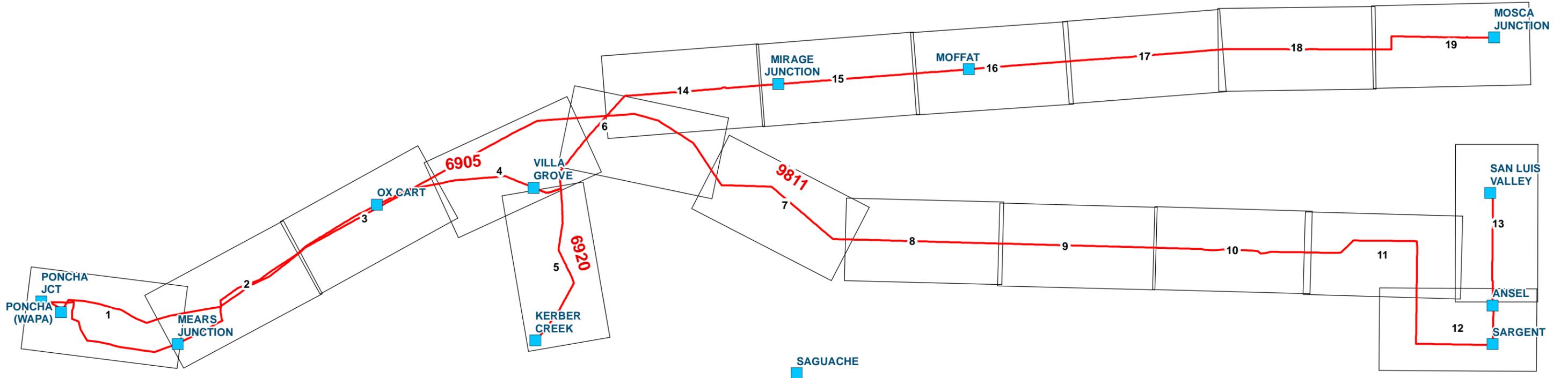


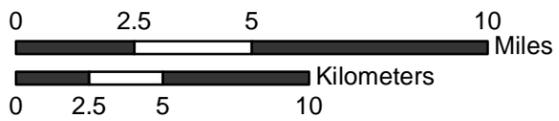
# Appendix A

Map Book





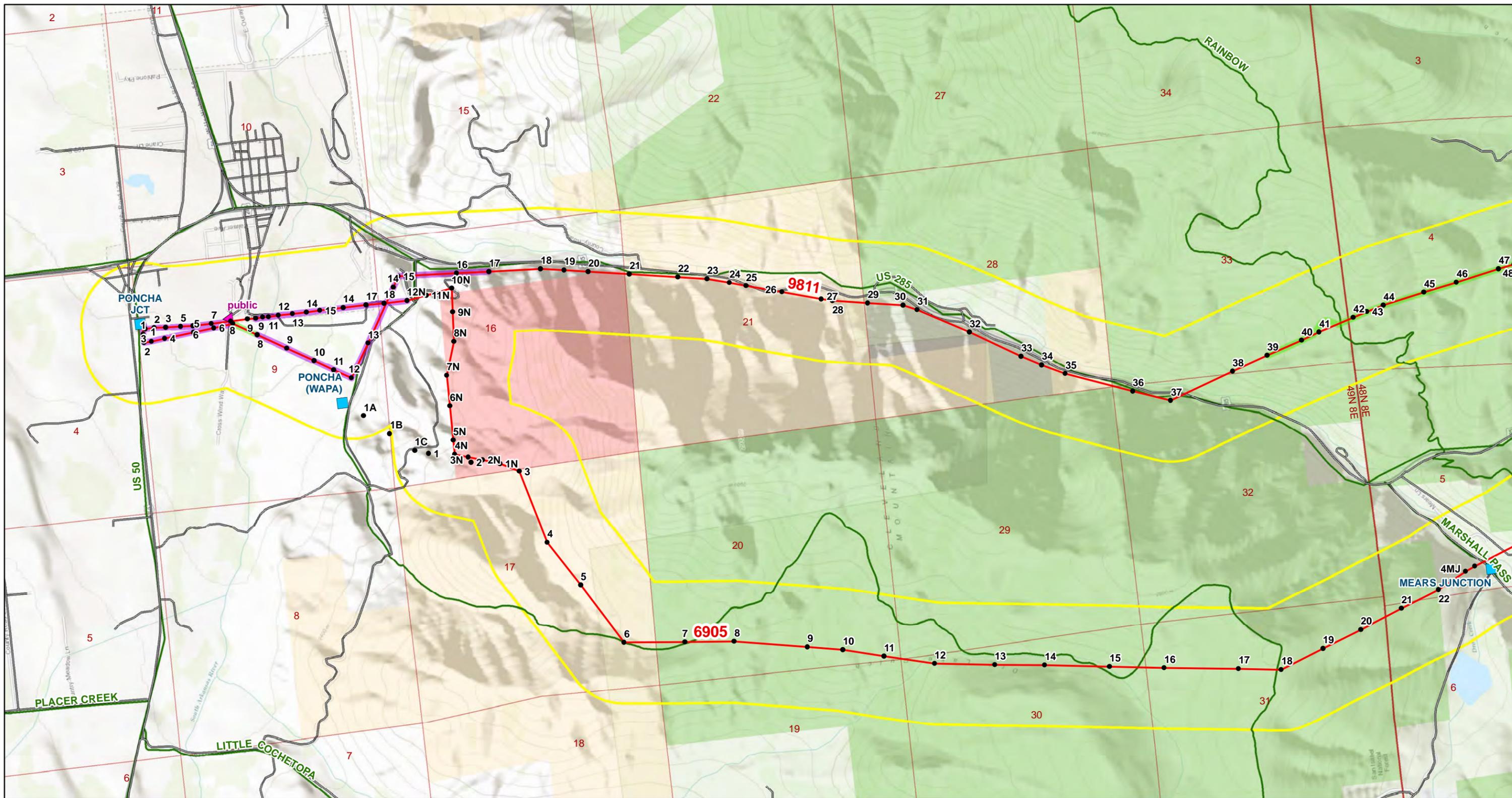
■ Substations     Page Grid  
— Lines



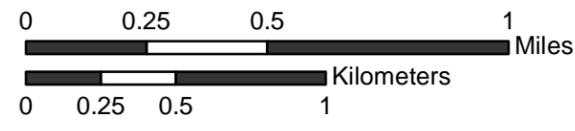
Projection: Transverse Mercator  
 UTM Zone 13 North  
 North American Datum of 1983

**Xcel Transmission Lines**  
**9811, 6905, 6920**





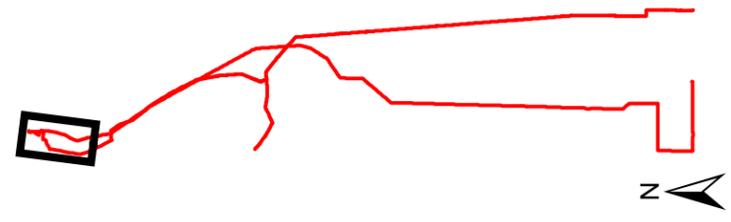
- Existing Structures
- ▲ Access Points
- Lines
- Forest Service Roads
- State Land Board
- Substations
- Clearing
- Roads
- BLM Roads
- Forest Service Land
- ◆ Culverts
- Compaction
- Railroads
- Gunnison sage-grouse Occupied Habitat
- BLM Land
- Baca NWR
- 1/4 mile Survey Buffer
- Staging Area

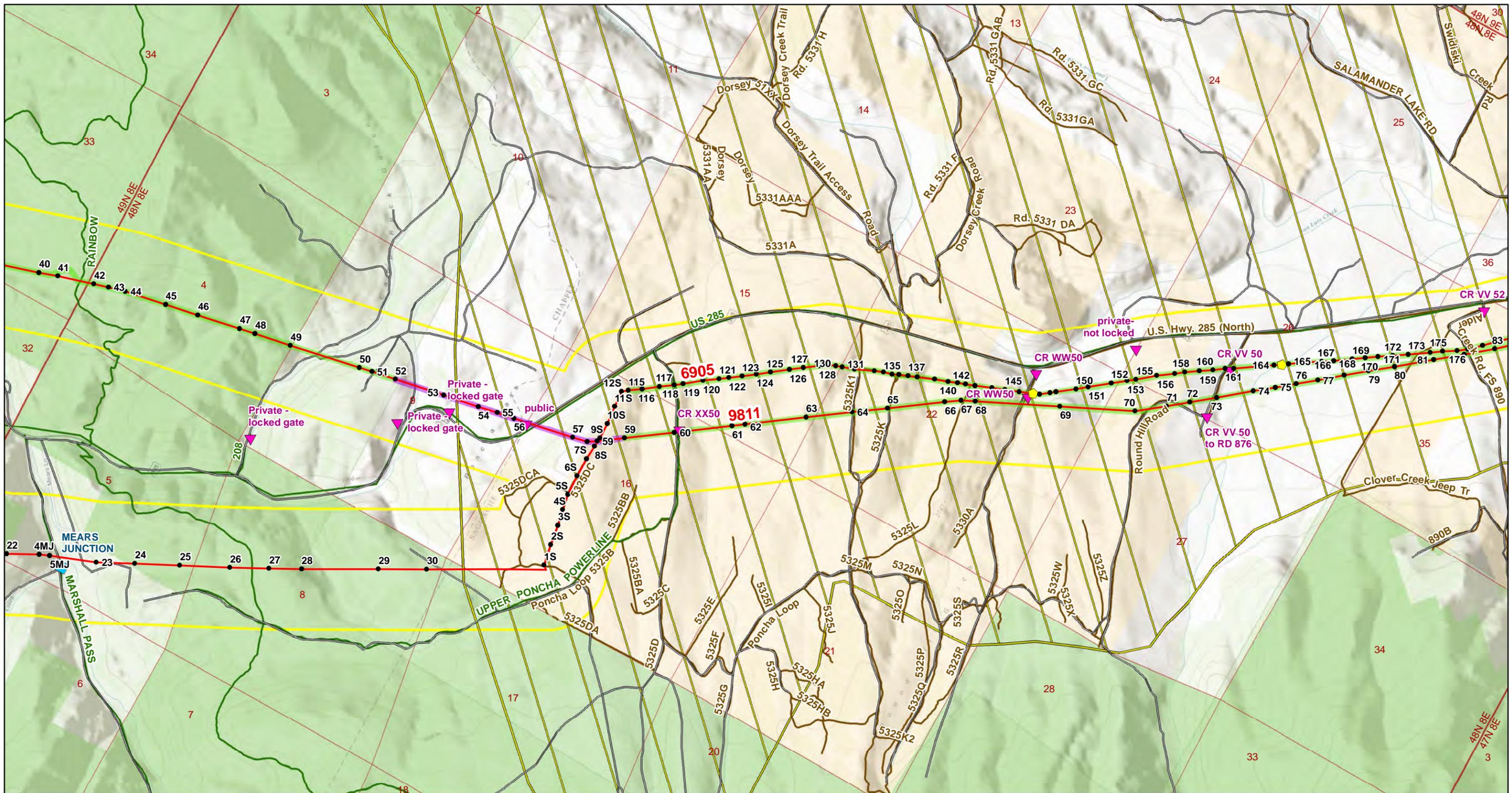


**Xcel Transmission Lines  
9811, 6905, 6920**

Projection: Transverse Mercator  
UTM Zone 13 North  
North American Datum of 1983  
Source of background: ESRI

1 inch = 2,000 feet





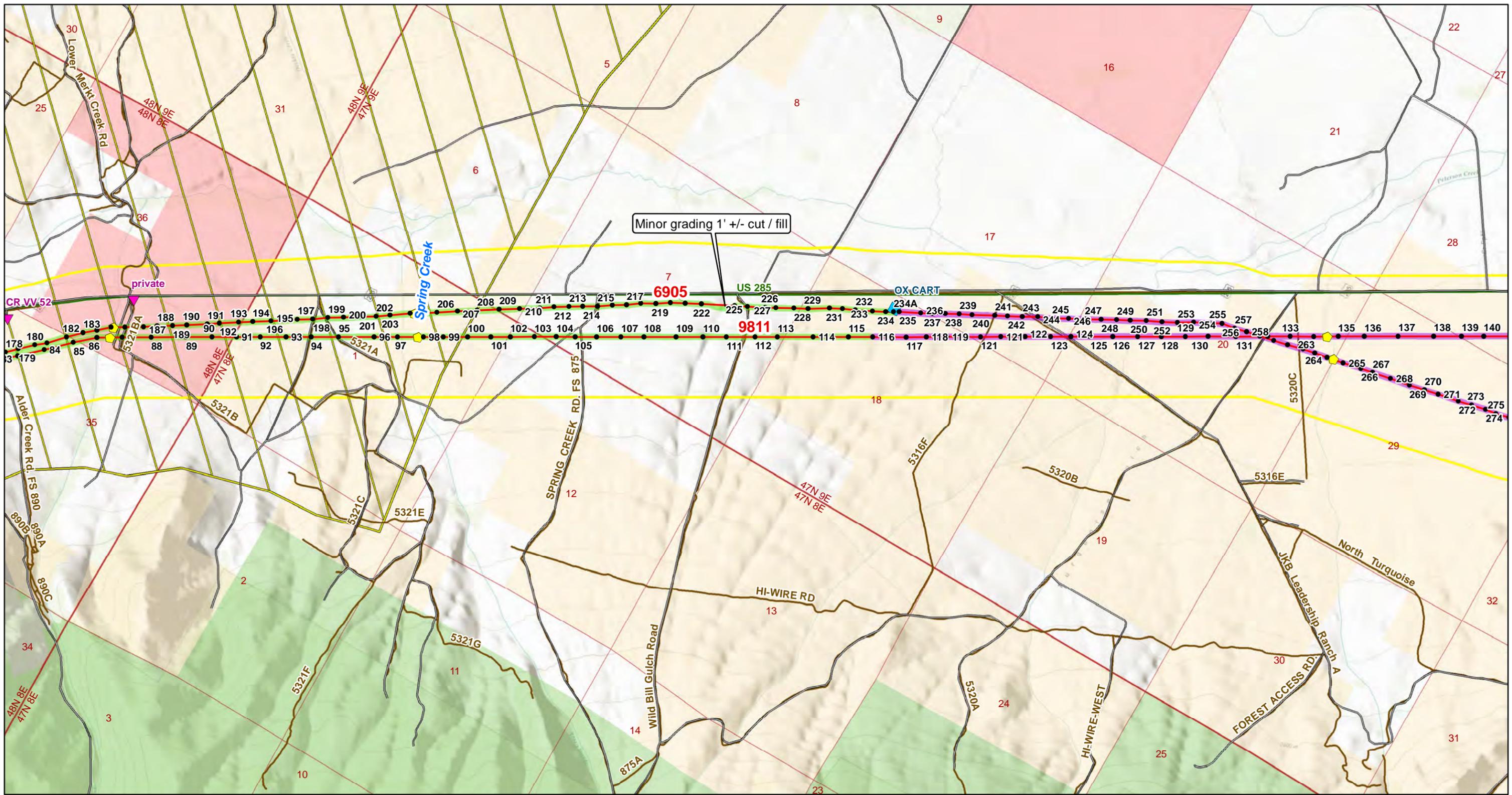
• Existing Structures	▲ Access Points	— Lines	— Forest Service Roads	— State Land Board
■ Substations	— Clearing	— Roads	— BLM Roads	— Forest Service Land
◆ Culverts	— Compaction	— Railroads	— Gunnison sage-grouse Occupied Habitat	— BLM Land
		— Staging Area	— Baca NWR	

**Xcel Transmission Lines**  
9811, 6905, 6920

Projection: Transverse Mercator  
UTM Zone 13 North  
North American Datum of 1983  
Source of background: ESRI

1 inch = 2,000 feet

Page 2 of 19



• Existing Structures	▲ Access Points	— Lines	— Forest Service Roads	■ State Land Board
■ Substations	▬ Clearing	— Roads	— BLM Roads	■ Forest Service Land
◆ Culverts	▬ Compaction	— Railroads	▨ Gunnison sage-grouse Occupied Habitat	■ BLM Land
			▭ 1/4 mile Survey Buffer	■ Baca NWR
			▭ Staging Area	

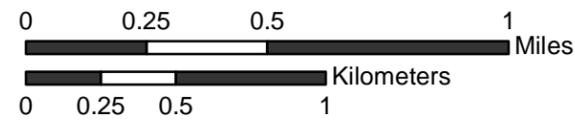
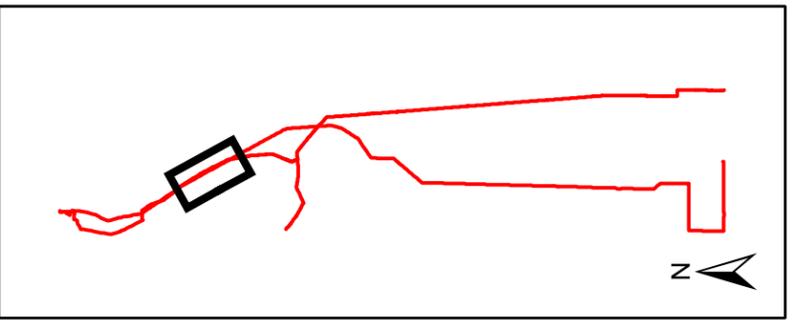
**Xcel Transmission Lines  
9811, 6905, 6920**

