

A Preliminary (for discussion and initial planning only) Construction Schedule for the ILC

overall_schedule_22feb06.xls

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This is just to get the discussion and preliminary planning started.

THIS IS A TECHNICALLY LIMITED, NOT FINANCIALLY LIMITED, SCHEDULE.

It assumes that there is **sufficient funding** to begin industrial mobilization and plant outfitting at time t_0 .

This financial assumption appears to be necessary to be able to complete construction and installation of technical components within **7 years** of t_0 . If there is not sufficient funding to begin both civil construction and preparations for production of technical components within 6 months, or so, of t_0 , it may not be possible to complete the production and installation of the multiple, high cost items such as cryomodules, klystrons, etc., within the desired 7 year overall construction timescale.

This is a preliminary model of a construction schedule, which needs much more detail to solidify.

It is presented at this time to give an indication of when enclosures and service buildings will be available to accept technical components for installation ($t_0 + 30-41$ months), and when the last components need to be on-site to complete installation ($t_0 + 78$ months), assuming they are delivered approximately linearly over that time span. This should be used by the Area, Global, and Technical System

This should be used by the Area, Global, and Technical System Groups in planning the production facilities and rates and their inclusion into the cost estimates.

This is just a preliminary schedule, not too much different from TESLA and USLCTOS, formulated through discussion with Fermilab's FESS group. It needs much more widespread discussion and study.

It will be modified as the schedule is better understood by the Conventional Facilities & Siting and the Installation Global System Groups, and as your comments and suggestions are folded in.

- t_0 project approval - authorization to begin spending funding, hire construction management firm
- $t_0 + 9$ months begin site preparation, start driving first shafts
- $t_0 + 17$ months tunnel boring machines arrive on site - begin setup
begin underground construction for e- source, keep-alive e+ source, and RTML arcs
- $t_0 + 20$ months launch TBMs
- $t_0 + 30$ months ready to begin technical component installation for e- source, keep-alive e+ source, and RTML arcs
- $t_0 + 33$ months first section of Damping Rings ready to install technical components
- $t_0 + 37$ months final section of Damping Rings ready to install technical components
- $t_0 + 41$ months first sections of Main Linac tunnel, service tunnel, service building, ready to install technical components
- $t_0 + 65$ months final sections of Main Linac and BDS tunnels and service buildings ready to install technical components
- $t_0 + 78$ months all components delivered to site for installation
- $t_0 + 84$ months construction, including installation, complete, ready to begin commissioning with beams to Exp Halls

Note: this schedule does NOT include Experimental Halls or positron bypass line around Experimental Halls nor does it include any additional underground alcoves or side-caverns, as yet unspecified to CF&S group, which would have to be constructed by drill & blast after tunnel and spoil removal is completed in that area.