



Alaska Department of Transportation & Public Facilities

Quarterly Design Meeting #55

PD&E: Andi Morton, P.E. and Kathy Shea

Survey: Matt Burkholder, PLS, SR/WA

October 25, 2016



Q&A DOT&PF Preliminary Engineering and Environmental, and Survey Panelists – RULES

- Panelist will have 5 to 10 minutes to give a quick update on their junctional group.
- The audience is given 4 to 8 minutes to ask any follow-up questions.
- At the end of all the questions, we will open it up to the floor for any additional questions.



Preliminary Engineering - Question

Q: How much of preliminary designs efforts are centered around conceptual, large scale, or planning level design efforts of larger more complex projects currently, and if there has been a shift in focus; why has that taken place and can you explain Preliminary Design's primary function?

A: [Andi]



Preliminary Engineering

Preliminary Design has three primary functions:

1. Provide technical support to the Planning Section, primarily cost estimates and feasibility analyses.
2. Completes Reconnaissance Engineering Study (ERS). ERSs are essentially a study of the feasible alternatives prior to developing an environmental document.
3. Provide project management and technical support to the Environmental Section during the development of an Environmental Assessment (EA) or Environmental Impact Statement (EIS).



Environmental

- SHPO now requires a Findings letter for geotechnical investigations – this means we need to know at least 2 months before geotec is scheduled to begin.
- PID forms – keep in mind that every PID form triggers a reevaluation of the environmental document.
- Plan for 6-12 months to complete a CE once we have funding and enough information to begin environmental research. Keep in mind that most studies need to occur during summer.
- Scope creep – keep your analyst in the loop of even the “smallest” changes; they may seem small in terms of design, but they also may not be included in the environmental document!
 - Type of document could change (i.e. floodplain encroachment)
 - New ground disturbance (i.e. utility trenches, culvert replacements)
- Utilities – consider utilities when deciding project termini and study areas; we’ve had project delays due to utility work outside the proposed project area.



Survey


- Elements of a good survey request:
 - Discuss your project with DOT Survey Section. This can be an informal meeting or taken care of during the Scope, Schedule, Budget (SSB) meetings.



Survey Request Form

- Fill out a Survey Request Form with as much detail as possible.

SURVEY REQUEST



Project name: _____

From: (Section, Design Group) _____ **Date Submitted:** _____

Request initiated by: _____ **Phone:** _____

State/Federal/AIP Project #: _____

Desired Completion Date: _____ **Program Code:** _____ **Activity Code:** _____

Project Scope & Survey Limits: (include exhibits as attachments) _____ **Project Phase:** _____

(Please contact Right of Way Engineering prior to filling this out, as their requirements may directly affect the survey effort required. Include their response)

For each area the following information is needed: Alignment data or physical location of line (exist CL, top bluff, etc.); Desired contour interval, Distance or physical limits left and/or right from line desired. Please provide an attachment for each alignment.

Scope of overall project: _____

Scope of survey work requested: _____

Locate: (Fill empty slots if desired & Check all that apply)

Improvements	Drainage	Utilities	Right of way/Monuments	Other
Edge Paint, Curb, etc.	Culverts	Above Ground	Front Corners Only	
Structures	Ditches	Overhead X-ings	Front & Back Corners	
Sewer/Septic System	Storm Drain	Inverts	Monuments in Roadway	
Bridge Site Survey			Encroachments	

Vertical Control
Are there any elevation-critical features needing to be located? ☐ Yes ☐ No
If Yes, which datum are these features to be referenced to? (MSL, MLLW, MHW, Project, Geoid, etc...) _____

Monuments in the road
Are there survey monuments in the roadway (from as-builts)? ☐ Yes ☐ No

