

## 3.12 VISUAL RESOURCES

Section 3.12 describes the existing visual resources that may be impacted as a result of the proposed action. Visual resources include scenic areas, thoroughfares, and access ways that provide natural-appearing or aesthetically pleasing places or views. Visual resource descriptions focus on well known specific places, views, and scenic overlooks. These resources also include viewsheds that people are accustomed to seeing as part of the general landscape. The region of influence for visual resources includes the islands and surrounding scenic vistas of Tinian and Pagan. The specific study areas are provided under the description for each island.

Visual resources are often associated with historic, cultural, and recreational resources. Descriptions of visual resources that are also recreational resources are discussed in Section 3.8, *Recreation*.

Descriptions of visual resources that are also cultural resources are discussed in Section 3.11, *Cultural Resources*.

### 3.12.1 Definition

Natural views include shorelines, seascapes, and cliffs. Man-made views include unique buildings, landscaping, parks, and cultural features. Views are described in terms of foreground, middle-ground, and background elements. For this analysis, the foreground is defined as up to 0.25 mile (0.4 kilometer) from the viewpoint; middle-ground is defined as between 0.25 mile (0.4 kilometer) and 3 miles (5 kilometers) from the viewpoint; and background is defined as greater than 3 miles (5 kilometers) from the viewpoint. Visual resources are further defined by:

- Dominant landscape features (e.g., a tall water tower in a landscape otherwise composed of low vegetation, and one- or two-story buildings)
- Diversity (e.g., cattle grazing adjacent to a former World War II military facility with the central highlands as a backdrop)
- Elements of line, color, form, and texture
- Distinctive visual edges (e.g., a housing tract adjacent to a forested area)

### 3.12.2 Regulatory Framework

NEPA requires federal agencies to consider scenery and aesthetic resources in federally supported projects. Federal agencies, including the Federal Highway Administration, the U.S. Forest Service, and the Bureau of Land Management, have developed guidance to implement NEPA with respect to the evaluation of visual resources.

### 3.12.3 Methodology

The methodology for analysis of visual impacts in this EIS/OEIS is based on the guidelines found in the *Bureau of Land Management Manual H-8410-1 – Visual Resource Inventory* (Bureau of Land Management 1986a), and *Bureau of Land Management Manual 8431 – Visual Resource Contrast Rating* (Bureau of Land Management 1986b). The Bureau of Land Management guidance was chosen as the

methodology for this proposed action, as it has the desired flexibility to accommodate the varying landforms and visual environments found within the project area.

The methodology consists of the following steps:

1. Establish the visual character and visual quality of the affected environment. Visual character includes elements such as landforms, vegetation, water surfaces, and modifications that give a landscape its visually aesthetic qualities. The visual quality of a landscape is determined by factors such as its uniqueness, harmonious appearance, prominence, diversity, and viewer sensitivity.
2. Determine Key Observation Points to represent the most critical viewpoints related to visual quality and the aesthetic experience. These are usually along commonly traveled routes or at other public observation points. Factors considered in selecting Key Observation Points include:
  - Visual quality of the landscape
  - Angle of observation
  - Number of potential viewers
  - Length of time a facility or activity is in view
  - Relative size of facilities and activities
  - Season of use
  - Light conditions (e.g., time of day and shadowing)

## 3.12.4 Tinian

### 3.12.4.1 Regional Visual Environment and Study Area

The island of Tinian is characterized by a series of limestone plateaus, steep slopes, and cliffs. The steep cliffs along the shoreline are concentrated on the southeast and northwest sides of the island and provide a dramatic visual backdrop. The central part of the island is a relatively flat plateau extending from the village of San Jose along Broadway Avenue corridor, north almost to North Field. The same type of flat plateau is located along the 8<sup>th</sup> Avenue corridor. Both of these corridors have intermittent forested areas within grassland, and topography that provide broad views north and south on the island, with the north-central highlands area situated between the two corridors. Unlike other islands in the Mariana Island chain, Tinian has large areas of relatively flat expanses, such as North Field.

The study area for visual analysis on Tinian consists of the Military Lease Area that covers the northern two-thirds of the island. The study area includes three major visual environments, shown in [Figure 3.12-1](#). Key Observation Points are shown, indicating their respective number and view orientation.

