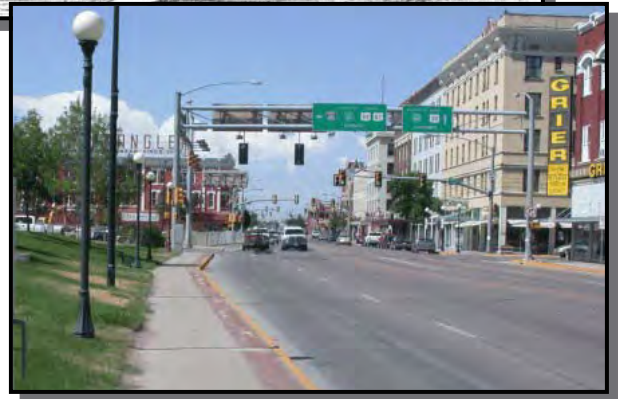
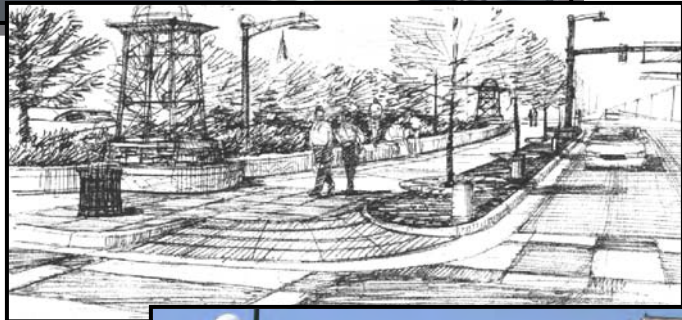


# I-180 Enhancement Project - Lincolnway Section – Final Report

*Cheyenne MPO*



SEH No. ACHMPO0306.00

December 30, 2005



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# I-180 Enhancement Project - Lincolnway Section

## FINAL REPORT

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### 1.0 Introduction

Short Elliott Hendrickson, Inc. (SEH) is pleased to provide this report for the I-180 Corridor Enhancement Project. The purpose of this report is to provide modification alternatives to improve roadway signing and landscaping along the “Lincolnway Section” of I-180 in downtown Cheyenne. This includes the intersections of north and southbound I-180 with Lincolnway, in addition to the small stretch of Lincolnway between these two intersections.

### 1.1 Project Overview

A city’s appearance can greatly affect its economic development as well as the quality of life for its residents. If a city invests in improving the appearance of public spaces, the returns can be tremendous. Businesses prefer to locate in cities with a high quality of life for their employees to enjoy. The City of Cheyenne has an opportunity to improve the appearance of the I-180 corridor. Located in the southern part of Cheyenne, I-180 is an important entrance to the city. This short segment of interstate highway connects I-80 to downtown Cheyenne. For many travelers exiting I-80 and those traveling north on US 85 it is their first impression of Cheyenne. By improving the appearance of this area, Cheyenne can enhance the quality of life for its residents living along the corridor, and provide a positive experience for visitors.

I-180 is one of the shortest interstate highway segments in the country and one of the few interstates with traffic signals. Originally conceived as a controlled access ramp between I-80 and downtown Cheyenne, the highway was reclassified as an Interstate spur and designated as I-180 in 1969. Plans to construct an elevated highway were dropped in 1970 due to the high cost. The design of an at-grade roadway was completed by the Wyoming Highway Department (now the Wyoming Department of Transportation (WYDOT)) in the 1970’s. Construction began on the first segment in 1977 and the final segment was opened in 1984.

This project has been divided into three sections, including South, Bridge, and Lincolnway. While the overall goal for each of the sections is to improve the appearance

of the corridor, each of these sections of the project has distinct challenges. Descriptions of these sections are provided below and illustrated on Figure 1.

**South Section:** The south section is the longest of the three sections and extends from I-80 to the south end of the bridges over the Union Pacific Railroad (UPRR) yard. I-180 is at-grade with the surrounding landscape in this area. Small businesses and residences primarily occupy the adjoining land.

