March 2021
Project
Recommendations

East County Line Road/
Weld County Road 1
Master Plan
# Summary of Engineer's Opinion of Probable Cost

<table>
<thead>
<tr>
<th>Segment</th>
<th>Project</th>
<th>Project ID</th>
<th>Implementation Grouping</th>
<th>Construction Total</th>
<th>ROW Acquisition</th>
<th>Design Engineering</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Segment 1</strong>&lt;br&gt;City of Longmont</td>
<td>Ute/Highway 66 Intersection Capacity &amp; Safety Improvements</td>
<td>L1</td>
<td>Long-Term</td>
<td>$623,000</td>
<td>$31,000</td>
<td>$60,000</td>
<td>$714,000</td>
</tr>
<tr>
<td></td>
<td>Roadway Widening &amp; Safety Improvements from Highway 66 to 17th Avenue</td>
<td>L2</td>
<td>Long-Term</td>
<td>$4,120,000</td>
<td>$0</td>
<td>$396,700</td>
<td>$4,516,700</td>
</tr>
<tr>
<td></td>
<td>17th Avenue Roundabout &amp; Safety Improvements</td>
<td>L3</td>
<td>Mid-Term</td>
<td>$1,738,000</td>
<td>$144,000</td>
<td>$167,400</td>
<td>$2,049,400</td>
</tr>
<tr>
<td></td>
<td>Roadway Widening &amp; Safety Improvements from 17th Avenue to 9th Avenue</td>
<td>L4</td>
<td>Short-Term</td>
<td>$2,292,000</td>
<td>$400,000</td>
<td>$216,800</td>
<td>$2,868,800</td>
</tr>
<tr>
<td></td>
<td>Deerwood Drive/WCR 26 Intersection Capacity &amp; Safety Improvements</td>
<td>L5</td>
<td>Long-Term</td>
<td>$703,000</td>
<td>$0</td>
<td>$67,700</td>
<td>$770,700</td>
</tr>
<tr>
<td></td>
<td>Roadway Shouldering &amp; Multi-Use Trail from Great Western/Zlaten Drive to Vrain Creek</td>
<td>L6</td>
<td>Short-Term</td>
<td>$1,275,000</td>
<td>$27,500</td>
<td>$122,800</td>
<td>$1,425,300</td>
</tr>
<tr>
<td><strong>Segment Subtotal:</strong></td>
<td></td>
<td></td>
<td></td>
<td>$10,711,000</td>
<td>$602,500</td>
<td>$1,031,400</td>
<td>$12,344,900</td>
</tr>
<tr>
<td></td>
<td>St. Vrain Pedestrian Bridge &amp; Multi-Use Trail</td>
<td>C1</td>
<td>Short-Term</td>
<td>$1,450,000</td>
<td>$18,000</td>
<td>$188,500</td>
<td>$1,656,500</td>
</tr>
<tr>
<td></td>
<td>Roadway Shouldering &amp; Safety Improvements from Quicksilver Road to WCR 20.5</td>
<td>C2</td>
<td>Short-Term</td>
<td>$1,374,000</td>
<td>$75,000</td>
<td>$132,300</td>
<td>$1,581,300</td>
</tr>
<tr>
<td></td>
<td>Replace Existing Dry Creek Bridge With Box Culvert &amp; Overland Grading</td>
<td>C3</td>
<td>Short-Term</td>
<td>$2,224,000</td>
<td>$60,000</td>
<td>$214,200</td>
<td>$2,498,200</td>
</tr>
<tr>
<td></td>
<td>WCR 20.5 Roundabout &amp; Safety Improvements</td>
<td>C4</td>
<td>Short-Term</td>
<td>$1,880,000</td>
<td>$185,000</td>
<td>$245,000</td>
<td>$2,309,000</td>
</tr>
<tr>
<td></td>
<td>Roadway Shouldering &amp; Safety Improvements from WCR20.5 to Oxford Road</td>
<td>C5</td>
<td>Mid-Term</td>
<td>$2,257,000</td>
<td>$5,000</td>
<td>$237,000</td>
<td>$2,529,000</td>
</tr>
<tr>
<td></td>
<td>Oxford Road Roundabout &amp; Safety Improvements</td>
<td>C6</td>
<td>Mid-Term</td>
<td>$1,487,000</td>
<td>$80,000</td>
<td>$144,000</td>
<td>$1,711,000</td>
</tr>
<tr>
<td></td>
<td>Roadway Shouldering &amp; Safety Improvements from Oxford Road to WCR16.5</td>
<td>C7</td>
<td>Mid-Term</td>
<td>$475,000</td>
<td>$0</td>
<td>$45,700</td>
<td>$520,700</td>
</tr>
<tr>
<td></td>
<td>WCR 16.5 Roundabout &amp; Safety Improvements</td>
<td>C8</td>
<td>Mid-Term</td>
<td>$1,662,000</td>
<td>$47,500</td>
<td>$160,100</td>
<td>$1,869,600</td>
</tr>
<tr>
<td></td>
<td>Roadway Shouldering &amp; Safety Improvements from WCR16.5 to Niwot Road</td>
<td>C9</td>
<td>Mid-Term</td>
<td>$478,000</td>
<td>$15,900</td>
<td>$46,100</td>
<td>$540,000</td>
</tr>
<tr>
<td></td>
<td>Niwot Road Roundabout &amp; Safety Improvements</td>
<td>C10</td>
<td>Mid-Term</td>
<td>$1,235,000</td>
<td>$57,200</td>
<td>$118,900</td>
<td>$1,411,000</td>
</tr>
<tr>
<td></td>
<td>Roadway Shouldering &amp; Safety Improvements from Niwot Road to Highway 52</td>
<td>C11</td>
<td>Long-Term</td>
<td>$1,343,000</td>
<td>$12,500</td>
<td>$129,300</td>
<td>$1,454,800</td>
</tr>
<tr>
<td></td>
<td>Replace Existing Boulder Creek Bridge</td>
<td>C12</td>
<td>Long-Term</td>
<td>$5,500,000</td>
<td>$75,000</td>
<td>$715,000</td>
<td>$6,290,000</td>
</tr>
<tr>
<td></td>
<td>Highway 52 Intersection Safety Improvements</td>
<td>C13</td>
<td>Mid-Term</td>
<td>$810,000</td>
<td>$23,000</td>
<td>$78,000</td>
<td>$911,000</td>
</tr>
<tr>
<td><strong>Segment Subtotal:</strong></td>
<td></td>
<td></td>
<td></td>
<td>$22,175,000</td>
<td>$662,200</td>
<td>$1,031,400</td>
<td>$23,328,600</td>
</tr>
<tr>
<td></td>
<td>Roadway Widening &amp; Safety Improvements from Highway 52 to Kenosha Road</td>
<td>E1</td>
<td>Long-Term</td>
<td>$2,236,000</td>
<td>$69,500</td>
<td>$215,300</td>
<td>$2,520,800</td>
</tr>
<tr>
<td></td>
<td>Replace Existing ECLR/WCR Bridge over Coal Creek</td>
<td>E2</td>
<td>Long-Term</td>
<td>$2,352,000</td>
<td>$10,000</td>
<td>$305,800</td>
<td>$2,677,800</td>
</tr>
<tr>
<td></td>
<td>Kenosha Road Roundabout, WCR 10.5 Roundabout and Connecting Roadway</td>
<td>E3</td>
<td>Mid-Term</td>
<td>$2,625,000</td>
<td>$162,700</td>
<td>$282,800</td>
<td>$3,070,500</td>
</tr>
<tr>
<td></td>
<td>Replace Existing Kenosha Road Bridge over Coal Creek</td>
<td>E4</td>
<td>Short-Term</td>
<td>$5,500,000</td>
<td>$50,000</td>
<td>$715,000</td>
<td>$6,265,000</td>
</tr>
<tr>
<td></td>
<td>Roadway Widening &amp; Safety Improvements from WCR 10.5 to Jay Road</td>
<td>E5</td>
<td>Mid-Term</td>
<td>$2,980,000</td>
<td>$103,100</td>
<td>$287,000</td>
<td>$3,370,100</td>
</tr>
<tr>
<td></td>
<td>Jay Road Intersection Capacity &amp; Safety Improvements</td>
<td>E6</td>
<td>Short-Term</td>
<td>$1,314,000</td>
<td>$14,700</td>
<td>$126,200</td>
<td>$1,455,000</td>
</tr>
<tr>
<td><strong>Segment Subtotal:</strong></td>
<td></td>
<td></td>
<td></td>
<td>$17,004,000</td>
<td>$410,000</td>
<td>$1,902,100</td>
<td>$19,316,100</td>
</tr>
</tbody>
</table>

