



**Bear Creek Fire Service Area**  
**PO Box 1565-Mile 5 Seward Hwy**  
**Seward, AK 99664**

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## **Bear Creek Fire Station and Multi-purpose Building Site Committee Site Analysis Report and Recommendation August 2, 2011**

This report describes sites that were considered for locating a new Bear Creek Fire Station. A number of factors were considered, including: environmental impacts, floodplain, geology, site condition, access, land ownership, and distances in service area.

**Background, Objectives, and Methods:** The goal of this effort was to identify appropriate sites that minimize exposure to risk while maximizing ability of the Bear Creek Fire Station to respond to its service area and to provide support to other fire services when appropriate. The matrix of success for this goal is to ideally find a site optimally within the service area, outside of the floodplain, with reasonable site conditions requiring manageable site preparation. It was also desired to find other potential sites that might be suitable and rank them in relative terms.

In order to update its facilities and better serve the community, the Bear Creek Fire Station, under the Kenai Peninsula Borough, has been working since 2006 to design and find funding to build the facility. Design is 90% complete, with remaining factors being funding and site location.

Regarding the latter, to date, the KPB Planning Department, Capital Projects Department, River Center Department, Seward Bear Creek Flood Service Area and Bear Creek Fire Service Area have worked together by meeting on three occasions, including one field trip on July 13, 2011, to discuss needs and map potential sites. The Mayor's Office has been apprised and supportive throughout the process. The KPB Geographic Information System Department has mapped primary selection criteria including major roads, water bodies and streams, topography, floodplain and Seward Mapped Flood Data Area (SMFDA), and Fire Service Area.

**Site Review Results:** The following sites were identified as meriting further review, inspection, and analysis:

- A. General area north of Kwechek Creek (Salmon Creek), south of Bear Lake Road (within floodplain): This area was looked at for potential since it was within the service area parameters. Lands in this area are comprised of alluvium and possibly subject to future flood events. This area has good access, but limited service as it is isolated from the Seward Highway. This area has a higher flood risk. Ultimately, it is deemed unsuitable for the purposes of this project due to potential higher flood risks.
- B. West of the Seward Highway across from Stoney Creek Ave (outside floodplain): KPB Tax Parcel ID 125-020-31. There is undeveloped property on bedrock at this location. Site development would require either explosives or heavy equipment to break down and to level fractured bedrock. Potentially up to two acres might be available at this location; however, Salmon Creek runs to the west of the developable property. This site has direct access to the Seward Highway with good site distance for entry. However, Chief Beals has stated that he likes two access roads, which this site does not provide. Private properties adjacent to the site might limit access to the future BCFS building, unless redesigned, because it is designed as a drive-through bay.
- C. Heather Lee and Munson Ct. Area (outside floodplain): A small number of parcels upland in the residential subdivision could potentially support the planned physical improvements. This area is accessed via Scott Way/Rough Road. The actual site is on the hill, roughly behind the present fire station, and approximately 150 feet higher in elevation. A tight radius turn may be unsuitable for fire trucks. Potential flooding at the bottom of Scott Way might impact the ability of trucks to pass, unless the roads were rebuilt to a different elevation. Road grades are steep enough to cause concern for ingress and egress of both apparatus and responders.
- D. Existing Bear Creek Fire Station Site (within floodplain): KPB Tax Parcel ID 144-011-01 and -02. This site has the benefit of being the current location. One parcel has been filled. Backwater flooding upstream of the parcels might affect adjacent properties, and Scott Way may be impassable in some flood stages as a result of fill. Downstream culverts are undersized and flood waters may not have good conveyance at some flood stages. Additionally, this site has two access points, which is desirable according to Chief Beals. The existing fire station would have to be demolished prior to completion of the new fire station. Draft flood mapping from FEMA shows this site affected by the floodway. If funding were available to complete the project at this time, the KPB could develop the

site with the current mapping and request a “Letter of Map Amendment” based on fill when the draft floodplain maps are finalized. However, this leaves the structure in a vulnerable position; especially should Kwechek Creek (Salmon Creek) overtop the railroad upstream. There is a limited area for which to develop the site; however, longevity of use at this location means fire service may be relatively stable except for during the extreme flood events.

