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TECHNICAL MEMORANDUM

To: Sean VonRoenn (East Rio Blanco County Metropolitan District) and Lisa Cook (Town of Meeker)
From: Noah Greenberg and Tony Somers, SWCA Environmental Consultants
Date: April 27, 2020
Re: **Summary of Initial Site Visit and Planning Discussions for Circle Park and 3rd/10th Street Access**

INTRODUCTION

SWCA Environmental Consultants (SWCA) has prepared this technical memorandum to summarize the observations and planning discussions which occurred during the April 10, 2020, site visit in Meeker, Colorado. The site visit was conducted by Noah Greenberg (SWCA) and David Bidelspach, P.E. (Five Smooth Stones Restoration, working as a sub-consultant to SWCA). Tony Somers, PLA (SWCA), was originally scheduled to participate in this site visit but was unable to join due to COVID-19 travel restrictions.

The site visit included the following specific activities.

- 1) Review the recently constructed Town Park to gain information regarding the design and amenities at that location, and to promote Circle Park and 3rd/10th Street designs that are consistent with Meeker's aesthetics and which provide new and supplementary amenities to those already present.
- 2) Conduct a fluvial geomorphological assessment of the White River at Circle Park (beginning just upstream of 3rd Street and extending downstream past Circle Park for roughly 100 yards).
- 3) Collect existing conditions information for Circle Park, 3rd Street, and 10th Street to facilitate the final design for Circle Park and conceptual planning for 3rd and 10th Streets.
- 4) Meet with Town of Meeker (Town) and East Rio Blanco County Metropolitan District (ERBM) Park and Recreation Department (PRD) staff to discuss big-picture goals for SWCA's design work; to discuss concerns and constraints with various project approaches; and to develop a better general understanding for how these projects can serve as an amenity to the community.

This technical memorandum summarizes SWCA's evaluation of existing conditions and conceptual design approaches for each of the three areas. General observations which apply to all three sites are provided as a stand-alone section.

GENERAL OBSERVATIONS AND INPUT FROM TOWN AND ERBM PRD

Meeker is in Rio Blanco County in northwest Colorado. With an economy that is driven in large part by ranching and hunting/fishing-based tourism, there is a strong connection to nature, and few places exist that can rival Meeker and its surrounding areas in this respect. The Flattop Mountains are located to the southeast of Meeker and are known as a remote wilderness area with productive high mountain lake and stream fisheries and abundant big-game wildlife. Expansive tracts of open range surround Meeker and are used for hunting and off-road vehicle recreation, with solitude and views that are world-class. People who love Meeker (either as residents or visitors) speak of the area's natural beauty, isolation from the chaotic outside world, and the down-to-earth character of the people who spend time here.

The White River originates in the Flattop Mountains and then flows through Meeker, providing ample opportunities for fishing. During SWCA's site visit, numerous individuals and small groups were observed walking the Town Park trail along the river, fishing from the riverbanks at Circle Park, and playing in the forest near 10th Street. The river provides an in-town connection to nature, a ribbon of greenspace, and recreational opportunity that is enjoyed by residents and visitors alike.

While talking with the Town and ERBM PRD staff, the following themes emerged.

- 1) Meeker has an appetite to enhance access and use of the river but does not want to become Steamboat Springs or Aspen. River-enhancement projects should promote safe access to the river to facilitate fishing, wildlife viewing, and other non "thrill" activities.
- 2) An important component of any successful project will be the protection of private property from risks including flooding, ice dams, trespassing, and vandalism.
 - a. Ice dams and associated flooding are especially problematic for the Town.
- 3) Design should focus on minimizing maintenance requirements.

CIRCLE PARK

Existing Conditions

Circle Park is located on the south side of the White River, accessed by a one-lane bridge. The existing amenities include a small tent campground, two covered picnic pavilions, a concave-shaped area used as an ice rink, a make-shift broken slab concrete boat ramp to the river, and roughly 250 feet of White River shore line that is used for fishing and river access.

