

**VISUAL ASSESSMENT REPORT  
FOR THE TRI-STATE MONTROSE-NUCLA-CAHONE  
TRANSMISSION LINE IMPROVEMENT PROJECT  
SOUTHWEST COLORADO**

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# Tri-State Montrose-Nucla-Cahone Transmission Line Improvement Project Colorado

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## **Introduction**

Tri-State Generation and Transmission Association, Inc. (Tri-State) retained ERO Resources Corporation (ERO) to conduct a visual assessment for proposed changes to an existing transmission line between Montrose and Cahone, Colorado. ERO contracted with Holdeman Landscape Architecture (HLA) to complete the assessment.

The project area is a corridor of existing and proposed transmission line alignments, approximately 80 miles long, beginning at a substation immediately west of Montrose, continuing generally southwest to a substation north of Cahone. A large majority of the proposed project upgrades the existing transmission line in-place with larger structures and a wider tree clearing width. The visual resources study area is a corridor 10 miles wide, or 5 miles on both sides of the existing and proposed transmission line alignments, on Bureau of Land Management (BLM) lands, USDA Forest Service (USFS) forests, and privately-owned lands (Figure 1, Appendix A).

This assessment evaluates the visual resources along the existing alignment and proposed realignments. A complete description of the project and alternatives is in the Project Environmental Assessment DOI-BLM-CO S000-2013-0001 (BLM 2015). All of the Action Alternatives include an upgrade from a 115 kV line to a 230 kV line in the existing transmission line alignment (except as identified below), with an increase of the

existing right-of-way (ROW) width from 100 feet to 150 feet for the proposed larger structures. Alternative alignments for the Dolores Canyon crossing and in Dry Creek Basin differentiate the alternatives summarized in Table 1. Alternative B, the No Action Alternative, is not included in Table 1 because there would be no change in the location or size of the existing transmission line in any locations.

**Table 1. Configuration of Alternatives\***

	<b>Dolores Canyon Crossing</b>	<b>Dry Creek Basin</b>
Alternative A (Proposed Action)	Realignment approx. 1 mile to the West	Upgrade-in-Place
Alternative C Combinations	Routing Option: Upgrade-in-Place	Upgrade-in-Place
	Realignment approx. 1 mile to the West	Routing Option: Realignment along SH 141
	Routing Option: Upgrade-in-Place	Routing Option: Realignment along SH 141

\*Note: Please see EA for complete description and maps.

This report includes the following sections:

- Introduction
- Existing Visual Resource Management
- Visual Assessment Methods
- Affected Environment
- Effects of the Alternatives
- Environmental Protection Measures

The *Existing Visual Resource Management* section describes the current BLM and USFS Visual Resource Management designations in the project area. The *Visual Assessment Methods* section describes the process used to evaluate potential impacts to visual resources from the proposed project alternatives. The *Affected Environment and Effects of the Alternatives* sections describe the digital viewshed analyses and observations during site visits as related to possible visibility and contrast concerns associated with the proposed project changes. The *Environmental Protection Measures (EPM)* section lists

applicable techniques for mitigating potential visual impacts of the proposed project. EPM for visual resources are listed in Table 4.

## **Existing Visual Resource Management**

The project area includes BLM lands managed by the Uncompahgre (UFO) and Tres Rios (TRFO) Field Offices, and two USDA National Forests, the Grand Mesa, Uncompahgre and Gunnison (GMUG NF) and San Juan (SJNF). Each agency has visual resource management systems to classify and qualify different levels of visual resources as a land management consideration within their jurisdictions.



The BLM Visual Resource Management (VRM) system was used by the BLM to classify existing visual resources. The visual resource inventory process (BLM Manual Section H-8410-1) determines visual resource values for the entire field office area. The inventory consists of a scenic quality evaluation, a sensitivity level analysis, rating potential contrasts, and delineation of distance zones. Based on these factors, and legislative or administrative mandates, one of four VRM classes is assigned to all BLM lands for consideration of proposed management activities, including; 1) Class I to preserve existing characteristics of the existing landscape, 2) Class II to retain existing characteristics of the existing landscape, 3) Class III to partially retain existing characteristics of the existing landscape, and 4) Class IV to allow major modifications to the existing landscape. The project areas on UFO and TRO lands are all designated Visual Resource Class II.

The USDA Forest Service (USFS) uses two methodologies for managing visual resources in the NF, the Visual Management System (VMS) (Agriculture Handbook Number 701, 1995a) and the Scenery Management System (SMS). Prior to 1995, the VMS was used in NF's to assess visual resources and provide

measurable scenery management standards (USFS 1974). This system is currently used in the GMUG NG. Forest plans updated since 1995 use the SMS to assess visual resources. The SMS is used in the SJNF.

According to the SMS, all operations are required, to the extent practicable, to harmonize proposed actions and operations with scenic values through measures such as the design and location of operating facilities, including roads and other means of access, vegetative screening of operations, and construction of structures and improvements which blend with the landscape (36 CFR 228.8(d)). The SMS is applied to establish Scenic Integrity Objectives (SIOs) (USFS 1995). The SIOs for the SJNF in the project area have a “moderate” rating. As defined by the NFS, the moderate rating allows changes with a “slightly altered” appearance to remain visually subordinate to the surrounding landscape. SIOs on the GMUG NF in the proposed project areas have a “low” rating due to high levels of visual disruption from existing disturbances.

## **Visual Assessment Methods**

Before beginning the visual assessment, HLA reviewed the following documents:

- Manual 8400 – Visual Resource Management, Bureau of Land Management, 5 April 1984 (BLM 1984).
- Manual H-8410-1 – Visual Resource Inventory, Bureau of Land Management, 5 April 1984 (BLM 1084)
- Manual 8431 – Visual Resource Contrast Rating, Bureau of Land Management, 5 April 1984 (BLM 1984).
- National Forest Landscape Management Handbook Series, USDA Forest Service, 1975 – 1987 (USFS 1985 through 1987)
- Landscape Aesthetics, a Handbook for Scenery Management, Agriculture Handbook Number 701,

USDA Forest Service, December 1995 (USFS 1995a).

Assessment methods include: 1) production and review of digital viewshed analyses identifying areas with visibility of the existing and proposed facilities, 2) a review of the applicable existing BLM and USFS visual resources management designations, 3) site visits to the project area with BLM and USFS visual resource specialists to identify Key Observation Points (KOP), identify views of the existing transmission line, and discuss the potential effects of the proposed project on the existing visual resources management designations, and 4) completion of the BLM VRM Visual Contrast Rating Worksheets (BLM Form 8400-4) (Contrast Rating) for the Proposed Action Alternative (Appendix B).



Areas with visibility of the transmission line alternatives were identified by two digital viewshed analyses. One viewshed analysis was performed from the existing transmission line (Figure 3), and the other analysis from the proposed line and alternatives (Figures 4 and 5). The digital viewshed analysis program for this project was written to use the transmission line structure tops for observation points. Therefore, the top of each connects direct lines of sight to the modified digital terrain model in all directions and at multiple elevations, within a distance of 5 miles from each structure. Tree coverage was included in the analysis by adding an average tree height to the digital terrain model. Digital polygons were created to represent the shape of the tree clearing areas required for the lines, structures, and access roads. The digital viewshed analyses were used to accurately calculate the length of each transmission line alternative visible from each KOP. The total length of transmission line alternative visible from each KOP was measured using GIS data. Twelve KOPs were selected for this assessment by the BLM and USFS visual resource specialists and HLA during site visits in June and July 2014. KOP selection

was based on the recreational uses of BLM roads, scenic overlooks, campgrounds, a trailhead, locations in the bottom of the Dolores River Canyon, and USFS roads and trails. Photographs from each KOP were taken for record, and the production of digital photographic simulations. The purpose of the site visits and analysis is to address the question: "Would the action alternatives meet the applicable BLM VRMs on BLM lands, and VQOs or Scenery Integrity Levels in the National Forests?"

To evaluate the potential effects from selected KOPs, photographic simulations were produced to graphically illustrate visual effects of the alternative actions from selected KOPs. Agency specialists selected specific views from some of the KOPs for photographic simulation based on visibility (identified in the viewshed analyses) and to provide a comparison of alternative actions.

The photographic simulations were produced from high-resolution, digital photographs taken from each selected KOP. The GIS location of the camera, camera height above the ground, compass direction of the view as seen by the camera, and the approximate vertical angle of the camera view were documented at the time each photograph was taken. In an appropriate digital terrain model (DTM) including the entire area seen by the camera, the camera's position is identified, and used for the simulated view. The photograph's color data is then deconstructed into individual pixels, and placed onto the surface of the DTM. Accurate placement of the color pixels onto the DTM is determined by aligning abrupt color changes in the photograph, such as between earth and sky, or tree tops and sky, with the topographic shapes and changes in the DTM. To accurately illustrate the alternative, such as the introduction of a new transmission line structure, the proposed structure is reproduced digitally from engineering drawings. The digital

structure is then placed onto the DTM, also located from engineering drawings for accuracy. Lastly, tree clearing corridors are created by eliminating the DTM tree coverage in the clearing corridor. The ground surface in the clearing corridor is created by harvesting the appropriate color pixels from other photographs of existing tree clearing corridors.

The photographic simulations, with site photographs and field notes from the site visits, were used to complete the Contrast Ratings for each BLM KOP. Descriptions of the potential effects to visual resources of the Proposed Action Alternative reference the conclusions from the Contrast Ratings (see details in Appendix B).

The following table identifies the 12 KOPs.

**Table 2. KOP Locations and Descriptions**

KOP #	AGENCY	LOCATION	REASON FOR SELECTION	SPECIAL DESIGNATION
1	BLM	2 views; Dolores River Canyon north and south rims	Developed scenic overlook with parking, picnic sites, and restroom	SRMA
2	BLM	2 views; Dolores River Canyon north and east	Unpaved vehicular cul-de-sac view of structures in Alternatives A and D.	SRMA
3	USFS	County Road (CR) 90 at Uncompahgre NF boundary	Entrance to national forest	N/A
4*	USFS	Colorado State Highway (SH) 145, 1.5 miles west of Redvale, Colorado	Scenic byway	N/A
5	USFS	Uncompahgre NF Road 402	ATV trails, roads, and campground	N/A
6	Private (no agency)	SH 145 at Basin	Town of Basin, Colorado and state highway	N/A

KOP #	AGENCY	LOCATION	REASON FOR SELECTION	SPECIAL DESIGNATION
7*	BLM	San Miguel River bank 1 mile south of Piñon, Colorado on BB36 Road Y	Cottonwood Ledges campground	N/A
8*	BLM	Lower Spring Creek Canyon south rim	Trailhead and trail	LWC, SRMA, W&S Rivers
9*	BLM	Dolores River Canyon, river bank	Dispersed campsite	LWC, SRMA, W&S Rivers,
10	BLM	Dolores River Canyon, river bank	Dispersed campsite	LWC, SRMA, W&S Rivers
11	BLM	Dolores River Canyon, river bank	Dispersed campsite	LWC, SRMA, W&S Rivers
12	BLM	Dolores River Canyon, river bank	Dispersed campsite	LWC, SRMA

\*BLM and USFS determined a photo simulation was unnecessary.

**LWC=lands with wilderness characteristics, SRMA=Special Recreation Management Area, W&S Rivers=Wild and Scenic Rivers**

## Affected Environment

To determine if the Proposed Action met the BLM Visual Resource Class II criteria and USFS VQO and SIO standards as viewed from the twelve KOPs, landscape character regions were identified and referenced during the field observations.

A region's appearance, or landscape character, is based on the region's physical characteristics consisting of the visible physical, biological, and cultural attributes. A landscape character may range from predominantly natural landscapes to those with highly visible cultural features. The existing landscape character description includes the natural scenic attributes of the landscape with the existing land use pattern. There are four definable character regions in the proposed project area



including pinyon-juniper forest, montane forest, montane valley, and arid canyon described as follows:

### ***Piñon-Juniper Forest***

The Piñon-Juniper forest region is prevalent in the project area near the Dolores River, San Miguel River, and Spring Creek canyons and in multiple locations between basins and valleys. Long distance views are unobstructed, or partially obscured when the viewer is in close proximity to the low-growing trees and large rocks or rock outcrops. The mostly-unobstructed views are of large areas of rock outcrops, native piñon and juniper trees 10 to 15 feet tall, boulder fields and vertical rock cliffs in canyons, and areas of bare soil sparsely populated with low-growing native shrubs, grasses, and forbs. In some locations, other than the canyons, small amounts of man-made forms in some views include fences, roads, rural residences or agricultural structures, and a few utilities. Although the power line is typically visible due to the absence of tall obstructions, most views from highways and roads include fences, rural residential and agricultural buildings, and other overhead utility lines. The ROW clearing corridor is visible from some locations, but does not create strong contrasts with the surrounding landscape because the ground colors and textures in the clearing corridor typically match the adjacent undisturbed ground surfaces.

### ***Montane Forest***

2) The Montane Forest region is throughout the entire project area, although not continuously. It is mostly in the GMUG NF along the Divide Road, NF Road 402, in the SJNF along most of the north rim of the Dolores River Canyon, and in the BLM TRFO jurisdiction along most of the south rim of the Dolores River Canyon. Views are typically relatively short distance due to the high density of deciduous and evergreen trees. Some long distance but narrow views are present along

roads, trails, and the existing power line clearing corridor. However, the existing clearing corridor is not visible from most recreation facilities, such as the Iron Springs Campground, where the edge of the clearing corridor is not noticeable only 0.5 mile from the nearest campsite. Montane Forest views include relatively small portions of sky, and are therefore heavily shaded and mostly monochromatic, except for some rock outcrops, creeks, and low-growing herbaceous plants, such as native wildflowers. The power line typically has very low visibility due to the screening effects of forest trees and mountainous topography. However, the clearing corridor is highly visible from some locations, and frequently for long distances. The clearing corridor through the forest produces strong contrasts of color, texture, line, and form with the surrounding trees when visible.

### ***Montane Valley***

The Montane Valley region is in the southern portion of the project area along the Unaweep Tabaguache Scenic and Historic Byway, and in the central portion of the project area including Disappointment Valley, Big Gypsum Valley, and Dry Creek Basin. The region is visually characterized by mostly unobstructed views of the sky, distant mountain ranges, and sparsely-vegetated open areas of sages, grasses, wildflowers, rock outcrops, and bare soil. Views are mostly unobstructed in all directions, with any man-made forms extending above the horizon highly visible. Some views include agricultural land development, very low-density residential areas with highly visible man-made forms of fences, paved and unpaved roads, overhead utilities, and small communities including Redvale, Coventry, and Norwood. This region is exemplified by the Dry Creek Basin and includes a large amount of visual variety with Piñon-Juniper forests in the southeast portion, Sage shrublands in most of the valley floors, and Ponderosa Pine forests visible in the distance, with unobstructed views of mountains beyond the valley in all directions. The existing power line is highly visible



near the town of Montrose and in the southwest corner of the Dry Creek Basin within the Montane Valley region. The existing clearing corridor on the GMUG NF is visible to the northeast from CR 90 and the Unaweep Tabaguache Scenic Byway near Redvale. Other existing power line locations with high visibility are isolated and relatively short in length. These isolated locations are visible from nearby trails and rural roads.

