

Lincoln Corridor Plan

A Great Street for a Great Neighborhood
Phase 1 - Vision Appendix A



Appendix A.

**EXISTING
AND FUTURE
CONDITIONS**

TRANSPORTATION INVENTORY

Lincoln Corridor Plan

Transportation Inventory

Figure 1.	Right of Way and Cross-Section Locations
Figure 2A.	Cross-Sections
Figure 2B.	Cross-Sections
Figure 3.	Bicycle and Pedestrian Volumes
Figure 4.	Existing Sidewalk Conditions
Figure 5.	Existing Pedestrian Levels of Service
Figure 6.	Existing and Proposed Bicycle Facilities
Figure 7.	Existing Bicycle Levels of Service
Figure 8.	Existing Transit Routes and Stops
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Key Messages from Inventory Graphics

Figure 1. Right of Way and Cross-Section Locations

The existing ROW along Lincoln Avenue generally varies from 70 feet to about 100 feet. The Woodward Governor development will dedicate an additional 27 feet of ROW along the south edge of Lincoln Avenue between 3rd Street and just to the west of Lemay Avenue.

Figure 2A & 2B. Cross-Sections

The Lincoln Avenue cross-section varies along the ¾ mile corridor. One vehicular travel lane in each direction and bike lanes exist along the length of the corridor; turn lanes are provided at the larger intersections with Jefferson Street/Riverside Avenue and Lemay Avenue. While curb and gutter are provided for short segments, most of the corridor has a more rural feel which includes the Coy Ditch along the Woodward Governor property.

Figure 3. Bicycle and Pedestrian Volumes

Bicycle volumes along Lincoln Avenue are moderate, with approximately 25 bicyclists using the corridor during the morning and afternoon peak hours. The peak bicycling direction is eastbound in the morning and westbound in the afternoon. Pedestrian activity at both ends of the corridor (at Jefferson Street/Riverside Avenue and at Lemay Avenue) is relatively low (≤ 6 in any hour).

Figure 4. Existing Sidewalk Conditions

Sidewalks exist along only portions of Lincoln Avenue. A detached sidewalk is provided on the north side of the street adjacent to the residential neighborhood, O'Dell Brewery, and Fort Collins Brewery. An attached sidewalk is provided across the Poudre River bridge and on the north side adjacent to Buckingham Park. The remainder of the corridor lacks sidewalk.

Figure 5. Existing Pedestrian Levels of Service

Pedestrian levels of service (LOS) reflect the comfort experienced by pedestrians as they walk along a street. Conditions that affect pedestrian segment LOS include the width of the sidewalk, buffer separation, amenities, and the speed and volume of adjacent traffic. Where sidewalks are provided, the pedestrian LOS is good (LOS C or better). The pedestrian intersection LOS is based on the level of delay and interaction with turning vehicles. The pedestrian intersection LOS at the two signalized intersections is good (LOS C or better).

Figure 6. Existing and Proposed Bicycle Facilities

Fort Collins has an extensive bicycle network composed of on-street bike lanes, designated bike routes, and multi-use trails. Lincoln Avenue has striped bike lanes except across the Poudre River bridge. There are ramp connections from Lincoln Avenue down to the Poudre Trail. The Lincoln corridor provides an important piece of the City's overall bicycle network.

Figure 7. Existing Bicycle Levels of Service

Bicycle LOS is based on the comfort bicyclists experience when riding the corridor which can be affected by the presence and width of bike lanes, on-street parking encroachment, and the speed and volume of adjacent traffic. The bicycle segment LOS on the Lincoln Avenue corridor is generally good (LOS C or better), but is LOS E on the Poudre River bridge where the bike lanes end, LOS D adjacent to the residential neighborhood due to the influence of on-street parking, and LOS D to the west of 1st Street where the bike lane in the westbound direction is very narrow.

Figure 8. Existing Transit Routes and Stops

Two Transfort bus routes currently serve the Lincoln Avenue corridor. Route 5 connects the Downtown Transit Center to the Mall Transfer Center via Lemay Avenue and Route 14 provides east-west bus service between the Downtown Transit Center and Centro via Lincoln Avenue and Mulberry Street. There are three bus stops on the Lincoln Avenue corridor in the westbound direction and two in the eastbound direction.

Figure 9. Transit Boardings and Alightings

The weekday and Saturday boardings and alightings for each of the stops along Lincoln Avenue (serving Routes 5 and 14) show the highest concentration of transit boardings/alightings at the intersection of Lincoln Avenue and Lemay Avenue. Boardings and alightings along Lincoln Avenue account for approximately five percent of the Route 5 total ridership and approximately ten percent of the Route 14 total ridership.

Figure 10. Planned Future Transit Routes

The Transfort Strategic Operating Plan outlines three phases of improvements/modifications to the transit routing and service in Fort Collins. In addition to renumbering the routes, several modifications/re-routings of existing routes are planned. MAX bus rapid transit service is scheduled to begin in the summer of 2014 and will terminate at the Downtown Transit Center. A new Downtown Circulator Route is identified in the Strategic Operating Plan which would provide a circulating bus route between the Downtown Transit Center and the brewery district along Lincoln Avenue and Buckingham Street.

Figure 11. Crash History

Over a three year period between 2010 and 2012 there were a total of 54 crashes along Lincoln Avenue. Approximately 70 percent of these crashes occurred at the two intersections on the ends of the corridor (Jefferson Street/Riverside Avenue and Lemay Avenue) as would be expected given the higher levels of intersecting traffic volumes. Six of the crashes on the corridor involved a bicyclist, and one involved a pedestrian. There were a total of nine injury accidents with three involving a pedestrian or bicyclist. Overall, the corridor has experienced a relatively low number of crashes.

Figure 12. Existing Traffic Volumes

Lincoln Avenue currently carries approximately 6,000 vehicles per day (vpd) on the west end of the corridor and approximately 8,800 vpd on the east end. Morning, noon, and afternoon peak hour turning movements are used to assess the existing traffic operations. Several of the existing land uses, as well as

planned redevelopment, along the corridor rely on large trucks to import and export goods to their sites. The western portion of the corridor carries approximately 4.2 percent heavy vehicles (trucks and buses), while the eastern portion carries approximately 3.4 percent. These heavy vehicles will need to be safely accommodated in any improvements made to the Lincoln corridor.

Figure 13. Existing Levels of Service and Lane Geometry

The two signalized intersections (Lincoln Avenue/Jefferson Street/Riverside Avenue and Lincoln Avenue/Lemay Avenue) operate well, with acceptable levels of delay for vehicular travel. The stop sign controlled intersections at Willow Street, and 1st, 2nd, and 3rd Streets also work well, with minimal delay for side street turning traffic.

Figure 14. 2035 Projected Traffic Volumes

The 2035 traffic volume projections are based on the North Front Range MPO regional travel demand model as modified for the Fort Collin's Transportation Master Plan. The forecasts, which account for local and regional residential and employment growth, show a 35 – 50 percent increase in daily traffic along Lincoln Avenue.

Figure 15. 2035 No Action Projected Levels of Service

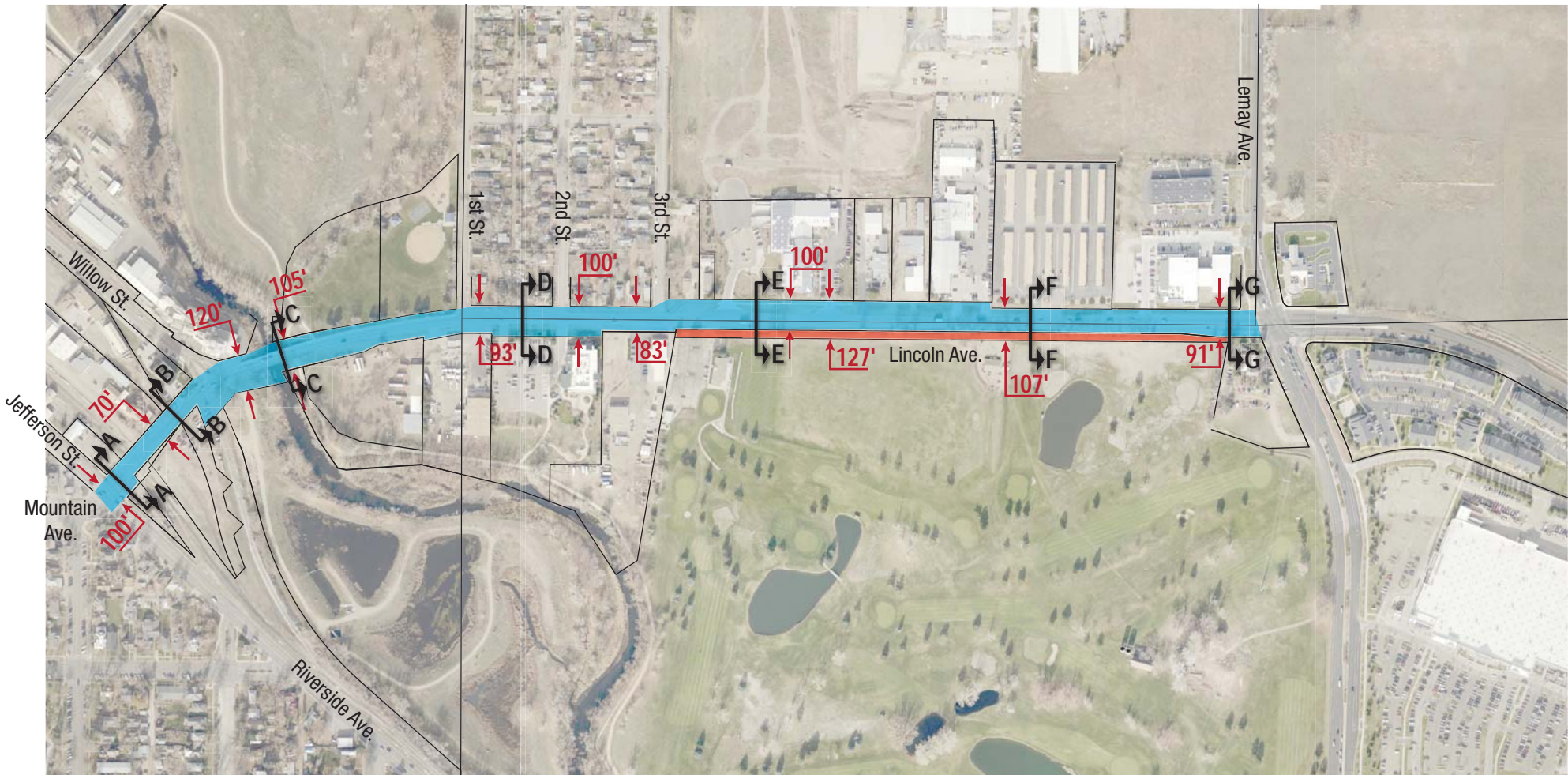
Using the forecasted traffic volumes for 2035, and assuming no improvements to the corridor (No Action), the intersections of Lincoln Avenue with Jefferson Street/Riverside Avenue, Lemay Avenue, and 1st, 2nd, and 3rd Streets would continue to operate at acceptable levels of service.

