

- Beach manhole within the nearest road right-of-way, which is the point of connection of the submarine and terrestrial networks (or via connecting route for three of the landing sites: 'Akiakoa Road, Kill Drive, and Sandy Beach Park).

S.3 PROPOSED CONSTRUCTION METHODS

A specialized cable-laying ship would precisely place the cable along a selected alignment between landing sites. While moving, the vessel would release the cable at a rate to accurately place the cable on the ocean floor.

Horizontal directional drilling (HDD) would be used to construct the cable landfalls. In the past, cable landfalls were constructed using open trenches. These trenches disturbed the surface of the land and cut through sensitive coastal and near shore resources, such as beaches and coral reefs. The use of HDD avoids adversely affecting such resources because a small diameter underground bore is created, avoiding surface disturbance along the length of the cable run. HDD can be conducted during rough weather and high waves because the operation would be shore-based, and excavation would occur below the ocean floor.

HDD involves the use of a special type of drilling rig supported by other equipment. A small pit is excavated for the drill entry point. From the entrance pit, the drill head commences boring towards the ocean, as shown in Figure S-4. The drill head can be changed depending on the type of soil or rock encountered. Drilling can be guided or steered both horizontally and vertically, but the angle of the drilling can be no more than 15 degrees. A probe located near the drill head allows the HDD operator to monitor and remotely control the precise vertical and horizontal location of the drill head. Sections of steel pipe, called drill casings, are used to push the drill head forward. These casings would remain in place and later be used as the fiber-optic cable conduit.

As the drill head bores its way underground, soil and rock is ground up, and this excavated material, called drill cuttings, is removed to create a hollow subterranean bore. Slurry, or drilling mud, is used to lubricate the drilling action, flush cuttings from the drill face and transport them back to the drill pit, and help seal the bore. The drilling mud consists of water and bentonite, a natural clay material, and is not toxic or harmful to the environment. A constant flow of slurry and cuttings is pumped back to the rig and into a centrifuge, called a desander or drilling fluid/mud handling tank. The cuttings are separated from the slurry in the centrifuge. The cleaned slurry is then recycled and re-injected into the bore hole. The cuttings are collected, dried, and disposed at a landfill.

The drill head progresses to the underwater EP, which will be located approximately 60 feet below mean sea level (msl) or deeper to protect the cable from damage from surface wave action. Just prior to reaching the EP, the slurry in the bore is replaced by water so that when the drill head breaks out into the ocean, there will be no discharge of slurry and/or cuttings into the ocean. A diver will remove the drill head and cap the bore to await later installation of the fiber-optic cable being delivered by the cable laying ship.

Upon arrival at the landing site, the cable ship would set a position near the EP using tugboats, side-thrusters, or other means. The vessel would release the appropriate amount of cable. Using small motorboats and/or other mechanical means and divers, the cable will be pulled to the EP and through the steel drill casing to the drill pit.

The beach manhole, with typical inside dimensions of 12 feet long by 7 feet wide and 7 feet deep, would be excavated within the nearest State or county road right-of-way.

A section of cable will need to be installed between the drill site and the beach manhole. A trench about one-foot wide and three-feet deep will be excavated for placement of the conduit. The fiber-optic cable is pulled through the conduit and spliced to the terrestrial fiber-optic cable at the beach manhole. Three of the landing sites do not require trenching between the drill site and beach manhole because the drill site would be mauka of the manhole. Similar trenching would also be conducted in roadway rights-of-way to install the connecting route fiber-optic cable.

Table S-1 summarizes the construction details by landing site.

**TABLE S-1
SUMMARY OF CONSTRUCTION DETAILS BY LANDING SITE**

Landing Site	Approx. HDD Distance	Trenching Between Drill Site and Manhole	Location of Beach Manhole	Connecting Route
Akaloa Road (Kaua'i)	3,600 ft	No	Kaumuali'i Hwy	Yes (4,500 ft)
Kili Drive (O'ahu)	3,500 ft	No	Farrington Hwy	Yes (17,200 ft)
Sandy Beach Park (O'ahu)	2,100 ft	Yes	Kalaniana'ole Hwy	Yes (1,800 ft)
Oneali'i Homesteads (Moloka'i)	4,500 ft	Yes	Kamehameha V Hwy	No
Wahikuli (Maui)	2,860 ft	No	Honoapi'iiani Hwy	No
Po'olenalena Park (Maui)	1,900 ft	Yes	Mākena Road	No
Keewa Place (Hawai'i)	3,200 ft	Yes	Akoni Pule Hwy	No

Source: Parsons Brinckerhoff, 2003.

S.4 ALTERNATIVES

Stretches of coastline, called "landing regions", were identified for each island. Identification of the landing regions was based on factors including providing connectivity to remote rural Hawaiian Home Lands, the ease of establishing a connection with the terrestrial networks; and design criteria of the submarine network.

The following landing regions were identified:

- Kekaha, Kaua'i;
- Mākaaha, O'ahu;
- Hawai'i Kai-Waimānalo, O'ahu;
- Kaunakakai (and east along the south shore), Moloka'i;
- Honokowai-Lahaina, Maui;
- Mākena-Kahikinui, Maui; and
- North Kohala-Kawaihae, Hawai'i.

Multiple candidate (alternative) landing sites were identified within each of the landing regions. The initial and most important criterion for screening candidate landing sites was the technical feasibility of using HDD in order to minimize impact to the environment and natural resources. In general, near shore ocean conditions were not a major factor in assessing technical feasibility of the proposed landing sites because of the proposed use of HDD. The EP would be engineered to be in an area with sandy or benign (e.g., no live coral) bottom conditions. In terms of land ownership, Hawaiian Home Lands were generally the first choice as landing site parcels, if all other factors were equal. If not available, other government-owned properties were sought. Private land was the last choice, but none of the sites finally selected are on private property. Surrounding land uses were a major factor because construction activities could have an adverse effect on certain land uses, such as residences.

A desktop analysis using geographic information system (GIS) software was used to identify candidate landing sites, which are listed on Table S-2. GIS allows various mapped data layers including topography, land ownership, zoning, and bathymetry to be overlaid, which can expedite identification of acceptable sites. Candidate sites were field checked by environmental planners, civil and marine engineers, archaeologists, cultural consultants, community outreach specialists, and biologists.

