

April 2014

## ELECTRICAL FACILITY CLEARANCE REQUIREMENTS

Enclosed is a copy of the Chugach Electric Association, Inc. (Chugach) Electrical Facility Clearance Requirements policy. Periodically, copies of the policy are mailed out to various companies and agencies whose activities may bring their personnel in close proximity to electrical facilities. Chugach distributes copies of this policy in an effort to help minimize and identify potential hazards for construction personnel and the general public. In addition, we are concerned with preventing possible damage to our electrical facilities and disruption of electrical service to our customers. Please note that the Electrical Facility Clearance Requirements publication is now on Chugach's web site at: [www.chugachelectric.com](http://www.chugachelectric.com). Click on the "Customer Service" tab and go to either "For your Home" or "For Your Business", click on "Electrical Facility Clearance Requirements" (April 2014).

For your additional information, Alaska State Statute ("Article 6. Locating Underground Facilities") has been included as an attachment.

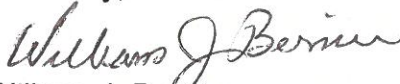
**Please thoroughly read and understand the entire document. It could save your life or the life of your employees, and the general public. We request that particular attention be paid to the following provisions:**

(Paragraph B. 2.) "Under no circumstances will Chugach allow any of its underground cable(s) to remain energized after it has been exposed, unless it is protected by supplementary mechanical protection approved by Chugach or unless a *qualified person* is on site at all times".

(Paragraph H. 7.) "Chugach defines a *qualified person* as a journeyman lineman who holds a current Certificate of Fitness in the Journeyman Lineman category issued by the State of Alaska". These two provisions clearly emphasize Chugach's position relating to the exposure and approach to energized facilities.

Chugach strongly recommends that prior coordination with us, either during the design phase of a project or prior to the start of actual construction, can help eliminate or minimize conflicts. If you have questions please contact the Line Operations Division at 762-7655 and your call will be directed to the appropriate department for assistance.

Sincerely,



William J. Bernier

Director, Substations and Line Operations

Enclosures

cc: Statewide Bonding Companies; State of Alaska OSHA Inspector; State of Alaska Electrical Inspector; Alaska General Contractors

## CHUGACH ELECTRIC ASSOCIATION, INC.

### ELECTRICAL FACILITY CLEARANCE REQUIREMENTS FOR CONSTRUCTION OR MAINTENANCE NEAR ELECTRICAL FACILITIES

Chugach's concern for the safety of non-qualified personnel working adjacent to its electrical facilities, its concern for the public in general, and its requirement that only *qualified personnel* under the employ of *qualified electrical contractors* handle electrical facilities such as cable, poles, padmounted equipment, etc., is based upon the following considerations:

- The potential for serious injury and resulting liability is extremely high when dealing with voltages as high as 230,000 volts on overhead and underground lines.
- Certain types of equipment, particularly cable, can easily be damaged by improper handling. For example, when cable is hit or improperly suspended (common during excavation adjacent to cables), the scraped, cut, or over-stressed insulation will almost always result in premature failure of the cable. The highest risk to personnel is a failure while the cable is being handled during excavation or construction. Undetected construction damage may result in a subsequent cable failure with consumer outages for periods of up to 48 hours during winter conditions.
- The stability of overhead pole lines or padmounted equipment is jeopardized with improper excavation and backfill. This may expose the public, as well as maintenance or construction personnel, to high voltages and create consumer power outages.

The above concerns can be minimized or eliminated by the use of properly trained, licensed, and certified electrical outside linework personnel. The National Electrical Safety Code (NESC), the United States Occupational Safety and Health Administration (OSHA) and the Alaska State OSHA support this position as well as the clearances addressed herein.

