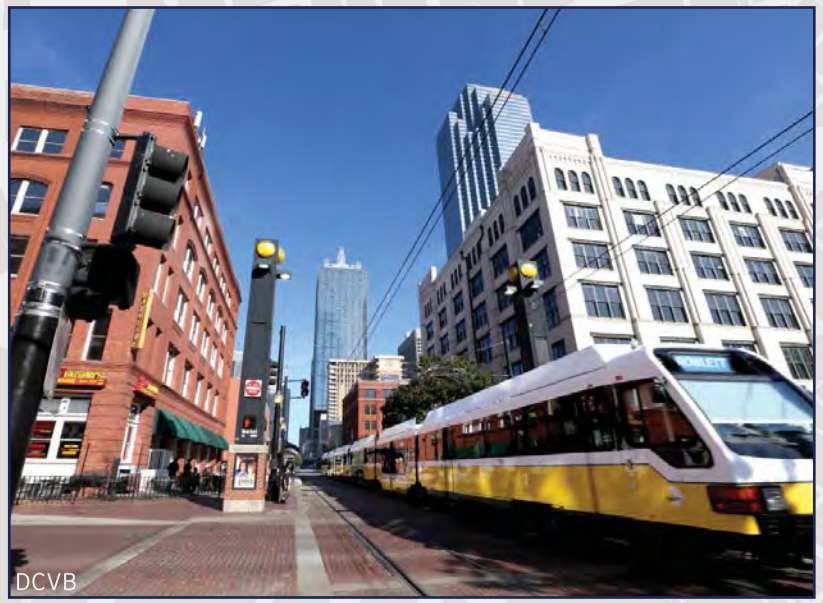
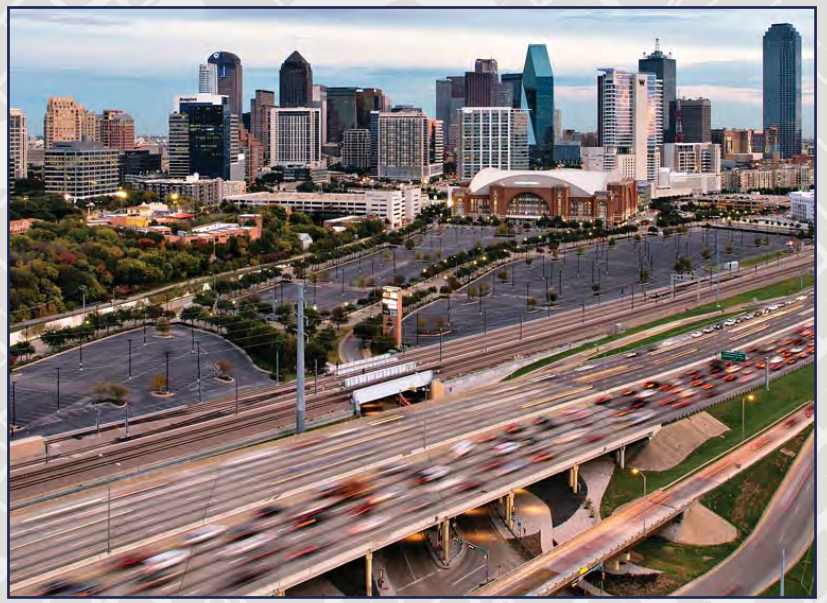
DALLAS CITY CENTER

MASTER ASSESSMENT PROCESS

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DRAFT | JUNE 10, 2016

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ACKNOWLEDGEMENTS

The CityMAP Team wishes to acknowledge the contributions of the following individuals who participated in the CityMAP project.

KEY STAKEHOLDERS

The stakeholders invited to participate in the Listening Sessions include elected officials and professional staff for the State of Texas, the City of Dallas and Dallas County. In addition, representatives of agencies, advocacy groups, institutions, businesses, developers and private citizens participated. A listing of those participating in the Listening Sessions includes:

UNITED STATES HOUSE OF REPRESENTATIVES

Congresswoman Eddie Bernice Johnson, 30th Congressional District of Texas

TEXAS STATE SENATOR

Senator Royce West, District 23

TEXAS HOUSE OF REPRESENTATIVES

Representative Rafael Anchia, District 103
Representative Linda Koop, District 102

CITY OF DALLAS ELECTED OFFICIALS

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Councilman Scott Griggs, District 1 (with Mina Ramon)
Councilman Adam Medrano, District 2 (invited)
Councilman Casey Thomas, II, District 3
Councilwoman Carolyn King Arnold, District 4 (invited)
Councilman Rickey D. Callahan, District 5
Councilwoman Monica R. Alonzo, District 6 - (Mayor Pro Tem)
Councilwoman Tiffinni A.Young, District 7
Councilman Erik Wilson, District 8 (Deputy Mayor Pro Tem)
Councilman Mark Clayton, District 9 (invited)
Councilman B. Adam McGough, District 10
Councilman Lee Kleinman, District 11
Councilwoman Sandy Greyson, District 12
Councilwoman Jennifer S. Gates, District 13
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Tennell Atkins, Former Councilman & Mayor Pro Tem
Ron Natinsky, Former Councilman

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Mike Cantrell, Commissioner District 2 (with Traci Enna)
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The Oak Lawn Committee - Brenda Marks (with Anthony Page, Micah Byrnes)
Coalition for a New Dallas – Matt Tranchin
Dallas Citizens Council - Alice Murray (with Mary Suhm)
Dallas Real Estate Council - Linda McMahon
Dallas Regional Chamber - Jay Barksdale (with Erica Mulder, Duane Dankesreiter)
Dallas Zoo - Gregg Hudson
Deep Ellum Community Association - Sean Fitzgerald
Downtown Residents Council - Ben Reavis (with Dustin Bullard)
Downtown Dallas Neighborhood Association - Crispin Lawson
Downtown Dallas, Inc. - John Crawford (with Jim Wood, Shalissa Colwell, Larry Good (DDI-GFF), Dustin Bullard)
Greater Dallas Planning Council - Robert Prejean
Klyde Warren Park Foundation - Tara Green
Trinity Commons Foundation - Ramon Miguez
The Trinity Trust - Gail Thomas (with Janie Bush, Tierney Kaufman, Amber Arseneaux)
Uptown Dallas Inc. - Amy Tharp
West Dallas Chamber of Commerce - Joleen Bagwell, Kyle Ward, Dustin Thibodeaux, James Cornelius and Irma Saracho (Dallas Economic Development)

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- Dallas Historical Society - Shannon Roberts
- Children's Aquarium - Stephen Walker
- City of Dallas, Park & Recreation - Daniel Huerta
- Friends of Fair Park - Craig Holcomb

Dallas Heritage Village - Melissa Prycer
Paul Quinn College - Michael Sorrell
St. Luke Community United Methodist Church - Dr. Michael Bowie
St. Philip's School and Community Center - Dr. Terry Flowers
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Marcus Wood & Company - Marcus Wood

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FOR LETTER PLACEMENT

FOR LETTER PLACEMENT

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SYNOPSIS OF CHAPTERS

The following paragraphs provide a brief summary of what is included in each chapter of this CityMAP document.

CHAPTER 1: INTRODUCTION

Chapter 1 frames the challenge faced with highway congestion and describes the why, what and context of the CityMAP project and process and its role in making Dallas an even greater city. TxDOT funded and stakeholder driven, the Dallas CityMAP process is an open and inclusive assessment of the challenges, opportunities, and potential solutions for the aging interstate corridors and adjacent neighborhoods in and around downtown Dallas. Its beginnings flowing from the MTIS, CityMAP is TxDOT's comprehensive effort to facilitate an early advanced planning process to bring decision makers and partners together. CityMAP began by listening to a broad spectrum of public and private stakeholders about the future of their community and the role that roadways play in getting people to and from their destinations. Stakeholder input was used to identify design and policy scenarios corridor-by-corridor. The resulting scenarios for each corridor have been evaluated by transportation, planning and design professionals as a first step in determining viability for future decision-making. That evaluation utilized traffic analysis but also factors measuring walkability, neighborhood character and fiscal impact. Chapter 1 culminates with 1-page at-a-glance summaries for each scenario including geometric design, neighborhood patterns, cross-sections and facility costs as, well as key observations and considerations.

CHAPTER 2: A BASIS FOR DECISION MAKING

Chapter 2 describes the various factors derived from stakeholder input, which are used to assess the scenarios in Chapters 5-8. These factors begin with a discussion on the regional, state and national context in which CityMAP was undertaken. The City of Dallas is the largest city in the fourth largest metropolitan area in the United States and faces tremendous growth pressure as the North Central Texas region is projected to nearly double in population by 2050. Chapter 2 examines the numerous planning studies, reports and initiatives that have shaped the development framework of the City over the years. The chapter then examines the highway system, local street network and Complete Streets, on- and off-street bicycle trail network and the regional public transit systems that define and shape the current state of mobility in the Dallas area.

CHAPTER 3: STAKEHOLDER PERSPECTIVE

Chapter 3 describes the Stakeholder Engagement Plan employed by CityMAP to listen, gather input and feedback from the numerous stakeholders and members of the general public. In total, the team spent more than 200 hours with 150 influencers as part of 80 unique "one on one" listening sessions. Additionally, approximately 250 people attended three public meetings. Attendees consisted of Dallas residents, elected officials and CityMAP team members. Meeting attendees completed questionnaires and offered opinions on how they envision the Dallas of the future. The project team also developed unique project branding and an interactive website that was updated throughout the project process and responded to more than 50 individual project related questions originating from website visitors.

CHAPTER 4: SCENARIO DEVELOPMENT PROCESS

Chapter 4 describes the process utilized to develop and evaluate the various stakeholder-driven corridor development scenarios. The project team studied each scenario relative to the context of regional economics, travel demand modeling and forecasting, and potential project development costs. Each potential development scenario was then reviewed and assessed against a series of analytical scenario review factors, which were developed through a combination of stakeholder, public and professional input. These factors represent measurable (quantitative) data and experiential (qualitative) conditions that the various scenarios would conceivably induce with their respective development and implementation. The project team sought to understand the current challenges and opportunities, while keeping in mind potential solutions for improving mobility, livability, and economic development within the study area.

CHAPTERS 5-8: SCENARIOS

Chapters 5-8 describe and provide analysis for each of the potential stakeholder-driven corridor development scenarios. Based on ideas, concerns, and expectations from stakeholders and the public, the project team created scenario options that integrated the community's vision with practical transportation and urban design solutions, construction and funding feasibility. Each development scenario includes plan graphics which depict the proposed improvements associated with that corridor and adjacent development, and a discussion of the various economic development, cost and other scenario review factors that were used to evaluate the viability of each scenario option. The land use plan renderings and perspective drawings for adjacent properties associated with each of these development scenario options reflect realistic, economically viable, market-based land use redevelopment. These plans have been designed and laid out in the context of a pedestrian-oriented complete streets solution that provide a mix of retail, commercial and residential uses tailored to each location based on current market and demographic data.

CHAPTER 9: MAKING DECISIONS AND IMPLEMENTING

Chapter 9 outlines next steps. The CityMAP process is about giving decision-makers at TxDOT, the City of Dallas and other stakeholder partners the tools they need to guide the decision-making process that will reconnect and revitalize neighborhoods, improve mobility options and spawn economic growth. It's about generating public buy-in for projects long in advance of when they are implemented. It's about empowering people to have a say in the development of their neighborhood based on their vision, dreams and desires. This chapter lays out next steps that can be taken to implement these projects based on funding strategies, partnerships and cost sharing for decision-making. It provides the City of Dallas, developers and neighborhood stakeholders a pathway for current and future land use, zoning districts and ideas for catalyst infrastructure investments that can be made in an effort to attract redevelopment and investment.

APPENDIX

The Appendix catalogs reference projects that could have an impact in the CityMAP study area. It includes information regarding the public involvement process. It documents the various issues and concepts discussed in the listening sessions and public meetings. It presents a sampling of the comments provided on each development scenario from those stakeholders most closely tied to that corridor. It provides a summary of email comments received via the CityMAP project website. It also shares project information provided by the City of Dallas CityDesign Studio.

DISCLAIMER

This document contains graphic depictions and artist's renderings of conceptual urban design development scenarios that extend to properties outside of the Texas Department of Transportation's (TxDOT) right of way. These scenarios include significant enhancements, such as deck parks and upgraded pedestrian amenities, which are beyond the allowable facility costs funded by TxDOT. The intent of these scenarios is to depict the "Art of the Possible," and to reflect stakeholder input, feedback and community expectations. The presentation of these scenarios does not in any way represent an assignment of cost or responsibility of those enhancements by TxDOT or any other project partner. Neither TxDOT, nor the CityMAP Team, has engaged individual property owners in the development of these scenarios. These scenarios do not represent an official planning document or a future condition and should not be used for investment, rezoning or construction purposes.

TxDOT is in the business of designing, building and maintaining transportation infrastructure projects, and is not in business of land or park development. However, the agency recognizes the opportunity it can make to both congestion management. For these reasons, the reader must not construe these scenarios as a commitment by TxDOT, or other project partners, to pursue, develop or fund these scenarios. TxDOT traditionally funds only the facility costs that relate to their mission of providing safe and reliable transportation solutions. In addition, the State of Texas is facing funding challenges for even basic maintenance obligations. In this context, the realization of the conceptualized enhancements in these scenarios will require additional funding commitments from local public and private partners and a community conversation about project prioritization and continued multi-modal opportunities. Additionally, any surplus right-of-way (ROW) to be sold will go through the necessary public process and be sold at fair market value.

CHAPTER 1 | INTRODUCTION



WE STARTED WITH A VISION

Long considered simply a way to "get there" or "get through there" urban interstates take on new meaning as communities like Dallas struggle to replace their aging transportation infrastructure and promote a great neighborhood experience. Changing views, needs and expectations for greater neighborhood and regional connectivity and livability are motivating communities to examine both traditional and innovative transportation solutions.



WHY CityMAP?

THE CHALLENGE

The state's urban highway system becomes more and more congested as Texas' major metro areas continue to face unprecedented population growth. This challenge requires a comprehensive and transparent approach to confront a variety of factors including both statewide and local connectivity in order to address congestion affectively.

The Texas Transportation Commission has been tasked by Texas Governor Greg Abbott to initiate the Texas Clear Lanes program (www.texasclearlanes.com). The program identifies the state's most congested corridors, and, in an effort to address this congestion quickly and efficiently, planners and engineers must work together through planning, design and construction as these roads will promote economic development and jobs creation.

Downtown Dallas is surrounded by several major highways that fall into the top 25 of the 100 most congested roadways in Texas. This greatly impacts the North Texas freeway system and the local and state economies. In addition to capacity and operational improvements, these highways are aging and portions need to be replaced to address maintenance and safety issues. Because this is not a simple fix, innovative solutions are needed to realize Governor Abbott's vision for Texas.

Responding to this need for innovation, Dallas CityMAP was created.

WHY CityMAP?

The Dallas City Center Master Assessment Process (CityMAP) is an open and inclusive assessment of the challenges, opportunities, and potential solutions for the aging interstate corridors and adjacent neighborhoods in and around downtown Dallas. CityMAP is an early advanced planning effort to frame opportunities around the potential reinvention of major central city highway corridors so that decisions can be made in an integrative way about the future of Dallas and its role in the region.

The process finds its beginnings in the *1998 Trinity Parkway Corridor Major Transportation Investment Study* (MTIS) undertaken by the Texas Department of Transportation (TxDOT). The MTIS mission was to develop a locally-preferred plan of action to solve transportation problems along I-30 and I-35E on the western edge of downtown Dallas. The study outlined a Recommended Plan of Action comprised of the following seven elements:

- Enhanced work trip reduction measures;
- Bicycle and pedestrian facilities;
- Enhanced transportation facilities;
- Improvements to the I-30 Canyon, I-30/I-35E Mixmaster, and Lower Stemmons Freeway (I-35E);
- Extension of Woodall Rodgers Freeway;
- A continuous high occupancy vehicle (HOV) system through the Canyon, Mixmaster and Lower Stemmons corridors; and
- A Trinity Parkway along the Trinity River.

Since the study was completed, many of those elements have been accomplished or received some level of completion through planning, design or construction. Much has changed in Dallas and the region, and transportation needs have evolved over the last 18 years since the MTIS was completed.

At the state level today, TxDOT has focused on several key priorities including regional connectivity, congestion relief, and maintenance of bridges and structures. The funding context of the state system has evolved since the MTIS. Increasing population and corresponding demands on the system have necessitated a prioritization of spending. Most recently, Proposition 7 passed with overwhelming support from voters across the state and provided additional funding for investments in highway capacity and system integrity. At the same time, local governments are focusing on new investments and reinvestments in local street systems and transit—critical components of a metropolitan transportation system—as many communities around the state face similar growth pressures and demands for quality infrastructure.

In order to respond to these demands, CityMAP was initiated to understand the opportunities and implications associated with future major transportation and community investments, and to prioritize those investments.

TxDOT cannot address urban and regional transportation issues alone. Planning, design, reconstruction and long-term maintenance of highway corridors will require collaboration and partnerships reaching beyond TxDOT's independent capacity. Creating sustainable partnerships will require considerable local financial participation in addition to collaboration. In this context, CityMAP provides the opportunity for public input to inform the development of options for more nuanced decision-making. Framing options through a comprehensive process will minimize public or local partner resistance, avoid costly planning and design delays and allow TxDOT to test options early for public acceptance, operational performance, funding feasibility and partnership potential.

The Dallas CityMAP team started the process in January 2015 with listening sessions about the future of Dallas' urban core.

Topics as part of this transparent discussion included but were not limited to:

- Quality of life and neighborhood character;
- Community and urban street connections;
- Regional mobility and safety;
- Economic development and future growth; and
- Policy, partnership and funding considerations.

With a broad conversation, CityMAP became an open dialog with the public, stakeholders and partner agencies to create a collaborative transportation and neighborhood redevelopment vision for Dallas' future.

TxDOT funded and stakeholder driven, CityMAP focuses on highway design and how it can contribute to both mobility and city-building in order to achieve the goals of both commuters and neighbors. The CityMAP listening sessions included a broad spectrum of public and private stakeholders, initially including those who participated in the MTIS. The sessions also included groups such as A Coalition for a New Dallas, the West Dallas Chamber, Downtown Dallas, Inc. (DDI), Saint Luke Community United Methodist Church, numerous developers and public partners including the City of Dallas, Dallas County, North Central Texas Council of Government (NCTCOG) and Dallas Area Rapid Transit (DART).

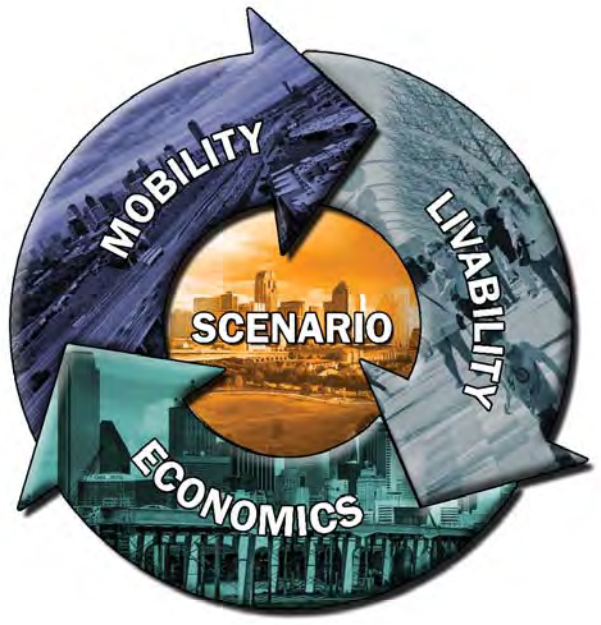
This report outlines a set of scenarios, organized by corridor, that provide the framework for an ongoing conversation between Dallas residents and decision-makers about the future of their community and the role that roadways play in getting people to and from their destination while maintaining a sense of community. Looking both inside and outside of the right-of-way (ROW), CityMAP presents concepts, diverse ideas, possibilities for roadway design, and adjacent neighborhood development impacting the future of the Dallas core. In addition to linking the various corridor scenarios into system-wide combinations to test traffic impacts, CityMAP uses stakeholder informed factors to evaluate the scenarios within the context of mobility, livability and economic vitality.



DALLAS SKYLINE *Source: HNTB*

WHY CityMAP?

The challenge lies in the balance of the three. Scenarios achieving mobility and congestion relief are more favorable and ultimately achieve a more successful life span when complemented by livability and quality of life considerations as well as catalyzed economic development potential.



Stakeholder input was used to frame design and policy scenarios corridor by corridor. The scenarios illustrate possibilities that include walkable neighborhoods connected across a broader city context while allowing for regional commuting that also complements the context of the corridors.

The stakeholder-originated ideas were then evaluated by transportation, planning, and design professionals as a first step in determining their viability for future decision-making. This report shares that analysis in an effort to continue the conversation to its next logical step. There are no predetermined outcomes; no fiscal or financial constraints (as with many other planning efforts); and no design limitations to hamper the consideration of creative ideas. The consultant team listened, documented and analyzed possibilities with the assumption that ideas could be achieved through partnerships and decision-makers working in concert to prioritize and implement projects. The analysis in this report provides an unvarnished review of the visionary opportunities and the potential limitations. It is the initial step for a more nuanced and comprehensive process that can thoroughly compare the direct and indirect impacts of scenarios as well as the regional, funding, and policy implications.

CityMAP CONTEXT

In the fall of 2014, elected officials, community leaders and business interests engaged in concerned discussions about congestion and investment solutions for the roadways leading into and through downtown Dallas. That discussion underscored the notion that it was time to reevaluate the process through which TxDOT facilitates congestion solutions and the role those solutions play in city building. Accordingly, TxDOT Commissioner Victor Vandergriff—in consultation with Mayor Mike Rawlings, County Judge Clay Jenkins, Regional Transportation Council (RTC) Director of Transportation Michael Morris, and other local leaders—initiated the Dallas CityMAP process to listen and learn. Moving forward required everyone to suspend initial judgment. As the process unfolded, participants and decision-makers were hopeful that through this effort, a greater sense of responsibility among all stakeholders and a desire to more thoughtfully direct funding towards infrastructure projects that have broad stakeholder and agency support will be realized.

Fundamentally, TxDOT understands the need for a highway system to support vital regional connectivity and commerce, but also recognizes the need for the responsible stewardship of public funds and the necessity to ensure that the stakeholders provide support for public infrastructure projects. With increasing demand for infrastructure investments and limited resources, the Dallas CityMAP process will assist TxDOT in delivering more effectively on its mission to provide safe, efficient and context-sensitive roadways for the public. This report will help TxDOT understand how and where to direct resources more effectively as projects are delivered more efficiently and with fewer delays. The Dallas CityMAP process is intended to support TxDOT and its partners to identify those projects that will be well supported within the complexity of a major American city and region.

What is the context in which well supported projects should be considered?

Modern major American cities have evolved from Central Business Districts (CBD) with a few “bedroom” communities in the surrounding suburbs into major regional centers that anchor a myriad of diverse cities connected by a complex transportation system. In north Texas, Dallas and Fort Worth now anchor many other major cities with urban centers. It is this collection of urban and suburban centers linked by interstate corridors that provide the richness of a regional context.

As some preferences have shifted over the past generation back towards more walkable mixed-use neighborhoods—the kind that created the original historic neighborhood fabric core of the area—the City of Dallas, among others in the Dallas-Fort Worth region, has diversified by reinventing older neighborhoods and creating new neighborhoods. This diversification mirrors the renaissance of place-making as the focal point for both economic development and quality of life. For local examples of this movement, one should look no further than



FAIR PARK *Regional Attractions within the Study Area. Source: DCVB*



KLYDE WARREN PARK *A good example of a context-sensitive design approach. Source: HNTB*

WHY CityMAP?

the Bishop Arts District in Oak Cliff, the Cedars neighborhood south of I-30, the Southside Planned Improvement District along Lamar Street, the Deep Ellum neighborhood east of the CBD and Lower Greenville Avenue in East Dallas. Each of these communities is attractive to multiple generations of people of all backgrounds due to their close proximities to the urban core, adaptive reuse of historic buildings and walkable scale of the neighborhood fabric.

From a regional perspective, providing cohesion for the expanding number of urban centers has been a focus of regional governance. For example, when the RTC undertook the update of Mobility 2035, the Metropolitan Transportation Plan (MTP), Michael Morris declared that, "I am no longer just the Director of Transportation for the region; today, I am also in a sense the manager of regional development patterns." Morris recognized the strong link between transportation infrastructure planning and city building at the street and block level. Why did he make that observation? He likely knew that the shape of neighborhood patterns and the design of transportation must be viewed symbiotically because the design of transportation in absorbing the unbridled growth of the region was an opportunity to support more sustainable development patterns. The term "sustainable development patterns" is rooted in the concept of neighborhood.

DFW's cities, including Dallas, were established and evolved over generations using this structure. Scores of historic neighborhoods emerged with this pattern in the heart of Dallas. Today, remnants of some of those neighborhoods remain—such as those east along the I-30 corridor—while others evolved such as ones in Oak Cliff and Kessler Park to the south and neighborhoods to the northeast of Downtown towards White Rock Lake.

As the region began to coalesce into a national and global economic powerhouse—hastened by the development of DFW Airport and the post-WWII shift towards suburban development—interstate highway development replaced the overwhelmed capacity of the rural state highway system (and the long ago abandoned Inter-Urban/Streetcar Rail System) as the primary transportation option. The sheer size and need of the regional network driven by the National Highway System resulted in a mismatch of scale as the new highways were constructed through the fine-grained urban fabric of the region's cities.

THE INTERSECTION OF MOBILITY, LIVABILITY AND ECONOMICS

When the concepts of "compact city" and "smart growth" were first advanced in the 1990s, the conventional wisdom was that roadway capacity and livability at the neighborhood scale were incompatible. Today, after a generation of evolved thinking by urban planners, engineers, neighborhood leaders, economic developers, city leaders and other stakeholders in the business of city-building, the art of city design has embraced a context-sensitive approach to transportation and neighborhood design that recognizes that roadway capacity and livability are not competing objectives.

In that context, CityMAP responds to the shared community goals of maintaining a robust regional transportation system and economic vitality with a desire to knit the neighborhood fabric in a contemporary way that responds to the renaissance of urban living. The aging and, in some cases, obsolete interstate corridors entering and looping the urban core of Dallas provide both a challenge and an opportunity for TxDOT, the City of Dallas and other public and private stakeholders. These corridors need more than maintenance and repairs, increased capacity and updated designs. They should also respond to a downtown that no longer serves merely as a CBD with 135,000 employees entering and leaving daily, but also as facilities that anchor a collection of downtown neighborhoods populated with more than 38,000 residents and is growing rapidly.

Both Millennials and Baby Boomers alike are moving to Dallas' urban neighborhoods either starting new careers or giving up the yard for a loft. Naturally, these multi-generational urban dwellers are concerned about the decisions TxDOT, the City of Dallas, Dallas County, NCTCOG and DART will make in regards to public infrastructure. Simultaneously, many residents living in the southern sector rely on the interstate system connecting through Dallas as primary routes to jobs in other major regional employment areas including but not limited to: Richardson, Plano, Irving, Arlington, Southlake and Frisco. Even as more jobs are created south, corridors like I-35E, I-45, I-30 and I-345 will be crucial to access employment. Regardless of the perspective, residents and businesses in the core of Dallas believe that the reinvention of the major interstate corridors provides an opportunity to enhance connectivity and quality of life. Addressing these complex infrastructure concerns and the evolution of Dallas' downtown neighborhoods will require much more than business as usual. With this perspective in mind, the CityMAP consultant team presents this report on behalf of TxDOT.

THE WORK EFFECT AND ITS RESULTS

This report describes the myriad of parallel activities and prior studies as a prelude to the non-traditional process undertaken for this work effort. After the extensive initial stakeholder engagement process and the development of geometric scenario options for the corridors informed by the engagement process, the consultant team proceeded to develop preliminary estimates of growth and development patterns likely resulting from each of those scenarios. Those projected development and urban design outcomes were then used in two ways.

On one track, an extensive analysis of traffic impacts was developed to test the scenarios. First, existing traffic patterns were analyzed to understand how and why traffic moves in and through the urban core. Then, traffic projections were undertaken with assumptions developed based on the growth impacts of the various associated corridor design scenarios, both in terms of roadway geometrics and urban development patterns. In most cases, those projections were then compared to a geometric baseline for each corridor derived from the NCTCOG's 2040 MTP.

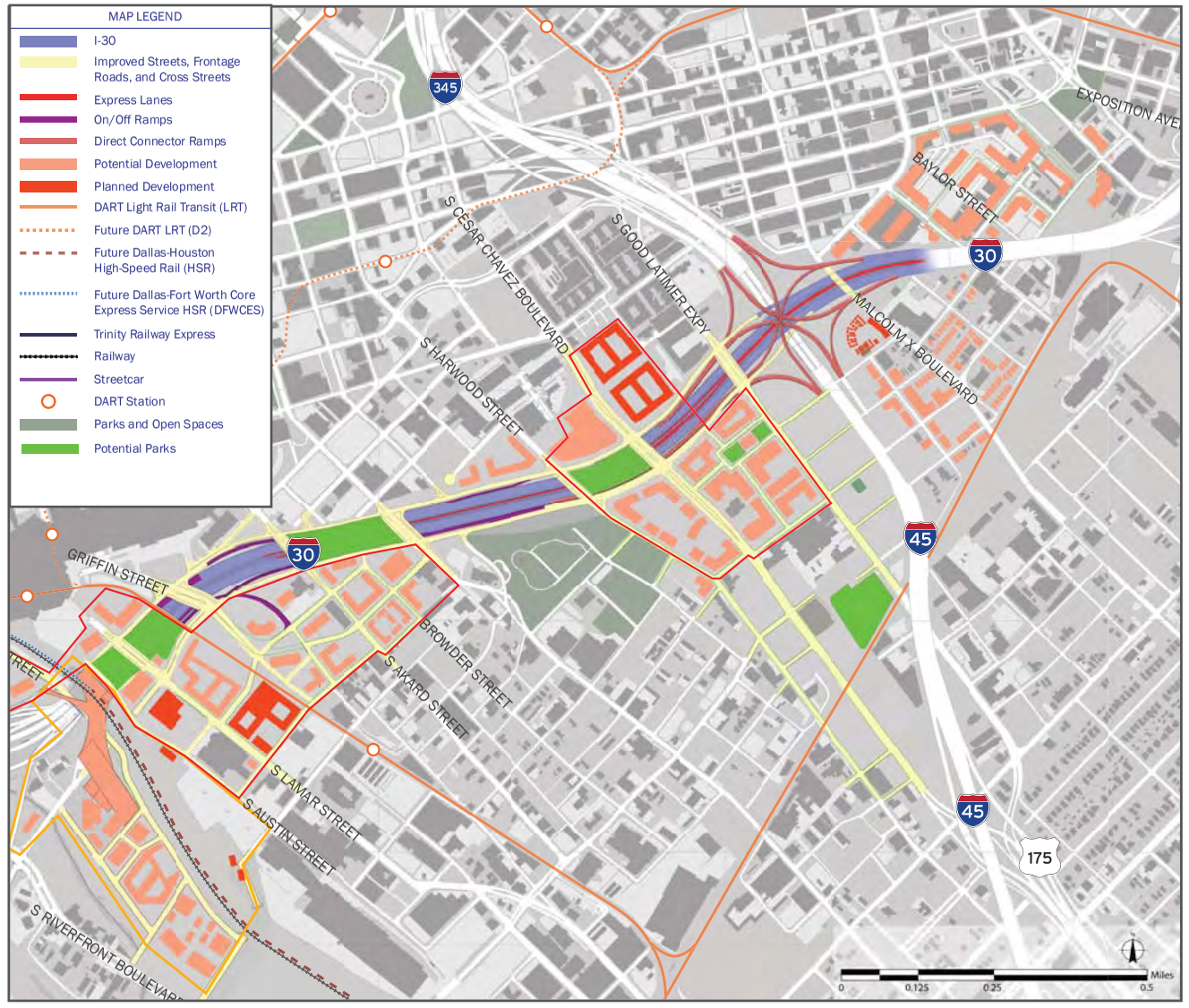
On another track, the corridor design scenarios in terms of the urban development patterns were analyzed through a selection of factors derived from stakeholder input and the consultant team's experience with similar complex community development projects.

Each scenario is analyzed as follows:

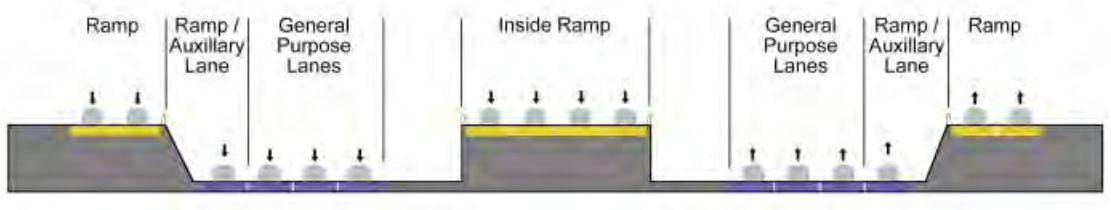
- Each select highway corridor includes one or more geometric design scenario options.
- Within each corridor, focus areas are delineated to assess how potential redevelopment might occur.
- Focus areas are aggregated into analysis areas that comprise approximately the total acreage of the aggregated focus areas for each corridor (but not the entire corridor).
- Preliminary redevelopment plans and perspectives have been developed for each respective focus area.
- The depicted development in each of these focus areas represents graphically the projection of the approximate net new development that will occur under each scenario in the context of the likely remaining existing development as the area redevelops over time (not including likely adaptive reuse, which is very difficult to identify on a consistent basis).
- The resulting depicted neighborhood context and projected net new development provide the basis for most of the factors analysis for each of the scenarios.

The following at-a-glance summaries provide an overview of each of the scenarios, including the geometric configuration, adjacent development context, proposed cross-sections of the facility, rough cost estimates, projected timelines for completion, and significant observations and considerations relative to mobility/congestion, livability/quality of life and economic development/growth.

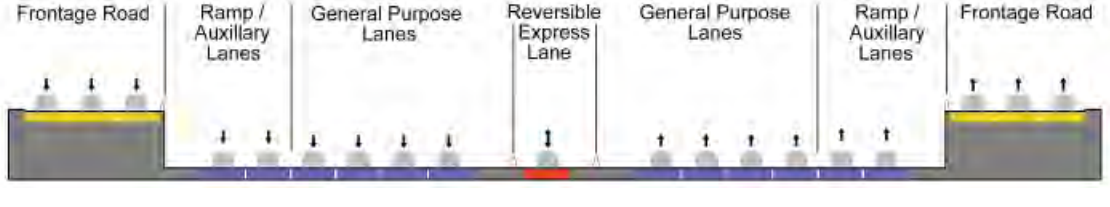
DALLAS CITYMAP | I-30 CANYON COMPRESSED SCENARIO | AT-A-GLANCE



EXISTING CROSS-SECTION



SCENARIO CROSS-SECTION



MOBILITY/CONGESTION RELIEF

Provides congestion relief (lane capacity increase) and safety improvements, as well as improved local network connectivity.

Implements features of Project Pegasus, including reconfiguring the Cesar Chavez interchange to a simple diamond interchange with connections to the I-30 express lanes and removing the collector-distributor system, adding continous frontage roads and other changes that simplify ramps and access to downtown.

Increased connectivity enhances access to existing DART light rail stations at convention center and Cedars offering regional mobility options in addition to a future DART D2 light rail planned station.

I-30 reconstruction in the Canyon will necessitate coordination with Union Pacific Railroad at existing bridges and Texas Central Railway (TCR) regarding potential High Speed Rail (HSR) crossing of I-30.

Below-grade alignment would preclude future main-lane widening.

LIVABILITY/QUALITY OF LIFE

Creates complete street bridges that offer pedestrian and cycling linkages across I-30, improving neighborhood character and connections to the Farmers Market, Heritage Village, convention center and the Cedars neighborhood.

The scenario identifies three deck park opportunities connecting downtown to South Dallas. If local partners support and fund deck parks, significant redevelopment opportunities could be realized.

The proposed deck park linking the convention center and possible HSR station provides an opportunity for a front door into the convention center from the south.

ECONOMIC DEVELOPMENT/GROWTH

Builds on current development momentum at the Farmers Market and Southside at Lamar neighborhoods.

Offers the potential to stimulate significant redevelopment in the southern sector.

Assumes surplus right-of-way at reconfigured Cesar Chavez Boulevard would be sold at market value in public process to provide development opportunities.

Leverages transformative opportunities around the HSR station.

SCENARIO DETAILS

SCENARIO LIMITS: I-30 from Hotel Street to east of I-45

SCENARIO LENGTH: 1.6 mile +/-

SCENARIO FACILITY CAPITAL COST ESTIMATE

Under $100M	$100M - 499M	$500M - 999M	$1B - 2B	Over $2B

M = Million B = Billion

MOST CONGESTED ROADWAYS IN TEXAS RANK: 16

ANNUAL HOURS OF DELAY PER MILE: 441,769

ANNUAL COST OF DELAY: $90.65 Million



POTENTIAL DECK PARK AT HARWOOD STREET

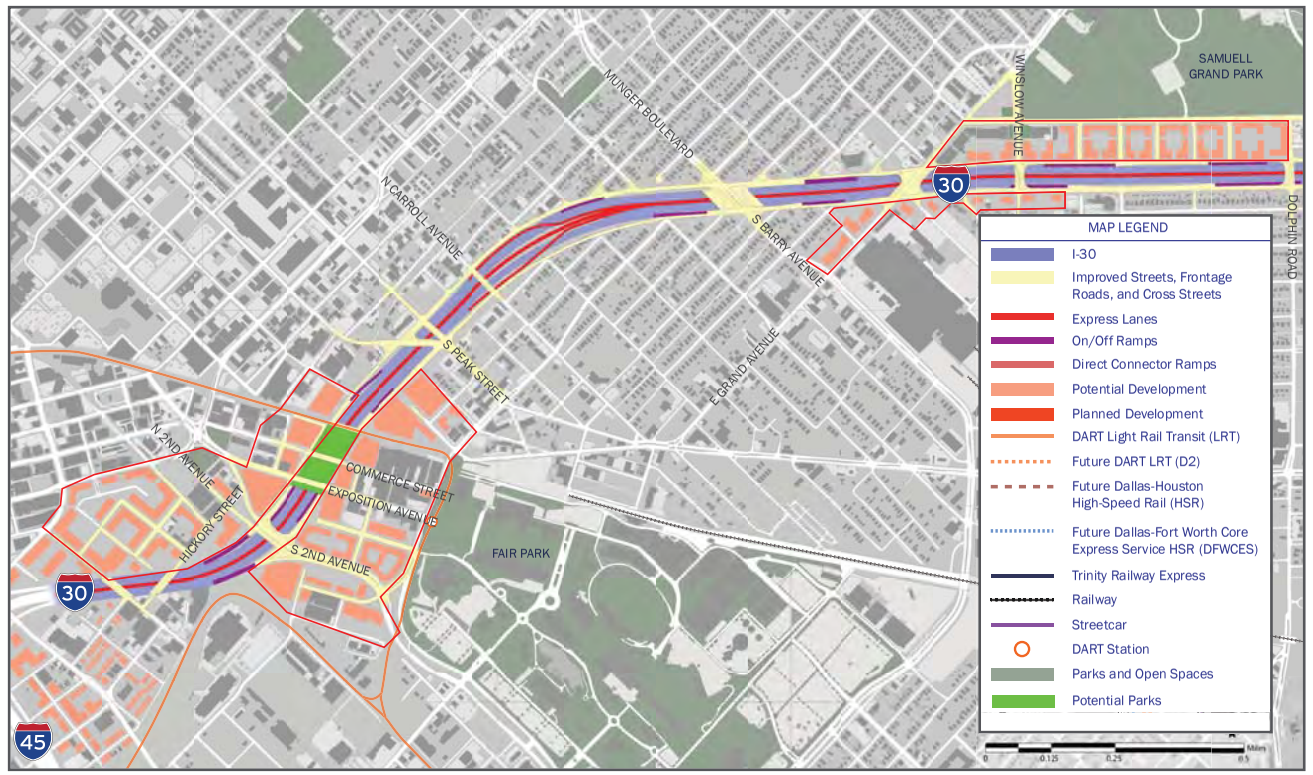
FACILITY DEVELOPMENT AND CONSTRUCTION DURATION

Identify Need → Needs Assessment → Advanced Planning → Environmental & Design Studies → Detail Design ROW, Utilities → Construction

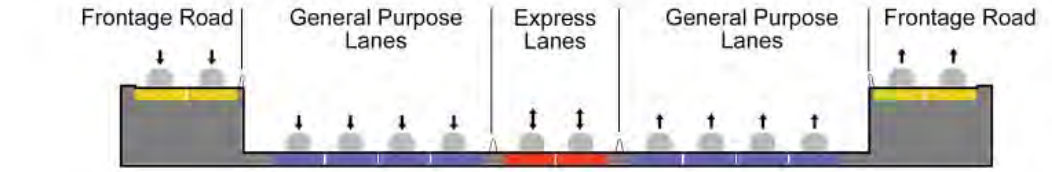
Scenario Timeline Estimate - 2017 thru 2026 — 10 Years*

**Includes two-year period to add to Metropolitan Transportation Plan*

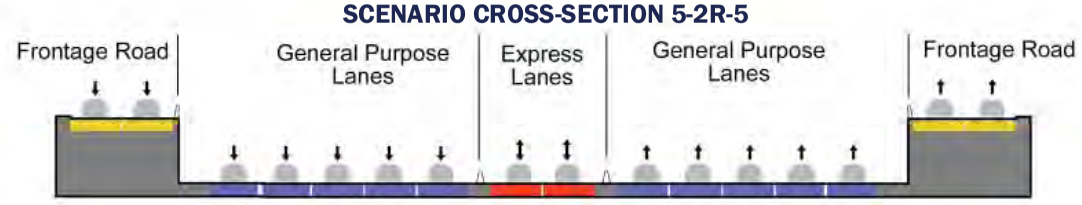
DALLAS CITYMAP | I-30 EAST CORRIDOR BELOW GRADE SCENARIO | AT-A-GLANCE



SCENARIO CROSS-SECTION 4-2R-4



SCENARIO CROSS-SECTION 5-2R-5





MOBILITY/CONGESTION RELIEF

Scenario examines two highway configurations. One version provides four general purpose lanes in each direction. The other has five general purpose lanes in each direction.

Eliminates the contraflow HOV lane and implements a 2 lane reversible express lane system. Existing configuration provides 4 general purpose lanes and 1 HOV lane in the peak direction with three lanes in the off-peak direction.

Adds missing frontage roads and cross-street connections where possible. Changes access routes to existing destinations in Deep Ellum and Fair Park.

Increases capacity to mitigate congestion and reduces operational expense over today's facility.

LIVABILITY/QUALITY OF LIFE

Lowers the profile where it is elevated or at grade to allow a below-grade facility from east of I-45 to Dolphin Street.

Reconnects Fair Park to Deep Ellum and East Dallas neighborhoods, providing an opportunity to reinvigorate the historic cultural center of Dallas.

The scenario identifies a deck park opportunity at Fair Park. If local partners support and fund a deck park, significant redevelopment opportunities could be realized.

Requires a thorough understanding of the impacts of gentrification and historic preservation.

Includes careful and complementary development that improves livability along Samuell Grand Park.

ECONOMIC DEVELOPMENT/GROWTH

Creates job opportunities through the transformation of underutilized public and private properties.

Retain and grow Baylor-affiliated research facilities as a result of better connectivity.

Expands redevelopment character, including broader housing choices, as well as a meaningful context for the redevelopment of the former Ford plant and reinforcement of the Jubilee Neighborhood.

OVERALL TXDOT PROJECT DETAILS

PROJECT LIMITS:
I-30 from I-45 to Bass Pro Drive and US 80 from I-30 to FM 460

PROJECT LENGTH:
17 miles along I-30 and 11 miles along US 80

PROJECT COST ESTIMATE:
Facilty Capital Cost (TxDOT) $2 Billion

ADDITIONAL FACILITY CAPITAL COSTS BY OTHERS:
TBD

MOST CONGESTED ROADWAYS IN TEXAS RANK:
16

ANNUAL HOURS OF DELAY PER MILE:
441,769

ANNUAL COST OF DELAY:
$90.65 Million

SCENARIO DETAILS (INCLUDED IN OVERALL TXDOT PROJECT)

SCENARIO LIMITS:
I-30 from east of I-45 to Dolphin Street

SCENARIO LENGTH:
2.6 miles

SCENARIO COST ESTIMATE:
Facility Capital Cost (TxDOT) $735 Million

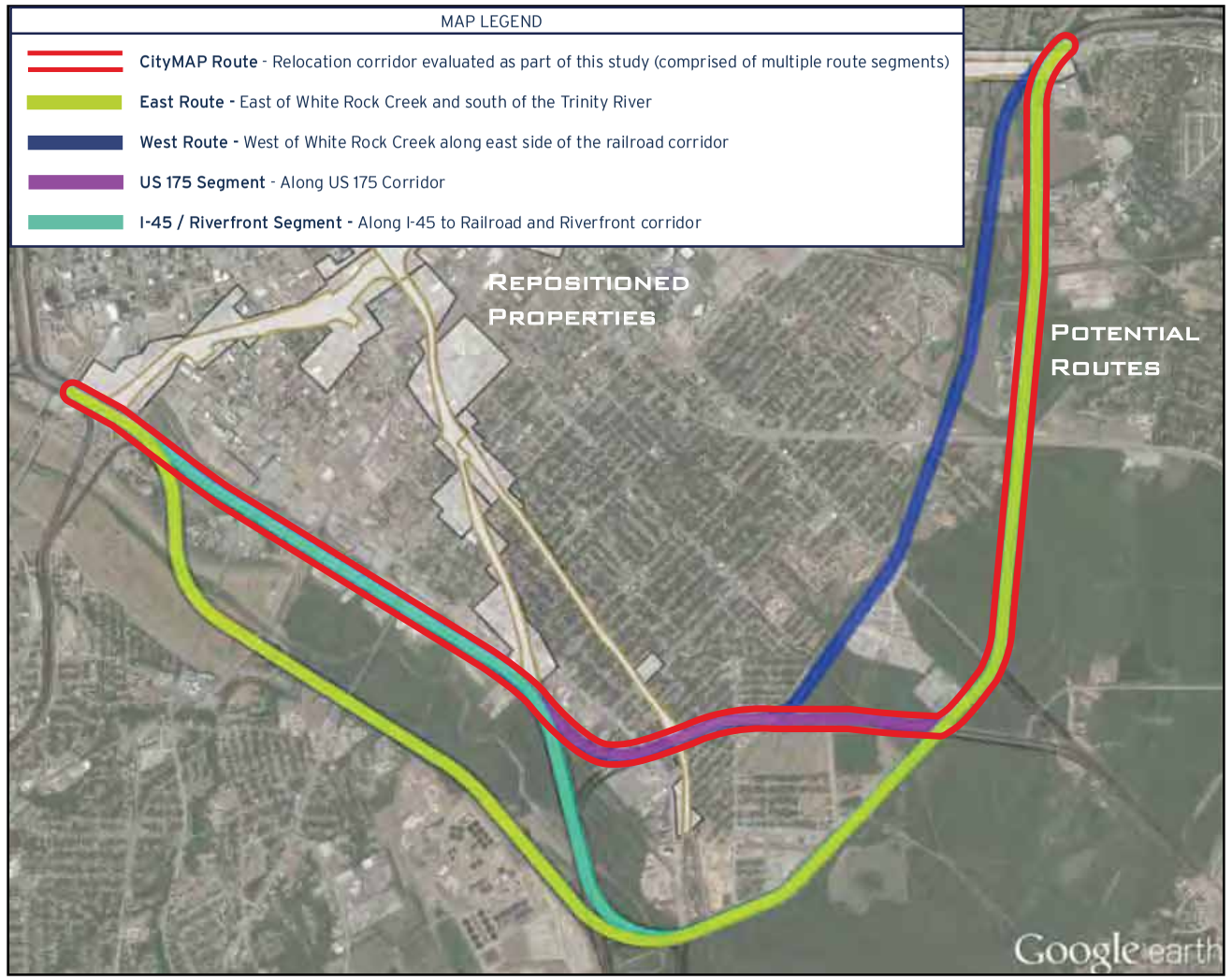
ADDITIONAL FACILITY CAPITAL COSTS BY OTHERS:
$50 Million - $150 Million

FACILITY DEVELOPMENT AND CONSTRUCTION DURATION

Identify Need | Needs Assessment | Advanced Planning | Environmental & Design Studies | Detail Design ROW, Utilities | Construction

Scenario Timeline Estimate - 2016 thru 2025 — 10 Years

DALLAS CITYMAP | I-30 RELOCATE SCENARIO | AT-A-GLANCE



I-30 CONCEPT DRAWING *Source: Adapted from a drawing by Patrick Kennedy*

MOBILITY/CONGESTION RELIEF

Transformational scenario features the complete relocation of I-30 between I-35E in Downtown Dallas and Ferguson Road near White Rock Creek, and potential removal of a segment of I-45 and I-345.

The new I-30 alignment, from west to east, would proceed from the I-35E on a route between Riverfront Boulevard and the Union Pacific Railroad and proceed southeastward to the planned interchange between I-45 and US 175. East of I-45, I-30 would consist of lanes added to US 175 and would operate with a joint designation (I-30/US 175). I-30 would diverge from US 175 through an interchange near South Second Avenue and Bruton Road, proceeding northward on the east side of White Rock Creek until rejoining the current I-30 alignment near Samuell Boulevard just west of the I-30/ Ferguson Road Interchange.

Relocating I-30 would change long established travel patterns to Baylor Hospital and Fair Park and have impacts to the existing freeway network system as well a local roadway system in southern Dallas County.

The existing I-30 ROW would be reconstructed to include a major thoroughfare in a boulevard configuration. The accommodation of six traffic lanes in the former freeway right of way would leave ample room for a linear green, context-sensitive facility to include urban design amenities, pedestrian accommodations, bicycle facilities and other opportunities in response to community input.

LIVABILITY/QUALITY OF LIFE

The relocated I-30 would impact existing neighborhoods, businesses and significant natural areas along the White Rock Creek and Trinity River corridors. These impacts and alternative alignments would require substantial study.

The existing I-30 right of way would replace the existing freeway with a new boulevard connecting with the city street grid. This would allow improved walkability and neighborhood linkages.

Relocating I-30 would expand the potential of the downtown central business district that has been traditionally defined as the area “inside the loop” with potential expansion of the urban core south and east.

ECONOMIC DEVELOPMENT/GROWTH

The repurposing of the I-30 Canyon by the Convention Center and Farmers Market would allow Dallas to have a new downtown center taking advantage of the DART light rail and potential HSR service. Structured parking could be depressed into the Canyon, topped with mixed use towers with street level lobbies and retail.

The relocation of I-30 would impact highway dependent uses along the current corridor. A major boulevard, in I-30’s place, would remain heavily trafficked conducive to retaining and attracting neighborhood retail and office uses.

The construction footprint of relocated I-30 would be minimized to reduce impacts to natural environment features.

Much of the highway would be elevated on structure and would not include frontage roads.



NEW BOULEVARD AT FARMERS MARKET

SCENARIO DETAILS

SCENARIO LIMITS: I-35E in Downtown to I-30 at Ferguson Road

SCENARIO FACILITY CAPITAL COST ESTIMATE

Under $100M	$100M - 499M	$500M - 999M	$1B - 2B	Over $2B

M = Million B = Billion

SCENARIO LENGTH: 10 miles +/-

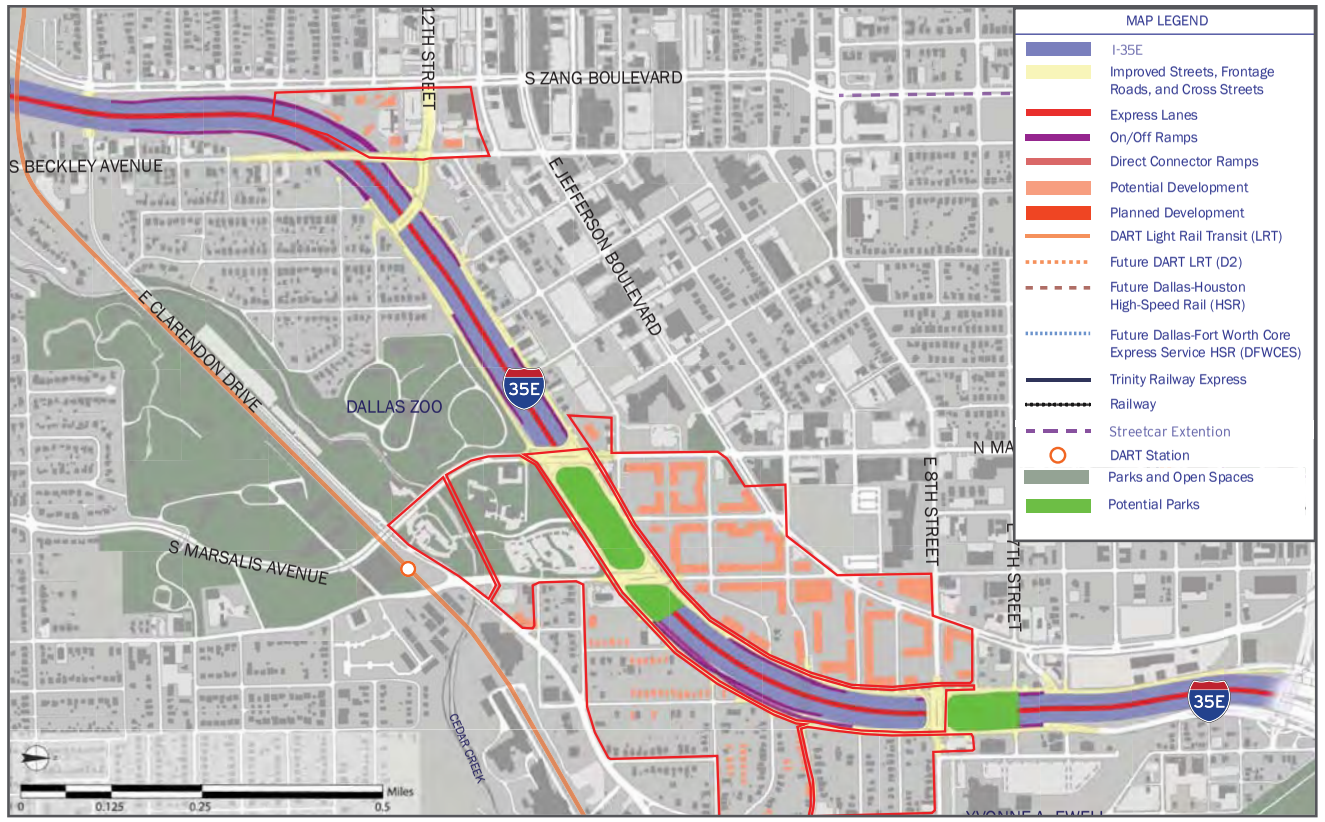
SCENARIO TIMELINE

Identify Need → Needs Assessment → Advanced Planning → Environmental & Design Studies → Detail Design ROW, Utilities → Construction

Scenario Timeline Estimate - 2017 thru 2040 — 24 Years*

**Includes two-year period to add to Metropolitan Transportation Plan*

DALLAS CITYMAP | I-35E THE SOUTHERN GATEWAY SCENARIO | AT-A-GLANCE



MOBILITY/CONGESTION RELIEF

The I-35E and US 67 plans included in the CityMAP scenario are functionally equivalent to the current plans under development by TxDOT.

The addition of a general purpose lane in each direction and the addition of two reversible express lanes will provide congestion relief and accommodate increased development activity in the Southern Sector.

Improved roadway geometry at the "Zang Curve", improved ramp design and improved shoulders are safety enhancements.

The scenario provides improved pedestrian and bicycle facilities across the freeway, linking neighborhoods with future development.

LIVABILITY/QUALITY OF LIFE

Scenario approach minimizes the footprint, keeping within the current ROW where possible.

Lowers the profile where it is at grade to below grade.

Connects the Dallas Zoo to retail/commercial along Jefferson Boulevard.

The scenario identifies three deck park opportunities. A preferred location has not been determined. If local partners support and fund a deck park, significant redevelopment opportunities would be realized.

Preserves and improves the 10th Street connection under I-35E, linking the 10th Street Historic District to the Jefferson Corridor.

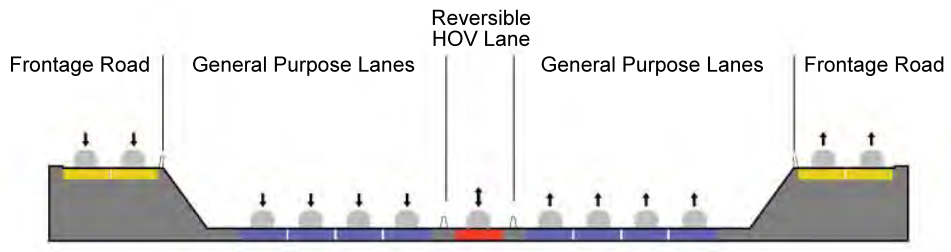
ECONOMIC DEVELOPMENT/GROWTH

Opportunities to link the Oak Cliff Gateway and Transit Oriented Development (TOD) Tax Increment Financing (TIF) districts.

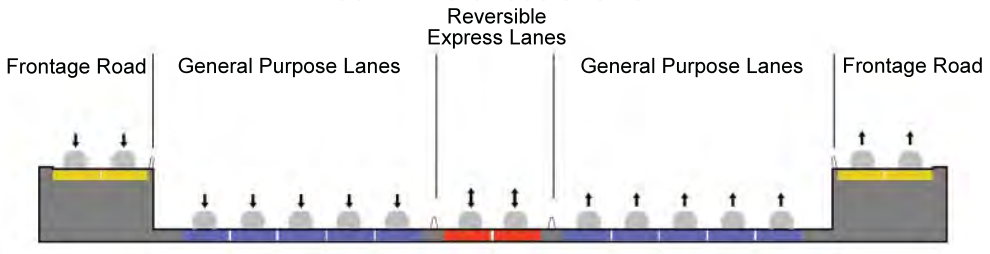
Opportunity to link existing educational institutions and facilities to future mixed-use development and existing residential neighborhoods.



EXISTING CROSS-SECTION



SCENARIO CROSS-SECTION



OVERALL TXDOT PROJECT DETAILS

PROJECT LIMITS:
I-35E From Reunion Boulevard to US 67, US 67 from I-35E to I-20

PROJECT LENGTH:
11 miles

PROJECT COST ESTIMATE:
Facilty Capital Cost (TxDOT) $662 Million

ADDITIONAL FACILITY CAPITAL COSTS BY OTHERS:
TBD

MOST CONGESTED ROADWAYS IN TEXAS RANK:
22

ANNUAL HOURS OF DELAY PER MILE: 359,414

ANNUAL COST OF DELAY: $46.44 Million

SCENARIO DETAILS (INCLUDED IN OVERALL TXDOT PROJECT)

SCENARIO LIMITS:
I-35E From Colorado Boulevard to Clarendon Drive

SCENARIO LENGTH:
2 miles

SCENARIO COST ESTIMATE:
Facility Capital Cost (TxDOT) $191 Million

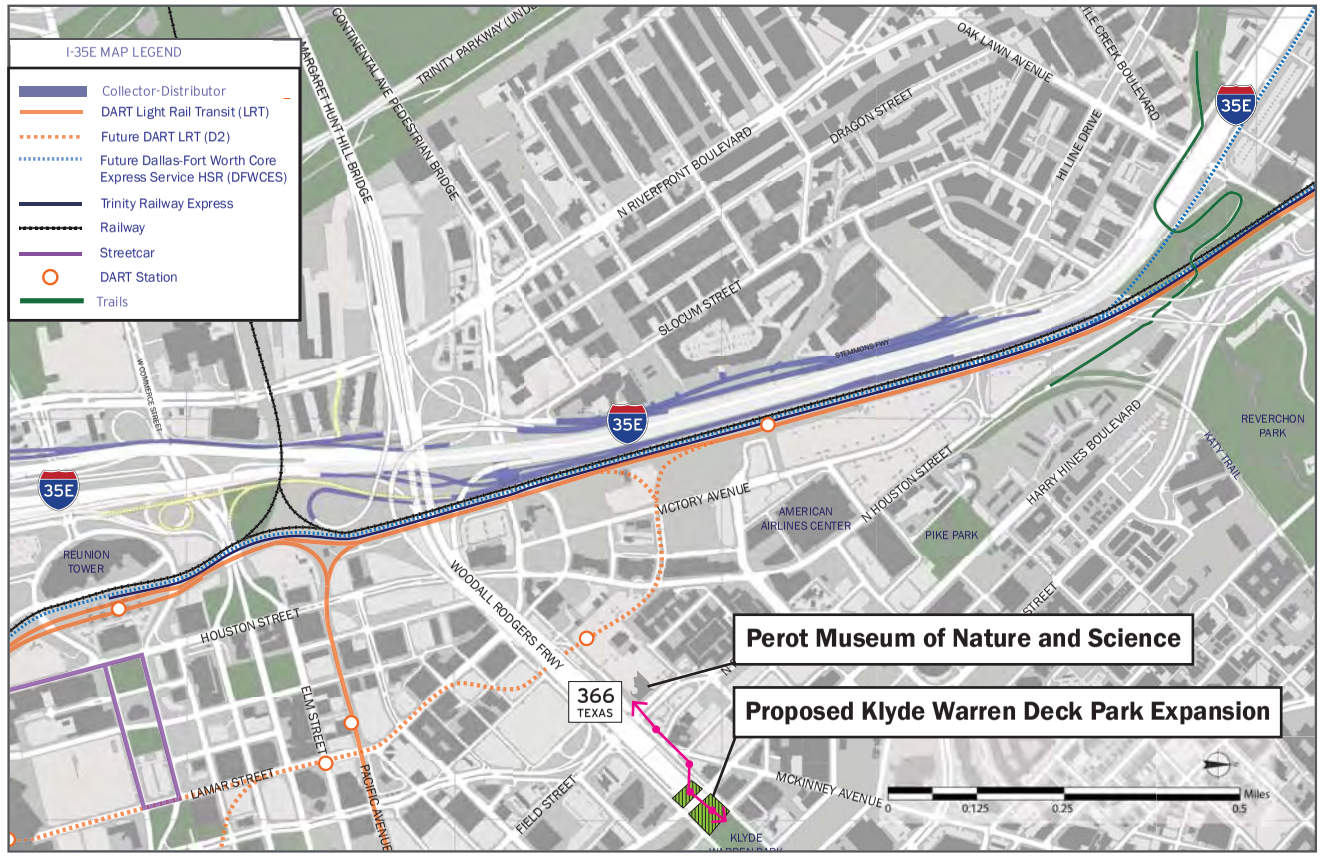
ADDITIONAL FACILITY CAPITAL COSTS BY OTHERS:
$50 Million -$150 Million

FACILITY DEVELOPMENT AND CONSTRUCTION DURATION

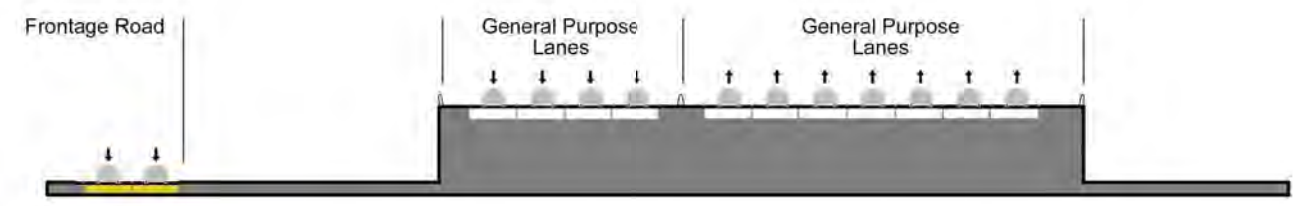
Identify Need → Needs Assessment → Advanced Planning → Environmental & Design Studies → Detail Design ROW, Utilities → Construction

Scenario Timeline Estimate - 2016 thru 2021 — 6 Years

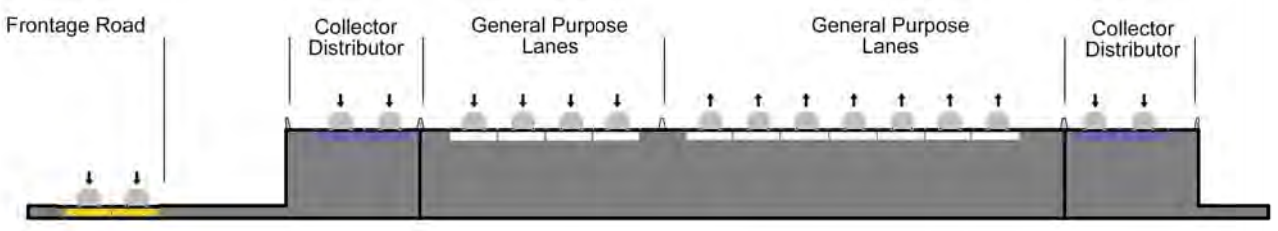
DALLAS CITYMAP | I-35E LOWEST STEMMONS SCENARIO | AT-A-GLANCE



EXISTING CROSS-SECTION



SCENARIO CROSS-SECTION



MOBILITY/CONGESTION RELIEF

The transportation network configuration of I-35E in this scenario reflects the current TxDOT plan to add collector-distributor roadways between Woodall Rodgers SH 366 and the Dallas North Tollway (DNT).

The Collector-Distributor (C-D) roadways would collect and distribute traffic between intersecting roads such as Woodall Rodgers, Lamar/Continental, Hi Line, the Dallas North Tollway and the freeway main lanes.

The direct freeway connection between westbound Woodall Rodgers and northbound DNT would be eliminated. Traffic from US 75 North Central Expressway and the CBD destined for northbound DNT would use existing thoroughfare routes.

The addition of northbound and southbound C-D roadways between Commerce Street/Woodall Rodgers and the direct connector ramps to DNT would eliminate many of the weaving maneuvers on both northbound and southbound I-35E and remove much of the daily congestion caused by weaving and merging traffic.

Overall, the addition of a C-D system would greatly improve this downtown section of I-35E and would capitalize further on the improvements now under construction with the Horseshoe Project.

LIVABILITY/QUALITY OF LIFE

The scenario focus is on improving pedestrian and bicycle linkages crossing I-35E at Oak Lawn Avenue, Hi Line Drive, DART Victory connection, Continental Avenue, Commerce Street and Reunion Boulevard.

The I-35E highway and the parallel the DART/ Trinity Railway Express (TRE) are dominant visual boundaries. Much of their profiles are elevated relative to crossing streets.

The scenario also includes the proposed Circuit Trail Connector project linking the Katy Trail to the Trinity Strand Trail with an elevated crossing over I-35E.

The highway operational improvements would require little to no additional ROW and would be less disruptive than a full highway reconstruction approach.

ECONOMIC DEVELOPMENT/GROWTH

The scenario location is experiencing significant growth in development, particularly in Victory and the Design District. Further growth is poised to occur along the new Riverfront Boulevard at planned developments near Continental Avenue. These developments would have a strong orientation towards the planned Trinity Lakes and should increase pedestrian and bicycle activity.

TXDOT PROJECT/CITYMAP SCENARIO DETAILS

PROJECT/SCENARIO LIMITS:
From Reunion Boulevard to Oak Lawn Avenue

PROJECT/SCENARIO LENGTH:
1.9 miles

PROJECT/SCENARIO COST ESTIMATE:
Facility Capital Cost (TxDOT) $100 Million

ADDITIONAL FACILITY CAPITAL COSTS BY OTHERS:
$5 Million -$20 Million

MOST CONGESTED ROADWAYS IN TEXAS RANK:
5

ANNUAL HOURS OF DELAY PER MILE:
602,114

ANNUAL COST OF DELAY:
$62.89 Million



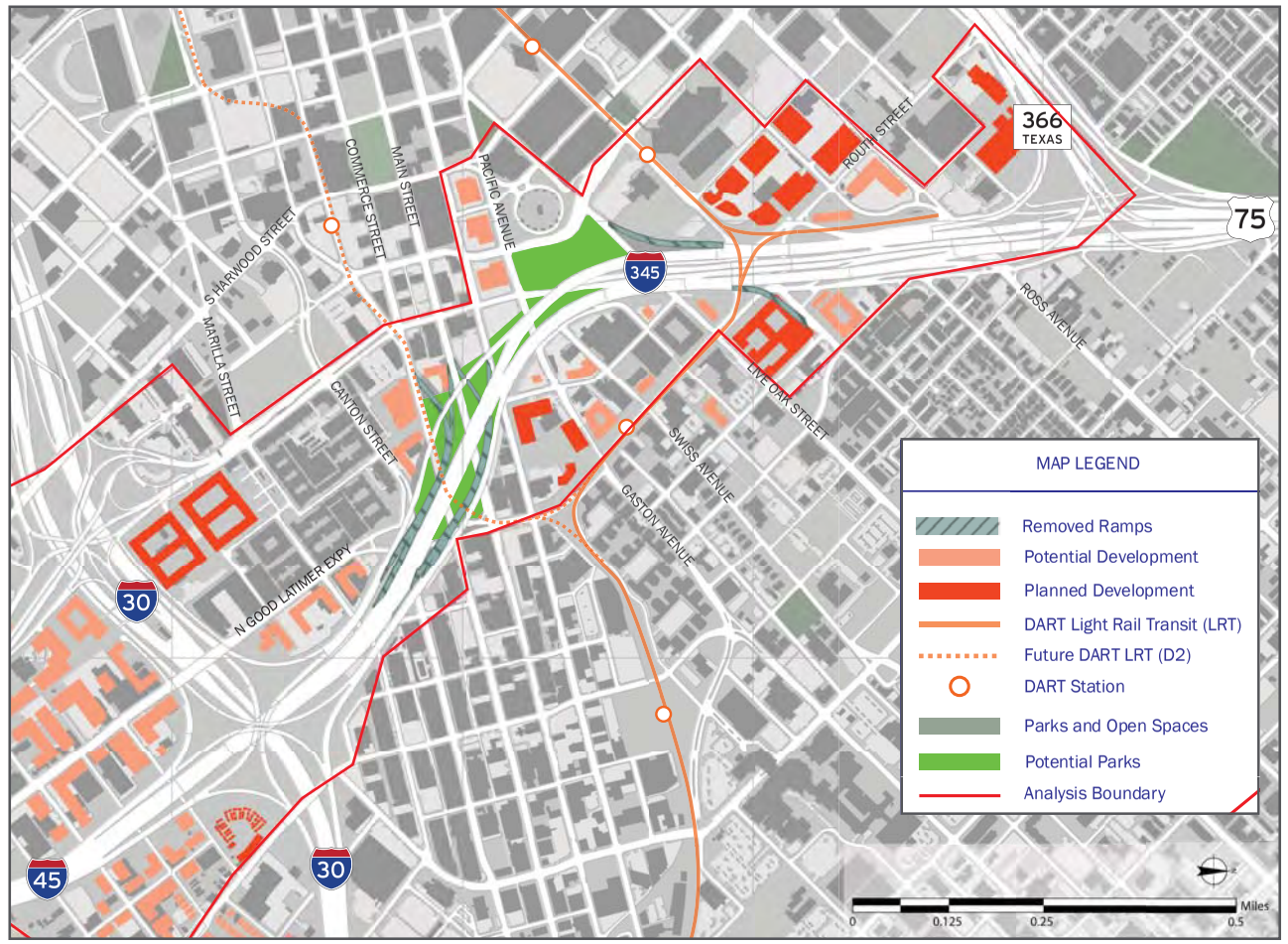
I-35E LOWEST STEMMONS at CONTINENTAL AVENUE

FACILITY DEVELOPMENT AND CONSTRUCTION DURATION

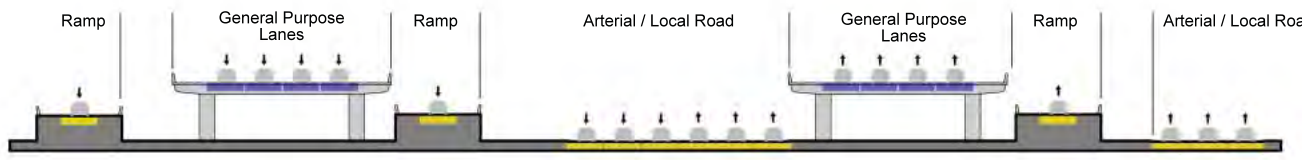
Identify Need | Needs Assessment | Advanced Planning | Environmental & Design Studies | Detail Design ROW, Utilities | Construction

Scenario Timeline Estimate - 2016 thru 2021 — 6 Years

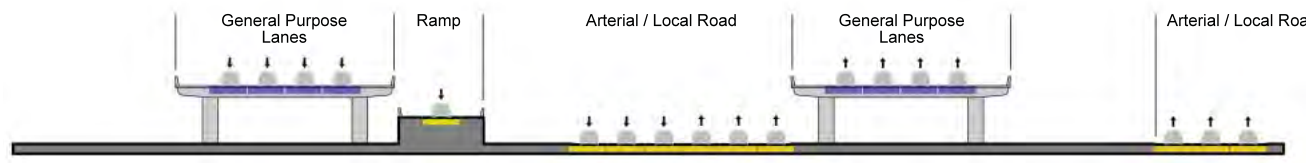
DALLAS CITYMAP | I-345/I-45 MODIFY SCENARIO | AT-A-GLANCE



EXISTING CROSS-SECTION



SCENARIO CROSS-SECTION



FACILITY DEVELOPMENT AND CONSTRUCTION DURATION

Identify Need → Needs Assessment → Advanced Planning → Environmental & Design Studies → Detail Design ROW, Utilities → Construction

Scenario Timeline Estimate - 2017 thru 2022 ——— 6 Years*

**Includes two-year period to add to Metropolitan Transportation Plan*

MOBILITY/CONGESTION RELIEF

The modify configuration is achieved by eliminating the ramp system that provides CBD access to and from Elm Street, Main Street and Commerce Street.

Another pair of outer ramps is eliminated in this scenario from northbound I-345 to Bryan Street and the southbound I-345 ramp to Live Oak Street.

The modify scenario also assumes that new I-45 ramps proposed in the S.M. Wright Phase IIB project are constructed prior to removing the ramps identified in the modify scenario. These new ramps allow I-45 highway access to downtown using Cesar Chavez Boulevard and Good Latimer Expressway from the south.

I-345 traffic to the CBD would seek alternate routes and use I-30 and I-45 exits to thoroughfares such as Elm, Main, Commerce and Cesar Chavez.

Thoroughfares in East Dallas, Deep Ellum, and the Cedars would all experience significant increases in traffic volumes.

Intersecting major arterial streets would likely experience peak-hour traffic queues and congestion delay.

LIVABILITY/QUALITY OF LIFE

The modify scenario would lessen the visual impact of I-345 north of the I-30/I-345 Interchange from Canton Street to Elm Street where I-345 "spreads out" to accommodate existing ramps.

The scenario allows for improved bicycle and pedestrian connections by removing fast moving vehicular traffic entering or exiting the street grid from the highway ramps.

Visibility is improved under the elevated I-345 where ramps are removed. Areas under I-345 and the land formerly used for ramps could be converted to a park connecting with the Carpenter Park planned between Live Oak and Pacific Avenue.

The ramp removal and improvements under I-345 will improve linkages between Deep Ellum and downtown.

Ramp removal would also allow Hawkins Street to be extended under I-345 to Canton Street in alignment with Farmers Market Way.

Minimizes disruption to small businesses and residents along corridor versus the remove or below grade scenarios during construction.

ECONOMIC DEVELOPMENT/GROWTH

Maintains current job commute route from Southern Dallas to jobs along US 75 and I-35E north of the CBD.

This area is experiencing significant development growth, particularly near Live Oak and near the Farmers Market.

The new park under I-345 would offer open space and amenities that would attract additional development.

SCENARIO DETAILS

SCENARIO LIMITS: From Hall Street to Lenway Street

SCENARIO LENGTH: 3.2 miles +/-

SCENARIO FACILITY CAPITAL COST ESTIMATE

Under 100M	100M - 499M	500M - 999M	1B - 2B	Over 2B

M = Million B = Billion

MOST CONGESTED ROADWAYS IN TEXAS RANK: 23

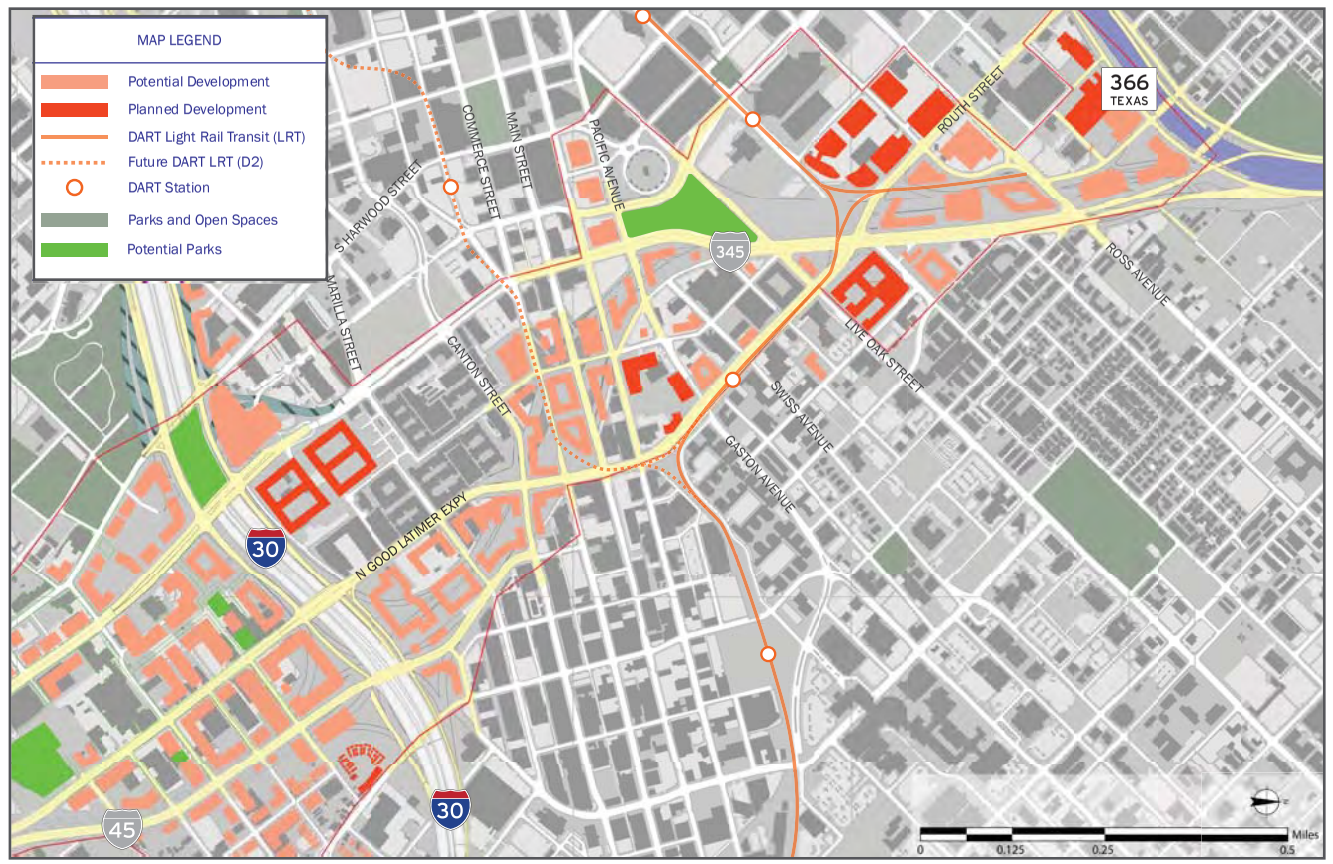
ANNUAL HOURS OF DELAY PER MILE: 354,695

ANNUAL COST OF DELAY: $29.55 Million



POTENTIAL I-345 MODIFY

DALLAS CITYMAP | I-345/I-45 REMOVE SCENARIO | AT-A-GLANCE



MOBILITY/CONGESTION RELIEF

The scenario would completely remove I-345 including the full interchange with I-30.

I-45 would be completely removed north of Martin Luther King, Jr. Boulevard north to I-30. The I-45 main lanes would transition into and from Cesar Chavez Boulevard and ramps would connect to and from Good Latimer Expressway. These changes would provide surface street connections between the termination of I-45 and the CBD and US 75 in order to carry the traffic displaced from I-45 and I-345.

The full interchange with I-30 would be replaced with exit and entrance ramps to street grid.

Congestion delay experienced on the overall 2040 MTP network would increase, especially on the thoroughfare network.

Thoroughfares in East Dallas, Deep Ellum, and the Cedars would all experience a major increase in daily traffic volume.

The US 75/Woodall Rodgers Interchange would also see a major reconfiguration. The direct connector ramps between Woodall Rodgers and I-345/US 75 would be removed and the main lanes between the two facilities would be connected as the through route. Cesar Chavez would be connected with ramps to US 75.

With the removal of I-345, several streets in the CBD would be connected such as Hawkins Street extended to Canton Street in alignment with Farmers Market Way.

Intersecting major arterial streets would likely experience peak hour traffic queues and congestion delay.

LIVABILITY/QUALITY OF LIFE

Increases local street connectivity within the urban core, providing improved auto, transit, bike and pedestrian access.

Reknits historic neighborhood patterns around core of downtown, providing a finer grain urban development pattern and thus more varieties of redevelopment.

Provides opportunities for increased affordable housing options in the urban core, which would potentially reduce home-to-work commutes on regional highways.

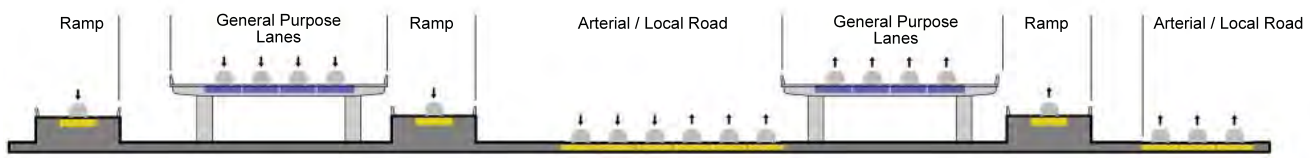
ECONOMIC DEVELOPMENT/GROWTH

Changes regional network commuting patterns by shifting local through trips to I-35 to the west and to I-635 to the east.

Provides substantial additional development potential for mixed use office and residential based on potential use of former highway ROW for new development.

Necessitates assessment of potential impacts of gentrification and historic preservation as the removal of the elevated I-345 will bring together the different development patterns of Deep Ellum and the CBD.

EXISTING CROSS-SECTION



SCENARIO CROSS-SECTION



SCENARIO DETAILS

SCENARIO LIMITS: From Hall Street to Lenway Street

SCENARIO LENGTH: 3.2 miles +/-

SCENARIO FACILITY CAPITAL COST ESTIMATE

Under $100M	$100M - 499M	$500M - 999M	$1B - 2B	Over $2B

M = Million B = Billion

MOST CONGESTED ROADWAYS IN TEXAS RANK: 23

ANNUAL HOURS OF DELAY PER MILE: 354,695

ANNUAL COST OF DELAY: $29.55 Million



POTENTIAL I-345 REMOVE

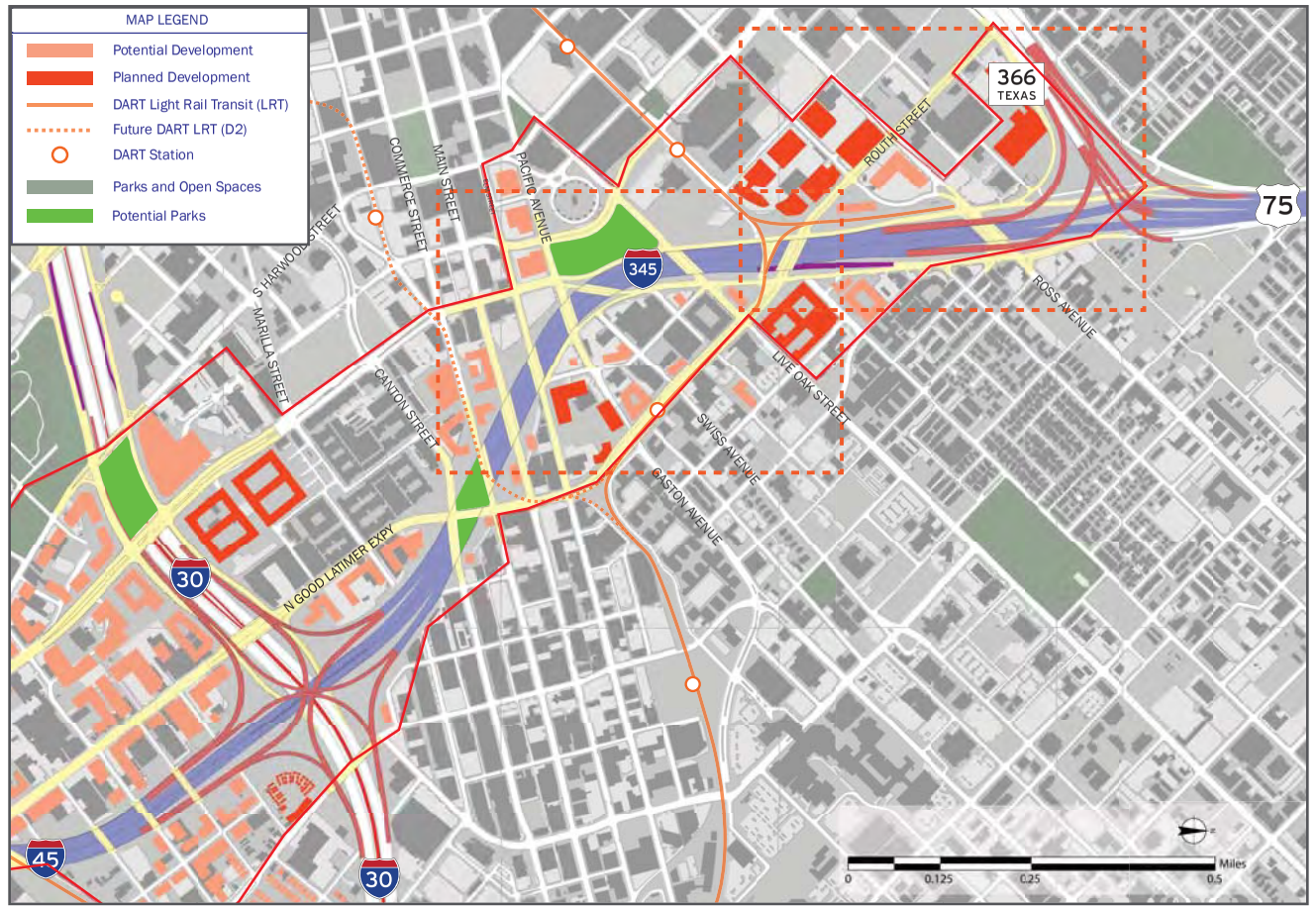
FACILITY DEVELOPMENT AND CONSTRUCTION DURATION

Identify Need → Needs Assessment → Advanced Planning → Environmental & Design Studies → Detail Design ROW, Utilities → Construction

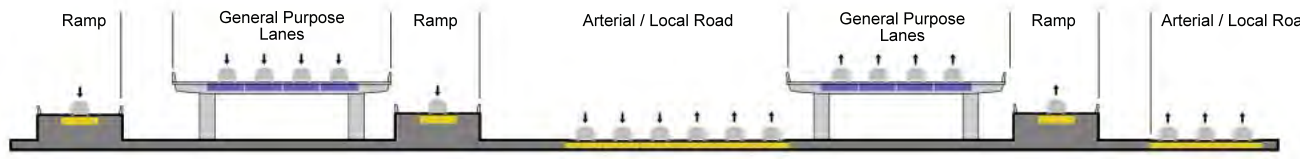
Scenario Timeline Estimate - 2017 thru 2040 ——— 24 Years*

**Includes six-year period to add to Metropolitan Transportation Plan*

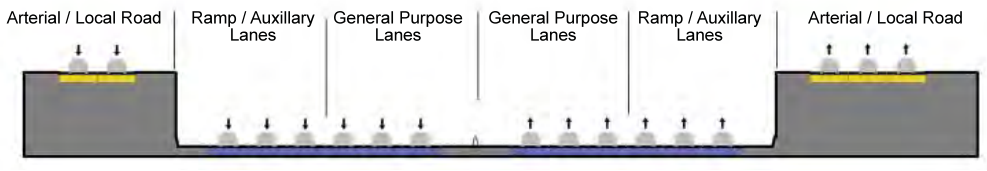
DALLAS CITYMAP | I-345/I-45 BELOW GRADE SCENARIO | AT-A-GLANCE



EXISTING CROSS-SECTION



SCENARIO CROSS-SECTION



FACILITY DEVELOPMENT AND CONSTRUCTION DURATION

Identify Need → Needs Assessment → Advanced Planning → Environmental & Design Studies → Detail Design ROW, Utilities → Construction

Scenario Timeline Estimate - 2017 thru 2040 ——— 24 Years*

**Includes six-year period to add to Metropolitan Transportation Plan*

MOBILITY/CONGESTION RELIEF

I-45 would descend south of Martin Luther King Jr. Boulevard with the reconstructed facility going under S.M. Wright Boulevard which would be aligned to Cesar Chavez Boulevard.

The alignment would have a full-directional interchange with I-30, keeping I-30 at its current below grade location. I-345/I-45 mainlanes would be shifted from the top level to directly above I-30 and the direct connecting ramps would be above the I-345/I-45 mainlanes.

North from I-30, I-345 would connect to US 75 at its current location in the Woodall Rodgers Interchange. A full-directional interchange would be provided with Woodall Rodgers.

Between Pacific and US 75 flanking service roads would be added as the extension of Cesar Chavez Boulevard.

At Ross Avenue a partial diamond interchange, with a frontage road U-turn lane would connect Ross Avenue/I-345 to and from the south

Between the I-30 and Woodall Rodgers Interchanges, I-345 would have five lanes in each direction. Through both interchanges, two or three lane direct connectors would reduce the thru-lane count to three in each direction.

The reduction in direct freeway access to the CBD would shift some traffic to longer thoroughfare routes, but only at a minor change in thoroughfare level of service.

Congestion delay on the freeway system in the downtown area would increase slightly, but would increase by 10% to 18% on thoroughfares.

LIVABILITY/QUALITY OF LIFE

The scenario would create an express connection between I-30 and US 75 in a depressed alignment. This facility would have a much smaller footprint and would not be as visually intrusive as today's elevated structure.

The scenario would allow for improved pedestrian and bicycle connections by reducing the number of ramps entering or exiting the street grid from a below grade I-345 highway.

The city street grid would bridge over the below grade I-345. The scenario would provide complete street bridges linking Deep Ellum to downtown.

The scenario identifies a wide bridge between Canton Street and Commerce Street. This bridge would also include Good Latimer and DART D2 crossings. This bridge would allow for a possible deck park opportunity.

The below grade alignment would potentially allow for large portions of the corridor to be capped in the future for parks and other uses.

ECONOMIC DEVELOPMENT/GROWTH

Encourages more dense mixed use on east side of downtown; but in turn, requires a careful look at zoning and preservation policy from likely development intensification pressures on Deep Ellum.

Maintains more direct access for job commute trips from the Southern Dallas to jobs along US 75 and I-35E north of the CBD.

SCENARIO DETAILS

SCENARIO LIMITS: From Hall Street to Lenway Street

SCENARIO LENGTH: 3.2 miles +/-

SCENARIO FACILITY CAPITAL COST ESTIMATE

Under $100M	$100M - 499M	$500M - 999M	$1B - 2B	Over $2B

M = Million B = Billion

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POTENTIAL I-345 BELOW GRADE

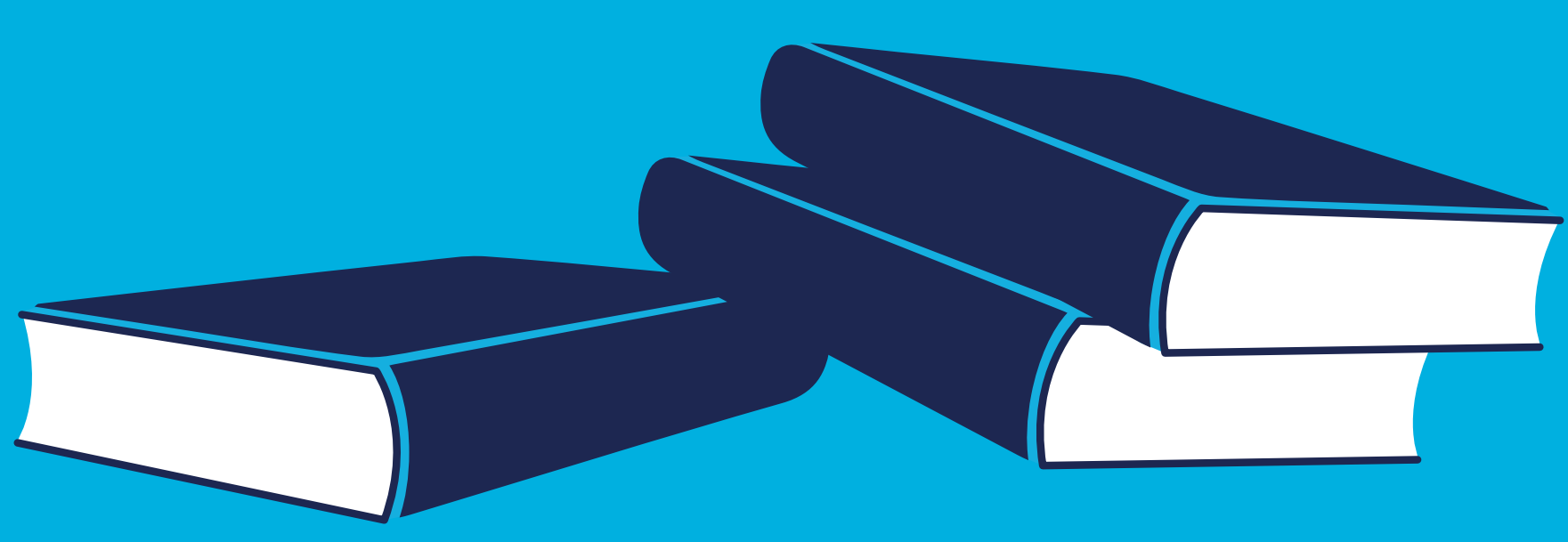

DALLAS CITY CENTER
MASTER ASSESSMENT PROCESS
MAP

CHAPTER 2 | A BASIS FOR DECISION-MAKING



WE DID OUR HOMEWORK

This plan did not start from scratch. The team assembled, reviewed, studied and cataloged existing short, medium and long-range public agency plans, private developer and stakeholder plans, special studies, reports, white papers and research documentation.



THE DALLAS CONTEXT

The DFW metropolitan area is one of the fastest growing metropolitan areas in the United States, maintaining a thriving economy and becoming home to an ever-expanding list of corporate relocations. Sharing in this growth, the Dallas urban core is currently experiencing a major renaissance. Long an employment-only destination, the core is now growing into a collection of vibrant and diverse neighborhoods with a mix of employment, residential, commercial, and retail land uses, among others. While this transition from a 9-to-5 business district to a 24/7 live/work/play neighborhood is a major boon for the City of Dallas, this transition and growth has also placed a major strain on the existing, aging roadway infrastructure.

Additionally, this transition has brought to light a glaring deficiency in other transportation infrastructure, including transit, bicycle and pedestrian facilities. For decades, the majority of transportation infrastructure investment in the urban core has been focused on roadways with an overarching goal of moving a large volume of employees into the core for work in the morning and back out to the suburbs at the end of the work day. The transition to a 24/7 live/work/play neighborhood now requires a focus on and an investment in all transportation services – roadway, transit, bicycle and pedestrian facilities.

In order to meet the needs of this growing district in transition and to allow for continued future growth, investment in a variety of transportation infrastructures is essential and planning these facilities in concert is of utmost importance in order to ensure an overall cohesive and user-friendly transportation system.

REFERENCE PROJECTS

CityMAP reviewed a comprehensive array of past, current and on-going Dallas and regional studies related to existing short, medium and long-range public agency plans, private developer and stakeholder plans, special studies, reports, white papers and research documentation in order to establish thorough understanding of the complex issues relative to this assessment.

Refer to the Appendix for a complete list and general description of each reference document.



KLYDE WARREN PARK WATER FEATURE *Source: The Dallas Convention & Visitors Bureau*

THE REGIONAL TRANSPORTATION SYSTEM

The regional transportation system in the DFW metropolitan area consists of a variety of transportation modes, from freeways, toll roads, and managed/HOV lanes, to light rail, commuter rail, streetcar, bus routes, and a growing web of bicycle and pedestrian trails and facilities. As DFW grows, the regional transportation system grows hand-in-hand, but it doesn't happen without a vision.

The Metropolitan Transportation Plan (Mobility 2040) for North Central Texas is the defining vision for the multimodal transportation system in the Dallas-Fort Worth Metropolitan Planning Area. Mobility 2040 guides the implementation of multimodal transportation improvements, policies, and programs in the 12-county Metropolitan Planning Area, supporting goals emphasizing mobility, quality of life, system sustainability and implementation. Through the year 2020, it will guide the expenditure of local, state and federal transportation funds, and provide a series of recommendations for the most critical projects in the region. As stated in the document, "Despite the approval of Proposition 1 in 2013 and Proposition 7 in 2015, which provide additional funding for roads, it is increasingly clear that North Central Texas will not be able to build its way out of congestion. Even with a $118.9 billion investment in projects and programs over the next 24 years, funding for new or expanded transit and roadways, and for maintenance and operations, will be insufficient to meet all demands. Changes in the way North Central Texans travel will be integral to maximizing limited funds and the existing capacity of the transportation system."



NCTCOG CityMAP LISTENING SESSION *Source: HNTB*



LOWEST STEMMONS AND DALLAS NORTH TOLLWAY *Source: HNTB*



NCTCOG MOBILITY 2040 *Source: NCTCOG*



DOWNTOWN TROLLEY *Source: The Dallas Convention & Visitors Bureau*



WHITE ROCK LAKE TRAIL *Source: The Dallas Convention & Visitors Bureau*

THE HIGHWAY SYSTEM

The highway system in the DFW region consists of numerous linear (north-south and east-west) highways/tollways connecting urban areas with suburban areas as well as circumferential highways/tollways ringing the urbanized areas and providing cross-town access. The highways are constructed and maintained by TxDOT with North Texas Toll Authority (NTTA) constructing and maintaining the tollway facilities within the region. The Dallas urban core is ringed by several major highway/tollway facilities, including I-35E and the DNT to the west, US-75, I-45, and I-345 to the east, Woodall Rodgers Spur 366 to the north, and I-30 to the south. These facilities provide access to and mobility around the core but also inadvertently divide the core from the surrounding neighborhoods.

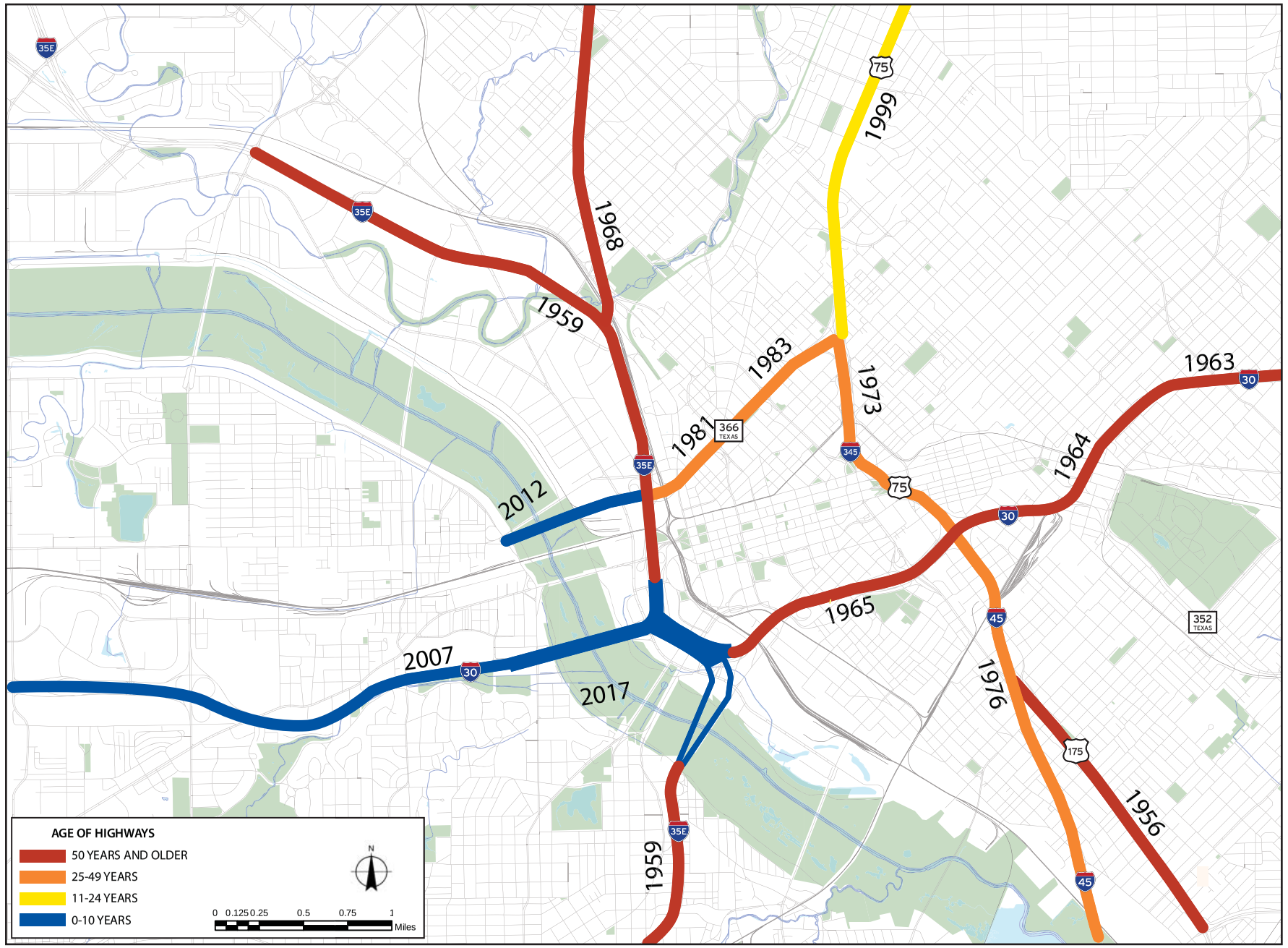
The following section discusses the current state and challenges of the existing highway system in the urban core, the evolving role of TxDOT and NCTCOG with respect to this system, and planned improvements to and transformation of the system.

CHALLENGES OF AN AGING SYSTEM

The rapid growth of the DFW metropolitan area of land surrounding the Dallas urban core has continued over the past several decades with no real physical boundaries (e.g., mountains, oceans, major rivers, etc.) to naturally confine and focus this growth. This suburbanization of development has continued to march outward in the region.

This growth has been aided by the construction of a number of new and expanded highways that radiate out of the urban core. While these highway facilities provided the means to develop the surrounding countryside, the focus on new highway and roadway construction over the past several decades has ultimately resulted in a vast network that has now stretched the available resources necessary for maintenance to the breaking point. A stagnant gas tax that has not been raised since 1993 and has long-since lost pace with inflation coupled with increasingly fuel-efficient vehicles has resulted in a dwindling highway trust fund, which has historically been the major funding source for the construction and maintenance of highways in the United States.

With funding challenges and a large number of aging local and regional highways to maintain (see graphic this page), TxDOT and the region must seek alternative routes. Funding levels now barely cover yearly highway/roadway maintenance costs while the region continues to grow, congestion increases daily, and in turn, communities continue to call for new and expanded roadways. Due to multiple demands for limited highway funding, toll roads have become a popular, albeit a controversial, tool within the DFW region, with



DALLAS URBAN CORE YEAR OF CONSTRUCTION MAP *The average age of the interstate corridors in the CityMAP study area is greater than 40 years.*

numerous toll road facilities constructed in the region over the past decade. Tolled facilities attract outside investment which enables construction of these new facilities years or even decades before a similar non-tolled facility can be built. However, while no doubt improving mobility within the region, the continued rise of toll roads has resulted in questions from the general public about their use in expanding capacity.

Meanwhile, TxDOT, NCTCOG, and local, state, and national law-makers continue to collaborate in an effort to identify additional funding sources and innovative funding and financing opportunities. Despite some recent major transportation funding wins in Texas, namely the passage of Propositions 1 and 7 that both constitutionally dedicate billions in additional funding for Texas roads, the funding strain continues due to the sheer volume of transportation needs around the state.

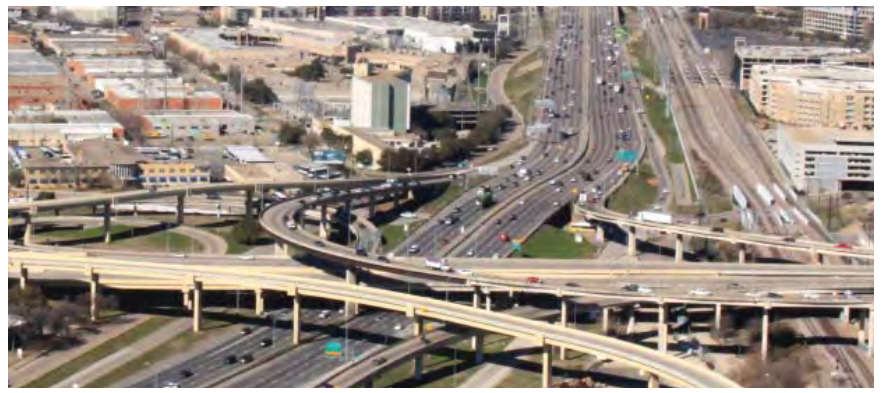
NEED FOR TRANSFORMATION

With limited transportation funding and an urban core in the midst of a renaissance, TxDOT and area stakeholders are taking a step back in an effort to evaluate the transportation needs of the urban core holistically. Traditionally, TxDOT projects were planned individually with the focus on moving vehicles into, out of, and through an area as efficiently as possible. While efficiency is still a major factor in project development, a transformation is beginning to take hold within the region in which roadways and highways are planned holistically, in concert with one another, and broader thought is given not just to the mobility needs of cars but also to transit users, bicyclist, and pedestrians.

By thinking more holistically, TxDOT and area stakeholders can design projects that not only move cars more efficiently but also reduce the "barrier-like" nature of these facilities. Integrating design elements that allow for individuals to cross these facilities by means other than motorized vehicle increases the viability of these other modes and in turn opens up the world of "mode choice" to the general public. Moreover, these holistically-planned projects often result in increased economic development adjacent to the facilities compared to a traditionally-planned project. For example, the integration of Klyde Warren Park over a portion of the depressed Woodall Rodgers freeway has been a rousing success, reconnecting the downtown and uptown districts while spurring extensive economic development adjacent to the park. The project essentially took a major barrier and turned it into a major destination and activity center. Through CityMAP, TxDOT and area stakeholders now have an opportunity to identify similar connections over or under highways surrounding the urban core.

PLANNED IMPROVEMENTS

With numerous aging highway segments within and surrounding the Dallas urban core, TxDOT is in the midst of planning and designing the future of these facilities. With some improvements to I-35E and I-30 in planning and design phases, as well as safety improvements to I-345, TxDOT is in a position to evaluate these facilities concurrently and ultimately design improvements that work together seamlessly, provide opportunities for other modes of transportation, and "stitch" the various urban core neighborhoods back together again.

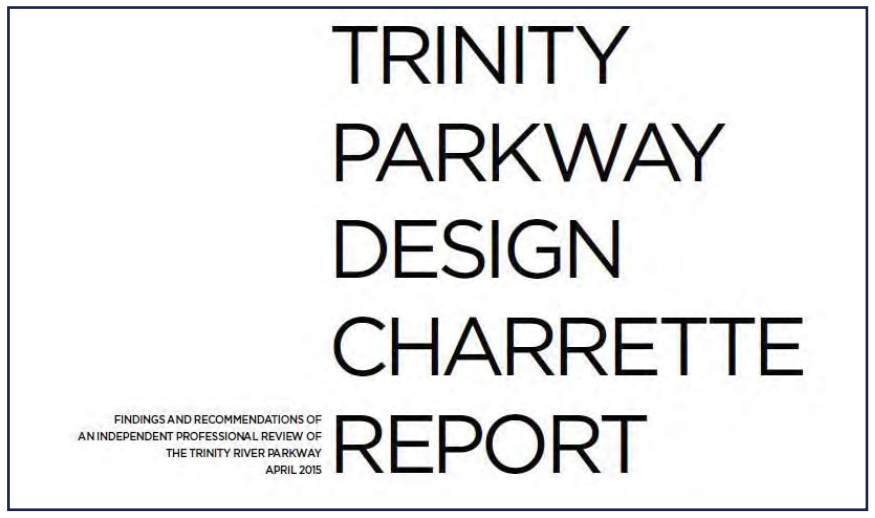


HIGHWAYS NEAR DOWNTOWN *Source: HNTB*

THE TRINITY PARKWAY

As long as Dallas has had developed plans for the Trinity River Corridor, planners have envisioned a parkway through the corridor. Dating back to the 1920's, George Kessler predicted the following, "A great city will spring up immediately upon the construction of one or two highways safely above the Trinity floodway."

In April 2015 the Federal Highway Administration (FHWA) approved the Trinity Parkway Alternative 3C, which includes six toll lanes, local street interchanges, and interchanges between the tollway and freeways at the northern terminus, southern terminus, and Woodall Rodgers Freeway Spur 366. This decision was based upon the ability to meet the need and purpose of the project, public and agency input, the practicability analysis required by Executive Orders 11988 and 11990, and the minimization and avoidance of direct, indirect, and cumulative impacts on environmental resources and the human environment. Additionally, in April 2015, a separate charrette study of the Trinity Parkway was prepared by a team of professionals from diverse backgrounds charged with taking a fresh look at the roadway design and its relationship with the park. This study was developed in response to increasing concerns about a high-speed toll road within the Trinity River Corridor. The initiative was sponsored by the Dallas Citizens' Council, the Dallas Regional Chamber, the Real Estate Council, the Trinity Commons and support from various donors with the goal of achieving a vehicular connection with the lowest impacts and the highest benefits possible.



TRINITY PARKWAY DESIGN CHARRETTE REPORT *Source: www.trinityriverdallas.org*

THE HIGHWAY SYSTEM

THE TRINITY PARKWAY ALTERNATIVE 3C

The following information is taken directly from the NTTA project update web page.

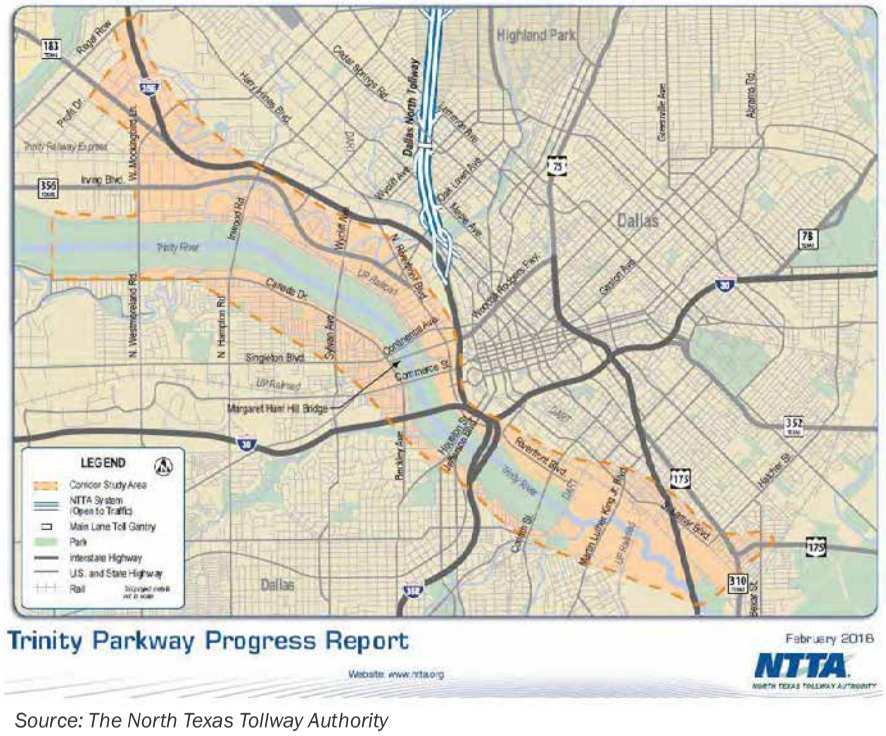
The proposed Trinity Parkway will connect Interstate 35E to US 175, providing a new, approximately 9-mile relief route around the west and south sides of Dallas' central business district. The Trinity Parkway would be a six-lane, tolled bypass around downtown Dallas, which would provide traffic relief for the I-30 and I-35E corridors. The NTTA is managing ongoing environmental clearance and preliminary engineering efforts to advance the project. The project may go through a market valuation process, a joint NTTA-TxDOT effort, as outlined in Senate Bill 792, passed by the 80th Texas Legislature.

A 1997 Major Investment Study identified the construction of a new roadway in the Trinity River area as one of several projects that would relieve congestion near downtown Dallas. Due to its proximity to other planned Trinity River improvements, environmental analysis continues to be comprehensive and extensive.

A Notice of Availability of the Federal Highway Administration (FHWA) Record of Decision (ROD) for the proposed construction of the Trinity Parkway in Dallas County, Texas is available for public review.

Additional information about the project can be obtained by contacting Scott Ford, Environmental Specialist, Environmental Affairs Division, TxDOT.

Cost Estimate: $1.3 billion (current dollars).



Source: The North Texas Tollway Authority



THE HIGHWAY SYSTEM

TRINITY PARKWAY TECHNICAL PROPOSAL

(CONCEPTUAL DEVELOPMENT OF THE DESIGN CHARRETTE REPORT)

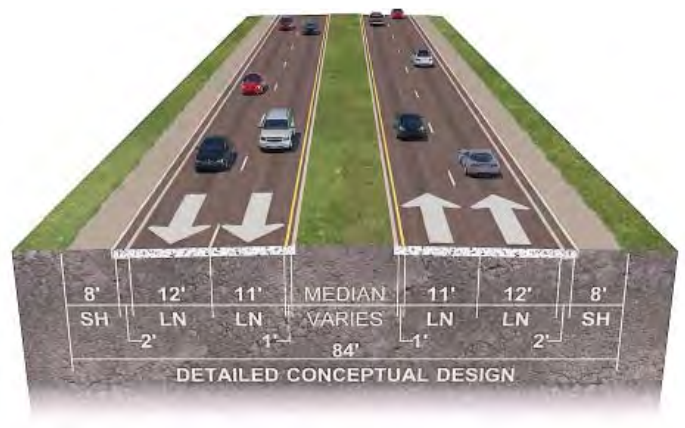
The Dallas City Manager was directed by Council Resolution 150732 to form a team, including partners and appropriate expertise from a variety of disciplines, to determine actions that would be necessary to implement the findings of the Charrette Report within the current project federal approvals or Records of Decision (ROD)

The purpose of the report or technical proposal was to serve as a summary of findings by the Trinity Parkway Technical Team regarding the evaluation of the ideas within the Trinity Parkway Design Charrette Report and how those ideas may be implemented within the context of current federal regulatory approvals.

Local, regional and private partners and the City of Dallas funded a Technical Team of consultants and provided in-kind support through staff and resources. This Technical Team included national and local expertise, as well as staff from the local, state and federal project partner agencies. Several members of the Design Charrette Team also actively participated in Technical Team work sessions. The Technical Team has been working throughout the fall and winter of 2015 to bring forward its assessment of feasibility regarding the ideas presented. The Technical Team proceeded with interactive design investigations and development of detailed conceptual designs from hand-drawn ideas in the Charrette Report. They focused their work on the ideas recommended in the Charrette Report and then assessed their potential consistency with the existing ROD.

SUMMARY OF SPECIFIC RECOMMENDATIONS

1. Develop necessary documentation to allow design exceptions to implement U-Turns, meandering and pull-off parking as a part of a staged approach to Parkway implementation.
2. Complete analysis and develop recommendations for shifting the ramps and reconfiguring Riverfront ramps.
3. Explore appropriate policy concerning operation of the roadway with respect to restricting non-emergency truck traffic, allowing occasional on-street parking and accommodating toll-free use of the park.
4. Continue design exploration of the tree-lined Parkway concept and the landscape configuration to add character, interest and strong ecological strategy along the parkway.
5. Continue exploration of aesthetic design refinements of the flood protection barriers and bridge deck crossings over outfalls.
6. Continue design and transit agency coordination as necessary concerning possible transit stop locations and/or access.
7. Continue exploration of development strategies near Reunion, Commerce, Design District, and Mix-Master District as part of design and park review process.
8. Continue exploration of sump options and ramp design in and near Southside District to support and enhance adjacent development opportunity.
9. Continue design exploration for strategies to build over/under the roadway at the far north/south ends of the Parkway to spur private development and enhance neighborhoods.
10. Explore how the use of a lower design speed as a part of a staged implementation will impact existing ROD.
11. Further investigate economic development considerations in areas near the I-35E/SH-183 corridor.
12. Investigate the I-35E/SH-183 connection to the Parkway scaled as appropriate as a Phase 1 Parkway using traffic modeling provided by NCTCOG.
13. Investigate future connections, amenities and access for adjacent neighborhoods as part of the park planning efforts.



Source: The City of Dallas



Source: The City of Dallas

LOCAL STREET NETWORK AND COMPLETE STREETS

CONTEXT TODAY

The existing local street network in the City of Dallas consists of a patchwork of various grids each developed decades apart in the early years of Dallas' emergence from individual settlements to emerging outpost on the plains. This includes a grid laid out at a 45 degree angle to the cardinal directions (Old East Dallas, Oak Lawn, and South Dallas), a grid aligned with the cardinal directions (North Dallas and Oak Cliff), and a grid laid out by John Neely Bryan that is aligned with the Trinity River (CBD and Deep Ellum). Additionally, the local street network was influenced over the years by railroads and competing real estate interests with all of these factors resulting in the patchwork local street network that we see today.

For many years, during suburbanization and the transition of the urban core from the heartbeat of the City of Dallas to a more vacant, employment-only district, the local streets in the urban core were viewed as simply a means to get employees into, out of, and through the district by car. The streetscape outside of the travel lanes had essentially become an afterthought, with narrow sidewalks and limited pedestrian amenities. In fact, in the 1970s and 1980s, the City of Dallas implemented a network of grade-separated walkways covering thirty six city blocks in the CBD that connected buildings, parking garages, and parks through underground tunnels and above-ground skybridges in an attempt to improve traffic flow by separating pedestrian and vehicular traffic. While street-level pedestrian activity had been on the decline for decades, this move essentially destroyed the remaining activity, resulting in a sea of boarded-up storefronts in the CBD.

However, since the early 2000s there has been a de-emphasis on the grade-separated walkways and a shift in focus and reinvestment to street-level retail and pedestrian amenities (wider sidewalks, benches, lighting, etc.), which has resulted in a slow but steady reemergence of street-level pedestrian activity. Meanwhile, many of the major arterials in the urban core that for years had been one-way in order to improve traffic flow in and out of downtown have been converted or are in the process of being converted back to two-way streets, a move that has also contributed to the improved vitality of the local streets in the urban core.

Today, the Downtown Dallas 360 Plan, Parks Master Plan, Bike Plan, and other area plans that cover the urban core are all promoting increased investment in local streets, including general travel lane maintenance as well as upgrades and amenities for pedestrians, cyclists, and transit users. While decidedly a slow process, the steady investment and re-investment in the local street network in the urban core over the years has resulted in the re-emergence of these streets as destinations in and of themselves. The renaissance in the urban core is due in large part to this focused investment, and the urban core streets are now on the cusp of becoming true "complete streets," a concept discussed in greater detail in the following section.

COMPLETE STREETS

Complete streets are a critical component of a great city. Streets historically provided the democratized public spaces for the American neighborhood, providing places along mixed-use corridors designed as much for people to walk and gather as to drive. As the historic walkable mixed-use neighborhoods of Dallas and other U.S. cities began to lose sufficient levels of generational reinvestment in the face of regional suburbanization, many of the streets in those neighborhoods gave in to lane expansions to make way for regional growth and regional commuting. The transformation of many of those streets from walkable cohesive places into "commercial corridors" with neighborhoods "buffered" behind was hastened as nearby highways were constructed through the core of the cities.

Today, people have a renewed interest in walking, cycling and living in urban neighborhoods. The rebirth of central cities has seen a focus on reinventing roadways into streets that make it just as safe and convenient to walk or ride a bike as it is to drive a car. That transportation mode choice is made possible by the reinvention of roads back into corridors that act as destinations themselves, anchoring places to shop, work and live as well as providing connections to adjacent neighborhoods that feel part of a larger community.

The reinvention of streets as places has been coined a "Complete Street." Several years ago, Dallas initiated a process to look comprehensively at opportunities for complete streets by developing a policy and technical guidance for the implementation of those opportunities.

The Dallas Complete Streets Initiative surveyed Dallas citizens and determined that most residents (68%) would like to address traffic congestion by improving public transportation and designing communities for easier and safer walking and bicycling. National surveys are consistent with the Dallas perspective as 63% of people surveyed preferred travel options and context sensitive designs for street corridors.

In Dallas, a remarkable finding of the Complete Streets Initiative included a willingness of 88% surveyed to accept an additional five minutes of commute time if the trade-off was more convenient walking and biking along their commute routes. According to Dallas citizens, safety, health, and saving money on gas were all strong motivators for implementing complete streets.

With support from the community, routes that can be improved to complete streets should be evaluated and, where feasible, be designed to accommodate all modes of transportation and users: pedestrians, bicyclists and transit users along with traditional vehicles within the right-of-way.

Complete street tools available include: narrower lanes; a reduction of the number of lanes; wider sidewalks; on-street parking; pedestrian refuge areas; mid-block crosswalks; extensions of curbs for cafés; street furniture such as benches; traffic signal adjustments; converting one-way streets to two-way; including transit or streetcar; special pavement treatments; and bicycle facilities.

One of the key outcomes in complete street implementation is slowing the traffic down to a speed below 30 mph. Actual observed traffic speeds below 30 mph are shown by the data to be substantially safer for pedestrians and bicyclists. The chance for severe injury and death of pedestrians struck by a vehicle is dramatically reduced at speeds below 30 mph.

Accordingly, a complete street strategy for a particular location should start with the determination of whether a slower speed makes sense in terms of the overall goals of the corridor in terms of its character. In the *Dallas Complete Streets Design Manual*, design speed and operational speed are replaced with target speed, which becomes the primary control for determining the following geometric design values:

- Minimum intersection sight distance;
- Minimum sight distance on horizontal and vertical curves; and
- Horizontal and vertical curvature;

Target speed ranges from 25 to 40 mph for major thoroughfare types and lower target speeds as an essential characteristic of thoroughfares in walkable and mixed-use urban designs.

How does the Complete Street Policy apply to CityMAP?

LOCAL STREET NETWORK AND COMPLETE STREETS

THE ROLE OF COMPLETE STREETS IN CityMAP

As the various scenarios for the highway corridors are considered and analyzed—in terms of both design and the corresponding factors representing the priorities of the community for mobility, economy and quality of life—the ability to capture the urban design benefits of different transportation options will be dependent on the complementary reinvention of the connecting local arterials and other streets adjacent to the highway corridors. Several scenarios being analyzed will provide more connectivity through the highway corridors and provide corresponding opportunities for redevelopment. The level of increased connectivity and redevelopment will be dependent in some measure to the ability to also facilitate the reinvention of many key corridors through a complete street approach.

DALLAS POLICY

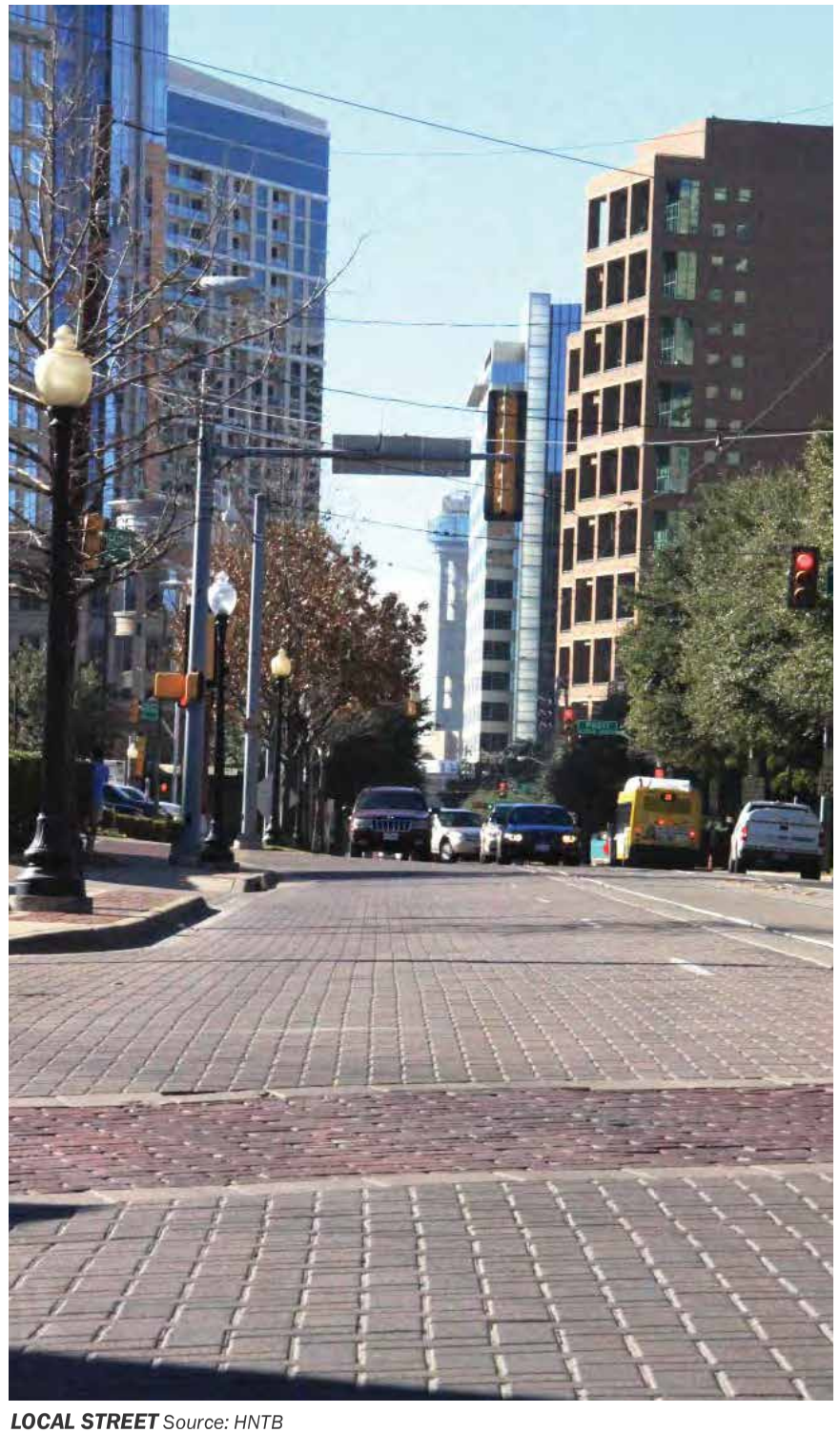
The *Dallas Complete Streets Design Manual* has been recently adopted by the City. The manual has been used for inspiration and practical guidance by a number of design professionals to develop complete streets designs on an ad hoc basis. In the past several years, the City has seen successful complete streets projects implemented on Sylvan Avenue, Lower Greenville Avenue, SMU Boulevard, Bishop Boulevard, Victory Boulevard, Main Street and other highly visible and successful mixed-use streets. Many more locations are in the planning phase or under design.

The Manual includes a Vision Map that identifies the different types of streets that will overlay on the Dallas Thoroughfare Plan and indicate the potential complete street routes for future reinvention.

Two of the big ideas expressed in the *Dallas Complete Streets Design Manual* include a checklist that must be filled out by the entity initiating a new complete street project and the work flow chart that calls for a kickoff meeting with all of the City departments represented to review the checklist and agree on its completeness. The checklist requires the explanation of the following aspects and the proposed project:

- Project Information including: location description, budget and funding sources, lead agency/entity, contact information, partner agencies/ entities, TxDOT Highway designation, project area, project goals, project scope, and anticipated schedule;
- Context Zone (Natural, Rural, Suburban, General Urban, Urban Core or a Special District);
- History and character of the land uses in the corridor;
- Current and proposed land uses;
- Major sites;
- Current and desired operations: walking, bicycling, motor vehicles, transit, trucks/freight, access, curbside conditions, public space, drainage and street cuts;
- Green streets elements: street trees, planting, stormwater control, flooding, maintenance partners and permits;
- Paving Design Manual: materials, lighting, furniture, application, major deviations from guidelines, and pilot treatments; and
- Additional Information or considerations that will help the design and review teams make informed decisions.

Whether a proposed complete streets project is initiated by the City as part of on-going capital improvements or by the private sector improving access adjacent to a new development, the complete streets planning, design and implementation process work flow encourages early and frequent communication. That work flow approach will be critical for the successful implementation of any of the scenarios presented by the CityMAP initiative as complementary and well-integrated complete streets will be necessary for any meaningful urban framework.



LOCAL STREET *Source: HNTB*

BIKE SYSTEM AND TRAILS

DALLAS BIKE PLAN

The City of Dallas and the NCTCOG co-sponsored the *2011 Dallas Bike Plan* (Bike Plan) and the *2011 Dallas Bike Plan Addendum - Complete Streets Initiative Design and Policy Guidance* (Addendum). The primary purpose of the Bike Plan and Addendum was to update the existing 1985 Dallas Bike Plan. The Bike Plan update provides a master plan and an implementation strategy for a new bicycle network, the Dallas Bikeway System (System), which will consist of both on-street and off-street bicycle facilities. The Bike Plan document also provides a number of related programs to be recognized, sponsored, or supported under the Bike Plan.

The Addendum is a guiding document that provides plans, cross sections and details for various on-street and off-street bike facilities, signage, and other improvements associated with the implementation of the Complete Streets Initiative within the City. Both the Bike Plan and Addendum were designed to function as a template for other NCTCOG member cities in the preparation of their own municipal bike plans.

The Bike Plan and Addendum incorporate the off-street shared-use bike trails previously identified in the 2008 Dallas Trail Network Plan (Network Plan), as produced by the Dallas Parks and Recreation Department. The Network Plan identifies existing and proposed off-street shared-use trails located throughout the City at the time of preparation in 2008. These shared-use facilities were incorporated into the new System.

The System has also been integrated into the NCTCOG's Regional VeloWeb, and Fort Worth to Dallas Trail. The VeloWeb and Fort Worth to Dallas Trail incorporate bike lane and bike trail planning efforts from neighboring communities in Dallas, Tarrant, Collin and other surrounding counties comprising the 16-county NCTCOG region.

SUMMARY

The Bike Plan mission, vision, goals and objectives seek to establish the City of Dallas as one of the premier bike friendly communities in the country. The Bike Plan suggests that converting excess capacity on numerous City roadways into useable on-street bicycle facilities will further the Bike Plan mission and vision. The guiding principles were drafted by the various committees engaged in the planning process, and refined through the public involvement process.

The 2011 Dallas Bike Plan mission is as follows:

To improve the safety, use, and efficiency of the bicycle in the City of Dallas; and to better integrate the bicycle mode within the City and regional transportation system.

Breakdown of On-Street Facilities	Miles	Percent of Miles Studied
Bike Lanes	123	20%
Shared Lane Markings	203	33.5%
Climbing Lanes	3	0.5%
Cycle Track/Buffered Bike Lane	132	22%
Paved Shoulder	19	3%
Sub-Total	**480**	
Further Study Needed*	124	21%
Total Miles	**604**	100%
Additional Network Connections (not studied)**	236	
Total On Street Network	**840**	**100%**

Source: 2011 Dallas Bike Plan, pg. 15

** Further Study Needed: Streets where design solution not immediately apparent.*
*** Additional Network Connections: Streets that are important to the network but have not been studied. In most cases, shared lane markings will be most appropriate.*

Network Summary	Miles	Percent
On-Street	840	65%
Off-Street	456	35%
Total Miles	**1,296**	**100%**

Source: 2011 Dallas Bike Plan, pg. 15

Breakdown of Off-Street Facilities*	Miles	% of Off-Street Network
Existing or Funded	130	29%
Planned	170	37%
Proposed	97	21%
Sidewalk-Bikes Permitted	59	13%
Total Miles	**456**	**100%**

Source: 2011 Dallas Bike Plan, pg. 16

The 2011 Dallas Bikeway System consisted of 840 miles of on-street facilities and 456 miles of off-street facilities, totaling 1,296 miles. The Bike Plan is recommended for update in 2016, and again in 2021. It is likely that the percentages and total miles of both on-street and off-street facilities will increase as a result of the forthcoming update.

The Bike Plan describes the various planning activities incorporated into the planning process, as well as a detailed description of the public involvement process. The planning process included:

- Public Involvement
- Technical/Policy Analysis
- Data Collection
- Draft Facility Recommendations
- Revised Draft Facility Recommendations
- Draft Plan, and
- Final Plan

In addition to quantifying and mapping the existing System, the Bike Plan identified four "Regionally Significant and Signature Facilities" that represent critical connections between large areas, or may serve as major thoroughfares or spines of the network. These facilities may cross physical barriers (i.e.; freeways or rivers), or because of their highly-visible nature, they may take on a signature quality for design or aesthetic improvements. These projects were either under design or funded in 2011, and may be complete or under construction today.

Of the four projects identified in the Bike Plan, three projects, or portions thereof, are located within or near the CityMAP Study Area:

Design District Connection: I-35E Crossing – This project provides a 3/4–mile link between the Katy Trail at the Victory Overlook and the southeast end of the Trinity Strand Trail in the Dallas Design District. The trail crosses below and adjacent to I-35E, Stemmons Park and Oak Lawn Avenue. The master plan for the I-35E Crossing includes the following functional uses: parking lot, a dog run, benches, public art and scenic overlooks.

Trinity Corridor Levee Top Pathway / Regional VeloWeb Bicycle Highway – This project is envisioned as a "bicycle highway" that would be constructed on

top of portions of the existing Trinity River Levee system. The trail could double as an emergency and maintenance vehicle route. This concept is consistent with both the Dallas Trail Network Plan and the Trinity River Corridor Balanced Vision Plan.

Katy Trail U.S. 75 Bicycle/Pedestrian Bridge – Located approximately one mile north of the northern edge of the CityMAP Study Area, this project envisions the creation of a signature bicycle/pedestrian bridge to span U.S. 75 and frontage roads to provide an east/west connection for the Katy Trail between Airline Road and Glencoe Park. Each of these projects are thought to be significant in their ability to make critical connections that would facilitate increased bicycle commuting to the downtown Dallas core by increasing user safety and access across otherwise inhospitable areas.

DALLAS BIKE PLAN

The Bike Plan also identifies a number Bicycle Programs and Supporting Policies that are envisioned to encourage bicycle use and acceptance as an alternative mode of travel for commuting or recreation, while increasing awareness of the many health benefits associated with cycling, and improving motorist and bicycle user safety. These programs/policies most relevant to CityMAP are listed with associated action items below:

Program: Bicycle Transportation / Dallas Bikeway System Advocacy and Marketing

- Action 5.3: Establish and maintain the City bicycle planning program and the Bicycle Advisory Board.
- Action 5.4: Facilitate and/or support existing and new bicycling promotion events through partnerships with community organizations.
- Action 5.5: Develop, provide, and maintain a Dallas Bikeway System map.
- Action 5.6: Develop an interactive, internet-based bicycle route way-finding program.
- Action 5.7: Establish and maintain a Bikeshare program.
- Action 5.8: Plan and implement a youth bicycle program.
- Action 5.9: Develop and implement bicycling promotional materials and strategies.
- Action 5.10: Expand the Safe Routes to School Program to encourage children to walk and bicycle to school.
- Action 5.11: Increase enforcement of bicyclist and motorist behavior to reduce bicycle-motor vehicle-related accidents.
- Action 5.12: Establish and maintain Bicycle Commuter Incentive Reimbursement program through the U.S. IRS for City employees support/ promote use of program for other employees.

Program: Physical Network

- Action 5.13: Incorporate or study Citizen requested scenarios or service areas.

Program: User and Provider Benefits

- Action 5.14: Encourage bicycle/transit commuter incentives.

Finally, and perhaps most importantly, the Bike Plan includes a series of Implementation Strategies. These strategies include targets for project implementation of new on-street bicycle facility miles, a proposed project prioritization method and prioritization criteria, action items, and performance measurement criteria that can be utilized to measure the progress and success of plan implementation. The Bike Plan also includes ideas related to Funding Strategies, with recommendations for utilizing both public and private funding sources.

The Project Implementation targets were divided into four categories and include:

- **Strategic Demonstration / Early Implementation Projects**
  These projects are located in downtown and its immediate surrounding districts (i.e., projects that were already being planned by the City (in 2011) as roadway reconstruction projects that will have designated bicycle facilities as part of the bikeway system network).

- **Near-Term Implementation Projects (2012-2014)**
  The Bike Plan recommends the installation of approximately 90 miles of new on-street facilities, including approximately 20 miles of bicycle lanes, 10 miles of cycle tracks/buffered bike lanes, 30 miles of shared lane markings, 25 miles that will need further study and 5 miles of additional network connections (not studied- likely to be shared lane markings).

- **Medium-Term Implementation Projects (2015-2017)**
  The Bike Plan recommends the installation of approximately 370 miles of new on-street facilities, including approximately 50 miles of bicycle lanes, 40 miles of cycle tracks/buffered bike lanes, 80 miles of shared lane markings, 50 miles that will need further study and 80 miles of additional network connections (not studied- likely to be shared lane markings).

- **Long-Term Implementation Projects (2018-2021)**
  The Bike Plan recommends the installation of approximately 480 miles of new on-street facilities, including approximately 50 miles of bicycle lanes, 50 miles of cycle tracks/buffered bike lanes, 90 miles of shared lane markings, 60 miles that will need further study and 150 miles of additional network connections (not studied- likely to be shared lane markings).

THE 2011 DALLAS BIKE PLAN AND CityMAP

The Bike Plan was prepared to promote the use of bicycles as a viable transportation alternative to the automobile, to establish a seamless network of bicycle facilities throughout the City, and to serve as a transportation link to transit facilities and modalities. The plan was developed to improve bicycle mobility for the entire City, which would include, and overlap, the CityMAP study area.

The purpose of the CityMAP project is to study and develop overarching solutions that will enhance all modes of transportation, including automobiles, transit, bicycles and pedestrian activity within the CityMAP study area.

The scenarios for each corridor will be evaluated against the current and future Bike Plans to determine where the existing transportation infrastructure serves as a barrier to efficient bicycle facility connections, and how the scenario supports future bicycle travel planning with the goal of enhanced mobility for all travelers. Each corridor and scenario will include a high level review of the bicycle connectivity opportunities and challenges.

These key connections link the CBD and various downtown venues to the Katy Trail, the Trinity Strand Trail, The Bishop Arts District, Fair Park and the Santa Fe Trail to the east. These connections were viewed as the priority bike facility connections at the time that the Bike Plan was produced in 2011. Several significant developments have occurred in the intervening years that will influence the forthcoming update. These projects include but are not limited to the proposed DART D2 light rail line through downtown, the proposed Texas Central High Speed Rail project and station area, and continued residential growth in Deep Ellum, South Dallas, and Uptown Dallas, among others, that would warrant both additional or improved bicycle and pedestrian connections.

REGIONAL TRANSIT VISION

The DFW metropolitan area is served by three main transit agencies DART, The Fort Worth T (The T), and the Denton County Transportation Authority (DCTA). Additionally, the McKinney Avenue Transit Authority (MATA) operates the historic streetcar that travels between the Uptown and CBD districts. DART, The T, and DCTA all provide bus and para -transit services within their respective service areas. DART also operates the longest light-rail system in the United States, co-operates the TRE commuter rail service with The T (between downtown Fort Worth and downtown Dallas), and operates the Dallas Streetcar which links to Downtown Dallas and Oak Cliff. In addition to bus service, DCTA also provides commuter rail service known as the A-Train that operates between downtown Denton and DART's Trinity Mills light-rail station in Carrollton.

All of the regional transit agencies are currently working on long-range transit system plans or transit "visions". These plans provide the agencies with a road map for system expansion over a 25 to 30 year time horizon and are typically updated every ten years. The system plans are also fiscally constrained and ultimately inform the transit component of NCTCOG's regional long-range mobility plan. While all of these transit agencies are technically competitors and are all working to improve mobility within their respective service areas, these agencies are also all concerned with improving connections between their systems in order to provide better coverage and enhanced transportation options for the entire region. For example, DART and DCTA have a shared station at Trinity Mills in Carrollton, and DART and The T co-operate on the TRE, and the agencies are always on the look-out for opportunities to provide additional shared connections throughout the region.

These system-to-system connections are one of the shared transit vision goals for all of the transit agencies in the region. Other major regional transit goals include providing a viable transportation option for regional commuters, adequately serving transit dependent populations, and leveraging the transit investments to create economic development opportunities surrounding the various transit stations. While the region shares a general transit vision, each transit agency creates its own plan to achieve that vision within their respective service areas. The CityMAP study area is contained entirely within the DART service area and thus the remainder of this section focuses specifically on the DART transit vision and plan.

DART's most recently approved long-range transit system plan is the System Plan 2030. However, DART recently kicked-off the System Plan 2040 effort in December 2015 with a planned completion date of early 2016. The existing System Plan 2030 calls for investments throughout DART's existing service area, including investments in Express Rail (i.e., commuter rail), Rapid Rail (i.e., light rail), Express Bus, Enhanced Bus, and Rapid Bus. All of these are major capital projects that would be planned and implemented within the 2030 time frame.

With the light rail system essentially built out, the plan calls for relatively short extensions to the light rail network, including extension of the Red Line south to Loop 12 (Walton Walker), Blue Line south to I-20, Green Line east towards I-635, and an extension across the Trinity River from Downtown Dallas past the Trinity Groves development and into West Dallas. Additionally, the plan calls for Commuter Rail service along the Cotton Belt corridor in North Dallas between Plano on the east and DFW Airport on the west. Major bus investments include a new Bus Rapid Transit (BRT) route along Northwest Highway between I-635 on the east and the Bachman Station on the Green Line on the west as well as along Garland Road in East Dallas between I-635 and I-30. The local bus network would also include a number of changes around the service area, with a focus on route revisions that improve ridership numbers or eliminate under performing routes and the addition of new routes to areas of population and employment growth.

Looking towards System Plan 2040, anticipated major additions and revisions since the completion of System Plan 2030 include:

- **2nd Downtown Light rail Alignment (D2 Alignment)** – Construction of a second light rail alignment in downtown Dallas between Victory Park on the west and Deep Ellum on the east, designed to maximize capacity, alleviate train congestion issues, and provide operational flexibility, specifically by providing an alternative route during emergency situations that require the existing transit mall on Pacific Avenue to shut down.

- **Streetcar Link** – Since the completion of System Plan 2030, the City of Dallas received federal funding to construct an initial streetcar route between Union Station in downtown Dallas and Methodist Dallas Medical Center in Oak Cliff. An extension is currently under construction to extend the route further south into Oak Cliff to the bustling Bishop Arts District. However, in Downtown Dallas, a gap exists between the Dallas Streetcar to Oak Cliff and the MATA trolley; therefore, DART is planning an extension of the Dallas Streetcar east through Downtown Dallas to connect with the MATA trolley.

- **Cotton Belt Corridor** – Providing transit service on this corridor is a top priority for DART and the member cities in the north. However, due to funding constraints, implementation of commuter rail on the corridor as previously proposed is not currently feasible, and despite efforts to identify innovative funding and financing options, a solution has not yet been identified, resulting in the project being pushed out of the current planning time frame. Interest in transit in the corridor remains extremely high however within the region; therefore,for this reason, DART is now considering other modes in the corridor in addition to commuter rail, including BRT, as BRT is a more feasible from a capital cost perspective option.

- **High-Speed Rail (HSR)** – Another project that has surfaced since the completion of System Plan 2030 is a proposed high speed rail project connecting Houston and Dallas with a potential connection to Fort Worth. The train would travel at speeds up to 205 mph, meaning the journey between Dallas and Houston would be under 90 minutes. The project is currently in the planning development stage with a proposed opening for revenue service in 2021. The HSR project has a proposed station in Downtown Dallas, adjacent to the Trinity River near South Lamar and I-30. DART is planning to interface with HSR through a potential new underground light-rail station at the Convention Center and/or through enhanced pedestrian connection to the proposed HSR station. This project would feed a large number of passengers onto the DART rail system each and every day, greatly impacting rail operations; therefore, DART is taking a proactive stance, and planning for this eventuality today by scheduling the opening of the D2 light rail alignment and the Streetcar extension prior to the opening day of the HSR project.

Decades of building out the extensive light rail system has left DART burdened with large amounts of debt. Therefore, DART's focus has shifted primarily towards operational improvements in the short and mid-term that boost ridership, with targeted investment in a few major capital investment projects – D2, Streetcar Link, and Cotton Belt. In the long-term, towards the end of the planning time frame, DART's borrowing capacity opens back up and DART regains the ability to construct additional major capital projects; further building upon their continued efforts to achieve their regional transit vision.

REGIONAL TRANSIT VISION

DART®

2030 Transit System Plan

Light Rail Blue Line & Station (Existing)

Light Rail Red Line & Station (Existing)

Trinity Railway Express TRE
Commuter Rail & Station (Existing)

Light Rail Orange Line & Station (Committed)

Light Rail Green Line & Station (Committed)

2030 Rail

Express Rail

Rapid Rail

2030 Bus

Express Bus

Enhanced Bus

Rapid Bus

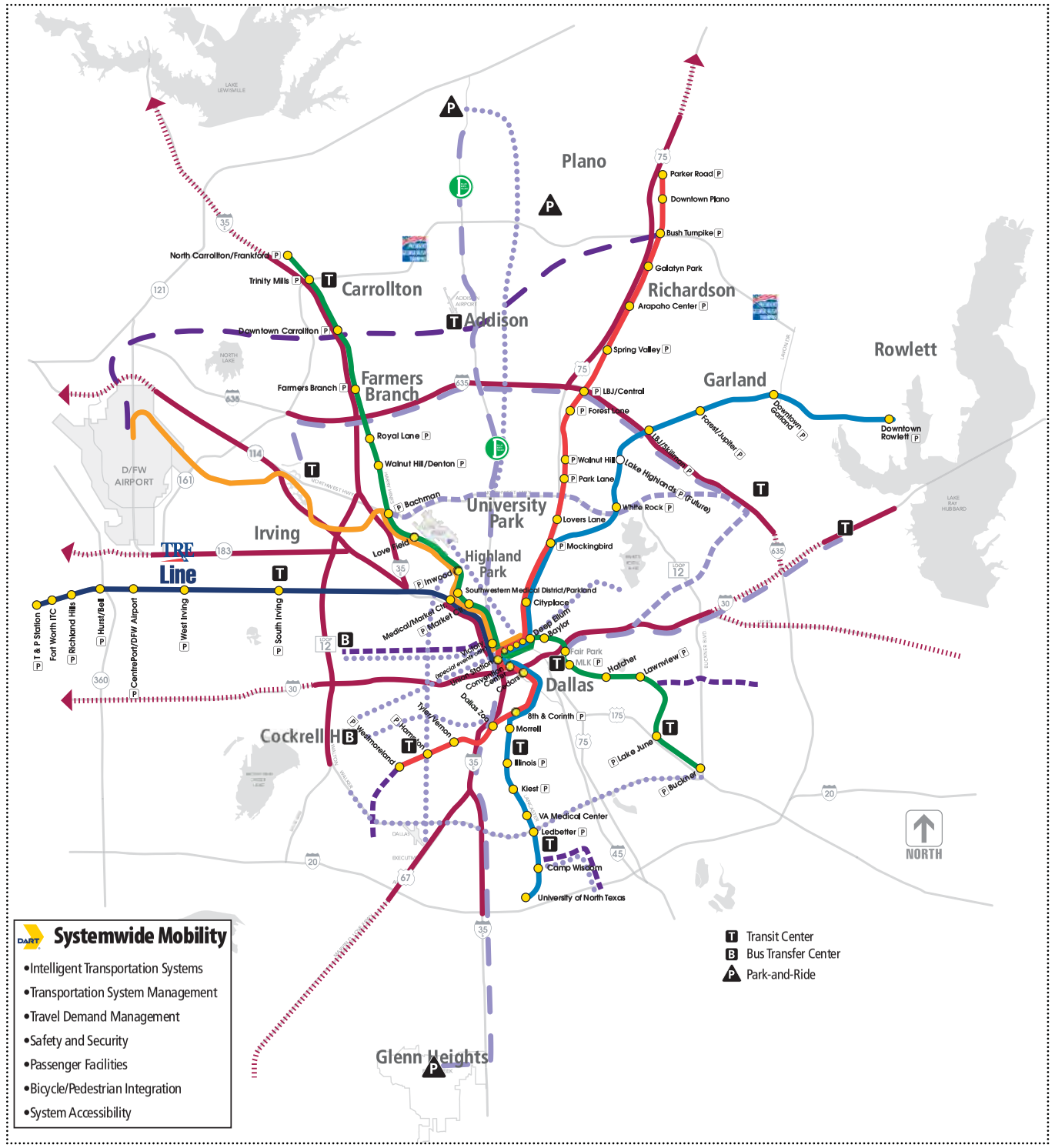
2030 Managed HOV Lanes

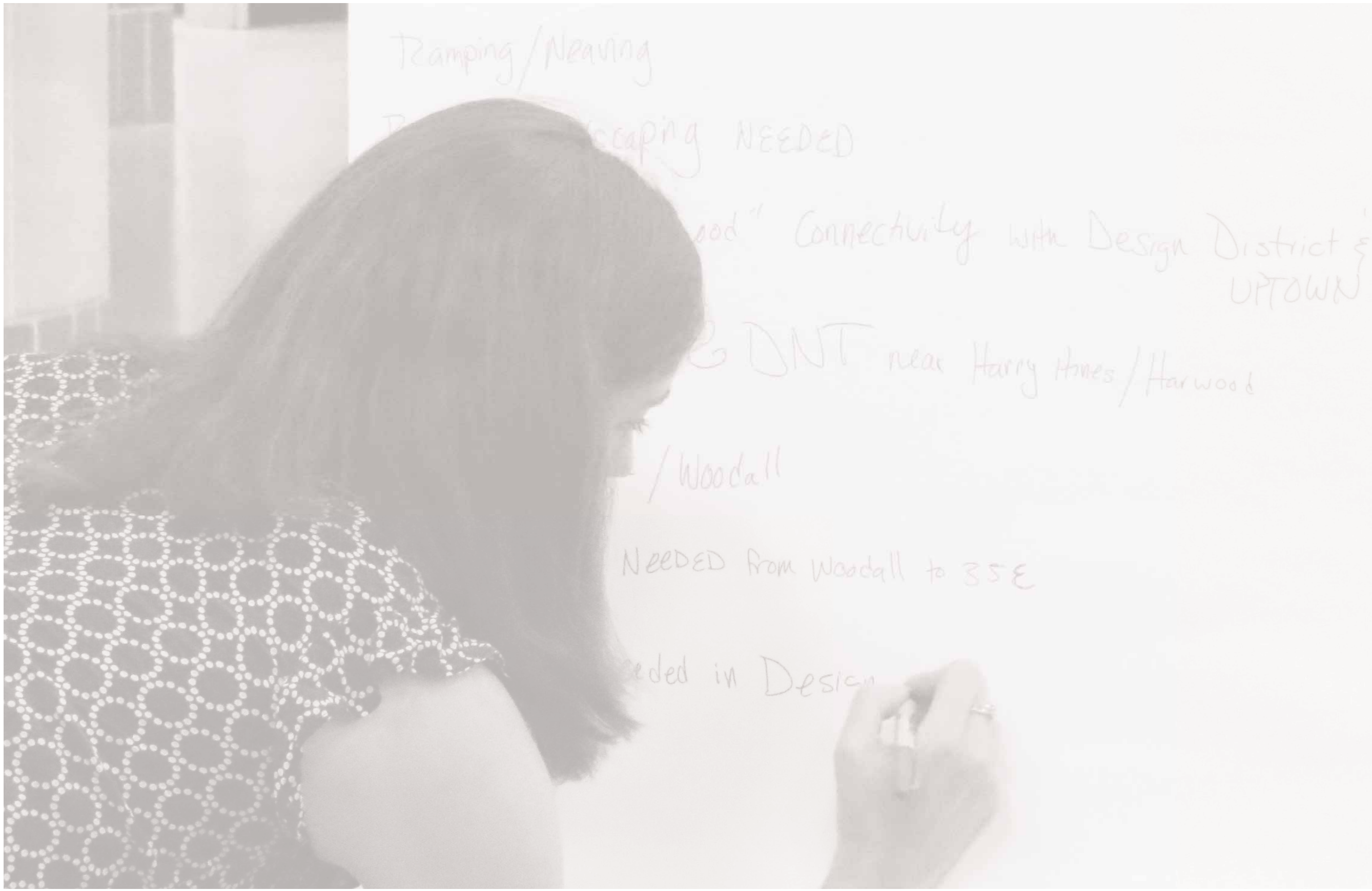
DART Participation

No DART Participation

2030 Paratransit (service provided systemwide)

2030 Systemwide Mobility




Ramping/Weaving
NEEDED
Connectivity with Design District &
UPTOWN
DNT near Harry Hines/Harwood
/Woodall
NEEDED from Woodall to 35E

CHAPTER 3 | STAKEHOLDER PERSPECTIVE



WE LISTENED TO STAKEHOLDERS

A major distinguishing attribute of this project is that it is driven by stakeholder and public feedback. The conceptual solutions found in this report are based on the local community's wants and needs. This chapter explains how we engaged the stakeholders and received ideas.



ENGAGEMENT STRATEGY

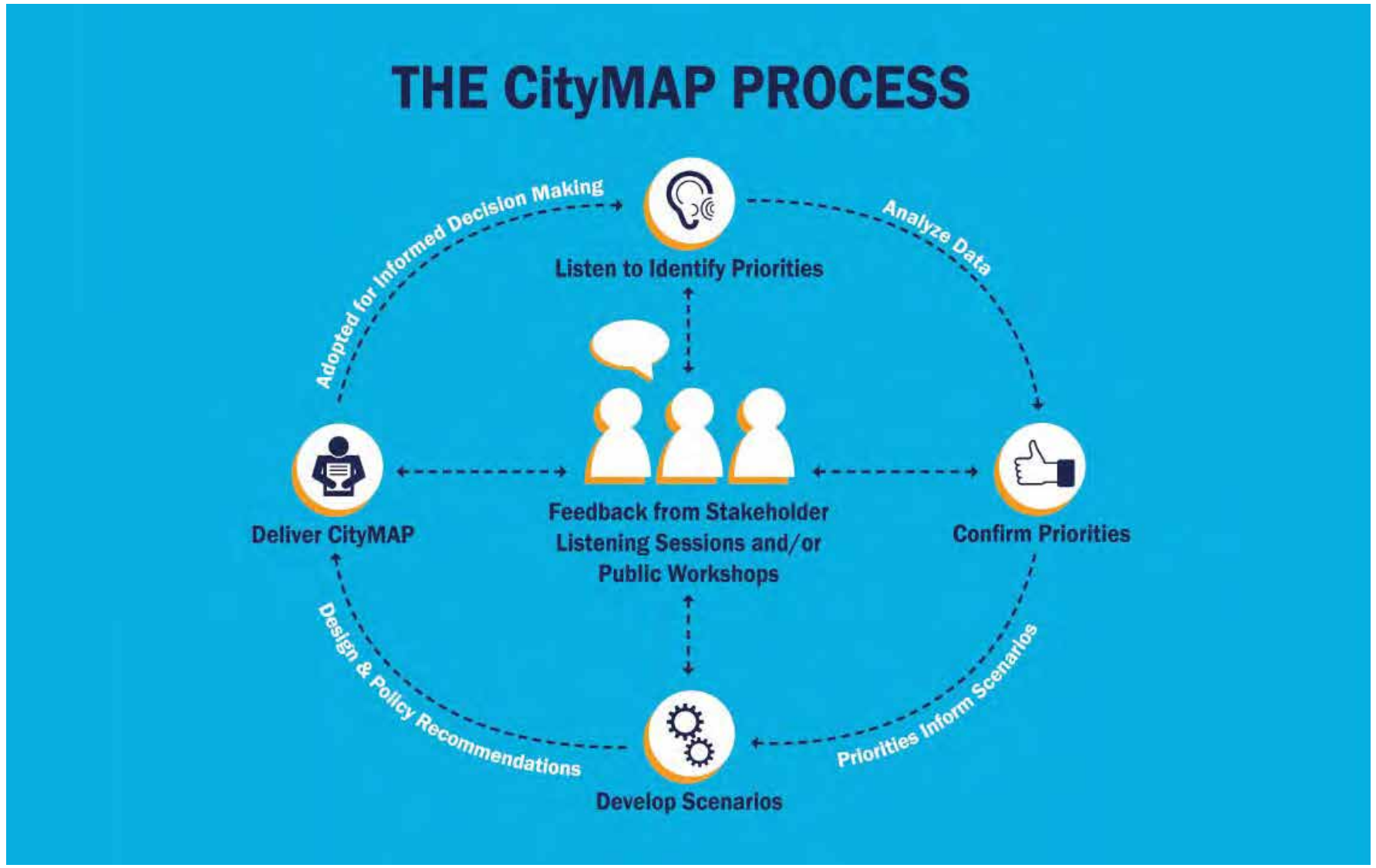
At the inception of CityMAP, a Stakeholder Engagement Plan (SEP) was developed to document stakeholder engagement efforts used to encourage outreach and participation among key stakeholders and gather information and feedback for the final Dallas CityMAP Report. Additionally, the SEP presents and describes the tools and strategies used during the initial phases of the Dallas CityMAP process. As part of the overall SEP, the Dallas CityMAP team interviewed a wide variety of local stakeholders to ensure the assessment was inclusive. Stakeholders consisted of elected officials, government staff, public and private agency representatives, advocacy groups, institutions, developers, business owners and private residents. Each stakeholder was identified because of their distinct Dallas voice and as champions for the city.

The team took a targeted, Dallas-specific approach to engaging its initial stakeholders. Invitations were sent out to each of the 120 identified stakeholders to introduce the project and to request the opportunity to meet with them.

Once the letters were distributed, the CityMAP team began scheduling one-on-one meetings, or "listening sessions," to gain an understanding of current thoughts and concerns related to the study area. In total, the team spent more than 150 hours with more than 200 stakeholders as part of 80 listening sessions.

Once the majority of stakeholder interviews had been conducted, the CityMAP team took the study to the public to gather additional input. Three public meetings were held in different venues within the study area. Residents were invited to the public meetings through mass email distribution, social media, partner agency communications and ads placed in *The Dallas Morning News*, *Al Día* and *The Dallas Weekly*.

The listening sessions and public meetings, as well as other public outreach activities, including a project website, are discussed in further detail on the following pages. A summary of comments and topics of interest discussed at the listenting sessions, public meetings and project website are included in the Appendix.