**Bridge Section:** The bridge section consists of the two I-180 bridges over the UPRR. The area under the bridge is a railroad yard on the UPRR mainline. The two bridges are each over 1,800 feet long and consist of 13 steel girder spans. Each has a sidewalk with a pedestrian rail. A combination of relatively flat terrain and high piers (needed to provide clearance for trains) make these bridges visible from many parts of Cheyenne.

**Lincolnway Section:** The Lincolnway section is located in downtown Cheyenne and includes the intersections of north and southbound I-180 with Lincolnway in addition to the small stretch of Lincolnway between these two intersections. Depot Square and the Union Pacific depot are located at the southwest corner of Southbound I-180 / Lincolnway. The north side of Lincolnway is adjoined by small businesses. A parking lot for UPRR employees occupies the area south of Lincolnway between the two bridges.

**Figure 1. Site Map**



This study focuses on the “Lincolnway section,” and discusses the existing conditions, goals for the section, and recommended improvements to achieve the goals.

## 2.0 Existing Conditions

As a northbound motorist traverses the UPRR Bridge, downtown Cheyenne comes into view. I-180 descends to the lower grade of the city street grid and there is little that welcomes visitors to downtown. Ironically, while I-180 was constructed to give access to downtown Cheyenne, the signs give directions for several other cities but don’t include any destinations in Cheyenne (see Figure 2). Un-landscaped parking lots, un-adorned sides of buildings, and narrow walkways are the dominant architectural elements. Large distracting sign bridges and jersey barriers on the roadside reinforce the impression that this is still an interstate highway, rather than a friendly urban streetscape. The right-turn islands facilitate a quick right-turn at the expense of pedestrian safety. While the existing

parking lots are practical urban necessities, they offer little in the way of welcoming visitors to downtown Cheyenne.

**Figure 2. Northbound I-180 at Lincolnway**



There are many positive features to this downtown entrance area. For example, the Plains Hotel and other established buildings provide a positive impression of an older community with history. Also, the elevated bridge allows motorists to see some of the important downtown landmarks and begin to orient themselves. Any street-level enhancements in this area would augment the scene. This downward view also provides an excellent opportunity to create some kind of sculptural feature or features to provide a welcoming gateway.

The Lincolnway streetscape west of the I-180 northbound bridge is very modest and unrefined (see Figure 3). The narrow pedestrian facilities, wide streets, and large sign structures are deterring. The older, historic buildings are a positive feature, while the narrow unadorned walkways and parking lots tend to be distracting. The renovations and refinements being made to the Depot Square area are attractive and positive changes. Hopefully these can act as a catalyst for nearby enhancements.



**Figure 3. Westbound Lincolnway at Central Avenue**



A potential opportunity area is the Union Pacific parking lot south of Lincolnway, between north and southbound I-180 structures. Currently the walkway is narrow and the obtrusive parking lot is unscreened from the street. Perhaps a cooperative planning effort can be initiated with the city and the railroad, taking a closer look at parking needs and streetscape potential. This area is an important streetscape link that can build on the adjacent Depot Square area improvements. The other major obtrusive element is the interstate sign bridge and signal poles. Decreasing the scale of these structures could greatly improve the feeling of the corridor. Pedestrian level lighting and street lighting can also be used to enhance the area.

### **3.0 Stakeholders Meeting**

On October 6, 2003, a stakeholders meeting was held to present entry enhancement concepts for the entire I-180 Corridor Enhancement Project by SEH and FLMA and gather ideas from interested parties. A list of the attendees is contained in Table 1.

**Table 1. Stakeholder Meeting Attendees**

Name	Association
Mike Wright	Union Pacific Railroad
Larry Wessel	Union Pacific Railroad
Ron Naro	Union Pacific Railroad
Martin Matsen	Cheyenne MPO
Matt Ashby	Cheyenne MPO
Jay Gould	WYDOT - District Engineer

Gene Legerski	WYDOT - Traffic Program
Joel Meena	WYDOT - Traffic Program
Gregg Fredrick	WYDOT - Bridge Program
John A. Winkler	United Transportation Union
John T. Goodier	Cheyenne Art in Public Places
Alvin Wiederspahn	Downtown Development Authority
Larry Bressler	Cheyenne Historical Preservation Board
Paula Qualls	South Cheyenne Community Development Association
Frank Miltenberger	FMLA
Doug Wellock	SEH