- **North Lowland:** North Field sits on a relatively flat plateau that slopes away to the ocean on the north, east, and west sides of the island (see Section 3.2, *Geology and Soils*, Figure 3.2-2). There is some undulation across the plateau. The southern side of the plateau is defined by a steep escarpment that connects to the Mount Lasso ridge line. Lake Hagoi is the lowest point on North Field plateau, with a minimum elevation of approximately 10 feet (3 meters) above MSL.

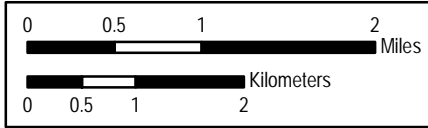
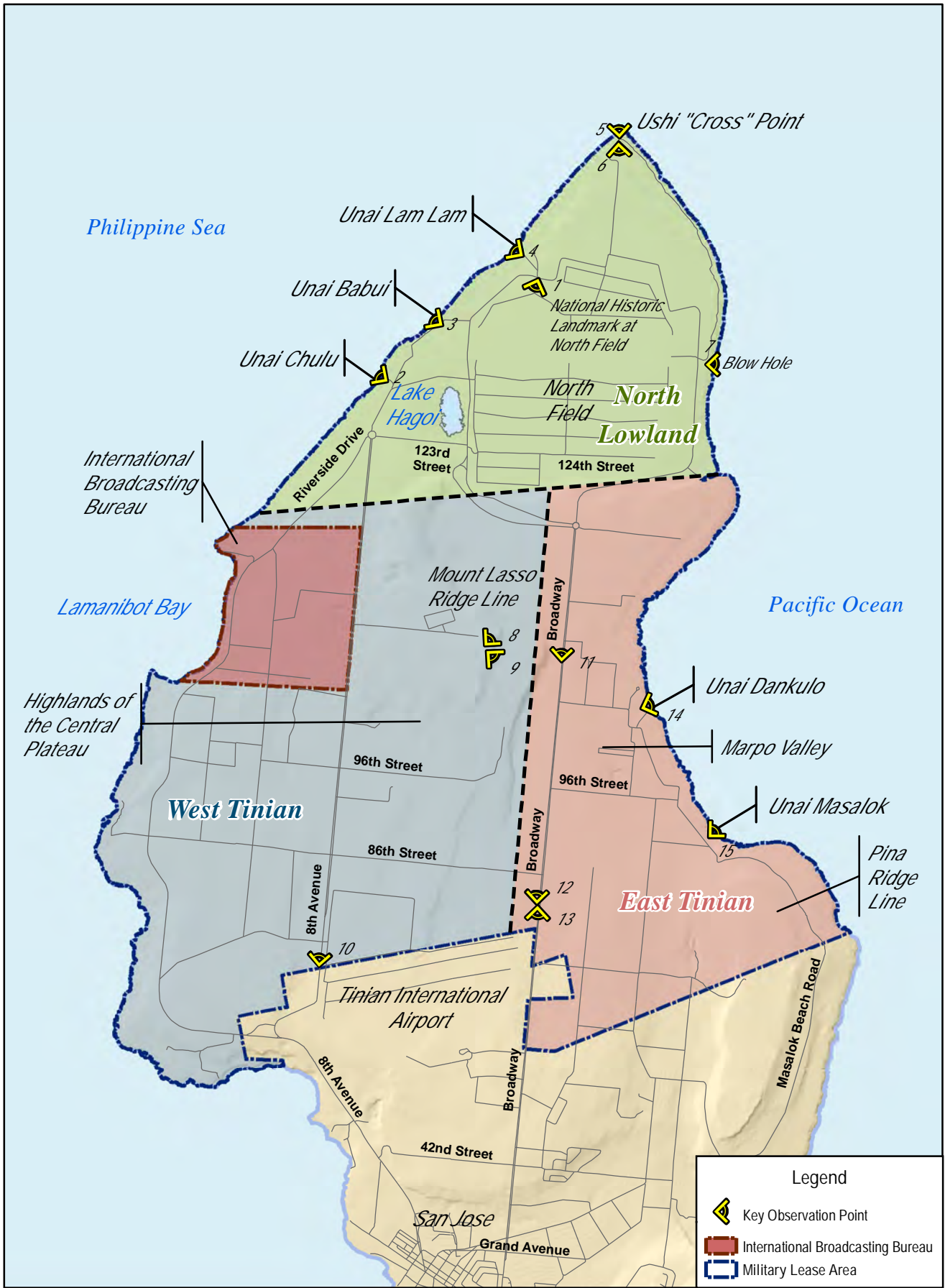


