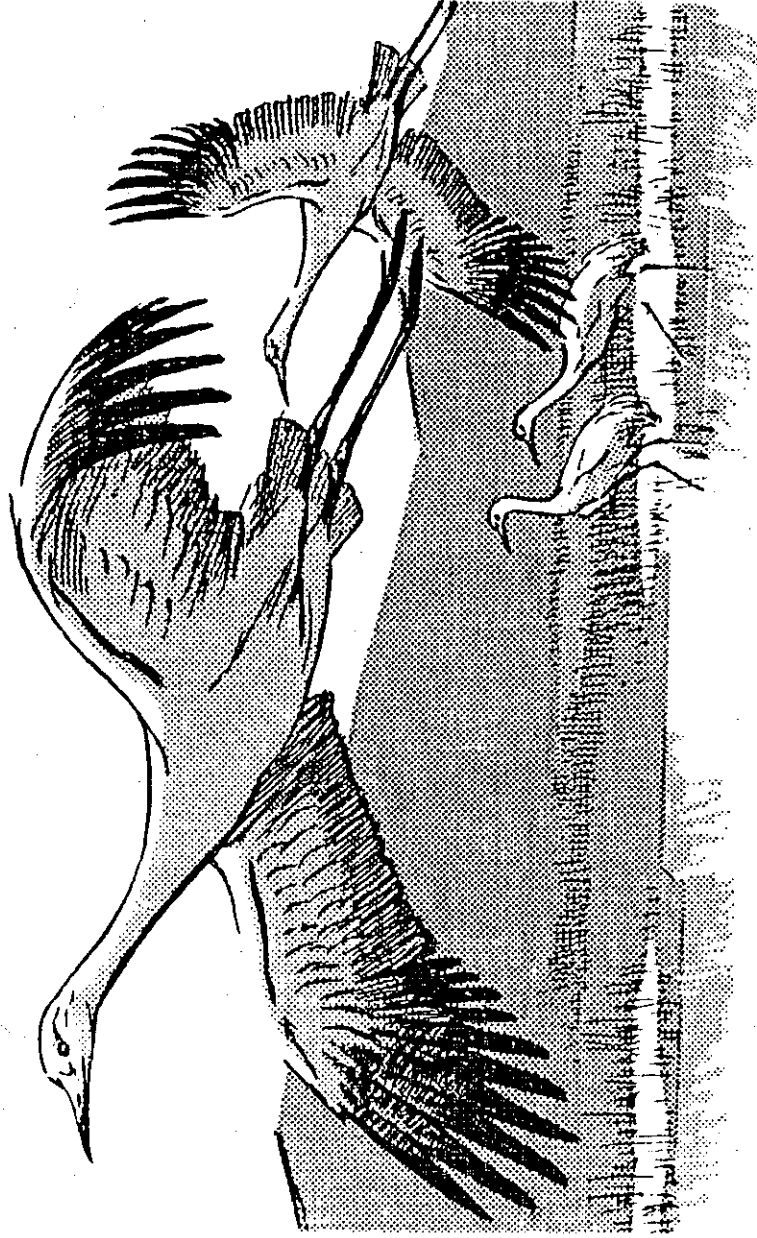


# **Interpretive Plan Watchable Wildlife in Parks**

---



---

## **Stagecoach Wetlands Wildlife Observation Area**



# **Interpretive Plan**

## **Stagecoach Wetlands Wildlife Observation Area**

---

### **Watchable Wildlife in Parks**

**Stagecoach State Park  
Steamboat Springs, Colorado**

**Department of Natural Resources  
Division of Wildlife  
Colorado State Parks**

**17 January 1994**

**John W. Hanna, Project Coordinator  
Paul Scalon, Landscape Architect  
Inside Outside  
Rte. 1, Box 172AA  
Elgin, TX 78621  
(512) 285-3801**

---

# Table of Contents

---

|                                                         |    |
|---------------------------------------------------------|----|
| 1. Management Summary                                   | 3  |
| 2. Site Conditions and Resource Summary                 | 4  |
| 3. Management, Interpretive, and Educational Objectives | 6  |
| 4. Theme and Storyline Elements                         | 8  |
| 5. Proposed Management Plan                             | 10 |
| 6. Proposed Interpretive and Educational Experiences    | 12 |
| 7. Description of Interpretive Media                    | 14 |
| Site Plan                                               | 14 |
| Parking, Viewing Terrace, and Trailhead                 | 15 |
| Universal Interpretive Trail                            | 16 |
| Observation Blind                                       | 17 |
| Pond Study Platform and Blind                           | 18 |
| 8. Cost Estimates                                       | 20 |

# 1. Management Summary

---

The Stagecoach wetlands mitigation area is a 78 acre parcel located at the west (inlet) end of Stagecoach Reservoir on the Yampa River. Owned by the Upper Yampa Water Conservancy District (UYWCD), the area was set aside and developed as a wetland to mitigate the loss of wetlands inundated by the creation of the reservoir. The UYWCD has leased the area to the Colorado Division of Parks and Outdoor Recreation (DPOR). The DPOR has entered into an agreement with the UYWCD and the Colorado Division of Wildlife (DOW) for joint management of the area. In general, DPOR manages people and recreation aspects, UYWCD manages water flows and maintenance of ditches and fences, and the DOW manages wildlife and habitat aspects.

The wetlands mitigation area is a major project that includes a number of related parts: 1) it is and will remain a functioning wetland, 2) it is a public recreational area, and 3) it is a wildlife management area. The wetland will be managed and manipulated as necessary to ensure continued functioning for mitigation purposes. The public will be allowed to use the area for recreation and education, but the use will be closely monitored and managed to ensure minimal impact to the wetland. The habitat and wildlife species will be managed for the purposes of waterfowl, wildlife, and fishery production.

The value of the area for recreation and education has come to the attention of a number of groups and agencies. Initially, the South Routt County (SOROCO) School District saw the opportunity to use the area for environmental studies and outdoor education. Their work, in cooperation with the DOW, spawned some creative thoughts on educational, fishing, hiking, and watchable wildlife opportunities. This early effort evolved into this planning effort. A partnership was formed between SOROCO schools, DPOR, DOW, Ducks Unlimited, UYWCD, the U.S. Forest Service, the U.S. Bureau of Land Management, Yampa Valley Fly Fishers, and the Yampa Valley Alliance. The goals of this partnership are to:

- maintain a functioning wetland area,
- provide opportunities to the public for outdoor education and recreation, and
- ensure accessibility to physically challenged users.

The Stagecoach site was chosen by the partners for this joint project due to its close proximity to the reservoir and its 250,000 annual visitors and the inclusion of the site within the Yampa Valley Trail corridor. The site has good access and high visibility so that all the partners can benefit from the project.

The operations and maintenance of the area and its future facilities will be the responsibility of the DPOR with continued support and input from the partners.

