Visual Impact Assessment

for the

NV FLAP US 50(1) Round Hill Pines Access Project
Douglas County, Nevada

Prepared for:
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Acronyms and Abbreviations

FHWA	Federal Highway Administration
KOP	Key Observation Point
Project	Round Hill Pines Access Project
SIO	scenic integrity objective
SMS	Scenery Management System
STA	station
TRPA	Tahoe Regional Planning Agency
US	United States Route
USFS	United States Forest Service
VIA	Visual Impact Assessment

1.0 Introduction/Purpose of the Study

The Round Hill Pines Access Project (Project) is proposing to improve safety for visitors entering and exiting the Round Hill Pines Resort from United States Route 50 (US 50). The proposed project begins on US 50, approximately 500 feet southeast of the original entrance road (Station [STA] 11+00) and continues approximately 0.35 mile north along US 50 to approximately 130 feet north of the intersection of Sierra Sunset Lane and US 50 (STA 35+00), in Douglas County, Nevada (Figure 1, Project Location; all figures are located in a figure section at the end of the report).

This Project involves relocating the Round Hill Pines access road intersection with US 50, constructing the Round Hill Pines access road on new alignment, and widening US 50 to accommodate a center median turn and acceleration lanes. The relocated Round Hill Pines access road will connect to existing parking areas for the Round Hill Pines Resort. Additional improvements include roadway drainage improvements, permanent water quality structures, signing, and striping.

The purpose of this Visual Impact Assessment (VIA) is to analyze the potential visual impacts associated with the proposed project and the consistency of the project-related visual changes with the visual objectives that applicable plans have established for the Project area.

2.0 Project Description (Build Alternative)

Figure 2 is a drawing that identifies the footprint of the Build Alternative's major features. As this figure indicates, as part of the Build Alternative, the Round Hill Pines Resort access road and US 50 intersection would be relocated approximately 0.2 mile farther to the north from the existing location. US 50 would be widened at the relocated intersection to accommodate a new median left-turn bay and eastbound US 50 acceleration lane. The US 50 cross section at the relocated intersection would consist of two 12-foot eastbound lanes, two 12-foot westbound lanes, a 12-foot-wide median left-turn bay, and an eastbound US 50 acceleration lane. Shoulder widths along US 50 would remain the same as existing, consisting of 4-foot-wide shoulders along US 50 westbound and 6-foot-wide shoulders along US 50 eastbound. The US 50 alignment would not change as part of the proposed project. The remaining areas of US 50 adjacent to the relocated intersection would receive a pavement mill and overlay, lane striping, pavement markings, and a safety edge, in addition to the widening.

An existing concrete slab retaining wall is located along the western US 50slope embankment facing into the Round Hill Pines Resort. The existing retaining wall would remain in place, and the slope paving would be removed. Guardrail would be used at this location along with 1:2 slopes to minimize the construction footprint. A curb section with minimal ditching would be added along the western side of US 50, and no ditches would be constructed along the eastern side of US 50. Roadway slopes would be constructed using boulders and vegetation to enhance visual aesthetics and blend into the natural setting.

Existing 18- and 36-inch culverts within the Project area would be replaced as well as armored with riprap where feasible. The clear zone, which is the area available for safe use by errant vehicles, would be improved through removal of obstructions, including clearing vegetation adjacent to the roadway as feasible. All traffic control signs would be reviewed and replaced, if needed, to meet current standards.

The Round Hill Pines access road would be constructed on new alignment. The access road would be reconstructed to accommodate two 12-foot lanes with 2-foot-wide shoulders. The new access road would have 1:4 barnroof slopes within the clear zone (12 feet from edge of traveled way) with 1:2 slopes to reduce construction impacts.

3.0 Project Location and Setting

3.1 Location and Visual Context

The proposed project is located on the eastern side of Lake Tahoe in Douglas County, Nevada. The 0.35-mile section of US 50 that will be widened by the Project is a small segment of the Lake Tahoe East Shore Scenic Byway, a 28-mile long National Scenic Byway that travels along the eastern side of Lake Tahoe from Crystal Bay on the north to Stateline on the south (Figure 1). From Stateline to the intersection with US 50 at Spooner Junction, the byway follows Nevada State Route 28. From Spooner Junction to Stateline, the byway follows US 50. Although the Lake Tahoe East Shore Scenic Byway travels through a series of areas that are developed, much of its route is located in natural-appearing landscapes, and the road provides a sequence of dramatic views toward Lake Tahoe and surrounding mountains, earning it the reputation as "The most beautiful drive in America."

The segment of the highway on which the Project will be constructed is part of a short section of roadway that extends through an undeveloped, natural-appearing forested area that lies between the node of commercial and residential development at Zephyr Cove on the north and the shopping center at the intersection of US 50 and Elk Point Road on the south. The 0.35-mile segment of US 50 that will be affected by the Project lies 0.2 mile to the east of the lake and at elevations that range from approximately 60 feet to 100 feet higher than that of the lake's surface. In this area, the landscape is heavily forested with pine trees (Figures 4a and 5a), and as a consequence, the views are restricted to the forested corridor along the highway, and there are few views toward the lake or the surrounding mountain ranges.

3.2 Scenic Threshold Ratings in the Project Area

The lands on the western side of US 50 are lands administered by the USFS. The USFS has leased the lands between the segment of the highway affected by the Project and the lake to a private concessionaire to operate as the Round Hill Pines Resort (see Figure 3 for the resort's boundaries). This resort facility includes a sandy beach that offers views of the lake and the surrounding mountains as well as parking, a restaurant, restrooms, shelters, and a range of recreational facilities and recreational equipment rentals.

