
Chapter Two

Project Alternatives

Environmental Assessment

US Highway 12: Frenchtown Vicinity to Walla Walla

Where Does the Project Begin and End?

The beginning and end points of a transportation project are referred to as its logical termini. **Logical termini** ensure that transportation improvements are appropriately matched to infrastructure, traffic movements, **topography**, and that the “logical” and prudent selection of project boundaries is made. Additionally, a project must have independent utility. Independent utility guarantees that the proposed project is usable even if no additional transportation projects are planned within the local geographic area.

Traveling east on US 12 from the intersection of SR 730 at Wallula Junction toward Walla Walla, traffic volumes, and the number of accidents and associated injuries, all begin to increase at the project’s western terminus in the vicinity of the historic area locally known as Frenchtown (MP 327.2). The transition from two to four lanes at the Walla Walla Bypass (MP 335.6) serves as the terminus for the eastern end of the project (Exhibit 2-1). These termini ensure the project’s independent utility.

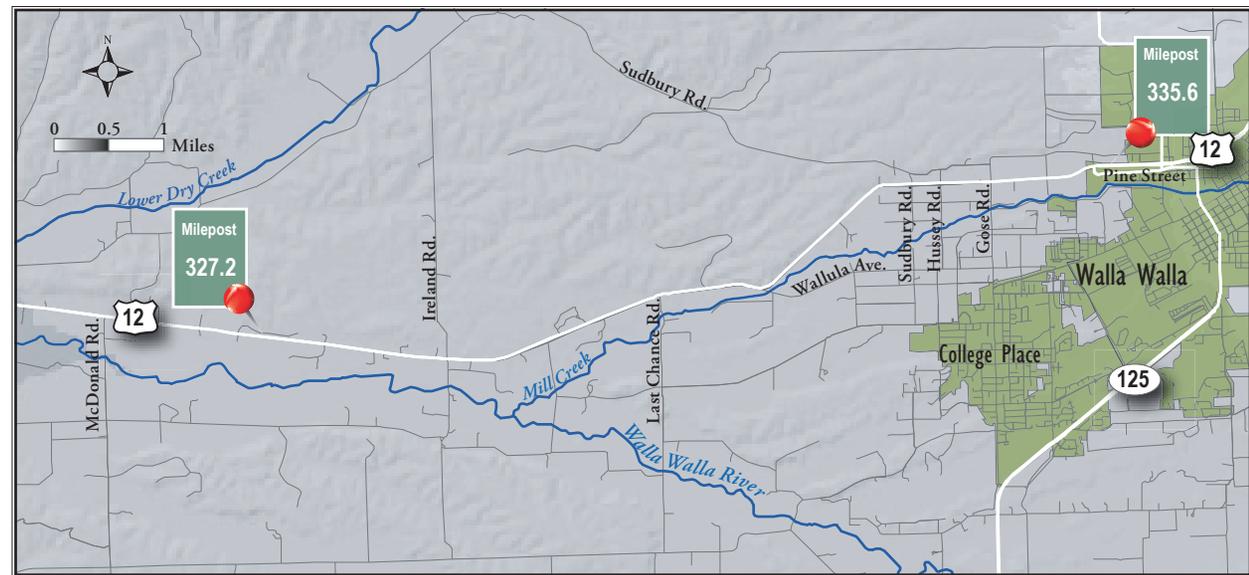
What are Logical Termini?

The FHWA defines logical termini as (1) rational beginning and end points for a transportation project, and (2) rational beginning and endpoints for a review of environmental impacts. Typically, the most common termini have been points of major traffic generation, such as intersecting roadways. However, there are also cases where the project improvement is not primarily related to traffic generators, and therefore, the choice of beginning and end points based on traffic volumes alone would not be appropriate. For example, a proposed transportation project should also be considered within the context of local topography, socioeconomics, and future travel demand.

What is Topography?

