*LIGO Laboratory / LIGO Scientific Collaboration*

LIGO- **E1101002-v1** *LIGO* 3/26/12

AOS SLC ITM Elliptical Baffle

Production Plan

Michael Smith

Distribution of this document:

LIGO Scientific Collaboration

This is an internal working note

of the LIGO Laboratory.

|  |  |
| --- | --- |
| **California Institute of Technology**  **LIGO Project – MS 18-34**  **1200 E. California Blvd.**  **Pasadena, CA 91125**  Phone (626) 395-2129  Fax (626) 304-9834  E-mail: info@ligo.caltech.edu | **Massachusetts Institute of Technology**  **LIGO Project – NW22-295**  **185 Albany St**  **Cambridge, MA 02139**  Phone (617) 253-4824  Fax (617) 253-7014  E-mail: info@ligo.mit.edu |
| **LIGO Hanford Observatory**  **P.O. Box 159**  **Richland WA 99352**  Phone 509-372-8106  Fax 509-372-8137 | **LIGO Livingston Observatory**  **P.O. Box 940**  **Livingston, LA 70754**  Phone 225-686-3100  Fax 225-686-7189 |

http://www.ligo.caltech.edu/

**Abstract**

This document describes the plan for acquisition of parts, components, and materials needed for fabrication of six (6) ITM Elliptical Baffle.

# Introduction

This document describes the plan for acquisition of parts, components, and materials needed for fabrication of six (6) ITM Elliptical Baffle.

## Scope

The cost of the production plan is limited to the hardware acquisition costs of the ITM Elliptical Baffles.

It does not include labor for procurement, assembly, pre-alignment, test, and installation.

# Production Plan

## Fabrication

The ITM Elliptical Baffle subassemblies will be manufactured by selected machine shops.

## Assembly and Test

The ITM Elliptical Baffle sub-assemblies will be pre-assembled in a clean room, wrapped, and transported to a portable clean room near the installation site; the final installation and assembly will be done in situ inside BSC chambers. No prior testing is required.

# Baffle Estimated Unit Cost

ITM Elliptical Baffle 10795

## Total Cost for all Signal Recycling Cavity Baffles

Qty 6 ITM Elliptical Baffle 64770

Qty 4 FM Beam Dump 43180

Qty 2 FM Elliptical Baffle 1018

Qty 2 Manifold Flat Baffle 20780

Shipping 8000

Total Cost  **$137,748**

## Comparison with Cost Book

The 8/26/10 AOS cost revision is detailed in the Advanced LIGO [Change Request No. ACR-100016](https://dcc.ligo.org/DocDB/0014/M1000226/001/ACR-100016_AOS_Budget_Sched_Revs_2010-08-27.pdf).

Cost of current baffles $**135,748**

Plus cost of other baffles $756,925

Budgeted Baffles and Beam Dumps $599,644

Cost Overrun ($293,029)

# Procurement Plan

**April 2012**

Qty 6 ITM Elliptical Baffle 64770

Shipping 3500

Total Cost  **$68,270**