COAL CREEK UPSTREAM OF McCASLIN BOULEVARD

Presented by
Alex Ariniello & Kyle Hamilton

February 11, 2013
Town Board Work Session

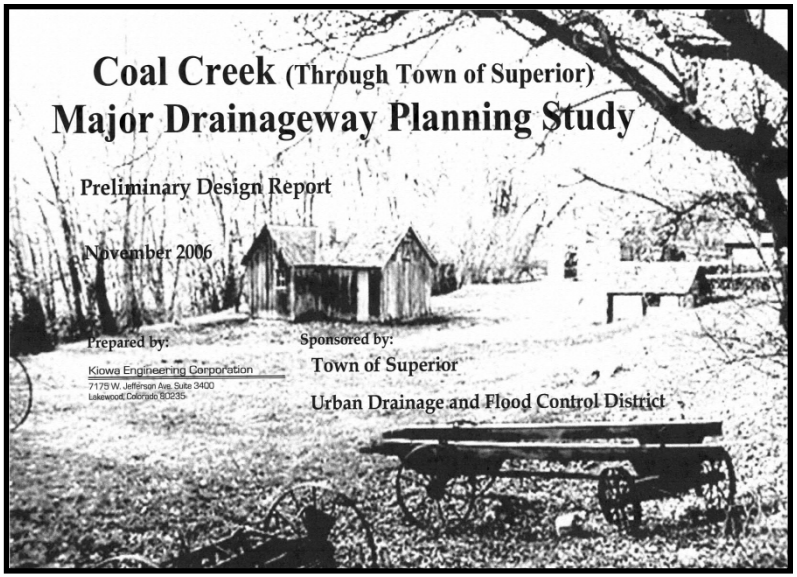
Project Area Overview

- Study area is along Coal Creek from the railroad embankment to McCaslin Blvd.

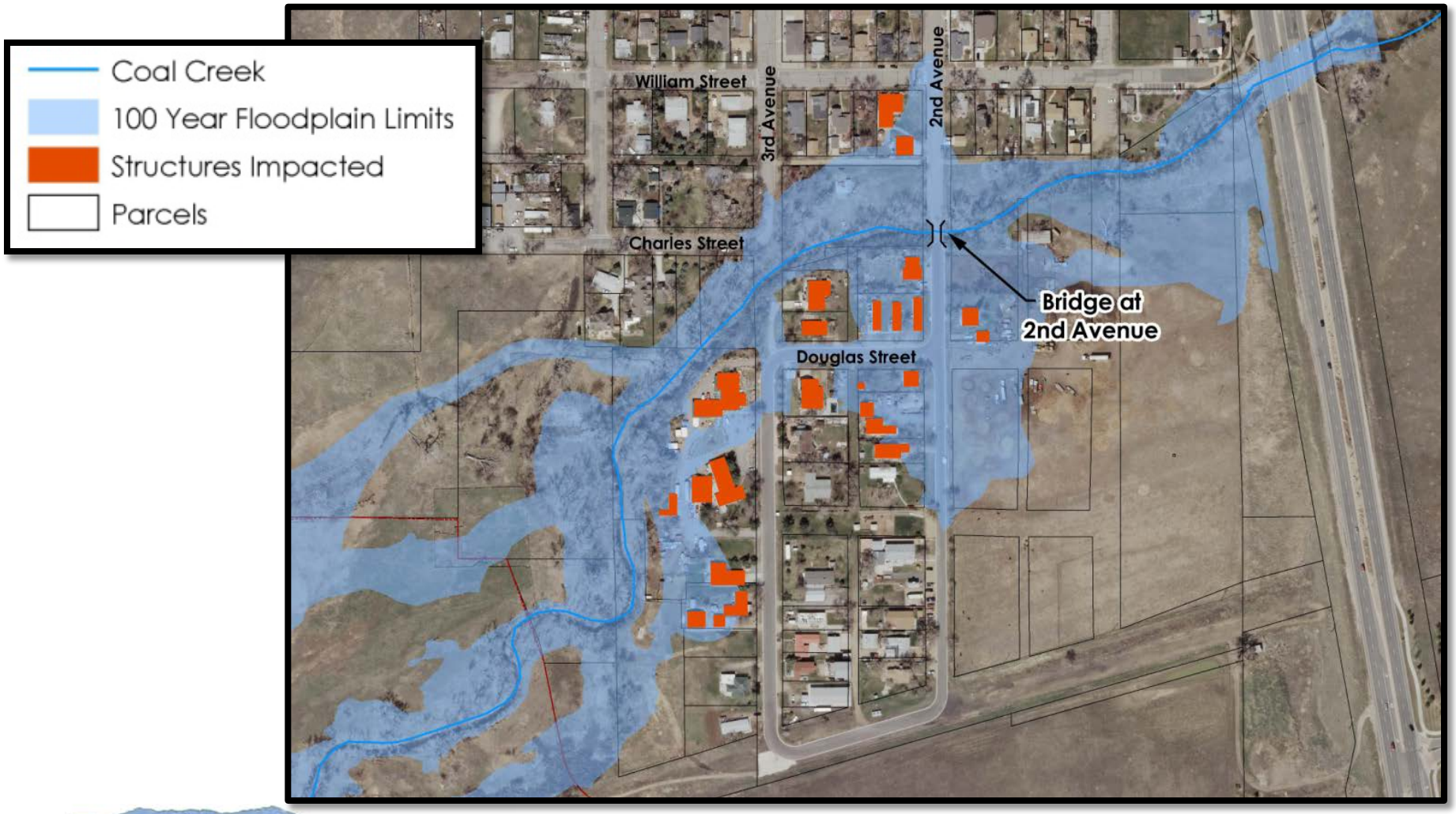
- Key Features:
  - Bridge embankment
  - Roadway bridges
  - Development in the 100-year floodplain

