

# Memorandum



**LANCASTER  
ENGINEERING**

**To:** Oregon City Planning Commission  
**From:** Todd E. Mobley, PE  
**Date:** November 25, 2019  
**Subject:** Beaver Creek Concept Plan Implementation: Street Classification

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This memorandum is written to provide comments regarding the planned street system within the Beaver Creek Concept Plan area, specifically, the number of streets slated for designation as collector within the plan area.

## *Collector Function*

In the hierarchy of streets, collectors take people from local streets, “collect” them, and bring them to higher-order streets such as minor and major arterials. In the vicinity of the concept plan area, streets such as Glen Oak Road and Loder Road are collectors. Meyers Road is a minor arterial and Beaver Creek Road is a major arterial. Figure 1 below is an excerpt from the Transportation System Plan (TSP) that shows street functional classifications in and around the plan area.

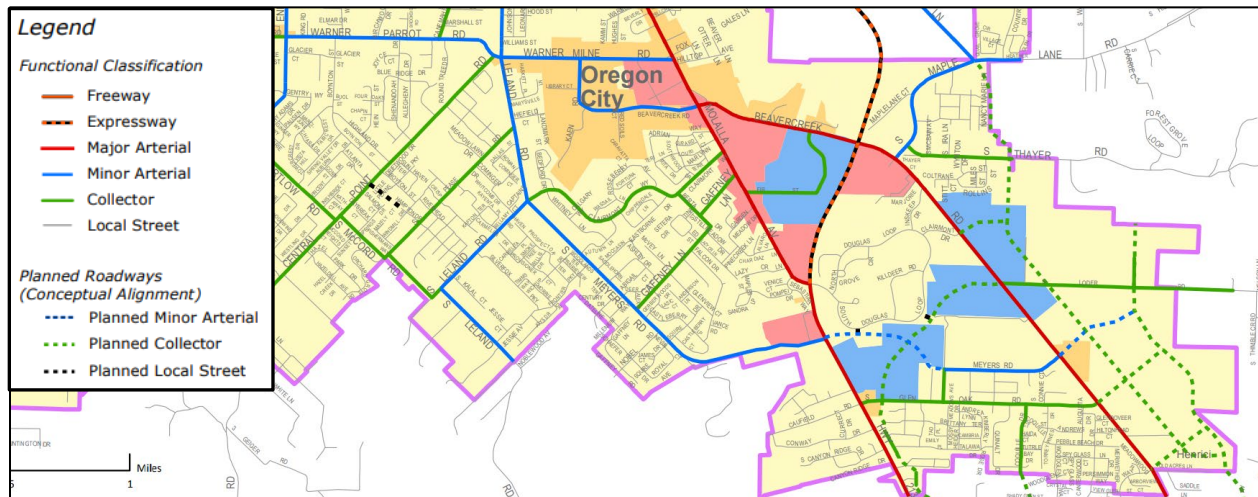


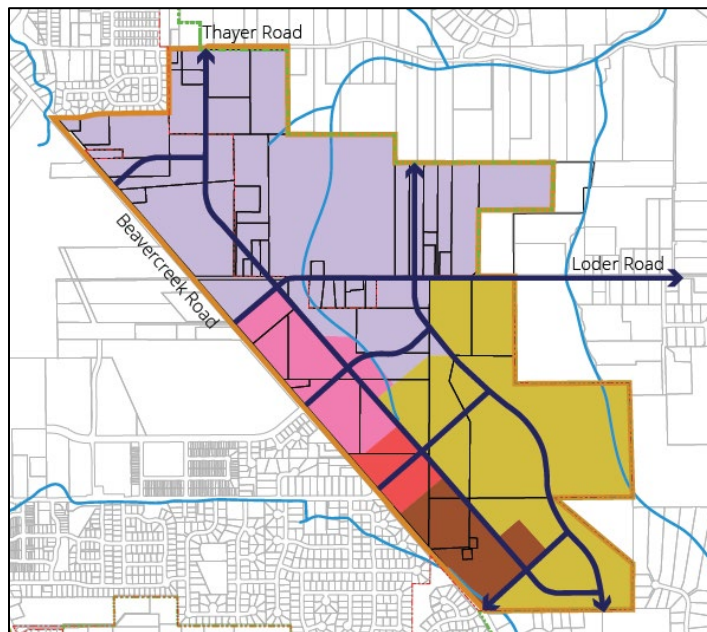
Figure 1 - Excerpt from Figure 8 in the Transportation System Plan

## *Planned Density*

The current proposal for implementation of the Beaver Creek Concept Plan includes a mix of industrial, commercial, mixed-use, and residential zones. The northern end of the plan area is primarily industrial,



transitioning to mixed use and residential zones to the south. The higher intensity uses such as commercial and high density residential are near Beaver Creek Road and lower density residential to the south and east, away from Beaver Creek Road. In addition, the Oregon City School District has long-term plans to construct a new elementary school south of the plan area, adjacent to the southeast corner of the plan boundary.



