SANTA FE STREETSCAPE DESIGN STUDY

CITY AND COUNTY OF DENVER

HDR
Apex Design
ThereSquared
# TABLE OF CONTENTS

## 01 Introduction
- Executive Summary .................................................................................................................. 1

## 02 Site Conditions
- Study Boundary ........................................................................................................................ 4
- Connections and Destinations .................................................................................................. 6
- Corridor and Community Identity .............................................................................................. 8
- Street Network, Capacity and Public Space Allocation ............................................................ 10
- Character Areas ....................................................................................................................... 12
- Curb Lane Inventory ............................................................................................................... 18
- On-Street Parking Utilization .................................................................................................. 20
- Ground Floor Facade Quality .................................................................................................. 22
- Ground Floor Uses .................................................................................................................. 24
- Sidewalk Conditions ............................................................................................................... 26
- Streetscape Elements .............................................................................................................. 30
- Tree Canopy, Plantings and Health ......................................................................................... 32
- Intersection Crossing Conditions and ADA Accessibility ...................................................... 34
- Multimodal Crash Analysis ..................................................................................................... 38
- Bicycle and Transit Conditions .............................................................................................. 40
- Planned And Funded Projects ................................................................................................. 42
01 INTRODUCTION
EXECUTIVE SUMMARY

Introduction

The Santa Fe Drive corridor is home to the Denver’s Art District on Santa Fe and is a key destination within Denver comprised of a unique mix of art galleries, independent shops and retail, bars and restaurants, theaters, offices, cultural institutions, auto-oriented commercial, and residential uses. Artists, designers, and creative enterprises both live and work in the area. Santa Fe Drive also connects residents to key neighborhood amenities and destinations including parks, schools, cultural facilities, employment, and transit stops and stations. The arts scene makes it a popular destination, particularly on First Fridays — a celebration of the arts with open galleries and large groups of people wandering in and out of galleries and restaurants on foot along the corridor.

Santa Fe is also an important corridor within the Denver transportation network providing access to downtown, the Auraria Campus, La Alma/Lincoln Park, the Santa Fe corridor and surrounding neighborhoods via US-6 and I-25. It is a key link between downtown, 6th and 8th Avenues, and I-25, providing connections for a variety of users in the surrounding neighborhoods and greater Denver community.

Today, vehicles dominant the space used along the street. The prioritization of moving traffic has resulted in narrow sidewalks with limited room for streetscape amenities often placing pedestrians in close proximity to vehicles. What has resulted is an uncomfortable, unsafe and unattractive pedestrian environment and character that does not match the existing needs, current momentum and community vision for the corridor.

The Santa Fe Streetscape Design Study aims to persevere and leverage the existing corridor identity and tap into it’s current momentum and strengths. In order to provide a “relief” for pedestrians walking along narrow uncomfortable sidewalks and to create invitations for people of all ages to spend time and engage, this study aims to analyze how existing public space is used along the corridor in order to better inform how it may be re-imagined. Working closely with area residents, businesses and stakeholders the study will identify, design, and develop a pilot that will help support local businesses and address the existing and evolving uses of the corridor. The pilot will help stimulate the physical transformation of the corridor and inch closer to a long-term vision. In order to engage and empower the community and better understand the specific corridor needs before future permanent installation, pilot installations will be measured, tested and refined.

In summary, the mission is to create a 21st century street that is designed for people of all ages to walk through and to and encourages them to linger. The design study, in the near-term, will improve the experience for people walking on Santa Fe, improve safety, maintain mobility and access for all modes, enhance the identity, history, and culture of Santa Fe and strengthen the local business community.
The Santa Fe Streetscape Design Study limits are defined as the area between and including Inca Street, Kalamath Street, West 8th Avenue and West Colfax Avenue. The primary focus area for near-term streetscape improvements is Santa Fe Drive and east-west streets within 1/2 block (up to the alley) between West 8th Avenue and West Colfax Avenue.

Denver’s Art District on Santa Fe (ADSF) spans from West 13th Avenue on the North to Alameda Avenue on the South, Kalamath Street to the West, and Inca Street to the East. The Santa Fe Business Improvement District (BID), created in 2015, serves the Santa Fe Drive commercial corridor between the 600 and 1300 blocks.
CITY CONNECTIONS
North-South Link to Downtown via I-25 and US-6

At the city scale, the street network provides access to downtown, the Auraria Campus, La Alma/Lincoln Park, Santa Fe corridor and surrounding neighborhoods via US-6 and I-25. The prioritization of through traffic often results in streets acting as both paths and barriers for neighborhood residents. The local street grid is bordered by Speer Boulevard and Sunken Gardens Park to the East and Burnham Yards to the West.
KEY NEIGHBORHOOD CONNECTIONS AND DESTINATIONS

Neighborhood Amenities and Destinations

The Santa Fe Drive corridor is a destination unto itself serving as home to many artists, designers, and creative enterprises.

At the neighborhood scale, the corridor connects residents to key neighborhood amenities and destinations including parks, schools, cultural facilities, employment, and transit stations.
Santa Fe Drive is located in southeast Denver. One of the first Arts Districts in Colorado, founded in 2003. As such, this neighborhood is home to many artists, designers, and creative enterprises. When understanding the demographics of this area, the American Community Survey, as part of the National Census, looks at Santa Fe Drive as part of Census Tract 18.