Figure 3.12-1  
Tinian Key Observation Points



- **West Tinian:** Western Tinian includes the highlands of the central plateau west of Broadway. This area extends north from Marpo Valley and is broad and gently sloping, with the majority of the vertical relief along the western shoreline. The north central highland area is within the northern part of the central plateau and midway between the east and west coasts of the island. The maximum elevation of the highland is 545 feet (166 meters) above MSL on Mount Lasso (see Section 3.2, *Geology and Soils*, Figure 3.2-2). Eighth Avenue provides the central corridor through this area with steep cliffs extending along the west side of Riverside Drive where the steep slopes extend to the sea.
- **East Tinian:** This land area extends north from Marpo Valley (see Section 3.2, *Geology and Soils*, Figure 3.2-2) and includes all of central Tinian east of Broadway, and portions of northern Tinian. The plateau is broad and gently sloping, with the majority of the vertical relief along the southern and northern boundaries. Unlike western Tinian, the shoreline areas in the windward (eastern) side of the Military Lease Area consist of gently sloping topography to the sea and beach areas. Most of these areas are rocky and windier than their counterparts on the leeward (western) side of the island.

### 3.12.4.2 North Lowland

The north lowland area (Photo 3.12-1) is primarily composed of previously developed and disturbed lands with an historic World War II-era airfield (North Field) extending from east to west. With the exception of the cleared airfield, northern Tinian is mostly overgrown with vegetation carpeting the area around the airfield and associated facilities. Views from within the north lowland area are generally close-in and somewhat constrained due to the surrounding dense vegetation. The dominant feature of the north lowland area is the National Historic Landmark at North Field. Both the north and northeast coastlines are covered with low, windblown vegetation and generally afford open and expansive views of Saipan, the Pacific Ocean, and the Philippine Sea. The northwest coastline is better protected, with denser vegetation than that of the leeward side. Views from the northwest coastline are open and expansive toward the Philippine Sea and horizon beyond.



**Photo 3.12-1. North Lowlands**

#### 3.12.4.2.1 Key Observation Points within the North Lowland

Seven Key Observation Points were identified in the north lowland for the visual analysis. The Key Observation Points are named for the primary element within their viewshed. The actual Key Observation Point includes not only the primary element they were named for, but the surrounding landscape as well. These points are shown on [Figure 3.12-1](#).

- 1: National Historic Landmark at North Field
- 2: Unai Chulu

- 3: Unai Babui
- 4: Unai Lam Lam
- 5: Ushi “Cross” Point A
- 6: Ushi “Cross” Point B
- 7: Blow Hole

### 3.12.4.2.1.1 1: National Historic Landmark at North Field

The National Historic Landmark at North Field is listed in the National Register of Historic Places and is regularly visited by tourists. The aesthetic value of North Field lies in its visual landscapes, relationship of various structures to each other, and the comparison of what the area looked like during World War II (at its height of development) to what it looks like today (remnant airfield facilities surrounded by overgrown vegetation). The field and surrounding facilities are now overgrown and abandoned, but the historic significance remains and the associated aesthetic values continue to draw visitors year round.

The viewshed from this Key Observation Point, looking south, includes pavement in the foreground and dense vegetation in the middle-ground and background (Photo 3.12-2). Degraded tarmac, Japanese air raid shelters, and other World War II structures make up other views from this Key Observation Point. The entire area was once open and clear, to accommodate the World War II air combat operations. However, the visual connections and relationships between airfield buildings and structures are presently much harder to recognize amidst the significant overgrown vegetation. Two bomb loading pits are preserved at North Field. The aprons surrounding these bomb pits were preserved in a mostly paved, unvegetated state, so that the views around and between the bomb pits are unobstructed. The bomb pits themselves are covered by protective enclosures of metal and lexiglas with historical photos and text within.

