict Vol:	546		540		312		541		541		223		223		xxxx		xxxxx		313		xxxx		xxxxx	
Potent Cap.:	452		451		733		455		451		822		1345		xxxx		xxxxx		1236		xxxx		xxxxx	
Move Cap.:	444		450		733		452		450		822		1345		xxxx		xxxxx		1236		xxxx		xxxxx	
Volume/Cap:	0.01		0.00		0.00		0.00		0.00		0.01		0.00		xxxx		xxxx		0.00		xxxx		xxxx	
Level Of Service Module:																								
2Way95thQ:	xxxx		xxxx		xxxxx		xxxx		xxxx		xxxxx		0.0		xxxx		xxxxx		0.0		xxxx		xxxxx	
Control Del:	xxxxx		xxxx		xxxxx		xxxxx		xxxx		xxxxx		7.7		xxxx		xxxxx		7.9		xxxx		xxxxx	
LOS by Move:	*		*		*		*		*		*		A		*		*		A		*		*	
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx		529		xxxxx		xxxx		723		xxxxx		xxxx		xxxx		xxxxx		xxxx		xxxx		xxxxx	
SharedQueue:	xxxxx		0.0		xxxxx		xxxxx		0.1		xxxxx		xxxxx		xxxx		xxxxx		xxxxx		xxxx		xxxxx	
Shrd ConDel:	xxxxx		11.9		xxxxx		xxxxx		10.1		xxxxx		xxxxx		xxxx		xxxxx		xxxxx		xxxx		xxxxx	
Shared LOS:	*		B		*		*		B		*		*		*		*		*		*		*	
ApproachDel:			11.9						10.1						xxxxxx						xxxxxx			
ApproachLOS:			B						B						*						*			

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. -- Project #9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
2030 No Build Future Conditions

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #6 Hwy 26 / 3rd Street (East)

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	0%			0%			2%			4%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												

Upstream Signals:		
Link Index:	#9	
Dist(miles):	0.000	
Speed (mph):	0.00	
SignalIndex:	#5	
Cycle Time:	0 secs	
InitVolume:	0	0
Saturation:	0	0
ArrivalType:	0	0
G/C:	0.00	0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection		
P:	0.000	0.000
gq1:	0.00	0.00
gq2:	0.00	0.00
gq:	0.00	0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons		
alpha:	0.000	
beta:	0.000	
ta (secs):	0.000	
F:	0.000	
f:	0.000	0.000
vcmax:	0	0
vcg:	0	0
vcmin:	0	0
tp:	0.0	0.0
p:	0.000	
*** Computation 3: Platoon Event Periods		
pdom/psubo:	0.000/0.000/Unconstrained	

*** Computation 4: Conflicting Flows During Each Unblocked Period

InitCnflVol:	546	540	312	541	541	223	223	xxxxx	xxxxx	313	xxxxx	xxxxx
AdjCnflVol:	546	540	312	541	541	223	223	xxxxx	xxxxx	313	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	546	540	312	541	541	223	223	xxxxx	xxxxx	313	xxxxx	xxxxx

*** Computation 5: Capacity for Subject Movement During Unblocked Period

InitPotCap:	452	451	733	455	451	822	1345	xxxxx	xxxxx	1236	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx

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Potent Cap.:	452	451	733	455	451	822	1345	xxxxx	xxxxx	1236	xxxxx	xxxxx

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Transportation System Plan Update, Street Connectivity -- John Day, Oregon
2030 No Build Future Conditions

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #7 Canyon Blvd / 4th Ave (South)

Average Delay (sec/veh): 2.5 Worst Case Level Of Service: C[24.7]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1!	0 0	0	0	1!	0 0	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	5	315	1		10	285	1		5	1	5		1	1	1	
Growth Adj:	1.00	1.18	1.00		1.00	1.18	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	5	372	1		10	336	1		5	1	5		1	1	1	
Added Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
PasserByVol:	0	5	0		0	10	31		70	0	0		0	0	0	
Initial Fut:	5	377	1		10	346	32		75	1	5		1	1	1	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.88	0.88	0.88		0.88	0.88	0.88		0.88	0.88	0.88		0.88	0.88	0.88	
PHF Volume:	6	428	1		11	394	36		85	1	6		1	1	1	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
FinalVolume:	6	428	1		11	394	36		85	1	6		1	1	1	
Critical Gap Module:																
Critical Gp:	4.1	xxxx	xxxxx		4.2	xxxx	xxxxx		7.1	6.5	6.2		7.1	6.5	6.2	
FollowUpTim:	2.2	xxxx	xxxxx		2.3	xxxx	xxxxx		3.5	4.0	3.3		3.5	4.0	3.3	
Capacity Module:																
Cnflict Vol:	430	xxxx	xxxxx		429	xxxx	xxxxx		876	875	412		878	893	429	
Potent Cap.:	1114	xxxx	xxxxx		1109	xxxx	xxxxx		267	286	636		271	283	631	
Move Cap.:	1114	xxxx	xxxxx		1109	xxxx	xxxxx		263	281	636		264	279	631	
Volume/Cap:	0.01	xxxx	xxxx		0.01	xxxx	xxxx		0.32	0.00	0.01		0.00	0.00	0.00	
Level Of Service Module:																
2Way95thQ:	0.0	xxxx	xxxxx		0.0	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Control Del:	8.2	xxxx	xxxxx		8.3	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
LOS by Move:	A	*	*		A	*	*		*	*	*		*	*	*	
Movement:	LT	-	LTR	- RT	LT	-	LTR	- RT	LT	-	LTR	- RT	LT	-	LTR	- RT
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	273	xxxxx		xxxx	335	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	1.4	xxxxx		xxxxx	0.0	xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	24.7	xxxxx		xxxxx	15.9	xxxxx	
Shared LOS:	*	*	*		*	*	*		*	C	*		*	C	*	
ApproachDel:	xxxxxx				xxxxxx				24.7				15.9			
ApproachLOS:	*				*				C				C			

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. -- Project #9256.0
Transportation System Plan Update, Street Connectivity -- John Day, Oregon
2030 No Build Future Conditions

