

ALASKA DNR AS-BUILT SURVEY INSTRUCTIONS FOR

ADL 107799

CITY OF CRAIG

KLAWOCK INLET

OUTFALL LINE

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINING, LAND AND WATER
AS-BUILT SURVEY INSTRUCTIONS for ADL 107799
Authority 11 AAC 53

A. OVERVIEW: These instructions define general survey and platting criteria unique to the City of Craig Klawock Inlet Outfall Line project as-built on Department of Natural Resources (DNR) managed land for compliance with permitting provisions as specified in these Survey Instructions. Addendums to these instructions may be issued to address unforeseen changes, additional tasks, or deletions needed to complete the job. These instructions provide procedures for post-construction survey and graphical representation of the affected real property, improvements, and Easement location to produce complete final as-built plats.

1. Goals and As-Built Surveys and Platting are:

- a. Location:** The plat will be of sufficient detail to allow a Surveyor to locate the Easement and the installed or constructed improvements.
- b. Basis for Easement Lease Fees:** Platted Easement dimensions and areas are used as the basis for the Easement descriptions, fees, and notice of project completion.
- c. State Mapping:** As-built plats and files will be used to position the improvements and Easements into the State GIS database to facilitate effective land management.
- d. Protection of Rights:** Accurate and thorough Record-Of-Survey's (ROSS) are the basis for the unique legal description(s) of the land being utilized for the Easement. The ROS aids in protecting the Lessee or Permit-holder's investment and interest from conflicting permits and complications.

These project instructions include survey and drafting standards, typical notes, and certifications. The survey standards include general, upland¹, tideland², shore³ and submerged land⁴ sub-sections. Companies engaged in projects on state lands are urged to confer with DNR, Division of Mining, Land and Water (DMLW) Survey Section⁵.

¹ Uplands: For the purpose of these instructions uplands shall be all lands above mean high water (MHW) or ordinary high water (OHW).

² Tidelands: For the purpose of these instructions tidelands shall be all land that is periodically covered by tidal water between the elevations of mean high water and mean low water. AS 38.05.365 (23)

³ Shorelands: For the purpose of these instructions shorelands shall be land belonging to the state which is covered by non-tidal water that is navigable under the laws of the United States up to ordinary high water mark as modified by accretion, erosion, or reliction. AS 38.05.965 (20)

⁴ Submerged lands: For the purpose of these instructions submerged lands shall be all land lying seaward from the line of mean low tide. AS 38.05.365

B. DELIVERABLES: Deliverables required by DNR include the following if applicable:

1. Pre-As-Built Planning: To include:

a. Overview Maps: USGS quads, Google, GIS land status, etc.

b. Planning Documents: Applicant is responsible for acquisition of this information and urged to do so early in the project. (DNR Survey Section may request copies).

- Associated record plats
- Status plats
- Protracted section line information
- Plan of Survey to complete this job
- Field notes of US survey boundaries
- Easement documents & plans
- Title Searches if needed

c. As-Built Planning Meeting: In-person or conference call between the “Project Land Surveyor”⁶ and the Survey Section is required prior to the construction of the improvements. The meeting will address each section of these instructions and come to common understanding as to how the instructions will be carried out. The planning documents should be available at the meeting. Instruction addendums may be issued to encompass needed updates and discussed at this meeting.

2. Installed Utility Markers: (If required) Installed Carsonite or equal markers on or offset from buried improvements. Not required in submerged lands.

3. Installed Control Monuments and Accessories: (If required). Note that photos and sketches of installed and found control monuments will be provided for inclusion in the case file. Paper copies of OPUS Solution Reports will be recorded as plat attachments..

4. Final As-Built Plats: Requirements and contents of which are listed herein.

5. Delimited Files on CD: Delimited file(s) on CD of survey point numbers, NAD 83 latitudes, longitudes, and elevation, ocean depth at each point, state plane northings, eastings, elevations, and point description on the improvement(s). Detailed multiple-page GPS solution reports, if submitted, will be electronic files, not paper copies.

