



Title 9 Conditional Use Permit No.: 106-03-20

Date of Issue: June 4, 2020

Permit Expires: December 31, 2022

Permit Issued By:

Northwest Arctic Borough
Planning Department
ATTN: John Chase
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Permittee:

Alaska Village Electrical Cooperative, Inc.
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Permittee Contact Information:

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Project Description:

The Alaska Village Electrical Cooperative, Inc. (AVEC) submitted a Title 9 application to install a three-phase electrical line to connect the existing power plant in the community of Kivalina with the new school site approximately 7.8 miles away. The power line will be installed along the evacuation and school site access road route that leads to Kisimigiuqtuq Hill (K-Hill). The project will install approximately 155 poles and 53 anchors and a transmission line that will provide electric power to the new school site.

The Kivalina Line Extension project includes the following activities: contractor mobilization and equipment staging, bulk fuel storage, and installation of the power poles and transmission line. The proposed start date is June 2020 and will be completed by December 2021.

The following Uses and Zoning Districts make up this project:

1. Village District:

- Bulk fuel storage—Major Use



- Temporary construction facilities—Major Use
- Energy facilities—Conditional Use
-

2. Subsistence Conservation District:

- Bulk fuel storage—Conditional Use
- Energy facilities—Conditional Use

Specific details of the project are contained in the Title 9 application (20-02-106) and documents submitted by AVEC to the Borough Planning Department. These documents are incorporated into the Borough's administrative record. Project Activities are summarized below.

Project Location:

The proposed project would begin on airport property at the City of Kivalina, located within the Borough's Village District and is located in Township 27 N, Range 26 W, Section 21, of the Kateel River Meridian. The project terminus is at Kisimigiutqu Hill (K-Hill), located within the Borough's Subsistence Conservation District, at Section 19, Township 28N, Range 25W, of the Kateel River Meridian. The route of the power line extension project is shown on **Figure 1** below.

Installation and placement of the power poles will be located within the Alaska Department of Transportation & Public Facilities' (AKDOT) road right-of-way, which is the route of the new evacuation and school site access road (approximately 7.8 miles from Kivalina to K-Hill). The Township and Range for the power pole route is at Township 27N, Range 25W, Section 6 Township 27N, Range 26W, Sections 1, 2, 10, 11, 15, 16, 21 Township 28N, Range 25W, Sections 19, 20, 30, 31 Township 28N, Range 26W, Sections 35, 36 (see the route on **Figure 1** below).

Temporary Construction Facilities:

AVEC's contractor will mobilize via barge to Kivalina in the summer of 2020. Barge transportation will convey construction equipment and vehicles to the Kivalina community barge landing where they will be mobilized to staging areas on airport property.

Construction Equipment Staging: Construction equipment will initially be staged adjacent to the contractor camp at the Kivalina Airport. Approximately 155 power poles, the electrical transmission line and fuel for the project will be staged here.

AVEC is required to get landowner permission before shipping equipment, materials, and fuel to Kivalina. Approval will be attained by the contractor.



Figure 1. Power line installation route on the evacuation and school site access road.

Bulk Fuel Storage and Refueling:

The contractor will either purchase fuel from the existing fuel provider in Kivalina or they will transport the fuel in with their equipment by barge. If the contractor provides the fuel, it is expected that fuel will be barged into Kivalina in the summer/fall and offloaded at the barge landing.

There are equipment and facilities (man camp, etc.) in place from the road project that may be employed during the power line construction. Fuel will likely be stored at the tank farm at the man camp near the Kivalina shown in the photographs below. The tank farm is fenced and contained and includes about 30 6,000-gallon tanks. Although the existing tank farm is much larger than will be required to support the power line construction, about 10 fuel tanks could be used.

Most equipment and trucks will be fueled from the tanks at the camp. Equipment that is unable to return to the camp to refill, including the crane(s) used to install the power poles, would be fueled in the field. A fuel truck (if available) or a pickup truck with a 100-gallon (expected) tank would deliver fuel to the work site and fuel the crane(s) and other equipment.



