1 INTRODUCTION

1.1 Background

In 1999, FHWA and ITD began developing an Environmental Assessment (EA) for a 20.4-mile improvement of US-95 from the Top of Lewiston Hill to Moscow. The project intent was to widen the existing highway in the southern 15.8 miles of the project and construct 4.6 miles of a new four-lane highway in the northern section. Eleven alternatives for the northern-most section of the corridor were narrowed to two. Alternative 6 would have widened along the existing highway and Alternative 10A would have constructed a four-lane highway on new alignment near the base of Paradise Ridge.

Alternative 10A was selected by ITD and FHWA and a FONSI was issued in May 2002. The project was litigated by the Paradise Ridge Defense Coalition, Inc. in 2003. The US District Court for the District of Idaho (Court) in the judgment for Civil Case number 03-0156-S-BLW decided that the EA and issuance of a Finding FONSI were not appropriate. The court found that an EIS would be required for the northern 4.6-mile segment between Thorncreek Road and Moscow to allow full consideration of the impacts by the public and agencies. The southern 15.8 miles was allowed to proceed and construction was completed in October 2007.

The Court decision for US-95 Lewiston Hill to Moscow was based on the finding that FHWA regulations give examples of actions that normally require an EIS, which includes a highway project of four or more lanes in a new location. Since the EA didn't discuss its unique circumstances, an EIS should have been prepared.

In an Idaho Department Fish and Game (IDFG) Draft Terrestrial Wildlife Impact report which was an appendix to the EA, IDFG characterized the diversity of plant and wildlife communities in Palouse remnants, xplained its rarity and stated that the new highway would disturb habitat and result in fragmentation and disruption of wildlife movement. IDFG also stated that it is difficult to predict the extent of this long-term impact but it is expected to be significant. Mitigation was recommended should the 10A alternative be selected. ITD did not follow the IDFG mitigation but pursued an alternative mitigation site. The Court ruled that because ITD chose not to follow the IDFG analysis and mitigation recommendations without relying on its own experts or explaining in the EA the unique or atypical circumstances that warranted proceeding in a different direction, that the EA raised substantial concerns regarding significant impact which was not resolved. Therefore, a FONSI was not appropriate and an EIS should be prepared.

An EIS is being prepared in response to the Court decision and in compliance with FHWA regulations. A Notice of Intent (NOI) to prepare an EIS for the section of US-95 between

Thorncreek Road and Moscow was published in the Federal Register on November 13, 2003. An extensive public involvement process has been completed and will continue to be implemented to identify and continue to address public and agency concerns. The public scoping process resulted in the identification and screening of a range of reasonable alternatives. See Chapter 2, Alternatives and Chapter 7, Public Involvement and Agency Coordination.

During the development of the DEIS and FEIS several technical reports were prepared to fully evaluate vegetation and wildlife resources and alternative effects. Experts in the respective fields conducted these reports. The technical reports are summarized in Chapter 3, Affected Environment and Chapter 4, Environmental Consequences and are listed below:

General Wildlife Assessment, Thorncreek Road to Moscow (December 2006). This report evaluates the impacts of the project to Idaho Species of Greatest Conservation Need (SGCN) species found in the project vicinity. It also discusses potential mitigation measures (IDFG 2006).

Biological Evaluation on the Potential Impacts of Corridor Alternatives from Thorncreek Road to Moscow on Large Ungulates (December 2005). This report evaluates the potential effects of alternatives through different corridors (west, central and east) on the habitat and survival of white-tailed deer (*Odocoileus virginianus*), elk (*Cervus elaphus*), and moose (*Alces alces*) in the project area (Melquist 2005a).

Biological Evaluation on the Long-eared Myotis and Pygmy Nuthatch (December 2005). This report describes the potential effects of the proposed project on the long-eared myotis (*Myotis evotis*) and pygmy nuthatch (*Sitta pygmaea*) which were classified as SGCN by the IDFG (Melquist 2005b).