## 2. Site Conditions and Resource Summary

---

### Site Conditions

The Stagecoach Wetlands Observation Area occupies approximately 80 acres at the upper end of Stagecoach Lake on the Yampa River (see Site Plan, p. 14). The intersection of County Roads 14 and 16 is adjacent to the property. Historically, this area was an agricultural hay meadow that had extensive grazing and a ranch headquarters. Demolition and removal of buildings, along with cessation of agricultural operations paved the way for the development of wetlands as a mitigation project after Stagecoach Lake was constructed. A series of seven ponds and connecting watering ditch system taking water from the Yampa River form the nucleus of the habitat improvements creating the wetland conditions. There are no control structures to fill the ponds individually or vary water levels within individual ponds. An all-year spring exists on the property that could be developed for wildlife watering. Boundary fencing is incomplete and some sections are deteriorated.

County Roads 14 and 16 form the northern boundary of the property and a single ownership forms the southern boundary of the elliptically-shaped parcel. The Stagecoach development nearby is requesting acquisition of a powerline easement either across or adjacent to the area which could also have substantial impact on the visual quality of wildlife viewing. A power line already exists along the road corridor. A large gravel mine on the mountain top to the north has a substantial impact on north-facing vistas across the area. The existing vista from County Road 14 across the property is of high quality and should be maintained.

### Resource Summary

Upland grasses predominate in the wetland with willow shrub community along the banks of the river and adjacent to some of the pond shorelines. Planting of various species of wetlands vegetation are aimed at gradually converting the area to a more productive wetland status.

Existing wildlife uses include wintering elk, deer, geese, a variety of other waterfowl, and passerines. Until habitat improvements are completed and maintained, productivity of the area will not realize its full potential.

A nesting pair of sandhill cranes has been using the area. Some fish spawning occurs in the river. Goose and other waterfowl production is occurring on the site. Further development of screening plantings and nesting structures/islands will enhance waterfowl production. Fish populations are presently confined to the river and Pond 8. It is desirable that none of the ponds be developed for fishing and measures

need to be taken to ensure that fish populations are not established in the other ponds. No fish screening structure currently exists to prevent fish from entering the ponds from the reservoir. Stream improvements will provide increased cover, spawning beds, and fishing opportunities for persons with mobility limitations. A wide variety of habitat improvements for appropriate wildlife populations will be undertaken to ensure diversity and provide interpretive opportunities.

### **3. Management, Interpretive, and Educational Objectives**

---

#### **Management Objectives**

The objectives of management of the site are a reflection of the three primary managers; the Upper Yampa Water Conservancy District, the Division of Parks and Outdoor Recreation, and the Division of Wildlife. Those objectives include:

- Maintain the site as a functional wetland
- Provide outdoor education within the wetland ecosystem for local schools and the public
- Provide recreation opportunities such as wildlife observation, hiking, and fishing
- Provide handicap access to the area for all of the above activities.

Detailed site analysis and evaluation of site potential for wildlife observation for educational purposes suggest the following amended management objectives:

- Maintain the site as a functional wetland and enhancing the site's ability to support a diversity of species and provide their requirements
- Take measures to reduce human impacts on the wildlife resource while providing ethical watchable wildlife opportunities
- Provide recreation opportunities such as wildlife observation, walking, aesthetic enjoyment, and stream fishing
- Provide handicap access to the area for the above activities.

#### **Interpretive Objectives**

The general public visiting the Stagecoach Wetlands Wildlife Observation Area will be able to:

- Identify the cooperators on the project, not just the primary managers
- Correctly identify common species of wildlife being observed
- Relate how the wetland was created, how it works, and the reason it was created
- Identify the value of wetlands to humans and wildlife
- Identify and practice appropriate wildlife viewing behavior.

#### **Educational Objectives**

A site plan will be developed that will allow the following types of studies to achieve environmental education learning and experiential outcomes:

- Practice of orientation and map utilization
- Study impacts of development and stream improvement on water quality

- Water study
- Fisheries study
- Willow study
- Nesting study
- Study of water rights and manipulation
- Observation and identification of wildlife
- Discussion of preservation versus use of stream and wetland resources
- Identification of wetland vegetation
- Practice birding
- Provide for hands on involvement of school children in planning development, construction, and use of the area (in order for the children to protect the site and consider it special, they must have "ownership" in all aspects of the project).

# 4. Theme and Storyline Elements

---

## Theme

The theme for the Stagecoach Wetlands Observation Area is designed to quickly orient recreationists and school children to the major significance of the area. It needs to quickly capture the visitor's imagination and focus their interest. The selected theme for the area is:

## Focus on Watchable Wetlands Wildlife

## Storyline

The storyline is a summary of the major learning elements that are to be included in the development of interpretive media. Each element and its subheadings supports the theme and contributes to the overall visitor experience. There is also a direct relationship to the interpretive and educational objectives from the proceeding section. The storyline for the area is:

### Focus on Watchable Wetlands Wildlife

#### I. Orientation to the Site and its Management

- Relationship between the dam, lake, river, and the wetland
- A created wetland
- Wetland habitat characteristics
- How the wetland is maintained

#### II. Types of Habitat and Related Watchable Wildlife

- Ponds and mud flats and waterfowl
- Stream and trout
- Wet meadow and sandhill cranes
- Dry meadow and meadowlarks
- Upland and deer/elk
- Willow thicket and passerines
- Insects

#### III. Interrelationships and Natural Cycles

- Larvae to adults
- Natural history of trout
- Insects to fish to humans
- Wetlands through the seasons

#### IV. Wildlife Watching Hints

- Movement
- Color contrast
- Habitat/species relationships
- Watching without disturbing – ethics
- Photographing wildlife

#### IV. Special Consideration Species

---

## 5. Proposed Management Plan

---

A formal natural resource management plan for the Stagecoach Wetland does not exist. However, several funding proposals spell out management details which are summarized below with some visitor use management suggestions added. The interpretive and educational experiences reflect the management directions suggested in this section.

### Management Plan

- The wetland area needs to be enhanced for waterfowl nesting by modifying the vegetation to that preferred and the stream banks need to be stabilized (revegetated) to prevent erosion. Additional top soil needs to be added in various spots and appropriate vegetation planted.
- To insure proper pond management, the ditch system needs to be modified and separate headgates need to be installed so that each pond can be filled and drained independently.
- Nesting sites and success could be increased by the construction of islands in the ponds and addition of nesting boxes.
- Construction should be done during fall to avoid disturbance to breeding, nesting, and rearing seasons.
- Screening plants should be planted along the ditch road so that water manipulation activities can occur with minimal disturbance to wildlife in the wetland.
- Stream structures will be developed to facilitate spawning and create areas where physically impaired persons can safely stream fish with good possibility of success.

