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NRDP
BUTTE OFFICE

BUTTE AREA ONE RESTORATION

"Conservatory Consolidated" - SMALL PROJECT SUBMITTAL FORM

A. Project Summary

This submittal is from Community Preservation Design (CPD) a local Architectural Firm whose Principle is Mark A. Reavis, Licensed Architect State of Montana. CPD is extensively involved in Mine-yard preservation and enhancement for the overall benefit of the Butte Community. The project is intended to demonstrate and implement how clean storm-water can be captured and utilized to irrigate enhanced plantings on a reclaimed mining site. The demonstration is to be implemented at the Mountain Consolidated Mine-yard. The project proposes to utilize the mines hoist house's roof runoff water to provide long term irrigation to a planting area that supports planted and volunteered plants to thrive without human intervention after established. The roof run-off is currently collected by a perimeter ground gutter and dumps it down the hill without benefit. The project intends to collect this clean water and utilize it to irrigate native and volunteer plants within a designated strip that enhances the area. The recently established trails and existing Forman's vegetation can be further enhanced to a point that is reminiscent to lost recreational aspects of the Columbia Gardens. It is important to note that reclaimed land will not be disturbed, but is to be capped with switch-back diversions and installations that hold and control the release of water. Installations will hold installed soil as well as retain natural soil building (see conceptual plans). The project will be professionally bid and managed by CPD as an architectural project by Mark Reavis who has 33 years of experience in Butte.

B. Project Goals and Objectives

The first step is to provide for the collection of the water with plumbing installation with in the current discharge tunnel. Pipe this water to the proposed planting strip to be developed on the hill side and at its base (see plans). Establish switch-back installation consisting of lumber and rip-rap. Provide soil-retention fabric and water holding material such as bentonite. Construct base retention area made primarily of large rip-rap (results that can be seen at the Anselmo's Timber Dump with extensive volunteered plants). Bring in clean fill as well as organic compost placed behind the retention structures. Provide temporary water supply to establish plantings. Provide small tree and shrub seedlings in planting area and sow seeds within area. Provide monitoring and weed management. Prepare interpretive signage for educational opportunity. The primary objective is to establish a self-sustaining naturalized area that contributes to the replacement of lost natural resources, conserves and utilized rain water and provides for the public's benefit of enjoying an outside experience in a naturalized setting.

C. Project Benefits

Water resources and native plants have suffered injury from extensive mining and smelting activities within the Butte area. By establishing an enhanced vegetated area that is self-sustaining it can demonstrate how to further utilize limited water resources and techniques possible to heal and enhance other sites. This primary historic site provides trail access that allows individuals to enjoy a walking opportunity within an improved natural setting.

D. Project Implementation

CPD when awarded the project will secure cooperation from BSB, the State and EPA for necessary approvals. CPD will also request securing BSB's participation of their contribution called out in this project submittal. The project will be implemented with professionally prepared bidding documents for work by the Architectural Firm CPD. NOTE: CPD is donating ½ of its professional fee as a public benefit and contribution to this project. All construction work will be contracted from qualified contractors with solid bids and/or 2 quotes per BNRC/NRDP requirements. CPD will supervise work and approve payments. Project updates and a substantial completion report will be prepared and submitted by CPD. Project monitoring is expected to last for two growing seasons. CPD welcomes any additional participation and modifications that create a greater "Synergy" for this project.

E. Project Schedule

The design of the project will take place as soon as awarded. The project will be bid in late winter for implementation in early spring for the major construction period. Planting and seeding to take place in late summer. Interpretive signage will be prepared in late fall or winter for installation the next spring. Supplemental watering will take place as part of planting with the next spring cutting back on water usage planned by ½ with the next growing season cutting that back again by half. Additional supplemental watering will take place if plant or hot weather conditions indicate need. It is proposed by the end of the 3rd season of existence that no more watering will take place with all water provided by the roof water run-off system.

F. Monitoring Activities

It is planned that the project will be monitored for a 3 year period with a final report prepared in the spring of the 4th year that indicates plant survival and growth. During the growing season some weed control (non-chemical) and minor corrective repairs will take place. Long term O&M is not predicted; it is the intent that this is an installation that is self-sustaining with little to no maintenance.

G. Project Budget

(This is a preliminary cost estimate with costs grouped in general categories, specific per item take off can only be calculated after the project design is completed).