### ***Mixed Forest Canyon***



The Mixed Forest Canyon region is the Dolores River Canyon in the southern portion of the project area, and the Spring Creek Canyon in the northern portion. Both canyons have extensive visual variety in large rock outcrops, diverse landforms, rivers, arroyos, forests, and meadows. Many colors are present in both canyons, and change seasonally due to the presence of deciduous trees and a large variety of herbaceous plants. Views from the canyon rims are long distance and include surrounding forests, plains, and mountain ranges. Most views within the canyons are short distance and contain a large variety of plant species, rocks, landforms, and water. The power line and clearing corridor typically have weak contrasts with the surrounding landscape due to the large variety of color, texture, line, and form in the existing landscape. However, the power line structures are highly visible if viewed against a background of sky because of the strong color and line contrasts with the sky and strong form contrasts with the horizon line.

Areas with the highest visual resources values are characterized by mostly unobstructed views of large rock forms, water features, with variety in color and texture, and changes in landforms. The Mixed Forest regions exemplify the highest quality visual resources in the study area, because visual resources include a large variety of landforms with unobstructed views and very few man-made obstructions (Agriculture Handbook Number 701, 1995a), (Agriculture Handbook Number 701, 1995a).

## **Effects of the Alternatives**

The effects analysis considered the benefits associated with the project design criteria and EPMS incorporated into the Action Alternatives to reduce and avoid adverse effects. An environmental effect is defined as a change in the quality or quantity of a given resource due to a modification in the existing environment resulting from project-related activities. Effects may be a primary result (direct) or secondary result (indirect) of an action, and may be permanent and long-term or temporary and short-term. Unless specifically defined as beneficial, effects described in the following sections are adverse. Potential effects to visual resources from the alternatives are defined as:

- High: highly visible with strong contrasts of texture, color, line, and form, creating a noticeable distraction in a defined view or multiple views
- Moderate: highly visible with noticeable contrasts of texture, color, line, or form in a defined view, in a single direction
- Low: noticeable visibility with weak, or no contrasts of texture, color, line, or form, but not a distraction in a defined view or multiple views
- Negligible: barely discernible visibility with weak, or no contrasts of texture, color, line, or form, but not a distraction in a defined view or multiple views
- No Effect: no, or mostly obstructed visibility with no noticeable contrasts

## **Temporary Construction Effects**

During construction there would be the potential creation of dust, surface disturbance, and the presence of construction equipment and vehicles. Although earthwork would be a relatively small portion of the proposed construction activities, some dust would be emitted from earthmoving activities, construction vehicles and equipment, delivery vehicles, and from disturbed areas and material stockpiles within the construction zone, though this would be minimized with dust suppression techniques (see the

Environmental Protection Measures, Table 4, for additional information. Additional information is in the EA for the project.)

### **Permanent Effects as viewed from the KOPs**

In all action alternatives, increasing the size of the structures, changing the line's alignment, and widening the vegetation clearing corridor would increase the visibility of the transmission line viewed from some locations. Although the visible impacts of the transmission line on the landscape would increase, in most locations it would not be noticeable because of the presence of the existing transmission line in the same location. For some viewers, the transmission line is an artificial form in the landscape and generates a distraction from scenic views. KOPs 3, 4, 5, 7, and 8 are in areas along the transmission line that are common to all action alternatives (i.e., would follow the existing alignment). Except for alternative alignments at the Dolores Canyon and Dry Creek Basin, the transmission line would follow the existing transmission line alignment under all Action Alternatives.

The proposed transmission line relocation at Dolores Canyon would affect the view from five BLM KOPs (KOP 1, 2, 10, 11, and 12), but would not affect views from any USFS KOPs. The proposed Dry Creek Basin realignment would affect the view from one KOP on nearby private land, KOP 6, and viewers traveling on SH 141.

Very few viewers visit KOPs 2, 9, 10, 11, and 12 because of difficult access and the absence of identification signage or map labels. KOP 2 access is from two unpaved roads suitable for 4-wheel drive vehicles only, in dry ground conditions, and there is no directional or identification signage or facilities of any sort. KOPs 9 through 12 are undeveloped locations in the canyon bottom accessible only by horseback riding, hiking, or boating. Boating access has not been a viable mode of transportation

through the canyon for approximately twelve years due to low flows controlled by the McPhee Reservoir dam; 2015 flows have offered some limited boating opportunities. The same low flows have eliminated sizable game fish in the river, therefore nearly eliminating the demand for recreational fishing access.

A portion of the existing and proposed transmission lines may be visible from some KOPs. The length of visible transmission line and distance between viewer and transmission line indicates the size and visibility of the transmission line in a view. The line will appear smaller in a view as the length of visible line decreases, and the distance between viewer and line increases.

The effects of varying distance between viewer and line can be defined by visibility characteristics. During daylight hours, and clear weather conditions, if the line is less than 0.5 mile from the viewer, typically the conductor, structures, and tree clearing corridors are visible and identifiable. Under the same viewing conditions, if the line is between 0.5 mile and 2.5 miles from the viewer, the structures and tree clearing corridor are visible and identifiable, but the conductors are not visible. Under the same viewing conditions, if the line is over 2.5 miles from the viewer, the tree clearing corridor is visible, but not always distinguishable from a road clearing corridor, and the structures and conductors are not visible.

Table 3 compares the distance and length of visible transmission line in each alternative as identified in the digital viewshed analysis. The distance designations are:

- D1 represents length of transmission line visible less than 0.5 mile from the KOP – relatively near views
- D2 represents length of transmission line visible between 0.5 mile and 2.5 miles from the KOP – relatively far views
- D3 represents length of transmission line visible greater than 2.5 miles from the KOP – remote views.

**Table 3. Number of structures visible by alternative from KOP for different distance designations.**

KOP	A: Proposed Action (realignment at Dolores River and upgrade-in-place at Dry Creek Basin)			B: No Action			C: Dolores River Crossing Routing Option (upgrade-in-place)			C: Dry Creek Basin Routing Option (realign along SH 141)			C: Dolores River Crossing Routing Option and Dry Creek Basin Routing Option		
	D1	D2	D3	D1	D2	D3	D1	D2	D3	D1	D2	D3	D1	D2	D3
1	-	-	6	-	-	5	-	-	6	-	-	6	-	-	6
2	-	4	-	-	3	-	-	3	-	-	4	-	-	3	-
3	2	9	5	2	9	4	2	9	5	2	9	5	2	9	5
4	-	-	10	-	-	10	-	-	10	-	-	10	-	-	10
5	1	-	-	1	-	-	1	-	-	1	-	-	1	-	-
6	-	25	36	-	31	46	0	25	36	6	27	33	6	27	33
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	1	-	-	1	-	-	1	-	-	1	-	-	1	-
10	-	-	1	2	1	-	2	-	-	-	-	1	2	-	-
11	-	1	-	1	-	-	1	-	-	-	1	-	1	-	-
12	-	1	-	1	1	-	1	-	-	-	1	-	1	-	-

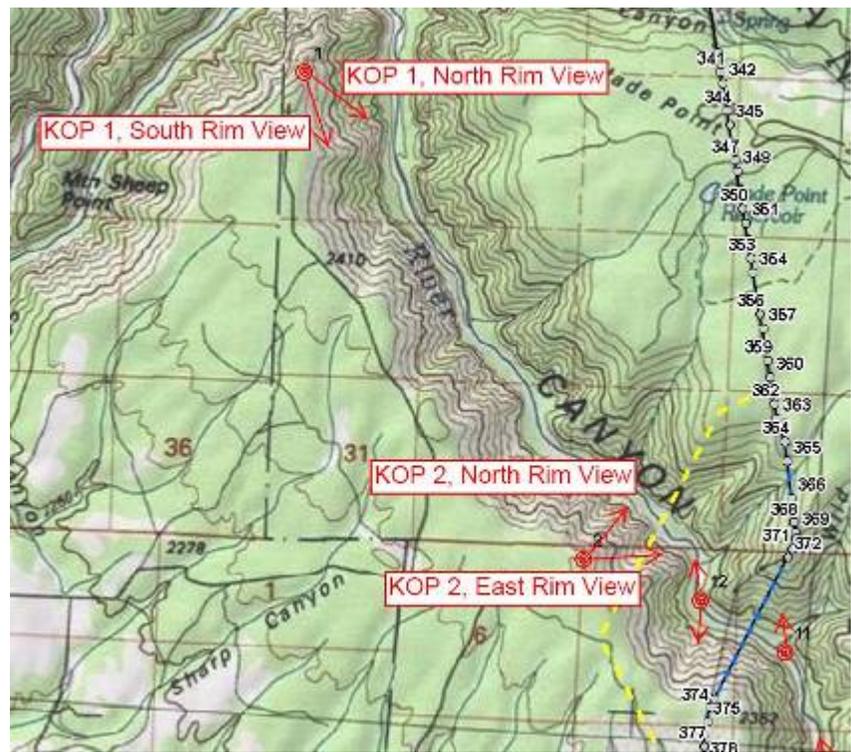
Note: D1, D2, and D3 definition provided on page prior to Table 3.

Potential effects at each KOP are identified and described as follows.

***KOP 1, South Rim View and North Rim View***

Description: Scenic overlook on the edge of the canyon rim, with gravel vehicular cul-de-sac and parking area, picnic sites, restrooms, trail, and a stone-paved and walled scenic overlook.

Location: South rim of the Dolores Canyon across from Big Spring Gulch. The KOP 1 photo simulation shows the view of the tower on the south rim of the canyon; a second set show the north rim.



Existing Views Description: Views from the 0.5-mile-long trail connecting the parking area and picnic sites to the scenic overlook, are of the close proximity piñon-juniper forest with rock outcrops and small native grasses, forbs, and shrubs, and partially-obstructed views of the canyon rims and sky. From the overlook is an unobstructed 270° panoramic view of the canyon and river in three directions, ponderosa and piñon-juniper forests

in all directions, distant high plains to the north, and a distant mountain range on the southern horizon. Views to the southwest, towards the parking area, restroom, and trail, are of the piñon-juniper and ponderosa forest, and large rock outcrops. The parking area and picnic sites are completely obscured in views from the scenic overlook by forest trees, rock outcrops, and changes in topography. Views in all directions have very high scenic quality. Other than the overlook itself, development visible from this location include a cell tower, the transmission line, and Dove Creek with associated structures and silo. During a site review at KOP 1, some participants could identify the existing conductor with the naked eye at a distance of 5 miles away; other participants could not, and could only identify the conductor using binoculars. Although appropriately developed for the site and recreational purpose, very few observers visit this location, due to unpaved access road conditions and the absence of any directional road signs identifying the access route or scenic overlook location.

Agency: BLM

**Alternative A: Proposed Action and Alternative C- Dolores River Crossing Realignment Option (Photos 1a and 1d) –**

The proposed alignment would cross the canyon approximately 1.2 miles closer to the scenic overlook than the existing alignment. The distance between the scenic overlook and proposed transmission line would be approximately 3.5 miles. Impacts to visual resources would vary dependent upon the direction of the view. Effects to visual resources in southerly and southeasterly views of the north rim would be low to moderate. Although the proposed south structure would be more visible, the conductors and structures would be visible in only one direction from the scenic overlook, would be relatively small in the view, and would be viewed primarily against a background of forest and canyon walls. As seen in Photo 1D, although the northern

structure is visible above the skyline, it is relatively small in the view.

**Alternative B: No Action (Photo 1b and 1e)** – Because the existing transmission line would remain unchanged, there would be no effects to visual resources.

**Alternative C: Combinations that include Dolores River Crossing Routing Option (Upgrade in Place) (Photo 1c and 1f)** – Existing towers on the north and south rims of Dolores Canyon would be replaced with new taller towers at different locations. Fewer towers would be needed and the new towers on the north and south rim would be placed farther back from the canyon than the existing towers. Although taller than the existing structures, the new structures would not be visible above the horizon line. Impacts to visual resources would be low to negligible because of the distance from KOP 1 and the proposed structures would be only slightly more visible than the existing structures due to the taller height and larger amount of structural members.



**Photo 1a. KOP 1, Alternatives A and C- Dolores River Crossing Realignment Option (South Rim)**



**Photo 1b. KOP 1, Alternative B (South Rim)**



**Photo 1c. KOP 1, Alternative C: Combinations that include the Dolores River Crossing Routing Option (upgrade-in-place) (South Rim)**



**Photo 1d. KOP 1, Alternatives A and C-Dolores River Crossing Realignment Option (North Rim)**



**Photo 1e. KOP 1, Alternative B (North Rim)**



**Photo 1f. KOP 1, Alternative C: Combinations that include the Dolores River Crossing Routing Option (upgrade-in-place) [North Rim]**

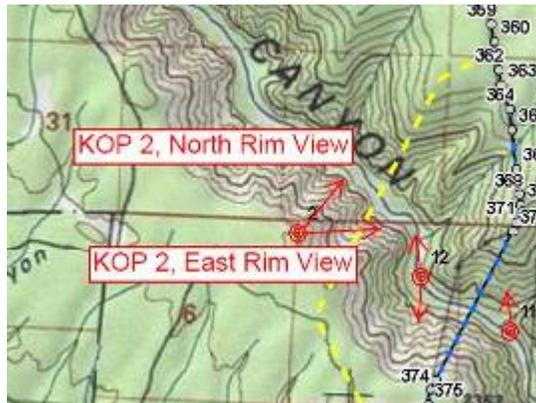
### ***KOP 2, Views North and East***



***Description:*** Dirt cul-de-sac near the edge of the Dolores Canyon rim accessible by 4x4 vehicles.

***Location:*** South rim of the Dolores Canyon approximately 2.4 miles southeast of the scenic overlook, KOP 1. The KOP 2 photo simulation is the view to the east showing the last tower (371) on the north rim of the canyon. The KOP 2a photo simulation shows the view of the construction access to the last tower on the north rim road for the upgrade in-place alternative.

***Existing Views Description:*** Views from the cul-de-sac are mostly



of the ponderosa pine forest surrounding the cul-de-sac and across the canyon. Long distance views, from the cul-de-sac, are mostly obscured by the

ponderosa pines and other native deciduous trees and large shrubs. However, from various locations on the canyon rim near the cul-de-sac, views in some directions are completely unobstructed, and views from other locations are partially-obstructed by native vegetation and rock outcrops. Viewer locations along the canyon rim are undeveloped and undefined with no formal overlooks or trails. The existing transmission line and structures are nearly imperceptible in the southeast view from the cul de sac, but are more visible from the canyon rim. Views in all directions have very high scenic quality. However, very few observers visit this location due to limited vehicular accessibility resulting in low volume and low frequency of use. During a field review in September 2015, local Dolores County commissioners noted that they are not aware of regular use at

this location. Users at this location likely include low frequency hunting use by locals. The site is at the end of unsigned 4-wheel drive access roads; there are no signs indicating canyon rim or other use areas. This KOP is not identified as a recreation site on any maps.