Final Review of Wildlife Mitigation for the Thorncreek Road to Moscow Highway Development Project (US-95) (September 2007). This report reviews and summarizes the information in the General Wildlife Assessment (IDFG 2006) and Biological Evaluation on Potential Impacts of Corridor Alternatives (Melquist 2005a). It evaluates the effects of the alternatives to deer, elk and moose and makes mitigation recommendations (Ruediger 2007).

Assessment of Potential Big Game Effects and Mitigation Associated with Highway Alternatives from Thorncreek Road to Moscow (December 2010). This report summarizes the various wildlife reports prepared for the project and provides ITD with an independent assessment of the project's effects to potential big game and also discusses mitigation (Sawyer 2010).

Biological Assessment, Thorncreek Road to Moscow Highway Construction Project (December 2007). This study describes the project effects to federally listed and proposed species and designated critical habitat (ITD 2007a). This report was reviewed in November 2011 and USFWS provided concurrence that the findings are still valid in 2007, 2011 and 2012.

A Scientific Evaluation for Noxious and Invasive Weeds of the Highway 95 Construction Project between the Uniontown Cutoff and Moscow (January, 2007). This report describes the potential weeds in the study area. It also describes the potential for the proposed project to spread weeds and discusses mitigation for the potential effects (Lass and Prather 2007).

Biological Evaluation of Plant Species and Communities of Conservation Concern in the US Highway 95 Thorncreek Road to Moscow Project Area (December 2005). This report discusses the potential occurrence and extent of rare plants and communities in the project area. It analyzes the potential effects for the proposed project on plant species of conservation concern and remnant native plant communities that potentially provide habitat for these species (Lichthardt 2005).

A Memo Documenting Resurvey for Spalding's catchfly in the Project Area, was prepared after the DEIS publication. This report documents the resurvey of the project area during the summer of 2014. No new plants were found (Lichthardt 2014).

Where ITD and FHWA had concerns or saw a lack of clarity with the consultants' or IDFG's assessments of effects to ungulates, other wildlife or proposed mitigation, recognized experts conducted additional studies to evaluate the effect and mitigation recommendations. The evaluations and findings were documented in the reports by Ruediger in 2007 and Sawyer in 2010. These reports were provided to IDFG. The report prepared by Sawyer was sent to IDFG in 2010 with a letter explaining the findings.

The Sawyer report found that the Melquist and Ruediger reports were consistent regarding general habitat quality and the relative alternatives' effects to habitat. It provided new information that was available since the previous reports were prepared which also supported the conclusions of the reports. That information was presented in the DEIS.

Both Ruediger and Melquist stated in their reports that the alternatives would not have population level effects to ungulates and that no mitigation was required for population level effects. Both offered optional recommendations that included wildlife crossing, fencing, habitat preservation and other measures that could benefit individuals and mitigate for animal vehicle collisions; however, these were not required, nor are they likely to be effective without land use control in the surrounding properties.

Melquist acknowledged that there may be impacts to individual ungulates through increased road kills, possible habitat avoidance, and increased risks to motorists and offers seven recommended actions that would benefit deer, elk, moose, and other wildlife should transportation corridors be constructed. These recommendations include one or two possible wildlife crossings near draws, fencing associated with the crossings, habitat preservation near those crossings and other measures. However, he further states that not implementing a recommended action would not jeopardize populations of any of the species.

