

STERLING HIGHWAY, MP 45-60

G South Alternative
COST ESTIMATE

Length	BOP	EOP	Length (ft)	Length (mi)
	1224+00.00	1976+17.00	75217.00	14.2
Length New Highway (from intersection to intersection of the old Hwy)	Int with Old Hwy	Int with Old Hwy	Length (ft)	Length (mi)
	1610+25.00	1866+25.00	25600.00	4.8

TYPICAL SECTION

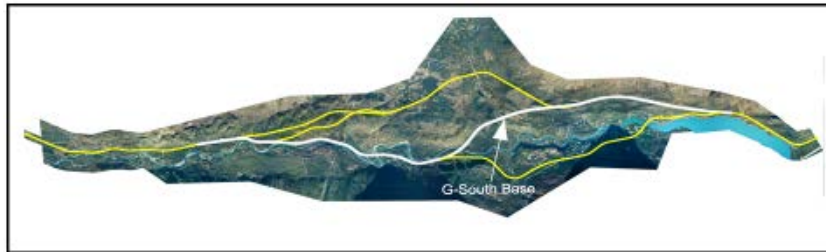
Proposed 2-Lane Sterling Highway: 8' - 12' - 12' - 8' = 40-foot
 Proposed 2-Lane Sterling Highway W/ Lt Turn Lane: 8' - 12' - 16' - 12' - 8' = 66-foot
 Proposed 2-Lane Sterling Highway W/ Rt Turn Lane: 8' - 12' - 12' - 12' - 8' = 62-foot
 Proposed 2-Lane Sterling Highway W Passing Lane: 8' - 12' - 12' - 12' - 8' = 62-foot

STRUCTURAL SECTION (inches)

ACP Type II =	2"		
Binder =	3"		
ABC =	4"		
Borrow "A" =	20"	Combined and listed as "Borrow A" for	
Borrow "B" =	20"	Cost Estimating Purposes	
Borrow "C" =	varies		

STRUCTURES (feet)

	Crossing	Bag Sta	End Sta	Width
Schooner Bend Bridge		1531+00	1534+25	40
Kenai River Crossing		1616+40	1621+26	52
Juneau Creek Crossing		1656+80	1670+00	52



ASSUMPTIONS:

Clear Zone: 30-foot
Slopes: 6:1 (22'); 2:1

DESCRIPTION	ITEM No	Pay Unit	Unit Price	Quantity	Amount
CLEARING AND GRUBBING	201 (2A)	ACRE	\$5,895.04	200	\$1,179,007.24
REMOVAL OF STRUCTURES AND OBSTRUCTIONS	202 (1)	LUMP SUM	\$431,022.41	1	\$431,022.41
REMOVAL OF PAVEMENT	202 (2)	SQUARE YARD	\$5.25	150,000	\$787,425.00
REMOVAL AND DISPOSAL OF CULVERT PIPE	202 (4A)	LUMP SUM	\$42,699.35	1	\$42,699.35
COMMON EXCAVATION	203 (1)	CUBIC YARD	\$7.18	2,445,700	\$17,569,151.87
ROCK EXCAVATION	203 (2)	CUBIC YARD	\$17.24	980,000	\$16,896,078.54
BORROW TYPE A	203 (8A)	TON	\$12.49	891,100	\$7,382,888.75
BORROW TYPE B	203 (8B)	TON	\$7.18	245,000	\$1,739,090.00
BORROW TYPE C	203 (8C)	TON	\$5.75	403,824	\$2,320,780.63
DILUTATION OF ROADWAY	203 (9)	SQUARE YARD	\$2.16	30,000	\$64,663.36
CRUSHED AGGREGATE BASE COURSE	301 (1)	TON	\$37.04	145,939	\$5,405,654.59
ASPHALT TREATED BASE COURSE	306 (1)	TON	\$54.60	74,000	\$4,040,116.74
ASPHALT CONCRETE PAVEMENT, TYPE II, CLASS A	401 (1)	TON	\$77.34	54,909	\$4,246,546.81
ASPHALT CEMENT GRADE AC-5	401 (2)	TON	\$85.61	2,269	\$2,469,663.73
CLASS A CONCRETE	501 (1)	LUMP SUM	\$71,837.07	1	\$71,837.07
MECHANICALLY STABILIZED EMBANKMENT RETAINING WALL	511 (1)	SQUARE FOOT	\$64.65	62,250	\$4,024,671.77
FIN DRAIN	603 (7-150)	LINEAR FOOT	\$57.47	14,000	\$804,575.17
24 INCH PIPE	603 (17-24)	LINEAR FOOT	\$125.34	3,800	\$481,214.33
36 INCH PIPE	603 (17-36)	LINEAR FOOT	\$183.04	1,600	\$302,864.00
48 INCH PIPE	603 (17-48)	LINEAR FOOT	\$265.26	2,200	\$1,275,368.41
144 INCH PIPE	603 (17-144)	LINEAR FOOT	\$735.79	1,200	\$882,947.36
END SECTION FOR 24 INCH PIPE	603 (20-24)	EACH	\$825.16	80	\$74,624.17
END SECTION FOR 36 INCH PIPE	603 (20-36)	EACH	\$993.43	60	\$59,605.84
END SECTION FOR 48 INCH PIPE	603 (20-48)	EACH	\$1,249.03	40	\$49,961.07
REINFORCED GUARDRAIL	606 (1)	LINEAR FOOT	\$28.79	30,000	\$862,420.86
REMOVAL AND DISPOSING OF GUARDRAIL	606 (6)	LINEAR FOOT	\$9.32	11,000	\$102,563.81
EXTRUDER TERMINAL (ET-2000)	606 (11)	EACH	\$4,310.22	34	\$186,547.62
GUARDRAIL/BRIDGEGERAL CONNECTION	606 (12)	EACH	\$2,873.48	12	\$34,481.79
DITCH LINING	610 (3)	SQUARE YARD	\$28.73	23,000	\$660,901.03
ASPHALT CLASS B	611 (2B)	CUBIC YARD	\$116.86	14,000	\$1,636,039.25
STANDARD SIGN	615 (1)	SQUARE FOOT	\$109.57	1,800	\$197,226.41
DOUBLE THAW PIPE	616 (6)	LINEAR FOOT	\$35.92	6,400	\$229,878.62
SEEDING	618 (1)	POUND	\$48.85	8,000	\$390,793.65
WATER FOR SEEDING	618 (3)	M GAL	\$12.93	8,000	\$103,445.38
TOPSOIL	620 (1)	SQUARE YARD	\$6.41	880,000	\$5,642,414.27
PILE REINFORCEMENT	637 (1)	LUMP SUM	\$1,423,311.81	1	\$1,423,311.81
MOBILIZATION AND DEMOBILIZATION	640 (1)	LUMP SUM	\$2,873,482.74	1	\$2,873,482.74
EROSION AND POLLUTION CONTROL ADMINISTRATION	641 (1)	LUMP SUM	\$56,932.47	1	\$56,932.47
EROSION AND POLLUTION CONTROL	641 (3)	LUMP SUM	\$284,662.36	1	\$284,662.36
SILT FENCE	641 (4)	LINEAR FOOT	\$5.75	45,000	\$258,613.45
CONSTRUCTION SURVEYING	642 (1)	LUMP SUM	\$718,370.69	1	\$718,370.69
THREE PERSON SURVEY PARTY	642 (2)	HOURLY	\$350.39	300	\$105,117.06
TRAFFIC MAINTENANCE	643 (2)	LUMP SUM	\$284,662.36	1	\$284,662.36
PERMANENT CONSTRUCTION SIGNS	643 (3)	LUMP SUM	\$17,240.90	1	\$17,240.90
FLAGGING	643 (15)	LUMP SUM	\$711,655.91	1	\$711,655.91
TRAFFIC CONTROL DEVICES	643 (2B)	CONTINGENT SUM	\$1,423,311.81	1	\$1,423,311.81
ENGINEERING TRANSPORTATION	644 (6)	EACH	\$35,916.53	14	\$502,851.48
WIDE PAD DOZER 48 ROW MINIMUM	646 (1)	HOURLY	\$172.41	1,000	\$172,408.96
METHYL METHACRYLATE PAVEMENT MARKINGS	670 (10)	LUMP SUM	\$892,044.82	1	\$892,044.82

ROADWAY SUBTOTAL	\$92,296,914
BRIDGE SUBTOTAL	\$89,177,625
CONTINGENCY (20%)	\$36,294,908
CONSTRUCTION ENGINEERING (15%)	\$32,665,417
CONSTRUCTION COSTS SUBTOTAL	\$250,434,864
ENVIRONMENTAL PERMITTING (2%)	\$5,008,697
DESIGN ENGINEERING (12%)	\$30,052,184
UTILITIES	\$700,000
ROW	\$2,896,601
SUBTOTAL	\$289,092,348
ICAP (5%)	\$14,454,617
GRAND TOTAL	\$303,500,000

*Right-of-Way costs estimate the land payment portion only of ROW acquisition. It does not address the other per parcel costs of ROW acquisition. Furthermore, these costs only consider privately owned land impacted by the alternatives. Impacted parcels owned by federal, state, and municipal agencies are assumed to be acquired in lieu of fee.