In the Lake Tahoe *Land Management Plan* (USDA Forest Service 2016), all lands under USFS jurisdiction have been designated with a scenic integrity objective (SIO) that establishes the level of scenic quality that the plan seeks to achieve for each specific area. In the US 50 corridor in the Project area and on the Round Hill Pines Resort site, the plan establishes an SIO of "High," a designation given to landscapes that appear unaltered:

> HIGH scenic integrity refers to landscapes where the valued landscape character "appears" intact. Deviations may be present but must repeat the form, line, color, texture, and pattern common to the landscape character and at such a scale that they are not evident. (USDA Forest Service 1995, pp. 2-4)

Because the lands on the eastern side of the segment of US 50 that will be affected by the Project are privately owned, they are not subject to the provisions of the USFS *Land Management Plan Lake Tahoe Basin Management Unit* (USDA Forest Service 2016). Instead, they fall under the regulatory jurisdiction of Douglas County. These private lands on the eastern side of the highway corridor as well as the USFS managed lands on the western side all are subject to the regulations of the Tahoe Regional Planning Agency (TRPA).

The overarching objectives of TRPA are to protect the water quality and opacity of Lake Tahoe and Project area views from the lake to the surrounding landscape and views from the areas around the lake toward the lake and the landscape beyond. To establish a baseline for evaluating the potential effects of

proposed projects on views from the lake and on views from surrounding roadways toward the lake, in 1982, the TRPA published scenic resource inventories that focused on views of the shoreline from the lake, views toward the lake from surrounding roadways, as well as other visual points of interest in the Lake Tahoe area (TRPA 1982a; 1982b). In evaluating the views from the lake toward the shore (the Shoreline Units) (TRPA 1982b), the inventory used a landscape scoring system that assigned numerical scores ranging from 1 (low visual quality) to 5 (high visual quality) to three variables (human-made features, background views, and landscape variety) that were combined to create an overall visual quality score. For the roadway units (TRPA 1982a), scores from 1 to 5 were assigned to six variables (human-made features, roadway distraction, road structure, lake views, landscape views, and variety) (TRPA 2016, Appendix G-1).

The Shoreline Study (TRPA 1982b) identified the Project area as being in Shoreline Unit 29, Zephyr Cove, which includes Round Hill Pines. The Shoreline Study characterized the view from the lake toward the Round Hill Pines Resort (Shoreline Unit 29.6) as "View is of natural appearing shoreline with sandy beach. Some clutter from signs and low walls is visible, but no large structures except for one. Slope is densely forested." Shoreline Unit 29 received a threshold composite score of 9 in 1982, and this level has been maintained in assessments undertaken between 1982 and 2015 (TRPA 2016, Appendix G-1). The Shoreline Study (TRPA 1982b) characterizes the scenic quality of this unit as moderate and rates its level of scenic quality as 2.

The Roadway Study (TRPA 1982a) identified the Project area as being in Roadway Unit 30, Zephyr Cove-Lincoln Park. The Roadway Study indicates that just north of the shopping center at Elks Point Road, "…the road returns to a natural condition, with pine forests on both sides for about 1.0 km (0.6 mile). Only minor development exists in this area. The view from this road segment (30.1) is listed in the "Views of natural landscape from roadway" category and this view is characterized as "Area of natural pine forest with minor development on both sides of road." In 2001, the roadway segment that includes the Project area was placed in Roadway Unit 30D (Round Hill) that includes a 1-mile stretch of US 50 that extends from Elks Point Road in the south to the Pinewild condo complex at the southern edge of Zephyr Cove to the north. In 1991, when this sub-unit was created, it received a threshold composite score of 18. In 2006, this score was increased to 19 to reflect visual improvements to some of the developed areas within the unit, and this rating was maintained in subsequent years. (TRPA 2016, Appendix G-1). The 1982 Shoreline Study (TRPA 1982b) characterized the scenic quality of the larger Zephyr Cove-Lincoln Park unit of which the Round Hill Unit 30D is a sub-unit as moderate and rated its level of scenic quality as 2.

4.0 Methodology

4.1 Analysis Methods

This analysis of the proposed project's visual impacts was prepared by applying the procedures common to the VIA methods developed by the Federal Highway Administration (FHWA) and USFS. The objective of the analysis was to identify the visual changes that the proposed project would bring about and the consistency of those changes with the High SIO established for the Project area by the *Land Management Plan, Lake Tahoe Basin Management Unit* (USDA Forest Service 2016) and with the threshold composite ratings that the TRPA has established for the Shoreline and Scenic Travel Routes within which the Project is located.

The procedure used to determine the proposed project's visual impacts follows the six steps outlined in the FHWA publication *Visual Impact Assessment for Highway Projects* (FHWA 1981):

- Define the Project setting in terms of visual character and quality, and identify the viewshed of the Project.

- Identify the viewers and their levels of sensitivity.
- Identify key views for visual assessment.
- Analyze existing visual resources and responses from viewers looking *from* the Project (while traveling through it) and viewers looking *at* the Project from nearby areas.
- Depict the visual appearance of the Project (using text descriptions, graphics and, where appropriate, visual simulations).
- Assess the visual impacts of Project.
- Propose methods to mitigate adverse visual impacts.

For a roadway project, it is appropriate to assess changes to the landscape as seen from the road to determine how travelers on the road might be affected by the proposed visual changes. There is also a need to assess views of the proposed project from areas off the roadway to determine how people near the proposed project would be potentially affected.

