

Sustainability Case Study:

Indeed Tower



At Principal Real Estate Investors, we believe consideration of environmental, social, and governance issues are critical in delivering attractive risk adjusted returns. In support of this commitment we use a distinct, overarching ESG framework called the Pillars of Responsible Property Investing initiative. This framework helps drive asset management and fiduciary governance as we strive to deliver positive financial and environmental results. Not only does the PRPI framework guide our approach to real estate investment and management, it also supports our property management partners who handle daily operations across our portfolio.

Indeed Tower case study is courtesy of Page, a full-service design, architecture, and engineering firm. From the outset, the team at Page worked collaboratively with the development and ownership team to identify and implement a multitude of innovative sustainable practices. Their depth of knowledge and experience in cutting edge sustainability practices was a key factor in the project exceeding our initial sustainability goals.

Indeed Tower

SUSTAINABILITY CASE STUDY



46%

Of Site is
Open Space



100%

Outdoor Water is from
Non-Potable Sources



80%

Of Rainwater
Management Onsite



14%

Energy Savings by Cost
Offset 100% by Offsite
Renewables

PROJECT OVERVIEW

Location: Austin, Texas

Size: 730,000 Square Feet, 36 Stories

Construction Type: New Construction/Historic Preservation

Former Land Use: Urban Infill in Historic District

Indeed Tower is a 36-story office tower comprised of 5 levels of below-grade parking, 12 above-grade parking garage levels, 21 office levels and a ground floor that includes an impressively open lobby fronting 6th Street that incorporates the east façade of Claudia Taylor Johnson Hall and the plaza at the northwest corner of the site. The tower's carefully sculpted design and its setting within the downtown core allows it to become an easily recognizable form on the Austin skyline, visible from most of the city's primary circulation corridors.

The office building, with its gracious 6th street entrance, as well as the entrance from Lavaca Street via the urban plaza, provides a vibrant lobby with connections to downtown from any direction. The office floors include deliberately proportioned floor plates to allow for efficiency in space planning, penetration of natural light, and maximized views. The project far exceeded its original sustainability targets and has achieved LEED v4 CS Platinum, AEGB 4-Stars, and targeting Fitwel 1-Star. The Firm paid Fitwel, LEED, and Austin Energy Green Building an application fee to be evaluated and use the ranking.



"This mixed-use project is exceptionally located in the epicenter of Austin's thriving and dynamic central business district. With the West 6th Street district an extremely desired area for young professionals, and Congress Avenue as the historic central corridor of downtown's business district, our goal is to bridge East 6th and West 6th with pedestrian oriented retail and highly sought-after urban amenities that raise the bar for the Austin market."

Adam Nims
**PRESIDENT, WESTERN OPERATIONS AT
 TRAMMELL CROW COMPANY**

COMMUNITY

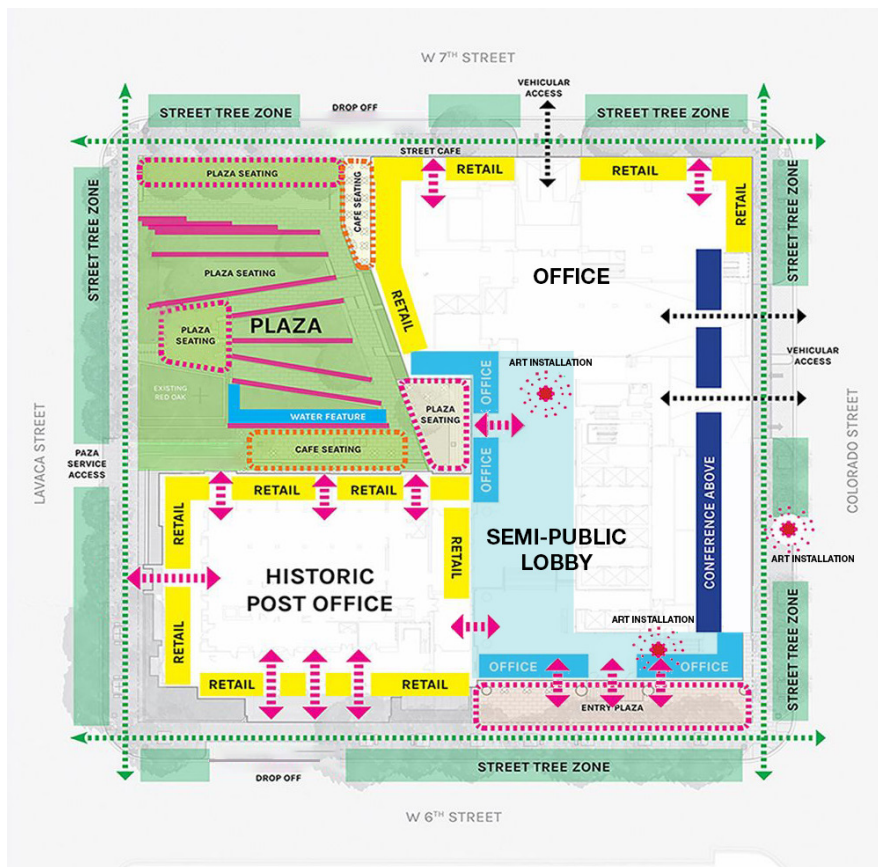
The project addresses the community in multiple ways through its location, the saving of a historic structure as part of its block development, and in the design of the plaza and lobby that engage the visitor.