Topography is the configuration of land and the relations among its man-made and natural features.

Exhibit 2-1. Map showing the beginning and endpoints (logical termini) of the project area.



What Alternatives Were Considered for This Environmental Assessment?

The project design team identified four preliminary alternatives for consideration in this EA; they include the following:

- Alternative 1: The No-Build Alternative
- Alternative 2: Widen the Existing US Highway 12
- Alternative 3: Last Chance Road Vicinity to the Walla Walla Bypass
- Alternative 4: Frenchtown Vicinity to the Walla Walla Bypass

Alternative 1: The No-Build Alternative

No major construction activities would occur under the **No-Build Alternative**. US 12 would remain at its present location and the highway would continue being maintained to current standards.

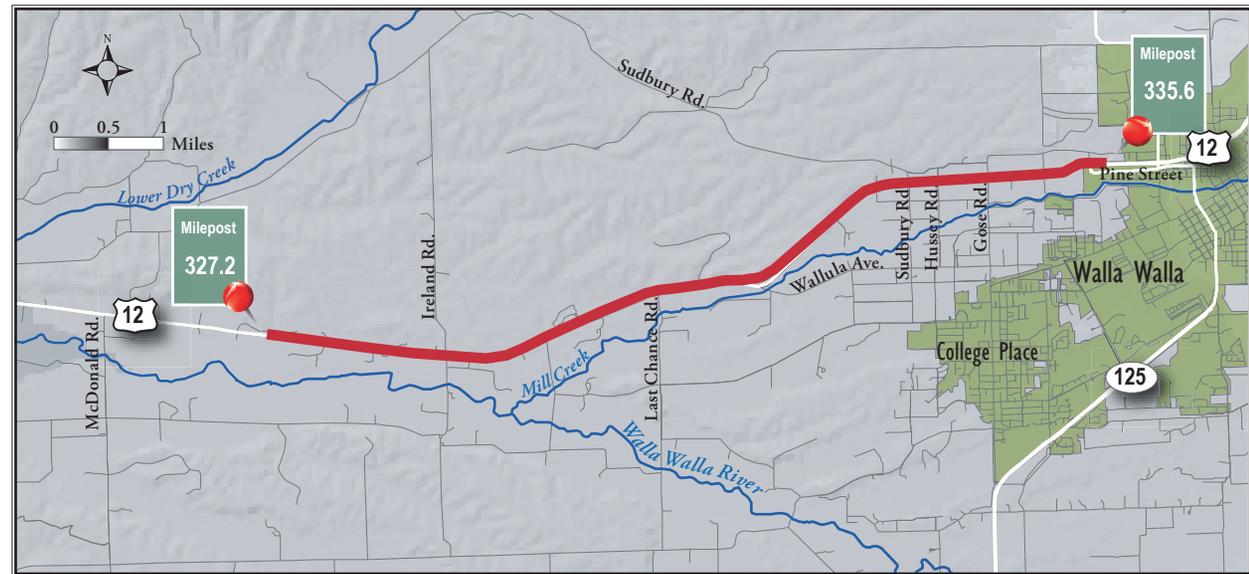
Alternative 2: Widen the Existing US Highway 12

As shown in Exhibit 2-2, widening US 12 to four lanes in its current location would require constructing lanes both north and south of the existing highway. This alternative necessitates building frontage roads for those residents that

What is the No-Build Alternative?

The National Environmental Policy Act requires that each Environmental Assessment include a “No-Build” alternative. This alternative establishes the baseline for comparing effects to social, economic, and environmental resources against which the negative and positive effects of all other alternatives are compared.

Exhibit 2-2. Map showing the location of the US 12 roadway under Alternative 2: Widen the Existing US Highway 12.