**Figure 2 - Proposed Zoning**

An exhibit showing the proposed zoning and comprehensive plan designations is attached to this memo, with an excerpt shown in Figure 2 for reference. The blue lines in the Figure 2 are all planned collector-level roadways. On the north end of the plan area, the collectors have a wider spacing. As those same streets extend south, the plan area narrows, and the spacing of collectors becomes much tighter. The street layout is logical, but as explained below, closer examination of residential densities and developable area shows that some of the streets slated for collector status will very likely not carry more traffic than local streets and will not warrant designation as a collector.

With land uses that have the highest trip intensity situated closest to Beaver Creek Road, some of the streets, particularly to the south and east, will naturally carry lower traffic volumes. The proposed R5 zoning designation to the south and east result in lower density and correspondingly low trip intensity. That combined with the closer collector spacing, results in a collector roadway density that is higher than necessary.

### *Effect of Left Turn Restrictions*

The concept plan includes restricting left turn movements along Beaver Creek Road, except at intersections controlled by either a traffic signal or a roundabout. The intersection of Glen Oak Road at Beaver Creek Road is the southernmost intersection along Beaver Creek Road within the Urban Growth Boundary that is planned for either a traffic signal or a roundabout. All new street intersection south of Glen Oak Road will be limited to right turns in and out, including the major arterial/collector intersection of Beaver Creek Road at D56/Timbersky Way. See Figure 3 for a reference to the future street labeled D56.

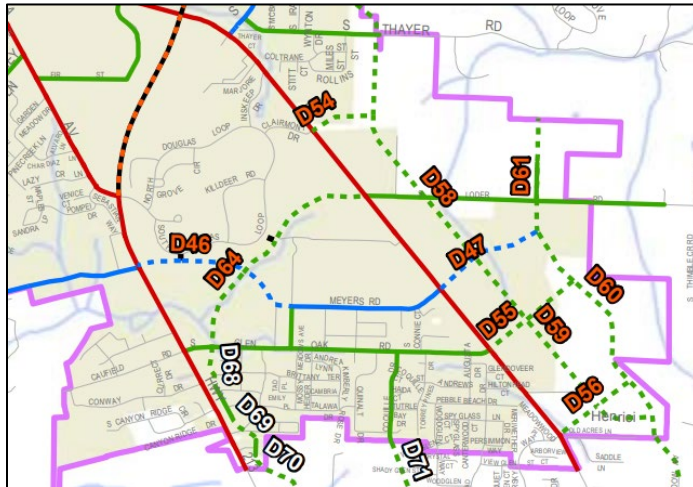


Figure 3 - Excerpt from TSP with New Street Labels

These turn restrictions further diminish the future traffic volumes on some of the streets within the plan area. For example, most trips, particularly in the southern area, are expected to be to and from the north. Exiting trips will have convenient access to Beaver Creek Road to make a right turn and travel north, but incoming trips will need to make a left turn from Beaver Creek Road at Glen Oak Road and use the internal street network. This results in decreased traffic volumes on streets such as D56, which is shown in Figure 3.

### *Does it Matter?*

Sizing and classifying streets appropriately results in the most efficient use of the land available within the plan area. Perhaps more importantly, ensuring that streets are not overbuilt results in increased safety and neighborhood livability. By design, collector streets typically have wider lanes and higher travel speeds than local streets. Keeping street designs slow and safe is critical to ensuring that neighborhoods are comfortable for all users.