Indeed Tower is surrounded by amenities at the heart of Austin's historic downtown with immediate access to public transportation options and bikeable infrastructure. Understanding the natural activation of this block, the team created a multi-functional outdoor plaza and interior that welcomes visitors from the plaza and busier 6th Street.

Once entering into the building, the expansiveness of the lobby has a very welcoming scale and houses a wide variety of user options – from individuals wanting a more serene, contemplative experience to larger groups seeking a meeting table.

The project incorporates a historic structure, the Claudia Taylor Johnson Hall (CTJ), originally built in 1914 as the 7th US post office in Austin. Early on the project team committed to preserving and incorporating the facility into the project's site. The CTJ was not only preserved but became an integrated part of the lobby design, site development, and also the scale of the hall humanizes the adjacent plaza. The CTJ will help preserve Austin's rich history for the benefit of the users of the office building, the urban plaza, and the general public.

With the CTJ Building positioned to house public-facing commercial retail or food space, the ability to bring community together from inside and outside the building is a distinct benefit of the project's design



The complete and seamless integration of the public realm through the tower lobby, historic building and plaza is unprecedented in Austin.

INTEGRATION

This project is built upon the legacy of a true public block with intentional street level engagement while also merging preservation, performance, and beauty into the design.

Continuously activated at street level for the full block, the public plaza provides ample opportunity for visitors or building tenants and nearby users to relax and socialize outdoors. The landscaped plaza space creates much needed publicly accessible open space in an urban environment and provides opportunity for relaxation, respite, and recreation.

The CTJ wraps the plaza and becomes an indoor extension of the public realm. The lobby acts as an interior street, tying the building, plaza, and CTJ together and creates a strong sense of place for the development. Natural and rich material palette of the lobby complements the adjacent historic post office and is an active participant in the Historic 6th street district.

The commercial office tower was shaped by sustainable performance and is sheared into two distinct tower forms. The eastern tower is unadorned, providing sweeping views through high performance glazing. The western portion of the tower is clad in glass sunshades to reduce peak heat gain and glare. Recessed double height terraces express the social nature of work and orient the building to some of Austin's landmarks: The Capitol, and Lady Bird Lake.

TARGETING CERTIFICATIONS:



USGBC LEED Platinum



**The Firm paid Fitwel, LEED, and Austin Energy Green Building an application fee to be evaluated and use the ranking.*



ECOLOGY

Thoughtful site design was employed to integrate green and open space for infill development.

The team was able to integrate open space covering nearly 50% of the block even with significant development and historic reuse through terraces and the large urban plaza. Of that open space, 75% is native and 25% is drought tolerant adapted vegetation, restoring and creating habitat and shaded spaces for visitors. The team extended the idea of preservation into the landscape as well, saving a heritage red oak and coordinated the plaza around that element. 100% parking under structure maximizing downtown buildable land, advancing urban design, as well as reducing heat island.

