ALLISON LAKE PROJECT

Dick Griffith

March 11, 2010

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PREVIOUS STUDIES

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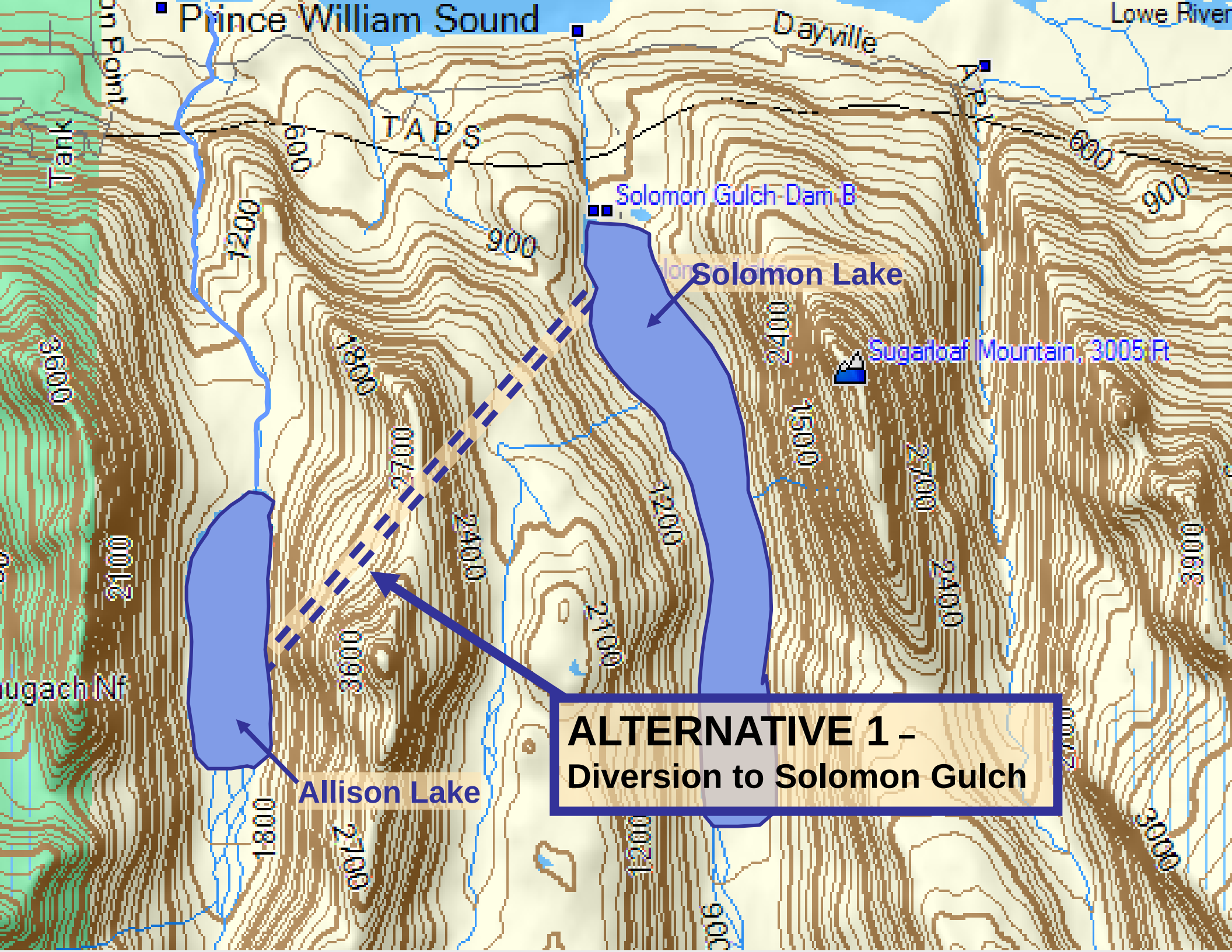
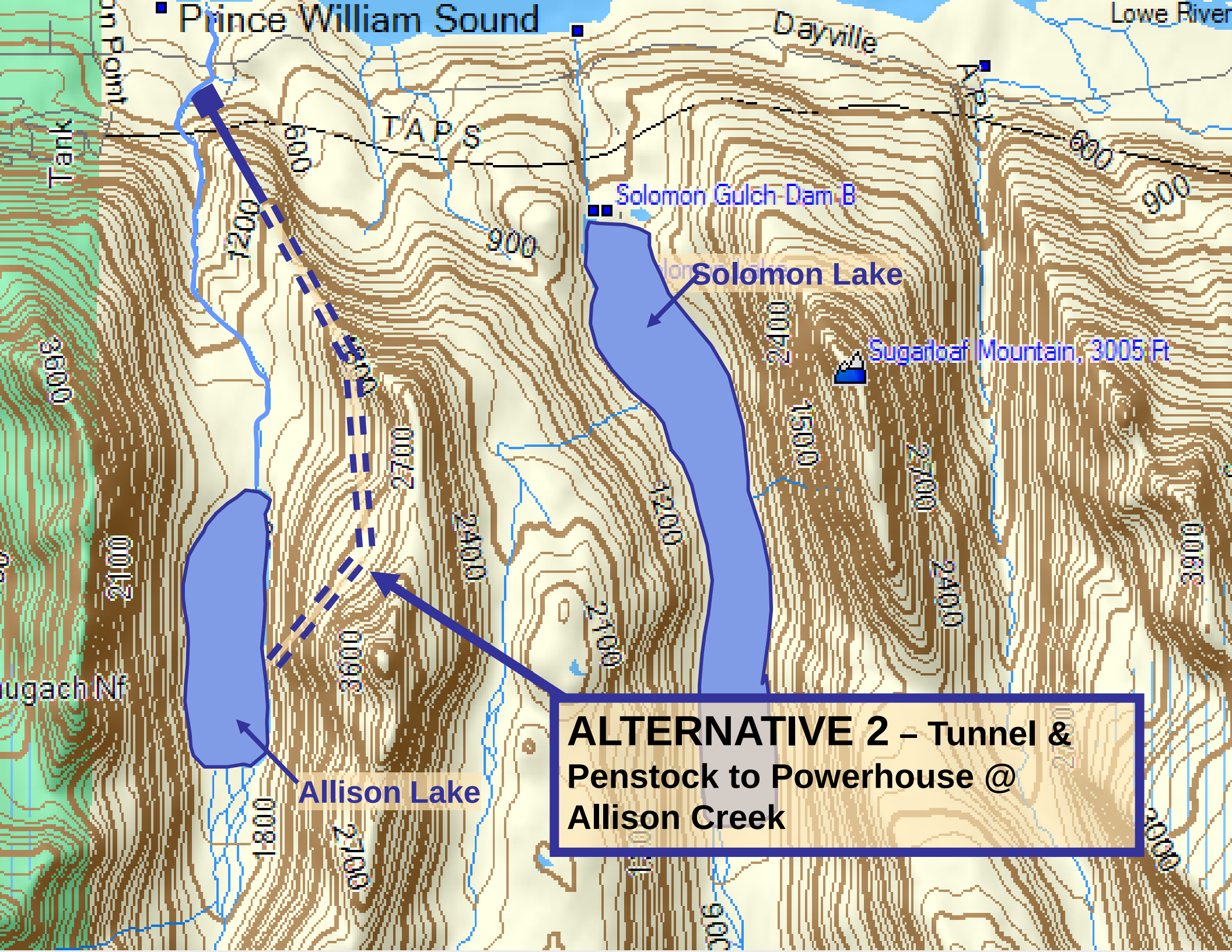
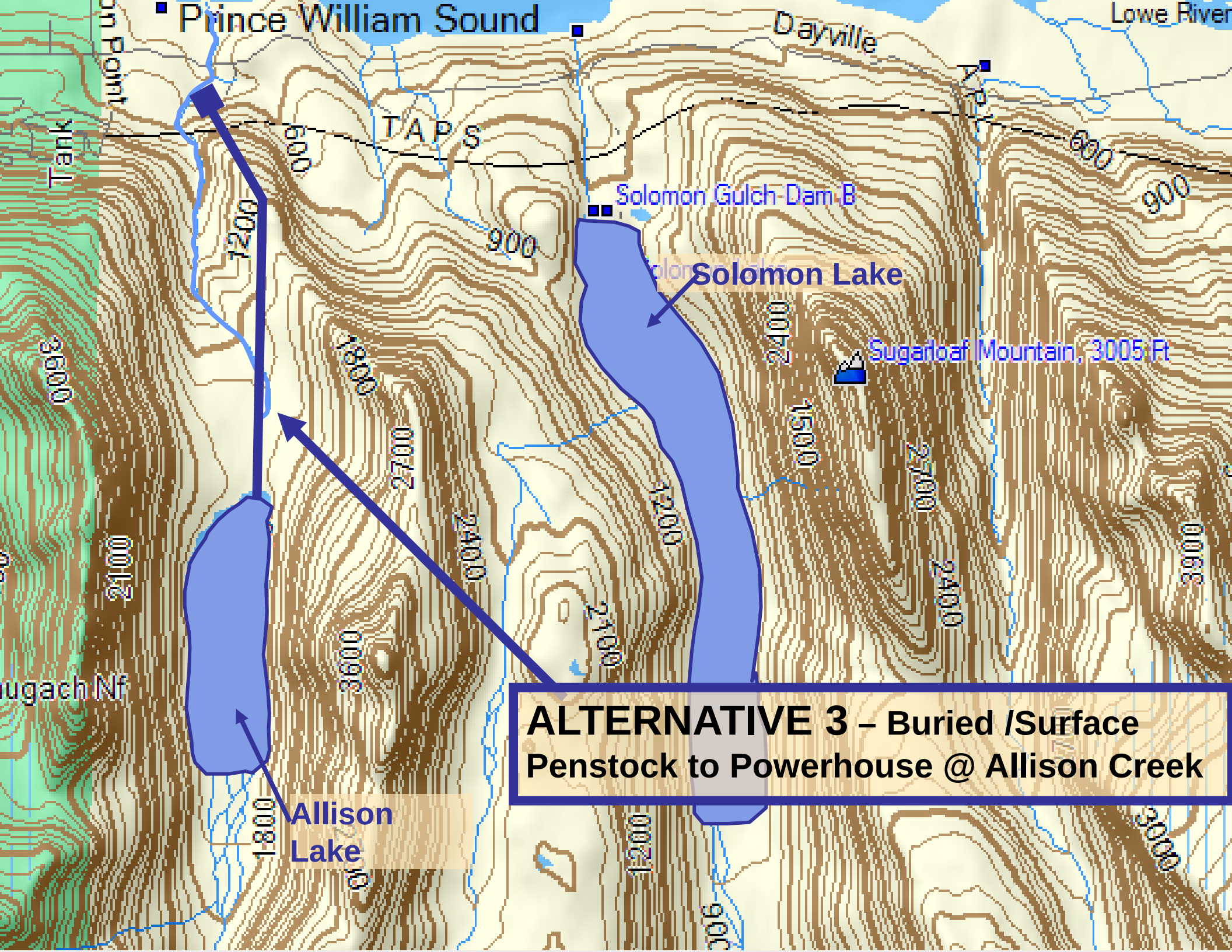
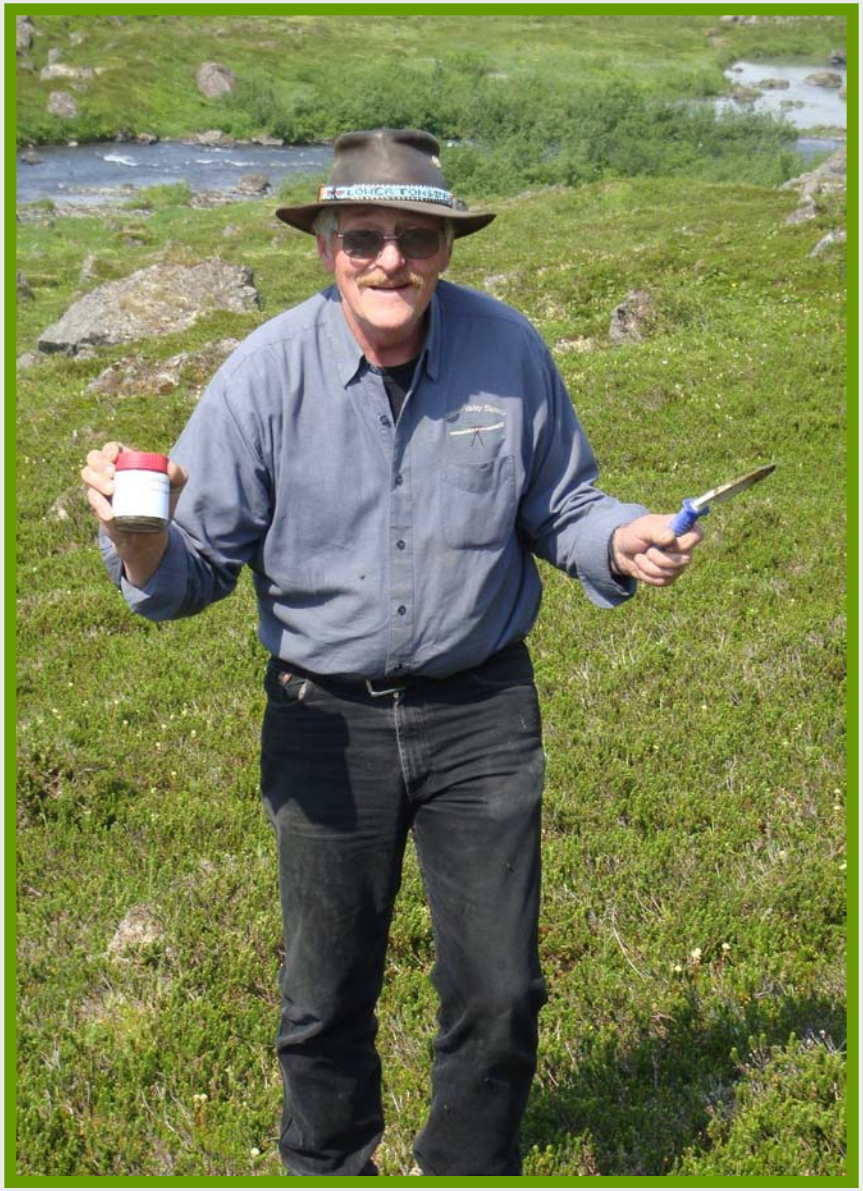

