



1 3.16 Irreversible and Irretrievable Commitment of Resources

2 3.16.1 Summary of Draft Tier 1 EIS

3 The Build Corridor Alternatives are expected to have an irreversible and irretrievable
4 commitment of resources in the following resource areas as a result of construction.

5 **Natural Resources.** The construction of the Project would involve irretrievable commitments of
6 natural resources such as land, including everything below the surface, and farmlands in some
7 areas (see **Section 3.12** [Geology, Soils, and Prime and Unique Farmlands]). The Purple
8 Alternative could result in irretrievable commitments of threatened and endangered species and
9 their associated habitat and wildlife connectivity (see **Section 3.14** [Biological Resources]) and
10 water resources (see **Section 3.13** [Water Resources]). In general, the commitment of
11 resources would result from the conversion of undeveloped land to developed land.

12 **Cultural and Section 4(f) Resources.** Cultural resources and Section 4(f) resources are both
13 scarce, and impacts would be an irretrievable commitment. Archaeological artifacts could be
14 preserved through curation, but the historic integrity of the site would be lost. Impacts to historic
15 sites outside of the construction area would be primarily contextual.

16 **Fossil Fuels.** Fossil fuels, such as oil and gas, consumed during project construction and the
17 operation of vehicles traveling along I-11 are not considered rare, but would be an irretrievable
18 commitment, as they are not renewable. Consumption of oil and gas would increase during
19 construction, but advances in technology may contribute to a reduction in the overall rate of
20 consumption and usage of fossil fuels in the long term.

21 **Construction Materials.** Materials used in the construction of I-11 could include Portland
22 cement concrete (concrete), asphalt concrete (asphalt), rock base course, and steel. Water
23 would be consumed for mixing concrete, washing equipment, and suppressing dust. The use of
24 these materials would be largely irretrievable; however, these resources are generally not in
25 short supply.

26 As stated in the Draft Tier 1 EIS, the Purple Alternative would require approximately 758 new
27 lane miles, requiring large amounts of undeveloped land and construction materials. However,
28 these commitments would be less than the 930 new lane miles required by the Green
29 Alternative. The Orange Alternative is located along more existing corridors than the Purple and
30 Green Alternatives and would require the least amount of undeveloped land and construction
31 materials with approximately 415 new lane miles. It would cause the least disruption to nearby
32 natural resources due to its being largely co-located with existing transportation facilities.

33 3.16.2 Summary of Changes Since Draft Tier 1 EIS

34 Commenters on the Draft Tier 1 EIS expressed concern for irreversible and irretrievable
35 commitments of wildernesses. These impacts were discussed in the Draft Tier 1 EIS. No
36 changes to this section resulted from comments.

1 **3.16.3 No Build Alternative**

2 Under the No Build Alternative, I-11 would not be built; and new commitments of resources
3 would not occur beyond those that would occur in relation to other programmed projects and the
4 maintenance of existing facilities. Existing conditions and baseline trends would continue.

5 **3.16.4 Recommended Alternative**

6 The Recommended Alternative is expected to have irreversible and irretrievable commitment of
7 resources in several resource areas if constructed, similar to those of Build Corridor Alternatives
8 analyzed in the Draft Tier 1 EIS and summarized above. These include natural resources,
9 cultural and Section 4(f) resources, fossil fuels, and construction materials. Generally,
10 commitments increase as the conversion of undeveloped land to developed land increases.
11 Construction of the Recommended Alternative could potentially result in irretrievable
12 commitments of the Pima pineapple cactus and the Yuma Ridgway's rail habitat, both
13 threatened and endangered species (see **Section 3.14** [Biological Resources] of the Final Tier
14 1 EIS). The Recommended Alternative could also involve irreversible commitments of high-
15 quality wetlands in the Santa Cruz River floodplain near Marana (see **Section 3.13** [Water
16 Resources] of the Final Tier 1 EIS). The Recommended Alternative would require 917 new lane
17 miles.

18 **3.16.5 Preferred Alternative**

19 The Preferred Alternative would require 714 new lane miles with the east option in Pima County
20 and 864 new lane miles under the west option in Pima County. Construction of the west option
21 of the Preferred Alternative could potentially result in irretrievable commitments of the Pima
22 pineapple cactus habitat. The irretrievable commitment of the Yuma Ridgway's rail habitat and
23 high-quality wetlands associated with the Recommended Alternative would be avoided under
24 the Preferred Alternative. The Preferred Alternative, regardless of the option selected, would
25 require fewer materials and disrupt fewer natural resources than the Recommended Alternative.
26 The Preferred Alternative with east option in Pima County has the potential to irretrievably
27 impact the historic districts in downtown Tucson.

28 **3.16.6 Mitigation and Tier 2 Analysis**

29 **3.16.6.1 Tier 2 Analysis Commitments**

30 FHWA and ADOT completed an initial level of analysis in this Final Tier 1 EIS to identify a
31 2,000-foot-wide preferred Build Corridor Alternative. Additional analysis in Tier 2 will inform
32 (1) the selection of a specific alignment (approximately 400 feet wide) within the selected
33 2,000-foot-wide corridor and (2) the selection of the west option or east option in Pima County.
34 Tier 2 analysis will also identify measures to avoid, minimize, or mitigate impacts.

35 **3.16.6.2 Mitigation Commitments**

36 As required by NEPA, FHWA and ADOT considered measures to avoid, minimize, and mitigate
37 impacts from the Project (generally referred to as mitigation measures) during this Tier 1
38 process.



1 Strategies to mitigate impacts are identified by resource throughout **Chapter 3** (Affected
2 Environment and Environmental Consequences) and in **Chapter 7** (Summary of Mitigation and
3 Tier 2 Analysis). More specific mitigation measures would be identified in the Tier 2 analysis.

4 **3.16.6.3 Additional Mitigation to be Evaluated in Tier 2**

5 During the Tier 2 process, ADOT will evaluate mitigation measures to include best practices,
6 permit requirements, and/or other mitigation strategies suggested by agencies or the public.



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