**KEY FINDINGS**

» Predominately a younger neighborhood.
» Half the population between ages 20–39.
» Dwelling units are largely occupied
» Majority of dwelling units are renter occupied
» Households in this neighborhood have a lower median income than the City of Denver as a whole

**POPULATION BY AGE RANGE**

**MEDIAN AGE**
Slightly less than the median age in Denver, 34.4

**RACE & ETHNICITY**

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**NUMBER OF HOUSEHOLDS**

1,700 Denver has more than 287,000 households

**MEDIAN HOUSEHOLD INCOME**

$47,576 about 80 percent of the median household income in Denver, $60,098

**OWNERSHIP OF OCCUPIED UNITS**

Renters Occupied 65%
Owner Occupied 35%
Denver is nearly 50% renter and 50% owner occupied

**OCCUPIED VS. VACANT UNITS**

Occupied 95%
Vacant 5%
Consistent with Denver as a whole
CORRIDOR AND COMMUNITY IDENTITY | EXISTING PROGRAMMING AND EVENTS
Denver’s Gateway To Art and Culture

ART ON FILM SERIES
This outdoor, arthouse film series features arthouse and Spanish-language films, food trucks, and live bands. Hosted in the Su Teatro parking lot each summer.

SANTA FE BID
Seven board members comprise the Santa Fe Business Improvement District (BID). The BID meets regularly, the third Tuesday of each month.

GALLERY EXPERIENCE
Every week, new exhibits are on display at one of the many Art District member galleries. (CIMA Gallery)

FIRST FRIDAY ART WALKS
Every month, First Friday Art Walks host art from artists at galleries, in studios, at co-ops, upstairs, downstairs, in alleys, and even on the street!

THE ART OF BRUNCH
This free gallery brunch crawl happens the last Sunday each spring and fall. Complete with complimentary brunch bites and art at participating galleries.

ART DISTRICT ON SANTA FE
Denver’s Art District on Santa Fe represents hundreds of artists, galleries, and creative businesses featuring rotating art exhibits and cultural events.

Photos and information provided by Denver’s Art District on Santa Fe website and social media sources
**STREET NETWORK AND CAPACITY**

Most Intersections Along Santa Fe Drive Operate at Level of Service C or Better During the AM Peak Period (2019)

Santa Fe Drive operates as a north-south couplet with Kalamath Street, and consists of three traffic lanes that flow in a northbound direction between 6th Ave and Colfax Ave. This section is approximately 1 mile in length and comprises ten intersections inclusive of those at 6th Ave and Colfax Ave. Santa Fe Drive intersects with a mixture of one-way and two-way streets, with eight of the ten intersections signalized.

Existing AM, midday, and PM peak period Synchro traffic models, created as part of 2015 and 2018 City and County of Denver (City) traffic signal retiming projects, were analyzed and adjusted with 2019 traffic conditions. The condition of traffic operations is expressed in terms of level of service (LOS), a qualitative measure used to describe the condition of traffic flow and delay. LOS is defined by the Highway Capacity Manual (TRB 2016) as ranging from free-flow conditions (LOS A), to breakdown of operation where conditions are poor or volume exceeds capacity (LOS F).

**KEY FINDINGS**

» Highest traffic volumes occur during the AM peak period
» Santa Fe/8th operates at LOS D during the AM peak period
» 5 minute walk between traffic signals on W 8th and W 10th Ave
» Daily traffic volumes are lower on Kalamath then Santa Fe Drive

Traffic volumes obtained on 1/23/2019 along Santa Fe Drive, Kalamath Street and Mariposa Street between W 8th and W 9th Ave and W 12th and W 13th Ave. AM/PM turning movement counts obtained at Santa Fe Drive and W 8th Ave.

0 220 440 660 880 1,000

STUDY AREA

PRIMARY FOCUS AREA

Traffic volume data obtained on 1/23/2019 along Santa Fe Drive, Kalamath Street and Mariposa Street between W 8th and W 9th Ave and W 12th and W 13th Ave.

AM/PM turning movement counts obtained at Santa Fe Drive and W 8th Ave.
**STREET SPACE ALLOCATION**

66% of Street Space is Dedicated to Travel Lanes and Curb Lane Uses

The following depicts the breakdown of how street space is used within the primary focus area. Between West 8th Avenue and West Colfax Ave, two-thirds of space is dedicated to cars and curb lane uses such as on-street parking, transit stops and loading/unloading. Sidewalks represents just 21% of all street space and tree lawn/bumpouts and medians/landscaping represents 13%.

Along Santa Fe Drive and not including east-west side streets, 73% of space is dedicated to cars and curb lane uses.

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**ROADWAY**

Travel Lanes + Curb Lanes

66%

**SIDEWALKS**

21%

**TREE LAWN/BUMP OUTS**

8%

**MEDIANS/LANDSCAPING**

5%
CHARACTER AREAS | ZONE A: BETWEEN W 8TH AND W 10TH AVENUE
A Fine Grained, Historic Main Street Building Fabric

The area between West 8th and West 10th Avenue is a continuation of the historic main street found along Santa Fe Drive to the south. Urban form characteristics include narrow buildings with small units and many doors, minimal building setbacks, active storefronts and a mix of ground floor businesses with primary entrances located along Santa Fe Drive and surface parking located in the rear.