The following is a summary of the discussions regarding the Lincolnway section of the enhancement project:

- WYDOT may want to eliminate the free right turn lane from northbound I-180 to Lincolnway. According to Joel Meena the Lincolnway and I-180 intersection is a high crash location. Free right turns are not pedestrian friendly. Alvin Wiederspahn said pedestrian movement is important to downtown Cheyenne.
- Jay Gould doesn't want the decorative feature in the center of the intersection, as shown on concept board #8, to look like you can't drive on it. (This comment refers to a concept that was rejected by the stakeholders.)
- Jay Gould said that a welcome to Cheyenne sign can't be added to the sign structures as shown on concept board #9. It would add too much information to the signs. He did like the idea of putting a sign on the northbound bridge, south of the intersection. Joel Meena agreed and suggested doing something similar on the southbound bridge. He said that the information on the signs is needed for motorists from out-of-town but that the size of the signs should be reviewed. (This comment refers to a concept that was rejected by the stakeholders.)
- Alvin Wiederspahn said that the existing sign structures are not appropriate for the downtown area. He would prefer single tube structures, painted black.
- Paula Qualls said that the Lincolnway section is important because it is the gateway to the Depot Plaza. The plan should not neglect the south side of Cheyenne. Gregg Fredrick suggested replacing the fence on the existing pedestrian overpass with a fence similar to the one proposed for the I-180 bridges to tie the area together.

## 4.0 Public Meeting

On April 28, 2004, a public meeting was held in the lobby of the historic train depot to receive input on the proposed improvements for the I-180 Corridor Enhancement Project. Displays illustrating the existing conditions and proposed improvements were exhibited. Personnel from SEH and the Cheyenne MPO were present to answer questions. Comment forms were developed to solicit input from the public on some issues related to the theme of the project. Thirty-five individuals took the opportunity to fill out a comment form.

Three questions were included on the comment form. The questions and the responses are summarized below:

### Question 1:

*The I-180 Corridor is an important entrance into downtown Cheyenne.*

*Strongly Agree   Agree   No Opinion   Disagree   Strongly Disagree*

Response to this question was overwhelmingly positive. The majority (27 or 77%) of responses strongly agreed with the statement. Six questionnaires had the agree box checked (17%). There was one no opinion and one disagree.

### Question 2:

*I feel the theme of any artwork placed along the I-180 corridor should be:*

*Wildlife                  Western                  Railroad                  Other \_\_\_\_\_*

Opinion on the theme of artwork was mixed. More than one theme was selected on several forms. Each selection was counted when summarizing the results. The most popular choice was the railroad theme with 18 selections or 35%. A western them was selected by 15 individuals (29%) and wildlife was the choice of 8 people (16%). Written comments suggested modern with a railroad or western theme, railroad history, obelisks similar to the depot tower, and leaving the open space as is.

### Question 3:

*In my opinion the fence on the bridge should be painted:*

*Black   Green                  Red                  Other \_\_\_\_\_*

The most popular choice for the fence color was green with 13 nominations (34%). Second was black with 10 selections or 26%. Red was checked on 4 forms. Suggestions in the other category included brown, light color, and natural rust. Concern about the need for maintenance of paint on the rail was mentioned.

Written comments were included on some of the comment sheets. Relevant comments are included below:

- I love the urban design elements, pedestrian lighting, landscaping and decorative fencing. Decreasing the amount and size of signage at the Lincolnway intersection



is very important. Also, black poles at the intersection (and smaller poles) are a must!

- I think the renderings look excellent and the proposed improvements will really enhance the downtown appearance. I really like the bridge railing, the decorative pedestrian lighting, and street lighting. Also, the improved signals and signage for Lincolnway is far less obtrusive than existing structures. Let's do it right and not exchange a quality job for what is available money wise. Let's get all parties involved...WYDOT, DDA, City, UP etc. Looks great!!!!
- The reconfiguration of the masts and poles at the Lincolnway intersections are critical to improving the gateway presentation. Perhaps the Greenway can be connected to I-180 from both North and South of the tracks, i.e. from 9<sup>th</sup> or 10<sup>th</sup> Street and Ames Avenue to 15<sup>th</sup> Street. Eliminating the "look-backs" at Warren and Central would make these intersections much safer.
- Any work on the I-180 Corridor should be compatible with Depot Square and downtown. Maybe with some enhancements, the downtown merchants will be encouraged to improve their image.
- I like the smaller, simpler signs.

