### **MetroWest Boston Development** Remediation, Construction, Demolition, and Rebuild

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Client: Anonymous Architect: SK+I Architecture Structural Engineer: Alliance Structural Engineering, Inc. Site Civil Engineer: Brassard Design & Engineering Landscape Architect: Paul Finger Associates General Contractor: Callahan Construction Subcontractors: J. Derenzo & Company, JDC Demolition, Hayward Baker, and Budget Concrete Services

#### **Environmental Remediation**

• Former MGP industrial site developed to 5story luxury residential development.



Below: Ink waste to be stabilized ISS §

 Separate-phase coal tar and ink waste was remediated by in-situ soil stabilization (ISS).
ISS grout-soil mix was later incorporated into



• A Contract to Closure (CTC) was used to remediate the site to allow for residential development.

foundation design.

**C7**4

Vapor intrusion barrier system consisted of a membrane and passive ventilation with the ability to go active should indoor air quality require activation.

Above: In-Situ Stabilization of 50' Diameter Tar Well

## **Geotechnical and Site Civil**

- On-site fills were of varying composition and densities with presence of ash/cinders and/or stabilized ink wastes.
- Ground improvement was used to facilitate the building over a former MGP plant site with buried gas holders. Ground improvement consisted of grouted rigid inclusions (RIs) and rammed aggregate piers (RAPs).



Above: Removal of existing foundations and urban fill

- Excavated soil and pumped groundwater were tracked for proper reuse and disposal.
- portions of the building were supported on the ISS stabilized ink waste. The mix design was reviewed and tested to verify mix strength for building support.
- Reuse of urban fills was maximized to reduce off-site disposal.



GZA observing the installation of RAPs

Inspection of RIs within gas holder installation

Below: Removing fire

debris for

#### Post Fire Response and Demolition

On July 23<sup>rd</sup> 2017, with construction nearly



 Fire Assessments were performed by GZA, Callahan, and Alliance to identify the damage to the foundations, assess post-

# completed, an arsonist burned the new building to the ground.

 Reconstruction happened immediately. The Owner's quick coordination with insurance companies allowed for an expedited rebuild.

Remnants of the former buildings and equipment

fire soil contamination, and perform surveys of ash cover affecting nearby abutter's property.

Within a week, demolition specifications and a reconstruction plan were finalized. Demolition started the following week



