



**Partners in Excellence Outreach Forum  
June 7, 2018**

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**Y-12 Overview**

**Mark Padilla**

Assistant Manager for Programs and Projects  
NNSA Production Office

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## Y-12 National Security Complex Overview

- Y-12 is a government-owned, contractor-operated facility
- The National Nuclear Security Administration (NNSA), a semi-autonomous agency within the Department of Energy, oversees contractor operations
- Consolidated Nuclear Security, LLC is the managing and operating contractor of the Y-12 and Pantex plants



Strategic Plan  
MAY 2016

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**Bechtel**  
Project Management  
Construction  
Operations



**Leidos**  
Operations  
Information Technology  
Engineering  
Supply Chain Management



**Orbital ATK**  
High Explosives  
High-Hazard Operations

Booz | Allen | Hamilton

**Booz, Allen, Hamilton**  
Transformation  
Cost Savings



**SOC**  
Security  
Safeguarding SNM

**CNS contracts with the private sector on behalf of NNSA  
and with oversight by NNSA**

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## Mission

- Providing the nuclear deterrent
- Fueling the Nuclear Navy
- Reducing the global nuclear threat



## Y-12 is a Production Site in the NNSA Nuclear Security Enterprise



The NNSA Production Office and CNS manages both the Pantex Plant and the Y-12 National Security Complex

YGG-16-034402

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## Site Overview



Land	3,024 acres
Buildings	347 totaling 7.54M ft <sup>2</sup>
Excess Facilities	99 totaling 2.9M ft <sup>2</sup>
Trailers	31 totaling 35K ft <sup>2</sup>
Power Poles	2,848
Roads	43 lane miles
RPV	\$12.7B

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## Y-12 National Security Complex

- Vital part of the national nuclear weapons enterprise
- Diverse workforce and unique manufacturing capabilities
- Transforming to ensure enduring security of our nation
- Vital members of our community



