<table>
<thead>
<tr>
<th>Department</th>
<th>CoD Estimate</th>
<th>Detailed Design Est</th>
<th>Difference</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optics</td>
<td>$336,617</td>
<td>$340,834</td>
<td>$4,217</td>
<td>Optics grade was reduced, diameter of optics increased</td>
</tr>
<tr>
<td>Electronics</td>
<td>$39,870</td>
<td>$92,426</td>
<td>$52,556</td>
<td>1. $600 allowance for Module control</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. $13,000 increase in parts cost due to better/change in understanding of function and requirements</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. $2,000 for use of hall effect limit switches rather than those used on previous projects</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4. $34,000 increase in labor due to better understanding of requirements as specified in Requirements Document</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5. $2,500 for allowance to back out of fully deployed secondary limit switch</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>$41,600</td>
<td>$43,290</td>
<td>$1,690</td>
<td>Change in Mechanical Design form CoD</td>
</tr>
<tr>
<td>Mechanical Fab</td>
<td>$41,420</td>
<td>$67,971</td>
<td>$26,551</td>
<td>1. $22,500 due to under estimate of parts cost</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. $4,000 due to changes in design</td>
</tr>
<tr>
<td>Software</td>
<td>$44,800</td>
<td>$55,720</td>
<td>$10,920</td>
<td>Re-estimate of work required</td>
</tr>
<tr>
<td>Assembly and Test</td>
<td>$11,200</td>
<td>$59,600</td>
<td>$48,400</td>
<td>Better understanding of what tests and how much testing is required. Need to test at 0-90 degrees gravity angle and at 0C, and duration of tests are big factors</td>
</tr>
<tr>
<td>Reviews</td>
<td>$62,400</td>
<td>$62,450</td>
<td>$50</td>
<td>No Change</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Minor re-estimate</td>
</tr>
<tr>
<td>Shipping</td>
<td>$42,075</td>
<td>$51,825</td>
<td>$9,750</td>
<td>1. Labor to pack was not considered at CoD</td>
</tr>
<tr>
<td>Commissioning</td>
<td>$28,600</td>
<td>$30,400</td>
<td>$1,800</td>
<td></td>
</tr>
<tr>
<td>Project Management</td>
<td>$39,221</td>
<td>$43,044</td>
<td>$2,465</td>
<td>Slight increase due to better understanding of the new way</td>
</tr>
<tr>
<td></td>
<td><strong>$687,803</strong></td>
<td><strong>$847,560</strong></td>
<td><strong>$158,399</strong></td>
<td>23% percent increase</td>
</tr>
</tbody>
</table>