ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Central Region

CAD STANDARDS & DRAFTING GUIDE (CSDG)

2020

TABLE OF CONTENTS

Chapter 1: Overview

TABLE OF CONTENTS

SECTION 1. OVERVIEW

The Alaska Department of Transportation & Public Facilities' (DOT&PF) Central Region CAD Standards and Drafting Guide (CSDG) formalizes the establishment of computer-aided drafting (CAD) standards that facilitate integration, ensure consistent data quality, improve work flow, and promote efficient data transfer within the Department and between state, federal and local agencies, consultants, and the public. For project completion and continuity the CSDG will need to be used for all roadway projects.

1.1 Organization and Updates

This guide is organized by discipline. Each of the chapters will be reviewed and updated regularly. Although each section is independent, all sections substantially conform to each other. Follow the Department's guidelines for naming and organizing CAD files/sheets. For exceptions please reference the applicable chapter of this guide.

Updating this guide is an ongoing process and revisions will be made periodically. Please check frequently to ensure that you are using the most current version of this document as well as the associated appendices. Questions, comments and recommendations are always welcome and may be addressed to:

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1.2 Resource Locations

For in-house personnel see the following folder tree:
L:\HighwayDesignMasters\Autocad\DraftingGuide

For Consultants the site is:
http://www.dot.state.ak.us/creg/design/highways/AutoCAD/DraftingGuide/

1.3 Intended Use

The information presented in this guide assumes that the user has a solid understanding of the common commands and features of AutoCAD software. Please defer to the Project Manager (hereafter PM) or their designated staff to request clarifications on this guide or to receive approval to deviate from it.

This guide is not a text book and does not exempt the professional from performing responsible surveying and/or engineering. It is intended to provide uniform procedures and standards for organizations that perform CAD related services for the Central Region of DOT&PF. The professional shall have final responsibility for the accuracy of all input and output of computer based applications.

Chapter 2: Drawing Development, Templates, Layering, & CTB

TABLE OF CONTENTS

APPENDIX

SECTION 1. OVERVIEW

The function of an engineering drawing is to illustrate and describe a design project in sufficient detail and clarity to ensure correct interpretation by contractors and construction personnel. To achieve this purpose, a drawing must be prepared according to universally recognized practices. This guide establishes the standards for format, content, and structure of drawings developed for roadway projects for the Central Region of the DOT&PF. The establishment of CAD data and drafting standards ensures consistency in:

- Drawing standards and symbol usage
- Layer naming and properties
- Drawing naming and sequencing
- Electronic deliverables

The creation of design drawings is merely the initial process in the facility's life span. These drawings will be shared and referenced by many users and must adhere to a well-defined standard to alleviate potential confusion and maximize efficiency. To accomplish this, all persons involved in the production of plans for the Central Region of the DOT&PF should use this guide as a basis for their development.

SECTION 2. DRAWING DEVELOPMENT

The cornerstone of all good drafting practice is clarity and precision. The Project Manager, Project Engineer, designer, and drafter must decide what is important and ensure that the drawings communicate the information to the intended audience as clearly as possible.

2.1 Basic Information

CAD files are considered models or real maps. Files shall not be broken into sheets in model space, but drawn as contiguous layouts, maps, models, etc. Each section creates file information with specific levels and symbols allowing files to be added to or linked as reference files to compile full engineering maps and models.

CAD files are considered working engineering drawings and should be drawn accurately and to scale. Differing vertical and horizontal scales may be used for clarity.

2.2 Drawing Templates & Sheet Templates

All civil base drawings shall be setup using the current appropriate dwt file. “Full sized” sheet format for all plans will be 22”x34” in paper space. “Half sized” format will be 11”x17”. Plain bond paper will be used for “Half sized” final drawing submittals unless otherwise specified. Use the standard borders and title sheets for all drawings. Central Region has drawings, templates, and other files available for use by designers and consultants.

Title and border template sheets are inserted into Paper space at coordinate 0,0,0 and attribute information is entered in full. Do not explode title and border sheet xref or blocks.

2.3 Model Space & Paper Space Guidance

Drawing models shall be drawn full scale in model space. Additional items that define the model or add model data such as details, dimensions, elevations, names, schedules, descriptive text, or sections are regularly drawn in model space. Secondary drawing elements such as title blocks and sheet borders may be created in paper space. The following lists items typically belonging in model or paper space in AutoCAD:

Model:

- Plans, sections, elevations, and details
- Any physical object located on the ground
- Text to identify a line or a specific object (typically any text with a leader is drawn in model space)
- Hatch patterns
- Dimensions
- Detail call outs and section cuts
- Object symbols
- Diagrams
- Station and/or offset references
- Elevation references

- Schedules
- Dynamic tables and large tables
- Legends
- Northing and Easting references

Paper:

- Sheet borders, title blocks, and any add-ons within the title blocks
- Viewports
- Any sheet layout information
- Titles and accompanying text

Either Paper or Model:

- General notes and sheet notes
- Non-dynamic small tables
- Detail titles

Essentially, model space is where you will do the design work and most of the drafting. Paper space is used to arrange and plot various views of the model.

2.4 Scale & Units

CAD drawing models should be drafted at full scale in engineering units such that one drawing unit equals one foot. All plans should be in imperial units.

2.5 Referenced Survey Information

Survey information referenced in design drawings shall not be moved or rotated from the original coordinates used in the survey drawing. When copying model space information between drawings, verify the UCS coordinates in both drawings are set to “World” prior to executing the copy-paste commands.

2.6 Callouts & Dimension Settings

All alignment and profile callouts should reference the Civil3D objects. Do not explode or overwrite callouts; all callouts shall remain associative, if possible.

Annotative dimensions and references should be used when available. Care should be taken to ensure the referenced object or element is correctly identified. Do not explode or overwrite dimensions; all dimensions shall remain associative, if possible.

2.7 Linework, Linetypes, & Lineweights

All line work should be black and opaque, except for as-built line work which shall be done in red. CAD entity linetypes and colors should be set “BYLAYER” with only rare exceptions. Linetype scale shall be set to plot correctly at full size. The “linescale” feature in the plot routine can then be used to plot accordingly.

The Legend Sheet (also known as A3) shows custom linetypes and standard symbols.

Best practices dictate:

- All linetypes and lineweights should be set to "BYLAYER"
- Plotted lineweights are controlled by color and the CTB file

2.8 External References & Data References

All externally referenced source drawings (xrefs) shall be inserted on the layer C-ANNO-REFR and should remain locked to avoid unintentionally moving the reference drawing from its original coordinates.

Data references should be used when possible to ensure accurate, up-to-date data is used in the design.

Note: Personnel working on a project should be continually informed of changes to referenced data. A design log or journal in the project folder and logical data naming should be retained to ensure designers use the correct data.

2.9 Font, Text Styles, & Size

All planset text shall be UPPERCASE. Two fonts are approved for use on roadway plans are; RomanSM, and RomanS. The exception to the allowed text is the title block provided by Central Region, fonts used for signage, exceptions per section dictated in this guide, and tables where text alignment provides additional clarity to the planset. Follow the provided templates for font, text style, and size.

Style	Title	Font	Size (1:1)	Remarks
RS-T200	Title Text	RomanS	0.200"	Detail Titles, Match Lines
RSM-T140	Table Header	RomanSM	0.140"	Table Column Headings
RS-T175	Subtitles	RomanS	0.175"	Detail Subtitles, Note Titles
RS-T120	Note Text	RomanS	0.120"	All General Text, & Dimensions
RSM-T120	Table Text	RomanSM	0.120"	Table Text
RS-T100	Note Text	RomanS	0.100"	Only when necessary (Parcel text, Dimensions, Grading plans, striping callouts)

Note: Do not use oblique text or a width factor; unless a special case dictates their use (i.e. Water labeling text should be at a 35 degree oblique angle).

Leader size shall be 0.20.

2.10 Tables, Titles, Notes, & Matchlines

For alignment of tables, RomanSM should be used. This is a monospaced font. Tables, titles, notes, and matchlines shall conform to what is outlined in the legend sheet and templates provided.

Cell heights in tables shall be 0.50 for titles and headers, and 0.30 for data. Add 0.2 to cell height for each additional row of text.

Insert blank row between groups of items in the Estimate of Quantities table on the C sheets for As-Built purposes. Also insert a blank row after each grouping of five (5) rows on the D sheets for the same purposes.

2.11 Blocks

The majority of blocks needed for the planset should be represented in the drawing template of the legend sheet. These blocks are included in the template. However, if an additional block is needed, all entities within the block shall be created on layer 0. Masking should be on layer 0 and the color property should be overwritten from “BYLAYER” to the appropriate masking color. Do not nest blocks, if possible.

Blocks should not be copied from the legend sheet. Blocks should be inserted into drawings as COGO points. Designers and drafters should assign their COGO points a value between 900,000 to 999,999 to avoid confusion with Survey’s COGO points, which will range from 0 to 899,999.

SECTION 3. LAYERING

3.1 Highway Design Layer Layers & Formatting

CAD drawings shall be prepared using the Central Region of the DOT&PF's layering scheme. The Central Region of the DOT&PF has eliminated its proprietary CAD layering standard and has adopted the National CAD Standards (NCS) layering scheme with some modifications. By adopting a "common language" of data classification and organization, the need for consultants to maintain multiple layering guides to decipher layer codes is reduced.

All drawings shall be layered in accordance with the standards established in the templates, legend sheet, drawing files, and those outlined in this guide.

The DOT&PF Central Region follows its own guidelines for naming and organizing CAD files and for naming sheets. The CTB file, although not entirely NCS, uses elements for simplicity.

3.2 General Layers & Formatting

Only in rare cases should new layers be created. Project specific layers will substantially conform to NCS and this guide. This is not intended to be an all-inclusive list, but rather a guideline. Here are some examples of acceptable formula variations, with explanations of formula variables found below:

1 C-TRAF = discipline code + major group
2 C-TRAF-SGNL = discipline code + major group + minor group
3 C-TRAF-SGNL-POLE= discipline code + major group + minor group + minor

3.2.1 Discipline Code:

The discipline code is a one or two-character field with the first character being the discipline code and the second character being either a hyphen or a modifier.

Discipline Code	Description
C	Civil
CU	Civil Utilities
V	Survey
VU	Survey Utilities

3.2.2 Major Group & Minor Group:

The major and minor group designations are a four-character field intended to identify the system, such as roads, right-of-way, buildings, etc. Although most major groups are logically associated with specific discipline codes, it is possible to combine major group codes with any of the discipline codes. For example: C-ASPH-EDGE or VU-ELEC-OVHD. Additional clarifiers include:

Groups	Description
TRAF	Traffic related layers
TRAF-SGNL	Traffic signal related layers
TRAF-MRKG	Traffic marking related layers
RWAY	Right-of-Way related layers

RWAY-PROP	Right-of-Way property related layers
RWAY-ESMT	Right-of-Way easement related layers
SURV	Survey

In practice, there are cases where clarity or further identifiers may be needed. The minor group codes could be used again following another minor group entry. This is optional. Further differentiation of minor groups could be needed for estimates or different viewport scales. For example, a property line might be better segregated with V-RWAY-PROP-SECT for a section line.

Note: If necessary, the minor group field may also be defined by the user, allowing additional layers to be added to accommodate special project requirements. However, this should only be done after checking to see if any of the predefined layer names meet the special project requirements.

SECTION 4. CTB FILE INFORMATION

Plotted lineweights are controlled by color and the color-dependent plot style table (CTB) file which maps drawing colors to line thicknesses. CTB files contain color-based plot styles, or mappings of colors to layers of objects; used to attach color and display settings to design objects. In a color dependent system, use the color parameter – either BYLAYER or BYOBJECT – of an object to control the thickness of the lines in the final printed output.

Appendix A outlines information for a full size plot of the CTB file. It should be used for all construction plansets. Use a 1:2 plot scale when plotting to half size (11”x17”) paper.

Chapter 2: Appendix A - CTB File Information

CR DOT&PF CTB FILE

ACAD Color #	Plot Pen Fullsize (mm)	Screening	Plot Color
1 Red	0.13	100%	Black
2 Yellow	0.18	100%	Black
3 Green	0.25	100%	Black
4 Cyan	0.35	100%	Black
5 Blue	0.50	100%	Black
6 Magenta	0.70	100%	Black
7 Black	1.00	100%	Black
8 Gray	1.40	100%	Black
9 Gray	2.00	100%	Black
EVEN GROUPS OF 10			
*0	0.130	100%	Plot Color
*1	0.180	100%	Plot Color
*2	0.250	100%	Plot Color
*3	0.350	100%	Plot Color
*4	0.500	100%	Plot Color
*5	0.700	100%	Plot Color
*6	1.000	100%	Plot Color
*7	0.500	100%	Plot Color
*8	0.180	100%	Plot Color
*9	2.000	100%	Plot Color

PLOT COLOR	
Colors 1 - 9	Black
Odd Groups of 10	Black
20's	Orange
40's	Yellow
60's	Olive
80's	Green
100's	Forest Green
120's	Teal
140's	Cyan
160's	Blue
180's	Navy
200's	Purple
220's	Magenta
240's	Red

ACAD Color #	Plot Pen Fullsize (mm)	Screening	Plot Color
ODD GROUPS OF 10			
*0	0.13	100%	Black
*1	0.18	100%	Black
*2	0.25	100%	Black
*3	0.35	100%	Black
*4	0.50	100%	Black
*5	0.70	100%	Black
*6	Varies	0%	White/Mask
*7	0.65	Varies	Black
*8	0.13	80%	Black
*9	2.00	100%	Black
SCREENED COLORS (*6 in odd groups of 10)			
16	0.13	0%	White/Mask
36	0.35	0%	White/Mask
56	0.50	0%	White/Mask
76	0.70	0%	White/Mask
96	1.00	0%	White/Mask
136	0.13	0%	White/Mask
156	0.35	0%	White/Mask
176	0.50	0%	White/Mask
196	0.70	0%	White/Mask
216	1.00	0%	White/Mask
236	1.40	0%	White/Mask
EXCEPTIONS			
20	0.70	100%	Red
21	0.25	60%	Black
22	0.35	0%	White/Mask
27	0.50	100%	Brown
40	0.13	0%	White/Mask
51	0.25	0%	White/Mask
60	0.13	10%	Screened
61	0.25	10%	Black
116	1.40	60%	Screened
117	0.35	70%	Screened
155	0.13	0%	White/Mask
164	0.50	100%	Color 142
174	0.70	60%	Screened
249	2.00	0%	White/Mask
251	0.25	50%	Screened
252	0.50	50%	Screened
253	0.50	100%	Color 252
254	0.50	0%	White/Mask
255	0.50	0%	White/Mask

CR DOT&PF CTB FILE

ACAD Color #	Plot Pen			Screening	Plot Color	Remarks
	Halfsize (mm)	Fullsize (mm)	Fullsize (in)			
1 Red	0.065	0.130	0.005	100%	Black	
2 Yellow	0.090	0.180	0.007	100%	Black	
3 Green	0.125	0.250	0.010	100%	Black	
4 Cyan	0.175	0.350	0.014	100%	Black	
5 Blue	0.250	0.500	0.020	100%	Black	
6 Magenta	0.350	0.700	0.028	100%	Black	
7 Black	0.500	1.000	0.039	100%	Black	
8 Gray	0.700	1.400	0.055	100%	Black	
9 Gray	1.000	2.000	0.079	100%	Black	
10	0.065	0.130	0.005	100%	Black	
11	0.090	0.180	0.007	100%	Black	
12	0.125	0.250	0.010	100%	Black	
13	0.175	0.350	0.014	100%	Black	
14	0.250	0.500	0.020	100%	Black	
15	0.350	0.700	0.028	100%	Black	
16	0.065	0.130	0.005	0%	White/Mask	
17	0.065	0.130	0.005	70%	Black/Screened	
18	0.065	0.130	0.005	80%	Black	
19	1.000	2.000	0.079	100%	Black	
20	0.350	0.700	0.028	100%	Red	As-built
21	0.125	0.250	0.010	60%	Black/Screened	
22	0.175	0.350	0.014	0%	White/Mask	Traffic
23	0.175	0.350	0.014	100%	Orange	
24	0.250	0.500	0.020	100%	Orange	Betterments
25	0.350	0.700	0.028	100%	Orange	
26	0.500	1.000	0.039	100%	Orange	
27	0.250	0.500	0.020	100%	Brown	Non-Par by State, FHWA, & FAA
28	0.090	0.180	0.007	100%	Orange	
29	1.000	2.000	0.079	100%	Orange	
30	0.065	0.130	0.005	100%	Black	
31	0.090	0.180	0.007	100%	Black	
32	0.125	0.250	0.010	100%	Black	
33	0.175	0.350	0.014	100%	Black	
34	0.250	0.500	0.020	100%	Black	
35	0.350	0.700	0.028	100%	Black	
36	0.175	0.350	0.014	0%	White/Mask	
37	0.065	0.130	0.005	70%	Black/Screened	
38	0.065	0.130	0.005	80%	Black/Screened	
39	1.000	2.000	0.079	100%	Black	
40	0.065	0.130	0.005	0%	White/Mask	

41	0.090	0.180	0.007	100%	Yellow	Existing Facilities to Remain
42	0.125	0.250	0.010	100%	Yellow	
43	0.175	0.350	0.014	100%	Yellow	
44	0.250	0.500	0.020	100%	Yellow	
45	0.350	0.700	0.028	100%	Yellow	
46	0.500	1.000	0.039	100%	Yellow	
47	0.250	0.500	0.020	100%	Yellow	
48	0.090	0.180	0.007	100%	Yellow	
49	1.000	2.000	0.079	100%	Yellow	
50	0.250	0.500	0.020	70%	Screened	Major Existing Contour
51	0.125	0.250	0.010	0%	White/Mask	
52	0.125	0.250	0.010	100%	Black	
53	0.175	0.350	0.014	100%	Black	
54	0.250	0.500	0.020	100%	Black	
55	0.350	0.700	0.028	100%	Black	
56	0.250	0.500	0.020	0%	White/Mask	
57	0.065	0.130	0.005	80%	Black/Screened	
58	0.065	0.130	0.005	80%	Black/Screened	
59	1.000	2.000	0.079	100%	Black	
60	0.065	0.130	0.005	10%	Black/Screened	
61	0.125	0.250	0.010	10%	Black/Screened	
62	0.125	0.250	0.010	100%	Olive	
63	0.175	0.350	0.014	100%	Olive	
64	0.250	0.500	0.020	100%	Olive	
65	0.350	0.700	0.028	100%	Olive	
66	0.500	1.000	0.039	100%	Olive	
67	0.250	0.500	0.020	100%	Olive	
68	0.090	0.180	0.007	100%	Olive	
69	1.000	2.000	0.079	100%	Olive	
70	0.065	0.130	0.005	100%	Black	
71	0.090	0.180	0.007	100%	Black	
72	0.125	0.250	0.010	100%	Black	
73	0.175	0.350	0.014	100%	Black	
74	0.250	0.500	0.020	100%	Black	
75	0.350	0.700	0.028	100%	Black	
76	0.350	0.700	0.028	0%	White/Mask	
77	0.065	0.130	0.005	80%	Black/Screened	
78	0.125	0.250	0.010	70%	Screened	Minor Existing Contour
79	1.000	2.000	0.079	100%	Black	
80	0.065	0.130	0.005	100%	Green	
81	0.090	0.180	0.007	100%	Green	
82	0.125	0.250	0.010	100%	Green	
83	0.175	0.350	0.014	100%	Green	
84	0.250	0.500	0.020	100%	Green	New Facilities
85	0.350	0.700	0.028	100%	Green	
86	0.500	1.000	0.039	100%	Green	

87	0.250	0.500	0.020	100%	Green	
88	0.090	0.180	0.007	100%	Green	
89	1.000	2.000	0.079	100%	Green	
90	0.065	0.130	0.005	100%	Black	
91	0.090	0.180	0.007	100%	Black	
92	0.125	0.250	0.010	100%	Black	
93	0.175	0.350	0.014	100%	Black	
94	0.250	0.500	0.020	100%	Black	
95	0.350	0.700	0.028	100%	Black	
96	0.500	1.000	0.039	0%	White/Mask	
97	0.065	0.130	0.005	80%	Black/Screened	
98	0.065	0.130	0.005	80%	Black/Screened	
99	1.000	2.000	0.079	100%	Black	
100	0.065	0.130	0.005	100%	Forest Green	
101	0.090	0.180	0.007	100%	Forest Green	
102	0.125	0.250	0.010	100%	Forest Green	
103	0.175	0.350	0.014	100%	Forest Green	
104	0.250	0.500	0.020	100%	Forest Green	
105	0.350	0.700	0.028	100%	Forest Green	
106	0.500	1.000	0.039	100%	Forest Green	
107	0.250	0.500	0.020	100%	Forest Green	
108	0.090	0.180	0.007	100%	Forest Green	
109	1.000	2.000	0.079	100%	Forest Green	
110	0.065	0.130	0.005	100%	Black	
111	0.090	0.180	0.007	100%	Black	
112	0.125	0.250	0.010	100%	Black	
113	0.175	0.350	0.014	100%	Black	
114	0.250	0.500	0.020	100%	Black	
115	0.350	0.700	0.028	100%	Black	
116	0.700	1.400	0.055	60%	Black/Screened	
117	0.175	0.350	0.014	70%	Black/Screened	Traffic Conduit
118	0.065	0.130	0.005	80%	Black/Screened	
119	1.000	2.000	0.079	100%	Black	
120	0.065	0.130	0.005	100%	Teal	
121	0.090	0.180	0.007	100%	Teal	
122	0.125	0.250	0.010	100%	Teal	
123	0.175	0.350	0.014	100%	Teal	
124	0.250	0.500	0.020	100%	Teal	
125	0.350	0.700	0.028	100%	Teal	
126	0.500	1.000	0.039	100%	Teal	
127	0.250	0.500	0.020	100%	Teal	
128	0.090	0.180	0.007	100%	Teal	
129	1.000	2.000	0.079	100%	Teal	
130	0.065	0.130	0.005	100%	Black	
131	0.090	0.180	0.007	100%	Black	
132	0.125	0.250	0.010	100%	Black	
133	0.175	0.350	0.014	100%	Black	
134	0.250	0.500	0.020	100%	Black	
135	0.350	0.700	0.028	100%	Black	

