

# Replace Existing Firestop and Install Radiation Shielding - NSTX

Statement of Work: NSTXU\_1-8-1-1-5\_SOW\_100

REVISION 0

July 30, 2019

**PREPARED BY:** Tom Jernigan 7/15/2019 10:05:02 AM

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Tom Jernigan,

**REVIEWED BY:** Tom Jernigan 7/23/2019 12:19:41 PM

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Tom Jernigan,

**REVIEWED BY:** Mark B. Cropper 7/23/2019 4:09:16 PM

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Mark B. Cropper,

**REVIEWED BY:** Todd Young 7/24/2019 1:00:00 PM

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Todd Young,

**REVIEWED BY:** Timothy N. Stevenson 7/25/2019 12:20:06 PM

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Timothy N. Stevenson,

**REVIEWED BY:** Jerry D. Levine 7/29/2019 12:41:29 PM

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Jerry D. Levine,

**APPROVED BY:** Leslie Hill 7/30/2019 7:41:33 AM

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Leslie Hill,

PRINCETON PLASMA PHYSICS LABORATORY  
P.O. BOX 451  
PRINCETON, N.J. 08543

**JOB ORDER STATEMENT OF WORK  
FOR  
BASIC ORDERING AGREEMENT (BOA)**

**Title: Replace Existing Firestop and Install Radiation Shielding – NSTX-U Test Cell**

**CAT: A1**

**Requisition No.: 420926**

**PREPARED BY: Mark Cropper**

**APPROVED BY: Tim Stevenson, Responsible Engineer**

**APPROVED BY: ES&H**

**APPROVED BY: Quality Assurance**

**APPROVED BY: Tom Jernigan, Cost Center Approver**

**APPROVED BY: Les Hill, Project Manager**

**PRINCETON PLASMA PHYSICS LABORATORY  
P.O. BOX 451  
PRINCETON, N.J. 08543  
609-243-2000**



## 1.0 SCOPE OF WORK

- 1.1 The Subcontractor shall provide all materials, labor, supervision, equipment, and expertise required to install neutron shielding in accordance with the Requirements provided herein. The following Work shall be completed:
- 1.2 Install scaffolding as needed to provide safe access to the work areas.
- 1.3 Remove existing firestop sealant and radiation shielding.
- 1.4 Install new radiation shielding and fire-stopping.
- 1.5 Clean work areas and dispose of all trash and debris.

## 2.0 ATTACHMENT(S)

Attachment 1 - Deliverables List

Attachment 2 – Technical Requirements

Attachment 3 – NSTX-U Test Cell Penetration Cross-Reference

Attachment 4 – PPPL-Provided Materials

### **Note:**

Referenced drawings will be provided to the Subcontractor under separate cover at time of site visit.

## 3.0 REFERENCE(S)

- 3.1 C/D-SOW-FAC-313 dated February 11, 2019, Rev. 0
- 3.2 PPPL Drawing E-FA1064, Test Cell East Wall Penetrations – Shielding Diagram
- 3.3 PPPL Drawing E-FA1065, Test Cell Northeast Wall Penetrations – Shielding Diagram
- 3.4 PPPL Drawing E-FA1066, Test Cell North Wall Penetrations – Shielding Diagram

## 4.0 GENERAL REQUIREMENTS:

Upon receipt of an appropriate BOA Job Order, Subcontractor agrees to perform the Work required by this Job Order Statement of Work, and any other documents included or referenced therein or elsewhere in this Job Order Statement of Work.

## 5.0 SPECIAL REQUIREMENTS:

### **Notes:**

1. A total of 21 penetrations require installation of neutron putty and firestopping.
2. Neutron putty will be provided by PPPL.
3. The subcontractor is required to provide all materials required to install the identified Hilti® firestop design.
4. Installation of neutron putty will require removal of the existing firestop material in the identified wall penetrations.
5. The subcontractor shall provide scaffolding as required to access penetrations at upper wall elevations.

- 5.1 Prior to submitting price quotation for this work, the Subcontractor shall visit the work site to ensure he/she understands the full scope of work and site conditions.
- 5.2 Use of scaffolding shall require inspection from a Competent Person.

### 5.3 Firestopping Materials

5.3.1 The Subcontractor shall replace firestopping at the locations designated on the three (3) referenced PPPL drawings provided in 3.0 above. Five (5) Hilti® Firestop Systems will be utilized. Attachment 2 is provided herein as a reference.

- C-AJ-0082
- C-AJ-1140
- C-AJ-3210
- C-AJ-8056
- C-AJ-8180

### 5.4 Work Execution

5.4.1 Subcontractor shall remove existing firestopping materials where installed and place PPPL-provided neutron putty and subcontractor-supplied Hilti® firestopping as identified in Attachment 1 and the associated PPPL drawings (References 3.2, 3.3 and 3.4 herein).

5.4.2 HOLD POINTS: PPPL shall inspect and verify the following at the identified work step:

- Removal of existing firestopping materials
- Placement of neutron putty
- Installation of Hilti® firestopping system

### Attachment 1 - Deliverables List

#	Physical Deliverables Required	When Deliverable Is Required	Deliverable Received (✓)
1	Remove existing firestopping material from identified penetrations	Work execution	
2	Placement of PPPL-provided neutron putty	Work execution	
3	Installation of identified Hilti® firestopping system	Work execution	
<b>Exceptions: None</b>			

#	Document Deliverables Required	When Deliverable Is Required	Deliverable format (paper, electronic etc.)	Storage Location for Deliverable	Deliverable Received (✓)
1	Job-specific Job Hazard Analysis (JHA)	Before start of work	Electronic or paper	Ops Center	
2	Subcontractor's Personnel Qualifications	Verification before Work is started	Electronic or paper	Ops Center	
<b>Exceptions: None</b>					

Princeton Technical Representative: \_\_\_\_\_

*(Sign-off and provide to the Operations Center when job is completed and deliverables are dispositioned and placed/filed in Operations Center (or other Project, Department or Division designated file center)*

**Attachment 2 – NSTX-U Test Cell Penetration Cross-Reference**

<b>Penetration ID No.</b>	<b>Wall</b>	<b>Applicable PPPL Drawing</b>	<b>Applicable Hilti Design</b>
1622	East	E-FA1064	C-AJ-3210
1623	East	E-FA1064	C-AJ-3210
1624	East	E-FA1064	C-AJ-3210
1625	East	E-FA1064	C-AJ-3210
1626	East	E-FA1064	C-AJ-8180
1630	East	E-FA1064	C-AJ-8180
1631	East	E-FA1064	C-AJ-8180
1632	East	E-FA1064	C-AJ-8180
1634	NE	E-FA1065	C-AJ-0082
1635	NE	E-FA1065	C-AJ-1140
1636	NE	E-FA1065	C-AJ-1140
6111	NE	E-FA1065	C-AJ-8180
6112	NE	E-FA1065	C-AJ-8180
6113	NE	E-FA1065	C-AJ-8180
6114	NE	E-FA1065	C-AJ-8180
6115	NE	E-FA1065	C-AJ-8180
6116	NE	E-FA1065	C-AJ-8180
1591	North	E-FA1066	C-AJ-8056
1592	North	E-FA1066	C-AJ-8056
1583	North	E-FA1066	C-AJ-8056
1594	North	E-FA1066	C-AJ-8056