TABLE S-2
CANDIDATE LANDING SITES BY LANDING REGION

Kekaha	Mākahe	Hawai'i Kai- Waimānalo	Kaunakakai	Honokowai- Lahaina	Mākena- Kahikinui	N. Kohala- Kawaihae
1. 'Alee Rd 2. 'Iwa Rd 3. Akepa Rd 4. Kikialoa Harbor 5. 'Akakoa Rd*	1. Keawa'ula 2. Mākua/Puna pōhaku 3. Kea'au-QLCC 4. Orange St-Mauna Lāhila 5. Kili Drive*	1. Makai Pier 2. Kaiwi 3. Sandy Beach Park*	1. Kiowa Park 2. Kaunakakai Harbor 3. Kamiloa 4. 'Ōnini Gulch 5. Oneali Homesteads* 6. Kapa'akae Loop 7. Kawela Gulch	1. Lipoa Point 2. Old Kā'anapali Airport 3. Nohea Dr 1 4. Nohea Dr 2 5. Honokōwai Beach Park 6. Pōhaku Kā'anapali 7. Kahoma Stream 8. Hawai'i Omori 9. Ala Moana St 10. Civic Center Rd 1 11. Civic Center Rd 2 12. Waihuli*	1. Kama'ole Beach Pk III 2. Hale Kama'ole 3. Wailea Beach Hotel 4. Po'olenaiena Park* 5. La Perouse Bay 6. Kamaheua 7. Kamana-mana	1. Upolu Airport 2. Upolu Point Loran 3. Honolu Landing 4. Kapa'a Beach Park 5. Honokoa 6. Kawaihae Harbor 7. Kawaihae 8. Spencer Beach 9. Honokoa St 10. Keewa Place*

Source: Parsons Brinckerhoff Quade & Douglas, Inc., July 2003.
Note: *Selected landing site.

A comparative evaluation was performed to select the proposed landing site within each landing region. The selected landing site is identified by an asterisk (*) on Table S-2. Besides the criteria listed above, the selections considered local community concerns and conditions.

S.5 IMPACTS AND MITIGATION

Table S-3 summarizes the potential environmental and social impacts of the proposed project, and a summary of proposed mitigation measures for each adverse impact.

Table S-3 is organized into two columns. The first column describes system-wide (i.e., Statewide) impacts and impacts that are common to all or most landing sites. Since the proposed action at each landing site is very similar, the potential impacts at these sites also tend to be similar. Therefore, the purpose of the first column is to reduce repetition in summarizing the impacts and proposed mitigation measures for each landing site. The environmental conditions of the landing sites do differ, therefore, potential impacts that would occur only at one or a few of the landing sites along with their proposed mitigation measures, if any, are provided in the second column. Table S-3 also clusters the environmental subjects, such as archaeology, noise, water resources, etc., covered in Chapters Three through Nine (the chapters that disclose the impacts and proposed mitigation measures of the proposed landing sites) in the order provided in these chapters. Within each cluster, short-term (i.e., construction period) impacts, long-term (i.e., operational) impacts, and proposed mitigation measures are disclosed.

**TABLE S-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION**

Common to All Landing Sites or System-Wide	Landing Site Specific
<p>Topographic and Geologic Conditions</p> <p><u>Construction or Short-Term Impacts.</u> HDD operations are feasible at all proposed landing sites based on soil sampling information collected for this project.</p> <p>Although some excavation work will be required for the drill pit and trenching, excavated areas would be backfilled with the same material. Excess excavated material, such as from the beach manhole site, would be disposed of properly in accordance with State Department of Health (SDOH) regulations. Once the landing site has been completed, the affected parcel would be restored to its pre-construction condition.</p> <p>HDD operations and other excavation activities at any of the proposed landing sites are not anticipated to uncover or be affected by soils previously contaminated by hazardous materials.</p>	<p><u>Akialoa Road, Kill Drive and Sandy Beach Park landing sites.</u> The construction areas for these three proposed landing sites include connecting routes between their beach manholes and the SIC terrestrial system.</p> <p><u>Po'olenalena Park Landing Site.</u> The geologic (underground) conditions of the site indicate that HDD may encounter voids, which could cause the loss of slurry. This would impact the effectiveness of the drilling operation.</p> <p><u>Kaewa Place Landing Site.</u> The EP is within an area covered by dredged spoil associated with past dredging activities at the nearby Kawaihae Harbor.</p>
<p><u>Long-Term Impacts.</u> Once construction is completed, all landing site infrastructure would be underground and under the seafloor, and would not change the topography of the landing site parcel or the nearshore area. A beach manhole cover would be the only visible evidence of the landing site.</p>	<p>Notable differences in impacts among landing sites are not anticipated.</p>
<p><u>Mitigation Measures.</u> See landing specific site mitigation measures to the right.</p>	<p><u>Po'olenalena Park Landing Site.</u> When going through a void, the SIC contractor shall monitor the returning slurry. If the slurry does not return or returns in insufficient quantities, the SIC contractor shall either alter the slurry mix consistency to make it thicker, or shall grout the void.</p> <p><u>Kaewa Place Landing Site.</u> The cuttings from the dredged spoil shall be tested to determine if it contains hazardous materials. If hazardous materials were to be found, these cuttings shall be disposed of in accordance with applicable SDOH requirements.</p>
<p>Land Use</p> <p><u>Construction or Short-Term Impacts.</u> All proposed landing site parcels contain adequate open space to conduct HDD and other fiber-optic cable installation operations. No existing land uses on or near the proposed landing site parcels would be affected, and the parcels would</p>	<p>Notable differences in impacts among landing sites are not anticipated.</p>

**TABLE S-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION
(CONTINUED)**

Common to All Landing Sites or System-Wide	Landing Site Specific
Land Use (continued)	
Construction or Short-Term Impacts (cont.) be restored to their pre-construction conditions immediately after construction.	See above.
Long-Term Impacts. Ten-foot wide easements would be obtained for the proposed landing sites' fiber-optic cable conduits between the shoreline and roads that would contain the beach manholes. Development is generally not allowed on most of the affected properties (e.g., park property).	Oneali'i Homesteads and Kaewa Place Landing Sites. These DHHL-owned landing site parcels may be developed in the future. The Oneali'i Homesteads easement would be established along the west side of the property and should not affect development of a homestead on the property. The Kaewa Place landing site easement would be under an existing driveway, and therefore, would also not affect future DHHL homestead development on the property.
Mitigation Measures. Mitigation is not necessary.	Landing site specific mitigation measures are not required.
Archaeological and Historic Resources	
Construction or Short-Term Impacts. In general, the areas affected by HDD operations contain no historic properties. The exceptions are provided to the right. Trenching and excavation at certain landing site parcels may uncover "significant" archaeological or historic materials (see to the right).	<p>Po'olenalena Park Landing Site. A subsurface inventory survey of the HDD alignment uncovered a coastal habitation site consisting of multiple cultural layers and showing evidence of pre-contact Hawaiians. The site is considered "significant". No human burial remains were found within the alignment. The cultural deposit may extend mauka of the drill site but within the sand formation parcel. Therefore, in addition to the HDD operation, some of the trenching for the fiber-optic cable conduit between the drill site and Makena Alanui Road may affect the cultural deposit.</p> <p>Kaewa Place Landing Site. Historic structural remains from the 1930s were found in the area proposed for HDD operations. Pursuant to concurrence by SHPD, they do not need to be preserved, and have been properly documented by the archaeological study conducted for this project.</p> <p>Akialoa Road, Oneali'i Homesteads and Wahikuli Landing Sites. Excavation or trenching along the Akialoa Road connecting route, and within the Oneali'i Homesteads and Wahikuli parcels may uncover "significant" materials or resources.</p>