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #7 Canyon Blvd / 4th Ave (South)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HevVeh:	5%				6%				4%				0%			
Grade:	0%				0%				0%				0%			
Peds/Hour:	0				0				0				0			
Pedestrian Walk Speed: 4.00 feet/sec																
LaneWidth:	12 feet				12 feet				12 feet				12 feet			
Time Period: 0.25 hour																
Upstream Signals:																
Link Index:					#11											
Dist(miles):					0.000											
Speed (mph):					0.00											
SignalIndex:					#5											
Cycle Time:						0 secs										
InitVolume:					0	0										
Saturation:					0	0										
ArrivalType:					0	0										
G/C:					0.00	0.00										
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection																
P:					0.000	0.000										
gq1:					0.00	0.00										
gq2:					0.00	0.00										
gq:					0.00	0.00										
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons																
alpha:					0.000											
beta:					0.000											
ta (secs):					0.000											
F:					0.000											
f:					0.000	0.000										
vcmax:					0	0										
vcg:					0	0										
vcmin:					0	0										
tp:					0.0	0.0										
p:					0.000											
*** Computation 3: Platoon Event Periods																
pdom/psubo: 0.000/0.000/Unconstrained																
*** Computation 4: Conflicting Flows During Each Unblocked Period																
InitCnflVol:	430	xxxxx	xxxxx		429	xxxxx	xxxxx		876	875	412		878	893	429	
AdjCnflVol:	430	xxxxx	xxxxx		429	xxxxx	xxxxx		876	875	412		878	893	429	
UpstreamAdj:	1.00	x.xxx	x.xxx		1.00	x.xxx	x.xxx		1.00	1.000	1.000		1.00	1.000	1.000	
ConflictVol:	430	xxxxx	xxxxx		429	xxxxx	xxxxx		876	875	412		878	893	429	
*** Computation 5: Capacity for Subject Movement During Unblocked Period																
InitPotCap:	1114	xxxxx	xxxxx		1109	xxxxx	xxxxx		267	286	636		271	283	631	
UpstreamAdj:	1.00	x.xxx	x.xxx		1.00	x.xxx	x.xxx		1.00	1.000	1.000		1.00	1.000	1.000	

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	jxh	Intersection	US 26/US 395
Agency or Co.		Area Type	All other areas
Date Performed	10/13/2008	Jurisdiction	ODOT
Time Period	Future 30th Hour	Analysis Year	2030
		Project ID	John Day Local Street Network Plan

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	1	1	0	1	0	0	1	1	0	1	0
Lane group		LT	R		LTR			LT	R		LTR	
Volume, V (vph)	60	204	238	67	173	15	318	54	100	45	50	20
% Heavy vehicles, %HV	2	2	2	3	3	3	5	5	5	2	2	2
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Pretimed (P) or actuated (A)	P	P	P	P	P	P	P	P	P	P	P	P
Start-up lost time, l_1		2.0	2.0		2.0			2.0	2.0		2.0	
Extension of effective green, e		2.0	2.0		2.0			2.0	2.0		2.0	
Arrival type, AT		3	3		3			3	3		3	
Unit extension, UE		3.0	3.0		3.0			3.0	3.0		3.0	
Filtering/metering, I		1.000	1.000		1.000			1.000	1.000		1.000	
Initial unmet demand, Q_b		0.0	0.0		0.0			0.0	0.0		0.0	
Ped / Bike / RTOR volumes	2	0	0	3	0	0	3	0	0	2	0	0
Lane width		12.0	12.0		12.0			12.0	12.0		12.0	
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B		0	0		0			0	0		0	
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = 19.0	G =	G =	G =	G = 33.0	G =	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 60.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		281	253		271			395	106		122	
Lane group capacity, c		482	460		367			617	777		744	
v/c ratio, X		0.58	0.55		0.74			0.64	0.14		0.16	
Total green ratio, g/C		0.32	0.32		0.32			0.55	0.55		0.55	
Uniform delay, d_1		17.2	17.0		18.3			9.4	6.6		6.7	
		1.000	1.000		1.000			1.000	1.000		1.000	

Progression factor, PF												
Delay calibration, k		0.50	0.50		0.50			0.50	0.50		0.50	
Incremental delay, d_2		5.1	4.7		12.5			5.0	0.4		0.5	
Initial queue delay, d_3		0.0	0.0		0.0			0.0	0.0		0.0	
Control delay		22.3	21.6		30.8			14.4	6.9		7.2	
Lane group LOS		C	C		C			B	A		A	
Approach delay	22.0			30.8			12.8			7.2		
Approach LOS	C			C			B			A		
Intersection delay	19.2			X_c = 0.68			Intersection LOS			B		

Appendix D
Traffic Growth
Assumptions

Appendix D

RESIDENTIAL DEVELOPMENT

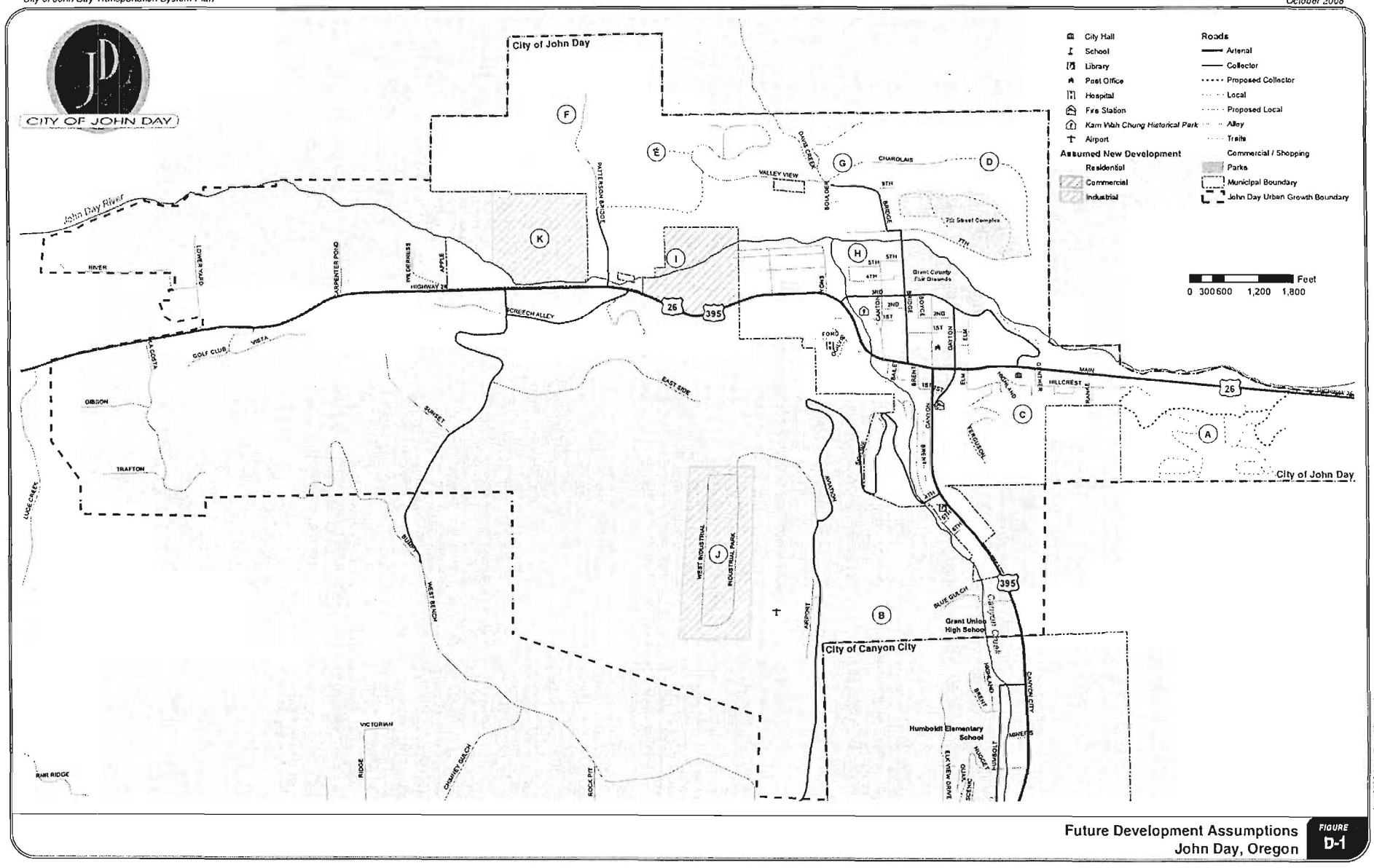
It is recognized that there is the potential for infill housing development within the existing John Day city limits and UGB. Based on a review of the John Day Comprehensive Plan and conversations with City staff, it was determined that the City may see an additional 82 single family housing units (not including the previously noted 112 in-process single-family homes from the Strawberry View Estates) through the 20-year planning horizon. The general locations of these new housing units were determined based on consultation with City staff (see Figure D-1) and are based on current development trends, the zoning map, and suitable land inventories.

