V. PLAN IMPLEMENTATION

A. Pedestrian

The implementation of pedestrian improvements includes three major components, one of which is included in the Adequate Public Facilities Plan. The three major components are:

- The Trails Plan
- Traffic Calming
- Level of Service Criteria for Adequate Public Facilities (Addressed in Appendix A)

The implementation of the plan includes not only the trails plan itself, but criteria for encouraging development to build pedestrian friendly projects through the APFP level of service criteria. In addition, a tool box of traffic calming options is listed that would allow for better vehicle/pedestrian interaction in pedestrian areas.

Trails

Much of the implementation of the Trails Plan is outlined in the City of Evans Parks, Trails and Recreation Master Plan. For the purposes of completeness of this plan, some of that information is summarized as part of the Transportation Plan.

The City should continue to pursue funding for the trails plan through applications to the North Front Range MPO as well as through federal programs. Funding for matching funds and certain local trails may be acquired through park impact fees, local taxes, or bonds. Additional funding options include Colorado State Trails Grants.

The following priorities for implementation are identified in the City of Evans Parks, Trails and Recreation Master Plan.

- Construction of trails with new development
- Recognition of American Discovery trail as a major regional trail
- Highway 85 trail underpass
- Construction of the Evans Ditch trail

Traffic Calming

Few communities are immune to the issues relating to neighborhood traffic. Minimizing both traffic speed and traffic volume in residential areas creates safety benefits to local residents. Various methods can be used to slow down or “calm” traffic; however, not all are appropriate for every situation. Table 8 includes a tool box of traffic calming options as well as information on how to use them.

Table 8. Traffic Calming Toolbox

Device	Definition	Volume Reduction	Speed Reduction	Change in % Trucks	Safety			Emergency/ Service Vehicle Access/Delay	Type/Classification of Street			Use on Bus Route	Use with Driveways on Street
									Collector	Local Streets			
					Vehicle Conflicts	Pedestrian	Bicyclist		Commercial	Neighborhood Collector	Local Access		
Crosswalks	Painted pedestrian crossing areas mid-block or at intersections.	No	No	No	No change	No change	No change	No effect	Yes	Yes	Yes	Yes	Yes
Curb Extension (Entry, Exit Mid-Block)	Extension of the curb into the roadway to create a narrower travel lane to protect parking strip or shorten pedestrian crossing distances.	No	Slight	No	No effect	Improved	Plan with care	No problems	Yes	Yes	Yes	No	Yes
Diagonal Diverters	Barrier placed diagonally across an intersection to force drivers to make a sharp turn but not allow other movements.	Yes	Likely	Yes	Improved	Varies	Varies	Minor constraint	No	Avoid	Yes	Plan with care	Yes
Median Entry/Exit Islands	Traffic islands used to create narrower roadway at entry/exit point.	Possible	No	Possible	Improved	Improved	Varies	Minor constraints	Yes	Yes	Yes	No	Yes
Median Mid-Block Islands	Traffic islands between intersections to create a narrower roadway or provide refuge for crossing pedestrians.	No	Slight	Slight	Improved	Improved	Varies	Minor constraints	Yes	Yes	Yes	Possible	Plan with care

Table 8. Traffic Calming Toolbox

Device	Definition	Volume Reduction	Speed Reduction	Change in % Trucks	Safety			Emergency/ Service Vehicle Access/Delay	Type/Classification of Street			Use on Bus Route	Use with Driveways on Street
					Vehicle Conflicts	Pedestrian	Bicyclist		Collector	Local Streets			
									Commercial	Neighborhood Collector	Local Access		
Mid-Block Slow Points, Chicanes	Curbed islands or curbed extensions protruding into the roadway, leaving a single-lane or narrow two-lane gap, often at an angle to the centerline.	Yes	Yes	Likely	Improved	Improved	Questionable	Minor constraint	Yes	Yes	Yes	Yes	Avoid near driveways
One-Way Entry/Exit Chokers, Half-Closures, Semi-Diverters	A barrier to traffic in one direction of a street which permits traffic in the opposite direction to pass through.	Possible	Yes	Not Likely	Improved	Improved	Improved	Minor constraint	Avoid	Avoid	Yes	Plan with care	Yes
Parking Variants Class I (Zones, Signs, Striping, timed, resident restricted)	Parking areas create narrower roadways and increased activity leading to increased attention by drivers.	Possible	Likely	Likely	Possible Improvement	Possible Improvement	No effect	No effect	Yes	Yes	Yes	Yes	Yes
Pavement Treatment, Class II (Texture/ Composition, Patterns, Color)	Special pavement compositions and markings to alert drivers of special conditions.	Not Likely	Possible	Possible	—	Possible Improvement	Varies	No constraint	Yes	Yes	Yes	Yes	Yes
Raised Crosswalks	Crosswalks raised transversely across the pavement.	Possible	Yes	Not Likely	—	Improved	Plan with care	Minor constraint	Plan with care	Yes	Yes	Plan with care	Yes
Speed Alert w/Warning	Residents use radar to clock speeds, record license plate numbers, police send notice to drivers.	No	Varies	Not Likely	—	Slight temporary improvement	No change	—	Yes	Yes	Yes	Yes	Yes

