APPENDIX F–TECHNICAL MEMO #4 SOLUTIONS ANALYSIS & FUNDING PROGRAM

TECHNICAL MEMORANDUM #4

Date:	November 25, 2025	Kittelson Project No: 27003.031
To:	Project Management Team	
From:	Kittelson Associates, Inc	
Subject:	Solutions Analysis and Funding Program	

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Introduction

This memorandum identifies the transportation system alternatives developed to address gaps and deficiencies identified in the transportation system inventory, the existing conditions analysis, and the future needs identified in the future (no-build) traffic conditions analysis (see Technical Memorandum #3). The information provided in this memorandum will help address the requirements identified in Oregon Administrative Rule 660-012-020 (Elements of a Transportation System Plan) for establishing a coordinated network of transportation facilities adequate to serve state and regional transportation needs.

Roadway Network

The state highway and county roadway network serves the majority of motor vehicle trips within Umatilla County. In addition to motorists, truck freight, pedestrians, bicyclists, and transit riders all rely on the state and county roadway network to access areas locally and regionally. This section summarizes the roadway network alternatives considered for implementation in the non-urban parts of the county to address gaps, deficiencies, and needs in the roadway network as well as alternatives that will facilitate improvements to the pedestrian, bicycle, and public transit networks.

Functional Classification Modifications

The County's existing functional classification plan includes designations for all State- and County-owned facilities. The classifications summarized below apply only to roadway sections which lie outside of urban growth boundaries of incorporated cities:

- **Arterial Roads** –Umatilla County considers all Interstate, National, and State Highways to be its Arterial network. The County does not own or maintain these highways, nor does it classify any county-owned roadways as Arterial roads.
- **Rural Major Collector Roads** –Major Collector roads carry higher volumes of county-wide vehicle and localized freight traffic with a greater emphasis on regional connectivity.
- **Rural Minor Collector Roads** – Rural Minor Collector roads also carry vehicle and localized freight traffic, but have a greater emphasis on serving abutting lands and the access needs of rural residents. Rural Minor Collector roads provide service to residential, commercial, industrial, and mixed land uses.
- **Local Road** – Property access is the main priority or Local roads. All roads in the County that are not classificed as Arterial or Collector roads are considered Local roads.

The Umatilla County TSP update provides an opportunity to review and revise the functional classification of all county-owned roadways. These designations were reviewed for consistency with the overall circulation network, updated transportation plans from other local/regional agencies, and current circulation patterns. In addition, the designations were reviewed against the Federal Functional classifications to ensure alignment. Based on this review, Table 1 summarizes proposed changes to the

County and Federal classifications of County roadways. Figure 1 and Figure 2 illustrates the changes shown in Table 1.

Assuming alignment on these recommended changes, modifications to the County classifications will occur with the adoption of the TSP update, while changes to the Federal classification will occur following the adoption of the TSP update and with subsequent coordination/approval from the Oregon Department of Transportation (ODOT) and the Federal Highway Administration (FHWA).

Table 1. Proposed Changes to County & Federal Functional Classifications

Road Name	From	To	Roadway Functional Classification				
			Existing County Class	Existing Federal Class	Proposed County Class	Proposed Federal Class	CTUIR TSP
County 320 Rd	I-84	Fullerton Rd	Local	Major Collector	Major Collector	-	N/A
Banister Rd	OR 11	W Mill St	Minor Collector	Minor Collector	Major Collector	Major Collector	N/A
Best Rd	Shaw Rd	Market Rd	Local	Major Collector	Major Collector	-	N/A
Bingham Rd	Spring Hollow Rd	Bar M Ln	Major Collector	Major Collector	Minor Collector	Minor Collector	Minor Arterial
Bridge Rd	Country Ln	Powerline Rd	Major Collector	Major Collector	Minor Collector	Minor Collector	N/A
Butter Creek Rd	OR 207	OR 74	Local	Major Collector	Major Collector	-	N/A
Circle Rd	Weinke	Pilot Rock- Hoeft Rd	Minor Collector	Minor Collector	Local	Local	N/A
Country Ln	Powerline Rd	Near Umatilla River Rd	Major Collector	None	Local	-	N/A
County 511 Rd	Stateline Rd	Fruitvale Rd	Local	None	Minor Collector	Minor Collector	N/A
Duff Rd	OR 11	Pambrun Rd	Local	None	Minor Collector	Minor Collector	Major Collector
E Birch Creek Rd	Pearson Creek Rd	Rocky Ridge Rd	Minor Collector	None	Local	-	N/A
Echo Meadows Rd	Stanfield Meadows Rd	OR 207	Local	None	Minor Collector	-	N/A
Emigrant Rd	Poverty Flat Rd	Emigrant Rd	Local	Minor Collector	Minor Collector	-	N/A
Feedville Rd	OR 207	End of Road	Major Collector	Major Collector	Minor Collector	Minor Collector	N/A

Road Name	From	To	Roadway Functional Classification				
			Existing County Class	Existing Federal Class	Proposed County Class	Proposed Federal Class	CTUIR TSP
Fergies Rd	Juniper Canyon Rd	County 888 Rd	Local	Minor Collector	Minor Collector	-	N/A
Frontage Ln	Cedar St	County Line Rd	Local	Major Collector	Major Collector	-	N/A
Fruitvale Rd	Edwards Rd	County 511 Rd	Local	None	Minor Collector	Minor Collector	N/A
Hermiston-Hinkle Rd	Feedville Rd	Locomotive Ln	Major Collector	None	Minor Collector	-	N/A
Holdman Rd	Harper Rd	OR 37	Local	Minor Collector	Minor Collector	-	N/A
Holmes Rd	Market Rd	Goad Rd	Local	None	Minor Collector	Minor Collector	N/A
Kings Corner Rd	County 864 Rd	County 977 Rd	Local	Minor Collector	Minor Collector	-	N/A
Korvola Rd	Birch Creek Rd	SW Sunset Dr	Minor Collector	Minor Collector	Local	Local	N/A
Lamb Rd	I-82	Westland Rd	Local	Major Collector	Major Collector	-	N/A
Mann Rd	Maloney Rd/ Duff Rd	OR 11	Local	None	Minor Collector	Minor Collector	Major Collector
McKay Creek Rd	Shaw Rd	N Fork McKay Creek Rd	Local	Minor Collector	Minor Collector	-	N/A
McKay Dr	US 395	Schroeder Rd	Minor Collector	None	Local	-	N/A
McKay Ln	Mytinger Ln	End of Rd	Minor Collector	None	Local	-	N/A
Milton Cemetery Rd	Grant Rd	Spofford Rd	Local	Minor Collector	Minor Collector	-	N/A
N Juniper Canyon Rd	Vansycle Rd	Fergies Rd	Local	Minor Collector	Minor Collector	-	N/A

Road Name	From	To	Roadway Functional Classification				
			Existing County Class	Existing Federal Class	Proposed County Class	Proposed Federal Class	CTUIR TSP
N Ott Rd	Moyer Ln	E Punkin Center Rd	Local	Major Collector	Major Collector	-	N/A
Pambrun Rd	Duff Rd	End of Rd	Minor Collector	None	Local	-	N/A
Porter Rd	Schoolhouse Rd	Shaw Rd	Local	Minor Collector	Minor Collector	-	N/A
Rockwell Rd	Shaw Rd	Stewart Creek Frontage Rd	Local	None	Minor Collector	Minor Collector	N/A
Ross Rd	OR 30	End of Rd	Minor Collector	None	Local	-	N/A
S First St	Feedville Rd	Hermiston UGB	Local	Major Collector	Major Collector	-	N/A
S Juniper Canyon Rd	Fergies Rd	County 864 Rd	Local	Minor Collector	Minor Collector	-	N/A
S Market Rd	Holmes Rd	Conner Rd	Local	Minor Collector	Major Collector	Major Collector	Major Collector
S Market Rd	Conner Rd	OR 331	Minor Collector	Minor Collector	Major Collector	Major Collector	Major Collector
Shaw Rd	Schoolhouse Rd	McKay Creek Rd	Major Collector	Minor Collector	Minor Collector	-	N/A
Shaw Rd	McKay Creek Rd	Best Rd	Major Collector	None	Minor Collector	Minor Collector	N/A
Spofford Rd	Milton Cemetery Rd	Birch Creek Rd	Local	Minor Collector	Minor Collector	-	N/A
Spring Creek Rd	US 395	Shaw Rd	Minor Collector	Minor Collector	Local	Local	N/A
Spring Hollow Rd	OR 11	Bingham Rd	Local	Minor Collector	Major Collector	Major Collector	Major Collector

Road Name	From	To	Roadway Functional Classification				
			Existing County Class	Existing Federal Class	Proposed County Class	Proposed Federal Class	CTUIR TSP
Stanfield Meadows Rd	Seymour St	OR 207	Local	Minor Collector	Minor Collector	-	N/A
Stateline Rd	OR 332	OR339	Minor Collector	Major Collector	Major Collector	-	N/A
Stateline Rd	OR 339	OR 11	Minor Collector	Minor Arterial	Minor Arterial	-	N/A
Stewart Creek Rd	Pilot Rock UGB	Schoolhouse Rd	Local	Minor Collector	Minor Collector	-	N/A
Third St	OR 11	Center St	Local	Major Collector	Major Collector	-	N/A
Thorn Hollow Rd	Spring Hollow Rd	Bingham Rd	Local	Minor Collector	Major Collector	Major Collector	N/A
Tum A Lum Rd	E Appleton Rd	E Crockett Rd	Local	None	Major Collector	Major Collector	N/A
Tum A Lum Rd	E Crockett Rd	Birch Creek Rd	Local	Major Collector	Minor Collector	-	N/A
Vansycle Rd	Richmond Ln	N Juniper Canyon Rd	Local	Minor Collector	Minor Collector	-	N/A
Appleton Rd	Trumbull Ln	OR 339	Major Collector	None	-	Major Collector	N/A
Canal Rd	E Punkin Center Rd	E Loop Rd	Major Collector	Minor Collector	-	Major Collector	N/A
E Appleton Rd	OR 11	Tum A Lum Rd	Major Collector	None	-	Major Collector	N/A
E Crockett Rd	OR 11	Tum A Lum Rd	Local	Major Collector	-	Local	N/A
E Punkin Center Rd	N Ott Rd	Tabor Rd	Major Collector	None	-	Major Collector	N/A
Hat Rock Rd*	OR 730	End of Rd	Local	Major Collector	-	Local	N/A

Road Name	From	To	Roadway Functional Classification				
			Existing County Class	Existing Federal Class	Proposed County Class	Proposed Federal Class	CTUIR TSP
McCormmach Rd	Shafer Rd	End of Rd	Local	Minor Collector	-	Local	N/A
Moorehouse Rd	Despain Gulch Rd	Stage Gulch Rd	Major Collector	Minor Collector	-	Major Collector	N/A
NE 42nd St	NE Riverside Ave	NE Queen Ave	Local	Minor Collector	-	Local	N/A
NE Queen Ave	Ne 42nd St	Ne 43rd St	Local	Minor Collector	-	Local	N/A
NE Riverside Ave	Pendleton UGB	Ne 42nd St	Local	Minor Collector	-	Local	N/A
Pambrun Rd	Spring Hollow Rd	Duff Rd	Minor Collector	None	-	Minor Collector	N/A
Powerline Rd	Stateline Rd	Birch Creek Rd	Local	Major Collector	-	Local	N/A
S Edwards Rd	E Punkin Center Rd	E Harding Ave	Minor Collector	Major Collector	-	Minor Collector	N/A
Sand Hollow Rd	Adams UGB	OR 334	Local	Minor Collector	-	Local	N/A
Shafer Rd	OR 335	McCormmach Rd	Local	Minor Collector	-	Local	N/A
Soap Hill Rd	County 1472 Rd	4975 ft from NF-058	Minor Collector	Major Collector	-	Minor Collector	N/A
Wells Station Rd	Stage Gulch Rd	I 84 ramps	Major Collector	Minor Collector	-	Major Collector	N/A

*Owned & managed by Oregon Parks and Recreation Department

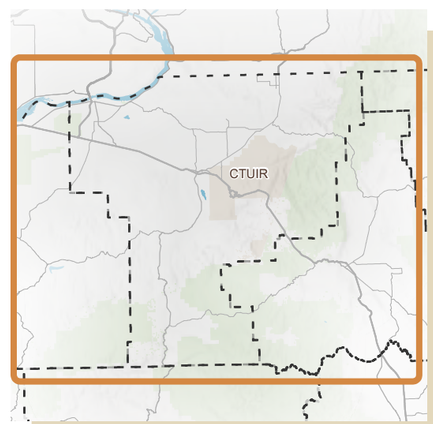
Figure 1

Proposed County Functional Classification

- Proposed Major Collector
- Proposed Minor Collector
- Proposed Local Road
- Interstate
- US/State Highways (Arterial)
- Existing Major Collector
- Existing Minor Collector
- Existing Local Road
- Umatilla County
- City Boundaries
- Tribal Lands
- Forest Service Lands