Figure 2. Tank farm in Kivalina

Federal laws require a Spill Prevention, Control and Countermeasure Plan (SPCCP) be developed for any above-ground fuel storage capacity greater than 1,320 gallons. The Borough having more stringent standards requires a SPCCP be prepared for bulk fuel storage greater than 660 gallons in the Subsistence Conservation District and 1,500 gallons or more for the Village District, as defined in Title 9.04.070 Definitions "Bulk fuel storage." The applicant is required to submit an SPCCP before fuel is transported to Kivalina.

Utility Pole Installation:

Approximately 155 utility poles will be installed along the route of the new evacuation and school site access road to accommodate the electrical transmission line that will connect Kivalina to the new school site. The utility poles will be installed approximately 250 to 300 feet apart at the direction of the field engineer, who will decide the best location considering site conditions, distances between poles, and the road alignment. The poles will be located 10 feet to 30 feet off the side of the evacuation and school site access road. The poles would be located on the side of the new causeway fill and would span the bridge opening.

Although construction methods would be determined by the contractor, it is expected that that the project will start within the community at an existing pole location shown on **Figure 3** below. The first pole will be installed at the intersection where the causeway intersects with Channel Street just north of North Street.

The utility poles will be forty (40), forty-five (45), and fifty-five (55) feet with about eight (8) feet of it buried in the ground for a total exposed height of about forty-seven (47) feet. Guy wires will be used to support the utility poles.

Subsurface conditions along the length of the route are anticipated requiring a variety of construction techniques and equipment for installation. It is expected that one crane to drive pile; however, it is up to the contractor how the project would be constructed. Two cranes may be used.

Poles will be placed in a few different manners depending on conditions:



Northwest Arctic Borough, Planning Department
Title 9 Conditional Use Permit No.: 106-03-20
Alaska Village Electrical Cooperative
Page 5 of 10

- 1) **Direct set poles** are placed by excavating a small (8 feet wide by 8 feet deep, maximum) hole with an excavator, placing the pole into the hole and erecting it using a crane, and then filling in the hole around the pole using an excavator. About 30 feet from the pole, the guy wire support is placed and anchored in an excavated hole which is filled with gravel after the anchor is set (all with the help of an excavator). The hole is about 6 feet wide and 7 feet deep.
- 2) **Pile foundation poles** are different. First, a metal pile is driven about 34 feet into the ground using a crane-mounted pile driver. Then a pole is placed on top of and attached to the driven pile using a crane. To anchor the pole, a pile is driven about 30 feet away from the pole to a depth of 40 feet into the ground, again with the crane-mounted pile driver. The guy wire is attached to the guy pile at the ground surface.
- 3) **Causeway poles** are placed by driving a 10 feet long steel pile sheath into the embankment using a crane-mounted pile driver. The pole is placed into the sheath using a crane and secured. If needed, a guy wire is anchored about 18 inches into the embankment, likely using an excavator.

Current Approvals:

- DOT Utility Permit #2-223450-19-132
- US Army Corp of Engineers—Wetlands Permit POA-2020-00037—Pending
- US Fish and Wildlife Service—Endangered Species Act—Pending

Timeline:

AVEC anticipates construction to start during Winter 2020/2021 and completed by December 2021. Work will occur in the winter when the ground is frozen (between October and March). AVEC anticipates the following schedule; however, final work completion will be up to the contractor.

Spring 2020	Select contractor, purchase materials
Summer 2020	Mobilize equipment and materials (including poles and piles) to Kivalina
Winter 2020/2021 (Oct-Mar)	Construction
December 2021	Complete construction