**Segment Subtotal:**

<table>
<thead>
<tr>
<th>Segment</th>
<th>Project</th>
<th>Project ID</th>
<th>Implementation Grouping</th>
<th>Construction Total</th>
<th>ROW Acquisition</th>
<th>Design Engineering</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td>$49,890,000</td>
<td>$1,675,700</td>
<td>$5,367,900</td>
<td>$56,933,600</td>
</tr>
</tbody>
</table>

1. Projects L1 and L2 could be combined into one (1) bid package.
2. Projects C3 and C4 could be combined into one (1) bid package.
3. Project implementation recommendation is based on several factors and is subject to change, see Master Plan.
4. Estimated costs are in 2021 dollars.
SEGMENT #1 RECOMMENDATION (L1): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1 AT UTE/HIGHWAY 66

OVERVIEW

Project Description
Improve the existing signalized intersection at ECLR/WCR 1 and Highway 66. ECLR/WCR 1 would be 5-lanes south of Highway 66 with a detached multiuse pathway on the west side. Future movements would include dual westbound left-turns off Highway 66. City of Longmont property west of the roadway would allow for future widening to avoid or minimize the need for acquisition of right-of-way from property owners east of ECLR/WCR 1.

Public Input
Public comments suggest concerns for traffic speed, bicyclist safety, right-of-way acquisition and congestion. Comments and polls were mostly in support of the proposed recommendation’s ability to meet the multiple community needs.

Project Alternatives
The Colorado Department of Transportation (CDOT) has prepared a Planning and Environmental Linkages (PEL) Study on State Highway 66. The PEL study suggests that a future grade separated intersection may be required at this intersection. This ECLR/WCR 1 study projects that a signalized intersection with 5-lanes on ECLR/WCR 1 would function acceptably through the year 2040.

Recommendation
Installation of new upgraded signalized intersection to meet 2040 multimodal traffic projections.

RECOMMENDED IMPROVEMENTS

PROJECT PRIORITIES

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>Accidents are moderately high at this intersection, with a large amount being 'rear-end' accidents. The proposed design would need to take existing crash data into account.</td>
</tr>
<tr>
<td>Mobility</td>
<td>The signalized intersection should be designed to allow full movements for both pedestrians and bicyclists. The proposed City of Longmont park at the southwest corner of the intersection would be a major draw for multimodal regional traffic.</td>
</tr>
<tr>
<td>Resiliency</td>
<td>The project area is not located within a 100-year floodplain; however, culvert replacement and drainage improvements as part of the proposed intersection project, north of Spring Gulch No.2, would increase resiliency within the area.</td>
</tr>
</tbody>
</table>
**Segment #1 Recommendation (L1): East County Line Road/Weld County Road 1 at Ute/Highway 66**

- **Extend improvements to 17th Avenue**
- **Approximate ROW acquisition ~40’ PEDESTRIAN WALKWAY**

**General Notes:**
- Concrete Multi-use path on the west side of ECLR/WCR1.
- Intersection configuration designed to meet 2040 anticipated traffic needs.
- Hold eastern edge of asphalt south of the intersection to minimize impacts to properties.
- Lower roadway profile of ECLR/WCR1 approximately 1,000 feet south of intersection to resolve vertical sight issues.
- Roadway layouts and lane widths described by the standard road cross sections in Table 2.2 of the Corridor Plan.
- Right-of-Way acquisition is estimated based on the current municipal typical section.

**ECLR/WCR1 and UTE/SH66 Highway Legend**
- **R/W:** Existing Right of Way
- **R/W:** Proposed Right of Way based on typical sections
- **Proposed Edge of Asphalt**

**Intersection Configuration may change in future design**

**Future Pel Row**

**Align through lanes to minimize shift**
OVERVIEW

Project Description
Improve safety and traffic flow through the existing stop-controlled “T” intersection at ECLR/WCR 1 and 17th Avenue. The roundabout and approaches would include detached sidewalks, widened to accommodate bicyclists. The double-lane roundabout would help regulate/reduce speeds on ECLR/WCR 1 and avoid conflict with the electrical steel towers better than a signalized intersection would.

Public Input
Public requests include separated bike path or protected bike lane to the new Spring Gulch trail, safety issues with bicycle/pedestrian and vehicular mobility, and congestion. Comments and polls were mostly in support of the proposed recommendation. Comments indicated concern for the ability of other residents to adapt to a roundabout.

Project Alternatives
Alternatives including a traditional stop-controlled intersection and a roundabout intersection were analyzed:
A. Roundabout – The center of the roundabout would be offset slightly west of ECLR/WCR 1. The roundabout would be designed to control traffic speeds. Raised medians and splitter islands would be installed at the approaches and departures.
B. Signal – Due to the required turning lanes, this option would require a larger right-of-way take east of the road. The southbound right-turn lane would be very close to a steel electrical tower.

Recommendation
A double-lane roundabout is recommended to improve safety by slowing vehicles through the intersection. A roundabout would reduce right-of-way takes east of the roadway.

PROJECT PRIORITIES

Safety
A roundabout would help control speeds on ECLR/WCR 1 and allow for raised medians for pedestrian refuge.

Mobility
Mobility will improve with the new roundabout since delay times (especially on 17th Avenue) will be decreased, and new wider detached sidewalks will be installed for pedestrians and cyclists.

Resiliency
The project area is not located within a 100-year floodplain; however, culvert replacement and drainage improvements as part of the proposed project, north of Spring Gulch No.2, would improve resiliency within the area.