**Your partnership is needed to transform Y-12 to ensure the enduring security of our nation in the coming decades**

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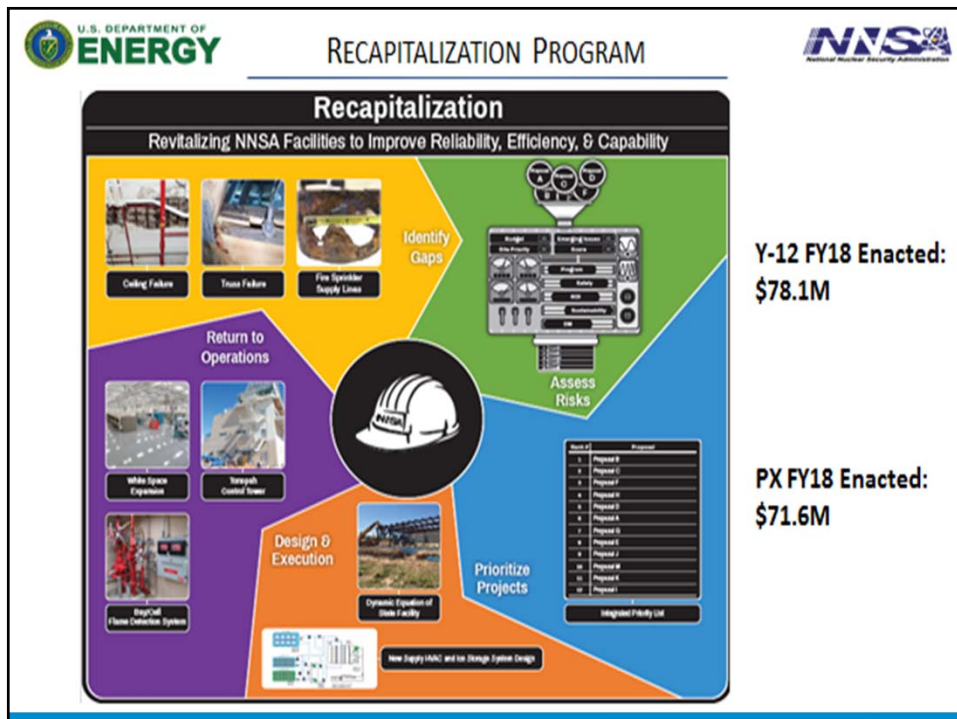
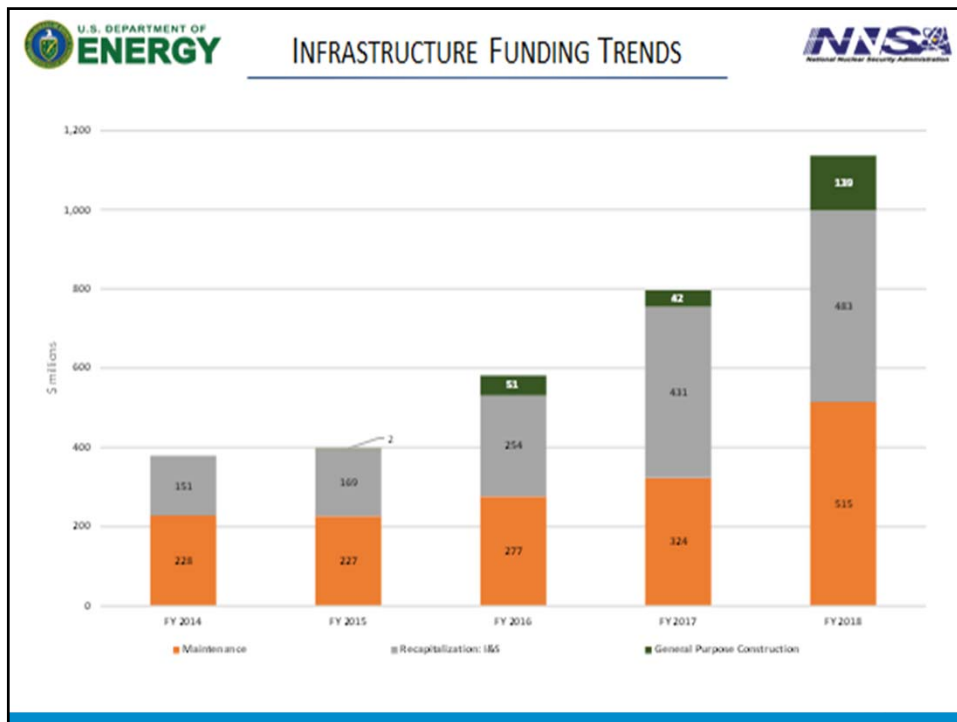
**Y-12**  
National Security Complex  
Managed and Operated by  
Consolidated Nuclear Security, LLC