Agency: BLM

**Alternative A: Proposed Action and Alternative C-Dolores River Crossing Realignment Option (Photo 2a and 2b) –**

Looking north, the proposed transmission line would cross the canyon within 1 mile of the cul-de-sac. The structures on both sides of the canyon would be highly visible from the canyon rim, and extend substantially above the horizon line (Photo 2a). Impacts would be moderate to high in views to the north. However, depending upon a viewer's specific location on the canyon rim near the vehicular cul-de-sac, some views would be partially-obscured by vegetation. The existing structure and roads are visible from the canyon rim. In summary, the contrast would increase but be consistent with the existing setting and type of impact. In addition, the effects would be offset by removal of the existing structures upstream.

**Alternative B: No Action (Photo 2c and 2d) –** Because the existing transmission line would remain unchanged, impacts to visual resources would be the same.

**Alternative C: Combinations that include Dolores River Crossing Routing Option (Upgrade in Place) (Photo 2e and 2f) –**

The upgrade in-place alternative would have fewer, but taller structures than the existing line. The new taller structures would be more visible, but would be set back from the rim about 314 feet from the position of the existing crossing structure on the north rim, and about 69 feet on the south rim. The proposed construction and maintenance access road with cut and fill slopes, would be very visible, as shown in the KOP 2 photo simulation (Photo 2f). Partial reclamation of the road following

construction would reduce visibility over the long-term. The view of the new structures and road would be in one direction from the observation point. Views in other directions would not include the new structures, road, and conductors. Overall, impacts to visual resources from KOP 2 would be moderate over the long-term following partial reclamation of the access road.

All photographic simulations from KOP 2 show unobstructed views from the canyon rim, not from the cul-de-sac.



**Photo 2a. KOP 2, Alternatives A and C-Dolores River Crossing Realignment Option  
(View of the North Rim)**



**Photo 2b. KOP 2, Alternative A and C-Dolores River Crossing Realignment Option (View to the East)**



**Photo 2c. KOP 2, Alternative B (View of the North Rim)**



**Photo 2d. KOP 2, Alternative B (View to the East)**



**Photo 2e. KOP 2, Alternative C: Combinations that include the Dolores River Crossing Routing Option (upgrade-in-place) (View of the North Rim)**



**Photo 2f. KOP 2, Alternative C- combinations that include Dolores River Crossing Routing Option - upgrade in place (View to the East)**

### ***KOP 3***



Description: Unpaved, two-lane, county road entering the Uncompahgre NF.

Location: Southwest boundary of the Uncompahgre NF approximately 1.5 miles northeast of the Nucla Transmission Plant, on CR 90 (FS Road 540); see Figure 2.

Existing Views Description: Northeast views from the road, looking toward the existing transmission line, are mostly of the Cottonwood Creek valley, adjacent piñon-juniper forest, and the Uncompahgre Plateau on the horizon. Because the existing transmission line is approximately 15 miles from the KOP, the structures and conductors are not visible. However, the clearing corridor through the forest trees is visible. The existing transmission line, and therefore the proposed transmission line, is not visible in any other direction from the KOP. The view of the transmission line clearing is behind westbound travelers on CR 90. Views in all directions have moderate scenic quality.

Agency: USFS

**Alternative A: Proposed Action (Photo 3a)** – Looking northeast, the existing transmission line clearing corridor is visible approximately 15 miles from the KOP. The clearing corridor is visible in one direction, and relatively small in the view. However, the contrast of the clearing corridor color and straight-line form make it highly visible. The existing clearing corridor is not visible in any other direction, from most other locations along USFS Road 540 in the national forest, or CR 90 near the national forest. The clearing is visible from the KOP in short duration from moving vehicles because there are no recreational facilities along the road or formal parking pullouts for scenic viewing. Because the existing transmission line corridor is visible, widening of the clearing for the upgraded transmission line would slightly increase visibility of the corridor. Impacts to

visual resources would be low from the slight expansion of the ROW clearing.

**Alternative B: No Action (Photo 3b)** – Because the existing transmission line would remain unchanged, impacts to visual resources would be the same.

**Alternative C: (Photo 3a)** – Impacts to visual resources for Alternative C would be the same as in Alternative A.



**Photo 3a. KOP3, Alternatives A and C**



**Photo 3b. KOP3, Alternative B**



#### ***KOP 4***

***Description:*** Paved, two-lane highway, SH 145, the Tabequache-UnawEEP Scenic Byway.

***Location:*** Approximately 0.5 mile west of the Town of Redvale, on SH 145 (see Figure 2).

***Existing Views Description:*** Views in all directions from the scenic byway, are of rural, single-family residences near the highway, large open valleys behind the residences, and distant mountain ranges on the horizon. Because the existing transmission line is approximately 15 miles from the KOP, the structures and conductors are not visible. However, the clearing corridor through the forest trees is visible. The view of the transmission line clearing is behind westbound travelers on the scenic byway, and visible to eastbound travelers, but not aligned with the direction of travel. Views from the KOP also include overhead utility lines, fences, and gates adjacent to the highway. Views in all directions have moderate scenic quality.

***Agency:*** BLM

**Alternative A and C: All Action Alternatives** – Looking northeast, the existing transmission line clearing corridor is visible crossing over the plateau, approximately 15 miles from the KOP. The existing clearing corridor is visible in one direction, and small in the view. However, the contrast of the clearing corridor color and straight-line alignment make it highly noticeable. The clearing corridor is not visible in any other direction from most other locations along USFS Road 540 in the NF and CR 90 near the NF and is only visible for a short duration from moving vehicles. Additional ROW clearing width in all Action Alternatives would have no effect on visual resources due to the limited visibility of the transmission line and short duration of the view from moving vehicles.

**Alternative B: No Action** – There would be no effect to visual resources because the existing transmission line would remain unchanged.



### ***KOP 5***

***Description:*** Unpaved, two-lane, USFS road at the intersection with a USFS ATV trail in the existing transmission line clearing corridor.

***Location:*** Approximately 0.5 mile west of Iron Spring Campground on USFS Road 402 (see Figure 2).

***Existing Views Description:*** Views from USFS Road 402 near the clearing corridor through the forest, but not in the corridor, are very short distance, and mostly of the dense forest trees and shrubs adjacent to the road. The road through the forest has very few long distance views in the direction of the road in the vicinity of KOP 5. The existing transmission line is not visible from the road, except in the clearing corridor. Views from USFS Road 402 and the ATV trails in the clearing corridor (at KOP 5) are of the forest edges, existing transmission line and structures, wood fences, trail signs, trails, the road, and two communications towers west of the KOP. Views in all directions have moderate scenic quality

***Agency:*** USFS

**Alternative A and C: All Action Alternatives (Figure 5a)** – Because the existing transmission line location, communications towers, fences, trails, and signs would not change, and the taller structures would not be noticeable in close proximity to the other existing manmade disturbances, there would be no effect to visual resources. Because the wider clearing width would not create forest openings between the nearby roads and clearing corridor, the impacts to visual resources from nearby roads would remain unchanged.

**Alternative B: No Action (Figure 5b)** – Because the existing transmission line would remain unchanged, impacts to visual resources would be the same.



**Photo 5a. KOP5, Alternatives A and C**



**Photo 5b. KOP5, Alternative B**



### **KOP 6**

Description: Two-lane, paved highway, SH 141.

Location: South of the intersection of SH 141 and CR U29 near Basin, Colorado (see Figure 2).

Existing Views Description: Views in all directions are unobstructed of the large open valley mostly covered with low-growing sage and grasses, and mountain ranges on all horizons. The state highway, some unpaved side roads, field fences, center pivot irrigation structure, residential structure and out buildings, and the Town of Basin are the only noticeable manmade disturbances. Therefore, views in all directions have high scenic quality.

Agency: Not Applicable, Private Land

**Alternative A: Proposed Action and Alternative C-Dry Creek Basin Upgrade in Place Option (Photo 6a)** – The upgrade on the existing alignment in Dry Creek Basin would have similar visibility as the existing structures, conductors, and maintenance roads, as seen from KOP 6 and SH 141. Because the upgrade structures would be viewed from KOP 6 and the SH with a background of sage prairie and mountains, visual contrast would not change and the structures would be very small in the view. The existing line crosses SH 141 near the south end of the Dry Creek Basin. Due to the larger structures, the transmission line would be more visible for a short time to travelers on the highway, but it would remain in the same position as the existing crossing. Also, because the Dry Creek Basin upgrade and KOP 6 are on private land, existing BLM VRM Classes, and USFS Scenic Integrity Ratings and VQO would not be affected. Visual effects from the upgrade in place in the Dry Creek basin would range from low to negligible.

**Alternative B: No Action (Photo 6a)** – Because the existing transmission line would remain unchanged, impacts to visual resources would be the same.

**Alternative C: Combinations that include Dry Creek Basin Routing Option (Realignment along SH 141) (Photo 6b and 6c)** – Because the proposed transmission line would be located adjacent, and parallel to either side of SH 141, the conductors and structures would be highly visible to travelers on SH 141 in both directions, and therefore impact views in both directions of travel. Views from the private roads and structures near the Town of Basin, including the BLM Kiosk, would also include the proposed conductors and structures in close proximity to all observation points in the vicinity of KOP 6. Therefore, effects to visual resources from SH141 would be high because the conductors and structures would be highly visible, in high contrast with the existing landscape, partially-obstruct some views, and be visible for the entire duration of the drive through the basin. Effects to visual resources from the Town of Basin and the BLM kiosk would also be high for the same reasons.



**Photo 6a. KOP6, Alternative A, B, and Alternative C-Dry Creek Basin Upgrade-in-Place Option**



**Photo 6b. KOP6, Alternative C: Combinations that include Dry Creek Basin Routing Option (Realignment) with the Transmission Line on the West Side of SH141 (View South)**



**Photo 6c. KOP6, Alternative C: Combinations that include Dry Creek Basin Routing Option (Realignment) with the Transmission Line on the East Side of SH141 (View South)**



### ***KOP 7***

***Description:*** Campground with an unpaved road, developed campsites with fire rings, picnic shelters with tables, and a vault toilet.

***Location:*** San Miguel River, 1 mile south of Piñon, Colorado on BB36 Road Y (see Figure 2).

***Existing Views Description:*** Views from the campsites and campground road are of large cottonwood trees, dense willow communities, steep hillsides in two directions, and the San Miguel River in close proximity. Views in all directions have high scenic quality.

***Agency:*** BLM

**Alternative A and C: All Action Alternatives** – Because the existing transmission line is not visible from the campground due to the screening effects of cottonwood trees and willow shrubs, the proposed transmission line would also not be visible from the campground. Therefore, there would be no effect to visual resources.

**Alternative B: No Action** – Because the existing transmission line would remain unchanged, there would be no effect to visual resources.



### ***KOP 8***

***Description:*** Unpaved parking area and a 0.5-mile-long hiking trail to the south rim of the Spring Creek Canyon.

***Location:*** Lower Spring Creek Canyon south rim (see Figure 2).

***Existing Views Description:*** Northerly views from the parking area and most of the trail are of the piñon-juniper forest. These views include the unpaved parking area, paved two-lane road south, east, and west of the parking area, and mountains in the distance to the south and west. Views from the trail between the parking area and Spring Creek Canyon, are of the piñon-juniper forest in all directions, the canyon rims to the north, east, and west are partially-obscured by the forest, and some existing transmission lines to the north, east, and west. Unobstructed views from the trail at the south canyon rim are of the canyon, Spring Creek in the canyon bottom, and red-colored rock canyon-walls with sparse native vegetation. Views in all directions have high scenic quality. Many existing overhead transmission lines are highly visible on the north canyon rim.

***Agency:*** BLM

**Alternative A and C: All Action Alternatives** – The existing transmission line is indiscernible from the other visible transmission lines in nearly the same location. Because the existing transmission line is visible with many other transmission lines from the trail at the south canyon rim, and the taller proposed structures would not be noticeably different from the other existing transmission line structures, there would be no effect to visual resources.

**Alternative B: No Action** – Because the existing transmission line would remain unchanged, there would be no effect to visual resources.

### ***KOP 9***



Description: Flat and mostly-level, forested bank area adjacent to the river with some open spaces for dispersed camping.

Location: In the bottom of the Dolores River Canyon adjacent to the river, approximately 4 miles south of the existing transmission line canyon crossing (see Figure 2).

Existing Views Description: Views are dominated by the relatively narrow landform of the canyon. The canyon walls are mostly composed of highly visible rock faces and outcrops with variable shapes and sizes, and colors varying from dark red to light brown. The narrow shape of the canyon creates framed views of the river and canyon bottom with a large amount of variety. Views of the sky are narrow in shape and not in the direct line of sight from the river or river banks. Because of the absence of development and scarcity of visitors, some unique views of wildlife are also common along the river. Views in all directions have very high scenic quality. However, very few observers are ever at this location, due to limited accessibility, very low river flows most of the time and the absence of trails or developed camp or picnic sites. Use along the river is infrequent; the river can be safely floated only about every 7 to 8 years. The existing transmission line is an expected component of the landscape and is visible at river mile 2, 5 and at the existing crossing location for long stretches (though not visible from KOPE 9). In addition, the existing structure and crossing are used as a frame of reference for boaters.

Agency: BLM

**Alternative A and C: All Action Alternatives** – Because the existing transmission line is not visible from this KOP due to the screening effects of the canyon walls and large evergreen trees, there would be no effects to visual resources.

**Alternative B: No Action** – Because the existing transmission line would remain unchanged, there would be no effects to visual resources.

### **KOP 10**



Description: Flat and mostly-level, forested bank area adjacent to the river with some open spaces for dispersed camping.

Location: In the bottom of the Dolores River Canyon adjacent to the river, approximately 1.5 miles south of the existing transmission line canyon crossing.

Existing Views Description: Views are mostly the same as from



KOP 9. The existing transmission line is visible in northerly views upward from the canyon bottom at approximately 45 degrees. A small portion of the conductor wire crossing over the

canyon and a portion of the south rim structure are visible, but relatively small in the view. The conductors are mostly against a background of sky and therefore have very low contrast. Although the structure is highly visible against the sky, it is very small in the view. The conductors and structure are only visible in northerly upward views. Views in all directions have very high scenic quality. Few observers are ever at this location, due to limited dry-land accessibility, very low river flows most of the time, and the absence of trails or developed camp or picnic sites. Use along the river is infrequent; the river can be safely floated only about every 7 to 8 years. The existing transmission line is an expected component of the landscape and is visible at river mile 2, 5 and at the existing crossing location for long stretches.

In addition, the existing structure and crossing are used as a frame of reference for boaters.

Agency: BLM

**Alternative A: Proposed Action and Alternative C-Dolores River Crossing Realignment Option (Photo 10a)** – Although the proposed transmission line would be approximately 1.0 mile farther north from the KOP, the proposed structure is more visible than the existing structure due to taller height and more structural members, creating more contrast against a background of sky. However, the view of the proposed structure and conductors would be in one direction, downstream and upward from the KOP, and be relatively small in the view. If the viewer were camping in, or hiking through the trees adjacent to the KOP, the proposed structure would be completely obscured by the trees. Effects would be offset by removal of the existing structure upstream. Tri-State would provide revised mapping and brochures for river users due to the change in transmission line location, because the existing structures and crossing are used as a frame of reference for river users. The transmission line is an expected component of the landscape. Overall, effects to visual resources would be low.