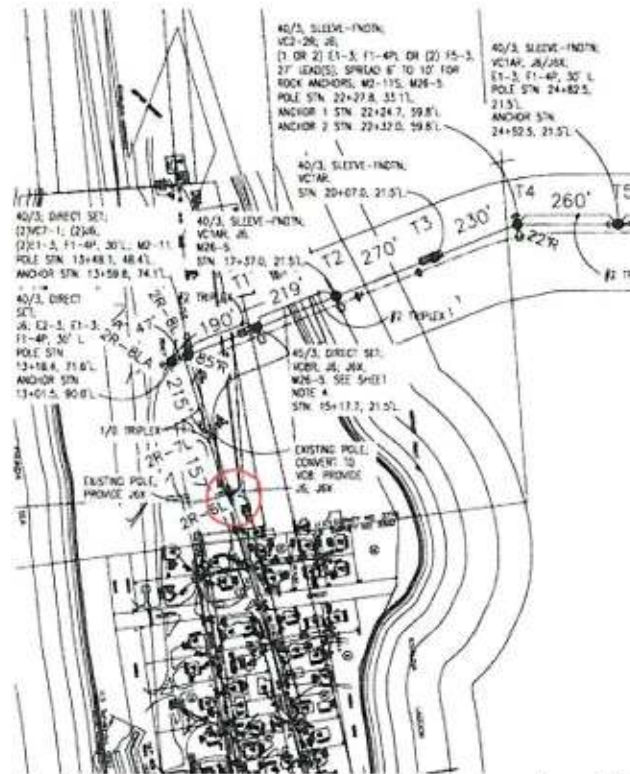


Figure 3. Project start at intersection of Channel and North Street

Transmission Line Installation:

It is expected that the contractor will "pull the line" onto each pole using the following method or a similar technique to be determined by the contractor:

- The pole, including the anchors and guy wires, will be erected as described above. Each pole will likely have the framing, including crossarms, insulators and attachments, already in place.
- Four temporary sheaves (rollers, similar to pulleys) with long pieces of rope strung through them will be secured to the pole and crossarms. The sheaves are for each conductor (or wire) of the three-phase line and the neutral line. The ropes will include a large loop that extend down to the ground.
- Spools of conductor (wire), supported on axle, allowing them to spin, will be pulled off by hand or using machines, as needed, and laid on the ground. (Typically, multiple spools are handled at one time.)
- The conductors (wires) will be tied to the ropes hanging from sheaves at the base of each pole. Then the wires will be pulled up and through the rollers. The wires will then be pulled to the next pole.
- This process will be continued along the pole line for many poles until there is a stopping point like a dead end or hard corner. Tension will then be applied to the wire to get the proper sag calculated for that section of line.
- A worker at the top of the pole (in a bucket truck or having climbed there) will then return to each pole to move the wire from the temporary sheaves to the insulators and tie it to the insulators using preformed wire fasteners or mechanical clamps.



- The sheaves and ropes will be removed from the pole.
This method will be repeated in stages along the power pole line to the end.

Permit Authorization and Documentation:

AVEC submitted a Title 9 Land Use Permit application (20-02-106) for the following Uses:

1. Village District:

- Bulk fuel storage—Major Use
- Temporary construction facilities—Major Use
- Energy facilities—Conditional Use

2. Subsistence Conservation District:

- Bulk fuel storage—Conditional Use
- Energy facilities—Conditional Use

The Title 9 application was received on January 8, 2020. On March 17, the Borough Planning Department deemed the application was complete. The 20-day public comment period started April 24, 2020. There were no public comments.

Permit fees due totaled \$850. AVEC will submit payment.

Pursuant to Northwest Arctic Borough Code (NABC) 9.12.020, the **Planning Director** has the authority to permit:

- Bulk fuel storage—Major Use in the Village District
- Temporary construction facilities—Major Use in the Village District

Pursuant to Northwest Arctic Borough Code (NABC) 09.12.020 and 09.12.030, the **Planning Commission** has the authority to permit:

- Bulk fuel storage (Conditional Use in the Subsistence Conservation District)
- Energy Facilities (Conditional Use in the Village and Subsistence Conservation Districts)

Permit Terms and Conditions:

1. The Alaska Village Electrical Cooperative, Inc. (AVEC) shall comply with the terms of the permission, permits and/or agreements granted by the federal government, State of Alaska, NANA, Northwest Arctic Borough and other applicable agencies.
2. AVEC shall comply with any and all applicable local, Borough, state and federal laws. The Borough reserves the right to conduct periodic inspections of the permitted operations as well as work with the permittee to observe operations and/or trips for permit compliance.
3. Energy facilities construction activities are required to be sited, designed, constructed and operated in a manner that does not substantially interfere with the use of a site that is



Northwest Arctic Borough, Planning Department
Title 9 Conditional Use Permit No.: 106-03-20
Alaska Village Electrical Cooperative
Page 8 of 10

important for significant cultural uses or essential for transportation to subsistence use areas.

