

CHAPTER 14.

ROADWAYS AND MARINE TRANSPORTATION

14.1 AFFECTED ENVIRONMENT

14.1.1 Definition of Resource

This section describes the existing transportation facilities, specifically roads, the Tinian International Airport, and the Tinian Harbor, in Tinian and the activities that occur there. The possible effects to these transportation facilities as a result of the proposed action are presented and these effects are compared to the conditions under the no-action alternative.

14.1.2 Tinian

14.1.2.1 Roads

Tinian has approximately 68.4 miles (mi) (110 kilometers [km]) of roads, most of that was constructed prior to and during World War II. Most roads were developed, graded, and paved for heavy truck traffic when the island's United States (U.S.) military population was about 150,000. Roads throughout Tinian are now in good to poor condition and traffic is extremely light. Roadways in the Military Lease Area (MLA) include former runways, taxiways, and parking aprons constructed to support B-24 and B-29 bombers (Belt Collins 1999).

Two primary roadways (Broadway Road and 8th Avenue) connect the San Jose Village to the MLA. Broadway Road is a two lane divided highway with approximately 20 foot (ft) (6.10 meters [m]) wide lanes and a 32 ft (9.75 m) wide median. 8th Avenue is a two lane undivided highway with 9 ft (2.74 m) lanes that was previously divided just north of the Airport with approximately 18 ft (5.49 m) wide lanes and a 36 ft (11 m) wide median. Lack of maintenance on Broadway Road and 8th Avenue within the MLA, has resulted in the southbound lanes of these roads in the MLA unusable.

Other roadways on Tinian are typically two-lanes, undivided, with no striped median and have a capacity of approximately 5,000 vehicles per day. The majority of the roadways on Tinian carry between 25 to 400 vehicles per day. Broadway Road and 8th Avenue carries up to 1,470 and 180 vehicles per day in certain segments, respectively. Route 201 and 202, two major routes that provide access in and out of the San Jose Village area, carry the highest traffic with approximately 1,520 and 2,240 vehicles per day, respectively. Based on the operational analysis conducted in the Draft Commonwealth of the Northern Mariana Islands (CNMI) Comprehensive Highway Master Plan, all roadways on Tinian are operating at excellent levels of service in their existing condition free flowing traffic and no traffic delays.

14.1.2.2 Airport

The Tinian International Airport is a Federal Aviation Administration (FAA) certified facility that currently accommodates single engine aircraft and Shorts 360 aircraft with capacity of up to 36 passengers. In 2002, the runway was extended to 8,600 ft (2,621.28 m) from 6,000 ft (1,828.80 m) in length capable of handling 767's. The apron is capable of handling two 767 in addition to one 767 at the gate. There is additional capacity for one C130 in the hard packed area at the west end of the taxiway.

14.1.2.3 Harbors

The affected environment discussed in this section is in the South region of Tinian. Tinian Harbor includes both the Inner Harbor near the town of Tinian and the Outer Harbor lying about 1.7 mi (2.8 km)

off shore between Garguan Point and Carolinas Point. The inner harbor is entered via a channel that has a navigable width of 500 ft (152 m) and a minimum depth of 25 ft (7.6 m)

The Inner Harbor was constructed in 1944 to accommodate up to eight Liberty Ship cargo vessels (Belt Collins 1999). The main quay has a usable length of 2,200 ft (670 m) with depths varying between 25 and 29 ft (7.6 and 8.8 m) (Figure 14.2-1). There are two piers (pier 1 and pier 2) lying to the southwest of the main quay. Each has a usable length of 500 ft (152 m) at both sides and a depth of 25 ft (7.6 m). Two shorter quays between the main quay and pier 1 and between piers 1 and 2 have 225 ft (69 m) of berth space each and a depth of 25 ft (7.6 m), bringing the total berthing space to 4,650 ft. (Global Security 2008). The Navy estimates that the main quay, or wharf, could handle up to 4,500 tons (4,082 metric tons) of cargo daily. The main quay is used to moor commercial barges operating between Tinian and Saipan and for hydrofoil ferry service for visitors from Saipan. Two stevedore companies service commercial shipping traffic. Gasoline and diesel fuel can be obtained at the Mobile Oil tank compound at the harbor. No tugboats operate in Tinian Harbor (Belt Collins 1999).