The visual quality of National Forest lands is managed using the USFS Scenery Management System (SMS), which establishes SIOs that describe the degree to which the natural landscape can acceptably be modified, based on a combination of variety class and sensitivity level. The SMS defines five SMS classes that establish how a landscape is to appear based upon varying degrees of naturalness:

- Very High (unaltered)
- High (appears unaltered)
- Moderate (slightly altered)
- Low (moderately altered)
- Very Low (heavily altered)

In the *Land Management Plan, Lake Tahoe Basin Management Unit*, the area in which the Project is located has been designated with an SIO of High (retention) (USDA Forest Service 2016).

To determine the consistency of the proposed project with the retention Visual Quality Objective the *Land Management Plan Lake Tahoe Basin Management Unit* (USDA Forest Service 2016) has established for the Project area, the guidance provided by the USFS *National Forest Landscape Management*, Volume 2, Chapter 1—The Visual Management System (USFS 1977a), and *Landscape Aesthetics: A Handbook for Scenery Management* (USFS 1995) was used. The guidance for the retention SIO in these documents specifies that:

> Under retention, activities may only repeat form, line, color and texture which are frequently found in the characteristic landscape. Changes in their qualities of size, amount, intensity, direction, pattern, etc. should not be evident. Immediate reduction of form, line, color, and texture to meet retention should be accomplished either during operation or immediately after. It may be done by such means as seeing, vegetative clearings and cut-or-fill slopes, hand planting of large stock, painting structures, etc. (USFS 1977a, p. 30)

4.2 Application of the Methods

The area analyzed encompasses the 0.35-mile segment of roadway that begins on US 50, approximately 500 feet southeast of the original entrance road and continues approximately 0.35-mile north along US 50 to approximately 130 feet north of the intersection of Sierra Sunset Lane and US 50. Because of the thick forest cover in the Project area, the Project viewshed—that is, the area from which the proposed changes to the road would be potentially visible to visitors off the road—is very limited. The analysis area extends out approximately 0.1 mile to the eastern side of the roadway, but encompass the potential views of the

Project from Lake Tahoe, which are of concern to the TRPA. It includes the Round Hill Pines Resort site and extends approximately 400 feet out into the lake. To structure the analysis, the Project area has been divided into two landscape units: the area along 0.35-mile road segment that will be altered, and the area within the Round Hill Pines Resort and the adjacent area of the lake (Figure 3).

The segment of US 50 in which the Project is located is heavily traveled, carrying an average of 20,000 vehicles per day. Although many of the travelers using this road segment are local residents, who drive through the area on the way to and from their homes, and commuters, who are driving to jobs located in South Lake Tahoe, Stateline, Zephyr Cove, and other locations around the lake where there are concentrations of employment, a large percentage of the travelers in this area are people who are driving the road to enjoy its scenic qualities and whose destinations are the Lake Tahoe Basin's scenic landscapes and recreational facilities. It can be assumed the recreational travelers using the road value the aesthetic qualities of the road and the scenery alongside it and would be highly sensitive to any major changes to them.

Fieldwork was undertaken in August 2019 to document existing visual conditions in the two landscape units. Field observations and photo documentation of the existing views were guided by review of the proposed project plans, which provided an understanding of the areas where visible changes would potentially occur. Representative photos of sensitive views where the proposed project would result in modifications to the existing landscape were taken from a range of viewpoints within each of the two landscape units. These photographs were taken with a digital single-lens-reflex camera with the lens set to take photographs equivalent to those taken with a 35-millimeter (mm) camera with a 48-mm focal length.

After the field visit, the photos were reviewed, and in consultation with the Central Federal Lands project manager and TRPA planning staff and environmenal specialist on September 4, 2019, three photos were selected for use in this visual analysis. The viewpoints from which the selected photos were taken are referred to as key observation points (KOPs). The locations of these KOPs are indicated on Figure 3.

Visual simulations were prepared for the photos taken from the three KOPs to depict the views from KOPs as they would appear with the proposed project's changes. Existing topographic and site data were used as the basis for developing an initial digital model, and Project engineers provided site plans and digital data for the proposed roadway and other built features. These were used to create three-dimensional digital models used in the visual simulations. For each KOP, the view location was digitized from topographic maps and scaled aerial photographs, using 5 feet as the assumed viewer eye level. Images representing the existing and simulated-with-project views from each of these KOPs are presented in Figures 4 through 6.

Based on review of the existing condition photos, an assessment was made of the existing visual character and scenic integrity of the views, applying the principles documented in the following USFS and TRPA references:

- *Agriculture Handbook Number 434, National Forest Landscape Management*, Volume 1 (USFS 1973)
- *Agriculture Handbook Number 462, National Forest Landscape Management*, Volume 2, Chapter 1 The Visual Management System (USFS 1977a)
- *Agriculture Handbook Number 483, National Forest Landscape Management*, Volume 2, Chapter 4 Roads (USFS 1977b)
- *Agriculture Handbook Number 701, Landscape Aesthetics: A Handbook for Scenery Management* (USFS 1995)
- *Scenic Resource Inventory Tahoe Environmental Study Shoreline Unit Inventory* (TRPA 1982b)

- *Scenic Resource Inventory Tahoe Environmental Study Roadway Unit Inventory* (TRPA 1982a)
- 2015 *Threshold Evaluation*, Appendix G-1 (TRPA 2016)

Section 5.0, Existing Conditions and Project Impacts, documents the Project area's existing visual conditions and assesses the proposed project's potential visual effects. The changes visible in KOPs 1 through 3 were evaluated in terms the National Forest Landscape Management System criteria to determine whether the proposed action creates visual conditions that are consistent with the USFS retention SIO and with the TRPA scenic standards for Roadway Unit 30D (Round Hill) and Shoreline Unit 29 (Zephyr Cove). The construction period impacts are assessed in Section 6.0, and the impacts of the No Build Alternative are assessed in Section 7.0. Based on the proposed project, the visual impact (documented in Sections 5.0 through 7.0) measures to attenuate the Project's visual impacts were identified, and these measures are documented in Section 8.0, Conclusions and Mitigation.