**Alternative B: No Action (Photo 10b)** – Because the existing transmission line would remain unchanged, there would be no effect to visual resources.

**Alternative C: Combinations that include Dolores River Crossing Routing Option (upgrade-in-place) (Photo 10c)** – The existing structure would move farther away from the canyon rim, and therefore be less visible. However, the taller structures near, but not on, the canyon rim with more structural members would create more contrast with the background of sky. Therefore, effects to visual resources would be low.



**Photo 10a. KOP10, Alternatives A and C-Dolores River Crossing Realignment Option**



**Photo 10b. KOP10, Alternative B**



**Photo 10c. KOP10, Alternative C: Combinations that include the Dolores River Crossing Routing Option (upgrade-in-place)**

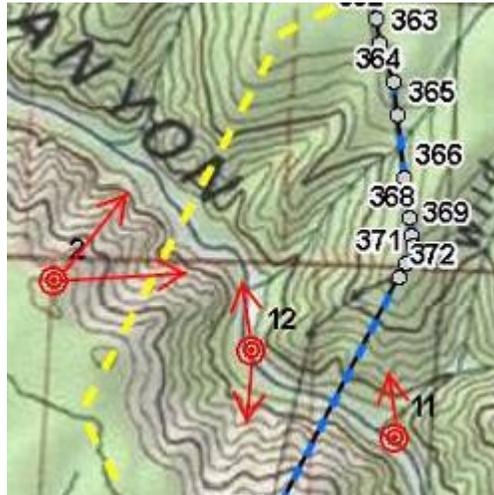
### **KOP 11**



Description: Flat and mostly-level, forested bank area adjacent to the river with some open spaces for dispersed camping.

Location: In the bottom of the Dolores River Canyon adjacent to the river, approximately 0.5 mile south of the existing transmission line canyon crossing.

Existing Views Description: Views are similar as from KOP 10, except the existing transmission line conductors and one structure are larger in northerly upward views. The conductors and structure are only visible in northerly upward views. Few observers visit this location, due to limited accessibility, very low river flows most of the time, and the absence of trails or developed camp or picnic sites.



Use along the river is infrequent; the river can be safely floated only about every 7 to 8 years. The existing transmission line is an expected component of the landscape and is visible at river mile 2, 5 and at the existing crossing location for long stretches. In addition, the existing structure and crossing are used as a frame of reference for boaters.

Agency: BLM

**Alternative A: Proposed Action and Alternative C- Dolores River Crossing Realignment Option (Photo 11a)** – The proposed transmission line would be approximately 1.0 mile farther north of the existing transmission line location, but would remain visible from KOP 11. Therefore, contrasts of the existing

conductors and structure with the surrounding landscape would be removed from the immediate foreground and moved further back from KOP 11. Effects would be offset by removal of the existing structure upstream. Tri-State would provide revised mapping and brochures for river users due to the change in transmission line location, because the existing structures and crossing are used as a frame of reference for river users. The transmission line is an expected component of the landscape.

**Alternative B: No Action (Photo 11b)** – Because the existing transmission line would remain unchanged, there would be no effect to visual resources.

**Alternative C: Combinations that include Dolores River Crossing Routing Option (Upgrade in Place) (Photo 11c)** – Because the proposed structure would be located farther from the canyon rim, it would not be visible in the photo simulation frame due to the screening effects of topography. The conductors would remain visible. Therefore, contrasts of the existing structure with the surrounding landscape and sky would be removed from the existing view within the photo simulation frame. There would be fewer structural elements remaining in the viewshed from this KOP with the setback of the pole structures. However, in general from the canyon bottom at this location, the structure would be more visible. Effects are offset by the fact that the existing structures and crossing are used as a frame of reference for river users, and the transmission line is an expected component of the landscape.



**Photo 11a. KOP11, Alternatives A and C- Dolores River Crossing Realignment Option**



**Photo 11b. KOP11, Alternative B**



**Photo 11c. KOP11, Alternative C: Combinations that include Dolores River Crossing Routing Option (Upgrade-in-Place)**

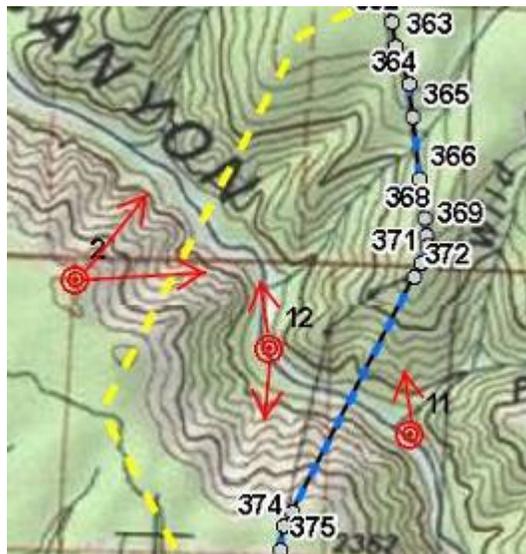
### **KOP 12**



Description: Flat and mostly-level, forested bank area adjacent to the river with some open spaces for dispersed camping.

Location: In the bottom of the Dolores River Canyon adjacent to the river, approximately 0.5 mile north of the existing transmission line canyon crossing, and 0.5 mile south of the proposed transmission line crossing.

Existing Views Description: Views would be similar to those from



KOP 10 and 11, except the existing transmission line conductors and structures are only visible in southerly upward views. Few observers visit this location, due to limited accessibility, very low river flows most of the time, and

the absence of trails or developed camp or picnic sites.

Use along the river is infrequent; the river can be safely floated only about every 7 to 8 years. The existing transmission line is an expected component of the landscape and is visible at river mile 2, 5 and at the existing crossing location for long stretches. In addition, the existing structure and crossing are used as a frame of reference for boaters.

Agency: BLM

**Alternative A: Proposed Action and Alternative C- Dolores River Crossing Realignment Option (Photos 12a and 12c) –** Impacts to visual resources, would vary dependent upon the direction of the view. In views to the east and west, effects to

visual resources would be low, because the crossing would be north of the KOP, and therefore not visible in any other direction. There would be a high level of visual contrast in views to the north compared to existing conditions because the north rim structure and most of the conductors would be highly visible without obstruction (Photo 12a). Also, views to the north, above the canyon bottom, would include views of the south rim structure and conductors peripherally. Views to the south would become more naturalized because the existing structure would be removed and the area reclaimed (Photo 12c). Effects would be offset by removal of the existing structure upstream; effects would effectively move from one location to another. Tri-State would provide revised mapping and brochures for river users due to the change in transmission line location, because the existing structures and crossing are used as a frame of reference for river users. The existing transmission line is an expected component of the landscape.

**Alternative B: No Action (Photo 12b and 12d):** Because the existing transmission line would remain unchanged, impacts to visual resources would be the same.

**Alternative C: Combinations that include the Dolores River Crossing Routing Option (upgrade-in-place) (Photos 12b and 12e)** Impacts to visual resources would be the same as in Alternative B in views to the north; there would be no visible structures. Views to the south (Photo 12e) indicate a larger structure moderate change in visibility. The structure is set back from the canyon rim slightly from the existing position. Effects are offset by the fact that the existing structures and crossing are used as a frame of reference for river users, and the transmission line is an expected component of the landscape.



**Photo 12a. KOP12, Alternatives A and C- Dolores River Crossing Realignment Option  
(View of the North Rim)**



**Photo 12b. KOP12, Alternative B and Alternative C: Combinations that include Dolores River Crossing Routing Option (Upgrade-in-Place) (View of the North Rim; the Existing Transmission Line is Behind the Viewer)**



**Photo 12c. KOP12, Alternatives A and C- Dolores River Crossing Realignment Option (View South)**



**Photo 12d. KOP12, Alternative B (View South)**



**Photo 12e. KOP12, Alternative C: Combinations that include Dolores River Crossing Routing Option (Upgrade-in-Place) (View South)**

## Environmental Protection Measures

For all alternatives, some views during the construction period would be altered by the presence of construction vehicles, equipment, personnel, and emerging new transmission facilities. This impact would be considered adverse by some viewers and would be an unavoidable consequence of project construction.

Alternatives A and C-Dry Creek Basin Routing Option would alter some views from some of the KOPs. The mitigation measures listed in Table 4 would reduce impacts on visual resources during and after construction.

For the Dolores River Crossing Realignment, Tri-State would provide revised mapping and brochures for river users due to the change in transmission line location. This is important because the existing structures and crossing are used as a frame of reference for river users and are expected components of the landscape.

**Table 4. Environmental Protection Measures**

Topic - No.	Applicant Committed Environmental Protection Measures And Design Features For Construction, Operation, And Maintenance
<b><i>Aesthetics/Visual Resources</i></b>	
A-1	Tri-State and its contractors shall exercise care to preserve the natural landscape and shall conduct construction operations so as to prevent any unnecessary destruction, scarring or defacing of the natural surroundings in the vicinity of the work. Except where clearing is required for permanent work, approved temporary or permanent construction roads, staging areas or excavation operations, vegetation shall be preserved and shall be protected from damage by the contractor's construction operations and equipment.
A-2	Tri-State and its contractor(s) shall minimize scarring, defacing, damage, or destruction of the natural landscape resulting from construction operations: any unnecessary or unauthorized disturbance shall be repaired by the contractor to the satisfaction of the agency authorized officer.

<b>Topic - No.</b>	<b>Applicant Committed Environmental Protection Measures And Design Features For Construction, Operation, And Maintenance</b>
A-3	All construction and future maintenance materials, waste, and debris shall be removed from the project area in a timely manner. Burning or burying of waste materials on the ROW or construction sites will not be allowed. All materials resulting from the contractor's clearing operations shall be removed from the ROW.
A-4	Structures and access roads will be located and designed to conform to the terrain and to minimize visual impacts whenever possible. Specifically, visibility from key observation points (KOP) will be considered at the Dolores Canyon crossing. (See A-6). Leveling and benching of the structure sites will be done to the minimum extent necessary to allow for construction and future maintenance operations. Existing cleared or disturbed areas will be used to the extent practicable for staging areas and other temporary use areas.
A-5	Tri-State and its contractor(s) will attempt to manage vegetation within the ROW in a manner that reduces the visual effect by only removing non-compatible vegetation that could pose a threat to the transmission line in the next 10 years and leaving compatible vegetation in the ROW. The first priority is to allow Tri-State to meet their federal reliability standards for vegetation management within and adjacent to the transmission ROW.
A-6	In order to minimize visual impacts from the transmission line from a design perspective, Tri-State has committed to utilizing non-specular conductor, applying acid-etched galvanized finish to all steel structures including steel fence, and using non-reflective insulators for all conductor to structure connections.
A-7	EPM VG-2 through VG-10 would minimize visual impacts from project construction and operation by reclaiming areas of temporary disturbance and minimizing vegetation removal to tall woody vegetation required for the safe construction, operation, and maintenance of the transmission line.
A-8	The alignment of any new access roads will follow the designated area's landform contours where practical, provided that such alignment does not additionally affect resource values. This will minimize ground disturbance and reduce scarring (visual contrast).

Topic - No.	<b>Applicant Committed Environmental Protection Measures And Design Features For Construction, Operation, And Maintenance</b>
<b><i>Vegetation</i></b>	
VG-2	<p>Vegetation shall be preserved and protected from damage during transmission line construction and operation to the maximum extent practicable and within areas approved in the Final POD, with the exception of trees and other woody vegetation that poses a threat to the safe and reliable operation of the transmission line. Wherever possible, on access roads, vegetation will be trampled rather than cleared where vehicles can move safely across the vegetation.</p> <p>By federal mandate, Tri-State is required to manage vegetation that creates a threat to the electrical reliability of the transmission line or substations or will impede access for safe operations. Danger tree/vegetation is defined as that vegetation that could grow, fall, or blow into the power line. Tri-State will also work with the authorizing agency to address any fuel loading concerns in the ROW that may pose a threat to the safe and reliable operation of the transmission line. Tri-State will manage ROWs to maintain compatible “low growing” vegetation only.</p>
VG-7	<p>All temporary surface disturbances on State, BLM and USFS administered lands will be seeded with native seed mixtures that have been approved by the authorizing agency. Seed mixes on private land will be at the discretion of the landowner. Reclamation will be deemed complete once vegetation has been reclaimed to 70 percent of pre-construction conditions, or at the discretion of the agency authorized agent.</p>
VG-8	<p>All construction materials and debris will be removed from the project area.</p>
VG-11	<p>The Final POD would include a reclamation and noxious weed management plan, which would be approved by the appropriate agency prior to the issuance of a ROW grant.</p>

## References

- U.S. Department of Interior, Bureau of Land Management (BLM). 1984. Manual 8400 - Visual Resource Management—User’s Manual (includes H-8410-1 and 8431).
- U.S. Department of the Interior, Bureau of Land Management (BLM). 2015 in progress. Tri-State Montrose-Nucla-Cahone Transmission Line Improvement Project Preliminary Environmental Assessment, DOI-BLM-CO-S000-2013-0001.
- U.S. Department of Agriculture, Forest Service. 1975-1897. National Forest Landscape Management Handbooks, Volume 2.

- U.S. Department of Agriculture, Forest Service (USFS). 1995a. Landscape Aesthetics, A Handbook for Scenery Management, Agriculture Handbook Number 701. December.
- U.S. Department of Agriculture, Forest Service (USFS). 1995b. Agricultural Handbook Number 701.