136	0.065	0.130	0.005	0%	White/Mask	
137	0.065	0.130	0.005	80%	Black/Screened	
138	0.065	0.130	0.005	80%	Black/Screened	
139	1.000	2.000	0.079	100%	Black	
140	0.065	0.130	0.005	100%	Cyan	
141	0.090	0.180	0.007	100%	Cyan	
142	0.125	0.250	0.010	100%	Cyan	
143	0.175	0.350	0.014	100%	Cyan	
144	0.250	0.500	0.020	100%	Cyan	
145	0.350	0.700	0.028	100%	Cyan	
146	0.500	1.000	0.039	100%	Cyan	
147	0.250	0.500	0.020	100%	Cyan	
148	0.090	0.180	0.007	100%	Cyan	
149	1.000	2.000	0.079	100%	Cyan	
150	0.065	0.130	0.005	100%	Black	
151	0.090	0.180	0.007	100%	Black	
152	0.125	0.250	0.010	100%	Black	
153	0.175	0.350	0.014	100%	Black	
154	0.250	0.500	0.020	100%	Black	
155	0.065	0.130	0.005	0%	White/Mask	
156	0.175	0.350	0.014	0%	White/Mask	
157	0.065	0.130	0.005	70%	Black/Screened	
158	0.065	0.130	0.005	80%	Black/Screened	
159	1.000	2.000	0.079	100%	Black	
160	0.065	0.130	0.005	100%	Blue	
161	0.090	0.180	0.007	100%	Blue	
162	0.125	0.250	0.010	100%	Blue	
163	0.175	0.350	0.014	100%	Blue	
164	0.250	0.500	0.020	100%	Color 142	Existing Facilities to be Adjusted
165	0.350	0.700	0.028	100%	Blue	
166	0.500	1.000	0.039	100%	Blue	
167	0.250	0.500	0.020	100%	Blue	
168	0.090	0.180	0.007	100%	Blue	
169	1.000	2.000	0.079	100%	Blue	
170	0.065	0.130	0.005	100%	Black	
171	0.090	0.180	0.007	100%	Black	
172	0.125	0.250	0.010	100%	Black	
173	0.175	0.350	0.014	100%	Black	
174	0.350	0.700	0.028	60%	Black/Screened	
175	0.350	0.700	0.028	100%	Black	
176	0.250	0.500	0.020	0%	White/Mask	
177	0.065	0.130	0.005	70%	Black/Screened	
178	0.065	0.130	0.005	80%	Black/Screened	
179	1.000	2.000	0.079	100%	Black	
180	0.065	0.130	0.005	100%	Navy	
181	0.090	0.180	0.007	100%	Navy	
182	0.125	0.250	0.010	100%	Navy	
183	0.175	0.350	0.014	100%	Navy	

184	0.250	0.500	0.020	100%	Navy	
185	0.350	0.700	0.028	100%	Navy	
186	0.500	1.000	0.039	100%	Navy	
187	0.250	0.500	0.020	100%	Navy	
188	0.090	0.180	0.007	100%	Navy	
189	1.000	2.000	0.079	100%	Navy	
190	0.065	0.130	0.005	100%	Black	
191	0.090	0.180	0.007	100%	Black	
192	0.125	0.250	0.010	100%	Black	
193	0.175	0.350	0.014	100%	Black	
194	0.250	0.500	0.020	100%	Black	
195	0.350	0.700	0.028	100%	Black	
196	0.350	0.700	0.028	0%	White/Mask	
197	0.065	0.130	0.005	70%	Black/Screened	
198	0.065	0.130	0.005	80%	Black/Screened	
199	1.000	2.000	0.079	100%	Black	
200	0.065	0.130	0.005	100%	Purple	
201	0.090	0.180	0.007	100%	Purple	
202	0.125	0.250	0.010	100%	Purple	
203	0.175	0.350	0.014	100%	Purple	
204	0.250	0.500	0.020	100%	Purple	Temporary Facilities
205	0.350	0.700	0.028	100%	Purple	
206	0.500	1.000	0.039	100%	Purple	
207	0.250	0.500	0.020	100%	Purple	
208	0.090	0.180	0.007	100%	Purple	
209	1.000	2.000	0.079	100%	Purple	
210	0.065	0.130	0.005	100%	Black	
211	0.090	0.180	0.007	100%	Black	
212	0.125	0.250	0.010	100%	Black	
213	0.175	0.350	0.014	100%	Black	
214	0.250	0.500	0.020	100%	Black	
215	0.350	0.700	0.028	100%	Black	
216	0.500	1.000	0.039	0%	White/Mask	
217	0.065	0.130	0.005	80%	Black/Screened	
218	0.065	0.130	0.005	80%	Black/Screened	
219	1.000	2.000	0.079	100%	Black	
220	0.065	0.130	0.005	100%	Magenta	
221	0.090	0.180	0.007	100%	Magenta	
222	0.125	0.250	0.010	100%	Magenta	
223	0.175	0.350	0.014	100%	Magenta	
224	0.250	0.500	0.020	100%	Magenta	
225	0.350	0.700	0.028	100%	Magenta	
226	0.500	1.000	0.039	100%	Magenta	
227	0.250	0.500	0.020	100%	Magenta	
228	0.090	0.180	0.007	100%	Magenta	
229	1.000	2.000	0.079	100%	Magenta	
230	0.065	0.130	0.005	100%	Black	
231	0.090	0.180	0.007	100%	Black	

232	0.125	0.250	0.010	100%	Black	
233	0.175	0.350	0.014	100%	Black	
234	0.250	0.500	0.020	100%	Black	
235	0.350	0.700	0.028	100%	Black	
236	0.700	1.400	0.055	0%	White/Mask	Viewports
237	0.065	0.130	0.005	80%	Black/Screened	
238	0.065	0.130	0.005	80%	Black/Screened	
239	1.000	2.000	0.079	100%	Black	
240	0.065	0.130	0.005	100%	Red	
241	0.090	0.180	0.007	100%	Red	
242	0.125	0.250	0.010	100%	Red	Existing Facilities to Retire
243	0.175	0.350	0.014	100%	Red	
244	0.250	0.500	0.020	100%	Red	
245	0.350	0.700	0.028	100%	Red	
246	0.500	1.000	0.039	100%	Red	
247	0.250	0.500	0.020	100%	Red	
248	0.090	0.180	0.007	100%	Red	
249	1.000	2.000	0.079	0%	White/Mask	
250	0.065	0.130	0.005	100%	Black	
251	0.125	0.250	0.010	50%	Black/Screened	Minor Existing Contour
252	0.250	0.500	0.020	50%	Black/Screened	Major Existing Contour
253	0.250	0.500	0.020	100%	Color 252	
254	0.250	0.500	0.020	0%	White/Mask	General Mask
255	0.250	0.500	0.020	0%	White/Mask	General Mask

Chapter 3: Survey (Roadway)

TABLE OF CONTENTS

SECTION 1. OVERVIEW

This chapter covers the Survey Control Diagram (SCD), the Survey Control Sheet (SCS), and the differences between the two products.

The SCD shows horizontal and vertical control either found or established during the survey. The SCD will show monumentation found during a ROW survey if ROW mapping is not done for the project. Record the SCD in the appropriate recording district.

The SCS identifies all existing horizontal and vertical survey control in relationship to the current project centerline or baseline. Alternately, the SCD does **NOT** show the current project alignment. The SCS is typically **NOT** recorded as a Record of Survey.

The principal users of the SCS will be Land Surveyors performing construction stakeout work in the vicinity of the project. Near-term users are: land surveyors staking the project centerline after construction, land surveyors replacing disturbed corners, DOT&PF surveyors checking work, and the Construction Engineer to ensuring existing monumentation does not get disturbed. The SCS has the potential to be used for many years.

Below is a breakdown of the typical SCD and SCS and what they consist of:

Survey Control Diagram

- Contains all horizontal and vertical control found or set.
- Contains found ROW and property corners if no ROW Base mapping effort is planned.
- The project centerline, stations, and offset tables are not shown.
- The diagram is recorded as a Record of Survey.

Survey Control Sheet (with ROW Mapping)

- The project centerline is shown, and related to horizontal and vertical control listed in tables.
- ROW and property corners are only shown if they may be affected by construction activities.
- The SCS is used in the Department's plan set.

Survey Control Sheet (without ROW Mapping)

- The project centerline is shown, and related to horizontal and vertical control listed in tables.
- ROW and property corners may also be shown in station & offset tables.
- The SCS is used in the Department's plan set.

SECTION 2. SURVEY CONTROL DIAGRAM AND SURVEY CONTROL SHEET DEVELOPMENT

2.1 Standards

Horizontal and vertical control points and existing corners shall be identified with standard DOT&PF symbols.

Each Survey Control Sheet (SCS) and Survey Control Diagram (SCD) shall show basic planimetric background information using a screened pen. The background will typically consist of the existing edge of pavement, buildings, significant land and water bodies. Label side street names. The goal is to help orient the user without cluttering the sheet.

The SCD and SCS shall be sealed and signed by a Professional Land Surveyor licensed to practice in the State of Alaska.

Note to Consultants: In the preparation of a SCD/SCS, adherence to the Central Region DOT&PF drafting guide will be strictly enforced. Additional drawing requirements are spelled out in the Surveying Statement of Services. Read these documents thoroughly since submittals that do not substantially conform to these criteria will be rejected.

2.1.1 Scale

The sheets shall be drawn at a scale to clearly show the relationship between survey control and the surrounding features. When selecting the scale keep in mind all plan sets are published on 11”x17” sheets.

2.1.2 Data Tables

On projects with multiple sheets, it is preferred that tables show only data applicable to the sheet on which the table is located. Occasionally it is prudent to group larger tables on their own sheets where space dictates.

Tables shall be sorted by ascending Point Number on the SCD, and by ascending Station on the SCS.

Horizontal Control Table - A table containing existing horizontal control points of sufficient quality to control the project. These points can be set or found points. The points shall be part of a closed traverse or redundantly tied points (as spelled out in the Statement of Services). The horizontal control table shall show point numbers, Northings and Eastings (to four decimal places), and a description of the type of monument shall be shown. Station and offset referenced from the current project alignment/baseline(s) will only be shown on a SCS. An example is shown below.

HORIZONTAL CONTROL						
Point	Station	Offset	Northing	Easting	Elevation	Description
10			262540.6528	101712.8682	223.05	Set BC/SSROD: AKDOT MP 130.7 2013
45			257384.9445	98292.5940	213.25	Set Rbr/AC[6714]: MP 132.0 2013
11	4116+35.84	70.25 Rt.	250231.0643	92923.7569	221.25	Set BC/SSROD: AKDOT MP 133.7 2013
12	4130+24.60	73.28 Rt.	249021.7190	92219.2105	223.21	Set BC/SSROD: AKDOT MP 134.0 2013
46	4243+70.87	54.70 Lt.	240352.2324	86917.4890	104.65	Set Rbr/AC[6714]: MP 136.2 2013
13	4350+73.97	79.24 Rt.	232396.1609	80717.7010	246.10	Set BC/SSROD: AKDOT MP 138.3 2013
14	4364+23.63	74.43 Lt.	231075.0577	80553.6310	267.17	Set BC/SSROD: AKDOT MP 138.5 2013
47	4443+75.41	44.97 Rt.	223437.9700	78531.9777	150.47	Set Rbr/AC[6714]: MP 140.1 2013
15	4542+53.14	90.06 Lt.	213722.0743	76808.9169	240.18	Set BC/SSROD: AKDOT MP 142.1 2013

Vertical Control Table - A table containing existing vertical control points of sufficient quality to control the project. These points can be set or found points. All vertical control points shall be part of a closed level loop; side-shots are not acceptable. The vertical control table shall show point number, Northing and Easting to the nearest foot, elevations to the hundredth of a foot, and a description of Benchmarks and TBMs shall be shown. Station and offset referenced from the current project alignment/baseline(s) will only be shown for a SCS. An example is shown below.

VERTICAL CONTROL						
Point	Station	Offset	Northing	Easting	Elevation	Description
609			256547	98037	216.27	Fd BC[USC&GS]: Z 82 1964
610			254556	95468	218.58	Fd BC[USC&GS]: P 75 1964
611	4181+48.81	21.78 Rt.	244645	90508	72.66	Fd BC[6714-S]: NINILCHIK CREEK BM-1 2005
613	4416+58.27	57.07 Lt.	226099	79089	147.97	Fd BC[USC&GS]: W 75 1964
614	4664+72.42	55.57 Lt.	201723	74552	171.90	Fd BC[USC&GS]: Y 86 RESET 1967
615	4715+62.32	99.63 Rt.	197241	72309	172.71	Fd BC[USC&GS]: X 86 1964
616	4775+75.80	43.62 Lt.	191848	70244	274.86	Fd BC[USC&GS]: W 86 1964

Monument Table - A monument table shall be included as part of the SCD/SCS per the following conditions. An example is shown below.

SCD - A monument table will be included in the SCD when no ROW mapping is being done for the project.

SCS - A monument table will be included in the SCS to show any monumentation potentially affected by construction. For example, centerline monuments, GLO monuments, and property corners directly affected by construction.

FOUND MONUMENTATION					
Point	Station	Offset	Northing	Easting	Description
701	3209+55	67 Lt.	317022.6952	147001.0559	Fd BC[BLM]: 1/4 S21|S22 xTIN R12W SM
702	3377+35	96 Rt.	304462.0861	136204.6052	Fd Rbr: S Cor LIO Bluffs
703	3375+70	66 Lt.	304538.4467	136422.5087	Fd AM[4928-S]: NW Cor Alascom Parcel
704	3377+78	58 Lt.	304355.2450	136324.3865	Fd AM[4928-S]: SW Cor Alascom Parcel
705	3480+78	51 Rt.	294856.4121	133373.6411	Fd AM[7328-S]: CS 1/16 S7 xTIN R12W SM
706	3852+05	47 Rt.	268995.1383	109088.1892	Fd BC[268-S]: SW 1/16 S5 xTIS R13W SM

2.1.3 Control Statements

A Horizontal & Vertical Control statement is required and will be provided by the DOT&PF Survey Section. Examples are shown below.

Horizontal Control Statement

Coordinate System:
This project is located entirely within the Anchorage Bowl 2000 adjustment, a U.S. Survey Foot local surface grid coordinate system developed by the Alaska Department of Transportation.

Basis of Coordinates:
The Basis of Coordinates is NGS Station O'Malley, located near the intersection of the New Seward Highway and O'Malley Road. Said station has Anchorage Bowl 2000 coordinates of 303,939.2310 N, 353,362.5446 E.

Basis of Bearings:
The Basis of Bearings is a local plane bearing between NGS Station O'Malley and NGS Station Loop 2 USE RM 3 1964. NGS Station Loop 2 USE RM 3 1964 bears N 01º43'26. 4"E a distance of 49,488.45 U.S. Survey Feet from NGS Station O'Malley. NGS Station Loop 2 USE RM 3 1964 has Anchorage Bowl 2000 coordinates of 353,405.2778 N, 354,851.3982 E.

Translation Parameters:
To convert the local coordinates to NAD83 (92) State Plane foot coordinates, translate using +2,296,868.6878 N, +1,312,517.4905 E, and scale using 0.9998910192.

Vertical Control Statement

MSL NAVD 88 as determined by differential level loops performed by DOT&PF between bench marks USC&GS BM V-102 1965, a brass disk clamped to a copper coated rod, with an elevation of 356.05 feet; USC&GS BM D-103 1965, a brass disk clamped to a copper coated rod, with an elevation of 301.58 feet; and USC&GS BM E-103 1965 a brass disk clamped to a copper coated rod, with an elevation of 285.89 feet.

2.1.4 Notes

The notes should contain the following information:

1. The methodology of how the survey was completed.

2. The unit of measurement used for the project.
3. Who completed the survey and the date it was performed.
4. Any additional information or direction to clarify the survey.

An example is shown below.

NOTES

1. *The information shown hereon is based on a field survey performed by DOT&PF January 28 through April 1, 2014.*
2. *Background information depicted is shown for orientation only and should not be used for any other purposes.*
3. *All dimensions, coordinates, and elevations shown are in U.S. Survey Feet unless otherwise noted.*
4. *Horizontal control points shown on this sheet were surveyed using networked static GNSS techniques. GNSS measurements were performed using Leica Viva GS15 GNSS receivers and processed using Leica GeoOffice v8.4 software. Differential leveling was performed with a Leica DNA-03 digital level.*
5. *All monument cases will have a permanent riser of sufficient height added so that the top of the monument lid matches finished grade.*
6. *All elevations must be field verified before use.*

2.2 Survey Control Diagram

2.2.1 Surveyor's Certificate

The SCD will be filed as a Record of Survey (ROS). A Surveyors Certificate shall appear and be signed by the PLS responsible for the diagram(s). The following certificate is an example:

Surveyor's Certificate

> *I hereby certify that I am properly Registered and Licensed to practice Land Surveying in the State of Alaska, and that this drawing represents a survey made by me or under my direct supervision, and that the monuments shown hereon actually exist as described, and that all dimensions and other details are correct to the extent shown hereon.*

_____	_____	_____
(Surveyor Name)	*(Surveyor Registration Number)*	*(Date)*

2.2.2 Title Block

The following statements should be placed above the title block.

Recording District
State Business—No Fee
This survey does not constitute a subdivision
As defined by AS 40.15.900(5)

MTRS information shall be placed in the title block.

Cap marking details shall be drawn on the SCD as recovered or set. The cap drawings shall depict all markings on the cap including dings and scratches as well as showing their orientation relative to north.

2.3 Survey Control Sheet

1. The current project alignment/baseline(s) shall be shown. Tangents shall be labeled with bearings to the nearest second and distances to the hundredth of a foot. Curves shall have PC and PT's stations and coordinates labeled as well as delta, radius, length, and tangent values. Curves shall be tangential, unless specifically called out otherwise and labeled accordingly. On projects with multiple adjoining alignment/baseline(s) (such as ramp, side street, bike path, and frontage road alignment/baselines) the consultant shall meet with DOT&PF Survey personnel to determine which alignment/baseline(s) shall be shown and dimensioned.

2. The SCS shall contain the following statement:

   Whether listed or not, ALL monuments or property markers, corners, or accessories, which will be disturbed or buried, shall be referenced and re-established in their original position (A.S. 19.10.260) and recorded (A.S. 34.65.040).

Chapter 4: Right-of-Way

TABLE OF CONTENTS

APPENDIX

TABLE OF FIGURES

SECTION 1. OVERVIEW

This Chapter of the Alaska DOT&PF Central Region CAD Standards and Drafting Guide (CRDG) is to assist staff and contractors through the Right-of-Way Engineering (ROW) drafting process. The information included in ***Italics*** is condensed and taken from:

> *Chapter 3 - Title and Plans of the Alaska Right-of-Way Manual*
> *For titles and plans, ROW obtains current title information on each acquisition parcel to ensure accurate ROW plans for appraisals, negotiations and relocations. The regional ROW Section develops the required project title information in the early stages of a proposed project.*

SECTION 2. RIGHT-OF-WAY PLANS – APPENDIX A

The Alaska Department of Transportation AutoCAD file **ROW_Template.dwt** is located within: **RWE:\C3D\AKDOT ROW Masters** and includes plan, parcel, easement, and schedule title blocks; label styles, tables, and the UCS layer convention.

2.1 Cover – RWE:\C3D\AKDOT ROW Masters

The ROW Cover Sheet format is provided in AutoCAD file 12345_R1 ROW Cover.dwg

The ROW Cover consists of all title block entities for project information and format:

Left — Alaska Location Map inset, Acquisition and Construction Dates, Project Length and Sufficient identifying information as directed by the ROW Engineering supervisor

Center — Project Title Information and Project Site Map with PLSS (Public Land Survey System) Stationing Arrows for Beginning and End of Project, PLSS north arrow and scale

Right — Plat Appraisal Information, date and signature
ROW Regional Chief and Supervisory Surveyor Certification dates and signatures
Regional Chief ROW Agent date and signature
Professional Seal and Department Description
Recording information and district

2.2 Legend – RWE:\C3D\AKDOT ROW Masters

The AKDOT&PF ROW Legend is provided in AutoCAD file: **12345_R2 ROW Legend.dwg**

Identify all symbols used and show them in the legend or on a standard legend sheet.

2.3 Tract – RWE:\C3D\AKDOT ROW Masters

The AKDOT&PF ROW Tract format is provided in AutoCAD file: **12345_R3 ROW Tract.dwg**

On the ROW Tract Map, show as much of the entire property ownerships, Public Land Survey System (PLSS – Township, Range, Section and Meridian), the road systems, major water bodies and tributaries and major cultural land features in a broad band for the length of the project. Show the centerline (of road or project?), ROW line of the highway with ROW hatch*, and the boundary lines to give a general picture of the entire project and its possible effect on properties.*

The Tract Map shows the plan-sheet layout boundaries with sheet number sequence, PLSS north arrow in upper right hand corner and bar scale placed in same location on all sheets.

2.4 Plans – RWE:\C3D\AKDOT ROW Masters

The basic purpose of ROW plan sheets is to depict as much information as possible for the appraiser, the ROW agent, and the property owner. An important function is to show the ROW lines in relation to the property lines and improvements and to provide a reference for the instrument of conveyance.

The Right-of-Way Plans serve as a vehicle for the acquisition of property for right-of-way. These plans are used for appraisals, negotiations and condemnation if necessary for the project. The ROW Plans accompany project design plans for the primary purpose of providing information to accurately locate

the right-of-way limits, and meet municipal right-of-way acquisitions plat standards relative to monuments and platting for the purpose of recording. PLSS north arrow and scale.
The AKDOT&PF ROW Tract format is provided in AutoCAD file: **12345_R4 ROW Plan.dwg**
The **ROW Title Block** is provided on a Layout Tab within the ROW **Template.dwt** OR by itself within:
12345 Title Block.dwg RWE:\C3D\AKDOT ROW Masters
This 'attributed' title block is used as an **X-reference** (xref) for all Plan-Set Sheets following the cover and includes project titles, federal-aid and state project numbers to populate on all sheets. Use sheet-set manager for sheet sequence, pagination and plotting. Sheet numbers with ROW designator R2 of R22 are shown only in the Project Designation area in upper right sheet corner.

X-Reference support drawings to retain integrity of data from various sources.

