BRUSH CREEK FEASIBILITY STUDY

DRAFT MAR. 2011

BI-STATE REACH – STATE LINE ROAD TO ROANOKE PARKWAY

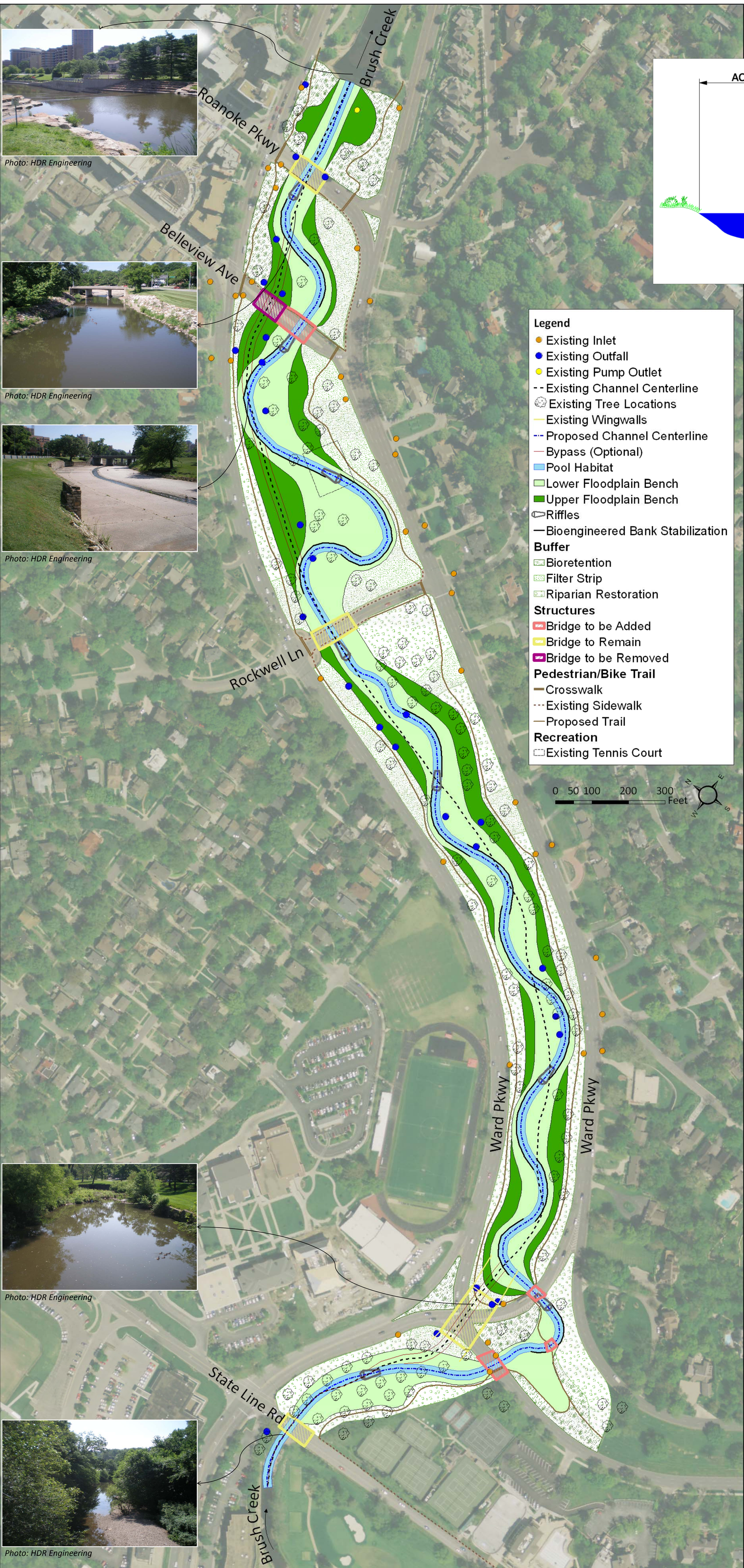

Photo: HDR Engineering

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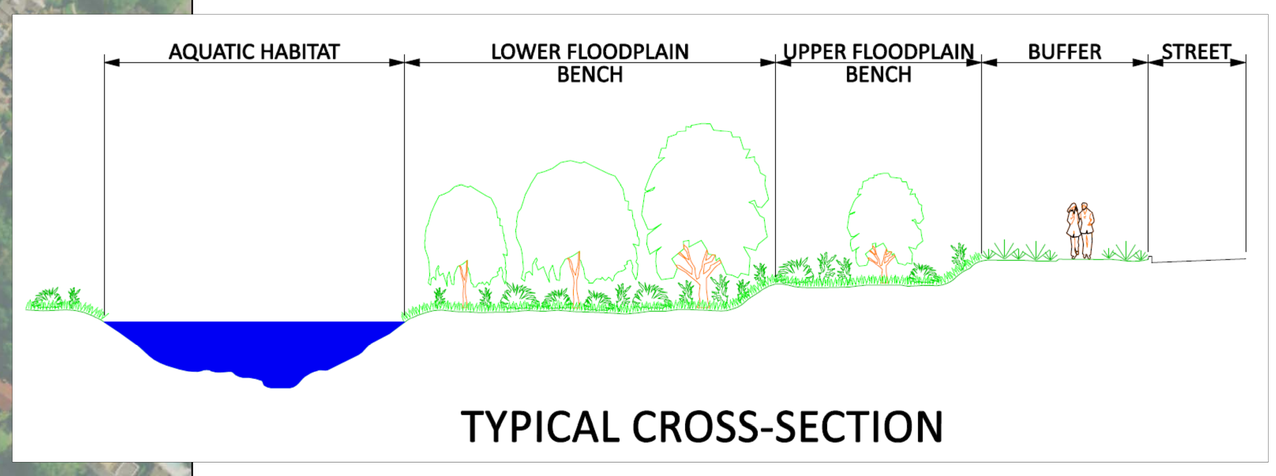
ALTERNATIVE 1



TYPICAL CROSS-SECTION

MULTIPURPOSE PROJECT OPPORTUNITIES

Manage Flood Risk

Widened channel

- Increases conveyance capacity

Floodplain benching

- Increases conveyance capacity

Bridge replacements and new bridges

- Increases open flow areas of bridges increasing conveyance capacity

Restore Ecosystems

Pool Habitat

- **In-stream Structures – Natural materials strategically placed within the channel**
  - Protects stream banks
  - Provides shelter for diverse group of aquatic species

Boulder Cluster

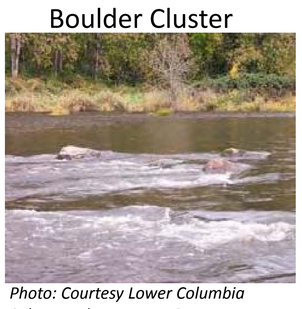


Photo: Courtesy Lower Columbia Salmon Enhancement Group

Engineered Rock Riffle

Photo: Courtesy lakecountyil.gov

Rootwad

Photo: HDR Engineering

- **Vegetation– Native and aquatic vegetation planted within the channel**
  - Provides habitat for aquatic species
  - Improves water quality through plant uptake

Riparian Habitat

- **Buffers – Features planted with vegetation**
  - Intercepts and reduces stormwater runoff
  - Removes pollutants through infiltration, plant uptake and sedimentation
  - Enhances riparian habitat diversity

Filter Strip

Photo: Courtesy NRCS

Bioretention Cell

Photo: Courtesy www.cleanwatermn.org

- **Floodplain Benches – Benches planted with vegetation**
  - Increases stream bank and slope stability
  - Removes pollutants through infiltration and plant uptake
  - Enhances riparian habitat diversity

Provide Recreational Benefits

Active – Pedestrian and bike trail

Passive – Quality of life, interpretive signage, education

KANSAS CITY MISSOURI

U.S. Army Corps of Engineers
Kansas City District

JOHNSON COUNTY KANSAS