



City of Austin

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September 24, 2021

Mr. Tucker Ferguson
Austin District Engineer
Ms. Susan Fraser, Mobility35 Project Manager
Texas Department of Transportation
7901 North IH-35
Austin, Texas 78753

RE: I-35 Capital Express (CapEx) Central Project, Austin, TX
City of Austin Comments on August 2021 Open House

Dear Mr. Ferguson and Ms. Fraser:

Thank you and the staff with TxDOT Austin for your work on the I-35 Capital Express Project. On behalf of the City of Austin, we want to express our appreciation to the Department and to the State for addressing what is one of our most pressing mobility and social equity challenges in Central Texas. Even as we continue to work through our differences in opinion on critical design elements, we recognize the value of this project.

We believe that a limited access highway within the I-35 Corridor is vitally important to the on-going success of Austin and the region. We are firmly on record as to the need for a major transformative project that connects our region to national and worldwide markets, while also providing the connective structures to knit our divided communities back together. We stand ready to continue our collaboration with TxDOT but are anxious for a strong commitment to meaningfully review certain design elements discussed herein.

This communication builds on the first and second Scoping Responses we have shared with TxDOT on Dec. 29, 2020 and Apr. 9, 2021, respectively. Below you will find key areas of concern that the City of Austin needs addressed in the I-35 CapEx Central project, along with additional comments included as attachments:

- **Purpose and Need**
- **Safety – Along and Across the Corridor**
- **Direct, Indirect and Cumulative Impacts**
 - **East-West Connectivity**
 - **Reduce Displacement by Narrowing the Footprint**
 - **Air Quality Concerns**
- **Transit Priority and High Occupancy Vehicle (HOV) Operations**
- **Actively Manage HOV lanes**
- **Incorporate Technology Solutions**
- **Utility/Drainage Concerns**

Purpose and Need

It is important that the City of Austin and TxDOT be aligned on the mission of the I-35 Cap Ex Central rebuild project. In our second Scoping response letter dated Apr. 9, 2021, we respectfully requested additional items in the Purpose and Need statement to broaden the scope of the project, namely, to add:

- The need to address/enhance people's health and safety within the corridor, and
- The need to acknowledge and address the existing and historic role the facility plays in negatively impacting Austin's communities of color and the natural environment.

We have seen no changes in the Purpose and Need in the latest TxDOT document, the "Draft Alternatives Evaluation Technical Report" August 2021. We believe the above items are critical to the success of the project and support of our community and again request TxDOT include them in the project Purpose and Need.

Safety- Along and Across the Corridor

In recognizing the importance of I-35, we also understand that the current design is broken – it no longer meets the needs of Central Texans. Its design is antiquated, leading to unacceptable increased safety risks. From our own data, we know that I-35 is one of the deadliest state roadways in our region. We agree with TxDOT that a modern freeway is needed. Our Austin Transportation Department engineers have provided numerous suggested solutions to improve safety design and standards that go beyond traditional highway design for urban areas including intersection design, design speeds, bicycle/pedestrian access and frontage road usage. We look forward to continued teamwork in this area.

Direct, Indirect and Cumulative Impacts

We know that Federal law requires mitigation of direct project impacts. The I-35 corridor has also created numerous indirect and cumulative impacts over its lifetime. Construction of a new highway will exacerbate some of these indirect and cumulative impacts to East-West connectivity, the surrounding community and air quality. We believe TxDOT is also responsible to mitigate these issues as well.

➤ East-West Austin Connectivity

In addition to our desire to incorporate improved safety, management, and transit options in the design for the IH-35 CapEx Central, we remain concerned that the future I-35 will continue to be a barrier for residents, cutting off East Austin from the key employment, educational, and entertainment opportunities in Central/West Austin. The I-35 corridor has had a generational community effect in terms of the physical and psychological barrier between east and west Austin. The long-term impacts of physical separation, reduced access to better jobs and opportunities, and increased air and noise pollution along the highway have helped perpetuate a lower wage earning, less healthy population east of the highway. The attached map is a rough estimate and visualization of Areas of Persistent Poverty along the I-35 corridor, using USDOT metrics (data source: 2014-2018 American Community Survey). Although some demographics of the area are changing, the marginalized intergenerational community remains and wishes to preserve its cultural identities and histories that have been pushed aside by the highway.

Replacing the existing at-grade and elevated upper deck structures with a depressed freeway design still presents a physical divide. Austin believes it important to reconnect our neighborhoods both east and west of the divide and make sure that people have numerous opportunities to cross the future corridor, on foot, on bicycle, using transit, as well as via automobile. We need assurance that the preferred alternative aligns with the City's Downtown Austin Plan goals of developing supportive, positive, and sustainable development with art and placemaking opportunities.

To achieve these goals, we believe sufficiently wide bridge structures or caps should be included in the definition of the base alternatives as mitigation for impacts as part of the project's National Environmental Policy Act (NEPA) EIS. The ability to allow the cap to be repurposed for public benefit with structures and/or community gathering places should be included. For TxDOT to be successful, we believe that at the

very least the supportive structures for future caps and wide bridges need to be constructed by the project to address the direct impacts we anticipate from the base project and the indirect impacts caused to the surrounding neighborhood due to the anticipated construction process. TxDOT estimates construction lasting up to a decade. The cumulative effect of the construction and probable displacements will create long-term economic hardship on the surrounding community that must be mitigated.

In addition, preservation of active transportation connections and corridors planned within the IH-35 corridor is essential. The Austin Transportation Department provided a list of pedestrian, bicycle, trail, and park greenbelt connectivity crossings via letter on January 19, 2021, and a map of “Bicycle and Pedestrian Crossings” to TxDOT for the IH-35 Capital Express North, Central and South projects via letter on May 25, 2021 (both attached). We believe these projects will improve the safety of people along and across the corridor. These crossings would reduce connectivity gaps, remove mobility barriers for lower income populations, and mitigate hot spots for pedestrian-involved crashes. The City requests continued coordination with TxDOT to assure the design of the Capital Express Central, along with North and South projects, include these proposed future crossings.

➤ **Reduce Displacement by Narrowing the Footprint**

Scars remain in the community from the original highway construction displacing black and brown communities to the east and cutting off communities from opportunity. TxDOT must design the I-35 Central project to prevent displacement of community members to the greatest extent possible. TxDOT has identified 147 parcels that are affected within the current alternatives. We look forward to a more definitive study on the potential residential and commercial minority and low-income displacements on a per person rather than parcel basis. Austin believes it is imperative that the width and impact to the remaining community be minimized to reduce the direct and indirect impacts to these historically impacted communities.

In addition to the long-term economic and health impacts, the proposed construction, relocation, and disruption to the community will be a major upheaval for nearly 10 years going forward. Access to our central employment centers (the University of Texas, State Capitol Complex, and Austin Central Business District) is also a primary concern for the City of Austin. Reconstruction of I-35, regardless of the design, will likely be impactful to our community for nearly a decade, so maximizing access to these employment centers during and after construction is critical to Central Texas.

Austin Transportation believes there are multiple ways to reduce or eliminate much of the proposed takings and improve operations through engineering design, such as cantilevered frontage roads, portal ramps, and reviewing operational needs for individual ramps, main lanes, and bypass lanes. etc. The ramping issue is the linchpin to many other design elements, such as the ability to reduce the number of frontage road lanes and achieve a more urban context for speed and safety.

By reexamining the volume projections and volume/capacity analysis assumptions and processes included in Traffic Forecasts and Modeling for the four managed lanes and general-purpose lanes with the supplemental collector-distributor lanes we believe we can further refine the needs of the project. For further detail, see ATD’s letter to TxDOT on Build Alternatives and potential design concepts, September 13, 2021 (attached).

We request that State and City design engineers work to fully analyze the opportunities presented by these concepts to further narrow the corridor. We request that together we thoroughly analyze all viable design alternatives that could reduce the need for additional right-of-way and displacements. The current design

proposals by TxDOT displace too many potential properties. These impacts, and all direct and indirect/cumulative impacts, identified through the NEPA process should be mitigated as part of the project.

A cantilevered approach to reduce the footprint combined with capping the structure to reconnect communities should be considered necessary mitigation to remedy direct impacts of the project. A cap should be implemented to facilitate access to social and job opportunities and express cultural and historical features important to our community to remedy the indirect and cumulative impacts caused by the corridor.

➤ **Air Quality Concerns**

While we have been fortunate as a community to remain in attainment for federal air quality guidelines, Austin is still on the brink of failure into non-attainment. Those communities closest to the I-35 facility, particularly black and brown communities, for decades have borne the worst effects of a congested highway and long-term and cumulative exposure to transportation air pollution at their back door.

As the new widened facility will induce high traffic volumes to the area, a serious and substantial study is needed to determine the health effects the current and proposed new facility has on the health of area residents within the airshed.

Relying on Corporate Average Fuel Economy (CAFE) standards for air pollution reduction is not sufficient when the overall amount of traffic will increase. We request the project, operations and ancillary facilities be designed to reduce greenhouse gas emissions.

Austin Transportation believes that many of the technical solutions we have offered will greatly aid healthy communities and pollution reduction, including:

- A reduced footprint and cantilevered and capped highways that filter pollutants,
- Tree plantings for shade, aesthetics, and pollution reduction,
- Safe east-west access that promote non-motorized crossings, and
- Direct portal entrances that can reduce frontage road and city grid congestion
- Prioritized transit access and supportive facilities to encourage high occupancy vehicle use

Transit Priority and High Occupancy Vehicle (HOV) Operation

Through our Austin Strategic Transportation Plan (ASMP), Austin has adopted a 50-50 transportation modal split by 2039. The adopted ASMP, as well as the Capital Area Metropolitan Planning Organization (CAMPO) adopted Regional Mobility Plan seek to reduce trips throughout the region. To meet the long-term future needs of the Austin region, it is critically important that we improve transit access into central Austin, incentivizing the use of higher occupancy forms of transportation over the single occupant vehicle. The current design of two HOV lanes in each direction through downtown is concerning. HOVs are typically destined for the primary employment destinations in the region. The current design is one geared for through-demand. Please share analysis that show the viability of this concept.

We also believe that investment in critical transit enhancements within the corridor are essential to the success of the TxDOT project. Ramping and remote park-and-ride facilities that encourage travelers to convert from private single-occupant vehicles to higher occupancy vehicles and into the automated rubber-tired fleets of the future are critical to the success of Central Texas. An expanded I-35 will generate higher numbers of trips. The City of Austin believes this direct impact can and must be mitigated using every tool available, including construction of transit facilities in conjunction with the overall project.

If the facility is to be managed only by vehicle occupancy, the City of Austin requests that one of these HOV lanes be used as dedicated access to the downtown arterial grid system, reducing the number of through-HOV lanes to one in each direction. We also request that a full operational analysis by HOV industry experts be conducted to provide improved information on the long-term sustainability of such an HOV concept, including an analysis of enforcement procedures and costs. Will the State enforce the vehicle occupancy requirements, or will this cost fall to local law enforcement agencies? This is important because it creates an unfunded mandate and direct impact on local law enforcement agencies that must be mitigated by the State as the proponent for this project.

Actively Manage HOV/HOT lanes

If the current four-lane managed lane design is to be maintained, then we request that the management of the central managed lanes be designed as HOV/Toll or HOT lanes and allowed to convert at an appropriate time based on the operational characteristics of the facility. We understand by previous communication that TxDOT Austin is currently restricted from looking at toll-managed solutions. We request that this limitation either be removed or that a HOT lane alternative still be evaluated, assuming initial operation is managed as HOV only but expressly allows for conversion in the future. We remain concerned that a 2+ HOV designation will lead to overcrowding of the facility resulting in inefficient transit operations and that a 3+ HOV designation will lead to a perceived underutilization of the facility. Only with a future toll option can we expect efficient future operations.

As previously communicated, when CAMPO supported regional funding of \$1 Billion for the I-35 Cap Ex project it was with a commitment that preservation of a future tolling option be maintained. We request that the EIS expressly maintains this capability.

Incorporate Technology Solutions

We implore TxDOT to not only assure that the facility meets the latest geometric requirements, but that the future freeway also incorporate technology and design principals that maximize the ability to manage the facility in real time. The new facility should include technology management capabilities that allow real-time dynamic management of travel demand on the central managed lanes; the ability to adjust and harmonize speeds variably so that traffic compression waves can be managed; and the future freeway must be able to accommodate and incentivize future modal investments in automated vehicles, rubber-tired transit, low emission vehicles and other yet to be defined emerging technologies.

Utility/Drainage Concerns and Coordination with Project Connect

Austin Water and Austin Energy have documented concerns about conflicts related to current infrastructure and future projects in memos attached to this letter.

The City is far along in its plans for the Waterloo Greenway and the operation of the Waller Creek tunnel. If the preferred alternative design conflicts with these projects or with the city's stormwater management system, early coordination is needed with our Watershed Protection Department.

With future updates to Atlas 14 in mind, please consider how flood mitigation strategies can protect assets and the broader community.

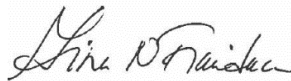
The City, along with Capital Metro, is making a major investment in high-capacity transit. These plans too, are far along and we ask TxDOT to coordinate with the region to assure these investments are not delayed.

Commitment to the Best Project

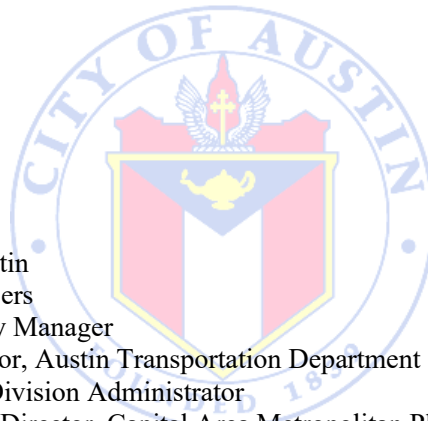
The I-35 Capital Express project is a once in a community lifetime opportunity to deliver a truly transformative solution to the current I-35 challenge. We know that this highway is not only the main street for Central Texas, but it is the main street for the State. Please consider all viable alternatives as part of the NEPA process. Design the future I-35 project to minimize real impacts to our community. Configure the future I-35 project with long-term sustainable operations in mind, directly imbedding within the design and the EIS technologies, and management capabilities that allow this project to be sustainable. Mitigate direct and indirect impacts suffered by our community by collaborating with the City in realizing the ability to reconnect east and west/central Austin, building the superstructure necessary for caps and wide bridges.

We want to work with TxDOT, regional and state leaders to make sure this is a project that all Texans can be proud of for generations to come.

Sincerely,



Gina Fiandaca
Assistant City Manager
Mobility Services
City of Austin

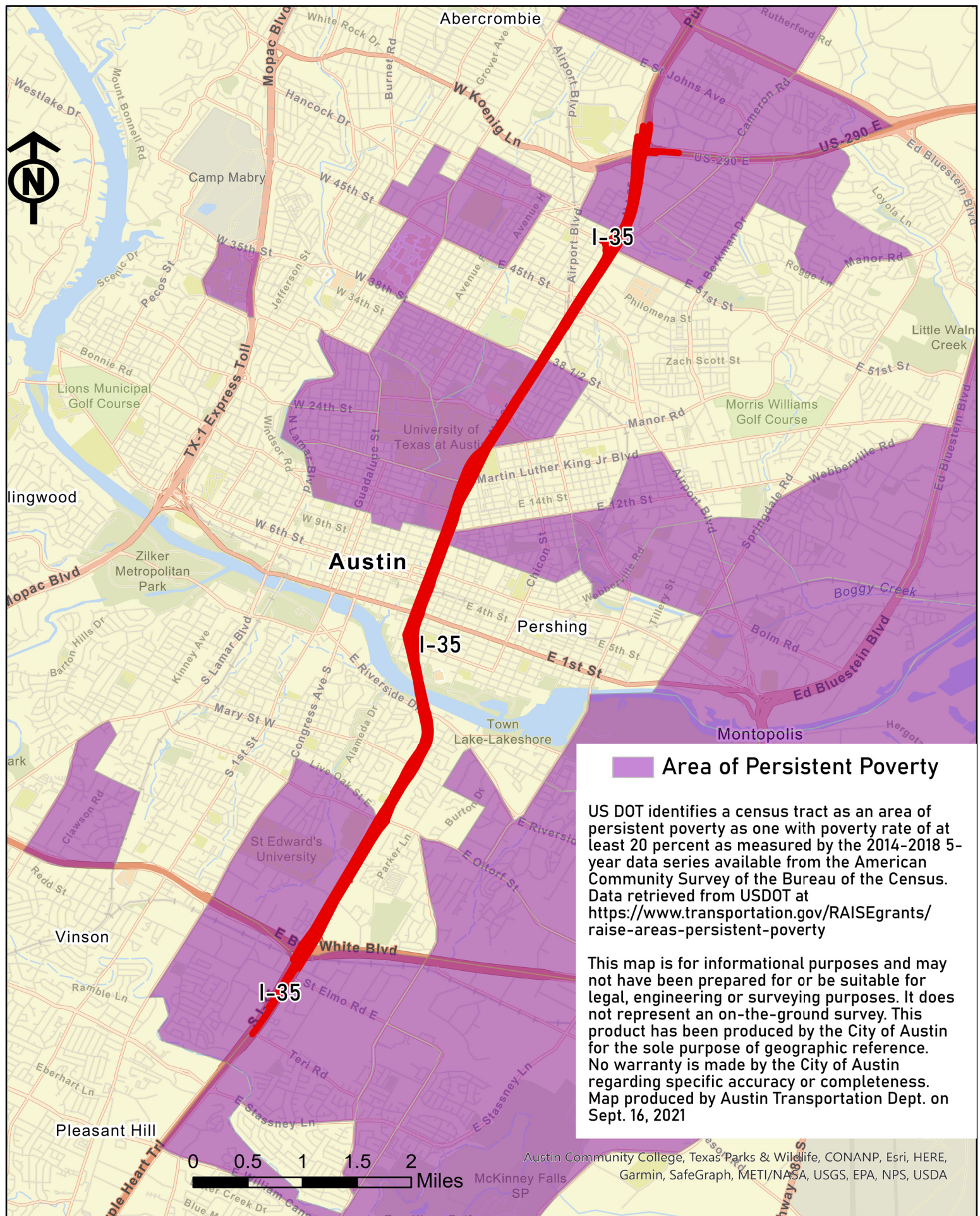


Cc: Steve Adler, Mayor of Austin
Austin City Council Members
Spencer Cronk, Austin City Manager
Robert Spillar, P.E., Director, Austin Transportation Department
Al Alonzi, FHWA Texas Division Administrator
Ashby Johnson, Executive Director, Capital Area Metropolitan Planning Organization
Judge Andy Brown, Travis County
Laura Huffman, President and CEO, Austin Chamber of Commerce
Dewitt Peart, President and CEO, Downtown Austin Alliance

Attachments:

- Areas of Persistent Poverty along the I-35 corridor - Illustrative map
- I-35 Bicycle and Pedestrian Crossings Jan. 19, 2021
- I-35 Capital Express S. Project Public Hearing Comments with Crossings Map May 25, 2021
- ATD's letter to TxDOT on Build Alternatives and potential design concepts, Sept. 13, 2021
- Austin Energy letter on potential conflicts – Sept. 8, 2021
- Austin Water letter on potential conflicts – Sept. 3, 2021

Areas of Persistent Poverty near Project Area





Austin Transportation Department

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January 19, 2021

Heather Ashley-Nguyen
I-35 Capital Expressway Project Team
Texas Department of Transportation
Heather.AshleyNguyen@txdot.gov

Re: Technical Backup for Inclusion of Adopted Trail Crossings within I-35 Design Alternatives

Dear Ms. Ashley-Nguyen,

The purpose of this letter is to provide technical backup to the one sent by Richard Mendoza and I transmitted to District Engineer Tucker Ferguson on January 4, 2021, regarding crossing improvement requests from the City of Austin (COA) for the I-35 North, South and Central Capital Express Projects. These crossing requests serve pedestrian, bicycle, trail and park greenbelt connectivity along the I-35 Capital Express projects. Many are included in Urban Trails and Park adopted plans and others address connectivity gaps or pedestrian crash hot spots. The North and South projects are of priority concern given their timeline but crossing requests for the Central Project are included for comprehensiveness. The City expects that significant cost savings of building these crossing improvements with the I-35 projects and avoids risks that crossing feasibility would be precluded or complicated. These crossings also mitigate social justice impacts of the corridor where the available crossing frequencies for people walking and bicycling in the north and south sections of the project are very limited, often 1.5 – 2 miles apart, creating significant barriers for eastern crescent communities with lower income populations who can no longer afford to live in the central part of the City from access to transit assets and economic opportunity to the west of I-35.

History of COA Request and Comment

In recent coordination calls with the Texas Department of Transportation (TXDOT), staff has requested a recounting of the history of these crossing requests. The final list of requested crossings shown below is pared down from previous versions that have been transmitted to the I-35 team by COA staff over many years through the interagency coordination for the development of these projects. Copies of comment transmissions are attached.

- Identification of many crossings in 2012 I-35 Charrette
- Public Works Department (PWD) compiled list of requested trail and pedestrian crossings and transmitted to I-35 design team May 20, 2013
- Austin Transportation Department (ATD) comments related to Shared Use Path (SUP) design and all crossings - inclusive of trails, existing roadway crossings, interchanges, and new roadway crossings – sent July 23, 2014
- ATD comments related to SUP design and crossings sent August 5, 2016 – No response received
- ATD comments on North project schematic sent October 13, 2016 – No response received. This included comments on numerous crossings.
- ATD comments on South project schematic sent January 12, 2017 – No response received. This included request to incorporate the Williamson Creek crossing which was not done during the Stassney project construction.

- Ladybird Lake trail to trail connection – Extensive coordination between ATD and TXDOT summer 2017, including confirmation from then District Engineer Terry McCoy this could be included into the I-35 project.
- ATD memo sent January 15, 2020 – All requested crossing locations listed
- Detailed markups of North, Central, and South schematics sent January 15, 2020 at TXDOT's request
- January 21-25, 2020 – CapEx Central Design Charrette – Improving and adding pedestrian crossings a frequent topic of stated importance and included in the end-of-week report out.
- February 10-11, 2020 – CapEx North VE Study - Improving and adding pedestrian crossings discussed as area of importance for ATD. Full list from 1-15-2020 memo retransmitted.
- TXDOT's CapEx Charrette Summary Report dated April 29, 2020, includes ATD's request for additional pedestrian/bicycle crossings
- March 20, 2020 – ATD letter following up on requests from Capital Express Design Charrette

Ideally these crossing requests would have been incorporated into the Capital Express projects on more timely notification of the intent not to incorporate into project would have been given. City staff first learned of the intent to not include the requested crossing improvements for the north and south projects (the central project is still early in development) at a Cross Agency Working group meeting on December 4, 2020. Given the importance of these crossings for removing the barrier of I-35 to pedestrian, bicycle, trail and park greenbelt connectivity the City is willing to enter into cost partnership to ensure that these connections are included in the project, particularly in the north and south project that are more advanced in development and fiscally constrained. Cost partnership would be in context of impacts of the corridor including parkland, noise, social justice, connectivity and the degree that these crossing improvements mitigation these impacts.

Funding Partnership Details

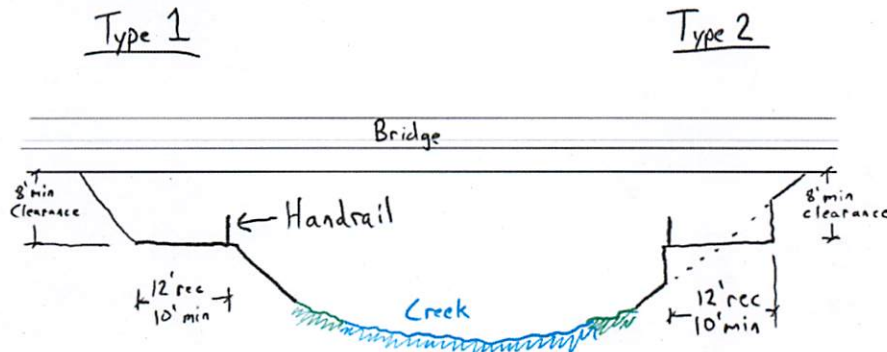
The City of Austin has several available sources of funding to cost partner particularly with the north and south Capital Express projects. These are Bikeway, Urban Trail, and Pedestrian Crossing funds from prior municipal bonds. The City expects to go through a process to quickly negotiate an appropriate cost share for the requested changes to the north and south projects considering current planned scope of work, engineering estimates, locations with Section 4(f) parkland negotiations (locations noted in the table below) and the impacts and mitigations noted above. Some crossing requests are to modify the under-bridge riprap to include a level landing or culvert with floor higher than base flow which should have minimal cost impact. Other locations are requests for new grade separated overhead crossings that have been requested to be incorporated into the project for years but are still not included in the project scope. Agreement by the City to participate in the funding for these trail crossings should be considered as part of overall project mitigation for the barrier affect created by I-35 passing through the community, dividing traditional neighborhoods connected by cultural and civic ties.- Detailed funding agreements for City participation will of course need to be negotiated, but we stand ready to assist.

General Connection Design

The crossings fit into three general categories, modified abutments, modified culverts, and overhead pedestrian / bicycle bridges. For crossings at creeks the table below notes if the crossing need is known to be on the north or south side of the creek. For trails where this determination has not been made the request is to accommodate the crossing on both sides of the creek to avoid issues with feasibility of later trail development. Generally, for grade separated crossings it is desirable to have the crossing at an elevation with as little grade change as possible.

