Goals of the Study

The Study Goals are to:

- Optimize corridor operations to move people across and through the area safely and efficiently.

- Develop a *Complete Street* corridor that is functional and appealing for non-motorists and motorists alike.

- Determine what type of intersection improvements are needed to improve corridor operations.

INRCOG | Iowa Department of Transportation

Purpose and Need

The purpose of this project is to upgrade and modernize University Avenue / IA 934 between Iowa Highway 58 in Cedar Falls and U.S. Highway 63 in Waterloo within Black Hawk County, Iowa.

The Proposed Project is Needed to:

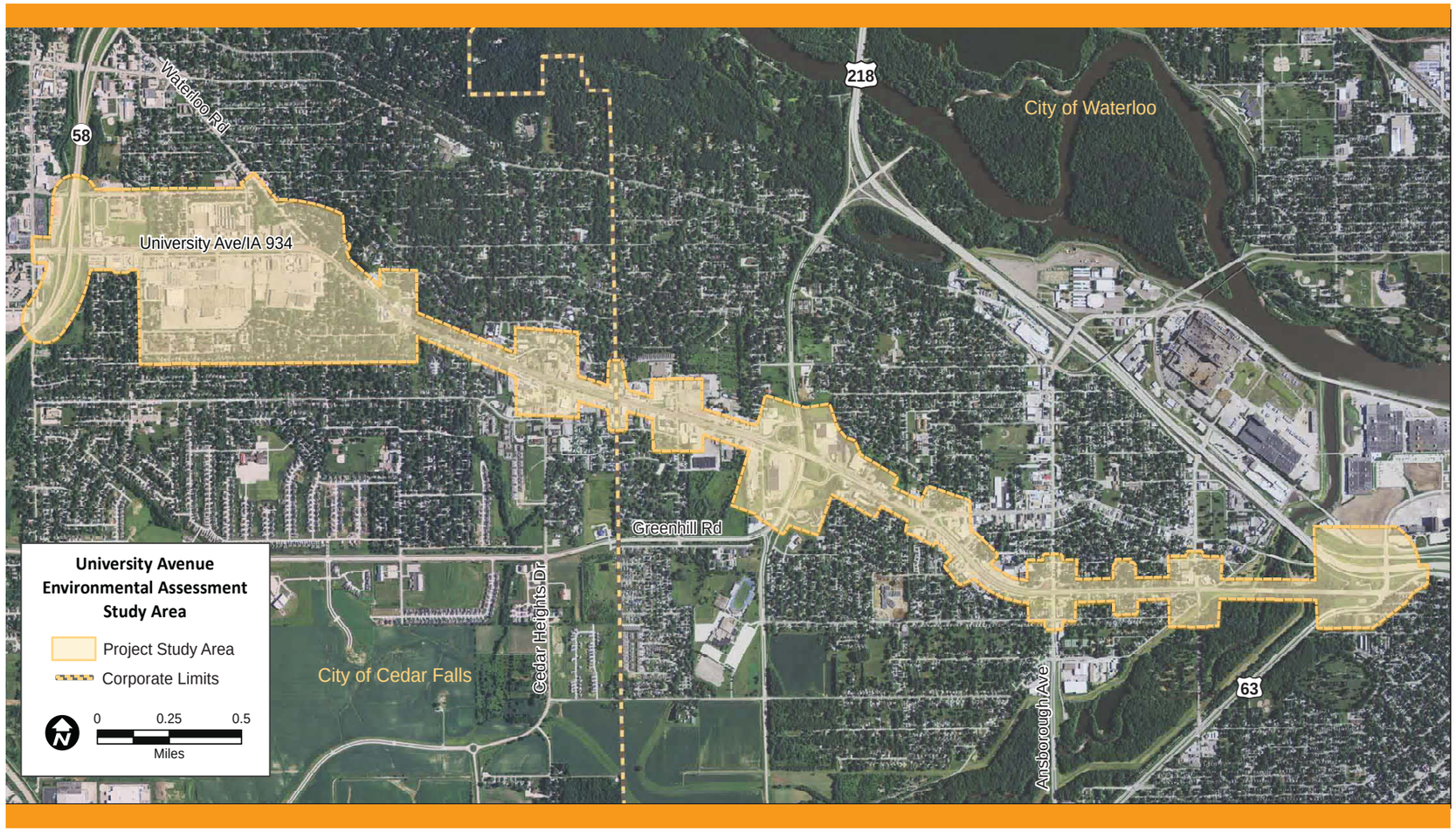
- Improve pavement and bridge condition
- Enhance safety
- Provide bicycle and pedestrian access and mobility
- Improve traffic flow
- Support economic growth and revitalization