NESC, Section 2, *Definitions of Special Terms* defines "qualified" as "*Having been trained in and having demonstrated adequate knowledge of the installation, construction, or operation of lines and equipment and the hazards involved, including identification of and exposure to electric supply and communication lines and equipment in or near the workplace.*" Only qualified persons are permitted to handle or work on or adjacent to energized electrical facilities. This includes not only overhead pole lines but also padmounted and underground facilities. Within the NESC, two rules specifically address the need for qualified persons to perform work on or near energized facilities:

Rule 420B1 states, "*Employees whose duties require working on or in the vicinity of energized equipment or lines shall perform only those tasks for which they are trained, equipped, authorized, and so directed. Inexperienced employees shall:*

*(a) work under the direction of an experienced and qualified person at the site; and (b) perform only directed tasks."*

Rule 420B4 states, *"Employees who do not normally work on or in the vicinity of electric supply lines and equipment but whose work brings them into these areas for certain tasks shall proceed with this work only when authorized by a qualified person."*

OSHA 29CFR 1910.269 contains the training and documentation requirements for a qualified person.

OSHA 29CFR 1926.550 (a) (15) addresses crane operations near electrical lines. For lines rated over 50 kilovolts (kV), minimum clearance between the lines and any part of the crane or load must be 10 feet plus 0.4 inch for each 1 kV over 50 kV -- or twice the length of the line insulator, but never less than 10 feet.

CHUGACH SYSTEM VOLTAGES	
Normal Voltage (Phase-to-Phase)	Minimum Clearance Required
Operations Near High-Voltage Overhead Power Lines to 50 kV	10 Feet
Over 50 kV to 200 kV	15 Feet
Over 200 kV to 350 kV	20 Feet

Specifically, 29CFR1926 (a) (15) (iv) requires a "Safety Observer" during crane operations if the equipment is operating where it is difficult for the operator to maintain the desired clearance to the overhead power line(s) by visual means. Alaska Statutes (AS) Sections 18.60.670 through Section 18.60.695 govern placement and operation of equipment near overhead electrical lines or conductors. 29CFR1926, Subpart P addresses the specific requirements involved with trenching operations. These include prior notice to utility companies, prior location of utility facilities, and proper supports once the facilities are exposed. Furthermore 29CFR Sections 1910.180; 1910.333; 1926.416; 1926.550; and 1926.651 regulate activities relative to job site electrical facilities.

Again, Chugach's concern for the safety of all personnel affected by work adjacent to its energized facilities has led to the development of the attached policy.

## **ELECTRICAL FACILITY CLEARANCE REQUIREMENTS**

The following requirements have been developed to help provide a safer work site to those personnel working adjacent to Chugach's electrical facilities and to protect Chugach facilities that are located in the area of work being done by State or Municipal entities and private construction and maintenance projects.

### **A. NOTIFICATION**

It is recommended that Chugach be informed of construction/maintenance activities as early as possible in the design process and be included in timely plan reviews. Any work that needs to be performed on Chugach facilities must have prior Chugach approval.

#### **1. Overhead Facilities**

Any work in the proximity of overhead power lines shall be preceded by a call to Chugach at 762-7659 or 762-7669, 48 hours in advance, to notify the Line Construction and Maintenance Department of the planned work and be in compliance with OSHA 29CFR1926 (a) (15), and AS 18.60.670. If equipment, tools, machinery, or material must work in proximity closer than the minimum clearances outlined in OSHA 29CFR1926 (a) (15), and AS 18.60.670, the requirements of AS 18.60.680 shall be complied with before work can proceed. All necessary arrangements to be made with Chugach by the requesting party for compliance with AS 18.60.680 shall be arranged in advance of the project start date.

#### **2. Underground Facilities**

Alaska Statutes 42.30.400 through 42.30.490, Anchorage Municipal Code, 24.40 and 26.90, and 29CFR1926, Subpart P place requirements on contractors who will be excavating around or adjacent to underground utilities. Advance notification requirements, underground facility locates, and the responsibilities for protection of utility facilities by contractors are specified in these regulations. All requests for locates of Chugach underground facilities are to be made through the Alaska Digline at 811. In addition, prior to excavating, Chugach shall be contacted a minimum of two (2) business days in advance. Contact the Line Operations Division at 762-7655 and your call will be directed to the appropriate department for assistance.

Locate surface markings are only reasonably accurate to +/- two (2) feet. As a general rule, Chugach requires hand-digging within two (2) feet of locate marks but in some cases may require three (3) or four (4) feet, depending on the actual facility involved and field conditions at the project site. Maintaining locate marks is the responsibility of the party requesting the locate. Chugach may charge for re-locating and re-marking facilities that were previously marked.