**TABLE S-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION
(CONTINUED)**

Common to All Landing Sites or System-Wide	Landing Site Specific
Archaeological and Historic Resources (continued)	
Long-Term Impacts. No Long-Term impacts to historic properties are anticipated.	Notable differences in impacts among landing sites are not anticipated.
Mitigation Measures. See specific landing site mitigation measures to the right.	<p>Po'olenalena Park Landing Site. A subsurface inventory survey of the HDD staging area and a portion of the trench alignment between the drill site and Mākena Afanui Road shall be conducted to better define and evaluate the coastal habitation site. A preservation plan for the historic site shall also be completed following completion of the inventory survey. Additional mitigation measures might be proposed following the second inventory survey.</p> <p>Kaewa Place Landing Site. Although the historic structures do not require preservation, the SIC contractor shall be instructed to avoid disturbing the sites if possible.</p> <p>'Akiāloa Road, Oneali'i Homesteads and Wahikuli Landing Sites. An archaeologist shall monitor excavation and trenching along the 'Akiāloa Road connecting route and within Oneali'i Homesteads and Wahikuli parcels. If potentially significant resources are uncovered during excavation or trenching activities, all excavation or trenching activity shall halt until the on-site archaeologist and other appropriate persons, such as SHPD staff, can determine the nature and significance of the resources.</p>
Cultural, Social, and Economic Activities	
<p>Construction or Short-Term Impacts. None of the proposed landing site parcels appears to be used for recreational activities, except two parcels (Sandy Beach Park and Po'olenalena Park landing sites), which are used as part of recreational shoreline parks.</p> <p>Four of the seven landing site parcels are located seaward of the coastal road (the road running nearest to the shoreline). Despite this location, it is not anticipated that HDD and other fiber-optic cable</p>	<p>Sandy Beach Park Landing Site. The construction site would be located in the eastern corner of the park's large grassy field that mostly is used for kite flying. Most of the field is also designated as a hang glider landing area (gliders take off from the nearby Koko Head crater), but the area proposed for HDD staging is not designated for hang glider landings. During construction, which might take up to three months, kite flying would be restricted from the part of the field used for HDD staging and other construction activities, such as trenching. Hang glider</p>

**TABLE S-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION
(CONTINUED)**

Common to All Landing Sites or System-Wide	Landing Site Specific
Cultural, Social, and Economic Activities (continued)	
<p>Construction or Short-Term Impacts (cont.). Installation operations would restrict access to the shoreline within the affected parcel, except at one site (see to the right). If access were temporarily restricted within a parcel, it would be done solely for public safety purposes.</p> <p>Engineering and construction jobs will be created.</p>	<p>Sandy Beach Park Landing Site (cont.). Landings would not be affected, however. This also means that the majority of the field would be available for kite flying during construction.</p> <p>Oneali'i Homesteads Landing Site. The landing site parcel provides access to Ali'i Fishpond, an important cultural resource. It is not anticipated at this time that access to the fishpond would be restricted during construction.</p> <p>Po'olenalena Park Landing Site. The public would continue to be allowed beach access through the parcel. However, HDD staging would temporarily displace some parking spaces, which would cause inconveniences to some beach users should there be a high demand to use the beach during landing site infrastructure installation. This impact is expected to last for the duration of construction, which might up to three months.</p> <p>Kaewa Place Landing Site. Since access to this L-shaped parcel is relatively narrow, the SIC contractor would probably temporarily restrict access onto the property and shoreline during HDD and cable installation operations for public safety purposes. Fishing was observed on the property, and other gathering activities are possible. The access restriction is expected to last for the duration of construction, which might be up to three months.</p>
<p>Long-Term Impacts. Once completed, all landing site infrastructure would be underground and therefore, would not affect cultural, social or economic activities that may be conducted from the landing site parcel or areas nearby. Maintenance and servicing of the telecommunications lines are expected to support several new permanent jobs including field and office positions.</p>	<p>Notable differences in impacts among landing sites are not anticipated.</p>
<p>Mitigation Measures. The contractor shall be required to have good safety protocols in place, especially if the landing site is at or near a</p>	<p>Oneali'i Homesteads Landing Site. If access to Ali'i Fishpond were restricted during construction for safety reasons, special arrangements</p>

**TABLE S-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION
(CONTINUED)**

Common to All Landing Sites or System-Wide	Landing Site Specific
Cultural, Social, and Economic Activities (continued)	
Mitigation Measures (cont.). park, such as those landing sites in Sandy Beach and Po'olenalena Parks.	Oneali'i Homesteads Landing Site (cont.). can be made to provide safe passage through the construction area if necessary.
Visual and Aesthetic Resources	
Construction or Short-Term Impacts. Vehicles and equipment, including the HDD rig, used to construct the landing site infrastructure would be visible from certain vantage points at or near the landing site parcels, which may temporarily block scenic views.	Notable differences in impacts among landing sites are not anticipated.
Long-Term Impacts. Once completed, all landing site infrastructure would be underground and therefore, would not affect existing viewplanes or scenic resources.	Notable differences in impacts among landing sites are not anticipated.
Mitigation Measures. Construction activities are temporary. Therefore, mitigation is not necessary.	Landing site specific mitigation measures are not required.
Water Resources	
<p>Construction or Short-Term Impacts. The quality of any nearby surface water body, such as the Pacific Ocean, would not be affected due to the following reasons:</p> <ul style="list-style-type: none"> • HDD operations produce no discharges of pollutants, and the SIC contractor shall be required to implement best management practices (BMP) if applicable, as required by SDOH regulations. • The use of drilling slurry, a lubricant made from a mixture of bentonite and water that is non-toxic, is highly controlled and monitored throughout the drilling process, • The slurry is used to both lubricate the drill cutter head and help seal the bore, along with the drill rods. Slurry is not expected to leak from the bore. • The slurry would be replaced by water immediately prior to the drill head emerging from the exit point (EP). • Although excavation is needed for trenching and beach manhole, such activities would not be conducted next to the ocean and the SIC contractor will not conduct such activities during a storm or heavy rain. 	<p>Kill Drive Landing Site. Although a small wetland was identified within the landing site parcel, the construction site (e.g., drill rig, associated equipment and supplies, etc.) will not be within the wetland. In addition, the HDD alignment will not be within the wetland.</p> <p>Oneali'i Homesteads Landing Site. This landing site parcel is within the U.S. Environmental Protection Agency designated Moloka'i Sole Source Aquifer, which encompasses the entire island. Adverse impacts to the aquifer are not anticipated because recharge occurs at upland locations far beyond the project site, and the aquifer gradient flows seaward.</p>