Animal/vehicle collisions (AVCs) and associated risks to motorists were considered in the AASHTO Safety Analyses and are mitigated for in the proposed alternatives' design. Clearing vegetation from the clear zone (highway right-of-way), widening the roadway and improving the sight distance are all mitigating factors that are expected to significantly reduce the AVCs. On US-20 between MP 369 and 375, similar improvements reduced the AVC by 85 percent (ITD 2012a). To further mitigate for the possible AVCs, if the E-2 Alternative is selected; ITD will monitor AVCs near Paradise Ridge in the identified ungulate crossing areas. The monitoring of AVCs will use existing ITD programs including the ITD/IDFG Road Kill & Wildlife Salvage Database, which is a road kill reporting and mapping tool. ITD also evaluates highway accident data annually and identifies high accident locations (HALs) based on the previous three years of crash data. These locations are investigated to determine contributing factors to accidents, including AVCs, and solutions are proposed and programmed. Should it be identified as a problem, ITD will take action to address AVCs and will collaborate with IDFG as needed to identify effective solutions.

Ruediger did not recommend stand-alone large game crossings nor did he recommend replacement of lost wildlife habitat. However, in recognition of the resource agencies' desire for mitigation, he made three optional recommendations, all of which were considered and included in the FEIS Chapter 9, Environmental Commitments. These were 1) to provide a wildlife/vehicle crossing at county road underpasses of US-95 where wildlife use is expected and where wildlife are welcome on private lands (deer, elk and moose), 2) to provide oversized culverts to allow for small terrestrial movement and 3) to replace water sources on the east side of the highway should water sources be impacted. Fencing will also be provided to prevent animals from getting onto the highway in areas where collisions are most likely and to funnel wildlife into crossings.

In the summer of 2012, ITD and IDFG began discussions regarding a MOU to address mitigation for vegetation, fish and wildlife effects. However, after further meetings with IDFG it was decided that an MOU would not be necessary and instead mitigation measures are included in the FEIS Chapter 9, Environmental Commitments. This includes additional detail about wildlife

mitigation including crossings for large and small terrestrial movement and fencing. In addition ITD and IDFG have committed to working together before final design to determine the details of the mitigation and to help ensure the success of the wildlife mitigation measures.

See Appendix 1, Key Agency Correspondence and Forms. See Section 4.8, Vegetation, Fish and Wildlife Effects and Section 4.9, Threatened and Endangered Species Effects and the respective technical reports for additional detail. The measures that FHWA and ITD plan to adopt to compensate for the identified resource effects are listed in Chapter 9, Environmental Commitments.

1.2 Setting

The project area is immediately south of the City of Moscow, Idaho. Moscow is the most populous city in the Palouse Region and is the Latah County seat. Moscow's primary employers are the University of Idaho in Moscow and Washington State University, which is located five miles to the west in Pullman, Washington. Moscow also serves as the agricultural and commercial hub for the Palouse Region. The study area is primarily agricultural land with scattered rural residences. The northern section of the project is within the southern boundary of the City of Moscow and is more urbanized with commercial and higher density residential development.

1.3 Project Location

The US-95 Thorncreek Road to Moscow Project is located south of Moscow, in Latah County, Idaho. The logical termini established for the project begins at Thorncreek Road (MP 337.67) and runs north to the South Fork Palouse River Bridge (MP 344.00). See Exhibit 7. Project Location.