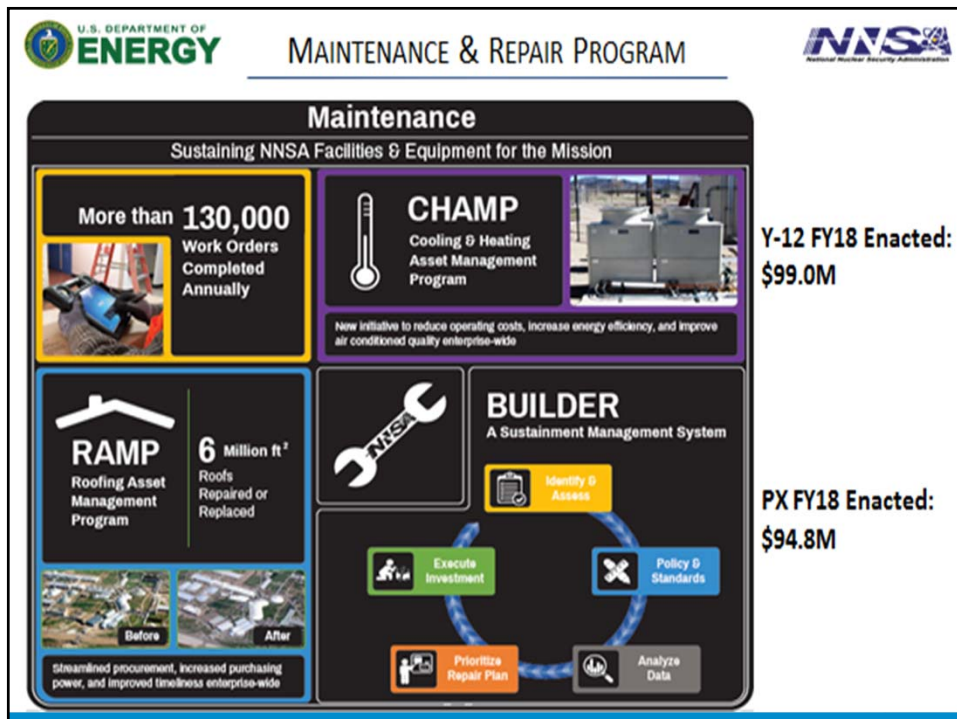
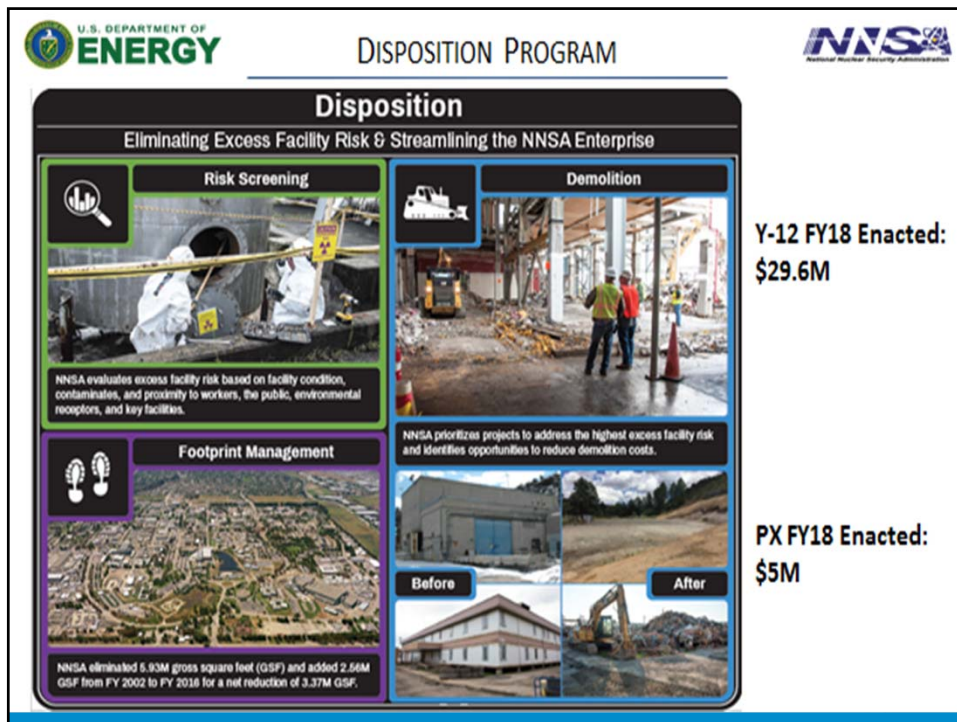
**NNSA Overview**  
**Jim Winter**  
Site Portfolio Manager  
NNSA Office of Infrastructure  
Modernization and Operations

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**Y-12**  
*National Security Complex*  
 Managed and Operated by  
 Consolidated Nuclear Security, LLC

**Opportunities Overview**  
**Steve Laggis**  
 Senior Director, Infrastructure Programs  
 CNS

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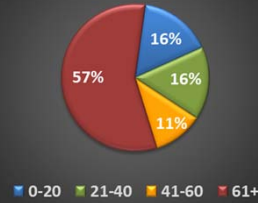
### Y-12 Opportunities — Takeaways

- Y-12 is a large industrial complex with a proud history of service to the nation and a long future of serving the nation's nuclear security
- The government has begun the revitalization of the Y-12 infrastructure and is committed to continuance of the revitalization in support of the nuclear security mission
- That revitalization requires a strong partnership with the private sector
- The opportunity for this partnership is significant and sustained
  - \$80-100 million per year of procurement opportunity over the next 7 years at the Y-12 National Security Complex managed by CNS
  - \$80-100 million per year of procurement opportunity over the next 7 years at the Pantex Plant managed by CNS
- Partners in Excellence Outreach Forum was held at Pantex in April



