
NATIONAL WESTERN CENTER



Master Plan Appendix D

*Denver, Colorado
March 9, 2015*

NWC Sustainability and Regeneration Framework and Goals

Engage the River and Nature					
<i>Guidelines</i>					
Recognizes the historic, ecological, and economic value of the site's proximity to the South Platte River as a key component of the National Western Center experience					
Celebrates and respects the natural world by promoting the restoration of the River's ecosystem, water quality and animal habitat					
Builds on current successes and recreational activity along the River, establishing a river-focused urban environment that is healthy, habitable and connected					
Enhances the safety of the River corridor and the surrounding region, serving as an integral connector of the adjacent neighborhoods					
Serves as one of several new gateways into and out of downtown Denver					
Engage the River and Nature	Potential Metric(s)	Scale(s)	Timing	Potential Implementation Strategies	Potential Initial Steps and Partners
<i>Goals</i>					
ERN 1: Create safe, intentional connections to the river and natural areas	<ul style="list-style-type: none"> ◆Percentage of area dedicated to green space ◆Number of connections to River 	Building District Programming	Immediate Ongoing	See below	See below
ERN 1.1: Provide diverse yet focused visual and physical access to nature and the River	<ul style="list-style-type: none"> ◆Number and type of connections to River 	Building District	Design Construction	<ul style="list-style-type: none"> ◆Leverage existing infrastructure ◆Use Water Resources Center ◆Create Boardwalks ◆Stairs to river 	<u>Steps:</u> Create NWC River Master Plan <u>Partners:</u> Greenway Foundation, CSU Water Center, The Water Connection
ERN 1.2: Create series of green spaces on site that connect to one another and to nearby greenspaces, trails, parks	<ul style="list-style-type: none"> ◆Number of connections per greenspace ◆Confirmation of connection to spaces outside NWC 	District Neighborhood	Design Construction	<ul style="list-style-type: none"> ◆Use trails and vegetated corridors to link greenspaces 	<u>Steps:</u> Create NWC River Master Plan <u>Partners:</u> Parks and Recreation
ERN 2: Use nationally or internationally recognized rating system for landscape design and maintenance, favor the use of native plants, and integrate with water use goals (EER 3).	<ul style="list-style-type: none"> ◆Sustainable Sites or similar system metrics 	Building District	Design Construction	<ul style="list-style-type: none"> ◆Restrict non-native plants to small percentage (or 0%) ◆Xeriscape ◆Provide variety of landscape experiences 	<u>Steps:</u> Research rating systems and determine appropriate system or benchmarks <u>Partners:</u> Public Works, Parks and Recreation, CSU Landscape Architecture

NWC Sustainability and Regeneration Framework and Goals

Engage the River and Nature	Potential Metric(s)	Scale(s)	Timing	Potential Implementation Strategies	Potential Initial Steps and Partners
<p>ERN 3: Replace or integrate physical infrastructure with natural systems and/or incorporate functional biomimicry and biophilic design principles wherever possible</p>	<ul style="list-style-type: none"> ◆Infrastructure plans must address alternatives 	<p>Building District</p>	<p>Design Construction Programming</p>	<ul style="list-style-type: none"> ◆Green infrastructure ◆Integrate natural systems from surrounding areas ◆Use ecosystem services as part of life-cycle costing during design 	<p><u>Steps:</u> Assign ecosystem services, establish design criteria, research comparable projects <u>Partners:</u> The Water Connection, Public Works, CSU Institute for the Built Environment</p>
<p>ERN 3.1: Treat stormwater onsite, using various methods throughout the site, to create net zero or net positive impact on stormwater quality and quantity entering the South Platte River</p>	<ul style="list-style-type: none"> ◆City and state water quality standards ◆MS4 permit requirements ◆Percent pervious surface 	<p>Building District</p>	<p>Design Construction Programming</p>	<ul style="list-style-type: none"> ◆Maximize pervious surface ◆Create stormwater treatment and infiltration measures throughout site ◆Increase tree canopy 	<p><u>Steps:</u> Create stormwater master plan <u>Partners:</u> Public Works, Greenway Foundation, The Water Connection, CSU Institute for the Built Environment</p>
<p>ERN 4: Provide education and outreach on site related to the Platte River and its watershed and include educational components in water quality features, wastewater treatment, and water conservation measures</p>	<ul style="list-style-type: none"> ◆User survey results 	<p>Building District Programming</p>	<p>Programming (Short- and Long-term)</p>	<ul style="list-style-type: none"> ◆Informational kiosks w/Interactive displays in Water Resources Center ◆Partnership with environmental education programs 	<p><u>Steps:</u> Create educational program plan <u>Partners:</u> Greenway Foundation SPREE Program, Environmental Learning for Kids, The Water Connection</p>
<p>ERN 5: Consider impacts to the Platte River watershed during all stages of decision making (design, construction, operations, etc.) to support the river containing swimmable, fishable water</p>	<ul style="list-style-type: none"> ◆City and state water quality standards 	<p>Building District</p>	<p>Design Construction</p>	<ul style="list-style-type: none"> ◆Construction management plans ◆Sedimentation control ◆Stormwater treatment 	<p><u>Steps:</u> Compile strategies from other cities and watersheds, establish water quality monitoring strategy and goals <u>Partners:</u> Public Works, CSU Water Center and Construction Management Program, The Water Connection</p>
<p>ERN 6: Habitats along the River meet key diversity and health indicators and provide appropriate biological corridors linking to other habitats in surrounding areas</p>	<ul style="list-style-type: none"> ◆Percent and diversity of native species ◆Removal of invasive species 	<p>District</p>	<p>Design Construction</p>	<ul style="list-style-type: none"> ◆Invasive species removal ◆Bank modification ◆Species and/or biodiversity management plans 	<p><u>Steps:</u> Create NWC River Master Plan, create baseline evaluations and goals for River health <u>Partners:</u> CSU Water Center, Greenway Foundation, Warner College of Natural Resources, The Water Connection</p>

