

3.5 Economic Environment

3.5.1 Affected Environment

3.5.1.1 Kenai Peninsula Borough

Employment and Earnings

Data from the Alaska Department of Labor and Workforce Development indicate that the total number of jobs in the Kenai Peninsula Borough (Borough) increased by 20.9 percent from 1990 to 2010, an average annual increase of 1.3 percent (2011).

The 2010 earnings for residents in the Borough were approximately \$788 million in total annual earnings and \$3,432 in average monthly earnings per wage earner (ADOLWD 2011). The Borough had 19,123 wage and salary workers earning an average annual wage of \$41,190 in 2010, compared to the statewide average annual wage of \$47,710 (ADOLWD 2011). See Table 3.5-1.

Table 3.5-1. Kenai Peninsula Borough 2010 employment and earnings

Type of Employment	Average Monthly Employment for 2010	Total Annual earnings (\$)	Average Monthly Earnings (\$)
Total employment	19,123	787,672,297	3,432
Private ownership	14,384	560,012,972	3,245
Goods-producing	2,994	203,928,030	5,677
Natural resources and mining	1,135	103,439,364	7,596
Construction	926	55,716,054	5,015
Manufacturing	933	44,772,612	4,000
Service-providing	11,390	356,084,942	2,605
Trade, transportation, and utilities	3,930	137,676,579	2,919
Information	230	9,725,795	3,532
Financial activities	546	26,353,805	4,020
Professional and business services	576	23,555,735	3,407
Education and health services	3,011	102,973,341	2,850
Leisure and hospitality	2,267	37,790,983	1,389
Other services	824	17,834,272	1,804
Government services	4,740	227,659,325	4,003
Federal	451	30,304,123	5,605
State	1,270	62,552,096	4,104
Local	3,019	134,803,106	3,721

Source: ADOLWD (2011).

Major Employment Industries

The government sector represented 24.8 percent of Borough employment in 2010, leisure and hospitality represented 11.9 percent, and the retail trade sector represented 13.6 percent.

Figure 3.5-1 illustrates the breakdown of employment by sector in the Borough in 2010 (ADOLWD 2011).

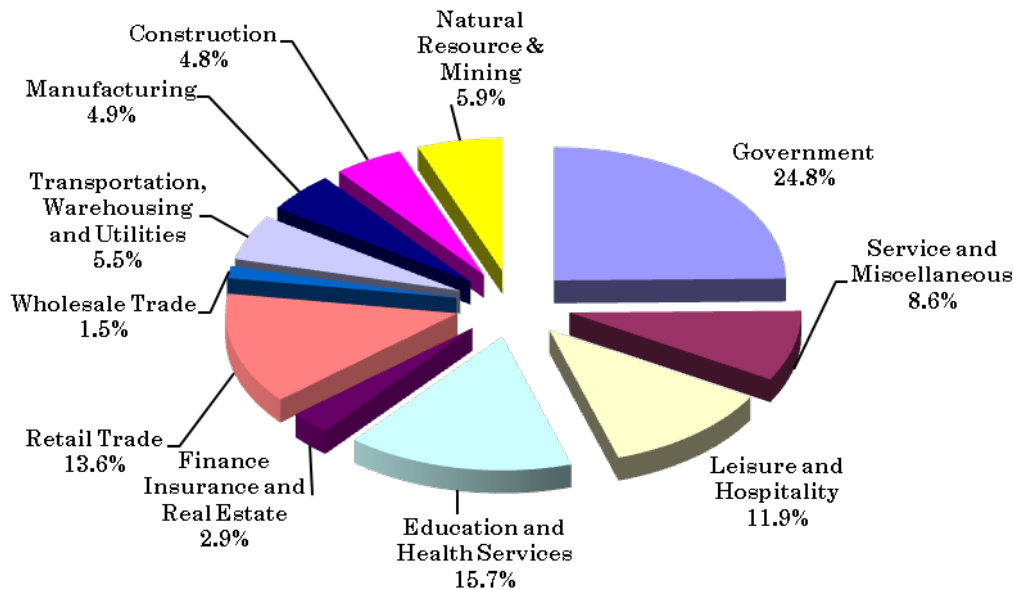


Figure 3.5-1. Kenai Peninsula Borough employment by sector, 2010

Tourism (best represented by the Leisure and Hospitality sector in Figure 3.5-1, but overlapping with other sectors) is the fastest-growing industry in the Borough and has emerged as a dynamic sector of the economy, as in many parts of Alaska. From 1994 to 2004, the number of visitor arrivals to the State of Alaska increased 55 percent from 931,400 to 1,447,400 (Northern Economics 2004). Since then, the number of out-of-state visitors has increased slightly. Between May 2010 and April 2011, an estimated 1.75 million out-of-state visitors traveled to Alaska (McDowell Group July 2011). Tourism-related employment and seasonal businesses provide the majority of employment in the Borough. The tourism industry in Alaska generates substantial income for the State and generates employment in a variety of industries such as transportation, retail trade, and services. The Alaska Department of Community, Commerce, and Economic Development (ADCCED) total visitor industry employment, labor income, and spending in Alaska between October 2008 and September 2009 was estimated at \$3.4 billion (McDowell Group 2010).