An existing ditch conveys water along the south side of Circle Park to a water pump station which provides irrigation water to the cemetery, located immediately to the south of the park and on a bluff that is roughly 100 feet higher in elevation than Circle Park. Water that is not pumped to the cemetery is released to the White River, either through an overflow weir or from an outlet which can be used to drain the ditch.

A fluvial geomorphologic assessment of the White River through Circle Park was initiated during this site visit, including a survey of the channel thalweg, water line, banks, and representative cross sections. These data are being analyzed using hydraulic modeling software, but the initial observations of the channel indicate that many of the bank erosion and flood dam issues along this reach may be the result of a channel that is too wide for the hydrology of the system. This additional width reduces the hydraulic energy in the channel which contributes to two processes that are averse to the Town's interests.

- 1) Lateral bars are formed in channels with lower hydraulic energy during routine flow conditions. The lateral bars can modify the channel hydraulics, creating erosive forces on channel banks. This is occurring at Circle Park, where a mid-channel lateral bar is impeding flows through the central portions of the drainageway, which is promoting bank eroding hydraulics on both sides of the channel.
- 2) Lower hydraulic energy and shallow water both contribute to the development of a specific type of ice formation that is especially prone to forming ice dams.

Developed Engineering Design for Circle Park

Prior to SWCA's engagement for the Circle Park landscape design, the Town developed an engineering design for the park that includes the burial of the existing ditch, excavation of a fishing pond in the location that is currently used for the seasonal ice rink, and a single pavilion structure that would replace the existing two structures.

Landscape Design Goals

SWCA understands that the goals for the Circle Park landscape design are as follows.

- 1) Develop the park to compliment Town Park—provide a natural park area that highlights the river.
- 2) Provide safe and controlled access to the river for fishing and water recreation.
- 3) Develop a handicap-accessible ramp to allow wheelchair access to the river.
- 4) Develop a trail network that connects the various park elements, including the parking lot, campground, fishing pond, river access, and adjoining property trails.
- 5) The existing parking lot and road are undersized and should be designed to facilitate ingress, egress, parking, and pedestrian safety.
- 6) Enhance access to, and the aesthetic quality of, the designed fishing pond.
- 7) Promote stable bank conditions along the White River to protect and enhance the natural aesthetic quality of the park.
- 8) The landscape design should include a lighting plan (with power buried from the utility pole near the access bridge).
- 9) The landscape design should include a conceptual irrigation plan layout, with the expectation that the irrigation system installer will use this information to guide a design-build process.

Landscape Design Constraints

The constraints which apply to SWCA's landscape design are understood to include the following.

- 1) The project should cause no harm to existing resources, and hopefully improve flooding and ice dam conditions in the White River.
 - a. Protection of Circle Park banks should not be at the expense of other properties along the drainageway.

- b. The project should qualify for a no-rise certification relative to the 100-year base flood elevation.
 - c. The project should be designed to provide incremental improvements to the conditions that currently promote dangerous ice dam formation.
- 2) The Circle Park fishing pond layout, including fishing dock, are already designed. SWCA's landscape design should be consistent and supportive of these existing designs.
 - 3) The park does not have a sanitary sewer or potable water supply.
 - 4) Access to the agricultural property to the east of the park must be maintained for the land user.

Conceptual Design Approaches

Based on the results of SWCA's initial site observations, conversations with ERBM PRD and Town staff, and the fluvial geomorphological assessment, the conceptual approach for the Circle Park landscape design includes the following components (some of which are represented, schematically, in the maps provided in Attachment 1).