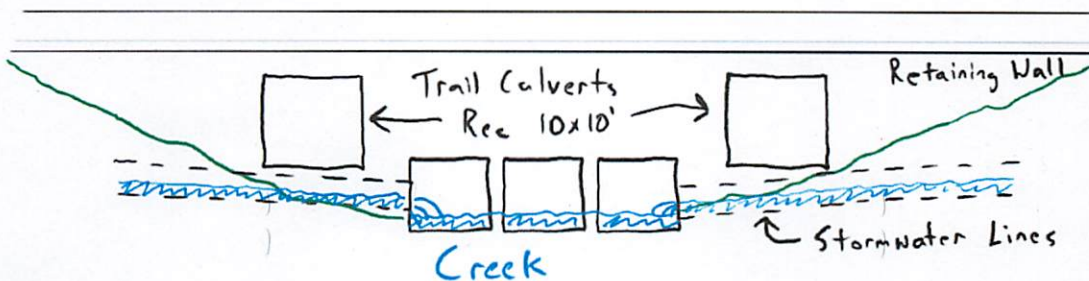
Modified Abutment

The modified abutment could use riprap only (type1) or retaining walls cut into existing riprap (type 2) to achieve a 12' recommended and 10' minimum trail pedestal approximately 8-10' below the bridge structure. 8' is the minimum overhead clearance and 10' is the max recommended to minimize the elevation change of the trail connections to the SUP and to keep the trail as far as possible out of the creek area.



Modified Culvert Design

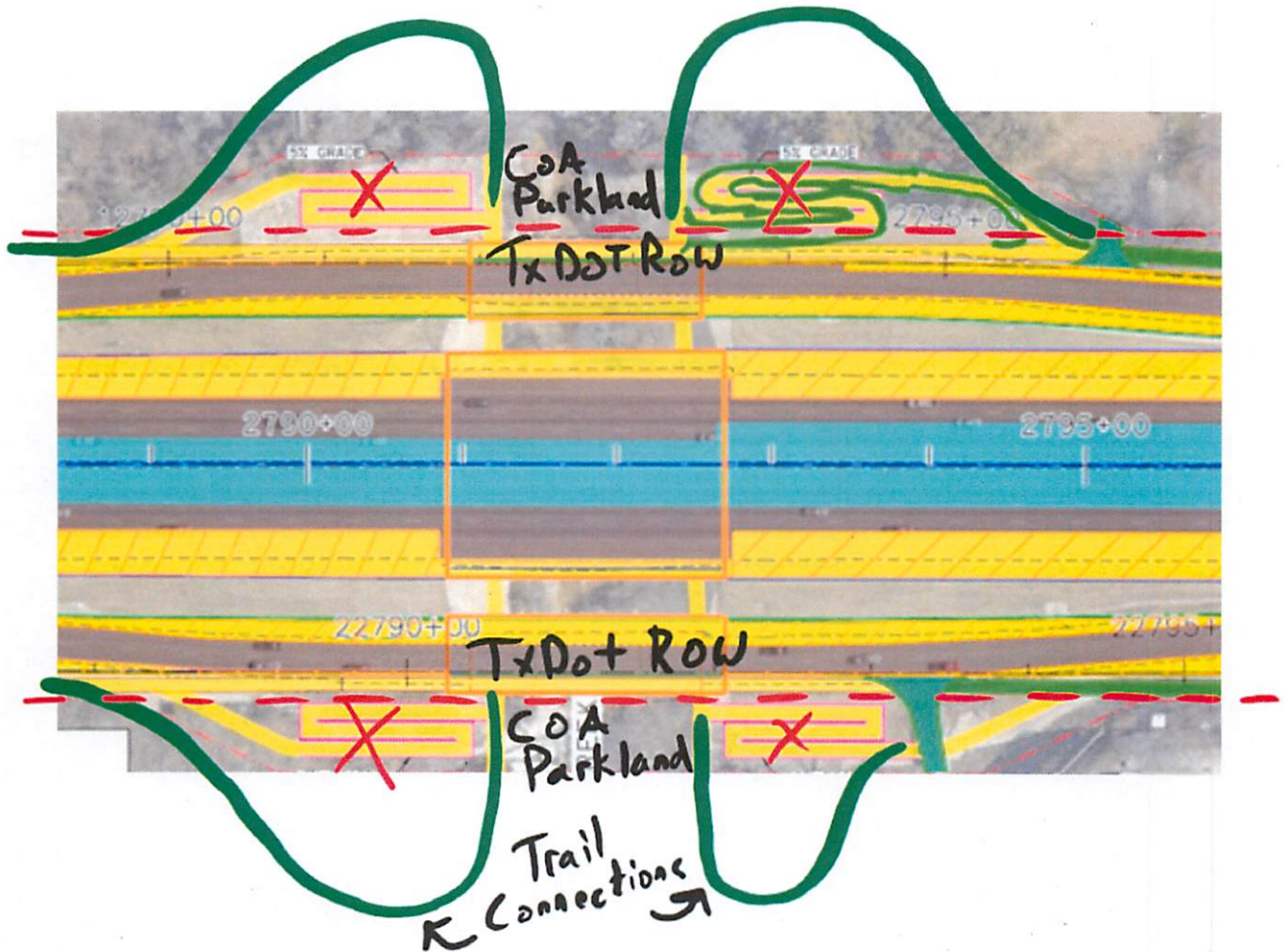
In locations with culverts a modified culvert design can be used to elevate the trail culverts above the base flow in the lower culverts. The trail culverts should be positioned high enough so that storm water lines running along I-35 discharge into the base flow culverts in order to keep the trail culverts dry as long as possible in a storm event. Multiple strategies would be used to improve the comfort, feel and safety of the culverts including quality lighting, opportunities for daylighting, and keeping the trail culverts as short as possible with opportunities to bridge over the creek with new structures (e.g. frontage road and / or CD roadway) while utilizing the existing culvert regime under the main lanes. Culverts could be sized and calibrated to achieve comparable flow character to conditions before the project or desired outcomes (e.g. I-35 retaining wall and culverts acting as a detention facility to not affect flood plain mapping).



SUP Connections to Creek Crossings

The trail crossings at creeks through modified abutment or modified culvert approaches should be connected to the IH35 SUPs along the frontage roads through trail connections that satisfy SUP design requirements. To improve the quality of the trail crossings, minimize the cost and amount of structure, and minimize the amount of acquired right-of-way (ROW), the City Transportation, Public Works, and Parks and Recreation Departments request that trail connections be made on City park land following

natural contours. COA PARD has deemed these trail / SUP connections a park land use and would not require TXDOT land acquisition or Section 4(f) mitigation. Under the Municipal Maintenance Agreement these SUPs in TXDOT ROW would be under City maintenance so these connections would be no different except they would be built under a right of entry.



Overhead Pedestrian / Bicycle Bridge

In some locations without creeks or other conflicts it is necessary to achieve pedestrian / bicycle connections with overhead structures. The pedestrian / bicycle overpasses built as part of US183 offer a very good example of SUP quality (widths, grade, and radius) facilities. Innovations in curved retaining wall structures enabled the designs to have better SUP geometry with radiuses and flexibly adapt various footprint requirements (long and narrow ramps or more compact ramps)



*Delivering a safe, reliable, and sustainable transportation system
that enhances the environment and economic strength of the region.*

CapExpress North Crossing Locations

Location	Mode	Notes	Crossing Type	Side of Creek	Funding Partnership	Constructability Notes
Northern Walnut Creek	Pedestrian / Bicycle / Trail / Park Greenbelt	A creek undercrossing is a part of City of Austin Urban Trails Master Plan and existing PARD greenbelt. ~1.7 miles between pedestrian crossings. A recent TXDOT design was completed for a creek crossing on both sides of the creek with connections to the SUPs, but ATD is not aware of this making into the current schematic.	Underpass using modified abutment detail and connections up to IH 35 SUP	Both sides	COA generally sees this as a design detail and related to ongoing Section 4(f) Parkland Negotiations	
Little Walnut Creek	Pedestrian / Bicycle / Trail / Park Greenbelt	A creek undercrossing is a part of City of Austin Urban Trails Master Plan and part of active parkland acquisitions. ~1.5 miles between pedestrian crossings	Underpass using modified culvert detail and connections up to IH 35 SUP	South side (Parkland is on south side)	COA generally sees this as a design detail and related to ongoing Section 4(f) Parkland Negotiations	PARD and Urban Trails are confident that south side is the way to go.
Middle Fiskville Rd (Braker to Rundberg Gap)	Pedestrian / Bicycle	This is the only crossing opportunity between Rundberg and Braker which is 1.5 miles between existing pedestrian crossings. There are no creek / greenbelt crossings in this section and the Middle Fiskville ROW lines up on the east and west side of IH 35. There are some small seemingly unusable private parcels that could support the landings of an overhead bridge.	Overpass	n/a	COA funding partnership through bicycle / pedestrian funding	Landings may need ROW acquisition
Powell/Rutherford (Rundberg to 183 Gap)	Pedestrian / Bicycle	A ped/bike bridge was shown at Powell/Rutherford in a previous version of IH 35 schematic. ~1.5 miles between pedestrian crossings with high-density housing along both sides of the corridor. Serious pedestrian fatality record in recent years at this location. This would provide a direct connection from the east of IH35 to the start of the Project Connect orange line at the North Lamar Transit Center 3/4 of a mile to the west via Powell Ln.	Overpass	n/a	COA funding partnership through bicycle / pedestrian (and possibly transit) funding Fatality record (3 in 5 years) should make this a high priority for the North project to solve and make pedestrian crossing demand apparent.	

US 183 Interchange	Pedestrian / Bicycle	SUP should be provided on all 4 legs of this interchange to appropriately connect the SUPs of all adjacent projects and not leave any gaps. In previous communications, it was relayed from TXDOT that these SUP crossings at the interchanges would be included in the more comprehensive North project, so ATD is fully expecting that they will be included for a complete SUP product as communicated to the public.	At grade SUPs through signals	n/a	COA sees this as the responsibility of TXDOT to provide a complete project that does not leave gaps in the pedestrian and bicycle facilities provided.	
Huntland / Atkinson (Between 183 and US 290)	Pedestrian / Bicycle	High-density, transit-dependent communities adjacent to highway with limited connectivity to jobs, education (ACC), transportation options, etc. Notable crash patterns at this location and connections to AISD schools make this a priority location for COA.	Overpass	n/a	COA funding partnership through bicycle / pedestrian funding	
US 290 Interchange	Pedestrian / Bicycle	There is a design by ATD consultants and approved by TXDOT to install SUPs around all 4 sides of this interchange. This work will likely be done in advance of the IH 35 work.	At grade SUPs through signals		Although ATD believes that the construction of SUPs around each interchange is the responsibility of TXDOT to deliver a complete and safe package, ATD plans to fund and construct these paths in partnership.	

CapExpress Central Crossing Locations

Location	Mode	Notes	Crossing Type	Side of Creek	Funding Partnership	Constructability Notes
Between 51 st St and US 290	Pedestrian / Bicycle	Almost a mile between pedestrian crossings. Frequent pedestrian fatalities. This could be ped/bike bridge at Reinli or Capital Plaza. High-density, transit-dependent communities adjacent to highway with limited connectivity to jobs,	Overpass	n/a	City requests this to be incorporated in the CapExpress Central project	

		education (ACC), transportation options, etc. At the IH 35 Central charrette in January 2020, TXDOT staff indicated this could be included in the project. Options for briefly raising the elevated ramps to create room for the pedestrian bridge were discussed.				
Mueller Northwest Greenway	Pedestrian / Bicycle / Trail / Park Greenbelt	Requested by PARD as a connection into Mueller and the existing trail system	Overpass or underpass	n/a		
Red Line Trail	Pedestrian / Bicycle / Trail	As discussed at CapEx Central charrette, the undercrossing designed for the rail at this location should include a trail with connection to the local street network.	Underpass	n/a		Constructability discussed at length at the Central charrette and appeared to be feasible
41 st / Wilshire	All Modes	As shown on the most recent schematics, 41st/Wilshire is planned to connect across IH 35. If this connection for motor vehicles is removed during further design, ATD requests that this remain as a pedestrian and bicycle connection, either at-grade or aerial.	At-grade or Overpass	n/a		Managed lane T-ramps are being discussed here which would require an aerial structure.
Concordia Ave.	All Modes	Concordia, Edgewood/Duncan, 30th St possible if TXDOT continues with a fully buried concept. This is particularly important if 32nd bridge connection gets severed, as has been discussed.	At-grade	n/a		
5 th Street	All Modes	Would require a revision of "cut and cap" section as recommended at Central charrette and January 2020 memo. Additional crossings in this downtown area are highly desired.	New street connection	n/a	City requests this to be incorporated in the CapExpress Central project	
4 th Street	Pedestrian / Bicycle / Trail	Desire for a grade separated crossing between the frontage roads and Trail and Rail crossing for reliability, motor vehicle delay and safety	Overpass	n/a	City requests this to be incorporated in the CapExpress Central project	
Lady Bird Lake Crossing and Trail Connections	Pedestrian / Bicycle / Trail / Park Greenbelt	Provide a direct connection between the Boardwalk on south shore and Butler Trail on the north shore and the shared use paths on the east side of IH35. Watershed has modeled this connection and we have a viable concept that does not	Bridge along IH35 over LBL. Maintain and connect to existing trails	n/a	City requests this to be incorporated in the CapExpress Central project. COA generally sees this as related to ongoing Section	Feasibility has been studied by TXDOT and COA as part of the prior but canceled IH35 Riverside project

		impact river flows. Also provide more direct connection than existing to Butler Trail on northwest side of bridge. PARD sees trail connections as park amenity if use of additional park land outside of the ROW is needed. Direct trail to trail connection was previously designed by TXDOT's consultant and was agreed to be added by Terry McCoy. TXDOT also agreed to add the direct connection on the NW corner of the bridge to the trail in development-related discussions.			4(f) Parkland Negotiations	
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CapExpress South Crossing Locations

Location	Mode	Notes	Crossing Type	Side of Creek	Funding Partnership	Constructability Notes
SH 71 Interchange	Pedestrian / Bicycle	SUP should be provided on all 4 legs of this interchange to appropriately connect the SUPs of all adjacent projects and not leave any gaps. In previous communications, it was relayed from TXDOT that these SUP crossings at the interchanges would be included in the more comprehensive South project, so ATD is fully expecting that they will be included for a complete SUP product as communicated to the public.	At grade SUPs through signals	n/a		
Bergstrom Spur Trail (south side of SH 71 Interchange)	Pedestrian / Bicycle / Trail / Park Greenbelt	At the south leg of the SH 71 interchange is a rail crossing that is identified in the Urban Trails Master Plan. This should be included as one of the four legs to make this interchange safely navigable by pedestrians and cyclists. Trail development is underway including park land acquisition of rail line.	Accommodate trail width east-west crossing at the signal. Bergstrom Spur Trail (funded) will be using the tracks on the south side of this interchange.	n/a	COA generally sees this as a design detail	
Teri Rd to Colonial Park Blvd	Pedestrian / Bicycle	~1.5 miles between pedestrian crossings. This is a low-income area is very lacking in east-west connectivity due to IH 35.	Overpass or underpass	n/a	COA funding partnership through bicycle / pedestrian funding	Using geometry similar to the US183 at 51st ramps to pedestrian crossing, these ramps could fit within CoA street ROW and still

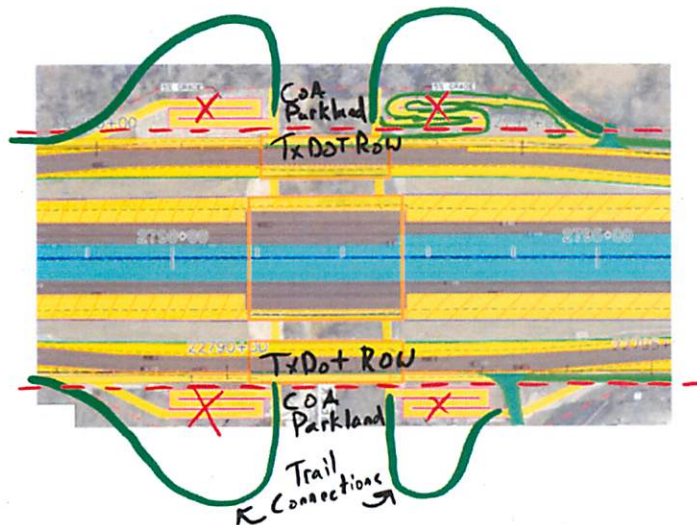
						accommodate travel lanes and shared use paths. Given 20' grade difference, underpass might be feasible.
Williamson Creek and Pleasant Hill Creek (tributary to Williamson Creek)	Pedestrian / Bicycle / Trail / Park Greenbelt	A creek undercrossing is a part of City of Austin Urban Trails Master Plan. ~1.5 miles between pedestrian crossings.	Underpass using modified abutment detail and connections up to IH 35 SUP	South side	COA generally sees this as a design detail and related to ongoing Section 4(f) Parkland Negotiations	
South Boggy Creek	Pedestrian / Bicycle / Trail / Park Greenbelt	A creek undercrossing is a part of City of Austin Urban Trails Master Plan. ~2 miles between pedestrian crossings.	Underpass using modified culvert detail and connections up to IH 35 SUP	Both sides	COA generally sees this as a design detail and related to ongoing Section 4(f) Parkland Negotiations	In the South schematic, it appears that there is 30'+ of ROW available outside of the shared use path area, which would be plenty of space to construct connections from trail undercrossing to IH 35 SUP.
Slaughter Creek	Pedestrian / Bicycle / Trail / Park Greenbelt	A creek undercrossing is a part of City of Austin Urban Trails Master Plan. ~1.3 miles between pedestrian crossings.	Underpass using modified abutment detail and connections up to IH 35 SUP	Both sides	COA generally sees this as a design detail and related to ongoing Section 4(f) Parkland Negotiations	In the South schematic, it appears that there is 40'+ of ROW available outside of the shared use path area, which would be plenty of space to construct connections from trail undercrossing to IH 35 SUP.
Onion Creek	Pedestrian / Bicycle / Trail / Park Greenbelt	A creek undercrossing is a part of City of Austin Urban Trails Master Plan. ~2 miles between pedestrian crossings.	Underpass using modified abutment detail and connections up to IH 35 SUP	Both sides	COA generally sees this as a design detail and related to ongoing Section 4(f) Parkland Negotiations	
Between Onion Creek and SH 45 @ Camino Vaquero Pkwy	Pedestrian / Bicycle	~2 miles between pedestrian crossings. The area near and north of Camino Vaquero Pkwy has a lot of recent development and sufficient ROW for landings/ramps.	Overpass	n/a	Future development - do not preclude. Schematic should show as dashed future alignment.	This should be a "do not preclude" potential for a bike/ped bridge.

SH 45 Interchange	Pedestrian / Bicycle	SUP should be provided on all 4 legs of this interchange to appropriately connect the SUPs of all adjacent projects and not leave any gaps. In previous communications, it was relayed from TXDOT that these SUP crossings at the interchanges would be included in the more comprehensive South project, so ATD is fully expecting that they will be included for a complete SUP product as communicated to the public.				
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Additional Crossing Details

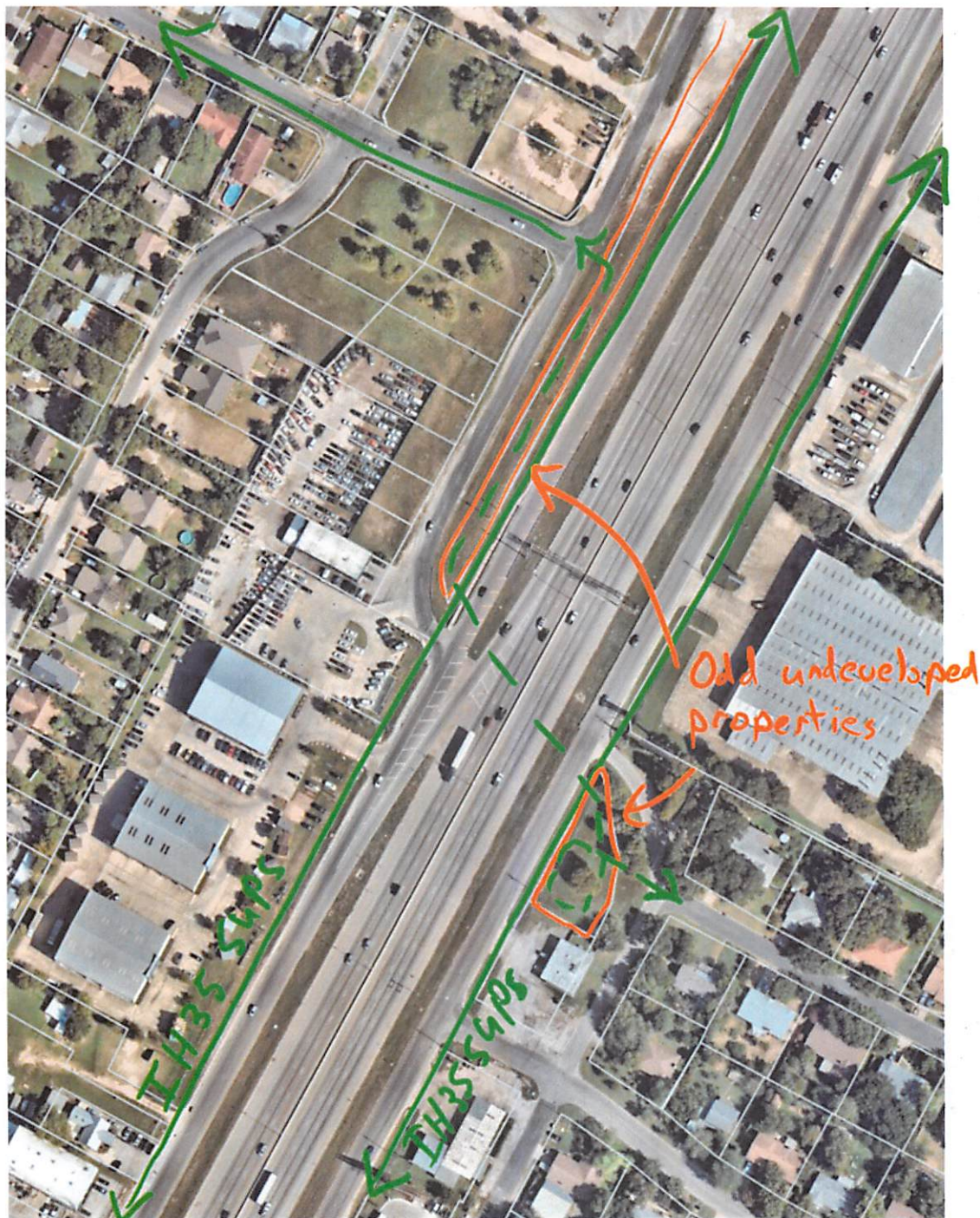
Northern Walnut Creek

The drawing below shows a version of a previous schematic showing tight switchbacks to achieve connections between the I-35 SUPs and the Northern Walnut Creek crossings under I-35. If crossings are structured, they should be built with acceptable widths and radiuses. As noted above, ideally the connections use adjacent parkland and follow land contours for lower cost, reduced impact, superior design.



Middle Fiskville Crossing (between Rundberg and Baker)

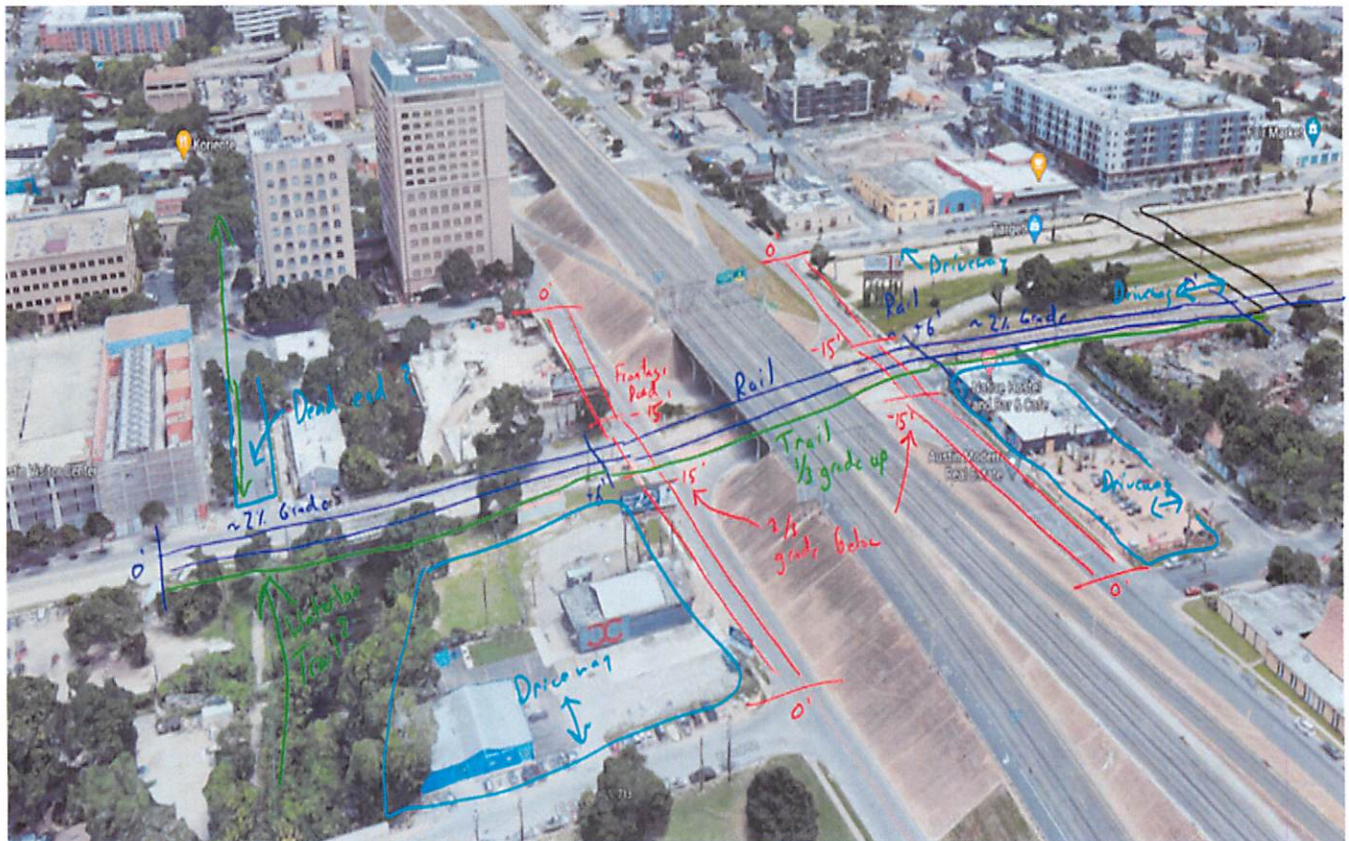
Rundberg to Braker has no creek crossings and is 1.5 miles apart. Middle Fiskville ROW aligns across I-35 providing the option for connectivity across I-35 to the local street network. Two odd shaped and undeveloped private parcels could serve to provide ramps for the overhead structure.



