

# Mueller Laboratory Renovation

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BY

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# Project Information

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- On PSU University Park campus
- \$18 million project
- Gutting, renovation of 4 of 7 floors
- Replacement of outdated HVAC, electrical systems
- High pedestrian traffic around building
- Scheduled to be completed before 2015 school year



# Recycling

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- Penn State requires recycling/reuse of 75% of construction waste
- Demolition prime target for recycling
  - Complete gutting of 4 of 7 floors
  - Demo of large amount of ductwork, piping
- Implementation/Method
  - Tight site: where to locate recycling dumpsters?
  - Transition from demolition to construction

## Materials to Recycle

- Cardboard
- Clean dimensional wood
- Beverage and food containers
- Brick and CMU
- Ferrous and non-ferrous metals
- Recyclable Plastic
- Gypsum wallboard
- Asphalt and concrete paving
- Ceiling Tile
- Carpeting
- Existing Windows
- Used equipment oil
- Useable appliances

# Asbestos Abatement

- Asbestos in tiles underneath carpeting
- Abatement only on floors being gutted (4 of 7)
- Total duration:40 days
- Is abatement necessary?
  - Cost savings
  - Schedule savings
- Legal repercussions?

Duration:

10 days

6TH FLOOR		210	30-Jun-14	20-Apr-15
6F-01010	Owner Vacates Floor	0		30-Jun-14*
6F-01020	Erect Temporary Barriers and Lab Bench Protection	5	01-Jul-14	07-Jul-14
6F-02240	MEP Cut, Cap, Make Safe for Abatement/Demo	5	08-Jul-14	14-Jul-14
6F-02250	Demo Lab Casework: Set Up Abatement	5	08-Jul-14	14-Jul-14
6F-02290	Abatement	10	15-Jul-14	28-Jul-14
6F-02320	MEP Cut, Cap, Safe Demo for Bulk Demo	10	20-Jul-14	11-Aug-14

10 days

5TH FLOOR		110	30-Sep-14	02-Mar-15
5F-01000	Erect Temporary Barriers and Lab Bench Protection	5	30-Sep-14	06-Oct-14
5F-01010	Owner Vacates Floor	0	30-Sep-14*	
4F-02440	MEP Cut, Cap, Make Safe for Abatement/Demo	5	07-Oct-14	13-Oct-14
4F-02450	Set Up Abatement	5	07-Oct-14	13-Oct-14
4F-02490	Abatement	5	14-Oct-14	20-Oct-14

5 days

4TH FLOOR		157	06-Oct-14	13-May-15
4F-01000	Owner Vacates Floor	0		06-Oct-14
4F-01100	Erect Temporary Barriers	2	07-Oct-14	08-Oct-14
4F-02470	MEP Cut, Cap, Make Safe for Abatement/Demo	5	09-Oct-14	15-Oct-14
4F-02480	Demo Lab Casework: Set Up Abatement	5	09-Oct-14	15-Oct-14
4F-02500	Abatement	5	16-Oct-14	22-Oct-14