## **APPENDIX A: MAPS**

Figure 1. Project Location – General

Figure 2. Key Observation Points and Direction of Photo Simulation

Figure 3. Existing Visibility of Transmission Line/Alternative - No Action Alternative

Figure 4. Visibility of Transmission Line from Alternative A - Proposed Action Alternative

Figure 5. Visibility of Transmission Line from Alternative C – Other Action Alternative (BLM routing options)

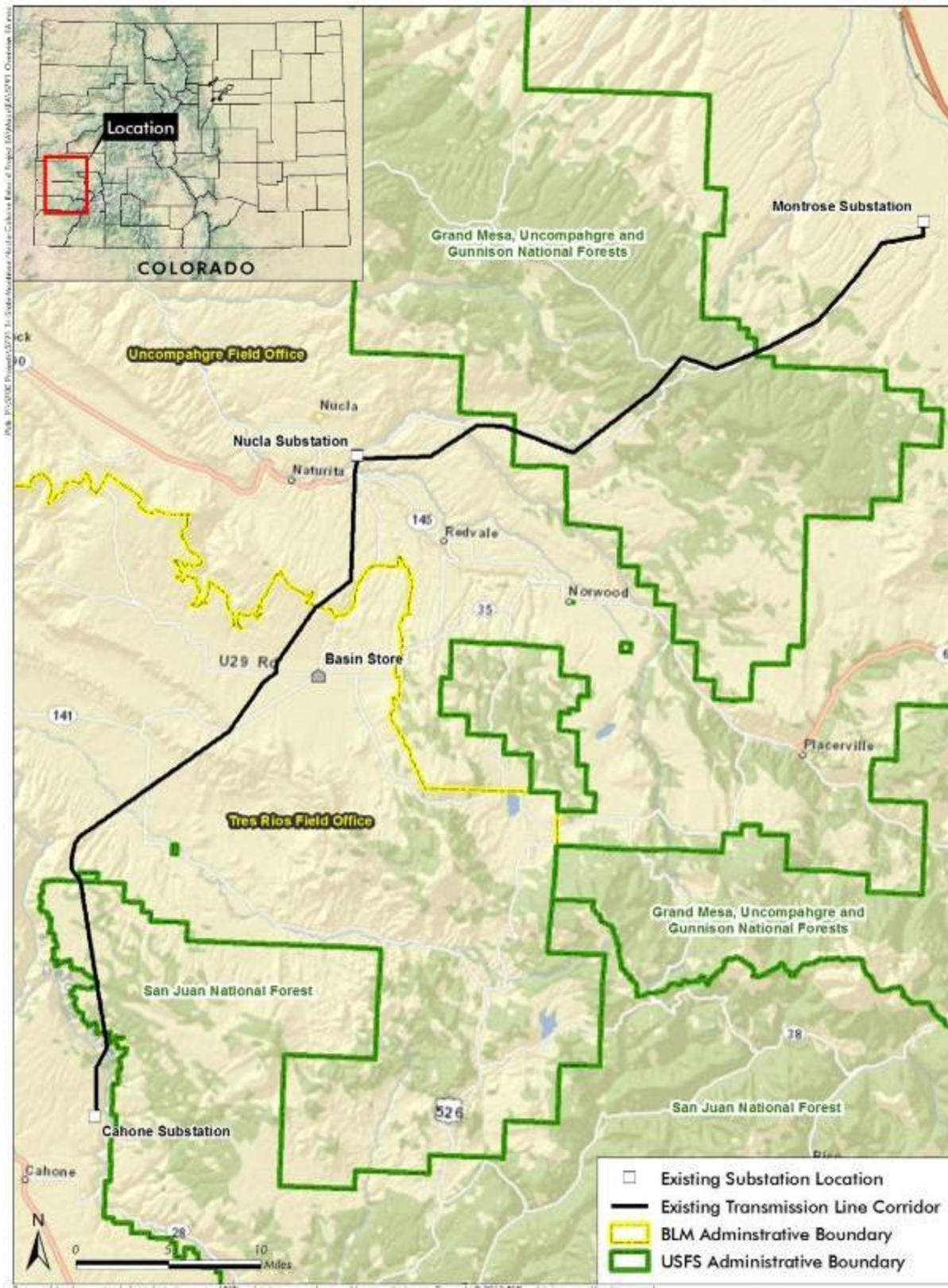


Figure 1. Project Location

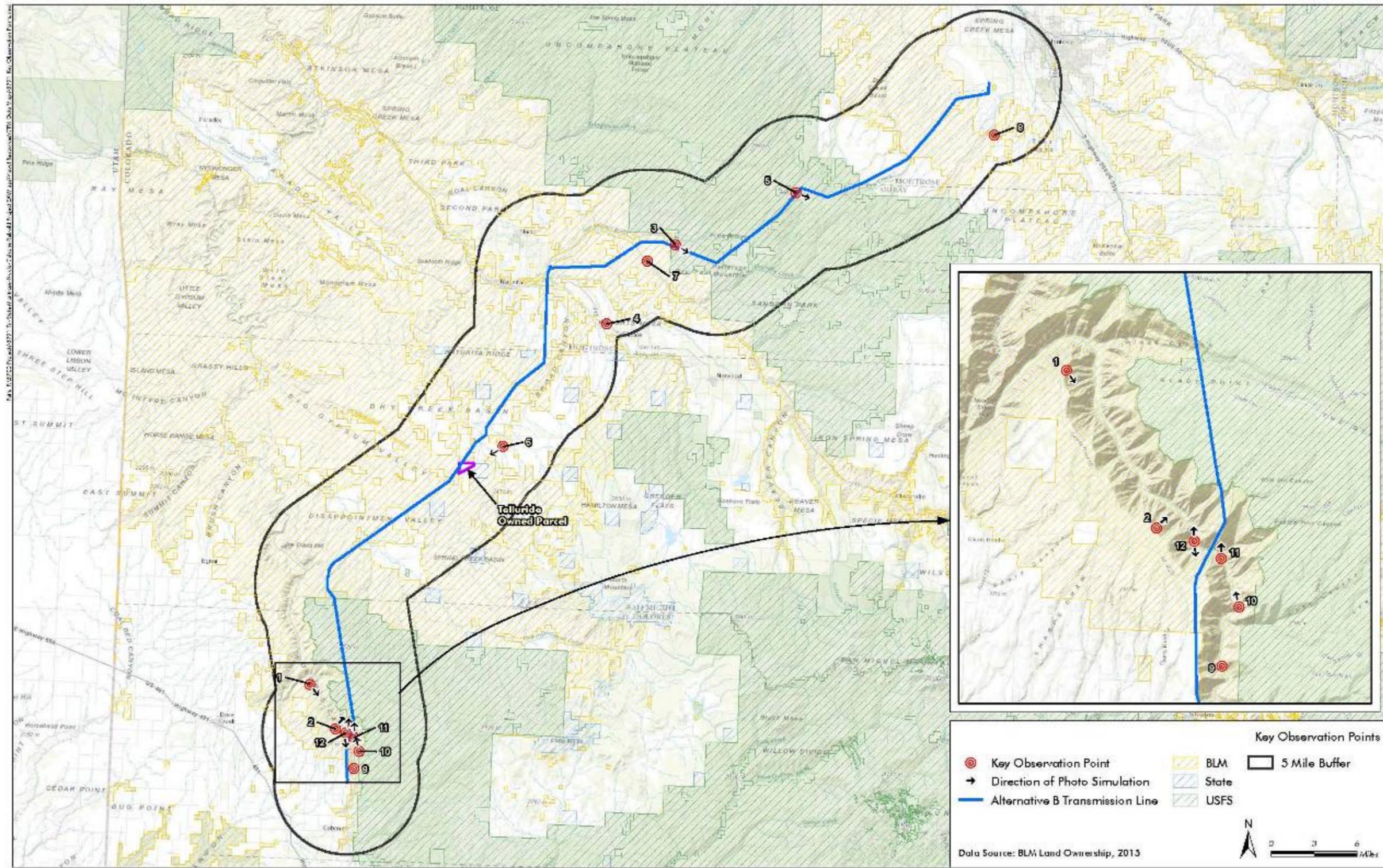


FIGURE 2. KEY OBSERVATION POINTS AND DIRECTION OF PHOTO SIMULATION

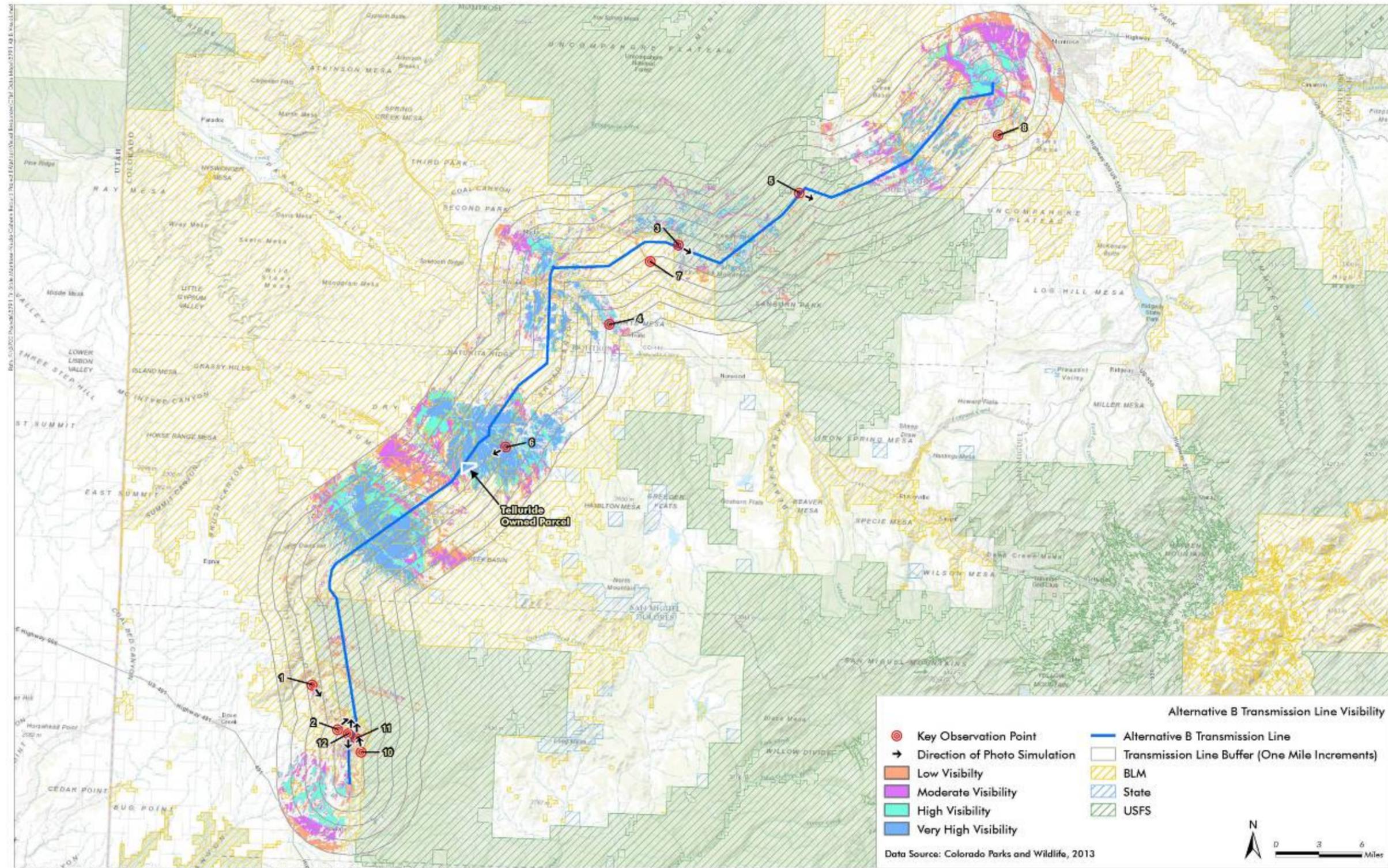


FIGURE 3. EXISTING VISIBILITY OF TRANSMISSION LINE/ALTERNATIVE - NO ACTION ALTERNATIVE

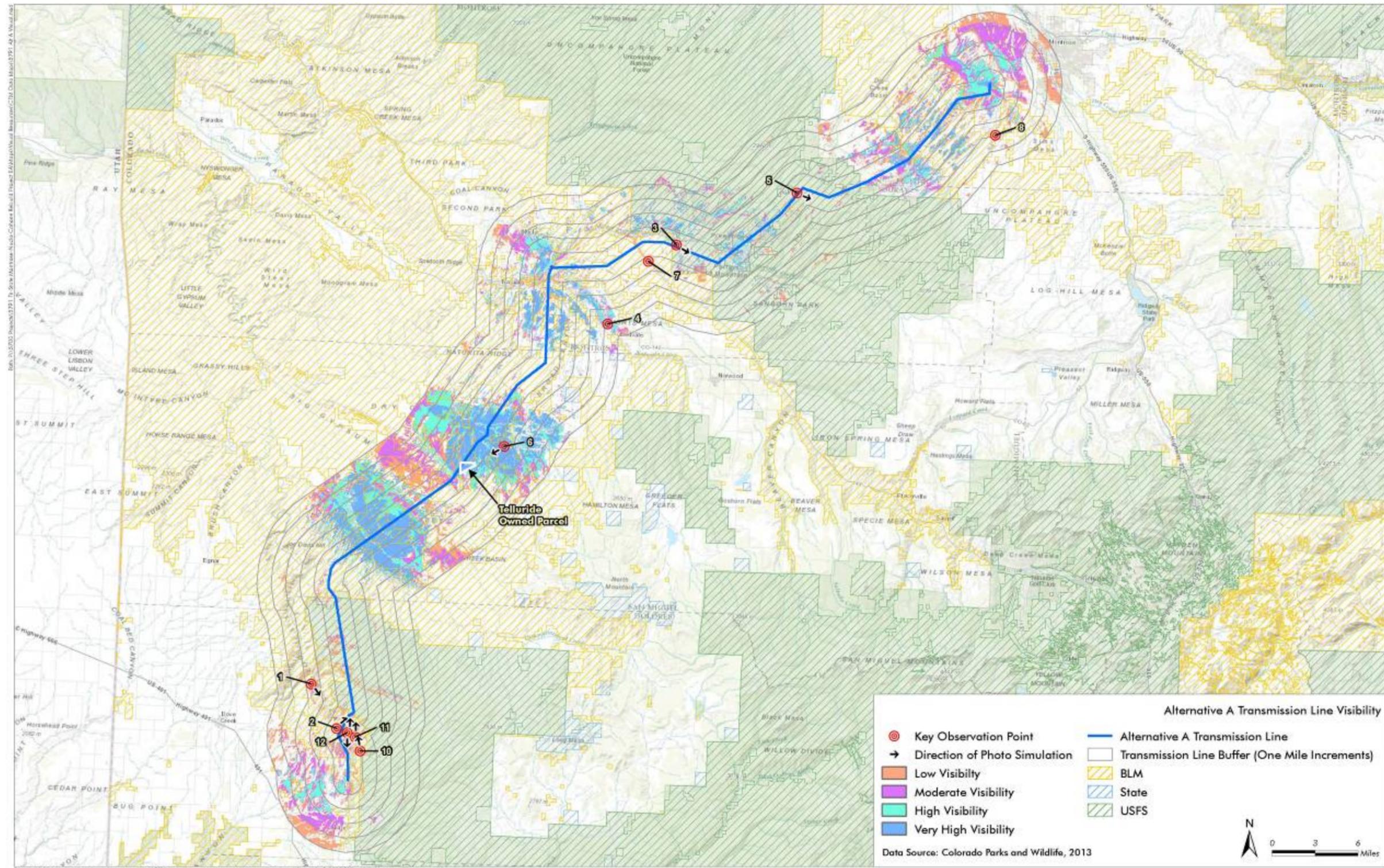


FIGURE 4. VISIBILITY OF TRANSMISSION LINE FROM ALTERNATIVE A - PROPOSED ACTION ALTERNATIVE

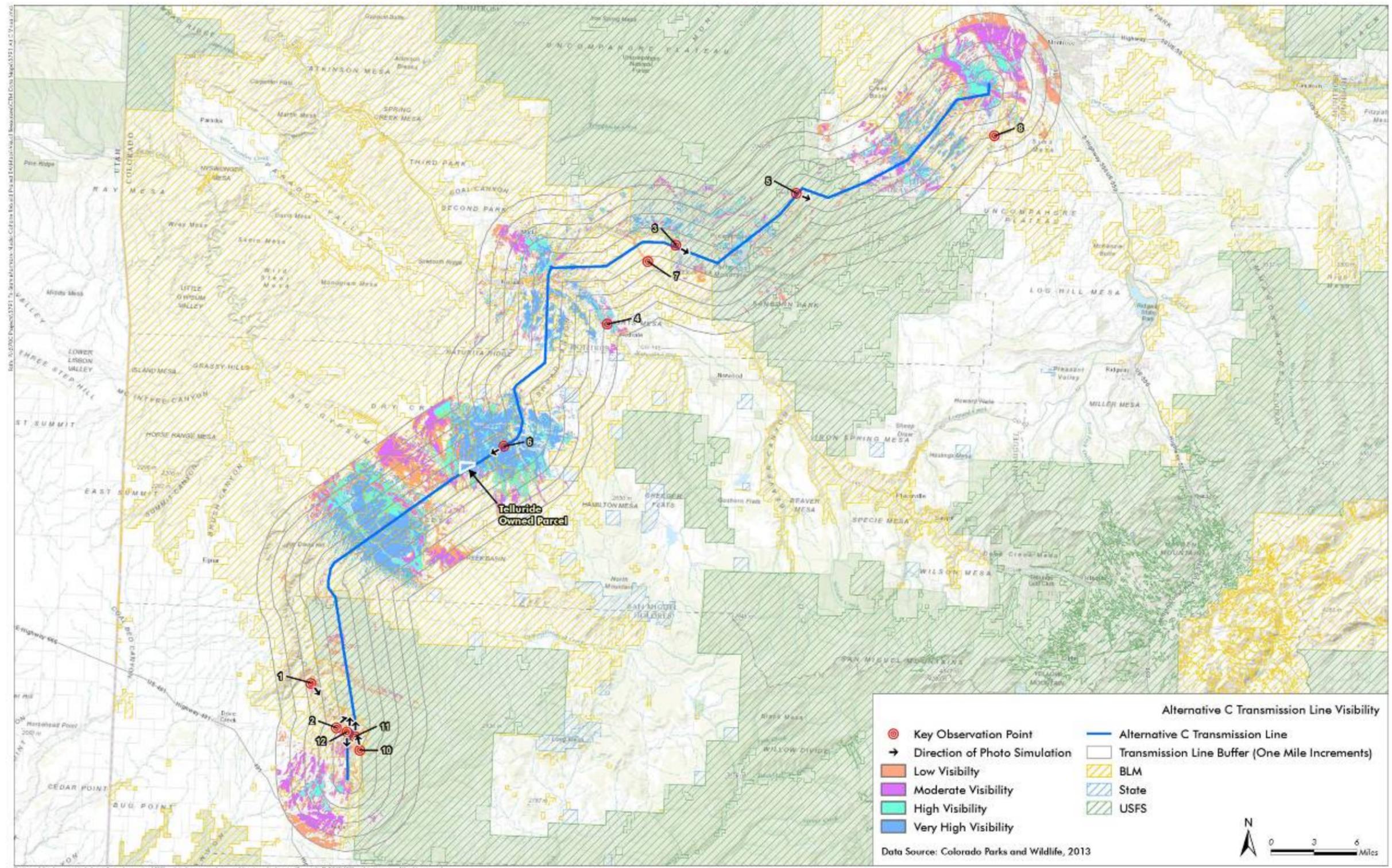


FIGURE 5. VISIBILITY OF TRANSMISSION LINE FROM ALTERNATIVE C – OTHER ACTION ALTERNATIVE

## **APPENDIX B: CONTRAST RATINGS MEMO AND WORKSHEETS**

**Technical Memorandum**  
**Tri-State Montrose-Nucla-Cahone**  
**Transmission Line Improvement Project**  
**BLM Contrast Ratings**  
**Application and Description**

**Date:** 20 July 2015 (revised October 2015)  
**From:** Mark Holdeman (HLA, Inc.)  
**To:** Aleta Powers (ERO)

**Introduction**

Information about the degree and type of visible contrasts from the Contrast Rating Worksheets is included in the Technical Report, Effects of the Alternatives section, for each Bureau of Land Management (BLM) Key Observation Point (KOP). The four VRM degrees of visible contrasts are categorized as None, Weak, Moderate, and Strong. The Technical Report uses the degree of contrast to define the levels of potential effects to visual resources. Therefore, a rating of “None” would have no effect, a “Weak” rating would have low effect, a “Moderate” rating would have a noticeable but limited effect, and a “Strong” rating would have a highly noticeable and distracting effect.

Each of the four Visual Resource Management (VRM) Classes allows a different degree of contrast within the geographic area of each VRM Class. The allowable levels of contrast for each VRM Class are, None in VRM 1, Weak in VRM 2, Moderate in VRM 3, and Strong in VRM 4. The project locations on BLM lands are all in areas classified VRM 2.

**Contrast Ratings Content**

Contrast ratings were determined from recognition of the visible, physical characteristics in a specific view, or views, of the existing landscape, compared with the potential changes to the existing landscape due to a proposed activity. To compare the existing conditions with the proposed changes, the potential contrasts of texture, color, line, and form were estimated, described, and rated on the Contrast Rating Worksheet. One Contrast Rating Worksheet was completed for each view from each KOP with visibility of the proposed alternatives.

The agencies selected twelve KOPs for assessment and analysis of potential effects to visual resources due to the action alternatives. Two of the twelve selected KOPs do not have visibility of the existing power lines or structures in any views. One of the twelve selected KOPs will have no visible contrasts from the proposed action due to the presence of the existing power line and structures among many larger power lines and structures in the same location. However, the Contrast Rating Worksheets have been completed for these three KOPs to provide the appropriate BLM record, consistent with the worksheets completed for the other KOPs.

### **Contrast Ratings in the VRM Process**

The *BLM Manual 8431- Visual Resource Contrast Rating* publication describes and defines the significance of the contrast ratings in the VRM process. An overview of the contrast rating procedure states:

“The contrast rating system is a systematic process used by the Bureau of Land Management (BLM) to analyze potential visual impact of proposed projects and activities. It is primarily intended to assist Bureau personnel who are not formally trained in the design arts to apply the basic principles of design in the resolution of visual impacts. It is not intended to be the only means of resolving these impacts. It should be used as a guide, tempered by common sense, to ensure that every attempt is made to minimize potential visual impacts. The basic philosophy underlying the system is: The degree to which a management activity affects the visual quality of a landscape depends on the visual contrast created between a project and the existing landscape. The contrast can be measured by comparing the project features with the major features in the existing landscape. The basic design elements of form, line, color, and texture are used to make this comparison and to describe the visual contrast created by the project. This assessment process provides a means for determining visual impacts and for identifying measures to mitigate these impacts.”

The contrast ratings are not applicable to the United States Forest Service (USFS) visual resources assessment, analysis methods, or visual quality objective (VQO) or Scenic Integrity levels as viewed from the USFS Service KOPs. Thus, no contrast ratings were developed for KOPs on National Forest lands.

### **Contrast Ratings in the Visual Resources Technical Report**

Information about the degree and type of visible contrasts from the Contrast Rating Worksheets is included in the Technical Report in the *Effects of the Alternatives* section, for each BLM KOP. The four BLM degrees of visible contrasts are categorized as None, Weak, Moderate, and Strong. The Technical Report uses the degree of contrast to define the levels of visual resource effect. Thus, a contrast rating of “None” would have no effect; a weak visual contrast would have a low effect; a moderate contrast would have a moderate, effect; and a strong contrast would have a high effect on visual resources (please note that these effects are not the same as those identified in the EA for the project; the NEPA definitions of intensity of effect are not synonymous with the contrast rating definitions).

The completed Contrast Rating Worksheets for each BLM KOP are included as an appendix to this memo.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date **6.14.15**

District **SW**

Resource Area **TRFO**

Activity (program) **Alternative A -  
Proposed Action**

SECTION A. PROJECT INFORMATION

1. Project Name <b>Tri-State Cahone-Montrose TL Upgrade</b>	4. Location Township <b>41N</b> Range <b>17W</b> Section <b>19</b>	5. Location Sketch <b>See report</b>
2. Key Observation Point <b>1 - view of north canyon rim</b>		
3. VRM Class <b>2</b>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land - deep canyon and mesa tops water - curvilinear river in canyon	globular and oval evergreen trees	None visible in frame
LINE	land - irregular and horizontal water - curvilinear	highly varied	None visible in frame
COLOR	land - brown and red water - grey	green and grey	None visible in frame
TEXTURE	land - coarse water - smooth	near - coarse far - smooth	None visible in frame

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land and water - no change	no change	Vertical structure is visible
LINE	land and water - no change	no change	Vertical structure is visible
COLOR	land and water - no change	no change	Vertical structure is visible
TEXTURE	land and water - no change	no change	no change

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

ELEMENTS	1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Evaluator's Names
					X				X			X		Date
					X				X			X		<b>Mark Holdeman</b>
				X				X			X			

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SECTION D. (Continued)

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Comments from item 2.

- Existing power line and south rim structure are nearly invisible.
- Proposed north rim structure is visible above horizon line which exhibits moderate contrasts of line and color against background sky and distant mountain range.
- These contrasts would only be in south and southeast views.
- Structure visible above skyline but very small in view
- Nonspecular steel would be used in all structures