**TABLE S-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION
(CONTINUED)**

Common to All Landing Sites or System-Wide	Landing Site Specific
Water Resources (continued)	
<p><u>Construction or Short-Term Impacts (cont.)</u> Despite the above characteristics of HDD and its normal operating conditions, accidental or inadvertent discharges of slurry into the ocean are possible. For example, the drill head might encounter a void that is accessible to the ocean water or land surface where the slurry can migrate to the ocean, or the contractor could miscalculate the timing of the slurry to water exchange when the drill head emerges from the EP. Slurry in the ocean would temporarily affect water turbidity, but ocean currents or wave action would be expected dissipate the turbidity relatively quickly. Bentonite in the slurry is a naturally-occurring clay material, which is not toxic or harmful to the ocean environment. The SIC contractor would immediately be aware of losses of slurry, and would stop drilling if the discharges cannot be stopped.</p>	See above.
<p><u>Long-Term Impacts.</u> Since all landing site infrastructure would be underground, water resources would not be affected. For example, the infrastructure would not cause changes to existing floodplains, some of which encroach on some landing site parcels.</p>	Notable differences in impacts among landing sites are not anticipated.
<p><u>Mitigation Measures.</u> The Akialoa Road, Kill Drive, and Sandy Beach Landing Sites include connecting routes between the beach manholes and the SIC terrestrial system. The connecting routes would increase the total construction area to over one acre, the threshold in which a National Pollutant Discharge Elimination System (NPDES) permit for Stormwater Discharges Associated with Construction Activity is needed. As required by this NPDES permit, site-specific BMP plans shall be developed appropriate to the construction activity, which mainly involves trenching, cable installation and backfilling. Although the other four landing sites may not require this NPDES permit, the same site-specific BMP measures shall be used because they involve basically the same excavation work.</p> <p>If the contractor were to find that slurry is leaking from the drill bore into the ocean environment, there are several measures to prevent further discharges, which include modifying the slurry properties (e.g., making</p>	<p><u>Kill Drive Landing Site:</u> A botanist shall identify a buffer zone between the construction site and wetland.</p>

TABLE S-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION
(CONTINUED)

Common to All Landing Sites or System-Wide	Landing Site Specific
Water Resources (Continued)	
Mitigation Measures (cont.) the slurry thicker) or modifying the pressure or volume of the slurry injection into the bore. If slurry is observed in the ocean and the problem cannot immediately be resolved, drilling will stop including the introduction of additional slurry. Drilling shall resume only when the contractor has taken measures to prevent further slurry discharges into the ocean. Divers stationed at the EP when the drill head emerges into the ocean shall be equipped with specialized pumps and filter bags in case slurry is accidentally discharged. All inadvertent discharges of slurry into State waters shall be reported to the SDOH Clean Water Branch.	See above.
Marine and Nearshore Conditions	
Construction or Short-Term Impacts. SCUBA surveys were used to identify EP locations and submarine cable alignments immediately seaward of the EP. Six of the seven landing site EP locations and seaward alignments consist of sandy substrate. None of the landing sites would displace live coral communities. See Water Resources section regarding slurry discharges.	Kaewa Place Landing Site. An area of dredge spoil was identified as the EP location. The area is devoid of live coral cover and is at a safe distance from entrance channel of Kawaihae Harbor.
Long-Term Impacts. Coastal or nearshore areas are vulnerable to a number of natural hazards, such as storms, hurricanes, tsunamis and high waves. However, none of these coastal hazards are anticipated to damage landing site infrastructure because the fiber-optic cable would be beneath the ocean floor and underground on the landside. For a few hundred feet seaward of the EP, the submarine cable would have double armor protection.	Notable differences in impacts among landing sites are not anticipated.
Mitigation Measures. See Water Resources mitigation regarding slurry discharges.	Landing site specific mitigation measures are not required.
Terrestrial and Aquatic Biology	
Construction or Short-Term Impacts. Construction at all the landing site parcels would clear small amounts of vegetation at the drill spot and along the trench up to the road that would contain the beach manhole. The three landing sites with the connecting routes would also require	Kili Drive Landing Site. The connecting route on Farrington Highway may relocate existing trees within the right-of-way depending on the cable alignment as coordinated with the State Department of Transportation (SDOT).

**TABLE S-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION
(CONTINUED)**

Common to All Landing Sites or System-Wide	Landing Site Specific
Terrestrial and Aquatic Biology (continued)	
<p>Construction or Short-Term Impacts (cont.) clearance of some vegetation if the trench is located outside the road pavement, but within the right-of-way. Vehicles and equipment parked on-site could displace vegetation. At all the landing sites, types of vegetation that would be affected are common, and many are considered weedy. After construction is completed, the contractor would return the site as much as possible to its pre-construction condition.</p> <p>The use of identified EP locations would avoid potential adverse impacts to live coral communities, as well as the overall aquatic biology, at all landing sites. The drill head emerging from the EP would be a controlled event, observed by divers who would cap the bore when completed to await later hook-up with the submarine cable, which will also be a controlled event conducted by divers. The drill head emergence or cable hook-up would be suspended if a threatened or endangered species and/or a marine mammal, such as the Hawaiian monk seal or green turtle, were observed in the immediate vicinity.</p> <p>In the event of an accidental discharge of slurry in the ocean during drilling or at the EP (see above), such a release would not be harmful to marine life, including marine mammals, because ocean currents or wave action would dissipate the turbidity relatively quickly. As stated above, bentonite is not toxic or hazardous to marine life.</p> <p>Submarine cable laying activities would avoid interactions with protected species of dolphins and whales that frequent Hawaiian waters. If whales or other marine animals are spotted in the path of the cable vessel or in an area where they may interact with the vessel or deployment of the cable, the operation would be halted until the animal(s) moves away from the vessel or cable deployment area of its own volition.</p>	See above.

