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# Sandia New Mexico

## October 25-26<sup>th</sup>, 2011

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# Agenda

- FY 2011 Activity
- FY 2012 Activity
- Roof Assessment Results
- Process Improvement

# FY 2011 Activity

- BTA finalized the design for two roof replacement projects, Buildings 860 and 970 (Phase II).
- Schreiber Roofing is in the process of construction of the two roof replacement projects that are the first projects with RAMP.
- BTA Roof assessments are in 70% review draft with RAMP

# FY 2011 Activity - Building 860/970

## Construction Summary

### **Building 860**

- Square Footage: approx. 47,000 SF
- Roof System: Membrane: 80 mil fleece backed TPO and Polyiso Insulation
- Construction Schedule: Sept. 7<sup>th</sup>-Nov. 7<sup>th</sup>, 2011
- Construction Status: 23% Complete (as of Oct. 10<sup>th</sup>, 2011)

### **Building 970 (Phase II)**

- Square Footage: approx. 20,184 SF
- Roof System: Membrane: 80 mil fleece backed TPO and Polyiso Insulation
- Construction Schedule: Oct. 1<sup>st</sup>-Nov. 15<sup>th</sup>, 2011
- Construction Status: 10% Complete (as of Oct. 10<sup>th</sup>, 2011)

# FY 2011 Activity

## Building 860 Pre-Construction Conditions

- Building is within the Limited Area in Tech Area-I.
- Ideal lay down space west of the building.
- Multiple construction projects occurring at the same time: 2<sup>nd</sup> Floor Renovations, New Passenger Elevator and Roof Replacement.



# FY 2011 Activity

## Building 860 Construction

- **Safety:** Schreiber Roofing has been responsive and has had good performance.
- **BTA** has established a good working relationship with SNL.
- **A maturing relationship with SNL Inspection.**



## Building 970 Pre-Construction Conditions

- **Building is within the Property Protection Area in Tech Area-IV.**
- **Dedicated lay down space in the vicinity.**
- **Building user coordination is vital, due to scheduled tests. User tests do not allow for any work to be done on the roof. Non-standard hours.**



# FY 2011 Activity

## Building 970 Construction



**Low-Bay Roof**

**Membrane Installation**



**Low-Bay Roof**

**Temporary Tie-in to Existing EPDM**

# FY 2011 Activity

## Sustainability/Reuse

## Coordination with Pollution Prevention (P2)

### Products

- Single-ply, 80mil bright white TPO membrane is the preferred roof system at SNL/NM.
- SNL VOC Limits



### Recycling (as of Oct. 10<sup>th</sup>)

- Polyiso Insulation: On Building 860, two truckloads (approx. 13,300 lbs) have been sent for reuse. A total of 4 truck loads are expected to be reused when completed.
- Stone Ballast: approx. 10 cy of clean 1"-3" river rock has been pulled for reuse.
- Stone Pavers: 4 pallets worth of stone pavers (12-15/pallet) have been pulled for reuse.

