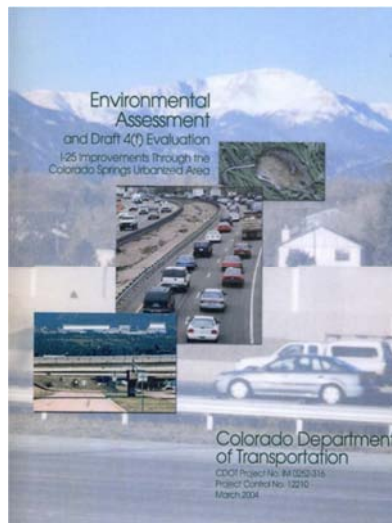




RE-EVALUATION, Mileposts 149 to 161

Interstate 25 Improvements through the Colorado Springs Area Environmental Assessment



TECHNICAL MEMO ON THREATENED AND ENDANGERED SPECIES

March 2012
Revised April 2012

Prepared for:
CDOT Region 2

Prepared by:
Robert Belford
Telephone (303) 297-2976

Introduction

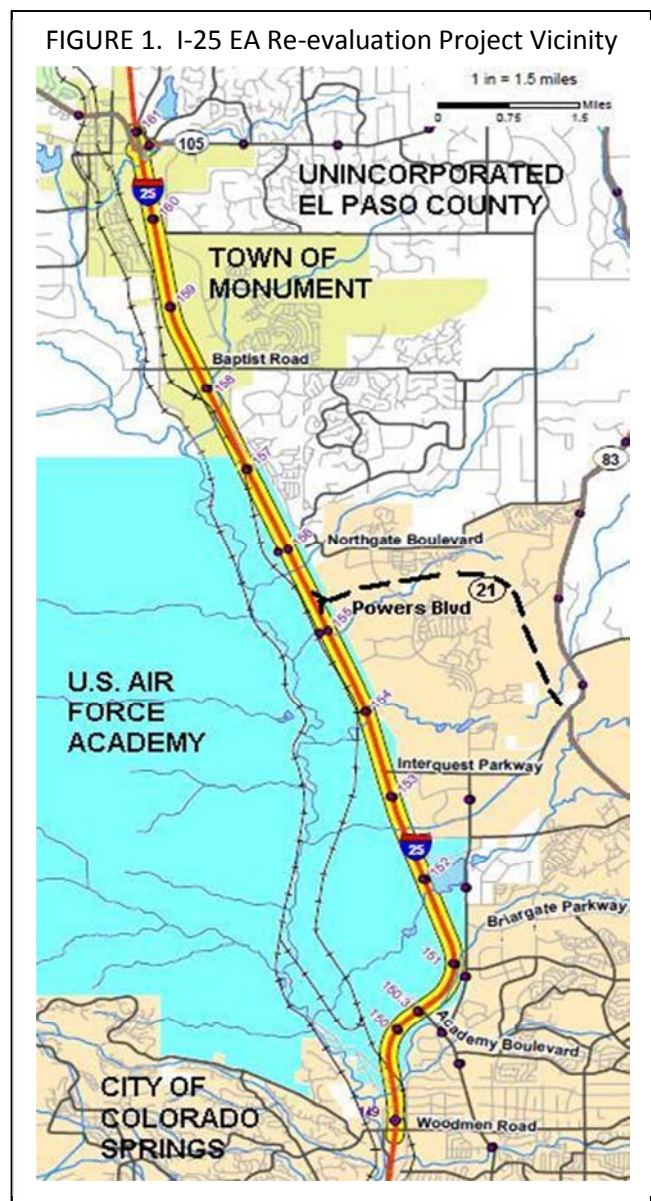
The Colorado Department of Transportation (CDOT) has prepared this technical memorandum to update the wildlife findings (including Threatened or Endangered species) described in the original 2004 I-25 Environmental Assessment (EA) with regard to the portion of the Proposed Action between Woodmen Road (Exit 149) in Colorado Springs and State Highway 105 in Monument (Exit 161). The purpose of the EA's Proposed Action is to relieve existing traffic congestion and address projected future congestion on I-25 within the Colorado Springs Urbanized Area.

The I-25 EA originally evaluated impacts for the widening of I-25 between South Academy Boulevard (Exit 135) and SH 105, together with reconstruction of various I-25 interchanges within this corridor. Page 2-10 of the EA stated that, "Consistent with projected traffic demand in the I-25 corridor, the conceptual phasing for the Proposed Action calls for:

- (1) initially six-laning through central Colorado Springs, then
- (2) six-laning in northern El Paso County, and finally
- (3) adding HOV [High-Occupancy Vehicle] lanes through central Colorado Springs and widening to six lanes south to South Academy Boulevard."

The first of these conceptual phases was undertaken in central Colorado Springs, completed in 2007. The so-called COSMIX project resulted in 12 miles of six-lane freeway, between South Circle Drive (Exit 138) and North Academy Boulevard (Exit 150). It included major reconstruction at several interchanges, notably not including the Cimarron interchange (Exit 141) or the Fillmore Street interchange (Exit 145). Additional funding will be needed to complete Phase 1.

For the year 2012, CDOT has received funding to begin the second phase, meaning to widen I-25 to six lanes in northern El Paso County, within the area shown in Figure 1. The EA calls for eventually widening I-25 all the way to SH105. Total funding for this project is yet to be determined. Currently enough is available to widen I-25 from Woodmen Road to Interquest Parkway (Exit 153). Nevertheless, to be prepared for possible additional funding being available to complete the widening to SH 105 with this project or available in the near future,



CDOT's current EA re-evaluation effort is covering all Phase 2 improvements. Therefore, the study area for this re-evaluation extends northward all the way to Monument.

The I-25 EA included a new connection with the planned Powers Boulevard (now State Highway 21), following SH 21 eastward to just past the SH 21/Voyager Boulevard interchange. The design and analysis of this connection in the I-25 EA superseded what was proposed earlier in the North Powers Boulevard EA that was approved in 1999. The current EA re-evaluation also includes this portion of SH 21 from I-25 to just east of Voyager Parkway.

Summary of the 2004 EA T&E Species Resources, Impact, and Mitigation

Based on consultation with the U.S. Fish and Wildlife Service, it was determined during preparation of the 2004 EA that there was only one threatened or endangered species known to occur along within the area affected by the Proposed Action – a Threatened mouse. However, this technical memorandum also discusses a prairie dog species which became a candidate for listing under the Endangered Species Act as of February 2008.

Preble's Meadow Jumping Mouse (*Zapus hudsonius preblei*)

The key wildlife focus of the 2004 EA was the occurrence of the Preble's meadow jumping mouse (PMJM) in all drainages that cross I-25 in northern El Paso County. This animal is Federally listed as a Threatened Species. A photo of the animal is provided in Figure 2. The Endangered Species Act protects both the species and its habitat. Northern El Paso County is the southernmost portion of the animal's range, which consists of the Colorado Front Range and portions of Wyoming.

As part of the I-25 EA, CDOT prepared a Programmatic Biological Assessment (BA) that documented existing conditions, impacts of the Proposed Action (and two other CDOT projects, North Powers Boulevard and SH83/Shoup Road intersection), and impact mitigation strategies. The BA was dated February 12, 2003. Figure 3, excerpted from the BA, shows the location of the creeks that are discussed in this technical memorandum.

A subsequent U.S. Fish and Wildlife Service (USFWS) Programmatic Biological Opinion (BO) issued on August 4, 2003 approved CDOT's findings and finalized specific mitigation requirements.

The I-25 Proposed Action would result in 21.2 acres of permanent impact and 26 acres of temporary impact to PMJM Habitat. This assessment was based on the assumption that habitat could be found within 300 feet each direction from the edge of the floodplain, based on consultation with USFWS. The BO reflected likely habitat impacts in nine creeks, as detailed in Table 1.

FIGURE 2. Preble's Meadow Jumping Mouse



Photo: USFWS

FIGURE 3. Location of Creeks with Preble's Mouse Habitat in Northern El Paso County