Project Background

- FEMA floodplain study developed 100-year floodplain
- Coal Creek Master Plan (updated in 2006) reevaluated developed 100-year floodplain
- 2010-2011 Coal Creek Upstream of McCaslin Boulevard Flood Mitigation Alternatives Analysis
- 2012-13 Coal Creek/Rock Creek Master Drainageway Study will be the basis of revised floodplain



Coal Creek Floodplain/2nd Avenue Bridge



Flooding Causes

- 2nd Avenue Bridge has limited flood capacity
- Coal Creek upstream of 2nd and 3rd Avenues has limited flood capacity
- Split flows occur in the open space area due to the railroad embankment and lack of flood capacity

Current Channel Conditions

Coal Creek, looking west from 2nd Ave Bridge

Coal Creek, looking east from 2nd Ave Bridge

Flood Hazard Reduction Options

- Increase capacity of 2nd Avenue Bridge
- Increase capacity of Coal Creek upstream of 2nd and 3rd Avenues
- Capture / redirect split flows
- Property acquisitions (with willing owners)

Channel Improvements

100 Yr Floodplain Limits

New Floodplain

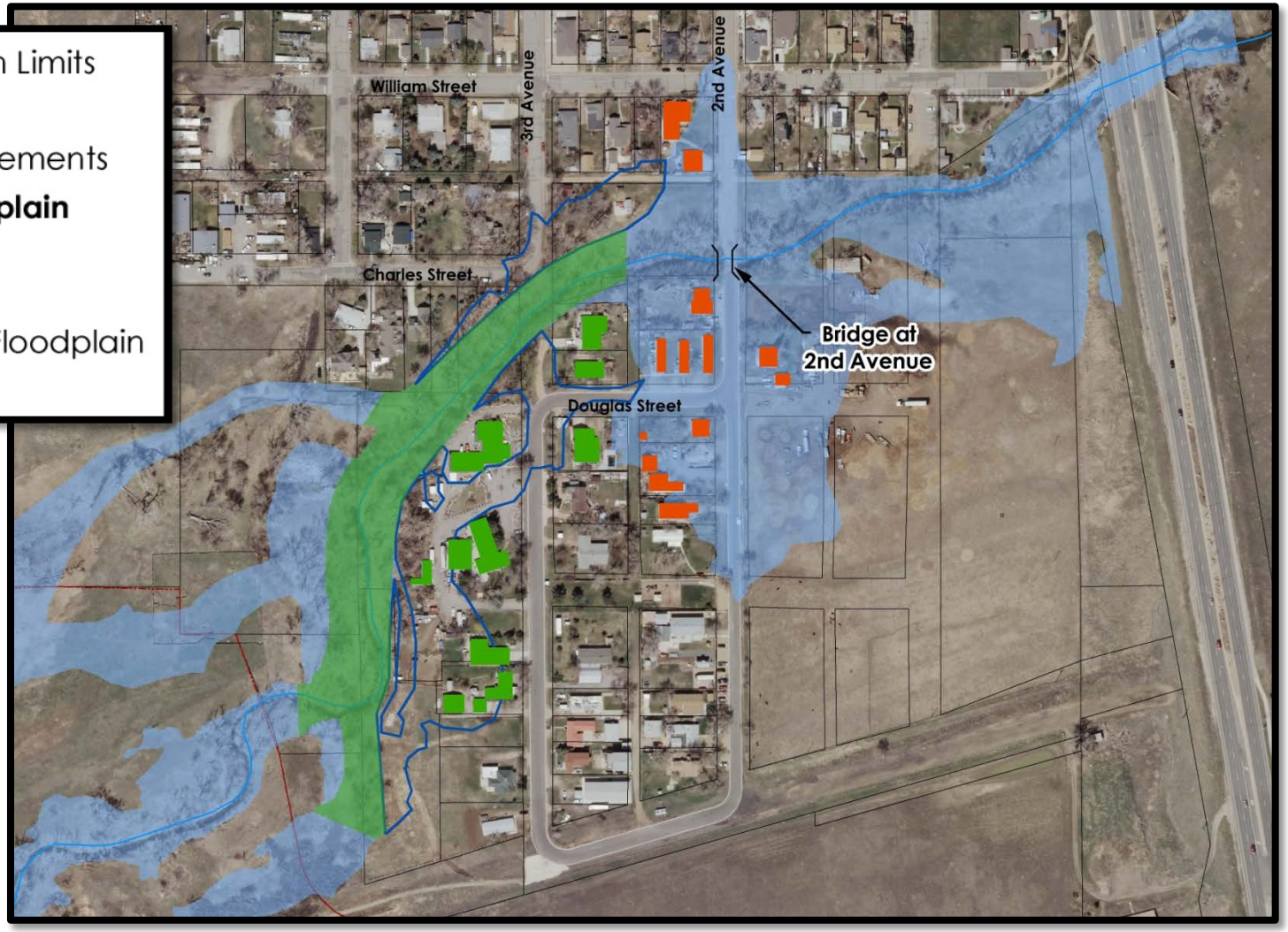
Channel Improvements

Removed from Floodplain

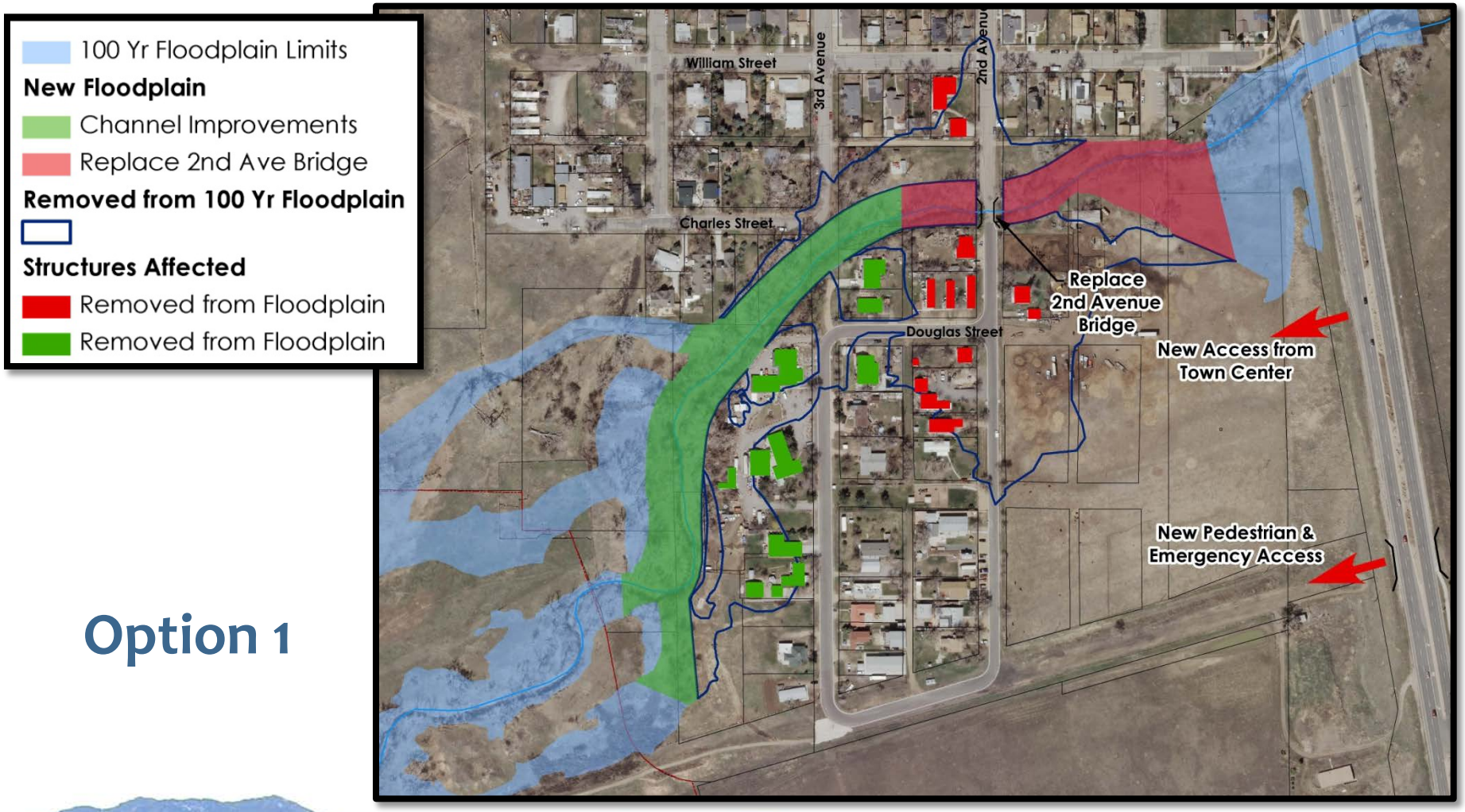
Structures Affected