- E. Knudson Properties (partially within floodplain): KPB Tax Parcel ID 144-011-14 and -15. This site is only partially in floodplain, and is not exposed to any floodways. There is a bald eagle nest within 330 feet of the property; however, preliminary discussions with USFWS specialists suggests that the eagles may be habituated to noise and industrial disturbance given the nearby gravel pit, sawmill, roads, and highway. The site is largely prepared and would require minimal site preparation. Soils are glacial silt (???) which is suitable for development and also the soil type indicates the site is out of the alluvial fan. There are two road accesses, with one to the highway. There is fairly good site distance, though a moderate radius turn on the highway to the south may require lights/signage. Good site locating may minimize the negative aspects of this limitation. Alternately, the hillside adjacent to the turn might be reduced. Developing this site is positive in the sense that it is near to the existing facility, while also allowing the current fire station to continue operations during construction. There are debris and machinery on site that would have to be removed. A Phase I Environmental Site Assessment would be prudent prior to purchase in order to identify potential site contaminants. Demolition of the existing fire station is not necessary after construction. A detractor of this site is that the nearby drainage along the northern property line shows signs of significant flow; therefore, conveyance of the drainage must be examined.
- F. Dykstra Property (within floodplain): KPB Tax Parcel ID 144-013-74. This property consists of fill placed in the floodplain and affected by a floodway.
- G. South Fork Lane/Blying Sound Drive (outside floodplain): This is high ground. A tight turn on the access road was undesirable according to Chief Beals.
- H. Hillside below South Lane (outside floodplain): This area right along the Sterling Highway is bedrock but having a steep hillside. A significant amount of blasting and removal would be needed to make it suitable.
- I. Seward Park Drive (within floodplain): This is a low-lying area along the highway.

**Conclusion:** Following the site visits, it was agreed among all that the Knudsen properties seemed to have the most potential for the proposed project. The site could be developed with the least disturbance to the current operations of the Bear Creek Fire Station, while also removing the fire station from impacts associated with the floodplain. The nearby bald eagle nest does not appear to be a major impediment to site development. The drainage to the north might be addressed by hardening techniques and/or raising the side road.

**Recommendation:** The members of the Bear Creek Fire Station and Multi-purpose Building Site Committee upon review of the best available data, site inspection, and analysis recommend pursuing the acquisition of the property described as Site "E," Parcels 144-011-14 & 15 (Lots 28 & 29 Block 2 Harbor View Subdivision) and additionally consider purchase of the adjacent parcel 144-011-13 (Lot 30 Block 2 Harbor View Subdivision).

The Bear Creek Fire Station and Multi-purpose Building Site Committee should continue involvement throughout the acquisition phase to ensure that all necessary due diligence measures are performed including considerations including but not limited to: Environmental conditions, acquisition procedures, permitting requirements, civil design considerations, operational considerations, funding considerations, grant funding requirements, Environmental Historical Preservation Review, board and commission representation, identification of local stakeholders, and coordination of efforts.

**Respectfully Submitted:**

A handwritten signature in black ink, appearing to read "Mark Beals". The signature is fluid and cursive, written in a professional style.