From this assessment, estimates of daily and weekday p.m. peak hour trip ends were developed based on empirical observations at similar residential land uses. These observations are summarized in the standard reference Trip Generation 7th Edition. Table 1 summarizes the estimated trip generation for each area of infill housing as referenced in Figure D-1.

Table 1 Assumed Residential Trip Generation Estimates

Lane Use	Figure D-1 Reference	ITE Code	Size (Units)	Daily Trips	Weekday PM Peak Hour		
					Total	In	Out
Single-Family Residential	"A"	210	112	1,070	110	70	40
	"B"		10	100	10	6	4
	"C"		4	40	4	2	2
	"D"		6	60	6	3	3
	"E"		20	200	20	12	8
	"F"		10	100	10	6	4
	"G"		6	60	6	3	3
	"H"		26	260	26	15	11
Total Residential			**194**	**1,890**	**192**	**117**	**75**

As shown in the table above, the assumed growth in housing is anticipated to generate 1,890 net new daily trips of which 192 are estimated to occur during the weekday p.m. peak hour.



Future Development Assumptions
John Day, Oregon

FIGURE D-1

proj\ak\9256 City\GIS\BaseMap.mxd

COMMERCIAL INFILL DEVELOPMENT

The traffic forecasting effort also investigated the potential for commercial infill development, particularly along the US 26 study corridor. This commercially zoned corridor is the main commercial hub for local residents and is also a major highway service area for travelers.

To account for commercial infill growth, City staff was consulted regarding past commercial development trends and the likelihood for new growth in this sector. From this assessment, it was assumed that some new commercial shopping is likely given the assumed growth in residential housing units and that it would likely be limited to small to moderate sized retailers such as a Bi-Mart. A likely location for the assumed commercial development includes the old Oregon Pine mill site as illustrated in Figure D-1. Using these assumptions, estimates of daily and weekday p.m. peak hour trip ends were developed based on empirical observations at similar land uses. These observations are summarized in the standard reference Trip Generation 7th Edition. Table 2 summarizes the estimated trip generation rates.

Table 2 Commercial Trip Generation

Lane Use	Figure D-1 Reference	ITE Code	Size (sq. ft.)	Daily Trips	Weekday PM Peak Hour		
					Total	In	Out
Shopping Center	"I"	820	30,000	1,290	110	55	55

As shown in the table above, the assumed commercial infill development is anticipated to generate 1,290 net new daily trips of which 110 are estimated to occur during the weekday a.m. peak hour and 490 are estimated to occur during the weekday p.m. peak hour.

INDUSTRIAL DEVELOPMENT

Due to varying market and land value conditions, it is difficult to forecast the amount of industrial land that may be developed over a long-term horizon year such as 2030. However, through consultation with City staff, an assumed industrial buildout was developed for the purposes of this study.

Two areas within the regional study area are likely for future industrial development: Airport Industrial Park and redevelopment opportunities on sites located off of Patterson Bridge Road. These areas are illustrated in Figure D-1. Given that the Airport Industrial Park offers pad ready sites, City staff estimates that a reasonable buildout of this park through the year 2030 constitutes approximately 50 percent of the first 25-acre phase. This equates to approximately 12.5-acres of new industrial park uses.

In addition to the Airport Industrial Park, City staff estimates that the old Grant Western Mill Site located off of Patterson Bridge Road is a likely candidate for future redevelopment opportunities. As such, it was assumed that 6-acres of this site could redevelop as light industrial uses.

Using this information, estimates of daily and weekday p.m. peak hour trip ends of industrial uses were developed based on empirical observations at similar land uses. Table 3 summarizes the estimated trip generation for each assumed industrial use.

Table 3 Industrial Trip Generation Estimates

Lane Use	Figure D-1 Reference	ITE Code	Size (acres)	Daily Trips	Weekday PM Peak Hour		
					Total	In	Out
Industrial Park	"J"	130	12.5	790	110	25	85
Light Industrial	"K"	110	6	310	45	10	35
Total Industrial			**18.5**	**1,100**	**155**	**35**	**120**

As shown in the table above, the assumed buildout of industrial developments are anticipated to generate 1,100 net new daily trips, of which 155 are estimated to occur during the weekday p.m. peak hour.

Appendix E
Traffic Re-Route
Operations Memo

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING
610 SW Alder Street, Suite 700, Portland, OR 97205 503.228.5230 503.273.8169

TECHNICAL MEMORANDUM

John Day Local Street Network Plan

Local Street Impacts on Roadway/Intersection Operations

Date: March 20, 2009 Project #: 9256

To: PMT / TAC Members

From: Matt Hughart, AICP; Darryl Depencier; and Chris Bernhardt

cc: John Day Project Team

This project is partially funded by a grant from the Transportation and Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation and the Oregon Department of Land Conservation and Development. This TGM grant is financed, in part, by federal Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), local government, and the State of Oregon Funds.