**TABLE S-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION
(CONTINUED)**

Common to All Landing Sites or System-Wide	Landing Site Specific
Terrestrial and Aquatic Biology (continued)	
<p><u>Long-Term Impacts.</u> Affected terrestrial areas would be returned to their pre-construction botanical condition.</p> <p>The depth of the submarine fiber-optic cable seaward of the EP provides more than enough pressure to hold the cable in place, even under stormy conditions. Therefore, movement of the cable is not expected.</p>	<p>Notable differences in impacts among landing sites are not anticipated.</p>
<p><u>Mitigation Measures.</u> See Water Resources mitigation.</p> <p>To avoid adverse interactions with marine animals during EP and cable deployment activities, divers shall observe the environment. If a protected animal is observed, the activity shall be delayed until the animal moves away from the project area of its own volition.</p>	<p><u>Kili Drive Landing Site:</u> If applicable, SIC will try to relocate trees near their original location. A qualified arborist shall be retained to supervise the relocation of any tree affected by the connecting route. Tree relocations shall be coordinated with the SDOT.</p>
Air Quality	
<p><u>Construction or Short-Term Impacts.</u> Noticeable fugitive dust emissions may occur during trenching and excavation to install beach manholes if the excavated soil is dry and conditions windy. Operation of construction vehicles is expected to temporarily contribute air pollutants in the vicinity of the work area. The HDD rig and compressor are diesel-powered, which emit relatively high levels of nitrogen oxide (NO_x) in comparison to gasoline-powered equipment. The effects of NO_x are evaluated on a regional basis, and would therefore, would not be violated by emissions at single spot locations on each of the islands.</p>	<p>Notable differences in impacts among landing sites are not anticipated.</p>
<p><u>Long-Term Impacts.</u> Ambient air quality conditions will not be affected because landing site infrastructure do not emit air pollutants.</p>	<p>Notable differences in impacts among landing sites are not anticipated.</p>
<p><u>Mitigation Measures.</u> As required by SDOH regulations, the SIC contractor shall prevent fugitive dust emissions from migrating beyond the construction site by watering or covering exposed soils. The SIC contractor shall also be required to maintain his or her equipment in proper working order, including exhaust systems. Upon completion of work the project site shall be re-vegetated as appropriate to control erosion and release of dust by the wind.</p>	<p>Landing site specific mitigation measures are not required.</p>

**TABLE S-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION
(CONTINUED)**

Common to All Landing Sites or System-Wide	Landing Site Specific
Noise	
<p>Construction or Short-Term Impacts. HDD operations involve equipment that produces noise, such as air compressors, and the diesel-powered drill rig, which produces noise levels as high as 94 decibels 50 feet away. This noise level is comparable to the noise from a lawnmower. The estimated number of residences that may be affected by HDD noise emissions are provided on the right by landing site. However, HDD operations and other construction activities would be conducted within the hours allowed for construction, 7 a.m. to 6 p.m. Mondays through Friday and Saturdays 9 a.m. to 6 p.m. HDD operations would probably violate Community Noise Control Standards, therefore, the SIC contractor would require a noise permit from the SDOH.</p>	<p>Akialoa Road Landing Site. One single-family residence is located about 100 feet from the drill site.</p> <p>Oneall's Homesteads Landing Site. Two single-family residences are located on parcels immediately west and east of this landing site parcel.</p> <p>Wahikuli Landing Site. Three or four single-family residences are located on the edge of a suburban neighborhood to the south of this landing site parcel.</p> <p>Po'olenalena Park Landing Site. A large residence adjacent to the site may be affected, but is separated from the parcel by a high wall, which would provide some noise attenuation. Noise emissions from the drill rig could disturb beach users next to the parking lot, but the beach is large enough for beach users to avoid this impact.</p> <p>Kaawa Place Landing Site. One single-family residence is located about 400 feet from the drill site.</p>
<p>Long-Term Impacts. No project-related noise emissions will occur once construction is completed other than occasional maintenance activities.</p>	<p>Notable differences in impacts among landing sites are not anticipated.</p>
<p>Mitigation Measures. SIC or its contractor shall inform residents near the proposed landing site parcels about the drilling noise and provide contact information. The SIC contractor shall be required to maintain his or her equipment in proper working order, especially all noise suppression systems.</p>	<p>Landing site specific mitigation measures are not required.</p>
Public Facilities	
<p>Construction or Short-Term Impacts. Installing beach manholes within State or County road rights-of-way would be coordinated with utility providers who are currently using the same rights-of-way for their infrastructure systems. Some of this coordination has been or is currently being conducted as part of SIC's terrestrial network project.</p>	<p>Wahikuli Landing Site. Installation of a beach manhole within the Honoapi'ilani Highway right-of-way, which is adjacent to the landing site parcel would require a lane closure, which would cause traffic delays because this section of highway is heavily used.</p>

**TABLE S-3
SUMMARY OF ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION
(CONTINUED)**

Common to All Landing Sites or System-Wide	Landing Site Specific
Public Facilities (continued)	
<p><u>Construction or Short-Term Impacts (cont.)</u>. Installation of fiber-optic cable along the connector routes may require new coordination with other utility providers.</p> <p>During installation of the beach manholes, up to one lane of traffic would be closed around the construction site. Depending on the level of usage of the affected road, traffic delays may result.</p>	See above.
<p><u>Long-Term Impacts</u>. The landing site infrastructure or underground fiber-optic cables within the connecting routes would not affect maintenance of the affected roads, nor would it affect expansion or installation of infrastructure.</p>	Notable differences in impacts among landing sites are not anticipated.
<p><u>Mitigation Measures</u>. SIC shall coordinate with the owners (i.e., agencies) of the affected roadways, such as the SDOT, for design plan reviews. Any lanes closures shall be coordinated with these agencies. All work within road rights-of-way shall include the posting of flagmen and/or police officers to safely direct traffic around construction sites.</p> <p>SIC shall also coordinate with the owners of utilities within the affected roadways to ensure that installation of the beach manholes and connecting routes (for three sites) do not cause damage or affect future utility plans.</p>	Landing site specific mitigation measures are not required.

Schedule A

<u>Quarterly Rent Payment Date</u>	<u>Total Quarterly Rent</u>
8/15/2009	\$3,750,000
11/15/2009	\$3,750,000
2/15/2010	\$3,750,000
5/15/2010	\$3,750,000
8/15/2010	\$3,750,000
11/15/2010	\$3,750,000
2/15/2011	\$3,750,000
5/15/2011	\$3,750,000
8/15/2011	\$4,125,000
11/15/2011	\$4,125,000
2/15/2012	\$4,125,000
5/15/2012	\$4,125,000
8/15/2012	\$4,743,750
11/15/2012	\$4,743,750
2/15/2013	\$4,743,750
5/15/2013	\$4,743,750
8/15/2013	\$4,743,750
11/15/2013	\$4,743,750
2/15/2014	\$4,743,750
5/15/2014	\$4,743,750
8/15/2014	\$5,455,313
11/15/2014	\$5,455,313
2/15/2015	\$5,455,313
5/15/2015	\$5,455,313
8/15/2015	\$5,455,313
11/15/2015	\$5,455,313
2/15/2016	\$5,455,313
5/15/2016	\$5,455,313
8/15/2016	\$6,546,375
11/15/2016	\$6,546,375
2/15/2017	\$6,546,375
5/15/2017	\$6,546,375
8/15/2017	\$6,546,375
11/15/2017	\$6,546,375
2/15/2018	\$6,546,375
5/15/2018	\$6,546,375
8/15/2018	\$7,855,650
11/15/2018	\$7,855,650
2/15/2019	\$7,855,650
5/15/2019	\$7,855,650
8/15/2019	\$7,855,650
11/15/2019	\$7,855,650
2/15/2020	\$7,855,650
5/15/2020	\$7,855,650
8/15/2020	\$7,855,650
11/15/2020	\$7,855,650

