



U.S. 14A/U.S. 85/DEADWOOD BOX STUDY AND ENVIRONMENTAL STUDY

DEADWOOD BOX STUDY

PUBLIC MEETING # 3

October 4, 2023





Welcome

The Deadwood Box is a concrete box that supports U.S. Highways 14A & 85 and conveys Whitewood Creek beneath the highway.

The study is evaluating alternatives for the redesign and replacement of the structure and roadway corridor while protecting the history and landmarks along the highway.





Today's Meeting

- Provide a brief study overview and update
- Present Deadwood Box project alternatives and visualizations
- Review the updated visual impact assessment & survey
- Gather feedback and answer questions

Your feedback will assist in the refinement, analysis, and development of recommendations.





Housekeeping Items

- Please sign-in
- Study website
<https://www.DeadwoodBox.com>
- Meeting format
 - *Introductory presentation*
 - *Open house*
- Methods to provide feedback
 - *Comment cards*
 - *VIA survey – online or printed*
 - *Study website*
 - *Study contact (email, phone, mail)*



As we begin this undertaking, it is important to get input from those who know Deadwood best, YOU!

Opportunities include virtual public meetings, adding notes to the online comment map, and connecting through email. In-person meetings will begin once physical distancing recommendations are relaxed.

GET INVOLVED

Questions or Comments?

Send the Study Advisory Team an email at study@deadwoodbox.com

Build Options Overview

The Study Advisory Team has narrowed the build options to 1a and 1c. To learn more, view this informational handout.

Email Notifications

Sign up to be notified when new opportunities or updates are available.

Resources

View public meeting materials, previous studies, and other related documents.

DEADWOOD BOX CORRIDOR STUDY



[Home](#) | [Resources](#) | [Contact](#)



CONTACT US

Have a question or comment for the Study Advisory Team?

Leave us a note below, we would love to hear from you.



Study Advisory Team

The Study Advisory Team includes representatives from:

- FHWA
- SDDOT
- City of Deadwood
 - Deadwood Historic Preservation Commission
- Lawrence County
- Consultant Team
 - HDR
 - Albertson Engineering



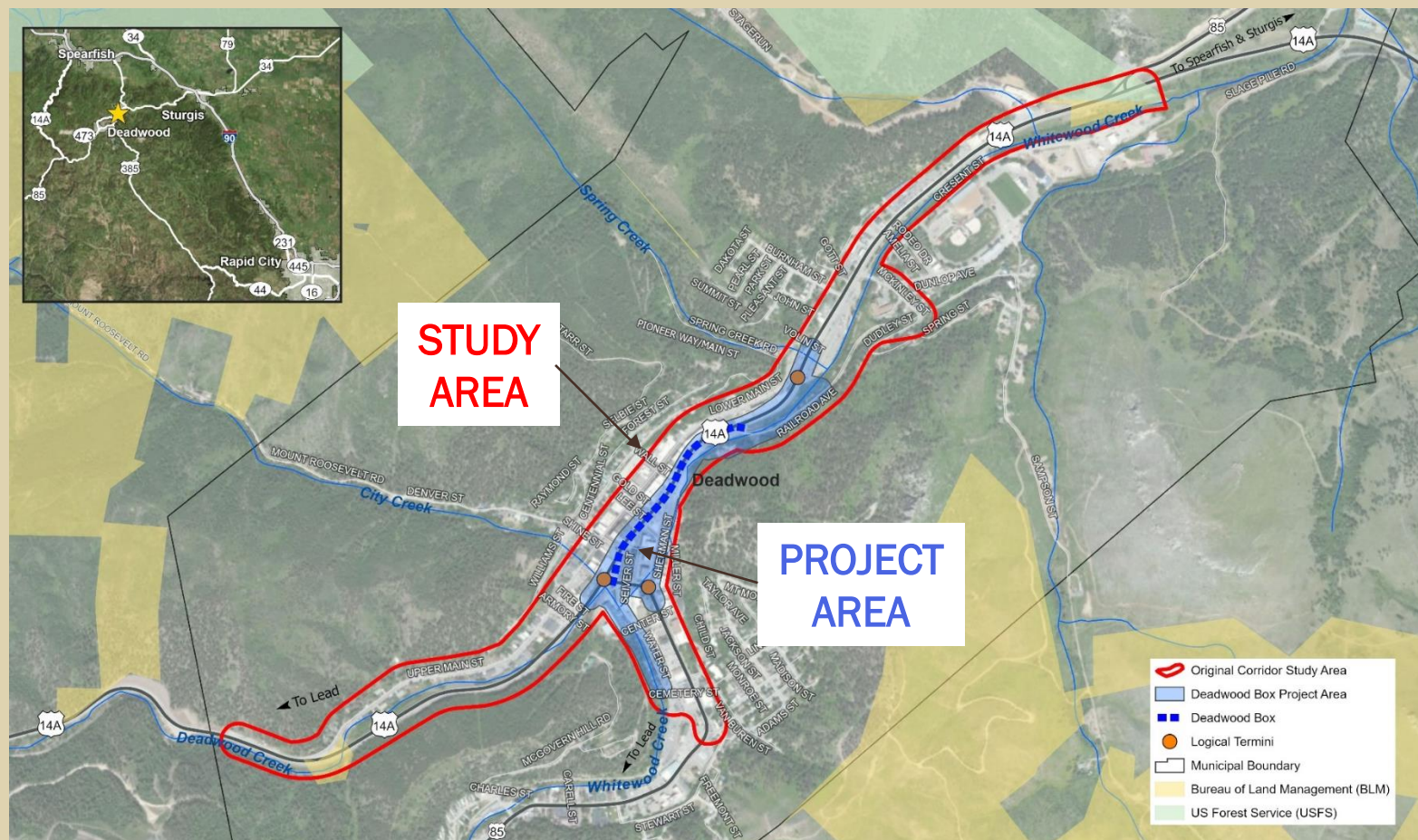
STUDY AREA

■ Study Area:

Area of analysis that encompasses potential environmental effects associated with the project

■ Project Area:

General “footprint” of potential improvements.





Updates

- Completed Environmental Scan
 - *Identified preliminary purpose and need and project alternatives*
 - *2 Virtual Public meetings held*
 - *Stakeholder meetings*
- Began National Environmental Policy Act (NEPA) Process
 - *Additional Need brought forward regarding pedestrian connectivity*
 - *Developed additional alternative*
 - *Updating Visual Impact Assessment*



PURPOSE & NEED

The Project has three main purposes:

- 1 ADDRESS** the deteriorating structure conditions in order to provide a durable structure
- 2 REDUCE** long-term maintenance costs of the Deadwood Box over Whitewood Creek along U.S. 14A/U.S. 85/Pioneer Way.
- 3 IMPROVE** the connectivity of the pedestrian and bicycle network along and across U.S. 14A/U.S. 85/Pioneer Way within the central core of Deadwood.



Basis for Need

- Structure deterioration
 - *Deck Condition*
 - *Substructure Condition*
- Increasing Maintenance Costs

| Condition Rating | | |
|------------------|--------|--|
| Item | Rating | Description |
| Deck | 5 | Fair Condition (all primary structural elements are sound but may have minor section loss) |
| Superstructure | 7 | Good Condition (some minor problems) |
| Substructure | 5 | Fair Condition (all primary structural elements are sound but may have minor section loss) |
| Culvert | NA | NA |

Condition inspections rate the structure as “Fair” but the structure continues to deteriorate.

Maintenance Costs have also continued to increase and without major repairs, load limits will eventually need to be implemented.

Repairs alone will not address the deterioration issues and replacement is required.