NWC Sustainability and Regeneration Framework and Goals

Inspire Health and Wellness					
<p><i>Guidelines</i></p> <p>The site and the surrounding neighborhoods inspire a healthy and vibrant way of life locally, regionally and nationally through a demonstrated mix of housing, parks and open space, jobs and range of services, all of which consider active design principles.</p> <p>Promotes recreational opportunities, multi-model connections, and access to healthy food for all populations.</p>					
Inspire Health and Wellness	Potential Metric(s)	Scale(s)	Timing	Potential Implementation Strategies	Potential Initial Steps and Partners
<p><i>Goals</i></p>					
IHW 1: Promote healthy food options, food security, and locally sourced foods	See below	Building District Neighborhood Programming	Programming (Short- and Long-term)	See below	See below
IHW 1.1: Increase availability of healthy, affordable, culturally appropriate food sources, ideally year-round, either on site or in partnership with surrounding businesses and organizations	<ul style="list-style-type: none"> ◆Number of markets and community gardens onsite or in surrounding areas ◆Number of community gardens ◆Proximity of markets to populated areas 	Building District Programming	Programming (Short- and Long-term)	<ul style="list-style-type: none"> ◆Mitigate contamination to allow cultivation onsite ◆Work with community to create NWC market 	<p><u>Steps:</u> Create food strategic plan for NWC</p> <p><u>Partners:</u> CSU College of Health and Human Sciences, Colorado Fresh Food Finance Fund (CHFA), The GrowHaus, Denver Fresh, Denver OED</p>
IHW 1.2: Support evidence-based models that increase food security for community members, either onsite or in partnership with surrounding businesses and organizations	<ul style="list-style-type: none"> ◆Number of markets onsite accepting SNAP benefits ◆USDA Standards of Food Insecurity 	Neighborhood Programming	Programming (Short- and Long-term)	<ul style="list-style-type: none"> ◆Set up dual pricing or sliding scale, implement SNAP ◆Provide SNAP trainings for seasonal markets, local retailers 	<p><u>Steps:</u> Create food strategic plan for NWC</p> <p><u>Partners:</u> CSU College of Health and Human Sciences, Colorado Fresh Food Finance Fund (CHFA), The GrowHaus, Denver Fresh, Denver OED</p>
IHW 1.3: Promote year-round availability of locally sourced foods, either onsite or in partnership with surrounding businesses and organizations	<ul style="list-style-type: none"> ◆Volume or weight of available food ◆Origin of foods ◆Number of partnerships 	Neighborhood Programming	Programming (Short- and Long-term)	<ul style="list-style-type: none"> ◆ Seasonal mapping of food sources in the area by type ◆Identify sources of fresh and prepared food, including community businesses 	<p><u>Steps:</u> Create food strategic plan for NWC</p> <p><u>Partners:</u> CSU College of Health and Human Sciences, Colorado Fresh Food Finance Fund (CHFA), The GrowHaus, Denver Fresh, Denver OED</p>

NWC Sustainability and Regeneration Framework and Goals

Inspire Health and Wellness	Potential Metric(s)	Scale(s)	Timing	Potential Implementation Strategies	Potential Initial Steps and Partners
IHW 2: Promote active transportation, active lifestyles, and access to nature for all site users to increase physical activity, promote mental wellbeing	<ul style="list-style-type: none"> ◆Health indicators identified in GES HIA, other fitness metrics ◆User survey results 	Building District Neighborhood	Programming (Short- and Long-term)	See below	See below
IHW 2.1: Provide multi-modal transportation connections, particularly to major transit stops, neighborhoods, employment centers, parks, and other destinations	<ul style="list-style-type: none"> ◆Linear feet of bicycle lanes ◆Linear feet of sidewalks ◆Number of bus stops with amenities such as benches, lighting, etc. 	Building District Neighborhood	Design Construction	<ul style="list-style-type: none"> ◆Provide bus stop amenities to promote bus ridership. ◆Provide bike lockers at transit stops and centers of employment. ◆Provide bike racks 	<u>Steps:</u> Create bike/ped/transit maps and identify and fill gaps <u>Partners:</u> RTD, WalkDenver, BikeDenver
IHW 2.2: Design the site for extensive active use (e.g., biking, recreation, walking)	<ul style="list-style-type: none"> ◆Number of annual users of park and recreational amenities ◆Number of site users who walk or bike to/from site ◆Number of open stairwells in buildings 	Building District Neighborhood	Design	<ul style="list-style-type: none"> ◆Use wayfinding signs to increase walkability ◆Provide bike racks at parks, all venues. ◆Design buildings for activity ◆Ensure bike/ped route safety (real, perceived) 	<u>Steps:</u> Create design guidelines for buildings and outdoor spaces <u>Partners:</u> ULI Healthy Places Committee, CO Health Foundation, Center for Active Living, CSU College of Health and Human Sciences
IHW 2.3: Improve connectivity to natural areas and places of respite, including the South Platte River	<ul style="list-style-type: none"> ◆Number of new connections to natural areas 	Building District Neighborhood	Design	<ul style="list-style-type: none"> ◆Create strategic connections between neighborhoods and the River, natural areas ◆Provide amenities for pedestrian comfort ◆Plant trees ◆Design the site to provide variety of respite areas 	<u>Steps:</u> Create NWC River Master Plan, create map of connectivity between on and offsite destinations and natural areas <u>Partners:</u> BikeDenver, WalkDenver, Greenway Foundation, Trust for Public Land