INRCOG | CEDAR FALLS Iowa | Iowa Department of Transportation | Waterloo Iowa

University Avenue / IA 934 Study Area

The University Avenue study is being led by the Iowa Department of Transportation in partnership with Iowa Northland Regional Council of Governments (INRCOG) and the cities of Cedar Falls and Waterloo.

University Avenue is also designated as Iowa Highway 934 and is maintained jointly by the Iowa DOT and the cities.



INRCOG · Cedar Falls Iowa · Iowa Department of Transportation · Waterloo Iowa

Project Development Process

How a transportation project moves toward construction:

1 The needs of the corridor are identified by the communities and Iowa DOT.

2 Corridor study process begins.

3 Corridor improvement concepts developed and presented to the public.

4 Environmental process begins and impacts assessed, public is consulted.

5 Concepts are developed for review. The public is consulted.

WE ARE HERE

6 Environmental process identifies and selects a Preferred Alternative for corridor improvement, public is consulted.

7 Design begins.

8 Final concept likely to be implemented in phases. Final plans presented to the public.

9 Property owners contacted, any necessary land purchased or easements granted.

10 Contracts awarded for construction.

11 Construction schedule and initial construction plans presented to the public.

12 Construction begins. Continual construction updates to the public.

Corridor improvements completed!

Once funding is identified, right-of-way acquisition and construction can begin.

INRCOG · Cedar Falls Iowa · Iowa Department of Transportation · Waterloo Iowa

What are the Steps to Complete an EA?

1 Purpose and Need

Identify purpose, needs and project goals.

2 Alternative Development and Screening

Which of the ideas for improving University Avenue are most feasible?

3 Environmental Assessment and Section 4(f) Evaluation

What are the social, economic and environmental impacts of the alternatives carried forward?

4 Preferred Alternative

Identify the alternative that is preferred for corridor improvement.

5 Formal Review

What do the resource agencies and the public think of the proposed solution? Have we missed anything?

6 Finalize EA and FHWA Decision

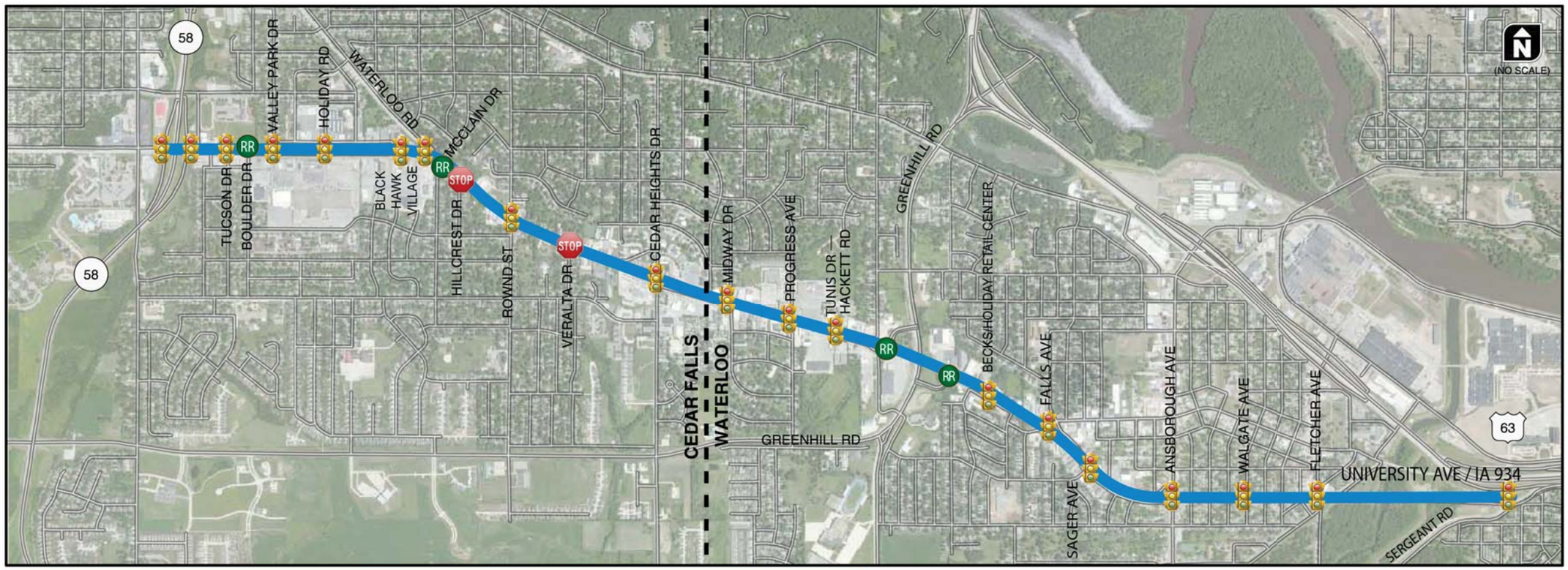
The EA is finalized. The FHWA determines if a Finding of No Significant Impact (FONSI) will be granted to move forward with design and construction, or an environmental impact statement (EIS) will be prepared.