# FY 2012 Activity

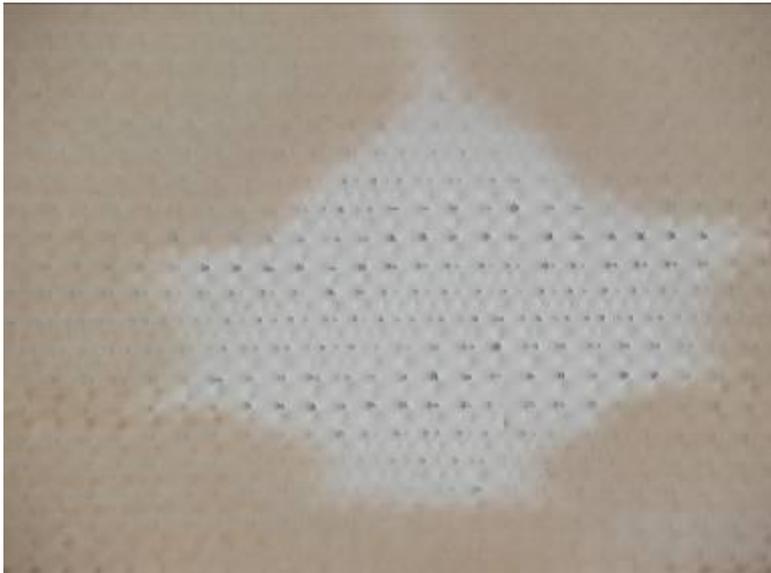
## Project Design

### Building List:

- Building 905: Approx. 80,000 SF
- Building 962: Approx. 37,000 SF
- Building 9925: Approx. 6,828 SF
- Building 6580: Approx. 9,438 SF
- Building 6581: Approx. 4,000 SF
- Building 6588: Approx. 15,184 SF

# FY 2012 Activity

## Building 905 Pre-Construction Condition



**Membrane Fracturing**



**Patches and lots of them**



# FY 2012 Activity

## Building 962 Pre-Construction Condition



**I hope you like Patches**



# FY 2012 Activity

## Building 9925 Pre-Construction Condition



**A creative use for a roof drain**



# FY 2012 Activity

## Building 6580/6581/6588

### Pre-Construction Condition



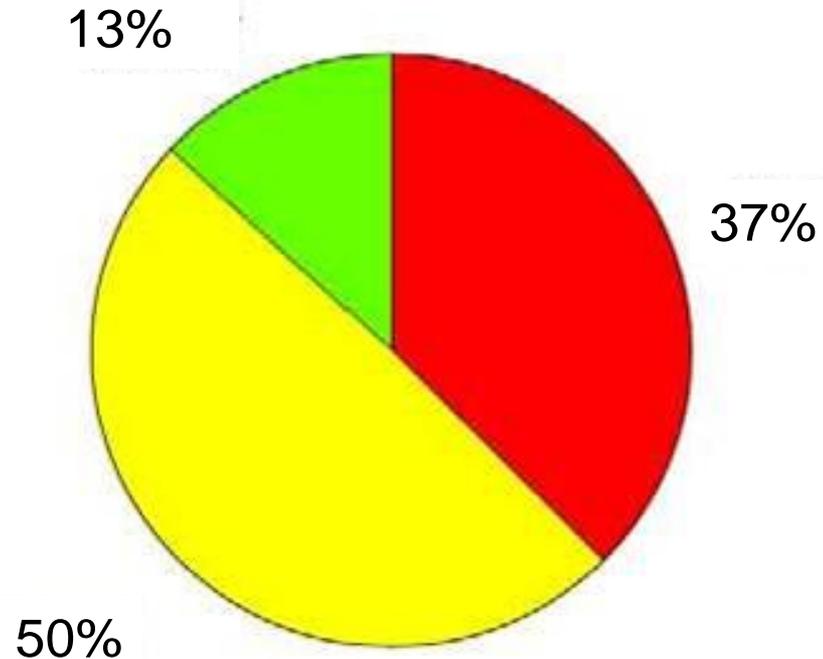
**Just a couple of conduit runs**



# Roof Assessments

## Based on BTA 70% Report

- 3.18 Million square feet in RoofSuite
- \$79.9 Million Replacement value
- \$324 K Strategic Repairs
- Avoid \$1.2 M Replacements, 3 Years
- Replacements Next 3 Years Estimate \$30.4 M



### Remaining Roof Life

- 1 – 3 Years
- 4 – 10 Years
- 11 – 20 Years

# Process Improvement

- Consider badging Roofing contractors to save on escort costs.
- Include Infrared (IR) as part of the evaluation process.
- Manage project to minimize leaks during construction.
- Consider the use of local suppliers for materials to support local business' and decrease shipping costs.
- Explore the use of Building Integrated Photovoltaics (Building 956, 52kW) and Green Roofs.



# Questions?

