

Pennsylvania Department
of General Services

**Pre-Proposal Conference
and Site Visit**

January 8, 2015



DGS Project No. 513-33 Phase 1
Torrance State Hospital
Boiler Plant Upgrades
DPW – Torrance State Hospital
Westmoreland Co., Pennsylvania

**Request for Proposal
for a
DBOOM Contractor**

Agenda

- Introductions
- General Information
- General Description of Work
- Technical Requirements
- Existing Conditions
- Reference Information
- Questions
- Site Visit
- **This presentation is provided for general guidance only. Proposers are advised to review and follow all RFP and Bulletin requirements in preparing their Proposal.**



General Information



- Bids are due January 29, 2015 at 10:00AM at the DGS office in Harrisburg
- Questions/Requests for Information (RFI) must be submitted in writing to the BPF RFP Coordinator (Diane Hallett) no later than January 19, 2015
- DGS to issue last bulletin by January 22, 2015
- The RFP consists of four parts and 16 appendices available on CD from the DGS Harrisburg office.

General Information



- Design-Build-Own-Operate-Maintain (DBOOM) Contract for a new Boiler Plant Facility on the Torrance State Hospital Property
- Successful proposal shall enter into the following contracts with PA DGS and/or PA DPW:
 - Enter into a design/build contract
 - Ground lease agreement
 - Energy services agreement
- Contractor shall bear the cost of financing, designing, permitting, constructing, operating and maintaining the proposed new boiler plant