UMATILLA COUNTY
est. 1862

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Washington
Wallowa
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Union
Baker
Grant
CTUIR
STATELINE RD
N JUNIPER CANYON RD
FERGIES RD
HOLDMAN RD
KINGS CORNER RD
WARSICLE RD
COLD SPRINGS RD
DESPAIN GULCH RD
MOORE HOUSE RD
FEEDVILLE RD
PUNKIN CENTER RD
BAXTER RD
LOOP RD
EDWARDS RD
CRAIG RD
UMATILLA RIVER RD
POWERLINE RD
WESTLAND RD
BRIDGE RD
320 RD
RIETH RD
DUFF RD
MANN RD
PAMBRUN RD
SPRING HOLLOW RD
BINGHAM RD
MISSION RD
CAYUSE RD
TUTUILLA CHURCH RD
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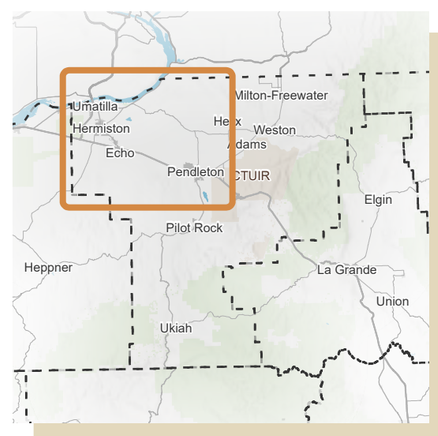
Figure 1a

Proposed County Functional Classification

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UMATILLA COUNTY
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UMATILLA RIVER RD
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STANFIELD MEADOWS RD
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MOOREHOUSE RD
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DESPAIN GULCH RD
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BUTTER CREEK RD
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Figure 1b

Proposed County Functional Classification

- Proposed Major Collector
- Proposed Minor Collector
- Proposed Local Road
- Interstate
- US/State Highways (Arterial)
- Existing Major Collector
- Existing Minor Collector
- Existing Local Road
- Umatilla County
- City Boundaries
- Tribal Lands
- Forest Service Lands

UMATILLA COUNTY est. 1862

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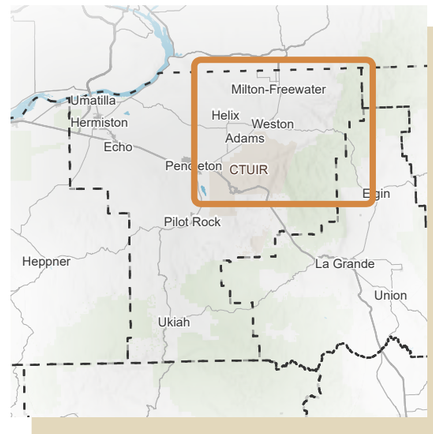


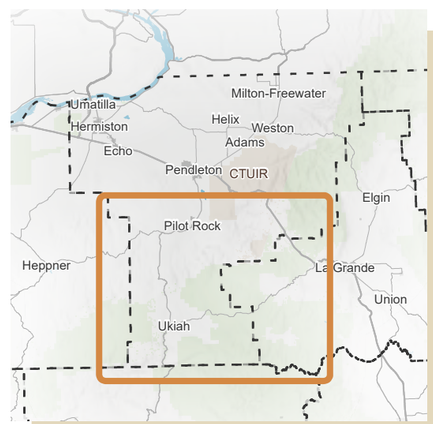
Figure 1c

Proposed County Functional Classification

- Proposed Major Collector
- Proposed Minor Collector
- Proposed Local Road
- Interstate
- US/State Highways (Arterial)
- Existing Major Collector
- Existing Minor Collector
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CIRCLE RD
SHAW RD
SPRING CREEK RD
R A KOCH RD
MCKAY CREEK RD
ROSS RD
BIRCH CREEK RD
SOAP HILL RD
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Figure 2

Proposed Federal Functional Classification

- Proposed Major Collector
- Proposed Minor Collector
- Proposed Local Road
- Interstate
- Other Principal Arterial
- Minor Arterial
- Existing Major Collector
- Existing Minor Collector
- Existing Local Road
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UMATILLA COUNTY
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KINGS CORNER RD
COLD SPRINGS RD
DESPAIN GULCH RD
MOORE HOUSE RD
SHAFER RD
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RIETH RD
DUFF RD
MANN RD
SPRINGDALE LOW RD
BINGHAM RD
THIRD ST
WILDHORSE RD
MCLEAN RD
WINN RD
MISSION RD
CAYUSE RD
EMIGRANT RD
TUTUILLA CHURCH RD
TUTUILLA CREEK RD
GOAD RD
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MCKAY CREEK RD
POVERTY FLAT RD
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CRAIG RD
LOOP RD
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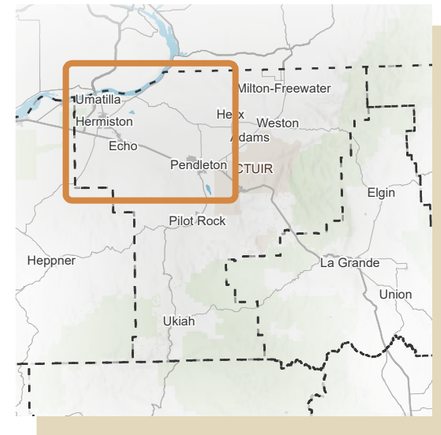
Figure 2a

Proposed Federal Functional Classification

- Proposed Major Collector
- Proposed Minor Collector
- Proposed Local Road
- Interstate
- Other Principal Arterial
- Minor Arterial
- Existing Major Collector
- Existing Minor Collector
- Existing Local Road
- Umatilla County
- City Boundaries
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UMATILLA COUNTY
est. 1862

0 2 4 Miles



Washington

Morrow

Umatilla

Hermiston

Stanfield

Echo

Pendleton

UMATILLA RIVER RD
COUNTRY LN
PUNKIN CENTER RD
BAXTER RD
CRAIG RD
N OTHELLO
CANAL RD
LOOP RD
EDWARDS RD
POWERLINE RD
BRIDGE RD
WESTLAND RD
FEEDVILLE RD
HARDING AVE
STANFIELD MEADOWS RD
MOOREHOUSE RD
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SHAFER RD
MISSION RD
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RIETH MAIN ST RD
KORVOLA RD
MCKAY DR
STEPHEN AVE
TUTUILLA CREEK RD
GOAD RD
TUTUILLA CHURCH RD
PATAWA RD
MARKET RD
BEST RD
SHAW RD
MOTANIC RD
HOLMES RD
BUTTER CREEK RD

82 730 37 395 207 84 334 11 331

Figure 2b

Proposed Federal Functional Classification

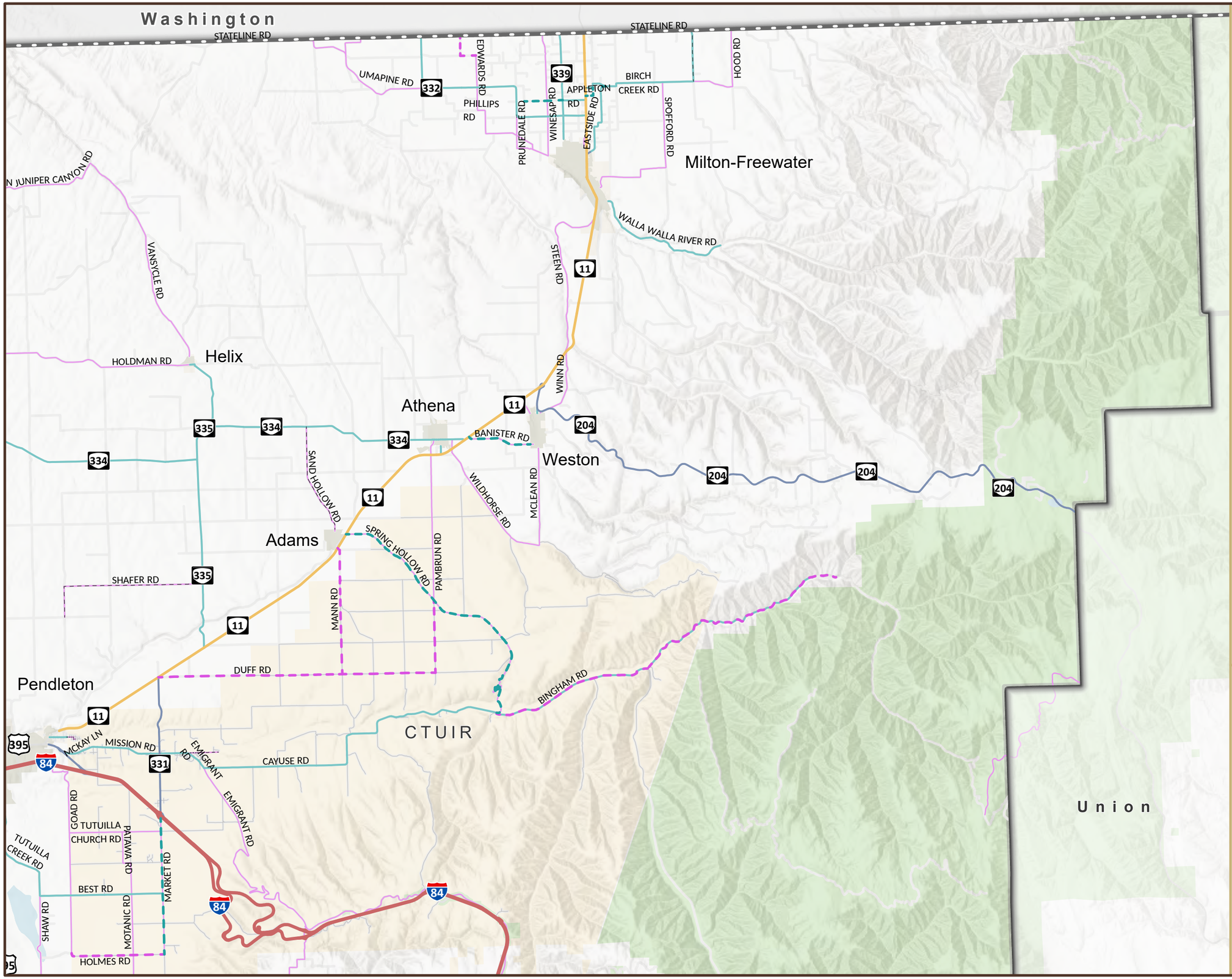


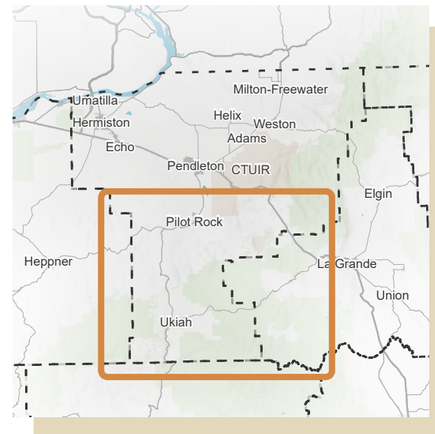
Figure 2c

Proposed Federal Functional Classification

- Proposed Major Collector
- Proposed Minor Collector
- Proposed Local Road
- Interstate
- Other Principal Arterial
- Minor Arterial
- Existing Major Collector
- Existing Minor Collector
- Existing Local Road
- Umatilla County
- City Boundaries
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- Forest Service Lands

UMATILLA COUNTY
est. 1862

0 2.75 5.5 Miles



Pilot Rock
Ukiah
CTUIR
Morrow
Union
Grant
BUTTER CREEK RD
CIRCLE RD
R A KOCH RD
SHAW RD
SPRING CREEK RD
MOTANIC RD
MCKAY CREEK RD
ROSS RD
BIRCH CREEK RD
SOAP HILL RD
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244

Roadway Design Standards

The County roadway design standards are necessary to ensure the roadway system will be capable of safely and efficiently serving the traveling public, while also accommodating the orderly development of adjacent lands. Roadway design standards are tied to the roadway functional classification hierarchy so that the design of the roadway supports its intended function. Proposed updated roadway design standards are summarized in Table 2. Updated graphical cross sections are shown in Exhibit 1. The cross sections illustrate right-of-way width, paved surface width, and travel lane/shoulder widths. Rural roadway segments will not include sidewalks. Where non-motorized/multi-modal accommodations are planned, a separated multi-use pathway is preferred. Where bicycle use is planned, bicycles are to be accommodated within the roadway shoulder width or separated multi-use pathway.

The standards and cross sections are intended for planning purposes in the case of new road construction, as well as for those locations where it is physically and economically feasible to improve existing roadways as part of redevelopment or capital improvements. For County facilities within the urban areas of Umatilla, Hermiston, Echo, Pendleton, Athena, Weston, Milton-Freewater, Pilot Rock, and Ukiah, the County will continue to defer to the standards of the respective incorporated city where feasible and unless specific roadway projects are not identified.