Local and State government employment is heavily dependent on area population, demand for government services, and available revenue. Government employment and spending play key roles in the Borough, as shown in Figure 3.5-2. The columns illustrate government employment distributed by Federal, State, and local governments. Government jobs represented 24.8 percent (or 4,740 jobs) of the total wage employment in the Borough in 2010, and an average of 25.9 percent of employment during the entire 17-year period (1994 to 2010).

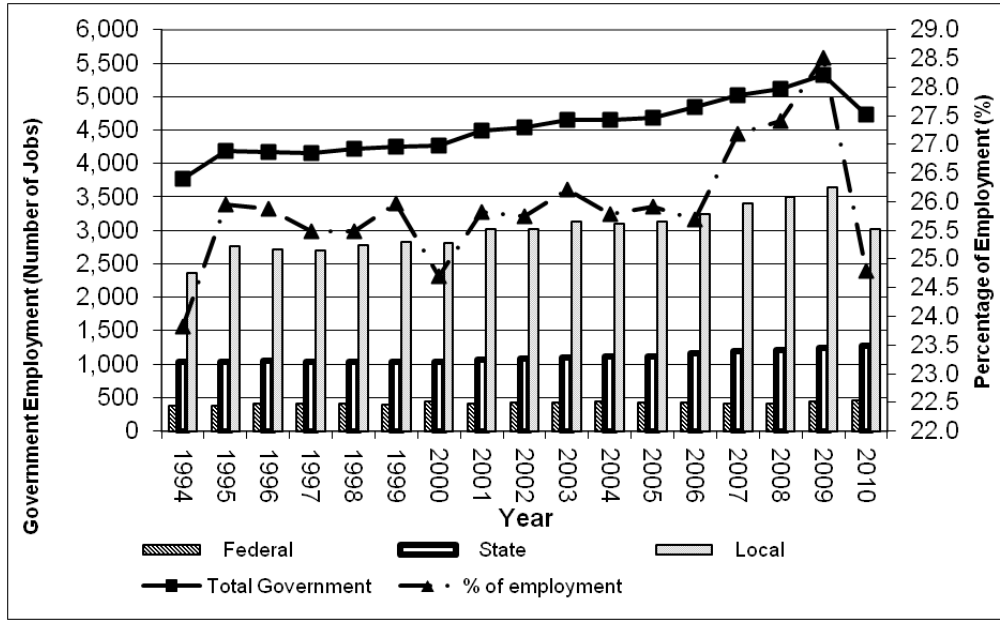


Figure 3.5-2. Kenai Peninsula Borough government employment, 1994–2010

Source: ADOLWD (2011).

Nearly one-fourth of workers in the Borough are employed by Federal, State, and local governments and earn more than Borough average wages. Local government workers represent two-thirds of the government sector and have earnings closer to the Borough-wide average.

Tax Base

The Borough has instituted property taxes (real estate, plus personal property, such as boats) and a sales tax to sustain Borough operations. In the project area, private land, homes, and businesses are taxed. Borough lands in the project area include some surveyed and subdivided lands intended for eventual residential settlement, which ultimately would become taxable lands that would contribute to the Borough tax base. Most Borough-owned lands in the project area are classified for preservation or recreation in *Kenai Peninsula Borough Comprehensive Plan* documents and are not currently anticipated to be developed or to become part of the tax base (KPB 2005b). State lands in Unit 395 north of the Kenai River could be transferred to the Borough and be sold to private parties for residential use. If this occurred, these lands could become part of the Borough tax base.

3.5.1.2 Cooper Landing

Employment, Earnings, and Businesses

According to 2005–2009 American Community Survey (ACS) data, 223 people were employed in Cooper Landing (Table 3.5-2). Employment in the sales and office sector dominates the small Cooper Landing labor market, encompassing 44 percent of the Cooper Landing employment population. In 2013, 120 unique licensed businesses had addresses in Cooper Landing (ADCCED 2013). The predominant business sectors within Cooper Landing are categorized by the following industries: approximately 22.5 percent of the businesses were licensed in accommodation and food services; 15.8 percent in arts, entertainment, and recreation; 10.8 percent in real estate, rental, and leasing; 9.2 percent in trade; and 9.2 percent in professional, scientific, and technical services (see Table 3.5-3 and ADCCED (2013)).