BUILDING FORM AND USE CHARACTERISTICS
» Narrow buildings with small units and many doors
» Minimal building setbacks
» Mostly active ground floor uses (shops/retail, restaurants/bars, leisure)
» Mostly active ground floor facades
» Primary entrances are located along Santa Fe Drive
» Minimal surface parking along Santa Fe Drive
» Community Corridor/Urban Center (Blueprint Denver 2018)

PEDESTRIAN REALM AND ROADWAY CHARACTERISTICS
» Attached sidewalks with physical obstructions limit mobility
» Up to 81% of street space is allocated to travel/curb lane uses
» Streetscape elements include pedestrian lighting and benches
» 1:2.5 height-to-width ratio for street enclosure (1:2 to 1:2.5 provides a good sense-of-enclosure)
» One-way street (One-way couplet with Kalamath Street)
» Minimal driveways and curb cuts
» Mid-block curb extensions
» Main Street Arterial (Blueprint Denver 2018)
Typical mid-block section. Dimensions vary and are based on tape measurements conducted in Fall 2018.

*Parking zone includes gutter pan when present (2 Typical)

Typical mid-block section. Dimensions vary and are based on tape measurements conducted in Fall 2018.
The area between West 10th and West 13th Avenue contains some characteristics of the historic main street found in Character Zone A. However, it is punctuated with a mix of large buildings with less units and doors, some large building setbacks, some active storefronts and mix of ground floor businesses and a larger concentration of surface parking.
**TYPICAL EXISTING SECTION**: BETWEEN WEST 10TH AND WEST 13TH AVENUE

1 to 4 Stories
13'-44''

1:2
Street Enclosure Ratio
(varies)

**Typical mid-block section. Dimensions vary and are based on tape measurements conducted in Fall 2018.**

- Parking zone includes gutter pan when present (2' typical)
- 6'-7' (typical)
- 2.5'
- 10.5'
- 10.5'
- 11'
- 6'
- 2.5'
- 9' 10'' (typical)
- Building to Building
  64'-68' (typical)
- View looking north between W 10th and W 11th Ave

Character Zone B

*Parking zone includes gutter pan when present (2' typical)

Typical mid-block section. Dimensions vary and are based on tape measurements conducted in Fall 2018.
CHARACTER AREAS | ZONE C: BETWEEN W 13TH AND W COLFAX AVENUE
Larger Buildings with Greater Setbacks, Auto-Oriented

The area between West 13th and West Colfax Avenue is dominated by large auto-oriented buildings with large setbacks. Urban form characteristics include surface and structured parking, landscaped medians, minimal active storefronts and mix of ground floor businesses.

BUILDING FORM AND USE CHARACTERISTICS
- Large buildings with less units and doors
- Large building setbacks
- Minimal active ground floor uses (shops/retail, restaurants/bars, leisure)
- Primary entrances setback from Santa Fe Drive
- Large surface and structured parking
- Community Corridor/Urban Center (Blueprint Denver 2018)

PEDESTRIAN REALM AND ROADWAY CHARACTERISTICS
- Attached sidewalks, some obstructions
- Up to 78% of street space is allocated to travel/curb lane uses (greater near W Colfax Ave)
- Streetscape elements include bus shelters
- 1:3.2 height-to-width ratio for street enclosure (1:2 to 1:2.5 provides a good sense-of-enclosure)
- One-way and two-way street near W Colfax Ave
- Several driveways and curb cuts
- Main Street Arterial (Blueprint Denver 2018)

GROUND FLOOR USES INCLUDE:
- Parking, Shops/Retail, Bars/Restaurants, Offices and Residential

BUSINESSES INCLUDE:
- King Sooper’s
- Denver Pony
- Pizza Hut
- Metro PCS
- Royal Nails
- Cleaners
- Tacos Los Compas
- Asian Chamber of Commerce of Denver
- Denver Hispanic Chamber of Commerce of Metro Denver
**TYPICAL EXISTING SECTION:** BETWEEN WEST 13TH AND WEST COLFAX AVENUE

- **Character Zone C**
- **Typical mid-block section. Dimensions vary and are based on tape measurements conducted in Fall 2018.**
- **Parking zone includes gutter pan when present (2’ typical)**
- **Sidewalk:** 2.5’
- **Curb/Gutter:** 2.5’
- **Travel Lane:** 11’
- **Bus Stop/Deceleration Lane:** 12’
- **Sidewalk:** 2.5’
- **Roadway:** 42’-52’ (110’ at Colfax)
- **Building to Building:** 130’-150’ (220’ at Colfax)

1:3.2 Street Enclosure Ratio (varies)

1 to 3 Stories
13’-27’

*Typical in-block section, dimensions vary and are based on tape measurements conducted in Fall 2018.*
There is approximately 2.5 miles of curb space providing both visitor and residential on-street parking, deliveries, travel lanes, bike lanes and loading/unloading for Regional Transportation District (RTD) bus service within the primary focus area. Of the approximately 2.5 miles of curb space, 48% is designated No Parking, 30% Un-Metered Parking (1-2 hours), 8% Unregulated Parking, 7% Bus Stops, 4% Bike Lanes and 3% Loading Zones.