Table 8. Traffic Calming Toolbox

Device	Definition	Volume Reduction	Speed Reduction	Change in % Trucks	Safety			Emergency/ Service Vehicle Access/Delay	Type/Classification of Street			Use on Bus Route	Use with Driveways on Street
									Collector	Local Streets			
					Vehicle Conflicts	Pedestrian	Bicyclist		Commercial	Neighborhood Collector	Local Access		
Speed Bumps	Short strips of raised pavement, avoid using on public streets.	Possible	Varies	Yes	Safety problem	Improved	Plan with care	Significant problems	Plan with care	No	No	No	—
Traffic Circles	These geometric design features force traffic at intersections into circular maneuvers.	Possible	Yes, near circle	Yes	Improved	Varies	Varies	Minor constraint	Plan with care	Yes	Yes	Plan with care	Yes

Source: A Guidebook for Residential Traffic Management by Washington State Department of Transportation

B. Transit

Local Transit

At this time the implementation of public local transit in the Evans area is dependent upon The BUS. Federal funding from the FTA is prorated by population since the Greeley/Evans area is not considered a major metropolitan area. Continued dialogue with representatives of The BUS regarding local Evans needs will be important to maintaining or improving the level of service of transit.

Regional Transit

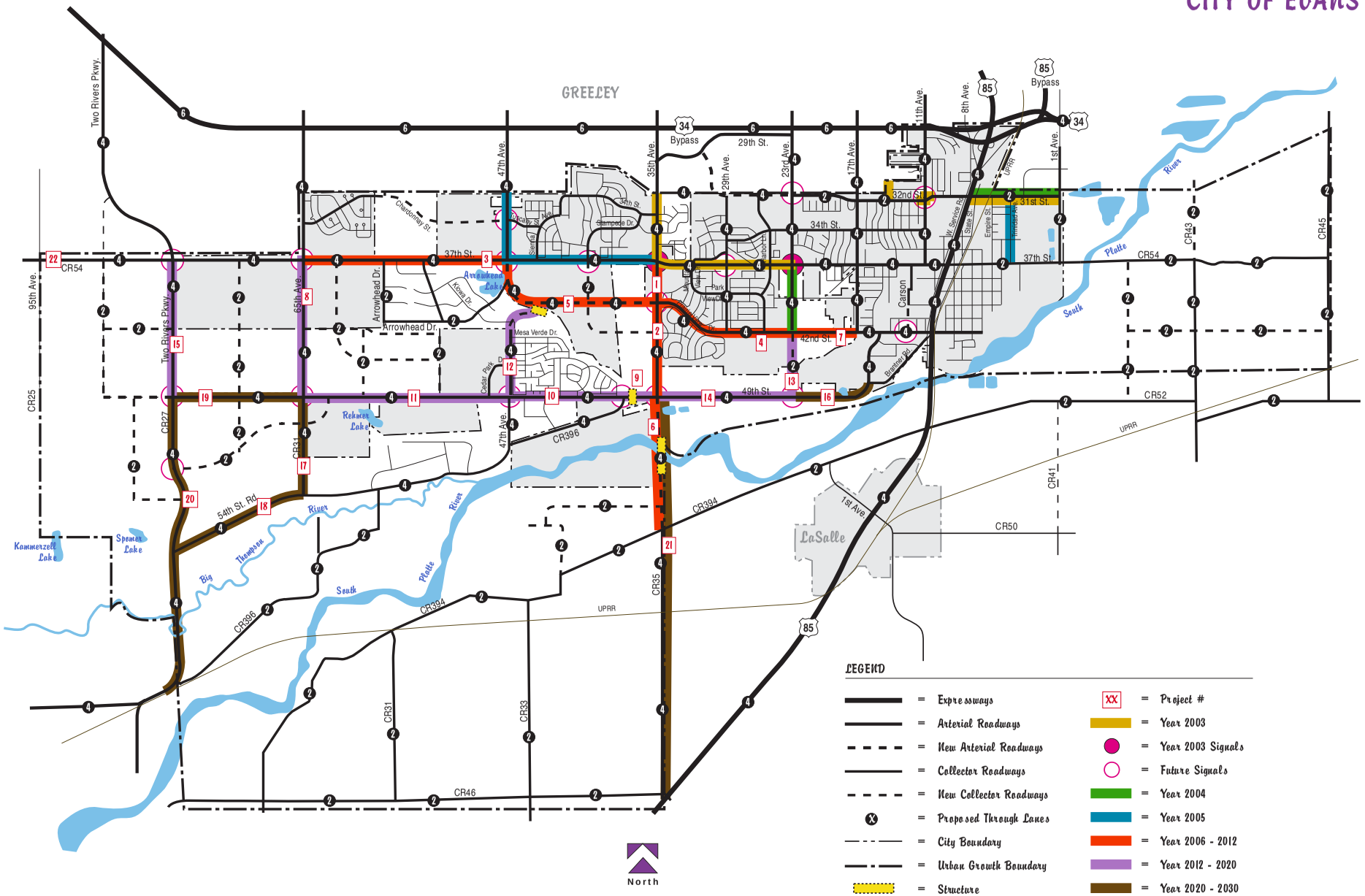
At the time of this writing, a separate study for the regional transit framework of the North Front Range area is under way. The results of this study should be available late 2003 or early 2004. This study will identify regional transit markets as well as plans for park-n-ride connections.