## Revitalization of Y-12 Infrastructure

Y-12 Age of Facilities



Excess Facilities



Failed Power Pole Replacements



Building 9201-1 Fan Refurbishment



Storm Drain Damage



Utilities

**NNSA is modernizing the Y-12 infrastructure in support of its nuclear security mission. We need your partnership in this effort.**

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## RECAPITALIZING PANTEX AND Y-12 INFRASTRUCTURE THROUGH AN INTEGRATED APPROACH

### REPLACE through Line Item construction



Y-12 Fire Station



Pantex High Explosives Pressing Facility

### ACQUIRE through alternatives



Pantex Administrative Support Complex

### BRIDGE to new facilities through Maintenance and Repair and Recapitalization



Y-12 Building 9204-2 Annex Demolition & Structural Repair

### EXTEND the life of facilities through Maintenance and Repair and Recapitalization



Y-12 Building 9204-2E Switch Gear Replacement

### ELIMINATE excess facilities



Pantex Mobile Structure Demolition



Y-12 Buildings 9111 & 9112 Demolition

### REINVEST cost savings



Y-12 Post 20 and 23 Restroom Installations



**Project execution is increasing to recapitalize aging infrastructure and reduce mission risk**

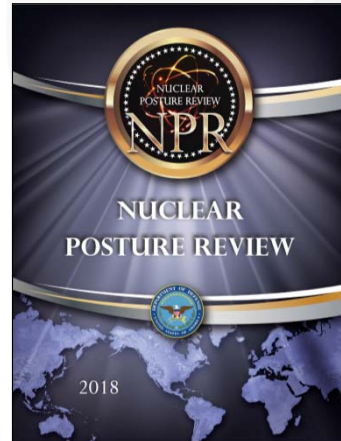
- FY17 Project Portfolio (all funding programs): 244 projects
- Recapitalization Program execution: FY16—\$42M; FY17—\$103M; FY18—\$128M

## Preparing Y-12 for Future Decades of National Service

*Nuclear forces, along with our conventional forces and other instruments of national power, are therefore first and foremost directed towards deterring aggression and preserving peace. Our goal is to convince adversaries they have nothing to gain and everything to lose from the use of nuclear weapons.*

*Recapitalizing the nuclear weapons complex of laboratories and plants is also long past due; it is vital we ensure the capability to design, produce, assess, and maintain these weapons for as long as they are required. Due to constant underfunding, significant and sustained investments will be required over the coming decade to ensure that National Nuclear Security Administration will be able to deliver the nuclear weapons at the needed rate to support the nuclear deterrent into the 2030s and beyond.*

*Jim Mattis*  
Jim Mattis



**The President's 2018 Nuclear Posture Review sets recapitalization of the NNSA Nuclear Security Enterprise as a priority over the coming decade**

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## Preparing Y-12 for Future Decades of National Service

HR 2810, the National Defense Authorization Act for fiscal year 2018

"...Administrator for Nuclear Security shall....establish and execute infrastructure modernization milestones that reduce the deferred maintenance and repair needs of the nuclear security enterprise by not less than 30 percent by 2025."

H.R.1625 Vehicle for Consolidated Appropriations Act

"Maintenance and Repair of Facilities. —...includes funds above the budget request to address the significant backlog of deferred maintenance at the NNSA sites."  
"Recapitalization - ...includes funds above the budget request to address....deferred maintenance."

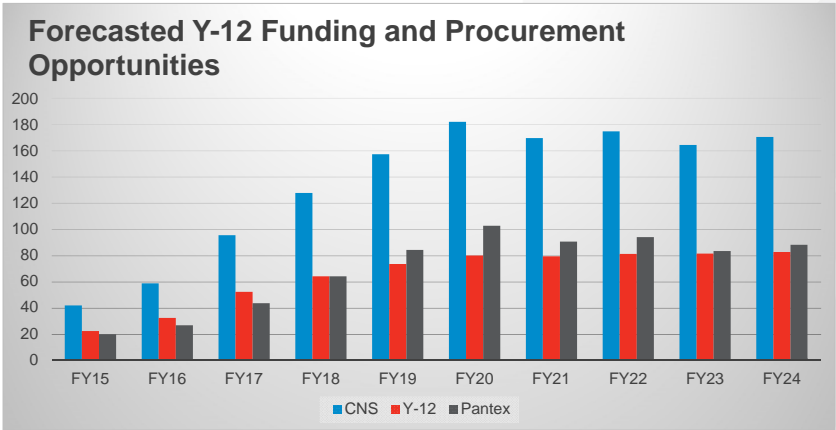


President Donald J. Trump, joined by Vice President Mike Pence and senior military leaders, signs H.R. 2810, the National Defense Authorization Act for fiscal year 2018, in the Roosevelt Room at the White House, Dec. 12, 2017. White House photo by Stephanie Chasez