### Visitor Use Management Considerations

The use of this wetland for educational and interpretive purposes forces certain special considerations onto the wildlife management plan. The following considerations should be given to public use:

- Public use should not be encouraged along the ditch service road. This area is highly visible to the prime wetland areas and human intrusion creates disturbance to waterfowl using the ponds and adjacent upland areas.
- The abandoned homesite area appears to be receiving heavy use from great blue herons and could possibly be on its way to becoming a rookery with supplemen-

tal tree plantings. Public use should be screened from this area to minimize disturbance of this site. Regardless of the herons' intentions, the presence of large conifers and cottonwoods creates good potential nesting and roosting for raptors and other birds. The watering pond near this site creates additional observation opportunities if observation blind adequately conceals human movements.

- Several areas of concentrated waterfowl activity were noted on the south sides of the ponds near the ditch road reinforcing the need to reduce and screen use along this road.
- Care should be taken to avoid the beaver lodges along the river bank.
- Sandhill crane nesting has been observed in the area. The known nesting site should be avoided and human activity screened from view.

## **6. Proposed Interpretive and Educational Experiences**

---

### **Interpretive Experience**

Visitors to the Stagecoach Wetlands will first encounter roadside approach signage informing them of a wildlife observation overlook and observation trail ahead. Pulling into the overlook parking area, visitors will pass a sign, viewable from their vehicle, with a map briefly describing the overlook and trail. Leaving their vehicle, the visitors will walk a short distance down a universally accessible paved trail to a viewing terrace that gives a view of the lower half of the wetland and the upland slope to the south of the wetland as well as several life zones. Major interpretive signage at this location describes the creation of the wetland, the mitigation concept, and the habitats and potential wildlife to be viewed. A height-adjustable telescope (optional) allows persons of all heights to view wildlife out in the wetlands.

Departing the overlook, visitors continue on down the universally accessible trail or the sleeper aggregate trail toward the river bottom where they encounter the restroom and the special populations fishing bridge crossing the river. At the bridge, a sign introduces the self-guided trail, a listening station, and welcomes visitors to the Watchable Wildlife experience. Crossing the bridge, visitors encounter the first of the signs describing stream habitats and the associated watchable wildlife. A couple of nodes on the bridge are available for fishing from wheelchairs. These nodes will be signed with the wheelchair symbol designating them for persons with special needs.

On the south side of the river, visitors encounter a junction and sign describing the two options. To the right is the access to the pond study platform, marsh blind, and additional fishing nodes. This trail to the pond study platform is gated past the march blind and signed for "Educational Groups Only." To the left is the self-guided trail and wildlife observation blind. Taking the left trail leads visitors downstream to additional self-guided trail signs and several more special access fishing nodes. Signs describe shoreline riparian habitat and stream habitat improvement features encouraging visitors to look for inhabitants and their behaviors and adaptations.

A short distance downstream, the trail turns inland through the willows, wetland, and gradually ramps up to the wildlife observation blind. Interpretive signs demarcate each change of habitat. At the observation blind, visitors encounter another height-adjustable spotting scope (optional) and identification signs interpreting the behavior of the more commonly seen species.

Returning to the junction by the bridge, visitors can choose to go to the marsh blind or additional upstream special access fishing nodes. Educational groups can go

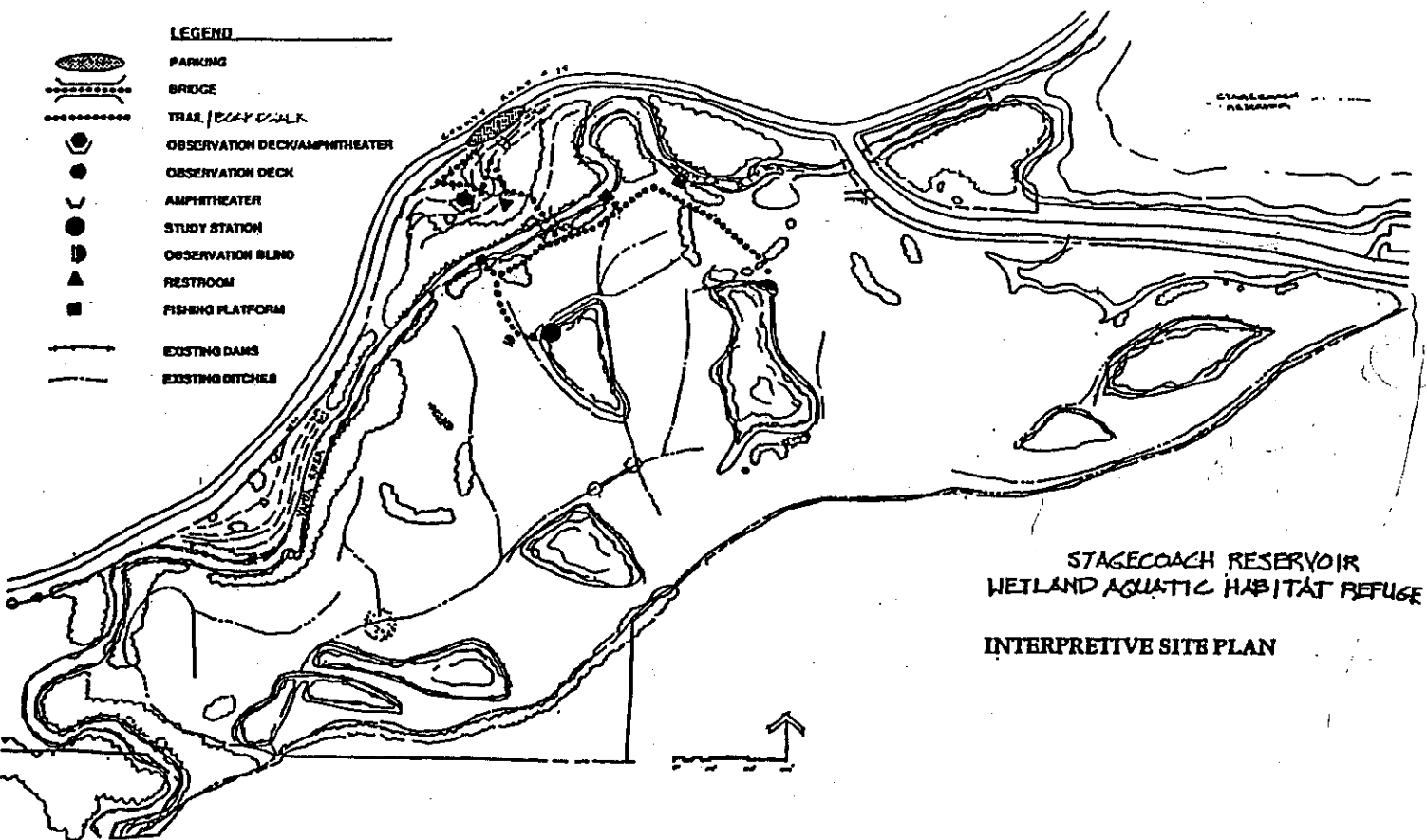
to the pond study platform where they will encounter interpretive signs describing the pond habitat and the systems operating in the pond. Another spotting scope (optional) is available for watching wildlife through the blind.