5.0 Existing Visual Conditions and Project Impacts

5.1 US 50 Corridor

5.1.1 Existing Conditions

This landscape unit encompasses the corridor along the 0.35-mile segment of US 50 where the project-related modifications will take place. In this area, the highway has four lanes. On the eastern side of the road, the land slopes upward, and there are cuts in the slope to accommodate the roadway. These cuts are covered with a rip rap that consists of large, irregularly shaped rock fragments. Above the rip rap, the slopes are covered with a pine forest with a shrub understory. Although there is a residential subdivision higher up on this slope, with homes as close as 300 to 400 feet from the roadway, these homes are not visible because of their upslope locations and the screening provided by the trees. On the western side of the road, in the northern portion of the Project area, much of the western edge of this segment is located on a fill slope with sides that are bermed and, in some areas, supported by a retaining wall. Generally, the bermed area and retaining walls are not visible to travelers on the highway. The western edge of the roadway is bordered by closely growing pine trees, which in the flatter areas grow very close to the roadway. Much of the western edge of the roadway is bordered by a galvanized steel guard rail, which because it is unpainted, has a light grayish color that attracts attention because of its contrast with the colors of the forest behind it. Because the views toward the lake, which is downslope from this area, are screened by the thick pine forest between the highway and the lake, there are no views toward the lake from this segment of US 50. In addition, because of the surrounding topography and the tree cover, this roadway segment provides few views of distant mountains. The only views of distant mountains are those seen by the southbound lanes near the Project area's southern end, where the cleared corridor created by the roadway permits forward views of the tops of the mountains located behind South Lake Tahoe. From some areas of the northbound lanes in this segment, there are views toward residences that are exposed to view on a nearby hillside to the north. The only landmark along the road in the Project area are the rustic, curved stone walls that frame the existing entrance to the Round Hill Pines Resort.

5.1.1.1 KOP 1

KOP 1 (Figure 4a) is a view from a point in the northern portion of the Project area looking south toward the proposed location of the new access road into the Round Hill Pines Site. Because this photo was taken from the outside edge of the roadway, it picks up more of the view of the berm on which the western edge of the roadway is located than would be the case with views from the travel lanes that would be seen by those traveling south on the highway. The eastern edge of this view is framed by the heavy tree cover on the forested slope above the roadway's eastern edge, and the rip rap-covered road cuts at the slope's base. On the roadway's western edge, the berm on which the western portion of the highway is located is

visible, covered with paved surfaces over which native shrubs are growing. The thick forest of generally small and closely spaced pine trees extends to the base of the roadway berm. An unpainted dull galvanized steel guard rail is located along the roadway's edge, and where its face is visible, it contrasts with its forest backdrop.

5.1.1.2 KOP 2

KOP 2 (Figure 5a) is a view from a point in the middle section of the Project area looking north toward the proposed location of the new access road into the Round Hill Pines Site. This view, taken at the roadway's eastern edge, provides both close-up and more distant views of the rip rap at the base of the cut slopes along the eastern side of the roadway, as well as close and more distant views of the pine trees that cover the slopes above them. The steel guard rail frames the entire western edge of the roadway in this area, and the light color of its unpainted galvanized steel finish contrasts with the greens and browns of the thick stand of pines seen behind it. In addition to the roadway and its appurtenances, the only human-made features seen in this view are the residences visible on the hillside located to the north directly above the centerline of the roadway corridor.

5.1.2 Project-Related Visual Changes and Consistency with USFS and TRPA Visual Objectives

Figure 4b is a simulation of the view looking south from US 50 toward the new entrance to the Round Hill Pines Resort as it would appear with the Project in place, and Figure 5b is a simulation of the view looking north up US 50 toward the resort's new entrance. Review of both simulations makes it clear that the Project will have no visual effects on the highway's existing eastern edge. The rip rap-covered cut slopes and the forest-covered slopes above them will be untouched by the Project and thus will not be changed in any way. The highway modifications will be accomplished by extending the highway to the west. The result will be a highway that generally follows the existing highway alignment, but which will be somewhat wider than it is now, making it appear less constricted. With its wider curves and dedicated turning lanes, it is also likely to appear safer to the motorists using it. The extension of the highway's berm into the forested area on the roadway's western side will require the removal of some of the trees that are closest to the existing highway in that area, but the solid line of trees along the highway's western edge will remain. The removal of the trees closest to the highway will open up the view along the highway corridor to some degree, making is less confined than it is at present. The one exception to this generalization about maintenance of the tree line along the highway's western edge will occur at the point where the entrance of the new Round Hill Pines Resort access road will be located. As can be seen in the simulations presented as Figures 4b and 5b, a partial disruption of the tree line will appear in this area. This disruption will not appear as a sharp gap in the tree line because the narrowness of the access road will limit the number of trees that need to be removed and the fact that the access road joins US 50 at a right angle will limit the visual effect of the break in the tree line that this road will create. A steel guard rail will be constructed along the western edge of the widened highway, but unlike the existing unpainted galvanized guard rail along the highway's western edge, the planned guard rail will have a brown surface treatment that will help to reduce its visual contrast with the highway's natural setting. As Figure 4b indicates, places along the western edge of the highway where there are disturbed soils or exposed soils related to filling, revegetation with native grasses and shrubs will take place. With the Project, this segment of US 50 will continue to be an area where there are no views of the lake. The Project will create no changes in the views of the mountains to the south seen at the southern end of the Project highway segment and will have no effect on the views toward the houses on the hill above the roadway's northern end seen in KOP 2.

