

# Project 180

Oklahoma City, OK

*OJB worked with the City of Oklahoma City to renovate the streetscape in the downtown area.*

In the early 2000's, downtown Oklahoma City suffered from a patchwork of sidewalk systems and oversized traffic lanes, which led to a car-dominant downtown where walkability was severely compromised. After a comprehensive study of transportation, access and wellness was undertaken, the public voted to increase funding for parks, transit, bike trails, and senior wellness centers around town. Spurred by the development of nearby Devon Energy headquarters and the renovation of Myriad Botanical Gardens, project 180 was launched. Supported by tax-increment financing, the scope of the project includes rebuilding 50 downtown blocks, infused with long-term reinvestment in the 180-acre urban core area.

This comprehensive design approach to the urban realm includes narrowing and eliminating one-way streets, increasing public parking and bike lanes adding new street trees, understory planting, LED lighting, wayfinding, street furnishings, and public art, and implementing integrated streetscape standards throughout the central core. A new visual language is deployed throughout the city, with generous sidewalks framed by layered planting and anchored by street trees. The trees contribute many benefits, including lowering surface temperatures, absorbing pollutants, and encouraging walkability throughout the downtown core.

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## Client

The City of Oklahoma City

## Size

222 acres

## Dates

2009 - 2015

## Team

Cardinal Engineering Inc.  
Coon Engineering Inc.  
Guernsey  
Johnson & Associates Inc.  
Legacy Engineering Inc  
Lemke Land Surveying  
Macaurthur Associated Consultants  
Myers Engineering  
Smith-Roberts Baldishwiler, LLC  
Tetra Tech  
Jeff Speck & Associates  
Murase Associates  
Howard-Fairbairn Site Design  
CLS& Associates  
Robert Lewis & Associates  
Carter Design Group  
Fisher Marantz Stone  
White Engineering  
Darr Collins Consulting Engineers  
Lemke Land Surveying  
C.H. Guernsey  
Traffic Engineering Consultants, Inc.  
Lifang International

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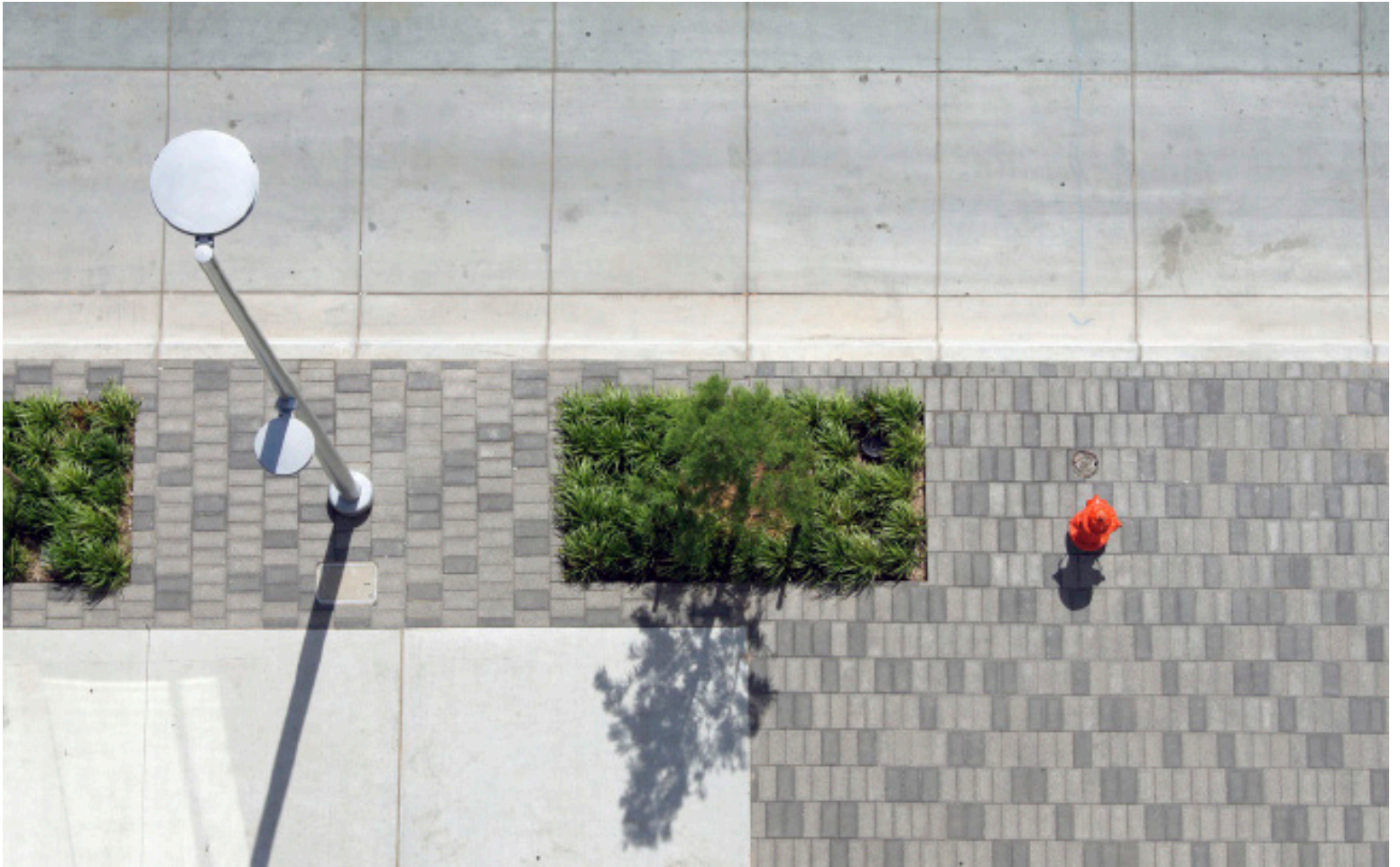