Basis for Need

Pedestrian Connectivity

- Comfort
- Convenience
- Continuity
- Safety

Comfort

- U.S. 14A/U.S. 85/Pioneer Way was noted as a **'barrier'** to pedestrian travel noting that the highway is intimidating to cross due to traffic volumes, speeds, and crosswalk distances (2008 Ped Study)

Convenience & Continuity

- A more **complete pedestrian network** is needed (2018 Comp Plan)
 - The current pedestrian network requires people to **backtrack** hundreds of feet depending on where they parked (Deadwood Box Study)
 - Pedestrians often want to walk the **shortest route**. If pedestrians must walk more than 3 minutes out of their way, they are more likely to **engage in riskier behavior**. (National Association of City Transportation Officials (NACTO) Urban Street Design Guide)
 - Pedestrian access to Main Street needs to be improved between the tourist attractions and the parking areas (2008 Ped Study)
- Connection between the Mickelson Trail to the Whitewood Creek Trail is desired (2018 Comp Plan)

Safety

- Pedestrian volumes continue to **grow over time** during both normal conditions and special events. (2008 Ped Study versus Deadwood Box Study Counts)
- Highly **varied pedestrian demographics** depending on time of day in terms of age, mobility, familiarity to the area, etc. (2008 Ped Study)
- Intersection improvements are needed to increase pedestrian safety and contribute to enhanced pedestrian movement (2008 Ped Study)



Alternatives

Alternative 1A and 1C-1 (previously named 1C) have both been shown in previous presentations. Alternative 1C-3 is a new build alternative that is a variation of 1C-1 that attempts to minimize the environmental, geological, visual, utility, and private landowner impacts while maintaining the benefits of 1C-1.

- Alternative **1A**
→ minor revisions
- Alternative **1C-1**
→ minor revisions
- Alternative **1C-3**
→ New



Similarities

The build alternatives have several similarities to each other including:

- Location of the drainage structure
- Typical section (number of lanes)
- Sherman Street conversion
- The addition of a shared use path on southwest side of highway
- Pedestrian Hybrid Beacon at Wall Street



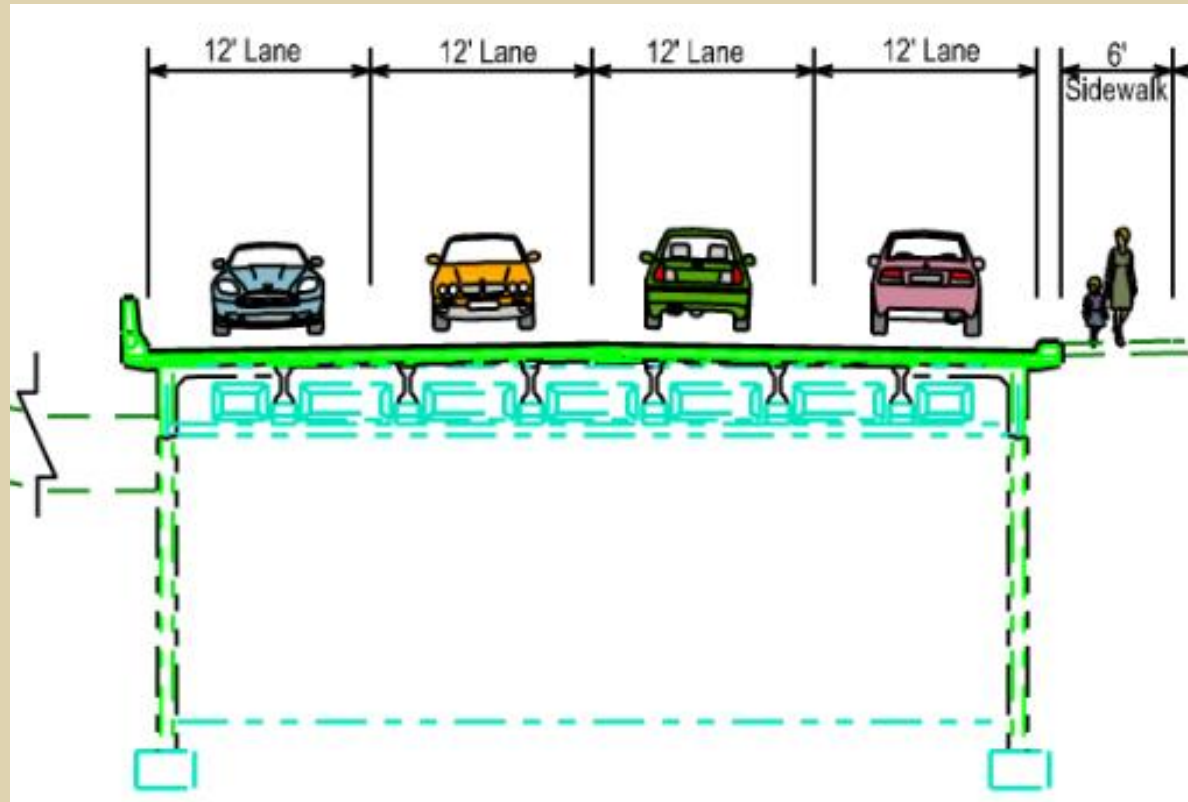
SUMMARY OF ALTERNATIVES

| Alt. No. | Drainage Structure | Location of Transportation Facilities | | Typical Section | | Bicycle/Pedestrian Amenities | | Sherman Street Direction of Traffic |
|----------|--|---------------------------------------|--------------|-----------------------|-----------------------------|------------------------------|---------------------------------------|-------------------------------------|
| | Pine St to Railroad Ave | Parking Side | Highway Side | Pine St to Sherman St | Sherman St to Lower Main St | North 6-foot Sidewalk Limits | South 10-foot Shared Used Path Limits | Lee St to US14A |
| No Build | N/A | South | North | 4-lane | 4-lane | Pine St to Deadwood St | None | One-Way |
| 1A | Replaced within Existing Structure (Temporary Extension) | South | North | 3-lane | 4-lane | Pine St to Wall St | Pine St to Railroad Ave | Two-Way |
| 1C-1 | Replaced within Existing Structure (Permanent Extension) | North | South | 3-lane | 4-lane to 5-lane | Pine St to Lower Main St | Pine St to Railroad Ave | Two-Way |
| 1C-3 | Replaced within Existing Structure (Permanent Extension) | North | South | 3-lane | 4-lane | Pine St to Lower Main St | Pine St to Railroad Ave | Two-Way |

