

Royal Oak, Michigan



SNAPSHOT

Country	USA
Project Area	7,546 acres 30.55 sq.km
Population	59,277 (2019)
Demographics	90.2% White; 3.7% Black or African American; 3.8% Asian; 2.3% Others
Top Official	Mayor Michael Fournier
Key Stakeholders and Partners	Royal Oak Environmental Advisory Board, Department of Public Services and Parks and Recreation, Police and Fire Departments, Beaumont Hospital, and South Oakland County Water Authority

PROJECT DETAILS

Certified on: April 20, 2020

Certification level: Certified

Royal Oak Named LEED Certified City

The city was recognized for implementing practical and measurable strategies aimed at improving sustainability, resilience, and the standard of living for all residents. Royal Oak is the first city in Michigan and the third in the nation to certify under LEED v4.1, the latest version of the rating system.

“Collaborating with peer cities allowed us to compare sustainability efforts and share valuable tips and lessons learned. The process also facilitated new relationships with community stakeholders, a deeper understanding of our current sustainability initiatives, and identified where the gaps exist. For our sustainability team, these gaps represent realistic opportunities on which to focus as we continue making our city more energy efficient, resilient, and equitable.”, said the city’s energy and sustainability manager, Julie Lyons Bricker.

SUSTAINABILITY PRIORITIES

- The City of Royal Oak demonstrates a strong interest in creating a path to a sustainable, energy-efficient, and equitable future. City’s zoning ordinance includes several sustainable objectives such as trees preservation, neighborhood enhancement strategies, encouraging transit-oriented design principles, non-motorised transportation, promoting a pedestrian-friendly environment to achieve a more socially and environment-friendly development.
- Royal Oak holds an ambitious energy vision to become a clean, efficient city. An Energy Management Plan was adopted by the city in 2018 to formulate and examine the actions that can be taken to achieve the city’s vision of reducing emissions and energy consumption in municipal facilities.



Certification Overview

Royal Oak achieved LEED Cities Certification by earning 42 points out of the possible 110 points available across nine credit categories for its accessible, abundant green space, low carbon economy, historic preservation, a high rate of high school graduates and those with at least a bachelor's degree, very low crime rate, and more. Opportunities for improving sustainability include reducing energy and water waste, decreasing the amount of materials going to landfills, and more.



ARC Performance Score

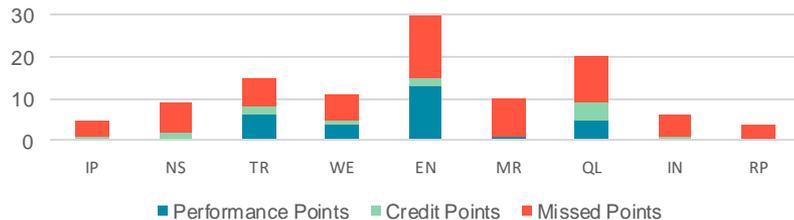
94/100 | Transportation Performance

77/100 | Water Performance

94/100 | Energy and Emissions Performance

46/100 | Waste Performance

83/100 | Quality of Life Performance



Category	Points Achieved/ Points Available
INTEGRATIVE PROCESS (IP)	1/5
NATURAL SYSTEMS & ECOLOGY (NS)	2/9
TRANSPORTATION & LAND USE (TR)	8/15
WATER EFFICIENCY (WE)	5/11
ENERGY & GHG EMISSIONS (EN)	15/30
MATERIALS & RESOURCES (MR)	1/10
QUALITY OF LIFE (QL)	9/20
INNOVATION (IN)	1/6
REGIONAL PRIORITY (RP)	0/4
TOTAL POINTS ACHIEVED	42/110

Performance + Strategies



INTEGRATIVE PROCESS

1/5

INTEGRATIVE PLANNING PROCESS

LEED for Cities integrative planning process helped in recognizing the direct connection with the Royal Oak's city-wide sustainability efforts and the LEED certification. The process facilitated identification of gaps in the city's sustainability efforts and established data-driven goals and objectives with key stakeholders for achieving a more sustainable, resilient, and equitable future.