Table 3.5-2. Cooper Landing income and employment, 2005–2009¹

Income and Poverty Levels	
Per capita income	\$30,324
Median household income	\$72,837
Median family income	\$74,135
Persons in poverty	0
Percent below poverty	0
Employment	
Total potential work force (age 16+)	287
Total Employment	223
Civilian	223
Military	0
Civilian unemployed (and seeking work)	19
Percent unemployed	0
Adults not in labor force (not seeking work)	45
Percent of all 16+ not working (unemployed and not in labor force)	22.3
Private wage and salary workers	117
Self-employed workers (in own not-incorporated business)	73
Government workers (city, Borough, State, Federal)	33
Unpaid family workers	0
Employment by Occupation	
Management, professional and related	39
Service	31
Sales and office	99
Farming, fishing, and forestry	0
Construction, extraction, and maintenance	54
Production, transportation, and material moving	0
Employment by Industry	
Agriculture; forestry; fishing and hunting; mining	7
Construction	53
Manufacturing	0
Wholesale trade	0
Retail trade	89
Transportation, warehousing, and utilities	0
Information	16
Finance, insurance, real estate, rental and leasing	10
Professional, scientific, management, administrative and waste management	0
Education, health and social services	0
Arts, entertainment, recreation, accommodation and food services	48
Other services (except public administration)	0
Public administration	0

Source: USCB (2010b).

¹ These figures are from the ACS 5-Year Estimate and are based on a sample and are the average of 5 years of monthly surveys. These estimates will not match counts from the 2010 U.S. Census.

Table 3.5-3. Cooper Landing licensed businesses by industry, 2013

Industry Type	Number of Businesses	Percent of Businesses
Agriculture, forestry, fishing, and hunting	5	4.2
Mining	1	0.8
Construction	9	7.5
Manufacturing	3	2.5
Trade	11	9.2
Transportation and warehousing	3	2.5
Information	2	1.7
Real estate, rental, and leasing	13	10.8
Professional, scientific, and technical services	11	9.2
Administrative, support, waste management, and remediation services	6	5.0
Educational services	2	1.7
Health care and social assistance	3	2.5
Arts, entertainment, and recreation	19	15.8
Accommodation and food services	27	22.5
Services	5	4.2
Total	120	100.0

Source: ADCCED (2013).

The Kenai and Russian rivers are a major draw for salmon and trout fishing and rafting for tourists and in-state recreationists. Combined with the lake, river, and mountain scenery, this drives much of the local economy. Many bed and breakfast inns, resorts, and fishing lodges in Cooper Landing accommodate visitors. The economy is seasonal and experiences a fluctuation of annual employment as businesses reduce the number of employees or close entirely during the winter. The 86-room Kenai Princess Lodge, located in Cooper Landing, employs approximately 100 people in the summer and 8 people in the winter. The lodge accommodates Princess Cruise ship passengers and other visitors. Flight-seeing trips and floatplane trips are available locally as well.

River-based businesses provide guided fishing and recreational floating services, and many are located along the Kenai River (between the existing highway and the river) immediately west of the outlet of Kenai Lake. Many launch drift boats or rafts directly from their own properties. Others transport bank-fishing guests to the river, or transport boating guests to the Cooper Landing boat launch ramp to begin a day trip to Sportsman’s Landing, Jim’s Landing, or Skilak Lake. In addition, a number of float and guide services from nearby communities use the upper Kenai River on a day-to-day basis.

There are many businesses in Cooper Landing that can be described as highway-based that benefit from their locations on or in proximity to the Sterling Highway. These include gas stations, gift shops, dining establishments, and, to a lesser extent, lodging. There are two gas stations in the project area, one at the eastern end of the project near Quartz Creek Road and one just west of the Kenai Lake outlet. There are several dining establishments immediately east and west of the Kenai Lake outlet along the highway, and more isolated eateries near Quartz Creek

and near Milepost (MP) 52. Some of the restaurants are associated with other combination businesses such as a bar, service station, motel, or store. Multiple gift shops and general stores occur east and west of the Kenai Lake outlet along the highway. Accommodations in Cooper Landing include cabin and room rentals, bed and breakfast inns, motels, and the much larger Kenai Princess Lodge.

Although less of an economic driver, there are many non-tourist businesses in Cooper Landing that provide year-round services. These businesses are generally in the sectors of public administration, educational services, health care services, professional and technical services, and construction.