Attach the x-reference drawing as an ***OVERLAY*** (recommended) on named layers:

0-XREF - BASE, - TTLB, - DAYL, - DSGN,- TCEP within file: **RWE:\(Project)\AutoCAD\XREF (folder)**

12345 TTLB	.dwg	Attributed title block with project info from ROW_Template.dwt	
12345 BASE	.dwg	Existing ROW, PLSS, Property Identification and Ownership	
12345 TOPO	.dwg	Infrastructure	from Survey
		Point data	from Survey
12345 DAYL	.dwg	Design slope limits	from Design
12345 DSGN	.dwg	Proposed alignment	from Design
12345 TCEP	.dwg	Temporary Construction Easement and Permits	

Right-of-Way Plan Scale
Use the same scale on the ROW plans as used on the design plans, if possible. To provide the required clarity, use the following scales, or another scale as directed by the ROW Engineering Supervisor. (Rural: 100' and 200'; Suburban: 100' and 50', Urban: 50' and 20').
Draw each property plan to scale and show a north arrow with PLSS information.
Right-of-Way Plan General Information
Draft all ROW plan sheets so that all parcels, easements, permits, etc., can be identified. The plan sheets shall contain the following information:
All existing property lines with Bearing and Distance label included on parcel acquisition,
All found corners tied to project centerline, - ROW Mapping, NOT Base Mapping
All rectangular surveys including aliquot parts, U.S. Surveys, subdivisions (by name or plat number), etc., that are used to identify ownership:
TRACT, PLAT, SUBDIVISION (SUBD.), BLOCK and LOT
All pertinent infrastructure that may affect costs of the ROW; such as structures (culverts), land service or access roads, improvements (all owner buildings) and fences. Show centerline ties and dimensions of improvements and structures within local setback requirements of the new ROW line,
Leader, Arrows and Stationing for Beginning and End of Project, label Roadway
All existing ROW,
All existing utility facilities and all utility easements with the type and ownership labeled,
The new ROW line and all pertinent distances and bearings. Show centerline offset distances to all breaks in ROW, or, if constant width, the offset distance should be shown on each plan sheet. All distances should be surface distances instead of state plane grid distance,

*The parcel- information **'table'** is generally located at the bottom of each respective plan sheet and contains the following information: 1)**Parcel No.** (# or **E-#** or **P-#**)(Fee, Easement, Permit or Other as noted), 2) type of **Interest Acquired**, 3) current **Owner**, 4) area of **Larger Parcel**, 5) **Take Including Existing Easement** area, 6) **Net Take** area, 7) **Remainder** area, 8) **Recorded Document Number***

Access control lines and points of approved access

Easement lines and label

Detail insets (if needed) are drawn to scale on their respective plan sheet and depict all features listed above. When more room is needed place detail insets on a separate sheet following the plans sheets and before monument summary sheets.

MATCH LINE and SHEET NUMBER are displayed in Layout Space on each Plan Sheet match (no overlap). Best to create the Match Line at ROW breaks, station breaks and monuments to omit duplicate labeling.

General Drafting Information: See Parcel Plats this Chapter regarding type, styles, text height, etc.
General labeling text is RomanS at 100 and as used in template and styles
Leader for general labeling is style RWAY MLEADER or Spline

(ROW Plan Sheet drafting features or methods other than listed above add here)

ROW Plan Sheet Project Control and Construction Information

*On the ROW plans show each main centerline and stationing. Show auxiliary centerlines of subordinate roadways if pertinent to acquisition or deed description. Show the beginning and end of the project's limits, the limits of construction or **slope limits,** drainage structures and other construction components that may affect valuation.*

ROW Plan Sheet Certification

The Supervising Professional Land Surveyor must stamp and certify the ROW Cover.

2.5 Monument Summary – RWE:\C3D\AKDOT ROW Masters

All notes and tabled resources provided per project including general notes and resource documents.
12345_R5 ROW Monument.dwg

The Monument Summary Sheet includes the following information:

Horizontal control statement which includes the coordinate system used, basis of coordinates, basis of bearings and translation parameters

Recovered corners table (Base Map)

Project Centerline Monuments table (to be set and after construction the set values)

ROW surveyor and department locations surveyor's seal

Other notes as directed by ROW engineering supervisor

Surveyed by and dates of Survey

SECTION 3. AIRPORT PROPERTY PLANS – APPENDIX B

Airport Property Plans (APP)
Acquisition Plat (recorded)
Airport Record Drawing -"Exhibit "A"
Airport Layout Plan (ALP)
Airport Property Map (APM) – part of the AIP
Airport Improvement Plan (AIP) - FFA program that funds improvements to airports

The process for airport land acquisition and development is contained in FAA's Advisory Circular 150/5100-17, Chapter.FAA has provided verbal authorization to replace Exhibit "A" mentioned in the circular with the airport property plan. The primary intent is to identify all land that is designated airport property and to provide and inventory of all parcels that make up the airport. The property plan is a document unique to the Airport Improvement Project (AIP). At a minimum, the document must show the current airport boundary compiled form deed research, available mapping/surveys, and field verification, as required.
*The **Exhibit 'A'** property map must be submitted as part of the project's grant application.*
Exhibit 'A' must be dated and amended whenever there is a change to any airport property.

SECTION 4. PARCEL PLATS – APPENDIX C

The ROW Parcel, Easement and Schedule Title Blocks are provided in AutoCAD file: **ROW Template.dwt**

Parcel Plat for 'Fee Interest' and 'Easement' are published on 8-1/2x11 inch paper (landscape or portrait). *If necessary, use more than one page to show the entire ownership and details of the acquisition (plot 1 of _ is provided with attribute title block). Information to include: lot, block, subdivision, survey or plat number, section or portion thereof, etc. Tie property to the project centerline; identification number for parcel, permit, easement, etc.; project ROW lines, parcel lines, and control-access lines- properly labeled; label entire larger parcel ownership AND the property lines, major improvements on the parcel, existing ROW in proximity to the parcel - properly labeled, pertinent centerline (ROW or Project) and associated data; stationing equations, curve data, bearing and distance, project identification (name and numbers) and area acquired.* Update Scale, Legend, *north arrow with PLSS information and* multiple page notes provided for take and remain.

See **Parcel Drawing ENTITIES.dwg** for all related drafting entities populated on UCS layers:

LARGER	is	REMAIN	(+ **GROSS TAKE**)	Dash at 45°
REMAIN	is	LARGER	(– GROSS TAKE)	AnsiD
NET (NEW)	is	portion of gross take that is not easement		Dot @ 0.6 scale @ 45°
ROW Take	is	depicted the same as NEW		Dot @ 0.6 scale @ 45°

To depict the 'ROW take' or 'New' Dot pattern in excessively-larger areas, offset the perimeter of the area by 1/5th the scale and fill this boundary with the hatch pattern with no boundary.

GROSS	is	TAKE (gross is most, TAKE is purchase)	
LAND HOOK	for	Multiple parcel take – same owner	,----------‘
S.F.	for	Square Feet label under 100,000 square feet	
Area	is	even number S.F. for GROSS and NEW	
AC	is	Acre label used when area is over 100,000 sqaure feet (1AC = 43,560 SF)	
Area	in	acres is to three decimal places (1.234 AC), ± (error) shown on REMAIN only for AC or S.F.	
Slope Limits	are	Cut _ _ _	Fill . . . . (daylight or DAYL)

4.1 Subdivision Plat – Appendix D

Subdivision Plat is developed for change in property ownership and record

SECTION 5. PLAN CHANGES – APPENDIX E

5.1 Design Changes

As designs plans are modified, change the parcel plat and the ROW plan.

5.2 Changes Found During Appraisal or Acquisition

Chief ROW Agent takes appropriate action to correct omissions or changes noted during the appraisal or acquisition processes.

5.3 Disposal of Excess Land

When DOT&PF intends to dispose of, relinquish, or abandon excess ROW, the Engineering Unit prepares a legal description or plat, revises the ROW plans, and determines the type of ownership. Property Management prepares and records the conveyance, and then the Engineering Unit must revise the ROW plans to reflect the disposal.

5.4 Condemnation

When a parcel is approved for condemnation, the Engineering unit must prepare appropriate court exhibits. Place this material in the parcel file and provide it to the Acquisition Unit and the Department of Law.

SCHEDULE 'A' - Legal tract description (Metes and Bounds) of condemnation of property
SCHEDULE 'B' - Location Map of parcel with gross and net take and remain –
SCHEDULE 'C' – Vicinity Map for Schedule 'B' showing parcel, lots, subdivisions and PLSS

SECTION 6. PARCELIZATION AND NUMBERING

Parcel numbers are displayed in a 'Circle' attributed block.

All parcels on a ROW project are numbered in sequence as they appear on the ROW plans. The Engineering Unit assigns the parcel numbers (except for materials sources) when the ROW plans are developed. If a parcel is split or added, add an alphabet letter to the original assigned parcel number (for example, a split or addition to Parcel 1 would be designated 1A).

SECTION 7. EASEMENT PARCELIZATION – APPENDIX F

Easement numbers are displayed in an 'Ellipse' attributed block.

*Prefix all easement by the letter 'E' followed by the number assigned to the ROW parcel for that particular larger parcel, or the next consecutive number. The parcel- information **'table'** must designate the type of easement and its purpose (see APPENDIX B – ROW Plans).*

Temporary Construction Permit	**Line Type**	**TCP__//__**	**APPENDIX G**
Temporary Construction Easement	**Line types**	**TCE __||__**	**APPENDIX H**

Prefix all areas acquired for the duration of the project only (construction permits, waste areas, etc.) through the use of a temporary construction permit (TCP) or a temporary construction easement (TCE), by the letters "TCP" and "TCE" followed by the number assigned to the ROW parcel for that particular larger parcel.

7.1 Numbering Easement or Permit Areas Not Part of a Right-of-Way Parcel

For all easements or permit areas not associated with a parcel, assign a number in numerical sequence with the parcel numbers. When no numbers are available for the easement or permits, use the closest parcel number followed by a letter designation.

7.2 Numbering Material Sources

Number a materials source in accordance with the number assigned by the Materials Section preceded by "MS". On federal-aid primary routes, the "MS: number must contain three dashes to separate the route number, the route-section number, the location and the region number (MS 21-1-243-1, MS 37-1-004-2, etc.) On the secondary routes, the "MS" number must contain two dashes to separate the route number, the location number and the region number (MS 680-009-2, MS 937-101-3, etc.)

7.3 Numbering Maintenance and Stockpile Sites

Designate all maintenance and stockpile sites by name rather than by number

7.4 Numbering Excess Parcels, Relinquishments, Vacations

Numbering ROW excess parcels, relinquishments, and vacations in accordance with the property management numbering system.

7.5 Restrictive Native Allotments

Surveying and platting within Alaska Native Lands and restricted native allotments are in accordance with the Bureau of Indian Affairs (BIA). It is essential, that prior to the surveying or platting of restricted Native lands, the Regional BLM Indian Lands Surveyor (BILS) be contacted in order to determine the most current procedures necessary to accomplish the desired action.

If any changes are made in the ROW plans after receiving the ATP with appraisal and acquisition, show changes on original ROW Plans. Also itemize the changes in a revision block on the original ROW plans.