C. Streets Phasing Plan

The Streets Phasing Plan was developed from the Master Streets Plan and shows a general outline of timing of implementation of street projects. The phasing plan shows projects that are funded for the years 2004 and 2005 as well as projects that are proposed for three periods up to 2030. Most of the projects shown on Figure 22 are at this time unfunded. The Streets Phasing Plan contains proposed arterial streets as well as proposed signals since they could also be included in the Traffic Impact Fees.

Concept level cost estimates were included for the sole purpose of funding allocation. These costs represent a “broad brush” look at funding so that planning of Impact Fees and other funding sources can be procured. Tables 9 through 11 contain summaries of projects and planning costs. The current CIP which includes projects from 2002 to 2007 includes a range of funding for street improvement projects of between $2.8M and $1.3M for later CIP years. Average yearly costs for each time period of the Street Phasing Plan range between $2.6M to $2.9M per year. These yearly averages exclude cost for the 35th Avenue extension across the South Platte River.

CITY OF EVANS



LEGEND

=	Expressways	XX =	Project #
=	Arterial Roadways	=	Year 2003
=	New Arterial Roadways	=	Year 2003 Signals
=	Collector Roadways	=	Future Signals
=	New Collector Roadways	=	Year 2004
X =	Proposed Through Lanes	=	Year 2005
=	City Boundary	=	Year 2006 - 2012
=	Urban Growth Boundary	=	Year 2012 - 2020
=	Structure	=	Year 2020 - 2030

02-240 1/6/04

FELSBURG HOLT & ULLEVIG

engineering paths to transportation solutions

Figure 22

STREET PHASING PLAN

Table 9. Short Range Projects (2004 to 2012)