The visual changes that the Project will bring about will be generally consistent with the retention SIO that the *Land Management Plan Lake Tahoe Basin Management Unit* (USDA Forest Service 2016) has assigned to this area. Overall, the Project will not substantially change the visual character of the views from the roadway corridor, which will remain a roadway through a forested area in which buildings and

other human intrusions are limited. The roadway improvements will be consistent with the form, line, color, and texture of the elements that now predominate in this landscape area. At the point where the new access road enters the Round Hill Pines Resort site, there will be a break in the line of trees that currently border the western side of the highway, which will create a minor change to the character of the roadway in this specific area, but the character of the roadway in the rest of the Project area will remain relatively unchanged. In one way, the Project will bring about an improvement of the view from the road by replacing the existing galvanized steel guard rails along the western edge of the road with new guard rails that have a brown surface treatment, which will reduce their visual contrast and will be more consistent with the surrounding forest landscape.

As explained in Section 3.2, TRPA's 2015 *Threshold Evaluation* report identified Roadway Unit 30D Round Hill (the 1.0-mile-long roadway unit that includes the highway segment where the Project is located) as having a threshold composite score of 19. This score was based on evaluation using five variables, each of which was rated on a scale ranging from 1 (low) to 5 (high). The Project visual changes described in the text and visible in the simulations are not likely to change the individual scores on which the overall score of 19 was based. The variables as defined in Appendix G-1 of the 2015 *Threshold Evaluation* (indicated in italics), the 2015 scores, and the potential effects of any project-related visual changes on them are detailed as follows:

- ***Human-made Features – 3.5***

  This variable applies to buildings, signs, piers, utility lines, and other features made by humans, including prominent scars on the landscape. Whether these features are desirable or undesirable depends on such factors as location, design, color, size, and material.

  The score of 3.5 reflects conditions that are slightly better than 3, which is defined as a situation in which human-made features cause only temporary distractions. As review of the simulations indicates, the Project will not add new, distracting human-made features, and the case can be made that the replacement of the existing galvanized steel guard rail with one with a brown surface treatment further reduces the presence of distracting human-made elements along the roadway corridor.

- ***Physical Distractions to Driving Along Roadway – 3***

  These items can create distractions that decrease pleasure of the drive. These distractions include hazards created by uncontrolled access and poor access road takeoff or entrance points that create traffic backup.

  The score of 3 is defined as a situation in which physical distractions cause some interference with enjoyment of the drive. The Project design will not add features that will constitute physical distractions to drivers. The case can be made that by eliminating the very awkward and dangerous existing entrance to the Round Hill Pines Resort site and replacing it with a new entrance with a left-hand turn pocket for northbound drivers, the Project will eliminate what is perhaps the major source of driver distractions in this segment of the highway and create vastly improved sightlines for travelers approaching the entrance road, leading to an increase in this score.

- ***Characteristics of Roadway – 3***

  The roadway can add to or detract from the traveler's pleasure. Good alignment takes advantage of natural terrain features, avoids road scars, adds variety and vistas to the drive, and avoids ugly areas. Physical alignment is also a part of this evaluation. A road may have horizontal or vertical curves that are difficult to drive on or that detract from the view. Straight roads lack variety and can evoke a negative response from the viewer.

The score of 3 is defined as a situation in which the road detracts from the natural scene. The roadway improvements proposed do not include any features that would detract from the driver's experience, and in fact, by smoothing out the roadway's curves and improving sightlines, would improve the driver's pleasure in driving this road segment.

- ***Views of Lake – 3***

  One main reason why people visit this region is to see the Lake. Some roadways offer outstanding view of the Lake, but some sections offer no such views. Many view areas are on access roads into the region. They should be evaluated, in addition to the present perimeter highways, so that this factor can be used as a consideration in future road upgrading and location. This factor can also be used to determine areas along the roadway where timber may be cut to improve vistas.

  The score of 3 that this variable received is applied to areas where the travel zone offers a glimpse of the lake. Although there may be segments of this 1-mile-long travel zone in which there are views of the lake, in the 0.35-mile-long road segment where the Project will occur, there are currently no views of the lake and no views will be created by the Project. Because the Project will not affect other areas of this travel zone where views toward the lake may exist, the Project will have no effect on the score assigned to this variable.

- ***Landscape Views – 3***

  Extensive scenic views reward the visitor, but closed spaces prevent them from seeing the landscape. Looking over a cliff into space or looking up at massive mountains can be very rewarding even to the person who is already acquainted with the scene.

  For this variable, a score of 3 indicates travel zone in which there are only limited opportunities to view natural landscape expanses. As the description of the existing landscape in the corridor along the segment of US 50 in which the Project is located indicates, because of the topography and heavy forest cover in the Project corridor, there are currently relatively few expansive views of scenic landscape features. With the Project, this situation will remain the same, and the Project would not bring about a change in this score.

- ***Variety – 3***

  Variety along a travel route is created by changes in the total landscape. These changes can be created by topography, vegetation, water or human-made facilities. When these changes harmonize with the natural environment, they are very desirable. Lack of variety over an extended drive can bore a traveler.

  A score of 3 for this variable indicates it is a travel zone that has some variety. As the description of the existing landscape in the corridor along the segment of US 50 in which the Project is located indicates, the area along the highway is mostly heavily forested, which limits the level of landscape variety. With the Project, this situation will remain the same, and the Project would not bring about a change in this score.