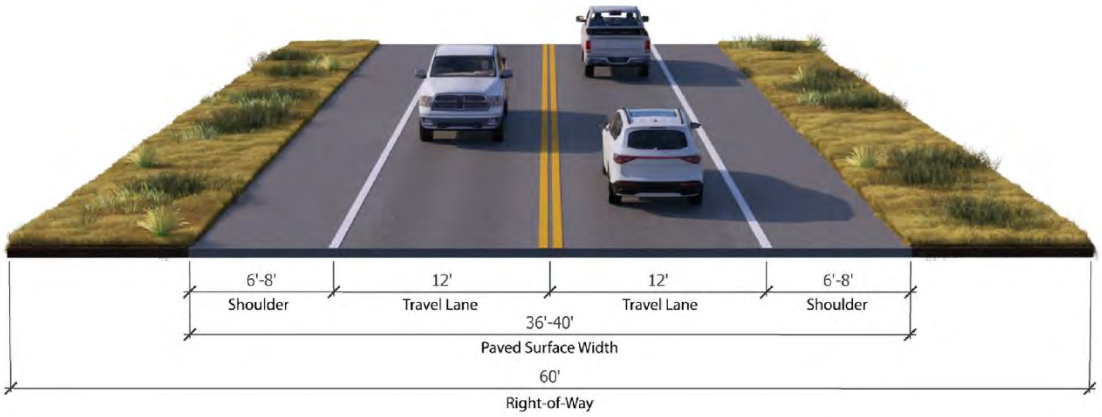
Table 2 – Potential Roadway Design Standard Modifications

Functional Classification	Right-of-way	Paved Surface Width	Paved Shoulder Width	Sidewalks
Rural Major Collector	60-ft	36–40 ft	6-8 ft[1]	-
Rural Minor Collector	60-ft	32-40 ft	4-8 ft[1]	-
Rural Local (Residential)	60-ft	28-36 ft	2-6 ft[2]	5-ft[3]
Rural Local (Industrial)	60-ft	30-42 ft	2-8 ft[1]	-
Private Roads and Public Rights-of-Way (Option 1[4])	30-ft	16-ft crushed gravel surface	-	-
Private Roads and Public Rights-of-Way (Option 2[5])	60-ft	22-ft crushed gravel surface	-	-

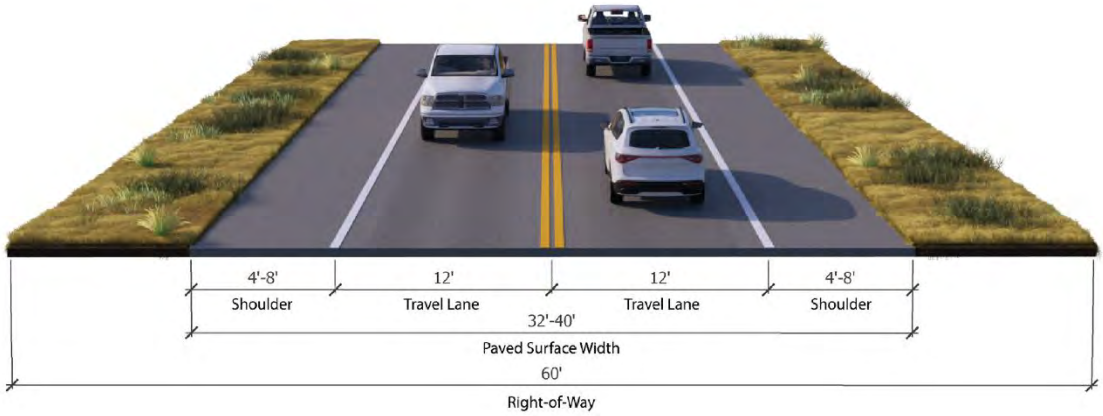
[1] Wider shoulder widths will be applied at the discretion of the County Engineer and reserved for situations where extra shoulder widths are necessary for safety reasons or the accommodation of shoulder bikeway treatments.
[2] If rural subdivision densities are greater than one dwelling per acre, or if a school or other neighborhood attraction is located within ½ mile walking distance, than 6-ft shoulders shall be provided.
[3] In lieu of 6-ft shoulders, 5-ft separated sidewalks can be provided on both sides of the local roadway, or one 10-ft separated multiuse path can be provided on one side of the local roadway.
[4] To be used for easements serving 3 or fewer parcels and additional partitioning or development is not anticipated.
[5] To be used for easements serving 4 or more parcels.

Exhibit 1 – Umatilla County Road Cross Sections

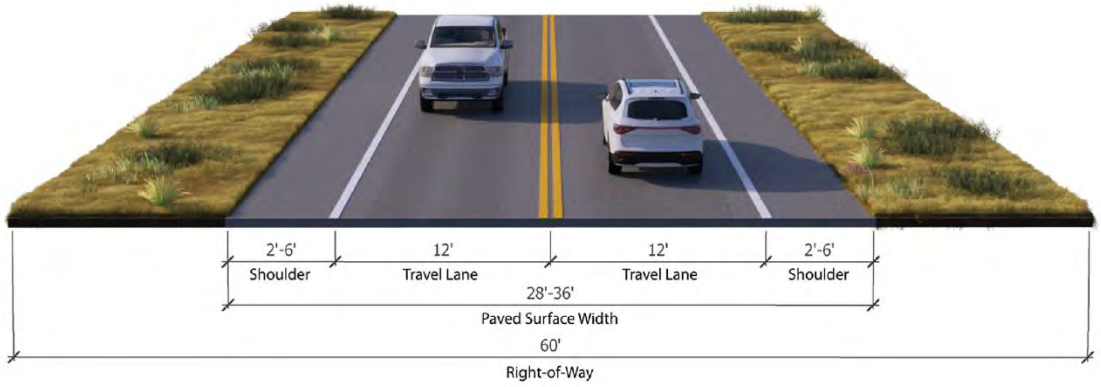
Rural Major Collector



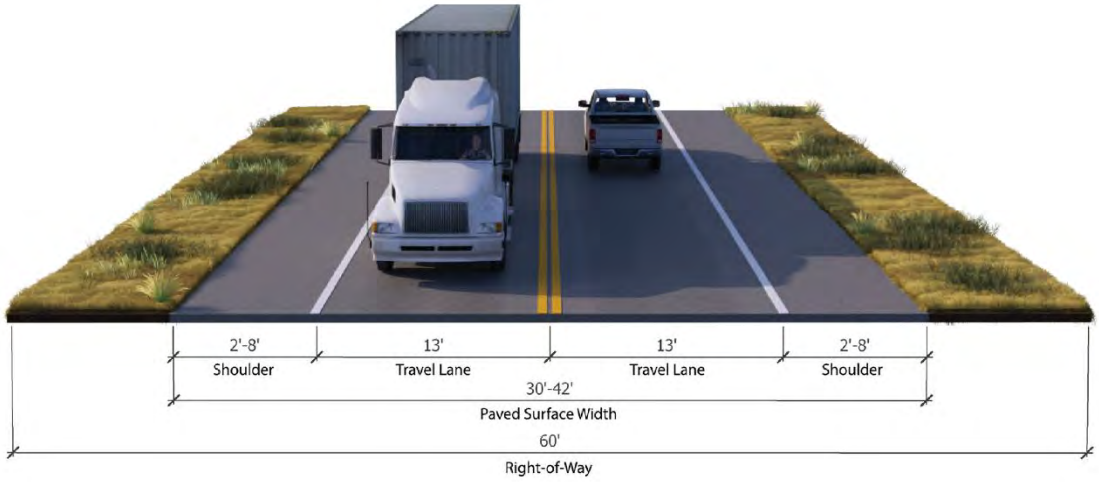
Rural Minor Collector



Rural Local Residential



Rural Local Industrial



Bridges, Structures, and Culverts

The bridge inventory summarized in Technical Memorandum #3 identified 16 bridges and structures in Umatilla County's transportation network with sufficiency ratings below 50. A bridge or structure with a sufficiency rating below 50 indicates that the bridge is in poor condition and is eligible for replacement.

Table 3 below lists the bridge projects identified for consideration in the TSP update. The list includes both bridge projects carried forward from the 2002 Umatilla County TSP and new projects identified on the 2023 bridge inspection data. Figure 3 summarizes the bridge project locations.

Table 3. Proposed Bridge Projects with Sufficiency Ratings

Project ID	County Bridge ID	Name	Location	Sufficiency Rating	Type of Work
B01	231	"A" Line Canal Bridge	N. Ott Rd.	72.5	Bridge replacement (structurally deficient)
B02	754	Barnhart Bridge	Rieth Rd.	Not Rated	Bridge replacement
B03	18078	S. Fork Cold Springs Bridge	S. Fork Cold Springs Rd.	98.7	Bridge replacement (structurally deficient)
B04	99	Umatilla River Bridge	Cuningham Rd.	61.3	Bridge replacement (functionally obsolete)
B05	455	Eastside/ Walla Walla River Bridge	Eastside Rd.	61.1	Bridge replacement (functionally obsolete)
B06	568	Wild Horse Creek Bridge	Sand Hollow Rd.	63.9	Bridge replacement (structurally deficient)
B07	65	Berry West Birch	Yellow Jacket Rd.	31.7	Bridge replacement (functionally obsolete)
B08	69	Rieth/Umatilla River Bridge	Birch Creek Rd.	34	Bridge replacement (structurally deficient)
B09	197	A Line Canal	E. Highland Ave.	49	Bridge replacement to accommodate future needs
B10	198	"A" Line Canal Bridge	Townsend Rd.	32	Bridge replacement (functionally obsolete)
B11	208	Furnish Ditch	Stage Gulch Rd.	48.9	Bridge replacement of load rated bridge

Project ID	County Bridge ID	Name	Location	Sufficiency Rating	Type of Work
B12	325	Emigrant Butte / Hunt Ditch	Emert Rd. (Co. Rd 1338)	41.8	Repair and Maintenance Work
B13	326	Hunt Ditch	Whitehouse Rd.	37.9	Repair and Maintenance Work
B14	327	Hunt Ditch	Rosenburg Rd.	35.5	Bridge replacement (structurally deficient)
B15	-	Umatilla River Bridge	Future westerly extension of Punkin Center Road to Country Ln.	N/A	New bridge construction

Figure 3

Proposed Bridge Projects

B# Proposed Bridge Project

Umatilla County

City Boundaries

Tribal Lands

Forest Service Lands

UMATILLA COUNTY
est. 1862

Data Source - Umatilla County, 2002 Umatilla County TSP

0 5 10
Miles



Washington
Wallowa
Morrow
Union
Baker
Grant
CTUIR
STATELINE RD
UMATILLA RIVER
PUNKIN CENTER RD
BAXTER RD
CRAIG RD
BRIDGE RD
POWERLINE RD
WESTLAND RD
EDWARDS RD
FEEDVILLE RD
DESPAIN GULCH RD
HOOPER HOUSE RD
COLD SPRINGS RD
RIETH RD
MISSION RD
CAYUSE RD
TUTUILLA CHURCH RD
MARKET RD
MCKAY DR
KORYOLA RD
TUTUILLA CREEK RD
SWAMP RD
SPRING CREEK RD
CIRCLE RD
ROSS RD
BIRCH CREEK RD
SOAP HILL RD
PAMBRUN RD
BINGHAM RD
WINN RD
STEEN RD
WALLA WALLA RIVER RD
EASTSIDE RD
WINESAP RD
COUNTY RD
HOOD RD
730
37
207
82
84
395
74
244
11
331
332
334
335
339
204
B01
B02
B03
B04
B05
B06
B07
B08
B09
B10
B11
B12
B13
B14
B15

Figure 3a

Proposed Bridge Projects

B# Proposed Bridge Project
Umatilla County
City Boundaries
Tribal Lands
Forest Service Lands

Washington

Umatilla

Hermiston

Stanfield

Echo

Pendleton

Morrow

B01 B02 B03 B04 B08 B09 B10 B11 B12 B13 B14 B15

82 84 395 730 37 207 334 11 331

UMATILLA RIVER RD
CRAIG RD
PUNKIN CENTER RD
COUNTRY LN
BAXTER RD
LOOP RD
POWERLINE RD
BRIDGE RD
WESTLAND RD
CANAL RD
EDWARDS RD
FEEDVILLE RD
HARDING AVE
MOOREHOUSE RD
WELLS STATION RD
DESPAIN GULCH RD
COLD SPRINGS RD
RIETH RD
MAIN ST
MISSION RD
MCKAY LN
KORVOLA RD
MCKAY DR
STEPHEN AVE
TUTUILLA CREEK RD
TUTUILLA CHURCH RD
GOAD RD
MARKET RD
SHAW RD

UMATILLA COUNTY
est. 1862

Data Source - Umatilla County, 2002 Umatilla County TSP

0 2 4 Miles

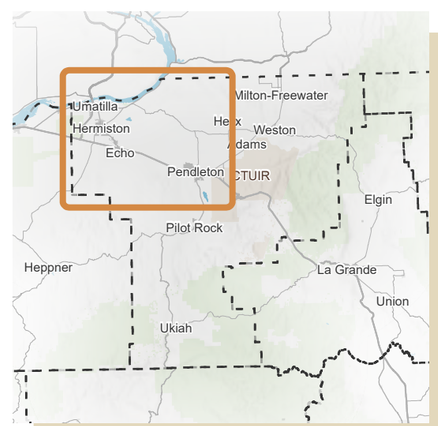


Figure 3b

Proposed Bridge Projects

Washington

STATELINE RD

UMAPINE RD

332

EDWARDS RD

PHILLIPS RD

PRUNEDALE RD

339

WINESAP RD

APPLETON RD

EASTSIDE RD

BIRCH CREEK RD

HOOD RD

B05

11

Milton-Freewater

WALLA WALLA RIVER RD

STEEN RD

WINN RD

Helix

Athena

335

334

Weston

204

B06

Adams

PAMBRUN RD

Pendleton

BINGHAM RD

CTUIR

MCKAY LN

MISSION RD

EMIGRANT RD

CAYUSE RD

331

395

84

TUTUILLA CHURCH RD

TUTUILLA CREEK RD

GOAD RD

MARKET RD

SHAW RD

Union

B# Proposed Bridge Project

Umatilla County

City Boundaries

Tribal Lands

Forest Service Lands

UMATILLA COUNTY

est. 1862

Data Source - Umatilla County, 2002 Umatilla County TSP

0 2 4 Miles

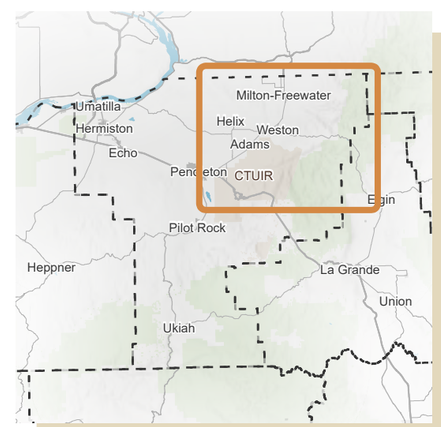


Figure 3c

Proposed Bridge Projects

B# Proposed Bridge Project

Umatilla County

City Boundaries

Tribal Lands

Forest Service Lands

Pilot Rock

CTUIR

SHAW RD

SPRING CREEK RD

CIRCLE RD

R A KOCH RD

ROSS RD

BIRCH CREEK RD

B07

74

84

395

244

Ukiah

SOAP HILL RD

Morrow

Union

Grant

UMATILLA COUNTY

est. 1862

Data Source - Umatilla County, 2002 Umatilla County TSP

0 2.75 5.5 Miles



Roadway/Corridor Improvements

Roadway/ Corridor improvements proposed in this memorandum comprises of pavement preservation on key roadways in county and roadway projects identified in existing TSPs on roadways within the county's jurisdiction.