NWC Sustainability and Regeneration Framework and Goals

Inspire Health and Wellness	Potential Metric(s)	Scale(s)	Timing	Potential Implementation Strategies	Potential Initial Steps and Partners
IHW 3: Design buildings to nationally or internationally recognize standards for physical and mental health of occupants	<ul style="list-style-type: none"> ◆LEED Health Credits ◆Living Building Health ◆Delos Metrics 	Building	Design Construction	<ul style="list-style-type: none"> ◆Use certified low emissions materials ◆Set goals for daylighting, occupant control for each building ◆Set appropriate ventilation levels ◆Consider workplace flow, noise 	<p><u>Steps:</u> Create design guidelines</p> <p><u>Partners:</u> Delos, ULI Healthy Places Committee, CSU College of Health and Human Sciences, CSU Institute for the Built Environment</p>
IHW 4: Establish and meet or exceed quality of life indicators (odor, noise, light pollution, traffic, etc.) for visitors and neighbors	<ul style="list-style-type: none"> ◆FHA/DOT Noise Standards ◆Backlight Uplight Glare (BUG) Standards (IES TM-15-11, Add A) ◆LEED ◆IESTMA Standard RP 33 	Building District Neighborhood	Design Construction	<ul style="list-style-type: none"> ◆Consider strategies identified in GES HIA Assessment ◆Install appropriate BUG rated lighting ◆Reroute truck traffic as appropriate/feasible ◆Install ventilation systems that reduce indoor/outdoor odor 	<p><u>Steps:</u> Establish specific indicators and benchmarks for quality of life categories</p> <p><u>Partners:</u> Groundwork Denver, UCAN, NDCC Projects Office, DEH</p>
IHW 5: Reduce and/or mitigate heat island effect to reduce its impact on health, energy use, etc.	<ul style="list-style-type: none"> ◆Onsite temperature ◆SRI for Materials ◆Hardscape percentage ◆Site albedo 	Building District	Design Construction	<ul style="list-style-type: none"> ◆Use high SRI materials for roofs, pavement, other surfaces ◆Increase tree canopy ◆Reduce air conditioning need 	<p><u>Steps:</u> Establish design guidelines for SRI, albedo, percent natural areas, tree canopy</p> <p><u>Partners:</u> Urban Climate Lab at Georgia Tech, CSU Institute for the Built Environment</p>

NWC Sustainability and Regeneration Framework and Goals

Embrace an Ethic of Regeneration					
<i>Guidelines</i>					
Celebrates interdependence of natural, social and economic systems					
Restores regional healthy habits and ecosystems					
Uses building remodeling and new construction to improve the site and regional environmental quality, while creating healthy work spaces.					
Creates measurable positive social, economic, and environmental impacts on the community and the region					
Embrace an Ethic of Regeneration	Potential Metric(s)	Scale(s)	Timing	Potential Implementation Strategies	Potential Initial Steps and Partners
<i>Goals</i>					
EER 1: Integrate high performance sustainable design and operations in all buildings	See below	Building	Design Construction Operations	See below	See below
EER 1.1: Design all buildings to meet a nationally or internationally recognized rating system's (e.g., LEED) "Gold" level or higher, or current City and partner requirements, and design for efficient adaptive reuse over time	<ul style="list-style-type: none"> ◆ Living Building, LEED, etc. system metrics ◆ Waste reduction during renovations (compare to traditional) 	Building	Design Construction Operations	<ul style="list-style-type: none"> ◆ Consider materials, energy efficiency, water efficiency, etc. in building design to also meet Goal EER 3 ◆ Modular structural elements ◆ Simple finishes to reduce renovation waste 	<p><u>Steps:</u> Determine rating system for initial phases</p> <p><u>Partners:</u> CSU Institute for the Built Environment, NWC Sustainability Task Force, USGBC CO</p>
EER 1.2: Train all staff working in buildings and/or on grounds in behaviors that maximize the efficacy of sustainable design and will be accountable for seeing that such behaviors are practiced	<ul style="list-style-type: none"> ◆ ISO Operations and Management Standards (14001) ◆ Staff Performance Metrics 	Building	Operations	<ul style="list-style-type: none"> ◆ Continuous staff training modules ◆ Include performance metrics into job descriptions and performance review 	<p><u>Steps:</u> Begin training existing NWSS Complex staff, meet with concessionaires and vendors</p> <p><u>Partners:</u> NWSS, vendors, CSU Institute for the Built Environment</p>
EER 1.3: Guide visitors, through appropriate defaults and instructions, in behaviors on site that maximize the efficacy of sustainable design and to similar behaviors they can practice at home and at work	<ul style="list-style-type: none"> ◆ Visitor Evaluations and Surveys 	Building	Design Operations	<ul style="list-style-type: none"> ◆ Intelligent signage ◆ Continuous evaluation 	<p><u>Steps:</u> Begin designing educational components for existing NWSS</p> <p><u>Partners:</u> CSU College of Health and Human Sciences, CSU Institute for the Built Environment, Denver Museum of Nature & Science</p>

NWC Sustainability and Regeneration Framework and Goals

Embrace an Ethic of Regeneration	Potential Metric(s)	Scale(s)	Timing	Potential Implementation Strategies	Potential Initial Steps and Partners
<p>EER 2: Design and operate facilities to maximize efficiency of facilities and resources per user</p>	<ul style="list-style-type: none"> ◆Occupancy Levels ◆Energy, Water Use per User/Time 	District	Operations	<ul style="list-style-type: none"> ◆Maximize occupancy and facility use ◆Create zones that can be shut down completely when not in use 	<p><u>Steps:</u> Identify existing underused space and appropriate potential use (community, etc.) at NWSS <u>Partners:</u> NWSS, UCAN, Groundwork Denver, GrowHaus</p>
<p>EER 3: Create "net zero" or "closed loop" systems for energy, waste, and water</p>	See below	District	Design Construction Operations	See below	See below
<p>EER 3.1: Create a "net zero" energy district, prioritizing technical and behavioral strategies to increase efficiency and using on-site renewable energy sources (by 5 years after full build-out)</p>	<ul style="list-style-type: none"> ◆Percentage of energy produced onsite ◆Energy metering 	District	Design Construction Operations	<ul style="list-style-type: none"> ◆District and/or building level controls ◆Energy efficient buildings and finishes ◆Solar PV, hot water ◆Combined heat/power ◆Wind turbines ◆Waste-to-energy ◆Heat capture off sewer ◆Groundsource heat 	<p><u>Steps:</u> Evaluate site for feasibility of various energy sources, establish efficiency benchmarks and design guidelines <u>Partners:</u> NREL, CSU Institute for the Built Environment, CSU College of Engineering, Xcel Energy, renewable infrastructure providers (e.g., PV, wind, etc.)</p>
<p>EER 3.2: Create a "net zero" or "closed loop" district for waste streams and apply relevant techniques and training during operations (by 5 years after full build-out)</p>	<ul style="list-style-type: none"> ◆Weight/volume of waste diverted 	District	Design Construction Operations	<ul style="list-style-type: none"> ◆Biogas digester ◆Waste-to-energy ◆Composting ◆Recycling, reuse ◆Sustainable purchasing ◆Train users on waste reduction 	<p><u>Steps:</u> Create initial waste balance and estimate future waste streams, investigate waste-to-energy feasibility, implement composting for food waste <u>Partners:</u> Denver Zoo, NWSS vendors/concessionaires, Waste Management, CCD Recycling</p>
<p>EER 3.3: Create a "net zero" district for water use, use zero potable water for landscaping, and apply relevant techniques and training during operations (by 5 years after full build-out).</p>	<ul style="list-style-type: none"> ◆Potable water use/site user ◆Amount used compared to traditional design ◆Non-potable water use/sq ft exterior space 	District	Design Construction Operations	<ul style="list-style-type: none"> ◆Apply relevant technologies and training to use non-potable water for landscaping and other acceptable uses ◆Install water efficient fixtures and train users on water conservation techniques 	<p><u>Steps:</u> Water balance study to determine baseline rainfall, ground water use to frame water use goals <u>Partners:</u> CSU College of Engineering, CSU Institute for the Built Environment</p>