Chapter 5: Appendix A – Right-of-Way Plans

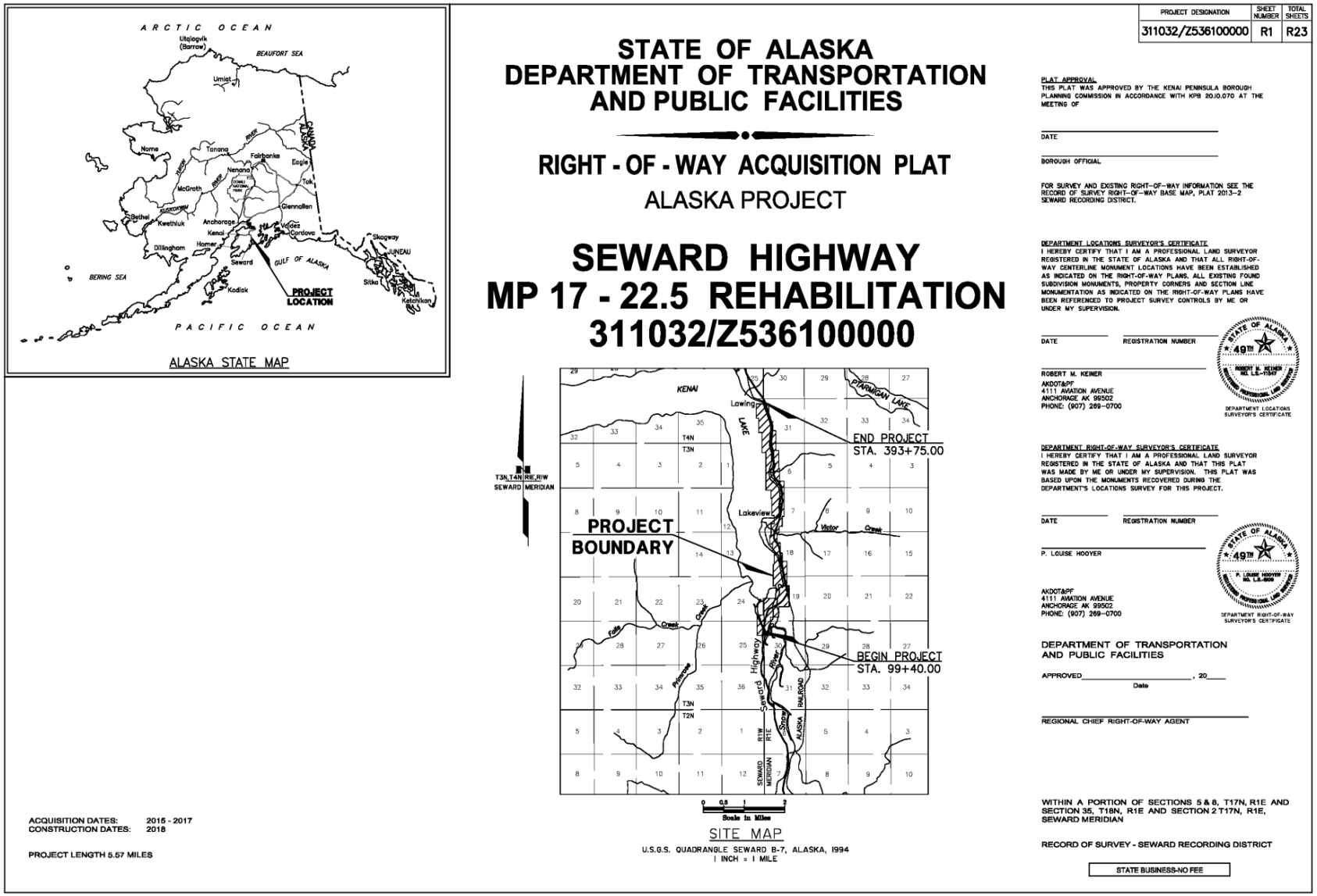


Figure A - 1: Cover

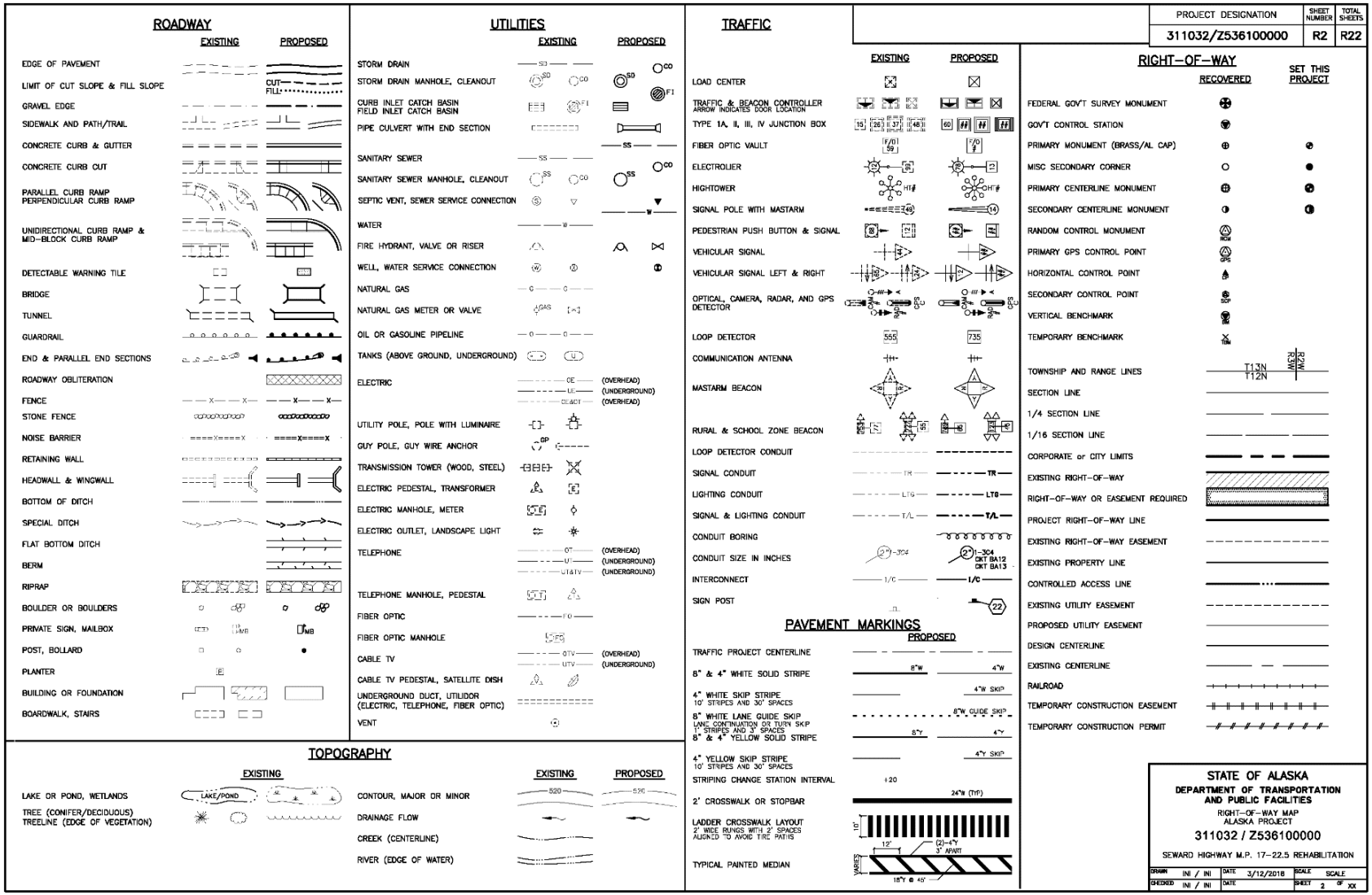


Figure A - 2: Legend

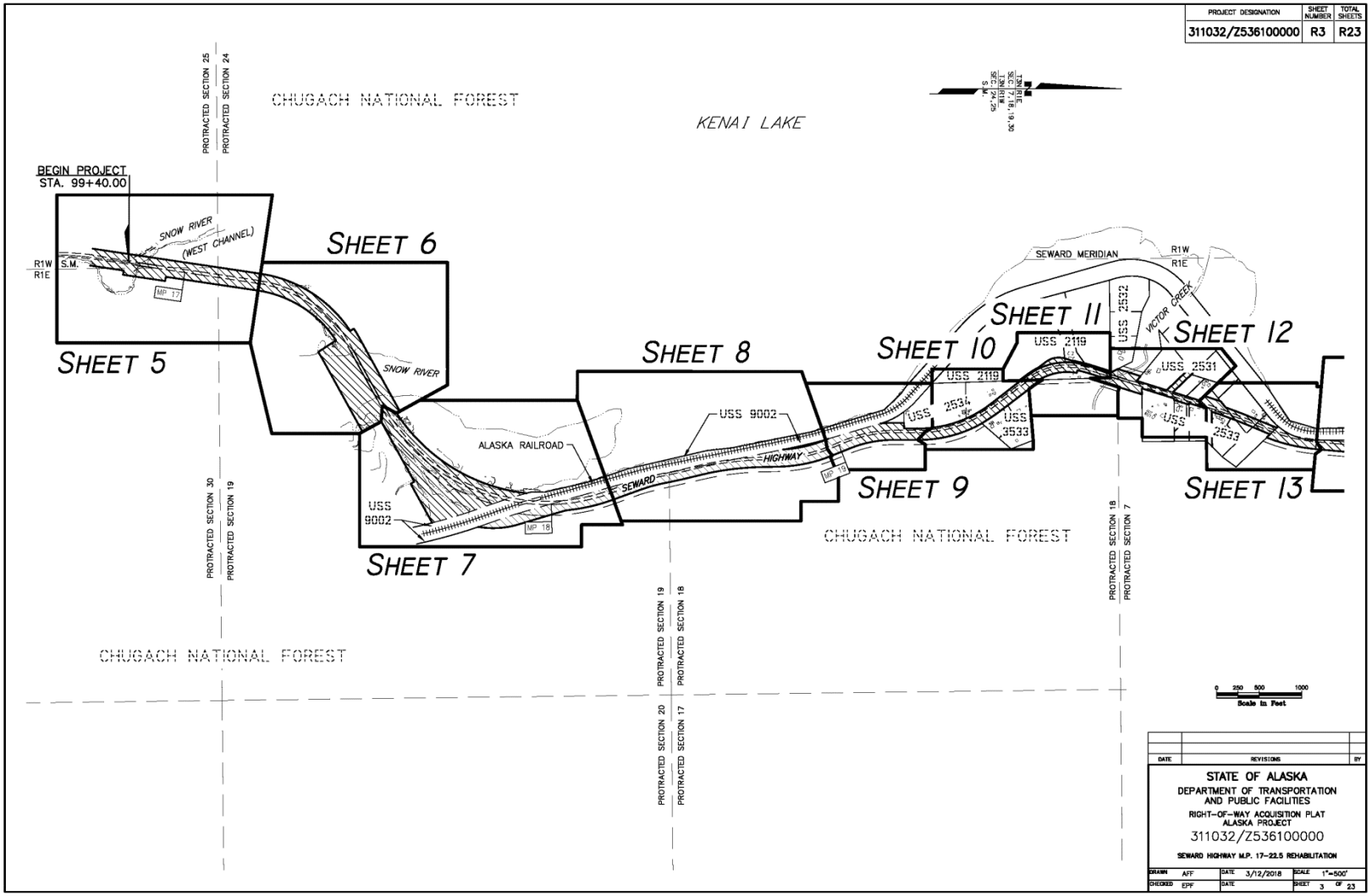
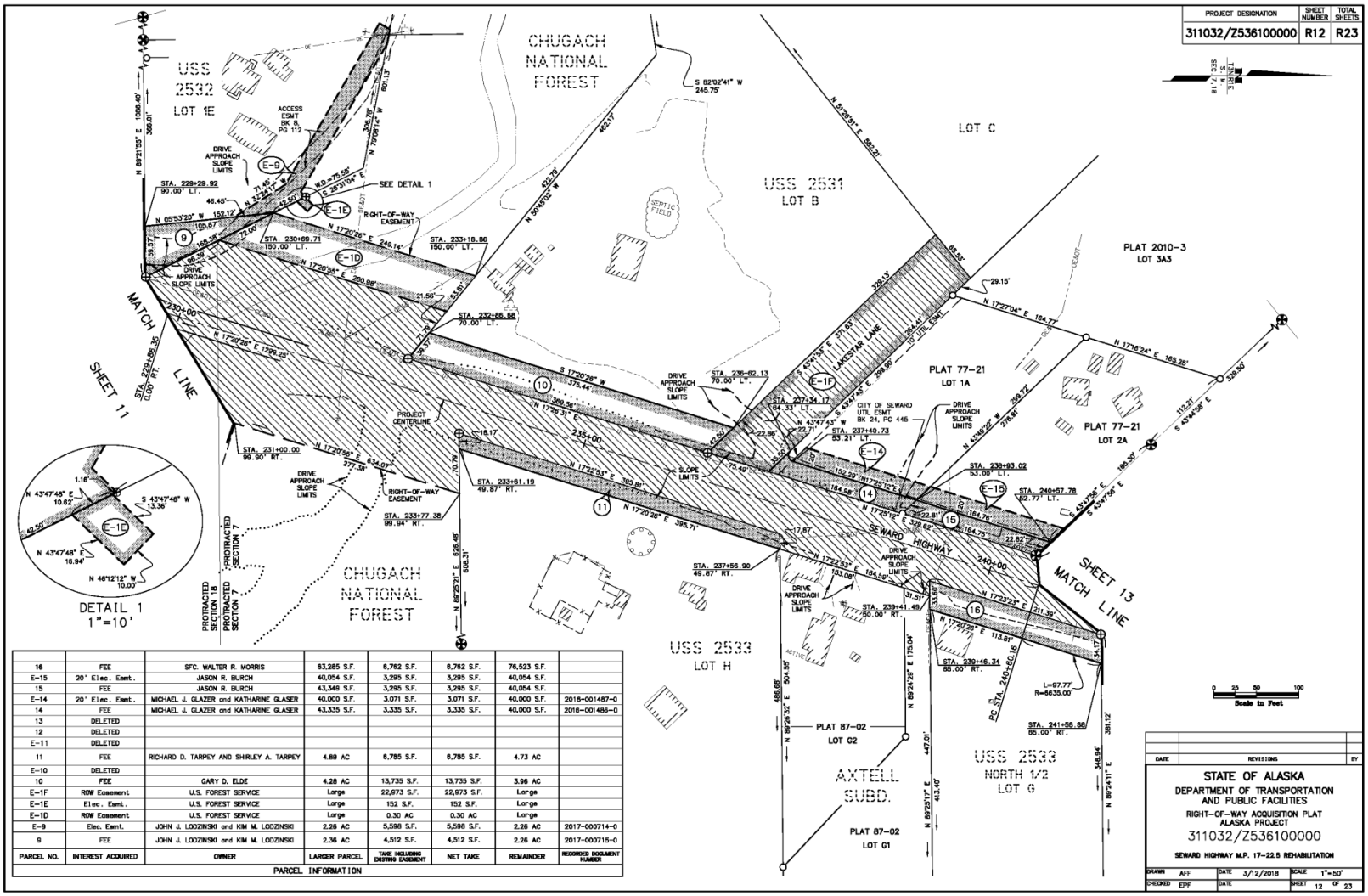


Figure A - 3: Tract



PARCEL NO.	INTEREST ACQUIRED	OWNER	LARGER PARCEL	TAKE INCLUDING EXISTING EASEMENT	NET TAKE	REMAINDER	RECORDED DOCUMENT NUMBER
PARCEL INFORMATION							
16	FEE	SFC. WALTER R. MORRIS	83,285 S.F.	6,762 S.F.	6,762 S.F.	76,523 S.F.	
E-15	20' Elec. Esmt.	JASON R. BURCH	40,054 S.F.	3,295 S.F.	3,295 S.F.	40,054 S.F.	
15	FEE	JASON R. BURCH	43,349 S.F.	3,295 S.F.	3,295 S.F.	40,054 S.F.	
E-14	20' Elec. Esmt.	MICHAEL J. GLAZER and KATHARINE GLASER	40,000 S.F.	3,071 S.F.	3,071 S.F.	40,000 S.F.	2016-001487-0
14	FEE	MICHAEL J. GLAZER and KATHARINE GLASER	43,335 S.F.	3,335 S.F.	3,335 S.F.	40,000 S.F.	2016-001486-0
13	DELETED						
12	DELETED						
E-11	DELETED						
11	FEE	RICHARD D. TARPEY AND SHIRLEY A. TARPEY	4.89 AC	6,785 S.F.	6,785 S.F.	4.73 AC	
E-10	DELETED						
10	FEE	GARY D. ELDE	4.28 AC	13,735 S.F.	13,735 S.F.	3.96 AC	
E-1F	ROW Easement	U.S. FOREST SERVICE	Large	22,973 S.F.	22,973 S.F.	Large	
E-1E	Elec. Esmt.	U.S. FOREST SERVICE	Large	152 S.F.	152 S.F.	Large	
E-1D	ROW Easement	U.S. FOREST SERVICE	Large	0.30 AC	0.30 AC	Large	
E-9	Elec. Esmt.	JOHN J. LODZINSKI and KIM M. LODZINSKI	2.26 AC	5,598 S.F.	5,598 S.F.	2.26 AC	2017-000714-0
9	FEE	JOHN J. LODZINSKI and KIM M. LODZINSKI	2.36 AC	4,512 S.F.	4,512 S.F.	2.26 AC	2017-000715-0

Figure A - 4: Plan 1

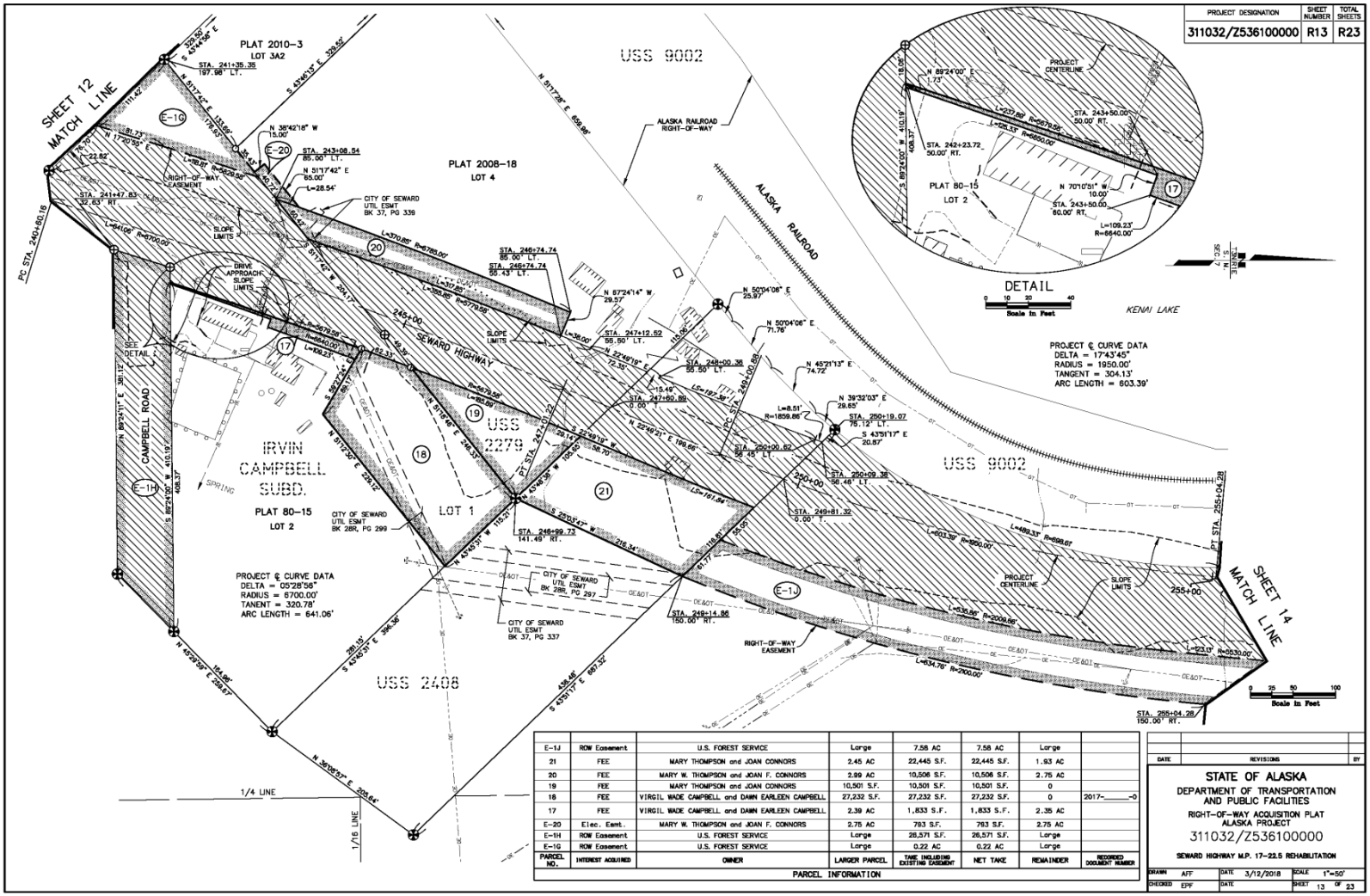
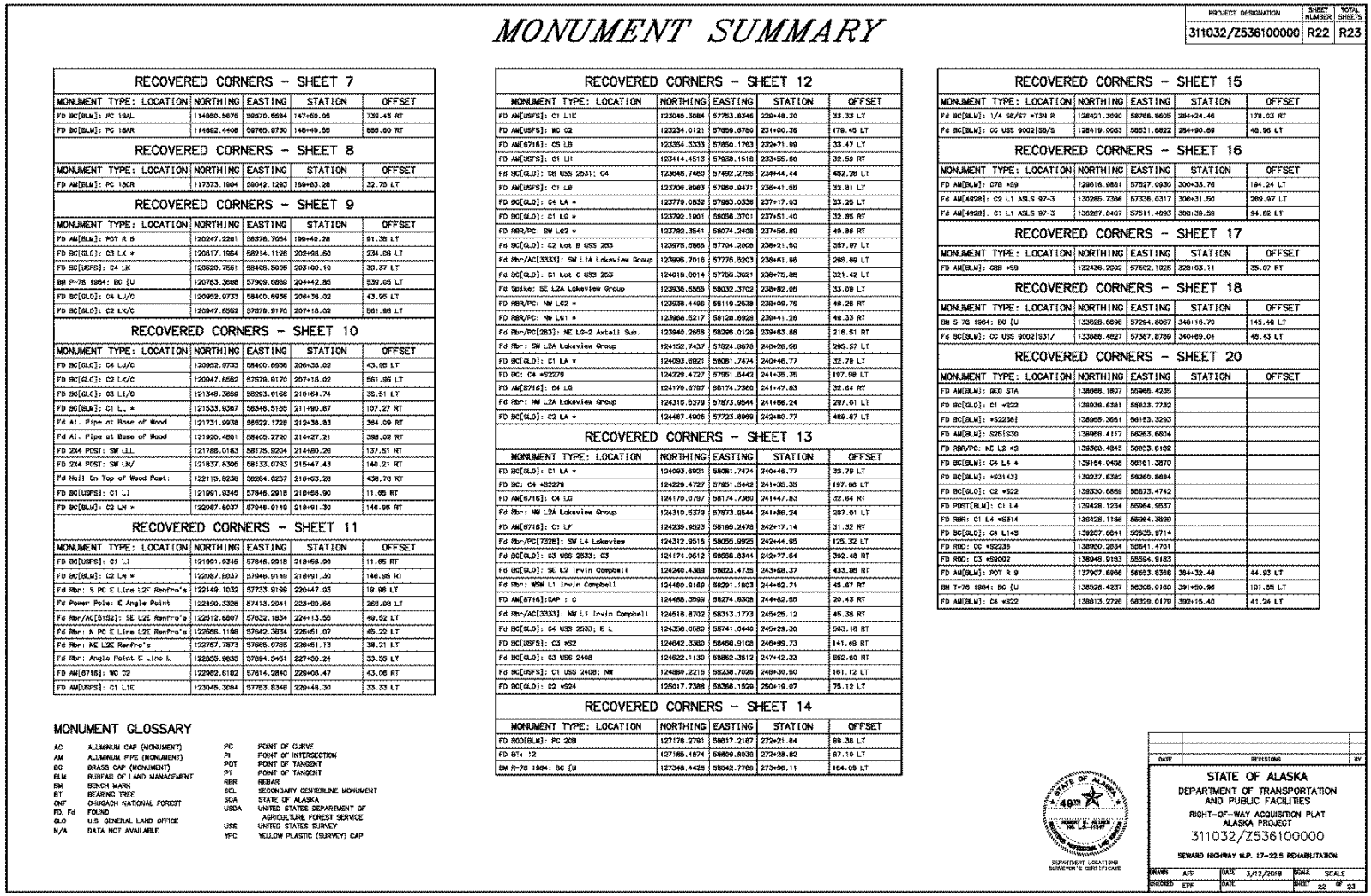


Figure A - 5: Plan 2



MONUMENT SUMMARY

PROJECT DESIGNATION	SHEET NUMBER	TOTAL SHEETS
311032/Z536100000	R22	R23

RECOVERED CORNERS - SHEET 7

MONUMENT TYPE: LOCATION	NORTHING	EASTING	STATION	OFFSET
FD BC[BLM]: PC 18AL	114650.5676	59570.6584	147+60.05	739.43 RT
FD BC[BLM]: PC 18AR	114992.4408	59765.9730	148+49.55	886.60 RT

RECOVERED CORNERS - SHEET 8

MONUMENT TYPE: LOCATION	NORTHING	EASTING	STATION	OFFSET
FD AM[BLM]: PC 18CR	117373.1904	59042.1283	159+83.28	32.75 LT

RECOVERED CORNERS - SHEET 9

MONUMENT TYPE: LOCATION	NORTHING	EASTING	STATION	OFFSET
FD AM[BLM]: POT R 5	120247.2201	58376.7054	196+40.28	91.38 LT
FD BC[GLO]: C3 LK *	120617.1984	58214.1128	202+98.60	234.09 LT
FD BC[USFS]: C4 LK	120620.7561	58408.9005	203+00.10	38.37 LT
BM R-78 1984: BC [U	120763.3608	57909.6869	204+42.86	539.05 LT
FD BC[GLO]: C4 L4/C	120952.9733	58400.6936	208+36.02	43.95 LT
FD BC[GLO]: C2 LK/C	120947.6662	57879.9170	207+18.02	561.98 LT

RECOVERED CORNERS - SHEET 10

MONUMENT TYPE: LOCATION	NORTHING	EASTING	STATION	OFFSET
FD BC[GLO]: C4 L4/C	120952.9733	58400.6936	208+36.02	43.95 LT
FD BC[GLO]: C2 LK/C	120947.6662	57879.9170	207+18.02	561.98 LT
FD BC[GLO]: C3 L1/C	121348.3859	58293.0166	210+64.74	35.51 LT
FD BC[BLM]: C1 LL *	121533.9267	58348.5185	211+90.67	107.27 RT
Fd Al. Pipe at Base of Wood	121731.9638	58522.1728	212+38.83	364.09 RT
Fd Al. Pipe at Base of Wood	121920.4801	58405.2720	214+27.21	398.02 RT
FD 2X4 POST: SW LL1	121786.0183	58175.9204	214+80.28	137.51 RT
FD 2X4 POST: SW LN/	121837.6306	58133.0783	215+47.43	140.21 RT
Fd Nail On Top of Wood Post:	122115.9238	58284.6257	218+63.28	438.70 RT
FD BC[USFS]: C1 L1	121991.9345	57846.2918	218+68.90	11.65 RT
FD BC[BLM]: C2 LN *	122087.8037	57948.9149	218+91.30	146.95 RT

RECOVERED CORNERS - SHEET 11

MONUMENT TYPE: LOCATION	NORTHING	EASTING	STATION	OFFSET
FD BC[USFS]: C1 L1	121991.9345	57846.2918	218+68.90	11.65 RT
FD BC[BLM]: C2 LN *	122087.8037	57948.9149	218+91.30	146.95 RT
Fd Rbr: S PC E Line L2F Renfro's	122149.1032	57733.9199	220+47.03	19.98 LT
Fd Power Pole: E Angle Point	122490.3328	57413.2041	223+89.66	268.08 LT
Fd Rbr/AC[5152]: SE L2E Renfro's	122512.6807	57632.1834	224+13.58	49.92 LT
Fd Rbr: N PC E Line L2E Renfro's	122568.1198	57642.3634	225+61.07	45.22 LT
Fd Rbr: NE L2E Renfro's	122757.7873	57685.0785	226+51.13	38.21 LT
Fd Rbr: Angle Point E Line L	122855.9635	57694.5451	227+50.24	33.55 LT
FD AM[6716]: WC C2	122982.6182	57614.2840	228+08.47	43.96 RT
FD AM[USFS]: C1 L1E	123045.3084	57753.6348	229+48.30	33.33 LT

RECOVERED CORNERS - SHEET 12

MONUMENT TYPE: LOCATION	NORTHING	EASTING	STATION	OFFSET
FD AM[USFS]: C1 L1E	123045.3084	57753.6348	229+48.30	33.33 LT
FD AM[USFS]: WC C2	123234.0121	57859.9780	231+00.36	179.45 LT
FD AM[6716]: C5 LB	123354.3333	57850.1763	232+71.99	33.47 LT
FD AM[USFS]: C1 LH	123414.4513	57938.1518	233+55.60	32.59 RT
Fd BC[GLO]: C8 USS 2531: C4	123648.7460	57492.2788	234+44.44	462.26 LT
FD AM[USFS]: C1 LB	123706.8983	57850.8471	236+41.55	32.81 LT
FD BC[GLO]: C4 LA *	123779.0532	57883.0338	237+17.03	33.25 LT
FD BC[GLO]: C1 LG *	123792.1901	58056.3701	237+51.40	32.85 RT
FD RBR/PC: SW LG2 *	123792.3541	58074.2408	237+56.89	49.86 RT
Fd BC[GLO]: C2 Lot B USS 253	123975.5888	57704.2009	238+21.50	357.97 LT
Fd Rbr/AC[3333]: SW L1A Lakeview Group	123995.7016	57775.5203	238+61.96	295.59 LT
Fd BC[GLO]: C1 Lot C USS 253	124015.6014	57755.3021	238+75.88	321.42 LT
Fd Spike: SE L2A Lakeview Group	123936.5565	58032.3702	238+82.05	33.09 LT
FD RBR/PC: NW LG2 *	123938.4486	58119.2538	239+09.76	49.26 RT
FD RBR/PC: NW LG1 *	123968.8217	58128.6928	239+41.26	49.33 RT
Fd Rbr/PC[263]: NE LG-2 Axtell Sub.	123940.2658	58298.0128	239+83.88	216.51 RT
Fd Rbr: SW L2A Lakeview Group	124152.7437	57824.8578	240+26.58	295.57 LT
FD BC[GLO]: C1 LA *	124083.6921	58081.7474	240+46.77	32.79 LT
FD BC: C4 *S2278	124229.4727	57951.5442	241+35.35	197.98 LT
FD AM[6716]: C4 LG	124170.0787	58174.7366	241+47.83	32.64 RT
Fd Rbr: NW L2A Lakeview Group	124310.5379	57873.9544	241+86.24	297.01 LT
FD BC[GLO]: C2 LA *	124467.4906	57725.6969	242+80.77	459.67 LT

RECOVERED CORNERS - SHEET 13

MONUMENT TYPE: LOCATION	NORTHING	EASTING	STATION	OFFSET
FD BC[GLO]: C1 LA *	124093.6921	58081.7474	240+46.77	32.79 LT
FD BC: C4 *S2278	124229.4727	57951.5442	241+35.35	197.98 LT
FD AM[6716]: C4 LG	124170.0787	58174.7366	241+47.83	32.64 RT
Fd Rbr: NW L2A Lakeview Group	124310.5379	57873.9544	241+86.24	297.01 LT
FD AM[6716]: C3 LF	124235.9523	58185.2478	242+17.14	31.32 RT
Fd Rbr/PC[732E]: SW L4 Lakeview	124312.9516	58055.9925	242+44.95	125.32 LT
Fd BC[GLO]: C3 USS 2533: C3	124174.0512	58585.8344	242+77.54	392.48 RT
Fd BC[GLO]: SE L2 Irwin Campbell	124240.4389	58623.4735	243+68.37	433.26 RT
Fd Rbr: WSW L1 Irwin Campbell	124480.9169	58291.1803	244+62.71	45.67 RT
FD AM[6716]:DAP : C	124468.3599	58274.8308	244+82.55	20.43 RT
Fd Rbr/AC[3333]: NW L1 Irwin Campbell	124618.8702	58313.1773	245+25.12	45.36 RT
Fd BC[GLO]: C4 USS 2533: E L	124356.0580	58741.6440	245+29.36	503.18 RT
FD BC[USFS]: C3 *S2	124642.3360	58456.9108	246+99.73	141.49 RT
Fd BC[GLO]: C3 USS 2408	124522.1130	58882.3512	247+42.33	552.60 RT
Fd BC[USFS]: C1 USS 2408: NW	124890.2216	58238.7026	248+30.50	181.12 LT
FD BC[GLO]: C2 *S24	125017.7388	58366.1529	250+19.07	75.12 LT

RECOVERED CORNERS - SHEET 14

MONUMENT TYPE: LOCATION	NORTHING	EASTING	STATION	OFFSET
FD ROD[BLM]: PC 209	127178.2791	58617.2187	272+21.84	89.38 LT
FD BT: 12	127185.4574	58609.8035	272+28.82	97.10 LT
BM R-78 1984: BC [U	127348.4428	58642.7266	273+96.11	164.09 LT