		Length (ft)	Unit Cost $M/Mile	Total Cost	Type of Improvement	Cost Sharing
2004–?	US 85 Access Control Plan Implementation			$2,050,000	Intersection Improvements	Possible CDOT/MPO
2004	23rd Ave. Widening (37th to 42nd)	2,625		*$290,000	Widen 2 to 4 Lanes	Developer
2004	42nd St. Improvements (17th to 23rd) – Phase II			$750,000	Paving Improvements	
2005	31st St. Reconstruction (1st to US 85)			$120,000	Pavement Rehabilitation	
2005	37th St. Widening (35th to 47th)	6,000		$600,000	Widen 2 to 4 Lanes	
2005	47th Ave. Widening (32nd to 37th)	2,625		$600,000	Widen 2 to 4 Lanes	
2005	Trinidad St. (31st to 37th)	3,200		$450,000	Pave Street	
1	35th Ave. – 37th St. to Prairie View	1,400	$2.5	$663,000	Widen Arterial 2 to 4 Lanes	
2	35th Ave. – Prairie View to 49th St.	3,600	$2.5	$1,705,000	Widen Arterial 2 to 4 Lanes	
3	37th St. – 47th Ave. to 65th Ave.	8,000	$2.5	$3,220,000	Widen Arterial 2 to 4 Lanes	
4	Prairie View Dr. Improvements (23rd to 35th)	6,200		$620,000	Various Improvements	Possible Developer?
5	Prairie View Dr. – 35th Ave. to 47th Ave.	7,000	$4.0	$5,300,000	New 4 Lane	Possible Developer?
6	35th Ave. – 49th St. to 54th Street Road	5,600	$10.0	$10,606,000	New 2 Lane (1,400' 4 Lane Br)	
7	42nd St. – 17th Ave. to 23rd Ave.	3,500	$2.1	$1,410,000	Widen 2 to 4 Lanes	
*	City cost					
	Total			$29,384,000		
	Cost per Year			$3,673,000		
	Cost Per Year w/o 35th Ave. Extension			$2,347,000		

Table 10. Mid Range Projects (2012 to 2020)

		Length (ft)	Unit Cost $M/Mile	Total Cost	Type of Improvement	Cost Sharing
8	65th Ave. – 37th St. to 49th St.	5,300	$2.5	$2,509,000	Widen Arterial 2 to 4 Lanes	
9	49th St. – CR 396 to 35th Ave.	1,200	$2.5	$568,000	Widen Arterial 2 to 4 Lanes	
10	49th St. – 47th Ave. to CR 396	4,700	$2.5	$2,225,000	Widen Arterial 2 to 4 Lanes	
11	49th St. – 47th Ave. to 65th Ave.	8,000	$2.5	$3,788,000	Widen 2 to 4 Lanes	
12	47th Ave. – Prairie View to 49th St.	4,200	$5.5	$4,375,000	Widen 2 to 4 Lanes (500' Br)	
13	23rd Ave. – 42nd St. to 49th St.	2,500	$2.5	$1,184,000	New 2 Lane	
14	49th St. – 35th Ave. to 23rd Ave.	5,280	$2.5	$2,500,000	Widen 2 to 4 Lanes	
15	Two Rivers Pkwy. – 37th St. to 49th St.	5,280	$2.5	$2,500,000	Widen 2 to 4 Lanes	Possible w/IGA
	Total			$19,650,000		
	Cost per Year			$2,456,000		

Table 11. Long Range Projects (2020 to 2030)

		Length (ft)	Unit Cost $M/Mile	Total Cost	Type of Improvement	Cost Sharing
16	49th St. – 23rd Ave. to Brantner	4,900	$2.5	$2,320,000	Widen 2 to 4 Lanes	
17	65th Ave. – 54th St. Rd. to 49th St.	4,000	$2.5	$1,894,000	Widen 2 to 4 Lanes	
18	54th St. Rd. – Two Rivers Pkwy. to 65th Ave.	5,600	$2.5	$2,652,000	Widen 2 to 4 Lanes	
19	49th St. Rd. – Two Rivers Pkwy. to 65th Ave.	5,280	$2.5	$2,500,000	New 2 Lane	
20	Two Rivers Pkwy. – 49th St. to 54th St. Rd.	12,300	$2.5	$5,824,000	Widen 2 to 4 Lanes	Possible w/IGA
21	35th Ave. – 49th St. to US 85	15,800	$2.5	$7,481,000	Widen 2 to 4 Lanes	
	Total Cost per Year			$22,670,000 $2,267,000		
	Projects Outside Growth Boundary					
22	CR 54 Widening – Two Rivers Pkwy. to I-25	9.5 Miles	$19.5		Widen 2 to 4 Lanes	IGA with Weld Co./ Greeley