PROCESS GRAPHIC

IDEAS FROM THE STAKEHOLDER LISTENING SESSIONS

A critical component of CityMAP was receiving input from key stakeholders. Over a nine-month period beginning in March 2015, interviews were conducted in a free form interview style to allow stakeholders the opportunity to communicate ideas and visions of importance to them. As a result, a wide range of ideas and topics were discussed.

The listening sessions were held at either a place of the stakeholders' choosing or the HNTB Dallas office at Bryan Tower. The sessions typically lasted approximately one hour. The interviewees were provided with a questionnaire before their listening session to help guide the discussion. The questions touched on the stakeholders' priorities, interests, concerns, knowledge, ideas, obstacles and other opinions they might have on development on their vision for communications within the study area. Common themes from the listening sessions included:

- Barriers and limited connectivity presented by the roadways;
- Mobility challenges associated with getting downtown;
- Strong link between land development and transportation infrastructure;
- Parking focus limits transit usage;
- Limited opportunities for bicycle/pedestrian travel; and
- Highways limited economic development opportunities.

"I think this is the most important thing happening in Dallas since DART and the Kessler Plan."

Patrick Kennedy
Coalition for a New Dallas



LISTENING SESSION WITH COMMISSIONER ELBA GARCIA



LISTENING SESSION WITH SENATOR ROYCE WEST

FEEDBACK FROM THE PUBLIC WORKSHOPS

The Dallas CityMAP team held three public workshops:

Thursday, October 8, 2015
Townview Magnet Center
1201 E. 8th Street
Dallas, Texas 75203

Thursday, October 22, 2015
Dallas Regional Chamber
500 N. Akard Street, Ste. 2600
Dallas, Texas 75201

Thursday, November 5, 2015
African American Museum
3536 Grand Avenue
Dallas, Texas 75210

Venues were chosen for their close proximity to key neighborhoods in the study area. Approximately 250 people attended the public workshops. Attendees consisted of Dallas residents, elected officials and CityMAP team members. The format of the meetings included a formal presentation and group breakout sessions to discuss the four main interstate corridors in the study area. Attendees were assigned to one of four starting tables when they signed in.

After a brief presentation about the study and the purpose of the workshops, each group went to their assigned CityMAP study area table — I-35E and The Southern Gateway, I-345, I-35E Lowest Stemmons, and the I-30 Canyon and The East Corridor. CityMAP and Downtown Dallas 360 staff moderated the tables and assisted attendees in marking up maps and taking comments. Attendees spent approximately 20 minutes at each table discussing challenges, opportunities, and solutions with other attendees, and then rotated to the next table.

This process continued until each attendee had the opportunity to provide input in each corridor. After the breakout sessions, everyone gathered together to discuss the findings from each of the four groups.

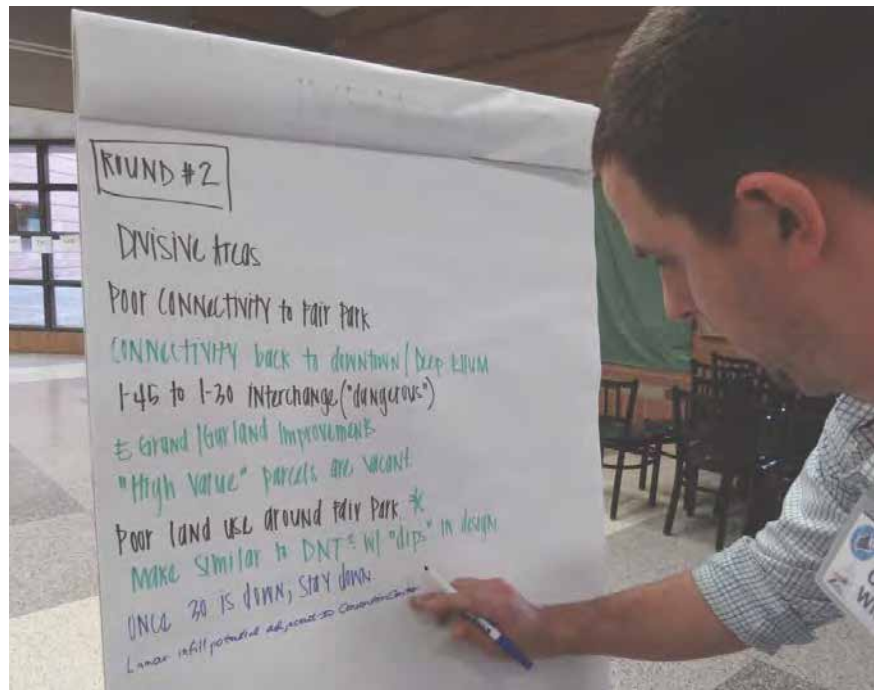
The findings from all of the public listening sessions and workshops were translated into the scenarios that can be found in Chapter 4.



PUBLIC LISTENING SESSION AND WORKSHOP AT DALLAS REGIONAL CHAMBER



PUBLIC LISTENING SESSION AND WORKSHOP AT AFRICAN AMERICAN MUSEUM IN FAIR PARK



NOTE TAKING AT PUBLIC LISTENING SESSION AND WORKSHOP

WEBSITE AND BRANDING

BRANDING

Logo and graphic guidelines were developed for the CityMAP study to give the project an identity and to establish consistency on all materials and discussions throughout the process. The philosophy behind the logo design and guidelines was to communicate the project objectives to the stakeholders as bulleted below:

- The use of the word 'City' in the brand communicates the study area encompassed by the project;
- The term 'assessment' suggests that the effort would involve revisiting and reviewing existing conditions and assumptions related to the study area;
- 'Process' implies that the document will be a step-wise approach to understanding the issues and developing the scenarios;
- The acronym "MAP" suggests the outcome will be a visual product; and
- The logo provides a map of downtown and ties in the acronym.

DALLAS CityMAP WEBSITE

CityMAP created a mobile-friendly website at www.DallasCityMAP.com, which provides details about the study, information detailing how to become involved and promotes two-way communication with a page dedicated for visitors to submit questions or comments about the study. Specific comments/questions can be found in the Appendix of this report. The website garnered 15,000 page visits over the course of twelve months, and nearly 50 questions were received and responded to.



DALLAS CITYMAP LOGO



DALLAS CITYMAP WEBSITE

PRINT AND DIGITAL IMAGES

In addition to the website, a wide variety of multi-functional, bilingual materials were developed to help educate and inform the public about CityMAP. The graphics guidelines were carried through all materials to ensure consistency and clarity. Below is a comprehensive list of materials and what they were used for:

POWERPOINT
Several versions of a CityMAP-themed PowerPoint were developed to present during stakeholder meetings, public listening sessions, workshops and other meetings. PowerPoints were used for both digital and print use.

FACT SHEET
A one-page front and back fact sheet provided information about the study and the study map. The sheet was developed to provide to interviewees and to hand out at the public listening sessions and workshops. It was also available to download or view on the CityMAP website.

STUDY AREA MAP
A study area map was developed for various print materials, the website and on large exhibit boards.

CORRIDOR MAPS
Individual corridor maps of the main corridors within the study area were developed and used at public listening sessions and workshops, and for viewing on the website.

COMMENT CARD/QUESTIONNAIRE
A comment card and questionnaire was developed to hand out at public listening sessions and workshops as well as to fill out on the website.

ONE-PAGE FLYER
A one page flyer was developed to distribute via email, on the website and through physical copy distribution to promote the public listening sessions and workshops.

CITYMAP VIDEO
A three minute video was filmed and produced to demonstrate the existing urban landscape within the study area. It was shown at the public listening sessions and workshops, available on the website and as an upload to YouTube.

PRINT AD
A print ad was developed to run in the *Dallas Morning News, Al Dia* and *Dallas Weekly* to promote the public listening sessions and workshops. These ads ran three times on three different weeks.

EMAIL BLASTS
Email blasts were sent to the CityMAP stakeholder list prior to each public listening session and workshop to invite them to the sessions.

STUDY TIMELINE
An easy to understand timeline was developed to show stakeholders a quick snapshot of where the study is at the current time and what is coming up next.

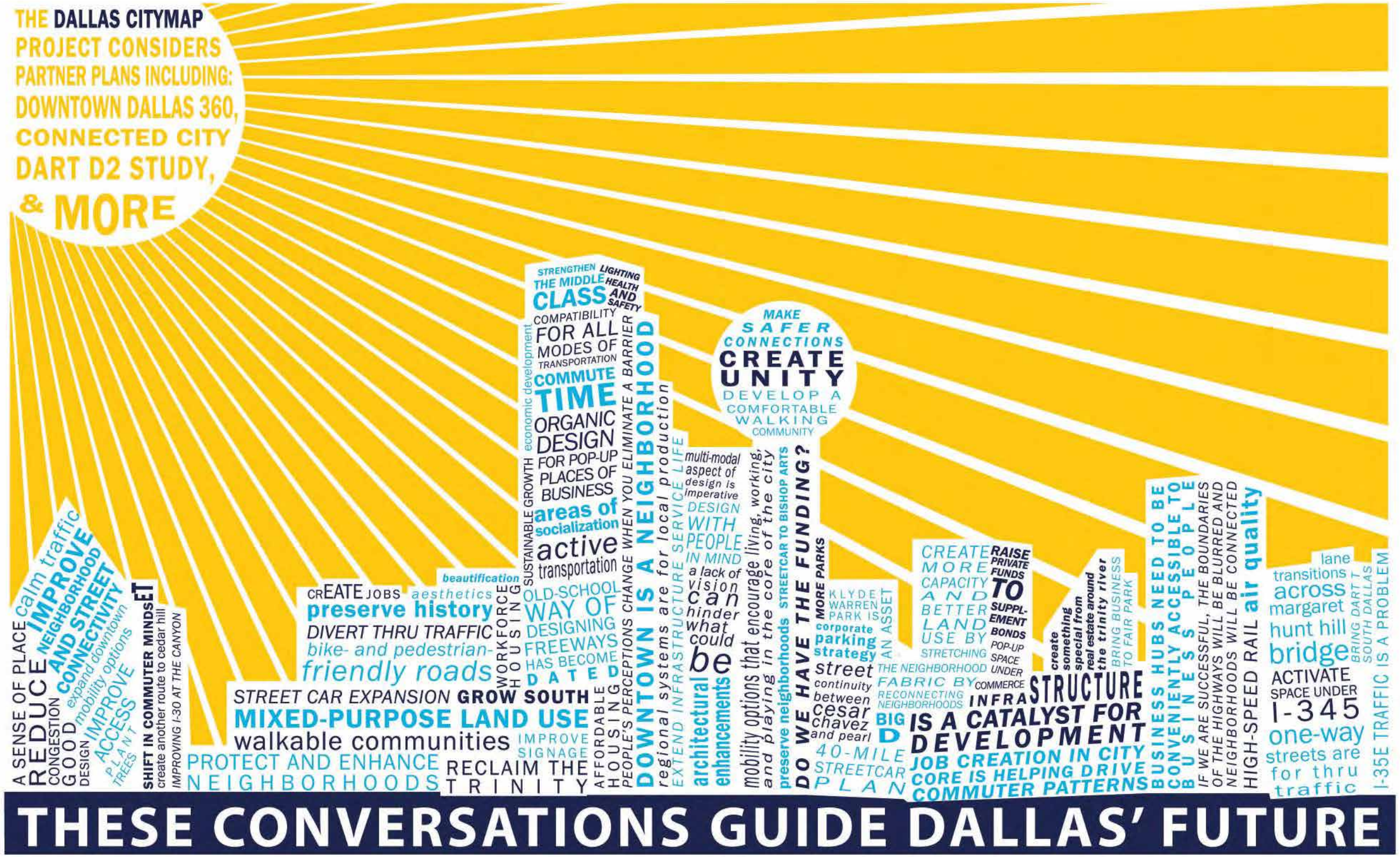
INTERVIEWS
Nearly a dozen video interviews were conducted with various attendees at the public listening session and workshops to gather information of personal opinion regarding the study and personal desires for Dallas' future. These were uploaded to the website as well and are available on YouTube.



FLYER FOR PUBLIC LISTENING SESSIONS AND WORKSHOPS



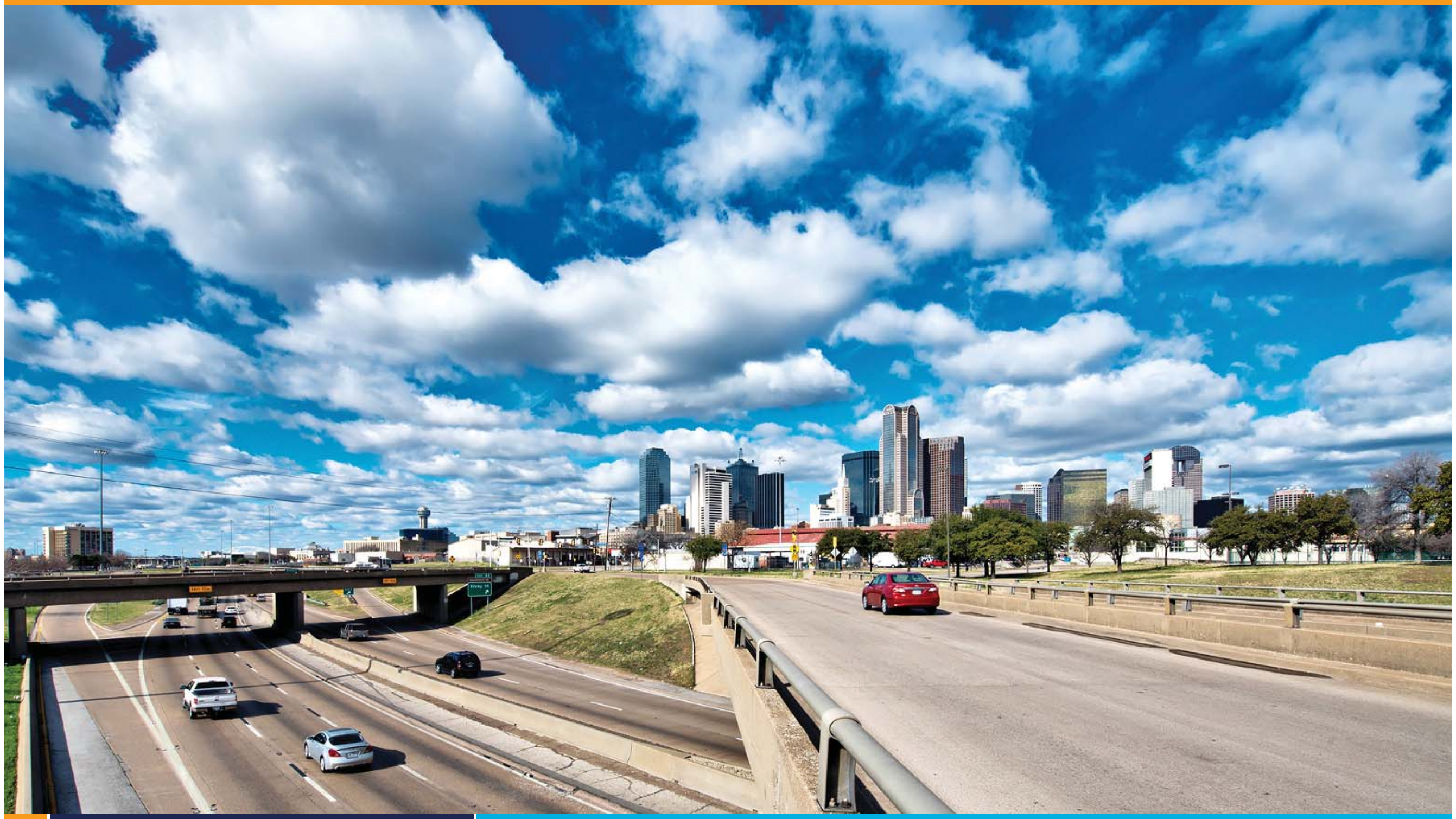
WEB SUMMARY OF PUBLIC LISTENING SESSIONS AND WORKSHOPS



WEB ANIMATION

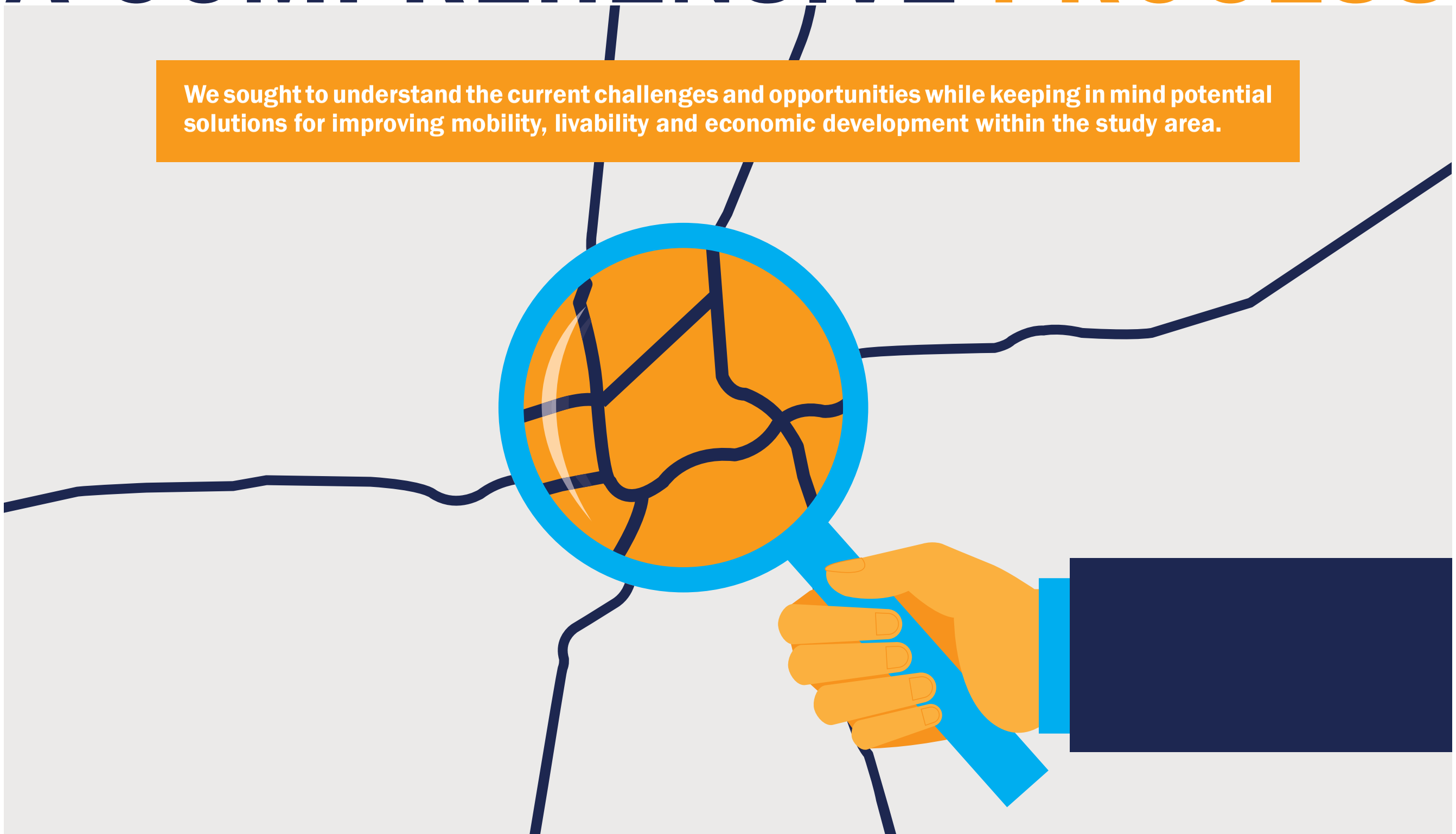

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CHAPTER 4 | SCENARIO DEVELOPMENT PROCESS



A COMPREHENSIVE PROCESS

We sought to understand the current challenges and opportunities while keeping in mind potential solutions for improving mobility, livability and economic development within the study area.



STUDY AREA

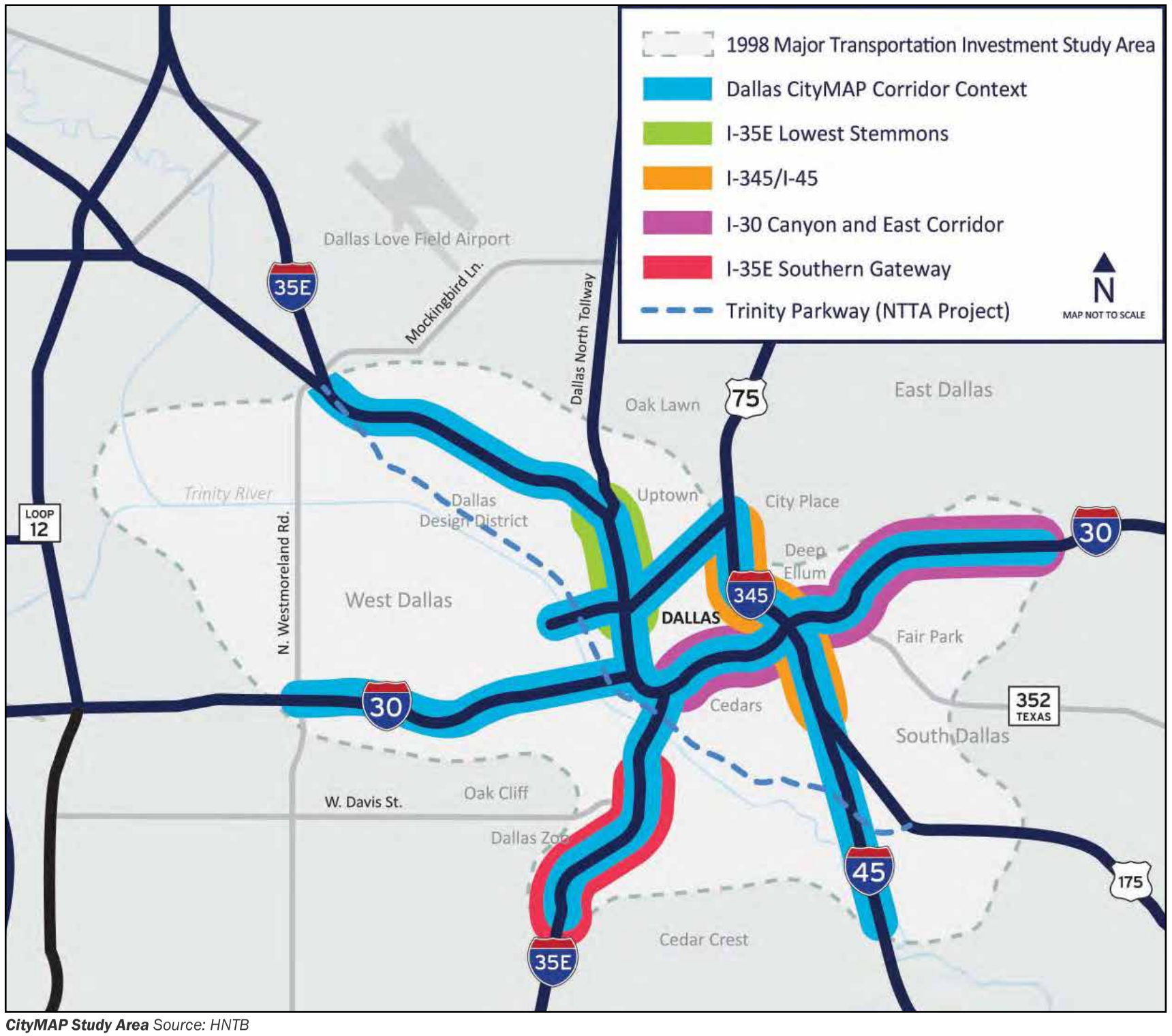
CityMAP will deliver a set of design and policy scenarios for all corridors included as part of this study. Based on stakeholder feedback, a series of design scenarios were selected that include proposed roadway alignment changes, development and re-development opportunities, and order-of-magnitude costs, including funding, construction feasibility, partnership potentials and agency responsibilities.

The study is focused on the major highway facilities in the Dallas urban core and connections to and between adjacent neighborhoods and districts. These existing highways provide efficient through movements and connections to major activity centers, but they are not currently designed to efficiently support other modes of transportation. These facilities often function as barriers between the thriving and growing mixed-use districts and neighborhoods in the Dallas urban core. With this in mind, CityMAP is charged with taking a holistic look at the highways within the urban core, analyzing and identifying opportunities to improve connections with the surrounding districts and neighborhoods for all modes of transportation, through the development of design scenarios and policy considerations.

Specific corridors under evaluation in the CityMAP study include the following:

- **I-35E: Lowest Stemmons** – The 1.9 mile long segment of I-35E from Oak Lawn Ave on the north and I-30 on the south.
- **I-35E: Southern Gateway** – The 2.0 mile long segment of I-35E from Colorado Boulevard on the north and Clarendon Drive on the south.
- **I-345/I-45** – The I-345 portion is a 1.7 mile long highway segment connecting with US 75 and Woodall Rodgers Freeway on the north and I-30 on the south; and the I-45 portion is a 1.5 mile-long highway from I-30 on the north to Lenway Street on the south.
- **I-30: Canyon and East Corridor** – The 4.2 mile long segment of I-30 from Hotel Street on the west to Dolphin Road on the east.

While evaluation and analysis is focused on these specific facilities between the specified limits, the project team recognizes that connections to adjacent facilities is important for determining the feasibility of recommendations and ensuring context-sensitive solutions. The study area also includes I-35E north to the US-183 split, I-30 west to Westmoreland Road, and I-45 south to the Trinity River. Within these defined areas, the project team is working with local stakeholders, governmental organizations and the general public to develop various design scenarios that result in better linkages to and between the numerous districts and neighborhoods in the urban core.



CityMAP Study Area *Source: HNTB*

REGIONAL ECONOMICS AND CONTEXT

DFW is one of the most vibrant markets in the United States. To understand how the region relates to CityMAP, this analysis explored regional trends and how the various proposed scenarios might enhance the economic base. This could be through creating opportunities to improve housing choices, providing greater connectivity to jobs, reducing impacts to the environment and other social benefits. The proposed scenarios analyses create a framework for decision-making and underscore potential economic benefits to each modification proposed.

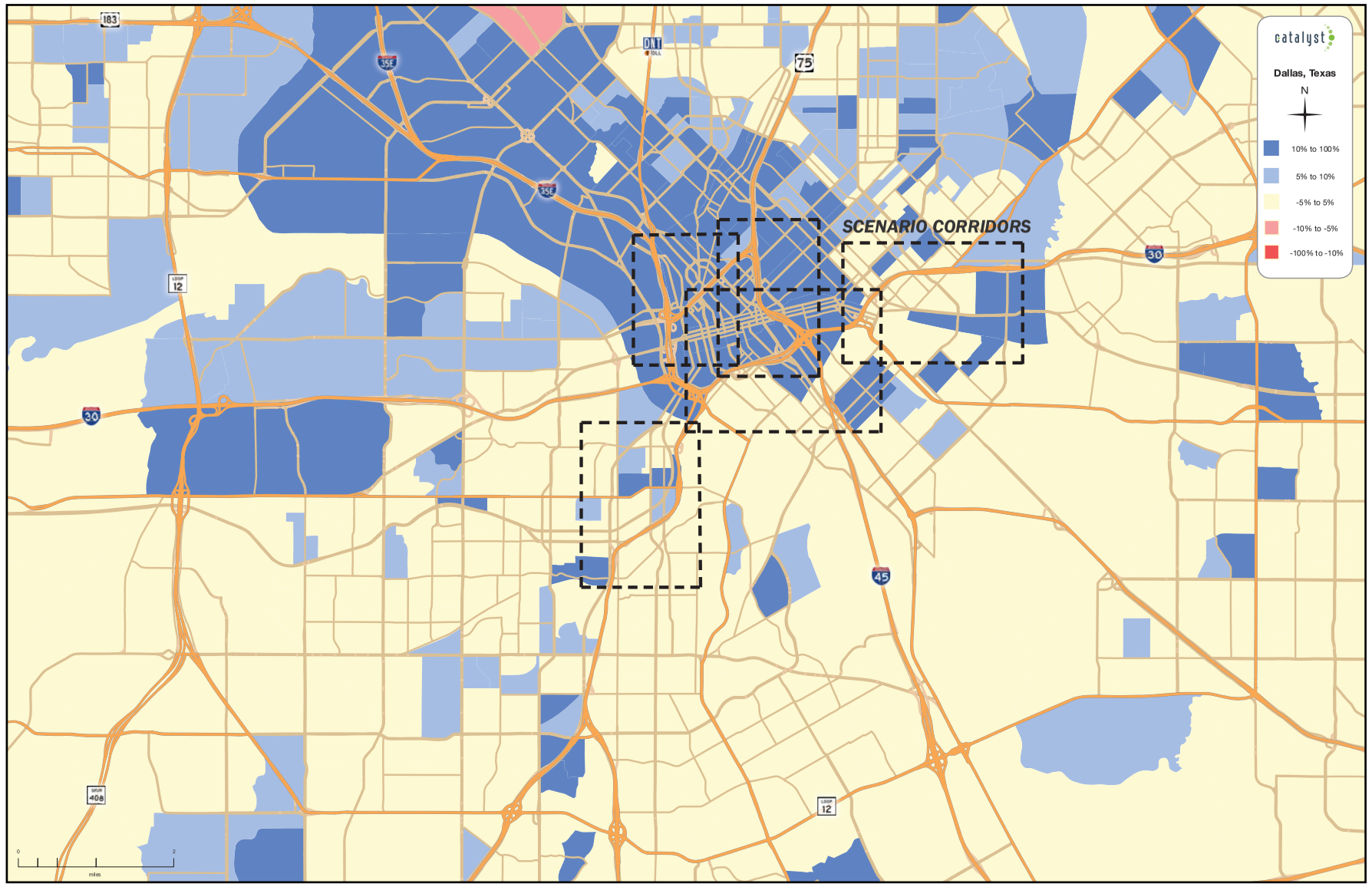
POPULATION TRENDS IMPACTING THE DALLAS CORE

The population within the state of Texas has undergone rapid growth in recent years; and Texas is anticipated to sustain robust growth going forward. According to the Texas State Data Center (TSDC), the agency that provides demographic data for the state of Texas, the 2015 estimated population of Texas is approximately 27.6 million. This is up from 20.8 million since 2000 (a total growth of approximately 32%). Based upon TSDC assumptions, the population of Texas is projected to eclipse 40.5 million by 2050.

The DFW metroplex has also experienced a strong population increase, with projected growth expected to rise steadily across the region in the coming years. As of 2010, the TSDC estimates that the 2015 population of DFW is slightly greater than 7.0 million. Using a moderate TSDC estimate, the population of DFW will be greater than 10.7 million by 2050. This growth provides substantial opportunity to increase the economic base within Dallas' urban core.

The adjacent map shows population growth across DFW by census block group. The darker shade of blue represents more rapid population growth while the lighter shades represent slower growth. Dallas County 2015 population is estimated to be greater than 2.4 million and is the largest county in the region based on population. Although the growth rate of Dallas County is projected to be slightly lower than some of the northern area counties, the growth within Dallas County is expected to be substantial. By 2050, the Dallas County population is projected to be 3.3 million, or a potential increase in 700,000 people.

The expected increase in population within Dallas County provides the opportunity for the CityMAP process to take advantage of this growth. By increasing the core components of mobility, livability and economic base - particularly in and around downtown Dallas - the CityMAP area will contribute to Dallas' competitiveness and as a choice place to live and work.



Dallas-Fort Worth Metroplex Population Growth *Source: Catalyst Commercial*

INCOME AND OVERCOMING RELATIVE GEOGRAPHIC DISPARITIES

The median household income in 2015 across the state of Texas is estimated at $53,600 (ESRI). When grouping Texas households into income ranges, the greatest percent of households earn between $50,000 and $74,999 annually (ESRI). The 2015 median household income across all DFW Metroplex counties is estimated at $61,300 (ESRI). The median household income in 2015 within Dallas County is estimated at $50,400 (ESRI). Grouping households into income ranges, the greatest percent of households in Dallas County earn between $25,000 and $49,999 (ESRI). Within the CityMAP study area, the median household income is roughly 20% lower than the median household income for Dallas County. Furthermore, the greatest percent of households - roughly 30% - within the CityMAP study area earn less than $25,000 annually. The CityMAP process is bringing stakeholders together for a conversation and exploration of ideas to improve transportation and create more livable neighborhoods resulting in opportunities for new job growth through improved

access to employment centers and broader housing choices helping overcome these social and economic conditions.

The following chart compares household income for Dallas County and the Dallas-Fort Worth Metroplex as a whole.

2020–2050 Population by DFW County

	Population 2020	Population 2030	Population 2040	Population 2050
Collin	975,957	1,211,461	1,496,177	1,794,493
Dallas	2,621,131	2,859,701	3,086,679	3,311,187
Delta	5,359	5,497	5,532	5,487
Denton	822,601	1,014,812	1,242,750	1,495,119
Ellis	179,078	213,832	249,455	286,483
Hunt	96,046	107,574	119,853	134,056
Johnson	173,103	198,761	225,251	254,140
Kaufman	128,122	158,947	194,001	233,532
Parker	138,373	163,780	191,733	223,325
Rockwall	97,466	120,573	146,334	171,220
Tarrant	2,039,890	2,287,581	2,528,520	2,758,129
Wise	68,070	78,265	88,876	100,448
DFW	7,345,196	8,420,784	9,575,161	10,767,619
Texas	28,813,282	32,680,217	36,550,595	40,502,749

Source: TDSC

DFW Area Median Household Income by Range

Income Range	Percent of Households		
	Texas	DFW Metroplex	Dallas County
$0-$24,999	10.6%	18.6%	23.6%
$25,000-$49,999	23.3%	22.2%	25.8%
$50,000-$74,999	29.4%	16.8%	17.3%
$75,000-$99,999	13.8%	13.3%	11.2%
$100,000+	10.2%	29.0%	22.0%

Source: ESRI

A DIVERSE CITY, AN OPPORTUNITY

The 2015 median age within the DFW Metroplex is 36.4 (STI Popstats). The 2015 median age within Dallas County as of 2015 is 35.6, slightly lower than the regional median age (STI Popstats). The population of the DFW Metroplex and Dallas County can be broken down further into generational age cohorts. This provides an understanding of the market and associated demand for housing, employment and services.

The youngest age group includes ages up to 17 years old and is known as Generation Z. The second youngest age cohort includes ages 18 to 34; known as the Millennials. The age cohort with ages between 35 and 49 is known as Generation X. And the age cohort between 50 and 74 are known as the Baby Boomers. The final age cohort, known as the Silent Generation, consists of the population aged greater than 75. Across all geographies, Generation Z is the largest age cohort based on percent of total population. The age cohort distributions highlight the relatively young population in both the DFW Metroplex and Dallas County, especially within Dallas County. The adjacent chart underscores the young age of the City of Dallas.

This analysis revealed an imbalance in age, income and employment within the CityMAP study area compared to DFW. This is likely due to the economic characteristics within the study area which contribute to the economic under-utilization occurring within many of these areas. However, modifications to the infrastructure facilities can create an opportunity to modify the context to create a framework to introduce housing choices, services and amenities that can create economic sustainability and encourage additional investment. Local population is necessary for a vibrant, economically-strong 24-7 core. Increasing population downtown has a positive effect on the retail market, local transportation systems and quality of life. Population also mitigates safety issues often occurring in vacant and blighted areas.

There are common requirements across all age groups for a complete urban core, but different age groups have independent needs and preferences in working and living choices. For example, a recent ULI study shows that Millennials who choose to live in and near downtowns have a greater need for affordable housing, desire access to entertainment, experiential retail and multi-modal transportation as they area less reliant on the automobile to access nearby employment centers. These were also frequent statements heard during the stakeholder interview process.

Area Age/Generational Distribution

Age Range (Generation)	Percent of Total Population by Geography	
	DFW Metroplex	Dallas County
0-17 (Generation Z)	27.5%	27.6%
18-34 (Millennials)	22.8%	24.2%
35-49 (Generation X)	21.1%	21.0%
50-74 (Baby Boomers)	24.7%	23.4%
75+ (Silent Generation)	3.8%	3.8%

Source: STI Popstats

Dallas also has a large population of families that have a desire to be located near urban centers. Families are an important component to downtowns, as they contribute to the workforce, create greater capacity for shops and businesses, generally have greater tenure and a wider range for housing values, and create generations that have an appreciation for culture and urban cores. To attract families, a downtown core needs quality schools, larger housing floor plans, parks and open space, safety, and several other factors. Currently, the CityMAP study area has very few areas that are family-oriented, and only 26% of households within the CityMAP area have children. Many progressive cities, such as Portland, Oregon, have policies geared towards accommodating families in their downtown with larger floor plans, increasing parks and open space and recruiting businesses that cater to this demographic. Supporting this, the stakeholder interview with the Uptown Development District stressed the need to improve safe multimodal connections to schools which also helps create a greater sense of community and leads to the retention with families of school age children.

Additionally, to attract residents over the age of 55 requires an emphasis on other needs such as access to healthcare services, reliable and accessible multimodal options, greenspace and affordable living choices.

REGIONAL ECONOMICS AND CONTEXT

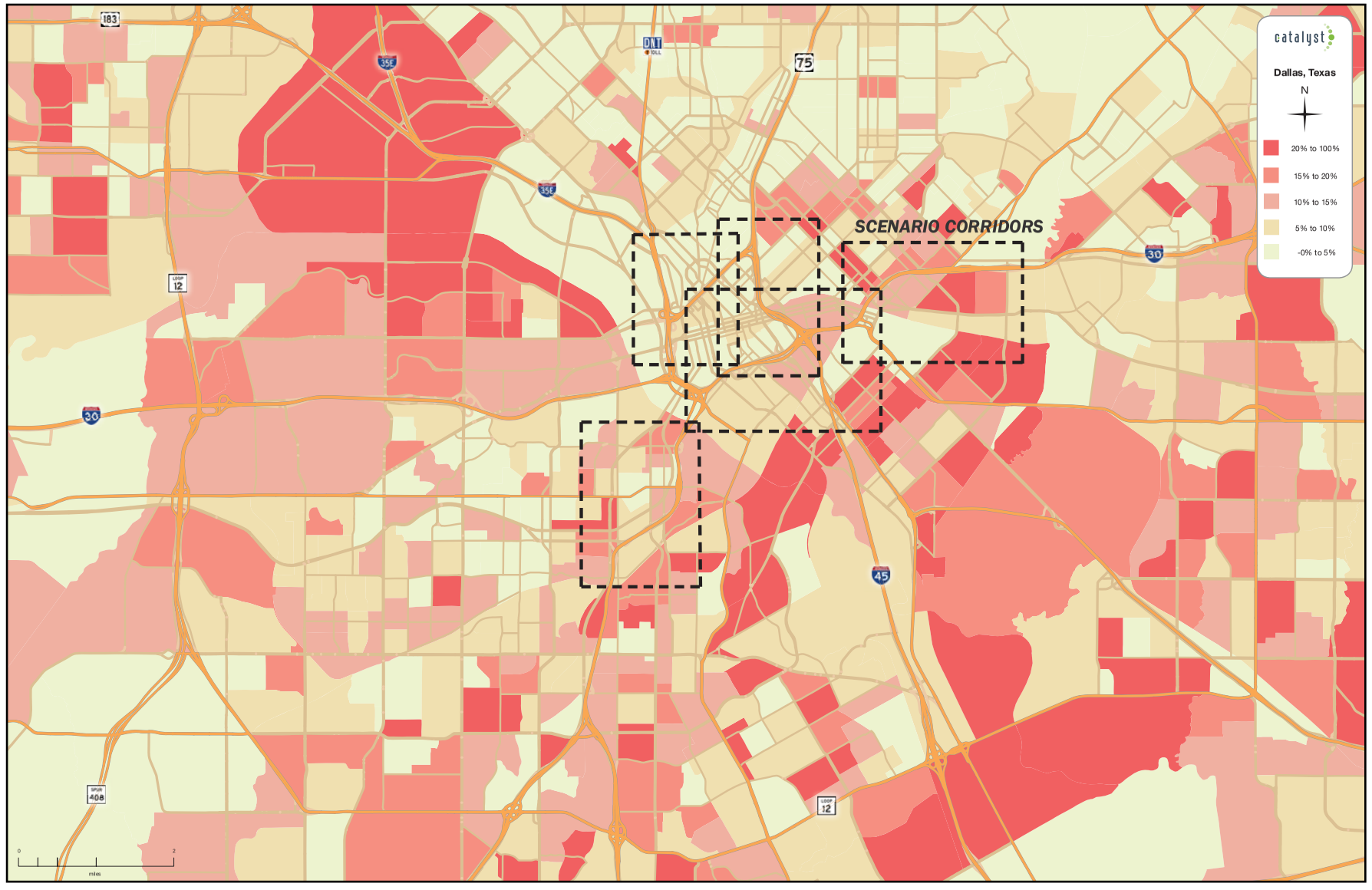
EMPLOYMENT TRENDS AND OPPORTUNITIES

As of August 2015, the statewide unemployment rate was 4.4% while the unemployment rate in DFW was only 3.8% (Texas Workforce Commission). The adjacent thematic map shows the unemployment rate for the DFW census block groups, with deeper shades of red representing higher unemployment rates. As indicated by the map, the area near the core and south of I-30 have some of the highest unemployment rates in the area.

To counter this issue, the CityMAP process can identify more integrated transportation solutions that help position the City for a stronger workforce. This requires an understanding of what The Texas Workforce Commission provides as industry data at a regional level, including establishments, average weekly wages and total employment by industry. The regional data provided is within a Workforce Development Area (WDA). The Dallas County WDA includes all of Dallas County and has been included within this analysis. The largest industry based on total employment in the Dallas County WDA is the Trade, Transportation, and Utilities industry, with a total 2015 estimated employment of 296,500. The second largest industry based on total employment is Professional and Business Services with approximately 288,100 employees within this industry, followed by Education and Health Services with an estimated 2015 employment of over 270,100.

The industry with the most establishments in the Dallas County WDA is the Professional and Business Services industry, with an estimated 16,230 establishments in the county. The three industries with the highest average annual wages are the Natural Resources and Mining, Information, and Financial Activities industries, all of which have average annual incomes greater than $110,000. The industry expected to see the most significant growth in terms of employment from 2015 - 2022 is the Professional and Business Services, with an anticipated increase of 26.2% followed closely by Education and Health Services (25.6% growth) and Construction (25.4% growth).

Recent trends reveal how valuable the CityMAP process is to employee attraction, as well. Analysis by JLL found that “knowledge-workers are not moving to where the jobs are, but instead want to choose where to live and have the jobs to come to them.” Observations gleaned from the stakeholder outreach is that this population is also serving as an advocate for making their neighborhoods more livable. They are acting as civic change agents to ensure that infrastructure dollars are spent in a way that aligns with their priorities and values. These trends underscore the importance of this process and opportunity for the capture of professional and health related jobs in the Dallas core if quality places are coupled with economic development opportunities. In short, great cities attract great talent.

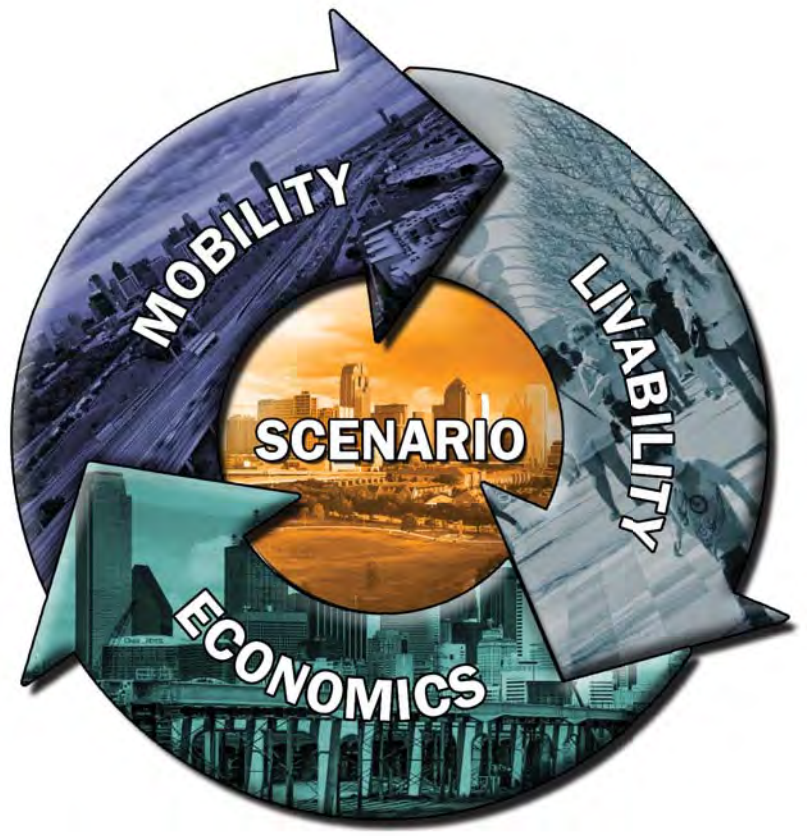


DALLAS-FORT WORTH METROPLEX UNEMPLOYMENT RATES *Source: Catalyst Copmmerical*

SCENARIO DEVELOPMENT OVERVIEW

Multiple scenarios were considered for each corridor within the CityMAP study area. Depending on the particulars of the corridor, the respective scenarios delineated represent optional geometric redesign concepts and the contextual considerations of the corridors for those concepts based on extrapolations from current designs, prior city plans, current market conditions and stakeholder feedback.

As described, the extensive stakeholder process resulted in insight into a complex set of interests with historic and contemporary considerations. CityMAP initially developed and considered scores of policy matters that were translated into factors. Narrowed for purposes of analysis of the scenarios and described in more detail later in this chapter, the factors represent the intersection of mobility, economics and livability.



SCENARIO CONTEXT GRAPHIC *This visual helped guide stakeholder discussions; ensuring each scenario considered mobility, livability and economics.*

Within a corridor, the factors are used to compare scenarios with each other to understand the implications of moving forward with each respective scenario in terms of timing, cost and economic development. The factors are not used to rank the scenarios against each other; rather, the factors are utilized to relate the scenarios to the community context and need, as well as to demonstrate a likely approach that can be taken if a particular scenario is to be pursued.

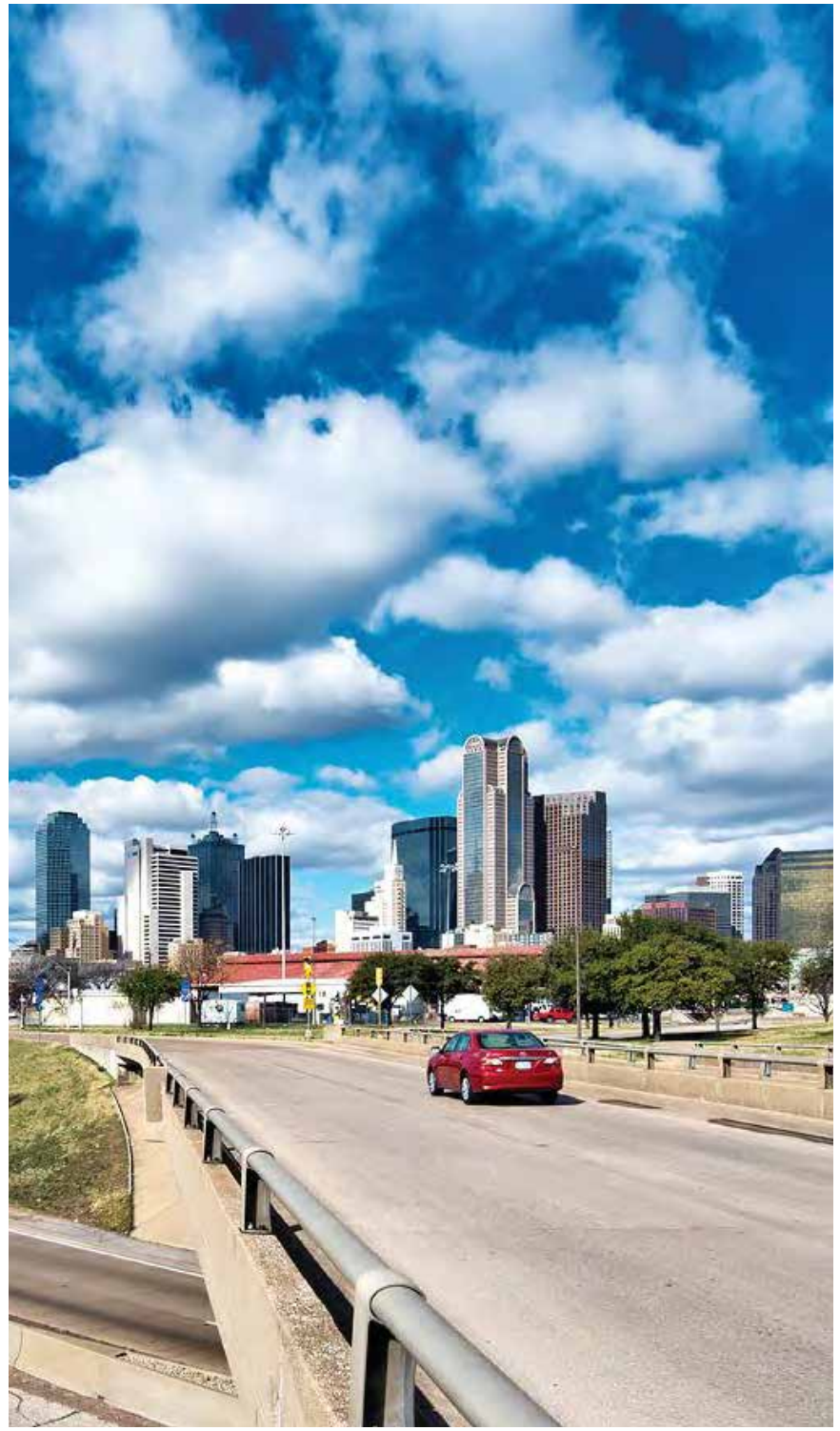
These factors selected are not all-inclusive, but they do represent themes and priorities gleaned from a diverse set of stakeholders. The understanding from stakeholder discussions and used in developing the factors also provided a methodology to consider the different opportunities within the scenarios in terms of timing. The CityMAP evaluation approach can be considered through three time frames: Quick Wins, Medium and Long Term:

- Quick wins represent projects that can be realized in 5 to 10 years, which may represent the initial phase of a particular scenario.

- Medium term represents projects with a longer time frame, such as 10 to 15 years, but that are still realizable within a time-frame expected as typical for transportation projects absent substantial complicating elements.

- Long term represents opportunities that will require a much longer span of time, greater than 15 to 20 years. Such time frame could be due to funding, environmental, design or general unknown conditions leading to a longer project duration.

The scenario time frame ranges in this initiative simply reflect the status and potential of the respective scenarios given the current conditions and are absent of potential accelerating considerations.



OBSERVED TRAVEL PATTERNS

INTRODUCTION

CityMAP addresses the freeways that serve the CBD and surrounding neighborhoods (Figure 4-1). The premise of Dallas CityMAP is that the downtown freeway system, last evaluated in the 1998 MTIS, is a defining element of downtown Dallas. As such, the City of Dallas and other stakeholders should provide input to TxDOT regarding the future configuration and operation of these facilities. The intent of CityMAP is to provide decision makers and stakeholders with information that allows them to provide TxDOT with the direction needed for future improvements to the downtown mobility system.

An understanding of the downtown freeways includes knowledge of how motorists traveling to and from the various radial routes (I-30 East, I-30 West, I-35E North, I-35E South, I-45, US 175 and US 75) navigate to and through downtown Dallas. It is also important to know how regional trips on the major interstate routes use the downtown routes. To provide information about both local and regional trips on these facilities, two different studies were conducted to enable the characterization of trips on the interstate facilities that serve downtown Dallas. These two studies were conducted at different times in 2015 and were designed to answer different questions. The first study, described below under Downtown Urban Core, investigated the origins and destinations of trips on each of the radial freeways in the vicinity of the CBD. The second study, described below under the Regional/Sub-regional caption examined trips that originated outside of the Dallas County I-20/I-635 perimeter. Both used the same technology and present observed (sampled) data rather than estimates or projections using a model.

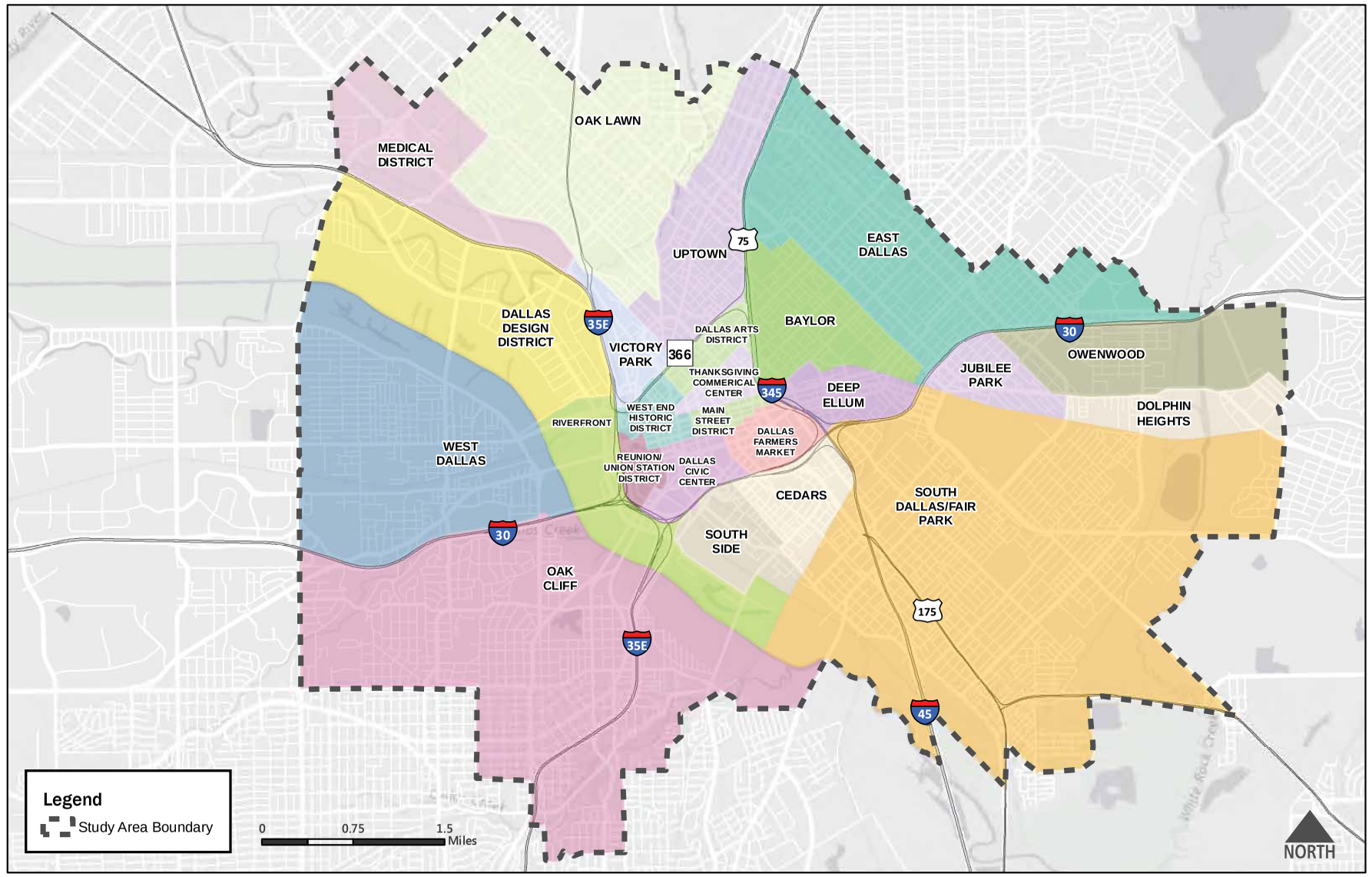


FIGURE 4-1 TRANSPORTATION ANALYSIS STUDY AREA BOUNDARY - ORIGIN: I-35E NORTH *Source: Kimley-Horn*

OBSERVED TRAVEL PATTERNS

TECHNOLOGY

To detect and measure the vehicular movements, this study utilized Bluetooth technology to identify vehicular paths. Bluetooth technology used for travel time or Origin-Destination (O-D) estimation is a fairly new tool. In the past, O-D data has been collected using travel surveys (stated behavior), license plate readers, or GPS data. The Bluetooth technology has the advantage of cost effectively collecting a large number of observed trips for a defined observation period. It is believed that this observed data will provide stakeholders, elected officials and analysts with a better understanding of how the downtown system is currently being used for trips to and from the different areas of the city.

The presence of vehicles traversing the roadways was captured using a technology developed by the Texas A&M Transportation Institute called, Anonymous Wireless Address Matching (AWAM). The technology is deemed "anonymous" because the device reads only the Media Access Control (MAC) address of the detected device. The MAC address has no personal data or information that can be used to identify an individual. The technology involves the use of a Bluetooth detector to identify the MAC address from the Bluetooth enabled device, with a timestamp at each station. The equipment is housed in cases and placed in proximity to the roadway. The information is remotely accessed and processed for statistical validity. The results for the two studies are summarized in each of the following sections.

DOWNTOWN URBAN CORE

The basic purpose of the survey is to inform how SH 366 (Woodall Rodgers), I-345, I-30 (the Canyon), and I-35E are used by motorists in conjunction with the radial routes (I-30, I-35E, US 75, and I-45. It is known that these facilities are used for local as well as regional and even inter- and intra-state travel. Due to cost limitations the study is restricted to observations near downtown. However, the goal is to provide observed (not modeled) data that shows how travel to and from the different radial routes navigates to and around the CBD.

Thirty-four vehicle observation stations (17 pairs) were located on the radial freeways serving trips into and out of downtown as well as at locations on the freeways around the Central Business District (Figure 4-2). These stations anonymously monitored all vehicle trips with Bluetooth enabled devices from 12:00:00 A.M. April 13, 2015 until 11:59:59 P.M. April 17, 2015. This constitutes one full work week of trip data. The data were aggregated to three time periods that correspond to the morning peak period (6:30 – 9:00 A.M.), afternoon peak period (3:00 – 6:30 P.M.), and the balance of the day (off-peak period). In addition to the Bluetooth monitors, traffic counts were performed along several of the freeway locations using video detection. Each video unit was installed within a safe distance from the roadway to capture a clear picture. It was ensured that the view was not obstructed by objects that could interfere with processing. Once the data was collected, it was uploaded to the portal, along with all the necessary information needed to process accurately. This information included volume, vehicle classification, and number of lanes, directions, and location. After the processing was completed, manual spot checks were performed to ensure accuracy. The traffic counts are a measure of the total vehicular demand on the facilities and allow an approximation of the total traffic demand for a movement by applying the percentages acquired using Bluetooth data. The results are presented in map format for A.M. peak-period and the P.M. peak-period for each of the seven interstate and U.S. highway routes serving to downtown.

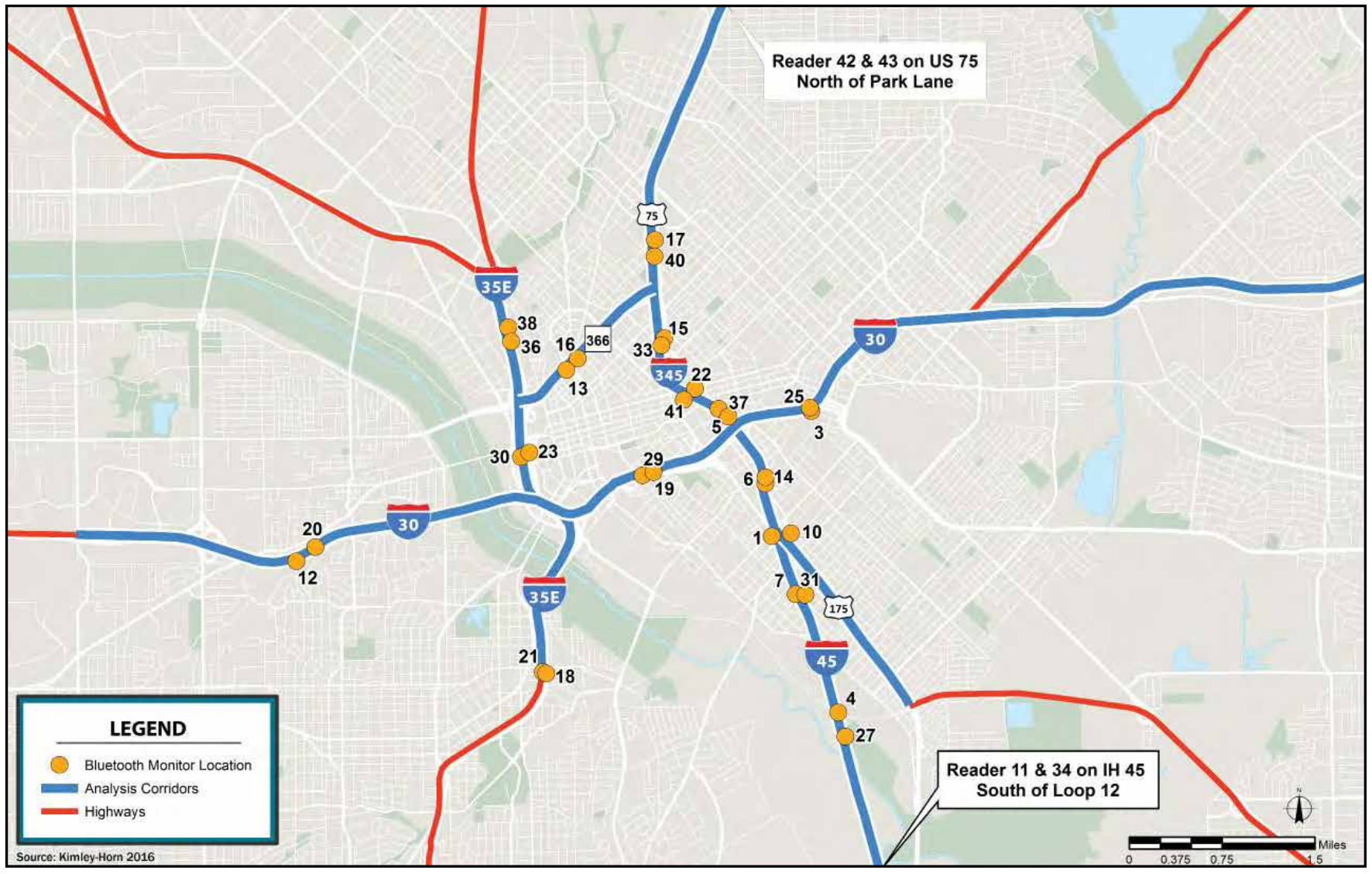
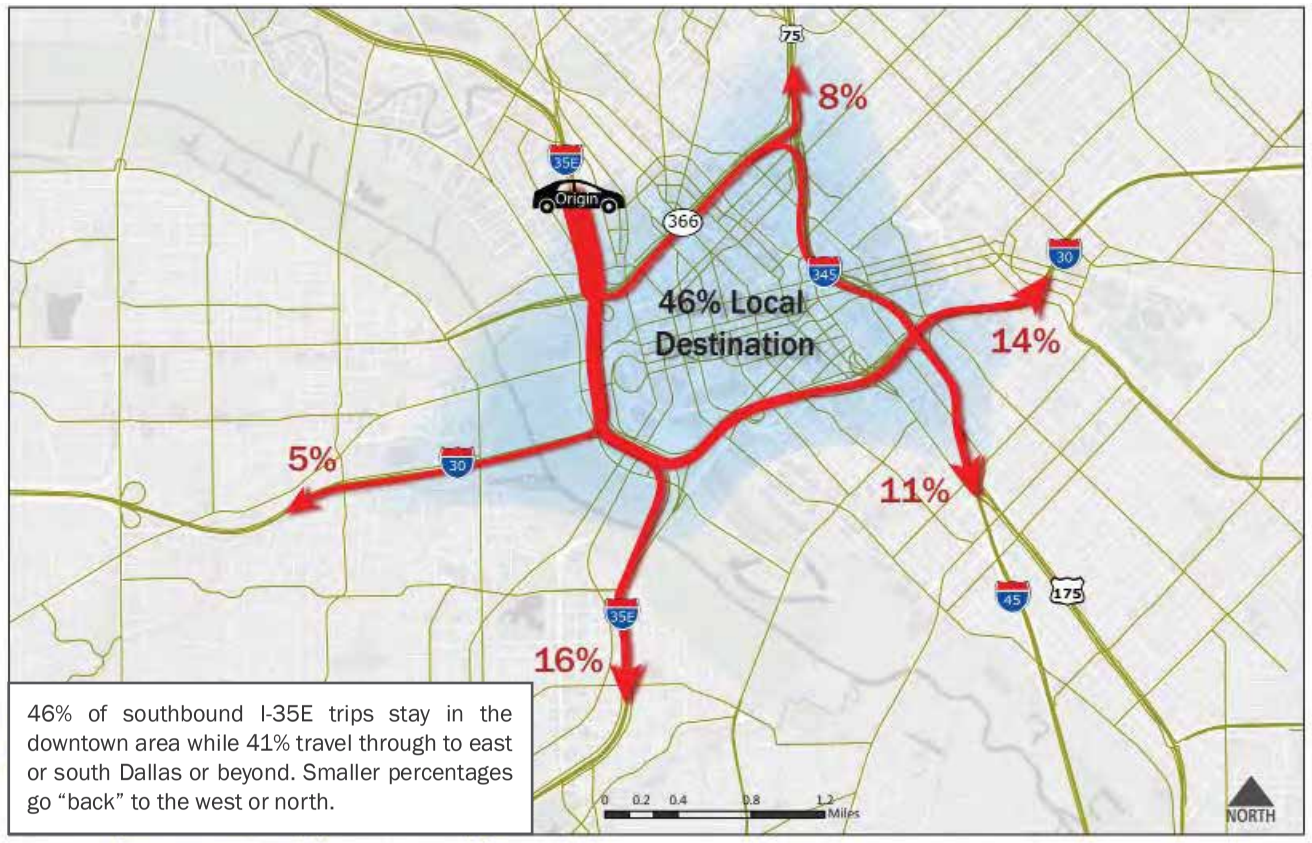


***FIGURE 4-2 BLUETOOTH DETECTOR LOCATIONS** - Source: Kimley-Horn*

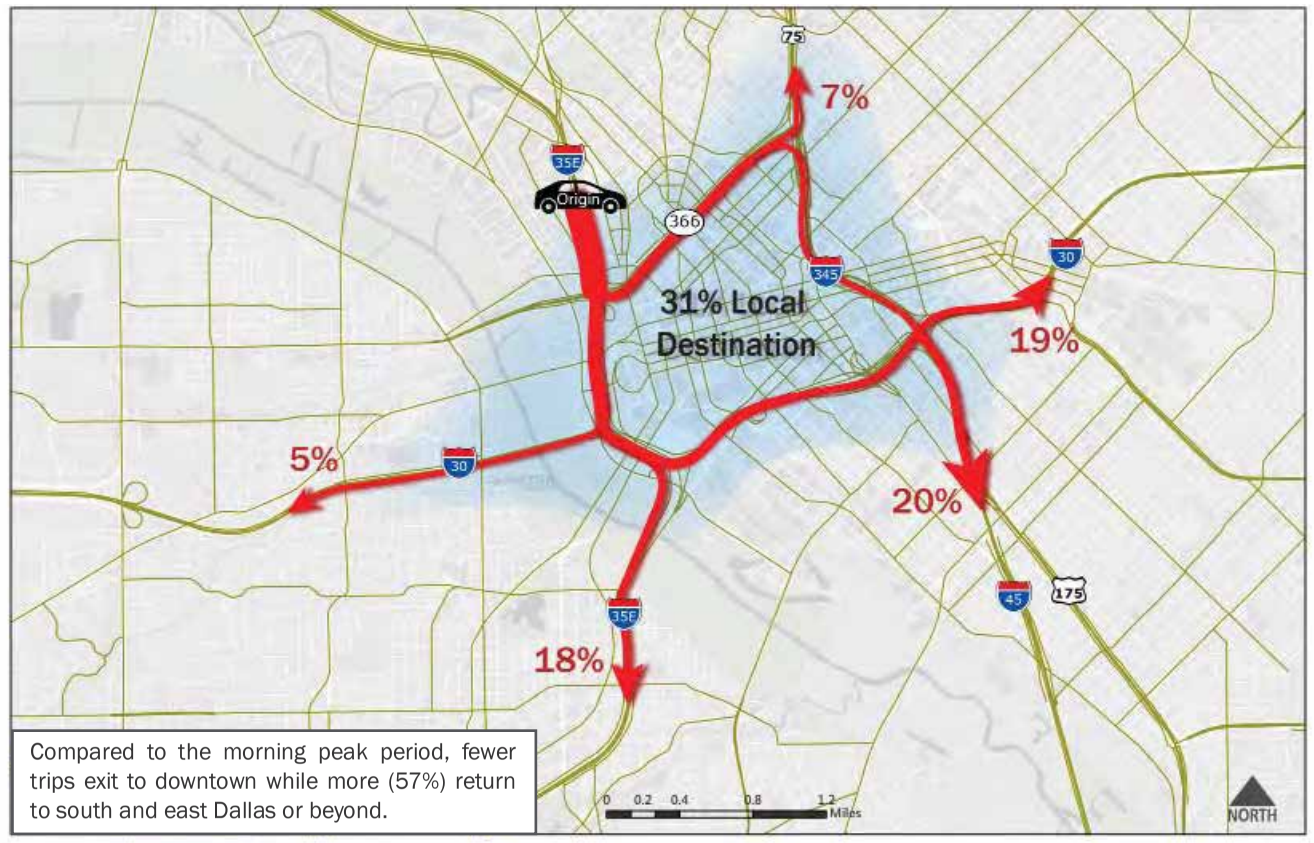
PRESENTATION OF DOWNTOWN URBAN CORE RESULTS

Each of the following figures (4-3 through 4-16) highlights the seven radial routes that approach the CBD. These are I-35E (north), I-35E (south), I-30 (west), I-30E (east)/R.L. Thornton, I-45 (south), US 75 (north)/North Central Expressway, and US 175 (south) which branches from I-45. The route, or "leg" with the car symbol reflects the origin of surveyed trips and the other legs represent a departure. The values shown on each leg for the A.M or P.M. peak period, are the percentage of the trips observed at the origin that were matched at the departure location. The vehicles that were not matched at a departure location are assumed to have exited from the freeway system, presumably to a "local" destination. The local destination percentage is estimated by subtracting the sum of the departure leg percentages from 100 percent. The figures and the observations in the adjoining text provide some insights about how the downtown freeway system is used by motorists.



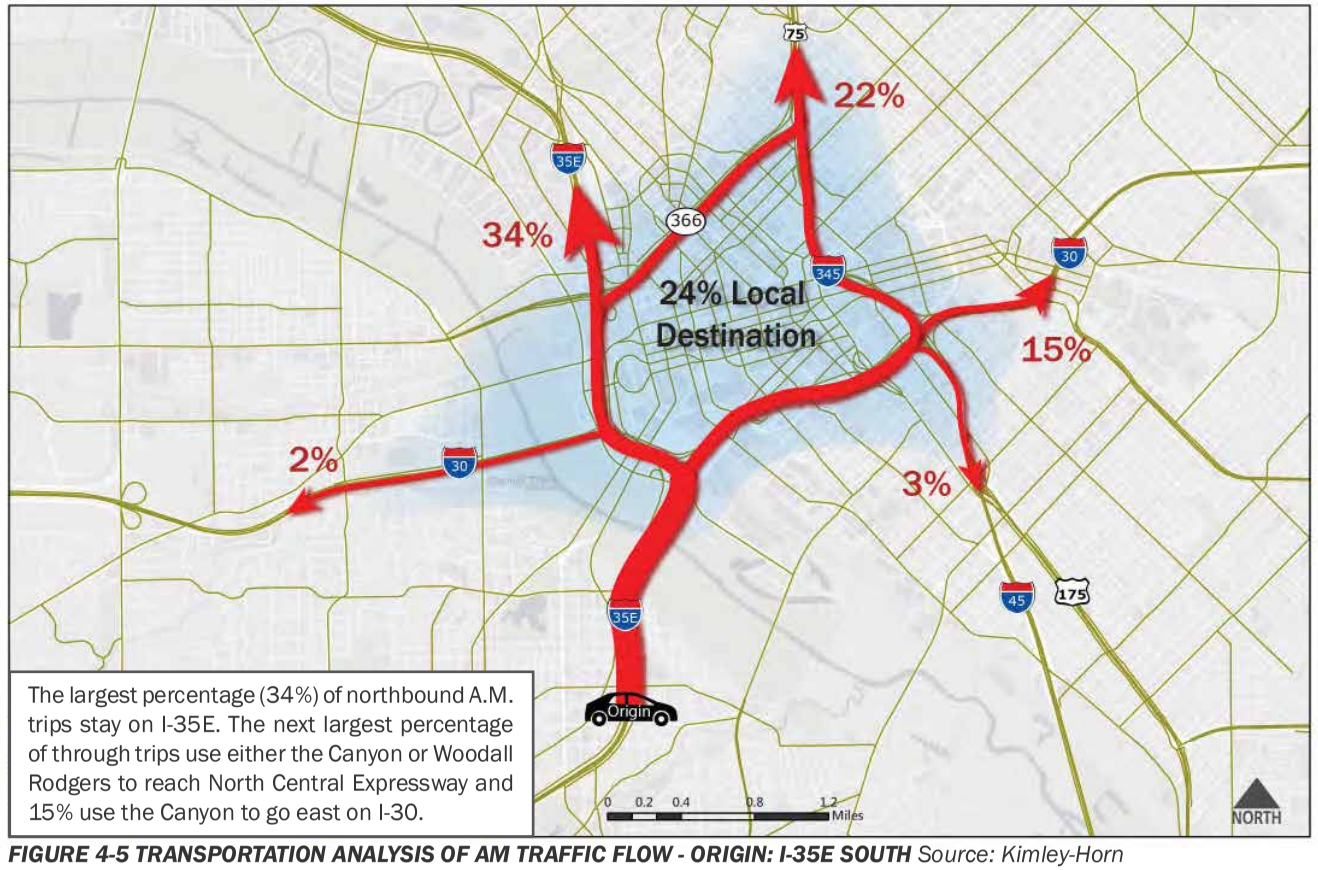
46% of southbound I-35E trips stay in the downtown area while 41% travel through to east or south Dallas or beyond. Smaller percentages go "back" to the west or north.

FIGURE 4-3 TRANSPORTATION ANALYSIS OF AM TRAFFIC FLOW - ORIGIN: I-35E NORTH *Source: Kimley-Horn*



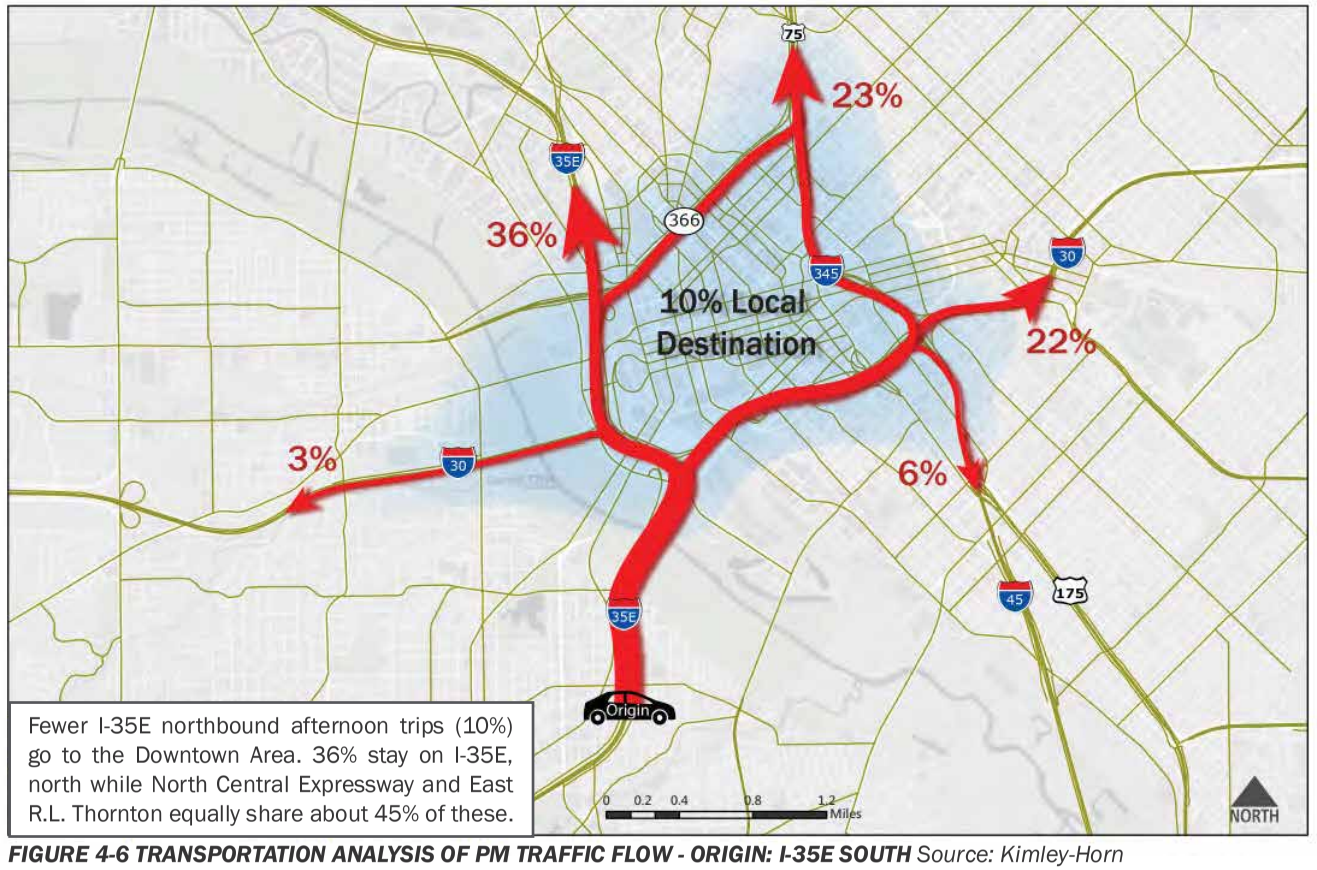
Compared to the morning peak period, fewer trips exit to downtown while more (57%) return to south and east Dallas or beyond.

FIGURE 4-4 TRANSPORTATION ANALYSIS OF PM TRAFFIC FLOW - ORIGIN: I-35E NORTH *Source: Kimley-Horn*



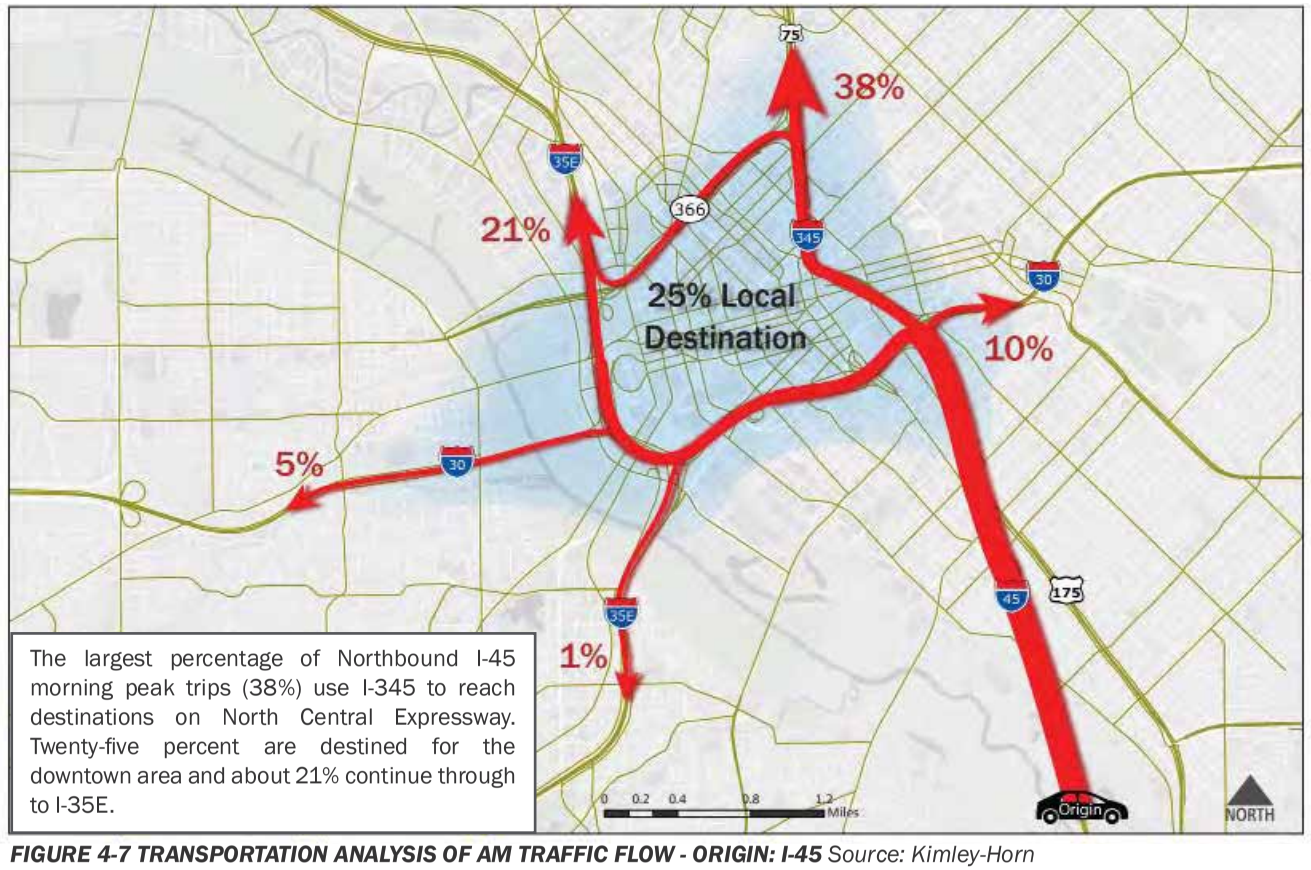
The largest percentage (34%) of northbound A.M. trips stay on I-35E. The next largest percentage of through trips use either the Canyon or Woodall Rodgers to reach North Central Expressway and 15% use the Canyon to go east on I-30.

FIGURE 4-5 TRANSPORTATION ANALYSIS OF AM TRAFFIC FLOW - ORIGIN: I-35E SOUTH *Source: Kimley-Horn*



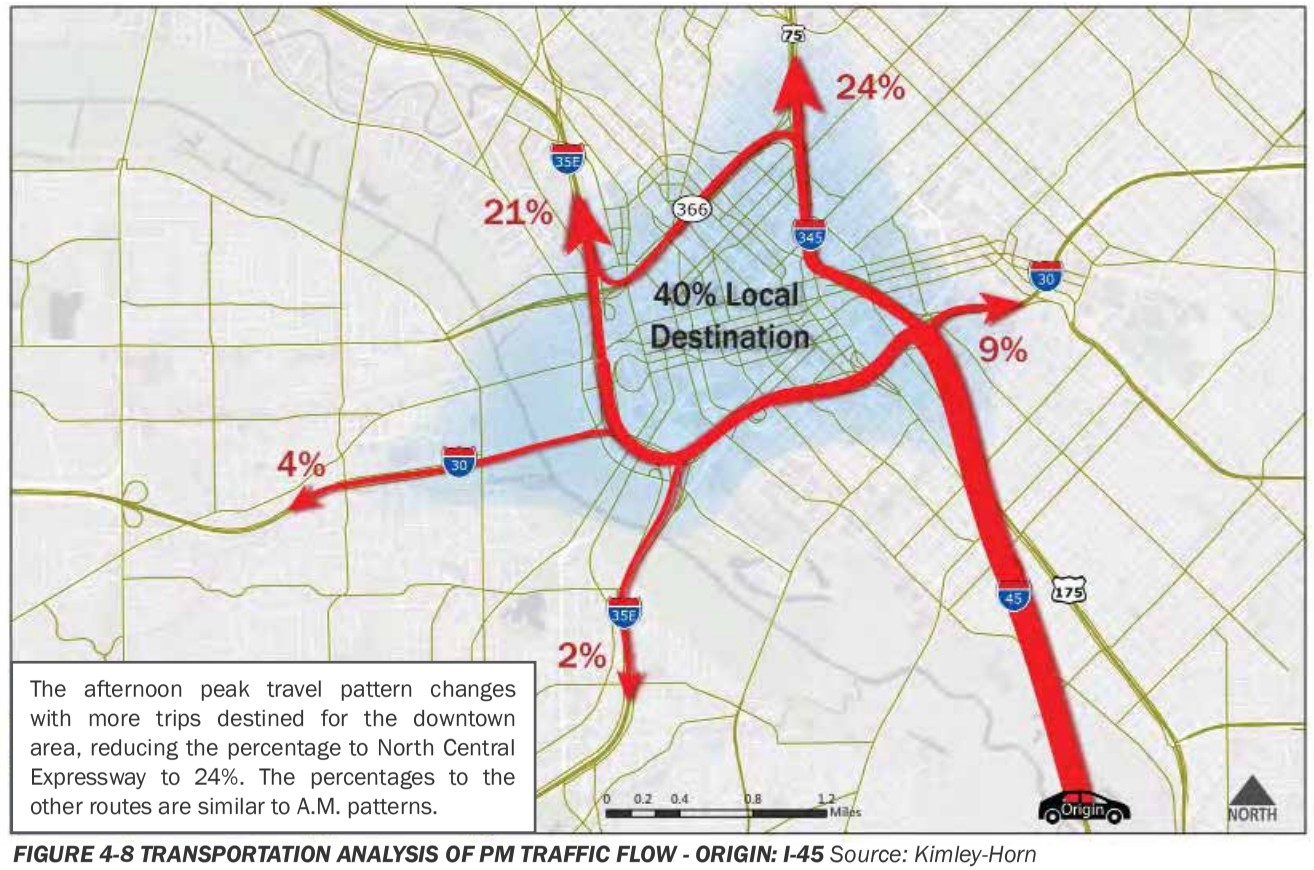
Fewer I-35E northbound afternoon trips (10%) go to the Downtown Area. 36% stay on I-35E, north while North Central Expressway and East R.L. Thornton equally share about 45% of these.

FIGURE 4-6 TRANSPORTATION ANALYSIS OF PM TRAFFIC FLOW - ORIGIN: I-35E SOUTH *Source: Kimley-Horn*



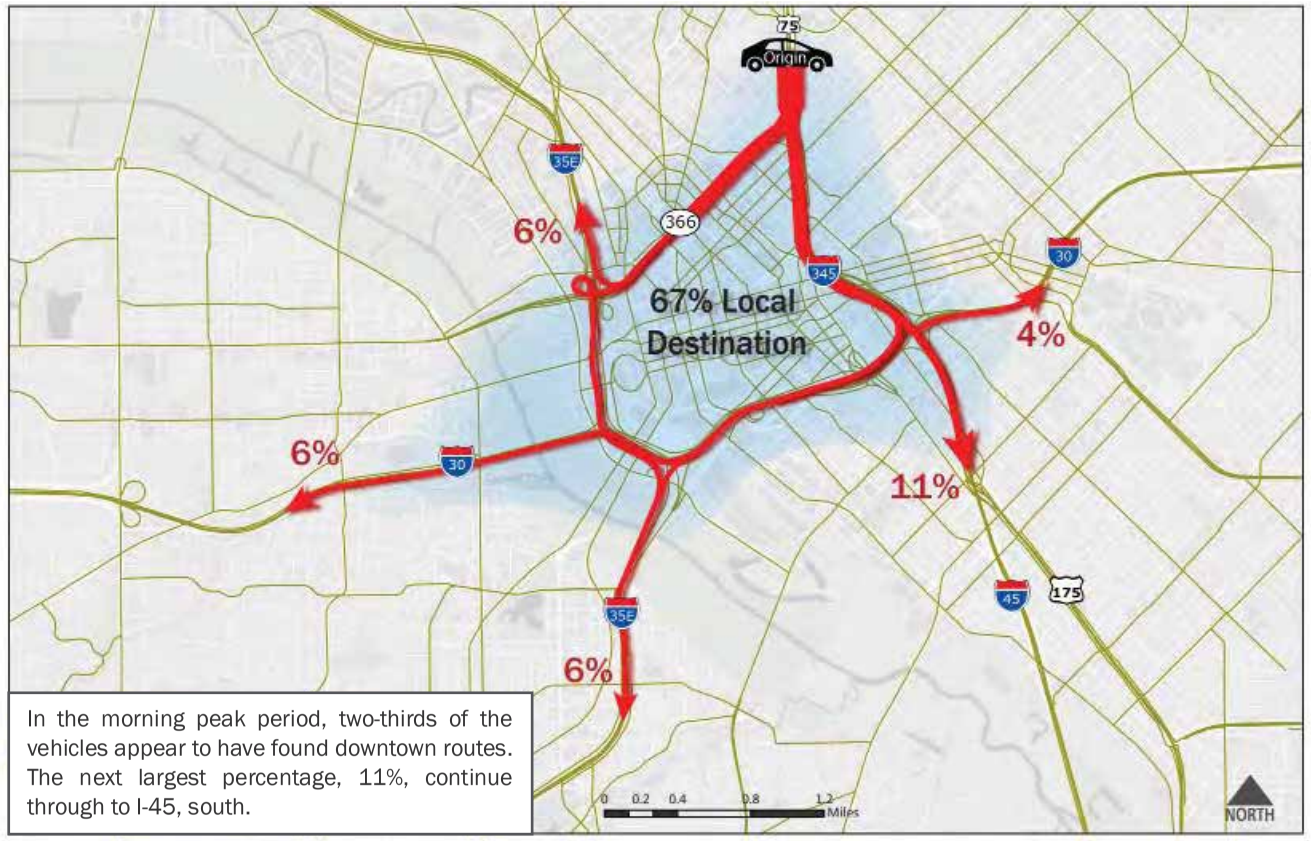
The largest percentage of Northbound I-45 morning peak trips (38%) use I-345 to reach destinations on North Central Expressway. Twenty-five percent are destined for the downtown area and about 21% continue through to I-35E.

FIGURE 4-7 TRANSPORTATION ANALYSIS OF AM TRAFFIC FLOW - ORIGIN: I-45 *Source: Kimley-Horn*



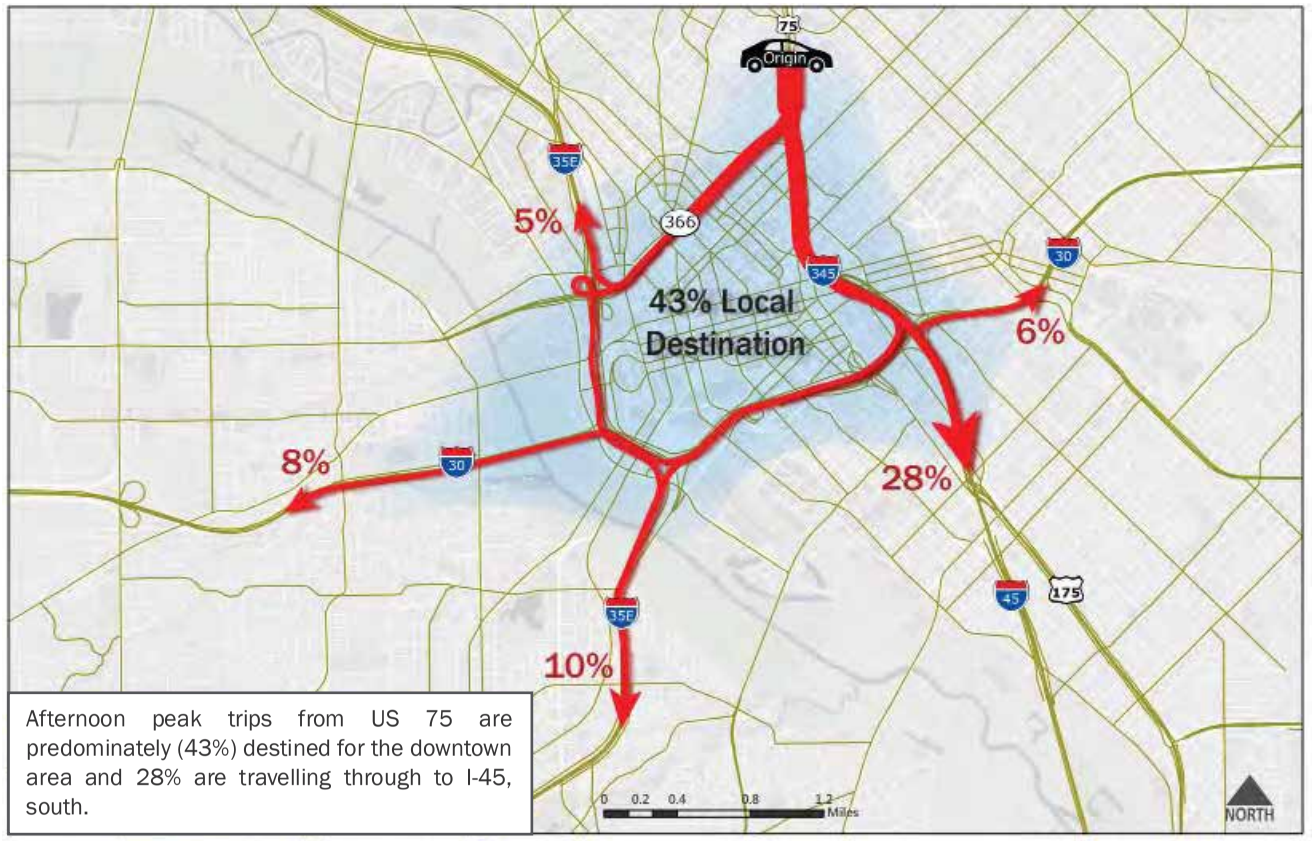
The afternoon peak travel pattern changes with more trips destined for the downtown area, reducing the percentage to North Central Expressway to 24%. The percentages to the other routes are similar to A.M. patterns.

FIGURE 4-8 TRANSPORTATION ANALYSIS OF PM TRAFFIC FLOW - ORIGIN: I-45 *Source: Kimley-Horn*



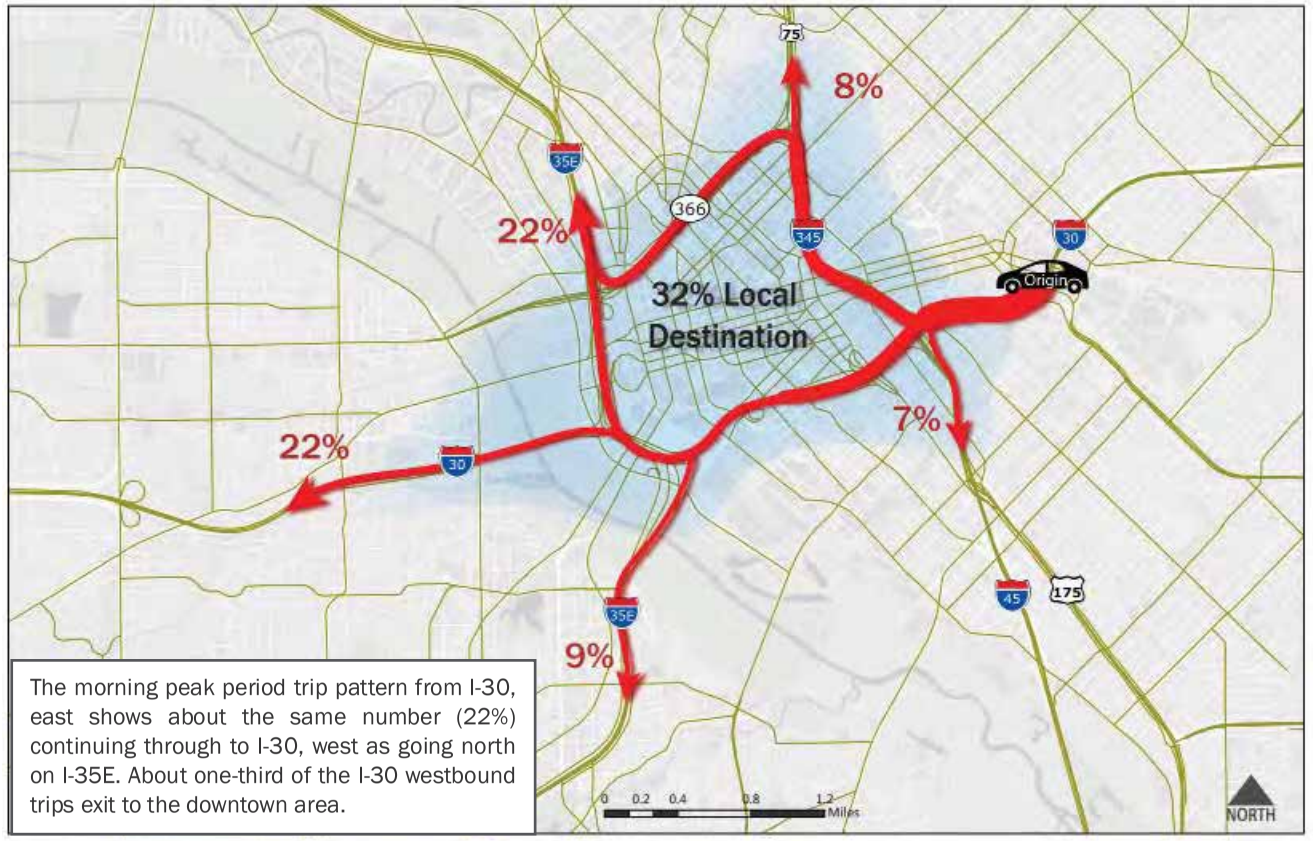
In the morning peak period, two-thirds of the vehicles appear to have found downtown routes. The next largest percentage, 11%, continue through to I-45, south.

FIGURE 4-9 TRANSPORTATION ANALYSIS OF AM TRAFFIC FLOW - ORIGIN: US 75 *Source: Kimley-Horn*



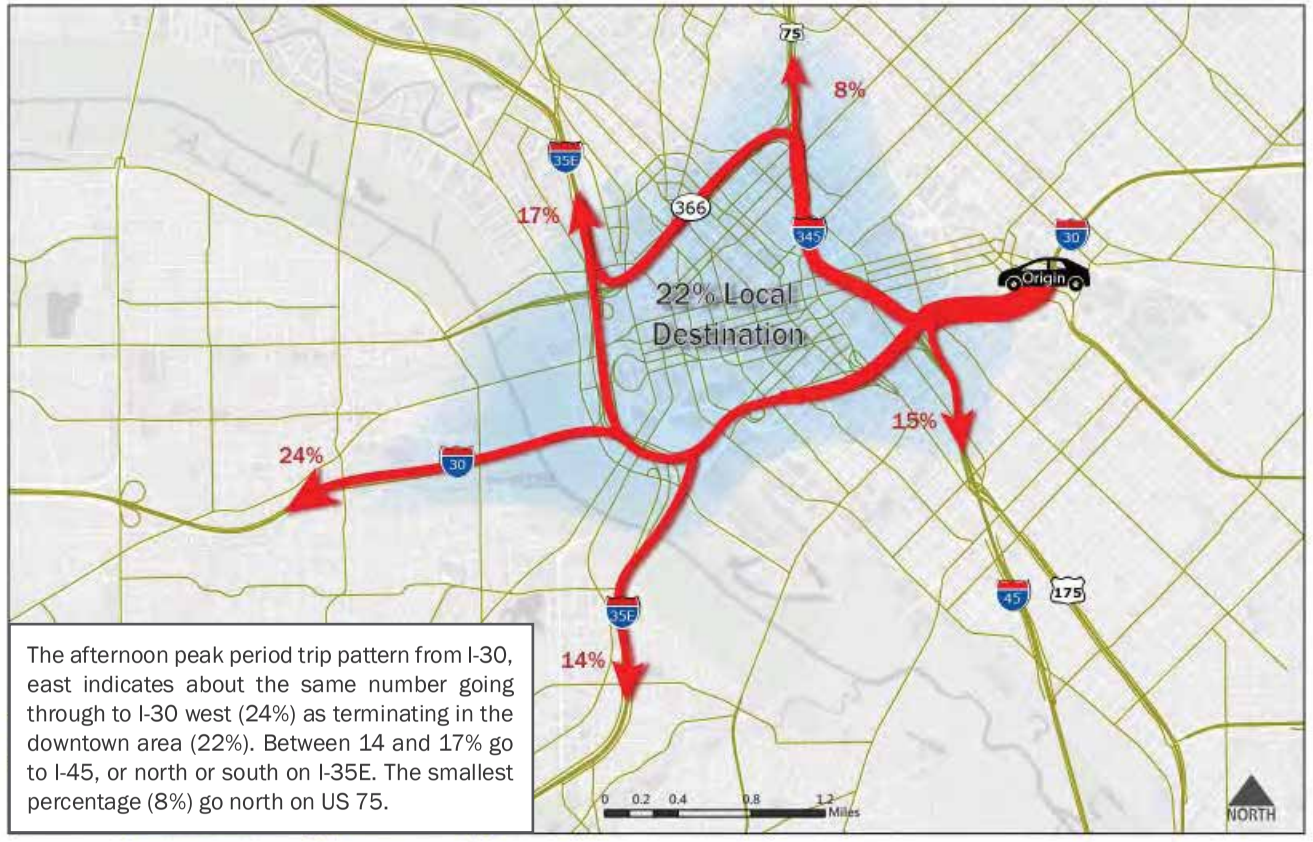
Afternoon peak trips from US 75 are predominately (43%) destined for the downtown area and 28% are travelling through to I-45, south.

FIGURE 4-10 TRANSPORTATION ANALYSIS OF PM TRAFFIC FLOW - ORIGIN: US 75 *Source: Kimley-Horn*



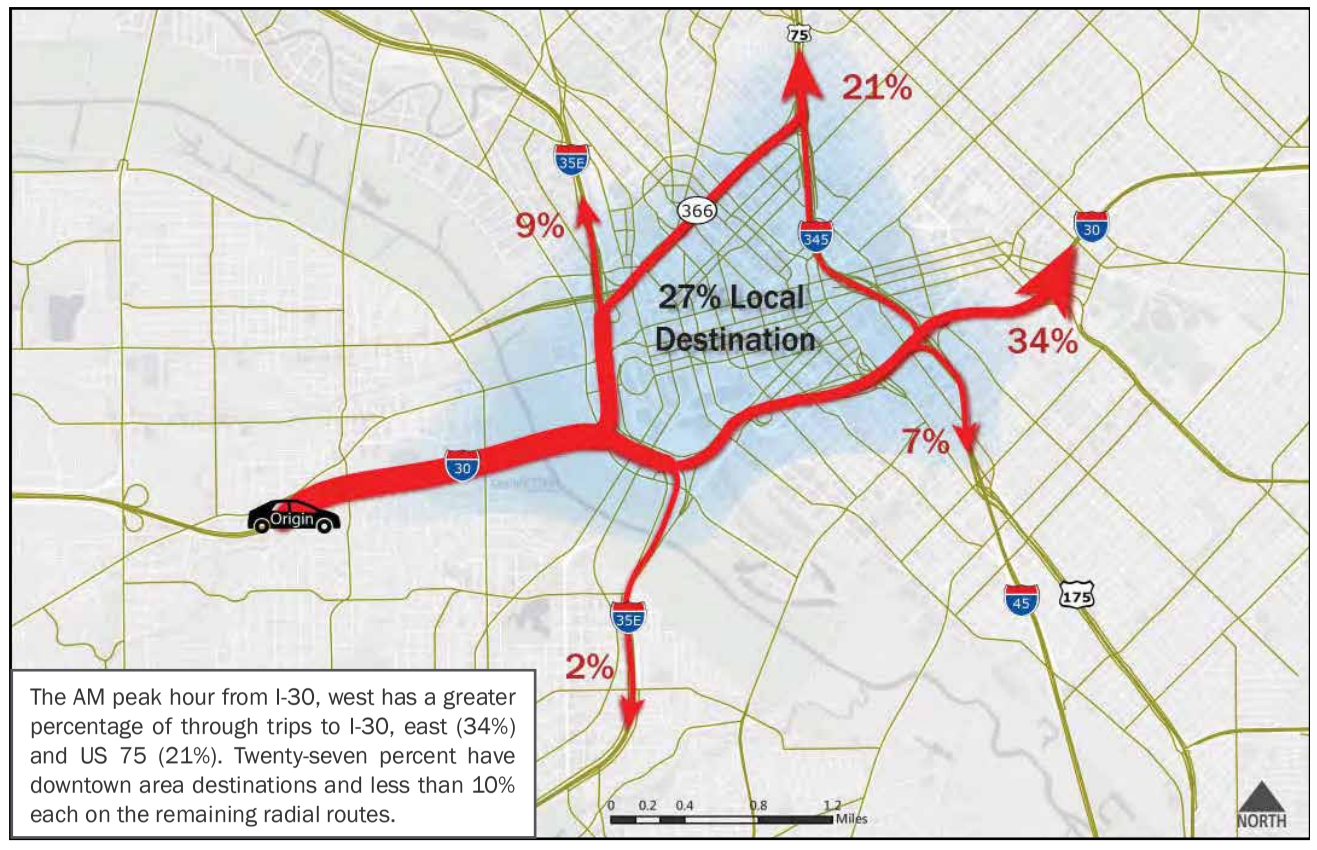
The morning peak period trip pattern from I-30, east shows about the same number (22%) continuing through to I-30, west as going north on I-35E. About one-third of the I-30 westbound trips exit to the downtown area.

FIGURE 4-11 TRANSPORTATION ANALYSIS OF AM TRAFFIC FLOW - ORIGIN: I-30E *Source: Kimley-Horn*



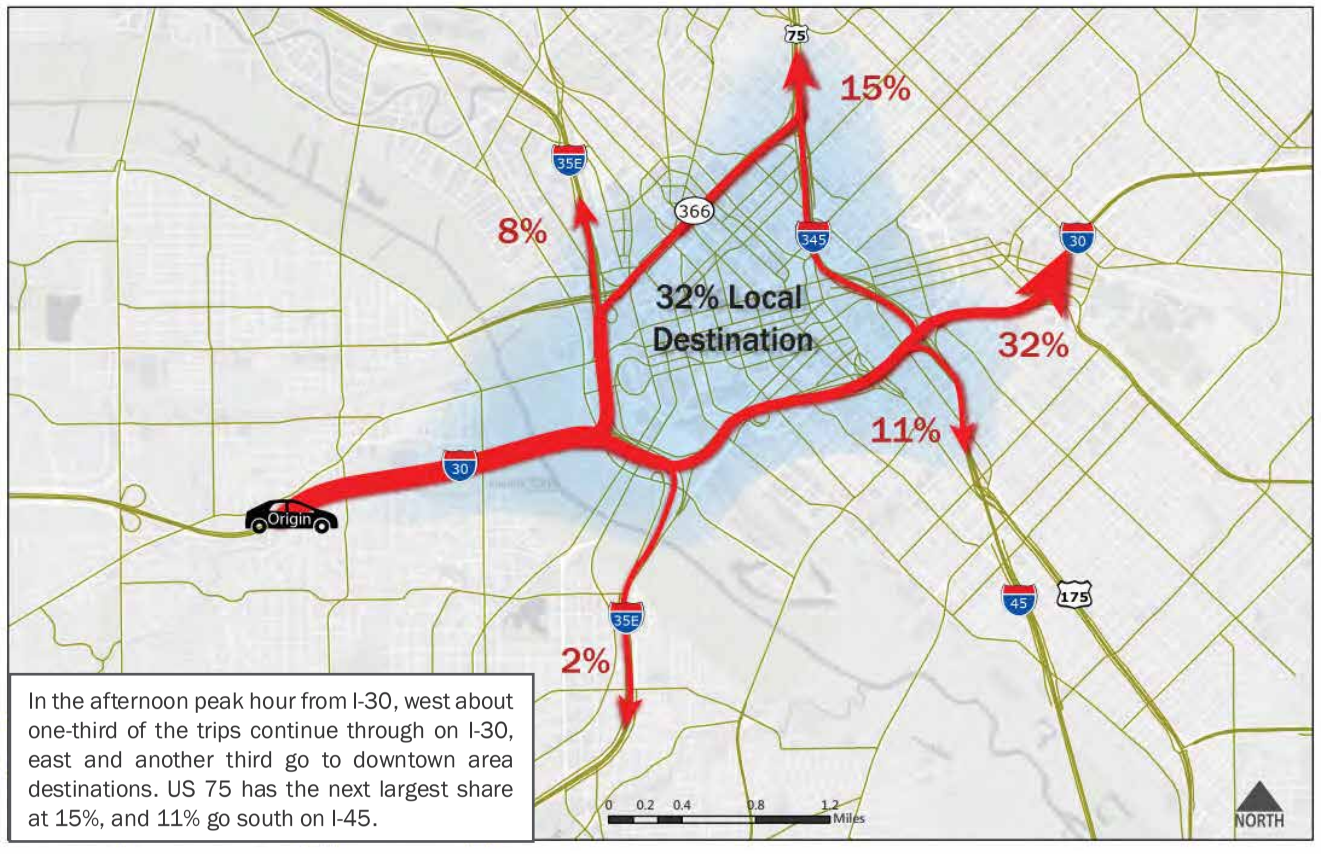
The afternoon peak period trip pattern from I-30, east indicates about the same number going through to I-30 west (24%) as terminating in the downtown area (22%). Between 14 and 17% go to I-45, or north or south on I-35E. The smallest percentage (8%) go north on US 75.

FIGURE 4-12 TRANSPORTATION ANALYSIS OF PM TRAFFIC FLOW - ORIGIN: I-30E *Source: Kimley-Horn*



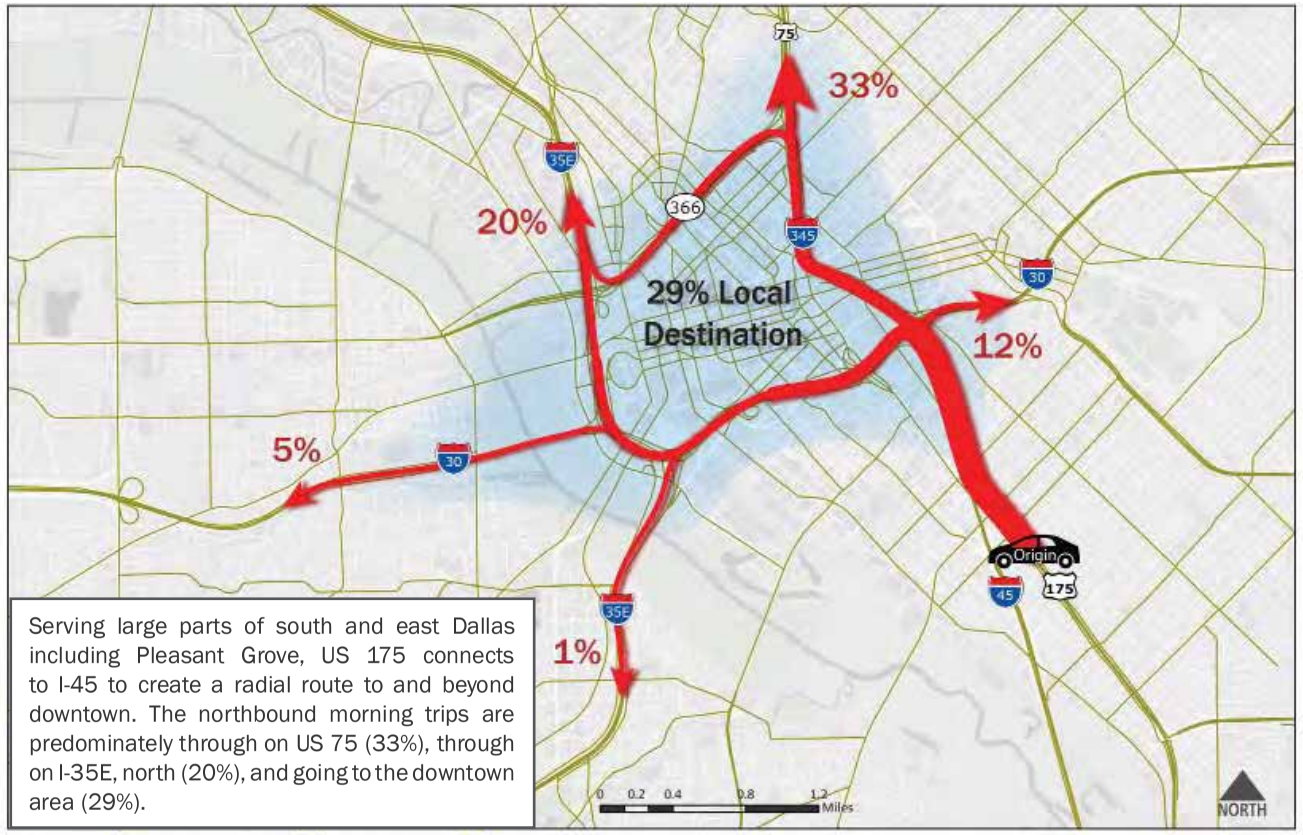
The AM peak hour from I-30, west has a greater percentage of through trips to I-30, east (34%) and US 75 (21%). Twenty-seven percent have downtown area destinations and less than 10% each on the remaining radial routes.

FIGURE 4-13 TRANSPORTATION ANALYSIS OF AM TRAFFIC FLOW - ORIGIN: I-30W *Source: Kimley-Horn*



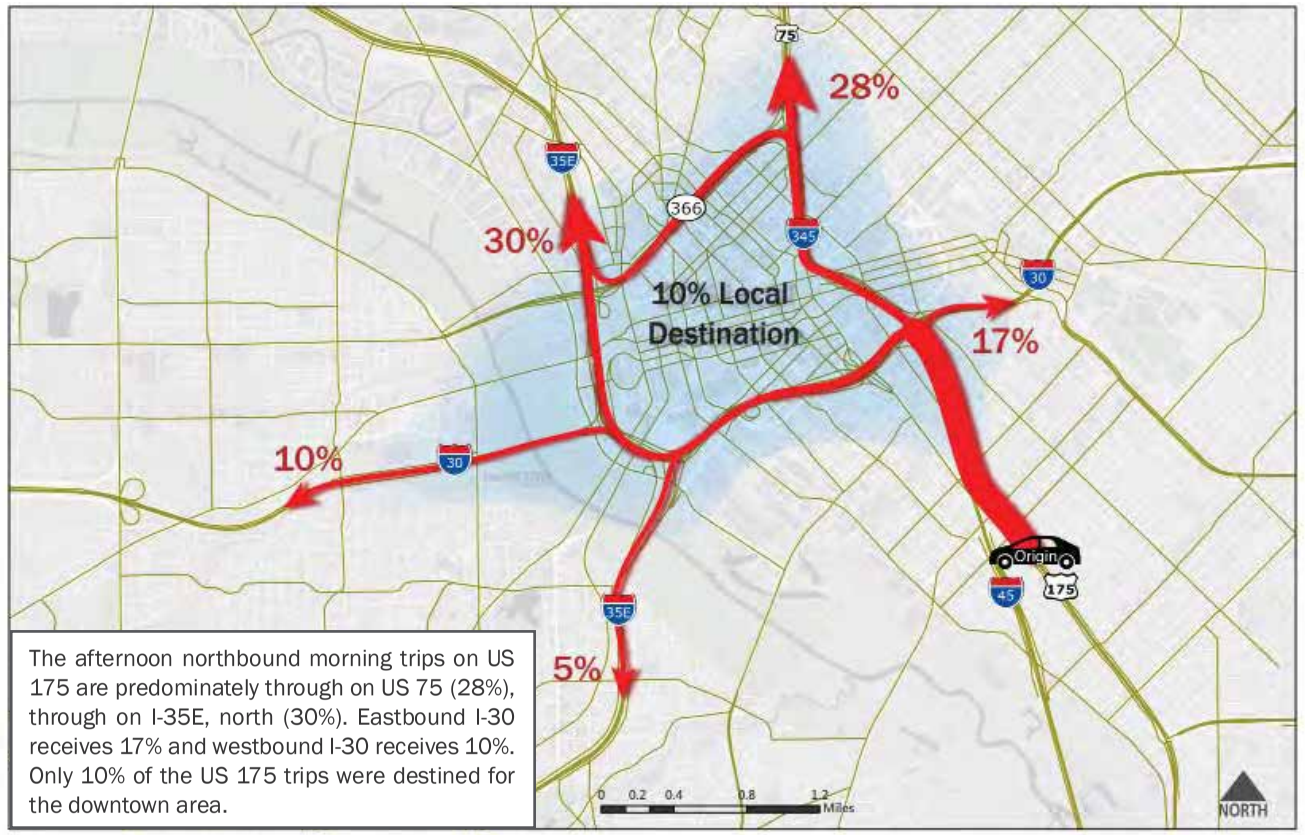
In the afternoon peak hour from I-30, west about one-third of the trips continue through on I-30, east and another third go to downtown area destinations. US 75 has the next largest share at 15%, and 11% go south on I-45.

FIGURE 4-14 TRANSPORTATION ANALYSIS OF PM TRAFFIC FLOW - ORIGIN: I-30W *Source: Kimley-Horn*



Serving large parts of south and east Dallas including Pleasant Grove, US 175 connects to I-45 to create a radial route to and beyond downtown. The northbound morning trips are predominately through on US 75 (33%), through on I-35E, north (20%), and going to the downtown area (29%).

FIGURE 4-15 TRANSPORTATION ANALYSIS OF AM TRAFFIC FLOW - ORIGIN: US 175/S.M. WRIGHT FREEWAY *Source: Kimley-Horn*



The afternoon northbound morning trips on US 175 are predominately through on US 75 (28%), through on I-35E, north (30%). Eastbound I-30 receives 17% and westbound I-30 receives 10%. Only 10% of the US 175 trips were destined for the downtown area.

FIGURE 4-16 TRANSPORTATION ANALYSIS OF PM TRAFFIC FLOW - ORIGIN: US 175/S.M. WRIGHT FREEWAY *Source: Kimley-Horn*

OBSERVED TRAVEL PATTERNS | DOWNTOWN URBAN CORE FINDINGS

The survey of travel patterns on the radial freeway routes serving downtown Dallas indicates that the radial "spokes" serve two important functions. Not unexpectedly, a primary function for all routes, is to serve the downtown area with the US 75 origin (A.M.) having the largest downtown percentage (67%). However, an additional function is to distribute trips to each of the remaining routes. In most cases each approach route links a significant percentage of its trips approaching the CBD to two or three of the spoke routes departing the CBD.

Figure 4-17 shows (for A.M. only) how each of the trips from the origin facility are distributed to the other facilities and the downtown area. For each of the origins the downtown receives the highest or second highest percentage of origin trips. In each case, the through route, e.g. I-45 to US 75 or I-30 (east) to I-30 (west), also receives the first or second highest trip share. This demonstrates the importance of each route to the downtown and CBD; and, the important role that each of the facilities immediately adjacent to the CBD has to the Dallas freeway network.

Since the observation stations are all located fairly close to the center of Dallas, these through downtown trips may be to other destinations in the city such as jobs along the I-35E/Stemmons Corridor or US 75/North Central Expressway, or they may be longer trips that leave Dallas (see next section for analysis of longer trips). However, it is clear that the Downtown Freeway System links the various parts of the city and the region to each other. Dallas' hub and spoke freeway system is complemented by a robust arterial system that facilitates shorter trips and provides access to destinations that are not on freeways. The survey indicates that the freeways serve multiple functions and all parts of the City.

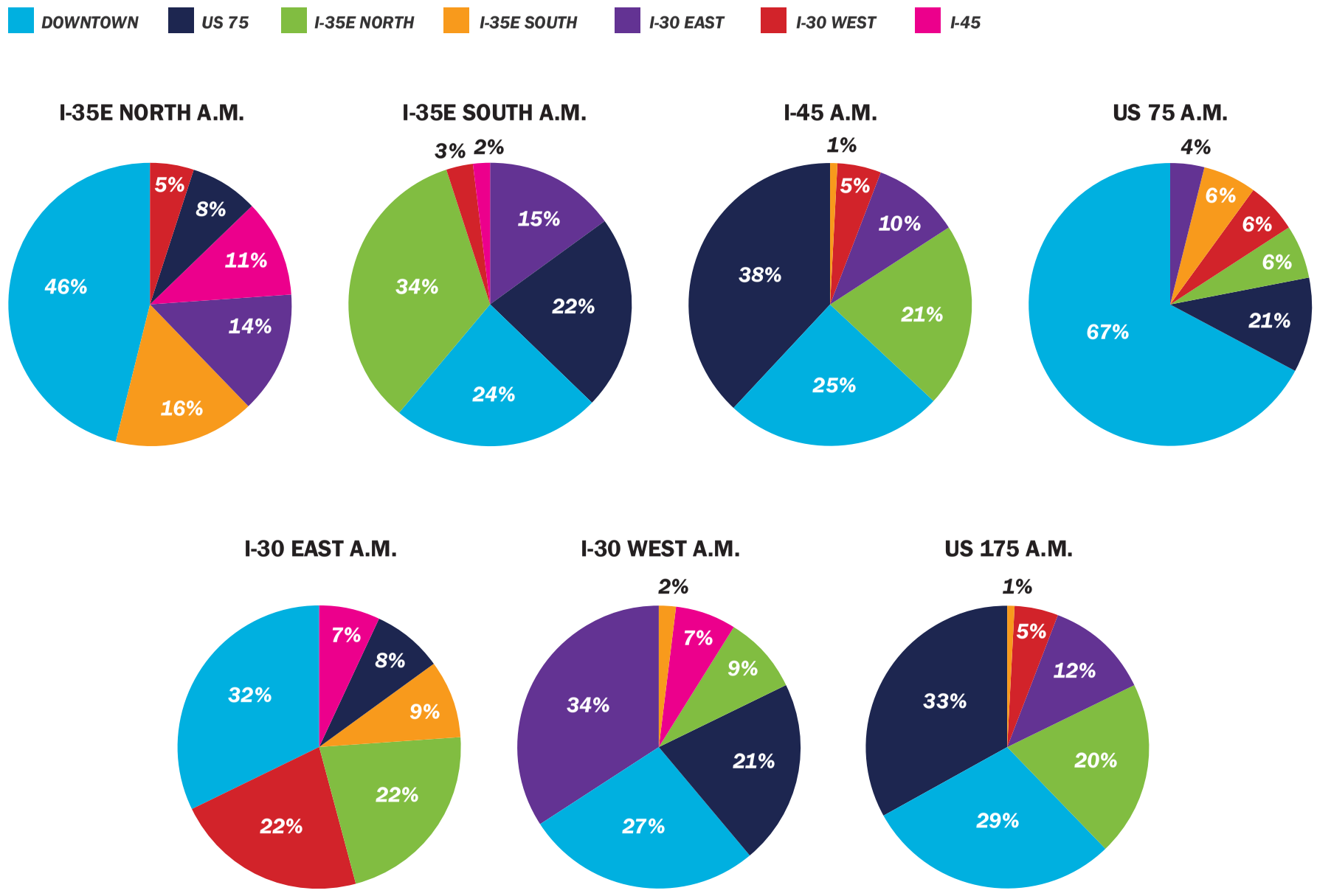


FIGURE 4-17 TRIP DISTRIBUTION FROM ORIGIN ROUTE TO DESTINATION

REGIONAL/SUB-REGIONAL

The basic purpose of this survey is to understand how many motorists are utilizing the radial corridors: I-35E, I-45/US 75, and I-30 as routes for "through" trips. It is known that these facilities are used for local as well as regional and even inter- and intra-state travel. Through trips in this context are defined as trips originating and terminating on the radial facilities outside of the Dallas freeway "loop" that is defined by I-20, I-35, Loop 12, and Spur 408. The study did not attempt to study all possible trip interchanges between the radial routes, rather its focus was single-route, through trips. In part this limitation was to keep the study smaller, but also it recognizes that the most likely candidates for new circumferential diversions are single route through trips. Trips from I-45 to the east on I-20 or I-30 are likely to be diverting today, rather than going downtown and then out. One exception to this was a shorter study of "crossover" trips that interchanged between I-35E and I-45/US 75.

The Kimley-Horn survey identified 27 vehicle observation stations on each of the corridors, I-35E, I-45/US 75, and I-30. These locations can be seen on Figure 4-18. These stations anonymously monitored all vehicle trips with Bluetooth enabled devices from 12:00:00 A.M. November 3, 2015 until 11:59:59 P.M. November 5, 2015 along I-45/US 75 and from 12:00:00 A.M. November 10, 2015 until 11:59:59 P.M. November 12, 2015 along I-35E. Later, the I-30 route was monitored on February 1, 2, and 3 also for twenty-four hours.

The data were aggregated to three time periods that correspond to the morning peak period (6:30 9:00 A.M.), afternoon peak period (3:00 - 6:30 P.M.), and for 24 hours. In addition to the Bluetooth monitors, vehicle classification counts were performed at nine freeway locations using video detection. Each video unit was installed within a safe distance from the roadway to capture a clear picture. It was ensured that the view was not obstructed by objects that could interfere with processing. The information from the vehicle classification counts included volumes, class of vehicle, direction, and locations. There were a total of three different types of vehicle classifications defined. Light vehicles, which were considered to be FHWA Classes 1 – 3, Medium vehicles, which were considered to be FHWA classes 4 – 7, and Articulated Trucks, which were considered to be FHWA classes 8 – 13. After the processing was completed, manual spot checks were performed to ensure accuracy. The traffic counts are a measure of the total vehicular demand on the facilities and allow for an approximation of the total traffic demand for a movement by applying the percentages acquired using Bluetooth data.

The following maps (Figures 4-19 to 4-25) show the observed traffic tracked on each of the specified routes on I-35E and I-45/US 75 and the declining percentage at "downstream" observation locations that reflects that a percentage of the traffic exited the routes. It should be noted that construction and other temporary conditions may affect traffic study results. Specifically, in the case of the I-35E and I-30 routes construction was underway in the downtown area on the Horseshoe Project.

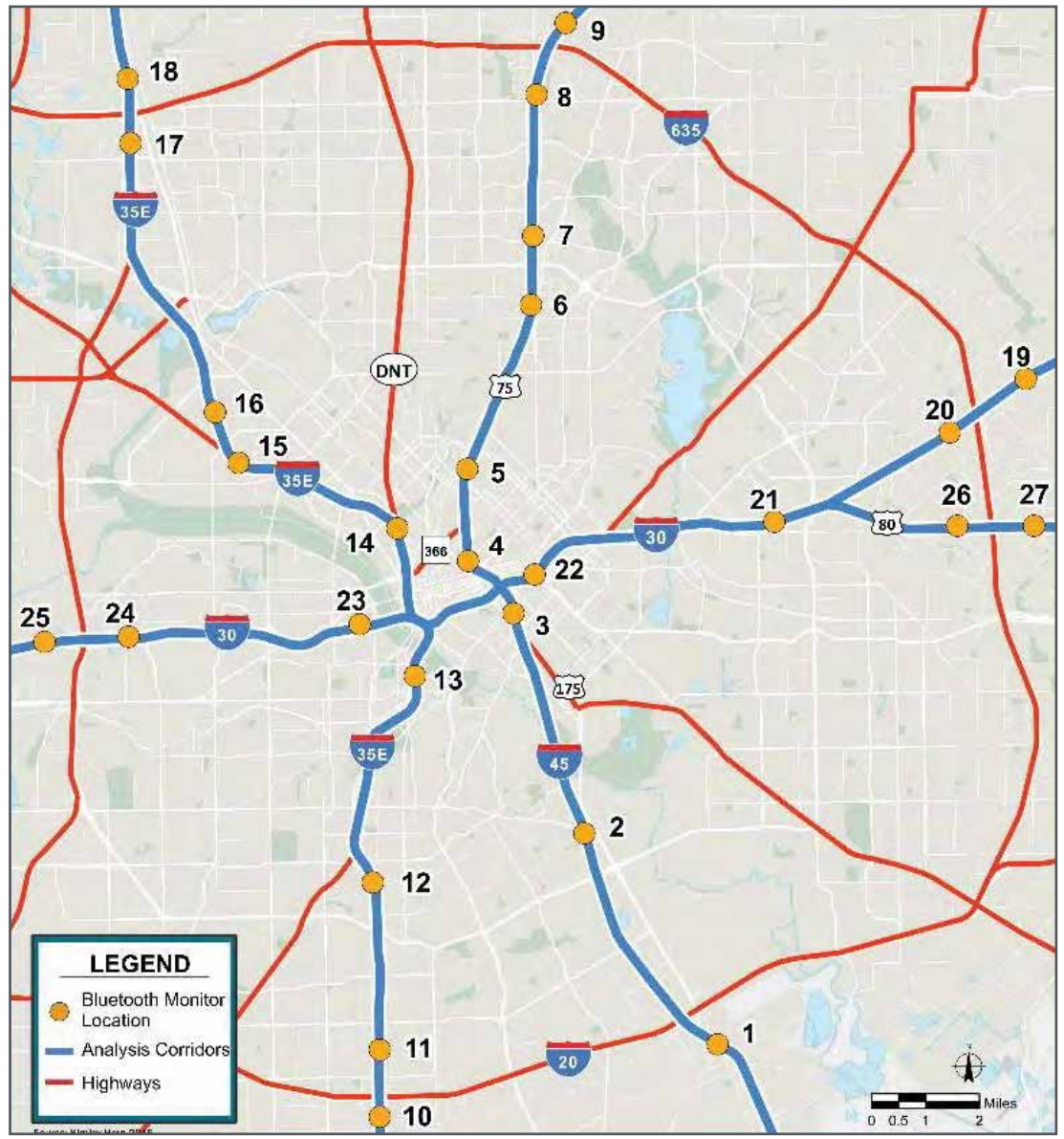


FIGURE 4-18 BLUETOOTH DETECTOR LOCATIONS WITHIN THE STUDY AREA *Source: Kimley-Horn*

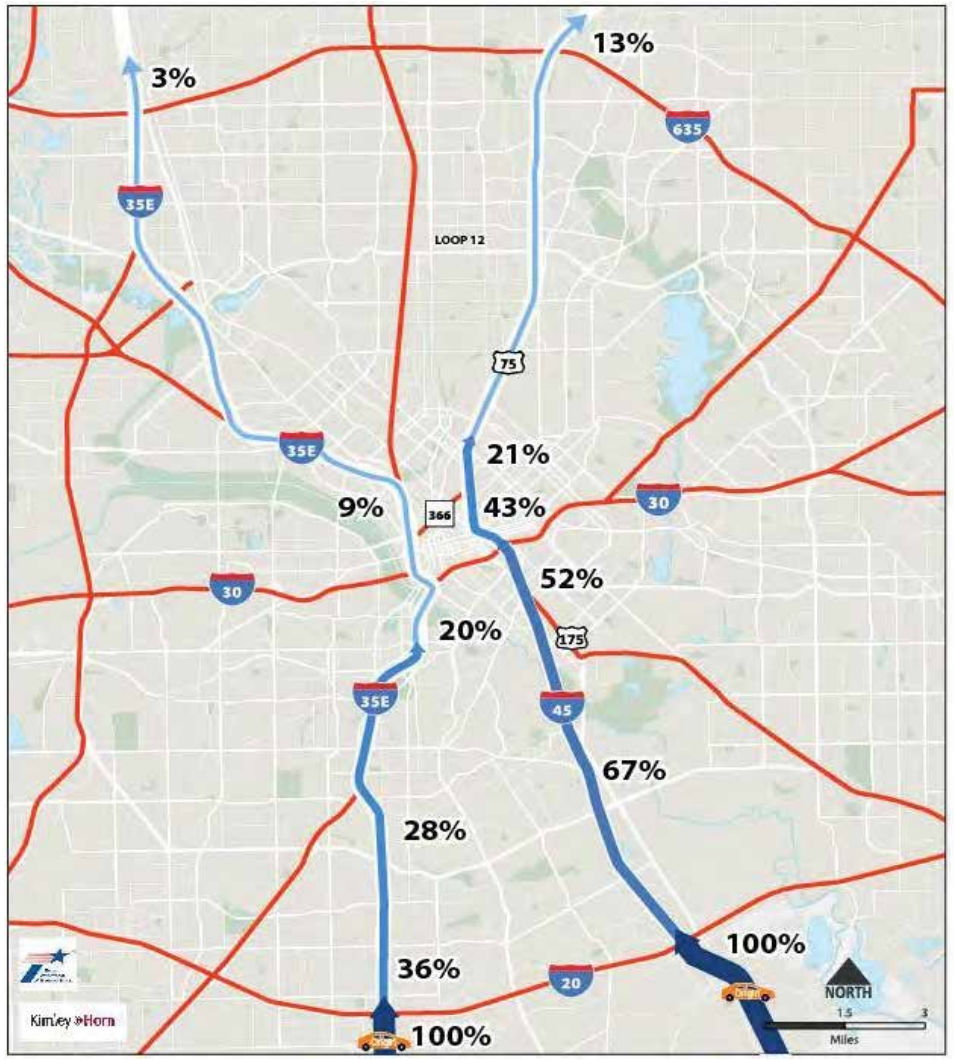


FIGURE 4-19: WEEKDAY NORTHBOUND TRAFFIC FLOW *Source: Kimley-Horn*

I-35E: November 3, 2015 – November 5, 2015
I-45/US 75: November 10, 2015 – November 12, 2015

Trips on northbound I-35E and I-45 were detected at stations along the route.

I-35E. North of I-20 64% of the trips exited, leaving 36% on I-35E. At the station north of Woodall Rodgers only 9% of the trips were detected and by I-635 the number of through trips, as a percentage of the trips south of I-20 was only 3%.

I-45/US 75. Of the northbound vehicles on I-45, 67% remain north of Loop 12. Past Woodall Rodgers the percentage dropped to 21% and north of I-635 the through trip percentage was 13%.

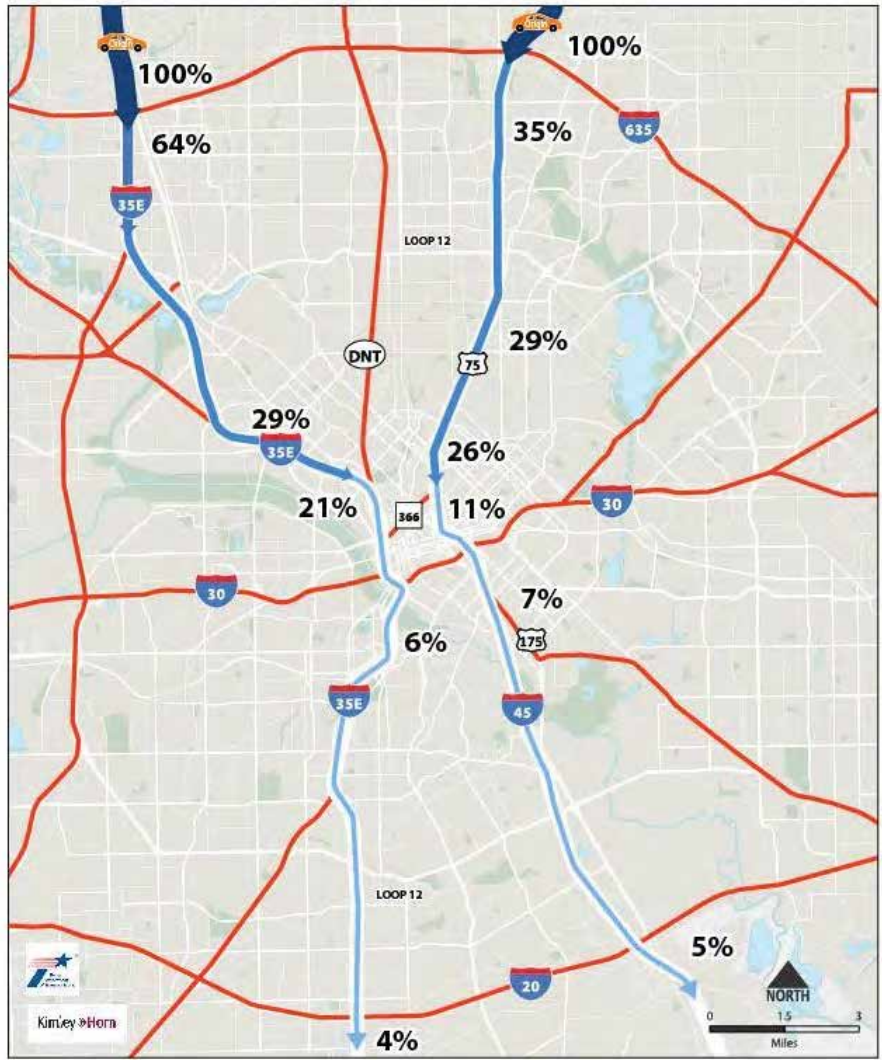


FIGURE 4-20: WEEKDAY SOUTHBOUND TRAFFIC FLOW *Source: Kimley-Horn*

I-35E: November 3, 2015 – November 5, 2015
I-45/US 75: November 10, 2015 – November 12, 2015

Trips on southbound I-35E and I-45 were detected at stations along the route.

I-35E. South of I-635 36% of the trips exited, leaving 64% on I-35E. At the station south of the CBD only 6% of the trips were detected and by I-635 the number of through trips, as a percentage of the trips north of I-20 was down to 4%.

US 75/I-45. Of the southbound vehicles observed on US 75 north of I-635, 29% remain south of Loop 12. South of the CBD the percentage dropped to 7% and south of I-20 the through trip percentage was 5%.

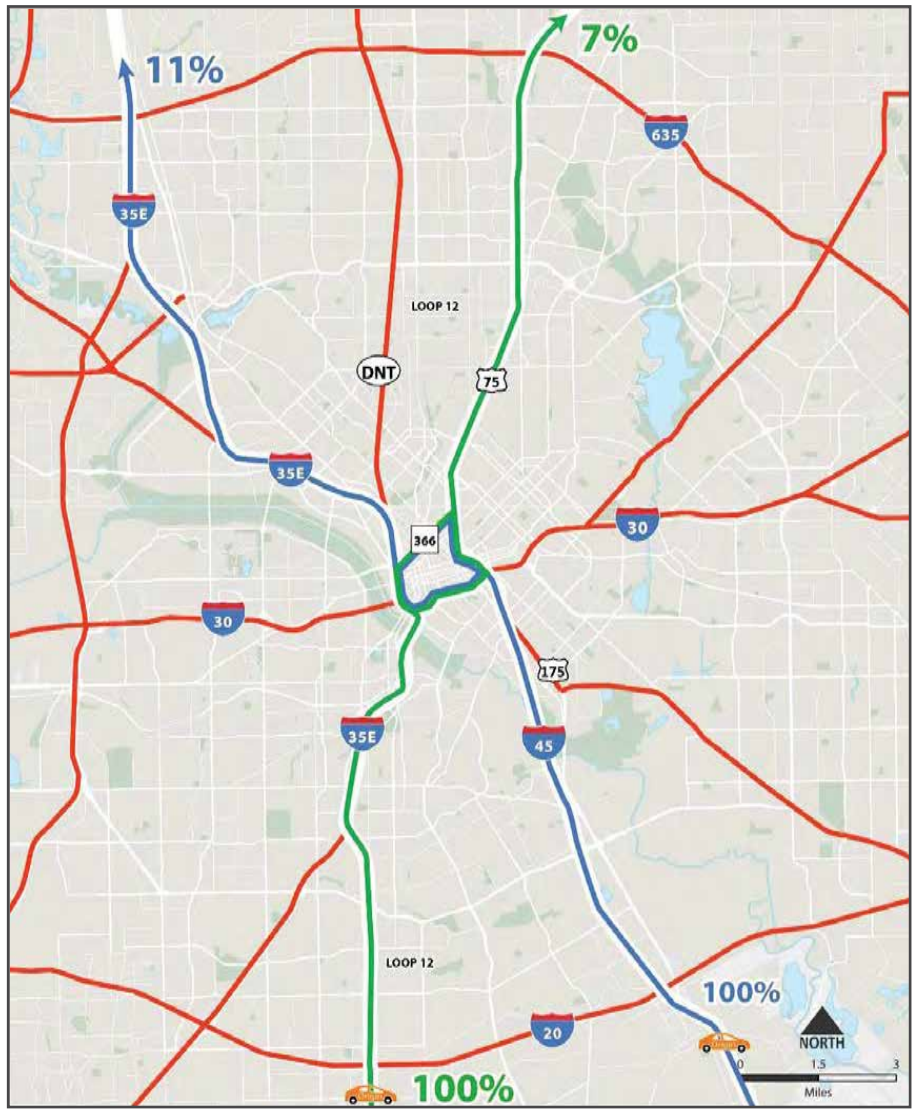


FIGURE 4-21: WEEKDAY NORTHBOUND CROSSOVER TRAFFIC FLOW *Source: Kimley-Horn*

I-35E and I-45/US 75: November 3, 2015

In addition to the single-route paths (I-35E and I-45/US 75), it was noted that significant percentages of the observed trips went from one freeway route to the other as they traversed the county. In terms of through trips from south of I-20 to north of I-635, the "crossover" values were comparable and sometimes greater than the single route trips. For example, almost as many northbound trips (11%) on I-45 crossed over to I-35 north of I-635 compared to 13% which went to US 75. Also, 7% of northbound I-35E trips crossed over to US 75, which was more than stayed on I-35E (3%). (Refer to Figure 4-19 for single route percentages.)

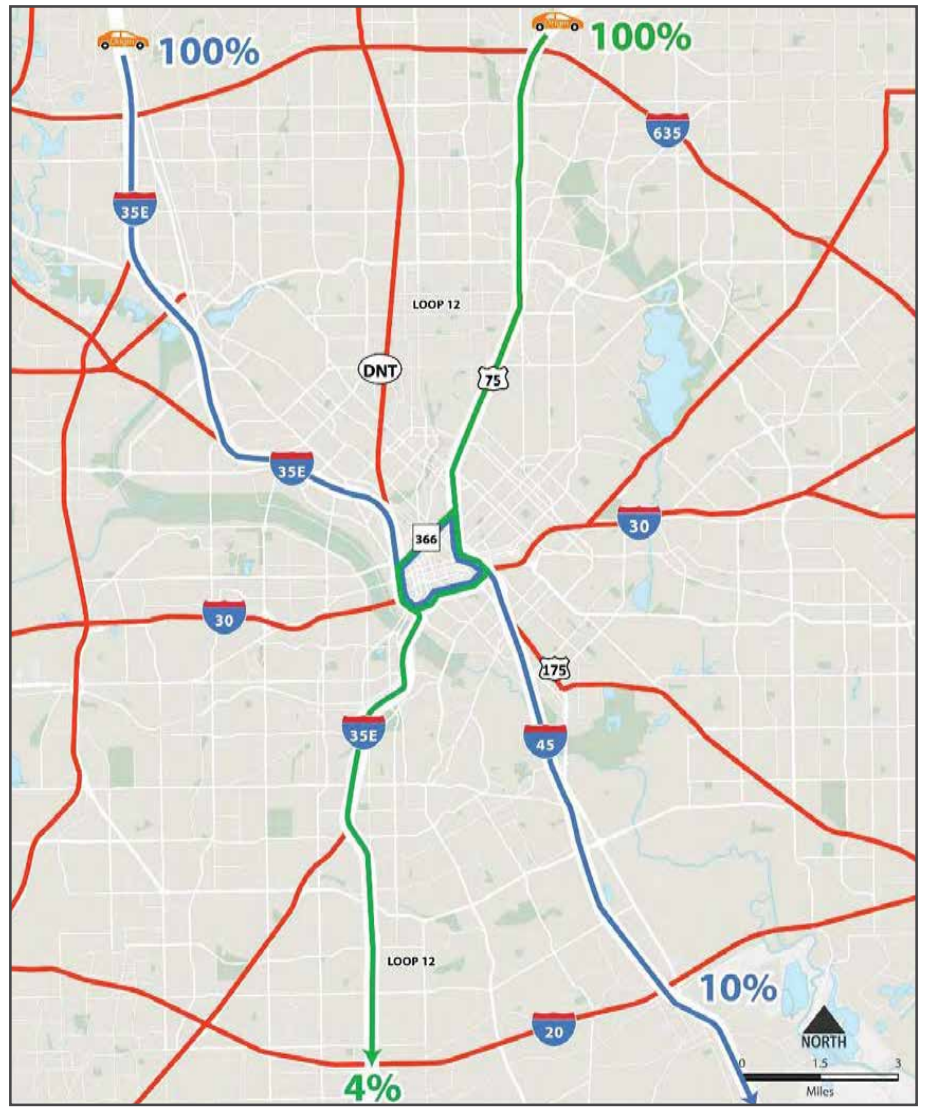


FIGURE 4-22: WEEKDAY SOUTHBOUND CROSSOVER TRAFFIC FLOW *Source: Kimley-Horn*

I-35E and I-45/US 75: November 3, 2015

The "crossover" phenomenon also occurred southbound. In terms of through trips from north of I-635 to south of I-20, the "crossover" values were 10% from I-35E to I-45 which compared to 5% of US 75 trips departing on I-45. Similarly, 4% crossed from US 75 to I-35E, compared to 4% of I-35E originating trips. (Refer to Figure 4-20 for single route percentages.)

The percentages are applied to a different number of vehicles at the origin locations, but they do indicate the degree to which the respective routes are used by long through trips versus trips that have local destinations (within I-20/I-635).

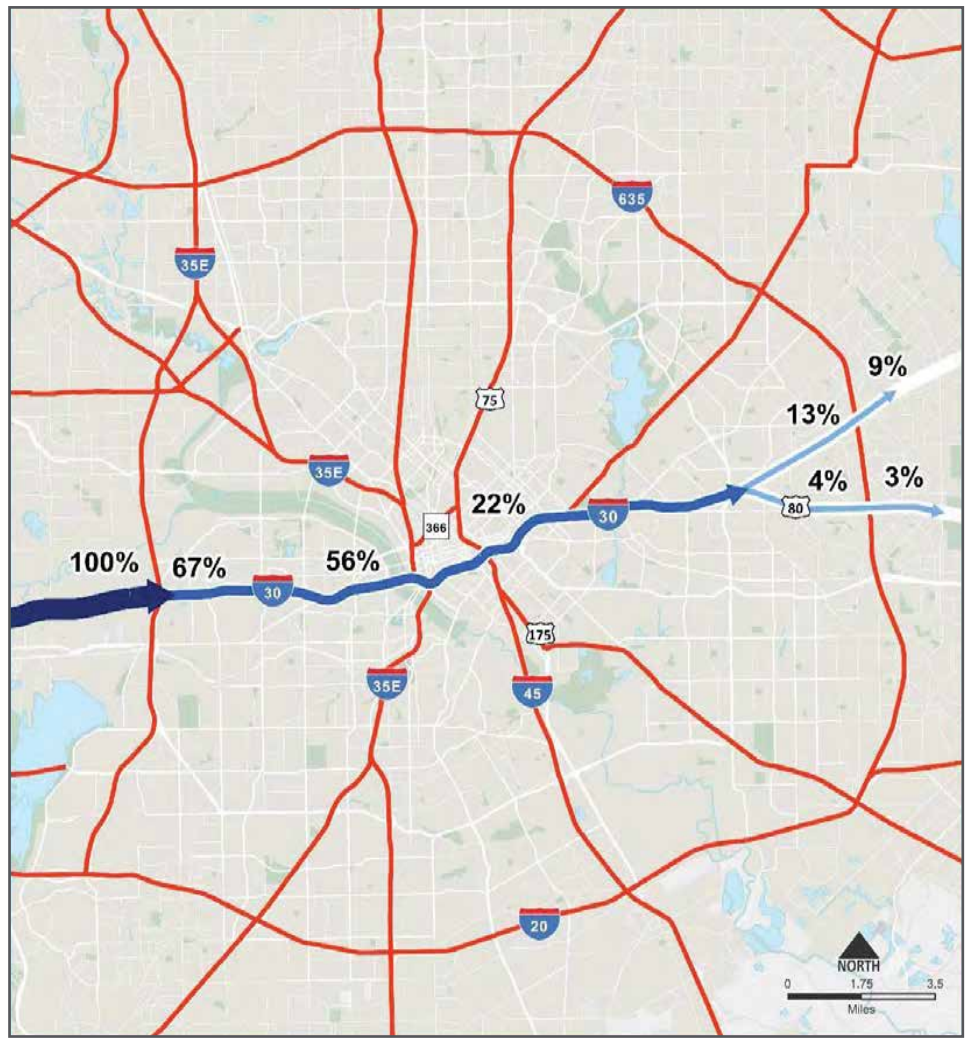


FIGURE 4-23: WEEKDAY EASTBOUND TRAFFIC FLOW *Source: Kimley-Horn*

I-30 (west) to I-30 (east) and US 80: February 2-4, 2016

Eastbound on I-30 one-third of the observed traffic exits near Loop 12. East of the CBD 22% of the vehicles remain. Proceeding east from downtown, most vehicles stayed on I-30 (13%) with less than half that number (4%) going to US 80. East of I-635 9% of the original vehicles remained on I-30 and 3% remained on US 80.

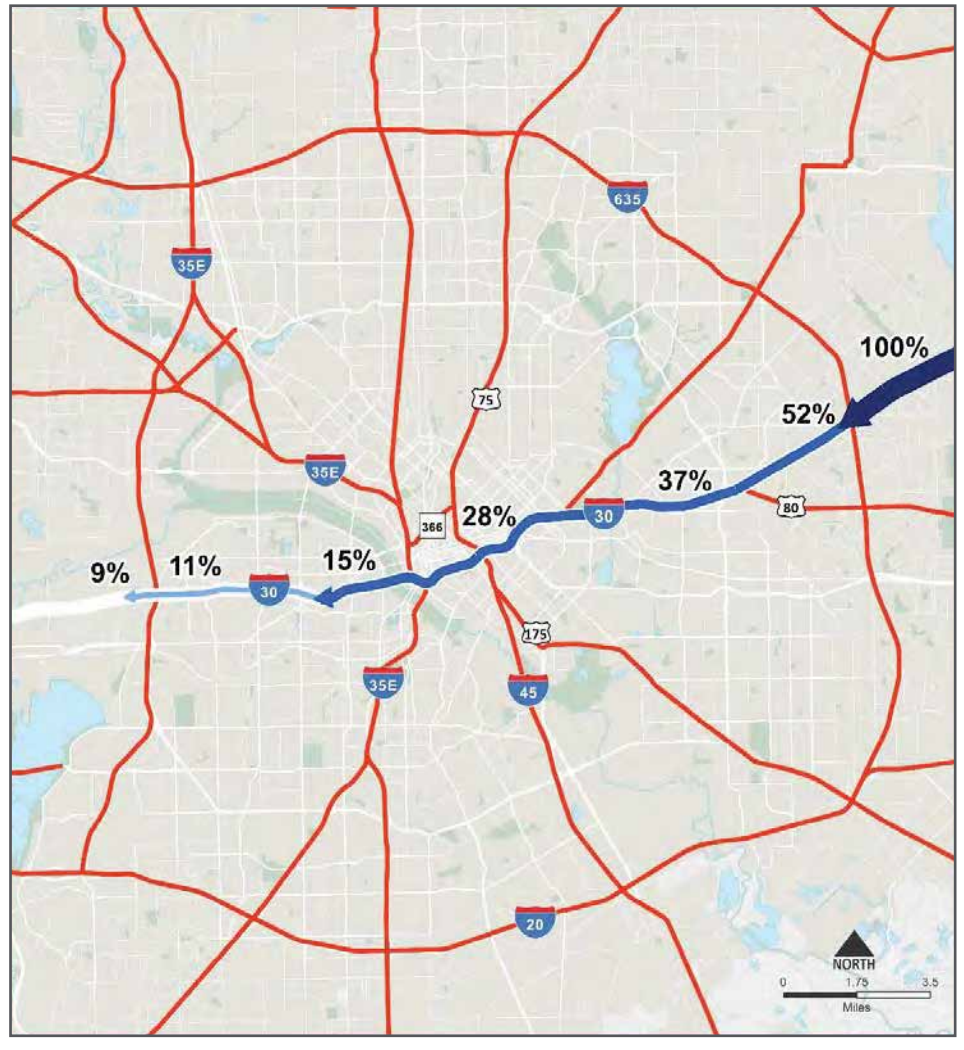


FIGURE 4-24: WEEKDAY WESTBOUND TRAFFIC FLOW *Source: Kimley-Horn*

I-30 (East) to I-30 (West): February 2-4, 2016

Observations of westbound I-30 vehicles indicated that almost half exit in the vicinity of I-635. By downtown only 28% of the vehicles were observed and only 15% west of downtown. Just beyond Loop 12 only 9% of the vehicles remained as through trips.

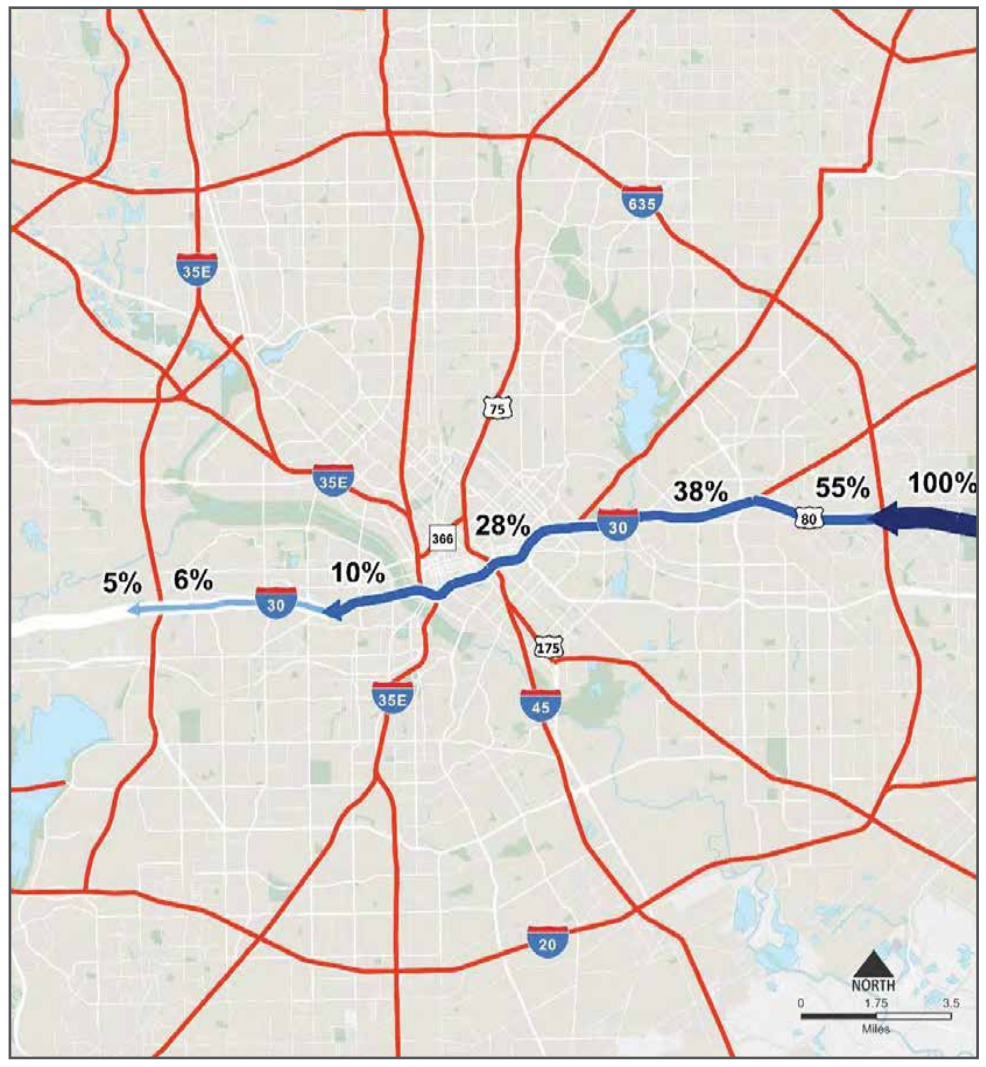


FIGURE 4-25: WEEKDAY WESTBOUND TRAFFIC FLOW *Source: Kimley-Horn*

US 80 to I-30 (west): February 2-4, 2016

Westbound US 80 vehicles observed dropped by 45% in the vicinity of I-635. By downtown 28% of those vehicles were observed and only 10% remained west of downtown. West of Loop 12 only 5% of the vehicles remained as through trips.

The Regional/Sub-regional Bluetooth study was designed to illuminate the nature of travel on the major interstate and US highway radial facilities that serve downtown Dallas. The study attempts to quantify the percentage of trips that are traveling through the downtown area on I-35E, I-45/US 75, and I-30 that may be candidates for alternate routes which do not enter downtown Dallas. For the purpose of this Bluetooth study the I-20/I-635/Loop 12/Spur 408 freeway loop is termed the Dallas Loop. The through-trip results are illustrated above in Figures 4-19 through 4-25 and shown in a tabular format in Table 4-1.

For each route studied, the Bluetooth sampling determined the percentage of trips that begin outside of the Dallas Loop and traveled through to be detected again (end) outside of the Loop. The through-trip percentage ranged from as little as 3% to a maximum of 13%. For the crossover routes studied, I-35E to I-45/US 75 the percentage range was 4% to 11%. Between I-35E and I-45/US 75 a smaller sample identified the trips that "crossed over" from route to the other (see cells labeled "crossover" in table).

While these percentages of through trips are significant, they are fairly small in comparison to the number of trips which originate outside the loop and leave the freeway inside the loop. These "Dallas-bound" trips would appear to have fewer options for alternate freeway paths. For example, inspecting Figure 4-19 shows that of all vehicles detected northbound on I-45 south of I-20, 67% have left the facility before they reach the station north of Loop 12. At the station north of the CBD the percentage has declined to just 21%. This indicates that a small percentage of the trips on the radial routes are through in the sense of having both an origin and a destination outside of the freeway loop.

To different degrees this same pattern is repeated on all of the radial routes that enter downtown Dallas. It is likely that many more of these longer northbound "through" trips would exit the route for a destination in Dallas County or Collin or Denton Counties. The data support the fact that the large population and economic base in the DFW region provides either the origin, the destination, or both for the vast majority of the vehicle trips using the radial interstate/US routes. This doesn't mean that circumferential routes like I-20/I-635/Loop 12/Spur 408, or a proposed facility like Loop 9 are not important for interstate traffic – they do now and will in the future play an important role. Increasingly, Intelligent Transportation Systems and personal communications will provide motorists and the trucking industry with more real-time tools that assist in the identification of optimal routes.

Dallas' hub and spoke freeway system serves a multitude of travel patterns. The most prevalent remains access to the CBD and greater downtown from the City, suburban neighbors and the region. Another travel pattern that serves a vital need is connecting Dallas residential neighborhoods and employment centers via through and radial routes. The data suggest that it is unrealistic to expect major congestion on the downtown freeway system to be solved by diverting any single component of the network demand.

Table 4-1: Through-trip Percentages

ORIGINS: 100% Outside Dallas Loop	DESTINATIONS: Percentage Remaining Outside Dallas Loop						
	US 75	I-35E (North)	I-45	I-35E (South)	I-30 (East)	US 80	I-30 (West)
I-45	13%	11% (Crossover)	N.A.	X	X	X	X
I-35E (South)	7% (Crossover)	3%	X	N.A.	X	X	X
US 75	N.A.	X	5%	4% (Crossover)	X	X	X
I-35E (North)	X	N.A.	10% (Crossover)	4%	X	X	X
I-30 (West)	X	X	X	X	9%	3%	N.A.
I-30 (East)	X	X	X	X	N.A.	X	9%
US 80	X	X	X	X	X	N.A.	5%

N.A.= Not Applicable
X = Not Surveyed

SCENARIO FACTORS

The following factors are defined so that the CityMAP analysis can provide a common platform for discussion among community stakeholders and public entities. The definitions below represent stakeholder input and professional judgment by the CityMAP team.