FUTURE TRAFFIC CONDITIONS (WITH INCLUSION OF LOCAL STREET PROJECTS)

The identified local street connectivity and bicycle/pedestrian projects are anticipated to have an impact on future travel patterns within the City of John Day. This memo identifies how the study area network will operate with the implementation of these projects through the year 2030.

Impact Projects

From a vehicular perspective, the identified list of local street projects will provide better connectivity for existing and future development within the City. Projects such as the Valley View Drive extension to Patterson Bridge Road and the Charolais Heights extension to 7th Street/3rd Avenue will provide alternative travel routes to the existing homes and businesses along the Bridge Street corridor north of 7th Street. Other projects such as the extension of the 4th and 6th Street corridors west of Canyon Creek will provide better east-west street continuity and reduce the reliance upon Main Street for local travel. As such, it is reasonable to expect some shifting of travel patterns at some of the study intersections along the Main Street corridor. Figure E-1 illustrates the 2030 forecast traffic volumes at the study area intersections with an assumed shifting of traffic volumes that reflects these new street connections.

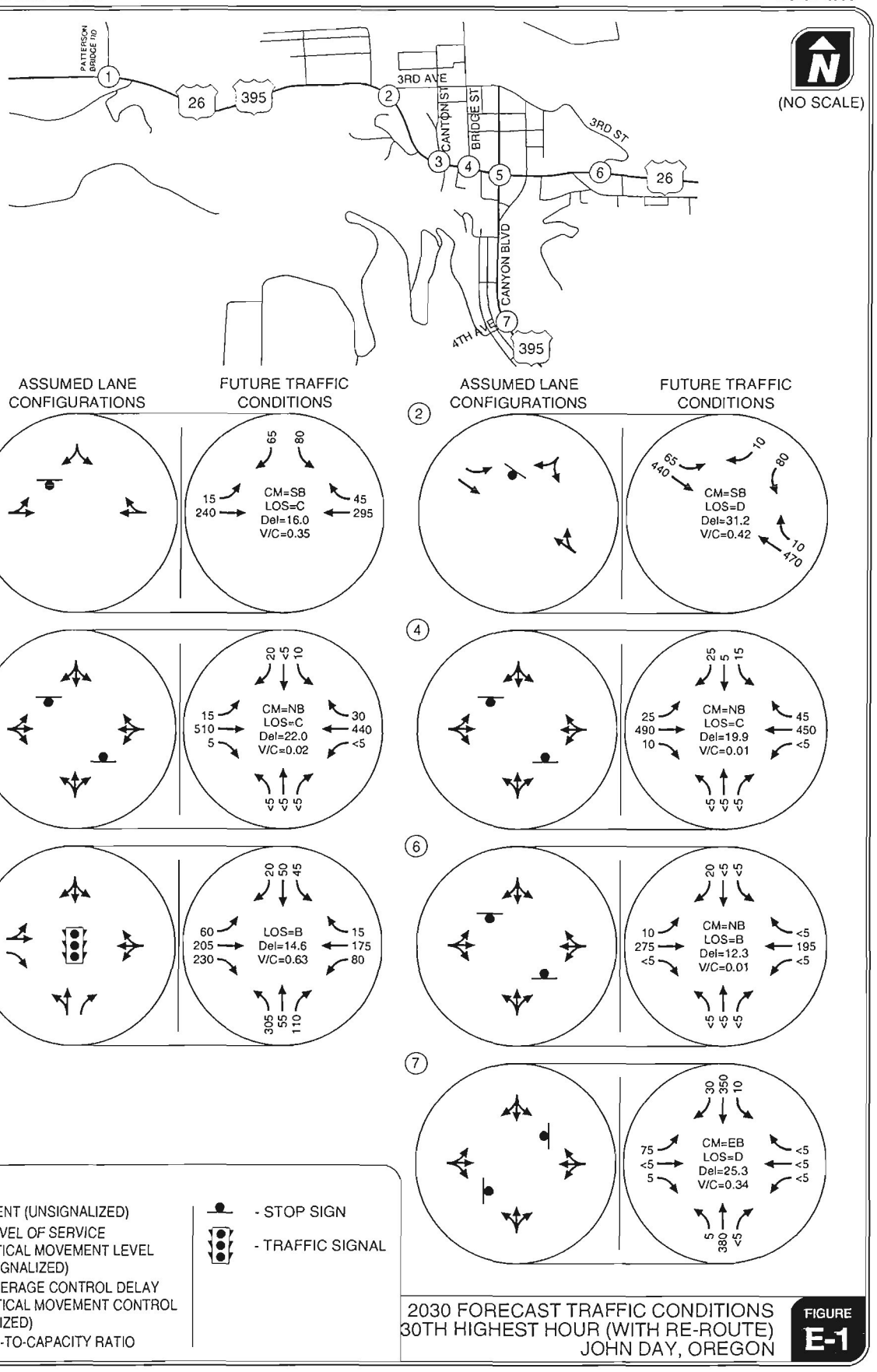
Intersection Operations Analysis

A traffic operations analysis was performed for the study intersections using the forecast traffic volumes shown in Figure E-1. Table E-1 summarizes the resulting traffic operations analysis for each of the study intersections. As shown in the table, by the year 2030, assuming the implementation of these local street connections, the intersection volume-to-capacity ratios are not forecast to exceed ODOT operating standards at any of the studied intersections during weekday p.m. peak hours.

Table E-1 Estimated 2030 30th Highest Hour Intersection Operations (With an Assumed Re-routing of Traffic Volumes)

Intersection	Critical Movements	V/C Ratio	Adequate	95th Percentile Queue (feet)	
				HCM Methodology	Two Minute Rule
US 26 / Patterson Bridge Road	US 26 EB TH/LT[1]	0.27	Yes	25	400
	SB Approach[2]	0.35	Yes	50	225
US 26 / 3rd Avenue	US 26 EB LT[1]	0.06	Yes	25	100
	SB Approach[2]	0.42	Yes	50	150
US 26 / Canton Street	US 26 EB LT[3]	0.59	Yes	100	825
	US 26 WB LT[3]	0.53	Yes	75	725
	NB Approach[4]	0.02	Yes	25	25
	SB Approach[4]	0.10	Yes	25	50
US 26 / Bridge Street	US 26 EB TH/LT[3]	0.54	Yes	100	825
	US 26 WB TH/LT[3]	0.51	Yes	75	800
	NB Approach[4]	0.01	Yes	25	25
	SB Approach[4]	0.14	Yes	25	100
US 26 / US 395	---	0.63	Yes	NBTHLT – 300 NBRT – 50 EBTHLT – 225 EBRT - 75 WB – 200 SB - 100	---
US 26 / 3rd Street	US 26EB LT[1]	0.25	Yes	25	450
	US 26 WB LT[1]	0.18	Yes	25	325
	NB Approach[2]	0.01	Yes	25	25
	SB Approach[2]	0.03	Yes	25	25
US 395 / 4th Avenue	US 395 NB LT[1]	0.40	Yes	50	600
	EB Approach[2]	0.34	Yes	50	125

[1] The performance standard for this movement is a v/c ratio of 0.80 or better.
[2] The performance standard for this movement is a v/c ratio of 0.90 or better.
[3] The performance standard for this movement is a v/c ratio of 0.85 or better.
[4] The performance standard for this movement is a v/c ratio of 0.95 or better.