- **Construction Materials**
  - Bolder
  - Rip-Rap
  - Gravel
  - Retention timbers
  - Soil fabric, Filter "snakes"
  - Interpretive plaque

  .....$8,276
- **Fill Materials**
  - Bentonite liner layer
  - Clean fill
  - Organic Compost
  - Non-decomposed cover layer – bark, leaf debris (water/moisture retention)

  ..... $6,180
- **Plant Materials**
  - Tree seedlings
  - Shrub seedlings
  - Seeds

  ..... $4,250

Subtotal 18,706

- **Labor and delivery $56,118**

Total Material & Labor $74,824

A&E fee @ 15% $11,223.6 with ½ donated match ..... $5,611.80 = $80,435.80

MATCH

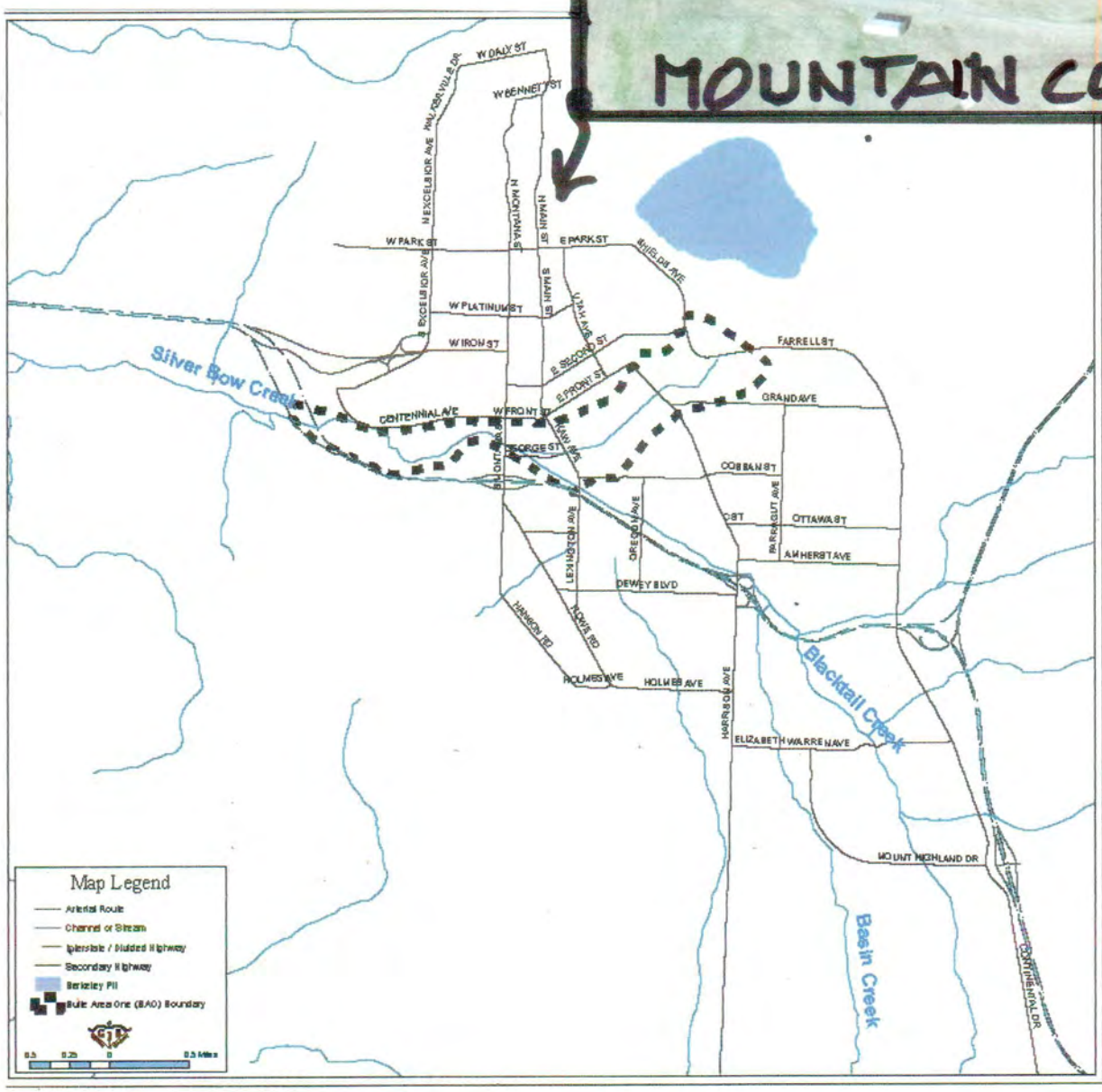
BSB water @ $1,540

CPD Architectural Donation @ $5,611.80

Total Match @ $7,151.80

Total Project = $87,587.60

E Center St
MOUNTAIN CON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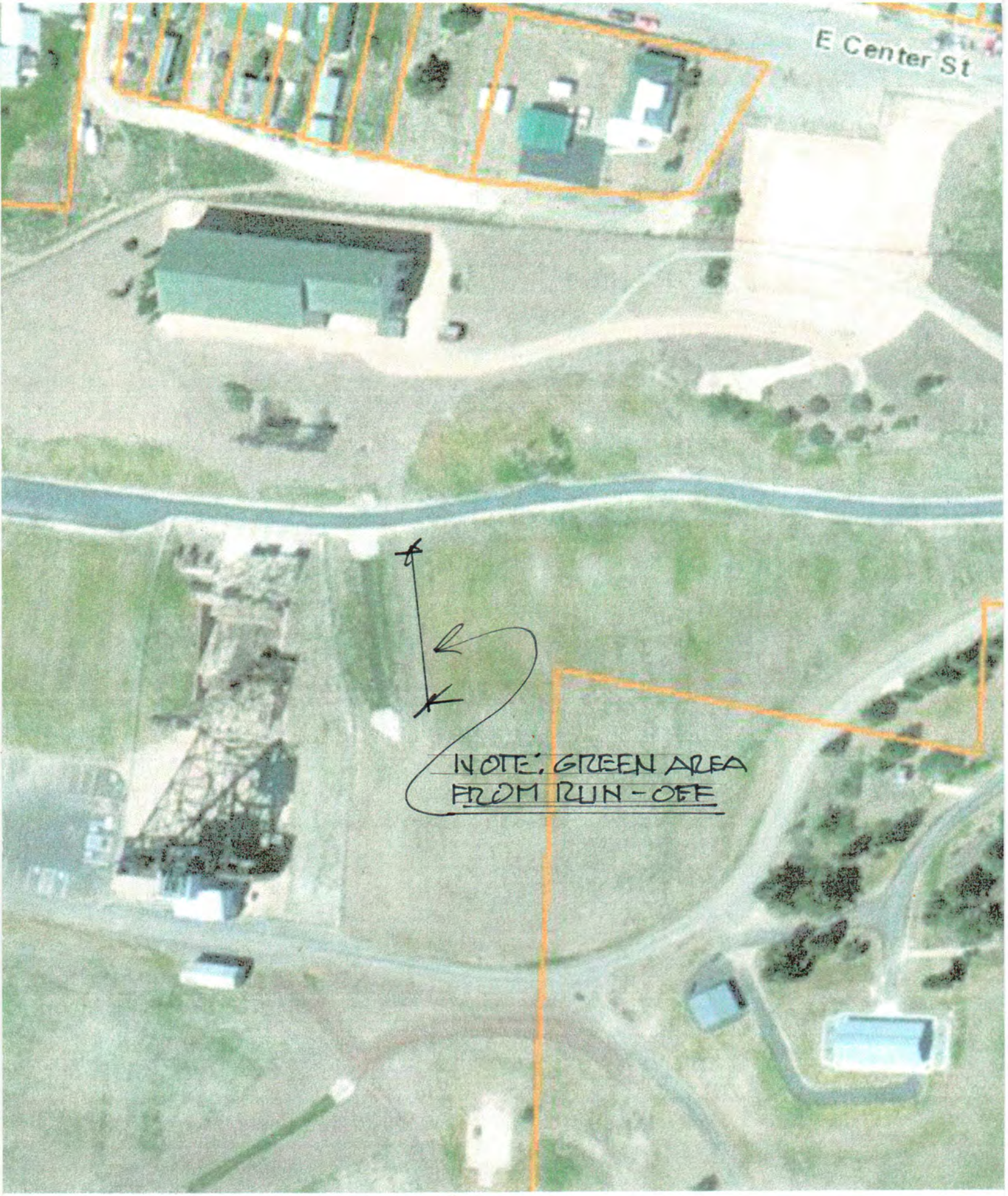
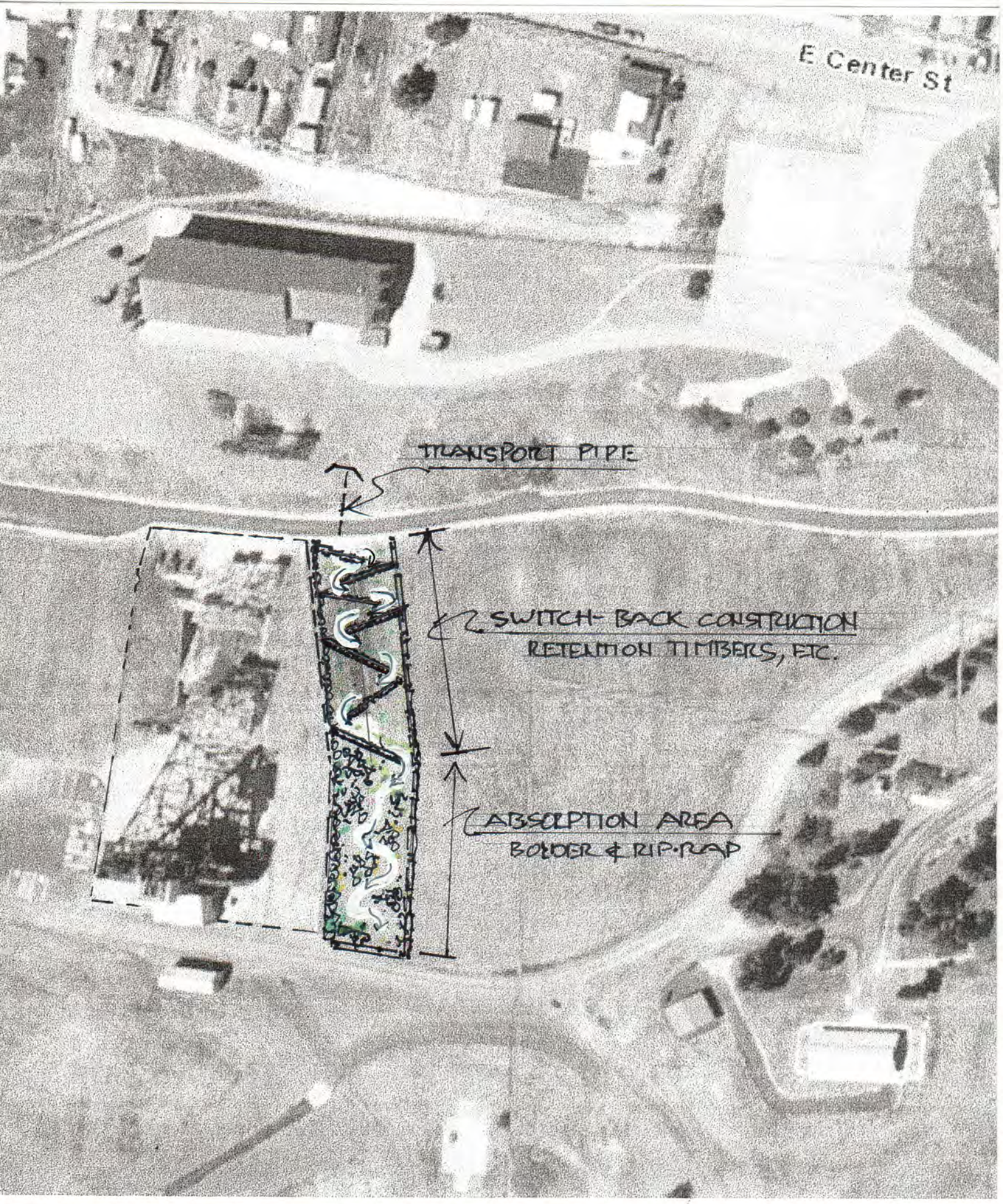
FARRELL ST
GRAND AVE
Silver Bow Creek
CENTENNIAL AVE
W FRONT ST
GEORGE ST
COBBAN ST
C ST
OTTAWA ST
AMHERST AVE
DEWEY BLVD
LEXINGTON AVE
OREGON AVE
HANSON RD
HOLMES AVE
HARRISON AVE
ELIZABETH WARREN AVE
Blacktail Creek
MOUNT HIGHLAND DR
Basin Creek
CONTINENTAL DR
Map Legend
Arterial Route
Channel or Stream
Interstate / Divided Highway
Secondary Highway
Berkeley Pit
Butte Area One (BAO) Boundary
0.5 0.25 0 0.5 Miles