## **B. UNDERGROUND CABLE EXCAVATION**

1. Any excavation which is within a three (3) foot radius of a cable and parallels a cable for a distance greater than twenty (20) feet in length (see Section H-1 below) may require relocation of that cable. Excavations shorter in length and/or closer may also require relocation. At a minimum, cables that will require exposure must be exposed by *hand-digging* only, by a *qualified person* under the employ of a *qualified electrical contractor* (see Section H). See Drawing No. F-062388 attached.
2. Any excavation, such as a trench which crosses cable and/or conduit, shall be limited to twenty (20) feet in width and have provisions for the exposed cable/conduit to be supported every two (2) feet on a cross beam in such a manner that the outer cable jacket and/or conduit shall not be damaged in any way. The cable support work and excavation within the three (3) foot radius (see Section H-1) shall be done by a *qualified person* under the employ of a *qualified electrical contractor*.

NOTE: When excavation must occur within the limits specified in B.1, and B.2, above, reasonable efforts will be made by Chugach to de-energize the direct buried cable if system conditions and personnel requirements allow. Even if the cable has been de-energized, a "Cable Watch" by a qualified person under the employ of a qualified contractor is still required. To request the de-energization of the cable, contact the Line Operations Division at 762-7655 and your call will be directed to the appropriate department for assistance. Requests must be made three (3) working days in advance of the outage date requested. After hours, contact Chugach's Power Control Center at 762-4660.

**Under no circumstances will Chugach allow any of its underground cable(s) to remain energized after it has been exposed, unless it is protected by supplementary mechanical protection approved by Chugach or unless a qualified person is on site at all times.**

3. Should any cable be exposed by non-qualified personnel, Chugach must be immediately contacted for field investigation before work may resume in the immediate area of such exposed cable.

**Chugach recognizes that reasonable continuation of work may be required around energized underground cables after Chugach inspects the site. When this occurs, it is the responsibility of the construction contractor working at the site to arrange for qualified personnel as well as payment of the costs of said personnel and/or equipment. Chugach will neither arrange for, nor provide qualified personnel to satisfy this requirement unless it determines it is in its best interest on a case-by-case basis. Where Chugach is otherwise forced to subsequently take**

**steps to ensure the safety of the site, it will advise the construction contractor that it will pass these costs to the construction contractor.**

4. In all cases, a final minimum burial depth of 40 to 60 inches (depending on the operating voltage) for high-voltage (above 1000 volts) primary cable/conduit and 30 inches for secondary low-voltage cable/conduit shall be maintained. If, however, existing Federal, State, or Municipal permit conditions require depths in excess of the 40 inches, then the cable/conduit shall be buried at the depth required in the permit. The depth is measured from the top of the cable/conduit to final grade at the shallowest depth. Burial shall be in compliance with Chugach Construction Standard SUR2-3 through 6 (supplied upon request).
5. Projects which increase the final grade over Chugach underground distribution cable that are direct buried shall require relocation if the final depth of burial exceeds 60" from the proposed final grade. Where the distribution cables are in conduit a review and written approval by Chugach are required for proposed grade increases resulting in a depth of burial above 60".
6. Projects which propose to modify the grade over Chugach underground transmission cables (voltages above 25kV) require review and written approval by Chugach.
7. In addition to the foregoing, excavations near transmission underground cable/conduit will require the following:
  - a) Excavation Adjacent to Transmission Voltage Level Power Lines: Chugach will require its Locate Contractor to notify excavators when a locate request includes the locating of cables that exceed 25kV distribution voltages.

When excavation is planned that will come within close proximity (ten (10) feet), expose, parallel or undermine sections of Chugach's transmission underground cables (voltages above 25kV), special precaution and safety consideration must be taken. These cables operate at voltages between 34,000 volts and 230,000 volts phase-to-phase, provide power to tens of thousands of Chugach customers and require extraordinary protection. The following guidelines shall apply:

Chugach Operations Department shall be contacted at (907) 762-7655 in advance of the planned excavation a minimum of five (5) business days prior to beginning excavation. Chugach requires that a *qualified person* be on site at all times during excavation activity that comes within ten (10) feet of any transmission cable. The contractor shall arrange and pay for a *qualified person* from Chugach or, with approval, from one of Chugach's approved and *qualified contractors*. Excavations closer than ten (10) feet

shall require exposure of the cables at the intersecting point or at intervals of not less than every twenty-five (25) feet for parallel excavations by *qualified personnel* to determine the exact location of the cable prior to machine excavation.