2030 FORECAST TRAFFIC CONDITIONS
30TH HIGHEST HOUR (WITH RE-ROUTE)
JOHN DAY, OREGON

FIGURE E-1

H:\projfile\9256 - City of John Day TSP\dwgs\figs\9256fig1.dwg Apr 17, 2009 - 4:08pm - mhughart Layout Tab: E1

Left- and Right-Turn Lane Warrant Analysis

As previously mentioned, some identified projects such as the Valley View Drive extension to Patterson Bridge Road are anticipated to provide alternate travel routes for existing and future development. Although the traffic operations analysis summarized in Table E-1 indicates that all of the study area intersections are forecast to continue to operate at acceptable levels, a subsequent level of analysis was performed to determine the need for left- and right-turn lanes. Currently, the east and west US 26 approaches to the US 26/Patterson Bridge Road and US 26/3rd Avenue intersections do not have separate left or right-turn lanes. As both of these intersections are forecast to accommodate an increase in turning movements due to potential future development and re-routed traffic volumes, a left- and right-turn lane warrant analysis was conducted.

The procedures used to determine the need for left- and right-turn lanes were based on ODOT's left- and right-turn lane criteria. Using the forecast traffic volumes summarized in Figure E-1, it was determined that the forecast traffic volumes are not high enough to meet the vehicular volume criterion for separate left- or right-turn lanes at either intersection. However, it is recommended that both of these intersections be continuously monitored and evaluated as part of any potential future development projects.

Appendix F

Justification Matrix for Project Prioritization Evaluation

Project Evaluation Matrix

	Relevance to Goals	Realistic Cost	Available Funding	Technical Implementation	Political Implementation	Potential Use
	Highly Relevant = + Moderately Relevant = 0 Not Relevant = -	Inexpensive = + Moderately Expensive = 0 Expensive = -	Funding Readily Available = + Some Funding Available = 0 Funding Not Readily Available = -	Simple to Implement = + Implementable = 0 Difficult to Implement = -	Few Political Challenges = + Some Political Challenges = 0 Highly Political = -	High Utilization = + Some Utilization = 0 Low Utilization = -
1	(+) Provides pedestrian and bicycle connectivity to major destination.	(0) ROW exists and construction costs will not be atypical.	(0) Project may rank well with funding sources.	(0) A few alignment issues will need to be addressed.	(0) Some residents may object to the change.	(+) The 7th Street Recreation Complex is popular and this will be the safest route for most users.
2	(+) Provides pedestrian and bicycle connectivity to major destination.	(+) Land is owned by City and construction costs will be low because of flatter terrain and short distance.	(-) Project provides a more simple non-motorized access for people, but there are other more-valuable access routes to the site.	(+) Terrain is flat and parcel is wide enough to accommodate the path.	(+) Land is owned by City.	(-) Route is one of several proposed and will not be the closest to the greatest bicycle/pedestrian traffic generator.
3	(+) Provides bicycle and pedestrian connectivity east-to-west.	(-) Significant project with a bridge over the John Day River.	(0) Project may rank well with funding sources, but will require significant funds.	(0) No major terrain issues. River is a barrier, but can be bridged.	(0) High cost of project may cause some to question its value.	(+) Serving both transportation and recreation needs and being separated from motor vehicle traffic will make this a popular route.
4	(+) Provides local pedestrian connectivity.	(0) Needed ROW increases costs.	(0) Funding available, but requests are competitive.	(0) Utilities and other existing facilities may complicate implementation.	(-) Obtaining ROW from landowners is difficult.	(0) Sidewalks will be used by local residents but not serve a larger population.
5	(+) Provides bicycle and pedestrian connectivity east-to-west.	(-) Significant project with ROW purchases necessary.	(0) Project may rank well with funding sources, but will require significant funds.	(0) No major terrain issues if sufficient ROW can be obtained.	(-) High cost of project may cause some to question its value.	(+) Serving both transportation and recreation needs and being separated from motor vehicle traffic will make this a popular route.
6	(+) Provides pedestrian connectivity along popular route.	(0) Scope of project is significant but not technically difficult.	(0) Funding available, but requests are competitive.	(0) No major terrain issues but vehicle lanes and utilities will need to be considered.	(0) Project is both valuable and expensive.	(+) Provides needed pedestrian access between downtown and commercial development along Main Street.
7	(0) Provides bicycle and pedestrian connectivity but may be redundant.	(-) Facility mostly exists; maintenance is needed.	(0) Funding available, but requests are competitive and project may not rank well as it is redundant.	(+) Facility mostly exists; maintenance is needed.	(+) Facility already exists.	(0) Use will be split with proposed sidewalk along Ford Road.
8	(+) Provides pedestrian and bicycle bypass to Bridge Street.	(-) Not technically difficult, but scope of project is significant, requires a bridge, and will require ROW purchase.	(0) Project may rank well with funding sources, but requests are competitive.	(0) Terrain is relatively flat but development exists in the area.	(-) Obtaining ROW from landowners is difficult.	(+) Provides valuable non-motorized connection from commercial district to proposed John Day River path.
9	(0) Provides pedestrian access but may be redundant because of other accesses.	(0) The path itself will be inexpensive but it would be necessary to purchase ROW.	(0) Funding available, but requests are competitive and project may not rank well as it is redundant.	(0) Terrain is relatively simple but existing development would complicate the issue.	(-) Obtaining ROW from landowners is difficult.	(0) Use would be split with other accesses to the 7th Street Recreation Complex.
10	(+) Establishes better local street connectivity for an area of the City that lacks alternate travel routes.	(0) The alignment is currently a private road that would need to be purchased and upgraded to city standards.	(-) Would likely require special funding by the City of John Day.	(0) Roadway currently serves an existing viable business. Roadway alignment is already in place.	(0) Implementation is based on the lifespan of the existing private land use.	(+) Would serve as an alternate travel route to a sizable number of single-family homes.
11	(+) Provides pedestrian connectivity from Main Street to area of major employment.	(+) Improvement length is short.	(0) Project may rank well with funding sources, but requests are competitive.	(0) Slope complicates construction.	(+) No stakeholders adversely affected.	(0) Sidewalk will likely be used by employees in the area.
12	(+) Provides pedestrian connectivity between residential neighborhoods to the north	(-) Constrained ROW and the need for sidewalks on both sides will increase costs.	(0) Project may rank well with funding sources, but requests are competitive.	(0) Slope complicates construction.	(-) Obtaining ROW from landowners is difficult.	(0) Sidewalk will likely be used by residents in the area.
13	(+) Provides an alternate travel route for the Charolais Heights neighborhood.	(0)Cost is moderately expensive but the majority of the construction cost could be incurred by private development.	(+) Private development would incur the majority of construction costs.	(0) Alignment is mostly along undeveloped land.	(0) May be some objection by Charolais Heights neighbors.	(-) Would be used primarily by Charolais Heights neighborhood residents. Use would be low, but comparative to other local neighborhood streets.