In 2005, the project team conducted community meetings and personal interviews with many of the Cooper Landing business owners located on the Sterling Highway from MP 45 to 52, Bean Creek Road, and Quartz Creek Road to gain a perspective on the business community's perception of alternatives routed around or through Cooper Landing. Results from meetings and interviews regarding the project effects by type of business are summarized by the following general statements:

- **River-Based Businesses** - River-based businesses (i.e., guiding and lodging businesses catering to fishing and recreational opportunities) were more destination-oriented and less concerned about the loss of drive-by customers. The project team learned that business owners were much more concerned about protecting the river and reducing traffic congestion in the area where they transport rafts and clients.
- **Highway-Based Businesses** - Highway-based businesses (i.e., retail businesses, such as gas stations, grocery and general merchandise stores, restaurants, motels) were most concerned about reduced business or the need to close in winter if traffic no longer passed by their businesses. The project team learned that about 30 percent of highway-based business was from spontaneous stops by those passing by on the highway.

Not all businesses fit neatly into these categories, and businesses that might seem to be “river-based” also get drop-in business. The following local businesses interviewed for this project in 2005 estimated the percentage of their business from highway travelers:²

- Kenai Float-n-Fish: 30 percent
- Hamilton's: 100 percent
- Cooper Landing Grocery: 30 percent in summer, 90 percent in winter
- Alaska Rivers Company: 40 percent
- Gwin's Lodge: 30 percent

3.5.1.3 Project Area Personal Income Trends

Personal income statistics are a function of several factors, including employment and population. Personal income statistics are a critical indicator of an area's output and economic

² This is meant as a general representation of the importance of highway travelers to business owners, but not as a compilation of all businesses in the area. Project personnel interviewed a larger number of businesses in 2005, but several no longer exist, and even at that time interviews were a sample and not comprehensive.

stability. If an area's economy cannot support as many jobs as it did previously, the resulting decline in employment will also reduce total personal income for the area.

Data from the U.S. Bureau of Economic Analysis (2011) indicate that from 1990 to 2009, total personal income in the Borough increased by 144.7 percent (7.6 percent annually); however, per capita income increased by only 84.1 percent (4.4 percent annually), indicating that the economic improvement was not distributed equally among individuals in the Borough. In 2009 dollars, per capita income for Cooper Landing was \$30,324, compared to \$26,940 for the Borough (USCB 2010b).

3.5.2 Environmental Consequences

This section describes the effects of the alternatives on the local Borough and Cooper Landing economies.

3.5.2.1 No Build Alternative

Direct and Indirect Impacts

The No Build Alternative would not change the existing economic conditions of Cooper Landing or the Borough. No land would be removed from the tax base (land acquisitions for routine maintenance activities are discussed in Section 3.27, Cumulative Impacts). No businesses would be moved, and there would be no change to income or employment trends in the region. The No Build Alternative would continue long-term trends and patterns of business opportunities and development in Cooper Landing. Cooper Landing would continue to be the only location between Summit Lake, Moose Pass, and Sterling providing services to highway travelers.

Under the No Build Alternative, all traffic would continue to travel through the Cooper Landing central commercial area. Traffic congestion would continue to rise, and access to and parking for local businesses would become more difficult. The No Build Alternative would not alleviate the congestion, safety, and access problems of the current road.

While residents would have to endure these conditions, travelers could choose to travel to other areas for recreation if highway conditions in the project area were perceived as unsafe, unpleasant, or inconvenient. Travelers may also adjust the time of day or day of the week that they travel through Cooper Landing to avoid roadway congestion, or more travelers may choose to pass through without stopping, to minimize the time they spend in congestion or because of difficulties returning to the roadway; the latter already occurs.

Increasing congestion, safety problems, and highway noise over time could diminish Cooper Landing's appeal as a recreation and fishing destination. The draw of the Kenai River and Russian River fisheries would be expected to continue, but some recreationists could choose to overnight or shop elsewhere, or even to avoid the entire area, if the trip became too cumbersome and the quality of the experience decreased.

Because there is no proposed construction associated with the No Build Alternative, there are no project development or construction costs. There would, however, continue to be annual maintenance costs and periodic major maintenance projects (e.g., pavement overlays). Additionally, reconstruction or replacement of the existing Sterling Highway bridges over the Kenai River is a reasonably foreseeable future action. The costs of these reasonably foreseeable future projects are addressed in the Cumulative Impacts section (see Section 3.27).

3.5.2.2 Issues Applicable to the Build Alternatives

Direct and Indirect Impacts

None of the build alternatives would result in the acquisition or relocation of any business.

All build alternatives include a highway segment that would remove 70 percent of the traffic from all or a portion of the central commercial area of Cooper Landing. Thirty percent of the traffic would continue traveling through Cooper Landing on the “old” highway. A beneficial impact would be decreased congestion and improved safety for visitors, pedestrians, and residents, as well as local businesses that use the existing road in their daily business transactions, such as river guides who shuttle rafts and sport fishing clients. To varying degrees, all of the build alternatives also have the potential to adversely affect individual businesses by diverting some travelers who might make spontaneous stops from the “old” highway segment where many of the businesses are located. These spontaneous stops constitute a meaningful portion of their clientele, especially for highway-related businesses such as gas stations, eateries, and convenience stores.

