



Technical Memo

Federal Project No: NH-000S(588)

AKSAS Project No. 58544

Subject: H2H 2035 Travel Forecast

Date: November 29, 2010

This technical memorandum summarizes the travel model enhancements developed for the H2H project and then presents the 2035 travel forecast.

H2H Travel Model Enhancements

The H2H project commissioned a new economic forecast and enhancements to the Anchorage Metropolitan Area Transportation Solutions (AMATS) travel demand model to enable evaluation of project reasonable alternatives for the 2035 design year. The new travel model incorporates several important refinements to the existing AMATS travel model:

- Regional geographic expansion to include the Mat-Su Valley
- Refined detailing of traffic analysis zones in the vicinity of the H2H corridor.
- New regional population, households and employment growth forecast to 2035
- Incorporation of a time and cost utility network impedance framework

To confirm that the new travel model performs satisfactorily, a travel model for 2007 was run and evaluated against ADOT 2007 count volumes. H2H model results also were summed by time-of-day across 28 screenlines throughout the region for comparison with ADOT ground counts.¹

2035 Regional Socio-Economic Forecast

The Institute for Social and Economic Research (ISER) at the University of Alaska, Anchorage was contracted to produce a 2035 statewide and regional economic forecast. The ISER final forecast report was completed in December 2009². Tables 1– 3 below show the 2009 ISER forecasts for years 2035.

Table 1. ISER Population Projection

	2009 ISER Forecast		
	Anchorage	Mat-Su	Total
2035	351.3	170.8	522.1

¹ Full details of the travel model refinements, changes in logic structure, model coefficients and relationships, and validation are presented in Technical Memorandum “Anchorage H2H Travel Model Documentation” June 2010.

² For full details, see “Economic and Demographic Projections for Alaska and Greater Anchorage 2010–2035” Scott Goldsmith, Institute of Social And Economic Research, University of Alaska, Anchorage, December 2009.

Table 2. ISER Household Projection

	2009 ISER Forecast		
	Anchorage	Mat-Su	Total
2035	136.6	63.1	199.7

**Table 3. ISER Employment Projection¹
(Wage & Salary Employment)**

	2009 ISER Forecast		
	Anchorage	Mat-Su	Total
2035	177.6	46.4	224.0

¹Wage & salary employment excludes self-employed persons

Generally, the 2009 ISER forecast estimates slightly lower total regional population, households and wage & salary employment for 2035 than had been predicted for 2030 in their prior 2005 analysis.

2035 H2H Travel Forecasts

The AMATS Long Range Transportation Plan (LRTP) explains that the H2H project is intended to reduce congestion on parallel arterial streets, as well as on the existing arterial connection between the highways, which is comprised of Gambell and Ingra Streets and East 5th Avenue and 6th Avenue.

The H2H travel model estimates that by 2035, there will be a demand for new capacity to accommodate approximately 60,000 additional vehicle trips daily within the project area. This additional demand estimate was determined by comparing the estimated 2035 traffic to the available capacity of the existing arterial street network between the two highways using north-south and east-west screenlines that were developed as part of the H2H Purpose and Need and screening methodology.

Travel demand in the area between the highways was estimated, using the H2H enhanced travel model, for the No Action alternative for the project design year 2035. The No Action alternative is defined as the existing transportation network including all projects in the adopted AMATS and MSB long range transportation plans, except the H2H improvement project. To develop the 2035 No Action Alternative Travel Forecast, base year allocations of all socio-economic variables by TAZ were created for 2007 using census, state, AMATS and local planning sources. For 2035, the ISER 2009 population and employment forecast established socio-economic controls for population, household and employment (segmented into multiple industry sectors) for Anchorage and the Matanuska and Susitna Borough. All socio-economic variables used in the travel model were estimated for 2035 by TAZ and reconciled with the ISER control totals.

Travel model runs were made to assign vehicle trips by three time-of-day periods: 7-9AM, 3-6PM, and Off Peak (all other hours). The Knik Arm Crossing Bridge project was modeled in the 2035 forecast using a No Toll charge assumption. Routing of vehicle trips over the road network was determined by time and cost impedance measures. The three time-of-day assignments were also combined to produce a total 24-hour daily traffic forecast.