

Memorandum

TO: Cheryl Jarvis-Smith (ODOT), Barry Beyeler (City of Boardman)
FROM: Carl Springer, Pam O'Brien – DKS Associates
DATE: March 13, 2007
SUBJECT: Task 5 – Assessment of Transportation /Land Use P/A No. 06097-005-001
Alteratives
Functional Classification and Cross Section Standards
Boardman IAMPs and TSP Update

Functional Classification

The proposed functional classification (shown in Figure 1) differs from the existing roadway classification. Changes made to the functional classification map include:

- Olson Road changed from an Arterial to a Collector
- Tatone Street changed from a Local to a Collector
- Laurel Lane classified as Arterial from I-84 eastbound ramp to County Line
- Oregon Trail Boulevard extensions designated as a Collector
- Tatone Street extension designation as a Collector
- New north-south road between Main Street and Anderson Road designated as a Collector
- New east west road between Front Street and BPA easement designated as a Local
- New east-west road south of I-84 intresecting Laurel Lane designated as a Collector

The proposed functional classification was developed following detailed review of the existing Boardman TSP and Morrow County TSP. The criteria used to assess connectivity have two components: the extent of connectivity and the frequency of the facility type. Maps can be used to determine regional, city/district and neighborhood connections. The frequency or need for facilities of certain classifications is not routine or easy to package into a single criterion. While planning textbooks call for arterial spacing of a mile, collector spacing of a quarter to a half-mile, and neighborhood connections at an eighth to a sixteenth of a mile, this does not form the only basis for defining functional classification.

Changes in land use, environmental issues or barriers, topographic constraints, and demand for facilities can change the frequency for routes of certain functional classifications. While spacing



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standards can be a guide, they must consider other features and potential long term uses in the area (some areas would not experience significant changes in demand, where others will). The general intent and purpose of the facility, whatever the name, should be consistent with regional, state and federal guidelines.

Based on the future volumes, a bridge over I-84 at Olson Road is difficult to justify, especially given the estimated cost of \$10 – \$15 Million. A better use of the funds is to improve the Main Street bridge. If the Olson Road overpass is removed from the future transportation network, it would logical to reduce the functional classification of Olson Road from Arterial to Collector.

Roadway Cross-Section Standards

The design characteristics of streets in Boardman were developed to meet the function and demand for each facility type. Because the actual design of a roadway can vary from segment to segment due to adjacent land uses and demands, the objective was to define a system that allows standardization of key characteristics to provide consistency, but also to provide criteria for application that provides some flexibility, while meeting the design standards. Figure 1 shows the functional classification of the roadways in Boardman.

Existing

Boardman currently has six roadway cross section standards, two standards for each of the classifications. The following table lists the characteristics of each of the existing standards.

Table 1: Existing Street Standard Characteristics and Widths

Street Stanadard	Travel Lane Width	Turn Lane Width	Bike Lane Width	Parking Width	Storm Planter Width	Sidewalk Width	Total ROW
Local Street (conditional)	14' ¹	-	-	8' ²	8'	5'	56'
Local Street	9'	-	-	8' ²	8'	5'	60'
Neighborhood Collector	10'	-	-	9' ²	6' ³	5'	60'
Minor Collector	10'	-	6'	7'	6' ³	5'	68'
Arterial	12'	12'	6'	-	8' ³	8'	80'
Arterial (Special) ⁴	12'	12'	6'	-	6'	10'	80'

¹ One travel lane for both directions of traffic.

² Includes 1 foot curb width

³ Includes 0.5 foot curb width

⁴ Pertains to East Columbia Avenue, Wilson Road and South Main Street

The TSP shows the cross section of the North Main Street Arterial and the North Main Street Rail Overpass (existing). The cross sections included in the TSP were the proposed cross sections prior to the reconstruction of North Main Street. Since North Main Street has been reconstructed, these cross sections do not need to be included in the new standards.

Proposed

It is proposed to simplify the cross section standards. The roadways in Boardman have basically three functional classifications; Local, Collector and Arterial. The standards will be based on the functional classification of roadway, with some flexibility while meeting the design standards. Table 2 summarizes the proposed street characteristics, with illustrations of recommended roadway cross-sections for arterials, collectors, and local (residential) streets provided in Figure 2. On facilities under State jurisdiction, ODOT's design standards from the current *Highway Design Manual* will apply.