1.4 Purpose

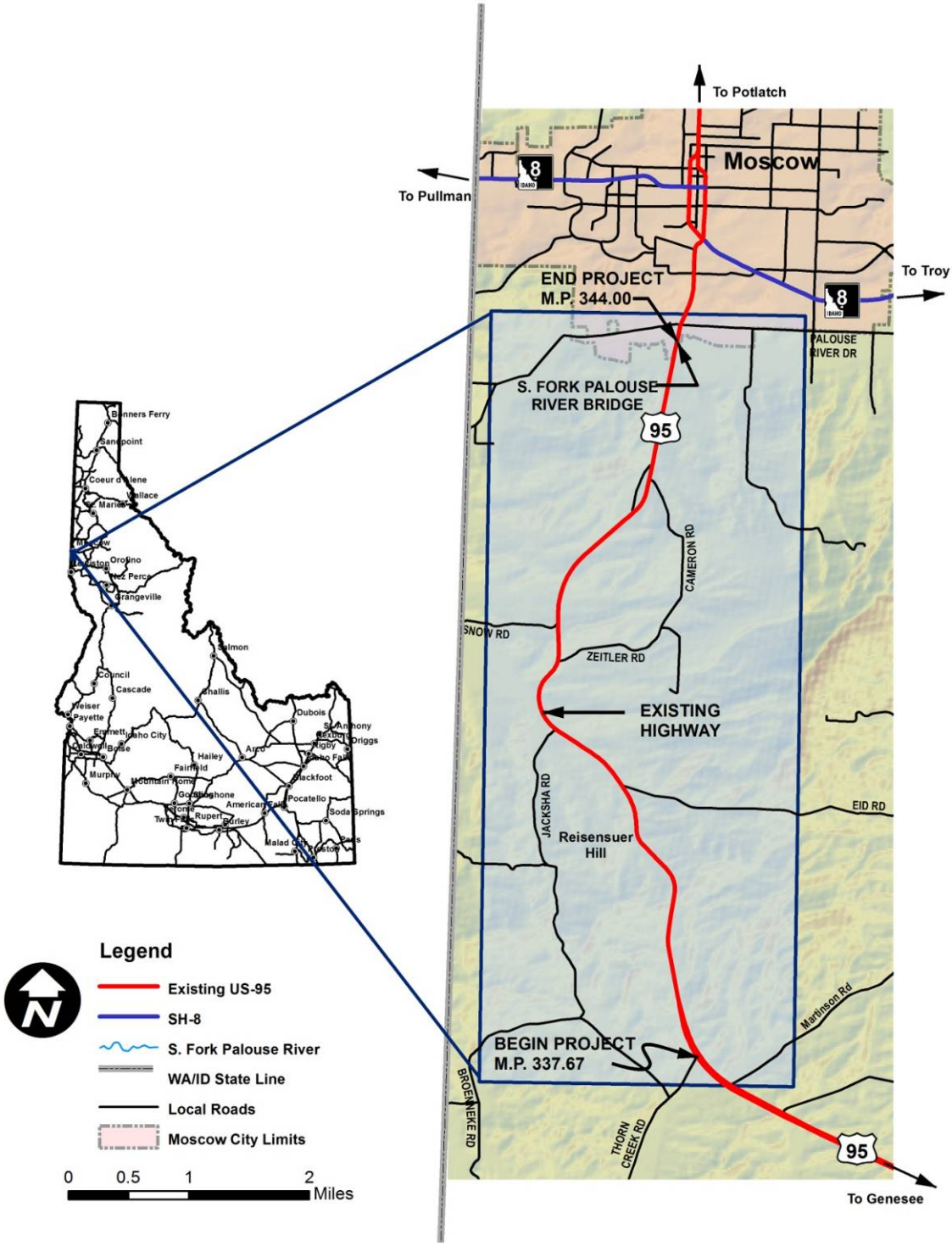
The purpose of this project is to improve public safety and increase highway capacity on US-95 south of Moscow between Thorncreek Road (MP 337.67) and the South Fork Palouse River Bridge (MP 344.00).

1.5 Need

US-95 is part of the National Highway System (NHS) and is a North America Free Trade Agreement (NAFTA) route spanning the United States from Canada to Mexico. Within Idaho, US-95 is classified as a principal arterial, providing the only continuous north-south highway connection between the Idaho Panhandle and the rest of the state. It supports multiple local uses, including primary access to agricultural, residential, commercial and industrial land located

directly adjacent to the highway. Within the City of Moscow, US-95 connects with SH-8, which is a major east-west highway. The US-95 Thorncreek to Moscow project is included in the approved Idaho Transportation Investment Program (ITIP) (ITD 2011a).