6. DWG Files: DWG and .SHP files (including *.PRJ) on CD of the plat drawings, to include all points and point numbers that match the delimited file point numbers. The .DWG and .SHP files may be submitted through an arranged-for FTP internet site.

⁵ Alaska Department of Natural Resources, Division of Mining, Land, & Water, Survey Section
Eric Simons 269-8524 Stanley Brown 269-8521; 550 West 7th, Suite 650, Anchorage, AK 99501-3576

⁶ Project Land Surveyor: For the purposes of these project survey instructions, a company installing or building improvements on State land, shall designate an overall Project Land Surveyor, who will be the DNR point of contact on all phases of the survey, mapping, and subsequent as-built plat production for the project.

C. COMPREHENSIVE SURVEY REQUIREMENTS:

1. Standards:

- a. **General:** Land surveys affecting the legal real property rights of the State of Alaska, the adjoining landowner, or both, shall be performed in accordance with applicable laws, regulations, rules of procedure, acceptable professional practices, and AS 34.65.020. They shall be performed under the direct supervision of a Land Surveyor licensed to practice in the State of Alaska. All survey work must be accomplished with equipment and procedures sufficient to insure at least the degree of accuracy prescribed in these instructions. Survey Section shall review the plan of survey, commence survey tracking on the LAS system, assign a project EPF number, and notify the surveyor of the LAS File type, number, and legal description for the Project title block.
- b. **Measurements:** “As-built” surveys are generally metes and bounds or positional type surveys of installed or constructed improvements on DNR lands relative to legal boundaries, other improvements, and natural features. The survey and plat shall represent the project’s post-construction location & condition.
 - 1) **Metes and bounds:** “Conventional” type surveys are designated as Class III Surveys under 11 AAC 53.110.
 - 2) **Positional and Radial Type Surveys on Tidelands and/or Uplands:** The “Allowable Relative Positional Accuracy” on these lands shall be better than ± 0.26 feet + 200 ppm⁷. Upland and Tideland metes & bounds type surveys will meet Class III standards mentioned above. Upland and Tideland positional data shall be shown to the nearest thousandth of second of arc.
 - 3) **Positional and Radial Type Surveys on Submerged Lands:** The “Allowable Relative Positional Accuracy” on these lands shall be better than ± 3 Meters. Tideland metes & bounds type surveys will meet Class V standards. Upland and Tideland geographic positional data shall be shown to the nearest thousandth of second of arc.
 - 4) **Distances:** Distances on the as-built plats shall be Alaska State Plane NAD 83 (ASP) using horizontal ground distances for area. Upon request and approval at the as-built planning meeting, use of horizontal ground distance may be utilized exclusively. Distances may be shown in tabular form. Show average scale factor for each sheet if using ASP distances.
 - 5) **Bearings:** All bearings on the as-built plats shall be Alaska State Plane, NAD 83 unless agreed to otherwise in the as-built planning meeting. Bearings shall be shown to the nearest second.
 - 6) **Area:** Total area(s) of the Easement will be broken down by sections or parcels as specified in the as-built planning meeting. The area(s) will be shown in a table

⁷ National Society of Professional Surveyors, NSPS Classification and Accuracy Standards for Property Surveys, Section C, approved 12 March 2002. <http://www.nspsmo.org/>

based upon the horizontal distance of centerline, (CL) or boundaries of the Easement as agreed per the planning meeting.