## **Educational Experience**

Educational groups will arrive at the overlook parking area, unload, and take the short walk to the viewing terrace and orientation amphitheater just below the interpretive signs at the overlook. This small amphitheater will accommodate one class (up to 30 students) and allows the leader to orient the students to the site while they are able to compare what's being seen with their maps. From the amphitheater, the students can be split into two groups with one group taking the self-guided trail to the observation blind and the other group going to the marsh blind and pond study platform and blind. After a suitable study period, the groups can exchange places. Since groups will be using both the observation blind and the pond study platform at the same time, it will be necessary for both structures to be screened. Uniform Building Code requires that the structures and any boardwalk over 18 inches above ground be protected with hand railings.

# 7. Description of Interpretive Media

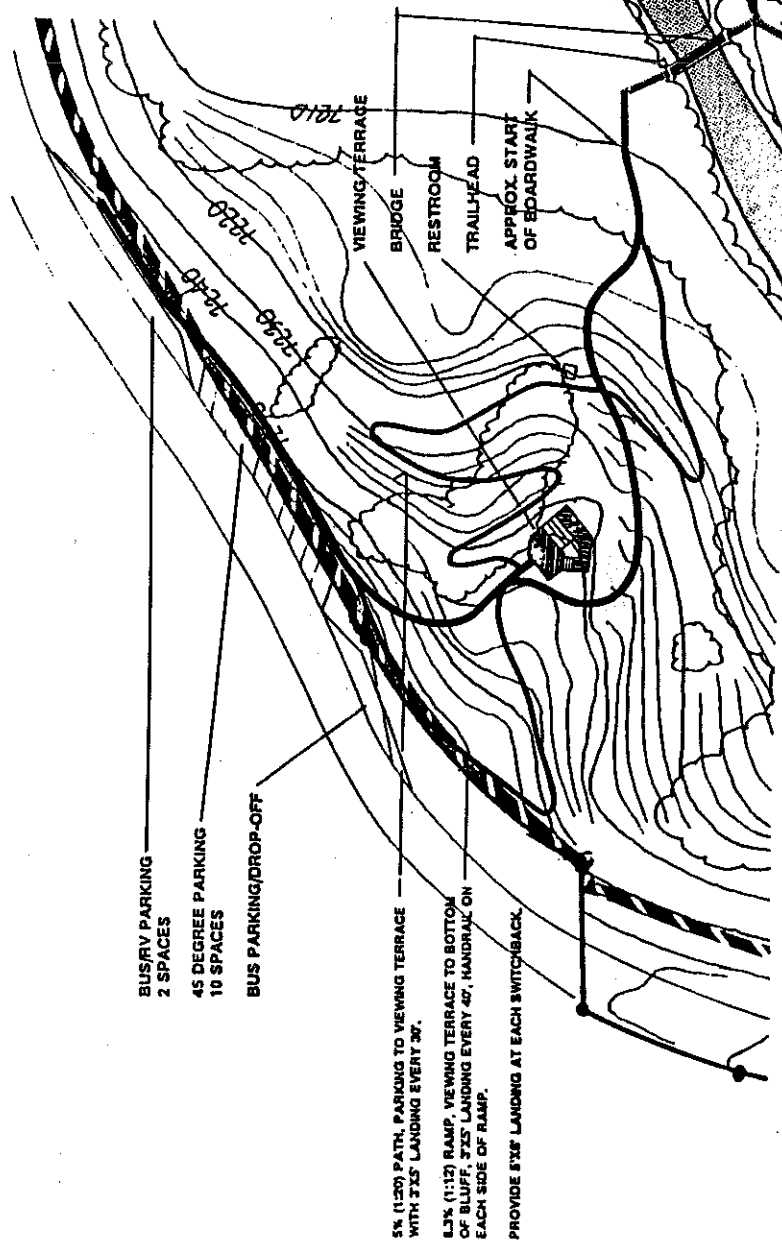
## Site Plan



## Parking, Viewing Terrace, and Trailhead

Parking will be provided for two school buses or oversized recreational vehicles and ten cars. When the bus parking is occupied, the school bus can unload and park at one of the pull outs on the north side of the road to the east. A large sign (for reading from the car) will be placed at the parking lot entry announcing fee collection and describing the purpose of the area and the facilities. A paved trail at wheelchair standard grades will lead to the overlook where signs and an adjustable-height viewing scope interpret the scene. Just below the overlook, a small amphitheater, capable of seating 30 children blends into the hillside. At the bottom of the hill, below the overlook, is the restroom and trailhead for the self-guided trail. Signs at the overlook and trailhead are laser etched on low angled posts.