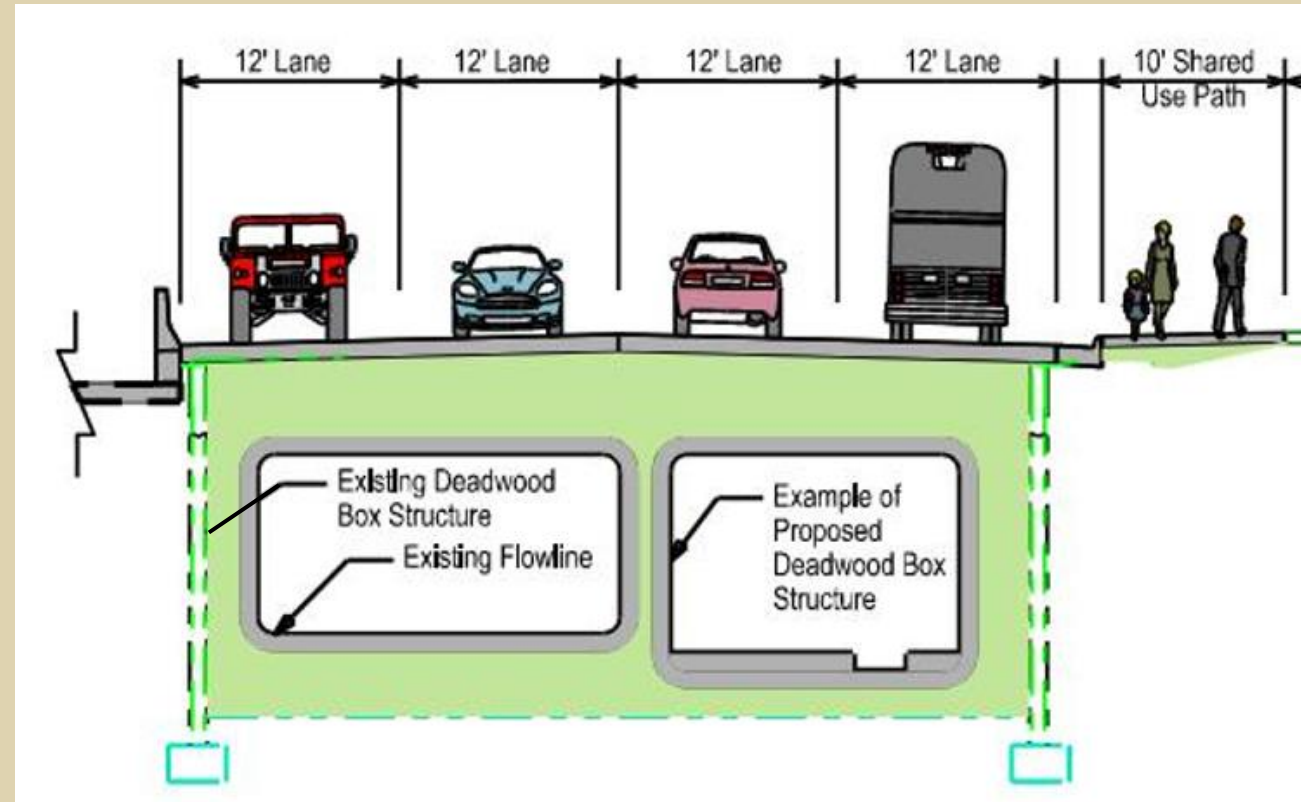


DRAINAGE STRUCTURE

Existing Deadwood Box Structure



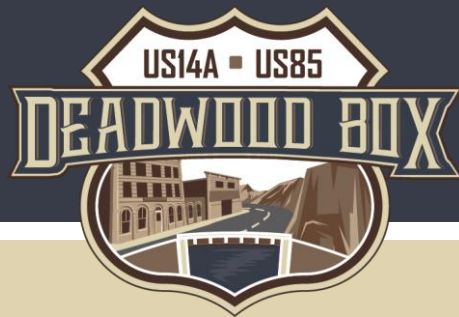
Proposed Deadwood Box Structure





SUMMARY OF ALTERNATIVES

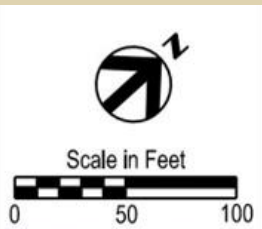
| Alt. No. | Drainage Structure | Location of Transportation Facilities | | Typical Section | | Bicycle/Pedestrian Amenities | | Sherman Street Direction of Traffic |
|----------|--|---------------------------------------|--------------|-----------------------|-----------------------------|------------------------------|---------------------------------------|-------------------------------------|
| | Pine St to Railroad Ave | Parking Side | Highway Side | Pine St to Sherman St | Sherman St to Lower Main St | North 6-foot Sidewalk Limits | South 10-foot Shared Used Path Limits | Lee St to US14A |
| No Build | N/A | South | North | 4-lane | 4-lane | Pine St to Deadwood St | None | One-Way |
| 1A | Replaced within Existing Structure (Temporary Extension) | South | North | 3-lane | 4-lane | Pine St to Wall St | Pine St to Railroad Ave | Two-Way |
| 1C-1 | Replaced within Existing Structure (Permanent Extension) | North | South | 3-lane | 4-lane to 5-lane | Pine St to Lower Main St | Pine St to Railroad Ave | Two-Way |
| 1C-3 | Replaced within Existing Structure (Permanent Extension) | North | South | 3-lane | 4-lane | Pine St to Lower Main St | Pine St to Railroad Ave | Two-Way |



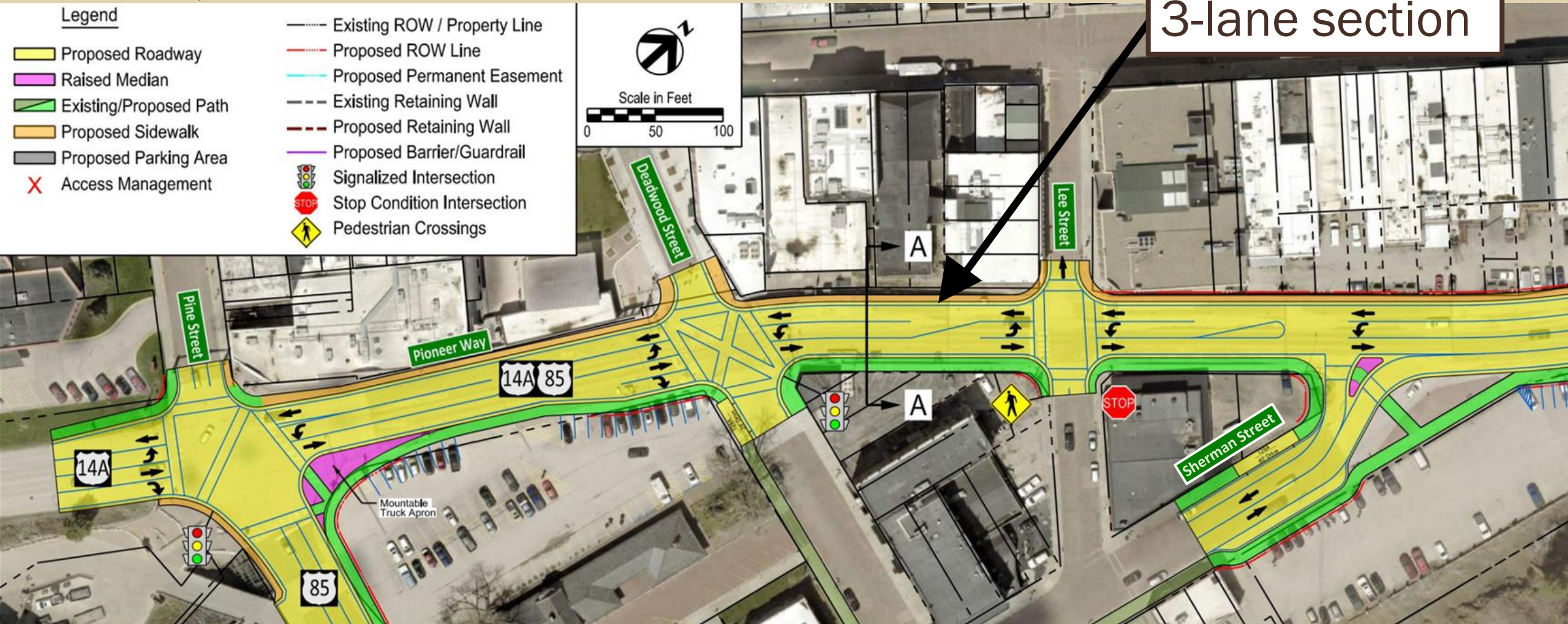
PINE STREET TO SHERMAN

Legend

- Proposed Roadway
- Raised Median
- Existing/Proposed Path
- Proposed Sidewalk
- Proposed Parking Area
- Access Management
- Existing ROW / Property Line
- Proposed ROW Line
- Proposed Permanent Easement
- Existing Retaining Wall
- Proposed Retaining Wall
- Proposed Barrier/Guardrail
- Signalized Intersection
- Stop Condition Intersection
- Pedestrian Crossings