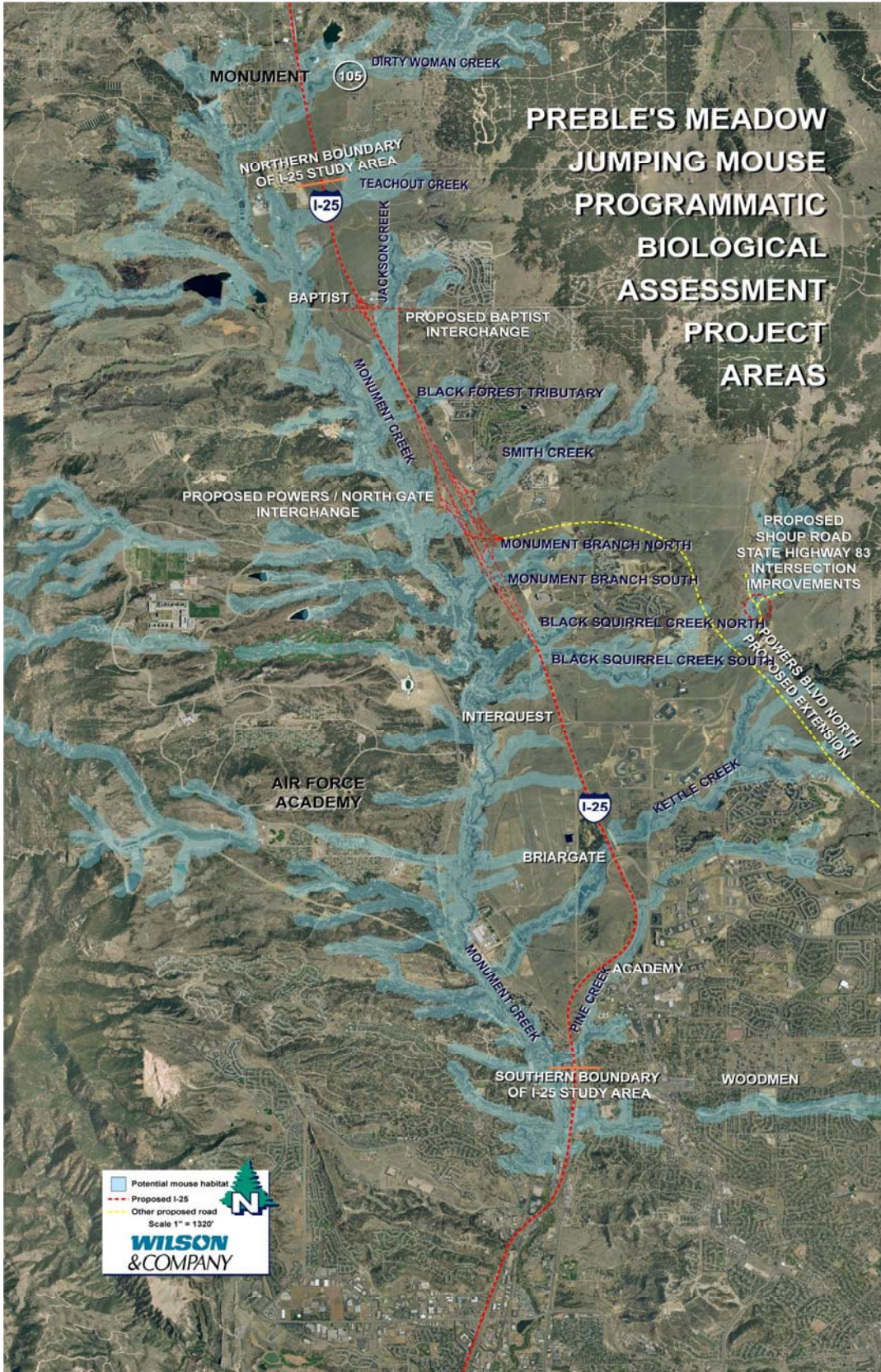


TABLE 1. I-25 Proposed Action Impacts to Preble's Mouse Habitat, per the 2004 EA

Site	Permanent Impact (acres)	Temporary Impact (acres)
Pine Creek	0.0	3.3
Kettle Creek	0.1	0.4
Black Squirrel Creek South	1.2	2.1
Black Squirrel Creek North	1.0	3.1
Monument Branch	3.5	6.1
Smith Creek	6.2	4.0
Black Forest Tributary	0.3	1.0
Jackson Creek	7.7	4.6
Teachout Creek	1.1	1.4
I-25 totals	21.1	26.0

As mitigation for these habitat impacts, plus impacts arising from two other CDOT projects (North Powers Boulevard, and the Shoup Road/SH83 intersection), the BO contains a very extensive list of conservation measures, actions and procedures. The requirements of the BO are too lengthy to repeat here, and they have not changed. However, a few of the key requirements are mentioned below. For example, the BO states that "Highway construction in habitat areas will be scheduled during Preble's hibernation season (November 1 to April 30)" [EA Section 8, page 9].

CDOT made eight conservation commitments that are found in the Programmatic BA (EA Appendix 6, page 46). These eight commitments are briefly summarized below.

1. Avoid and minimize impacts to Preble's habitat to fullest extent practicable.
2. Not to exceed 36.2 acres of temporary alterations and 25.7 acres of permanent alterations to Preble's habitat.
3. Successful restoration of all temporarily altered habitat or replacement with equivalent quality or better habitat.
4. Reestablishment of at least two linkages. The following options are known at this time:
 - a. Lower Monument to Upper Monument
 - b. Kettle to Monument South
 - c. Hay and Beaver to Monument South
 - d. Jackson to Monument South
 - e. Teachout to Monument North
5. Purchase of conservation easements or fee title on 50 additional acres of habitat in Dirty Woman, Monument, or Jackson Creeks as advance mitigation for disturbances within the project areas.
6. Completion of research program on small mammal ledges and implementation per results of research.
7. Active cooperation with El Paso County and the U.S. Air Force Academy
8. Reporting: a) interactive database; b) annual monitoring; c) template Biological Assessments for specific projects.

Regarding measure #8 above, item number 5 in the BO's terms and conditions states that, "Site specific biological assessments must contain a complete project description including the

location of the actions covered and efforts taken to avoid and minimize project impacts.” In other words, the Programmatic BO provided an overall approach, but a traditional, project-specific (non-programmatic BA and BO are needed before a construction project can proceed.

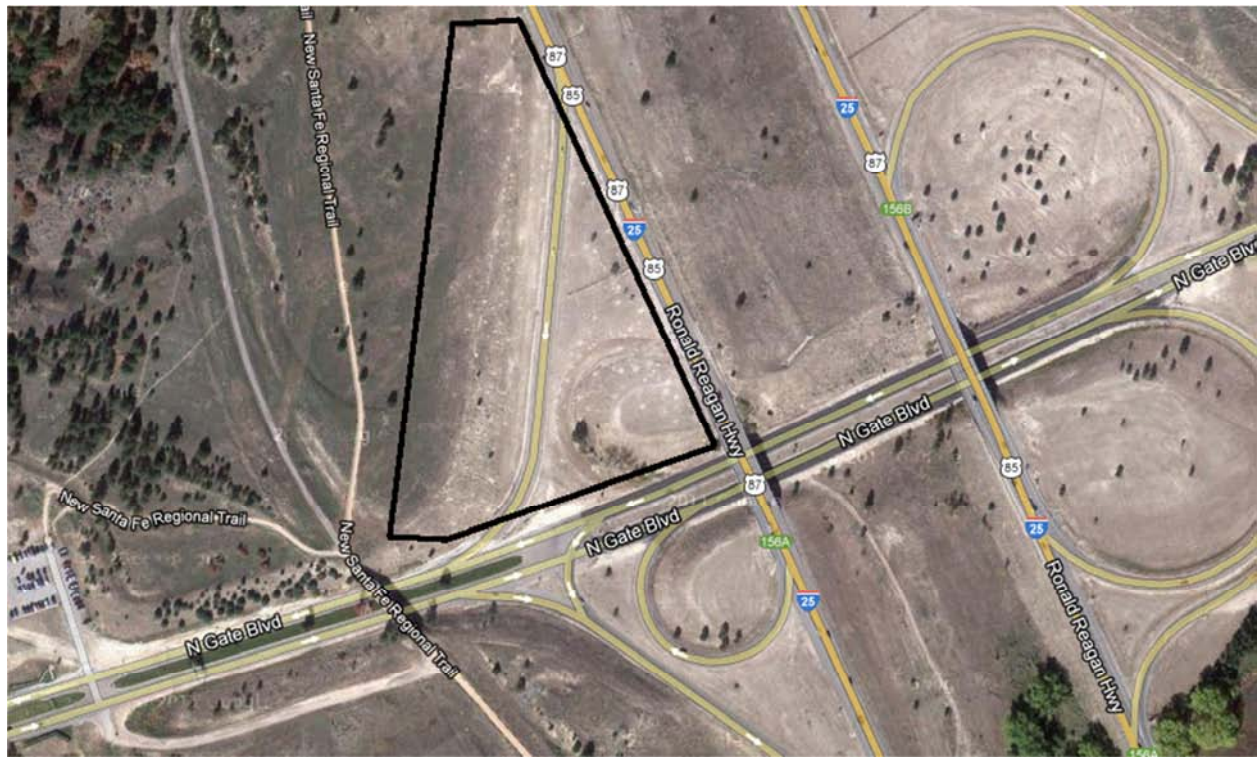
The BO includes a paragraph entitled “Reinitiation Notice” that states, in part, “reinitiation of formal consultation is required if ... (4) a new species is listed or critical habitat designated that may be affected by the action.” [emphasis added]

Gunnison’s Prairie Dog (*Cynomys gunnisoni*)

Another notable wildlife issue mentioned in the EA was the presence of two colonies of Gunnison’s prairie dog, an 8-acre colony at Teachout Creek, a half mile north of Baptist Road (Exit 158), and a 3-acre colony in the northwest quadrant of the I-25/Northgate Boulevard interchange (Exit 156). The I-25 Proposed Action would affect only the latter, which is on the CDOT easement within U.S. Air Force Academy (USAFA) boundaries. The EA indicated that CDOT would coordinate with USAFA staff to determine mitigation conforming to USAFA’s policies and/or preferences. This species of prairie dog did not have any threatened or endangered status as of 2004. The location of the affected prairie dog colony is shown in Figure 4.

The colony at Northgate would be affected because the Northgate interchange will be reconstructed to accommodate ramp connections from southbound I-25 to Powers Boulevard. The colony at Teachout Creek will not be affected since widening the freeway to six lanes will not require any construction outside out CDOT’s existing right-of-way, and the colony is outside of the right-of-way.

FIGURE 4. Three-acre Colony of Gunnison’s Prairie Dog at the I-25/Northgate Exit



Changes to the Project that Would Affect the Resource Differently

CDOT has not proposed to change the project in any way that would affect threatened and endangered species differently from what was described in the EA.

Currently, the proposed I-25 improvements remain at the Conceptual Design stage. CDOT is likely to select a design-build contractor to construct the project. CDOT will continue to consider opportunities to reduce adverse impacts to wildlife and habitat to the extent practicable, compared to the impacts that were described in the EA.

