

Transportation & Conservation



MARC

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Introduction

In October 2021, the Mid-America Regional Council, regional municipalities, and community organizations gathered to discuss their efforts to incorporate green infrastructure into local transportation plans. The benefits of integrated transportation and conservation projects range from improved pedestrian safety to reduced flooding in local transportation networks. These projects also provide the additional benefits of green infrastructure in urban environments, including cooler neighborhoods, broader tree canopies, and reduced pollution conveyance to rivers and streams. By identifying stormwater and transportation challenges and localizing solution, integrated community projects are the best method of distributing these benefits across the region. This report will outline county and city efforts to incorporate green stormwater infrastructure into local transportation plans and explain how organizations in the area can support this effort.

Mobility Planning

Mobility planning is the practice of creating a policy to connect residents to safe and reliable transportation. To do this, a municipality must include public feedback, design choices, and policy updates in their planning process.

Recent design trends use Complete Streets and Green Streets designs to make transportation networks safer and healthier. Projects can range from creating bike lanes protected by green street medians to new green space on formerly vacant lots. Municipalities combining transportation infrastructure and green stormwater infrastructure usher in the next phase of innovative transportation planning.

Below are several local examples of integrated transportation and conservation projects and roadmaps for creating more integrated development across the Kansas City region.

Wyandotte County: GoDotte Mobility Plan

In 2020, the Unified Government of Wyandotte County and Kansas City, Kansas (UG) began a process of developing their mobility plan to improve connectivity and better manage stormwater. The plan does this by leveraging Complete Streets design and incorporating green infrastructure along transportation routes. Their process is outlined below.

Gather data

The process to integrate conservation and transportation planning begins with a technical analysis. This analysis investigates the existing conditions of bus stops, sidewalks, and bike lanes. The analysis also includes other relevant data like public health data, economic data, and land use data. All data is summarized, and recommendations are developed to inform a public foundations report.



Analyze data

The foundations report highlights what issues emerge from the collected data. One persistent issue, for example, is poor connectivity between residents, businesses, and other parts of the city or county. This disconnect can be resolved by multimodal streets that provide the area with multiple transit options. Another challenge is frequent flooding along roads not built to Green Street standards.

Overbuilt roads in the region are a concurrent cause of damage to public infrastructure and private property. These issues are best mitigated by conveying water to a Green Infrastructure (GI) installation. By incorporating Green Streets Design in local transportation plans, municipalities can address both issues at once.

Formulate Plan

Using the foundations report and gathered data, planners can begin to develop recommendations and refine design choices for new transportation infrastructure. Design choices are then presented to the public for feedback via online surveys and open house discussions.

Take Action

Once results are created to best satisfy the community and planning goals, the plan is then presented to governing officials for approval. A finalized plan, including any relevant policy updates, allows municipalities to implement new Green Streets and mobility standards. In Wyandotte County, this process led to the development of the GoDotte Mobility Plan.

To learn more about GoDotte, visit <https://dashboards.mysidewalk.com/godotte-68d5ebff55f3>



City of Shawnee: Municipal Green Streets Program

The City of Shawnee, Kansas (Shawnee) has also integrated a green streets program into Shawnee's comprehensive plan Achieve Shawnee. Like the UG, Shawnee uses green stormwater infrastructure to address stormwater issues present in the city. This effort requires various city departments to work collaboratively to successfully enable improved mobility and connectivity options.

Form a Team of Invested Staff

One of the first steps to enact improved connectivity is to form a team of invested staff. Dedicated members of local government from various city departments—including Public Works, Community Development, and Planning—combine their expertise to develop solutions and integrate them into Shawnee's transportation plans.

Establish a Street Design

The aforementioned group of experts outline solutions to mobility issues in Shawnee. To do this the group decides on a specific street design that can improve connectivity and safety, and address stormwater challenges in Shawnee's existing street layout. A design approach that does both is the Green Streets design. Due to its efficient use of taxpayer funds, Green Streets design became the ideal choice for Shawnee's new street program. In addition to a reduction in capital and operating costs, new jobs are created to retrofit streetscapes with green infrastructure.