3-lane section





SUMMARY OF ALTERNATIVES

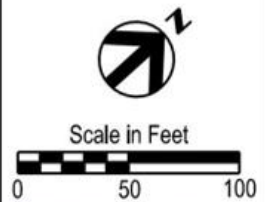
| Alt. No. | Drainage Structure | Location of Transportation Facilities | | Typical Section | | Bicycle/Pedestrian Amenities | | Sherman Street Direction of Traffic |
|----------|--|---------------------------------------|--------------|-----------------------|-----------------------------|------------------------------|---------------------------------------|-------------------------------------|
| | Pine St to Railroad Ave | Parking Side | Highway Side | Pine St to Sherman St | Sherman St to Lower Main St | North 6-foot Sidewalk Limits | South 10-foot Shared Used Path Limits | Lee St to US14A |
| No Build | N/A | South | North | 4-lane | 4-lane | Pine St to Deadwood St | None | One-Way |
| 1A | Replaced within Existing Structure (Temporary Extension) | South | North | 3-lane | 4-lane | Pine St to Wall St | Pine St to Railroad Ave | Two-Way |
| 1C-1 | Replaced within Existing Structure (Permanent Extension) | North | South | 3-lane | 4-lane to 5-lane | Pine St to Lower Main St | Pine St to Railroad Ave | Two-Way |
| 1C-3 | Replaced within Existing Structure (Permanent Extension) | North | South | 3-lane | 4-lane | Pine St to Lower Main St | Pine St to Railroad Ave | Two-Way |



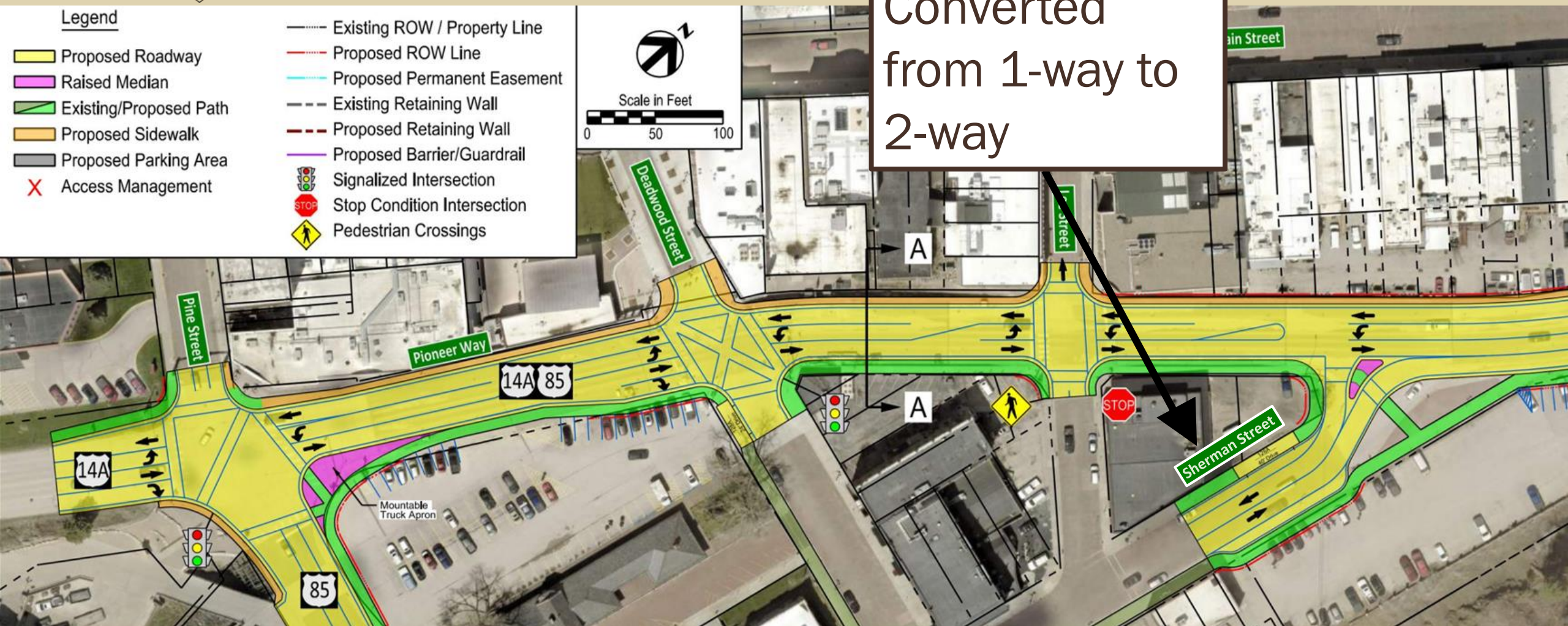
SHERMAN STREET CONVERSION

Legend

- Proposed Roadway
- Raised Median
- Existing/Proposed Path
- Proposed Sidewalk
- Proposed Parking Area
- X Access Management
- Existing ROW / Property Line
- Proposed ROW Line
- Proposed Permanent Easement
- Existing Retaining Wall
- Proposed Retaining Wall
- Proposed Barrier/Guardrail
- Signalized Intersection
- Stop Condition Intersection
- Pedestrian Crossings