Through-travelers who would have made unplanned stops in Cooper Landing under existing conditions or with the No Build Alternative would likely not pass through all or any portion of the town under a build alternative. With no clear town center or other new attractions in Cooper Landing, the diversion of traffic around its commercial portion could negatively impact sales and revenue for highway-dependent businesses no longer on the main highway. Businesses would be forced to adapt, and if they were unable to adapt, some could fail. (See further discussion under each alternative in the sections below.) Adaptation for individual businesses could include advertising their specific business on the new highway in accordance with established Alaska Department of Transportation and Public Facilities (DOT&PF) highway sign programs. This would be in addition to signs DOT&PF would erect indicating services in Cooper Landing (see Mitigation, below).

While some businesses may be impacted, because DOT&PF would control access on the segment of each alternative built on a new alignment, no competing commercial development is anticipated as a result of this project. No new competition for goods and services associated with the new alignments would occur. The build alternatives would not build any new access to developable lands. However, for the Juneau Creek alternatives, this EIS assumes that the Kenai Peninsula Borough may wish to build access from the new alignment to Unit 395 (which is identified for a future rural residential subdivision). Because access and development of Unit 395 are reasonably foreseeable, these actions are evaluated as a cumulative impacts. See Section 3.27.

People currently relying on Cooper Landing businesses would likely continue to do so, although some spontaneous economic activity would be decreased. During community meetings and interviews conducted in 2005, the project team found that many businesses thought an alternative that would reconnect west of the Russian River would minimize business impacts somewhat because anglers would be more likely to continue to drive through the community to access fishing and would be more likely to patronize existing businesses.

All build alternatives would decrease travel time and improve ease of travel to the western and southwestern parts of the Kenai Peninsula. Cooper Landing, which is one of the primary fishing concentration areas of the Kenai River system located at the mouth of the Russian River and has

the upper Kenai River’s unique “drift only” regulations, multiple trails and campgrounds, and its scenic mountainous setting is anticipated to continue to attract recreational users in numbers similar to those of recent years to fish and camp. These people would continue to use local food, gas, lodging, and gift-sales businesses.

A positive economic effect under the build alternatives would be the reduced risk of a catastrophic accidental spill of fuels, chemicals, or similar materials being transported by truck (see Section 3.17, Hazardous Waste Sites and Spills). Such events would be harmful to the Kenai River and therefore to the economic stability of the community and commerce of Cooper Landing that is dependent on clean water and healthy fish populations. Trucks would not be prohibited from using the “Old Sterling Highway” under any of the build alternatives, because local fuel, food, and other deliveries still would need to be made. It is anticipated, however, that through-movements would use the segment of each alternative built on a new alignment. Only direct deliveries to local destinations would use the “old” highway, thereby decreasing the risk of spills in the river by decreasing the number of trucks on the winding “old” road, which is located adjacent to the river in many areas.

Proposed mitigation for recreation impacts includes replacement trailheads that, in most cases, would formalize access and make it more visible, with better directional and interpretive signs (see Section 3.8, Park and Recreation Resources, and Chapter 4). These changes, particularly under the two Juneau Creek alternatives with the large new trailhead and proximity to Juneau Falls, have the potential of making the area more used by recreational visitors, who are already important to Cooper Landing’s economy. These visitors shop, buy gas, and engage in tourism-related activities such as drift boating, and may overnight in the community. These potential economic benefits may affect the community and business owners.

As a result of improved travel times through the project area, truck-freight shipping and intercity travel through the project area would be improved. Transportation improvements would have a positive impact on the Borough as a whole by improving the movement of people and goods, contributing in small ways to a slower rise in shipping costs, more timely delivery of goods, improved reliability of freight transport, and ease of travel, which may benefit tourism.

Construction funding would come mostly from the Federal government (approximately 90 percent) and partly from the State of Alaska (approximately 10 percent). Therefore, neither the Borough nor Cooper Landing would be affected any differently than all Alaska residents in regard to construction funding. Funds would go toward labor, most likely benefitting a primarily Alaska labor market, and toward a substantial supply chain both inside Alaska and from other states for fuel, equipment, pipe, earth materials and concrete, erosion control material, materials for bridges, and other materials. There are generally more transportation projects identified than there is funding to construct them; to the extent Federal and State transportation dollars were allocated to this project, they would not be available for other transportation needs.

Construction costs for the build alternatives are based on 2010 unit prices adjusted to 2015 dollar values. Table 3.5-4 shows projected construction costs by alternative. Phasing construction over multiple years adds additional costs for mobilizing and demobilizing equipment and personnel. For the Juneau Creek Alternative, it is estimated to add approximately \$20 million to the construction total. A financial plan prepared for the preferred alternative includes the additional costs associated with phasing (see Appendix H, *Initial Financial Plan*).

