

April 9, 2002

Dr. Michael Witherell, Director
Fermi National Accelerator Laboratory

Dear Mike:

Please find below a brief guide for the documentation contained on this web page for the Director's Review of the DØ Run 2b Project, to be held at Fermilab on April 16-18, 2002. The project consists of two primary components: the replacement of the Silicon Microstrip Tracker (SMT), and the upgrades to the trigger elements and online system. The sub-projects are organized as follows, with WBS numbers given in parentheses:

- (1.1) Silicon Microstrip Tracker (SMT) replacement
- (1.2) Level 1 Trigger, consisting of upgrades to the following hardware-level trigger systems:
 - (1.2.1) Calorimeter Trigger
 - (1.2.2) Calorimeter cluster/track match (Cal/Track Match)
 - (1.2.3) Central Track Trigger (CTT)
- (1.3) Level 2 Trigger, consisting of upgrades to:
 - (1.3.1) Level 2 β trigger system
 - (1.3.2) Silicon Track Trigger (STT)
- (1.5) Online System

Below is a short description of the material posted on this page. Note that all documents are provided in PDF format:

1. The two relevant updated **Technical Design Reports (TDRs)**. The most significant updates to the silicon TDR are contained in chapters 4 (silicon sensors), 7 (production and testing), and 9 (detector simulations). The draft trigger and online TDR is a distillation of the Conceptual Design Report submitted to the November '01 PAC and December '01 Director's Technical Review of the Run 2b Projects. It provides a description of the scope of the trigger upgrades being proposed and the current status of the technical designs.
2. The **M&S cost estimate** for each of the sub-projects.
3. The **project schedule**, in the form of a task sheet/Gantt chart, for each of the sub-projects.

4. **WBS Dictionary and Basis of Estimate (BoE) for the labor** for each of the sub-projects. Each entry contained here refers line-by-line to the information contained in the project schedule. In order to present this information in a more easily accessible form, and to limit excess paperwork and redundancy, we have merged these two items into one document for each sub-project. The full entries for both the Dictionary and the labor BoE are contained here. Also include is an **Executive Summary for the WBS Dictionary**, which provides an overview of the project in rolled-up form.
5. **Basis of Estimate for the M&S cost estimate** for each of the sub-projects.
6. **Acquisition Execution Plan.**
7. **Project Execution Plan.** An updated draft of this document is in preparation as of this writing.
8. **Written responses** to the questions raised by the **December '01 Director's Technical Review Committee.**
9. Most recent results from **simulation studies of the silicon detector**, which was presented at the April '02 PAC meeting. This document is a stand-alone summary of the information contained in the updated silicon TDR, complemented by a discussion of relevant silicon scope options.

If there are any problems accessing this information, or any questions that I might be able to help with, please don't hesitate to contact me.

Sincerely,

Jonathan Kotcher
Project Manager, DØ Run 2b Upgrade Project

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