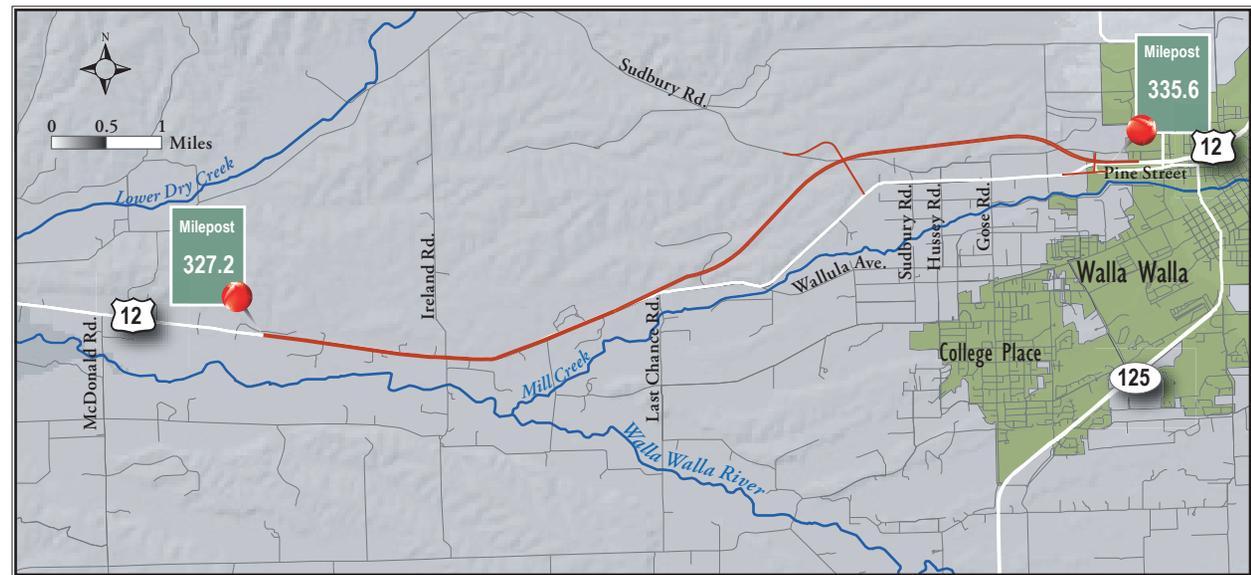


currently access the highway directly, and therefore, would result in a wider footprint than other build alternatives.

Alternative 3: Last Chance Road Vicinity to the Walla Walla Bypass

This alternative would widen the existing highway from the Frenchtown Vicinity (327.2) to the area near Last Chance Road (MP 331). From here, a new roadway would be constructed north of existing US 12 to the Walla Walla Bypass (335.6) (Exhibit 2-3). A cul-de-sac would be constructed just east of the point where this alternative would leave existing US 12 near MP 331, and ownership of the existing highway from there to the Walla Walla Bypass would be transferred

Exhibit 2-3. Map showing the location of the US 12 highway under Alternative 3: Last Chance Road Vicinity to the Walla Walla Bypass.