INRCOG | CEDAR FALLS Iowa | Iowa Department of Transportation | Waterloo Iowa

Overview of Alternatives

- **No Build Alternative** — Retain University Avenue/IA 934 as it currently exists.
- **Alternative 1** — Retain six lane roadway and optimize traffic signals at intersections. Provide accommodation for pedestrian and bicycle use and corridor aesthetic treatments.
- **Alternative 2** — Reduce roadway to four lanes and optimize traffic signals at intersections. Provide accommodation for pedestrian and bicycle use and corridor aesthetic treatments.
- **Alternative 3** — Reduce roadway to four lanes and construct roundabouts at intersections. Provide accommodation for pedestrian and bicycle use and corridor aesthetic treatments.
- **Alternative 4** — Reduce roadway to four lanes and include either an optimized traffic signal or a roundabout at intersections. Provide accommodation for pedestrian and bicycle use and corridor aesthetic treatments.

No-Build Alternative



LEGEND

- Traffic Signal
- Traffic Signal Optimized
- 2 Way Stop Controlled
- Right In/Right-Out
- Right In/Right-Out/Left-In
- Multilane Roundabout
- Single Lane Roundabout
- 6 Lanes
- 4 Lanes
- Bicycle/Pedestrian Accommodations and Aesthetic Treatments

Note: Recommendations for intersection concepts are preliminary and may be modified based on further analysis and public input as the study moves forward.

