

## SECTION 5. ESTIMATED COSTS

### 5.1 Introduction

Planning level cost estimates have been prepared in order to estimate the approximate funding level required to rehabilitate the bridge. These estimates are based on concept level design and assumptions intended to identify the principle project elements. Two cost estimates were prepared: pre-cast concrete girder design, and steel girder design. A more detailed breakdown of project items is included in the Appendix. Estimated costs are summarized below.

**Table 5-1**

<i>Preliminary Cost Estimate - Steel Girder Design</i>	
<b>Item</b>	<b>Estimated Cost</b>
Approach related work	\$ 165,000
Bridge	2,010,000
Lighting and electrical	151,000
Subtotal	\$2,326,000
Tax (8%)	186,000
Contingency (budget 25%)	582,000
Engineering (budget 25%)	582,000
<b>Total</b>	<b>\$3,675,000</b>

**Table 5-2**

<i>Preliminary Cost Estimate - Concrete Girder Design</i>	
<b>Item</b>	<b>Estimated Cost</b>
Approach related work	\$ 165,000
Bridge	2,140,000
Lighting and electrical	151,000
Subtotal	\$2,456,000
Tax (8%)	196,000
Contingency (budget 25%)	614,000
Engineering (budget 25%)	614,000
<b>Total</b>	<b>\$3,880,000</b>

## SECTION 6. PROJECT IMPLEMENTATION

### 6.1 Design Issues

Items that will be addressed in detail during project design include:

◆ **Soils and Foundation Investigation**

As reported in Section 3, available soils information indicates that the existing bridge foundation is likely capable of supporting the moderate dead load increases from a wider new deck and steel girder structural system. The probable significant dead load increases from a pre-cast concrete girder system may or may not exceed the allowable capacity of the soils. The design phase will include a thorough soils investigation, including appropriate exploratory drilling, to quantify allowable loading.

◆ **Selection of Steel or Concrete Girder System**

The selection of steel or pre-cast concrete girder system will be made during final design and after completion of the soils/foundation investigation. Considerations in this selection will include:

- Results of the soils/foundation investigation
- Connection detail design/construction issues
- Capital and maintenance cost
- Appearance
- Boat clearance

◆ **Selection of Bridge Deck Configuration**

The choice of curbs and raised sidewalks versus a single level deck will be made during project design.

◆ **Right-of-Way**

Right-of-way documentation will be completed for approach revisions prior to project design.

◆ **Permits and Environmental**

Required project permits and approvals are anticipated to include:

- Environmental review process
- Substantial Development Permit (Chelan County or City of Chelan)
- 404 Permit (Corps of Engineers)
- Water Quality Modification (DOE) (possibly)
- Hydraulic Project approval (WA Dept of Wildlife)
- Building Permit (City of Chelan)

## 6.2 Construction Issues

Issues related to construction that will be addressed during design and preparation of construction documents include:

- ◆ Traffic control plan during bridge closure.
- ◆ Determination of minimum required construction period in order to minimize bridge closure time.
- ◆ Protection of waterway during construction; determination if boat traffic will be allowed during construction.

## 6.3 Financing

Proposed funding for the rehabilitation project is through the state Bridge Replacement Advisory Committee (BRAC). Recent program revisions allow for 100% grant funding for projects under \$5 million.

## 6.4 Project Schedule

The project schedule will be determined by availability of funding. If funding is obtained in Spring 2004, the project schedule is anticipated to be as follows.

- |                                          |                           |
|------------------------------------------|---------------------------|
| ◆ Submit this Feasibility Study to WSDOT | Jan 2004                  |
| ◆ BRAC funding application/presentation  | Spring 2004               |
| ◆ Environmental reviews, permits, design | Summer 2004-Spring 2005   |
| ◆ Construction                           | 2005 (possibly into 2006) |