**Because of the high voltage, excavations within ten (10) feet of a transmission cable can expose unqualified workers to extremely unsafe conditions. Prior planning by the excavator with coordination through Chugach and Chugach approval of construction activity within ten (10) feet of transmission cable is required.**

Chugach shall approve, in advance, any plan for directional drilling, boring, pile driving or other type of "trenchless" construction in the vicinity of its transmission cables prior to any construction activity.

Chugach may require a special locate utilizing Ground Penetrating Radar to locate critical facilities. "Pothole" locates utilizing vacuum excavation in conjunction with an air-knife tool may be used, with Chugach approval.

## **C. STRUCTURE EXCAVATION**

### **1. Equipment Pads or Vaults**

Temporary excavation is allowed with a maximum slope of 1:1 beginning three (3) feet from the exterior edge of a concrete pad or vault. The final grade shall consist of a level area radiating out a minimum of four (4) feet, measured from the exterior edge of the pad or vault, and a maximum slope of 2:1 beginning from that four (4) foot distance from the exterior edge of the pad or vault. For both temporary and final grade situations, a level area extending ten (10) feet out from the edge of the concrete pad in front of equipment doors or access panels is necessary. Refer to Drawing No. F-062388 attached.

If the slope cannot be maintained at the grades specified above, additional protection such as barriers or piling is required. All shoring and excavation (closer than the above limits) shall be done by a qualified person(s) under the employ of a qualified electrical contractor.

### **2. Concrete-Encased Duct**

Excavation under a concrete-encased duct requires a method designed and certified by an Alaska-registered civil engineer and approved by Chugach. Installation of the temporary shoring or bracing shall be done under the supervision of a qualified person under the employ of a qualified electrical contractor.

#### **D. POLE/GUY ANCHOR EXCAVATION**

Excavation beginning no closer than a three (3) foot radius from a pole or guy anchor in stable soil conditions or a ten (10) foot radius from a pole or guy anchor in organic/unstable soil conditions is allowed, provided the slope from that point does not exceed 1:1. Refer to Drawing No. F-062388 attached.

Excavation closer than the limits defined above or within a ten foot radius of more than one consecutive pole where excavation will be open while more than one pole is affected, may require shoring of each pole. Chugach review and approval of shoring plan is required for all excavations where more than one pole is subject to an open excavation. Pole shoring shall conform to Chugach specifications XP-X/Y (steel pile shoring) or XM40/XM40A (wood pole shoring) as approved by Chugach for the specific excavation. Specifications will be supplied upon request. All work for installing the piles must be performed within the OSHA guidelines. Shoring by other methods requires prior approval by Chugach on a case-by-case basis. Street light poles may be temporarily removed, subject to a written agreement with Chugach, prior to excavation.

Any excavation that may expose the pole butt requires a structural analysis of the pole shoring method. The analysis shall be performed by an Alaska-licensed professional engineer familiar with electrical transmission and distribution design standards in use by Chugach.

All shoring and excavation (closer than the above limits) shall be done by a qualified person under the employ of a qualified electrical contractor.

#### **E. RELOCATION REQUIRED**

Where protection of the cable and structures cannot be maintained, as required in Sections A, B, and C, relocation of those facilities will be required prior to the intended work and at the contracting agency's expense.

#### **F. BACKFILL**

Replacement backfill for electrical facilities must be in accordance with Chugach specifications and done by a qualified person under the employ of a qualified electrical contractor.

A damaged underground facility may not be reburied until it is repaired or relocated to the satisfaction of Chugach.