The pavement conditions inventory summarized in Technical Memorandum #3 showed that most County highways are in "Fair" condition or better, except for:

- Birch Creek Rd
- Bridle Drive
- Cayuse Dr
- Circle Rd
- E Feedville Rd
- E Harding Ave
- E Punkin Center Rd
- Eagle Creek
- Goad Rd
- Hermiston
- Hoosier
- Lehman Springs
- Mcnary
- N Cayuse Rd
- Nolin Grade
- Old Airport
- Ordnance
- Pendleton-John Day
- Power City
- Powerline Rd
- Reith Rd
- Spring Hollow
- Sunquist
- Theater
- Tubbs Ranch
- Tutuilla Church Rd
- Umatilla-Mission
- Valley View Drive

As resources permit, the County is expected to continue maintaining pavement conditions along County roadways at fair or better conditions. There are several options available to the County to address future pavement preservation deficiencies:

- **Pothole repairs** fill holes that have developed along a roadway. There is no broader resurfacing of the roadway and no structural component besides filling in the pothole.
- **Chip seal** combines an asphalt and fine aggregate material layer to repair minor cracks in a roadway and provide a relatively even surface.
- **Blade patching** applies an asphalt mix over the top of existing pavement with a motor grader or spreader box that spreads and compacts the asphalt.
- **Overlay** consists of layers of cement or asphalt over the existing pavement structure. This process provides structure and is typical in places with minor or modest damage on the existing pavement.
- **Crack sealing** uses compressed air to blow/clean cracks in the road, and then a rubberized asphalt emulsion is squirted into the cracks.

ODOT is also expected to continue maintaining pavement conditions along its highways.

The proposed roadway/ corridor improvement projects are listed in Table 4 and shown in Figure 4.

Intersection Improvements

The proposed intersection improvements are based on the intersection operations analysis summarized in Technical Memorandum #3 and projects identified in existing TSPs on county roadways.

The intersection operations analysis showed that the County's current transportation network is sufficient to support the forecast traffic volume growth through the year 2045 outside of the incorporated cities with the exception of the following intersections/locations:

- **I-84 / OR 207 Interchange – EB Ramp Terminal (Intersection 5A):** Forecast to operate over capacity due to high projected eastbound left-turn volumes and conflicts with north/south through movements.
- **I-82 / Powerline Road Interchange – EB Ramp Terminal (Intersection 1A) and WB Ramp Terminal (Intersection 1B)**: Both interchange ramp terminals are forecast to operate over capacity due to continued growth along the Powerline Road corridor.

Given these forecasts and the complex nature of making significant improvements at older, rural interchanges where geometrics and interchange forms need to be studied in greater detail, it is recommended that the County work with ODOT and consider the development of a sub-area refinement plan for both interchanges. Known as Interchange Area Management Plans (IAMP), an IAMP would evaluate a range of potential operational, geometric, access management, and land use modifications to help improve near- and long-term modifications to improve safety, reduce congestion, and enhance future mobility at these critical interchange locations. The product of this planning effort would be adopted as part of a future Umatilla County TSP amendment.

All other County intersections should continue to be monitored for operational performance, particularly within incorporated cities, where localized congestion may occur.

The four proposed intersection improvement projects are listed in Table 4 and shown in Figure 4.

Traffic Safety Improvements

As a parallel effort to the Umatilla County TSP update, Umatilla County recently developed a Safety Action Plan (SAP) that was based on an anlaysis of recent crash data on all major County roads and State highways within the non-urban areas of the County. Through this review, emphasis areas for the SAP were developed based on the following findings:

- Crash Characteristics
  - The total number of crashes and number of severe crashes has increased from 2018 to 2022, with the biggest jump in crashes occuring between 2021 and 2022.
  - Impaired driving was involved in 35% of crashes that resulted in fatal or serious injuries, which is higher than Oregon overall and ODOT Region 5.

  - Road departure crashes make up 45% of crashes that resulted in a fatal or serious injury.
  - Speeding was a contributing factor in 27% of crashes that resulted in a fatal or serious injury.
  - Although not frequent in Umatilla County, crashes involving a pedestrian or a bicyclist are more likely to result in a fatal or serious injury.
  - Crashes involving a pedestrian or bicyclist are mostly located around areas transitioning to urban, near city limits or commercial land uses.
- Crash Locations
  - Intersections and roadways with the highest crash rates are predominantly located around urban areas, near city limits or commercial land uses.
  - High crash corridors also include winding sections of OR 11, OR 204, and US 395 in more rural parts of Umatilla County.
  - The identified high crash corridors and intersections align with analysis from the ODOT Safety Priority Index System (SPIS).
- Emphasis Areas
  - Roadway Departure Crashes: 672 road departure crashes occurred in Umatilla County. Focusing on arterials / collectors, roadways with posted speeds of 45 mph or greater, and curvy roads can help prioritize the implementation of countermeasures.
  - Impaired Drivers: 120 crashes involved an impaired driver, with 44 crashes resulting in a fatality or serious injury. 35% of crashes that resulted in a fatality or serious injury involved an impaired driver.
  - Crashes in Urban Transition Areas: 783 crashes occurred at intersections and segments in urban transition areas.
  - Seatbelt Usage: 76 crashes involved an unrestrained vehicle occupant, with 47% of crashes involving an unrestrained vehicle occupant resulting in a fatality or serious injury.

The SAP led to the identification of crash patterns and prioritized safety countermeasures for those intersections and roadway segments that had at least one fatal or severe injury (FSI) crash. As shown below in Table 4, many of the safety alternatives for roadway segments overlap with safety alternatives for pedestrians and bicyclists, illustrating that some alternatives address multiple traffic safety issues.

The ten proposed safety improvements listed in Table 4 and shown in Figure 4 were identified in SAP as high priority.

Freight Improvements

Freight-related improvements were identified based on feedback from County staff and input collected by members of the project team during a recent assessment and investigation of a rural transportation information system.

Table 4. Proposed Roadway Corridor/Intersection/Safety/Freight Improvement Projects

Project ID	Road Name	From	To	Type of Work	Notes
Roadway/Corridor Projects					
R1	Punkin Center Rd.	US 395	OR 207	Shoulder widening / Urban upgrade	Listed in 2002 TSP, Table 7-6
R2	Umatilla River Rd.	US 730	NW 11th St	Widen shoulder, install centerline rumble strips	High number of FSI crashes involving lane departure and high speed rear-end crashes
R3	Edwards Rd	US 395	Feedville Rd.	Shoulder widening and repaving	Listed in 2002 TSP, Table 7-6
R4	Highland Ave. Ext	Canal Rd.	Edwards Rd.	Reconstruct and pave gravel sections	Listed in 2002 TSP, Table 7-6
R5	Emigrant Rd.	St. Andrews Rd.	Poverty Flat Rd.	Repave and shoulders	Adopted as medium priority project in CTUIR TSP
R6	Punkin Center Rd./ Country Ln.	Sunshine Ln.	Powerline Rd.	Extend Punkin Center Road westerly from current terminus at Sunshine Ln. to Umatilla River Road and to a new bridge across the Umatilla River (B15). Upgrade existing Country Ln. to Major Collector standards and realign intersection with Powerline Rd. further to the south.	Listed in 2002 TSP, Table 7-6. Consistent with pending Hermiston TSP update
R7	Reith Rd	Birch Creek Rd	I-84	Repave	Listed as Poor Pavement Condition in 2023 Pavement Data from County
R8	E Punkin Center Rd	Diagonal Rd.	Edwards Rd.	Repave	Listed as Poor Pavement Condition in 2023 Pavement Data from County

Project ID	Road Name	From	To	Type of Work	Notes
R9	Powerline Rd	Birch Creek Rd.	Washington State line	Repave	Listed as Poor Pavement Condition in 2023 Pavement Data from County
R10	Goad Rd	Tutuilla Church Rd.	Southern extents	Repave, pulverize and oil mat	Listed as Poor Pavement Condition in 2023 Pavement Data from County
R11	Pambrun Rd	OR 11	Reford Ln.	Repave	-
R12	Tutuilla Church Rd	Goad Rd.	Market Rd.	Repave, pulverize and oil mat	Listed as Poor Pavement Condition in 2023 Pavement Data from County
R13	US 395	0.3 mi south of Schroeder Drive	Pilot Rock UGB	Repave	Listed as Poor Pavement Condition in 2023 Pavement Data from TransGIS
R14	OR 207	US 730	0.23 mi southwest of E Walls Road	Repave	Listed as Poor Pavement Condition in 2023 Pavement Data from TransGIS
R15	Kash Kash Road	East of OR 331		Close existing access to OR 331 and reroute Kash Kash Road north to a new intersection with Kuse Road	Adopted as medium priority project in CTUIR TSP
R16	Emigrant Road	Cayuse Road	Poverty Flat Road	Widen, add shoulders, and repave Emigrant Road (County Road #937) from Cayuse Road to Poverty Flat Road.	Adopted as medium priority project in CTUIR TSP
R17	N Cayuse Rd	River Rd	Mann Rd	Widen, add shoulders, and pave	Adopted as low priority project in CTUIR TSP

Project ID	Road Name	From	To	Type of Work	Notes
R18	Mann Rd	Crawford Hollow Rd	N Cayuse Rd	Widen, add shoulders, and pave	Adopted as low priority project in CTUIR TSP
R19	Motanic Rd	Best Rd	Spring Creek Rd	Widen, add shoulders, pave, add stormwater management	Adopted as low priority project in CTUIR TSP
R20	Sumac Rd	Spring Creek Rd	McKay Creek Rd	Widen, add shoulders, pave, add stormwater management	Adopted as low priority project in CTUIR TSP
R21	McKay Creek Rd	Sumac Rd	North Fork McKay Creek Rd	Widen, add shoulders, pave, add stormwater management	Adopted as low priority project in CTUIR TSP
Intersection Improvement Projects					
I1	I-82 / Powerline Road interchange Improvements	-		Interchange Area Management Plan (IAMP) – Refinement plan to modernize the interchange (including widening and improving ramp configurations and traffic control) to accommodate the growing traffic volumes.	Eastbound and westbound ramp terminals are projected to exceed capacity by 2045
I2	I-84 / OR 207 (Hermiston) interchange Improvements	-		Interchange Area Management Plan (IAMP) – Refinement plan to modernize the interchange (including widening and improving ramp configurations and traffic control) to accommodate the growing traffic volumes.	Eastbound ramp terminals are projected to exceed capacity by 2045
I3	Cayuse Rd	Cayuse River Rd Intersection		Reconstruct northern leg to connect at a more perpendicular angle	Adopted as low priority project in CTUIR TSP
I4	River Rd	White Rd intersection		Reconstruct southern leg to connect at a more perpendicular angle	Adopted as low priority project in CTUIR TSP

Project ID	Road Name	From	To	Type of Work	Notes
Safety Improvement Projects					
S1	US 395	Punkin Center Rd	US 730	Raised medians to better manage left-turn and U-turn movements, enhanced mid-block crossings as appropriate	High number of FSI turning movement crashes
S2	OR 207	Townsend Rd.	Columbia Ln.	Install lighting at major intersections, install edge line rumble strips, install traffic control at Punkin Center Road and Townsend Rd intersections when warranted	High number of FSI crashes involving road departure crashes
S3	OR 11	Milton-Freewater City Limits	WA State Line	Raised medians to better manage left- turn and U-turn movements, rumble strips, improved lighting	High number of turning movement and Head-on crashes
S4	OR 11	OR 204	Just north of CR 643	Northbound edge line rumble strips, centerline snow-plowable reflectors or recessed pavement markers	High number of FSI crashes (road departure and high speed)
S5	US 395	South of Ukiah MP 51.8	MP 54.7	Install roadside and centerline rumble strips, shield roadside hazards where appropriate, install additional curve signing where applicable	High number of roadway departure crashes
S6	US 395	Airport Rd.	Stanfield city limits	Raised medians to better manage left-turn and U-turn movements	High number of FSI crashes
S7	Westland Road / Highland Ave corridor	Agnew Rd.	West Hermiston City Limits	Add centerline rumble strip, maintain fog lines, restripe shoulder/travel lane line, improve lighting.	High number of FSI crashes, including lane departures and darkness-related crashes
S8	US 730	West Umatilla County line	Umatilla City Limits	Raised medians to better manage left-turn and U-turn movements, additional animal crossing warning signage, street lighting	High number of FSI turning movement crashes

