

EXHIBIT A

TAX INCREMENT REINVESTMENT ZONE #3

# TRAFFIC AND PLANNING ANALYSIS

CORPUS CHRISTI TX | APRIL 2018



Kimley»Horn

GATEWAY  
PLANNING

## EXHIBIT A

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The reinvention of downtown Corpus Christi and the greater Tax Increment Reinvestment Zone (TIRZ) #3 area into a walkable and connected neighborhood through key infrastructure investments sets the stage contextualizing the recommended infrastructure projects within a realistic future for greater Downtown. Gateway Planning and team members Kimley Horn and RCLCO were retained by the City to craft this roadmap and bring together the planning and transportation initiatives for its future. This report sets forth development potential and infrastructure investment in downtown over the next 10 or more years.

In that context, neighborhood focus areas are identified and described in relation to the short, mid and long-term investments to show how the planning and transportation projects can work together to catalyze

## FIGURE 2: PROJECT STUDY BOUNDARY

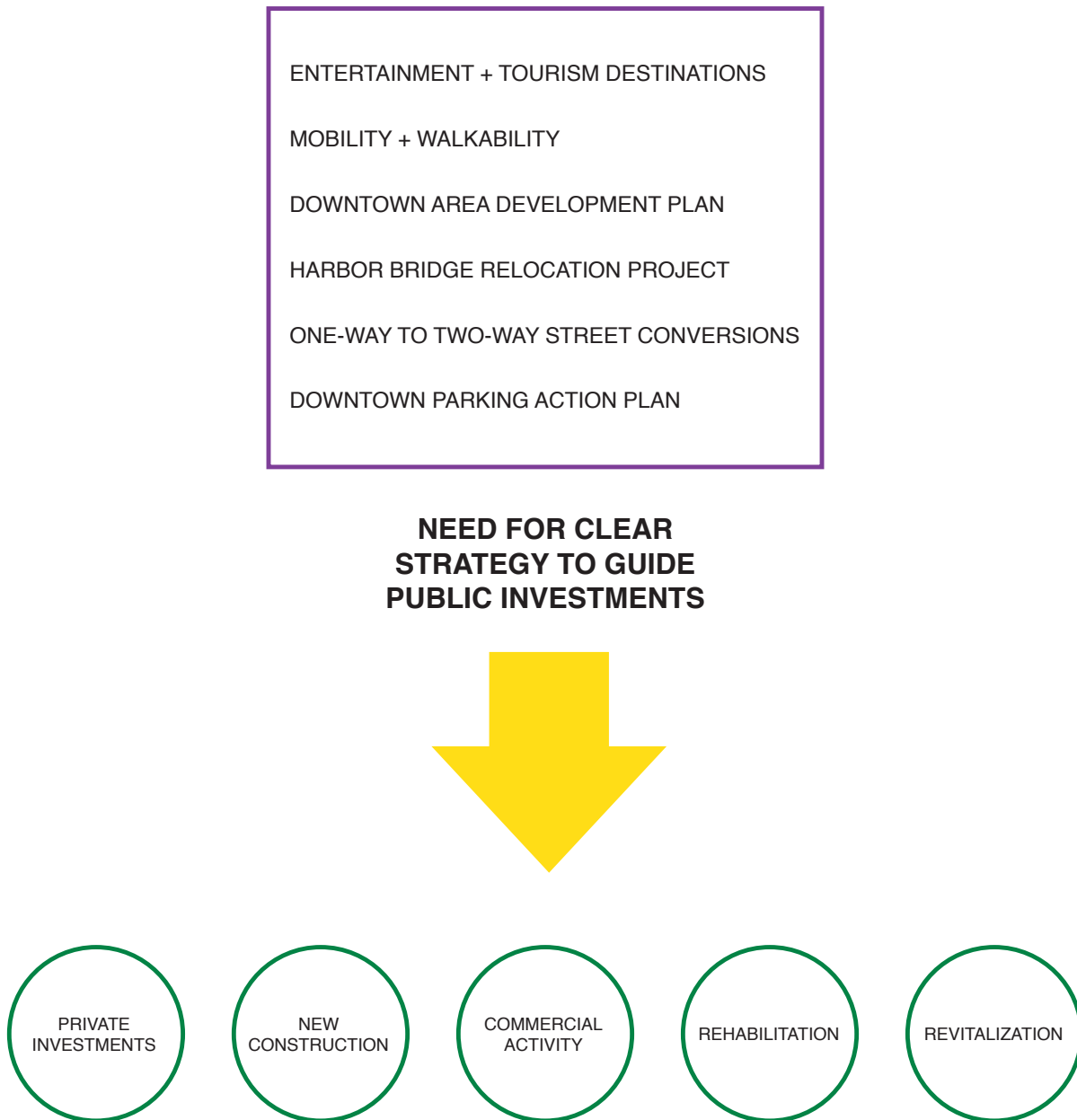


Additionally, the SEA District exemplifies an area where significant reinvestment and development could occur in the next 10 years as the Harbor Bridge project is completed, the short-term investment strategies focus on the Marina Arts District to better take advantage of the street network improvements needed to support quality of life. This strategy will also help catalyze demand for new development. Currently, there is

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no predictability about what the area will look like in the near-term, which limits the immediate development potential versus waiting for investment after the Harbor Bridge is completed.