**Congressional action also sets recapitalization of the NNSA Nuclear Security Enterprise as a priority over the coming decade.**

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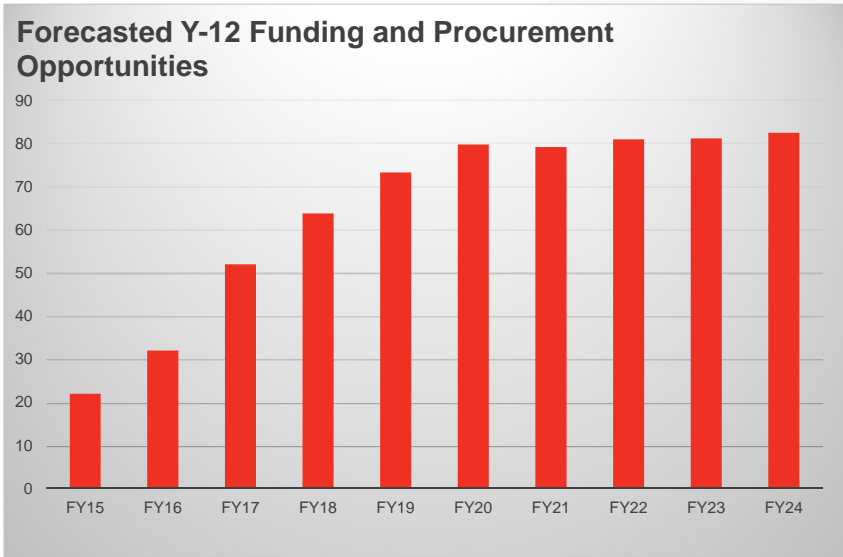
Forecasted Funding — CNS



Multi-year revitalization plans have been developed for CNS based upon the executive and congressional priority and budget planning guidance. A robust vendor base is needed to successfully accomplish these plans.

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Forecasted Funding — Y-12

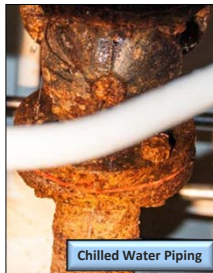


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## Recapitalization and Repair Needs



Steam Coils



Chilled Water Piping



Flooding



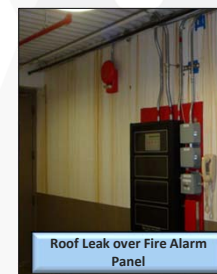
Asbestos Insulated Piping



Fan Refurbishment



Gas Lab &amp; X-ray



Roof Leak over Fire Alarm Panel

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## Additional Y-12 Opportunities

- Roof Asset Management Program (RAMP)
  - Anticipate growth
  - Managed at Kansas City Plant
  - Contacts:
    - KCP: John Demski (816) 488-5463
    - Technical Assurance: Dan LaFountain (440) 953-3147 ext.131
- Chiller & Heating Asset Management Program (CHAMP)
  - Anticipate growth
  - Managed at Lawrence Livermore National Laboratory
  - Just getting started
  - Contact: Barb Quivey (925) 784-6517

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## Y-12 Opportunities — Takeaways

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### Expectations for Partners in Performance

**Jim W. Wright**  
 Director, Projects Management  
 CNS

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**PanTEX**

- Weapons assembly and disassembly
- Life Extension Programs and surveillance for active weapons
- Plutonium pit surveillance
- High explosives components



**Y-12**

- Disassembly, refurbishment, and reassembly of canned subassemblies
- Safe, secure uranium storage
- Highly enriched uranium fuel for the United States Navy
- Specialized response training and material recovery to support nonproliferation