Removed from Floodplain

Still in Floodplain



Replacement of the 2nd Avenue Bridge



Option 1

2nd Avenue Bridge at Present

Construct New 3rd Avenue Bridge & Leave Existing 2nd Avenue Bridge

100 Yr Floodplain Limits

New Floodplain

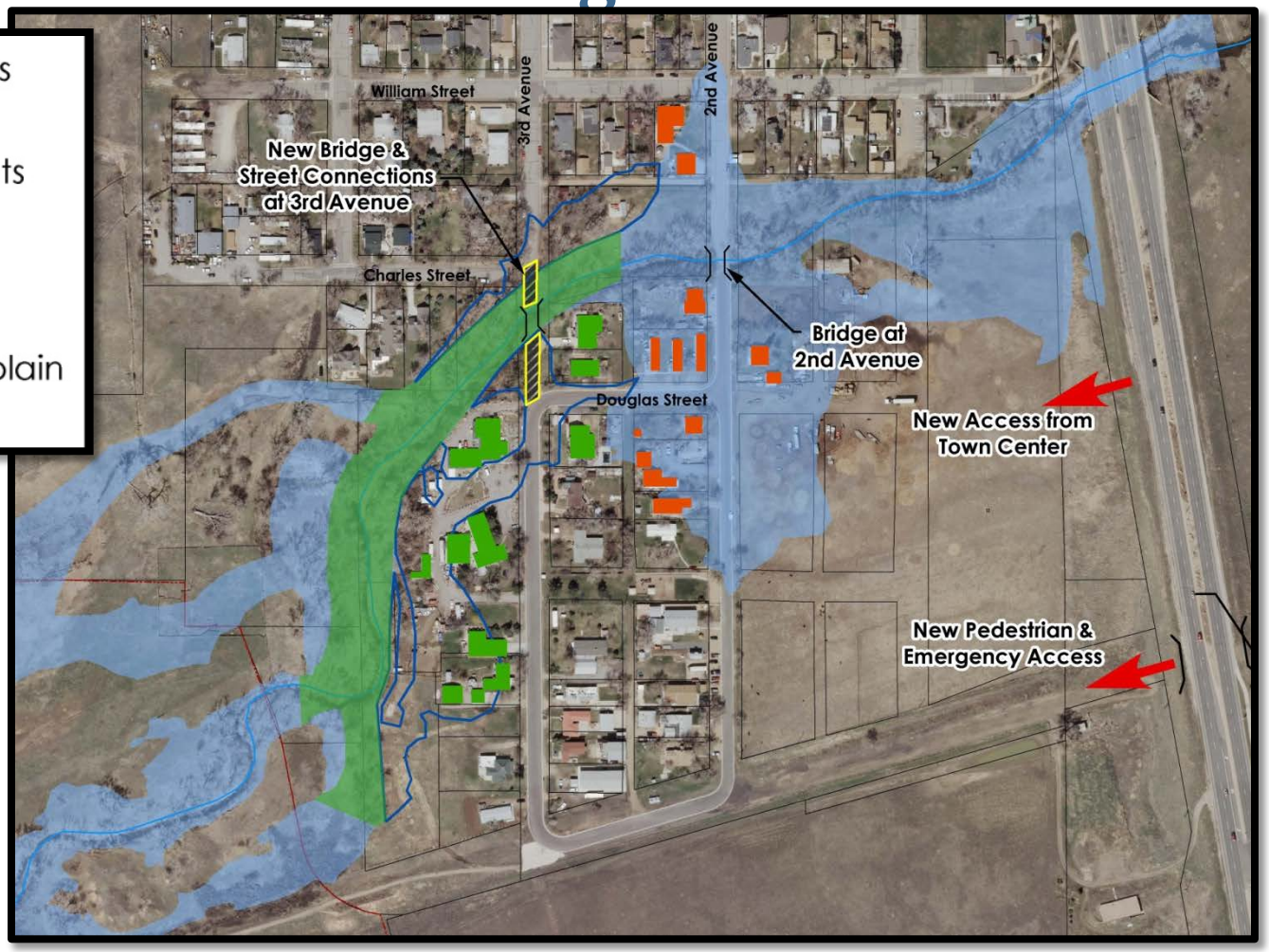
Channel Improvements

Removed from Floodplain

Structures Affected

Removed from Floodplain

Still in Floodplain



Option 2

3rd Avenue at Present

3rd Avenue, looking South

3rd Avenue, looking North

Remove 2nd Avenue Bridge & Construct new 3rd Avenue Bridge

100 Yr Floodplain Limits

New Floodplain

Channel Improvements