## 5.0 Selected Alternative

The proposed improvement for this area includes reducing the size of the signs and sign structures. Enhanced landscaping on the south side of Lincolnway was also investigated. The following sections describe the two elements of the selected alternative.

### 5.1 Overhead Signing and Structures

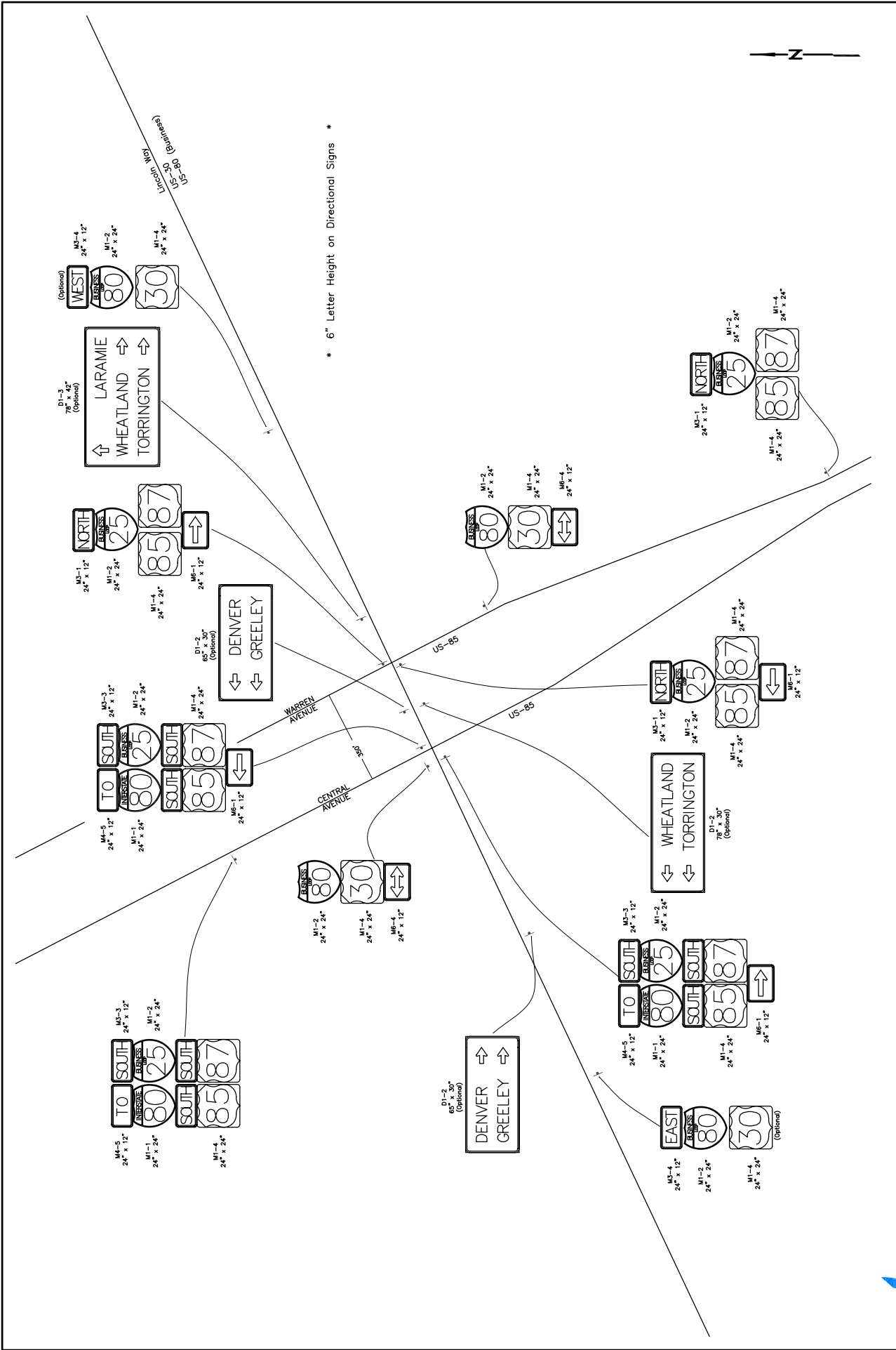
SEH prepared a revised signing plan for the intersections of north and southbound I-180 with Lincolnway that uses smaller ground mounted signs (see Figure 4). The emphasis of the new signing plan is on route numbers rather than destinations outside Cheyenne. The plan contained in Figure 4 complies with the Manual on Uniform Traffic Control Devices<sup>1</sup> and identifies all of the necessary routes. WYDOT rejected the SEH plan because they felt that it was necessary to have overhead signs due to the number of routes to be identified and the amount of tourist traffic that passes through the intersections. The signing plan prepared by WYDOT is contained in Figure 5. This plan has smaller and fewer signs as compared with the existing conditions. The WYDOT plan also eliminates some of the redundancy that exists. A comparison between the square footage of the existing signs and the square footage of the signs proposed by WYDOT is contained in Table 2. The comparison shows a reduction in sign size of approximately 77.5%. Reducing the size of the signs will also reduce the size of the supporting sign structures. An example of the WYDOT signing plan on northbound I-180 at Lincolnway is contained in Figure 6. The graphic shows a black monotube structure with a single overhead sign rather than the existing multiple signs on galvanized structures. Consideration was given to using more decorative and historically appropriate sign