Table 2: Proposed Street Characteristics

Street Element	Characteristic	Width/Options
Vehicle Lane Widths: (Minimum widths)	Truck Route =	12 feet
	Arterial =	12 feet
	Collector =	10 feet
	Local =	9 feet
	Turn Lane =	14 feet ⁵
On-Street Parking:		7 feet ⁶
Bicycle Lanes: (minimum widths)	New Construction =	6 feet ⁷
	Reconstruction =	5 – 6 feet
Sidewalks: (Minimum width)	Arterial =	6 feet
	Collector =	5 feet
	Local =	5 feet
Storm Planter:		5 – 6 feet

As shown in Figure 2, street cross-sections may vary among functional classifications as many elements are recommended, but have been left as “optional” to allow for flexibility. The actual treatment will be determined within the design and public process for implementation of each project.

The curb to curb width for the Proposed Local Street standard is 32 feet, with a required right-of-way width of 54 feet. The curb to curb width on the Proposed Collector Street standard can vary from 34 to 46 feet depending if bike lanes are constructed, with the right-of-way width varying from 56 to 68 feet. Arterials are substantially wider, requiring right-of-way widths up

⁵ In constrained conditions on collectors and local routes, a minimum width of 10 feet may be considered.

⁶ On arterials, on-street parking should be limited to special circumstances.

⁷ Bike lanes shall be considered on facilities with speeds higher than 25 mph or ADT greater than 3,000 veh/day.

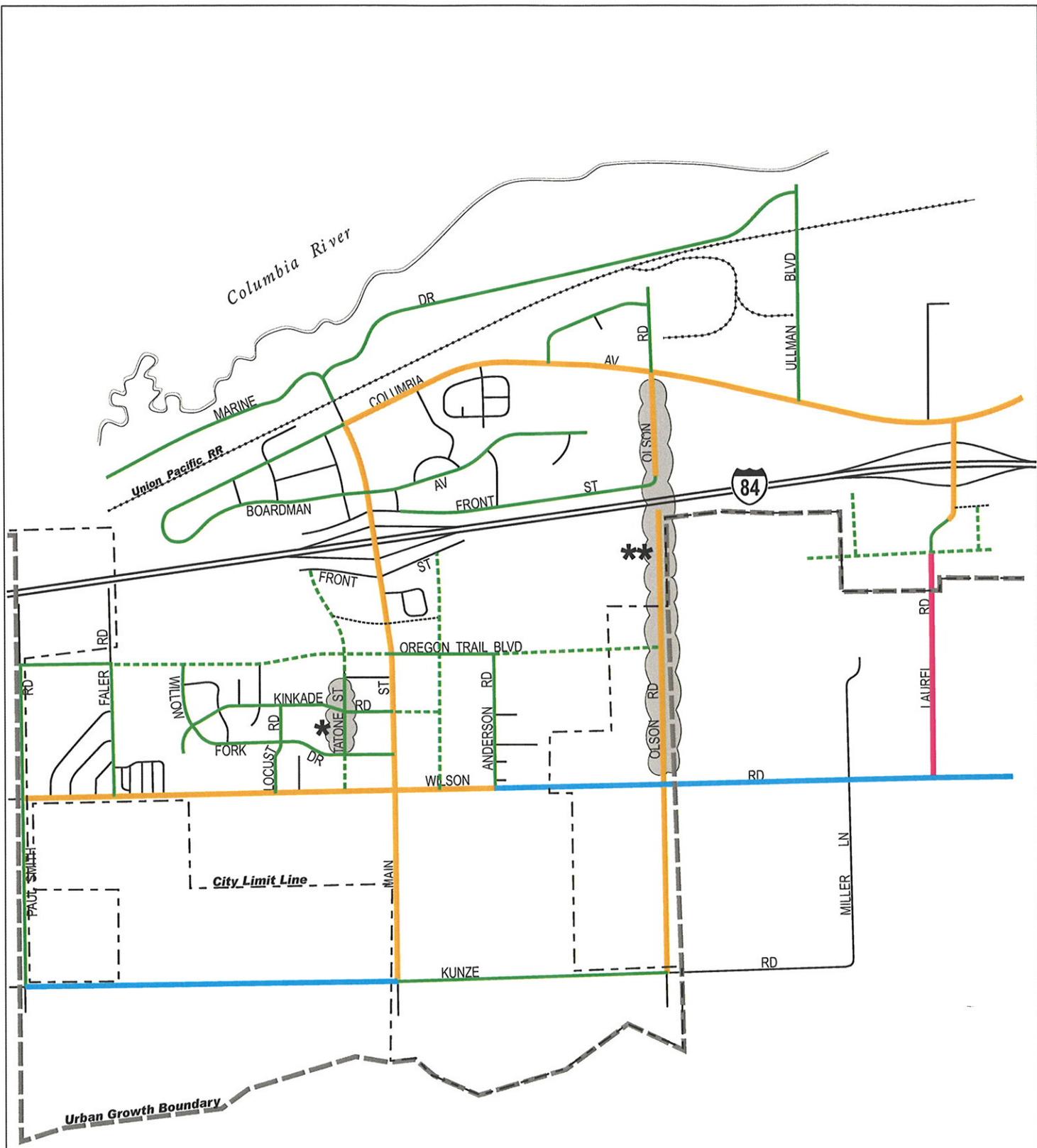
to 74 feet. On these facilities, bike lanes are required and the inclusion of a 14-foot turn lane is an option where needed.