### Plan for Viewing Terrace



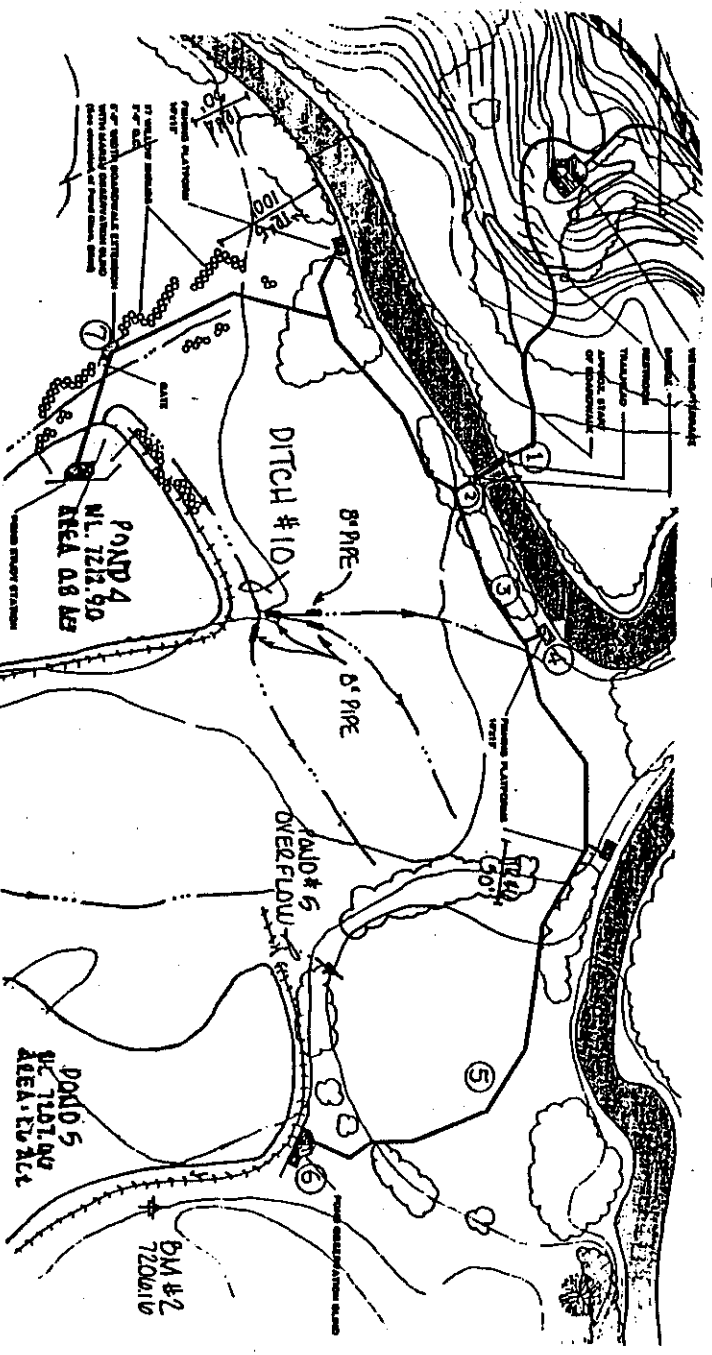
## Universal Interpretive Trail

The self-guided interpretive trail will consist of a trail head just prior to the bridge crossing and seven interpretive signs at the following locations:

- 1) Trailhead - Introduction to trail, time and distance, role of water in wetland
- 2) Bridge - Habitat for fish, concept of aquatic food chain
- 3) Willows - Passerines, beaver, concept of shelter
- 4) Stream - Natural and human created stream structures, adaptation of fish to those structures, stream morphology, fish species i.d., and life cycles
- 5) Wet Meadow - Water quality improvement, food, nesting area, plant i.d.
- 6) Blind - Species and habitats being observed, wildlife behaviors, migration patterns
- 7) Marsh Observation Blind - Sandhill cranes and importance of wetland habitats

The trail will be constructed of: 1) concrete or asphalt between treated, non-toxic edge rails or 2) elevated boardwalk with edge railings and safety hand railings where necessary. Signs will be laser etched, approximately 24 x 36 inches, mounted on low angled wood posts. Benches will be installed at frequent intervals for resting when climbing back up the hill. Several fishing platforms will be provided.

Map of Trail with Approximate Sign Locations

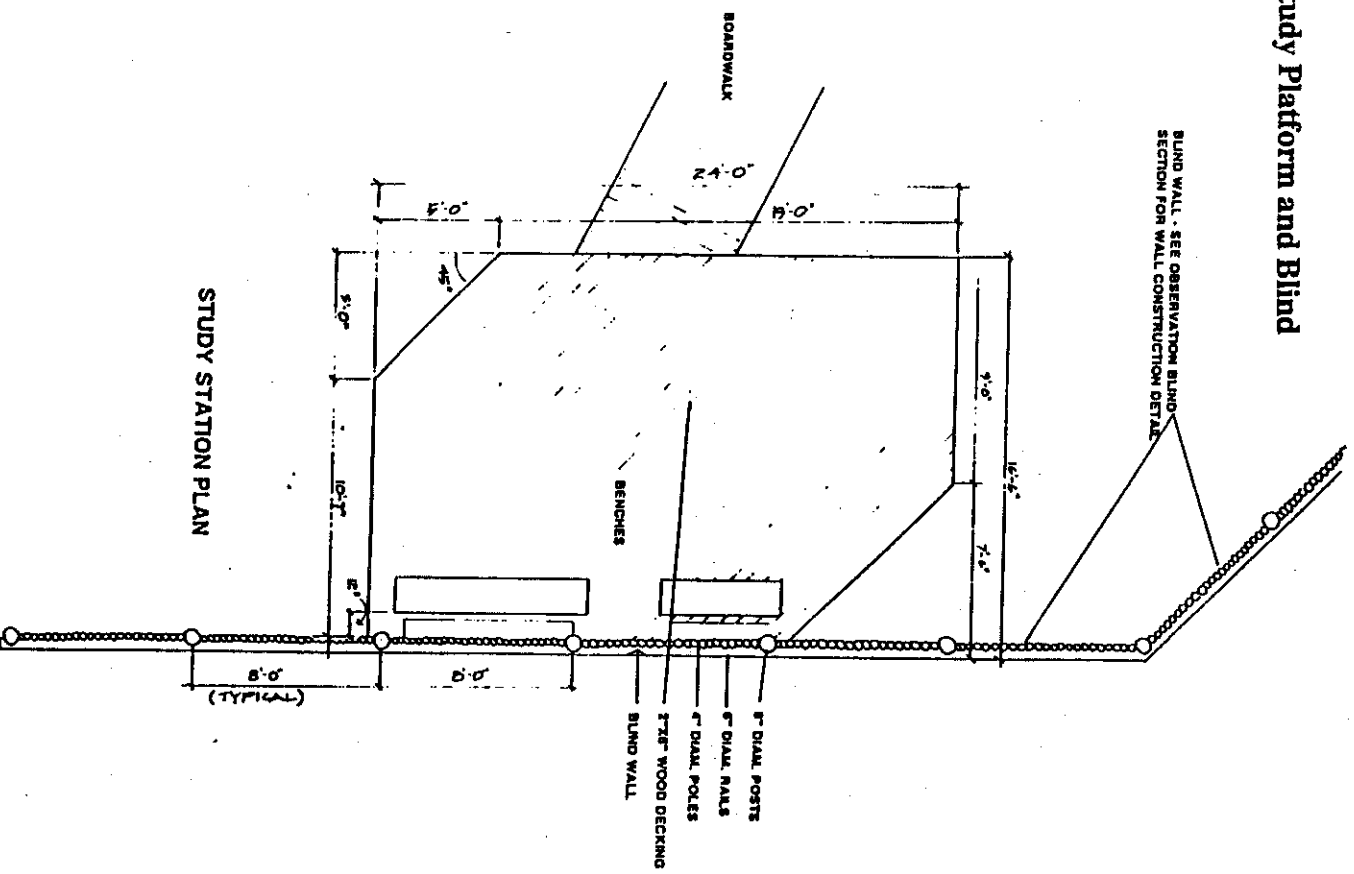




## Pond Study Platform and Blind

The pond study platform and blind located on the northeast corner of Pond 4 is similar in size and design to the observation blind on Pond 5. However, it extends out over the pond and has an access to the water with safety railings for the purpose of taking water samples for study. The benches at the blind openings will double as study tables and one of the benches will have lockable storage designed into it for securing dip nets, petri dishes, activity cards, and other curriculum related materials. Interpretive signs describe pond habitat and pond systems. Uniform Building Codes require that handrailings be provided where participants are 30 inches above ground or over water.