**KEY FINDINGS**

- High productivity uses including bus stops and loading zones account for just 10% of all curb space within the primary focus area.
- ADA parking is located only along West 9th and West 10th Avenue West of Santa Fe Drive and in the 900 block of Santa Fe Drive.
- There is no designated taxi or Transportation Network Provider (TNC) parking.
- Curb lane is auto dominated and only occasionally extended to allow for landscaping, increased sidewalk/seating or other pedestrian uses.
Curb lane inventory based on the Lincoln Park Parking Occupancy & Parking Restrictions Study conducted by the City and County of Denver in August/September 2016.
On-street parking utilization was determined using the Lincoln Park Parking Occupancy Parking Restrictions Study conducted by the City in August/September 2016. The study was conducted during the early morning (Thursday September 15 at 5:00am), mid-day (Wednesday September 14 at 12:00pm) and in the evening (Friday August 19 at 7:00pm). The study was not conducted during the weekend or during a First Fridays event. The map below depicts on-street parking utilization during the mid-day (12pm) as within the primary focus area, parking is most utilized during both this time-period.

**ON-STREET PARKING UTILIZATION**

Parking is Most Utilized Between West 8th and West 10th Avenue

On-street parking utilization was determined using the Lincoln Park Parking Occupancy Parking Restrictions Study conducted by the City in August/September 2016. The study was conducted during the early morning, mid-day and in the evening. The study was not conducted during the weekend or during a First Fridays event. The map below depicts on-street parking utilization during the mid-day (12pm) as well as within the primary focus area, parking is most utilized during both this time-period.

**KEY FINDINGS**

- Of the 259 on-street parking spaces, 15% of spaces are utilized during the early morning, 54% during the mid-day and 53% during the evening.
- During the mid-day and evening, parking is utilized the most in the 800 and 900 blocks of Santa Fe Drive including the adjacent side streets within 1/2 block (to the alley).
- Parking is fairly well utilized in the 1100 block.

**WEEKDAY MID-DAY SANTA FE DRIVE ON-STREET PARKING UTILIZATION**

Includes adjacent side streets within 1/2 block (to the alley)

**ZONE A**

- 78% SANTA FE DRIVE: 27 of 30 spaces
- 81% SANTA FE DRIVE: 21 of 27 spaces
- 36% SANTA FE DRIVE: 13 of 37 spaces

**ZONE B**

- 78% W 8TH AND W 9TH AVE: 19 of 29 spaces
- 81% W 9TH AND W 10TH AVE: 18 of 21 spaces
- 36% W 10TH AND W 11TH AVE: 5 of 13 spaces

**Percentage of Weekday On-Street Parking Utilized by Time Of Day**

Based on total linear feet.
### 02 Site Conditions

**WEEKDAY MID-DAY SANTA FE DRIVE ON-STREET PARKING UTILIZATION**

Includes adjacent side streets within 1/2 block (to the alley)

- **57%** SANTA FE DRIVE: 15 of 21 spaces
  - W 11TH AND W 12TH AVE: 2 of 9 spaces
- **33%** SANTA FE DRIVE: 6 of 18 spaces
  - W 12TH AND W 13TH AVE: 14 of 22 spaces
- **0%** SANTA FE DRIVE: 0 of 12 spaces
  - W 13TH AND W 14TH AVE: 0 of 0 spaces
- **0%** SANTA FE DRIVE: 0 of 12 spaces
  - W 14TH AND W COLFAX AVE: 0 of 0 spaces

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On street parking utilization based on the Lincoln Park Parking Occupancy Parking Restrictions Study conducted by the City and County of Denver in August/September 2016. The study was conducted during the early morning (Thursday September 15 at 5:00am), mid-day (Wednesday September 14 at 12:00pm) and in the evening (Friday August 19 at 7:00pm).
GROUND FLOOR FACADE QUALITY
Most Vibrant and Active Facades Are located Between West 8th and West 10th Avenue

The quality of ground floor building facades helps to contribute to the activity level of a street. The more interesting or lively the edges of a street, the more pleasant and safe the environment and opportunity for people to stop and spend time. Based on our average walking speed of 3mph, the more variation and complexity the street-wall is, the more enjoyable the experience.

In general, the more doors and windows, the more active the frontage. For purposes of this study, the facades have been ranked in 5 categories; vibrant, active, dull, inactive and murals on otherwise inactive facades (see images on the right for definitions).