Where center left turn lanes are identified, the actual design of the street may include sections without center turn lanes adjacent to environmentally sensitive or physically constrained areas or with median treatments to accommodate mid-block pedestrian crossings, where feasible. Under some conditions a variance to the adopted street cross-sections may be requested from the City.

Figure 3 illustrates the existing cross-section of Main Street and the proposed Arterial Cross-Section for comparison purposes.

Changes from the previous street design standards incorporated into Figure 2 include:

- Creating one Arterial Standard by combining the “New Arterial Standard” and the “Arterial Standard for East Columbia Avenue, Wilson Road and South Main Street”.
- Increasing the center turn lane/median from 12 feet to 14 feet on Arterials.
- Reducing the sidewalk width from 10 to 6 feet on Arterials.
- Combining Minor Collector and Neighborhood Collector with the option of a bike lane.
- Removing North Main Street Arterial cross section.



- * - Tatone Street currently designated as Local.
Proposed to re-designate Tatone Street as a Collector.
- ** - Olson Road currently designated as an Arterial.
Proposed to re-designate Olson Road as a Collector.

LEGEND	
	- Existing Arterial
	- Existing Collector
	- Proposed Collector
	- Existing Local
	- Proposed Local
	- Major Collector (County)
	- Minor Arterial (County)

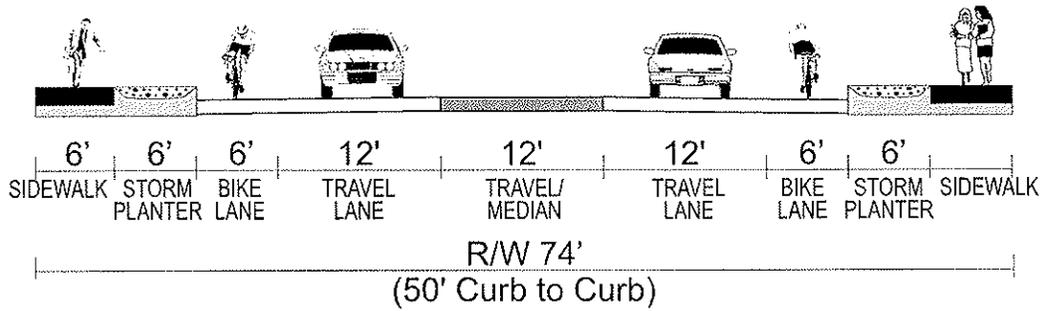
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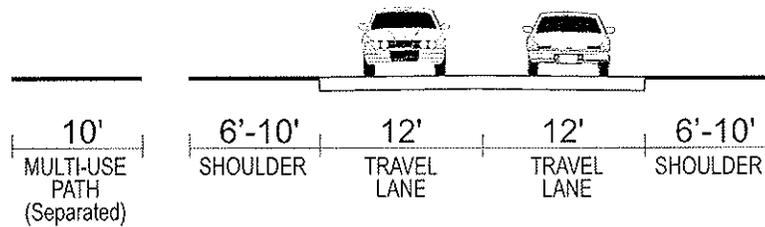
Figure 1

ROADWAY NETWORK AND CLASSIFICATION PLAN

Arterial Standard Cross Section



Current Main Street Cross Section



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Figure **3**

**MAIN STREET
CROSS SECTIONS**