#### **G. INSPECTION AND APPROVAL**

All work on or in the immediate vicinity of Chugach facilities, such as backfilling, temporary support, shoring, and relocations are subject to prior approval and

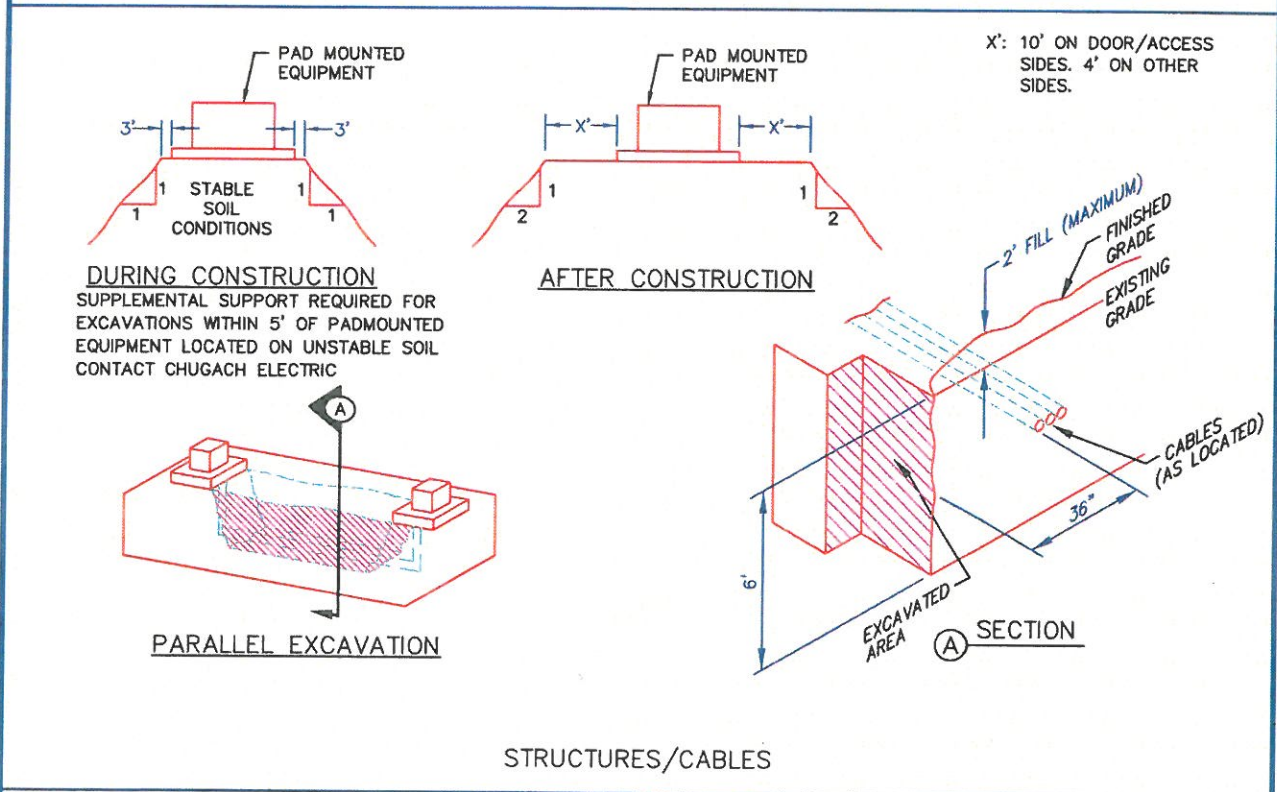
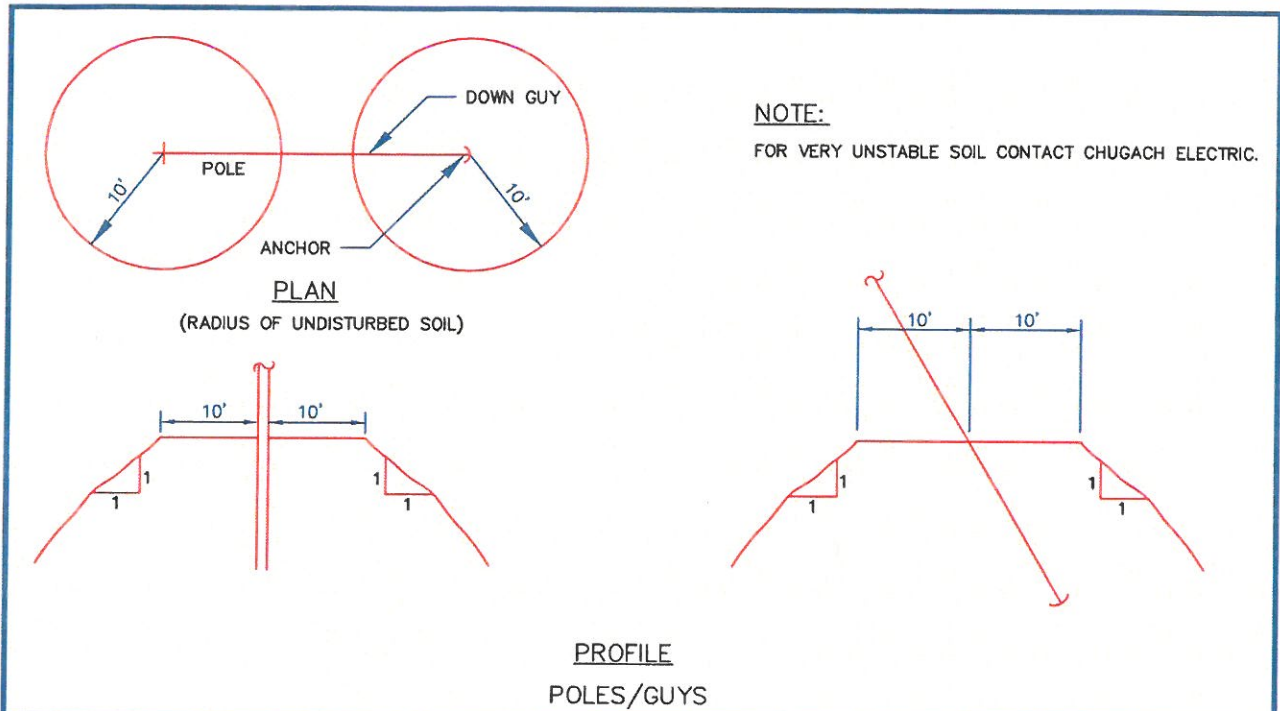