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### Lithium Production Capability

- Approximately 100,000 square foot facility will house non-nuclear process equipment
- In early planning stage; CD-1 submittal later this year



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## Emergency Operations Center/Fire Station

- New EOC replaces existing 1940s-era Plant Shift Superintendent building
  - Approximately 12,000 square feet
- New Fire Station replaces existing 1940s-era Fire Station
  - Also consolidates fire response equipment stored at a separate location
  - Approximately 36,000 square feet including berthing and apparatus bays
- CNS soliciting input on an alternate acquisition strategy using commercial practices



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## Working at Y-12

- Y-12 is located in Oak Ridge, TN approximately 25 miles northwest of Knoxville, TN
- Authorized access is required for all work at the site
- Escorts are required in security-restricted areas if not Q cleared
- All work must be approved in advance to ensure safety and quality requirements are met
- Laydown areas are provided for equipment and materials

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### **Y-12 Opportunities — Infrastructure Improvement** **Examples include \$700M (FY19–FY24)**

- Electrical Improvements
  - \$230M (FY19–FY24)
  - Design Engineering and Construction Electrical
- Fire Suppression Systems, Fire Water/Potable Water Lateral Replacements
  - \$110M (FY19–FY24)
  - Design Engineering and Construction (Piping, Structural, Fire Protection) some Safety Class
- Heating, Ventilation, and Air Conditioning (HVAC)
  - \$100M (FY19–FY24)
  - Design Engineering and Construction (Electrical, Mechanical, Structural, HVAC)
- Elevator Upgrades
  - \$25M (FY19–FY24)
  - Specialty Design/Build

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### **Y-12 Opportunities — Infrastructure Improvement** **Examples include \$700M (FY19–FY24) (cont.)**

- Structural Repairs
  - \$50M
  - Structural Design Engineering and Construction
- Criticality Accident Alarm Systems
  - \$100M
  - Design Engineering and Safety Class Construction (Electrical, Instrumentation)
- Building Renovation/Demolition
  - \$40M
  - Design Engineering and Construction (Electrical, Mechanical, Architectural, Structural, HVAC)
- Infrastructure Piping Improvements
  - \$25M
  - Design Engineering and Construction (Piping, Structural)

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### **Y-12 Opportunities — Excess Facility Disposition** **Examples include \$165M (FY19–FY24)**

- 33 projects associated with demolition or preparation for turnover to Environmental Management
  - Design Engineering (Electrical, Mechanical, Structural) and Construction

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### **Y-12 Opportunities — Defense Nuclear Security** **Examples include \$200M (FY19–FY24)**

- Upgrade existing PIDAS systems
- Install new West End Protected Area Reduction System
  - Line item; submit CD-1 this year
- Install new building security features
- All involve Design Engineering (Electrical, Civil) and Construction

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### **Y-12 Opportunities — Production Enhancements** **Examples include \$400M (FY19–FY24)**

- Equipment Fabrication and Installation
  - Gloveboxes
  - Furnaces/Ovens
  - Manufacturing, such as cutting, grinding, measuring
  - High Fidelity/resolution quality measurement
- Increased capabilities for specialized processes
- Upgrades or enhancements to existing processes

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### **Additional Y-12 Opportunities — Line-Item Projects**

- Electrorefining
  - \$95M TPC (FY19–FY22)
  - Glovebox and Specialty Equipment Installation
  - Construction (Mechanical, Electrical, Instrumentation, Structural), some Safety Class
- Calciner
  - \$65M TPC (FY19–FY22)
  - Glovebox and Specialty Equipment Installation
  - Construction (Mechanical, Electrical, Instrumentation, Structural), some Safety Class
- Emergency Operations Center and Fire Station
  - See earlier slide for rendering
  - Commercial Design and Build, all disciplines

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### Additional Y-12 Opportunities — Line-Item Projects (cont.)

