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CLIMATE ACTION PLAN
ALIGNMENT

6.1 ALIGNMENT WITH CLIMATE ACTION PLAN AND GOALS

Future site and building developments support the goals established in the Kirkwood Community College Climate Action Plan. Site development recommendations focus on land management and site infrastructure to reduce net carbon emissions. Strategies include expanding existing carbon sinks, renewable energy systems, and electric vehicle infrastructure. Building development recommendations focus on improving space utilization within existing buildings, reducing carbon emissions through geothermal systems and energy efficiency measures, improving indoor environments to support well-being, reducing building water use, and standardizing waste infrastructure. For future construction initiatives, reference the Climate Action Plan for sustainable measures.

SITE DEVELOPMENT

Increase Land Designated as Carbon Sink

The area of land acting as a carbon sink could increase up to 155.4 acres, or 16.2% of the campus, by converting targeted sites, as identified in Section 5, into native prairie and arboretum areas.

Expand Renewable Energy Systems

Several potential sites have been identified for ground-mounted photovoltaic arrays and agrivoltaics, as noted in Section 5. Given recent changes to federal incentives and funding available for renewable energy systems, Kirkwood plans to engage in partnerships, such as power purchase agreements, to install and procure renewable energy. Agrivoltaic sites will support collaborative research and partnerships that not only support reduced carbon emissions, but also support agricultural and pastoral initiatives to maximize land productivity and resource efficiency.

Facilitate Low-Carbon Transit Options

Locations for seven future electric vehicle charging stations are identified in Section 5 to support a growing demand for electric vehicle charging infrastructure. Additionally, proposed changes to the site plans include improvements for accessibility, walking, and biking on campus.

BUILDING DEVELOPMENT

Prioritize Building Reuse and Improve Space Utilization

The master plan focuses on increasing functionality and utilization of existing space on campus through building reuse and renovation, in lieu of adding new buildings to site. This will support improved educational outcomes and be the most effective use of resources. Prioritizing building reuse is critical for reducing embodied carbon in the built environment and will reduce the amount of construction & demolition waste sent to landfill.

Electrify Heating Systems and Improve Energy Efficiency

Buildings undergoing major HVAC system renovations include plans to install geothermal systems to support the campus transition to electrification and improve energy efficiency. Prioritizing as much of this work as possible in the next six years is recommended to take advantage of the existing federal incentives available for geothermal systems under Section 48 of the tax code before those incentives gradually phase out between 2033 and 2025. Transitioning more buildings to geothermal systems is a key component of the Climate Action Plan's pathway to net zero emissions by 2040. In addition to more efficient HVAC systems, upgrades to lighting and envelope systems, where applicable, will prioritize energy efficiency. As building systems are updated, whole-building energy submeters should be installed to enable better tracking of energy performance across individual buildings.

Support Health and Well-Being

The recommended projects will support the health and well-being of students, faculty, and staff by creating improved learning environments. Improvements include increased access to daylight, acoustic upgrades, improved accessibility, and low-emitting interior finishes.

Improve Water Conservation and Efficiency

The master plan prioritizes reducing campus water consumption. When indoor plumbing fixtures are replaced or added as part of building renovations, water-efficient fixtures, such as low-flow and WaterSense appliances, should be installed to meaningfully reduce overall water demand and support campus-wide water efficiency. Buildings undergoing major renovations will also explore opportunities to incorporate smart water monitoring systems to identify inefficiencies and track consumption over time.

Standardize Waste Infrastructure

The recommended projects will support campus-wide waste diversion throughout standardized waste management infrastructure and signage. Sites should consider each building's bin and dumpster needs, ensuring adequate capacity for applicable streams. Clearly labeled stations should be incorporated into renovations and new construction to encourage consistent waste sorting and reduce contamination. These measures align with the Climate Action Plan's target of increasing waste diversion.