Converted from 1-way to 2-way





SUMMARY OF ALTERNATIVES

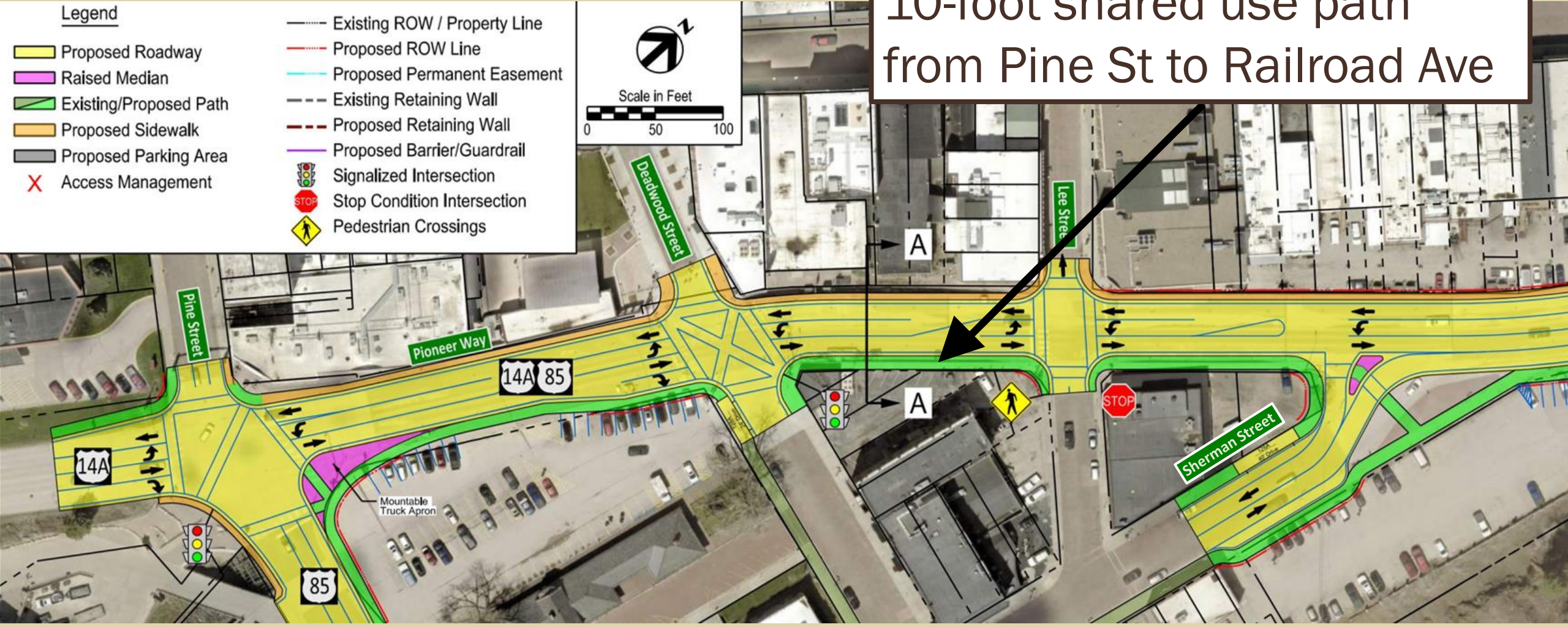
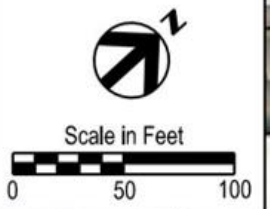
| Alt. No. | Drainage Structure | Location of Transportation Facilities | | Typical Section | | Bicycle/Pedestrian Amenities | | Sherman Street Direction of Traffic |
|----------|--|---------------------------------------|--------------|-----------------------|-----------------------------|------------------------------|---------------------------------------|-------------------------------------|
| | Pine St to Railroad Ave | Parking Side | Highway Side | Pine St to Sherman St | Sherman St to Lower Main St | North 6-foot Sidewalk Limits | South 10-foot Shared Used Path Limits | Lee St to US14A |
| No Build | N/A | South | North | 4-lane | 4-lane | Pine St to Deadwood St | None | One-Way |
| 1A | Replaced within Existing Structure (Temporary Extension) | South | North | 3-lane | 4-lane | Pine St to Wall St | Pine St to Railroad Ave | Two-Way |
| 1C-1 | Replaced within Existing Structure (Permanent Extension) | North | South | 3-lane | 4-lane to 5-lane | Pine St to Lower Main St | Pine St to Railroad Ave | Two-Way |
| 1C-3 | Replaced within Existing Structure (Permanent Extension) | North | South | 3-lane | 4-lane | Pine St to Lower Main St | Pine St to Railroad Ave | Two-Way |



SHARED USE PATH

10-foot shared use path from Pine St to Railroad Ave

- Legend**
- Proposed Roadway
 - Raised Median
 - Existing/Proposed Path
 - Proposed Sidewalk
 - Proposed Parking Area
 - Access Management
 - Existing ROW / Property Line
 - Proposed ROW Line
 - Proposed Permanent Easement
 - Existing Retaining Wall
 - Proposed Retaining Wall
 - Proposed Barrier/Guardrail
 - Signalized Intersection
 - Stop Condition Intersection
 - Pedestrian Crossings

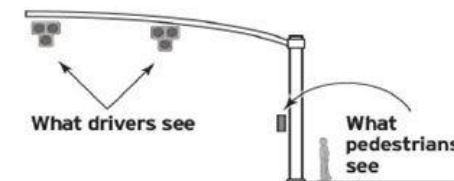




PEDESTRIAN HYBRID BEACON



HOW DOES THE NEW PEDESTRIAN HYBRID BEACON CROSSWALK WORK?



The Pedestrian Hybrid Beacon signal is dark. Traffic is free to move until a pedestrian presses button to cross.



When a pedestrian activates the signal, approaching cars will see a flashing yellow light.



The signal will change to a solid yellow, indicating that drivers must slow down and prepare to stop.



The signal will change to a double, solid red, indicating to drivers that they must stop. The pedestrian will then be allowed to cross the street.



When the signal begins flashing with alternating red lights, all vehicles must come to a complete stop, but may proceed if there are no pedestrians in the crosswalk.





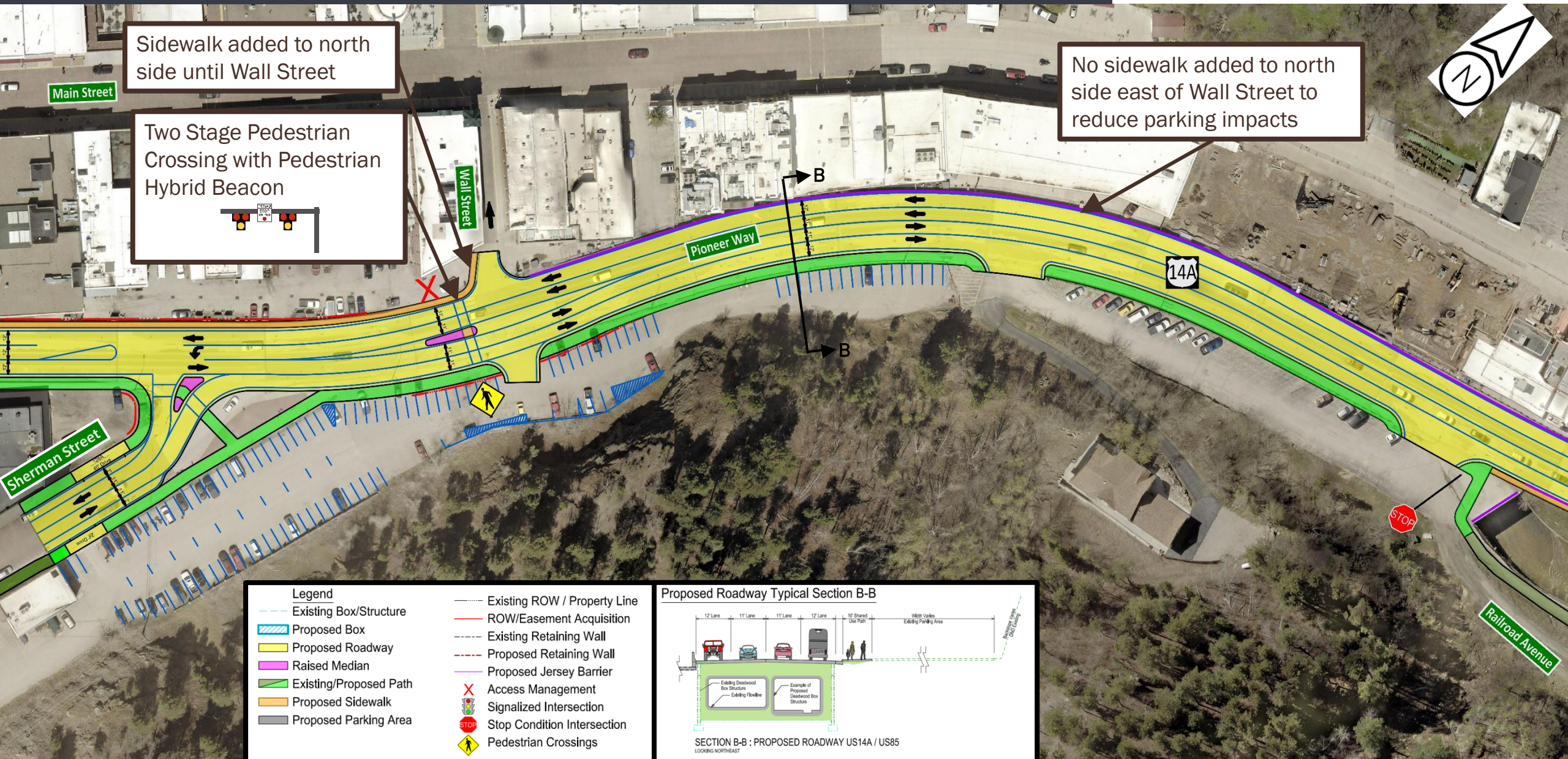
Differences

The build alternatives have several dissimilarities to each other including:

- The relation of the Holiday Inn/Bullock/Railroad Parking Lots to the highway
- The extent of sidewalk to northwest of highway
- Temporary or permanent extension of box
- Cost
- Parking impacts
- Impacts to hillside

Alternative 1A Key Differences

ROW Impacts = 0.4 Acres
 Total Cost = \$41.0 M
 Net Parking Impacts = (-) 21 spaces



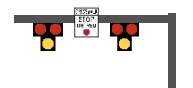
Alternative 1C-1 Key Differences

ROW Impacts = 1.5 Acres
 Total Cost = \$60.3 M
 Net Parking Impacts = (-) 32 spaces

High Impact to Utility Corridor

Sidewalk added to entire north side of highway

Two Stage Pedestrian Crossing with Pedestrian Hybrid Beacon



Parking on NW side of highway reduces pedestrian crossings

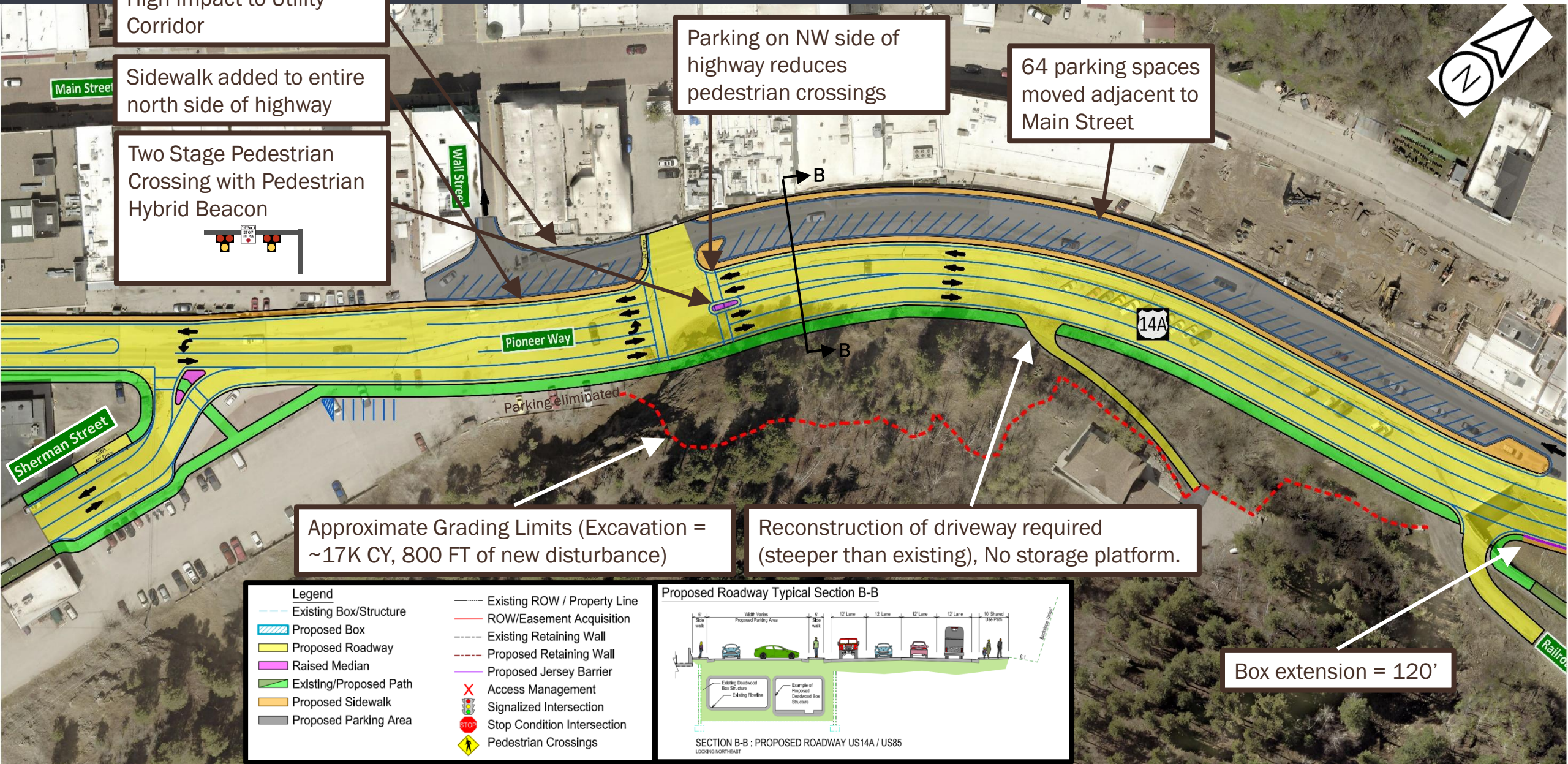
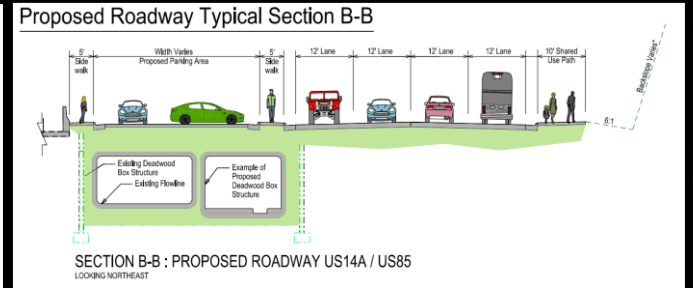
64 parking spaces moved adjacent to Main Street

Approximate Grading Limits (Excavation = ~17K CY, 800 FT of new disturbance)

Reconstruction of driveway required (steeper than existing), No storage platform.