inspection by Chugach. On large projects where inspection time is substantial, all costs for inspection shall be the responsibility of the agency or entity contracting for the work. Reimbursement to Chugach shall be in accordance with Chugach's tariff, Section 8.

For any questions or approvals involving these requirements contact the Line Operations Division at 762-7655 and your call will be directed to the appropriate department for assistance.

## **H. MISCELLANEOUS**

1. Depending on the soil type, depth and length of the excavation, type of Chugach facility involved, and the certainty of the cable locate, excavations can be approved within a two (2) foot radius of cable on a case-by-case basis.
2. Stable soil conditions are defined as all dry and non-organic. Soil conditions shall be evaluated and approved on a case-by-case basis by Chugach. The evaluation will be done using 29CFR1926, Subpart P, "*Excavations*" as a guide.
3. Excavation, except as noted, shall be defined as mechanically done by a backhoe, scraper, grader, auger, or other piece of equipment.
4. Cables are defined as insulated cable whether buried directly or in conduit. The guidelines for cables also include 600-Volt pedestals and other small electrical apparatus associated with cable but not included under pads or vaults.
5. Spare conduit is not included in these provisions except to the extent of providing temporary support when exposed and inspected by Chugach prior to the placement of proper backfill.
6. Chugach defines a *qualified electrical contractor* as a contractor registered in the State of Alaska who has an Electrical Administrator's License in the Outside Linework category; or who has an employee with an Electrical Administrator's License in the same category registered with the contractor.
7. Chugach defines a *qualified person* as a journeyman lineman who holds a current Certificate of Fitness in the Journeyman Lineman category issued by the State of Alaska.
8. Chugach defines *hand-digging* as the removal of soil with hand tools or with an air-knife tool (compressed air jet).