Changes in Resources, Analysis Data, Analysis Methods or Applicable Regulations

Two regulatory changes potentially affecting mitigation for the Proposed Action have occurred since the EA was approved in 2004:

- In December 2010, the U.S. Fish and Wildlife Service designated critical habitat for the threatened Preble's meadow jumping mouse along Monument Creek and its tributaries. Some of these watersheds designated as critical habitat occur within the EA study area and would be impacted by the I-25 Proposed Action.
- In February 2008, the U.S. Fish and Wildlife Service listed the Gunnison's prairie dog as a candidate species under the Endangered Species Act. Populations of this species occurring in El Paso County are covered under this designation. Two colonies of the Gunnison's Prairie Dog occur within the EA study area. One of them would be affected by the I-25 Proposed Action.

Preble's Meadow Jumping Mouse

Some of the streams listed in the USFWS December 2010 critical habitat announcement streams flow through the United States Air Force Academy (USAFA) where they are exempt from the critical habitat expanded stream buffers. Kettle Creek, Black Squirrel Creek, Monument Branch, and Smith Creek are located on USAFA lands where they cross I-25, and thus will not have the expanded buffers that these watersheds have outside the Academy. However, three stream buffers in the EA study area have been expanded from the previously assumed 300 feet. The three streams with expanded buffers are discussed below.

Since the interchange at SH105/Monument (Dirty Woman Creek) was reconstructed in 2004, the change in habitat width will have no effect in this location, with regard to upcoming I-25 improvements in northern El Paso County.

The previously identified impacts at Teachout Creek (1.1 acres permanent, 1.4 acres temporary) could increase by as much as 20 percent (i.e., 61 additional feet each direction, compared with 300 feet as previously assumed). This could add approximately 0.22 acres of permanent impact and 0.28 acres of temporary impact at Teachout Creek by newly defining impacted non-habitat area as impacted habitat area.

Most of the previously identified impacts at Jackson Creek (7.7 acres permanent, 4.6 acres temporary) were associated with the Baptist Road interchange reconstruction work that was completed in 2007. However, a portion of the Jackson Creek impacts are associated with the proposed I-25 widening that has not yet occurred. These were quantified as 0.9 acres of permanent impact and 1.9 acres temporary impact. Increasing these numbers by 20 percent to include the expanded critical habitat area has the potential to add 0.18 acre of permanent impact and 0.38 acre of temporary impact.

Adding the numbers calculated above for Teachout Creek and Jackson Creek, the December 2010 USFWS action on designated critical habitat has the potential to increase the impacts of the I-25 Proposed Action by a total of as much as 0.40 acre of permanent habitat and 0.56 acre of temporary impact. Compared with the 21.1 acres of permanent impact and 26 acres of temporary impact originally estimate in the EA, the addition of these acres would increase the totals by approximately two percent.

The upland areas that are newly designated as critical habitat were already going to be impacted by the Proposed Action as described in the EA, so there is no actual difference to how the mouse or its habitat will be affected by the project. Whether or not the change in designated critical habitat affects mitigation needs for the I-25 Proposed Action is a matter that must be determined through consultation with USFWS.

An assessment of the effects of the USFWS December 21010 critical habitat decision is provided in Table 2.

TABLE 2. Impact of Designated Critical Habitat Rule for Streams Crossing I-25 in the Re-evaluation Area

Stream	Impact of Designated Critical Habitat (DCH) Final Rule	I-25 Reference Location	Change in Habitat Amount Affected
Pine Creek	Not affected. Since these streams cross I-25 within USAFA, these locations are exempted from the new DCH.	Approx. Milepost 151, about 0.65 mile north of N. Academy Blvd (Exit 150).	No change to impacts identified in the I-25 EA.
Kettle Creek		Approx. Milepost 152, about 0.25 mile north of Briargate Pkwy (Exit 151)	
Black Squirrel Creek		Approx. Milepost 154, about 0.8 mile north of Interquest Pkwy (Exit 153)	
Monument Branch		Milepost 154.93, about one mile south of North Gate Blvd (Exit 156)	
Smith Creek		Milepost 155.75, just south of North Gate Boulevard (Exit 156)	
Black Forest Tributary		Milepost 156.97, about one mile south of Baptist Road (Exit 158)	
Jackson Creek	New DCH is 361 feet from edge of the 100-year floodplain.	Milepost 157.70, just south of Baptist Road interchange (Exit 158)	May increase nominal impact up to 20%; however, these newly designated areas were already going to be disturbed by the Proposed Action, so there is no change in actual impact.
Teachout Creek	New DCH is 361 feet from edge of the 100-year floodplain.	Milepost 159.34, about 1.5 miles south of SH105 in Monument (Exit 161)	
Dirty Woman Creek	New DCH is 394 feet from edge of the 100-year floodplain.	Milepost 161, just south of SH 105 in Monument (Exit 161)	No change. The SH105 interchange was reconstructed (in 2004), not part of the I-25 EA Proposed Action.

Gunnison's Prairie Dog

Designation of the Gunnison's prairie dog as a candidate for listing under the Endangered Species Act means that USFWS has sufficient data to indicate that its listing is warranted. However, USFWS indicates that listing is precluded at this time due to the need to address other, higher-priority listings. Gunnison's prairie dog inhabits southwestern Colorado, northwestern New Mexico, northeastern Arizona, and far southeastern Utah. The USFWS determined that Gunnison's prairie dog is not threatened or endangered throughout all of its range, but that listing is warranted for the portion of the species' range located in central and south-central Colorado and north-central New Mexico.

The two colonies found on the western side of I-25 in the EA re-evaluation area represent among the northeasternmost known occurrences of this species. Dr. Brian Muhlbachler, USFWS staff stationed at USAFA, has reported that the 3-acre colony at the Northgate interchange is estimated to contain approximately 20 animals at this time. A photo of the animal is shown in Figure 5.

In developing the I-25 EA, CDOT was not required to consult with USFWS regarding this species. Regarding the 3-acre colony on USAFA land adjacent to the Northgate interchange (Exit 156), CDOT proposed to mitigate this impact in consultation with USAFA staff. CDOT has a Black-Tailed Prairie Dog Policy (Note: different species, not threatened or endangered, but a State Species of Special Concern) and proposed to follow it in handling the Gunnison's prairie dog colony. Now that Gunnison's prairie dog has been designated as a candidate species, it would be appropriate to revisit the matter in consultation with USFWS.

FIGURE 5. Gunnison's Prairie Dog



Photo: USFWS

Changes in Proposed Mitigation

CDOT will consult with USFWS to identify the mitigation implications, if any, of the expanded critical habitat boundaries at Jackson Creek, Teachout Creek, and Dirty Woman Creek.

The 2012 widening project offers the opportunity to create one or two of the five potential habitat linkages discussed in the BO. The BO requires implementation of two linkages out of the five. One of these would be located along Kettle Creek, just north of the Briargate Interchange (Exit 151). The linkage would make it easier for mice in Kettle Creek on either side of I-25 to safely reach the other side of the highway. As this location is clearly within the project limits of the 2012 widening effort, a decision was needed now as to whether or not to select this linkage for implementation.

CDOT and USFWS staff made a field visit to inspect this linkage site on January 4, 2012. After considering the original linkage proposal and several alternatives, CDOT concluded that it is appropriate to implement the original linkage concept as part of the 2012 widening project. E-mail documentation on this matter is included in Appendix 1. Close cooperation with the U.S. Air Force Academy will be needed as portions of the land needed to create this linkage are on the USAFA property outside of CDOT easement.

A second potential habitat linkage would make it easier for mice in the Jackson Creek drainage to cross under I-25 along Jackson Creek, immediately south of Baptist Road. The BO described this linkage opportunity as follows: "Downstream movement of the Preble's

population at FHWA/CDOT's mitigation site on Jackson Creek at I-25 and Baptist Road is inhibited by two small culverts under the frontage road on the east side of I-25, the frontage road, and a large CBC under I-25. The culverts and the frontage road will be removed, and the CBC improved by installing a natural bottom and improving habitat at its portals, thereby re-establishing the connection across I-25." The frontage road has already been removed and revegetated, as part of the Baptist Road interchange reconstruction project. However, the fill associate with the roadway remains in place. This linkage may or may not be included as part of the 2012 widening project, depending on how far available funds will enable CDOT to widen.

Conclusion

A site-specific Biological Assessment is being prepared to identify impacts and mitigation associated with the 2012 widening project on I-25, including both Preble's meadow jumping mouse and Gunnison's prairie dog. The Programmatic BO requires (Reasonable and Prudent Measure #5) the Federal Highway Administration to ensure that the site-specific biological assessment is submitted to and approved by the U.S. Fish and Wildlife Service (USFWS) prior to project implementation. CDOT will work with the USAFA on relocating the prairie dogs and/or the process CDOT will follow such as try and relocate first, passive relocate second, live capture and donate to the ferret program as the third and last alternative. This coordination is occurring now, in early 2012.

Based on coordination with USFWS in early 2012, it has determined that the agency will require a new BA and BO, rather than a site-specific BA/BO tied to the previous programmatic BA/BO.

The new biological assessment prepared for this project will be based on the findings of the Programmatic BA and BO, together with re-initiated consultation with USFWS. The new critical habitat designation for PMJM and the new candidate species designation for Gunnison's prairie dog will be fully considered. The new I-25 BA and subsequent USFWS BO for the Phase 2 project will be completed before the project enters the final design phase (approximately December 2012). The estimated schedule for the new I-25 BA/BO is as follows:

- Send Site Specific Biological Assessment to USFWS - mid August 2012
- USFWS review- August to mid-October 2012
- USFWS BA concurrence letter/Biological Opinion - mid-October 2012

Close coordination with USAFA staff will be critically important for sensitive wildlife mitigation efforts within the boundaries of the Air Force Academy, including the proposed Kettle Creek habitat linkage across I-25, as well as potential prairie dog relocation. Many of these mitigation efforts will involve not only planning and construction, but also follow-up maintenance and monitoring.