KEY FINDINGS
» 31% of facades are vibrant or active
» Most vibrant and active facades along Santa Fe Drive are concentrated between W 8th Ave and W 9th Avenue (88% of facades)
» 38% of street frontages are parking, vacant lots or large buildings with few doors and windows
02 SITE CONDITIONS

VIBRANT
High transparency
Small units with many doors
No vacant, blank or passive units
High complexity in architectural detailing

ACTIVE
Low transparency
Large units with few doors
Some vacant, blank or passive units
Complexity in architectural detailing

DULL
Low transparency
Large units with few doors
Some vacant, blank or passive units
Some complexity in architectural detailing

INACTIVE
Parking or vacant lot
Large units with few doors
Little or no transparency

MURAL ON OTHERWISE INACTIVE FACADE
Mural on an otherwise blank facade that helps activate the street

Ground floor facade quality based on site observations conducted during Fall 2018.
GROUND FLOOR USES
Most Active Ground Floor Uses are located in Character Zone A

In addition to the quality of the ground floor building facades, the use also play a key role in shaping the sidewalk experience. More active uses such as shops/retail, bars/restaurants and leisure tend to ‘reach out’ to the street inviting people to come inside. Offices, automotive and institutions have less foot traffic and people coming and going. A mix of uses along a street is important in creating a lively and well-used public realm providing people with multiple destinations and activities.

KEY FINDINGS
- 29% of ground floor uses are active (shops/retail, bars/restaurants and leisure)
- Most active ground floor uses are located in Character Zone A
- 23% are comprised of parking, vacant lots, or automotive uses
- Art galleries are located between W 8th Ave and W 10th Ave
Ground floor uses based on site observations conducted during Fall 2018.
**SIDEWALK CONDITIONS**

As Minimal as 3 Feet of Clear Sidewalk Space In The Narrowest Locations

In general, sidewalks on both side of the streets along Santa Fe Drive are uncomfortable for walking. Gas meters, street and pedestrian lighting, benches, bollards and other physical obstructions create obstacles for pedestrian mobility further narrowing sidewalks. Best practice recommends a minimum 5 foot clear zone free of obstructions. The American with Disabilities Act (ADA) requires a 4 feet minimum continuous and unobstructed clear width of a pedestrian access route, exclusive of the width of curb. In general, 6 feet is the preferred minimum to allow for two people to comfortably walk side by side.

**KEY FINDINGS**

- As minimal as 3 feet of clear sidewalk space in the narrowest locations
- Gas meters are primarily located between W 8th and W 10th Avenue
- Large concentrations of surface parking and driveways fronting Santa Fe Drive are located between W 10th and W Colfax Avenue
- High noise levels especially near the intersections
- Pedestrian street lighting does not provide adequate visibility at night
- Side streets have detached sidewalks with large planting areas
02 SITE CONDITIONS

SIDEWALK WIDTH ALONG SANTA FE DRIVE
BASED ON FIELD MEASUREMENTS AT SPOT LOCATIONS

SANTA FE DRIVE: 6'-10'
SANTA FE DRIVE: 6'-10'
SANTA FE DRIVE: 5'-10'
SANTA FE DRIVE: 5'-10'

ZONE B
ZONE C

1100 BLOCK
1200 BLOCK
1300 BLOCK
1400 BLOCK

An old sign post stump near W 11th Ave
Multiple driveways near W 13th Ave
Damaged sidewalk near W 10th Ave
Gas meters and pedestrian lighting
Damaged drain grate near W 11th Ave

Gas meter locations based on site observations conducted during Fall 2018.
SIDEWALK CONDITIONS
As Minimal as 3 Feet of Clear Sidewalk Space In The Narrowest Locations

SANTA FE DRIVE NEAR WEST 9TH AVE (WEST SIDE OF STREET)
SANTA FE DRIVE NEAR WEST 10TH AVE (WEST SIDE OF STREET)
SANTA FE DRIVE BETWEEN WEST 11TH AND 12TH AVE (WEST SIDE OF STREET)

- TREE WELLS OBSTRUCT CLEAR ZONE FOR PEDESTRIANS
- LOW ON-STREET PARKING UTILIZATION
- 1'7" FRONTAGE ZONE
- 2' THROUGH ZONE
- 4'1" AMENITY ZONE
- 0.5' 0.5'

CORNER CONDITION: SANTA FE DRIVE AT WEST 9TH AVE (WEST SIDE OF STREET)

- PEDESTRIAN ORIENTED SIGNAGE / ACTIVE FACADE
- BENCH FACES ROADWAY & LIMITS CLEAR ZONE
- UNIQUE PAVING MATERIAL
- INCREASED SPACE FOR STREETScape ELEMENTS
- 7' THROUGH ZONE
- 8'6" AMENITY ZONE
- 0.5'
STREETSCAPE ELEMENTS
Limited Invitations For People To Spend Time

Streetscape elements such as seating can encourage people to stop and spend time in a space. Non-commercial primary seating such as benches, secondary seating such as seat-walls and private cafes, bicycle racks, BCycle stations, transit shelters, bollards, public art, pedestrian streetlights and trash cans are located within the primary focus area. Luminous blue pedestrian street lighting contributes to the character and experience of Santa Fe but do not provide adequate visibility. The lack of non-commercial and private cafe seating contribute toward an inactive environment limiting opportunities for social interaction and for people to spend time.