ADAPTIVE REUSE

The potential of reuse of existing buildings and the importance of neighborhood character preservation. Looking beyond the building scale, this factor evaluates whether the scenario will lead to building preservation and reuse or demolition.

A real estate market in transition and cities that grow incrementally make good use of existing buildings to accommodate new and diverse uses over time. These buildings can provide a lower cost of entry for new businesses and residences and also provide a level of architectural interest that cannot be replicated in areas of completely new construction. Adaptive reuse of the historic neighborhood fabric and the slower rate of growth associated with the 'thickening up' of our cities by reusing the existing built form can provide a more stable form of growth (Chuck Marohn, 10/29/15). This factor is best assessed qualitatively rather than quantitatively. As adaptive reuse applies to the geometric design scenarios, CityMAP analysis describes the resonance between adaptive reuse potential and the particular scenarios.

CONNECTIVITY

The potential for better connections at the neighborhood scale, and whether multi-modal and active transportation options become more or less available with the respective scenario. This factor determines whether the scenario maintains, enhances or reduces pedestrian and bicycle connections through the adjacent neighborhoods.

One of the most repeated themes of livability and mobility during stakeholder interviews, connectivity was underscored by virtually every person. Accordingly, maintaining and possibly enhancing connectivity with potential improvements to the highway corridors was considered an important baseline by the CityMAP Team.

Connectivity can be measured in numerous ways. Two of these measurements were considered germane to the CityMAP analysis. One is the potential for more sidewalks as a standard measure of walkability and the other is the change in the density of intersections as a measure of connectedness within the neighborhood. The CityMAP team analyzed the potential connectivity opportunities within focus areas for each scenario which included the evaluation of existing neighborhood market potential and anticipated future development projects.

Connectivity is measured in this report using two metrics: net new linear feet of sidewalk per acre and net new intersections per square mile. In order to provide a common standard across analysis areas of different sizes, the total amount of new intersections and feet of sidewalk are divided by the area. The net new linear feet of sidewalk per acre factor is a range from 0 to 500 feet, with each quintile being 100 feet. The net new intersections per square mile factor is a range from 0 to 75 intersections per square mile, with each quintile being 15 intersections.

SIDEWALKS AS A MEASURE OF WALKABILITY

A robust system of sidewalks is instrumental to creating a connected community, particularly at the neighborhood street level as part of ensuring the "last mile" connections from regional auto or transit commutes to the front door of a destination. Everyone, regardless of primary mode of transportation, begins and ends each trip as a pedestrian. In order to facilitate pedestrian activity, especially in dense urban environments, sidewalks are a critical element on every street.

In different contexts, sidewalks take on different attributes; varying widths, landscaping and setbacks configurations can serve varying purposes. As an example, wider sidewalks on major and minor arterials allow for street furniture, trees, and café tables and narrower sidewalks in neighborhoods allow for two to three pedestrians to pass while walking. Net new linear feet of sidewalk was utilized as the unit analyzed for this factor.

INTERSECTIONS PER SQUARE MILE AS A MEASURE OF WALKABILITY

A livability indicator, the number of intersections per square mile is a useful metric for comparing people's ability to access places within and around neighborhoods. Beyond livability, access can also provide improvements to the economic context of a place.

Whether driving, walking or cycling, connectivity is important to disperse cars across a network rather than funneling them all through one corridor. A finer grain network provides more than one route to a destination, lessening congestion by spreading it across more roadways and providing alternative options during crashes and providing greater reliability and resiliency.



DALLAS SKYLINE SKETCH *Source: HNTB*

ECONOMIC IMPACT

This factor analyzed changes of net new potential development within each analysis area. Factors measured included net new revenue and associated value created. In addition, this also measured net new jobs and increase in population. This analysis did not incorporate the cost of services, such as fire protection, additional police, and other city services required to service the new development within the analysis area.

One of the three key considerations in CityMAP, economic impact was measured through four sub-factors that relate directly to the design elements of CityMAP. Around each of the focus areas, a somewhat similarly sized analysis area has been assigned to collect existing data and interpret the concepts illustrated in each scenario condition.

The sub-factors include:

- **Net New Development Value** is based on the proposed and currently planned development within the analysis areas. Uses within the proposed and planned development were allocated an amount per square foot that was used to project over time.
- **Net New Tax Revenue** is based on the proposed and currently planned

SCENARIO FACTORS

development property (ad valorem), sales and hotel tax revenues that would be generated from net new development.

- **Net New Population** is based on the total area of housing that is included in the proposed and planned development within the analysis area.
- **Net New Workforce** is based on the total area of non-residential that is included in the proposed and planned development within the analysis area.

For the each scenario, development conditions are assumed to be enhanced by potential additional investments within public control, such as deck park improvements. Additionally, changes in ROW control providing opportunities for conversion to private development. Detailed explanations of these potential impacts are provided within each scenario as a part of the factors analysis.

In the I-30 Canyon and Relocation scenarios there are specific development outcomes associated with the HSR station. These outcomes are added into the total factor scoring; but they are also shown in the analysis summary as a separate item in order to illustrate the potential impact of HSR in that particular scenario.

As discussed, the economic development factor is comprised of an average of four sub-factors: net new tax revenue, net new development value, net new workforce and net new population. Net new tax revenue is calculated by the anticipated ad valorem, hotel tax revenue, and sales tax revenue generated by net new development generated within the respective analysis areas. Net new development value is the total appraised value of that same net new development. The net new development shown in the concepts reflect a variety of uses. Net new workforce and net new population are then calculated from the combination of the potential development shown validated by a detailed market study. Net new tax revenue factor is a range between 0 and 92 million with each quintile being 18.4 million dollars. Net new development value factor is a range from 0 to 2.6 billion dollars with each quintile being 520 million dollars. Net new workforce factor is a range from 0 to 52,000 jobs with each quintile being 10,400 jobs. Net new population factor is a range from 0 to 30,000 people with each quintile being 6,000 people.

Using a baseline of the total building square footages by development type, the existing base was analayzied and forecasted of the economic impact of each respective development type. To perform this complex analysis, a number of steps were involved which included a series of broad assumptions.

Value Assumptions:
For each sceneario, a custom polygon was constructed in GIS. All values per square foot obtained from DCAD data reflect the existing values in each scenario.

Hospitality Assumptions:
Existing hotels in the area were indexed, including the square foot totals of these facilities. The square foot totals per facility were then divided by DCAD values to obtain values per square foot. The value per square foot found – and therefore assumed in this analysis – was $41/SF. To estimate construction costs, building cost data from a number of sources were used.

Office Assumptions:
Existing office space was indexed in the area, including the square foot totals of these facilities. The square foot totals per facility were then divided by DCAD values to obtain values per square foot. To estimate construction costs, an assumption of $120/SF was used after collecting building cost data from a number of sources.

Retail:
Existing retail space was collected in each scenario area, including the square foot totals of these facilities. The square foot totals per facility were then divided by DCAD values to obtain values per square foot. To estimate construction costs, an assumption of $125/SF was used after collecting building cost data from a number of sources. An assumption of $300 of retail sales per square foot was also assumed.

Single Family:
Existing single family was indexed to determine square foot and values.

Multifamily:
Existing retail space in the area was collected, including the square foot totals of these facilities. The square foot totals per facility were then divided by DCAD values to obtain values per square foot. To estimate construction costs, an assumption of $105/SF was used after collecting building cost data from a number of sources.

Tax rates (sales tax, hotel tax, and property tax) were all obtained from Texas State Comptroller data.

Additional analysis was conducted for additional catalytic projects – for example, HSR – For HSR three economic models were conducted to estimated the impact of proposed catalytic projects. Our model included no additional market velocity (i.e. no introduction of HSR), low market velocity (changes to facility changes, but no HSR), and high market velocity (introduction of HSR and facility changes.

Sources:
American Institute of Architects Construction Costs Manual
Craftsman 2014 National Building Cost Manual
HVS Design 2013 Hotel Cost Estimating Guide
Brown Wegher Construction
CoStar
ALN Apartment Data
ICSC

FACILITY COST - CAPITAL

Represents the total project cost without the cost of operations and maintenance on the facility. This study includes high level planning cost estimates, primarily for the highway infrastructure components. A more detailed description of the estimate is included for each scenario. These costs are provided primarily for comparison purposes. As these comparisons are made, the nature and extent of improvements will become more refined and responsibilities for funding these choices will be made.

These estimates do not include costs involved with land development projects, city parks, changes to city streets, DART improvements, HSR improvements and other city building costs. Where costs are included for highway enhancements such as deck parks, widened bridges, etc. their inclusion in the estimate is for comparison purposes only and not to indicate a TxDOT commitment to fund. Many of the scenarios are based on concept drawings that are preliminary and not based on engineering studies. As such, the cost estimates are also preliminary and will change.

Facility development and construction duration is an approximation of the total time for planning, design and construction. The project duration factor is a range from 0 to 25 years with each quintile being 5 years.

Total capital costs estimates are calculated based on a high-level approximation

SCENARIO FACTORS

of the total construction costs of the highway corridor transportation project as shown in the concept. The total capital costs factor is a range from $0 to 1.6 billion dollars with each quintile being $320 million dollars.

FACILITY COST - OPERATIONS AND MAINTENANCE

The costs reflected in this factor are geometric, scenario specific costs for items such as tunnels, safety improvements and other elements that would maintain or enhance the facility without complete reconstruction or demolition costs.

The cost to operate and maintain a facility should be closely considered in making infrastructure decisions. The operation and maintenance (O&M) costs include routine tasks, such as litter pickup. The costs can also include expenses such as electricity and water or larger expenses such as the need to resurface a roadway. Organizations, such as TxDOT, have standard procedures for addressing these O&M costs, which frequently influence how new projects are built. Baseline TxDOT infrastructure O&M costs would be fairly comparable from facility to facility. Most examples of non-standard TxDOT infrastructure involve items that include O&M funding from other sources.

The CityMAP scenarios have included non-standard infrastructure in response to input from stakeholders. These non-standard items will have an O&M responsibility that needs to be determined before a decision is made to construct it.

As scenarios have been developed these non-standard items are included to illustrate a stakeholder idea so consensus can be reached on a decision to fund. Looking at these scenarios it seems clear that O&M cost needs to be considered in the decision process but attempting to score the scenarios on this factor would yield unfair comparisons. For example, a scenario showing 3 deck parks at the Canyon may end up becoming a 1 deck park project.

FACILITY DEVELOPMENT AND CONSTRUCTION DURATION

The project time line from environmental analysis and design to construction and completion.

Construction duration is typically indicative of the complexity of the work and the potential for impacts to motorists and to neighboring businesses and residents. Reconstruction projects often have longer durations than new construction since old facilities must be demolished and new work must be staged around shifted traffic lanes.

Highway construction projects that are longer or more complex may be subdivided into smaller contracts to allow multiple contractors to work simultaneously. The value of getting the construction completed quicker often leads to contracts that include incentives for early completion or the use of design-build procurements.

Construction durations estimated at a planning level are approximations. Durations will be refined as plans and estimates become more defined and contractual factors discussed above are taken into account.

Construction impacts are also influenced by the area available to perform the work. A confined footprint makes sequencing and maintenance of traffic particularly challenging and extremely important to the project success. Based on similar urban projects we anticipate that significant amounts of the work will need to occur during night time and weekend hours.

Most of the CityMAP scenario corridors are surrounded by commercial, residential and institutional uses each with differing needs for access and preferences for working hours. Consideration should be given to installation of noise walls early in the construction to help buffer residential properties from construction. The provision of noise walls will follow standard TxDOT procedures for determining noise impacts and mitigation.

PARKS AND OPEN SPACE - QUANTITY

Measures the quantity of acres gained or lost within the scenario.

Open space provides a needed respite in urban environments, engaging the quality of life and adding value to adjacent development. Dallas has been working on a myriad of opportunities for urban spaces with much success in the urban core.

Typically, the amount and type of open space will vary depending on the context. Regardless, well-designed spaces do not need to be large to function well. One such design approach is pocket parks, which typically are less than one acre and are designed around only one activity or remain passive in function.

Another design that has found considerable popularity, especially in Dallas, is the deck park over a highway. As it is well executed at Klyde Warren Park, a deck park design not only caps a highway shielding the traffic noise but also connects development seamlessly on both sides creating a higher quality development opportunity than would otherwise be possible.

Finally, linear greens are an important design in cities to serve as linkages between areas of activity and as a green cushion between development and a high speed roadway.

Similarly open space quantity is derived from the anticipated reconstruction of the highway and the adjacent potential redevelopment; and the factor is shown as the percentage of total net new number of acres of open space relative to the analysis area. The open space quantity factor is a range from 0 to 6%, with each quintile being 1.2 %.

PARKS AND OPEN SPACE - QUALITY

This factor focuses on the improvement of existing and provision of new open spaces and their quality of space. Quality is evaluated on safety (via Crime Prevention Through Environmental Design (CPTED) principles), usability, and potential for management and programming as well as necessary operations and maintenance.

To build on the Parks and Open Space - Quantity factor, parks and open space should be designed, constructed and maintained to a certain quality. Quality public spaces are those that are perceived to be safe, clean, and accessible and used by the public.

Attracting people in and around the public spaces will add to the perceived and real security that those spaces need in order to remain attractive. Accordingly, this analysis includes the quality of open space potential relative to the quantity described above. Evaluation of the quality of proposed and enhanced parks and open space is based upon five guiding points practiced through CPTED and best practices of design. Though there are many other guiding points and rules for CPTED as well as best practices, the following five are the definable outcomes that can be interpreted through the illustrative design vignettes developed for CityMAP:

- Well-defined and clear entranceways;
- Clearly defined edge boundaries;
- Natural surveillance and unobstructed sightlines;
- “Eyes on the street” with buildings facing the space;
- Safe and accessible space for passive or active recreation.

SCENARIO FACTORS

The open space quality factor is a 0-25 ranking using the CPTED criteria based on the design of the net new open space. The open space quality factor is a range from 0 to 25 points with each quintile being 5 points.

VISUAL IMPACT

Specific to each corridor, the visual impact factor will evaluate the experiential impact for the neighborhood pedestrian, bicyclist or motorist when utilizing local streets. This factor is not intended to measure the visual impact of or from private property, nor from motorists utilizing the facility.

When applying a Context Sensitive Solutions approach to assessing the visual impact associated with roadway or freeway corridors, two main perspectives are typically considered:

1. The "view from" the corridor, or the views experienced from the perspective of the motorist driving on the freeway; and
2. The "view to" the corridor, or views experienced from the perspective of people outside the corridor looking at the corridor. This could include views from cross streets, adjacent properties, etc.

"VIEW FROM" SCENARIO

The "view from" the motorists perspective can vary widely depending on whether the corridor is elevated above grade, at-grade, or below grade. "Views from" elevated corridors, such as I-45 or I-345, consist of generally high quality long range views of the Downtown Dallas skyline, with few visual barriers like building rooftops or trees obstructing these views.

Conversely, the "views from" below grade corridors, such as US 75 Central Expressway or the I-30 Canyon, are usually shorter and restricted lower quality views of retaining walls, and freeway-adjacent land uses that may be visible over the top of the retaining walls. Occasionally, the below grade corridor alignment will be arranged such that the views through the front window of the vehicle are aligned to facilitate high quality distant views of the downtown skyline.

"VIEW TO" SCENARIO

The "view to" scenario often works as an inverse of the "view from" condition. In other words, an elevated highway section, like I-345, creates good long range views of the Dallas skyline for motorists driving on the highway (view from), but generally negative and obstructed views of the underside of the bridge structure for individuals on the cross streets or neighboring properties adjacent to the highway (view to). A below grade highway condition, like Central Expressway or Woodall Rodgers Freeway, generally produces lower quality views for motorists driving on the freeway (view from), but generally more positive views across or over the freeway to the Downtown skyline, enhanced bridge conditions or deck park for individuals on the cross streets or neighboring properties (view to).

The "view-to" an at-grade freeway from neighboring properties creates perhaps the worst aesthetic condition, as it becomes a constant visual reminder of a major noise generating element, while also creating a physical barrier to pedestrian, bicycle or vehicular mobility. While this condition may create favorable long range views of tall elements over the top of passing vehicles, the experience is less than ideal. Likewise, "views from" at-grade freeways are often focused on the urban sprawl and relative chaos of street level roadside commercial development along the frontage roads. These negative views can be mitigated and enhanced through the use of effective signage controls and landscape improvements, both on the commercial properties and along the freeway.

VISUAL IMPACTS OF CORRIDOR AESTHETICS

In the context of the CityMAP project, we recognize that the "view from" below grade corridors can be significantly influenced by the relative importance placed on the architectural and aesthetic treatments incorporated into the corridor design. The visual quality of the corridor aesthetics create powerful first and lasting impressions and impact motorist perceptions as to the relative quality of the corridor, the quality of development constructed adjacent to the corridor, and the amount of civic pride the community places on the corridor. While the visual impact of clean, well-maintained, uncluttered, and architecturally interesting corridor aesthetics are attractive to developers and are likely promote growth by conveying a sense of community pride and optimism toward the future, the opposite is also true. Unattractive, dirty, visually cluttered and graffiti-filled corridors can send the message that the community lacks civic pride, criminal activity may be an issue, or the market demographics are unfavorable, and therefore the community may not be as attractive to developers or potential residents.

The financial reality of limited transportation funding resources dictates that difficult policy and funding choices must be made when allocating resources toward a given corridor improvement project. Assuming that greater funding for aesthetic improvements equates to a higher level of visual quality, a generalized continuum of aesthetic treatments may include:

- Baseline Aesthetic Approach = Average Visual Quality.
- Complete Streets Expanded Bridges / Special Architectural Finishes = Better Visual Quality.
- Deck Parks = Best Visual Quality.
- TxDOT's typical project funding allocation for aesthetic treatments is approximately one percent of the construction cost. For the purposes of this discussion, we will refer to this as a Baseline Aesthetic Approach, which would yield average visual quality. In order to attain higher levels of visual quality, additional funding beyond the baseline would be required from either public or private partners. These additional funding arrangements are typically handled through Inter-Local Agreements (ILA's) with the local municipality or other private sponsoring entities. These ILA's may include provisions which ensure funding for long-term maintenance of the aesthetic enhancements. Municipalities often utilize planning tools, like the creation of Tax Increment Finance (TIF) districts, Tax Increment Reinvestment Zones (TIRZ) or Public Improvement Districts (PIDs) to generate revenues for long term maintenance.

VISUAL IMPACT EVALUATION FACTOR/SCORING

The scenarios developed for CityMAP involve urban corridors that occur within the context of surrounding city streets, neighborhoods and development. This factor evaluates the relative impact of the highway configuration on the view across the highway corridor from the perspective of a pedestrian on a cross street. The view typically correlates to the vertical position of the highway relative to the cross street. A below grade highway section would allow better views across the highway corridor, while an above grade highway section would reduce or block views across the highway corridor.

For purposes of this analysis, below grade sections are defined as being at least 10-ft below the corridor edges. Above grade sections would include all other configurations including at-grade, on-fill and on-structure designs. A corridor may include a combination of below grade and above grade conditions along its length which can be measured. Corridors where lengths of highway are removed are counted as below grade sections.

For scoring the corridor, the greater percentage of below grade section length would equate to better views across the corridor as follows:

- 0-20% below grade;
- 21-40% below grade;
- 41%-60% below grade;
- 61-80% below grade; and
- 81-100% below grade.

SCENARIO FACTORS

MOBILITY

Dallas CityMAP is considering sets of short and long-range modifications to the freeway transportation system that serves downtown Dallas. These range from conventional design changes such as ramp closures and alignment adjustments to transformational alternatives like the re-routing of I-30. In each case, the transportation facility modification would create the opportunity and expectation of a land use development pattern and economic impact that is different and more favorable than would otherwise occur. This combination of transportation and development change defines a "Scenario" that can be evaluated with respect to the fundamental purpose of the transportation system – to provide Mobility. Since major transportation changes have a long implementation period, and because the networks must serve needs well into the future, the year 2040 time horizon is selected for this analysis.

The purpose of the mobility evaluation of the scenarios is to provide information to decision makers and stakeholders. It is not intended to select one as the preferred scenario or even to eliminate a scenario from consideration. The CityMAP team selected two mobility measures that describe different aspects of system performance. These will be computed or "modeled" using the NCTCOG Regional Travel Demand Model. This model represents the regional multi-modal transportation network of roadways (freeways, tollways, and major streets), the rail systems (DART Light Rail, the Trinity Railway Express, and the Denton A-train Commuter Rail), and the local bus systems. The transportation performance factors will each be stratified by roadway classifications: Freeway/Tollroad and Thoroughfare. The statistics will be summarized for the downtown Dallas study area.

An original premise of Dallas CityMAP is that it is not intended to address any pending decisions regarding the Trinity Parkway. The Trinity Parkway is a non-TxDOT facility whose implementation is outside of the TxDOT decision-making process. However, since it is a facility with regional and downtown Dallas implications, the scenario analysis presented here includes the 4-lane phase of the Trinity Parkway as endorsed by the City of Dallas.

MOBILITY PERFORMANCE FACTORS

QUALITY/AVERAGE SPEED

One component of the measure of travel quality is average speed in miles per hour. It is used as a performance factor because people can relate it to their current experiences in their daily travel.

CONGESTION/CONGESTION DELAY PER TRIP

Congestion delay measures the amount of vehicular delay, in minutes, encountered by all vehicles on the roadway network. The delay is based on the difference in actual (modeled) vehicular speeds and the speed vehicles would travel if there was no congestion.

SCENARIO ASSESSMENT METHODOLOGY

HARVEY BALLS

Harvey Balls depict a relative range from "low to high" for each factor. An empty circle represents the low score of one (1), with a quarter solid circle representing a score of two (2), a half solid circle represents a score of three (3), a three quarter solid circle a score of four (4) and a solid circle represents the high score of five (5).

RECORDING SCORES

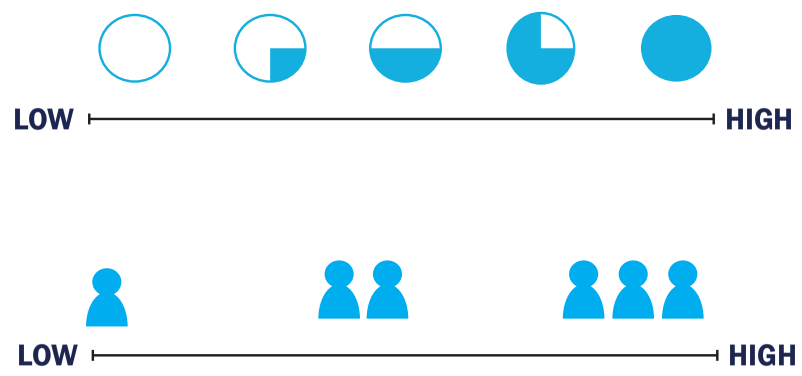
The low to high scoring does not necessarily correlate with "desirable" or "beneficial." The assessment attempts to avoid the assignment of subjective value judgments, such as "good, better or best" to the development factors. For instance, rebuilding the I-345 corridor in a below-grade configuration scores a "2" under the "Facility Cost-Capital" factor because of the high construction cost of the project. This is a lower score than the I-30 Remove and Relocate project, which scores a "5" because of its higher construction cost. The higher score for does not imply that this project is more desirable or better than the I-345 project; nor does it imply that the higher scoring I-30 Relocation project should be prioritized over, or be constructed before the I-345 project; it simply means that the I-30 Relocation project is more expensive to construct than the I-345 Below-Grade project.

In another example, the I-345 Below-Grade project scores "2" on "Connectivity" because this scenario establishes the same number of connected streets as the existing disrupted at-grade street grid associated with the existing elevated highway condition. This scenario also scores "4" on "Visual Impact/Visual Quality" because it re-establishes views to the Dallas Skyline from neighboring properties or cross streets from which views are currently blocked or obscured by the elevated structure.

STAKEHOLDER INTEREST

CityMAP has also included people icons to address relative levels of stakeholder interest associated with each factor. One "person" would represent a relatively low level of stakeholder interest for a specific factor, while three "people" would represent a relatively high level of stakeholder interest for that factor.

Measuring or qualifying stakeholder interest was very subjective and difficult to ascertain for each factor as some stakeholders were adamant about certain factors or specific corridor development scenarios within the CityMAP study area, but ambivalent towards other factors or corridors. Other stakeholders expressed interest in all factors and ranked them in order of importance as related to their specific point of view. Some stakeholders completed the CityMAP stakeholder questionnaire in its entirety, while others preferred to discuss and speak about their thoughts and concerns without completing a written record of their input. For this reason, the scoring associated with the people icons represents the collective professional judgment and recollections of stakeholder interest and comments as recalled and recorded by the members of the CityMAP team.

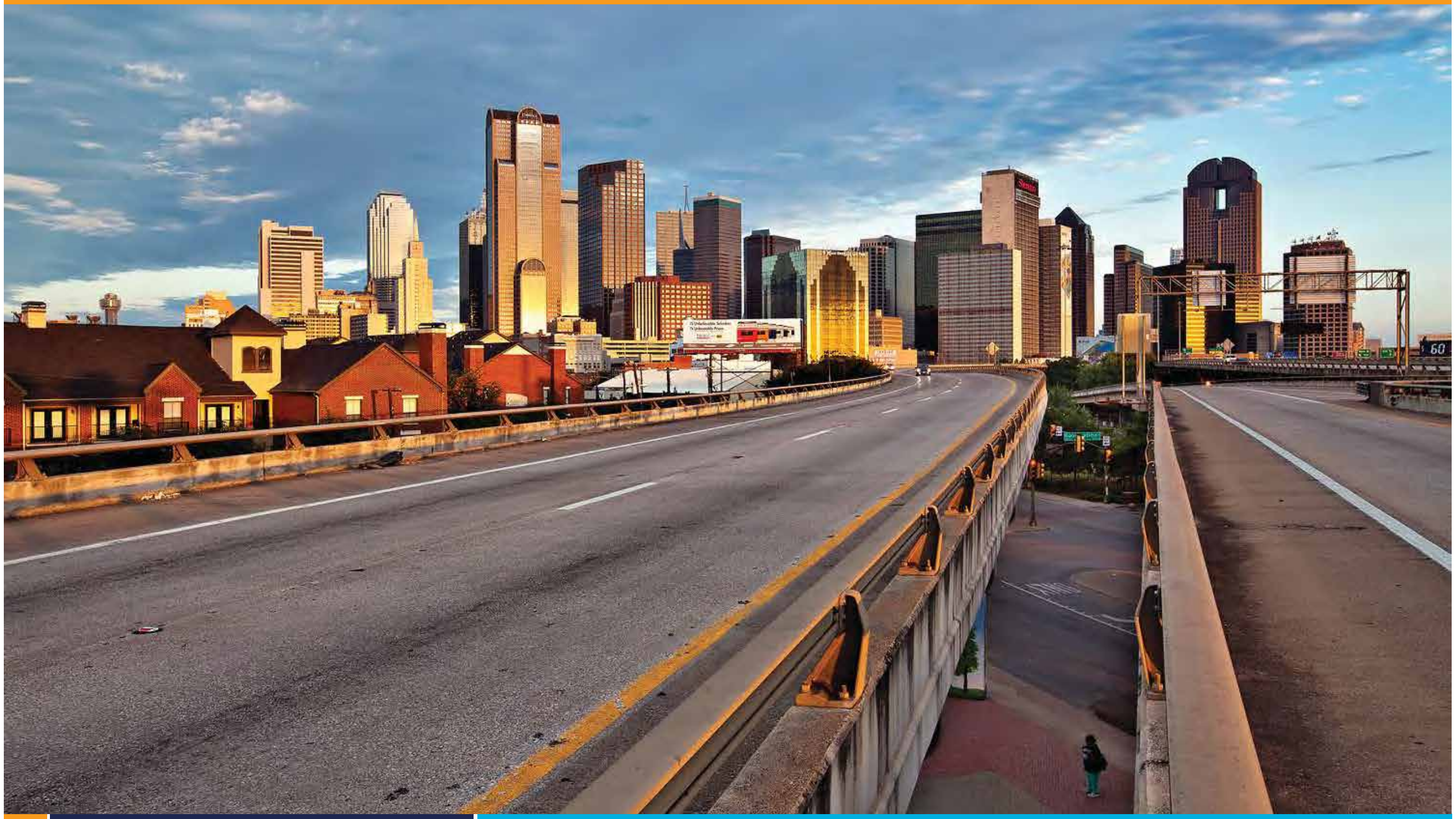


	SCORE
CONNECTIVITY	
Net New Linear Feet of Sidewalk per Acre	
Net New Intersections per Square Mile	
ECONOMIC DEVELOPMENT	
Total Revenue	
Total Value	
Net New Jobs	
Net New Population	
Overall	
FACILITY CAPITAL COST	
Estimated Total Cost of the Facility (inside TxDOT right-of-way)	
FACILITY DEVELOPMENT & CONSTRUCTION DURATION	
Total Time for Planning, Design & Construction	
PARKS & OPEN SPACE - QUANTITY	
Net New % of Area	
VISUAL IMPACT	
Visual Impact Score	

EXAMPLE FACTOR ASSESSMENT CHART

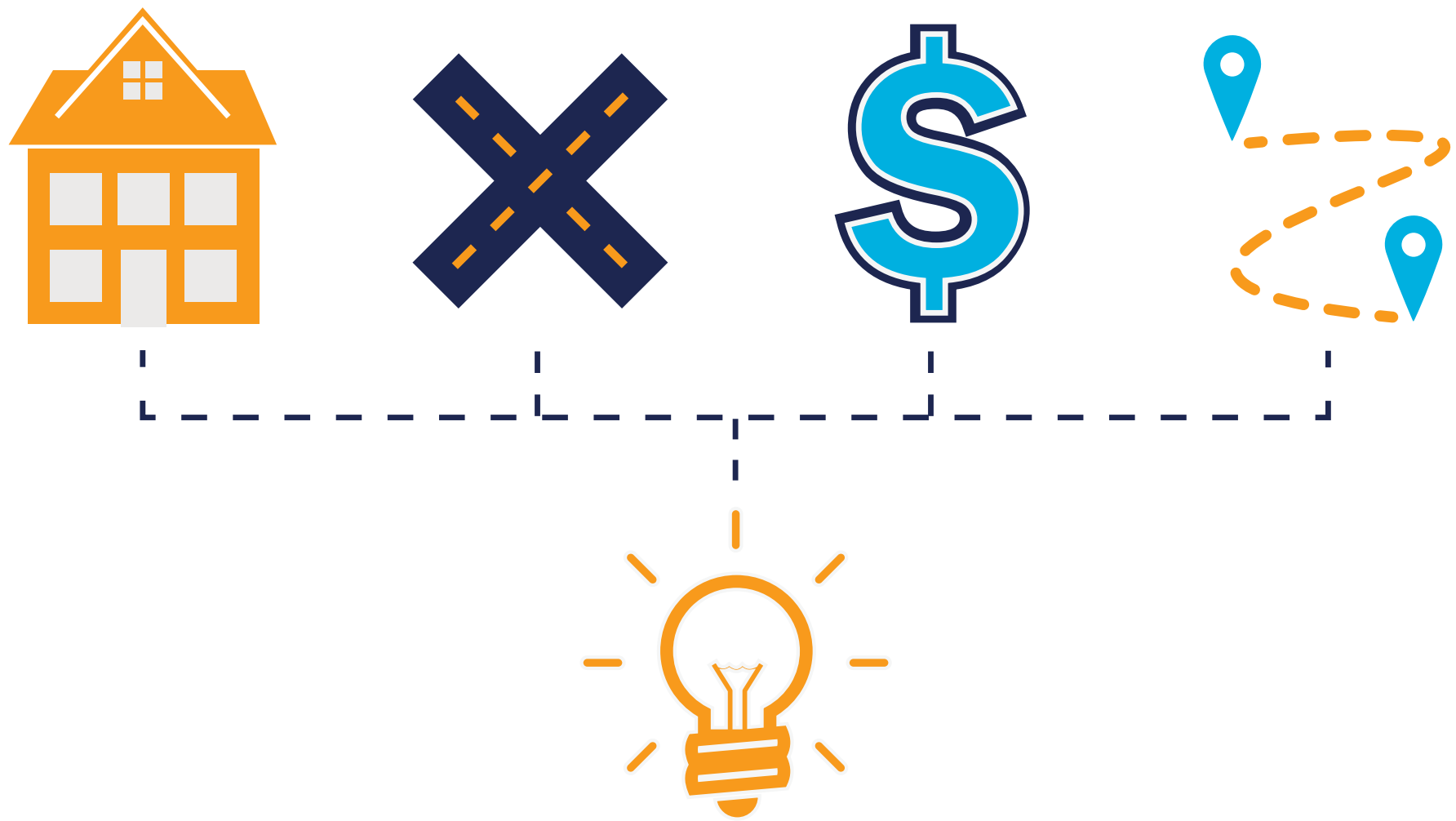


SCENARIOS



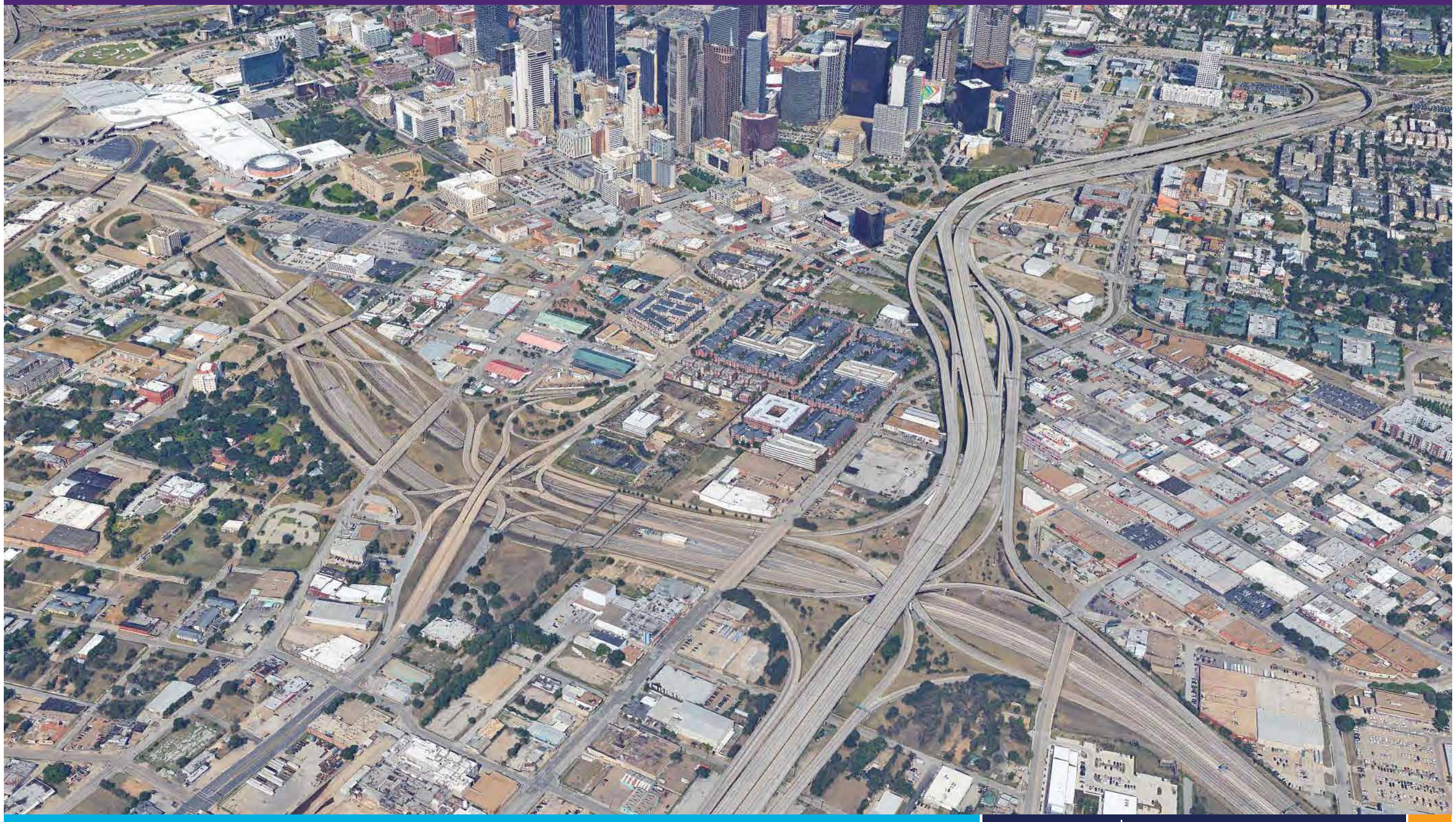
WE DEVELOPED SCENARIOS.

Based on ideas, concerns, and expectations from stakeholders and the public, we created scenario options that integrate the community's vision with practical transportation and urban design solutions, construction, and funding feasibility.




STATION 3
MAP

CHAPTER 5 | I-30 SCENARIOS



I-30 SCENARIOS | OVERVIEW

The I-30 Corridor has been broken into two segments, the "Canyon" from Hotel Street to I-45 and the East Corridor from I-45 to Dolphin Road. The scenario approach is primarily focused on the separate and unique context of the two east and west segments of the corridor. With the Canyon area predominantly connected to the CBD and other destinations like the Convention Center, Farmers Market and Heritage Village, that area will realize a much different pattern of redevelopment than the East Corridor, which is predominately single-family neighborhoods and the historic area encompassing Fair Park as well as the significant public ownership of lands used for storage near I-45 and further east at the former Ford Plant.

The East Corridor segment of I-30 has a rich cultural history that dates well before the interstate was constructed. Today, the majority of people think of I-30 as the divider between North Dallas and South Dallas.

The following scenarios include significant enhancements such as deck parks and upgraded pedestrian amenities. The presentation of these scenarios do not represent an assignment of cost or responsibility of those enhancements to TxDOT or any other potential partner. TxDOT traditionally funds core facility costs. In addition, the State is facing funding challenges for even basic maintenance obligations. In this context, the realization of the conceptualized enhancements in these scenarios will require additional funding commitments from local public and private partners.

CANYON – COMPRESSED

The I-30 Canyon was previously studied by TxDOT as a part of the 3.7-mile Project Pegasus, which extended from Sylvan Avenue west of the Trinity River to approximately Chestnut Street east of the I-45 interchange. This section of freeway is generally located in a depressed "canyon" condition below the grade of surrounding existing land uses. For the purposes of the CityMAP project, the I-30 Canyon is referred to as the area located between the east edge of the Dallas Horseshoe in the vicinity of Hotel Street and the UPRR bridge and I-45, a distance covering approximately 1.3 miles. Many of the alignment aspects of Project Pegasus were incorporated into the CityMAP Canyon scenarios.

This scenario segment maintains the below grade profile of I-30 and focuses on the cleanup of the ramps and bridges for Cesar Chavez. The reconstruction of I-30 from the Horseshoe to I-45 will reflect a compressed version of the Pegasus Schematic. This tightens up the current ROW and will support better connectivity across I-30 between the CBD and The Cedars. This scenario also adds capacity and improved linkages in several locations.

EAST CORRIDOR – ADDED CAPACITY/BELOW GRADE

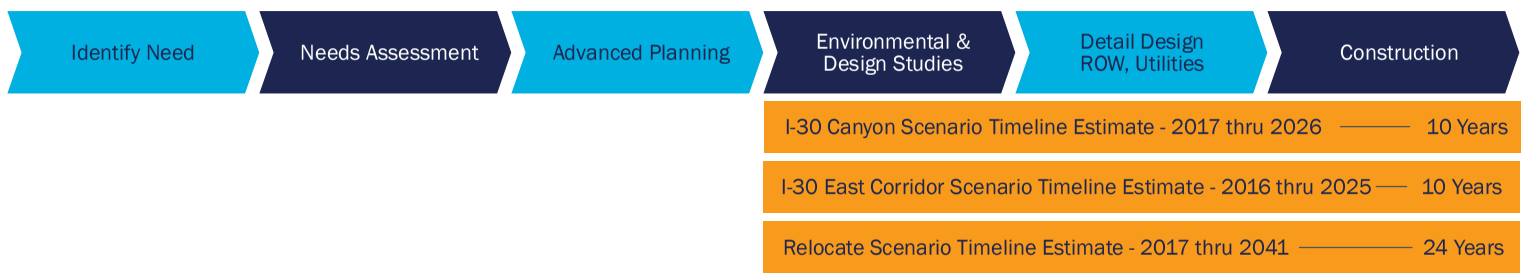
TxDOT's East Corridor project spans approximately 19 miles along I-30 from I-45 to Bass Pro Drive and approximately 10 miles along US 80 from I-30 to FM 460. The total study area for TxDOT's East Corridor project involves five cities/towns: Dallas, Garland, Mesquite, Rowlett and Sunnyvale. For the purposes of the CityMAP project, the I-30 East Corridor refers to the approximately 3.0-mile section of I-30 located between I-45 and Dolphin Road.

This scenario proposes the reconstruction of I-30 from I-45 to Dolphin Road based on the East Corridor schematic with a compressed section (known as a 4-2R-4 with two lane frontage roads). This scenario continues below grade to Dolphin Road and adds capacity and improved linkages in several other locations.

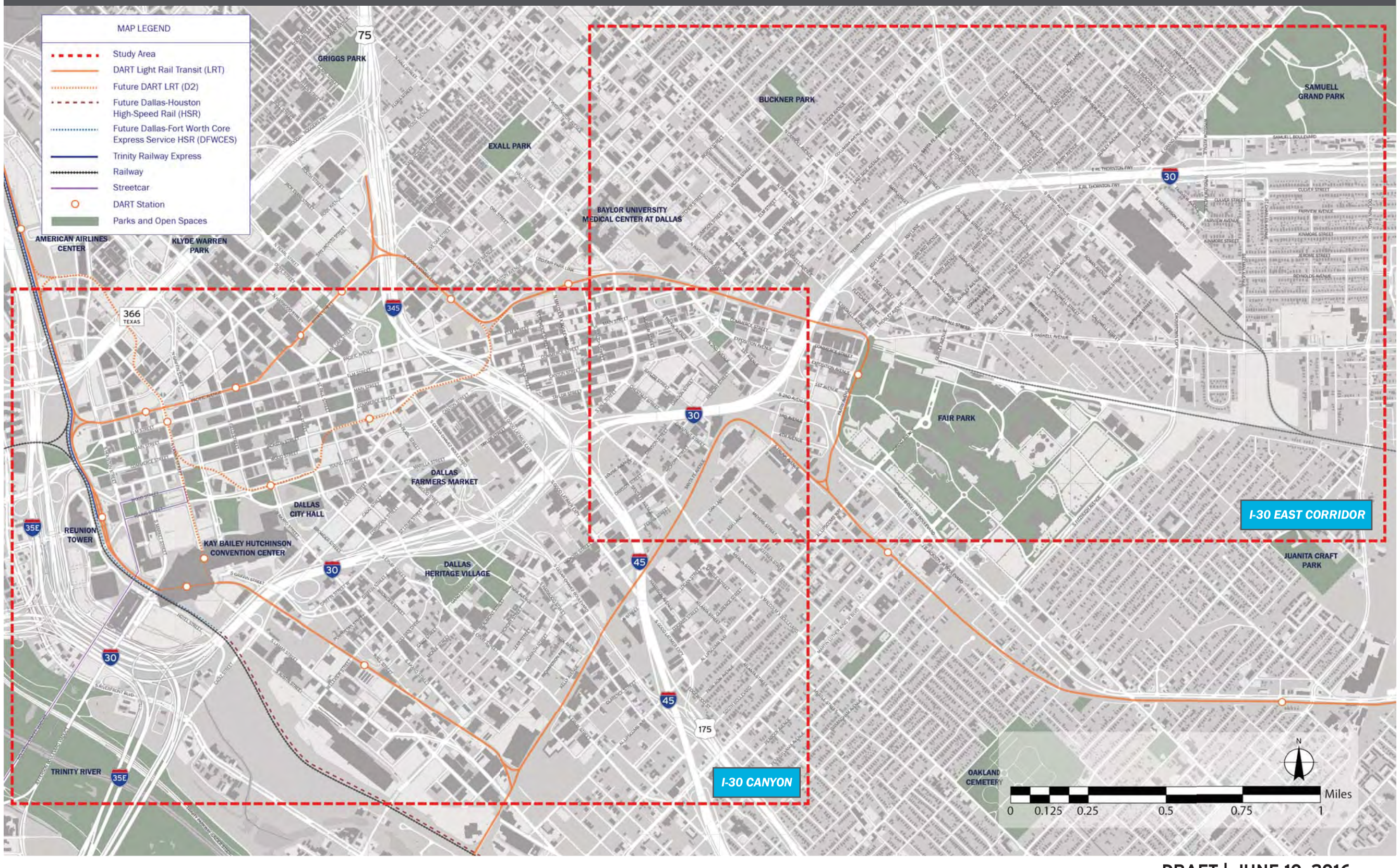
RELOCATION

At the request of stakeholders, the CityMAP team performed a "high level" evaluation of this potentially transformational scenario to reroute I-30. Although many alignments were suggested, for evaluation purposes, the team chose a potential new alignment traveling southeast from I-35E along the eastern edge of the Trinity River to US 175 eastward and then following the White Rock Creek floodway northeast before rejoining the current I-30 location near Ferguson Road. A full description of the conceptual alignment is included in the Mobility section of this chapter. It is difficult, without immense collaboration, to predict the many challenges certain to be associated with this scenario, and it is equally difficult to envision all of the best opportunities for the abandoned current I-30 alignment and potential surplus ROW. However, the team listened to stakeholders and analyzed the prospects to reconnect neighborhoods immediately south of the urban core through a restored urban grid of streets and associated infill development. Potential environmental impacts associated with a new alignment would need extensive evaluation as well as potential impacts to established southern Dallas neighborhoods, current and future projects such as the Horseshoe, Trinity Parkway, and potential HSR.

SCENARIO TIMELINE



I-30 SCENARIOS | EXISTING CONDITIONS



DRAFT | JUNE 10, 2016

METHODOLOGY

The tables in each scenario evaluation present the factors that describe the performance of the transportation system. These factors, described in more detail in Chapter 4, are used to describe the relative performance of each scenario. Scenario effects are reported in two ways. First, they are summarized for the overall transportation system in the downtown study area. This is done because the effect of improvements or changes to a specific roadway usually go beyond the roadway itself. Traffic changes (increases or decreases in traffic volumes) on a freeway can affect intersecting and parallel thoroughfare routes. Increased congestion on a freeway can spill onto parallel routes or decreased congestion can improve thoroughfare conditions. The area factors that describe the roadway performance are summarized for:

- Freeway/Tollway system
- Thoroughfare system

The second way that scenario performance is shown is at the level of specific facilities in the downtown study area. Specific facility "segments" are shown with Performance Factor values because most people relate to the facilities they use and so users can understand the relative potential impact of a scenario on specific travel patterns, destinations, or neighborhoods in the area.

The Performance Factor tables (Tables 5-1, 5-2, and 5-3) and the facility comparisons show the factor values for three "comparative travel simulations" plus a simulation of the scenario being analyzed. The first comparative simulation is the "2017 Existing" which simulates travel on the current transportation network using 2017 demographic data. The next comparative simulation projects 2040 traffic onto the "2040 No-build" network. This represents the existing transportation network plus those improvements which are under construction today. It simulates a hypothetical situation where the region's population and employment continue to grow to 2040 levels but the new projects identified in the 2040 Preliminary MTP are not implemented. The third comparative network simulation models the performance of the "2040 Preliminary Plan"[1] network which is a proxy for the Regional Transportation Plan, Mobility 2040.

The scenario configurations presented here each include the Trinity Parkway in the configuration currently endorsed by the City of Dallas. This is a four-lane toll road between I-45 at US 175 and I-35E at US 183 with partial service interchanges provided at Cedar Crest Boulevard with access to and from the north only and at Inwood Road with access to and from the south only.

The Study Area Performance Factor Comparison tables provide comparative statistics in two broad areas that relate to mobility objectives expressed in the stakeholder listening sessions: Quality of Travel and Congestion Relief. Relating to each objective is a performance factor that is computed from the travel simulations. The performance factors are Average Speed and Congestion Delay per Trip. Each of the statistics is subtotaled for Freeway/Toll Roads and Thoroughfares. The modeled values are calculated and aggregated from the model network in the downtown study area. They are analogous to what people experience as they travel in the real world, but the experiential travel of individuals is not always well represented by a computer model of annual average weekday traffic for an entire region, especially when projected years into the future. But, the travel demand model is objective and is the best way to compare a variety of network scenarios.

The tables present four columns of values representing the two comparators and the subject scenario. The last two columns provide a simplified indication of the comparison of the scenario to both the 2040 Preliminary Plan and the 2040 No-Build. The indication is an up arrow if the scenario value is greater than the base value, a down arrow if it is less, or a right arrow if it is unchanged. The arrows are coded green if the change is in a desirable direction or unchanged for that factor and red if it is in an undesirable direction. The 2017 existing values are provided to benchmark how the system performs today. By comparing the 2040 Preliminary values to the 2040 No-Build and the 2017 existing one can see that the Mobility Plan is a well-conceived strategy to deal with the population growth between now and 2040. So, a scenario's slight reduction in speed, compared to the Plan, should be viewed in the context that the Mobility Plan has already achieved a more significant improvement in that measure, compared to doing nothing.

The purpose of the presentation was to objectively compare the scenarios to the comparators, not to select, rank, or eliminate scenarios.

[1] The 2040 Preliminary Network was available and used by CityMAP in 2015 prior to the adoption of the Mobility 2040 Plan by the Regional Transportation Council in March 2016. The only significant difference between 2040 Preliminary and Mobility 2040 is I-30, East. Preliminary 2040 assumes a 10-lane freeway plus a 4-lane managed facility while the adopted Plan assumes a 10-lane freeway with no managed lanes.

SCENARIO DESCRIPTION: I-30 – Add Capacity, Below Grade, 4-2R-4

This scenario includes the reconstruction of Interstate 30 between the I-30/I-35E Interchange (the Horseshoe Project) and Dolphin Road in East Dallas. The transportation features of the I-30 configuration proposed by this scenario include:

- Provide additional capacity while minimizing the ROW footprint,
- Lower the roadway profile where it is elevated or at grade to below grade,
- Eliminate the contraflow HOV lanes and implement a barrier-protected, 2-lane reversible HOV/managed-lane system,
- Provide four dedicated general purpose lanes in each direction,
- Add missing frontage roads and cross-street connections where possible,
- Implement features of Project Pegasus in the I-30 Canyon including:
  - -Reconfiguring the Cesar Chavez Interchange to a simple diamond interchange with connections to the I-30 HOV/managed lanes,
  - -Removing the Collector-Distributor System, and
  - -Adding continuous frontage roads, other changes that simplify ramps and access to Downtown.

The proposed configuration is described as 4-2R-4 which denotes four general purpose lanes in each direction and a separate two-lane, reversible HOV/managed roadway that would operate westbound in the morning peak period and eastbound in the afternoon peak. Compared to the operational configuration today, this provides an additional HOV lane in the peak direction and an additional general purpose lane in the off peak direction. Also, the operational expense of the reversible HOV is considerably less than today's contraflow operation. While the scenario adds capacity to today's network, the Mobility 2040 Preliminary that is the basis of comparison is a 5-2-2-5 configuration which provides 25 percent more general purpose lane capacity than the scenario.

EVALUATION: I-30 – Add Capacity, Below Grade, 4-2R-4

FACTOR COMPARISON -- STUDY AREA

Table 5-1 presents the performance factor values aggregated to the study area (see right). The scenario comparison to 2040 No-Build shows that the I-30 – Add Capacity, Below Grade, 4-2R-4 Scenario anticipates an improvement in both performance factors for both freeway and thoroughfare facilities. When the scenario is compared to the Preliminary 2040 Plan, the Average Speed factor decreases slightly, an unfavorable comparison. However, the resulting speed marks an improvement over the 2040 No-Build. The congestion metrics, shown in vehicle hours of delay per trip, indicate no significant changes from the 2040 Preliminary Plan.

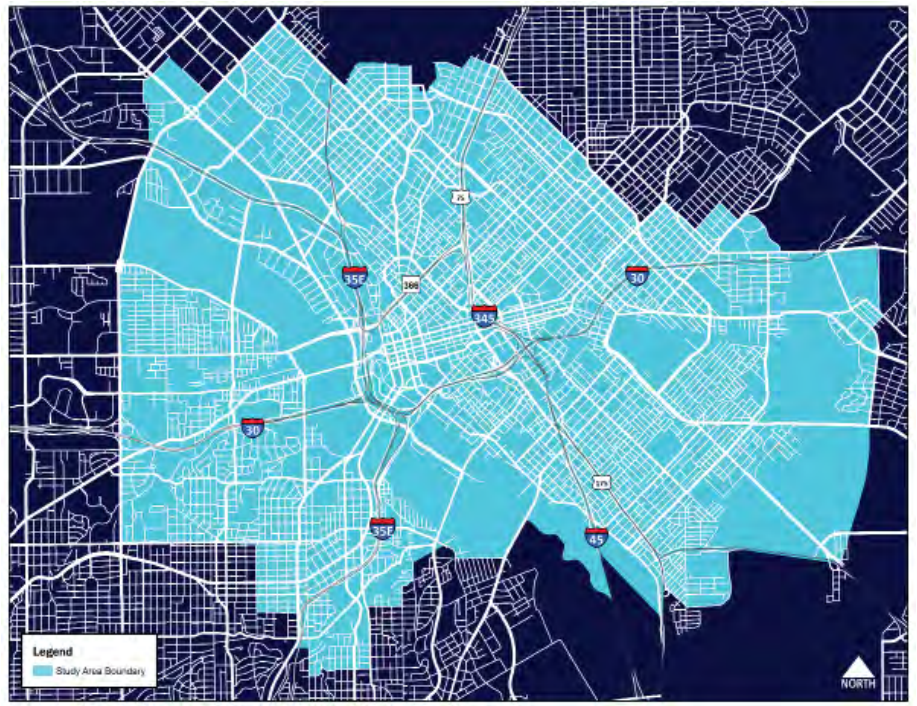


Table 5-1 Study Area Performance Factor Comparison

Scenario: I-30 — Add Capacity/Below Grade (4-2R-4) Objectives and Performance Factors			2017 Existing Value	2040 No-Build Value	2040 Preliminary Plan Value	Scenario Value	Scenario Comparison	
							No-Build	2040 Prelim
Quality	Average Speed (Weekday Miles per Hour)	Freeway/Toll Road	33	24	29	27	▲	▼
		Thoroughfare	19	15	18	17	▲	▼
Congestion	Congestion Delay per Trip (Minutes)	Freeway/Toll Road	4	8	5	5	▼	▶
		Thoroughfare	2	4	2	2	▼	▶
All Values represent annual average weekday traffic.								

Arrow Indication Key:

- Favorable change in performance factor value
- Unfavorable change in performance factor value
- ▲ Increase in performance factor value
- ▼ Decrease in performance factor value
- ▶ No significant difference in performance factor value

FACTOR COMPARISON – SCENARIO



Transportation Indicators for I-30 Canyon	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-30 4-2R-4 CityMAP Scenario
Average Daily Volume	153,000	175,000	177,000	182,400
Average V/C Ratio	1.05	1.21	1.19	1.04
Level of Service	F	F	F	F
Average Travel Speed (mph)	38	31	33	33
Hours of Delay per Mile	1,224	3,019	2,240	3,135

I-30, south of the Central Business District, the Canyon, carries more traffic but with an additional lane in each direction, there would be an improvement in the volume-to-capacity ratio.



Transportation Indicators for I-30 near Fair Park	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-30 4-2R-4 CityMAP Scenario
Average Daily Volume	235,000	259,000	295,000	253,000
Average V/C Ratio	1.27	1.40	1.19	1.16
Level of Service	F	F	F	F
Average Travel Speed (mph)	35	28	42	39
Hours of Delay per Mile	3,102	5,806	3,449	3,922

I-30 (East) in the vicinity of Fair Park would carry considerably less traffic in the general purpose lanes and would operate at lower speeds.

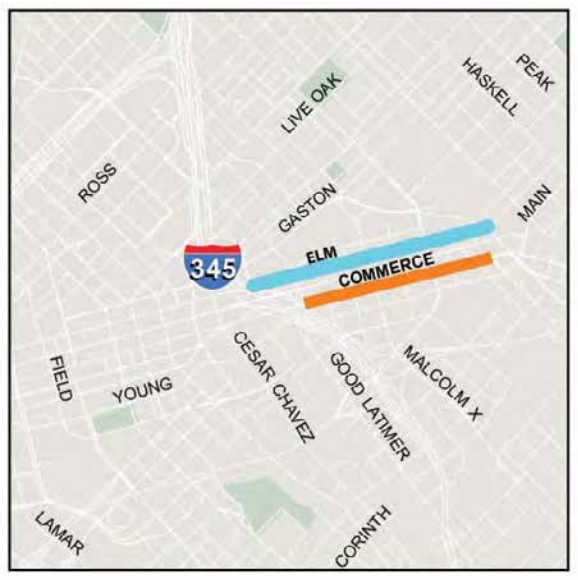
FACTOR COMPARISON – SCENARIO



Transportation Indicators for I-30 near Samuell Blvd	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-30 4-2R-4 CityMAP Scenario
Average Daily Volume	223,000	255,000	282,000	240,000
Average V/C Ratio	1.21	1.39	1.23	1.31
Level of Service	F	F	F	F
Average Travel Speed (mph)	38	29	38	33
Hours of Delay per Mile	2,792	6,985	4,496	5,202

I-30 (East) near Samuell Grand Park would also operate with lower levels of service and lower speeds.

FACTOR COMPARISON – SAMPLE FACILITIES



Transportation Indicators for Elm St	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-30 4-2R-4 CityMAP Scenario
Average Daily Volume	12,000	22,000	13,000	15,000
Average V/C Ratio	0.38	0.70	0.42	0.49
Level of Service	A	D	A	C
Average Travel Speed (mph)	24	22	24	24
Hours of Delay per Mile	54	147	34	41

Transportation Indicators for Commerce	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-30 4-2R-4 CityMAP Scenario
Average Daily Volume	11,000	18,000	14,000	17,000
Average V/C Ratio	0.35	0.57	0.45	0.55
Level of Service	A	C	A	C
Average Travel Speed (mph)	26	25	25	25
Hours of Delay per Mile	28	96	71	76

I-30 (East) in the 4-2R-4 configuration would cause slightly more traffic to use Elm and Commerce Streets.

SCENARIO DESCRIPTION: I-30 – Add Capacity, Below Grade, 5-2R-5

This scenario includes the reconstruction of Interstate 30 between the I-30/I-35E Interchange (the Horseshoe Project) and Dolphin Road in East Dallas. The transportation features of the I-30 configuration proposed by this scenario are identical to the previous scenario except for the addition of a general purpose lane in each direction. These features include:

- Provide additional capacity in each direction while minimizing the ROW footprint,
- Lower the roadway profile where it is elevated or at grade to below grade,
- Eliminate the contraflow HOV lanes and implement a barrier-protected, 2-lane reversible HOV/managed-lane system,
- Provide five dedicated general purpose lanes in each direction,
- Add missing frontage roads and cross-street connections where possible,
- Implement features of Project Pegasus in the I-30 Canyon including:
  - -Reconfiguring the Cesar Chavez Interchange to a simple diamond interchange with connections to the I-30 HOV/managed lanes,
  - -Removing the Collector-Distributor System, and
  - -Adding continuous frontage roads, other changes that simplify ramps and access to Downtown.

The proposed configuration is described as 5-2R-5 which denotes five general purpose lanes in each direction and a separate two-lane reversible HOV/managed roadway that would operate westbound in the morning peak period and eastbound in the afternoon peak. Compared to the operational configuration today, this provides an additional HOV lane in the peak direction and two additional general purpose lanes in the off peak direction. Also, the operational expense of the reversible HOV is considerably less than today's contraflow operation.

EVALUATION: I-30 – Add Capacity, Below Grade, 5-2R-5

FACTOR COMPARISON -- STUDY AREA

Table 5-2 presents the performance factor values aggregated to the study area (see right). The scenario comparison to 2040 No-Build shows that the I-30 – Add Capacity, Below Grade, 5-2R-5 Scenario anticipates an improvement in all performance factors for both freeway and thoroughfare facilities.

When the scenario is compared to the Preliminary 2040 Plan, the Average Speed factor is not significantly different for Freeway/Toll Road and is slower for Thoroughfares. The congestion measures, shown in vehicle hours of delay per trip, indicate no significant changes from the 2040 Preliminary Plan.



Table 5-2. Study Area Performance Factor Comparison

Scenario: I-30 — Add Capacity/Below Grade (5-2R-5)			2017 Existing Value	2040 No-Build Value	2040 Preliminary Plan Value	Scenario Value	Scenario Comparison	
Objectives and Performance Factors							No-Build	2040 Prelim
Quality	Average Speed (Weekday Miles per Hour)	Freeway/Toll Road	33	24	29	29	▲	►
		Thoroughfare	19	15	18	17	▲	▼
Congestion	Congestion Delay per Trip (Minutes)	Freeway/Toll Road	4	8	5	5	▼	►
		Thoroughfare	2	4	2	2	▼	►
All Values represent annual average weekday traffic.								

Arrow Indication Key:

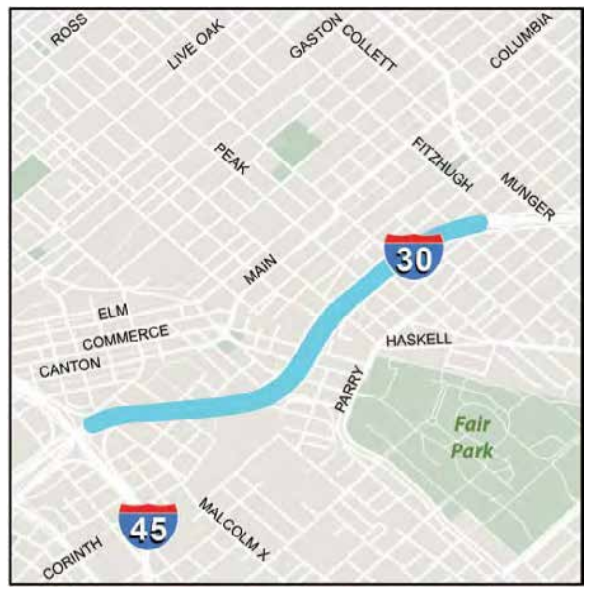
- Favorable change in performance factor value
- Unfavorable change in performance factor value
- ▲ Increase in performance factor value
- ▼ Decrease in performance factor value
- ► No significant difference in performance factor value

FACTOR COMPARISON – SCENARIO



Transportation Indicators for I-30 Canyon	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	5-2R-5 CityMAP Scenario
Average Daily Volume	153,000	175,000	177,000	205,000
Average V/C Ratio	1.05	1.21	1.19	1.17
Level of Service	F	F	F	F
Average Travel Speed (mph)	38	31	33	34
Hours of Delay per Mile	1,224	3,019	2,240	2,299

I-30 in the Canyon would attract considerably more demand, but with an additional lane the ratio of volume to capacity is only slightly worse than in the plan.



Transportation Indicators for I-30 near Fair Park	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	5-2R-5 CityMAP Scenario
Average Daily Volume	235,000	259,000	295,000	284,000
Average V/C Ratio	1.27	1.40	1.19	1.15
Level of Service	F	F	F	F
Average Travel Speed (mph)	35	28	42	42
Hours of Delay per Mile	3,102	5,806	3,449	3,519

I-30 (East) in the Fair Park area would see a better volume to capacity ratio but would still operate at Level of Service F.

FACTOR COMPARISON – SCENARIO



Transportation Indicators for I-30 near Samuell Blvd	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	5-2R-5 CityMAP Scenario
Average Daily Volume	223,000	255,000	282,000	281,000
Average V/C Ratio	1.21	1.39	1.23	1.22
Level of Service	F	F	F	F
Average Travel Speed (mph)	38	29	38	38
Hours of Delay per Mile	2,792	6,985	4,496	4,504

Under the 5-2R-5 Scenario, the operating characteristics are almost unchanged compared to the plan.

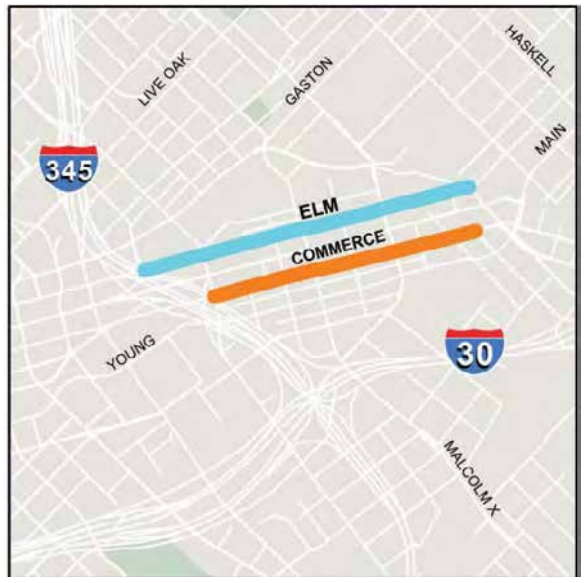
FACTOR COMPARISON – SAMPLE FACILITIES



Transportation Indicators for I-345	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	5-2R-5 CityMAP Scenario
Average Daily Volume	166,000	192,000	175,000	177,000
Average V/C Ratio	1.05	1.21	1.11	1.11
Level of Service	F	F	F	F
Average Travel Speed (mph)	41	34	39	38
Hours of Delay per Mile	1,973	4,746	2,487	3,040

The scenario impact on I-345 would be minimal compared to the preliminary plan.

FACTOR COMPARISON – SAMPLE FACILITIES



Transportation Indicators for Elm St	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	5-2R-5 CityMAP Scenario
Average Daily Volume	12,000	22,000	13,000	16,000
Average V/C Ratio	0.38	0.70	0.42	0.52
Level of Service	A	D	A	C
Average Travel Speed (mph)	24	22	24	24
Hours of Delay per Mile	54	147	34	45

Transportation Indicators for Commerce	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	5-2R-5 CityMAP Scenario
Average Daily Volume	11,000	18,000	14,000	17,000
Average V/C Ratio	0.35	0.57	0.45	0.55
Level of Service	A	C	A	C
Average Travel Speed (mph)	26	25	25	25
Hours of Delay per Mile	28	96	71	92

Elm and Commerce Streets would be expected to attract about 20 percent more traffic under this scenario than the plan.



Transportation Indicators for Woodall Rodgers	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	5-2R-5 CityMAP Scenario
Average Daily Volume	191,000	222,000	210,000	204,000
Average V/C Ratio	1.04	1.21	1.15	1.11
Level of Service	F	F	F	F
Average Travel Speed (mph)	37	31	33	34
Hours of Delay per Mile	953	2,357	1,661	1,406

The 5-2R-5 Scenario would see less demand; This is likely due to the effect of the different Trinity Parkway configurations.

FACTOR COMPARISON – SAMPLE FACILITIES



Transportation Indicators for Cesar Chavez	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	5-2R-5 CityMAP Scenario
Average Daily Volume	34,000	49,000	26,000	29,000
Average V/C Ratio	0.71	1.03	0.52	0.56
Level of Service	D	F	C	C
Average Travel Speed (mph)	20	18	16	15
Hours of Delay per Mile	479	1,544	237	336

Transportation Indicators for Good Latimer	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	5-2R-5 CityMAP Scenario
Average Daily Volume	15,000	31,000	26,000	24,000
Average V/C Ratio	0.37	0.76	0.62	0.57
Level of Service	A	D	C	D
Average Travel Speed (mph)	18	16	17	17
Hours of Delay per Mile	173	1,054	342	337

Compared to the Plan, the 5-2R-5 Scenario would increase traffic on Good Latimer and Cesar Chavez by almost 12 percent, but they would still operate at acceptable levels.

FACTOR COMPARISON – SAMPLE FACILITIES



Transportation Indicators for I-35E Horseshoe	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	5-2R-5 CityMAP Scenario
Average Daily Volume	157,000	180,000	185,000	188,000
Average V/C Ratio	1.14	1.30	1.34	1.36
Level of Service	F	F	F	F
Average Travel Speed (mph)	36	28	26	26
Hours of Delay per Mile	2,246	5,732	6,608	6,797

Transportation Indicators for I-30 Horseshoe	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	5-2R-5 CityMAP Scenario
Average Daily Volume	99,000	128,000	118,000	125,000
Average V/C Ratio	0.86	0.92	1.03	1.08
Level of Service	E	E	F	F
Average Travel Speed (mph)	44	35	40	37
Hours of Delay per Mile	386	1,898	904	1,030

The I-35E lanes in the Horseshoe would see only a slight increase in traffic. The I-30 part of the Horseshoe would attract about 6 percent more daily traffic with a commensurate reduction in performance.

SCENARIO DESCRIPTION: I-30 – RELOCATE

This transformational scenario features the complete relocation of Interstate Highway 30 between I-35E in Downtown Dallas and Ferguson Road near White Rock Creek. The existing I-30 ROW would be reconstructed to include a major thoroughfare in a boulevard configuration. The new I-30 alignment, described from west to east, would maintain the southeasterly bearing in the Horseshoe, diverging from the existing curve in the eastern Mixmaster, to proceed on a route generally parallel to Riverfront Boulevard between Riverfront and the UPRR. The new alignment would proceed southeastward to the interchange between I-45 and US 175 that is currently under construction. Through this interchange proceeding eastward, I-30 would consist of lanes added to US 175 and operate with a joint designation (I-30/US 175). I-30 would diverge from US 175 through an interchange near South Second Avenue and Bruton Road, proceeding northward on the east side of White Rock Creek until rejoining the current I-30 alignment near Samuell Boulevard just west of the I-30/Ferguson Road Interchange.

I-30 would have a variable lane count but would generally maintain eight general purpose lanes, except where additional lanes are added in the I-30/US 175 jointly-designated section. In addition to general purpose lanes it would include a four-lane, High-occupancy Vehicle Lane or Managed Lane System. The newly-aligned interstate facility would include system (freeway) interchanges with I-35E, I-45, and US 175. Thoroughfares would be provided access at service interchanges with the New Boulevard (Old I-30), Cedar Crest Boulevard Boulevard, SM Wright Boulevard/SH 310, South Second Avenue/Bruton Road, Scyene Road (SH 352), Military Parkway, and New Boulevard/Samuell Boulevard.

A major transportation feature of this scenario would be the six-lane, divided boulevard built within the I-30 ROW. The accommodation of six traffic lanes in the former freeway ROW would leave ample room for a green, context-sensitive facility to include urban design amenities, pedestrian accommodations, bicycle facilities and other opportunities in response to community input. As a city thoroughfare it would feature mostly at-grade intersections, with grade-separated interchanges where appropriate considering the existing terrain. The precise configuration of the facility would be developed with appropriate public input, but the opportunities are countless. Existing cross street freeway over and underpasses would be replaced with intersections which offer many more pedestrian and bicycle friendly features and are less disruptive of adjoining communities. Access to abutting property would be provided under appropriate access management guidelines that would govern driveway and median opening spacing.

EVALUATION: I-30 – RELOCATE

FACTOR COMPARISON -- STUDY AREA

Table 5-3 presents the performance factor values aggregated to the study area (see right). The scenario comparison to 2040 No-Build shows that the I-30 – Relocate scenario anticipates an improvement in all factors for both Freeway and Thoroughfare facilities.

When the scenario is compared to the Preliminary 2040 Plan, all performance factors show only a slight change from 2040 Preliminary, but unfavorable in each instance.



Table 5-3 Study Area Performance Factor Comparison

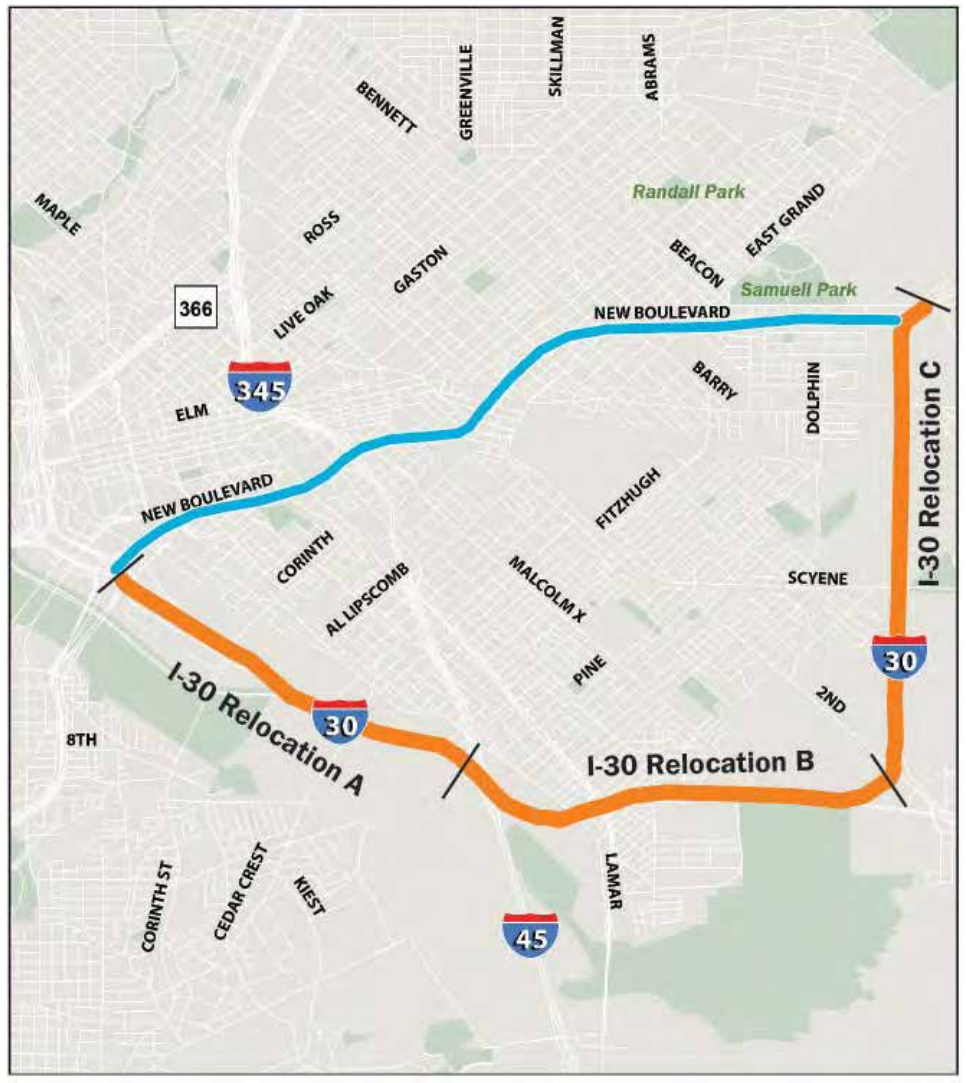
Scenario: I-30 — Relocate Objectives and Performance Factors			2017 Existing Value	2040 No-Build Value	2040 Preliminary Plan Value	Scenario Value	Scenario Comparison	
							No-Build	2040 Prelim
Quality	Average Speed (Weekday Miles per Hour)	Freeway/Toll Road	33	24	29	28	▲	▼
		Thoroughfare	19	15	18	17	▲	▼
Congestion	Congestion Delay per Trip (Minutes)	Freeway/Toll Road	4	8	5	6	▼	▲
		Thoroughfare	2	4	2	3	▼	▲
All Values represent annual average weekday traffic.								

Arrow Indication Key:

- Favorable change in performance factor value
- Unfavorable change in performance factor value
- ▲ Increase in performance factor value
- ▼ Decrease in performance factor value
- ▶ No significant difference in performance factor value

FACTOR COMPARISON – SCENARIO

Figure 5-4 Dallas New Blvd Performance Factors



The relocated I-30 is divided into three sections, labeled A, B, and C for the facility analysis. Section A is from existing I-30 to I-45, Section B from I-45 to Second Avenue, and Section C goes from Second Avenue to existing I-30.

Figure 5-5 I-30 Relocate Section A



Section A, parallel to the Trinity River would also parallel the Trinity Parkway alignment. Section A is projected to attract 163,000 vehicles. Part of the I-30 route is coincidental with the Trinity Parkway and in combination both routes divert considerable traffic from I-45. The I-30 route would have an LOS of .99 (E).

Transportation Indicators for I-30 Relocate	I-30 Relocate A
Average Daily Volume	163,000
Average V/C Ratio	0.99
Level of Service	E
Average Travel Speed (mph)	37
Hours of Delay per Mile	2,469

Figure 5-6 I-30 Relocate Section B



Section B, would represent a joint designation of US 175 and I-30 and would have additional lanes reflecting the demand from both freeway routes. The scenario exceeds capacity with average speeds and delay reflecting the demand/supply imbalance.

Transportation Indicators for I-30 Relocate	I-30 Relocate B
Average Daily Volume	202,000
Average V/C Ratio	1.07
Level of Service	F
Average Travel Speed (mph)	35
Hours of Delay per Mile	6,690

FACTOR COMPARISON – SCENARIO

Figure 5-7 I-30 Relocate Section C



Section C, between US 175 and existing I-30, would operate better than Sections A and B, achieving an LOS of 0.61 (C).

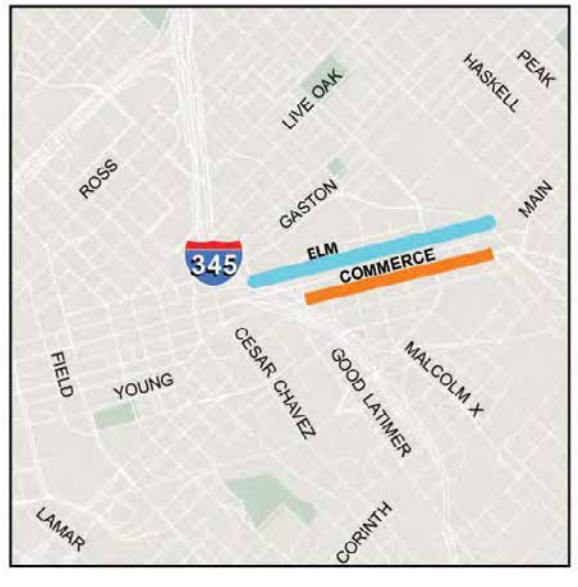
Transportation Indicators for I-30 Relocate	I-30 Relocate C
Average Daily Volume	112,000
Average V/C Ratio	0.61
Level of Service	C
Average Travel Speed (mph)	54
Hours of Delay per Mile	541

Figure 5-8 Transportation Indicators for New Boulevard

The New Boulevard, converted from the existing I-30 would carry high thoroughfare volumes. The resulting Volume to Capacity ratios of 1.25 indicate that the facility would not operate at acceptable levels.

Transportation Indicators for I-30 Relocate	New Blvd
Average Daily Volume	57,344
Average V/C Ratio	1.25
F	F
Average Travel Speed (mph)	22
Hours of Delay per Mile	2,829

FACTOR COMPARISON – SCENARIO



Transportation Indicators for Elm St	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-30 Relocate CityMAP Scenario
Average Daily Volume	12,000	22,000	13,000	25,000
Average V/C Ratio	0.38	0.70	0.42	0.80
Level of Service	A	D	A	D
Average Travel Speed (mph)	24	22	24	23
Hours of Delay per Mile	54	147	34	90

Transportation Indicators for Commerce	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-30 Relocate CityMAP Scenario
Average Daily Volume	11,000	18,000	14,000	17,000
Average V/C Ratio	0.35	0.57	0.45	0.55
Level of Service	A	C	C	C
Average Travel Speed (mph)	26	25	25	25
Hours of Delay per Mile	28	96	71	108

Elm and Commerce Streets would be expected to attract about 56 percent more traffic under this scenario than the plan. The congestion levels, represented by delay per mile, would increase dramatically.



Transportation Indicators for I-345	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-30 Relocate CityMAP Scenario
Average Daily Volume	166,000	192,000	175,000	161,000
Average V/C Ratio	1.05	1.21	1.11	1.02
Level of Service	F	F	F	F
Average Travel Speed (mph)	41	34	39	43
Hours of Delay per Mile	1,973	4,746	2,487	2,004

In the I-30 Relocate scenario, traffic demand on I-30 would be reduced by 40 percent.

I-30 CANYON - COMPRESSED | INTRODUCTION

HISTORY

The I-30 Canyon has long been one of Dallas' most important connections as a critical east-west thoroughfare. As Dallas has grown, so has the importance of the I-30 Canyon. This facility, however, has fragmented areas along the corridor, such as the Cedars neighborhood. The Cedars neighborhood is defined as the area extending immediately south of the I-30 Canyon, between the Jefferson Memorial Connector (i.e. the "Horseshoe") and I-345.

Owing its name to the trees once covering its landscape, Dallas' Cedars district is rich with history and is one of Dallas' oldest neighborhoods. From its origin in the late 1800s this district has seen a variety of economic cycles, including growth, decline and more recently, resurgence. Historically, the Cedars and the areas to the east have served a variety of uses – from initially residential to more industrial and heavy commercial, coinciding with the desire to move larger volumes of traffic along I-30. Until recently, the Cedars has struggled to recapture its vitality.

The Cedars began as a residential area located near Dallas' downtown. This proximity in additional to the adjacent availability of using various modes of transportation, made the Cedars an attractive residential neighborhood for many Dallas residents. As Dallas economy began to grow, so did the local economy within the Cedars. Beginning in the early 1900s, some large-scale commercial development emerged, including a six-story hotel and numerous shops, located on what today is Lamar Street.

Reflective of the overall national economy through the 1930s and the 1940s, the Cedars began to slowly deteriorate; what was once a high quality residential and commercial area began to give way to industrial uses. The neighborhood's deterioration was further exacerbated with the increased dependence on the automobile during the 1960s. As more industrial and heavy commercial uses were introduced, the residents in the area began to move away. The construction of the Interstate Highway System and, specifically the construction of I-30; severed the Cedars from the CBD, eliminating the connectivity that had originally made it an attractive community and further speeding up its decline.



I-30 HISTORICAL AERIAL *Source: Dallas Historical Society*

CURRENT CONDITIONS

While the southern part of the I-30 Canyon struggled to attract quality development during this time period, the northern section of the I-30 Canyon continued to see increased development. Notable, relatively recent examples of development and investment north of the I-30 Canyon include the Kay Bailey Hutchinson Convention Center and more recently, development around the Dallas Farmer's Market. While development in the Cedars has not matched development north of the I-30 Canyon, there have been a few examples of investment and updated infrastructure that have helped the Cedars gain additional economic traction. Notable examples include the Cedars DART station, the introduction of the Jack Evans Police Headquarters, as well as the introduction of higher quality residential and destination uses, such as the NYLO Hotel.

Generally, existing conditions north and south of the Canyon are quite stark. While the northern portion of the Canyon currently features dense commercial development on larger city blocks, the south area is a mix of underutilized and underdeveloped parcels containing residential and lower-grade commercial. This fragmentation and lack of development cohesion and character south of the I-30 Canyon has proven challenging for continued development.

FUTURE OPPORTUNITY

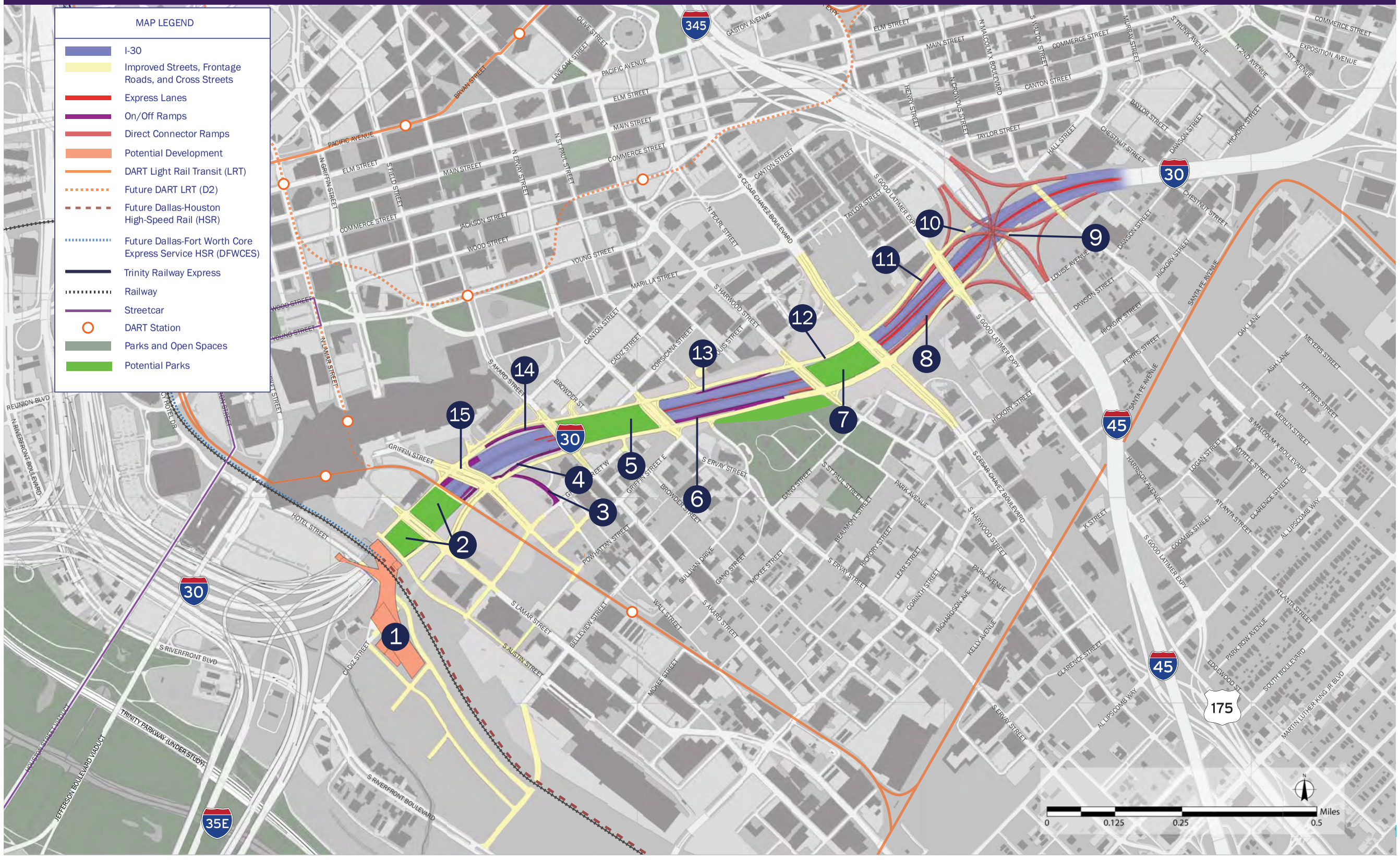
Although the Cedars has struggled to recapture the majority of its historical viability, there is an increasing amount of investment being infused in the area. This investment is creating additional opportunity and promise that the district has not experienced since its formation. The residential population adjacent to the I-30 Canyon corridor has experienced steady residential growth in recent years, and future growth projections look to be trending upwards in a similar manner. Opportunities to create quality residential and attract additional retail (i.e. a larger consumer base) could be bountiful as the corridor gains additional market velocity.

The proximity of a reinvented I-30 Canyon relative to downtown Dallas affords the corridor the opportunity to increase its viability in the short and long-term. A determinant of the neighborhood's future success will be the connectivity between the northern and southern portions of the corridor.



I-30 CANYON EXISTING *Source: HNTB*

I-30 CANYON - COMPRESSED | SCENARIO MAP



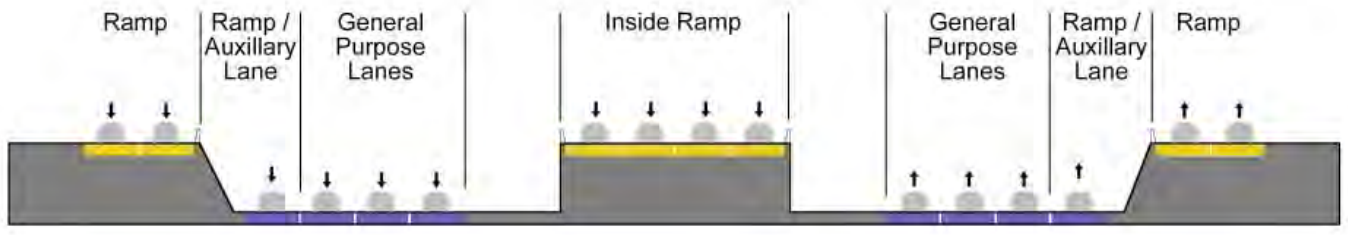
DRAFT | JUNE 10, 2016

I-30 CANYON - COMPRESSED | SCENARIO MAP

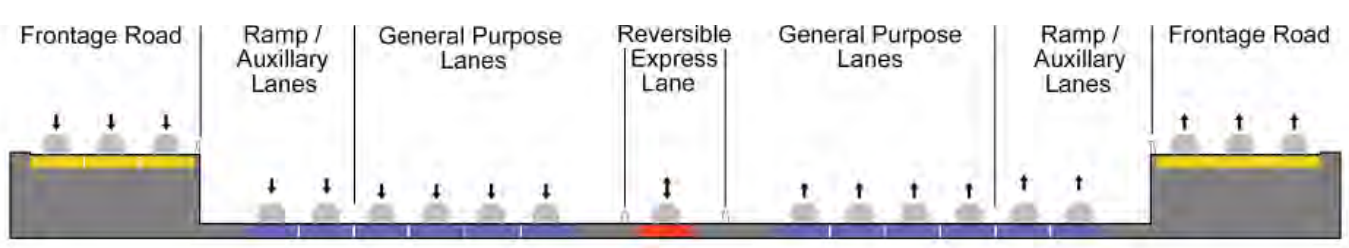
PLAN NOTES: I-30 CANYON

1. Possible HSR Station, including connector structure over I-30
2. Possible Convention Center Deck Park over I-30
3. Eastbound I-30 exit ramp to Griffin Street including street grid modifications
4. Eastbound I-30 entrance ramp from Griffin Street
5. Possible Deck Park over I-30 from Akard Street to Ervay Street
6. Eastbound I-30 exit ramp to Harwood Street
7. Possible Deck Park over I-30 linking Farmers Market and Heritage Village Park
8. Eastbound I-30 direct connecting ramps exiting to northbound I-345 and southbound I-45. Configuration may vary based on changes under consideration for I-345 and I-45
9. Eastbound I-30 entrance ramp from Good Latimer Expressway
10. Westbound I-30 exit ramp to Good Latimer Expressway
11. Westbound I-30 direct connecting ramps entering from southbound I-345 and northbound I-45. Configuration may vary based on changes under consideration for I-345 and I-45
12. Remove existing ramps at Cesar Chavez including Griffin Street connector running in the center of existing I-30
13. Westbound I-30 entrance ramp from Harwood Street
14. Westbound I-30 exit ramp to Griffin Street
15. Complete streets bridge over I-30

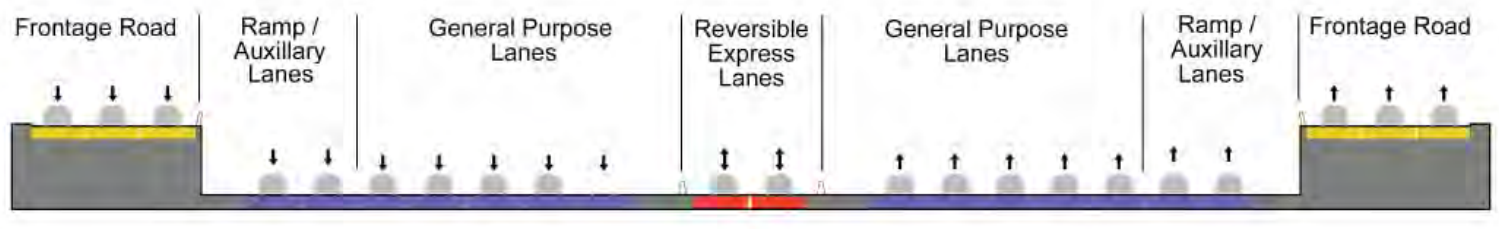
CROSS SECTIONS



EXISTING

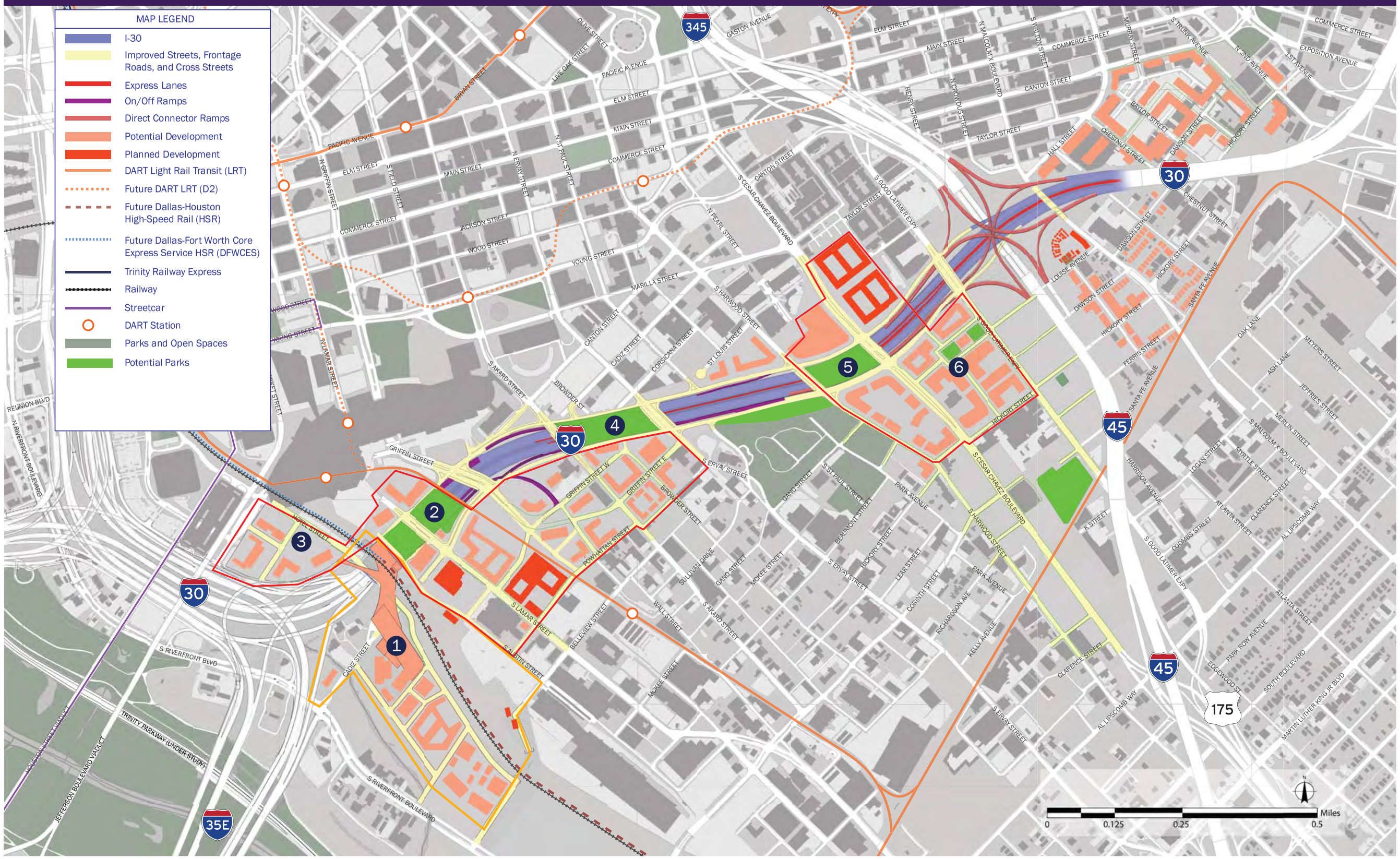


SCENARIO 4-2R-4



SCENARIO 5-2R-5

I-30 CANYON - COMPRESSED | DEVELOPMENT MAP



DRAFT | JUNE 10, 2016

I-30 CANYON - COMPRESSED | DEVELOPMENT MAP

DEVELOPMENT NOTES: I-30 CANYON

1. Potential station for HSR and the associated development
2. Deck improvement at the Convention Center, connecting the Cedars to the CBD
3. Potential for convention, hotel and office expansion within the Convention Center area
4. Deck improvement at Akard Street
5. Deck improvement at Harwood and Cesar Chavez
6. Opportunity for mixed-use redevelopment, taking advantage of improved connections to Farmers Market and deck improvement

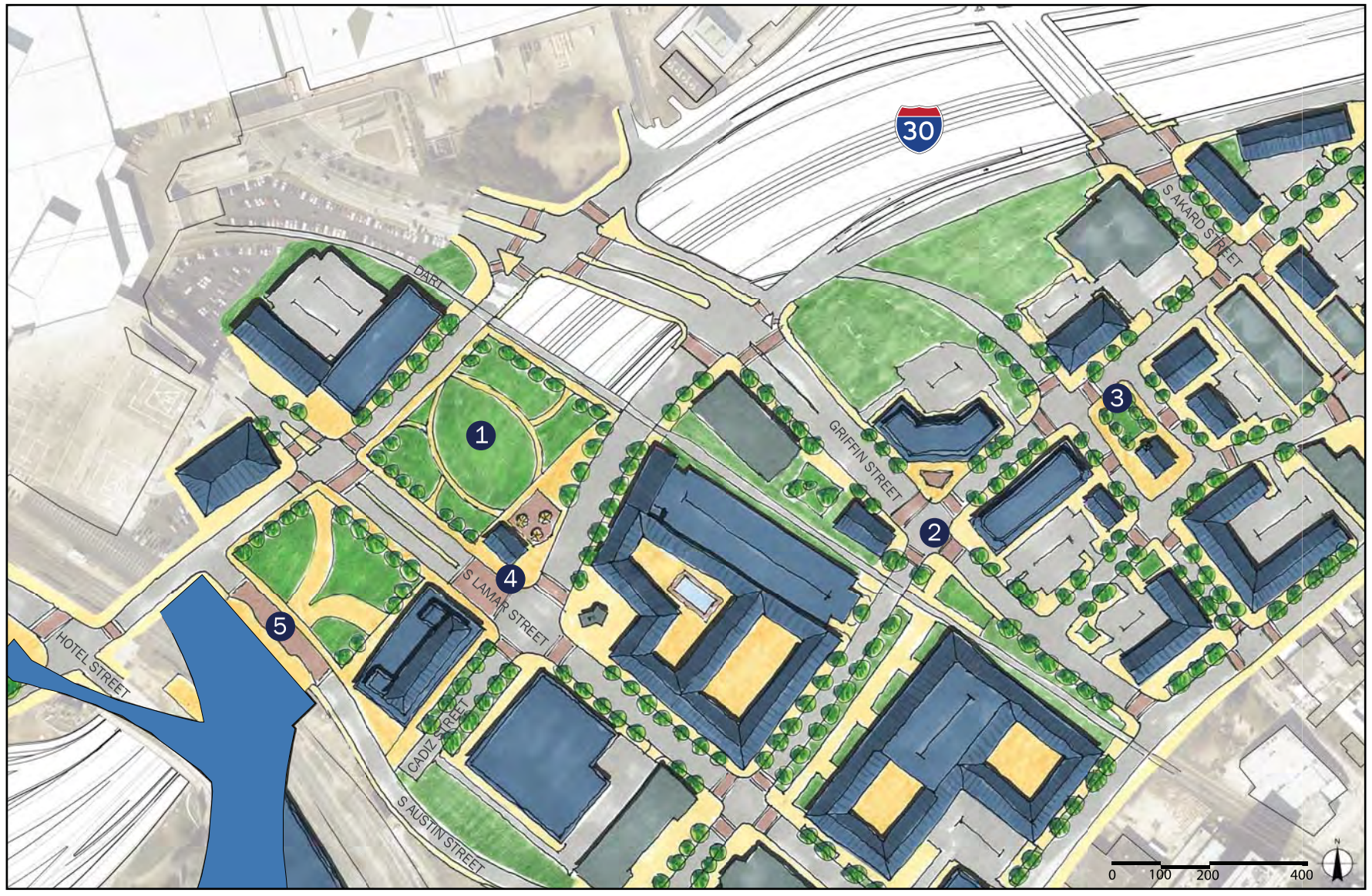
I-30 CANYON - COMPRESSED | FOCUS AREAS



I-30 AT HIGH SPEED RAIL FOCUS AREA

FOCUS AREA NOTES: I-30 CANYON AT HSR

1. Deck improvement with public/private amenities
2. Reorganized grid to maximize development potential
3. Pocket park to serve as a central gathering space for the neighborhood
4. Focus on pedestrian and bicycle crossings at regular intervals
5. Plan for connections to future access of HSR



I-30 AT HIGH SPEED RAIL STATION CONCEPT *Source: Gateway Planning Group*

BROWDER STREET POTENTIAL



I-30 CANYON - COMPRESSED | FOCUS AREAS



I-30 AT CESAR CHAVEZ BOULEVARD FOCUS AREA

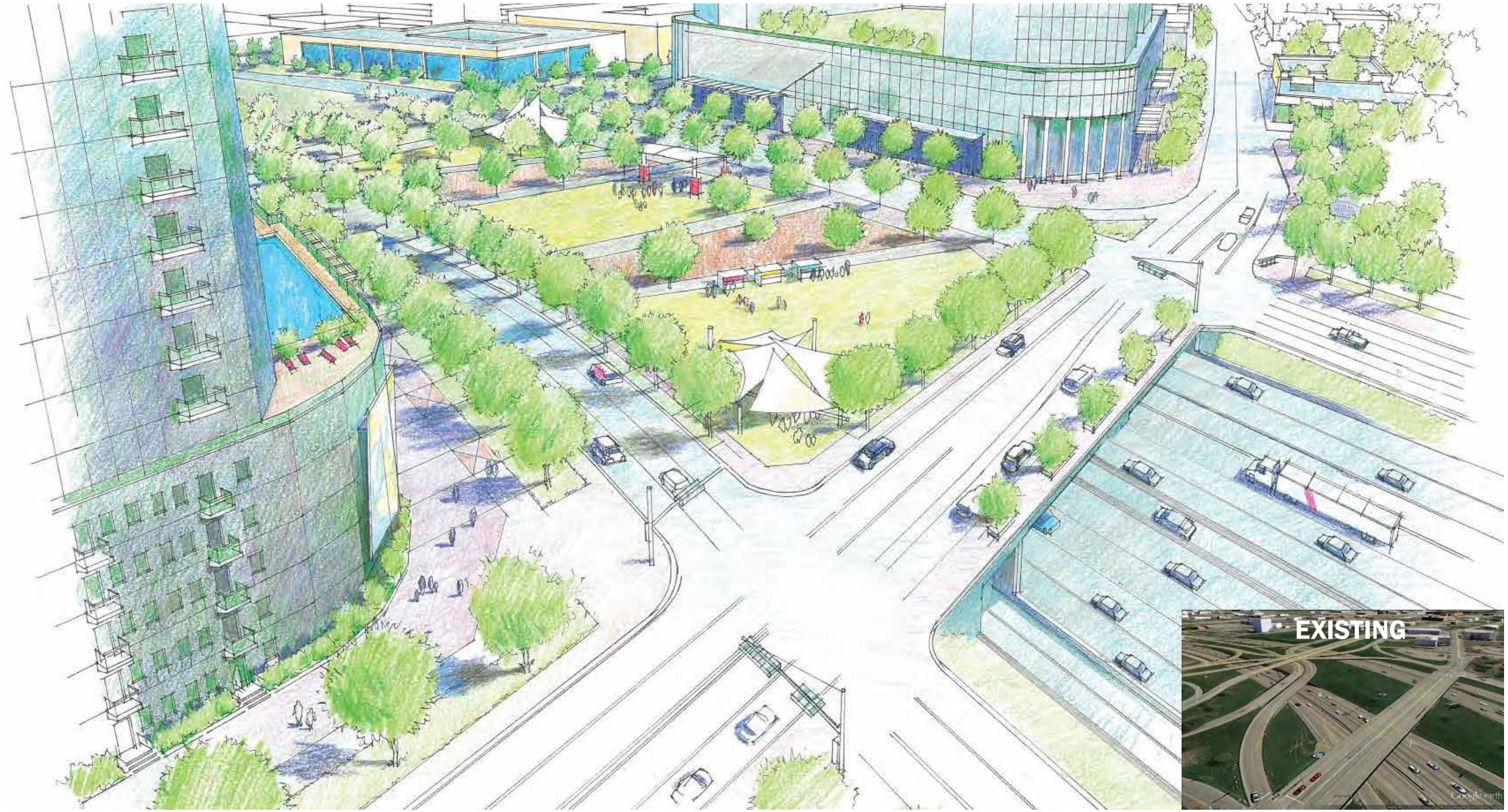
FOCUS AREA NOTES: I-30 CANYON AT CESAR CHAVEZ

1. Deck improvement with public/private amenities
2. New development focused on the deck as an amenity
3. Additional ROW near existing development used for trail connectivity
4. Large blocks broken up for neighborhood pattern of development
5. Infill development preserving architectural gems
6. Focus on pedestrian and bicycle crossings at regular intervals



I-30 AT CESAR CHAVEZ BOULEVARD CONCEPT *Source: Gateway Planning Group*

CESAR CHAVEZ BOULEVARD POTENTIAL



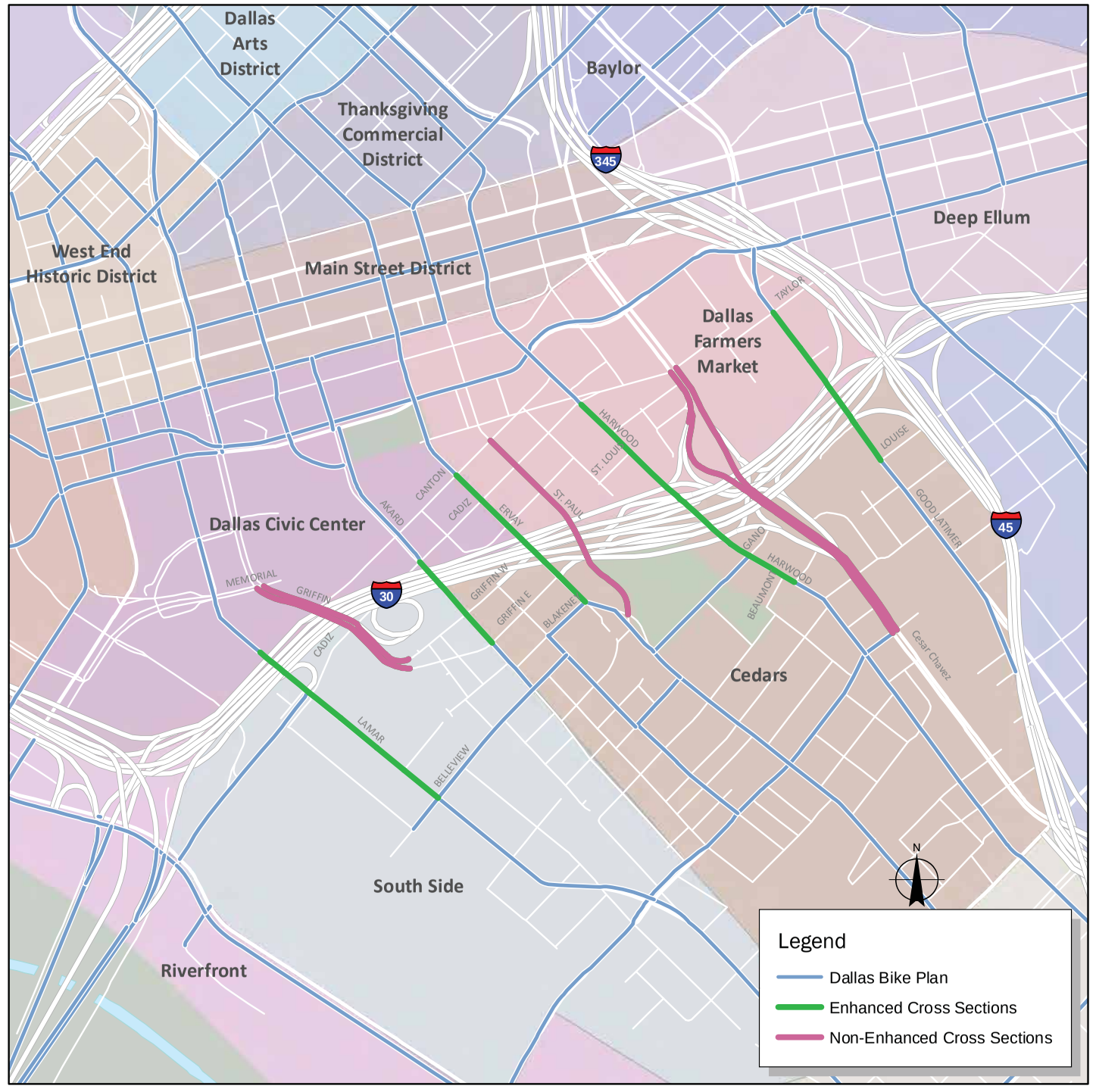
I-30 CANYON - COMPRESSED | CONNECTIVITY OPPORTUNITIES

The section of I-30 between I-35E and I-45, the Canyon, was opened to traffic in 1965. The highway designers saw as their primary charge to provide efficient and high speed entrances and exits to major arterials serving downtown, maintain the arterial network at-grade and minimize the visual intrusion of the freeway to downtown. The alignment passed through light industrial, commercial and residential neighborhoods south of downtown and Dallas Heritage Village. News reports of the period pointed out the innovative nature of the right-hand and left-hand exits and entrances. The designers accomplished the goal of efficient access between downtown and the freeway network.

A primary focus of Dallas CityMAP is improving the connections between downtown and adjacent neighborhoods. Whether short-term, medium-term, or long-term improvements, all improvements recommended by Dallas CityMAP have at their core philosophy and approach - CONNECTIVITY. Where the historic street grid is broken, CityMAP proposes solutions to knit the network together. The freeway achieved the objectives important at the time, east-west mobility and downtown access. Values have since shifted and the highway that provided a high-speed route to a commuter's destination is now seen as a barrier between downtown and the neighborhoods south.

The CityMAP team analyzed existing traffic volumes and 2040 traffic volume projections on important local streets in the Canyon corridor and determined where additional capacity existed on a 24-hour and peak hour basis. Streets with a volume to capacity ratio of 0.7 or less were considered as candidate streets. Where streets had available vehicle carrying capacity, CityMAP explores a series of alternatives for making key roadways more walkable and bikeable by using tools provided in the Complete Streets Design Manual, Dallas Bike Plan, and other sources. These alternatives are just one of many possible configurations that could be applied to the candidate streets and by no means are exhaustive. Each roadway has been evaluated based on the following attributes presented in the Existing Cross Sections Analysis table below: Functional Classification, Capacity, Average Daily Traffic (ADT), Existing and Future Volume to Capacity (v/c), roadway cross-section attributes, existing bicycle and pedestrian facilities. Right-of-Way width was also an important consideration in the development of future alternatives. The map to the right provides the arterial street grid in the Canyon with the 2011 Bike Plan and Dallas downtown area neighborhoods overlaid. The map indicates the candidate streets that were evaluated for enhancements in pedestrian and bicycle facilities.

Along the Canyon corridor we determined that Lamar, Akard, Ervay, Harwood and Good-Latimer provided the greatest opportunity to enhance connectivity by providing various pedestrian and bicycle improvements. Griffin and Cesar Chavez were determined by our analysis to continue to provide primarily vehicular access, supporting light industrial and warehouse development along each corridor. St. Paul is recommended to stop at the north frontage road of I-30 so that ROW can be given back to Dallas Heritage Village in the future.



I-30 Canyon Existing Cross Sections Analysis

Street	From	To	Area Type	Functional Class	Capacity	Existing ADT	Existing V/C	2040 ADT	2040 V/C	One Way Two Way	Median Type	Total Lanes	Parking	Bike Facility
Lamar	Belleview	Cadiz	CBD Fringe	Principal Arterial	25,000	15,514 [1]	0.62	16,761	0.67	2	TWLTL	4	0	0
Lamar	Cadiz	Canton	CBD Fringe	Principal Arterial	25,000	16,535 [1]	0.66	16,160	0.65	2	TWLTL	4	0	0
Griffin	U-Turn	Cadiz	CBD Fringe	Minor Arterial	37,500	7,115 [1]	0.19	15,496	0.41	2	Divided	6	0	0
Griffin	Cadiz	Canton	CBD Fringe	Minor Arterial	37,500	6,970 [1]	0.19	16,160	0.43	2	Divided	6	0	0
Griffin	Canton	Memorial	CBD	Minor Arterial	34,500	6,826 [1]	0.20	17,953	0.52	2	Divided	6	0	0
Akard	Griffin E	Griffin W	CBD Fringe	Minor Arterial	12,500	5,905	0.47	14,059	1.12	2	TWLTL	2	2	0
Akard	Griffin W	Cadiz	CBD Fringe	Minor Arterial	25,000	4,937 [1]	0.20	10,750	0.43	2	TWLTL	4	0	0
Ervay	Blakeney	Griffin E	CBD Fringe	Minor Arterial	18,750	2,911	0.16	5,446	0.29	1	Undivided	3	1	0
Ervay	Griffin E	Corsicana	CBD Fringe	Minor Arterial	25,000	6,411 [1]	0.26	29,392	1.18	1	Undivided	4	0	0
Ervay	Cadiz	Canton	CBD	Minor Arterial	11,500	6,608 [1]	0.57	35,862	3.12	1	Undivided	2	2	0
St. Paul	Canton	Cadiz	CBD	Minor Arterial	17,250	3,006 [1]	0.17	21,533	1.25	1	Undivided	3	0	0
St. Paul	I-30 FR WB	Griffin E	CBD Fringe	Minor Arterial	18,750	4,221 [1]	0.23	23,108	1.23	1	Undivided	3	0	0
St. Paul	Griffin E	Ervay	CBD Fringe	Minor Arterial	12,500	1,570 [1]	0.13	4,324	0.35	1	Undivided	2	0	0
Harwood	Beaumont	Gano	CBD Fringe	Minor Arterial	23,000	5,462	0.24	6,135	0.27	2	Undivided	4	0	0
Harwood	I-30 FR EB	I-30 FR WB	CBD Fringe	Minor Arterial	23,000	6,412 [1]	0.28	13,376	0.58	2	Undivided	4	0	0
Harwood	St. Louis	Cadiz	CBD	Minor Arterial	26,250	8,045	0.31	16,814	0.64	2	Undivided	5	0	0
Good Latimer	Louise	Taylor	CBD Fringe	Principal Arterial	34,500	5,058	0.15	18,976	0.55	2	Undivided	6	0	0

[1] Counts not conducted by KHA and acquired using historical data from NCTCOG or Google Earth Pro.

Parking Nomenclature:

0 - No on street parking

1 - On street parking on one side of the street

2 - On street parking on available on both sides of the street

Bike Facility Nomenclature:

0 - No bike facility

1 - Shared bike lane

2 - Dedicated bike lane

LAMAR STREET

Lamar Street is a principal north-south arterial in downtown and extends from Victory Park north of Woodall Rodgers Freeway and south across I-30 to South Side and the area that serves the future HSR station. Lamar extends under the Dallas Convention Center and has a grade-crossing with the DART light rail line. The corridor has sidewalks, but is industrial in look and feel with the ramps that provide truck access to the Convention Center truck loading docks. Lamar Street and any future pedestrian improvements would be incorporated into the deck that is being contemplated to provide connectivity to the HSR station.

The Lamar cross-section south of I-30 is four lanes with a two way left-turn lane functioning at Level of Service (LOS) C. The CityMAP analysis suggests that the 12' existing lanes can be reduced to 10' lanes and two 5' bike lanes can be added because of the reduction, which is consistent with the Bike Plan. This is shown in Figures 1 and 2. The possible street cross-section responds to the future demand for connectivity between downtown and Southside and HSR. Figures 3 and 4 show similar enhancements over I-30. In both cases the LOS remains the same after the enhancements based on existing and future volumes. In 2040, the LOS deteriorates to E for both cross-sections.

To maintain both LOS and complete streets, City of Dallas and DART transit planners may want to discuss the opportunity to provide bus only lanes on this arterial in advance of the deteriorating LOS to encourage a mode shift.

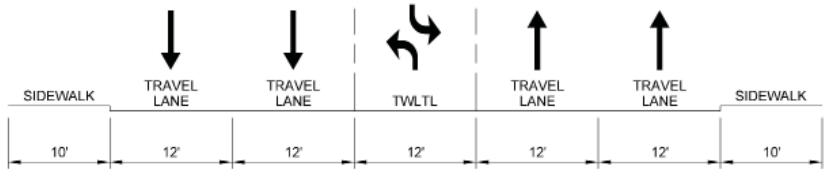


FIGURE 1 *Existing Lamar Street Cross Section from Belleview Street to Cadiz Street*



FIGURE 2 *Possible Lamar Street Cross Section from Belleview Street to Cadiz Street*

Street	Cross Section	Capacity	2016 ADT	2016 V/C	2016 LOS	2040 ADT	2040 V/C	2040 LOS
Lamar	Existing	25,000	15,514	0.62	C	12,908	0.52	C
Lamar	Possible	25,000	15,514	0.62	C	12,908	052	C

TABLE 1 *LOS for existing and possible cross sections for Lamar Street from Belleview Street to Cadiz Street*

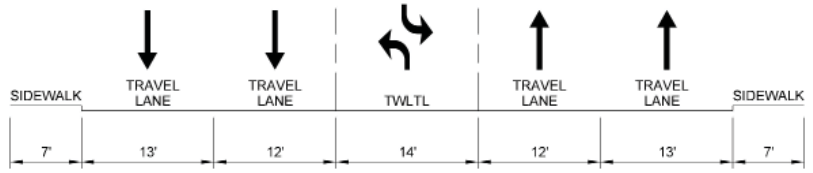


FIGURE 3 *Existing Lamar Street Cross Section from Cadiz Street to Canton Street*

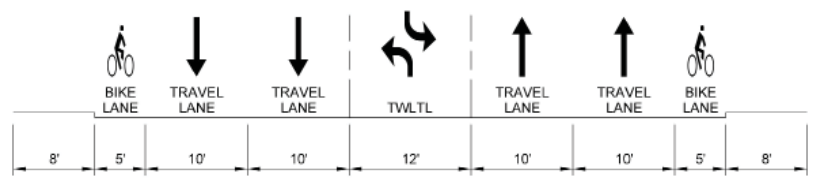


FIGURE 4 *Possible Lamar Street Cross Section from Cadiz Street to Canton Street*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Lamar	Existing	25,000	16,535	0.66	D	21,231	0.85	E
Lamar	Possible	25,000	16,535	0.66	D	21,231	0.85	E

TABLE 2 *LOS for existing and possible cross sections from Lamar Street from Cadiz Street to Horton Street*

GRIFFIN STREET

Griffin Street is a minor north-south arterial in downtown and extends from Woodall Rodgers and Field Street on the north, south as a six-lane divided boulevard under the Convention Center to the Cedars and then turns east as a couplet crossing back over I-30 and providing direct connect ramps to the main lanes of I-30. This road has substantial excess capacity, but due to the critical movements serving downtown, is not recommended by the CityMAP team for major pedestrian and bicycle improvements at this time.

AKARD STREET

Akard Street is a minor north-south arterial that is discontinuous through downtown to provide for a plaza between Commerce Street and Jackson. Akard connects Dallas City Hall to the Cedars south of I-30. City and local stakeholders are pursuing short-term improvements on the Akard Street Bridge over I-30 to make the sidewalks more walkable. Akard has available vehicle capacity and is a candidate for pedestrian enhancements.

The Akard cross-section south of I-30 is two lanes with a two way left-turn lane functioning at LOS C. The CityMAP analysis suggests that complete street reductions can be applied to the cross-section which would allow for two 6' bike lanes to be added. This is shown in Figures 5 and 6. The LOS remains the same for this cross-section after the enhancements for the existing ADT. In 2040, LOS is F for both existing and possible cross-sections. Based on the current analysis, this cross section of the corridor experiences LOS F in 2040 but may still warrant enhancements upon further analysis and input from local stakeholders.

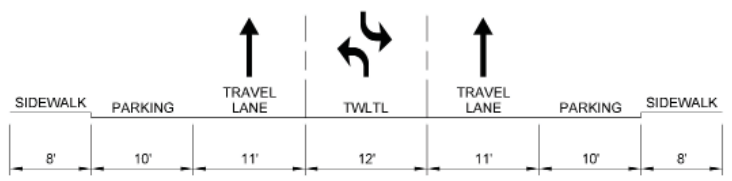


FIGURE 5 *Existing Akard Street Cross Section from Griffin E to Griffin W*

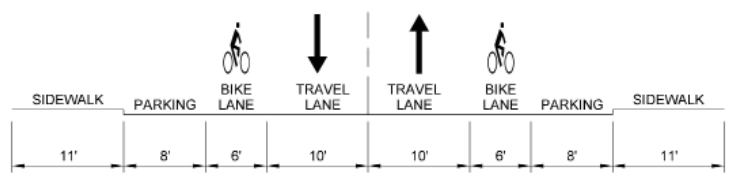


FIGURE 6 *Possible Akard Street Cross Section from Griffin E to Griffin W*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Akard	Existing	12,500	5,905	0.47	C	13,174	1.05	F
Akard	Possible	11,500	5,905	0.51	C	13,174	1.15	F

TABLE 3 *LOS for existing Akard Street Cross Section from Griffin E to Griffin W*

The Akard cross-section on the bridge over I-30 is 4 lanes with a two way left-turn lane functioning at LOS A/B. The CityMAP analysis suggests that complete street reductions can be applied to the cross-section which would allow for two 8' buffered bike lanes to be added. This is shown in Figures 7 and 8. These street cross-section enhancements respond to the stakeholders' interest and investment in improving connection between downtown and The Cedars. The LOS changes for this cross-section after enhancements in 2040 are LOS A/B to LOS C, which is acceptable.

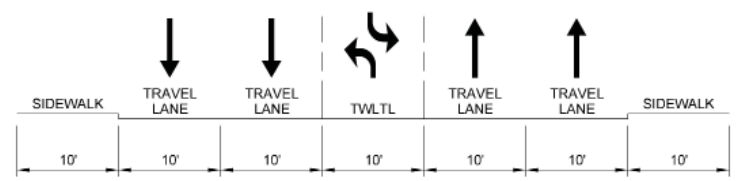


FIGURE 7 *Existing Akard Street Cross Section from Griffin W to Cadiz Street*

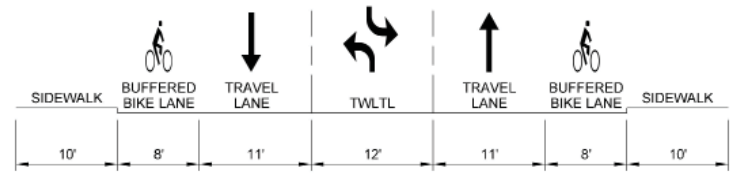


FIGURE 8 *Possible Akard Street Cross Section from Griffin W to Cadiz Street*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Akard	Existing	25,000	4,937	0.20	A/B	7,881	0.32	A/B
Akard	Possible	12,500	4,937	0.39	A/B	7,881	0.63	C

TABLE 4 *LOS for existing and possible cross section for Akard Street from Griffin W to Cadiz Street*

ERVAY STREET

Ervay Street is a minor north-south arterial downtown providing access from the Cedars and Dallas Heritage Village to Dallas City Hall and north past Thanksgiving Square to First Baptist Church and ultimately to Uptown north of Woodall Rodgers Freeway. Ervay is one-way northbound from Dallas Heritage Village to Ross Avenue and two way north of Ross. Ervay has excess vehicle capacity and is a candidate for additional pedestrian and bicycle improvements along the corridor and over I-30.

The Ervay cross section south of I-30 is one way with four lanes, of which one lane is dedicated to parking on the left side. Existing LOS at this cross section is A/B. The CityMAP analysis suggests that complete street reductions can be applied to the cross-section which would allow for a 6' bike lane to be added on the right side, which is consistent with the Bike Plan. This is shown in Figures 9 and 10. The LOS remains the same for this cross-section after the enhancements.

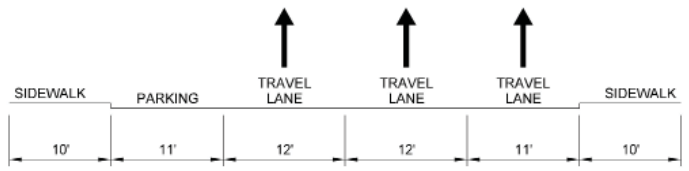


FIGURE 9 *Existing Ervay Street Cross Section from Blakeney Street to Griffin E*

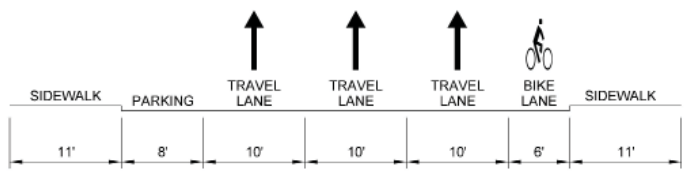


FIGURE 10 *Possible Ervay Street Cross Section from Blakeney Street to Griffin E*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Ervay	Existing	18,750	2,911	0.16	A/B	9,004	0.48	C
Ervay	Possible	18,750	2,911	0.16	A/B	9,004	0.48	C

TABLE 5 *LOS for existing possible cross sections for Ervay Street from Blakeney Street to Griffin E*

The Ervay cross-section on the bridge over I-30 is four lanes functioning at LOS A/B. The CityMAP analysis suggests that complete street reductions can be applied to the cross-section which would allow for 6' bike lane and expanded sidewalks. This is shown in Figures 11 and 12. The LOS remains the same for this cross-section after the enhancements for existing volumes. In 2040, both cross-sections operate at LOS F. Based on the current analysis, this cross section of the corridor experiences LOS F in 2040 but may still warrant enhancements upon further analysis and input from local stakeholders.

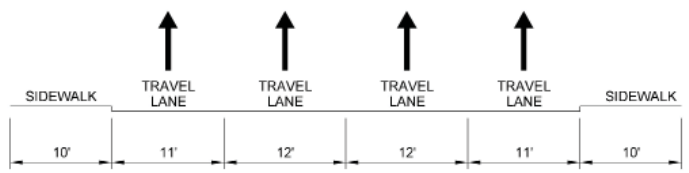


FIGURE 11 *Existing Ervay Street Cross Section from Griffin E to Corsicana Street*

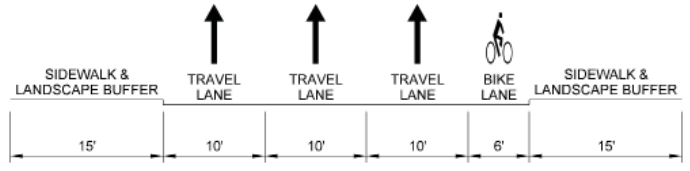


FIGURE 12 *Possible Ervay Street Cross Section from Griffin E to Corsicana Street*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Ervay	Existing	25,000	6,411	0.26	A/B	29,440	1.18	F
Ervay	Existing	18,750	6,411	0.34	A/B	29,440	1.57	F

TABLE 6 *LOS for existing and possible cross sections for Ervay Street from Griffin E to Corsicana Street*

The Ervay cross-section in downtown from Cadiz Street to Canton Street consists of four lanes with two lanes dedicated to parking, one on each side of the street. After analyzing the cross-section, lane reductions can be applied across the cross-section to allow for a 6' bike lane on the right side of the road, which is consistent with the bike plan. This is shown in Figures 13 and 14. The LOS remains at C after the enhancements for existing volumes. In 2040, both the cross-sections operate at LOS F. Based on the current analysis, this cross section of the corridor experiences LOS F in 2040 but may still warrant enhancements upon further analysis and input from local stakeholders.

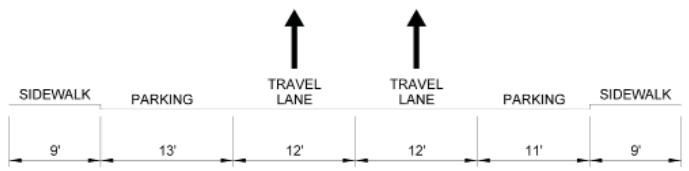


FIGURE 13 *Existing Ervay Cross Section from Cadiz Street to Canton Street*



FIGURE 14 *Possible Ervay Street Cross Section from Cadiz Street to Canton Street*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Ervay	Existing	11,500	6,608	0.57	C	17,605	1.53	F
Ervay	Possible	11,500	6,608	0.57	C	17,605	1.53	F

TABLE 7 *LOS for existing and possible cross sections for Ervay Street from Cadiz Street to Canton Street*

ST. PAUL STREET

St. Paul Street is a major north-south arterial connecting Uptown and the Arts District to Main Street Gardens and south to Dallas Heritage Village. St. Paul is one way southbound from Woodall Rodgers and provides the complementary traffic movement with Ervay. However, the CityMAP team recommends that St. Paul be terminated on the northside of I-30 and the ROW dedicated back to Dallas Heritage Village.

HARWOOD STREET

Harwood Street is designated a minor north-south arterial through downtown connecting Klyde Warren and the Arts District, Thanksgiving Commercial Center, Main Street District and Dallas Farmers Market to Dallas Heritage Village, the Cedars, and the light industrial and warehouse neighborhood south of I-30 and west of I-45. Harwood has great potential for improving connectivity.

Each of the three existing cross-sections illustrated in Figures 15, 17 and 19 show some form of four-lane configuration ranging from 10' to 13' from south of I-30 to downtown. The CityMAP analysis suggests applying a road diet to reduce the number of through lanes to two lanes and adding a continuous two way left-turn lane with bike lanes on each side as shown in Figures 16, 18, and 20. The LOS for Harwood Street after the possible cross sectional enhancements remains the same for the cross section south of I-30 (LOS A/B), drops to LOS C on the bridge over I-30, and drops to LOS D by farmers market for existing volumes. Based on the current analysis, this cross section of the corridor experiences LOS F in 2040 but may still warrant enhancements upon further analysis and input from local stakeholders.

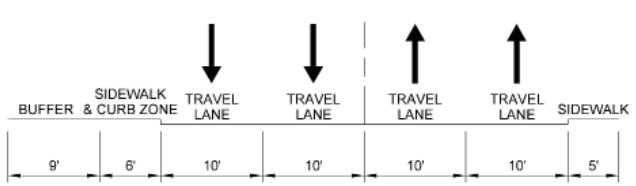


FIGURE 15 *Existing Harwood Street Cross Section from Beaumont Street to Gano Street*

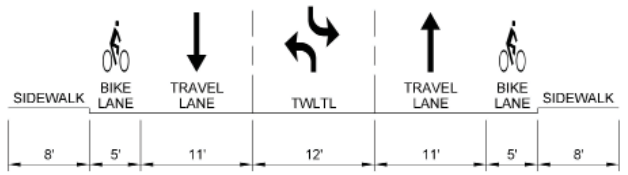


FIGURE 15 *Possible Harwood Street Cross Section from Beaumont Street to Gano Street*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Harwood	Existing	23,000	6,412	0.28	A/B	20,630	0.90	E
Harwood	Possible	12,500	6,412	0.51	C	20,630	1.65	F

TABLE 8 *LOS for existing and possible cross sections for Harwood Street from Beaumont Street to Gano Street*

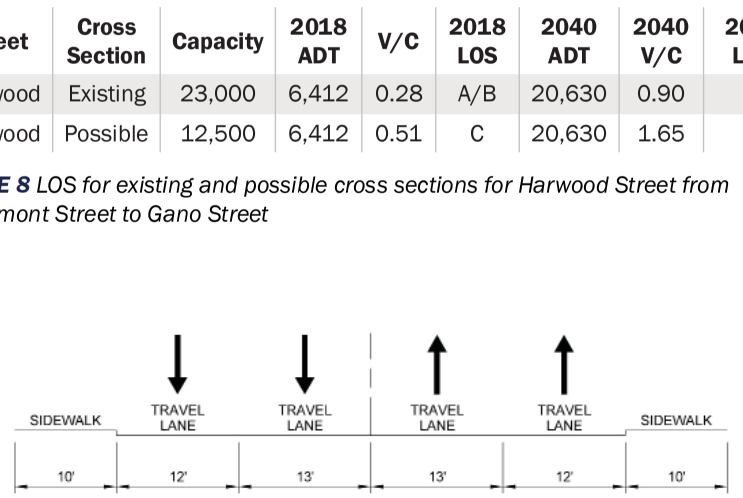


FIGURE 17 *Existing Harwood Street Cross Section from I-30 FR EB to I-30 FR WB*

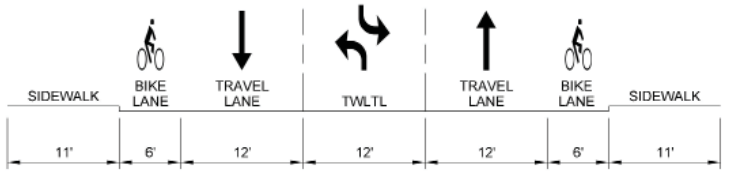


FIGURE 18 *Possible Harwood Street Cross Section from I-30 FR EB to I-30 FR WB*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Harwood	Existing	23,000	6,412	0.28	A/B	20,630	0.90	E
Harwood	Possible	12,500	6,412	0.51	C	20,630	1.65	F

TABLE 9 *LOS for existing and possible cross sections for Harwood Street from I-30 FR EB to I-30 FR WB*

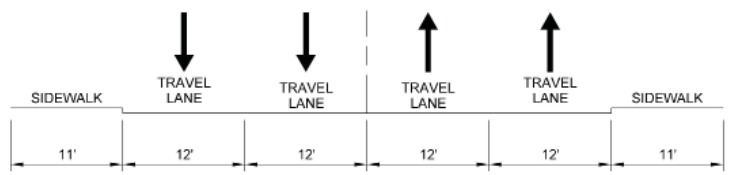


FIGURE 19 *Existing Harwood Street Cross Section from St. Louis Stree to Cadiz Street*

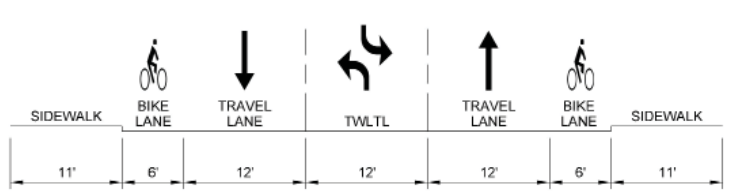


FIGURE 20 *Possible Harwood Street Cross Section from St. Louis Street to Cadiz Street*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Harwood	Existing	26,250	8,045	0.31	A/B	17,532	0.67	D
Harwood	Possible	11,500	8,045	0.70	D	17,532	1.52	F

TABLE 10 *LOS for existing and possible cross sections for Good Latimer from Louise Street to Taylor Street*

CESAR CHAVEZ BOULEVARD

Cesar Chavez Boulevard is a major north-south six-lane divided arterial connecting North Central Expressway (US 75) through downtown and the Farmers Market connecting to S. M. Wright Freeway (US 175). Due to the heavy use by large trucks serving the light industrial and warehouse areas south of I-30 and narrow flyovers above I-30, CityMAP is not recommending pedestrian or bicycle enhancements at this time.

GOOD LATIMER EXPRESSWAY

Good Latimer Expressway is a major north-south arterial that connects North Central Expressway and Routh Street on the north through Deep Ellum to S. M. Wright Freeway (US 175). The DART Green line runs in the Good Latimer median between Bryan and Elm Streets. Good Latimer has excess vehicular capacity between of I-345 and S. M. Wright Freeway (US 175).

The Good Latimer cross-section from Louise Avenue to Taylor Street is six lanes wide currently functioning at LOS A/B. The CityMAP analysis suggests a road diet can be applied to Good Latimer where it would have four lanes, a two way left-turn lane, and 5' bike lanes on each side. This section of Good Latimer is shown to be on the Bike Plan. These cross-sections can be seen in Figures 21 and 22. After the enhancements Good Latimer remains at the same LOS for existing volumes. In 2040, LOS changes from C to E.

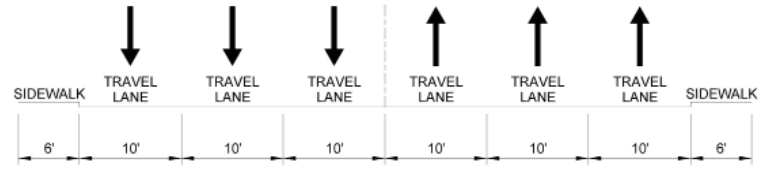


FIGURE 21 *Existing Good Latimer Cross Section from Louise Avenue to Taylor Street*

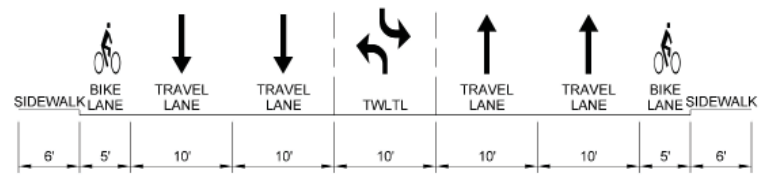


FIGURE 22 *Possible Good Latimer Cross Section from Louise Street to Taylor Street*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Good Latimer	Existing	34,500	5,058	0.15	A/B	21,095	0.61	C
Good Latimer	Possible	25,000	5,058	0.20	A/B	21,095	0.84	E

TABLE 11 *LOS for existing and possible cross sections for Good Latimer from Louise Avenue to Taylor Street*

I-30 CANYON - COMPRESSED | FACTOR ANALYSIS

The I-30 Canyon Compressed scenario focuses strategically on the connectivity from north to south. Improving the connectivity between downtown Dallas and the Farmers Market with the Cedars and Dallas Heritage Village advances the synergy of these places by creating a series of anchor locations along the corridor. I-30 is currently depressed at this location, but the wide ROW and the lack of consistent street connections across the I-30 corridor today results in a feel of isolation.

The focus areas selected for the Canyon suggest one way the facility could relate better to the adjacent development. The renderings and perspectives show the potential for parks and open spaces integrated into the redevelopment, as well as Complete Streets that promote walkability and smaller blocks with buildings that are oriented toward street and neighborhood open spaces.

The HSR and Convention Center focus area in particular shows how a more robust development environmental can benefit from a refined street grid to create open spaces and connect visitors and residents across I-30 along a potential deck improvement from the HSR station area to the DART line crossing.

At the Farmers Market and Cesar Chavez focus area, the proposed reconstruction of the Cesar Chavez Bridge enhances the development potential south of I-30 by taking advantage of better connections to the Farmers Market development and a deck improvement between Harwood and Cesar Chavez. New development adjacent to Dallas Heritage Village highlights the area as an asset by addressing the Harwood Street entrance as a new front door to the educational park. A mix of uses focused on a cohesive development pattern would be possible with the substantial reinvention of Cesar Chavez Boulevard, Harwood Street and Good Latimer Expressway.

The boundaries of the analysis areas are delineated on the development map and show the proposed and known planned developments for this scenario. It is reasonable to assume that an area extending beyond the analysis areas would be influenced by the facility changes but for the purposes of the CityMAP effort, we focused on key areas of interest that could be considered catalytic.

The factors defined in Chapter 4 are applied below to the I-30 Canyon Compressed scenario. Those factors represent stakeholder values with many of these factors looking beyond the I-30 highway ROW.

	SCALE	QUINTILE UNITS	VALUE	SCORE
CONNECTIVITY				
Net New Linear Feet of Sidewalk per Acre	0 to 500	100	219.9	
Net New Intersections per Square Mile	0 to 75	15	60.4	
ECONOMIC DEVELOPMENT				
Net New Revenue	$0 to $92 Million	$18.4 Million	$32,890,299	
Net New Value	$0 to $2.6 Billion	$520 Million	$969,114,617	
Net New Jobs	0 to 52,000	10,400	10,739	
Net New Population	0 to 30,000	6,000	6,210	
Overall	Average of Subfactor Score			
FACILITY CAPITAL COST				
Estimated Total Cost of Facility (Inside TxDOT Right-of-Way)	N/A	N/A	$500-$999M	$$$
FACILITY DEVELOPMENT & CONSTRUCTION DURATION				
Total Time for Planning, Design and Construction	0 to 25 Years	5 Years	10 Years	
PARKS & OPEN SPACE - QUANTITY				
Net New % of Area	0 to 8	1.6	7.4%	
VISUAL IMPACT				
Visual Impact - % Below Grade	0 to 100%	20	79%	

COST KEY

Under $100M	$100M - 499M	$500M - 999M	$1B - 2B	Over $2B
$	$$	$$$	$$$$	$$$$$

FACTOR KEY

0 - 1 | 1.1 - 2 | 2.1 - 3 | 3.1 - 4 | 4.1 - 5

LOW — HIGH

STAKEHOLDER INTEREST

ADAPTIVE REUSE

The area south of I-30, the Cedars neighborhood, has dozens of remaining buildings from primarily the 1920s to 1930's that could provide opportunity for adaptive reuse. Although much of the original building stock has been demolished and the parcels are mostly vacant, there are great examples of former warehouses and small commercial buildings stoutly constructed that have been repurposed for a wide spectrum of residential and commercial uses across the country. The market has already responded to the value of adaptive reuse in the neighborhood, with Southside on Lamar being the most iconic example.

At the other end of the spectrum, a cleared lot ready for new development is punctuated by an art deco style filling station that has been restored and is awaiting a future use. The authenticity created by these buildings is irreplaceable; and even for new construction, such as the recently completed Alamo Drafthouse which mimics some of the pre-WWII industrial features of the original historic buildings. Additional adaptive reuse in the Cedars could be an important portion of the development activity in the area. For this reason and those listed above, we would evaluate this factor as high for the I-30 Canyon scenario.

CONNECTIVITY

SIDEWALKS AS A MEASURE OF WALKABILITY

Much of the existing sidewalk network in the I-30 Canyon Convention Center and Farmers Market focus areas is in poor condition, with inadequate widths or is nonexistent with large connectivity gaps presenting safety concerns. The likely resulting redevelopment related to the I-30 Canyon Compressed Scenario provides the impetus for making repairs to the sidewalk network. This would begin by providing sidewalks along the new I-30 frontage roads that would be built at grade. The surface streets reconfigured and reconnected after removing ramps that limit connectivity, could be stitched together to provide a grid in several places with bridges wide enough for convenient bicycle and pedestrian infrastructure. A sidewalk network could then be expanded farther north and south of I-30 as redevelopment occurs and city streets are rebuilt as complete streets.

Assessing the redevelopment concept, the CityMAP Team measured the net new linear feet of sidewalks. The Convention Center focus area north of I-30 realized a net increase of 5,370 linear feet of sidewalk and 12,148 linear feet of sidewalk south of I-30. The Farmers Market focus area north of I-30 realized approximately 6,777 additional net linear feet of sidewalk and 10,234 linear feet of sidewalk south of I-30. A complete sidewalk audit was not conducted; but rather an estimate of future potential sidewalks was developed by the CityMAP team for those select focus areas.

Sub-Area	Linear Feet
North of I-30 Convention Center	5,370
South of I-30 Lamar	12,148
North of I-30 Farmers Market	6,777
South of I-30 Cedars	10,234

INTERSECTIONS PER SQUARE MILE AS A MEASURE OF CONNECTEDNESS

In the areas of downtown Dallas where the grid is maintained and there is the highest level of connectivity, with approximately 350 intersections per square mile, which meets the minimum LEED-ND standard previously discussed. The I-30 Canyon Convention Center and Farmers Market focus areas offer decent existing connectivity especially considering that these two areas are bisected by a freeway and the street grid is interrupted by ramps. However, there are opportunities to repair the grid while still allowing the below grade freeway. The option of the I-30 Canyon scenario allows the frontage roads to mitigate some of negative effects of the ramps; and therefore, it would allow the grid to be repaired facilitating a more predictable environment for the driver and for pedestrians moving in the area. To achieve this vision, it assumes that the frontage roads will function more as arterials allowing accessibility much like a boulevard.

Sub-Area	New Intersections per Square Mile
North of I-30 Convention Center	122
South of I-30 Lamar	48
North of I-30 Farmers Market	40
South of I-30 Cedars	73

ECONOMIC IMPACT

KEY OPPORTUNITIES

Several conditions will impact the potential development profile of the I-30 Canyon. I-30 Canyon Compressed scenario includes a narrowed footprint with a below grade profile. This scenario creates additional developable land within existing TxDOT ROW, providing an opportunity for ground lease or sale to developers, as depicted in the renderings. The enhanced connectivity across I-30 will provide decking opportunities at the Convention Center and also the Farmers Market/Dallas Heritage Village, which will further enhance the redevelopment context as depicted in those renderings.

Development near the potential future HSR Station offers significant opportunities to further reshape that portion of the I-30 corridor. Accordingly, various analyses have been performed to show how each enhancement to the built environment can influence the existing market potential. These estimates involve conservative assumptions for proposed value increase from potential projects, such as decking and HSR. The ability to demonstrate which individual enhancement would be responsible incrementally for increased development and values is beyond the capacity of the CityMAP analysis. But the analyses demonstrate the collective potential of all of these considerations.

RIGHT OF WAY CONVERSION

Approximately 15 to 18 acres of current ROW could become available under the I-30 Canyon Compressed scenario. For the purposes of this project, it was assumed that the land would become available for potential redevelopment in 2030. As such, the ROW impact has been included within the projections of the economic impact for the analysis area.

Beginning in 2030, the additional sold ROW will support more commercial and residential development. Post 2030, the anticipated net new value of development is approximately $325 million as a low estimate, and approximately $327 million as a high estimate. Under current City of Dallas property tax rates, this net new development from former TxDOT ROW would generate estimated property tax revenue between $8.7 million and approximately $9 million over the 30 year time period. This number was arrived at by calculating the total amount of proposed development occurring within the released ROW.

The additional development projected in the former ROW also creates additional workforce. While the total amount of employees added between 2016 and 2029 is an estimated 3,145, the total amount between 2030 and 2045 could be 7,337 due to the estimated resulting additional development of retail and office space in the released ROW.

DECK OPPORTUNITIES

With the addition of deck facilities, redevelopment impact is anticipated to be high around the deck at the outer edge of the southern CBD area. The

added connectivity, open space and visual impacts of the decking could attract higher density development and property tax revenues. It is important to note that qualitative aspects of deck facilities would add value to potential development for a number of reasons, including improved connections, increased pedestrian traffic (in the form of increased sales and sales tax revenue), and higher quality aesthetics.

In order to maintain the momentum of the market associated with a deck improvement and to realize estimates, a strict focus on programming, maintenance and sustainable funding will need to be in place through the lifetime of the deck. Operations of such a facility can be costly, so having the appropriate business plan through a value capture process will help with the ongoing operations and maintenance cost.

HIGH SPEED RAIL (HSR)

High Speed Rail has been discussed as a key catalytic economic element within the Canyon and would likely have significant impacts on property values, which in turn would create additional property tax revenue.

To estimate the potential impact of HSR on the I-30 Canyon area, an increased value assumption has been made from planned development projects associated with HSR. This increased value assumption models the property value increase that HSR would likely generate on property near the terminus. Much like the deck facility, the HSR impacts could potentially be greater than the conservative measures provided, and this potential is shown in the total economic impact summary.

POPULATION AND JOBS

With the proposed development, there would be an increase in employment totals – namely within retail and office development. While lowest development square foot totals, i.e., existing absorption, would bring some employment to the area, proposed development leveraging HSR and I-30 Canyon facility changes would likely create additional employment growth.

As a low estimate, an estimated 10,739 employees will be brought to the analysis area between 2015 and 2045. The introduction of HSR would bring an estimated 18,739 jobs.

Like employment, population would also increase with the introduction of the previously discussed catalytic projects. As a low estimate reflecting existing absorption, an estimated population of 6,210 would be added to the area between 2015 and 2045. This number could, however, increase substantially with the inclusion of HSR in the Canyon analysis area, which could potentially bring the estimated population increase of 12,210.

The breakdown of categories below provides the underlying analysis for the opportunities analyzed as part of the Economic Impact factor for the I-30 Canyon analysis area.

ECONOMIC IMPACT SUMMARY

The breakdown of categories described below provides the underlying analysis for the opportunities analyzed as part of the Economic Impact factor for the I-30 Canyon analysis area.

HOSPITALITY ECONOMIC IMPACT

The total existing hospitality value in the I-30 Canyon area is $5.7 million. There is a total of 475,000 SF of hospitality proposed in the I-30 Canyon scenario. The value of this proposed space is estimated to be between $61 million and $71.8 million on the high end over the 30 year time period. The estimated hotel tax revenue from this proposed hospitality development is approximately $2.6 million over the 30 year time period, while the estimated property tax revenues range from $1.8 million to $1.9 million. The estimated added workforce generated from the proposed hospitality space is 570 employees.

OFFICE ECONOMIC IMPACT

There is approximately 526,000 SF of existing office space in the I-30 Canyon area. Based upon the average value per square foot for existing office in the area, the total existing value for office space is $34.7 million. The estimated value of all office space developed between 2015 and 2045 ranges between $345 million on the low end and $378 million on the high end. That estimate could increase estimated property tax revenues to $9.3 million on the low end and $10.2 million on the high end over the 30 year time period. Incorporating existing space with net new space, there could be a total of over 2.8 million SF of total office in the Canyon area. The estimated resulting added workforce from the proposed office between 2015 and 2045 is 9,272 although this would be increased with HSR.

RETAIL ECONOMIC IMPACT

There is approximately 454,260 SF of existing commercial development categorized as retail space in the I-30 Canyon area (City GIS Data). Research shows the existing value for retail space is approximately at $27.3 million. Including the possible impact of HSR, there is a total of 477,600 SF of proposed new retail space between 2015 and 2045 in the I-30 Canyon area. The estimated value of all retail space developed between 2015 and 2045 ranges between $69.1 million on the low end and $77.9 million on the high end. Estimated projected property tax revenues on this net new space range from $1.9 million on the low end to $2.1 million on the high end over the 30 year time period.

Incorporating existing space with net new space, over 920,000 retail square feet in the Canyon area could be possible. The resulting added retail workforce between 2015 and 2045 was estimated at 915 people, although this could increase with HSR. Using an assumption of $300/SF for retail sales, the total sales tax revenue for retail space between 2015 and 2045 is projected at an estimated $4.1 million.

MULTIFAMILY ECONOMIC IMPACT

The amount of planned multifamily space in the I-30 Canyon analysis area makes the multifamily economic impact one of the most significant among all development types. There is approximatly 1,188,000 SF of existing multifamily space in the I-30 Canyon area. Research determined the value per square foot for existing office inventory is $65/SF; therefore, the total existing value for multifamily space is $58.2 million. There is a total of 3.45 million square feet of planned multi-family space between 2015 and 2045 in the Canyon area. The estimated value of all multi-family space developed between 2015 and 2045 ranges between approximately $490 million on the low end and $536 million on the high end.

Property tax revenues that could be realized on this net new space range from approximately $13.2 million on the low end and $14.4 million on the high end over the 30 year time period. Incorporating existing space with net new space, there could be over 4.5 million multifamily square feet in the Canyon analysis area. The estimated added population in multifamily units between 2015 and 2045 is 6,210, although this would be increased significantly with the inclusion of HSR.

SINGLE-FAMILY ECONOMIC IMPACT

There is currently no planned single-family development in the I-30 Canyon area. For this reason, only existing inventory was captured. In total, there is 6,840 SF of single-family in the study area. Research determined the value per square foot for existing single-family inventory is $75/SF. The total existing single-family value in the I-30 Canyon area is $390,000, generating a de minimus ad valorem impact.

I-30 CANYON - COMPRESSED | FACTOR ANALYSIS

I-30 Canyon - Compressed Economic Projections (2015 - 2045)

Metric	Existing	Proposed	w/HSR
Existing Square Feet (2015)	2,236,550	-	-
Net New Square Feet (2015 - 2045)	-	6,371,200	6,781,931
Existing Value (2015)	$125,980,200	-	-
Net New Value	-	$969,114,617	$1,055,624,814
Additional Impacts (Net New)			
Property Tax Revenue (Ad Valorem)	-	$26,166,095	$28,711,400
Sales Tax Revenue	-	$4,085,476	$4,124,151
Hotel Tax Revenue	-	$2,638,729	$49,557,922
Increase to Existing Population	-	6,210	12,210
Increase to Existing Workforce	-	10,739	20,339
Net New Total Revenue		$32,890,299	$82,393,473

TOTAL ECONOMIC IMPACT

Across all development types, there is 2.36 million square feet in the I-30 Canyon area of existing building inventory. The total existing value (2015) of all development types is $126 million (Catalyst via County GIS Data).

There is a total of 6.8 million square feet of estimated new development across all development types. The estimated total value of net new space is approximately $969 million on the low end and $1.07 billion on the high end. Net new City of Dallas property taxes across all development over the 30 year time period is approximately $26.1 million (without HSR). The total added workforce from the new proposed development is estimated at 10,739 which is increased to 20,339 with HSR between 2015 and 2045.

FACILITY CAPITAL COST

The CityMAP scenario limits for I-30 Canyon are from Hotel Street to east of I-45 near Jeffries Street, a distance of approximately 1.6 miles. The scenario is a modified version of the 2004 TxDOT Design Schematic for Project Pegasus. The modifications within the Canyon are needed to match the geometry of the I-30/I-35 Horseshoe project and the plans for the I-30 East Corridor project. Of particular importance will be the further study of the HOV configuration in the I-30 Corridor. The CityMAP scenario proposes two reversible HOV lanes in the East Corridor. These two HOV lanes extend west into the Canyon, running to ramps to the Cesar Chavez Boulevard Bridge, with one HOV lane continuing west to transition to the general purpose lanes before reaching the Horseshoe.

The I-30 Canyon facility estimated construction cost assumes the full reconstruction of I-30 within the project limits and includes widened bridges at Lamar Street, Griffin Street, Akard Street, Ervay Street, Harwood Street, Cesar Chavez Boulevard, Good Latimer Expressway and Malcolm X Boulevard. The estimate also includes three potential deck parks at the following locations:

- Convention Center: between Lamar Street and the DART bridge west of Griffin Street. This location could be expanded further west to connect with the future High Speed Rail facility.
- Center Park: between Akard Street and Ervay Street.
- Farmers Market/Heritage Village: between Harwood Street and Cesar Chavez Blvd.

The estimate assumes that minimal changes will be made to the I-345/I-45 interchange. These costs are indicated in the various I-345/I-45 scenarios.

The potential HSR facility will cross I-30 near the existing Hotel Street/UPRR bridge. This HSR crossing over I-30 is anticipated to be privately funded and a cost amount has not been included in the scenario estimate.

Modifications to the existing DART bridge near Griffin Street have been included in the scenario estimate. Other changes to DART facilities may be necessary in conjunction with the HSR. This study assumes that these changes will be by others and costs have not been included in the CityMAP estimate. The cost to reconstruct the Hotel Street/UPRR bridge is not included.

The I-30 Canyon facility capital cost estimate is in the range of $500 - $999 million. Further discussions by the project partners are necessary to determine the scope of the improvements and funding responsibilities.

Given the conceptual nature of the CityMAP highway geometry, the estimate should be considered a high level planning estimate and will change as the design advances.

Related city building responsibilities would fall to the city, private developers or public-private entities such as improvement districts. There are significant costs for public improvements to support development in the Cedars, particularly if the HSR project moves forward. This scenario estimate does not included possible HSR costs such as bridge construction over I-30, stations, parking structures and any access improvements to the I-30/I-35 Horseshoe project made for the HSR.

Examples of city building costs could include items such as modifications to the existing Cadiz underpass of the UPRR, new underpasses of the UPRR, the possible signature pedestrian bridge over the UPRR at Belleview Street and significant reconstruction and modifications to the street grid. None of these city building costs have been included in the CityMAP estimate.

FACILITY DEVELOPMENT AND CONSTRUCTION DURATION

NCTCOG's 2040 MTP indicates that the I-30 Canyon project would be limited to operational improvements. For this reason, this schedule would allow a two (2) year period prior to project development to allow for a revision to the MTP to expand the project scope. Schematic design would begin in 2019 with FHWA environmental clearance in 2020. Detailed design would occur in 2021 and construction would begin in 2023 with a four (4) year duration.

The facility development and construction duration for the I-30 Canyon project would be approximately ten (10) years, including the two year period for the MTP change.

FACILITY OPERATION AND MAINTENANCE COST

The delineation of responsibilities for operation and maintenance of each facility should be established at the same time agreement is reached for funding of construction. This becomes particularly important as facilities become more complex and traditional responsibilities may be inadequate.

In the case of The Canyon, some of the possible enhanced connectivity components could have significant operation and maintenance costs which need to be accounted for. The O&M costs for the Complete Streets overpasses, as well as the deck parks, cannot be readily determined at this time because the types of amenities that would be incorporated have not been discussed and/or agreed upon by the appropriate entities.

PARKS & OPEN SPACE – QUANTITY

Two sets of pocket parks are incorporated into the redevelopment context: one in the heart of the Cedars neighborhood made available by the reroute of a direct connection ramp; and one in between Caesar Chavez and Good Latimer in a potential redevelopment of some vacant and industrial land. Both are surrounded by development leveraging the investment by providing an amenity to residents, employees and customers. They are also both easily accessible to the surrounding neighborhood through a repaired street grid. Deck parks can be effective, but are expensive to construct, maintain and program.

Therefore, to realize the greatest return for the investment, key locations must be selected that connect areas of high activity where mitigating the highway below can have the greatest benefit. At this high level analysis, the proposed Convention Center deck park meets the criteria by connecting the thousands of visitors that are at the Convention Center on a regular basis with the emerging entertainment district and new development along Lamar. In addition a future HSR Station that would likely provide synergy as a major anchor at the southwestern end of the proposed deck park. Further analysis would be required to accurately determine a deck park's potential success at this location.

A second deck park connecting the Farmers Market development would enhance the success of redevelopment on the north side of I-30, while providing needed open space in a downtown location where it is in short supply. The linear green shown as part of the Farmers Market focus area is a portion of the "Emerald Bracelet" envisioned as a green trail connection between the primarily residential population in the Farmers Market area with the commercial and civic areas to the south and west.

The I-30 Canyon scenario also provides the opportunity to take advantage of some unused right of way near Dallas Heritage Village that was lost when I-30 was first constructed. Although this is not a large portion of land, perhaps it could be used to improve the pedestrian environment along the northern edge; or it could be used to mend the interface with the new proposed urban frontage road and improve the "front yard" of Dallas Heritage Village.

Summarized below, the resulting greenspace is as follows:

Open Space	Net New Area in Acres
Deck Parks	
Convention Center Deck Park	4.73
Farmers Market Deck Park	3.24
Pocket Parks	
Cedars Pocket Park	0.6
Bluebell Street Pocket Parks	0.74
Park Expansion	
Heritage Village Expansion	2.38

The Convention Center Deck Park is shown as 4.73 acres and the Farmers Market Deck Park 3.24 acres. For comparison the Woodall Rodgers deck park is 5.2 acres. The potential Cedars pocket park is estimated at 0.6 acres and the potential Bluebell Street pocket parks are an estimated combined .74 acres. The Dallas Heritage Village extension is an additional estimated 2.38 acres.

PARKS & OPEN SPACE – QUALITY

Parks and open space can be significantly enhanced with the I-30 compressed scenario. The slivers of land along the right-of-way and Heritage Village discussed above can be used to create open trails and connections between the Convention Center and Farmers Market areas along the edge of the highway. Inclusion of pocket parks and plazas within the focus areas reflect the guiding points for access and surveillance.