2/15/2021	\$7,855,650
5/15/2021	\$7,855,650
8/15/2021	\$7,855,650
11/15/2021	\$7,855,650
2/15/2022	\$7,855,650
5/15/2022	\$7,855,650
8/15/2022	\$7,855,650
11/15/2022	\$7,855,650
2/15/2023	\$7,855,650
5/15/2023	\$7,855,650
8/15/2023	\$7,855,650
11/15/2023	\$7,855,650
2/15/2024	\$7,855,650
5/15/2024	\$7,855,650
8/15/2024	\$7,855,650
11/15/2024	\$7,855,650
2/15/2025	\$7,855,650
5/15/2025	\$7,855,650
8/15/2025	\$7,855,650
11/15/2025	\$7,855,650
2/15/2026	\$7,855,650
5/15/2026	\$7,855,650
8/15/2026	\$7,855,650
11/15/2026	\$7,855,650
2/15/2027	\$7,855,650
5/15/2027	\$7,855,650



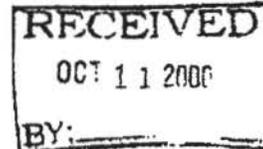
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PBC

United States Department of Agriculture
Rural Development

Rural Business-Cooperative Service • Rural Housing Service • Rural Utilities Service
Washington, DC 20250

SEP 29 2000



Mr. Albert S.N. Hee
President
Sandwich Isles Communications, Inc.
1001 Bishop Street
Honolulu, Hawaii 96813

Dear Mr. Hee:

This letter supersedes our previous letter of September 29, 2000, advising your organization that we have completed the preliminary studies of your organization's "C" loan application and are submitting the results of these studies for your consideration. We have increased the proposed loan amounts due to the availability of additional loan funds. Our studies show that concurrent loans in the amount of \$61,567,000 made by the Rural Utilities Service (RUS) and \$35,918,400 made by the Rural Telephone Bank (RTB) will be required. The concurrent loan amounts are based on the total amount of funds appropriated for fiscal year 2000 for RUS cost-of-money loans and RTB loans. The RUS and RTB loans will bear interest at the rate applicable to each advance of loan funds based on the average yield on outstanding marketable obligations of the United States having a final maturity comparable to the final maturity of the advance. The RUS loan interest rate will be fixed at the time of each advance. The interest rate on each RTB loan advance, however, will be an interim rate. A permanent interest rate will be determined on each RTB loan advance at the end of the fiscal year in which that advance is made based on RTB's cost-of-money rate for that fiscal year. An interest rate of 5.86 percent for the contemplated loans was used in our feasibility study. It should be understood that this letter is not a commitment that a loan will be approved.

Our studies show that \$95,775,000 of the above funds, supplemented by \$240,910,000 of additional funds, will be needed to: 1) connect 3,948 new subscribers; 2) construct trunk additions to all existing switches to interface with the new fiber optic transport network; 3) install a new remote switch off the Waiehu switch to serve the Lanai exchange; 4) construct 46 digital loop concentrators (DLCs) to serve all exchanges except Lanai; 5) construct fiber optic terminals in all exchanges to establish an intra-island and an inter-island fiber optic network; 6) construct an inter-island fiber optic network between all the islands using OC-48 SONET system and 48-fiber cables; 7) install optical amplifiers and optical filters at each central office or DLC site that is closest to the landing entrance of the undersea fiber optic cable; 8) construct outside plant including fiber optic facilities to establish intra-island network and copper facilities to serve subscribers; 9) construct a building for the Pu'ukapu switch; 10) construct new buildings for the two remotes purchased from Tel-Hawaii; 11) construct a combination warehouse/central office building in the Lanai exchange; 12) purchase 165-acre parcel of land on Oahu for use as the future site of the Network Operations Center; 13) purchase office equipment, construction-related vehicles, and work equipment; and 14) provide for other system improvements. In addition to funds required for construction, the enclosed revised loan Budget, Form 493, includes \$1,710,400 for investment in RTB Class B stock. The stock will be issued at the time of each RTB loan fund advance in an amount equal to 5 percent of such advance for all other loan purposes.

Rural Development is an Equal Opportunity Lender
Complaints of discrimination should be sent to
Secretary of Agriculture, Washington, DC 20250

Also enclosed is a copy of the revised "Forecast of Revenues and Expenses" for the proposed system. It is based on the number of subscribers proposed to be served, existing local service rates without mileage or zone charges, and other revenues and expenses outlined on the form.

If a loan is approved, no "C" funds will be released until your organization has furnished to RUS, among other things, all of the documents, opinions, and other evidence listed in the loan contract applicable to this loan, including:

1. Evidence that your organization has duly authorized, executed, recorded, and filed a security instrument, in form and substance satisfactory to RUS;
2. Evidence that your organization has received RUS approval of the additional financing to fund the remaining \$240,910,000 required to complete the proposed project;
3. Evidence that services provided by Waimana Enterprises, Inc., to your organization are charged based on actual time spent as stated in the Management Agreement, dated June 1, 1996, between Waimana Enterprises, Inc. and Sandwich Isles Communications, Inc. and approved by RUS, and any "mark-up" costs currently being charged, as noted in the CPA audit report as of December 31, 1999, are eliminated.

No "C" loan funds will be advanced for each specific project until your organization has submitted evidence to RUS that the Department of Hawaiian Homelands has approved detailed project descriptions and site specific Environmental Reports for that project.

No "C" loan funds will be advanced for the central office/warehouse building in Lanai and the two remote buildings in Nanakuli and Freitas Dairy until your organization submits evidence sufficient for RUS to determine that neither the Flood Protection Act of 1973 (the Flood Act), nor any rule, regulation, or order issued to implement the Flood Act restricts Federal financial assistance for these areas.

The loan documents will also contain the following special covenants:

1. Your organization will be required to submit a construction work plan on an annual basis.
2. Your organization will be required to submit annually, sufficient pro-forma and financial data (as determined by RUS), to enable RUS to determine loan project feasibility.

Debt service payments are to be made on a monthly basis for the RUS and RTB loans. This requirement will be included in the mortgage notes. Outstanding loans will continue to be billed as required by the mortgage notes for those loans.