General Description of Work

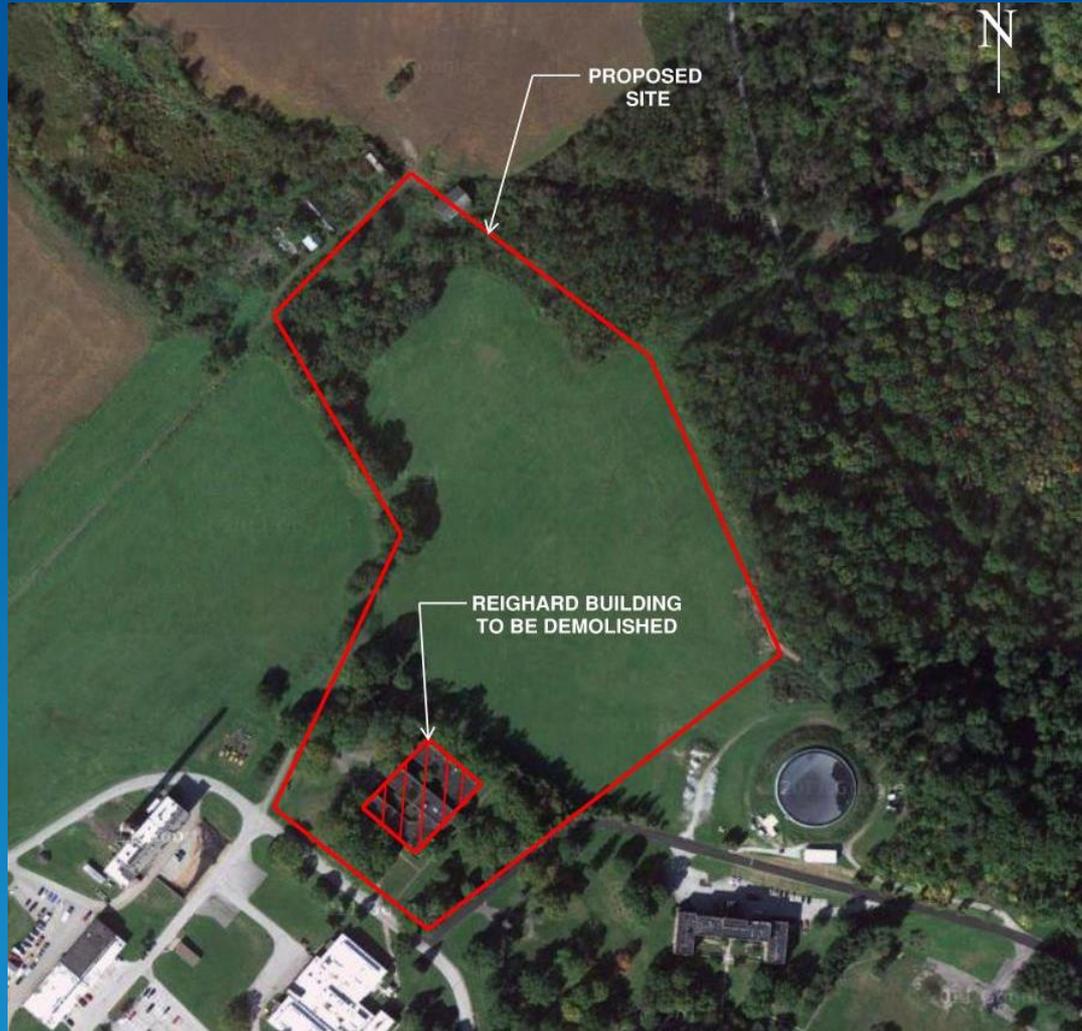


- Provide a new Boiler Plant Facility (BPF)
 - Steam boilers
 - Electrical distribution and infrastructure
 - Standby electrical power generation equipment
- Rerouting and replacement of certain steam distribution piping systems
- Extension of utilities to new BPF
- Demolition of the existing Reighard Building
- DGS is not dictating steam generation technologies, open to multiple technologies, such as:
 - Natural gas
 - Co-generation
 - Biomass combustion

Generation Description of Work



General Description of Work



Technical Requirements (Appendix N)

- DBOOM Project Objectives
 - Meet future federal and state air quality requirement
 - Provide continuous and reliable steam supply
 - Increase system efficiency
 - Reduce maintenance cost
 - Transfer ownership via the DBOOM contracting approach



Technical Requirements (Appendix N)



- System Reliability
 - 24 hours/day – 365 days/year steam production
 - A complete system shutdown shall not exceed 6 hours at any time
 - Design redundancy to maintain full-range of steam demand with one unit out of service or loss of primary fuel
 - Standby engine generator to sustain full-capacity range of steam production upon loss of utility-supplied electrical power
 - Propane is not an acceptable fuel supply

Technical Requirements (Appendix N)



- Example BPF Boiler Combination
 - Boilers with dual-fuel burners (i.e., natural gas and diesel)
 - Biomass combustion with natural gas-fired back-up boilers (must demonstrate ability to obtain long-term commitment for biomass supply in proposal)
 - Combined heat and power (co-generation) – Note: electrical power can only be sold-back to Hospital. It cannot be sold back to the grid.

Technical Requirements (Appendix N)



- Steam Demand
 - Peak wintertime demand is approximately 30,000 lb/hr
 - Summertime demand is between 5,000 to 8,000 lb/hour
 - Annual average based on fiscal years 2009 to 2012 ranged from 90,178 to 108,020 mlbs/year
- Electricity Usage
 - Annual electricity usage range from 6.4 to 6.8 million kWh/year with a peak demand of 1,300 – 1500 KW.
- Steam is generated at 150 psig

Technical Requirements (Appendix N)



- Air Quality Permitting
 - Torrance State Hospital currently has a Title V permit with DEP
 - Considered a major source of air pollutant with a major facility operating permit
 - New BPF facility designed to include existing emission sources that remain when obtaining new operating permit
 - See Section 2.6 in Appendix N for detailed description of air quality scope of work

Technical Requirements (Appendix N)

- Section 3.0 Design Basis
 - General basis of design requirements for:
 - Major equipment
 - Heating systems
 - Natural gas system
 - Fuel oil system
 - Chemical treatment
 - Electrical systems
 - Fire protection
 - Structural and Architectural design



Technical Requirements (Appendix N)

- Steam Distribution
 - Modifications to steam and condensate piping to new BPF, including extension of service tunnel to BPF
 - Originally three steam pressures in distribution system “High”, “Medium” and “Low”
 - Provide new isolation valves at all points of connection to existing distribution system
 - Torrance State Hospital to provide a new condensate return pump station outside of the existing Power House in the adjacent service tunnel (DBOOM Contractor) owns new condensate piping



Existing Conditions (Appendix O)