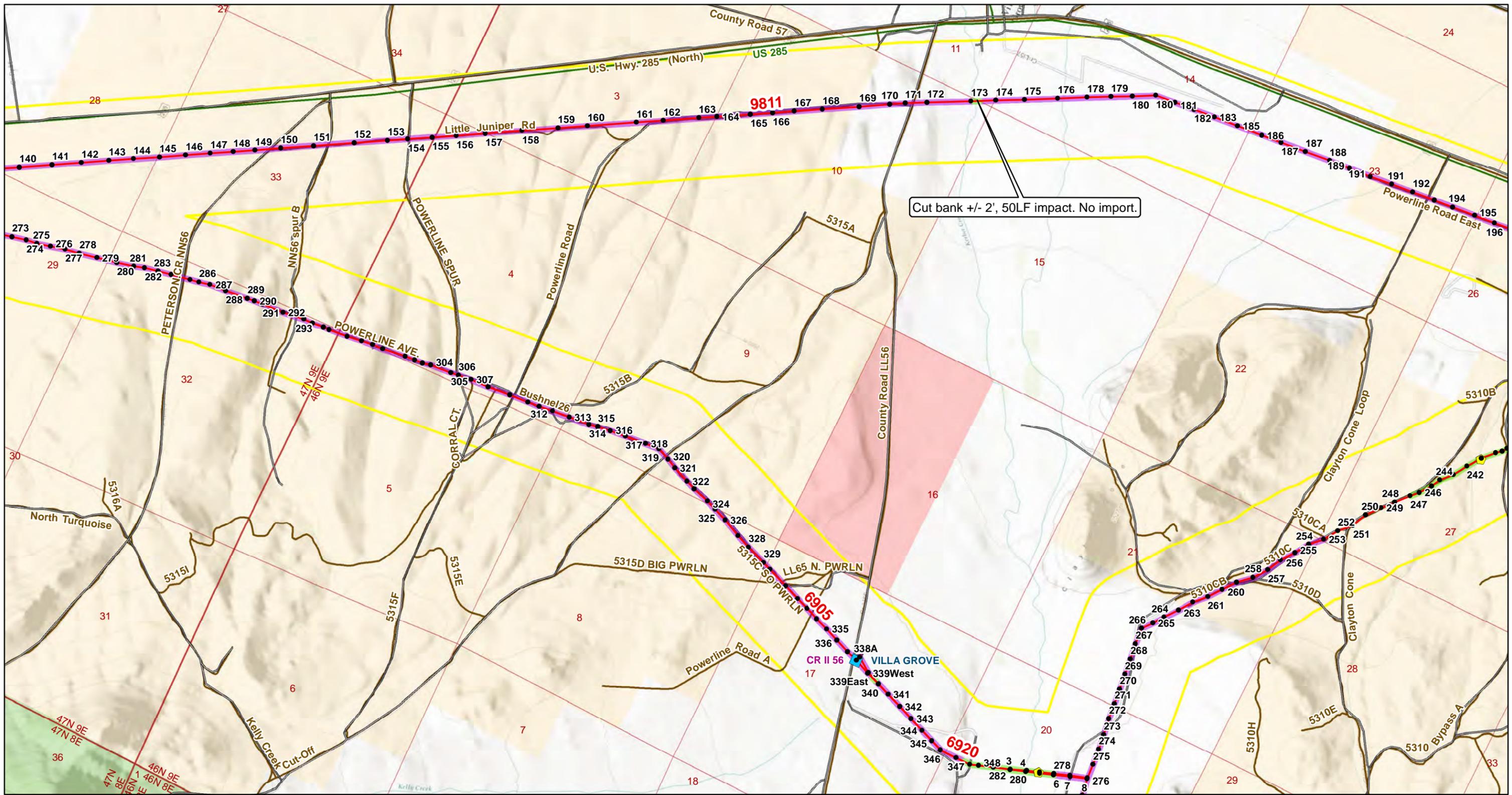
Projection: Transverse Mercator  
UTM Zone 13 North  
North American Datum of 1983  
Source of background: ESRI

Page 3 of 19

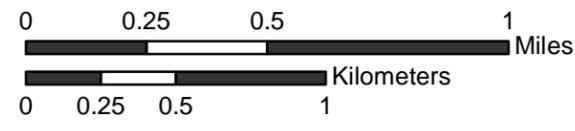
**HDR**

1 inch = 2,000 feet





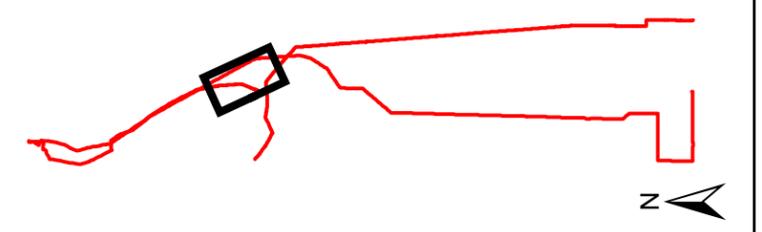
- Existing Structures
- ▲ Access Points
- Lines
- Forest Service Roads
- State Land Board
- Substations
- Clearing
- Roads
- BLM Roads
- Forest Service Land
- ◆ Culverts
- Compaction
- Railroads
- ▨ Gunnison sage-grouse Occupied Habitat
- BLM Land
- Baca NWR
- ▭ 1/4 mile Survey Buffer
- ▭ Staging Area

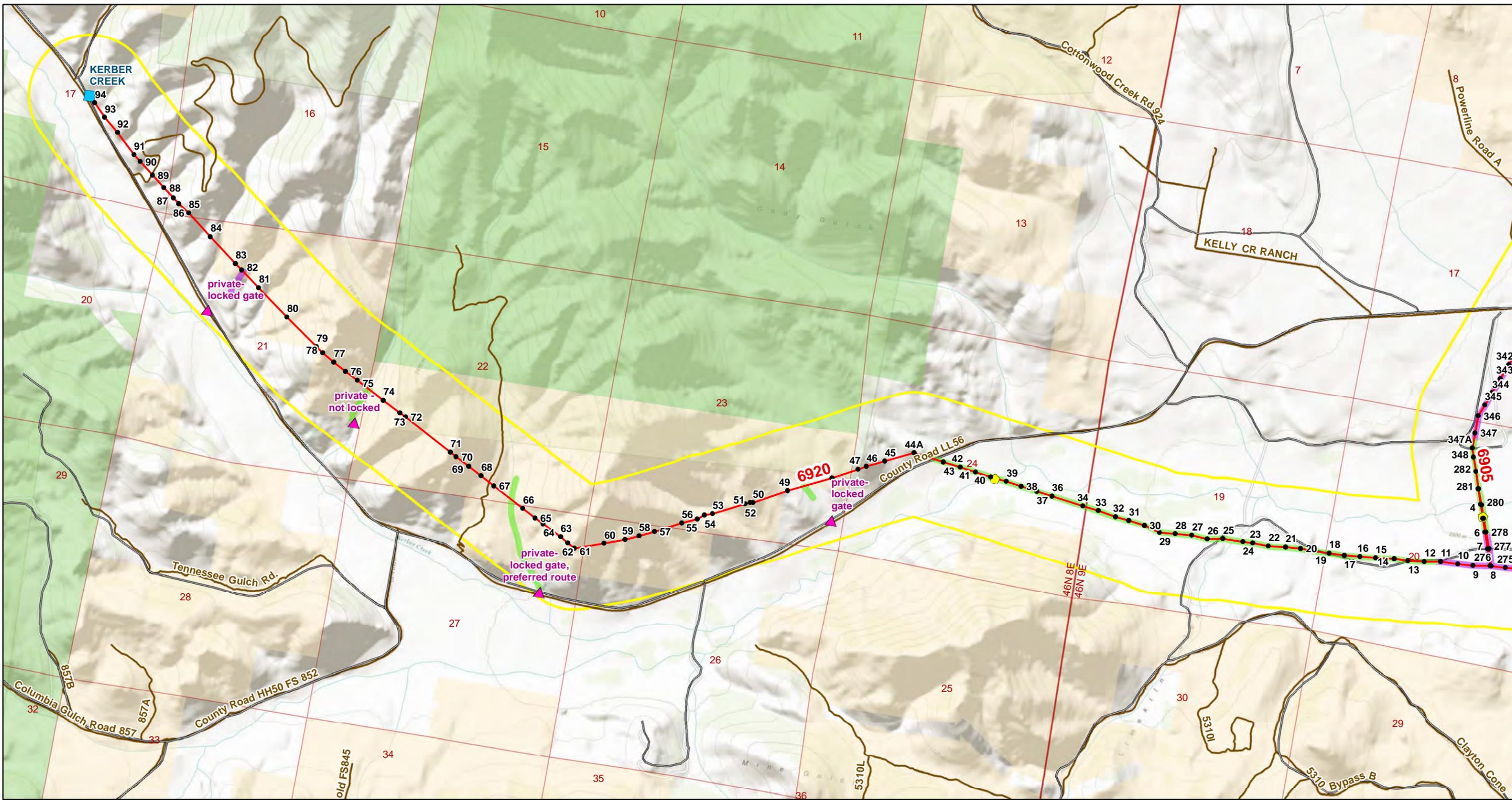


**Xcel Transmission Lines**  
**9811, 6905, 6920**

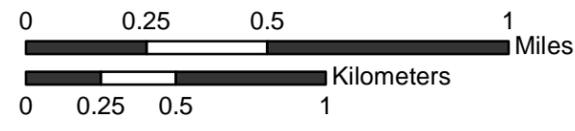
Projection: Transverse Mercator  
 UTM Zone 13 North  
 North American Datum of 1983  
 Source of background: ESRI

1 inch = 2,000 feet





- Existing Structures
- Substations
- ◆ Culverts
- ▲ Access Points
- ▬ Clearing
- ▬ Compaction
- ▬ Lines
- ▬ Roads
- ▬ Railroads
- ▬ Forest Service Roads
- ▬ BLM Roads
- ▬ Gunnison sage-grouse Occupied Habitat
- ▬ 1/4 mile Survey Buffer
- ▬ Staging Area
- ▬ State Land Board
- ▬ Forest Service Land
- ▬ BLM Land
- ▬ Baca NWR

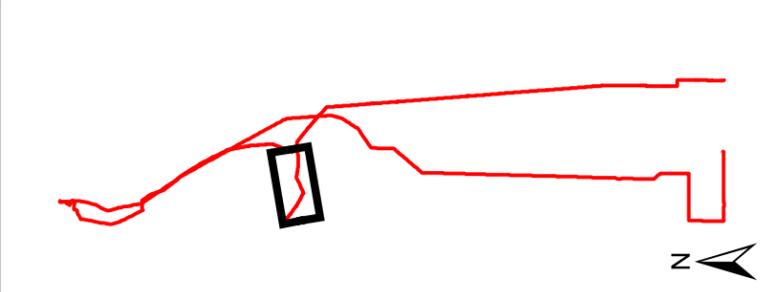


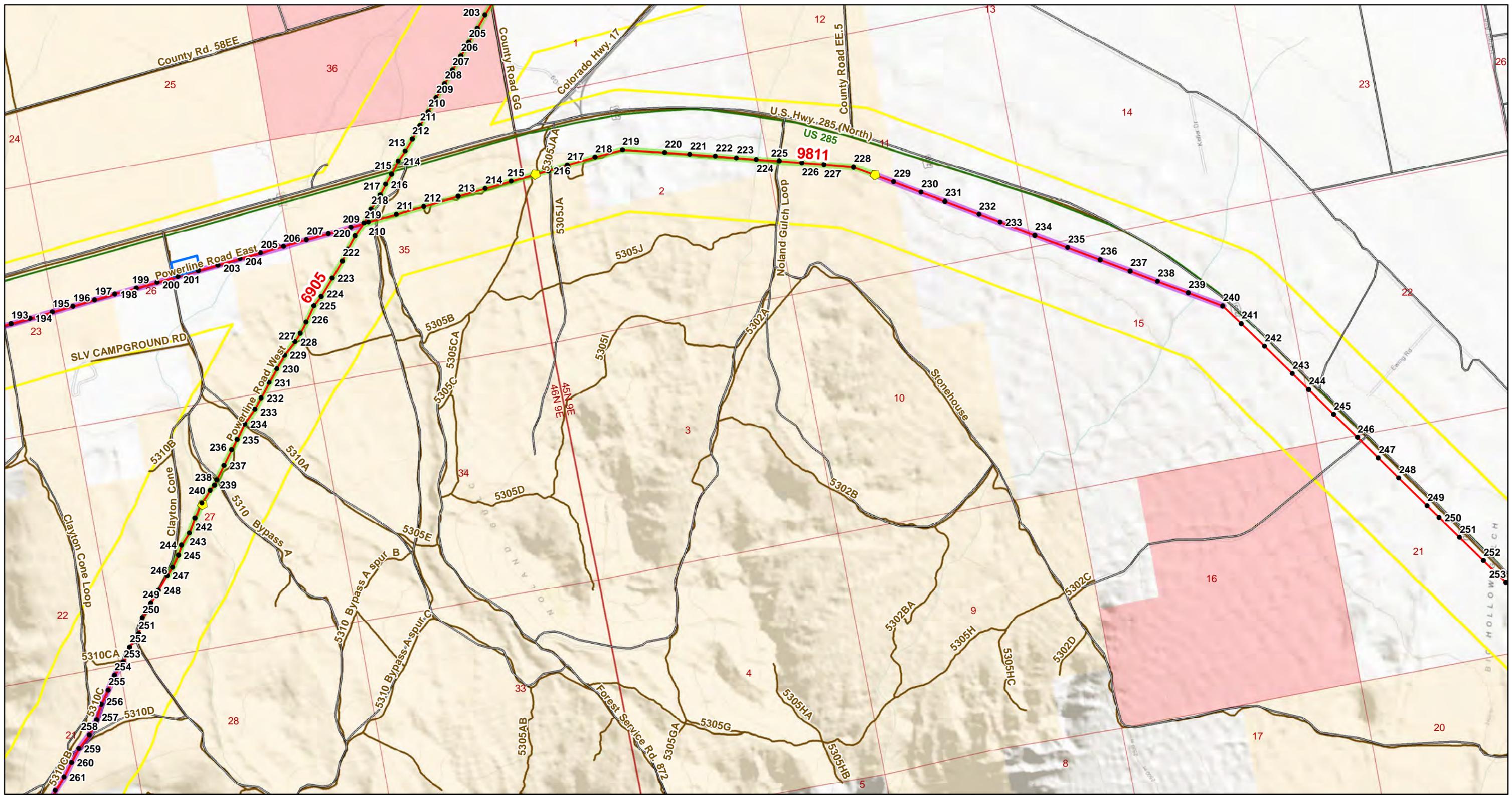
**Xcel Transmission Lines**  
**9811, 6905, 6920**

Projection: Transverse Mercator  
 UTM Zone 13 North  
 North American Datum of 1983  
 Source of background: ESRI

1 inch = 2,000 feet

Page 5 of 19

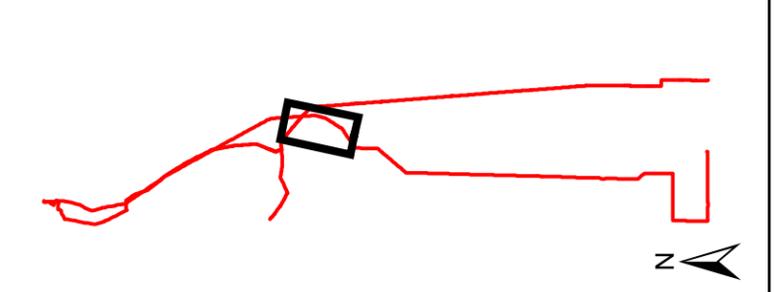


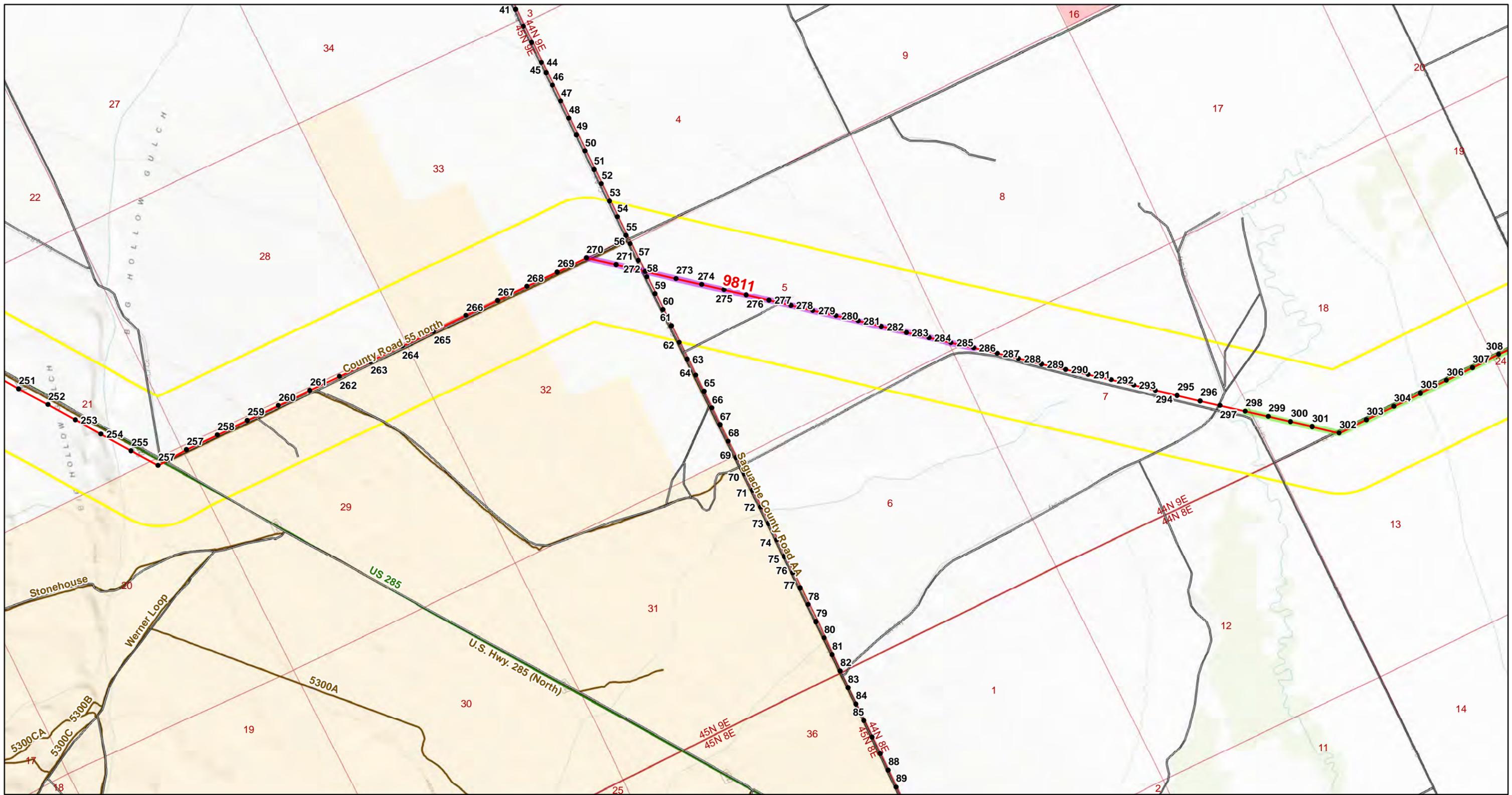


- Existing Structures
- ▲ Access Points
- Lines
- Forest Service Roads
- State Land Board
- Substations
- Clearing
- Roads
- BLM Roads
- Forest Service Land
- ◆ Culverts
- Compaction
- Railroads
- Gunnison sage-grouse Occupied Habitat
- BLM Land
- Baca NWR
- 1/4 mile Survey Buffer
- Staging Area