- 1) Improved road quality and parking lot, with the road circle being shifted to the northeast, possibly centered on the existing conifer tree.
- 2) A trail network that connects the bridge and parking lot to the planned fishing pond, river, campground, and existing trail that begins in the southwest corner of the park. The trail would be constructed of crusher fines or other natural material that is conducive to wheelchair use.
 - a. Educational signs/stations located at the fishing pond, along the banks of the White River, and/or on the handicap-accessible river access ramp.
 - b. Boulder or log benches located along the trail to provide sitting/resting opportunities.
- 3) A bank stabilization design that would include a j-hook weir on either side of the river, just downstream of the access bridge, concentrating flows into the channel center (toward the existing lateral bar).
 - a. This design would protect properties on both sides of the channel and would create better instream habitat for fish.
 - b. Using material from the existing lateral bar, build up the eroded banks along Circle Park to develop a terraced floodplain. The banks would be revegetated with typical native riparian woody vegetation that would provide aesthetic and wildlife value to the corridor.
 - c. A rustic fence (buck and rail or similar) or well placed vegetation could limit access between the trail and the White River. Access to the river would be provided at several fence (or vegetation) line breaks, with natural stonework providing safe footing to the river for recreation.
- 4) Develop design for a handicap-accessible ramp to be located just downstream of the access bridge, where the makeshift ramp is currently located. The ramp would be for pedestrian use only (i.e., not vehicles), should be designed to be accessed via foot traffic from the south (to avoid conflicts with vehicles), and should take advantage of the existing deep eddy that is located here.
 - a. A major obstacle to achievement of an ADA-compliant ramp will be the length of ramp needed to attain a 7.5% or flatter slope.

- 5) An improved fence along the park's east perimeter (buck and rail or similar) that maintains property boundaries, prevents cattle from accessing Circle Park's riverbanks, and includes a gate to maintain property access.
- 6) Develop lighting plan that promotes safety along the park road and parking lot.
 - a. Initially, bollard lighting is presumed to be the appropriate level of lighting. If more lighting is desired by the stakeholders, light poles could be incorporated.
 - b. The lighting plan should be dark sky compliant and will require coordination with the stakeholders to determine when lighting should go off.
- 7) Develop a conceptual irrigation plan layout that pulls water from the existing water pump house and delivers it to the major lawn areas throughout the park.
- 8) Develop a micro-grading and planting plan that achieves the following.
 - a. Introduces some minor topographic relief to break up spaces and create natural planting areas.
 - b. Uses native vegetation along the park perimeter, fishing pond, structures, and designated planting beds.
 - c. Conserves water by vegetating open lawn areas with low-water demand turf grass.
 - d. Provides a wind break by planting evergreen trees to the west of the camping areas, which would also provide privacy from the higher use areas of the park.
 - i. Maintain views to cemetery for 4th of July fireworks.

3RD STREET

SWCA is developing conceptual river access enhancement designs for 3rd Street.

Existing Conditions

The intersection of 3rd Street and the White River is presently a dead end of a street that is primarily lined with Town utility buildings and sheds. SWCA understands that the southeast-most building is scheduled for demolition but that most of the other buildings will remain for the foreseeable future. Where 3rd Street currently ends at the White River, there is A large pile of fine-grained sediment and debris is currently at the 3rd Street and White River intersection. A trailer park community is located along the river to the east of 3rd Street and Circle Park is located to the west. The White River flows in a primarily straight orientation by 3rd Street, with a small channel formed by a lateral bar near the riverbank and the main channel thalweg located near the opposite riverbank.

Design Goals

SWCA understands that the design goals for 3rd Street include the following.

- 1) Creating an alternative river access location that is less busy than Circle Park.
- 2) Converting an existing industrial area to be an amenity for the Town.
- 3) Protecting private property to the east, with controlled access for residents.

- 4) Providing a connection with Town Park.
- 5) The 3rd Street access area does not need to be a stand-alone park area. Town Park is adjacent to this area and provides many park amenities.

Design Constraints

The primary design constraints expected at the 3rd Street access area include the following.

- 1) Existing Town buildings will limit the area that can be incorporated into the design at this location.
- 2) The side channel immediately downstream (west) of 3rd Street needs to remain as it serves as a water intake from the channel.
- 3) A water transfer station is located roughly one block north of the White River on 3rd Street—parking and access will need to be designed to be compatible with this truck traffic.

Conceptual Design Approaches

The conceptual design approach is expected to include the following components, which are depicted schematically on the maps in Attachment 1.