- Clearing corridor is parallel to view and screened by nearby vegetation
- Structure would move from one location along the canyon rim to another
- Other human uses are evident in other directions from this view and not unexpected
- Some structures in proximity include low curvilinear stone wall of overlook structure; cell tower north in canyon, Dove Creek and silos to the northwest
- On field trip to site with Dolores County Commissioners, some people could identify existing transmission line; others could not. Some could locate with aid of binoculars. Local residents thought only locals may notice a change. Not obvious to a casual observer.

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Additional Mitigating Measures (See item 3)

UNITED STATES  
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VISUAL CONTRAST RATING WORKSHEET

Date **6.14.15**

District **SW**

Resource Area **TREO**

Activity (program) **Alternative C -  
Upgrade-in-Place**

SECTION A. PROJECT INFORMATION

1. Project Name Tri-State Cahone-Montrose TL Upgrade		4. Location Township <b>41N</b>		5. Location Sketch <b>See Report</b>
2. Key Observation Point 1 - view of north canyon rim		Range <b>17W</b>		
3. VRM Class <b>2</b>		Section <b>19</b>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land - deep canyon and mesa tops water - curvilinear river in canyon	globular and oval evergreen trees	None visible in frame
LINE	land - irregular and horizontal water - curvilinear	highly varied	None visible in frame
COLOR	land - brown and red water - grey	green and grey	None visible in frame
TEXTURE	land - coarse water - smooth	near - coarse far - smooth	None visible in frame

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	no change	no change	no change
LINE	no change	no change	no change
COLOR	no change	no change	no change
TEXTURE	no change	no change	no change

SECTION D. CONTRAST RATING D SHORT TERM X LONG TERM

1. DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes D No (Explain on reverse side)			
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)							
ELEMENTS		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	3. Additional mitigating measures recommended? D Yes <input checked="" type="checkbox"/> No (Explain on reverse side)			
		Form			X				X				X			Evaluator's Names <b>Aleta Powers</b>	Date
		Line			X				X				X				
		Color			X				X				X				
Texture			X				X				X						

Comments from item 2.

- Existing power line and south rim structure are nearly invisible
- Proposed south rim structure is barely visible below horizon line due to weak contrasts of line and color
- These contrasts would only be in south and southeast views
- Some structures in proximity include low curvilinear stone wall of overlook structure; cell tower north in canyon, Dove Creek and silos to the northwest
- On field trip to site with Dolores County Commissioners, some people could identify existing transmission line; others could not. Some could locate with aid of binoculars. Local residents thought only locals may notice a change. Not obvious to a casual observer.

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Additional Mitigating Measures (See item 3)

(Continuation of Item 2 comments above: )

- Structure visible above skyline but very small in view
- Nonspecular steel would be used in all structures and conductor
- Clearing corridor is parallel to view and screened by nearby vegetation
- Structure would move from one location on the canyon rim to another, offsetting effect
- Other human uses are evident in other directions from this view and not unexpected

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date **6.14.15**

District **SW**

Resource Area **TRFO**

Activity (program) **Alternative A -  
Proposed Action**

SECTION A. PROJECT INFORMATION

1. Project Name <b>Tri-State Cahone-Montrose TL Upgrade</b>	4. Location Township <b>41N</b> Range <b>17W</b> Section <b>19</b>	5. Location Sketch <b>See report</b>
2. Key Observation Point <b>1 - view of south canyon rim</b>		
3. VRM Class <b>2</b>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land - deep canyon and mesa tops water - curvilinear river in canyon	globular and oval evergreen trees	None visible in frame
LINE	land - irregular and horizontal water - curvilinear	highly varied	None visible in frame
COLOR	land - brown and red water - grey	green and grey	None visible in frame
TEXTURE	land - coarse water - smooth	near - coarse far - smooth	None visible in frame

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land and water - no change	no change	Vertical structure is visible
LINE	land and water - no change	no change	Vertical structure is visible
COLOR	land and water - no change	no change	Vertical structure is visible
TEXTURE	land and water - no change	no change	no change

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

1.  DEGREE  OF  CONSTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)	
	LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)					
	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None		
				X					X					X
				X					X					X
ELEMENTS	Form			X				X				X		
	Line			X				X				X		
	Color			X				X				X		
	Texture			X				X				X		
												3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)		
												Evaluator's Names <b>Mark Holdeman</b>		
												Date		

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SECTION D. (Continued)

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Comments from item 2.

- Existing power line and south rim structure are nearly invisible.
- Proposed south rim structure is barely visible below horizon line due to weak contrasts of line and color.
- These contrasts would only be in south and southeast views.
- Structure visible above skyline but very small in view
- Nonspecular steel would be used in all structures
- Clearing corridor is parallel to view and screened by nearby vegetation
- Structure would move from one location along the canyon rim to another
- Other human uses are evident in other directions from this view and not unexpected
- Some structures in proximity include low curvilinear stone wall of overlook structure; cell tower north in canyon, Dove Creek and silos to the northwest.
- On field trip to site with Dolores County Commissioners, some people could identify existing transmission line; others could not. Some could locate with aid of binoculars. Local residents thought only locals may notice a change. Not obvious to a casual observer.

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Additional Mitigating Measures (See item 3)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
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VISUAL CONTRAST RATING WORKSHEET

Date **6.14.15**

District **SW**

Resource Area **TREO**

Activity (program) **Alternative C -  
Upgrade-in-Place**

SECTION A. PROJECT INFORMATION

1. Project Name <b>Tri-State Cahone-Montrose TL Upgrade</b>	4. Location Township <b>41N</b> Range <b>17W</b> Section <b>19</b>	5. Location Sketch <b>See Report</b>
2. Key Observation Point <b>1 - view of south canyon rim</b>		
3. VRM Class <b>2</b>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land - deep canyon and mesa tops water - curvilinear river in canyon	globular and oval evergreen trees	None visible in frame
LINE	land - irregular and horizontal water - curvilinear	highly varied	None visible in frame
COLOR	land - brown and red water - grey	green and grey	None visible in frame
TEXTURE	land - coarse water - smooth	near - coarse far - smooth	None visible in frame

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	no change	no change	no change
LINE	no change	no change	no change
COLOR	no change	no change	no change
TEXTURE	no change	no change	no change

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

1.	DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	
					X								X	
					X								X	
ELEMENTS	Form				X				X				X	3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)
	Line				X				X				X	
	Color				X				X				X	
	Texture				X				X				X	
Evaluator's Names												Date		
Aleta Powers														

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SECTION D. (Continued)

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Comments from item 2.