TABLE 2. Summary of Previously and Currently Identified Wildlife/T&E Impacts and Mitigation

EA 2004 – No-Action Alternative	EA 2004 – Impacts of Proposed Action	EA 2004 - Mitigation	2012 – What Has Changed	Re-evaluation 2012 – No Action	Re-evaluation 2012 – Impacts of Proposed Action	Re-evaluation 2012 – Mitigation
<p>The No-Action Alternative would not result in any direct impacts to habitat of the Preble's meadow jumping mouse, Federally listed as a Threatened species.</p>	<p>Disturbance of Preble's mouse habitat will be include 21.1 acres of permanent habitat loss and 26 acres of temporary impact.</p> <p>Preble's mouse habitat connectivity and mobility will improve at some project sites as a result of improved culvert and bridge crossings.</p>	<p>Implement the U.S. Fish and Wildlife Service Biological Opinion strategies:</p> <ul style="list-style-type: none"> • Restore, enhance, and create Preble's mouse habitat, including protection of 50 additional acres of habitat • Monitor to assure disturbance areas are not exceeded and to gauge restoration efforts • Restore habitat linkages • Sponsor a research project to determine the effectiveness of ledges for small mammals in culverts. 	<p>Since 2004, CDOT has acquired more than 30 of the 50 acres needed to satisfy the requirements of the Programmatic BO.</p> <p>In December 2010, USFWS designated critical habitat for the threatened Preble's meadow jumping mouse. This may increase permanent impacts at Teachout Creek by up to 0.22 acre, and also increase temporary impacts.</p>	<p>No change to the No-Action Alternative impacts identified in the EA.</p>	<p>In addition to the impacts identified in the EA, up to 0.22 upland acres permanently impacted by the Proposed Action were previously not considered as Preble's Mouse habitat but now may be considered Designated Critical Habitat. Similarly, the number of temporary impact acres may increase by up to 0.28 acres.</p>	<p>In addition to the mitigation identified in the EA, CDOT will re-examine the design of the Proposed Action in the vicinity of Teachout Creek during project design to see if the impacts to this area can be further reduced.</p> <p>A new I-25 Biological Assessment is being prepared for the I-25 Phase 2 improvements. The 2012 widening project will include creation of the Kettle Creek habitat linkage.</p>
<p>The No-Action Alternative would not result in any direct impacts to any prairie dog colony.</p>	<p>The 3-acre colony of Gunnison's prairie dogs located near I-25 and the North Gate interchange would be impacted. This colony is located on Air Force Academy property.</p>	<p>Prior to construction, USAFA staff will be consulted to determine if Gunnison's prairie dog should be relocated to Air Force Academy property. CDOT will adhere to any specific USAFA requirements for this species.</p>	<p>In February 2008, USFWS identified the Gunnison's prairie dog as a candidate species for listing under the Endangered Species Act.</p>	<p>No change to the impacts identified in the EA.</p>	<p>No change to the impacts identified in the EA.</p>	<p>CDOT will consult with USFWS and ordinate with USAFA to determine appropriate handling of the estimated 20 Gunnison's prairie dogs in the colony at I-25/Northgate.</p>

APPENDIX 1 INTERAGENCY E-MAIL REGARDING KETTLE CREEK HABITAT LINKAGE

From: Frei, Robert [mailto:Robert.Frei@DOT.STATE.CO.US]
Sent: Thursday, January 26, 2012 11:41 AM
To: Michael, Alison Deans; brian.mihlbachler@usafa.af.mil; Peterson, Jeff
Cc: Cosyleon, Gabriel; Streisfeld, Lisa; Hunt, Daniel; Eberhart, Douglas P.
Subject: Update on the Kettle Creek Linkage

Hi Everyone-

I just wanted to let you know that CDOT will be constructing the Kettle Creek Linkage as outlined in the BA/BO (culvert at the north side of the Kettle Creek Dam). The reasons for this are the following:

- Removing Kettle Creek Dam is not a feasible option (cost associated with dam removal, constructing new bridges to convey Kettle Creek, and restoring the Kettle Creek channel).
- PMJM are unlikely to use a 1000' culvert inside the existing 9' pipe.
- Judy DeHaven indicated to me that the placement of the culvert at the south end of the dam (near the spillway) was discussed during the BA/BO process, but was eliminated for several reasons. Firstly, no habitat is present on the "backside" of the dam (rip-rap face), therefore habitat would need to be created. Secondly, placement of the culvert at this location was thought not to be the greatest since the grades to and from the culvert are very steep (2 dam faces and the steep gully on the west side), which is thought to pose challenges to PMJM movement. For these reasons the culvert was not placed at the south end of the dam.

The culvert located on the north end of the dam was identified in the BA/BO since a PMJM was found near the proposed location with the most likely route of travel being from the north end of the dam as grades are gentler and it is vegetated. Judy also indicated that brush piles, not shrub plantings were suggested in order to link mouse habitat with the culvert. Furthermore the BA/BO indicates that monitoring of the linkages should take place to determine if these actions were successful. While, this linkage may not be the best, it was approved. CDOT is required to complete 2 habitat linkages.

Five linkages were identified in the BA/BO. Unfortunately three of these require willing landowners that have either shown no interest or have changed their minds in selling or providing easements on their property. Therefore, the Kettle Creek Linkage and the Jackson Creek Linkage are the only remaining options left. Therefore, CDOT will construct the culvert at/near the proposed location. The proposed 365' long, 6'x4' culvert will be shorted to the greatest extent possible. Brush piles and/or plantings will occur in the future to create a travel corridor for the mouse. CDOT will work with the USAFA and the USFWs on how to do this (this will likely be done as a separate project in the future). Monitoring of the culvert for use by PMUJM will also be done (likely use remote sensing cameras).

Finally, there is some internal CDOT discussion on possibly doing some level of drainage restoration work on the USAFA as part of the widening project. If this work occurs it would help to restore some damaged PMJM habitat. I will keep everyone updated on this.

Thanks-
Rob

CDOT Region 2 NEPA Specialist/Biologist
Office 719 227-3251
Cell 719 251-8171
Robert.frei@dot.state.co.us

APPENDIX 2

Preble's Meadow Jumping Mouse Habitat Areas Affected by the I-25 Proposed Action

1. Pine Creek (north of Exit 150), southern portion of impact area
2. Pine Creek (north of Exit 150), southern portion of impact area
3. Kettle Creek (north of Exit 151)
4. Black Squirrel Creek South (north of Exit 153)
5. Black Squirrel Creek North (north of Exit 153) and Monument Branch
6. Smith Creek (south of Exit 156) and Black Forest Tributary
7. Jackson Creek (south of Exit 158)
8. Teachout Creek (north of Exit 158)

FIGURE A-1. Pine Creek (north of Exit 150), southern portion of impact area: Impact 3.3 acres temporary impact. All on USAFA property, so no critical habitat.

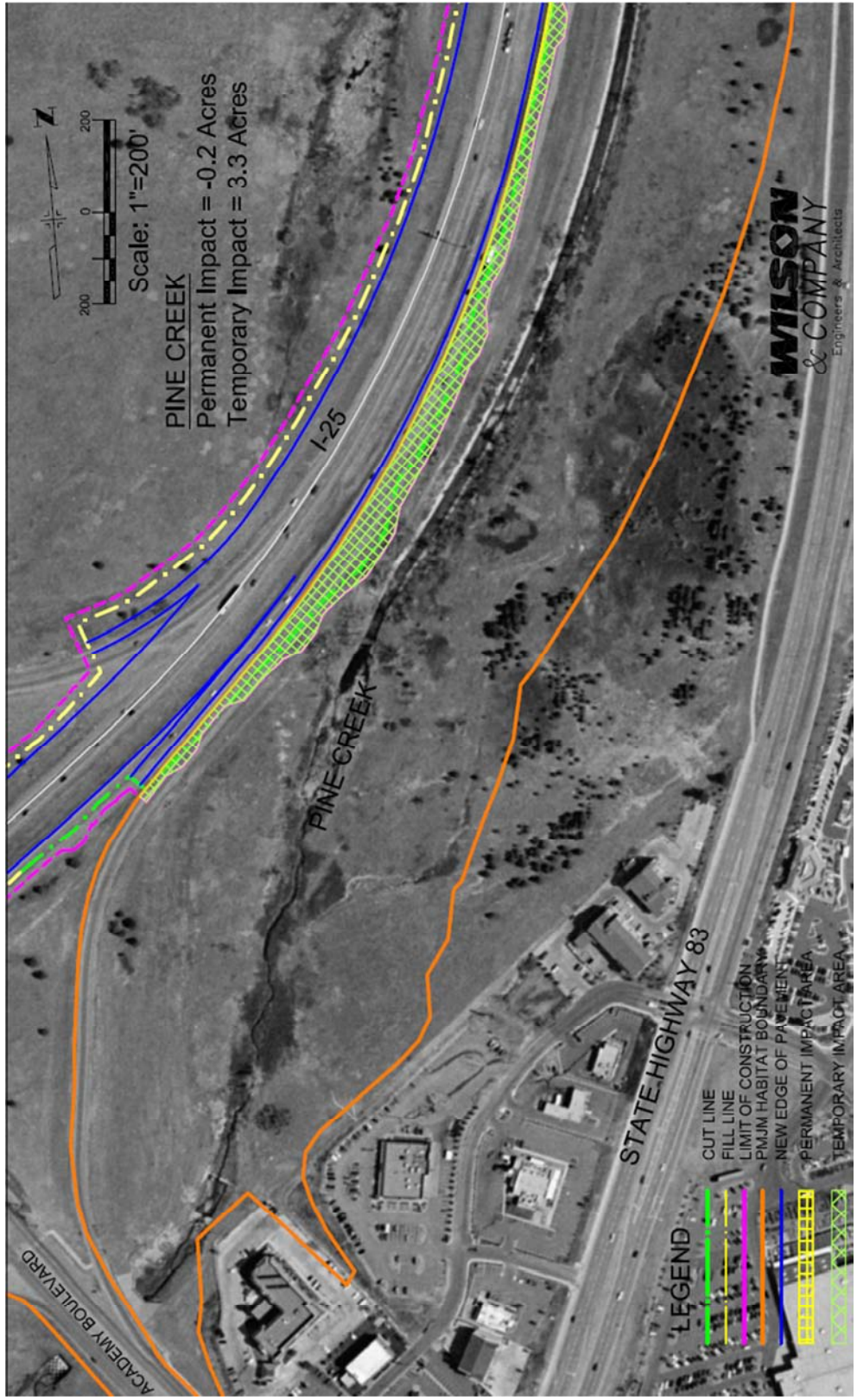


FIGURE A-2. Pine Creek (north of Exit 150), northern portion of impact area: Impact 3.3 acres temporary impact. All on USAFA property, so no critical habitat.