I-35 at 4th Street

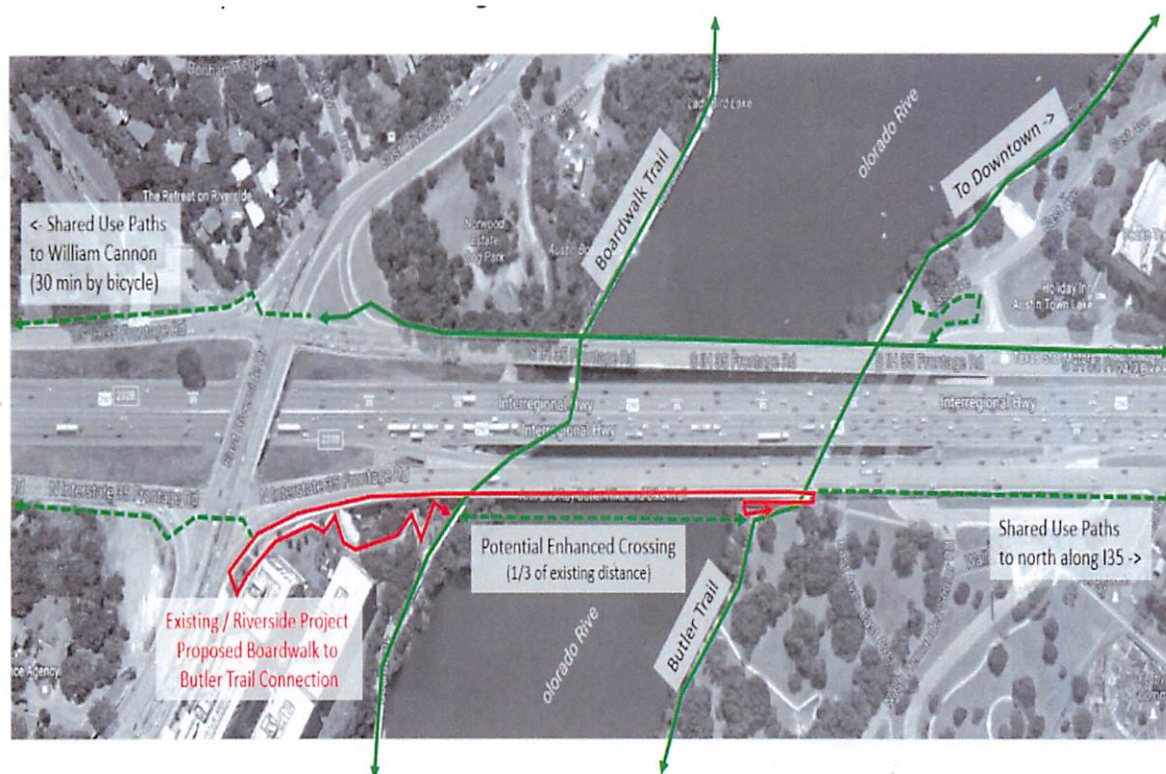
The proposal for managing the Capital Metro Rail Red Line / Green Line and LAB / Cross-town Bikeway crossing at 4th Street is an iteration of a suggestion by TXDOT staff at the I-35 Charrette. The idea would be to avoid interrupted operations of the frontage road by both the Rail and bikeway signals by grade separating the crossing. The rail and bikeway/pedestrian path would be at a +1/3 grade and frontage road at a -2/3 grade. The frontage road would tie back to existing grade at 3rd and 5th Streets

and the rail would tie into existing grade at San Marcos Street and just west of Sabine Street. The only property with driveways facing I-35 is the NW corner which is currently a construction staging area that could likely take its access off 5th Street exclusively. The properties on the west side north and south of 4th Street have billboards that would need to maintain access which could potentially be achieved through the SUP. This concept would achieve much superior reliability for downtown ingress / egress for the capacity constrained frontage road / CD roadway serving the heart of downtown.

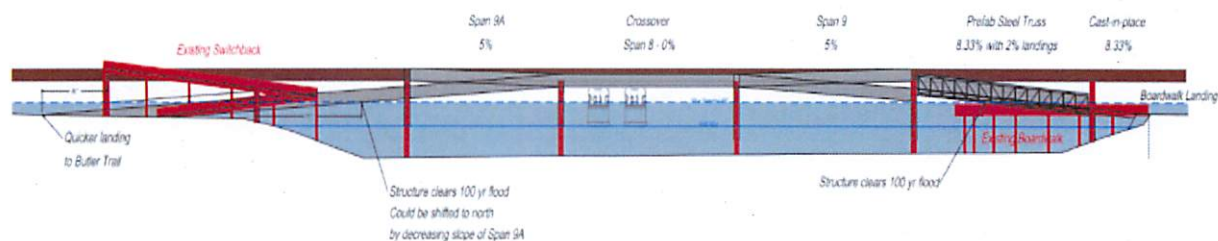


I-35 at Lady Bird Lake

I-35 at Lady Bird Lake has critical connectivity between the I-35 SUPs and the Boardwalk and Butler Trail that is a critical connectivity component of a signature bridge. The main connection is proposed on the east side of the bridge due to the boardwalk landing which is a good takeoff point for the SUP structure over the lake. The proposed elevation and column spacing has been vetted and modeled with Watershed Protection Department (100-year storm modeled), is compatible with rowing lanes (columns aligned with IH35 columns) and allows double decker river boats continued access of Lady Bird Lake to the east. The connection addresses the existing switchbacks for the SUP connection that do not meet SUP design guidance as well as reducing the connection to 1/3 of its current length.

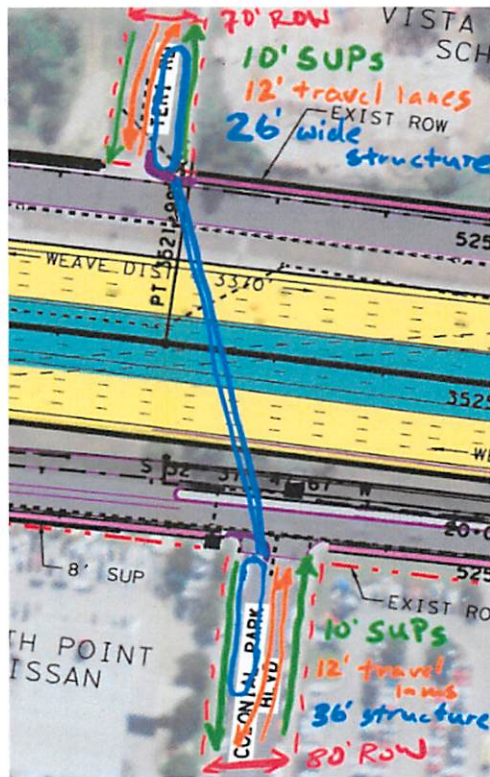


*I35 SUP Bridge
 5% slope to Boardwalk and Butler (8.33 for north span)
 Lowered Flat Center Span*



Teri Road and Colonial Park Drive

Teri Road and Colonial Park Drive are both wide streets and ROWs that align across I-35. Overhead or tunnel structures could sit in the ROW or even current street space. Colonial Park Drive is a grade below Teri Road.



Sincerely,

Robert Spillar, PE

Robert Spillar, Director
Austin Transportation Department.

Cc: Tucker Ferguson, Austin District Engineer
Richard Mendoza, Director Public Works Department
File – I-35 Correspondence 01192021



Austin Transportation Department

Office of the Director

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May 25, 2021

Mr. Tucker Ferguson, P.E., Austin District Engineer, TxDOT, and
Mr. Matthew Cho, P.E. Transportation Engineer, TxDOT
7901 N. IH 35
Austin, Texas 78753

RE: I-35 Capital Express South Project
Comments for Public Hearing

Dear Mr. Ferguson and Mr. Cho:

Thank you for the opportunity to comment on the I-35 Capital Express South project. The Austin Transportation Department appreciates the efforts of TxDOT staff on this project that would improve safety and the movement of people and goods along this crucial corridor.

The Austin Transportation Department (ATD) supports the State's plan to reconstruct this section of the I-35 Capital Express Project. We recognize that the project presents an opportunity to improve safety and mobility in South Austin. We offer the following comments for the I-35 Capital Express South Project public hearing to further advance the mobility and safety needs of the city and region on both design and future operational plans:

Community Engagement: The aerial concepts, direct-connect ramps, bypass lanes, and collector-distributor lanes all represent a significant change from how the corridor presents today. Please assure that these concepts have a thorough public vetting before assuming full support from the community and area stakeholders. Please make sure that these design elements do not repeat the harms that similar structures through the central section of IH-35 have historically created (i.e., creating a barrier between communities of color east of I-35 and employment opportunities in Central/West Austin). The City requests TxDOT coordinate with the City and community to assure sufficient connectivity across the corridor, improved safety, reduced noise impacts, and attractive aesthetics through design and construction materials is achieved. Specifically, please consider using art and aesthetics as a point of engagement with the community, helping those most affected by the future corridor to take ownership in its design and presentation within their neighborhood.

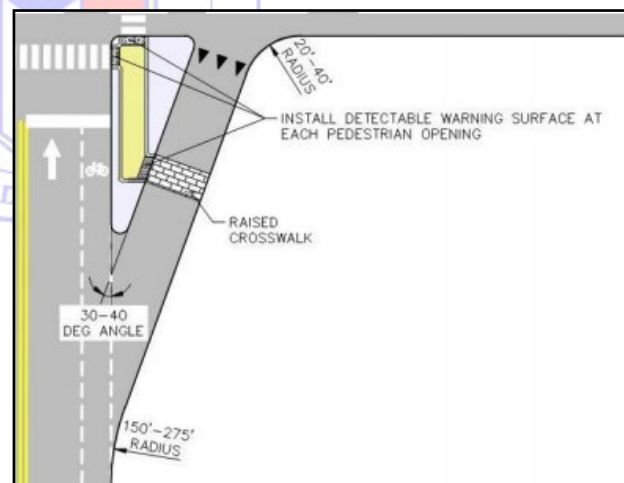
Multimodal Crossings: Plans for the South segment currently propose no new east-west crossings. The City has transmitted requests to TxDOT for additional pedestrian and bicycle crossings in letters dated January 4 and January 19, 2021. Many crossings are included in the City's adopted Urban Trails and Park master plans. These crossings would reduce connectivity gaps, remove mobility barriers for lower income populations, and mitigate hot spots for pedestrian-involved crashes. The City requests continued coordination with TxDOT to assure the design of the Capital Express South project does not preclude or complicate these proposed future crossings. A map of these proposed crossings for the Capital Express South project is attached. The Austin Transportation Department is interested in partnering with TxDOT to bring these proposed crossings to fruition.

HOV/HOT Managed Lanes: The addition of managed High Occupancy Vehicle (HOV)/High Occupancy Toll (HOT) lanes could help the city achieve the mode-split goals enumerated in the Austin Strategic Mobility Plan (ASMP) adopted in 2019. Managed HOV lanes would make carpooling and transit use more attractive, thereby reducing demand on the region's roadway network. Currently, TxDOT is assuming HOV operations of the managed lane additions to the corridor. The Austin Transportation Department is on record for requesting that toll-management remain an option in the development of these assets. Because of demand, many HOV lanes in Texas can be seen to operate at sub-optimal conditions when occupancy requirements remain defined as transit and 2+ vehicles only. Likewise, demand on many Texas HOV lanes is not sufficient to sustain a vehicle criterion of transit and 3+ operation throughout the day. Moving the most people through the corridor while maintaining a sustainable investment is a priority for the City. We request TxDOT consider combining the operational concept of HOV and toll management, operating the future managed lanes as HOT (HOV and Toll managed lanes).

Transit Access: Transit access between the managed lanes and critical intermodal transit facilities, transit stations, park-and-ride facilities, and primary destinations is critical to meeting Austin's adopted goal of achieving a 50/50 modal split by 2030 per the Austin Strategic Mobility Plan. The City, along with Capital Metro is evaluating opportunities to construct a park-and-ride facility near Slaughter Lane and Ralph Ablanedo Dr., adjacent IH-35. ATD provided TxDOT this information in our previous comments for the South project, and Project Connect has included this facility in its 15% design plans for the Orange Line. TxDOT's latest South project plans do not include this facility and the City again requests TxDOT continue to work with Capital Metro and the City to either provide this direct transit connection or preserve the ability to accommodate it as Project Connect is constructed.

Signalized Intersection Safety: Signalized intersections should be designed with safe crossings for pedestrians and bicyclists.

Signalized intersections between frontage roads and cross streets are typically the least safe for vulnerable users due to high-speed conflicts with motor vehicles. Improvements include yield-controlled merge points enforced through innovative designs, including smart right-turn lanes and raised crosswalks. These design patterns should be the default configuration for slip lanes to improve crossing safety and comfort. The Federal Highway Administration (FHWA) has documented the effectiveness of these designs for improving safety for vulnerable users. The City's draft Transportation Criteria Manual also recommends the use of smart rights and raised crosswalks and we have partnered with TxDOT on installation of such designs here in the Austin District.



Driveway Access and Reducing Conflict Points: Driveways along frontage roads should be reduced in number and reconstructed with standardized widths, radii, and shared-use path setbacks to manage vehicle speeds, reduce length of conflict exposure, improve crossing safety and comfort, and preserve the quality of the shared-use paths. The City recommends minimizing driveway radii, allowing 10' setbacks for the shared use path (no less than 5'), and 24'-30' driveway throat widths to reduce pedestrian exposure and improve vulnerable user safety.

Frontage Road Design: Frontage roads should be designed to target speeds appropriate for our urban environment to improve safety and address multi-modal conflicts. Techniques to lower design speeds include narrowing frontage road lanes to 10 feet, providing high-quality shared-use paths instead of standard narrow sidewalks, use of appropriate street trees and landscaping, and allowing on-street parking. The Austin Transportation Department is eager to partner with TxDOT on these and other appropriate techniques to humanize frontage road travel speeds and effectively operate grid-level assets.

Local Cross Streets: Local cross streets, intersecting frontage roads at both signalized and unsignalized intersections, should be constructed with standardized widths, radii, and shared-use path setbacks. These design choices would manage vehicle speeds, reduce length of conflict exposure, improve crossing safety and comfort, ensure ADA accessibility and preserve the quality of the shared-use paths. The City's Transportation Criteria Manual update recommends minimizing turn radii to reduce pedestrian exposures at intersections and increase the opportunity for drivers to detect the presence of vulnerable roadway users in their path. The City recommends 10' setbacks of the shared-use paths (no less than 5'), and cross street widths reduced to the extent possible while maintaining the appropriate number of lanes. At cross street intersections where slip lanes are proposed, Austin Transportation requests constructing the turn lanes as smart-rights with raised crossings for the shared-use paths to improve crossing safety and comfort.

Next Steps: Although the Central I-35 portion of the Capital Express project has received the most attention, each section of the corridor is critical to improving safety and the movement of people, goods and services through and within the Austin region. The City of Austin welcomes TxDOT's efforts to improve this corridor and strives to collaborate productively with the agency to deliver a project that meets the mobility needs of the city, region, and state.

The Austin Transportation Department stands ready to assist TxDOT in achieving this grand vision for the I-35 Corridor. We recognize the importance of this corridor today, carrying somewhere between 200,000 and 300,000 vehicles per day. While it is vital to our economy, it is also a barrier to a safer and more connected Austin and needs replacement. The current safety attributes of the corridor are not acceptable to achieving our shared Vision Zero goals (eliminating fatalities and serious injuries due to mobility crashes). We recognize that with replacement, we must improve the efficiency, safety, and carrying capacity of the facility, emphasizing the movement of people, goods and services through and across the corridor, in preference to vehicle trips.

Sincerely,

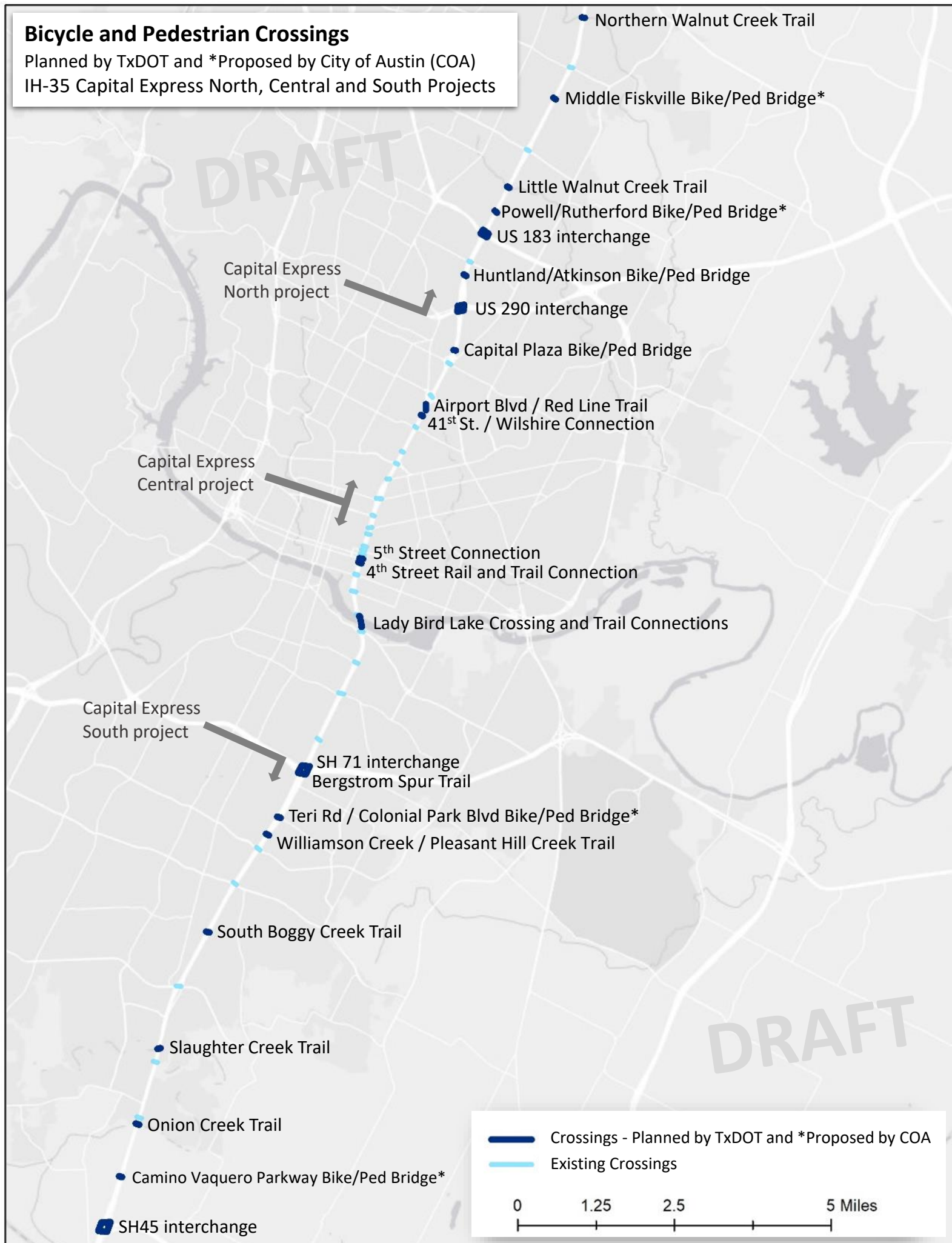


Robert Spillar, P.E.
Director, Austin Transportation Department
City of Austin

Cc: Gina Fiandaca, Assistant City Manager

Bicycle and Pedestrian Crossings

Planned by TxDOT and *Proposed by City of Austin (COA)
IH-35 Capital Express North, Central and South Projects





City of Austin

Austin Transportation Department

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(512) 974-1150

September 13, 2021

Ms. Heather Ashley-Nguyen, P.E.
Director, Transportation Planning and Development
Texas Department of Transportation
P.O. Drawer 15426
Austin, TX 78761-5426

RE: Austin Transportation Department's Comments on the Capital Express Central Build Alternative Layouts

Dear Ms. Ashley-Nguyen:

Thank you for providing the City of Austin the ongoing opportunity to participate in the collaborative design and coordination on the Capital Express Central Build Alternative Layouts, including the latest schematics the Texas Department of Transportation (TxDOT) issued for the Virtual Public Meeting on August 10, 2021. On behalf of the Austin Transportation Department (ATD), I believe the schematics are moving in a positive direction over the last year to address the City of Austin's primary goals of improving transportation safety, increasing mode shift, minimizing community and property impacts, and providing access to the regional employment center during the design process.

In response to your team's request for ATD to provide design concepts to refine the project with these goals in mind, this letter outlines proposals based on our review of the latest schematics to further improve this project.

Traffic Forecasts and Modeling

The Build Alternatives are driven by providing adequate capacity for forecasted traffic volumes. Therefore, it is critical that this element of the design is based on feasible assumptions and processes.

- Daily volumes crossing Lady Bird Lake were 198,000 in 2001, 201,543 in 2019, and 161,775 in 2020 for a growth of less than 2% over this period.
- The current forecasting methodology uses a 17.2% growth rate between 2017 and 2025 and a 57.8% growth rate between 2017 and 2045. This could be true if additional capacity is provided, but the previous bullet indicates that separate forecasts should be made for the No Build Scenario given the different capacities provided in each scenario.
- The forecasted volume/capacity ratios over 1.0 will not be realized and have consequences for upstream and downstream volumes and required capacities via the provided lanes.
- The forecasted volumes are not constrained: all general-purpose lanes are over

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capacity; collector-distributor lanes, ramps, and frontage roads are over capacity between Manor Road and Riverside Drive; and managed lanes have volume/capacity ratios under 0.5.

- ATD has identified segments with unutilized lanes in the analysis based on PM peak hour constrained volumes, indicating where forecasted vehicles cannot reach provided lanes due to upstream bottlenecks.

Added Capacity

Using TxDOT capacity estimates, added capacity throughout the corridor exceeds the capacity added by the two managed lanes.

- This is true for general-purpose lanes, managed lanes, and collector-distributor/bypass lanes.
- This does not include the frontage roads, which also add capacity in some locations.
- Collector-distributor lanes should be identified as added capacity to reveal the true nature of the project, per TxDOT's volume/capacity ratio analyses.

Ramping and Portals

ATD is open to all ramping and portal options that allow for more efficient use of right-of-way, improved intersection operations, and safe access to and from frontage roads and City streets. We are also open to changing directionality of City streets to facilitate ramping and access for long-term improvements.

As we explore concepts with TxDOT for possible improvements, we might realize that other locations need evaluation; therefore, concepts included in this letter should not be considered ATD's complete list.

ATD has reviewed ramping systems in use from around the country whose concepts are applicable to the Capital Express Central project and form the basis for some of the following concepts.

The wishbone managed lane entrance and exit ramps between Airport Boulevard and East 32nd Street should be analyzed for removal.

- These ramps would serve mainly Central Austin drivers making short trips to downtown rather than regional trips with farther origins and destinations.
- Design and placement of managed lanes should not encourage short trips by a relatively small population.
- Removal of these ramps could flatten the closely spaced grade changes, reducing the "roller coaster effect" impacting operations and safety.
- Removal of these ramps has a potential width reduction of 24 feet.

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The northbound exit ramps for E 38th ½ Street and Airport Boulevard should be modified.

- Combine the exit ramps for both streets into a single ramp that continues through to access Airport Boulevard.
- Access to E 38th ½ Street would be provided through a portal exit under the frontage road and the existing Fiesta Mart parking lot.
- Potential for a similar southbound ramp removal needs review.

For the downtown segment, several concepts are possible to improve access and operations.

- Provide alternative ramping from Manor Road to 15th Street, 15th to 8th Streets, 11th to 8th Streets, and 5th Street to Cesar Chavez Street.
- Provide flyover ramps from northbound collector-distributor lanes at 9th and 10th Streets for direct access into downtown. This would provide the opportunity for a u-turn lane for northbound to southbound at 11th Street and require removing or repositioning the southbound collector-distributor entrance ramp.
- Provide portals near 8th and 7th Streets outside of TxDOT right-of way. This could possibly impact the Guadalupe Neighborhood Development Corporation, the City of Austin Police Department, and other nearby properties.
- Provide direct access ramps at 15th and 12th Streets and additional access from 11th to 8th Streets.
- Place collector-distributor lanes “tucked under” frontage roads at locations to reduce the project’s footprint.

Transit access has been discussed, with the concept of transit-only ramps being considered local enhancements and not included in the Capital Express Central project.

- Is TxDOT considering the proposed ramping configurations at Dean Keeton Street and Riverside Drive to be accessible to transit?
- Could future transit only-lanes still be possible based on the proposed designs?

Design speeds for the ramps and merging/diverging areas are driving the lane alignment and operation.

- What are the design speeds for each type of lane?
- Do the design speeds take into context the expected and desired speed differentials between the lane types?



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Managed Lanes

The provided volume projections and volume/capacity analysis do not support the inclusion of four managed lanes, particularly between Airport Boulevard and Martin Luther King, Jr. Boulevard.

- Can TxDOT provide the analysis justifying four High-Occupancy Vehicle (HOV) lanes?
- Is the conversion to High-Occupancy Toll (HOT) lanes an option?
- Removal of two managed lanes has a potential width reduction of 24 feet.