2. Control:

- a. **Concept:** A macro-control monument(s) with accurate geographic position based on OPUS generated coordinates in the vicinity of the project will be used to establish overall control of the project survey. Intermediate monuments will be found and established and tied geographically and in grid to the macro network. The as-built points gathered to map the specified project will then be tied to this control network. All data will comply with the specified standards.
- b. **Macro-Control:** The project shall have a reliable control monument of record or newly established primary monuments on or near the project.
 - 1) Macro control monuments will be very stable existing record or new in-ground or in-slab, primary monuments. The monuments will be positioned by static GPS survey & processed using OPUS. The NAD 83 OPUS solutions to the monuments and ties from the monuments to the beginning and end of the project shall be shown on the plat. Monument installation per 11AAC 53.190 and 11 AAC 53.200. See control monument notes.
 - 2) **Processing:** Macro control monument(s) in the near vicinity to the Easement will be statically observed if good record geographic information, produced through OPUS, does not exist on it. Two good quality solutions⁸ will be acquired through OPUS on each point with a break and reset-up between sessions. OPUS NAD 83, ASP, and record positional data will be shown for the point(s). Alaska Geoid 99 or later with a common epoch will be utilized for this project. Both the NAD 83 mean geodetic and ASP bearings and distances will be shown on inverses between the control monuments with closure of the network shown. All macro control monuments will be surveyed and processed as a static network to be defined and discussed at the Survey planning meeting. Ties from the macro monument(s) to intermediate control will be shown. The Surveyor may mean the OPUS results or choose the more statistically reliable solution. In either case, explain which method was used for the indicated position of the monument.

⁸ A quality solution shall:

- Be based on a static session which occupied the point a minimum of 1 minute per KM of distance from the CORS station being tied to.
- Use the precise ephemeris.
- In which more than 50% of ambiguities are fixed
- Peak to peak errors < 5cm
- See <http://www.ngs.noaa.gov/OPUS/about.html>
- Used more than 90% of observations
- The overall RMS < 3cm
- Antennae type and height are correct

- 3) **Required Macro control monuments for ADL 107799:** One found record monument of ATS 1410, False Island Subdivision, or other record monument on or near False Island in reliable condition.
 - c. **Required Intermediate Control Monuments:** Find & tie the following monuments near each landing of the sewer line(s) to include:
 - 1) **Three record monuments** of ATS 1410, False Island Subdivision, Plat 2001-15, and/or the 14C Survey of the outfall vicinity from Plat 95-57, and/or Industrial Park Tidelands, Plat 97-69.
 - d. **Basis of Coordinates:** All project geodetic coordinates will be based on geodetic positions of the Macro control monuments. Alaska State Plane NAD 83 coordinates will be shown for the Macro control monument and the outfall terminus.
3. **Items to be Surveyed and Mapped.** The landing vaults and/or pedestals, and/or terminal manhole, and/or lift station corners at the landings will be surveyed and shown on each landing.
- a. **Boundaries:**
 - 1) **Property Boundaries:** Boundaries of record which are crossed by the improvement or encompass the State land parcel on which the improvement is located must be tied and shown. Survey of at least two reliable monuments & accessories are required to define boundary locations. Rubbings, photos, or a sketch of the monument markings, type, and condition will be noted in the field books and on the plats. The stated intermediate monuments found shall be tied to the point of beginning of ADL 107799 at its intersection with the boundary of Tract II, the record bearings and distances of the adjacent corners of the Tract tied To the beginning of the ADL and to the control monuments.
 - 2) **Other Easements:** Other Easements which abut or cross the project Easement will be identified, surveyed if necessary, & shown on the as-built drawings. The state section line Easements *will not* be required to be shown unless specified.
 - 3) **Survey of Mean High Water, (MHW):** Not necessarily required for the as-built of ADL 107799. MHW on Navigable Waters which lie within the 50' of the project Easement corridor shall be mapped utilizing mapping grade tools or better to a distance of 50' from the Easement boundaries.
 - b. **Section Lines:** Shall be shown on the drawings.
 - c. **Buried or surface laid sewerage improvements within the easement** will be surveyed and shown using the best available evidence in submerged areas and survey of the landings and terminus of outfalls using potable dye or other method to locate and survey the terminus. Notation will explain whether the utility is buried or laid on

the ocean bottom, diameter and type of pipe, and how weighted. Geographic and grid coordinates will be shown for the terminus tied to control.

