

# *June 2013 Update*

## *Copper River Highway*

### *Bridge 339, Cordova Alaska*

AKSAS Project # 60555

June 18, 2013

#### **Recent Changes**

1. This spring (2013) eastward migration of the Copper River's main channel and erosion of the road has accelerated:
  - a. The road breach on the east side of Bridge 339 has grown from 185 feet last fall (2012) and is now approaching 800 feet in width
  - b. On May 30, 2013 a camera mounted on Bridge 339 captured over 50 feet of road erosion in a 24-hour period
2. Sonar equipment mounted on the bridge indicates the deep scour hole at piers 4 and 5 is filling in. This was predicted because the road breach has created a larger opening for water to flow. This large opening slows down water velocities resulting in the river dropping its bed load.



**Figure 1** – Road breach looking east June 4, 2013



**Figure 2** – Road breach east side of Bridge 339 June 9, 2013

## Design Update

---

1. The environmental document has been put on hold. The recent extreme river changes have created questions about our design and constructability:
  - a. Is the current design appropriate?
  - b. How to remove the existing bridge
  - c. How to build the new bridge
  - d. How to transport construction equipment and materials across the river

These questions need to be answered so impacts to the environment can be determined and included in the final document.

2. We are currently in the final stages of hiring a Construction Consultant. The consultant will answer constructability questions raised in bullet number 1 above and develop an independent construction cost estimate.
3. Then we will procure a Construction Manager/General Contractor (CMGC) contract to assist in finishing the design:
  - a. A CMGC contract hires a construction contractor to assist in developing the design. Basically the contractor has input on the construction schedule, phasing (how it will be built) and cost based on his equipment and manpower. Then a “fixed price” construction contract is negotiated with the contractor and he builds the project.
  - b. This process eliminates nearly all the unknown risks associated with how the construction contractor will build the project, what equipment he has and the schedule.
  - c. The Construction Consultant in bullet number 2 will be retained to provide independent reviews of the CMGC’s work plan and construction cost estimate(s).

4. The environmental document will be finalized after the CMGC has developed a preliminary construction phasing plan identifying project impacts. Then we will proceed and develop the detailed design.

## Schedule

---

The recent decision to use a CMGC contract has added 1 year to the schedule:

1. Summer 2013 procure Bridge/Engineer/Construction Consultant
2. Winter 2013/2014 Construction Consultant develop bridge constructability report and cost estimate
3. Summer 2014 procure Construction Manager/General Contractor (CMGC)contract
4. Winter 2014/2015:
  - a. CMGC develop preliminary construction phasing plan
  - b. Finalize Environmental Document
5. Spring 2015:
  - a. Detailed design
  - b. Apply for permits
6. Summer 2017 construction begins

## Conclusion

---

The design team is proceeding in developing a bridge replacement design.

Two years ago we did not anticipate the main river channel shifting its alignment in such an extreme and rapid manner. This has compelled us re-evaluate our approach to the project design, construction and estimated costs.

It's extremely difficult to predict where or how fast the river will continue to migrate. This is a natural process and will continue over time.

We do not believe this project is a one-time fix. We predict the river channel will move to another bridge and create similar problems in the future.