LINAC HINS/Proton Driver Civil Design Synergies

Dixon Bogert

Fermilab Accelerator Advisory Committee
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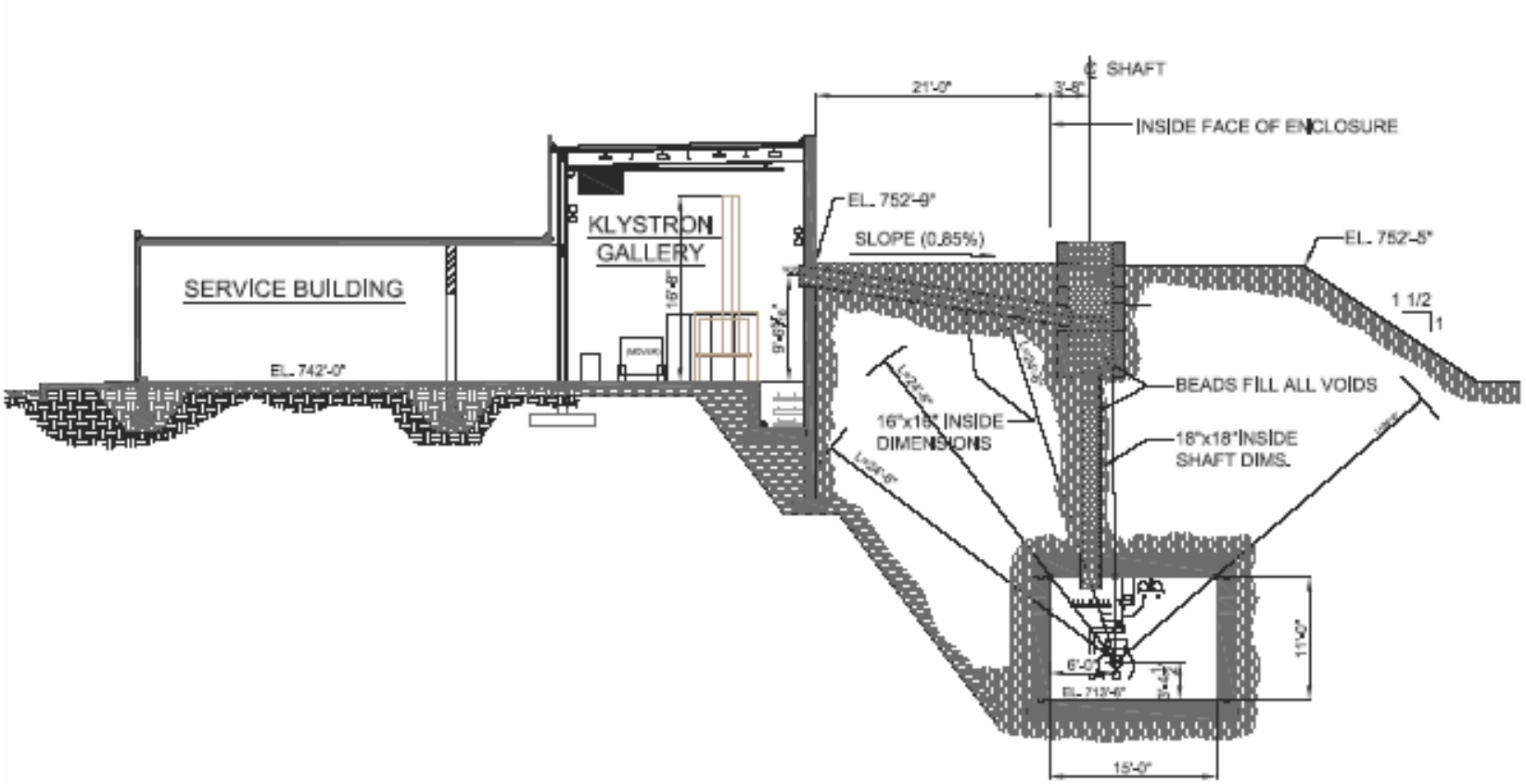
Reporting Work by FESS – Elaine McCluskey
And
Chuck Federowicz Tom Lackowski Paul Lahn
Rod Walton Gary Van Zandbergen

Outline

- **Siting – Inside Main Ring**
- **Major Elements of Construction for HINS & ILC**
  - Overview on Site Plan
  - Cross-sections of tunnels/service building
    - HINS
    - ILC
  - Plans of HINS Klystron Gallery & ILC Service Tunnel
- **ILC TF Deficiencies with respect to HINS facility**
- **HINS Consultant Engineering Work in FY06**