### Details of Pond Study Platform and Blind



## 8. Cost Estimates

---

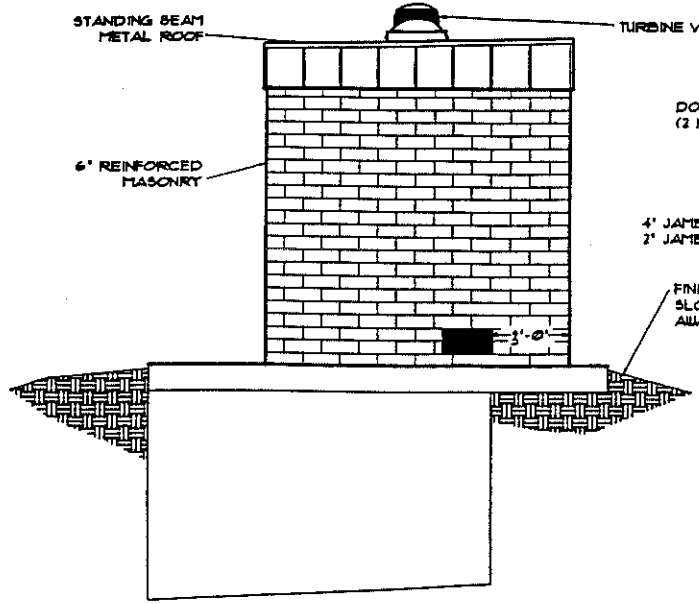
The following cost estimates reflect total design, fabrication, and construction costs. Use of staff and volunteer construction can greatly reduce costs of trail and blind construction.

|                                                                                                                                                                        |                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>Parking</b><br>(includes shifting road, concrete island, curbing, and gutter)                                                                                       | <b>\$45,000</b>  |
| <b>5' Wide Aggregate Trail</b>                                                                                                                                         | <b>\$8,000</b>   |
| <b>3' Wide Handicap Accessible Trail (850 feet)</b><br>(Includes cut & fill, retaining wall, & 1700" of handrail)                                                      | <b>\$75,000</b>  |
| <b>Universal Access Option</b><br>(Construct road & parking along existing road cut for<br>handicap drop off down by river - \$15,000) (delete \$60,000<br>from total) |                  |
| <b>Observation Terrace and Interpretive Sign</b>                                                                                                                       | <b>\$30,000</b>  |
| <b>Restroom (Clivus Multrum M-12)</b>                                                                                                                                  | <b>\$15,000</b>  |
| <b>Bridge and Fishing Platforms</b><br>(Bridge estimated at \$20,000)                                                                                                  | <b>N.I.</b>      |
| <b>Boardwalk, Trailhead, and 7 Interpretive Signs</b><br>(Superdeck - plastic decking material)                                                                        | <b>\$114,000</b> |
| <b>Marsh Observation Blind (120 SF)</b>                                                                                                                                | <b>\$3,000</b>   |
| <b>Pond Study Station (390 SF and 105 LF Wall)</b>                                                                                                                     | <b>\$10,000</b>  |
| <b>Pond 5 Observation Blind</b>                                                                                                                                        | <b>\$10,000</b>  |
| <b>TOTAL CONSTRUCTION COST</b>                                                                                                                                         | <b>\$310,000</b> |
| <b>CONTINGENCY (15%)</b>                                                                                                                                               | <b>\$46,500</b>  |
| <b>TOTAL PROJECT COST</b>                                                                                                                                              | <b>\$356,500</b> |