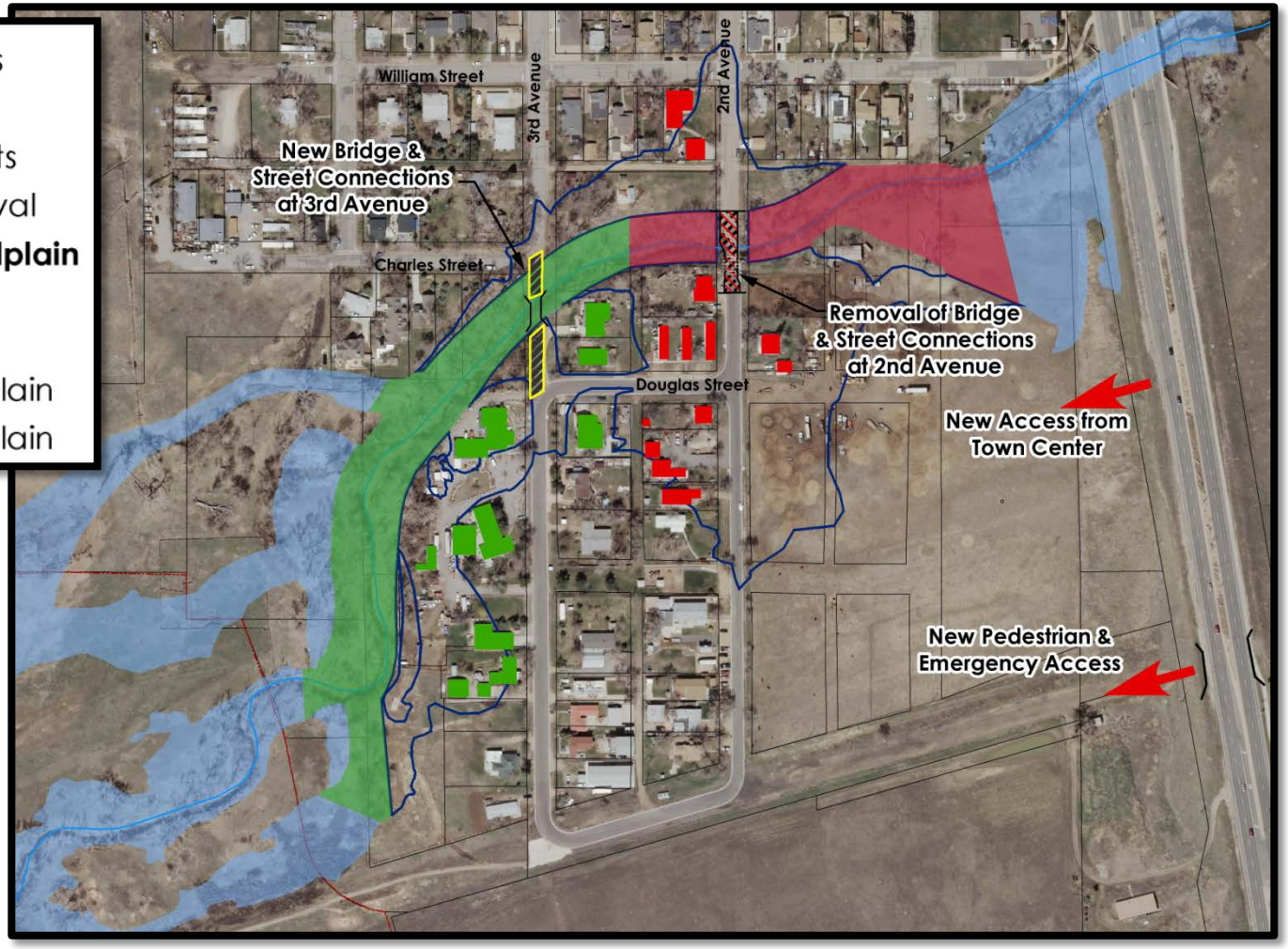
2nd Ave Bridge Removal

Removed from 100 Yr Floodplain

Structures Affected

Removed from Floodplain

Removed from Floodplain



Option 3

Replace 2nd Ave Bridge & Construct New 3rd Ave Bridge

100 Yr Floodplain Limits

New Floodplain

Channel Improvements

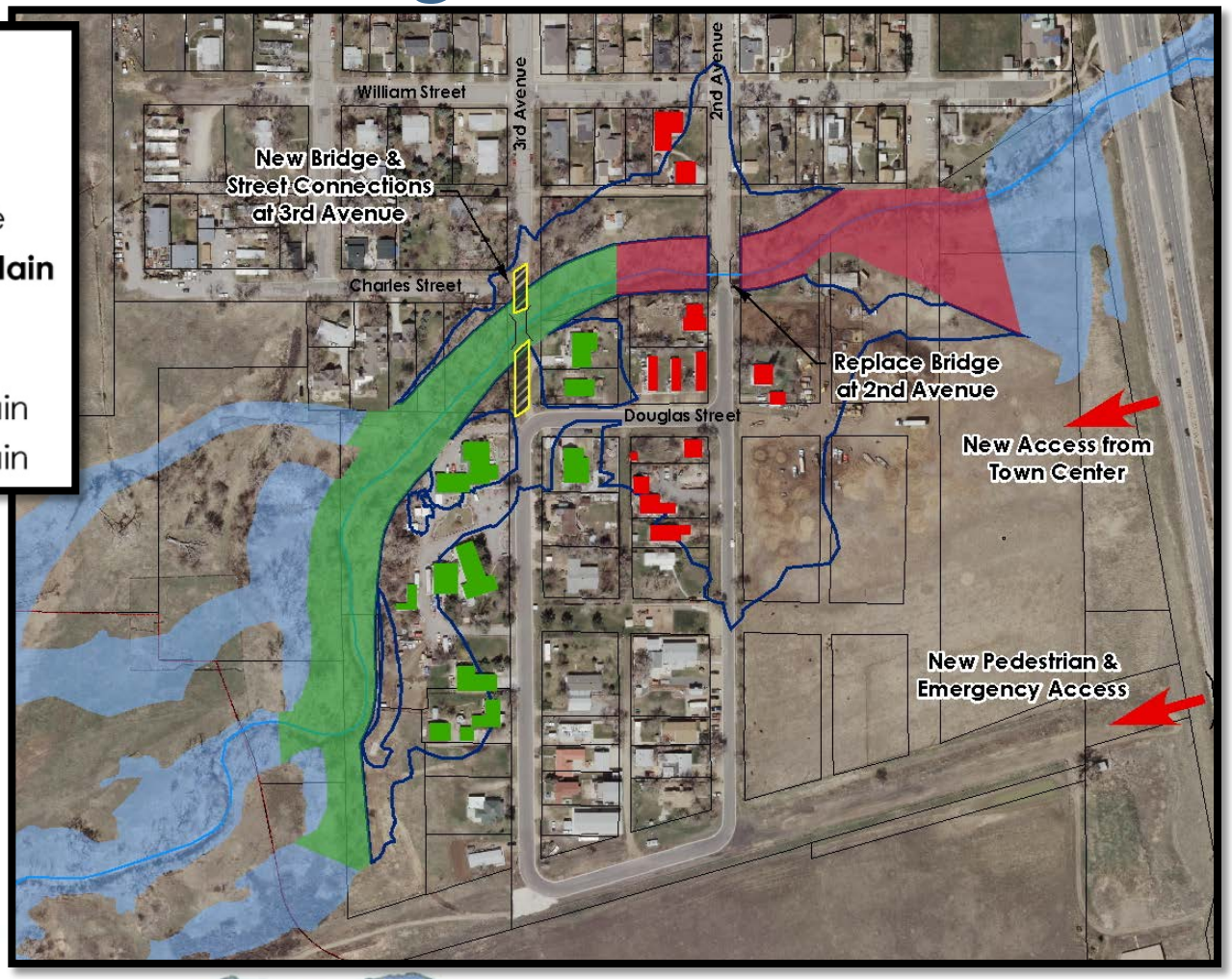
Replace 2nd Ave Bridge

Removed from 100 Yr Floodplain

Structures Affected

Removed from Floodplain

Removed from Floodplain



Option 4

Coal Creek Flood Mitigation Cost Summary