KEY FINDINGS

» Streetscape elements are located between W 8th Ave and W 13th Ave
» Due to narrow sidewalks, elements often act as physical obstructions limiting mobility for pedestrians. This includes the use of 59 bollards, typically placed to protect street lights and benches.
» Lack of non-commercial and private cafe seating. Benches are only located in Character Zone A.
» Public seating, typically located adjacent to the curb, is oriented towards the roadway rather than towards the sidewalk and buildings

» Limited amount of bicycle parking
» Only 1 BCycle station
» Trash can are located along every block
» Limited public art installations (not including street murals)
02 SITE CONDITIONS

Luminous blue street lighting at night
Bollards act as obstructions for crossings
Mid-block bumpouts with missing art
Paving material with 'Hollywood stars'
Cafe seating at Interstate Kitchen & Bar

Streetscape elements based on site observations conducted during Fall 2018 and City supplied GIS information.
Trees play a vital role in urban street design adding environmental, social and economic value to the public realm. Street trees provide a sense of human scale, enclosure and continuity, contribute to good mental health, make cities more beautiful increasing property values, improve air quality and climate control, reduce noise pollution and reduce stormwater runoff. The City of Denver Office of the City Forester recommends an average street tree spacing of 35 feet between shade trees and 25 feet between ornamental trees.

**KEY FINDINGS**

- Low number of trees on Santa Fe Drive between W 8th and W 11th Ave
- Large gaps in spacing between trees
- 15 ash trees (green/white) are identified in the primary focus area and 54 in the larger study area
- 80% of focus area ash trees are located between W 8th and W 10th Ave
- 49% of trees have trunks with diameters less than 6 inches, 79% less than 12 inches
- Side streets have large planting areas

**TREE CANOPY, PLANTINGS AND HEALTH**

Low Number of Trees Between West 8th and West 11th Avenue

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**SPACING ALONG SANTA FE**

- **20 TO 180 FEET**
  - SANTA FE DRIVE: 13 TREES
  - W 8TH AND W 9TH AVE: 5 TREES
- **10 TO 220 FEET**
  - SANTA FE DRIVE: 11 TREES
  - W 9TH AND W 10TH AVE: 8 TREES
- **33 TO 438 FEET**
  - SANTA FE DRIVE: 8 TREES
  - W 10TH AND W 11TH AVE: 11 TREES

**TREE TRUNK DIAMETER**

- 0”-6”
- 6”-12”
- 12”-18”
- 18”-24”
- 24”-30”

**OTHER TREE TYPES (VARY)**

**GREEN/WHITE ASH TREE (GENUS FRAXINUS)**
Lack of street trees in the 900 block
Trees at the intersection with wider sidewalks
Trees/landscaping in mid-block bumpouts
Wide planting areas at the side streets
View of a covered/closed tree pit

SPACING ALONG SANTA FE
15 TO 120 FEET
SANTA FE DRIVE: 28 TREES
W 11TH AND W 12TH AVE: 6 TREES

SPACING ALONG SANTA FE
17 TO 125 FEET
SANTA FE DRIVE: 22 TREES
W 12TH AND W 13TH AVE: 5 TREES

SPACING ALONG SANTA FE
22 TO 370 FEET
SANTA FE DRIVE: 8 TREES
W 13TH AND W 14TH AVE: 7 TREES

SPACING ALONG SANTA FE
16 TO 144 FEET
SANTA FE DRIVE: 22 TREES
W 14TH AND W COLFAX AVE: 12 TREES

Tree assessment based on City supplied GIS information and site observations conducted during Fall 2018.
INTERSECTION CROSSING CONDITIONS AND ADA ACCESSIBILITY
Most Intersections Appear To Be Non-ADA Compliant

SANTA FE DRIVE AND WEST 8TH AVE

CROSSING INFRASTRUCTURE
» Pedestrian signals operate on recall (no push buttons).
» Pedestrian countdown signals are on all intersection legs.
» Yield to pedestrian signage is absent from all corners.
» High-visibility crosswalks are located at all legs.
» Appears to be non-ADA compliant with single diagonal pedestrian curb ramps. No detectable warning tiles.
» Pavement and markings are in good condition.

SIDEWALK CONDITIONS
» Northwest corner: multiple driveways for Grease Monkey.
» Street and pedestrian lighting are at all four corners.
» Sidewalk pavement condition is in decent quality along all four legs of the intersection except for the southeast corner leading up to the intersection.

SANTA FE DRIVE AND WEST 9TH AVE (UNCONTROLLED INTERSECTION)

CROSSING INFRASTRUCTURE
» Uncontrolled intersection (no traffic signal or stop/yield).
» Yield to pedestrian signage is absent from all corners.
» No crosswalks.
» Appears to be non-ADA compliant. South side: single diagonal pedestrian curb ramps; North side: blended transition curb ramps. No detectable warning tiles.

SIDEWALK CONDITIONS
» No driveways near intersection.
» Pedestrian lighting is at all four corners.
» Sidewalk pavement condition is in decent quality.
SANTA FE DRIVE AND WEST 10TH AVE

CROSSING INFRASTRUCTURE
» Pedestrian signals operate on recall (no push buttons).
» Pedestrian countdown signals are on all intersection legs.
» Yield to pedestrian signage is absent from all corners.
» High-visibility crosswalks are located at all legs.
» Southeast corner has directional curb ramps with detectable warning tiles. All other corners appear to be non-ADA compliant with blended transition curb ramps.
No detectable warning tiles.
» Pavement and markings are in good condition.