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<sup>1</sup> Manual on Uniform Traffic Control Devices. Federal Highway Administration. 2003.



I-180 ENHANCEMENT STUDY - LINCOLNWAY SECTION  
 SIGNING PLAN DEVELOPED BY SEH TO ELIMINATE THE EXISTING OVERHEAD SIGNS







structures. Given the proximity of the entrance structure to Depot Square, it was decided to use simple sign structures rather than compete with the design elements of Depot Square. By placing the new signs on smaller, single tube sign structures, painted black, the visual impact of the signs can be reduced.

**Table 2. Comparison of Sign Size - Existing Signage versus Proposed WYDOT Plan**

Approach	Sign Size (ft <sup>2</sup> )		Reduction (%)
	Existing	Proposed	
NB Warren Avenue at Lincolnway	228.0	35.3	84.5%
WB Lincolnway at Warren Avenue	243.0	65.0	73.3%
EB Lincolnway at Warren Avenue	150.0	25.0	83.3%
SB Central Avenue at Lincolnway	250.5	46.0	81.6%
WB Lincolnway at Central Avenue	162.0	40.0	75.3%
EB Lincolnway at Central Avenue	240.0	75.0	68.8%
<b>Total</b>	<b>1,273.5</b>	<b>286.3</b>	<b>77.5%</b>