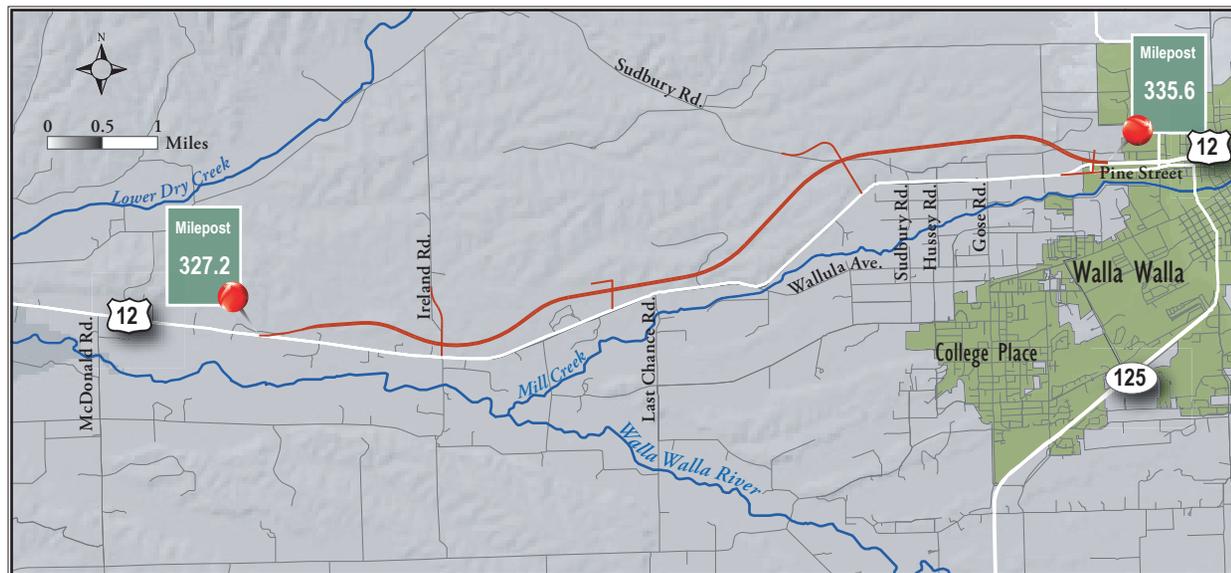


to the county and city of Walla Walla. Widening the existing highway to the vicinity of Last Chance Road would also require constructing frontage roads, and therefore, would result in a wider footprint from the beginning of the project to near the intersection of Last Chance Road and US 12.

Alternative 4: Frenchtown Vicinity to the Walla Walla Bypass

This alternative would construct a new roadway north of existing US 12 from the Frenchtown Vicinity (MP 327.2) to the Walla Walla Bypass (335.6) (Exhibit 2-4). A cul-de-sac would be constructed just east of the point where this alternative would leave existing US 12 at MP 327.2, and ownership of the existing highway

Exhibit 2-4. Map showing the location of the US 12 highway under Alternative 4: Frenchtown Vicinity to the Walla Walla Bypass.



from there to the Walla Walla Bypass would be transferred to the county and city of Walla Walla. Because frontage roads would not be necessary, this alignment would result in a narrower footprint than any other alignment.

What Criteria Were Used for Assessing the Preliminary Alternatives?

Each of the preliminary alternatives described above were evaluated by assessing their respective potential to meet the following coarse screening criteria:

- Does the alternative effectively improve motorist safety, capacity, and mobility?
- Is the alternative feasible from an engineering standpoint?
- Does the alternative avoid or minimize negative effects to social, economic, and environmental resources?
- Is the alternative reasonable from a cost perspective?

Exhibit 2-5 provides a summary of the coarse screening evaluation for each alternative.

US Highway 12 Coarse Screening Evaluation of Preliminary Alternatives					
		Preliminary Alternative			
		Alternative 1: No-Build	Alternative 2: Widen the Existing US Highway 12	Alternative 3: Last Chance Road Vicinity to Walla Walla	Alternative 4: Frenchtown Vicinity to Walla Walla
Coarse Screening Criteria	Does the Alternative Improve Motorist Safety, Capacity and Mobility ?	Baseline ¹	Yes	Yes	Yes
	Is the Alternative Feasible from an Engineering Standpoint?	Baseline ¹	Yes	Yes	Yes
	Does the Alternative Avoid or Minimize Negative Effects to Social, Economic, and Environmental Resources?	Baseline ¹	No ²	No ²	Yes
	Is the Alternative Reasonable from a Cost Perspective?	Baseline ¹	No ³	No ³	Yes

Exhibit 2-5. Summary of coarse screening evaluation for preliminary alternatives.

Evaluating each alternative for potential negative effects to key social, economic, and environmental resources at a detailed level substantiates the coarse screening evaluation of the preliminary alternatives above (Exhibit 2-6).