The mortgage will contain a provision requiring your organization to maintain a TIER of at least 1.0 throughout the forecast period ending December 31, 2004. After that date your organization will be required to maintain a TIER of at least 1.26.

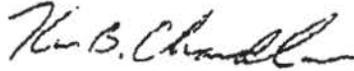
Mr. Albert S.N. Hee

3

The maturity period for your "C" loan is 25 years as you requested in your loan application package. The principal repayment period will be 23 years. The approximate amounts to be repaid will be \$112,150,000 at a monthly payment of \$406,300 for the RUS portion, \$65,429,000 at a monthly payment of \$237,100 for the RTB portion, assuming the interest rates used in the feasibility study. The actual repayment of the loans will depend on the interest rate applicable to each advance and the schedule of those advances. A savings in interest costs over the life of the loan would result if a shorter amortization period were selected.

We would appreciate any suggestions you may have with respect to the matters discussed in this letter. If you concur in the above requirements, please let us know by facsimile (202-205-2921) with a follow-up letter from an officer of your organization and indicate the maturity period desired for the loan, if shorter than the period stated above. We then will proceed with our studies. Our office should, however, be advised of your decision immediately upon receipt of this letter.

Sincerely,



KEN B. CHANDLER, Director
Southwest Area
Telecommunications Program

Enclosures

cc: Mr. Kenneth Kauhi Keliiaa, Manager

USDA-RUS TELEPHONE LOAN BUDGET		NAME OF BORROWER Sandwich Isles Communications, Inc.	
		BORROWER and LOAN DESIGNATION Hawaii 501-C12 Sandwich Isles	
BUDGET ITEM	PRIOR LOAN RESERVES AS OF: 8/29/00		NEW PROJECT BUDGET C.
	RESERVE BALANCES A.	AVAILABLE FOR NEW PROJECTS B.	
1. CONSTRUCTION	a. CENTRAL OFFICE	\$6,494,368	\$20,517,000
	b. OUTSIDE PLANT	26,878,581	247,269,000
	c. LAND and BUILDINGS	3,605,472	14,751,000
	d. SPECIAL PROJECTS		
2. ENGINEERING	a. PRELOAN		250,000
	b. CONSTRUCTION	214,908	51,048,000
3. OPERATING EQUIPMENT	a. OFFICE EQUIPMENT	335,000	1,500,000
	b. VEHICLES and WORK EQUIPMENT	372,000	1,350,000
4. a. OVERHEAD EXPENDITURES			
	b. CLASS B STOCK - RURAL TELEPHONE BANK		1,710,400
5. OPERATING FUNDS			
6. REFINANCING WITH LOAN FUNDS			
7. ACQUISITIONS			
8. OTHER			
9. TOTALS		\$37,850,329	\$0
LESS AVAILABLE FROM PRIOR LOANS (COL. B, ITEM 9)			0
LESS NONLOAN FUNDS			
TOTAL NEW LOAN FUNDS			\$338,395,400
13. HARDSHIP LOAN			
14. CONCURRENT - COST OF MONEY			61,567,000
15. CONCURRENT - RURAL TELEPHONE BANK			35,918,400
16. GUARANTEED LOAN			0
17. OTHER LOAN			240,910,000
REQUIRED ADDITIONAL BUDGET DATA			
18. PRIOR LOANS		19. NONLOAN FUNDS AS ADJUSTED	20. CUMULATIVE ADVANCES AS OF FAS # 1
PRIOR LOAN TOTALS	\$69,263,750	NONLOAN FUNDS: PRIOR LOAN	REA \$16,048,000
REA LOANS	41,699,000	SAV FFB PRIORITY	RTB 0
RTB LOANS	24,564,750	OTHER	FFB
RUS LOANS		TOTAL NONLOAN FUNDS	RUS 0
GUARANTEED LOANS			21. ENCUMBERED BUT UNADVANCED FUNDS 1
			15,365,421
22. RETIRED PLANT		NEW & ACQUIRED AREAS	EXISTING AREAS
ESTIMATED ORIGINAL COST OF RETIRED PLANT (See Item)		\$0	\$0
ESTIMATED SALVAGE VALUE OF RETIRED PLANT (See Item)			
NOTES			
Line 17 Other Loan is the amount of additional loan funds that Sandwich Isles will need to borrow to complete the entire project.			

FORECAST OF REVENUES AND EXPENSES		CORPORATE NAME AND ADDRESS	
		Sandwich Isles Communications, Inc. Honolulu, Hawaii	
LOAN DESIGNATION		SUBSCRIBER FORECAST	
Hawaii 501-C12 Sandwich Isles		12,896	
1. Local Network Service Revenues*		\$3,422,644	
2. Access, Long Distance Network, and Carrier Billing & Collection Revenues		52,937,172	
3. Miscellaneous Revenues		262,640	
4. Less Uncollectible Revenues		18,760	
5. Net Operating Revenues		\$56,603,696	
6. Plant Specific Operations Expense		\$1,693,546	
7. Plant Nonspecific Operations Expense		523,640	
8. Depreciation Expense		18,330,716	
9. Amortization Expense		0	
10. Customer Operations Expense		138,271	
11. Corporate Operations Expense		1,419,717	
12. Other Operating Income and Expense		0	
13. Taxes Excluding F.I.T.		420,000	
14. Total Fixed Charges (Interest)		24,359,819	
15. Nonoperating Net Income (expressed with the opposite arithmetic sign)		(131,270)	
16. Extraordinary Items		0	
17.		0	
18. Nonregulated Net Income			
19. Total Expenses, Excluding Federal Income Taxes		\$46,754,439	
20. Net Income Before Federal Income Taxes		\$9,849,257	
21. Federal Income Taxes		3,348,748	
22. Net Income After Federal Income Taxes		\$6,500,510	
23. Add Interest		24,359,819	
24. Net Operating Income		\$30,860,329	
25. Add: Depreciation And Amortization		18,330,716	
26. Available For Interest And Principal Payments		\$49,191,045	
27. Scheduled Interest And Principal Payments		32,851,613	
28. Available For Plant Additions, Replacements, Etc.		\$16,339,432	
29. Times Interest Earned Ratio (Line 24 / Line 23)		1.26	
Item 14 (interest)			
Outstanding Loan Balance(s).....@	6.54%	\$69,263,750.00 =	\$4,529,849
Current Loan(s).....@	5.86%	\$97,485,400.00 =	\$5,712,644
Total Outside Financing.....@	5.86%	\$240,910,000.00 =	\$14,117,326
Total Interest.....			\$24,359,819
*Local Service Revenues Based On Approved Rates			



United States Department of Agriculture
Rural Development

Rural Business-Cooperative Service • Rural Housing Service • Rural Utilities Service
Washington, DC 20250

NOV 30 2000

Mr. Albert S.N. Hee
President
Sandwich Isles Communications, Inc.
Pauahi Tower, Suite 2750
Honolulu, Hawaii 96813

Dear Mr. Hee:

This is to inform you that the Rural Utilities Service (RUS) will provide the additional funding needed to complete the project proposed in your "C" loan application. The total project cost is \$338,395,400, of which \$97,485,400 was approved in your "C" loan from RUS. The remaining \$240,910,000 will be made available to you through subsequent supplemental loans from RUS. The size and number of loans required to completely fund your project will be subject to any budget restrictions imposed on RUS. We will notify you soon concerning future funding commitments.