As this assessment of the variables used to create the threshold composite score for the roadway unit in which the Project is located indicates, the Project will not lead to reductions in any of the scores assigned to them, and in some cases, could raise them. As a consequence, the Project will not reduce the composite score for the roadway unit, and thus will not reduce the "moderate" rating that was assigned to the Zephyr Cove-Lincoln Park unit (of which the Unit 30D Round Hill is a sub-unit) in the *Scenic Resource Inventory Tahoe Environmental Study Roadway Unit Inventory* (TRPA 1982a).

5.2 Round Hill Pines Resort and Lake Tahoe

5.2.1 Existing Conditions

This landscape unit encompasses the portion of the Round Hill Pines Resort to the west of the US 50 landscape unit and extends 300 feet out into Lake Tahoe. The Round Hill Pines Resort is located on a large parcel of USFS land located between US 50 and the lake that is leased to a private operator to run as a day use facility that provides access to a long sandy beach on the lake's shoreline. The site slopes from US 50 down to the lake and is covered with a thick forest of pine trees. The resort's developed facilities, which are concentrated in the area along the beach, include a large building that houses a restaurant, shop, and function rooms; a restroom building; tent pavilions; and both unpaved and paved parking areas. Because for the most part, the facilities are located under the trees and have a rustic design, they integrate reasonably well with the site's landscape. Because the US 50 corridor where the Project-related modifications will take place is located at the upper edge of the site, away from the beach and developed areas of the site where the visitors to the resort are concentrated, and because views toward the roadway corridor from the area of visitor concentration are screened by the intervening pine forest, the sensitivity of the site's users to the Project's modifications will be low.

5.2.1.1 KOP 3

KOP 3 (Figure 6a) is a view from a point located 300 feet out on the pier at the Round Hill Pines Resort. The objective of this view is to capture a representative view from the near shore area of the lake that can be used to make the assessment of the Project's impacts on views from the lake that is required by TRPA. The major components of this view include the lake in the foreground; the beach along the shoreline with scattered parties of beach goers, a shed, and an area with a concentration of umbrellas; several tent pavilions and a rest room building in the zone at the beach's edge next to the forest; the beach lodge with restaurant and meeting rooms located under the trees at the right side of the view; and the pine forest behind the beach, which screens the views toward the east. The pine forest, which is the dominant element in this view appears to be relatively intact, and the developed facilities are subordinate to it, creating a view that is pleasant and in which the elements fit together in an orderly way.

5.2.2 Project-related Visual Changes and Consistency with USFS and TRPA Visual Objectives

Figure 6b is a simulation of the view from the pier looking eastward as it would appear with the Project in place. Because of the area where the project-related changes would take place is located upslope and 1,000 feet and more in the distance, and because of the screening provided by the thick forest cover, the roadway improvements will not be visible from this vantage point. The only change to this view, which will be subtle, will be that because of the limited tree clearing that will be required to permit development of the access road, a few of the treetops now seen on the far horizon in the area above the rest room building will disappear. This change is reflected in the simulation. Overall, the effect of this change on the visual character and quality of this view will be negligible. As a consequence, the Project will be entirely consistent with the retention SIO that the USFS *Land Management Plan Lake Tahoe Basin Management Unit* (USDA Forest Service 2016) has assigned to this area.

As explained in Section 3.2, the 2015 *Threshold Evaluation* report (TRPA 2016) identified the Project area as being in Shoreline Unit 29, Zephyr Cove, which includes Round Hill Pines. The Shoreline Study (TRPA 1982b) characterized the view from the lake toward the Round Hill Pines Resort (29.6) as "View is of natural appearing shoreline with sandy beach. Some clutter from signs and low walls is visible, but no large structures except for one. Slope is densely forested." This unit received a threshold composite score of 9 in 1982, and this level has been maintained in assessments undertaken between 1982 and 2015 (TRPA 2016, Appendix G-1). This score was based on evaluation using three variables (human-made features, background views, and variety), each of which was rated on a scale ranging from 1 (low)

to 5 (high). Because the Project visual changes on the view seen in the simulation and described in the text are negligible, they will have no effect on the individual scores on which the overall score of 9 was based. Because the threshold composite score for the shoreline unit in which the Project is located will not change, the Project will not reduce the "moderate" rating that the *Scenic Resource Inventory Tahoe Environmental Study Shoreline Unit Inventory* (TRPA 1982b) assigned to Shoreline Unit 29 Zephyr Cove.

6.0 Construction Period Impacts

Construction of the proposed project would be completed in a single construction season. During that time, construction equipment would be visible along and adjacent to the roadway. To permit continued use of the US 50 while construction is taking place, concrete barriers would be installed to separate the work areas from the travel lanes kept open for traffic. The generation of dust would be limited through implementing standard best management practices for dust suppression. It is anticipated that much of the construction activity would take place during daylight hours. Should nighttime construction operations be required, measures would be taken to control the impacts of the night lighting through minimization of the lighting, lighting only areas necessary for construction operations and safety, directing light specifically to those areas where it is required, and use of light fixtures that are hooded to prevent spill into surrounding areas and the night sky. These construction activities may create moderate levels of visual contrast with the existing visual setting, but that would not necessarily be inconsistent with the Project area's retention SIO, because they would be short-term in duration and would be localized to the specific areas being worked on at a given time.