ALTERNATIVES

Alternative “A” (Preferred)

Alternative “B”
SEGMENT #1: PREFERRED ALTERNATIVE (L3): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1 AT 17TH AVENUE

GENERAL NOTES:
- SHIFT ROADWAY TO THE EAST TO AVOID TRANSMISSION TOWERS
- IMPROVEMENTS COULD IMPACT EXISTING IRRIGATION LINES/DITCHES
- IMPROVEMENTS COULD IMPACT PROPERTY OWNERS TO THE EAST
- RIGHT-OF-WAY ACQUISITION IS AN ESTIMATE BASED ON THE CURRENT MUNICIPAL TYPICAL SECTION AND MAY VARY DURING ACTUAL DESIGN
- ROADWAY LAYOUTS AND LANE WIDTHS DESCRIBED BY THE STANDARD ROAD CROSS SECTIONS IN TABLE 1.2 OF THE CORRIDOR PLAN
- BIKE ROUTE WILL BE DETERMINED BY THE FINAL ROUNDABOUT DESIGN
- ROADWAY LAYOUTS AND LANE WIDTHS DESCRIBED BY THE STANDARD ROAD CROSS SECTIONS IN TABLE 1.2 OF THE CORRIDOR PLAN
- RIGHT-OF-WAY ACQUISITION IS ESTIMATED BASED ON THE CURRENT MUNICIPAL TYPICAL SECTION
- 15 MPH ROUNDABOUT DESIGN SPEED

APPARENTLY 100' OF ROW REQUIRED
- RAISED CONCRETE MEDIAN OR XERISCAPE (TYPICAL)
- AVOID MAJOR POWER LINE TOWER WITH RIGHT LANE
- EXTEND IMPROVEMENT TO HIGHWAY 65
- PROPOSED CONCRETE MULTIUSE PATH

CONCRETE SIDEWALK CONSTRUCTED BY DEVELOPER
- AVOID MAJOR POWER LINE TOWER WITH RIGHT LANE

APPROXIMATE ROW ACQUISITION-15'

ECLR/WCR1

BIKE RAMP (TYPICAL)
- STORAGE STRUCTURE MAY NEED TO BE REMOVED

APPROXIMATELY 120' OF ROW REQUIRED
- SHIFT ROAD TO THE EAST TO AVOID POWER LINE TOWERS WILL ENCROACH ON EXISTING PROPERTY

ECLR/WCR1 AND E. 17TH AVENUE LEGEND
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY BASED ON TYPICAL SECTIONS
- PROPOSED EDGE OF ASPHALT
- EXISTING IRRIGATION PIPE

SCALE INFEET
SEGMENT #1 RECOMMENDATION (L6): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1, GREAT WESTERN/ZLATEN DRIVE TO VRAIN CREEK

OVERVIEW

Project Description

The proposed project would widen ECLR/WCR 1 between Zlaten Drive and the bridge over the St. Vrain Creek to allow for paved shoulders. The multiuse trail would be extended south to St. Vrain Creek and connect to the proposed pedestrian bridge over St. Vrain Creek.

Public Input

Need for pedestrian and bicycle improvements to improve safety, along with vehicular congestion issues. Comments and polls were in support of the proposed recommendation’s ability to meet the multiple community needs.

Project Alternatives

N/A

Recommendation

Widening of ECLR/WCR 1 along is recommended to increase safety for motorists and bicyclists. Recommendations also include installing a traffic signal or roundabout at time of full buildout of the Springs at Sandstone Ranch development. Extending the multiuse trail would provide continuity to the Quicksilver underpass and trail system south of St. Vrain Creek.

PROJECT PRIORITIES

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>Adding widened shoulders and an improved intersection would increase safety for both pedestrians and motorists. The detached trail would enable both pedestrians and bicyclists to be separated from motorists.</td>
</tr>
<tr>
<td>Mobility</td>
<td>Mobility for both pedestrians and bicyclists would be greatly improved with connectivity to the regional trail system in the area.</td>
</tr>
<tr>
<td>Resiliency</td>
<td>The southern portion of the project area is located within a 100-year floodplain associated with St. Vrain Creek. The roadway profile is above the 100-year. The possible use of roadway slope revetment/stabilization should be explored as part of the design.</td>
</tr>
</tbody>
</table>
SEGMENT #1 RECOMMENDATION (L6): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1, GREAT WESTERN/ZLATEN DRIVE TO VRAIN CREEK

**General Notes:**
- Widen both sides of ECLR/WCR1
- Add eastern multi-use trail to connect to future pedestrian bridge over St. Vrain Creek
- Connect widened shoulders to existing bridge over St. Vrain Creek
- Right-of-way acquisition is an estimate based on the current municipal typical section and may vary during actual design
- Roadway layouts and lane widths described by the standard road cross sections in Table 1.2 of the Corridor Plan
- Right-of-way acquisition is estimated based on the current municipal typical section

**Recommendation:**
RECOMMEND ADDING TRAFFIC SIGNAL OR ROUNDABOUT WITH FULL BUILDOUT OF THE SPRINGS AT SANDSTONE RANCH

**Shoulder Widening:**
Shoulder widening to connect to existing bridge structure

**Approximate ROW Acquisition:**
- Approximate ROW acquisition - 20'
- Connect to future pedestrian bridge

**Connect to Existing Sidewalk:**

**Multi-Use Trail:**

**ECLR/WCR1 and Great Western/Zlaten Drive Legend:**
- Existing Right of Way
- Proposed Right of Way based on typical sections
- Proposed edge of asphalt
OVERVIEW #2 RECOMMENDATION (C3): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1 AT DRY CREEK BRIDGE

Project Description
Eliminate flows from the 100-year event from overtopping ECLR/WCR 1. This would require overland grading west of ECLR between Dry Creek and Quicksilver Road, and replacement of existing bridge with a box culvert.

Public Input
Comments on the proposed recommendation were in overall support, with an interest to preserve silver maples trees along the east.

Project Alternatives
Four alternatives were evaluated (see all alternatives figure to right):

1. Improve existing channel alignment – Improvements to the existing creek alignment and increase capacity to carry the 100-year flows. Install a new 100-year bridge at ECLR/WCR1 to allow 100-year flows.

2. New spill channel – Redirect the Dry Creek channel west of ECLR/WCR 1 and run channel to the north to intercept the St. Vrain Creek upstream of the existing ECLR/WCR 1 bridge. Construct a bridge at Quicksilver to allow flows under the road. Historic flows within Dry Creek would be allowed to flow under ECLR/WCR 1 through a new box culvert structure.

2A. Overland grading and raise ECLR/WCR 1 – similar to Alternative 2, storm water would be stopped west of ECLR/WCR 1 and allowed to flow to the St. Vrain Creek. However, instead of a deep channel and a bridge at Quicksilver Road, flows would be allowed to spread out and take a more natural path to the river.

3. Overflow channel – This two-stage channel would divert most of the flows into a new channel located closer to N. 119th Street, which would drop into the St. Vrain River. Historic flows within Dry Creek would be allowed to flow under ECLR/WCR 1 through a new box culvert.