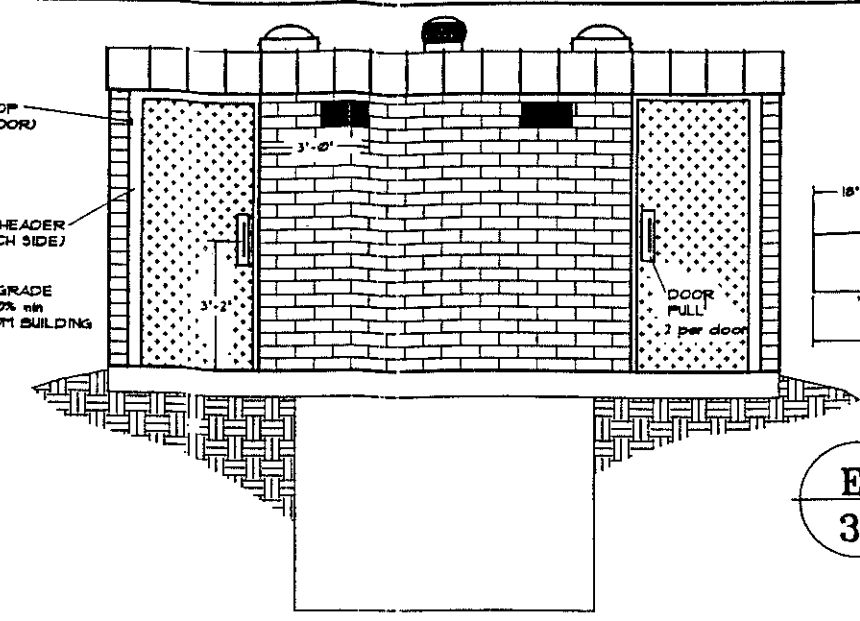




**A**  
**3**

**LEFT SIDE ELEVATION**

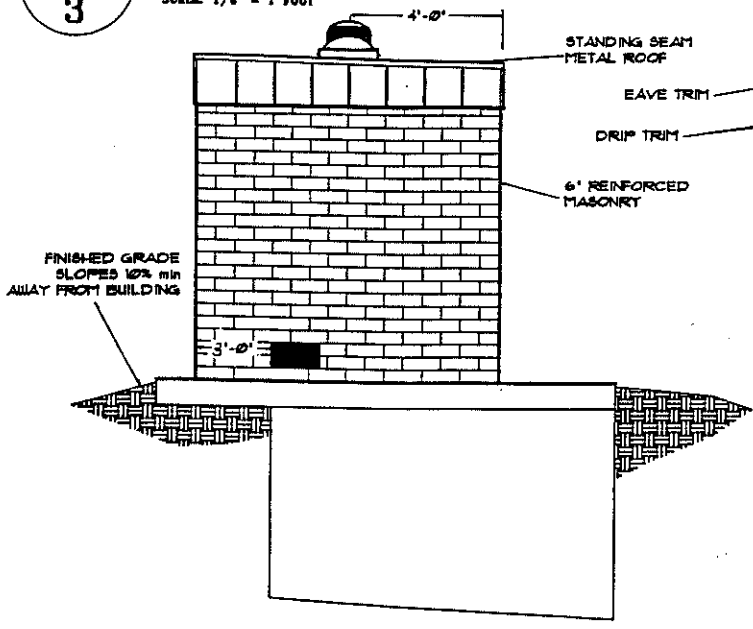
SCALE: 1/4" = 1 FOOT



**C**  
**3**

**FRONT ELEVATION**

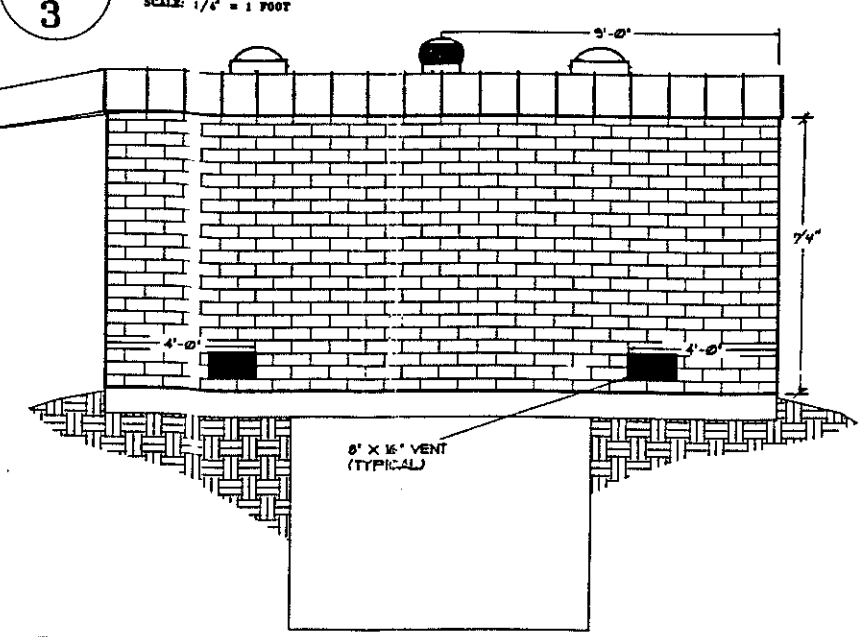
SCALE: 1/4" = 1 FOOT



**B**  
**3**

**RIGHT SIDE ELEVATION**

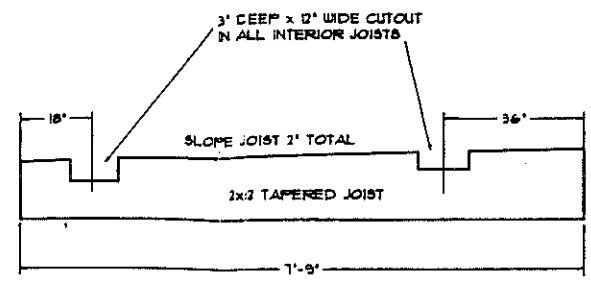
SCALE: 1/4" = 1 FOOT



**D**  
**3**

**REAR ELEVATION**

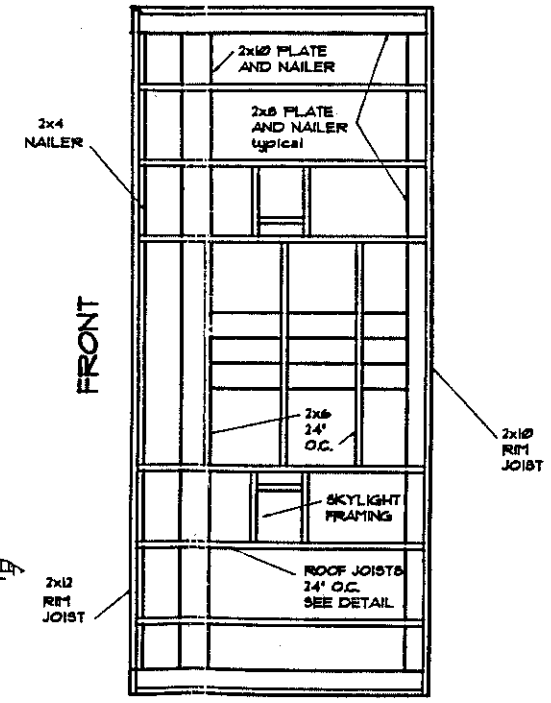
SCALE: 1/4" = 1 FOOT



**E**  
**3**

**ROOF JOIST**

NO SCALE



**F**  
**3**

**ROOF FRAMING PLAN**

SCALE: 1/4" = 1 FOOT

NOTE: PROVIDE 1/2" DIA x 8" ANCHOR BOLTS AT 48" CENTERS AND AT ENDS OF PLATES

COLORADO DIVISION OF PARKS & OUTDOOR RECREATION