4. All project activities shall utilize measures to avoid or minimize disrupting wildlife and bird migration, or subsistence activities including fishing, trapping, waterfowl hunting, egg gathering, berry picking and caribou hunting. The applicant will ensure reasonable access to subsistence users to subsistence resources.
5. All vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed. Vehicles shall not be abandoned. Vehicles must avoid areas where species that are sensitive to noise or movement are concentrated.
6. All trash and human waste generated at the sites must be properly disposed in accordance with Northwest Arctic Borough Code Section 9.25.020(M), establishing standards of disposal of refuse, human body waste, and chemicals. All remedial activities shall comply with any and all other applicable state and federal laws, including all applicable hazardous waste and disposal requirements, all waste disposal and landfill requirements, and all open burning and air quality standards.
7. The applicant must conduct activities in a manner to maintain natural drainage pattern, watershed protection, and permafrost stability; to prevent runoff and erosion into water supplies; to minimize alteration of vegetation; and to conserve natural features and the general environment of the area.
8. The Borough recognizes that this area within **Kivalina** is periodically subject to flooding that may result in the loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary public expenditures for flood protection and relief, all of which adversely affect the health, safety and general welfare of Kivalina residents. The Borough has adopted the necessary regulations of the Federal Emergency Management Agency (FEMA) to enable its communities and residents to participate in the National Flood Insurance Program (NFIP). See NABC 9.25.020.

To promote the public health, safety and general welfare by minimizing flood damage and loss and promoting access to disaster relief, the following conditions must be met:

- a. Encourage protection of land uses vulnerable to floods, including public facilities and utilities that serve such uses, against flood damage at the time of initial construction or substantial improvement.
Ensure that those persons who occupy areas of special flood hazards assume responsibility for occupying such flood hazard areas.
- b. All new construction and substantial improvements shall meet the following general standards, as applicable:
 1. Anchoring. All new construction and substantial improvements shall be designed, modified, constructed and adequately anchored to prevent flotation, collapse or lateral movement of the structure; all manufactured



Northwest Arctic Borough, Planning Department
Title 9 Conditional Use Permit No.: 106-03-20
Alaska Village Electrical Cooperative
Page 9 of 10

- homes must likewise be anchored to prevent flotation, collapse or lateral movement.
2. Construction Materials and Methods. All new construction and substantial improvements shall be constructed with materials and utilize equipment resistant to flood damage and use methods and practices that minimize flood damage, including waterproofing, watertight construction, use of substantially impermeable materials, and other construction techniques.
 3. Mechanical and Electrical Utilities. Electrical, heating, ventilation, plumbing, and other service facilities shall be designed, constructed and/or otherwise elevated or located to prevent water from entering or accumulating within the components during flooding.
9. Uses permitted shall cease upon the discovery of archaeological, prehistoric, historic or cultural resources during the project activities, and AVEC shall immediately contact the Planning Director at the NAB to determine the conditions to continue.
 10. All fuel/oil/hazardous substance storage, including waste oil, must meet all applicable state and federal containment laws. Any project fuel storage at the energy facilities construction sites shall meet all applicable state and federal containment laws to prevent fuel spills and protect against fire danger. If a spill occurs, it must be reported immediately to the Alaska Department of Environmental Conservation and the NAB Planning Department (at least within 24 hours). Appropriate spill kits and absorbent pads must be stored at the road construction and gravel extraction sites. Fuel/oil drums or other storage containers shall not be abandoned.
 11. Project equipment servicing and fueling operations are prohibited within 100 feet of any surface water body, including any rivers, drainage channels, sloughs and lakes. Equipment must be monitored daily for hydraulic leaks. Project equipment shall not be abandoned.
 12. AVEC shall immediately notify the Borough (at least within 24 hours) of any change in the plans and seek modification of the permit.
 13. During the winter and spring seasons, AVEC or any project contractors shall not, during the migration of caribou, locate any operation and/or equipment so as to block or cause diversion of the migration of caribou. AVEC and/or any project contractors shall cease any activity that may interfere with the seasonal spring caribou migrations and/or caribou winter/spring movements, such as marine, ground and airborne transports, ground and airborne surveys or movement of equipment, until such time as the migration or spring movements have cleared $\frac{3}{4}$ of a mile from the location of the project activity. Concern for human safety will be given special consideration when applying this policy.