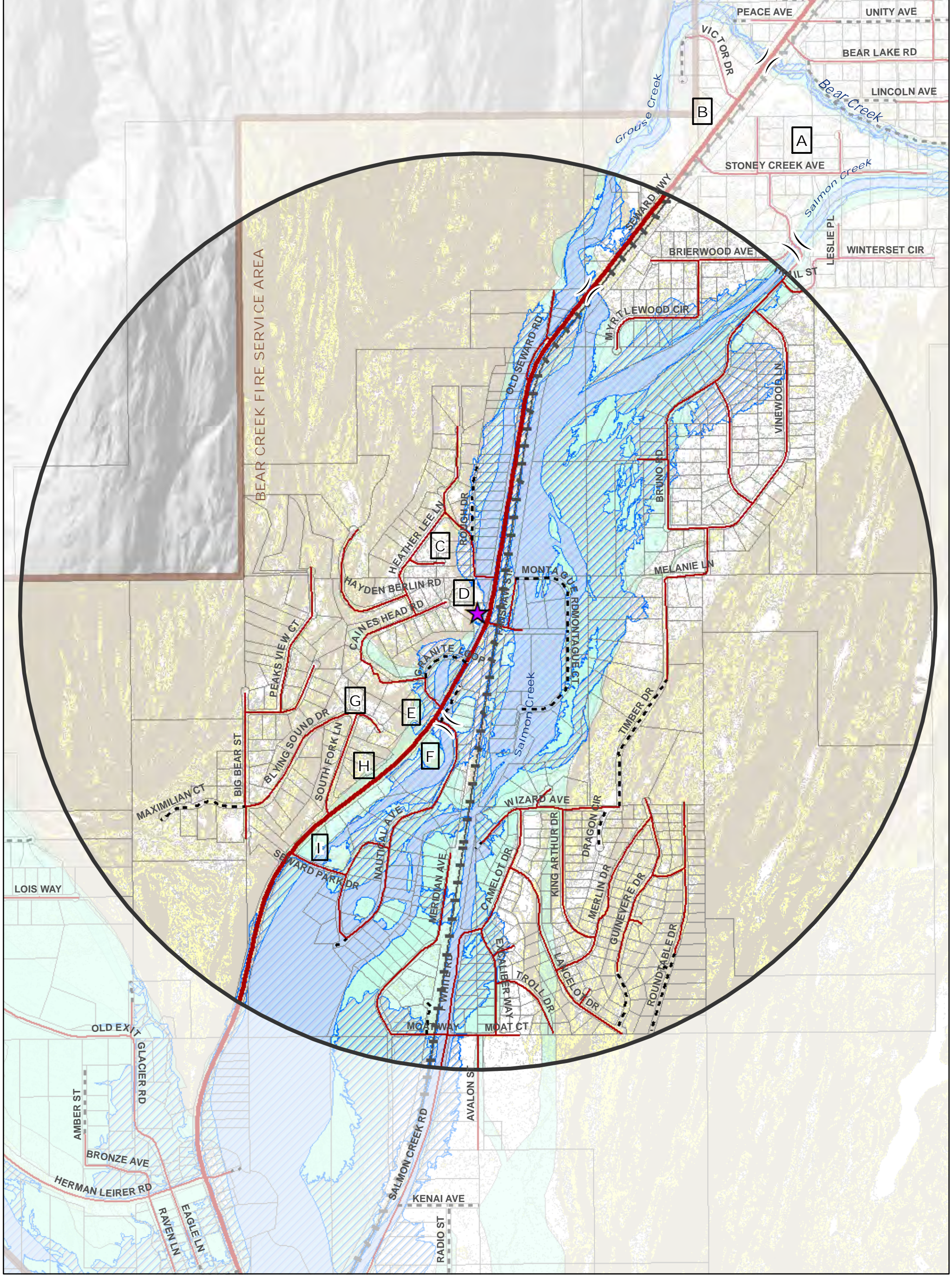
Mark Beals, Chief, Bear Creek Fire Service Area

Bear Creek Fire Station and Multi-purpose Building Site Committee Chair

Bear Creek Fire Station and Multi-purpose Building Site Committee									
Site Analysis Maytrix									
FACTORS	SITES								
	A	B	C	D	E	F	G	H	I
Within Floodplain	X			X	X	X			X
Bridge Crossing									
RailRoad Crossing	X								
Excess Grade			X				X	X	
Sufficent Area (over 2 acres)	X	X		X		X	X		
Out of Central Response Area	X	X							
Neighborhood (Residential)	X	X	X				X		
Permitting Issues Anticipated				X		X			X
Site Development Issues		X	X	X		X		X	X

X = not favorable



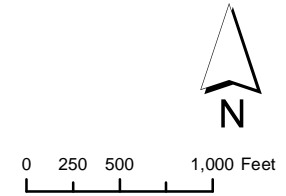


**Slope: percent rise**

- 0 - 5
- 5 - 10
- 10 - 20
- 20+

- State Highway
- Major Road
- Minor Road
- Proposed
- ++ Alaska Railroad
- Bridge