Locations, descriptions, and photos of representative structures within North Field are provided in Section 3.8, *Recreation*. According to the Tinian Mayor’s Office, the atomic bomb pits at North Field have approximately 100 visitors per day (DoN 2014). The North Field National Historic Landmark is the site of anniversary tours sponsored by private tour operators, such as Stephen Ambrose Historical Tours. The North Field National Historic Landmark is also a destination of the Tinian Dynasty North Side tour.



**Photo 3.12-2. Key Observation Point 1 – National Historic Landmark Looking Toward Mount Lasso**

### 3.12.4.2.1.2 2: Unai Chulu, 3: Unai Babui, and 4: Unai Lam Lam

Unai Chulu (Photo 3.12-3), Unai Babui (Photo 3.12-4), and Unai Lam Lam (Photo 3.12-5), are located on the west coast of Tinian. The largest of these beaches, Unai Chulu, is the easiest to access. Unai Chulu is popular with visitor groups who come with tours for various beach activities. Unai Chulu is a long, wide beach with open vegetated areas located between the beach and the densely vegetated area further inland. These areas are commonly used for picnics and social gatherings, as they provide an open view of the beach and the ocean. Unai Babui is a smaller beach (e.g., less sand area) with rugged coral outcrops along the shoreline edge and thick vegetation extending close to the shoreline's edge. The shallow reef flat is easily seen from the coastline. Unai Lam Lam is made up of a small sandy cove that is a beach even smaller than Unai Babui. The vegetation is thick and extends to the edge of the sand and coral outcroppings.



**Photo 3.12-3. Key Observation Point 2 – View of Beach Area and Expansive View Corridor of Unai Chulu**



**Photo 3.12-4. Key Observation Point 3 – Unai Babui Looking North Toward Saipan**



**Photo 3.12-5. Key Observation Point 4 – View of Rocky Coast and Narrow Expanse at Unai Lam Lam**

### 3.12.4.2.1.3 5: Ushi “Cross” Point A and 6: Ushi “Cross” Point B

Ushi “Cross” Point A (Photos 3.12-6 and 3.12-7) is the northern-most point of the island. It contains several memorials to various residents from Tinian, primarily fishermen. These whitewashed memorials are in sharp contrast to the natural surroundings that consists of a landscape of green, low vegetated ground cover, and the ocean with the island of Saipan in the distance. The area also contains a small three-sided memorial chapel and a maritime navigational aid beacon on a concrete base. It is exposed to a nearly continuous breeze from the trade winds coming off the ocean, which also create windswept vegetation along the shoreline and whitecaps in the waters offshore. Unlike other parts of Tinian, the shoreline immediately around the point contains no large jungle areas, only low shrubbery and ground cover. This allows expansive views from east to west including the Philippine Sea and the island of Saipan.



Photo 3.12-6. Key Observation Point 5 – View North toward Saipan from Ushi “Cross” Point



Photo 3.12-7. Key Observation Point 5 – Saipan across Channel from this View near Ushi “Cross” Point

Ushi “Cross” Point B (Photos 3.12-8 and 3.12-9) is in the same location as Key Observation Point 5 described above, but is directly south and facing away from the ocean. This view mostly consists of a green, low vegetated ground cover. The memorials and a U.S. Geological Survey navigational aid facility are in the foreground, and a gently sloping trail leading through a forested area is in the middle-ground.



Photo 3.12-8. Key Observation Point 6 – Memorial Chapel at Ushi “Cross” Point



Photo 3.12-9. Key Observation Point 6 – View Looking South from Ushi “Cross” Point

#### 3.12.4.2.1.4 7: Blow Hole

The Tinian Blow Hole (Photo 3.12-10) is on the northeastern side of Tinian on a rocky outcrop common to this part of the island. A natural phenomenon made by weather and waves has carved a cave under the limestone ledge over the years. Waves enter the underwater cave and exit forcefully via a hole above, resulting in columns of water shooting high in the air. The coastal feature of low growing vegetation and coral outcrops forms the foreground, the rugged coastline's green/blue water composes the middle-ground, and Saipan in the distance makes up the background of this scenic vista that is often visited by tourists. Wind provides a more dramatic display as water is carried in a spray, sometimes resulting in a rainbow.