As a general guideline, caribou migration means an area where 500 or more caribou are travelling or congregating. However, during the winter/spring period of January through May, AVEC shall take extra precautions to avoid deflecting even small numbers (e.g. group sizes of 5-10) of the first caribou moving through the area as these groups/bands




Northwest Arctic Borough, Planning Department
Title 9 Conditional Use Permit No.: 106-03-20
Alaska Village Electrical Cooperative
Page 10 of 10

set trails as “lead caribou” that subsequent caribou later follow during the migration. The intent of these guidelines are to ensure free passage of caribou through the area and to avoid impacting caribou and the communities that historically and currently depend upon it as well as preserving existing and important adjacent land uses. These guidelines may be revised based upon updated information and research (including local traditional knowledge).

14. AVEC is subject to all penalties and civil actions pursuant to section 9.08.240 for violation of the permit conditions and stipulations prescribed herein.
15. Annually by December 31st, the permittee shall file a written report with the NAB Planning Department describing the following:
 - a. A complete report of any fuel or other hazardous substances discharges and clean-up activities completed,
 - b. Other matters as reasonably required by the Administrator/NAB Planning Director.
16. At the conclusion of each season, the Borough Planning Department shall evaluate the effectiveness of the permit conditions. The Title 9 Administrator shall be authorized to adopt corrective measures for ineffective or inadequate permit conditions.
17. AVEC and/or landowners shall allow the NAB and/or their representatives access to the permitted sites and properties, during the term of this permit or within 5 years after permit expiration, to conduct scheduled or unscheduled inspections to determine compliance with this permit or respond to emergency situations.
18. This permit will expire December 31, 2022, unless revoked by the Title 9 Administrator and/or AVEC.

Permit Approval

NORTHWEST ARCTIC BOROUGH


Conditional Use Permit Approved by the Northwest Arctic Borough Planning Commission
through Resolution PC 20-03
Authorized signatory: Martha Siikauraq Whiting, Planning Director/Title 9 Administrator

June 4, 2020

Date

CC: City of Kivalina, Kivalina IRA Council, NANA Regional Corporation, Maniilaq Association, State of Alaska Department of Transportation & PF—Kotzebue Office

Posted at: www.nwabor.org

**NORTHWEST ARCTIC BOROUGH PLANNING COMMISSION
RESOLUTION PC-20-03
A RESOLUTION OF THE NORTHWEST ARCTIC
BOROUGH PLANNING COMMISSION APPROVING
ALASKA VILLAGE ELECTRICAL COOPERATIVE'S
DRAFT CONDITIONAL USE PERMIT #106-03-20,
AND FOR RELATED PURPOSES**

WHEREAS: The Northwest Arctic Borough Planning Department received a Title 9 Permit Application (20-02-106) on January 8, 2020 from the Alaska Village Electrical Cooperative for the following Uses in the Subsistence Conservation District:

- Temporary construction facilities,
- Energy facilities,
- Bulk fuel storage; and

WHEREAS: On March 17, 2020, the Borough planning department deemed the application complete with all necessary information; and

WHEREAS: The Borough planning department has published a public notice for this permit on April 24, 2020, as required in borough code 9.20.030; and

WHEREAS: The Northwest Arctic Borough Planning Commission has the authority to approve: Bulk fuel storage and Energy facilities in the Subsistence Conservation District by conditional use permit according to borough code 9.12.030, following a public hearing as required under borough code 9.20.030E.

NOW THEREFORE BE IT RESOLVED, The Northwest Arctic Borough Planning Commission hereby authorizes the Planning Director/Title 9 Administrator to approve the DRAFT Conditional Use Permit #106-03-20 dated April 24, 2020, as discussed during the commission meeting;

PASSED AND ADOPTED THIS 3rd DAY OF JUNE, 2020.



Harold Lambert, Planning Commission Chair

SIGNED AND ATTESTED TO THIS 3rd DAY OF JUNE, 2020.



Stella Atoruk, Borough Clerk