Hence, the vision for the future of Royal Oak is set as one where development and purchasing decisions (buildings, energy, green space, transportation, and programs for people) are first viewed through a sustainability lens to encourage nurturing the economy, the environment, and social equity.

Royal Oak adopted a master plan (amended in 2012, planned for an update in 2022) that includes several sustainability objectives such as neighborhood enhancement strategies, walkable communities, transit-oriented development, promoting non-motorized transportation and use of public transit, ordinances that allow for permeable pavers, tree preservation, and renewable energy installations. The seven impact categories of LEED, gaps and opportunities identified during the certification process are intended to guide the future development and update of the master plan by 2022.



NATURAL SYSTEMS & ECOLOGY

2/9

ACCESSIBLE GREEN SPACE

Royal Oak provides 241.59 square feet of accessible green space per person. About 98.20% of city residences in the city have a green space within ½ mile (800 meters) of walking distance. Parks and Recreation Master Plan (2017-2022) has been developed by the city of Royal Oak in conjunction with the Royal Oak Parks and Recreation Advisory Board with strong citizen participation. The plan is intended to maintain high quality of parks and recreation services and facilities, and improve them.



ECOSYSTEM ASSESSMENT

The prerequisite of Ecosystem Assessment helped the city in developing a detailed ecosystem inventory to help guide its future integrative planning and design work. The ecosystem assessment inventory indicated that the city has fewer major ecosystem concerns relative to planning and development. There are no slope stability issues, waterways or shorelines, critical habitats, wetlands, farmlands, or flood hazard areas. The city's relevant ecosystem concerns are enhancing urban trees and green park space which have historically and continually played an important part in the city's planning activities, developing green stormwater infrastructure (GSI) to manage the stormwater run-off.

Performance + Strategies



TRANSPORTATION & LAND USE

8/15

TRANSPORTATION PERFORMANCE

Royal Oak demonstrated a transportation performance score of 94/100 based on the value of 17.2 (2018) Vehicles Miles Travelled (VMT) per person per day. To reduce daily VMT, the city has adopted many non-motorised transportation initiatives such as:

- In 2015, Royal Oak's city commission approved a non-motorized plan to support pedestrians and bicyclists and began the process to install pedestrian safety islands and "share the road" pavement markings and bike route designating signage on many local streets.
- In 2018, 3.8 miles of dedicated bike lanes were installed within the city.
- In 2018, Royal Oak was one of six adjacent cities to earn a MOGO bike share program grant which will connect the communities through 31 stations with 145 available share bikes.



HISTORIC PRESERVATION

The city of Royal Oak has a Historic District Commission which was adopted in 1995. There are around 13 historic districts currently within the city of Royal Oak that have been designated as such under the local historic commission purview.

Chapter 82 of the City Code provides the terms and conditions for altering a historic structure or site. Applicants are required to go through a review procedure of the historical commission as outlined in the Chapter 82-20 of the city code.



WATER EFFICIENCY

5/11

WATER PERFORMANCE

The City of Royal Oak demonstrated a water performance score of 77/100 based on the estimated daily per capita domestic water consumption value of 71.68 gallons (2017).

EQUITABLE AND QUALITY ACCESS

The City of Royal Oak has 100% of the buildings provided with public water and wastewater collection. Both drinking water quality and treated wastewater quality demonstrate compliance with the required quality standards as mandated by US Environmental Protection Agency (EPA).



WATER SYSTEM ASSET MANAGEMENT PLAN

The Michigan Department of Environment, Great Lakes and Energy (EGLE) requires that each city perform a water distribution system reliability study every five years, the city of Royal Oak's latest study was performed in 2015 to assess the reliability of its water distribution system. Additionally, in 2017 the city created a Water System Asset Management Plan which comprised of preparation of an asset inventory, criticality assessment, establishing level of service goals, capital improvement plan, funding structure, and rate methodology. The 5-year and 20-year capital improvement plan is aimed at improving the water system efficiencies by replacement and maintenance of the aging infrastructure and upgradation of the identified asset.