NWC Sustainability and Regeneration Framework and Goals

Embrace an Ethic of Regeneration	Potential Metric(s)	Scale(s)	Timing	Potential Implementation Strategies	Potential Initial Steps and Partners
<p>EER 4: Divert at least 90% of allowable waste from landfill during all site manipulation and demolition processes</p>	<ul style="list-style-type: none"> ◆Weight or volume of diverted waste 	<p>Building District</p>	<p>All Construction Phases</p>	<ul style="list-style-type: none"> ◆Recycling ◆Reuse 	<p><u>Steps:</u> Create construction management plan, identify materials in existing buildings <u>Partners:</u> CSU Construction Management, CCD Waste Management and Recycling</p>
<p>EER 5: Maintain or reduce greenhouse gas emissions (GHG) levels, including transportation, at or below 2016 GHG emissions and strive for continuous reduction over time, aiming for alignment with City and County GHG and climate goals</p>	<ul style="list-style-type: none"> ◆Greenhouse gas emissions from buildings, transportation, operations ◆Amount of carbon sequestered 	<p>Building District</p>	<p>Design Construction Operations</p>	<ul style="list-style-type: none"> ◆Energy efficiency and renewable energy production ◆Creating carbon sinks onsite ◆Purchasing offsets for transportation emissions ◆Using lower GHG cement 	<p><u>Steps:</u> Determine best GHG tracking system, evaluate attendee transportation modes <u>Partners:</u> NREL, CSU Natural Resource Ecology Lab, CSU College of Engineering, CSU Facilities, CCD Office of Sustainability, Rocky Mountain Institute</p>
<p>EER 6: Explore using a district scale rating system, such as EcoDistricts, LEED-ND (or similar) or following STAR Communities (or similar) metrics</p>	<ul style="list-style-type: none"> ◆Listed in each system 	<p>Building District</p>	<p>Design</p>	<ul style="list-style-type: none"> ◆Work with rating systems to determine which rating system is applicable 	<p><u>Steps:</u> Determine cost and applicability of various rating systems <u>Partners:</u> CSU Institute for the Built Environment, USGBC CO, Living Building, EcoDistricts, DEH/CCD Office of Sustainability</p>

NWC Sustainability and Regeneration Framework and Goals

Community and Neighborhood Integration					
<i>Guidelines</i>					
Creates a welcoming and open “campus” to the adjacent communities					
Provides critical multi-modal connections and access points to the adjacent communities to engage the river, access transit and promote a healthy lifestyle					
Establishes a positive community benefit					
Community and Neighborhood Integration	Potential Metric(s)	Scale(s)	Timing	Potential Implementation Strategies	Potential Initial Steps and Partners
<i>Goals</i>					
CNI 1: Create porous district boundaries and physical, spatial, and psychological connections	See below	Building District Neighborhood	Design Construction	See below	See below
CNI 1.1: Ensure access for neighbors and visitors to public transportation stops, NWC venues and amenities, and increase connectivity and mobility overall	<ul style="list-style-type: none"> ♦Walkscore ♦Traffic studies ♦User surveys to determine neighborhood use of facilities ♦NWC visitor use of neighborhood amenities ♦Number of new connecting thoroughways 	District	Design Construction	<ul style="list-style-type: none"> ♦Provide new vehicular and bike/ped connections through the NWC site, both north/south and east/west ♦Marketing/outreach campaign to get users on and through site 	<p><u>Steps:</u> Create mobility plan to ensure access to amenities, work over time to market NWC services in GES and beyond</p> <p><u>Partners:</u> UCAN Metro Denver, WalkDenver, BikeDenver, NDCC Projects Office</p>
CNI 1.2: Blend the boundary between site and surrounding neighborhoods while allowing for efficient event operations and ticketing	<ul style="list-style-type: none"> ♦Scale of structures at edges of NWC ♦Number of design elements pulled into neighborhoods and vice versa 	Building District	Design Construction	<ul style="list-style-type: none"> ♦Ensure neighborhood-friendly and appropriately scaled uses at site boundaries (e.g. building footprints, massing, block faces, street level amenities, and setbacks) ♦Integrate space types and uses ♦Echo architectural features on and offsite 	<p><u>Steps:</u> Engage GES neighborhoods and NWCAC in design guideline creation, identifying themes and locations for direct connection to neighborhoods</p> <p><u>Partners:</u> NWCAC, UCAN, E-S United, ESG Business Association, designers</p>
CNI 1.3: Design site to a human scale for optimal user experience	<ul style="list-style-type: none"> ♦Size of public facing facades 	Building	Design Construction	<ul style="list-style-type: none"> ♦Provide range of sizes of structures and open spaces to provide interest and comfort 	<p><u>Steps:</u> Classify structures and open spaces by size, begin constructing guidelines for development</p> <p><u>Partners:</u> ULI Healthy Places Committee, CU Planning Dept.</p>