- d. **Other utilities:** If other utilities lie within 50' of the ADL show them using survey or mapping standards.
- e. **Other Improvements & Natural Features**
 - 1) **Major Natural Features & Improvements within 50' of Easement:** Other improvements, such as buildings, roads, trails, manholes, utilities, pads, valves, etc., and major natural features such as water bodies and cliffs, within 50' of the Easement boundaries will be tied on the as-built plats.
 - 2) **Features within 300 Feet of CL:** Other improvements and major natural features more than 50' and less than 300' from boundaries of the Easement, on state lands will be mapped on the as-built plat using aerial photography or mapping grade tools.
 - 3) **Shore lines:** Shore lines shall be shown adjacent to the Easement and land masses and water bodies labeled.
 - 4) **Underwater Improvements:** Underwater improvements below MHW must be mapped, platted, and labeled as "buried" or "lain on bottom" in water bodies. Buried utilities may be marked with "Carsonite" or other marker posts at or near to road ROW's and MHW to indicate the location of the utility crossing the ROW or water body. The shores out to 50' from the boundaries of the Easement will be surveyed and tied to intermediate control boundary network. Record meanders will shown in the vicinity with light uniquely dashed lines on the drawings. .

D. DRAFTING REQUIREMENTS AND STANDARDS:

- 1. **Medium Formats:** The Surveyor shall submit the final as-built plats on stable Mylar or equivalent film. on 11" x 17" or larger sheet "Record of Survey" format. Samples of the formats can be obtained from the DNR Survey Section. Note: When using the "Record of Survey" format, the project name, "Record of Survey of ADL 107799 and the EPF 20160040 must be at least 0.25" tall on the final Mylar As-Built Plat. The 0.25" text height ensures that critical elements on reduced-sized reference copies are legible.
- 2. **Content Format:** Provided "as-built" plat samples are the format guide. The title block, vicinity map, legend, notes, surveyor's seal, and graphics shall be shown substantially as indicated. Individual firm or company "Logo's", title blocks, certificates, notes, north arrows, etc. are acceptable if in a reasonably similar format as the sample drawing. The Surveyor will submit the final as-built plats with original stamps & signatures. The final as-built plat must be neat, orderly, easily read, and complete.
- 3. **Recordation & Recordability:** The DNR will record the final as-built plats. The applicant will pay the recording fee and will meet standards set forth by 11 AAC 06.040

(Prerequisites for Recording Documents).

4. **Line Work:** All line work on the as-built drawing must be of professional quality in black drafting ink and of such width and contrast as to clearly convey all information.
5. **Text (Lettering):**
 - a. **Clarity:** All lettering on the plats must of professional quality in black drafting ink and of such size and contrast as to clearly depict all information.
 - b. **Minimum Size:** No lettering shall be smaller than 0.08" high.
6. **Drawing Scale:** Will be in multiples of 10 feet per inch: for example, 10', 20', 30', 100', 200', 300', etc. Details shall be shown to scale and on the sheet to which they apply.
7. **Vicinity Map** is required. It shall be at whatever scale is necessary to show the entire project and clearly indicate section, township, range, meridian, and geographic information. The vicinity map should be on the first sheet and on others as needed. If multiple sheets are required, the vicinity map shall indicate the coverage by each sheet.
8. **Multiple Sheets in a Set:** If more than one sheet is required to clearly show the project, the vicinity map, the legend, notes, Surveyors Certificate, the DNR approval block, and any other required certificates shall appear on the first sheet. All other sheets shall also show ADL number, scale, and sheet number/total number of sheets, location by section, township, range, match lines and stations, and the project scale.
9. **Sheet Match Lines:** Match lines at the left and right margins of each sheet will be shown at common Easement CL stations.
10. **State Plane Zone Match Lines and Match Points:** Match Lines will be shown where the CL of the improvement and Easement cross ASP projection zones on applicable projects. The match line will center on a CL point and station, common to each of the zones and labeled with ASP coordinate data from each zone and the NAD 83 values of the point. If the point is on a tangent of the Easement CL the ASP forward and back bearings will be shown on the CL of the Easement.
11. **Boundary Lines, Bearing and Distance Labels:** All surveyed legal boundaries, including aliquot part boundaries, adjacent to, surrounding, and or crossing the project Easement corridor or parcel shall be shown with record and "measured"⁹ bearings and distances and tied to the improvement. The extent of this provision can be negotiated in areas congested with legal boundaries.
 - a. **Boundary Line Type and Weight:** All surveyed lines of record shall be shown with a solid line type. All non-surveyed lines, tie lines and Easement lines shall be dashed