RECOVERED CORNERS - SHEET 15

MONUMENT TYPE: LOCATION	NORTHING	EASTING	STATION	OFFSET
Fd BC[BLM]: 1/4 S6/S7 *T3N R	128421.3090	58766.8605	284+24.46	178.03 RT
Fd BC[BLM]: CC USS 9002\S6/S	128419.9063	58531.6822	284+90.89	48.96 LT

RECOVERED CORNERS - SHEET 16

MONUMENT TYPE: LOCATION	NORTHING	EASTING	STATION	OFFSET
FD AM[BLM]: C78 *S9	129616.9881	57527.0935	300+33.76	194.24 LT
Fd AM[4928]: C2 L1 ASLS 97-3	130285.7366	57336.0317	306+31.50	289.97 LT
Fd AM[4928]: C1 L1 ASLS 97-3	130287.0467	57311.4093	306+39.58	94.62 LT

RECOVERED CORNERS - SHEET 17

MONUMENT TYPE: LOCATION	NORTHING	EASTING	STATION	OFFSET
FD AM[BLM]: C88 *S9	132436.2902	57502.1025	328+63.11	35.07 RT

RECOVERED CORNERS - SHEET 18

MONUMENT TYPE: LOCATION	NORTHING	EASTING	STATION	OFFSET
BM S-76 1984: BC [U	133828.6698	57294.6087	340+16.70	145.40 LT
Fd BC[BLM]: CC USS 9002\S31/	133686.4827	57367.8789	340+69.04	46.43 LT

RECOVERED CORNERS - SHEET 20

MONUMENT TYPE: LOCATION	NORTHING	EASTING	STATION	OFFSET
FD AM[BLM]: SED STA	138688.1807	59966.4235		
FD BC[GLO]: C1 *S22	138938.6381	58633.7732		
FD BC[BLM]: *S2238\	138965.3951	58153.3283		
FD AM[BLM]: S2515\S6	139068.4117	58283.6604		
FD RBR/PC: NE L2 *S	139308.4845	58053.6182		
FD BC[BLM]: C4 L4 *	139154.0456	58161.3870		
FD BC[BLM]: *S2143\	139237.6382	58260.8684		
FD BC[GLO]: C2 *S22	139330.6858	58873.4742		
FD POST[BLM]: C1 L4	139428.1234	59964.9537		
FD RBR: C1 L4 *S314	139428.1186	59964.3589		
FD BC[GLO]: C4 L1*S	139267.6841	55635.9714		
FD ROD: CC *S2238	139000.2834	58641.4701		
FD ROD: C3 *S2002	138949.9193	58594.9183		
FD AM[BLM]: POT R 9	137907.6866	58653.6368	384+32.48	44.93 LT
BM T-78 1984: BC [U	138528.4237	56308.0160	391+50.96	101.85 LT
FD AM[BLM]: C4 *S22	138613.2728	58329.0178	392+15.40	41.24 LT

MONUMENT GLOSSARY

AC	ALUMINUM CAP (MONUMENT)
AM	ALUMINUM PIPE (MONUMENT)
BC	BRASS CAP (MONUMENT)
BLM	BUREAU OF LAND MANAGEMENT
BM	BENCH MARK
BT	BEARING TREE
CNF	CHUGACH NATIONAL FOREST
FD, Fd	FOUND
GLO	U.S. GENERAL LAND OFFICE
N/A	DATA NOT AVAILABLE
PC	POINT OF CURVE
PI	POINT OF INTERSECTION
POT	POINT OF TANGENT
PT	POINT OF TANGENT
RBR	REBAR
SCL	SECONDARY CENTERLINE MONUMENT
SOA	STATE OF ALASKA
USDA	UNITED STATES DEPARTMENT OF AGRICULTURE FOREST SERVICE
USS	UNITED STATES SURVEY
YPC	YELLOW PLASTIC (SURVEY) CAP

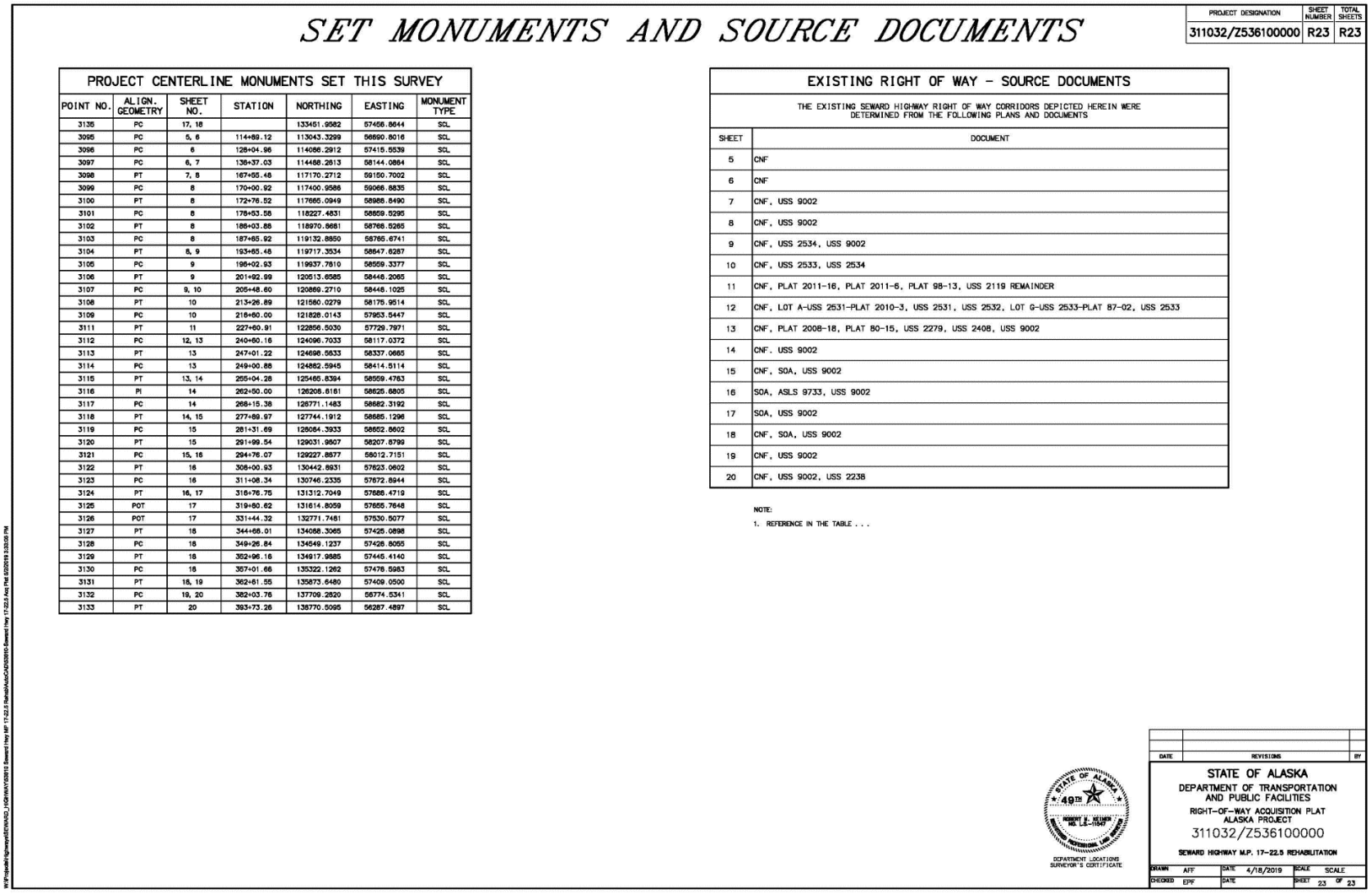
DEPARTMENT LOCATIONS SURVEYOR'S CERTIFICATE

DATE	REVISIONS	BY

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
RIGHT-OF-WAY ACQUISITION PLAT
ALASKA PROJECT
311032/Z536100000
SEWARD HIGHWAY M.P. 17-22.5 REHABILITATION

DRAWN	AFF	DATE	3/12/2018	SCALE	SCALE
CHECKED	EPF	DATE		SHEET	22 OF 23

Figure A - 6: Monument Summary 1



SET MONUMENTS AND SOURCE DOCUMENTS

PROJECT DESIGNATION	SHEET NUMBER	TOTAL SHEETS
311032/Z536100000	R23	R23

PROJECT CENTERLINE MONUMENTS SET THIS SURVEY

POINT NO.	ALIGN. GEOMETRY	SHEET NO.	STATION	NORTHING	EASTING	MONUMENT TYPE
3135	PC	17, 18		133451.9582	57456.8644	SCL
3095	PC	5, 6	114+89.12	113043.3299	56690.8016	SCL
3096	PC	6	128+04.96	114066.2912	57415.5539	SCL
3097	PC	6, 7	136+37.03	114468.2813	58144.0864	SCL
3098	PT	7, 8	167+55.48	117170.2712	59150.7002	SCL
3099	PC	8	170+00.92	117400.9586	59066.8835	SCL
3100	PT	8	172+76.52	117665.0949	58986.8490	SCL
3101	PC	8	178+53.58	118227.4831	58859.5295	SCL
3102	PT	8	186+03.88	118970.8681	58766.5265	SCL
3103	PC	8	187+85.92	119132.8850	58765.6741	SCL
3104	PT	8, 9	193+85.48	119717.3534	58647.6287	SCL
3105	PC	9	196+02.93	119937.7810	58559.3377	SCL
3106	PT	9	201+92.99	120513.6585	58446.2065	SCL
3107	PC	9, 10	205+48.60	120869.2710	58446.1025	SCL
3108	PT	10	213+26.89	121580.0279	58175.9514	SCL
3109	PC	10	216+60.00	121828.0143	57963.5447	SCL
3111	PT	11	227+60.91	122856.5030	57729.7971	SCL
3112	PC	12, 13	240+60.16	124096.7033	58117.0372	SCL
3113	PT	13	247+01.22	124698.5833	58337.0665	SCL
3114	PC	13	249+00.88	124862.5945	58414.5114	SCL
3115	PT	13, 14	255+04.28	125465.8394	58559.4763	SCL
3116	PI	14	262+50.00	126206.6161	58625.6805	SCL
3117	PC	14	268+15.38	126771.1483	58682.3192	SCL
3118	PT	14, 15	277+89.97	127744.1912	58685.1296	SCL
3119	PC	15	281+31.69	128084.3933	58652.8602	SCL
3120	PT	15	291+99.54	129031.9507	58207.8799	SCL
3121	PC	15, 16	294+76.07	129227.8677	58012.7151	SCL
3122	PT	16	308+00.93	130442.8931	57623.0602	SCL
3123	PC	16	311+08.34	130746.2335	57672.8944	SCL
3124	PT	16, 17	316+76.75	131312.7049	57686.4719	SCL
3125	POT	17	319+80.62	131614.8059	57655.7648	SCL
3126	POT	17	331+44.32	132771.7481	57530.5077	SCL
3127	PT	18	344+66.01	134068.3065	57425.0898	SCL
3128	PC	18	349+26.84	134549.1237	57426.8055	SCL
3129	PT	18	352+96.16	134917.9585	57445.4140	SCL
3130	PC	18	357+01.66	135322.1262	57476.5983	SCL
3131	PT	18, 19	362+61.55	135873.6480	57409.0500	SCL
3132	PC	19, 20	362+03.76	137709.2820	56774.5341	SCL
3133	PT	20	393+73.26	138770.5095	56287.4897	SCL

EXISTING RIGHT OF WAY – SOURCE DOCUMENTS

THE EXISTING SEWARD HIGHWAY RIGHT OF WAY CORRIDORS DEPICTED HEREIN WERE DETERMINED FROM THE FOLLOWING PLANS AND DOCUMENTS

SHEET	DOCUMENT
5	CNF
6	CNF
7	CNF, USS 9002
8	CNF, USS 9002
9	CNF, USS 2534, USS 9002
10	CNF, USS 2533, USS 2534
11	CNF, PLAT 2011-16, PLAT 2011-6, PLAT 98-13, USS 2119 REMAINDER
12	CNF, LOT A-USS 2531-PLAT 2010-3, USS 2531, USS 2532, LOT G-USS 2533-PLAT 87-02, USS 2533
13	CNF, PLAT 2008-18, PLAT 80-15, USS 2279, USS 2408, USS 9002
14	CNF, USS 9002
15	CNF, SOA, USS 9002
16	SOA, ASLS 9733, USS 9002
17	SOA, USS 9002
18	CNF, SOA, USS 9002
19	CNF, USS 9002
20	CNF, USS 9002, USS 2238

NOTE:

1. REFERENCE IN THE TABLE . . .

DEPARTMENT LOCATIONS SURVEYOR'S CERTIFICATE

DATE	REVISIONS	BY

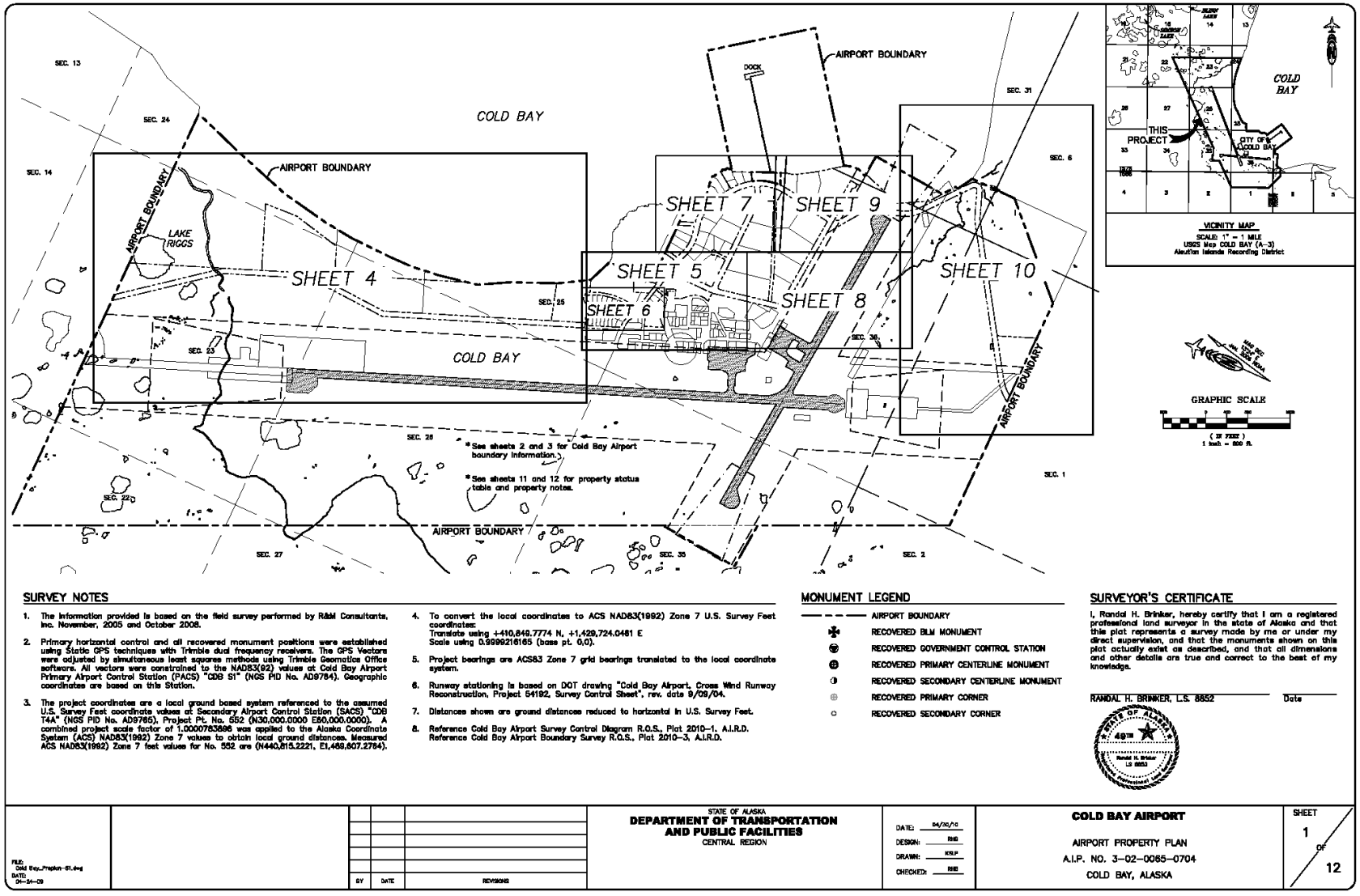
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
RIGHT-OF-WAY ACQUISITION PLAT
ALASKA PROJECT
311032/Z536100000
SEWARD HIGHWAY M.P. 17-22.5 REHABILITATION

DRAWN	AFF	DATE	4/18/2019	SCALE	SCALE
CHECKED	EPF	DATE		SHEET	23 OF 23

W:\Projects\Highways\SEWARD_HIGHWAY\0815 Seward Hwy MP 17-22.5 Rehab\Auto\CAD\0815 Seward Hwy 17-22.5 Acq Plat 02052019 3:33:05 PM

Figure A - 7: Monument Summary 2

Chapter 4: Appendix B – Airport Property Plans



SURVEY NOTES

1. The information provided is based on the field survey performed by Ribbl Consultants, Inc. November, 2005 and October 2008.
2. Primary horizontal control and all recovered monument positions were established using Static GPS techniques with Trimble dual frequency receivers. The GPS Vectors were adjusted by simultaneous least squares methods using Trimble Geomatics Office software. All vectors were constrained to the NAD83(92) values at Cold Bay Airport Primary Airport Control Station (PACS) "CDB 51" (NGS PID No. AD9784). Geographic coordinates are based on this Station.
3. The project coordinates are a local ground based system referenced to the assumed U.S. Survey Feet coordinate values at Secondary Airport Control Station (SACS) "CDB T4A" (NGS PID No. AD9765). Project Pt. No. 552 (N30,000.0000 E50,000.0000). A combined project scale factor of 1.0000783696 was applied to the Alaska Coordinate System (ACS) NAD83(1992) Zone 7 values to obtain local ground distances. Measured ACS NAD83(1992) Zone 7 feet values for No. 552 are (N440,815.2221, E1,468,807.2784).
4. To convert the local coordinates to ACS NAD83(1992) Zone 7 U.S. Survey Feet coordinates:
   Translate using +410,849.7774 N, +1,429,724.0481 E
   Scale using 0.99999216185 (base pt. 0,0).
5. Project bearings are ACS83 Zone 7 grid bearings translated to the local coordinate system.
6. Runway stationing is based on DOT drawing "Cold Bay Airport, Cross Wind Runway Reconstruction, Project 54192, Survey Control Sheet", rev. date 9/09/04.
7. Distances shown are ground distances reduced to horizontal in U.S. Survey Feet.
8. Reference Cold Bay Airport Survey Control Diagram R.O.S., Plat 2010-1, A.I.R.D.
   Reference Cold Bay Airport Boundary Survey R.O.S., Plat 2010-3, A.I.R.D.

MONUMENT LEGEND

- AIRPORT BOUNDARY
- RECOVERED BLM MONUMENT
- RECOVERED GOVERNMENT CONTROL STATION
- RECOVERED PRIMARY CENTERLINE MONUMENT
- RECOVERED SECONDARY CENTERLINE MONUMENT
- RECOVERED PRIMARY CORNER
- RECOVERED SECONDARY CORNER

SURVEYOR'S CERTIFICATE

I, Randal H. Brinker, hereby certify that I am a registered professional land surveyor in the state of Alaska and that this plat represents a survey made by me or under my direct supervision, and that the monuments shown on this plat actually exist as described, and that all dimensions and other details are true and correct to the best of my knowledge.