** The bridge costs are taken from the Preliminary Bridge Structures Technical Memo August 2011 and are not intended to reflect actual construction costs but rather to be used for cost comparisons between alternatives.

TABLE OF ESTIMATING FACTORS

ITEM	FACTOR	QUANTITY
Select Material Type C (tons)	140 lb/ft ³	403,824
Select Material Type B (tons)	140 lb/ft ³	245,000
Select Material Type A (tons)	145 lb/ft ³	591,100
Crushed Aggregate Base Course (tons)	145 lb/ft ³	30,000
Asphalt Treated Aggregate Base Course (tons)	148 lb/ft ³	145,939
ACP (tons)	152 lb/ft ³	74,000
ATB AC Oil (tons)	5.5 % of ATB	8,027

SUMMARY

Borrow Type C (CY--B3)	213,863	5,768,909
Borrow Type B (CY--B3)	129,630	3,500,000
Borrow Type A (CY--B3)	301,967	8,153,163
Aggregate Base Course (CY--B3)	15,326	413,790
ATB (CY--B3)	73,043	1,972,150
ACP (CY--B3)	36,062	973,684

GUARDRAIL (LF)

Segment:	Length
1255+00 RT TO 1268+00 RT	1,300
1268+00 RT TO 1275+50 RT	750
1275+50 RT TO 1281+50 RT	600
1281+50 RT TO 1285+50 RT	400
1285+50 RT TO 1291+00 RT	550
1307+50 RT TO 1313+00 RT	550
1366+00 RT TO 1383+50 RT	1,750
1383+50 RT TO 1387+00 RT	350
1387+00 RT TO 1391+50 RT	450
1400+00 RT TO 1405+50 RT	550
1405+50 RT TO 1409+50 RT	450
1409+50 RT TO 1415+00 RT	550
1438+50 RT TO 1452+00 RT	1,350
1568+00 LT TO 1571+50 LT	350
1720+00 LT TO 1730+00 LT	1,000
1819+00 RT TO 1834+00 RT	1,500
1854+25 RT TO 1898+25 RT	4,400
1910+00 RT TO 1916+50 RT	650
1937+00 RT TO 1942+00 RT	500
OFF-MAINLINE	12,000
TOTAL:	30,000

MSE RETAINING WALLS (SF)

Location	Length	Height	Face
1258+00 LT TO 1259+25 LT	125	22	2,125
1261+50 LT TO 1262+50 LT	100	19	1,850
1265+00 LT TO 1272+50 LT	1,250	16	12,100
1288+50 LT TO 1289+00 LT	50	5	225
1313+50 LT TO 1315+50 LT	200	3	625
1348+50 LT TO 1350+00 LT	150	4	550
1370+00 LT TO 1377+50 LT	750	8	6,000
1399+25 LT TO 1399+75 LT	50	5	125
1404+50 LT TO 1408+00 LT	350	11	4,275
1405+50 RT TO 1409+00 RT	350	8	2,925
1410+00 LT TO 1410+75 LT	75	26	1,275
1414+50 LT TO 1415+50 LT	100	16	1,575
1820+00 RT TO 1820+50 RT	50	3	125
1824+50 RT TO 1826+00 RT	150	18	2,750
1829+50 RT TO 1833+50 RT	400	12	4,800
1872+50 RT TO 1876+50 RT	400	25	10,150
1886+00 LT TO 1889+50 LT	250	8	1,975
1910+50 LT TO 1911+00 LT	50	5	250
1939+00 RT TO 1940+50 RT	150	12	1,825
OFF-MAINLINE			6,250
TOTAL:			62,250

Bridge Rail Connections

Structures:	3
x4	12
TOTAL:	15

Guardrail End Sections

Rail Runs	19
X1 (Opposing Traffic)	19
Clear Zone Need	15
TOTAL:	53

Bridge Structure Costs

Crossing	SF	Cost (\$/SF)	Revised Cost (\$/SF)	Bridge Cost
Forest Service Crossing	8448	\$270.40	\$270.40	\$2,284,348.80
Kenai River	37908	\$625.00	\$545.16	\$20,666,061.57
Juneau Creek	82212	\$800.00	\$697.81	\$57,368,306.55
Kenai River at Schooners	16250	\$625.00	\$545.16	\$8,858,908.42
Totals				\$89,177,625.40

Bridge Structure Cost Revision Assumptions: From the Bridge Report the most expensive bridge option was used to provide a conservative estimate, the cost per sq ft from the bridge report was adjusted to construction only costs by dividing by 1.55 (55% increase over basic furnishing and installation costs) and then including 10% for detours and 15% for mobilization. This number was then brought to 2014 Dollars via AK CPI inflation averages between 2011 and 2014.