Prince William Sound
Dayville
Lowe River
TAPS
Solomon Gulch Dam B
Solomon Lake
Sugarloaf Mountain, 3005 Ft
Allison Lake
ALTERNATIVE 1 –
Diversion to Solomon Gulch


Prince William Sound
Dayville
Lowe River
TAPS
Solomon Gulch Dam B
Solomon Lake
Sugarloaf Mountain, 3005 Ft
Allison Lake
ALTERNATIVE 2 – Tunnel & Penstock to Powerhouse @ Allison Creek


Prince William Sound
Dayville
Lowe River
TAPS
Solomon Gulch Dam B
Solomon Lake
Sugarloaf Mountain, 3005 Ft
Allison Lake
ALTERNATIVE 3 – Buried /Surface
Penstock to Powerhouse @ Allison Creek

PROGRAM OBJECTIVES



- *TIMELY PROJECT IMPLEMENTATION*
- *RELIABLE PROJECT COST ESTIMATES*

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PROJECT MILESTONES

- **Began study in late 2007**
- **Pre-Feasibility Study – February 2008**
- **Filed Preliminary Permit Application – March 2008**
- **Received Preliminary Permit – September 2008**
- **Initial Field Studies – October 2008**
- **Second-year Field Studies – October 2009**
- **Final Feasibility Study – April 2010**

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PROJECT STUDY PROGRAM

- ***Environmental Studies Program***
- ***Engineering Studies Program***

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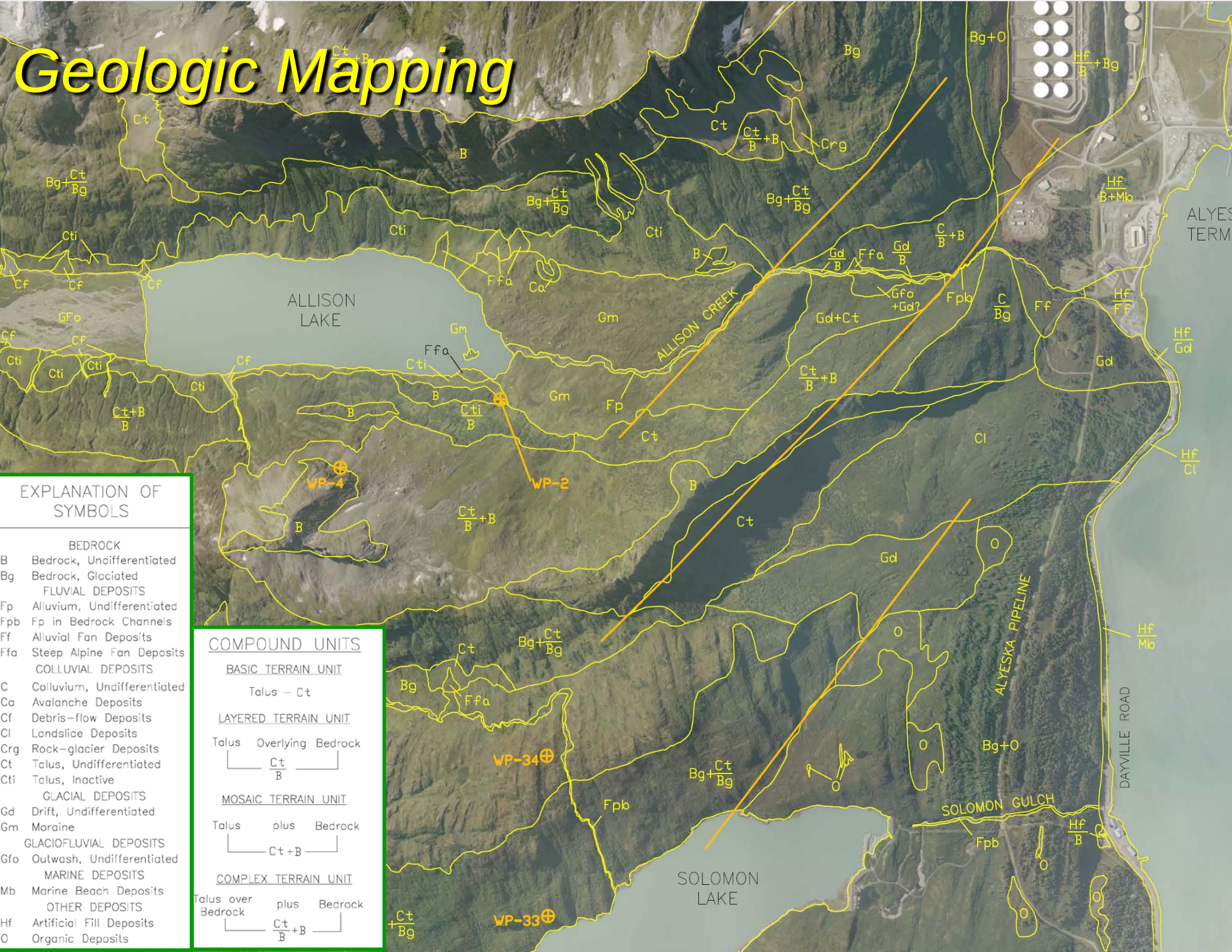
Geologic Mapping