15 days

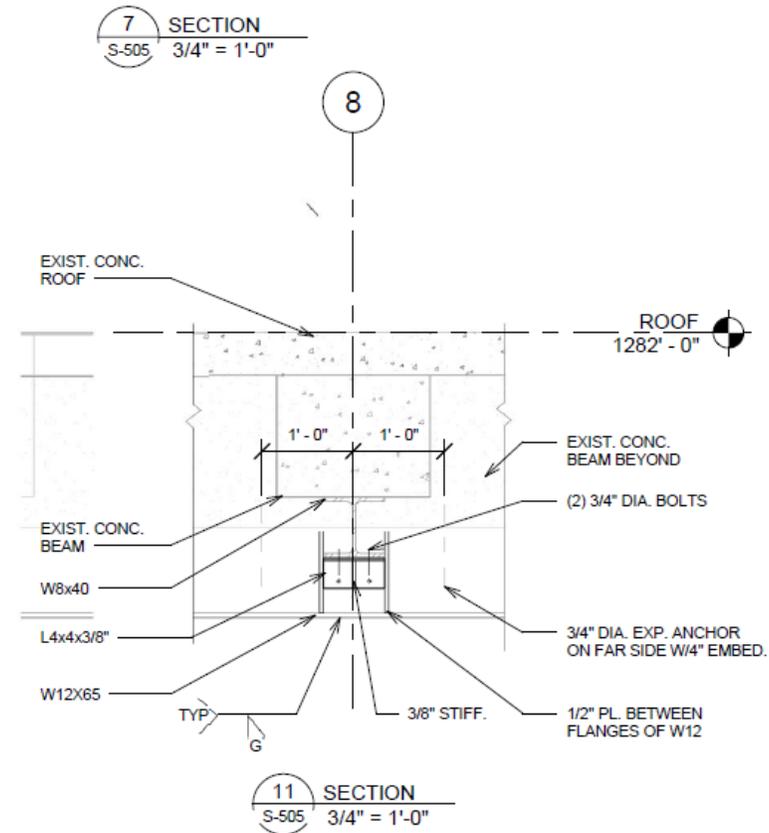
1ST FLOOR		300	02-Jun-14	24-Jul-15
1F-02130	MEP Cut, Cap, Make Safe for Casework Move	5	02-Jun-14	06-Jun-14
1F-13000	Relcoate Lab Casework to Thomas Basement	5	09-Jun-14*	13-Jun-14
1F-01000	Erect Temporary Barriers	2	01-Sep-14	02-Sep-14
1F-01010	Owner Vacates Floor	0	01-Sep-14	01-Sep-14
1F-02360	MEP Cut, Cap, Make Safe for Abatement/Demo	5	03-Sep-14	09-Sep-14
1F-02370	Set Up Abatement	5	03-Sep-14	09-Sep-14
1F-02400	Abatement	10	10-Sep-14	23-Sep-14

**Total: 40 days**

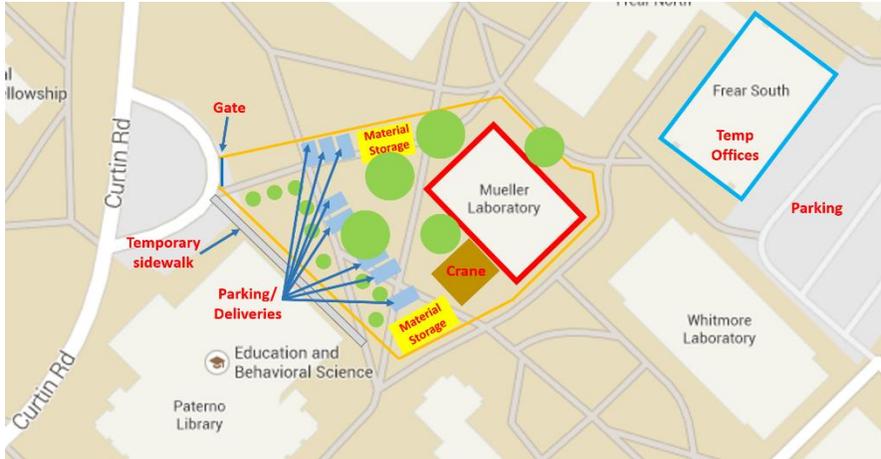
# Roof Reinforcement

- AHUs require roof reinforcement
- Installation of reinforcement beams require demo of 6<sup>th</sup> floor for access to underside of roof deck
- Is reinforcement still necessary if AHUs relocated?
- If reinforcement is necessary can components be prefabricated?