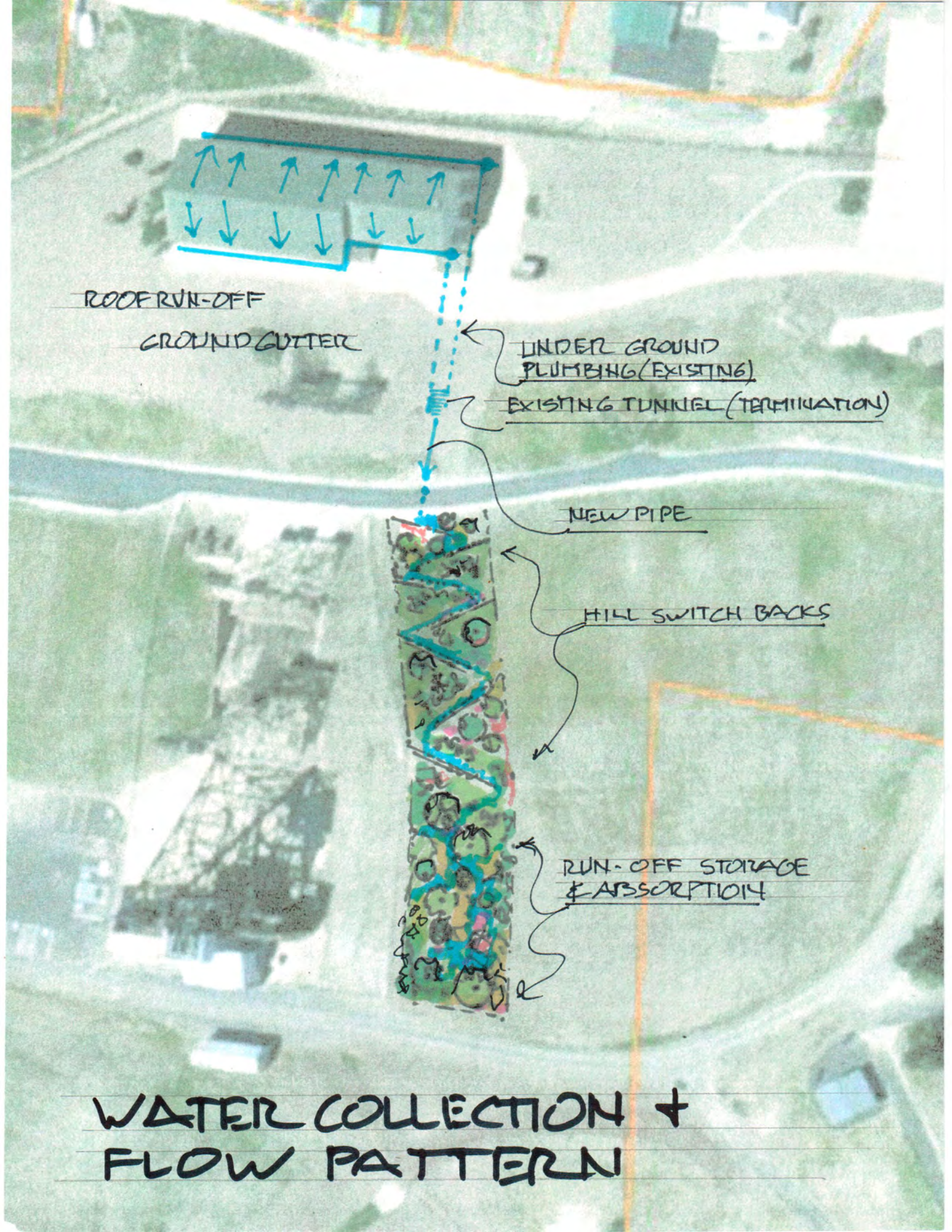


EXISTING RECLAMATION

CONSERVATORY CONSOLIDATED



CONSTRUCTION



WATER COLLECTION + FLOW PATTERN

MT. CON

ANSELMO TIMBER DUMP