

# Civil Construction and Beam Tube Enclosure Technical Review

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April 15, 1997

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## Outline

- Design Status and Variances
  - ›› Hanford, WA
  - ›› Livingston, LA
- Construction Status and Variances
  - ›› Hanford, Wa
  - ›› Livingston, LA

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## Design Status and Variances

- Design phase for both the Hanford and the Livingston sites were completed.
- Hanford, WA
  - ›› During this period, the bid package for the installation of the beam tube enclosure was completed and the contract was awarded to Levernier Construction Co.
  - ›› Since the start of the building construction, only one minor revision has been made to the building drawings.
    - Rearrangement of Office Area

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## Design Status and Variances

- Hanford, WA
  - ›› Since the start of the beam tube enclosure/slab contract, also, one minor revision has been made to the design drawings
    - The beam tube enclosure slab design was revised to facilitate the slipforming operation
    - No cost impact
    - Accelerated the performance schedule

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## Design Status and Variances

- Livingston, LA
  - ›› The construction bid documents for Building and Infrastructure were completed and the contract was awarded to Hensel Phelps Construction Co.
    - Livingston design is similar to Hanford design except for the site specific conditions.
    - LVEA building is sized to accommodate two full length interferometers.
    - Mid stations are significantly smaller, will house a Gate Valve only.

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## Design Status and Variances

- Livingston, LA
  - ›› The construction bid documents for the beam tube enclosure were completed and the contract was awarded to Woodrow Wilson Construction Co.
    - Design is similar to the Hanford design except for the site specific conditions.
  - ›› Settlement study of the berm was performed:
    - When it was determined that the majority of the settlements had occurred, the construction activities were initiated.

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## Construction Status and Variances

- Hanford, WA

- ›› Building and Infrastructure

- Construction is about 40 to 45% complete:
- Total days lost due to inclement weather is 28. Completion dates are still within late finish dates.
- Following the inspection of initial deliveries, performed an audit of the HVAC system to determine the cleaning requirements. This effort delayed some equipment deliveries.
- Substitution of siding material resulted in minor cost growth and minimal schedule impact.

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## Construction Status and Variances

- Hanford, WA

- ›› Beam Tube Enclosure - Fabrication and Installation

- The fabrication of the beam tube enclosure segments was completed on schedule within the awarded contract value.
- A secondary lifting fixture was added to the lifting device for Safety
- Installation of the beam tube enclosure segments is nearly completed on the northwest arm (x arm)



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## Construction Status and Variances

- Livingston, LA

- ››Site

- Rough grading of the site was completed within the budget
    - 166 days lost to inclement weather resulted in a schedule slip of 5 months (8/96 to 1/97)
    - Rough grading of the berm at the end station of the southeast arm was completed 8/96. The measured settlement rate was better than predicted
    - The distribution of electric power along arms started
    - Contract for QA was awarded to Delta Testing and Inspection, Inc.
    - Contract for Surveying Support was awarded to Simmons J. Barry & Associates

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## Construction Status and Variances

- Livingston, LA
  - ›› Building and Infrastructure
    - Construction of the Building and Infrastructure has been started at corner and end stations
  - ›› Beam Tube Enclosure - Fabrication and Installation
    - The service roads subgrade was treated with cement to provide a stronger subbase and to assure a stable working surface.
    - The gravel base for the service roads was completed.