General-Purpose Lanes

The provided volume projections and volume/capacity analysis do not support the inclusion of all general-purpose lanes with the supplemental collector-distributor lanes, particularly between Martin Luther King, Jr. Boulevard and Cesar Chavez Street.

- Removal of two general-purpose lanes has a potential width reduction of 24 feet.
- General-purpose lanes should be designed and messaged as “through freeway lanes.” Similarly, collector-distributor lanes should be considered “local freeway lanes.”

Frontage Roads

Cantilevered frontage roads provide an opportunity to reduce the overall footprint of the project where ramping can be maintained.

- Cantilevered frontage roads were designed through the most constrained segment near UT. Can this concept be replicated along most of the remaining segments where additional right-of-row is being proposed, particularly where portals or other innovative ramping can be designed in conjunction with cantilevers?
- What is the value engineering (cost/benefit analysis) of constructing cantilevers rather than displacing properties?
- Realignment of six frontage road lanes has a potential width reduction of 72 feet.
- ATD would like to learn more about TxDOT’s concept of bringing the frontage roads closer together through downtown in an urban boulevard couplet configuration; however, ATD has concerns about intersection operations, ramp access, and pedestrian/bicycle crossings that need extensive evaluation.



City of Austin

Austin Transportation Department

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Preliminary-level sketches illustrating many of these concepts are enclosed with this letter. I anticipate they will serve as discussion points for our ongoing joint workshops. ATD can further develop these concepts into refined schematics for your design team to analyze.

I look forward to continuing our close working partnership to evaluate alternatives given the magnitude of this critical component of our regional transportation network.

Sincerely,

Eric Bollich, P.E., PTOE
Managing Engineer, Austin Transportation Department

Cc: Akila Thamizharasan, P.E., Director, Advance Project Development, TxDOT
Tony Estes, P.E., Mobility35 Schematic Task Lead, TxDOT
Robert Spillar, P.E., Director, Austin Transportation Department

Enclosure: ATD design concepts for Capital Express Central

ATD Design Concepts

I-35 Capital Express Central

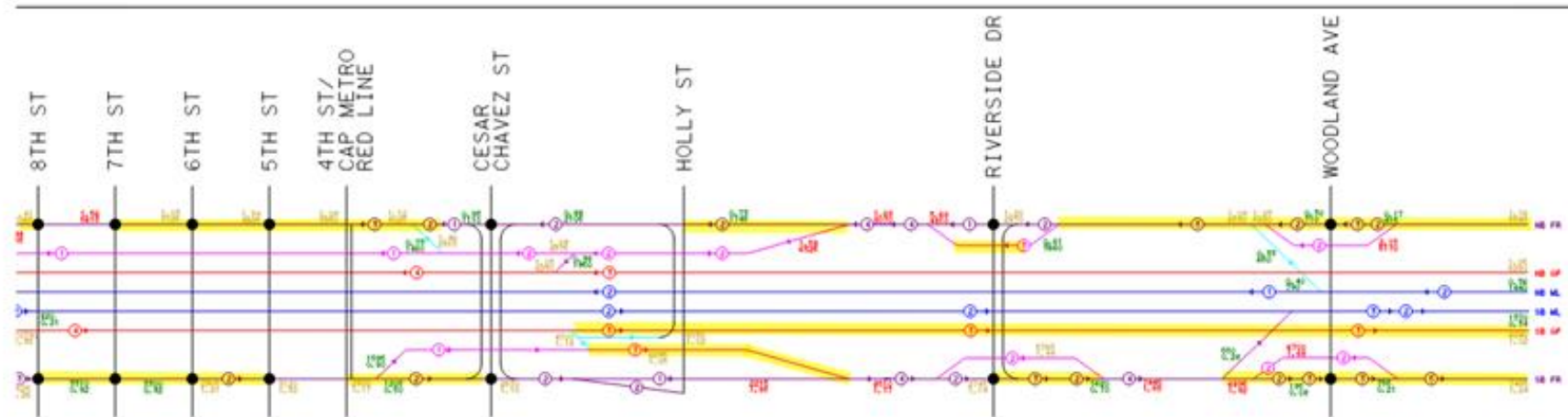
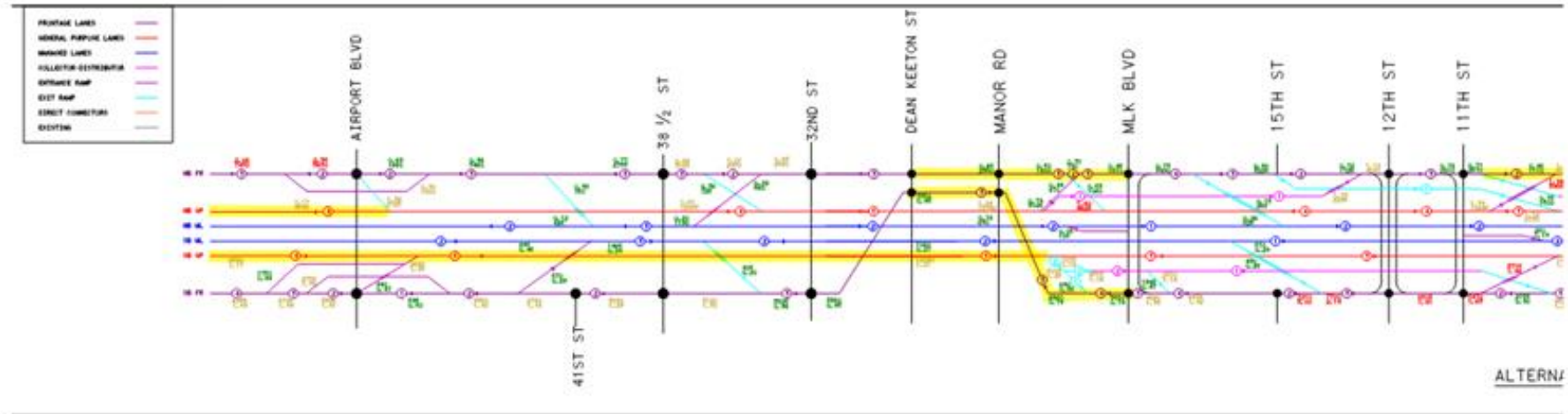
Historical Growth Rates

		Annual Growth from:																		
Year	AADT	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
2020	161775	-19.7%	-9.6%	-7.5%	-5.4%	-8.5%	-4.7%	-0.2%	-1.2%	-1.0%	-0.8%	-0.8%	-1.0%	-2.3%	0.4%	-1.2%	-1.1%	-0.9%	-1.2%	-1.1%
2019	201543		1.7%	-0.7%	-0.1%	-5.4%	-1.4%	3.5%	1.8%	1.6%	1.6%	1.3%	0.9%	-0.7%	2.1%	0.2%	0.3%	0.4%	0.0%	0.1%
2018	198084			-3.0%	-1.1%	-7.7%	-2.1%	3.8%	1.8%	1.6%	1.6%	1.3%	0.8%	-0.9%	2.2%	0.1%	0.2%	0.3%	-0.1%	0.0%
2017	204235				0.9%	-10.0%	-1.9%	5.6%	2.8%	2.4%	2.2%	1.8%	1.2%	-0.7%	2.7%	0.4%	0.5%	0.5%	0.1%	0.2%
2016	202378					-19.7%	-3.2%	7.2%	3.3%	2.7%	2.5%	1.9%	1.3%	-0.9%	2.8%	0.3%	0.4%	0.5%	0.1%	0.1%
2015	252075						16.7%	23.9%	12.3%	9.2%	7.6%	6.1%	4.7%	1.7%	5.7%	2.6%	2.5%	2.4%	1.8%	1.7%
2014	216040							31.6%	10.2%	6.9%	5.4%	4.1%	2.8%	-0.3%	4.4%	1.2%	1.2%	1.2%	0.6%	0.7%
2013	164177								-7.8%	-3.7%	-2.1%	-1.9%	-2.1%	-4.8%	1.0%	-2.1%	-1.7%	-1.5%	-1.8%	-1.5%
2012	178000									0.6%	0.9%	0.2%	-0.7%	-4.1%	2.6%	-1.3%	-0.9%	-0.7%	-1.2%	-1.0%
2011	177000										1.1%	0.0%	-1.1%	-5.3%	3.0%	-1.6%	-1.2%	-0.9%	-1.3%	-1.1%
2010	175000											-1.1%	-2.2%	-7.3%	3.4%	-2.1%	-1.5%	-1.2%	-1.7%	-1.4%
2009	177000												-3.3%	-10.3%	5.0%	-2.4%	-1.6%	-1.2%	-1.7%	-1.4%
2008	183000													-16.8%	9.4%	-2.1%	-1.2%	-0.7%	-1.5%	-1.1%
2007	220000														43.8%	6.2%	4.6%	3.7%	1.9%	1.8%
2006	153000															-21.5%	-10.7%	-7.0%	-6.5%	-5.0%
2005	194880																1.5%	1.3%	-0.9%	-0.4%
2004	192000																	1.1%	-2.0%	-1.0%
2003	190000																		-5.0%	-2.0%
2002	200000																			1.0%
2001	198000																			

2019 ADT = 201,543

2001 ADT = 198,000

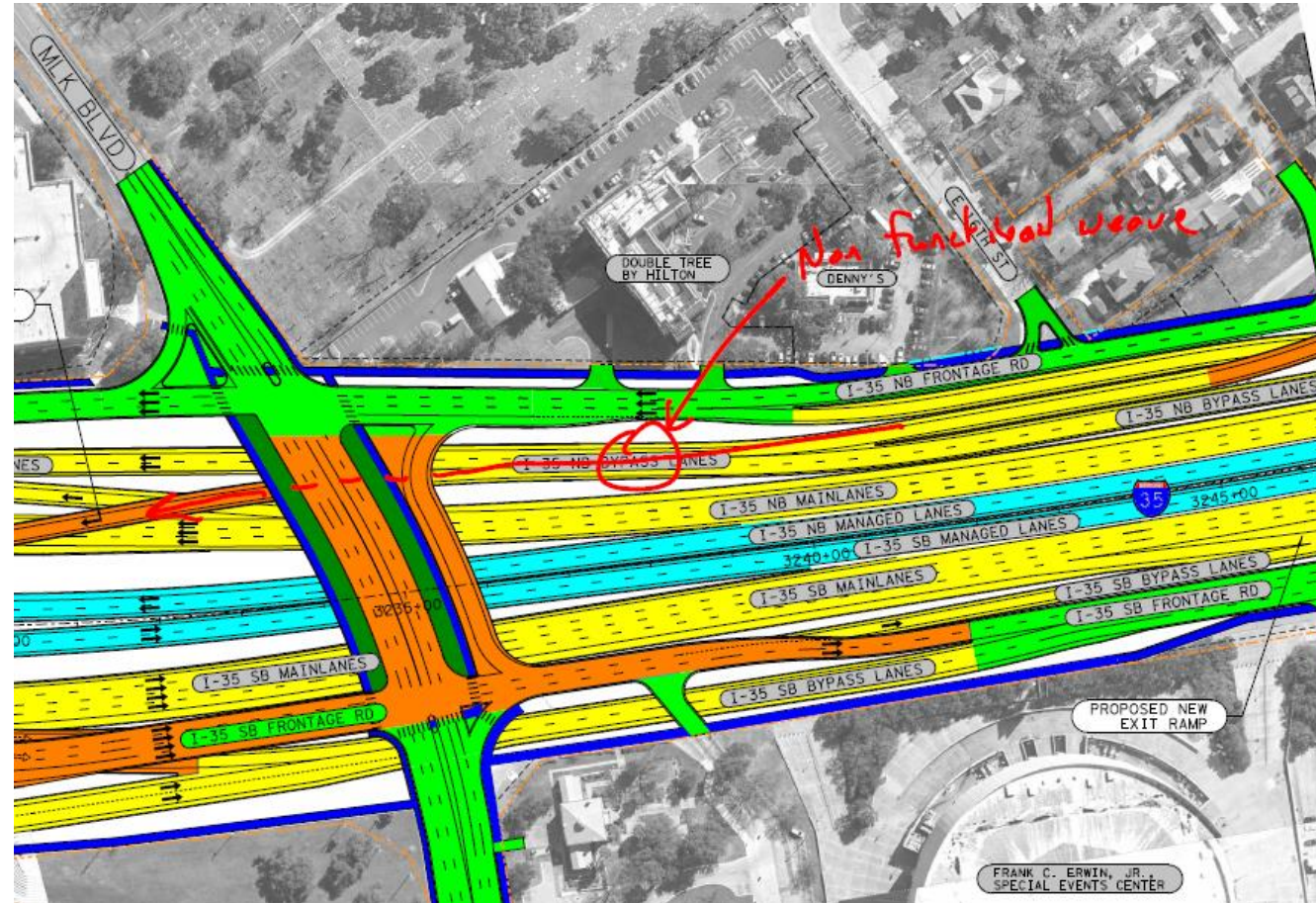
Unutilized lanes



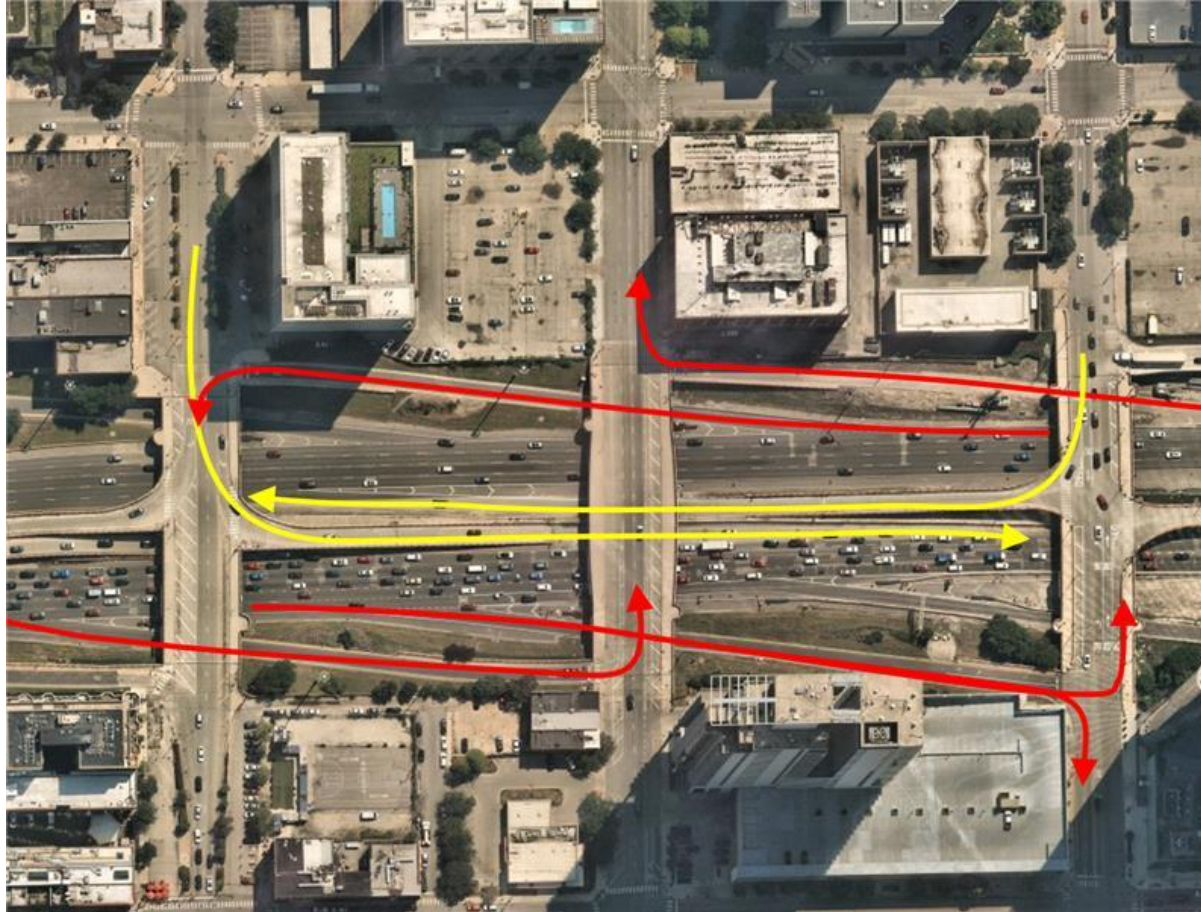
Added Capacity

Section		Mainline, Managed, C-Ds Capacity				Mainline Increase (Lane Equivalents)		Total Capacity Increase (Mainline)	
		Existing	Build	Existing	Build				
From	To	I-35 NB		I-35 SB		NB	SB	NB	SB
51st Street	Airport Boulevard	8,000	14,000	8,000	14,000	3.0	3.0	2.4	2.4
Airport Boulevard	38th 1/2 Street	8,000	12,000	8,000	14,000	2.0	3.0	2.6	2.4
38th 1/2 Street	Dean Keaton	8,000	12,000	8,000	14,000	2.0	3.0	2.0	2.4
Dean Keaton	Manor Road	8,000	14,000	8,000	14,000	3.0	3.0	3.0	3.6
Manor Road	MLK Jr. Blvd.	8,000	12,000	8,000	14,000	2.0	3.0	2.0	3.0
MLK Jr. Blvd.	15th Street	8,000	14,000	8,000	12,000	3.0	2.0	2.4	2.0
15th Street	12th Street	8,000	14,000	8,000	12,000	3.0	2.0	2.4	2.0
12th Street	11th Street	8,000	12,000	8,000	12,000	2.0	2.0	1.4	2.0
11th Street	6th Street	6,000	14,000	6,000	12,000	4.0	3.0	3.4	3.0
6th Street	Cesar Chavez Street	6,000	14,000	8,000	14,000	4.0	3.0	3.4	3.0
Cesar Chavez Street	Holly Street / River Street	6,000	16,000	8,000	16,000	5.0	4.0	3.8	4.0
Holly Street / River Street	Riverside Drive	6,000	14,000	6,000	14,000	4.0	4.0	2.8	3.4
Riverside Drive	Woodland Drive	6,000	16,000	6,000	14,000	5.0	4.0	4.4	3.4
Woodland Drive	Oltorf Street	6,000	14,000	8,000	10,000	4.0	1.0	3.4	2.2

Weaving concern



Ramping and portal options





E 41st St

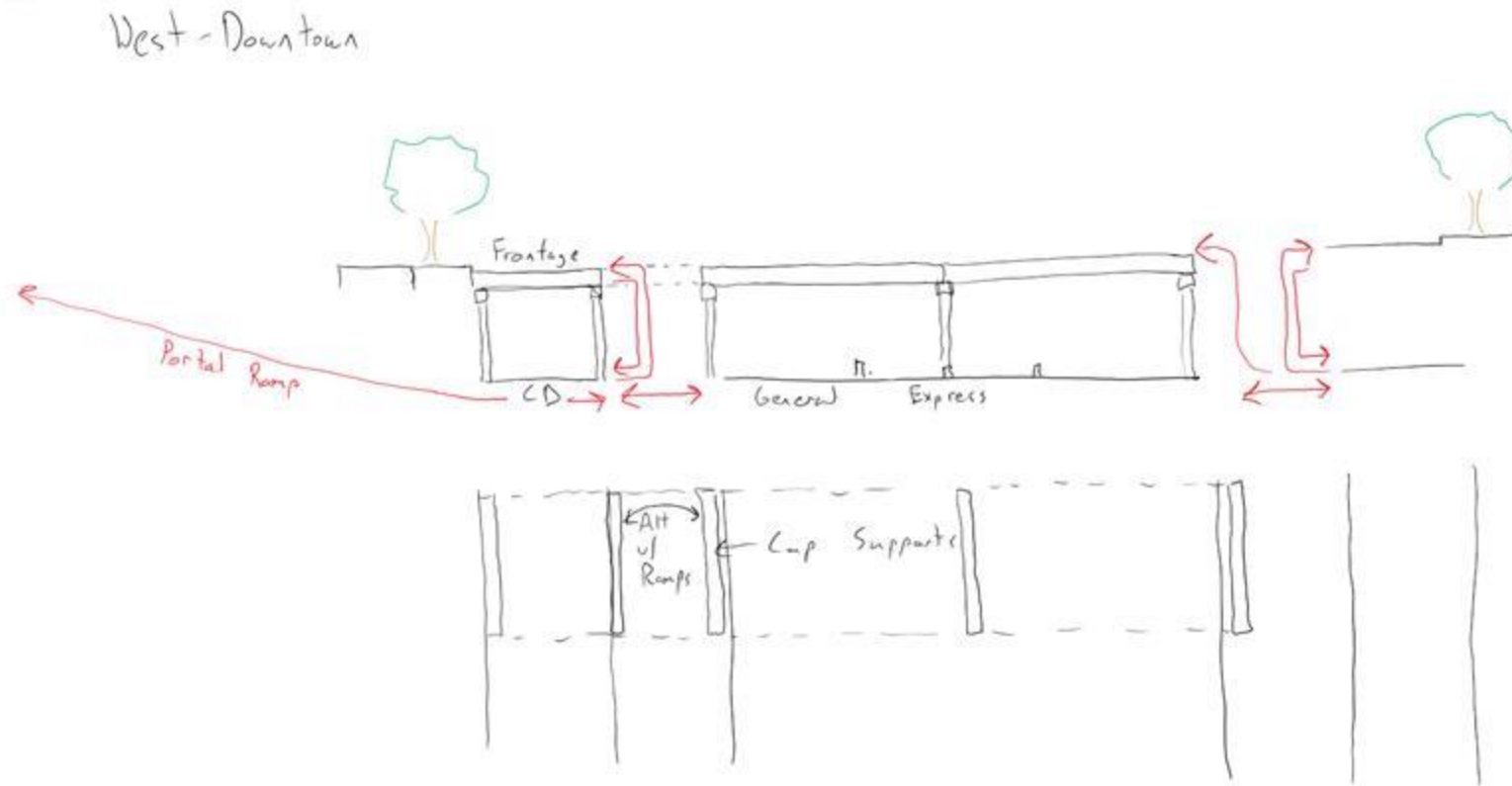
Redevelopment
opportunity over ramp

E 38th 1/2 St

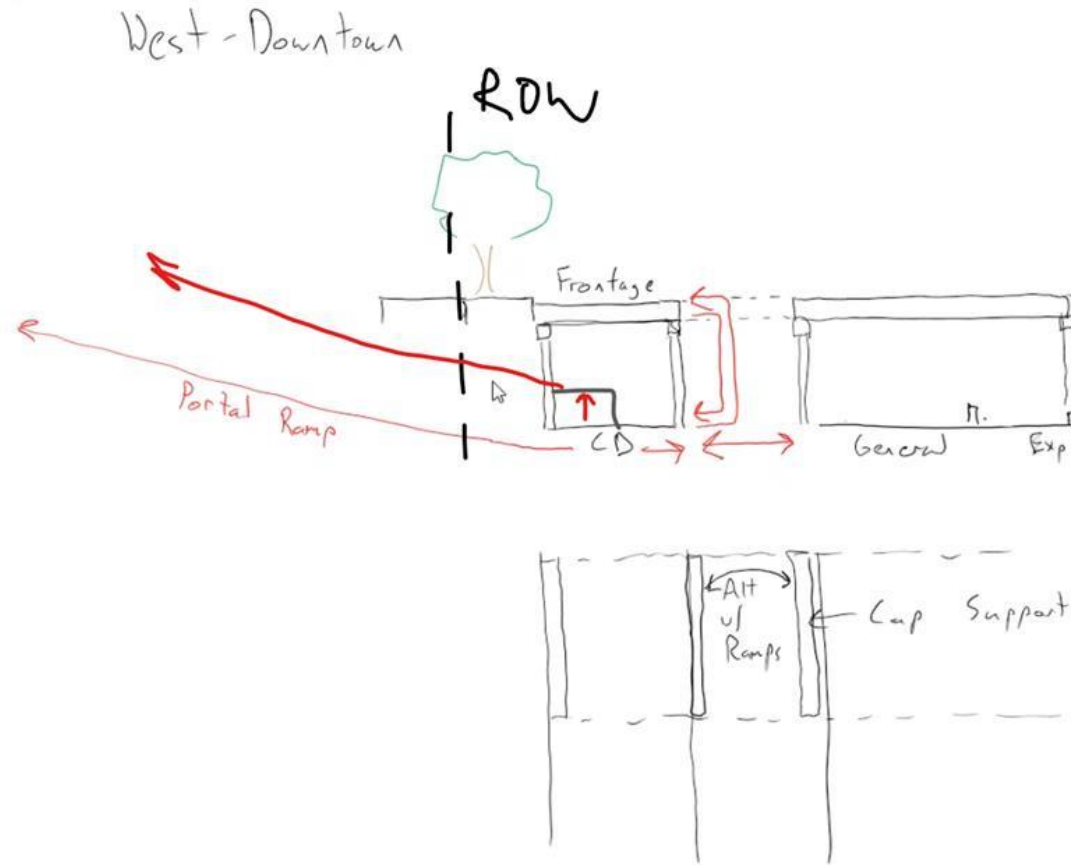
Redevelopment
opportunity over ramp

Maintain or reconstruct
after insertion of ramp

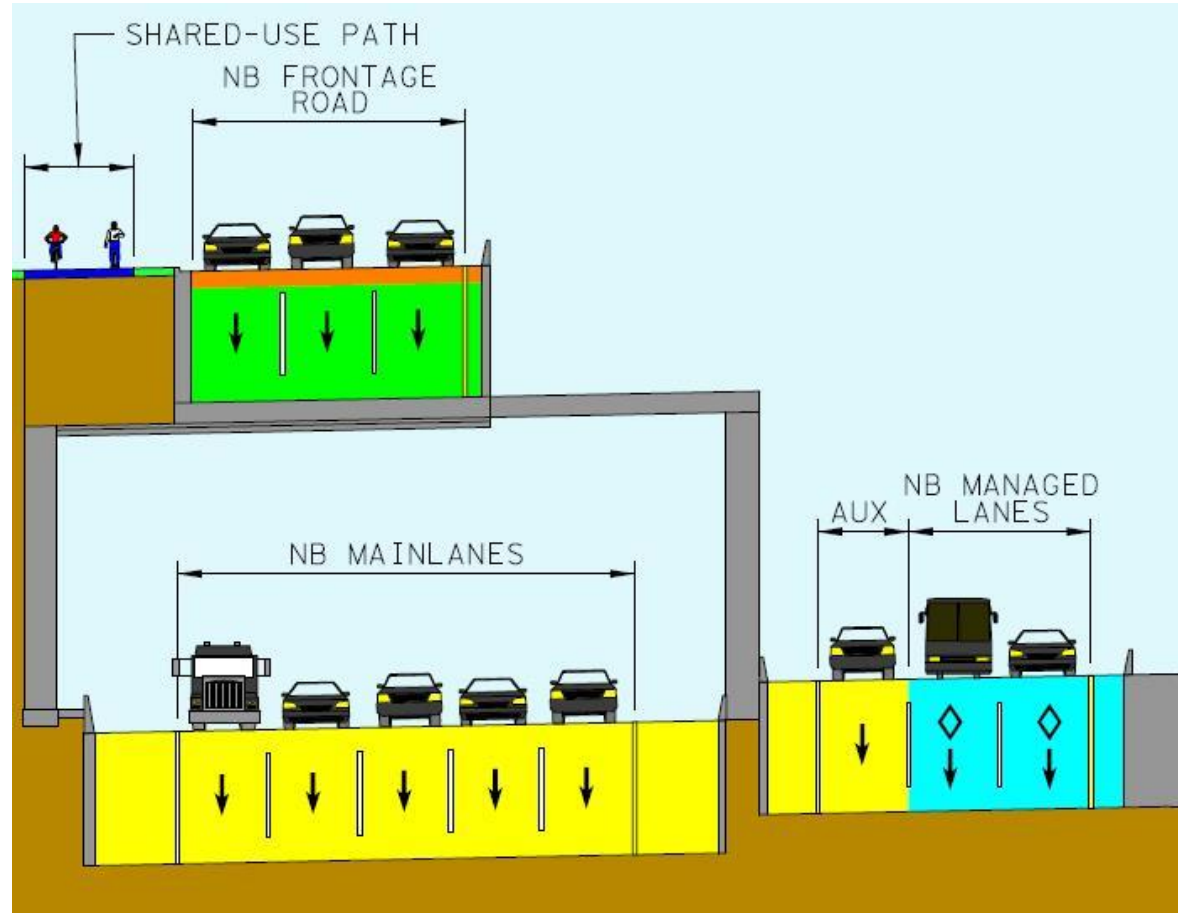
Cantilevered frontage roads over CD system