14.2 ENVIRONMENTAL CONSEQUENCES

14.2.1 Approach to Analysis

14.2.1.1 Methodology

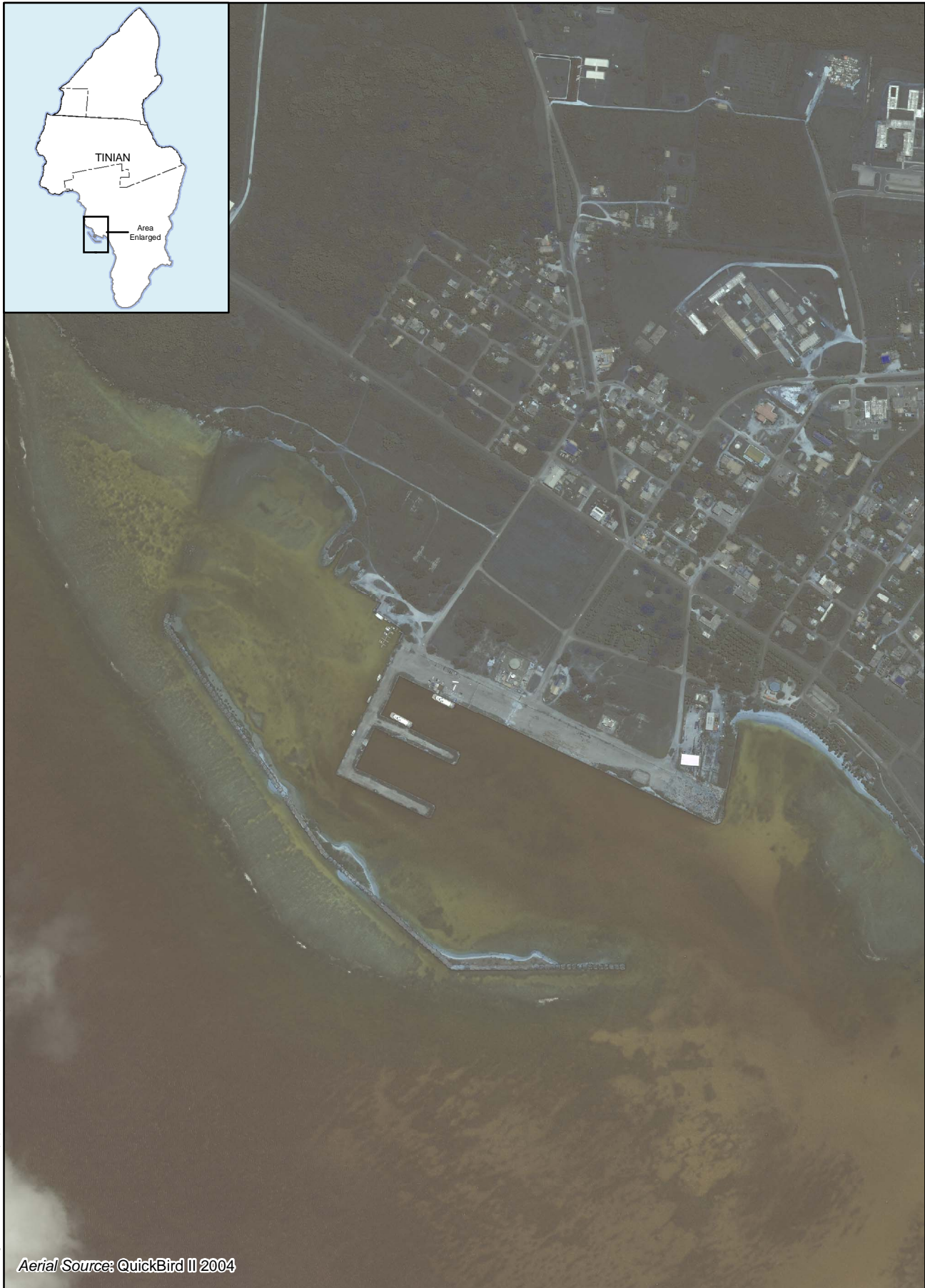
The need for the actions proposed on Tinian is to provide facilities to allow Marine Corps forces relocating to Guam to sustain their combat readiness that could not be accommodated on Guam. Construction and operation activities under the proposed action have been compared to the no-action alternative. There is no construction or modification of existing facilities at Tinian Harbor, Tinian International Airport, North Field or the roadways for training under the proposed action. Existing facilities would be used by existing modes of transportation.

14.2.1.2 Determination of Significance

A determination of significant adverse effect is made where the projected increase in transportation would exceed the infrastructure for that mode of transportation, such that the infrastructure would not be able to service additional demands while maintaining the same level of service for existing users.

14.2.1.3 Issues Identified during Public Scoping Process

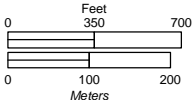
As part of the analysis, concerns related to marine transportation that were mentioned by the public, including regulatory stakeholders, during the public scoping meetings were addressed. This included concern for the impact of the proposed military buildup on harbor and navigable waters. Respondents expressed a desire for the military to invest in improving the present harbor infrastructure and for undertaking necessary repairs to the harbor facility. The public expressed a desire to be informed of how the military control would affect local small craft operators who presently use the harbor facility. Concerns were also expressed regarding restriction of public access and movement through the harbor and airport due to military control. Specific comments regarding road transportation were not raised. However, access to tourist and historical locations within military zone was identified as a concern by the public.