Photo 3.12-10. Key Observation Point 7 – Tinian Blow Hole

#### 3.12.4.3 West Tinian

West Tinian consists of the portion of the central plateau centered on 8<sup>th</sup> Avenue along with the central highlands area. Eighth Avenue traverses the island in a north-south direction and connects the memorials, historic sites and recreational features of the western side of Tinian (Photo 3.12-11). Eighth Avenue also connects directly to the North Field Historic Landmark complex. Dominated by Mount Lasso, the central highlands area is situated in north-central Tinian and just south of the north lowlands.



Photo 3.12-11. Central Plateau Area of Tinian

The steep topography along the eastern edge of Mount Lasso consists of some native limestone forest vegetation. The steep, rugged terrain here is not conducive to farming and was not cleared for sugarcane under the Japanese rule. Native vegetation therefore remains. The western coast of west Tinian consists of steep cliffs, starting south of Unai Chulu and accessed via Riverside Drive. West Tinian is visually dominated by the International Broadcasting Bureau transmitter antenna array consisting of tall towers and suspended antennas west of 8<sup>th</sup> Avenue in central west Tinian.



### 3.12.4.3.1 Key Observation Points within West Tinian

Three Key Observation Points were identified within west Tinian for the visual analysis:

- 8: Mount Lasso Scenic Lookout A
- 9: Mount Lasso Scenic Lookout B
- 10: 8<sup>th</sup> Avenue-North of the Airport

These points are shown on [Figure 3.12-1](#).

#### 3.12.4.3.1.1 8 and 9: Mount Lasso Scenic Lookout A and B

South of North Field, Mount Lasso is a scenic lookout point frequently visited by tourists. As Tinian's highest point, the location was an important communications and visual reconnaissance center during World War II. Both Japanese and American radar systems were located on top of Mount Lasso during World War II, and concrete mountings for the facilities remain (Photo 3.12-12). The approach to the lookout involves passing the foundation of a former U.S. Army hospital from the World War II era and a Japanese Shinto shrine near the lookout area.



**Photo 3.12-12. Mount Lasso Tower at Top of Hill with Remnants of Shinto Shrine in Foreground**

Views to the northeast (Mount Lasso Scenic Lookout A) afford a panoramic view over the eastern half of Tinian with Saipan in the background to the north, where development on the south end of Saipan is visible (Photo 3.12-13).



**Photo 3.12-13. Key Observation Point 8 – View from Mount Lasso Scenic Lookout North to Saipan**

Views to the southeast (Mount Lasso Scenic Lookout B) provide a view of the jungle landscape, eastern coast of Tinian, Pina Plateau and the Pacific Ocean (Photo 3.12-14). Views to the west are blocked by dense vegetation. Due to a topographical plateau below the lookout in the middle-ground, the views of Broadway Avenue and structures along the route are blocked. Areas to the south, including the village of San Jose, are not visible from the Mount Lasso Scenic Lookout.



**Photo 3.12-14. Key Observation Point 9 – View from Mount Lasso Scenic Lookout Southeast toward the Pina Plateau in South Tinian**

#### **3.12.4.3.1.2 10: 8<sup>th</sup> Avenue-North of the Airport**

This point is just north of the Tinian International Airport, where 8<sup>th</sup> Avenue turns directly north after bordering the airfield. The scenery changes from a completely cleared airfield and surrounding area of maintained low ground cover to a dense jungle extending along both sides of 8<sup>th</sup> Avenue as it heads north (Photo 3.12-15). The development in this area consists of fenced agricultural fields and a small pull-off to allow for access to the water filling station. This roadway serves as a primary route to the National Historic Landmark at North Field.



**Photo 3.12-15. Key Observation Point 10 – Looking North on 8<sup>th</sup> Avenue South Towards the Airport**

#### **3.12.4.4 East Tinian**

This area consists of the central plateau east of the escarpment flanking the Mount Lasso area just east of Broadway Avenue (Photo 3.12-16). Like the central plateau in west Tinian, it is a layered limestone plateau mostly blanketed by dense vegetation. Some areas of fenced, semi-cleared agricultural lands are located in this area. Street trees along Broadway Avenue provide an impression of this area during the World War II era. The Broadway Avenue corridor traverses the island in a north-south direction and is an important route that connects the memorials,



**Photo 3.12-16. Aerial View of East Tinian Looking West with the Airport in the Distance at the Upper Left Corner**

historic sites, and recreational features of the central plateau and North Field Historic Landmark complex.