The key for decking improvements to be successful in this area will be to have programmed space that is easily visible from the surrounding streets and allow some private development to occur around and on the deck.

With the enhancement of the available ROW adjacent to Dallas Heritage Village, careful consideration on the visibility of that portion of trails and park space will need to be monitored and programmed to meet the needs of the community.

VISUAL IMPACT

The CityMAP portion of I-30 Canyon involves the full reconstruction of the existing I-30 from Hotel Street to east of I-45 near Jeffries Street. The Canyon has a below grade profile with Hotel Street, Lamar Street, Griffin Street, Akard Street, Ervay Street, Harwood Street, Cesar Chavez Boulevard and Good Latimer Expressway all crossing over I-30. After Good Latimer Expressway, the Canyon transitions into the I-30 Interchange with I-345 and I-45, which is counted as an above-grade section based on the elevated direct connect ramps. For the Visual Impact Scoring, the percentage of below-grade highway for the I-30 Canyon scenario is 79%, which includes the interchange.

As previously discussed, the Cedars neighborhood was originally a primarily residential and small scale commercial neighborhood with a strong connection to the CBD. The original Cedars neighborhood was served by streetcar and later was bordered by freight rail lines. The increase in railroad traffic over the late 19th century resulted in increased commercial activity over the course of the early to middle 20th century. Zoning changes in the Cedars in the 1960s allowed more industrial and larger scale commercial, and distribution operations which led to a decline in the residential nature of the neighborhood.

Most recently the pace of new development in the larger area around the Canyon has increased due to carefully considered zoning changes due to increasing market demand for neighborhood reinvestment. The most dramatic examples of this turn around are the success of Southside on Lamar and the redevelopment of the Farmers Market area. This sets the stage for further opportunity underscored in the CityMAP Process for the Canyon Area.

POLICY

Successful redevelopment of the I-30 Canyon area would likely require updated land use maps and the associated zoning categories to achieve the agreed upon vision. Any change to the physical profile of I-30 should be accompanied by a further analysis and a larger community conversation on necessary changes in land use policy to ensure that any transportation investment can be leveraged to best benefit current and future residents. Much of that zoning has been reconsidered; but in order to encourage redevelopment, a thorough examination of the zoning should be completed to make sure that mixed-use and complementary infill development can occur.

New development associated with the implementation of this scenario could serve as a transition from the CBD to the Cedars. Tax incentives may also be a mechanism considered by the city, for the area near the convention center and the proposed HSR platform which would be complementary to that part of Downtown but could also spur its own economic and development activity. HSR would indeed be a game changer for the City of Dallas and would have major impact on transit use, but it would also have impacts on traffic and potentially dramatic development opportunities that must be carefully considered and planned.

With any new large scale development the accommodation of open space and arterial transportation needs to be considered. The I-30 concept depicts an investment in several public plazas, parks and a deck park near the Convention Center and one connecting the Farmers Market to the redevelopment opportunity to the south. Private support of these larger scale open space investments could be used to offset on-site open space requirements or a more direct system of fee-in-lieu could be arranged for new development in this area. To be most successful, a public-private funding arrangement may be needed for a deck park, similar to Klyde Warren Park. This is an example of how a popular and well-loved park requires a high level of management for day-to-day maintenance, programming, as well as fundraising for the initial capital expenditures and continued operations. New development needs to consider impacts to the arterial transportation corridors which would likely require considerable complete street investment if increased connections, enhanced bicycle pedestrian infrastructure, and increased transit convenience and potential transit oriented design are to be realized.

Ensuring a stable residential population in the neighborhood should be a top priority. Currently in the Cedars 20 percent to 40 percent of residents are below the poverty line; and so housing affordability and the negative impacts of gentrification should be taken seriously and anticipated. (Census Bureau, ACS 2009-2013)

Neighborhood stabilization is a priority for the City of Dallas through its Neighborhood Plus Program, the Design Center and other departmental efforts. Especially in the smaller scale redevelopment, the goals of alleviating poverty, fighting blight, attracting the middle class, expanding home ownership and enhancing rental options should be incorporated into the anticipated redevelopment efforts. Due to the large vacant tracts and underutilized properties, these goals can be accomplished without the negative side effect of displacement often found in other locations such as I-30 East. Commiserate zoning changes that would allow a variety of housing types could support the creation of housing at a range of price points and address the desire for continued neighborhood stabilization.



HISTORY

The Interstate 30 East Corridor (I-30 East Corridor) has long been home to some of Dallas' most recognizable cultural staples, including Fair Park - home to Texas' State Fair for over a century - and Deep Ellum - one of Dallas' most culturally significant entertainment districts. In additional to the Interstate's proximity to these important cultural districts, the I-30 Corridor has also served as Dallas' primary east-west roadway since the introduction of the Interstate Highway System.

Historically, East Dallas—located within what is today the I-30 footprint—was a series of residential neighborhoods that were regarded as one of the premier residential areas in the Dallas area. Up until the late 1800s, East Dallas was outside of the City of Dallas' jurisdiction. That area was annexed into the City of Dallas in 1890. As Dallas began to experience continued growth through the late 1800s and early 1900s, the State Fair of Texas expanded as well.

The State Fair of Texas has not only been a valuable asset for the City of Dallas, it has also long been one of the biggest visitor draws statewide. It is a place where entertainment and cultural exchange has continually enriched visitors for many decades. Today, approximately 4 million visitors enjoy Fair Park each year.

Across I-30, Deep Ellum has strong cultural and historical roots. In Deep Ellum's earliest days, the area was host to primarily African-American residents, in addition to a number of retail and nightlife centers, as well as studios for African-American produced movies. The nightlife centers helped the area become a sanctuary for music, specifically blues and jazz music, in addition to a number of small format "Mom and Pop" retailers.

Deep Ellum today is known as a resurging area where residential and nightlife have merged into a unique entertainment district with a national brand. However, unbeknownst to many of Dallas' current residents, the lifeblood of Deep Ellum's entertainment district has been present since the early 1900s.

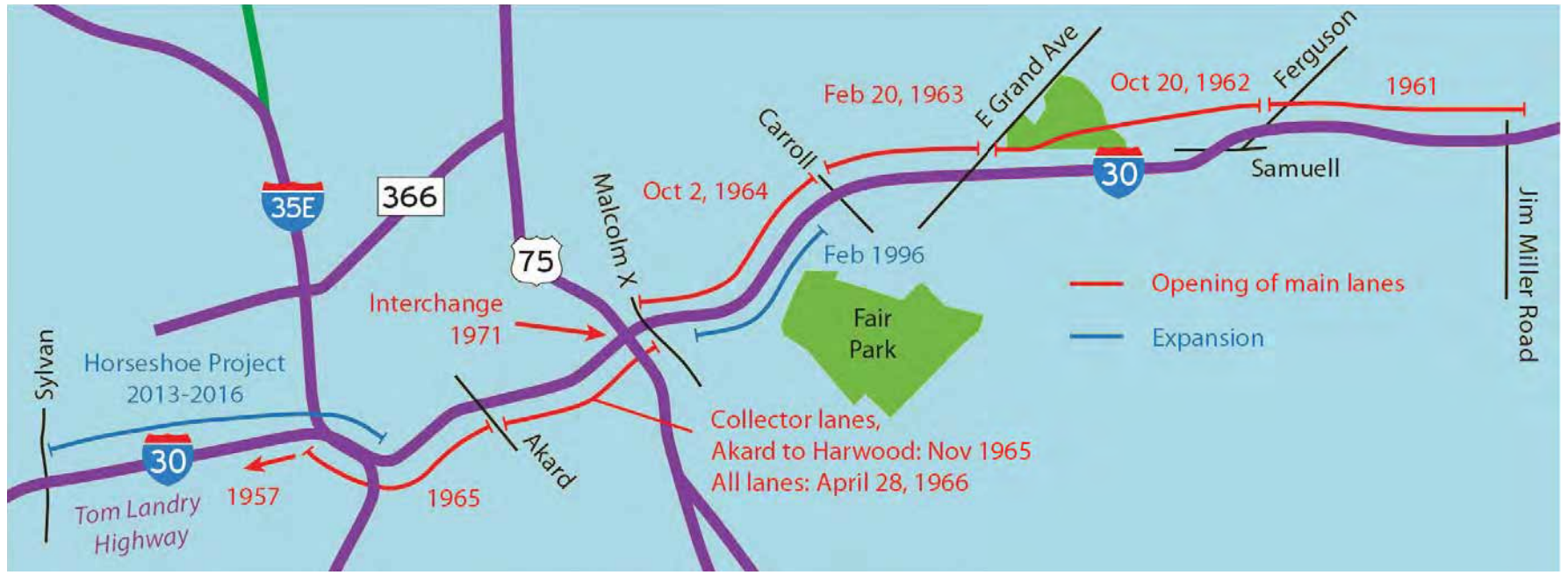
Moving into the 1950s and 1960s, both Fair Park and Deep Ellum were areas that began to experience general decline. Coinciding with this decline was the introduction of I-30, splitting these areas. While the Interstate improved east-to-west mobility—specifically, the mobility of residents living in suburban areas that began to grow east of Dallas—the roadway also severed once tightly knit neighborhoods into northern and southern fragments. The severance of those neighborhoods created even further decline for both Fair Park and Deep Ellum which, continued to magnify in the proceeding years.

Although the decline of these areas continued for some time, there has been increasing recent improvement of the conditions in Deep Ellum. On the other hand, Fair Park faces an uncertain future. Nevertheless, the valuable assets in both Fair Park and Deep Ellum provide historic and modern experiential opportunities for enhancement if I-30 is reinvented under one of the proposed scenarios. In addition, the defunct Ford plant provides an opportunity for substantial redevelopment.

As for Deep Ellum specifically, the area's recent influx of investment and growth signifies the increasing economic opportunity for the district. Recently, large-scale property acquisitions have been occurring in Deep Ellum, which will help facilitate more efficient property management rather than dealing with fragmented ownership over a large geography. Examples of this large scale property acquisition include the KDC mixed-use high rise at the intersection of Good Latimer Expressway and Elm Street.



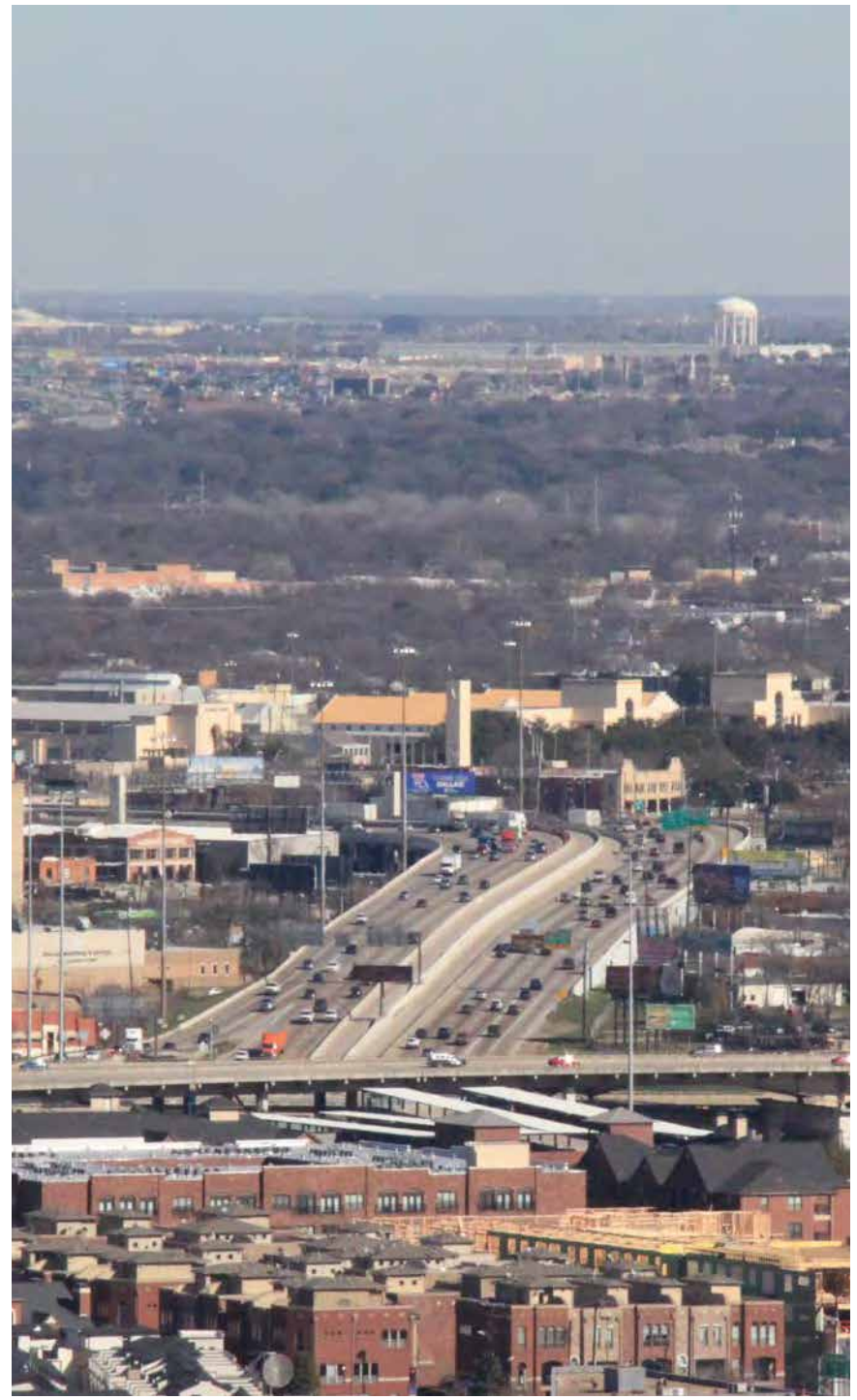
I-30 in 1962 *Source: The Dallas Morning News*



I-30 TIMELINE *Source:* Oscar Slotboom, *Dallas-Fort Worth Freeways (2014)*

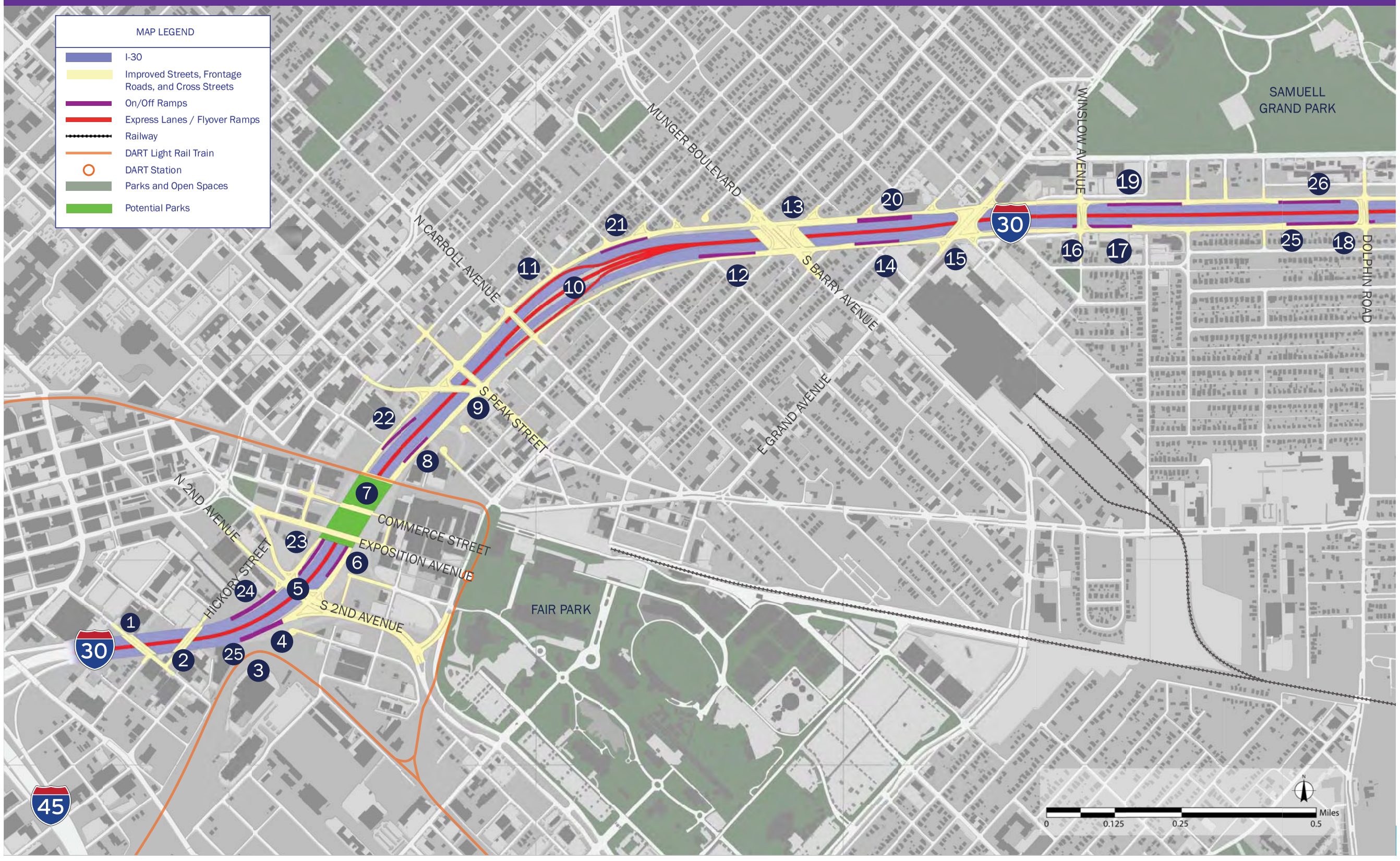


I-30 AT E GRAND AVENUE CURRENT STREET VIEW *Source: Google Maps*



I-30 EAST AT FAIR PARK (VIEW OVER FARMERS MARKET) *Source: HNTB*

I-30 EAST CORRIDOR - ADD CAPACITY/BELOW GRADE | SCENARIO MAP



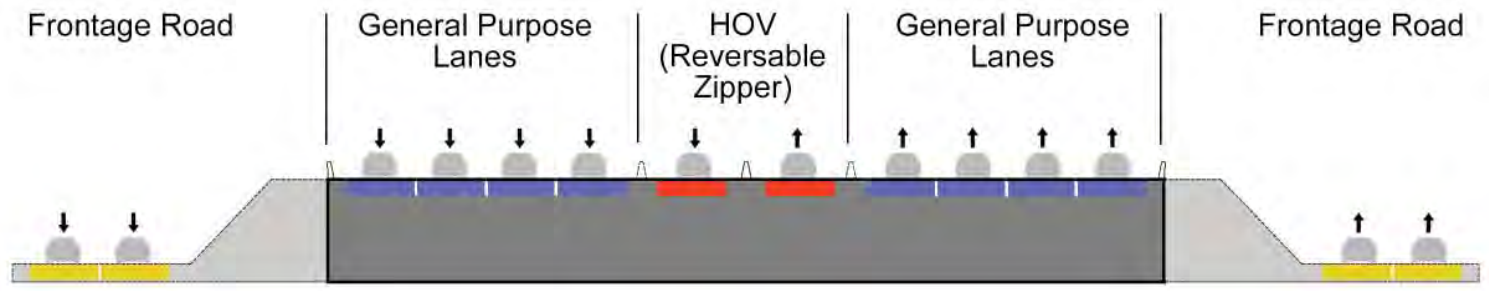
DRAFT | JUNE 10, 2016

I-30 EAST CORRIDOR - ADD CAPACITY/BELOW GRADE | SCENARIO MAP

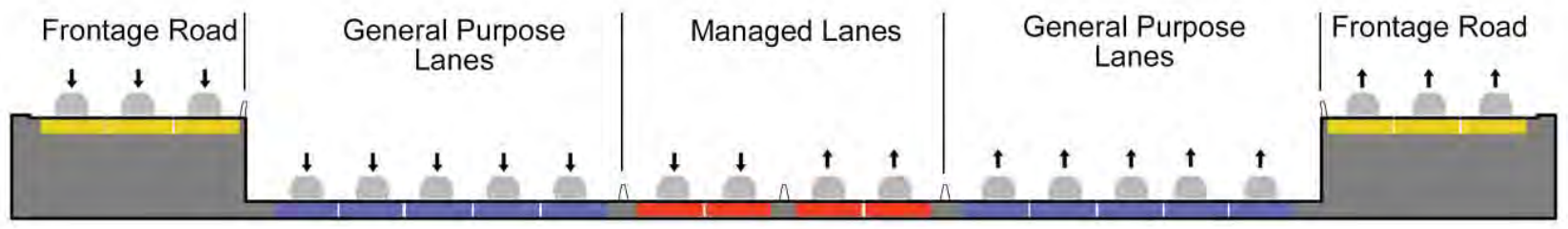
PLAN NOTES: I-30 EAST CORRIDOR

1. Chestnut Street bridge over below grade I-30
2. Hickory Street bridge over below grade I-30
3. Impacts to DART Rail Yard, additional study required
4. Eastbound I-30 exit ramp to 2nd Avenue
5. Combined 1st Avenue and 2nd Avenue bridge over below grade I-30
6. Eastbound I-30 exit ramp to below-grade frontage road
7. Possible Fair Park Deck Park at Exposition Avenue and Commerce Street crossing over I-30 and below-grade frontage roads
8. Eastbound I-30 entrance ramp from below-grade frontage road
9. Peak-Haskell bridge over below grade I-30
10. Eastbound I-30 flyover entrance ramp to Express lanes
11. Westbound I-30 flyover exit ramp from Express lanes
12. Eastbound I-30 exit ramp to Munger Boulevard/Barry Avenue
13. Munger Boulevard/Barry Avenue bridge over below grade I-30
14. Eastbound I-30 entrance ramp from Munger Boulevard/Barry Avenue
17. Grand Avenue bridge over below grade I-30
15. Winslow Avenue bridge over below grade I-30
18. Eastbound I-30 exit ramp to frontage road
16. Dolphin Road bridge over below grade I-30
19. Westbound I-30 entrance ramp from frontage road
20. Westbound I-30 exit ramp to Munger Boulevard/Barry Avenue
21. Westbound I-30 entrance ramp from frontage road
22. Westbound I-30 exit ramp to frontage road
23. Westbound I-30 entrance ramp to 1st Avenue and 2nd Avenue
24. Westbound I-30 entrance ramp from 1st Avenue and 2nd Avenue
25. Eastbound I-30 entrance ramp to frontage road

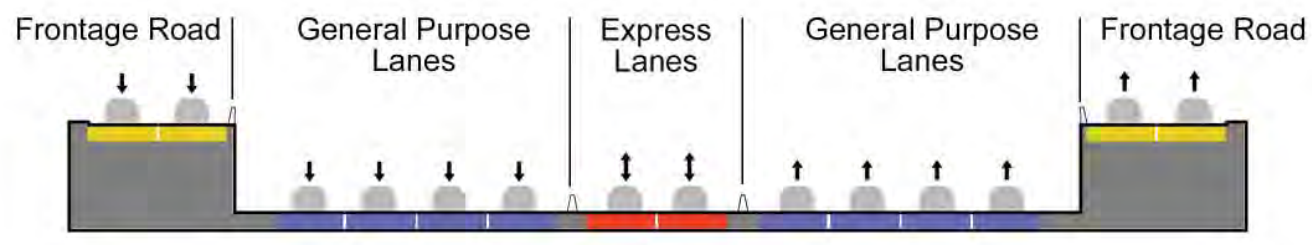
CROSS SECTIONS



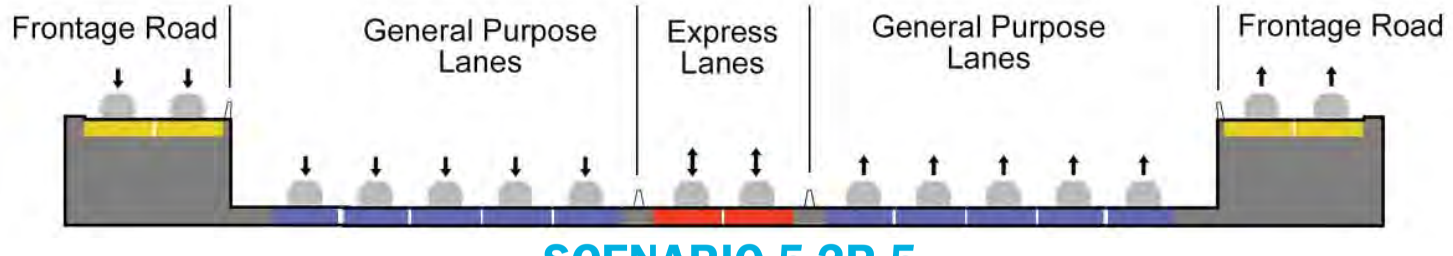
EXISTING



FROM TxDOT 2007 SCHEMATIC STUDY

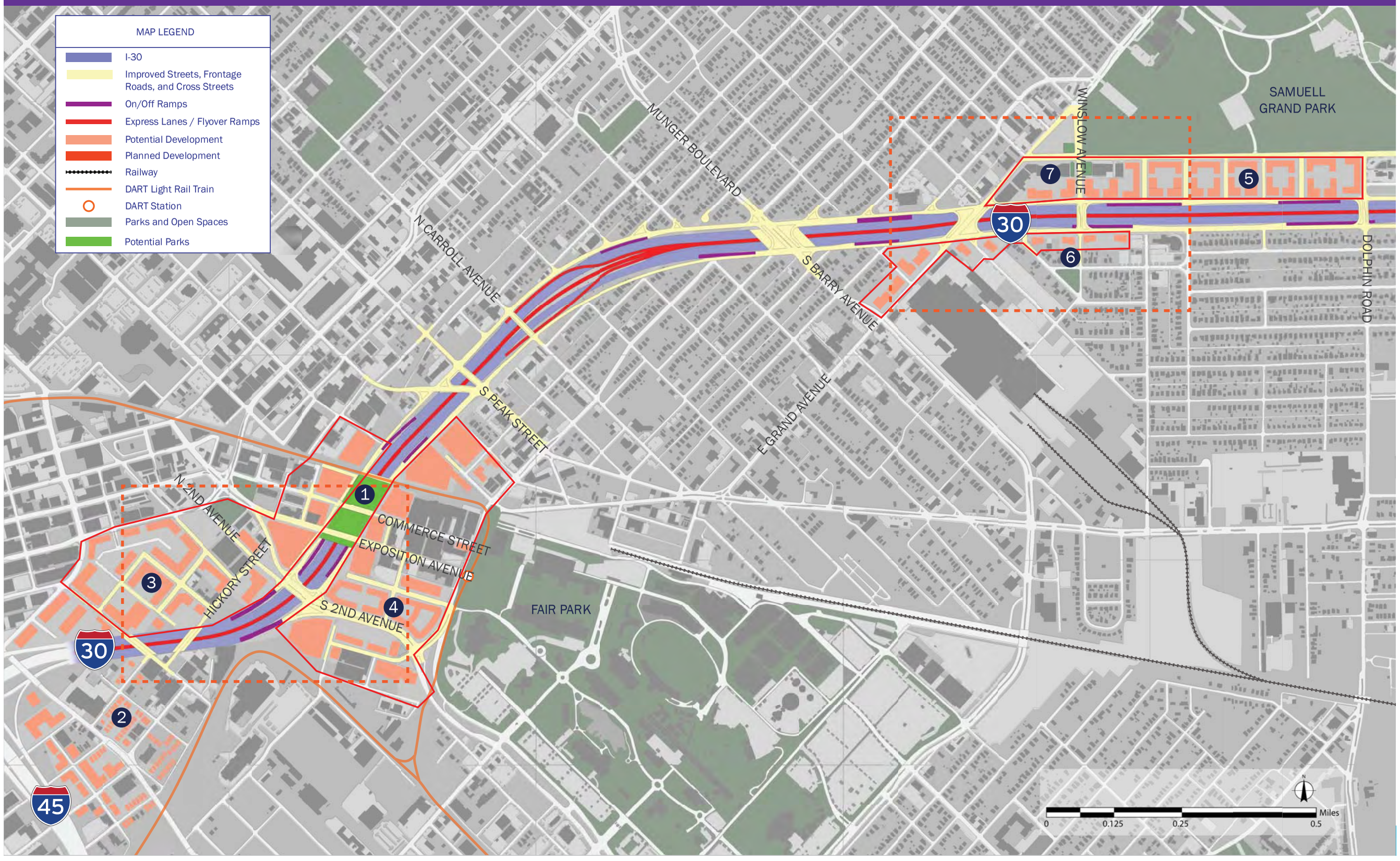


SCENARIO 4-2R-4



SCENARIO 5-2R-5

I-30 EAST CORRIDOR - ADD CAPACITY/BELOW GRADE | DEVELOPMENT MAP

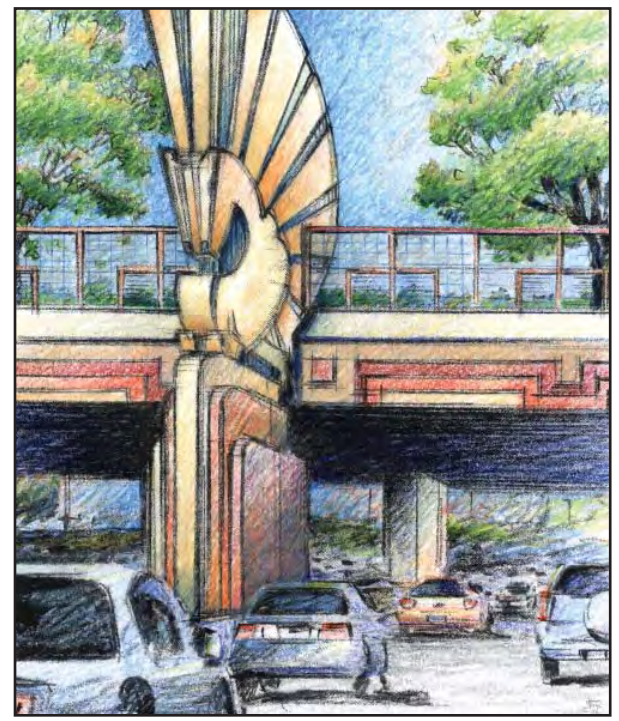


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I-30 EAST CORRIDOR - ADD CAPACITY/BELOW GRADE | DEVELOPMENT MAP

DEVELOPMENT NOTES: I-30 EAST CORRIDOR

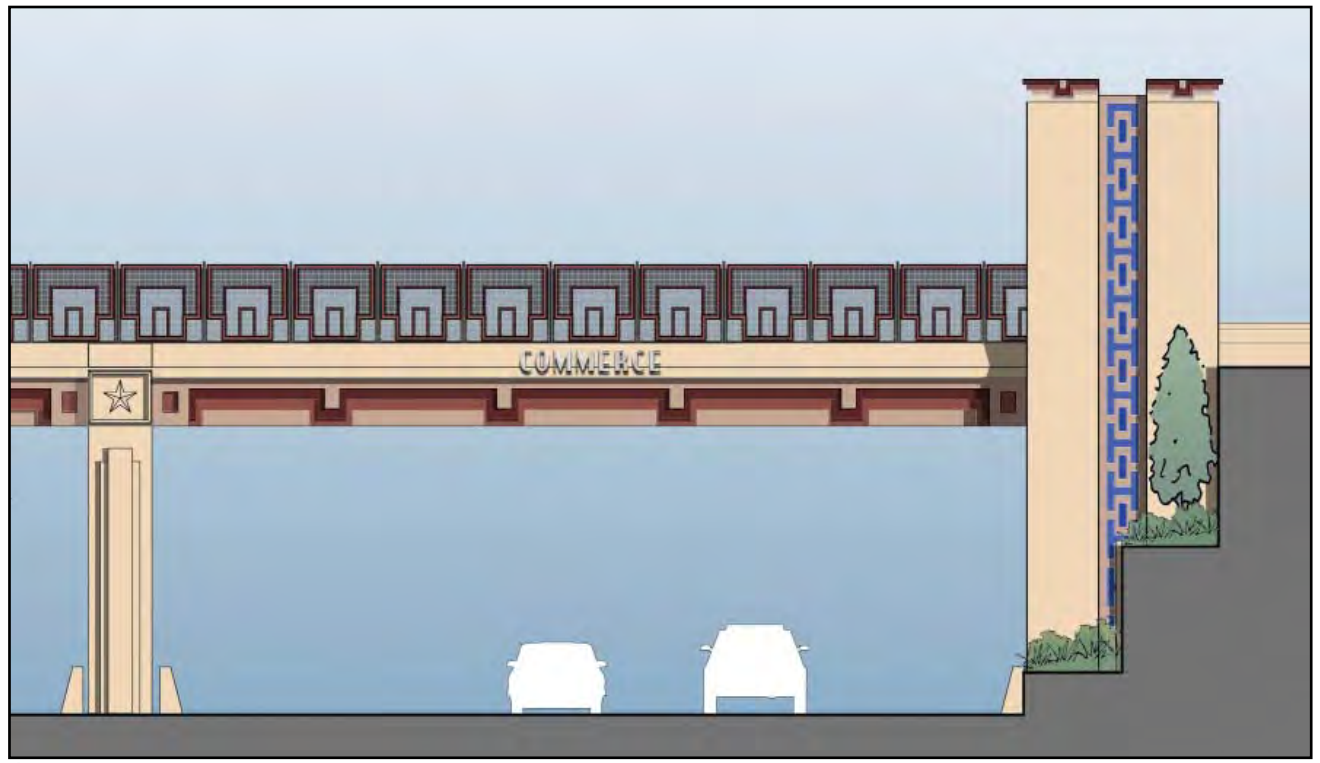
1. Deck improvement at Exposition Ave that increases connectivity to Fair Park from Deep Ellum
2. Small lot housing development to build off current planned small lot housing
3. Redevelopment of underutilized public property to promote walkable mixed use development adjacent to historic Deep Ellum
4. New development adjacent to Fair Park takes advantage of reconstructed street grid
5. Mixed Use retail and multi-family take advantage of both I-30 frontage and adjacency to Samuell-Grand Park
6. Redevelopment of retail along the frontage to take advantage of frontage on the below grade facility
7. Infill development that builds on the urban form of the existing retail and services along Grand Avenue



Conceptual Fair Park Gateway Enhancements



Conceptual Deck Park



Conceptual Bridge Enhancements

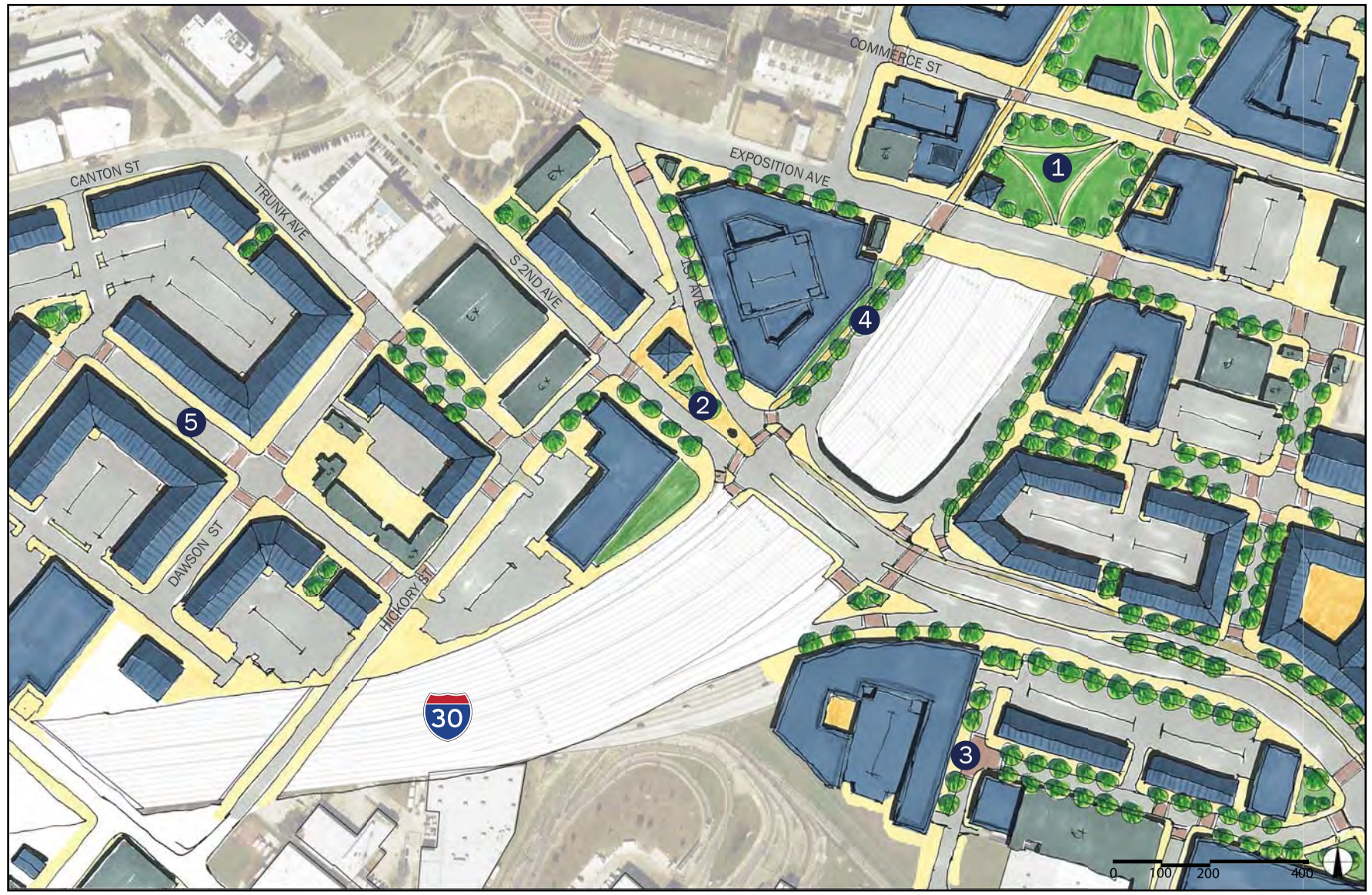
I-30 EAST CORRIDOR - ADD CAPACITY/BELOW GRADE | FOCUS AREAS



I-30 AT FAIR PARK FOCUS AREA

FOCUS AREA NOTES: I-30 EAST CORRIDOR AT FAIR PARK

1. Deck improvement with public/private amenities
2. Frame pocket parks with buildings to promote activation
3. Design streetscape with building as terminus to anchor neighborhood development
4. Relocation of Santa Fe Trail to connect to deck improvements and 2nd Street bike lanes
5. Install roadways to improve connections and promote additional development



I-30 AT FAIR PARK CONCEPT *Source: Gateway Planning Group*

FAIR PARK POTENTIAL



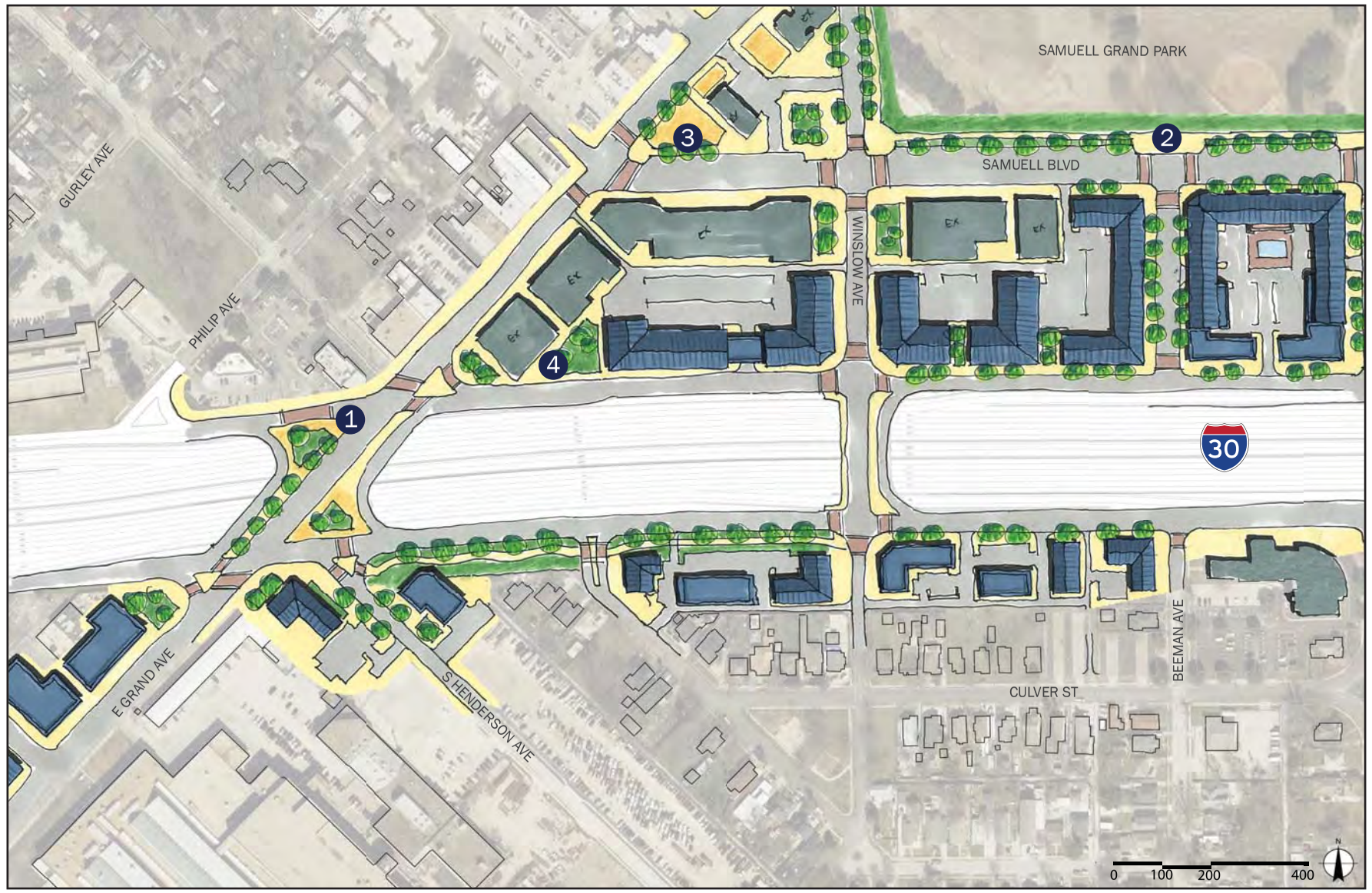
I-30 EAST CORRIDOR - ADD CAPACITY/BELOW GRADE | FOCUS AREAS



I-30 AT GRAND AVENUE FOCUS AREA

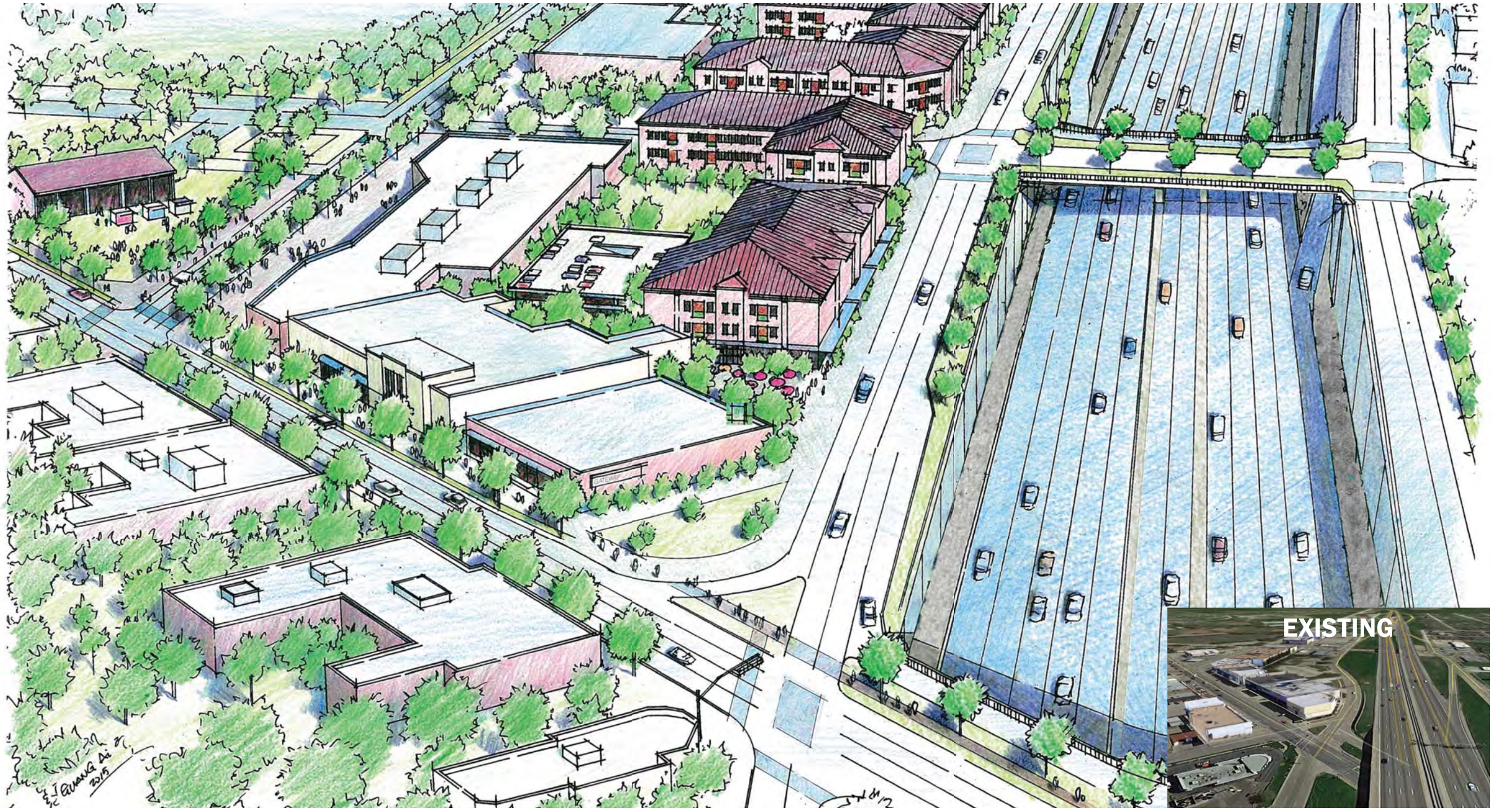
FOCUS AREA NOTES: I-30 EAST CORRIDOR AT EAST GRAND AVENUE

1. Improved bridge crossings for pedestrians and bicyclists
2. Improved connections to Samuell Grand Park
3. Use underutilized space for community gathering locations in established Grand Avenue commercial area
4. Enhance excess alleys and side spaces with pocket parks or plazas



I-30 AT GRAND AVENUE CONCEPT *Source: Gateway Planning Group*

EAST GRAND AVENUE POTENTIAL

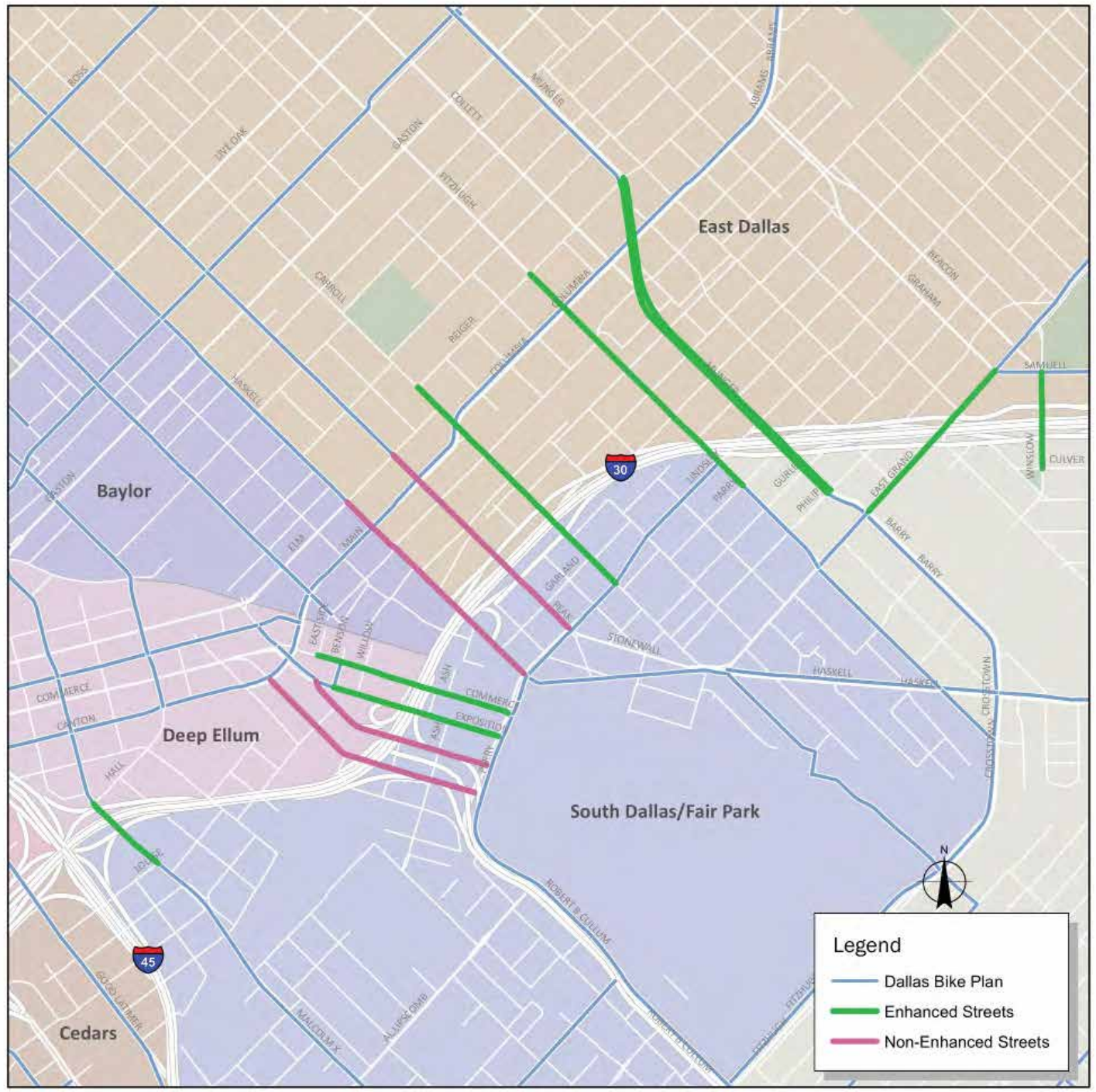


I-30 EAST CORRIDOR | CONNECTIVITY OPPORTUNITIES

I-30 East opened in 1962 and was designed to connect I-30 from US 75 on the west to the US 67/ US 80 split on the east. The first section extended from Samuell Boulevard and White Rock Creek to US 75. The alignment had to avoid the Grove Hill Cemetery on Samuell Boulevard, Samuell Grand Park, the Ford manufacturing plant, and Fair Park. In order to avoid the active railroads and maintain the local street grid as much as possible, the designers built the western portion above grade. Residential neighborhoods were impacted by the new interstate highway.

The City of Dallas has over the decades studied different ways to connect the downtown to Fair Park. Elm, Main and Commerce extending east through Deep Ellum and pivoting southeast to 2nd Avenue, 1st Avenue and Exposition Avenue are the most obvious links for Fair Park. This so called "CBD-Fair Park Link" is intended to be the physical and psychological connection between two of the most important destinations in the core of the city. The CityMAP team is well aware of the desire to reconnect the local roads under the existing I-30. Our discussion of the Existing Cross Section Analysis highlights opportunities to improve the pedestrian and bicycle experience along the I-30 corridor by short-, intermediate-, long-term improvements. The most common proposal is to clean and paint the columns and undersides of all the bridges. Where excess capacity exists the team points to opportunities to improve pedestrian facilities and to add bicycle facilities. Malcolm X, Exposition, Haskell, Peak, Fitzhugh, Munger and East Grand are all on the Bike Plan. The most expensive and long term improvement is to lower I-30 east from I-345 to east of Winslow and construct a cross-section similar to North Central Expressway between Downtown and Loop 12.

The CityMAP team analyzed existing traffic volumes and 2040 traffic volume projections on important local streets in the I-30 East corridor and determined where additional capacity existed on a 24-hour and peak hour basis. Streets with a volume to capacity ratio of 0.7 or less were considered as candidate streets. Where streets had available vehicle carrying capacity, CityMAP explores a series of alternatives for making key roadways more walkable and bikeable by using tools provided in the Complete Streets Design Manual, Dallas Bike Plan, and other sources. These alternatives are just one of many possible configurations that could be applied to the candidate streets and by no mean are exhaustive. Each roadway has been evaluated based on the following attributes presented in the Existing Cross Sections Analysis table below: Functional Classification, Capacity, ADT, Existing and Future V/C, roadway cross-section attributes, existing bicycle and pedestrian facilities. Right-of-Way width was also an important consideration in the development of future alternatives. The map to the right provides the arterial street grid in the Canyon with the 2011 Bike Plan and Dallas downtown area neighborhoods overlaid. The map indicates the candidate streets that were evaluated for enhancements in pedestrian and bicycle facilities.



I-30 East Corridor Existing Cross Sections Analysis

Street	From	To	Area Type	Functional Class	Capacity	Existing ADT	Existing V/C	2040 ADT	2040 V/C	One Way Two Way	Median Type	Total Lanes	Parking	Bike Facility
Malcolm X	Dawson	Canton	CBD Fringe	Minor Arterial	25,000	6,066 [1]	0.24	16,204	0.65	4	Undivided	4	0	0
Exposition	Parry	Ash	CBD Fringe	Minor Arterial	12,500	5,310 [1]	0.42	18,638	1.49	2	TWLTL	2	2	0
Exposition	Ash	Willow	CBD Fringe	Minor Arterial	25,000	5,310 [1]	0.21	14,206	0.57	2	TWLTL	4	0	0
Commerce	Parry	Ash	CBD Fringe	Minor Arterial	11,500	1,018 [1]	0.09	7,820	0.68	2	Undivided	2	2	0
Commerce	Ash	Willow	CBD Fringe	Minor Arterial	23,000	1,018 [1]	0.04	17,650	0.77	2	Undivided	4	0	0
Haskell	Elm	Main	CBD Fringe	Principal Arterial	18,750	8,466	0.45	24,916	1.33	1	Undivided	3	0	0
Haskell	Garland	Parry	CBD Fringe	Principal Arterial	18,750	6,569	0.35	10,239	0.55	1	Undivided	3	0	0
Peak	Parry	Garland	CBD Fringe	Principal Arterial	18,750	6,487	0.35	7,485	0.40	1	Undivided	3	0	0
Peak	Main	Elm	CBD Fringe	Principal Arterial	18,750	11,062	0.59	21,422	1.14	1	Undivided	3	0	0
Carroll	Lindsley	Garland	CBD Fringe	Minor Arterial	11,500	3,571	0.31	NA	-	2	Undivided	2	0	0
Carroll	I-30 FR EB	I-30 FR WB	CBD Fringe	Principal Arterial	23,000	10,233 [1]	0.44	NA	-	2	Undivided	4	0	0
Carroll	Main	Reiger	CBD Fringe	Minor Arterial	11,500	7,231	0.63	6,490	0.56	2	Undivided	2	0	0
Fitzhugh	Parry	Lindsley	CBD Fringe	Principal Arterial	11,500	2,807	0.24	4,066	0.35	2	Undivided	2	0	0
Fitzhugh	Lindsley	Garland	CBD Fringe	Principal Arterial	11,500	2,970 [1]	0.26	4,444	0.39	2	Undivided	2	0	0
Munger	Gurley	Philip	CBD Fringe	Principal Arterial	37,500	5,965	0.16	25,139	0.67	2	Divided	6	0	0
Munger	Columbia	Reiger	CBD Fringe	Principal Arterial	25,000	14,717	0.59	29,332	1.17	2	Divided	4	0	0
Grand	Barry	I-30 FR EB	CBD Fringe	Principal Arterial	23,000	8,798 [1]	0.38	14,373	0.62	2	Undivided	4	0	0
Grand	I-30 FR WB	Graham	CBD Fringe	Principal Arterial	23,000	17,866 [1]	0.78	38,916	1.69	2	Undivided	4	0	0
Winslow	Culver	I-30 FR EB	CBD Fringe	Minor Arterial	11,500	2,458 [1]	0.21	NA	-	2	Undivided	2	0	0
Winslow	I-30 FR WB	Beacon	CBD Fringe	Minor Arterial	23,000	7,127 [1]	0.31	4,706	0.20	2	Undivided	4	0	0

[1] Counts not conducted by KHA and acquired using historical data from NCTCOG or Google Earth Pro.

TWLTL - Two Way Left Turn Lane

Parking Nomenclature:

0 - No on street parking

1 - On street parking on one side of the street

2 - On street parking on available on both sides of the street

Bike Facility Nomenclature:

0 - No bike facility

1 - Shared bike lane

2 - Dedicated bike lane

MALCOLM X BOULEVARD

Malcolm X Boulevard is designated a minor north-south thoroughfare in Deep Ellum and south Dallas connecting Gaston Avenue and Baylor University Medical Center on the north, under existing I-30, to Martin Luther King Boulevard and extending to Lincoln High School on the south. Malcolm X passes over the DART rail maintenance yard with a lengthy structure that makes pedestrian passage intimidating. Excess capacity on Malcolm X Boulevard between Canton Street and Dawson Street provides an opportunity to add additional pedestrian and bicycle facilities. The CityMAP analysis indicates that road diet is feasible from Dawson Street up to Canton Street.

The Malcolm X cross-section from Dawson Street up to Canton Street is fout lanes undivided functioning at LOS A/B. The CityMAP analysis suggests that a road diet can be applied to Malcolm X reducing the number of lanes from four to three with a two way left-turn lane in the middle. This is shown in Figures 1 and 2. The LOS after the road diet is C which is acceptable. In 2040, the analysis indicates that the road diet would not be feasible as traffic volumes increase in the future. Based on the current analysis, this cross section of the corridor experiences LOS F in 2040 but may still warrant enhancements upon further analysis and input from local stakeholders.

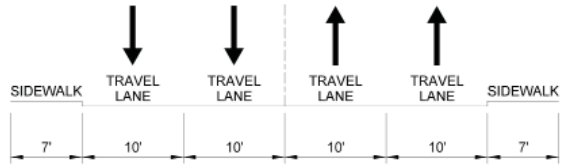


FIGURE 1 *Existing Malcolm X Boulevard Cross Section from Dawson Street to Canton Street*

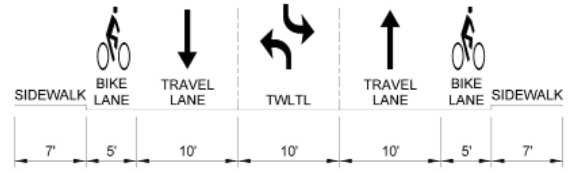


FIGURE 2 *Possible Malcolm X Boulevard Cross Section from Louise Street to Hall Street*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Malcolm X	Existing	25,000	6,066	0.24	A/B	18,855	0.75	D
Malcolm X	Possible	12,500	6,066	0.49	C	18,855	1.51	F

TABLE 1 *LOS for existing and possible cross sections for Malcolm X Boulevard from Louise Street to Hall Street*

2ND AVENUE

2nd Avenue is a one way major arterial that provides direct access from Deep Ellum and I-30 to South Dallas/Fair Park and Robert B. Cullum Boulevard. The current cross-section is established to carry major traffic flows to Fair Park and south Dallas from I-30. 2nd Avenue is not on the Bike Plan and was not considered as a candidate street for pedestrian and bicycle improvements.

1ST AVENUE

1st Avenue is a major one-way arterial and provides direct access from Robert B. Cullum Boulevard and Fair Park to I-30 and Deep Ellum. The current cross-section is established to carry major traffic flows from Fair Park and south Dallas to I-30. 1st Avenue is not on the Bike Plan and was not considered as a candidate street for pedestrian and bicycle improvements.

EXPOSITION AVENUE

Exposition Avenue is a major north-south arterial in Deep Ellum connecting to the main entrance to Fair Park and the DART light-rail station on Parry Avenue. On-street parking should be provided to support the local businesses, State Fair, and other special events. Short-term improvements that should be considered include painting the columns and underside of the I-30 bridge structure and adding enhanced lighting to make the pedestrian, cyclist, and parking experience more safe and welcoming.

The existing cross-section of Exposition from Parry Avenue to Ash Lane is five lanes, two of which are travel lanes, two lanes are dedicated for parking, and a two way left-turn lane in the middle. After analyzing this cross section, complete streets lane reductions can be applied to this cross section to allow for 5' bike lane son each side. This is shown in Figures 3 and 4. The LOS remains at A/B after cross-section adjustment based on existing volumes. Based on the current analysis, this cross section of the corridor experiences LOS F in 2040 but may still warrant enhancements upon further analysis and input from local stakeholders.

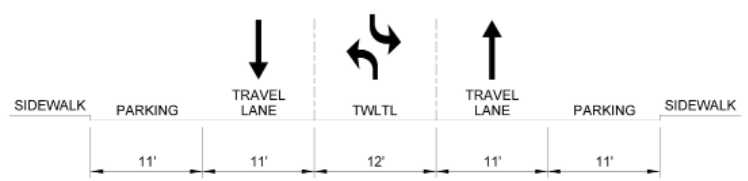


FIGURE 3 *Existing Exposition Avenue Cross Section from Parry Avenue to Ash Lane*

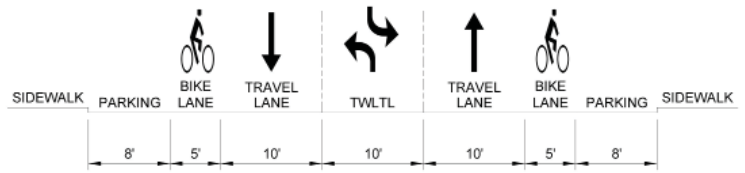


FIGURE 4 *Possible Exposition Avenue Cross Section from Parry Avenue to Ash Lane*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Exposition	Existing	12,500	5,310	0.42	A/B	18,638	1.49	F
Exposition	Possible	12,500	5,310	0.42	A/B	18,638	1.49	F

TABLE 2 *LOS for existing and possible cross sections for Exposition Avenue from Parry Avenue to Ash Lane*

The cross-section of Exposition from Ash Lane to Willow Street is also five lanes, four of which are travel lanes and a two way left-turn lane in the middle. The CityMAP analysis shows that a road diet can be applied to this cross-section, reducing it from four travel lanes to two travel lanes, still having the two way left-turn lane, and the remaining space be taken up by parking and 5' bike lanes on each side. This is shown in Figures 5 and 6. The LOS remains at A/B after the road diet based on existing volumes. Based on the current analysis, this cross section of the corridor experiences LOS F in 2040 but may still warrant enhancements upon further analysis and input from local stakeholders.

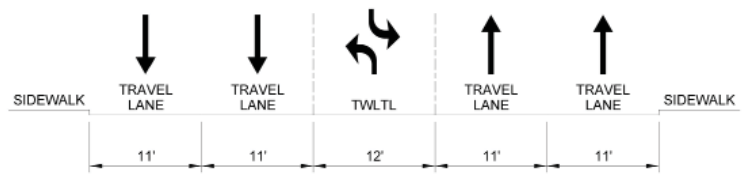


FIGURE 5 *Existing Exposition Avenue Cross Section from Ash Lane to Willow Street*

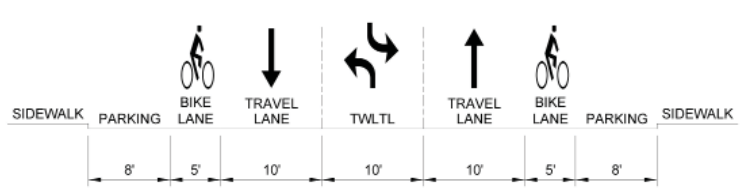


FIGURE 6 *Possible Exposition Avenue Cross Section from Ash Lane to Willow Street*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Exposition	Existing	25,000	5,310	0.21	A/B	14,206	0.57	C
Exposition	Possible	12,500	5,310	0.42	A/B	14,206	1.14	F

TABLE 3 *LOS for existing and possible cross sections for Exposition Avenue for Ash Lane to Willow Street*

COMMERCE STREET

Commerce Street is an eastbound one way minor arterial in downtown and Deep Ellum. At the intersection with Canton Street, Commerce becomes a two way minor arterial, connecting to the main entrance of Fair Park and the DART light-rail station on Parry Avenue. On-street parking exists from Parry Avenue to I-30. On-Street parking should be extended under I-30 to support the local businesses, State Fair, and other special events. Short-term improvements that should be considered include painting the columns and underside of the I-30 bridge structure and adding enhanced lighting to make the pedestrian, cyclist, and parking experience more safe and welcoming.

The existing cross-section of Commerce consists of two travel lanes and two lanes dedicated for parking. The CityMAP analysis identified this cross-section to be too narrow to allow for a complete streets conversion without taking some of the parking, which is an essential part of this cross-section for businesses and stakeholders on Commerce. Therefore, the CityMAP team suggests conversion of the travel lanes to shared travel lanes for bicyclists and motorists. This is shown in Figures 7 and 8. There is no change in LOS from this enhancement.

The existing cross-section in Figure 9 of Commerce consists of four travel lanes functioning at LOS A/B. The CityMAP analysis performed at this intersection showed that the two travel lanes can be converted to two shared travel lanes while still having dedicated parking on each side. This is shown in Figure 10. There is no change in LOS after the enhancements for existing conditions. Based on the current analysis, this cross section of the corridor experiences LOS F in 2040 but may still warrant enhancements upon further analysis and input from local stakeholders.



FIGURE 7 *Existing Commerce Street Cross Section from Parry Avenue to Ash Lane*

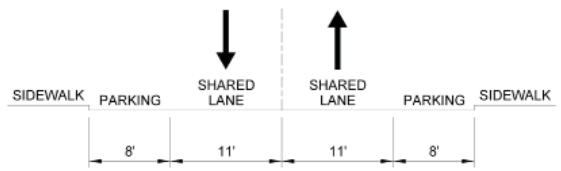


FIGURE 8 *Possible Commerce Street Cross Section from Parry Avenue to Ash Lane*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Commerce	Existing	11,500	1,018	0.09	A/B	7,820	0.68	D
Commerce	Possible	11,500	1,018	0.09	A/B	7,820	0.68	D

TABLE 4 *LOS for existing and possible cross sections for Commerce Street from Parry Avenue to Ash Lane*

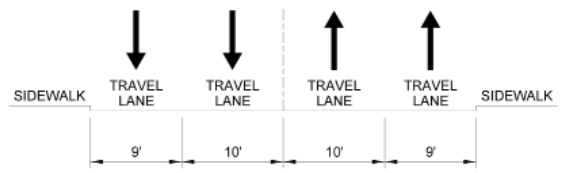


FIGURE 9 *Existing Commerce Street Cross Section from Ash Lane to Willow Street*

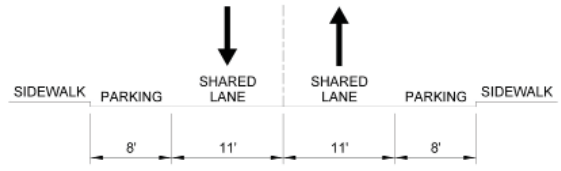


FIGURE 10 *Possible Commerce Street Cross Section from Ash Lane to Willow Street*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Commerce	Existing	23,000	1,018	0.04	A/B	17,650	0.77	D
Commerce	Possible	11,500	1,018	0.09	A/B	17,650	1.53	F

TABLE 5 *LOS for existing and possible cross sections for Commerce Street from Parry Avenue to Ash Lane*

HASKELL AVENUE

Haskell Avenue is a one way principal arterial southbound in east Dallas connecting US 75 (North Central Expressway) to Baylor University Medical Center crossing under I-30 to Parry Avenue in the vicinity of the main entrance of Fair Park and the DART light rail station.

Based on the existing ADT, Haskell appears to be a good candidate for conversion to a more complete streets cross-section. Haskell Avenue is on the Bike Plan. But Haskell has limited ROW, therefore any lane reduction would reduce capacity and based on the analysis make LOS undesirable. The existing dimension for the cross-section does not allow for bike lanes without dropping a lane or reducing existing sidewalk and buffer widths. Haskell Avenue will continue to be heavily utilized as a major thoroughfare in the future according to the CityMAP analysis. Haskell Avenue could potentially have bike lanes in the short to intermediate term but once ADT is high and the LOS deemed unacceptable in the future, the bike lanes may need to be reconsidered.

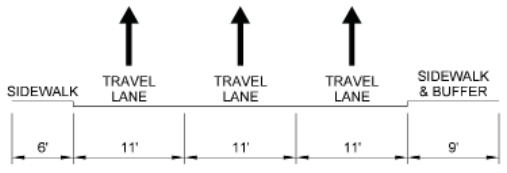


FIGURE 11 *Typical Existing Haskell Avenue Cross Section from Elm Street to Main Street and Garland Avenue to Parry Avenue*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Haskell	Existing	18,750	8,466	0.45	C	24,916	1.33	F
Haskell	Possible	18,750	6,569	0.35	A/B	10,239	0.55	C

TABLE 6 *LOS for existing cross sections for Haskell Avenue from Elm Street to Main Street and from Garland Avenue to Parry Avenue*

PEAK AVENUE

Peak Street is a one way principal arterial northbound in east Dallas connecting Fair Park under I-30 to Baylor Medical University Center and north through east Dallas to US 75 (North Central Expressway). The existing cross-section analysis shows a LOS of C. Peak is on the Bike Plan. In 2040, the existing cross-section is projected to be LOS F. Peak Avenue was not considered for improvements in bicycle facilities for similar reasons as mentioned above for Haskell Avenue.

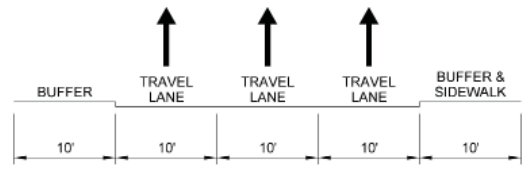


FIGURE 12 *Typical Existing Peak Avenue Cross Section from Main Street to Elm Street and Parry Avenue to Garland Avenue*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Peak	Existing	18,750	6,487	0.35	A/B	7,485	0.40	A/B
Peak	Existing	18,750	11,062	0.59	C	21,422	1.14	F

TABLE 7 *LOS for existing cross section for Peak Avenue from Main Street to Elm Street and Parry Avenue to Garland Avenue*

CARROLL AVENUE

Carroll Avenue is a minor north-south arterial in east Dallas connecting the US 75 northbound service road to I-30 and eventually making the connection to Haskell north of Fair Park. Carroll Avenue is a better candidate for bike facilities in the future than Peak or Haskell. Carroll runs parallel to Peak and Haskell and is a two way street which allows for bike facilities to be on both sides. Carroll traffic tends to be less commercial and is not utilized as a major thoroughfare like the Peak and Haskell couplet, making it safer for cyclists. The 2040 model did not have links for Carroll Avenue from Lindsley Avenue to I-30. Therefore, Carroll Avenue could not thoroughly evaluated.

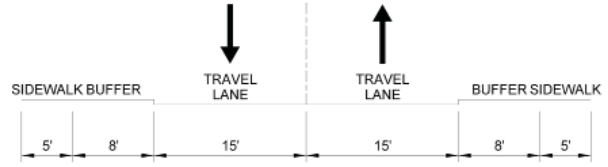


FIGURE 13 *Existing Carroll Avenue Cross Section from Lindsley Avenue to Garland Avenue*

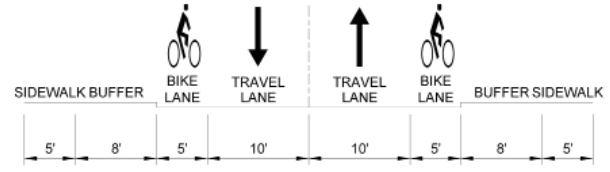


FIGURE 14 *Possible Carroll Avenue Cross Section from Lindsley Avenue to Garland Avenue*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Carroll	Existing	11,500	3,571	0.31	A/B	Data not Available		
Carroll	Possible	11,500	3,571	0.31	A/B	Data not Available		

TABLE 9 *LOS for existing and possible cross sections for Carroll Avenue from I-30 FR EB to I-30 FR WB*

The cross-section of Carroll underneath the I-30 bridge is four lanes and is functioning at LOS A/B. The possible road diet of converting the four lanes into three lanes with a two way left-turn lane in the middle and 5' bike lanes on each side would change the LOS to E for LOS C. This is shown in Table 9. The lane configuration is shown Figures 13 and 14. Another possible option to provide improved connectivity is to remove the riprap underneath the I-30 bridge deck and provide pedestrian and bike facilities in that space.

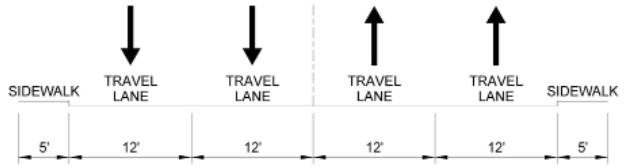


FIGURE 15 *Existing Carroll Avenue Cross Section from I-30 FR EB to I-30 FR WB*

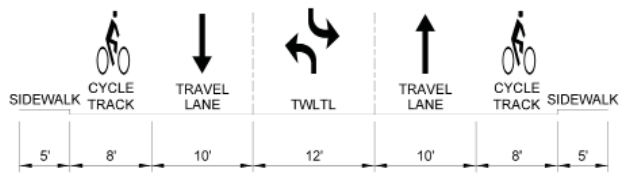


FIGURE 16 *Possible Carroll Avenue Cross Section from I-30 FR EB to I-30 FR WB*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Carroll	Existing	23,000	10,233	0.44	A/B	Data not Available		
Carroll	Possible	12,500	10,233	0.82	E	Data not Available		

TABLE 9 *LOS for existing and possible cross sections for Carroll Avenue from I-30 FR EB to I-30 FR WB*

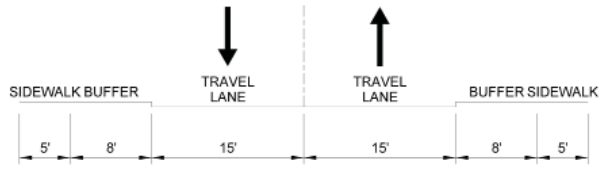


FIGURE 17 *Existing Carroll Avenue Cross Section from Main Street to Reiger Avenue*

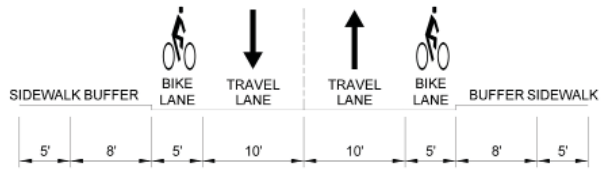


FIGURE 18 *Possible Carroll Avenue Cross Section from Main Street to Reiger Avenue*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Carroll	Existing	11,500	7,231	0.63	C	6,490	0.56	C
Carroll	Possible	11,500	7,231	0.63	C	6,490	0.56	C

TABLE 10 *LOS for existing cross section for Carroll Avenue from Main Street to Reiger Avenue*

FITZHUGH AVENUE

Fitzhugh Avenue is a principal north-south arterial in east Dallas connecting Turtle Creek and US 75 on the north to I-30 and eventually making the connection to Haskell north of Fair Park. Fitzhugh Avenue is on the Bike Plan and the facilities end at the intersection of Santa Fe Trail.

Fitzhugh Avenue's cross section from Parry Avenue to Lindsley Avenue has wide lanes which could be converted to bike lanes. This would not affect the LOS and the cross section operates at LOS A/B in both existing and future conditions.

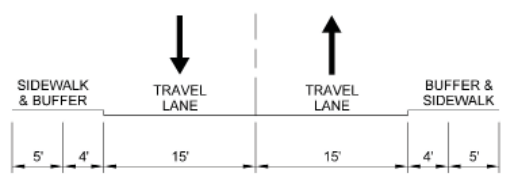


FIGURE 19 *Existing Fitzhugh Avenue Cross Section from Parry Avenue to Lindsley Avenue*

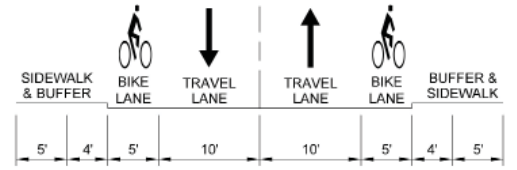


FIGURE 20 *Possible Fitzhugh Avenue Cross Section from Parry Avenue to Lindsley Avenue*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Fitzhugh	Existing	11,500	2,807	0.24	A/B	4,066	0.35	A/B
Fitzhugh	Possible	11,500	2,807	0.24	A/B	4,066	0.35	A/B

TABLE 11 *LOS for existing and possible cross sections for Fitzhugh Avenue Cross Section from Parry Avenue to Lindsley Avenue*

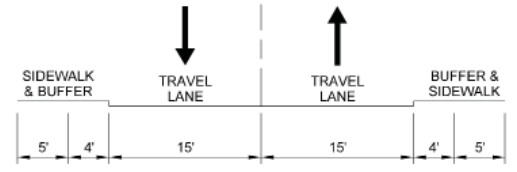


FIGURE 21 *Existing Fitzhugh Avenue Cross Section from Lindsley Avenue to Garland Avenue*

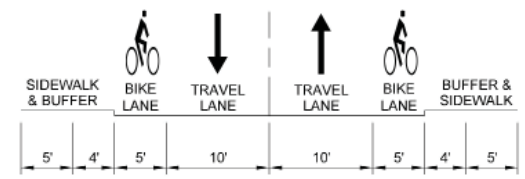


FIGURE 22 *Possible Fitzhugh Avenue Cross Section from Lindsley Avenue to Garland Avenue*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Fitzhugh	Existing	11,500	2,970	0.26	A/B	4,444	0.39	A/B
Fitzhugh	Possible	11,500	2,970	0.26	A/B	4,444	0.39	A/B

TABLE 12 *LOS for existing and possible cross sections for Fitzhugh Avenue from Lindsley Avenue to Garland Avenue*

MUNGER BOULEVARD/BARRY AVENUE

Munger Boulevard-is a principal north-south arterial in east Dallas connecting lower Greenville Avenue and Henderson Avenue to I-30 and Barry Avenue in south Dallas. The cross-section of Munger southeast of I-30 is six travel lanes with a 15' median functioning at LOS A/B. The CityMAP analysis suggests that a road diet could be performed on this cross-section to reduce the number of travel lanes down to four and add 8' buffered bike lanes on each side. This is shown in Figures 21 and 22. The LOS remains the same after the road diet for existing conditions. In 2040, due to increase in traffic volumes the road diet is no longer feasible. Based on the current analysis, this cross section of the corridor experiences LOS F in 2040 but may still warrant enhancements upon further analysis and input from local stakeholders.

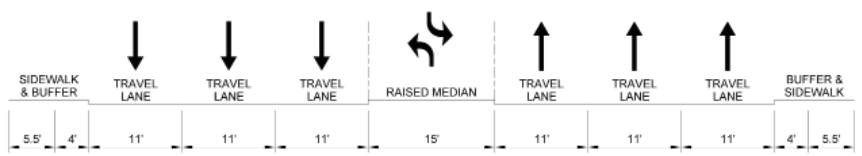


FIGURE 23 *Existing Munger Avenue Cross Section from Gurley Avenue to Philip Avenue*

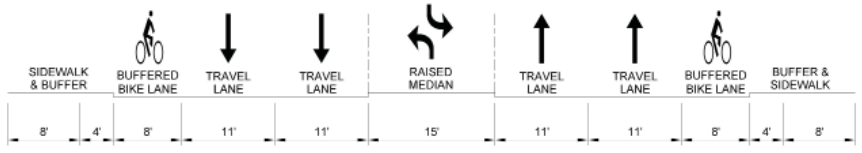


FIGURE 24 *Possible Munger Avenue Cross Section from Gurley Avenue to Philip Avenue*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Munger	Existing	37,500	5,965	0.16	A/B	25,139	0.67	D
Munger	Possible	25,000	5,965	0.24	A/B	25,139	1.01	F

TABLE 13 *LOS for existing and possible cross sections for Munger Avenue from Gurley Avenue to Philip Avenue*

EAST GRAND BOULEVARD

East Grand Boulevard is a principal east-west arterial in east Dallas connecting Haskell Avenue north of Fair Park to I-30 and continuing through Samuell Grand Park to White Rock Lake where East Grand Boulevard becomes Garland Road. The existing cross-section of East Grand Boulevard north and south of I-30 is four lanes with LOS A/B on the south side and LOS D on the northside. A road diet was performed on East Grand Boulevard but LOS change to undesirable levels in the 2040 scenario. This is shown in Table 14. The existing and possible lane configurations are shown in Figures 25 and 26. In 2040, due to increase in traffic volumes the road diet is no longer feasible. Based on the current analysis, this cross section of the corridor experiences LOS F in 2040 but may still warrant enhancements upon further analysis and input from local stakeholders.

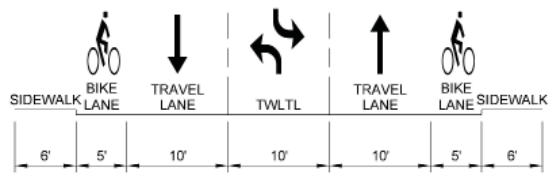


FIGURE 25 *Existing Grand Avenue Cross Section from Barry Ave to I-30 FR EB*

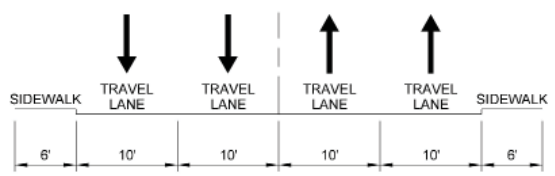


FIGURE 26 *Possible Grand Avenue Cross Section from Barry Avenue to I-30 FR EB*

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Grand	Existing	23,000	8,798	0.38	A/B	14,373	0.62	C
Grand	Possible	12,500	8,798	0.70	D	14,373	1.15	F

TABLE 14 *LOS for existing and possible cross sections for Grand Avenue from Barry Avenue to I-30 FR EB*

WINSLOW AVENUE

Winslow Avenue is an existing underpass and a minor north-south street in east Dallas connecting the residential areas in the vicinity of the former Ford plant south of I-30 to Samuell Boulevard and East Grand Boulevard and the Samuel Grand Park on the north.

The cross-section of Winslow is four travel lanes underneath the I-30 bridge. There was minimal existing data available on Winslow Avenue underneath I-30 to completely evaluate the candidate streets. A possible configuration for Winslow Avenue underneath I-30 could be to have three lanes with a two way left-turn lane in the middle and 5' bike lanes on each side. Another possible solution is to remove the riprap underneath the I-30 bridge and add pedestrian and bike facilities there similar to Carroll Avenue. This is shown in Figure 28. The cross section of Winslow Avenue from I-30 FR Westbound to Beacon Street is four lanes. The CityMAP analysis shows that there is excess capacity on Winslow Avenue for this cross section. A possible configuration for this cross section could be to convert the four lanes down to three lanes with a TWLTL in the middle and add 6' bike lanes on each side. This is shown in Figures 29 and 30.

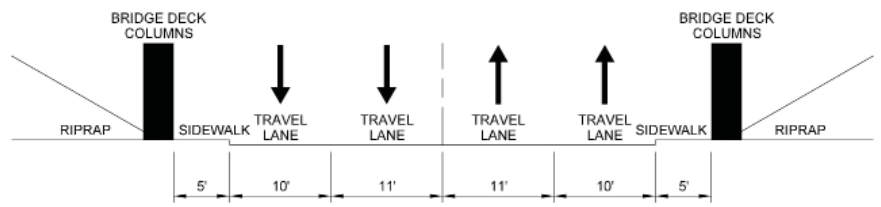


FIGURE 27 *Existing Winslow Avenue Cross Section from I-30 FR WB to Beacon Street*

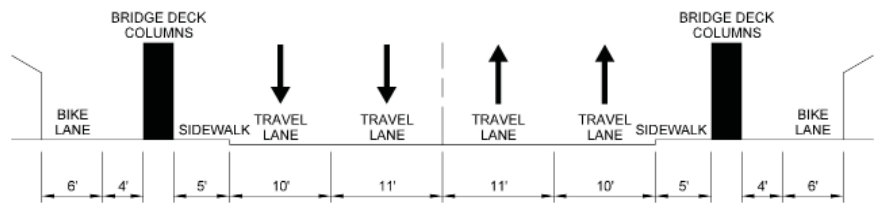


FIGURE 28 *Existing Winslow Avenue Cross Section from I-30 FR WB to Beacon Street*

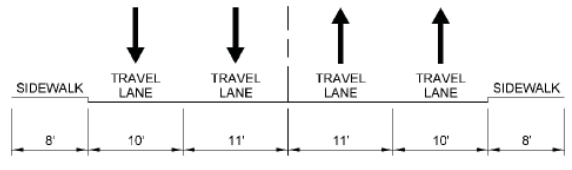


FIGURE 29 *Existing Winslow Avenue Cross Section from I-30 FR WB to Beacon Street*

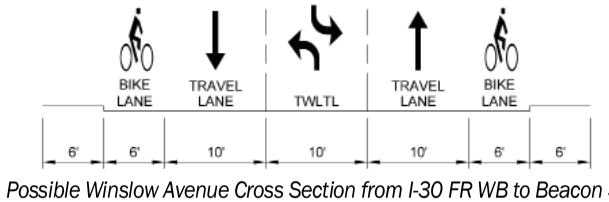


FIGURE 30 *Possible Winslow Avenue Cross Section from I-30 FR WB to Beacon Street*

I-30 EAST CORRIDOR - ADD CAPACITY/BELOW GRADE | FACTOR ANALYSIS

The I-30 East Corridor Add Capacity/Below Grade scenario focuses on the connectivity from Deep Ellum to Fair Park, and the neighborhoods north and south of Samuell-Grand Park. The design for this scenario includes lowering I-30 below grade. This will dramatically change the visual impacts of the neighborhood context, as well as the potential for a re-knitting of the neighborhood fabric north and south.

The focus areas selected for the East Corridor provide a particular view into how the facility design improvements relate to the development adjacent to the facility. The renderings show one option of how to integrate parks and open spaces into redevelopment, as well as complete streets that promote walkability and fine-grain development patterns with buildings that face streets and neighborhood open spaces that surround the I-30 Corridor.

This new city pattern could provide an opportunity to reconnect neighborhoods south of I-30—like the one between Fair Park and Munger Avenue—with the neighborhoods to the north surrounding Baylor Hospital. It should be noted that stakeholders representing those neighborhoods south of I-30 often consider themselves part of "East Dallas" not "South Dallas." On the other hand, many of those same stakeholders representing the neighborhoods south of I-30 are reticent about the impacts of reducing the "barrier" of I-30 in terms of the potential negative impacts of gentrification and losing the "protective" nature of I-30.

The Fair Park/Exposition Avenue focus area shows how the visual impact of bringing I-30 below grade could reopen Fair Park to the rest of the Downtown area. The vista terminus on Exposition Avenue can be seen from the north end of I-30. Incorporation of a deck improvement promotes a strong development context along Exposition Avenue and creates a space of respite for pedestrians and bicyclists as they travel from Fair Park to Deep Ellum. Connections for the Santa Fe Trail can be brought through the deck improvement and along the ROW for I-30, presenting a useful hike/bike connection in a location that lacks frontage roads.

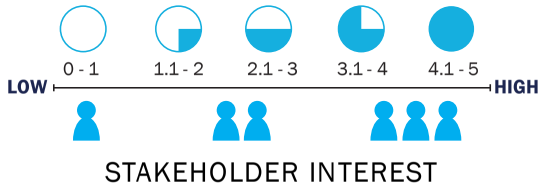
The Samuell-Grand focus area shows how the visual impact of bringing I-30 below grade can help connect two neighborhoods that had originally been one. The Grand Avenue development would feature a complete street bridge over I-30 instead of the tunnel-like existing crossing under I-30. In addition, the Winslow and Dolphin bridges will be enhanced to allow residents to cross without perceived safety concerns. The key for this focus area is preserving the historic storefront building context and infilling development along the I-30 frontage to build in more density at a lower scale to frame Samuell-Grand Park.

	SCALE	QUINTILE UNITS	VALUE	SCORE
CONNECTIVITY				
Net New Linear Feet of Sidewalk per Acre	0 to 500	100	190.1	
Net New Intersections per Square Mile	0 to 75	15	51.9	
ECONOMIC DEVELOPMENT				
Net New Revenue	$0 to $92 Million	$18.4 Million	$19,136,316	
Net New Value	$0 to $2.6 Billion	$520 Million	$594,409,628	
Net New Jobs	0 to 52,000	10,400	8,331	
Net New Population	0 to 30,000	6,000	4,740	
Overall	Average of Subfactor Score			
FACILITY CAPITAL COST				
Estimated Total Cost of the Facility (inside TxDOT Right-of-Way)	N/A	N/A	$500-999M	$$$
FACILITY DEVELOPMENT & CONSTRUCTION DURATION				
Total Time for Planning, Design and Construction	0 to 25 Years	5 Years	10	
PARKS & OPEN SPACE - QUANTITY				
Net New % of Area	0 to 8	1.6	3.5%	
VISUAL IMPACT				
Visual Impact - % Below Grade	0 to 100%	20	100%	

COST KEY

Under $100M	$100M - 499M	$500M - 999M	$1B - 2B	Over $2B
$	$$	$$$	$$$$	$$$$$

FACTOR KEY



I-30 EAST CORRIDOR - ADD CAPACITY/BELOW GRADE | FACTOR ANALYSIS

The analysis area is shown on the Development Map includes potential and planned developments for this scenario known at the time CityMAP was initiated. The analysis area does not cover the entire area that could be affected by the facility changes in this scenario. However, it does focus on key areas of interest that would be considered catalytic or impactful.

The factors defined in Chapter 4 are applied below to this scenario. Those factors represent stakeholder values both within and beyond the ROW.

ADAPTIVE REUSE

The area to the west of Fair Park and the far eastern edge of Deep Ellum contain several blocks of historic commercial buildings that have been reused and are potential for further adaptive reuse. This focus area also includes the iconic Pearlstone Grain Elevator that is an important part of the East Dallas Skyline. There are examples of interesting grain elevator reuse examples across the country that might be considered for application here.

The Grand Avenue focus area also contains some examples of traditional retail building form just northeast of the Grand Avenue Bridge that can provide a cornerstone for future redevelopment between Samuell Boulevard and the new I-30 frontage road. The authenticity created by the adaptive reuse of buildings is irreplaceable and can create an interesting synergy with new construction, especially in the Fair Park area where Fair Park itself has the most iconic buildings and largest collection of the Art Deco period in the State.

CONNECTIVITY

SIDEWALKS AS A MEASURE OF WALKABILITY

Much of the existing sidewalk network in the I-30 East corridor, both in the Fair Park and Grand Avenue Focus areas, are in poor condition, have inadequate widths or are nonexistent. The likely resulting redevelopment related to the I-30 East Scenario provides the impetus for the repair and creation of the sidewalk network. This intervention and urban fabric repair could begin by providing sidewalks along the new I-30 frontage roads, which would be built at grade. A sidewalk network could then be expanded out from I-30 as redevelopment occurs and city streets are rebuilt as complete streets.

Assessing the redevelopment concept, the CityMAP team measured the net new linear feet of sidewalks. The Fair Park focus area could realize a net increase of approximately 23,389 linear feet of sidewalk and the Grand Avenue focus area could realize approximately 9,770 additional net linear feet of sidewalk. A complete sidewalk audit was not conducted; but rather an estimate of future potential sidewalks was developed by the CityMAP Team for those select focus areas.

Sub Area	Linear Feet
Fair Park	23,389
Grand Ave	9,770

INTERSECTIONS PER SQUARE MILE AS A MEASURE OF CONNECTEDNESS

A finer grain network provides more than one route to a destination, lessening congestion by spreading it across more roadways and providing alternative options during crashes as previously mentioned.

In the areas of Deep Ellum where the grid is maintained and there is the highest level of connectivity there are approximately 285 intersections per square mile. The I-30 Fair Park and Grand Avenue focus areas offer decent existing connectivity considering that these two areas are bisected by a freeway and the street grid is interrupted by ramps or frontage roads. However, there are opportunities to repair the grid while still allowing the below grade freeway to bisect the historic grid. The I-30 East Corridor scenario allows the frontage roads to mitigate some of the disruptive effects of the ramps; and therefore would allow the grid to be repaired facilitating a more predicable environment for the driver. The grid repair will also help to make a more predictable environment for pedestrians.

The net increase in intersections per square mile was measured based on how the surface streets are affected by the revised highway design. Therefore, the resulting net new intersections per square mile are in addition to the existing intersections.

As the following table summarizes, the Fair Park focus area would have a net increase of 54 intersections per square mile. The Grand Avenue focus area results in a net increase of 46 intersections per square mile. These potential additional intersections facilitated by the I-30 East concept allow the grid to approach higher levels of connectivity.

Sub Area	New Intersections per Square Mile
Fair Park	54
Grand Ave	46

ECONOMIC IMPACT

KEY OPPORTUNITIES

Several conditions will impact the potential redevelopment of the I-30 East Corridor area. Enhanced connectivity across I-30 can be facilitated through decking to connect back the Deep Ellum and Fair Park areas. Various analyses have been performed to understand how the market potential for enhanced redevelopment can be catalyzed by relating the potential I-30 East Corridor scenario with better access to Deep Ellum, Fair Park and the adjacent neighborhoods. These estimates involve conservative assumptions for proposed value increase from potential projects, such as a deck park opportunity.

RIGHT-OF-WAY CONVERSION

Approximately 10 acres of ROW land could become available through a public process under the I-30 East Corridor scenario. The year 2030 is the year assumed when ROW could be sold at market value and could start supporting the potential redevelopment. As such, the ROW impact has been included within the projections of the economic impact for the analysis area.

Beginning in 2030, the anticipated net new value is approximately $356 million as a low estimate, and $368 million as a high estimate. Under current property tax rates, this would generate estimated property tax revenue between $9.6 million and $10 million between 2030 and 2045.

The added workforce is another important component of this released right-of-way. Between 2015 and 2045, the total added workforce within the I-30 East Corridor area is an estimated 8,331 employees.

DECK PARK OPPORTUNITY

With the addition of deck facilities, impacts could result in appropriately-scaled development transitioning from Deep Ellum to Fair Park. The added connectivity, open space and visual impacts of the decking between Deep Ellum and Fair Park will attract higher density development, increased property values as well as increased property tax revenues. This is due to a number of reasons, including improved connections, greenspace, increased pedestrian traffic, opportunities for increased sales and sales tax revenue through concessions or other activities, and higher quality aesthetics.

To maintain the momentum of the market associated with a deck improvement, a strict focus on programming and maintenance will need to be in place and sustainable through the lifetime of the deck. Operations of such a facility can

be costly, so having the appropriate business plan through a value capture process will help with the ongoing operations and maintenance costs.

To estimate the potential for projects within the I-30 East Corridor as they relate to increasing economic values, value assumptions were made for short-term and long term. To model this impact, the short-term economic impact was increased by a rate slightly greater than the assumed inflation rate. The long-term economic impact was increased slightly above this total to reflect the potential for catalytic projects and added market velocity (i.e. increased market activity) in the East Corridor.

POPULATIONS AND JOBS

With the proposed development, there would be an increase in employment totals – namely within retail and office development. While lowest development square foot totals, i.e. existing absorption, would bring some employment to the area, proposed development leveraging enhancements associated with Fair Park and Deep Ellum would create additional modest employment growth. A conservative estimate would be an increase of 8,331 employees between 2015 and 2045. Population would also increase with the catalytic projects. A low estimated population increase of 4,740 is anticipated within the I-30 East Corridor analysis area between 2015 and 2045.

ECONOMIC IMPACT SUMMARY

The breakdown of categories below provides the underlying analysis for the opportunities analyzed above.

HOSPITALITY ECONOMIC IMPACT

The square footage of estimated property use is estimated at 90,030 SF in addition to the existing 132,000 SF of hospitality in the study area. The total current hospitality value in the I-30 East Corridor area as of 2015 is estimated at $5.4 million. The estimated net new value for proposed development is estimated between $9.7 million and $10 million, and the net new property tax revenue over the 30 year time period is approximately $270,000. Using an average of 325 SF (including common area factor) per guestroom and an average daily rate of $175 per night, the estimated fiscal impact is approximately $500,000 over the 30 year time period. The estimated added workforce generated from the proposed hospitality space is 108 employees.

OFFICE ECONOMIC IMPACT

There is 2.1 million square feet of existing office space in the I-30 East Corridor analysis area. Research determined the value per square foot for existing office inventory is $66/SF; therefore, the total existing base value for office space is $142 million as of 2015.

There is a total of 1.9 million square feet of estimated office space planned between 2015 and 2045 in the East Corridor area. The estimated value of all office space developed between 2015 and 2045 ranges between $246 million to $252 million. The additional office space would create an increase in property tax revenues between $6.3 million on the low end and $6.8 million on the high end over the 30 years. The estimated resulting added workforce from the proposed office between 2015 and 2045 is 7,647.

RETAIL ECONOMIC IMPACT

There is over 481,000 SF of existing retail space in the I-30 East Corridor area. Research determined the value per square foot for existing retail inventory is $60/SF; therefore, the total existing value for retail space is $28.9 million between 2015 and 2045.

There is a greater than 316,000 SF of proposed retail in the I-30 East Corridor. The estimated value of all retail space developed between 2015 and 2045 ranges between $36.4 million on the low end and $37.4 million on the high end. Property tax revenues on this net new space range from $983,000 on the low end and $1 million on the high end over the 30 year time period. The estimated resulting added retail workforce between 2015 and 2045 is 576. Using an assumption of $300/SF for retail sales, the total sales tax revenue for retail space between 2015 and 2045 is $2.6 million. Incorporating existing space with net new space, the total retail space is estimated at nearly 800,000 retail square feet in the I-30 East Corridor area.

MULTI-FAMILY ECONOMIC IMPACT

There is a total of 2.6 million square feet of potential multi-family space between 2015 and 2045 in the I-30 East Corridor area, in addition to the existing 2.6 million square feet in the area currently. The existing multi-family has an estimated value of $129 million. The estimated value of all multi-family space developed between 2015 and 2045 ranges between $303 million on the low end and $312 million on the high end. Property tax revenues created from the net new space range is estimated to add $8.1 million up to $8.4 million over a 30 year time period to the tax rolls. The estimated added population from multi-family between 2015 and 2045 would be 4,740.

SINGLE FAMILY ECONOMIC IMPACT

The I-30 East Corridor scenario does not include additional new residential. Only existing inventory was factored. In total, there is an estimated total of 17,500 existing square feet of single family. The total existing single family value in the I-30 East Corridor area is approximately $1 million.

TOTAL ECONOMIC IMPACT

Across all development types, there is 5.4 million square feet in the I-30 East Corridor area of existing building inventory. The total existing value of all development types is $306 million. There is a total estimated square footage of 4.95 million of potential new development across all development types.

I-30 East Corridor- Below Grade Economic Impact Projections (2015 - 2045)

Metric	Existing	Proposed
Existing Square Feet (2015)	5,406,319	-
Net New Square Feet (2015 - 2045)	-	4,951,740
Existing Value (2015)	$305,865,840	-
Net New Value	-	$594,409,628
Additional Impacts (Net New)		
Property Tax Revenue (Ad Valorem)	-	$16,049,060
Sales Tax Revenue	-	$2,570,811
Hotel Tax Revenue	-	$516,445
Increase to Existing Population	-	4,740
Increase to Existing Workforce	-	8,331
Total Revenue		$19,136,316

The estimated total value of net new space is approximately $594 million, generating approximately $16 million over the 30 year time period. The total added workforce from the new proposed development is estimated at 8,331 jobs between 2015 and 2045.

FACILITY CAPITAL COST

The CityMAP scenario limits for I-30 East Corridor is from east of I-45 near Jeffries Street to Dolphin Road a distance of approximately 2.6 miles. The scenario is a modified version of the 2009 Draft Schematic for the TxDOT East Corridor project. The scope of the overall East Corridor project is approximately 17.8 miles.

I-30 EAST CORRIDOR - ADD CAPACITY/BELOW GRADE | FACTOR ANALYSIS

The major modifications in the CityMAP scenario from the 2009 plan include: reducing the typical section from a 5-2-2-5 section to either 5-2R-5 or a 4-2R-4 section; reducing the typical frontage road section from three lanes to two lanes. The 5-2R-5 typical section is being studied to provide additional capacity while still minimizing the overall footprint. These typical lane counts are generalized and do not account for highway auxiliary lanes for ramps and turn lanes for frontage roads. In addition, the scenario proposes that the I-30 facility be reconstructed as a below grade, compact urban highway for the entire 2.6 mile length of the project. These changes would significantly reduce the highway width and right-of-way acquisition requirements as compared to the 2009 plan.

The I-30 East Corridor facility estimated construction cost assumes the full reconstruction of I-30 within the project limits and includes widened bridges at Chestnut Street, Hickory Street, 1st Avenue/2nd Avenue, Exposition Avenue, Commerce Street, Peak Street/Haskell Avenue, Carroll Avenue, Barry Avenue, Munger Boulevard, East Grand Avenue, Winslow Avenue, and Dolphin Road intersections (cost incurred by others). The estimate also includes a potential deck park location near Fair Park between Exposition Avenue to the DART bridge, east of Commerce Street.

The below grade profile will also require converting an existing on-grade DART line to a DART bridge over I-30 which is included in the scenario estimate. In addition, the construction estimate includes costs for impacts to the DART Railroad Yard and a private DART maintenance facility.

The I-30 East Corridor facility capital cost estimate is in the range of $500 to $999 million. Further discussions by the project partners are necessary to determine the scope of the improvements and funding responsibilities.

Given the conceptual nature of the CityMAP highway geometry, the estimate should be considered a high level planning estimate and that will be refined as the design advances. Converting portions of the corridor from a highway on fill to a below grade facility will involve an extraordinary earthwork expense and require extensive utility relocations. In addition, modifications and extensions to the City storm drainage system will likely be needed based on the new highway profile. These considerations are reflected in the estimate for this scenario.

There will be significant costs for public improvements to support development along the corridor. These city building responsibilities would typically fall to the City, private developers or public-private entities such as improvement districts. Examples of city building cost could include items such as reconstruction and modifications to the city street grid outside of the TxDOT ROW. None of these city building costs have been included in the CityMAP estimate.

FACILITY DEVELOPMENT AND CONSTRUCTION DURATION

TxDOT will advance the schematic design in 2016. A new environmental assessment (EA) will be performed with FHWA environmental clearance anticipated in 2018. Assuming detailed design occurs in 2020, construction would begin in 2022 with a four (4) year duration.

The facility development and construction duration for the I-30 East Corridor would be approximately ten (10) years.

FACILITY OPERATION AND MAINTENANCE COST

The delineation of responsibilities for operation and maintenance of each facility should be established at the same time agreement is reached for funding of construction. This becomes particularly important as facilities become more complex and traditional responsibilities may be inadequate.

In the case of the East Corridor, some of the enhanced connectivity components under consideration could have significant operation and maintenance costs which need to be accounted for. The O&M costs for the complete streets overpasses, as well as deck parks, cannot be readily determined at this time because the types of amenities that would be incorporated have not been agreed upon by the appropriate entities.

PARKS & OPEN SPACE – QUANTITY

The acreage of open space resulting from the likely redevelopment associated with the I-30 East scenario has been estimated. In this scenario there is the opportunity for reconnecting the city grid and encouraging new development. For this reason, it is important to embed public open space in this design. Two sets of pocket parks are incorporated into the redevelopment context: one bookending redevelopment in Fair Park created by the reconfiguration of 1st and 2nd Avenue at Parry Lane. The second is located at Winslow and Samuell Boulevard, tying together existing and potential development in the center of the Grand Avenue focus area. Both pocket park locations share the commonality of being surrounded by development leveraging the investment by providing an amenity to residents, employees and customers. They are also both easily accessible to the surrounding neighborhood through a repaired street grid.

Deck parks can be effective but are expensive to construct, maintain and program. Therefore, to get the most return for the investment key locations must be selected that connect areas of high activity where mitigating the highway below can have the greatest impact. The proposed Fair Park deck park meets those criteria connecting the visitors to Fair Park with the popular Deep Ellum entertainment district.

This scenario also provides the opportunities to take advantage of some unused ROW to create linear greens to use as connections between and across neighborhoods. The linear green in the Fair Park area would act as an extension of the Santa Fe Trail from the DART line crossing, along the I-30 frontage and Deck Park, finally connecting with bike lanes on the northern side of 2nd Avenue. The linear green in the Grand Avenue focus area would connect the Owenwood Neighborhood with commercial uses along the frontage and to potential redevelopment at or near the former Ford plant.

Summarized below, the resulting greenspace is as follows: the Fair Park Deck Park is shown as 3.42 acres. In comparison, the Woodall Rodgers deck park is 5.2 acres. The Fair Park pocket parks are a combined .33 acres and the Grand Avenue pocket parks are a combined .56 acres.

PARKS & OPEN SPACE – QUALITY

Parks and open space will be significantly enhanced with the scenario's below grade profile for I-30. The scenario also features a potential deck park at Fair Park with a connection to the Santa Fe Trail, when then

Open Space	New Net Area in Acres
Deck Parks	
Fair Park Deck Park	3.42
Pocket Parks	
Fair Park Pocket Park	0.33
Grand Ave. Pocket Parks	0.56
Linear Green	
Owenwood Green	0.75
Santa Fe Trail Extension	0.96

connects to the 2nd Street bike lanes eastward. Between Grand Avenue and Dolphin Road, the compressed, below-grade facility promotes crossing between neighborhoods north and south of I-30.

Inclusion of pocket parks and plazas within the focus areas reflect the attributes for access and surveillance. Aside from the potential deck park, no additional large scale open space is recommended for these areas due to proximity of Fair Park and Samuell Grand Park. Pocket parks and plazas bring needed respite from the urban context, and are typically easy to maintain intimate spaces.

VISUAL IMPACT

The CityMAP portion of I-30 East Corridor involves the full reconstruction of existing I-30 from east of I-45 near Jeffries Street, east to Dolphin Road. The existing configuration of the corridor transitions from elevated on-structure, at-grade and elevated on-fill sections. The CityMAP scenario for the East Corridor would have a below grade profile for the length of the corridor. For the Visual Impact scoring, the percentage of below-grade highway for the I-30 East Corridor is 100%.

I-30 EAST CORRIDOR - ADD CAPACITY/BELOW GRADE | OBSERVATIONS AND CONSIDERATIONS

The eastern section of the I-30 corridor bifurcates the Deep Ellum, Fair Park, East Dallas and South Dallas neighborhoods. Many of which were served by streetcar and bifurcated by freight rail lines. The increase in railroad traffic over the late 19th century resulted in increased commercial and industrial activity over the course of the early-to-middle 20th century. This area of Dallas was also a cultural center for the African-American community, providing destinations for entertainment and business, including a famous film production facility.

Zoning changes in Deep Ellum as well as East and South Dallas in the 1960s allowed larger scale industrial, commercial and distribution operations, which led to a decline in the residential and fine grained mixed use nature of the neighborhood. The construction of I-30 severed the original street grid and resulted in numerous buildings being demolished. The last decades of the 20th century saw a modest halt in the decline with reinvestment in some buildings to reintroduce a level of activity that had been less than desired. DART service has helped to helped to bolster redevelopment and provide increased access. This sets the stage for further opportunity underscored in the CityMAP process for the I-30 East Corridor.

MOBILITY, LIVABILITY, ECONOMICS

Today, the CityMAP team has seen stakeholder optimism for an increased quality life in East Corridor neighborhoods. A reconstructed and compressed I-30—as compared to the current schematic—with the associated mobility, safety improvements, enhanced pedestrian and vehicular connections, parks and open spaces, could support further the advancement of this area of Dallas as potentially one of the most desirable to live, recreate and undertake business.

The anticipated lowered profile of I-30 provides certain advantages to this corridor to make connections more substantial. This lower profile offers opportunities to heal large sections of this corridor and reconnect neighborhoods and city streets impacted by the Interstate's construction more than 50 years ago. Demonstrated in this scenario, simply reorganizing the infrastructure elements to reduce confusion, improve intuitive way-finding, make more efficient use of ROW, open space and the impacted city street crossings will help alleviate much of the trepidation people currently experience in crossing under and near I-30. Even the addition of continuous—yet tight—frontage roads can provide improvements to local movement given the current conflicts with the grid and the elevated I-30 facility.

Deep Ellum was first developed as an extension of downtown in the late 1800s as a residential and commercial neighborhood primarily inhabited by African-Americans and European immigrants. Presently it is unique to Dallas for the large number of intact historic commercial and manufacturing buildings. After the mid-20th century and the addition of Central Expressway that separated Deep Ellum from Downtown the neighborhood began to decline. The removal of the streetcar and addition of an elevated section of Central Expressway further contributed to this decline. Deep Ellum has seen a modest but steady increase in an attraction over the past decade with new construction, adaptive reuse and infill development. By rebuilding I-30 in a below grade configuration there would be increased connectivity across the highway and the pace of neighborhood recovery would increase. There are potential negative externalities of this growth, like displacement and gentrification that can be addressed through policy and will be discussed further.

The pattern of division is continued between Deep Ellum and the Fair Park neighborhood. The Fair Park neighborhood is anchored by the fairgrounds established in 1886, formalized in in 1906 by landscape architect and city planner George Kessler, and became what we recognize it as today in 1936 for the Texas Centennial Exposition. Fair Park attracts close to five million visitors throughout the year, many for the State Fair of Texas. DART access has led to some sporadic and fledging resurgence of the neighborhood but it still struggles from a cycle of disinvestment and decline. The Samuell/Grand neighborhood area that borders the Fair Park neighborhood has similar dynamics where I-30 cut through the neighborhood creating isolated blocks of development on the north side of I-30 that have since fallen into decline.

During the early interview process, stakeholders commented on the need for improved mobility and neighborhood connectivity within the I-30 Canyon corridor. It is difficult to achieve both of these goals simultaneously. However, the team strived to respond to stakeholder desires through the I-30 below grade concept to add corridor capacity and minimize further separation. This concept offers the potential for surplus ROW along the edges of the corridor that could be used by TxDOT or serve as a buffer to adjacent development or perhaps even be sold or leased for other long-term uses such as parks, commercial development or trail connections.

POLICY

Land use policy and zoning changes will need to be combined with a reconfigured I-30 with better connections to downtown and repairs where possible to the street grid will further repair the vitality of the neighborhood. Any change to the physical profile of I-30 should be accompanied by a further analysis and community conversation on a commiserate change in land use policy in the corridor to ensure that any transportation investment can be leveraged to best benefit adjacent developments and protect the neighborhoods. The key will be to understand how to manage both the positive and negative impacts of resulting gentrification with the reduction of the I-30 facility as a barrier.

In the middle 20th century large scale heavy commercial and industrial zoning that was out of scale with existing development context led to negative repercussions and a cycle of disinvestment that is still felt to present day. Much of that zoning has been reconsidered; but in order to encourage redevelopment, a thorough examination of the zoning should be completed to make sure that mixed-use and complimentary infill development can occur.

For example areas; like Samuell Grand Avenue are not currently entitled for a variety of dense single family and multifamily but would be a good location for mid-range density and can occur in a way that frames the park and serve as a transition to surrounding single family and as a residential base to support the local existing retail on Grand Avenue. A reconfigured I-30 could accommodate more dense development along certain nodes and as a transition from the highway frontage to the existing neighborhoods. Revised zoning may also be appropriate near the deck parks as shown in the concepts for I-30 East Corridor. These deck parks would not only help connect the two sides; but also be catalysts for future development. The Downtown Dallas 360 planning process should focus some detailed analysis in that regard.

With any new large scale development the accommodation of open space and transportation needs to be considered. The I-30 East Corridor concept depicts an investment in several public plazas, parks and deck parks. Private support of these larger scale open space investments could be used to offset on site open space requirements or a more direct system of fee in lieu could be arranged for new development in this area.

I-30 - RELOCATION | INTRODUCTION

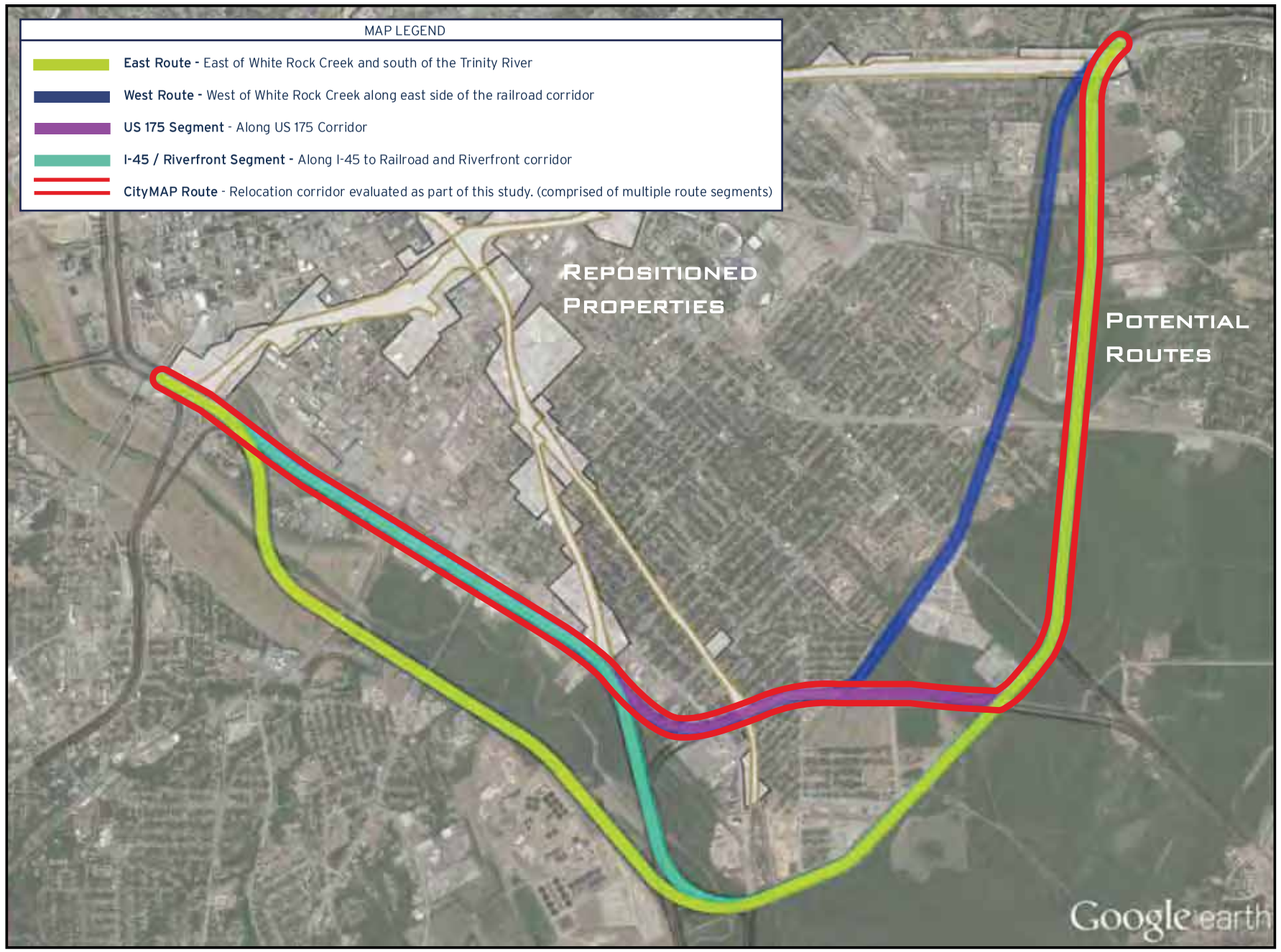
The I-30 Relocation Scenario would be a transformative change to Dallas. The scenario requires establishing an acceptable alignment beginning near the I-30 Horseshoe and proceeding east along the Trinity River corridor transitioning to a northerly alignment paralleling White Rock Creek until returning east into the current I-30 corridor. Several one-line alignments have been identified and are illustrated in the concept to the right. A detailed study of possible alignments has not been prepared, but would be a critical next step if there is sufficient interest and support for this scenario in concept.

The existing I-30 highway would be maintained in operation while construction of the I-30 reroute is underway. This will greatly reduce temporary impacts to traffic and simplify construction of the new facility. If the I-30 reroute were to occur, the remaining I-30 structure could be modified in a number of ways. Most of these options would center on removing the current I-30 as a limited access highway. We would anticipate that business and neighborhood stakeholders would have considerable opportunities to influence the decision making process. Ideas for reuse of I-30 will likely vary along the corridor, reflecting the variety of local interests and priorities.

Some possible options for the reinvented I-30 corridor include:

- Replace I-30 with an at-grade boulevard.
- Remove I-30 and reconnect the city grid, much as it would have been originally configured.
- Reuse I-30 as a multi-modal corridor that might include frontage roads, street cars or bus rapid transit, commuter bicycle lanes and shared use paths. Provide Park-and-ride facilities to link vehicular users to other modes.

Options for the I-30 canyon area would include higher intensity urban uses. One possibility would be a series of large connected urban developments with below grade parking to take advantage of the canyon geometry. Spaces between these developments would include generous street level plazas across the canyon. These developments could be triggered by demand for accommodations and commerce convenient to the HSR station proposed in this area. See the adjacent Figure for an illustration of this concept.



I-30 CONCEPT DRAWING *Source: Patrick Kennedy*

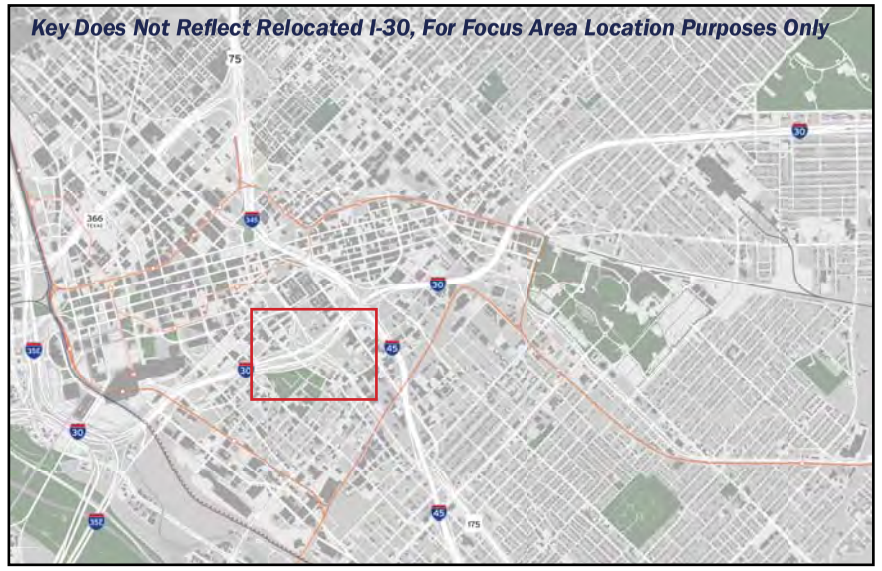
Natural and built features along the corridor will complicate engineering the I-30 reroute.

Some of the natural features anticipated to present engineering challenges are listed from west to east below:

- Proximity to and crossing of the Trinity River, floodway and levee system, including levee extensions;
- Streams, sumps, floodplains and wetland areas;
- Forest and other natural vegetation and wildlife areas; and
- Proximity to and crossing of White Rock Creek, a major tributary to the Trinity River

Some of the built and planned features from west to east include:

- Portions of the recently constructed I-30/I-35 Horseshoe project will need to be modified to account for the realignment. This would include many of the associated ramps;
- The potential HSR station will require access and adequate space for parking and other facilities. This would include immediate needs and room for expansion;
- Development parcels between the HSR and Riverfront Boulevard could be impacted by the I-30 reroute;
- Planned improvements for Riverfront Boulevard and the type of development it is intended to attract would be impacted by the location of the I-30 reroute;
- The I-30 reroute and portions of the Trinity Parkway would likely be in close proximity to each other. Alignments might be considered where sections of the Trinity Parkway and I-30 are merged together or share the same corridor. The need for direct connectors between the I-30 reroute and the Trinity Parkway should be considered;
- The I-30 reroute alignment would need to account for direct connectors to other highways, particularly at I-45 and US-175;
- There are a number of industrial and commercial uses along the corridor. Many of these uses are sources of employment. Many of the industrial uses border natural areas. Some of these industrial uses may be better accommodated at less environmentally sensitive areas. Some uses such as auto parts junk yards and truck parking and container storage may be compatible with an elevated highway. A reconsideration of the Future Land Use Map (FLUM) and existing zoning may be warranted so that desired uses could be accommodated and less desirable uses could be transitioned out over time;
- The alignment may displace businesses or residences and the change in access may present impacts to communities that should be anticipated, particularly in areas near US-175 and further to the east in the Parkdale Neighborhood; and
- The alignment may impact park and open space areas, particularly along the Trinity River and White Rock Creek, including the Parkdale Lake.



I-30 AT CESAR CHAVEZ BOULEVARD FOCUS AREA

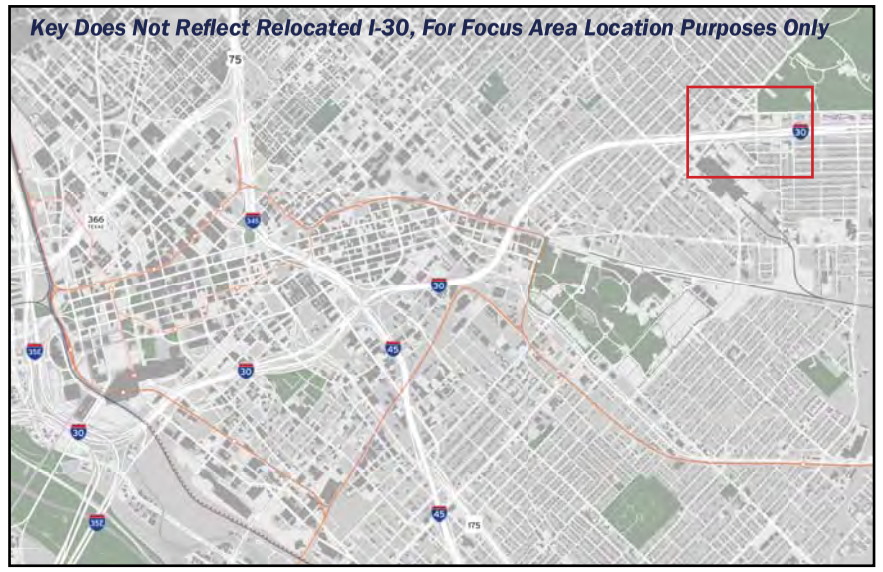
FOCUS AREA NOTES: I-30 CANYON AT CESAR CHAVEZ

1. New Development in released right of way with potential underground parking in former canyon
2. 120’ Boulevard to serve local traffic in place of I-30
3. Trail connection and extension of Heritage Village
4. Park improvement as center for new development
5. Rebuilt boulevard in more pedestrian friendly configuration continuing cross section of Ceasar Chavez further north
6. Trail in released ROW as continuation of “Emerald Bracelet”
7. Pocket park to serve as a central gathering point for the neighborhood
8. Focus on pedestrian and bicycle crossings at regular intervals



I-30 AT CESAR CHAVEZ BOULEVARD CONCEPT *Source: Gateway Planning Group*

I-30 RELOCATION | FOCUS AREAS



I-30 AT GRAND AVENUE FOCUS AREA

FOCUS AREA NOTES: I-30 EAST CORRIDOR AT E GRAND AVENUE

1. Reconnect street grid
2. Improved connections to park
3. 120' Boulevard to serve local traffic in place of I-30
4. New retail buildings that continue pattern of existing commercial
5. New multifamily with relationship to the park
6. Community park to serve as central gathering point for the neighborhood
7. Infill small retail to transition to single family to the south and townhouse to the north
8. Focus on pedestrian and bicycle crossings at regular intervals



I-30 AT GRAND AVENUE CONCEPT *Source: Gateway Planning Group*

I-30 - RELOCATION | FACTOR ANALYSIS

The I-30 Relocation scenario allows key development opportunities afforded by the relocation of I-30. The idea of relocating such a significant highway is not a new approach to resolving major urban design issues. Playing off the relocation of I-30 in Fort Worth and the relocation of I-40 in Oklahoma City, freeway relocations can have both positive and negative outcomes. The connectivity, economic development and parks factors in this analysis are not applied to where the relocation would occur, but rather how the development context in the released right-of-way would be redeveloped to build back the former urban environment.

The focus areas for this scenario includes two of the four focus areas presented in the I-30 Canyon and East Corridor Compressed scenarios. The renderings show the potential for parks and open spaces integrated into redevelopment, as well as complete streets that promote walkability and fine-grain development patterns with buildings that are focused towards streets and neighborhood open spaces.

In the context of removal, the Farmer's Market and Cesar Chavez focus areas shows the potential for a boulevard to replace I-30 from I-35E to Carroll Avenue. This boulevard could become a Complete Street with multi-use trails on both sides and medians. The Canyon itself could be filled in, or it could be used as underground parking garages, holding the structure of redevelopment at grade within the remaining right of way.

At the Samuell-Grand focus area, the grid could be stitched back together, utilizing the right of way for mixed-use development that transitions the single-family neighborhoods on the south to multi-family development framing Samuell-Grand Park.

The analysis for connectivity, economic development and parks factors are based on the analysis areas used for the East Corridor and Canyon scenarios. The analysis area does not cover the entire areas affected by the facility changes in this scenario. However, it does focus on key areas of interest that would be considered catalytic or impactful.

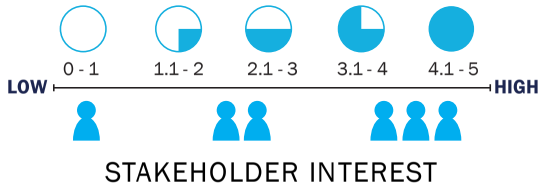
While the results of the connectivity, economic development and parks factors are informative they do not accurately depict a factor analysis for the entirety of the scenario. It is likely that many of the potential benefits identified in this factor analysis would be reduced or canceled out by the impacts caused by the new I-30 corridor construction. For example, much of the new I-30 would

	SCALE	QUINTILE UNITS	VALUE	SCORE
CONNECTIVITY				
Net New Linear Feet of Sidewalk per Acre	0 to 500	100	261.9	
Net New Intersections per Square Mile	0 to 75	15	70.2	
ECONOMIC DEVELOPMENT				
Net New Revenue	$0 to $92 Million	$18.4 Million	$88,970,174	
New New Value	$0 to $2.6 Billion	$520 Million	$516,660,327	
Net New Jobs	0 to 52,000	10,400	51,854	
Net New Population	0 to 30,000	6,000	21,405	
Overall	Average of Subfactor Score			
FACILITY CAPITAL COST				
Estimated Total Cost of the Facility (inside TxDOT Right-of-Way)	N/A	N/A	over $2B	$$$$$
FACILITY DEVELOPMENT & CONSTRUCTION DURATION				
Total Time for Planning, Design and Construction	0 to 25 Years	5 Years	24	
PARKS & OPEN SPACE - QUANTITY				
Net New % of Area	0 to 8	1.6	8.8%	
VISUAL IMPACT				
Visual Impact of New Highway- % Below Grade	0 to 100%	20	0%	

COST KEY

Under $100M	$100M - 499M	$500M - 999M	$1B - 2B	Over $2B
$	$$	$$$	$$$$	$$$$$

FACTOR KEY



likely have to be constructed as an elevated on structure highway to bridge the natural areas and features along the Trinity and White Rock Creek. This new highway would potentially reduce pedestrian connectivity. The new alignment would not likely have frontage roads and would do little to stimulate economic development along the corridor.

In addition, some alignment options that would be considered would likely displace businesses and/or homes that would diminish the economic metrics. Parks and open space would likely be impacted by the new alignment either by displacing the use or by creating noise and visual impacts. These and other impacts would need to be evaluated further to evaluate the relocation scenario.

The factors outlined in Chapter 4 have been applied to the I-30 Relocate scenario below.

ADAPTIVE REUSE

A real estate market in transition and authentic cities that grow incrementally make good use of existing buildings to accommodate new and diverse uses over time. These buildings can provide a lower cost of entry for new businesses and residences and also provide a level of architectural interest that cannot be replicated in areas of completely new construction. This adaptive reuse reinforces historically driven authenticity.

This factor at a high level is best assessed qualitatively rather than quantitatively. The entire study area affected by a relocation of I-30 encompasses a variety of neighborhood types. From the west moving east there is the Cedars neighborhood, South Dallas, Deep Ellum, Fair Park and the Grand Avenue/ Samuell Boulevard Area. A relocation of I-30 would encourage redevelopment that adaptive reuse would be suited well for.

South Dallas and Deep Ellum neighborhoods contain many examples of historic commercial buildings that have been reused and are candidates for further adaptive reuse. As mentioned earlier, in Deep Ellum there is the iconic Pearlstone Grain Elevator that is an important part of the East Dallas skyline. The Grand Avenue focus area also contains examples of traditional retail building form just northeast of the Grand Avenue Bridge that can provide a cornerstone for future redevelopment encouraged by the relocation of I-30 and the reknitting of the original city grid.

The authenticity created by the adaptive reuse of buildings is irreplaceable and can create an interesting synergy with new construction. Following the relocation of I-30, adaptive reuse can be an important portion of the development activity as reflected in the urban design structure in the redevelopment concepts provided.

CONNECTIVITY

Connectivity can be measured in numerous ways. One of the most repeated themes of livability during the stakeholder interviews, connectivity was underscored repeatedly. Maintaining and enhancing connectivity due to any changes in the transportation system was an important baseline. To demonstrate the impact of relocating I-30, connectivity was measured in two ways. As conducted for the other scenarios, intersection density and the increase in linear feet of sidewalks were measured.

SIDEWALKS AS A MEASURE OF WALKABILITY

Much of the existing sidewalk network along the length of the I-30 corridor from the Convention Center through the Grand Avenue Focus areas is in poor condition, inadequate width or is nonexistent. The relocation of I-30 replaced with a boulevard and the knitting back together of the original street grid provides an opportunity to enhance connectivity through new sidewalks both through the new street construction and when new development occurs. Assessing the redevelopment concept, the CityMAP team measured the net new linear feet of sidewalks. The combined focus areas realized a net increase of approximately 86,787 linear feet of sidewalk.

Sub Area	Linear Feet
Total I-30 Canyon Relocated	43,715
Total I-30 East Relocated	43,072

INTERSECTIONS PER SQUARE MILE AS A MEASURE OF CONNECTEDNESS

For this scenario, the net increase in intersections per square mile was measured based on how the surface streets are affected by the relocated highway design. The resulting net new intersections per square mile are in addition to the existing intersections.

Sub Area	New Intersections per Square Mile
Total I-30 Canyon Relocated	68
Total I-30 East Relocated	73

As the previous table summarizes, the I-30 Canyon Relocated focus area had a net increase of 68 intersections per square mile. The East Corridor focus area had a net increase of 73 intersections per square mile. These potential additional intersections facilitated by the relocation of I-30 will allow the grid to approach the higher levels of connectivity evident in the original grid.

ECONOMIC IMPACT

KEY OPPORTUNITIES

Under the I-30 Relocation scenario, there will be substantial impacts for numerous economic impacts. The utilization of the current I-30 right-of-way offers development opportunity within the core of the CBD and within neighborhoods that were once a cohesive development context.

This analysis explores the economic impact of proposed development that would occur within the released right of way under the scenario of the relocation of I-30.

POPULATION AND JOBS

With the increased proposed development that would likely occur within the released right-of-way under the I-30 Relocation scenario, there would be a corresponding increase in population and jobs brought forth from this new development. As a conservative estimate, approximately 43,859 jobs would be added as a result of the proposed development associated with the removal of I-30 from Dolphin Road to I-35. With the addition of HSR, the I-30 corridor could increase to an estimated 51,859 jobs. In addition to employment increases, population increases would occur as a result of the proposed development in the right of way sold at market value in a public process. As a low estimate, an additional population of approximately 21,405 would be added to the I-30 area. The addition of HSR would add an estimated additional population of 6,000, in addition to the 21,405 as estimated with the proposed development for a total population of 27,405.

ECONOMIC IMPACT SUMMARY

Of all the scenarios, this one creates the greatest potential developable acreage. The development types proposed under this analysis include: hospitality, retail, office, multifamily and single family.

HOSPITALITY ECONOMIC IMPACT

Currently, there is 271,000 SF of hospitality in the study area, and there is 530,400 SF of proposed hospitality space. Research determined the value per square foot for existing hospitality inventory is $41/SF along the entirety

of the I-30 corridor. The total existing hospitality value in the I-30 area is $11.1 million. With the additional hotels assumed within this Relocation scenario, the estimated additional hotel tax revenue is $2.8 million.

OFFICE ECONOMIC IMPACT

Office potential creates the largest economic impact among all development types. Currently, there is 2.6 million SF of existing office space in the I-30 area, with a total existing value of office space at $177 million.

The analysis assumes an additional 11 million square feet of planned office space between 2015 and 2045 in the I-30 area. The estimated value of all office space developed between 2015 and 2045 is approximately $1.4 billion. Property tax revenues on this net new space are estimated at $38.3 million total over the build out period.

Under this scenario, there will be a total of over 13.7 million office square feet in the I-30 relocation area. This could increase workforce by approximately 37,599.

RETAIL ECONOMIC IMPACT

Currently, there is approximately 935,445 SF of existing retail space in the I-30 area. The current value per square feet for existing retail inventory averages between $54-$60/SF, which equates to a value of $56.1 million.

There is a total of over 1.3 million square feet of planned retail space between 2015 and 2045 in the I-30 area. The estimated value of all retail space developed between 2015 and 2045 ranges between $150 million on the low end and $189 million on the high end. Property tax revenues on this net new space could range from $4.7 million on the low end and $5.1 million on the high end.

Incorporating existing space with net new space, there could be a total of over 1.96 million retail square feet in the I-30 area. The estimated added retail workforce between 2015 and 2045 is 2,444. Using an assumption of $300/SF for retail sales, the total sales tax revenue for retail space between 2015 and 2045 is $14.1 million.

MULTI-FAMILY ECONOMIC IMPACT

The multi-family potential in the I-30 area is also significant. Currently, there is 3.8 million SF of existing multi-family space in the I-30 area. The existing value per square foot for existing multi-family inventory is approximately $49/SF, therefore, the total existing value for multi-family space is $187 million.

There is a total of 9.6 million square feet of planned multi-family between 2015 and 2045 in the I-30 area. The estimated value of all multi-family space developed between 2015 and 2045 could be between $1.3 billion to $1.4 billion. Property tax revenues on this net new space range from $29 million up to $32 million. Incorporating existing space with net new space, there will be a total of over 15.2 million of additional residential in the I-30 area. The estimated added population in multi-family units between 2015 and 2045 is 20,702.

SINGLE FAMILY ECONOMIC IMPACT

Currently, there is approximately 26,840 SF of existing single-family space in the I-30 area. The value per square foot for existing single-family inventory ranges between $54 -75/SF. The total existing single-family value in the I-30 area is $1.6 million. There is an additional 460,000 SF of proposed single-family space under this scenario. This would equate to a value of approximately $58.4 million. This potentially could create additional property tax revenue of $1.5 million. The increased population would be approximately 859.

TOTAL ECONOMIC IMPACT

I-30 Relocation Scenario Projections (2015 - 2045)

Metric	Existing	Proposed	w/HSR
Existing Square Feet (2015)	7,642,869	-	-
Net New Square Feet (2015 - 2045)	-	25,339,422	25,390,153
Existing Value (2015)	$431,846,040	-	-
Net New Value	-	$3,051,142,113	$3,336,858,326
Additional Impacts (Net New)			
Property Tax Revenue (Ad Valorem)	-	$82,380,837	$90,095,175
Sales Tax Revenue	-	$14,779,139	$14,275,811
Hotel Tax Revenue	-	$3,395,929	$54,000,388
Increase to Existing Population	-	21,561	27,561
Increase to Existing Workforce	-	47,940	57,652
Net New Total Revenue		$92,811,363	$140,169,217

Across all development types, there is 7.62 million square feet in the I-30 area. The total existing value of all development types is $432 million. There is a total of 25.3 million square feet of proposed new development across all development types. Net new property taxes across all development over the 30 year time period is approximately $79.2 million. The total added workforce from the new proposed development is estimated at 47,940 which could be increased to 51,859 with the development of HSR between 2015 and 2045.

FACILITY CAPITAL COST

The I-30 Relocate scenario involves relocating I-30 from its current location between I-35 and White Rock Creek to a new alignment paralleling White Rock Creek and the Trinity River. The new I-30 would be constructed beginning at White Rock Creek and head in a southerly direction. The new freeway would continue south along White Rock Creek, crossing Military Parkway, Scyene Road, 2nd Avenue, and SH 175 before turning westward to cross SH 310 and I-45. The facility would then turn north and reconnect to I-30, either east or west of the Trinity River.

The scenario assumes that the new I-30 would be an twelve-lane elevated facility with entrance and exit ramps. The estimate anticipates some impacts to the recently constructed Horseshoe project near I-35E. It also includes interchanges with I-45 and US 175. Alignment studies will need to be conducted to evaluate a preferred route based on environmental feasibility, impacts to existing land uses and costs.

After the new I-30 is open to traffic the old portion of I-30 would be removed and replaced with a four or six lane divided boulevard with an emphasis on restoring the street grid. There are many options for how the old I-30 could be redeveloped, some that include multi-modal options like streetcars. These alternative options are not included in the estimate.

The facility capital cost estimate is in the over $2 billion range. This estimate does not include the cost of right-of-way for the new highway corridor. Other related costs such as mitigation for the new highway construction have not been established.

FACILITY DEVELOPMENT AND CONSTRUCTION DURATION

The scenario to relocate I-30 Canyon and East Corridor to a new location would be a transformational change that would require the study of alternative alignments for the new I-30 as well as changes to the current I-30 corridor. Reaction to the relocate scenario would be one way to gauge the level of interest in pursuing this idea further. If there is a strong support for this scenario a needs assessment and feasibility study should be conducted before large investments in advancing the I-30 Canyon and East Corridor projects are made.

Given the scale and complexity of the project, extensive and lengthy environmental studies with a high level of public engagement would be expected. The timeline for the Advanced Planning, Schematic Approval and Environmental clearance could rival the Trinity Parkway. An estimate of thirteen (13) years is assumed, which would include time for the project to be included in the MTP. An additional four (4) years is included for detailed design and procurement. This timeline assumes construction would begin in 2034 with a four (4) year duration for the new I-30 followed by another three (3) years to remove existing I-30 and construct the new boulevard and street grid changes. The facility development and construction duration for the I-30 Relocate project would be approximately twenty four (24) years.

FACILITY OPERATION AND MAINTENANCE COST

The O&M costs for the new boulevard and cross streets cannot readily be determined at this time because the types of amenities that would be incorporated have not been discussed and/or agreed upon by the appropriate entities. Typically, O&M costs for these types of facilities range from one to five percent of the construction cost, per year.

PARKS & OPEN SPACE – QUANTITY

The acreage of open space resulting from the likely redevelopment associated with the relocation of I-30 is measured based on the type of the space for purposes of this analysis. In the relocation scenario for I-30 as with others, there is the opportunity for reconnecting the city grid and encouraging new development. Therefore, it is important to embed public open space in this design. Pocket parks and linear greens could be incorporated in various areas of the corridor. Summarized below, the resulting greenspace for both ends of the corridor are as follows: The Canyon area would yield a combined 11.69 acres of open space and the eastern combined focus areas would yield 17.44 acres of right of way converted to new neighborhood fabric.

PARKS & OPEN SPACE – QUALITY

Open Space	Net New Area in Acres
Total I-30 Canyon Relocated	11.69
Total I-30 East Relocated	17.44

Parks and open space quality for the I-30 Relocation scenario will produce near to the same quality impact as the previous compressed scenario. The overall removal of the facility removes the highway and offers better connections to planned open spaces and parks. This also allows the proposed boulevard to incorporate hike and bike trails, connecting the Santa Fe Trail seamlessly through the Farmers Market and over to the Convention Center area.

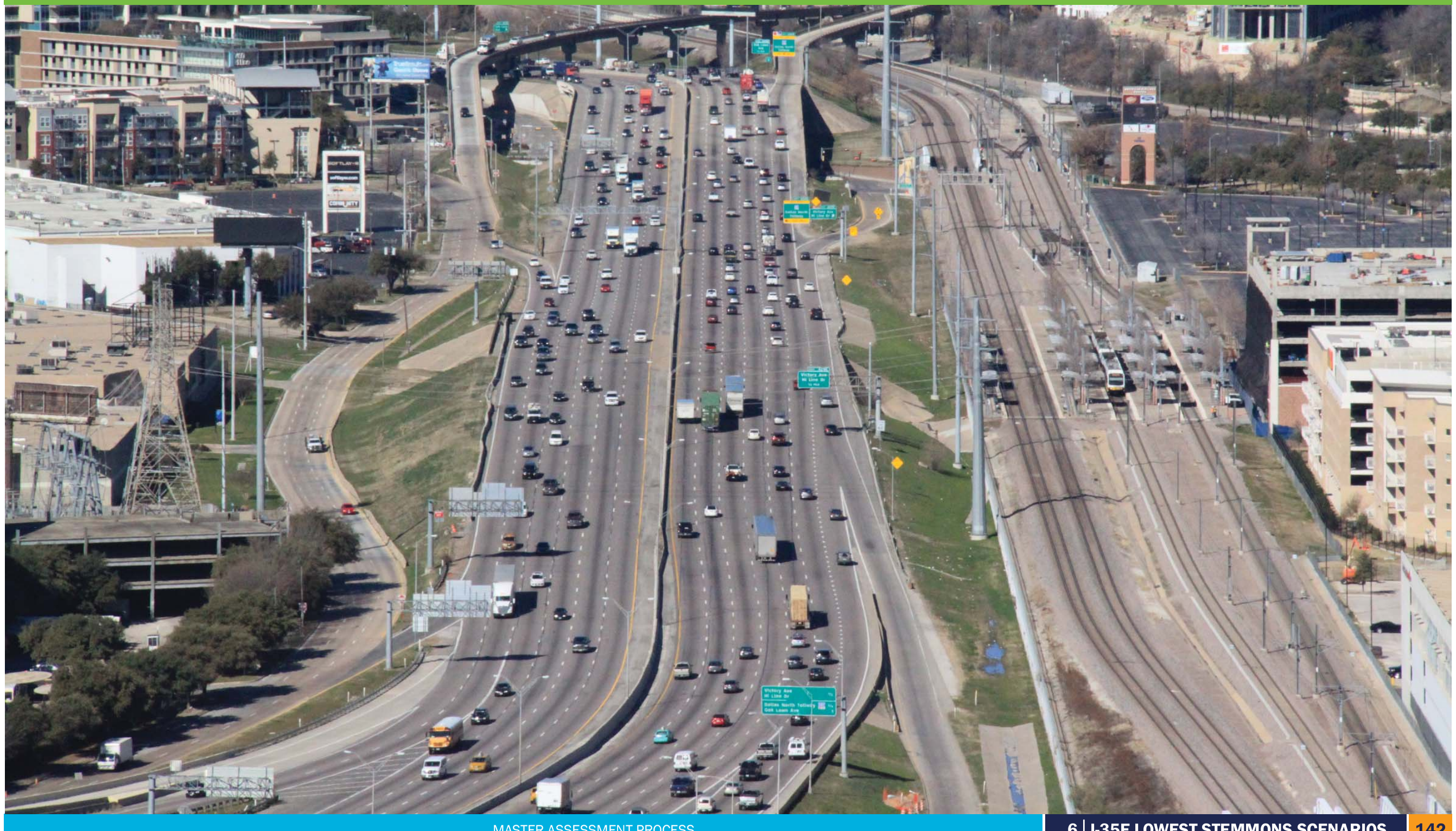
Instilling the feeling that there are people in and around the public spaces will add to the perceived security that deters safety degradation in park and open spaces. In addition, ensuring that the boulevard is treated as an urban thoroughfare with a focus on complete streets will ensure that the roadway is used by alternative transportation.

Between Carroll Avenue and Dolphin Road, removal scenario infills development and promotes crossing between neighborhoods north and south of the former I-30 right of way. The visual impact of the current I-30 design is removed entirely and reconnects the grid of the neighborhoods.

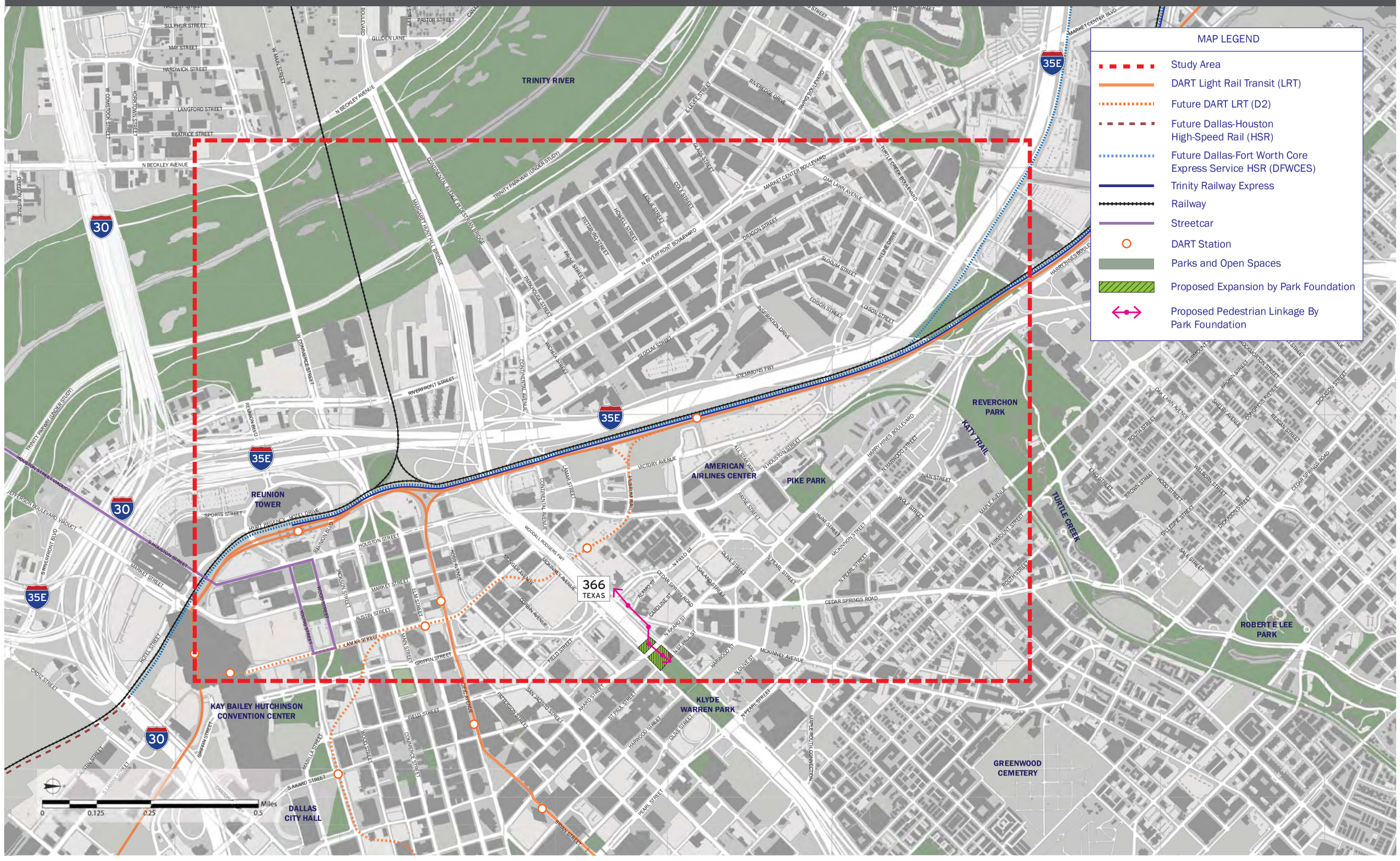
Inclusion of pocket parks and plazas within the focus areas reflect the attributes for access and surveillance. No additional large-scale open space is recommended for these areas due to proximity of Fair Park and Samuell Grand Park. Pocket parks and plazas will bring needed respite from the urban context, but will remain easy to maintain and intimate spaces.


HNTB
THIS IS THE HNTB SPARK.

CHAPTER 6 | I-35E LOWEST STEMMONS SCENARIOS



I-35E LOWEST STEMMONS | EXISTING CONDITIONS



DRAFT | JUNE 10, 2016

I-35E LOWEST STEMMONS | OVERVIEW

Known as “Lowest Stemmons”, the 2.3 mile long segment of I-35E from approximately Oak Lawn Avenue on the north and I-30 on the south. The facility is an urban highway with five travel lanes in each direction, frontage roads, and direct connections to I-30, Woodall Rodgers and the Dallas North Tollway (DNT). Ramps serving Lowest Stemmons provide access to numerous districts, neighborhoods and major activity centers, including Downtown Dallas, Uptown, Oak Lawn and Victory. Lowest Stemmons also serves over 200,000 vehicles per day, many traveling through the area to points farther north and south, as previously identified in the traffic analysis. With all of this activity, this portion of I-35E is one of the most congested highway segments in the State of Texas. With over 600,000 annual hours of delay per mile at a cost of nearly $63M annually, Lowest Stemmons is ranked as the 5th most congested highway segment in the state in 2015.

In an attempt to address this ranking, TxDOT is currently planning a project designed to ease congestion in the Lowest Stemmons corridor. The goal of the Lowest Stemmons project is to provide interim operational improvements. The project will tie-in with the Horseshoe project that is currently under construction to the south. Proposed interim operational improvements consist of collector-distributor roads (north and southbound), direct connectors, and reconstructed ramps and bridge structures. At this point in the project, TxDOT is continuing to develop a preferred alternative, as well as coordinating with the City of Dallas and various local stakeholders.

CityMAP project stakeholders also provided valuable feedback on this corridor – the City of Dallas among the most vocal. A lack of pedestrian and bicycle connections within the corridor and through to the surrounding neighborhoods and districts was identified during the outreach discussions. There was also a desire to reduce the effects I-35E has in separating downtown and the Victory and Oak Lawn Neighborhoods from the Design District and Trinity River Corridor to the west. Creating walkable, mixed-use developments was repeatedly mentioned by the stakeholders. Stakeholders were also focused on improving the pedestrian and bicycle connections across the I-35E corridor to the surrounding neighborhoods and districts. Specifically, the recommendations included potential pedestrian and bicycle connections nearest these locations: Oak Lawn Avenue, the Katy and Trinity Strand Trails, Hi Line Drive, Victory DART/TRE Station, Continental Avenue, Commerce Street, and Reunion Boulevard. For each of these facilities, a discussion of existing conditions, plans currently underway, and specific recommendations from the CityMAP process is provided below.

To better understand the corridor connection needs the Dallas CityMAP team also analyzed traffic volumes on local streets in the study area based on the base case model for the year 2018 and for the year 2040. Streets where the volume to capacity ratio was 0.7 or less were considered as candidate streets. CityMAP explores a series of alternatives for making key roadways more walkable and bikeable and enhancing connectivity by using tools presented in the City of Dallas Complete Streets Design Manual, Dallas Bike Plan, and other sources. Each roadway has been evaluated based on the following attributes presented in the Existing Cross Sections Analysis table below: Functional Classification, Capacity, ADT, Existing and Future V/C, roadway cross-section attributes, existing bicycle and pedestrian facilities.



Stemmons Circa 1960 *Source: University of Texas Arlington Special Collections*



Stemmons Opening Day *Source: University of Texas Arlington Special Collections*

FACILITY DEVELOPMENT AND CONSTRUCTION DURATION

Identify Need → Needs Assessment → Advanced Planning → Environmental & Design Studies → Detail Design ROW, Utilities → Construction

Scenario Timeline Estimate - 2016 thru 2021 — 6 Years

METHODOLOGY

The Lowest Stemmons Scenario is based on the same configuration for I-35E that is currently anticipated in Mobility 2040 and is included in the 2040 Preliminary Network. For this reason, there is no study area comparison to the Base Network of mobility performance factors for the Lowest Stemmons Scenario. However, the facility Performance Factors are presented for the Lowest Stemmons facility in the Evaluation discussion below.

SCENARIO DESCRIPTION: I-35E LOWEST STEMMONS

"Lowest Stemmons Freeway" is the section of I-35E from I-30 to Oak Lawn Avenue. The transportation network configuration of I-35E in this scenario reflects the current plan to add collector distributor roadways between Woodall Rogers (SH 366) and the Dallas North Tollway. A Collector-Distributor (C-D) roadway, as the name implies, collects and distributes traffic between intersecting roads or frontage roads and freeway mainlanes. This type of configuration is typically used for larger urban freeways where interchanges are closely spaced and weaving on the freeway main lanes causes capacity and operational problems. The addition of northbound and southbound C-D roadways between Commerce Street/Woodall Rodgers and the direct connector ramps to Dallas North Tollway will eliminate many of the weaving maneuvers on both northbound and southbound I-35E. The existing westbound Woodall Rodgers (SH 366) to Dallas North Tollway will no longer be possible, however this connection from the CBD is made via McKinnon Street, or by exiting I-35E to Oak Lawn. Overall the addition of a C-D system will greatly improve this downtown section of I-35E and will capitalize further on the improvements now under construction with the Horseshoe Project.

EVALUATION: I-35E LOWEST STEMMONS

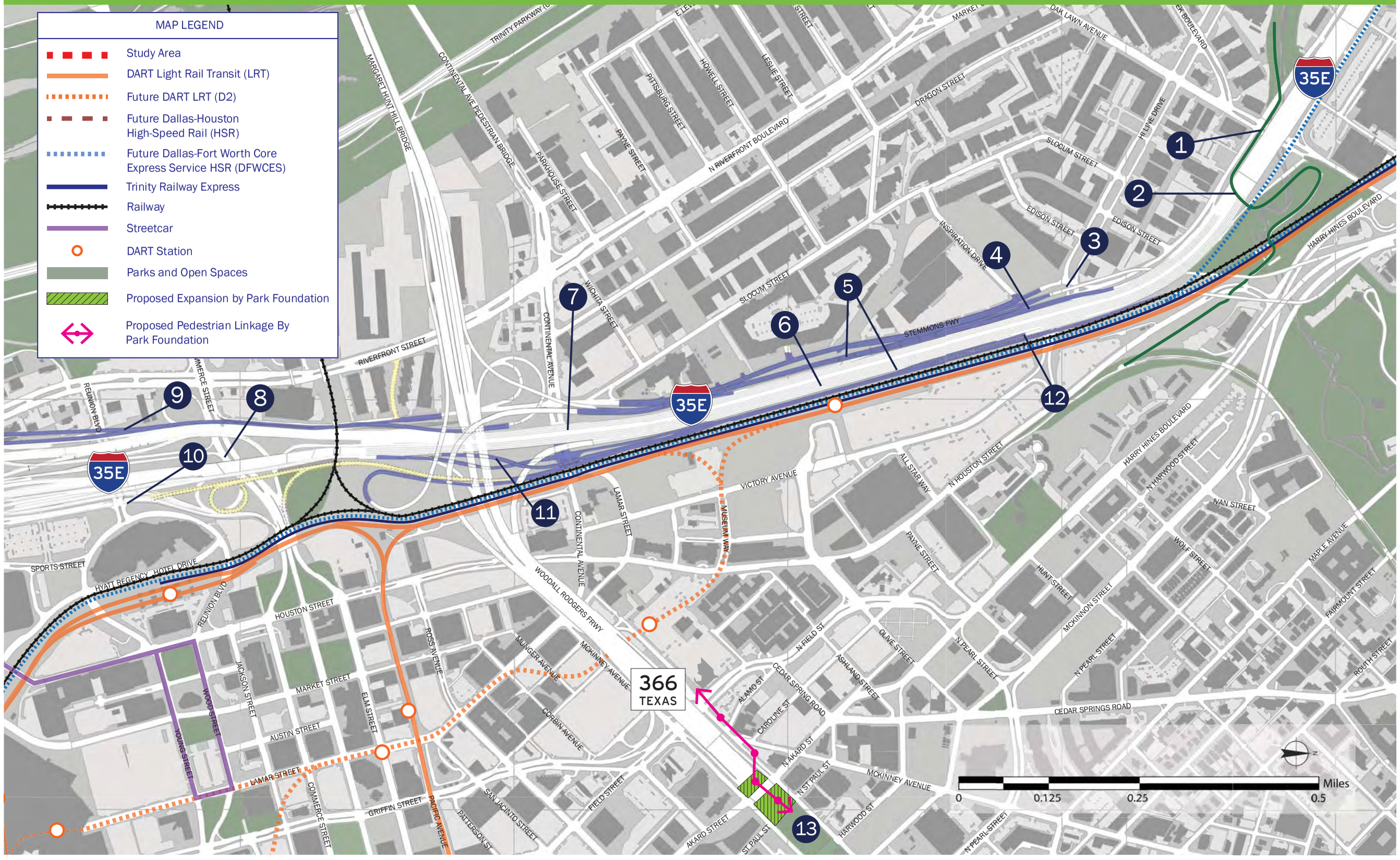


The table compares performance factors on I-35E general purpose lanes in the areas shown for Lowest Stemmons. Since the Scenario differs only in the configuration of the Trinity Parkway, there would not be much difference in performance on I-35E between the scenario and the 2040 Preliminary Plan. However, the Lowest Stemmons improvements in the Plan and the scenario will make significant operational improvements as shown by the Average Speed and Delay projections.