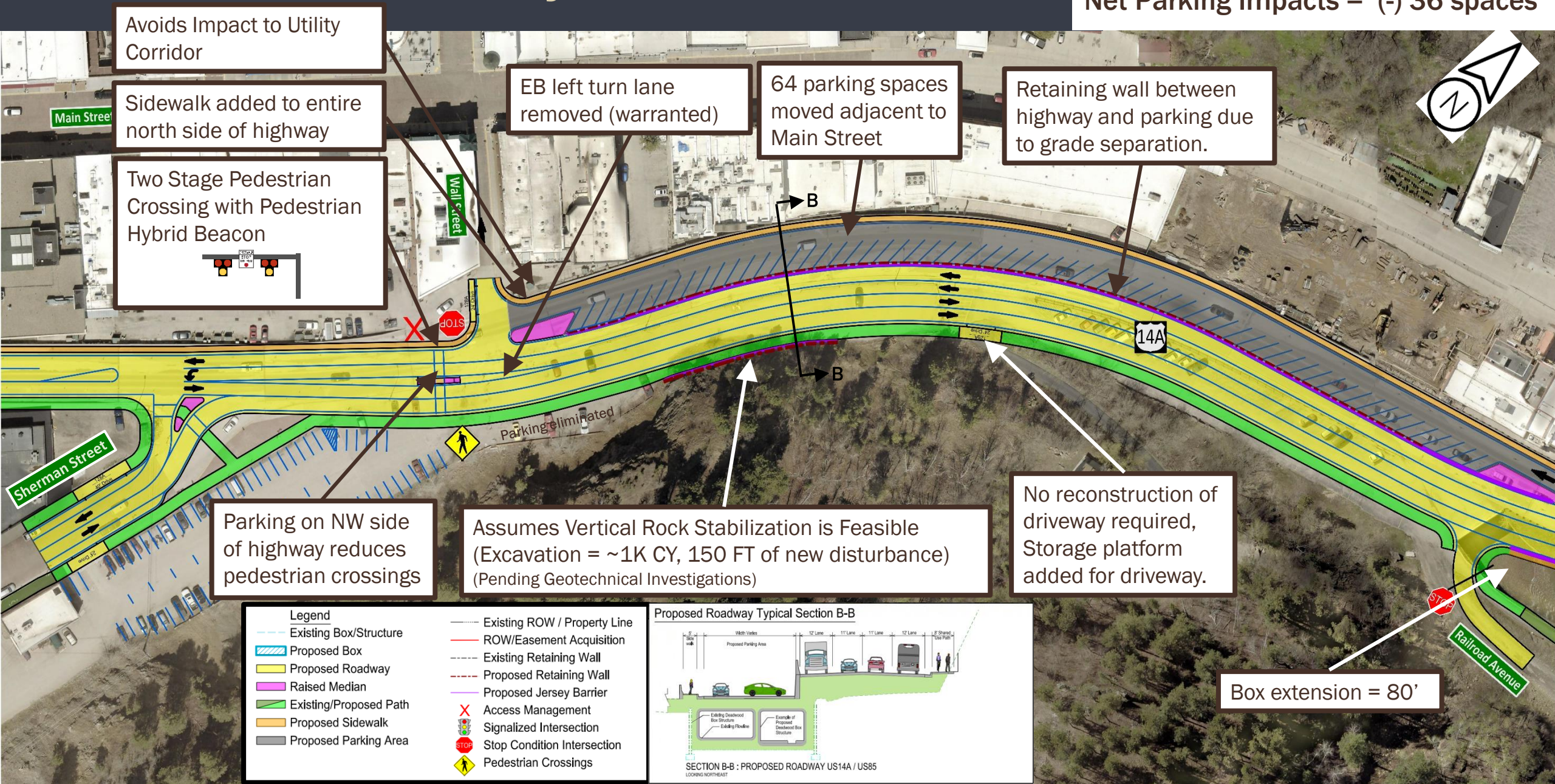
Box extension = 120'

- Legend**
- Existing Box/Structure
 - Proposed Box
 - Proposed Roadway
 - Raised Median
 - Existing/Proposed Path
 - Proposed Sidewalk
 - Proposed Parking Area
 - Existing ROW / Property Line
 - ROW/Easement Acquisition
 - Existing Retaining Wall
 - Proposed Retaining Wall
 - Proposed Jersey Barrier
 - Access Management
 - Signalized Intersection
 - Stop Condition Intersection
 - Pedestrian Crossings



Alternative 1C-3 Key Differences

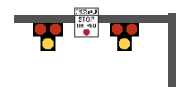
ROW Impacts = 1.1 Acres
 Total Cost = \$52.6 M
 Net Parking Impacts = (-) 36 spaces



Avoids Impact to Utility Corridor

Sidewalk added to entire north side of highway

Two Stage Pedestrian Crossing with Pedestrian Hybrid Beacon



EB left turn lane removed (warranted)

64 parking spaces moved adjacent to Main Street

Retaining wall between highway and parking due to grade separation.

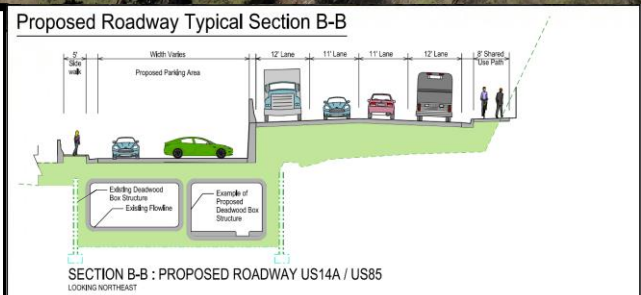
Parking on NW side of highway reduces pedestrian crossings

Assumes Vertical Rock Stabilization is Feasible (Excavation = ~1K CY, 150 FT of new disturbance) (Pending Geotechnical Investigations)

No reconstruction of driveway required, Storage platform added for driveway.

Box extension = 80'

- Legend**
- Existing ROW / Property Line
 - Existing Box/Structure
 - Proposed Box
 - Proposed Roadway
 - Raised Median
 - Existing/Proposed Path
 - Proposed Sidewalk
 - Proposed Parking Area
 - Existing Retaining Wall
 - Proposed Retaining Wall
 - Proposed Jersey Barrier
 - Access Management
 - Signalized Intersection
 - Stop Condition Intersection
 - Pedestrian Crossings





PARKING IMPACTS

| Build Alternative | Estimated Private Parking Stall Loss (-) | | Estimated Public Parking Stall Loss (-) | Parking Stalls Added (+) | Net Parking Loss (-) |
|-------------------|--|-------------------------|---|-------------------------------|----------------------|
| | Bullock Hotel Parking Lot | Holiday Inn Parking Lot | Railroad Parking Lot | New North Western Parking Lot | |
| 1A | -18 | -3 | 0 | 0 | -21 |
| 1C-1 | -41 | -12 | -43 | 64 | -32 |
| 1C-3 | -43 | -14 | -43 | 64 | -36 |



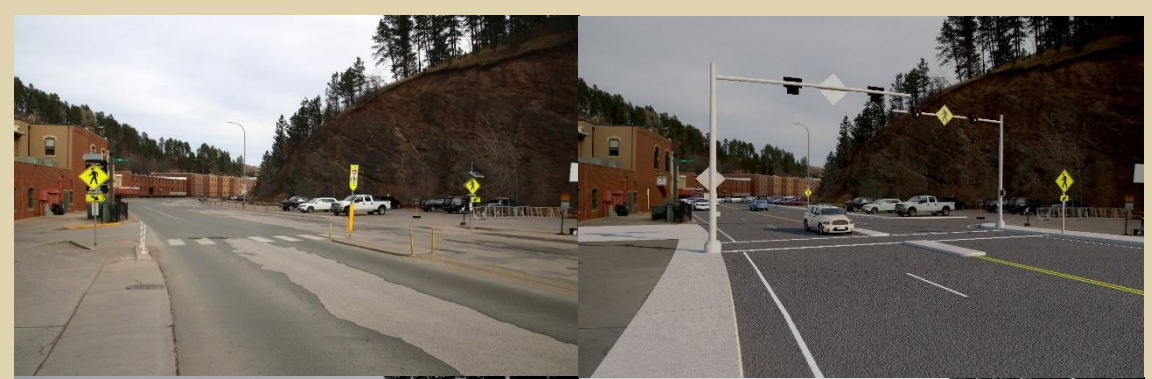
COST COMPARISON

| Build Alternative | Planning-Level Comparative Cost Estimate |
|-------------------|--|
| 1A | \$41.0 Million |
| 1C-1 | \$60.3 Million |
| 1C-3 | \$52.6 Million |



Visual Assessment

- Addition of new alternative created a need to update the visual impact assessment.
- Renderings of the alternatives have been created to get a visual representation of future conditions.
- Part of the impact assessment process is to solicit input from the public.
- These renderings have been made available to the public via the project website.