- Lithium Production Capability
  - Cost TBD
  - 100,000 sq. ft. non-nuclear process facility
- West End Protected Area Reduction (included in Security Section)
  - Installs new PIDAS approximately along existing “H” road
  - Significantly reduces the size of current Protected Area

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### Partnership with KBCTC

- The partnership between the Knoxville Building and Construction Trades Council (KBCTC) and Y-12 is identified through a Construction Labor Agreement (CLA)
  - 15 trades represented in the CLA
- Y-12 is providing support to the Apprentice Readiness Program to help grow the apprentice pool
  - First class completed; second class in progress
- Contacts
  - Stefanie Richards, CLA Lead Administrator, 574-7555 or [Stefanie.richards@cns.doe.gov](mailto:Stefanie.richards@cns.doe.gov)
  - Charlie Woody, President, KBCTC, 865-228-2323, or [charlie.woody46@yahoo.com](mailto:charlie.woody46@yahoo.com)
  - Tony Dagley, Vice President, KBCTC, 865-566-3875, or [tdagley@selaborers.org](mailto:tdagley@selaborers.org)

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## Expectations for Partners in Performance

- The government is committed to revitalizing the Y-12 infrastructure in support of its nuclear security mission
- That revitalization requires a strong partnership with the private sector



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### Quality Briefing

Laura Valdez

Director, Quality Projects & Programs

CNS

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## Quality Requirements

- DOE/NNSA has established Quality Assurance Requirements for Nuclear Safety
  - 10 CFR 830 Subpart A / DOE O 414.1D
    - Quality Assurance Requirements for Nuclear Facilities
  - ASME NQA-1a-2008, with the NQA-1a-2009 and NQA-1b-2011 addenda
    - Quality Assurance Requirements for Nuclear Facility Applications
  - NAP-24A
    - DOE/NNSA Weapon Quality Policy
- Y-12 relies heavily on the Supplier's Quality Management System to ensure these requirements are met

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## Evaluation of Supplier's QMS

- CNS will perform an audit of the subcontractor's QMS for placement on the Quality Approved Supplier List
  - On-site audit at the subcontractor's facility
  - Review of Quality Assurance Program
  - Verification of implementation
  - Additional evaluation for subcontractors who perform welding
  - Qualification required prior to award of contract
- Re-evaluation every 3 years
- Periodic surveillances will be performed within the 3-year period
- Project-specific QA plans may be required for each project

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**Y-12**  
*National Security Complex*  
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 Consolidated Nuclear Security, LLC

**Business with Y-12**  
**Lisa Copeland**  
 Y-12 Small Business Program Manager  
 CNS

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**Acquisition Process**

The primary objective of CNS Procurement is to obtain the best value in the products and services purchased. All CNS procurements emphasize safety, security, mission delivery, quality, and cost efficiency.

**Acquisition Methods**

- Lowest price, technically acceptable
- Best value, trade off

**Contract Type: Fixed Price/T&M/Cost**

- CNS approach: Select the contract type based on specificity of the statement of work or specification

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### Acquisition Process (cont.)

- Commercial items under \$5,000 are usually purchased with a P-card.
- The majority of dollars spent under \$150,000 are evaluated on a competitive basis and are typically set-aside for small business participation.
- Purchases over \$150,000 are competitively solicited under a formal written solicitation. As a general rule, awards are made to the lowest-priced technically acceptable offer or to the offeror determined to represent the best value to Consolidated Nuclear Security, LLC and the government.
- If Best Value is used, the criteria will be provided with the solicitation.
- The CNS Small Business Program ensures the utilization of small businesses by providing the maximum practicable opportunities to participate in subcontracting of services and products. Small businesses include businesses classified as small, small disadvantaged, 8(a), woman-owned, HUBZone, veteran-owned, and service disabled veteran-owned small businesses.

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### Subcontracting Considerations

- **Pantex and Y-12 sites act as an integrated Supply Chain organization**
  - CNS has one set of terms and conditions and one consolidated procurement policy document that governs our acquisition requirements
- **Be registered in the System for Award Management (SAM.gov)**
- **Be current in SAM**
  - Market research
  - Use of representations / certifications
- **Be good in SAM**
  - Verification of Suspension / Debarment
- **Y-12 / Pantex Supplier Registry**
- **Provide one-page capability statement**

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## Doing Business Information

### Procurement Forecast

- CNS's goal is to provide suppliers with Y-12 and Pantex procurement projections based on the best information presently available
- This information is provided for planning purposes and market research
- Requirements posted may be newly added, revised, or cancelled (depending on program budget funding or departmental needs)