D. Intersection Improvements

In addition to the designation of widening and new streets on the Master Streets Plan, various intersection improvements are recommended. Figure 23 shows the locations of such improvements. The following is a brief description of the recommended improvements at each of the intersections:

US 34/11th Avenue Intersection

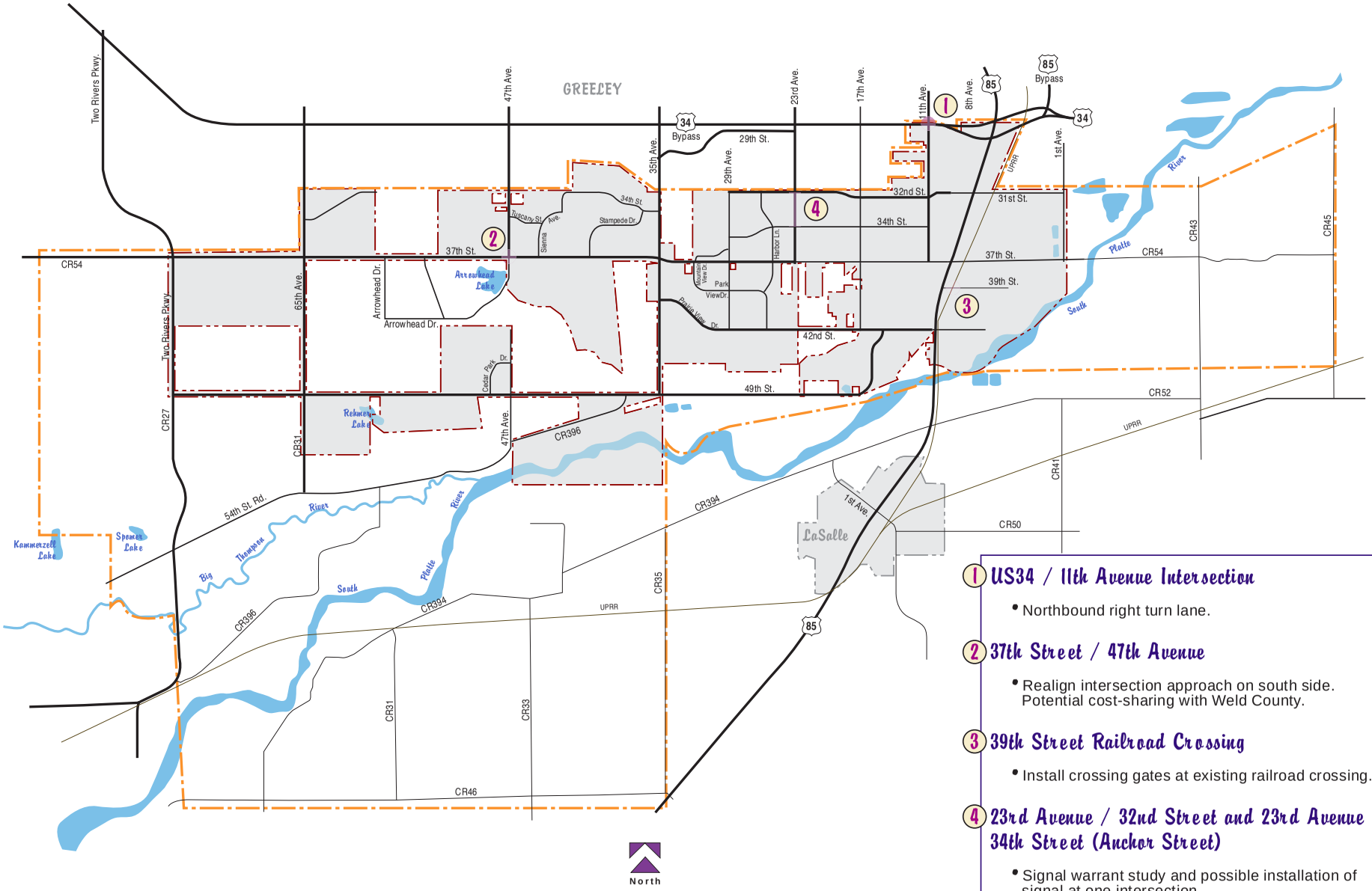
Capacity analyses and traffic volumes suggest the need for turn lane improvements at this intersection. The recommended improvement includes a northbound right turn lane.