*Project 180 provides the public with safe and beautiful streetscapes to travel Oklahoma City.*









*Pedestrian pathways aid circulation in the high traffic and iconic Central Business District.*











NATIVE PLANT SALE



# Sustainability

*Restored eight miles of Oklahoma City using plants covering 191,465 square feet including trees that can intercept up to, 1.25 million gallons of water.*



## LAND

The project restores nearly eight miles of Oklahoma City's Central Business District streetscape tying into the city's existing context, accommodating floodplain functions, and conserving habitat for species.

Creates a streetscape that is unique to Oklahoma City's local context, while allowing for future flexibility and growth.



## WATER

Trees have the potential for intercepting 1,250,000 gallons of water which is equivalent to the water usage for 1,250 American residents for one day.

Irrigation ties into the existing central control system used by Oklahoma City Parks Department. A weather station, quick couplers and low-water-use spray, bubblers and drip technologies allow for minimal water usage.

Silva Cell paving systems provides on-site storm water management through absorption, evapotranspiration and interception.



## CARBON, ENERGY & AIR

Concrete, pavers and sandstone were all locally sourced.

The trees sequester 300,000 pounds of carbon annually, which offsets 36 cars per year. \*\*

The trees create a continuous canopy for shading, temperature reduction and energy savings.



## PLANTING

Planting covers 191,465 square feet.

The project features 2,500 new street trees, including: Shantung Maple, Kentucky Coffee Tree, Chinese Pistache, Yarwood London Plane, Shumard Red Oak, Escarpment Live Oak, Frio River Bald Cypress, Cedar Elm and Bosque Elm.

Understory planting is based upon the 12 ecosystems of Oklahoma.

The project incorporates a native planting strategy.

No annual planting offers minimal maintenance and longevity.

Medians are switched from paint and concrete to planted material.



## SOCIAL

Creates an accessible environment with equal emphasis for automobiles, pedestrians and bicycles.

102 benches were installed.

50 waste/recycling receptacles are accessible to the public.

44 bike racks and 3 bike rental stations are available.

The project includes 500 street lights.

1600 "green" street parking spaces doubled the amount of parking downtown.

Bike lanes between on-street parking spaces and vehicular traffic lanes were introduced.

Destination markers are made out of custom castings to allow for wayfinding and an educational display of the historic context.



## ECONOMICS

The improved streetscapes have made downtown Oklahoma City a hub of activity and entertainment, having more festivals and events each year.

\*The tree average for water interception is 500 gallons. American's use an average of 100 gallons of water per day (EPA's water trivia facts).

\*\*120 pounds of CO2 per tree annually (This number is based on an average from the National Tree Benefits Calculator) One car produces an average of 8,320 pounds of CO2 per year (The Code of Federal Regulations - 40 CFR 600.113).