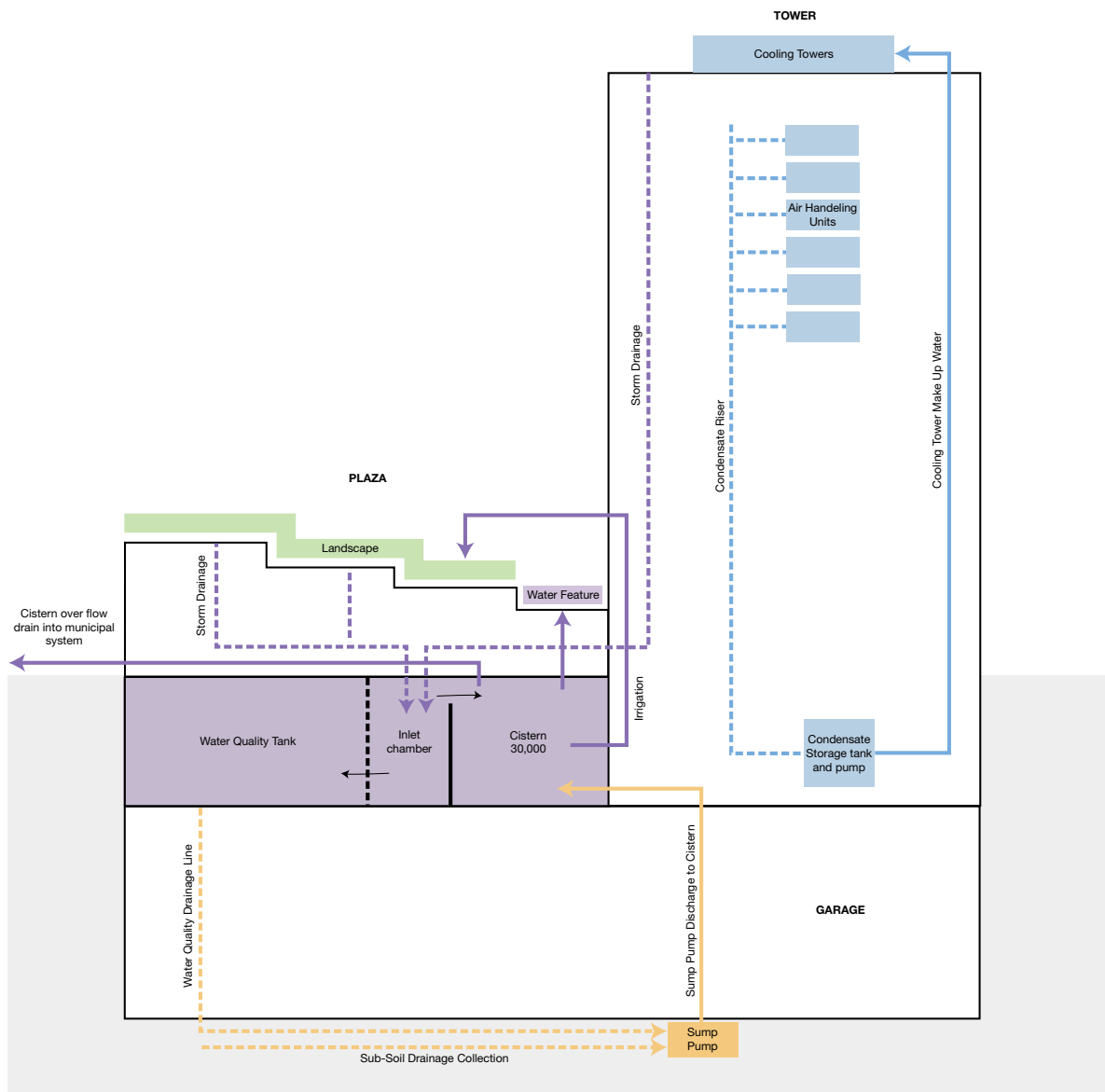
WATER

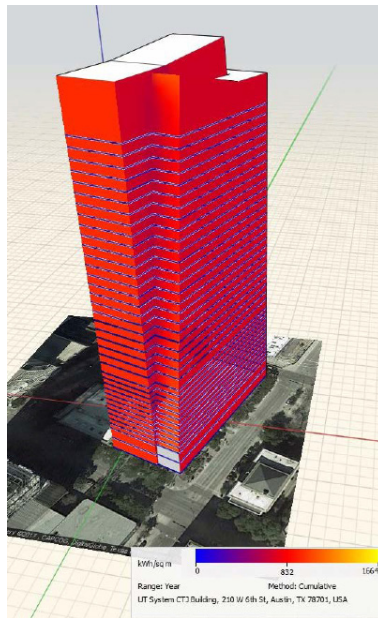
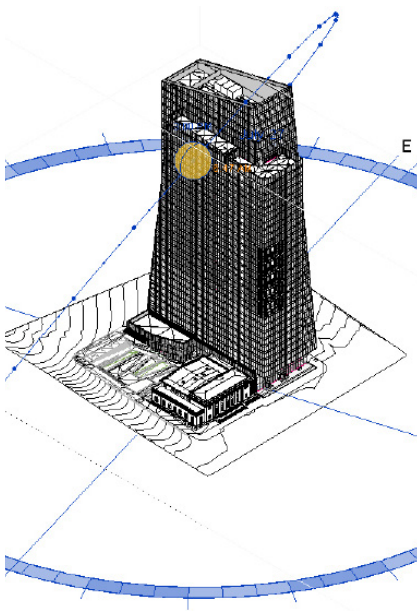