RANDAL H. BRINKER, L.S. 8852 Date

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

DATE: 04/30/10
DESIGN: RHB
DRAWN: KRLP
CHECKED: RHB

COLD BAY AIRPORT

AIRPORT PROPERTY PLAN
A.I.P. NO. 3-02-0065-0704
COLD BAY, ALASKA

SHEET 1 OF 12

Figure B - 1: Airport Property Plan 1

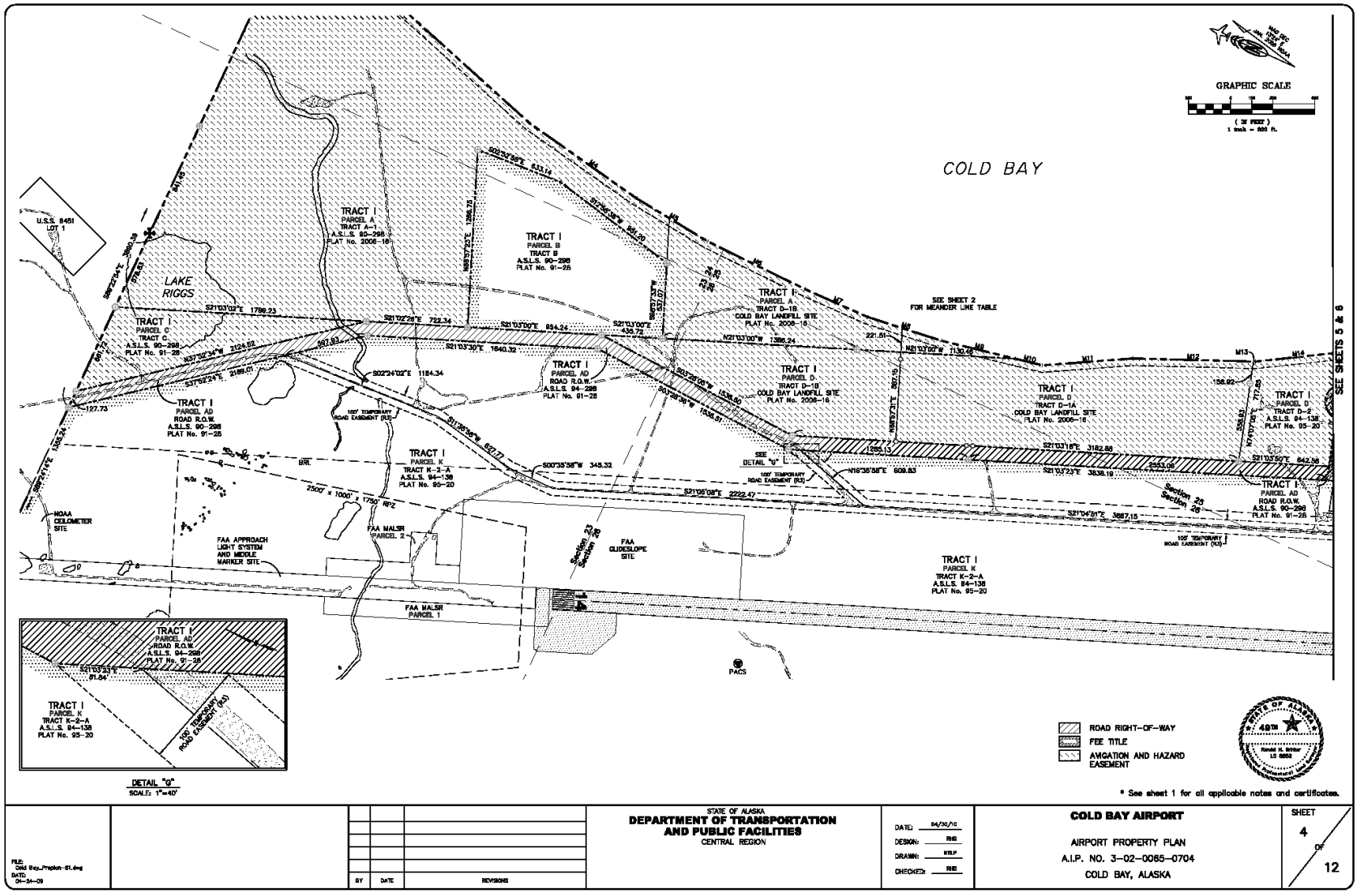


Figure B - 2: Airport Property Plan 2

Chapter 5: Appendix C – Parcel Plats

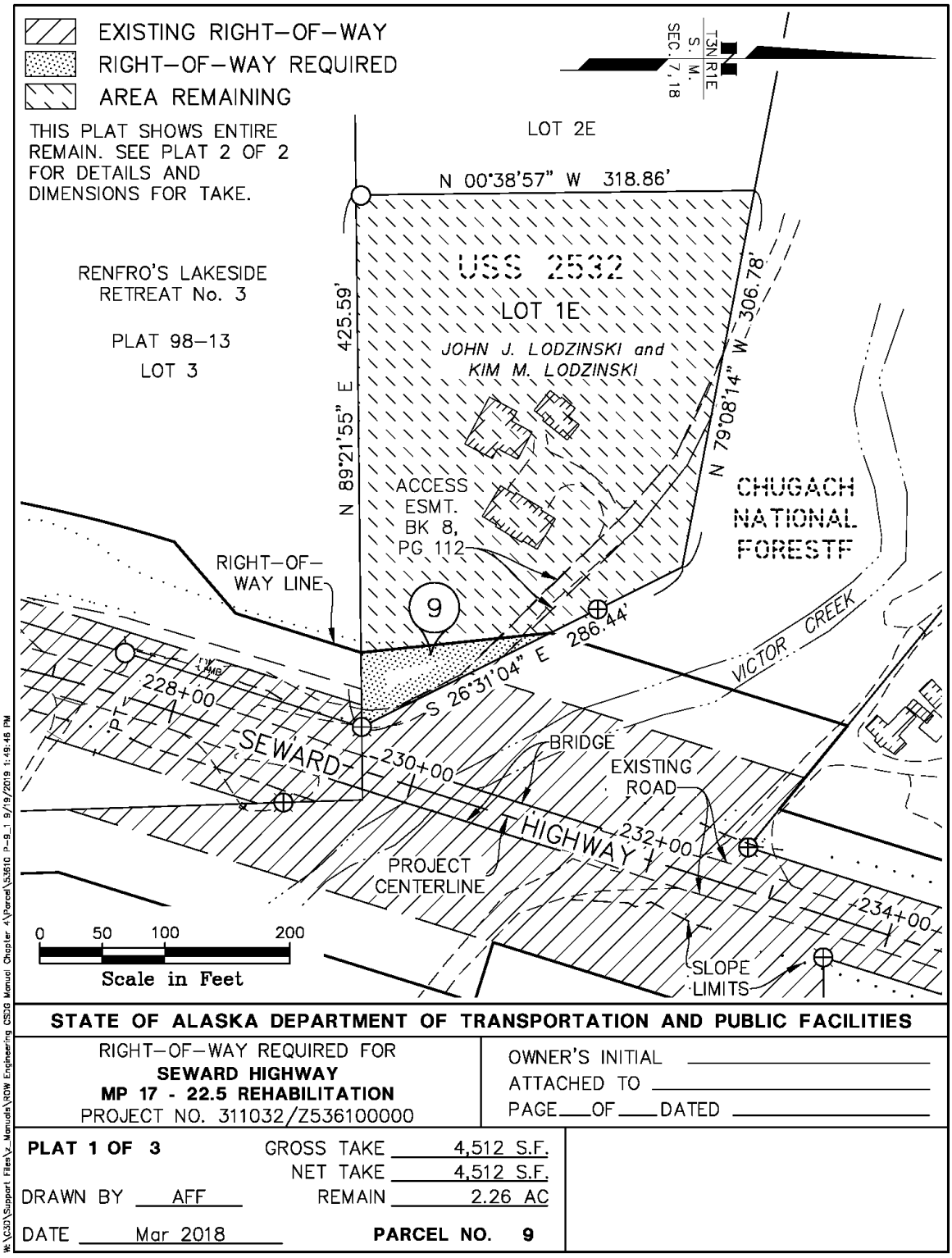


Figure C - 1: Parcel Plat 1

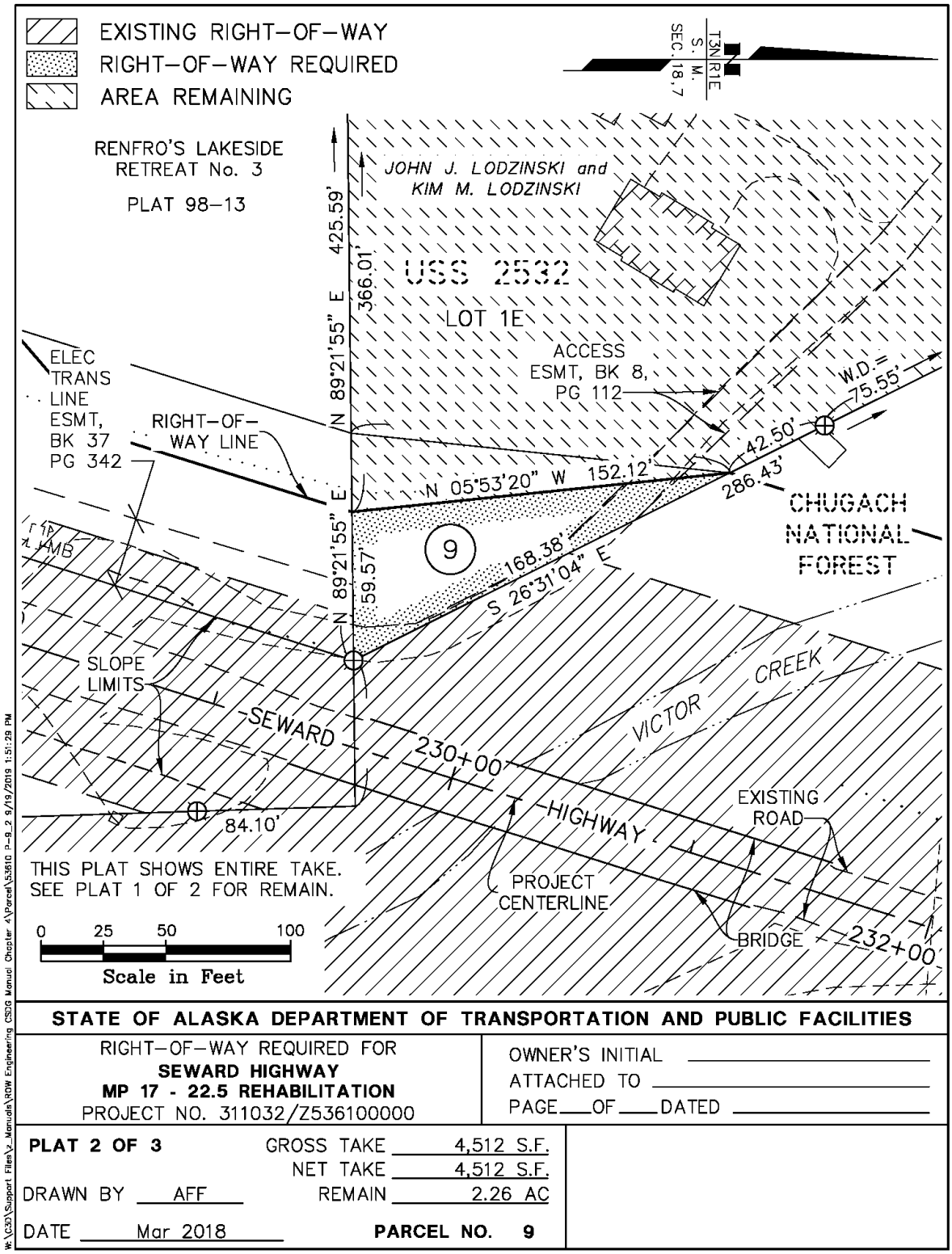
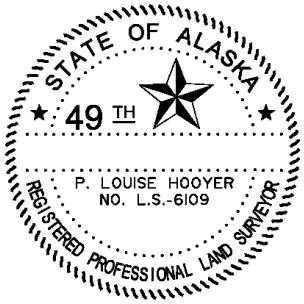


Figure C - 2: Parcel Plat 2

THESE PLATS MAY BE USED FOR THE ESTABLISHMENT OF THE RIGHT-OF-WAY BOUNDARY ONLY, AND SHOULD NOT BE USED AS A BASIS FOR ESTABLISHING ADJOINING PROPERTY LINES AND CORNERS.

THIS SEAL IS FOR ALL WORK CONTAINED ON PLAT 1,2 OF 2.



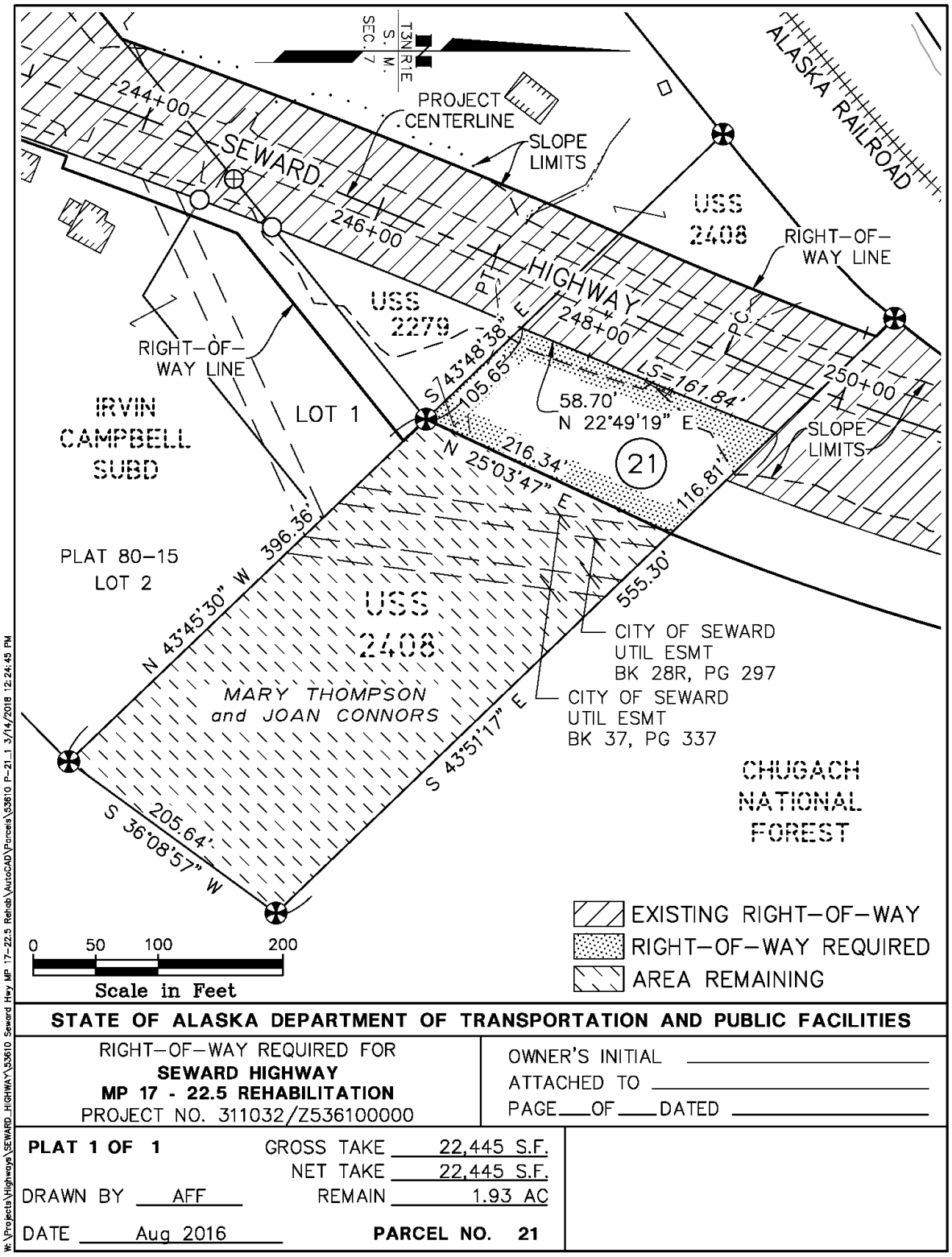
ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

4111 AVIATION AVENUE
ANCHORAGE, AK 99502
PHONE (907) 269-0700

ATTACHED TO _____ PAGE___OF___DATED _____

PLAT 3 OF 3 PROJECT NO. 311032/Z536100000 PARCEL NO. 9

Figure C - 3: Title Page for Plats



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

RIGHT-OF-WAY REQUIRED FOR
SEWARD HIGHWAY
MP 17 - 22.5 REHABILITATION
PROJECT NO. 311032/Z536100000

OWNER'S INITIAL _____
ATTACHED TO _____
PAGE ___ OF ___ DATED _____

PLAT 1 OF 1

GROSS TAKE 22,445 S.F.
NET TAKE 22,445 S.F.
REMAIN 1.93 AC

DRAWN BY AFF

DATE Aug 2016

PARCEL NO. 21

Figure C - 4: Parcel Plat 3

Chapter 4: Appendix D – Subdivision Plat

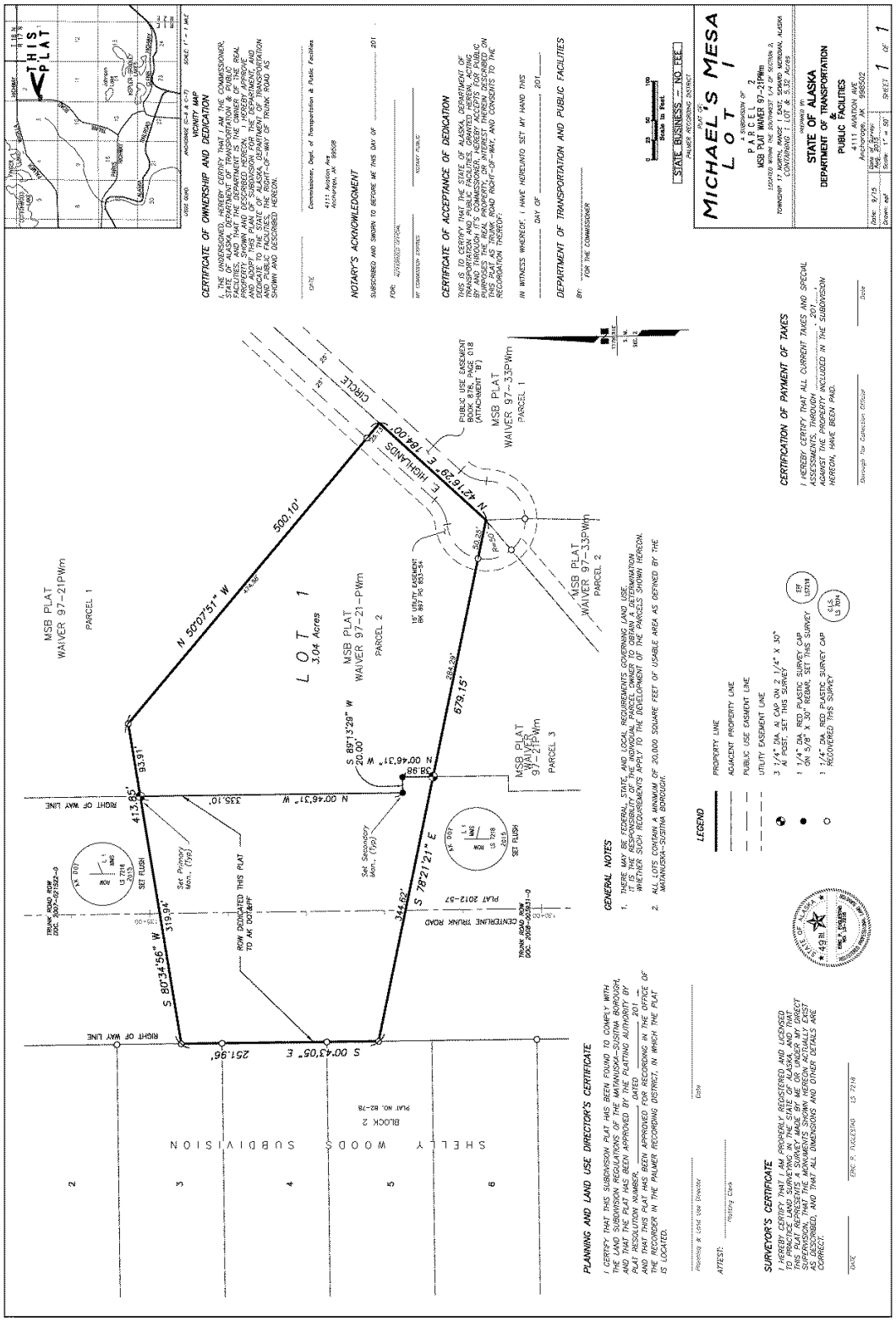
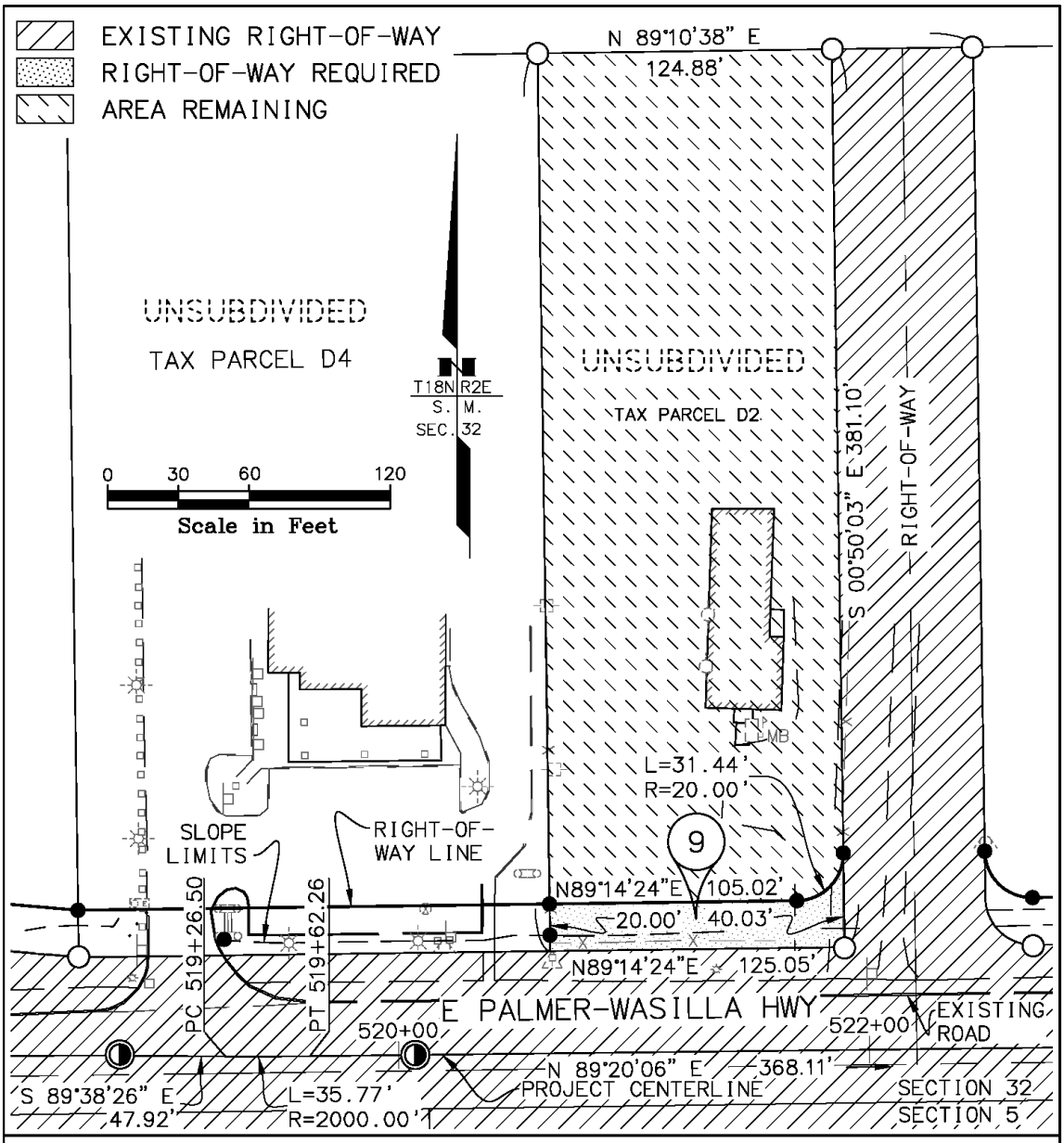


Figure D - 1: Subdivision Plat

Chapter 4: Appendix E – Plan Changes



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

RIGHT-OF-WAY REQUIRED FOR **PALMER-WASILLA HIGHWAY** **EASTERN TERMINUS PROJECT** PROJECT NO. 51363	SCHEDULE "B"