- 1) Removal of the large sediment pile and development of a stepped-stone river access/sitting area that is enhanced by riparian planting along the path to the river access.
- 2) Creation of a “link” trail between Town Park and 3rd Street.
- 3) Construction of a fence along the private property line to the east, with a gate installed for resident access to 3rd Street.
- 4) Explore potential for a parking lot or turn around area at the end of 3rd Street.
 - a. Managing the interface between pedestrians/cars at the river access area and the industrial truck traffic associated with Town facilities will be important.

10TH STREET

SWCA evaluated an area to the northeast of the 10th Street bridge for potential access improvement.

Existing Conditions

The area is currently an undeveloped riparian floodplain leading from a non-designated parking area to the river. Large trees create a canopy with a relatively open understory. The area is largely vegetated with hydrophytic plants and wetlands may be prevalent. SWCA understands that the public right-of-way remains fairly close to the 10th Street bridge. The private property is undeveloped and there was discussion about the landowner’s potential willingness to allow the access project to encroach onto their land.

Design Goals

The design goals for the 10th Street access include the following.

- 1) Providing a safe opportunity to park and access the river.
- 2) Managing user traffic to protect private property and the riparian habitat.
- 3) Concentrating use in a controlled manner to prevent the ongoing use of the south side of the 10th Street bridge for river access.

Design Constraints

Design constraints that will need to be addressed at this location include the following.

- 1) The public right-of-way is relatively narrow; improvements at this location will need to be confined to this corridor unless an agreement with the adjacent property owner is pursued.
- 2) Managing foot traffic to remain on the trail will be important to protect the fragile riparian environment and to prevent trespassing onto the adjacent property.
- 3) The area is prone to seasonal flooding and the design should minimize post-flooding maintenance requirements.

Conceptual Design Approaches

SWCA anticipates developing a conceptual design for the 10th Street access that includes the following components (see maps in Attachment 1 for design component locations).

- 1) A designated parking lot with appropriate signage.
 - a. Trash cans?
- 2) A trail that connects the parking lot to the river.
 - a. Consider a boardwalk to limit wetland impacts, facilitate use during wet weather, and manage foot traffic.
 - b. If not a boardwalk, consider using a low fence to manage traffic.
- 3) Depending on the level of coordination with the adjacent property owner, potential fence (with gate) to prevent trespassing but allow resident access to the 10th Street river access.
- 4) Construct a stepped-stone entry to river at the base of the 10th Street bridge abutment.
 - a. If adjacent property owner is amenable, consider moving river access roughly 20 feet upstream to a natural eddy that would be ideal for entry/exit from the river.