	Relevance to Goals	Realistic Cost	Available Funding	Technical Implementation	Political Implementation	Potential Use
	Highly Relevant = + Moderately Relevant = 0 Not Relevant = -	Inexpensive = + Moderately Expensive = 0 Expensive = -	Funding Readily Available = + Some Funding Available = 0 Funding Not Readily Available = -	Simple to Implement = + Implementable = 0 Difficult to Implement = -	Few Political Challenges = + Some Political Challenges = 0 Highly Political = -	High Utilization = + Some Utilization = 0 Low Utilization = -
14	(+) Establishes better local street connectivity for an area of the City that lacks alternate travel routes.	(-) The roadway would be expensive to construct given the uneven hillside terrain.	(+) Private development would incur the majority of construction costs.	(0) General alignment is along undeveloped land, but the terrain is uneven hillside terrain.	(+) Likely to have few political challenges.	(+) Would serve as an alternate travel route to a sizable number of single-family homes.
15	(+) Would extend the existing city street grid and provide a local street alternative to US 26.	(0) Cost is moderately expensive with alignments based on potential redevelopment of the mobile home park.	(+) Private development would likely incur the majority of construction costs.	(-) Contingent upon redevelopment of the mobile home park.	(0) Likely to be some political challenge to the redevelopment of the mobile home park.	(+) Would serve as an alternate local street route to US 26.
16	(+) Would extend the existing city street grid and provide a local street alternative to US 26.	(+) Relatively inexpensive costs as the alignment is flat and straight.	(+) Private development would likely incur the majority of construction costs.	(+) Property is mostly vacant.	(+) Likely to have few political challenges.	(0) Would be used primarily by neighborhood residents.
17	(+) Would provide a formal pedestrian crossing of Main Street.	(+) Relatively inexpensive.	(0) Would likely require special funding by the City of John Day.	(+) May require a more in depth review of safety issues.	(+) Likely to have few political challenges.	(0) Would be used primarily by neighborhood residents accessing the hospital. Use may increase with a Canyon Creek trail.
18	(+) Would provide an alternate travel route to 7th Street.	(-) Likely to be an expensive project to construct given an alignment through potential wetlands and the need for a bridge over the John Day River.	(-) Would likely require special funding by the City of John Day and/or Grant County.	(-) An alignment would need to minimize wetland impacts and environmental impacts to the John Day River.	(0) Likely to have some political challenges due to the environmental impacts.	(0) Utilization would be moderate compared to the existing Bridge Street.
19	(+) Would extend the existing city street grid and provide a local street alternative to US 26.	(0) Cost is moderately expensive with alignments based on potential redevelopment of the mobile home park.	(+) Private development would likely incur the majority of construction costs.	(-) Contingent upon redevelopment of the mobile home park.	(0) Likely to be some political challenge to the redevelopment of the mobile home park.	(+) Would serve as an alternate local street route to US 26.
20	(+) Provides local pedestrian connectivity.	(+) Improvement length is short.	(0) Project may rank well with funding sources, but requests are competitive.	(+) Terrain is relatively easy.	(0) Some residents may question extending sidewalks until new development occurs to the east.	(0) Sidewalk will likely be used by residents in the area, particularly when development occurs to the east.
21	(+) Provides safe pedestrian access along major transportation route.	(-) Project is significant in scope.	(0) Project may rank well with funding sources, but requests are competitive.	(+) Terrain is relatively easy.	(0) Some residents may question extending sidewalks until new development occurs to the east.	(0) Sidewalk will likely be used by residents in the area, particularly when development occurs to the east.
22	(0) Trails will provide pedestrian access to John Day River, particularly in conjunction with John Day River path.	(+) Natural surface trails are inexpensive to construct and maintain.	(0) Project may rank well with funding sources, but requests are competitive.	(+) Terrain is flat.	(+) Trails already exist and are supported by the community.	(-) Some minor recreation use but not significant transportation use.
23	(+) Provides pedestrian connectivity.	(-) Project is significant in scope.	(0) Project may rank well with funding sources, but requests are competitive.	(0) Fill areas near intersection of US 26 and 3rd Street may need special engineering and design.	(0) Some residents may question cost of developing the facility.	(0) Sidewalk will provide connection towards 7th Street Recreation Complex from residential areas to the south, but US 26 still poses a barrier.
24	(+) Creates pedestrian transportation system within proposed residential subdivision.	(-) Extent of development is unknown, but expected to be significant.	(+) The developer will need to implement the system in order to conform with land use approvals.	(0) Terrain will make implementation difficult in some areas but the ability to use accessways instead of sidewalks will reduce the burden.	(+) Proposed sidewalks and accessways are already approved.	(0) Facilities will likely be used by residents in the area.
25	(0) Provides a marginal level of connectivity for future development.	(-) The roadway would be expensive to construct given the uneven hillside terrain.	(+) Private development would likely incur the majority of construction costs.	(-) General alignment is along undeveloped land, but the terrain is uneven hillside terrain.	(-) Would require modification of approved Strawberry View Estates plat.	(-) Would have limited use.
26	(+) Would extend the existing city street grid.	(+) Relatively inexpensive as the land is currently undeveloped.	(+) Private development would likely incur the majority of construction costs.	(0) Property is mostly vacant.	(+) Likely to have few political challenges.	(-) Low to moderate utilization but proportional to other downtown streets.
27	(+) Would extend the street grid.	(+) Cost born by future development.	(+) Private development would incur the construction costs.	(+)Property is mostly vacant.	(+) Likely to have few political challenges.	(0) Utilization dependent upon future development.