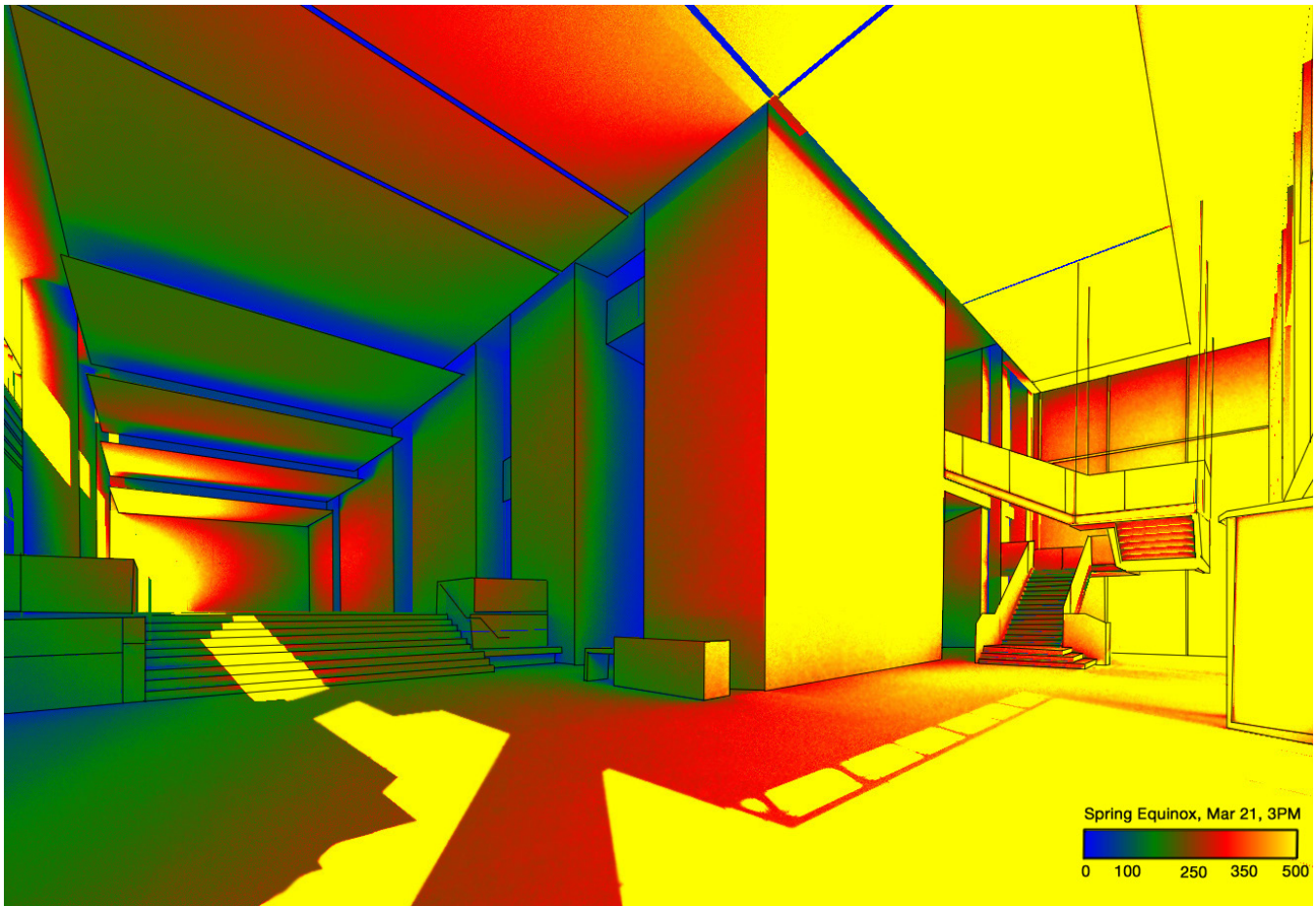
Careful management and reuse were incorporated into both the rainwater management and base building water systems.