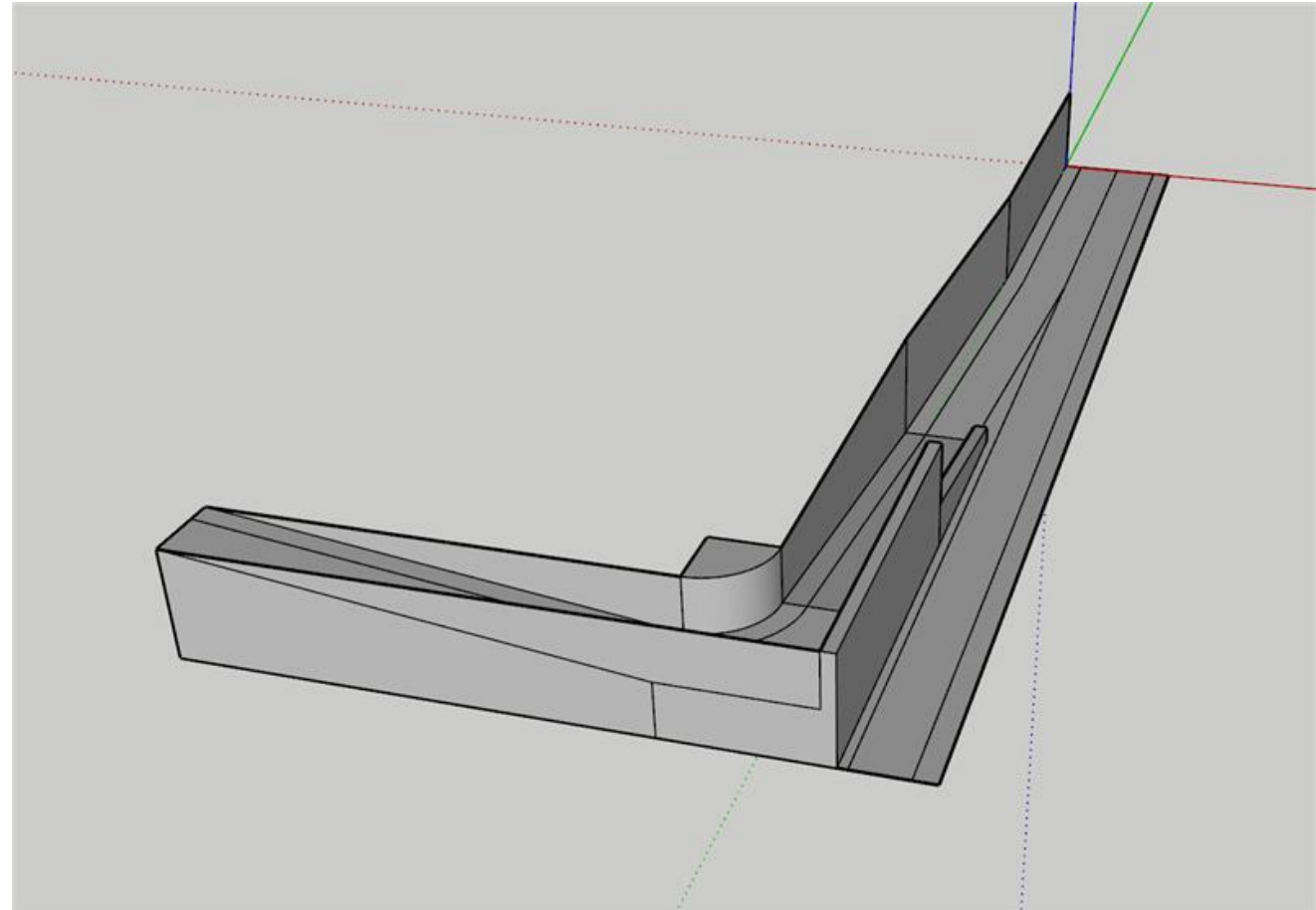
Cantilevered frontage roads over CD system



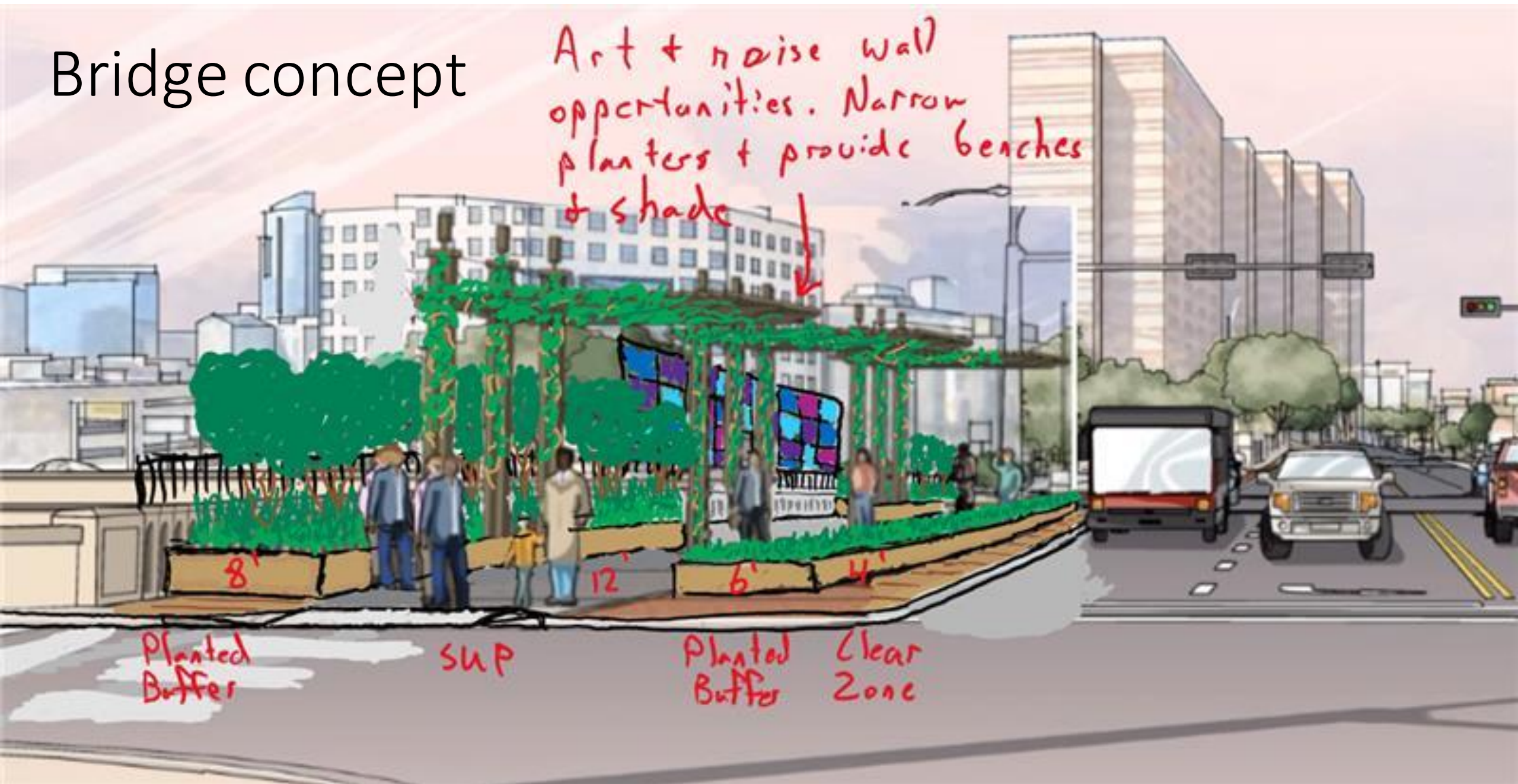
Cantilever design: extended to other segments?



Design improvement options



Bridge concept



Alternative Ramping System

I-35 Capital Express Central

Letter to TXDOT – December 2020

Inclusion of Ramping as Part of EIS Analysis

The City of Austin requests that ramping into/out of the City's grid system be evaluated as part of the EIS. As stated by TxDOT's own studies, 85% of the traffic on I-35 is local to the Central Texas region. Alternatives, **including ramping options**, should be evaluated and included as part of the EIS to appropriately evaluate the potential impacts. The City has proposed a **ramping system that would load critical downtown arterials directly from inline lowered ramps and a lowered circulation/distribution lane system** in downtown as opposed to requiring access from a surface frontage road. We request that this concept be included in one or more of the alternatives for evaluation. Much of the existing congestion during the PM peak period in our downtown is directly caused by operational loading constraints of the I-35 frontage roads' ramps. Congestion from the freeway backs up onto surface streets, eventually causing circular congestion and gridlock. **The City believes that this alternate ramping methodology proposed by the City could significantly reduce urban congestion within our grid.**

Letter to TXDOT – December 2020, cont.

City of Austin Proposed Revised Range Alternatives

Across all alternatives:

- Include the ability to evaluate alternative ramping scenarios as proposed by the City in downtown (i.e., direct ramp access into the perpendicular arterials as well as ramping from traditional parallel surface access or boulevard roadways).

Letter to TXDOT – April 2021

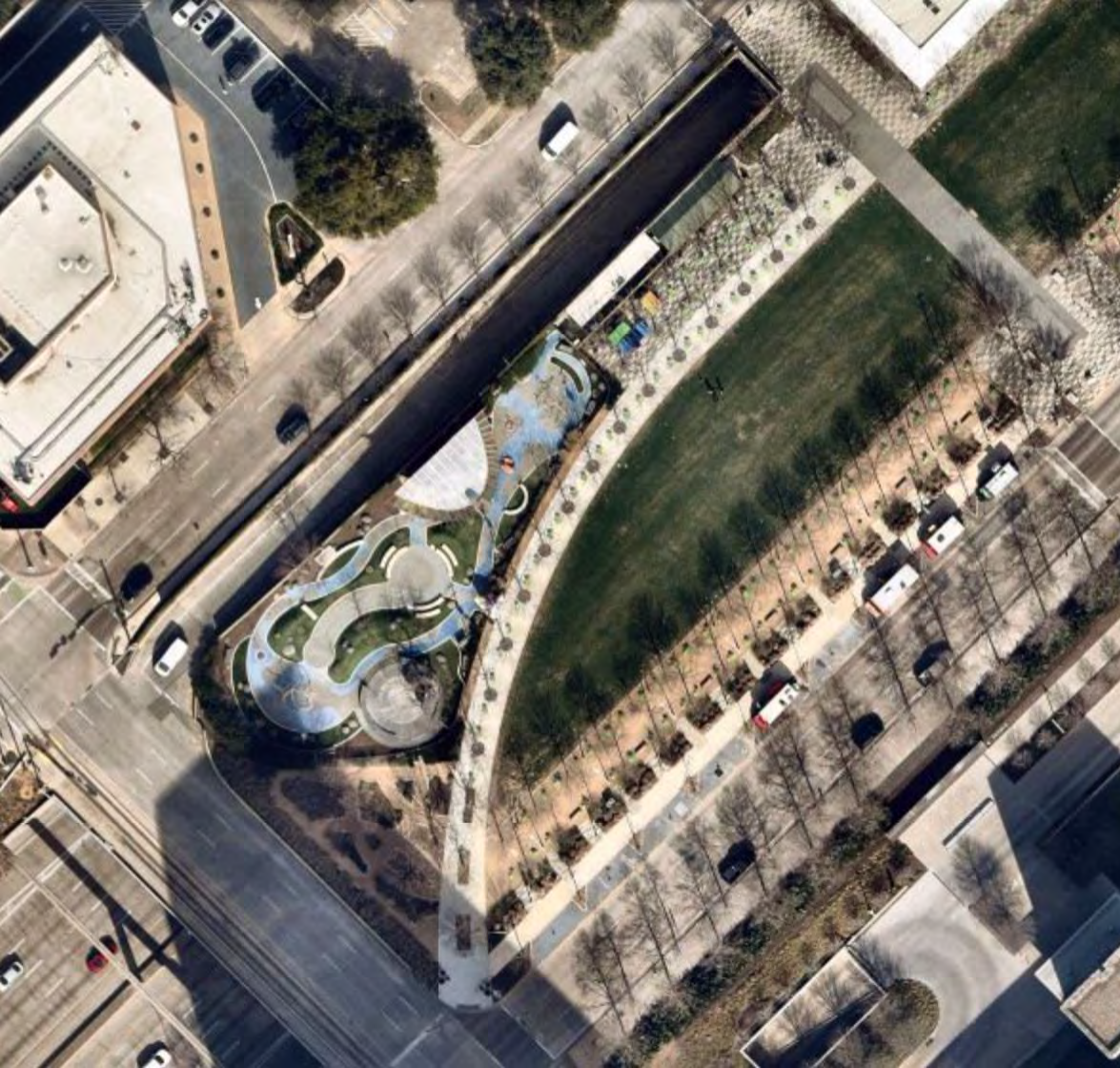
As you know, City staff have proposed a **ramping system that would load critical downtown arterials directly from inline depressed ramps and a lowered circulation/distribution lane system** in downtown as opposed to requiring access from a surface frontage road. It is our belief that the **existing frontage road ramp design leads to the significant grid congestion** we experience daily within our primary employment centers. The ramping issue is the linchpin to many other design elements, such as the **ability to reduce the number of frontage road lanes and achieve a more urban context for speed and safety**. The difference between this ramping strategy and the traditional frontage road ramping can have measurable differences across many of the proposed Evaluation Criteria. We are anxious to understand your findings on how ramping concepts into and out of the major employment centers within the State Capitol Complex, University of Texas, downtown and the East Side could **address network gridlock caused by the current loading and unloading of constrained I-35 ramps**.

Reasons for proposed alternative ramping

- ability to reduce the number of frontage road lanes
- achieve a more urban context for speed and safety on parallel surface streets
- address network gridlock caused by the current loading and unloading of constrained I-35 ramps

Klyde Warren Park

- 336' long exit ramp portal into overpass
- Entrance ramp/exit lane begins 800' back
- Exit 20 mph advised
- Adjacent to 4 travel lanes (50 mph)
- 16' height clearance









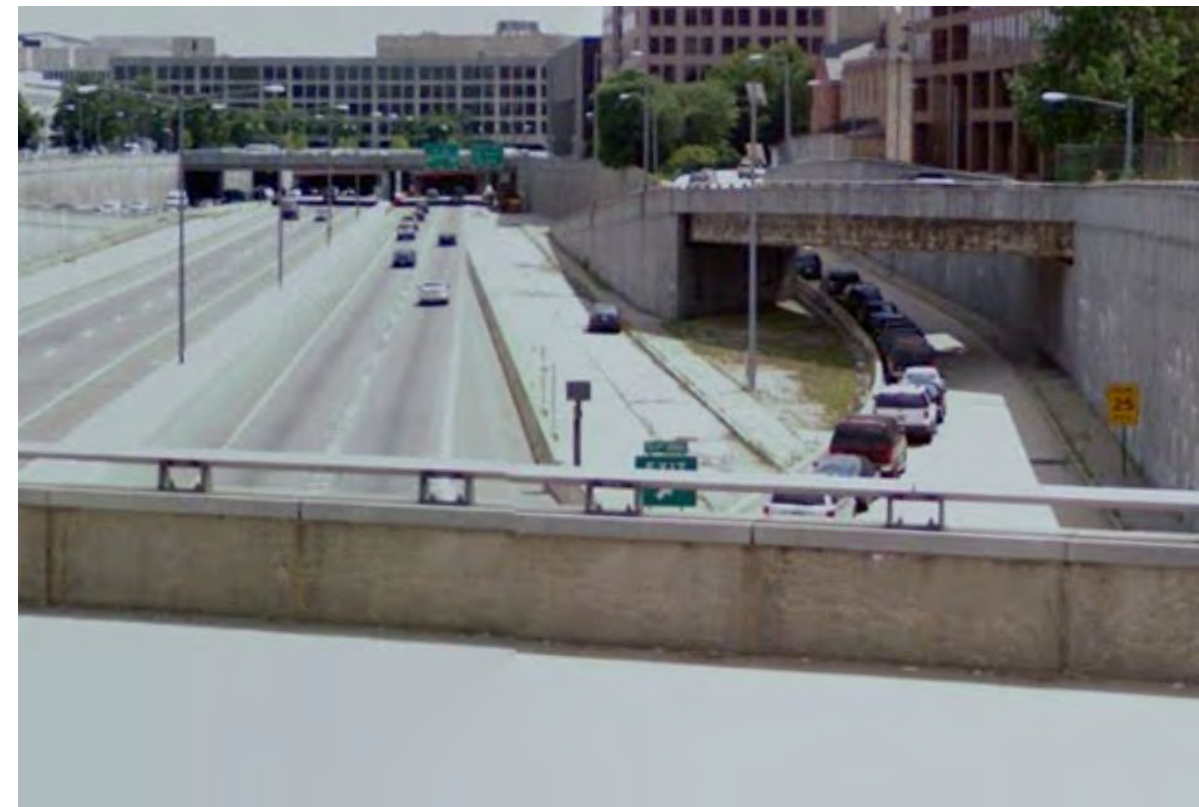
Google

Capitol Crossing DC

- 250' long entrance ramp portal
- ramp 20 mph advised
- Adjacent to 2 travel lanes
- No trucks in tunnel