	Relevance to Goals	Realistic Cost	Available Funding	Technical Implementation	Political Implementation	Potential Use
	Highly Relevant = + Moderately Relevant = 0 Not Relevant = -	Inexpensive = + Moderately Expensive = 0 Expensive = -	Funding Readily Available = + Some Funding Available = 0 Funding Not Readily Available = -	Simple to Implement = + Implementable = 0 Difficult to Implement = -	Few Political Challenges = + Some Political Challenges = 0 Highly Political = -	High Utilization = + Some Utilization = 0 Low Utilization = -
28	(+) Provides bicycle and pedestrian connectivity north-to-south.	(-) Construction and ROW purchase would be significant for a trail.	(0) Project may rank well with funding sources, but requests are competitive.	(-) Steep and moving stream banks, narrow bridges, and ROW purchases make the project difficult to implement.	(-) Obtaining ROW from landowners is difficult.	(0) Project will likely see good use from some populations (e.g., school children) but others will not like the less-formalized conditions.
29	(+) Provides pedestrian connectivity from the valley floor to the airport area.	(-) Project scope is considerable given the length of the improvements and fill necessary to create a sufficient road shoulder.	(-) The unique nature of this project makes it a poor fit for many funding sources.	(-) Steep terrain and limited options make this a design and construction challenge.	(0) Some residents may question cost of developing the facility.	(-) The route does not connect major pedestrian origins or destinations.
30	(+) Provides a bicycle and pedestrian route away from Canyon Boulevard but may have safety issues.	(0) No major improvements are proposed.	(0) The unique nature of this project makes it a poor fit for many funding sources.	(0) The technical difficulty for this project lies in providing safe passage and mid-block crossings for users of the alleyways.	(-) Some residents may question if it is appropriate to direct children into alleyways as primary passage routes. In addition, the local residents may not approve.	(0) With the other options proposed for providing bicycle and pedestrian connectivity in the area this will probably see low use.
31	(+) Provides pedestrian connectivity along a primary transportation route and to schools.	(-) Scope of improvements is considerable.	(0) Project may rank well with funding sources, but requests are competitive.	(0) Existing utilities and development make an otherwise simple implementation more difficult.	(-) Adjacent property owners may object to driveway consolidation efforts.	(+) This will be the best and safest pedestrian route south from the City.
32	(+) Increases effectiveness of bicycle transportation facilities.	(+) Materials are inexpensive.	(0) Project may rank well with funding sources, but requests are competitive.	(+) Restriping is fairly simple.	(0) Some residents may feel more constrained by narrower vehicle travel lanes.	(0) Bicycle use will probably increase if riders feel safer in bike lanes.
33	(+) Provides local pedestrian connectivity.	(0) Smaller scope of project makes costs reasonable.	(0) Project may rank well with funding sources, but requests are competitive.	(0) Terrain is simple but existing development and utilities will complicate efforts.	(0) Some residents may question cost of developing the facility.	(0) These facilities are in the downtown area, but slightly away from Main Street.
34	(+) Provides local pedestrian connectivity.	(0) Smaller scope of project makes costs reasonable.	(0) Project may rank well with funding sources, but requests are competitive.	(0) Terrain is simple but existing development and utilities will complicate efforts.	(0) Some residents may question cost of developing the facility.	(0) These facilities are in the downtown area, but slightly away from Main Street.
35	(+) Would establish a more complete street network on the southwest quadrant of the downtown street grid.	(-) Cost is expensive as right-of-way would need to be acquired.	(-) Would likely require special funding by the City of John Day.	(-) Difficult to implement as land from existing businesses would need to be acquired.	(-) Property condemnation would be needed in the near-term to implement.	(0) Some utilization by adjacent businesses. Through traffic would most likely continue to use US 26 and US 395.
36	(+) Would provide better connectivity for development located east of the airport.	(-) The roadway would be expensive to construct given the uneven hillside terrain.	(0) Private development would likely incur the majority of construction costs.	(-) General alignment is along undeveloped land, but the terrain is uneven hillside terrain.	(+) Likely to have few political challenges.	(-) Utilization is likely limited to the future development that it serves.
37	(+) Provides local pedestrian connectivity, particularly for school children.	(-) Improvements to bridge will be relatively costly.	(0) Project may rank well with funding sources, but requests are competitive.	(-) The bridge crossing will need considerable design and construction effort.	(+) Need for safe school access is important.	(0) Project will see use but area does not contain a high number of residents.
38	(+) Provides pedestrian connectivity along major transportation route.	(-) Scope of improvements is considerable.	(0) Project may rank well with funding sources, but requests are competitive.	(0) Additional grading needed is not extensive but existing development and utilities will complicate efforts.	(+) Higher costs will be justified by importance of project.	(+) Sidewalks will serve as major pedestrian transportation facility connecting origins and destinations.
39	(+) Provides bicycle connectivity along major transportation route.	(-) Scope of improvements is considerable.	(0) Project may rank well with funding sources, but requests are competitive.	(0) Additional grading and paving needed is not extensive but existing development and utilities will complicate efforts.	(0) Some residents may question cost of developing the facility.	(0) Better shoulders for bicycling will encourage more riders to utilize the facility.
40	(+) Provides local pedestrian connectivity.	(0) Terrain and existing development will complicate implementation. ROW purchases may be considerable.	(0) Project may rank well with funding sources, but requests are competitive.	(0) Terrain is fairly open.	(0) Obtaining ROW from landowners is difficult.	(-) Use will mostly be by local residents.
41	(+) Would provide industrial park access to West Bench Road.	(-) The roadway would be expensive to construct given the uneven hillside terrain.	(-) Would likely require special funding by the City of John Day and/or Grant County.	(0) General alignment is along undeveloped land, but the terrain is uneven hillside terrain.	(+) Likely to have few political challenges.	(0) Utilization is likely limited to the industrial park tenants.

Appendix G

Proposed Comprehensive Plan/Development Code Amendments

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING
610 SW Alder Street, Suite 700, Portland, OR 97205 P 503.228.5230 F 503.273.8169

MEMORANDUM

Date: March 24, 2009 Project #: 9256

To: Peggy Gray, City of John Day
Cc: Cheryl Jarvis-Smith

From: Matt Hughart, AICP
Project: John Day Local Street Network Plan
Subject: Proposed Plan and Code Amendments

This memorandum presents a series of amendments identified for the City of John Day's Comprehensive Plan and Development Code in order to implement the John Day Local Street Network Plan. The Local Street Network Plan itself will be proposed for adoption by reference into the Comprehensive Plan.

The identified amendments represent feedback received from an initial "red flag" review conducted of the City's Comprehensive Plan and Development Code (Memorandum 3G) as well as other ideas developed during the committee meetings. Language that is proposed to be deleted is indicated by strike-through and language that is proposed to be added is indicated by underline. Proposed amendments are shown in a table which also includes comments about the intent of each amendment.