SIDEWALK CONDITIONS
» Northeast corner: driveway for Bud’s Muffler.
» Street or pedestrian lighting are at all four corners.
» Sidewalk pavement condition is in decent quality along all four legs of the intersection except for the southeast corner leading up to the intersection.

SANTA FE DRIVE AND WEST 11TH AVE

CROSSING INFRASTRUCTURE
» Pedestrian signals operate on recall (no push buttons).
» Pedestrian countdown signals are on all intersection legs.
» Yield to pedestrian signage is absent from all corners.
» High-visibility crosswalks are located at all legs.
» Appears to be non-ADA compliant. Northwest corner: single diagonal pedestrian curb ramp; All other corners: blended transition curb ramps. No detectable warning tiles except for on southwest corner.
» Pavement is cracked but markings are in good condition.

SIDEWALK CONDITIONS
» Driveways are located on the southeast and northwest corners near Tortillas Mexico and 7-Eleven.
» Street or pedestrian lighting are at all four corners.
» Sidewalk pavement condition is in decent quality.
» High amount of mid-day student foot traffic (West High School, Greenlee Elementary, Colorado Ballet).
INTERSECTION CROSSING CONDITIONS AND ADA ACCESSIBILITY

Most Intersections Appear To Be Non-ADA Compliant

SANTA FE DRIVE AND WEST 12TH AVE

CROSSING INFRASTRUCTURE
- Pedestrian signals operate on recall (no push buttons).
- Pedestrian countdown signals are on all intersection legs however are not functioning on the south side and the west side for northbound crossings.
- Yield to pedestrian signage is absent from all corners.
- High-visibility crosswalks are located at all legs.
- Southeast corner has directional curb ramps with detectable warning tiles. All other corners appear to be non-ADA compliant; Northeast corner: single diagonal pedestrian curb ramp, all other corners blended transition curb ramps. No detectable warning tiles.
- Pavement is cracked but markings are in good condition.

SIDEWALK CONDITIONS
- Multiple driveways for Snyder Automotive, 1168 Santa Fe Drive and Gerken’s Religious Supplies.
- Street and pedestrian lighting are at all four corners.
- Sidewalk pavement condition is in decent quality.

SANTA FE DRIVE AND WEST 13TH AVE

CROSSING INFRASTRUCTURE
- Pedestrian signals operate on recall (no push buttons).
- Pedestrian countdown signals are on all intersection legs however are not functioning on the south side, west side for northbound crossings and north side for westbound crossings.
- Yield to pedestrian signage is absent from all corners.
- High-visibility crosswalks are located at all legs.
- Appears to be non-ADA compliant. Southwest corner: single diagonal pedestrian curb ramp; All other corners: blended transition curb ramps. No detectable warning tiles.
- Pavement is cracked and depressed surrounding an inlet in the southeast corner but markings are in good condition.

SIDEWALK CONDITIONS
- Multiple driveways Bark n’ Play, Stony Pony and King Sooper’s.
- Street or pedestrian lighting is at all four corners.
- Sidewalk pavement condition is in decent quality along all four legs of the intersection except for the southeast corner leading up to the intersection.
- Bollards at the corners create obstructions for crossings.
**02 SITE CONDITIONS**

**SANTA FE DRIVE AND WEST 14TH AVE**

**CROSSING INFRASTRUCTURE**
- Pedestrian signals operate on recall (no push buttons).
- Pedestrian countdown signals are on north side of the intersection for southbound and westbound crossings however are not functioning.

**CROSSING INFRASTRUCTURE**
- Yield to pedestrian signage is absent from all corners except for in the dual channelized right turn lane.
- High-visibility crosswalks are located at all legs.
- Appears to be non-ADA compliant. Single diagonal pedestrian curb ramp are at all corners. No detectable warning tiles.
- Pavement is cracked and depressed in the southwest corner but markings are in good condition.

**SIDEWALK CONDITIONS**
- No driveways near intersection.
- Street lighting is present except for the southeast corner.
- Sidewalk pavement condition is in decent quality except for the southeast corner leading up to the intersection.

**SANTA FE DRIVE AND WEST COLFAKX AVE**

**CROSSING INFRASTRUCTURE**
- Pedestrian push buttons at all corners with Accessible Pedestrian Signals (APS).
- Pedestrian countdown signals on all intersection legs however the northwest corner for southbound crossings is not functioning.
- Yield to pedestrian signage is present on the north-side.
- High-visibility crosswalks are located at all legs.
- All corners appear to be ADA compliant with single diagonal pedestrian curb ramps. The northwest corner which has directional curb ramps. Detectable warning tiles are present at all crossings.
- Pavement and markings are in good condition.

**CROSSING INFRASTRUCTURE**
- Pedestrian push buttons at all corners with Accessible Pedestrian Signals (APS).
- Pedestrian countdown signals on all intersection legs however the northwest corner for southbound crossings is not functioning.
- Yield to pedestrian signage is present on the north-side.
- High-visibility crosswalks are located at all legs.
- All corners appear to be ADA compliant with single diagonal pedestrian curb ramps. The northwest corner which has directional curb ramps. Detectable warning tiles are present at all crossings.
- Pavement and markings are in good condition.