EXPLANATION OF SYMBOLS

BEDROCK
- B — Bedrock, Undifferentiated
- Bg — Bedrock, Glaciated

FLUVIAL DEPOSITS
- Fp — Alluvium, Undifferentiated
- Fpb — Fp in Bedrock Channels
- Ff — Alluvial Fan Deposits
- Ffa — Steep Alpine Fan Deposits

COLLUVIAL DEPOSITS
- C — Colluvium, Undifferentiated
- Ca — Avalanche Deposits
- Cf — Debris–flow Deposits
- Cl — Landslide Deposits
- Crg — Rock–glacier Deposits
- Ct — Talus, Undifferentiated
- Cti — Talus, Inactive

GLACIAL DEPOSITS
- Gd — Drift, Undifferentiated
- Gm — Moraine

GLACIOFLUVIAL DEPOSITS
- Gfo — Outwash, Undifferentiated

MARINE DEPOSITS
- Mb — Marine Beach Deposits

OTHER DEPOSITS
- Hf — Artificial Fill Deposits
- O — Organic Deposits

COMPOUND UNITS

BASIC TERRAIN UNIT

Talus — Ct

LAYERED TERRAIN UNIT

Talus Overlying Bedrock: Ct / B

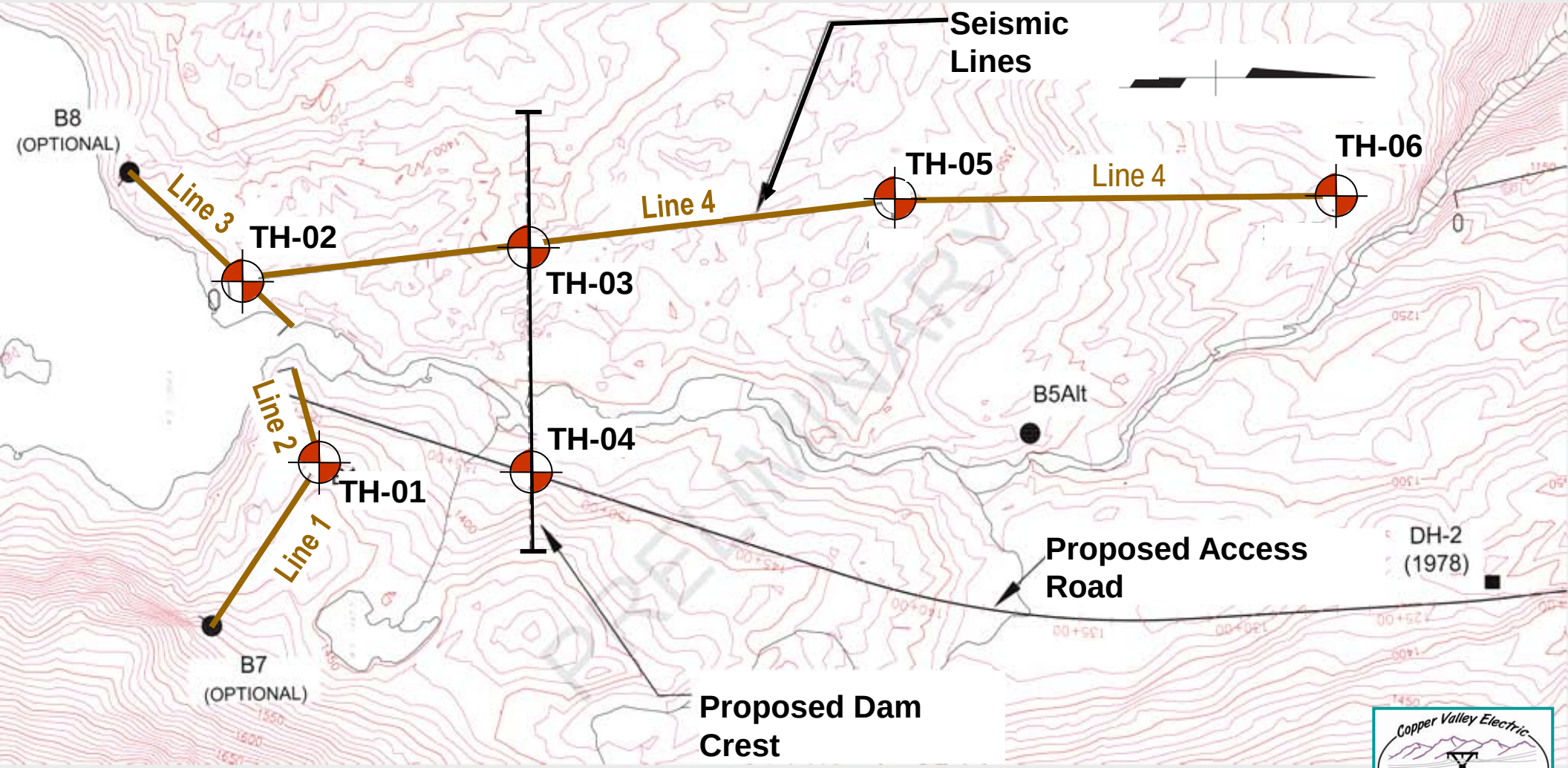
MOSAIC TERRAIN UNIT

Talus plus Bedrock: Ct + B

COMPLEX TERRAIN UNIT

Talus over Bedrock plus Bedrock: Ct / B + B

Geotechnical Program – Seismic Profiles and Borehole Locations



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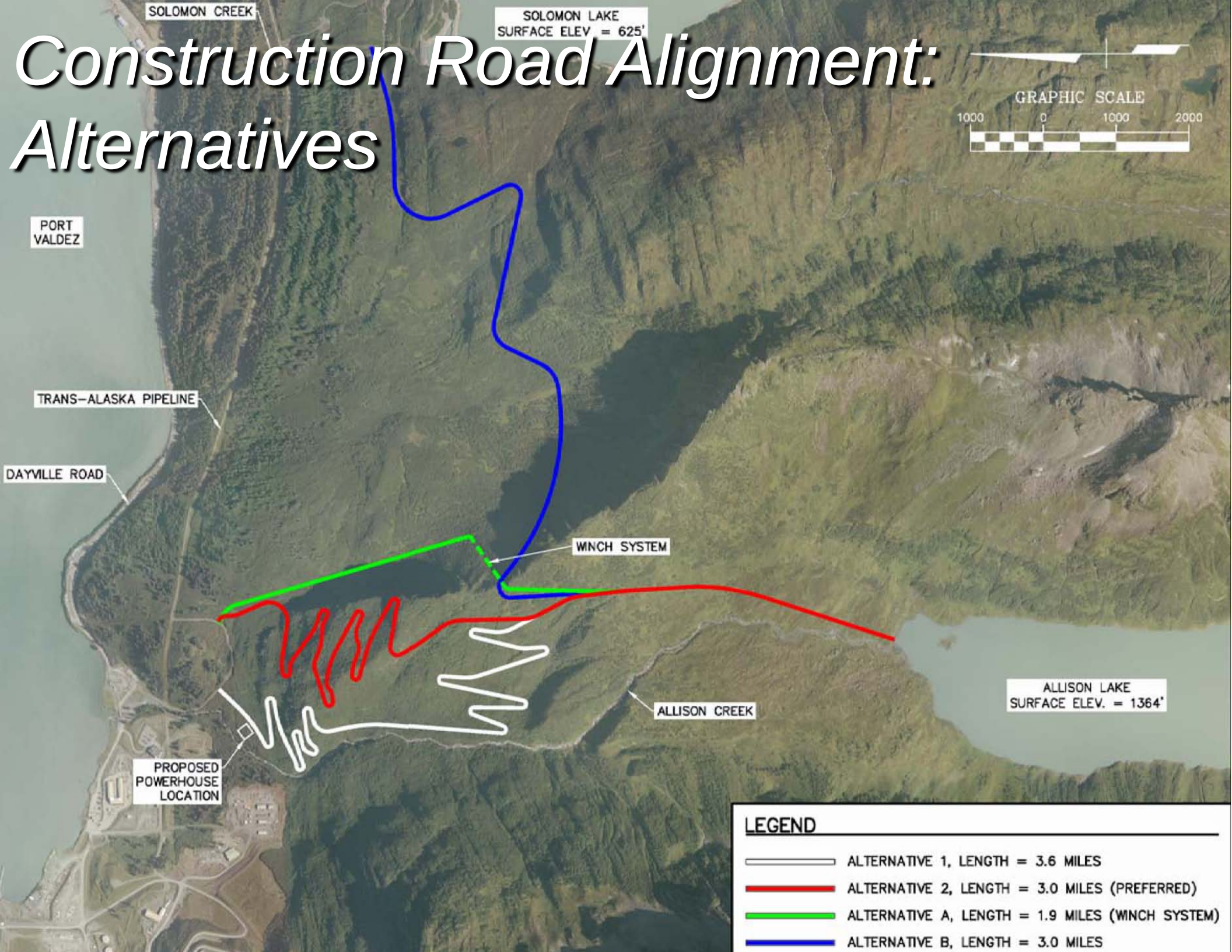
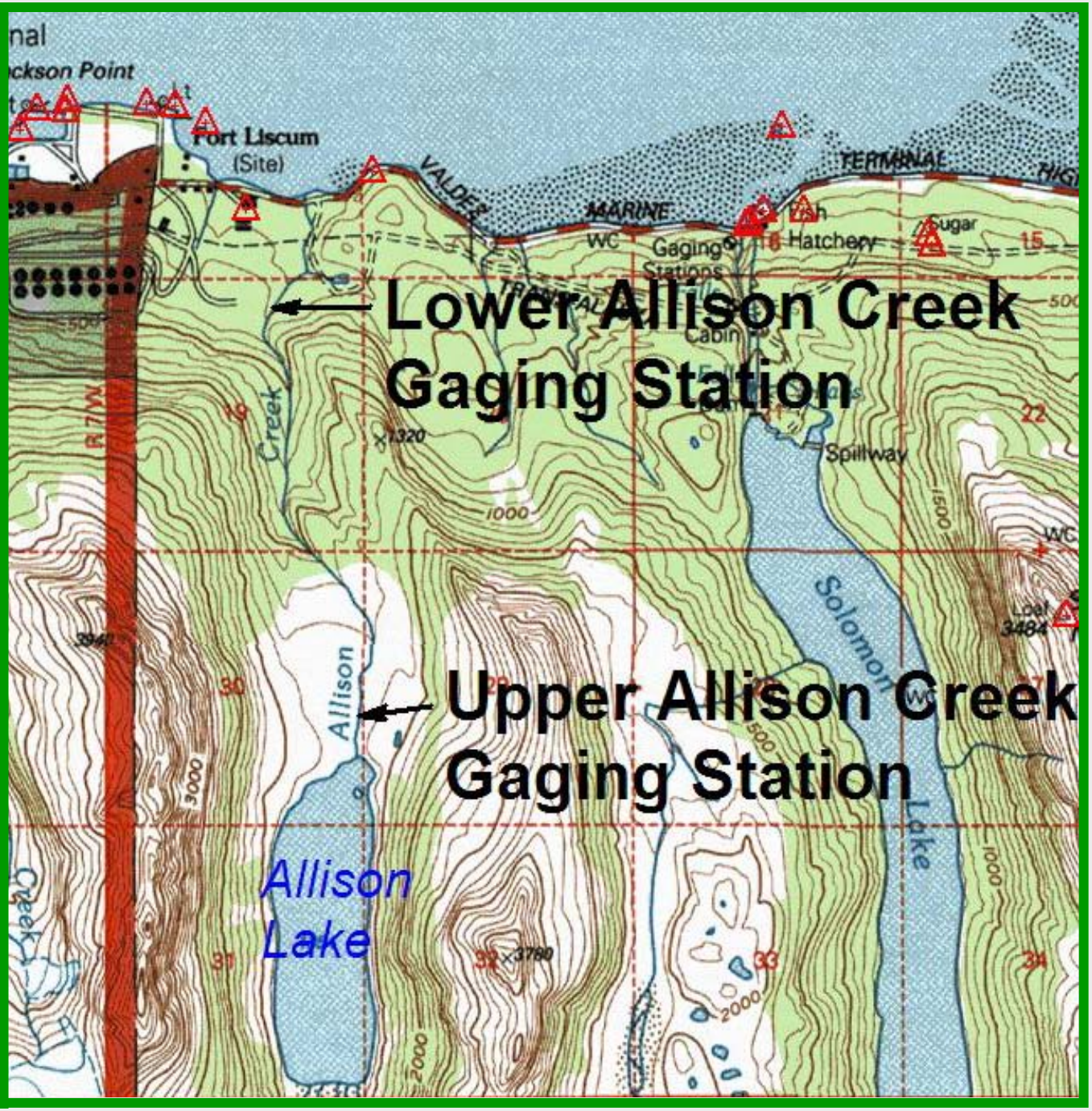
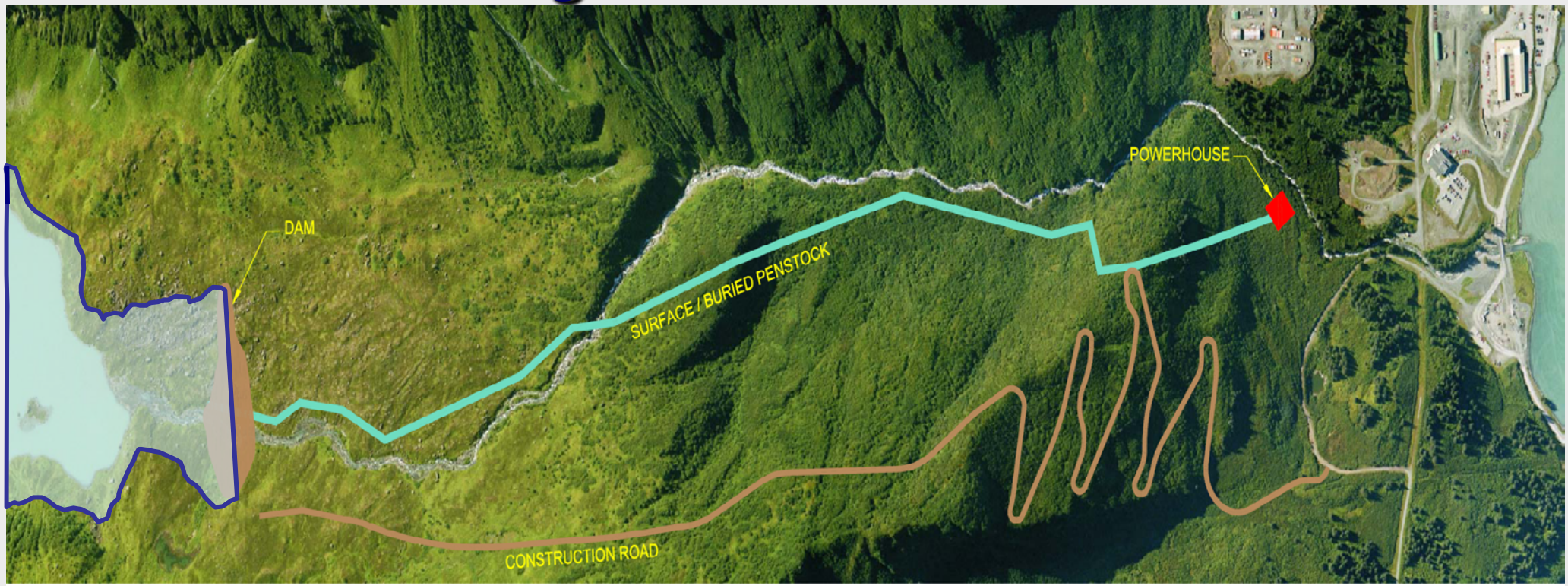
Construction Road Alignment: Alternatives