Transportation Indicators for I-35E	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	Lowest Stemmons CitMAP Scenario
Average Daily Volume	293,000	337,000	268,000	266,000
Average V/C Ratio	1.16	1.33	1.06	1.06
Level of Service	F	F	F	F
Average Travel Speed (mph)	35	27	36	36
Hours of Delay per Mile	3,969	10,491	3,701	3,746



I-35E LOWEST STEMMONS



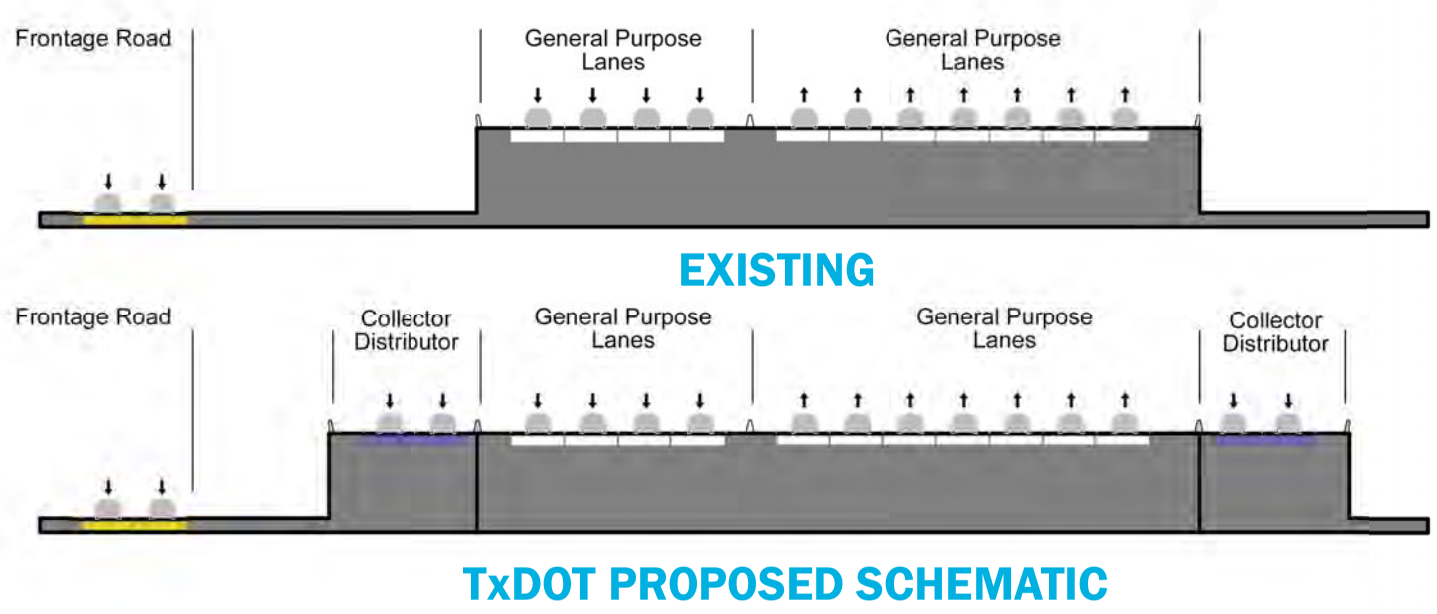
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I-35E LOWEST STEMMONS

PLAN NOTES: I-35E LOWEST STEMMONS

1. Improve connections under I-35E at Oak Lawn Avenue
2. Proposed Circuit Trail Connector Project linking Katy Trail to Trinity Strand Trail with elevated crossing over I-35E. Option 02 shown – (approximately 1 mile length)
3. Improved connections under I-35E at Hi Line Drive
4. Southbound I-35E exit ramp to Woodall Rodgers Freeway (Texas 366)
5. New Collector-Distributors
6. Improve connections under I-35E at DART Victory Station
7. Improve connections under I-35E at Continental Avenue and Lamar Street
8. Improve connections under I-35E at Commerce Street
9. New connections to I-30 and I-35E
10. Improve connections under I-35E at Reunion Boulevard
11. New exit to downtown
12. Entrance to northbound I-35E from Collector-Distributor
13. Klyde Warren Park

CROSS SECTIONS



I-35E LOWEST STEMMONS - IMPROVED CONNECTIONS | OAK LAWN

EXISTING CONDITIONS

Oak Lawn Avenue is an east-west four-lane divided major arterial connecting the Oak Lawn and Uptown districts to the Design District and Trinity Strand Hike and Bike Trailhead passing under I-35E “Lowest Stemmons”. Oak Lawn is at-grade and the area under the Stemmons Freeway structures is currently dark and uninviting for pedestrians and bicyclists. The level of service (LOS) for this cross section for base case 2018 and 2040 model is shown in the adjacent summary table. Oak Lawn has very little excess vehicle capacity under Lowest Stemmons.

PLANS UNDERWAY

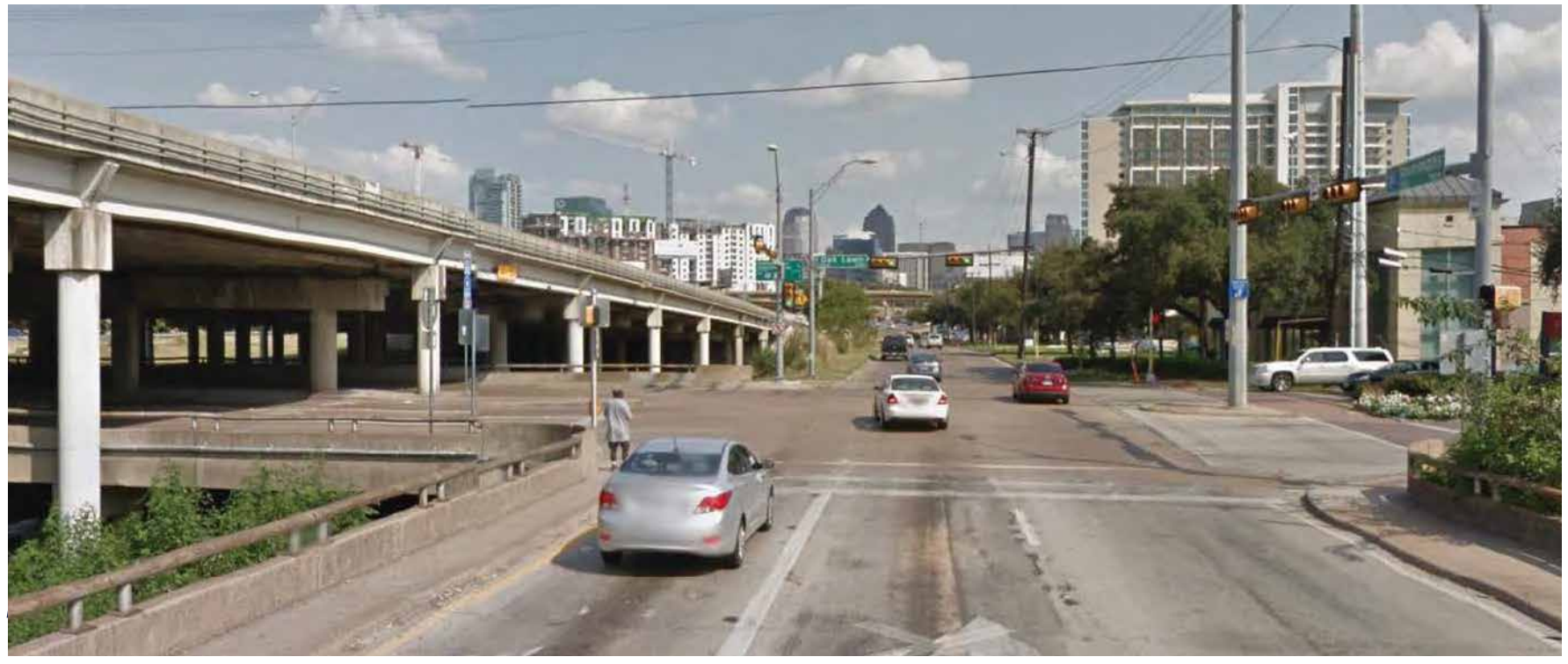
The existing City of Dallas Parks Master Plan calls for a bike/pedestrian connection between the Katy Trail and the Trinity Strand Trail. Part of this connection includes widening the sidewalk along Oak Lawn Avenue adjacent to Stemmons Park and adding a signalized crossing to the Infomart as well as way-finding signage. The plan also calls for the installation of LED lighting under I-35E and the construction of a pedestrian crossing under Oak Lawn Avenue that allows for un-interrupted bike/pedestrian movement between the north and south sides of Oak Lawn Avenue under I-35E. The area under I-35E at Oak Lawn Avenue would also include an interactive art feature and native landscaping to enhance the image of the currently dark and uninviting area. This project is a high priority for the City of Dallas Parks Department but currently remains unfunded.

OAK LAWN SCENARIO

The planned improvements are consistent with stakeholder feedback gathered during the CityMAP effort. The City of Dallas Parks Master Plan calling for planned improvements along Oak Lawn Avenue and under I-35E as part of the Katy Trail Connection project would go a long way to addressing stakeholder concerns. However, while funding is being identified for this project, the CityMAP project team suggests safety enhancements and other improvements that would make the area more inviting to bicyclists and pedestrians in the interim. These short-term improvements include painting all structural surfaces and installing new bright LED lighting for the entire zone underneath I-35E. These enhancements, while only a small part of the overall solution, would be an affordable component of the larger solution and would go a long way towards making the area feel more inviting and safe.

LOS for Oak Lawn Avenue

Street	From	To	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Oak Lawn	Hi Line	Market Center	Existing	25,000	2,977	0.12	A/B	6,759	0.27	A/B
Oak Lawn	I-35 E FR SB	I-35 E FR NB	Existing	43,750	50,957	1.16	F	36,478	0.83	E
Oak Lawn	I-35 E FR NB	Harry Hines	Existing	37,500	26,583	0.71	D	63,672	1.70	F



I-35E LOWEST STEMMONS - IMPROVED CONNECTIONS | HI LINE

EXISTING CONDITIONS

Hi Line Drive is a four-lane divided minor arterial providing east-west access under I-35E and connecting the Victory district east of I-35E to the Design District west of I-35E and serving as the gateway between the two districts. Hi Line Drive also provides direct vehicular access to one of the Trinity Strand Trail trailheads west of Oak Lawn Avenue. The LOS for this cross section for base case 2018 and 2040 model is shown in the following summary table. Excess capacity exists west of I-35E.

LOS for Hi Line Drive

Street	From	To	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Hi Line	Oak Lawn	I-35 E FR SB	Existing	25,000	3,148	0.13	A/B	10,664	0.43	A/B
Hi Line	I-35 E FR SB	I-35 E FR NB	Existing	25,000	8,066	0.32	A/B	19,998	0.80	D
Hi Line	I-35 E FR NB	Victory	Existing	25,000	6,690	0.29	A/B	22,524	0.98	E



I-35E AT HI LINE DRIVE LOOKING EAST *Source: Google Maps*

PLANS UNDERWAY

The Victory and Design districts, directly connected by Hi Line Drive, are both experiencing a renaissance with significant mixed-use development occurring in these areas that were previously under-developed with low density commercial, industrial/warehouse, and vacant land uses. With the addition of mid-and high-rise apartments and higher density mixed-use developments as well as the completion of the Trinity Strand Trail, vehicular, bicycle, and pedestrian movements within and between these districts are increasing rapidly, resulting in the need for enhanced transportation facilities, including Hi Line Drive.

Recognizing the significance of the Hi Line Drive corridor in connecting the Victory and Design Districts, pedestrian improvements along Hi Line Drive were made through a NCTCOG sustainable development grant in 2006. In 2011, additional public infrastructure improvements were made to Hi Line Drive through the "Edison/Hi Line/Stemmons/Rail Transit Underpass Connection" project that was one of the 2009 NCTCOG sustainable development grant recipients. These improvements included pedestrian and crosswalk improvements and improvements to the underpass of Hi Line Drive under I-35E, with the goal of building upon the 2006 project and creating a stronger connection between the Design and Victory Districts.

In the Victory District, Houston Street and Victory Avenue are currently in the process of being converted from a one-way couplet to two-way, and the intersections are being improved to make them more pedestrian and bicycle friendly. The sidewalks have recently been improved and bicyclists are expected to share the outside lanes with vehicles.

HI LINE SCENARIO

All of these improvements to the pedestrian zone should include painting structural surfaces and new bright LED lighting in order to make the area more inviting to bicyclists and pedestrians and foster greater connectivity and bike/pedestrian activity between the Victory District and the Design District.



RAILROAD BRIDGE AND HI LINE DRIVE LOOKING EAST *Source: Google Maps*

I-35E LOWEST STEMMONS - IMPROVED CONNECTIONS | CONNECTING THE KATY AND TRINITY STRAND TRAILS

EXISTING CONDITIONS

Union Pacific Railroad donated the abandoned M-K-T rail ROW to the City in 1993. By the early 1990s, Dallas residents, business people, and city and county officials proposed restoring the greenbelt along the railroad route and creating an urban park named the "Katy Trail." The Katy Trail was subsequently funded and constructed and is now the "Central Expressway" for walkers, joggers and bicyclists through the heart of north Dallas connecting SMU, the Park Cities, Mockingbird Station and east Dallas neighborhoods to the Oak Lawn area, Uptown, Victory and Downtown through a grade-separated 12-foot wide paved path that carries thousands daily.

Across I-35E, to the west of the Katy Trail is the Trinity Strand Trail along the banks of the "Trinity Meanders," which is the original stream channel of the Trinity River prior to the implementation of the levee system. The Trinity Strand Trail continues west along Turtle Creek, but currently terminates on the eastern end at Oak Lawn Avenue, immediately south of I-35E. While a connection with the Katy Trail is desired by many, finding a solution to crossing the barrier created by the confluence of I-35E, the DNT, and DART/TRE rail ROW is a complex and expensive challenge. However, plans are currently underway to create this connection as discussed in detail below.

PLANS UNDERWAY

In 2011, "The Connection" Master Plan was completed with the intent to provide a tool to guide development of a primary trail connection between the 3-1/2 mile Katy Trail and the 2-1/4 mile main spine of the Trinity Strand Trail. When complete, "The Connection" will join Uptown, Downtown, the Design District, the Medical District, the Infomart, Stemmons Corridor businesses and hotels along I-35E. Since the inception of each trail system, it has been a strategic decision that they connect to provide a continuous main spine that minimizes conflicts with vehicular traffic. To successfully make this connection, the design must respond to a series of challenges, including multi-agency coordination, existing and future highway crossings, drastic grade differences (upwards of 20'), overhead utilities, underground utilities, easements, drainage and backwater from the Trinity River Levee System.

The master plan for "The Connection" was approved by the City of Dallas Parks and Recreation Board in 2011. Based on this plan, "The Connection" was anticipated to cost approximately $18 million and would begin at Katy Trail's Victory Overlook and travel over Houston Street, through Stemmons Park and underneath I-35E and Oak Lawn Avenue, connecting with the concrete spine of Trinity Strand Trail on the old Trinity River channel. Numerous design options are provided in the master plan allowing for varying degrees of ease of functionality, aesthetic design and construction cost.



CIRCUIT TRAIL CONNECTOR CONCEPTUAL ALIGNMENT STUDY *Source: SWA*

IMPLEMENTATION

Currently, the City of Dallas Parks and Recreation Department is working with the Circuit Trail Conservancy (CTC) to implement the Connecting Trail. The CTC is a non-profit organization formed to partner with the City in public/private partnerships to connect existing trails. In the fall of 2015, CTC engaged landscape architecture firm SWA to revisit the proposed plan from 2011 to explore an alternative route using an elevated trail alignment that would cross over I-35E via pedestrian bridge to connect the Katy Trail to the Trinity Strand Trail. CTC is undertaking a Capital Campaign to raise private funds to match City and other government funds to build this trail. Plans call for the Connecting Trail to be completed within the next five years.

Included above is the proposed route for the Connecting Trail. The CityMAP team has met with CTC on several occasions to identify the impact of this alignment and the TxDOT requirements for bridges over highways. CTC and the City have met with NTTA and DART. CTC and its consultants will continue to coordinate between these groups and other affected stakeholders.

EXISTING CONDITIONS

The existing Victory Station is a DART light-rail and TRE station used predominantly during Mavericks and Stars games and special events at the American Airlines Center (AAC). With all of the activities and events happening each week throughout the year, the Victory Station is heavily-used. There is an existing path that connects the station to the AAC; however, due to the recent construction of a large parking structure, the path is somewhat cold and uninviting. Additionally, adjacent to the DART and TRE Victory Station is an underpass of I-35E created by an abandoned railroad spur. This passageway is currently being used by pedestrians, albeit illegally, to access Victory Station and the Victory district.

PLANS UNDERWAY

There are currently no known formalized plans to utilize the abandoned railroad spur under I-35E. However, the Victory District, within which the Victory Station is located, is currently undergoing a "redevelopment" with the goal of becoming "...a district where both visitors and DFW residents love to shop, dine, live, work and stay and for it to become a welcoming, walkable, vibrant hub of Dallas' urban districts – easy to use, entertaining, contemporary, authentic, and evolving."

The first iteration of the Victory District was very much auto-oriented, with one-way streets and large buildings without desired street-level vibrancy outside of the immediate AAC area. As such, the much hoped-for 24/7 liveliness with bicycle and pedestrian activity has never truly materialized. In an effort to transform the district into a "walkable" 24/7 activity center, the owners of the Victory District are in the process of implementing a redevelopment plan that includes the following:

- Adding over 1,000 additional multi-family housing units (apartments and condo) to the district;
- Conversion of Houston Street and Victory Avenue from one-way to two-way, improving pedestrian interaction as well as traffic flow;
- Adding dedicated bike lanes on Houston Street that serve as an extension of the Katy Trail further into the heart of the Victory District;
- Widening sidewalks, enhancing crosswalks, improving signage, and adding place making elements and pedestrian amenities in order to better connect the AAC with the rest of the district and enhancing the pedestrian experience;
- Adding additional ground-floor retail and enhancing all storefronts, including the addition of more affordable shops and restaurants as many of the existing shops and restaurants are higher end establishments;

This redevelopment effort began in 2015 and is scheduled for completion by late 2016.

VICTORY STATION SCENARIO

With the major redevelopment currently underway in the Victory District, the CityMAP project team focused on ways to better integrate and connect the Victory Station area with the larger Victory District as well as better connect to the Design District west of I-35E.

With the construction of a new large parking structure immediately to the east of the Victory Station in 2015, only one wide pedestrian path on the north side of the parking structure remains that connects pedestrians from Victory Station to the AAC. This path is currently less inviting than it could be and the parking structure visually blocks much of the view between the Victory Station and the AAC. The CityMAP team proposes to enhance this path with additional signage, enhanced pedestrian scaled lighting, and interactive street-level art and place-making elements in order to enhance the feeling of safety and security. Additionally, the project team recommends an extension of the recently-implemented dedicated bike lanes directly to the Victory Station in order to provide a dedicated bike lane from the Katy Trail at the north end of the district, into the heart of the district, and over to Victory Station.

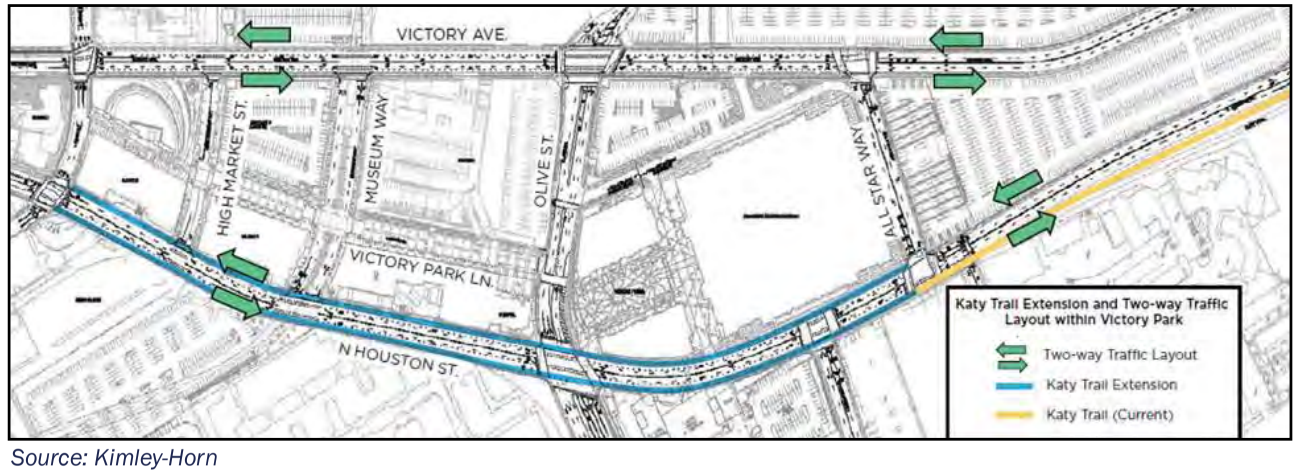
In addition to enhanced connections to the Victory District, the project team provided a new connection between the Victory Station and the Design District on the west side of I-35E. This recommendation would utilize an abandoned rail spur under I-35E, immediately to the west of the Victory Station. Two concepts are illustrated to utilize the existing underpass area to connect the Design District to Victory Station. Both concepts create an enhanced pedestrian crosswalk at the southbound service road of I-35E, but vary in the approach taken for a pedestrian ramp over the drainage area and up to the elevation of the station platforms. All of these improvements to the pedestrian zone should include the painting of all structural surfaces and the addition of new LED lighting.



VICTORY STATION CONNECTIVITY CONCEPT *Source: HNTB*



PEDESTRIAN ENTERING VICTORY STATION FROM UNDER I-35E *Source: HNTB*



Source: Kimley-Horn

I-35E LOWEST STEMMONS - IMPROVED CONNECTIONS | CONTINENTAL AVENUE

EXISTING CONDITIONS

Continental Avenue is a four-lane divided east-west minor arterial providing vehicular access between Victory and Riverfront Boulevard, the Margaret Hunt Hill Bridge and the Continental Pedestrian Bridge. The City of Dallas recently reconstructed portions of Continental Avenue west of I-35E and converted the Continental Avenue Bridge over the Trinity River into a pedestrian-only bridge. The bridge, re-opened in June 2014, is essentially a linear park, including a playground, a splash park, lounge chairs, human-sized chess boards, and cloth shade structures designed to shade the area, along with connections to many trails surrounding the bridge in the Trinity River Basin and on the levees.

While the bridge and the area immediately adjacent to the bridge are now very walkable with many pedestrian amenities and activities, the portion of Continental Avenue east of this area is extremely auto-oriented with only very narrow, discontinuous sidewalks, provided for pedestrians. This has resulted in a pedestrian "no man's land" between the Trinity River Trails, Continental Avenue Bridge Park, and downtown Dallas due to insufficient bicycle and pedestrian infrastructure. The LOS for this cross section for base case 2018 and 2040 model is shown in the following summary table.

PLANS UNDERWAY

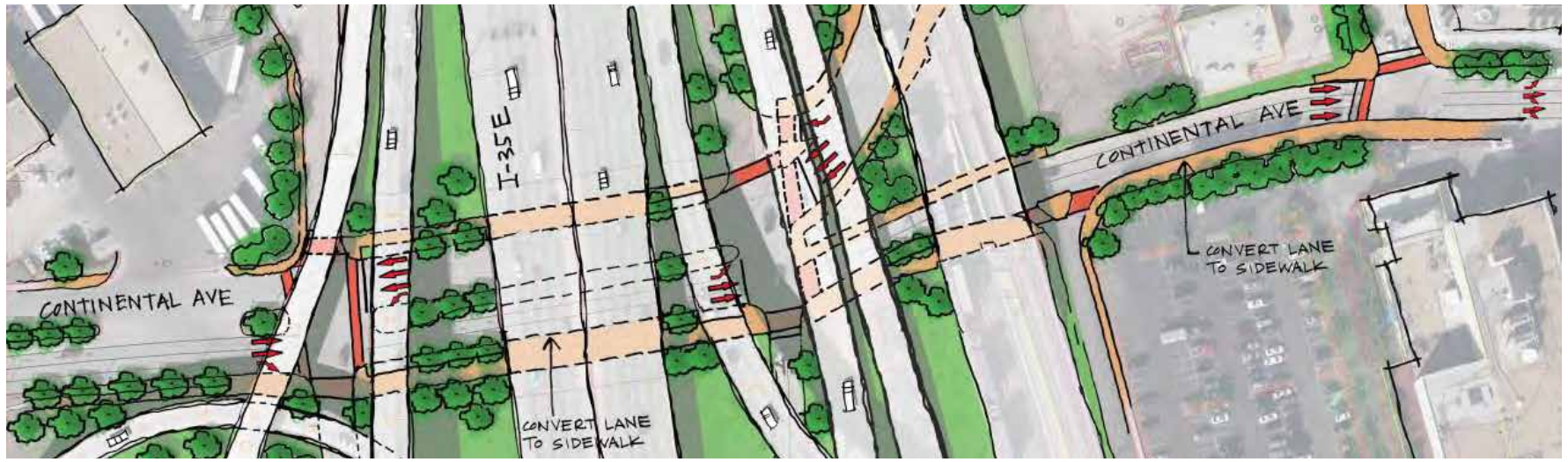
The City of Dallas is currently reconstructing Continental Avenue between the Continental Avenue Pedestrian Bridge and the southbound I-35E service road. The reconstruction includes full reconstruction of the travel lanes as well as the addition of a center median and wider continuous sidewalks.

RECOMMENDATIONS FROM THE PROCESS

Reconstructing Continental Avenue between the I-35E southbound service road and Victory Avenue would provide a continuous walkable corridor between the Continental Avenue Pedestrian Bridge and the Victory District. The concepts shown to the right illustrate the utilization of two lanes of traffic on Continental Avenue to provide a wider pedestrian zone from Victory Avenue to the southbound service road of I-35E. All of these improvements to the pedestrian zone should include painting all structural surfaces and new bright LED lighting. The proposed improvements would provide for an enhanced pedestrian connection between the Trinity River/Continental Avenue Pedestrian Bridge and the Victory District.

LOS for Continental Avenue

Street	From	To	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Continental	Riverfront	I-35 E FR SB	Existing	25,000	5,321	0.21	A/B	7,675	0.31	A/B
Continental	I-35 E FR NB	I-35 E FR SB	Existing	34,500	25,173	0.73	D	34,787	1.01	F
Continental	I-35 E FR NB	Victory	Existing	21,000	19,920	0.95	E	33,494	1.59	F
Continental	Victory	I-35 E FR NB	Existing	21,000	23,518	1.12	F	27,817	1.32	F



LAMAR STREET AT CONTINENTAL AVENUE CONNECTIVITY CONCEPT *Source: HNTB*



CONTINENTAL AVENUE LOOKING EAST *Source: HNTB*

I-35E LOWEST STEMMONS - IMPROVED CONNECTIONS | COMMERCE STREET

EXISTING CONDITIONS

The existing Commerce Street is an 8-lane major arterial passing through the Triple Underpass arterial and with the adjoining streets of Main and Elm provide vehicular access between the West End of downtown, I-35E, Riverfront Boulevard and the future Trinity River development. The existing facility is auto-oriented with only basic pedestrian facilities in the form of narrow sidewalks and does not support non-bicycle and pedestrian connections to and from the future Trinity River development and downtown Dallas. The LOS for this cross section for base case 2018 and 2040 model is shown in the following summary table. Excess capacity exists west of I-35E.

PLANS UNDERWAY

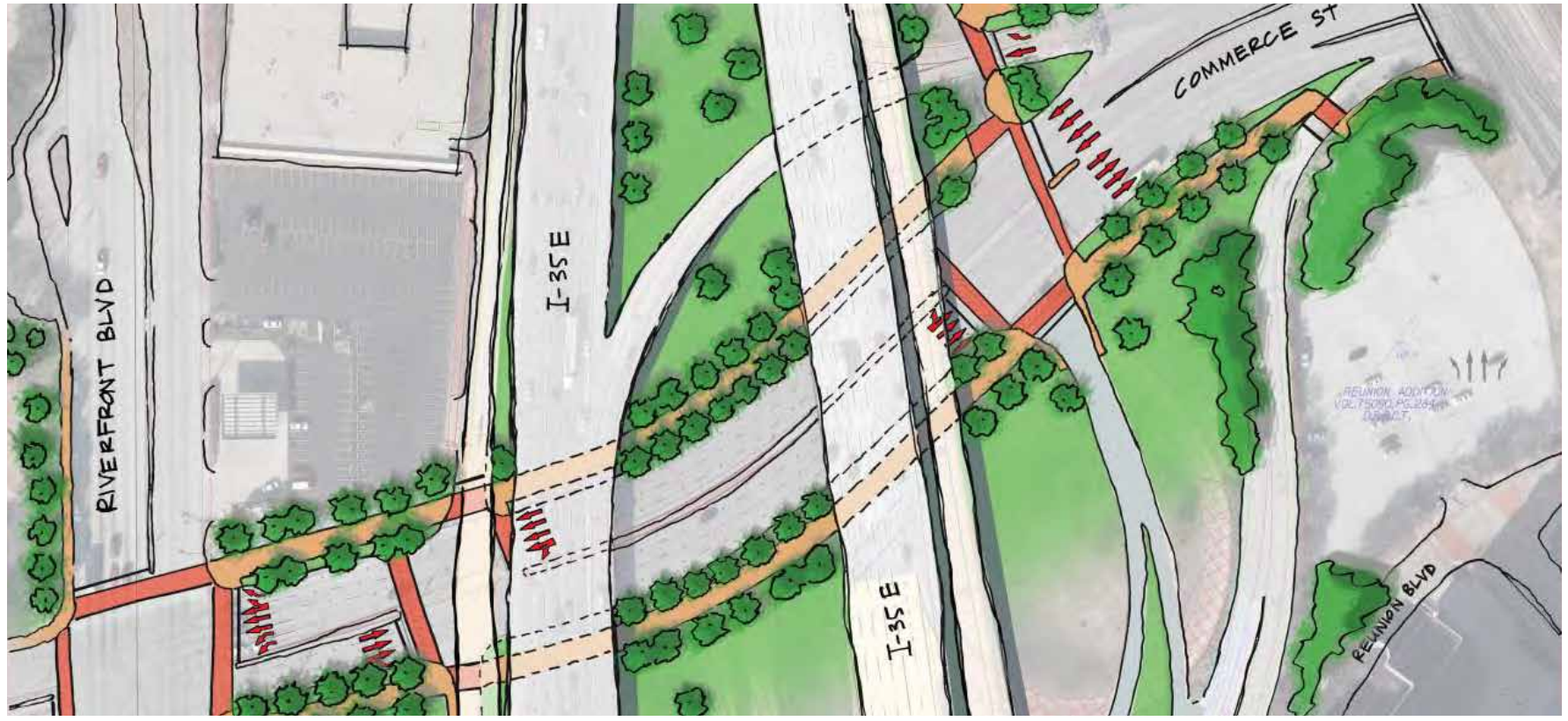
The City of Dallas does not currently have any formalized plans to enhance bicycle and pedestrian facilities within this corridor.

COMMERCE STREET SCENARIO

Enhancing the walkability of the corridor by widening the existing sidewalks and creating pedestrian crosswalks across Commerce Street would support greater connectivity between the Trinity River Trails, future Trinity River development and downtown Dallas. These pedestrian improvements would help to stitch together these neighborhoods that were physically divided by the construction of I-35E. The concepts shown on the right illustrate the recommendation to cut back the side slopes and rip-rap under I-35E and constructing retaining walls to provide a much wider pedestrian zone. Additionally, all of these improvements to the pedestrian zone should include painting all structural surfaces and new bright LED lighting. The wider pedestrian zones would allow for a larger buffer between pedestrians utilizing the sidewalks and vehicles traveling along Commerce Street, enhancing pedestrian safety and encouraging more pedestrians to utilize the expanded pedestrian zones.

LOS for Commerce Street

Street	From	To	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Commerce	Riverfront	Main	Existing	25,000	18,570	0.74	D	24,163	0.97	E
Commerce	Main	Riverfront	Existing	25,000	6,526	0.26	A/B	10,274	0.41	A/B



COMMERCE STREET CONNECTIVITY CONCEPT *Source: HNTB*



COMMERCE STREET CONNECTIVITY CONCEPT *Source: HNTB*



COMMERCE STREET CONNECTIVITY CONCEPT *Source: HNTB*

I-35E LOWEST STEMMONS - IMPROVED CONNECTIONS | REUNION BOULEVARD

EXISTING CONDITIONS

The existing Reunion Boulevard is a six-lane divided east-west minor arterial connecting the Reunion area and Hyatt Regency to Riverfront Boulevard and future Trinity River development. The existing facility is auto-oriented with only basic pedestrian facilities in the form of narrow sidewalks on both the north and south sides of the roadway facility. The LOS for this cross section for base case 2018 and 2040 model is shown in the following summary table. Excess capacity exists west of I-35E.

PLANS UNDERWAY

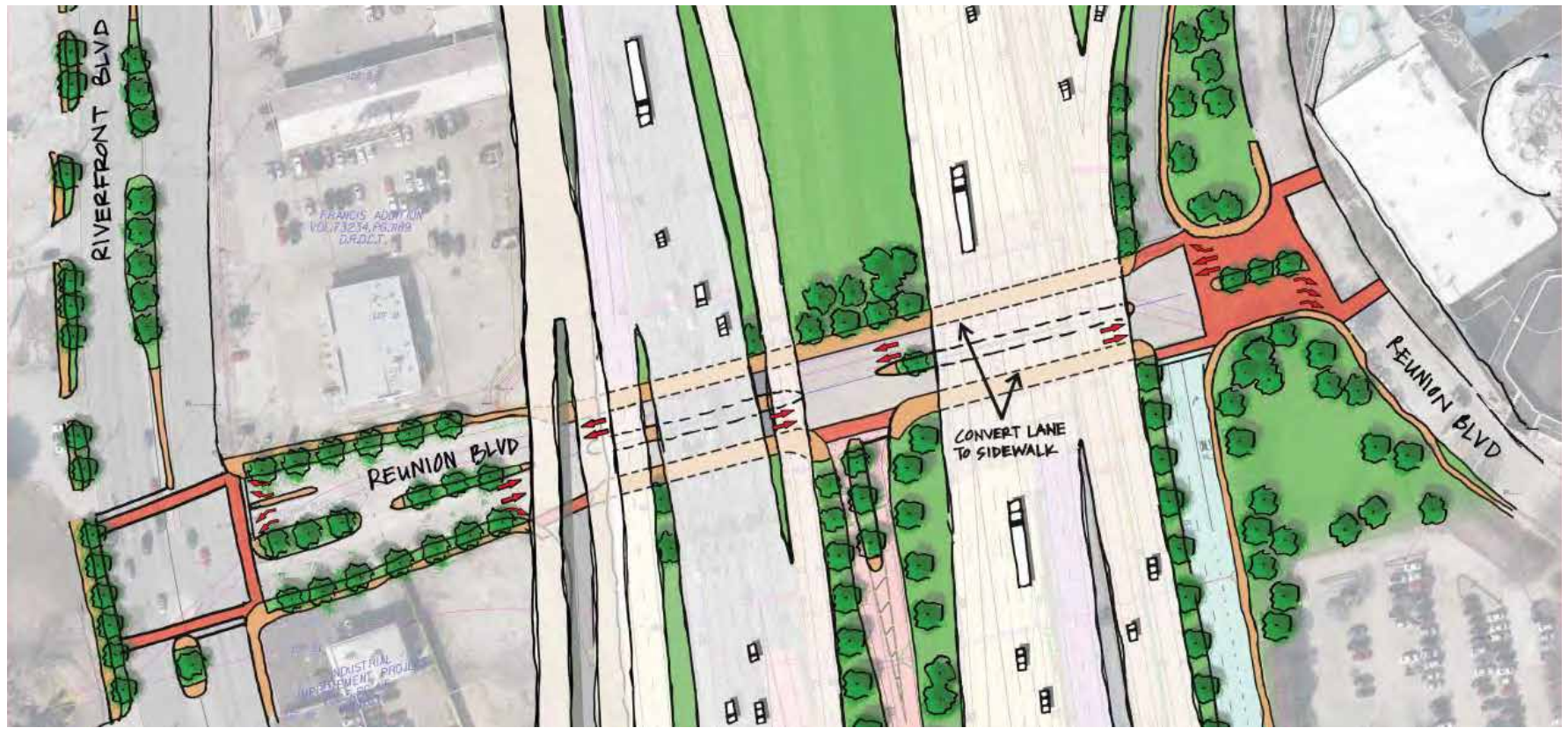
The City of Dallas does not currently have any formalized plans to enhance bicycle and pedestrian facilities within this corridor.

REUNION BOULEVARD SCENARIO

Enhancing the walkability of the corridor by widening the existing sidewalks and creating a pedestrian crosswalk across Reunion Boulevard at Riverfront Boulevard was specifically expressed by stakeholders. The concept shown on the right illustrates the one design option that would utilize one lane of traffic on Reunion Boulevard to provide a wider pedestrian zone from Reunion to Riverfront Boulevard. All of these improvements to the pedestrian zone should include painting all structural surfaces and new bright LED lighting. Similar to the Continental Boulevard recommendations, the proposed improvements would provide for an enhanced pedestrian connection between future Trinity River development and Riverfront Boulevard and the Reunion area and Hyatt Regency.

LOS for Reunion Boulevard

Street	From	To	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Reunion	Riverfront	Reunion E/W	Existing	37,500	14,532	0.39	A/B	26,495	0.71	D



REUNION BOULEVARD TWO LANE OPTION *Source: HNTB*



REUNION BOULEVARD TWO LANE OPTION *Source: HNTB*



REUNION BOULEVARD TWO LANE OPTION *Source: HNTB*

I-35E LOWEST STEMMONS - IMPROVED CONNECTIONS | KLYDE WARREN PARK

BACKGROUND

Klyde Warren Park opened in 2012 to much excitement and anticipation. Over the past four years, it has perhaps been more successful than anyone could have possibly imagined. Dallas citizens and visitors alike enjoy the park that now connects the urban core of Dallas to neighborhoods to the north. Due to the park's resounding success, efforts are now being explored to expand the park from North St. Paul Street where the park currently ends west to North Akard Street. Concepts for the potential expansion as well as future program elements of the westward park expansion were shared with the CityMAP team in a meeting with members of the Klyde Warren Park Foundation. The process is very early, but elements such as future office space, a potential restaurant, parking for visitors and additional parks and open space were all part of the expanded park program presented.

The Klyde Warren Park Foundation also envisions a potential pedestrian connection to the Perot Museum of Nature and Science and future DART light rail station planned near the museum. Conceptual renderings of this expansion are depicted below, but are also subject to change as the program becomes more refined and as design develops further. At the request of the CityMAP team, the Klyde Warren Park Foundation provided the following existing conditions and plans underway descriptions.

EXISTING CONDITIONS

Klyde Warren Park serves as a central gathering space for Dallas and its visitors. The 5.2-acre deck park is an urban green space built over the recessed Woodall Rodgers Freeway between Pearl and St. Paul streets in downtown Dallas. Klyde Warren Park is a highly active space, providing daily free programming for the public ranging from yoga to lecture series to outdoor concerts and films. The park is privately operated and managed by the Woodall Rodgers Park Foundation.

PLANS UNDERWAY

The Klyde Warren Park Expansion Project seeks to:

1. Provide pedestrian friendly connectivity between the Perot Museum of Nature and Science through Klyde Warren Park to the Dallas Arts District
2. Create an expanded and enhanced Klyde Warren Park to better serve the Dallas community through improved pedestrian safety, enhanced user experience, increased programming and event opportunities, maximized revenue sources for Park operation and increased economic benefits for Dallas taxpayers.



KLYDE WARREN PARK DINING *Source: Klyde Warren Park*



KLYDE WARREN PARK PEDESTRIAN BRIDGE *Source: Klyde Warren Park*

I-35E LOWEST STEMMONS - IMPROVED CONNECTIONS | OBSERVATIONS AND CONSIDERATIONS

Lowest Stemmons is the 2.3 mile long segment of I-35E located between Oak Lawn Avenue and the I-30 Dallas Horseshoe. It is an urban highway with five travel lanes in each direction, frontage roads, and direct connections to I-30, the Dallas North Tollway, Woodall Rodgers Freeway, and ramps to/from Hi Line, Singleton Blvd., and Elm, Main, and Commerce Streets. Through these connections Lowest Stemmons provides access to numerous districts, neighborhoods, and major activity centers, including Downtown Dallas, Uptown, Oak Lawn, Oak Cliff, Victory and the Design district. Lowest Stemmons serves over 200,000 vehicles per day and is one of the most congested highway segments in the State of Texas.

TxDOT is currently in the early planning stages of a $100M project designed to ease congestion in the Lowest Stemmons corridor. TxDOT has identified a preferred alternative, and is coordinating with the City of Dallas and local stakeholders. Construction in expected to be complete in late 2019 or early 2020.

Many of the CityMAP project stakeholders provided feedback on this corridor. They expressed a desire to create more walkable, mixed-use developments, and to improve mobility and connectivity for pedestrians and bicyclists across the freeway corridor and through to the surrounding neighborhoods and districts. Stakeholder recommendations included improvements to and/or provision of new pedestrian and bicycle connections to the Katy and Trinity Strand Trails, and at Oak Lawn, Hi Line, Victory Station, Continental Avenue, Commerce Street, and Reunion Boulevard.

VISUAL IMPACT

The I-35E Lowest Stemmons operational improvements generally involve the construction of collector distributor lanes and ramp/frontage road modifications. Changes to the existing general purpose lanes will be minimal and their at-grade and above grade profile will remain. Detailed cross sections for these improvements are not yet available but we anticipate that 0% of Lowest Stemmons will be in a below grade condition. The ability to convert Lowest Stemmons to a below grade facility is primarily limited by the need to connect to the I-30 Trinity Bridge/Horseshoe project, Woodall Rodgers Freeway, the Dallas North Tollway and I-35E north of Oak Lawn.

QUICK WIN PROJECTS

Because it will be several years before the Lowest Stemmons project is implemented, the CityMAP Team has identified several “Quick Win” project opportunities. These are projects that address stakeholder desired pedestrian and bicycle access and connectivity improvements in the near term and for relatively small amounts of money.

These “Quick Wins” generally involve cosmetic improvements to make existing freeway underpasses more inviting to pedestrian and bicycle traffic. Many of these would function as interim improvements that address immediate needs, but that could also be improved upon as a part of the Lowest Stemmons project. These improvements could include the following:

- Cleaning and painting of the underside of existing bridge structures, including columns and bent caps;
- Inclusion of LED lighting or additional under bridge illumination to promote both daytime and nighttime use by improving visibility and user safety;
- Affix bolt-on stainless steel ornamentation to bridge columns as aesthetic enhancements (similar to Maple/Routh Street underpass at Woodall Rodgers);
- Repairs to existing sidewalks or adding new sidewalks and accessible curb ramps where none currently exist;
- Widening existing sidewalks up to 12 feet wide or as space permits;
- Pavement markings and signage to designate existing vehicular lanes as shared vehicular/bicycle lanes;
- Removal of weeds/underbrush that can create hiding places or collect trash;
- Use of decorative stone inert mulch as groundcover for bare dirt areas under structures;
- Improve traffic signalization to calm traffic and to facilitate pedestrian/bicycle crossings; and
- Additional security enhancements.

FACILITY CAPITAL COST

The CityMAP scenario limits for I-35E Lowest Stemmons is from I-30 to Oak Lawn Boulevard a distance of approximately 1.9 miles. The scenario is based on a recent 2015 TxDOT conceptual plan to construct collector distributor roads and reconstruct portions of frontage roads. The conceptual plan is very preliminary and was generated for a workshop. The total preliminary estimated project cost for the conceptual plan is approximately $100 million and does not include utility relocation costs. This estimate was prepared independent of CityMAP and should be a high level planning estimate that will be refined as the design advances.

The focus of the CityMAP scenario for the Lowest Stemmons is to improve connectivity particularly for bike and pedestrian use. The scenario identifies options that may include LED lighting, painting of structural elements, landscaping, hardscape, sidewalks/trails at the following locations:

- Improvements under I-35 E at Oak Lawn;
- Improvements under I-35E and TRE Railway at Hi Line Drive;
- Shared use path under I-35E providing access to DART Victory Station from Design District;
- Improvements under I-35E and TRE Railroad at Continental Avenue/Lamar;
- Improvements under I-35E at Commerce Street; and
- Improvements under I-35E at Reunion Boulevard.

Specific designs for these improvements have not been established. A high level estimated cost of $15 million is anticipated for all of the six locations above. This amount will change as the design is established and funding responsibilities are determined.

The I-35E Lowest Stemmons facility capital cost estimate is in the range of $100 - $499 million. Further discussions by the project partners are necessary to refine the scope of the improvements and define funding responsibilities.

The proposed Circuit Trail connecting the Katy Trail and Trinity Strand Trail over I-35E is being managed by another organization and a construction cost estimate and information concerning funding sources are not available at this time.

FACILITY DEVELOPMENT AND CONSTRUCTION DURATION

TxDOT has advanced the Lowest Stemmons project into project development for operational improvements. A new environmental assessment (EA) would be performed with FHWA environmental clearance expected in late 2016. Detailed design and procurement would be completed in 2017. Construction of the operational improvements would begin in 2018 and have an approximate duration of three (3) years, with a completion in 2021.

The facility development and construction duration for the Lowest Stemmons project would be approximately six (6) years.

FACILITY OPERATION AND MAINTENANCE COST

The delineation of responsibilities for operation and maintenance of each facility should be established at the same time agreement is reached for funding of construction. This becomes particularly important as facilities become more complex and traditional responsibilities may be inadequate.

In the case of I-35E Lowest Stemmons, some of the enhanced connectivity components could have operation and maintenance costs which need to be accounted for. In particular, decisions involving the inclusion and location of the connectivity components demand that operation and maintenance responsibilities are clearly established so that the components remain an amenity for the community.

For most of the city building infrastructure, the O&M responsibilities would generally fall to the city, private developers or public-private entities such as improvement districts that may be involved. For the Lowest Stemmons project there are significant opportunities for groups in Victory, the West End, Design District and Riverfront Boulevard to organize programming and improve facilities along the Lowest Stemmons corridor.



LOWEST STEMMONS AT VICTORY STATION *Source: Google Earth*

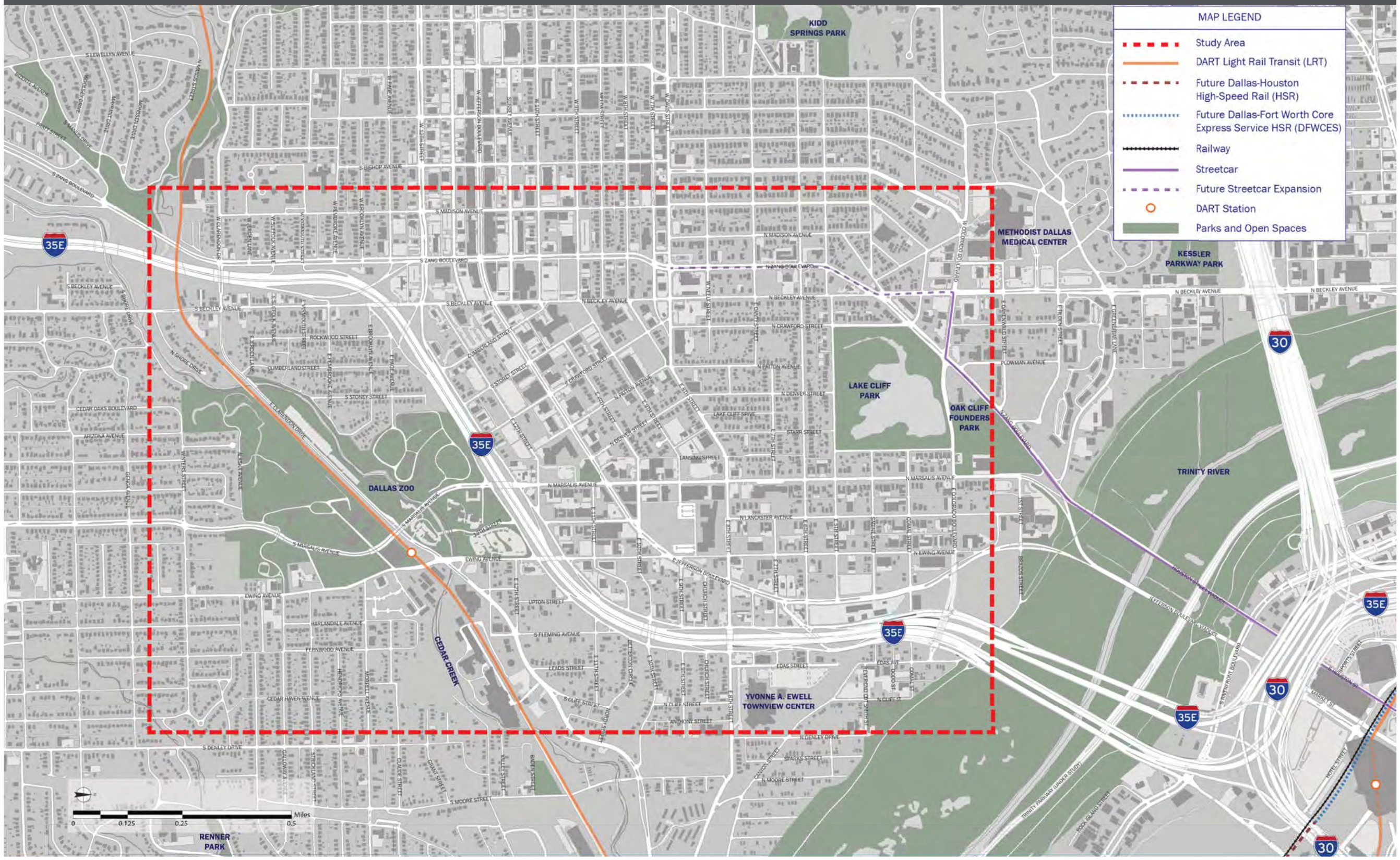
CORE AREA MAP

CHAPTER 7 | I-35E THE SOUTHERN GATEWAY SCENARIO



I-35E Looking North *Source: Dallas Morning News*

I-35E THE SOUTHERN GATEWAY SCENARIO | EXISTING CONDITIONS



DRAFT | JUNE 10, 2016

I-35E THE SOUTHERN GATEWAY SCENARIO | OVERVIEW

TxDOT's The Southern Gateway (TSG) project would improve I-35E from US 67 to Reunion Boulevard and along US 67 from I-20 to I-35E, a total length of approximately 11 miles. TxDOT is currently finalizing design schematics and environmental clearances for this project. The proposed 11 mile project generally includes the following:

- I-35E between Colorado Boulevard and Reunion Boulevard: convert two reversible HOV lanes to two reversible non-tolled express/managed lanes.
- I-35E from US 67: Full reconstruction to include two reversible non-tolled express lanes, increasing the mainlanes from 8 to 10, and modifications to the frontage roads.
- US 67 from I-20 to I-35E: Partial reconstruction to change existing concurrent HOV lane to one reversible non-tolled express managed lane within the existing median and widening the mainlanes from 4 to 6 along with slip ramp modifications.



The non-tolled express/managed lanes would be open to all users including HOV's and would function as general purpose lanes with limited access. As a managed lane, the operations could change over time.

CITYMAP SOUTHERN GATEWAY SCENARIO DESCRIPTION

The CityMAP scenario for TSG is limited to only the 2 mile portion of I-35E to be reconstructed from Colorado Boulevard to north of Clarendon Drive. This portion of I-35E was selected because of stakeholder input, the proximity to the downtown core and because it would involve full reconstruction. The selection of study limits was primarily an urban design decision and is not the basis for how the project would be funded. In this report when reference is made to scenario it is referring to just the 2 mile portion and not the larger, overall Southern Gateway project.

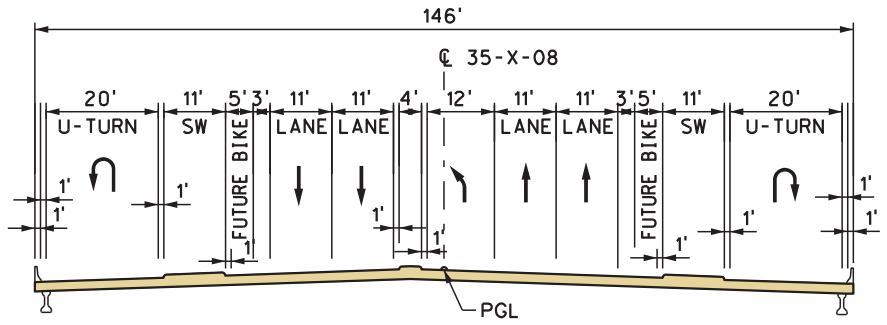
Unlike most of the other scenarios, the TSG project was in the midst of design and stakeholder outreach by the TxDOT schematic team while, at the same time, CityMAP was conducting listening sessions. Given the level of interest, CityMAP began to study the TSG with a focus on the area of I-35E, generally in the vicinity of the Dallas Zoo. Included in this effort was a series of stakeholder meetings and initial design concepts were developed for a scenario and shared with the schematic design team.

The input received by the TxDOT schematic team and the CityMAP team included some significant departures from the prior schematic presented in the Summer of 2015. This input was considered and TxDOT decided to proceed with extensive design changes to the TSG Project schematic as a result. The most notable change to the project is that the managed lane will not be proposed as a toll facility. Instead a non-tolled express/managed lane facility open to all users will be implemented.
For the portion of I-35E being reconstructed north of US 67 the schematic

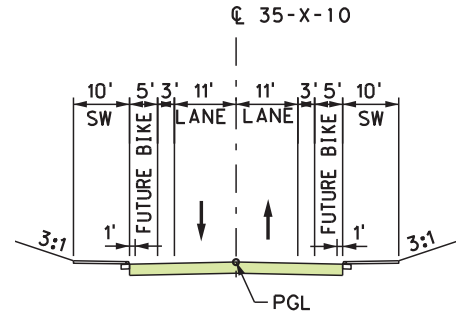
FACILITY DEVELOPMENT AND CONSTRUCTION DURATION



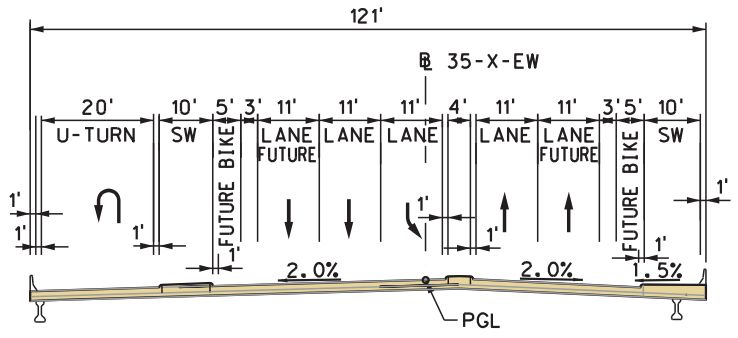
design was modified to a more compact urban freeway cross section, similar in appearance to US 75 Central Expressway. This change resulted in less right of way impacts and fewer business and residential displacements but required significantly more retaining walls and other costs. The profile of I-35E was also modified to allow 10th Street to underpass I-35E as a two lane street with 5-ft wide bike lanes and 10-ft sidewalks in both directions. A 3-ft wide painted buffer is included to separate the bike lanes from street travel lanes. Cross street bridges at 8th Street, Ewing Avenue, Marsalis Avenue, 12th Street and Beckley Street were revised to include 5-ft wide bike lanes with 3-ft wide painted buffer on each side. These bridges also include 10-ft wide sidewalks in each direction, except that 8th Street and Marsalis Avenue bridge sidewalks will be 11-ft wide. These "complete street" bridges will allow improved pedestrian and bicycle linkages across I-35E and would connect to cross streets as the City implements complete streets improvements in the future. Frontage roads along I-35E will include 14-ft wide outside lanes that allow for shared use with bicycles. This is consistent with standard TxDOT practice.



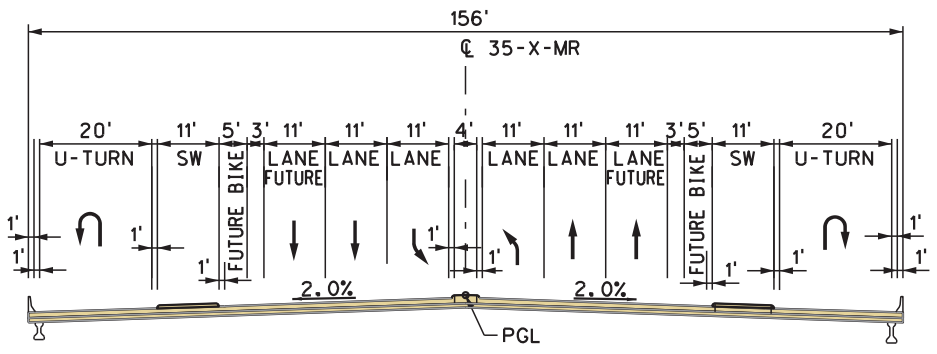
CROSS STREET
8TH STREET



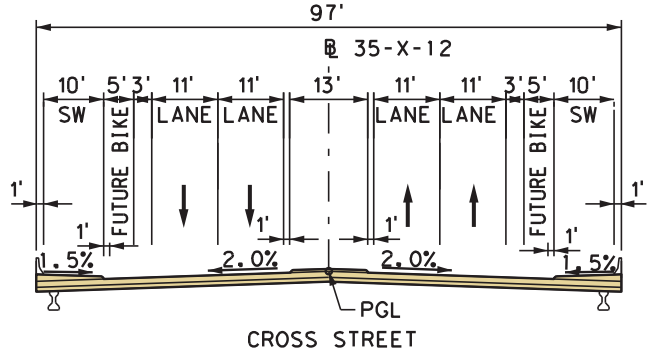
CROSS STREET
10TH STREET



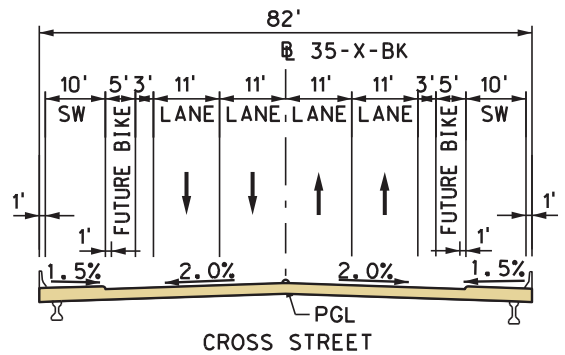
CROSS STREET
EWING AVENUE



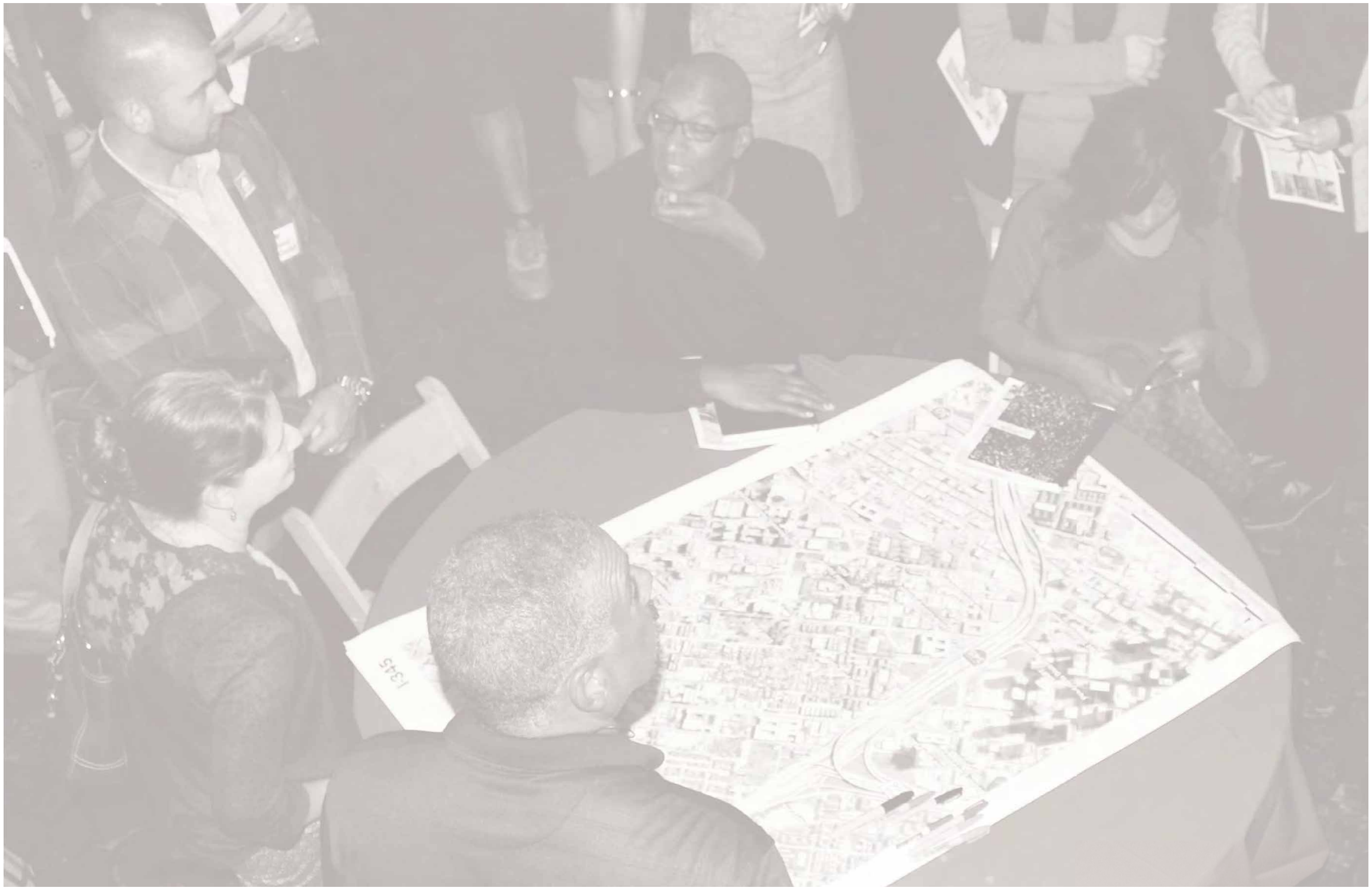
CROSS STREET
MARSALIS AVENUE



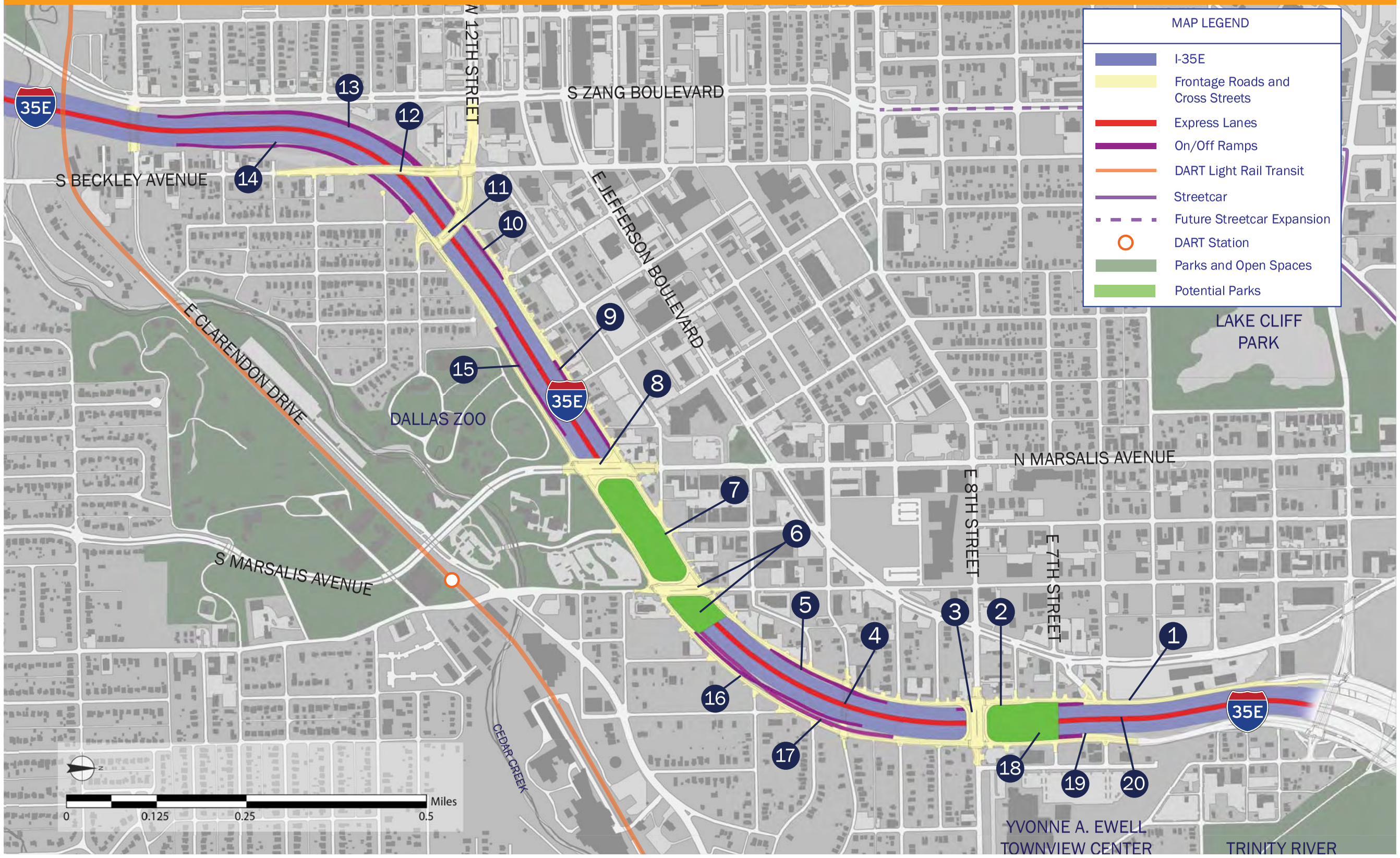
CROSS STREET
12TH STREET



CROSS STREET
BECKLEY STREET



I-35E THE SOUTHERN GATEWAY | SCENARIO MAP



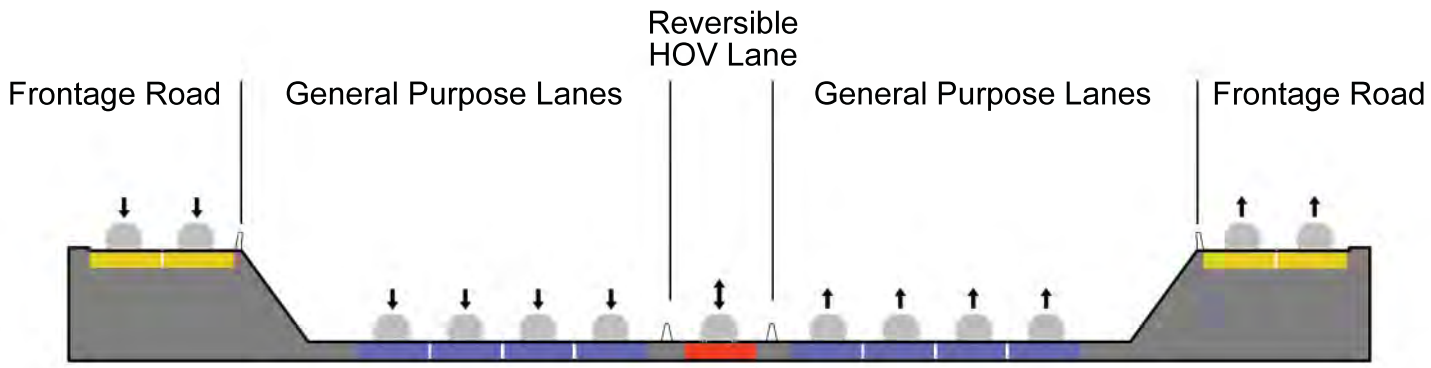
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PLAN NOTES: I-35E THE SOUTHERN GATEWAY

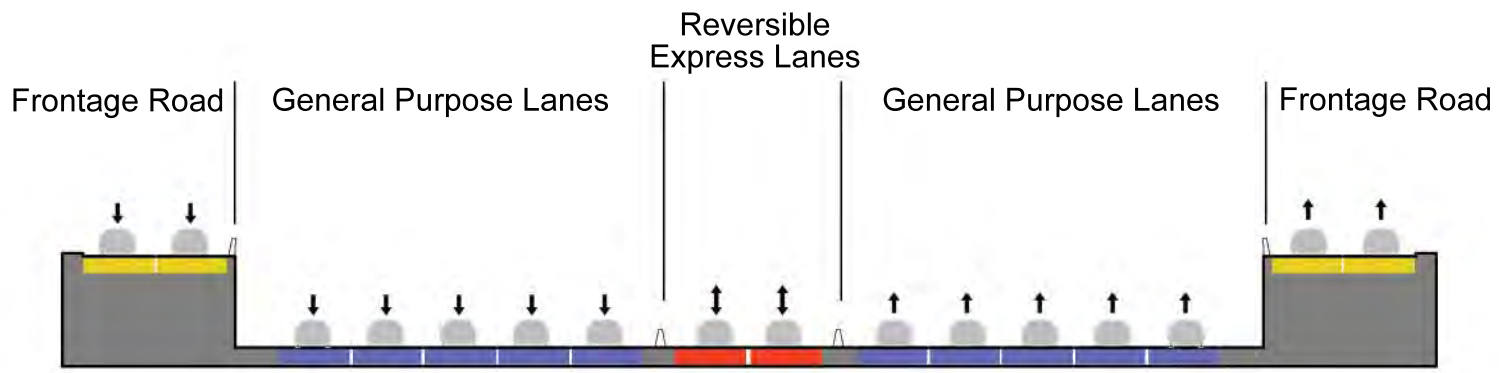
1. Southbound I-35E Frontage Road
2. Southbound I-35E entrance ramp from Frontage Road at Colorado Boulevard
3. 8th Street Bridge over I-35E
4. I-35E Bridge over 10th Street
5. Southbound I-35E exit ramp to Frontage Road at Ewing Avenue
6. Ewing Avenue Bridge over I-35E and possible deck park north of Ewing Avenue
7. Possible Deck Park between Ewing and Marsalis Avenues.
   This location requires the following changes:
   - Zoo entry relocates to Ewing Avenue
   - City improves Ewing Avenue to accommodate Zoo traffic
   - Vertical profile of NB frontage road raised and walls modified

   The Deck Park configuration will be studied and may require reduced length and/or openings to avoid the need for ventilation equipment.
8. Marsalis Avenue Bridge over I-35E
9. Southbound I-35E exit ramp to Frontage Road
10. Southbound I-35E entrance ramp from Frontage Road
11. 12th Street Bridge over I-35E
12. Beckley Avenue Bridge over I-35E
13. Zang Boulevard ramp to southbound I-35E
14. Northbound I-35E exit ramp to Frontage Road at 12th Street
15. Northbound I-35E entrance ramp from 12th Street
16. Northbound I-35E braided entrance ramp from Ewing Avenue
17. Northbound I-35E braided exit ramp to Frontage Road at 8th Street (over 10th Street)
18. 8th Street Deck Park explored (likely not possible due to existing mainlane profile and Horseshoe impacts)
19. Northbound I-35E exit ramp to Frontage Road at Colorado Boulevard
20. Two (2) reversible non-tolled express lanes

CROSS SECTIONS



EXISTING



SCENARIO

Ultimately, the TSG scenario adopted the revised TxDOT schematic design for the portion of the TSG project within the CityMAP limits, as a baseline. There are some additional enhancements that were considered by CityMAP for the TSG scenario that involve further input by the City. This discussion primarily involves determining if there is adequate interest and funding for a deck park across I-35E. The CityMAP scenario studied three locations for a deck park including the following:

- From 8th street to 7th street: This location offers noteworthy views of the downtown skyline and would provide good linkage to schools along 8th street. The site offers potential for economic development particularly west of I-35E and along Jefferson Boulevard. East of I-35E there are more institutional uses and relatively narrow fronting lots that might limit growth potential. This location would not be feasible without significant design changes to the current schematics including rerouting the southbound frontage road to Jefferson Street, changes to ramp and mainlane profiles, modifying the northbound frontage road to flatten the profile along the deck park site. The deck park site would also require close coordination with the development of the parcels west of the site that would include a multi-story building entering at the deck park level with garage levels under, with the lowest fronting on Jefferson Boulevard. These factors taken together suggest that the option of an 8th Street deck park may not be feasible or would require extraordinary costs to accommodate it.

- From Marsalis to Ewing Avenue: This option assumed that existing entrance to the Dallas Zoo would be relocated from the northbound frontage road to a new location off an improved Ewing Boulevard. This relocation would allow the profile of the northbound frontage road to be raised even with Ewing Avenue and Marsalis Avenue. The option assumes that a retaining wall would be constructed along the frontage road right of way and the zoo would construct a multi-use building fronting at the deck park level with garage levels under that would be accessed from below. This option would include several alternatives including a large deck park that would extend the full length and width of I-35E from Ewing Avenue to Marsalis Avenue. Pedestrian access to the deck park would be at the cross street bridges. We would anticipate the addition of a mid-block signalized crossing where Lancaster Street meets the frontage road. The frontage road would also be modified to include on-street parking and reduced lane widths for traffic calming. Smaller footprints for the deck park could be considered to reduce construction and operation/maintenance costs. The feasibility of this location would be highly dependent on the participation of the Dallas Zoo to manage, program and maintain the park.

- North of Ewing Avenue: This site offers potential economic development on both the east and west frontages of I-35E. However, the location is limited by the I-35E exit ramp to the southbound frontage road just north of Ewing Avenue and by the I-35E entrance ramp from the northbound frontage road, just north of Ewing Avenue. This northbound entrance ramp eventually braids with a northbound exit ramp near 11th Street. As a result, access to the deck park would be limited to the bridge at Ewing Avenue. Barriers to prevent pedestrians from crossing the frontage roads to access the deck park would be needed. This arrangement would not provide the sense of linkage that the Klyde Warren Park demonstrates.

While there has been public discussions regarding a possible deck park over I-35E in the TSG scenario area, there has not been a formal decision made. To help inform this decision the following information is provided.

- The cost to construct a deck park is a significant investment and funding sources would need to be identified. Each situation is different but TxDOT funds would not be used for this purpose. This means that City and private funds would need to be identified.

- Provisions for deck parks are not included in the TxDOT TSG design schematic. Such provisions would require that funding, operation and maintenance agreements are in-place to assure that the deck park project would occur.

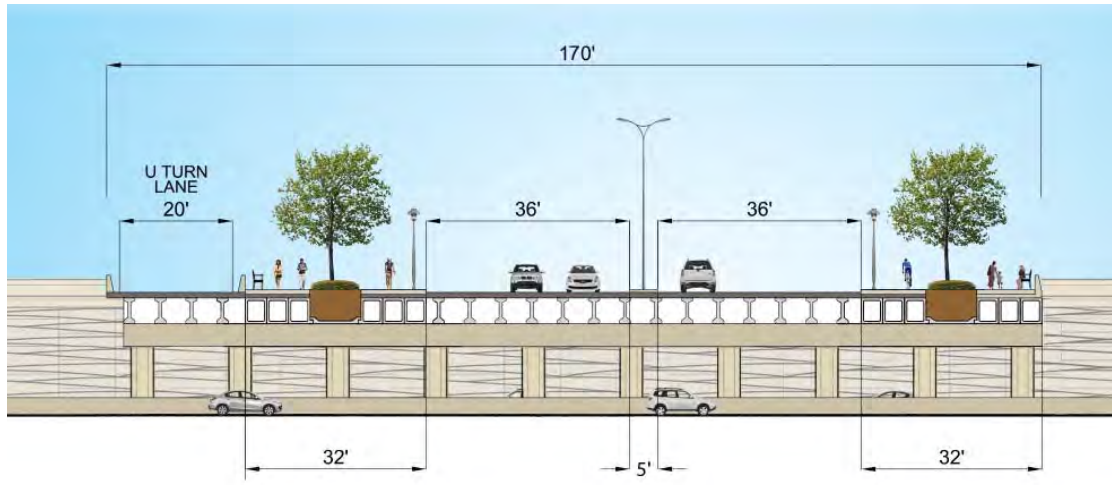
- The construction of a deck park over a highway requires that a detailed roadway tunnel engineering analysis is performed. Tunnel lengths designed to be less than 800 feet in length can typically be shown to not require mechanical ventilation. These tunnels would have emergency system requirements for traffic control and fire protection standpipes as well as other requirements for tunnel lighting and closed drainage systems for fuel spills. Tunnel lengths longer than 800 feet in length have additional emergency and life safety requirements including mechanical ventilation systems. These requirements need to be considered in the cost to construct, operate and maintain.

- The level of investment involved in a deck park demands that a superior site be available. More detailed investigations will be needed to study the locations examined in this study in greater detail.

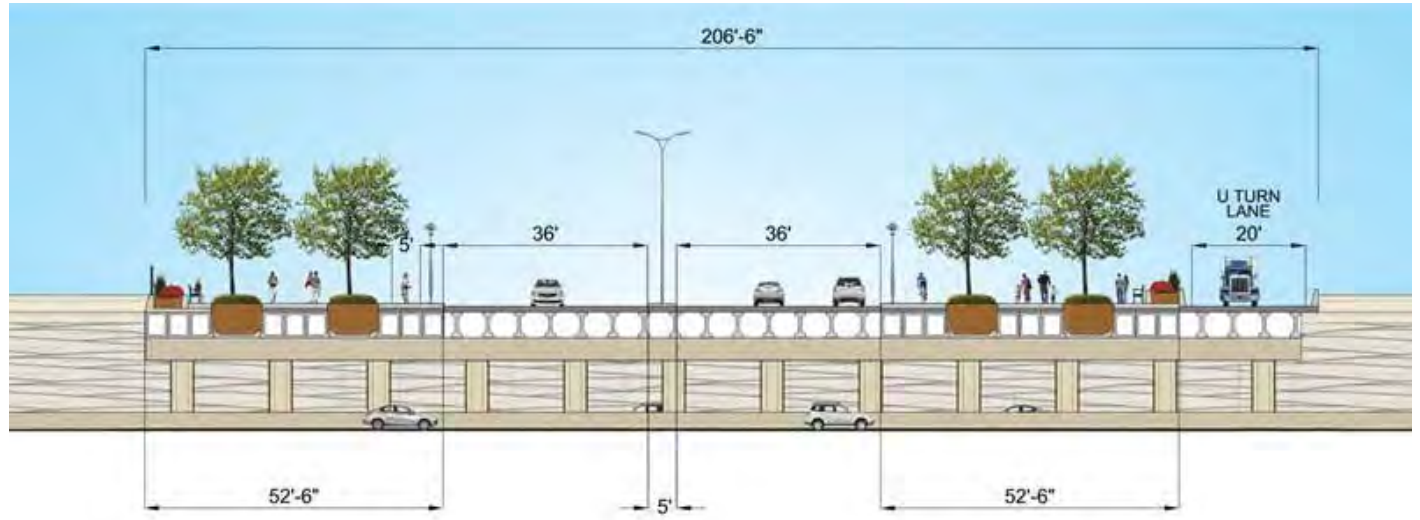
CityMap also developed options for wider “landscaped bridges” that would provide pedestrian zones that are even wider than the complete street bridges on the schematic design. These bridges would be designed to allow for tree plantings and/or feature structures, similar to a deck park. They would be much smaller in size and less costly to construct, operate and maintain than a larger deck park with programmed activities. However, these “landscaped bridges” involve added expense and are not included in the TxDOT baseline project and are not shown on the design schematic.

The TSG project procurement is expected to begin later in 2016. The window of time to establish funding and maintenance agreements for enhancement items is quickly closing if the goal is to add any of this work into the highway reconstruction project.

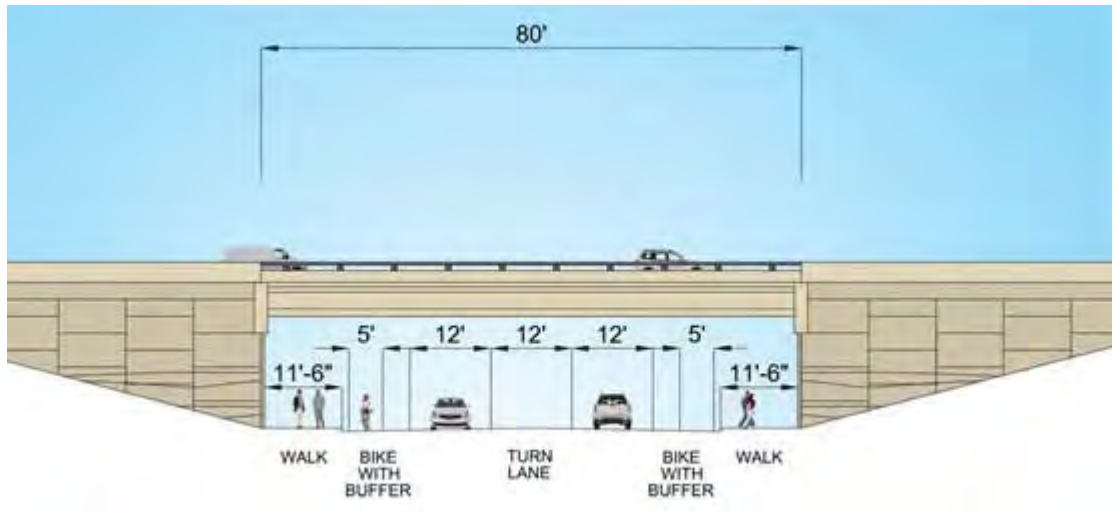
8TH STREET



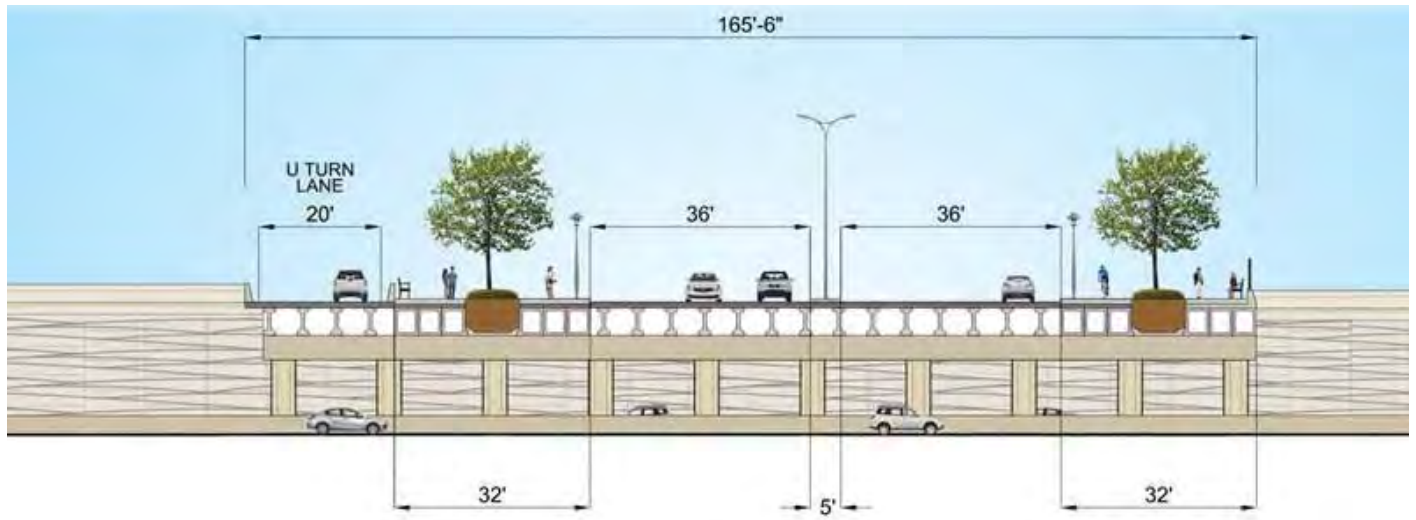
EWING AVENUE



10TH STREET



MARSALIS AVENUE

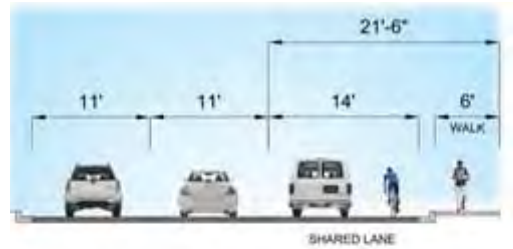


12TH STREET



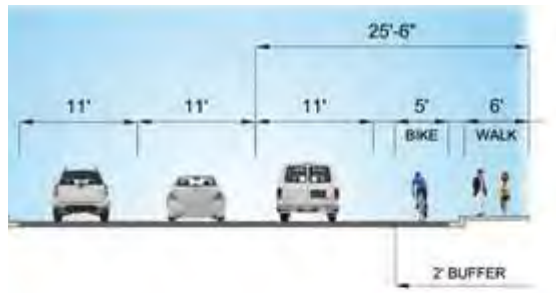
(BECKLEY STREET BRIDGE IS SIMILAR BUT WITHOUT A CENTER MEDIAN)

FRONTAGE ROAD CONCEPTS

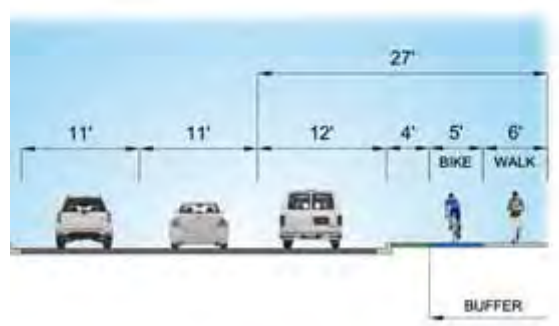


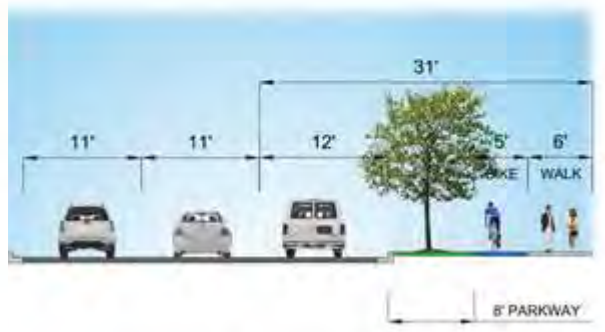
FRONTAGE ROAD WITH SHARED BIKE LANE - STANDARD SECTION

SHOWN ON SCHEMATIC DESIGN



FRONTAGE ROAD - SEPARATE BIKE LANE OPTION





FRONTAGE ROAD - RAISED BIKE LANE WITH STREET TREES OPTION

ADDITIONAL ENHANCEMENT OPTIONS WOULD REQUIRE ADDITIONAL RIGHT OF WAY

METHODOLOGY

The I-35E/US 67 Southern Gateway Scenario, like I-35E Lowest Stemmons Scenario, uses the same configuration for I-35E that is currently anticipated in Mobility 2040. Similarly, there is no comparison of Study Area mobility performance factors. The Performance Factors are presented for specific locations on I-35E in the Evaluation discussion.

SCENARIO DESCRIPTION: I-35E SOUTHERN GATEWAY

The Southern Gateway is the project name for I-35E between I-20 and Colorado Boulevard (the southern end of the Horseshoe Project) and US 67 from I-20 to its interchange with I-35E. The I-35E and US 67 plans included in the CityMAP scenario are functionally equivalent to the current plans under development by TxDOT at the time of this writing and assumed in the 2040 Preliminary Network. From US 67 north the network will be improved to accommodate five general purpose lanes in each direction, an increase over today's eight-lane freeway. The project will include a two-lane, reversible HOV/Express or special purpose lane which is double the existing one-lane, reversible facility. The shorthand designation for this lane configuration is 5-2R-5.

In addition to the change in the number of lanes, the proposed project makes operational and safety changes including: elimination of the northbound ramp to Zang Boulevard; improving the roadway geometry at the "Zang Curve"; improvements to the 12th Street Connection; and, the addition of frontage road U-turns at Marsalis Avenue, Ewing Avenue (north side only), and Eighth Street

EVALUATION: I-35E /US 67 SOUTHERN GATEWAY



The table compares performance factors on I-35E general purpose lanes in the vicinity of the Jefferson District and the Dallas Zoo. This Scenario differs only in the configuration of the Trinity Parkway so there would not be much difference in performance between the Base and the scenarios. The demand/supply comparison indicates that daily volumes would exceed capacity by about 20 percent.

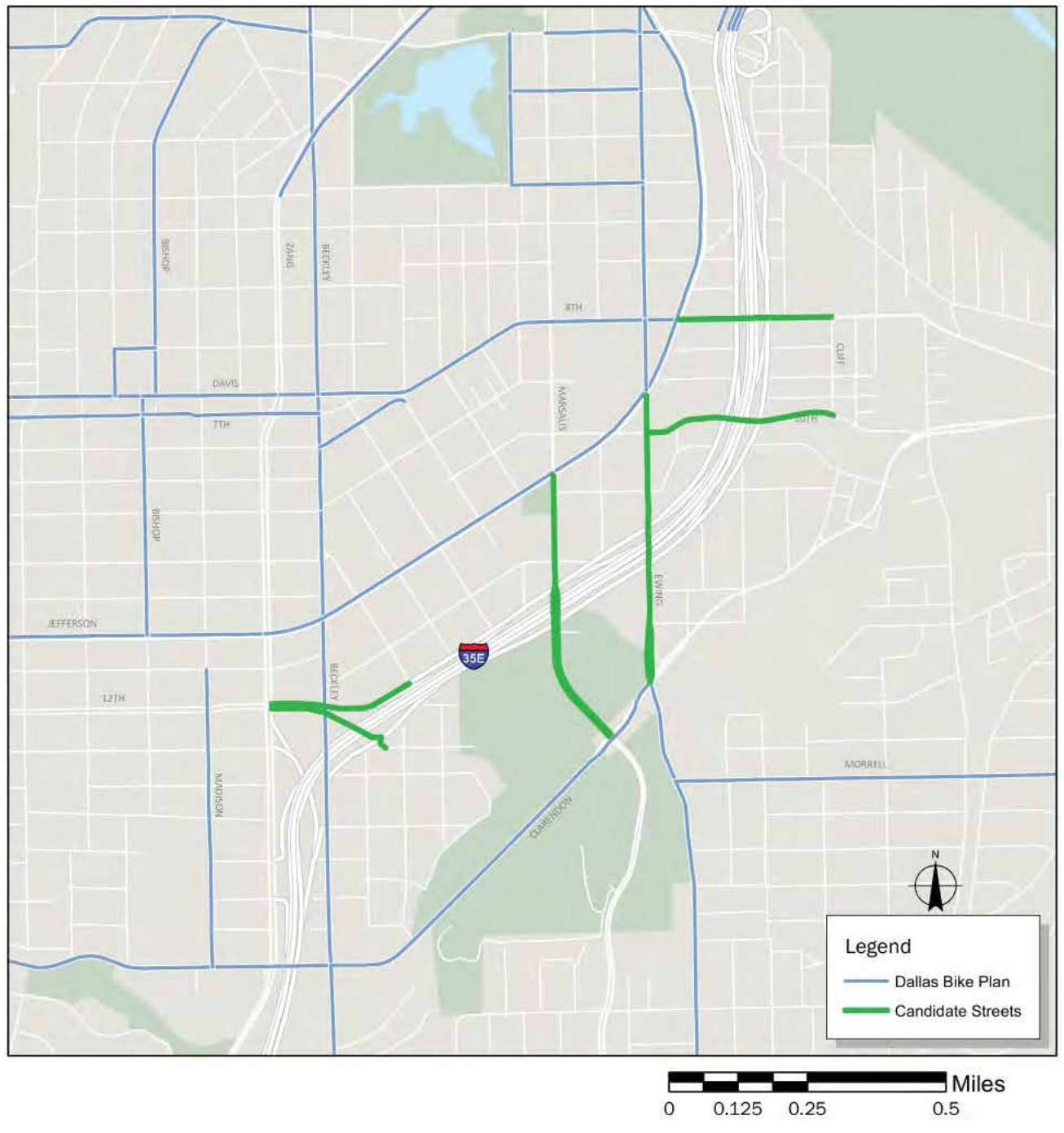
Transportation Indicators for I-35E Southern Gateway	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	Southern Gateway CityMAP Scenario
Average Daily Volume	234,000	258,000	290,000	288,000
Average V/C Ratio	1.28	1.41	1.22	1.21
Level of Service	F	F	F	F
Average Travel Speed (mph)	35	27	35	35
Hours of Delay per Mile	3,491	6,754	4,656	4,487

I-35E THE SOUTHERN GATEWAY | CONNECTIVITY OPPORTUNITIES

Oak Cliff is one the most scenic and well located communities in the region as it is immediately across the Trinity River floodway west of downtown. Traveling north on I 35E under 8th Street a motorist begins to encounter one of the most spectacular views of the iconic downtown Dallas skyline. The Southern Gateway (TSG) includes I 35E and US 67 from the county line to the Trinity River. TSG corridor has already become the center of attention of local community leaders and is fast becoming the focus of new development and a potential renaissance in housing and neighborhood revitalization. The CityMAP team has explored improvements to the thoroughfare connections across the I 35E corridor at 8th Street, 10th street, Ewing Avenue, Marsalis Avenue and 12th Street.

TxDOT is about to issue a schematic for improvements to TSG and an RFP for design-builders to complete the design. The CityMAP team offers the following improvement concepts for consideration with the goal of improving a sense of connectivity between neighborhoods and districts on either side of the freeway corridor. Over the months of community input and numerous listening sessions with principal stakeholders, the CityMAP team developed numerous concepts for improved roadway cross sections and much of the work has already influenced the schematic development process.

The Dallas CityMAP team analyzed traffic volumes on local streets in the study area based on the base case model for the year 2018 and Southern Gateway Scenario model for the year 2040. Streets where the volume to capacity ratio was 0.7 or less were considered as candidate streets. CityMAP explores a series of alternatives for making key roadways more walkable and bikeable and enhancing connectivity by using tools presented in the Complete Streets Design Manual, Dallas Bike Plan, and other sources. Each roadway has been evaluated based on the following attributes presented in the Existing Cross Sections Analysis table below: Functional Classification, Capacity, ADT, Existing and Future V/C, roadway cross-section attributes, existing bicycle and pedestrian facilities.



Southern Gateway Existing Cross Sections

Street	From	To	Area Type	Functional Class	Capacity	2018 ADT	Existing V/C	2040 ADT	2040 V/C	One Way Two Way	Median Type	Total Lanes	Parking	Bike Facility
8th	Jefferson	I-35E FR SB	CBD Fringe	Principal Arterial	23,000	8,434 [1]	0.37	13,153	0.57	2	Undivided	4	0	0
8th	I-35E FR SB	I-35E FR NB	CBD Fringe	Principal Arterial	23,000	7,837 [2]	0.34	15,927	0.69	2	Undivided	4	0	0
8th	I-35E FR NB	Cliff	CBD Fringe	Principal Arterial	23,000	12,012 [1]	0.52	15,653	0.68	2	Undivided	4	0	0
10th	Jefferson	Ewing	CBD Fringe	Minor Arterial	11,500	541 [1]	0.05	393	0.03	2	Undivided	2	2	0
10th	I-35E FR SB	I-35E FR NB	CBD Fringe	Minor Arterial	23,000	2,857 [2]	0.12	1,697	0.07	2	Undivided	4	0	0
10th	I-35E FR NB	Clarendon	CBD Fringe	Minor Arterial	11,500	4,557 [1]	0.40	5,541	0.48	2	Undivided	2	0	0
Ewing	8th	I-35E FR SB	CBD Fringe	Principal Arterial	11,500	2,459 [2]	0.21	4,317	0.38	2	Undivided	2	1	0
Ewing	I-35E FR SB	I-35E FR NB	CBD Fringe	Principal Arterial	23,000	5,399 [2]	0.23	7,385	0.32	2	Undivided	4	0	0
Ewing	I-35E FR NB	Clarendon	CBD Fringe	Principal Arterial	11,500	9,584 [1]	0.83	11,718	1.02	2	Undivided	2	0	0
Marsalis	Jefferson	I-35E FR SB	CBD Fringe	Principal Arterial	23,000	7,207 [1]	0.31	13,194	0.57	2	Undivided	4	0	0
Marsalis	I-35E FR SB	I-35E FR NB	CBD Fringe	Principal Arterial	28,750	12,897 [2]	0.45	18,353	0.64	2	Undivided	5	0	0
Marsalis	I-35E FR NB	Clarendon	CBD Fringe	Principal Arterial	25,000	19,270 [1]	0.77	23,533	0.94	2	Divided	4	0	0
12th	Zang	Beckley	CBD Fringe	Minor Arterial	37,500	11,590 [1]	0.31	19,978	0.53	2	Divided	6	0	0

[1] Counts not conducted by KHA and acquired using historical data from NCTCOG or Google Earth Pro.

Parking Nomenclature:

0 - No on street parking

1 - On street parking on one side of the street

2 - On street parking on available on both sides of the street

Bike Facility Nomenclature:

0 - No bike facility

1 - Shared bike lane

2 - Dedicated bike lane

8TH STREET

8th Street is an east-west principal arterial that passes over I-35E and has two lanes in each direction. 8th Street is a vital Oak Cliff thoroughfare providing access not only between neighborhoods on either side of the TSG corridor, but also linking Corinth Boulevard on the east to Bishop Arts on the west. 8th Street is also a dynamic educational corridor connecting the Yvonne A. Ewell Townview Center, Hector Garcia Middle School and WH Adamson High School.

The existing 8th Street cross section over I-35E is four lanes wide with the interior lanes 10' each in width and the outside lanes 20' in width. This cross section operates at LOS A/B in the 2018 model and at LOS D for the 2040 model. In the Improved Connections section, a possible cross section option for 8th would increase the overall width of the bridge to 190' with six lanes and 32' wide spacious sidewalks with landscaping on each side. The LOS for this cross section for 2018 and 2040 model is shown in Table 1. 8th is also on the Bike Plan and opportunities to connect the surrounding neighborhoods via bike facilities to Bishop Arts District should be taken advantage off.

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
8th	Existing	23,000	7,837	0.34	A/B	15,927	0.69	D
8th	Possible	37,500	7,837	0.21	A/B	15,927	0.42	A/B

TABLE 1 *LOS for Existing and Possible Cross Sections for 8th St. Over I-35E*

10TH STREET

10th Street is an east-west minor arterial crossing under the I-35E corridor with two lanes in each direction. 10th Street connects the residential neighborhoods east of TSG to the commercial districts on the west. Stakeholders in the area have asked City MAP to explore ways to maintain 10th Street as a roadway in the future TSG schematic.

The existing cross section of 10th street underneath I-35E has an approximate curb to curb distance of 42 feet. The cross section consists of two lanes in each direction. Traffic volume projections from the model show that 10th street will not experience heavy volumes in either 2018 or 2040. A possible cross section option shown in the Improved Connections section would consist of two travel lanes and a Two Way Left Turn Lane (TWLTL) in the middle, 5 foot bike lanes on each side, and the riprap would be cut back to allow for wide pedestrian facilities. The LOS for the existing and possible connections for 10th Street underneath I-35E is shown in Table 2 below.

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
10th	Existing	23,000	2,857	0.12	A/B	1,697	0.07	A/B
10th	Possible	12,500	2,857	0.23	A/B	1,697	0.14	A/B

TABLE 2 *LOS for Existing and Possible Cross Sections for 10th St. Under I-35E*

EWING AVENUE

Ewing Avenue is a north-south principal arterial in the I-35E corridor with two lanes in each direction. Ewing Avenue connects the Jefferson Boulevard commercial district on the north to I-35E and south to the Dallas Zoo parking and the residential neighborhoods south of Clarendon.

The existing Ewing Avenue cross section over I-35E is approximately 42 feet from curb to curb. The cross section consists of four lanes with one lane in each direction dedicated for left turns only. The CityMAP team has developed a cross section option for Ewing Avenue (shown in previous section, Improve Connections) bridge crossing over I-35E which would support a dynamic pedestrian realm: wide sidewalks, cycle tracks, and enhance landscaping including the potential for shade trees or shade structures. The LOS for the existing and possible connections for Ewing Avenue over I-35E is shown in Table 3 below. CityMAP discussions with the Dallas Zoo indicate that providing enhanced connectivity north with the Jefferson Boulevard commercial district will improve the way the Dallas Zoo relates to their neighborhood and the larger community.

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Ewing	Existing	23,000	5,399	0.23	A/B	7,385	0.32	A/B
Ewing	Possible	37,500	5,399	0.14	A/B	7,385	0.20	A/B

TABLE 3 *LOS for Existing and Possible Cross Sections for Ewing Ave. Over I-35E*

MARSALIS AVENUE

Marsalis Avenue is a north-south principal arterial in the I-35E corridor with two lanes in each direction. Marsalis Avenue connects the Jefferson Boulevard commercial district on the north to I 35E the Dallas Zoo and the residential neighborhoods south of Clarendon.

The existing Marsalis Avenue bridge crossing over I-35E is approximately 80 feet wide with a curb to curb distance of 66 feet. Marsalis Avenue has two lanes in the southbound direction, a raised median, and three lanes in the northbound direction, one of which is for left turns only. The CityMAP team has developed a cross section option for Marsalis Avenue (shown in previous section, Improve Connections) bridge crossing over I-35E which would consist of six lanes, a median with lighting, spacious sidewalks, dedicated cycle tracks, and enhanced landscaping including potential for shade trees or shade structures. The LOS for the existing and possible connections for Marsalis Avenue over I-35E is shown in Table 4 below. CityMAP discussions with the Dallas Zoo indicate that providing enhanced connectivity north with the Jefferson Boulevard commercial district will improve the way the Dallas Zoo relates to their neighborhood and the larger community.

Street	Cross Section	Capacity	2018 ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Marsalis	Existing	28,750	12,897	0.45	A/B	18,353	0.64	C
Marsalis	Possible	37,500	12,897	0.45	A/B	18,353	0.49	C

TABLE 4 *LOS for Existing and Possible Cross Sections for Marsalis Ave. Over I-35E*

12TH STREET

12th Street is an east-west minor arterial in the I-35E corridor with three lanes in each direction and a direct connect ramp to the freeway. 12th Street is a major thoroughfare in Oak Cliff connecting residential, commercial, and mixed-use neighborhoods to the downtown area and to the I-35E corridor.

APPLICATION OF THE PLANS' POLICIES

Within the context of these plans, the CityMAP team crafted very rough illustrative concepts within the TSG Study Area that could manifest if connectivity is improved across IH-35 through a deck park or, as an alternative, via expanded bridges at 12th Street, Marsalis Avenue, Ewing Avenue, and 8th Street in addition to connectivity maintained through the East 10th Street connection under IH-35. The illustrative concepts described in more detail below represent three distinct focus areas within the larger TSG Study Area.

The TSG Focus Area illustrative development concept fulfills the strategic goals of Neighborhood Plus to improve the neighborhoods' quality of life and housing options in terms of recovering vacant land, improving walkability and focusing on neighborhood preservation. The potential infill development on the west side of IH-35 includes higher densities of retail and multi-family housing as a transition to the Jefferson Corridor and Bishop Arts. On the east side, the infill potential represents fine-grained single family and light neighborhood commercial.

These potential development patterns provide an opportunity to link jobs and housing within the same neighborhood and thus reducing the reliance on automotive transportation as walkability is increased. These potential neighborhood improvements also can support middle class opportunities as property values, better transportation, job access and quality of life amenities are improved. These factors can also support expanded homeownership rates and a greater variety of rental options within the neighborhood.

CHARACTERISTICS OF THE STUDY AREA

CONNECTIVITY

The existing TSG study area performs as two separate areas bisected by IH-35 as it winds its way between South Dallas and the Horseshoe. The two sides are connected at Beckley, Marsalis, Ewing, 10th and 8th Streets. Beckley, Marsalis, Ewing and 8th Street cross over IH-35 and 10th Street underneath IH-35. The west side of IH-35 in the study area, moving from south to north, is the iconic Bank of America building, aging highway oriented commercial, and multifamily scattered among vacant lots. On the East side of IH-35 moving south to north is a working class but stable single family neighborhood, the Dallas Zoo, some highway commercial, a working class neighborhood with many vacant lots and abandoned properties, the Bottoms neighborhood containing the Talented and Gifted Magnet School.

Currently the vehicular crossings connecting the two sides of the South Gateway study area are sufficient in maintaining the network; however, they only serve automobiles effectively as pedestrian and multimodal options are limited.

DRIVERS AND SIGNIFICANT MARKET FACTORS

The primary economic drivers in the study are the Bank of America office building on Beckley, which contains the majority of the office space in the area, and the retail along Jefferson on the western edge of the TSG Study Area. The two elementary schools and the magnet school in the area provide anchors for the community in addition to the Zoo, which attracted over one million visitors in one year for the first time (as of September 2015).

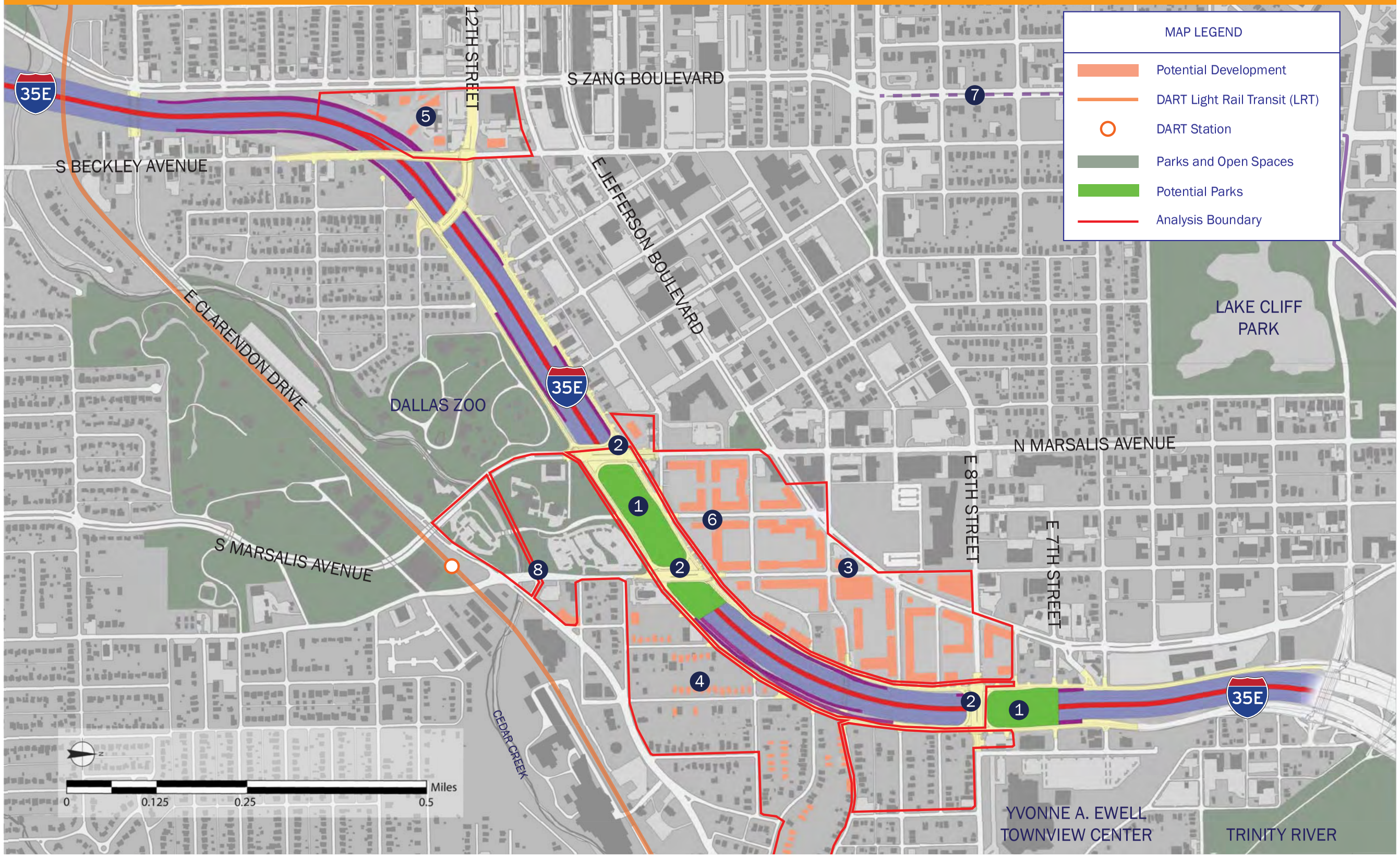
FOCUS AREA CONSTRAINTS AND OPPORTUNITIES

The existing constraints in the focus area are the lack of reinvestment in both commercial and residential properties; the abundance of vacant parcels and abandoned buildings; the limited investment in public infrastructure; and the limited pedestrian connectivity throughout the area. Given the imminent reconstruction of I-35E, a marriage of strategic redevelopment as depicted in the illustrative concepts and a complementary geometric design strategy can protect existing economic activity; spur quality redevelopment and private reinvestment in the area; improve pedestrian connectivity; and bolster the existing economic drivers, in particular the Dallas Zoo.

IMPLEMENTATION

The following enhancements include significant upgraded pedestrian amenities such as deck parks. The presentation of these enhancements do not represent an assignment of cost or responsibility to those enhancements to TxDOT or any other potential partner. TxDOT and FHWA traditionally funds only core facility costs. In addition, the State is facing funding challenges for even basic maintenance obligations. In this context, the realization of the conceptualized enhancements in these scenarios will require additional funding commitments from local public and private partners.

I-35E THE SOUTHERN GATEWAY | DEVELOPMENT MAP



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I-35E THE SOUTHERN GATEWAY | DEVELOPMENT MAP

PLAN NOTES: I-35E THE SOUTHERN GATEWAY

1. Deck improvement potential locations
2. Complete street improvements to promote neighborhood connectivity
3. Mixed-use development
4. Neighborhood infill opportunities
5. Infill opportunities from potential ROW resale
6. Multi-family, mixed-use development
7. Bishop Arts District
8. Potential location for an enhanced zoo entrance

I-35E THE SOUTHERN GATEWAY - IMPROVED CONNECTIONS | FACTOR ANALYSIS

The TSG scenario focused initially on compressing the current geometric design of the corridor to minimize ROW takes and improve connections across and under I-35E. This corridor is different from the others as it is currently in the final schematic design phase. Therefore, the CityMAP team had to provide input quickly to the TxDOT design team to incorporate stakeholder desires. Stakeholders interviewed by the CityMAP team were seeking more connectivity between neighborhoods to the east and neighborhoods and commercial centers to the west of the freeway. For example, when interviewed, Texas Senator Royce West, whose district encompasses most of the CityMAP study area, reminded the team to address the needs of both sides of the freeway in equilibrium. Neither side should be left out of the potential for growth and development as a result of constructing a new I-35E corridor. Others pushed the team to create pedestrian friendly multi-modal connections from the 10th Street Historic District neighborhood and the Dallas Zoo on the south and east to the Jefferson Boulevard commercial district to the north and west. Multiple departments within the City of Dallas desire bridges like Marsalis and Ewing to be designed and constructed as complete streets with Ewing Avenue serving as a potential future grand boulevard entry to the Dallas Zoo and connecting North Oak Cliff.

To this end, the focus area provides a particular view into how the facility design improvements could more effectively integrate with the existing neighborhoods and new development adjacent to the facility. The focus area shows how the road network, through this scenic part of Dallas, could be reinvented as complete streets, promoting a more comfortable walking and bicycling experience and extending connectivity to the south. The improved cross-over bridges depicted in this scenario would promote safe and even shaded walkability that doesn't exist today and serve as a signature feature for this corridor welcoming commuters and visitors to Dallas as a gateway to the city.

The analysis associated with the factors for the aggregated analysis area is gathered from an area slightly greater than the focus areas featured. The boundaries of the analysis area are outlined on the development map and show the proposed and planned developments related to this scenario and known at CityMAP initiation. The analysis area does not cover the entire areas affected by the facility changes in this scenario. However, it does focus on key areas of interest that would be considered catalytic, impactful and transformational for this region of Oak Cliff and South Dallas.

	SCALE	QUINTILE UNITS	VALUE	SCORE
CONNECTIVITY				
Net New Linear Feet of Sidewalk per Acre	0 to 500	100	416.9	
Net New Intersections per Square Mile	0 to 75	15	0	
ECONOMIC DEVELOPMENT				
Net New Revenue	$0 to $92 Million	$18.4 Million	$6,153,131	
Net New Value	$0 to $2.6 Billion	$520 Million	$166,522,629	
Net New Jobs	0 to 52,000	10,400	982	
Net New Population	0 to 30,000	6,000	1,689	
Overall	Average of Subfactor Score			
FACILITY CAPITAL COST				
Estimated Total Cost of the Facility (inside TxDOT Right-of-Way)	N/A	N/A	$100-$499M	$$
FACILITY DEVELOPMENT & CONSTRUCTION DURATION				
Project Timeline	0 to 25 Years	5 Years	6	
PARKS & OPEN SPACE - QUANTITY				
Net New % of Area	0 to 8	1.6	3.4%	
VISUAL IMPACT				
Visual Impact - % Below Grade	0 to 100%	20%	52%	

COST KEY

Under $100M	$100M - 499M	$500M - 999M	$1B - 2B	Over $2B
$	$$	$$$	$$$$	$$$$$

FACTOR KEY

0 - 1 | 1.1 - 2 | 2.1 - 3 | 3.1 - 4 | 4.1 - 5

LOW — HIGH

STAKEHOLDER INTEREST

The factors defined in Chapter 4 are applied below to the I-35E Southern Gateway. Those factors represent stakeholder values with many of these factors looking beyond the I-35E right-of-way.

ADAPTIVE REUSE

The CityMAP team found that The TSG focus area did not present many opportunities for adaptive reuse - and certainly no signature opportunities. Although a complete assessment of building stock was not conducted, much of the building stock is not of historic or adaptable quality. As stated earlier, the Southern Gateway is adjacent to historic neighborhoods to the east and north. Existing single family neighborhoods are in need of revitalization and infill housing on vacant lots to help support a vibrant and safe residential neighborhood. The existing single family neighborhoods offer a unique scale and character to the corridor, and the vacant lots could offer first-time buyer opportunities to Dallas citizens along a corridor that could compare to the US 75 Central Expressway corridor when completed.

On the west side of I-35E, there may be some limited larger scale adaptive reuse opportunities where larger scale development could be feasible between the highway and Jefferson Boulevard similar to the Knox-Henderson region of Central Expressway.

CONNECTIVITY

SIDEWALKS AS A MEASURE OF WALKABILITY

Much of the development pattern in the eastern half of Southern Gateway is single family residential with an incomplete sidewalk network as well as many gaps and some existing sidewalks in very poor condition.

On the west side, where there is more commercial development. A reconstructed I-35E would also provide the opportunity to add sidewalks along the improved frontage roads as the anticipated development could provide an opportunity for a repair of this region's sidewalk network. This process would begin by providing sidewalks along the improved frontage roads and connecting to the potential Complete Street bridges on Ewing, Marsalis, 8th Street and the crossing underneath 10th Street.

Assessing the redevelopment concepts for the scenario, the CityMAP Team measured the net new linear feet of sidewalks. The total sub areas realized a net increase of approximately 62,160 linear feet of sidewalk, which equates to 416.9 linear feet of net new sidewalk per acre in the analysis area limits.

Sub Area	Linear Feet
I-35 Southern Gateway Modified East	19,138
I-35 Southern Gateway Modified West	17,255
I-35 Southern Gateway Modified Beckley	25,767
I-35 Southern Gateway Modified Total	62,160

INTERSECTIONS PER SQUARE MILE AS A MEASURE OF CONNECTEDNESS

The existing configuration of I-35E cuts through the historic street grid and interrupts many of the original intersections. However, improved ramping locations, frontage roads at grade and a compressed ROW can improve the function of the surface streets.

Regardless of the improved traffic flow from those improvements, the Southern Gateway scenario provides no net new intersections per square mile. However, improvement of the perpendicular streets such as Ewing, Marsalis, 8th Street and the crossing underneath 10th Street will improve walkability and connectivity.

Focus Area	New Intersections per Square Mile
Southern Gateway	0

ECONOMIC IMPACT

KEY OPPORTUNITIES

The Southern Gateway scenario features needed roadway improvements in addition to better connections in terms of sidewalks, complete streets and a general multimodal approach to the corridor connecting residential to parks (Dallas Zoo) and commercial centers. It also presents more development opportunities for single-family housing, which was explicitly expressed by stakeholders.

POPULATION AND JOBS

As a conservative estimate, the proposed scenario would add an additional estimated 982 employees between 2015 and 2045 as a result of likely new development. Population would also increase as a result of that development. The proposed scenario would create an increase in population of 1,689 by 2045.

ECONOMIC IMPACT SUMMARY

The breakdown of the factors below provides the underlying analysis for the opportunities analyzed above.

HOSPITALITY ECONOMIC IMPACT

As of today, the current total hospitality value in the Southern Gateway analysis area is $1.8 million. There is a total of over 90,000 SF of new hospitality anticipated in the Southern Gateway scenario. This would add an additional $9.8 million to $10.3 million of value, over the 30 year time period. The estimated hotel tax generated would be $0.5 million over the 30 year time period. The estimated added workforce generated from hotels, would create an increase of 108 employees.

OFFICE ECONOMIC IMPACT

Currently, there is over 338,000 SF of existing office space in the Southern Gateway area, with a current value of approximately $20.3 million. The estimated value of new likely office space developed between 2015 and 2045 ranges between $17.8 million on the low end and $18.8 million on the high end. Property tax revenues are estimated to increase to approximately $500,000 over the 30 year time period.

Including the net new office space proposed with the existing space, there will be a total of over 493,000 SF of total office in the Southern Gateway area. This could increase workforce from the proposed office between 2015 and 2045 by over 618.

RETAIL ECONOMIC IMPACT

There is roughly 163,000 SF of existing retail space in the Southern Gateway analysis area. Research shows the existing value for retail space is approximately at $8.9 million. There is a total of over 140,000 SF of proposed new retail space between 2015 and 2045 in the Southern Gateway area. The estimated value of the additional retail space could be between and $15.2 million and $16.1 million. Estimated projected property tax revenues on this net new space are approximately $450,000 over the 30 year period.

Including existing space, the total square foot total could be over 300,000 retail square feet in the Southern Gateway area under this scenario. This would increase workforce between 2015 and 2045 by 256. This also would increase sales tax revenue by $1.1 million between 2015 to 2045.

MULTI-FAMILY ECONOMIC IMPACT

There is over 213,000 SF of existing multi-family space in the Southern Gateway analysis area. The current value of existing multi-family space is $10.5 million. There is a total of 894,000 SF of estimated multi-family space between 2015

and 2045 in the Southern Gateway area. The resulting estimated value of all multi-family space developed between 2015 and 2045 is estimated between $109 million and $115 million over the 30 year period.

Property tax revenues on net new multi-family uses are estimated to be between $2.9 million and $3.1 million over the 30 year time period. Incorporating existing multi-family with net new space, there will be a total of over 1.1 million multi-family square feet in the Southern Gateway area. The resulting estimated added population in multi-family units between 2015 and 2045 is 1,610.

SINGLE FAMILY ECONOMIC IMPACT

There is currently 50,750 SF of single-family development in the Southern Gateway analysis area with a current value of approximately $2.5 million. There is an additional 49,000 SF of proposed single-family development in the Southern Gateway area. The estimated value of the additional proposed space is between $5.9 million and $6.3 million over the 30 year period. Property tax revenues created for the new housing would increase tax revenues of approximately $170,000. There is a resulting estimated increase in population of single-family by 78 people.

Southern Gateway Economic Projections (2015 - 2045)

Metric	Existing	Proposed
Existing Square Feet (2015)	808,420	-
Net New Square Feet (2015 - 2045)	-	1,328,940
Existing Value (2015)	$44,377,960	-
Net New Value	-	$166,522,629
Additional Impacts (Net New)		
Property Tax Revenue (Ad Valorem)	-	$4,493,958
Sales Tax Revenue	-	$1,142,154
Hotel Tax Revenue	-	$517,019
Increase to Existing Population	-	1,689
Increase to Existing Workforce	-	982
Net New Total Revenue		$6,153,131

TOTAL ECONOMIC IMPACT

Across all development types, there are over 808,000 SF in the Southern Gateway area of existing building inventory. The total existing value within the Southern Gateway is $44.3 million.

There is a total of 1.3 million square feet of likely new development across all development types under the scenario. The estimated total value of net new space is approximately $167 million. The resulting net new property tax revenue is estimated to be $4.5 million over the 30 year time period. The resulting total added workforce from the new proposed development is estimated at 982 between 2015 and 2045.

FACILITY CAPITAL COST

The CityMAP scenario limits for I-35E TSG are from Colorado Boulevard to Clarendon Drive, a distance of approximately 2.0 miles. The scenario is generally based on the current TxDOT Schematic Design for TSG project. The current scope of the overall TSG project is approximately 11 miles of which 2 miles is being studied in City MAP.

The current estimate for the TSG project (11 miles) has a total project cost amount of approximately $662 million, including agency costs.

The largest portion of the TSG project costs are in Segment 1 from approximately Colorado Boulevard to the Split at US 67. The current estimate for Segment 1 (5.3 miles) has a total project cost amount of approximately $504 million, including agency costs. These estimated costs do not include right-of-way, displacements or additional amounts to accommodate the Jefferson Memorial project or future amenities and does not include the cost to upgrade drilled shaft walls for a potential deck park.

The above estimates for the TSG project were prepared as part of the schematic design work and were made independent of CityMAP. To establish a baseline cost for the CityMAP portion of the TSG, the CityMAP team prorated the $504 million total cost for the 5.3 miles of Segment 1 reconstruction resulting in a baseline cost of approximately $191 million for the two (2) mile CityMAP portion.

Input received during the CityMAP process from stakeholders resulted in a significant redesign effort that is reflected in the current schematics. This redesign reduced the planned footprint of the facility, primarily in the CityMAP limits. Some estimates indicate that this resulted in a reduction of additional right of way from approximately 12 acres to 4.1 acres. However, this reduction also required additional costs for retaining walls and complexities in working within a tighter footprint. The redesigned schematic also included road profile changes that allowed for a 10th Street bridge under I-35E. The schematics make baseline provisions for bike and pedestrian use including shared bike lanes and 6.5-ft wide sidewalks on cross street bridges and most frontage roads.

The focus of the CityMAP scenario for The Southern Gateway is to improve connectivity particularly for bike and pedestrian use. The scenario identifies options that could include four "widened" bridge structures located at 8th Street, Ewing Avenue, Marsalis Avenue, and 12th Street. These "widened" structures, while accommodating the necessary number of lanes to convey traffic, could also provide a generous space for Complete Streets improvements, including enhanced bicycle and pedestrian zones, as well as other enhancements such as lighting, landscaping, and hardscape. The scenario also assumes Complete Streets enhancements to the 10th Street Bridge under I-35E. Furthermore, in response to stakeholder feedback, the scenario also envisions a potential deck park, most likely near Ewing Avenue. Determining the need, location and timing for a deck park has not been established.

Each of the connectivity options identified above have a construction cost impact depending on the scope of the improvements and size of the facility enhancements. It will be important for decision makers and stakeholders to reach agreement regarding these enhancements so that funding sources can be determined and the necessary steps taken to provide accommodations for them in the procurement if applicable.

The estimated cost of $191 million for the two (2) mile CityMAP portion of the Southern Gateway project does not include the cost of deck parks and other enhancements. Some early discussions have included a deck park in the range of $50 million to $100 million.

Based on the commentary above, the TSG facility capital cost estimate is in the range of $100 million to $499 million. Further discussions by the project partners are necessary to determine the scope of the improvements and funding responsibilities.

FACILITY DEVELOPMENT AND CONSTRUCTION DURATION

TxDOT has advanced the TSG project through much of the project development process. Schematic design is nearing completion and FHWA Schematic approval is anticipated in Spring 2016. FHWA environmental clearance is expected at the end of 2016.

The TSG project would be procured as a Design-Build contract with construction to begin in 2017. The duration of this contract is not established but this study

assumes four (4) years to construct the TxDOT TSG facility. The facility would be complete in 2021.

The facility development and construction duration for the TSG facility would be approximately six (6) years.

PARKS & OPEN SPACE – QUANTITY

The Southern Gateway focus area has fairly good access to open space and recreation opportunities with the largest being the Dallas Zoo. Additional open space could be added to the corridor through the redesign of I-35 to accommodate a potential future deck park at one of several possible locations. The deck park also could serve as a gateway and physical connection across the highway. If a deck park is located adjacent to the Zoo, its programming, operations and maintenance should be carefully coordinated with the City of Dallas Park Department and the Dallas Zoo. This is not to imply that a deck location next to the Zoo would require their participation, but depending on the ultimate program, it would be beneficial to coordinate the final design and activities.

Assuming for analysis that a deck park is located between Marsalis Avenue and Ewing Avenue adjacent to the Zoo, the resulting greenspace for The Southern Gateway could be 5.1 acres. For comparison the Woodall Rodgers deck park is 5.2 acres. Ultimate size, location and configuration have not been determined and would be subject to a ventilation and life-safety analysis among other determining factors.

Open Space	Net New Area in Acres
Deck Park	5.1

PARKS & OPEN SPACE – QUALITY

Parks and open space quality has the potential to be enlarged and improved with the I-35E Southern Gateway scenario. Connecting bridges could have a park-like experience, and as discussed, the design of any potential deck parks would need to be carefully undertaken in coordination with the surrounding community, stakeholders, and potential programming carefully considered.

VISUAL IMPACT

The CityMAP portion of the I-35E Southern Gateway project involves the full reconstruction of the existing I-35E from Clarendon Drive to Colorado Boulevard. This project is currently under design and preliminary cross sections were reviewed as part of this analysis. The profile of I-35E is generally below grade, with Beckley Avenue, 12th Street, Marsalis Avenue, Ewing Avenue and 8th Street crossing over I-35E. The profile of I-35E does become above grade where it crosses over 10th street and at the north and south limits where I-35E transitions to cross above Clarendon Drive and Colorado Boulevard. These transitions represent one-third of the length of the corridor and cannot be reasonably altered to become a below grade condition.

For the Visual Impact scoring, the percentage of below grade highway for the Southern Gateway scenario is 52 percent.

The Southern Gateway is one of the oldest corridors in the CityMAP study area. It also traverses through some of the most beautiful natural topography and most historic neighborhoods in the City of Dallas. As a North American Free Trade Agreement (NAFTA) corridor, it also provides important commercial and strategic value to the United States and first or last impressions to motorists entering or leaving the City of Dallas. I-35E south of the Trinity River also bisects Oak Cliff and provides one of the primary highway accesses into downtown from the south. On the west and north side of I-35E, there is a small commercial corridor with some aging retail and multifamily between Jefferson Boulevard and I-35E. The south and east side of I-35E includes aging single family, limited highway oriented commercial and the Dallas Zoo. There are many civic and open space uses distributed throughout the neighborhoods.

MOBILITY, LIVABILITY, ECONOMICS

Oak Cliff was developed starting in the early 20th century as one of Dallas' original streetcar suburbs and has a street network that demonstrates that pattern. These original neighborhoods were primarily a mixture of residential building types with some small to mid-scale commercial enterprises along key corridors.

DART access, especially rail access near the Zoo, has provided a much needed option for transit throughout the region. A potential streetcar extension of the Oak Cliff Line could accelerate further investment in the neighborhood. Now the challenge is how to encourage new and infill development, while maintaining the authenticity that is so cherished in the neighborhood. There are potential negative consequences of this growth, like displacement and gentrification, which can be addressed through policy and will be discussed further below.

As identified earlier, final design engineering is currently underway for the I-35E rebuild through Oak Cliff and South Dallas that has led to tremendous stakeholder involvement. During the interview process, stakeholders commented on the need for improved mobility and neighborhood connectivity within the corridor. It is difficult to achieve both of these goals simultaneously; however, the CityMAP team strived to respond to stakeholder desires to add corridor capacity; design as unobtrusive a profile as possible; and improve east west connections through enhanced bridges and explore a potential deck park.

A reconstructed and compressed I-35E, as compared to the original schematic, with the associated mobility, safety improvements, enhanced pedestrian and vehicular connections, parks and open spaces, could further support the general improvement of this corridor. The lower profile offers opportunities to reconnect large sections of neighborhoods and city streets impacted by the Interstate's construction more than 50 years ago. Demonstrated in this scenario, reducing the necessary right of way, simplifying the frontage road configuration, improving intuitive way-finding, making more efficient use of right of way, and implementing open space and the impacted city street crossings will help alleviate confusion people currently experience in crossing under and over I-35E.

POLICY

A community conversation and analysis on any needs for policy and zoning changes for The Southern Gateway should be undertaken, just as has occurred in the Bishop Arts area, to ensure that significant transportation investment can be leveraged to the best benefit for the adjacent development and neighborhoods. The adjacent Oak Cliff Gateway Form Based Code, passed in 2015, does allow for more detailed mixed use and infill development. In addition, the area between Jefferson Boulevard and I-35E is a good location for this type of development and can serve as a substantial residential base to support the local existing retail on Jefferson Boulevard.

Nevertheless, there may be the need for increased incentives or agreements near a potential deck park in order to help maximize that investment as well as enhance the connection between the two sides of I-35E. On the east side of I-35E, where there is primarily single-family homes, there could be enhanced zoning that allows a compatible but diverse set of housing types and buildings like accessory dwelling units. Coordinated through the City's Neighborhoods Plus Program, this zoning strategy could help expand housing options.

With any new development, the accommodation of open space and multimodal transportation needs to be considered. The Southern Gateway development concepts under the scenario depict a general location for a deck park. Private support of these larger scale open space investments could be used to offset on-site open space requirements or a more direct system of fee-in-lieu could be arranged for new development in this area. In order to be successful, a deck park would likely need a public private funding arrangement for programming and operations. The area stakeholders—including those west in the Bishop Arts area and east including the Zoo—have already been mobilized on the design issues and should explore options to assist the City of Dallas in ensuring that any deck park is implemented and sustained successfully.

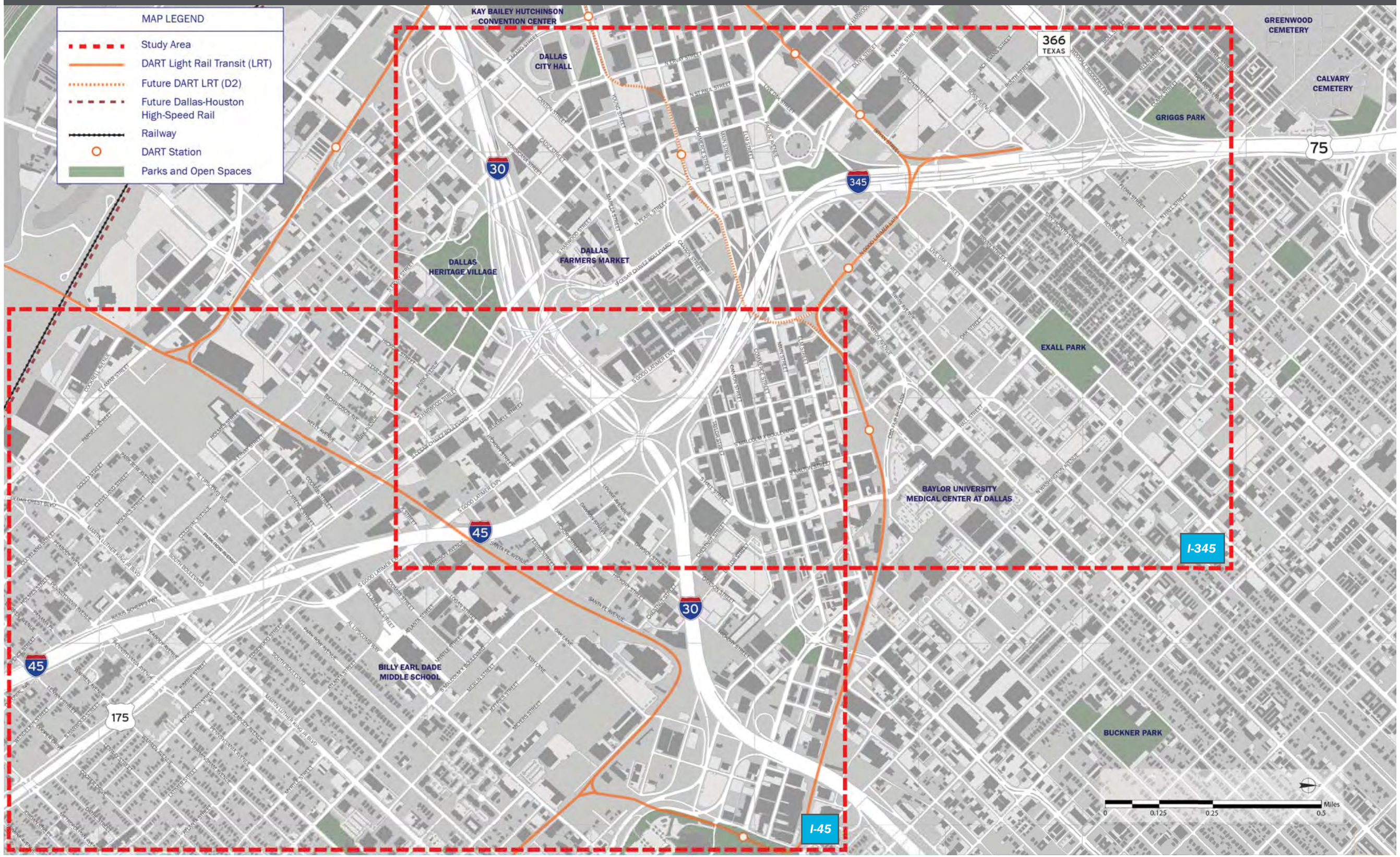
Ensuring a stable residential population is a necessity for long term success in these neighborhoods. Currently in the southern Dallas neighborhoods adjacent to I-35E 20% to 40% of residents live in poverty with some areas above 40%. (Census Bureau, ACS 2009-2013) Therefore, the negative impacts of gentrification should be taken seriously and anticipated. Neighborhood stabilization has emerged as a priority for the City of Dallas through its Neighborhoods Plus Program, the Design Center and other departmental efforts. Accordingly, the impacts of the redesign scenario should be very carefully understood so that the surrounding neighborhoods—especially those to the north and east are preserved and enhanced as single-family communities. In other words, any redevelopment must be carefully considered in terms of potential displacement.



CHAPTER 8 | I-345/I-45 SCENARIOS



I-345/I-45 SCENARIOS | EXISTING CONDITIONS



DRAFT | JUNE 10, 2016

I-345/I-45 SCENARIOS | OVERVIEW

I-345 is an elevated section of highway designed and constructed in 1974. The section provides a north/south linkage connecting US 75 Central Expressway and I-45 between I-30 and Spur 366 Woodall Rodgers Freeway. The freeway is heavily used carrying approximately 200,000 vehicles per day.

The I-345/I-45 corridor is being evaluated by CityMAP from the US 75/Woodall Rodgers interchange connection on the north, to the S.M. Wright connection at Martin Luther King Boulevard. Three scenarios have been developed that reflect the dynamic focus of the community and the myriad of complex conditions within the corridor.

This corridor directly defines the edge of through the Dallas CBD with the Deep Ellum neighborhood to the east. This area has seen considerable attention in the last five years due to the increasing pressures from citizens to improve the infrastructure and reconnect the city grid. Parcels along I-345 have seen delayed economic growth and have lower densities than parcels not adjacent to the corridor with many parcels adjacent to I-345 in the CBD being utilized as parking lots.

Deep Ellum is a historic neighborhood to the east of the Downtown CBD that has a rich history in Dallas' development, and was included a center of culture for the African American Community. Today's neighborhood has small-scale, historic buildings, many of which have been adaptively reused for retail, office and residential purposes.

TxDOT's proposed project for the S.M. Wright Freeway includes the reconfiguration of the existing interchange between I-45, S.M. Wright, Cesar Chavez Boulevard and Good Latimer Expressway. The proposed improvements will extend S.M. Wright to connect to Cesar Chavez Boulevard. The existing S.M. Wright underpass at Martin Luther King Jr. Boulevard (MLK) would be converted to an at-grade signalized intersection. The existing I-45 frontage roads would be extended to MLK, and the existing ramps connecting MLK and I-45 would be relocated to the proposed signalized intersections of the proposed frontage roads and MLK. A northbound exit ramp to Grand Avenue from I-45, as well as a southbound entrance ramp from Grand Avenue to I-45, would also be constructed. The project also includes pedestrian and bicycle improvements constructed along S.M. Wright to create a continuous network between S.M. Wright, MLK, Grand Avenue, and Good Latimer Expressway.

MODIFY

This scenario maintains the elevated I-345 general purpose lanes, but removes the off-ramps to Main, Elm, Live Oak and Bryan Streets and removes the on-ramps from Main and Commerce Streets. This scenario assumes the construction of S.M. Wright Phase 2B to add on and off-ramps from I-45 to the street grid, utilizing Cesar Chavez and Good Latimer to connect to the downtown grid.

REMOVAL

Focusing on the concept that I-345 could be removed all together, this scenario reflects the necessary improvements that would be required to mitigate the traffic flows and still maintain grid connectivity for CBD commuters. The scenario constructs US 75 general purpose lanes, below grade, along with frontage roads from US75 to Woodall Rodgers at Pearl Street. This scenario also removes the elevated I-45 general purpose lanes from I-30 to south of US 175 (S.M. Wright). The transition for I-45 general purpose lanes will be handled through the street grid along Cesar Chavez and Good Latimer, as well as an additional new boulevard aligned within the existing I-45 right-of-way. The direct connectors from I-345 and I-45 to I-30 would be removed in this scenario and access to I-30 would be handled through the arterial street grid. There is an assumption of mode shift to transit using bus only lanes on the arterials.

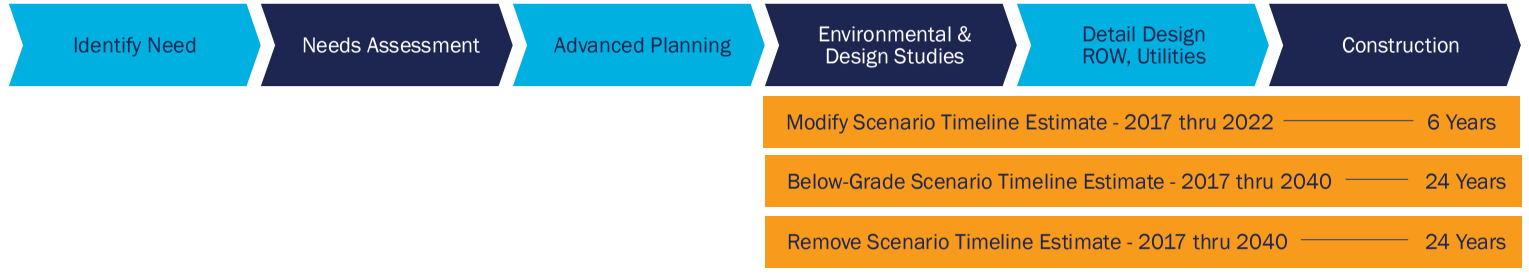
BELOW GRADE

The scenario maintains an expressway option, but focuses on tackling the visual impacts that the current I-345 poses. This scenario removes the elevated I-345 general purpose lanes and ramps that have resulted in a barrier effect, and constructs new general purpose lanes below grade from Canton to Ross. There will be northbound exit ramps at Ross, but there will be limited access from S.M. Wright to Ross. This scenario provides an exit ramp for US 75 and an on-ramp to Cesar Chavez. This scenario also reconstructs the interchange at I-30 and restacks the levels of the interchange to allow the below grade profile change for I-345/I-45.



I-345 ELEVATED STRUCTURE *Source: HNTB*

FACILITY DEVELOPMENT AND CONSTRUCTION DURATION



METHODOLOGY

The tables in each scenario evaluation present the factors that describe the performance of the transportation system. These factors, described in more detail in Chapter 4, are used to describe the relative performance of each scenario. Scenario effects are reported in two ways. First, they are summarized for the overall transportation system in the Downtown Study Area. This is done because the effect of improvements or changes to a specific roadway usually go beyond the roadway itself. Traffic effects (increases or decreases in traffic volumes) on a freeway can affect intersecting and parallel thoroughfare routes. Increased congestion on a freeway can spill onto parallel routes or decreased congestion can improve thoroughfare conditions. The area factors that describe the roadway performance are summarized for:

- Freeway/Tollway system
- Thoroughfare System

The second way that scenario performance is shown is at the level of specific facilities in the Downtown Study Area. Specific facility "segments" are shown with Performance Factor values because most people relate to the facilities they use and so users can understand the relative potential impact of a scenario on specific travel patterns, destinations, or neighborhoods in the area.

The Performance Factor tables (Tables 8-1, 8-2, and 8-3) and the facility comparisons show the factor values for three "comparative travel simulations" plus a simulation of the scenario being analyzed. The first comparative simulation is the "2017 Existing" which simulates travel on the current transportation network using 2017 demographic data. The next comparative simulation projects 2040 traffic onto the "2040 No-build" network. This represents the existing transportation network plus those improvements which are under construction today. It simulates a hypothetical situation where the region's population and employment continue to grow to 2040 levels but the new projects identified in the 2040 Preliminary Metropolitan Transportation Plan are not implemented. The third comparative network simulation models the performance of the "2040 Preliminary Plan"[1] network which is a proxy for the Regional Transportation Plan, Mobility 2040.

The scenario configurations presented here each include the Trinity Parkway in the configuration currently endorsed by the City of Dallas. This is a four-lane tollroad between I-45 at US 175 and I-35E at US 183 with partial service interchanges provided at Cedar Crest Boulevard with access to and from the north only and at Inwood Road with access to and from the south only.

The Study Area Performance Factor Comparison tables provide comparative statistics in two broad areas that relate to mobility objectives expressed in the Stakeholder listening sessions: Quality of Travel and Congestion Relief. Relating to each objective is a Performance Factor that is computed from the travel simulations. The Performance Factors are Average Speed and Congestion Delay per Trip. Each of the statistics is subtotaled for Freeway/Toll Roads and Thoroughfares. The modeled values are calculated and aggregated from the model network in the downtown study area. They are analogous to what people experience as they travel in the real world, but the experiential travel of individuals is not always well represented by a computer model of annual average weekday traffic for an entire region, especially when projected years into the future. But, the travel demand model is objective and is the best way to compare a variety of network scenarios.

The tables present four columns of values representing the two comparators and the subject scenario. The last two columns provide a simplified indication of the comparison of the scenario to both the 2040 Preliminary Plan and the 2040 No-Build. The indication is an up arrow if the scenario value is greater than the base value, a down arrow if it is less, or a right arrow if it is unchanged. The arrows are coded green if the change is in a desirable direction or unchanged for that factor and red if it is in an undesirable direction. The 2017 existing values are provided to benchmark how the system performs today. By comparing the 2040 Preliminary values to the 2040 No-Build and the 2017 existing one can see that the Mobility Plan is a well-conceived strategy to deal with the population growth between now and 2040. So, a scenario's slight reduction in speed, compared to the Plan, should be viewed in the context that the Mobility Plan has already achieved a more significant improvement in that measure, compared to doing nothing.

The purpose of the presentation is to objectively compare the scenarios to the comparators, not to select, rank, or eliminate scenarios.

[1] The 2040 Preliminary Network was available and used by CityMAP in 2015 prior to the adoption of the Mobility 2040 Plan by the Regional Transportation Council in March 2016. The only significant difference between 2040 Preliminary and Mobility 2040 is I-30, East. Preliminary 2040 assumes a 10-lane freeway plus a 4-lane managed facility while the adopted Plan assumes a 10-lane freeway with no managed lanes.

SCENARIO DESCRIPTION: I-345 – MODIFY

The basic approach of this scenario is to lessen the visual impact of I-345 north of the I-30/I-345 Interchange from Canton Street to Elm Street where I-345 "spreads out" to accommodate ramps. These ramps are from I-345 and the I-30 Direct Connectors (DC) to westbound Elm and Main Streets and the ramps from eastbound Main and Commerce Streets to I-345 and the I-30 DC. The reduced configuration is achieved by eliminating the ramp system that provides Central Business District access to and from Elm Street, Main Street, and Commerce Street. The ramp elimination allows for improved bicycle and pedestrian connections on Elm, Main and Commerce Streets between the Central Business District and Deep Ellum. Another pair of ramps is also eliminated in this scenario from northbound I-345 to Bryan Street and the southbound I-345 ramp to Live Oak Street.

EVALUATION: I-345 – MODIFY

FACTOR COMPARISON – STUDY AREA

Table 8-1 presents the performance factor values aggregated to the Study Area (see right). The scenario comparison to 2040 No-Build shows that the I-345 – Modify Scenario anticipates an improvement in both performance factors for both Freeway and Thoroughfare facilities.

The Modify I-345 Scenario improves Freeway/Toll Road speed while Thoroughfare speed is expected to be slightly slower than for the Plan. Both Freeway/Toll Road and Thoroughfare facilities are projected to have about the same congestion delay when compared to the 2040 Preliminary Plan.



Table 8-1 Performance Factor Comparison

Scenario: I-345 — Modify Objectives and Performance Factors			2017 Existing Value	2040 No-Build Value	2040 Preliminary Plan Value	Scenario Value	Scenario Comparison	
							No-Build	2040 Prelim
Quality	Average Speed (Weekday Miles per Hour)	Freeway/Toll Road	33	24	29	30	▲	▲
		Thoroughfare	19	15	18	17	▲	▼
Congestion	Congestion Delay per Trip (Minutes)	Freeway/Toll Road	4	8	5	5	▼	▶
		Thoroughfare	2	4	2	2	▼	▶
All Values represent annual average weekday traffic.								

Arrow Indication Key:

- Favorable change in performance factor value
- Unfavorable change in performance factor value
- ▲ Increase in performance factor value
- ▼ Decrease in performance factor value
- ▶ No significant difference in performance factor value

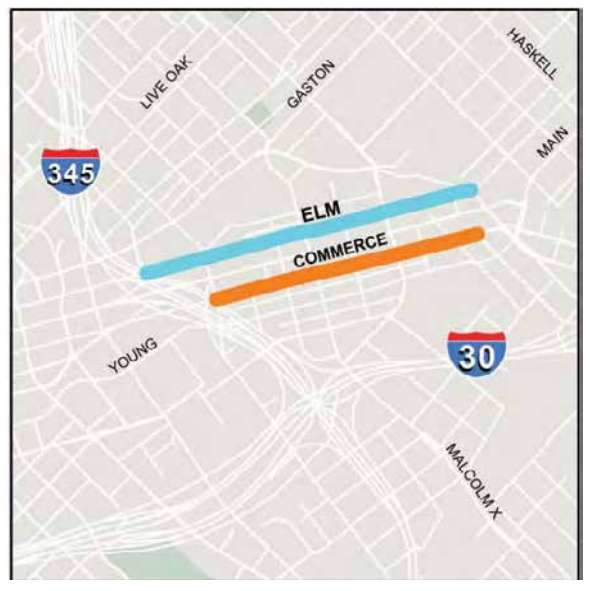
FACTOR COMPARISON – SCENARIO



Transportation Indicators for I-345	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Modify CityMAP Scenario
Average Daily Volume	166,100	192,100	175.200	177,000
Average V/C Ratio	1.05	1.21	1.11	1.11
Level of Service	F	F	F	F
Average Travel Speed (mph)	41	34	39	38
Hours of Delay per Mile	1,973	4,746	2,487	2,844

On I-345 itself, the I-345 – Modify Scenario exhibits slightly more traffic, slower speed, and more congestion than the 2040 Preliminary Plan.

FACTOR COMPARISON – SAMPLE FACILITIES



Transportation Indicators for Elm St	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Modify CityMAP Scenario
Average Daily Volume	12,000	22,000	13,000	26,000
Average V/C Ratio	0.38	0.70	0.42	0.82
Level of Service	A	D	A	E
Average Travel Speed (mph)	24	22	24	22
Hours of Delay per Mile	54	147	34	142

Transportation Indicators for Commerce	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Modify CityMAP Scenario
Average Daily Volume	11,000	18,000	14,000	22,000
Average V/C Ratio	0.35	0.57	0.45	0.71
Level of Service	A	C	A	D
Average Travel Speed (mph)	26	25	25	24
Hours of Delay per Mile	28	96	71	158

With the removal of direct access to the Central Business District, the I-345 – Modify Scenario fairly dramatic affects would be seen on streets which provide alternate access to the CBD. Elm and Commerce Streets in east Dallas would attract over 77 percent more daily traffic with a commensurate decline in performance.

FACTOR COMPARISON – SAMPLE FACILITIES



Transportation Indicators for Cesar Chavez	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Modify CityMAP Scenario
Average Daily Volume	34,000	49,000	26,000	32,000
Average V/C Ratio	0.71	1.03	0.52	0.63
Level of Service	D	F	C	C
Average Travel Speed (mph)	20	18	16	15
Hours of Delay per Mile	479	1,544	237	442

Transportation Indicators for Good Latimer	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Modify CityMAP Scenario
Average Daily Volume	15,000	31,000	26,000	27,000
Average V/C Ratio	0.37	0.76	0.62	0.65
Level of Service	A	D	C	C
Average Travel Speed (mph)	18	16	17	17
Hours of Delay per Mile	173	1,054	342	546

Cesar Chavez and Good Latimer would also carry additional traffic into the Central Business District.



Transportation Indicators for I-35E	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Modify CityMAP Scenario
Average Daily Volume	157,000	180,000	185,000	190,000
Average V/C Ratio	1.14	1.30	1.34	1.37
Level of Service	F	F	F	F
Average Travel Speed (mph)	36	28	26	25
Hours of Delay per Mile	2,246	5,732	6,608	7,320

Transportation Indicators for I-30	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Modify CityMAP Scenario
Average Daily Volume	99,000	128,000	118,000	108,000
Average V/C Ratio	0.86	0.92	1.03	0.94
Level of Service	E	E	F	E
Average Travel Speed (mph)	44	35	40	43
Hours of Delay per Mile	386	1,898	904	475

Facility performance on the I-35E/I-30 Interchange, known as the "Horseshoe", was measured to understand the effect the I-345 Modified Scenario has on this critical component of the transportation network. The I-35E components of the Horseshoe would carry slightly more traffic while the I-30 roadways would carry less traffic. These effects may be more related to the different configuration of Trinity Parkway access than the modifications to I-345 in the scenario.

FACTOR COMPARISON – SAMPLE FACILITIES



Transportation Indicators for Woodall Rodgers	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Modify CityMAP Scenario
Average Daily Volume	191,000	222,000	210,000	206,000
Average V/C Ratio	1.04	1.21	1.15	1.12
Level of Service	F	F	F	F
Average Travel Speed (mph)	37	31	33	34
Hours of Delay per Mile	953	2,357	1,661	1,443

Facility performance on Woodall Rodgers was measured to understand the surrounding impacts of the I-345 Modified scenario. The reduction in ramps along I-345 decreases accessibility to downtown. Despite the removal of the ramps, daily volume along Woodall Rodgers is not projected to increase when compared to the 2040 Preliminary Plan. It's difficult to isolate the cause of the decrease, but it is presumed the removal of ramp access to the Trinity Parkway from Woodall Rodgers is the likely cause of the daily volume decrease along Woodall Rodgers. The 2040 Preliminary Plan includes the Trinity Parkway with the approved 3C option while each of the scenarios includes a 4 lane limited access parkway, as endorsed by the City of Dallas.

SCENARIO DESCRIPTION: I-345 – REMOVE

The I-345 Removal Scenario would be implemented with major changes to I-45, I-30, US 75, S. M. Wright (US 175), and Woodall Rodgers (SH366), in addition to the complete removal of I-345 and the I-30/I-345 Interchange. The project would begin with the removal of I-45 north of Martin Luther King, Jr. Boulevard with the I-45 main lanes going to and from Cesar Chavez Drive and with ramps to and from Good Latimer Expressway. Good Latimer would be realigned between the DART grade crossing and Al Lipscomb Way. S.M. Wright would follow the existing connection to Good Latimer Expressway, following the alignment to Logan Street. From that location the S.M. Wright (extension) would proceed on a northwesterly bearing, go under I-30, and terminate at Canton Street in Deep Ellum. These changes would provide surface street connections between the termination of I-45 and the CBD and US 75 in order to carry the traffic displaced from I-45 and I-345. The changes to I-30 in the Canyon would include implementation of the improvements that were identified in Project Pegasus, including the conversion of the Cesar Chavez Boulevard/I-30 Interchange to a diamond configuration. The US 75/SH 366 Interchange would also see a major reconfiguration. The direct connector ramps between Woodall Rodgers and I-345/US 75 would be removed and the main lanes between the two facilities would be connected as the through route. Cesar Chavez would be connected with ramps to the north leg of US 75. With the removal of I-345, several streets in the CBD would be connected such as Hawkins Street extended southward Elm Street to Canton in alignment with Farmers Market Way.

It is noted that the I-345 Remove Scenario includes the proposed Trinity Parkway in the configuration currently endorsed by the City of Dallas. This is a new 4-lane toll road between I-45 at US 175 and I-35E at US 183. Partial service interchanges are provided at Cedar Crest Boulevard with access to and from the north only and at Inwood Road with access to and from the south only.

EVALUATION: I-345 – REMOVE

FACTOR COMPARISON – STUDY AREA

Table 8-2 presents the performance factor values aggregated to the Study Area (see right). The scenario comparison to 2040 No-Build shows that the I-345 – Modify scenario anticipates an improvement in all both performance factors for both Freeway and Thoroughfare facilities.

The scenario compared to the 2040 Preliminary Plan projects an improvement in average speed and congestion delay for Freeway/Toll Road facilities in the downtown study area. The opposite effect is projected for Downtown Area thoroughfares which would operate more slowly and with more congestion delay.

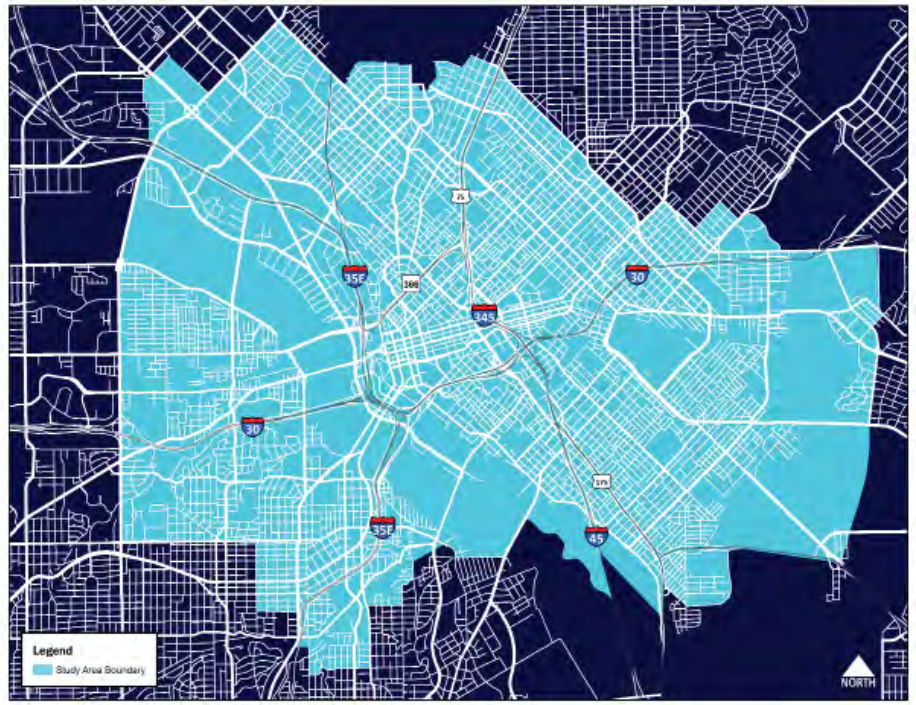


Table 8-2 Performance Factor Comparison

Scenario: I-345 — Remove Objectives and Performance Factors			2017 Existing Value	2040 No-Build Value	2040 Preliminary Plan Value	Scenario Value	Scenario Comparison	
							No-Build	2040 Prelim
Quality	Average Speed (Weekday Miles per Hour)	Freeway/Toll Road	33	24	29	30	▲	▲
		Thoroughfare	19	15	18	17	▲	▼
Congestion	Congestion Delay per Trip (Minutes)	Freeway/Toll Road	4	8	5	4	▼	▼
		Thoroughfare	2	4	2	3	▼	▲
All Values represent annual average weekday traffic.								

Arrow Indication Key:

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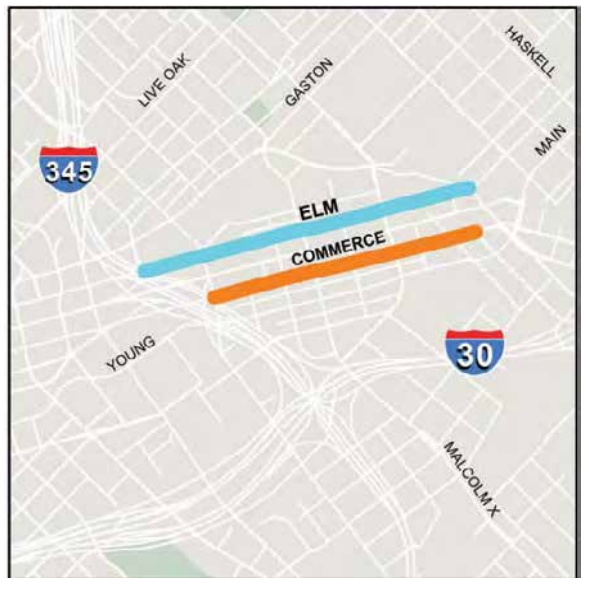
FACTOR COMPARISON – SCENARIO



Transportation Indicators for Cesar Chavez	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Remove CityMAP Scenario
Average Daily Volume	34,000	49,000	27,000	51,000
Average V/C Ratio	0.71	1.03	0.52	1.01
Level of Service	D	F	C	F
Average Travel Speed (mph)	20	18	16	13
Hours of Delay per Mile	479	1,544	237	1,443

Transportation Indicators for Good Latimer	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Remove CityMAP Scenario
Average Daily Volume	15,000	31,000	26,000	53,000
Average V/C Ratio	0.37	0.76	0.62	1.25
Level of Service	A	D	C	F
Average Travel Speed (mph)	18	16	17	13
Hours of Delay per Mile	173	1,054	342	1,345

The removal of I-345 would have a significant impact on thoroughfares in the Downtown Area. The tables show that Cesar Chavez Boulevard and Good Latimer Expressway would carry significant volumes at LOS F serving to connect I-45 south to the CBD and US 75.



Transportation Indicators for Elm St	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Remove CityMAP Scenario
Average Daily Volume	12,000	22,000	13,000	28,000
Average V/C Ratio	0.38	0.70	0.42	0.89
Level of Service	A	D	A	E
Average Travel Speed (mph)	24	22	24	21
Hours of Delay per Mile	54	147	34	298

Transportation Indicators for Commerce	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Remove CityMAP Scenario
Average Daily Volume	11,000	18,000	14,000	22,000
Average V/C Ratio	0.35	0.57	0.45	0.72
Level of Service	A	C	A	D
Average Travel Speed (mph)	26	25	25	23
Hours of Delay per Mile	28	96	71	318

Elm and Commerce Streets would replace access routes to the CBD from I-30 East. These two thoroughfares would be projected to see traffic volumes nearly double with a commensurate decline in level of service.

FACTOR COMPARISON – SCENARIO



Transportation Indicators for Woodall Rodgers	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Remove CityMAP Scenario
Average Daily Volume	191,000	222,000	210,000	200,000
Average V/C Ratio	1.04	1.21	1.15	1.09
Level of Service	F	F	F	F
Average Travel Speed (mph)	37	31	33	34
Hours of Delay per Mile	953	2,357	1,661	1,533

Woodall Rodgers, already carrying more traffic than its capacity, would carry less traffic with the scenario. This reduction may be more attributable to the different Trinity Parkway access configurations in the plan and the scenario.



Transportation Indicators for I-35E	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Remove CityMAP Scenario
Average Daily Volume	157,000	180,000	185,000	198,000
Average V/C Ratio	1.14	1.30	1.34	1.44
Level of Service	F	F	F	F
Average Travel Speed (mph)	36	28	26	22
Hours of Delay per Mile	2,246	5,732	6,608	9,460

Transportation Indicators for I-30	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Remove CityMAP Scenario
Average Daily Volume	99,000	128,000	118,000	116,000
Average V/C Ratio	0.86	0.92	1.03	1.01
Level of Service	E	E	F	F
Average Travel Speed (mph)	44	35	40	42
Hours of Delay per Mile	386	1,898	904	593

The I-345 Remove Scenario would significantly increase volumes on I-35E in the Horseshoe with a related reduction in speed and increase in delay. Under this scenario the I-30 component of the Horseshoe projects to have slightly less traffic than it would with the Plan.