Project ID	Road Name	From	To	Type of Work	Notes
S9	Stanfield Meadows Rd	OR 207	½-mile to east	Install centerline pavement markers that are plowable, restripe fog lines, install speed feedback signing and lighting	High number of FSI crashes
S10	OR 37	CR 1172	West of Holdman Cemetery	Install centerline and edge line rumble strip, maintain signage, add chevrons approaching all horizontal curves from both directions and install lighting to improve visibility, especially along curves.	High number of lane and road departure crashes
Freight Improvement Projects					
F1	I-84 eastbound at approximately MP 191	-		The existing sign structure meets minimum vertical clearance standards of 17' of clearance but is a barrier to permitted over height loads. Raising the sign bridge or replacing the sign bridge with a cantilevered sign structure would allow over height loads to stay on the freeway rather than relying upon the state and local county roadway networks to bypass the structure.	Approximate cost of $0.5M - $1.0M
F2	I-84 at Echo Meadows Rd overpass	Echo Meadows Rd		The existing Echo Meadows Rd overpass structure meets minimum vertical clearance standards of 17 feet but is a barrier to permitted over height loads. Raising or replacing bridge over I-84 would allow over height loads to stay on the freeway rather than relying upon the other state or local county roadway networks to bypass the structure.	Approximate cost of >$5M

Project ID	Road Name	From	To	Type of Work	Notes
F3	I-84 westbound truck climbing lane	MP 204	MP 207	Install a truck climbing lane on westbound I-84 to improve safety and operations by allowing slow moving vehicles such as trucks, buses and recreational vehicles to move to the climbing lane and reduce the speed differential between heavy vehicles and passenger vehicles.	Approximate cost of >$5M
F4*	Northeast Umatilla County Freight Access and Mobility Study	OR 37/OR 334/OR 335		- Evaluate ITS and enforcements solutions to reduce the instances of overlength vehicles exceeding length restrictions on OR 37, OR 334, and OR 335 - Assess the economic impact of continued length restrictions on OR 37, OR 334, and OR 335 - Safety, geometric, and operational improvements to remove length restrictions on freight and improve safety, access and mobility between OR 11 (Athena-Weston) and OR 730 and I-82	Refinement study
F5*	Hermiston area Freight Access and Mobility Study	Hermiston area		A joint County, City and ODOT study to assess alternative freight routes in and around Hermiston to improve freight circulation, reduce freight impacts on urbanized areas and reduce conflicts between freight and vulnerable road users.	Refinement study
F6*	Umatilla County Active Rural Transportation Information System (ARTIS)	Entire Umatilla County area		Traveler Information System supported by third party vendors that provides alerts to travelers (particularly freight) on road closures, work zones and safety issues via web applications and in-cab alerts.	Subscription service
***Studies are not shown in Figure 4**					

Figure 4

Proposed Roadway Projects

- I# Proposed Intersection Improvement
- S# Proposed Safety Improvement
- R# Proposed Roadway Improvement
- F# Proposed Freight Improvement
- Umatilla County
- City Boundaries
- Tribal Lands
- Urban Growth Boundaries
- Forest Service Lands

Data Source - Umatilla County, 2002 Umatilla County TSP, TransGIS

0 5 10 Miles



Figure 4a

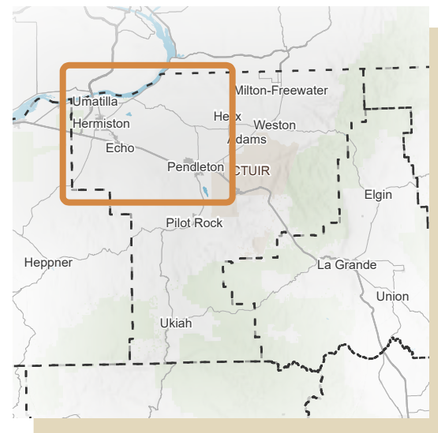
Proposed Roadway Projects

- I# Proposed Intersection Improvement
- S# Proposed Safety Improvement
- R# Proposed Roadway Improvement
- F# Proposed Freight Improvement
- Umatilla County
- City Boundaries
- Tribal Lands
- Urban Growth Boundaries
- Forest Service Lands

UMATILLA COUNTY est. 1862

Data Source - Umatilla County, 2002 Umatilla County TSP, TransGIS

0 2 4 Miles



Washington

Morrow

Umatilla

Hermiston

Stanfield

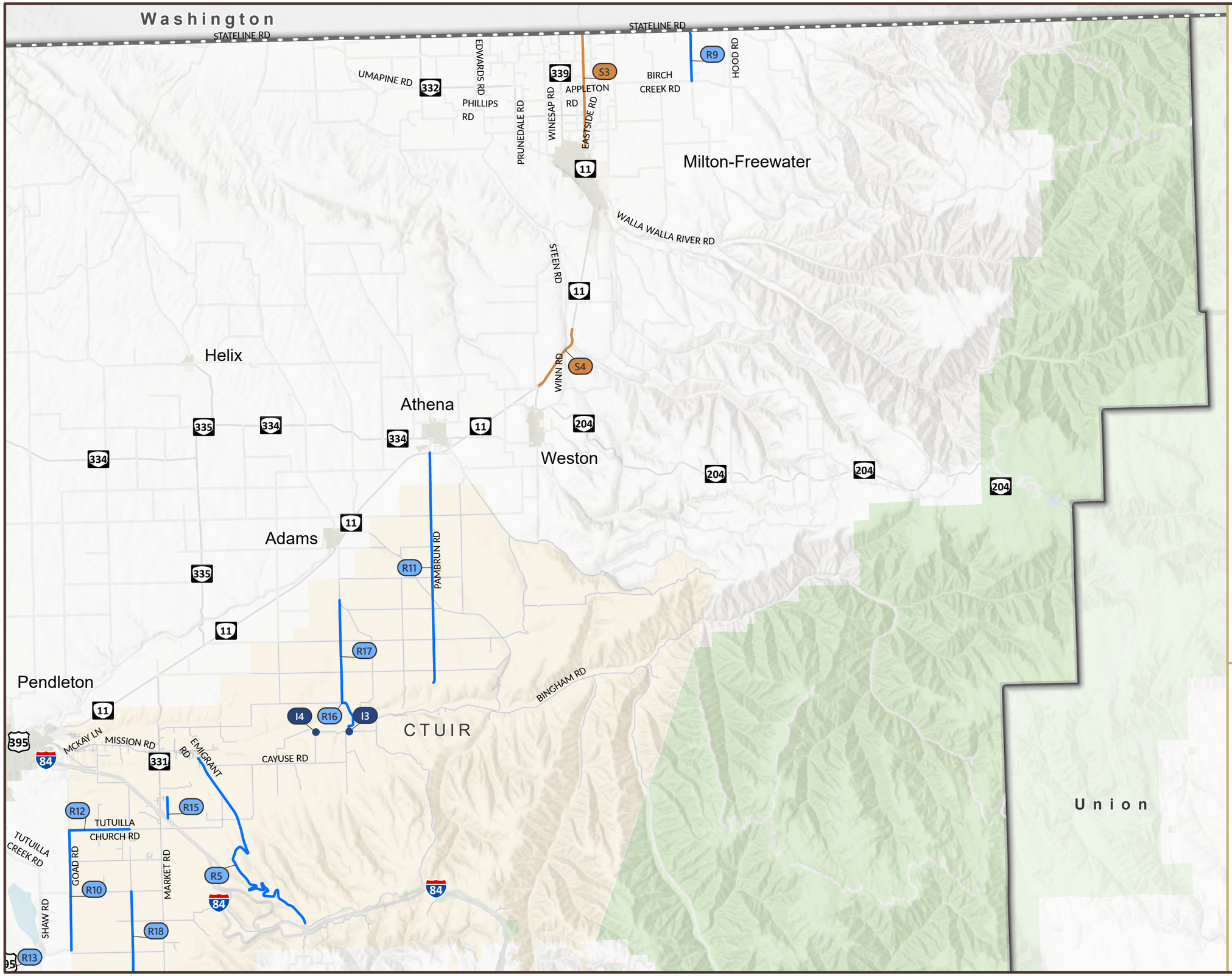
Echo

Pendleton

82 730 S8 R2 S1 UMATILLA RIVER RD I1 395 PUNKIN CENTER RD S2 207 BAXTER RD R14 CRAIG RD R8 R6 POWERLINE RD R1 CANAL RD LOOP RD BRIDGE RD 82 207 S7 WESTLAND RD FEEDVILLE RD R4 EDWARDS RD S6 84 I2 S9 HARDING AVE R3 F2 395 F1 WELLS STATION RD 207 207 RIETH RD 37 37 S10 37 COLD SPRINGS RD 334 334 37 DESPAIN GULCH RD 84 37 F3 RIETH MAIN ST RD 84 R7 11 MCKAY LN MISSION RD 331 R15 GOAD RD 84 TUTUILLA CHURCH RD KORVOLA RD 395 MCKAY DR TUTUILLA CREEK RD R12 MARKET RD STEPHEN AVE R10 R18 SHAW RD R13

Figure 4b

Proposed Roadway Projects



Proposed Intersection Improvement
Proposed Safety Improvement
Proposed Roadway Improvement
Umatilla County
City Boundaries
Tribal Lands
Urban Growth Boundaries
Forest Service Lands

UMATILLA COUNTY
est. 1862

Data Source - Umatilla County, 2002 Umatilla County TSP, TransGIS

0 2 4 Miles

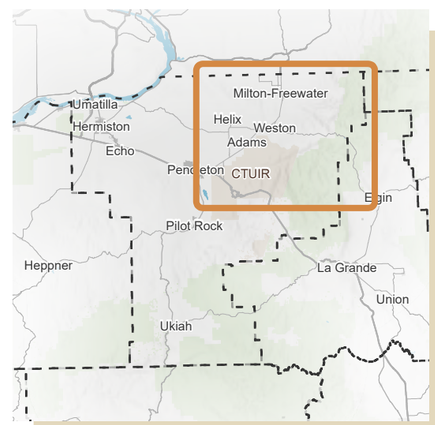


Figure 4c

Proposed Roadway Projects

S# Proposed Safety Improvement

R# Proposed Roadway Improvement

Umatilla County

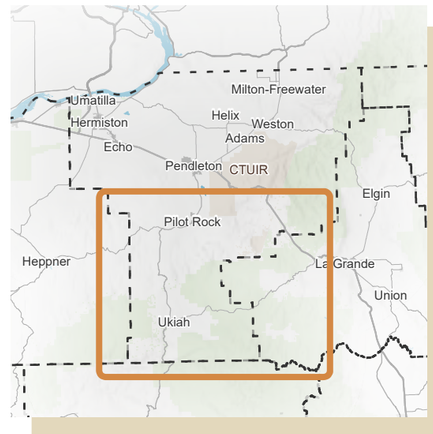
City Boundaries

Tribal Lands

Forest Service Lands

Data Source - Umatilla County, 2002 Umatilla County TSP, TransGIS

0 2.75 5.5 Miles



Pilot Rock

Ukiah

CTUIR

SPRING CREEK RD

SHAW RD

CIRCLE RD

R A KOCH RD

ROSS RD

BIRCH CREEK RD

SOAP HILL RD

R13

R18

R19

R20

S5

74

395

84

244

Morrow

Union

Grant

Non-Motorized Transportation Network

From the inventory and analysis of current pedestrian and bicycle facilities summarized in Technical Memorandum #3, Umatilla County's non-motorized transportation network is relatively minimal given its size and generally lacks facilities for people to walk and bike on a regional scale. The following sections present a variety of pedestrian and bicycle facilities and potential alternatives for consideration by the County.

Pedestrian Facilities

Pedestrian facilities are the elements of the transportation system that enable people to walk safely and efficiently to destinations. They provide opportunities for people to maintain and improve their health while accessing daily needs or recreating. These include facilities for pedestrian movement along key roadways (e.g., shoulders, sidewalks, shared-use paths) and for safe roadway crossings (e.g., crosswalks, crossing beacons, pedestrian refuge islands). Each facility plays an important role in developing a comprehensive pedestrian system.

This section summarizes the alternatives considered for implementation in Umatilla County to address existing gaps and deficiencies in the pedestrian system. FHWA's Small Town and Rural Multimodal Networks document provided guidance on the pedestrian facilities in a rural context.

SHOULDER WALKWAYS

Shoulders on the edge of roadways in a rural context can be enhanced to serve as a functional space for pedestrians to travel in the absence of other facilities with more separation. While gravel shoulders can provide space for able-bodied pedestrians to travel, not all gravel shoulders are level enough for comfortable pedestrian movement. The County's current design standards identify 6-foot gravel shoulders on both sides of minor arterials, 4-foot gravel shoulders on both sides of major collectors, and 2-foot gravel shoulders on both sides of minor collectors, resource/industrial/commercial streets, and residential streets with 11+ dwelling units.



Paved Shoulder (Source: Rural Design Guide)



Pedestrian Lane (Source: Rural Design Guide)

SIDEWALK

Sidewalks are the fundamental building blocks of the pedestrian system. They enable people to walk comfortably, conveniently, and safely from place to place. They provide an important means of mobility for people with disabilities, families with strollers, and others who may not be able to travel on an unimproved roadside surface. Sidewalks are usually six- to eight-feet wide and constructed from concrete. They are also frequently separated from the roadway by a curb, landscaping, and/or on-street parking. Sidewalks are widely used in urban areas. Ideally, sidewalks could be provided along both sides of the roadway in a more urbanized setting; however, some areas with physical or right-of-way constraints may require that sidewalk be located on only one side.