7.0 No Build Alternative

Under the No Build Alternative, none of the features proposed for the Project under the Build Alternative would be constructed. As a consequence, there would be no visual changes in either the US 50 or Round Hill Pines and Lake Tahoe landscape units, and thus no incompatibility with the visual objectives that the *Land Management Plan Lake Tahoe Basin Management Unit* (USDA Forest Service 2016) and the TRPA's scenic resource inventories (1982a; 1982b) have established for these areas.

8.0 Conclusions and Mitigations

As the foregoing analysis has established, the visual changes brought about by the proposed project would be consistent with the visual objectives for the Project that the USFS and TRPA have established for the Project area.

The Project's design will include measures intended to integrate it into its landscape setting and reduce potential visual impacts. These include leaving the slope on the eastern edge of the US 50 roadway undisturbed; generally following the existing roadway alignment to reduce impacts, but widening the road to permit safe turns and smoothing out curves to permit improved sightlines; replanting disturbed areas; and treating the surface of the guard rail that will run along the western side of the roadway with a brown color that will reduce its visual contrast with its setting. An additional measure that should be considered to bring about a further reduction in the Project's visual impacts include dense hand planting of mid-height (up to 2.5 feet) native shrubs in any open areas in close vicinity of where the new Round Hill Pines access road meets US 50. In addition to completely covering areas of exposed soil, because of their medium height, these shrubs will partially screen views toward the surface of the access road seen by travelers on US 50, reducing the effect on the visual integrity of the roadside. As a further measure to attenuate the Project's visual impacts, once the engineering plans for the expanded berm on

the road's western side have been completed, a careful analysis should be done of the locations of trees in and adjacent to the area that the expanded berm will cover so that a precise clearing plan can be developed. This plan should minimize the numbers of trees that have to be removed and should design the cuts in a way that the new forest edge that will be created will have a feathered, natural appearance, as opposed to an appearance that is abrupt and artificial looking.

9.0 References

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Figures

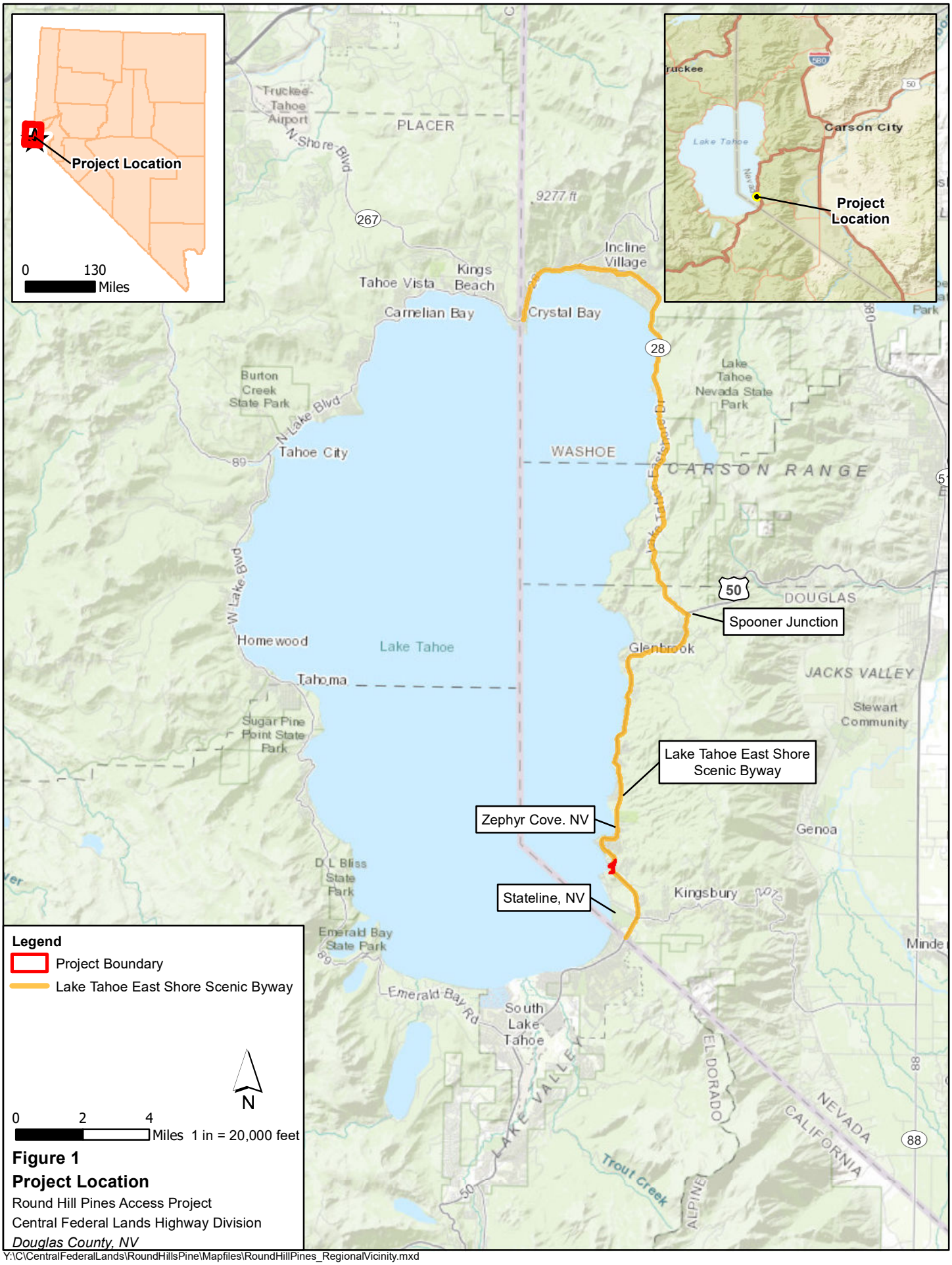

Figure 1
Project Location
Round Hill Pines Access Project
Central Federal Lands Highway Division
Douglas County, NV