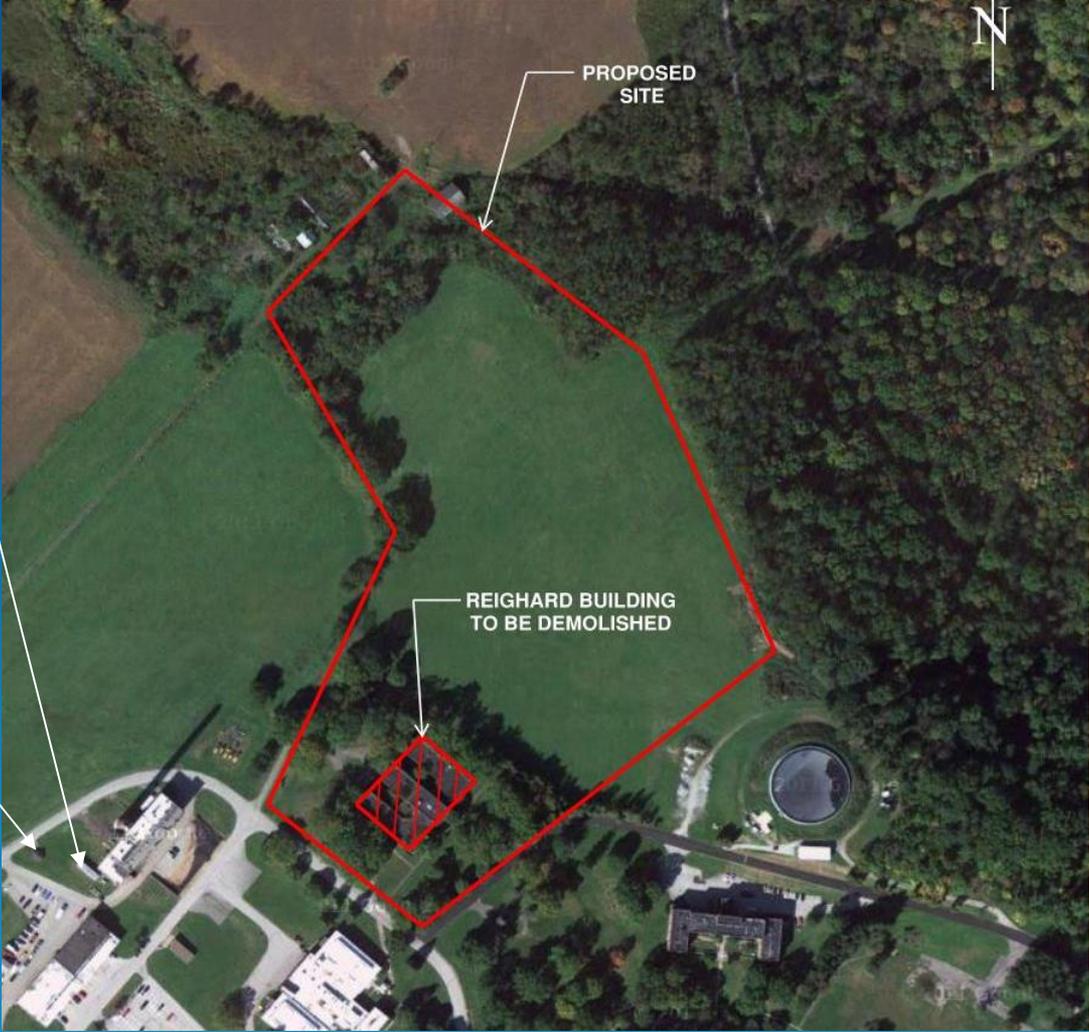
- Natural gas service
 - Existing service enters site at the Gas House
 - DBOOM Contractor to provide their own gas service
 - Coordinate with Peoples Natural Gas to provide separate service and metering from the Gas House
 - Service pressure of 365 psi
- Electricity Service
 - Existing service includes two, 2,300 volt utility feeds from the North to the Main Substation
 - Electricity providers include Hess and Penelec.

Existing Conditions (Appendix O)



Main Substation

Gas House



PROPOSED SITE

REIGHARD BUILDING TO BE DEMOLISHED



Existing Conditions (Appendix O)



- Potable water
 - Torrance State Hospital owns and operates its own water treatment plant (3.4 million gallon clearwell)
 - Back-up supply connection to Highland Water Authority
 - BPF water connection to be installed and metered by DBOOM Contractor
 - Hospital shall provide water at no charge
 - DBOOM contractor responsible for chemical treatment of make-up water and condensate

Existing Conditions (Appendix O)



- Wastewater service
 - Torrance State Hospital owns and operates its own sewage treatment plant (STP)
 - DBOOM contractor shall provide new sewer piping connection to existing hospital collection system
 - Sanitary sewage and boiler blowdown shall be received at the STP with no usage charge
 - DBOOM contractor responsible for pretreatment of blowdown prior to discharge.

Reference Information (Appendix P)

- Record Drawings
 - Scanned Drawings, there are no electronic CADD files
- Operating Data
 - Daily boiler logs 2011 to 2013
 - Monthly Utility Usage Reports 2010 to 2013





Questions?