INRCOG · Cedar Falls Iowa · Iowa Department of Transportation · Waterloo Iowa

Alternative 1 — 6 Lanes with Traffic Signals Optimized

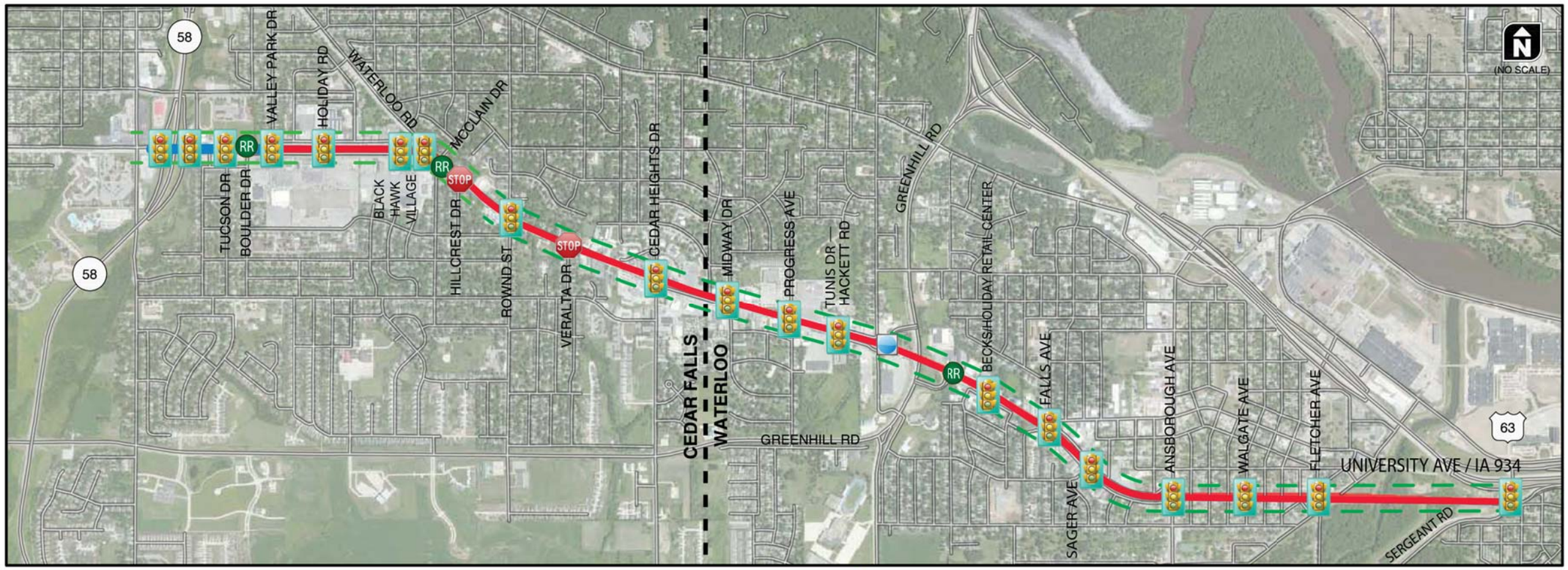
LEGEND

- Traffic Signal
- Traffic Signal Optimized
- 2 Way Stop Controlled
- Right In/Right-Out
- Right In/Right-Out/Left-In
- Multilane Roundabout
- Single Lane Roundabout
- 6 Lanes
- 4 Lanes
- Bicycle/Pedestrian Accommodations and Aesthetic Treatments

Note: Recommendations for intersection concepts are preliminary and may be modified based on further analysis and public input as the study moves forward.