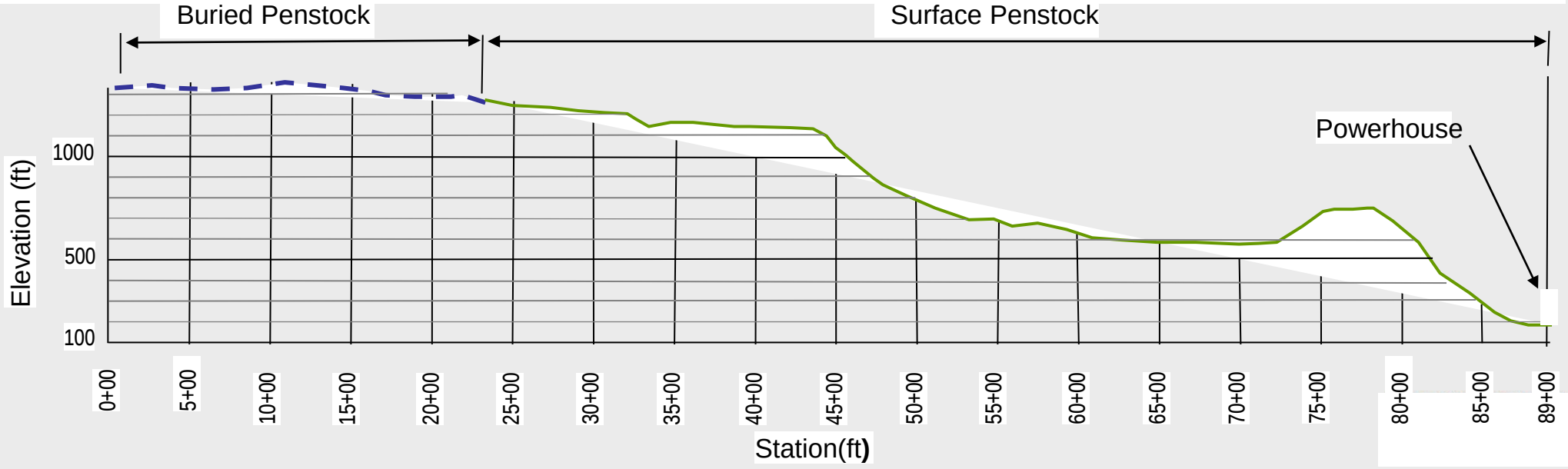


HYDROLOGY – Installation

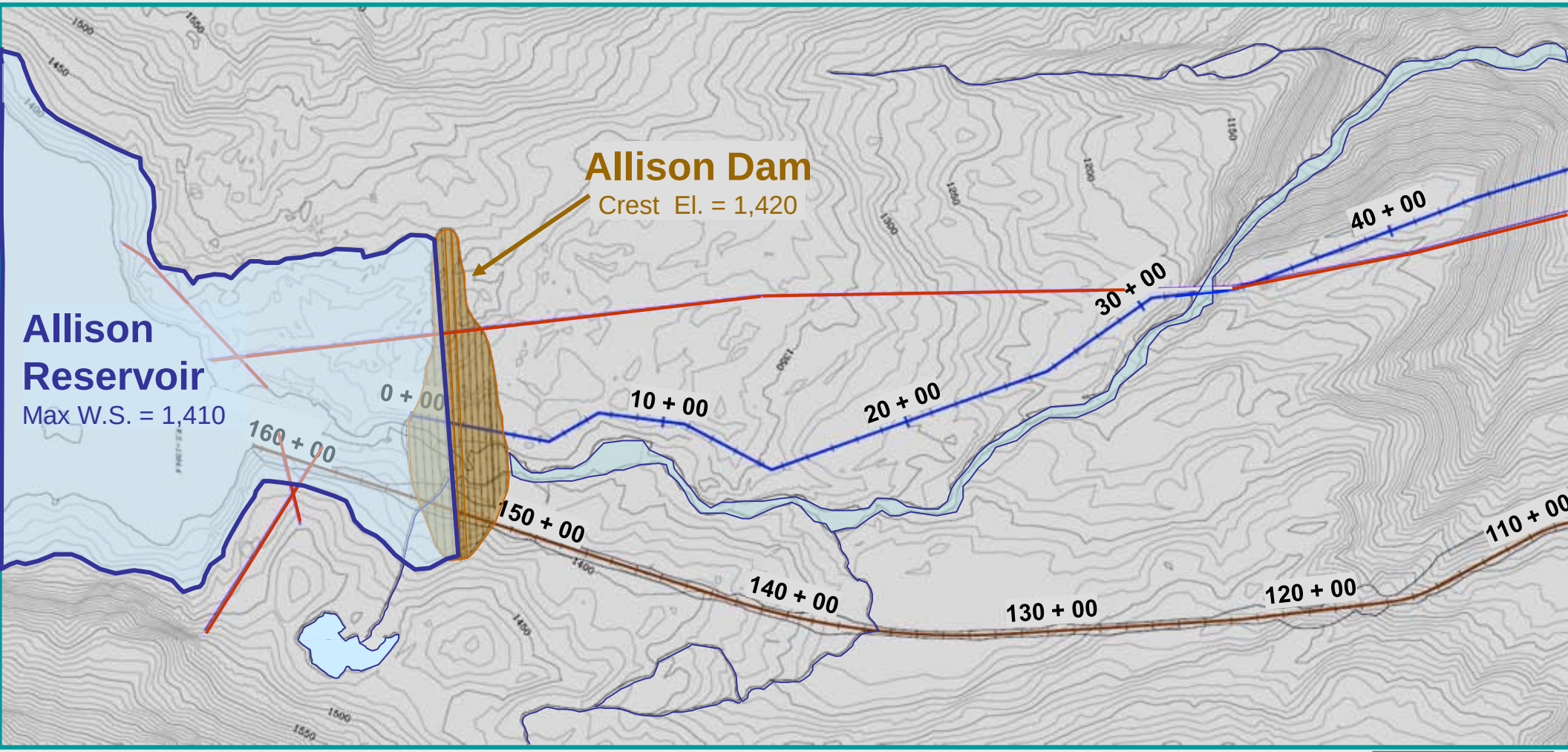


Preferred Arrangement – Plan & Profile





Preferred Alternative –Plan (sheet 1 of 2)



Geophysical Survey Lines