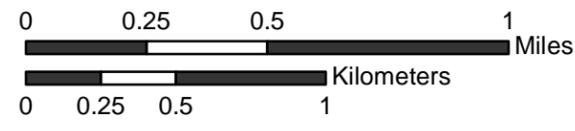
**Xcel Transmission Lines  
9811, 6905, 6920**

Projection: Transverse Mercator  
UTM Zone 13 North  
North American Datum of 1983  
Source of background: ESRI  
1 inch = 2,000 feet





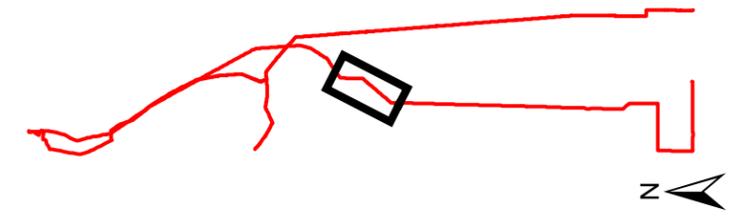
- Existing Structures
- ▲ Access Points
- Lines
- Forest Service Roads
- State Land Board
- Substations
- Clearing
- Roads
- BLM Roads
- Forest Service Land
- ◆ Culverts
- Compaction
- Railroads
- Gunnison sage-grouse Occupied Habitat
- BLM Land
- Baca NWR
- 1/4 mile Survey Buffer
- Staging Area

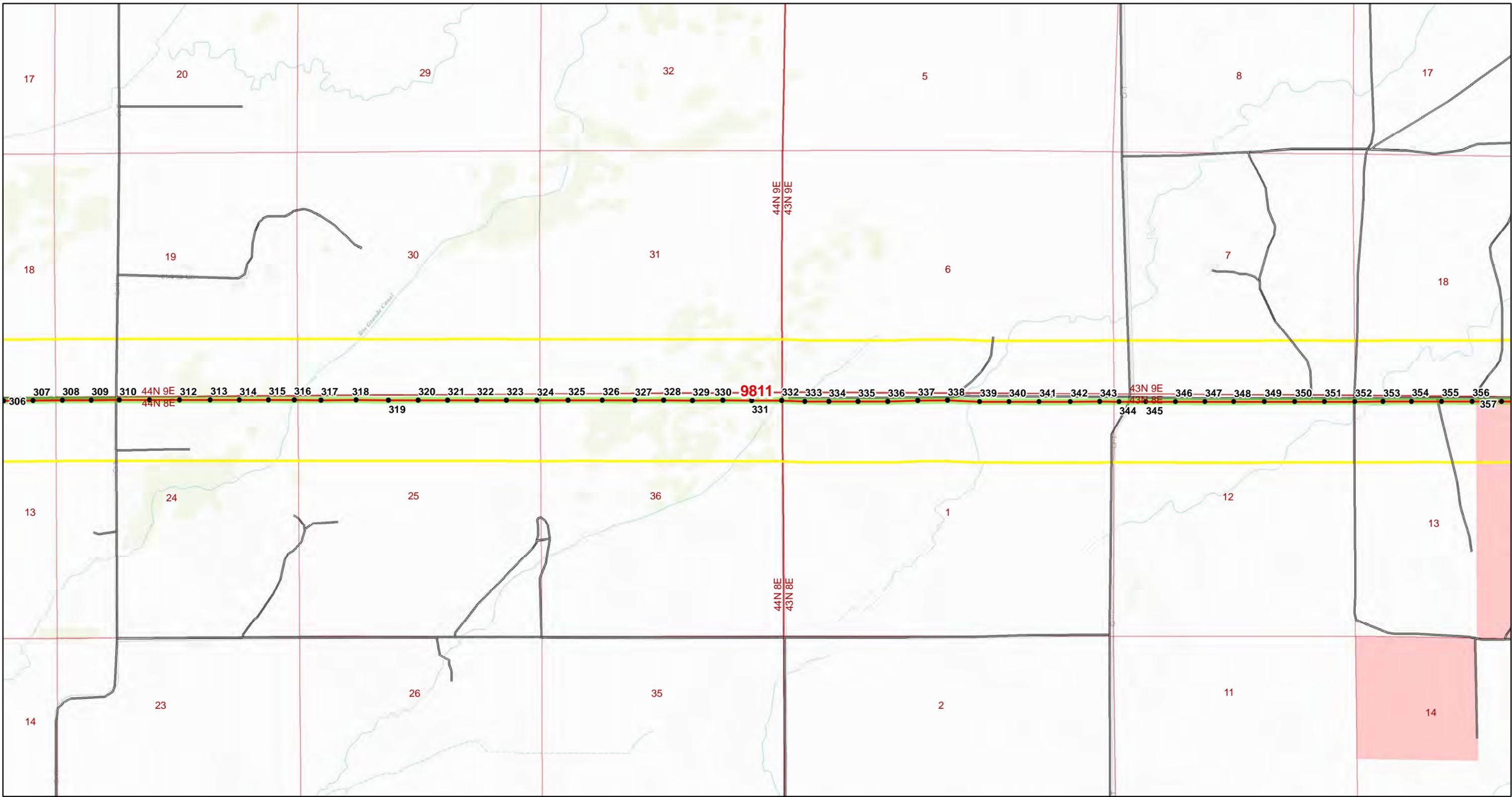


**Xcel Transmission Lines  
9811, 6905, 6920**

Projection: Transverse Mercator  
UTM Zone 13 North  
North American Datum of 1983  
Source of background: ESRI

1 inch = 2,000 feet





• Existing Structures	▲ Access Points	— Lines	— Forest Service Roads	■ State Land Board
■ Substations	— Clearing	— Roads	— BLM Roads	■ Forest Service Land
◆ Culverts	— Compaction	— Railroads	▨ Gunnison sage-grouse Occupied Habitat	■ BLM Land
 		▨ 1/4 mile Survey Buffer	■ Baca NWR	
	■ Staging Area			

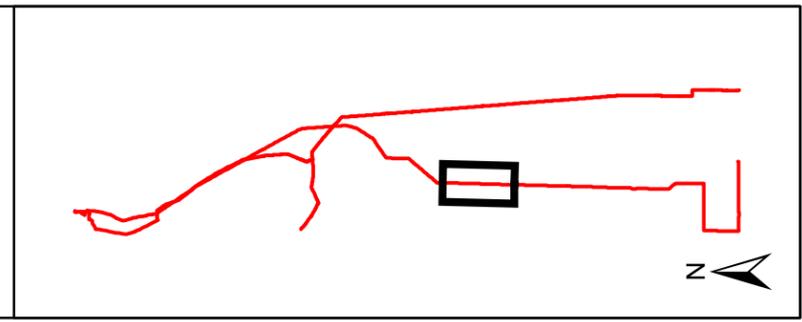
**Xcel Transmission Lines**  
**9811, 6905, 6920**

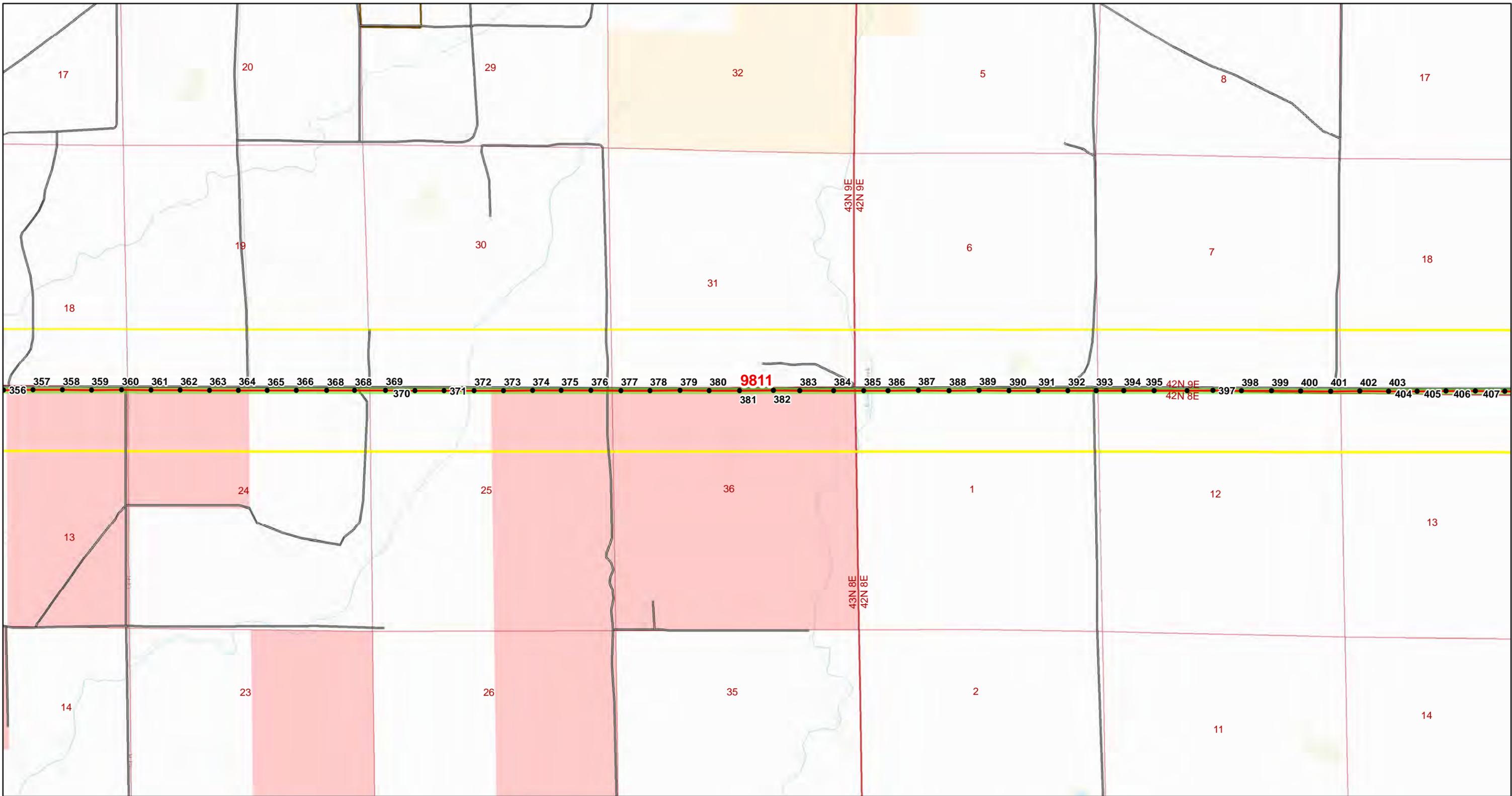
Projection: Transverse Mercator  
 UTM Zone 13 North  
 North American Datum of 1983  
 Source of background: ESRI

Page 8 of 19

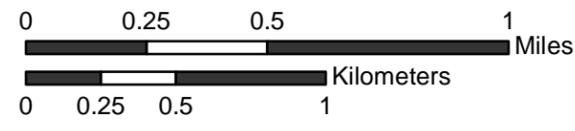
**HDR**

1 inch = 2,000 feet



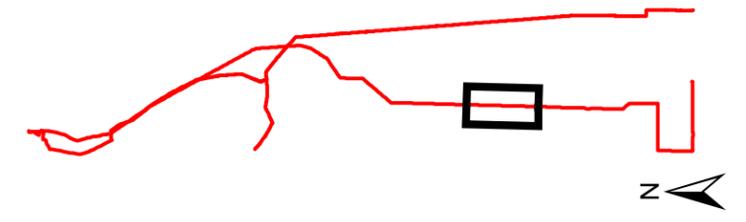


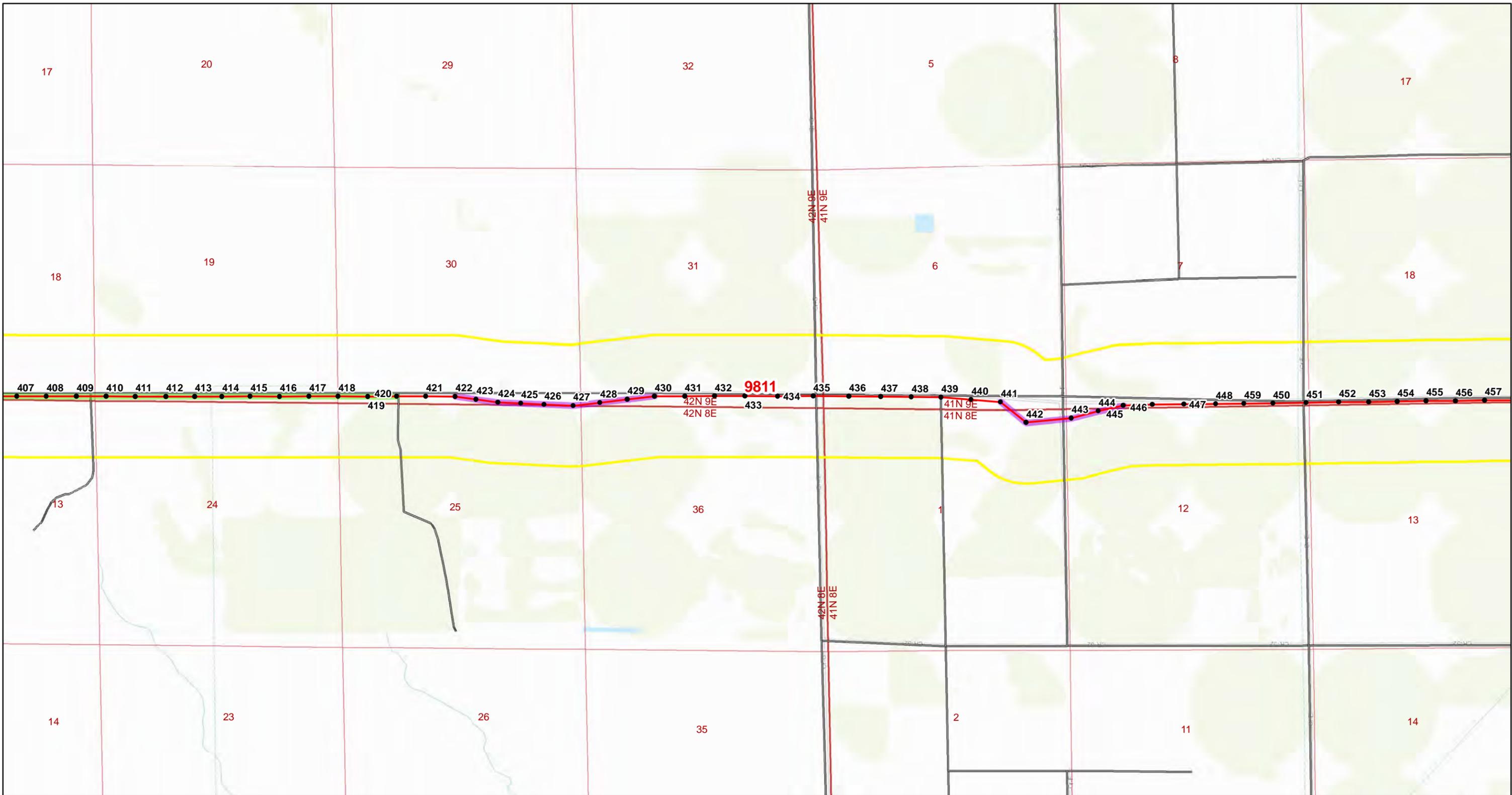
- Existing Structures
- ▲ Access Points
- Lines
- Forest Service Roads
- State Land Board
- Substations
- Clearing
- Roads
- BLM Roads
- Forest Service Land
- ◆ Culverts
- Compaction
- Railroads
- ▨ Gunnison sage-grouse Occupied Habitat
- BLM Land
- Baca NWR
- ▭ 1/4 mile Survey Buffer
- ▭ Staging Area



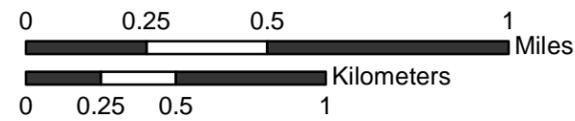
**Xcel Transmission Lines  
9811, 6905, 6920**

Projection: Transverse Mercator  
UTM Zone 13 North  
North American Datum of 1983  
Source of background: ESRI  
1 inch = 2,000 feet



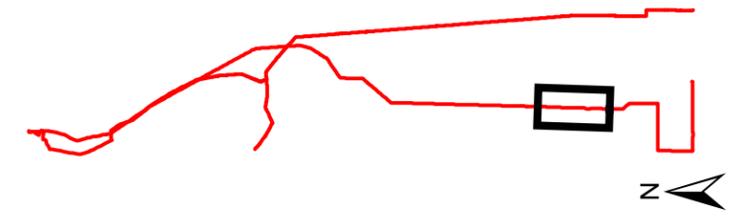


- Existing Structures
- ▲ Access Points
- Lines
- Forest Service Roads
- State Land Board
- Substations
- Clearing
- Roads
- BLM Roads
- Forest Service Land
- ◆ Culverts
- Compaction
- Railroads
- ▨ Gunnison sage-grouse Occupied Habitat
- BLM Land
- Baca NWR
- ▭ 1/4 mile Survey Buffer
- ▭ Staging Area



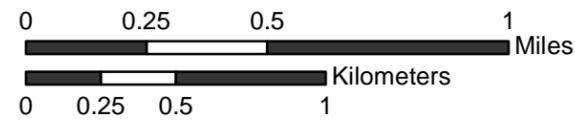
**Xcel Transmission Lines  
9811, 6905, 6920**

Projection: Transverse Mercator  
UTM Zone 13 North  
North American Datum of 1983  
Source of background: ESRI  
1 inch = 2,000 feet





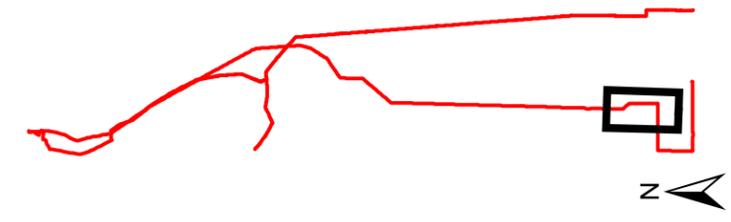
- Existing Structures
- ▲ Access Points
- Lines
- Forest Service Roads
- State Land Board
- Substations
- Clearing
- Roads
- BLM Roads
- Forest Service Land
- ◆ Culverts
- Compaction
- Railroads
- ▨ Gunnison sage-grouse Occupied Habitat
- BLM Land
- Baca NWR
- ▭ 1/4 mile Survey Buffer
- ▭ Staging Area