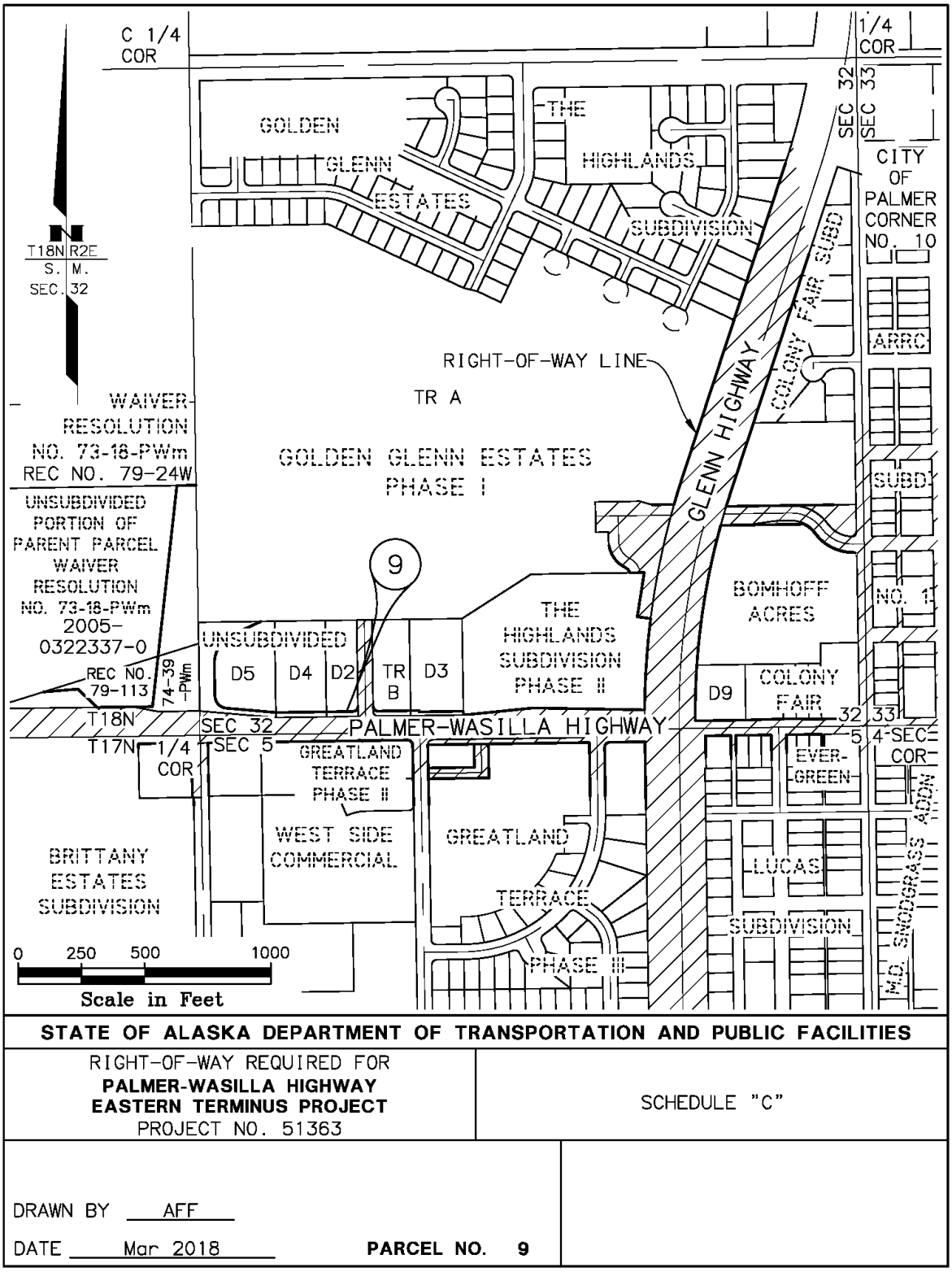
GROSS TAKE 2,587 S.F.
NET TAKE 2,587 S.F.
REMAIN 45,028 S.F.±

DRAWN BY AFF

DATE Mar 2018

PARCEL NO. 9

Figure E - 1: Plan Changes – Schedule "B"



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

RIGHT-OF-WAY REQUIRED FOR **PALMER-WASILLA HIGHWAY EASTERN TERMINUS PROJECT** PROJECT NO. 51363	SCHEDULE "C"
DRAWN BY AFF DATE Mar 2018 **PARCEL NO. 9**	

Figure E - 2: Plan Changes – Schedule "C"

Chapter 4: Appendix F – Right-of-Way Easement

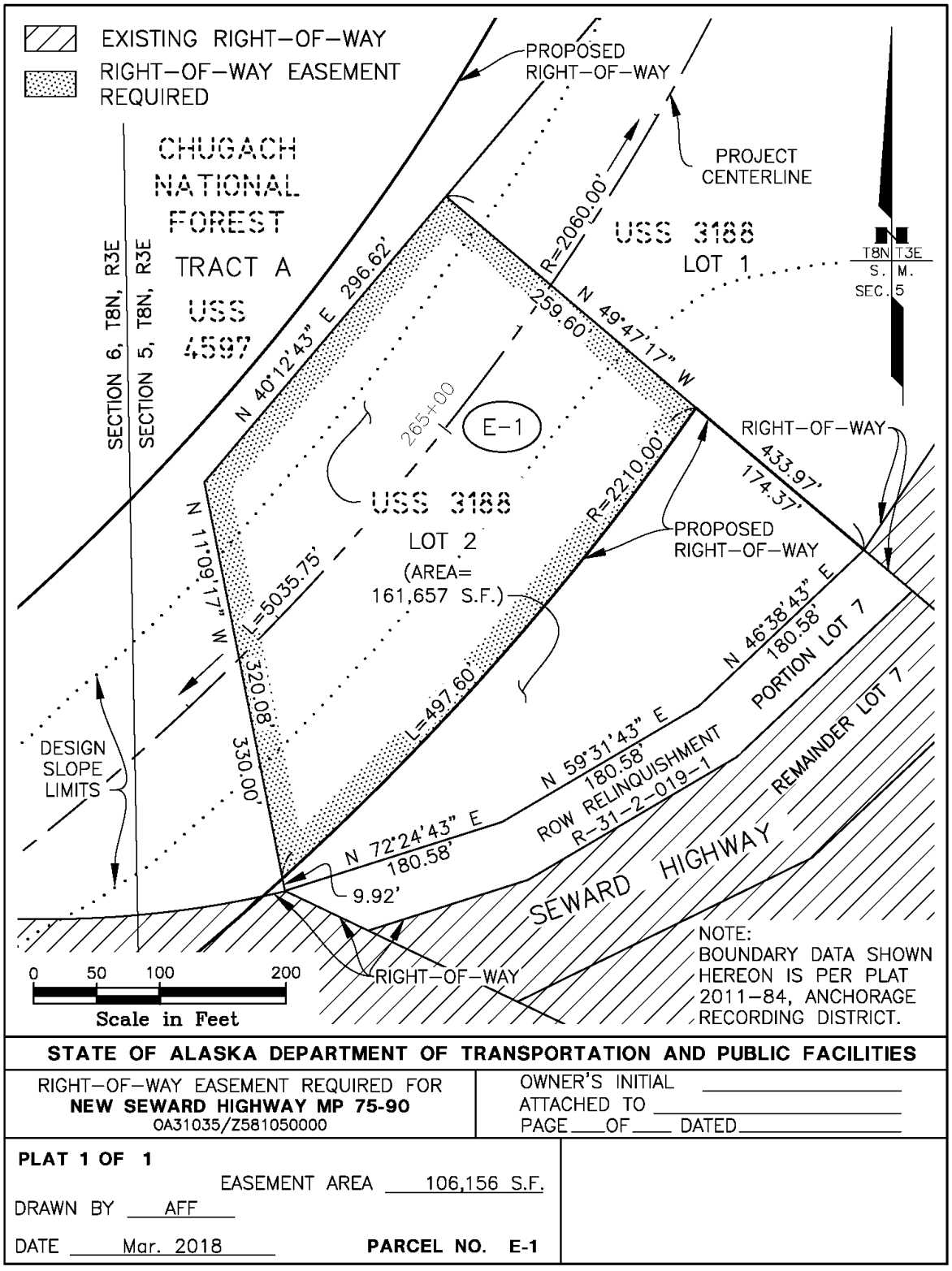


Figure F - 1: Right-of-Way Easement

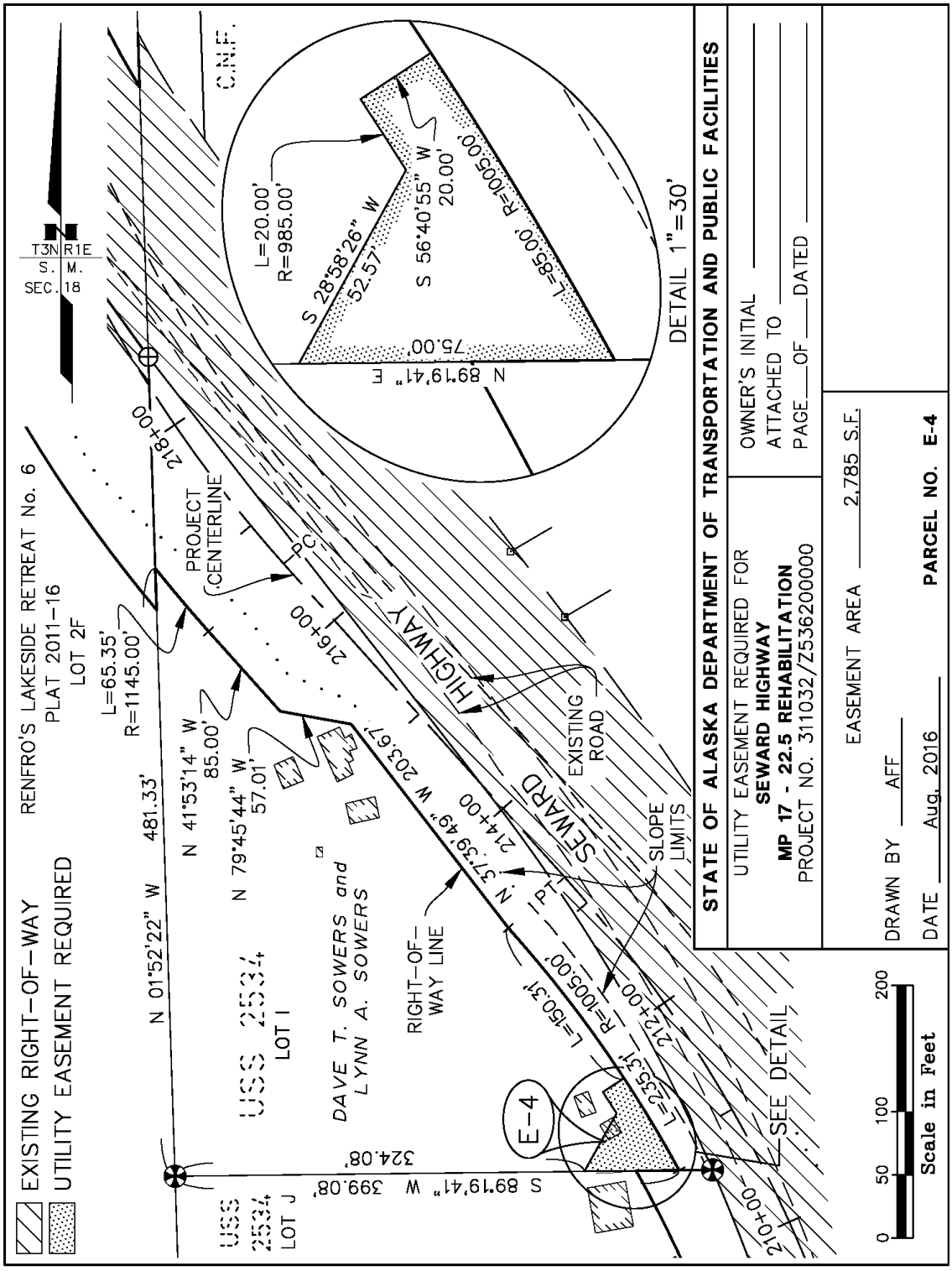


Figure F - 2: Utility Easement

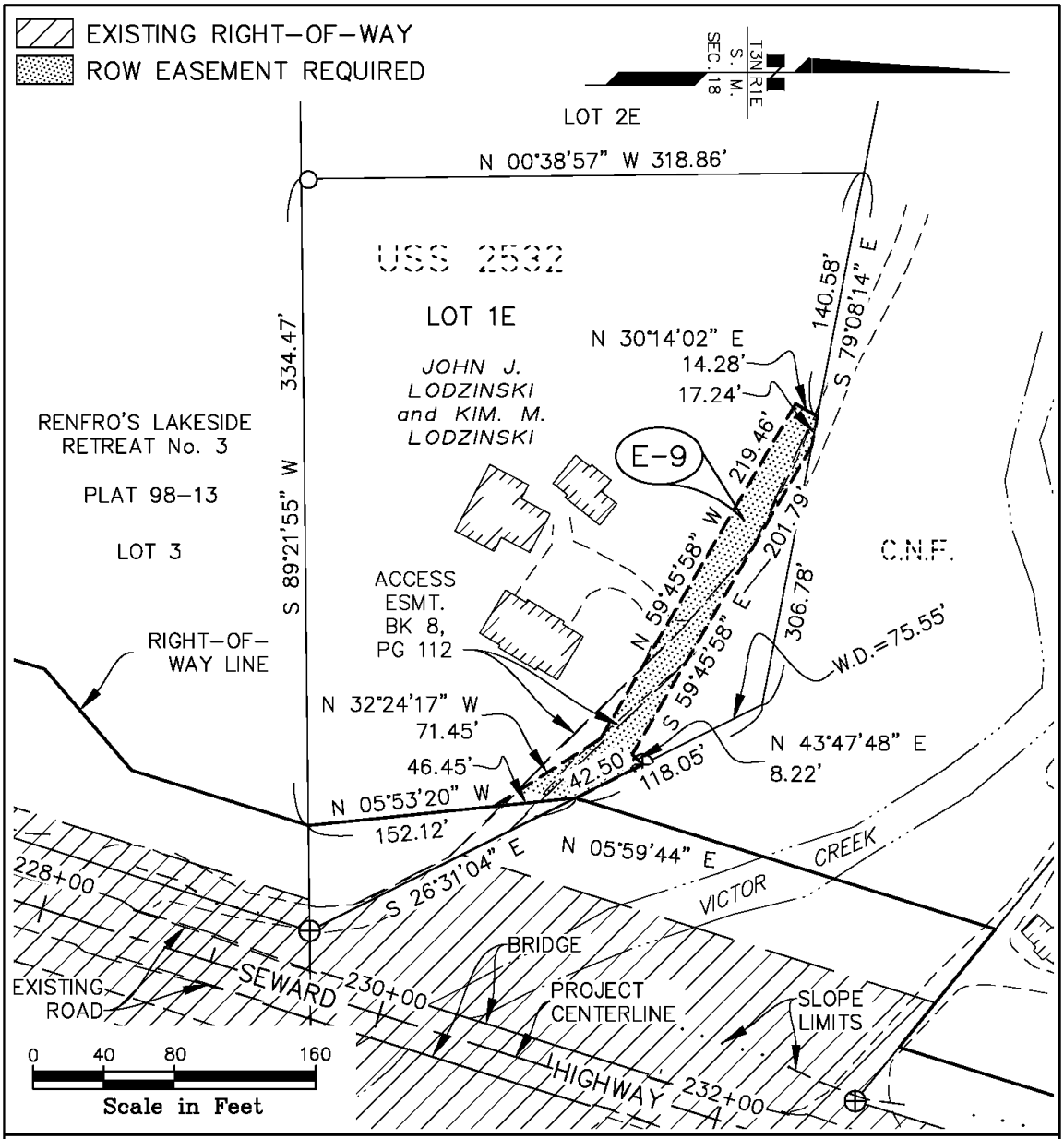


Figure F - 3: Utility Easement

Chapter 4: Appendix G – Temporary Construction Easement

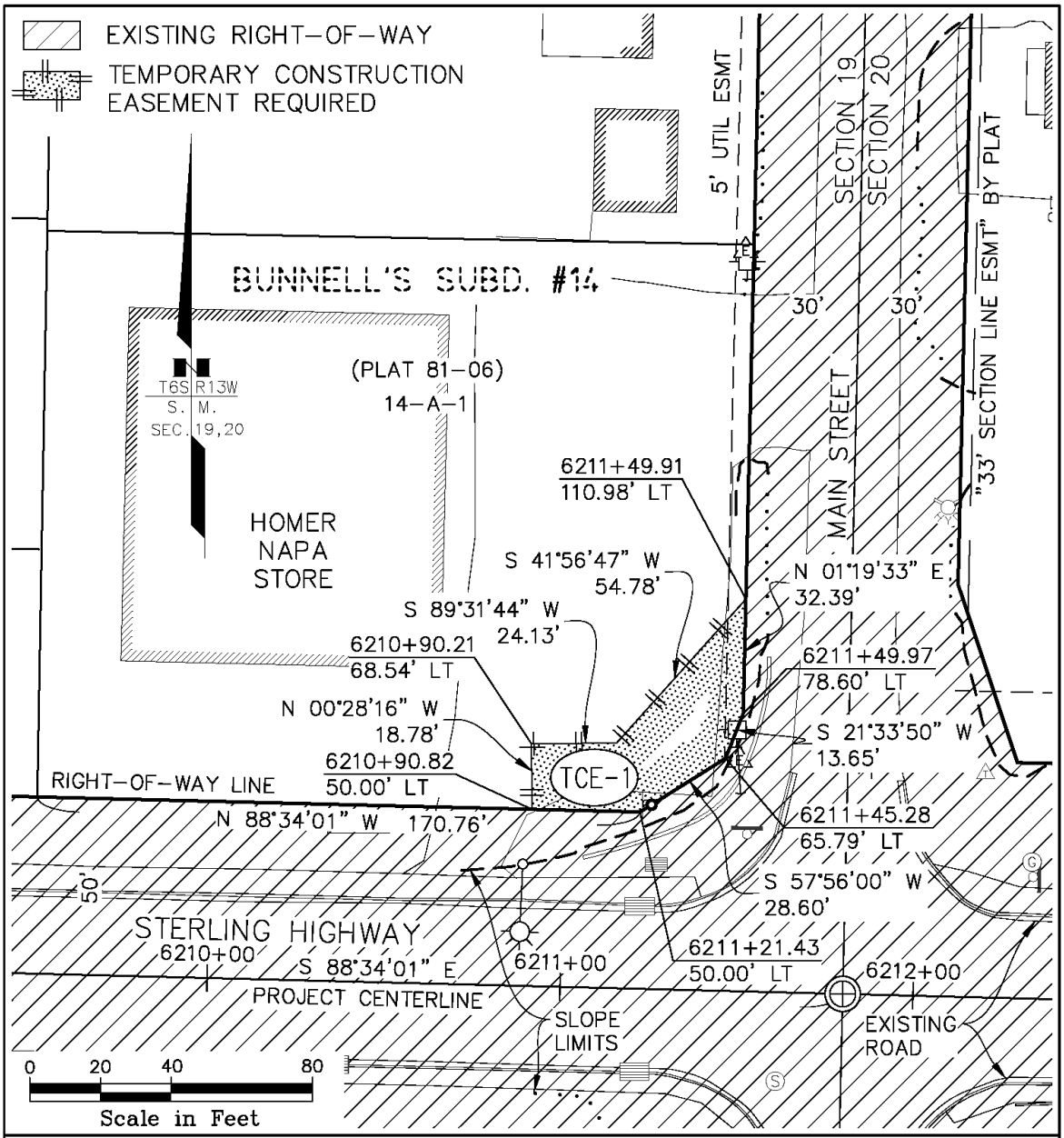
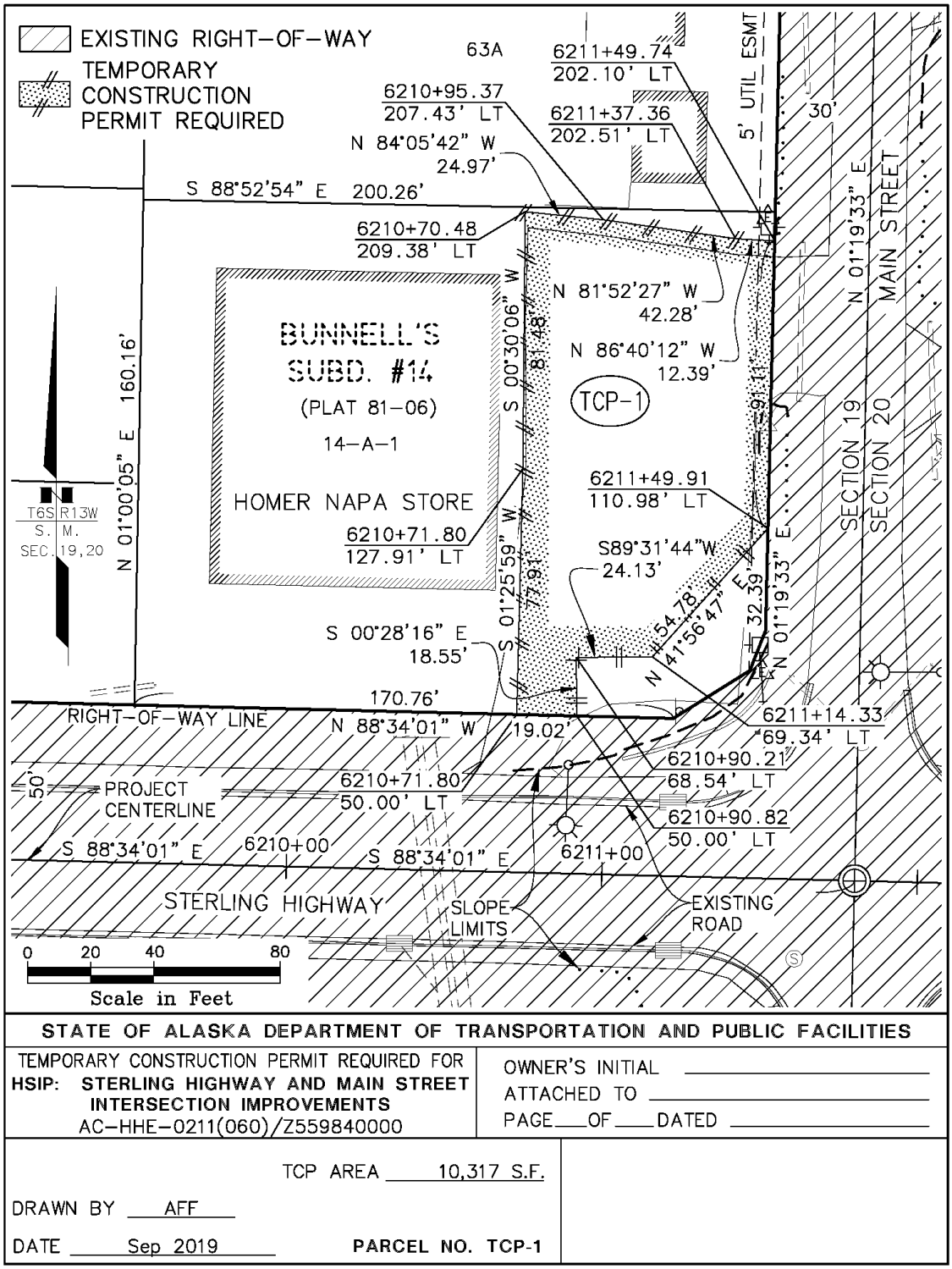


Figure G - 1: Temporary Construction Easement

Chapter 4: Appendix H – Temporary Construction Permit



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

TEMPORARY CONSTRUCTION PERMIT REQUIRED FOR **HSIP: STERLING HIGHWAY AND MAIN STREET INTERSECTION IMPROVEMENTS** AC-HHE-0211(060)/Z559840000	OWNER'S INITIAL _____ ATTACHED TO _____ PAGE ___ OF ___ DATED _____
TCP AREA 10,317 S.F. DRAWN BY AFF DATE Sep 2019 **PARCEL NO. TCP-1**	

Figure H - 1: Temporary Construction Permit

Chapter 5: Highway & Traffic Design

TABLE OF CONTENTS

APPENDIX

SECTION 1. OVERVIEW

This chapter of the Alaska Department of Transportation & Public Facilities' (DOT&PF) Central Region Highway Design CAD Standards and Drafting Guide covers information pertaining to the Highway Design and Traffic Design sections. This guide is to be used for roadway projects.