NWC Sustainability and Regeneration Framework and Goals

Community and Neighborhood Integration	Potential Metric(s)	Scale(s)	Timing	Potential Implementation Strategies	Potential Initial Steps and Partners
<p>CNI 2: Continue relationship building, communication, and interaction with surrounding communities and Denver metro region, including culturally relevant engagement methods, to address community needs and reduce uncertainty</p>	<ul style="list-style-type: none"> ◆ Engagement Plans and Strategies ◆ Survey results, interviews 	<p>Building District Neighborhood</p>	<p>Programming (Short- and Long-term)</p>	<ul style="list-style-type: none"> ◆ Continue NWCAC and expand other engagement opportunities ◆ Continue to leverage NDCC projects' planning processes for further engagement ◆ Continue identifying neighborhood groups/organizations for partnership 	<p><u>Steps:</u> Create ongoing strategy in partnership with NWCAC <u>Partners:</u> NWCAC, UCAN Metro Denver, ES United, The GrowHaus, Focus Points, LiveWell</p>
<p>CNI 3: Create programming that supports neighborhood identity, the local economy, job opportunities, and economic development through training, local business incubation, fostering entrepreneurship, local partnerships, etc.</p>	<ul style="list-style-type: none"> ◆ Number of trainings and participants ◆ Number of new businesses fostered at NWC ◆ Number of NWC-Community business partnerships 	<p>Neighborhood City Regional</p>	<p>Programming (Short- and Long-term)</p>	<ul style="list-style-type: none"> ◆ Survey and document the residential and industrial history of the area ◆ Create business incubation opportunities for local startup businesses 	<p><u>Steps:</u> Draft strategic plan for business incubation and begin relationship building, determine business development interests of community <u>Partners:</u> CSU College of Business, CSU Public History Department, Denver OED, ESG Business Association, Denver Chamber</p>

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Build Cultural Crossroads					
<i>Guidelines</i>					
Educate the public about the historical importance of this site. The NWC site has been shaped by over 10,000 years of human activity and helped create the unique cultures of Denver and Colorado.					
Foster the crossing of cultures locally, regionally, nationally or globally					
Serve as a gathering place where ideas and diverse cultures can be exchanged in this 'hub' of the west					
Celebrate local and regional artistic and creative talent					
Integrate the "arts", in all its various forms, into the site and provides a platform that is inclusive of a broad range of cultural expressions					
Create a unique region of the city that celebrates the past yet focuses on a mutually beneficial shared future through the combination of neighborhood, commercial and cultural experiences					
Build Cultural Crossroads	Potential Metric(s)	Scale(s)	Timing	Potential Implementation Strategies	Potential Initial Steps and Partners
<i>Goals</i>					
BCC 1: Provide physical and programmatic space for cultural and artistic activity, and for innovation to emerge from the crossing of cultures	♦Number of potentially programmed spaces	Building District	Design Construction Programming	See below	See below
BCC 1.1: Highlight current cultural and artistic activities locally, regionally, nationally, globally	♦Characteristics of annual programming ♦Demographics of attendees at various events ♦Media coverage in diverse publications	District	Programming (Short- and Long-term)	♦Create framework for inclusion of arts that has scale, location of origin, other criteria to ensure diversity ♦Create and implement plan for appropriate capture of user information at events/programs ♦Develop programming that provides cross-section of art	<u>Steps:</u> Develop initial strategic plans for bringing in diverse cultural events and programs at current NWSS, establish advisory group <u>Partners:</u> Coors Western Art Association, RiNO District, Art Museums, CO Business Committee for the Arts, Hispanic Chamber of Commerce, Native American Chamber of Commerce
BCC 1.2: Foster new forms of cultural and artistic expression, particularly as these activities relate to the American West	♦Number of novel events, exhibitions, and programs	District	Programming (Short- and Long-term)	♦Develop strategic plans among NWC partners to support arts as part of overall programming ♦Use permanent and temporary public art to showcase Western art in various forms	<u>Steps:</u> Develop initial strategic plans for collaborative programming onsite currently, establish advisory group <u>Partners:</u> Coors Western Art Association, RiNO District, Art Museums, CO Business Committee for the Arts

NWC Sustainability and Regeneration Framework and Goals

Build Cultural Crossroads	Potential Metric(s)	Scale(s)	Timing	Potential Implementation Strategies	Potential Initial Steps and Partners
<p>BCC 2: Create a virtual and physical global cultural destination that fosters the crossing of cultures locally, regionally, nationally or globally</p>	<ul style="list-style-type: none"> ◆ Mix of demographics of users, both in person and virtual ◆ User survey results 	<p>All</p>	<p>Design Construction Programming</p>	<ul style="list-style-type: none"> ◆ Develop an online presence for the NWC that shares information, history, etc. and fosters interaction 	<p><u>Steps:</u> Develop plan for creation of NWC website, develop programming on current site that fosters cultural exchange <u>Partners:</u> CSU External Relations</p>
<p>BCC 2.1: Provide physical and programmatic space for innovation to emerge from the crossing of cultures (e.g., local and large scale businesses, US and overseas companies, etc.)</p>	<ul style="list-style-type: none"> ◆ Mix of demographics of users, both in person and virtual ◆ User survey results 	<p>Building District Neighborhood</p>	<p>Design Construction Programming</p>	<ul style="list-style-type: none"> ◆ Intentionally program events (live and virtual) with diverse audiences that focus on creativity and innovation 	<p><u>Steps:</u> Create strategic plan for innovative cross-cultural programming <u>Partners:</u> Biennial of the Americas, Chambers of Commerce, DDP Start-up Week</p>
<p>BCC 3: Practice inclusiveness and consider multiple cultural viewpoints at all decision-making stages, including design, construction, operations, events, etc.</p>	<ul style="list-style-type: none"> ◆ Characteristics of annual programming ◆ Demographics of attendees at various events ◆ Media coverage in diverse publications 	<p>Building District Neighborhood</p>	<p>Programming (Short- and Long-term)</p>	<ul style="list-style-type: none"> ◆ Create criteria for decision-making process that ensure inclusivity and cultural sensitivity 	<p><u>Steps:</u> Develop initial criteria for decision-making, establish advisory group <u>Partners:</u> NWCAC, Hispanic Chamber of Commerce, Native American Chamber of Commerce, CO Black Chamber of Commerce, Denver Women's Commission, Groundwork Denver, etc.</p>

