





LBNF Primary Beam Project Update

Anne Norrick Friday 9am 6 Oct 2023

Primary Beam

Magnets

What is included

All conventional magnets needed for extracting the beam from the Main Injector/Recycler and moving the protons to the target. Includes stands to hold the magnets, and plans for installation.

Ongoing Work

- » Working on making measurements of magnetic properties of the lamination steel.
- » Preparing QA/QC plan for dipole coils to be purchased from vendors
- » Preparing for a Preliminary Design Review and early procurement for the Kicker Magnet
- » Magnet stand Final Design Review planned for January

Magnet Power Supplies

What is included

Power supplies needed for any and all magnets used in the primary beam.

Ongoing Work

- » Undergoing schedule replanning.
- » Moving a transformer for the Primary Beam service building and a load for one of the dipole circuits onto Beamline scope.
- » Evaluating better ways to route bus to minimize rework for possible future upgrades.
- » Wrapping up electrical distribution drawing details.



Primary Beam

Primary Water System

What is included

All water cooling for all magnets and power supplies.

Ongoing Work

- » Work on flow models and schematic diagrams for the LCW continue
- » Rearrangement work on LBNF-05 Power Supply Room. Rerouting LCW piping and Bus.
- » Continuing work on Primary Water System Branch piping for power supplies in MI-14.

Vacuum

What is included

Beam pipes and all of equipment needed to create and maintain vacuum in the beam pipes.

Ongoing Work

- » Engineers and drafters doing final markups of beam line vacuum
- » We continue to seek a commercial coating for the kicker ceramic vacuum beam tubes: samples are at a vendor (Polyteknik) for coating.
- » Final edits to ceramic beam tube drawings underway.
- » Final design review planned for December.