REV. NO.: 3 DATE: 1/28/98

Standards Engineer: \_\_\_\_\_

Mgr., Dist. Engineering: \_\_\_\_\_

Mgr., Const. & Maint.: \_\_\_\_\_

Dir., T&D Services Div.: \_\_\_\_\_



**EXCAVATION LIMITS**  
DEFINITION OF LIMITS REQUIRING  
NO ADDITIONAL STRUCTURAL SUPPORT

DRAWING NUMBER

F-062388

SHEET 1 of 1

**Sec. 42.30.450. Waiver of requirements by written agreement.**

An operator and an excavator may, by written agreement, waive the requirements of AS 42.30.400 - 42.30.490 that the excavator notify the operator of planned excavations and that the operator locate underground facilities. The agreement must identify the geographic areas to which the waiver applies and the time period for which the waiver is valid.

**Sec. 42.30.460. Underground facility owner.**

If the operator of an underground facility is not the owner of the facility and if the operator cannot be identified or has been identified but cannot be reached in a reasonable amount of time, the excavator may give the notice required by AS 42.30.400 - 42.30.490 to the owner of the underground facility and the owner shall assume the duties and responsibilities of the operator under AS 42.30.400 - 42.30.490.

**Sec. 42.30.490. Definitions.**

(1) "damage" means

(A) the substantial weakening of structural or lateral support of an underground facility;

(B) penetration, impairment, or destruction of any underground protective coating, housing, or other protective device; and

(C) the partial or complete severance of an underground facility to the extent that the project owner or facility operator determines that repairs are required;

(2) "emergency" means

(A) a condition that constitutes a clear and present danger to life, health, or property; or

(B) an unplanned service interruption;

(3) "excavation" means

(A) an activity in which earth, rock, or other material on or below the ground is moved or otherwise displaced by any means;

(B) road maintenance that changes the original road grade;

(C) demolition or movement of earth by equipment, tools, or explosive device except tilling of the soil less than 12 inches in depth for agricultural purposes;

(4) "excavator" means a person who conducts excavation in the state;

(5) "inaccessible" means impossible or unreasonably difficult to reach due to conditions beyond the control of the underground facility operator;

(6) "notification center" or "center" means a service through which a person is able to call one number to notify member operators of underground facilities that an excavation is proposed and to request the operators to mark facilities located inside of the proposed excavation area;

(7) "operator" means a person who supplies a service for commercial or public use by means of an underground facility;

(8) "person" means any individual, public or private corporation, political subdivision, government agency, municipality, industry, partnership, copartnership, association, firm, trust, estate, or any other entity whatsoever;

(9) "remote" means not accessible by road;

(10) "underground facility" means a pipe, sewer, conduit, cable, valve, line, or wire, including attachments and those parts of poles or anchors that are below ground, for use in connection with the storage or conveyance of water, sewage, telecommunications, cable television, electricity, petroleum, petroleum products, hazardous liquids, or flammable, toxic, or corrosive gas;

(11) "unstaffed" means not normally staffed with employees;

(12) "working day" means a day on which an underground facility operator is open for regular business.

**ALASKA STATUTES**

**TITLE 42**

**PUBLIC UTILITIES  
&  
CARRIERS**

**Sec. 42.30.400. Excavator's notice of proposed excavation.**

(a) Before beginning an excavation, an excavator shall give notice of the proposed excavation to each underground facility operator who has an underground facility in the area of the proposed excavation and request the operator to field mark the location of its underground facility. The excavator shall notify an underground facility operator who subscribes to a notification center by giving notice to the center. The excavator shall notify an underground facility operator listed in the applicable telephone directory who is not a subscriber to a notification center by giving notice directly to the operator.

(b) Except in the case of an emergency locate request or a request to locate in a remote, unstaffed, or inaccessible location, the excavator shall notify an underground facility operator who may have a facility in the area of a proposed excavation at least two but not more than 15 working days before the date scheduled for beginning the excavation. In the case of a request to locate in a remote or unstaffed location, the excavator shall notify the operator at least 10 but not more than 20 working days before the scheduled date for beginning excavation.

(c) In an emergency, the excavator shall immediately notify each underground facility operator in the area of the emergency and of the need for the excavation and request prompt location of underground facilities.

**Sec. 42.30.410. Operator's response to request to locate; immunity related to unmarked or inaccurately marked facilities.**

(a) An underground facility operator shall accept requests to locate underground facilities during the operator's regular business hours. An operator who receives a request to locate shall maintain for at least one year an accurate record of the request and responses to the request.