The project collects rainwater from the plaza and underground sump pump, stores in a cistern under the plaza, and then reuses that water onsite. 85% of the stormwater is managed onsite which means 100% of site water is from non-potable sources.

Condensate is also collected in a separate condensate storage tank and is then used as make up water for the building's cooling towers. Through treatment, this process water is reused 6 times, maximizing its reuse potential.

Water is also saved annually through low flow plumbing fixtures and EnergyStar appliances. Potable water within the building has been reduced by 30% with 1.5 millions gallons saved annually.





Building Performance Analysis

Early building performance analysis helped the team refine design strategies to improve envelope performance, solar heat gain reduction, and improve pedestrian comfort.



ENERGY

Building design and system strategies reduce the project's annual energy cost as well as reduce energy load.

Balancing tenants' desires for expansive glass and views from the tower with performance, the team was able to achieve meaningful energy improvements on the project. The peak load energy was reduced by nearly 21.6% by reducing vision glazing, increasing glazing performance, and studying how to optimize the fins within the curtain wall. Through high performing glazing, interior lighting power reduction, and cooling equipment, the project achieved 14% (LEED) and 12.6% (AEGB) total energy cost reduction and has an EUI of 42 kBtu. The remaining power used by the base building is 100% offset with renewable sources.

The owners invested in the ongoing operations of the building through fundamental, enhanced, and monitor based commissioning. The envelope was also commissioned to ensure appropriate construction and sealing of the exterior. This commitment to performance and the community is also extended to the grid as the project is enrolled in a demand response program with Austin Energy and has a semi-automatic plan in place to shed electrical load if needed to help stabilize the electrical grid.

ECONOMY

Decisions were made on the project for not only what would save money short term but also what added long term value to the owner and future occupants.

During design, the team conducted a triple bottom line analysis using Autocase software to help quantify impact and payback for sustainable strategies that were implemented such as designing for daylight and views, reduced low-emitting materials, and improvements in energy strategies. The report shows occupants will receive benefits of \$5M in increased productivity and reduced absenteeism, on top of \$1.5M in savings for electricity and water. The community benefits include reduction of air pollution, carbon emissions reduction, congestion reduction through less vehicle use totaling \$2.8M in value.

There were very tangible stories of economy driving design decisions throughout the project. Medium pressure mains were eliminated on most of the typical office floors in order to provide better flexibility in the finish out and eliminate re-work of the existing mechanical systems during finish out to meet tenant needs.

WELL-BEING

Advancing health for tenants and visitors was done not only through the materials we selected, but also embedded in the project location and building program.

The project sought Fitwel Certification to quantify and measure health and wellbeing attributes in the project. Fitwel prioritizes strategies that advance public health and walkable communities of which this project offers tenants in abundance. Through many public transit options, walkable blocks, bike infrastructure, fitness centers, and places of respite, the location and core building programs help advance wellness strategies for visitors and tenants. An open communicating stair was used to connect the lobby and conference spaces at the mezzanine and encourage use over elevators.

The design also prioritized material to advance health for occupants. Nature's colors were specifically chosen to capture a timeless and balanced palette of warm and cool. Biomimicry is subtly integrated through natural materials and seen in large and small scales as well as a variety of textures. Transparency in ingredients disclosure was a core criteria in selection and the project has installed more than 30 products with material ingredient disclosures, even though only 10 were required for LEED.

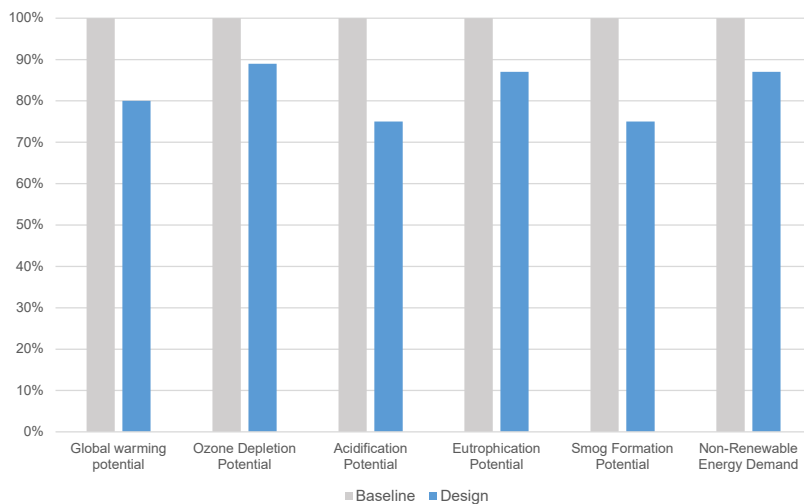


RESOURCES

Reusing, recycling, and transparency were core strategies for our material use.