Figure 16. Existing Floodplains and Storm Sewer System

The Cache La Poudre River floodplain limits affect several parcels that abut Lincoln Avenue. Some parcels are quite affected (Team Petroleum for example), while others more minimally. Some underground storm sewer systems exist along the corridor that primarily serve the Buckingham neighborhood and the businesses along the north side of Lincoln Avenue between 3rd Street and Lemay Avenue.

Figure 17. Environmental Inventory

Several environmental resources have been identified within the Lincoln Avenue study area, including potentially noise sensitive areas, historic resources, park/recreational resources, wetland resources, and sites with potential hazardous materials issues, which could affect the alternatives development process.

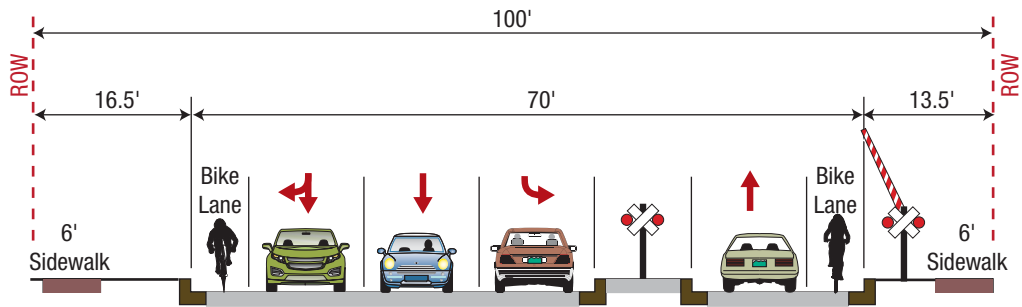


LEGEND

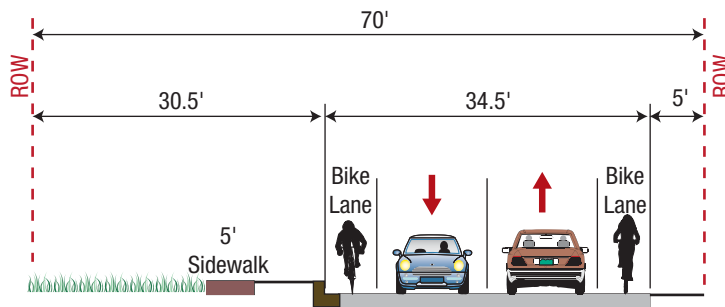
	Existing Right-of-Way (ROW)
	Future Right-of-Way (Woodward Development)
	Cross Section Locations (refer to Figure 2A and 2B)
	Approximate Right-of-Way Width

SOURCE: City of Fort Collins Engineering, 2013 Survey

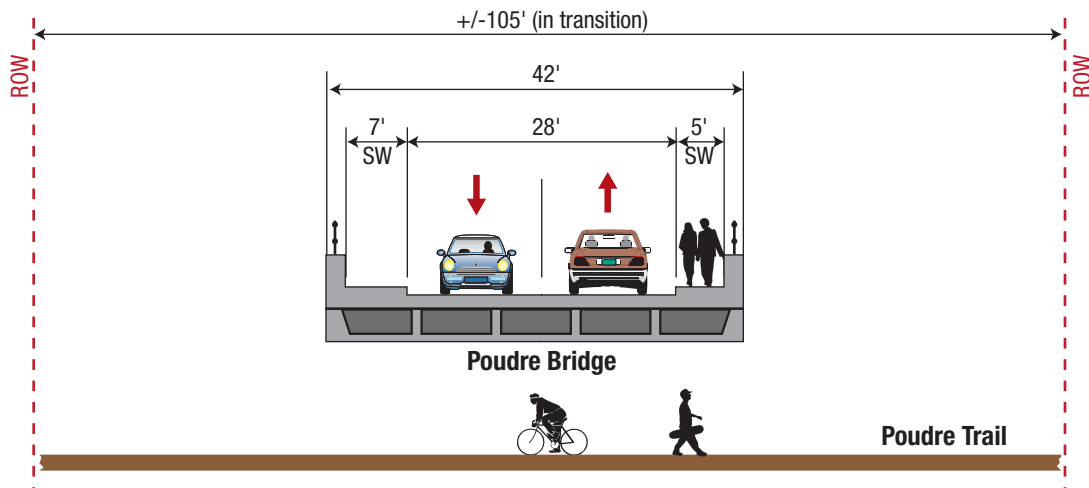
Figure 1
Right-of-Way and Cross-Section Locations



A-A. Between Jefferson Street / Riverside Avenue and Union Pacific Railroad (West Tracks)



B-B. West of Willow Street and Union Pacific Railroad (East Tracks)

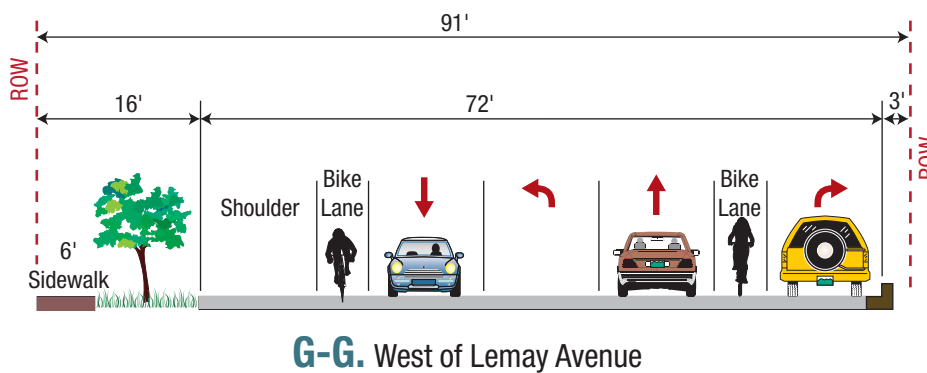
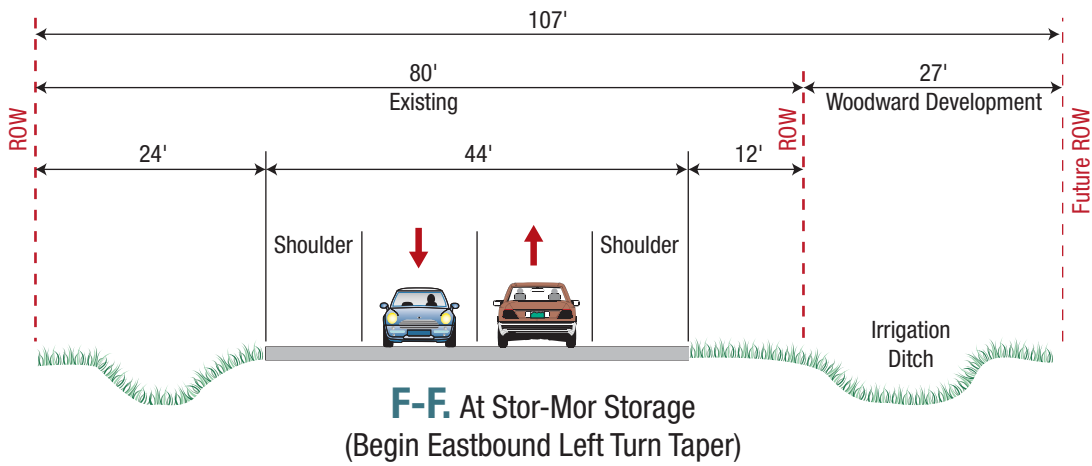
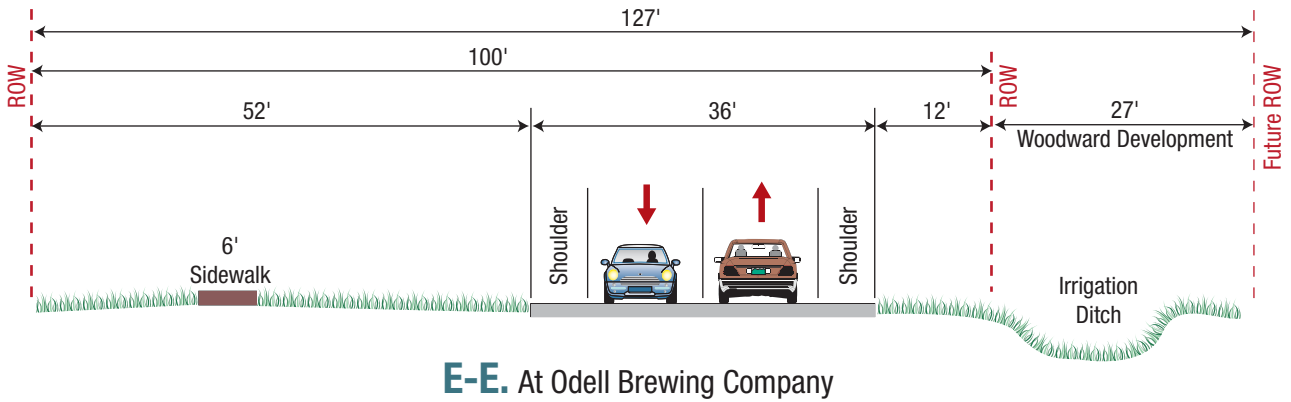
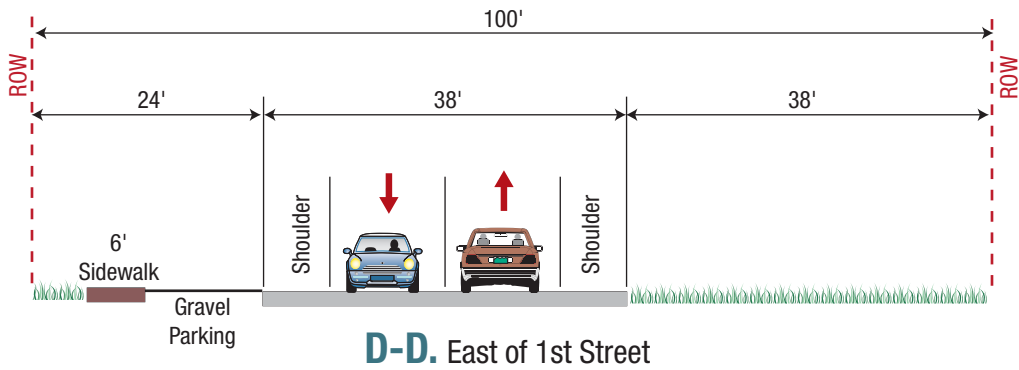