37th Street/47th Avenue

The south approach does not align with the north approach and there are no turn lanes. Potential short-term improvements before the widening of 37th Street could include eliminating the offset approaches and providing westbound and eastbound left turn lanes. There is the potential for cost-sharing these improvements with Weld County.

Additional turn laneage on the north approach would significantly improve operations.

CITY OF EVANS



1 US34 / 11th Avenue Intersection

- Northbound right turn lane.

2 37th Street / 47th Avenue

- Realign intersection approach on south side. Potential cost-sharing with Weld County.

3 39th Street Railroad Crossing

- Install crossing gates at existing railroad crossing.

4 23rd Avenue / 32nd Street and 23rd Avenue / 34th Street (Anchor Street)

- Signal warrant study and possible installation of signal at one intersection.

02-240 1/6/04

FELSBURG HOLT & ULLEVIG

engineering paths to transportation solutions

Figure 23

SAFETY & INTERSECTION PROJECTS

39th Street Railroad Crossing

Install crossing gates at this existing railroad crossing.

23rd Avenue/32nd Street

This intersection is a high accident location and was identified as a congested intersection by the public. A signal warrant analysis is recommended at this intersection.

23rd Avenue/34th Street (Anchor Street)

This intersection is a high accident location and was identified as a congested intersection by the informal survey. A signal warrant analysis is recommended at this intersection. The warrant study would also include the 23rd Avenue/32nd Street intersection due to its close proximity and since both intersections probably wouldn't be signalized.

US 85 Access Improvements

US 85 is an important high speed regional connection for Evans. The close proximity of frontage roads to US 85 causes confusion and safety problems at intersections within Evans. The following concept improvements have been recommended previously in the US 85 Access Control Plan in 1999. Some elements of these improvements have already been done or are underway. In light of recent growth, the remaining projects continue to be a priority for Evans. Improvements at each of the four crossings of US 85 focus on relocating the frontage roads to create more space between intersections while maintaining reasonable access to adjacent properties. Design details such as specific access location and actual street alignment would be determined closer to the time each project is implemented. The following is a more detailed listing of improvements by intersection with US 85:

1. ***31st Street improvements***
   - Cul-de-sac and re-align existing west frontage road, or realign access through parking lot. (This could be done with redevelopment)
   - Construct US 85 accel / decel lanes
   - Cul-de-sac and re-align east frontage road (State St)

2. ***37th Street improvements***
   - Cul-de-sac and realign west frontage road in southwest quadrant 37th Street intersection

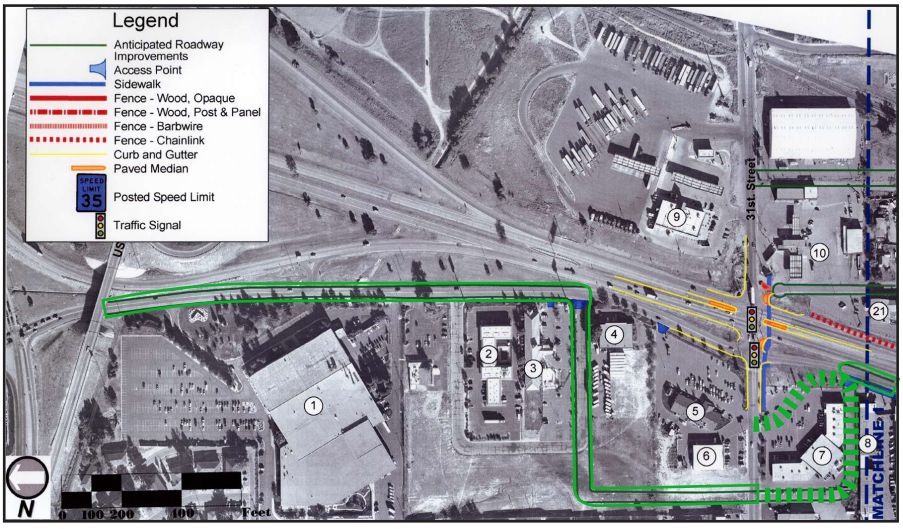
- Cul-de-sac and re-align west frontage road northwest quadrant 37th Street intersection
- US 85 median improvements