INRCOG · CEDAR FALLS · WATERLOO · Iowa Department of Transportation

Alternative 2 — 4 Lanes with Traffic Signals Optimized



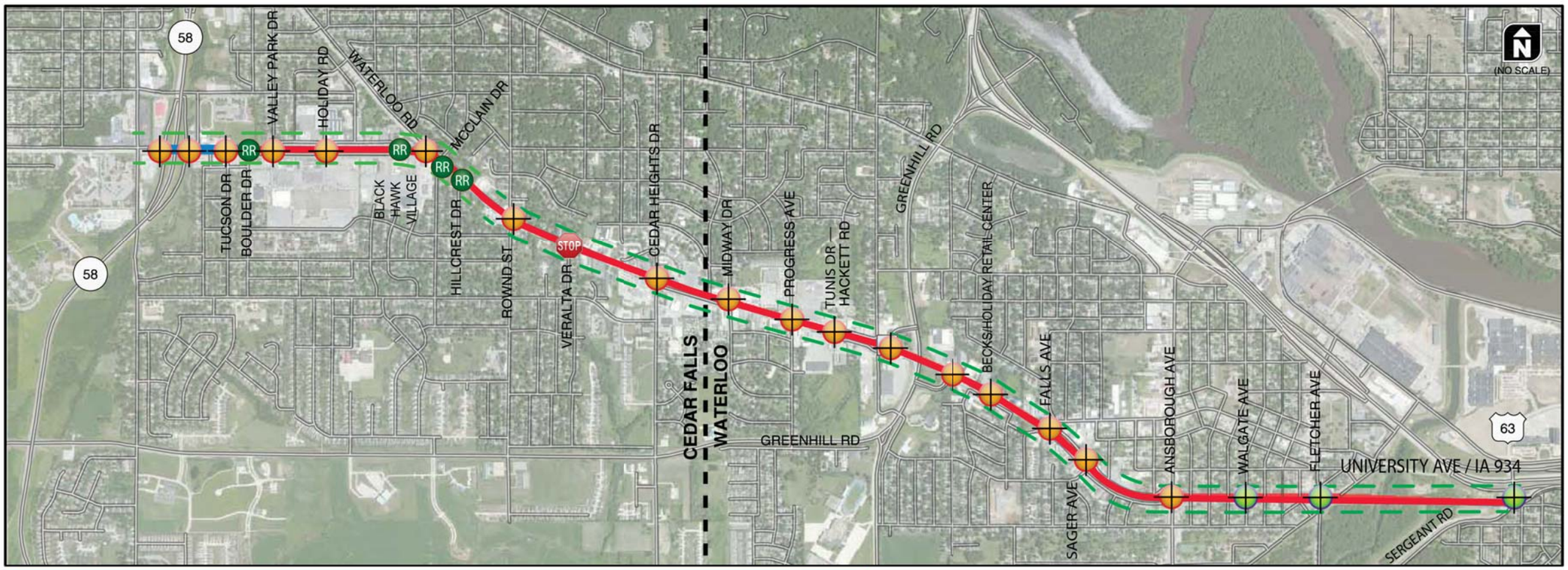
LEGEND

- Traffic Signal
- Traffic Signal Optimized
- 2 Way Stop Controlled
- Right In/Right-Out
- Right In/Right-Out/Left-In
- Multilane Roundabout
- Single Lane Roundabout
- 6 Lanes
- 4 Lanes
- Bicycle/Pedestrian Accommodations and Aesthetic Treatments

Note: Recommendations for intersection concepts are preliminary and may be modified based on further analysis and public input as the study moves forward.

INRCOG | CEDAR FALLS IOWA | Iowa Department of Transportation | Waterloo Iowa

Alternative 3 — 4 Lanes with Roundabouts

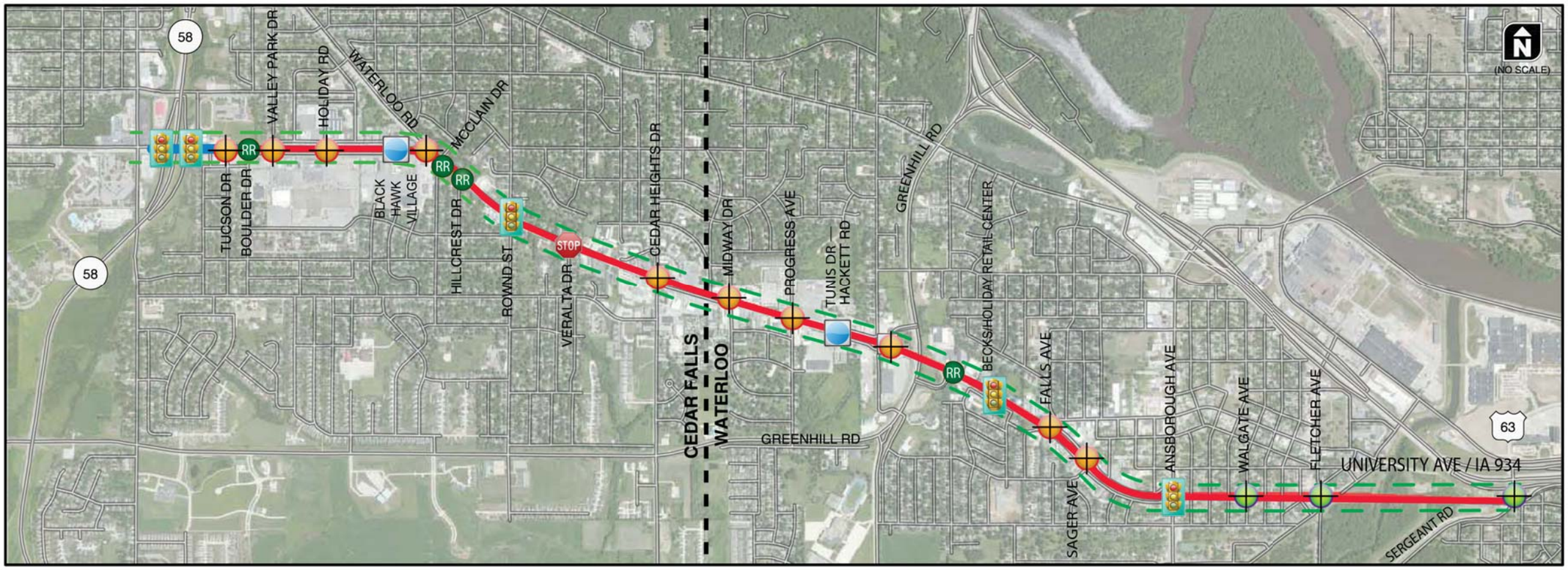


LEGEND

- Traffic Signal
- Traffic Signal Optimized
- 2 Way Stop Controlled
- Right In/Right-Out
- Right In/Right-Out/Left-In
- Multilane Roundabout
- Single Lane Roundabout
- 6 Lanes
- 4 Lanes
- Bicycle/Pedestrian Accommodations and Aesthetic Treatments

Note: Recommendations for intersection concepts are preliminary and may be modified based on further analysis and public input as the study moves forward.