Enclosed is a copy of the "Forecast of Revenues and Expenses" and "Telephone Loan Budget" covering the entire project.

Since the complete project will be funded by more than one loan from RUS, you should immediately develop a construction plan detailing how you will construct the project over multiple years using funds that will become available in future loan packages. This information will enable you to complete your first annual construction work plan, which is due by the end of December (see Page 2 of our letter dated September 29, 2000). RUS representatives will be visiting your project on December 11, 2000, and will review your progress on this issue.

RUS is happy to participate with Sandwich Isles Communications, Inc., in undertaking this ambitious project. Please feel free to contact us should you have any questions concerning this matter.

Sincerely,

KEN B. CHANDLER, Director
Southwest Area
Telecommunications Program

Enclosures

cc:
Mr. Kenneth Kauahi Keliiaa, Manager

FORECAST OF REVENUES AND EXPENSES		CORPORATE NAME AND ADDRESS	
		Sandwich Isles Communications, Inc. Honolulu, Hawaii	
		LOAN DESIGNATION	SUBSCRIBER FORECAST
		Hawaii 501-C12 Sandwich Isles	12,896
1.	Local Network Service Revenues*		\$3,422,644
2.	Access, Long Distance Network, and Carrier Billing & Collection Revenues		52,937,172
3.	Miscellaneous Revenues		262,640
4.	Less Uncollectible Revenues		18,760
5.	Net Operating Revenues		\$56,603,696
6.	Plant Specific Operations Expense		\$1,693,546
7.	Plant Nonspecific Operations Expense		523,640
8.	Depreciation Expense		18,330,716
9.	Amortization Expense		0
10.	Customer Operations Expense		138,271
11.	Corporate Operations Expense		1,419,717
12.	Other Operating Income and Expense		0
13.	Taxes Excluding F.I.T.		420,000
14.	Total Fixed Charges (Interest)		24,359,819
15.	Nonoperating Net Income (expressed with the opposite arithmetic sign)		(131,270)
16.	Extraordinary Items		0
17.			0
18.	Nonregulated Net Income		
19.	Total Expenses, Excluding Federal Income Taxes		\$46,754,439
20.	Net Income Before Federal Income Taxes		\$9,849,257
21.	Federal Income Taxes		3,348,748
22.	Net Income After Federal Income Taxes		\$6,500,510
23.	Add Interest		24,359,819
24.	Net Operating Income		\$30,860,329
25.	Add: Depreciation And Amortization		18,330,716
26.	Available For Interest And Principal Payments		\$49,191,045
27.	Scheduled Interest And Principal Payments		32,851,613
28.	Available For Plant Additions, Replacements, Etc.		\$16,339,432
29.	Times Interest Earned Ratio (Line 24 / Line 23)		1.26
Item 14 (Interest)			
	Outstanding Loan Balance(s).....@ 6.54%	\$69,263,750.00 =	\$4,529,849
	Current Loan(s).....@ 5.86%	\$97,485,400.00 =	\$5,712,644
	Total Outside Financing.....@ 5.86%	\$240,910,000.00 =	\$14,117,326
	Total Interest.....		\$24,359,819
*Local Service Revenues Based On Approved Rates			

USDA-RUS TELEPHONE LOAN BUDGET		NAME OF BORROWER Sandwich Isles Communications, Inc.			
BUDGET ITEM		BORROWER and LOAN DESIGNATION Hawaii 501-C12 Sandwich Isles			
		PRIOR LOAN RESERVES AS OF: 8/29/00		NEW PROJECT BUDGET C.	
		RESERVE BALANCES A.	AVAILABLE FOR NEW PROJECTS B.		
1. CONSTRUCTION	a. CENTRAL OFFICE	\$6,494,368		\$20,517,000	
	b. OUTSIDE PLANT	26,828,581		247,269,000	
	c. LAND and BUILDINGS	3,605,472		14,751,000	
	d. SPECIAL PROJECTS				
2. ENGINEERING	a. PRELOAN			250,000	
	b. CONSTRUCTION	214,908		51,048,000	
3. OPERATING EQUIPMENT	a. OFFICE EQUIPMENT	335,000		1,500,000	
	b. VEHICLES and WORK EQUIPMENT	372,000		1,350,000	
4. a. OVERHEAD EXPENDITURES					
	b. CLASS B STOCK - RURAL TELEPHONE BANK			1,710,400	
5. OPERATING FUNDS					
6. REFINANCING WITH LOAN FUNDS					
7. ACQUISITIONS					
8. OTHER					
9. TOTALS		\$37,850,329	\$0	\$338,395,400	
10. LESS AVAILABLE FROM PRIOR LOANS (COL. B, ITEM 9)				0	
11. LESS NONLOAN FUNDS					
12. TOTAL NEW LOAN FUNDS				\$338,395,400	
13. HARDSHIP LOAN					
14. CONCURRENT - COST OF MONEY				61,567,000	
15. CONCURRENT - RURAL TELEPHONE BANK				35,918,400	
16. GUARANTEED LOAN				0	
17. OTHER LOAN				240,910,000	
REQUIRED ADDITIONAL BUDGET DATA					
18. PRIOR LOANS		19. NONLOAN FUNDS, AS ADJUSTED		20. CUMULATIVE ADVANCES AS OF FRS # 2	
PRIOR LOAN TOTALS	\$69,263,750	NONLOAN FUNDS, PRIOR LOAN	\$0	REA	\$16,048,000
REA LOANS	44,699,000	SALE OF PROPERTY		RTB	0
RTB LOANS	24,564,750	OTHER		FTB	
RUB LOANS		TOTAL, NONLOAN FUNDS		RUS	0
GUARANTEED LOANS				21. ENCUMBERED BUT UNADVANCED FUNDS	
					15,365,421
22. RETIRED PLANT		NEW & ACQUIRED AREAS		EXISTING AREAS	
ESTIMATED ORIGINAL COST OF RETIRED PLANT (Net loan)		\$0		\$0	
ESTIMATED SALVAGE VALUE OF RETIRED PLANT (Net loan)					

NOTES

Line 17 Other Loan is the amount of additional loan funds that Sandwich Isles will need to borrow to complete the entire project.