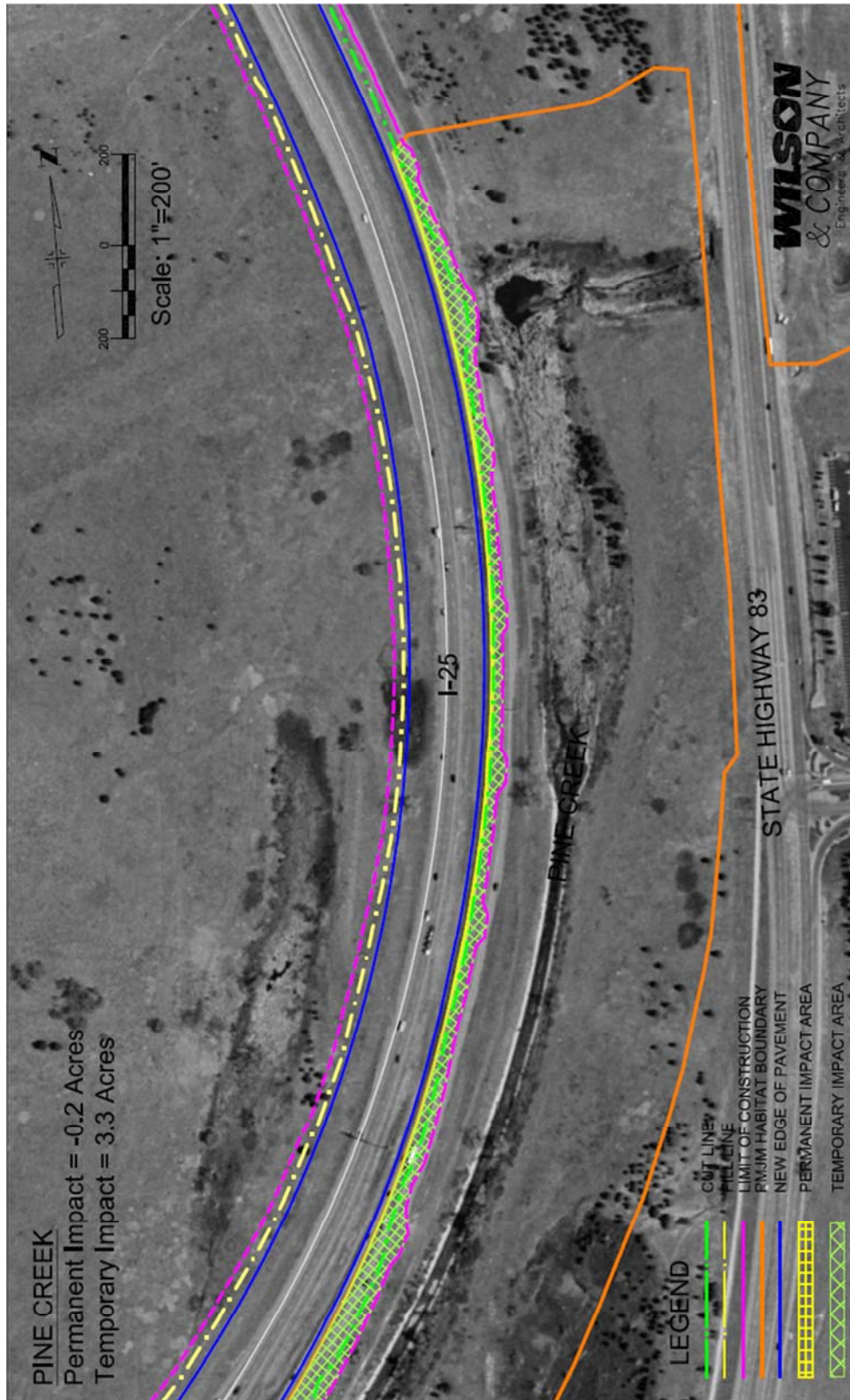


FIGURE A-3. Kettle Creek (north of Exit 151), northern portion of impact area: 0.1 acre permanent impact. 0.4 acre temporary impact. All on USAFA property, so no critical habitat.

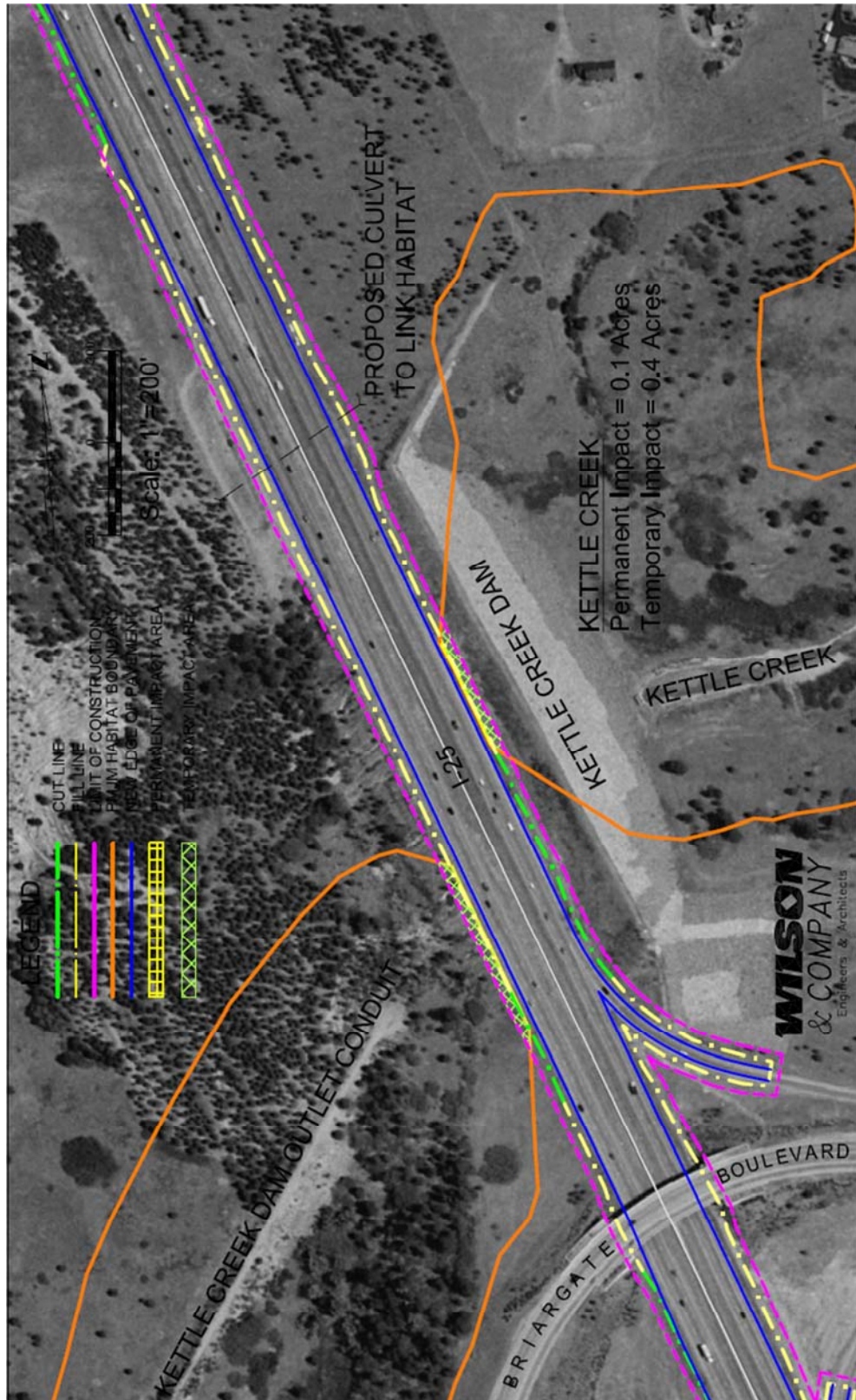


FIGURE A-4. Black Squirrel Creek South (north of Exit 153): 1.2 acres permanent impact. 2.1 acres temporary impact. All on USAFA property, so no critical habitat.

