



PROJECT PROFILE

City of Royal Oak Green Infrastructure Project

Client: City of Royal Oak

Location: Royal Oak, MI

Service Areas: Green Infrastructure & Sustainability

Services Provided: Site Visioning
Conceptual Stormwater Design
Hydrologic Modeling
Cost Estimating
Community Planning

Project Activities

The City of Royal Oak commissioned an evaluation of using Green Infrastructure (GI) to reduce runoff entering the City's stormwater system. The project included an analysis of conditions, pilot site applications, and a final report demonstrating how various GI stormwater management solutions could be used as a guide for future stormwater management planning in the City of Royal Oak. As part of the project, the consultant team reviewed city-wide existing soils and groundwater elevations as well as conducted site specific geotechnical evaluations at six locations identified as pilot project locations. Sites were selected to represent a variety of site types including parking lots/alleys, local streets, major roadway, and city parks. These sites were then evaluated by the design team for two storm events: the NOAA Atlas 14 10-year, 1-hour storm and the 98th percentile storm.

The City of Royal Oak Stormwater Management Plan for Green Infrastructure has been advanced through the evaluation phase to provide the final recommendations for implementing GI at various pilot sites and to capture and treat 2.2 million gallons of runoff. With the diversity of application sites available to the city and the efficacy of GI demonstrated in the project report, GI can be a valuable tool in the City's toolbox.

Outcomes

The final outcome was the City of Royal Oak Green Infrastructure Evaluation Report that described green infrastructure potential in their community organized around land use typology including parks, alleys, parking lots, major roads, and neighborhood subdivisions. The report provides a plan for implementation on the sites evaluated and recommendation for transfer to other areas of the city based on volume of stormwater removed, cost, soil infiltration, social use, and implementation concerns.