Exhibit 7. Project Location



1.5.1 Public Safety

Horizontal Curves and Vertical Grades

The existing highway has several horizontal curves and vertical grades that do not meet AASHTO standards. The crash statistics for the highway between January 2003 and December 2012 show that this section of US-95 averages 25.3 crashes per year and is projected to reach 27.4 crashes per year in 2017, the anticipated year of construction completion. Over half of the crashes in the corridor occurred between MP 338 and MP 342 and approximately half of those were associated with a horizontal curve in the road. The curves on this section of highway contribute to approximately nine accidents per year. Approximately 60 percent of the crashes in this section of highway occur during inclement weather conditions, such as snow, rain, hail, fog or ice (ITD 2013).

Access

Access for this section of US-95 is currently Statewide Access Control. There are 66 approaches[5] (public, commercial and field approaches) in this 6.34-mile segment. The many approaches do not meet the ITD Access Control Policy due to spacing, sight distance, width and grade of approaches, which contributes to intersection related conflicts. From 2003 to 2012, 26 crashes were directly associated with private approaches or intersections (ITD 2013).

The north end of the project is the most densely populated area with the highest number of intersection related crashes. The southern end of the project is primarily rural residences and farms with closely spaced approaches and curves that have also resulted in a high number of intersection related crashes.

Surface Conditions

In addition to the primary deficiencies, this section of US-95 has a substandard rating for the pavement surface. Both the surface roughness and the amount of cracking fall below the minimum standard indices used to determine acceptable pavement performance.

1.5.2 Highway Capacity

Capacity and Operations

This segment of US-95 has an ADT of 5364 and operates at a Level of Service (LOS) C based on 2010 data. This is considered a high-density traffic flow with restricted movements and delays for short periods. The volume for this segment of US-95 is projected to be 8,524 ADT by

[5] IDAPA 39.03.42 definition of approach is a connection between the outside edge of the shoulder or curb line and the abutting property at the highway right-of-way line, intended to provide access to and from said highway and the abutting property. An approach may include a driveway, alley, street road or highway.

2037, based on a two percent annual growth rate. It would operate at a LOS D in the 2037 design year. See Table 4. Existing and Projected ADTs.