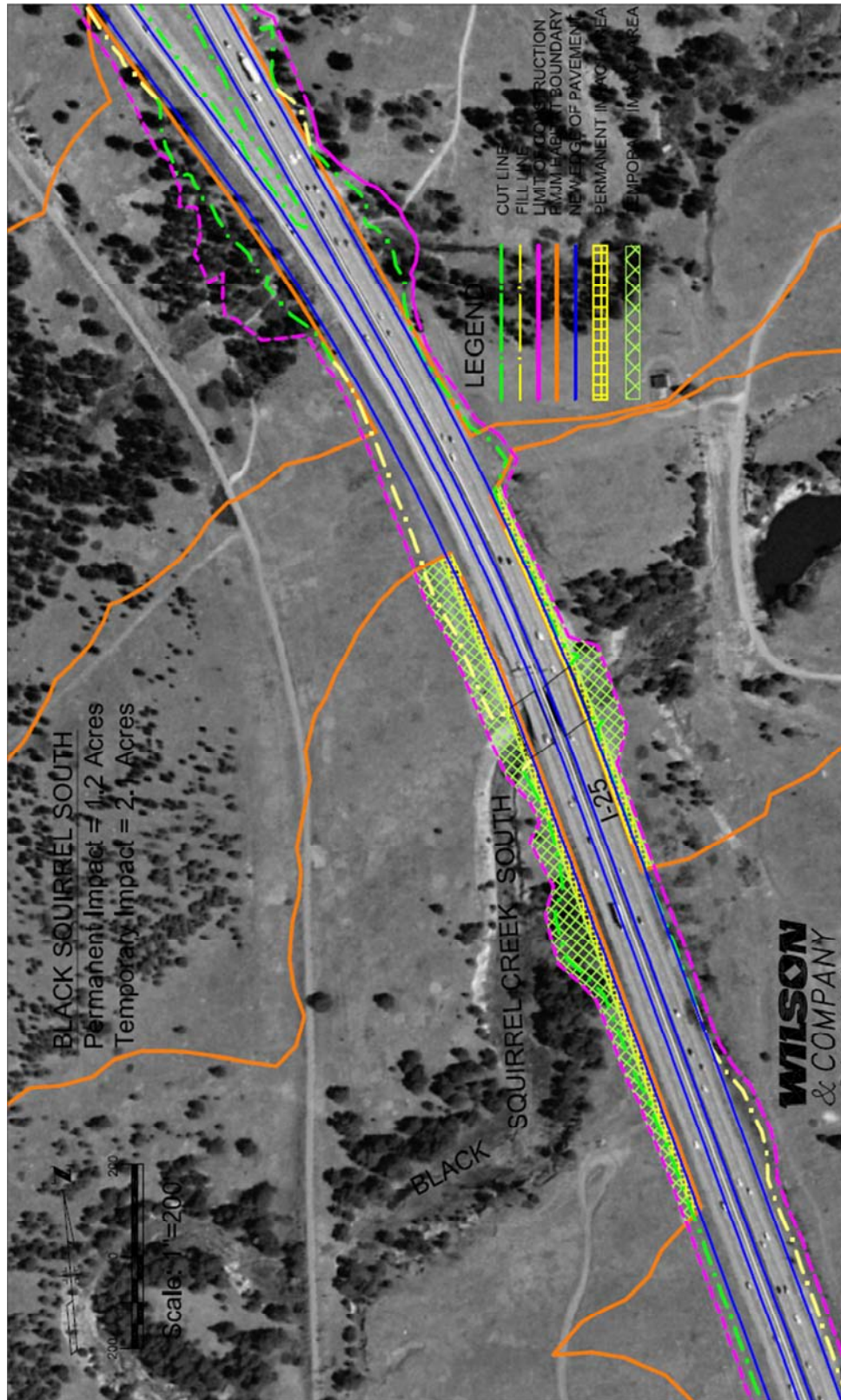


FIGURE A- 5. Black Squirrel Creek North (north of Exit 153): 1.0 acre permanent impact. 3.1 acres temporary impact. Monument Branch: 3.5 acres permanent, 6.1 acres temporary. All on USAFA property, so no critical habitat.

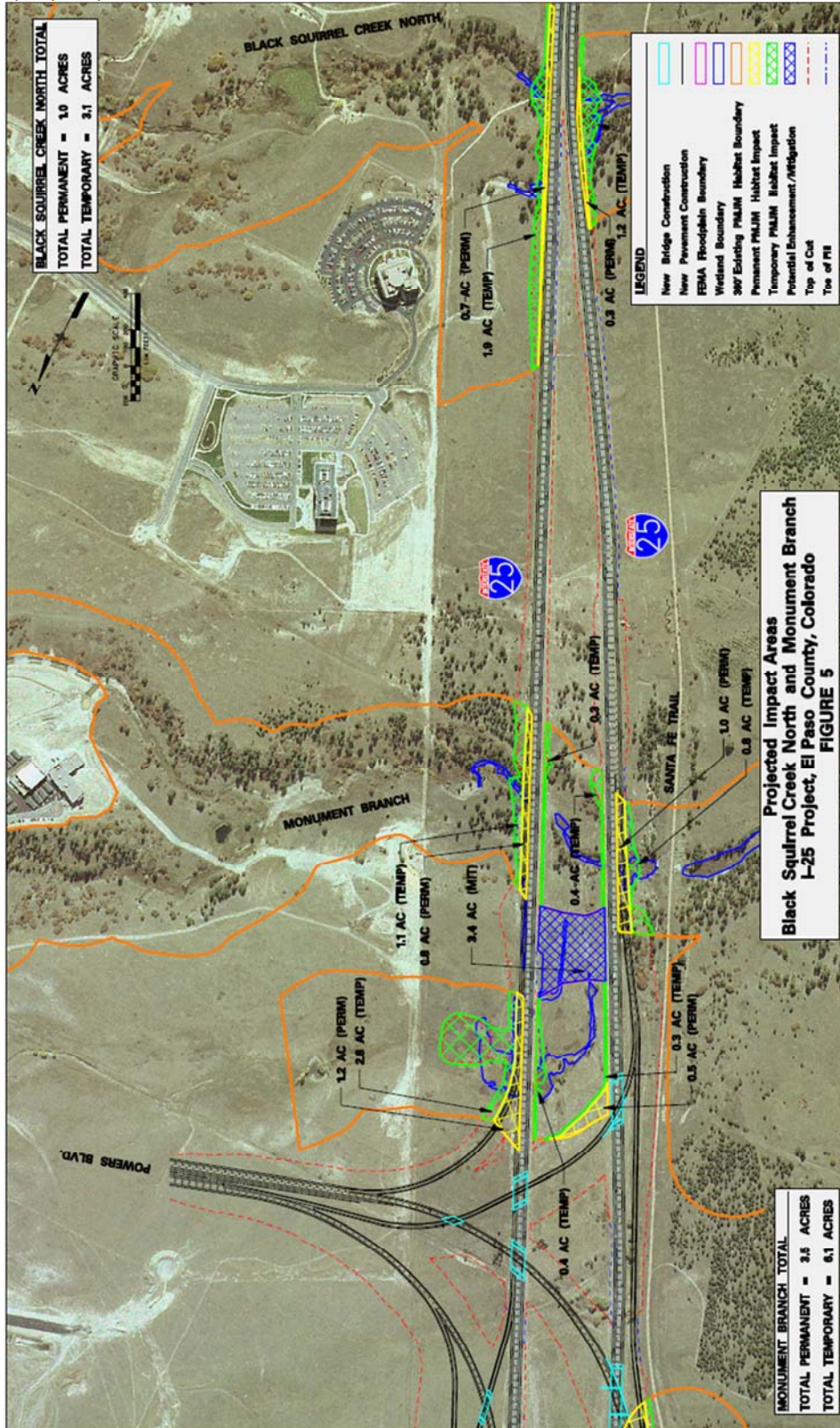


FIGURE A-6. Smith Creek (south of Exit 156): 6.2 acres permanent impact. 4.0 acres temporary impact. Black Forest Tributary : 0.3 acre permanent, 1.0 acres temporary. All on USAFA property, so no critical habitat.