**STANDARD VAULT TOILET ELEVATIONS AND FRAMING**

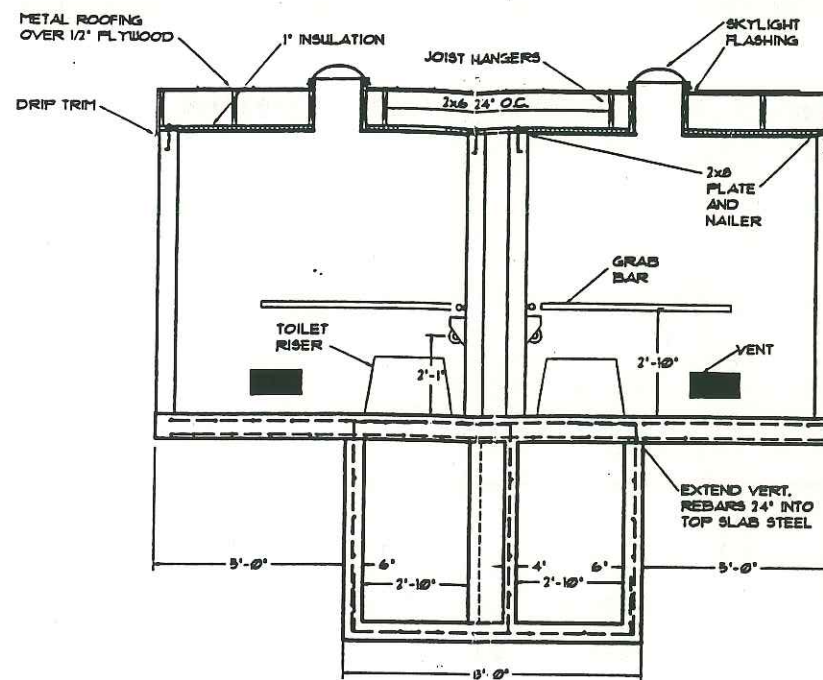
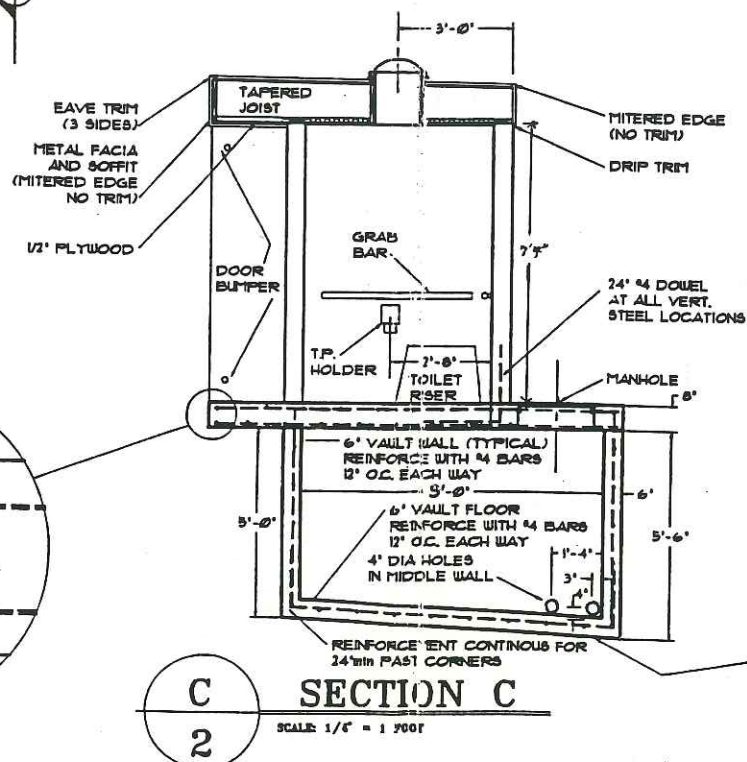
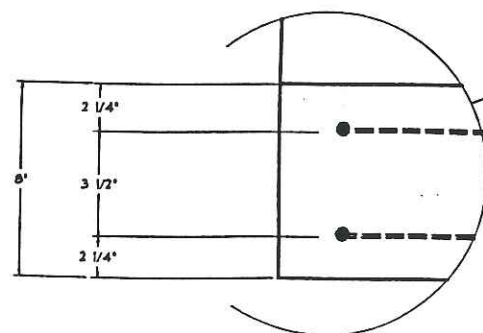
DESIGNED BY: E. J. SHAW, CHASE OF DENVER, CO.

DRAWN BY: E. J. SHAW

DATE: 11-10-92

SHEET 3 OF 4





**B**  
**2** **SECTION B**  
SCALE: 1/8" = 1 FOOT

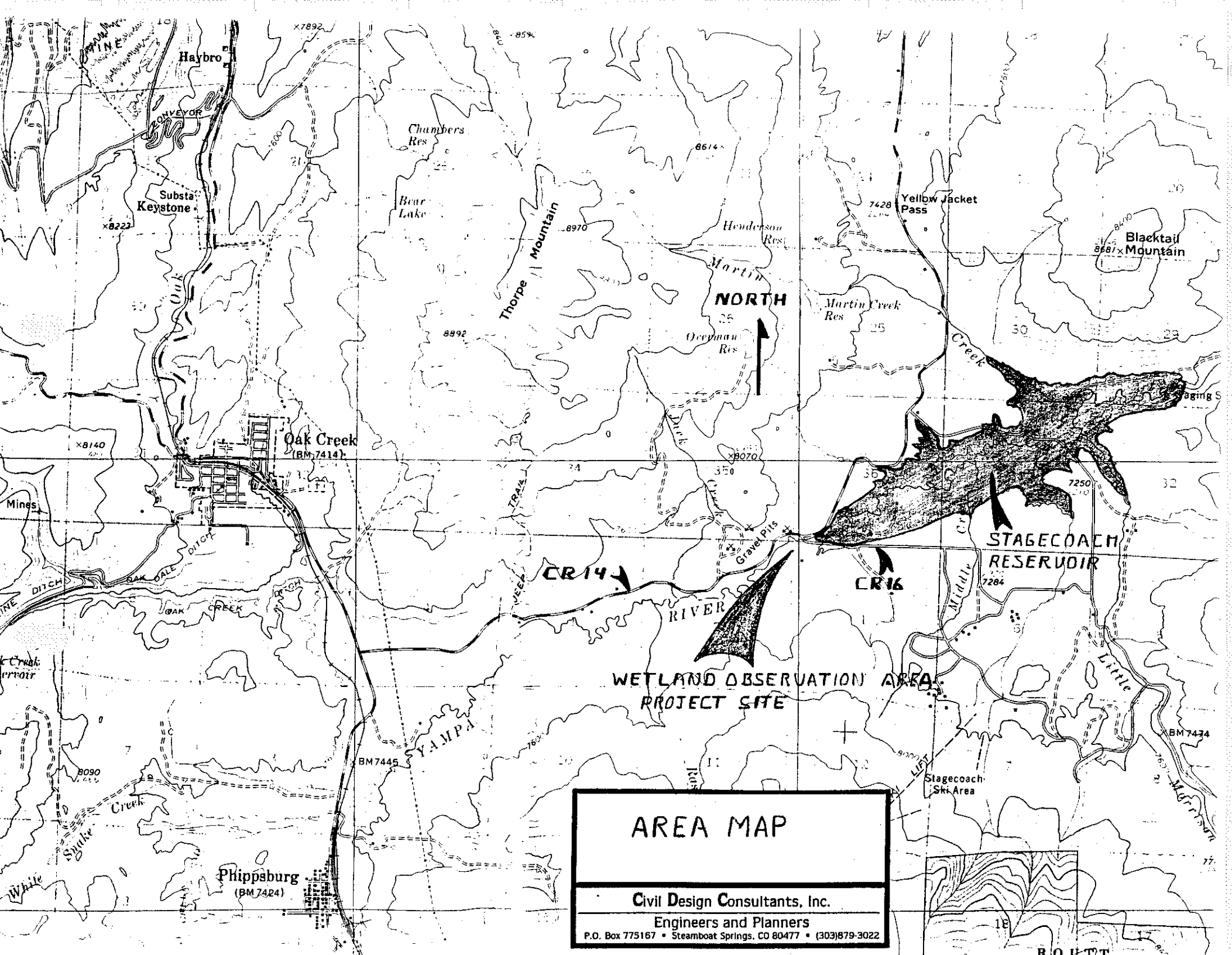
— NOTE : VAULT FLOOR MAY BE POURED  
LEVEL AND FILLED WITH GROUT  
TO PROVIDE 6" TOTAL SLOPE.



*Ed Rahnberg*  
CHIEF OF DEVELOPMENT

DESIGNED  
B. VICK/P. GIESING  
DRAWN P. GIESING  
FILE VANTR.DWG  
DATE 11-10-92





## AREA MAP

Civil Design Consultants, Inc.

Engineers and Planners

P.O. Box 775167 • Steamboat Springs, CO 80477 • (303)879-3022