Alternative 4 — 4 Lanes with Signals and Roundabouts



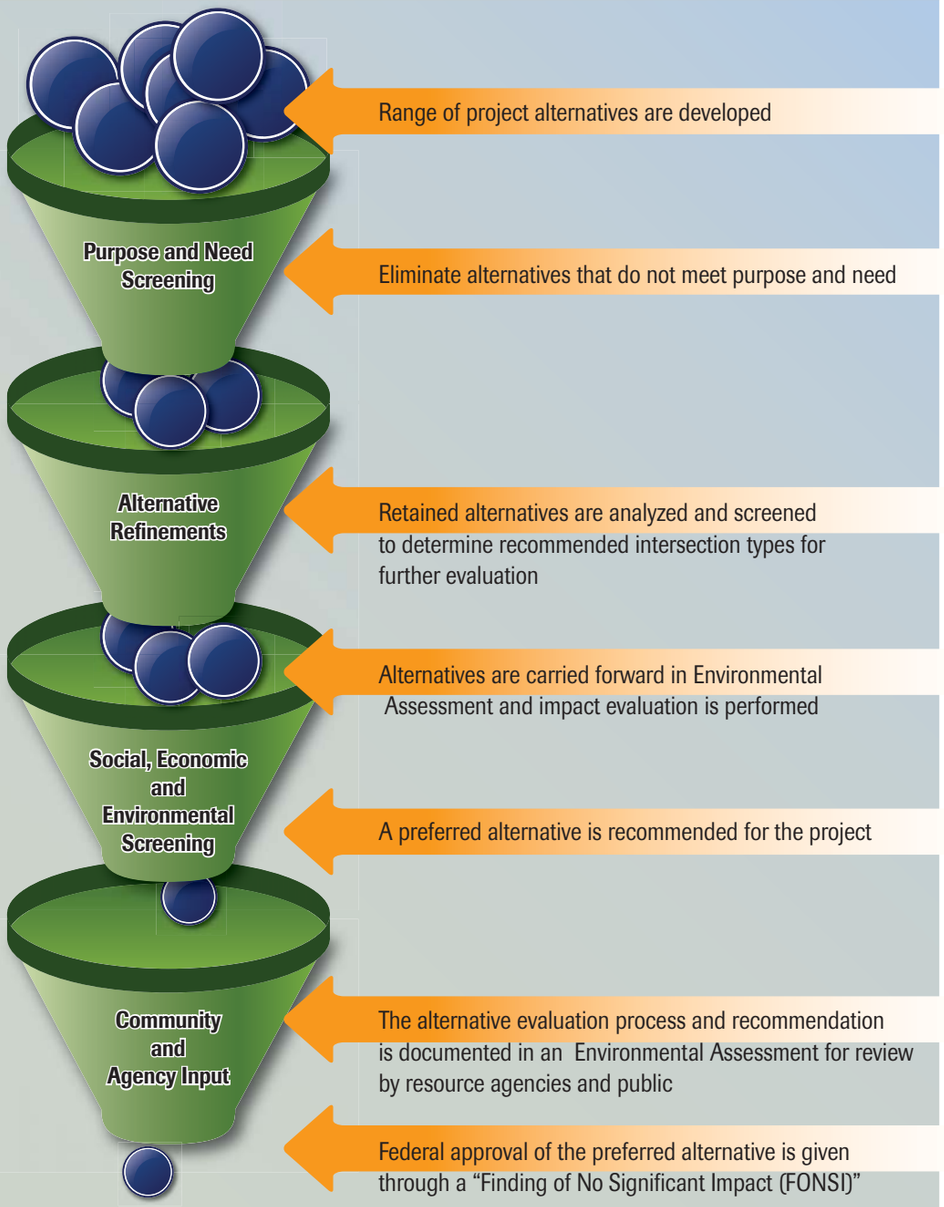
LEGEND

- Traffic Signal
- Traffic Signal Optimized
- 2 Way Stop Controlled
- Right In/Right-Out
- Right In/Right-Out/Left-In
- Multilane Roundabout
- Single Lane Roundabout
- 6 Lanes
- 4 Lanes
- Bicycle/Pedestrian Accommodations and Aesthetic Treatments

Note: Recommendations for intersection concepts are preliminary and may be modified based on further analysis and public input as the study moves forward.