C-C. Poudre River Bridge and Bike Trail Underpass

All Cross-Sections are Looking East

SOURCE: City of Fort Collins Engineering, 2013 Survey

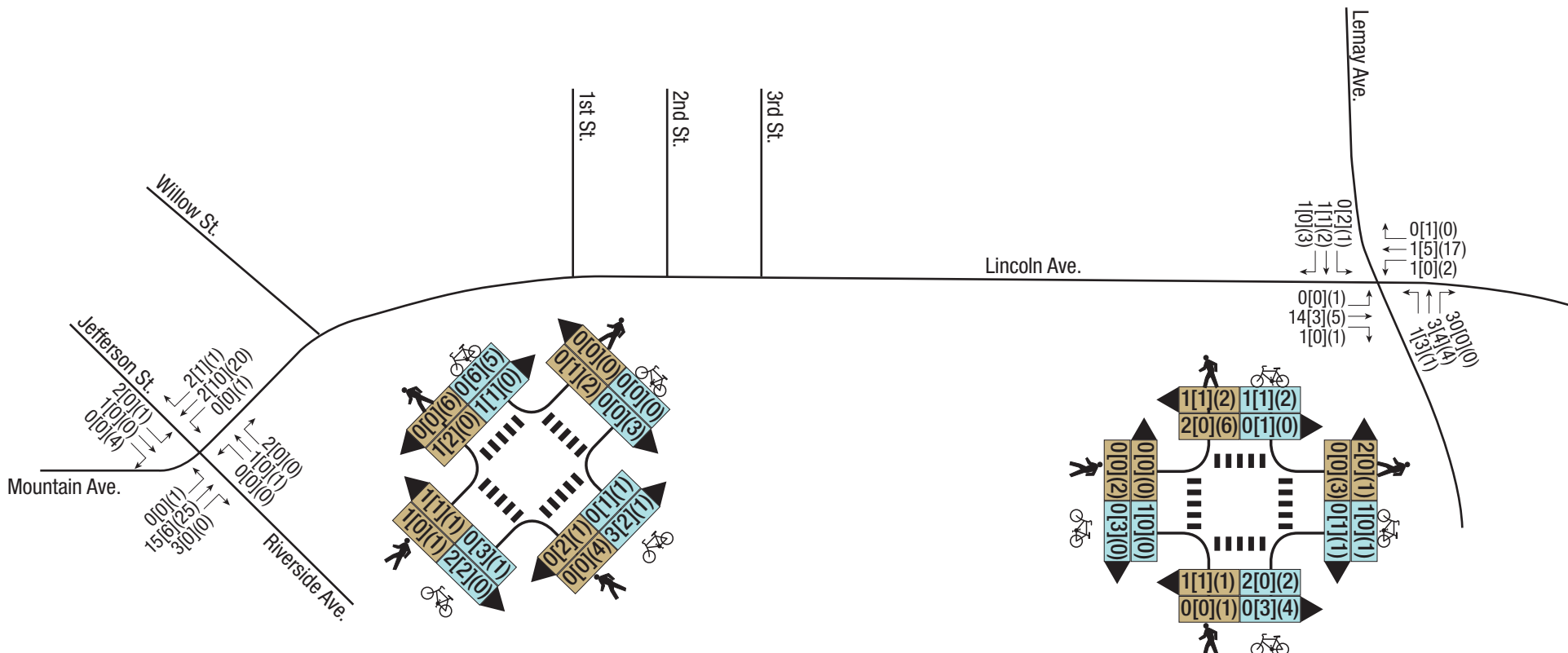
Figure 2A
Cross-Sections



All Cross-Sections are Looking East

SOURCE: City of Fort Collins Engineering, 2013 Survey

Figure 2B
Cross-Sections



LEGEND

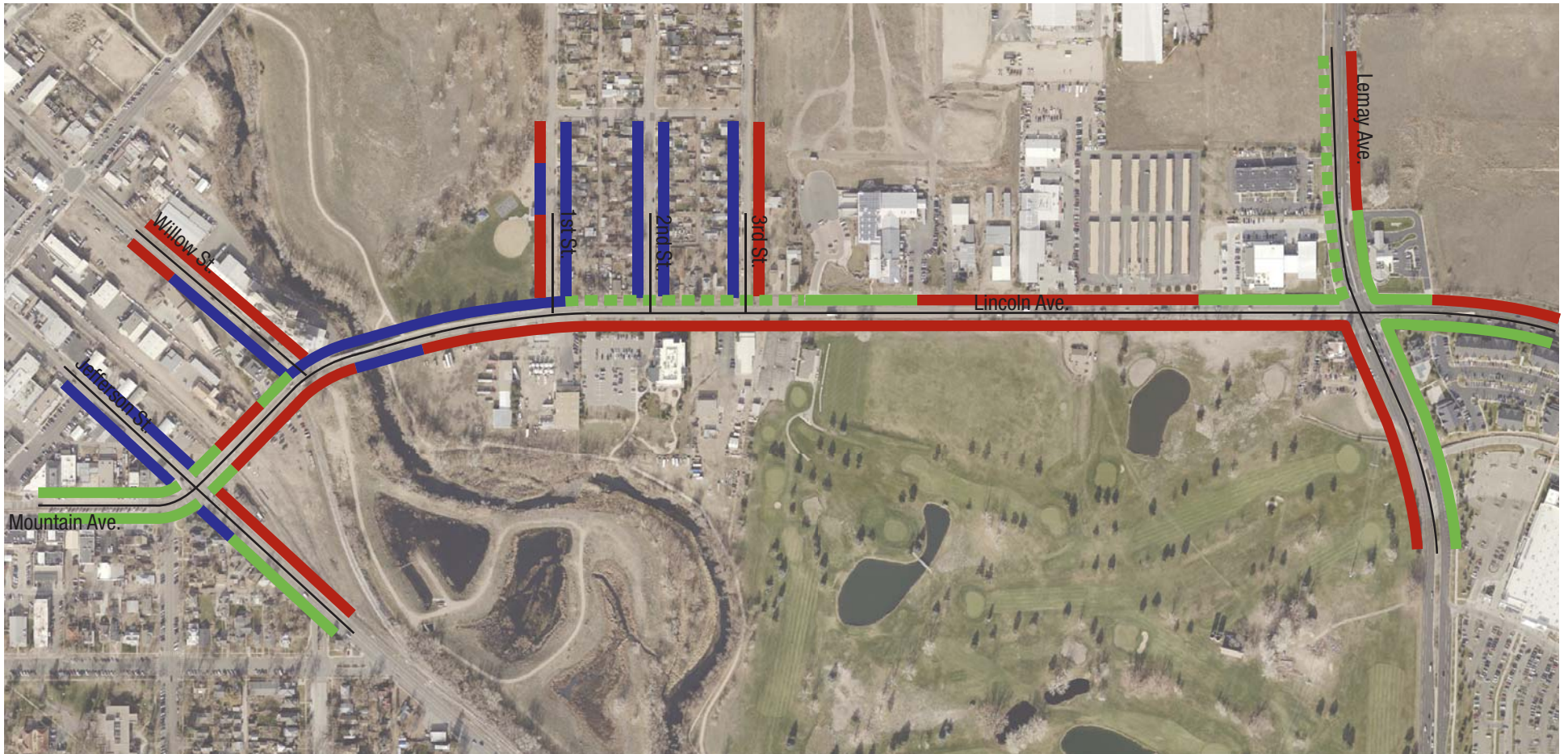
X[Y](Z) AM[Noon](PM) Bicycle Turning Movements in Bike Lanes





X[Y](Z) AM[Noon](PM) Pedestrian Crossings in Crosswalk

X[Y](Z) AM[Noon](PM) Bicycle Crossings in Crosswalk

SOURCE: City of Fort Collins, 2011 and 2012

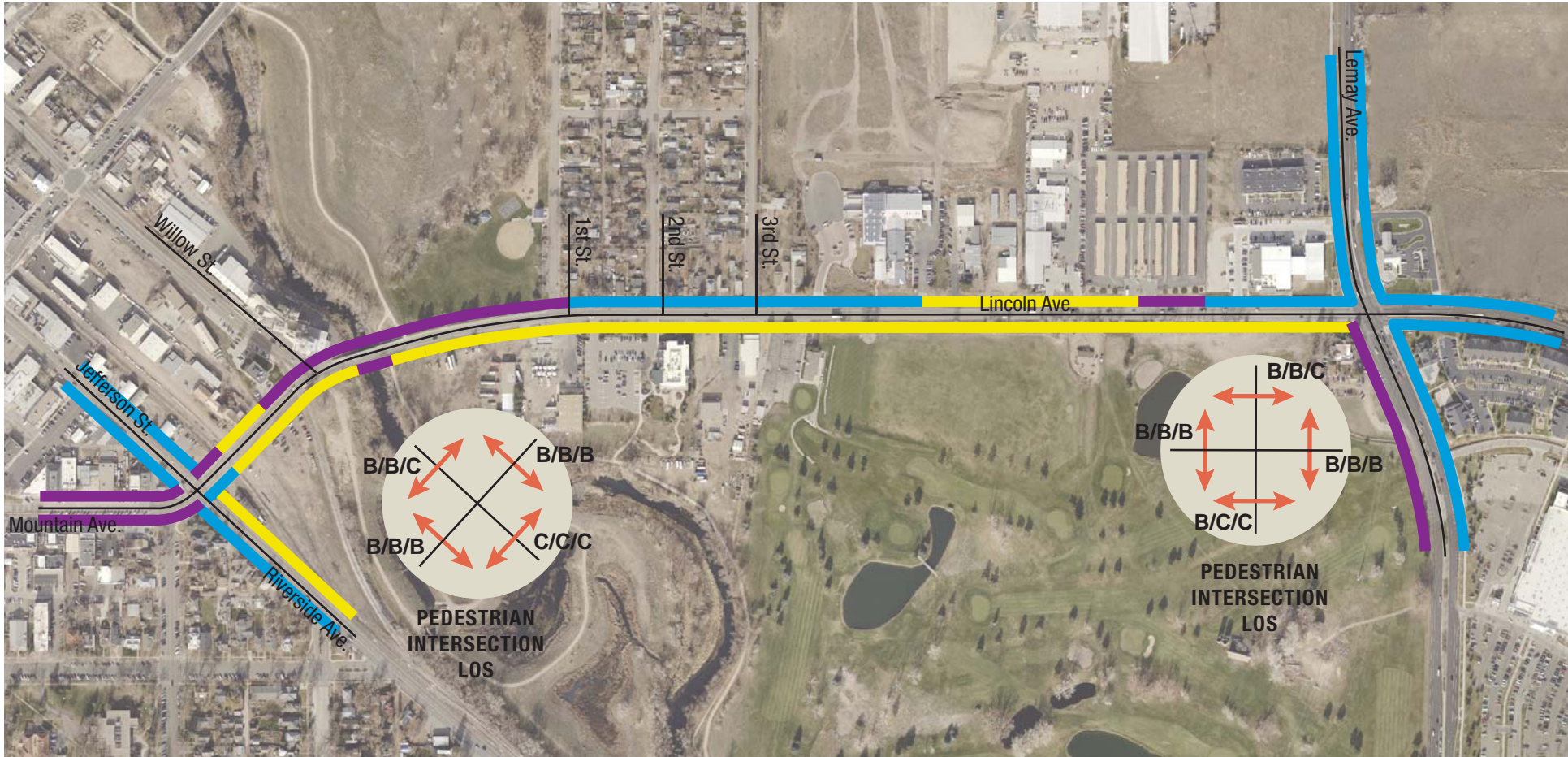
Figure 3
Bicycle and Pedestrian Volumes



LEGEND	
	Detached Sidewalk
	Attached Sidewalk
	Missing Sidewalk
	Interim Sidewalk