Recommendation
In an effort to minimize improvements to the Dry Creek channel outside of the ECLR/WCR 1 corridor, Alternative 2A is the recommendation. Replacement of the existing ECLR/WCR 1 Dry Creek Bridge with a box culvert and a slight lowering of Quicksilver Road to allow flood water overtopping will also be required.

PROJECT PRIORITIES

Safety
Safety would be improved by allowing the roadway to stay open during the 100-year storm events, thereby allowing north-south passage during a flood emergency.

Mobility
Multi modal mobility through this section of the corridor would not be disrupted by storm flows less than the 100-year event.

Resiliency
The project area is located within a 100-year floodplain. Improvements would eliminate 100-year flows from overtopping the road. Improvements could supply roadway resiliency in storm event over 100-year.

ALTERNATIVES

Alternative “A” (Preferred)

All Alternatives
SEGMENT #2 PREFERRED ALTERNATIVE (C3): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1 AT DRY CREEK BRIDGE

GRADE FIELD FROM DRY CREEK TO QUICKSILVER ROAD TO ALLOW OVER-TOPPING FROM DRY CREEK TO FLOW NORTH TO THE ST. VRAIN CREEK. RECEESS QUICKSILVER ROAD TO ALLOW FLOOD FLOWS TO OVER-TOP ROADWAY.

MINOR ROADWAY SHIFT WEST TO FIT FIELD CONDITIONS CONTINUES SOUTH TO PIKE ROAD

CORRIDOR IMPROVEMENT TO PIKE ROAD

CURRENT ISSUE: STORM WATER FLOWS DURING LARGE STORM EVENTS OVERTOP ECLR BETWEEN DRY CREEK AND QUICKSILVER ROAD

RECOMMENDED SOLUTION: COMBINATION OF RAISING ECLR AND GRADING OF OPEN AREA WEST OF ECLR TO ALLOW STORM WATER TO FLOW TO QUICK SILVER ROAD AND FLOW TO THE ST. VRAIN CREEK.

REPLACE EXISTING BRIDGE WITH BOX CULVERT (APPROXIMATE SIZE 15'x6') TO ALLOW HISTORIC FLOWS TO PASS UNDER ECLR

GENERAL NOTES:
- SIZE AND LOCATION OF THE BOX CULVERT MAY BE ADJUSTED DURING DESIGN
- STORM WATER TO FLOW "OVERLAND" BETWEEN QUICKSILVER AND THE ST. VRAIN CREEK WITHOUT GRADING OF FIELD
- ROADWAY LAYOUTS AND LANE WIDTHS DESCRIBED BY THE STANDARD ROAD CROSS SECTIONS IN TABLE 2.2 OF THE CORRIDOR PLAN
- RIGHT-OF-WAY ACQUISITION IS ESTIMATED BASED ON THE CURRENT MUNICIPAL TYPICAL SECTION

RAISE ECLR BETWEEN 6" AND 12" BETWEEN DRY CREEK AND QUICKSILVER ROAD TO PREVENT ROADWAY FLOODING

ECLR/WCR1 AND DRY CREEK BRIDGE LEGEND
OVERVIEW

Project Description

Improve the existing two-way stop-controlled intersection at ECLR/WCR 1 and WCR 20.5/Pike Road with a single-lane roundabout to accommodate future traffic volumes. Major irrigation facilities with the existing ditch running diagonally under intersection should also be addressed with the proposed project, and coordination should be done with the ditch companies to accommodate improvements.

Public Input

Commentors on existing conditions shared that heavy traffic to and from WCR 20.5 creates need to improve operations to accommodate heavy commuter traffic from Weld County communities. Safety improvements needed especially due to high level of truck traffic and to accommodate bicycles. Slow traffic and make sure to accommodate wildlife crossings. Comments and polls on the proposed recommendations mostly support the proposed roundabout, specifically as useful way to truck traffic movement.

Project Alternatives

A. Roundabout – Center of the roundabout would be offset southeast of the existing intersection to reduce impacts to the fire station and to maximize deflection of traffic entering the roundabout. To slow the traffic entering the roundabout. Raised medians and splitter islands would be installed at the approaches and departures. An optional slip lane on the northeast quadrant is shown to better accommodate morning commuter traffic. The slip ramp improvements could result in higher speeds and potential safety impacts.

B. Signal – Addition of right-turn lanes and/or left-turn lanes in each direction. Installation of a new traffic signal to control movements and improve safety. The footprint would be wider than the roundabout and potentially increase off-peak hour delays.

Recommendation

A single-lane roundabout would:

- Increase safety by slowing vehicles though the intersection. Allow for ‘continuous’ traffic flow – decreased delays.
- Improve off-peak operations.
- No need for traffic signal maintenance.
- Decreased congestion and emissions.

PROJECT PRIORITIES

Safety

Slower traffic, raised median would separate traffic, reduce severity of accidents.

Mobility

Vehicles would navigate the roundabout intersection without having to stop. Speeds would be reduced within the roundabout to approximately 15-20 MPH, bicyclists would be able to ride through the roundabout without being overtaken by a vehicle, and a raised median would provide pedestrian refuge.

Resiliency

The project area is not located within a 100-year floodplain; however, culvert replacement and drainage/irrigation improvements along this stretch of roadway between Dry Creek and Boulder Creek would increase resiliency.
**SEGMENT #2: PREFERRED ALTERNATIVE (C4): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1 AT PIKE/WELD COUNTY ROAD 20.5**

**GENERAL NOTES:**
- HOLD WESTERN EDGE OF ECLR/WCR1
- AVOID IMPACT TO MOUNTAIN VIEW FIRE RESCUE STATION 10
- HOLD NORTHERN EDGE OF WCR20½
- MAY BE POSSIBLE TO COMBINE INTERSECTION IMPROVEMENTS WITH ECLR/WCR1 WIDENING PROJECT NORTH FROM QUICKSILVER TO THE INTERSECTION
- BIKE ROUTE WILL BE DETERMINED BY THE FINAL ROUNDBOUD DESIGN
- ROADWAY LAYOUTS AND LANE WIDTHS DESCRIBED BY THE STANDARD ROAD CROSS SECTIONS IN TABLE 1.2 OF THE CORRIDOR PLAN
- RIGHT-OF-WAY ACQUISITION IS ESTIMATED BASED ON THE CURRENT MUNICIPAL TYPICAL SECTION
- 20 MPH ROUNDBOUD DESIGN SPEED
**OVERVIEW**

**Project Description**
Improve the existing two-way stop-controlled intersection at Oxford Road with a single-lane roundabout to accommodate future traffic volumes and to address safety, sight distance, and speeding issues. Adjacent historic graveyard northeast of intersection must be protected.

**Public Input**
Concern for traffic speed, safety for bicyclists, historic house & cemetery, and agricultural/farm equipment access. Public comments support a roundabout at this intersection to reduce speed and widening shoulders along the corridor to protect bicyclists. Comments and polls on the proposed recommendation were mostly in support of the proposed roundabout, as the best option for slowing traffic and increasing safety for bicyclists and motorists. Comments also noted interest to preserve trees, wildlife habitat and include wildlife crossings where possible.