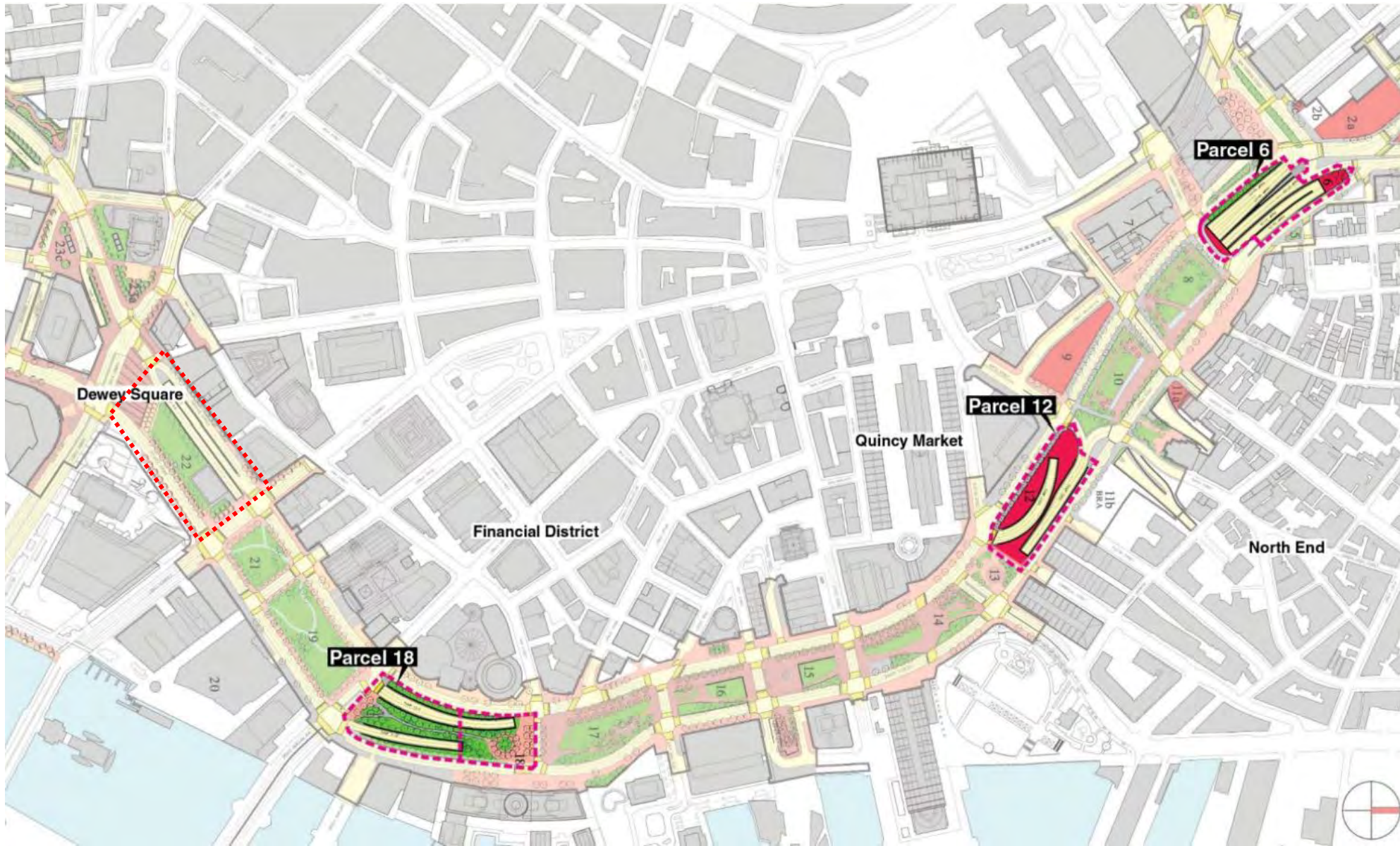


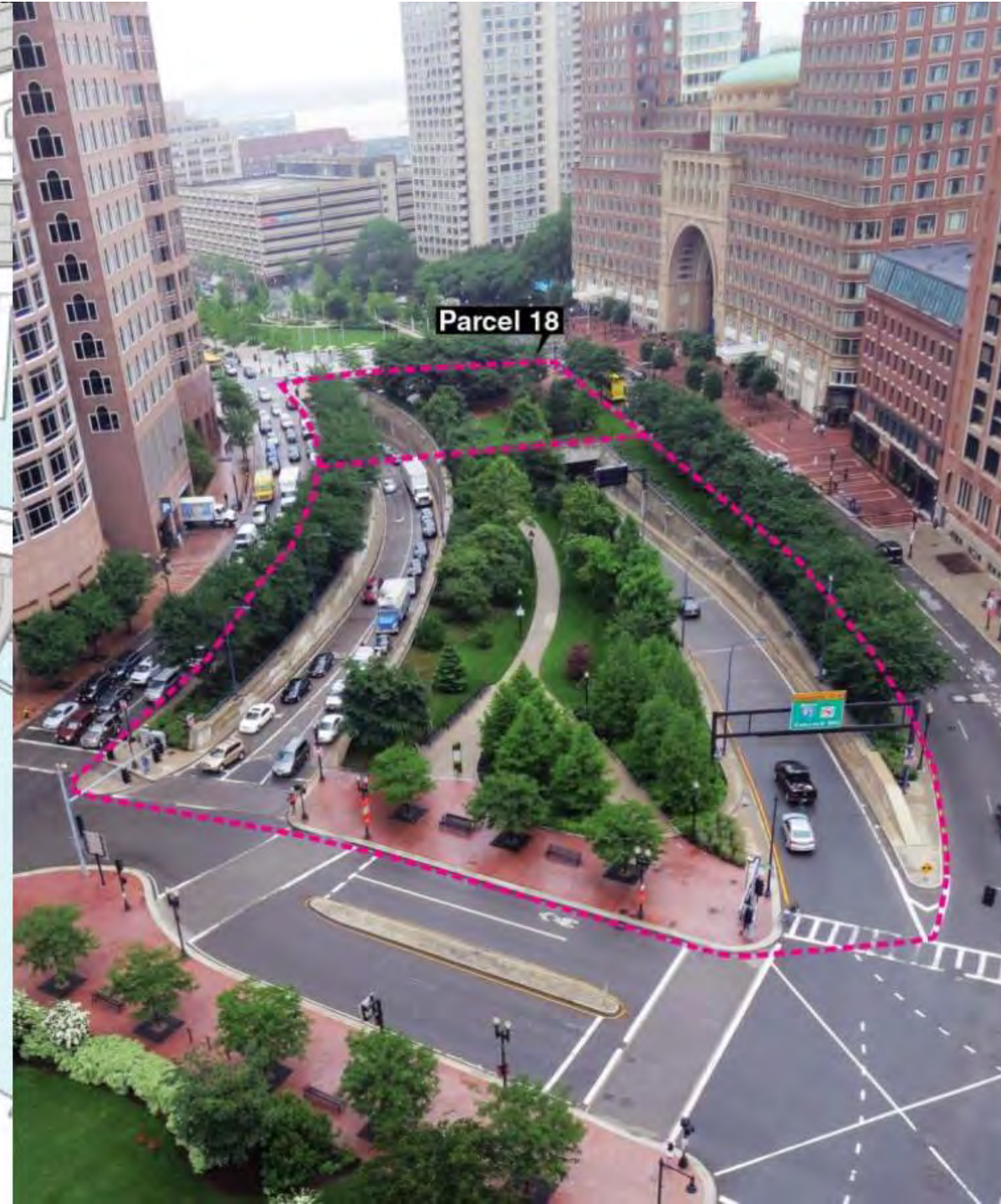
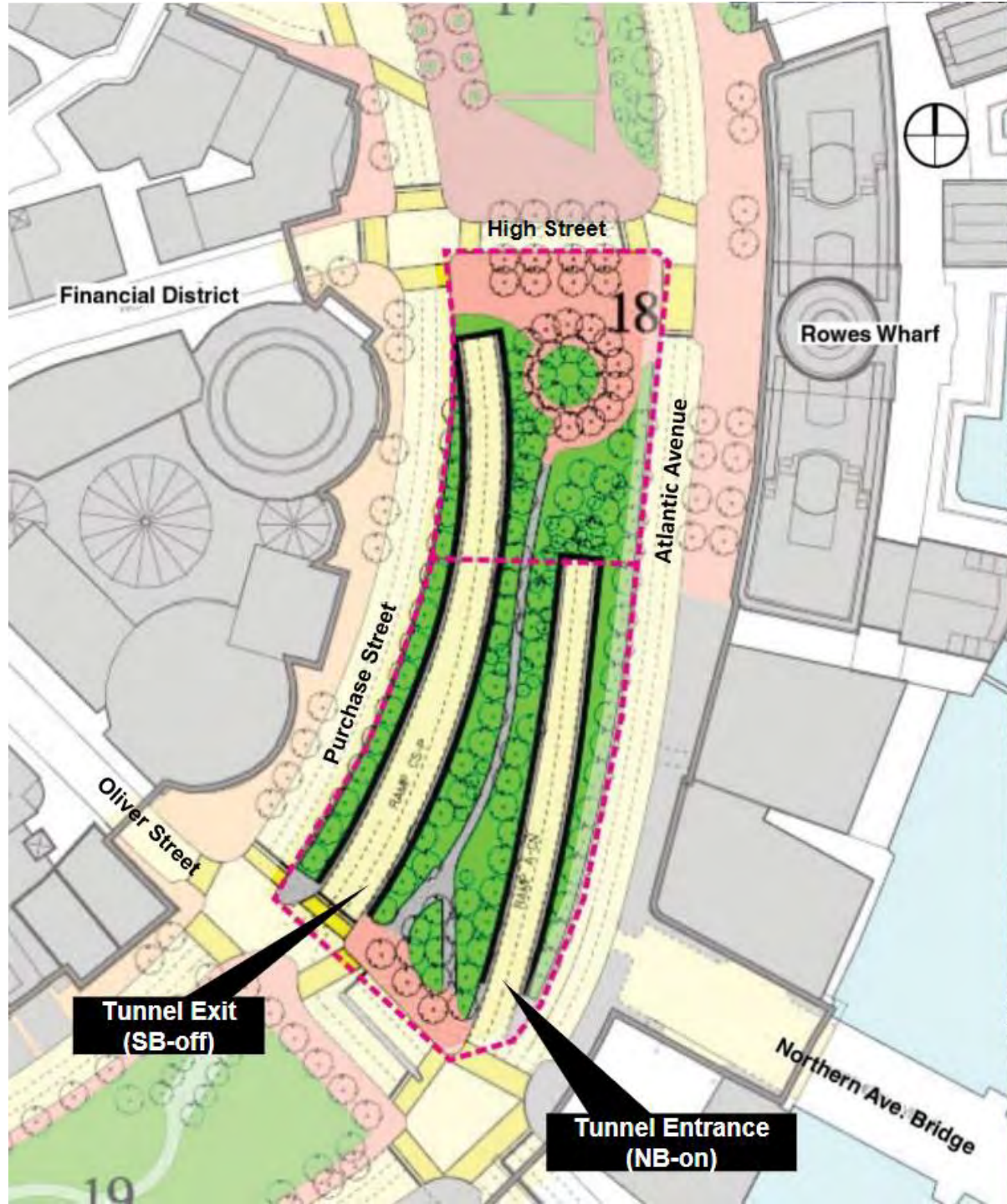


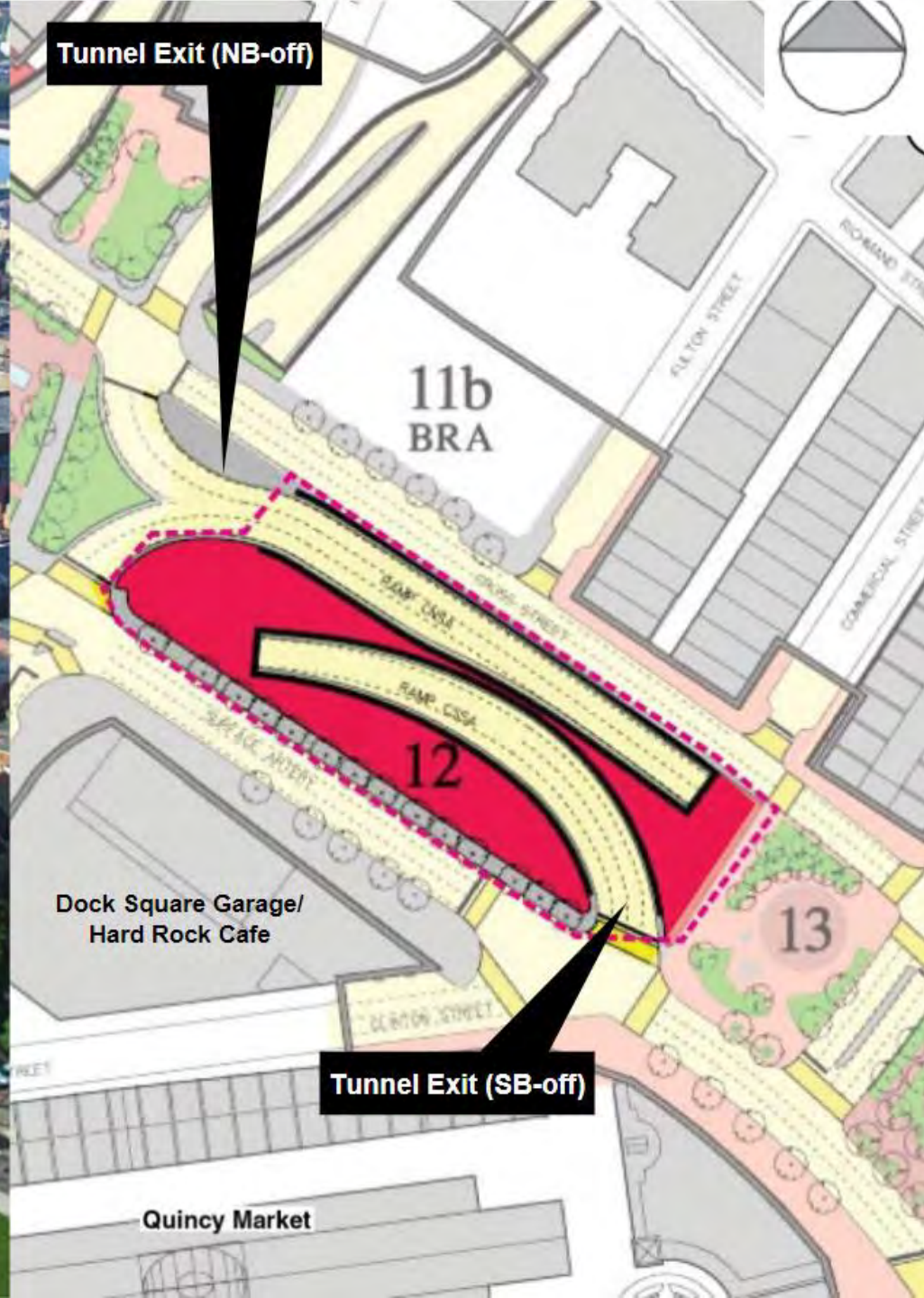
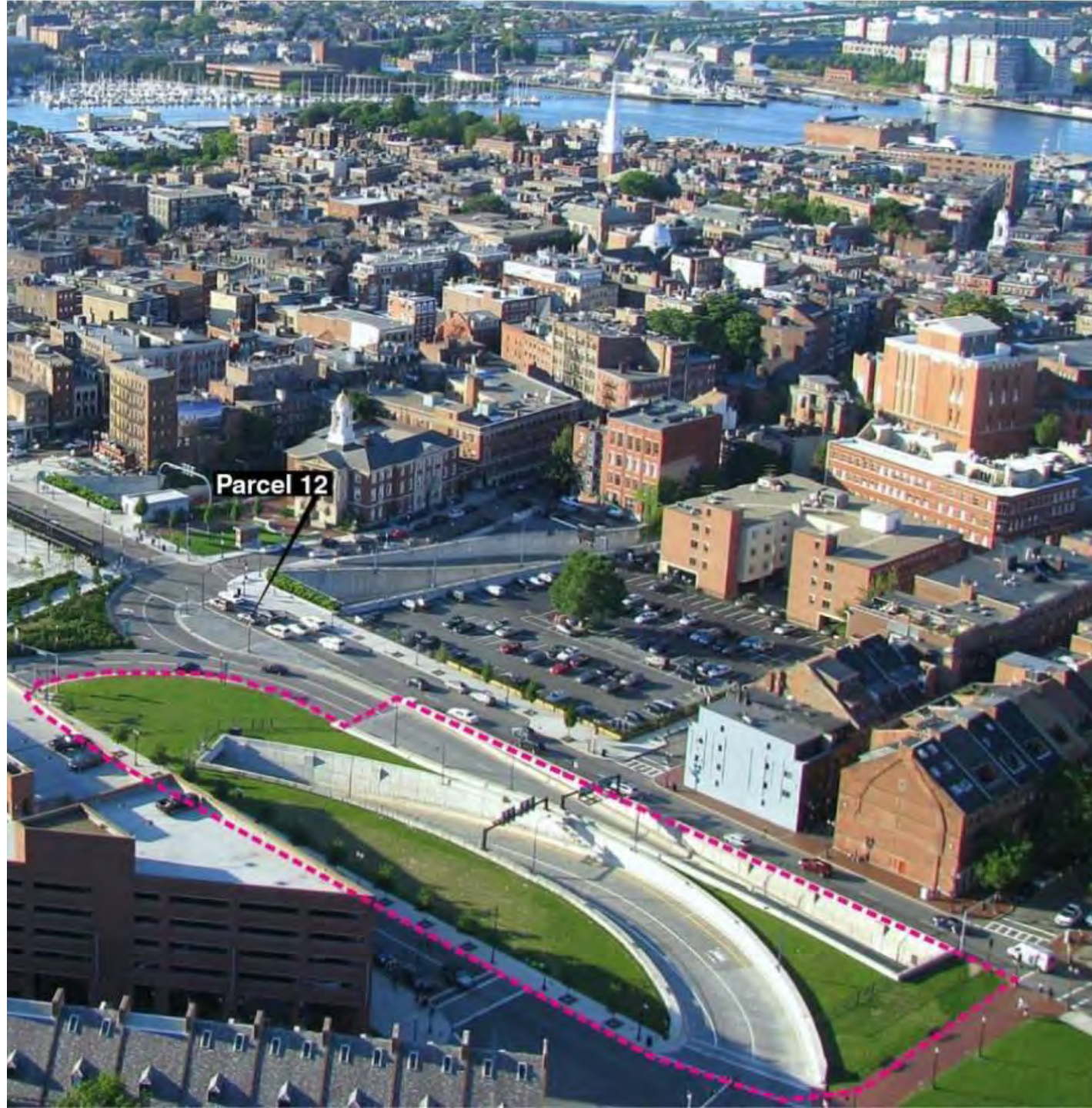


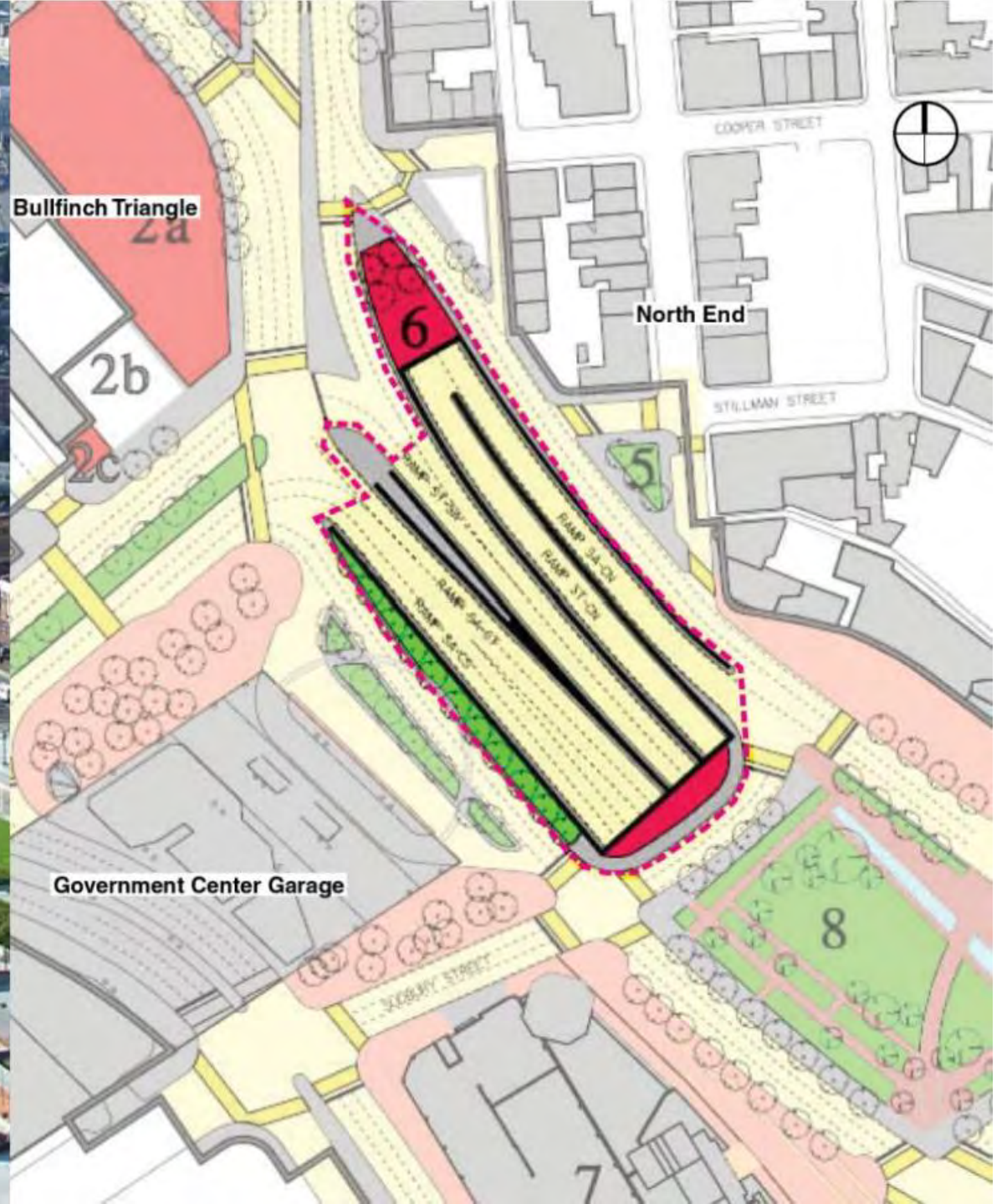
Rose Kennedy Boston

- 4 parcels with exit and entrance ramp portals











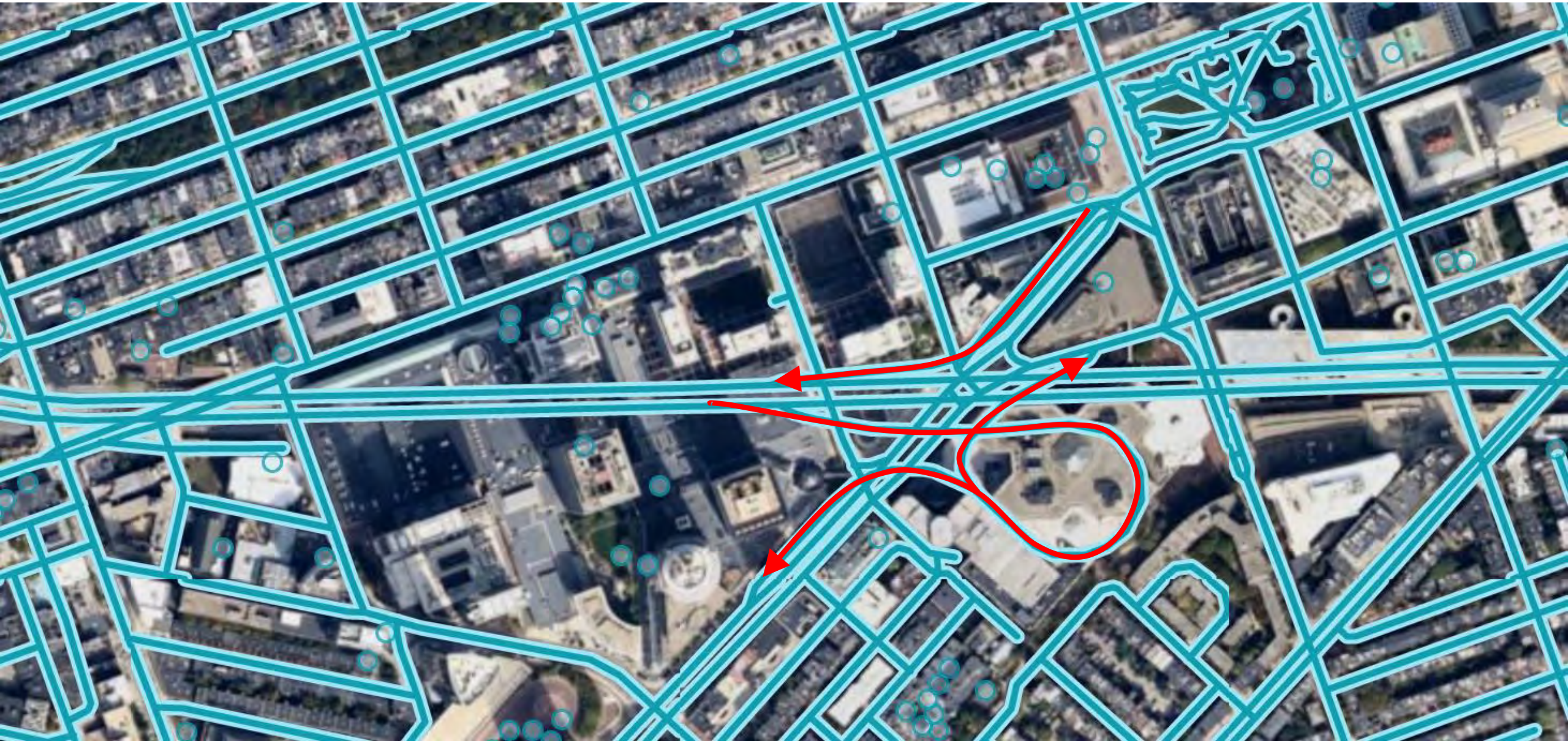
Prudential Center Boston

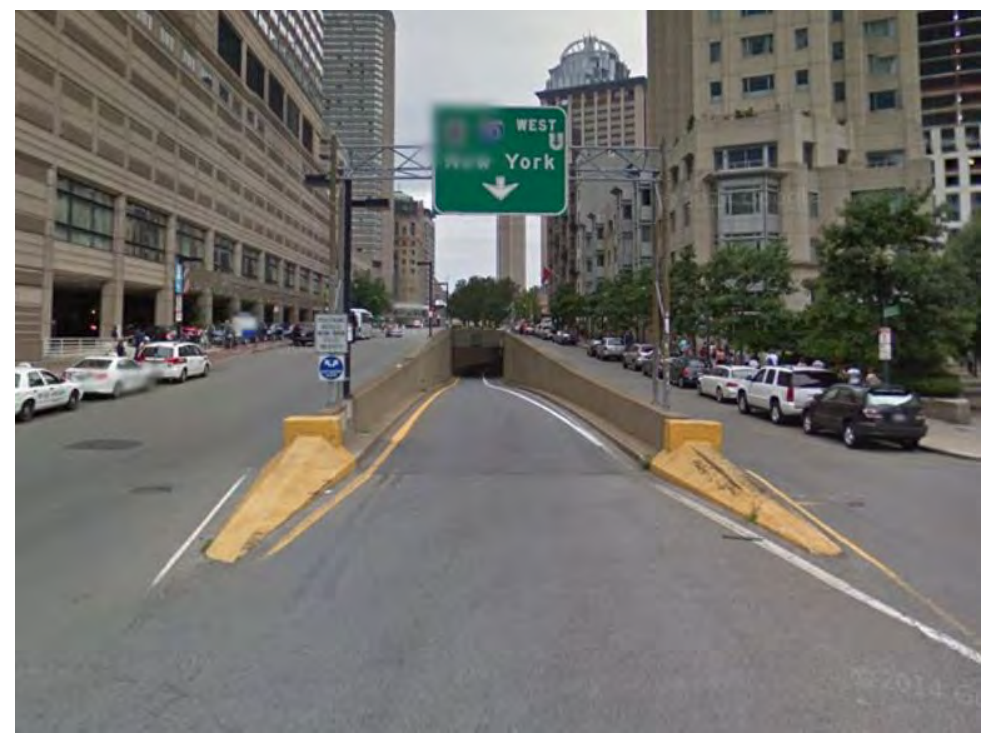
- 2 inline exit and entrance ramp portals