¹Motorist safety, capacity, and mobility would not be improved beyond baseline (existing) conditions and would worsen with time.

²While negative effects to social, economic, and environmental resources would be avoided and minimized to the greatest extent possible, this alternative has the potential to generate more negative effects than other alternatives.

³Although fundable, the cost associated with purchasing Right-of-Way is substantially more than other alternatives because of the number of businesses and residences that would be acquired.

US Highway 12 Resource Evaluation of Preliminary Alternatives

		Preliminary Alternative			
		Alternative 1: No-Build	Alternative 2: Widen the Existing US Highway 12	Alternative 3: Last Chance Road Vicinity to Walla Walla	Alternative 4: Frenchtown Vicinity to Walla Walla
Resource	Direct effects to Residents (Displacements and Relocation)	Baseline	50 Units	11 Units	4 Units
	Direct effects to Businesses (Displacements and Relocation)	Baseline	6 Units	5 Units	0 Units
	Approximate Right-of-Way Cost	Baseline	+/- \$22 million	+/- \$11 million	+/- \$6.5 million
	Direct effects to the Mill Creek and Walla Walla River 500-year and 100-year (Regulatory) Floodplains	Baseline	+/- 1.5 Acres	0 Acres	0 Acres
	Direct effects to the Mill Creek and Walla Walla River Alluvial (Non-Regulatory) Floodplains	Baseline	258 Acres	153 Acres	65 Acres
	Direct effects to Wetlands Associated with Mill Creek and the Walla Walla River	Baseline	+/- 2.6 Acres	+/- 1.6 Acres	+/- .44 Acres
	Potential effects to wildlife and fish habitat	Baseline	+/- 7.5 River Miles	+/- 5.5 River Miles	0 River Miles
	Potential effects to known Archeological, Historic, and Cultural Resources	Baseline	6.5 Acres	6.5 Acres	None Known
	Direct effects to Prime Farmlands	Baseline	15 Acres	28 Acres	68 Acres
	Direct effects to Farmlands of Statewide or Local Importance	Baseline	123 Acres	190 Acres	318 Acres

Exhibit 2-6 Summary of effects to key social, economic, and environmental resources.

Which Alternatives Were Eliminated from Further Study and Why?

Of the four preliminary alternatives evaluated, the project design team identified two alternatives that were considered but rejected from further study; they include the following:

- Alternative 2: Widen the Existing US Highway 12
- Alternative 3: Last Chance Road Vicinity to the Walla Walla Bypass

As shown in Exhibit 2-6, the WSDOT determined it was both reasonable and prudent to eliminate both alternatives two and three from further study for the following reasons:

- Both alternatives would displace a greater number of residents and businesses than either the No-Build Alternative or Alternative four.
- They would result in greater Right-of-Way costs than either the No-Build Alternative or Alternative four.
- Alternative two would negatively affect more acres of Mill Creek's regulatory floodplain than the No-Build Alternative or Alternative four; however, this difference would not be substantial.
- Alternatives two and three would negatively affect more acres of the Mill Creek and Walla Walla River **alluvial floodplains**. Because these floodplains are directly and indirectly connected to the waterways that create them, their structural and functional attributes are essential to the health of a river's ecology, even though they are not regulated.
- Both alternatives two and three would negatively affect more acres of wetlands and irrigation ditches than the No-Build Alternative or Alternative four.

What is an Alluvial Floodplain?

Alluvial floodplains are landscape features comprised of soils that contain clay, silt, sand, gravel or cobbles, and are deposited by running water.

- While none of the alternatives would directly affect threatened or endangered species, Alternatives two and three have a greater potential to indirectly affect Summer steelhead habitat and bull trout habitat in both Mill Creek and the Walla Walla River.
- Since a larger portion of the roadway would be located within the floodplain of Mill Creek and the Walla Walla River, and because both native peoples and early Euro-Americans traveled through, resided on, and utilized floodplains extensively, the potential for disturbing archeological, historic, and cultural resources is greater under Alternative two or three than either the No-Build Alternative or Alternative four.