VIA Survey


A short survey with renderings is available as a handout & at the project website:

www.DeadwoodBox.com


PDF can be downloaded to better view renderings.

SAT is accepting survey responses/comments through October 11th.

VIA SURVEY



| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Alternative 1A | | | | | |
| Alternative 1A would result in a noticeable change in the existing environment. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Alternative 1A would negatively impact the existing visual character (setting, feeling, context). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| There are many concerns about Alternative 1A's features and construction impacts. | <input type="radio"/> | | | | |
| Alternative 1A has the potential to be very controversial. | <input type="radio"/> | | | | |
| After project completion (if Alternative 1A is chosen), people would notice to the visual changes. | <input type="radio"/> | | | | |
| In general, if Alternative 1A is chosen, how do you believe the changes would be perceived? | | | Negatively | | |
| | <input type="radio"/> | | | | |
| Alternative 1C-1 | | | | | |
| Alternative 1C-1 would result in a noticeable change in the existing environment. | <input type="radio"/> | | | | |
| Alternative 1C-1 would negatively impact the existing visual character (setting, feeling, context). | <input type="radio"/> | | | | |
| Alternative 1C-1 would negatively impact the existing visual character (setting, feeling, context) because of the change to the hillside. | <input type="radio"/> | | | | |
| There are many concerns about Alternative 1C-1's features and construction impacts. | <input type="radio"/> | | | | |
| Alternative 1C-1 has the potential to be very controversial. | <input type="radio"/> | | | | |
| After project completion (if Alternative 1C-1 is chosen), people would notice to the visual changes. | <input type="radio"/> | | | | |
| In general, if Alternative 1C-1 is chosen, how do you believe the changes would be perceived? | | | Negatively | | |
| | <input type="radio"/> | | | | |



| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Alternative 1C-3 | | | | | |
| Alternative 1C-3 would result in a noticeable change in the existing environment. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Alternative 1C-3 would negatively impact the existing visual character (setting, feeling, context). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Alternative 1C-3 would negatively impact the existing visual character (setting, feeling, context) because of the change to the hillside. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| There are many concerns about Alternative 1C-3's features and construction impacts. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Alternative 1C-3 has the potential to be very controversial. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| After project completion (if Alternative 1C-3 is chosen), people would notice to the visual changes. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| In general, if Alternative 1C-3 is chosen, how do you believe the changes would be perceived? | | | Negatively | | Positively |
| | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Feel free to briefly summarize your input, or use the questions above to guide your response. Please indicate if you have a preference for an alternative and explain.

The visualizations of each alternative are available for review on the project website: <https://deadwoodbox.com/>



Please complete this survey and return via mail by **Oct. 11, 2023**: 703 Main Street #200 Rapid City, SD 57701





General Feedback

There are several ways to provide your general feedback as well:

- Project Website

www.DeadwoodBox.com

- Comment Form
- Study Contact

The image shows a digital form titled "Comment Form" on a dark blue background. At the top left is the Deadwood Box logo. The form itself is a white rectangle with ten horizontal lines for text entry. At the bottom of the form, there are four logos: the South Dakota Department of Transportation logo, the Federal Highway Administration logo, the Deadwood logo, and the URL <https://deadwoodbox.com/>. A QR code is located in the bottom right corner.



Contact

WEBSITE: www.DeadwoodBox.com

EMAIL: study@DeadwoodBox.com

SDDOT PROJECT MANAGER

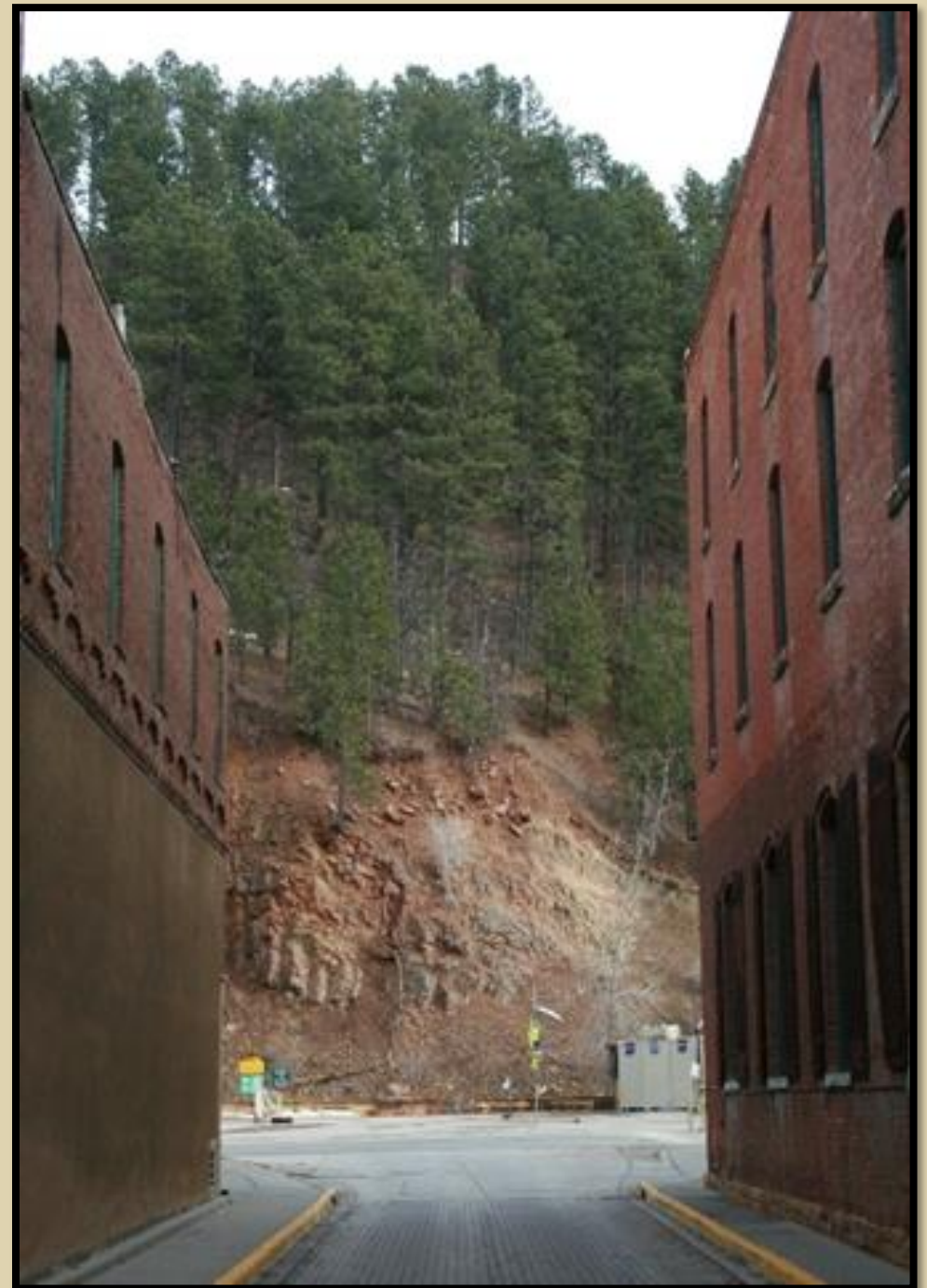
Steve Gramm

Steve.Gramm@state.sd.us

CONSULTANT PROJECT MANAGER

Steve Hoff

Steve.Hoff@hdrinc.com





Next Steps

- Finalize Visual Impact Assessment
- Complete cultural review
- Select preferred alternative
- Complete NEPA Process

- Construction tentatively planned for 2028.