Table 4. Existing and Projected ADTs

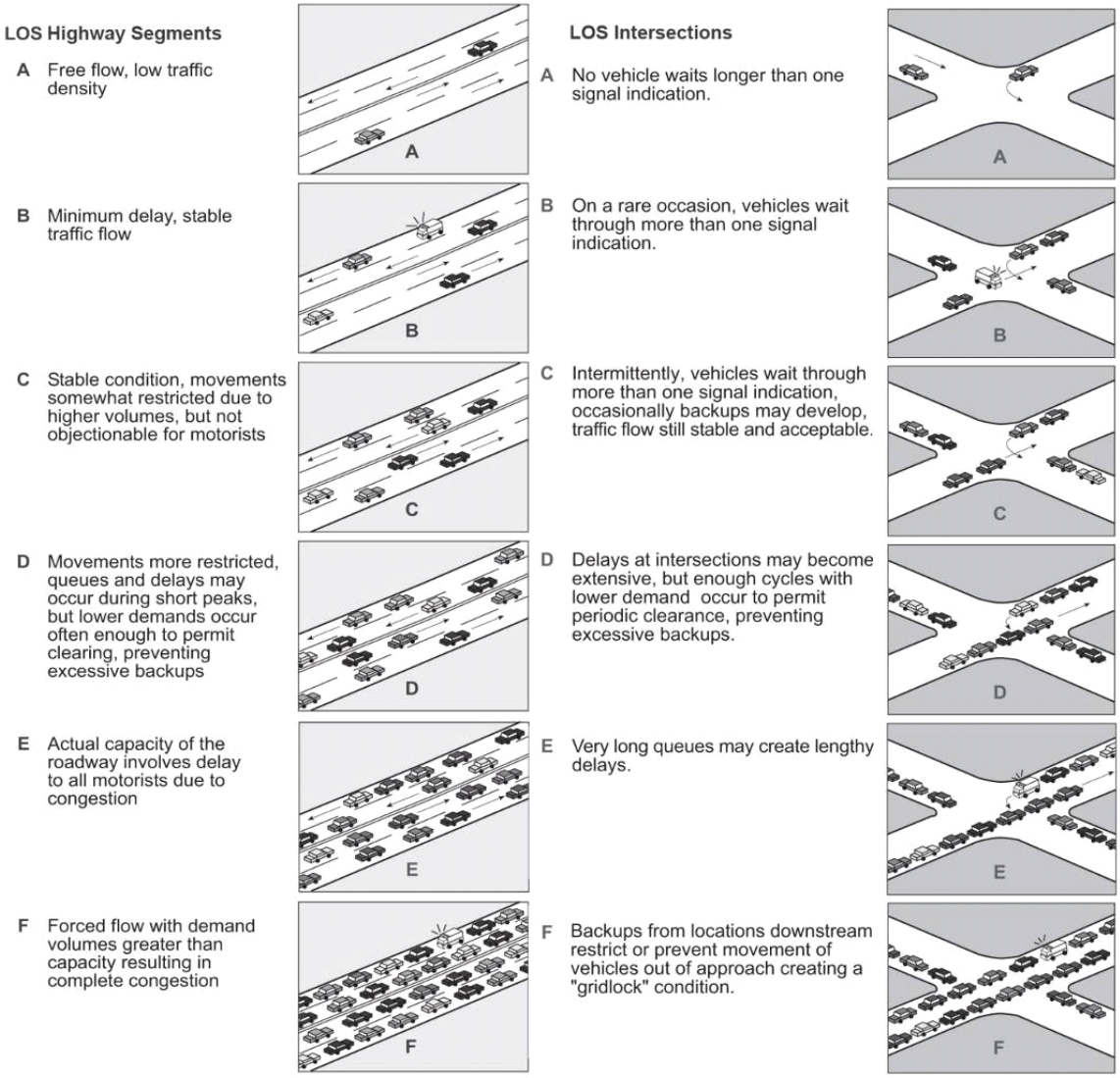
US-95 Segment (MP)	Existing 2010 (ADT)	Design Year 2037 (ADT)
337.2-337.7	4,900	7,809
337.7-339.6	4,900	7,821
339.6-342.9	5,300	8,437
342.9-344.1	6,500	10,221
Overall ADT - 337.2-344.1	5,364	8,524

This is at-capacity and would result in delays due to congestion. The traffic consists of approximately 5.7 percent heavy truck traffic and 94.3 percent passenger vehicles. The AASHTO standard for capacity for a rural highway is LOS B. See Exhibit 8. Level of Services (LOS).

Roadway Width

The existing roadway consists of two 12-foot undivided travel lanes with two-foot shoulders. The clear zone and shoulder width, which are important elements for safety, vary throughout the corridor and do not meet AASHTO standards. This two-lane segment of US-95 is a bottleneck for the four-lane highway at the northern and southern ends of the project. It experiences approximately one head-on collision per year. The proposed solutions to alleviate these deficiencies are described in Chapter 2, Alternatives, Section 2.4.2, Design Elements and Typical Section for Action Alternatives.

Exhibit 8. Level of Services (LOS)



Note: Information in this diagram illustrates concepts from the Highway Capacity Manual 2000

1.6 Public Concerns

1.6.1 Scoping Process

The following is a summary of the primary public concerns expressed during the scoping process, the public involvement effort and through public comment. See Chapter 7, Public Involvement and Agency Coordination for additional detail.