**Figure 6. Example of Proposed Signs and Signals on Northbound I-180 at Lincolnway**

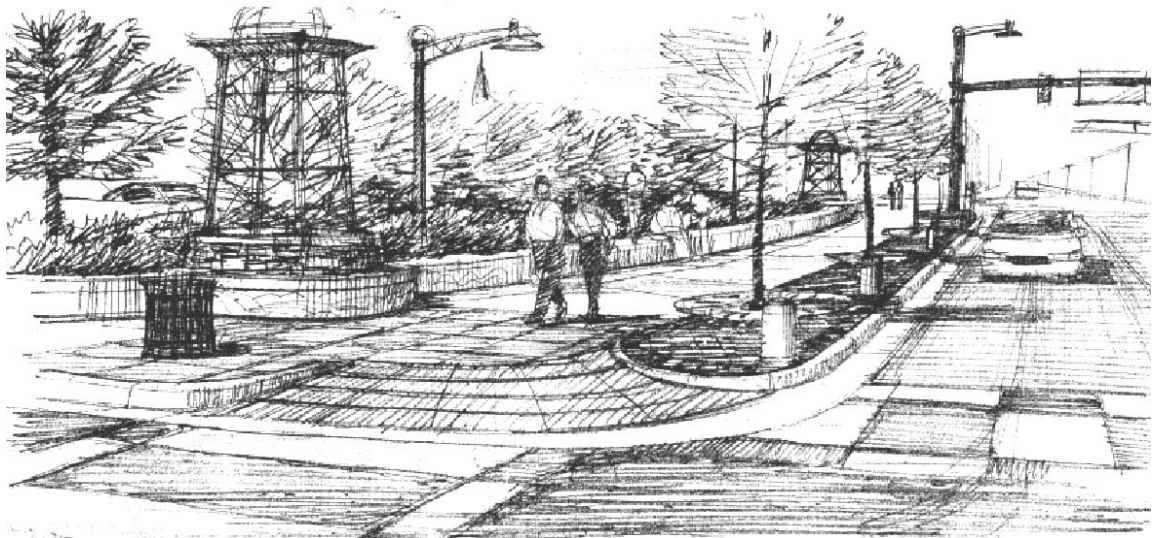


## 5.2 Enhanced Landscaping

SEH investigated possible landscape improvements to enhance the south side of the street. A conceptual sketch showing the proposed landscaping improvements is

contained in Figure 7. Right-of-way along Lincolnway is limited; the area to the south is owned by the UPRR. If agreement can be reached with the railroad, this area can be used to enhance the downtown. Providing a wider sidewalk with trees and sculptures will extend the Depot Square landscaping one block to the east. Light poles similar to the historic style used in nearby sections of downtown Cheyenne could also be installed. A low retaining wall placed at the south edge of the area will help to delineate the separation of the public space from the privately owned UPRR parking lot and help deter trespassing by guiding pedestrians to Depot Square. Also, where possible, wider walkways or bump-outs might be investigated for pedestrian crosswalks at intersections. Specialty pavements for pedestrian crosswalks might also be investigated to make crossing less intimidating as well as generate some traffic calming results.

**Figure 7. Conceptual Sidewalk Area Enhancements Looking West along the South Side of Lincolnway at Warren Avenue**



## 6.0 Cost Estimate

SEH has developed an estimation of probable construction costs to complete the project based on the conceptual plans. A cost estimate for the installation of new signs and sign structures as well as lighting is contained in Table 3. The estimated cost to design and construct the new signs and lighting is roughly \$686,000 including a 15% contingency. A cost estimate for the proposed landscaping enhancements for the south side of Lincolnway between the two I-180 bridges is contained in Table 4. The estimated cost of the landscaping enhancements is roughly \$172,300 including a 15% contingency.

**Table 3. Probable Construction Costs (Signs and Structures)**

Item	Unit	Quantity	Unit Price	Cost
Mobilization	LS	1	\$63,000.00	\$63,000.00
Contract Bond	LS	1	\$6,300.00	\$6,300.00
Removal of Sign Structures	LS	1	\$10,000.00	\$10,000.00
Drilled Shaft Foundations	LF	160	\$400.00	\$64,000.00
Overhead Sign Structure	EA	6	\$35,000.00	\$210,000.00
Plywood Sign Panels	SF	290	\$25.00	\$7,250.00
Lighting System	LS	1	\$25,000.00	\$25,000.00
Signal System	LS	1	\$100,000.00	\$100,000.00
Traffic Control	LS	1	\$20,000.00	\$20,000.00
<b>Subtotal</b>				\$505,550.00
Contingency	15%			\$75,830.00
Estimated Construction Cost				\$581,380.00
Preliminary Engineering	8%			\$46,510.00
Construction Engineering	10%			\$58,140.00
<b>Total</b>				\$686,030.00

**Table 4. Probable Construction Costs (Landscaping)**

Item	Unit	Quantity	Unit Price	Cost
Planting Trees	EA	24	\$500.00	\$12,000.00
Sculpture	EA	1	\$80,000.00	\$80,000.00
Retaining Wall	SF	1,000	\$35.00	\$35,000.00
<b>Subtotal</b>				\$127,000.00
Contingency	15%			\$19,050.00
Estimated Construction Cost				\$146,050.00
Preliminary Engineering	8%			\$11,680.00
Construction Engineering	10%			\$14,610.00
<b>Total</b>				\$172,340.00

## 7.0 Funding Options

Funding for the Lincolnway Section of the I-180 enhancement project will primarily come from the City of Cheyenne. Other potential funding sources and the enhancements their contributions may help fund are described below and summarized in Table 5.