SOURCE: FHU Field Investigation

Figure 4
Existing Sidewalk Conditions



LEGEND	
Pedestrian Segment LOS	
█	LOS A
█	LOS B
█	LOS C
█	LOS D
█	LOS E
█	LOS F

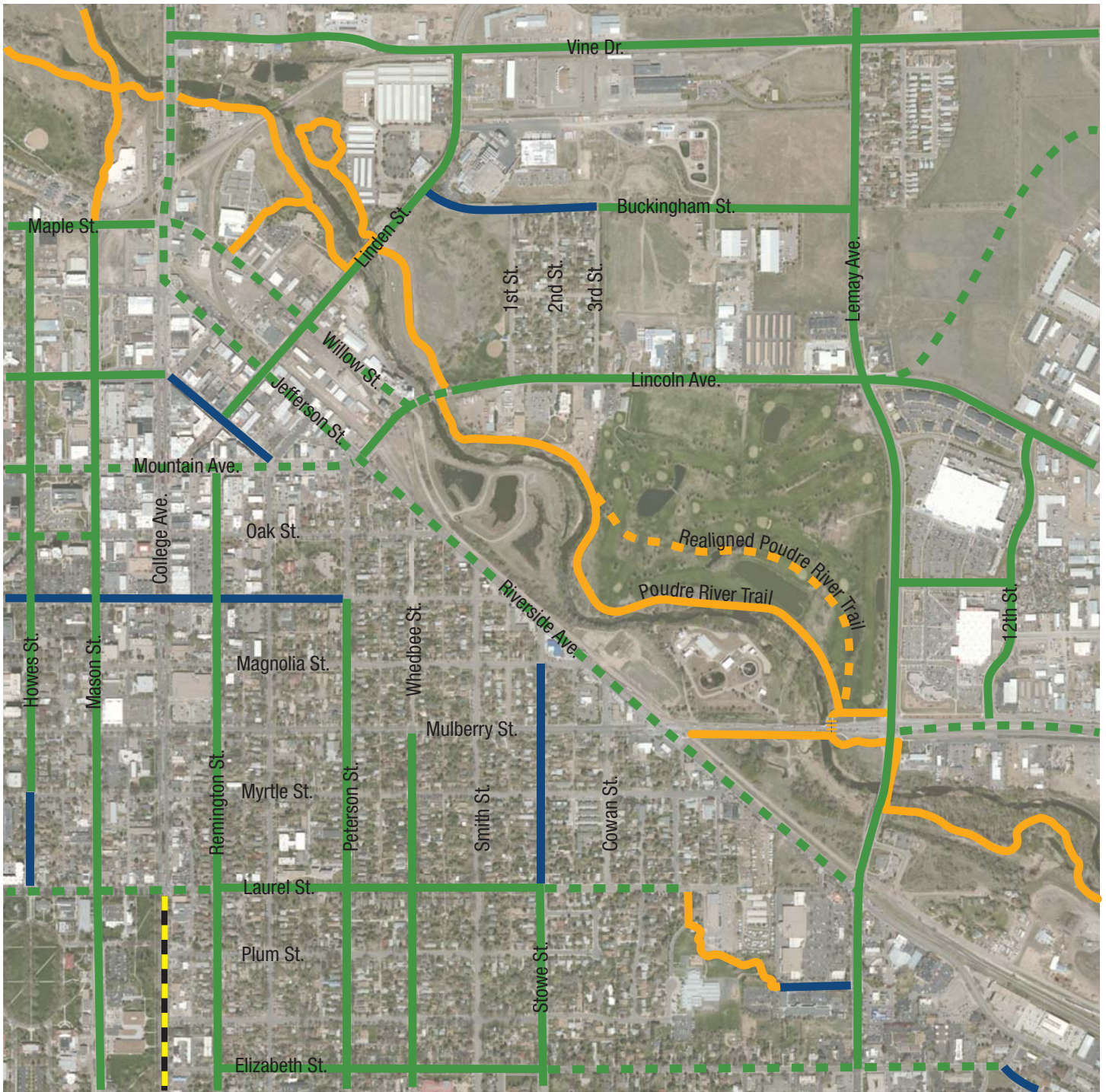
SOURCE: HCM Pedestrian Segment and Intersection LOS Methodology

FELSBURG HOLT & ULLEVIG

Lincoln Corridor Plan 13-014 08/12/13

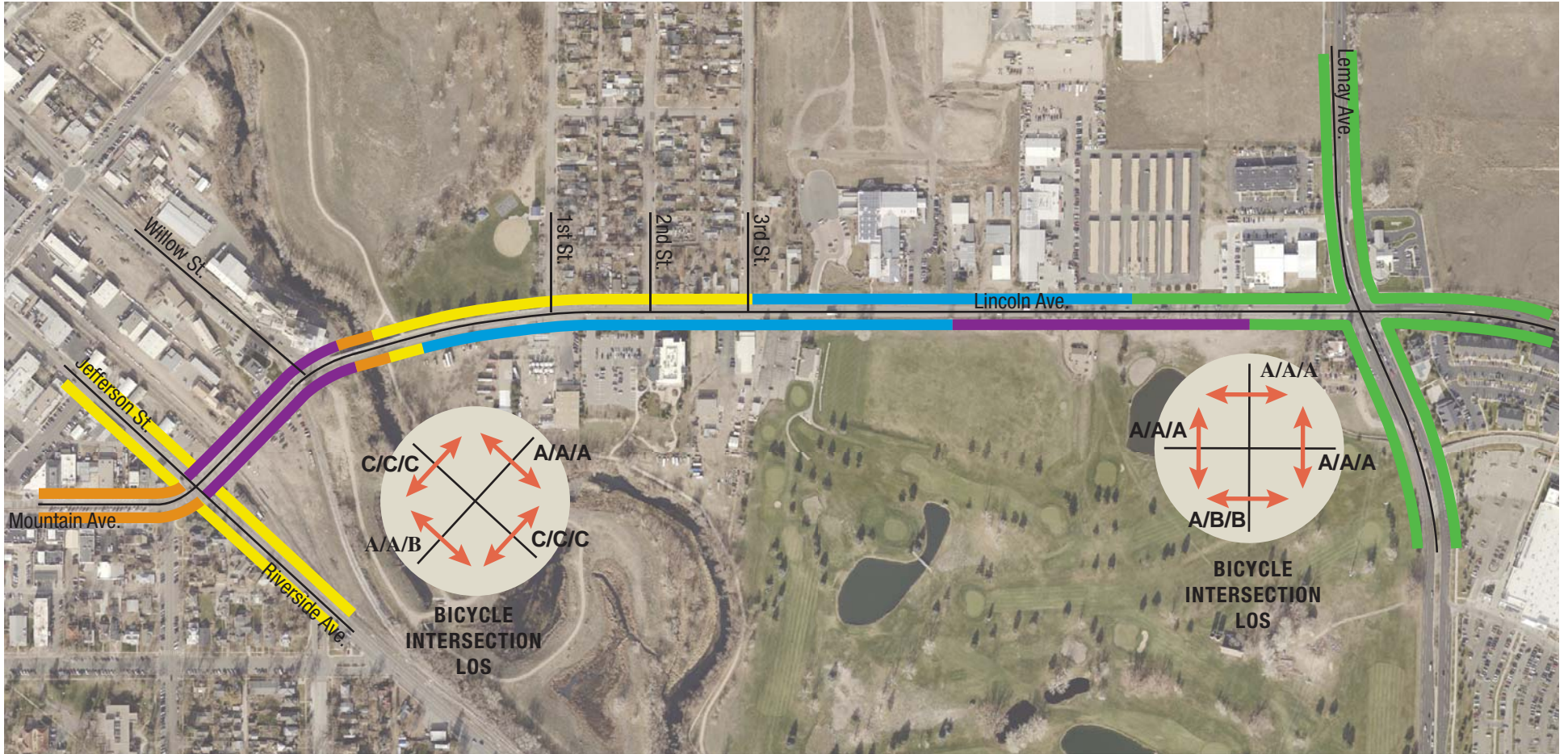
Figure 5
Existing Pedestrian Levels of Service

NORTH



LEGEND	
	Bike Lanes
	Proposed Bike Lanes
	Bike Routes
	Proposed Bike Routes
	Multi-Use Trails
	Proposed Multi-Use Trail
	No Bicycling