Linac Proton Driver Site Plan

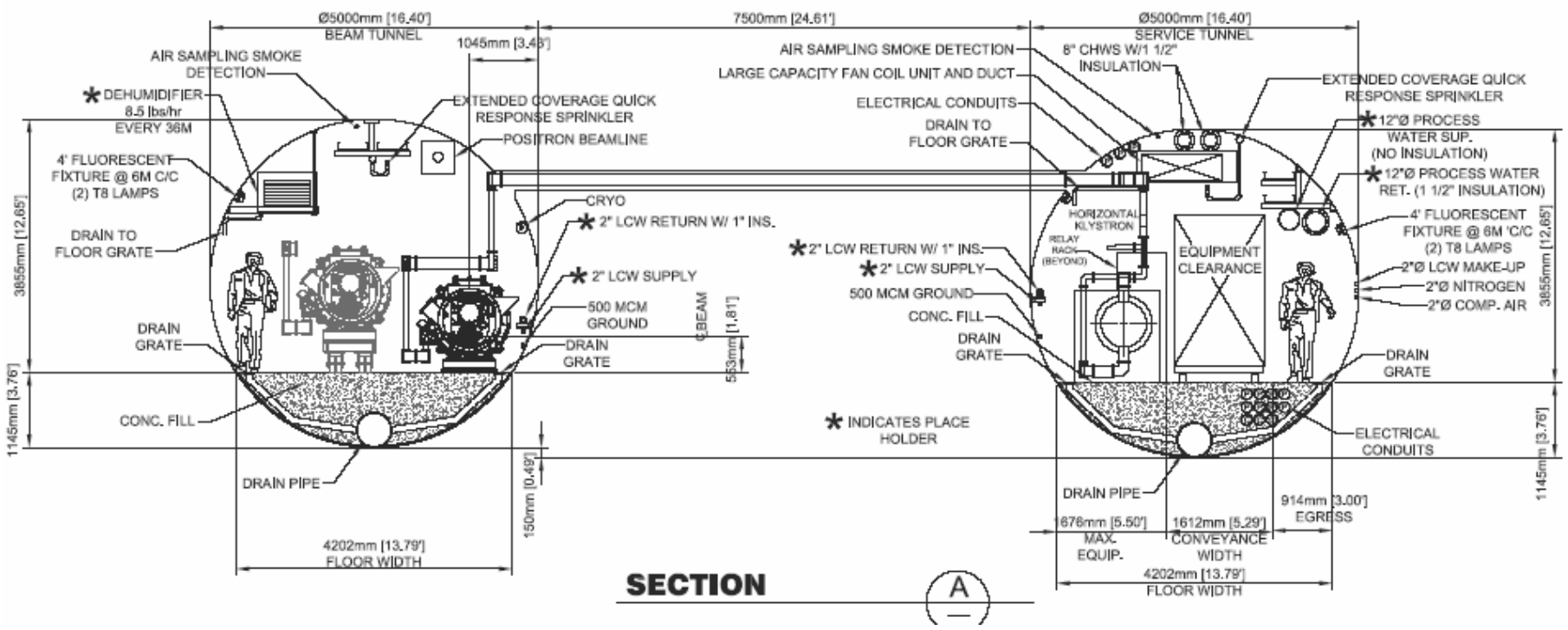
HINS Linac Enclosure/Klystron Gallery



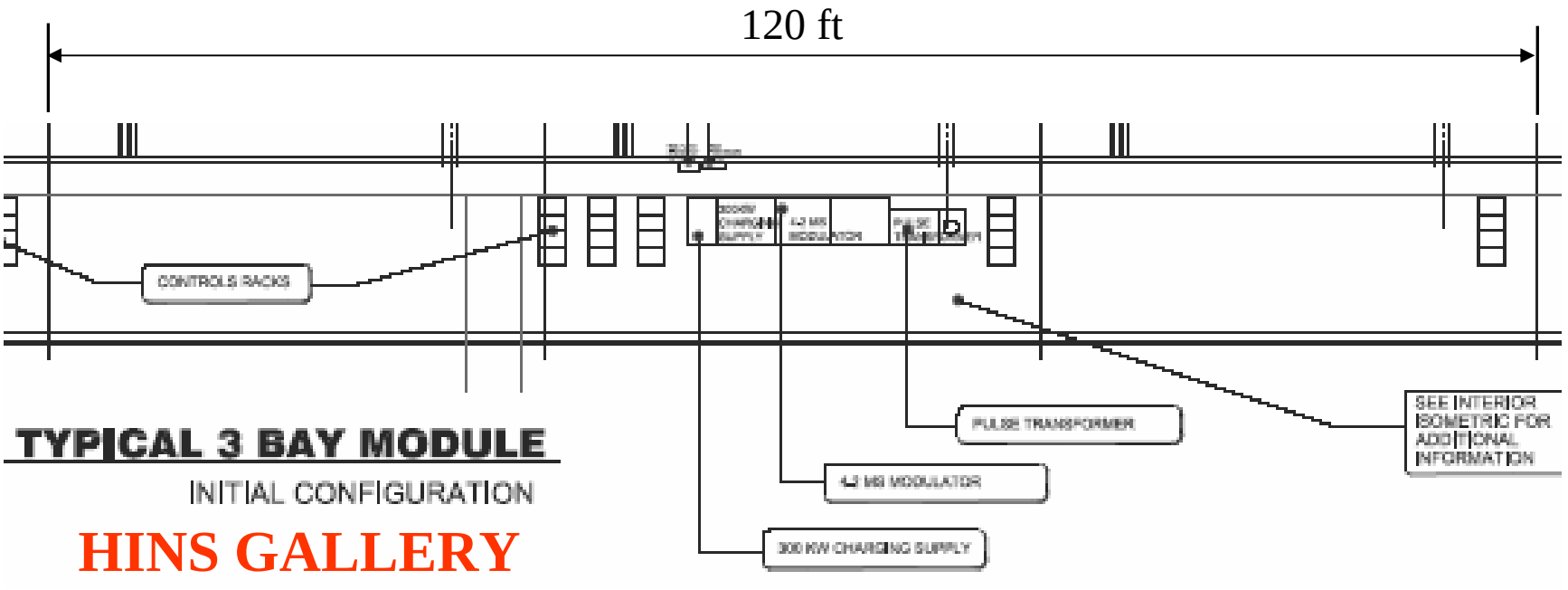
TRANSVERSE SECTION @ WAVE GUIDE

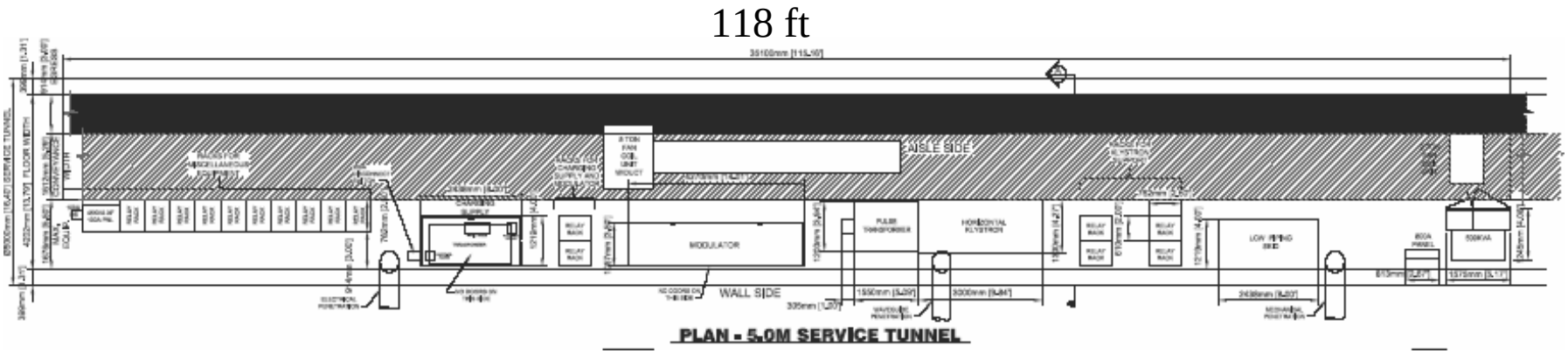
SCALE: 1/4" = 1'-0"

ILC Twin Tunnels



Klystron Gallery (HINS)/Tunnel (ILC)





ILC TF Deficiencies w.r.t. HINS Facility

- **Below grade service gallery presents operational difficulties for HINS**
- **In ILC service tunnel, equipment arrangement &tunnel connections to beam tunnel would make HINS upgrade to 2 MW beam difficult. HINS planned for this upgrade.**
- **Round ILC beam tunnel section is markedly smaller than HINS tunnel**
- **Future uses such as recirculating muon acceleration not accounted for.**

HINS Consultant Work FY06

- **Life Safety study completed that established code-related occupancy, exiting, and fire protection requirements for the proposed facility**
- **Hydrogeologic borings to determine horizontal and vertical groundwater transport in vicinity of proposed linac absorber**
- **Wetland delineation for south half of Tevatron Ring to scope what wetland mitigation would be required for installation of new facility in this region**