MULTIUSE OR SHARED-USE PATH

Multiuse or shared-use paths and trails are paved and unpaved facilities that serve pedestrians and bicyclists. Multiuse paths and trails can be constructed adjacent to and parallel to roadways where topography, right-of-way, or other issues do not allow for the construction of sidewalks and bike lanes (side path) or they may be constructed within their own right-of-way. A minimum width of 10 feet is recommended for low-pedestrian/bicycle-traffic contexts; 12 to 20 feet should be considered in areas with moderate to high levels of bicycle and pedestrian traffic. Multiuse paths and trails can be used to create longer-distance links within and between communities and provide regional connections. Shared-use paths play an integral role in recreation, commuting, and accessibility due to their appeal to users of all ages and skill levels.



Multiuse Path (Source: Rural Design Guide)



Side Path (Source: Rural Design Guide)

ENHANCED CROSSINGS

Enhanced pedestrian crossing facilities enable pedestrians to safely cross streets, railroad tracks, and other transportation facilities. Planning for appropriate pedestrian crossings requires the community to balance vehicular mobility needs with providing crossing locations along the desired routes of walkers. Enhanced pedestrian crossing treatments include:

- Flashing beacons
- Pedestrian signals

- Crosswalk striping
- Raised median islands
- Curb extenstions

Bicycle Facilities

Bicycle facilities are the elements of the transportation system that enable people to travel safely and efficiently by bicycle. Like pedestrian facilities, they play an important role in a region's health and recreational opportunities and allow people who don't own vehicles to safely travel to destinations. These include facilities along key roadways (e.g., shared lane pavement markings, on-street bike lanes, and separated bike facilities) and facilities at key crossing locations (e.g., enhanced bike crossings). These also include end of trip facilities (e.g., secure bike parking, changing rooms, and showers at worksites); however, these facilities are typically addressed through development code requirements. Each facility plays an important role in developing a comprehensive bicycle system.

This section summarizes the bicycle facilities considered for implementation in Umatilla County to address existing gaps and deficiencies and future needs in the bicycle system. FHWA's Small Town and Rural Multimodal Networks document provided guidance on the development of bicycle facilities in a rural context.

YIELD ROADWAY

A yield roadway is designed to serve pedestrians, bicyclists, and motor vehicle traffic in the same slow-speed, rural travel area. When operating at very-low volumes – generally around 400 vehicles or fewer per day – and at low speeds (<25 mph), pedestrians and bicyclists are comfortable travelling within the travel area of the roadway. Yield roadways are designed with narrow roadway dimensions to prioritize local access and community livability.

SHARED-LANE PAVEMENT MARKINGS AND SIGNS

Shared lane pavement markings (often called "sharrows") are not a bicycle facility, but a tool designed to accommodate bicyclists on roadways where bike lanes are not possible or realistic to construct. Sharrows indicate a shared roadway space for cyclists and motorists and are typically centered in the roadway or approximately four feet from the edge of the travel lane and are recommended to be spaced approximately 50 to 250-feet apart dependent on the levels of traffic volumes. Sharrows are suitable on roadways with relatively low travel speeds (<25 MPH) and low ADT (<3,000 ADT).



Yield Roadway (Source: Rural Design Guide)



Shared-Lane Pavement Markings (Sharrows)

ADVISORY SHOULDER

Advisory shoulders create usable shoulders for bicyclists on a roadway that is otherwise too narrow to accommodate one. Roads with advisory shoulders accommodate low to moderate volumes of two-way motor vehicle traffic in rural conditions. The motor vehicle lane can only accommodate one vehicle at a time, so motorists may enter the shoulder to safely pass oncoming traffic. Motorists may only enter the shoulder when no bicyclists are present and must overtake these users with caution due to potential oncoming traffic.

SHOULDER BIKEWAYS

Shoulder bikeways are the portions of the paved roadway that fall outside of the vehicle travel lanes. Shoulder bikeways typically have no bicycle-specific signage or pavement markings and serve both bicyclists and pedestrians. Buffered shoulders are enhanced versions of conventional shoulders that include an additional striped buffer of typically 2-3 feet between the shoulder and the vehicle travel lane. They are typically located along streets that require a higher level of separation to improve the comfort of bicycling.



Advisory Shoulder (Source: Rural Design Guide)



Buffered Shoulder (Source: Rural Design Guide)

BIKE LANES

On-street bike lanes are striped lanes on the roadway dedicated for the exclusive use of cyclists. Bike lanes are typically placed at the outer edge of pavement (but to the inside of right - turn lanes and/or on - street parking – if adjacent to on-street parking there should be a buffer strip). Bicycle lanes can improve safety and security of cyclists and can provide direct connections between origins and destinations if there is a comprehensive network of bike lanes.

SEPARATED BIKE LANES

There are two common types of separated bike lanes: buffered bike lanes and cycle tracks. Buffered bike lanes are enhanced versions of conventional on-street bike lanes that include an additional striped buffer of typically 2-3 feet between the bicycle lane and the vehicle travel lane and/or between the bicycle lane and the vehicle parking lane. They are typically located along streets that require a higher level of separation to improve the comfort of bicycling. Cycle tracks are bike lanes that are physically separated from motor vehicle travel lanes by a vertical element such as a planter, flexible post, parked car, or a mountable curb. One-way cycle tracks are typically found on each side of the street, like conventional bike lanes, while two-way cycle tracks are typically found on one side of the street.

Pedestrian and Bicycle Alternatives

The non-motorized transportation strategy for Umatilla focuses on expanding a connected system of multiuse paths that link key destinations within the county and to nearby communities such as Pendleton and Hermiston. These projects are designed to improve regional connectivity, support safe active transportation, and complement existing and planned facilities identified in nearby city and previous county Transportation System Plans (TSPs).

The proposed multi-use path projects, summarized in the accompanying Figure 5 and Table 5, forms the backbone of the non-motorized network. A central focus of the non-motorized system is the development of a regional multi-use path network that connects key locations in the County. These projects supports safe, off-street travel between the cities in the county for pedestrians, bicyclists, and other non-motorized users.

Table 5. Proposed Multi-Use Projects

Project ID	Project Name / Location	Considerations	Description	Project Source
M1	**OR 207** Hermiston to Hat Rock State Park	Narrow shoulders High travel speeds	Widen existing highway shoulders to provide a striped buffered shoulder along both sides of OR 207 from Hermiston to Hat Rock State Park. Provides a BLTS 2 level facility for regional recreation.	
M2	**Umatilla River Road** Umatilla River Trail Umatilla - Hermiston	Limited shoulders No pedestrian facilities (PLTS 4) No bicycle facilities (BLTS 4)	Construct a multiuse trail from Umatilla to Hermiston, mainly along Umatilla River and segments of Umatilla River Road. Provides a PLTS/BLTS 1 level facility for regional connectivity and recreation.	Umatilla River Trail Concept Plan
M3	**Umatilla River Trail** Various roadway and offroad segments between Hermiston and Echo	No multi-use regional recreation connections	Construct a multiuse trail from Echo to Stanfield and Hermiston, mainly along the Umatilla River and segments of Stanfield Meadows Road. Provides a PLTS/BLTS 1 level facility for regional connectivity and recreation.	Umatilla River Trail Concept Plan
M4	**Reith Road** Echo to Pendleton	Limited shoulders No pedestrian facilities (PLTS 4) No bicycle facilities (BLTS 4)	Widen existing highway shoulders to provide a striped buffered shoulder along both sides of OR 207 from Hermiston to Hat Rock State Park. Provides a BLTS 2 level facility for regional recreation.	-
M5	**Umatilla River Trail**	No multi-use regional recreation connections	Construct a multiuse trail (hard surface, soft surface, or both) extending 3.9 miles from the western terminus of the River Walk along the Flood District #1 levee. Provides a PLTS/BLTS 1 level facility for regional connectivity and recreation.	Pendleton ATP/2002 TSP
M6	**Pendleton to Athena Trail** (various roadway and offroad segments between Pendelton and Athena)	No multi-use regional recreation connections	Construct a soft-surface multiuse trail extending along an old rail right-of-way east of Pendleton to Adams and Athena. Provides a PLTS/BLTS 1 level facility for regional connectivity and recreation.	Pendleton ATP/2002 TSP

Project ID	Project Name / Location	Considerations	Description	Project Source
M7	**Mission to Blue Mountain Scenic Corridor** (Old Emigrant Hill Rd)	Limited shoulders No pedestrian facilities (PLTS 4) No bicycle facilities (BLTS 4)	Widen existing roadway shoulders to provide a striped buffered shoulder along both sides of Old Emigrant Hill Road. Provides a BLTS 1 level facility for regional recreation.	CTUIR TSP
M8	**Weston-Athena Multimodal Connection** (Banister Rd)	Limited shoulders No pedestrian facilities (PLTS 4) No bicycle facilities (BLTS 4)	Construct a separated multiuse path along Banister Road from approximately Mill Street to OR 11. Provides a Provides a PLTS/BLTS 1 level facility for regional connectivity. Develop an enhanced crossing for people walking and biking across OR 11 between Athena and Weston.	Weston TSP (2015)
M9	**Weston to Milton Freewater Connection** (York Rd and other corridors)	Limited shoulders No pedestrian facilities (PLTS 4) No bicycle facilities (BLTS 4)	Construct a separated multiuse pathway along York Road and Dry Creek Road connecting Weston to the Milton-Freewater vicinity. Provides a PLTS/BLTS 1 level facility for regional connectivity and recreation.	-
M10	**Community Connection 8** - Milton-Freewater and Walla Walla	No bicycle facilities (BLTS 4)	Install shared lane signing	Blue Mountain Trails
M11	**Community Connection 11** - Milton-Freewater Cemetery Loop	No bicycle facilities (BLTS 4)	Install shared lane signing	Blue Mountain Trails
M12	**Milton-Freewater to National Forest**	No bicycle facilities (BLTS 4)	Shared roads connecting to South Fork Walla Walla Trailhead	Blue Mountain Trails
M13	**Community Connection 10** - Milton-Freewater and Walla Walla	No bicycle facilities (BLTS 4)	Install shared lane signing	Blue Mountain Trails

Project ID	Project Name / Location	Considerations	Description	Project Source
M14	**Walla Walla Valley Rail Pathway**	Limited shoulders No pedestrian facilities (PLTS 4) No bicycle facilities (BLTS 4)	Construct a multi-use path between the Freewater Highway and OR 11 (Milton-Freewater). Provides a PLTS/BLTS 1 level facility for regional connectivity and recreation.	2002 Umatilla County TSP
M15	**Community Connection 9** - Milton-Freewater and Walla Walla	No bicycle facilities (BLTS 4)	Shared Roads, Bike Lanes	Blue Mountain Trails
M16	**West Bike Route 3** - Stateline	No bicycle facilities (BLTS 4)	Install shared lane signing	Blue Mountain Trails

Figure 5

Proposed Pedestrian, Bicycle & Trail Network

- Proposed Multi Use Path Project
- Proposed Shared Roads Project
- Proposed Shoulder Bikeway Project
- Proposed Multi Use Path Project in UGB
- Proposed Shared Roads Project in UGB
- Proposed Shoulder Bikeway Project in UGB
- Umatilla County
- Urban Growth Boundaries
- City Boundaries
- Tribal Lands
- Forest Service Lands

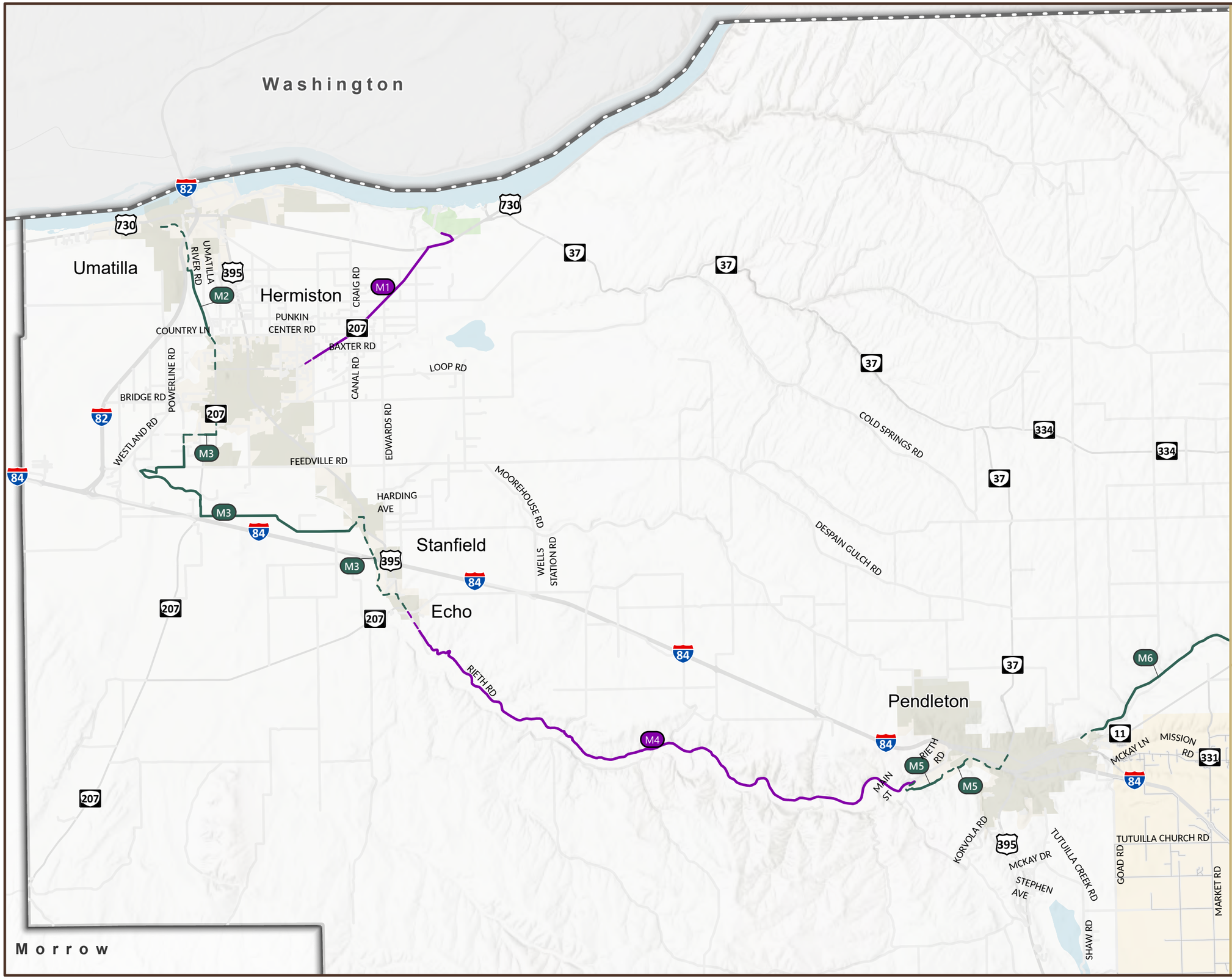
Data Source - ODOT TransGIS, Umatilla County, Hermiston Parks, Recreation and Open Spaces Master Plan, Pendleton TSP, Pendleton ATP, Umatilla City TSP, CTUIR TSP, Blue Mountain Tail Plan, Umatilla River Trail Plan