- Safety concerns due to curves that do not meet current AASHTO standards.
- Safety concerns due to weather
- Safety concerns due to steep approaches and grades
- Potential indirect effects to Paradise Ridge

- Public concern regarding wildlife habitat and wildlife movement effects (especially concerning weeds, pygmy nuthatch, giant Palouse earthworm, Palouse remnants, and ungulates)
- IDFG concern regarding direct and indirect effects to a host of species listed as Species of Conservation Concern (SCC) and Species of Greatest Conservation Need (SGCN) and mitigation for impacts.
- Construction timing
- Potential effects to wetlands, floodplains and tributaries
- Visual effects of the E-2 Alternative

1.6.2 DEIS Comment Period

The following is a summary of the primary public concerns expressed during the DEIS comment period. See Chapter 7, Public Involvement and Agency Coordination for detail regarding the public involvement activities. See Chapter 10, Comments and Responses for all of the public and agency comments and responses to those comments.

- Concern regarding the validity of the Weather and Safety Analyses
- Safety concerns regarding the weather conditions for each alternative.
- Significance of the difference in length between alternatives
- Potential spread of weeds to Paradise Ridge and Palouse remnants
- Development pressure on Paradise Ridge
- Concern regarding maintenance of the new and old roadways
- Concern regarding the use of multiple wildlife experts
- Concern regarding discrepancies in numbers of displacements
- Concern that access control would not be enforced
- Concern regarding impacts to farmland
- Consideration of the safety deficiencies that will remain on the existing US-95 loop
- Continuing concern regarding safety due to steep approaches, grades and curves.
- Potential indirect effects to Paradise Ridge
- Public concern regarding wildlife habitat and wildlife movement effects (especially concerning weeds, pygmy nuthatch, giant Palouse earthworm, Palouse remnants, and ungulates)
- IDFG concern regarding direct and indirect effects to a host of species listed as SCC and SGCN and mitigation for impacts.
- Construction timing
- Visual effects of the E-2 Alternative, especially views from Moscow
- Mitigation for effects to wildlife habitat, residences, wetland and other resources.

- Short term improvements that don't require road realignment (speed limit, pull outs, widening lanes)

1.7 Permits and Approvals

Table 5. Permits and Approvals list the permits and approvals that may be required to construct any of the Action Alternatives. Other required measures are listed by alternative in Chapter 9, Environmental Commitments.

Table 5. Permits and Approvals

Agency	Permits or Approvals
FHWA	Issue Record of Decision
USACE	Jurisdictional determination and Section 404 Permit
EPA	NPDES Construction General Permit
EPA	Notice of Demolition
IDEQ	401 Water Quality Certification
IDWR	Stream Channel Alteration Permit
FEMA, Moscow and/or Latah County	Floodplain No Rise Certification; Conditional Letter of Map Revision (CLOMR) and Letter of Map Revision (LOMR)

1.8 Document Organization

This FEIS document is organized as follows:

FEIS Body

Chapter 1, Introduction provides a general background of the project and explains the purpose and need for the project. It describes the proposed action including design elements and lists required permits and approvals should an Action Alternative be selected.

Chapter 2, Alternatives describes how a range of reasonable alternatives was developed and screened. It describes the alternatives that were evaluated for detailed analysis and how the Preferred Alternative was identified.

Chapter 3, Affected Environment describes the regulatory framework and policies for resource protection and the methods used to evaluate the existing conditions and effects to resources.

Chapter 4, Environmental Consequences describes the benefits and effects of the No Action, Modified W-4, C-3 and E-2 alternatives on the natural and human environment.

Chapter 5, Section 4(f) Evaluation describes the Section 4(f) resources that would be affected by the alternatives. It describes avoidance alternatives and the Modified W-4 Alternative that was developed after the DEIS hearing.

Chapter 6, Indirect and Cumulative Effects describes the indirect effects from the project that could occur at a time and place separate from the project. It also discusses the cumulative effects of the project in addition to past and reasonably foreseeable future projects, even if they are unrelated to the proposed project.

Chapter 7, Public Involvement and Agency Coordination describes the public involvement, agency consultations, and tribal coordination during the development of the DEIS. It also provides updated public involvement activities that have occurred since the DEIS publication.