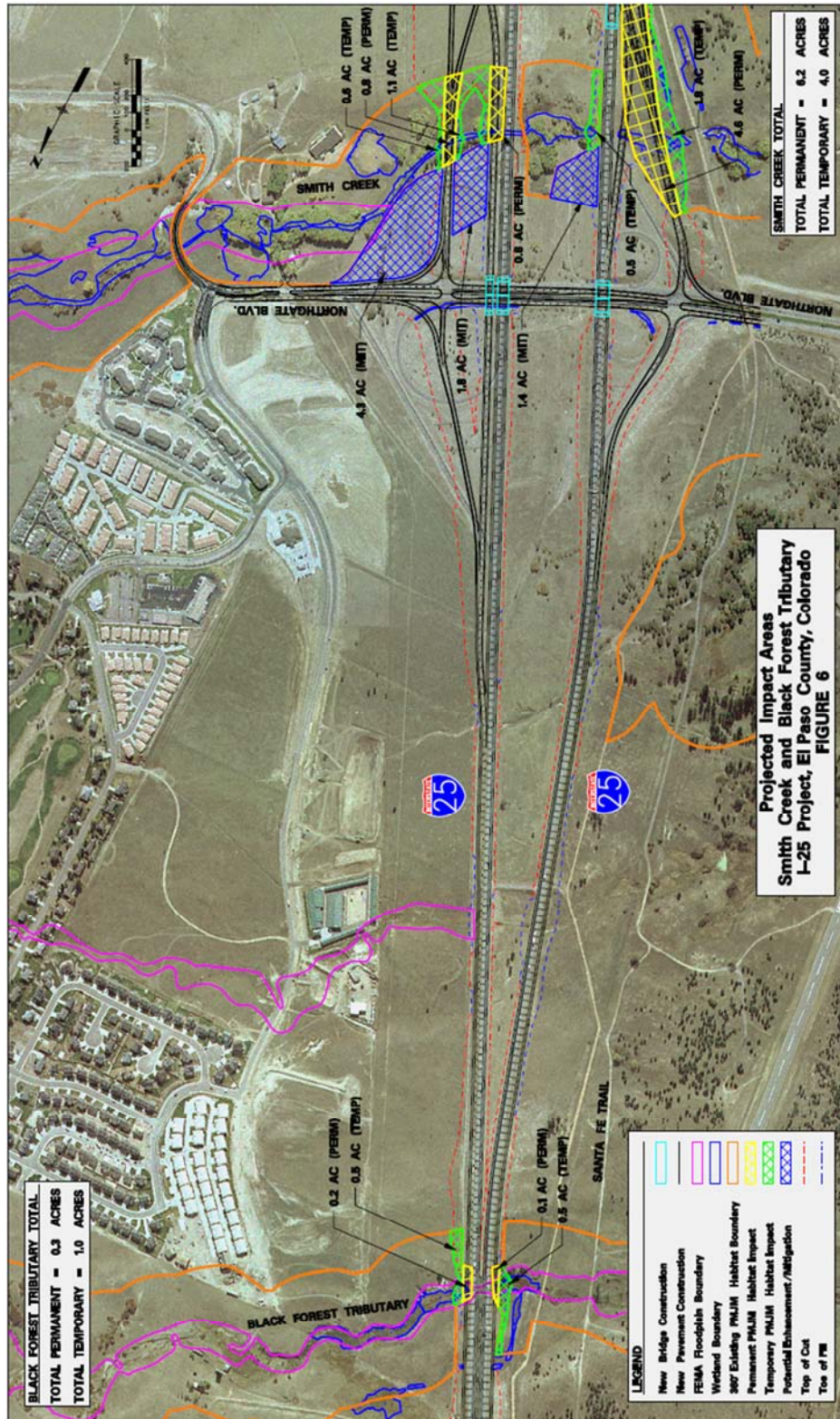


FIGURE A-7. Jackson Creek (south of Exit 158): Baptist Road intersection project was completed in 2007. Remaining impacts associated with I-25 widening are: 0.9 acres permanent impact, 1.9 acres temporary impact. The 2010 USFWS critical habitat designation could increase these up to 20 percent.

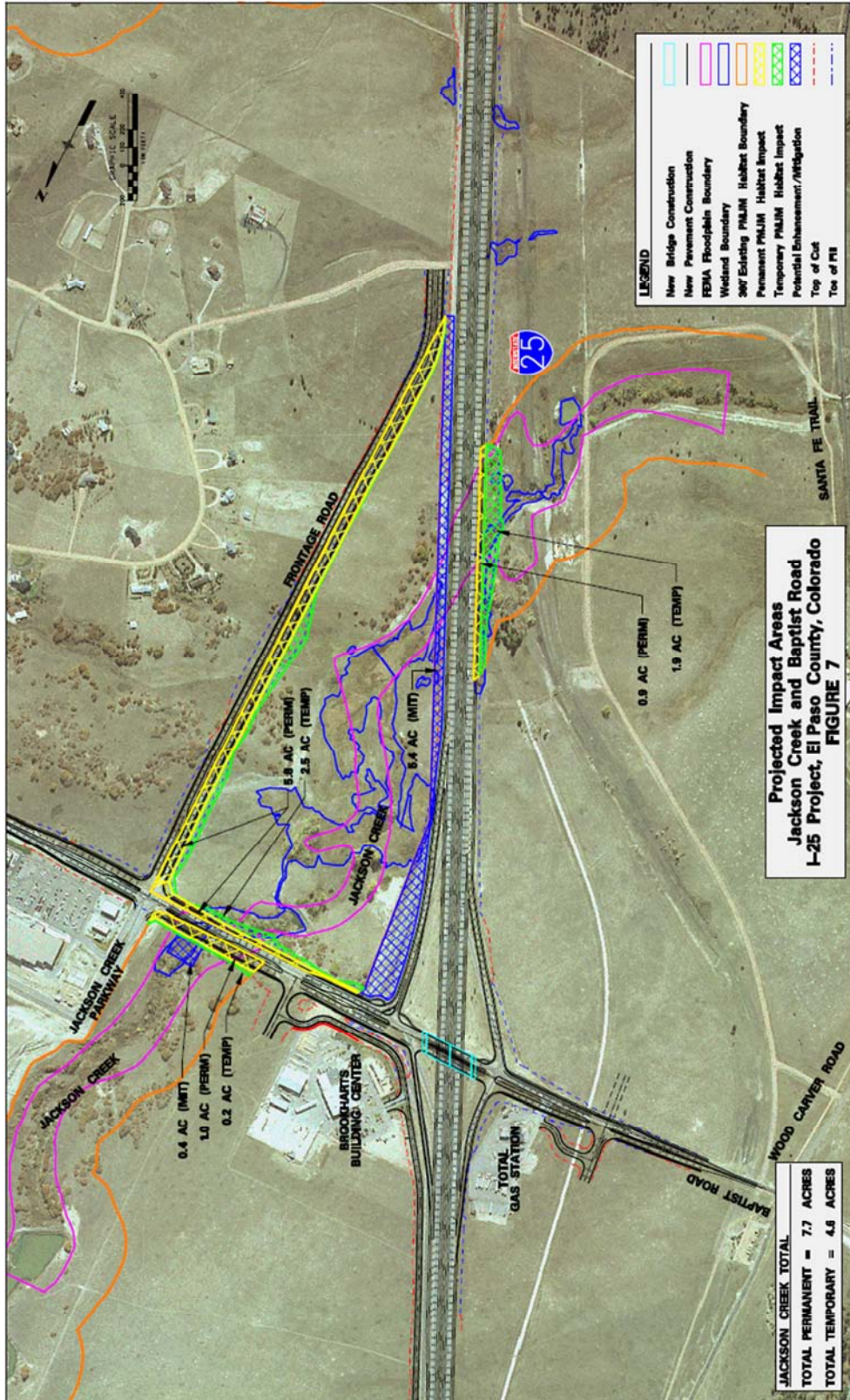
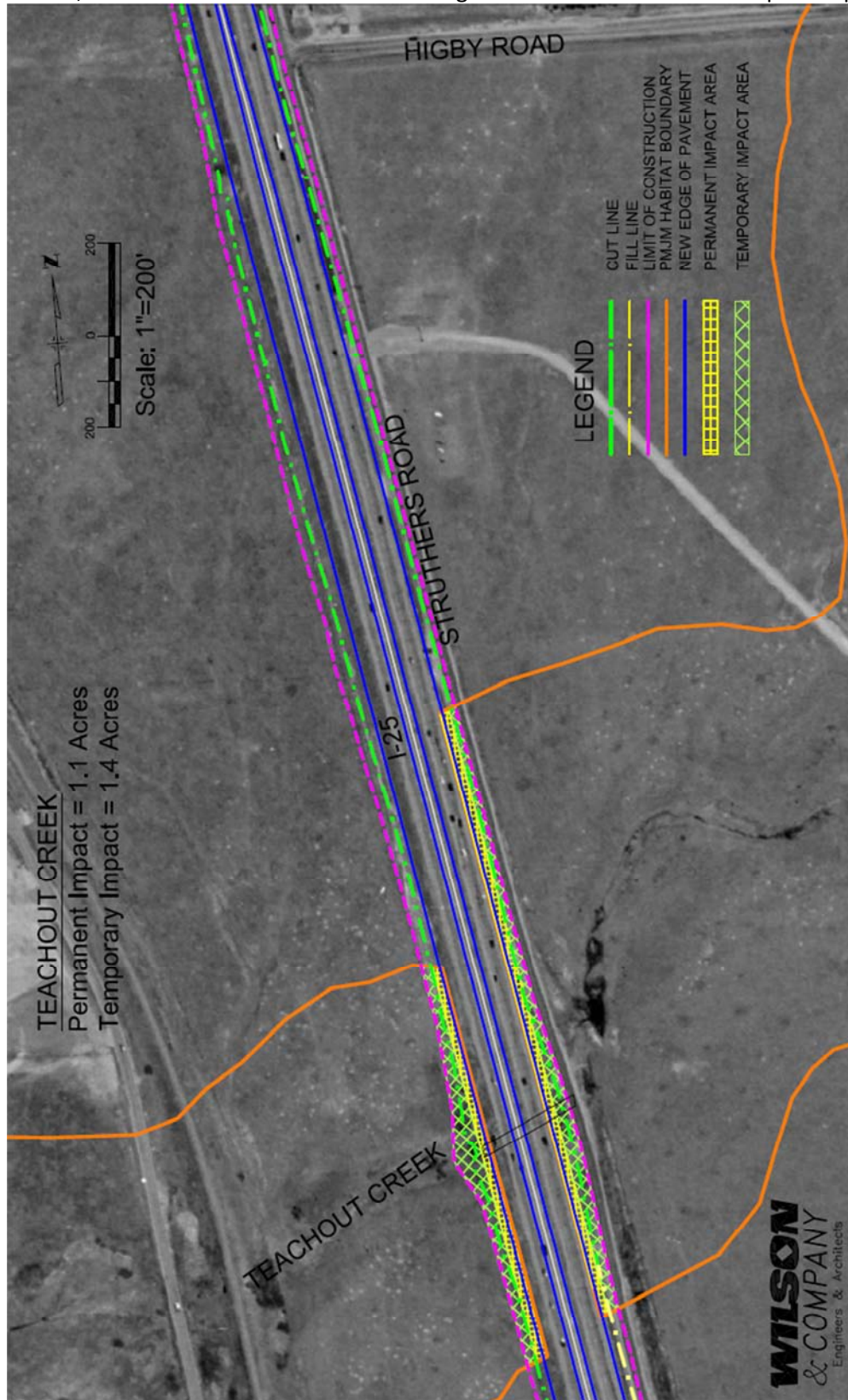