Table 3.5-4. Project costs by alternative (millions of dollars)

	Cooper Creek	G South	Juneau Creek	Juneau Creek Variant
Direct Construction				
Roadway costs	\$99.3	\$93.5	\$103.9	\$105.1
Bridge and structure costs	\$77.7	\$88.3	\$56.4	\$59.8
Contingency (20%) and construction administration (15%)	\$67.3	\$69.1	\$60.9	\$62.7
Direct Construction Subtotal	\$244.3	\$250.9	\$221.2	\$227.6
Project Development				
Design, permitting, utility, right-of-way ^a , DOT&PF overhead/administration (ICAP ^b)	\$51.9	\$48.7	\$43.6	\$44.7
Wildlife Impact Mitigation ^e	\$7.5	\$6.9	\$9.7	\$9.7
Wetland Impact Mitigation	\$0.7	\$1.5	\$2.5	\$2.3
Cultural Resources Mitigation	\$4.2	\$4.0	\$3.2	\$4.0
Project Development Subtotal	\$64.3	\$61.1	\$58.9	\$60.7
CONSTRUCTION TOTAL	\$308.6	\$312.0	\$280.1	\$288.2
O&M and Periodic Major Activities (over 20 years)	\$23.7	\$23.8	\$24.2	\$24.3
- Operations and Maintenance ^c	\$11.9 (\$593,400/yr)	\$11.7 (\$585,400/yr)	\$12.2 (\$608,600/yr)	\$12.2 (\$611,700/yr)
- Periodic Major Activities ^d	\$11.8	\$12.1	\$12.0	\$12.1
TOTAL	\$332.3	\$335.8	\$304.3	\$312.6

^a The right-of-way cost estimates the land payment portion only of right-of-way acquisition. It does not address the other per parcel costs of right-of-way acquisition. Furthermore, these costs consider only privately owned land impacted by the alternatives. Impacted parcels owned by Federal, State, and municipal agencies are assumed to be acquired via interagency land transfers.

^b Indirect Cost Allocation Plan

^c O&M = Operations and maintenance; includes annual costs such as snow plowing, crack sealing, and other basic maintenance on the alignments. O&M is a State responsibility.

^d Periodic major activities include projects such as replacement of guardrail and pavement overlays that are reasonably anticipated over a 20-year span.

Notes: Numbers are rounded and therefore totals do not add perfectly. All estimates are in 2015 dollars (i.e., future dollars have not been inflated to the future year values). Costs associated with phasing construction over several years are not presented. Mitigation figures are estimates—see Sections 3.20 (Wetlands and Vegetation), 3.22 (Wildlife), and Chapter 4 (Section 4(f) Evaluation) for more detail. Other minimization and mitigation costs are included in design and permitting estimates.

^e To be conservative, the upper end of the range of potential structure costs, plus earthwork, is included.

For additional information and cost estimate details, refer to Appendix B of the *Preliminary Engineering Report* (HDR 2014a). For cost estimates that address the cumulative cost of each alternative with the operations and maintenance of the existing or remaining segments of the existing highway, see Section 3.27.7.5 and Table 3.27-4.

Construction Impacts

All build alternatives are likely to have short-term economic benefits to the local economy due to construction crews living in the area during several construction seasons. There is also the potential for temporary local hires while the project is under construction. These construction impacts would bring money into the community of Cooper Landing, which would temporarily spur economic growth for individuals and the community.

Construction spending under the build alternatives would include wages for construction workers, likely up to 6 years. Spending by construction workers for goods and services in the community and in their home communities would create a multiplier effect, as spending for meals, lodging, and services would indirectly employ local workers. Construction jobs would include jobs held by local residents, by people who may move to the community on a temporary basis, and by those who would commute to the community for employment during construction.

Under any of the build alternatives, an anticipated 60 to 70 workers would likely be located on site during the snow-free season, with other workers coming in and out of the area regularly depending on the specific activities underway at any given time. DOT&PF typically works to accommodate DOT&PF staff in local housing, an economic benefit to local owners who would rent out the space. If sufficient space were not available to house workers during the busy summer recreation and tourist season in Cooper Landing, it is likely the contractor would establish an area for campers and motor homes (in a work camp), likely within designated construction staging or material extraction areas. Including the entire supply chain for bridges and culverts, fuel, construction tools and equipment, delivery, and administration of the project, the economic impact of project construction would be widespread.

Traffic flows and access to commercial areas would be disrupted when construction activities were located along the existing alignment. Flaggers, pilot cars, minor detours, and truck traffic hauling materials also would disrupt normal traffic flows and ease of access between the highway and businesses. Individual delays may be short in duration and highly localized. However, without an alternative route to avoid construction activity, local residents and frequent through-travelers may become frustrated. This may cause some travelers to avoid or postpone trips to Cooper Landing and project area businesses, and the delays may cause through-travelers to avoid additional stops and purchases at local businesses. Construction impacts such as noise and alteration of local recreation access are documented in other sections and may contribute to temporary economic impacts to local businesses and services.