### Forecast Link:

<https://www.y12.doe.gov/suppliers/procurement/subcontracting/subcontracting-forecasts>

<https://pantex.energy.gov/suppliers/subcontracting-forecasts>

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## Procurement Website

The screenshot shows the Y-12 Procurement Website. The header includes the Y-12 logo and a navigation menu with links: Home, About, News, Careers, Community, Mission, Suppliers, Library, and Contact. The main content area is titled "Subcontracting" and contains three paragraphs of text. The first paragraph states that Y-12 Procurement strives to implement subcontracting practices that will be regarded as the Standard of Excellence by the Department of Energy and others. The second paragraph explains that if you are a Y-12 subcontractor and have a question about payment activity, you should use the Automated Vendor Account Status System (VASS), which is available 24-hours a day, for a status update. The third paragraph states that in this section of the website, you can view current and past solicitation and subcontract provisions, which have been incorporated by reference in procurement documents. The sidebar on the right is titled "Suppliers" and lists various links: Accounts Payable, Important Notices, Procurement, Affirmative Procurement, Business Operations Calendar, DUNS, FFATA, SAM, Expression of Interest, Important Information, Privacy Act Statement, Products and Services Purchased, Sales, Subcontracting, Acceptable Information Technology Devices, Expediting Payment, Pre-Bid Meetings, Subcontract Provisions, Subcontracting Forecasts, and Socioeconomic Programs.

<https://www.y12.doe.gov/suppliers/procurement/subcontracting>

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### Pre-Bid Conference

- Pre-bid meetings may be held to discuss the requirements of each solicitation
- Pre-bids include:
  - Briefings from Safety, Quality, Project Manager, Subcontract Technical Representative, Buyer, Waste Operations, Environmental, and Security
  - Review of technical requirements and scope
  - Walk down of site conditions
- All questions asked are compiled and sent to all offerors
- Pre-bid conferences are non-reimbursable

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### Seller Environment, Safety & Health Performance

It is the policy of the Company to award Agreements only to firms that have demonstrated safety performance equal to or better than the industry average. In order to be considered for award, the Offeror must have the most recent three-year average interstate Experience Modification Rate (EMR) not to exceed one (1). When the EMR average exceeds one (1), the Company's Safety Department may waive this requirement based on a specific review of the work package, documentation, and proposed compensatory measures. As such, Offeror is requested to provide the following:

OSHA 300 Log for the 3 past calendar years

Completed Seller Safety Qualification Questionnaire (UCN-21752)

Offers received from firms that do not meet these minimum requirements must be approved by the Safety Department to be considered.

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**Mentor Protégé Program**

- CNS is an active participant in the DOE Mentor Protégé Program
  - The program encourages DOE/NSA prime contractors to assist in the development of small businesses, Historically Black Colleges and Universities, and other Minority Educational Institutions of higher learning
  - The agreements are designed to enhance the protégé’s business and technical capabilities, to foster long-term business relationships between these small businesses and DOE prime contractors, and to increase the overall number of small businesses receiving awards
- Interested candidates should contact the Small Business office for more details

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**Y-12 / Pantex Point of Contacts**

Y-12 National Security Complex (Oak Ridge, TN) and Pantex Plant (Amarillo, TX)	
<b>Y-12 SMALL BUSINESS PROGRAM</b> Lisa Copeland 865-576-2090 lisa.copeland@cns.doe.gov http://www.y12.doe.gov	<b>PANTEX SMALL BUSINESS PROGRAM</b> Ryan Johnston 806-573-4417 ryan.johnston@cns.doe.gov http://www.pantex.com
<b>Y-12 SERVICES MANAGER</b> Richard Atwood 865-241-1247 richard.atwood@cns.doe.gov	<b>PANTEX PROCUREMENT MANAGER</b> Bill Bridenbaugh, Jr. 806-573-7445 william.bridenbaugh@cns.doe.gov
<b>Y-12 COMMODITIES &amp; EQUIPMENT MANAGER</b> Jessica Robinson 865-574-2216 Jessica.r1.robinson@cns.doe.gov	

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