- Existing power line and south rim structure are nearly invisible
- Proposed south rim structure is barely visible below horizon line due to weak contrasts of line and color
- These contrasts would only be in south and southeast views
- Some structures in proximity include low curvilinear stone wall of overlook structure; cell tower north in canyon, Dove Creek and silos to the northwest
- On field trip to site with Dolores County Commissioners, some people could identify existing transmission line; others could not. Some could locate with aid of binoculars. Local residents thought only locals may notice a change. Not obvious to a casual observer.

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Additional Mitigating Measures (See item 3)

Imperceptible change due to distance.

UNITED STATES  
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VISUAL CONTRAST RATING WORKSHEET

Date **6.14.15**

District **SW**

Resource Area **TRFO**

Activity (program) **Alternative A -  
Proposed Action**

SECTION A. PROJECT INFORMATION

1. Project Name <b>Tri-State Cahone-Montrose TL Upgrade</b>	4. Location Township <b>40N</b> Range <b>17W</b> Section <b>6</b>	5. Location Sketch <b>See report</b>
2. Key Observation Point <b>2 - view of north canyon rim</b>		
3. VRM Class <b>2</b>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land - deep canyon and mesa tops water - creek in canyon bottom	globular and oval evergreen trees	slight form of conductor visible
LINE	land - irregular in canyon water - horizontal above canyon	highly varied	horizontal conductor with dense background vegetation
COLOR	land - brown and red water - dark grey	green and grey	grey-brown
TEXTURE	land - coarse water - smooth	near - coarse far - smooth	smooth conductor

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	no change	shape change in clearing corridor	vertical and linear of new structure
LINE	no change	highly varied except in clearing	vertical structure is visible
COLOR	no change	light green and light brown in clearing	grey and brown, vertical structure is visible
TEXTURE	no change	smooth in clearing	smooth, vertical structure is visible

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

ELEMENTS	1. DEGREE OF CONTRAST	2. Does project design meet visual resource management objectives? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No *see back (Explain on reverse side)												3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side) <b>See back page</b>
		Evaluators Names <b>Mark Holdeman</b> Date												
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	
	Form			X				X			X			
	Line			X				X				X		
	Color			X				X				X		
	Texture			X				X				X		

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SECTION D. (Continued)

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Comments from item 2.

- Existing power line structure not visible above the horizon line.
- Proposed power line structure would be:
  - ~ visible above the horizon line
  - ~ create contrasts of line and color.
- These contrasts would only be in south and southeast views.
- New effects would be offset by removal of upstream structure for existing line.
- Existing structure and roads visible; contrast would increase but consistent with existing setting and type of impact .
- Low volume and low frequency of use.
- Types of users at this location include low frequency hunting use by locals.
- During field review in September 2015, local Dolores Co commissioners noted that they are not aware of regular use at this location.
- At end of unsigned 4-wheel drive access roads; no signs indicating canyon rim or other use areas

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Additional Mitigating Measures (See item 3)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date **6.14.15**

District **SW**

Resource Area **TREO**

Activity (program) **Alternative C -  
Upgrade-in-Place**

SECTION A. PROJECT INFORMATION

1. Project Name <b>Tri-State Cahone-Montrose TL Upgrade</b>	4. Location Township <b>40N</b> Range <b>17W</b> Section <b>6</b>	5. Location Sketch <b>See Report</b>
2. Key Observation Point <b>2 - view of north canyon rim</b>		
3. VRM Class <b>2</b>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land - deep canyon and mesa tops water - creek in canyon bottom	globular and oval evergreen trees	Slight form of conductor visible
LINE	land - irregular in canyon water - horizontal above canyon	highly varied	Horizontal conductor with dense background vegetation
COLOR	land - brown and red water - dark grey	green and grey	Grey-brown
TEXTURE	land - coarse water - smooth	near - coarse far - smooth	Smooth conductor

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	no change	No change	Longer line span at Chicken Aspen Canyon
LINE	no change	No change	Larger conductor slightly more evident as linear feature
COLOR	no change	No change	No change
TEXTURE	no change	No change	No change

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

ELEMENTS	1. DEGREE OF CONTRAST	2. Does project design meet visual resource management objectives <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)													
		3. Additional mitigating measures recommended? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)													
		Evaluator's Names											Date		
		Aleta Powers													
		Form				X					X				
	Line				X					X				X	
	Color				X					X					X
	Texture				X					X					X

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SECTION D. (Continued)

---

Comments from item 2.

- Existing structure and roads visible; contrast would increase but consistent with existing setting and type of impact
- Low volume and low frequency of use
- Types of users at this location include low frequency hunting use by locals
- During field review in September 2015, local Dolores Co commissioners noted that they are not aware of regular use at this location
- At end of unsigned 4-wheel drive access roads; no signs indicating canyon rim or other use areas

---

Additional Mitigating Measures (See item 3)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date **6.14.15**

District **SW**

Resource Area **TRFO**

Activity (program) **Alternative A -  
Proposed Action**

SECTION A. PROJECT INFORMATION

1. Project Name <b>Tri-State Cahone-Montrose TL Upgrade</b>	4. Location Township <b>40N</b> Range <b>17W</b> Section <b>6</b>	5. Location Sketch  <b>(see report)</b>
2. Key Observation Point <b>2 - view of northeast canyon rim</b>		
3. VRM Class <b>2</b>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land - deep canyon and mesa tops water - creek in canyon bottom	globular and oval evergreen trees	existing road and poles visible as linear forms
LINE	land - irregular in canyon water - horizontal above canyon	highly varied	existing road and poles visible with linear contrast
COLOR	land - brown and red water - dark grey	green and grey	existing road and poles grey and brown
TEXTURE	land - coarse water - smooth	near - coarse far - smooth	existing road and poles smooth

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	no change	no change	existing road and poles removed; new structures not visible
LINE	no change	no change	existing road and poles removed; new structures not visible
COLOR	no change	no change	existing road and poles removed; new structures not visible
TEXTURE	no change	no change	existing road and poles removed; new structures not visible

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

ELEMENTS	1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Evaluator's Names
					X				X				X	Date
					X				X				X	<b>Mark Holdeman</b>

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SECTION D. (Continued)

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Comments from item 2.

- Existing power line structure and roads visible.
- Proposed power line structure and maintenance road would not be visible in this view, and would be to the left of the view frame.
- Existing structure and roads visible; contrast would increase but consistent with existing setting and type of impact
- Low volume and low frequency of use
- Types of users at this location include low frequency hunting use by locals
- During field review in September 2015, local Dolores Co commissioners noted that they are not aware of regular use at this location
- At end of unsigned 4-wheel drive access roads; no signs indicating canyon rim or other use areas

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Additional Mitigating Measures (See item 3)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date **6.14.15**

District **SW**

Resource Area **TREO**

Activity (program) **Alternative C -  
Upgrade-in-Place**

SECTION A. PROJECT INFORMATION

1. Project Name <b>Tri-State Cahone-Montrose TL Upgrade</b>	4. Location Township <b>40N</b> Range <b>17W</b> Section <b>6</b>	5. Location Sketch  <b>(see report)</b>
2. Key Observation Point <b>2 - view of northeast canyon rim</b>		
3. VRM Class <b>2</b>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land - deep canyon and mesa tops water - creek in canyon bottom	globular and oval evergreen trees	Existing road and poles visible as linear forms
LINE	land - irregular in canyon water - horizontal above canyon	highly varied	Existing road and poles visible with linear contrast
COLOR	land - brown and red water - dark grey	green and grey	Existing road and poles grey and brown
TEXTURE	land - coarse water - smooth	near - coarse far - smooth	Existing road and poles smooth

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Form of road and structure pad contrasts with existing land form	Vegetation removed from road and structure pad	Larger road structures than existing
LINE	Abrupt change in edge evident; straight line	Abrupt clearing at new road edge and pad	Only wooden structures visible in this view; same as existing
COLOR	Brown of cut and fill for road contrasts with surroundings	Brown cut and fill contrasts with surrounding vegetation	Only wooden structures visible in this view; same as existing
TEXTURE	Smoothness of road cut and fill contrasts with existing variable texture	Vegetation texture ends at road cut and fill	Only wooden structures visible in this view; same as existing

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

ELEMENTS	1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Evaluator's Names
			X					X				X		Date
			X					X				X		<b>Aleta Powers</b>

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SECTION D. (Continued)

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Comments from item 2.

- Existing structure and roads visible; contrast would increase but consistent with existing setting and type of impact
- Low volume and low frequency of use
- Types of users at this location include low frequency hunting use by locals
- During field review in September 2015, local Dolores Co commissioners noted that they are not aware of regular use at this location
- At end of unsigned 4-wheel drive access roads; no signs indicating canyon rim or other use areas
- Cut and fill would be minimized as much as possible
- Cut and fill would be revegetated as quickly as possible

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Additional Mitigating Measures (See item 3)

UNITED STATES  
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BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date **6.14.15**

District **SW**

Resource Area **TRFO**

Activity (program) **Alternative A -  
Proposed Action**

SECTION A. PROJECT INFORMATION

1. Project Name <b>Tri-State Cahone-Montrose TL Upgrade</b>	4. Location Township <b>44N</b> Range <b>15W</b> Section <b>19</b>	5. Location Sketch <b>See Report</b>
2. Key Observation Point <b>6 -town of Basin/BLM kiosk</b>		
3. VRM Class <b>2</b>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land - wide open valley water - no visible water features	- low, horizontal, slightly rounded mass of sagebrush - globular of pinon	- rectilinear and cubical of buildings and BLM sign - curvilinear of road
LINE	land - horizontal in valley, sloped and variable at valley edges - mountains	- horizontal in most of valley - some vertical in southwest and northeast corners of valley	horizontal and vertical
COLOR	land - grey (sage and road), green (grasses and shrubs), and brown (mountains)	grey and green	brown buildings and grey roads
TEXTURE	land - smooth in valley and coarse at mountains	- smooth in valley - coarse in southwest and northeast corners of valley	smooth

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	no change	no change	no change
LINE	no change	no change	no change
COLOR	no change	no change	no change
TEXTURE	no change	no change	no change

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

ELEMENTS	1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side) N/A; Private land
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Evaluator's Names
					X				X				X	Date
					X				X				X	Mark Holdeman

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SECTION D. (Continued)

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Comments from item 2.

- The existing power line is not visible from the KOP.
- The proposed power line would be upgraded in place - no change.

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Additional Mitigating Measures (See item 3)

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VISUAL CONTRAST RATING WORKSHEET

Date **6.14.15**

District **SW**

Resource Area **TRFO**

Activity (program) **Alt C - Realignment  
Along SH141**

SECTION A. PROJECT INFORMATION

1. Project Name <b>Tri-State Cahone-Montrose TL Upgrade</b>	4. Location Township <b>44N</b> Range <b>15W</b> Section <b>19</b>	5. Location Sketch <b>See Report</b>
2. Key Observation Point <b>6 - town of Basin/BLM kiosk</b>		
3. VRM Class <b>2</b>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land - wide open valley water - no visible water features	- low, horizontal, slightly rounded mass of sagebrush - globular of pinon	- rectilinear and cubical of buildings and BLM sign - curvilinear of road
LINE	land - horizontal in valley, sloped and variable at valley edges - mountains	- horizontal in most of valley - some vertical in southwest and northeast corners of valley	horizontal and vertical
COLOR	land - grey (sage and road), green (grasses and shrubs), and brown (mountains)	grey and green	brown buildings and grey roads
TEXTURE	land - smooth in valley and coarse at mountains	- smooth in valley - coarse in southwest and northeast corners of valley	smooth

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	graded road adjacent to existing road edge	straight form/edge of road	linear Monopole with davit arms
LINE	linear disturbance edge from road may be evident	clearing/grading edge	vertical Horizontal components and conductor with perch discouragers and flight diverters
COLOR	brown access road grading	brown contrasts with grey/green of sage	grey- Brown
TEXTURE	smooth line of access road	abrupt line between natural vegetation and cleared road	smooth

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

ELEMENTS	1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side) <b>N/A</b>
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				3. Additional mitigating measures recommended? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Evaluator's Names
				X				X			X			Date
				X				X				X		<b>Aleta Powers</b>

Comments from item 2.

No VRM. Private land.

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Additional Mitigating Measures (See item 3)

- Revegetate short-term vegetation, clearing, and grading
- Minimize grading for downline access road

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VISUAL CONTRAST RATING WORKSHEET

Date **6.14.15**

District **SW**

Resource Area **UFO**

Activity (program) **All Action  
Alternatives**

SECTION A. PROJECT INFORMATION

1. Project Name <b>Tri-State Cahone-Montrose TL Upgrade</b>	4. Location Township <b>46N</b> Range <b>14W</b> Section <b>11</b>	5. Location Sketch <b>See Report</b>
2. Key Observation Point <b>7 - Cottonwood Ledges Campground</b>		
3. VRM Class <b>2</b>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land - mountainous with shallow slopes water - river with horizontal surface	rectangular willow masses and conical and oval cottonwoods	roads - linear
LINE	land - diagonal and horizontal water - horizontal	vertical and horizontal	roads - horizontal, curvilinear picnic shelters and restroom - vertical
COLOR	land - brown, green, and grey water - white, dark blue, and green	green and grey (low sages)	rocks - brown and grey vegetation - dark to light green and grey water -
TEXTURE	land - coarse water - coarse	coarse	variable

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	no change	no change	not visible
LINE	no change	no change	not visible
COLOR	no change	no change	not visible
TEXTURE	no change	no change	not visible

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

ELEMENTS	1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Evaluator's Names
					X				X				X	Date
					X				X				X	<b>Mark Holdeman</b>

Comments from item 2.

Proposed power line will be in same location as existing power line.

- Proposed taller structures and wider clearing corridor would not be visible from any location in the campground.

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Additional Mitigating Measures (See item 3)

Unnecessary.

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VISUAL CONTRAST RATING WORKSHEET

Date **6.14.15**

District **SW**

Resource Area **UFO**

Activity (program) **All Action  
Alternatives**

SECTION A. PROJECT INFORMATION

1. Project Name <b>Tri-State Cahone-Montrose TL Upgrade</b>	4. Location Township <b>46N</b> Range <b>13W</b> Section <b>7</b>	5. Location Sketch <b>See Report</b>
2. Key Observation Point <b>8 - Lower Spring Creek Trail</b>		
3. VRM Class <b>2</b>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land - canyon and mesa top water - creek in canyon bottom	globular-shaped pinon and juniper trees	TL monopoles, truss structures, and H-frames
LINE	land - horizontal and steeply-sloped water - curvilinear	circular	vertical
COLOR	land - brown, green, and grey water - none perceptible	green and grey	brown and grey
TEXTURE	land - coarse water - none perceptible	coarse	smooth

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	no change	no change	no noticeable change
LINE	no change	no change	no noticeable change
COLOR	no change	no change	no noticeable change
TEXTURE	no change	no change	no noticeable change

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

ELEMENTS	1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Evaluator's Names
					X				X				X	Date
					X				X				X	<b>Mark Holdeman</b>

Comments from item 2.