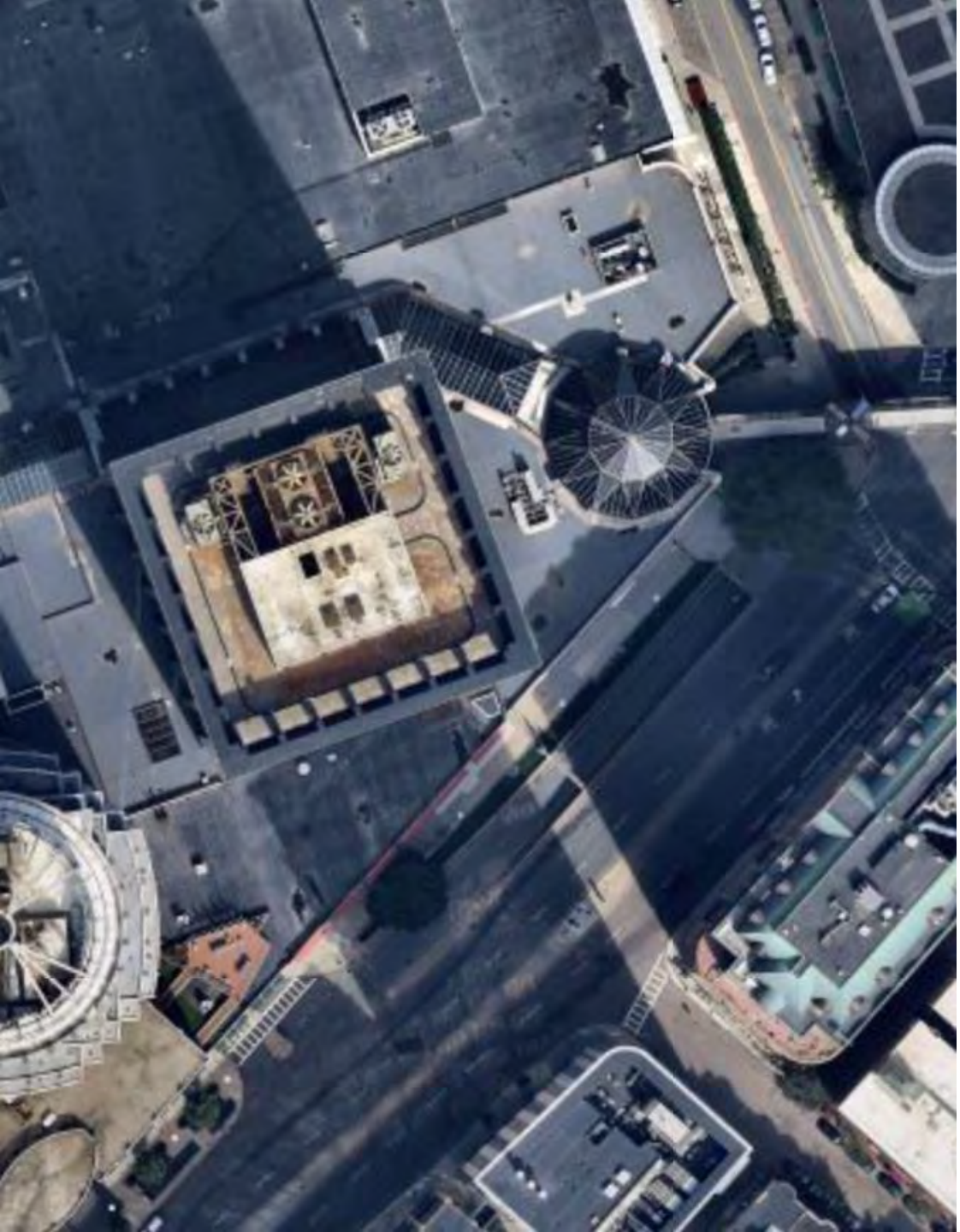


Prudential Center Boston

- 2 inline exit and entrance ramp portals

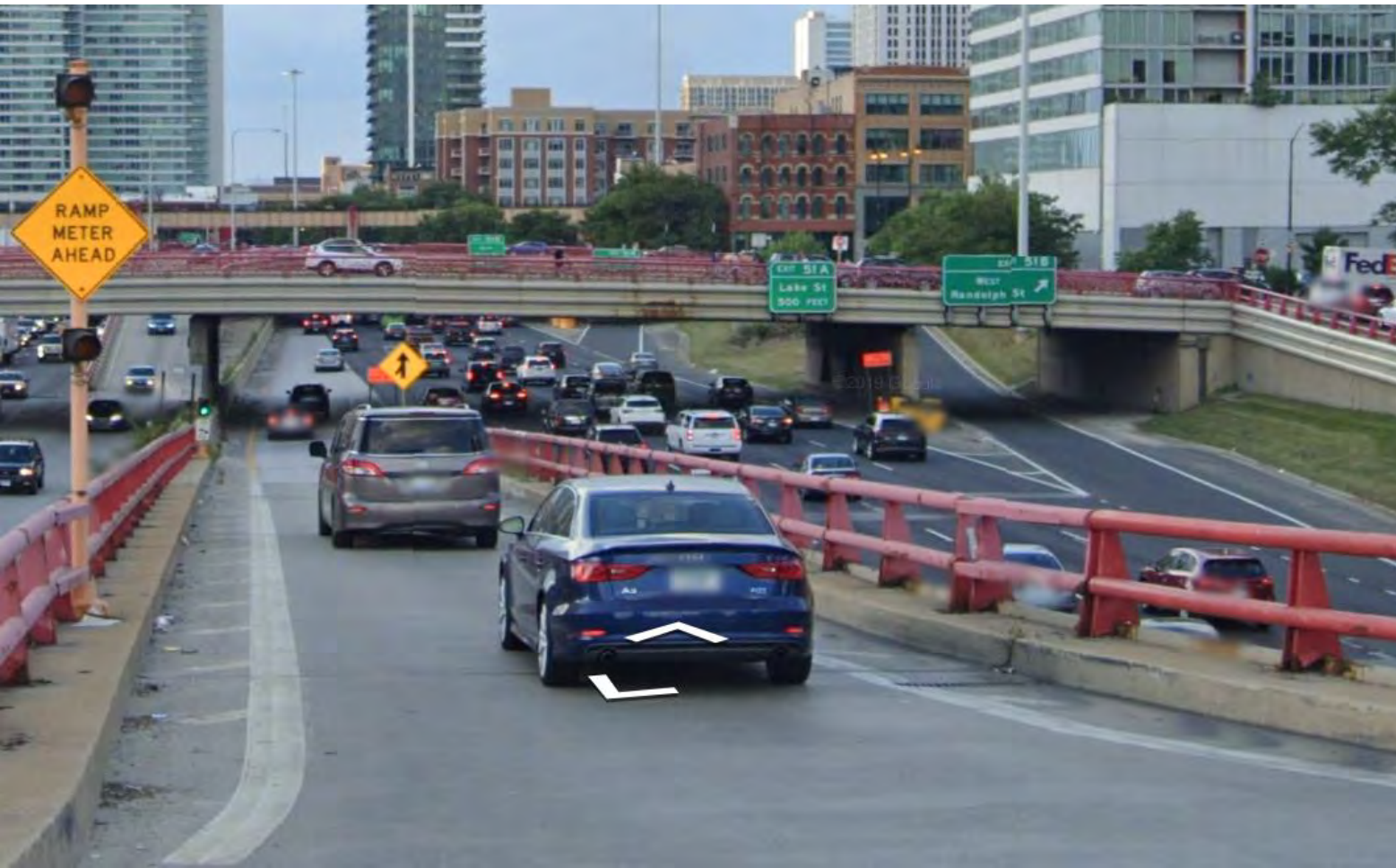






Kennedy Expwy Chicago

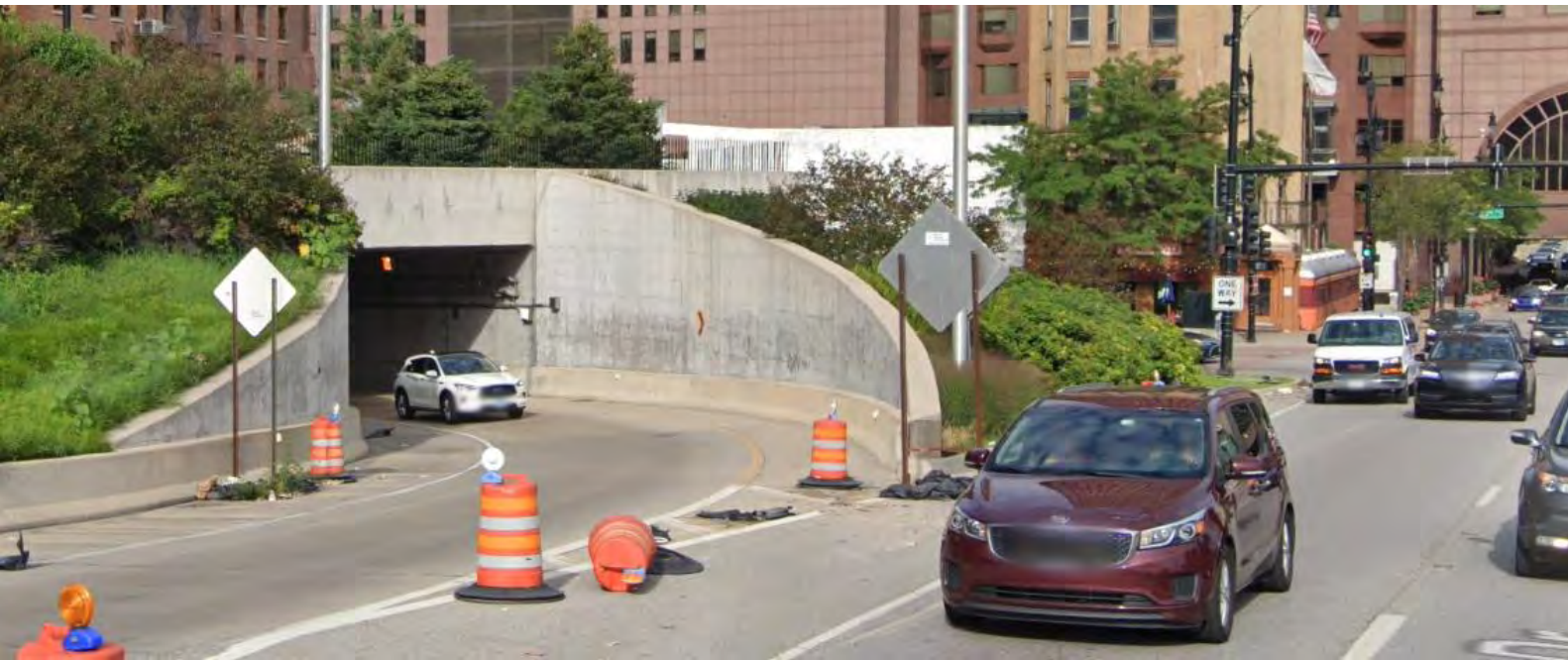
- High density of entrances/exits within 2 miles
- Both one way and two way surface streets
- All *entrances* from city street grid into middle main lanes
- All exits from outside main lane to city street grid in more traditional exit ramp design
- 2009-10 reconstruction improved safety of known dangerous ramping by increasing lengths of most entrance ramps and reducing bottlenecks





Dwight D. Eisenhower Expy / Ida B. Wells Dr / D'Angelo Park Chicago

- Two block park/cap area with partially tunneled entrance exit ramps
- Connects Dwight D. Eisenhower Expy (slightly farther west becomes I-290) to Lower and upper Wacker Dr two-level street grid system
- Ramps to Franklin and two levels of Wacker Dr have existed since construction widening project that began in 1949, landscaping was added over the ramps to create D'angelo park in 2012.



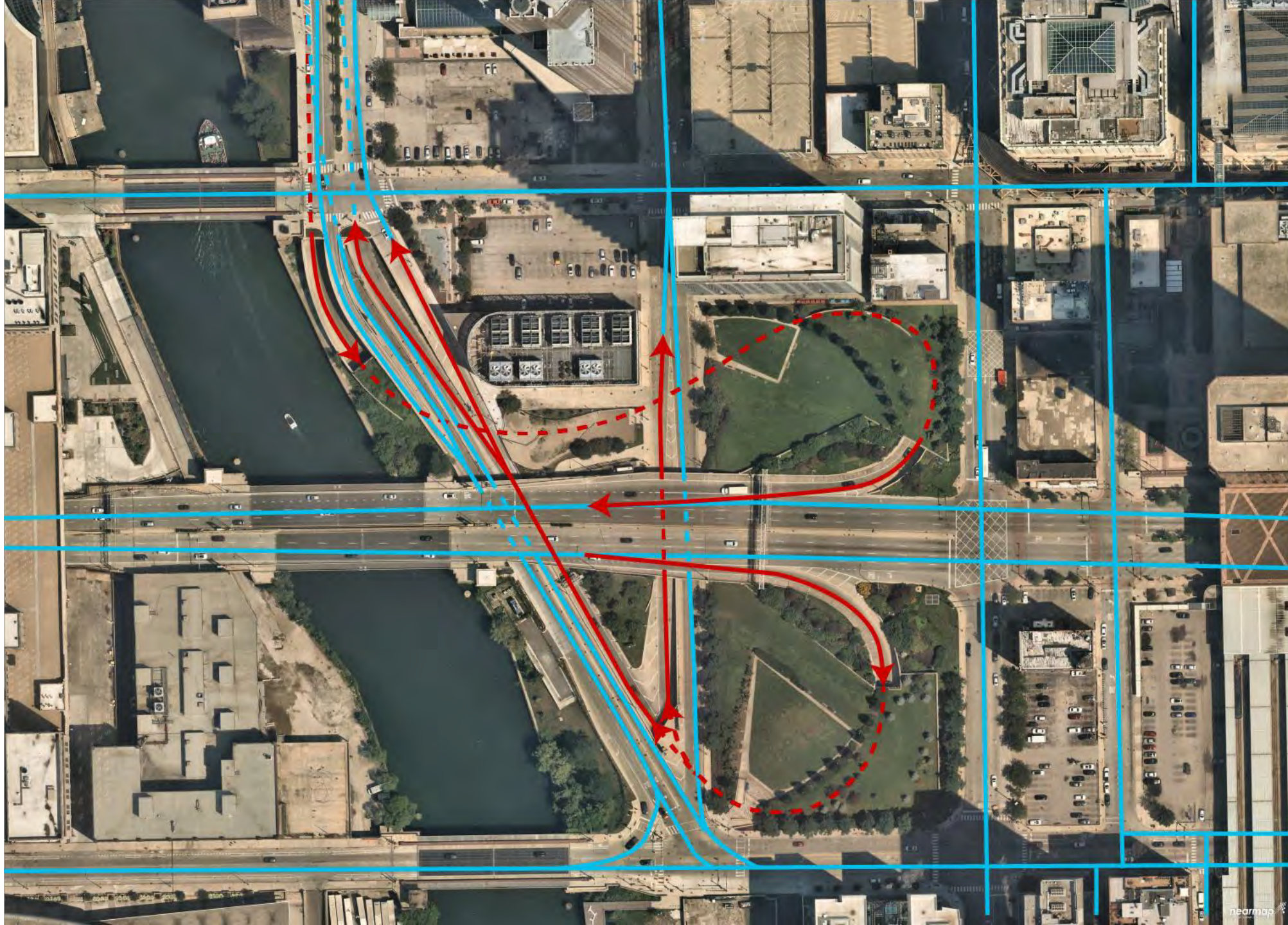


[Google Maps](#)

Wacker Dr
(two levels of traffic)

D'Angelo Park

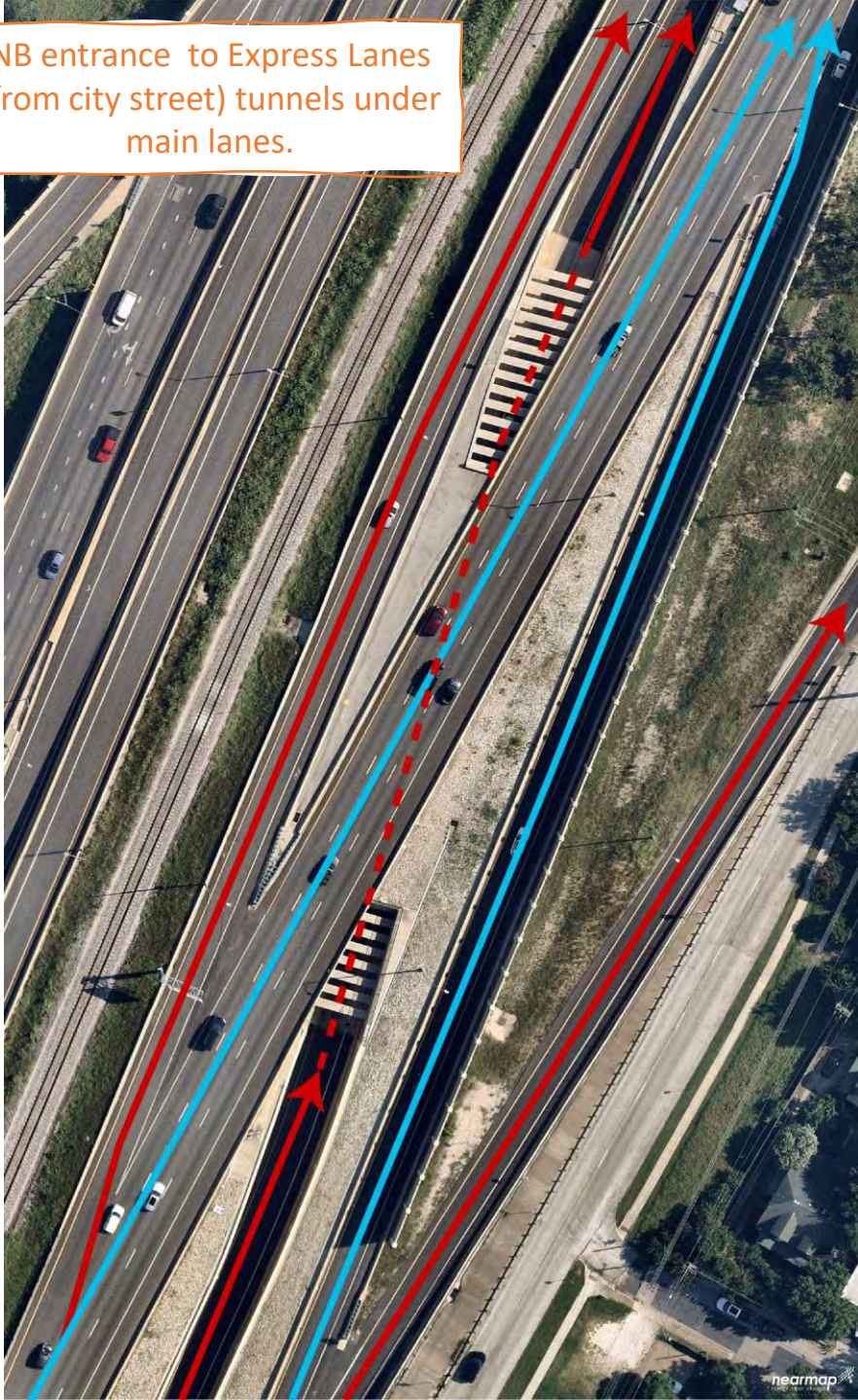
Ida B. Wells continues under
Post Office and becomes I-290
at the I90/I-94 interchange ~2K
ft west



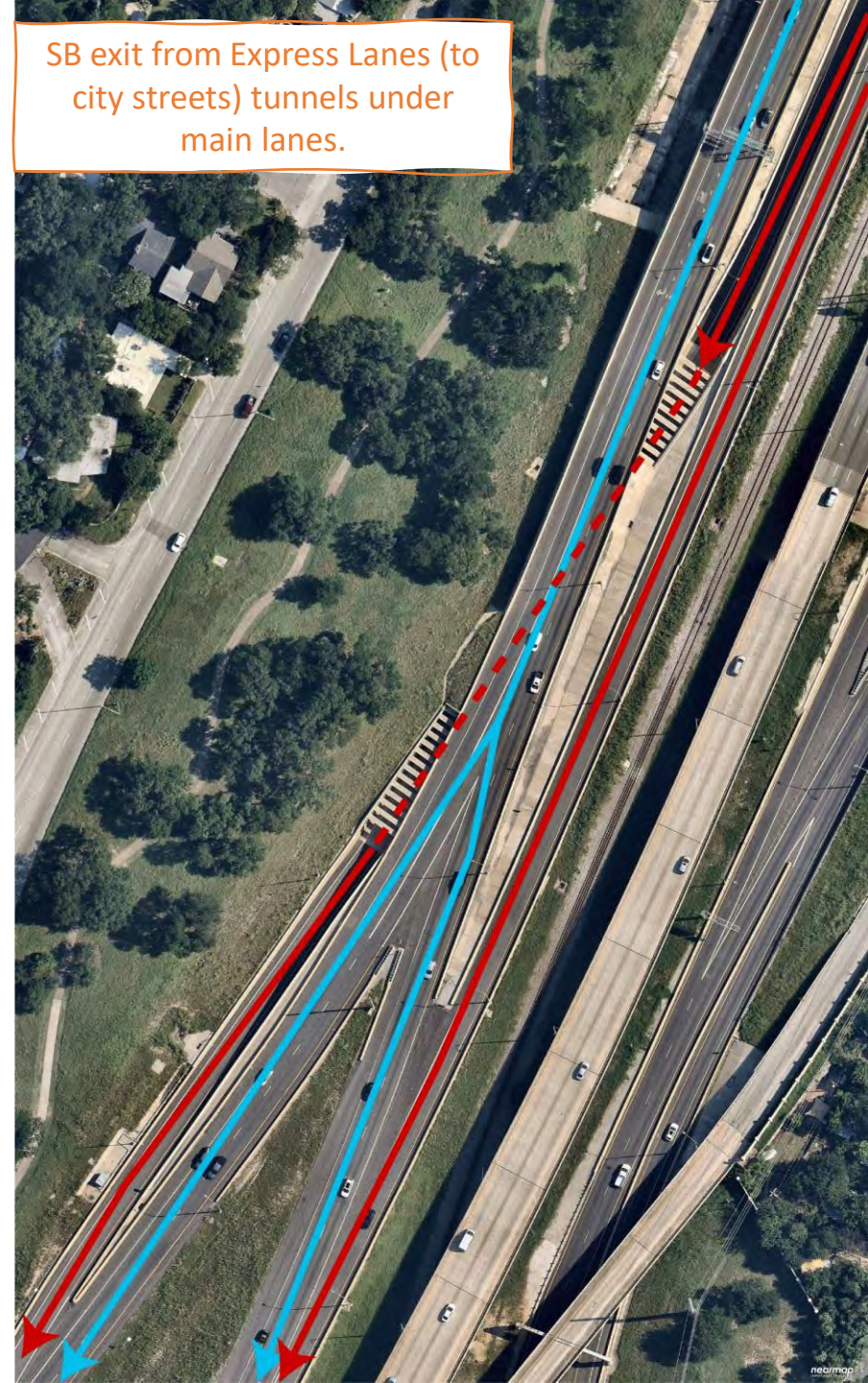
MoPac @ Cesar Chavez & 5th Streets

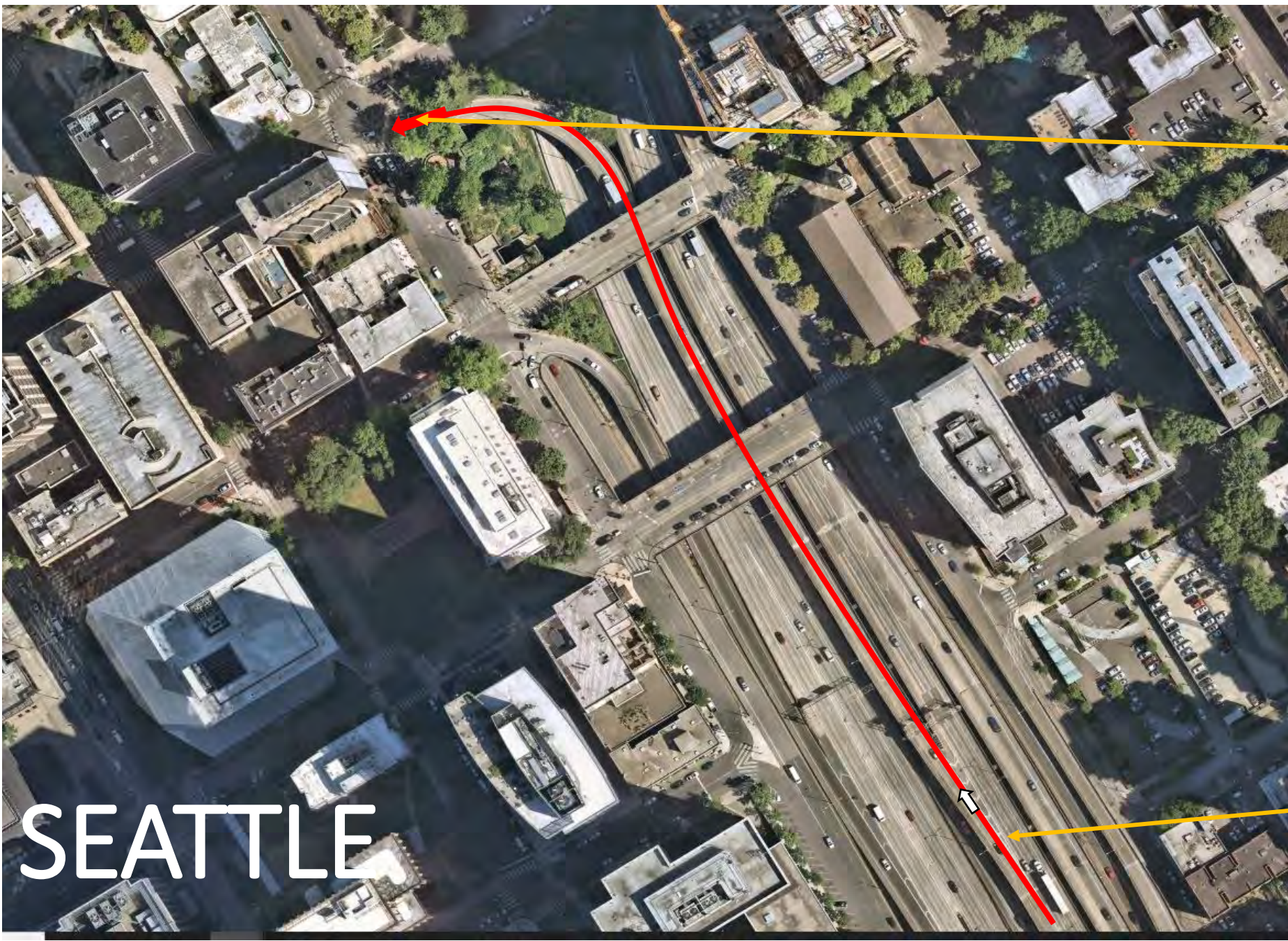


NB entrance to Express Lanes
(from city street) tunnels under
main lanes.



SB exit from Express Lanes (to
city streets) tunnels under
main lanes.





- From the start of the exit lane to the stop light intersection pictured above, the exit ramp is about 1,255 ft long, comes to a stop light intersection pictured above. 60mph sign at start of exit ramp





Pictured above, intersection coming from downtown onto 5 South, with center lane as the lane that turns into ramp, bus lane with transit signal in right lane.

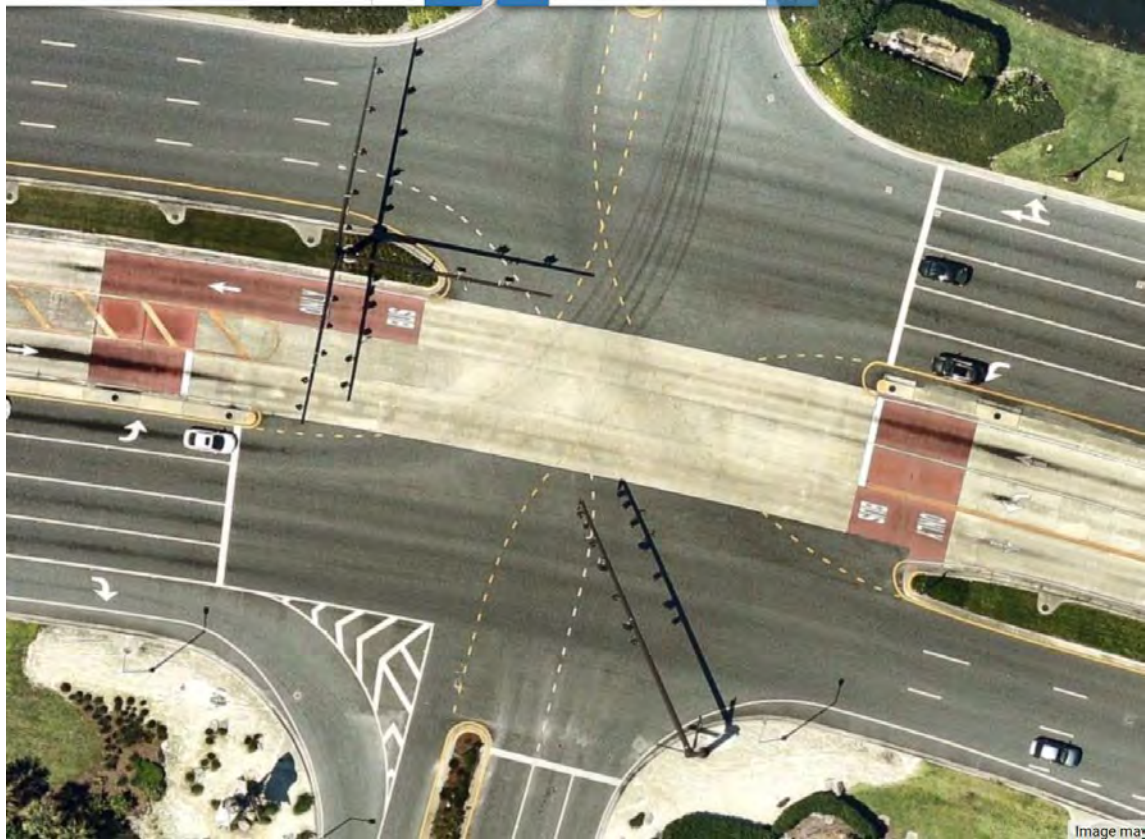
Pictured below, right lane on frontage road is entrance ramp to 5 South, same ramp as pictured above. Right turn Signal, NTOR, bus lane in the middle, through traffic in left lane.