Figure 6
Existing and Proposed Bicycle Facilities



LEGEND	
Bicycle Segment LOS	
█	LOS A
█	LOS B
█	LOS C
█	LOS D
█	LOS E
█	LOS F

SOURCE: HCM Bicycle Segment and Intersection LOS Methodology

Figure 7
Existing Bicycle Levels of Service

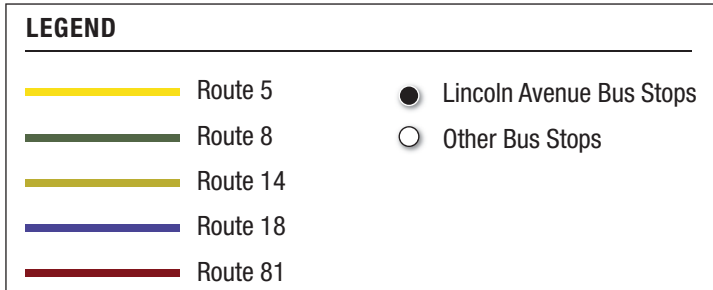
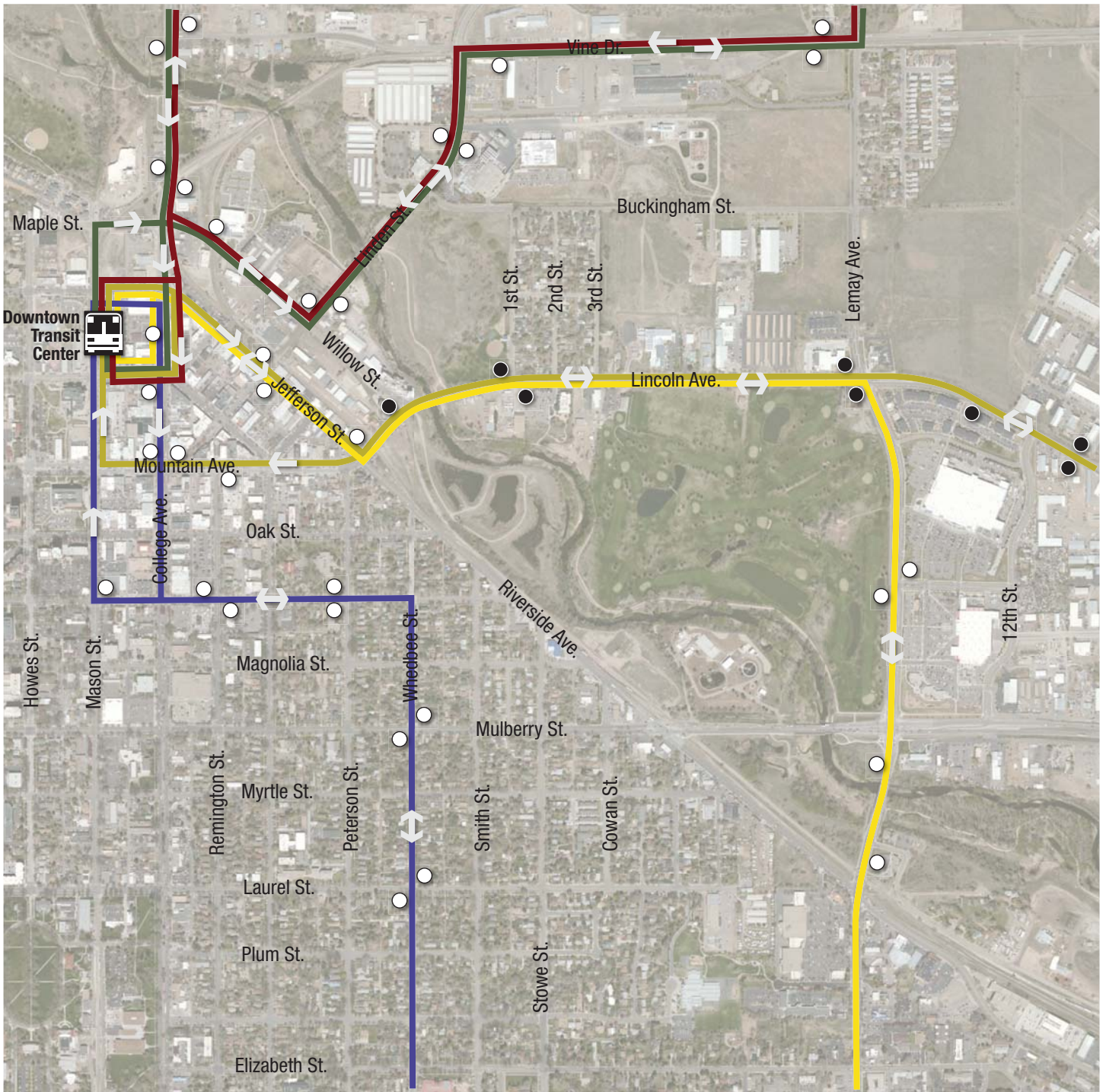
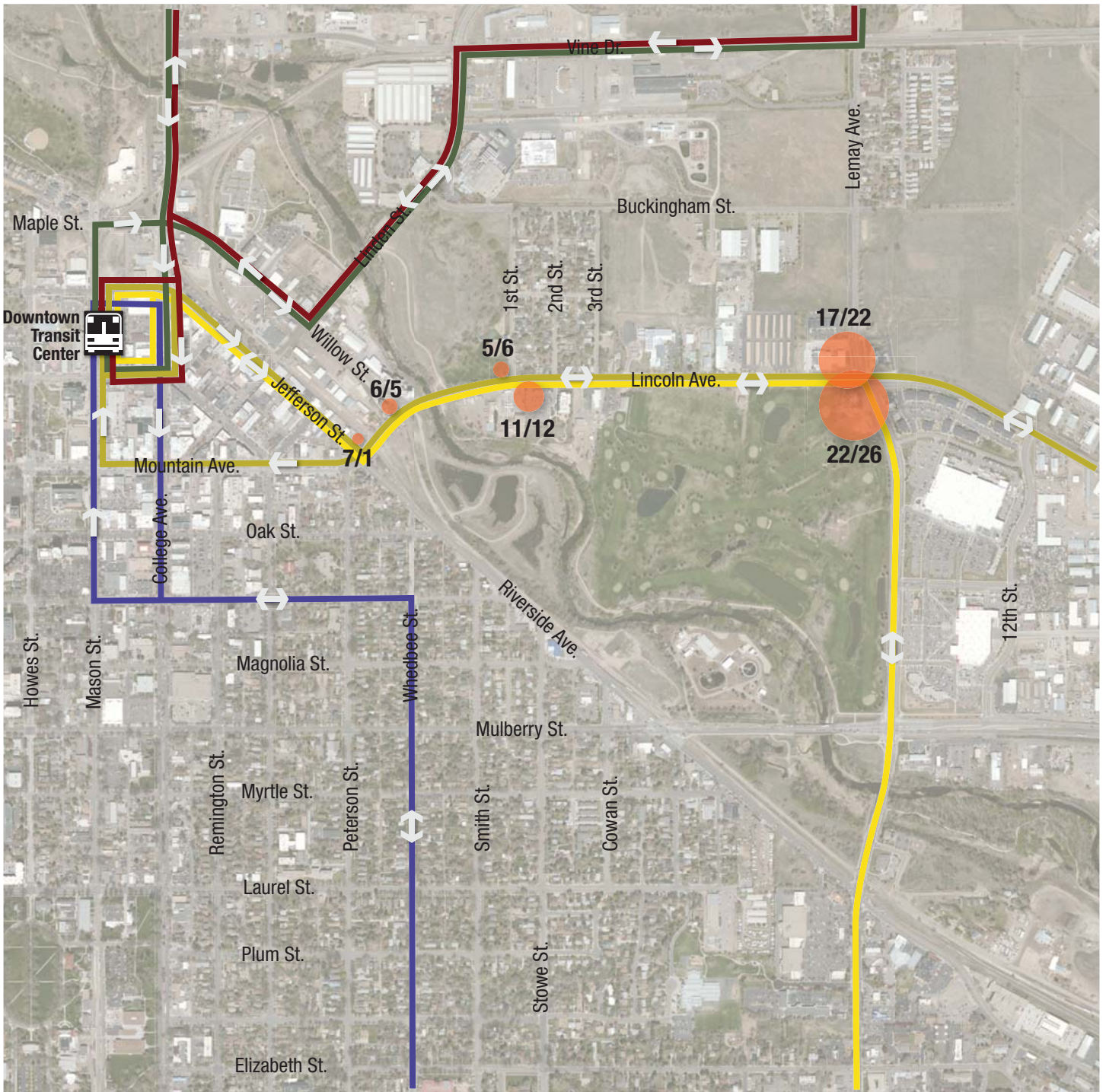


Figure 8
Existing Transit Routes and Stops

SOURCE: Transfort



LEGEND	
	Route 5
	Route 8
	Route 14
	Route 18
	Route 81
XX/XX	Weekday/Saturday Boardings and Alightings on Routes 5 and 14

WEEKDAY/SATURDAY BOARDINGS and ALIGHTINGS

	ROUTE 5	ROUTE 14
Lincoln Corridor Stops	31/25	37/45
All Route Stops	611/470	356/385
Lincoln % of Total	5.1%/5.3%	10.4%/11.7%

Figure 9
Transit Boardings and Alightings

SOURCE: Transfort, Summer 2013 Ridership Survey

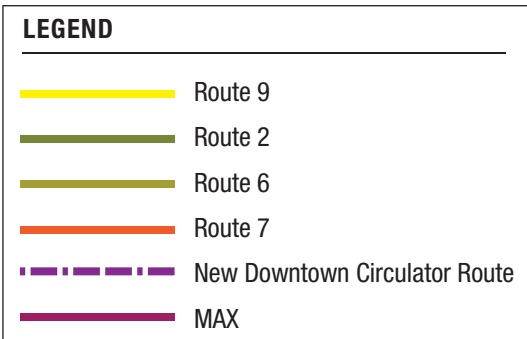
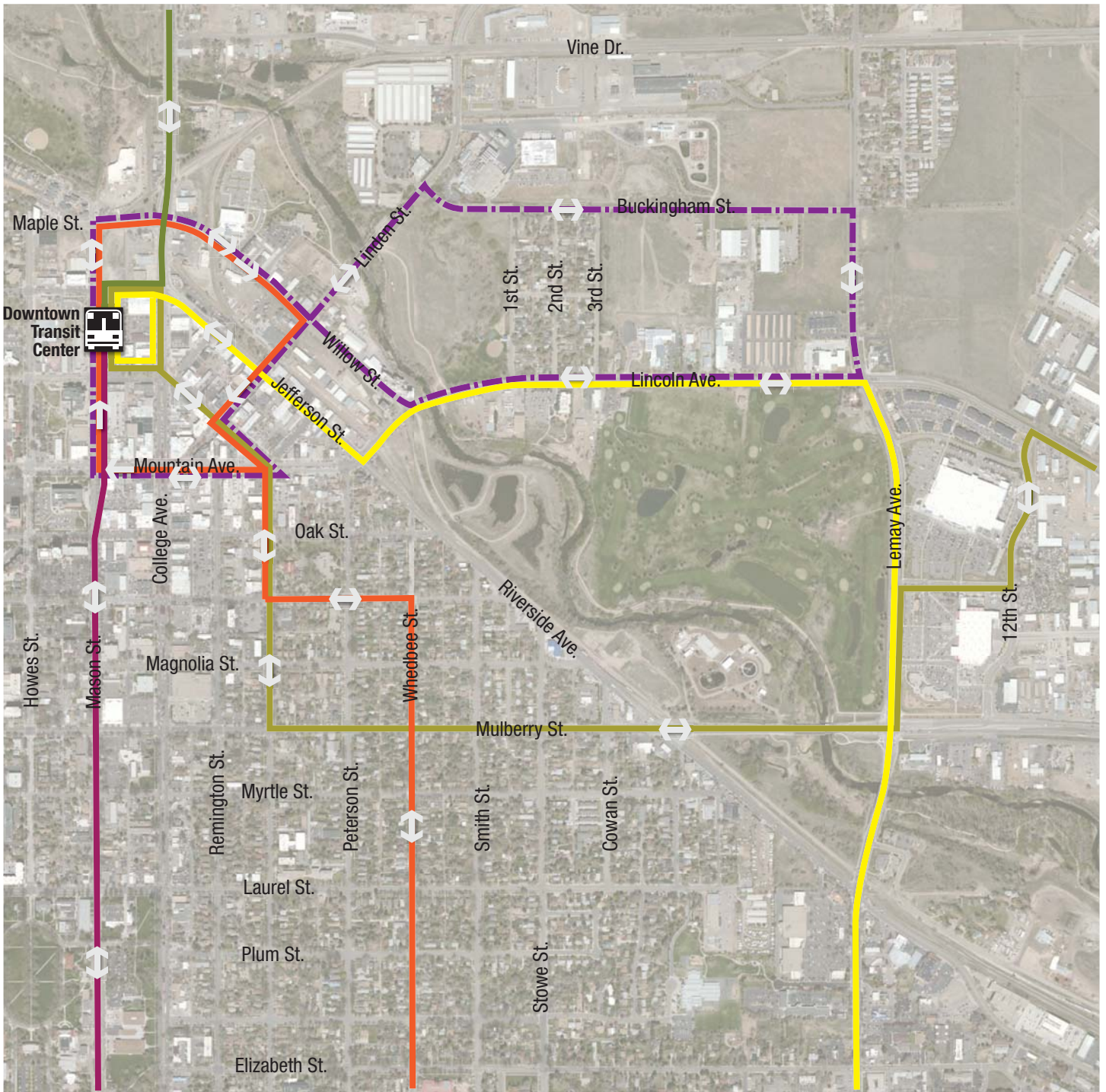
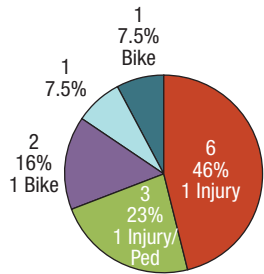
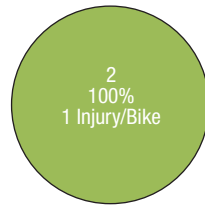