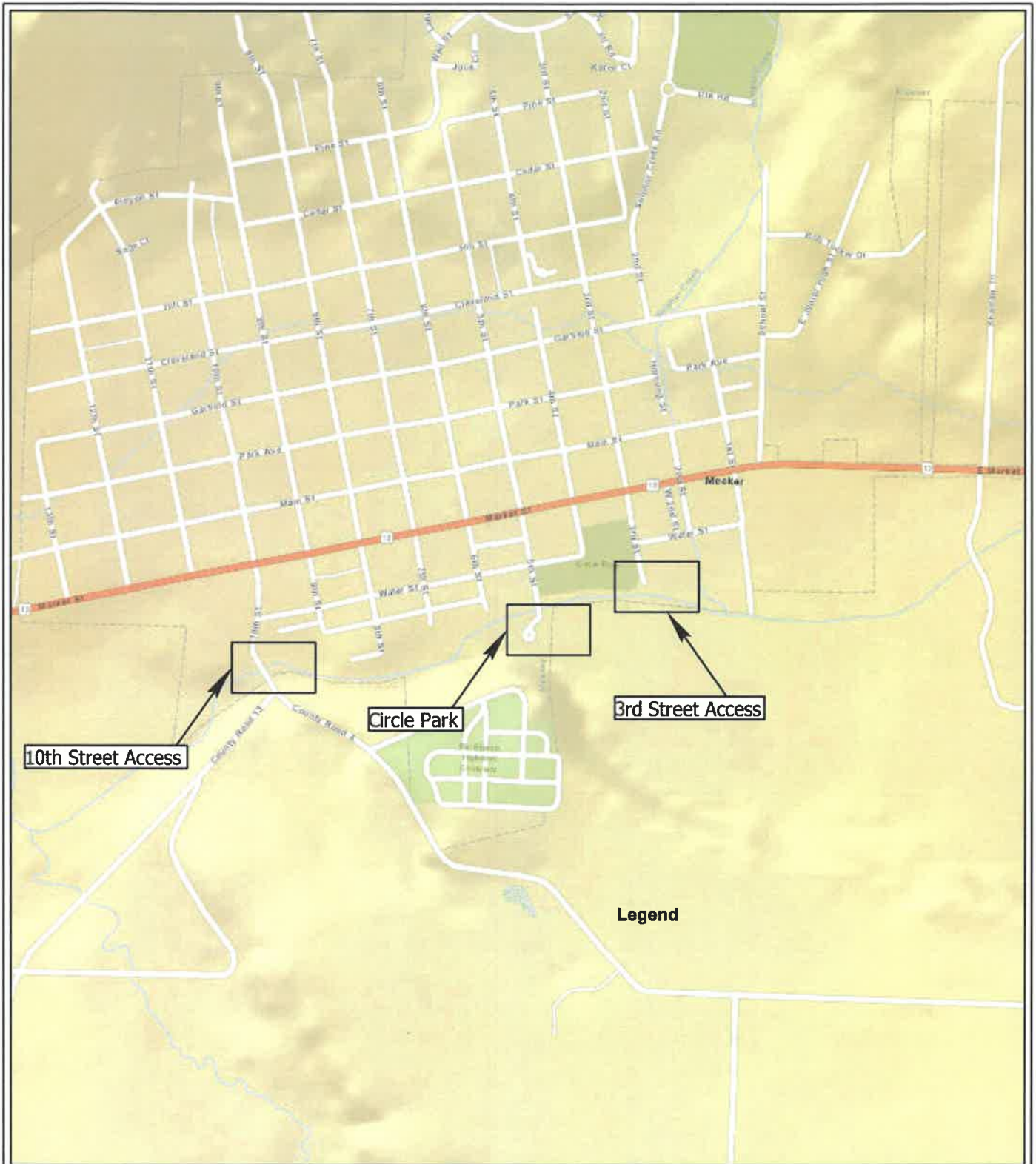
INFORMATION REQUEST

If available, SWCA requests the following information to facilitate development of the conceptual designs for the 3rd and 10th Street access and landscape design at Circle Park.

- 1) Landscape design for Town Park;
- 2) Bridge design (including survey, wetlands delineation, and hydraulic study) for 10th Street bridge; and
- 3) Parcel boundaries for Town.

ATTACHMENT 1

Circle Park, 3rd Street, and 10th Street Schematic Conceptual Design Maps

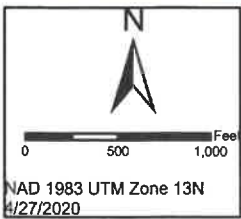


10th Street Access

Circle Park

3rd Street Access

Legend



Meeker Circle Park Design and White River Access
Location Map
Town of Meeker, Rio Blanco County, Colorado

SWCA Project No. 480863

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NOTE: Although not depicted here, landscape design will include trail network, planting plan, lighting plan, irrigation system layout, and other amenities.

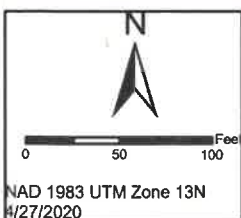
In-channel Structures
to Protect Both River Banks

Improved Fence
Extend toward River to Limit
Cattle Movement into Park

Handicap Accessible
Ramp to River

Designed Fishing Pond (typ)

Implement Bank Stabilization, with
2-3 Access Locations from New Trail



Meeker Circle Park Design and White River Access
Circle Park
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