SCENARIO DESCRIPTION: I-345 – BELOW GRADE

The transportation rationale for this scenario would be to lower the grade of I-345 to below natural ground level, providing an "express" connection between I-30 and US 75 in an "open trench" with a much smaller footprint than the existing elevated structure. The reconstructed facility would eliminate most thoroughfare interchanges while maintaining system level interchanges at I-30 and US 75. Described from south to north, the grade change would begin on I-45 in the vicinity of Martin Luther King Jr. Boulevard with the reconstructed facility going under S.M. Wright Boulevard which is connected to Cesar Chavez Boulevard. The alignment would be below crossing streets and the DART Light Rail Vehicle Yard. I-45/I-345 would have a full-directional interchange with I-30, reconstructed to place I-345/I-45 at the lowest level and I-30 at its current vertical location. North from I-30, I-345 would follow the existing horizontal alignment until it connects to US 75 at its current location in the Woodall Rodgers Interchange. A full-directional interchange would be provided with Woodall Rodgers. Between Pacific and US 75, flanking service roads would be added as the extension of Cesar Chavez Boulevard. At Ross Avenue, a partial diamond interchange, with a frontage-road U-turn lane would connect Ross Avenue/I-345 to and from the south. Between the I-30 and Woodall Rodgers Interchanges (Direct Connector Terminals), I-345 would have five lanes in each direction. Through both interchanges, two or three lane Direct Connectors would reduce the through-lane count to three in each direction.

It is noted that the I-345 Remove Scenario includes the proposed Trinity Parkway in the configuration currently endorsed by the City of Dallas. This is a new 4-lane toll road between I-45 at US 175 and I-35E at US 183. Partial service interchanges are provided at Cedar Crest Boulevard with access to and from the north only and at Inwood Road with access to and from the south only.

EVALUATION: I-345 – BELOW GRADE

FACTOR COMPARISON – STUDY AREA

Table 8-3 presents the performance factor values for I-345 – Below-Grade aggregated to the study area (see right). Once again, the scenario comparison to 2040 No-Build shows that the I-345 – Below-Grade scenario anticipates an improvement in both performance factors for both Freeway and Thoroughfare facilities.

As measured by facility average speeds, both Freeway/Toll Road and Thoroughfare facilities in the study area will be slightly slower than projected for the 2040 Preliminary Plan. Congestion levels are not predicted to be significantly different in the scenario than the 2040 Plan.

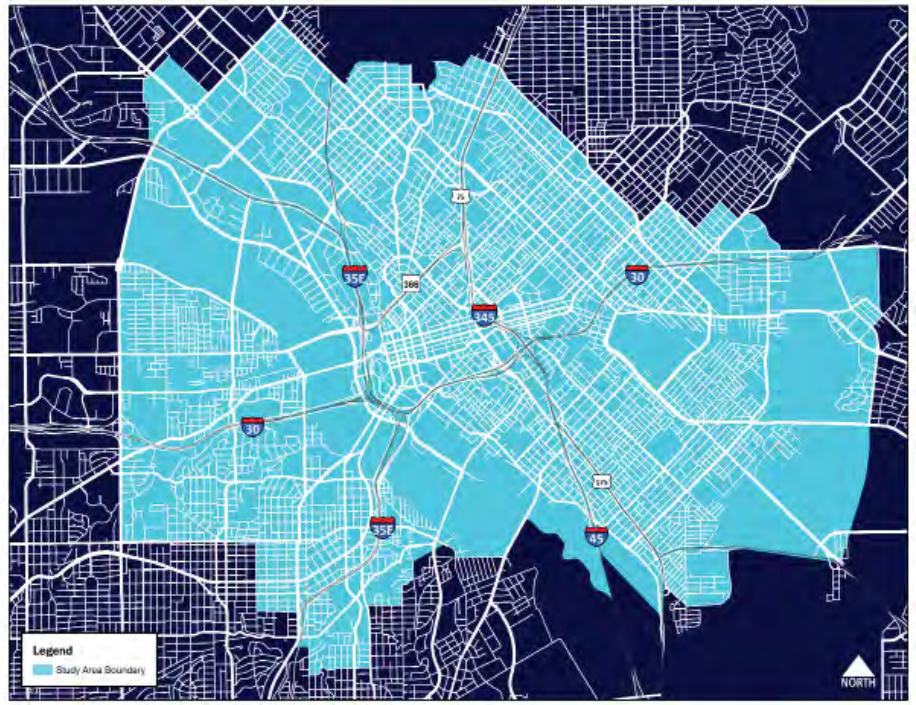


Table 8-3 Performance Factor Comparison

Scenario: I-345 — Below Grade Objectives and Performance Factors			2017 Existing Value	2040 No-Build Value	2040 Preliminary Plan Value	Scenario Value	Scenario Comparison	
							No-Build	2040 Prelim
Quality	Average Speed (Weekday Miles per Hour)	Freeway/Toll Road	33	24	29	28	▲	▼
		Thoroughfare	19	15	18	17	▲	▼
Congestion	Congestion Delay per Trip (Minutes)	Freeway/Toll Road	4	8	5	5	▼	▶
		Thoroughfare	2	4	2	2	▼	▶
All Values represent annual average weekday traffic.								

Arrow Indication Key:

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- ▶ No significant difference in performance factor value

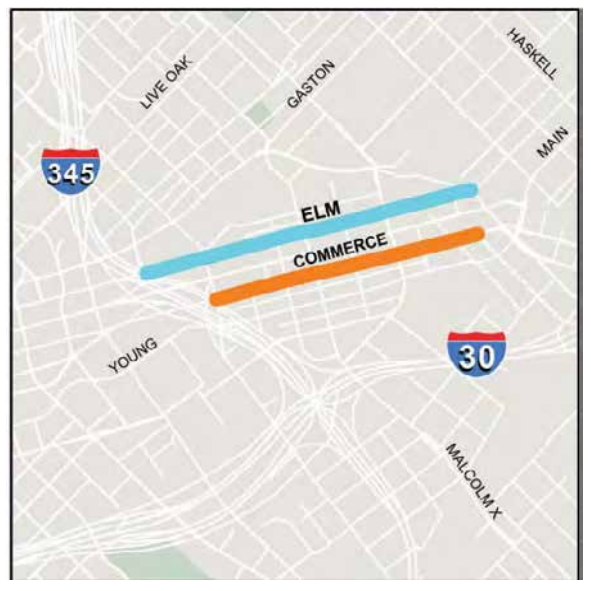
FACTOR COMPARISON – SCENARIO



Transportation Indicators for I-345	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Below Grade CityMAP Scenario
Average Daily Volume	166,000	192,000	175,000	191,000
Average V/C Ratio	1.05	1.21	1.11	1.01
Level of Service	F	F	F	F
Average Travel Speed (mph)	41	34	39	42
Hours of Delay per Mile	1,973	4,746	2,487	2,216

The below-grade configuration of I-345 would carry more traffic in both scenarios because it is restricted to through movements. The below-grade alignment in this configuration creates an express facility between I-45 and US 75 that does not provide direct access to the CBD or Deep Ellum. Even with these modifications the facility would likely operate just over its nominal capacity for a level of service F.

FACTOR COMPARISON – SAMPLE FACILITIES



Transportation Indicators for Elm St	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Below Grade CityMAP Scenario
Average Daily Volume	12,000	22,000	13,000	25,000
Average V/C Ratio	0.38	0.70	0.42	0.82
Level of Service	A	D	A	E
Average Travel Speed (mph)	24	22	24	22
Hours of Delay per Mile	54	147	34	135

Transportation Indicators for Commerce	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Below Grade CityMAP Scenario
Average Daily Volume	11,000	18,000	14,000	22,000
Average V/C Ratio	0.35	0.57	0.45	0.70
Level of Service	A	C	A	D
Average Travel Speed (mph)	26	25	25	24
Hours of Delay per Mile	28	96	71	188

The loss of ramps to Elm, Main, Commerce, and Live Oak Streets in the CBD would have a significant impact on other locations. This is illustrated by the highlighted locations on Elm and Commerce Streets in Deep Ellum. The table shows that Elm Street would carry over 60 percent more vehicles daily, an LOS change from A to E. The impact on Commerce Street would be only slightly less than on Elm Street.

FACTOR COMPARISON – SAMPLE FACILITIES



Transportation Indicators for Woodall Rodgers	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Below Grade CityMAP Scenario
Average Daily Volume	191,000	222,000	210,000	206,000
Average V/C Ratio	1.04	1.21	1.15	1.12
Level of Service	F	F	F	F
Average Travel Speed (mph)	37	31	33	34
Hours of Delay per Mile	953	2,357	1,661	1,418

Woodall Rodgers would carry less traffic; again this effect may be related to the different configurations of Trinity Parkway.



Transportation Indicators for I-35E	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Below Grade CityMAP Scenario
Average Daily Volume	157,000	180,000	185,000	188,000
Average V/C Ratio	1.14	1.30	1.34	1.36
Level of Service	F	F	F	F
Average Travel Speed (mph)	36	28	26	25
Hours of Delay per Mile	2,246	5,732	6,608	7,247

Transportation Indicators for I-30	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Below Grade CityMAP Scenario
Average Daily Volume	99,000	128,000	118,000	111,000
Average V/C Ratio	0.86	0.92	1.03	0.97
Level of Service	E	E	F	E
Average Travel Speed (mph)	44	35	40	43
Hours of Delay per Mile	386	1,898	904	518

I-35E and I-30 in the Horseshoe would see opposite effects. I-30 would be projected to a level of service E, with a higher average speed and less delay that the Plan.

FACTOR COMPARISON – SAMPLE FACILITIES



Transportation Indicators for Cesar Chavez	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Below Grade CityMAP Scenario
Average Daily Volume	34,000	49,000	26,000	32,000
Average V/C Ratio	0.71	1.03	0.52	0.63
Level of Service	D	F	C	C
Average Travel Speed (mph)	20	18	16	15
Hours of Delay per Mile	479	1,544	237	466

Transportation Indicators for Good Latimer	2017 Existing	2040 No-Build	2040 MTP (NCTCOG Preliminary)	I-345 Below Grade CityMAP Scenario
Average Daily Volume	15,000	31,000	26,000	24,000
Average V/C Ratio	0.37	0.76	0.62	0.59
Level of Service	A	D	C	C
Average Travel Speed (mph)	18	16	17	17
Hours of Delay per Mile	173	1,054	342	253

Cesar Chavez would carry about 23 percent more traffic in the scenario configuration while Good Latimer would carry about 8 percent less traffic.


WORKS DEPARTMENTAL TRAINING ROOM CALENDAR

I-345 SCENARIO - MODIFY | MAP



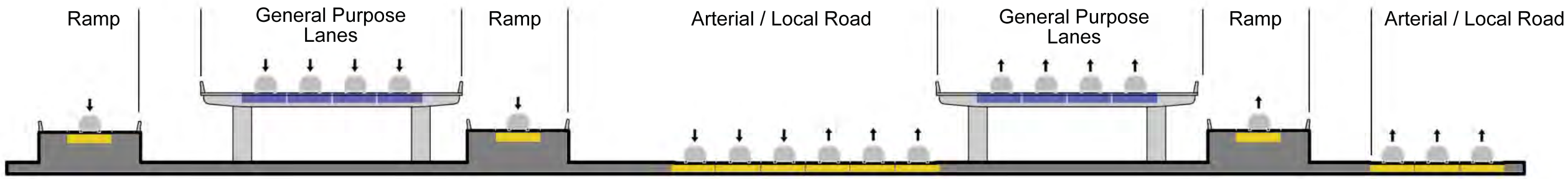
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I-345 SCENARIO - MODIFY | MAP

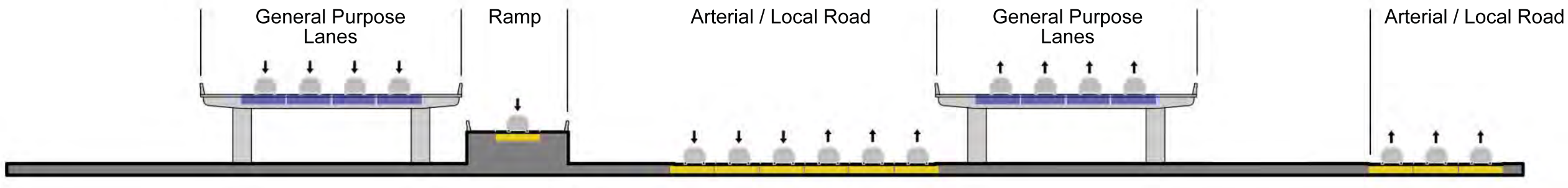
PLAN NOTES: I-345 MODIFY

1. Remove southbound I-345 exit ramp to Live Oak Street
2. Remove northbound I-345 exit ramp to Bryan Street
3. Remove northbound I-345 exit ramp to Elm Street
4. Remove northbound I-345 exit ramp to Main Street
5. Remove southbound I-345 entrance ramp from Main Street
6. Remove southbound I-345 entrance ramp from Commerce Street

CROSS SECTIONS

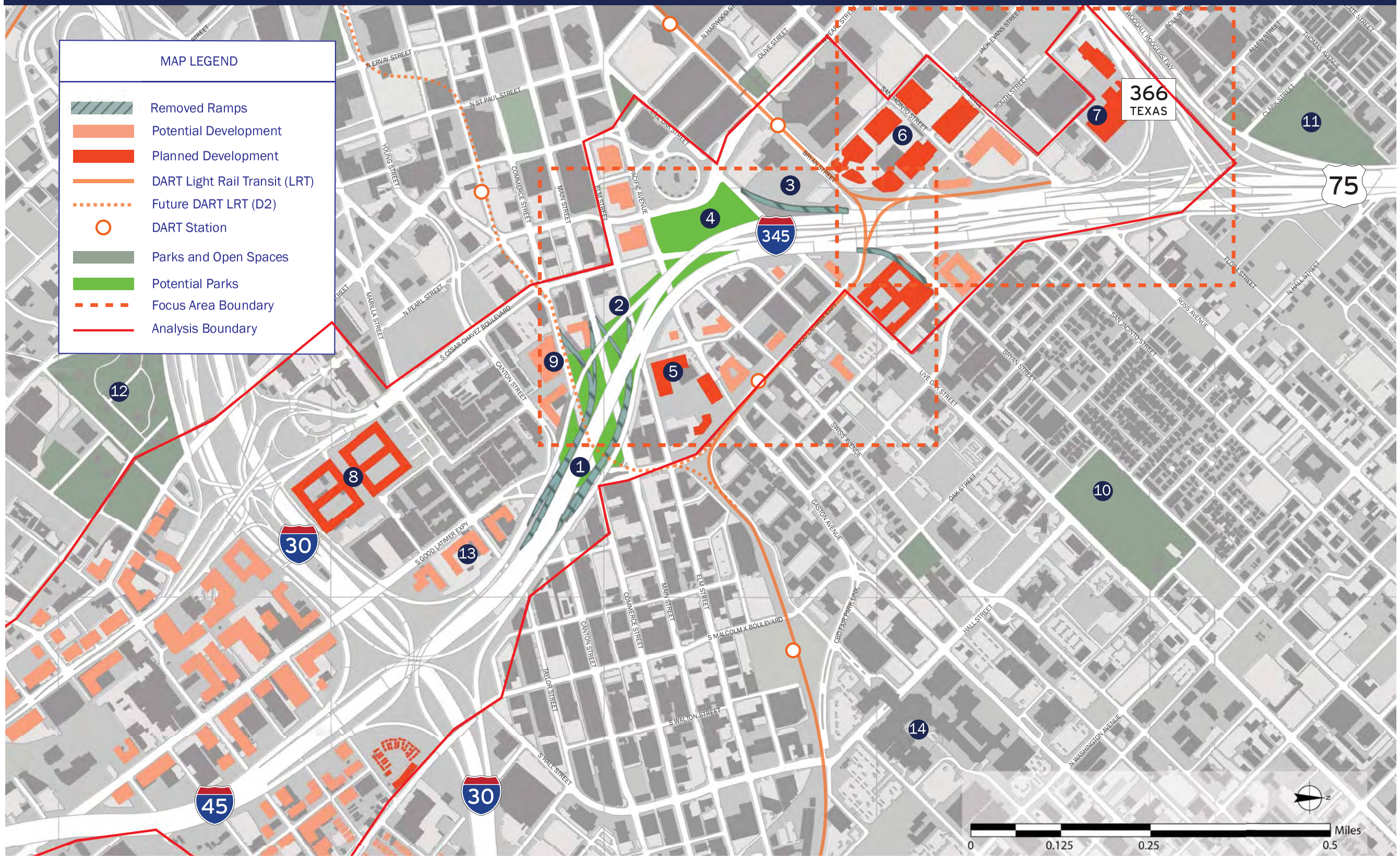


EXISTING



SCENARIO

I-345 SCENARIO - MODIFY | DEVELOPMENT MAP



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I-345 SCENARIO - MODIFY | DEVELOPMENT MAP

PLAN NOTES: I-345 MODIFY

1. Removal of direct connect ramps open up space between elevated portion of I-345 improving experience of crossing underneath
2. Removal of direct connect ramps allows surface streets to function as they were designed and may allow for some improved grid connectivity
3. Ramp removal allows for moderate increase in developable land on some parcels
4. Carpenter Park Plaza
5. Proposed KDC mixed-use development, including hotel and office uses
6. Future Spire development
7. Future Two Arts and Three Arts developments
8. Planned Farmer's Market multi-family development
9. Potential multi-family mixed-use development
10. Exall Park
11. Griggs Park
12. Dallas Heritage Village
13. Potential infill retail or multi-family mixed-use
14. Baylor University Medical Center at Dallas

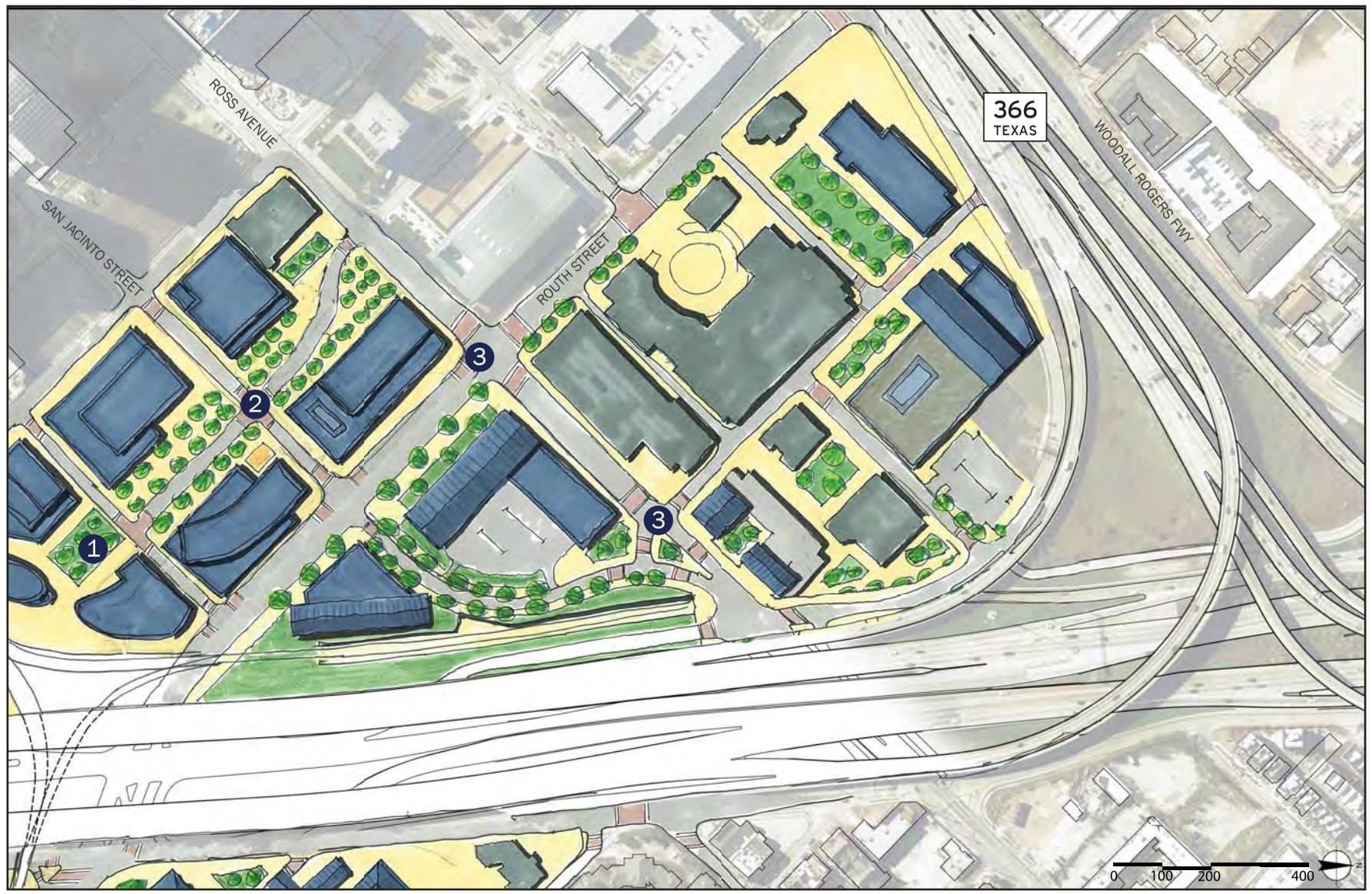
I-345 SCENARIO - MODIFY | FOCUS AREAS



I-345 AT ROSS AVENUE FOCUS AREA

FOCUS AREA NOTES: I-345 AT ROSS AVENUE

1. Development focused around publicly accessible open space and plazas
2. Maintain and encourage grid connectivity
3. Provide opportunity for pedestrian and bike crossing

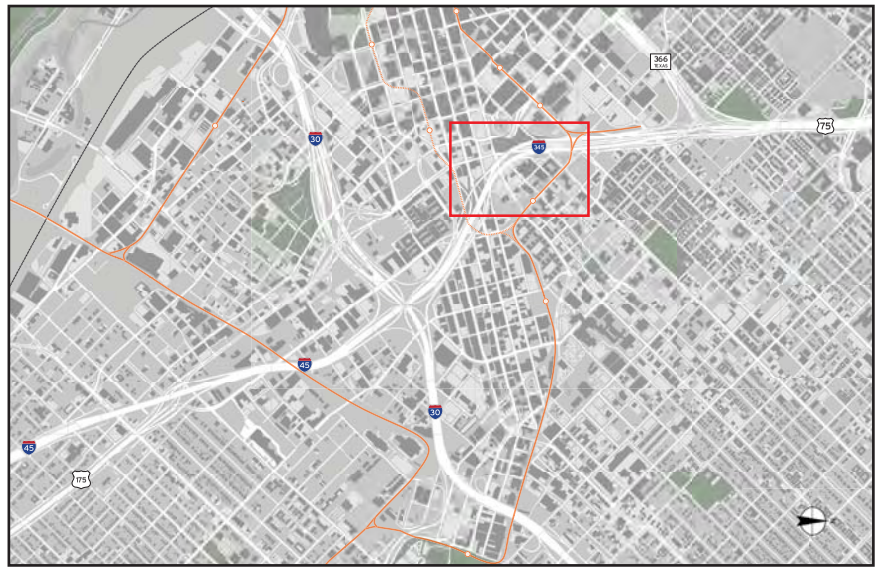


I-345 AT ROSS AVENUE CONCEPT *Source: Gateway Planning Group*

I-345 CORRIDOR POTENTIAL



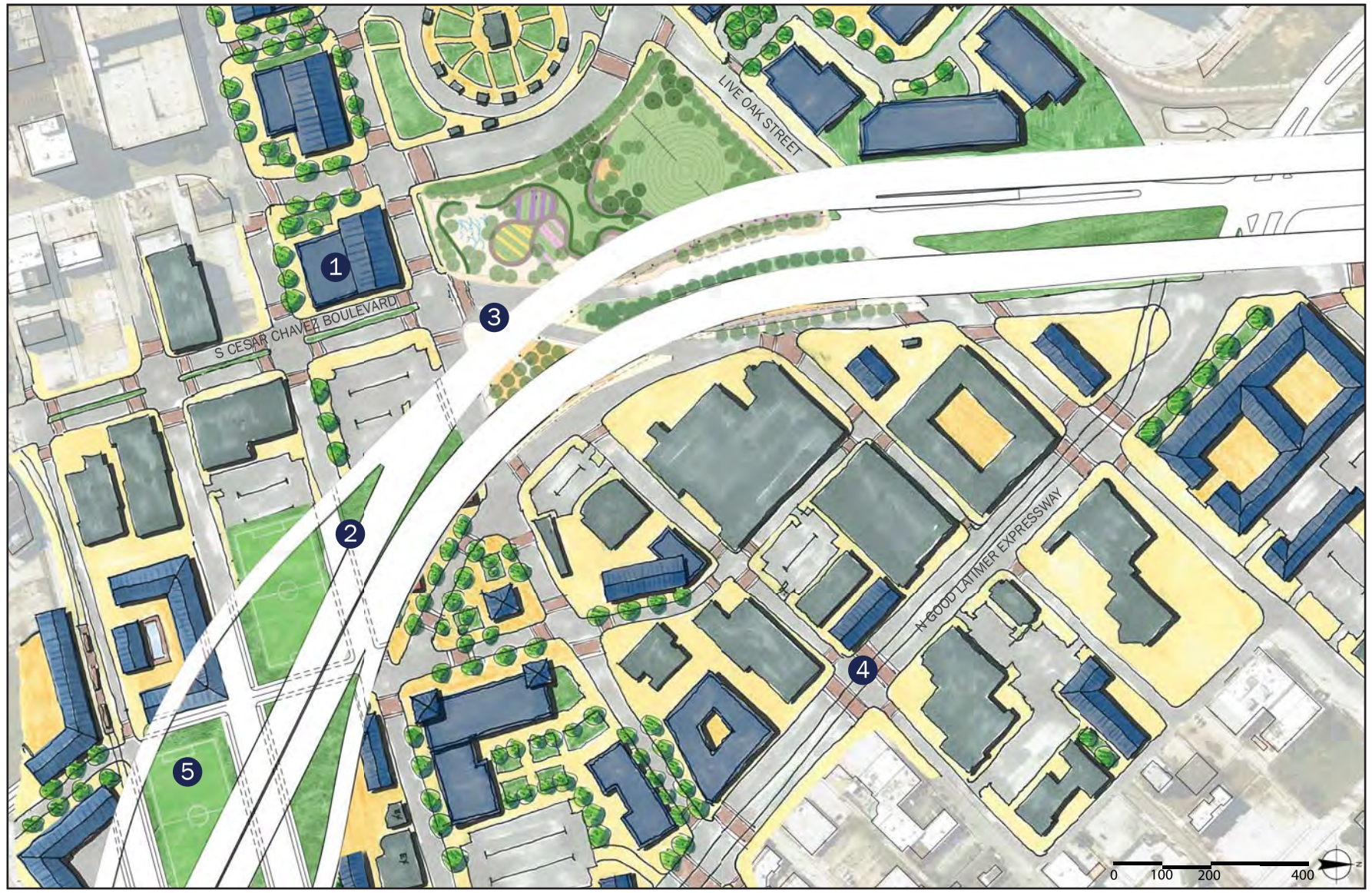
I-345 SCENARIO - MODIFY | FOCUS AREAS



I-345 AT LIVE AK STREET FOCUS AREA

FOCUS AREA NOTES: I-345 AT LIVE OAK STREET

1. Infill on underutilized lots
2. Street improvements under freeway
3. Improved pedestrian crosssings and access between Deep Ellum and CBD
4. Opportunity for infill buildings on under utilized or vacant parcels
5. “Under I-345 Park”



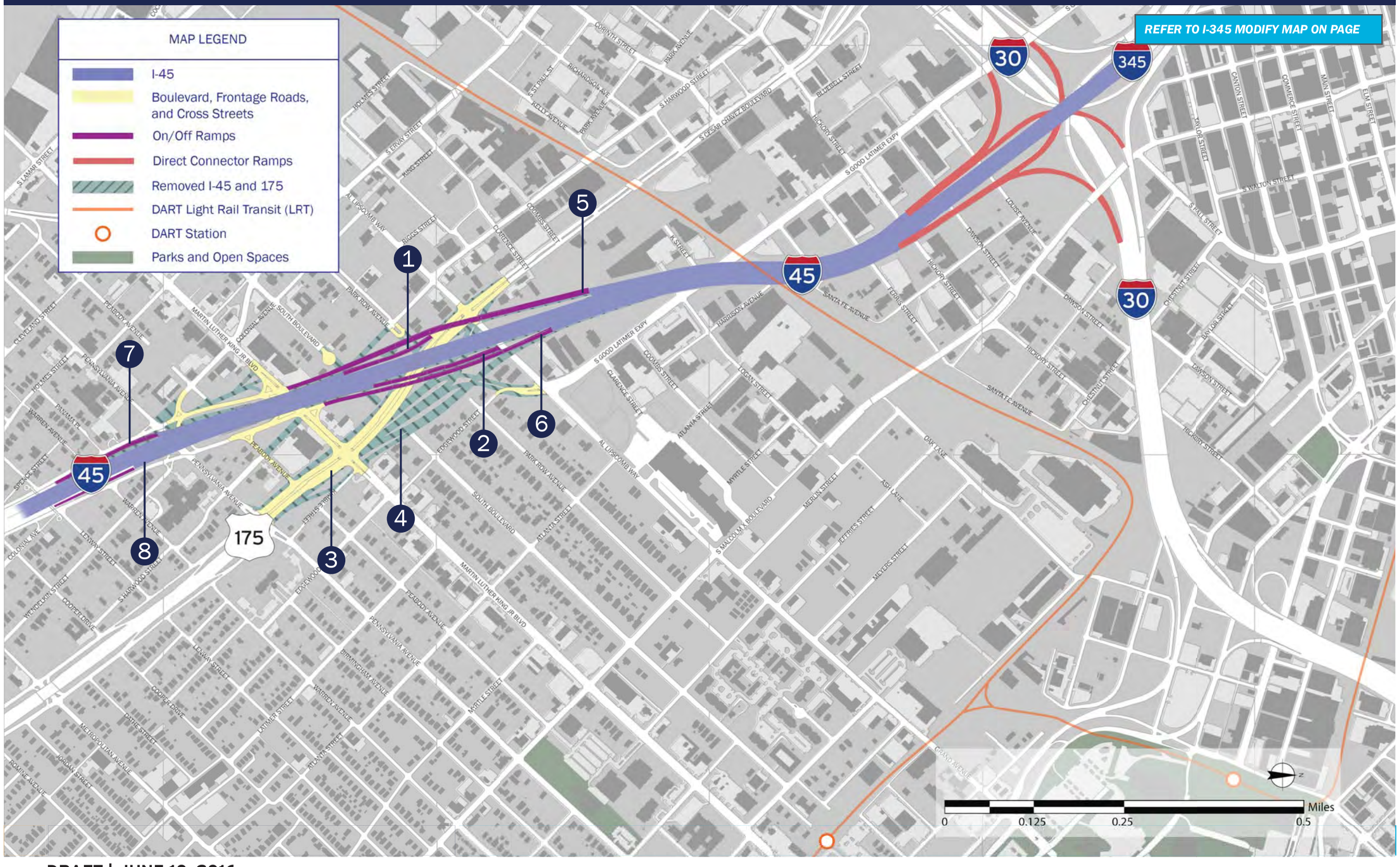
I-345 AT LIVE OAK STREET CONCEPT *Source: Gateway Planning Group*

I-345 SCENARIO - MODIFY | FOCUS AREAS

I-345 CORRIDOR POTENTIAL



I-45 SCENARIO - MODIFY | MAP



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I-45 SCENARIO - MODIFY | MAP

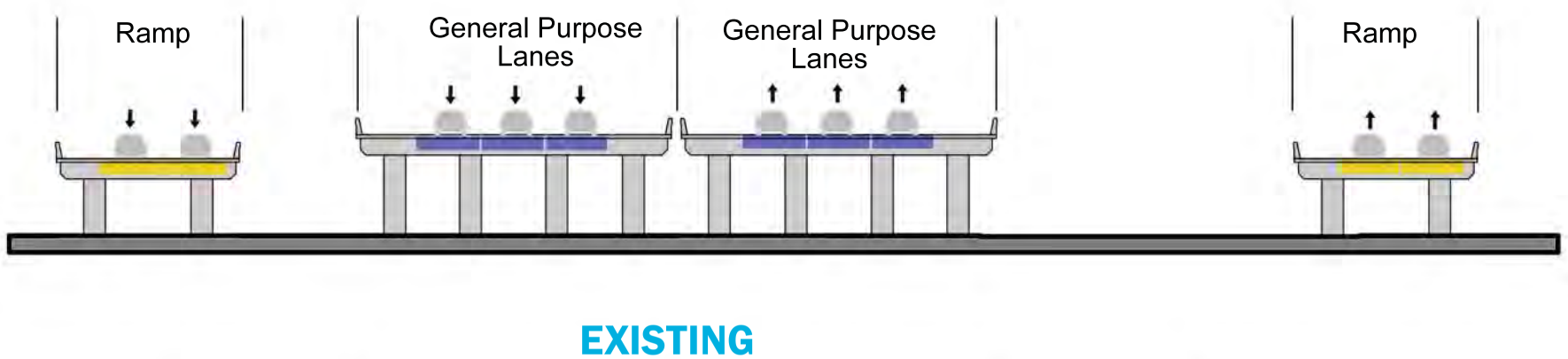
PLAN NOTES: I-45 MODIFY

1. Add southbound I-45 entrance ramp from Cesar Chavez Boulevard
2. Add northbound I-45 exit ramp to Al Lipscomb Way (Grand Ave)
3. Reconstruct S.M. Wright from Pennsylvania Avenue to Cesar Chavez Boulevard at Al Lipscomb Way
4. Remove northbound I-45 entrance ramp and connections to Good Latimer Expressway and Cesar Chavez Boulevard from US-175
5. Southbound I-45 exit ramp to frontage road at Al Lipscomb Way
6. Northbound I-45 entrance ramp from frontage road at Al Lipscomb Way
7. Southbound I-45 exit ramp to frontage road at Lenway Street
8. Northbound I-45 entrance ramp from frontage road at Lenway Street

CROSS SECTIONS



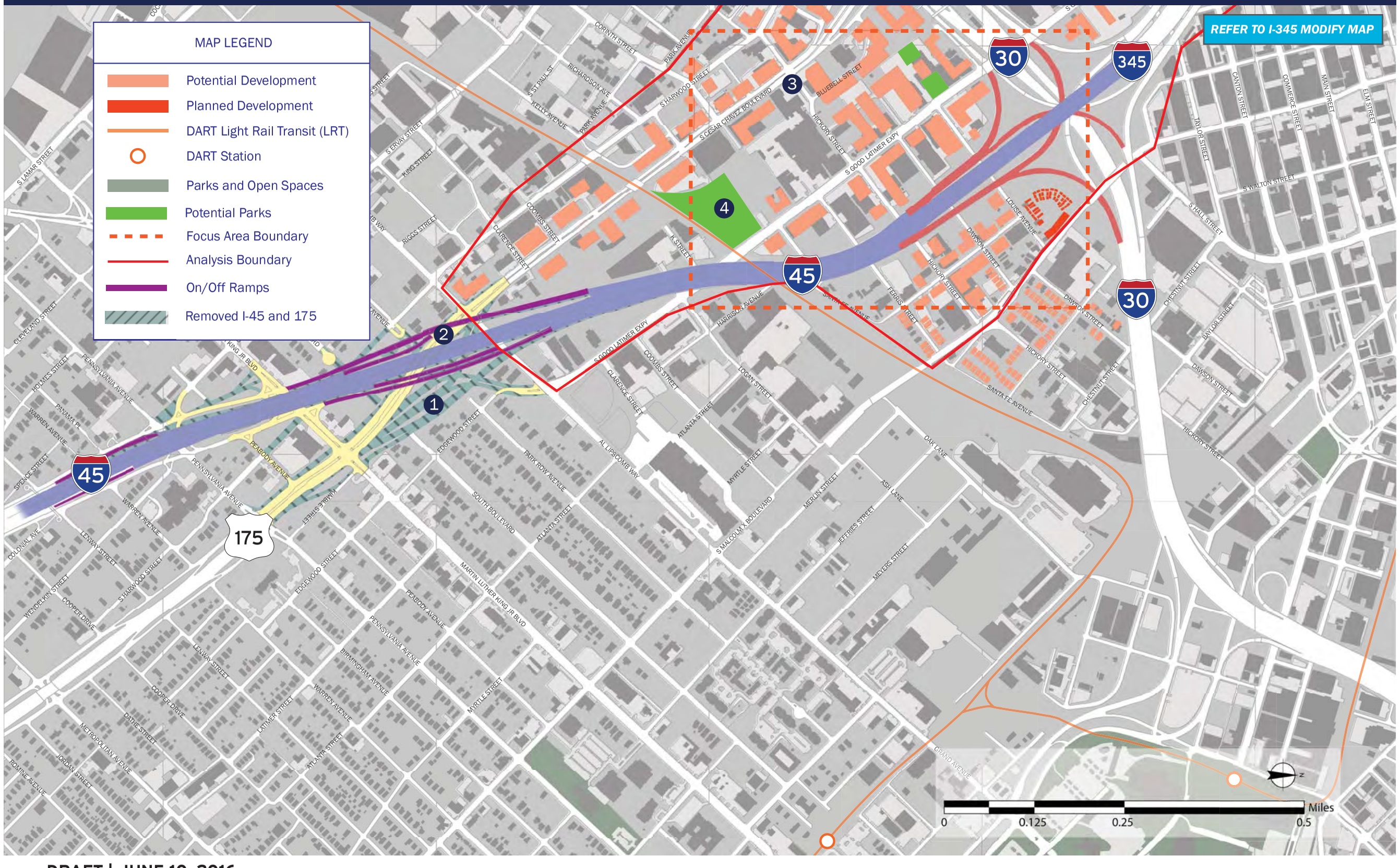
EXISTING



Arterial / Local Road

SCENARIO

I-45 SCENARIO - MODIFY | DEVELOPMENT MAP



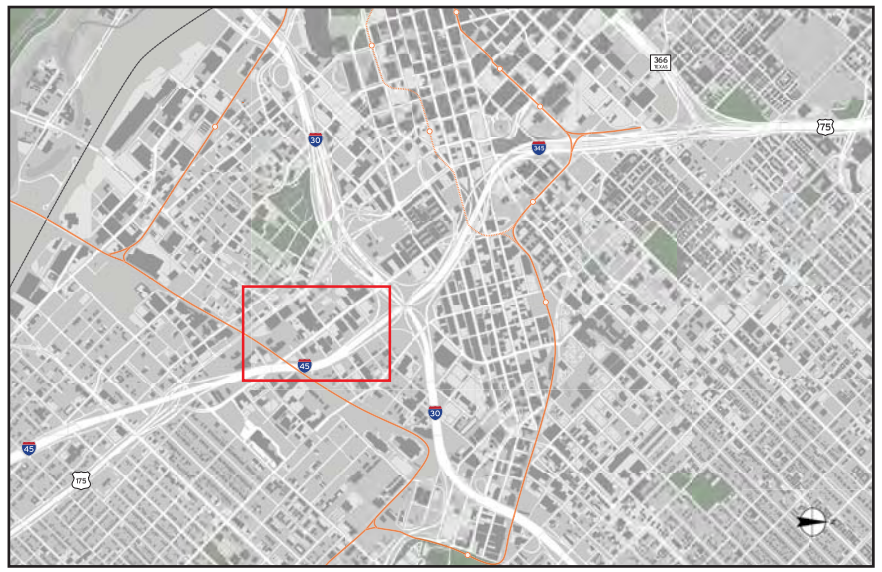
DRAFT | JUNE 10, 2016

I-45 SCENARIO - MODIFY | DEVELOPMENT MAP

PLAN NOTES: I-45 MODIFY

1. Ramp removal will open up developable land and provide opportunity to repair street grid
2. Make new ramps for intuitive and improve wayfinding to decrease driver confusion
3. Provide opportunity for pedestrian and bike crossing
4. Potential Corinth Street Park

I-45 SCENARIO - MODIFY | FOCUS AREAS



I-345 AT SOUTH GOOD LATIMER EXPRESSWAY FOCUS AREA

FOCUS AREA NOTES: I-45 AT SOUTH GOOD LATIMER EXPRESSWAY AVENUE

1. City Park on former brownfield site to provide needed open space to neighborhood
2. Focus on pedestrian and bicycle crossings at regular intervals
3. Pocket parks to serve as a central gathering point for the neighborhood
4. Infill scale retail and office
5. Multifamily to provide housing options in the neighborhood focused around open spaces



I-345 AT SOUTH GOOD LATIMER EXPRESSWAY CONCEPT *Source: Gateway Planning Group*

I-45 CORRIDOR POTENTIAL



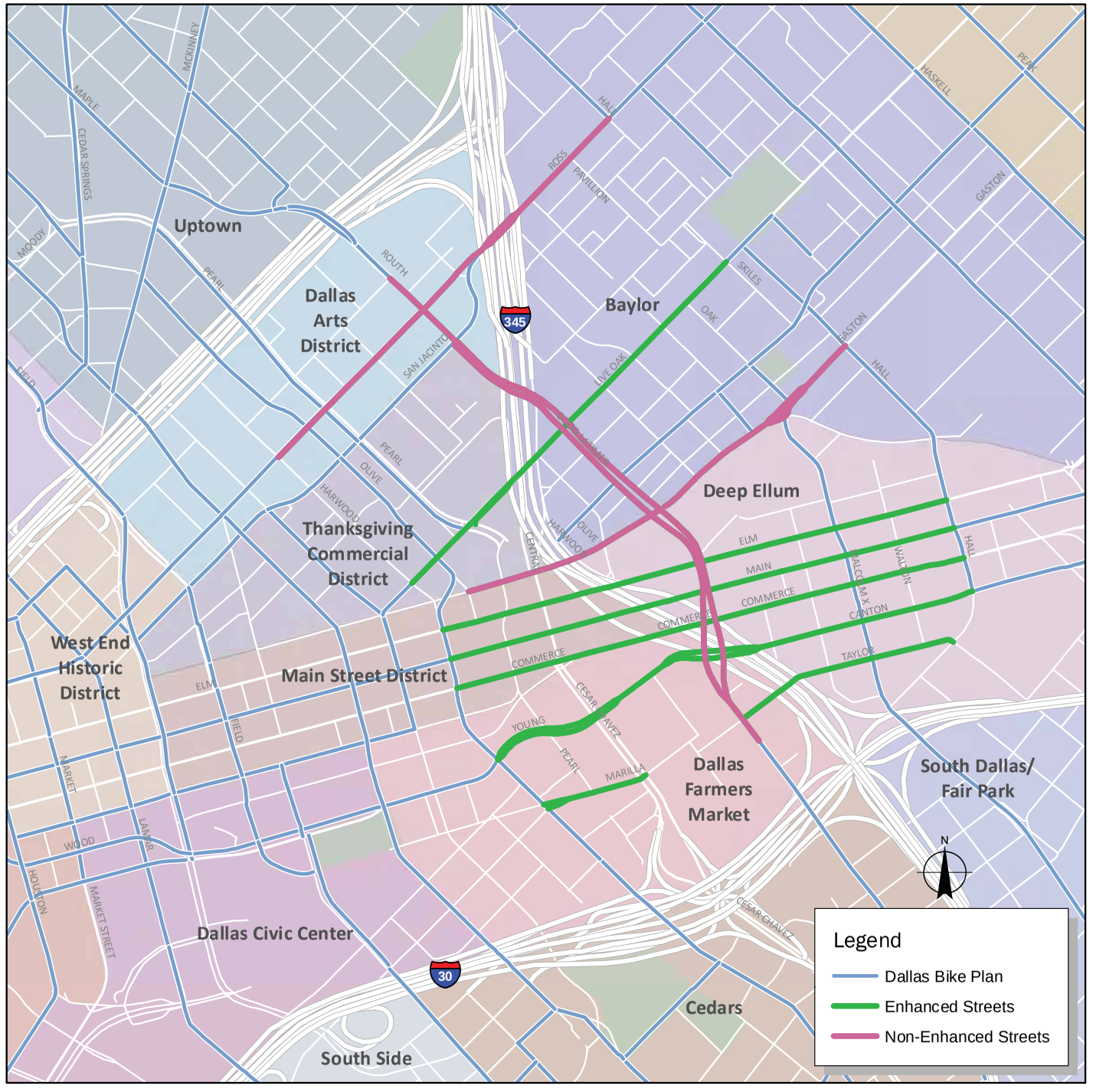
I-345 SCENARIO - MODIFY | CONNECTIVITY OPPORTUNITIES

The hub of our regional hub-and-spoke transportation network is the freeway loop around downtown Dallas. A primary focus of Dallas CityMAP is improving the connections between the CBD and the adjacent neighborhoods around and near downtown. Whether short-, intermediate-, or long-term, all improvements considered by CityMAP have at their core philosophy and approach - CONNECTIVITY. Where the historic city street grid is broken, CityMAP proposes solutions to knit the network together. The CityMAP team analyzed existing and future traffic volumes on local streets in the study area and determined where additional capacity existed on a 24-hour and peak hour basis. Where streets have available vehicle carrying capacity, CityMAP explores a series of alternatives for making key roadways more walkable and bikeable, enhancing connectivity.

For years the route of US 75 towards Houston wound through the east end of downtown, past the Farmers Market and the warehouses supporting the wholesale food distribution businesses. In 1968 I-345 was opened providing direct access from US 75, I-30, and I-45 to Elm, Main, and Commerce Streets via collector distribution roads and ramps. The new freeway absorbed the traffic demands on US 75 and I-45 but created a visible separation between downtown and Deep Ellum. Whether I-345 is imposed through structural enhancements or is put underground or removed all together the Existing Cross Sections Analysis identifies roadway improvements that enhance connectivity between downtown and Deep Ellum.

Ross Avenue is an important street in the Arts District and needs a better connection under I-345 to East Dallas. Live Oak and Gaston provide access to the Thanksgiving Commercial Center and Main Street Districts from the Baylor District and East Dallas. Elm, Main, Commerce, and Canton provide access between Deep Ellum, South Dallas and Fair Park to the Main Street District and Farmers Market.

The CityMAP team analyzed existing traffic volumes and 2040 traffic volume projections on important local streets in the I-345 corridor and determined where additional capacity existed on a 24-hour and peak hour basis. Streets with a volume to capacity ratio of 0.7 or less were considered as candidate streets. Where streets had available vehicle carrying capacity, CityMAP explores a series of alternatives for making key roadways more walkable and bikeable by using tools provided in the Complete Streets Design Manual, Dallas Bike Plan, and other sources. These alternatives are just one of many possible configurations that could be applied to the candidate streets and by no mean are exhaustive. Each roadway has been evaluated based on the following attributes presented in the Existing Cross Sections Analysis table below: Functional Classification, Capacity, ADT, Existing and Future V/C, roadway cross-section attributes, existing bicycle and pedestrian facilities. Right-of-Way width was also an important consideration in the development of future alternatives. The map to the right provides the arterial street grid in the I-345 Corridor study area with the 2011 Bike Plan and Dallas downtown area neighborhoods overlaid. The map indicates the candidate streets that were evaluated for enhancements in pedestrian and bicycle facilities.



I-345 SCENARIO - MODIFY | CONNECTIVITY OPPORTUNITIES

I-345 Modify Existing Cross Sections Analysis

Street	From	To	Area Type	Functional Class	Capacity	Existing ADT	Existing V/C	2040 ADT	2040 V/C	One Way Two Way	Median Type	Total Lanes	Parking	Bike Facility
Ross	Hall	Pavillion	CBD Fringe	Principal Arterial	25,000	19,227	0.77	21,450	0.86	2	TWLTL	4	0	0
Ross	Olive	Harwood	CBD	Principal Arterial	17,250	15,516	0.90	31,214	1.81	1	TWLTL	3	2	0
Ross	Central NB	Central SB	CBD Fringe	Principal Arterial	37,500	21,670 [1]	0.58	19,733	0.53	2	Divided	6	0	0
Live Oak	Oak	Skiles	CBD Fringe	Minor Arterial	25,000	16,459	0.66	11,111	0.44	2	TWLTL	4	0	0
Live Oak	Central	Pearl	CBD Fringe	Minor Arterial	28,750	10,263 [1]	0.36	28,764	1.00	2	Undivided	5	0	0
Live Oak	Olive	Harwood	CBD	Minor Arterial	17,250	8,043	0.47	12,005	0.70	1	Undivided	3	1	0
Pacific	Good Latimer	Hawkins	CBD Fringe	Principal Arterial	23,000	8,903	0.39	21,388	0.93	2	Undivided	4	0	0
Pacific	Central	Cesar Chavez	CBD Fringe	Minor Arterial	28,750	10,384 [1]	0.36	20,008	0.70	2	Undivided	5	0	0
Pacific	Cesar Chavez	Pearl	CBD	Minor Arterial	26,250	9,775 [1]	0.37	35,202	1.34	2	Undivided	5	0	0
Elm	Hawkins	Cesar Chavez	CBD Fringe	Principal Arterial	25,000	14,724 [1]	0.59	30,613	1.22	1	Undivided	4	0	0
Elm	Olive	Harwood	CBD	Principal Arterial	17,250	12,926	0.75	22,494	1.30	1	Undivided	3	2	0
Main	Hall	Walton	CBD Fringe	Minor Arterial	11,500	8,760	0.76	7,863	0.68	2	Undivided	2	2	1
Main	Pearl	Harwood	CBD	Minor Arterial	21,000	8,952	0.43	16,462	0.78	2	Undivided	4	2	1
Commerce	Walton	Hall	CBD Fringe	Principal Arterial	18,750	4,772	0.25	23,659	1.26	1	Undivided	3	2	0
Commerce	Cesar Chavez	Good Latimer	CBD Fringe	Minor Arterial	28,750	10,841 [1]	0.38	23,607	0.82	2	Undivided	5	0	0
Commerce	Harwood	Pearl	CBD	Principal Arterial	17,250	11,764	0.68	29,143	1.69	1	Undivided	3	2	0
Canton	Hall	Walton	CBD Fringe	Principal Arterial	12,500	10,271	0.82	7,606	0.61	2	TWLTL	2	0	0
Canton/Young	Pearl	Harwood	CBD	Principal Arterial	23,000	12,000	0.52	12,031	0.52	2	Divided	4	0	0
Taylor	Malcolm X	Good Latimer	CBD Fringe	Minor Arterial	11,500	966 [1]	0.09	4,176	0.36	2	Undivided	2	2	0

[1] Counts not conducted by KHA and acquired using historical data from NCTCOG or Google Earth Pro.

TWLTL - Two Way Left Turn Lane

Parking Nomenclature:

0 - No on street parking

1 - On street parking on one side of the street

2 - On street parking on available on both sides of the street

Bike Facility Nomenclature:

0 - No bike facility

1 - Shared bike lane

2 - Dedicated bike lane

ROSS AVENUE

Ross Avenue is a principal east-west arterial in Deep Ellum connecting lower Greenville, east Dallas, and the Baylor Medical district to downtown including the Arts District and West End. A number of high rise office buildings have Ross Avenue as their address. The City has invested in pedestrian amenities on Ross Avenue within the CBD and it is a designated route on the Bike Plan.

The pedestrian experience under I-345 would be enhanced with better lighting, painted surfaces and urban design amenities that connect downtown to the adjacent neighborhoods in east Dallas.

Ross Avenue has high ADTs and v/c ratios within the CBD and in east Dallas. Any road diets or complete streets configurations applied to Ross Avenue will reduce the capacity further and increase the overall LOS to undesirable levels.

Ross Avenue does have excess capacity underneath I-345. Pedestrian enhancements and facilities should be provided to improve connectivity between downtown and east Dallas neighborhoods.

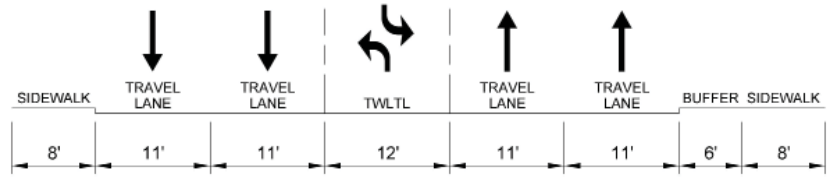


FIGURE 1 *Existing Ross Avenue Cross Section from Hall Street to Pavillion Street*

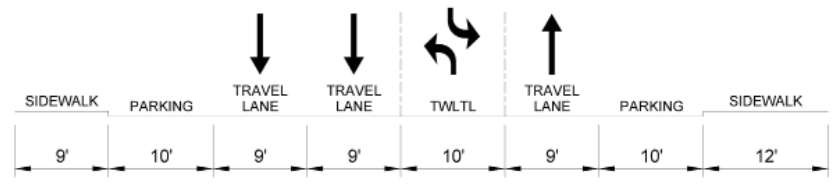


FIGURE 2 *Existing Ross Avenue Cross Section from Olive Street to Harwood Street*

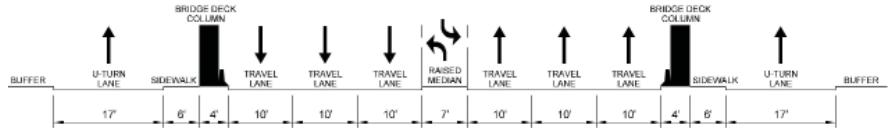


FIGURE 3 *Existing Ross Cross Section under US 75/I-345*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Ross	Existing	25,000	19,227	0.77	D	21,450	0.86	E
Ross	Existing	17,250	15,516	0.90	E	31,214	1.81	F
Ross	Existing	37,500	21,670	0.58	C	19,733	0.53	C

TABLE 1 *LOS for existing cross sections for Hall Street to Pavillion Street, from Olive Street to Harwood Street, and underneath I-345*

LIVE OAK STREET

Live Oak Street is a principal east-west arterial in Deep Ellum connecting lower Greenville and east Dallas to downtown. Live Oak serves heavy vehicular movements shown to be at LOS D today and LOS E in the future. Due to the heavy concentration of multifamily and single family on the east side of Central, pedestrian movement between Deep Ellum and downtown needs to be addressed with continuous sidewalks underneath I-345. Live Oak Street is designated on the Dallas Bike Plan to have bike facilities.

The cross section of Live Oak Street from Oak Street to Skiles Street is 5 lanes with a TWLTL in the middle. Even though Live Oak Street for this cross section is operating at a current LOS D it is still under the V/C ratio used for candidate streets, which is 0.7. A possible cross section could be removing the TWLTL on Live Oak and adding 6' bike lanes on each side.

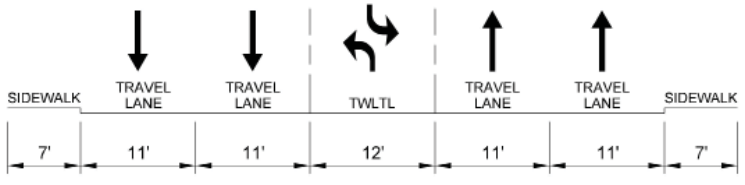


FIGURE 4 *Existing Live Oak Street Cross Section from Oak Street to Skiles Street*

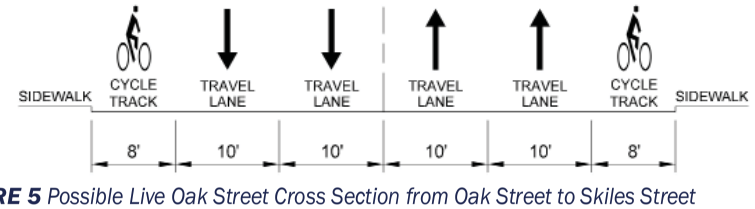


FIGURE 5 *Possible Live Oak Street Cross Section from Oak Street to Skiles Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Live Oak	Existing	25,000	16,459	0.66	D	11,111	0.44	A/B
Live Oak	Possible	23,000	16,459	0.72	D	11,111	0.48	C

TABLE 2 *LOS for existing and possible cross sections for Live Oak Street from Oak Street to Skiles Street*

The cross section of Live Oak Street underneath I-345 is 5 lanes, with 3 lanes in the westbound direction, towards downtown, and 2 lanes in the eastbound direction. Short term enhancements could include providing continuous sidewalks, better lighting underneath, and painted surfaces which would help improve the connectivity and pedestrian experience when crossing into downtown from east Dallas or vice versa. A possible lane configuration could be to drop one of the westbound travel lanes and add 5' bike lanes. Based on the current analysis, this cross section of the corridor experiences LOS F in 2040 but may still warrant enhancements upon further analysis and input from local stakeholders.

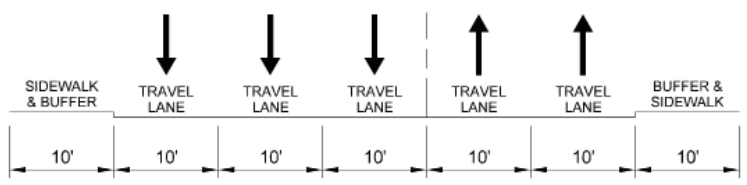


FIGURE 6 *Existing Live Oak Street Cross Section from Central to Pearl Street*

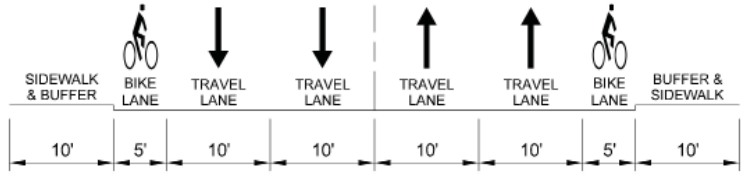


FIGURE 7 *Possible Live Oak Street Cross Section from Central to Pearl Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Live Oak	Existing	28,750	10,263	0.36	A/B	28,764	1.00	F
Live Oak	Possible	23,000	10,263	0.45	A/B	28,764	1.25	F

TABLE 3 *LOS for existing and possible cross sections for Live Oak Street from Central to Pearl Street*

The cross section of Live Oak Street from Olive Street to Harwood Street is one way. It consists of 4 lanes, 2 of which are dedicated as travel lanes, one of which is parking, and the last one is parking for part of the way and a left turn lane for the rest. The CityMAP analysis shows that there is excess capacity in the existing scenario for this configuration. Figure 9 shows a possible configuration for Live Oak Street for this cross section.

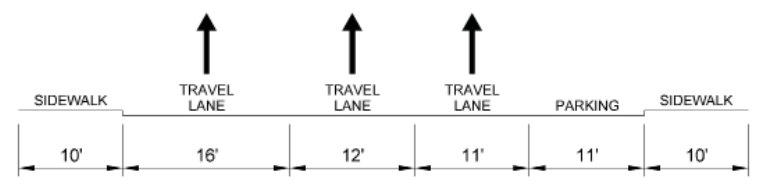


FIGURE 8 *Existing Live Oak Street Cross Section from Olive Street to Harwood Street*

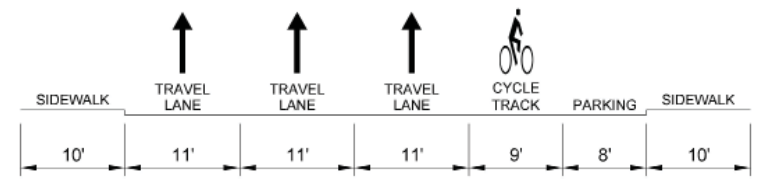


FIGURE 9 *Possible Live Oak Street Cross Section from Olive Street to Harwood Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Live Oak	Existing	17,250	8,043	0.47	C	12,005	0.70	D
Live Oak	Possible	17,250	8,043	0.47	C	12,005	0.70	D

TABLE 4 *LOS for existing and possible cross sections for Live Oak Street from Olive Street to Harwood Street*

GASTON/PACIFIC AVENUE

Gaston Avenue is a principal east-west arterial in Deep Ellum connecting Lakewood and east Dallas to downtown. Pacific Avenue is a principal east-west arterial in downtown connecting the Thanksgiving Commercial Center and Main Street District under I-345 to Deep Ellum.

Gaston/Pacific Avenue has wide pedestrian zones ranging from 15' to 17' within the CBD. It is suggested that continuous sidewalks be installed where there are none. The analysis shows that there is not adequate room for proper bike facilities. Gaston/Pacific are not on the Bike Plan. A possible cross section

to consider for Pacific Avenue could be to add shared lanes as shown in Figure 11. Existing traffic volumes are low at this part of Pacific Avenue as shown in Table 5. Based on the current analysis, this cross section of the corridor experiences LOS E in 2040 but may still warrant enhancements upon further analysis and input from local stakeholders.

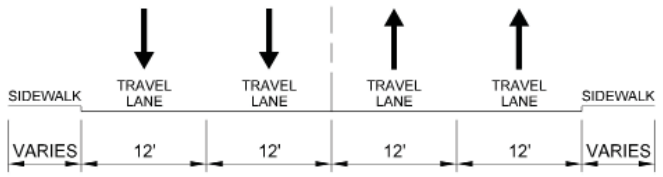


FIGURE 10 *Existing Pacific Avenue Cross Section from Good Latimer Expressway to Hawkins Street*

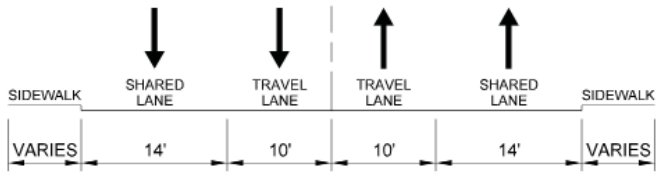


FIGURE 11 *Possible Pacific Avenue Cross Section from Good Latimer Expressway to Hawkins Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Pacific	Existing	23,000	8,903	0.39	A/B	21,388	0.93	E
Pacific	Possible	23,000	8,903	0.39	A/B	21,388	0.93	E

TABLE 5 *LOS for existing and possible cross sections for Pacific Avenue from Good Latimer Expressway to Hawkins Street*



FIGURE 12 *Existing Pacific Avenue Cross Section from Central to Cesar Chavez Boulevard*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Pacific	Existing	23,000	8,903	0.39	A/B	21,388	0.93	E
Pacific	Possible	23,000	8,903	0.39	A/B	21,388	0.93	E

TABLE 6 *LOS for existing and possible cross sections for Pacific Avenue from Central to Cesar Chavez Boulevard*

ELM STREET

Elm Street is a principal westbound one way arterial in Deep Ellum connecting under I-345 to the Main Street District downtown. Currently, the collector-distributor lanes of I-345 have direct connect ramps into and out of the CBD on Elm, Main and Commerce. Traffic volumes peak on Elm Street in the AM peak period as commuters enter downtown from Deep Ellum and direct connect ramp from I-345.

CityMAP encourages the removal of the direct connect ramp which will provide for an additional sidewalk on Elm and reduce the amount of bridge structure overhead. This will open up the space to allow for continuous sidewalks and bicycle facilities. Elm Street is not on the Bike Plan. Possible bicycle improvements are shown on Elm Street underneath I-345 because it falls below the V/C threshold used for candidate streets in CityMAP analysis. However, since Main Street is just parallel of Elm Street and has bicycle facilities, bicycle facilities on Elm Street may not be a top priority. Other possible improvements underneath I-345 could include better lighting, wider sidewalks, and streetscape to improve the pedestrian experience and to encourage people to cross between downtown and east Dallas neighborhoods.

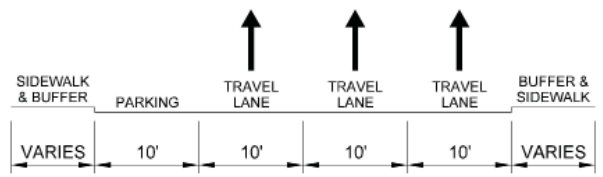


FIGURE 13 *Existing Elm Street Cross Section from Hawkins Street to Cesar Chavez Boulevard*

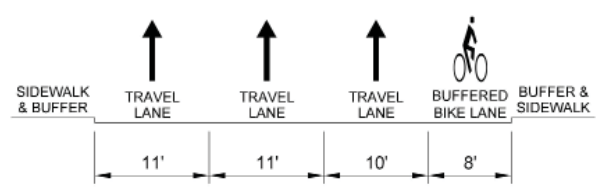


FIGURE 14 *Possible Elm Street Cross Section from Hawkins Street to Cesar Chavez Boulevard*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Elm	Existing	25,000	14,724	0.59	C	30,613	1.22	F
Elm	Possible	25,000	14,724	0.59	C	30,613	1.22	F

TABLE 7 *LOS for existing and possible cross sections for Elm Street from Hawkins Street to Cesar Chavez Boulevard*

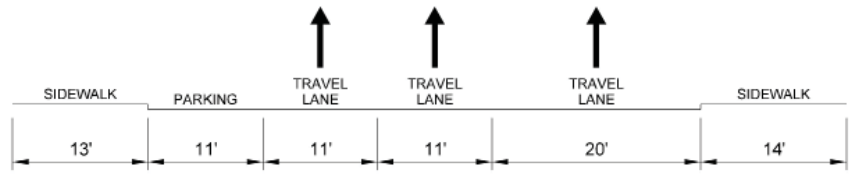


FIGURE 15 *Existing Elm Street Cross Section from Olive Street to Harwood Street*

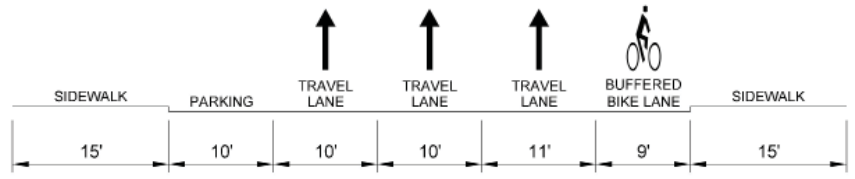


FIGURE 16 *Possible Elm Street Cross Section from Olive Street to Harwood Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Elm	Existing	17,250	12,926	0.75	D	22,494	1.30	F
Elm	Possible	17,250	12,926	0.75	D	22,494	1.30	F

TABLE 8 *LOS for existing and possible cross sections for Elm Street from Olive Street to Harwood Street*

MAIN STREET

Main Street is designated a minor two way east-west arterial in Deep Ellum connecting under I-345 to the Main Street District in downtown. Currently, the collector-distributor lanes of I-345 have direct connect ramps into and out of the CBD on Elm, Main and Commerce. Traffic volumes on Main Street peak in both the AM and PM periods.

CityMAP encourages the removal of the direct connects to I-345 providing an opportunity for wider and continuous sidewalks on either side of Main. This allows the collector-distributor roads to be redesigned, reducing the width of the bridge structures overhead. Main Street is on the Bike Plan and has bike lanes and shared lanes. Main Street is a good route for cyclists to travel on considering its two lane cross section through most of downtown and part of Deep Ellum. No further improvements regarding pedestrian or bicycle facilities are recommended for Main Street at this time.

COMMERCE STREET

Commerce Street is a Principal eastbound one way arterial in downtown connecting under I-345 from the Main Street District to Deep Ellum. Currently, the collector-distributor lanes of I-345 have direct connect ramps onto and out of the CBD on Elm, Main and Commerce. Traffic volumes peak on Commerce Street in the PM peak period as commuters leave down to Deep Ellum and the direct ramp to I-345.

CityMAP encourages the removal of the direct connects providing an opportunity for additional sidewalk on Commerce and reducing the width of the bridge structures overhead. However, Main Street already has bike lanes and shared lanes which serve a similar functionality that Elm and Commerce would if they were to have bike lanes. Commerce Street is not on the Bike Plan. Figure 18 shows possible Commerce Street reconfiguration through Deep Ellum. Based on the current analysis, this cross section of the corridor experiences LOS F in 2040 but may still warrant enhancements upon further analysis and input from local stakeholders.

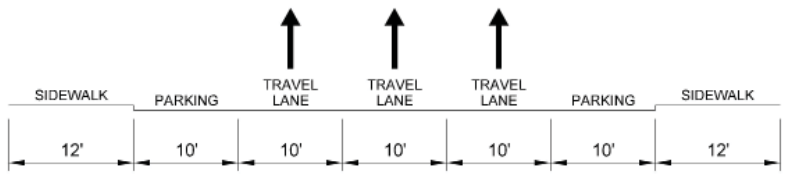


FIGURE 17 *Existing Commerce Street Cross Section from Walton Street to Hall Street*

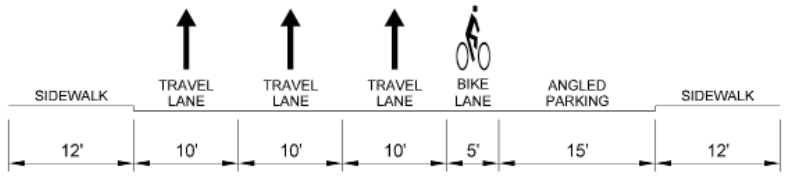


FIGURE 18 *Possible Commerce Street Cross Section from Walton Street to Hall Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Commerce	Existing	18,750	4,772	0.25	A/B	23,659	1.26	F
Commerce	Possible	18,750	4,772	0.25	A/B	23,659	1.26	F

TABLE 9 *LOS for existing and possible cross sections for Commerce Street from Walton Street to Hall Street*

The crossing of Commerce Street underneath I-345 is 5 lanes wide. A possible reconfiguration of the street is shown in Figure 20. Based on the current analysis, this cross section of the corridor experiences LOS F in 2040 but may still warrant enhancements upon further analysis and input from local stakeholders.

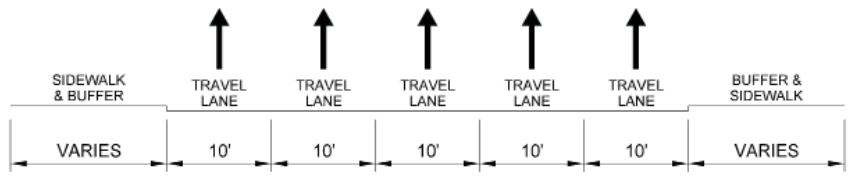


FIGURE 19 *Existing Commerce Street Cross Section from Cesar Chavez Boulevard to Good Latimer Expressway*

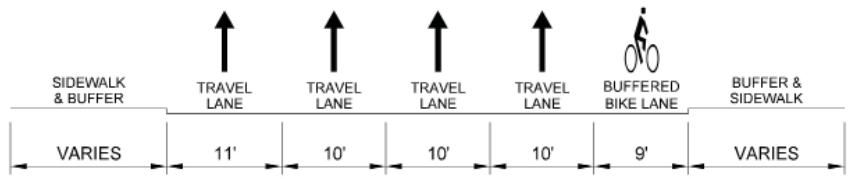


FIGURE 20 *Possible Commerce Street Cross Section from Cesar Chavez Boulevard to Good Latimer Expressway*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Commerce	Existing	28,750	10,841	0.38	A/B	23,607	0.82	E
Commerce	Possible	23,000	10,841	0.47	C	23,607	1.03	F

TABLE 10 *LOS for existing and possible cross sections for Commerce Street from Cesar Chavez Boulevard to Good Latimer Expressway*

Commerce Street in downtown has a similar cross section to that of Commerce between Hall and Walton. Therefore similar configuration was chosen. Based on the current analysis, this cross section of the corridor experiences LOS F in 2040 but may still warrant enhancements upon further analysis and input from local stakeholders.

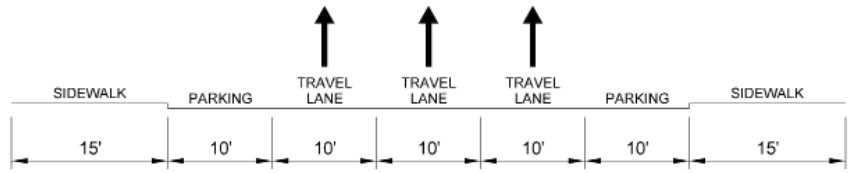


FIGURE 21 *Existing Commerce Street Cross Section from Harwood Street to Pearl Street*

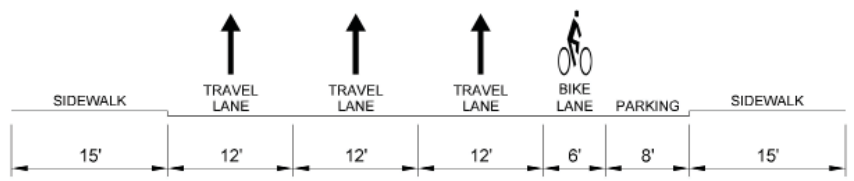


FIGURE 22 *Possible Commerce Street Cross Section from Harwood Street to Pearl Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Commerce	Existing	17,250	11,764	0.68	D	29,143	1.69	F
Commerce	Possible	17,250	11,764	0.68	D	29,143	1.69	F

TABLE 11 *LOS for existing and possible cross sections for Commerce Street from Harwood Street to Pearl Street*

CANTON/YOUNG STREET

Young Street is a principal east-west arterial in downtown that becomes Canton Street and connects the Reunion/Union Station, Civic Center, and Farmers Market districts to Deep Ellum. At 4 lanes divided, Canton/Young has excess capacity in the Farmers Market between Pearl and Harwood and under I-345. The CityMAP analysis indicates that the cross section could be reallocated to include 5' lanes in each direction. This is shown in Figures 23 and 24. Canton/Young street are on the Bike Plan.

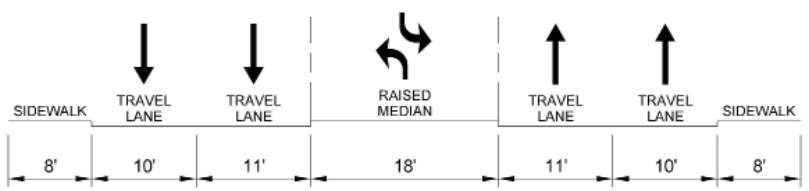


FIGURE 23 *Existing Young Street Cross Section from Pearl Street to Harwood Street*

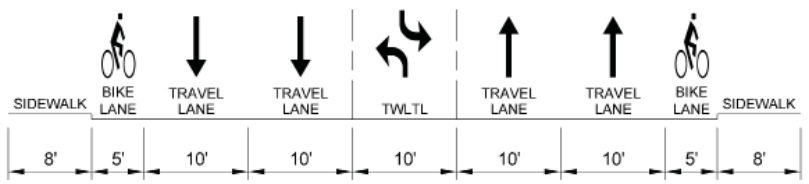


FIGURE 24 *Possible Young Street Cross Section from Pearl Street to Harwood Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Canton/ Young	Existing	23,000	12,000	0.52	C	12,031	0.52	C
Canton/ Young	Possible	23,000	12,000	0.52	C	12,031	0.52	C

TABLE 12 *LOS for existing and possible cross sections for Young Street from Pearl Street to Harwood Street*

Canton Street has minimum space available under I-345. The area is similar to a box diamond intersection but more compact. There are also bridge deck columns which make it hard to accommodate bike lanes. CityMAP recommends further detailed study.

TAYLOR STREET

The City Bike Plan has designated a number of streets within the CBD for bike facilities. An often discussed bike network connection that is needed is a formal connecting route between the Santa Fe Trail in east Dallas and the Katy and Strand Trails in Victory Park and Design Districts. Taylor Street has the potential for providing a critical link of the as yet undesignated route as it extends under I-345.

CityMAP recommends improving Taylor Street and working out a connection to Marilla Street that extends past City Hall as part of connecting the Santa Fe, Katy and Strand Trails in downtown. Taylor Street is designated a minor east-west arterial in Deep Ellum and the Farmers Market and has 2 large travel lanes in each direction. There is adequate room to create two 10' travel lanes and exclusive bike lanes that are 5' each with 2' buffer zones. Narrower travel lanes encourage motorists to slow down which is consistent with parallel and adjacent bicycle facilities sharing the same ROW. Taylor Street is likely to continue to have a number of commercial vehicles which need wider lanes at intersections to accommodate turning movements. The buffer zones are intended to provide room for the occasional wide vehicle to turn safely.



FIGURE 25 *Existing Taylor Street Cross Section from Malcolm X Boulevard to Good Latimer Expressway*

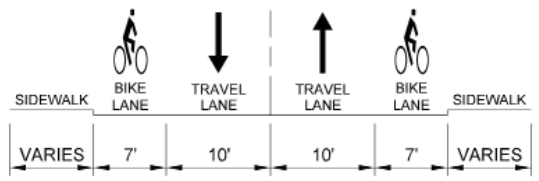


FIGURE 26 *Possible Taylor Street Cross Section from Malcolm X Boulevard to Good Latimer Expressway*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Taylor	Existing	11,500	996	0.09	A/B	4,176	0.36	A/B
Taylor	Possible	11,500	996	0.09	A/B	4,176	0.36	A/B

TABLE 13 *LOS for existing and possible cross sections for Taylor Street from Malcolm X Boulevard to Good Latimer Expressway*

GOOD LATIMER EXPRESSWAY/ROUTH STREET

Routh Street and Good Latimer Expressway are principal north-south arterials connecting Uptown and the Arts District under I-345 to Deep Ellum, to the Cedars and south Dallas/Fair Park districts. DART has a major intersection of light rail lines at Hawkins Street which creates a series of wide intersections that are intimidating to cross for pedestrians. Currently, Good Latimer is marked as having shared bike lanes on it but it is not on the Bike Plan. Pedestrian facilities should be accommodated to provide better connectivity between east Dallas and downtown neighborhoods.

I-345/I-45 SCENARIO - MODIFY | FACTOR ANALYSIS

The I-345 Modify scenario focuses on safety and ramp improvements for the Main, Elm and Commerce area. The direct connect structures are left intact for this concept. Considered and dismissed by the CityMAP Team, their relocation would not have had a great impact on connectivity and economic development. On the other hand, the I-45 connection at S.M. Wright is proposed for modification in order to facilitate better connections to downtown via Cesar Chavez Boulevard, Good Latimer Expressway and Harwood Street.

Though limited by the elevated highway structures that would remain in this scenario, the focus areas selected for the I-345 Modify provide an opportunity for a more contextual relationship to the development adjacent to the facility. The illustrative plans and perspectives show the potential for enhancing the existing public realm and present opportunities for new parks and open space.

The Arts District and Main-Elm-Commerce focus areas show the impact an I-345 Modify scenario would have on the current available property. This focus area also assumes the transition to US 75 and Woodall Rodgers would stay the same; but that ramps at Main-Elm-Commerce would be removed. Finally, the scenario demonstrates how development would be able to infill in the current conditions.

The boundaries of the analysis area are outlined on the map and show the proposed and planned developments known at the time CityMAP was initiated. The analysis area does not cover the entire areas affected by the facility changes in this scenario. However, it does focus on key areas of interest that would be considered catalytic or impactful.

	SCALE	QUINTILE UNITS	VALUE	SCORE
CONNECTIVITY				
Net New Linear Feet of Sidewalk per Acre	0 to 500	100	91.3	
Net New Intersections per Square Mile	0 to 75	15	11.5	
ECONOMIC DEVELOPMENT				
Net New Revenue	$0 to $92 Million	$18.4 Million	$51,027,844	
Net New Value	$0 to $2.6 Billion	$520 Million	$1,449,416,334	
Net New Jobs	0 to 52,000	10,400	23,274	
Net New Population	0 to 30,000	6,000	5,774	
Overall	Average of Subfactor Score			
FACILITY CAPITAL COST				
Estimated Total Cost of the Facility (inside TxDOT Right-of-Way)	N/A	N/A	Under $100M	$
FACILITY DEVELOPMENT & CONSTRUCTION DURATION				
Total Time for Planning, Design and Construction	0 to 25 Years	5 Years	5 Years	
PARKS & OPEN SPACE - QUANTITY				
Net New % of Area	0 to 8	1.6	5.3%	
VISUAL IMPACT				
Visual Impact - % Below Grade	0 to 100%	20%	0%	

COST KEY

Under $100M	$100M - 499M	$500M - 999M	$1B - 2B	Over $2B
$	$$	$$$	$$$$	$$$$$

FACTOR KEY

0 - 1 | 1.1 - 2 | 2.1 - 3 | 3.1 - 4 | 4.1 - 5

LOW — HIGH

STAKEHOLDER INTEREST

I-345/I-45 SCENARIO - MODIFY | FACTOR ANALYSIS

The factors defined in Chapter 4 are applied below to the I-345 Modify Scenario.

ADAPTIVE REUSE

Historic buildings can provide an opportunity to reinforce authentic history while taking advantage of current redevelopment demands. In general, there are limited opportunities for adaptive reuse in the area, which will only be moderately advanced by the Modified scenario.

CONNECTIVITY

SIDEWALKS AS A MEASURE OF WALKABILITY

Sidewalks are critical to the vibrancy and functionality of urban neighborhoods. In different contexts, sidewalks take on different attributes, i.e., varying widths and various configurations with landscaping and setbacks.

Much of the existing sidewalk network in and near the I-345 corridor is in poor condition, inadequate widths, they contain gaps in the network or are nonexistent. Combinations of disinvestment, lack of connectivity and large vacant tracts are not conducive to pedestrian mobility. I-345 cuts through the city grid at inconvenient angles which causes problems with connectivity that can be marginally improved through the removal of ramps that create barriers and confusion to the pedestrian and the reconnecting of the grid where possible.

Development is continuing due to proximity to the CBD and Deep Ellum nonetheless. This development helps establish demand for a repair of the limited sidewalk network that exists today. This could begin by providing sidewalks along the improved east west streets in the context of the removal of the ramps.

In assessing the redevelopment concept, the CityMAP team measured the net new linear feet of sidewalks. The Modified scenario could result in a net increase of approximately 46,852 linear feet of sidewalk. In other words, even with just the Modified scenario option, significant additional sidewalk investments could be facilitated.

Focus Area	Linear Feet
I-345 Modify	46,852

INTERSECTIONS PER SQUARE MILE AS A MEASURE OF CONNECTEDNESS

The existing configuration of I-345 cuts through the street grid and is interrupted by on/off ramps. However, if some of those direct connect ramps were removed it improves the function of the surface streets and requires that traffic be dispersed into the grid across a wider set of locations but eliminates access to downtown to those using the freeway. The area north of I-30 has major gaps in connectivity, but overall is adequate outside of the I-345 ROW. South of I-30 the connectivity is interrupted by grade separation on some of the arterials and as a result of the DART line crossing.

As the following table summarizes, the I-345 focus area had a net increase of 11.5 intersections per square mile. The potential additional intersections facilitated by the I-345 Modified scenario allow minimal improvements in connectivity.

Focus Area	New Intersections per Square Mile
I-345	11.5

ECONOMIC IMPACT

A modified I-345 could create some additional development activity due to the removal of the ramps to Elm, Main and Commerce. In addition, the redesign of S.M. Wright could connect Cesar Chavez, Good Latimer and Harwood as major connections to downtown. This scenario could realize some opportunities for redevelopment within the Cedars industrial areas. The visual impact of the removal of the ramps could also support better connectivity from the Arts District and Farmer's Market to Deep Ellum due to a perceived and actual contextual pedestrian realm.

POPULATION AND JOBS

The I-345 Modified Scenario could be associated with an estimated 23,274 employees between 2015 and 2045 when combined with other market and neighborhood factors. Population could also increase as a result of the proposed development. As a low estimate, it would increase by 5,774 people between 2015 and 2045.

ECONOMIC IMPACT SUMMARY

The breakdown of categories below provides the underlying analysis for the opportunities analyzed above.

HOSPITALITY ECONOMIC IMPACT

The total existing hospitality value in the I-345 area is approximately $7.3 million. There is a total of 1.1 million square feet of hospitality proposed in the I-345 Modified scenario. The value of this proposed space is estimated to be between $158 million and $168 million on the high end over the 30 year time period. The estimated property tax revenues, from this scenario, range from $4.2 million to $4.4 million. The estimated hotel tax generated would be approximately $5.9 million over the 30 year time period. The estimated added workforce generated from the proposed hospitality would be 1,331 employees.

OFFICE ECONOMIC IMPACT

There is approximately 536,300 SF of existing office space, with an approximate value of $46.7 million. There is the potential for an additional 5.1 million square feet of office space, and the estimated value of all office space between 2015 and 2045 ranges between $731 million and $773 million.

This scenario is estimated to increase property tax revenues to $19.7 million on the low end and $20.1 million on the high end over the 30 year time period.

Incorporating existing space with net new space, there will be a total of over 5.6 million square feet of total office in the I-345 analysis area. The estimated resulting added workforce from the proposed office between 2015 and 2045 is over 20,000.

RETAIL ECONOMIC IMPACT

There is approximately 703,300 SF of existing commercial retail space in the I-345 area today. The existing value for retail space is approximately at $57.7 million. There is a total of 741,800 SF of proposed new retail space added between 2015 and 2045 in the I-345 area. The estimated value of all retail space developed between 2015 and 2045 ranges between $105 million on the low end and $111 million on the high end. Estimated projected property tax revenues on this net new space range from $2.8 million on the low end to $3 million on the high end over the 30 year time period.

Existing space plus net new space creates over 1.4 million retail square feet in the I-345 area. The estimated increase in retail workforce between 2015 and 2045 is 1,349. Using an assumption of $300/SF for retail sales, the total sales tax revenue for retail space between 2015 and 2045 is projected at an estimated $6 million over the 30 year period.

MULTI-FAMILY ECONOMIC IMPACT

Like the difference between the Removal and Modified for office, the difference for the multifamily potential is pronounced between Removal on the one hand and Modified (and Below Grade) on the other.

I-345/I-45 SCENARIO - MODIFY | FACTOR ANALYSIS

There are 206,000 SF of existing multi-family space in the I-345 analysis area. Using market data to verify multi-family value per square feet, the total existing value for multi-family space is $10.3 million. There is a total of 3.1 million SF of potential multi-family space between 2015 and 2045 in the I-345 analysis area for the Modified scenario, well below that for the Removal Scenario. Nevertheless, the resulting estimated value of all multi-family space developed between 2015 and 2045 ranges between approximately $451 million on the low end and $387 million on the high end, which still will be a substantial impact.

Property tax revenues on this net new space range from approximately $12.1 million on the low end and $12.8 million on the high end over the 30 year time period. Incorporating existing space with net new space, there will be a total of over 3.2 million multi-family square feet in the I-345 area. The estimated added population in multi-family units between 2015 and 2045 is 5,725.

SINGLE FAMILY ECONOMIC IMPACT

There is currently 26,250 square feet of single-family development and an additional 26,250 square feet proposed.

I-345 Modify Scenario Projections (2015 - 2045)

Metric	Existing	Proposed
Existing Square Feet (2015)	1,634,350	-
Net New Square Feet (2015 - 2045)	-	10,206,750
Existing Value (2015)	$123,909,950	-
Net New Value	-	$1,449,416,334
Additional Impacts (Net New)		
Property Tax Revenue (Ad Valorem)	-	$39,134,241
Sales Tax Revenue	-	$6,018,680
Hotel Tax Revenue	-	$5,874,922
Increase to Existing Population	-	5,774
Increase to Existing Workforce	-	23,274
Net New Total Revenue		$51,027,843

TOTAL ECONOMIC IMPACT

Under this scenario, there is approximately 1.6 million total square feet in the I-345 area. The total existing value of all existing development is $124 million.

There is a total of 10.2 million square feet of likely new development across all development types. The estimated total value of likely net new space is approximately $1.4 billion, which could increase City of Dallas property taxes by $39.1 million over the 30 year time period. The total added workforce from the new proposed development is estimated at 23,274 between 2015 and 2045.

FACILITY CAPITAL COST

The CityMAP I-345/I-45 Modify Scenario assumes that planned rehabilitation improvements to I-345 would be completed to the elevated I-345 highway. The Modify scenario also includes the removal of six existing I-345 entrance and exits ramps. Ramp removals within this scenario include the following:

- I-345 Exit Ramp Removals - The southbound ramp to Live Oak Street, the northbound ramp to Bryan Street, the northbound ramp to Main Street, and the northbound ramp to Elm Street.
- I-345 Entrance Ramp Removals - The southbound ramp from Main Street and the southbound ramp from Commerce Street.

The Modify scenario also assumes that the S.M. Wright Phase I, Phase II and Phase II-B projects will be constructed. In general, the Phase I project constructs new direct connecting ramps from C.F. Hawn Freeway to I-45. Phase II reconstructs S.M. Wright from I-45 to Budd Street as a low speed landscaped six lane arterial. Phase II-B provides a new northbound I-45 exit ramp and a new southbound I-45 entrance ramp to and from Al Lipscomb Way and connects S.M. Wright to Cesar Chavez Boulevard.

TxDOT's current total cost estimate for the I-345 rehabilitation project is $44 million and the S.M. Wright Phase I and II project is $151.6 million. These amounts are not included in the I-345/I-45 Modify scenario.

The cost estimate for the I-345/I-45 scenario assumes a cost of $28 million for ramp removals which includes the cost for demolition, signage changes and stabilizing disturbance from construction. The estimate also includes $26 million for the S.M. Wright Phase IIB project. In addition, the estimate includes $20 million of costs by others to develop a 15 acre "Under 345" park and extension of Hawkins Street. The facility capital cost estimate for the I-345/I-45 Modify scenario is in the under $100 million range. Further discussions by the project partners are necessary to refine the scope of the improvements and determine the funding responsibilities.

FACILITY DEVELOPMENT AND CONSTRUCTION DURATION

The modify scenario assumes that new ramps proposed in the S.M. Wright Phase IIB project are constructed prior to removing the ramps identified in the scenario. A 2020 date is assumed for the S.M. Wright Phase IIB ramps to be open to traffic. This would also allow the on-going I-345 Rehabilitation project to be completed.

The I-345/I-45 Modify project would require revisions to the 2040 MTP. This estimate allows a five (5) year project development period, including two years for the MTP change. This period would be followed by a construction period of one (1) year. The facility development and construction duration for the I-345/I-45 Modify project would be approximately six (6) years.

FACILITY OPERATION AND MAINTENANCE COST

Ramp removal should reduce maintenance requirements for TxDOT. However, there could be significant O&M costs related to the "Under I-345" park improvements envisioned for the scenario. Agreement will need to be reached as to the maintenance responsibilities of each of the project partners as these scenarios are considered.

PARKS & OPEN SPACE – QUANTITY

A main feature of the Modify scenario is the removal of ramps at Elm, Main and Commerce that would allow the "Under I-345" area to be transformed into an important City park, similar to Carpenter Park being planned by the City. The new park would be approximately 12.9 acres with a mix of areas, some shaded by the highway above and others open to the sun. This "Under I-345" park could be designed as an extension of Carpenter Park.

Like in the Removal scenario, the CityMAP team depicted three pocket parks in the Modified scenario, a set of pocket parks in between Caesar Chavez and Good Latimer in a potential redevelopment of some vacant and industrial land, one on Louise Street and one on Hickory Street, providing a small amenity to the immediate neighborhood.

Similar to the Remove scenario, the Modify scenario also anticipates continued redevelopment south of I-30 due to market factors and the proximity to the central business district. This development would necessitate some new parkland in an area that is currently vacant and industrial. One potential area for significant parkland is the current recycling plant as suggested in the other I-345 scenarios.

The resulting greenspace is summarized below: The Bluebell Extension pocket parks are a combined .74 acres, The Louise Street park .15 acres and the Hickory Street pocket park is .19 acres. The Corinth Street Neighborhood Park is 4.27 acres.

The 2013 Downtown Parks Master Plan Update identified future priority parks at Carpenter Park, Pacific Plaza, West End Plaza and Harwood Park. The Modify scenario does not impact these future priority park sites. The development depicted in the Modify scenario would conflict with the Taylor Fields proposal (5.36 Ac) at the NW quadrant of the I-345 interchange with I-30. Since this is not identified as a priority park we have not reduce the new net acreage amount.

Open Space	New Net Area in Acres
Pocket Parks	
Bluebell Extension Pocket Park	0.74
Louise St. Pocket Parks	0.15
Hickory St.	0.19
Neighborhood Park	
Corinth St.	4.27
“Under I-345 Park”	12.90
Carpenter Plaza	8.70

PARKS & OPEN SPACE – QUALITY

The City of Dallas has successfully implemented new downtown parks at Main Street Garden, Belo Garden and Klyde Warren Park. Each park illustrates the City’s ability to develop quality parks and open space in the downtown. The planned Carpenter Plaza design also offers a promising view for developing a quality park under and around I-345.

While the “Under I-345” park in the Modify scenario would be a major improvement and a unique amenity, it is limited by the elevated I-345 from a noise and visual point of view. While not quantitatively scored, we would expect potential park quality in the Remove and the Below Grade Scenarios to be higher based on the changes to I-345 envisioned by these scenarios.

VISUAL IMPACT

The scenario for I-345/I-45 Modify involves the removal of several I-345 ramps and assumes the construction of the S.W. Wright Phase II-B modifications for I-45. Removing the Live Oak Street, Bryan Street, Main Street, Elm Street and Commerce Street ramps helps improve the view lines under much of the elevated I-345 while also reducing many auto-pedestrian conflict points. This improvement to the “Under I-345” visual quality isn’t reflected in this scoring but should be considered when comparing to the existing configuration.

The I-45 scenario area includes existing elevated structures and proposed S.M. Wright Phase II-B improvements that will also be above grade. For the Visual Impact scoring, the percentage of below grade highway for the I-345/I-45 Modify scenario is 0%.

I-345/I-45 SCENARIO - MODIFY | OBSERVATIONS AND CONSIDERATIONS

The I-345 Modified scenario would only have minimal impacts on the street network and development pattern along the length of the existing I-345/I-45 corridor from Al Lipscomb north to Central Expressway.

MOBILITY, LIVABILITY, ECONOMICS

As discussed in the other I-345 scenarios, I-345 acts as a physical barrier between Deep Ellum and Downtown interrupting the contiguous block pattern and creating a swath of underutilized and vacant land along the elevated highway. The success of Uptown and the recent resurgence of downtown appear to have some spillover effect into Deep Ellum as another neighborhood adjacent to Downtown. Additionaly, the South Dallas Neighborhood went through similar dynamics with a cycle of residential neighborhood transitioning to larger scale commercial and industrial uses. South Dallas is struggling to find its footing and improvements to the transportation system can serve as an impetus for further investment in the neighborhood.

Despite the performance as a regional thoroughfare; I-345 also acts as a neighborhood divider. The Modified scenario would have a marginal impact on the performance of connectivity and surface streets. The removal of ramps will make some parcels more developable and return the functionality of Main, Commerce and Elm as parts of the grid rather than ramp extensions. The existing elevated I-345 would still be an impediment to maximizing market opportunities. Nevertheless, current market dynamics would still have significant development along the corridor but in many ways this development would happen in spite of the elevated freeway and due to the proximity to downtown.

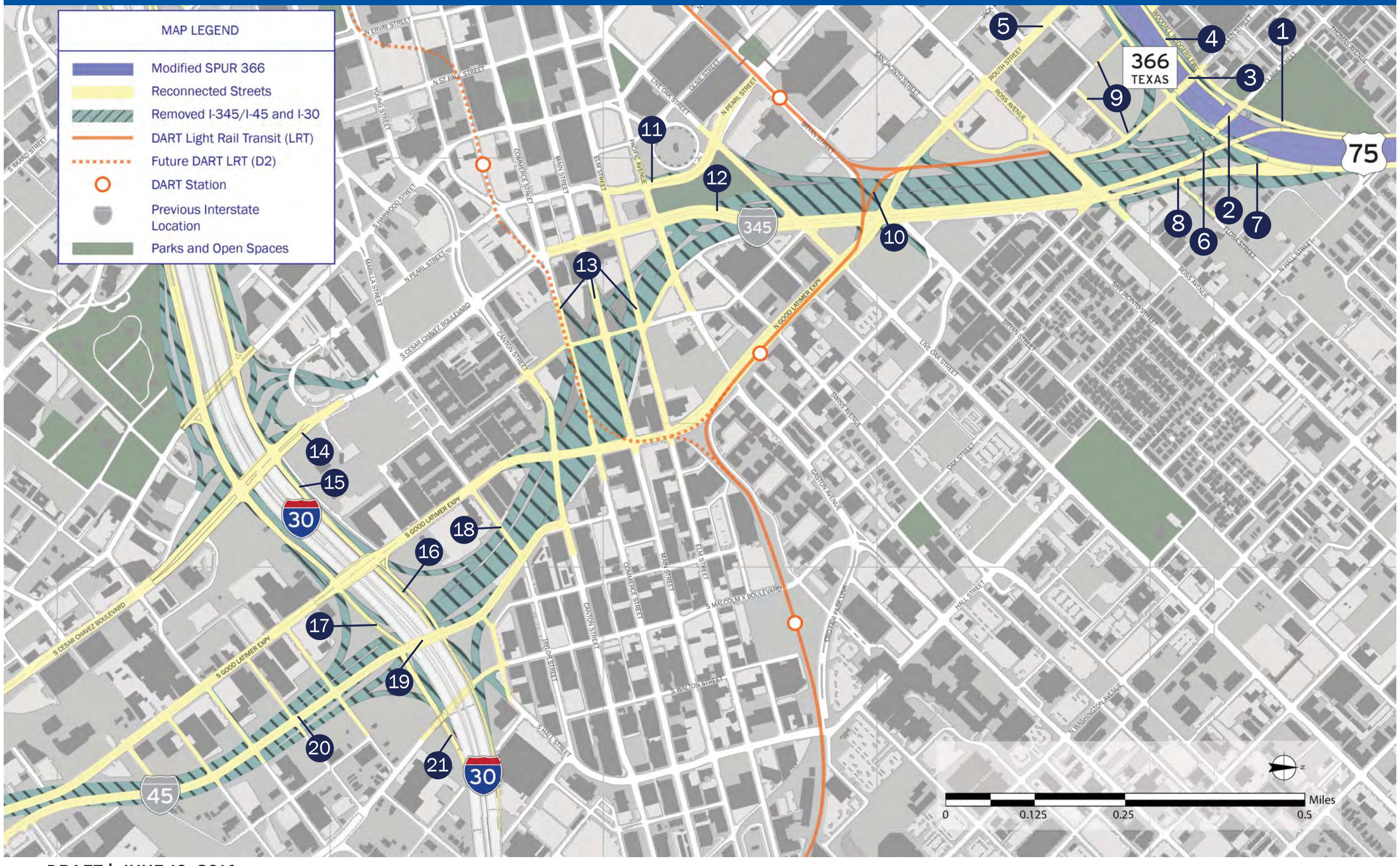
POLICY

This scenario has limited policy implications, however, as a point of best practice there may be opportunities in general to improve zoning and housing policy as the Downtown Dallas 360 Plan is updated. Any zoning or policy changes should be accompanied by a further analysis and community conversation during the 360 update process to ensure that any transportation investment can be leveraged to best benefit the adjacent neighborhood.

The I-345 Modify Scenario is not anticipated to have a substantial impact beyond what is already occurring in the market place. Certainly, the limited opportunities made available by ramp removal would help specific sites or parcels. Much of the current development is occurring on existing vacant parcels and parking lots. Redevelopment of former TxDOT ROW would be sold at market value in a public process.


CORE AREA MAP
MAP

I-345 SCENARIO - REMOVE | MAP



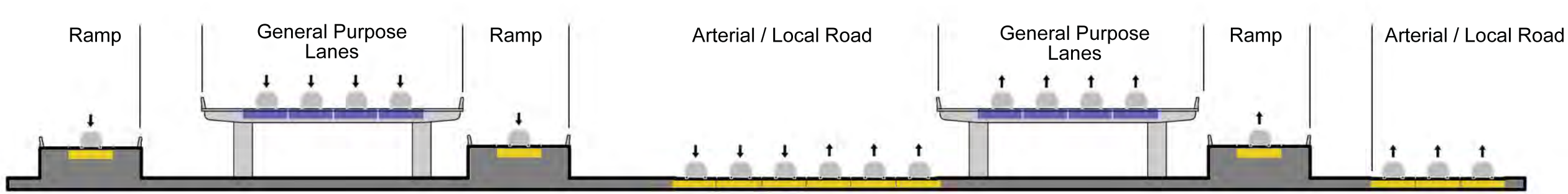
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I-345 SCENARIO - REMOVE | MAP

PLAN NOTES: I-345 REMOVE

1. Westbound Woodall Rodgers frontage road (at grade)
2. New Clark Street bridge over Woodall Rodgers
3. New Allen Street bridge over below grade Woodall Rodgers
4. Southbound US-75/WB Woodall Rodgers exit ramp to Routh Street
5. New Routh Street bridge over below grade Woodall Rodgers
6. Southbound US-75 exit ramp (elevated) to new Cesar Chavez Boulevard at Ross Avenue
7. Northbound US-75 entrance ramp from new Cesar Chavez Boulevard at Ross Avenue
8. Signalized intersection at Flora Street to allow pedestrian crossing for trail extending to Griggs Park
9. Re-establish street grid by extending Boll and Allen Streets to Flora Street
10. At grade DART crossing and transition to center median of Good Latimer Expressway
11. Assumes Pearl Street realignment - planned
12. New alignment for Cesar Chavez Boulevard
13. Elm, Main and Commerce Streets without I-345 overhead
14. Cesar Chavez Boulevard reconfiguration at I-30
15. Westbound I-30 exit ramp to Cesar Chavez Boulevard
16. Westbound I-30 exit ramp to Good Latimer Expressway
17. Eastbound I-30 entrance ramp from Good Latimer Expressway
18. Reconnect Taylor Street
19. New boulevard bridge across I-30 (full interchange removed)
20. New at-grade boulevard following former alignment of I-45 (removed). Make street grid connections to cross streets
21. Entrance ramp to eastbound I-30 from new boulevard

CROSS SECTIONS

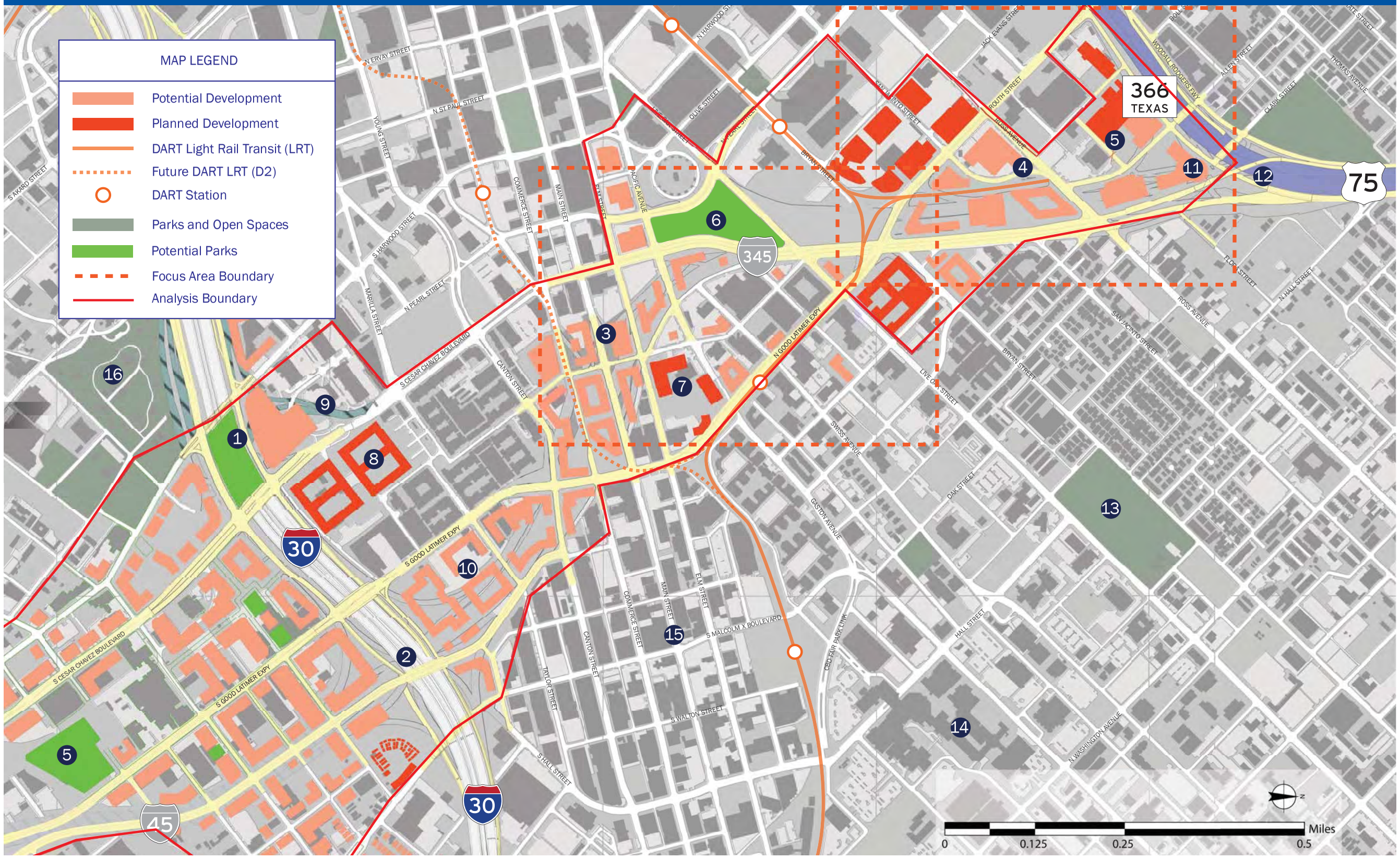


EXISTING



SCENARIO

I-345 SCENARIO - REMOVE | DEVELOPMENT MAP



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I-345 SCENARIO - REMOVE | DEVELOPMENT MAP

PLAN NOTES: I-345 REMOVE

1. Deck improvements that connect neighborhoods across I-30
2. With the removal of I-345 and I-45, utilize some of the right-of-way for a boulevard to connect local traffic
3. Within the right-of-way, create a usable block structure that supports continued growth but appropriately transitions from CBD to Deep Ellum
4. Extensive opportunity for redevelopment within the Arts District boundaries
5. Potential Corinth Street park
6. Carpenter Plaza - reduced from current City plans
7. Planned hotel and office multi-use development
8. Planned Farmers Market multi-family development
9. Realigned Cesar Chavez Boulevard and Harwood Street to allow for better traffic flow and potential deck park connectivity across I-30
10. Mixed-use multi-family that liks Deep Ellum and Farmers Market neighborhoods
11. Potential tower office development adjacent to One, Two and Three Arts buildings
12. Realigned US-75 that directs flow directly onto Woodall Rogers
13. Exall Park
14. Baylor Hospital
15. Deep Ellum
16. Heritage Village

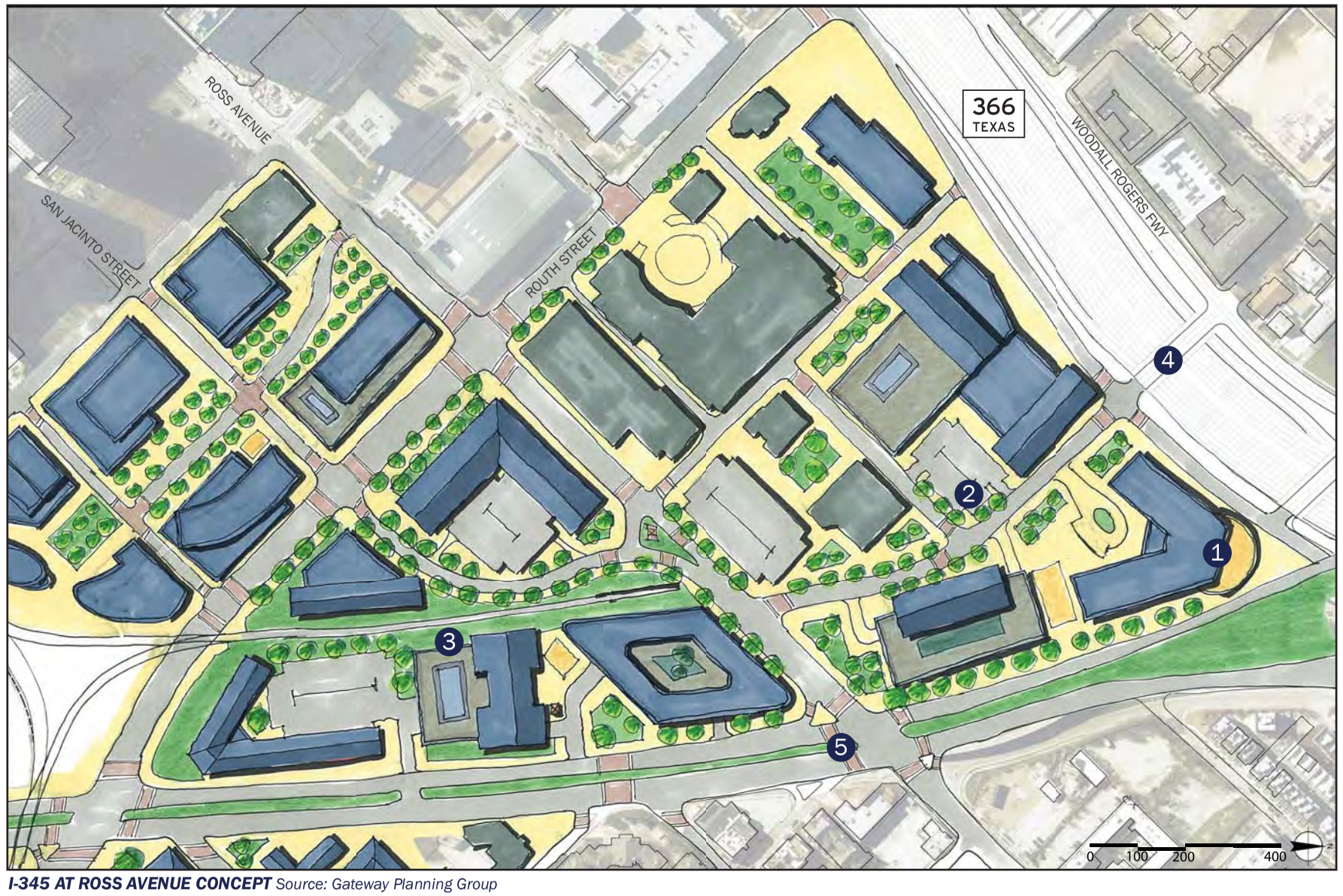
I-345 SCENARIO - REMOVE | FOCUS AREAS



I-345 AT ROSS AVENUE FOCUS AREA

FOCUS AREA NOTES: I-345 AT ROSS AVENUE

1. Infill tower opportunity along new boulevard
2. Rear parking lots make development more inviting
3. Opportunity for transit oriented development
4. Below grade freeway improves pedestrian connectivity between Arts District and Uptown
5. Downtown development transitions cross boulevard into Deep Ellum

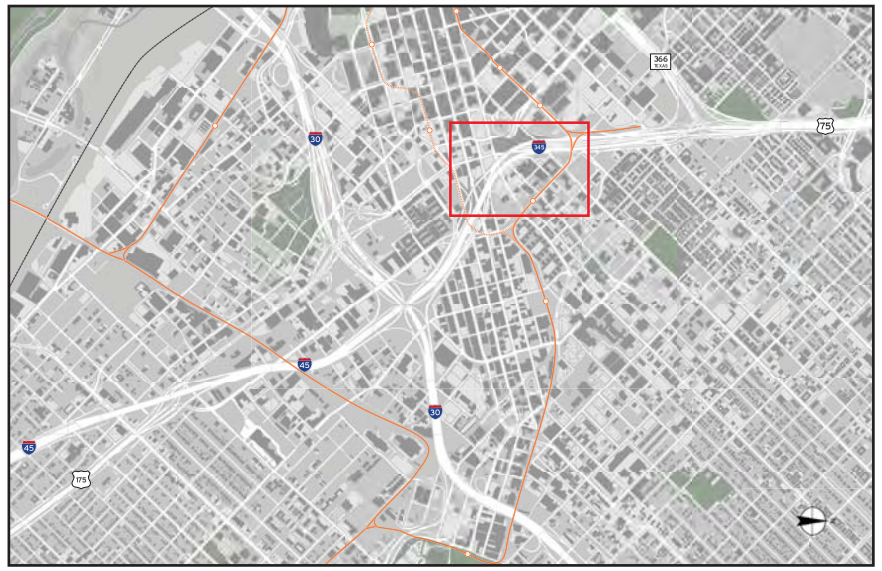


I-345 AT ROSS AVENUE CONCEPT *Source: Gateway Planning Group*

I-345 CORRIDOR POTENTIAL



I-345 SCENARIO - REMOVE | FOCUS AREAS



I-345 AT LIVE OAK STREET FOCUS AREA

FOCUS AREA NOTES: I-345 AT LIVE OAK STREET

1. Reconnected street grid brings development towards a walkable atmosphere
2. Infill promotes value creation while supporting the protection of community character
3. Parking to the side of buildings with access from side streets
4. Carpenter Plaza

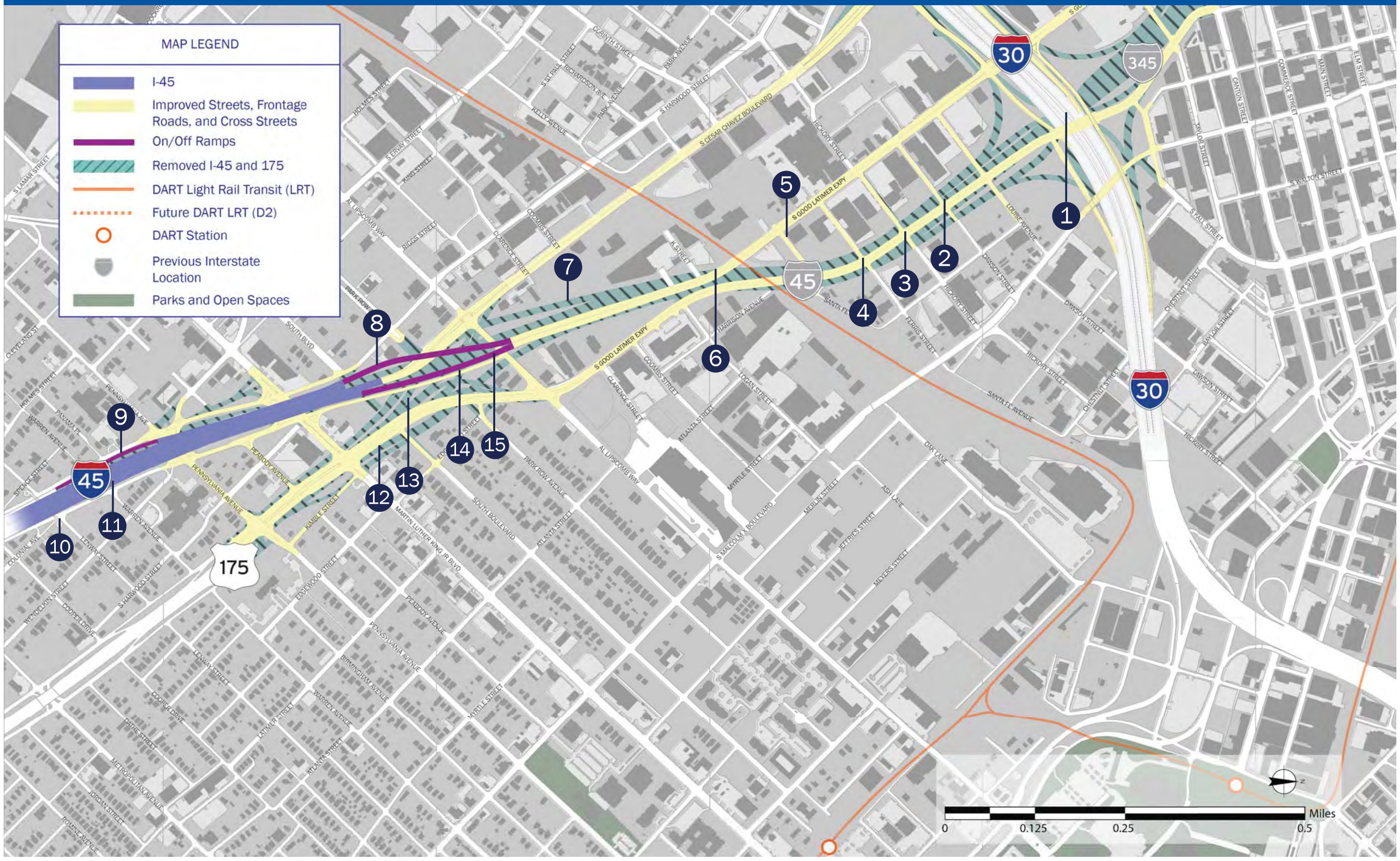


I-345 AT LIVE OAK STREET CONCEPT *Source: Gateway Planning Group*

I-345 CORRIDOR POTENTIAL



I-45 SCENARIO - REMOVE | MAP



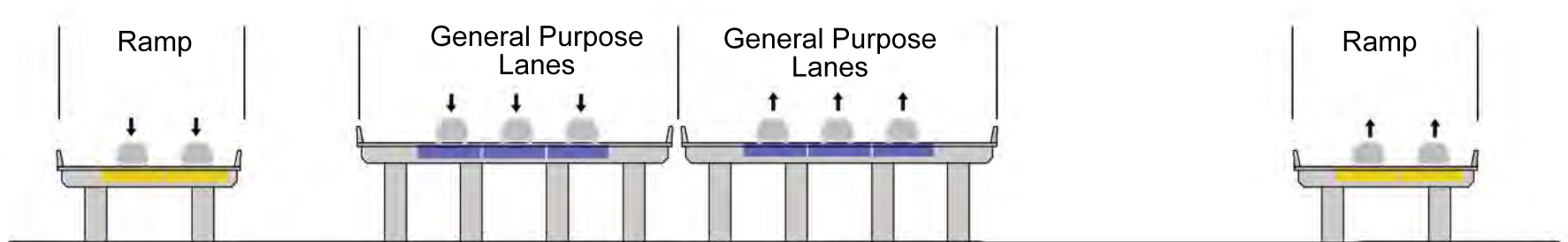
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I-45 SCENARIO - REMOVE | MAP

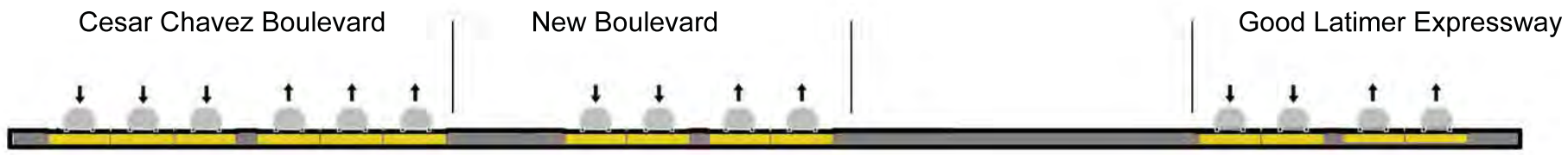
PLAN NOTES: I-45 REMOVE

1. Reconstruct interchange with I-45 at grade (I-30 still below grade). This improves transitions to a below grade I-345/I-45
2. Dawson Street bridge (new) over I-45
3. Hickory Street bridge (new) over I-45
4. Ferris Street bridge (new) over I-45
5. Bridge over DART rail yard
6. Good Latimer bridge over I-45
7. Southbound I-45 exit ramp to southbound frontage road
8. Southbound Cesar Chavez Boulevard entrance ramp to SB I-45
9. Southbound I-45 exit ramp to southbound frontage road
10. Existing pedestrian bridge over I-45 at Lenway Street
11. Northbound I-45 entrance ramp from northbound frontage road
12. Reconfigured at grade S.M. Wright Boulevard
13. S.M. Wright bridge (new) over I-45
14. Northbound I-45 exit ramp to Al Lipscomb Way (Grand Avenue) providing access to Cesar Chavez Boulevard and Good Latimer Expressway
15. Northbound I-45 entrance ramp from NB frontage road

CROSS SECTIONS

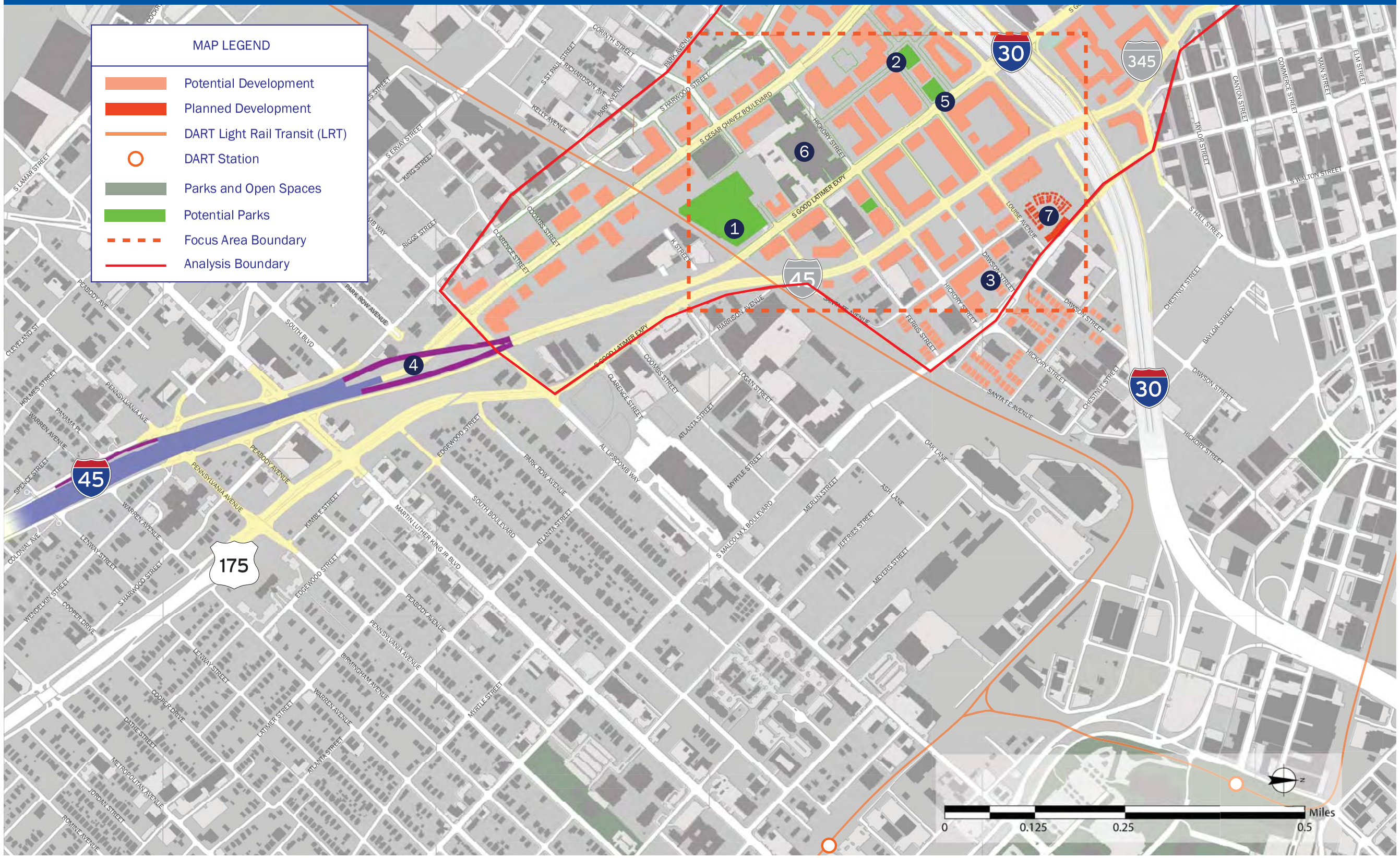


EXISTING



SCENARIO

I-45 SCENARIO - REMOVE | DEVELOPMENT MAP



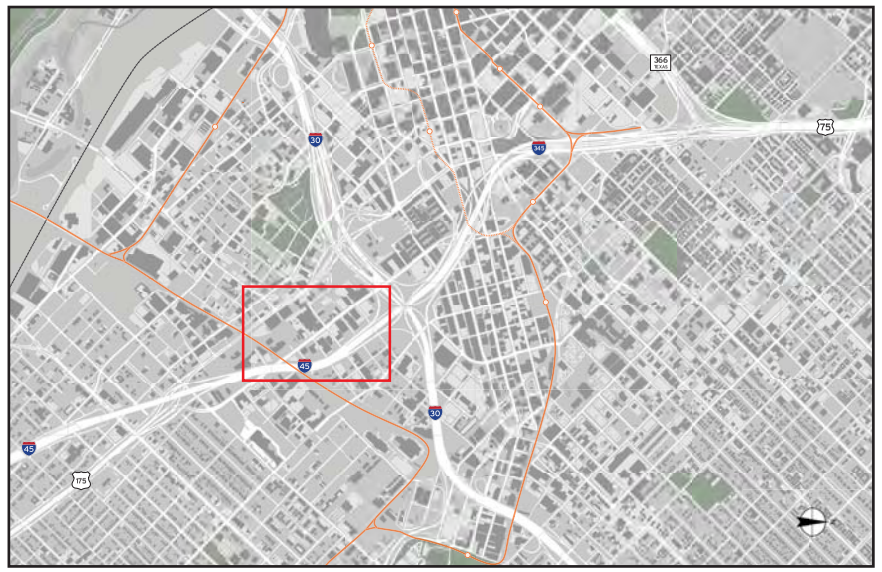
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I-45 SCENARIO - REMOVE | DEVELOPMENT MAP

PLAN NOTES: I-45 REMOVE

1. Opportunity for potential brownfield sites to become neighborhood amenities and catalyze development
2. Infill development and redevelopment of aged industrial buildings could be catalyzed by greater traffic and complete street design on Cesar Chavez
3. Infill small lot housing could build back a neighborhood that has been disconnected by I-45, I-30 and rail lines
4. Realigned I-45 to allow for transition from elevated freeway to boulevard
5. Potential pocket parks or plazas that will encourage better infill development and walkability
6. Existing recycling plant
7. Cottages at Hickory Crossing

I-45 SCENARIO - REMOVE | FOCUS AREAS



I-45 AT SOUTH GOOD LATIMER EXPRESSWAY FOCUS AREA

FOCUS AREA NOTES: I-45 AT SOUTH GOOD LATIMER EXPRESSWAY

1. New community park over potential brownfield site
2. Supporting major employers by creating a better walkable environment around the facility
3. Tuck parking behind and below buildings in order to promote a walkable atmosphere
4. Build back the neighborhood by reintroducing affordable small lot homes and face them towards existing homes



I-45 AT SOUTH GOOD LATIMER EXPRESSWAY CONCEPT *Source: Gateway Planning Group*

I-45 CORRIDOR POTENTIAL

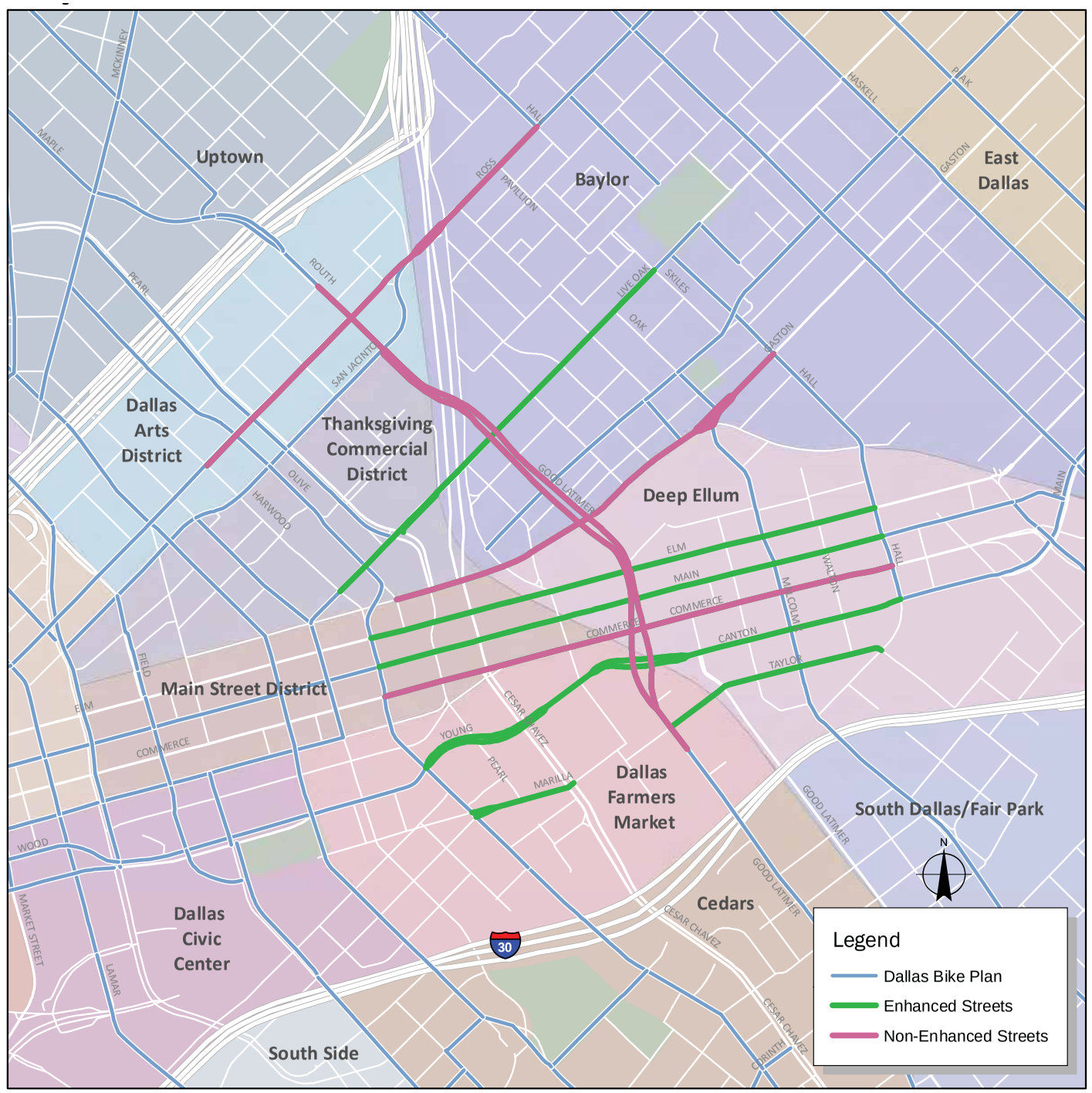


I-345 SCENARIO - REMOVE | CONNECTIVITY OPPORTUNITIES

For years the route of US 75 towards Houston wound through the east end of downtown, past the Farmers Market and the warehouses supporting the wholesale food distribution businesses. When I-345 was opened, it provided direct access from US 75, I-30, and I-45 to Live Oak, Elm, Main, and Commerce Streets via collector distributor roads and ramps. The new freeway absorbed the traffic demands on US 75 and I-45 but created a visible separation between downtown and Deep Ellum. The CityMAP team studied how I-345 might be removed through downtown and regional trips redistributed to local arterials or rerouted around the core all together.

This scenario explores the opportunities created when I-345 is removed altogether so that the local and regional traffic is directed to use the former north-south arterials such as Good Latimer Expressway and Cesar Chavez Boulevard to travel through downtown. On the south end this conversion begins in the vicinity of the confluence of Cesar Chavez Boulevard, Good Latimer Expressway, Al Lipscomb Way and US 175 (S. M. Wright Freeway). Traffic that is destined to travel through downtown and beyond would wind their way through the east end of downtown and Deep Ellum north to US 75 North Central Expressway and Woodall Rodgers Freeway using principal arterials as Cesar Chavez Boulevard and Good Latimer Expressway. The Existing Cross Sections Analysis below identifies local street improvements that enhance connectivity between downtown districts (Farmers Market, Main Street District, Thanksgiving Commercial Center, and Dallas Arts District) and Deep Ellum and Baylor districts. South of I-30 there are new opportunities to reconnect local streets between the Cedars and South Dallas/ Fair Park neighborhoods created by the I-345 scenario.

The CityMAP team analyzed existing traffic volumes and 2040 traffic volume projections on important local streets in the I-345 corridor and determined where additional capacity existed on a 24-hour and peak hour basis. Streets with a volume to capacity ratio of 0.7 or less were considered as candidate streets. Where streets had available vehicle carrying capacity, CityMAP explores a series of alternatives for making key roadways more walkable and bikeable by using tools provided in the Complete Streets Design Manual, Dallas Bike Plan, and other sources. These alternatives are just one of many possible configurations that could be applied to the candidate streets and by no means are exhaustive. Each roadway has been evaluated based on the following attributes presented in the Existing Cross Sections Analysis table below: Functional Classification, Capacity, Average Daily Traffic (ADT), Existing and Future Volume to Capacity (v/c), roadway cross-section attributes, existing bicycle and pedestrian facilities. Right-of-Way width was also an important consideration in the development of future alternatives. The map to the right provides the arterial street grid in the I-345 corridor study area with the 2011 Bike Plan and Dallas downtown area neighborhoods overlaid. The map indicates the candidate streets that were evaluated for enhancements in pedestrian and bicycle facilities.



I-345 SCENARIO - REMOVE | CONNECTIVITY OPPORTUNITIES

I-345 Remove Existing Cross Sections Analysis

Street	From	To	Area Type	Functional Class	Capacity	Existing ADT	Existing V/C	2040 ADT	2040 V/C	One Way Two Way	Median Type	Total Lanes	Parking	Bike Facility
Ross	Hall	Pavillion	CBD Fringe	Principal Arterial	25,000	19,227	0.77	25,549	1.02	2	TWLTL	4	0	0
Ross	Olive	Harwood	CBD	Principal Arterial	17,250	15,516	0.90	22,889	1.33	1	TWLTL	3	2	0
Ross	Central NB	Central SB	CBD Fringe	Principal Arterial	37,500	21,670 [1]	0.58	44,678	1.19	2	Divided	6	0	0
Live Oak	Oak	Skiles	CBD Fringe	Minor Arterial	25,000	16,459	0.66	13,695	0.55	2	TWLTL	4	0	0
Live Oak	Central	Pearl	CBD Fringe	Minor Arterial	28,750	10,263 [1]	0.36	16,857	0.59	2	Undivided	5	0	0
Live Oak	Olive	Harwood	CBD	Minor Arterial	17,250	8,043	0.47	8,962	0.52	1	Undivided	3	1	0
Pacific	Good Latimer	Hawkins	CBD Fringe	Principal Arterial	23,000	8,903	0.39	20,865	0.91	2	Undivided	4	0	0
Pacific	Central	Cesar Chavez	CBD Fringe	Minor Arterial	28,750	10,384 [1]	0.36	33,094	1.15	2	Undivided	5	0	0
Pacific	Cesar Chavez	Pearl	CBD	Minor Arterial	26,250	9,775 [1]	0.37	33,635	1.28	2	Undivided	5	0	0
Elm	Hawkins	Cesar Chavez	CBD Fringe	Principal Arterial	18,750	14,724 [1]	0.79	20,839	1.11	1	Undivided	3	0	0
Elm	Olive	Harwood	CBD	Principal Arterial	17,250	12,926	0.75	21,183	1.23	1	Undivided	3	2	0
Main	Hall	Walton	CBD Fringe	Minor Arterial	11,500	8,760	0.76	8,844	0.77	2	Undivided	2	2	1
Main	Pearl	Harwood	CBD	Minor Arterial	21,000	8,952	0.43	17,128	0.82	2	Undivided	4	2	1
Commerce	Walton	Hall	CBD Fringe	Principal Arterial	18,750	4,772	0.25	20,029	1.07	1	Undivided	3	2	0
Commerce	Cesar Chavez	Good Latimer	CBD Fringe	Minor Arterial	28,750	10,841 [1]	0.38	38,064	1.32	2	Undivided	5	0	0
Commerce	Harwood	Pearl	CBD	Principal Arterial	17,250	11,764	0.68	31,693	1.84	1	Undivided	3	2	0
Canton	Hall	Walton	CBD Fringe	Principal Arterial	12,500	10,271	0.82	6,281	0.50	2	TWLTL	2	0	0
Canton/Young	Pearl	Harwood	CBD	Principal Arterial	23,000	12,000	0.52	10,600	0.46	2	Divided	4	0	0
Taylor	Malcolm X	Good Latimer	CBD Fringe	Minor Arterial	11,500	966 [1]	0.09	4,771.5	0.41	2	Undivided	2	2	0

[1] Counts not conducted by KHA and acquired using historical data from NCTCOG or Google Earth Pro.

TWLTL - Two Way Left Turn Lane

Parking Nomenclature:

0 - No on street parking

1 - On street parking on one side of the street

2 - On street parking on available on both sides of the street

Bike Facility Nomenclature:

0 - No bike facility

1 - Shared bike lane

2 - Dedicated bike lane

ROSS AVENUE

Ross Avenue is a principal east-west arterial in Deep Ellum connecting lower Greenville, east Dallas, and the Baylor Medical district to downtown including the Arts District and West End. A number of high rise office buildings have Ross Avenue as their address. The City has invested in pedestrian amenities on Ross Avenue within the CBD and it is a designated route on the Bike Plan.

Ross Avenue has high ADTs and v/c ratios in the CBD and east Dallas. Any road diets or complete streets configurations applied to Ross Avenue will reduce the capacity and increase the overall LOS to an unacceptable level. This will remain true with the removal I-345 according to CityMAP models. However, the available space should be utilized to enhance the pedestrian zones and make it a more pleasant experience for pedestrians to cross between Deep Ellum and downtown.

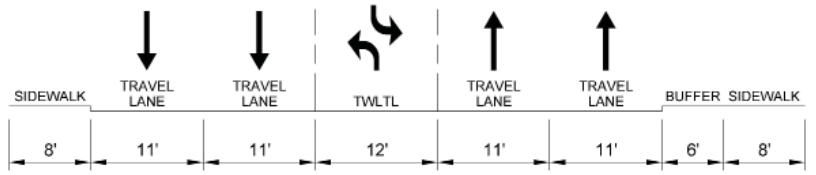


FIGURE 1 *Existing Ross Avenue Cross Section from Hall Street to Pavillion Street*

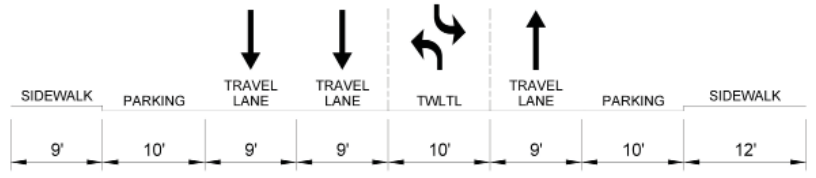


FIGURE 2 *Existing Ross Avenue Cross Section from Olive Street to Harwood Street*

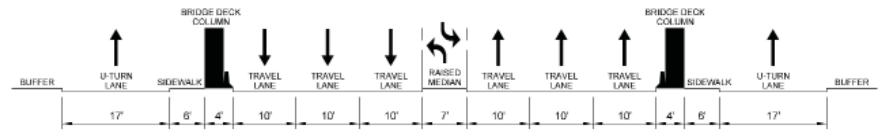


FIGURE 3 *Existing Ross Avenue Cross Section from Central NB to Central SB*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Ross	Existing	25,000	19,227	0.77	D	25,549	1.02	F
Ross	Existing	17,250	15,516	0.90	E	22,889	1.33	F
Ross	Existing	37,500	21,670	0.58	C	44,687	1.19	F

TABLE 1 *LOS for existing cross sections for Hall Street to Pavillion Street, from Olive Street to Harwood Street, and from Central NB to Central SB*

LIVE OAK STREET

Live Oak Street is a principal east-west arterial in Deep Ellum connecting lower Greenville and east Dallas to downtown. Live Oak is designated on the Bike Plan. Existing v/c ratios show that Live Oak Street is close to being at undesirable conditions outside of the CBD. But within the CBD and under I-345, there is excess capacity. According to CityMAP analysis, after the removal of I-345, Live Oak street is one of the principal arterials that has excess capacity to accommodate bike lanes. A possible cross section for Live Oak Street from Oak Street to Skiles Street could be to remove the TWLTL and place buffered bike lanes on each side. This is shown in Figures 4 and 5.

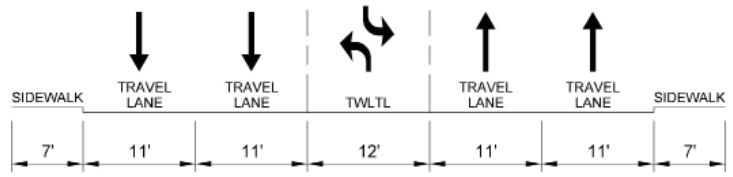


FIGURE 4 *Existing Live Oak Street Cross Section from Oak Street to Skiles Street*

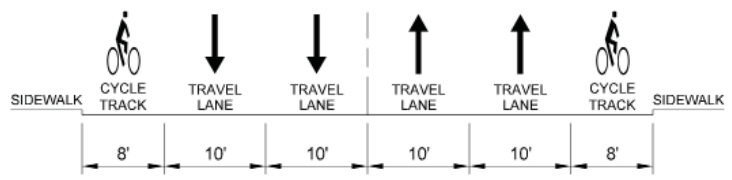


FIGURE 5 *Possible Live Oak Street Cross Section from Oak Street to Skiles Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Live Oak	Existing	25,000	16,459	0.66	D	13,695	0.55	C
Live Oak	Existing	23,000	16,459	0.72	D	13,695	0.60	C

TABLE 2 *LOS for existing and possible cross sections for Live Street from Oak Street to Skiles Street*

After the removal of I-345, bike lanes and pedestrian facilities could be accommodated in the space that is freed underneath I-345. LOS should not be affected significantly since there is no need to remove lanes in order to place bike lanes and pedestrian facilities.

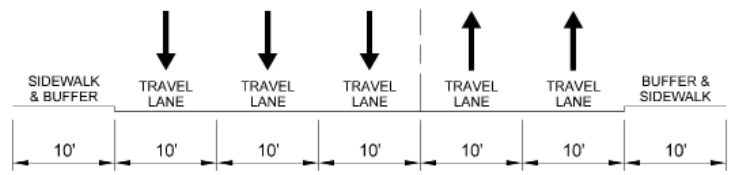


FIGURE 6 *Existing Live Oak Street Cross Section from Central to Pearl Street*

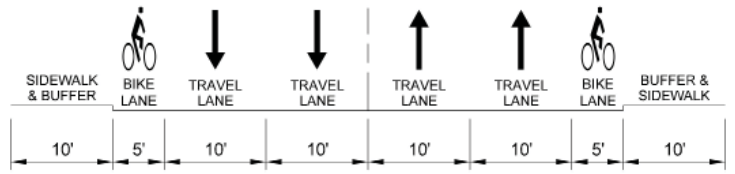


FIGURE 7 *Possible Live Oak Street Cross Section from Central to Pearl Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Live Oak	Existing	28,750	10,263	0.36	A/B	16,857	0.59	C
Live Oak	Existing	28,750	10,263	0.36	A/B	16,857	0.59	C

TABLE 3 *LOS for existing and possible cross sections for Live Oak Street from Central to Pearl Street*

The cross section of Live Oak Street from Olive Street to Harwood Street is one way. It consists of 4 lanes, 2 of which are dedicated as travel lanes, one of which is parking, and the last one is parking for part of the way and a left turn lane for the rest. The CityMAP analysis shows that there is excess capacity in the existing scenario for this configuration. Figure 9 shows a possible configuration for Live Oak Street for this cross section.

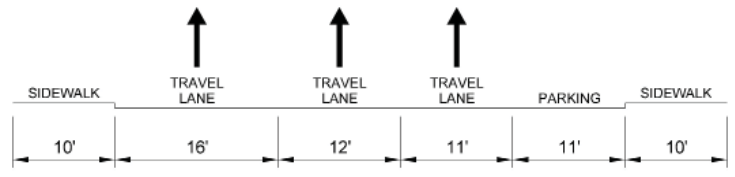


FIGURE 8 *Existing Live Oak Street Cross Section from Olive Street to Harwood Street*

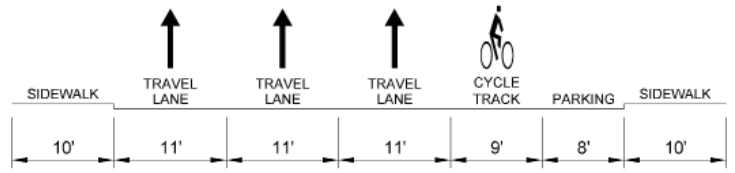


FIGURE 9 *Possible Live Oak Street Cross Section from Olive Street to Harwood Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Live Oak	Existing	17,250	8,043	0.47	C	8,962	0.52	C
Live Oak	Possible	17,250	8,043	0.47	C	8,962	0.52	C

TABLE 4 *LOS for existing and possible cross sections for Live Street from Olive Street to Harwood Street*

GASTON/PACIFIC AVENUE

Gaston Avenue is a principal east-west arterial in Deep Ellum connecting Lakewood and east Dallas to downtown. Pacific Avenue is a principal east-west arterial in downtown connecting the Thanksgiving Commercial Center and Main Street District under I-345 to Deep Ellum. In the I-345 removal scenario, Gaston/Pacific Avenue takes on more traffic when compared to I-345 modify scenario. Due to heavy traffic projected in the future and Gaston/Pacific Avenue not being on the Bike Plan, CityMAP team considered not placing bike facilities along the corridor. Gaston/Pacific Avenue has wide pedestrian zones ranging from 15' to 17' within the CBD. It is suggested that continuous sidewalks be installed where there are none and better pedestrian facilities be provided to improve connectivity between downtown and east Dallas neighborhoods.

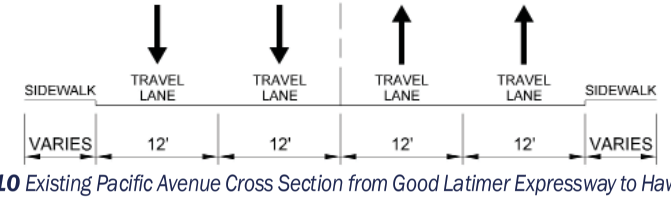


FIGURE 10 *Existing Pacific Avenue Cross Section from Good Latimer Expressway to Hawkins Street*



FIGURE 11 *Existing Pacific Avenue Cross Section from Central to Cesar Chavez Boulevard*

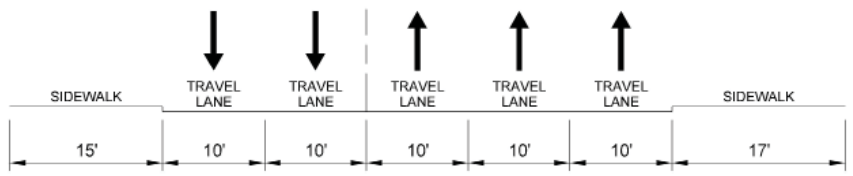


FIGURE 12 *Existing Pacific Avenue Cross Section from Cesar Chavez Boulevard to Pearl Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Pacific	Existing	23,000	8,903	0.39	A/B	20,865	0.91	E
Pacific	Existing	28,750	10,384	0.36	A/B	33,094	1.15	F
Pacific	Existing	26,250	9,775	0.37	A/B	33,365	1.28	F

TABLE 5 *LOS for existing for Pacific Avenue from Good Latimer Expressway to Hawkins Street, from Central to Cesar Chavez Boulevard, and from Cesar Chavez Boulevard to Pearl Street*

ELM STREET

Elm Street is a principal westbound one way arterial in Deep Ellum connecting under I-345 to the Main Street District downtown. Currently, the collector-distributor lanes of I-345 have direct connect ramps into and out of the CBD on Elm, Main and Commerce. Traffic volumes peak on Elm Street in the AM peak period as commuters enter downtown from Deep Ellum and direct connect ramp from I-345.

The CityMAP analysis shows that Elm Street is currently and will remain a major route in the future even after the removal of I-345. The four lane cross section that is prevalent through downtown could be carried upstream where the space has opened up because of the removal of I-345. Elm Street is not designated on the Bike Plan. After the removal of I-345, enough space is opened up to add bicycle and pedestrian facilities without degrading the LOS. However, Main Street already has bike lanes and shared lanes and serves a similar functionality that Elm and Commerce would if they were to have bike lanes. Figure 14 shows a possible cross section underneath the area I-345 would be.

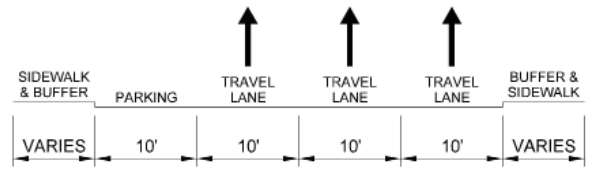


FIGURE 13 *Existing Elm Street Cross Section from I-345 Exit Ramp to Cesar Chavez Boulevard*

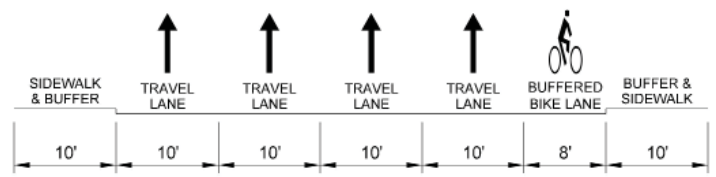


FIGURE 14 *Possible Elm Street Cross Section from I-345 Exit Ramp to Cesar Chavez Boulevard*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Elm	Existing	18,750	14,724	0.79	D	20,839	1.11	F
Elm	Possible	28,750	14,724	0.59	C	20,839	0.83	E

TABLE 6 *LOS for existing and possible cross sections for Elm Street from I-345 Exit Ramp to Cesar Chavez Boulevard*

Elm Street downtown between Olive Street and Harwood Street is four lanes wide with the left lane dedicated for parking and a very wide right lane. As Elm Street continues into downtown the far right lane turns two lanes, one which is dedicated as a travel lane and the other is dedicated as a bus lane from 6 am to 6 pm and allows for only right turners to utilize it. One possibility could be to share the bus lane with cyclists also. The cross section for Elm Street between Olive Street and Harwood Street is shown in Figures 15 and 16. Based on the current analysis, this cross section of the corridor experiences LOS F in 2040 but may still warrant enhancements upon further analysis and input from local stakeholders.

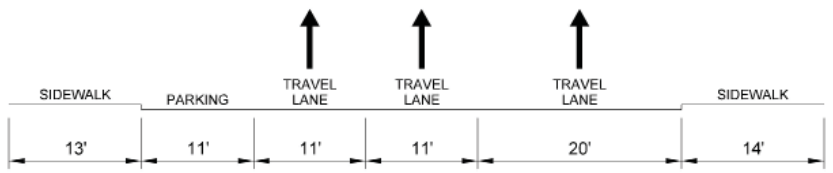


FIGURE 15 *Existing Elm Street Cross Section from Olive Street to Harwood Street*

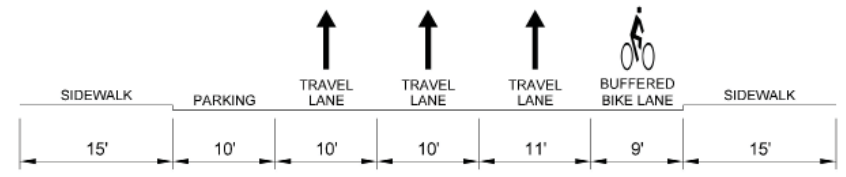


FIGURE 16 *Possible Elm Street Cross Section from Olive Street to Harwood Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Elm	Existing	17,250	12,926	0.75	D	21,183	1.23	F
Elm	Possible	17,250	12,926	0.75	D	21,183	1.23	F

TABLE 7 *LOS for existing and possible cross sections for Elm Street from Olive Street to Harwood Street*

MAIN STREET

Main Street is designated a minor two way east-west arterial in Deep Ellum connecting under I-345 to the Main Street District in downtown. Currently, the collector-distributor lanes of I-345 have direct connect ramps into and out of the CBD on Elm, Main and Commerce. Traffic volumes on Main Street peak in both the AM and PM periods.

Main Street is on the Bike Plan and has bike lanes and shared lanes. With the removal of I-345, additional space should be dedicated to pedestrian and bicycle facilities and converting Main Street into more of a complete street underneath I-345. Doing so will help make the crossing between Deep Ellum and downtown more of a pleasant experience and encourage people to cross.

COMMERCE STREET

Commerce Street is a Principal eastbound one way arterial in downtown connecting under I-345 from the Main Street District to Deep Ellum. Currently, the collector-distributor lanes of I-345 have direct connect ramps onto and out of the CBD on Elm, Main and Commerce. Traffic volumes peak on Commerce Street in the PM peak period as commuters leave down to Deep Ellum and the direct ramp to I-345.

After the removal of I-345, the CityMAP analysis determined that Commerce will become a more heavily utilized street. At the cross section of Commerce where I-345 used to be, pedestrian facilities should be provided to enhance the pedestrian experience and make it more welcoming to cross from Deep Ellum into downtown and vice versa. Commerce Street is not on the Bike Plan but the additional space could also be allocated for bike lanes. At this time CityMAP suggests does not propose any bicycle facilities on Commerce Street.

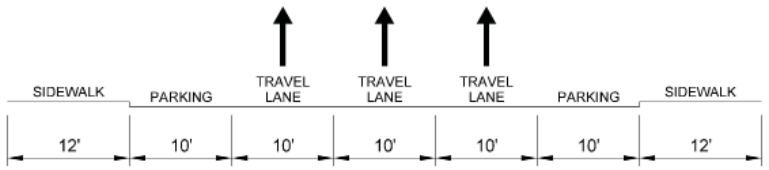


FIGURE 17 *Existing Commerce Street Cross Section from Walton Street to Hall Street*

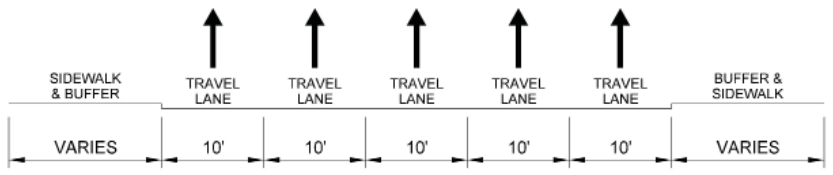


FIGURE 18 *Existing Commerce Street Cross Section from Cesar Chavez Boulevard to Good Latimer Expressway*

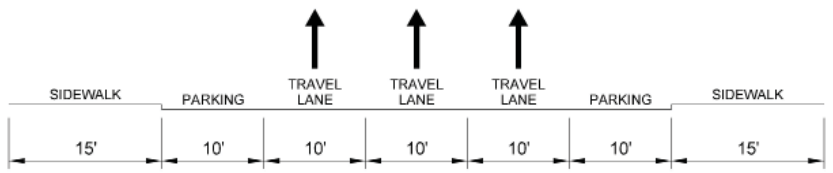


FIGURE 19 *Existing Commerce Street Cross Section from Cesar Chavez Boulevard to Good Latimer Expressway*

Street	From	To	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Commerce	Walton	Hall	Existing	18,750	4,772	0.25	A/B	20,029	1.07	F
Commerce	Cesar Chavez	Good Latimer	Existing	28,750	10,841	0.38	A/B	38,064	1.32	F
Commerce	Harwood	Pearl	Existing	17,250	11,764	0.68	D	31,693	1.84	F

TABLE 8 *LOS for existing and possible cross sections for Commerce Street from Walton Street to Hall Street, from Cesar Chavez Boulevard to Good Latimer Expressway, and from Harwood Street to Pearl Street*

CANTON/YOUNG STREET

Young Street is a principal east-west arterial in downtown that becomes Canton Street and connects the Reunion/Union Station, Civic Center, and Farmers Market districts to Deep Ellum. At four lanes divided, Canton/Young has excess capacity in the Farmers Market between Pearl and Harwood under existing conditions.

The CityMAP analysis indicates that Canton/Young Street have lower volumes in the future when I-345 is removed and a good candidate street for cross section enhancements. One reason for lower volumes on Canton in the future could be that the regional model has assigned more traffic on other parallel facilities with more capacity. Tables 9 and 10 show the LOS on Canton before and after the enhancements. Possible cross section could include improvements in pedestrian facilities and addition of bike lanes on Canton Street. Figure 21 shows a possible cross section for Canton Street from Pearl Street to Harwood Street.

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Canton/ Young	Existing	23,000	12,000	0.52	C	10,600	0.46	C
Canton/ Young	Possible	23,000	12,000	0.52	C	10,600	0.46	C

TABLE 9 *LOS for existing and possible cross sections for Young Street from Pearl Street to Harwood Street*

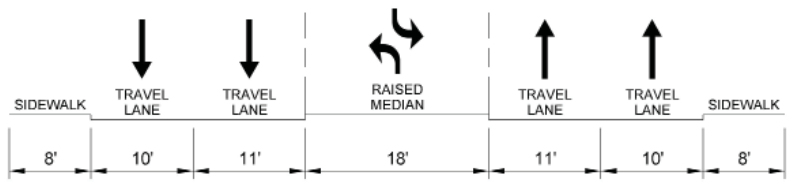


FIGURE 20 *Existing Young Street Cross Section from Pearl Street to Harwood Street*

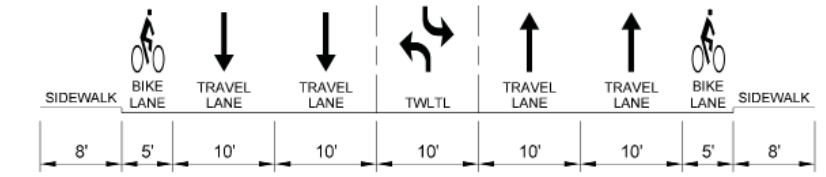


FIGURE 21 *Possible Young Street Cross Section from Pearl Street to Harwood Street*

Canton Street's existing cross section from Hall Street to Walton Street is three lanes with a TWLTL and parking on both sides. This is shown in Figure 22. A possible configuration in the future could be to remove the TWLTL and add 7' bike lanes on each side. This is shown in Figure 23.

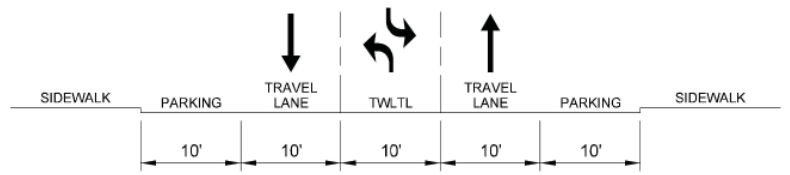


FIGURE 22 *Possible Young Street Cross Section from Hall Street to Walton Street*

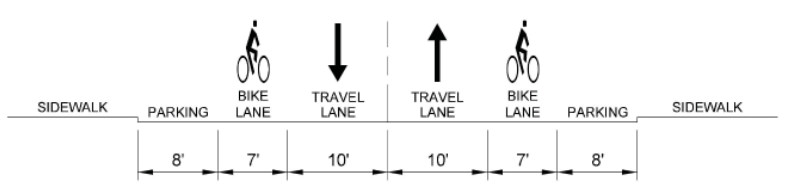


FIGURE 23 *Possible Young Street Cross Section from Hall Street to Walton Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Canton	Existing	12,500	10,271	0.82	E	6,281	0.50	C
Canton	Possible	11,500	10,271	0.89	E	6,281	0.55	C

TABLE 10 *LOS for existing and possible cross sections for Canton Street from Hall Street to Walton Street.*

TAYLOR STREET

The city Bike Plan has designated a number of streets within the CBD for bike facilities. An often discussed bike network connection that is needed is a formal connecting route between the Santa Fe Trail in east Dallas and the Katy and Strand Trails in Victory Park and Design Districts. Taylor Street has the potential for providing a critical link of the as yet undesignated route as it extends under I-345.

CityMAP recommends improving Taylor Street and working out a connection to Marilla Street that extends past City Hall as part of connecting the Santa Fe, Katy and Strand Trails in downtown. Taylor Street is designated a minor east-west arterial in Deep Ellum and the Farmers Market and has 2 large travel lanes in each direction. There is adequate room to create two 10' travel lanes and exclusive bike lanes that are 5' each with 2' buffer zones. Narrower travel lanes encourage motorists to slow down which is consistent with parallel and adjacent bicycle facilities sharing the same ROW. Taylor Street is likely to continue to have a number of commercial vehicles which need wider lanes at intersections to accommodate turning movements. The buffer zones are intended to provide room for the occasional wide vehicle to turn safely.