**Project Alternatives**
A. Roundabout – The center of the roundabout would be offset southeast of the existing intersection to improve sight distance and avoid impacts to historic features. Approaches to the roundabout would have curvilinear alignment to slow the traffic entering the roundabout. Raised medians and splitter islands would be installed at the approaches and departures.

B. Signal controlled – Addition of right-turn lanes and/or left-turn lanes in three of the four directions. Intersection could be controlled by a traffic signal.

**Recommendation**
A single-lane roundabout is recommended for the following reasons:
- Increase safety by slowing vehicles though the intersection.
- Allow for ‘continuous’ traffic flow – decreased delays
- Increase in sight distances.
- No need for traffic signal maintenance.
- Decreased congestion and emissions.

**PROJECT PRIORITIES**

**Safety**
Slower traffic, raised median would separate traffic, reduce severity of accidents. Improvement to sight distance.

**Mobility**
Vehicles would navigate the roundabout intersection without having to stop. Speeds would be reduced within the roundabout to approximately 15-20 MPH, bicyclists would be able to ride through the roundabout without being overtaken by a vehicle. Raised median would provide pedestrian refuge.

**Resiliency**
The project area is not located within a 100-year floodplain; however, culvert replacement and drainage/irrigation improvements along this stretch of roadway between Dry Creek and Boulder Creek would increase resiliency.
SEGMENT #2: PREFERRED ALTERNATIVE (C6): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1 AT OXFORD ROAD

GENERAL NOTES:
- Adjust intersection to the southeast to improve safety and sight distances
- Hold western edge of ECLR/WCR1
- Hold northern edge of Oxford Road
- Widen Oxford Road shoulders to improve safety
- Avoid impact to historic cemetery
- Bike route will be determined by the final roundabout design
- Roadway layouts and lane widths described by the standard road cross sections in Table 1.2 of the corridor plan
- Right-of-way acquisition is estimated based on the current municipal typical section
- 15 MPH roundabout design speed

APPROXIMATE ROW ACQUISITION - 15'
CORRIDOR IMPROVEMENT TO NIWOT ROAD

APPROXIMATE ROW ACQUISITION - 11'
CORRIDOR IMPROVEMENT TO PIKE ROAD
HISTORIC CEMETERY

RAISED CONCRETE MEDIAN OR XERISCAPE (TYPICAL)

ECLR/WCR1 AND OXFORD ROAD LEGEND
- Existing Right-of-Way
- Proposed Right-of-Way based on typical sections
- Proposed edge of asphalt

15 MPH
SEGMENT #2 RECOMMENDATION (C6A): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1, AREA PROJECT COORDINATION

OVERVIEW

<table>
<thead>
<tr>
<th>Project Description</th>
<th>This project worksheet has been added to illustrate the potential addition of two roundabouts at both 119th Street and 115th Street and Oxford Road to control speeds and improve the safety of the intersections.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Input</td>
<td>Public comments suggest concerns with traffic speed, unsafe passing, and safety for bicyclists on Oxford Road. Comments and polls on the proposed recommendation were in support.</td>
</tr>
</tbody>
</table>
| Project Alternatives| A. Construct roundabouts as part of future roadwork. Size and design to be determined.  
 B. Maintain existing stop-controlled intersections. |
| Recommendation      | While the addition of future roundabouts at 115th and 119th Streets and Oxford Road were not analyzed as part of the ECLR/WCR 1 Masterplan, the additional roundabouts may provide traffic calming and reduce serious accidents. |

PROJECT PRIORITIES

<table>
<thead>
<tr>
<th>Safety</th>
<th>General safety improvements realized by the addition of roundabouts including slower traffic and raised medians to separate traffic and reduce severity of accidents.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility</td>
<td>Vehicles would navigate roundabout intersections without having to stop. Since speeds would be reduced within the roundabouts to approximately 15-20 MPH, bicyclists would be able to ride through the roundabout without being overtaken by a vehicle.</td>
</tr>
<tr>
<td>Resiliency</td>
<td>Not analyzed as part of the ECLR/WCR 1 Master Plan.</td>
</tr>
</tbody>
</table>
SEGMENT #2 RECOMMENDATION (C6A): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1, AREA PROJECT COORDINATION

ECLR/WCR1 AND SURROUNDING AREA PROJECT COORDINATION RECOMMENDATION LEGEND

GENERAL NOTES:
- COORDINATE DESIGN AND CONSTRUCTION OF NIWOT ROAD IMPROVEMENTS, WCR1&5 IMPROVEMENTS, AND OXFORD ROAD IMPROVEMENTS
**OVERVIEW**

**Project Description**
Improvements to this intersection include reducing speeds, allowing for increased capacity, and improving safety. Traffic volume on WCR 16.5 is projected to increase as development to the east occurs. Recommended improvements also include removing the sub-standard vertical curve south of WCR 16.5 which will improve safety by increasing visibility and access to and from the existing western driveways.

**Public Input**
Safety issues associated with passing on a double yellow line/speeding, and poor visibility/sight distance and adding a third lane through this area. Comments on the proposed recommendation were in support of the proposed roundabout as an effective solution to address multiple community concerns.

**Project Alternatives**
A. Construct a single lane roundabout slightly northeast of the current intersection. Existing driveways would reconfigure to allow safe access to the roundabout.
B. Add a center turn lane to WCR 16.5 to improve access for left turning vehicles and reduce the chance of a rear end collision for turning vehicles.
C. Add a raised median to WCR 16.5 to control access. Re-route driveways and create a common driveway across from WCR 16 ½. This alternative would severely restrict access relative to Alternative “B”.

**Recommendation**
Alternative “A” is recommended because it does the best job of fulfilling the project objectives of lowering speeds, increasing safety, and allowing for future increased capacity. Alternative “A” is also the alternative desired by adjacent property owners.

**PROJECT PRIORITIES**

**Safety**
Slower traffic, raised median would separate traffic, reduce severity of accidents. Improving the vertical profile of the roadway would increase sight distance and safety.

**Mobility**
Vehicles would navigate the roundabout intersection without having to stop. Speeds would be reduced within the roundabout to approximately 15-20 MPH, bicyclists would be able to ride through the roundabout without being overtaken by a vehicle. Raised median would provide pedestrian refuge.

**Resiliency**
The intersection is not located within a 100-year floodplain; however, culvert replacement and drainage improvements at this location between Dry Creek and Boulder Creek would increase resiliency.

**ALTERNATIVES**

**Alternative “A” (Preferred)**

**Alternative “B”**
SEGMENT #2: PREFERRED ALTERNATIVE (C8): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1 AT WELD COUNTY ROAD 16.5

- Provide access to private property
- Corridor improvement to Niwot Road
- Lower road by approximately 6 inches to correct vertical sight issues
- Existing irrigation line
- Corridor improvement to Oxford Road
- Approximate ROW acquisition - 7'

**General Notes:**
- Lower road profile south of 16.5
  to improve safety and vertical sight distance
- Work with ditch company on potential ditch impacts
- Maintain existing accesses to properties
- Roadway layouts and lane widths described by the standard road cross sections in Table 1.2 of the Corridor Plan
- Right-of-way acquisition is estimated based on the current municipal typical section

**Legend:**
- Existing Right of Way
- Proposed Right of Way Based on Typical Sections
- Proposed Edge of Asphalt
- Existing Irrigation Pipe
**OVERVIEW**

The proposed project at ECLR/WCR 1 and Niwot Road would improve the existing one-way stop-controlled intersection with a new single-lane roundabout and reduce excessive speeds when coupled with other roundabouts along the corridor.