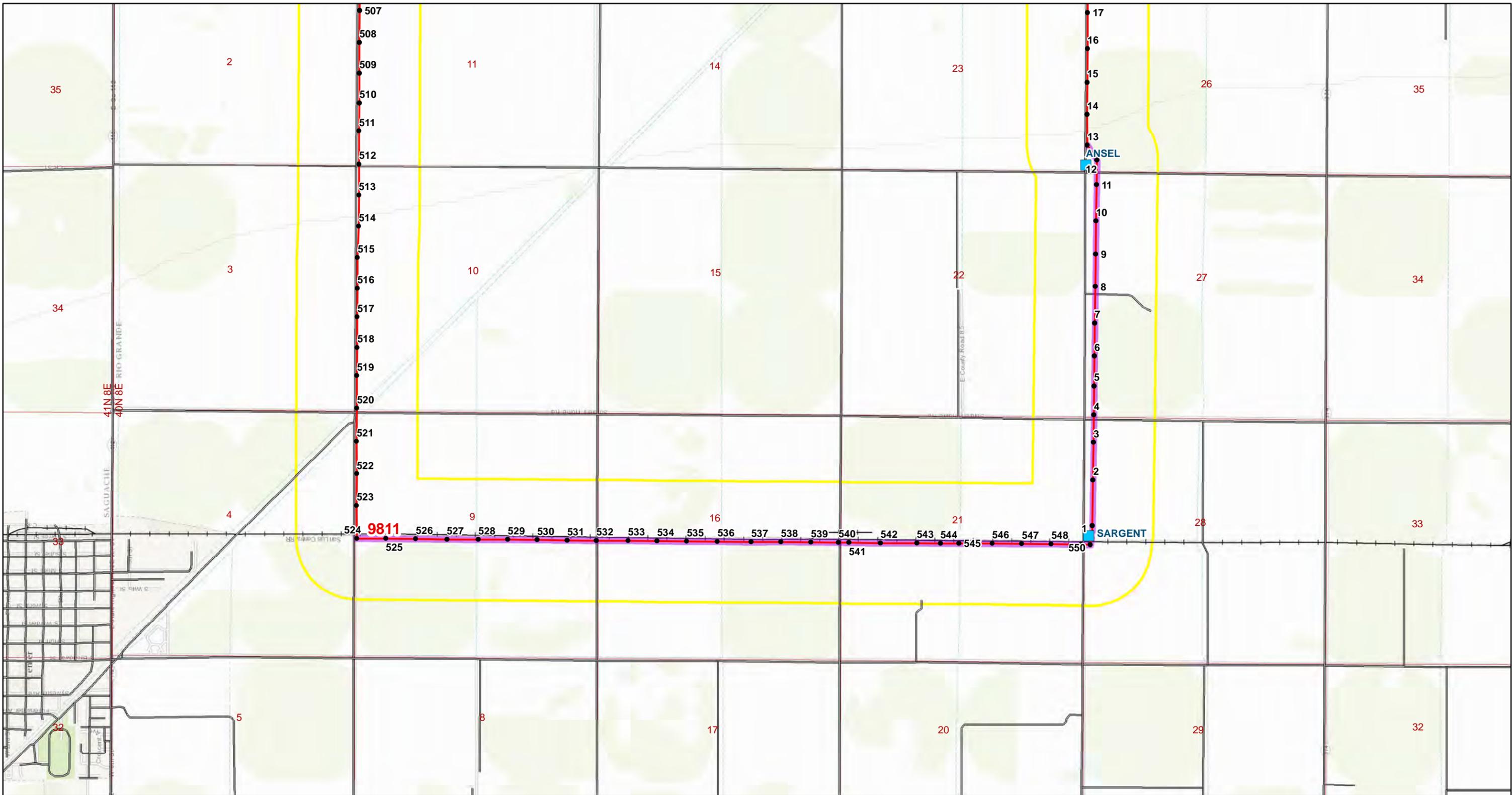


**Xcel Transmission Lines  
9811, 6905, 6920**

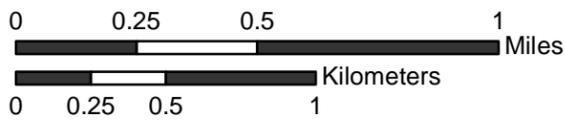
Projection: Transverse Mercator  
UTM Zone 13 North  
North American Datum of 1983  
Source of background: ESRI

1 inch = 2,000 feet





- Existing Structures
- ▲ Access Points
- Lines
- Forest Service Roads
- State Land Board
- Substations
- Clearing
- Roads
- BLM Roads
- Forest Service Land
- ◆ Culverts
- Compaction
- Railroads
- ▨ Gunnison sage-grouse Occupied Habitat
- BLM Land
- Baca NWR
- ▭ 1/4 mile Survey Buffer
- ▭ Staging Area



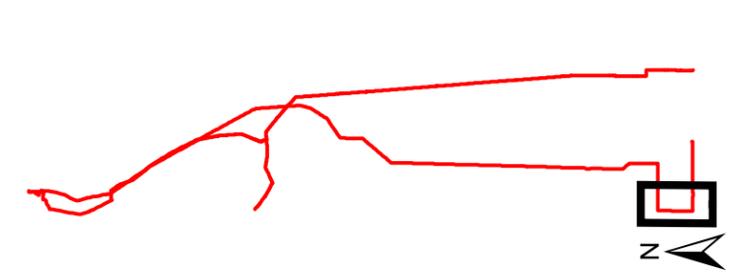
**Xcel Transmission Lines**  
**9811, 6905, 6920**

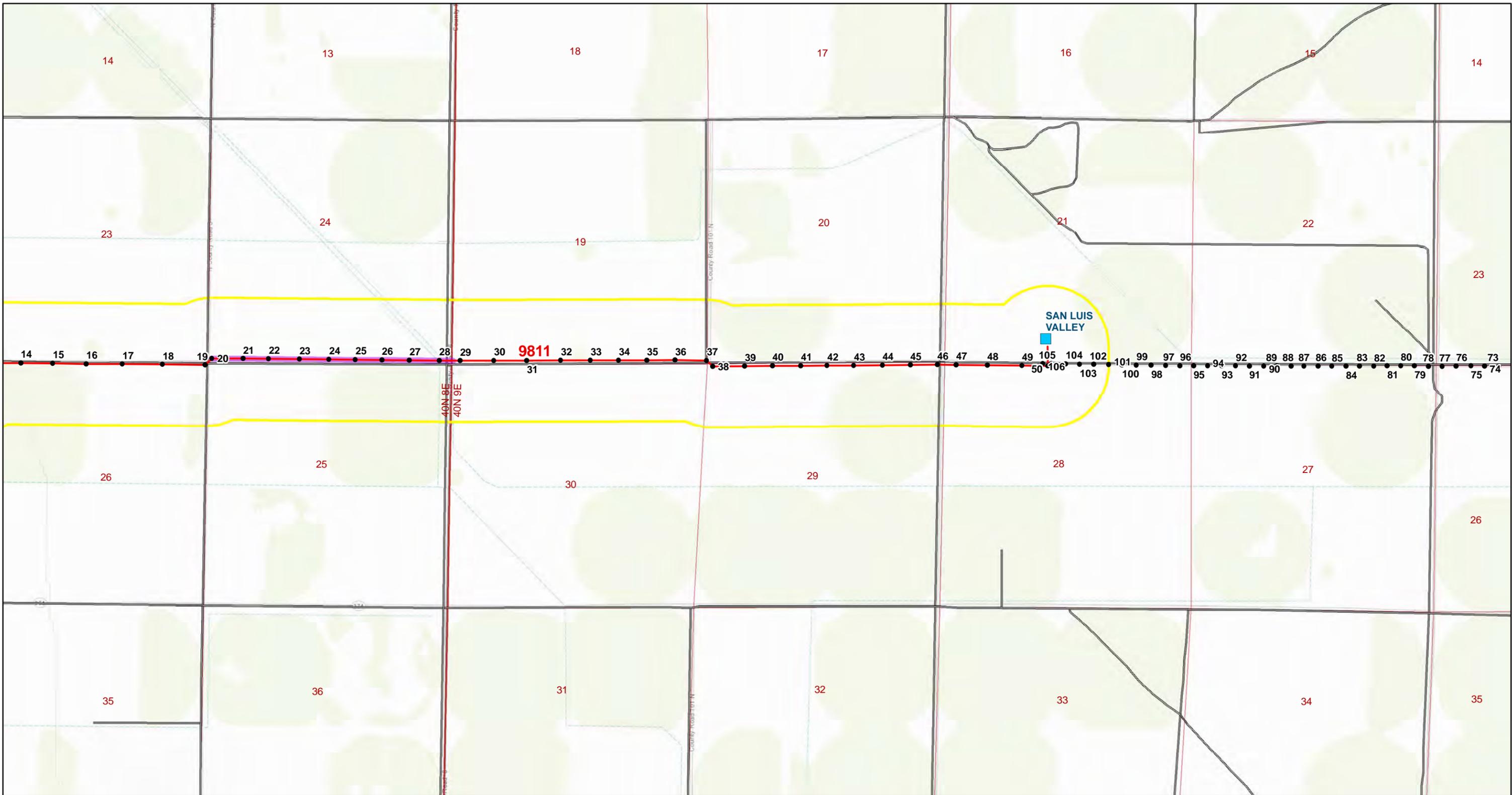
Projection: Transverse Mercator  
 UTM Zone 13 North  
 North American Datum of 1983  
 Source of background: ESRI

Page 12 of 19

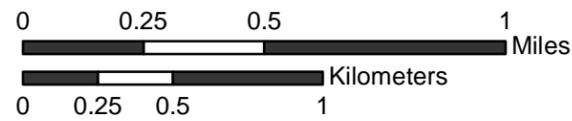
**HDR**

1 inch = 2,000 feet





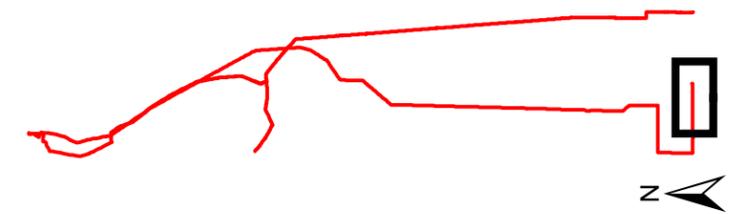
- Existing Structures
- ▲ Access Points
- Lines
- Forest Service Roads
- State Land Board
- Substations
- Clearing
- Roads
- BLM Roads
- Forest Service Land
- ◆ Culverts
- Compaction
- Railroads
- ▨ Gunnison sage-grouse Occupied Habitat
- BLM Land
- Baca NWR
- ▭ 1/4 mile Survey Buffer
- ▭ Staging Area



**Xcel Transmission Lines  
9811, 6905, 6920**

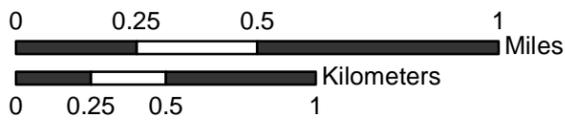
Projection: Transverse Mercator  
UTM Zone 13 North  
North American Datum of 1983  
Source of background: ESRI

1 inch = 2,000 feet





- Existing Structures
- ▲ Access Points
- Lines
- Forest Service Roads
- State Land Board
- Substations
- Clearing
- Roads
- BLM Roads
- Forest Service Land
- ◆ Culverts
- Compaction
- Railroads
- Gunnison sage-grouse Occupied Habitat
- BLM Land
- Baca NWR
- 1/4 mile Survey Buffer
- Staging Area



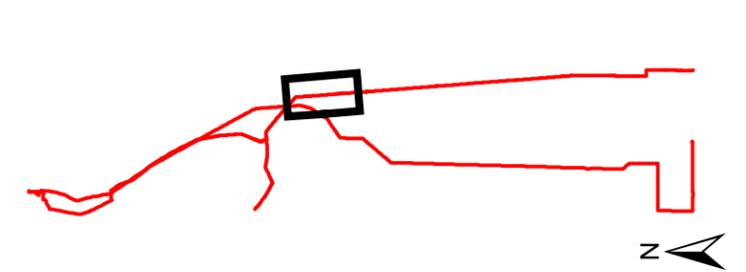
**Xcel Transmission Lines**  
**9811, 6905, 6920**

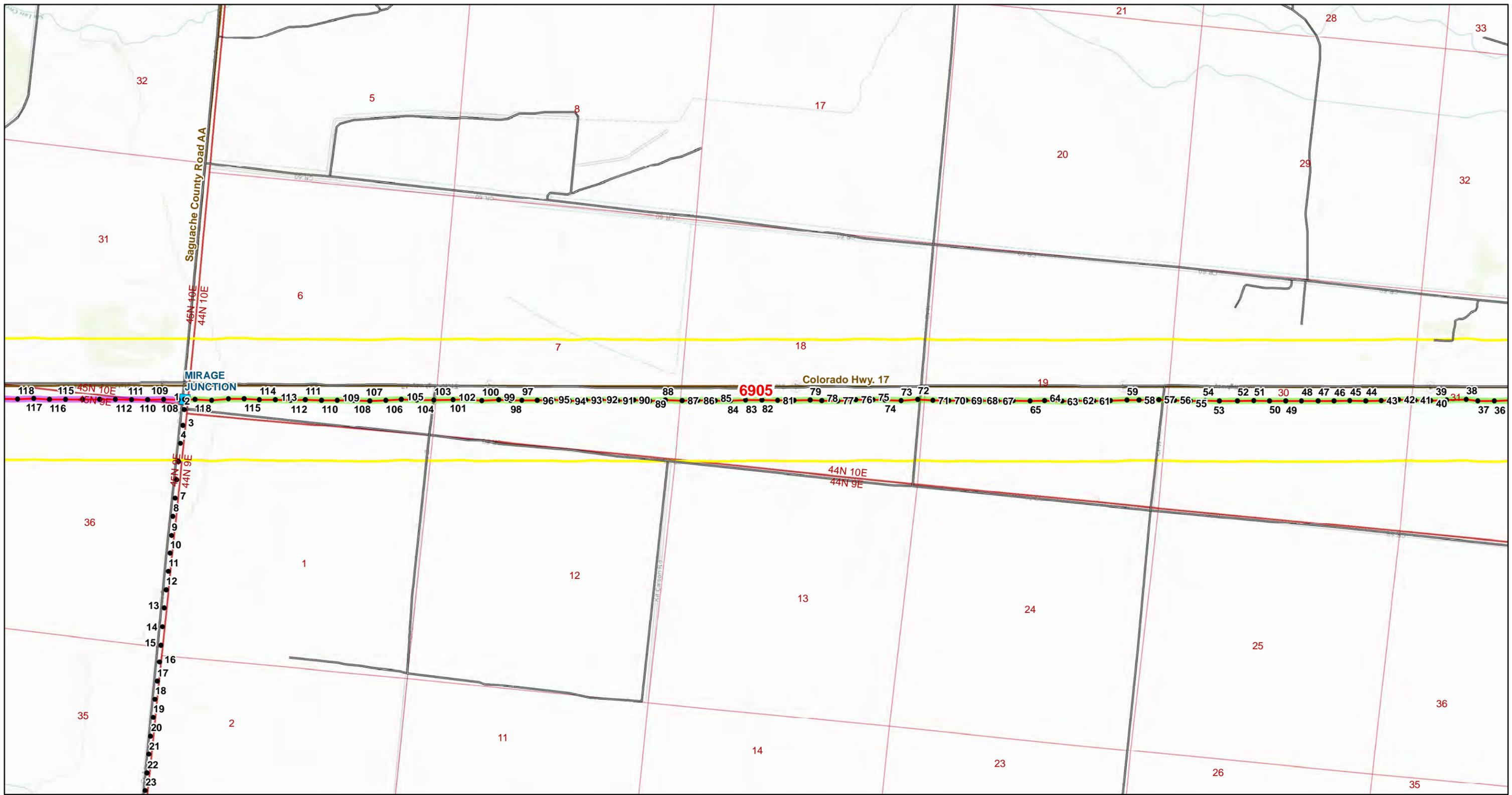
Projection: Transverse Mercator  
 UTM Zone 13 North  
 North American Datum of 1983  
 Source of background: ESRI

Page 14 of 19

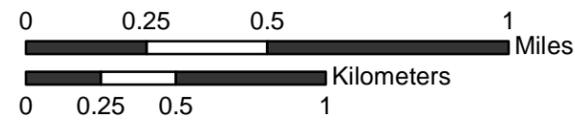
**HDR**

1 inch = 2,000 feet





- Existing Structures
- ▲ Access Points
- Lines
- Forest Service Roads
- State Land Board
- Substations
- Clearing
- Roads
- BLM Roads
- Forest Service Land
- ◆ Culverts
- Compaction
- Railroads
- ▨ Gunnison sage-grouse Occupied Habitat
- BLM Land
- Baca NWR
- ▭ 1/4 mile Survey Buffer
- ▭ Staging Area



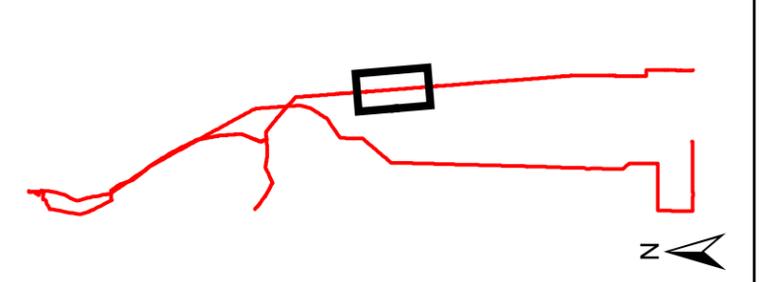
**Xcel Transmission Lines**  
**9811, 6905, 6920**