⁹ Measured; for the purposes of these survey instructions shall mean the distance and/or bearing between two found and surveyed monuments.

or other unique line type at contrasting scales. ADL 107799 Easement boundary will be bold dashed lines.

- b. Boundary Line Label Specifics:** Record bearings and measured bearings of the boundaries will be labeled on the boundary line itself or referenced and shown in a table. The measured distances shall be horizontal ground distances.
- c. Line Status:** Except for the ties and CL information itself, all bearings and distances shall be labeled (R) for record, (M) for measured or (C) for “computed”¹⁰.
- d. Section Lines and Section Line Easements:** Surveyed and protracted section lines will be shown. Section line Easements will not to be shown unless otherwise specified. Surveyed section lines shall be solid line types. Protracted, un-surveyed section lines and Easement boundaries shall be dashed.

12. Monuments:

- a. Monument Markings:** Exact markings on all “found”¹¹ or recovered and set monuments and their accessories must be shown on the plat. If particular monumented corners were not surveyed during the field survey, unrecovered record monuments must be indicated with a unique symbol. No markings of any kind shall be added to any recovered survey monuments or existing bearing trees.
- b. Monument Type and Dimensions:** The monument type, material, diameter, and length of rod and cap shall be noted.
- c. Control Monument Notations:** Control monuments will be shown and the NAD 83 Lat, Long, NAVD 88 elev., ASP coordinates, and zone shown in a table or directly next to the cap. The inverse between any two upland/tideland macro control monuments will be labeled in mean geodetic and state plane bearings and horizontal ground distances.

13. Improvement Mapping:

The surveyor will survey and map the submerged sewer Lines and appurtenances including all PI’s, a minimum of every 200’ on tangents,

terminal manholes, lift station corners, and provide a typical cross section of the installation. These will be shown in position using the best available evidence of location and so noted as to how the utility was located.

14. Project Easement CL & Boundaries:

- a. Easement CL Design:** The surveyor will design the Easement CL, with 10’ offset boundaries to each side which encompass the shown installed utility lines. The

¹⁰ Computed; for the purposes of these survey instructions shall mean a position, bearing, or distance on a point or between two points, which have not been surveyed in the execution of these instructions.

¹¹ Found; for the purposes of these survey instructions shall mean a recovered and surveyed monument.

Easement CL will be offset 10' each side, creating a 20'-wide easement corridor. Easement CL will be a bold CL and not interfered with by other data. The offset boundaries will be dashed. The designed CL PI will be identified in a traverse table or graphically with ASP coordinate and geographic lat., long. positions, bearings, and distances one to another will be shown in a traverse table or labelled on the graphics. The ends of the ADL 107799 Easement will be the ATS 1410 boundary(s) on the southeast and extend 20' northwest of the terminus. - East, MHW on the southwest end of Segment 4, and MHW at the southeast end of