Mitigation

Each alternative includes a new alignment that bypasses most (i.e., Cooper Creek Alternative) or all (i.e., G South, Juneau Creek, and Juneau Creek Variant alternatives) of the business district. A sign would be erected near each intersection of the selected alternative with the “old” highway that would indicate “Cooper Landing X miles” with symbols for all services and recreation/camping and trails, as appropriate. During construction, access to businesses that front

on a construction zone would be maintained during normal business hours to the greatest extent possible, and signs would indicate access routes to specific businesses where necessary.

3.5.2.3 Cooper Creek Alternative

Direct and Indirect Impacts

The Cooper Creek Alternative would have different effects on community businesses than the other build alternatives because this alternative would continue to bring all traffic through the portion of Cooper Landing northeast of the Kenai Lake outlet, diverting through-traffic away from town only southwest of the Kenai Lake outlet. This would alter the character of the community, as described in Section 3.3, Social Environment, and would affect the business environment. Also, under this alternative, all highway traffic (through-traffic and local traffic) would continue to pass in front of many of the community's highway-based businesses, and drivers would be able to see much of the rest of the business district as they passed the "Old Sterling Highway"/Snug Harbor Road intersection. Impacts described above in Section 3.5.2.2 would be similar in type, but businesses located northeast of the Cooper Landing Bridge would remain on the main highway. Highway-based businesses in this area would retain the benefit of passing traffic. River-based businesses would still have to contend with 100 percent of Sterling Highway traffic. Businesses located on the existing highway west of Cooper Landing Bridge could see a reduction in impulse purchases associated with through-traffic. The overall economy would be unlikely to change, but some individual business may need to adapt to these changes.

Property tax revenues, a major source of funding for the Borough, would be directly affected by the Cooper Creek Alternative. Acquisition of private³ property valued at approximately \$5.6 million (HDR 2014a) would result in an annual loss of tax revenue of approximately \$25,200⁴ for the Borough.

Estimated annual operations and maintenance costs and project life costs (development, construction, plus O&M and periodic projects through 2043) for the Cooper Creek Alternative are \$593,400/year and \$332.3 million, respectively. These figures do not include maintenance of the remaining 4 miles of the "old" Sterling Highway, which DOT&PF would continue to maintain. See Section 3.27.7.5 of Cumulative Impacts for a discussion of the remnant highway section costs.

Construction Impacts

The Cooper Creek Alternative would reconstruct the existing highway in front of businesses located northeast of Cooper Landing Bridge, with use of flaggers and pilot cars, minor detours, active earth moving using large equipment, and associated noise and dust. Access to businesses likely would be altered temporarily. Replacement of the Cooper Landing Bridge, Snug Harbor Road intersection, and Bean Creek Road intersection in the heart of town would generally disrupt normal traffic patterns temporarily and could result in fewer business stops by passing traffic. Similar impacts would occur for two isolated businesses, one located near MP 45 (Quartz Creek Road) and one near MP 52.

³It is assumed that Borough land will be acquired by interagency land transfer, not purchase; therefore, it is not included in acquisition calculations.

⁴Based on the Borough mill rate of 4.50 (KPB 2016). Property tax was determined by multiplying the assessed value by the mill rate and then dividing by 1,000.

The estimated direct construction cost of the Cooper Creek Alternative is \$244.3 million.

Mitigation

Mitigation is addressed above at the end of Section 3.5.2.2. For the Cooper Creek Alternative, access to all businesses would be maintained during business hours to the greatest extent possible. Additional signs would be used to inform motorists about how to access businesses.

3.5.2.4 G South Alternative

Direct and Indirect Impacts

Beneficial and adverse impacts applicable to all the build alternatives are presented above in Section 3.5.2.2. The G South Alternative would be routed around the Cooper Landing community and its businesses entirely. It is likely that removing 70 percent of traffic from the community under the G South Alternative would adversely affect some individual businesses that are dependent on their locations adjacent to the highway. Because Cooper Landing and the project area recreation sites are a recreational destination, it is likely that economic activity by those stopping in the project area will continue. But impulse stops by through-travelers for gas and convenience items are likely to decrease at businesses that are no longer on the main highway. It is possible the decreases would be enough that businesses would have to shift their business models to take more advantage of the destination-oriented, river-dependent travelers and less on through-traffic. If they were unable to adapt to the changes, it is possible a few might close or change ownership and be reconstituted as different types of businesses. It is unlikely the overall economy would be adversely affected; reduction in through-traffic may slightly enhance the overall business climate in Cooper Landing, making it easier to get around town by car and more pleasant for pedestrians. Individual businesses, however, may be adversely affected.