(b) When an underground facility operator receives a request to locate, it shall notify the excavator of the location of the underground facilities that the operator is able to field mark with reasonable accuracy and field mark those facilities. If the operator owns, uses, or operates an underground facility that is identified as being in the area of the proposed excavation but that the operator cannot field mark with reasonable accuracy, the operator shall provide the excavator with the best information available to the operator about its location and shall provide on-site assistance until the facility is located or until the excavator no longer needs assistance in locating that facility.

(c) The field marks for an underground facility buried 10 feet deep or less must be located within 24 horizontal inches of the outside dimensions of the facility. For a facility buried deeper than 10 feet, the operator shall locate the field marks within 30 horizontal inches of the outside dimensions of the facility. The operator shall use stakes, paint, or other clearly identifiable material to show the field location of the underground facility. The marker used to designate the approximate location of an underground facility must follow the current color code standard used by the American Public Works Association.

(d) Except for an underground facility in a remote, unstaffed, or inaccessible location, an underground facility operator shall respond to a request to locate promptly. A response is considered to be prompt if it is made within two working days after the operator receives the request or at a later time so long as the response occurs before the beginning of the excavation. For an underground facility in an accessible remote or unstaffed location, the operator shall respond within 10 working days after the operator receives the request or at a later time

so long as the response occurs before the beginning of excavation.

(e) After an operator has field marked an underground facility, the excavator is responsible for maintaining the markings.

(f) An excavator may not begin to excavate until each underground facility has been field marked.

(g) When an operator has field marked an underground facility once at the request of an excavator, the operator has the right to receive compensation from the excavator for costs incurred in responding to subsequent requests to locate the same underground facility during the same excavation project if the excavator failed to maintain the original marking.

(h) If an excavator discovers an underground facility that was not field marked or was inaccurately field marked, the excavator shall immediately stop excavating in the vicinity of the facility and shall notify the operator of the discovery. The excavator may notify the operator by means of a notification center. The operator shall treat the notification as a request to locate in an emergency and shall respond accordingly. An excavator may not be held liable for inadvertent damage caused to an unmarked or an inaccurately marked underground facility.

(i) Unless the request to locate is made in response to an emergency, an underground facility operator has the right to receive compensation for costs incurred in responding to a request to locate that gives the operator less notice than the minimum notice required by this section. This subsection may not be interpreted to require the operator to respond to the request to locate within the time requested in the notice.

**Sec. 42.30.420. Responsibility of construction project owners.**

The owner of a construction project that will require excavation shall indicate in bid documents or contracts for construction the existence of underground facilities that the project owner knows are located inside of the proposed area of excavation. This requirement does not release the

excavator from the excavator's responsibility under AS 42.30.400 - 42.30.490.

**Sec. 42.30.430. Obligations concerning the conduct of excavations.**

(a) An excavator shall use reasonable care to avoid damaging an underground facility. The excavator shall

(1) determine, without damage to the facility, the precise location of an underground facility whose location has been marked;

(2) plan the excavation to avoid damage to and minimize interference with an underground facility in or near the excavation area; and

(3) to the extent necessary to protect a facility from damage, provide support for an underground facility in and near the construction area during the excavation.

(b) An excavator who, in the course of excavation, contacts or damages an underground facility shall notify the operator. If the damage causes an emergency, the excavator shall also alert appropriate local public safety agencies and take reasonable steps to ensure public safety. A damaged underground facility may not be reburied until it is repaired or relocated to the satisfaction of the operator. The operator of an underground facility that was damaged during excavation shall arrange for repair or relocation of the facility as soon as practical.

**Sec. 42.30.440. Penalties; injunctive relief.**

(a) In addition to all other remedies provided by law, a person who violates a provision of AS 42.30.400 - 42.30.490 is subject to a civil penalty of not less than \$50 nor more than \$1,000 for each offense if the violation results in or significantly contributes to damage to an underground facility.

(b) If the court finds that an excavator is violating or threatening to violate a provision of AS 42.30.400 - 42.30.490 and the violation may result in damage to an underground facility, the court may grant injunctive relief to the underground facility operator.