0 5 10 Miles



Figure 5a

Proposed Pedestrian, Bicycle & Trail Network



- Proposed Multi Use Path Project
- Proposed Shoulder Bikeway Project
- Proposed Multi Use Path Project in UGB
- Proposed Shoulder Bikeway Project in UGB
- Umatilla County
- Urban Growth Boundaries
- City Boundaries
- Tribal Lands
- Forest Service Lands

Data Source - ODOT TransGIS, Umatilla County, Hermiston Parks, Recreation and Open Spaces Master Plan, Pendleton TSP, Pendleton ATP, Umatilla City TSP, CTUIR TSP, Blue Mountain Tail Plan, Umatilla River Trail Plan

0 2 4 Miles

UMATILLA COUNTY est. 1862

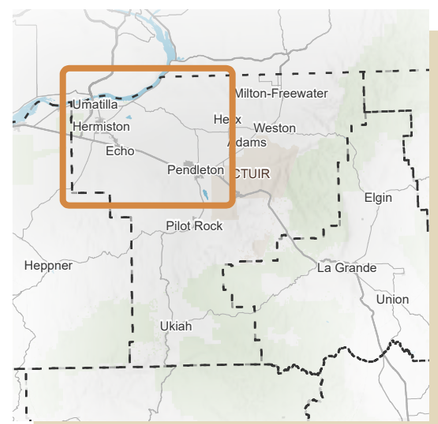


Figure 5b

Existing Pedestrian, Bicycle & Trail Network

- Proposed Multi Use Path Project
- Proposed Shared Roads Project
- Proposed Shoulder Bikeway Project
- Proposed Multi Use Path Project in UGB
- Proposed Shared Roads Project in UGB
- Proposed Shoulder Bikeway Project in UGB
- Umatilla County
- Urban Growth Boundaries
- City Boundaries
- Tribal Lands
- Forest Service Lands

Data Source - ODOT TransGIS, Umatilla County, Hermiston Parks, Recreation and Open Spaces Master Plan, Pendleton TSP, Pendleton ATP, Umatilla City TSP, CTUIR TSP, Blue Mountain Tail Plan, Umatilla River Trail Plan

UMATILLA COUNTY est. 1862

0 2 4 Miles

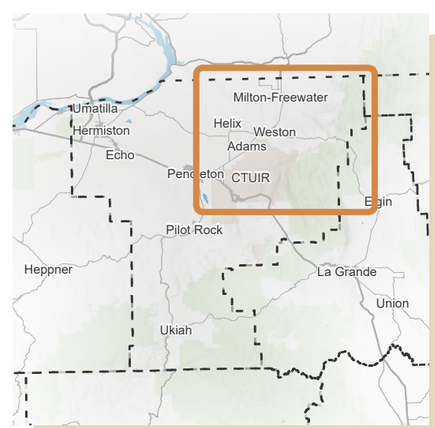


Figure 5c

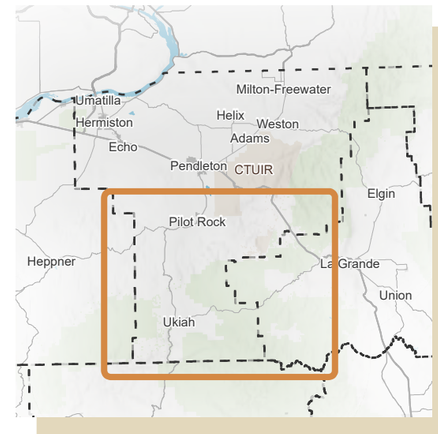
Proposed Pedestrian, Bicycle & Trail Network

- Proposed Multi Use Path Project
- Proposed Shared Roads Project
- Proposed Shoulder Bikeway Project
- Umatilla County
- Urban Growth Boundaries
- City Boundaries
- Tribal Lands
- Forest Service Lands

Pilot Rock
CTUIR
SHAW RD
SPRING CREEK RD
CIRCLE RD
R A KOCH RD
ROSS RD
BIRCH CREEK RD
SOAP HILL RD
Ukiah
Morrow
Union
Grant
74
395
84
M7
244

Data Source - ODOT TransGIS, Umatilla County, Hermiston Parks, Recreation and Open Spaces Master Plan, Pendleton TSP, Pendleton ATP, Umatilla City TSP, CTUIR TSP, Blue Mountain Tail Plan, Umatilla River Trail Plan

0 2.75 5.5 Miles



Public Transit Network

Public transit can provide important connections to destinations for people that do not drive or bike and can provide an additional option for all transportation system users for certain trips. Public transit also links to walking, bicycling, or motor vehicle trips: users can walk to and from transit stops and their homes, shopping or workplaces, people can drive to park-and-ride locations to access a bus, or people can bring their bikes on transit vehicles and bicycle from a transit stop to their final destination.

Public transit in Umatilla County is provided through a mix of public, semi-private, and private services offering fixed-route, commuter, and demand-response options. The 2023 Umatilla County Transit Development Plan (TDP) documents the range of existing services, including operating hours, service areas, and provider types. A detailed summary of transit providers and services is included in Memo 4.

Since the adoption of the 2023 TDP, two transit services have discontinued operations in the region: Greyhound, which ended statewide regional service in January 2025, and CAPECO, which discontinued its Medicaid/Medicare transportation program in December 2022. Despite these changes, existing providers continue to offer essential local and regional connections that support mobility for residents, workers, and vulnerable populations.

At this time, no new transit projects are proposed as part of the Umatilla TSP. Instead, the County will continue to coordinate with the cities, existing transit providers and CTUIR to support implementation of recommendations in the 2023 Umatilla County Transit Development Plan. Transit-related investments in Umatilla should prioritize TDP-identified projects that:

- Strengthen regional connections between Hermiston, Pendleton, and Umatilla;
- Improve local access to regional routes through first-/last-mile enhancements; and
- Enhance passenger amenities such as shelters, lighting, and ADA-accessible infrastructure at key stops.

Prioritizing TDP projects within the City's future transportation funding and coordination efforts will help maintain reliable service, improve transit accessibility, and support broader goals related to mobility, safety, and equity.

Transportation System Management and Operations

Transportation Demand Management (TDM) and Transportation System Management (TSM) strategies are two complementary approaches to managing transportation and maximizing the existing system. Together, these strategies are referred to as Transportation System Management and Operations (TSMO). TDM addresses the demand on the system: the number of vehicles traveling on the roadways ach day. TDM measures include any method intended to shift travel demand from single occupant vehicles to non-auto modes or carpooling, travel at less congested times of the day, etc. TSM addresses the supply of the system: using strategies to improve the system efficiency without increasing roadway widths or building new roads. TSM measures are focused on improving operations by enhancing capacity during peak times, typically with advanced technologies to improve traffic operations.

The following section provides an overview of a broad range of TSMO measures that could be considered for implementation in Umatilla County and the primary and secondary implementation roles.

TSMO Strategies

Successful implementation of TSMO strategies relies on the participation of a variety of public and private entities. Strategies can be implemented by a region, a city, a neighborhood, or particular employer. In addition, they can be categorized as policies, programs, or physical infrastructure investments. Table 7 provides a summary of potential measures that can be implemented within the County and which agencies are generally in the position to implement each one. As the County continues to grow and redevelop over the next 20 to 40 years, the applicability of these strategies can be further reviewed.

Table 6 – Potential TSMO Strategies/Programs

TSMO Strategy	Type of Investment	County/ Region	State	Developers	Transit Providers	Employers
TSM - Regional Traffic Control Programs						
Active traffic management (variable speed limits)	Infrastructure	P	P			
Special event management (automated traffic control)	Program/ Infrastructure	P	P			
Bike/ped operations and safety (crossing enhancements)	Policy/ Infrastructure	P	P		S	
Traffic network surveillance (real-time monitoring of traffic conditions)	Infrastructure	P	P		P	

TSMO Strategy	Type of Investment	County/ Region	State	Developers	Transit Providers	Employers
Safety applications (warning systems for queues, geometric limitations, over height/weight)	Infrastructure	P	P			
TSM - Traveler Information						
Regional traveler information (real-time traveler information – incidents and weather)	Infrastructure/ Program	P	P			
Real-time transit arrival information	Infrastructure/ Program	S			P	
TSM - Road Weather Operations						
Road weather information system (monitoring of adverse conditions)	Infrastructure/ Program	P	P			
Weather warning system (detection of adverse roadway conditions)	Infrastructure/ Program	P	P			
Ramp closures (closure of freeway ramps for weather and incidents)	Infrastructure	S	P			
TSM - Freight						
Roadside truck electronic screening (transfer of regulatory data at check stations)	Infrastructure/ Program	P	P			
TDM						
Rideshare matching system (ride-matching to reduce commute trips)	Program	S[1]			S	S
Employer programs (assist employers with vehicle trip reduction plans for employees)	Program/ Policy	S			S	P
Bicycle facilities	Infrastructure/ Policy	P	S	P		
Pedestrian facilities	Infrastructure/ Policy	P	S	P		
Transit facilities	Infrastructure/ Policy	P	S	P	S	

[1] Typically the responsibility of a Transportation Management Association. One does not exist in Umatilla County
P: Primary role
S: Support role

Funding Inventory

Future federal, state, and local funding for transportation investments is uncertain, creating the challenge to accurately forecast how much is available and which transportation investments qualify. Within this context, the Umatilla County TSP Update will provide a prudent and conservative list of transportation investments and emphasize lower cost methods that strengthen mobility within the county.

This section presents information on the County's historical funding sources that are available for transportation investments identified in the TSP. This section also offers additional funding sources for the County to consider pursuing in cases of funding gaps when implementing transportation investments through the TSP horizon year. This information will help the County evaluate transportation projects, define priorities, and maximize all available funding opportunities to preserve and improve its infrastructure.

TSP Project Funding Background

The Umatilla County TSP may recommend transportation projects that span multiple jurisdictions including ODOT, CTUIR, and incorporated cities such as Pendleton and Hermiston, as well as projects that rely on partnerships with the private development community. As such, each project could be funded through a different combination of federal, state, local, or private sources. The following sections present current and possible new funding mechanisms that may be available to implement projects through the life of the TSP.

Constructing every project contained in the TSP in the next 20 years is unlikely, thus, the TSP will include a complete list of projects that the County identifies as being needed over the planning horizon as well as visionary projects that support critical County goals that likely require outside funding sources. While the TSP does prioritize planned projects, the County may advance projects as opportunities arise. These opportunities could include changes in policy or funding at the federal, state, or local level; changes in local development priorities; or public-private partnerships. Project priorities are intended to be flexible for allowing the County to make wise investments consistent with the overall vision contained in this TSP.

Historical Funding Sources

Historical funding sources supplied by the County provide a basis for estimating future revenue that might be available for transportation projects over the next 20 years. Table 8 summarizes the past 5 years of County Road Fund revenue and expenditures. As shown, the County's primary sources of revenue come from State Highway Fund receipts (State Fuel Tax) and Federal Forest receipts. Other smaller/less frequent revenue has come from General Fund transfers and FEMA money.

Table 7. Umatilla County Public Works Revenue (Five most recent years)

Revenue Source	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	Average
Intergovernmental[1]	$7,246,985	$8,952,872	$10,473,994	$9,815,069	$10,845,656	$9,466,915
(funds dedicated for roadway maintenance and capital projects)	($6,449,000)	($7,480,000)	($8,349,000)	($7,640,000)	($8,300,000)	($7,643,600)
Charges for Services[2]	$144,086	$338,815	$118,178	$212,171	$257,002	$214,050
Interest/Rent	$147,244	$47,961	$52,936	$126,885	$292,352	$133,476
Reimbursables	$309,706	$236,222	$56,723	$52,542	$108,411	$152,721
Total Revenue	$7,848,021	$9,575,870	$10,701,831	$10,206,667	$11,503,421	$9,967,162

[1] Includes state gas tax & vehicle licensing revenue, other Federal, State, & local revenues

[2] Includes sale and rental of supplies and sales of vehicle/equipment

Based on the information shown in Table 7, Umatilla County Public Works has generated an average of approximately $9,900,000 per year in total revenue for public works projects. Of this revenue, approximately $7,643,600 was earmarked for roadway maintenance and capital projects. The steadiest revenue source has been the motor vehicle gas tax revenue.