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Aerial Source: QuickBird II 2004

Figure 14.2-1
Tinian Inner Harbor



14.2.2 Alternative 1 (Preferred Alternative)

14.2.2.1 Tinian

Construction

No new transportation infrastructure would be required for implementation of Alternative 1 at Tinian. There is no construction or modification of existing facilities at Tinian Harbor, Tinian International Airport, North Field or on the roadways for the training related to the relocation. There would be no impact to marine transportation.

Operation

Roads

Under the proposed training, 200 to 400 personnel would be transported between Andersen Air Force Base (AFB) North Field on Guam to Tinian International Airport (West Field) on Tinian, depending on the type of aircraft. Frequency of the training would be approximately one week per month. The various routes proposed to transport the personnel from the airport would be by foot with the exception of up to four humvees for ammunition and equipment.

Portions of the range area would not be accessible by non-participating personnel during training, including sufficient lead-time before training to ensure range area clearance. To facilitate range safety, ground access would be controlled through gates at existing roads. This would maintain access to areas where training is not being conducted. Broadway would be closed during training. However, the public can travel up 8th Avenue and check in with personnel manning the first access gate. Once cleared by range control, they can proceed up 8th Avenue, checking in with each successive guard point until clear of the training area. The additional traffic proposed by transporting equipment and ammunition from the airport to the ranges would not exceed the existing capacity of the roadways; impacts to roadways would be less than significant.

Airport

There is no construction or modification proposed at the airport for training. As indicated above, air transport would be between Andersen AFB North Field on Guam to Tinian International Airport (West Field) on Tinian, depending on the type of aircraft. Only the C-17s need the use of the Tinian West Field Airport due to the runway requirements for these aircraft and there would be 2 airlifts to transport 200 Marines and 4 airlifts to transport 400 Marines per training event. No impacts to the Tinian International Airport are anticipated. In addition, public access to the Tinian International Airport would not be impacted.

Harbors

If equipment is moved by barge, one single would be able to carry the equipment necessary to support the estimated 200 to 400 Marine training evolution. The harbor currently accommodates this type of marine vessel activity on a regular basis. Therefore, the addition of one barge per month would result in no impact to marine transportation in Tinian Harbor.

14.2.2.2 Summary of Alternative 1 Impacts

Table 14.2-1 summarizes Alternative 1 impacts.

Table 14.2-1. Summary of Alternative 1 Impacts

<i>Area</i>	<i>Project Activities</i>	<i>Project Specific Impacts</i>
Tinian	Construction	Less than significant impact to roads; no impact to the airport or to marine transportation in Tinian Harbor.
	Operation	Less than significant impact to roads; no impact to the airport or to marine transportation in Tinian Harbor.

14.2.2.3 Alternative 1 Potential Mitigation Measures

No mitigation measures are suggested.

14.2.3 Alternative 2

14.2.3.1 Tinian

Construction

No new transportation infrastructure would be required for implementation of Alternative 2 at Tinian. There is no construction or modification of existing facilities at Tinian Harbor, Tinian International Airport, North Field or on the roadways for the training related to the relocation. Since there is no proposed construction, there would be no impact to marine transportation in Tinian Harbor.

Operation*Roads*

Under the proposed training, 200 to 400 personnel would be transported between Andersen AFB North Field on Guam to either the bivouac area, Tinian North Field, or Tinian International Airport (West Field) on Tinian, depending on the type of aircraft. Frequency of the training would be approximately one week per month. The various routes proposed to transport the personnel from the airport would be by foot with the exception of up to four humvees for ammunition and equipment. Portions of the range area would not be accessible by non-participating personnel during training, including sufficient lead-time before training to ensure range area clearance. To facilitate range safety, ground access would be controlled through gates at existing roads. This would maintain access to areas where training is not being conducted. Broadway would be closed during training. However, the public can travel up 8th Avenue and check in with personnel manning the first access gate. Once cleared by range control, they can proceed up 8th Avenue, checking in with each successive guard point until clear of the training area. The additional traffic proposed by transporting equipment and ammunition from the airport to the ranges would not exceed the existing capacity of the roadways; impacts to roadways would be less than significant.

Airport

There is no construction or modification proposed to the airport for training. As indicated above, air transport would be between Andersen AFB North Field on Guam to Tinian International Airport (West Field) on Tinian, depending on the type of aircraft. Only the C-17s need the use of the Tinian West Field Airport due to the runway requirements for these aircraft and there would be 2 airlifts to transport 200 Marines and 4 airlifts to transport 400 Marines per training event. No impacts to the Tinian International Airport are anticipated. In addition, public access to the Tinian International Airport would not be impacted.