Identify Potential Green-Street Locations

Once design standards have been developed for Green Street implementation, an analysis is done on select locations. Planners identify locations by analyzing street circulation, level of service—the speed, density, and frequency of vehicles on a road during a given period—and street layout. One intended goal is to establish Green Streets design on overbuilt roads as a safety measure to slow traffic flows and improve pedestrian safety.

Locations are also selected based on the absence of Green Infrastructure features. This creates an opportunity to retrofit streetscapes with curb extensions, street trees, stormwater retention swales, and other stormwater best management practices. These tools are useful tools when it comes to reducing the burden on gray stormwater infrastructure. Additionally, green infrastructure improves the use of underutilized space in urban areas.

Seek Support from Planning Commission/Governing Body

After seeking support from relevant stakeholders and the public, new design standards are presented to the local government for approval in public meetings. Issues like flooding, topography changes, and even promoting the city's east to west connectivity are addressed. Additionally, a detailed cost analysis is presented. This analysis proves to governing officials that proposed green streets serve as an economic development tool and benefit the city with an efficient use of taxpayer dollars. Following this informative engagement process the plan can continue to its final phase of implementation.

Update the City's Comprehensive Plan

Once approval is gained from the governing body, updates are incorporated into the city plan. In the City of Shawnee's comprehensive plan, Achieve Shawnee, the green streets program serves as an important reference point to guide growth and redevelopment in Shawnee's transportation network.

To learn more about Shawnee's current projects visit https://www.cityofshawnee.org/Departments/Community_Development/Planning

Conservation Projects

Used to improve ecological conditions and enhance connectivity, integrated transportation and conservation projects also improve trails, parks, and neighborhood infrastructure. At various scales and price points these projects are carried out by municipalities and through public-and-private partnerships across the region. Collaboration with local organizations can serve as a helpful tool for municipalities who can be overwhelmed by the need and opportunity for integrated projects. When championed by a neighborhood association or nonprofit, these projects serve to protect natural resources and mitigate adverse effects caused by pollution, flooding, and invasive species in neighborhoods. Conservation projects are also used as tools to improve and educate communities and enact environmentally conscious change. This scale of engagement plays a key role in small-scale green infrastructure.

An example of a collaborative effort is the partnership between the UG and Groundwork Northeast Revitalization Group (Groundwork NRG) on the Northeast Kansas City, Kansas Heritage Trail. The purpose of the Northeast Kansas City, Kansas Heritage Trail is to advance social change and connect heritage sites with a trail from Kaw Point to the Quindaro heritage site. This trail connects residents to heritage sites as well as green sites along the trail across the Northeast KCK area.

To learn more about ongoing projects in Wyandotte County visit

<https://www.wycokck.org/Departments/Planning-Urban-Design>

<https://www.northeastkck.org/ne-kck-heritage-trail>

Groundwork Northeast Revitalization Group

One of the newest members in the Groundwork national network, Groundwork NRG is an organization that educates and engages residents and youth in conservation, revitalization, and participation in the decision-making process of local government.

The Green Team is an ongoing conservation project at Groundwork NRG which engages school-aged youth in the construction and maintenance of green infrastructure projects. Projects like the 710 Oakland and Turtle Hill green spaces were built using the Green Team Tool Kit. These projects create destinations within residential neighborhoods and include features like recreational space, infill rain gardens, native plantings, and rain barrels.

Groundwork NRG's Green Team also conducts local stream clean-ups. In 2021, the Green Team participated in the Parkwood Park stream clean-up. Youth removed brush, shrub, and invasive species that congested the banks of the stream. These plants can cause damage to local ecosystems, obstruct paths and waterways, and threaten native species. Removing invasives can free up room for native plants to thrive and help keep pollution out of waterways. Work done by the Green Team continues to grow as the team grows.

To learn more about the Groundwork Northeast Revitalization Group and their projects visit:
<https://www.northeastkck.org/>

Conclusion

In conclusion, local governments and nonprofit organizations have integrated green infrastructure into their mobility plans and into communities across the region.

Although planning methods and processes differ across scales and geographies, they all call upon Green and Complete Streets design to improve connectivity in transportation networks, green communities, relieve frequent flooding, and improve local water quality.

The results and effectiveness of integrated transportation and conservation planning makes it the next phase of innovative planning and design, which can be called upon to improve communities across the Kansas City metro for years to come.



Groundwork NRG event for residents to share feedback on NE KCK Heritage Trail plan.