Which Alternatives Were Selected for Further Study?

Of the four preliminary alternatives evaluated, the WSDOT chose to advance two alternatives for further study; they include the following:

- Alternative 1: The No-Build Alternative
- Alternative 4: Frenchtown Vicinity to the Walla Walla Bypass

What Would Happen If Nothing Were Built?

As previously mentioned, no major construction activities would occur under the No-Build Alternative; therefore, substandard roadway conditions would persist, as would the need for increasing traffic capacity and mobility. As such, the No-Build Alternative would not resolve the safety, capacity, or mobility issues associated with this section of US 12.

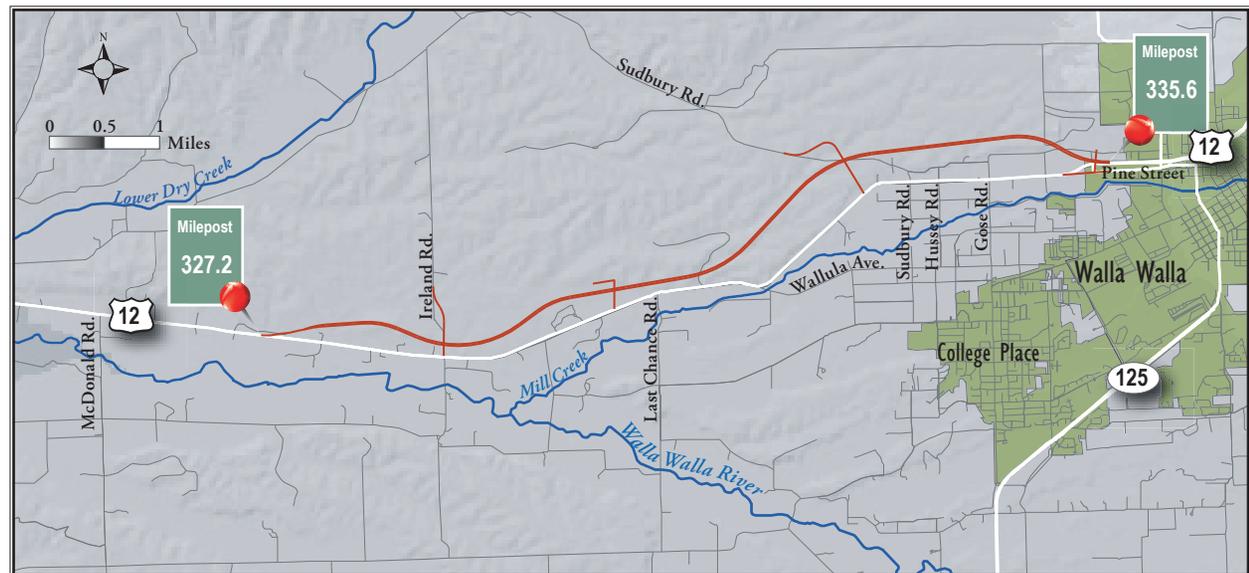
What Is the Preferred Alternative?

Working with federal and state agencies, tribal, county, and city governments, and the public, the WSDOT has identified Alternative 4, constructing an alignment from the Frenchtown Vicinity to Walla Walla, as the **preferred alternative** (Exhibit 2-7). This alternative satisfies the project’s purpose and need at the lowest cost, while generating the fewest negative effects to social, economic, and environmental resources.

What is the Preferred Alternative?

The preferred alternative is the alternative selected from a comprehensive evaluation of all alternatives.

Exhibit 2-7. Map showing the location of US Highway 12 under Alternative 4: Frenchtown Vicinity to the Walla Walla Bypass; the preferred alternative.



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