



APPENDIX E, COST ESTIMATE NARRATIVE



APPENDIX E

Deficiencies Cost Estimates Methodologies

Once the required facility improvements had been identified for each airport within the state system, the rough-order-magnitude cost to address each need was determined. Since the costs are planning level estimates and did not require a detailed engineering cost breakdown for each improvement, a more high-level approach was needed.

The costs for each airport were based on average unit prices sourced from the 2009 Oregon Department of Aviation Unit Cost Estimate Update. These unit prices represent a large sample size of actual bidding information from similar projects collected over many years. To account for inflation, an inflation value was assumed and then validated and adjusted using historical Turner Building Cost Index information. The individual improvements needed such as taxiway widening, runway extensions, lighting, drainage etc., then were assembled and using the unit prices, formed the basis of each cost. Soft costs including environmental, surveying, testing, design, bidding, construction administration, construction observation, and miscellaneous administrative costs were factored in to each total cost as well. For larger capital improvement projects where expansion would require acquisition of land, the total cost also included land acquisition, associated appraisals, and property surveys.

Generally, the categories of major improvements needed was broken down as follows:

Airfield Pavements

- Construct/Rehabilitate
- Add Runway Extension
- Add Runway Width
- Add New Taxiway
- Earthwork

Runway Markings

- Visual Painting
- Non-Precision Painting
- Precision Painting

Runway/Taxiway Lighting

- Runway Lighting
- Taxiway Lighting
- Reflectors

Drainage

Fencing



The estimated cost to install the systems and facility improvements below was estimated based on similar previous installations at airports within the state. It was assumed suitable space was available on the respective airports and no land acquisition, clearing of obstructions, or other major improvements were required. All costs account for applicable soft costs such as permitting, project administration, contingencies, etc.

- Visual Approach Aids – Lump sum cost estimate
- Rotating Beacon and Wind Cone – Lump sum cost estimate
- Weather Reporting – Lump sum cost estimate
- Fuel – Lump sum cost estimate
- Snow Removal – Lump sum cost estimate
- Deicing Facility – Lump sum cost estimate
- Terminal Building – Lump sum cost estimate
- Hangars/Aircraft Storage – 1500 SF per Hangar at \$75/SF
- Apron Parking Storage – 5000 SF per spot at \$5/S for CAT I and CAT II and \$3.79/SF for all other CATs.
- Auto Parking – 400 SF per parking spot at \$4/SF
- Fencing - \$40 per linear foot plus gates.
- Cargo Aprons – Remarketing existing apron space at \$25,000
- Cargo Handling Facilities – 5,000 SF Facility at \$300/SF