The I-180 enhancement project will qualify in the TEAS category. The TEAS process is handled through a written request to the WYDOT District Engineer which is evaluated and reviewed with consideration to its merit as an addition or enhancement to the State Highway System (SHS), a major consideration is its impact on highway safety. TEAS



projects can be matched as high as 90.49% federal and 9.51% local/state, for projects with an obvious benefit to the state highway system. WYDOT may opt to provide the required local/state match; such match determinations are the discretion of WYDOT. Timing on the project would depend on availability of funds.

Another category of funding that the I-180 enhancement project can take advantage of is the Cooperative Landscape Program. This program provides financial assistance to projects which encourage well-designed landscaping featuring low maintenance of native/adapted species. Financial assistance can be provided to organizations and public entities responsible for installation of landscape materials under WYDOT supervision.

Grants are limited to a maximum of \$2,500 per occurrence and may only be used to purchase landscaping materials and rental of equipment. This type of grant can be best utilized by community groups wanting to contribute labor to beautify the area.

Sponsoring organizations must submit a completed grant application to be considered for the program. Grant applications may be obtained from the WYDOT District Engineer or from the Office of Local Government Coordination. Projects will be reviewed by a selection committee. WYDOT administers the grant funding. Proposed sites for roadway landscaping must be located where the planting would not be disturbed by scheduled roadway construction work.

Private grants are another possible source of funding. Private grants tend to be small but may be used to matching money for federal projects and provide amenities not covered in federal projects.

The Cheyenne Downtown Development Authority (DDA) is another possible source of funds. The DDA has helped to fund streetscape improvements in the downtown area in the past. They have also contributed funds to the Cheyenne Depot. Funds for the bridge section and the Lincolnway section may be available from the DDA.

The Union Pacific Railroad Foundation could potentially help fund some of the landscaping enhancements on the south section of Lincolnway between the two bridges. Since this area is owned by the UPRR, an agreement would have to be made to proceed with improvement plans.

The Business Ready Community Grant and Loan Program has a funding category for community enhancement. Based on information found on the State of Wyoming web site, this funding category is designed "... to improve the communities esthetic character or quality of life through such activities as landscaping or recreational or convention facilities in order to make itself more attractive for business development under a specific or plan of action." Applications are due by October 3, 2005 and a maximum award is \$500,000.

**Table 5. Possible Funding Sources**

Possible Funding Sources	Landscaping	Signs/Signals
Art in Public Places	X	
Cooperative Landscape Program (WYDOT)	X	
TEAS Grant (Administered by WYDOT)		X
Downtown Development Authority	X	X
Union Pacific Railroad	X	
Business Ready Communities Grant and Loan Program - Community Enhancement	X	

A contact list for the above possible funding sources is provided below for reference:

**Art in Public Places**

Marian Black  
 Director of Purchasing  
 City of Cheyenne  
 2101 O’Neil Av  
 Cheyenne, WY 82001  
 (307) 637-6348

**UPRR Foundation**

Dick Hartman  
 Special Representative  
 2424 Pioneer Avenue, Suite 301  
 Cheyenne, WY 82001

**Cheyenne Downtown  
 Development Authority**

Ms. Christian Cherek  
 1714 Capitol Ave.  
 Cheyenne, WY 82001  
 (307) 433-9730

**WYDOT**

Jay Gould  
 District Engineer  
 Wyoming Department of Transportation  
 3411 South 3rd Street  
 Laramie, WY 82073  
 (307)745-2100

**Business Ready Communities  
 Grant and Loan Program**

Shawn Reese  
 Business Ready Community Program  
 Wyoming Business Council  
 214 West 15<sup>th</sup> Street  
 Cheyenne, WY 82002  
 (307) 777-2813