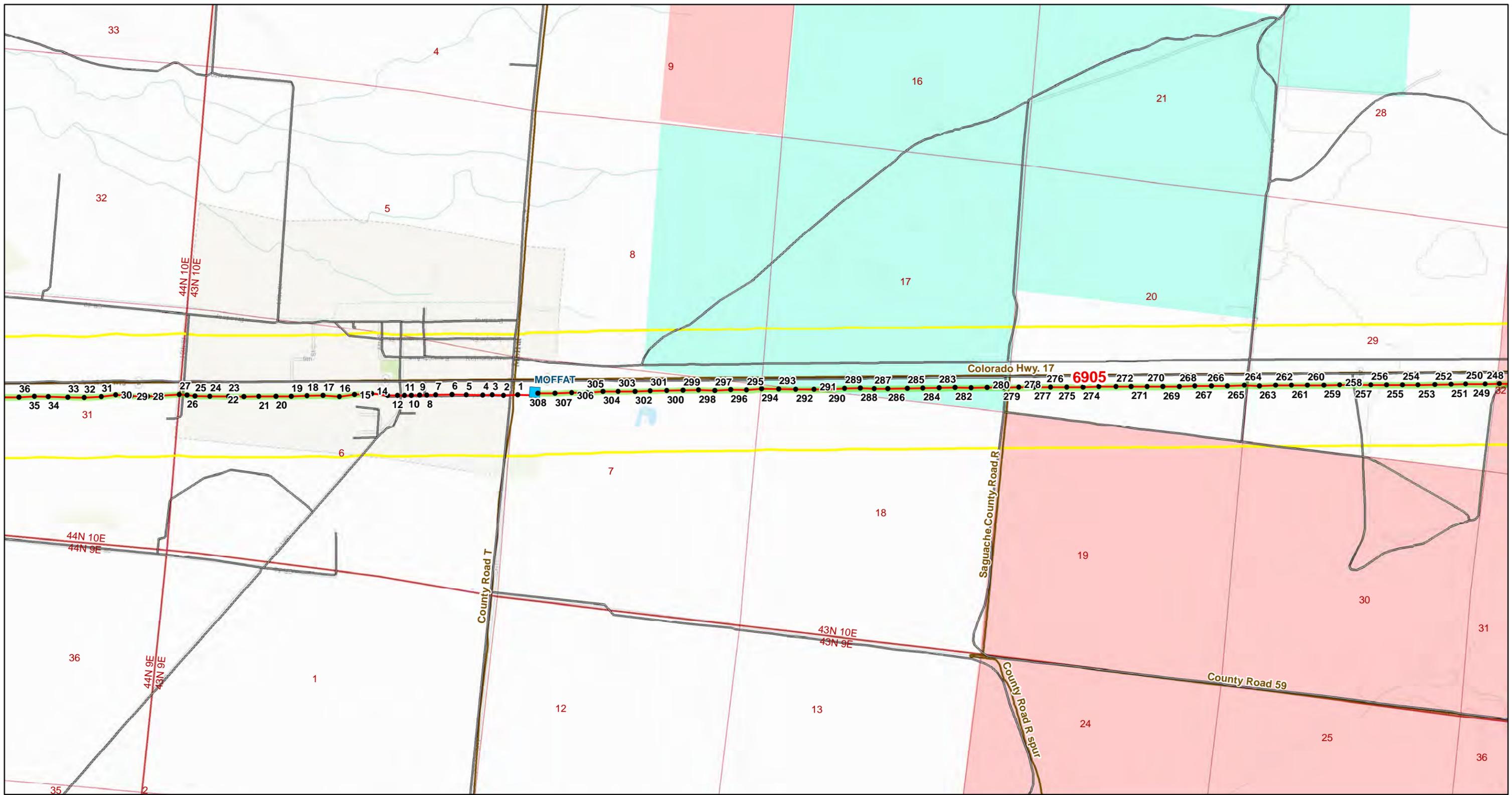
Projection: Transverse Mercator  
 UTM Zone 13 North  
 North American Datum of 1983  
 Source of background: ESRI

Page 15 of 19

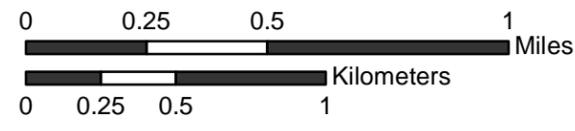
**HDR**

1 inch = 2,000 feet





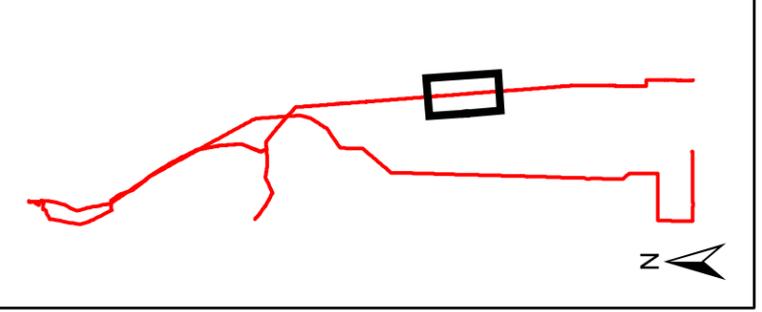
- Existing Structures
- ▲ Access Points
- Lines
- Forest Service Roads
- State Land Board
- Substations
- Clearing
- Roads
- BLM Roads
- Forest Service Land
- ◆ Culverts
- Compaction
- Railroads
- Gunnison sage-grouse Occupied Habitat
- BLM Land
- Baca NWR
- 1/4 mile Survey Buffer
- Staging Area

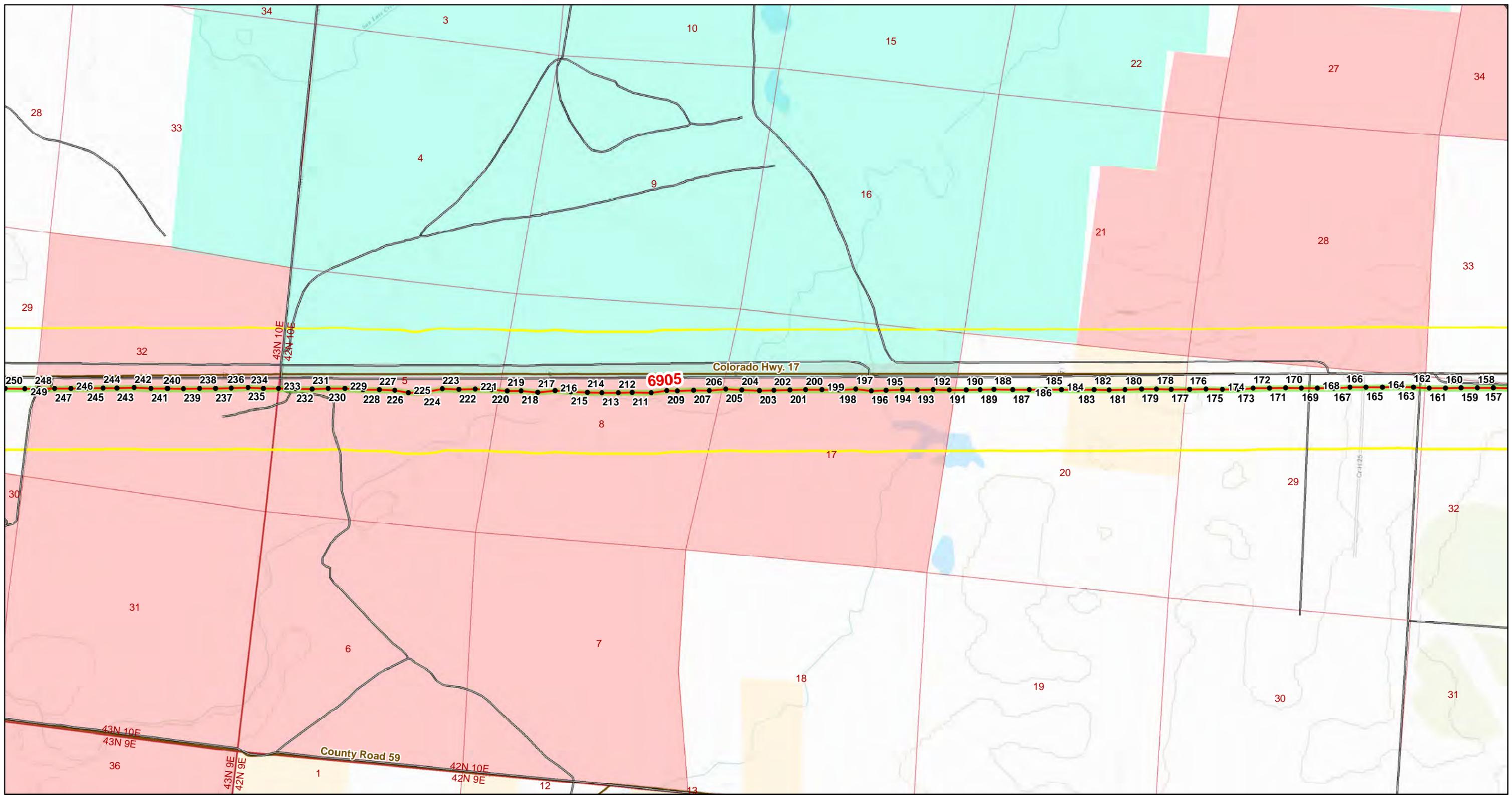


**Xcel Transmission Lines**  
**9811, 6905, 6920**

Projection: Transverse Mercator  
 UTM Zone 13 North  
 North American Datum of 1983  
 Source of background: ESRI

1 inch = 2,000 feet





• Existing Structures	▲ Access Points	— Lines	— Forest Service Roads	■ State Land Board
■ Substations	— Clearing	— Roads	— BLM Roads	■ Forest Service Land
◆ Culverts	— Compaction	— Railroads	▨ Gunnison sage-grouse Occupied Habitat	■ BLM Land
			■ 1/4 mile Survey Buffer	■ Baca NWR
			■ Staging Area	

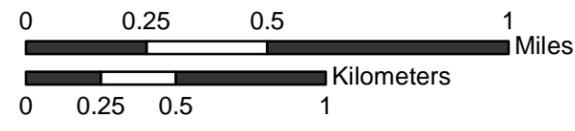
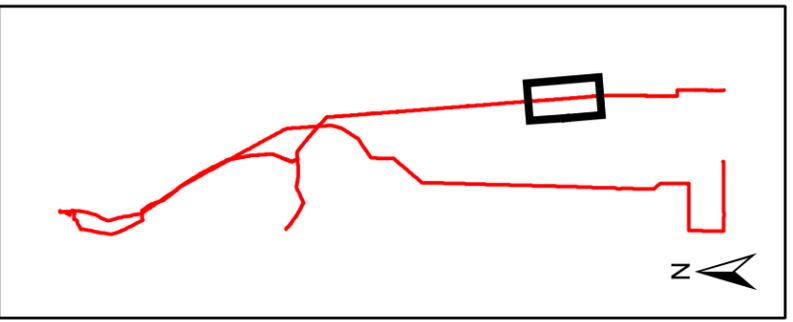
**Xcel Transmission Lines**  
**9811, 6905, 6920**

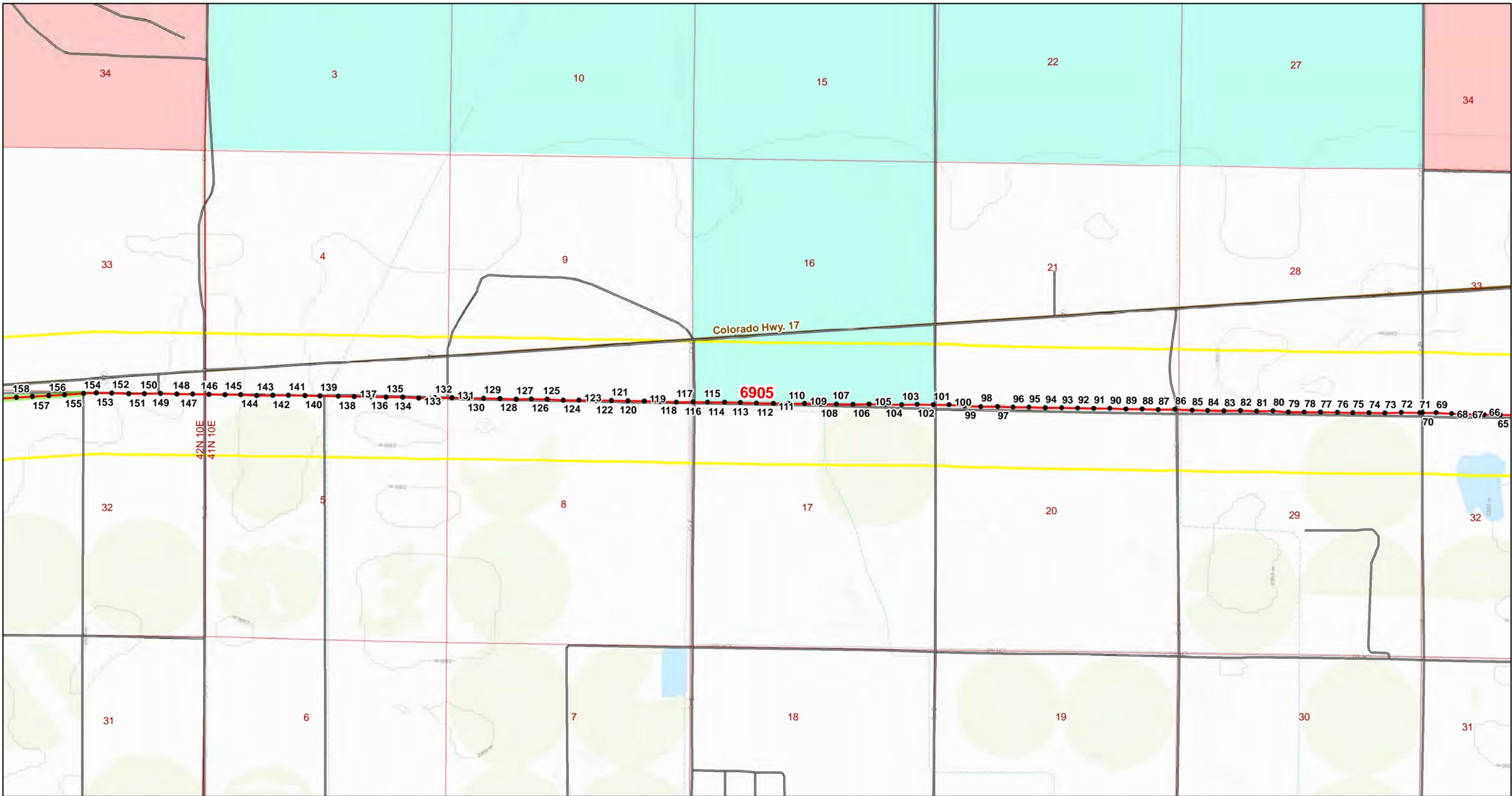
Projection: Transverse Mercator  
 UTM Zone 13 North  
 North American Datum of 1983  
 Source of background: ESRI

Page 17 of 19

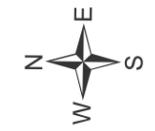
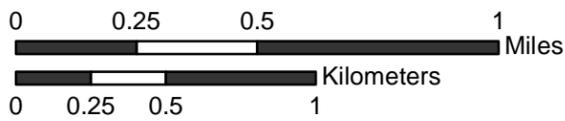
**HDR**

1 inch = 2,000 feet





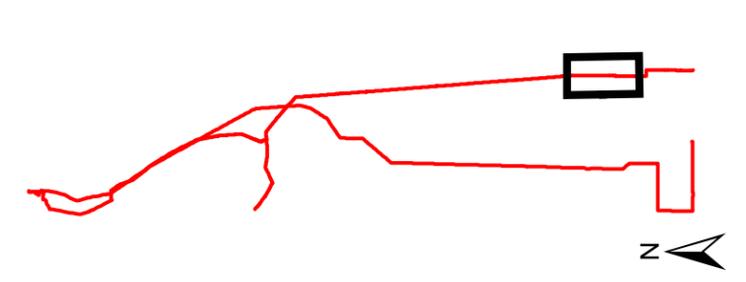
- Existing Structures
- ▲ Access Points
- Lines
- Forest Service Roads
- State Land Board
- Substations
- Clearing
- Roads
- BLM Roads
- Forest Service Land
- ◆ Culverts
- Compaction
- Railroads
- ▨ Gunnison sage-grouse Occupied Habitat
- BLM Land
- Baca NWR
- 1/4 mile Survey Buffer
- Staging Area

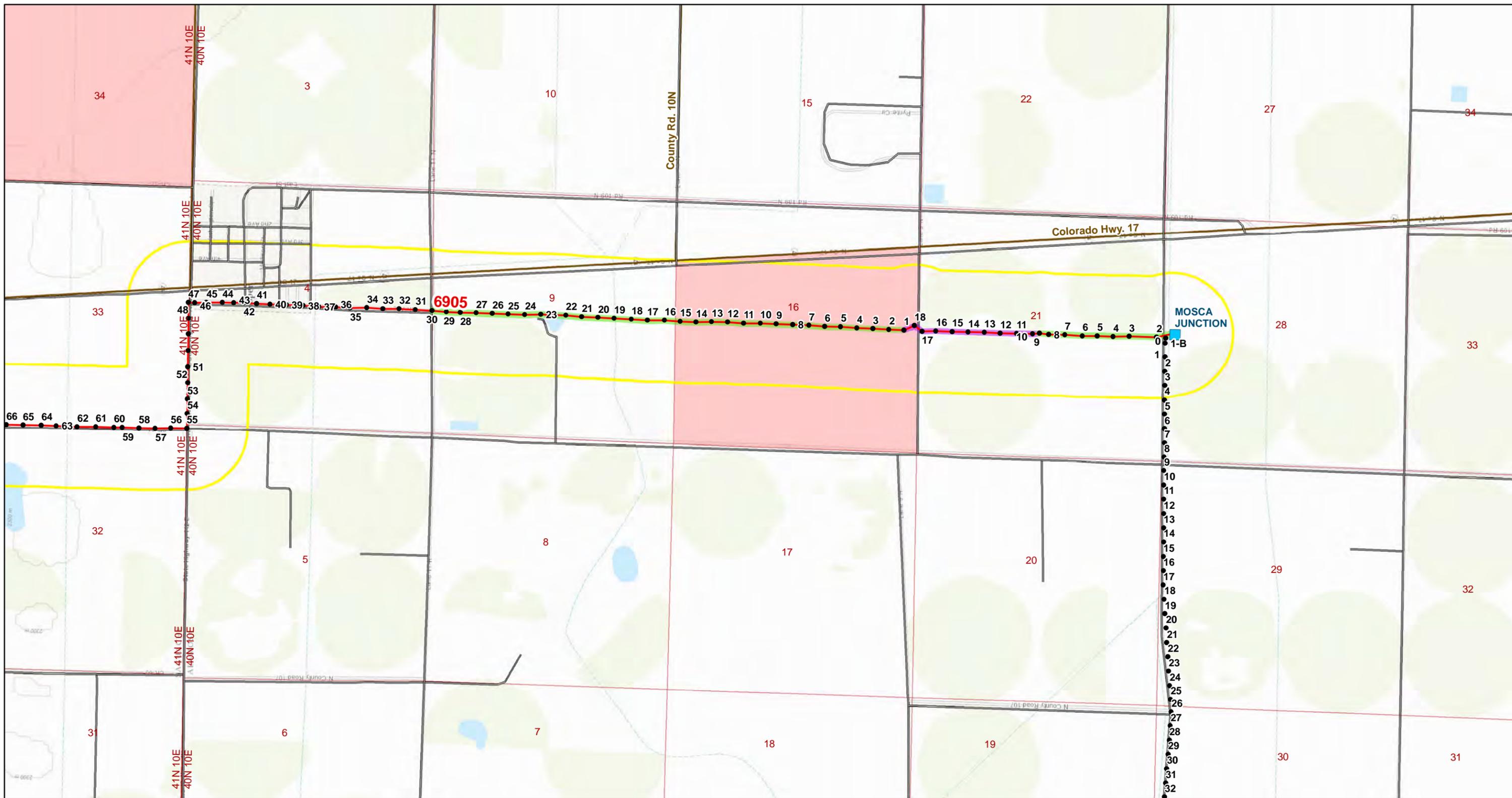


**Xcel Transmission Lines**  
**9811, 6905, 6920**

Projection: Transverse Mercator  
 UTM Zone 13 North  
 North American Datum of 1983  
 Source of background: ESRI