Construction Schedule
When is construction anticipated to occur? _____

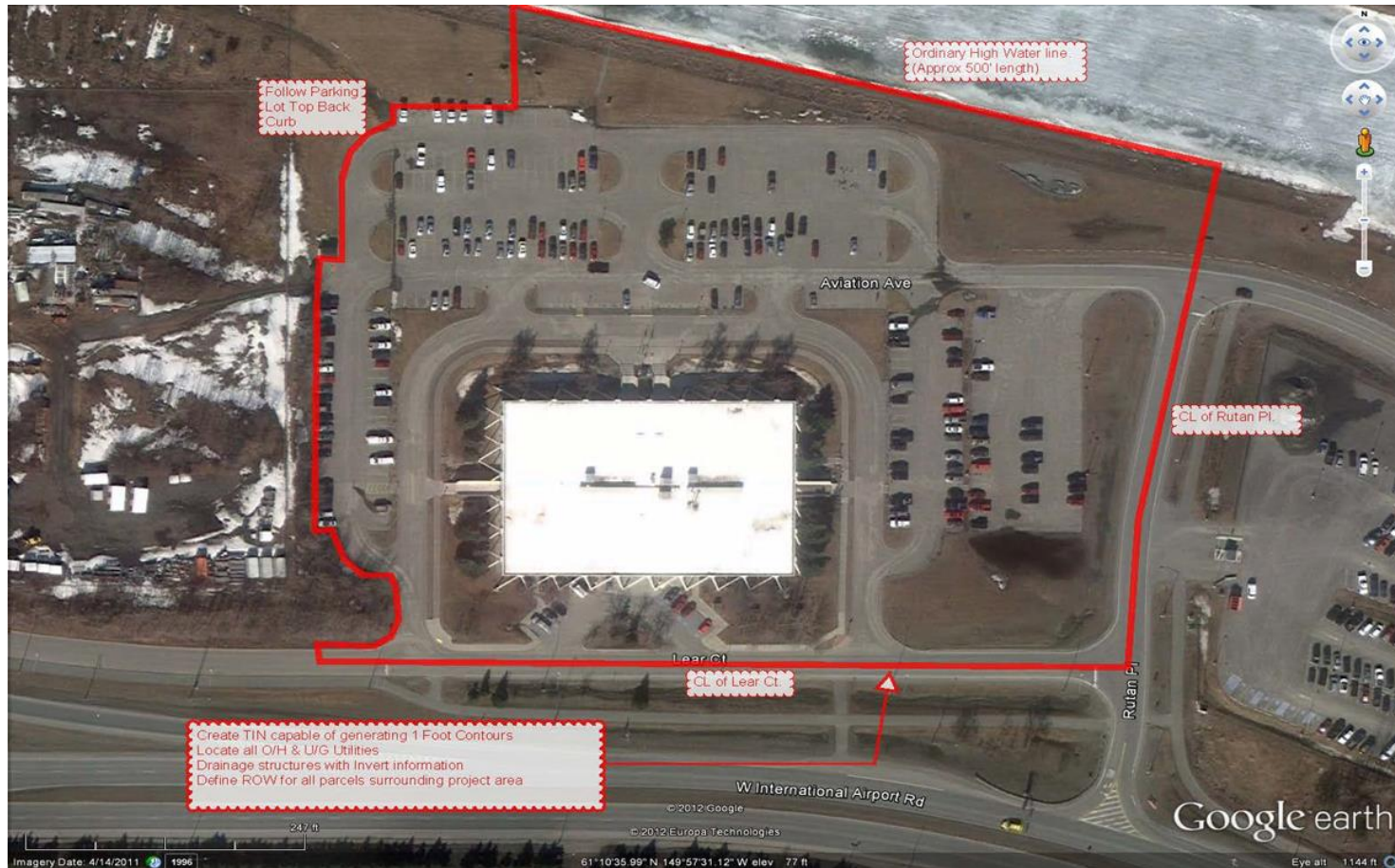
Completed by _____ Date Completed _____

Notes: _____

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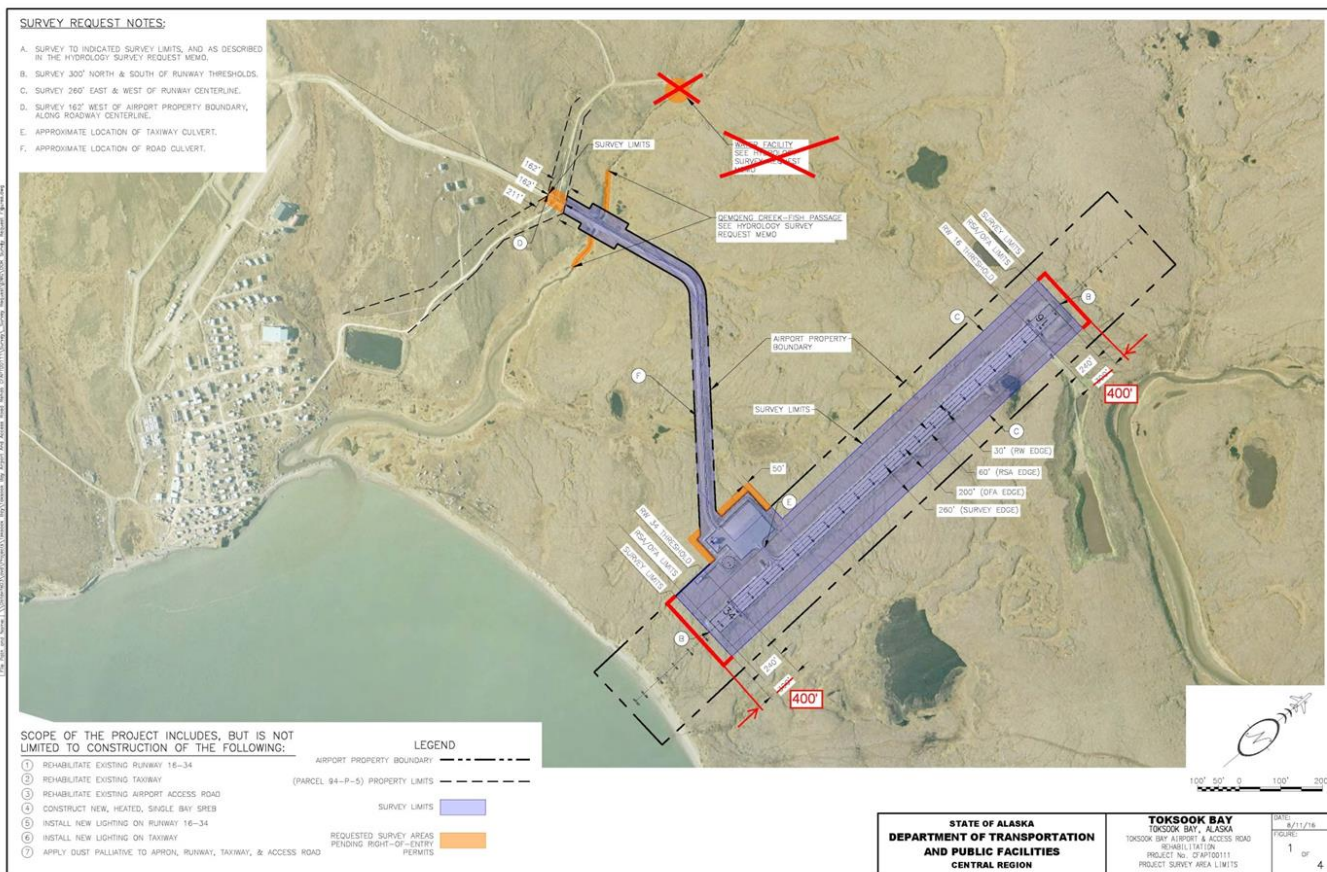


Exhibits





Exhibits





Survey Requests and Exhibits

- Using the survey request and the exhibits, the Survey Section will work with you to tweak the request to your projects needs.
- Once we have the request and exhibits complete. We can start on an estimate. We provide estimates for in-house and Consultant work. We also can help you negotiate and review Consultant proposals.
- If the work is to be consulted out, a pre-work meeting is required. This is to insure that both parties are on the same page and that any last minute requests or details are addressed. Schedule will also be addressed and modified if necessary in the pre-work meeting.
- Survey products from Consultants should go through the Survey Section for review before use. Generally, the Survey Section has our reviews back to the Consultants in two weeks.



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