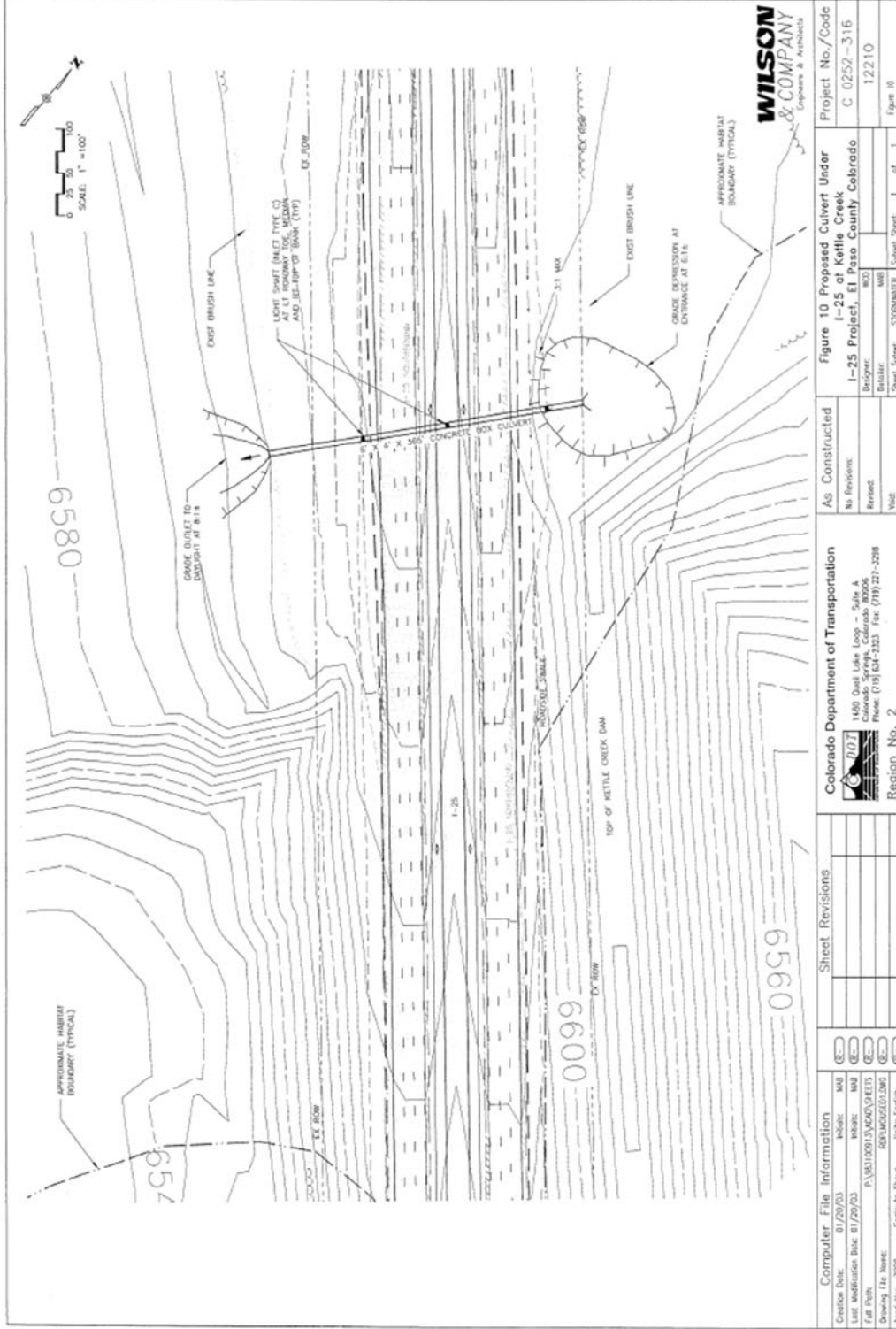
FIGURE A- 8. Teachout Creek (north of Exit 158): 1.1 acres permanent impact, 1.4 acres temporary impact. However, the 2010 USFWS critical habitat designation could increase these up to 20 percent.



APPENDIX 3 POTENTIAL PREBLE'S MOUSE HABITAT LINKAGES – DESIGN

(Two figures follow: Kettle Creek linkage and Jackson Creek linkage)

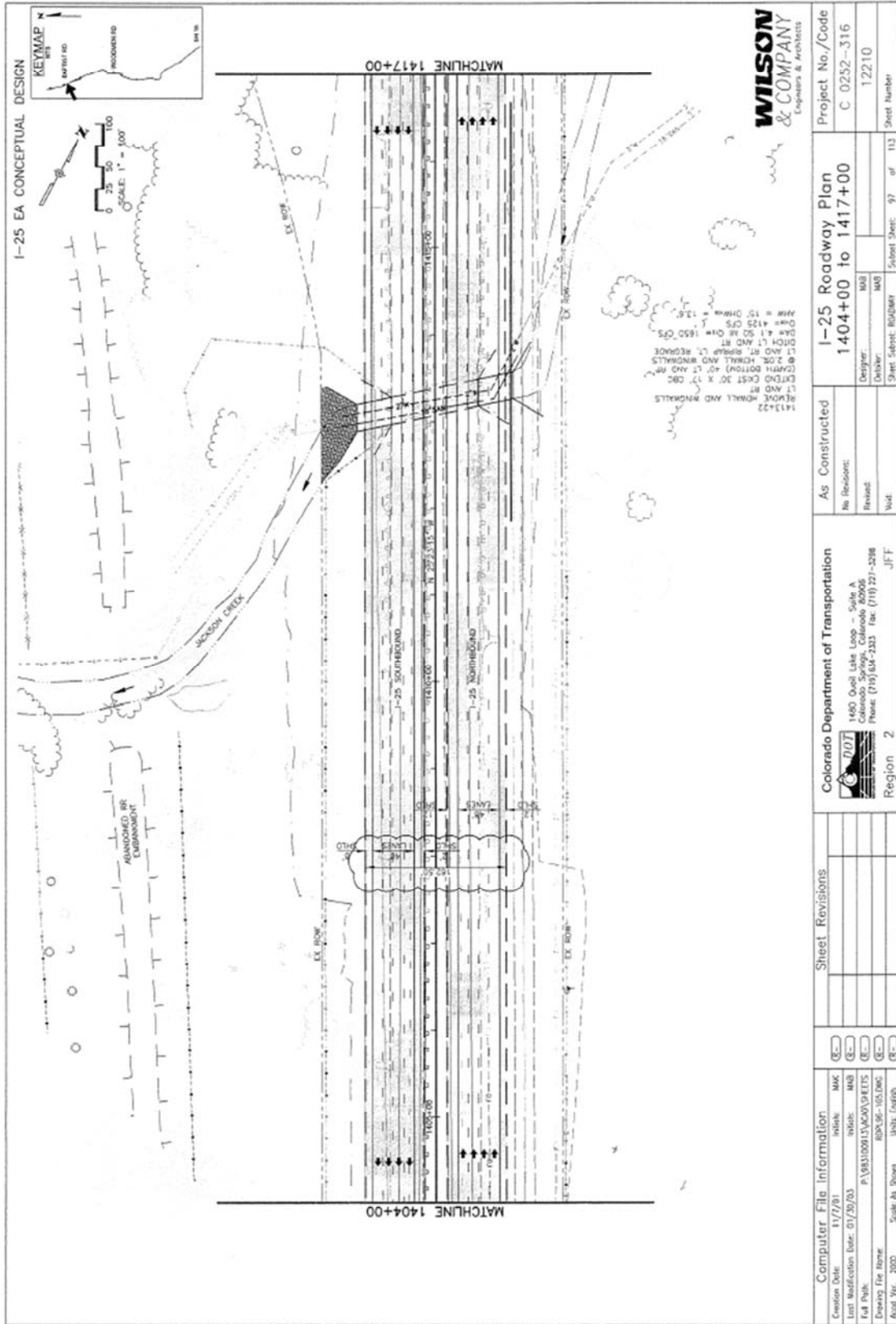
1. Kettle Creek Linkage



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Computer File Information	Colorado Department of Transportation	As Constructed	Figure 10 Proposed Culvert Under
Creation Date: 01/29/03	1450 Quail Lake Loop - Suite A Colorado Springs, Colorado 80908 Phone: (719) 541-3323 Fax: (719) 217-3288 Region No. 2	No finished:	Project No./Code
Last Modification Date: 01/29/03		Revised:	1-25 at Kettle Creek
Full Path: P:\8310091\3\040\04E17		Value:	1-25 Project, El Paso County, Colorado
Drawing File Name: BDKM0501.DWG			Designer: MJD
Acad Ver: 2000			Checker: MBS
			Sheet No.: STORMWTR
			Sheet Size: 11 x 17
			Figure 10

2. Jackson Creek Linkage



WILSON & COMPANY
Engineers & Architects

Computer File Information Creation Date: 1/7/01 MKK Last Modification Date: 01/30/03 MKB Full Path: P:\91310091\3\AC01\9\K115 MKB Drawing File Name: 8005.96-105.DWG MKB Acad Ver.: 2000 Scale: As Shown Units: English		Colorado Department of Transportation  1400 Quail Lake Loop - Suite A Colorado Springs, Colorado 80905 Phone: (719) 534-3333 Fax: (719) 237-3298 Region 2		As Constructed No Revisions: Revised: Void:		I-25 Roadway Plan 1404+00 to 1417+00 Designer: MKB Checker: MKB Sheet Subst: 8010647 Sheet Sheet: 97 of 113		Project No./Code C-0252-316 12210 Sheet Number	
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