NWC Sustainability and Regeneration Framework and Goals

Celebrate Western Heritage	Potential Metric(s)	Scale(s)	Timing	Potential Implementation Strategies	Potential Initial Steps and Partners
<p>CWH 3: Honor the authenticity and origins of the site, preserving architecture and features that have historic and cultural merit, while efficiently reusing them and integrating with new facilities.</p>	<ul style="list-style-type: none"> ◆Percent/number of historic features preserved. ◆Use of preservation incentives. ◆Number of visitors to historic buildings/features. 	<p>Building District</p>	<p>Design Construction</p>	<ul style="list-style-type: none"> ◆Pursue other partnerships and creative opportunities to record and document the history of the site and surrounding neighborhoods. ◆Educate potential developers on the incentives available for existing buildings. (See more in Part 7: Historic Resources) 	<p><u>Steps:</u> Complete a National Register Historic Places District nomination or equivalent level of documentation, complete Historic Structure Assessments for buildings considered for reuse <u>Partners:</u> Professional Historians CSU History Department, Historic Denver, History Colorado</p>
<p>CWH 4: Offer robust educational programming and features that provide a balanced presentation about the natural, geological, agricultural, and cultural history of Colorado and the West</p>	<ul style="list-style-type: none"> ◆User survey results ◆Number and characteristics of programs offered ◆Number and distribution of onsite educational features 	<p>Programming</p>	<p>Long-term Programming</p>	<ul style="list-style-type: none"> ◆Develop and implement an Interpretative Plan 	<p><u>Steps:</u> Initiate interpretive plan process <u>Partners:</u> CSU, DMSN, History Colorado, NWSS, Historic Denver</p>
<p>CWH 5: Honor the historic significance of human/animal relationships and continue to use best-in-class animal treatment and care</p>	<ul style="list-style-type: none"> ◆Humane Society or other standards for treatment 	<p>Programming</p>	<p>Long-term Programming</p>	<ul style="list-style-type: none"> ◆Develop public standards for animal care and treatment ◆Work with Dr. Temple Grandin on design, implementation 	<p><u>Steps:</u> Develop design standards for animal movement, care <u>Partners:</u> Dr. Temple Grandin, CSU Animal Sciences Department</p>

NWC Sustainability and Regeneration Framework and Goals

Celebrate Western Heritage					
<i>Guidelines</i>					
The site reflects, respects, and celebrates the meaning of the Western way of life and its unique influence on culture, competition, and commerce Celebrate the West's pioneering past and desire for continual discovery, while pointing visitors toward the future of how life in the West is evolving Honestly acknowledge aspects of Western history that may not be cause for pride today, while celebrating efforts to redress them Solidifies and sustains the National Western Stock Show (NWSS) as the top stock show and rodeo in the world Creates a world class equestrian facility to attract the highest level of competition in equestrian events Honors the connection between land and people, and how the Western landscape has shaped different generations and cultures Consider incorporating Western heritage in each stage of design and implementation					
Celebrate Western Heritage	Potential Metric(s)	Scale(s)	Timing	Potential Implementation Strategies	Potential Initial Steps and Partners
<i>Goals</i>					
CWH 1: Ensure that the NWC has world-class, multi-purpose stock show, rodeo, equestrian, and event facilities that support diverse year-round programming and a sustainable business model for the NWSS	<ul style="list-style-type: none"> ◆Percentage of programming that has specific diversity criteria ◆Diversity of media coverage ◆Facility occupancy and number of events ◆NWSS revenue streams 	Building District	Design Construction Programming	<ul style="list-style-type: none"> ◆Establish criteria for events/programs/uses that help diversify programming ◆Create and implement plan for appropriate capture of user information at events/programs 	<u>Steps:</u> Develop strategic and business plan to program new spaces with variety of events and ensure financial success <u>Partners:</u> Bill Pickett Rodeo, Indian National Finals Rodeo
CWH 2: Support and promote culturally sensitive and diverse events and social gathering places that highlight the history and present of the American West	<ul style="list-style-type: none"> ◆Percentage of programming that has specific diversity criteria ◆Number of events spaces, booking rates, types of events 	Building District Programming	Design Long-term Programming	<ul style="list-style-type: none"> ◆Create Western cultural plan for NWC to use events and spaces 	<u>Steps:</u> Identify goals of Western cultural plan for NWC, research potential programs <u>Partners:</u> History CO, Denver Museum of Nature & Science, CSU History Department, Parks and Rec

NWC Sustainability and Regeneration Framework and Goals

Be Pioneering: Break Trail and Foster Innovation

Guidelines

Fosters global linkages to advance cutting edge research and development for products and services in the agricultural industry. This includes, but is not limited to, fields of study in food production and safety, nutritional health, technology, energy efficiency, animal husbandry and public policy.

Embraces innovation, independence and ingenuity

Is a place where "breaking trail" is in our founding charter and represents our forward-looking spirit

Encourages new ideas that serve as catalysts for recurring job creation, neighborhood entrepreneurialism, ongoing public and private capital investment, and a sustainable business model for the National Western Stock Show, new equestrian events, and the National Western Center Partners.