**Public Input**

Public concerns included safety and mobility issues associated with lack of bicycle facilities, speed, commuter traffic, sight distance, and heavy industrial truck traffic. Comments and polls on the proposed recommendation were mostly in support, with some concerns on the ability of other drivers to safely adapt to a roundabout.

**Project Alternatives**

Two intersection alternatives were analyzed:

A. Roundabout – The center of the roundabout would be roughly equal to the center of the existing intersection. Approaches to the roundabout would have curvilinear alignment to slow the traffic entering the roundabout. Raised medians and splitter islands would be installed at the approaches and departures.

B. Stop-controlled – Addition of a southbound right-turn lane and a northbound left-turn lane and wider shoulders on both sides.

**Recommendation**

A single-lane roundabout is recommended to increase safety by slowing vehicles though the intersection. A roundabout is not required for traffic congestion purposes but is recommended as a traffic calming alternative.

---

### Alternatives

**Alternative “A”** (Preferred)

- Raised concrete medians and splitter islands would be installed at the approaches and departures.

**Alternative “B”**

- Addition of a southbound right-turn lane and a northbound left-turn lane and wider shoulders on both sides.

---

### Project Priorities

<table>
<thead>
<tr>
<th>Priority</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>Safety would be improved with slower traffic, and the raised median would separate traffic and reduce severity of accidents.</td>
</tr>
<tr>
<td>Mobility</td>
<td>Vehicles would be able to navigate the roundabout intersection without having to stop. Speeds would be reduced within the roundabout to approximately 15-20 MPH, bicyclists would be able to ride through the roundabout without being overtaken by a vehicle and raised medians would provide pedestrian refuge.</td>
</tr>
<tr>
<td>Resiliency</td>
<td>The project area is not located within a 100-year floodplain; however, culvert replacement and drainage/irrigation improvements along this stretch of roadway between Dry Creek and Boulder Creek would increase resiliency.</td>
</tr>
</tbody>
</table>
SEGMENT #2 PREFERRED ALTERNATIVE (C10): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1 AT NIWOT ROAD

GENERAL NOTES:
- SIZE AND LOCATION OF THE ROUNDABOUT MAY BE ADJUSTED DURING DESIGN
- THE ROUNDABOUT PRIMARILY SERVES AS A TRAFFIC CALMING MEASURE AND IS NOT NECESSARY TO MAINTAIN INTERSECTION FUNCTIONALITY
- IMPACT TO SURROUNDING IRRIGATION DITCHES
- BIKE ROUTE WILL BE DETERMINED BY THE FINAL ROUNDABOUT DESIGN
- ROADWAY LAYOUTS AND LANE WIDTHS DESCRIBED BY THE STANDARD ROAD CROSS SECTIONS IN TABLE 1.2 OF THE CORRIDOR PLAN
- RIGHT-OF-WAY ACQUISITION IS ESTIMATED BASED ON THE CURRENT MUNICIPAL TYPICAL SECTION
- 35 MPH ROUNDABOUT DESIGN SPEED

CORRIDOR IMPROVEMENT TO HIGHWAY S2

APPROXIMATE ROW ACQUISITION—15' RAISED CONCRETE MEDIAN OR XERISCAPE (TYPICAL)

APPROXIMATE ROW ACQUISITION—6'

APPROXIMATE ROW ACQUISITION—8'

CORRIDOR IMPROVEMENT TO WCR16½

ECLR/WCR1 AND NIWOT ROAD LEGEND

EXISTING RIGHT OF WAY
PROPOSED RIGHT OF WAY BASED ON TYPICAL SECTIONS
PROPOSED EDGE OF ASPHALT

EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1 C10

Master Plan

35 MPH

EXISTING RIGHT OF WAY
PROPOSED RIGHT OF WAY BASED ON TYPICAL SECTIONS
PROPOSED EDGE OF ASPHALT

ECLR/WCR1 AND NIWOT ROAD LEGEND

EXISTING RIGHT OF WAY
PROPOSED RIGHT OF WAY BASED ON TYPICAL SECTIONS
PROPOSED EDGE OF ASPHALT
SEGMENT #2 RECOMMENDATION (C12): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1 AT BOULDER CREEK BRIDGE

OVERVIEW

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Replace the existing bridge with new structure(s) which would pass 100-year flows under ECLR/WCR 1. Due to current creek configuration and a non-standard bridge, less than 30% of 2013 flood flows passed under the roadway. The remaining 70% flowed over the road, both south and north of the bridge.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Input</td>
<td>Comments and polls on the proposed recommendation were in support. Comments included interest for options for cyclists during construction.</td>
</tr>
<tr>
<td>Project Alternatives</td>
<td>N/A</td>
</tr>
<tr>
<td>Recommendation</td>
<td>Develop a design which includes a combination of improvements to Boulder Creek and the construction of new bridge structures to allow 100-year flows to pass under the roadway.</td>
</tr>
</tbody>
</table>

PROJECT PRIORITIES

<table>
<thead>
<tr>
<th>Category</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>Improve safety by allowing the roadway to stay open, thereby allowing north-south passage during a flood emergency. Wider shoulders and higher barriers would provide safety for cyclist.</td>
</tr>
<tr>
<td>Mobility</td>
<td>Multi modal mobility through this section of the corridor would not be disrupted by storm flows less than the 100-year event. Bridge would be widened to allow for standard shoulders.</td>
</tr>
<tr>
<td>Resiliency</td>
<td>The project area is located within a 100-year floodplain. Improvements would eliminate 100-year flows from overtopping the road and reduce the area of the Boulder Creek floodplain near the bridge. Improvements could supply roadway resiliency in storm event over 100-year.</td>
</tr>
</tbody>
</table>
SEGMENT #2 RECOMMENDATION (C12): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1 AT BOULDER CREEK BRIDGE

**GENERAL NOTES:**
- SIZE AND LOCATION OF THE BRIDGE MAY BE ADJUSTED DURING DESIGN
- BRIDGE ESTIMATES BASED ON THE BOULDER CREEK RESTORATION MASTER PLAN PUBLISHED BY ICON ENGINEERING IN 2015.
- ROADWAY LAYOUTS AND LANE WIDTHS DESCRIBED BY THE STANDARD ROAD CROSS SECTIONS IN TABLE 1.2 OF THE CORRIDOR PLAN
- RIGHT-OF-WAY ACQUISITION IS ESTIMATED BASED ON THE CURRENT MUNICIPAL TYPICAL SECTION
**SEGMENT #2 RECOMMENDATION (C13): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1 AT MINERAL ROAD/HIGHWAY 52**

### OVERVIEW

**Project Description**

Existing traffic signals are operated by the Colorado Department of Transportation (CDOT). Traffic analyses indicate that southbound and northbound right turn lanes would be needed to accommodate 20,400 volumes of ECLR/WCR 1. Additionally, there is a need to increase storage and add shoulders.