**SIDEWALK CONDITIONS**
- No driveways near intersection.
- Street lighting at all four corners.
- Sidewalk pavement condition is in good quality
- Programmed improvements include curb extensions, raised channelized right turn lane, and improved pedestrian safety islands.

Intersection conditions and ADA accessibility based on site observations conducted during Fall 2018.

**SIDEWALK CONDITIONS**
- No driveways near intersection.
- Street lighting at all four corners.
- Sidewalk pavement condition is in good quality
- Programmed improvements include curb extensions, raised channelized right turn lane, and improved pedestrian safety islands.

Intersection conditions and ADA accessibility based on site observations conducted during Fall 2018.
MULTIMODAL CRASH ANALYSIS (2014 - 2018)
People Walking and Biking Represent 51% of All Crashes Involving an Injury

A multimodal crash analysis was determined using City supplied crash records. The map below depicts all intersection-related crashes reported between 2014 and 2018 and include people walking, biking and driving.

Building safe streets for everyone, creating safe speeds and promoting a culture of safety are part of the five primary needs to improve safety in the City as identified in the Denver Vision Zero Action Plan (2017).

KEY FINDINGS (ALONG SANTA FE BETWEEN W 8TH AND W COLFAX)
» 549 total crashes
» People walking and biking involved in 5% of all crashes but represent 51% of all injury crashes (35% pedestrians/16% bike)
» 33% of all injury related crashes are severe
» Most walking crashes occur at W 8th Ave.
» Most walking and biking crashes occur at W 8th, 9th, 14th and Colfax Ave.
» No fatal crashes reported
Multimodal crash analysis based on City supplied crash records between 2014 and 2018.

View of crossing conditions at W 8th Ave
View of crossing conditions at W 9th Ave
View of crossing conditions at W 13th Ave
View of crossing conditions at W 14th Ave
View of crossing conditions at W Colfax Ave
**BICYCLE CONDITIONS**
Lack of All Ages & Abilities Bicycle Facilities

West 11th Avenue, Mariposa Street and the Cherry Creek Trail provide access to/from La Alma-Lincoln Park. Due to breaks in the local street grid including Auraria Campus to the North, Burnham Yards to the West, Sunken Garden Parks to the east and the shift of the grid Downtown, connectivity to/from the neighborhood is challenging.

Planned facilities that are safe, comfortable and equitable include protected bike lanes on W 13th Ave, W 14th Ave and Mariposa St and buffered bike lanes on Galapago St. The 5280 Loop is also proposed along W 10th Avenue.

**KEY FINDINGS**
- Lack of connectivity through and between the neighborhood
- Lack of All Ages & Abilities bicycle facilities (safe, comfortable and equitable)
- Several facilities are planned and proposed
- Limited amount of bicycle parking, especially near transit stops
- Only 1 BCycle station
- Several cyclists were observed riding along W 11th Avenue and occasionally along Santa Fe Drive

Bicycle conditions based on City supplied GIS information and site observations conducted during Fall 2018.
Opportunity to Improve the Customer Experience at Bus Stops

The design of transit stops can help promote streets as desirable places and can enhance the value of a street by proving a comfortable waiting environment and improved transit operations. While transit shelters are located at 3 of 5 bus stops along Santa Fe Drive, the current design does not provide adequate weather protection and lacks vital customer information and adequate lighting.

The study area is served by both north-south and east-west service and is in close proximity to both the C, D, E, F, H RTD LRT Lines.

**KEY FINDINGS**

- Transit shelters provide minimal weather protection
- No pedestrian lighting at W 13th and at W 14th Ave stops
- Closely spaced bus stops between W 10th Ave and W 11th Ave
- High ridership at W 10th Ave and W 13th Ave
- 15min peak service on Santa Fe/Kalamath (Routes 1 and 9 combined)
- Average Weekday RTD bus speed: 9.5MPH (Santa Fe, AM Peak) and 10.3MPH (Kalamath, PM Peak)
- Santa Fe Drive as part of Bus Frequent Transit Network (Denver Moves: Transit)
Several Improvements Are Planned and/or Funded

Current and previous planning efforts have identified planned projects for the corridor. These include efforts from Denver Moves Bicycles, Santa Fe/Kalamath Pedestrian Improvement Study, La Alma/Lincoln Park Neighborhood Association Design Overlay, Neighborhood Transportation Management Program (NTMP) and the Colfax Corridor Pedestrian Mobility Improvements study. Future changes in zoning and infrastructure improvements will impact multimodal connections, traffic flow, safety, land use, and character in the corridor and neighborhood.

- Neighborhood Transportation Management Program (NTMP) Boundary
- Design Overlay District
- W 13th and W 14th Avenue Protected Bike Lanes
- W 14th Avenue and Santa Fe Drive Intersection Redesign (channelized right turn lane)
- W Colfax Avenue and Santa Fe Drive/Kalamath Street Intersection Redesign
- Galapago Street Buffered Bike Lanes
- Mariposa Street Protected Bike Lanes