20 + 00 Penstock Alignment

140 + 00 Construction Access Road

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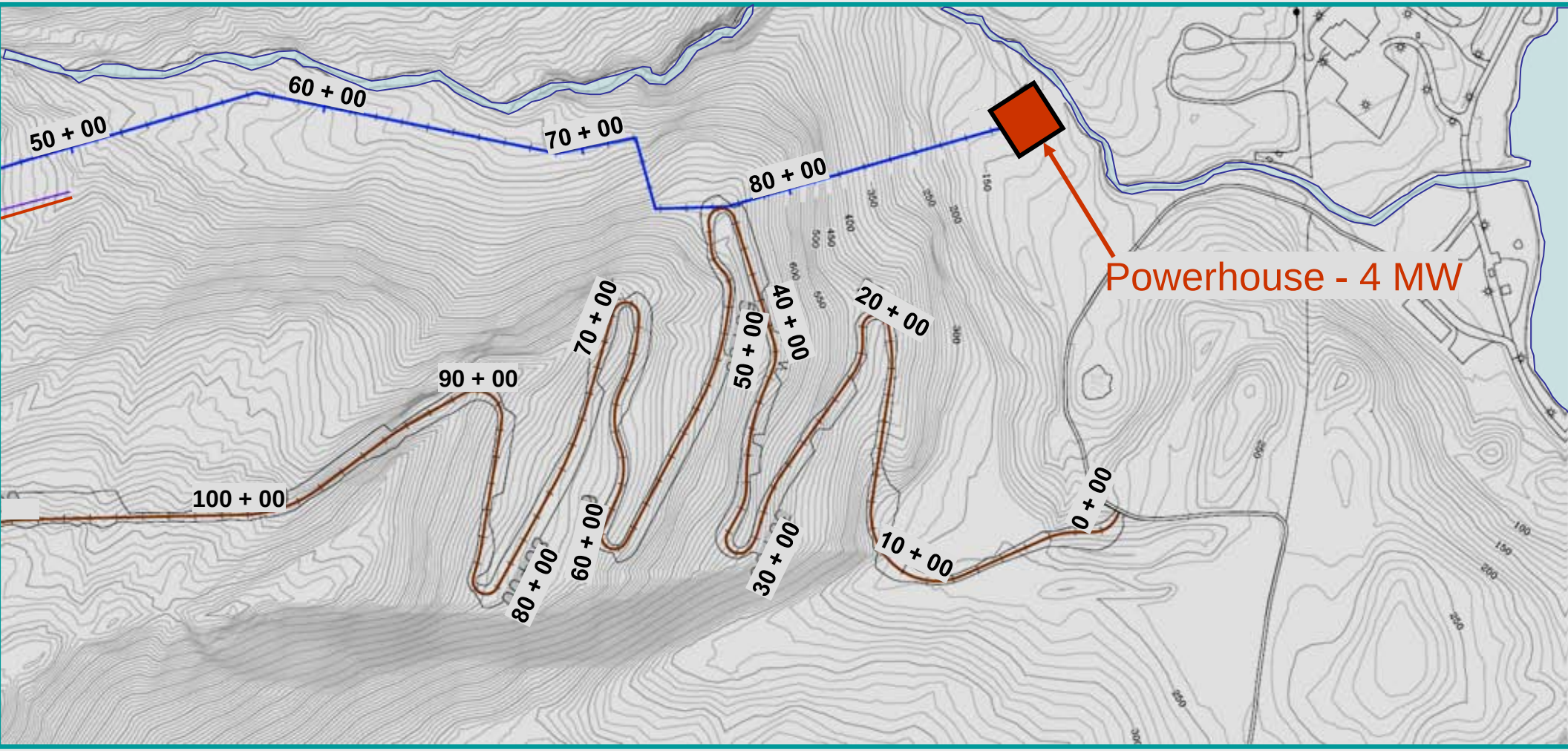
Preferred Alternative –Plan (sheet 2 of 2)



