Sustainable Urban Design & Construction

24 JAN 2017 : 2:00PM – 3:30PM
Introduction of TURNER INTERNATIONAL
WE ARE AWARDED MOST OF OUR WORK BASED ON REPUTATION. THIS IS THE FOUNDATION OF OUR COMPANY

Henry C. Turner, Founded 1902
Turner Construction Company

60+ COUNTRIES

TURNER GLOBAL REACH & INTERNATIONAL EXPERIENCE
Turner and SUSTAINABLE CONSTRUCTION
**Economic Sustainability:**
increasing profitability by making more efficient use of resources including labor, materials, energy and water

**Environmental Sustainability:**
protecting the environment from the impact of emissions, effluent and waste and where possible, enhancing it and using natural resources, carefully

**Social Sustainability:**
recognizing the needs of all stakeholders impacted, from inception of a project to demolition, including workforce, community, the supply chain and end users.

**THE TRIPLE BOTTOM LINE**
<table>
<thead>
<tr>
<th>Driver for change</th>
<th>Improving the project process</th>
<th>Target for improvement</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Committed leadership</td>
<td>Product Development</td>
<td>Capital Cost</td>
<td>-10%</td>
</tr>
<tr>
<td>Focus on customer</td>
<td>Partner with supply chain</td>
<td>Construction time</td>
<td>-10%</td>
</tr>
<tr>
<td>Product team integration</td>
<td>Project implementation</td>
<td>Predictability</td>
<td>+20%</td>
</tr>
<tr>
<td>Quality- driven agenda</td>
<td>Production of components</td>
<td>Defects</td>
<td>-20%</td>
</tr>
<tr>
<td>Commitment to people</td>
<td></td>
<td>Accidents</td>
<td>-20%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Productivity</td>
<td>+10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Turnover &amp; Profit</td>
<td>+10%</td>
</tr>
</tbody>
</table>
Turner’s Experience

#1 ENR Ranked GREEN Builder 2007 - 2016

496 LEED Certified Projects

339 LEED Registered Projects

1,477 LEED Accredited Professionals

ENR 2016 Top 100 Green Building Contractors

<table>
<thead>
<tr>
<th>Rank 2016/2015</th>
<th>Firm</th>
<th>Green Accredited Staff</th>
<th>Green Contracting Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1</td>
<td>THE TURNER CORP., New York, N.Y.</td>
<td>1,477</td>
<td>5,701.00</td>
</tr>
<tr>
<td>2/2</td>
<td>CLARK GROUP, Bethesda, Md.</td>
<td>375</td>
<td>2,620.00</td>
</tr>
<tr>
<td>3/16</td>
<td>HENSEL PHELPS, Greeley, Colo.</td>
<td>304</td>
<td>2,283.85</td>
</tr>
<tr>
<td>4/6</td>
<td>SKANSKA USA, New York, N.Y.</td>
<td>481</td>
<td>1,941.40</td>
</tr>
<tr>
<td>5/10</td>
<td>SWINERTON INC., San Francisco, Calif.</td>
<td>350</td>
<td>1,918.00</td>
</tr>
<tr>
<td>6/4</td>
<td>GILBANE BUILDING CO., Providence, R.I.</td>
<td>424</td>
<td>1,746.36</td>
</tr>
<tr>
<td>7/5</td>
<td>THE WHITING-TURNER CONTRACTING CO., Baltimore, Md.</td>
<td>296</td>
<td>1,602.65</td>
</tr>
<tr>
<td>8/9</td>
<td>STRUCTURE TONE, New York, N.Y.</td>
<td>163</td>
<td>1,460.80</td>
</tr>
<tr>
<td>9/7</td>
<td>DAVID E. HARVEY BUILDERS, Houston, Texas</td>
<td>56</td>
<td>1,339.00</td>
</tr>
<tr>
<td>10/19</td>
<td>HOLDER CONSTRUCTION CO., Atlanta, Ga.</td>
<td>190</td>
<td>1,335.00</td>
</tr>
</tbody>
</table>