Property tax revenues, a major source of funding for the Borough, would be directly affected by the G South Alternative. Acquisition of private property valued at approximately \$2.9 million (HDR 2014a) would result in an annual loss of Borough tax revenue of approximately \$13,000.

The G South Alternative would require acquisition of vacant Borough properties classified for residential development in the Birch and Grouse Ridge Subdivision. Three platted undeveloped residential Borough properties with an assessed total land value of \$280,200 would be fully acquired, which would result in a loss of future Borough revenue (KPB 2013).

Estimated annual operations and maintenance costs and project life costs (development, construction, plus O&M and periodic projects through 2043) for the G South Alternative are \$585,400/year and \$335.8 million, respectively. These figures do not include maintenance of the remaining 5 miles of the “Old” Sterling Highway, which DOT&PF would continue to maintain. See Section 3.27.7.5, Cumulative Impacts, for a discussion of the remnant highway section costs.

Construction Impacts

This alternative would likely include minor temporary access impacts for two roadside businesses, one located near MP 45 at Quartz Creek Road and one located near MP 52.

The estimated direct construction cost of the G South Alternative is \$250.9 million.

Mitigation

Mitigation is addressed above at the end of Section 3.5.2.2. Signs would be erected at the intersection of the G South Alternative with the “old” highway to direct visitors to the community, area attractions, and local businesses.

3.5.2.5 Juneau Creek and Juneau Creek Variant Alternatives

Direct and Indirect Impacts

Beneficial and adverse impacts applicable to all the build alternatives are presented above in Section 3.5.2.2. The Juneau Creek (preferred alternative) and Juneau Creek Variant alternatives would be routed around the Cooper Landing community and its businesses entirely. It is likely that removing 70 percent of traffic from the community under these alternatives would adversely affect some individual businesses that are dependent on their location adjacent to the highway. Because Cooper Landing and the project area recreation sites are a recreational destination, it is likely that economic activity by those stopping in the project area will continue. But impulse stops by through-travelers for gas and convenience items are likely to decrease at businesses that would no longer be on the main highway. It is possible the decreases would be enough that businesses would have to shift their business models to take more advantage of the destination-oriented, river-dependent travelers and less on through-traffic. If they were unable to adapt to the changes, it is possible a few might close or change ownership and be reconstituted as different types of businesses. It is unlikely the overall economy would be adversely affected; reduction in through-traffic may slightly enhance the overall business climate in Cooper Landing, making it easier to get around town by car and more pleasant for pedestrians. Individual businesses, however, may be adversely affected.

Because they would connect to the “old” highway near the western end of the project area, the Juneau Creek and Juneau Creek Variant alternatives could, in addition to affecting businesses in Cooper Landing, also affect two businesses along the “old” highway at approximately MP 51 and MP 52.

Property tax revenues, a major source of funding for the Borough, would be directly affected by these alternatives. Acquisition of private property valued at approximately \$2.9 million for the Juneau Creek Alternative and \$2.8 million for the Juneau Creek Variant Alternative (HDR 2014a) would result in an annual loss in Borough tax revenue of approximately \$13,000 and \$12,600, respectively.

The Juneau Creek and Juneau Creek Variant alternatives would also require acquisition of vacant Borough properties classified for residential development in the Birch and Grouse Ridge Subdivision. Three platted undeveloped residential Borough properties with an assessed total land value total of \$280,200 would be fully acquired, which would result in a loss of future Borough revenue (KPB 2013).

Estimated annual operations and maintenance costs and project life costs (development, construction, plus O&M and periodic projects through 2043) for the Juneau Creek Alternative are \$608,600/year and \$304.3 million, respectively. Estimated annual operations and maintenance costs and project life costs for the Juneau Creek Variant Alternative are \$611,700/year and \$312.6 million, respectively. These figures do not include maintenance of the remaining 9.1 miles (for the Juneau Creek Alternative) and 8.5 miles (for the Juneau Creek Variant Alternative) of the “Old” Sterling Highway, which DOT&PF would continue to

maintain. See Section 3.27.7.5 of Cumulative Impacts for a discussion of the remnant highway section costs.

Construction Impacts

Construction of these alternatives may include minor temporary access impacts to a single business located at Quartz Creek Road, near MP 45.

The estimated direct construction cost of the Juneau Creek Alternative is \$221.2 million. The estimated direct construction cost of the Juneau Creek Variant Alternative is \$227.6 million.

Mitigation

Mitigation is addressed above at the end of Section 3.5.2.2. Signs would be erected at the intersections of the Juneau Creek and Juneau Creek Variant alternatives with the “old” highway to direct visitors to the community, area attractions, and local businesses.

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