Geophysical Survey Lines

20 + 00 Penstock Alignment

140 + 00 Construction Access Road

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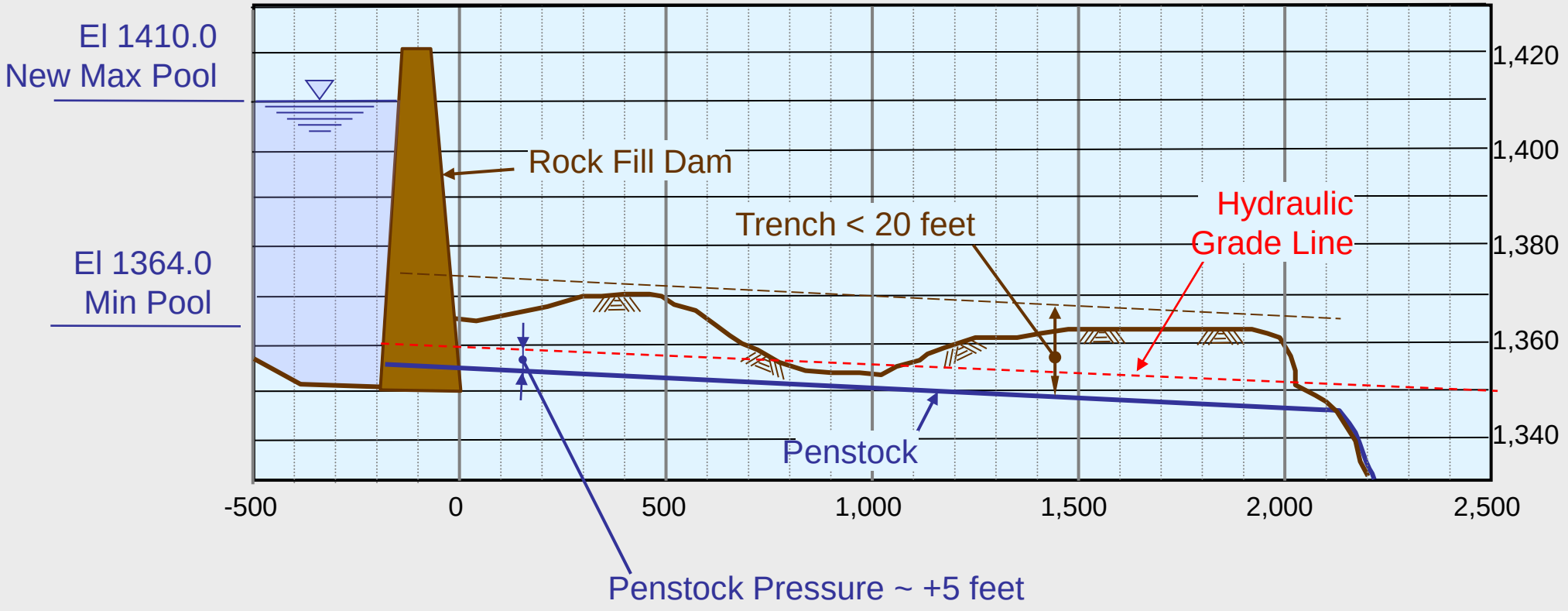
Preferred Alternative –Profile Detail



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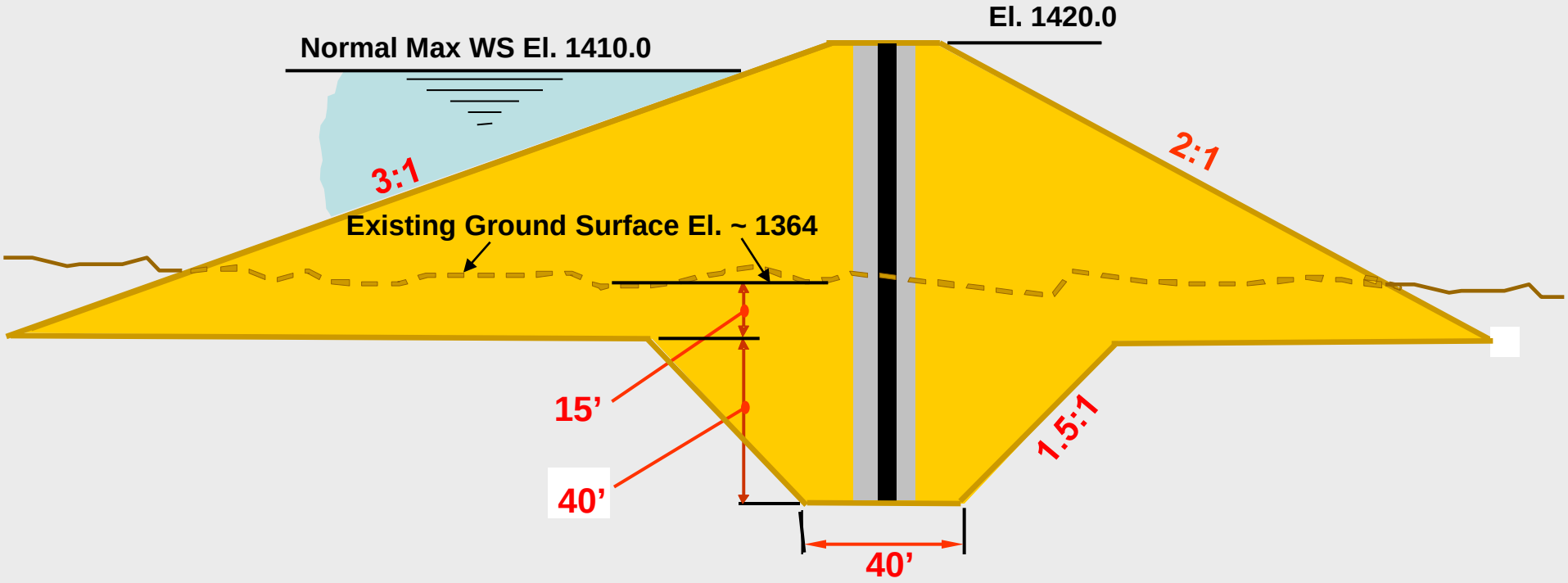
Preferred Alternative – Dam Cross Section



Asphaltic Core

Filter Zones

Random Fill

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INTERIM CONCLUSIONS

- **Project is environmentally net positive**
- **Project is technically feasible**
- **Buried / surface penstock w/ dam @ El.1420 appears to be most cost effective arrangement**
- **Technical challenges >>>Economic impacts**
- **Project would benefit from current exclusion from "renewable" status.**

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