Orlando

I-4 redevelopment in Orlando could be a good example of center express lanes and ramps from major crossing streets that lead directly into center express lanes. This is a link to their webpage that includes site plans and images/videos: <https://i4ultimate.com/project-info/>

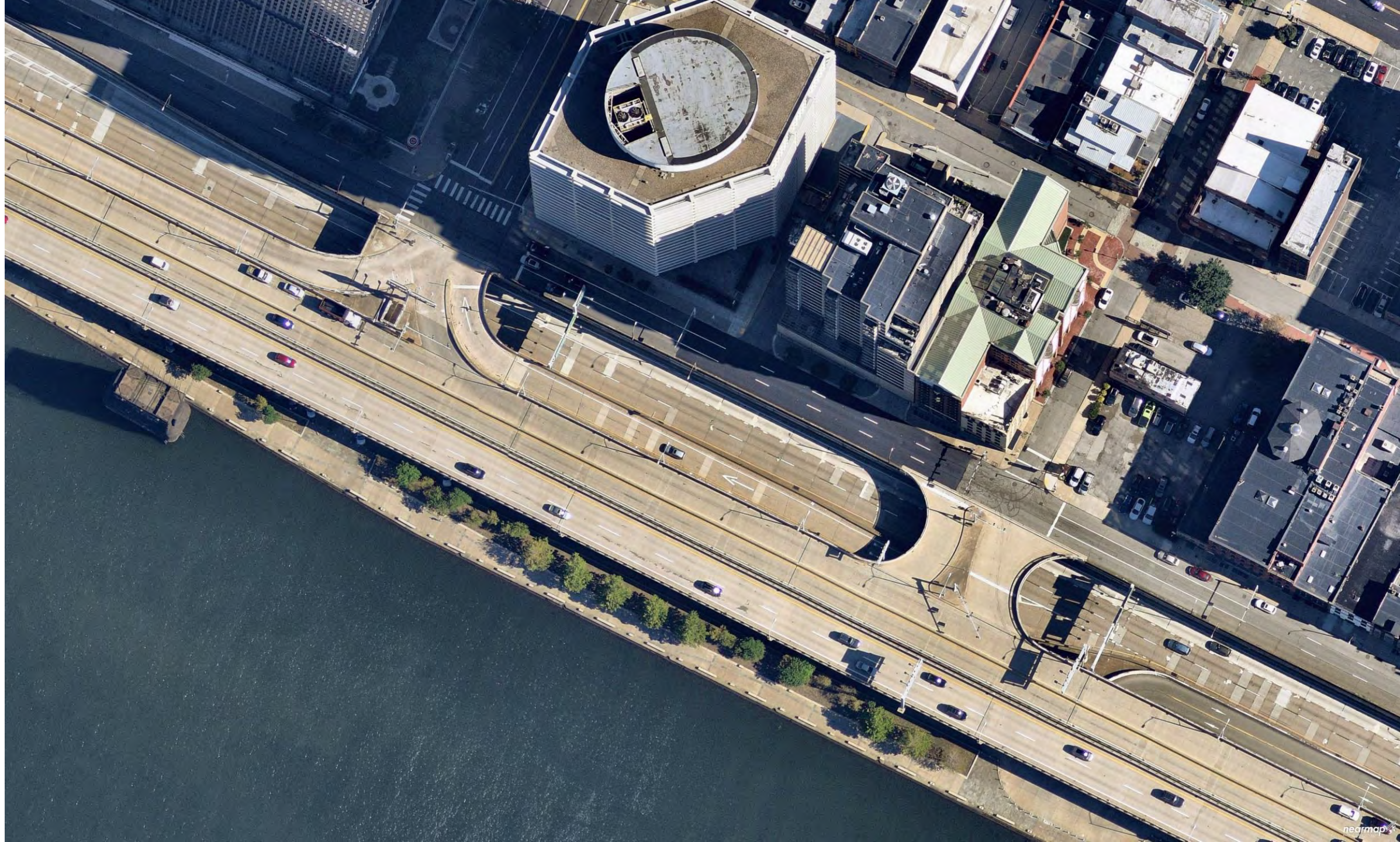


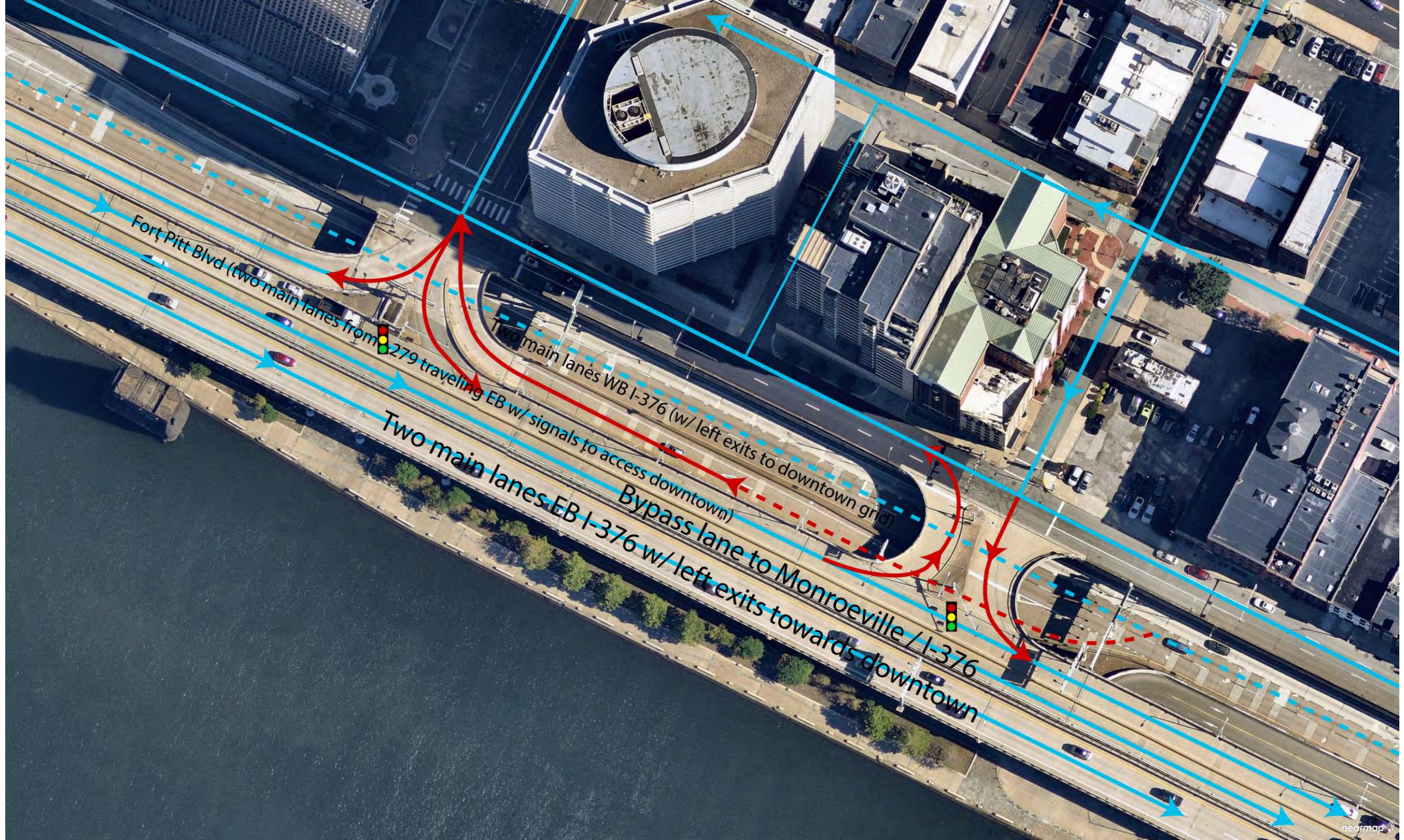
In Orlando (WDW), there is reconstruction to include bus only center lanes. This is an example of the intersections for these bus only center lanes.



Pittsburgh







Fort Pitt Blvd (two main lanes from 279 traveling EB w/ signals to access downtown grid)

Two main lanes WB I-376 (w/ left exits to downtown grid)

Two main lanes EB I-376 w/ left exits towards downtown

Bypass lane to Monroeville / I-376



**Customer Driven.
Community Focused.SM**

MEMORANDUM

TO: **Robert Spillar**
Austin Transportation Department Director

FROM: **Thomas Pierpoint**
Austin Energy, Vice President for Electric System Engineering & Technical Services

Tara Delagarza *JRD*
Austin Energy, Single Point of Contact for I-35 Capital Express

DATE: September 8, 2021

SUBJECT: I-35 Central Express Open House Comments

As Austin is one of the nation's largest and most popular cities, it is important that the priorities of the municipally owned electric utility, Austin Energy, reflect the priorities of the community we serve. The I-35 Capital Express Central Project (I-35 Capital Express Project) provides an opportunity to address issues stemming from a highway that has long divided our community. As such, Austin Energy is committed to building connections so that we can continue to safely deliver clean, affordable, reliable energy to our customers. Austin Energy's promise comes from our status as a public-power utility, bringing more benefits to our community in how we protect our health and our environment. Austin Energy is committed to working with the community and with the Texas Department of Transportation (TxDOT) to develop a vision for what works for Austin now and in the future.

Austin Energy staff have coordinated with TxDOT staff since 2018 on the early design of the Capital Express Project. In response to TxDOT's most recent I-35 Open House (August 10, 2021), Austin Energy staff have submitted comments addressing the utility's specific concerns which include consideration of existing and planned electrical crossings along the path of the I-35 Capital Express Project (impacting an 8-mile segment of Highway I-35 between 290 East to the North to 290 West to the South (SH71) and the provision of adequate room for the placement of duct banks and power poles required for such crossings.

Highlighted in this memo are Austin Energy's issues and concerns associated with the impact of the I-35 Capital Express Project on the two (2) existing substations and one (1) planned

substation, three (3) existing transmission circuits, and various distribution overhead and underground crossings located adjacent to the path of the I-35 Capital Express Project.

Austin Energy Substations

Siting substations in dense urban areas present utilities with numerous challenges: safety, power density, right of way (ROW), potential community opposition and the total cost of land and construction. Austin was originally electrified many decades ago, and, like the City's water, sewer and highway infrastructure, the power distribution network must be continually maintained, expanded, and updated. Given the density of Austin and the cost of land in the central core of Austin, Austin Energy central substations must not only support the current needs of a vital and booming City, these critical facilities which are not suited for relocation, must also be preserved, maintained, and upgraded in order to support the projected power needs of the City. Austin Energy's specific concerns with respect to the three (3) substations along the path of the I-35 Capital Express Project are listed below.

Rainey Street Substation (706 ½ Lambie Street)

Owned by the City of Austin since 1955, the Rainey Street Substation property has been maintained by Austin Energy since 2012 as a future substation site. In order to meet projected downtown Austin electric needs and to perform necessary and time-sensitive upgrades at the Brackenridge Substation, Austin Energy kicked off the Rainey Street Substation Project in March of 2018. Austin Energy commenced engineering and design work and community engagement efforts, and, in October of 2018, Austin Energy representatives met with TxDOT to discuss access to the substation in light of its location along the I-35 frontage road and in recognition of TxDOT's announced plans to rebuild the City of Austin I-35 corridor. These discussions were held in order to identify appropriate locations for maintaining the existing alignment of overhead lines and for the siting of the electric duct banks necessary to connect the existing Austin Energy Brackenridge Substation and the proposed Rainey Street Substation. Discussions and planning between Austin Energy and TxDOT in relation to the Rainey Street Substation Project have been ongoing during the three years since the inception of this major Austin Energy substation project.

Staff of Austin Energy and TxDOT developed understandings based upon meetings held, information exchanged, and communications received from TxDOT representatives in 2018 and thereafter. Based upon these understandings and discussions, Austin Energy has proceeded with the planning and engineering necessary to design and site facilities to bring power to the new substation site by maintaining the existing overhead circuits to the south and a duct bank running north along the existing I-35 southbound frontage road at a 20' depth (TxDOT communicated to Austin Energy that 20' was a sufficient depth to meet clearance requirements under the frontage road pavement).

Following is an update for this area based on the current Alternatives 2 and 3 proposed by TxDOT:

- As of August 26, 2021, Austin Energy has received TxDOT approval of a Temporary Construction Driveway from the I-35 frontage road, just south of River Street, for the construction of the Rainey Street Substation. Austin Energy widened its planned sidewalk on the east side of the Rainey Street Substation site to accommodate TxDOT and Austin Energy as a Shared Use Path. Rainey Street Substation construction is expected to commence in October 2021.
- Austin Energy Circuit 1015, which connects the transmission system from the Pedernales Substation (@Holly Street) to the new Rainey Street Substation, will require a new alignment, likely with easements through a residential neighborhood with existing overhead distribution, on the east side of I-35 due to the increased ROW.
- The proposed East Avenue Duct Bank, from the west side of I-35 heads north from the Rainey Street Substation to interconnect with the Brackenridge Substation, alignment is approximately 6' to centerline of the duct bank in the southbound frontage road from 12th to Lambie Streets (estimated depth: 20'). The Austin Energy design is currently at 50%. Tunneled lanes under the Capital Metro Red Line crossing at 4th Street (Section I-I) are in conflict with proposed frontage road alignment. Austin Energy will be required to change the East Avenue Duct Bank design to tunnel the duct bank under lanes (estimated depth ~40'). This is a 20' change in depth for Austin Energy's design, and implications such as cost, maintenance, cable rating, etc. are unknown at this time.

These TxDOT changes would cause significant delay and could mean that Austin Energy will need to acquire additional downtown property in order to construct the necessary duct bank to fully integrate the Rainey Street Substation into the downtown Austin power grid. Austin Energy will continue to work cooperatively with TxDOT staff; however, the necessity of the on-schedule completion of this the in-flight Austin Energy East Avenue Duct Bank project can proceed on schedule, as timely completion is critical to reliably serve the power needs of the City of Austin.

Brackenridge Substation (1300 ½ N. I-35 Service Road):

The Brackenridge Substation is an existing Austin Energy substation located on the I-35 west frontage road and it is an essential component of the Austin Energy downtown power grid. Upon the completion of the Rainey Street Substation, it is Austin Energy's plan to rebuild and upgrade this substation. TxDOT communicated to Austin Energy in 2018 that it was considering preliminary plans to significantly change the elevation of the frontage road immediately adjacent to the substation (and which provides the only access to this substation) and eliminate one of the driveways to the substation. Austin Energy representatives communicated to TxDOT that a grade change in the frontage road would render this substation inaccessible and that the driveway could not be eliminated as it was necessary in order to maneuver Austin Energy trucks

within the substation. Accordingly, TxDOT indicated that it would adjust its plans and not significantly change the current grade of the I-35 frontage road at this location, nor would it eliminate the driveway.

Following is an update for this asset based on the Alternatives 2 and 3 proposed by TxDOT:

- It is unclear from reviewing Alternatives 2 and 3 whether maintaining the access to two (2) driveways is being contemplated by TxDOT. The input at the Open House indicated it could be a drawing error that only one of the driveways was indicated as remaining.

Austin Energy appreciates TxDOT maintaining access to this substation in its current plans and Austin Energy asks that TxDOT continue to accommodate Austin Energy's access requirements for maintaining both driveways to this substation as it finalizes its plans for the I-35 Capital Express Project.

Fiesta Substation (3817 ½ N. I-35 Service Road @ 38th Street)

The Fiesta Substation is located east of the I-35 Highway. It is Austin Energy's understanding that the current plans for the I-35 Capital Express Project will not affect this substation, but that this project may have an impact on the parking lot adjacent to this substation. As this critical electrical facility is located in close proximity to the I-35 Capital Express Project limits of construction, please be aware that this is a significant Austin Energy facility and that the preservation, and the continued accessibility of this substation is a priority to Austin Energy.

Following is an update for this area based on the Alternatives 2 and 3 proposed by TxDOT:

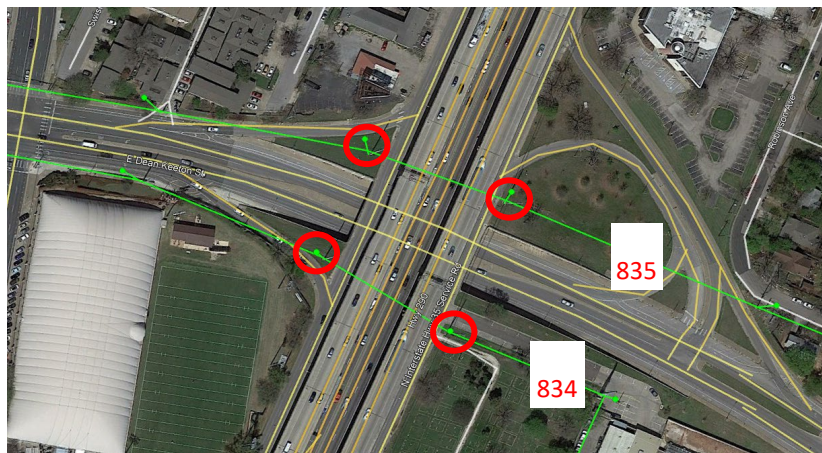
- It is unclear from reviewing Alternatives 2 and 3 whether maintaining the access to the nearest driveway access to the substation from the frontage road is being contemplated. The input at the Open House indicated it could be a drawing error that only one of the driveways was indicated as remaining.

There are other access points to this substation from 38th Street, but the I-35 Highway frontage road is most desirable. Austin Energy appreciates TxDOT maintaining access to this substation in its current plans and Austin Energy asks that TxDOT continue to accommodate Austin Energy's access requirements to this substation as it finalizes its plans for the I-35 Capital Express Project.

Other Austin Energy Assets Impacted

Transmission:

At the intersection of Dean Keeton and I-35, there could be significant modifications to I-35. Although Austin Energy's existing infrastructure in this area, Circuits 834 and 835, do not appear to be in direct conflict, there will be modifications required. The overhead transmission structures in this area are points of intersection for the circuits, and



therefore any changes to these structures have a cascading effect to other structures upstream and downstream of the structures. Additionally, any modifications to these structures will require the transmissions structures to be designed to cross the existing elevated I-35 infrastructure. Easements will likely be required to modify Austin Energy infrastructure based on the proposed Alternatives, where the University of Texas could be one of the primary entities for which easements will be acquired.

Distribution:

For the Airport Boulevard to Martin Luther King Junior (MLK) sections (Alternative 3 was the primary alternative evaluated in this section), following are the potential areas of conflict:

- In many areas where I-35 highway is widened and TXDOT acquires new ROW, there are numerous Austin Energy overhead structures that will be impacted and are potentially in conflict and will be required to be moved to newly acquired ROW.
- Any changes that increase the elevation of existing highway infrastructure (e.g., upper deck or addition of flyovers), in these areas create conflicts for Austin Energy as the crossings are currently mounted on maxed-out-height poles (85-100') at:
 - 38th ½ Street
 - Concordia Ave
 - E. 32nd Street
 - 30th Street
 - Manor Road

For the MLK to Highway 71 project section (Alternative 2 was the primary alternative evaluated in this section) there are six (6) existing potential areas of conflict:

- In many areas where I-35 highway is widened and TXDOT acquires new ROW, there are numerous Austin Energy overhead crossing structures (e.g., both east and west) that will be impacted and are potentially in conflict and will be required to be moved to newly acquired ROW. The overhead locations are at:
 - 11th Street
 - South of Lambie Street
 - Riverside Drive
 - Oltorf Street
 - South of Woodward Avenue
- 3rd Street Underground Crossing: There will be a conflict with below grade lanes/tunnel under the proposed Capital Metro Red Line. Austin Energy believes there is a possibility of moving from underground to overhead structures in this area, but extensive sequencing will be required (e.g., overhead infrastructure must be in place before removing the underground Austin Energy infrastructure and lowering lanes).

Conclusion

Siting electric substations and the associated transmission and distribution infrastructure in and rebuilding highways through the dense urban core of a significant sized city is challenging. Regardless of the build Alternative 2 or 3 selected for I-35, it is imperative that TxDOT representatives continue to work cooperatively with Austin Energy staff and that the plan ultimately selected for this major highway rebuild do not negatively impact Austin Energy's ability to timely complete the Rainey Street Substation and East Avenue Duct Bank or its ability to continue to operate its existing substations which are critical electrical infrastructure supporting the City of Austin.



September 3, 2021

Robert Spillar, P.E., Director
Austin Transportation Department

RE: Texas Department of Transportation (TxDOT) I-35 Capital Express Central Project

Dear Mr. Spillar:

Thank you for your continued coordination with Austin Water on the TxDOT I-35 Capital Express Program. As requested, I am providing you with the most important and challenging impacts to Austin Water associated with the TxDOT proposed build alternatives for the I-35 Capital Express Central Project.

Our evaluation is based on the information that has been shared with us to date by TxDOT's team working on the I-35 Capital Express program, specifically Alternatives 2 and 3. The information provided indicates that for Alternatives 2 and 3, the general purpose lanes will be excavated as much as +/-60 feet (including road base & storm sewer system) from existing/frontage road elevations. With a few exceptions, the water and wastewater crossings within the project limits will be adversely impacted by the proposed improvements and will need to be relocated or rerouted. Additionally, there is significant Right-of-Way (ROW) acquisition between 51st Street and Concordia Avenue, encroaching as much as +/-130 feet to the west of I-35 current ROW. This property acquisition will not only impact utility crossings, but also parallel lines and additional water and wastewater lines currently providing service to existing customers within the area for acquisition.

As I indicated in our previous letter dated December 2, 2020, the water line crossings are critical at a neighborhood level as well as at a regional water transmission level. The smaller waterline crossings (24" and smaller) may be able to be replaced or relocated; however, there will be extensive waterline work parallel to I-35 to make this feasible. For the large diameter water transmission lines, the most critical lines are:

- 66" Transmission Main @ IH35 & 3rd St (Intersection #1004 & 1047)
- 48" Transmission Main @ IH35 & Edgewood Ave (Intersection #1211)
- 36" Transmission Main @ IH35 & 51st St (Intersection #7827 & 570)
- 48" Transmission Main @ IH35 & Woodland Ave (Intersection #5297 & 3358)
- 36" Reclaimed Water Main @ IH35 & 51st (Intersection #273 & #173)

Relocating these larger water transmission mains will be difficult and will require extensive coordination between Austin Water and TxDOT. In addition to serving area customers, these mains provide water delivery and transmission to other parts of the city.

There are limitations to when and how long these transmission mains can be taken out of service. Any disruptions to these critical waterlines will need to be scheduled, planned, and carefully coordinated. Taking these critical lines out of service for replacement and reconnection is only feasible during water

system low demand periods. Coordination is required months in advance prior to shutdowns to allow Austin Water planning and operations staff to adjust the system around the impacted areas in order to maintain level of service, including fire protection.

There are also additional impacted water lines 24" in diameter and smaller, which include internal distribution lines within pressure zones as well as transmission lines serving as interconnects between pressure zones or east-west areas (of I-35) within each pressure zone.

Relocating or rerouting impacted wastewater lines will also be challenging. Critical wastewater pipes are extremely difficult or impossible to reroute or relocate. These include the following segments:

- Downtown Tunnel – 78"
- Crosstown Tunnel – 96"
- North Austin Interceptor – 48"
- South Austin Interceptor – 54"
- 3rd Street Crossing – 42"
- Holly Street Crossing – 36"

There are other wastewater pipes (24" and larger) in the area classified as critical that could be relocated, but this would be challenging. Small diameter crossings provide wastewater service to existing customers. Austin Water will likely need to work with TxDOT to reroute and consolidate the crossings that are in conflict.

In the limited ROW along the project's corridor, it is essential to maintain required separation distances between water and wastewater pipelines and other utilities. Concepts such as shared conduits with gas or communication lines and easement widths narrower than 15 feet create unacceptable risks for the City, TxDOT, and private utilities.

The Austin Water SPOC for relocation projects involving TxDOT, Travis and Williamson Counties, CTRMA, and Project Connect is Supervising Engineer Aldo Ranzani, P.E. Your staff can contact Aldo directly by phone at 512-972-1122 or through email at aldo.ranzani@austintexas.gov for questions or information.

Please let me know if you need additional information at this time or would like to discuss further.
Thank you,

Sincerely,



Greg Meszaros
Director, Austin Water

CC: Shay Ralls Roalson, P.E., Assistant Director, Austin Water
Kevin Koeller, P.E., Managing Engineer, Austin Water
Teresa Lutes, P.E., Managing Engineer, Austin Water
Aldo Ranzani, P.E., Supervising Engineer, Austin Water