Cost Item	Replace 2nd Ave Bridge	New 3rd Ave Bridge / Leave 2nd Ave Bridge in Place	New 3rd Ave Bridge / Remove 2nd Ave Bridge	New 3rd Ave Bridge / Replace 2nd Ave Bridge
	Option 1	Option 2	Option 3	Option 4
Channel Improvements	$1,224,300	$1,001,700	$1,224,300	$1,224,300
ROW Costs	$148,515	$122,382	$148,515	$148,515
2nd Avenue Bridge Costs	$852,000	--	$25,000	$852,000
3rd Avenue Bridge Costs	--	$1,049,000	$1,049,000	$1,049,000
Total Costs	$2,224,815	$2,173,082	$2,446,815	$3,273,815

Coal Creek Flood Mitigation Property Summary

Evaluation Measure	Replace 2nd Ave Bridge	New 3rd Ave Bridge / Leave 2nd Ave Bridge in Place	New 3rd Ave Bridge / Remove 2nd Ave Bridge	New 3rd Ave Bridge / Replace 2nd Ave Bridge
	Option 1	Option 2	Option 3	Option 4
Access Improvements	One Access	Two Accesses	One Access	Two Accesses
Residences Removed	17	7	17	17
Total Costs	**$2,225,000**	**$2,175,000**	**$2,450,000**	**$3,275,000**

Next Steps

- Town Board Direction on Options
- Public Meeting on Flood Mitigation Options
  - March
- PC/Town Board Approval of Flood Mitigation Plan
  - April
- Develop Town/UDFCD Finance Plan
  - May
- Bridge Design/Environmental Clearance
  - June to December
- Construction
  - January to June, 2014

Thank You!

Questions?