**Public Input**

Public comments suggest the need for improved signal timing, addition of turn lanes and increased driveway spacing away from the intersection. Comments and polls on the proposed recommendation were mostly in support.

**Project Alternatives**

CDOT is in the early stages of preparing a Planning and Environmental Linkages (PEL) Study on State Highway 52. Future designs at this intersection must be coordinated with CDOT.

**Recommendation**

- The addition of southbound and northbound right turn lanes and designing additional storage length to the existing right and left turn lanes.
- Future widening should occur west of the existing right-of-way as not to further encroach into the residential property on the northeast corner.

### PROJECT PRIORITIES

**Safety**

Accidents are moderately high at this intersection, with a large amount being 'rear-end' accidents. The addition and improvement of turn lanes, along with the addition of shoulders should increase safety on ECLR/WCR 1.

**Mobility**

Improvements to the signalized intersection should be designed to allow full movements for both pedestrians and bicyclists. Added/improved turn lanes would reduce motorist delay.

**Resiliency**

The project area is located within the Boulder Creek 100-year floodplain; therefore, intersection improvements would need to consider resiliency features such as slope revetment/stabilization and drainage improvements.

---

**RECOMMENDED IMPROVEMENTS**

---
SEGMENT #2 RECOMMENDATION (C13): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1 AT MINERAL ROAD/ HIGHWAY 52

GENERAL NOTES:
- ADD SOUTHBOUND RIGHT TURN LANE
- WIDEN SHOULDERS FOR SAFETY
- EXTEND STORAGE BAYS FOR NORTHBOUND AND SOUTHBOUND TURNING TRAFFIC
- MAINTAIN EASTERN EDGE OF ROADWAY TO MINIMIZE PROPERTY IMPACT
- COORDINATE IMPROVEMENTS TO STATE HIGHWAY 52 BEING PLANNED BY CDOT.
- ROADWAY LAYOUTS AND LANE WIDTHS DESCRIBED BY THE STANDARD ROAD CROSS SECTIONS IN TABLE 3-2 OF THE CORRIDOR PLAN
- RIGHT-OF-WAY ACQUISITION IS ESTIMATED BASED ON THE CURRENT MUNICIPAL TYPICAL SECTION
**SEGMENT #3 RECOMMENDATION (E2): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1 AT COAL CREEK BRIDGE**

**OVERVIEW**

**Project Description**
Replace the existing bridge with a new structure which would pass 100-year flows under ECLR/WCR 1. Icon Engineering completed a conceptual design of a new bridge in 2018. The proposed channel and bridge location would be dependent on the selected improvements of Kenosha Road included in project E1 of this master plan.

**Public Input**
Comments and polls on the proposed recommendation were in support.

**Project Alternatives**
The location of the proposed bridge would be dependent on the selected improvements of Kenosha Road included in project E1 of this master plan.

**Recommendation**
Develop a design to include a combination of improvements to Coal Creek and the construction of a new bridge structure to allow 100-year flows to pass under the roadway.

**PROJECT PRIORITIES**

<table>
<thead>
<tr>
<th>Safety</th>
<th>Safety would be improved by allowing the roadway to stay open, thereby allowing north-south passage during a flood emergency.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility</td>
<td>Multimodal mobility through this section of the corridor would not be disrupted by storm flows less than the 100-year event. A proposed regional multi-use trail along Coal Creek would greatly increase non-motorized mobility.</td>
</tr>
<tr>
<td>Resiliency</td>
<td>The project area is located within a 100-year floodplain. Improvements would eliminate 100-year flows from overtopping the road and reduce the area of the Coal Creek floodplain near the bridge. Improvements could supply roadway resiliency in storm event over 100-year.</td>
</tr>
</tbody>
</table>
SEGMENT #3 RECOMMENDATION (E2): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1 AT COAL CREEK BRIDGE

GENERAL NOTES:
- SIZE AND LOCATION OF THE BRIDGE MAY BE ADJUSTED DURING DESIGN
- BRIDGE ESTIMATES BASED ON THE COAL CREEK CHANNEL RESTORATION MASTER PLAN PUBLISHED BY ICON ENGINEERING IN 2018
- ROADWAY LAYOUTS AND LANE WIDTHS DESCRIBED BY THE STANDARD ROAD CROSS SECTIONS IN TABLE 1.2 OF THE CORRIDOR PLAN
- RIGHT-OF-WAY ACQUISITION IS ESTIMATED BASED ON THE CURRENT MUNICIPAL TYPICAL SECTION
OVERVIEW

Project Description
This proposed realignment project includes two intersections along ECLR/WCR 1, the first at Kenosha Road and the second at WCR 10.5. The two intersections are currently offset by a quarter of a mile. All alternatives are designed to handle 2040 traffic.

Public Input
Public comments suggest the need for improved safety for bicyclists and pedestrians, difficult vehicular turning movements, and poor visibility. Comments and polls on the proposed recommendation were mostly in support, with some concerns on the ability of other drivers to safety adapt to a roundabout. Input suggested that the proposed recommendation would make it safer to turn left from Kenosha onto ECLR/WCR1. Commentors also expressed interest to understand the ways that a roundabout design could handle large farm tractors and equipment. Input also suggested an interest to understand options for safe cyclist use of roundabouts and much safer to turn left from Kenosha onto Countyline.

Project Alternatives
Three alternatives were analyzed:
A. Double Roundabouts – Both the Kenosha Road and WCR 10.5 intersections would receive a 3-legged roundabout.
B. Roundabout and stop-control – The addition of a roundabout at Kenosha, and the addition of right turn and left turn lanes at the WCR 10.5 intersection. WCR 10.5 would remain stop sign controlled.
C. Single Roundabout – Realign Kenosha Road to the southeast to align with WCR 10.5. WCR 10.5 would also be realigned to the northwest as illustrated in the exhibit. A roundabout would be added to intersect/combine all four roadway legs into one intersection.

Recommendation
It is recommended that a single lane roundabout be added at both the Kenosha Road/ECLR and WCR 10.5/ECLR intersections to increase safety by slowing vehicles though the intersections. A new bridge over Coal Creek would be installed just south of WCR 10.5.

PROJECT PRIORITIES

Safety
Slower traffic, raised median would separate traffic, reduce severity of accidents at Kenosha and at WCR 10.5.

Mobility
Vehicles would navigate the roundabout intersections without having to stop. Since speeds would be reduced within the roundabout to approximately 15-20 MPH, bicyclists would be able to ride through the roundabout without being overtaken by a vehicle. The addition of the roundabouts would decrease vehicle delays.

