

Chapter 5: Affected Environment, Environmental Consequences, and Mitigation

This chapter discusses the affected environment and environmental impacts from the construction and operation of the project alternatives and how these impacts will be mitigated.

5.1 Introduction to Chapter 5

Chapter 5 is divided into sections discussing various environmental and social resources and how the project alternatives benefit or impact these resources. Each section includes subsections that explain the policy and guidelines for evaluating that resource, list the changes to the resource since the publication of the 2008 Draft EIS or indicate if there are no changes, identify the study area, discuss how the project alternatives will affect the resource, and identify mitigation measures to offset the adverse impacts. The discussion of impacts begins with those that are common for all alternatives and then moves into the impacts that are specific to each alternative.

This chapter summarizes the impacts for each alternative. The corresponding technical reports document the detailed analysis for environmental justice, right of way (conceptual stage relocations), hazardous materials, historic resources, air quality, noise, biological resources, hydrology and hydraulics, and wetlands. The technical reports are available as attachments to this document. In addition to the resources listed, the following topics also are discussed in this chapter:

5.20 Irreversible and Irretrievable Commitment of Resources

5.21 Short-Term Use and Long-Term Productivity

5.1.1 What is the study area?

In this document, each resource has a specific study area that is typically different in size than the project area that was identified in the 2008 Draft EIS. The project area from the 2008 Draft EIS was created by applying an approximate one-mile

Resources evaluated in Chapter 5

- 5.2 Social and Economic Conditions
- 5.3 Environmental Justice
- 5.4 Land Use
- 5.5 Relocations and Displacements
- 5.6 Historic Preservation
- 5.7 Paleontological Resources
- 5.8 Visual Resources and Aesthetic Qualities
- 5.9 Parks and Recreation
- 5.10 Air Quality
- 5.11 Energy
- 5.12 Noise
- 5.13 Biological Resources
- 5.14 Floodplains and Drainage / Hydrology
- 5.15 Wetlands and Other Waters of the U.S.
- 5.16 Water Quality
- 5.17 Geology and Soils
- 5.18 Hazardous Materials
- 5.19 Utilities

buffer around the project limits. Exhibit 5.1-1 shows the project area, the limits of the project, and the construction limits of the proposed alternatives.

Some resources—such as social and economic resources—have a broader study area that includes all the neighborhoods impacted along the corridor, while others—such as utilities—are analyzed within the project’s construction limits.

Exhibit 5.1-1. Project area, project limits, and construction limits



5.1.2 What are the alternatives analyzed in Chapter 5?

The I-70 East Supplemental Draft EIS examines potential effects to social, environmental, and economic resources resulting from proposed improvements to I-70 between I-25 and Tower Road. Consistent with federal regulations, this document fully evaluates potential effects that might result from the No-Action Alternative and the Build Alternatives (Revised Viaduct Alternative and Partial Cover Lowered Alternative). The alternatives and options are presented in Exhibit 5.1-2.

For more detail on the alternatives and their options, see Chapter 3, Summary of Project Alternatives. For summary of impacts and mitigation measures related to each alternative, see Section 5.22, Summary of Impacts and Mitigations.

Project Area

This is an approximate one-mile buffer around the project limits that was studied in the 2008 Draft EIS to identify possible alternatives.

Study Area

To have a closer look at impacts in this Supplemental Draft EIS, each resource has a specific study area that may be different than the project area.

Exhibit 5.1-2. Summary of project alternatives and options

Alternative		Expansion Options	Connectivity Options	Operational Options
No-Action		<ul style="list-style-type: none"> • North • South 	N/A	N/A
Build Alternatives	Revised Viaduct	<ul style="list-style-type: none"> • North • South 	N/A	<ul style="list-style-type: none"> • General-Purpose Lanes • Managed Lanes
	Partial Cover Lowered	N/A	<ul style="list-style-type: none"> • Basic • Modified 	<ul style="list-style-type: none"> • General-Purpose Lanes • Managed Lanes

5.1.3 How did the project team collect and update data for the environmental analysis?

The I-70 East EIS was initiated in 2003 and the initial data collection started as early as 2003/2004 to identify the study area and alternatives. The 2008 Draft EIS included all the available data from the project initiation through the publication date; however, some data, such as the social and economic data from the U.S. Census Bureau, dated back to 2000.

Because the 2008 Draft EIS has become outdated, and since there are changes in the project alternatives and in the built, natural, and social environment of the study area, the project team is preparing this document to capture all the changes and to include the latest available data.

In this document, all of the resources have been re-evaluated to determine if there are any changes to the original data or if the data still represent corridor conditions and provide a reasonable baseline to analyze the environmental impacts. They also were revisited to determine if a new law or regulation associated with a specific resource has been enacted since the publication of the 2008 Draft EIS.

The data and analysis were updated based on the most recent available data and the most recent regulations. For example, social, economic, and environmental justice resources were updated with the 2010 Census data. Land uses, wetlands, and biological resources were verified through field surveys to confirm the validity of available data.

5.1.4 What resources are not affected by the project alternatives?

Data collection for the I-70 East EIS determined that the following resources are not present in the project area, so the alternatives will have no effect on them:

- Prime and unique farmlands
- Wild and scenic rivers

Because these resources are not present in the project area, they are not analyzed or discussed in this document.