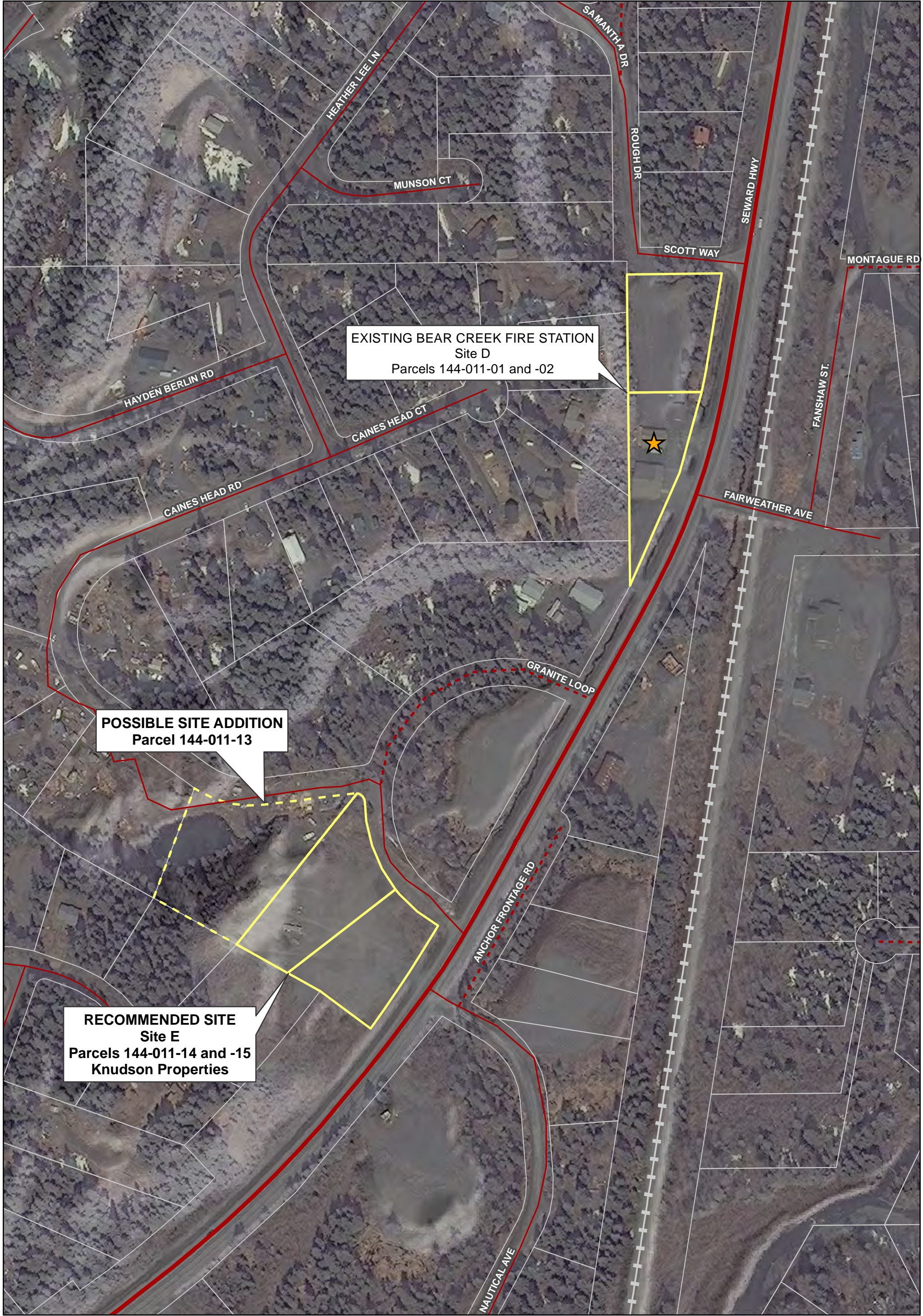
- Current Fire Station
- 1 Mile Buffer of Current Fire Station
- Tax Parcels
- Floodway\*
- Flood Zone\* (AE)
- Historical Flood Zones\*\*



\*Data shown is based on preliminary flood insurance rate maps produced by the Federal Emergency Management Agency and released for review June 2010; data is considered advisory

\*\*Seward Mapped Flood Data Area (SMFDA)





**EXISTING BEAR CREEK FIRE STATION**  
 Site D  
 Parcels 144-011-01 and -02

**POSSIBLE SITE ADDITION**  
 Parcel 144-011-13

**RECOMMENDED SITE**  
 Site E  
 Parcels 144-011-14 and -15  
 Knudson Properties

State Highway	Current Fire Station	Imagery Date: 2008	
Major Road	Tax Parcels	LiDAR Date: 2009	
Minor Road	Alaska Railroad	0 100 200 400 Feet	
Proposed			



# Highway access to property views



At the end of the driveway looking east



From the driveway looking north



South end of parcel from nautical



# Highway access to property views



View east from nautical



View from southwest corner of property looking across property



View looking east from the gravel pile



# Highway access to property views



View looking east from the north corner