Resiliency
The project area is located within the 100-year floodplain of Boulder Creek/Coal Creek; therefore, intersection and roadway improvements would be designed in conjunction with the flood improvement design.
SEGMENT #3 RECOMMENDATION (E3): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1 AT KENOSHA RD/WELD COUNTY RD 10.5

- **Replace Bridge**
- **Approximate ROW Acquisition ~ 6'**
- **15 MPH**
- **Existing Oil Battery**
- **Future Realigned Coal Creek**
- **Future Coal Creek Bridge**

**GENERAL NOTES:**
- Coal Creek to be realigned in the future per the Icon Engineering Conceptual Design Report.
- Coal Creek bridge to be reconstructed in the future to coordinate with the Icon Engineering Conceptual Design Report and the ECLR/WCR1 Master Plan.
- Improve both CW Buxer Blvd. right turn lanes to the South to meet AASHTO Standards.
- Proposed roadway improvement to be designed in conjunction with flood mitigation.
- Bike route will be determined by the final roundabout design.
- Roadway layouts and lane widths described by the Standard Road Cross Sections in Table 1.2 of the Corridor Plan.
- Right-of-Way Acquisition is estimated based on the current municipal typical section.
- 15 MPH roundabout design speed.
SEGMENT #3 RECOMMENDATION (E4): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1, KENOSHA ROAD AT COAL CREEK BRIDGE

OVERVIEW

Project Description
Replace the existing bridge with a new structure which would pass 100-year flows under Kenosha Road. This project would be completed in conjunction with projects E3 (Kenosha Road/WCR 10.5) of this master plan. Icon Engineering completed a Coal Creek Restoration Plan that can assist with design.

Public Input
Comments and polls on the proposed recommendation were in support. Commentors expressed interest to better understand the interaction between the proposed recommendation and Erie’s plan to extend the Coal Creek Trail adjacent to the (realigned) Coal Creek drainage, as well as the interaction between the bike lanes in the proposed recommendation and additional bike lanes in other planning efforts.

Project Alternatives
N/A

Recommendation
Develop a design to include a combination of improvements to Coal Creek and the construction of new bridge structure to allow 100-year flows to pass under the roadway.

PROJECT PRIORITIES

Safety
Safety would be improved by allowing the roadway to stay open, thereby allowing East-West passage and access to ECLR during a flood emergency. Shoulders would be widened on the bridge.

Mobility
Multi modal mobility through this section of the corridor would not be disrupted by storm flows less than the 100-year event.

Resiliency
The project area is located within a 100-year floodplain. Improvements would eliminate 100-year flows from overtopping Kenosha road and reduce the area of the Coal Creek floodplain near the bridge.

RECOMMENDED IMPROVEMENT
SEGMENT #3 RECOMMENDATION (E4): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1, KENOSHA ROAD AT COAL CREEK BRIDGE

GENERAL NOTES:
- SIZE AND LOCATION OF THE BRIDGE MAYBE ADJUSTED DURING DESIGN
- BRIDGE ESTIMATES BASED ON THE COAL CREEK RESTORATION MASTER PLAN PUBLISHED BY ICON ENGINEERING IN 2018
- ROADWAY LAYOUTS AND LANE WIDTHS DESCRIBED BY THE STANDARD ROAD CROSS SECTIONS IN TABLE 1.2 OF THE CORRIDOR PLAN
- RIGHT-OF-WAY ACQUISITION IS ESTIMATED BASED ON THE CURRENT MUNICIPAL TYPICAL SECTION

KENOSHA ROAD
KENOSHA ROAD AND COAL CREEK BRIDGE LEGEND
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY BASED ON TYPICAL SECTIONS
- PROPOSED EDGE OF ASPHALT

PROPOSED BRIDGE REPLACEMENT
FUTURE COAL CREEK REALIGNMENT
CORRIDOR IMPROVEMENT TO ECLR/WCR1
SEGMENT #3 RECOMMENDATION (E6): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1 AT JAY ROAD/CHEESMAN STREET

OVERVIEW

Project Description
The proposed project would improve the ECLR/WCR 1 and Jay Road/Cheesman Street four-way stop-controlled intersection with a traffic signal to meet future traffic demand. Intersection improvements would be designed to improve approaches and bicycle and pedestrian safety in a school zone area.

Public Input
Public comments suggest concerns for child safety/sidewalk, bicycle and crosswalk improvements and congestion near the elementary school, traffic, visibility issues and speeding. Comments and polls on the proposed recommendations were mostly in support, with a shared interest to preserve the small-town character of the area.

Project Alternatives
Two alternatives were analyzed:
A. Traffic Signal – Addition of left turn and right-turn lanes. The addition of a traffic signal.
B. Roundabout – The center of the roundabout would be north of the existing intersection. Approaches to the roundabout would have curvilinear alignment to slow the traffic entering the roundabout. Raised medians and splitter islands would be installed at the approaches and departures. This option would require large right-of-way takes.

Recommendation
A conventional signalized intersection is recommended at this intersection for the following reasons:
• Less right-of-way acquisition and impacts to adjacent businesses, compared to a roundabout.
• More conventional intersection for bicycle and pedestrian crossing, especially elementary students.

PROJECT PRIORITIES

Safety
Safety would be improved with widened shoulders and turn lanes. The traffic signal would be designed with the nearby schools in mind.

Mobility
Added lanes would increase vehicle mobility. The traffic signal would increase mobility for pedestrians and bicyclists as future traffic volumes increase. Connectivity to regional trail system would also improve mobility.

Resiliency
The project area is not located within a 100-year floodplain; however, proposed drainage and intersection improvements would increase resiliency south of Coal Creek.

ALTERNATIVES

Alternative “A” (Preferred)

Alternative “B”
SEGMENT #3: PREFERRED ALTERNATIVE (E6): EAST COUNTY LINE ROAD/WELD COUNTY ROAD 1 AT JAY ROAD/CHEESMAN STREET

GENERAL NOTES:
- NO TRAFFIC CALMING MEASURES ADDED
- ADD LEFT TURN LANES ON ECLR/WCR1
- WIDENING SHOULDERS TO IMPROVE SAFETY
- ADD CONCRETE MULTIPURPOSE PATH TO CONNECT TO THE FUTURE COAL CREEK TRAIL
- ROADWAY LAYOUTS AND LANE WIDTHS DESCRIBED BY THE STANDARD ROAD CROSS SECTIONS IN TABLE 1.2 OF THE CORRIDOR PLAN
- RIGHT-OF-WAY ACQUISITION IS ESTIMATED BASED ON THE CURRENT MUNICIPAL TYPICAL SECTION

APPROXIMATE ROW ACQUISITION=6'
APPROXIMATE ROW ACQUISITION=17'
APPROXIMATE ROW ACQUISITION=19'
POTENTIALLY ADD MEDIAN REFUGE FOR PEDESTRIANS
POTENTIALLY ADD MEDIAN REFUGE FOR PEDESTRIANS
CONTINUE CONCRETE TRAIL TO FUTURE COAL CREEK TRAIL
CORRIDOR IMPROVEMENT TO WCR105
ECLR/WCR1 AND JAY ROAD/CHEESMAN STREET LEGEND
EXISTING RIGHT OF WAY
PROPOSED RIGHT OF WAY BASED ON TYPICAL SECTIONS
PROPOSED EDGE OF ASPHALT