INRCOG | Cedar Falls Iowa | Iowa Department of Transportation | Waterloo Iowa

Alternatives Screening Process



What screening criteria is being used for the project?

Engineering

- Impacts to Structures
- Right-of-Way Acquisition
- Construction Costs

Safety

- Severity of Crashes
- Pedestrian/Bicycle Conflicts
- Travel Speed Consistency

Traffic Operations

- Good Traffic Operations
- Minimize Delay at Intersections
- Improve Traffic Progression

Multimodal

- Pedestrian/Bicycle Environment
- Transit Environment

Local Access & Aesthetics

- Impacts to Connecting Streets
- Access to Area Businesses & Amenities
- Community Image & Aesthetics

INRCOG · CEDAR FALLS Iowa · Iowa Department of Transportation · Waterloo Iowa

What Is a Roundabout?

A Roundabout is a circular intersection designed for uniform, low-speed flow in one direction with yield control for entering traffic.

What are the benefits compared to stop-controlled and signalized intersections?

- Operates more efficiently due to free flow travel conditions
- Lower speeds and shorter crossing distances are simpler and safer for pedestrians
- Reduces overall crashes by eliminating angle crashes and lowering speeds
- More environmentally friendly because there is less stop-and-go traffic and no electricity needed for traffic signals
- Provides opportunity to incorporate aesthetic treatments, such as landscaping or public art

INRCOG | CEDAR FALLS Iowa | Iowa Department of Transportation | Waterloo Iowa

Complete Streets

What are *Complete Streets*?

Complete Streets are planned, designed and operated to enable safe access for all users. Motorists, truck drivers, bicyclists, pedestrians and bus riders of all ages and abilities are able to safely move along and across a *Complete Street*.

What does a *Complete Street* look like?

A *Complete Street* may include:

- Sidewalks or multi-use trails
- Bike lanes or wide paved shoulders
- Bus turn-outs
- Comfortable and accessible public transportation stops
- Frequent and safe crossing opportunities
- Median islands
- Accessible pedestrian signals
- Narrower travel lanes
- Aesthetic treatments and landscaping
- Roundabouts

INRCOG | Cedar Falls Iowa | Iowa Department of Transportation | Waterloo Iowa

What is Traffic Signal Optimization?

Traffic signal optimization includes installing new, modern traffic signal equipment and coordinating the traffic signals to improve traffic flow. Through traffic on a main roadway can travel through multiple, coordinated signals without having to stop.

What are the benefits of optimizing a traffic signal?

- Reduces congestion by increasing intersection capacity and smoothing traffic flow
- Reduces vehicle emissions and improves safety by reducing congested, stop-and-go travel conditions and promoting uniform speed
- Reduces delay and travel time along a corridor

Study Schedule and Next Steps

The schedule shows the tasks and next steps that it will take to complete the environmental assessment for the corridor. Once the project completes the environmental assessment phase, design of the initial improvements could begin in Fall/Winter 2013. Right-of-way acquisition and construction will not occur until funding is identified.

Task Name	Quarter 4 - 2011	Quarter 1 - 2012	Quarter 2 - 2012	Quarter 3 - 2012	Quarter 4 - 2012	Quarter 1 - 2013	Quarter 2 - 2013	Quarter 3 - 2013
Collect Data								
Develop Purpose and Need Statement								
Conduct Traffic and Safety Analysis								
Perform Field Reviews								
Develop and Refine Alternatives								
Conduct Environmental Analysis								
Prepare Environmental Documentation								
Conduct Public Involvement Events								
Public Review of EA and Preferred Alternative								
Respond to Public Comments on EA and prepare FONSI								
NEPA Complete								

Public Information Meeting

Public Hearing

NEPA Complete

INRCOG CEDAR FALLS Iowa Iowa Department of Transportation Waterloo Iowa