FIGURE 24 *Existing Taylor Street Cross Section from Malcolm X Boulevard to Good Latimer Expressway*

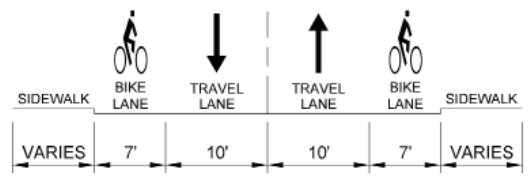


FIGURE 25 *Possible Taylor Street Cross Section from Malcolm X Boulevard to Good Latimer Expressway.*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Canton	Existing	12,500	10,271	0.82	E	6,281	0.50	C
Canton	Possible	11,500	10,271	0.89	E	6,281	0.55	C

TABLE 11 *LOS for existing and possible cross sections for Taylor Street from Malcolm X Boulevard to Good Latimer*

GOOD LATIMER EXPRESSWAY/ROUTH STREET

Routh Street and Good Latimer Expressway are principal north-south arterials connecting Uptown and the Arts District under I-345 to Deep Ellum, to the Cedars and south Dallas/Fair Park districts. DART has a major intersection of light rail lines at Hawkins Street which creates a series of wide intersections that are intimidating to cross for pedestrians. Currently, Good Latimer is marked as having shared bike lanes on it but it is not on the Bike Plan. Pedestrian facilities should be accommodated to provide better connectivity between east Dallas and downtown neighborhoods.

I-345/I-45 SCENARIO - REMOVE | FACTOR ANALYSIS

As a suggested scenario by many stakeholders the CityMAP team interviewed, the I-345 Remove scenario focuses on the development and connectivity potential of removing I-345 from Woodall Rodgers at the north to S.M. Wright at the south. The Remove scenario also includes the construction of a new boulevard within the existing right-of-way and the connection improvements for Good Latimer Expressway, Cesar Chavez Boulevard and Harwood Street as north and south routes to connect vehicles to downtown. The development potential and the connectivity as well as the visual impacts are analyzed herein.

The focus areas selected for the I-345 remove scenario provide a particular view into how the removal of the facility could add to the context for the eclectic and diverse existing development adjacent to the current facility. The illustrative plans and perspectives show the potential for quality neighborhood parks and open spaces integrated into redevelopment, as well as complete streets that promote walkability and fine-grain development patterns with a neighborhood pattern that transitions back together the varied scales and character of Deep Ellum, the Arts District, the CBD, as well as the reknitting of the lost neighborhood fabric just south of I-30 and the still somewhat intact neighborhood patterns much farther south.

The Arts District and Main-Elm-Commerce focus area demonstrates how the visual and physical impact of removing I-345 can open development potential on the outskirts of Deep Ellum and continue additional development potential near and within current planned development. The focus area also provides an option for potential infill development in current underutilized blocks within the area, especially as opportunities along the future DART D2 line.

The focus area for the Cedars south of I-30 demonstrates how the removal of the I-45 connection becomes an opportunity to connect an overlooked area on the east of I-45. This area, coupled with the potential for redevelopment within the heavy industrial area along Cesar Chavez and Harwood could become an expanded, robust mixed income housing and office development, focusing on connections over to Farmers Market and Deep Ellum.

The analysis associated with the factors for the aggregated analysis area for the I-345 Removal is comprised of an area slightly greater than the focus areas. The boundaries of the analysis area are outlined on the map and show the proposed and known planned developments related to this scenario. The analysis area does not cover the entire areas affected by the facility changes in this scenario. However, it does focus on key areas of interest and opportunity that would be considered catalytic or impactful.

	SCALE	QUINTILE UNITS	VALUE	SCORE
CONNECTIVITY				
Net New Linear Feet of Sidewalk per Acre	0 to 500	100	131.8	
Net New Intersections per Square Mile	0 to 75	15	51	
ECONOMIC DEVELOPMENT				
Net New Revenue	$0 to $92 Million	$18.4 Million	$80,685,976	
Net New Value	$0 to $2.6 Billion	$520 Million	$2,499,391,246	
Net New Jobs	0 to 52,000	10,400	39,300	
Net New Population	0 to 30,000	6,000	11,519	
Overall	Average of Subfactor Score			
FACILITY COSTS - CAPITAL				
Estimated Total cost of the facility (inside TxDOT right-of-way)	N/A	N/A	$100M-$499M	$$
FACILITY DEVELOPMENT & CONSTRUCTION DURATION				
Total Time for Planning, Design and Construction	0 to 25 Years	5 Years	24 Years	
PARKS & OPEN SPACE - QUANTITY				
Net New % of Area	0 to 6	1.6	2.5%	
VISUAL IMPACT				
Visual Impact - % Below Grade	0 to 100%	20	71%	

COST KEY

Under $100M	$100M - 499M	$500M - 999M	$1B - 2B	Over $2B
$	$$	$$$	$$$$	$$$$$

FACTOR KEY

0 - 1 | 1.1 - 2 | 2.1 - 3 | 3.1 - 4 | 4.1 - 5

LOW — HIGH

STAKEHOLDER INTEREST

The factors defined in Chapter 4 are applied below to the I-345 Remove Scenario. Those factors represent stakeholder values both within and beyond the ROW.

ADAPTIVE REUSE

Real estate markets in transition and cities that grow incrementally make good use of existing buildings to accommodate new and diverse uses over time. This factor is best assessed qualitatively rather than quantitatively. One standout example of an adaptive reuse opportunity is the former Dallas High School. This is an excellent example of historic architecture, currently part of a redevelopment process that could be enhanced by the removal of I-345, providing a complete re-knitting of historic neighborhood fabric activated in a modern context.

The area to the east of I-345, the western edge of Deep Ellum, offers several key opportunities for adaptive reuse including the recently proposed KDC redevelopment of a historic structure into a hotel. The commercial and industrial area south of I-30 also provides several buildings of interesting character that could be candidates for reuse.

Overall there are only limited opportunities for adaptive reuse as many of the best development sites are currently vacant or are underutilized and/or undesirable industrial sites. Accordingly, taking advantage of the remaining opportunities will be impactful for the continued reinforcement of the core of Deep Ellum to help maintain the character of that neighborhood while also improving pedestrian and cycling connectivity.

CONNECTIVITY

SIDEWALKS AS A MEASURE OF WALKABILITY

CityMAP stakeholder interviews reinforced the fact that a robust system of safe and connected sidewalks is instrumental in ensuring a vibrant city. Everyone regardless of primary mode of transportation begins and ends each trip as a pedestrian. Accordingly, sidewalks matter to Dallas citizens.

Much of the existing sidewalks in and near the I-345 corridor are in poor condition, they are too narrow, contain gaps, are not well-lit or are nonexistent. Combinations of disinvestment, lack of connectivity and large vacant tracts are not conducive to pedestrian mobility resulting in sidewalk deficiencies. I-345 also cuts through the city grid at angles causing problems with connectivity that a highway removal and reconnection of the grid could help mend. The likely resulting redevelopment related to the I-345 Removal scenario would provide the stimulus for repair and creation of the sidewalk network. This strategy could begin by providing new sidewalks along existing streets and a new boulevard that would carry much of the north/south traffic through the grid. The complete streets section of this document covers this topic in greater detail. New sidewalks could also be added along the east/west local streets while reconnecting or improving the city street grid.

South of I-30 the replacement of I-45 with a new boulevard and an enhanced Good Latimer Expressway provide an opportunity to add sidewalks and improve at-grade intersections. Finally, one of the most pedestrian-friendly impacts of an I-345 removal would be the elimination of all the direct connector ramps from I-345 and Cesar Chavez. Outside of the newly released I-345 ROW, a sidewalk network could then be expanded as redevelopment occurs and city streets are rebuilt as complete streets.

Assessing the redevelopment concept, the CityMAP team measured the net new linear feet of sidewalks. The focus areas realized a net increase of approximately 67,626 linear feet of sidewalk.

Focus Area	Linear Feet
I-345 Remove	67,626

INTERSECTIONS PER SQUARE MILE AS A MEASURE OF CONNECTEDNESS

As discussed earlier, the number of intersections per square mile is a useful quality of life metric for comparing people's ability to access places within and around neighborhoods. The existing configuration of I-345 cuts through the street grid and is interrupted by direct connect ramps. However, there are opportunities to repair the grid when the highways is removed and replaced by at-grade boulevards that allow the grid to be repaired facilitating a network that disperses traffic. The grid repair will also help to make a more predictable environment for pedestrian movement through the focus area.

The net increase in intersections per square mile was measured based on how the surface streets are affected by the revised highway design. Therefore, the resulting net new intersections per square mile are additive to the existing intersections. The area north of I-30 has major gaps in connectivity but overall is decent outside of the I-345 ROW. South of I-30 the connectivity is only interrupted by grade separation on some of the arterials and the DART lines.

As the following table summarizes, the I-345 focus areas netted an increase of 51 intersections per square mile. These potential additional intersections facilitated by the I-345 removal scenario allow the grid to approach the higher levels of connectivity evident in the original grid.

Focus Area	New Intersections per Square Mile
I-345	51

ECONOMIC IMPACT

KEY OPPORTUNITIES

With the removal of I-345, former Interstate right of way could be released as additional developable land. The street grid could be reorganized with North/South boulevards to accommodate the access needs for downtown and open current industrial development in the Cedars for potential mixed-use redevelopment. Estimates used in this analysis are conservative in terms of proposed value increases associated with new development.

POPULATION AND JOBS

With the proposed scenario, there would be a significant increase in employment totals – namely within retail and office development. The lowest development estimates, proposed development in addition to existing inventory and market absorption, provide an approximation of total employment and residential increases within the analysis area. Although, it should be noted, that increased market activity within the analysis area may increase these estimates.

As a low estimate, an increase of 37,614 employees is estimated between 2015 and 2045 as a result of likely resulting development. Population would also increase as a result of the new development. As a low estimate reflecting existing absorption, an estimated population of 11,519 would be added to the area between 2015 and 2045.

I-345/I-45 SCENARIO - REMOVE | FACTOR ANALYSIS

ECONOMIC IMPACT SUMMARY

The breakdown of categories below provides the underlying analysis for the opportunities analyzed above.

HOSPITALITY ECONOMIC IMPACT

The total existing hospitality value in the I-345 analysis area is $7.3 million. There is a total of 1.4 million square feet of additional hospitality proposed in the I-345 modified scenario. The value of this new space is estimated to be between $199 million and $217 million on the high end, over the 30 year time period; while the estimated property tax revenues range from $5.4 million to $5.8 million. Using an average of 500 SF (including common area factor) per guestroom and an average daily rate of $149 per night, the estimated hotel tax generated could be an additional $7.3 million over the 30 year time period. The estimated added workforce generated from the new hospitality space is 1,687 employees.

OFFICE ECONOMIC IMPACT

There is approximately 536,300 SF of existing office space in the I-345 analysis area. Based upon the average value per square foot for existing office in the area, the total existing value for office space is $46.7 million. There is 9 million square feet of office space planned and likely under this scenario, and the estimated value of all office space developed between 2015 and 2045 ranges between $1.3 billion on the low end and $1.4 billion on the high end. This could increase estimated property tax revenues to $34.8 million on the low end, and $37.9 million on the high end over the 30 year time period.

Incorporating existing space with net new space, there will be a total of over 9.5 million square feet of total office in the I-345 area. The estimated resulting added workforce from the proposed office between 2015 and 2045 is 36,300, although this could increase with additional office market activity.

RETAIL ECONOMIC IMPACT

There is approximately 722,500 SF of existing commercial categorized as retail space in the I-345 analysis area (City GIS Data). The existing value for retail space is approximately at $57.7 million. There is a total of 703,300 SF of likely new retail space between 2015 and 2045 in the I-345 analysis area under the scenario. The estimated value of all retail space developed between 2015 and 2045 ranges between $105 million on the low end and $111 million on the high end. Estimated projected property tax revenues on this net new space range from $2.8 million on the low end to $3 million on the high end over the 30 year time period.

Incorporating existing space with net new space, there could be over 1.4 million retail square feet in the I-345 area. The estimated resulting added retail workforce between 2015 and 2045 is 1,314. Using an assumption of $300/square feet for retail sales, the total sales tax revenue for retail space between 2015 and 2045 is projected at an estimated $6 million.

MULTI-FAMILY ECONOMIC IMPACT

The amount of planned multi-family space in the I-345 area makes the multi-family economic impact one of the most significant among all development types. There is 206,000 SF of existing multi-family space in the I-345 area. Using market data to verify multi-family value per square feet, research determined the total existing value for multi-family space is $10.3 million. There is a total of 6.3 million square feet of estimated new multi-family space between 2015 and 2045 in the I-345 area. The estimated value of all multi-family space developed between 2015 and 2045 ranges between approximately $905 million on the low end and $925 million on the high end. Property tax revenues on this net new space range from approximately $24.4 million on the low end and $24.9 million on the high end over the 30 year time period. Existing space plus the proposed net new space would be 6.5 million multi-family square feet in the I-345 area. The estimated added population from multi-family would be 11,470 additional people, between 2015 and 2045.

SINGLE FAMILY ECONOMIC IMPACT

There is currently 26,250 SF of single-family development in the I-345 area valued at approximately $2 million. There is an additional 26,250 square feet of proposed single-family development in the I-345 area. The estimated value of this proposed space is $3.9 million as a low estimate and $4 million as a high estimate over the 30 year period, while property tax revenues on this net new space are estimated at $105,426. There is an estimated total population of 49 within this proposed space.

I-345 Remove Scenario Projections (2015 - 2045)

Metric	Existing	Proposed
Existing Square Feet (2015)	1,634,350	-
Net New Square Feet (2015 - 2045)	-	17,601,550
Existing Value (2015)	$123,909,950	-
Net New Value	-	$2,499,391,246
Additional Impacts (Net New)		
Property Tax Revenue (Ad Valorem)	-	$67,483,564
Sales Tax Revenue	-	$5,862,087
Hotel Tax Revenue	-	$7,340,325
Increase to Existing Population	-	11,519
Increase to Existing Workforce	-	39,300
Net New Total Revenue		$80,685,976

TOTAL ECONOMIC IMPACT

Across all development types, there is 1.6 million square feet in the I-345 area of existing building inventory. The total existing value of all development types is $124 million.

There is a total of 17.6 million square feet of proposed new development across all development types. The estimated total value of net new space is approximately $2.4 billion, while net new property taxes across all development types are estimated to be $67.4 million over the 30 year time period. The total added workforce from the new proposed development is estimated at 39,300 between 2015 and 2045.

FACILITY CAPITAL COST

The I-345/I-45 Remove scenario entails removing the existing elevated freeway and replacing it with a series of arterials that would free up previously unavailable space throughout the corridor. The estimate includes the following:

1. Completely removing I-345 from I-30 to Woodall Rodgers Freeway as well as I-45 from Martin Luther King, Jr. Blvd. (MLK) to I-30.
2. Reconstructing portions of Cesar Chavez Blvd., Good Latimer Blvd. and reconstructing a new S.M. Wright Blvd. from Al Lipscomb Blvd. to north of I-30. This new boulevard would generally follow the former I-45 corridor.
3. Reconstructing several east-west cross streets within the two corridors.
4. Constructing a new below grade highway section that extends to Central Expressway (US 75) to Woodall Rodgers Freeway at Pearl Street.

The facility capital cost estimate for the I-345/I-45 Remove scenario is in the $100 - $499 million range. Further discussions by the project partners are necessary to determine the scope of the improvements and funding responsibilities.

FACILITY DEVELOPMENT AND CONSTRUCTION DURATION

TxDOT is currently making safety repairs to I-345. Assuming the repairs are completed in 2018 and allowing for a 25 year service life, replacement of I-345 would not be likely until 2043. The CityMAP estimate allows six (6) years for the Remove scenario to be added to the MTP in 2022. An estimated eight (8) year period to prepare environmental and traffic studies needed to obtain approvals would follow. The Remove scenario would require approval by FHWA to withdrawl I-345 and the portion of I-45, from I-20 to I-30 from the Interstate system. In addition, this scenario assumes that portions of highway right of way that are no longer needed would be sold in a public process or conveyed to another government agency for continued transportation use.

The sale of TxDOT right of way would need to comply with Federal and TxDOT requirements. According to FHWA Guidance, the State would have to use the Federal share of the proceeds from the sale of the property for other projects within the State eligible for funding under Title 23 of the U.S. Code. A six (6) year period is assumed for detailed design, right of way and utility relocations.

This would be followed by a four (4) year construction period that would include:

- Demolition of I-345 and portions of I-45 including the interchanges at Woodall Rodgers and I-30;
- Construction of ramps at the terminus of the former I-45 and at I-30;
- Reconstruction of Woodall Rodgers Expressway from Pearl Street to North Hall Street;
- Construction of new boulevards and portions of streets impacted by removal.

The design team anticipates that a Development Authority for the project would be needed to coordinate city and franchise utility relocations and manage the conversion of right of way into development tracts. These efforts would run concurrent with TxDOT project development and construction tasks. The facility development and construction duration for the I-345/I-45 Remove project as described would be approximately twenty four (24) years, including a six (6) year period to add to the MTP. This schedule assumes completion in 2040 in advance of the possible 2043 target date identified for I-345 replacement.

FACILITY OPERATION AND MAINTENANCE COST

The O&M costs for the arterials and cross streets cannot readily be determined at this time because the types of amenities that would be incorporated have not been discussed and/or agreed upon by the appropriate entities. Typically, O&M costs for these types of facilities range from one to five percent of the construction cost, per year.

PARKS & OPEN SPACE – QUANTITY

As with the other scenarios, the acreage of open space resulting from the redevelopment associated with the I-345 removal concept was measured based by type. The CityMAP Team identified three pocket parks in the Remove scenario, a set of pocket parks between Caesar Chavez Boulevard and Good Latimer Expressway in a potential redevelopment of some vacant and industrial land, one on Louise Street and one on Hickory Street providing a small amenity to the immediate neighborhood. All three pocket parks share the commonality of being surrounded by development leveraging the investment by providing an amenity to residents, employees and customers. They are also easily accessible to the surrounding neighborhood through a repaired street grid.

Open Space	New Net Area in Acres
Deck Parks	
Farmers Market Deck Park	3.24
Pocket Parks	
Bluebell Extension Pocket Park	0.74
Louise St. Pocket Parks	0.15
Hickory St.	0.19
Neighborhood Park	
Corinth St.	4.27
Reduced Carpenter Plaza	4.35

The I-345 Remove scenario also creates the opportunity for major redevelopment south of I-30 due to the reconfiguration of I-45 into enhanced boulevards. This significant development would necessitate some new parkland in an area that is currently vacant and industrial. One potential area for significant parkland is the current recycling plant. A site like this often requires some level of environmental remediation which can be a good opportunity for publicly funded open space if the remediation costs are not prohibitive.

The 2013 Downtown Parks Master Plan Update identified future priority parks at Carpenter Park, Pacific Plaza, West End Plaza and Harwood Park. As currently configured, the Modify Scenario would reduce the park area for Carpenter Park by approximately 50%. However, Pacific Plaza, West End Plaza and Harwood Park would not be impacted by the scenario. The development depicted in the Remove scenario would conflict with the Taylor Fields proposal (5.36 Ac) at the NW quadrant of the I-345 interchange with I-30. Since this is not identified as a priority park we have not reduce the new net acreage amount.

PARKS & OPEN SPACE – QUALITY

Parks and open space quality has the potential to be improved with the I-345 removal scenario. The removal of the facility allows for current parks and open space located adjacent and underneath the facility to be brought out in the open. This also allows development to occur in a more consistent pattern around the open spaces.

Roadways currently crossing underneath the highway would be reconnected, providing better connectivity throughout the area. In addition, the recycling center at S.M. Wright and I-45 is redesigned as a programmed public park.

Inclusion of pocket parks and plazas within the focus areas reflect the attributes for access and surveillance. Pocket parks and plazas will bring needed respite from the urban context, but should remain easy to maintain intimate spaces. This is especially important in areas that would transition from industrial to mixed-use, as many of the common community spaces do not exist.

With the removal of I-345, current plans for Carpenter Park would require significant redesign. The extent of development opportunities could be reduced if a greater emphasis on parks and open space are preferred.

VISUAL IMPACT

The I-345/I-45 Remove scenario eliminates most of I-345 and more than one-half of I-45 within the CityMAP limits. The scoring for the I-345 portion considers the fly-over ramp from southbound US 75 to Cesar Chavez Boulevard to be an above grade section. In addition, the scoring does not account for the reconstruction of the Woodall Rodgers interchange with US 75 to a below grade facility. Roughly one-half of the I-45 scenario area is above grade as it transitions to a below grade condition north of Al Lipscomb Way. Taken together, the I-345/I-45 scenario scoring reflects that 71% of the corridor would have a below grade profile. This is a dramatic change considering that none of the existing corridor meets the below grade criteria.

The removal of I-345 would have dramatic impacts on the street network and development pattern along the length of the existing I-345/I-45 corridor from Al Lipscomb north to Central Expressway.

I-345/I-45 SCENARIO - REMOVE | OBSERVATIONS AND CONSIDERATIONS

MOBILITY, LIVABILITY, ECONOMICS

I-345 acts as a physical barrier between Deep Ellum and Downtown interrupting the contiguous block pattern and creating a swath of underutilized and vacant land along the elevated highway. Deep Ellum was first developed as an extension of downtown in the late 1800s as a residential and commercial neighborhood primarily inhabited by African-Americans and European immigrants. It is unique to Dallas for the large number of intact historic commercial and manufacturing buildings. After the mid-20th Century and the addition of I-345 separating Deep Ellum from Downtown the neighborhood began to decline. The removal of the streetcar and addition of an elevated section of I-345 further led to decline. However, beginning in the late 20th century there was resurgence in some of the older buildings converted to lofts or retrofitted for new businesses. The success of Uptown and the recent resurgence of downtown appear to have some spillover affect into Deep Ellum as another neighborhood adjacent to Downtown. Similarly, the South Dallas Neighborhood went through similar dynamics with a cycle of residential neighborhood transitioning to larger scale commercial and industrial uses. South Dallas is struggling to find its footing and improvements to the transportation system could serve as an impetus for further investment in the neighborhood.

Despite the performance as a regional thoroughfare, I-345 acts as a divider of neighborhoods. The removal opportunity provides the occasion for reconnecting the street grid, encouraging infill redevelopment and reviving neighborhoods that have struggled to remain vibrant. This scenario, with the associated mobility, safety improvements, enhanced pedestrian and vehicular connections, parks and open spaces, could further the advancement of this area of Dallas as a desirable place to live and work. This concept offers the potential for surplus right of way along the length of the corridor that could be sold or leased for parks and commercial development.

POLICY

As discussed in the I-345 removal scenario, transportation, infrastructure and adjacent land use are intertwined with the removal of I-345 and has the potential for very dramatic effects on the adjacent land use, development potential and livability experience in Downtown Dallas. The removal of I-345 should be accompanied by a further analysis and a community conversation on commensurate changes in land use policy in the corridor to ensure that any transportation investment can be leveraged to best benefit the adjacent neighborhood.

However, a realistic approach needs to be taken to harness the added development to ensure that it is within the community desires to ensure that a transition can occur between the CBD densities of downtown proper and the lower scale and historic development.

The City of Dallas may want to consider if and how tax incentives may be appropriate however; this would need to be evaluated on a granular level by the City's Economic Development department and other stakeholders.

Through the cycle of disinvestment, along the I-345 corridor especially in the area south of I-30 there were many zoning changes that resulted in unintended consequences. Much of that zoning has been revised; but in order to encourage redevelopment, a thorough examination of the zoning should be completed to make sure that mixed use and flexible infill development can occur. For example, portions of the southern area of Deep Ellum and the sections of Malcolm X, the new boulevard, Good Latimer Expressway and Cesar Chavez that are in the study area, do not currently allow for a variety of dense mixed use and multifamily but would be a good location for mid-range density and can occur in a way that meets market demand yet provides a transition between the existing scales of development. Much of the new development in the removal of I-345 scenario is anticipated to occur in released right of way that would be unzoned. This unzoned land would be served well to be part of a rezoning process along the corridor to evaluate context sensitive zoning that serves as a transition between the CBD and the adjacent neighborhoods, Bryan Place, Deep Ellum and South Dallas.

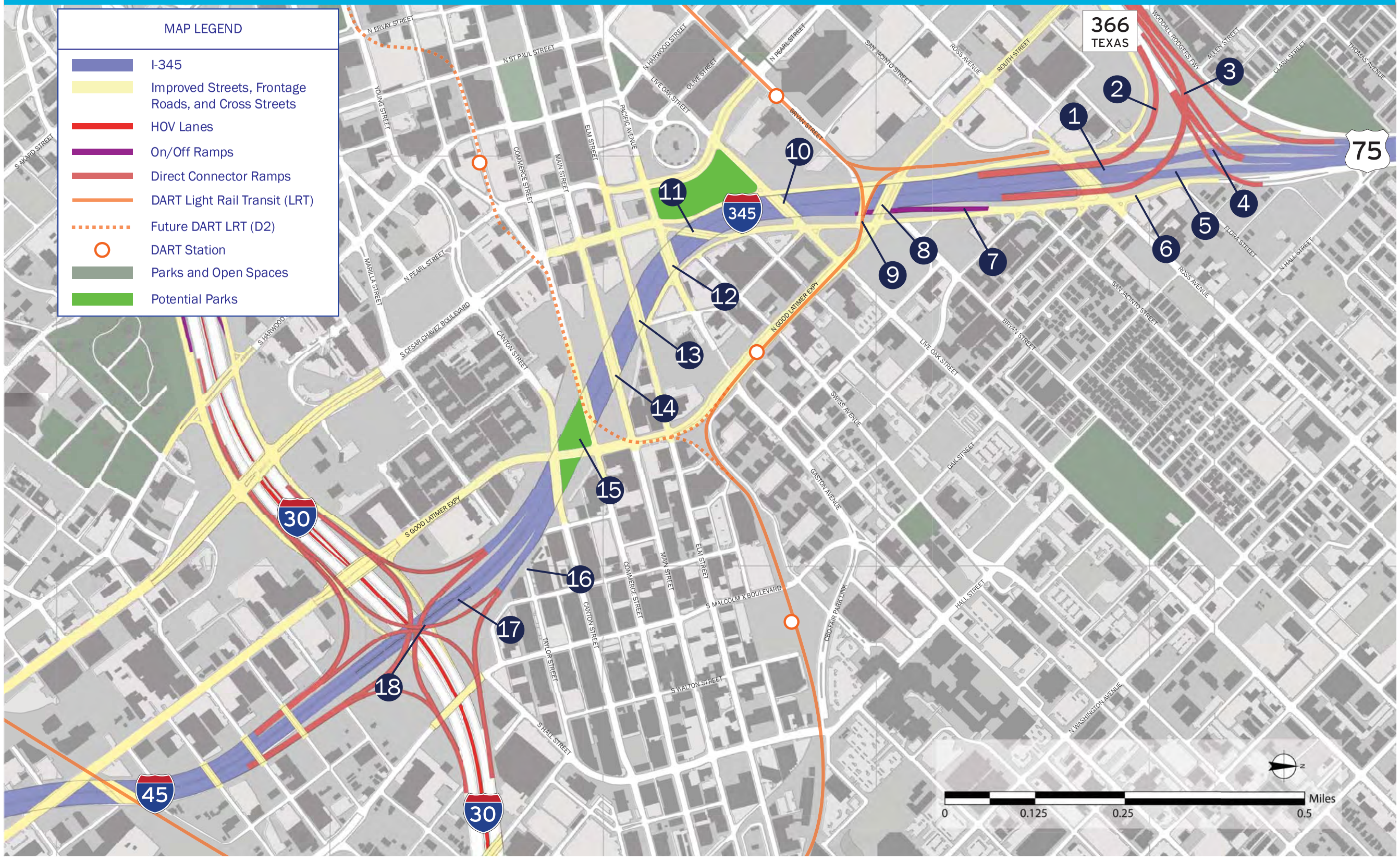
With any new large scale development the accommodation of open space and transportation needs to be considered. The I-345 removal concept depicts an investment in several public parks and plazas. Private support of these larger scale open space investments could be used to offset on-site open space requirements or a more direct application of fee-in-lieu could be arranged for new development in this area. New development needs to be considered with impacts on transportation, necessitating city investments for complete streets if increased connections are to be realized effectively in terms of enhanced pedestrian and bicycle access as well as increasing transit convenience and TOD development.

As also reinforced in the Below Grade scenario, ensuring a stable residential population in these neighborhoods should be a top priority. Currently in the Deep Ellum and South Dallas Neighborhoods 20% to over 40% of residents live in poverty; housing affordability and the negative impacts of gentrification should be taken seriously and anticipated. (Census Bureau, ACS 2009-2013) Neighborhood stabilization is a priority for the City of Dallas through its Neighborhood Plus Program, the Design Center and other departmental efforts. Especially in the smaller scale redevelopment, the goals of alleviating poverty, fighting blight, attracting the middle class, expanding home ownership and enhancing rental options should be incorporated into the anticipated redevelopment efforts. The challenges from potential gentrification should be openly discussed with the community as part of the next phase. A community discussion should take place on what aspects of the surrounding areas should be protected and what types of development would be appropriate as a transition.

As discussed in the subsequent Below Grade scenario, due to some vacant tracts and underutilized properties, these goals can potentially be accomplished without the negative side effect of displacement, however an evaluation of displacement policies should be considered. Commensurate zoning changes that would allow a variety of housing types could help to accommodate a range of price points in the same neighborhoods as they are reintroduced into this area of Dallas.


MAP
What is Dallas CityMAP?
MAP

I-345 SCENARIO - BELOW GRADE | MAP



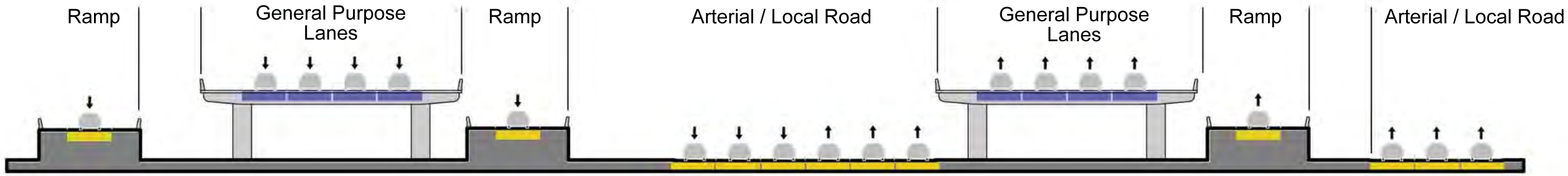
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I-345 SCENARIO - BELOW GRADE | MAP

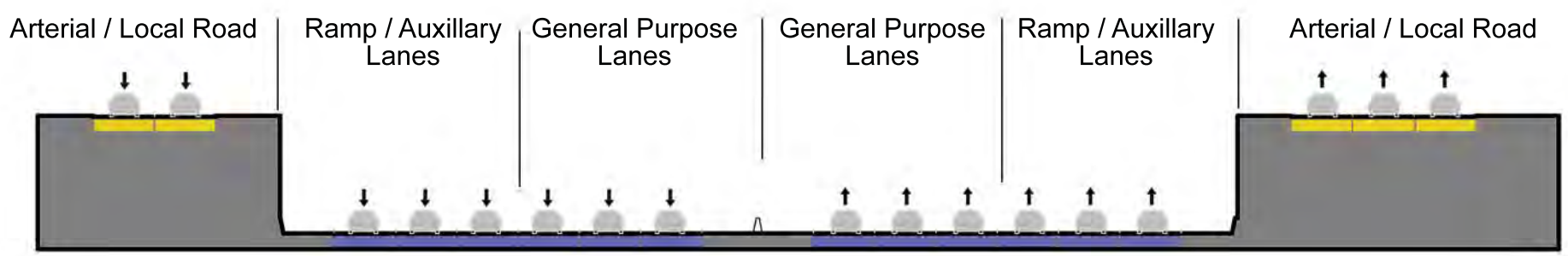
PLAN NOTES: I-345 BELOW GRADE

1. Ross Avenue Bridge over below grade I-345
2. Eastbound Woodall Rodgers Freeway direct connect ramp to southbound I-345 (over Ross Avenue)
3. Northbound I-345 direct connect ramp to westbound Woodall Rodgers Freeway (over Ross Avenue)
4. Southbound I-345 general purpose lanes from US 75
5. Northbound I-345 general purpose lanes to US 75
6. Northbound I-345 frontage road to US 75 northbound frontage road
7. Northbound I-345 exit ramp to Ross Avenue
8. Good Latimer Expressway/Routh Street bridge over below grade I-345
9. DART bridge over below grade I-345
10. Live Oak Street bridge over below grade I-345
11. Cesar Chavez Boulevard bridge over below grade I-345
12. Pacific Avenue bridge over below grade I-345
13. Elm Street bridge over below grade I-345
14. Main Street bridge over below grade I-345
15. Commerce Street to Canton Street bridge over below grade I-345. Accommodates DART D2, Good Latimer Expressway and possible deck park area.
16. Taylor Street breaks at I-345 footprint
17. Interchange at I-345 and I-30 reconfigured with I-345 lowered to allow transition to below grade condition at Canton Street
18. I-345 and I-30 direct connect ramps reconfigured based on lowered I-345 change

CROSS SECTIONS

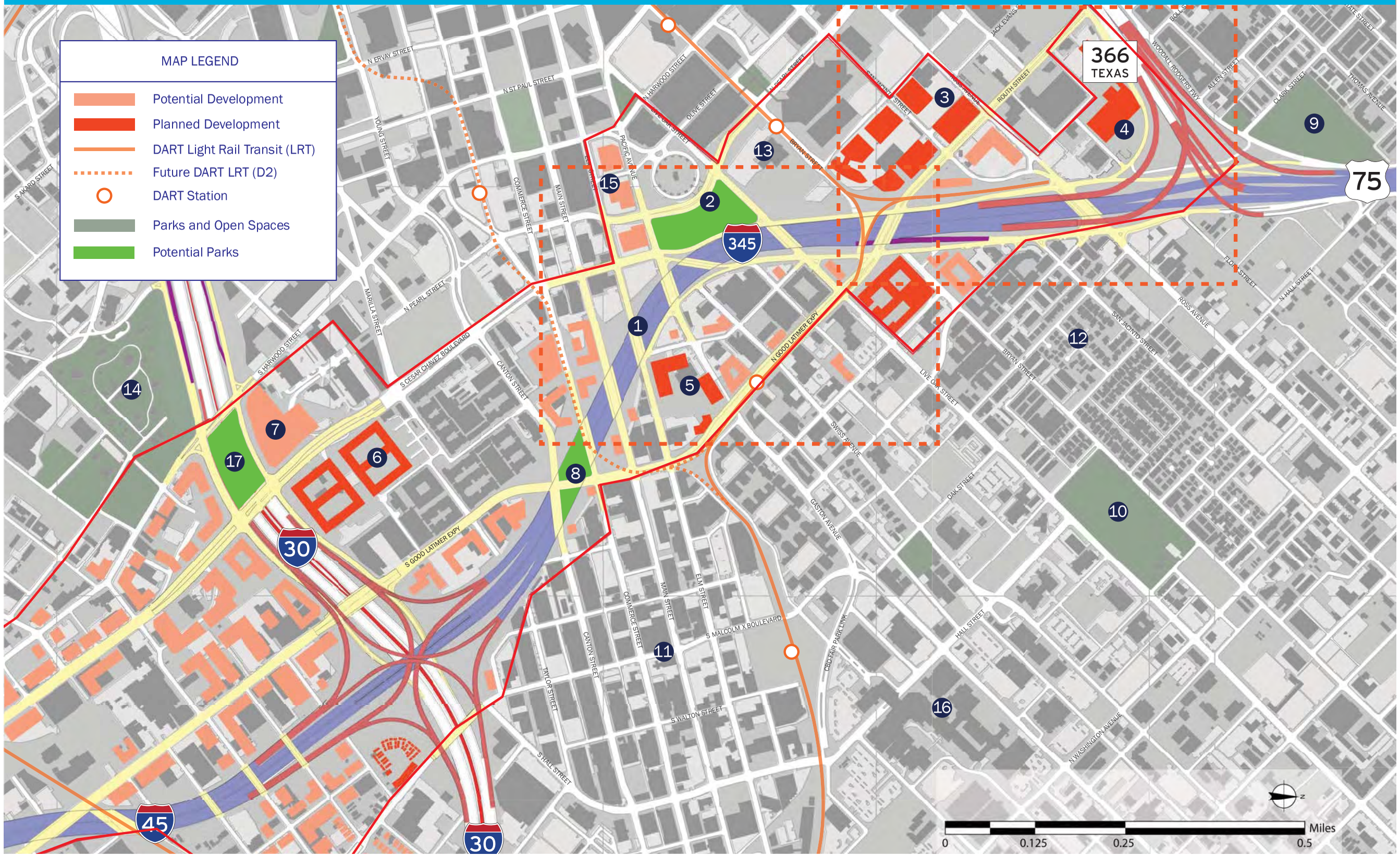


EXISTING



SCENARIO

I-345 SCENARIO - BELOW GRADE | DEVELOPMENT MAP



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I-345 SCENARIO - BELOW GRADE | DEVELOPMENT MAP

PLAN NOTES: I-345 BELOW GRADE

1. Bridges built with complete streets in mind to promote walkability across I-345
2. Enhancements to Carpenter Park in order to mitigate the loss of the current expansion plans
3. Future Spire development
4. Future Two Arts and Three Arts development
5. Planned hotel and office multi-use development
6. Planned Farmers Market multi-family development
7. Potential office or retail mixed-use tower development
8. Potential open space/park crossing across I-345 to improve connectivity and integrate green community space
9. Griggs Park
10. Exall Park
11. Deep Ellum
12. Exxon Place
13. Dallas High School redevelopment
14. Heritage Village
15. Potential office tower mixed-use development
16. Baylor Hospital
17. Potential deck park

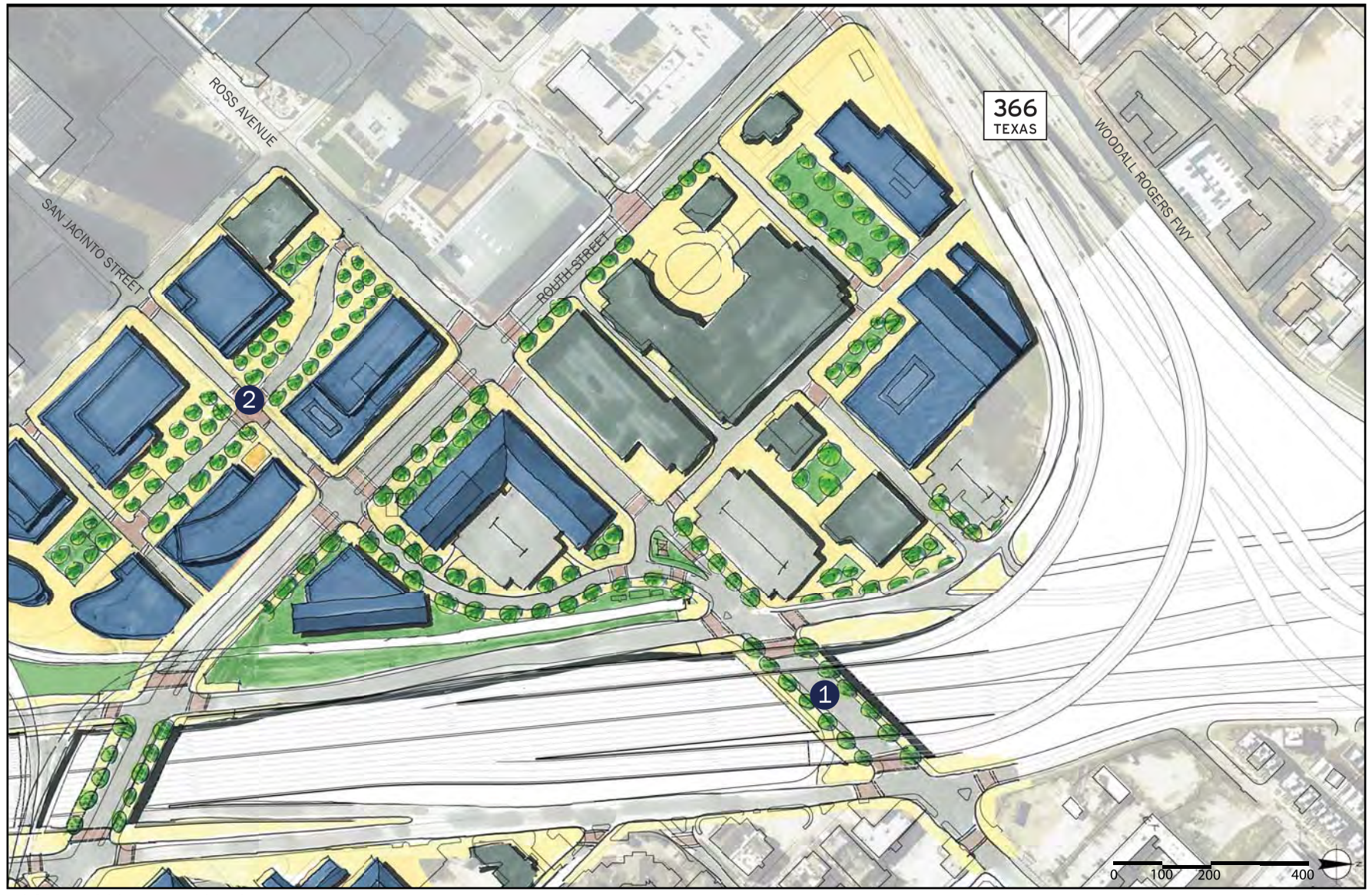
I-345 SCENARIO - BELOW GRADE | FOCUS AREAS



I-345 AT ROSS AVENUE FOCUS AREA

FOCUS AREA NOTES: I-345 AT ROSS AVENUE

1. Complete street bridge crossings
2. Street trees promoting walkability with collective shade canopy

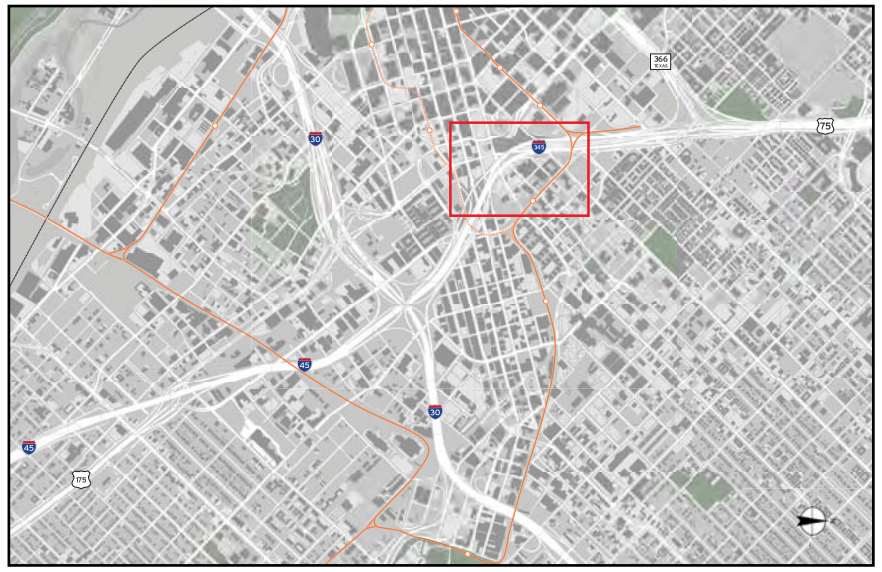


I-345 AT ROSS AVENUE CONCEPT *Source: Gateway Planning Group*

I-345 CORRIDOR POTENTIAL



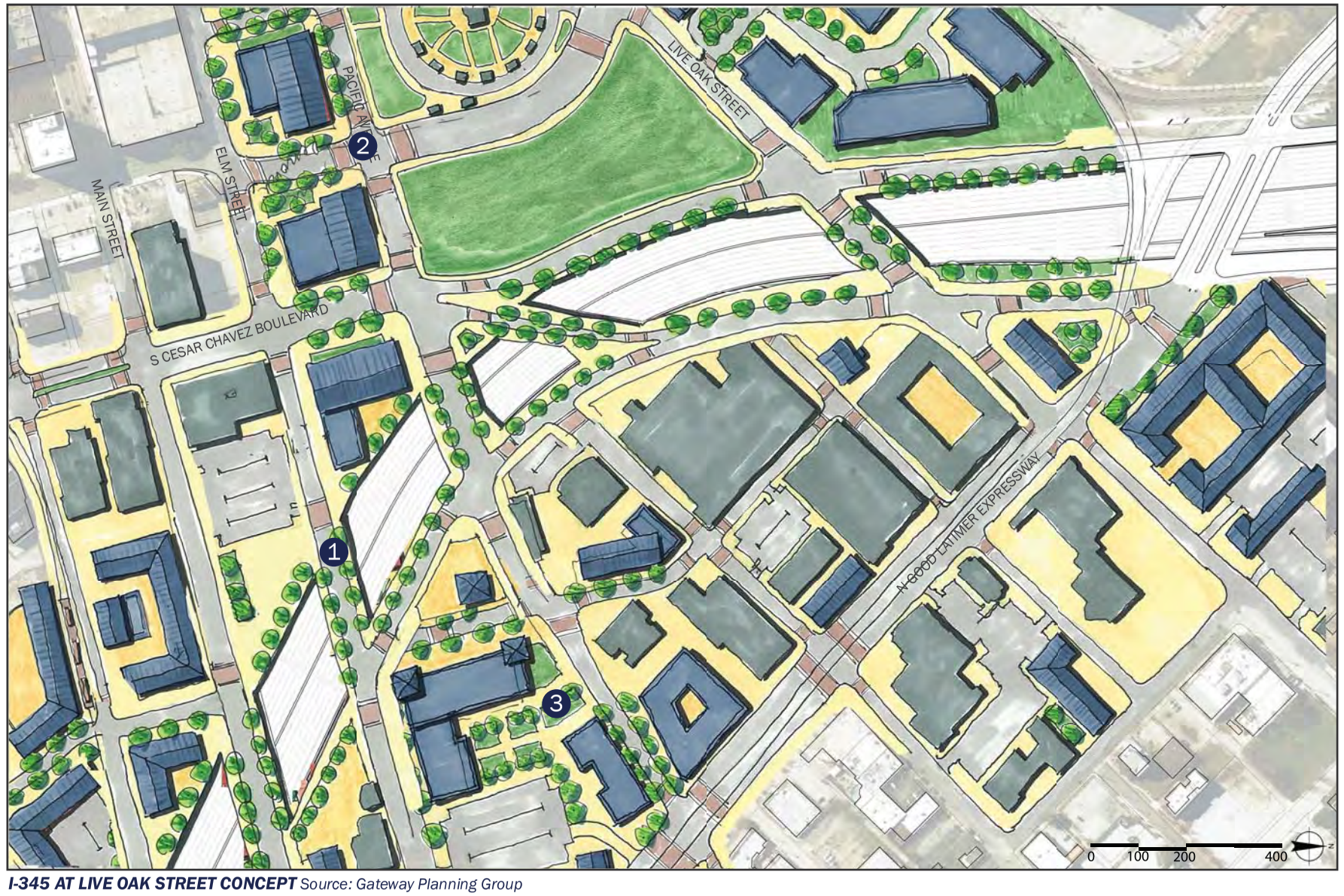
I-345 SCENARIO - BELOW GRADE | FOCUS AREAS



I-345 AT LIVE OAK STREET FOCUS AREA

FOCUS AREA NOTES: I-345 AT LIVE OAK STREET

1. Complete street bridge crossings
2. Development on underutilized lots
3. Pockets of green and plazas to support pedestrian connectivity

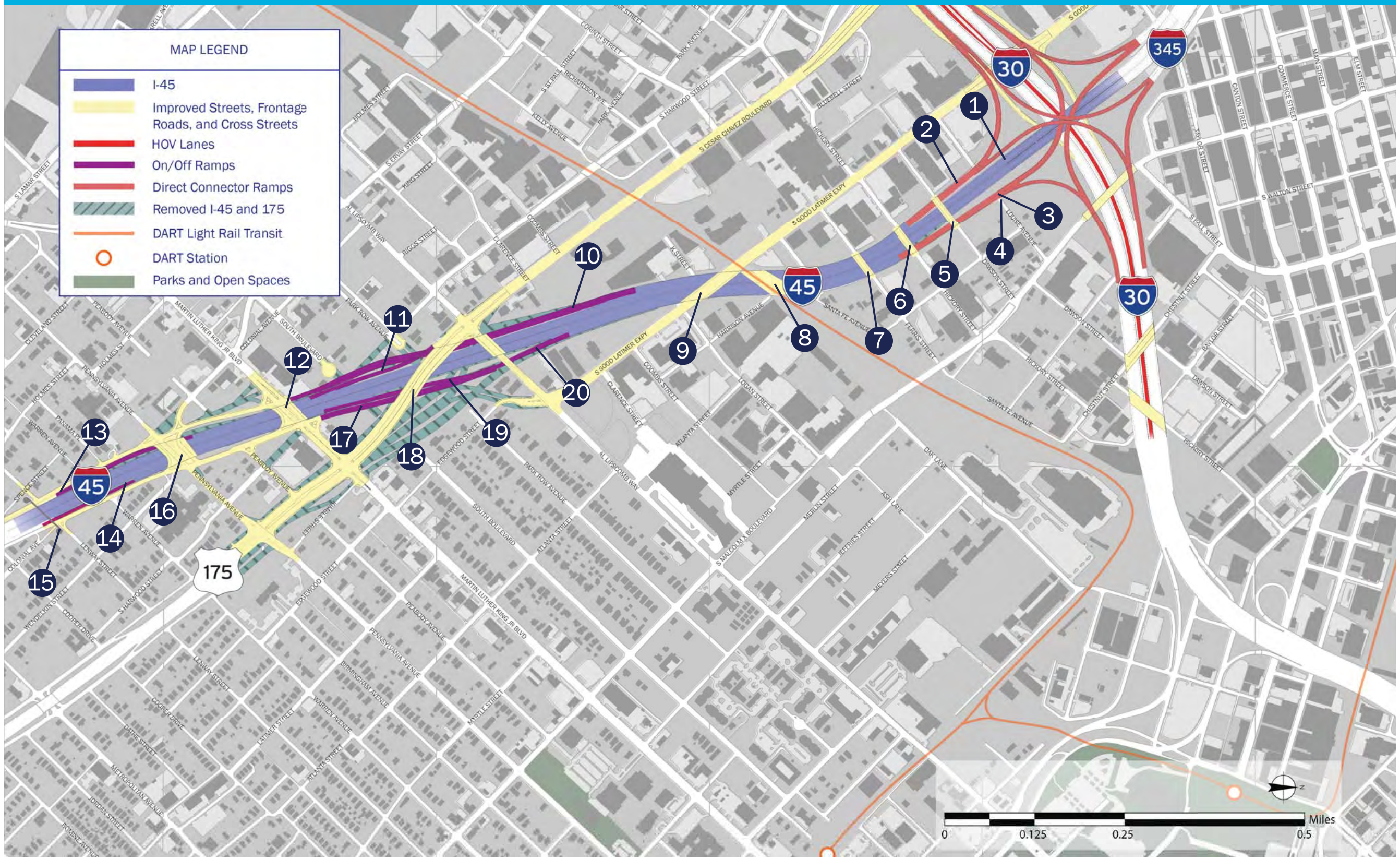


I-345 AT LIVE OAK STREET CONCEPT *Source: Gateway Planning Group*

I-345 CORRIDOR POTENTIAL



I-45 SCENARIO - BELOW GRADE | MAP



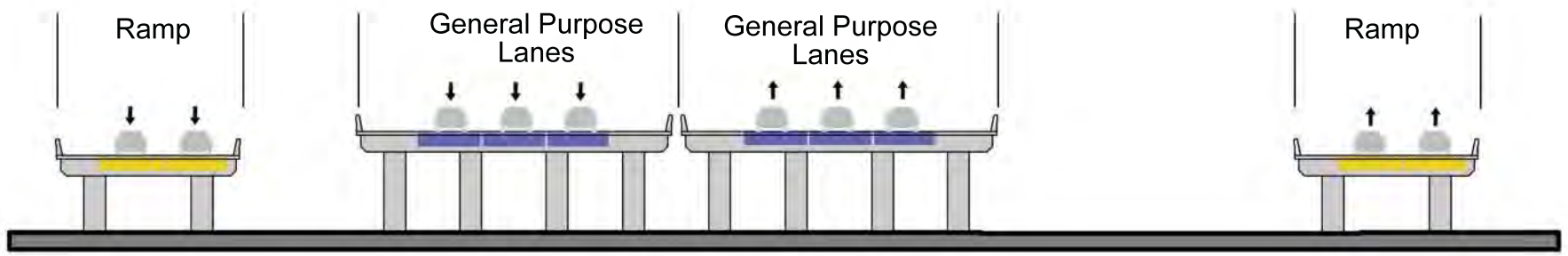
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I-45 SCENARIO - BELOW GRADE | MAP

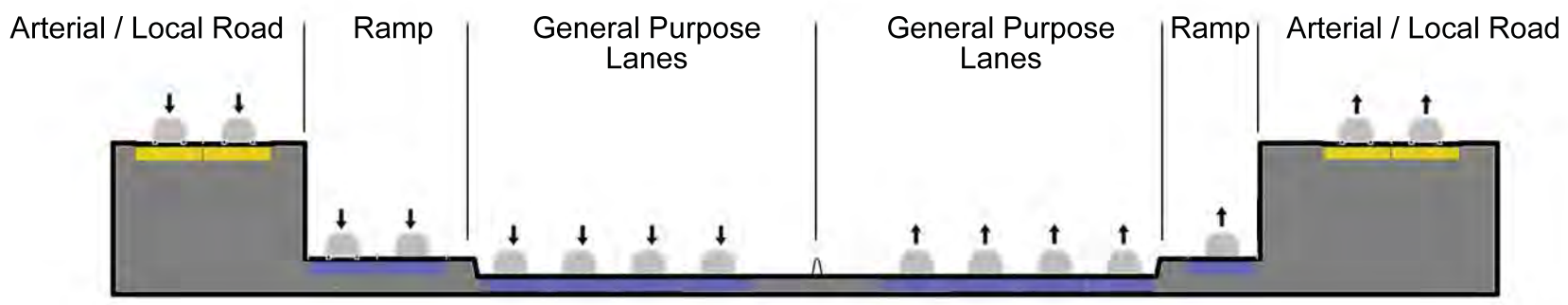
PLAN NOTES: I-45 BELOW GRADE

1. Interchange at I-45 and I-30 reconfigured with I-45 lowered to allow transition to below grade condition at Dawson Street
2. Reconfigured southbound I-45 direct connect ramps from eastbound I-30 and westbound I-30
3. Reconfigured northbound I-45 direct connect ramps to westbound I-30 and eastbound I-30
4. Louise Street breaks at I-45 footprint
5. Dawson Street bridge over below grade I-45
6. Hickory Street bridge over below grade I-45
7. Ferris Street bridge over below grade I-45
8. DART bridge over below grade I-45
9. Good Latimer Expressway bridge over below grade I-45
10. Southbound I-45 exit ramp to frontage road at Martin Luther King Boulevard (under S.M. Wright connector to Cesar Chavez Boulevard)
11. Southbound I-45 entrance ramp from Cesar Chavez Boulevard
12. Martin Luther King Boulevard bridge over below grade I-45
13. Southbound I-45 exit ramp to frontage road at Lenway Street
14. Northbound I-45 entrance ramp from frontage road at Cooper Street
15. Existing pedestrian bridge over I-45
16. Pennsylvania Avenue bridge over below grade I-45
17. Northbound I-45 frontage road from Martin Luther King Boulevard to Al Lipscomb Way (under S.M. Wright connector to Cesar Chavez Boulevard)
18. S.M. Wright connector to Cesar Chavez Boulevard bridge over below grade I-45
19. Northbound I-45 exit ramp to Al Lipscomb Way
20. Northbound I-45 entrance ramp from Al Lipscomb Way

CROSS SECTIONS

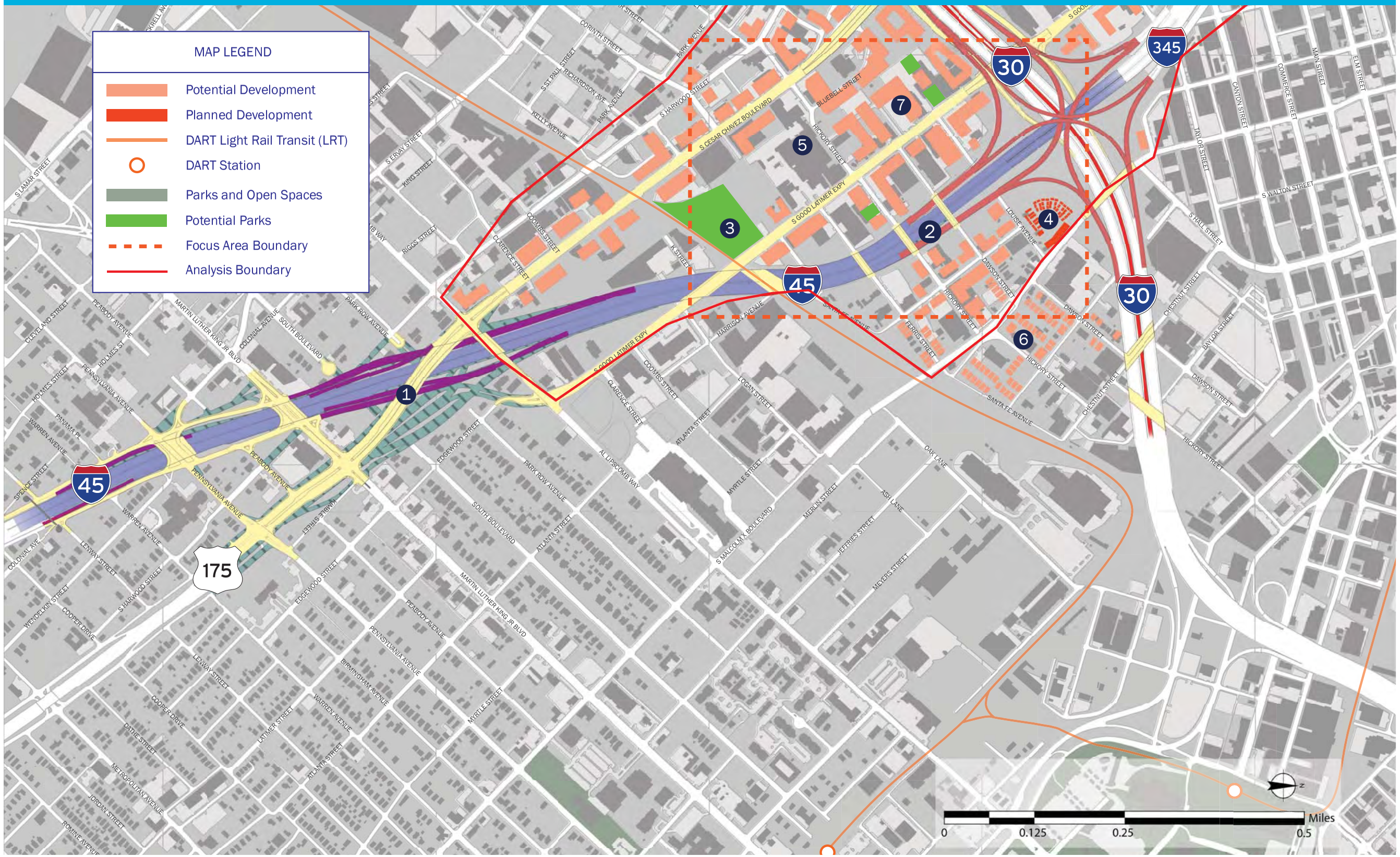


EXISTING



SCENARIO

I-45 SCENARIO - BELOW GRADE | DEVELOPMENT MAP



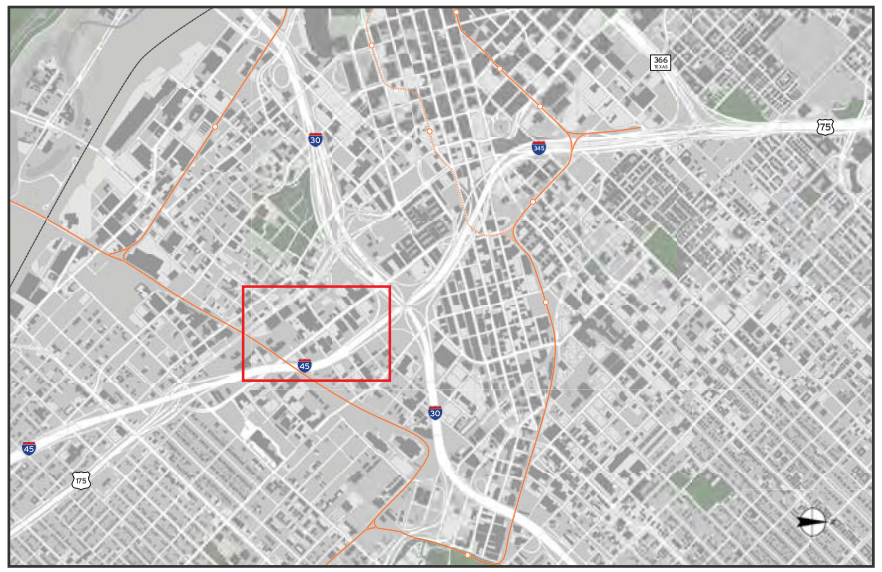
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I-45 SCENARIO - BELOW GRADE | DEVELOPMENT MAP

PLAN NOTES: I-45 BELOW GRADE

1. S.M. Wright Improvements promote redevelopment along Cesar Chavez and Good Latimer
2. Neighborhoods focused on complete street bridge crossings
3. Potential Corinth Street community park
4. Cottages at Hickory Crossing
5. Recycling plant
6. Infill neighborhood residential
7. Potential retail, office or mixed-use infill opportunities

I-45 SCENARIO - BELOW GRADE | FOCUS AREAS



I-345 AT SOUTH GOOD LATIMER EXPRESSWAY FOCUS AREA

FOCUS AREA NOTES: I-345 AT SOUTH GOOD LATIMER EXPRESSWAY

1. Community park from potential brownfield site
2. Corner pads built to frame entry to neighborhoods
3. Development focused on Cesar Chavez as a walkable street



I-345 AT SOUTH GOOD LATIMER EXPRESSWAY CONCEPT *Source: Gateway Planning Group*

I-45 CORRIDOR POTENTIAL

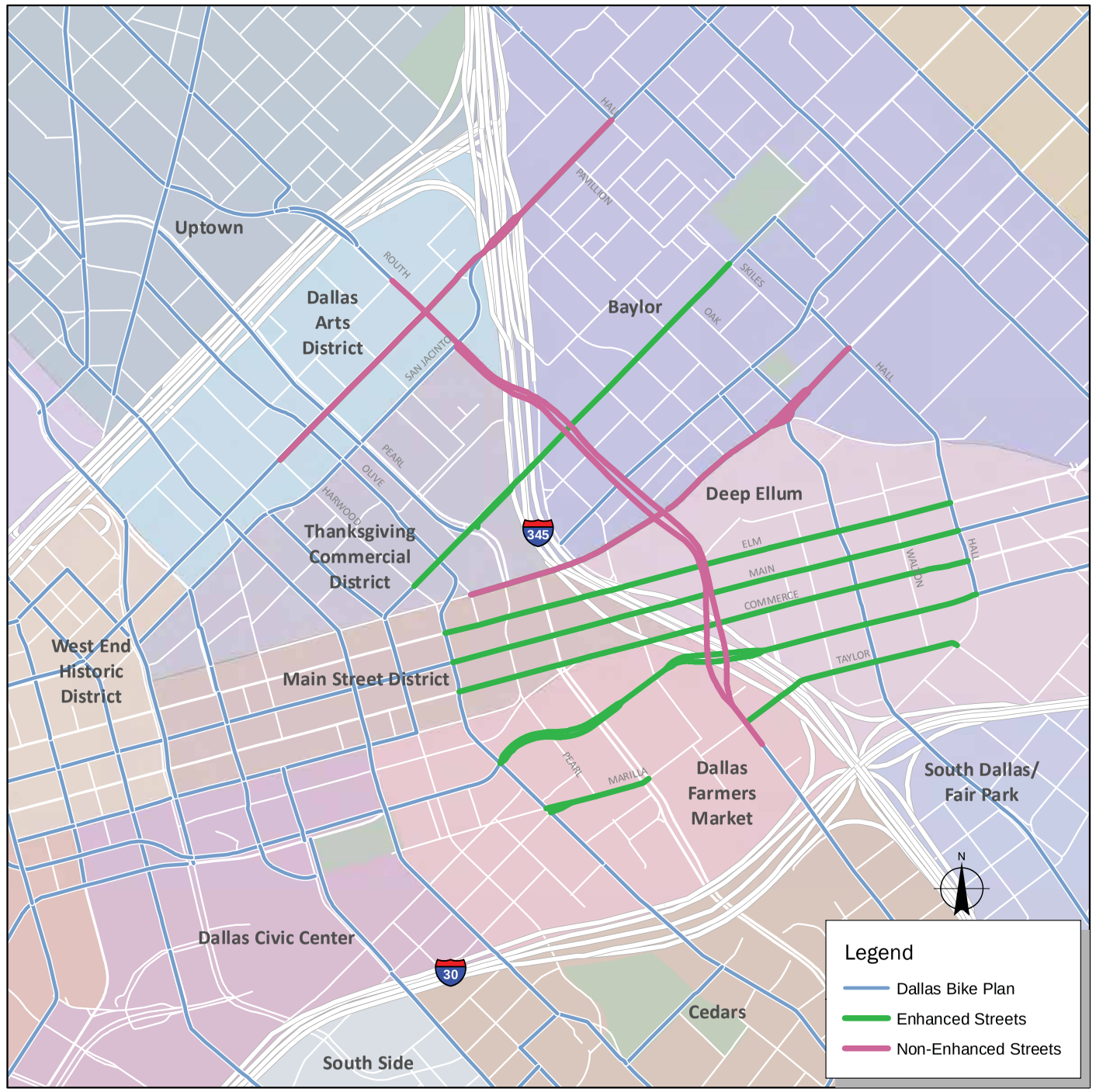


I-345/I-45 SCENARIO - BELOW GRADE | CONNECTIVITY OPPORTUNITIES

For years US 75 wound through the east end of downtown on local streets past the Farmers Market and warehouses supporting wholesale food distribution businesses. As a local street in downtown US 75 was also known as Central Expressway and has been renamed Cesar Chavez Boulevard today. Up until recently, Central Expressway was part of a one way couplet with Field Street from Live Oak to I-30. The City is completing extensive improvements to Cesar Chavez Boulevard from Live Oak Street to the Farmers Market paid for by a series of bond programs, converting Cesar Chavez and Field Street each back to two-way and reestablishing the street patterns. Many of the warehouses around the Farmers Market have been replaced by new townhomes and apartments. South of I-30, US 75 runs past older warehouse and light industrial businesses that appear poised for transition.

When I-345 was opened to traffic in the late 1960's it accommodated the high demand for regional traffic to travel through downtown above grade and off of the local street network and it provided direct access to Elm, Main and Commerce streets via direct connect ramps to the collector-distributor roads. The new elevated freeway absorbed the traffic demands on US 75 and I-45 and provided easy access between I-30 and I-45 to downtown. By being elevated the freeway did not substantially disrupt the existing downtown street network.

The Dallas CityMAP team analyzed existing and future traffic volumes on local streets in the study area and determined where additional capacity existed on a 24-hour and peak period basis. Where streets have vehicle carrying capacity, CityMAP explores a series of alternatives for making key roadways more walkable and bikeable, enhancing connectivity. This scenario explores the opportunities created when I-345 is reconstructed below grade beginning on the south in the vicinity of the confluence of Cesar Chavez Boulevard, Good Latimer Expressway, Al Lipscomb Way and US 175 (S. M. Wright Freeway). The new below grade I-345 will connect to I-30 via a new direct connect interchange and emerge on the north end at US 75 North Central Expressway and Woodall Rodgers Freeway. The Existing Cross Sections Analysis below identifies local street improvements that enhance connectivity between downtown districts (Farmers Market, Main Street District, Thanksgiving Commercial Center, and Dallas Arts District) and Deep Ellum and Baylor districts east of the new I-345 below grade. South of I-30 there are new opportunities to reconnect local streets between the Cedars and South Dallas/Fair Park neighborhoods created by the below grade scenario.



I-345 Remove Existing Cross Sections Analysis

Street	From	To	Area Type	Functional Class	Capacity	Existing ADT	Existing V/C	2040 ADT	2040 V/C	One Way Two Way	Median Type	Total Lanes	Parking	Bike Facility
Ross	Hall	Pavillion	CBD Fringe	Principal Arterial	25,000	19,227	0.77	19,018	0.76	2	TWLTL	4	0	0
Ross	Olive	Harwood	CBD	Principal Arterial	17,250	15,516	0.90	26,933	1.56	1	TWLTL	3	2	0
Ross	Central NB	Central SB	CBD Fringe	Principal Arterial	37,500	21,670 [1]	0.58	32,665	0.87	2	Divided	6	0	0
Live Oak	Oak	Skiles	CBD Fringe	Minor Arterial	25,000	16,459	0.66	12,822	0.51	2	TWLTL	4	0	0
Live Oak	Central	Pearl	CBD Fringe	Minor Arterial	28,750	10,263 [1]	0.36	18,201	0.63	2	Undivided	5	0	0
Live Oak	Olive	Harwood	CBD	Minor Arterial	17,250	8,043	0.47	11,913	0.69	1	Undivided	3	1	0
Pacific	Good Latimer	Hawkins	CBD Fringe	Principal Arterial	23,000	8,903	0.39	21,324	0.93	2	Undivided	4	0	0
Pacific	Central	Cesar Chavez	CBD Fringe	Minor Arterial	28,750	10,384 [1]	0.36	18,332	0.64	2	Undivided	5	0	0
Pacific	Cesar Chavez	Pearl	CBD	Minor Arterial	26,250	9,775 [1]	0.37	30,954	1.18	2	Undivided	5	0	0
Elm	Hawkins	Cesar Chavez	CBD Fringe	Principal Arterial	18,750	14,724 [1]	0.79	32,492	1.73	1	Undivided	3	0	0
Elm	Olive	Harwood	CBD	Principal Arterial	17,250	12,926	0.75	22,873	1.33	1	Undivided	3	2	0
Main	Hall	Walton	CBD Fringe	Minor Arterial	11,500	8,760	0.76	8,739	0.76	2	Undivided	2	2	1
Main	Pearl	Harwood	CBD	Minor Arterial	21,000	8,952	0.43	17,186	0.82	2	Undivided	4	2	1
Commerce	Walton	Hall	CBD Fringe	Principal Arterial	18,750	4,772	0.25	19,700	1.05	1	Undivided	3	2	0
Commerce	Cesar Chavez	Good Latimer	CBD Fringe	Minor Arterial	28,750	10,841 [1]	0.38	28,478	0.99	2	Undivided	5	0	0
Commerce	Harwood	Pearl	CBD	Principal Arterial	17,250	11,764	0.68	28,839	1.67	1	Undivided	3	2	0
Canton	Hall	Walton	CBD Fringe	Principal Arterial	12,500	10,271	0.82	7,670	0.61	2	TWLTL	2	0	0
Canton/Young	Pearl	Harwood	CBD	Principal Arterial	23,000	12,000	0.52	12,807	0.56	2	Divided	4	0	0
Taylor	Malcolm X	Good Latimer	CBD Fringe	Minor Arterial	11,500	966 [1]	0.09	4,084	0.36	2	Undivided	2	2	0

[1] Counts not conducted by KHA and acquired using historical data from NCTCOG or Google Earth Pro.

TWLTL - Two Way Left Turn Lane

Parking Nomenclature:

0 - No on street parking

1 - On street parking on one side of the street

2 - On street parking on available on both sides of the street

Bike Facility Nomenclature:

0 - No bike facility

1 - Shared bike lane

2 - Dedicated bike lane

ROSS AVENUE

Ross Avenue is a principal east-west arterial in Deep Ellum connecting lower Greenville, east Dallas, and the Baylor Medical district to downtown including the Arts District and West End. A number of high rise office buildings have Ross Avenue as their address. The City has invested in pedestrian amenities on Ross Avenue within the CBD and it is a designated route on the Bike Plan.

Ross Avenue has high ADTs and v/c ratios in the CBD and east Dallas. Ross Avenue will operate at unacceptable levels of LOS in the future with the existing cross sections. Any road diets or complete streets configurations applied to Ross Avenue will reduce the capacity and will further degrade the LOS. This will remain true with the I-345 being placed below grade. However, this will allow for the connection of Ross between Deep Ellum and downtown to be widened. That space should be used to enhance the pedestrian experience and make the crossing more inviting.

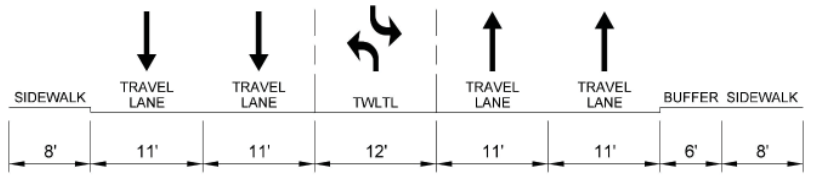


FIGURE 1 *Existing Ross Avenue Cross Section from Hall Street to Pavillion Street*

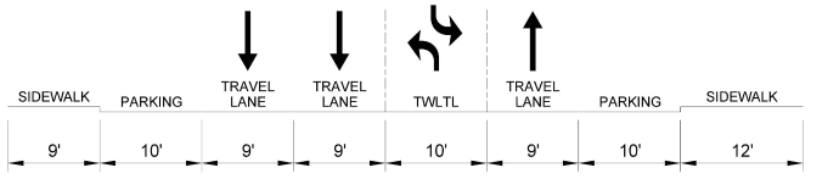


FIGURE 2 *Existing Ross Avenue Cross Section from Olive Street to Harwood Street*

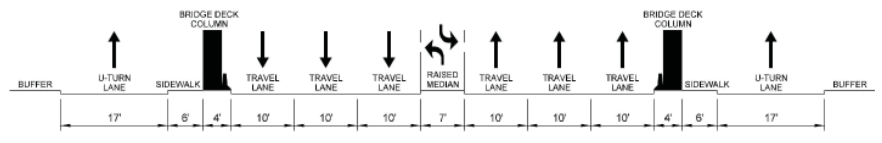


FIGURE 3 *Existing Ross Avenue Cross Section from Central NB to Central SB*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Ross	Existing	25,000	19,227	0.77	D	19,018	0.76	D
Ross	Existing	17,250	15,516	0.90	E	26,933	1.56	E
Ross	Existing	37,500	21,670	0.58	C	32,665	0.87	F

TABLE 1 *LOS for existing cross sections for Hall Street to Pavilion Street, from Olive Street to Harwood Street, and from Central NB to Central SB*

LIVE OAK STREET

Live Oak Street is a principal east-west arterial in Deep Ellum connecting lower Greenville and east Dallas to downtown. Live Oak is designated on the Bike Plan. Existing v/c ratios show that Live Oak Street is close to being at unacceptable conditions outside of the CBD. But within the CBD and under I-345 today the LOS is acceptable and there is excess capacity. According to CityMAP analysis, after the I-345 is placed below grade, Live Oak street is one of the principal arterials that has excess capacity to accommodate bike lanes.

A possible cross section for Live Oak Street outside the CBD in the future could be to remove the TWLTL and place buffered bike lanes on each side. This is shown in Figures 4 and 5.

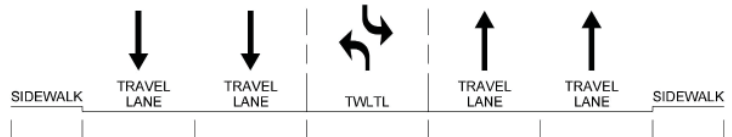


FIGURE 4 *Existing Live Oak Street Cross Section from Skiles Street to Oak Street*

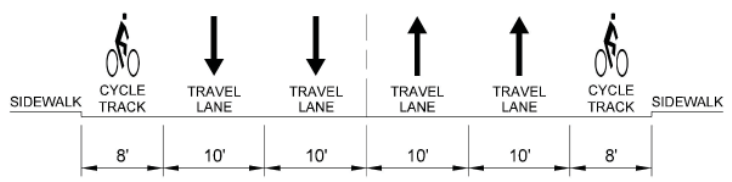


FIGURE 5 *Possible Live Oak Street Cross Section from Skiles Street to Oak Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Live Oak	Existing	25,000	16,459	0.66	D	12,822	0.51	C
Live Oak	Possible	23,000	16,459	0.72	D	12,822	0.56	C

TABLE 2 *LOS for existing and possible cross sections for Live Oak Street from Oak Street to Skiles Street*

After I-345 is placed below grade, bike lanes and pedestrian facilities could be accommodated by expanding the crossings over I-345. LOS should not be affected significantly since there is no need to remove lanes in order to place bike lanes and pedestrian facilities.

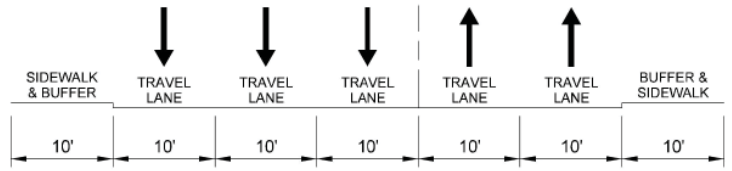


FIGURE 6 *Existing Live Oak Street Cross Section from Central to Pearl Street*

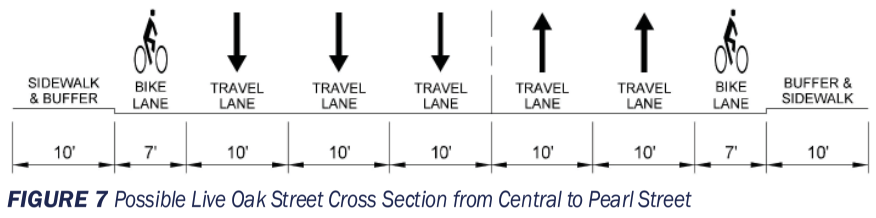


FIGURE 7 *Possible Live Oak Street Cross Section from Central to Pearl Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Live Oak	Existing	28,750	10,263	0.36	A/B	18,201	0.63	C
Live Oak	Possible	28,750	10,263	0.36	A/B	18,201	0.63	C

TABLE 3 *LOS for existing and possible cross sections for Live Street from Central to Pearl Street*

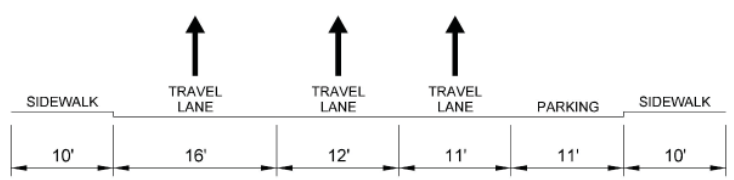


FIGURE 8 *Existing Live Oak Street Cross Section from Olive Street to Harwood Street*

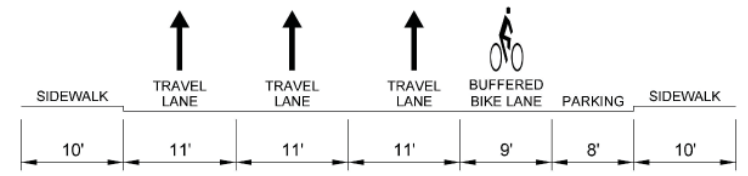


FIGURE 9 *Possible Live Oak Street Cross Section from Olive Street to Harwood Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Live Oak	Existing	17,250	8,043	0.47	C	11,913	0.69	D
Live Oak	Possible	17,250	8,043	0.47	C	11,913	0.69	D

TABLE 4 *LOS for existing and possible cross sections for Live Street from Olive Street to Harwood Street*

GASTON/PACIFIC AVENUE

Gaston Avenue is a principal east-west arterial in Deep Ellum connecting Lakewood and east Dallas to downtown. Pacific Avenue is a principal east-west arterial in downtown connecting the Thanksgiving Commercial Center and Main Street District under I-345 to Deep Ellum. In the I-345 below grade scenario, Gaston/Pacific Avenue take on more traffic when compared to I-345 modify scenario. Due to heavy traffic projected in the future and Gaston/Pacific Avenue not being on the Bike Plan, CityMAP team considered not placing bike facilities along the corridor. Gaston/Pacific Avenue has wide pedestrian zones ranging from 15' to 17' within the CBD. It is suggested that continuous sidewalks be installed where there are none and better pedestrian facilities be provided to improve the pedestrian experience and the crossing over I-345 into downtown.

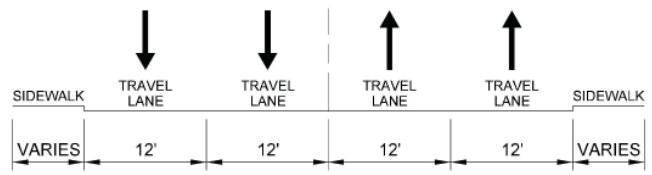


FIGURE 10 *Existing Pacific Avenue Cross Section from Good Latimer Expressway to Hawkins Street*



FIGURE 11 *Existing Pacific Avenue Cross Section from Central to Cesar Chavez Boulevard*

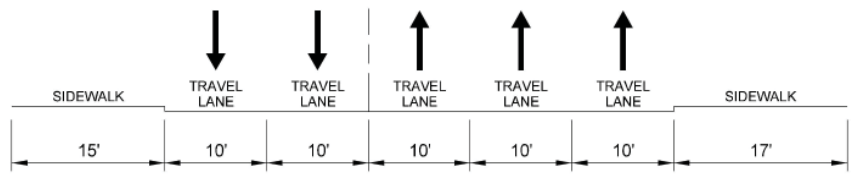


FIGURE 12 *Existing Pacific Avenue Cross Section from Cesar Chavez Boulevard to Pearl Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Pacific	Existing	23,000	8,903	0.39	A/B	21,324	0.93	E
Pacific	Existing	28,750	10,384	0.36	A/B	18,332	0.64	C
Pacific	Existing	26,250	9,775	0.37	A/B	30,954	1.18	F

TABLE 5 *LOS for existing for Pacific Avenue from Good Latimer Expressway to Hawkins Street, from Central to Cesar Chavez Boulevard, and from Cesar Chavez Boulevard to Pearl Street*

ELM STREET

Elm Street is a principal westbound one way arterial in Deep Ellum connecting under I-345 to the Main Street District downtown. Currently, the collector-distributor lanes of I-345 have direct connect ramps into and out of the CBD on Elm, Main and Commerce. Traffic volumes peak on Elm Street in the AM peak period as commuters enter downtown from Deep Ellum and direct connect ramp from I-345.

The CityMAP analysis shows that Elm Street is currently and will remain a major route in the future even after I-345 is placed below grade. The four lane cross section that is prevalent through downtown could be carried upstream by widening the crossing over I-345. Elm Street is not designated on the Bike Plan. After I-345 is placed below grade and the crossing of Elm Street over I-345 widened, bicycle and pedestrian facilities can be added without degrading the LOS. However, Main Street already has bike lanes and shared lanes and serves a similar functionality that Elm and Commerce would if they were to have bike lanes. Based on the current analysis, this cross section of the corridor experiences LOS F in 2040 but may still warrant enhancements upon further analysis and input from local stakeholders.

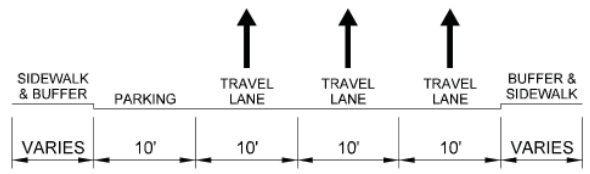


FIGURE 13 *Existing Elm Street Cross Section from Hawkins Street to Cesar Chavez Boulevard*

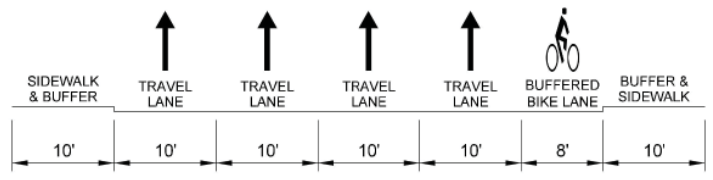


FIGURE 14 *Possible Elm Street Cross Section from Hawkins Street to Cesar Chavez Boulevard*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Elm	Existing	18,750	14,724	0.79	D	32,492	1.73	F
Elm	Possible	25,000	14,724	0.59	C	32,492	1.30	F

TABLE 6 *LOS for existing and possible cross sections for Elm Street from Hawkins Street to Cesar Chavez Boulevard*

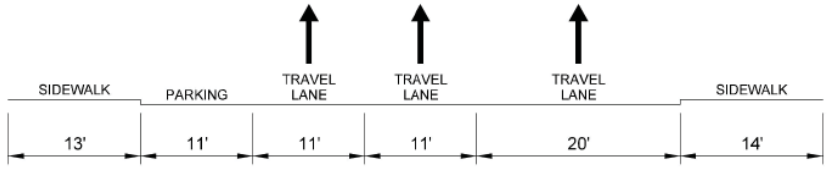


FIGURE 15 *Existing Elm Street Cross Section from Olive Street to Harwood Street*

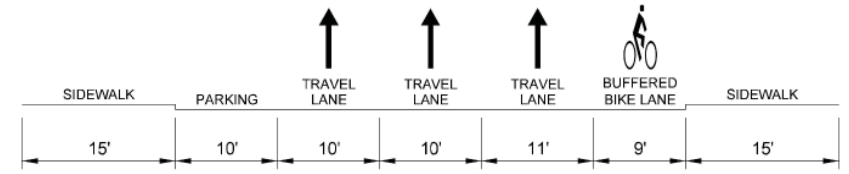


FIGURE 16 *Possible Elm Street Cross Section from Olive Street to Harwood Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Elm	Existing	17,250	12,926	0.75	D	22,873	1.33	F
Elm	Possible	17,250	12,926	0.75	D	22,873	1.33	F

TABLE 7 *LOS for existing and possible cross sections for Elm Street from Olive Street to Harwood Street*

MAIN STREET

Main Street is designated a minor two way east-west arterial in Deep Ellum connecting under I-345 to the Main Street District in downtown. Currently, the collector-distributor lanes of I-345 have direct connect ramps into and out of the CBD on Elm, Main and Commerce. Traffic volumes on Main Street peak in both the AM and PM periods.

With I-345 below grade, the bridge crossing should be expanded to improve pedestrian and bicycle facilities. Main Street is on the Bike Plan and has bike lanes and shared lanes.

COMMERCE STREET

Commerce Street is a Principal eastbound one way arterial in downtown connecting under I-345 from the Main Street District to Deep Ellum. Currently, the collector-distributor lanes of I-345 have direct connect ramps into and out of the CBD on Elm, Main and Commerce. Traffic volumes peak on Commerce Street in the PM peak period as commuters leave downtown through Deep Ellum and the direct ramp to I-345. Based on the current analysis, this cross section of the corridor experiences LOS F in 2040 but may still warrant enhancements upon further analysis and input from local stakeholders.

In the I-345 below grade scenario, Commerce Street experiences heavy traffic in downtown and in Deep Ellum. Pedestrian and bicycle facilities should be expanded and improved at the crossing of Commerce over I-345.

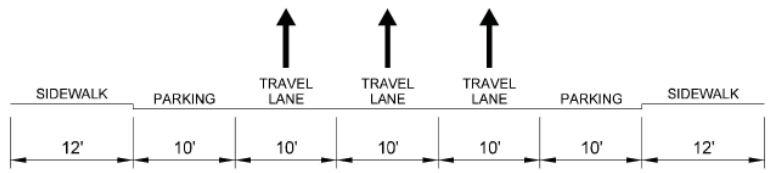


FIGURE 17 *Existing Commerce Street Cross Section from Walton Street to Hall Street*

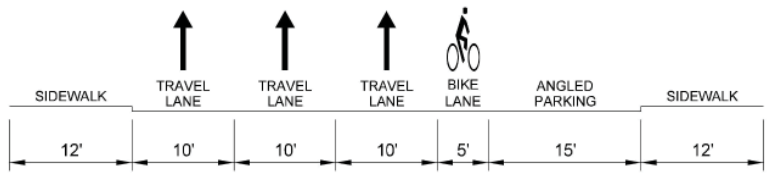


FIGURE 18 *Possible Commerce Street Cross Section from Walton Street to Hall Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Commerce	Existing	18,750	4,772	0.25	A/B	19,700	1.05	F
Commerce	Possible	18,750	4,772	0.25	A/B	19,700	1.05	F

TABLE 8 *LOS for existing and possible cross sections for Commerce Street from Walton Street to Hall Street*

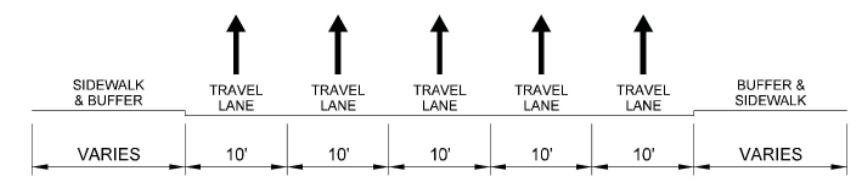


FIGURE 19 *Existing Commerce Street Cross Section from Cesar Chavez Boulevard to Good Latimer Expressway*

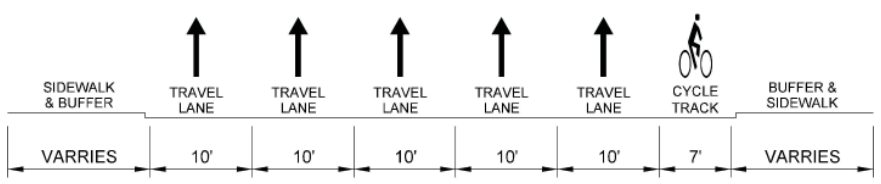


FIGURE 20 *Possible Commerce Street Cross Section from Cesar Chavez Boulevard to Good Latimer Expressway*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Commerce	Existing	28,750	10,841	0.38	A/B	28,478	0.99	E
Commerce	Possible	28,750	10,841	0.38	A/B	28,478	0.99	E

TABLE 9 *LOS for existing and possible cross sections for Commerce Street from Cesar Chavez Boulevard to Good Latimer Expressway*

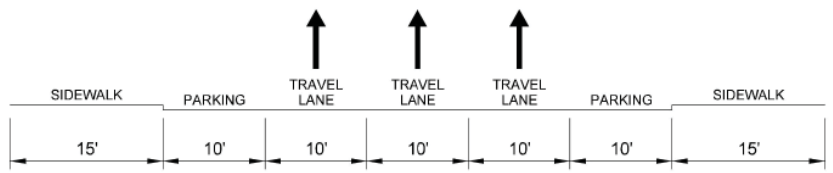


FIGURE 21 *Existing Commerce Street Cross Section from Harwood Street to Pearl Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Commerce	Existing	17,250	11,764	0.68	D	28,839	1.67	F
Commerce	Possible	17,250	11,764	0.68	D	28,839	1.67	F

TABLE 10 *LOS for existing cross sections for Commerce Street from Harwood Street to Pearl Street*

CANTON/YOUNG STREET

Young Street is a principal east-west arterial in downtown that becomes Canton Street and connects the Reunion/Union Station, Civic Center, and Farmers Market districts to Deep Ellum. At 4 lanes divided, Canton/Young has excess capacity in the Farmers Market between Pearl and Harwood and under I-345. The CityMAP analysis indicates that Canton/Young Street have lower volumes in the future when I-345 is removed. The cross section could be reallocated to include 5' lanes in each direction from Good Latimer Expressway, under I-345 and west to Harwood. Canton/Young street are on the Bike Plan.

Under I-345 Canton Street has minimum space available. The area is similar to a box diamond intersection but more compact. There are also bridge deck columns which make it hard to accommodate bike lanes. However, after the construction of I-345 below grade, the freed up space can be utilized to provide pedestrian and bike facilities to allow for a smooth transition between Deep Ellum and downtown.

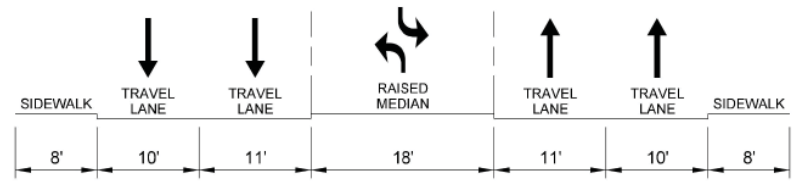


FIGURE 22 *Existing Young Street Cross Section from Pearl Street to Harwood Street*

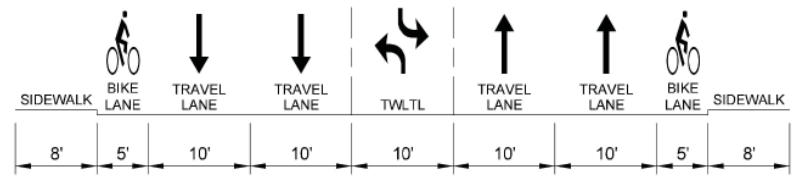


FIGURE 23 *Possible Young Street Cross Section from Pearl Street to Harwood Street*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Canton/ Young	Existing	23,000	12,000	0.52	C	12,807	0.56	C
Canton/ Young	Possible	23,000	12,000	0.52	C	12,807	0.56	C

TABLE 11 *LOS for existing and possible cross sections for Young Street from Pearl Street to Harwood Street*

TAYLOR STREET

The City Bike Plan has designated a number of streets within the CBD for bike facilities. An often discussed bike network connection that is needed is a formal connecting route between the Santa Fe Trail in east Dallas and the Katy and Strand Trails in Victory Park and Design Districts. Taylor Street has the potential for providing a critical link to the as yet undefined route as it extends under I-345.

CityMAP encourages improving Taylor Street and exploring a connection along Marilla Street that extends past City Hall as part of connecting the Santa Fe, Katy and Strand Trails in downtown. Taylor Street is designated a minor east-west arterial in Deep Ellum and the Farmers Market and has 2 large travel lanes in each direction. There is adequate room to create two 10' travel lanes and exclusive bike lanes that are 5' each with 2' buffer zones. Narrower travel lanes encourage motorists to slow down which is consistent with parallel and adjacent bicycle facilities sharing the same ROW. Taylor Street is likely to continue to have a number of commercial vehicles which need wider lanes at intersections to accommodate turning movements. The buffer zones are intended to provide room for the occasional wide vehicle to turn safely.

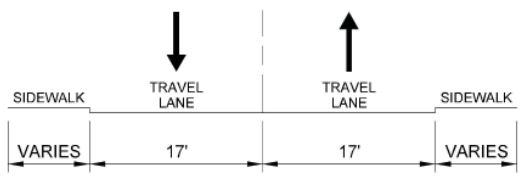


FIGURE 24 *Existing Taylor Street Cross Section from Malcolm X Boulevard to Good Latimer Expressway*

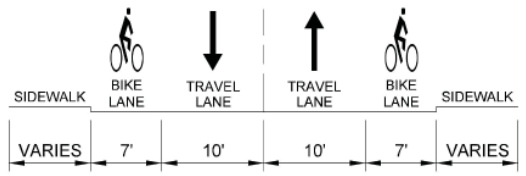


FIGURE 25 *Possible Taylor Street Cross Section from Malcolm X Boulevard to Good Latimer Expressway*

Street	Cross Section	Capacity	Existing ADT	V/C	2018 LOS	2040 ADT	2040 V/C	2040 LOS
Taylor	Existing	11,500	996	0.09	A/B	4,084	0.36	A/B
Taylor	Possible	11,500	996	0.09	A/B	4,084	0.36	A/B

TABLE 12 *LOS for existing and possible cross sections for Taylor Street from Malcolm X Boulevard to Good Latimer Expressway*

GOOD LATIMER EXPRESSWAY/ROUTH STREET

The City Bike Plan has designated a number of streets within the CBD for bike facilities. An often discussed bike network connection that is needed is a formal connecting route between the Santa Fe Trail in east Dallas and the Katy and Strand Trails in Victory Park and Design Districts. Taylor Street has the potential for providing a critical link to the as yet undefined route as it extends under I-345.

I-345/I-45 SCENARIO - BELOW GRADE | FACTOR ANALYSIS

The I-345 Below Grade scenario focuses on the use of the existing right of way of I-345 at a below grade profile.

The focus areas selected for the I-345 below grade provide a particular view into how the facility design improvements could relate to the development adjacent to the facility. The illustrative plans and perspectives show the potential for enhancing existing public space and present opportunities for new parks and open space. As with the other scenarios, the focus areas also focus on complete streets that promote walkability and fine-grained development patterns with buildings that are focused towards streets and neighborhood open spaces.

The Arts District focus area shows how the development impact of I-345 below grade would have on the current available property. This focus area also shows how the transition to US 75 and Woodall Rodgers would occur with the significant change in the connections to a below grade profile.

The Main-Elm-Commerce focus area shows the resulting bridge locations and the connectivity that occurs above the below grade profile. The potential for continued infill development is illustrated in the concept.

The I-45 focus area shows the infill development potential and the redevelopment that could occur between the east and west edges of the I-45 right-of-way. It illustrates the potential for the reinvention of land for park and open space and shows connectivity through the use of complete street bridges across I-45.

The analysis associated with the factors for the aggregated analysis area is gathered from an area slightly greater than the focus areas featured. The boundaries of the analysis area are outlined on the map and shows the proposed and planned developments known at the time CityMAP was initiated. The analysis area does not cover the entire areas affected by the facility changes in this scenario. However, it does focus on key areas of interest that would be considered catalytic or impactful.

	SCALE	QUINTILE UNITS	VALUE	SCORE
CONNECTIVITY				
Net New Linear Feet of Sidewalk per Acre	0 to 500	100	100.7	
Net New Intersections per Square Mile	0 to 75	15	27	
ECONOMIC DEVELOPMENT				
Net New Revenue	$0 to $92 Million	$18.4 Million	$50,121,355	
Net New Value	$0 to $2.6 Billion	$520 Million	$1,457,973,399	
Net New Jobs	0 to 52,000	10,400	28,618	
Net New Population	0 to 30,000	6,000	5,338	
Overall	Average of Subfactor Score			
FACILITY CAPITAL COST				
Estimated Total Cost of the Facility (inside TxDOT right-of-way)	N/A	N/A	$500-$999M	$$$
FACILITY DEVELOPMENT & CONSTRUCTION DURATION				
Total Time for Planning, Design and Construction	0 to 25 Years	5 Years	24 Years	
PARKS & OPEN SPACE - QUANTITY				
Net New % of Area	0 to 8	1.6	2.8%	
VISUAL IMPACT				
Visual Impact - % Below Grade	0 to 100%	20%	67%	

COST KEY

Under $100M	$100M - 499M	$500M - 999M	$1B - 2B	Over $2B
$	$$	$$$	$$$$	$$$$$

FACTOR KEY

0 - 1 | 1.1 - 2 | 2.1 - 3 | 3.1 - 4 | 4.1 - 5

LOW — HIGH

STAKEHOLDER INTEREST

I-345/I-45 SCENARIO - BELOW GRADE | FACTOR ANALYSIS

The factors defined in Chapter 4 are applied below to the I-345 Below Grade scenario. Those factors represent stakeholder values as discovered during the outreach process.

ADAPTIVE REUSE

Like the I-345 Removal, a standout example of adaptive reuse that could be reinforced by the Below Grade scenario is the former Dallas High School. This is an excellent example of historic architecture on a site that could be greatly enhanced by the adjacent I-345 reconstructed below grade.

The area to the east of I-345, the western edge of Deep Ellum, has several key opportunities for adaptive reuse including a redevelopment of a historic structure into a hotel. The commercial and industrial area south of I-30 also has some buildings of interesting character that could be candidates for reuse. Overall there are only limited opportunities for adaptive reuse as many of the best development sites are currently vacant or are underutilized and/or undesirable industrial sites. The authenticity created by the adaptive reuse of buildings is irreplaceable and can create an interesting synergy with new construction especially as a transition in to the core of Deep Ellum to help maintain the character of that neighborhood.

CONNECTIVITY

SIDEWALKS AS A MEASURE OF WALKABILITY

Much of the existing sidewalks in and near the I-345 corridor are in poor condition, with inadequate widths, contain gaps, in the network or are nonexistent. Combinations of disinvestment, lack of connectivity and large vacant tracts that are not conducive to pedestrian mobility have resulted in these sidewalk deficiencies. As discussed already, I-345 cuts through the city grid at inconvenient angles which cause problems with connectivity that compressing the ROW and moving below grade can partially remedy by providing opportunities to reconnect the grid. The likely resulting redevelopment related to the I-345 Below Grade scenario provides the opportunity for a repair of the sidewalk network. This would begin by providing sidewalks along the rebuilt streets necessitated by the reconstruction of I-345. Sidewalks could also be added along the east/west surface streets as they are reconnected to new bridges crossing over the new I-345. South of I-30 the replacement of I-45 with a below grade option would allow better connections east/west and along an enhanced Caesar Chavez and Good Latimer Expressway which will provide the opportunity to add sidewalks and create safer at grade intersections. One of the most pedestrian friendly benefits of I-345 being moved below grade is all the direct connector ramps from I-345 and Cesar Chavez would be removed as specifically voiced by the stakeholders. Outside of the newly released I-345 ROW a sidewalk network could be expanded as redevelopment occurs and city streets are rebuilt as Complete Streets.

Assessing the redevelopment concept, the CityMAP Team measured the net new linear feet of sidewalks. The focus area realized a net increase of approximately 51,679 linear feet of sidewalk.

Focus Area	Linear Feet
I-345 Below Grade	51,679

INTERSECTIONS PER SQUARE MILE AS A MEASURE OF CONNECTEDNESS

The net increase in intersections per square mile was measured based on how the surface streets are affected by the below grade design. Therefore, the resulting net new intersections per square mile are in addition to the existing intersections. The area north of I-30 has major gaps in connectivity, but overall it improves outside of the I-345 ROW. South of I-30 the connectivity is only interrupted by grade separation on some of the arterials and the DART line.

As the following table summarizes, the I-345 focus area had a net increase of 27 intersections per square mile. These potential additional intersections facilitated by the I-345 below grade scenario allow the grid to approach somewhat increased levels of connectivity.

Focus Area	New Intersections per Square Mile
I-345	27

ECONOMIC IMPACT

The I-345 Below Grade scenario includes the current footprint with a below grade profile. This scenario creates some additional developable land within existing TxDOT right-of-way where current ramps and direct connect structures are located. The I-345 corridor currently has a prevalence of office with many planned mixed-use projects along the existing corridor.

POPULATION AND JOBS

As a conservative estimate, the proposed scenario would add an additional estimated 23,644 employees between 2015 and 2045 as a result of proposed development. Population would also increase as a result of the proposed development and could create an increase in population of 5,338 by 2045.

ECONOMIC IMPACT SUMMARY

The breakdown of categories below provides the underlying analysis for the opportunities analyzed above.

HOSPITALITY ECONOMIC IMPACT

As of today, the current total hospitality value in the I-345 analysis area is $7.3 million. There is a total of 1.1 million square feet of new hospitality that could be added in the I-345 below grade scenario. This would add an additional $158 million to $168 million of value, over the 30 year time period. The estimated hotel tax generated would be $5.9 million over the 30 year time period. The estimated added workforce generated from hotels, would create an increase by 1,331 employees.

OFFICE ECONOMIC IMPACT

Currently, there is 536,300 SF of existing office space in the I-345 analysis area, with a current value of approximately $46.7 million. The estimated value of new likely office space developed between 2015 and 2045 ranges between $929 million. Property tax revenues are estimated to increase to $25.1 million on the low end and $22 million on the high end over the 30 year time period.

Including the net new office space proposed with the existing space, there will be a total of over 6 million square feet of total office in the I-345 area. This would increase workforce from the proposed office between 2015 and 2045 by over 26,193.

RETAIL ECONOMIC IMPACT

There is roughly 703,300 SF of existing retail space in the I-345 analysis area. Research shows the existing value for retail space is approximately at $57.7 million. There is a total of 601,600 SF of proposed new retail space between 2015 and 2045 in the I-345 area. The estimated value of the additional estimated retail space could be between and $85.4 and $92.3. Estimated projected property tax revenues on this net new space range from $2.3 million on the low end to $2.5 million on the high end over the 30 year time period.

Including existing space, the total square foot total would be approximately 1.2 million retail square feet in the I-345 area, under this scenario. This could increase workforce between 2015 and 2045 by 1,093. This could increase sales tax revenue by $4.9 million between 2015 and 2045.

MULTIFAMILY ECONOMIC IMPACT

I-345/I-45 SCENARIO - BELOW GRADE | FACTOR ANALYSIS

There is 206,000 SF of existing multi-family space in the I-345 analysis area. The current value of existing multi-family space is $10.3 million. There is a total of 2.4 million square feet of likely additional multi-family space between 2015 and 2045 in the I-345 area. The estimated value of all multi-family space developed between 2015 and 2045 ranges between approximately $342 million on the low end and $271 million on the high end.

Property tax revenues on this net new multi-family ranges from approximately $9.2 million on the low end and $7.3 million on the high end over the 30 year time period. Incorporating existing multi-family with net new space, there will be approximately 3 million multi-family square feet in the I-345 area. The estimated added population in multi-family units between 2015 and 2045 is 4,342.

SINGLE FAMILY ECONOMIC IMPACT

There is currently 26,250 SF of single-family development in the I-345 analysis area with a current value of approximately $2 million. There is an additional 26,250 SF of proposed single-family development in the I-345 area. The estimated value of this proposed space is between $3.9 million and $4 million over the 30 year period. Property tax revenues created for the new space would increase tax revenues of approximately $2.3 million. There is an estimated increase in population of single-family by 49 people.

I-345/I-45 Below Grade Scenario Projections (2015 - 2045)

Metric	Existing	Proposed
Existing Square Feet (2015)	1,634,350	-
Net New Square Feet (2015 - 2045)	-	11,032,450
Existing Value (2015)	$123,909,950	-
Net New Value	-	$1,457,973,399
Additional Impacts (Net New)		
Property Tax Revenue (Ad Valorem)	-	$39,365,282
Sales Tax Revenue	-	$4,881,151
Hotel Tax Revenue	-	$5,874,922
Increase to Existing Population	-	5,338
Increase to Existing Workforce	-	28,618
Net New Total Revenue		$50,121,355

TOTAL ECONOMIC IMPACT

Across all development types, there is 1.6 million square feet in the I-345 analysis area of existing building inventory. The total existing value within I-345 is $124 million.

There is a total of 11 million square feet of likely new development across all development types. The estimated total value of estimated net new space is approximately $1.45 billion. Net new City of Dallas property tax revenue is estimated to be $39.4 million over the 30 year time period. The total added workforce from the new estimated development is estimated at 28,618 between 2015 and 2045.

FACILITY CAPITAL COST

The CityMAP I-345/I-45 Below Grade scenario involves the demolition of existing I-345 and reconstructing it as a below grade urban freeway. The scenario also includes the development of a below grade footprint for I-45 from I-30 to Martin Luther King, Jr. Blvd. A below-grade footprint would be similar to that of Central Expressway and would require the reconfiguration of several of the surrounding cross streets.

The facility capital cost estimate for the I-345/I-45 Below Grade scenario is in the $500 million to $999 million range. Further discussions by the project partners are necessary to refine the scope of the improvements and determine funding responsibilities.

FACILITY DEVELOPMENT AND CONSTRUCTION DURATION

TxDOT is currently making safety repairs to I-345. Assuming the repairs are completed in 2018 and allowing for a 25 year service life, replacement of I-345 would not be likely until 2043. The CityMAP estimate allows six (6) years for the Below Grade scenario to be added to the MTP in 2022. An estimated eight (8) year period to prepare environmental and traffic studies needed to obtain approvals would follow. A six (6) year period is assumed for detailed design, right of way and utility relocations. This would be followed by a four (4) year construction period that would include:

- Demolition of I-345 and portions of I-45 including portions of the interchanges at Woodall Rodgers and I-30
- Construction of the below grade I-345/I-45
- Construction of new ramps at Woodall Rodgers Expressway and new interchange at I-30
- Construction of cross street bridges

The facility development and construction duration for the I-345/I-45 Remove project as described would be approximately twenty four (24) years, including a six (6) year period to add to the MTP. This schedule assumes completion in 2040 in advance of the possible 2043 target date identified for I-345 replacement.

FACILITY OPERATION AND MAINTENANCE COST

The O&M costs for the “Complete Street” overpasses cannot readily be determined at this time because the types of amenities that would be incorporated have not been discussed and/or agreed upon by the appropriate entities. Typically, O&M costs for these types of facilities range from one to five percent of the construction cost, per year.

PARKS & OPEN SPACE – QUANTITY

The acreage of open space resulting from the likely redevelopment associated with the I-345 below grade concept is measured based on the type of the space. The CityMAP Team identified three pocket parks on in the below grade concept, a set of pocket parks between Caesar Chavez and the Good Latimer Expressway in a potential redevelopment of some vacant and industrial land, one on Louise Street and one on Hickory Street that could provide a small amenity to the immediate neighborhood. All three pocket parks share the commonality of being surrounded by development leveraging the investment by providing an amenity to residents, employees and customers. They are also easily accessible to the surrounding neighborhood through a repaired street grid.

The I-345 below grade scenario also creates the opportunity for major redevelopment south of I-30 due to the reconfiguration of I-45 to the south as well. This significant development would necessitate some new parkland in an area that is currently vacant and industrial. One potential area for significant parkland is the current recycling plant. A site like this often requires some level of environmental remediation which can be a good opportunity for publicly funded open space if the costs are not prohibitive.

The 2013 Downtown Parks Master Plan Update identified future priority parks at Carpenter Park, Pacific Plaza, West End Plaza and Harwood Park. As currently configured, the Below Grade scenario would reduce the park area for Carpenter Park by approximately 50%. However, Pacific Plaza, West End Plaza and Harwood Park would not be impacted by the scenario. The development depicted in the Remove scenario would conflict with the Taylor Fields proposal

(5.36 Ac) at the NW quadrant of the I-345 interchange with I-30. Since this is not identified as a priority park we have not reduce the new net acreage amount. The resulting greenspace is summarized below: A possible 1.6 acre deck park is shown as a cap over I-345 between Canton Street and Commerce Street. The limits of this cap could be expanded to Live Oak Street if funding would allow. The Farmer's Market Deck Park is shown as 3.24 acres. For comparison the Woodall Rodgers deck park is 5.2 acres. The Bluebell Extension pocket parks

Open Space	New Net Area in Acres
Deck Parks	
Farmers Market Deck Park	3.24
Canton St./Commerce St. Deck Park	1.60
Pocket Parks	
Bluebell Extension Pocket Park	0.74
Louise St. Pocket Parks	0.15
Hickory St.	0.19
Neighborhood Park	
Corinth St.	4.27
Reduced Carpenter Plaza	14.54

are a combined .74 acres, The Louise St. park .15 acres and the Hickory St. pocket park is .19 acres. The Corinth Street Neighborhood Park is 4.27 acres.

PARKS & OPEN SPACE – QUALITY

Parks and open space quality has the potential to be improved with the I-345 below grade scenario. The lowering of the I-345 facility to a below grade profile allows for current parks and open space located adjacent to be brought out in the open, however the park space underneath the existing elevated structure would be eliminated. Park quality could be greatly improved if additional funding would allow a cap over I-345 to be expanded from Live Oak Street to Canton Street. This cap would allow for park amenities without reducing development area.

Some crossings currently underneath the highway would be reconnected with bridges, providing the visual perception of better connectivity. In addition, the recycling center at S.M. Wright and I-45 is redesigned as a programmed public park.

Inclusion of pocket parks and plazas within the focus areas reflect the attributes for access and surveillance. Pocket parks and plazas will bring needed respite from the urban context, but will remain easy to maintain and intimate spaces. This is especially important in areas that would transition from industrial to mixed-use, as many of the common community spaces do not exist.

VISUAL IMPACT

The scenario for I-345/I-45 Below Grade involves the full reconstruction of the corridor with a below grade profile utilized except where transitions are required at the I-30 interchange, the Woodall Rodgers interchange and for the transition at the south limit near Lenway Street. These transitions involve approximately one-third of the corridor length, leaving approximately two- thirds of the corridor with a below grade profile. For the Visual Impact scoring the percentage of below grade highway for the I-345/I-45 Below Grade scenario is 67%.

I-345/I-45 SCENARIO - BELOW GRADE | OBSERVATIONS AND CONSIDERATIONS

The I-345 below grade option would have dramatic impacts on the street network and development pattern along the length of the existing I-345/I-45 corridor from Al Lipscomb north to Central Expressway.

MOBILITY, LIVABILITY, ECONOMICS

As has been discussed extensively in the community, I-345 acts as a physical barrier between Deep Ellum and Downtown interrupting the contiguous block pattern and creating a swath of underutilized and vacant land along the elevated highway.

As discussed in the I-345 Removal scenario, the success of Uptown and the recent resurgence of downtown appear to have some spillover affect into Deep Ellum. Additionally, the South Dallas Neighborhood went through similar dynamics with a cycle of residential neighborhood transitioning to larger scale commercial and industrial uses. South Dallas is struggling to find its footing and improvements to the transportation system could provide support for new investment in the neighborhood.

This concept offers the potential for the partial removal of a visual barrier between neighborhoods that would facilitate parks and development along the corridor.

POLICY

Similar to the I-345 Removal scenario, working with the community to discern their ultimate vision is a critical component of moving any scenario into the next phase. This conversation should include a detailed discussion about the opportunities that development offers and the gentrification challenges that could be faced. From that conversation, policy makers at the City should be able to more thoroughly consider how to translate that feedback into the built environment. An update to the future land use plan would be reasonable policy outcomes along with any complimentary updates in the zoning ordinance. Supporting policies such as updates to the bike plan and parks master plan may also be necessitated to ensure that all changes are well coordinated across all modes and unintended consequences are avoided as much as possible. Once these guiding documents are in place, the City may need to discuss its desire to incentivize certain types of development through the various taxation tools. The City is already very aware and knowledgeable of these tools and their use, which is beneficial in determining their future applicability.


HNTB

CHAPTER 9 | MAKING DECISIONS AND IMPLEMENTING



DECISIONS ARE MADE TOGETHER









A MORE COMPREHENSIVE PROCESS GOING FORWARD

CityMAP OUTCOMES

Dallas CityMAP started a conversation amongst stakeholders about the 'Art of the Possible'. TxDOT's consultant team listened and learned what was important to the public, and the scenarios are an attempt by the team to translate those desires into potential design ideas for future consideration. CityMAP is both a process and a resource to inform decision-making. With the engagement of thoughtful leaders, community representatives and professional public staff, the CityMAP team crafted a set of design scenarios to share with stakeholders. The scenarios can be viewed from different perspectives depending on the values of the community. For this reason, CityMAP was careful not to make recommendations as to which scenarios should continue into the project development process; that decision rests with the taxpayer and community leadership.

CityMAP took the community's feedback and grouped it into three areas: mobility, livability, and economics and developed factors to measure each. There are many ways to measure mobility, livability, and economics; this is a starting point for a larger conversation about policy and funding priorities.

Most importantly, this process highlighted the critical point that transportation solutions, land use policy, and quality of life are inseparable, and that both visioning and decision-making should consistently be integrated across disciplines. The stakeholders voiced their desire for greater integration of disciplines and the recognition that all agencies with funding ability can play a role in addressing congestion and contribute to city building at the same time.

SHIFTING THE PARADIGM

In December of 2015, President Obama signed into law the FAST Act, which stands for Fixing America's Surface Transportation and provides long-term funding for surface transportation (www.transportation.gov/fastact, 2016). The Texas Legislature and the citizens of the State have also provided more funding for transportation with the passage of Propositions 1 and 7. Nevertheless, funding is not limitless. In fact—now more than ever—prioritizing investments in local transportation will be critical to sustaining the new reality of limited public dollars available for infrastructure and mobility. New to the FAST Act legislation is the inclusion of TOD expenses as eligible for funding under highway and rail credit programs. As we know, TOD supports compact, walkable and dense designs with residential development near transit hubs, in an effort to create supportive environments for transit ridership and better integrate land use and transportation. This shift in federal funding aligns with the desires we heard from stakeholders during the CityMAP effort. Leveraging the federal and state dollars with a local match to better integrate projects will more effectively and holistically address congestion that is crippling our economies. Our economies are dependent upon the delivery of goods, and the highway system can not bear the burden of transporting our residents alone and relieving congestion in high growth regions. The CityMAP process looks to all modes and roadway capacity at both the highway and arterial level to offer greater relief to more commuters. This approach has been strongly voiced by stakeholders because it simultaneously builds cities that achieve greater livability objectives.

U. S. Department of Transportation Secretary Anthony Foxx eloquently made the connection between the economy, livability and mobility in his address at the Transportation Research Board's annual conference this past January:

> Transportation doesn't hire you but it makes getting to work possible. It doesn't treat an illness but it makes healthcare possible and it doesn't teach but it also makes learning possible and it's not a house but you try getting to one without transportation..... I believe transportation can do more than simply take us from where we live to someplace else that may be better. At its best transportation can impact the communities where they are, ... It is place-making and can make the place people live, make their doorstep a better doorstep. If we do our jobs right as transportation professionals, the economy will get better, the schools will get better, the neighborhoods will get better... (Secretary Anthony Foxx: The Road to Opportunity, TRB Annual Conference, Washington D.C., January 13, 2016).

A shift in other Texas communities is noted in recent comments from the Mayor of Houston, Sylvester Turner, to the Texas Transportation Commission. Mayor Turner commended Houston District Engineer, Quincy Allen, P.E., for recognizing the limitations of expanded highway capacity and the need and benefits of partnership across multi-modes to address congestion. The Mayor is quoted as saying:

> If there's one message that I'd like to convey, it's that we're seeing clear evidence that the transportation strategies that the Houston region has looked to in the past are increasingly inadequate to sustain regional growth. Our agencies must look beyond these strategies if we are to successfully accommodate the growth that Texas' major urban areas are anticipating... First, we need a paradigm shift in how we prioritize mobility projects... Second, I believe we need to focus the highway resources for our urban regions in the urban core, where congestion is most severe... Third, our agencies should continue to collaborate to find comprehensive solutions for the traveling public. TxDOT and local partners, like the City of Houston, should work together to ensure TxDOT's projects are coordinated with enhancements to the local street system – the "last mile"... (Mayor Turner, Texas Transportation Commission, Austin, Texas, January 28, 2016)

Here in Dallas, TxDOT and its agency partners undertook this process because they recognized the limitations of the roadway system alone to address congestion and they heard from stakeholders a desire to step back and consider planning priorities at a higher level. Now that the desire for greater integration has received more federal support and other Texas communities such as Houston are also recognizing the value of a such a process, a more supportive ecosystem necessary for a complete paradigm shift is evolving.

AGENCY COOPERATION

The City of Dallas, Dallas County, DART, NCTCOG and TxDOT must work together to develop project prioritization and sequencing and even funding packages that are more supportive of stakeholder desires. With increased demands for better project integration, we must expand our definition of partnership by inviting new organizations with a keen interest in realizing their objectives to join the conversation and help create opportunity for project objectives outside agency mandates or funding limitations. No easy task, stakeholder desires are often in direct conflict when they seek greater mobility and accessibility simultaneously, or when stakeholders ask agencies to work beyond their mandates to achieve important but more challenging and often difficult to translate objectives such as greater livability. A single public agency typically funds all, or the large majority of, an infrastructure project. This funding model can make coordination across agencies challenging and can result in projects with limited integrative value. The CityMAP process suggests that, although it adds complexity, agencies should capitalize on the opportunity to better align project prioritization with stakeholder desires by integrating their visioning processes.

A MORE COMPREHENSIVE PROCESS GOING FORWARD

ADVANCING THE SCENARIOS

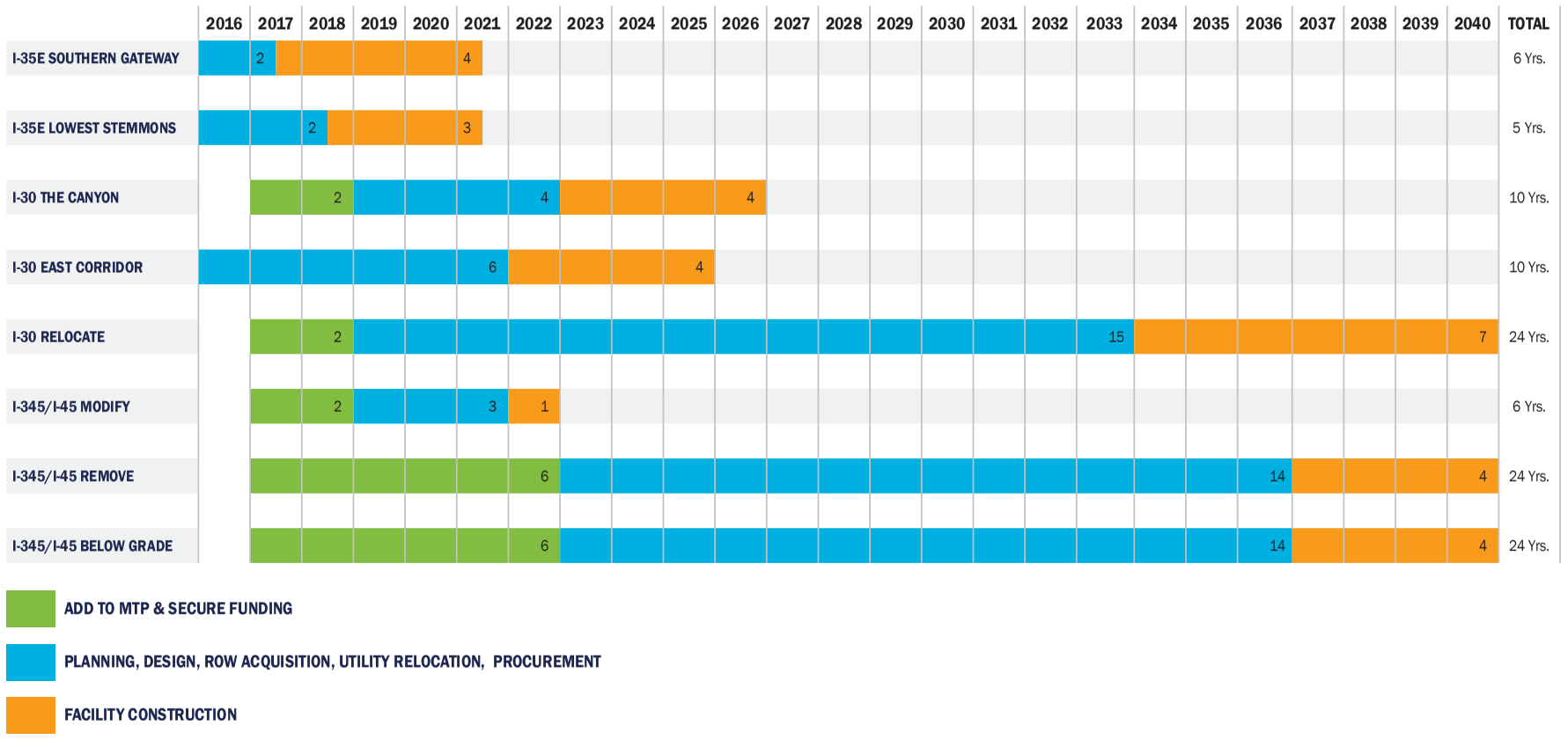
The CityMAP scenarios and the factor outputs are not the final outcome. Rather, the scenarios provide a substantial starting point by listening to stakeholders, conducting research and analysis, and developing conceptual design. The next step will be to begin project priority discussions amongst all local partner agencies to review CityMAP outcomes and continue the dialogue of integrated problem solving.

CityMAP provides a starting point for these discussions with timing estimated on the at-a-glance sheets. These have been combined to provide sequencing options outlined in the table below.

COMPLEMENTING MOBILITY 2040 AND FUTURE MTPs

In addition to scenario next steps, the most compelling lesson learned from the CityMAP process was the desire to vision collaboratively across all modes in the context of neighborhoods in the central city. The NCTCOG Mobility 2040 process includes a regional vision process that incorporates stakeholder input. Complementing Mobility 2040, the CityMAP visioning process occurred at subregional, corridor, project level or at a specific geographic area. At any level, the key objective is to go to the public as a unified partnership of agencies seeking input on detailed desires, trade-offs and outcomes that include prioritization, sequencing and identification of funding gaps. This approach seeks to discover the values of the community and use that to identify and prioritize projects using a broader spectrum of metrics for evaluation.

CityMAP Scenario Timeline



Federally legislated transportation planning occurs at the MPO level to understand regional travel demand, patterns and trends. It comprehensively considers and plans for demographic changes and how this impacts travel needs. CityMAP strives to be a value driven process that seeks to consider the street level outcomes of transportation choices and build community using transportation investments as catalysts. The CityMAP process should inform and contribute to the current Mobility 2040 planning effort and future regional planning efforts by viewing planning choices from the additional stakeholder perspective of economic development and growth, livability and quality of life in addition to solving the region's mobility and congestion challenges.

PARTNERSHIP AND FUNDING MOMENTUM

Communities that demonstrate how a transportation investment will increase the broader quality of life—livability, economy AND mobility—will be the ones that realize a significant share of the limited transportation funding available for investment going forward.

This integrated perspective emerged as the most compelling theme during the CityMAP process. That theme was translated into the proposed scenarios and the factors selected to assess those scenarios. The benefits of those scenarios, strongly underscore that partnerships and interagency cooperation are a requirement for successful project delivery. For example, if I-30 is lowered and compressed between Deep Ellum and Fair Park by TxDOT, but complementary Complete Streets are not designed and funded by the City of Dallas across that reinvented corridor with access to transit, the community will not realize the full potential benefits.

The design interface of local streets and a reinvented highway facility, the maintenance of associated integrated public spaces, and the neighborhood redevelopment policies necessary to secure sustainable neighborhood patterns around that facility cannot remain in isolation. The planning, design, and construction of projects, regardless of the agency should be coordinated. The rich complexity of city-building represented in CityMAP assumes that those elements, and others, will be advanced through a more coordinated approach to implementation.

A MORE COMPREHENSIVE PROCESS GOING FORWARD

Those implementation strategies could include:

1. **A project development process protocol entered into by the City of Dallas, Dallas County, DART, NCTCOG and TxDOT** to initiate redesign and reinvestments in any particular corridor through the initial common lens of economics, livability and mobility.

2. **Development of an interagency funding approach that addresses capital expenditures and operation and maintenance responsibilities.** This will enable more sustainable outcomes so that the vitality of major investments by any given public partner can be sustained.

3. **Agreement amongst the CityMAP stakeholders that funding priorities are limited, trade-offs must be made, and an agreement on project priorities is needed as the next step.** This will enable the public agencies to adjust planning, design and funding accordingly to achieve top priorities.

The CityMAP scenarios and the factors used to analyze them should not be viewed as a final step. Rather, the scenarios provide a substantial starting point by listening to stakeholders, conducting research and analysis, and developing conceptual design. The next step will be to begin project priority discussions amongst all local partner agencies to review CityMAP outcomes and continue the dialog of integrated problem solving.

THE CityMAP GOAL

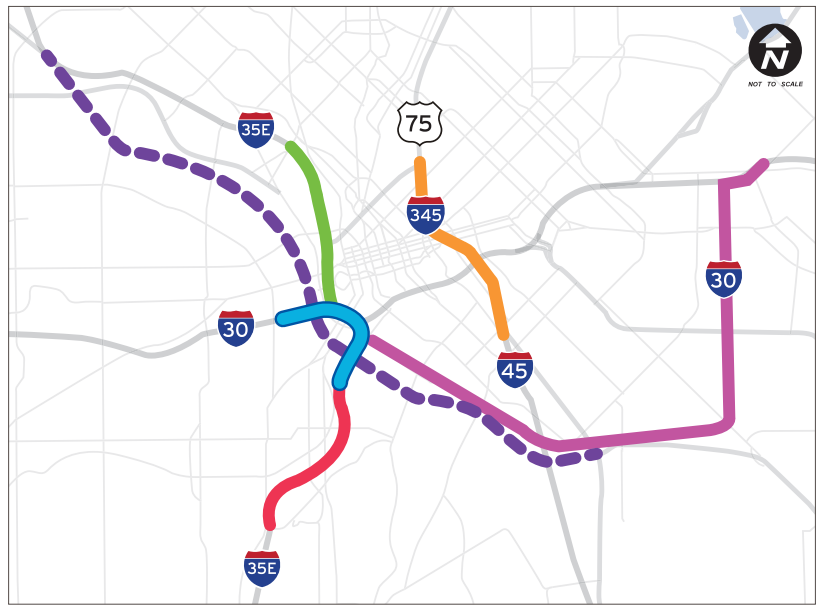
CityMAP explored the "art of the possible" and stakeholder input guided scenario development. What emerged was the convergence of mobility/congestion relief, livability/quality of life and economic development. In this context, the CityMAP scenarios are supported by geometric implications, traffic analysis, economic analysis, urban design options and other factors. Those factors provide a comprehensive platform for decision-making.

CityMAP CONSIDERATIONS

A critical first step in establishing a logical sequence of understanding the opportunities – for the respective corridors and their impact on the overall system – has already been made with the decision to construct the I-30/I-35E Horseshoe Project which is currently underway.

The graphics on this page show each corridor's relationship to one another. This is important because each corridor cannot be viewed in isolation; they are all interconnected.

System Based On I-30 Relocation Scenario



- I-30 Relocate Scenario
- I-345/I-45 Decision Point:
  - Modify Scenario
  - Remove Scenario
  - Below-Grade Scenario
- I-35E Lowest Stemmons Scenario
- I-35E Southern Gateway Scenario
- TxDOT Horseshoe Project Under Construction
- NTTA Trinity Parkway Project

First-Order Decision: *Is the I-30 Relocate Scenario Advanced?*
- Impacts I-30 Canyon and I-30 East Corridor Scenarios
- Coordinate with S.M. Wright/US 175 Project

Second-Order Decision: *How is I-345/I-45 Advanced?*
- Modify Scenario, Remove Scenario, or Below-Grade Scenario

System Based On I-30 Canyon And East Corridor Scenarios



- I-30 Canyon and East Corridor Scenarios
- I-345/I-45 Decision Point:
  - Modify Scenario
  - Remove Scenario
  - Below-Grade Scenario
- I-35E Lowest Stemmons Scenario
- I-35E Southern Gateway Scenario
- TxDOT Horseshoe Project Under Construction
- NTTA Trinity Parkway Project

First-Order Decision: *Advance the I-30 Canyon and I-30 East Corridor Scenarios?*

Second-Order Decision: *How is I-345/I-45 Advanced?*
- Modify Scenario, Remove Scenario, or Below-Grade Scenario

A MORE COMPREHENSIVE PROCESS GOING FORWARD

The scenarios for I-35E Lowest Stemmons and I-35E The Southern Gateway are logical extensions of the “Horseshoe” Project. CityMAP also provides several design scenarios for I-345/I-45 and I-30. Each scenario invariably impacts the others. Various combinations of scenarios add to the importance of using the CityMAP document for informed decision-making.

A logical first step in the decision-making process could be considering the viability of the I-30 Relocate scenario, which is arguably the most transformative and complex idea. The decision to relocate I-30 should be determined early in order to inform the I-30 Canyon and East Corridor projects. In addition, the I-30 Relocate scenario decision should be closely coordinated with other planned projects such as the Trinity Parkway and S.M. Wright/175. This coordination should also consider the I-30 Relocate alignment’s potential impacts on the new Riverfront Boulevard, DART D2, possible high-speed rail station, and several other major area investments.

Scenarios representative of stakeholder input for the I-345/I-45 corridor are assessed in this document. Determining which of the I-345/I-45 scenarios is preferred will add clarity to the ongoing I-30 Canyon and East Corridor project development process.

CityMAP NEXT STEPS

The CityMAP scenarios and the factor analysis are not the final outcome. Rather, the scenarios provide a substantial starting point based on listening to stakeholders, conducting research and analysis, and developing conceptual designs. The next step will be to begin project priority discussions with local partner agencies from their review of CityMAP and continue the dialogue of integrated problem-solving.

Based on the findings of the CityMAP study, it is recommended that agencies including the City of Dallas, Dallas County, DART, NCTCOG and TxDOT work together to develop project prioritization, sequencing, and funding packages that are supportive of stakeholder needs and desires.

APPENDIX | **REFERENCE PROJECTS**



REFERENCE PROJECTS

TRINITY PARKWAY CORRIDOR MTIS

March 1988



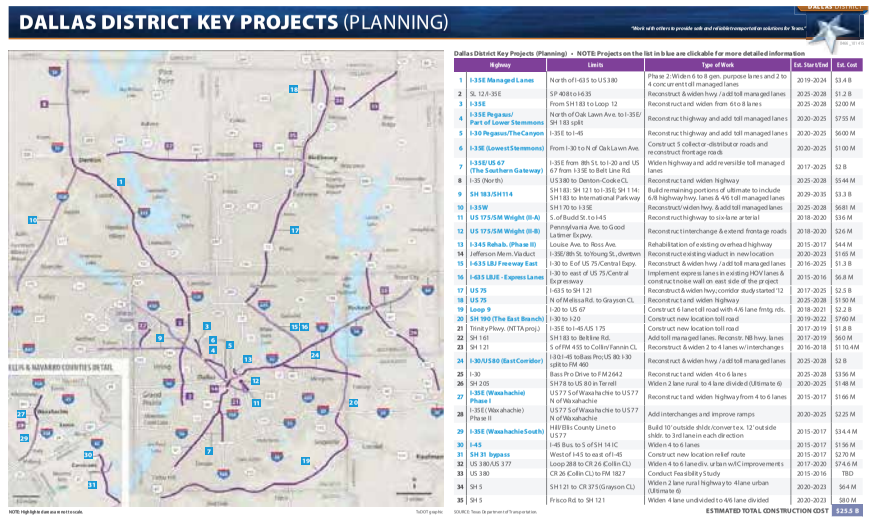
The Trinity Parkway Corridor Major Transportation Investment Study (MTIS) was a plan to solve transportation problems surrounding the Trinity River Corridor in Dallas, and to incorporate alongside the existing plans and goals of the Trinity River Floodway. The study area was based off the transportation beside I-30/I-35E Interchange along the west edge of downtown Dallas, known as the "Mixmaster," and the segment of I-30 south of downtown, known as the "Canyon." The area was expanded beyond the downtown to include a broader area of influence from both the Canyon and Mixmaster on area transportation facilities.

TXDOT DALLAS DISTRICT KEY PROJECTS (PLANNING) WHITE PAPERS

www.keepitmovingdallas.com/content/dallas-district-key-projects-planning

2014

List of Dallas District Major Projects (Planning) - Highways, Limits, Type of Work, Estimated Start/End Date, and Estimated Cost.



TXDOT ROADWAY DESIGN MANUAL

onlinemanuals.txdot.gov/txdotmanuals/rdw/rdw.pdf

October 2014

Texas Department of Transportation®

The Roadway Design Manual was developed by the Texas Department of Transportation as guidance to the design of roadway facilities. It should be noted that this document does nott represent absolute design requirements, but is tsimply recommendations in geometric design. This manual represents a blend of information and practices associated to the geometric design of roadway facilities.

THE SOUTHERN GATEWAY

www.thesoutherngateway.org

2014

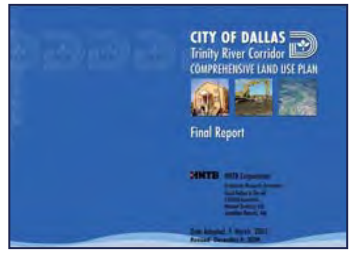


The Southern Gateway project was approved as a possible design build public-private partnership project. The possible impacts of the project include a section of Interstate 35E within the Dallas Horseshoe project, which would be addressed in an environmental assessment. The remaining sections of the corridor would have separate environmental assessments, including along US 67 from FM 1382 to the split, the reconstruction of I-35E from I-20 to the split, and the addition of general purpose lanes from I-35E/US 67 split to Marsalis Avenue. In place of the previously proposed HOV lanes, the opportunity for single occupancy vehicle to use the facility as well will be provided by the implemented non-tolled express/managed lanes.

TRINITY RIVER CORRIDOR COMPREHENSIVE LAND USE PLAN

www.trinityrivercorridor.com/resources/comprehensive-land-use-plan.html

Adopted March 2005, Revised December 2009



The plan is the "blueprint" for the future of the Trinity River corridor in Dallas. It provides a vision, overall principles that should guide land use and urban design in the corridor, implementation strategies, and more detailed corridor district plans. The five objectives of the Trinity River Comprehensive Land Use Plan are: reconnect North and South Dallas, establish the role of economic development along the Trinity River, create a vibrant central city, establish the Trinity River floodplain as the front yard of the City and enhance the City's urban form to increase the appeal of urban life.

TRINITY PARKWAY FINAL ENVIRONMENTAL IMPACT STATEMENT

www.ntta.org/roadsprojects/futproj/trihwy/Documents/Record_of_Decision.pdf

April 2015



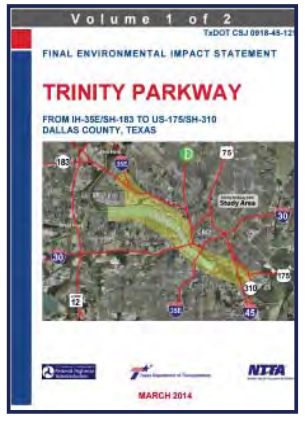
The proposed Trinity Parkway will provide a 9 mile relieve, connecting Interstate 35E and US 175, around the west and south side of the Dallas business district. Providing relief for the I-35 and I-35 E corridors, the Trinity parkway will serve as a six-lane around downtown Dallas. The construction of a new roadway in the Trinity River area was identified to relieve congestion near downtown Dallas, alongside several other projects, by a 1997 Major Investment Study. Continued environmental analysis remains to be comprehensive and extensive due to its vicinity to other planned Trinity River improvements.

REFERENCE PROJECTS

FINAL ENVIRONMENTAL IMPACT STUDIES: TRINITY PARKWAY & ALTERNATIVE 3C – CONCEPTUAL SCHEMATIC DRAWINGS

www.ntta.org/roadsprojects/futproj/trihwy/Pages/Project-Meeting-Materials.aspx

March 2014 & February 2014

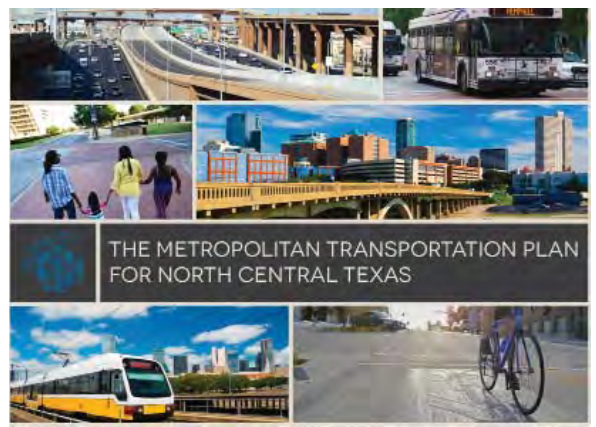


The Trinity Parkway is a proposed new toll road that would provide an additional 9 mile distance, to the west of downtown Dallas. The Environmental Impact Studies (EIS) will be prepared in accordance to NEPA, appropriately reviewed and commented on information will detail socioeconomic, environmental, and engineering information about a project so that the general public and federal, state, and local agencies. The permitted proposed action to continue onto the final design phase will be upon the completion of the environmental review and impact documentation process of this FEIS, unless the No-Build Alternatives is selected.

MOBILITY 2040: THE METROPOLITAN TRANSPORTATION PLAN FOR NORTH CENTRAL TEXAS

www.nctcog.org/trans/mtp/2040/

March 2016

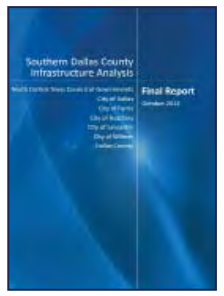


Mobility 2040: The Metropolitan Transportation Plan for North Central Texas is the defining vision for the multimodal transportation system in the Dallas-Fort Worth Metropolitan Planning Area. The plan, known as Mobility 2040, was adopted in March 2016 by the Regional Transportation Council, which serves as the policy body for the Metropolitan Planning Organization for North Central Texas. The Regional Transportation Council is a 44-member independent transportation policy body comprised of elected or appointed officials from the metropolitan area and representatives from area transportation providers. Mobility 2040 guides the implementation of multimodal transportation improvements, policies, and programs in the 12-county Metropolitan Planning Area through the year 2040. The plan provides a range of transportation options to serve the needs of North central Texans now and into the future. As the region grows from approximately 7 million residents today to an estimated 10,7 million by 2040, it will require a maturing transportation system of roads, transit, and bicycle and pedestrian facilities, complemented by local policies and programs that enhance this investment in infrastucture. These efforts to provide choice to the traveling public and maintain the quality of life driving the region's growth are detailed in Mobility 2040.

SOUTHERN DALLAS COUNTY INFRASTRUCTURE STUDY

www.nctcog.org/trans/sustdev/landuse/funding/plan/sdcia/

October 2012

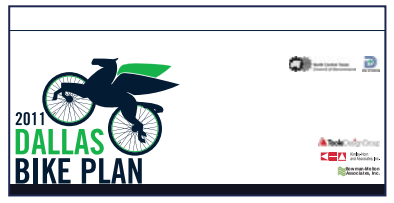


Through a partnership of the North Central Texas Council of Governments, a need was recognized to develop an infrastructure and facilities assessment to a portion of Southern Dallas County, which in long range planning will aid the study area and development for the region. Representatives from within the study area were selected by their agencies to participate on the Project Advisory Committee as well as elected representatives from the developer and landowner community all to provide input to the process. The local governments hired Wilbur Smith consultant firm to perform the analysis which is overseen by PAC as to the day to day coordination. The goal of this analysis is to review the areas current infrastructure and recommend implementations in order to produce unified Inland Port in Southern Dallas County that will encourage additional commercial, industrial, and residential development.

2011 DALLAS BIKE PLAN

dallascityhall.com/departments/pnv/bikeway/Pagesbikeplan2011.aspx

June 2011



The 2011 Dallas Bike Plan provides "a master plan and an implementation strategy for a new bicycle network, the Dallas Bikeway System, which will be made from designated on-street and off-street facilities." The mission is to "improve the safety, use and efficiency of the bicycle in the City of Dallas, and to better integrate the bicycle mode within the City and regional transportation system." The 2011 Dallas Bike Plan Addendum provides design and policy guidance for bicycle-related elements to be addressed under the multi-modal approach used for the Complete Streets initiative.

A BALANCED VISION PLAN FOR THE TRINITY RIVER CORRIDOR

www.trinityrivercorridor.com/about/balanced-vision-plan.html

2003



This plan's purpose was to successfully "balance diverse and potentially conflicting goals for the Trinity River Corridor" including flood protection, environmental responsibility, recreation and open space amenity, transportation goals, and community and economic opportunities for the areas bordering the corridor.

REFERENCE PROJECTS

A NEW PARADIGM: STRATEGIES FOR REVITALIZING DALLAS' DISTRESSED NEIGHBORHOODS

www.dallas-ecodev.org/wp-content/uploads/2012/07/A-New-Paradigm.pdf

2010



An immense amount of the United States population lives, works, and plays in cities. There has been very little movement back to cities of people and investments throughout the past decade. The continuation or not of housing construction within cities and central business districts will only be projected with time as the overall market turns around. There will eventually be positive spill-over effects on neighborhoods in the downtown vicinity. Southern Dallas has been faced with many challenges in respect to the continued distress of urban neighborhoods. The overall goal is to revitalize Dallas' distressed neighborhoods, the pure size of the geographic area and level of problems.

BELLEVIEW PEDESTRIAN BRIDGE DESIGN CONCEPT

dallasparks.org/121/2496/Master-Plans

November 2011



The purpose of the Belleview Pedestrian Bridge is to create a pedestrian and bicycle friendly environment with unified elements that provide a sense of place along the bridge and within the larger Cedars area. The idea revolves around the production of an aesthetic quality which will enhance the human experience while providing ADA accessible pedestrian and bicyclist connections between South Lamar Boulevard and the Trinity River corridor. The bridge is intended to improve pedestrian accessibility, and to serve as a vivid icon in the Dallas urban landscape along the Cedars Neighborhood and the Trinity River Corridor.

COLLIN COUNTY MOBILITY PLAN

www.co.collin.tx.us/mobility/pages/mobility_plan.aspx

2014



The Collin County Mobility Plan (CCMP) is a comprehensive, multi-modal plan and guide for transportation systems and investments that will serve the mobility needs of county residents. The 2014 CCMP Update includes a county-wide system of roadways, transit facilities, and hike-and-bike-trails that are needed to meet the travel needs of the county. The purpose of the 2014 CCMP is to identify the transportation needs of area residents and businesses. It identifies the future transportation network that will be needed to serve projected population and employment growth and increased travel demand. The CCMP serves as a guide for major investment in improving transportation facilities and services. It identifies policies, programs and projects for implementation and continuing development, and it serves as a guide for local funding decisions.

CITY OF DALLAS COMPLETE STREETS DESIGN

dallascityhall.com/departments/pnv/strategic-planning/Pages/completestreets.aspx

August 2013

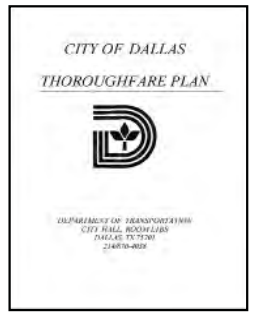


The Complete Streets Design Manual provides policies and design best practice guidelines for the improvement of streets and pedestrian areas throughout Dallas. The manual promotes high quality street designs that create safe, multimodal streets for all users: young or old, wheelchair or walker users, motorists, bicyclists, bus and train riders alike. The manual is intended to work alongside the Dallas Thoroughfare Plan and the Dallas Development Code to provide the policy framework for the design and use of Dallas' roadway network. The Complete Streets Initiative is aimed at a phased transformation of Dallas' street network through a combination of public street improvements and incremental private developments.

CITY OF DALLAS THOROUGHFARE PLAN

dallascityhall.com/departments/pnv/transportation-planning/Pages/default.aspx

June 1993



The City's Thoroughfare Plan provides a hierarchical street classification system that distinguishes streets based on their ability to move automobile traffic. There are five street types in the Thoroughfare Plan, which are based on their functional classification, dimensional classification, and the number of traffic lanes. The implementation of the City's Complete Streets Initiative will provide an opportunity to transition to a more multi-modal approach. The City's Mobility Planning group maintains a Thoroughfare Plan Table that was last updated May 2015. This Table provides current information for thoroughfares including function, proposed dimension, ordinance and amendment date. A table listing streets with special cross sections is included. The Thoroughfare Plan is also depicted as a layer on the City of Dallas GIS application.

CONGRESS OF THE NEW URBANISM: HIGHWAYS TO BOULEVARDS

www.cnu.org/our-projects/highways-boulevards

CNU

The continuing purpose and worth of urban freeways are being called into question as many of them are reaching the end of their lifespans. The replacement of freeways with surface streets has gained recognition as a practical alternative and a means to restore and revitalize communities as opposed to rebuilding expensive highways. This would lead to solutions as shrinking budgets become conflict for Federal and State Department of Transportation and the search for ways of increasing revenue by cities. Many cities have already successfully put these alternatives to practice, saving billions of dollars in infrastructure costs by replacing highways with boulevards and surface streets, simultaneously increasing real estate values on adjacent lands, and bringing a vibrant restoration to the overall urban neighborhoods. As these urban freeways and adjacent corridors head toward the end of their lifespans they also represent opportunity to transform and enhance once broken liabilities into future social and economic assets.

REFERENCE PROJECTS

CONTEXT SENSITIVE SOLUTIONS

contextsensitivesolutions.org

Context Sensitive Solutions is an approach to the development of transportation projects. It has the involvement of stakeholders, community members, elected officials, interest groups, and those affected local, state and federal agencies. It puts the project needs and both the values of the agency and community on one level and considers all possible trade-offs in the decision process. Though it is often associated with design in transportation projects, CSS should be a part of all program delivery including: long range planning, programming, environmental studies, design, construction, operation, and maintenance.

CORINTH STREET VIADUCT, HAER NO TX-34

lcweb2.loc.gov/master/pnp/habshaer/tx/tx0700/tx0760/data/tx0760data.pdf

August 1996

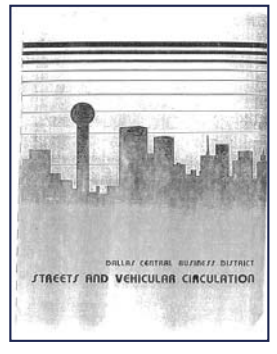


Built in the early 1930s as one of four highway viaducts, the Corinth Street viaduct was constructed with the purpose to relieve some of the traffic congestion along the Dallas-Oak Cliff Viaduct, now Houston Street, which served as the only all-weather road crossing of the Trinity River at Dallas. Alongside the additional roadway viaducts built as part of the issue, Commerce Street, Cadiz Street (now Interstate 35E), and Lamar-McKinney Street (now Continental Street) Viaducts, had been approved by 1928 voters, the Corinth Street Viaduct represents a striking victory in the long battle in overcoming the physical battle of the Trinity River was for Dallas.

DALLAS CENTRAL BUSINESS DISTRICT STREETS AND VEHICULAR CIRCULATION

dallascityhall.com/departments/pnv/transportation-planning/Pages/default.aspx

November 1988



This document is concerned with traffic circulation within the central business district and it describes the arrangement of two concentric ring road systems. The City's Mobility Planning group maintains a CBD Streets and Vehicular Circulation Table that was last updated January 2015. This table provides current data for street and right of way widths, operational characteristics, ordinance and amendment date. The Central Business District Streets and Vehicular Circulation Plan (CBD Plan) is also depicted as a layer on the City of Dallas GIS application.

DALLAS CITY HALL

dallascityhall.com/Pages/default.aspx

SUSTAINABILITY PLAN REVISIONS 2015
dallascityhall.com/government/Council%20Meeting%20Documents/qol_4_sustainabilityplanupdate_combined_060815.pdf
June 8, 2015

S.M. WRIGHT PROJECT STATUS UPDATE
dallascityhall.com/government/Council%20Meeting%20Documents/TTRP_Final_Combined_04272015.pdf
April 27, 2015

THE BOTTOM, URBAN STRUCTURE AND GUIDELINES
dallascityhall.com/government/Council%20Meeting%20Documents/The%20Bottom%20Urban%20Structure%20and%20Guidelines.pdf
April 1, 2015

THE SOUTHERN GATEWAY
dallascityhall.com/government/Council%20Meeting%20Documents/ttrp_finalcombined_051115.pdf
May 11, 2015

TRINITY LAKES AMENITIES DESIGN PLAN
dallascityhall.com/government/Council%20Meeting%20Documents/TTRP_TrinityLakesAmenities%20_10202014.pdf
October 20, 2014

DALLAS COUNTY AND ROCKWALL COUNTY DRAFT 2040 VELOWEB AND BIKEWAYS MAP, NCTCOG

www.nctcog.org/trans/sustdev/bikeped/veloweb.asp

May 2015

Draft map indicating the existing adopted Regional Veloweb (2035) overlaid with the proposed 2014 Veloweb. The mapping also indicates other local paths that support the Veloweb network, as well as the existing and planned on-street bikeway network. Input is being received on the draft during the spring and summer of 2015 with the Regional Transportation Council approval expected in spring 2016.

REFERENCE PROJECTS

DALLAS DOWNTOWN PARKS MASTER PLAN
dallasparks.org/121/2563/Master-Plans

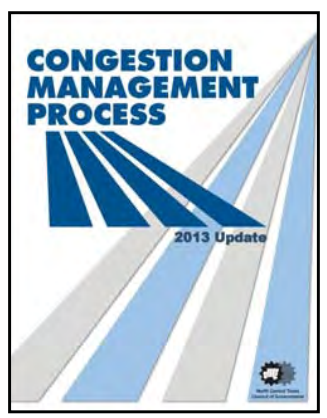
April 2013



The Master Plan is an update to the 2004 Master Plan and accounts for the completion of three new parks downtown – Main Street Garden, Belo Garden in the Main Street District and the Klyde Warren Park in the Arts District. The plan update includes a summary of the status of downtown parks, goals for the City Center, Historic West End, Convention Center and Farmer's Market Districts and guidelines for future priority parks.

CONGESTION MANAGEMENT PROCESS
www.nctcog.org/trans/cmp/

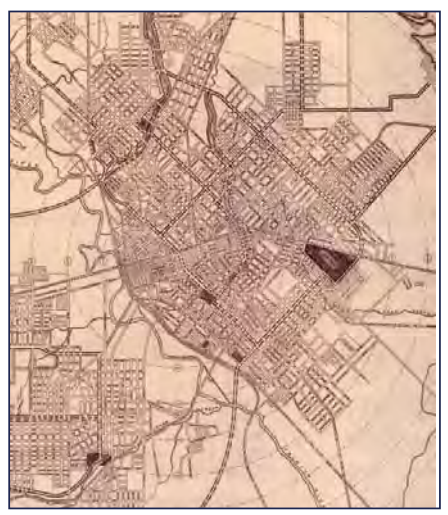
July 2013



The Congestion Management Process is the management process of congestion that provides system performance information of transportation, alleviating alternative congestion strategies, and mobility enhancement of person and goods leveling to meet both state and local needs. The CMP develops low cost strategies that complement recommendations of the capital investment, though to meet the growing travel demands major capital investments are still needed. The overall results are effective and efficient transportation systems, increased mobility, and a leveraging of resources.

A CITY PLAN FOR DALLAS, PREPARED BY GEORGE E. KESSLER
www.texashistory.unt.edu/ark:/67531/metapth129158/

1911



The Kessler Plan was the City of Dallas's managed growth plan from 1910 through the 1930's. The plan was issued in 1911 and was not implemented at the time. Key elements of the plan included: the building of levees in the Trinity bottoms and straightening of the river for flood protection; the building of a belt railroad in two loops, one around Dallas and the other around Oak Cliff, connecting with each other along the Trinity bottoms; the building of a union passenger station in the vicinity of Main and Broadway; the building of terminal facilities for local freight at new locations; the building of a civic center and station plaza adjoining the Union Station; the elimination of railroad grade crossings in the downtown; street openings and corrections; and the building of playgrounds and a comprehensive system of parks, parkways and connecting boulevards. The plan document is available on-line at the Portal to Texas History operated by the UNT libraries. The Kessler plan included a folding map titled General Plan for a System of Parks and Boulevards for the City of Dallas. Later city planning documents, including the Ulrickson Plan (1927), the Bartholomew Plan (1944), Goals for Dallas (1965), and the Dallas Plan (1992) are available for research in the Municipal Archives at the City Secretary's Office.

THE DALLAS MORNING NEWS
www.dallasnews.com

LAWMAKERS, OFFICIALS ARGUE OVER FEATURES FOR LBJ EAST www.dallasnews.com/news/transportation/20150616-lawmakers-officials-argue-over-features-for-lbj-east.ece June 17, 2015

30-STORY APARTMENT TOWER TO REPLACE PARKING LOT IN VICTORY PARK www.bizjournals.com/dallas/blog/morning_call/2015/06/30-story-apartment-tower-to-replace-parking-lot-in.html June 16, 2015

AMAZON MAKES IT OFFICIAL: SOUTHERN DALLAS TO GET FULFILLMENT COUNTER AND 'HUNDREDS OF JOBS' bizbeatblog.dallasnews.com/2015/06/amazon-makes-it-official-southern-dallas-to-get-fulfillment-center-and-hundreds-of-jobs.html/ June 9, 2015

PEGASUS STANDS WATCH OVER DOWNTOWN DALLAS' REVITALIZATION www.dallasnews.com/business/columnists/cheryl-hall/20150609-pegasus-stands-watch-over-downtown-revitalization.ece June 9, 2015

CITY COUNCIL APPROVES OAK CLIFF GATEWAY REZONING cityhallblog.dallasnews.com/2015/04/city-council-approves-oak-cliff-gateway-rezoning.html/ April 22, 2015

D-FW TOPS US IN INDUSTRIAL BUILDING bizbeatblog.dallasnews.com/2015/03/d-fw-tops-u-s-in-industrial-building.html/March 3, 2015

DOWNTOWN DALLAS MAKES HEADWAY IN LURING NEW COMPANIES www.dallasnews.com/business/commercial-real-estate/headlines/20150226-downtown-dallas-makes-headway-in-luring-new-companies-more-jobs.ece February 27, 2015

APARTMENT TOWER IN THE WORKS FOR HIGH-PROFILE DALLAS ARTS DISTRICT www.dallasnews.com/business/commercial-real-estate/headlines/20150224-29-story-apartment-tower-set-for-prime-dallas-arts-district-tract.ece February 25, 2015

DOWNTOWN DALLAS REBOUND BRINGS MOST OFFICE LEASING SINCE 1980s www.dallasnews.com/business/commercial-real-estate/headlines/20150216-downtown-dallas-rebound-brings-most-office-leasing-since-1980s.ece February 17, 2015

FOUR MORE TOWERS IN THE WORKS FOR DALLAS' VICTORY PARK PROJECT bizbeatblog.dallasnews.com/2015/02/four-more-towers-in-the-works-for-dallas-victory-park-project.html/ February 11, 2015

DALLAS CITY COUNCIL APPROVES $12 MILLION CONTRACT FOR RIVERFRONT BOULEVARD MAKEOVER cityhallblog.dallasnews.com/2014/03/dallas-city-council-approves-12-million-contract-for-riverfront-boulevard-makeover.html/ March 26, 2014

REFERENCE PROJECTS

DALLAS OFFICE OF ECONOMIC DEVELOPMENT

www.dallas-ecodev.org

DALLAS ECONOMIC DEVELOPMENT

FARMERS MARKET TIF
dallascityhall.com/government/Council%20Meeting%20Documents/ECO_4_FarmersMarketTIF_combined_051815.pdf
May 18, 2015

PROGRESS UPDATE – UNT – DALLAS AREA
dallascityhall.com/government/Council%20Meeting%20Documents/ECO_3_ProgressUpdateUNTDallasArea_Combined_042015.pdf
April 20, 2015

PLACEMAKING PROJECT – VICTORY SUB-DISTRICT SPORTS ARENA TIF DISTRICT
dallascityhall.com/government/Council%20Meeting%20Documents/ECO_PlacemakingVictory_030215.pdf
March 2, 2015

TRINITY GROVES MIXED-USE DEVELOPMENT, SPORTS ARENA TIF DISTRICT
dallascityhall.com/government/Council%20Meeting%20Documents/ECO_TrinityGrovesMixed-useProject_100614.pdf
October 6, 2014

VICTORY PARK TWO-WAY TRAFFIC AND PARKING DIRECTIONAL
dallascityhall.com/government/Council%20Meeting%20Documents/ECO_Upcoming_Agenda_Items_061614.pdf
June 16, 2014

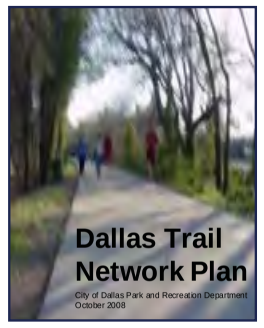
CLIFF VIEW FORT WORTH AVENUE TIF DISTRICT
dallascityhall.com/government/Council%20Meeting%20Documents/ECO_Cliff_View_051914.pdf
May 19, 2014

FARMERS MARKET DISTRICT REDEVELOPMENT PLAN: CREATING A FRESH FOOD FOCUSED URBAN NEIGHBORHOOD
dallascityhall.com/government/Council%20Meeting%20Documents/ECO_FarmersMarketDistrictRedevelopmentPlan_120213.pdf
December 2, 2013

DALLAS TRAIL NETWORK PLAN

www.dallasparks.org/395/Hike-and-Bike-Trail-Plans

October 2008



The Dallas Trail Network Plan includes over 98 miles of existing trails and 151 miles of additional proposed trails. The plan classifies trails into four distinct categories which include: major linear trails, major loop trails, major nature trails, and neighborhood trails. This trail network is becoming more connected as trails are constructed and with the addition of on-street bike facilities included in the 2011 Dallas Bike Plan.