Figure 10
Planned Future Transit Routes

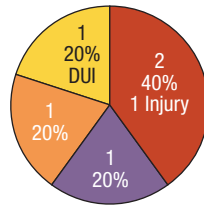
SOURCE: Phase 3 Transfort Strategic Operating Plan



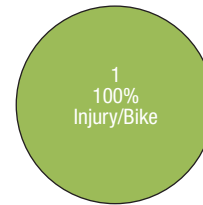
JEFFERSON ST. / RIVERSIDE AVE. / LINCOLN AVE. / MOUNTAIN AVE.



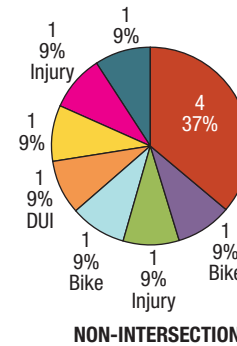
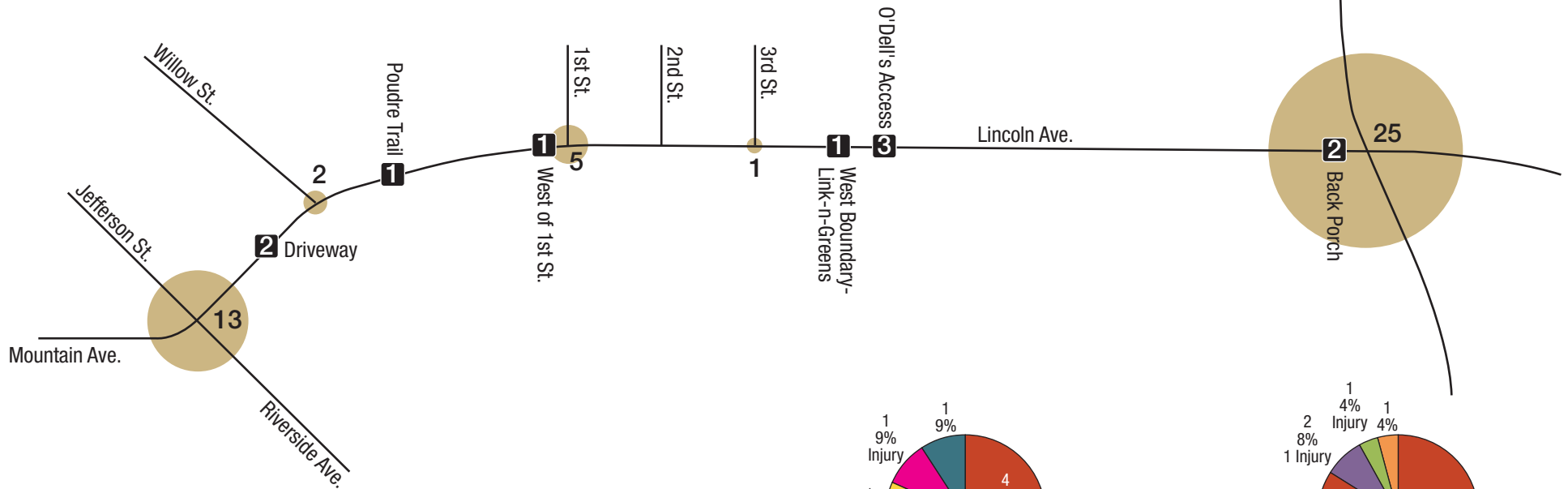
WILLOW ST. / LINCOLN AVE.



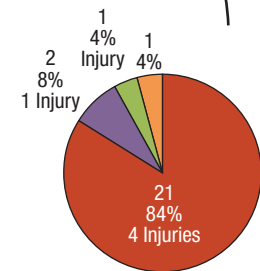
1ST ST. / LINCOLN AVE.



3RD ST. / LINCOLN AVE.



NON-INTERSECTION



LEMAY AVE. / LINCOLN AVE.

LEGEND

Crash Type

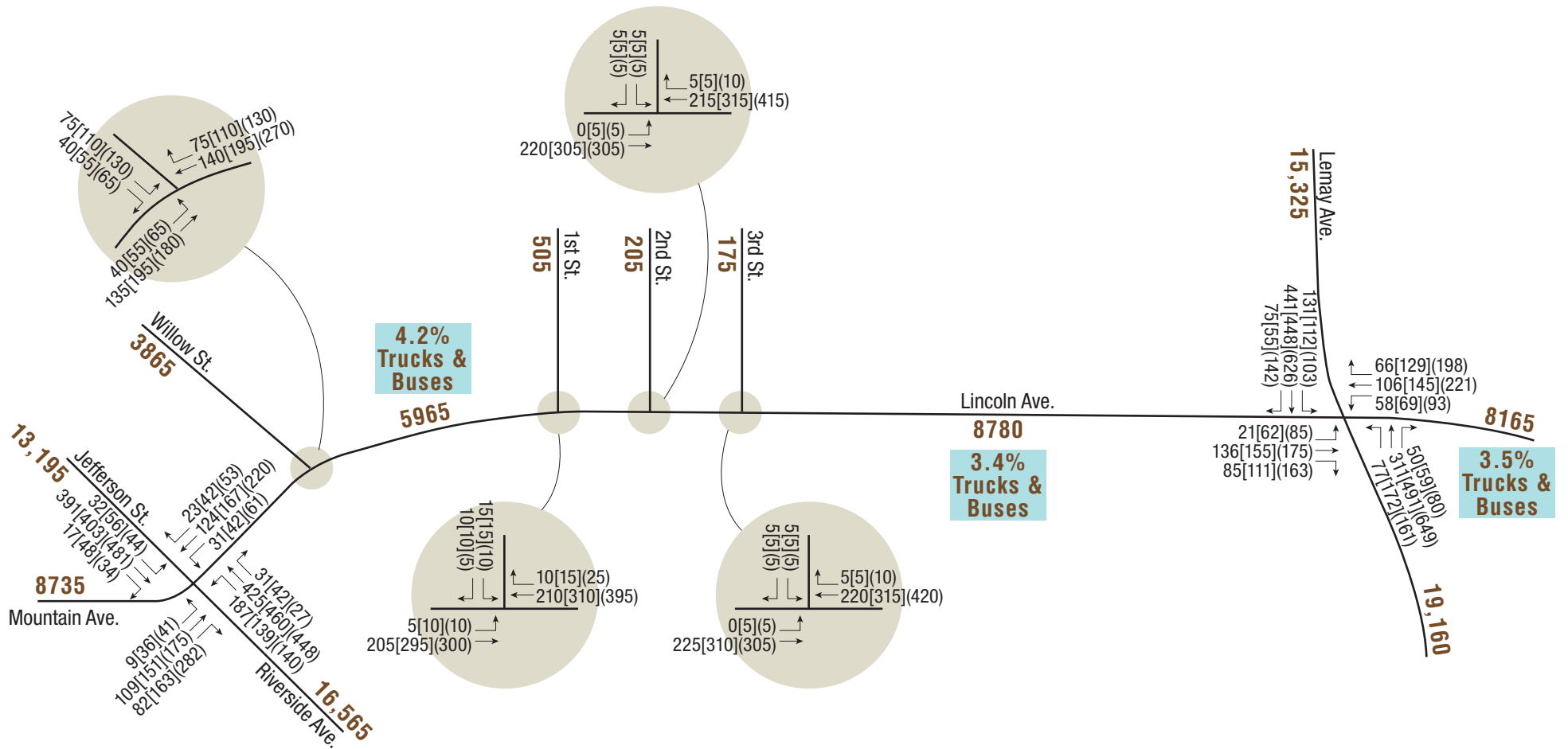
Right Turn	Sideswipe
Rear End	Fixed Object
Approach Turn	Parked Car
Broadside	Left Turn

= Number of Intersection Crashes

= Number of Non-Intersection Crashes (1 unknown location)