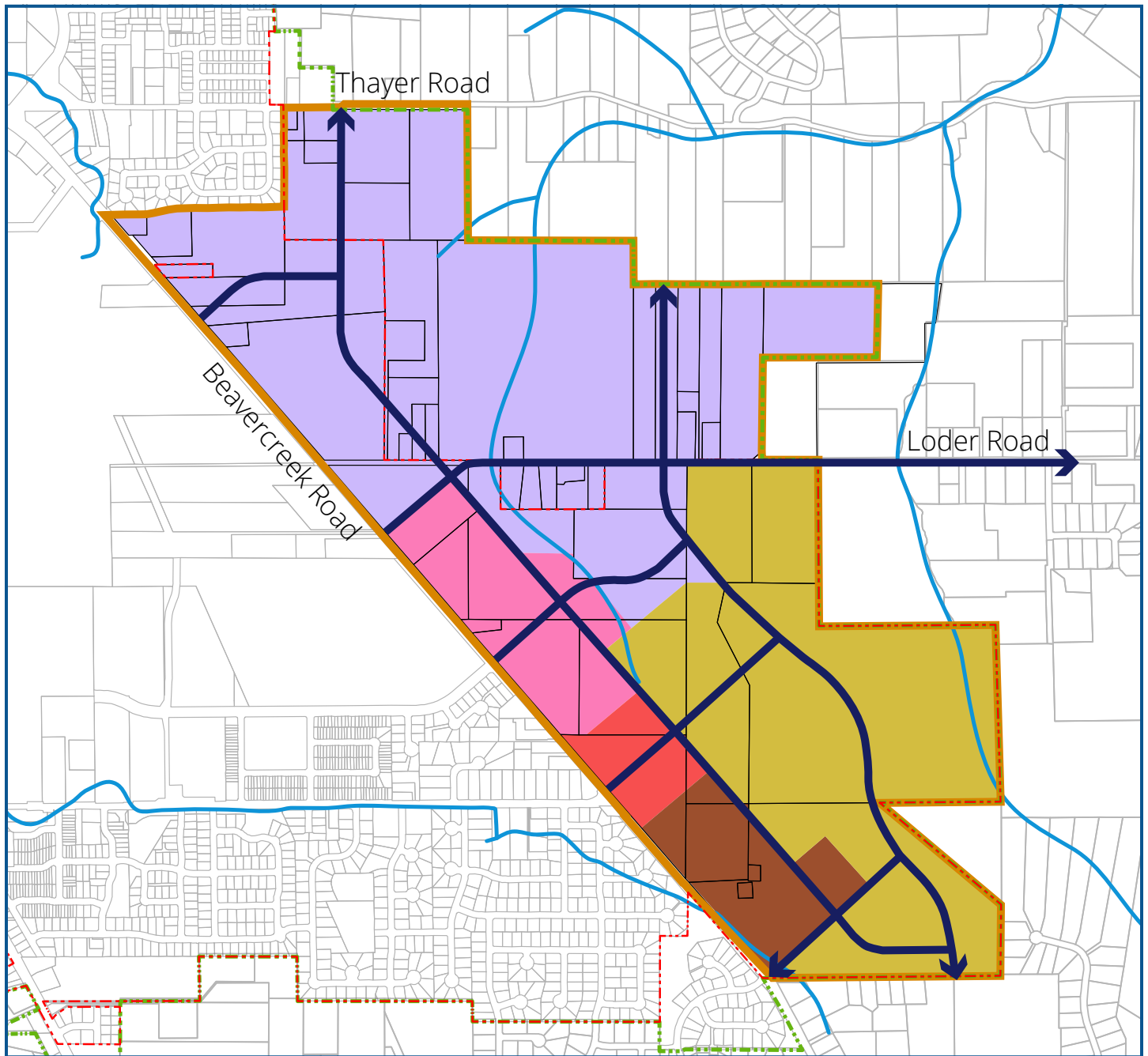
### *Summary & Conclusions*

The streets contained in the current Beaver Creek Concept Plan create a logical network that will serve the diverse range of land uses in the plan area. However, as the plan area narrows to the south and zoning districts get lower in both density and trip intensity, the result is a system of too-closely spaced collector streets.

It is recommended that with the implementation of the concept plan, that flexibility be retained with respect to internal street classifications, particularly in the southern portion of the plan area. This will allow the creation of new, vibrant neighborhoods, where the emphasis is on the people, the neighborhoods, the land uses, and the parks, with lower emphasis on the streets that connect them.

# Beavercreek Road Concept Plan

## Proposed Zoning and Comprehensive Plan Designations



### Legend



BRCP Subdistrict	Comp Plan Designation	Zoning Designation	
West Mixed Use Neighborhood	High Density Residential	High Density Residential	R-2
East Mixed Use Neighborhood	Medium Density Residential	Medium Density Residential	R-5
Main Street	Mixed Use Corridor	Neighborhood Commercial	NC
Mixed Employment Village	Mixed Use Corridor	Mixed Use Corridor	MUC-2
North Employment Campus	Industrial	Campus Industrial	CI
		BRCP Boundary	
		Urban Growth Boundary	
		City Limits	
		Future Road Connections	
		Streams	