1 inch = 2,000 feet





• Existing Structures	▲ Access Points	— Lines	— Forest Service Roads	■ State Land Board
■ Substations	▬ Clearing	— Roads	— BLM Roads	■ Forest Service Land
◆ Culverts	▬ Compaction	— Railroads	▨ Gunnison sage-grouse Occupied Habitat	■ BLM Land
			▭ 1/4 mile Survey Buffer	■ Baca NWR
			▭ Staging Area	

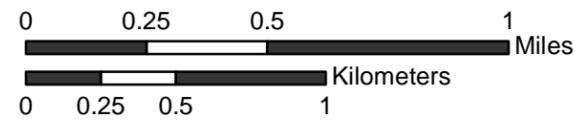
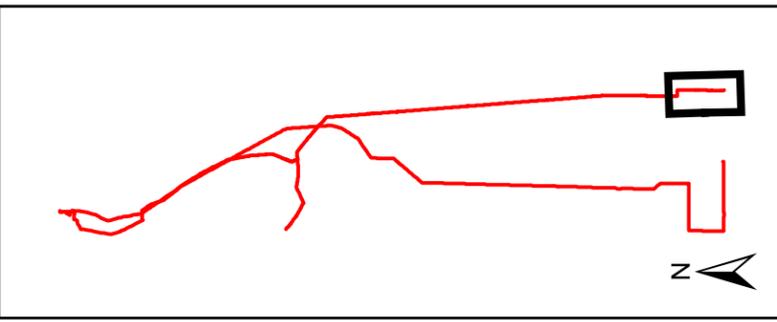
**Xcel Transmission Lines**  
**9811, 6905, 6920**

Projection: Transverse Mercator  
 UTM Zone 13 North  
 North American Datum of 1983  
 Source of background: ESRI

Page 19 of 19

**HDR**

1 inch = 2,000 feet



# **Appendix B**

Biological Resources Evaluation Support Material



**Appendix B**  
**Biological Resources Evaluation Support Material**

**Table B-1. Noxious Weeds Managed by Colorado**

Common Name	Scientific Name	Federal List	Colorado Noxious Weed List
Velvetleaf	<i>Abutilon theophrasti</i>		C
Russian knapweed	<i>Acroptilon repens</i>		B
Jointed goatgrass	<i>Aegilops cylindrical</i>		B
Camelthorn	<i>Alhagi pseudalhagi</i>		A
Spurred anoda	<i>Anoda cristata</i>		B
Corn chamomile	<i>Anthemis arvensis</i>		B
Mayweed chamomile	<i>Anthemis cotula</i>		B
Common burdock	<i>Arctium minus</i>		C
Absinth wormwood	<i>Artemisia absinthium</i>		B
Downy brome	<i>Bromus tectorum</i>		C
Hoary cress	<i>Cardaria draba</i>		B
Plumeless thistle	<i>Carduus acanthoides</i>		B
Musk thistle	<i>Carduus nutans</i>		B
Wild caraway	<i>Carum carvi</i>		B
Diffuse knapweed	<i>Centaurea diffusa</i>		B
Spotted knapweed	<i>Centaurea maculosa</i>		B
Meadow knapweed	<i>Centaurea pratensis</i>		A
Yellow starthistle	<i>Centaurea solstitialis</i>		A
Squarrose knapweed	<i>Centaurea virgata</i>		A
Rush skeleton weed	<i>Chondrilla juncea</i>		A
Oxeye daisy	<i>Chrysanthemum leucanthemum</i>		B
Chicory	<i>Cichorium intybus</i>		C
Canada thistle	<i>Cirsium arvense</i>		B
Bull thistle	<i>Cirsium vulgare</i>		B
Chinese clematis	<i>Clematis orientalis</i>		B
Poison hemlock	<i>Conium maculatum</i>		C
Field bindweed	<i>Convolvulus arvensis</i>		C
Common crupina	<i>Crupina vulgaris</i>	X	A
Houndstongue	<i>Cynoglossum officinale</i>		B
Yellow nutsedge	<i>Cyperus esculentus</i>		B
Common teasel	<i>Dipsacus fullonum</i>		B
Russian olive	<i>Elaeagnus angustifolia</i>		B
Quackgrass	<i>Elytrigia repens</i>		B
Redstem filaree	<i>Erodium cicutarium</i>		C
Cypress spurge	<i>Euphorbia cyparissias</i>		A
Leafy spurge	<i>Euphorbia esula</i>		B
Myrtle spurge	<i>Euphorbia myrsinites</i>		A

Common Name	Scientific Name	Federal List	Colorado Noxious Weed List
Halogeton	<i>Halogeton glomeratus</i>		C
Dame's rocket	<i>Hesperis matronalis</i>		B
Venice mallow	<i>Hibiscus trionum</i>		B
Orange hawkweed	<i>Hieracium aurantiacum</i>		A
Hydrilla	<i>Hydrilla verticillata</i>	X	A
Black henbane	<i>Hyoscyamus niger</i>		B
Common St. Johnswort	<i>Hypericum perforatum</i>		C
Dyer's woad	<i>Isatis tinctoria</i>		A
Perennial pepperweed	<i>Lepidium latifolium</i>		B
Sericiea lespedeza	<i>Lespedeza cuneata</i>		A
Dalmatian toadflax, broad-leaved	<i>Linaria dalmatica</i>		B
Dalmatian toadflax, narrow-leaved	<i>Linaria genistifolia</i>		B
Yellow toadflax	<i>Linaria vulgaris</i>		B
Purple loosestrife	<i>Lythrum salicaria</i>		A
Scentless chamomile	<i>Matricaria perforate</i>		B
Eurasian watermilfoil	<i>Myriophyllum spicatum</i>		B
Scotch cottonthistle	<i>Onopordum acanthium</i>		B
Bull cottonthistle	<i>Onopordum tauricum</i>		B
Wild proso millet	<i>Panicum miliaceum</i>		C
African rue	<i>Peganum harmala</i>		A
Sulfur cinquefoil	<i>Potentilla recta</i>		B
Prickly Russian thistle	<i>Salsola tragus</i>		-
Mediterranean sage	<i>Salvia aethiopsis</i>		A
Giant salvinia	<i>Salvinia molesta</i>	X	A
Bouncingbet	<i>Saponaria officinalis</i>		B
Tansy ragwort	<i>Senecio jacobaea</i>		A
Perennial sowthistle	<i>Sonchus arvensis</i>		C
Johnsongrass	<i>Sorghum halepense</i>		C
Medusahead	<i>Taeniatherum caputmedusae</i>		A
Salt Cedar	<i>Tamarisk spp.</i>		B
Common tansy	<i>Tanacetum vulgare</i>		B
Puncturevine	<i>Tribulus terrestris</i>		C
Moth mullein	<i>Verbascum blattaria</i>		B
Common mullein	<i>Verbascum Thapsus</i>		C

**Notes:**

List A includes noxious weeds targeted for eradication and for which management plans have been developed for their control. Control of these species is required by law.

List B species are recommended for control, but management plans have not yet been developed for these species and control is not required by law.

List C species are generally considered too widespread to effectively control, and control of List C species is not required.

**Table B-2. Special Status Species and their Potential for Occurrence within the Project Area**

Common Name (Scientific Name)	Status	Preferred Habitat	Potential Occurrence in the Project Area
<b>Mammals</b>			
American Hog-nosed Skunk ( <i>Conepatus leuconotus</i> )	USFS	Occurs in canyons, stream sides, and rocky terrain.	Unlikely. Based on the current distribution of this species.
American Marten ( <i>Martes americana</i> )	USFS	Spruce-fir and lodgepole pine mature to old-growth forests with moderate to high density canopy closures and abundant snags and logs; 8,000 – 13,000 ft.	Unlikely. No suitable habitat.
Big Free-tailed Bat ( <i>Nyctinomops macrotis</i> )	BLM	Inhabitant of rugged, rocky habitats in arid landscapes.	Unlikely. Only five scattered records exist from Mesa, Otero, El Paso, Gunnison, and Weld counties, with the northernmost from Greeley.
Black-Footed Ferret ( <i>Mustela nigripes</i> )	FE, SE	Needs prairie dog town or complexes of >200 acres. Complexes consist of 2+ neighboring towns within 4.3 miles of each other.	Extirpated in Saguache County. The only known population is located northwest Colorado (Rio Blanco and Moffat Counties).
Black-Tailed Prairie Dog ( <i>Cynomys ludovicianus</i> )	SC	Highest densities in CO found on lands held by developers adjacent to or within urban areas such as Denver, Boulder, and Aurora.	Unlikely.
Botta's Pocket Gopher ( <i>Thomomys bottae rubidus</i> )	SC	Woodlands, chaparral, scrubland, and agricultural land, being limited only by rocky terrain, barren deserts, and major rivers.	Unlikely. Not identified as 'Known/Likely to Occur' in Saguache and Chaffee counties. Occurs in southern CO.
Canada Lynx ( <i>Lynx canadensis</i> )	FT, SE	Dense subalpine forest, spruce-fir, aspen-mixed conifer forests and dense willow corridors along mountain streams generally above 8,000 feet above sea level.	Moderate. Restricted to extremely isolated areas of the mountains of the central portion of the state; however, there is suitable foraging and denning habitat in the project area.
Fringed Myotis ( <i>Myotis thysanodes</i> )	USFS	Ponderosa pine and piñon-juniper woodlands, greasewood, oakbrush, and saltbrush shrublands; prefer coniferous woodlands and desert scrub habitats.	Moderate. Identified as 'Likely to Occur' although abundance in Saguache and Chaffee counties is unknown.
Gray Wolf ( <i>Canis lupus</i> )	FE, SE	Large areas of contiguous habitat that can include forests and mountainous terrain.	Unlikely. No authentic records of wolves in Colorado exist past 1935.
Grizzly Bear ( <i>Ursus arctos</i> )	FT, SE	Found in many different habitats, from dense forests to subalpine meadows, open plains and arctic tundra.	Unlikely. Although grizzly bears were once common throughout Colorado, there are presently no known populations.

Common Name (Scientific Name)	Status	Preferred Habitat	Potential Occurrence in the Project Area
<b>Mammals (continued)</b>			
Gunnison's Prairie Dog ( <i>Cynomys gunnisoni</i> )	FC, USFS, BLM	Inhabit shrub- grassland habitat between 6,000 – 12,000 ft. in mesic plateaus, intermountain valleys, benches & arid lowlands.	High. Pockets of suitable habitat exist in the vicinity. Colonies have been observed in the vicinity of the project during 2013 surveys.
Hoary Bat ( <i>Lasiurus cinereus</i> )	FS	In Colorado, Douglas-fir and ponderosa forests where large deciduous trees are lacking.	Moderate. Identified as 'Known to Occur' with a common abundance in Saguache and Chaffee counties.
Kit Fox ( <i>Vulpes macrotis</i> )	SE	Arid climates, such as desert scrub, chaparral, and grasslands.	Unlikely. To date only one small population has been located, near Delta.
North American Wolverine ( <i>Gulo gulo luscus</i> )	SE, USFS	High elevations in southern distribution that consist of cold, snowy habitats that maintain deep, persistent snow late into the warm season.	Unlikely. Minimal suitable habitat. Inhabits boreal forests, bogs, lowlands, and tundra.
Northern Pocket Gopher ( <i>Thomomys talpoides macrotis</i> )	SC	A wide variety of vegetation communities including semidesert shrublands, grasslands, forests, and alpine tundra.	Moderate. Suitable habitat occurs in the project area.
Preble's Meadow Jumping Mouse ( <i>Zapus hudsonius preblei</i> )	FT, ST	Lives primarily in heavily vegetated, shrub dominated riparian (streamside) habitats and immediately adjacent upland habitats.	Unlikely. Not identified as 'Known/Likely to Occur' in Saguache and Chaffee counties.
Pygmy Shrew ( <i>Sorex hoyi</i> )	USFS	Inhabits moist coniferous forests.	Unlikely. No suitable habitat.
River Otter ( <i>Lontra canadensis</i> )	ST, USFS	Inhabits streams, lakes, reservoirs, wetlands and marine coasts.	Unlikely. No suitable habitat.
Rocky Mountain Bighorn Sheep ( <i>Ovis canadensis canadensis</i> )	USFS	Open or semi-open, often precipitous, terrain characterized by a mix of steep or gentle slopes, broken cliffs, rock outcrops, and canyons and their adjacent river benches and mesa tops.	Moderate. Identified as 'Known to Occur' with a fairly common to common abundance in Saguache and Chaffee counties.
Swift Fox ( <i>Vulpes velox</i> )	SC	Inhabits open prairies, plains, and shrubby desert areas away from extensively cultivated land.	Unlikely. No suitable habitat.
Townsend's Big-Eared Bat ( <i>Corynorhinus townsendii pallescens</i> )	SC, USFS, BLM	Highly associated with caves and mines. Foraging associations include edge habitats along streams, adjacent to and within a variety of wooded habitats.	Moderate. Suitable foraging habitat exists within the project area. Identified as 'Known to Occur' in Saguache and Chaffee counties although abundance is unknown.
<b>Birds</b>			
American Peregrine Falcon ( <i>Falco peregrinus anatum</i> )	SC, USFS	Foothill and mountain cliffs surrounded by piñon-juniper or ponderosa pine woodlands.	Moderate. This species has been documented foraging around wetlands and marshes near the project area. However, no known nesting habitat occurs within the vicinity of the project area.

Common Name (Scientific Name)	Status	Preferred Habitat	Potential Occurrence in the Project Area
<b>Birds (continued)</b>			
American White Pelican ( <i>Pelecanus erythrorhynchos</i> )	BLM	Shallow water on inland marshes, along lake or river edges, and in wetlands.	Unlikely. No suitable habitat.
Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	SC, USFS, BLM	Generally nests and roosts in proximity to large water bodies including rivers, lakes, and reservoirs.	High. A documented winter night roost site is within 2,000 feet of the project area.
Black Swift ( <i>Cypseloides niger</i> )	USFS	A variety of landscapes, from seacoasts to the Rocky Mountains. Nest on vertical or precipitous cliffs or rock faces near or behind high waterfalls, or in dripping caves.	Low. Nesting has been documented in the Salida Ranger District and foraging habitat exists in the area; however, none were found during the 2013 surveys.
Boreal Owl ( <i>Aegolius funereus</i> )	USFS	Primarily mature spruce-fir forests, but can also be found in lodgepole pine, mixed conifer, Douglas-fir, and aspen interspersed with meadows.	Low. Boreal owls tend to avoid openings, such as clearcuts and open meadows, except for occasional use of edges for foraging.
Brewer's Sparrow ( <i>Spizella breweri</i> )	USFS, BLM	Breeds primarily in sagebrush shrublands, but also occurs in mountain rabbitbrush. In migration they frequent wooded, brushy and weedy agricultural and urban areas.	High. Suitable habitat is present in the vicinity. Individuals were observed during the 2013 surveys; however, no nests were found.
Burrowing Owl ( <i>Athene cunicularia</i> )	ST	Open country from desert scrub to grasslands. Often found in or around prairie dog colonies.	Low. Suitable habitat is present in the vicinity; however, no individuals or nests were observed during the 2013 surveys.
Columbian Sharp-Tailed Grouse ( <i>Tympanuchus phasianellus columbianus</i> )	SC	Found in native bunchgrass and shrub-steppe communities.	Unlikely. No suitable habitat.
Ferruginous Hawk ( <i>Buteo regalis</i> )	SC, USFS, BLM	Open grassland and shrub- steppe habitats. Nests on the ground, usually on a hill or rock outcrop.	Moderate. Suitable habitat is present in the vicinity; however, no individuals or nests were observed during the 2013 surveys.
Flammulated Owl ( <i>Otus flammeolus</i> )	USFS	Mature to old-growth ponderosa pine and ponderosa-Douglas-fir forests, often mixed with mature aspen.	Moderate. Suitable habitat occurs in the vicinity of the project area; however, none found or heard during 2013 surveys.
Golden Eagle ( <i>Aquila chrysaetos</i> )	USFWS	A diversity of habitats from grasslands, shrublands, piñon-juniper woodlands, and ponderosa pine forests, ranging into other areas during migration and winter.	Moderate. This species was observed along the ROW on private lands during the 2013 surveys.
Greater Sage Grouse ( <i>Centrocercus urophasianus</i> )	SC	Sagebrush grasslands.	Unlikely. Not identified as 'Known/Likely to Occur' in Saguache and Chaffee counties.