Be Pioneering: Break Trail and Foster Innovation	Potential Metric(s)	Scale(s)	Timing	Potential Implementation Strategies	Potential Initial Steps and Partners
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Goals

<p>BPFI 1: Advance the state of the art using site and facility design, operations, and events as experimental and educational "Living Labs"</p>	<ul style="list-style-type: none"> ◆Number of educational components designed into systems ◆User surveys on educational effectiveness 	<p>Building District</p>	<p>Design Long-term Programming</p>	<ul style="list-style-type: none"> ◆Design each facility and/or public space with research question driving design criteria ◆Monitor user and staff experiences to evaluate and understand facility use ◆Design monitoring systems into facilities 	<p><u>Steps:</u> Inventory and learn from existing "Living Lab" facilities, identify initial goals for research/application <u>Partners:</u> NREL, CSU Institute for the Built Environment, CSU Warner Collage of Natural Resources, UBC, Rocky Mountain Institute</p>
<p>BPFI 2: Foster entrepreneurship and innovation, particularly around food and food systems, water, energy, entertainment, livestock management, etc. through partnerships, research, training, outreach</p>	<ul style="list-style-type: none"> ◆Number of new partnerships ◆Number of new businesses conceived/fostered at NWC 	<p>Building District</p>	<p>Programming (Short- and Long-term)</p>	<ul style="list-style-type: none"> ◆Create business incubation opportunities for local startup businesses ◆Provide job training, business classes, and mentorship to entrepreneurs 	<p><u>Steps:</u> Identify local entrepreneurs to help shape NWC activities, identify gaps in training for entrepreneurs (esp. in food systems) <u>Partners:</u> CSU College of Business, Chambers of Commerce, Startup community</p>
<p>BPFI 3: Showcase relevant innovation at the NWSS event each year</p>	<ul style="list-style-type: none"> ◆Number of talks, booths, events related to innovation in ag/livestock/food/other ◆User surveys on impact 	<p>Building District</p>	<p>Programming (Short- and Long-term)</p>	<ul style="list-style-type: none"> ◆Convene panels, speakers, Q&A with innovators in field ◆Create innovation awards 	<p><u>Steps:</u> Identify innovators in field, determine plan for showcasing as early at 2016 NWSS <u>Partners:</u> NWSS, CSU President's Agricultural Advisory Council, CSU Office of Engagement</p>

NWC Sustainability and Regeneration Framework and Goals

Be Pioneering: Break Trail and Foster Innovation	Potential Metric(s)	Scale(s)	Timing	Potential Implementation Strategies	Potential Initial Steps and Partners
<p>BPFI 4: Use virtual and physical space to host cross-sector and cross-discipline conversations, speaker series, demonstrations, conferences, etc.</p>	<ul style="list-style-type: none"> ◆Number of attendees at interdisciplinary conferences (live, virtual) ◆Number of interdisciplinary discussions annually ◆Partnerships and/or products emerging out of NWC 	<p>Building District</p>	<p>Programming (Short- and Long-term)</p>	<ul style="list-style-type: none"> ◆Use existing interdisciplinary groups to help convene conversations ◆Design and host interdisciplinary conferences 	<p><u>Steps:</u> Identify controversial conversations or areas lacking interdisciplinary approach as initial conversations to address, potentially at current NWSS <u>Partners:</u> NWSS, CSU Office of Engagement and College of Agricultural Sciences, School of Global Environmental Sustainability, DMNS, History Colorado</p>
<p>BPFI 5: Establish adaptive management processes in operations and maintenance that drive continual improvement, measurement, monitoring and adaptation</p>	<ul style="list-style-type: none"> ◆Revenue and operating costs ◆Resource use (water, energy) ◆Waste volumes and types ◆User satisfaction ◆Employee satisfaction 	<p>Building District</p>	<p>Programming (Short- and Long-term)</p>	<ul style="list-style-type: none"> ◆Design monitoring systems into facilities ◆Create user/employee satisfaction survey protocol ◆Develop systems for evaluation and improvement 	<p><u>Steps:</u> Establish baselines in resource use, efficiency, revenue, user and employee satisfaction <u>Partners:</u> NWSS, CCD, CSU Institute for the Built Environment and College of Health and Human Sciences</p>

NWC Sustainability and Regeneration Framework and Goals

Create Fun and Entertaining Experiences					
<i>Guidelines</i>					
An interactive and engaging site for visitors					
A place that establishes, for young and old visitors alike, memorable and enjoyable experiences that encourage them to return to the NWC					
Provides a broad range of year-round entertainment, competition, and educational programming					
Create Fun and Entertaining Experiences	Potential Metric(s)	Scale(s)	Timing	Potential Implementation Strategies	Potential Initial Steps and Partners
<i>Goals</i>					
CFE 1: Create programming that emphasizes health (e.g., NWC 5K, farmers market)	♦Number of health-related events	Building District	Programming (Short- and Long-term)	♦Create annual plan for healthy, fun events	<u>Steps:</u> Create initial health-related event at current NWSS Complex (e.g., run or market) <u>Partners:</u> CO Health Foundation, LiveWell GES, The GrowHaus, Focus Points
CFE 2: Ensure design and operations allow for safe interactivity and hands-on learning for all ages	♦Number of learning opportunities throughout site, both formal and informal	Building District	Programming (Short- and Long-term)	♦Create Interpretive Plan that includes structures, infrastructure, River and novel, fun learning experiences that change	<u>Steps:</u> Begin collecting concepts and developing Interpretive Plan <u>Partners:</u> DMNS, CSU, History CO, NWSS, CCD Parks and Rec
CFE 3: Create outdoor activity spaces to provide flexible uses and a variety of experiences related to food, agriculture, livestock, energy, water, etc.	♦Number of potential uses for each public space ♦Occupancy rates of public spaces for events annually	District Programming	Design Programming	♦Design a variety of public spaces that allow for different types of activity (passive, active, etc.) and events (markets, sports, etc.)	<u>Steps:</u> Create inventory of desired public spaces, begin collecting concepts and developing plan for public spaces <u>Partners:</u> DMNS, CSU, History CO, NWSS, CCD Parks and Rec
CFE 4: Integrate local and regional visual and performing art and artists into the site design, programming, and operations	♦Number of locally/regionally sourced public art pieces, programs ♦Participation of local/regional artists in design process, review	Building District Programming	Design Programming	♦Use local/regional arts community as design guideline developers, reviewers ♦Conduct local/regional competitions for arts installations ♦Conduct local/regional design competitions for specific site elements (e.g., sections of walking/biking paths)	<u>Steps:</u> Develop arts engagement plan, establish arts advisory group <u>Partners:</u> CCD Parks and Rec, Coors Western Art, MCA, DAM, NWSS, CSU