- b. Angle Points and Labels:** All PCs, PTs, and PIs of the Easement CL will be stationing if applicable. Each angle point will be labeled with the point number and the station, on the line or in a table. The Easement CL will be station-labeled and/or ticked at intervals of a multiple of 50', which is appropriate for the scale and appearance of the sheet. The stations and/or point numbers may be in tabular form.
 - c. Easement CL Bearings** will be shown in ASP bearings or as agreed. Bearings may be shown in a traverse table or directly on the drawn CL segments.
 - d. Easement CL Distances:** The Easement CL shall be labeled with ASP distances or horizontal ground distances. If ASP distances are used, they shall be scaled to horizontal ground times the 60' width of easement to compute areas of easement.
 - e. Easement Segment Acreage** will be labeled on the graphics and/or shown in a table.
 - f. Easement Boundaries:** Easement boundaries shall be shortened or extended to meet at all angle points and at boundaries between state and non-state land.
- 15. Topographic, Natural, & Improvement Feature Depiction:** Improvements and major topographic features such as streets, roads, highways, streams, rivers, and shores shall be located and labeled on the as-built drawing if they lie within 50' of the Easement boundaries. Current meander lines of water bodies which cross the Easement or lie within 50' of the Easement will be mapped out to 50' from the CL. Major features and improvements within 300' of CL will be mapped for general location only.
- 16. Land Ownership Labels:** Ownership of land traversed by the project shall be labeled (i.e., state, private, native corporation, etc.), and with the legal parcel ID, e.g., lot, block, and Subdivision designations, U.S. Survey or ASLS number, section, aliquot part, etc.
- 17. Permanent Objects, Structures, and Improvements:** Placed within 50' of the Easement shall be surveyed and mapped in an accurate and scalable manner. In cases where this requirement is prohibitive due to intense development the Surveyor will contact the DNR Survey Section to discuss.
- 18. Project Improvements and Appurtenances:** All project improvements on state land, outside the Easement shall be tied in the same manner as other improvements. All project improvements will be dimensioned and labeled.

- 19. Encroachments** onto the Easement shall be shown.
- 20. Beginning and End of ADL:** Show the Beginning of ADL 107799, and End of ADL 107799, if applicable, with an arrow to the beginning and the end of the project. Label the “Terminus” of the outfall to include the latitude and longitude and ASP position, which will be approximately 20’ southeast of the End of ADL 107799.
- 21. North Arrow:** A north Arrow will be required on each sheet, to include the magnetic declination and source and date of the declination and area state plane mapping angle.
- 22. Graphic Scale:** A graphic scale in inches and U.S. Survey feet will be required on each as-built sheet. The foot scale must be identical to that used in the survey portion of the plat. Two equations must also be shown: 1 meter = 3.280833 U.S. survey feet and 1 U.S. acre = 0.4047 hectare.
- 23. Graphics Orientation:** The graphics of plats shall generally be oriented with north toward the top of the sheet, unless impractical.
- 24. As-Built Plat Submittal Process:** On preliminary as-built completion submit two full-sized paper copies of each sheet full-sized paper copies of each sheet, and supporting documents and OPUS solution sheets to DNR Survey Section for review. The outside of the package should state “as-built drawings”. Reviews will be completed by the Survey Section and returned with red-lined plans and a review letter with needed edits.
- 25. Fees:**
- a. **As-Built Survey Instruction Fee** (11 AAC 05.010): \$225
 - b. **Recordation fees for Final As-Built Plats:**
 - First Sheet \$ 20
 - Each additional sheet \$ 5

26. Title Block Requirements: Recommended Record of Survey Title Block:

STATE OF ALASKA	SURVEYOR:
DEPARTMENT OF NATURAL RESOURCES	JOE SNUFFY LAND SURVEYING
DIVISION OF MINING, LANDS, AND WATER	ADDRESS
ANCHORAGE, ALASKA	

RECORD OF SURVEY

DOC. TITLE: RS-CITY OF CRAIG SEAFOOD PROCESSING OUTFALL

- GTE] 1. ADL 107799
2. CITY OF CRAIG
2. KLAWOCK INLET
3. SEAFOOD PROCESSING OUTFALL LINE
4. AS-BUILT SURVEY

LOCATED WITHIN: Section 5 of Township 73 South, Range 81 East and
Sections 31 and 32 of Township 74 South, Range 81 East
of Copper River Meridian, Alaska

CRAIG RECORDING DISTRICT

SHEET OF _____	<u>DNR APPROVAL</u>
DATES OF SURVEY:	
BEGIN: _____	
END: _____	STATEWIDE PLATTING SUPERVISOR _____
DATE _____	DATE _____
DRAWN DATE: _____	DRAWN BY: _____
SCALE: _____	DNR FILE : EPF 2017xxxx

The DNR Approval block will only be needed on the first sheet.