Common Name (Scientific Name)	Status	Preferred Habitat	Potential Occurrence in the Project Area
<b>Birds (continued)</b>			
Greater Sandhill Crane ( <i>Grus canadensis tabida</i> )	SC	Flooded fields, wetlands, marshes, meadows, and agricultural fields.	Moderate. A large number of greater sandhill cranes migrate through the San Luis Valley in the fall and spring.
Gunnison Sage-Grouse ( <i>Centrocercus minimus</i> )	FE, USFS, BLM	Sagebrush grasslands.	High. Occupied habitat and production areas have been identified in the project area.
Least Tern ( <i>Sterna antillarum</i> )	FE, SE	Feeds in shallow waters of rivers, streams, and lakes.	Unlikely. No suitable habitat occurs in the project area.
Lesser Prairie-Chicken ( <i>Tympanuchus pallidicinctus</i> )	FT, ST	Occupies sandsage and sandsage-bluestem grassland plant communities.	Unlikely. No suitable habitat.
Lewis's Woodpecker ( <i>Melanerpes lewis</i> )	USFS	Occurs in lowland and foothill riparian forests, agricultural areas, urban areas with tall deciduous trees and foothills.	Unlikely. No suitable habitat.
Loggerhead Shrike ( <i>Lanius ludovicianus</i> )	USFS	Open riparian areas, agricultural areas, grasslands, and shrublands, especially semi-desert shrublands, and piñon-juniper woodlands.	Low. Identified as 'Known to Occur' in Chaffee and Saguache counties; although abundance is considered rare to uncommon.
Long-Billed Curlew ( <i>Numenius americanus</i> )	SC	Short-grass prairie with scattered playas. Feeds along lake and reservoir edges during migration.	Low. This species has been documented migrating through the vicinity; however no suitable nesting habitat occurs within the project area.
Mexican Spotted Owl ( <i>Strix occidentalis lucida</i> )	FT, ST	Mixed conifer and rocky canyons.	High. Suitable habitat occurs in the project area; however, none found or heard during 2013 surveys.
Mountain Plover ( <i>Charadrius montanus</i> )	SC, USFS, BLM	Native short-grass prairie, stunted shrublands, agricultural fields, and overgrazed pastures.	Low. Very few records exist for the San Luis Valley. Suitable habitat occurs in the vicinity of the project area.
Northern Goshawk ( <i>Accipiter gentilis</i> )	USFS, BLM	Mixed hardwood and coniferous forests in temperate and boreal regions from 7,500 to 11,000 feet.	High. Adult and juvenile Northern goshawks were observed in northern part of the project area; however, no nests were found.
Northern Harrier ( <i>Circus cyaneus</i> )	USFS	Grasslands, agricultural areas, and marshes, but also range up to the alpine tundra.	High. This species was observed along the ROW on private lands during the 2013 surveys.
Olive-sided Flycatcher ( <i>Contopus cooperi</i> )	USFS	Mature spruce/fir forest, particularly with large conifers, bogs, and meadows present.	High. This species was observed along the ROW during the 2013 surveys.
Plains Sharp-Tailed Grouse ( <i>Tympanuchus phasianellus jamesii</i> )	SE	Prairie ecosystems.	Unlikely. Rare to uncommon resident in Douglas County.

Common Name (Scientific Name)	Status	Preferred Habitat	Potential Occurrence in the Project Area
<b>Birds (continued)</b>			
Piping Plover ( <i>Charadrius melodus circumcinctus</i> )	FT, ST	Inhabits mudflats and shorelines of reservoirs and lakes.	Unlikely. No suitable habitat.
Prairie Falcon ( <i>Falco mexicanus</i> )		Migrants and winter residents occur in grasslands, shrublands, and agricultural areas.	Low. This species is a rare summer resident in the San Luis Valley. Wintering birds could forage along the ROW.
Southwestern Willow Flycatcher ( <i>Empidonax traillii extimus</i> )	FE, SE	Dense riparian woody vegetation, (especially willow thickets).	Low. Marginally suitable habitat occurs in the vicinity of the project area.
Western Snowy Plover ( <i>Charadrius nivosus nivosus</i> )	SC, BLM	Inhabits sandy beaches, dry salt flats, river bars, and alkali covered playas.	Unlikely. No suitable habitat.
White-faced Ibis ( <i>Plegadis chihi</i> )	USFS, BLM	Wet meadows, marsh edges, and reservoir shorelines.	Moderate. Fairly common spring migrant in the San Luis Valley. Identified as 'Known to Occur' in Saguache County.
White-tailed Ptarmigan ( <i>Lagopus leucura</i> )	USFS	Alpine habitats.	Unlikely. Occurs in alpine tundra. Identified as 'Known to Occur' in Chaffee and Saguache counties; although abundance is considered rare to uncommon.
Whooping Crane ( <i>Grus americana</i> )	FE, SE	Inhabits mudflats around reservoirs and in agricultural areas.	Unlikely. No suitable habitat.
Yellow-Billed Cuckoo ( <i>Coccyzus americanus</i> )	PT, SC	Relatively large, contiguous patches of multilayered riparian habitat consisting of cottonwood/willow tree species.	Suitable habitat does not occur in the vicinity of the project area.
<b>Reptiles</b>			
Common Garter Snake ( <i>Thamnophis sirtalis</i> )	SC	Occurs in northeastern Colorado along the South Platte River and its tributaries and in the North Fork Republican River drainage in Yuma County.	Unlikely. Suitable habitat is not in the counties or watersheds of the project area.
Common King Snake ( <i>Lampropeltis getula</i> )	SC	A habitat generalist, found in deserts, riparian areas, woodlands, forests, and farmland.	Unlikely. Not identified as 'Known/Likely to Occur' in Saguache and Chaffee counties.
Longnose Leopard Lizard ( <i>Gambelia wislizenii</i> )	SC	Occurs in west-central Colorado and extreme southwestern Colorado at elevations below about 5,200 feet.	Unlikely.
Massasauga ( <i>Sistrurus catenatus</i> )	SC	Occurs in southeastern Colorado at elevations below 5,500 feet.	Unlikely. Not identified as 'Known/Likely to Occur' in Saguache and Chaffee counties.
Midget Faded Rattlesnake ( <i>Crotalus viridis concolor</i> )	SC	Rocky outcrops with southern exposure for denning.	Unlikely. Identified as 'Known to Occur' in Chaffee and Saguache counties; although abundance is considered rare to uncommon.

Common Name (Scientific Name)	Status	Preferred Habitat	Potential Occurrence in the Project Area
<b>Reptiles (continued)</b>			
Milk Snake ( <i>Lampropeltis triangulum taylori</i> )	BLM	Shortgrass prairie, sandhills, shrubby hillsides, canyons and open stands of ponderosa pine in foothills, piñon-juniper woodlands, and arid river valleys.	Moderate. Identified as 'Likely to Occur' in Saguache County. Suitable habitat occurs in the project area; however, none were found during the 2013 surveys.
Roundtail Horned Lizard ( <i>Phrynosoma modestum</i> )	SC	Sandy, semi-arid with sparse vegetation.	Unlikely. Known distribution is restricted to a small area south-southeast of Fowler in extreme northwestern Otero County.
Texas Blind Snake ( <i>Leptotyphlops dulcis</i> )	SC	Deserts, prairies and mountain slopes in arid areas.	Unlikely. Known from elevations of about 4,300–5,000 feet in southeastern Colorado.
Texas Horned Lizard ( <i>Phrynosoma cornutum</i> )	SC	Arid and semiarid habitats in open areas with sparse plant cover.	Unlikely. Occurs chiefly south of the Arkansas River at elevations below about 6,000 feet in southeastern Colorado.
Triploid Checkered Whiptail ( <i>Cnemidophorus neotesselatus</i> )	SC	Grassland-surrounded rocky arroyo habitat.	Unlikely. This species occurs only in southeastern Colorado.
Yellow Mud Turtle ( <i>Kinosternon flavescens</i> )	SC	Prefers a sandy habitat and spends as much time on land as in the water. Its aquatic habitats include rivers, sloughs, ponds, water-filled ditches, marshes, oxbow lakes, and flooded fields.	Unlikely. Occurs in eastern Colorado in the Republican, Arkansas, and Cimarron River drainages.
<b>Amphibians</b>			
Boreal Toad ( <i>Bufo boreas boreas</i> )	SE, USFS	Breeds in ponds and over-winters in refugia within lodgepole pine, spruce fir forests, and alpine meadows; 7,500-12,000 ft.	Moderate. Potential habitat within the project area.
Couch's Spadefoot ( <i>Scaphiopus couchii</i> )	SC	Grasslands and deserts.	Unlikely. Occurs in Colorado in Otero County at elevations of 4,000-4,500 ft.
Great Plains Narrowmouth Toad ( <i>Gastrophryne olivacea</i> )	SC	A range of habitats, but most frequently on moist ground or in leaf litter, and under rocks or fallen logs.	Unlikely. Occurs in southeastern Colorado at elevations of about 4,000–5,000 feet.
Northern Cricket Frog ( <i>Acris crepitans</i> )	SC	Prefer the edges of slow-moving, permanent bodies of water.	Unlikely. Known from the North Fork and South Fork of the Republican River in Yuma County.
Northern Leopard Frog ( <i>Rana pipiens</i> )	SC, USFS, BLM	Banks and shallow portions of marshes, ponds, lakes, reservoirs, beaver ponds and streams, especially those with rooted aquatic vegetation up to 11,000 ft.	Moderate. Suitable habitat exists in the vicinity of the project area.

Common Name (Scientific Name)	Status	Preferred Habitat	Potential Occurrence in the Project Area
<b>Amphibians (continued)</b>			
Plains Leopard Frog ( <i>Rana blairi</i> )	SC	Found in or very near permanent water sources, such as streams, creeks, and ponds.	Unlikely. Occurs in the Great Plains portion of the Arkansas River drainage in southeastern Colorado and the Republican River drainage in northeastern Colorado.
Wood Frog ( <i>Rana sylvatica</i> )	SC	Forest-dwelling organisms that breed primarily in ephemeral, freshwater wetlands.	Unlikely. The project area is outside the known range of this species.
<b>Fish</b>			
Arkansas Darter ( <i>Etheostoma cragini</i> )	ST	Headwater streams and mountain lakes.	Unlikely. Occurs within the Fountain Creek, Rush Creek, and Big Sandy Creek drainages.
Bonytail Chub ( <i>Gila elegans</i> )	FE, SE	Large, fast flowing waterways of the Colorado River watershed.	Project area is not in the Colorado River watershed.
Brassy Minnow ( <i>Hybognathus hankinsoni</i> )	ST	Prefer clear water and weedy ponds and streams.	Unlikely. Found in low numbers in the South Platte, and Republican rivers.
Colorado Pike Minnow ( <i>Ptychocheilus lucius</i> )	FE, ST	Green, Yampa, White, Colorado, Gunnison, San Juan, and Dolores Rivers in Colorado River watershed.	Project area is not in the watersheds of known range.
Colorado River Cutthroat Trout ( <i>Oncorhynchus clarki pleuriticus</i> )	SC	Headwater streams and mountain lakes.	Unlikely. Limited to a few headwater streams of the Green and upper Colorado rivers.
Colorado Roundtail Chub ( <i>Gila robusta</i> )	SC	Native to the Colorado River drainage basin, including the Gila River and other tributaries.	Unlikely. Endemic to the Colorado River Basin.
Common Shiner ( <i>Luxilus cornutus</i> )	ST	Common shiner can be found in rivers and streams, usually in the faster pool.	Unlikely. Found in only four streams, tributary to the South Platte River; of those, only in West Plum Creek is the species fairly common.
Flathead Chub ( <i>Platygobio gracilus</i> )	SC	Restricted to the Arkansas and Rio Grande rivers in the southern part of the state.	Low.
Greenback Cutthroat Trout ( <i>Oncorhynchus clarki stomias</i> )	FT, ST	Well-oxygenated headwaters of mountain streams; restricted to one drainage in the Pike National Forest.	Not known to occupy project area section of the Arkansas River drainage; preferred habitat not present.
Humpback Chub ( <i>Gila cypha</i> )	FE, ST	Deep, fast-moving, turbid waters with large boulders and/or cliffs.	Rivers and associated watersheds of known range are not located within the project area.

Common Name (Scientific Name)	Status	Preferred Habitat	Potential Occurrence in the Project Area
<b>Fish (continued)</b>			
Iowa Darter ( <i>Etheostoma exile</i> )	SC	Lakes and streams.	Unlikely. Found in some plains streams in northeastern Colorado; Plum Creek and single locations on the Saint Vrain and Big Thompson River and Eleven Mile Reservoir in South Park.
Lake Chub ( <i>Couesius plumbeus</i> )	SE	Lakes, rivers, and streams.	Unlikely. Within Colorado, the species was historically limited to Platte River drainage.
Mountain Sucker ( <i>Catostomus platyrhynchus</i> )	SC	Rivers.	Unlikely. In Colorado, populations are found in the northwestern part of the state.
Northern Redbelly Dace ( <i>Phoxinus eos</i> )	SE	Found in cool, quiet, boggy streams and lakes.	Unlikely. Native to the South Platte River Basin.
Plains Minnow ( <i>Hybognathus placitus</i> )	SE	Found in low gradient silt-laden large rivers and streams, with slower water, and side pools of silty streams.	Unlikely. No suitable habitat.
Plains Orangethroat Darter ( <i>Etheostoma spectabile</i> )	SC	Primarily an upland species; preferring alkaline waters.	Unlikely. Restricted to the Republican River Basin on the eastern side of the state.
Razorback Sucker ( <i>Xyrauchen texanus</i> )	FE, SE	Deep, clear to turbid waters of large rivers and lakes.	Rivers and associated watersheds of known range are not located within the project area.
Rio Grande Chub ( <i>Gila pandora</i> )	SC, USFS, BLM	Range is confined to the headwaters of the Rio Grande surrounding the San Luis Valley.	Low. Occurs in the Rio Grande Basin of southern Colorado.
Rio Grande Cutthroat Trout ( <i>Oncorhynchus clarki virginalis</i> )	SC, USFS, BLM	This species like other cutthroat trout species prefers clear, cold streams and lakes.	Known range is confined to the headwaters of the Rio Grande, outside of the project area.
Rio Grande Sucker ( <i>Catostomus plebeius</i> )	SE	This species prefers small streams with clear water, pools, and riffles.	Low. This species is endemic to the Rio Grande Basin in Colorado.
Southern Redbelly Dace ( <i>Phoxinus erythrogaster</i> )	SE	Clear-flowing streams and rivers.	Unlikely. Populations occur in the headwaters of the Arkansas River near Pueblo and Cañon City.
Stonecat ( <i>Noturus flavus</i> )	SC	Large creeks and small rivers.	Unlikely. Only ever collected from the Republican River near the Colorado border, the North Fork of the Republican River, and the Saint Vrain River.
Suckermouth Minnow ( <i>Phenacobius mirabilis</i> )	SE	Small to medium creeks.	Unlikely. Limited to the eastern plains, in portions of the mainstem South Platte and lower mainstem and some tributaries of the Arkansas Rivers.

Common Name (Scientific Name)	Status	Preferred Habitat	Potential Occurrence in the Project Area
<b>Invertebrates</b>			
Hudsonian Emerald ( <i>Somatochlora hudsonica</i> )	USFS	Lakes, ponds, and marshes.	Unlikely. Known from seven locales in Colorado; all sites are within a 40-mile radius of Boulder.
Rocky Mountain Capshell ( <i>Acroloxus coloradensis</i> )	SC, USFS	High altitude ponds and lakes.	Unlikely. Only known from six locations in Colorado. The Boulder County population possibly the southern extent of its distribution.
Susan's Purse-making Caddisfly ( <i>Ochrotrichia susanae</i> )	USFS	Inhabits wetlands found outside of the proposed project area.	Unlikely. Local endemic found in springs and seeps in Chaffee and Park counties.
Uncompahgre Fritillary Butterfly ( <i>Boloria acrocneema</i> )	FE	Inhabits alpine habitat above 12,400 feet with large patches of snow willow.	Project area is lower in elevation than required habitat.
<b>Plants</b>			
Fragile Rockbrake ( <i>Cryptogramma stelleri</i> )	BLM	Moist wooded slopes and rock outcrops.	Unlikely. No suitable habitat present.
Pale blue-eyed grass ( <i>Sisyrinchium pallidum</i> )	BLM	Wetlands, fens, and riparian corridors, limited occurrences in Saguache County.	Moderate. Limited habitat within project area exists.
Ripley's Milkvetch ( <i>Astragalus ripleyi</i> )	BLM	Sagebrush and ponderosa pine at elevation below 8,250 ft.	Unlikely. No suitable habitat present.
Bill's 'Rock loving' neoparrya ( <i>Neoparrya lithophila</i> )	BLM, USFS	Rock shelves or in cracks of volcanic cliffs and rock outcrops.	Unlikely. No suitable habitat present.
Slender spiderflower ( <i>Cleome multicaulis</i> )	BLM	Saline/alkaline soils at edge of wetlands.	Moderate. Limited habitat within project area exists.
Skiff milkvetch ( <i>Astragalus microcymbus</i> )	FC	Sparsely vegetated slopes within open sagebrush.	No suitable habitat in the project area and is outside of the known range of the species.

Sources: CPW 2014, NDIS 2014, USFWS 2005a, USFWS 2014, Wrigley et al. 2012, USFWS 2011, BLM 2009

Notes:

ROW - right of way

FE - Federally Endangered; FT - Federally Threatened; FC - Federal Candidate;

PT - Federally Proposed Threatened; PE - Federally Proposed Endangered

SE - State Endangered; ST - State Threatened; SC - State Species of Concern (not a statutory category)

USFS - Forest Service Sensitive

BLM - Bureau of Land Management Sensitive

**Species included in the analysis with a ‘LOW’ potential for occurrence in the project area include:**

**Black swift (*Cypseloides niger*).** Swifts invariably nest on vertical or precipitous cliffs or rock faces near or behind high waterfalls, or in dripping caves. Other than the above requirement, they inhabit a variety of landscapes, from seacoasts to the Rocky Mountains. Foraging birds range at high elevations widely (over most montane and adjacent lowland habitats and the adults typically return to feed the young at in the evening. They sometimes cruise over the summits of 14,000 feet peaks and over croplands or deserts 25 miles from nesting colonies (Wrigley et al. 2012).

**Boreal owl (*Aegolius funereus*).** This owl inhabits primarily mature spruce-fir forests, but can also be found in lodgepole pine, mixed conifer, Douglas-fir, and aspen interspersed with meadows. Boreal owls tend to avoid openings, such as clearcuts and open meadows, except for occasional use of edges for foraging. It inhabits coniferous woodlands occurring in the higher mountain areas statewide from 9,500 to 11,500 feet in elevation. Boreal owls prefer extensive growth of stunted spruce in close proximity to open grasslands-meadows which provide prey species (especially voles). This owl is a year-round resident in Colorado (Wrigley et al. 2012).

**Burrowing owl (*Athene cunicularia*).** The burrowing owl is typically associated with prairie dog colonies and heavily grazed tracts of mixed-grass prairie (NDIS 2014). In Colorado, burrowing owls generally occur in open grasslands, commonly nest in prairie dog burrows, often close to roads and surrounded by bare ground or short grass and rarely in semidesert shrublands. Burrowing owls nest in rodent burrows in areas with sparse vegetation, and several nesting records have been recorded in the San Luis Valley (Kingery 1998).

**Long-billed curlew (*Numenius americanus*).** The long-billed curlew is a fairly common local summer resident on southeastern plains and a rare spring and fall migrant in western valleys, mountain parks, and on eastern plains (NDIS 2014). This species prefers open, sparsely vegetated habitats such as short-grass prairie with scattered wetlands and playas. Very few breeding records exist for the San Luis Valley, although suitable nesting habitat occurs in the vicinity of the project area (USFWS 2005a).