Harbors

If equipment is moved by barge, one single would be able to carry the equipment necessary to support the estimated 200 to 400 Marine training evolution. The harbor currently accommodates this type of marine vessel activity on a regular basis. Therefore, the addition of one barge per month would result in no impact to marine transportation in Tinian Harbor.

14.2.3.2 Summary of Alternative 2 Impacts

Table 14.2-2 summarizes Alternative 2 impacts.

Table 14.2-2. Summary of Alternative 2 Impacts

<i>Area</i>	<i>Project Activities</i>	<i>Project Specific Impacts</i>
Tinian	Construction	Same as Alternative 1.
	Operation	Same as Alternative 1.

14.2.3.3 Alternative 2 Potential Mitigation Measures

No mitigation measures are suggested.

14.2.4 Alternative 3

14.2.4.1 Tinian

Construction

No new transportation infrastructure would be required for implementation of Alternative 3 at Tinian. There is no construction or modification of existing facilities at Tinian Harbor, Tinian International Airport, North Field or on the roadways for the training related to the relocation. Since there is no proposed construction, there would be no impact to marine transportation in Tinian Harbor.

Operations

Roads

Under the proposed training, 200 to 400 personnel would be transported between Andersen AFB North Field on Guam to either the bivouac area, Tinian North Field, or Tinian International Airport (West Field) on Tinian, depending on the type of aircraft. Frequency of the training would be approximately one week per month. The various routes proposed to transport the personnel from the airport would be by foot with the exception of up to four humvees for ammunition and equipment. Portions of the range area would not be accessible by non-participating personnel during training, including sufficient lead-time before training to ensure range area clearance. To facilitate range safety, ground access would be controlled through gates at existing roads. This would maintain access to areas where training is not being conducted. Broadway would be closed during training. However, the public can travel up 8th Avenue and check in with personnel manning the first access gate. Once cleared by range control, they can proceed up 8th Avenue, checking in with each successive guard point until clear of the training area. The additional traffic proposed by transporting equipment and ammunition from the airport to the ranges would not exceed the existing capacity of the roadways; impacts to roadways would be less than significant.

Airport

There is no construction or modification proposed to the airport for training. As indicated above, air transport would be between Andersen AFB North Field on Guam to Tinian International Airport (West Field) on Tinian, depending on the type of aircraft. Only the C-17s need the use of the Tinian West Field

Airport due to the runway requirements for these aircraft and there would be 2 airlifts to transport 200 Marines and 4 airlifts to transport 400 Marines per training event. No impacts to the Tinian International Airport are anticipated. In addition, public access to the Tinian International Airport would not be impacted.

Harbors

If equipment is moved by barge, one single would be able to carry the equipment necessary to support the estimated 200 to 400 Marine training evolution. The harbor currently accommodates this type of marine vessel activity on a regular basis. Therefore, the addition of one barge per month would result in no impact to marine transportation in Tinian Harbor.

14.2.4.2 Summary of Alternative 3 Impacts

Table 14.2-3 summarizes Alternative 3 impacts.

Table 14.2-3. Summary of Alternative 3 Impacts

<i>Area</i>	<i>Project Activities</i>	<i>Project Specific Impacts</i>
Tinian	Construction	Same as Alternative 1.
	Operation	Same as Alternative 1.

14.2.4.3 Alternative 3 Potential Mitigation Measures

No mitigation measures are suggested.

14.2.5 No-Action Alternative

Under the no-action alternative the Marines would not relocate to Guam and no training on Tinian would be necessary. No additional training capabilities would be implemented for the CNMI. No construction, dredging, training, or operations associated with the military relocation would occur and the Marine Corps would not meet readiness, mission and international treaty obligations. Since there is no proposed construction or transportation of Marines or supplies by ship or barge, there would be no impact to marine transportation in Tinian Harbor.

14.2.6 Summary of Impacts

Table 14.2-4 summarizes the potential impacts of each action alternative and the no-action alternative. A text summary is provided below.

Table 14.2-4. Summary of Impacts

<i>Alternative 1</i>	<i>Alternative 2</i>	<i>Alternative 3</i>	<i>No-Action Alternative</i>
Roads			
• LSI	• LSI	• LSI	• NI
Airport			
• NI	• NI	• NI	• NI
Tinian Harbor			
• NI	• NI	• NI	• NI

Legend: LSI = Less than significant impact; NI = No impact.

14.2.7 Summary of Potential Mitigation Measures

Table 14.2-5 summarizes potential mitigation measures.

Table 14.2-5. Summary of Potential Mitigation Measures

<i>Alternative 1</i>	<i>Alternative 2</i>	<i>Alternative 3</i>
Roads		
• None	• None	• None
Airport		
• None	• None	• None
Tinian Harbor		
• None	• None	• None