For project completion and continuity, this guide should be used in conjunction with the Central Region Highway Design Project Closeout Guide.

SECTION 2. PLANSET ORGANIZATION

2.1 Planset Series Organization

Arrange highway project plan sets in the order shown below. Plan sheet numbering will be alphanumeric. For example, plan and profile sheets will be numbered from F1 to F19.

Series Letter	*Sheet Category*
A	Title, Index, Sheet Layout Schematic, Legend/Symbols, General Notes and Survey Control Sheets
B	Typical Sections
C	Estimate of Quantities/ Table of Estimating Factors
D	Summary Tables
E	Details
F	Plan & Profile Sheets – Mainline, Pathway, and Approaches
G	Grading (Intersections, Pads, Cul-de-Sacs, Roundabouts, etc.)
H	Traffic Sheets (Legend & Notes, Signalization, Illumination, Signing, & Striping)
J	Traffic Control Plans (Used in special circumstances, consult PM for inclusion)
K	Automated Traffic Recorder (ATR) and Weigh-In-Motion (WIM)
L	Landscaping
M	Retaining Walls
N	Bridge Structures
P	Unassigned
Q	Erosion Sediment Control Plan (Used in special circumstances, consult PM for inclusion)
R	Right of Way Maps (Consult PM for inclusion)
S	Unassigned
T	Unassigned
U	Utilities (Used in special circumstances, consult PM for inclusion)
V	Unassigned
W	Unassigned
X	Unassigned
Y	Unassigned
Z	Unassigned

Consult the chapters of this guide for additional information on the planset.

Note: Do not use the letters “I” or “O” for series letters. *For all the series, the total number of sheets shown in the top right corner is for that particular series only. For example, if there are 14 plan and profile sheets, the number in the total sheets box should read “F14” and so forth.*

Note: Do not use aerial imagery in the plansets unless specifically requested or approved by the Project Manager.

Note: X-section guidance is located below in section 2.2.

2.2 Series Descriptions

Specific planset sheets and/or sections are discussed below.

- **A1 – Title Sheet**

  The Title sheet shows the general location of the project, official name of the project, project number (Federal and State), construction year, location map (with the closest M&O Station), and vicinity map. It may also show the "Project Summary" and "Design Designations" tables which are usually located on the far right side. For in-house designs the title sheet will be signed and dated by the Regional Preconstruction Engineer and the Director of Design & Construction.

  If designed by a consultant, add the name of the consultant's firm per the borders and templates provided. Consultant's logos are not allowed on any plan sheet.

- **A2 – Index, Sheet Layout Schematic, and General Notes**

  The Sheet Layout, Index, and General Notes belong on sheet A2. The Index is located on the right side of A2 followed by the list of Regional Standard Drawings and Standard Drawings applicable to the project. This placement ensures these items are consistently easy to locate when the planset is "Z" folded. For in-house designs, the A2 sheet will be signed, sealed, and dated by the Project Manager, Design Section Chief, and Engineer of Record. For consultant designs the A2 sheet will be signed, sealed, and dated by the consultant Project Manager and Engineer of Record. The remainder of the planset is sealed by the Professional Engineer responsible for it.

  Included in the remaining space is the comprehensive overview of the project, known as the Sheet Layout or Schematic. It is a quick-reference "stick" drawing of the roadway with plan view outlines (from the F sheets) and sheet numbers superimposed on a scaled-down view of the entire project. Consider including project stationing, BOP/EOP, and key features of the design to highlight and provide a "quick overview" to the user. It is placed on A2 (if it will fit) with any remaining schematics following.

  A draft of the general notes is provided on the A2 template drawing. The notes should be modified to suit the project and additional notes may be needed.

  Note: Additional schematic sheets will shift the legend sheet and survey control drawings (i.e. A3 becomes A4, A4 becomes A5, etc.).The first sheet of plan schematics contains a table listing any alignment abbreviations.

- **A3 – Legend**

  This sheet consists of a general Legend (blocks, linetypes, etc.) applicable to the planset. It is provided by DOT&PF Central Region and includes the layer names, linetypes, colors, blocks, text sizes, etc. If extra space is needed for project specific items not otherwise shown, use space on A2 or create a new sheet following the standard legend.

  This drawing is intended to be dynamic. There is a revision table in model space to inform users of any revisions. Please ensure you are using the most current version of the legend available.

Note: Specific legends such as Survey Control, Electrical, Landscaping, ESCP, etc. generally appear on the first sheet of their respective sections.

- **A4 – Survey Control**

  See the Survey Chapter of this Guide.

- **B – Typical Sections**

  The Typical Section sheets show cross-section views typical to all or a large portion of the project with only minor modifications. If several typical sections run sequentially with direct transitions between them, the transitions do not generally require their own details. Typical sections should be organized in ascending order by station, wherever possible.

  The titles of each typical are generally the street name. The applicable locations or stations are noted under the title of each typical section, as appropriate. The words "Typical Sections" are shown only in the title block in the bottom right corner.

  If applicable, the "Cut Section" is generally shown on the left of the centerline and the "Embankment Section" is generally on the right.

  The roadway structural section material types and depths are shown in order, from top to bottom. These should be condensed into separate details called "Pavement Structural Section No. 1", "… No. 2", etc. An example B sheet with structural hatching is provided by DOT&PF Central Region and should be used when practicable. This will be at the Project Engineer's discretion.

  Typical section notes are shown on the first sheet, "B1", and are located in the upper right corner, if possible.

- **C – Estimate of Quantities**

  The Estimate of Quantities sheets show the item number, item descriptions, quantities, and unit of measurement necessary to construct the project and shall match the bid schedule, engineer's estimate, and the pay items in the specifications. All item numbers are shown in numeric order, starting with the smallest item number at the top. Include extra spaces, generally following each section, to allow for the possible addition of items during construction. The "Table of Estimating Factors" is always shown on the last C sheet. The Table of Estimating Factors should be modified to only include items used on the project.

- **D – Summary Tables**

  The Summary Sheets contain tables for most work items except those shown on the Plan & Profile sheets, Traffic sheets, Bridge sheets, and the Landscaping sheets. They may contain tables and totals for the project not found elsewhere. For example, a culvert pipe summary table might be located here if the project does not contain a drainage plan or they do not fit on the Plan & Profile sheets.

Summary tables are shown in numeric order, starting with the smallest item numbers on "D1". In each table extra spaces are included to allow for the possible addition of items during construction as well as for as-built entries. If items are listed by sheet number, there should be a space between each break in the sheet numbers. A general guideline regarding extra spaces is one space for every half-dozen or so entries (unless clarity is added by grouping items together).

Note: The Earthwork Quantities table may be added to the project on rare occasion. On projects with significant earthwork quantities, include a "D0" sheet with information about the excavation and embankment preparation such as what types of earthwork can be expected in different areas of the project and overall expected volumes for excavation, assumed swell factors, etc. This sheet will be included in the reviews and likely removed prior to advertisement. The inclusion in the final planset will be at the discretion of the Project Manager and the Construction Project Manager. If an Earthwork Summary table is included in the project, it is always the first summary sheet shown "D1" and is given its own individual sheet. If not included in the planset, the information should be provided in the Design Quantity Notebook.

- **E – Details**

  The Detail sheets are drawings developed for anything not clearly shown elsewhere. Examples might include details for curbs and gutters, pipe installations, curb ramps, drainage, etc. Details should be organized first by general details pertaining to the whole project followed by any particular of specific details. Similar work items should be grouped together.

- **F – Plan & Profile Sheets**

  The Plan and Profile sheets (P&P's) orient horizontal features of the alignment to the vertical information of the profile. Generally the minimum scale of the full size planset is as follows: 1"=50' for rural projects and 1"=20' for urban projects. (Pavement Preservation projects may be set at a larger scale depending on the complexity. Prior to setting up sheets, confirm the appropriate scale with the Project Manager.) The preferred horizontal to vertical scale ratio is 1:5; depending on the terrain.

  Adjacent sheets are connected with match lines along the alignment. Stations on the profile shall proceed from left to right. Consider lining up the beginning or ending station, or a tangent section of the roadway in the plan view with the corresponding profile station. Attempt to line up features if stationing has not been established. Stationing will typically increase from south to north or from west to east. Before setting a new stationing, check if a preferred stationing has already been established for the roadway (i.e. matching existing as-built stationing).

  Major approach roadway Plan and Profile sheets generally match the scale of the mainline. Stationing should run south to north and west to east so that Plan & Profile run left to right but may be shown differently depending on the specific circumstances and as determined by the Project Engineer. Do not start stationing at 0+00; choose stationing where no conflict with the mainline occurs. Approach roadway sheets appear after the mainline "F" series.

  Pathway Plan and Profile sheets generally match the scale of the mainline and follow the direction of the mainline stationing. Pathway sheets appear after the mainline and major approach roadway P&P sheets.

Driveway sheets are generally at a scale of 1”=20’. Driveway sheets appear at the end of the “F” series. For simple driveway designs, the use of a detail sheet may suffice and no additional plan and profile would be required. Complicated approaches may need a plan and profile view while others may just need a profile. Use 20+00 where the driveway intersects with mainline as a general rule.

- **G – Grading Plans**

  The Grading Plan sheets show how grading features such as intersections, pullouts, gravel pads, cul-de-sacs, roundabouts, etc. should be constructed. Grading features often have complicated grading and drainage designs different from the typical sections. Grading plans show detailed elevation information to correctly construct these features and are usually shown at a larger scale than the “F” series sheets. Doing so more easily accommodates labeling and dimensioning.

- **H – Traffic Sheets**

  The H1 sheet consists of legend items and notes specific to the project’s H Sheets and is not otherwise shown elsewhere within the plan set. General notes regarding Traffic information will be placed here.

  Following the H1 sheet will be applicable Traffic detail sheets in the order listed in Appendix A. Subsequent to the detail sheets, any intersection specific signal and lighting sheets are included. These sheets will contain all the information a contractor would need to install signals or lighting at the specific intersections. Intersection specific plan view sheets will be displayed on the Detail border layout, and typically should be at a 1”:20’ scale. Profile view sheets including Pole Elevation sheets will use the same border but typically are displayed at a 1”:10’ scale.

  Any detail sheets pertaining to project wide lighting will be placed in order as found in Appendix A. These sheets will include any information needed to install project wide lighting not shown elsewhere within the H sheets or planset. The project wide illumination plan will be added to the signing and striping plan sheets. Load center, illumination, and other summary table sheets will precede the signing, striping, and illumination plan sheets. Appropriate summary tables may be moved to the D sheet section if confusion can be avoided.

  The signing, striping, and illumination plan sheets are typically shown at a 1”:20’ scale. Other scales may be used if appropriate detail of striping plans can be shown. The signing and striping plan sheets will be displayed on the Plan and Profile border layout and can be shown in a plan and plan format. Alignments and striping station callouts will be displayed as shown on the A3 sheet under the traffic and pavement markings sections. Alignment stationing tic marks will be shown as needed to effectively augment the striping station callouts. For clarity of striping, proposed line work should be emphasized and only the needed existing line work should be shown.

- **J – Traffic Control Plan**

  Traffic Control Plans (TCP) are generally not in the planset. They are commonly provided to the contractor under a separate cover. If there are specific requirements, the TCP may be included in the planset.

See Chapter 14 of the current edition of the Highway Preconstruction Manual on when a TCP should be included in the planset.

- **K – Automated Traffic Recorder (ATR) and Weigh-In-Motion (WIM) Sheets**

  Automated Traffic Recorder (ATR) and Weigh-In-Motion (WIM) sheets generally have the following items and follow a general order. On "K1" there is generally a site plan, "K" series index, notes, labels, and legend. Following "K1" should be the site layout, wiring diagrams, schedule, and details.

- **L – Landscaping**

  The Landscaping sheets are usually only included in urban projects, with rare exceptions. The overall plan usually appears on the first sheet "L1". Total quantities are summarized on the first sheet in the "Landscape Summary" and each quantity agrees with "C1" or the Estimate of Quantities Sheet and the cost estimate. Additional landscaping detail sheets generally follow L1. Plan sheets shall be signed by a qualified individual like a Landscape Architect or a Civil Engineer.

- **M – Retaining Walls**

  Retaining wall drawings belong in the M series sheets.

- **N – Bridge Structures**

  Consult with the DOT&PF's Bridge section for guidance on Bridge sheets, if applicable.

- **Q – Erosion Sediment Control Plan**

  Generally, the Erosion Sediment Control Plans (ESCP) are not included as a part of the planset and are available separately to the contractor at the time of bidding in an appendix of the ESCP document. However, the general guidelines of this guide apply to the ESCP sheets.

  If there are specific permanent requirements, details may be included in the planset. The most common case is when a specific permanent erosion control measure is called out for on the plans and is included as a separate pay item. The details would be included in the "Q" series.

- **R – Right-of-Way Maps**

  See the Alaska Right-of-Way Manual.

- **U – Utilities**

  If utility relocations are to be done by the project's contractor, the U series sheets will be included in the planset. If the utility companies are doing their own relocations, the sheets will not be included in the planset. The sheets are generally signed by the individual in responsible charge of the utility work, as determined by the utility company.

- **Cross Sections**

Cross sections should match the drawing scale (usually 20 or 50) with no vertical exaggeration (1:1). Vertical exaggerations should only be used if required to more accurately show the proposed work. Cross sections are not included in the planset but provided for-information-only.

SECTION 3. DRAWING NAMING CONVENTIONS

3.1 Engineering Drawings

These are drawings containing design entities (also called objects) created in AutoCAD Civil 3D. Use the following naming convention:

(Last 5 digits of the State Project #)-(Suffix - Discipline or Drawing Type)-(Brief Description, if needed)

Suffixes include:

AL	Alignment	TR	Traffic and Safety
CM	Corridor Model	UL	Utility
PN	Pipe Network	XS	Cross Section
SR	Surface		

Examples:

12345-AL-Main.dwg	12345-PN-Culverts.dwg
12345-AL-App.dwg	12345-PN-StormDrain.dwg
12345-CM-Main.dwg	12345-SR-Lidar.dwg
12345-CM-App.dwg	12345-XS-Main.dwg

3.1.1 Alignment Names

Alignment name convention may be used for clarification based on project complexity:

Mainline Alignments:	M-<Description>
Mainline EOP Alignments:	M-<Description>-<RT/LT> (edge of pavement)
Approach Public:	A-<Description>-<RT/LT>
Approach Private:	A-<Station>-<RT/LT>
Target Alignments:	T-<Parent Alignment>-<Description>-<RT/LT>
R.O.W. Alignments:	R-<Parent Alignment>-<RT/LT>

3.1.2 Profile Names

Profile name convention may be:

<Parent Alignment>-<FG/EG>

Examples: Mainline-EG or Mainline-FG

3.1.3 Corridor Names

Corridor name convention may be:

Mainline Corridor:	M-<Description>
Public Approach Corridor:	A-<Description>-<RT/LT>
Private Approach Corridor:	A-<Station>-<RT/LT>

Examples: M-Mainline or A-LocalRoad

3.1.4 Surface Names

Surface name convention may be:

<FG/EG>-<Description>

3.2 External Referenced Drawings

External Reference Drawings should be named with XR to group them together. Use the following naming convention for external references:

XR-(Last 5 digits of the State Project #)-(Brief Description)

Examples:

XR-12345-BDR_DTL.dwg
XR-12345-BDR_PnP.dwg
XR-12345-Design.dwg
XR-12345-ROW.dwg

3.3 Planset Drawings

Use the following naming convention:

(Last 5 digits of the State Project #)_(Series Letter and/or Number)_(Brief Description)

Examples:

12345_A01_Title.dwg
12345_B01_Typ.dwg
12345_H05_Signal.dwg
12345_H23_SignStripe.dwg

Note: It is important to keep file names as short as possible; therefore, keep descriptions short or do not use them unless necessary. Examples: 12345_B01_Typ.dwg or 12345_F12_PnP.dwg

SECTION 4. ADVERTISING, ADDENDUMS, & AS-BUILTS

4.1 Advertising

All 11x17's submitted for advertising shall be signed originals. It is the Engineer's responsibility to ensure all sheets are numbered correctly, stamped, signed, and dated. Signatures shall be in blue ink. Electronic signatures will not be accepted. Traffic, Bridge, Utilities, and Right-of-Way sections will provide originals as well, without exception.

4.1.1 N.I.C. (Not In Contract)

Sometimes an element of the project will be eliminated. If this occurs, "N.I.C." is printed across the affected area. For more extensive deletions, a cloud may be drawn around an area and the "N.I.C." label added. If an entire sheet is eliminated, draw a bold diagonal line (in a heavy lineweight) across the sheet from the lower left corner to the upper right corner and add the "N.I.C." label. The N.I.C. label should be large (4.0") bold text and printed at an angle to help set it apart from anything else on the sheet.

4.1.2 Addendums

After transmittal of the plans, and the project advertises, no changes may be made to the plans up until bid opening except by addendum. The Contracts Section will insert identification of "ADDENDUM #___, ATTACHMENT #___". Designers are not to include any information regarding "ADDENDUM #___, or ATTACHMENT #___". Submit the addendum content to Contracts Section allowing one day for processing.

Addenda to the planset are made as follows:

- The revisions are made to all affected drawings.
- The revisions to each sheet are documented as follows:
    - The revision number indicates that the drawing was modified and released to bidders.
    - The designer will sequentially number, starting at 1, all sheet revisions issued by addenda, whether the sheet is revised in Addendum No. 1 or Addendum No. 4. A hexagon with this number inside is placed next to each revision on the sheet.
        - Example: Addendum No. 1 includes a revision on Sheet B1. The Addendum No. 1 revisions are denoted on the plan sheet with a 1 (with hexagon). A second revision is being included on Sheet B1 in Addendum No. 4 and will be denoted with a number 2 (with hexagon).
    - For more extensive revisions, a cloud line is drawn around the change, along with the revision number (with hexagon) on the outside edge of the cloud.
    - The revision number (with hexagon), along with a brief description of the change such as "Modified notes", "Deleted item", "Revised detail", etc. is noted in the revisions block located in the title block.

4.2 Design Closeout

At the time of Bid Opening, the CAD drawings, including any addenda drawings, will be submitted to the As-Built Archivist. Follow the Central Region Highway Design Project Closeout Guide for drawing requirements.

4.3 "As-Builts" (also known as "Record Drawings") – Reserved

Chapter 5: Appendix A - H Sheet Order

Arrange applicable sheets in the order shown below.

DETAIL SHEETS:

- Traffic Legend and Notes
- Type 1A Load Center
- Type 1 Load Center
- Type 2 & 3 Load Center
- Junction Box
- Loop Detector
- Splice Details
- Controller Foundation
- Controller Cabinet
- Flasher Cabinet
- Pipe Pile Foundation
- Lighting Standard
- Lighting Standard 2
- Lighting Standard 3 (45deg)
- Rural Beacon
- School Beacon
- Breakaway Pole
- Firehouse Beacon
- Eight Foot Pedestrian Pole
- High Tower Pipe Foundation
- Wood Pole Signal
- Span Wire
- Pole Wiring & Grounding
- Signal Hardware
- Antenna Mounting Bracket
- EVP Detector
- Sign attachment details (2 Sheets)
- Delineator details
- Mast Arm Dampening Device
- 22-24 Inch Pole Adapter

SHEET ORDER FOR SPECIFIC INTERSECTIONS:

- Signal Systems Plan
- Signal Operations
- Wiring (include LC Summary if possible)
- Pole Elevations
- Controller Equipment (include communications and EVP equipment)

Additional letter identifiers may be used with the sheet numbers after the H, to emphasis intersection groups. Examples being HA1-HA5 for intersection 1 of a 3 intersection project, whereas intersection 3 of 3 would be HC1-HC5.

SHEETS ORDER FOR PROJECT WIDE AREA:

- Load Center Summary
- Illumination Summary
- J-Box Summary
- Signing, Striping and Illumination (including any special marking details)
- Sign Summary and Salvage tables

Sign Shop Drawings are to be added to the Specifications as an appendix.