**Loggerhead shrike (*Lanius ludovicianus*).** Shrikes are migrant and summer residents and primarily inhabit open riparian areas, agricultural areas, grasslands, and shrublands, especially semi-desert shrublands, and sometimes piñon-juniper woodlands. Breeding birds are typically near isolated trees or shrubs. Shrikes are found to have breeding sites at elevations ranging from below 4,000 feet to possibly as high as 8,900 feet (Wrigley et al. 2012).

**Mountain plover (*Charadrius montanus*).** The mountain plover occurs in dry, more upland habitats, commonly associated with open, flat, shortgrass areas often with scattered cactus, disturbed habitats, and active prairie dog colonies. In the San Luis Valley, mountain plovers use flat, sparsely vegetated areas with stunted shrubs and widely spaced dwarf rabbitbrush (Kingery 1998). No plovers were documented in Rio Grande, Saguache, or Alamosa counties during the spring 2005 surveys conducted by the Rocky Mountain Bird Observatory. Although no mountain plover breeding has been documented along the proposed project route, suitable habitat does occur.

**Prairie falcon (*Falco mexicanus*).** This falcon species nests on cliffs, bluffs, and rocky outcrops in open areas, ranging widely over surrounding grasslands, shrublands, and alpine tundra. Migrants and winter residents occur mostly in grasslands, shrublands, and agricultural areas (NDIS 2014). Prairie falcons would be rare summer residents in the San Luis Valley, with the most suitable nesting and foraging habitat along the northwestern portion of the project area. Wintering birds could forage along the entire right of way (ROW).

**Southwestern willow flycatcher (*Empidonax traillii extimus*).** The southwestern willow flycatcher requires dense riparian vegetation with thickets of trees and shrubs (willow and boxelder) ranging in height from 6 to 98 feet tall in middle and lower elevation riparian forests, and with lower-stature thickets (6 to 13 feet tall) found at higher elevations. The understory vegetation structure has dense foliage from the groundlevel up to approximately 13 feet. (USFWS 2011; USFWS 2013a; USFWS 2013b). Field and desktop surveys conducted in 2013 and 2014, indicate there is no suitable habitat on federal lands within the project area.

**Flathead chub (*Platygobio gracilis*).** Colorado populations of the flathead chub are restricted to the Arkansas and Rio Grande rivers in the southern part of the state. Flathead chubs historically occurred in the Arkansas River up to Salida, Colorado, but specimens are no longer found upstream of the large water diversion near Florence, Colorado (NDIS 2014).

**Rio Grande chub (*Gila pandora*).** The Rio Grande chub in Colorado is found exclusively in the Rio Grande basin in pools of small streams and creeks. The Rio Grande chub prefers streams with undercut banks, overhanging bank vegetation, and aquatic vegetation (NDIS 2014).

**Rio Grande sucker (*Catostomus plebeius*).** The Rio Grande sucker occurs exclusively in the Rio Grande basin from Colorado to Mexico. In Colorado this species is limited to small creeks and springs within the San Luis Valley, such as Hot Creek and McIntyre Springs. This species prefers backwaters and pools near rapidly flowing water. The Rio Grande sucker typically spawns from February to April and may spawn a second time in late summer (NDIS 2014).

**Species included in the analysis with a ‘MODERATE’ potential to occur in the project area include:**

**Canada lynx (*Lynx canadensis*).** The Canada lynx habitat is comprised of boreal forest landscapes supporting a mosaic of differing successional forest stages; presence of snowshoe hares and their preferred habitat conditions, which include dense understories of young trees or shrubs tall enough to protrude above the snow; winter snow conditions that are generally deep and fluffy for extended periods of time; and sites for denning that have abundant coarse woody debris, such as downed trees and root wads (USFWS 2005b; 2013c). The Canada lynx reintroduced to Colorado primarily uses high elevation spruce-fir and aspen vegetation types as habitat (Theobald and Shenk 2011).

**Fringed myotis (*Myotis thysanodes*).** Fringed myotis bats are found in ponderosa pine and piñon-juniper woodlands, greasewood, oakbrush, and saltbrush shrublands; preferring coniferous woodlands and desert scrub habitats. Fringed myotis are slow, maneuverable fliers that forage close to vegetation in shrubs and woodlands, low over meadows, or near water. Snags are very important for this species for roost sites. Individuals utilize crevices, mines, caves, or buildings for both day and night roosts. Hibernation sights can include caves, mines, and buildings. Fringed myotis winter range is not known in Colorado (Wrigley et al. 2012).

**Hoary bat (*Lasiurus cinereus*).** The hoary bat is a solitary and wide-ranging species that likely occurs throughout Colorado in suitable habitat from the eastern plains to elevations of 10,000 feet in the mountains. They use a variety of trees as roost sites. In Colorado, they are frequently detected in Douglas-fir and ponderosa forests where large deciduous trees are lacking. Roosts are located 13-16 feet above ground, protected from above with leaf cover and branches, while allowing a clear flight path from below. Such trees are frequently associated with margins of clearings or with windbreaks of the narrow fringe of deciduous trees along irrigation canals on the plains (Wrigley et al. 2012).

**Northern pocket gopher (*Thomomys talpoides agrestis*).** The northern pocket gopher occurs in the San Luis Valley north and east of the Rio Grande River. This species inhabits a wide variety of habitats including desert shrublands, grasslands, forests, and alpine tundra (NDIS 2014).

**Rocky Mountain bighorn sheep (*Ovis canadensis canadensis*).** Rocky Mountain bighorn sheep distribution is confined to scattered populations in open or semi-open, often precipitous, terrain characterized by a mix of steep or gentle slopes, broken cliffs, rock outcrops, and canyons and their adjacent river benches and mesa tops. Slope steepness appears to be a significant feature of bighorn sheep habitat (Wrigley et al. 2012).

**Townsend's big-eared bat (*Corynorhinus townsendii*).** Townsend's big-eared bats are found in a variety of vegetation types, but have specific roosting and hibernating requirements. This species is most commonly found in desert shrublands, piñon-juniper woodlands, and open montane forests (NDIS 2014). This species is highly associated with caves and mines. Common foraging associations include edge habitats along streams, adjacent to and within a variety of wooded habitats. There is suitable foraging habitat within the project area.

**American peregrine falcon (*Falco peregrinus anatum*).** The peregrine falcon is found throughout western Colorado in areas of nesting suitable habitat (i.e., ledges on tall cliffs) with piñon-juniper or ponderosa pine woodlands nearby (Kingery 1998). In Colorado peregrine falcons arrive at their nesting areas in March and typically begin nesting by April. Suitable foraging habitat occurs within the project area.

**Ferruginous hawk (*Buteo regalis*).** This hawk species is generally found in grasslands and semidesert shrublands, and less often along the interface with piñon-juniper woodlands. Breeding birds nest in isolated trees, on rock outcrops, man-made structures, and sometimes on the ground. Winter residents often concentrate around prairie dog towns. Migrants and winter residents also may occur in shrublands and agricultural areas (NDIS 2014).

**Flammulated owl (*Otus flammeolus*).** Flammulated owls are associated with mature to old-growth ponderosa pine and ponderosa-Douglas-fir forests, often mixed with mature aspen, and has been observed in pure aspen stands. They also occur in old-growth piñon-juniper woodlands. This owl is an uncommon to common summer resident in the foothills and lower mountains of Colorado. In Colorado, this owl is known or suspected to breed throughout most of the western half of the state (Wrigley et al. 2012).

**Golden eagle (*Aquila chrysaetos*).** The golden eagle occupies a diversity of habitats from grasslands, shrublands, piñon-juniper woodlands, and ponderosa pine forests, ranging into other areas during migration and winter. It generally nests on cliffs, rocky outcrops, and at times large trees in rugged areas (NDIS 2014). Along the project ROW they would most likely occur on grasslands along the northwestern part of the project area.

**White-faced ibis (*Plegadis chihi*).** The white-faced ibis typically occupies wet meadows, marsh edges, and reservoir shorelines. The white-faced ibis is a common spring and fall migrant (NDIS 2014). Along the project ROW, ibis could forage within the wetlands and wet meadows. However, the likelihood of nesting near the ROW would be low, given the proximity of the ROW to roads and other human influences.

**Milk snake (*Lampropeltis triangulum*).** The milk snake occupies a wide variety of habitats, including shortgrass prairie, sandhills, shrubby hillsides, canyons, foothills, piñon-juniper woodlands, arid river valleys, and abandoned mines. It is primarily nocturnal and typically found at elevations below 8,000 feet (NDIS 2014).

**Boreal toad (*Anaxyrus boreas boreas*).** In Colorado, boreal toads occupy habitats between approximately 7,500 and 12,500 feet in elevation. Specific habitats including breeding ponds, summer range, and overwinter refugia all occur within lodgepole pine and spruce-fir forests, and alpine meadows. Historically, boreal toads were known to breed at several locations in Lake and Chaffee counties. Populations in Colorado have become scarce or extinct in both low and high elevation sites and have experienced significant downward population trends (Wrigley et al. 2012).

**Northern leopard frog (*Rana pipiens*).** Northern leopard frogs are a widely ranging species that are found throughout most of Colorado in mountainous and plains habitats. Recently however, they have experienced significant population declines across most of their range and have become scarce in Colorado. They are found in a wide variety of habitats within the state including banks and shallow portions of marshes, ponds, lakes, reservoirs, beaver ponds and streams, especially those with rooted aquatic vegetation up to 11,000 feet in elevation (Wrigley et al. 2012).

**Slender Spiderflower (*Cleome multicaulis*).** Slender spiderflower is an annual that inhabits saline or alkaline soils at the edge of wetlands or moist meadows, especially where the water table nears the surface. A member of the caper family, population size fluctuates considerably from year-to-year. Drainage of wetlands throughout its range is thought to have decreased the amount of habitat available. This species now occurs almost exclusively in the San Luis Valley, commonly found in the transition area between the Seasonally Flooded Herbaceous Alliance and the Rabbitbrush Shrubland Alliance, where it thrives in moist, slightly saline conditions (USFWS 2005a).

**Pale blue-eyed grass (*Sisyrinchium pallidum*).** Pale Blue-eyed Grass is a single-stemmed or tufted perennial herb with grass-like leaves and six pale blue tepals. It occurs in wet, poorly drained meadows, stream banks, roadside ditches, and irrigated hay meadows where standing water is available through the early growing season and blooms in June and July. The species is found at elevations ranging from 8,000 to 9,500 feet (2460 m-2920 m) in Colorado (Jennings 1990). Plant communities in which *S. pallidum* is found are dominated by graminoids and forbs, such as *Pedicularis crenulata*, *Dodecatheon pulchellum*, and *Primula incana* (Cholewa and Henderson 1984).

**Species included in the analysis with a ‘HIGH’ potential to occur in the project area include:**

**Gunnison’s prairie dog (*Cynomys gunnisoni*).** This species of prairie dog is found in mesic plateaus, higher mountain valleys, and lowlands. They are colonial rodents that inhabit grasslands and semi-desert and montane shrublands. In central Colorado, around 10,000 feet, individuals entered burrows by October and emerged in mid-April (Wrigley et al. 2012).

**Bald eagle (*Haliaeetus leucocephalus*).** The bald eagle is primarily a winter migrant throughout Colorado, although bald eagle nests have been documented throughout Colorado, primarily along rivers, lakes, and reservoirs. Primary wintering areas for this species in Colorado include the South Platte, Arkansas, White, Colorado, and Yampa rivers (Gray 1998).

**Brewer’s sparrow (*Spizella breweri*).** This species is sagebrush obligate that is often the most abundant songbird in sagebrush shrubsteppe habitats. This sparrow species breeds primarily in sagebrush shrublands, but also occurs in other shrub habitats (e.g., mountain mahogany, rabbitbrush). During migration they frequent wooded, brushy and weedy agricultural and urban areas (NDIS 2014). They are fairly common in the San Luis Valley and could occur along the project ROW.

**Gunnison sage-grouse (*Centrocercus minimus*).** The Gunnison sage-grouse (GuSG) uses a variety of habitats throughout the year, but the primary component necessary is big sagebrush (*A. tridentata*), which is used for hiding, thermal cover, as well as a major source of food in the winter (Wrigley et al. 2012). The GuSG inhabits sagebrush grasslands within the project area. Leks are located in open areas in

proximity to escape cover. Nests are located in sagebrush habitat, typically within 2 to 4 miles from the lek. Broods are raised in wet, grassy areas near sagebrush. Winter habitat consists of south and east facing slopes with minimal snow cover. Breeding season is March 15– July 1. The Poncha Pass population of GuSG is 16 individuals (USFWS 2014). The occupied habitat in the area includes all sagebrush and some forested lands from the top of Poncha Pass south for about 8 miles on either side of U.S. Highway 285 to approximately Villa Grove. GuSG are believed to actively occupy fewer than 10,000 acres of this area due to the presence of Highway 285 and the three transmission lines west of the road (PPCP 2000).

**Mexican spotted owl (*Strix occidentalis lucida*).** The MSO occurs in montane and canyon habitats in Arizona, New Mexico, Utah, Colorado, and Mexico. Occurrence in Colorado has been documented in the southwestern, central, and northwestern portions of the state. Owl habitat in Colorado includes a combination of dense, mixed coniferous forests (Douglas-fir, ponderosa pine, white fir), steep slopes (greater than 40% slope), often with canyons or rocky outcroppings, and elevation range between 6,500 to 9,500 feet, with an average elevation of 7,500 feet. MSOs generally use a wider variety of forest conditions for foraging than they use for nesting or roosting. Most of the habitat areas that support MSOs in the U.S. are on federal lands, primarily administered by the Forest Service, and to a lesser degree, the BLM (Wrigley et al. 2012). Potential habitat for the Mexican spotted owl habitat has been mapped along the Poncha Pass portion at the northern end of the 6905 and 9811 transmission lines (Shively 2014).

**Northern goshawk (*Accipiter gentilis*).** Goshawks inhabit mixed hardwood and coniferous forests in temperate and boreal regions from 7,500 to 11,000 feet in elevation; however, they are occasionally found below 7,000 feet in winter and during migration. They may also utilize other coniferous forest types and structures as available. In Colorado, the goshawk is found throughout the forested mountains. They prefer woodlands with intermediate canopy coverage interspersed with fields or wetlands in remote areas. Goshawks typically nest in large hardwood trees that are most often found within mature to old-growth forests (Wrigley et al. 2012).

**Northern harrier (*Circus cyaneus*).** Harriers are a resident in most of Colorado during migration and summer but they are rarely found in the analysis area. They inhabit grasslands, agricultural areas, and marshes, but in the fall they also range up to the alpine tundra. Nesting habitat requires abundant cover such as tall wetland vegetation and grasses. They have been observed at elevations ranging from approximately 3,500-13,000 feet (Wrigley et al. 2012).

**Olive-sided flycatcher (*Contopus cooperi*).** In Colorado, the olive-sided flycatcher is a breeding mountain resident nesting at elevations between 7,000 and 11,000 feet. It is associated with the mature spruce/fir forest, particularly if there are large conifers, bogs, and meadows present, preferring areas with abundant snags. They are frequently associated with forest openings and edges and following natural and anthropogenic disturbances, such as tree fall gaps, fire, and logging. Although breeding habitat for this species is primarily located in mature spruce-fir, Douglas-fir, and occasionally in some other types of forests, it also occurs in montane and foothill riparian and aspen forests (Wrigley et al. 2012).

## References for Appendix B

- BLM. 2009. BLM Colorado State Director's Sensitive Species List. Last updated November 20th, 2009.
- CPW. 2014. Colorado Parks & Wildlife. Threatened and Endangered Species List. Available online: <<http://cpw.state.co.us/learn/Pages/SOC-ThreatenedEndangeredList.aspx>>. Accessed July 15, 2014.
- Gray, M. T. 1998. The Guide to Colorado Birds. Westcliffe Publishers, Inc. Englewood, Colorado. 256 pp.
- Kingery, H. E. 1998. Colorado Breeding Bird Atlas. Colorado Bird Atlas Partnership and Colorado Division of Wildlife, Denver, Colorado. 636 pp.
- NDIS 2014. Natural Diversity Information Source (NDIS). Wildlife Species Page. Available online: <[http://ndis.nrel.colostate.edu/aspresponse/spxbycnty\\_res.asp](http://ndis.nrel.colostate.edu/aspresponse/spxbycnty_res.asp)>. Accessed July 15, 2014.
- PPCP. 2000. Poncha Pass Gunnison Sage Grouse Conservation Plan. March 21, 2000. Available online: <http://grazingforgrouse.com/sites/default/files/2000%20Poncha%20Pass%20Plan-Gunnison.pdf>
- Shively, Stephanie. Personal Communication between Stephanie Shively, Forest Service Biologist, and Rebecca Ralston, HDR, on December 1, 2014, regarding Forest Service surveys in Poncha Pass area.
- Theobald, David M. and Tanya M. Shenk. 2011. Areas of high habitat use from 1999-2010 for radio-collared Canada lynx reintroduced to Colorado.
- USFWS. 2005a. Conceptual Management Plan Baca National Wildlife Refuge, U.S. Fish and Wildlife Service, Lakewood, Colorado. 55 p.
- USFWS. 2005b. Endangered and Threatened Wildlife and Plants; Proposed Designation of Critical Habitat for the Contiguous United States Distinct Population Segment of the Canada Lynx. Federal Register 70(216): 68294-68328.
- USFWS. 2011. *Environmental Assessment of Proposed Oil and Gas Exploration, Baca National Wildlife Refuge, Saguache County, Colorado*. April 2011.
- USFWS. 2013a. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Southwestern Willow Flycatcher; Final Rule. Federal Register 78(2): 344-534.
- USFWS. 2013b. Southwestern Willow Flycatcher Critical Habitat Revision Questions and Answers. Arizona Ecological Field Services Office.
- USFWS. 2013c. Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Contiguous U.S. Distinct Population Segment of the Canada Lynx and Revised Distinct Population Segment Boundary. Federal Register 78(187): 59430-59474.
- USFWS. 2014. Endangered and Threatened Wildlife and Plants; Threatened Status for Gunnison Sage-grouse. Federal Register 79(224): 69191-69310.
- Wrigley et al. 2012. Wrigley, M.J., M. White, B. Elliott, M. Comer, R.E. Torretta, P. Gaines, S. Olson, K. Meyer, M. Painter, J. Windorski, F. Quesada, and M. Welker. 2012. Threatened, endangered, and Forest Service sensitive species on the Pike and San Isabel National Forests (updated June 2012). Unpubl. Rpt. U.S. Department of Agriculture, Forest Service. Pike and San Isabel National Forests and Comanche and Cimarron National Grasslands. Salida, Colorado. 115pp + appendices.

*This page intentionally left blank.*