E. TYPICAL NOTES: (When applicable)

- 1. History:** This as-built Record of Survey represents a post-construction survey of ADL 107799. This ADL was initiated in 2008 to allow City of Craig to install, operate, and maintain a Seafood Processing Plant Ocean Outfall Line from ATS 1410 onto DNR submerged lands to an outfall terminus.
- 2. Post-Construction Statement:** This as-built represents a post construction survey of ADL 107799. It is intended to depict that portion of the Easement as it pertains to state land and is not to be presumed to plat or dedicate those portions pertaining to non-state lands. This as-built is not intended to be used to re-establish property boundaries. Except as indicated, no encroachments exist within the permitted area.
- 3. Record of Survey Note:** This survey does not constitute a subdivision as defined by A.S. 40.15.900 (5) (A).

4. **The Basis of Coordinates** is (describe monument and corner represented) as shown more exactly on sheet ___ of these drawings, geographic positional data derived from (OPUS, In-house GPS processing, Record Position of ___ Plat, or autonomous GNSS position from _____) as indicated on sheet ___. (In the graphics or notes show the geographic position of the monument and the associated grid position with Grid, datum, and epoch identified, IE Alaska State Planes Zone 5, NAD 83, 2014 epoch.

5. **Basis of Bearings:** All shown bearings are _____ (Mean Geodetic or Grid). (If Grid, specify Alaska State Plane, local, or other grid:) bearings. The Basis of Bearing was derived from _____ (Record information between monuments of record or High precision (brand and model) GNSS survey, differentially corrected & processed with (Name and Version of software or other approved method specify).

6. **If using DNR-approved grid bearings other than Alaska State Plane (ASP)** with a specific Epoch identified add this note:

 To convert the shown grid data to ASP data: (Consider the order in which this data was originally changed to non-ASP grid values and reverse)
 1. Values to add or subtract from each coordinate set to translate to ASP values.
 2. Angle and direction or rotation to rotate the data to ASP values in position.
 3. Note the scale factor to use to bring the data to ASP values.

7. **Distances:** “All distances are reduced to horizontal ground distances unless otherwise Noted” or “All distances are Alaska State Plane Zone __, NAD __ distances with scale factor shown to reduce to horizontal ground distances.”

8. **Easement sidelines are extended or shortened** to meet at angle points and terminate at boundaries with non-state lands.

9. **Closure and/or Accuracy:**
 - A. **Conventional Closure:** The error of closure of this survey does not exceed 1:5000.
or
 - B. **Positional accuracy:** All survey data produced by this as-built survey is no less accurate than ± 0.26 feet + 200 PPMA relative to any and all other points in this upland and tideland survey segment located within (S,T,R,M).

10. **All parcels** of land owned by the State of Alaska, located within 50.00 feet of, or bisected by a surveyed or protracted section line, are subject to a fifty foot (50’) Easement, each side of the section line, which is reserved to the State of Alaska for public highways under A.S. 19.10.010.”

F. CERTIFICATES:

Should be shown substantially as follows with headings capitalized and underlined.

SURVEYOR'S CERTIFICATE

I hereby certify that I am properly registered and licensed to practice land surveying in the State of Alaska, that this plat represents a survey made by me or under my direct supervision, that the monuments shown hereon actually exist as described, and that all dimensions and other details are correct.

Date: _____ Registration Number: _____

(Surveyor's Seal) _____ (Signature in black ink)

Registered Land Surveyor