Chapter 8, Construction Phasing and Funding describes how the proposed action would be funded and constructed.

Chapter 9, Environmental Commitments lists the measures implemented to avoid, minimize and compensate for the adverse effects of the alternatives on the natural and human environment. Mitigation was revised since the DEIS was published.

Chapter 10, DEIS Comments and Responses presents the public and agency comments on the DEIS and Alternatives and provides responses to the submitted comments.

Appendices

Appendix 1, Key Agency Correspondence and Forms includes important letters and concurrence documents from agencies. Additional agency coordination documentation has been added since the DEIS was published.

Appendix 2, List of Preparers and Reviewers –lists the primary authors and reviewers of the DEIS, FEIS and technical reports as well as their experience and qualifications.

Appendix 3, List of Agencies, Organizations and Persons Receiving the DEIS and FEIS -lists the agencies, organizations and persons to whom a copy of the DEIS was sent. It also lists locations where the DEIS and FEIS may be viewed.

Appendix 4, Species of Greatest Conservation Need, Conservation Ranking Descriptions- describes the ranks and classifications for the Species of Greatest Conservation Need.

Appendix 5, Uniform Relocation Act Summary provides a summary of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, which governs the right-of-way acquisition process.

Appendix 6, Horizontal and Vertical Alignment Calculations provides data regarding the horizontal alignment and vertical grade for the conceptual level alternatives.

Technical Reports

Technical reports were prepared and updated as necessary. The technical reports are referenced under Chapter 3, under the Methodology sections for each respective discipline and are also listed after the Table of Contents. These technical reports are available electronically on the disc distributed with the respective DEIS and FEIS documents. Public viewing locations where hard copies of the FEIS and the technical reports may be viewed are listed in Appendix 3, List of Agencies, Organizations and Persons Receiving the FEIS.

The following reports were prepared after the DEIS publication or included with the FEIS publication to provide additional information and to evaluate the existing conditions and alternative effects. These reports are included as technical reports to the FEIS.

- *Memo Documenting Resurvey for Spalding's Catchfly along US-95 Thorncreek to Moscow Project Area* (Lichthardt 2014)
- *Memo: Effects Analysis of the US Highway 95-Thorncreek Road to Moscow Project for Plant Species and Communities of Conservation Concern* (Lichthardt 2008)
- *Hydrogeologic Analysis of Alternative Alignments of Highway 95 from Thorncreek to Moscow* (Ralston 2014)
- *US-95 Thorncreek Road to Moscow; AASHTO Highway Safety Manual Analysis on Alternatives Carried Forward* (ITD 2013)
- *Addendum 1 US-95 Thorncreek Road to Moscow AASHTO Highway Safety Manual Analysis on Alternatives Carried Forward. (ITD 2015b)*
- *US-95 Thorncreek Road to Moscow; Mobility and Road User Cost Study on Alternatives Carried Forward (ITD 2014a)*
- *Addendum 1 US-95 Thorncreek Road to Moscow; Mobility and Road User Cost Study on Alternatives Carried Forward. (ITD 2014b)*
- *Weather Analysis and Climate Study for US Highway 95, Thorncreek Road to Moscow, Four Proposed Alternatives, No-Build, W-4, C-3 And E-2* (Qualls 2014)
- *Hydraulic Study for Affected Floodplains on Alternatives Carried Forward (ITD 2014c)*
- *Analysis of Noise Environment and Impacts (Bionomics 2012)*
- *Addendum to the Analysis of Noise Environment and Impacts (ITD 2015a)*

- *Addendum A to the Cultural Resource Reports to evaluate the Modified W-4 Alternative (ITD 2015c)*

Errata sheets, summaries of changes or supplemental analyses were prepared for the technical reports as needed, to describe changes to the W-4 Alternative (Modified W-4), to provide corrections and to update information since the DEIS was published.