DESIGNING WALKABLE URBAN THOROUGHFARES: A CONTEXT SENSITE APPROACH

library.ite.org/pub/e1cff43c-2354-d714-51d9-d82b39d4dbad

March 2010



This report is a response to the growing interest for the improvement of mobility choices and community character through the creation and enhancement of walkable communities. Using the concepts and principles stated in this reports, many agencies will work towards these goals to ensure the users, community, and other key factors are considered in the design and planning processes in order to develop walkable urban thoroughfares. The intention of this report is to simplify the complex multi functions of the modern urban streets. Its use will allow design guidance of walkable thoroughfares to be provided to places that currently support the mode of walking and places where the community desires a more walkable thoroughfare, and continuous future support.

DART

www.dart.org/about/expansion/downtowndallasphasetwo.asp

February 2013

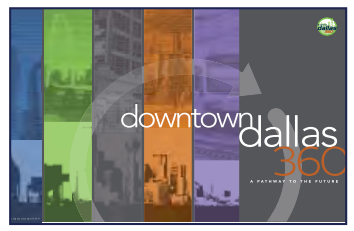
DART®

The D2 Alternative Analysis Phase 2 project purpose is to address: regional system capacity, downtown access and circulation, operational flexibility, service reliability and economic development. The study process will entail the developmental alternatives that will reflect or respond to public hearing comments and recent downtown events as well as evaluate Viable Alternatives and select Locally Preferred Alternatives (LPA).

DOWNTOWN DALLAS 360

www.downtowndallas360.com/360-plan/

April 2011



The 360 Plan's overall vision states "Downtown Dallas is a complete urban center composed of distinct yet interconnected districts linked by an accessible transit network, each offering a unique and diverse combination of places to live, refreshing open spaces, bustling street activity, successful business and retail, and dynamic urban experiences for residents, workers and visitors alike." The plan includes a broad vision, character description and key opportunities for core downtown districts, supporting districts and surrounding districts. Transformative strategies are presented that give direction on achieving the vision for Downtown Dallas. Five focus areas are presented in the plan to prioritize improvements. The implementation section of the plan sets forth priority actions for investment to transform Downtown Dallas.

REFERENCE PROJECTS

DOWNTOWN DALLAS HISTORIC PRESERVATION TASK FORCE

www.preservationdallas.org/wp-content/uploads/2015/04/Dwtn-HP-TF-FINAL-Report-4-1-15-sm.pdf

April 2015



The amount of historical buildings recently demolished within the Downtown Dallas National Register Historic District encouraged Downtown residents, business owners, and the historic preservation community to take action. A demand for answers as to why these historical building could so easily be erased, without the input or notification of the public, and solutions to prevent future demolitions from happening. The question as to how historic preservation and development can work together for a better Dallas was answered with the Mayor's appointment of the Downtown Preservation Task Force. Comprised of Downtown stakeholders and organizations, collaboratively represent the preservation of development, architecture, planning, and real estate. This report holds recommendations that will benefit from the Greater Downtown and collectively enhance its energy and viability as one of the city's best places to live, work, and play.

FAIR PARK: A PARK FOR ALL PEOPLE: REPORT OF THE MAYOU'S FAIR PARK TASK FORCE

fairpark.org/pdfs/mayors-task-force-report.pdf

September 2014

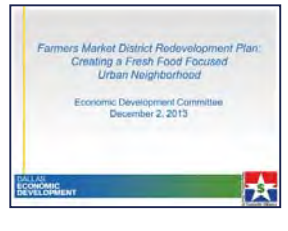


The adopted plan's many valuable recommendations have yet to be implemented due to in part by a combination of inadequate funding and a confusing governance and management structure. With the proper funding and accountability, updating and seeing into fruition these ideas. The reports key recommendations follow the similar theme of placing the "park" back into Fair Park. Keeping the following in mind: enhancing access, and connectivity with the community and city, establishing a community park on the south side of Fair Park, and allowing new organizations as operational and marketing authorities for Fair Park. Combined with ideas from this report and the community, these elements will allow Fair Park to fulfill its potential as an educational and recreational amenity.

FARMERS MARKET DISTRICT REDEVELOPMENT PLAN

cityhallblog.dallasnews.com/2013/12/a-very-specific-look-at-the-upgraded-dallas-farmers-market-and-how-it-will-be-funded.html/

December 2013

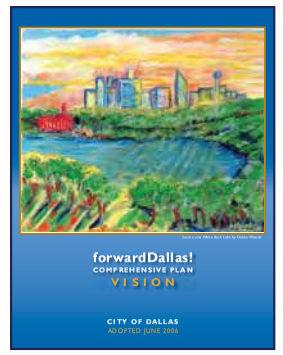


This redevelopment plan reviews the current status of the Dallas Farmers Market District Redevelopment Master Agreement and other steps for implementation completed so far as well as recommendations for various funding requests approvals by the City Council from the Economic Development Committee. The ultimate vision for the Dallas Farmers Market by The City's and master developers' was to create destination not only for local residents, but for visitors looking for an authentic Dallas experience within pedestrian oriented settings. Also, the existing street grid had to be able to transform during weekends and special events for pedestrians only, but accommodate during the usual business hours for the to and fro vehicles through the majority of the week. These considerations helped in creating a new framework for the Market.

FORWARD DALLAS! COMPREHENSIVE PLAN

dallascityhall.com/departments/pnv/strategic-planning/Pages/forward-dallas.aspx

June 2006



The forwardDallas! Plan includes a Vision document, a Policy Plan, an Implementation Plan and a Monitoring Program. The Vision describes the conceptual vision for the future of Dallas based on guiding principles and core values. The Vision Illustration shows general locations of development patterns, referred to as Building Blocks. The Policy Plan contains seven components: Land Use, Economics, Housing, Transportation, Urban Design, Environment and Neighborhoods. The Policy Plan provides a framework for ongoing small area plans, several of which have been advanced since adoption. The Implementation Plan sets a schedule of items to be completed over a five to seven year period and a list of action plans to be completed in the first two years after adoption of the plan. The monitoring program will collect data and monitor key growth indicators in various parts of the city.

GROW SOUTH COMMUNITY INDICATORS

dallascityhall.com/government/citymayor/DCH%20Documents/2013_FocusAreasAnnualReport.pdf

April 2013



In February 2012, the City of Dallas announced a comprehensive strategy for economic development in the city's southern half. Complementing Mayor Michael S. Rawlings' GrowSouth initiative, the city's Office of Economic Development produces an annual report of changes in eight focus areas. The 2013 GrowSouth Progress Report provides statistical updates on changes in the focus areas. The eight focus areas are: Pinnacle Park Expansion, North Oak Cliff, Greater Downtown / Cedars, Education Corridor / IIPOD, Red Bird, West Dallas Gateway, Lancaster Corridor and DART Green Line.

REFERENCE PROJECTS

HOW TO FUND A PARK ABOVE A FREEWAY

www.dmagazine.com/publications/d-magazine/2012/special-report-the-park/how-to-fund-a-park-above-a-freeway-klyde-warren-park

2012

Klyde Warren Park, the production of one of the most successful examples of a public-private partnership of Dallas located atop the Woodall Rodgers Freeway overpass. In combination with the professionals who worked pro bono for years, the legal team who locked in a line of credit during the height of an economic-crisis, and the stimulus money that saved the day. No public-private partnership has gathered as much support as Klyde Warren Park, credited to the strong leadership and overall valued support.

IH-345 FEASIBILITY STUDY

www.txdot.gov/inside-txdot/get-involved/about/hearings-meetings/dallas/ih345-121112.html

December 11, 2012



The Feasibility Study discusses alternatives for the continued increasing cost of preserving and maintaining the Interstate 345 overhead freeway bridge in the City of Dallas due to structural issues. The purpose of the study is to evaluate nine alternatives with the intention to: improve the bridges structural condition, reduce maintenance cost, and overall reduction of preservation and maintenance activity.

INSPIRE DALLAS, THE FUTURE OF LIVING IN OUR CITY

www.inspire-dallas.org

May 2015

InspireDallas™ The future of living in our city

This Internet site is an officially sponsored initiative of the City of Dallas to "Learn how we are creating a proactive strategy for planning neighborhoods in Dallas." The site includes statistical trends on population growth, median income, housing conditions, attracting the middle class, expanding homeownership and enhancing rental options.

LINC DALLAS

dallascityhall.com/departments/citydesignstudio/pages/linc.aspx

June 2012

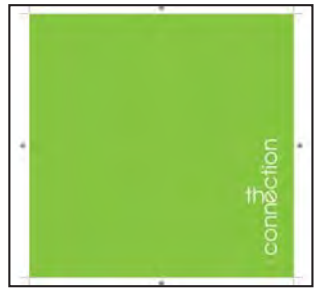


LINC Dallas is a community planning effort adjacent to the Trinity River on both the east and west side of the neighborhoods. The total area is 1755 acres, home to a population of 11,806 people. The focus area, consisting of six distinct areas, offers many opportunities and challenges.

THE CONNECTION MASTER PLAN

www.dallasparks.org/395/Hike-and-Bike-Trail-Plans

2011



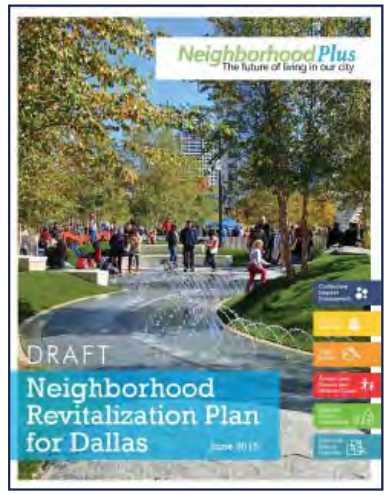
The purpose of this plan is to provide a way in which to guide the existing trail system, between Katy Trail and the remaining over two mile main spine of the Trinity Strand Trail. It will serve as an additional connection to the future City park that will in itself, function as a landscape gateway. It will join those developments along Interstate 35E such as Uptown, the Design District, the Medical District, Downtown, the Infomart, Stemmons Corridor businesses, and hotels. This plan will analyze all the elements that will impact the connections, present schematic graphics of the design and 3-D animations of the site, and provide overall probable costs. All of these factors will assists the City of Dallas, Friends of the Katy trail, and Friends of the Trinity Strand Trails, to develop planning and fundraising efforts.

REFERENCE PROJECTS

NEIGHBORHOOD PLUS - NEIGHBORHOOD REVITALIZATION PLAN FOR DALLAS

dallascityhall.com/departments/pnv/DCH%20Documents/Neighborhood-Plus-June17-small.pdf

June 2015



The Neighborhood Plus Plan lays a firm foundation to improving the quality of life for all of Dallas residents while ensuring an all-inclusive, neighborhood by neighborhood approach. This planning process was launched by the City of Dallas in order to engage a diverse range of community-based stakeholders and partner agencies. The purpose of Neighborhood Plus is to set an overall new direction and shape new policies for housing and neighborhood revitalization in Dallas. In order to guide towards more effective community decisions, a strategic planning and decision-making framework is to be created. Along with creating a structure for inter-agency collaboration, acknowledging the dependency of local government with public and private agencies, for-profit businesses, nonprofit organizations, and philanthropic foundations. Place the City of Dallas into taking a leadership role in beginning a regional discussion on important housing issues.

SOUTHERN DALLAS COUNTY

www.drcinteractive.com/southerndallas/

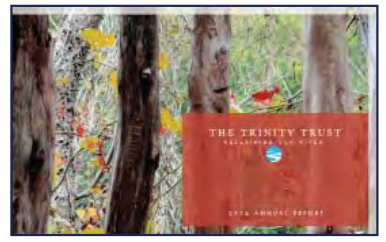
DALLAS REGIONAL CHAMBER®

This website is intended to showcase the growing development in Southern Dallas County. Together with Southern Dallas County leaders, the Dallas Regional Chamber's Southern Dallas Committee takes part in specific projects to promote it as a prime business location. The combination of location, low taxes, low cost of doing business, a selection of land choices and an environment for business are just a few reasons as to the rising discovery of Southern Dallas County.

THE TRINITY TRUST: RECLAIMING OUR RIVER

thetrinitytrust.org/blog/wp-content/uploads/2012/10/TheTrinityTrust2014AnnualReport_small.pdf

2014

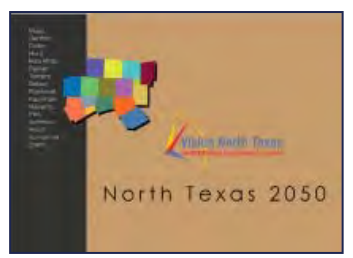


In 2015, construction begins for the first phase of the Trinity Urban Lakes, which will entail lakes, pavilions, an amphitheater, water maze, and trails, creating a new gathering space and recreation site for the city of Dallas. This phase will locate the first two lakes between the Margaret McDermott Bridge and the railroad trestle. An additional third lake will be flow under the Margaret Hunt Hill Bridge, provided by The Trinity Trust funding. A mix of nature with an urban skyline, it will Dallas' new destination spot for visitors.

VISION NORTH TEXAS: NORTH TEXAS 2050

www.visionnorthtexas.org/main.html

2010



This North Texas 2050 document describes the overall preferred vision by Vision North Texas participants. It is the collaborative result of experts in professional fields, residents, and regional leaders. The 2050 vision is presented by two major sections within the document along with possible actions in order to achieve such vision. A Vision for North Texas, the first major section, proposes a Vision Statement and a set of twelve Guiding Principles for the region's growth and development. The second major section of this vision, known as the Action Package, identifies the tools and techniques needed for the actions to achieve this vision. The next steps in achieving the preferred future of the North Texas 2050 should use the information which is focused on in the proposed action agenda.

REFERENCE PROJECTS

THE WALKUP WAKE-UP CALL: BOSTON

www.smartgrowthamerica.org/locus/walkup-boston

2015

This new research defines the form and function of all land use in Metropolitan Boston. For all the land in the region of this study, performance is then ranked based on two criteria: economics and social equity. Private sector investment decisions, public sector infrastructure investments, and public policy and household decisions will be directed by the comparison between the different land use forms as to where to live, work, and play. Additionally, the metrics developed in this report could be used to assess performance and progress made in achieves certain objectives. The research can lastly assist in setting urban policy, specifically for economic development, housing, and transportation.

WEST DALLAS .01 URBAN STRUCTURE AND GUIDELINES

dallascityhall.com/departments/citydesignstudio/pages/guidelines.aspx

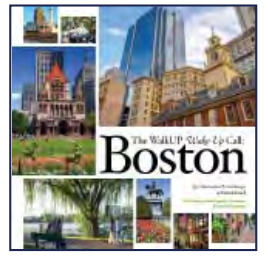
March 2011



Planning study prepared by the Dallas CityDesign Studio for the West Dallas study area bounded by the Trinity River to the north and east, Sylvan Avenue to the west and I-30 to the south. The plan includes sections covering: Vision and Direction, Civic Policy Context, Expectations of Organic Growth, Urban Guidelines, Economics, and Implementation.

WORKING IN NEIGHBORHOODS

www.wincincy.org



Working in Neighborhoods is an effective leader in the areas of housing development, foreclosure prevention, home ownership, leadership development, and energy conservation. WIN has helped low and mid-income residents in the Hamilton County area for over 35 years, in order to bring stability to the surrounding neighborhoods and families. WIN is a non-profit organization, building for low and mid-income homeowners energy-efficient homes. At risk homeowners are assisted, educated and supported in order to better prepare them for homeownership. They are educated around the premise of energy conservation and financial capability. Residents are trained to become leaders within their neighborhoods, for themselves and their neighbors.

APPENDIX | **STAKEHOLDER ENGAGEMENT**

STAKEHOLDER ENGAGEMENT PLAN

OVERVIEW

The Texas Department of Transportation (TxDOT) is conducting an assessment of the major urban corridors in downtown Dallas formally known as the Dallas CityMAP Master Assessment (Dallas CityMAP). The goal of Dallas CityMAP is to develop a set of transportation, urban design, and adjacent development scenarios with associated investment considerations for the in and around these corridors. This effort will include identifying neighborhood redevelopment, preservation, and transportation scenarios to include in a comprehensive vision for the city's future. Specific highway segments identified in the study include the following. (Appendix A: Dallas CityMAP Study Area)

- IH-30 from IH-45 to Dalrock Rd.
- IH-30 from IH-45 to IH-35E
- IH-345 from IH-30 NB & SB to SP 366 Over IH-30, US 75, & DART RR
- IH-345 from IH-30 Interchange to Spur 366 Interchange
- IH-35E from SH 183 to Loop 12 (NW Hwy)
- IH-35E from North of Oak Lawn Ave to SH 183
- IH-35E from IH-30 to Reunion Blvd.
- IH-35E from IH-30 to North of Oak Lawn Ave.
- IH-35E from IH-20 to IH-30

The initial phase of Dallas CityMAP began in January 2015. This phase will include the analysis of previous studies, an assessment of the information gathered throughout the initial stakeholder engagement meetings, data gathering and outlining funding possibilities. This information will be used for preparing various urban scenarios for consideration and in the presentation of a final Dallas CityMAP Report to local, regional, and state decision-makers and TxDOT.

Within the initial phase, key stakeholder meetings will be conducted to gather information and feedback on perspectives, projects, and current and future planned development in and around these corridors. These stakeholders will remain engaged throughout the process. Key milestones within the process include inventory and data collection, analysis, and the development of the Assessment Report. Dallas CityMAP will conclude in 2015. (Appendix B: Dallas CityMAP Process Schedule)

Activities within the Stakeholder Engagement Plan (SEP) address the initial outreach phase of the Dallas CityMAP process. Initial key stakeholders were identified as individuals, agencies, and organizations that can provide key information needed to understand past, current, and future development and improvements in and around the corridor. Although stakeholder meetings in the first phase include purposefully identified stakeholders for the initial stages of this process, information about Dallas CityMAP and the process is available on a public website located at www.dallascitymap.com. Additional stakeholder engagement and public outreach activities will be addressed in future addendums to this plan.

This document addresses stakeholder engagement activities for the initial phase of Dallas CityMAP.

PURPOSE OF THE STAKEHOLDER ENGAGEMENT PLAN

The purpose of the Stakeholder Engagement Plan (SEP) is to document initial stakeholder engagement efforts used to encourage outreach and participation among key stakeholders and gather information and feedback for the Dallas CityMAP Report. Additionally, the SEP presents and describes the tools and strategies used during the initial phase of the Dallas CityMAP process. Specific outcomes of the SEP include:

- Identification and documentation of the overall initial stakeholder engagement process and approach
- Set goals for the initial stakeholder engagement process
- Identification of initial stakeholder (e.g. , elected /local officials, agencies, community and neighborhood organizations)
- Establishment of strategies to achieve the goals of the stakeholder engagement process
- Identification of specific tools and techniques to support the strategies.

STAKEHOLDER ENGAGEMENT GOALS

The SEP is intended to provide outreach strategies for engaging key stakeholders, information on Dallas CityMAP, and a forum for gathering information. Strategies for addressing Limited English Proficiency populations have been addressed in this plan. (Appendix C: Dallas CityMAP Demographics) The term "stakeholder" represents groups of purposefully identified individuals, agencies, and community and neighborhood organizations who have been identified as having key information related to projects, development, improvements, and community perspectives that impact the downtown urban core. Although the initial phase does not include meetings with the general public, communication mediums have been created to provide continuous information on the Dallas CityMAP progress and status. These forums have also been created to provide channels for any stakeholders to provide feedback and information to the Dallas CityMAP team. Information on the public website will be presented in English and Spanish.

GOALS:

- Maintain a level of communication that promotes engagement and allows participants to provide and receive information
- Convey a consistent message throughout the planning process
- Communicate Dallas CityMAP's purpose and key messages
- Provide up-to-date information about the assessment, schedule, process, and findings
- Involve key stakeholders throughout the process
- Create communication channels for stakeholders to provide and receive information
- Incorporate feedback and data into the Dallas CityMAP Report

STAKEHOLDER ENGAGEMENT PLAN

PUBLIC INVOLVEMENT TEAM CONTACTS

Dr. Audrey L. Andrews
Office: 972.628.3186
Mobile: 214.985.9629
Email: alandrews@hntb.com

Robert Cox
Office: 817.332.0404
Mobile: 469.855.4079
Email: robert.cox@ocgpr.com

DALLAS CityMAP INTERNAL COMMUNICATIONS

The Dallas CityMAP team is organized of six consultant firms offering a variety of services. Figure 1 is an overview of the Dallas CityMAP Team.

TEAM MEETINGS

HNTB Corporation is the lead consultant for the Dallas CityMAP process. Team meetings are held on Tuesday's of each week beginning at 8:00 a.m.
Toll Free Number 1-866-692-4541
Participant Code 1776140
** A WebEx will be activated to discuss project particulars when necessary.

TEAM COMMUNICATION

The Dallas CityMAP team uses various means of communicating internally within the group. Along with traditional face-to-face meetings, emails and telephone communication, the Dallas CityMAP team has an internal project folder which serves as the CityMAP repository for drafts, ongoing and final deliverables used during the process. The Dallas CityMAP folder address should be included in all communications and deliverables. SharePoint will be used as a repository for shared information and documents.

INTERNAL MEETING NOTES

Appendix D: Team Meeting Notes (Template)

TEAM CONTACT LIST

Appendix E: Dallas CityMAP Team Contact List

QA\QC PROCESS

The Dallas CityMAP QA\QC process may be found in the Dallas CityMAP folder. Specific graphic guidelines have been developed for Dallas CityMAP (see Appendix E: Dallas CityMAP Graphic Guidelines). Each consultant for the Dallas CityMAP process is responsible for using the Dallas CityMAP QA/QC process for the delivery of services and deliverables to the team. Figure 2: Dallas CityMAP Contact List represents the contact information and individuals providing services to the team.

GRAPHIC GUIDELINES

Appendix F: Dallas CityMAP Graphic Guidelines

DALLAS CityMAP INITIAL KEY STAKEHOLDERS

Throughout the first phase of the process, key stakeholders will be engaged in the initial discussions as they relate to the Dallas CityMAP study area. Stakeholder groups identified during the initial phase includes:

- Neighborhood Associations
- School Districts
- Elected Officials
- Former Elected Officials
- Private Agencies
- Medical Centers/Hospitals
- Universities
- Professional Organizations
- Local Government Agencies
- Developers
- Community Development Corporations

Additional individuals and groups will be added to the process as the study continues to develop.

Stakeholder Mailing List

Appendix G: Dallas CityMAP Stakeholder Mailing List

STAKEHOLDER ENGAGEMENT TOOLS

To engage stakeholders in the process, a broad range of tools have been created for use. These tools include, but are not limited to the Dallas CityMAP website (www.dallascitymap.com) and other social media tools such as Facebook, Twitter, blogs, Instagram, and email (info@dallascitymap.com or contactus@dallascitymap.com). All stakeholder comments, questions, and feedback will be documented in the report and considered during the process. Specific tools considered for process will include, but are not limited to:

Website

The Dallas CityMAP website will provide information on the assessment, schedule and process, stakeholder engagement activities, and active and interactive communication forums. The website will be linked to other agency and community sites to share information about the downtown urban core. As information becomes available, it will be posted on the website and social media as well as updated in presentations and handouts. (Appendix H: Diagram of Dallas CityMAP website)

Dallas CityMAP Contact Information:
Email Address(s)
info@dallascitymap.com or contactus@dallascitymap.com
Physical Address:
TxDOT Dallas District
4777 E. Highway 80
Mesquite, Texas 75150
Phone: (Provide Phone Number)

LETTERS

(Appendix I: Sample Stakeholder Engagement Letter)
- Stakeholder Letter
- Elected Official Letter
- Former Elected Official Letter
- Agency Letter

ONE-PAGER

Appendix J: Dallas CityMAP One-pager

STAKEHOLDER ENGAGEMENT PLAN

LISTENING SESSIONS

The Dallas CityMAP Listening Sessions will serve as a forum for learning, engaging, and gauging the investment of key stakeholders in the Dallas CityMAP process. The open, candid and two-way communication process will be conducted by the Dallas CityMAP team with key stakeholders who have influence or have expressed a previous interest in the urban corridors in and around downtown Dallas.

The sessions will be initiated by the Dallas CityMAP team and may include group, one-on-one, or piggy-backed meetings. The Dallas CityMAP team previously sends letters to purposefully selected stakeholders (3/6/2015). Various stakeholder groups were sent specific letters to solicit and schedule a one-on-one meeting. During the meetings, the interview team will use probing questions from the "Stakeholder Engagement Questionnaire" to retrieve specific information from the stakeholder.

The purpose of the meetings is to allow stakeholders to provide information, ideas and perspectives on the downtown urban corridors. The stakeholder team will consist of a minimum of three individuals (Team leader, engineer, and scribe). Each team will receive an interview kit consisting of:

- Dallas CityMAP One-pagers
- Study area map (large)
- Stakeholder Questionnaires
- Interview Team Meeting Schedule
- Team Contact Information
- Stakeholder Engagement Meeting Notes (template)
- Dallas CityMAP Name Tags

QUESTIONNAIRE

(Appendix K: Stakeholder Engagement Questionnaire)

TWITTER

TxDOT will send out "Tweets" regarding public listening sessions and real time updates at the sessions. The CityMAP team will provide suggested content for TxDOT to push out.

STAKEHOLDER COMMUNICATION

Throughout the stakeholder engagement process, the Dallas CityMAP team will convey key messages about the intent of the Dallas CityMAP process. These messages will be communicated with stakeholders throughout the process.

KEY MESSAGES

- Promoting neighborhood character and quality of life
- Promoting community and urban street connections
- Enhancing regional mobility and safety
- Supporting economic development and future growth
- Consideration of policies, partnership and funding
- Proactive, inclusive and continuous communication
- On-going stakeholder engagement
- Encouraging green space

POTENTIAL STAKEHOLDER QUESTIONS (FAQ)

Appendix L: Potential Stakeholder Questions

STAKEHOLDER LISTENING SESSIONS INPUT

Quantitative									Qualitative												
Site Specific & Corridor Priorities									Issue Priorities												
Stakeholder	I-35E	SPUR 366	US-75	I-345	I-45	I-30	DART D2/HSR	Other	Economic Development	Environment	Funding	Livability	Mass Transit	Mobility	Multi-Modal	Neighborhood/ Community Sense of Place	Park, Open Space, & Green Space	Policy Changes	Safety	Social	Urban Form (Connectivity)	Other
01				●		●			●	●		●		●		●	●		●		●	●
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STAKEHOLDER LISTENING SESSIONS INPUT

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40						●																

STAKEHOLDER LISTENING SESSIONS INPUT

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PUBLIC WORKSHOP INPUT

TABLE 01: I-35E THE SOUTHERN GATEWAY

Challenge	
I-35 is a physical barrier	More connection between bottom to west
Sound walls are a positive and a negative	Pedestrian connection from trails and Dallas Zoo
Noise issue around the Dallas Zoo	Wayfinding and signals
Dallas Zoo access ramps	Businesses suffer due to access issues from I-35; money goes to Grand Prairie
No HOV/ML unless it starts downtown	Three key points: traffic, cost, access to parks
Connecting to I-30 west from I-35	Regional impacts of residents commuting north to jobs, employment along Stemmons
Separation between both sides of I-35; pedestrian crossing is an issue	Trash in ROW from dump trucks
Lack of connectivity and walkability between schools	No easy way to cross I-35 at 8th St., needed for schools
Improve street crossings	North bound traffic exiting Zang Blvd., creates a bad situation
Signage is an issue	Currently lots of pass thru traffic
A balance is needed between people in the region and through the region	There has been more truck traffic in the Cedars because of construction
There is a need for multi-modal transit options	Reduce elevation
Underdevelopment/safety/'eyes on the street'	Freeway view from across Dallas Zoo and neighborhood
Cedar Crest Heights	Ewing is underutilized
Longer stack up	

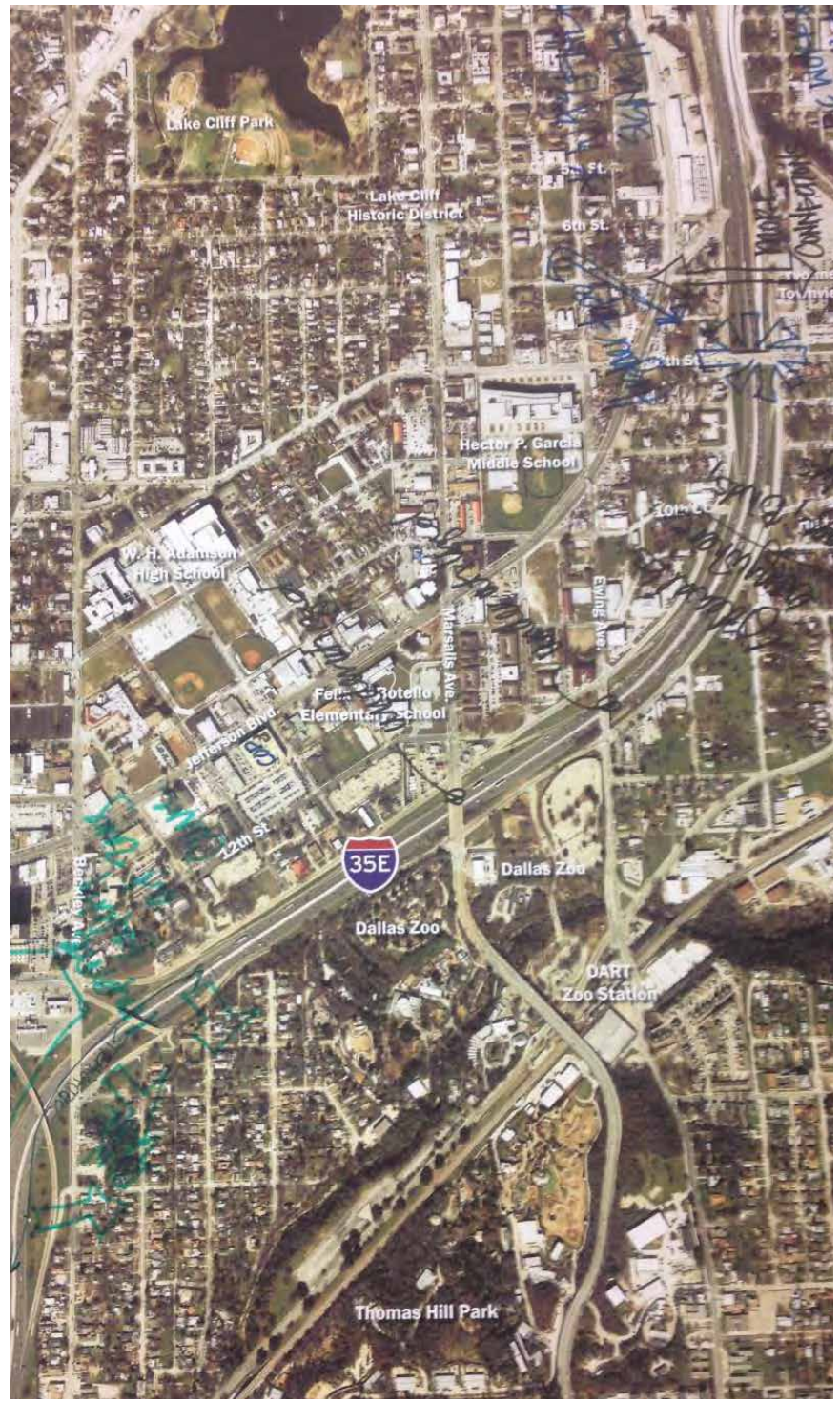


SESSION 01 *Rotation 4*

PUBLIC WORKSHOP INPUT

TABLE 01: I-35E THE SOUTHERN GATEWAY

Opportunity	
Improve connections and safety along 10th St	Straighten Zang curve - improve safety - minimize footfront of freeway
Widen 8th St bridge over I-35 for better pedestrian and bike connectivity between schools	Frontage roads - local traffic profile - as neighborhood builds
Pedestrian access over I-35	Deck the area from Beckley Ave to north
DART Station connection across I-35	Deck park
More direct bus routes	Depress corridor
Connections of all types with Dallas Zoo, High School, etc.	Horseshoe bike and pedestrian connectivity over Trinity
Economic development is best when all people can travel thru	DART to Dallas Zoo pedestrian connections to north
Better ramp access at southern end	Incorporation of mass transit
Depressed is preffered - mindful of drainage	Make crossings look good and connect to the local traffic
Redusing runoff into Cedar Creek; revitalize Cedar Creek	Sidewalks everywhere
Take advantage of the topography	Boulevards and signage
Cedar Crest golf course	Noise protection
Rain harvesting technology on bridges and over passes	Take advantage of topography
More creative opportunity with trails	Deck park near Dallas Zoo
Pedestrian circulation	Improving ramps to Dallas Zoo is less expensive than a deck park
Access ready-sidewalk safety	Deck park makes economic sense as part of Dallas Zoo
Wayfinding	Improve 8th St corridor
Lighting	Keep 12th St ramp as pedestrian access
Enhance water and landscape features	Topography
Close Colorado Blvd to connect Lake Cliff Park to north	Lots of vacant land
Need to provide middle class homes	

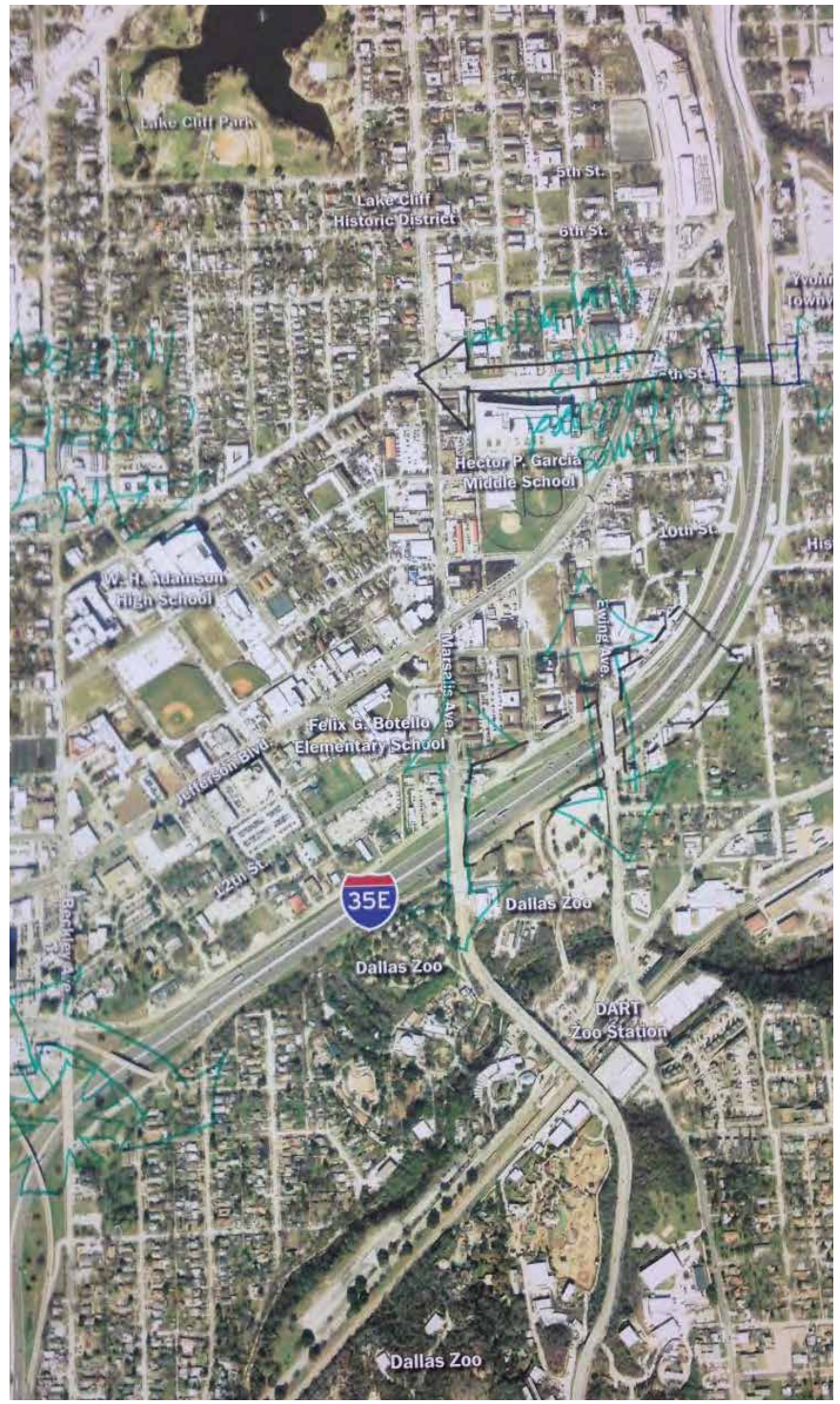


SESSION 02 *Rotation 1*

PUBLIC WORKSHOP INPUT

TABLE 01: I-35E THE SOUTHERN GATEWAY

Solution	
Connection between 12th St across I-35 neighborhood	Views at 8th St crossing
Bridges over I-35 at Ewing Ave	Central I-75 model
Improve access with wider bridges to Dallas Zoo	Connectivity over freeway
Pedestrian friendly bridges	Connection to Trinity Trails at bottom
Complete streets	Wayfinding
Jefferson streetcar	Better connectivity for pedestrians and bicyclist
Inter-modal transit station city/park and ride	Wall treatment noise for residence
Promote access and assets	Columbus OH connections - with buildings
ADA issues/curb cuts	BC workshop study for bottoms
Audio crosswalks	All about moving from point A to point B in many ways
Maintain workforce housing	Create walkable streets between DART station and light rail
Improve infrastructure	Deck park between Ewing Ave and Marsalis Ave as front door connecting west side to Dallas Zoo
Allow for the possibility of future priorities to be possible by creating flexible plans/policies today	



SESSION 03 *Rotation 3*

PUBLIC WORKSHOP INPUT

TABLE 02: I-345

Challenge	
Lack of an easy trasition from I-35 and I-45	Commerce St underpass extremely dangerous for pedestrians
Dangerous weave from north bound I-30 to I-345	Pedestrian improvements are imperative, i.e. Deep Ellum to downtown
Concrete falling from I-345 bridge	Highway obstructs rush hour traffic, moving Deep Ellum thru downtown
Configure I-345 better for thru traffic	Freeway has splintered downtown, Deep Ellum, Fair Park communities
Separation created by I-345 between downtown and Deep Ellum	I-345 has created separate districts
Easy getting off, but difficulty getting on Live Oak St and Bryan St	Inability to exit once on I-345
Difficult lower level highway access; especially on Live Oak St and Bryan St	I-345 expansion will not solve the problem, it will simply fill up
Dangerous walking on Live Oak St and Bryan St	If removed, where will traffic go?
Multiple conflicts on Live Oak St, i.e. lights, DART, etc.	Is I-345 valving regional traffic and trucks over local residents?
Disconnection of grid especially Main St and Commerce St	How are we going to pay for construction and maintenance?
Underutilized space between Ross Ave and Live Oak St	Freeway is a barrier, bad idea to begin with
Desire to congregate under elevated freeway	Inability to exit in accident scenarios
Obsolete corridor	Lack of service roads
Current elevation is a challenge	Service roads reduce usable land/linkages
Grade separation issues	Curving interstate design slows traffic
Need to move traffic North and South	Traffic, level of service, is an issue
Ramps are confusing and do not work well	Origin and destination of traffic is not local
Pedestrian and ramp conflicts	DART creates a barrier
Need for handicap accessibility such as sidewalks, everywhere	Too many columns, cluttering usable space below highway
Eliminates parking requirements	Unwelcoming, “scary” underpass environment; “Horrendous” pedestrian experience
Unreliable bus system in area	How do we deisign an underpass park that is inviting?
Wayfinding is a problem	Current art work, dog park, garden is decent
Connections from east side to State Thomas	Current improvements such as art work, dog parks, and gardens, have helped e.g Deep Elum
On ramps above Ross Ave are “awful” and dangerous	Challenged by downtown vibrancy
Ross Ave underpass extremely unfriendly to pedestrians	No parkspace in Deep Ellum
Pacific Ave and Taylor are highly problematic areas	Emission issues

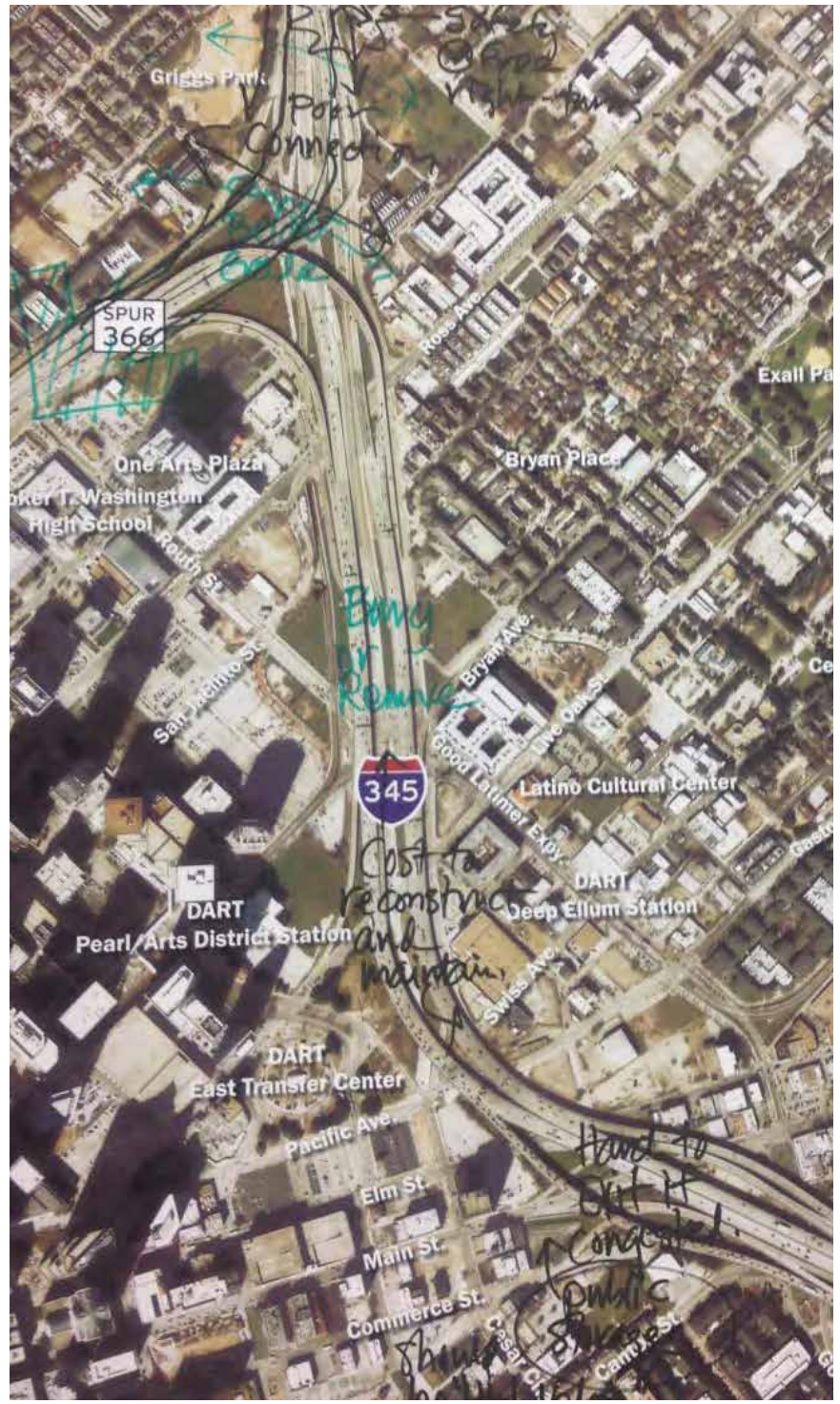


SESSION 01 *Rotation 4*

PUBLIC WORKSHOP INPUT

TABLE 02: I-345

Opportunity	
Combine	Develop inner-city, infill opportunities
Reroute I-35 traffic	Improve/redevelop derelict structures/vacant parcels
Remove north bound to west bound Woodall Rodgers to reduce traffic on I-345	Economic development opportunities from “freed” land via tunneling
Move ramps out further from highway	Air pollution reduction
Increase density around I-345	Residential to increase activity levels
Improve pedestrian and bicyclist connectivity under I-345	Repurposing of existing facilities
Add pedestrian lighting along and under I-345	Evaluate cost of interstate construction vs that of arterial/feeder roads vs value capture
Need a DART station within I-345 footprint, part of D2	Repairing city grid vs I-345 options
DART Station at Arts District	Knitting neighborhood, deck together
Connect downtown to Oak Cliff	Removal creates great economic development opportunities
Safe connections to Griggs Park	Think about multi-modal solutions
Add lighting to dark streets like Ross Ave	I-345 removal will increase home values therefore, improving the DISD
Old road with bad lighting at Live Oak St and Bryan St can be repaired	Use this as a way to leverage other options
Add ADA accessibility to sidewalks	Express movements in DART
Use landscape as dividers between pedestrians and vehicles	Explore transit/multi-modal options along corridors
Explore land use policies	Economic development opportunity
Increase housing and work force to reduce auto traffic	Prioritize neighborhoods over traffic
Explore multiple funding opportunities	Ross overpass as the Arts District’s gateway
People will “adapt” to change and will”love it”	Utilize street grid with excess capacity
More connection between other districts	Best done in conjunction with I-30 reroute
Haskell as new route	Maintaining cultural integrity by zoning/policy

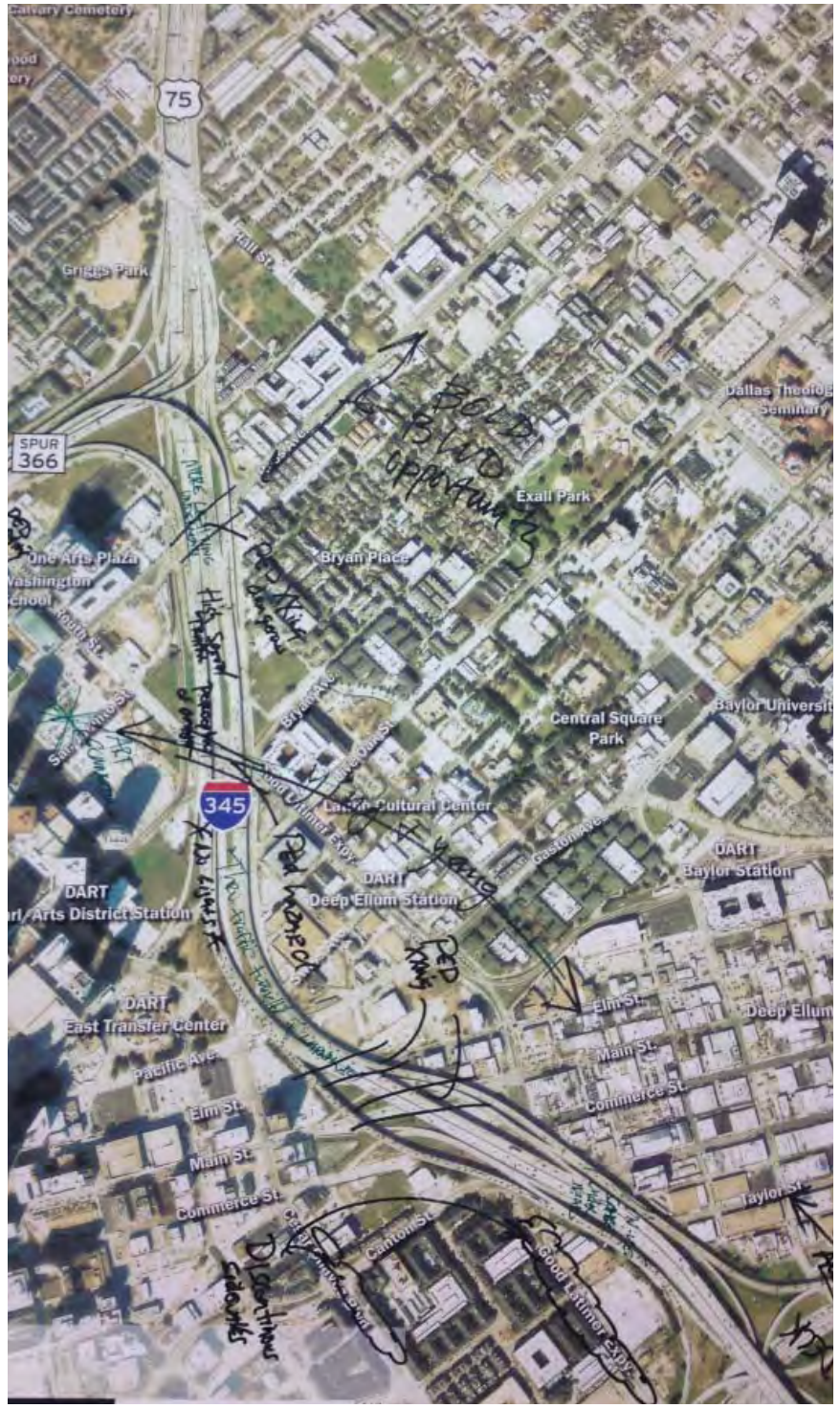


SESSION 02 *Rotation 3*

PUBLIC WORKSHOP INPUT

TABLE 02: I-345

Solution	
Managed lanes along I-345 to better even out traffic	Depress or full removal
Fewer on/off ramps to reduce congestion	Entrance below grade
Explore PID/TIF under I-345	Depress the LBJ
Bury or replace I-345	Grade separated design separating pedestrians, streets, and I-345
Remove I-345 - remove/reconnect grid	“Suspension bridge” design for I-345
Rerouting traffic around the city	Elevation of I-345 is fine if ramps, ROW is “cleaned up”/”skinny it up”
Providing more access to “on street”	Consider ramps reconfiguration/removal
Redefine traffic use	Reduce off-ramp curb-radii
Explore roundabouts if possible	Improve weaving, on/off movements
Activate space downtown	No new lanes
Creative funding mechanisms	Rearrange/design on-off “Minnesota-style”
Think in terms of livability options as a result of existing land use - mobility options need to mirror livability options	Separating thru traffic and local service traffic
Bus rapid transit	Hours where trucks are prohibited on freeways
Improve lighting and safety	Transform it into a more neighborhood/serving road
Increase street crossing time	Series of boulevards
Improve public safety	New cross-section for whole highway
Reestablish State Thomas grid by removing I-345 and putting Woodall Rodgers	Maintain underside and improve lighting
Change Main St off-ramp to improve bicyclist and pedestrian and access on Main St	Sound/noise solutions
Make Main St “super friendly” for pedestrians	Any solution needs “a little bit of both,” complex solution
Making underpasses more inviting, i.e Live Oak St underpass	Remove I-345; “Only solution is to remove”
Streetcar down Live Oak St	Boulevard: Cesar Chavez to Good Latimer Expy, complete Pearl St and Cesar Chavez Blvd connections
DART straight through downtown, making more direct routes	Green space with boulevards

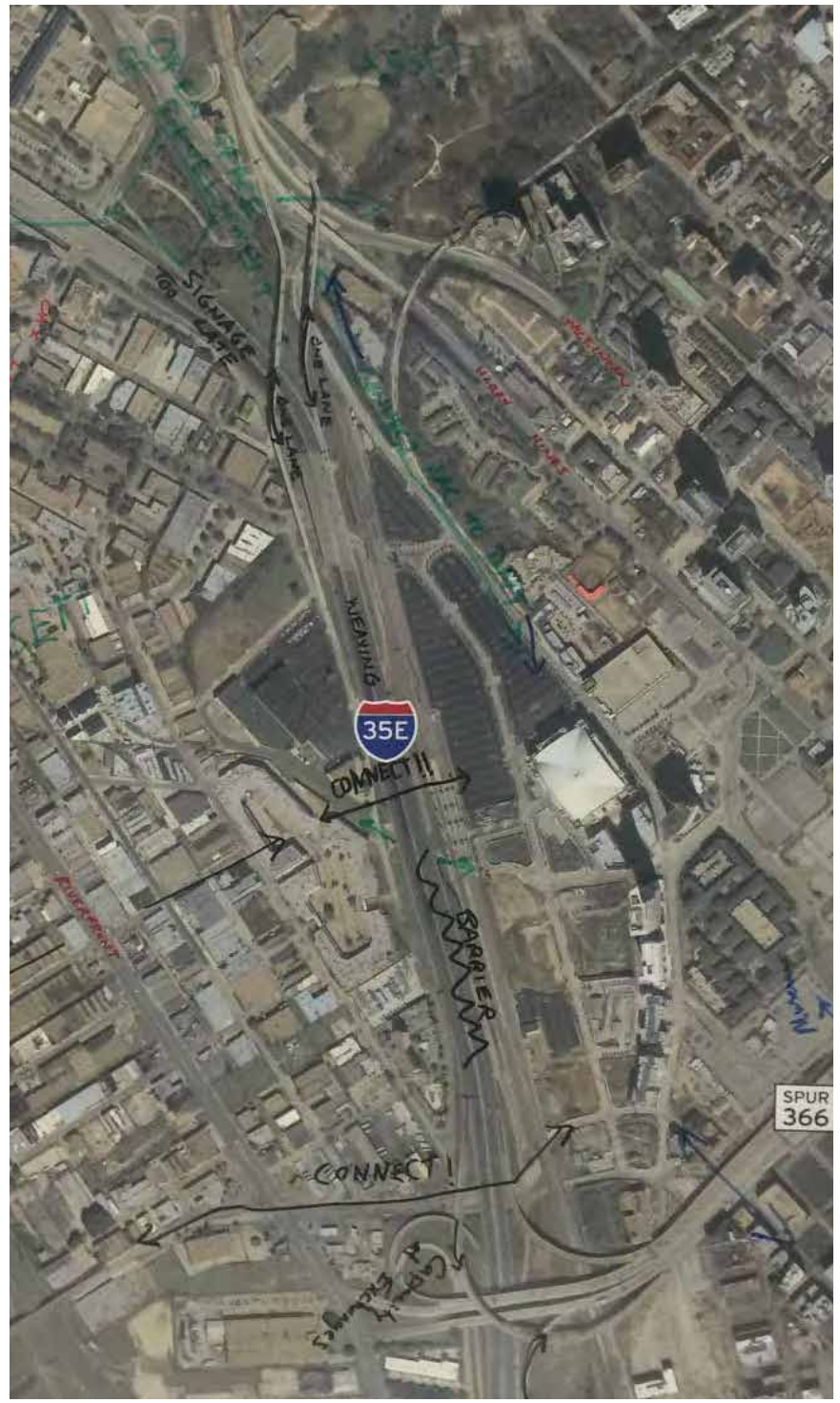


SESSION 03 *Rotation 1*

PUBLIC WORKSHOP INPUT

TABLE 03: I-35E LOWEST STEMMONS

Challenge
Ramping and weaving in I-35E needs to be addressed
Merging at I-35E and Woodall Rodgers
Direct connection needed from Woodall Rodgers to I-35E
SPUR 366 to I-30 west connection and weaving issues
Ramp to DNT is a major challenge, north bound and south bound
ADA issues near AAC need to be addressed and access
Single lanes in and out of toll roads
DNT exit and entry toll road
Continuos frontage roads
Handling/reducing congestion better
The highway is too wide
I-35 is an obstactle between neighborhoods
Lack of access and pedestrian connectivity
Lack of pedestrian connectivity to different neighborhoods, districts and Trinity River
Connection between Continental Ave and West End
Connectivity from Hi-Line Dr to American Airlines Center
No connection from DART station
Lack of access to trails i.e. Strand and Katy trails
Access to Trinity River is cut off
Lack of pedestrian and bicyclist crossings
Safe access
Reduce speeds on streets
Lack of livability i.e. neighborhood services
Grid connectivity
Food desert
Railroad tracks
Too many lanes on Continental Ave

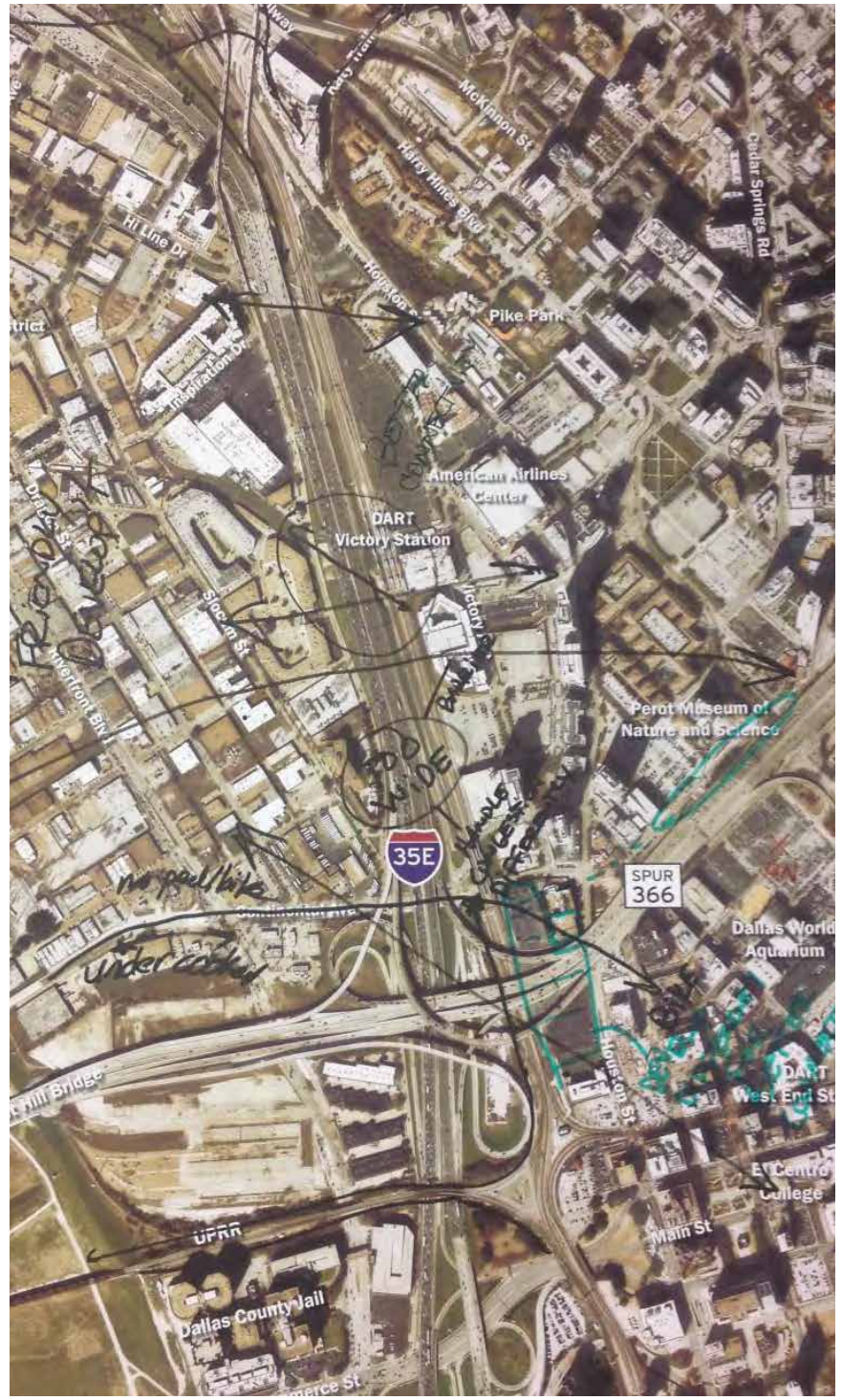


SESSION 01 *Rotation 2*

PUBLIC WORKSHOP INPUT

TABLE 03: I-35E LOWEST STEMMONS

Opportunity	
Better signage along I-35E	Combine I-35 and I-30 Woodall Rodgers
Simplify movements and weaving along I-35E	Reducing flyovers for development to address density demand
Side street connections to downtown	Reduction of massive parking lots
Reconstruction of Harry Hines	Complete streets on Houston St
Development opportunity in West End	Old brewery land north of SPUR 366 west of West End
Opportunity along abandoned railway near I-35E - “use for connectivity”	Connection to West End over SPUR 366 to downtown
Better land use around Victory Station	Connect Design District to DART West End Station
Better access to Trinity River from Riverfront Blvd	Improve flyovers/crossovers/access roads
There needs to be better “neighborhood” connectivity between the Design District, Uptown, American Airlines Center, and DART	Elevated connection over I-35 on Continental Ave with pedestrian access to Victory
Multi-modal connectivity	Bike connectivity along I-35 access across I-35 from downtown to Design District
Better connectivity involves more than just the vehicle	Better trail connections
Pedestrian connectivity	Hike and bike
Connect Katy Trail to Strand Trail	Pedestrian friendly development
Reverchon Park under utilized	Investing in good jobs in the area
Better design elements on Riverfront Blvd	Compliment the gateway/skyline
Better landscaping needed	Contextual structures
Lamar to Continental Ave bike and pedestrian access	

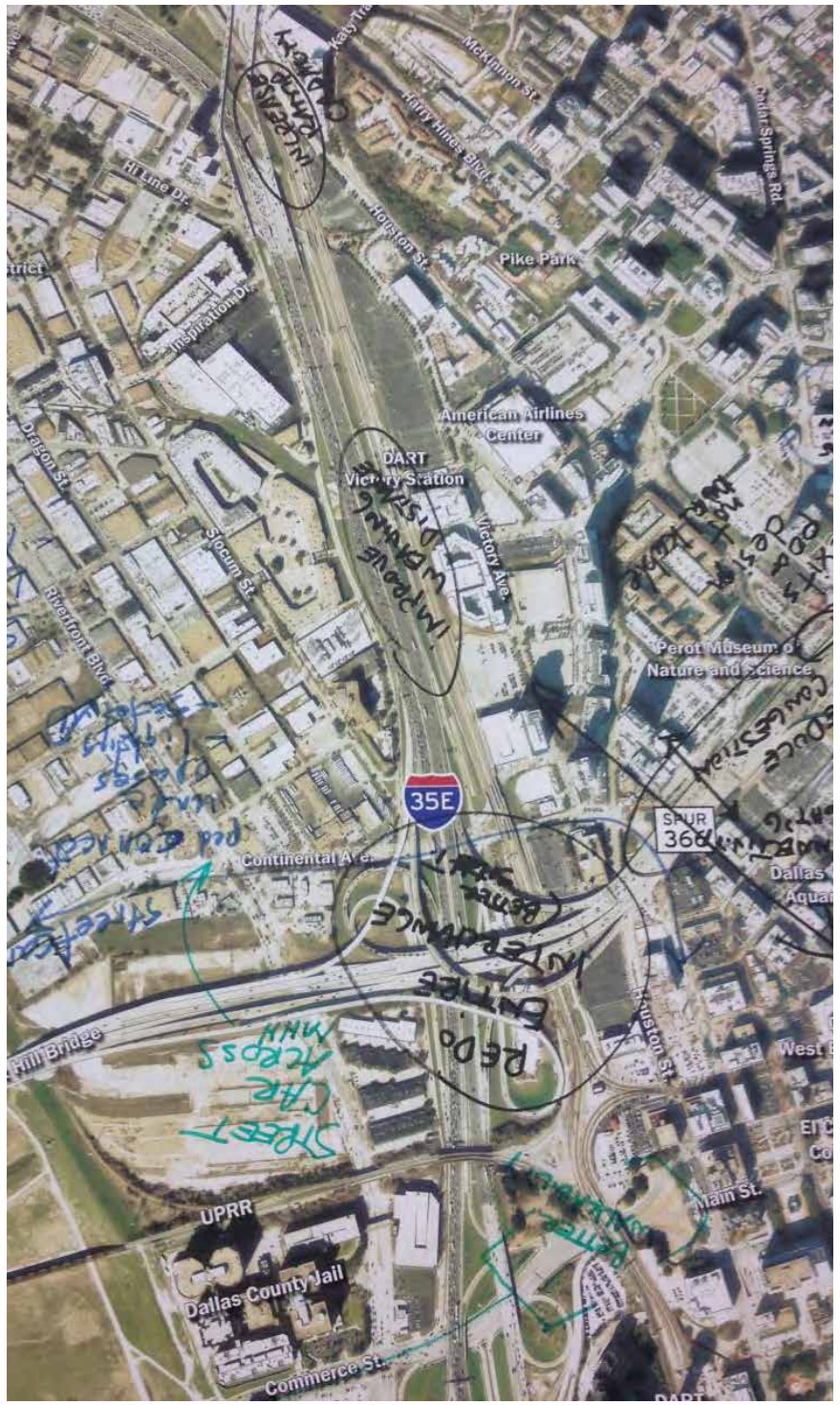


SESSION 02 *Rotation 4*

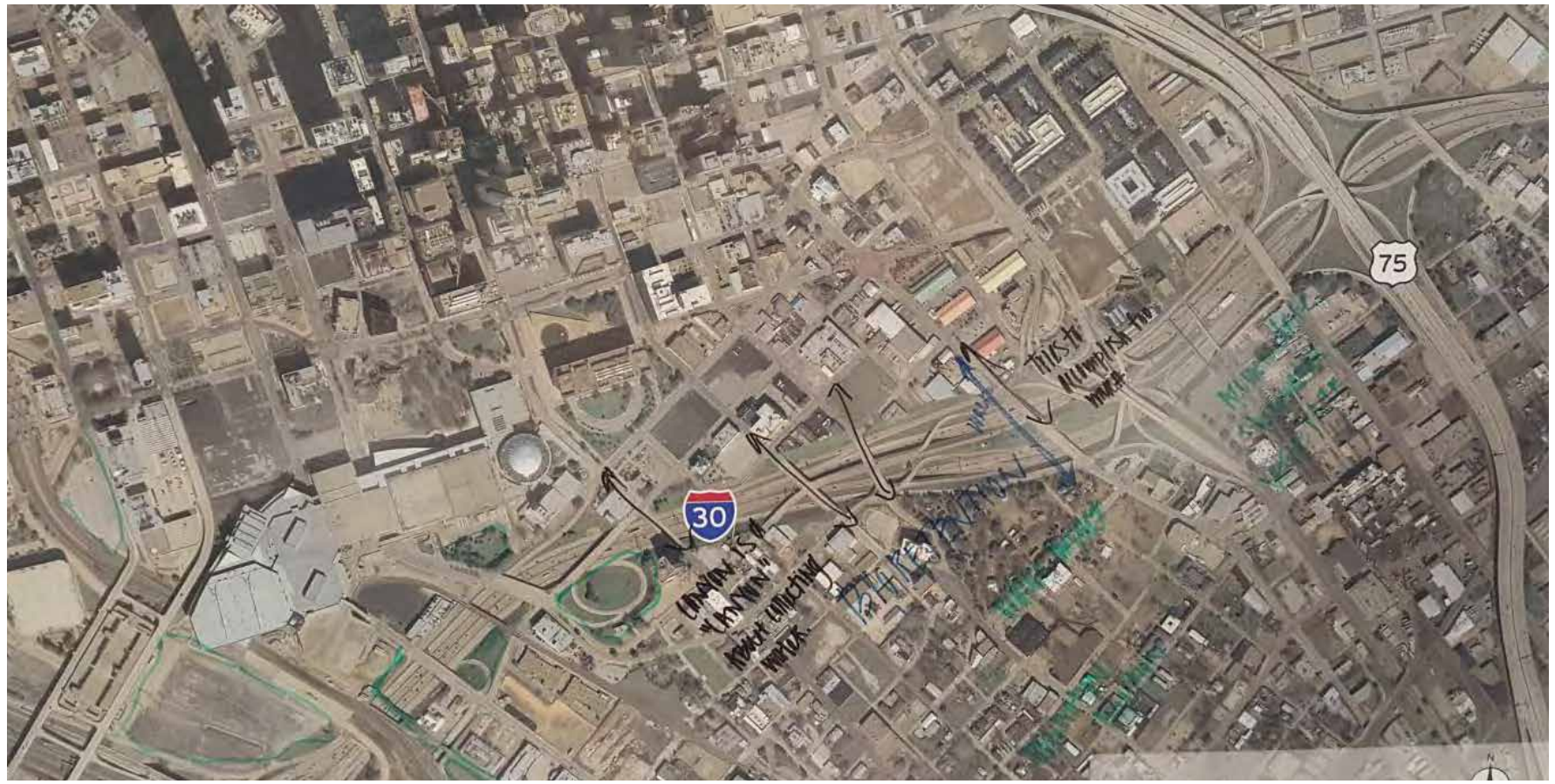
PUBLIC WORKSHOP INPUT

TABLE 03: I-35E LOWEST STEMMONS

Solution
DNT connection to I-35E and Woodall Rodgers, more lanes needed
Increase ramp capacity
Queing of vehicles at DNT near Harry Hines Blvd and Harwood St
Connectivity is needed for pedestrians from Design District to DART Station and American Airlines Center
Better signage near American Airlines Center along streets
Complete street solutions along Riverfront Blvd
Improve sidewalks
Bike path needed in Design District
Depress I-35E adjacent to Design District
More inter-agency communication: DART, NTTA, TxDOT
Connect downtown to the river
Stadium north of Reunion Blvd
Ground floor retail
Decking I-35 by depressing
Reduce product structures
Unubstructed lateral connections
Decrease highway footprint
Transportation management strategies
Better and earlier signage on the freeway towards Margaret Hill Bridge
No more highway lanes
No elevated roads
No decking of highways, no stacking
Complete streets, to address connectivity
DNT express lanes over the railroad track?
Sustainability development in Design District = less roads
Eliminate surface parking



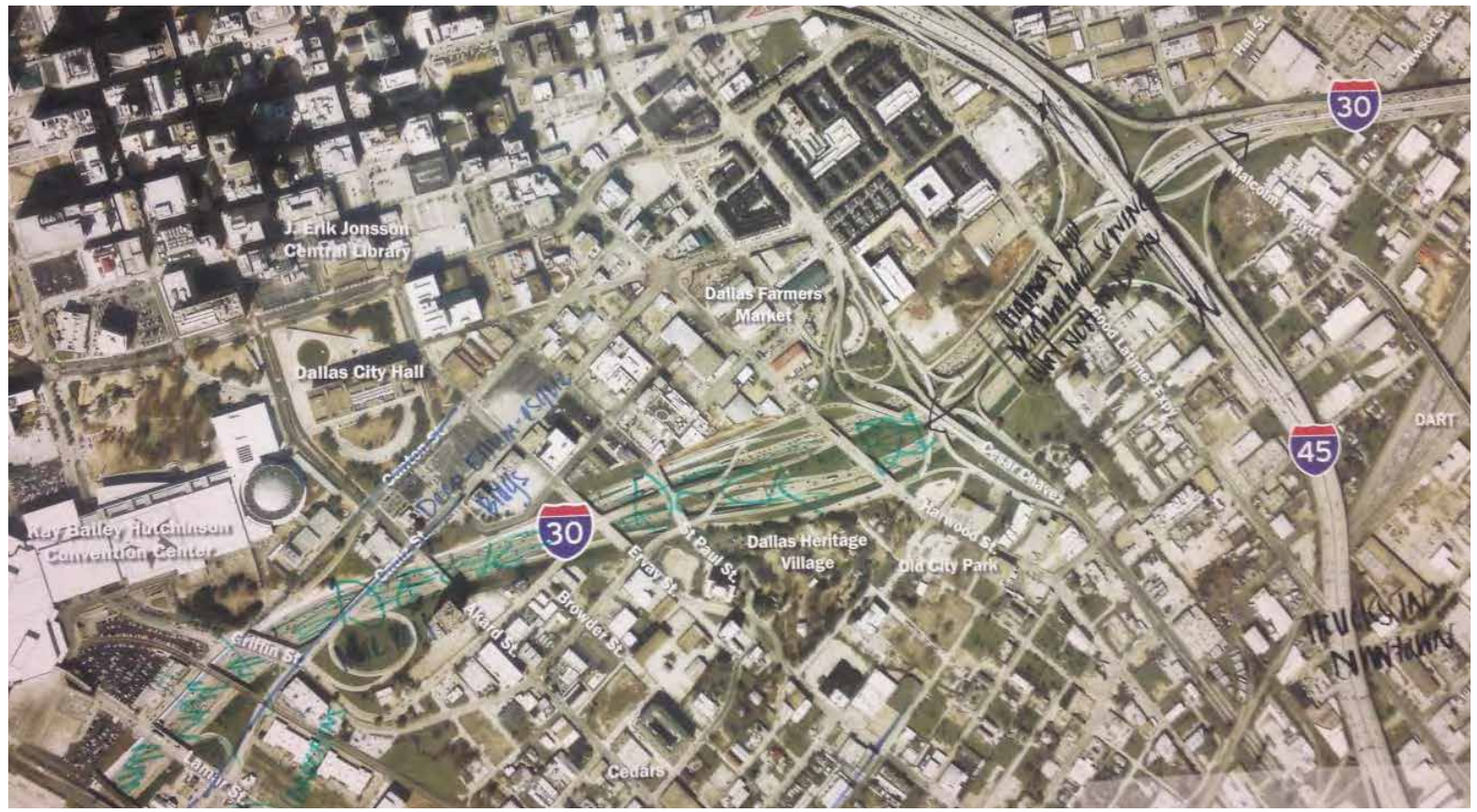
SESSION 03 *Rotation 3*



SESSION 01 *Rotation 4*

TABLE 04: I-30 CANYON

Challenge		
Connections across of I-30	Reroute I-30 around downtown and the Cedars area	Canyon too confusing
East/west connections	Needs to be more infill development (parking lots)	I-30 is very spread out
I-45 to I-30 Interchange is “dangerous”	Transport vs realestate, S.F. example	Convention Center needs to be more walkable
One east/west artery carrying high volume traffic	Ramps create land use conflict(s); cleaning up/spreading out ramps	HSR needs to connect to DART, TRE, and DFW
Lack of exit signange causing congestion	Does reconfiguration help economic development?	City spends more on parking meter regs. than it gets in revenue
Push signs further back east	Regional mobility is not lost; I-30 allows good movement; Trucks though downtown?	Main St needs to be more pedestrian and bicyclist friendly
Confusion caused by too many ramps going downtown	I-345 DC’s create conflict for pedestrian and bike users	Stormwater creates issues on nearby assets
Disconnect grid Convention Center “wall”	Dallas Farmers Market needs to be more walkable	D2 potentially cutting off south downtown and Cedars even more
Water table under Cedars	HSR; potential stadium? Needs to be walkable neighborhood first	Dallas City Hall is a dead zone



SESSION 02 *Rotation 2*

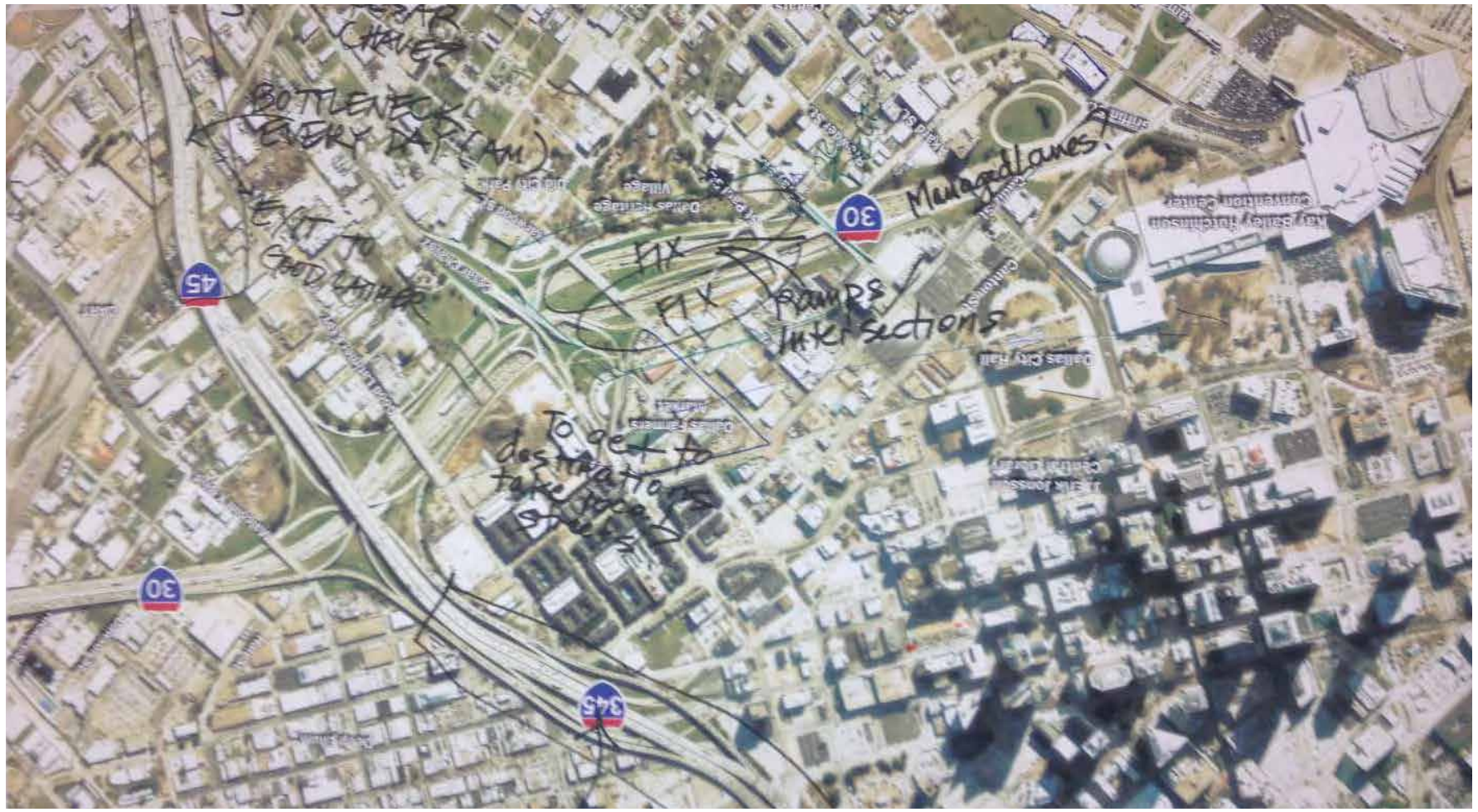
TABLE 04: I-30 CANYON

Opportunity		
More ramps and therefore better access	Gateway onto downtown from the Canyon	Lamar infill potential, adjacent to Convention Center
Underutilized space around I-30 ramps	Create decks over I-30 near south Dallas and City Hall	Access/view corridor to City Hall
“High Value” parcels are vacant	Create deck park over I-30	Reunion property and HSR
Reduce high impacts on nearby assets i.e. Dallas Heritage	Closing St. Paul St near Heritage Park south of I-30	Slow down stormwater before Trinity i.e capturing it, irrigation?
Make similar to DNT? With “dips” in design	Create better cohesiveness between Heritage Park and Dallas Farmers Market	Can we engineer that doesn’t include livability?
Connectivity back to downtown and Deep Ellum	Allow downtown type development to alter into Cedars and South Dallas area	Bike lanes set for Cedars area; Akard St and Ervay St growing community
Sidewalks at Farmers Market	Geometry of Elm St, Main St, and Commerce St may help connectivity	More bike lanes downtown, Elm St and Commerce St
Improve pedestrian connections e.g. Harwood St crossing	Main St - pedestrian only - promenade	Bike share program downtown
Trail possible to/from Convention Center and south side on Lamar St	Roadways need wider sidewalks, all roads need them	Trinity walking trail
Geology of the area may help in excavation, limestone	Create better interchanges along the Canyon	Better urban design elements on streets in the Cedars

PUBLIC WORKSHOP INPUT

TABLE 04: I-3 CANYON

Solution
Addition of public space over I-30, not necessarily decks
Widen access onto I-35 from the Canyon
Get rid of interchanges; one “primary” interchange along I-30 e.g. St. Louis Arch (D2)
Improve signage and lighting in the Canyon
Reconnect Browder St
Improve Belleview St to river
Analyze mode of transit/transport options at Convention Center
Improve and add “multi-modal” transport
Pedestrian access in Live Oak St
Once I-30 is down, stay down
“F” at grade; “C” above/elevated; “A” tunnel/Canyon
Make more compact to open for more development
Create walkable bridge over I-30 from Farmers Market to South Dallas
Rain harvesting
Require trucks to be in right lanes only
Provide parallel routes along I-45 to provide relief
Make Good Latimer Expy more walkable
Make Dallas City Hall more engaging with the community
Roundabouts in downtown



SESSION 03 *Rotation 0*



SESSION 01 *Rotation 4*

TABLE 04: I-30 EAST CORRIDOR

Challenge		
Connections across of I-30	Challenges associated with deck park(s)	30% different in single family rental properties; i.e. $1/square feet north of I-30, 70 cents on south side
East/west connections	How much of an isolating impact I-30 has; barrier	Lack of grocery stores downtown
I-45 to I-30 Interchange is “dangerous”	Disconnection of neighborhood(s)	Commercial tracks on corridor
One east/west artery carrying high volume traffic	Socio-economic discontinuity, north and south	Parking lots kill walkability
Lack of exit signange causing congestion	Freeway creates discontinuity	Jubilee Park cut off with I-30 entry
Push signs further back east	Munger Blvd and Fitzhigh Ave are a barrier for neighborhoods	Pedestrian = $; driving through traffic does not generate money
Poor connectivity to Fair Park	Issue going through neighborhoods to I-30; lacks continous roads to/through I-30	Public properties do not equal taxbase in area
“Conditioned” to think we need/have to drive to Fair Park	Single biggest detainment for south Dallas development, connectivity	Stormwater creates issues on nearby assets
Poor land use around Fair Park	So much publically owned land by Canyon	Concerns about local movement to downtown if I-30 is removed
Infrastructure around Fair Park is problematic	No "destination" between neighborhoods north and south of I-30	Numerous dead end streets
Flow of traffic off I75 to Grand Ave leads to safety concersn with Michelle School	Better connectivity between Fair Park and Deep Ellum	I-30 creating unappealing connecting points, e.g. Exposition Ave being fenced

PUBLIC WORKSHOP INPUT

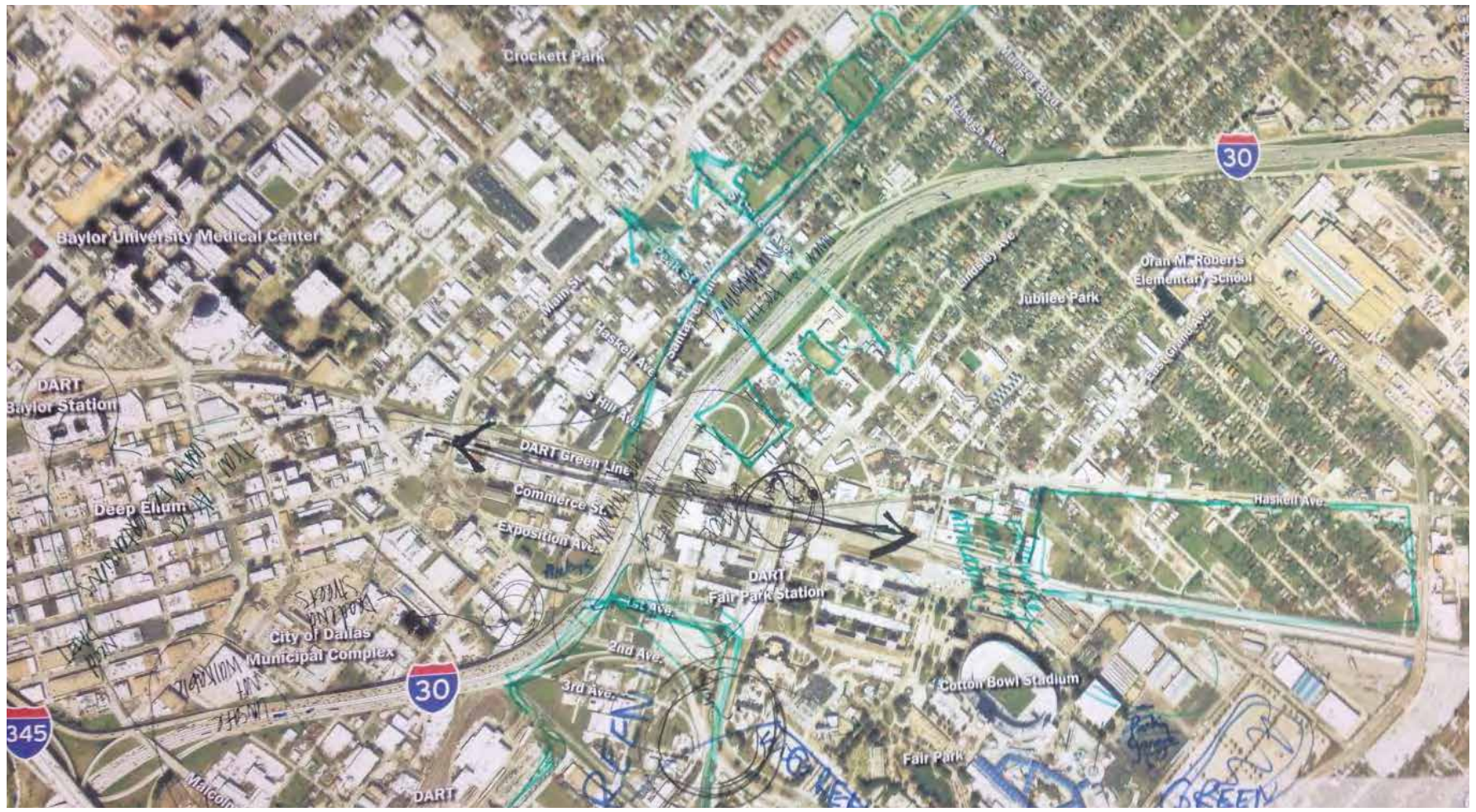
TABLE 04: I-30 EAST CORRIDOR

Opportunity
Underutilized space around I-30 ramps
“High Value” parcels are vacant
More ramps and therefore better access
Connectivity back to downtown and Deep Ellum
Make similar to DNT? With “dips” in design
East Grand and Garland improvements
Can we engineer that doesn’t preclude livabilty?
I-30 removed as a “barrier” reconnects areas; potential development opportunity?
Far east of I-30 , city owned property, could be revitalized
I-30 parkway
Rerouting of I-30, S.M. Wright
Need service roads (continous; you’re forced to the road)
Wider bridges to promote/enhance connectivity
Education on density if redesign occurs
If geometry works...
Alternative access from Fair Park to the east; I-45 Corridor
Ferguson curve
Take new spur (to Dolphin, east of Fair Park) of I-30 east of I-30 over to Lamar and Horseshoe south of Haskell, what about the old railroad?
Near intersection of Haskell and Barry Ave
What’s the roll of Haskell?
Don’t look at Fair Park by itself
East Grand as a gateway; what does it do/mean to East Dallas?
Re-knitting neighborhoods, north and south of I-30
Jobs, hospitality, "neighborhood connected" jobs offered in and around Fair Park Property
Create some "destination" at Fair Park, e.g. Verizon in Grand Prairie
Fair Park as "urban and walkable" should be designed for pedestrians



SESSION 02 *Rotation 1*

PUBLIC WORKSHOP INPUT



SESSION 03 *Rotation 4*

TABLE 04: I-30 EAST CORRIDOR

Solution
Public space over I-30, not necessarily decks
Get rid of interchanges; one “primary” interchange along I-30 e.g. St. Louis Arch (D2)
More and/or improve “multi-modal” transport
Pedestrian acces in Live Oak St
Once I-30 is down, stay down
“F” at grade; “C” above/elevated; “A” tunnel/Canyon
Keep Winslow Ave exit for accessibility, a connector with Dolphin Rd
Grand Ave as a gateway to Fair Park
I-30 at grade
Deck park as connectivity; access to Fair Park
Reroute I-30
Deep Ellum traffic as two way (Elm St, Main St, and Commerce St)
Explore DART bus storage property for development
Reroute trails (“low hanging fruit”) Which side of green line?
Fair park as the "heart of Dallas" park system, a central park
Tearing down the walls surrounding Fair Park, as they're a "barrier" for the community

E-MAIL INPUT

COMMENTER 01
As someone who is intimately involved in the city council racing taking place across Dallas, I would very much like to participate in a conversation discussing the future of transportation and infrastructure in our City. Thank you very much for organizing this effort!

COMMENTER 02
I'd like to join the conversation.

COMMENTER 03
I'm very interested in this effort and would love to find out more about it.

Thank you!

COMMENTER 04
Traffic doesn't move in a system in a 1:1 ratio. Just because you remove lanes doesn't make other lanes necessarily have higher congestion in the long run. Planners know this. Most people know this. Just because a traffic model doesn't show it doesn't mean it's not true or applicable to downtown Dallas. Otherwise, Time Square would never have become pedestrian only.

COMMENTER 05
I'm a land development engineer in the Dallas-Fort Worth. Just want to be a part of the conversation.

COMMENTER 06
I have been a vehicular cyclist, pedestrian and mass transit commuter for 10 years

COMMENTER 07
Please keep me updated on all information related to this initiative. It is very important to a South Dallas/Fair Park revitalization effort called WINS, Working in Neighborhoods Strategically, which is an outgrowth of the mayor's GrowSouth effort. Thanks.

COMMENTER 08
I live, work, study, and play in and around Main Street garden. Currently I do not own a car. My annual income is greater than $60,000.00 per year and household is greater than $130,000.00.
I mention income to identify my ability to own a motorvehicle and my concious decision not to.
Lets continue to re-build Downtown as a pedestrian oasis. The more space we designate for pedestrians (going on a road diet, building protected bike lanes, and green spaces instead of parrallel parking) we will continue to see a direct correlation with increased population density.
Downtown's roadways should be a maximum of 3 lanes across. This would decrease road maintenace costs in the long run. This would also create a much safer environment for pedestrians, cyclists, skateboards. Also, we will see an increase in retail revenues as more people are able to access the stores and dine on the sidewalks.
Build more spaces for people, you get more people. Build more space for vehicles, you get more vehicles.
Changing the taxation structure currently used to evaluate surface parking lots will encourage property owners to stop "sitting" on their property.
Parking lots need to be taxed based on realestate values, not revenues received from annual parking.

COMMENTER 09
Would like to be informed about our future. Thank you.

COMMENTER 10
I am a downtown resident, business owner and property owner. I would like to be part of this conversation about the Downtown Urban Core Future. Let me know how I can help.

COMMENTER 11
Would like to be a part of the conversation. The I-30 corridor must be reworked.

COMMENTER 12
We would like to give feedback as a stakeholder in this process. Please let us know when we can assist with your study.

COMMENTER 13
Interested in learning more, providing input, engaging with shaping Dallas' future.
Reducing blight and its effects on neighborhoods, districts and areas.
Advocate for improving conditions for people who walk, ride a bike or ride transit.
Especially interested in reducing the barrier-effects of urban highways.
Slowing speeds of traffic has the greatest potential to enhance public safety.
Investing in infrastructure that provides a balanced level of service for all modes is a must.

COMMENTER 14
I'm a certified urban planner with 15+ years experience, born and raised in Dallas and very interested in being engaged. Please let me know what opportunities exist for involvement with this effort.

COMMENTER 15
I'd like to receive updates on the project as it progresses, as well as any other public notices, for example, announcing meetings. Thank you.

COMMENTER 16
I am a downtown resident that owns in the Farmers Market Square. Please keep me informed with any updates. Please remove the yield lanes at Canton Road and South Cesar Chavez. This is a suburban engineering solution.

COMMENTER 17
More pedestrians - less cars!

COMMENTER 18
I'd like to be involved in any way possible.

COMMENTER 19
Tear I-345 down... or at the least reduce it to a boulevard with lots of red lights, protected bike lanes, and repair the street grid. Also, adding a marked lane to the 35 shoulder between Continental and the DNT exit would help with the flow of northbound traffic.

E-MAIL INPUT

COMMENTER 20
I am a Dallas resident who wants to help in any way possible. I am interested in moving/eliminating highways around downtown Dallas, improving public transportation, and creating more transit-oriented neighborhoods. My fiance and I are both life-long Texans and working professionals who live car-free in Dallas, and I believe we have a strong understanding of what Dallas residents need to enjoy better, more sustainable lifestyles. After growing up in small Texas towns and finding happiness here in Dallas, we want to dispel the notions that Texans are in love with their cars and that Texans care more about traffic than people.

COMMENTER 21
I'd love to attend any workshops or public information sessions. I'm looking forward to brainstorming, collaborating and letting ideas fly.

COMMENTER 22
I would like to sign up for a workshop. Great website and effort! So looking forward to the impact to the city!!

COMMENTER 23
Really excited that Dallas is starting to prioritize urban design. I think plans like this will ultimately move our city into the future and make it a better place to live.

COMMENTER 24
I will try to attend on November 5. Thank you!

COMMENTER 25
I'm interested in better city planning (urban and suburban); zoning and public transportation. I'm an ex-New Yorker who's lived in Garland for the past 15 years. I have high, world-class expectations for Dallas. If you want to attract new corporations, fix the darn sidewalks, invite architects and social scientists to renovate urban blight without raising the rents of the lower-class. House the homeless. It's doable. Let Dallas set the tone for the future. Thanks.

COMMENTER 26
Dallas, we are a great City but it seems like we have neglected the southern and western corridors for a long time. As I drive through neighborhoods where dilapidated and abandoned buildings exist, poor neighborhoods, obviously and no real infrastructure - then how can we proudly say we're representing the BEST, especially boasting being 'home' to some of America's best sports franchises? We seem to focus overall, on the more developed areas vs. the healing of our native citizens who are the 'have nots,' because of course they're less fortunate but ignoring the problem - how does that help?

COMMENTER 27
Please add me to any email lists that will keep me informed on the progress of CityMAP, including notifications of public meetings. Thank you.

COMMENTER 28
Please keep me informed of your progress.

COMMENTER 29
I would really like to get involved with this process.

COMMENTER 30
Please send me updates about public meetings and events.

COMMENTER 31
Please add me to your mailing list. I want to be involved. Thanks.

COMMENTER 32
Please keep me connected with your activities. As a native of Dallas and an architect, I have watched the city grow. I've seen visionary decisions and the results of good and bad planning. I am encouraged by the current effort to make Dallas an even greater city with effective planning and development.

COMMENTER 33
Please email me information.

COMMENTER 34
I am particularly interested in implementing the great concepts from the Connected City Design Challenge for connecting Downtown Dallas to the Trinity River. 1) Extending a walkable urban grid across the Stemmons Freeway is crucial. Moving beyond concept, I would like to understand (or at least identify with you) the design parameters that should inform preliminary proposals for actual street/structure fly-overs. 2) The idea of re-creating the original Trinity River course leads to plotting a channel and linear park system that can be mostly built on freeway right-of-way. Threading through the freeway interchanges will be challenging and require technical solutions to "tunnel " under some freeway benches. The current planning should include possible channel routes and the required infrastructure. I would like to pursue some of those route options with you. 3) On-off ramps can hopefully be simplified to have less impact on the development potential of the surrounding properties. 4) Regional traffic should be encouraged to use routes other than downtown connections by improving outer routes and not building more disruptive lanes in downtown. This takes some focus on areas outside downtown–your mission. We can at least challenge the assumptions of traffic projections and push for a commitment to provide relief visa vie improved alternatives. I am planning to attend the Workshop tomorrow night and look forward to interacting with you. Thanks for leading an open and listening format.

COMMENTER 35
I would like to get a digital copy of the intro to your public workshops. It has your plan, vision, methodology and strategy neatly and nicely done. Thanks.

COMMENTER 36
Please add me to your mailing list (email.)

COMMENTER 37
Please add me to your email list. Thanks.

COMMENTER 38
Who is the Dallas CityMap team? TxDoT it looks like, but any other planning entities? Thank you.

COMMENTER 39
Put I-30 and I-345 in trenches and deck them over for several blocks. Turn Cesar Chavez into a real boulevard and remove its ridiculous baby interchange at I-30 to free up a few more acres for development.

COMMENTER 40
Hello, I'd really like to be a part of Dallas CityMAP especially in the design process of future mass transportation ideas that could come to Dallas. I'm currently a Junior at the Yvonne A. Ewell Highschool and Urban Planning really interests me. I was excited to find out that guys came to Townview a couple of weeks ago.

COMMENTER 41
Please keep me informed of the progress on this important project.

COMMENTER 42
The biggest issue that I see is the divide (between north and south) that I-30 creates. There is a certain stigma associated with living south of I-30. Property values for similar homes are 20-30% lower, as are rental rates, simply because of the fact that they are south of I-30. I "burying" I-30 and creating some type of green space over the top (similar to Klyde Warren Park) that would facilitate the ease of access from one side of I-30 to the other would be a huge benefit. If it were to be placed near the Dart station and the end of the Santa Fe bike trail, that would be ideal. It would provide people with access to Fair Park, to the Santa Fe trail and White Rock Lake, and to the Dart station. Having small restaurants/cafes in that area would further help to create a sense of community, as opposed to the division that is created now.

COMMENTER 43
Please keep me informed of the progress on this important project.

E-MAIL INPUT

COMMENTER 44

First, let me thank-you for seeking citizen and taxpayer input.

As you well know Dallas has a long history of building roads so that people could leave their garage, drive 80 miles / hour to wherever they are going, come to screeching halt, and park in the front row. This has resulted in a mess as far as livability is concerned.

I-345:
1. This seems like a no-brainer to me
2. The economic development would be tremendous
3. The ability to live in the city would be enhanced
4. There are plenty of examples in the US and in other parts of the world where this has happened and the results have been remarkable – Who would have ever thought San Francisco would be what it is today – obviously a few folks but no nay-sayers now.

I-30
1. Have not spent a great deal of time studying this
2. But, I believe that there are two options
a. Move it South
b. Cover it, aka KWP, as it goes thru the city – in this plan there will need to be consideration given to extending the covered areas as the urban core grows

Southern Gateway
1. Listen to Scott Griggs – if he is happy, I am happy

Stemmons
1. Also this area has not been given a great deal of thought
2. Like the I-345 area though it seems to me that with the current mass transit options, we should be looking at ways to diminish the concrete and create another large urban neighborhood – taking a great many cars off the roads - Interesting the way that this is starting to happen in spite of all the obstacles, in the Design District.

Focusing on Mobility (not raceways), Economic Development, and Quality of Life issues should be our focus. Lowering speeds significantly can provide for much nicer roads and a more pleasant experience.
There should also be a general focus on making the roads serve the ingress and egress for the urban core and to eliminate the traffic that is pass-thru.

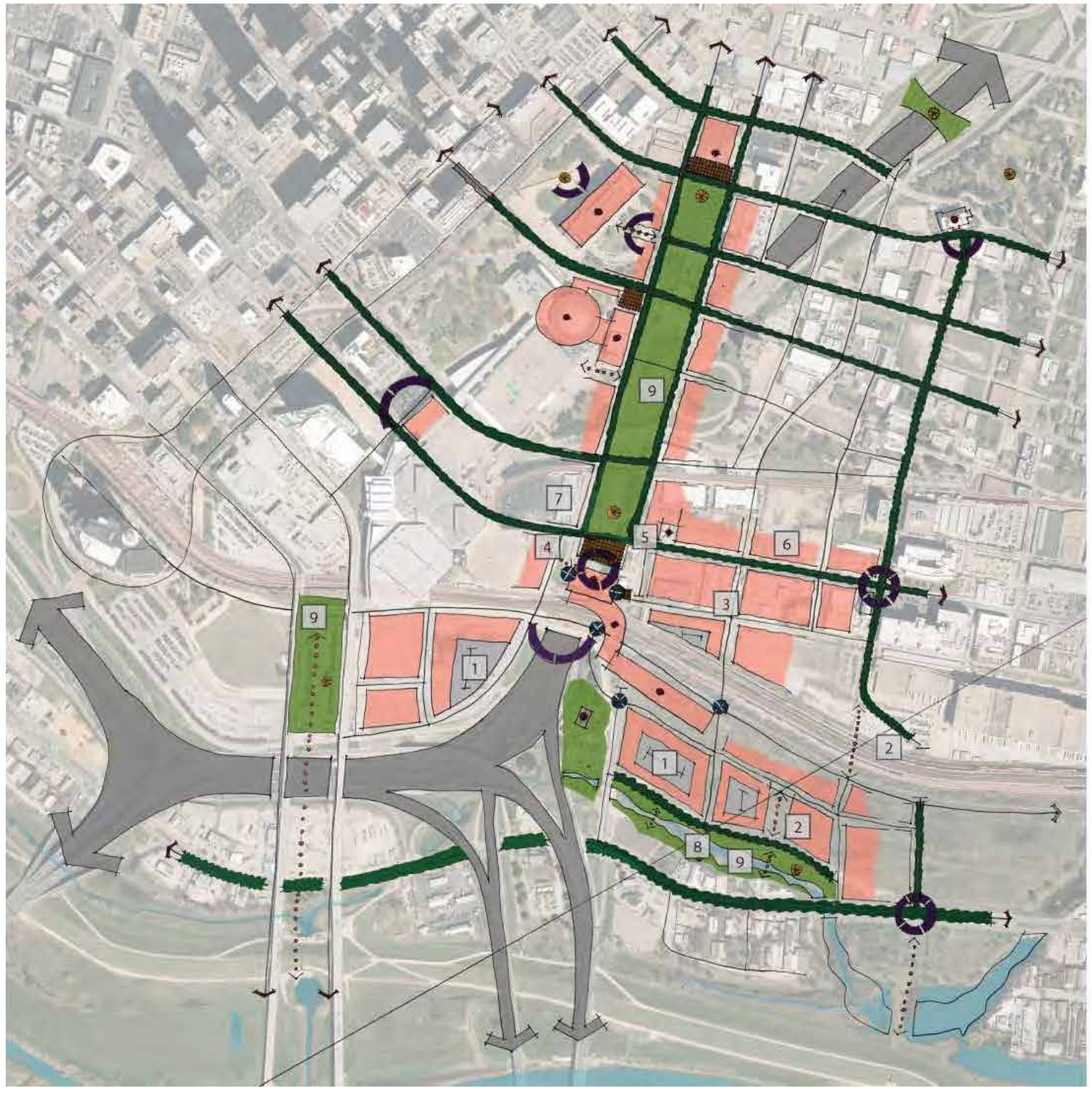
Encourage the innovators of self-driving cars. Maybe include under pavement charging lanes.

Thanks for your consideration.

APPENDIX | CITY DESIGN STUDIO RECOMMENDATIONS

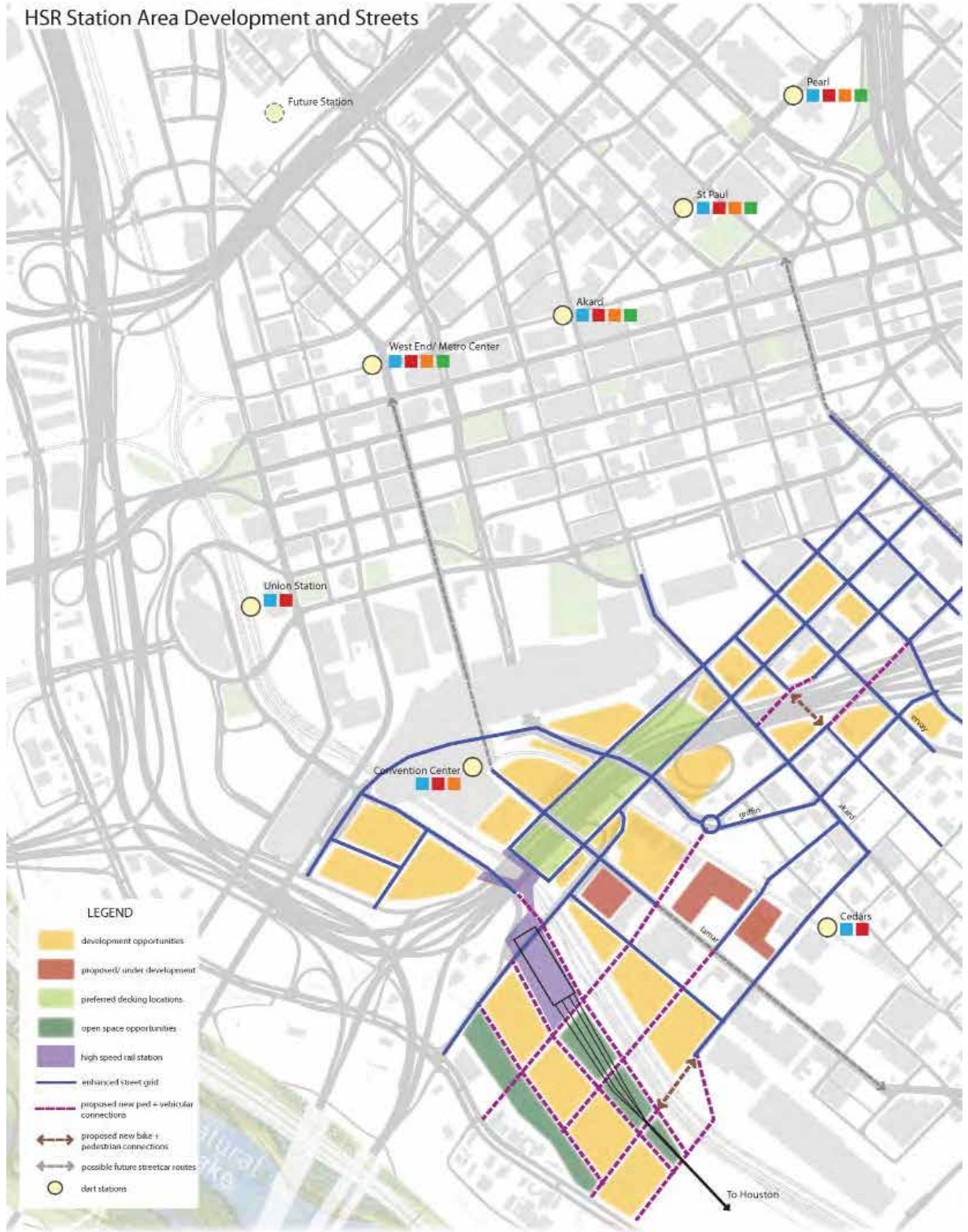
Separate from the CityMAP study, preliminary design recommendations were developed by the City of Dallas City Design Studio for corridor considerations. These recommendations were developed and received in early 2016 after the majority of the CityMAP report development. These recommendations are included in the appendix for reference and future considerations as corridor improvements are planned and have not been offically approved by the City or any other agency in any capacity.

I-30 CANYON - URBAN DESIGN FRAMEWORK

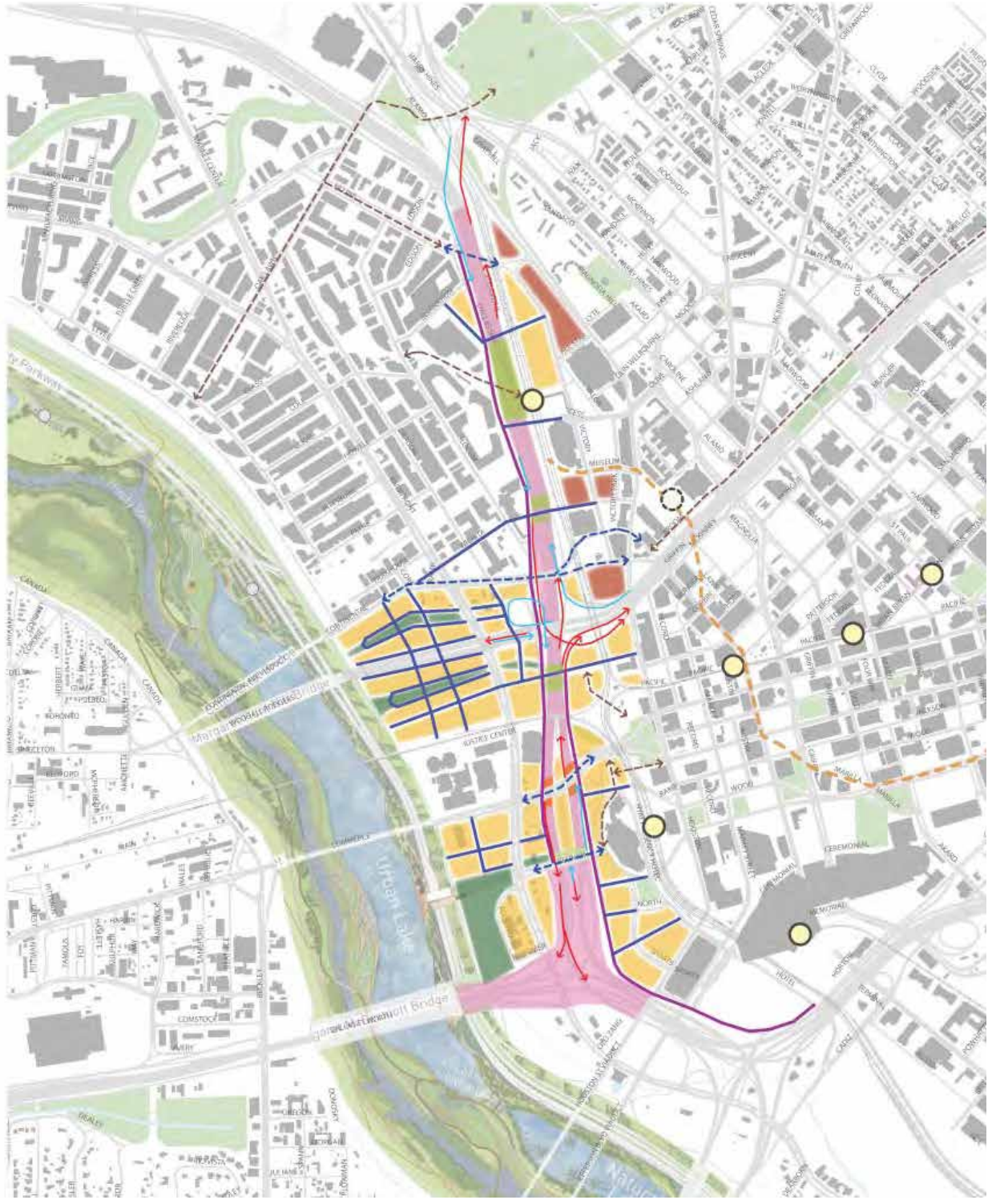


1	Parking	Reduce parking requirements in order to incentivize transit and increase economic development potential.
2	Connectivity	Improve district connectivity and porosity by constructing new through-streets that are spaced a maximum of 400' apart.
3	Pedestrian Realm	Encourage a highly walkable district through an enhanced pedestrian realm
4	Transit	Encourage transit use in the district through increased and improved transit routes in order to incentivize transit use by future travelers, workers, and residents, while also maintaining local vehicular access on existing and new streets
5	Identity	Create a district that has a unique identity and serves to connect downtown to the Cedars
6	Housing	Utilize the district's proximity to transit and downtown to develop the district as a livable and vibrant neighborhood that helps to meet the demand for new housing types in the city's central core.
7	Economic Development	Utilize the station as a catalyst to promote new residential, office, entertainment, and hotels on the south side of downtown and in the Cedars.
8	Sustainability	Utilize new development in the district to establish an example of the possibility that integrated stormwater management, on-site renewable energy, and environmental design can have on the greater city and region.
9	Open Space	Provision appropriate amount and equal distribution of open space for the district in relation to the projected number of new residential units and the increased amount of retail and commercial in order to create a more livable and desirable neighborhood.

I-30 CANYON HSR CONCEPT



I-35E LOWEST STEMMONS



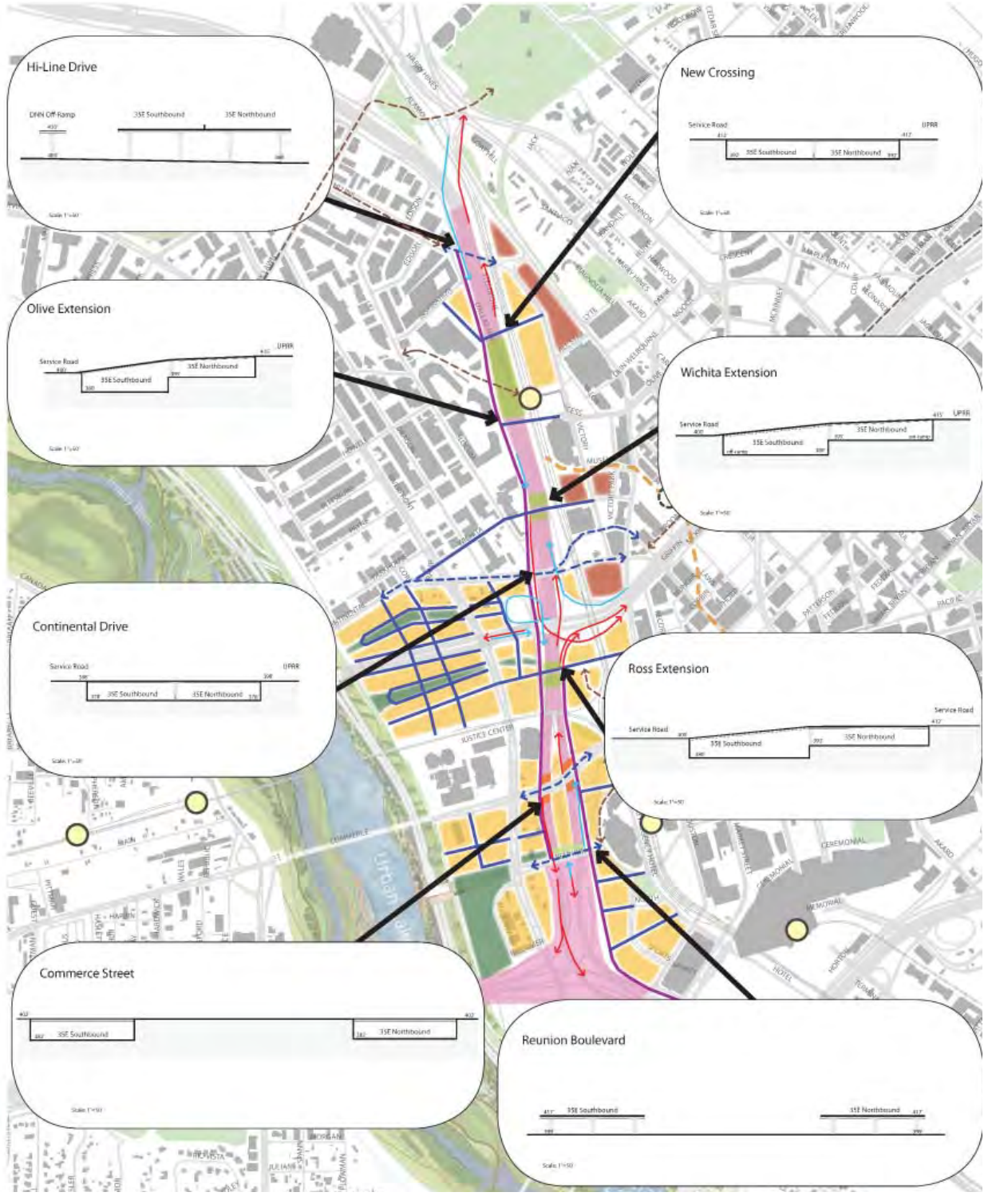
LEGEND

- development opportunities
- proposed/ under development
- preferred decking locations
- open space opportunities
- decked development opportunities
- max right-of-way area
- enhanced street grid
- proposed new bike + pedestrian connections
- enhanced pedestrian + vehicle connections
- on/ off ramps
- proposed DART alignment
- dart stations

OBJECTIVES

1. No new right-of-way shall be taken
2. Reconnect street grid whenever possible. An ideal scenario would involve a trenched design allowing for at-grade connections of surface streets. In addition, all existing street crossings shall be designed as multi-modal "complete streets"
3. Redesign on/ off-ramps to use less area, allowing development, at:
   - Reunion
   - Commerce
   - Woodall Rodgers
   - Continental
   - Tollway
4. Explore decking opportunities
5. Explore decking opportunities that incorporate buildings
6. Construct pedestrian connections at the following locations:
   - Commerce near Dealey Plaza
   - Elm Street near Dealey Plaza
   - Victory DART Station

I-35E LOWEST STEMMONS



LEGEND

- development opportunities
- proposed/ under development
- preferred decking locations
- open space opportunities
- decked development opportunities
- max right-of-way area
- enhanced street grid
- proposed new bike + pedestrian connections
- enhanced pedestrian + vehicle connections
- on/ off ramps
- proposed DART alignment
- dart stations

OBJECTIVES

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I-35E THE SOUTHERN GATEWAY



I-35E THE SOUTHERN GATEWAY



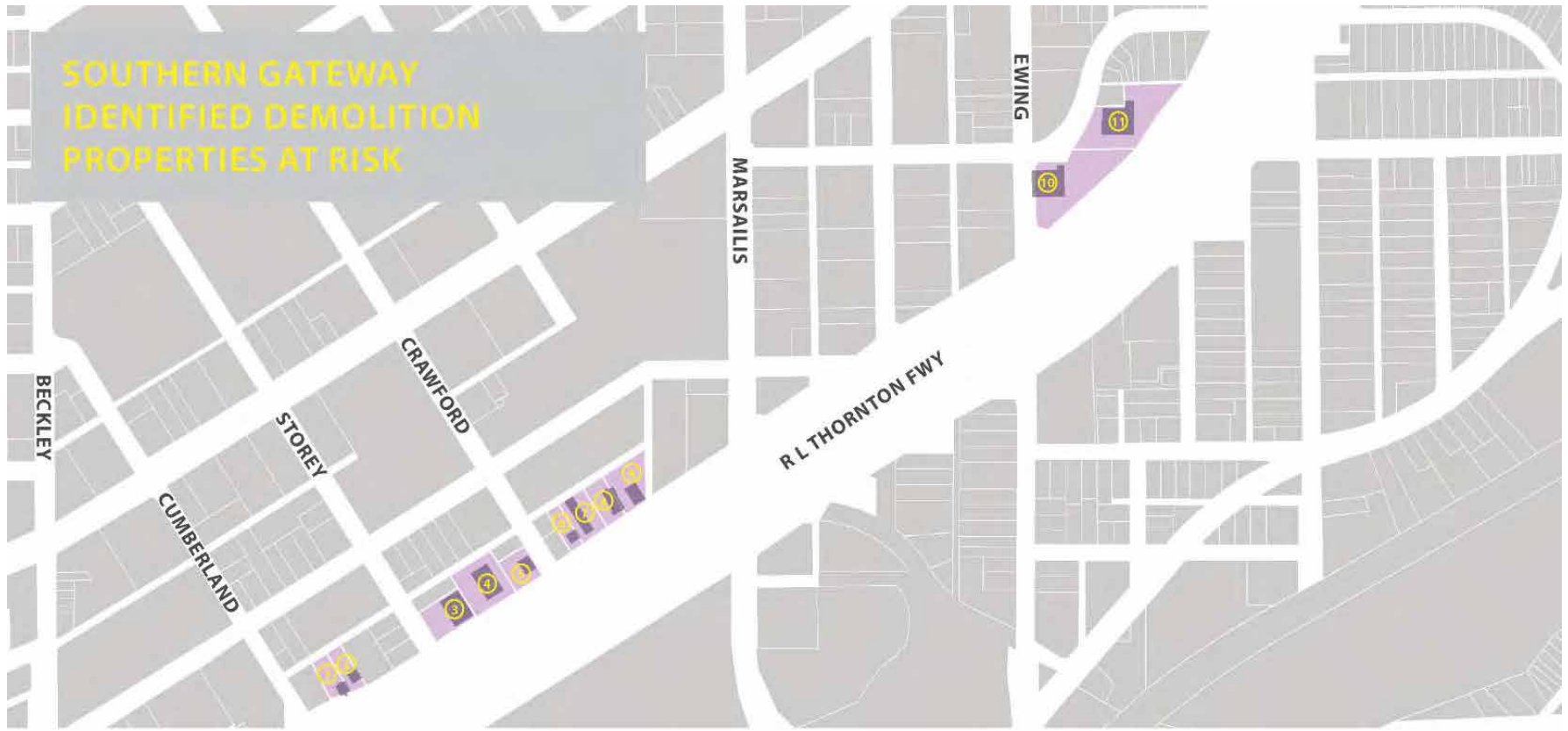
I-35E THE SOUTHERN GATEWAY



I-35E THE SOUTHERN GATEWAY



I-35E THE SOUTHERN GATEWAY





825 S. R L THORNTON FWY
YEAR BUILT: 1921
TYPE: Commercial Converted Residence
NAME: All Real Estate Brokerage



821 S. R L THORNTON FWY
YEAR BUILT: 1945
TYPE: Single Family Residence
NAME: Maxwell Tommy Eugene Life Estates



799 S. R L THORNTON FWY
YEAR BUILT: 1971
TYPE: Comerical Office Building
NAME: S A Meazell Insurance Agency



777 S. R L THORNTON FWY
YEAR BUILT: 1971
TYPE: Commercial Office Building
NAME: National Baptist Convention of America Inc.



851 S. R L THORNTON FWY
YEAR BUILT: 1964
TYPE: Commercial - Medical Office
NAME: Urgent Care and Rehab - Possible vacant property



318 S CRAWFORD*
YEAR BUILT: 1940
TYPE: Commercial Converted Residence
NAME: Unknown



737 S. R L THORNTON FWY
YEAR BUILT: 2000
TYPE: Commercial Office Building
NAME: Bonner Associates Constructors



731 S. R L THORNTON FWY
YEAR BUILT: 1950
TYPE: Commercial Converted Residence
NAME: Peachez, Inc.



727 S. R L THORNTON FWY
YEAR BUILT: 1911
TYPE: Commercial Converted Residence
NAME: Law Office



621 S. R L THORNTON FWY
YEAR BUILT: 1987
TYPE: Automotive Display
NAME: Tricolor Auto



553 S. R L THORNTON FWY
YEAR BUILT: YEAR BUILT: 1984
TYPE: Commercial Sales Office
NAME: Tricolor Auto

ENHANCED BRIDGE EXAMPLES



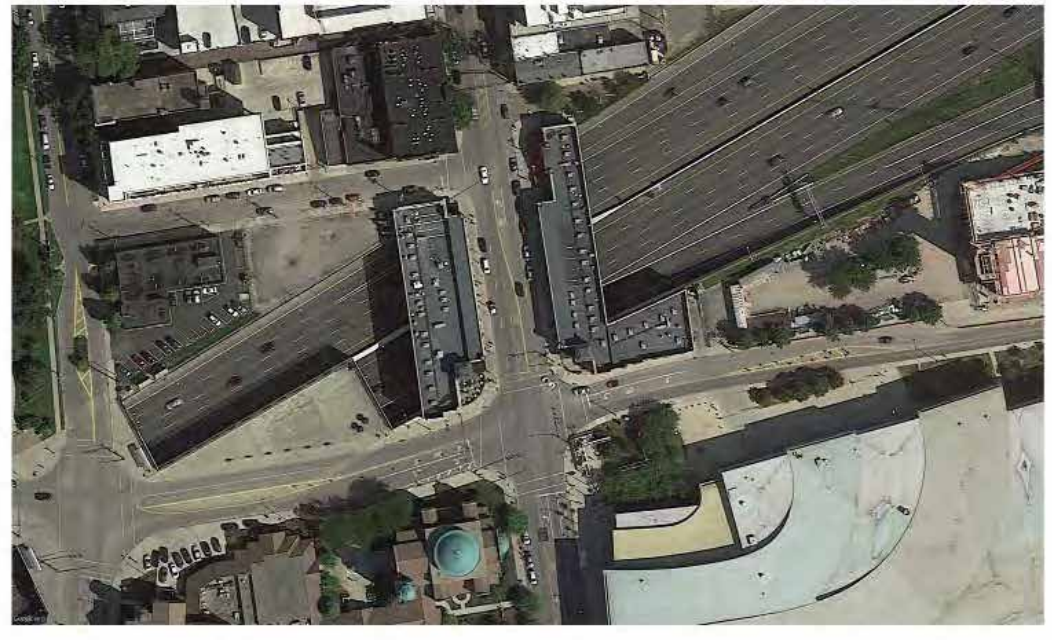
5th Street Bridge
Atlanta, Georgia

Opened: 2003
Cost: $10.1 Million
Dimensions: 256′ x 223′

Connects Georgia Tech campus to Midtown Atlanta







N. High Street Overpass
Columbus, Ohio

Opened: 2004
Cost: $10 Million
Dimensions: 215′ x 200′

Connects Short North neighborhood to the Convention Center





ENHANCED BRIDGE EXAMPLES



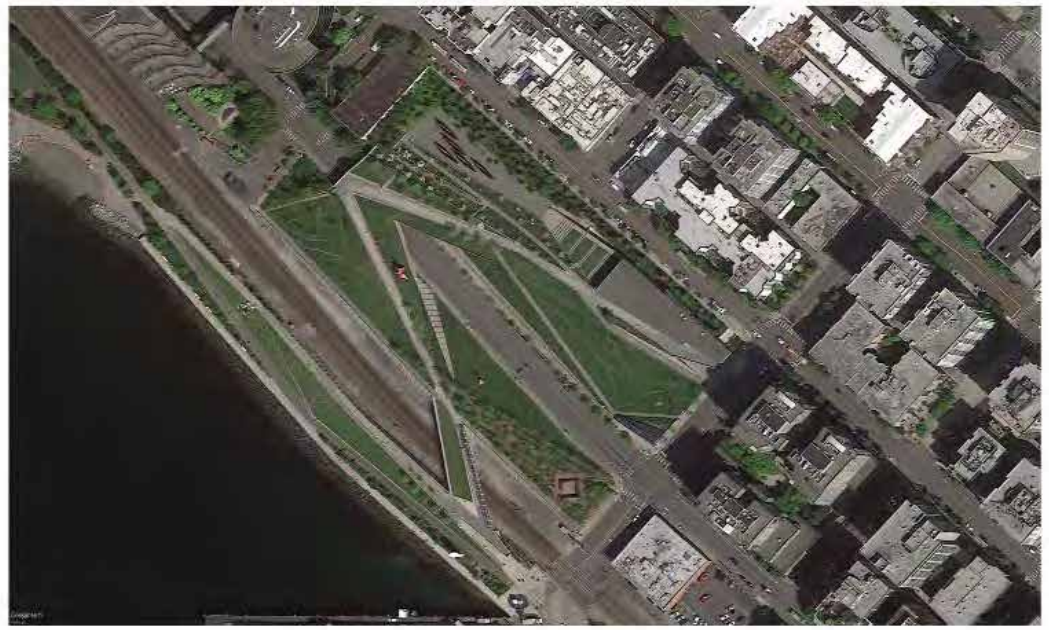
Millennium Bridge
Denver, Colorado

Opened: 2002
Cost: $9 Million
Length: 130'

Connects 16th Street Pedestrian Mall to Commons Park







Olympic Sculpture Park
Seattle, Washington

Opened: 2007
Cost: $85 Million
Size: 8.5 acres

Connects city to waterfront





APPENDIX | SUPPLEMENTAL MOBILITY EVALUATION

OVERVIEW

This Supplementary Mobility Evaluation presents additional evaluations that may be used in the consideration of the scenarios. The information presented includes an additional set of Study Area Performance Factor Comparisons and a series of network maps that compare the projected scenario traffic volumes to the 2040 Preliminary Plan projected traffic volumes. These are each discussed below and presented in the following pages.

STUDY AREA PERFORMANCE FACTOR COMPARISON FOR SCENARIOS WITHOUT TRINITY PARKWAY

The Study Area Performance Factor Comparisons presented here are identical in format to Tables 5-1, 5-2, 5-3, 8-1, 8-2, and 8-3 in the report. These additional tables compare the same Scenarios, but in this case, without the assumption that the Trinity Parkway is in place. The scenarios (without Trinity Parkway) are compared to the 2017 (Existing) Network, the 2040 No-build network, and to the 2040 Preliminary Plan. It should be noted that the 2040 Preliminary Plan includes the Trinity Parkway in the configuration that is in the Metropolitan Transportation Plan, Mobility 2040, a six-lane, tollroad.

TRAFFIC VOLUME DIFFERENCE MAPS

The following Traffic Volume Difference Maps show selected roadway link daily traffic projections in the Downtown area. The roadway links are also color coded to compare how the scenario daily projected volumes compare to the 2040 Preliminary Plan volumes. The links are coded to one of seven category ranges based on the volume difference. If the difference ranges from 5% less than to 5% greater than, there is no link color (grey). The three blue shades, ranging from light to dark, indicate that the scenario volume is up to 5% less, from 5% to 25% less, or greater than 25% less than the baseline network. The yellow/orange/brown shades indicate that the scenario is up to 5% greater, 5 to 25% greater, or more than 25% greater than the baseline.

This map series is helpful to detect the instances where the scenario modification to the freeway has an effect on thoroughfares as traffic seeks alternate routes. These are comparisons to the baseline that don't address whether they are more or less than the capacity of the road. However, several of the scenarios affect through-route capacity or access to the Central Business District to such a degree that widespread effects to thoroughfare facilities are projected. There are instances where groups of thoroughfares in a particular neighborhood would expect an increase of greater than 25% over the baseline projections. These are cases where the scenario may not be viable without significant measures to mitigate the impacts to community thoroughfares.

SUPPLEMENTAL MOBILITY EVALUATION

Study Area Performance Factor Comparison

Scenario: I-30 — Add Capacity/Below Grade (4-2R-4) Without Trinity Parkway

Objectives and Performance Factors			2017 Existing Value	2040 No-Build Value	2040 Preliminary Plan Value	Scenario Value	Scenario Comparison	
							No-Build	2040 Prelim
Quality	Average Speed (Weekday Miles per Hour)	Freeway/Toll Road	33	24	29	28	▲	▼
		Thoroughfare	19	15	18	17	▲	▼
Congestion	Congestion Delay per Trip (Minutes)	Freeway/Toll Road	4	6	5	5	▼	▶
		Thoroughfare	2	4	2	3	▼	▲

All Values represent annual average weekday traffic.

Scenario: I-30 — Add Capacity/Below Grade (5-2R-5) Without Trinity Parkway

Objectives and Performance Factors			2017 Existing Value	2040 No-Build Value	2040 Preliminary Plan Value	Scenario Value	Scenario Comparison	
							No-Build	2040 Prelim
Quality	Average Speed (Weekday Miles per Hour)	Freeway/Toll Road	33	24	29	27	▲	▼
		Thoroughfare	19	15	18	17	▲	▼
Congestion	Congestion Delay per Trip (Minutes)	Freeway/Toll Road	4	8	5	5	▼	▶
		Thoroughfare	2	4	2	3	▼	▲

All Values represent annual average weekday traffic.

Scenario: I-30 — Relocate Without Trinity Parkway

Objectives and Performance Factors			2017 Existing Value	2040 No-Build Value	2040 Preliminary Plan Value	Scenario Value	Scenario Comparison	
							No-Build	2040 Prelim
Quality	Average Speed (Weekday Miles per Hour)	Freeway/Toll Road	33	24	29	28	▲	▼
		Thoroughfare	19	15	18	17	▲	▼
Congestion	Congestion Delay per Trip (Minutes)	Freeway/Toll Road	4	8	5	6	▼	▲
		Thoroughfare	2	4	2	3	▼	▲

All Values represent annual average weekday traffic.

Arrow Indication Key:

- Favorable change in performance factor value
- Unfavorable change in performance factor value
- ▲ Increase in performance factor value
- ▼ Decrease in performance factor value
- ▶ No significant difference in performance factor value

SUPPLEMENTAL MOBILITY EVALUATION

Study Area Performance Factor Comparison

Scenario: I-345 — Modify Objectives and Performance Factors Without Trinity Parkway

Objectives and Performance Factors			2017 Existing Value	2040 No-Build Value	2040 Preliminary Plan Value	Scenario Value	Scenario Comparison	
							No-Build	2040 Prelim
Quality	Average Speed (Weekday Miles per Hour)	Freeway/Toll Road	33	24	29	29	▲	▶
		Thoroughfare	19	15	18	17	▲	▼
Congestion	Congestion Delay per Trip (Minutes)	Freeway/Toll Road	4	8	5	5	▼	▶
		Thoroughfare	2	4	2	3	▼	▲

All Values represent annual average weekday traffic.

Scenario: I-345 — Remove Objectives and Performance Factors Without Trinity Parkway

Objectives and Performance Factors			2017 Existing Value	2040 No-Build Value	2040 Preliminary Plan Value	Scenario Value	Scenario Comparison	
							No-Build	2040 Prelim
Quality	Average Speed (Weekday Miles per Hour)	Freeway/Toll Road	33	24	29	30	▲	▲
		Thoroughfare	19	15	18	16	▲	▼
Congestion	Congestion Delay per Trip (Minutes)	Freeway/Toll Road	4	8	5	4	▼	▼
		Thoroughfare	2	4	2	3	▼	▲

All Values represent annual average weekday traffic.

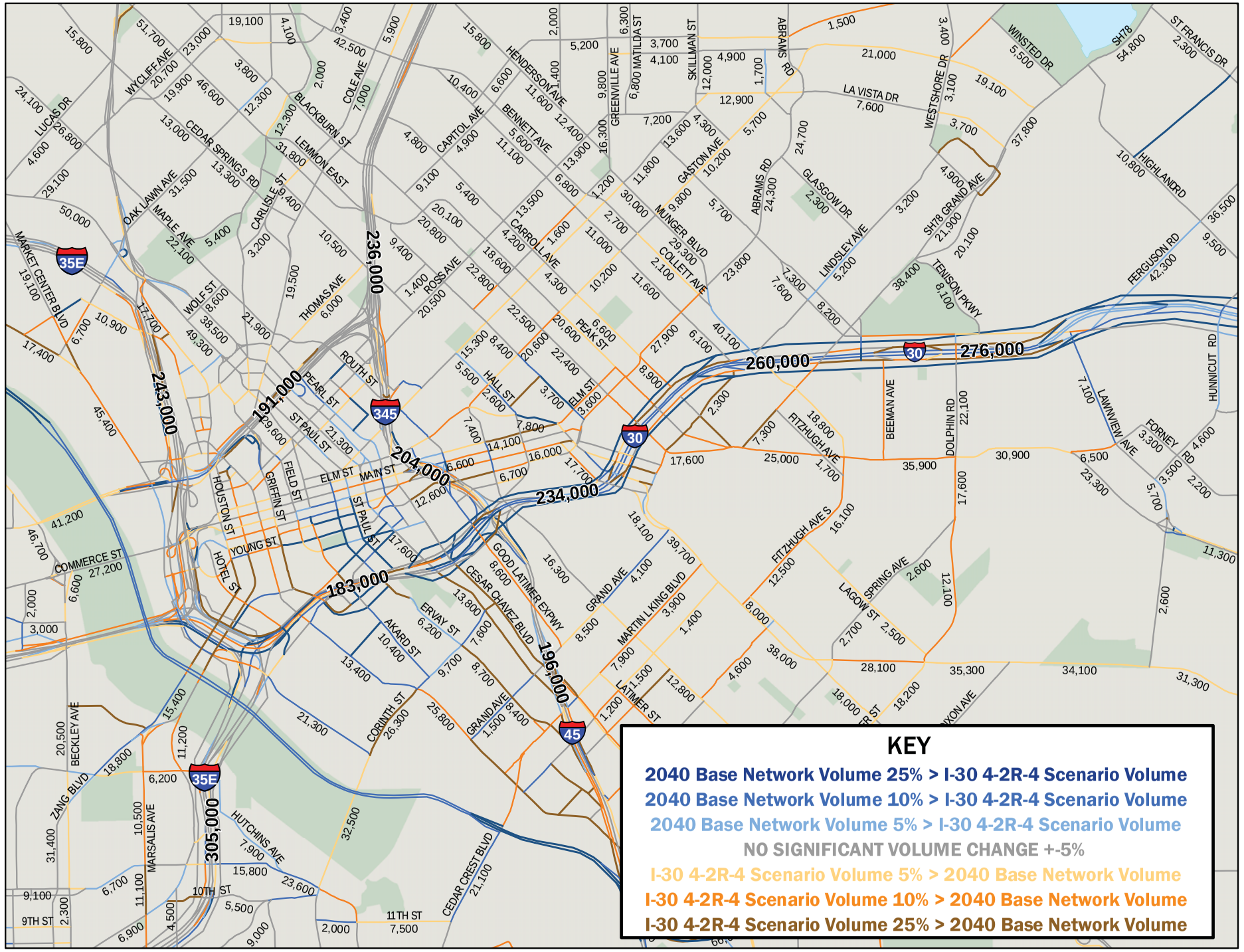
Scenario: I-345 — Below Grade Objective and Performance Factors Without Trinity Parkway

Objectives and Performance Factors			2017 Existing Value	2040 No-Build Value	2040 Preliminary Plan Value	Scenario Value	Scenario Comparison	
							No-Build	2040 Prelim
Quality	Average Speed (Weekday Miles per Hour)	Freeway/Toll Road	33	24	29	30	▲	▲
		Thoroughfare	19	15	18	17	▲	▼
Congestion	Congestion Delay per Trip (Minutes)	Freeway/Toll Road	4	8	5	5	▼	▶
		Thoroughfare	2	4	2	3	▼	▲

All Values represent annual average weekday traffic.

Arrow Indication Key:

- Favorable change in performance factor value
- Unfavorable change in performance factor value
- ▲ Increase in performance factor value
- ▼ Decrease in performance factor value
- ▶ No significant difference in performance factor value



Traffic Volume Difference Maps

Scenario (I-30, 4-2R-4) compared to 2040 Preliminary Plan

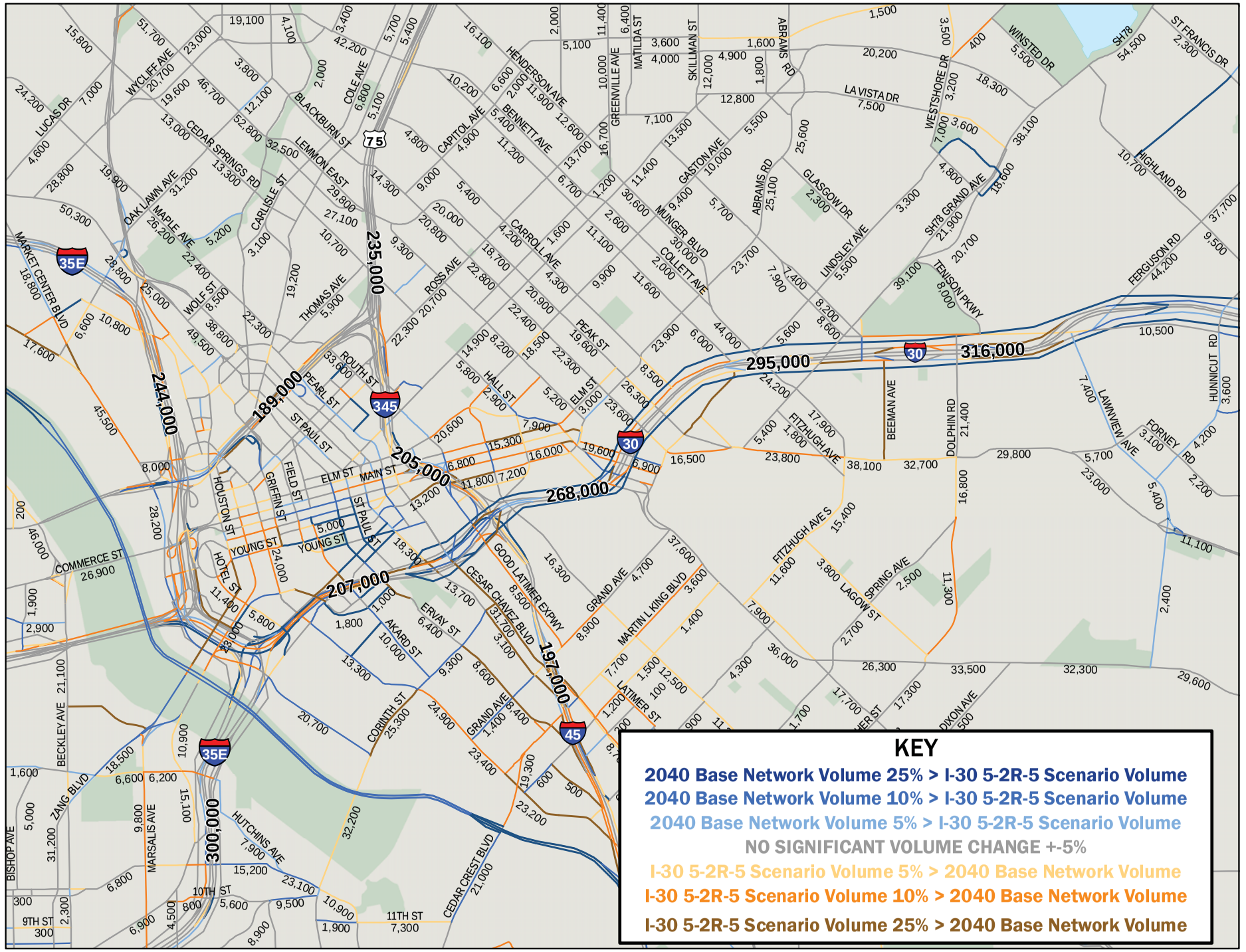
This comparison predicts that the scenario, compared to the Plan, would place slightly more traffic on some thoroughfares near the Central Business District. Traffic on I-45 would divert to Good Latimer Expressway, Cesar Chavez Boulevard, and Harwood Street.

Link Volumes shown are Scenario 2040, Annual Average Weekday.

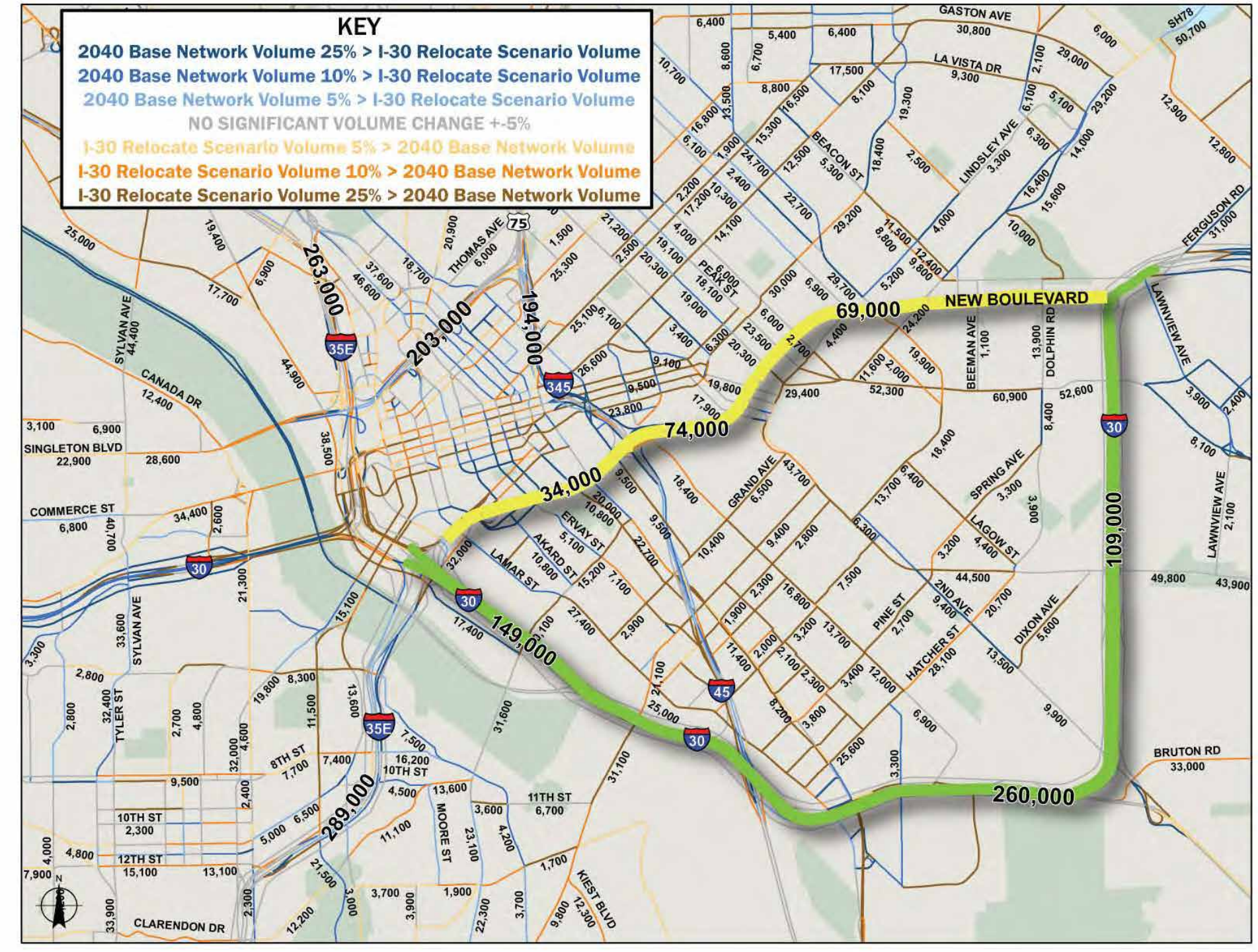
Traffic Volume Difference Maps

Scenario (I-30, 5-2R-5) Compared to 2040 Preliminary Plan

This comparison predicts that the scenario, compared to the Plan, would place slightly more traffic on some thoroughfares near the Central Business District. Traffic on I-30 east of I-45 would divert to Elm, Main and Commerce Streets and traffic on I-45 would divert to Cesar Chavez Boulevard.



Link Volumes shown are Scenario 2040, Annual Average Weekday.



Traffic Volume Difference Maps

Scenario (I-30, Relocate) compared to 2040 Preliminary Plan

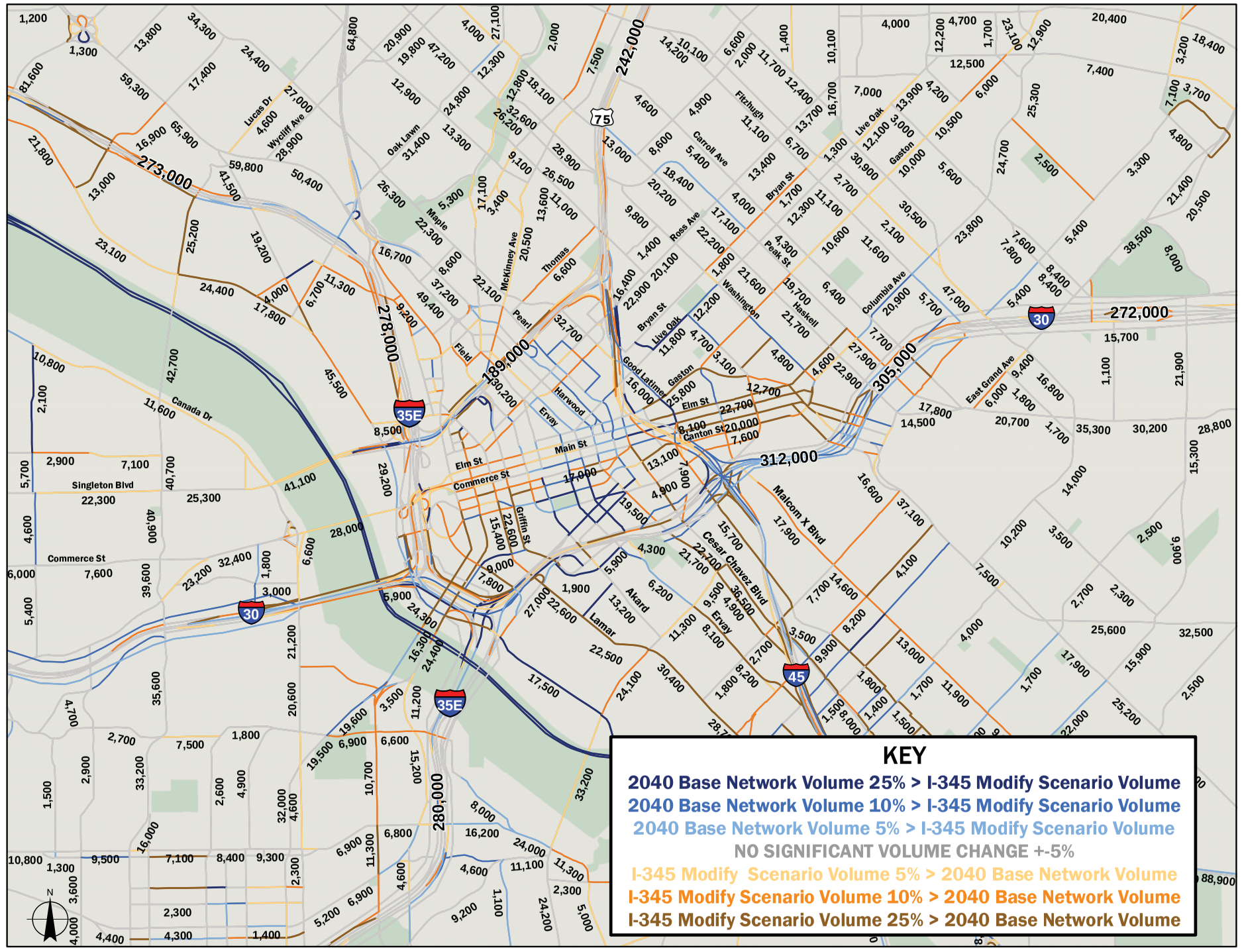
The I-30 Relocate Scenario would trigger a major alteration in traffic patterns in Downtown Dallas. The highest volumes (260,000 vehicles per weekday) in the new I-30 route would occur where I-30 and US 175 would exist as a coterminous route and between I-45 and the Horseshoe (149,000 vehicles per weekday) where the route diverts traffic from I-45. The traffic on New Boulevard, which replaces the I-30 alignment, at 74,000 and 69,000 vehicles per weekday, would exceed the normal capacity of a principal arterial (67,500).

Link Volumes shown are Scenario 2040, Annual Average Weekday.

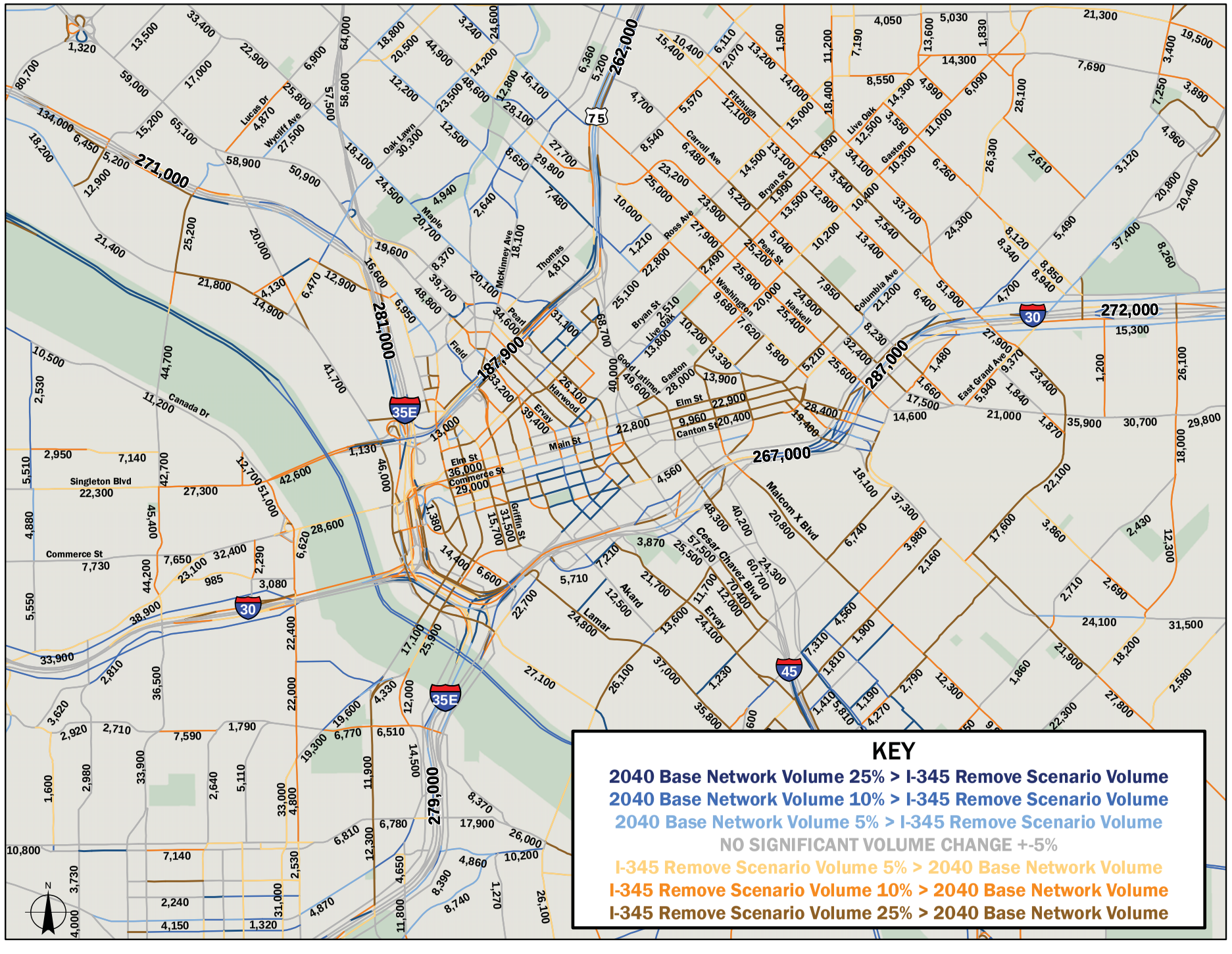
Traffic Volume Difference Maps

Scenario (I-345, Modify) compared to 2040 Preliminary Plan

This scenario would eliminate existing access to the Central Business District that I-345 provides from I-30, east and I-45. I-30 traffic would seek alternate routes on Elm, Main, Commerce Streets and Gaston, Exposition, 1st, and 2nd Avenues. I-45 traffic to and from the Central Business District would divert to Good Latimer Expressway, Cesar Chavez Boulevard and Harwood Street.



Link Volumes shown are Scenario 2040, Annual Average Weekday.



Traffic Volume Difference Maps

Scenario (I-345, Remove) compared to 2040 Preliminary Plan

Compared to the 2040 Preliminary Plan, this scenario would cause widespread traffic increases in East Dallas, Deep Ellum, and Near South Dallas. These increases would occur as new routes are utilized to access the Central Business District from I-30, east and I-45. Thoroughfare traffic increases would also be attributed to traffic between US 75 and I-45. Some of the thoroughfares that would have increases greater than 25% are: N. Collett and Carroll Avenues; Elm, Main, Commerce and Peak Streets; and Malcom X Boulevard, Cesar Chavez Boulevard, Harwood Street. A particularly problematic situation would be handling the crossing of traffic to/from the east and the Central Business District and traffic between South Dallas with origins and destinations along US 75. The sections of I-45 near the Central Business District and the I-45/I-30 Interchange would be eliminated. As a result, the scenario would decrease volumes in the eastern part of the Canyon and cause an increase in thoroughfares such as South Ervay and South Lamar Streets.

Link Volumes shown are Scenario 2040, Annual Average Weekday.

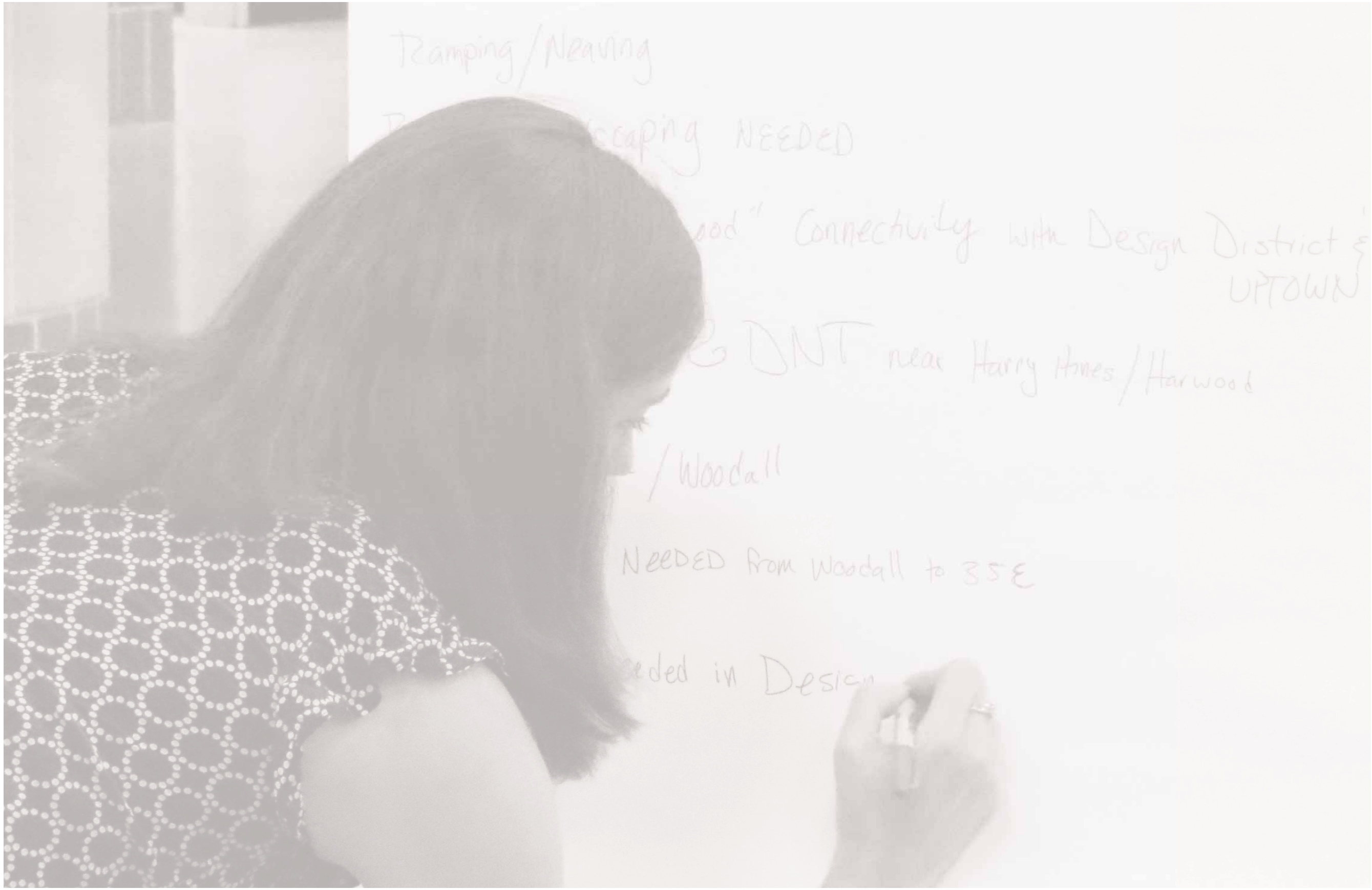
Traffic Volume Difference Maps

Scenario (I-345, Below Grade) compared to 2040 Preliminary Plan

The I-345 Below-grade option was configured without the existing access connections to Elm, Main, and Commerce Streets. Traffic would seek alternate paths to and from the Central Business District thus increasing traffic on Elm, Main, and Commerce Streets as well as Good Latimer Expressway, Cesar Chavez Boulevard, and Harwood Street.



Link Volumes shown are Scenario 2040, Annual Average Weekday.


Ramping/Weaving
NEEDED
Connectivity with Design District &
UPTOWN
DNT near Harry Hines/Harwood
/Woodall
NEEDED from Woodall to 35E