SOURCE: City of Fort Collins 2010-2012

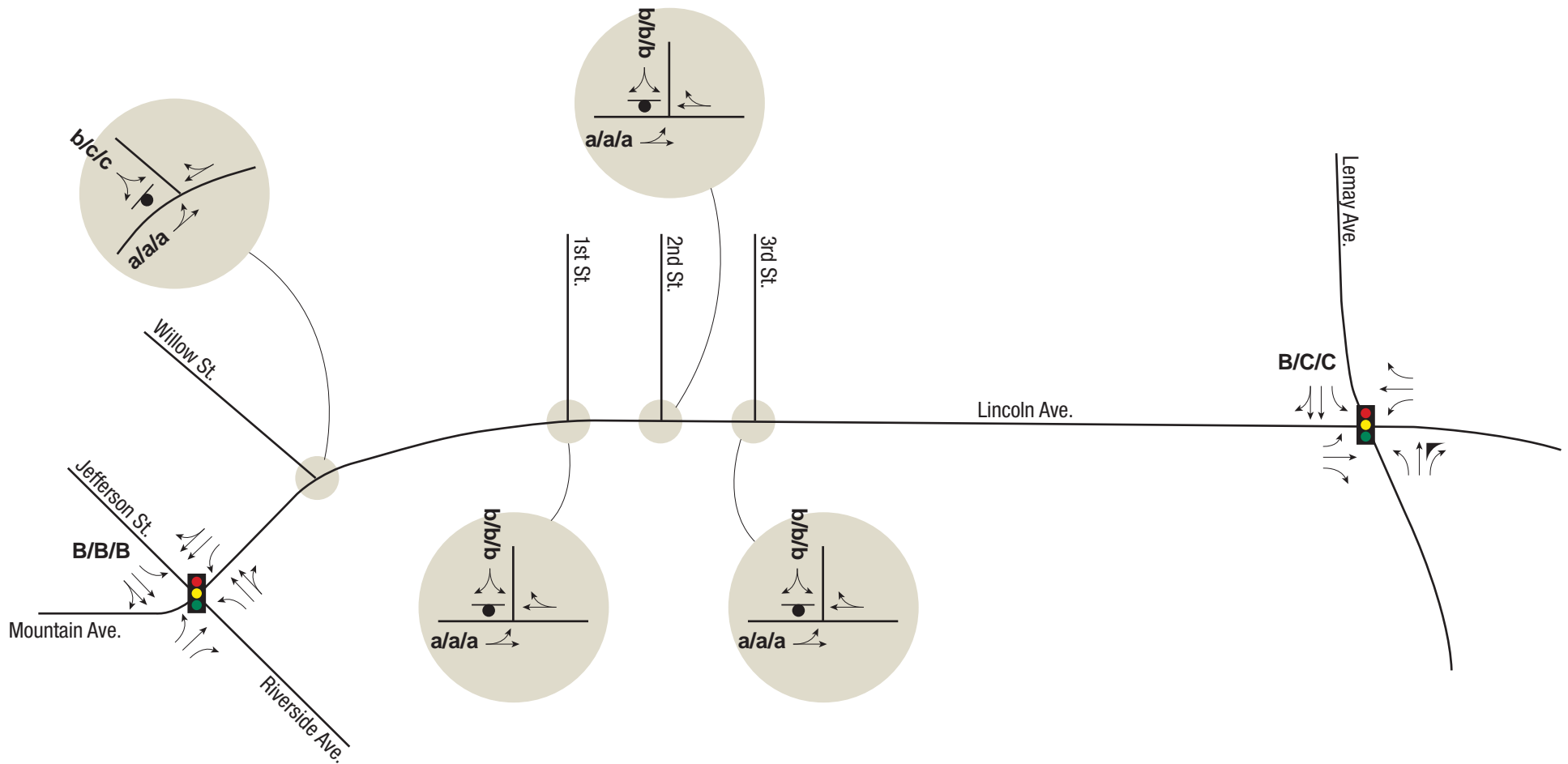
Figure 11
Crash History (2010-2012)



LEGEND	
xxxxxx	AM[Noon](PM) Peak Hour Traffic Volumes
XXXX	Daily Traffic Volumes

Figure 12
Existing Traffic Volumes

SOURCE: City of Fort Collins 2011, 2012





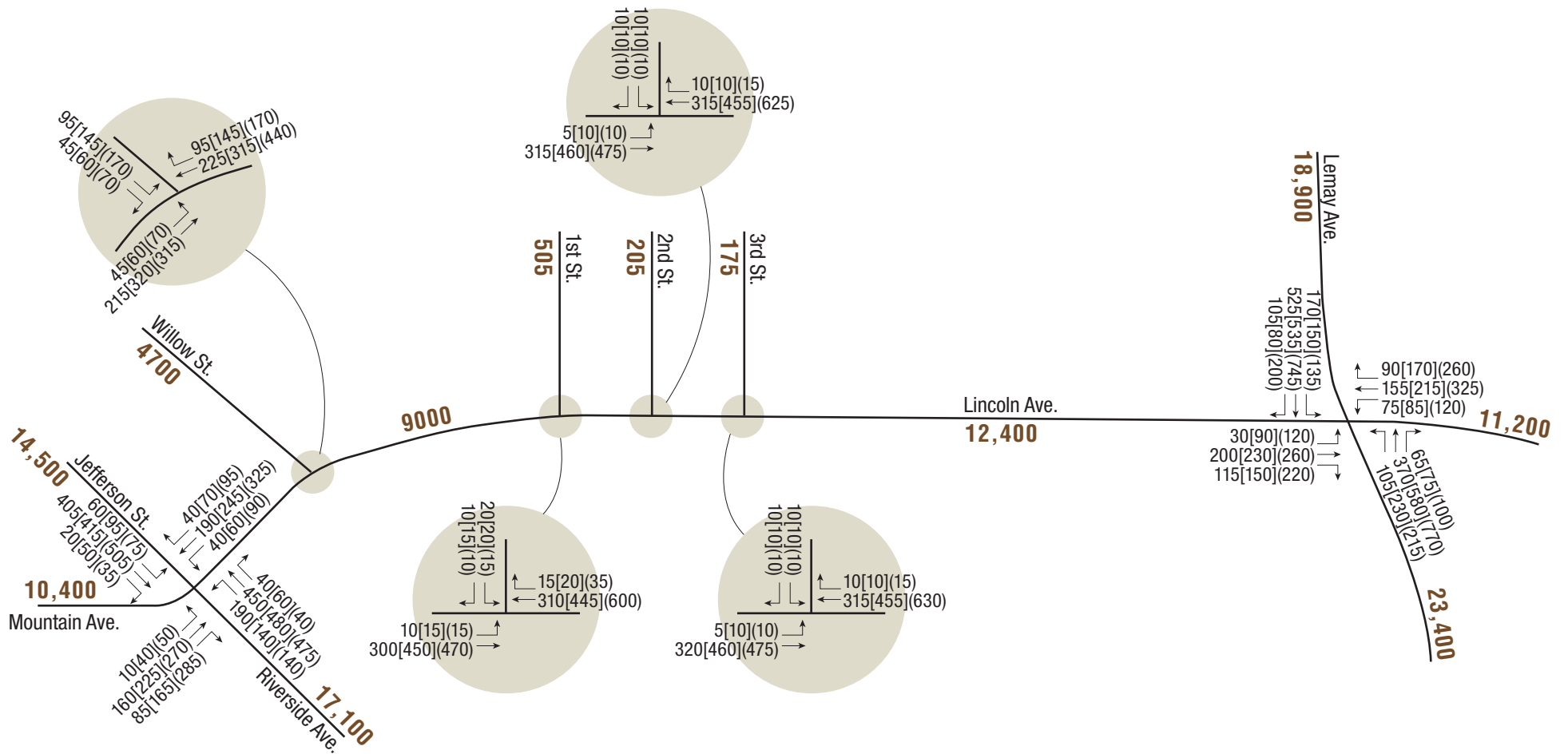
LEGEND	
X/X/X	AM/PM Peak Hour Signalized Intersection Level of Service
x/x/x	AM/PM Peak Hour Unsignalized Intersection Level of Service
	Stop Sign
	Traffic Signal

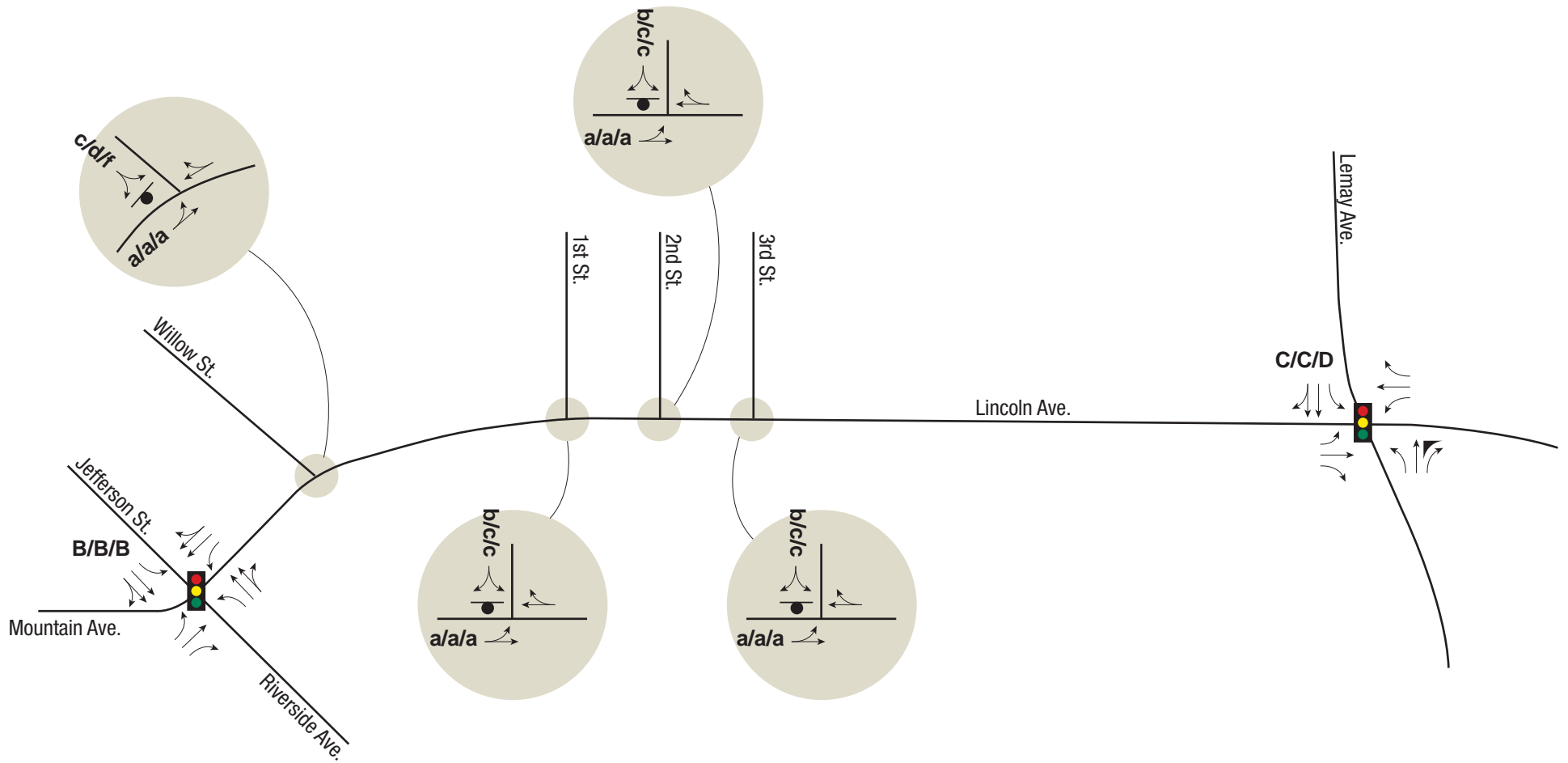
Figure 13
Existing Levels of Service
and Lane Geometry