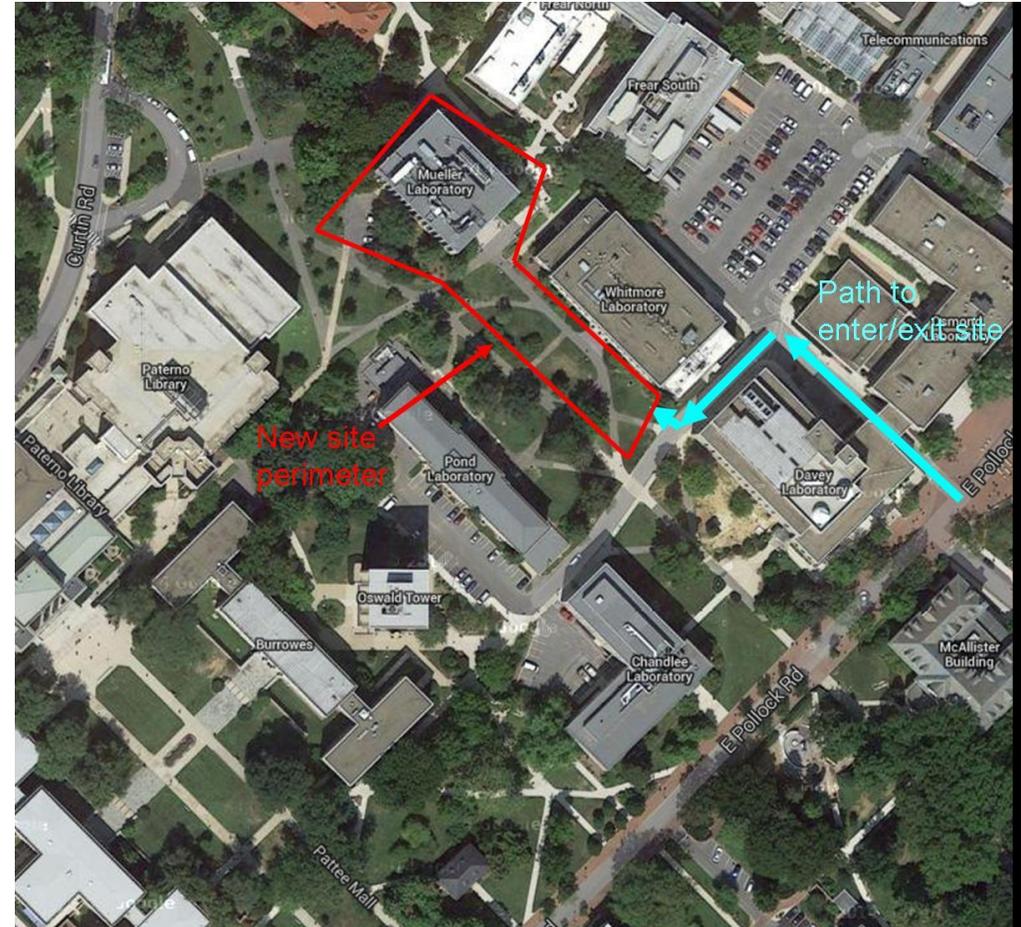
6TH FLOOR		210	30-Jun-14	20-Apr-15
6F-01010	Owner Vacates Floor	0		30-Jun-14*
6F-01020	Erect Temporary Barriers and Lab Bench Protection	5	01-Jul-14	07-Jul-14
6F-02240	MEP Cut, Cap, Make Safe for Abatement/Demo	5	08-Jul-14	14-Jul-14
6F-02250	Demo Lab Casework; Set Up Abatement	5	08-Jul-14	14-Jul-14
6F-02290	Abatement	10	15-Jul-14	28-Jul-14
6F-02300	MEP Cut, Cap, Safe, Prep for Bulk Demo	10	08-Jul-14	14-Aug-14
6F-02340	Rough Demolition	10	12-Aug-14	25-Aug-14
6F-22020	Remove MEP Sub Ops Third Floor	5	20-Aug-14	01-Sep-14
6F-22030	U/S Drain Connections/Core Drilling	5	26-Aug-14	01-Sep-14
6F-30040	OH Storm Piping Rpt	20	02-Aug-14	02-Oct-14
6F-05100	Install Steel Reinforcing Below Roof Slab	10	26-Aug-14	08-Sep-14



# Site Location



- Very tight site
- Accessed off of busy Curtain road
- Site on 10% grade
- Relocate contractor parking, material storage to south?



# Questions/Comments?

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