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Figure 2
Project Footprint
Round Hill Pines Access Project
Central Federal Lands Highway Division
Douglas County, NV

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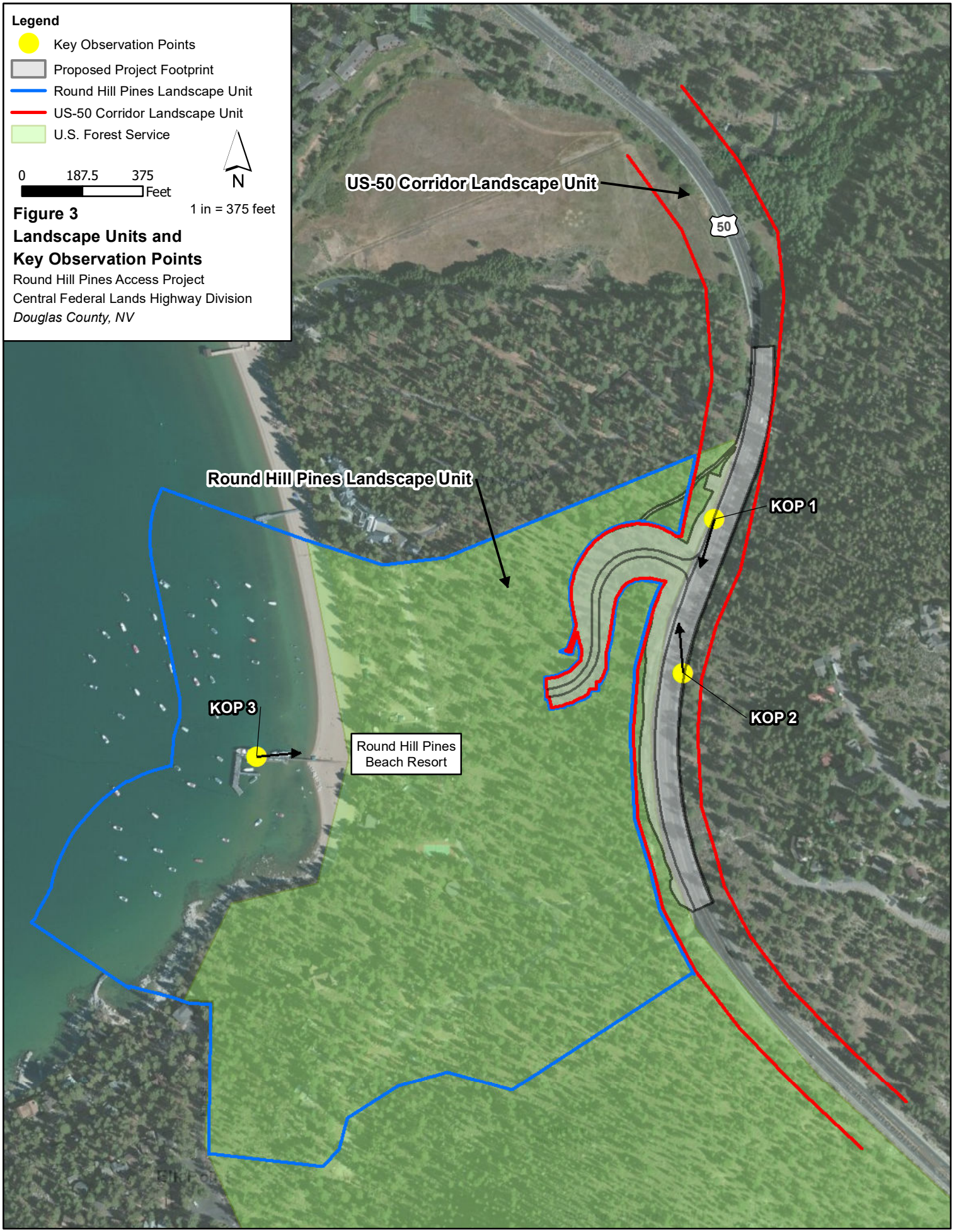

Figure 3
Landscape Units and Key Observation Points
Round Hill Pines Access Project
Central Federal Lands Highway Division
Douglas County, NV

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a. Existing view from US 50 looking south in the direction of the area where the new entrance to the Round Hill Pines Resort is proposed.

b. Simulated view from US 50 north of the proposed new entrance to the Round Hill Pines Resort that depicts the view with the new entrance in place.

Figure 4
KOP 1
Round Hill Pines Access Project
Central Federal Lands
Douglas County, NV

a. Existing view from US 50 looking north in the direction of the area where the new entrance to the Round Hill Pines Resort is proposed.

b. Simulated view from US 50 south of the proposed new entrance to the Round Hill Pines Resort that depicts the view with the new entrance in place.

Figure 5
KOP 2
Round Hill Pines Access Project
Central Federal Lands
Douglas County, NV

a. Existing view from a point on the Round Hill Pines Resort pier 300 feet out from the shoreline looking east in the direction of the area on the forested slope where the access project improvements will be made.

b. Simulated view from the pier in the direction of the area on the forested slope where the access project improvements will be made. Because of the thick forest cover that completely screens the view toward the project area, none of the roadway improvements will be visible. The only change, which will not be readily detectable to the casual viewer, is that because of the tree removal required by the road expansion, the tops of several of the trees seen in the distance will no longer be visible in the view.

Figure 6
KOP 3
Round Hill Pines Access Project
Central Federal Lands
Douglas County, NV