#### **3.12.4.4.1 Key Observation Points within East Tinian**

Five Key Observation Points were identified within east Tinian for the visual analysis:

- 11: Broadway North
- 12: Broadway South A
- 13: Broadway South B
- 14: Unai Dankulo
- 15: Unai Masalok

These points are shown on [Figure 3.12-1](#).

##### **3.12.4.4.1.1 11: Broadway North**

Along this stretch of Broadway Avenue, tall vegetation has been cleared out to a distance of 600 feet (180 meters) on both sides of the roadway, allowing light to penetrate (Photo 3.12-17). These cleared strips contain palm trees that were planted in a linear configuration when the road was built during World War II. The cleared conditions provide a more expansive viewshed in both northward and southward directions than those seen along many of the other existing roads. These views are seen as one travels along the roadway from San Jose to the American memorial round-about. Broadway Avenue is a primary north-south road utilized by both visitors and residents.



**Photo 3.12-17. Key Observation Point 11 – Broadway Avenue Looking North**

##### **3.12.4.4.1.2 12 and 13: Broadway South A and B**

These two Key Observation Points are located near the center of the island at the highest point along Broadway Avenue (Photos 3.12-18 and 3.12-19). This is where the developed areas of the village of San Jose and airport transition to the rural northern two-thirds of Tinian in the Military Lease Area. Cattle, cleared agricultural fields, and interspersed trees are visible toward the north in the foreground and middle-ground. Dense jungle vegetation is visible in the background.

The Broadway South A Key Observation Point 12 mirrors the views of the Broadway North Key Observation Point 11. The Broadway South B Key Observation Point 13 faces south (Photo 3.12-19). It provides a view to the Carolinas Plateau, Marpo Valley to the southeast, and development in the village of San Jose. Broadway Avenue is a primary north-south roadway utilized by both visitors and residents.



**Photo 3.12-18. Key Observation Point 12 – Broadway Avenue Looking North**



**Photo 3.12-19. Key Observation Point 13 – Broadway Avenue Looking South with Carolinas Plateau in the Background**

#### **3.12.4.4.1.3 14: Unai Dankulo**

This area is accessible through a forested trail that opens to an expansive beach extending north. The beach and flat nearshore environment allow direct vehicle access to picnic spots that are located within somewhat shaded coconut groves adjacent to the beach (Photo 3.12-20). While more windswept than the leeward beaches, the wind is buffered by inland vegetation. Views from this beach include the adjacent shoreline of Tinian, parts of Saipan in the distance, and the open ocean. The beach consists of an open, relatively flat area of coarse sand with chunks of coral near the water, with the sand becoming more fine-grained as it transitions towards the coconut grove and understory vegetation. Unai Dankulo is frequented by shore-based spear fishermen and is accessed by local tour companies (Mariana Visitors Authority 2014).



**Photo 3.12-20. Key Observation Point 14 – West toward Unai Dankulo**

#### **3.12.4.4.1.4 15: Unai Masalok**

Like Unai Lam Lam and Unai Babui, this beach is accessible via a narrow rocky foot trail (Photo 3.12-21). The beach itself is a narrow cove, fringed by large rock outcroppings. The beach provides views northeast to Saipan and some limited views of Tinian's eastern coast to the north and south. This beach is small, less open than Unai Dankulo,



**Photo 3.12-21. Key Observation Point 15 – East toward the Shoreline and Unai Masalok**

and is surrounded by steep topography. Vegetation extends nearly to the edge of the water. Seashells and pieces of coral are mixed with the fine white sand at this beach. This location is somewhat unique due to the variations in the brown colors of the rock and soil and the deep green colors of the vegetation.