Standing Proudly Among the Top 100

LEED Accredited Professionals

ENR Ranked GREEN Builder 2007 - 2016

339 LEED Registered Projects

1,477 LEED Accredited Professionals

Turner’s Experience

Founding Member

LEED Accredited Professionals
TURNER SUSTAINABILITY PRACTICES

TRAIN OUR PEOPLE

LEAN OUR COMPANY

REUSE REDUCE RECYCLE GREEN OUR PROJECTS
Achieving LEAN CONSTRUCTION

A CULTURE OF CONTINUOUS IMPROVEMENT
TURNER has taken the BIM model beyond MEP coordination and has utilized it for site logistics, scheduling and increasing production. The model was utilized to help support the self perform concrete operation by creating fully coordinated shear wall lift drawings as well as modeling and coordinating the rebar within the round 42" double columns. The team used the model to create templates for the column reinforcing and coordination of items which allowed for increased productivity and quality assurance. The project team is also utilizing the BIM model to create coordinated exterior envelope detail drawings that can be reviewed by the team in the field to confirm sequence of installation as well as quality. The project team also utilized laser scanning and the model to confirm tolerances for the prefabricated steel modules prior to them being erected in place. All of this has helped the team find and solve problems before physically building.
BIM & Prefabrication

- utilized laser scanning and the model to confirm tolerances for the prefabricated steel modules prior to them being erected in place.
Successful plan implementation requires the schedule activities to be broken down to a micro level. Commitments are made, measured, and recapped on a weekly basis.
LEAN CONSTRUCTION

Modular prefabrication systems, manufactured as complete single-room modules with all MEP systems and structural support, were a key component to accelerated delivery.

B2 BKLYN
TALLEST MODULAR TOWER

LEAN APPROACH EMPLOYED:
• BIM
• 5S JOBSITE
• NOTHING HITS THE GROUND
• PREFABRICATION
• LAST PLANNER SYSTEM
• DAILY HUDDLES
• CONTINUOUS IMPROVEMENT
Modular prefabrication systems, manufactured as complete single-room modules with all MEP systems and structural support, were a key component to accelerated delivery.
Modular prefabrication systems, manufactured as complete single-room modules with all MEP systems and structural support, were a key component to accelerated delivery.
Modular prefabrication systems, manufactured as complete single-room modules with all MEP systems and structural support, were a key component to accelerated delivery.
Modular prefabrication systems, manufactured as complete single-room modules with all MEP systems and structural support, were a key component to accelerated delivery.
Real Estate Bill: Errant promoters and builders face 3-year jail

Home buyers can now look forward to a better deal from builders with the Real Estate (Regulation and Development) Bill, 2013, being approved by the Lok Sabha on Tuesday five days after it was cleared by the Rajya Sabha.

Home buyers can now look forward to a better deal from builders with the Real Estate (Regulation and Development) Bill, 2013, being approved by the Lok Sabha on Tuesday five days after it was cleared by the Rajya Sabha.

It will now be difficult for promoters and builders to delay projects as the new law provides for imprisonment of up to three years apart from monetary penalty for violators. The Bill provides for setting up of a Real Estate Regulatory Authorities (RERAs) to monitor execution of projects. RERAs will regulate transactions related to both commercial and residential projects and ensure their timely completion and handover.

Cabinet clears 20 major amendments to Real Estate Bill

NEW DELHI | MUMBAI: The Cabinet has approved 20 major amendments to the real estate regulatory Bill that seeks to protect home buyers as well as help boost investments in the real estate industry.

These changes are based on the recommendations of a Rajya Sabha committee that examined the Bill pending in the upper house of Parliament.

Under the amendments, projects on at least 500 sq. metres of area or with eight flats will be registered with the proposed regulatory authority, instead of the minimum size of 1,000 sq. metres suggested earlier, bringing a larger number of projects under the regulator’s ambit.

Builders will have to deposit at least 70% of the sale proceeds, including land cost, in an escrow account to meet construction cost, compared with the earlier proposal for 50% or less, and pay interest to home buyers for any default or delays at the same rate they charge them. Builders will be liable for structural defects for five years, instead of two years earlier.
Turner Project Management India
Building the Future

A Wing, Suite 303-304, Delphi Orchard Avenue, Hiranandani Gardens, Powai, Mumbai 400 076

Jairam Panch - Managing Director
jpanch@tcgo.com

+91 22 426 30 122

www.turnerconstruction.com