West Campus Steam Plant

Project Scope:
Restored the original 1928 building and upgraded mechanical, electrical, and building components. This included the addition of three new natural gas/oil fired boilers since coal is no longer used for campus steam production.

Program:
Engineering studies concluded that it was equal or more costly to remain on coal than to convert to natural gas due to the age of the equipment in the plant. Conversion to natural gas increased reliability and will allow the West Plant to continue to grow its capacity for another 20 years or more.

Architecture & Engineering:
The design included the removal of coal related equipment inside and outside the facility. A new entrance with lobby and control room was created and three new gas fired boilers and related piping were installed. The north stack was removed down to its red brick base. The south stack constructed at a later date was removed entirely. The site work was developed to complement the new pedestrian esplanade.

Sustainability:
The elimination of coal reduced Duke’s carbon footprint by 1.8%. This project is targeted for LEED silver.

Media:
Cutting out coal: Reducing Duke’s Carbon Footprint
RMF Engineering: West Campus Steam Plant
Out with the Coal

<table>
<thead>
<tr>
<th>Gross Square Feet</th>
<th>30,785</th>
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<tbody>
<tr>
<td>Completion</td>
<td>Feb 2014</td>
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<tr>
<td>LEED Goal</td>
<td>Silver</td>
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<tr>
<td>Contractor</td>
<td>Lend Lease</td>
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<tr>
<td>Engineer/Architect</td>
<td>RMF/Flad</td>
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</tbody>
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North Side before renovation and conversion

North Side after renovation and conversion