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ENERGY & GHG EMISSIONS

15/30

ENERGY PERFORMANCE

The total annual per capita scope 1 and scope 2 greenhouse gas emissions from all sectors was measured as 10.71 MtCO₂ (2016) and this accounted for a energy performance score of 94/100 for the city.



POWER SURETY AND RESILIENCY

To ensure power surety and resiliency, following measures are undertaken by the city's emergency facilities:

- The fire and police department have natural gas generators in place that are activated automatically if the connection to the power grid is breached.
- The public services department (DPS) has fourteen portable gasoline generators to run major traffic signals and another gasoline generator that runs the gasoline and diesel fuel pump for city vehicles.
- Beaumont health has four substantial emergency power systems, with multiple diesel generators, in place to fully run all patient care buildings and partially run laboratory services. They also have a purchase agreement in place for fuel delivery "within 24 hrs." with a vendor.
- The South Oakland County Water Authority (SOCWA) has a stationary diesel generator and one portable diesel generator available for emergency water pumping and two gravity fed water towers.



MATERIALS & RESOURCES

1/10

WASTE PERFORMANCE

The City of Royal Oak demonstrated a waste performance score of 46/100 based on the total estimated value of 1.09 tons (2017) of municipal solid waste (MSW) generation per person per year and a waste diversion rate of 42% from the Landfills.



SOLID WASTE MANAGEMENT

100% of the residential and institutional buildings in the city have access to waste collection service which is performed by an outside contractor administered by the Department of Public Services. Commercial and multi-family units are serviced by private trash haulers.

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QUALITY OF LIFE

9/20

QUALITY OF LIFE PERFORMANCE

The city of Royal Oak achieved the quality of life performance score of 83/100 by tracking and measuring the following key indicators of education, equitability, prosperity, health & safety related to elevating the living standards of all people in the city

- 96.4% (2017) of population with high school degree
- 56% (2017) of population with Bachelor's degree
- 15.90% (2017) Median Gross Rent as percent of household income
- 0.47 (2016) Gini Coefficient
- \$74,140 (2017) Median Household Income
- 2.10% (2018) Unemployment Rate
- Median Air Quality Index: 40 (2018)
- 0.027 (2018) Violent Crime Rate per capita per year



TREND IMPROVEMENT

Reflecting upon the effectiveness of key indicators, Royal Oak demonstrated an annual improving trend in the areas of:

- Education: Rate of high school graduates increased from 95.8% in 2014 to 96.4% in 2017.
- Prosperity: Unemployment rate decreased from 5.8% in 2014 to 2.10% in 2018. Additionally, the City of Royal demonstrated a decrease in poverty levels from 7.6% in 2014 to 7.0% in 2017.
- Health & Safety: The Violent Crime Rate in the City of Royal Oak has decreased by 29.69% since 2014.



INNOVATION

1/6

INNOVATIVE PERFORMANCE

The city of Royal Oak achieved one innovation point by demonstrating exemplary performance in QL Credit: Trend Improvement. The city earned exemplary performance by achieving the thresholds for the following four metrics:

METRICS	THRESHOLD	CITY'S PERFORMANCE
• Population with a High School Degree	≥ 70%	96.4% (2017)
• Unemployment Rate	Between 3% to 4%	2.10% (2018)
• Poverty Rate	Declining at a rate of zero poverty by 2025:	The City of Royal Oak demonstrated a decrease in poverty levels from 7.6% in 2014 to 7.0% in 2017.
• Violent Crime per 100,000 population	≤ 5.5 homicides, 70 incidents of forcible rape, and 462.7 aggravated assaults	0.0 Homicides, 8.41 incidents of forcible rape, and 60.41 incidents of aggravated assaults were reported in 2018.



REGIONAL PRIORITY

0/4