### 3.12.5 Pagan

Pagan has officially been uninhabited since the 1981 volcanic eruption and the evacuation of the island for safety reasons. However, small groups of private citizens do occasionally visit the island, small scientific parties have conducted research on the island, and one group of ecotourists have toured the island. There are currently two tour options being offered for Pagan: Pagan ecotour adventure and the Silver Explorer cruise ship. There is a 10-person minimum for the Pagan ecotour (Goodridge, W.F.J., personal communication, August 28, 2014) and the Silver Explorer cruise ship accommodates 132 guests and 117 crew members (Silversea Expeditions 2012).

Key Observation Points are, by definition, those features and views that are accessible visually to the public (e.g., residents and regular visitors). Designating Key Observation Points on Pagan would imply a permanent or regular viewing audience. Therefore, the visual environment on Pagan is described in general terms below and shown in [Figure 3.12-2](#).

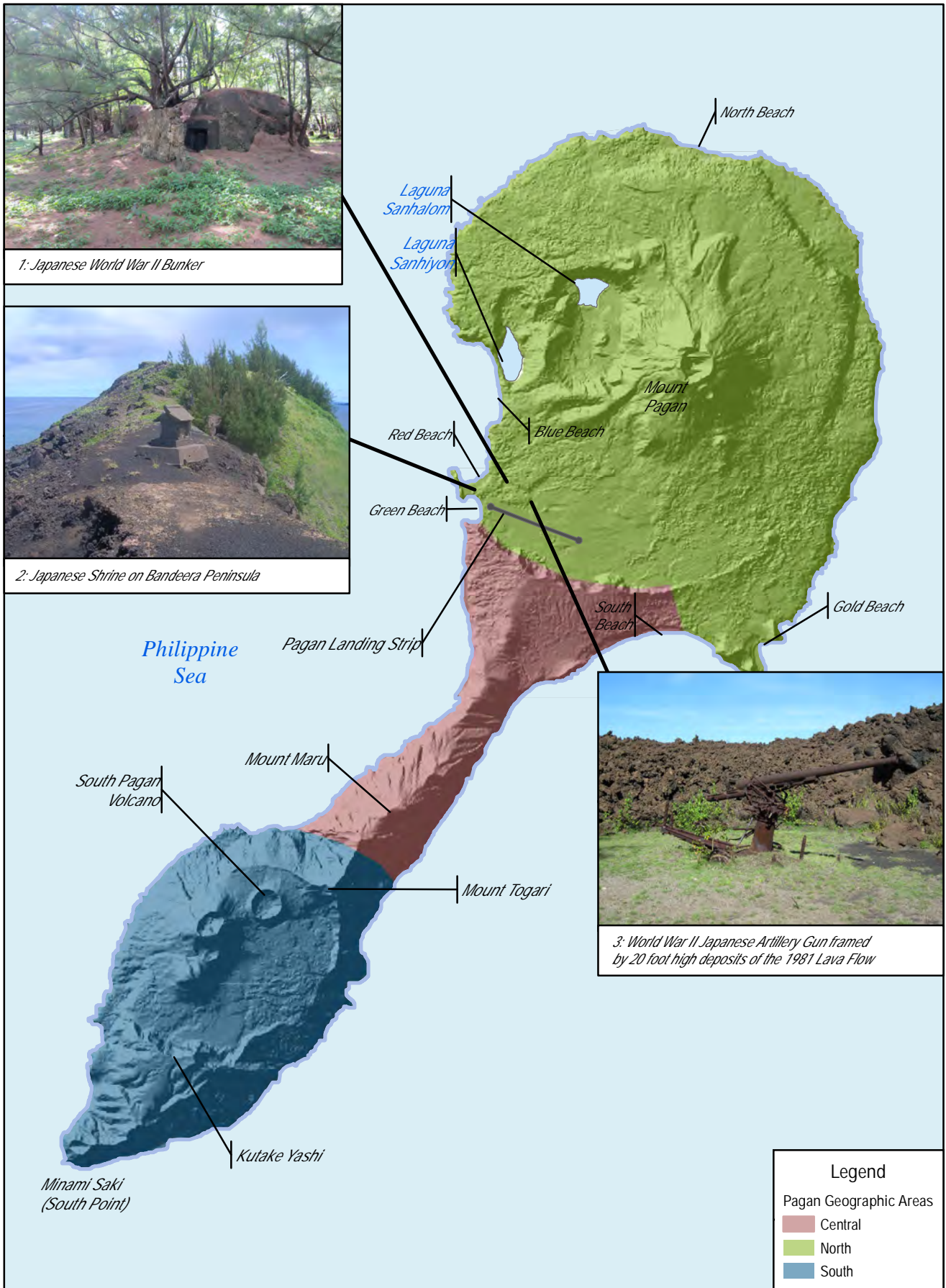
In general, with few man-made alterations, the dramatic views of Mount Pagan on the north end of the island, South Pagan Volcano on the south end, and ocean beyond provide relatively unspoiled view corridors and experiences for both visitors to the island and for travelers passing nearby on marine vessels.