PROPOSED COMPREHENSIVE PLAN AMENDMENTS

GENERAL LAND USE ELEMENT

Goal 2 – Land Use Planning

POLICIES

3. All new developments should follow accessibility guidelines outlined in the John Day's Development Code based on Oregon's 2005 Development Code and User's Guide for Small Cities.

RESIDENTIAL AREAS

5. Residential uses should be accessible by all modes of transportation.

TRANSPORTATION POLICIES

Pedestrian and Bicycle Circulation

1. It is the policy of John Day to plan and develop and complete a continuous network of streets, accessways, and other improvements, including bikeways, walkways, and safe street crossings to promote safe, direct and convenient bicycle and pedestrian circulation within the community.

2. John Day shall require streets and accessways where appropriate to provide safe, direct and convenient access to major activity centers, including downtown, schools, shopping areas, and community centers.

7. Bicycle parking facilities shall be provided at all new ~~residential multi-family developments of four units or more, commercial, industrial, recreational, and institutional facilities.~~construction or major reconstruction based on recommendations set forth in the current development standards (based on ODOT's 2005 Development Code and User's Guide for Small Cities).

8. Promote bicycle safety and increased bicycling through education, encouragement and enforcement activities.

9. Work with local transit agencies to provide projects that improve multi-modal connections (e.g., bike racks on all public transportation vehicles) and enhance opportunities for bicycle-transit trip linking.)

10. Seek funding for bicycle transportation projects through current local, regional, state, and federal funding programs while seeking to form local partnerships to leverage those funds to maximize the use of available dollars.

11. Develop a program to routinely repair and maintain roads and other bikeway network facilities, including regular sweeping of bikeways and shared use pathways.

PROPOSED DEVELOPMENT CODE AMENDMENTS

Development Code

ARTICLE 5-2 - LAND USE DISTRICTS

5-2.3.180 Commercial Districts – Pedestrian Amenities

B. Standards.

5. Transit bus shelter in accordance with the following guidelines:
   a. Three walls (a rear and two sides with a minimum covered area of 48 square feet. For areas with space limitations, other types of shelters (e.g., umbrella or halfwall or canopies) may be used.
   b. Interior seating.
   c. A minimum front clearance of four feet (five feet desirable) from the shelter to the edge of the curb.
   d. Minimum sidewalk around shelter (i.e., sides and rear) of three feet (five feet desirable).
   e. Display panel for route and schedule information, if not provided on information kiosk.

ARTICLE 5-3 – COMMUNITY DESIGN STANDARDS

5-3.1.200 Vehicular Access and Circulation

H. Joint and Cross Access – Requirement.

4. For multi-tenant developments, and developments on multiple lots or parcels. Such joint accesses and shared driveways shall provide access to no more than two proposed or potential parcels.

5-3.1.300 Pedestrian Access and Circulation

C. Transit Shelter Design

New developments and major remodels may provide a bus transit shelter within a street furnishing zone. Use of the public right-of-way requires approval by the road authority.

1. Transit bus shelter in accordance with the following guidelines:
   a. Three walls (a rear and two sides with a minimum covered area of 48 square feet. For areas with space limitations, other types of shelters (e.g., umbrella or halfwall or canopies) may be used.
   b. Interior seating.
   c. A minimum front clearance of four feet (five feet desirable) from the shelter to the edge of the curb.

d. Minimum sidewalk around shelter (i.e., sides and rear) of three feet (five feet desirable).

e. Display panel for route and schedule information, if not provided on information kiosk.

5-3.4.100 Transportation Standards

F. Minimum Rights-of-Way and Street Sections.

Street Type	Right-of-Way Width	Curb-to-Curb Paved Width	Within Curb-to-Curb Area				Curb	Planting Strip	Side-walks
			Motor Vehicle Travel Lanes	*Center Turn Lane*	*Bike Lanes*	*On-Street Parking*			
Local Residential									
Option A	38'-40'	28'	10'/10'	None	None	8' (one side)	Yes	None	4'-6'
Option B	40'-42'	36'	10'/10'	None	None	8'/8'	Yes	None	4'-6' (one side
Option C	38'-40'	28'	10'/10'	None	None	8' (one side)	Yes	None	4'-6' (one side
Option D	50'	36'	10'/10'	None	None	8'/8'	Yes	None	4'-6'
Option E	60'	36'	10'/10'	None	None	8'/8'	Yes	(optional) 2'-6'/2'-6'	4'-6'
Alley									
A-1	16'-20'	16'-20'	8'-10'/8'-10'	None	None	None	No	None	None
Collector									
Option A	44'-56'	30'-32'	10'-11'/ 10'-11'	None	5'/5'	None	Yes	(optional) 2'-6'/2'-6'	6'/6'
Option B	40'-44'	30'-32'	10'-11'/ 10'-11'	None	5'/5'	None	Yes	(optional) 2'-6'	6'(one side)
Option C	54'	42'	12'/12'	None	5'/5'	8' one side	Yes	None	6'/6'
Option D	62'-74'	50'	12'/12'	None	5'/5'	8'/8'	Yes	(optional) 2'-6'/2'-6'	6'/6'

Street Type	Right-of-Way Width	Curb-to-Curb Paved Width	Within Curb-to-Curb Area				Curb	Planting Strip	Side-walks
			Motor Vehicle Travel Lanes	*Center Turn Lane*	*Bike Lanes*	*On-Street Parking*			
Arterial									
Option A	62'	50'	14'/14'	12'	5'/5'	None	Yes	None	6'/6'
Option B	80'	64'	12'/12'	12'	6'/6'	8'/8'	Yes	None	6'/6'
Option C	80'	50'	12'/12'	14'	6'/6'	None	Yes	None	5'-8'/ 5'-8'
Arterial (One-Way)	60'	18'	12'	None	6'	None	Yes	None	6'/6'

G. Subdivision Street Connectivity.

6. Bicycle/Pedestrian Access and Circulation. To promote safe, direct, and convenient bicycle and pedestrian circulation, a system of connected multi-use pathways should be developed to provide access to and from residential neighborhoods, business districts, schools, and recreational destinations. Development standards for non-motorized multi-use pathways should conform to the information provided in the American Association of State Highway and Transportation Officials (AASHTO) "Guide for the Development of Bicycle Facilities" or similar standards as appropriate.

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING PLANNING

610 SW Alder Street, Suite 700
Portland, OR 97205

P (503) 228-5230
F (503) 273-8169

ATTN: Plan Amendment Specialist
Dept of Land Conservation & Develop.
635 Capitol St NE Ste 150
Salem OR 97301