LEGEND	
xxxxxx	AM[Noon](PM) Peak Hour Traffic Volumes
XXXX	Daily Traffic Volumes

SOURCE: NFRMPO Travel Demand Model, Adjusted

Figure 14
2035 Projected Traffic Volumes





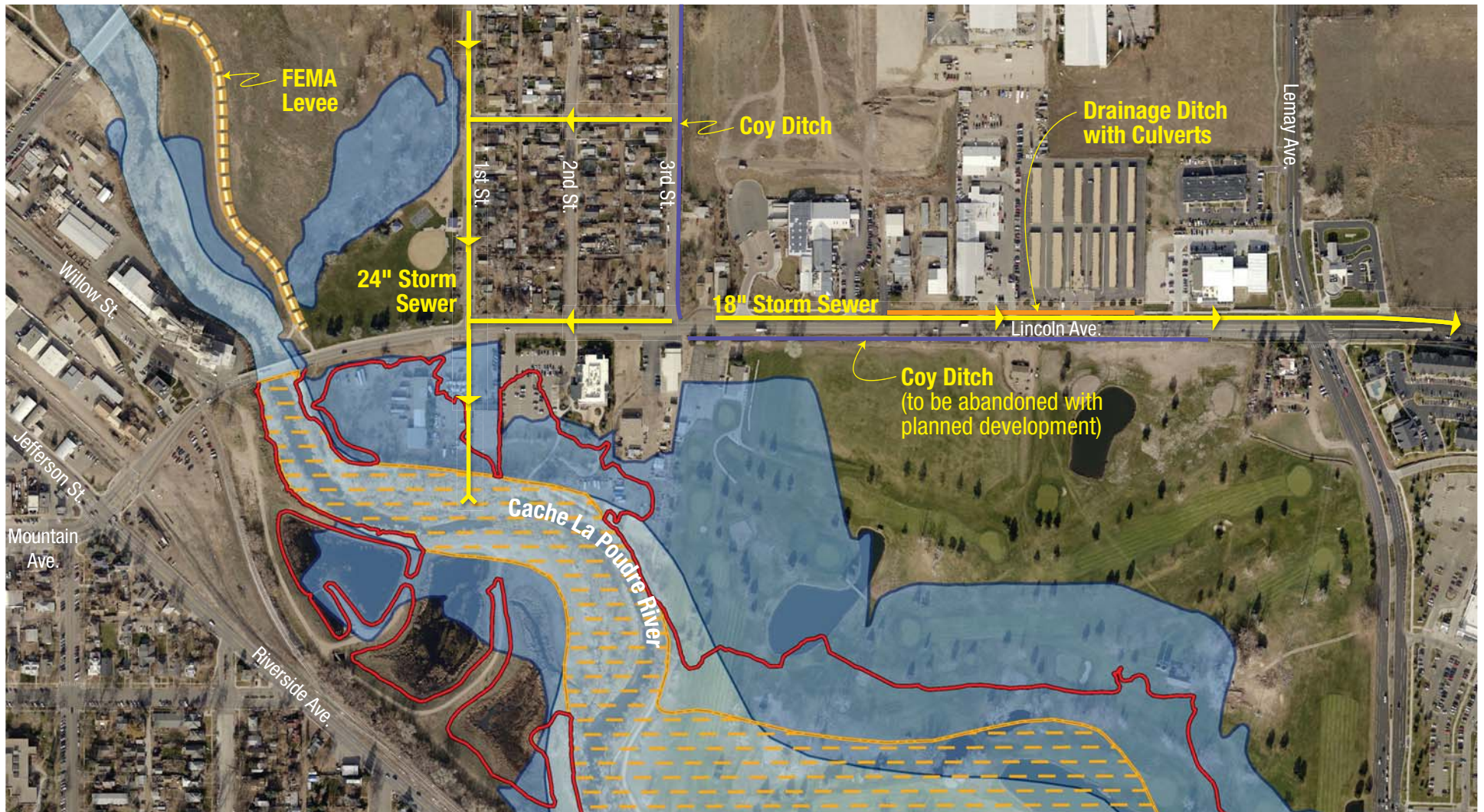





LEGEND	
X/X/X	AM/PM Peak Hour Signalized Intersection Level of Service
x/x/x	AM/PM Peak Hour Unsignalized Intersection Level of Service
	Stop Sign
	Traffic Signal

Figure 15
2035 No Action Projected
Levels of Service



LEGEND	
	Existing Levee
	Proposed 100 Year Floodplain
	Existing 100 Year Floodplain
	Proposed 1 Foot Floodway
	Existing 1 Foot Floodway

SOURCES: City of Fort Collins Engineering, 2310 Survey,
 FEMA Flood Insurance Rate Map (FIRM) Panel Number 08069C0979H. Effective Date May 2, 2012,
 FEMA Flood Insurance Study (FIS) for Larimer County, Colorado and Incorporated Areas.
 Effective Date February 6, 2013

Figure 16
 Existing Floodplains and Storm Sewer System

PRELIMINARY DRAFT



LEGEND

- Hazmat Site - LUST
- Hazmat Site - RCRA
- Hazmat Site - UST
- Traffic Signals
- Bike Trails
- Trails/Potential 4(f)
- Historical Districts
- Parcels
- Potential Environmental Justice
- Noise Sensitive Area
- Fresh Water Pond
- Cache La Poudre River/Wetlands
- Natural Areas/Potential 4(f)
- Parks/Potential 4(f)
- Project Foot Prints

Map Index

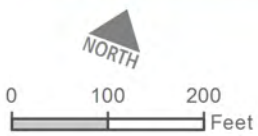
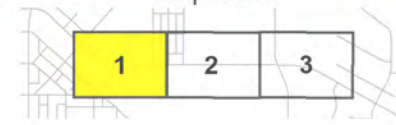
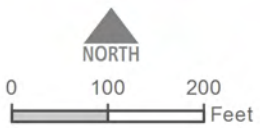
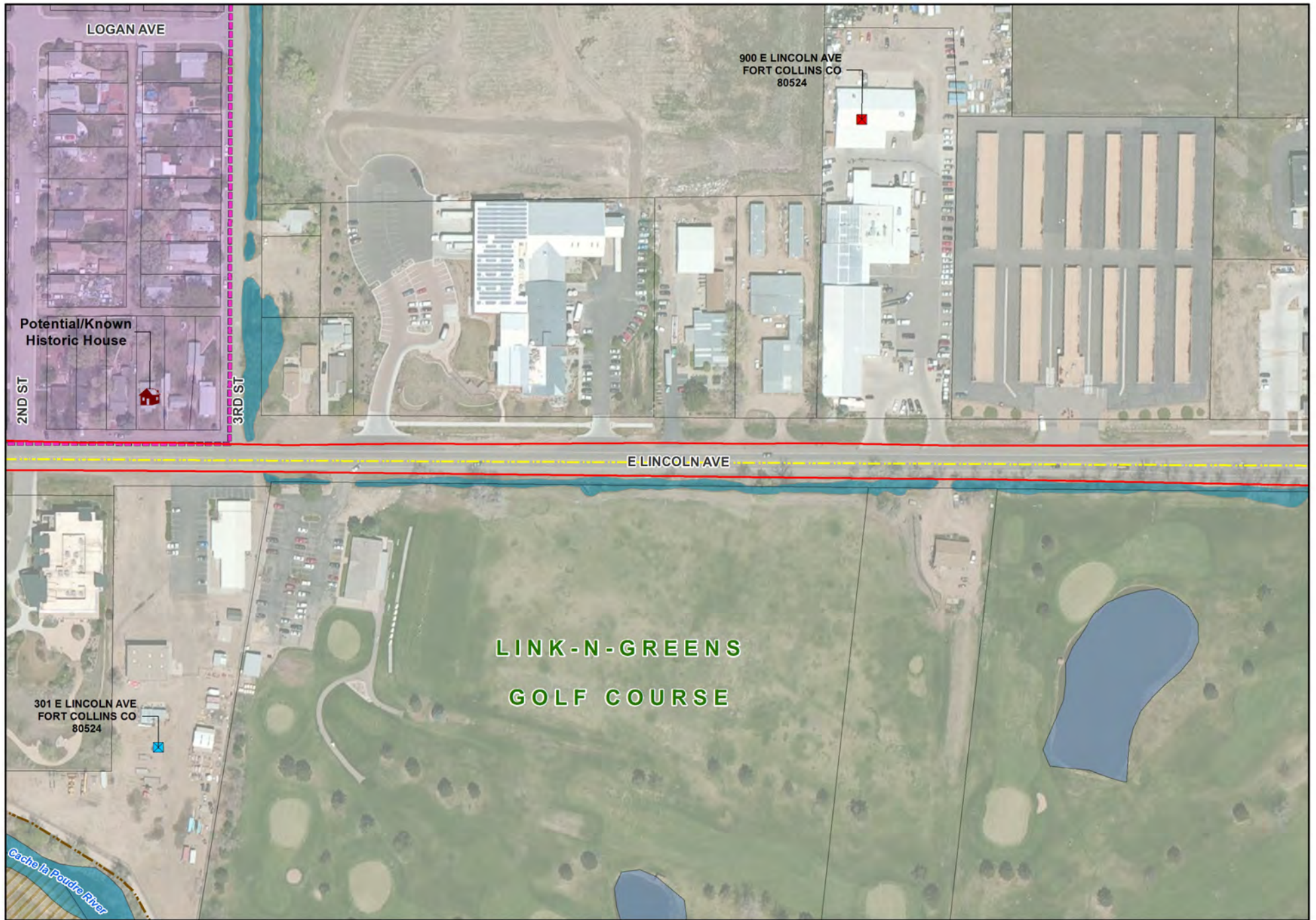


Figure 17
Environmental Inventory

PRELIMINARY DRAFT



LEGEND

- | | | | |
|--------------------|-----------------------|---------------------------------|------------------------------|
| Hazmat Site - LUST | Bike Trails | Potential Environmental Justice | Natural Areas/Potential 4(f) |
| Hazmat Site - RCRA | Trails/Potential 4(f) | Noise Sensitive Area | Parks/Potential 4(f) |
| Hazmat Site - UST | Historical Districts | Fresh Water Pond | Project Foot Prints |
| Traffic Signals | Parcels | Cache La Poudre River/Wetlands | |

Map Index

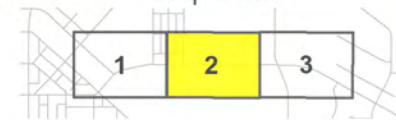
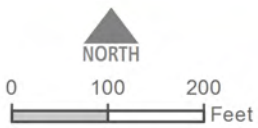


Figure 17
Environmental
Inventory

PRELIMINARY DRAFT



LEGEND

- | | | | |
|--------------------|-----------------------|---------------------------------|------------------------------|
| Hazmat Site - LUST | Bike Trails | Potential Environmental Justice | Natural Areas/Potential 4(f) |
| Hazmat Site - RCRA | Trails/Potential 4(f) | Noise Sensitive Area | Parks/Potential 4(f) |
| Hazmat Site - UST | Historical Districts | Fresh Water Pond | Project Foot Prints |
| Traffic Signals | Parcels | Cache La Poudre River/Wetlands | |

Map Index

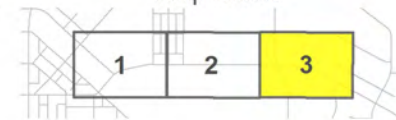


Figure 17
Environmental
Inventory