Proposed TL will be in same location as existing TL with many other TLs.

- Proposed taller structures would not be noticeable as other adjacent TLs will remain taller than the proposed TL.
- TLs are not in a forest at this location, and so the clearing corridor is not visible.

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Additional Mitigating Measures (See item 3)

Unnecessary.

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VISUAL CONTRAST RATING WORKSHEET

Date **6.14.15**

District **SW**

Resource Area **TRFO**

Activity (program) **All Action  
Alternatives**

SECTION A. PROJECT INFORMATION

1. Project Name <b>Tri-State Cahone-Montrose TL Upgrade</b>	4. Location Township <b>40N</b> Range <b>17W</b> Section <b>16</b>	5. Location Sketch <b>See Report</b>
2. Key Observation Point <b>9 - Dolores Canyon bottom</b>		
3. VRM Class <b>2</b>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land - deep canyon water - river with horizontal surface	rectangular willow masses, conical evergreen trees, and round oak masses	none
LINE	land - diagonal, vertical, and horizontal water - horizontal and curvilinear	vertical and circular	none
COLOR	land - brown and red water - white	green	none
TEXTURE	land - coarse (mostly rock) water - smooth	coarse trees, smooth grasses	none

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	no change	no change	none
LINE	no change	no change	none
COLOR	no change	no change	none
TEXTURE	no change	no change	none

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

ELEMENTS	1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Evaluator's Names
					X				X				X	Date
					X				X				X	<b>Mark Holdeman</b>

Comments from item 2.

Existing TL and proposed TL location are not visible from this KOP.

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Additional Mitigating Measures (See item 3)

Unnecessary.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date **6.14.15**

District **SW**

Resource Area **TRFO**

Activity (program) **Alternative A -  
Proposed Action**

SECTION A. PROJECT INFORMATION

1. Project Name <b>Tri-State Cahone-Montrose TL Upgrade</b>	4. Location Township <b>40N</b> Range <b>17W</b> Section <b>9</b>	5. Location Sketch <b>See report</b>
2. Key Observation Point <b>10 - Dolores Canyon bottom</b>		
3. VRM Class <b>2</b>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land - deep canyon water - river with horizontal surface	oval evergreen trees and rectangular willow masses	Delicate vertical wooden H-frame
LINE	land - diagonal, vertical, and horizontal water - horizontal	vertical and circular	linear and rectangular
COLOR	land - brown and red water - white	green	brown
TEXTURE	land - coarse water - smooth	trees coarse and grass smooth	smooth

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	no change	no change	vertical dense steel lattice-work tower
LINE	no change	no change	linear and rectangular
COLOR	no change	no change	grey
TEXTURE	no change	no change	smooth; dense lattice

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

1.  DEGREE  OF  CONSTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
	LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	
				X				X			X		
				X				X			X		
ELEMENTS	Form			X				X			X		
	Line			X				X			X		
	Color			X				X			X		
	Texture			X				X			X		
												3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)	
												Evaluator's Names <b>Mark Holdeman</b>	
												Date	

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SECTIOND. (Continued)

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Comments from item 2.

- Proposed power line structure is about the same size as existing structure in view but is more dense, creating moderate structure contrast.
- Both structures are visible in only one view north and upward.
- Use is infrequent; only when river can be safely floated (every 7-8 years)
- Existing transmission line visible at river miles 2 and 5 for long stretches
- Existing structure and crossing used as a frame of reference for boaters and is an expected component of landscape
- Effects offset by removal of existing structure upstream
- Tri-state would provide revised mapping brochures for river users for changed transmission line location

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Additional Mitigating Measures (See item 3)

UNITED STATES  
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VISUAL CONTRAST RATING WORKSHEET

Date **6.14.15**

District **SW**

Resource Area **TREO**

Activity (program) **Alternative C -  
Upgrade-in-Place**

SECTION A. PROJECT INFORMATION

1. Project Name <b>Tri-State Cahone-Montrose TL Upgrade</b>		4. Location Township <b>40N</b>	5. Location Sketch <b>See Report</b>
2. Key Observation Point <b>10 - Dolores Canyon bottom</b>		Range <b>17W</b>	
3. VRM Class <b>2</b>		Section <b>9</b>	

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land - deep canyon water - river with horizontal surface	oval evergreen trees and rectangular willow masses	Delicate wooden H-frame, vertical
LINE	land - diagonal, vertical, and horizontal water - horizontal	vertical and circular	Linear and rectangular
COLOR	land - brown and red water - white	green	brown
TEXTURE	land - coarse water - smooth	trees coarse and grass smooth	smooth

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	no change	no change	Vertical; taller than existing; dense lattice tower
LINE	no change	no change	Linear and rectangular
COLOR	no change	no change	grey
TEXTURE	no change	no change	dense lattice - steel

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

ELEMENTS	1. DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side) <b>See back page</b>	
			LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)	
			Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None		
						X						X				
						X							X			
			X						X							
		Evaluator's Names <b>Aleta Powers</b> Date _____														

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SECTION D. (Continued)

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Comments from item 2.

- Proposed power line structures are larger than existing in the view. Structure lattice is more dense, creating greater structure contrast.
- New structures are only visible in one view, north and upward.
- Use is infrequent; only when river can be safely floated (every 7-8 years)
- Existing transmission line visible at river miles 2 and 5 for long stretches
- Existing structure and crossing used as a frame of reference for boaters and is an expected component of landscape

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Additional Mitigating Measures (See item 3)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date **6.14.15**

District **SW**

Resource Area **TRFO**

Activity (program) **Alternative A -  
Proposed Action**

SECTION A. PROJECT INFORMATION

1. Project Name <b>Tri-State Cahone-Montrose TL Upgrade</b>	4. Location Township <b>40N</b> Range <b>17W</b> Section <b>4</b>	5. Location Sketch <b>See report</b>
2. Key Observation Point <b>11 - Dolores River Canyon bottom</b>		
3. VRM Class <b>2</b>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land - deep canyon water - river	oval evergreen trees and rectangular willow masses	linear and rectangular
LINE	land - diagonal, vertical, and horizontal water - curvilinear	vertical and circular	Conductor visible with marker balls
COLOR	land - brown and red water - white	green	Grey conductor; orange, yellow, or white balls
TEXTURE	land - coarse water - smooth	trees coarse and grass smooth	smooth

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	no change	no change	structure not visible
LINE	no change	no change	structure not visible
COLOR	no change	no change	structure not visible
TEXTURE	no change	no change	structure not visible

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

ELEMENTS	1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Evaluator's Names
					X				X				X	Date
					X				X				X	<b>Mark Holdeman</b>

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SECTIOND. (Continued)

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Comments from item 2.

- Existing power line structure would be eliminated from view. Beneficial effect of removing a human-made structure from the landscape.

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Additional Mitigating Measures (See item 3)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date **6.14.15**

District **SW**

Resource Area **TRFO**

Activity (program) **Alternative C -  
Upgrade-in-Place**

SECTION A. PROJECT INFORMATION

1. Project Name <b>Tri-State Cahone-Montrose TL Upgrade</b>	4. Location Township <b>40N</b> Range <b>17W</b> Section <b>4</b>	5. Location Sketch <b>See Report</b>
2. Key Observation Point <b>11 - Dolores River Canyon bottom</b>		
3. VRM Class <b>2</b>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land - deep canyon water - river	oval evergreen trees and rectangular willow masses	linear and rectangular
LINE	land - diagonal, vertical, and horizontal water - curvilinear	vertical and circular	Conductor visible with marker balls
COLOR	land - brown and red water - white	green	brown-Grey conductor; orange, yellow or white balls
TEXTURE	land - coarse water - smooth	trees coarse and grass smooth	smooth

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	no change	no change	Lattice structure screened by vegetation
LINE	no change	no change	Conductor visible with marker balls
COLOR	no change	no change	Grey conductor; orange, yellow or white balls
TEXTURE	no change	no change	Smooth

SECTION D. CONTRAST RATING D SHORT TERM X LONG TERM

ELEMENTS	1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)	
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)	
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Evaluator's Names	Date
					X				X				X	Aleta Powers	
					X				X			X			
				X				X			X				
			X					X				X			

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**SECTION D. (Continued)**

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Comments from item 2.

- Same as existing view of conductor and marker balls.
- New structure set back from canyon edge and screened by vegetation.
- Use is infrequent; only when river can be safely floated (every 7-8 years)
- Existing transmission line visible at river miles 2 and 5 for long stretches.
- Existing structure and crossing used as a frame of reference for boaters and is an expected component of landscape.

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Additional Mitigating Measures (See item 3)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date **6.14.15**

District **SW**

Resource Area **TRFO**

Activity (program) **Alternative A -  
Proposed Action**

SECTION A. PROJECT INFORMATION

1. Project Name <b>Tri-State Cahone-Montrose TL Upgrade</b>	4. Location Township <b>40N</b> Range <b>17W</b> Section <b>5</b>	5. Location Sketch <b>See report</b>
2. Key Observation Point <b>12 - view of north canyon rim</b>		
3. VRM Class <b>2</b>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land - deep canyon water - river	oval evergreen trees and rectangular willow masses	no visible structures
LINE	land - diagonal, vertical, and horizontal water - horizontal	vertical and circular	no visible structures
COLOR	land - brown and red water - white	green	no visible structures
TEXTURE	land - coarse water - smooth	coarse trees and smooth grass	no visible structures

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	no changes	no changes	Vertical dense steel latticework-worktower
LINE	no changes	no changes	Linear and rectangular
COLOR	no changes	no changes	Grey with colored marker balls
TEXTURE	no changes	no changes	smooth

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

ELEMENTS	1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No *See back (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side) See back page
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Evaluator's Names
					X				X		X			Mark Holdeman
					X				X			X		Date

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**SECTION D. (Continued)**

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Comments from item 2.

- Existing power line structure not in view - located in south view only.
- Proposed power line is in northeast view, upward at about 45 degrees only.
- Use is infrequent; only when river can be safely floated (every 7-8 years)
- Existing transmission line visible at river miles 2 and 5 for long stretches
- Existing structure and crossing used as a frame of reference for boaters and is an expected component of landscape
- Effects offset by removal of existing structure upstream
- Tri-State would provide updated documentation for river users and rafters.

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Additional Mitigating Measures (See item 3)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date **6.14.15**

District **SW**

Resource Area **TRFO**

Activity (program) **Alternative C -  
Upgrade-in-Place**

SECTION A. PROJECT INFORMATION

1. Project Name <b>Tri-State Cahone-Montrose TL Upgrade</b>	4. Location Township <b>40N</b> Range <b>17W</b> Section <b>5</b>	5. Location Sketch <b>See report</b>
2. Key Observation Point <b>12 - view of north canyon rim</b>		
3. VRM Class <b>2</b>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land - deep canyon water - river	oval evergreen trees and rectangular willow masses	no visible structures
LINE	land - diagonal, vertical, and horizontal water - horizontal	vertical and circular	no visible structures
COLOR	land - brown and red water - white	green	no visible structures
TEXTURE	land - coarse water - smooth	coarse trees and smooth grass	no visible structures

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	no changes	no changes	Vertical dense steel latticework-tower
LINE	no changes	no changes	Linear and rectangular
COLOR	no changes	no changes	Grey with colored marker balls
TEXTURE	no changes	no changes	smooth

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

ELEMENTS	1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No *See back (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side) <b>See back page</b>
					X				X		X			
					X				X			X		
				X				X			X		Evaluator's Names <b>Mark Holdeman</b>	
													Date	

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**SECTIOND. (Continued)**

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Comments from item 2.

- Existing power line structure not in view - located in south view only.
- Proposed power line is in northeast view, upward at about 45 degrees only.
- Use is infrequent; only when river can be safely floated (every 7-8 years)
- Existing transmission line visible at river miles 2 and 5 for long stretches
- Existing structure and crossing used as a frame of reference for boaters and is an expected component of landscape
- Effects offset by removal of existing structure upstream
- Tri-State would provide updated documentation for river users and rafters.

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Additional Mitigating Measures (See item 3)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date **6.14.15**

District **SW**

Resource Area **TRFO**

Activity (program) **Alternative A -  
Proposed Action**

SECTION A. PROJECT INFORMATION

1. Project Name <b>Tri-State Cahone-Montrose TL Upgrade</b>	4. Location Township <b>40N</b> Range <b>17W</b> Section <b>5</b>	5. Location Sketch <b>see report</b>
2. Key Observation Point <b>12 - view of south canyon rim</b>		
3. VRM Class <b>2</b>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land - deep canyon water - river	oval evergreen trees and rectangular willow masses	wooden H-frame structure
LINE	land - diagonal, vertical, and horizontal water - horizontal	vertical and circular	linear and rectangular
COLOR	land - brown and red water - white	green	brown; clearly visible conductor and marker balls
TEXTURE	land - coarse water - smooth	coarse trees and smooth grass	smooth

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	no change	no change	eliminates contrast
LINE	no change	no change	eliminates contrast
COLOR	no change	no change	eliminates contrast
TEXTURE	no change	no change	eliminates contrast

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

ELEMENTS	1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Evaluator's Names
					X				X				X	Date
					X				X				X	<b>Mark Holdeman</b>

Comments from item 2.

- Existing power line structure would be eliminated from view.
- Beneficial effect of removing a human-made structure from the landscape.

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Additional Mitigating Measures (See item 3)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date **6.14.15**

District **SW**

Resource Area **TREO**

Activity (program) **Alternative C -  
Upgrade-in-Place**

SECTION A. PROJECT INFORMATION

1. Project Name <b>Tri-State Cahone-Montrose TL Upgrade</b>	4. Location Township <b>40N</b> Range <b>17W</b> Section <b>5</b>	5. Location Sketch  <b>See report</b>
2. Key Observation Point <b>12 - view of south canyon rim</b>		
3. VRM Class <b>2</b>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	land - deep canyon water - river	oval evergreen trees and rectangular willow masses	Wooden H-frame structure
LINE	land - diagonal, vertical, and horizontal water - horizontal	vertical and circular	Linear and rectangular
COLOR	land - brown and red water - white	green	Brown; clearly visible conductor and marker balls
TEXTURE	land - coarse water - smooth	coarse trees and smooth grass	Smooth

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	No change	No change	Linear and rectangular; taller than existing but set back from rim
LINE	No change	No change	No change
COLOR	No change	No change	No change
TEXTURE	No change	No change	No change

SECTION D. CONTRAST RATING D SHORT TERM X LONG TERM

ELEMENTS	1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes D No (Explain on reverse side)	
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				3. Additional mitigating measures recommended? D Yes <input checked="" type="checkbox"/> No (Explain on reverse side)	
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Evaluator's Names	Date
					X				X			X		<b>Aleta Powers</b>	
					X				X				X		
				X				X				X			
				X				X				X			

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**SECTION D. (Continued)**

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Comments from item 2.

- Similar to existing views. Structure set back from canyon.
- Use is infrequent; only when river can be safely floated (every 7-8 years).
- Existing transmission line visible from river miles 2 and 5 for long stretches.
- Existing structure and crossing used as a frame of reference for boaters and is an expected component of landscape.

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Additional Mitigating Measures (See item 3)

Nonspecular conductor and crossing structure