#### 3.12.5.1 North Pagan

Natural features that dominate the North Pagan area include Mount Pagan, and two brackish, inland lakes ([Figure 3.12-2](#) and Photo 3.12-22).



**Photo 3.12-22. View of Inland Brackish Lagoon near Green Beach with a Japanese Monument in Foreground**



1: Japanese World War II Bunker

2: Japanese Shrine on Bandeera Peninsula

3: World War II Japanese Artillery Gun framed by 20 foot high deposits of the 1981 Lava Flow

Figure 3.12-2  
Pagan Visual Resources

The active volcano at the center of the North Pagan provides a unique landmark visible from most parts of the island, as its caldera emits a stream of gasses on a near-continual basis. The 1981 volcanic eruption of Mount Pagan left the landscape of northern Pagan with large areas of barren lava, surrounded by vegetation (Photo 3.12-23). The north shoreline of Mount Pagan is covered by dense, green vegetation that becomes less dense as one moves inland towards Mount Pagan. The barren lava areas provide a dark gray or black landscape. The western shoreline of North Pagan is dominated by a large black sand beach and contiguous brackish water lake just inland from the shore. The eastern shoreline of North Pagan has rockier beach areas and steeper terrain that is less accessible from inland areas.



**Photo 3.12-23. View of North Pagan (looking south) showing Mount Pagan and Landscape**

The largest man-made feature in North Pagan is the landing strip constructed in an east-west direction extending inland from the shoreline of Green Beach (Photo 3.12-24). Over two-thirds of this former grass landing strip was covered by a massive lava flow as a result of the 1981 volcanic eruption of Mount Pagan. This lava flow covered much of the landing strip with approximately 20 feet (6.1 meters) of lava, rendering the landing strip severely impaired. This rugged and barren lava flow provides a sharp contrast to both the vegetated area found at its immediate periphery and the large conical volcano in the background. Remnants of World War II Japanese equipment (guns, airplanes) and structures (bunkers) are still evident in North Pagan, primarily in the flat area surrounding the former air strip (see [Figure 3.12-2](#), Photos 1 and 3). This flat area generally remains clear of thick vegetation. There is a Japanese shrine on Bandeera Point (see [Figure 3.12-2](#), Photo 2).



**Photo 3.12-24. North Pagan Landing Strip (looking east) with Green Beach in the foreground**

Dirt/grass vehicle pathways are located inland from the western shoreline of North Pagan and provide access to inland lakes, the various beach areas, and the former landing strip area.

### 3.12.5.2 Central Pagan

Central Pagan consists of the center portion of a narrow isthmus that connects North Pagan with South Pagan. Central Pagan consists of a rugged, steep escarpment containing open green grasslands and near-vertical drops to the sea. Beach areas are limited, as most of the shoreline in central Pagan is rocky and vertical, providing dramatic shoreline formations (Photos 3.12-25 and 3.12-26).



Photo 3.12-25. View of Central Pagan Looking South



Photo 3.12-26. Off-Shore View of West Side of Central Pagan

### 3.12.5.3 South Pagan

South Pagan consists of a narrow peninsula dominated by the South Pagan Volcano (Photo 3.12-27). Like central Pagan, this area is steep, with difficult terrain. The lack of shoreline makes this area difficult to access. South Pagan has a few archaeological sites and remnants of coconut groves. There are dramatic, unspoiled visual corridors in the area from both land and off-shore locations.



Photo 3.12-27. Central Pagan View Towards South Pagan