The reuse of the existing historical structure as part of site development is a big story of the project's contribution, not only for the community but also for our climate. Reuse of CTJ along with improvements to mix design and strength of steel, showed a 20% reduction of CO2 associated embodied carbon of materials when evaluated during design.

The stewardship of materials was a high priority in the selection and specification of materials. In partnership with the construction team, the project was able to far exceed goals for material transparency as 40 products were installed from manufacturers who had disclosure the environmental impact of their materials (only 10 products were required for LEED), and 34% by cost of the materials came from recycled and recyclable (closed loop) sources. Our contractor also managed materials responsibly with diverting 82.6% of demolition and construction materials from the landfill and incineration.



Life Cycle Assessment

The project team conducted an LCA of the building's envelope and structure. Through the reuse of CTJ and optimizations in mix design, the project showed a 20% reduction in CO2 and at least a 10% improvement in all other environmental impact categories

CHANGE

Adapting from the past and preparing for the future.

The Claudia Taylor Johnson building was rehabilitated both inside and out as part of this development. As the layers of non-original materials and structures were removed, the intended spatial character and materiality of the building is experienced again, and the now exposed expansive mail sorting room provides an immense opportunity for socially engaging tenant fit outs that interact directly with the street, the office lobby and the plaza.

The building's east facade was restored to its original design and is a feature in the new office lobby, forming the west wall of the space. The monumental glass facade on the north side of the CTJ, previously obscured by a parking garage and alley, is now fully exposed to view from the plaza which now occupies the northwest corner of the site.

The ground floor provides 3 shell spaces at street level, including Claudia Taylor Johnson Hall, which are flexible enough in space and infrastructure to accommodate nearly any type of public retail fit out. The building has been equipped with 50 electric vehicle charging stations day one with infrastructure and capacity for more as transportation needs evolve.

DISCOVERY

Commitment to the project's goals and team members involved helped drive integration and collaboration throughout the design and construction process.

Having an owner and design team invested in capitalizing on the opportunities the site afforded was critical to the success of this project. The complete and seamless integration of the public realm through the tower lobby, historic building and plaza is unprecedented in Austin.

Those involved in this project worked as a truly integrated team. Spanning over 4 years, there was little turn over in the core group managing the process. There was a commitment to the project and to each other to work through issues thoughtfully but also effectively. What many might see as site or regulatory constraints can be leveraged to provide opportunities for both cost savings and sustainability. For example, by capturing some of our required stormwater detention, this project can irrigate the provided landscaped areas and plaza without the use of potable water.

Early sustainability goal setting outlined big intentions for the project, beyond any individual certification point, and provided a reminder for the team throughout the process. Trammell Crow Companies pushed for investigating solutions that made sense which set a tone at the top that motivated the team. Tracking of shifts in LEED point compliance paths by the design team identified additional opportunities for the project and set LEED Platinum within reach and with support of Principal Real Estate Investors. The combined, sustained effort of the development, design, and construction teams during both the design and construction phases allowed the project to advance sustainability performance even further and exceed original targets.



PROJECT TEAM

Developer: Trammell Crow Company

Investor: Principal Real Estate Investors

Construction Manager: DPR Construction

Architect: Page

Interior Design: Page

Civil Engineer: Stantec & LandDev Consulting

Landscape Architect: Campbell Landscape Architecture &
Ten Eyck Landscape Architects

MEP Engineer: Blum Consulting Engineers

Structural Engineer: Thornton Tomasetti

Sustainability: Page

Accessibility Consulting: Altura Solutions & Deming Designs

Acoustical Engineering: JEAcoustics

Art Consultant: Kinzelman

Commissioning, MEP: Simple Payback

Commissioning, Building Envelope: WJE

Furniture Design: Britt Design Group

Geotechnical Engineer: Terracon

Historic Preservation Architect: Architexas

Life Safety: Jensen Hughes

Lighting Design: Quentin Thomas Associates

Permitting: Austin Permit Service

Signage Design: FMG

Technology Design: 4b

Vertical Transportation: Persohn/Hahn

Wind Engineering: RWDI





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