Table 8 summarizes the total expenditures over the past five years.

Table 8. Umatilla County Transportation Maintenance/Capital Expenditure History (Five most recent years)

Expenditures	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	Average
Materials and Services	$4,006,385	$7,115,099	$5,437,467	$2,503,087	$3,661,235	$4,544,655
Capital Outlay	$1,173,049	$1,530,373	$924,808	$1,804,281	$2,027,295	$1,491,961
Total Expenditures	$5,179,434	$8,645,472	$6,362,275	$4,307,368	$5,688,530	$6,036,616

Based on the information shown inTable 8, Umatilla County has spent an average of $4,544,655 per year on materials and services and $1,491,961 on capital outlays. The information shown in Table 7 and Table 8 were used to project the availability of future funding for transportation improvement projects as described below.

Projected Transportation Funding

Table 9 provides a summary of the potential future project funding (in year 2025 dollars) over the next five, ten, and twenty years based on an assumed average funding level of approximately $1,491,961 per year.

Table 9. Future Transportation Funding Projections

Expenditures	Average Annual	5-Year Forecast	10-Year Forecast	20-Year Forecast
Revenue For Capital Outlay	$1,491,961	$7,459,805	$14,919,610	$29,839,220

As shown inTable 9, it is anticipated that approximately $29,839,220 will be available for transportation project funding over the next 20 years using historical funding trends. This projection does not include potential funds received from intergovernmental grants.

Given that future transportation improvements will likely exceed this amount in a 20-year time period, the County will need to partner with other agencies and the private development community and pursue alternative funding sources to fulfill the 20-year list of prioritized projects as well as visionary projects, should their priorities change. The following sections present possible new funding mechanisms for the County to consider for project implementation.

Local Funding Mechanisms

Potential local-level funding sources are summarized in Table 11. These funding sources may be considered by the County for implementation as new funding sources. Including this table in the TSP does not create new funding sources but rather presents the various funding sources that local governments throughout Oregon have utilized. In general, local funding sources are more flexible than funding obtained from state or federal grant sources.

Table 10. Potential Local Funding Mechanisms

Funding Source	Description	Potential Application
Street Utility Fees / Road Maintenance Fees	A fee based on the number of automobile trips a particular land use generates; usually collected through a regular utility bill. Fees can also be tied to the annual registration of a vehicle to pay for improvements, expansion, and maintenance of the street system.	System-wide transportation facilities including streets, sidewalks, bike lanes, and shared use paths.

Funding Source	Description	Potential Application
Transportation Systems Development Charge (SDC)	SDCs are fees assessed to development for the capacity demand it creates on public infrastructure systems. SDCs may be an improvement fee, a reimbursement fee, or a combination thereof. Reimbursement fee revenues are dedicated to capital projects that increase capacity to meet the needs of growth. SDC credits are provided to developers for public improvements they construct which add capacity to the system beyond that required to serve their development. SDC credits may also be given for development provisions that reduce vehicular capacity demand on the transportation system, such as providing end-of-trip bike facilities within the new development.	SDCs may only be used for the portion of transportation improvements that generate additional capacity demand related to growth.
Stormwater SDCs, Grants, and Loans	SDCs, grants, loans, and stormwater improvement fees can be obtained for improving stormwater management facilities constructed as part of transportation system improvements.	SDCs may only be used for the portion of transportation improvements that generate additional capacity demand related to growth.
Local Fuel Tax	A local tax can be assessed on the purchase of fuel within the County. This tax is added to the cost of fuel at the pump, along with the state and federal gas taxes.	System-wide transportation facilities including streets, sidewalks, and bike lanes.
Incentives	The County could provide enticements such as bonus densities and flexibility in design in exchange for public benefit. Examples might include providing additional bicycle parking in exchange for bonus densities. Incentives may be used with SDC methods to reduce transportation impacts from new development.	System-wide transportation facilities including streets, sidewalks, bike lanes, shared use paths, and transit.
Public/Private Partnerships	Public/private partnerships have been used around the country to provide public transportation amenities within the public right-of-way in exchange for operational revenue from the facilities. These partnerships could be used to provide services such as vehicle charging stations, public parking lots, bicycle lockers, or car share facilities.	System-wide transportation facilities including streets, sidewalks, bike lanes, shared use paths, and transit.

Funding Source	Description	Potential Application
Tax Increment Financing (TIF)	TIF is a tool that cities and counties may use to create special districts (tax increment areas) where public improvements are made to generate private-sector development. During a defined period, the County freezes the tax base at the pre-development level. Property taxes for that period can be waived or paid, but taxes derived from increases in assessed values (the tax increment) resulting from new development can go into a special fund created to retire bonds issued to originate the development or leverage future improvements. A number of small-to-medium sized communities in Oregon have implemented, or are considering implementing, urban renewal districts that will result in a TIF revenue stream.	System-wide transportation facilities including streets, sidewalks, bike lanes, shared use paths, and transit.
Streets District	Oregon state law (Oregon Revised Statute [ORS] 371) allows for the formation of special streets taxing districts for purposes of constructing and maintaining streets within the taxing district boundaries. A Streets District would be a separate entity from the County, with its own property tax levy rate and an elected board of commissioners. Those within the potential district boundaries must vote on the creation of a Streets District.	Roadway improvement projects.
Revenue and General Obligation Bonds	Bonding allows municipal and county governments to finance construction projects by borrowing money and paying it back over time, with interest. Financing requires smaller regular payments over time compared to paying the full cost at once, but financing increases the total cost of the project by adding interest. General obligation bonds are often used to pay for construction of large capital improvements and must be approved by a public vote. These bonds add the cost of the improvement to property taxes over time.	Construction of major capital improvement projects within the county, street maintenance and incidental improvements.
Economic Improvement Districts (EIDs)	EIDs pool funds from area businesses to make improvements in the business district.	Transportation facilities including streets, sidewalks, bikeways, and transit located within the EID area.
Local Improvement Districts (LIDs)	LIDs pool funds from property owner to make local transportation improvements.	Transportation facilities including streets, sidewalks, bikeways, and transit located within the LID area.
Street Fund Serial Levy	This levy is a voter-approved property tax levied in addition to the permanent tax rate.	Operations or capital programs.

Funding Source	Description	Potential Application
Vehicle Registration Fee	An extra fee on all registered motor vehicles in the County. Requires County-wide approval and implementation.	Operations or capital programs.
Urban Growth Management Agreement (UGMA)	UGMAs are intergovernmental agreements that outline how facilities are managed in the areas outside City limits, but inside City Urban Growth Boundaries (UGB).	Transportation facilities including streets, sidewalks, and bikeways within UGBs.
Hotel/Motel Taxes	Under state law, 70% of revenues from such taxes must fund programs boosting tourism. Many jurisdictions have hotel/motel taxes and could use a portion of the revenue for transportation investments.	Tourism, economic development, and sidewalk improvement programs.
Dedicated Property Taxes	Washington County has a dedicated property tax to fund its Major Streets Transportation Improvement Program. Since 1986, the Program has funded $900 million of new roads, sidewalks, bridges, and bikeways. Voters approved the funding source multiple times. Today, the program raises an average of $44 million per year. Washington County also has property tax to support its Urban Road Maintenance District, levying 25 cents per $1,000 assessed value; the program raises about $4.4 million/year for local roadway maintenance.	System-wide transportation facilities.
Reimbursement Districts	Also called Zones of Benefit or Advance Financed Districts, a county determines the boundary of the district. Property owners of new development or large redevelopment permits pay a fee for the installation of public improvements. They then recover some portion of the cost over a period of years (often 15).	Construction of major capital improvement projects within the county.

State Funding Mechanisms

In addition to local funding sources, the County can seek opportunities to leverage funding from state funding sources. Table 12 outlines such sources and their potential applications. State sources change regularly as new transportation legislation is passed or existing legislation is modified and are limited and competitive. Any future improvements that rely on state funding may require County and regional consensus that are more important than needs elsewhere in the region and the state.

Table 11. Potential State Funding Mechanisms

Funding Source	Description	Potential Application
State Funding Mechanisms		
Statewide Transportation Improvement Program (STIP)	STIP is the State of Oregon's four-year transportation capital improvement program. ODOT's system for distributing these funds has varied over recent years. Generally, local agencies apply in advance for projects to be funded in each four-year cycle.	Projects on any facility that meet the benefit categories of the STIP.
All Roads Transportation Safety Program (ARTS)	The federal Highway Safety Improvement Program (HSIP) is administered as ARTS in Oregon. ARTS provides funding to infrastructure and non-infrastructure projects that improve safety on all public roads. ARTS requires a data-driven approach and prioritizes projects in demonstrated problem areas.	Areas of safety concerns within the county, consistent with Oregon's Transportation Safety Action Plan.
Immediate Opportunity Fund (IOF)	The IOF is discretionary and provides funding for transportation projects essential for supporting site-specific economic development projects. These funds are distributed on a case-by-case basis in cooperation with the Oregon Economic and Community Development Department. These funds can only be used when other sources of financial support are insufficient or unavailable. These funds are reserved for projects where a documented transportation problem exists or where private firm location decisions hinge on the immediate commitment of road construction. A minimum of 50 percent match is required from project applications.	Any identified projects that would improve economic development in the county and where there are documented transportation problems.
Connect Oregon	Lottery-backed bonds distributed to air, marine, and rail projects statewide. No less than 10 percent of Connect Oregon funds must be distributed to each of the five regions of the state, if there are qualified projects in the region. The objective is to improve the connections between the highway system and other modes of transportation.	System-wide transportation facilities.
Oregon Parks and Recreation Local Grants	Oregon Parks and Recreation Department administers this program using Oregon Lottery revenues. These grants can fund acquisition, development, and major rehabilitation of public outdoor parks and recreation facilities. Local match is required.	Trails and other recreational facility development or rehabilitation.

Funding Source	Description	Potential Application
Oregon Transportation Infrastructure Bank (OTIB)	A statewide revolving loan fund is available to local governments for many transportation infrastructure improvements, including highway, transit, and non-motorized projects. Most funds made available through this program are federal; streets must be functionally classified as a major collector or higher to be eligible for loan funding.	Infrastructure improvements to major collectors or higher classified roads for vehicle, transit, and non-motorized travel.
State Highway Fuel Tax Increase or User Fee	ODOT is currently researching a state user fee for drivers to address steady or declining state gas tax revenues. An increase in the state gas tax or a user fee would need to pass through state legislation and would increase the state's transportation funds.	System-wide transportation facilities including streets, sidewalks, bikeways, and transit.
Multi-modal Active Transportation Fund	This fund invests in multimodal transportation infrastructure improvements across Oregon.	Pedestrian and bicycle-related projects.
Safe Routes to School (SRTS)	SRTS, administered by ODOT, focuses on infrastructure and non-infrastructure programs to improve access and safety for children to walk, roll, and/or bike to school.	Pedestrian and bicycle-related projects within the vicinity of local schools.
Oregon Community Paths (OCP)	This State of Oregon program combines funds from the Multimodal Active Transportation Fund, Oregon Bicycle Excise Tax, and federal Transportation Alternatives Program to help communities create and maintain connections with primarily off-street pedestrian and bicycle facilities.	Off-street pedestrian and bicycle facilities (primarily).
ODOT Bridge Program	ODOTs Bridge Section coordinates selection and funding of Federal Highway Bridge Program bridges through the Local Agency Bridge Selection Committee, a committee of city, county, and state representatives. Local agency bridges are prioritized using a Technical Ranking System and selected in categories of Large (30,000+ square feet of deck area), Small On-System, and Small Off-System.	Bridges.
ODOT Emergency Operations Program Funding	A federal program that provides emergency funding for repair or reconstruction of highways and roads damaged during natural disasters or catastrophic failures. ODOT's Maintenance and Operations Branch administers the Emergency Operations Program and can help local agencies navigate the Emergency Repair process.	Highway and bridge repair from natural disasters or catastrophic failures.

Funding Source	Description	Potential Application
Transportation Options	The TO program focuses on implementation of the Oregon Transportation Options Plan, including: managing demand across the transportation system; educating students and the public on travel options and how to safely use them; connecting veterans, low income populations, communities of color, and others with ways to get to and from work or school; supporting vanpooling; and more.	Projects supporting implementation of the Oregon Transportation Options Plan.
State Transit Improvement Fund (STIF) and Public Transportation Funds	STIF is a newer dedicated source of funding under Section 122 of the House Bill (HB) 2017 Transportation Funding Package for improving or expanding public transportation service in Oregon.	Pedestrian and bicycle improvements that provide connections to transit.
State Highway Trust Fund/ Bicycle Bill	When roads are constructed or reconstructed, Oregon law requires walkways and bikeways to be provided. Additionally, all agencies receiving State Highway Funds are required to spend at least 1% of those funds on bicycle and/or pedestrian infrastructure improvements (ORS 366.514). Currently, cities and counties receive 20% and 30% of the state's highway trust funds, respectively, which can be used for walking and biking projects along roads.	Bicycle and pedestrian projects.
Sidewalk Improvement Program (SWIP)	ODOT's SWIP builds pedestrian and bicycle facilities on state roads and local roads that help people moving across or around the state system.	Bicycle and pedestrian projects.
Various Public or Private Grant Programs	Many public and private grant programs exist, such as People for Bikes, that offer funding support for transportation infrastructure. New such grant programs are formed often and should be regularly tracked by the County.	Various depending on the grant program.