NWC Sustainability and Regeneration Framework and Goals

Grow Local, Regional, and Global Intelligence					
<p><i>Guidelines</i></p> <p>Stimulates pre-school through post-secondary experiential education and cultivates new partnerships for life-long learning around the issues of agriculture, food systems, land and livestock management, veterinary medicine, history, ecology, business, the arts, and engineering</p> <p>Creates a spirit of engaged learning by investing in local and regional intelligence, linked to an ever-expanding global knowledge base</p> <p>Serves as a key Corridor of Opportunity gateway, linking downtown Denver and the local neighborhoods from Denver Union Station to Denver International Airport through new multi-modal connections</p>					
Grow Local, Regional, and Global Intelligence	Potential Metric(s)	Scale(s)	Timing	Potential Implementation Strategies	Potential Initial Steps and Partners
<p><i>Goals</i></p>					
<p>GLRGI 1: Provide programming that complements local and regional education, including (but not limited to) topics of agriculture, food systems, land and livestock management, veterinary medicine, history, ecology, business, the arts, and engineering</p>	<ul style="list-style-type: none"> ◆Number of educational programs ◆Number of educational partner organizations 	<p>Building District</p>	<p>Programming (Short- and Long-term)</p>	<ul style="list-style-type: none"> ◆Daily demonstrations on animal care at "Urban Farm" ◆Viewing windows into vet facilities ◆Interpretive activities at crop plots ◆Harvest days and nutrition classes ◆Student competitions on NWC art, design, engineering problems 	<p><u>Steps:</u> Identify gaps in local/regional/statewide programming that NWC can fill with experiential learning, etc. to develop strategic plan</p> <p><u>Partners:</u> DPS, CSU School of Education, DMNS, History CO, Urban Farm at Stapleton</p>
<p>GLRGI 2: Work with local and regional schools to provide on- and off-site educational opportunities and pathways for life-long learning for students of all ages</p>	<ul style="list-style-type: none"> ◆Number of NWC programs in schools in CO ◆Number of school programs onsite 	<p>District Neighborhood City Regional</p>	<p>Programming (Short- and Long-term)</p>	<ul style="list-style-type: none"> ◆NWC mobile lessons that can travel to schools ◆Curricula development ◆School visits to site with age-appropriate activities 	<p><u>Steps:</u> Identify gaps in local/regional/statewide programming that NWC can fill as partners with schools, curricula development</p> <p><u>Partners:</u> DPS, CSU School of Education, DMNS, History CO, Urban Farm at Stapleton, CO Montessori Academy</p>

NWC Sustainability and Regeneration Framework and Goals

Grow Local, Regional, and Global Intelligence	Potential Metric(s)	Scale(s)	Timing	Potential Implementation Strategies	Potential Initial Steps and Partners
<p>GLRGI 3: Use infrastructure, natural systems, buildings, animal care, crop production, operations, monitoring, etc. as public, formal, and informal educational opportunities, including (but not limited to) STEM subjects</p>	<ul style="list-style-type: none"> ◆Number of educational components designed into systems ◆User surveys on educational effectiveness 	<p>Building District</p>	<p>Design Construction Operations Programming</p>	<ul style="list-style-type: none"> ◆Real-time energy, water monitors in facilities and on energy generation infrastructure ◆Stormwater management (e.g., bioswales) with interpretive signs ◆Viewing windows into composting, gasification or other waste facilities ◆Health information on actively using site (e.g., you burn X calories walking up stairs) or on crop plots ◆Viewing windows into animal care areas 	<p><u>Steps:</u> Education/interpretive plan for use of site as educational tool <u>Partners:</u> DMNS, History Colorado, CCD Parks and Rec, Greenway Foudation, CSU Warner College of Natural Resources, CSU Institute for the Built Environment, CSU School of Education</p>
<p>GLRGI 4: Create or extend existing programs to support mentorships, training, and internships at the NWC</p>	<ul style="list-style-type: none"> ◆Number of mentor/mentees ◆Number of local/regional interns ◆Number of job training programs 	<p>Building District</p>	<p>Design Construction Operations Programming</p>	<ul style="list-style-type: none"> ◆Internship Program for facility operations, program development, education, animal care, etc. ◆Job training in areas identified by communities as desirable ◆Partnerships with businesses for mentorships, internships (e.g., ag businesses) 	<p><u>Steps:</u> Identify local/regional needs for internships, mentorships, begin developing business relationships as needed, expand existing programs at NWSS <u>Partners:</u> NWSS, CSU College of Business, ESG Business Association, high school programs, DPS</p>
<p>GLRGI 5: Use the NWC platform, both physical and virtual, to convene discussions that inform and improve the state of the art, including (but not limited to) topics of agriculture, food systems, land and livestock management, veterinary medicine, history, ecology, business, the arts, and engineering.</p>	<ul style="list-style-type: none"> ◆Number of attendees at conferences (live, virtual) ◆Number of discussions annually ◆Partnerships emerging out of NWC 	<p>Building District</p>	<p>Design Construction Operations Programming</p>	<ul style="list-style-type: none"> ◆Host conferences at the NWC ◆Host business association meetings ◆Convene virtual discussions ◆Host maker events, hack-a-thons, design charrettes, other creative events to provide concrete outcomes 	<p><u>Steps:</u> Begin creating online presence (see above), assess current events hosted by NWC partners that may be hosted at NWC in the future <u>Partners:</u> CSU, DMNS, History Colorado, CCD, NWSS, Visit Denver</p>