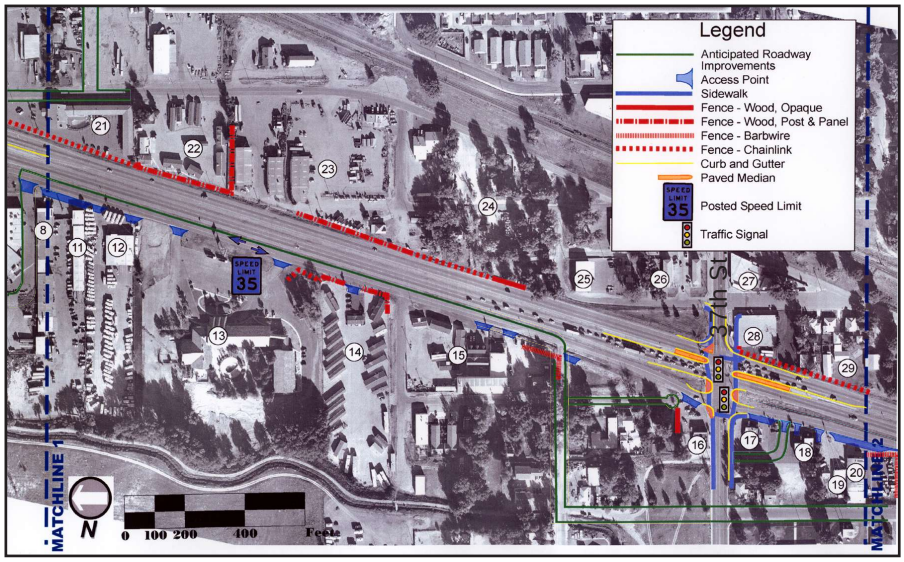
3. ***39th Street improvements***
   - US 85 median improvements to restrict east side to right in / right out (recently completed)
   - Realign and close west side access to US 85.

4. ***42nd Street improvements***
   - Realignment of west frontage road. Northwest corner of 42nd Street (southwest corner currently underway)
   - US 85 Median improvements
   - Signalization of intersection (recently completed)

The above conceptual improvements, graphically depicted in Figure 24, have been included to illustrate a conceptual implementation phasing that is logical based upon current development plans and funding structure.

CITY OF EVANS



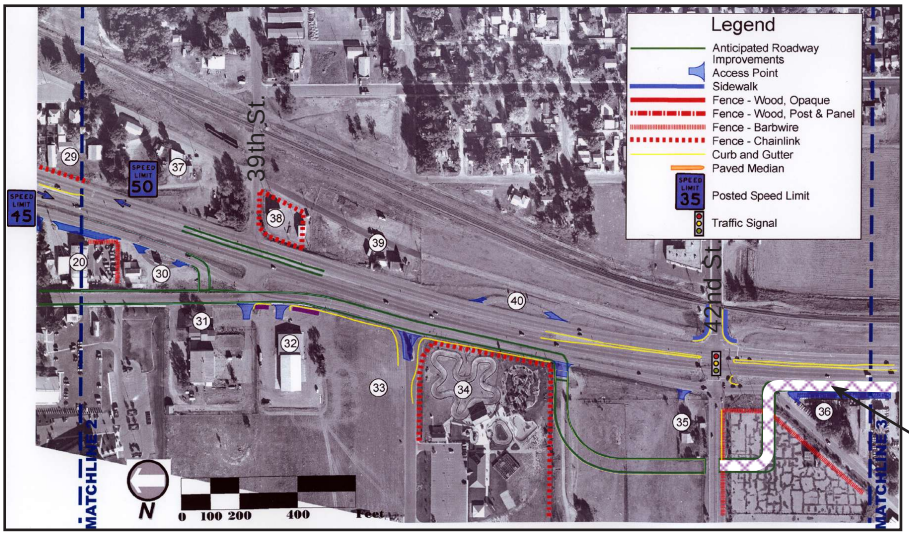


LEGEND

= Early 2004 - 2012

= Mid 2004 - 2012

= Late 2004 - 2012



Currently Underway

SOURCE: US85 Corridor Master Plan, Carter Burgess

02-240 1/8/04

FELSBURG HOLT & ULLEVIG
engineering paths to transportation solutions

Figure 24

US 85 ACCESS IMPROVEMENTS