

## **Project Narrative**

### **Superior Town Center Final Development Plan – Coal Creek Improvements within Tracts A and B of the Superior Town Center**

#### **Background**

Over the course of the last three years, staff, the Parks, Recreation, Open Space and Trails Advisory Committee (PROSTAC), the Open Space Advisory Committee (OSAC), consultants from GreenPlay, and landscape architects and engineers from Design Concepts and Matrix Design Group worked to create a comprehensive park and creek corridor design for two of the park parcels identified in the Superior Town Center. Tracts A and B, which are approximately 16.5 acres in combined size and are proposed to contain Parks 1 and 2, border the north and south sides of Coal Creek between McCaslin Boulevard to the west and the US 36 highway to the east.

At the direction of the Town Board, this Final Development Plan (FDP) application has separated the aspects of this proposal that relate specifically to channel stabilization and floodplain preservation improvements for Coal Creek (covering roughly 4.6 acres) from the overall improvements proposed for Parks 1 and 2. This will allow the applicant to pursue the associated state and federal reviews for the proposed creek enhancements independently. The proposed channel stabilization and floodplain modifications address the recommended improvements of the 2014 Master Drainageway Plan that was approved for this reach of the creek. Additionally, this FDP also proposes additional landscape enhancements for the existing and proposed wetland and riparian areas along the Coal Creek corridor through the park parcels. The intent of the improvements is to provide public access to Coal Creek while maintaining a healthy riparian/wetland corridor through the park. The limits of work for the FDP accommodate the grading and drainage activities necessary to construct the creek channel and include the associated wetland and riparian re-vegetation adjacent to the creek that will be required by the applicable local, state, and federal regulations.

This overall park design has gone through a rigorous community engagement process that began in 2013. The proposed creek improvements are made in consideration of the overall designs for Parks 1 and 2, and this FDP proposal complies with local, state and federal environmental guidelines and follows standards established by the Urban Drainage and Flood Control District and 2014 Master Drainageway Plan for Coal Creek.

#### **Description of proposal**

The intent of the improvements is to provide public access to Coal Creek while minimizing floodplain impacts and maintaining a healthy riparian/wetland corridor through the park. Per the 2014 Master Drainageway Plan, a series of boulder-lined drop structures is proposed which total 9' vertical feet of drop from McCaslin Boulevard to the pedestrian bridge just west of US 36. The existing Coal Creek alignment through the park parcels is a braided, multi-thread creek channel which was damaged during the September 2014 floods. The future Marshall Street bridge crossing over Coal Creek necessitates the armoring of the channel at this crossing to reduce damage to the channel from high-velocity stormwater flows below the bridge during large

rain events. The proposed Coal Creek improvements take advantage of the creek armoring by providing pedestrian accessible boulder terraces along the cut banks (outer channel curves that experience high velocity flows) and wetland and riparian plantings along the point bank (inner channel curve that experience high sediment deposition). The existing braided stream alignment is consolidated into a single, stabilized channel with a 10' bottom width that will convey roughly 6" of water across the channel bottom in a base flow condition which will provide an ideal depth for water access by park visitors. Low water crossings have been provided that are consistent with the adjacent/future park trail and sidewalk improvements and additional, informal boulder stepping stone crossing have been provided as well.

The proposed creek enhancements can be summarized as follows:

1. **Creek Realignment** –The current Coal Creek channel through the park parcels is a braided, multi-thread alignment that was damaged in the September 2013 flood events. The proposed channel improvements will consolidate the creek into a single, stabilized, 10' wide channel and will include armored, pedestrian-accessible banks below and adjacent to the future Marshall Road bridge crossing over Coal Creek that separates the two park parcels.
2. **Drop Structures** – Construct six vertical drop structures to provide approximately 9' of drop between McCaslin and US-36 per recommendations of the 2014 Master Drainageway Plan for Coal Creek. The proposed drop structures will provide vertical channel stabilization and reduce stormwater flow velocities during rain events.
3. **Natural Riparian Corridor** – Enhance the natural riparian corridor by removing non-native species and invasive plants, and replace with native sustainable plants recommended by ERO Resource Corporation who developed the original biological assessment of the Coal Creek corridor between McCaslin and US 36. The proposed channel revegetation will provide further bank stabilization, wildlife habitat, and biodiversity.
4. **Low Water Crossings** – In addition to restoring the native habitat, part of the overall plan for Parks 1 and 2 is to increase the public's accessibility to the park. Toward this end, three formal low water crossings will be added provided safe pedestrian access across Coal Creek. Low water crossings will also provide additional areas for nature play.
5. **Urban Wild Corridor** – In addition to creek crossings, the proposed channel improvements to the segment of Coal Creek underneath and adjacent to the Marshall Rd. crossing are intended to increase public access to the creek while stabilizing the creek edge during larger storm events. Improvements include stone slab channel retaining walls with natural grass terraces in between and large diameter river boulders for the drop structures that can be used as stepping stones. A small channel diversion is proposed below the bridge to create a shaded creek interaction area for children adjacent to the play area.

### **Landscape Plan and Aesthetics**

The landscape plans (Sheets 5-6) provide native, riparian plantings throughout the improved Coal Creek corridor and are consistent with typical stream bank restoration improvements that are required by permitting agencies, including Urban Drainage and Flood Control District, Colorado Department of Fish and Wildlife, and Army Corps of Engineers. The proposed plant

material provides a layered approach to the landscape conditions within and extending from the creek corridor. Wetland species will include herbaceous material such sedges, rushes, and native grasses. Riparian species will include cottonwood, willow, alder, and dogwood and will transition to the upland native and turfgrass areas. The extent of the proposed plant material is consistent with the future surrounding park improvements in order to limit disturbance to the channel plantings when the following phase(s) for the park improvements is constructed. Native seeding is provided outside of the proposed corridor plantings and within the disturbance area for the proposed earthwork activities.

The associated plant schedule tabulates the sizes and numbers for each proposed plant. Notes describe the proposed landscape materials (mulch, seed mixes, etc.). The landscape plans include species from the Design Guidelines as well as the Town of Superior approved plant list. Due to climatic and space conditions, plants from the Town of Superior approved plant list have been specified to promote plant diversity and meet the needs of the site.

### **Drainage**

The proposed storm drainage facilities included with this FDP are limited to approximately 90' linear feet of 18" diameter reinforced concrete pipe that will extend from the existing open channel below the existing Pond 11 (southeast corner of McCaslin Boulevard and Marshall Road). This proposed storm drain extension will accommodate the proposed creek and trail alignment prior to the construction of the surrounding park improvements. Drainage improvements for the entirety of Parks 1 and 2, however, have informed this design.