FIGURE 3: PROJECT PURPOSE

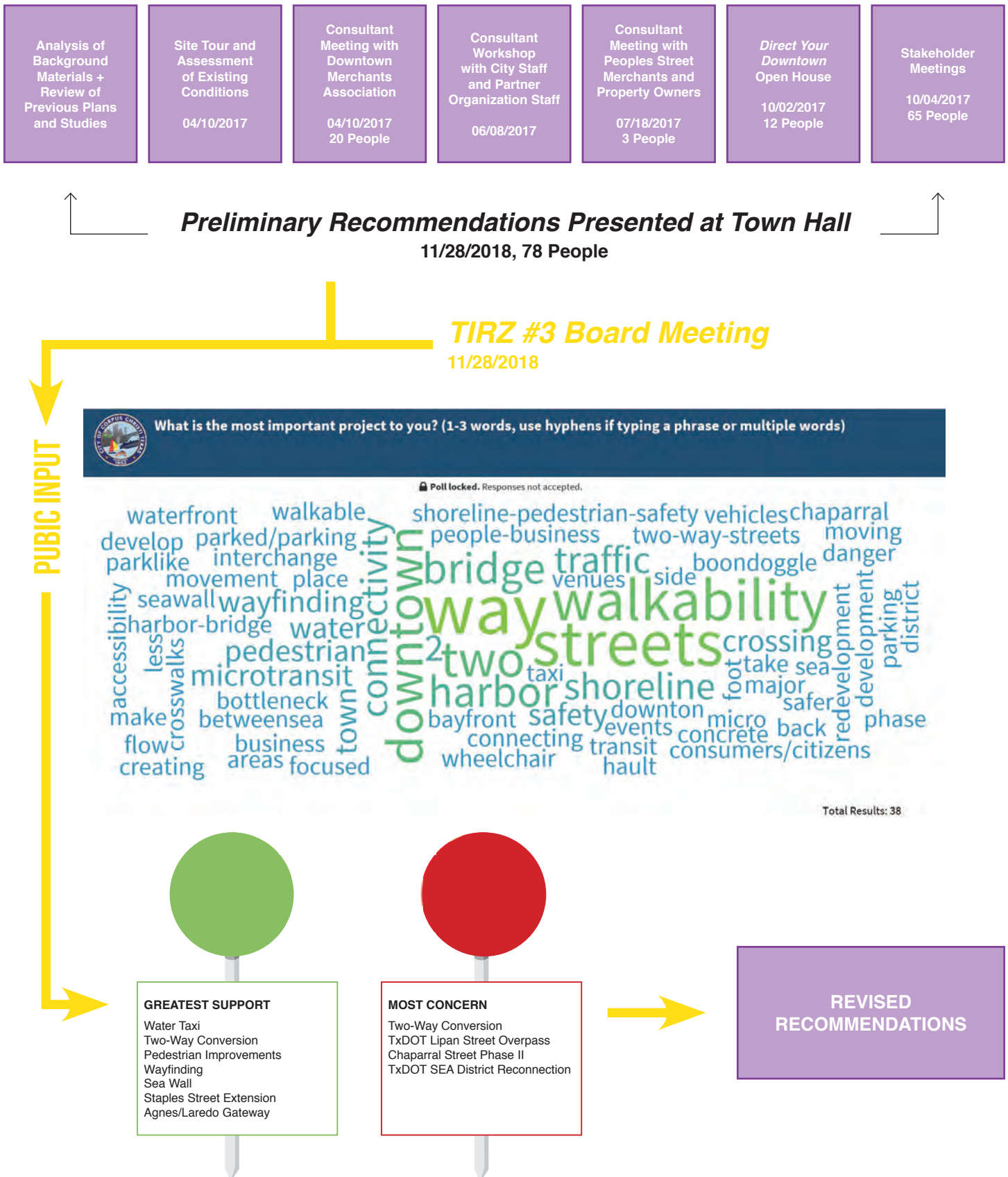


### THE PROCESS

In April 2017, this initiative kicked off with a detailed strategy work session and stakeholder meeting to understand the outcomes desired, the current issues and opportunities, as well as the potential projects. The Team returned in July and October 2017 to conduct a design and project workshop where scenarios and phasing strategies were discussed and then results presented to the TIRZ #3 Board and community at-large for additional feedback and input. Both online and in-person feedback was gathered and then integrated into key projects and deliverables for this initiative. Detailed results from the stakeholder meetings and open house are included in the Appendix of this report.

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## FIGURE 4: ENGAGEMENT SUMMARY + PROCESS



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### MARKET ANALYSIS

The market analysis undertaken by RCLCO in conjunction with the potential infrastructure project prioritization set forth a greater understanding for development potential and needs in the Downtown TIRZ #3 area over the next 10 years. A detailed report and analysis is included in the Appendix of this report, but several key themes are important to consider in context of the recommendations made in this document:

1. Downtown Corpus Christi sits on an accessible and active waterfront lined with a park, marina, aquarium, museums, convention center, ballpark and entertainment/dining options.
2. Visitation is predominantly event and tourist-driven with Downtown lacking a consistent level of local daytime or nighttime population to support an 18-hour environment.
3. A lack of Downtown residential housing options is likely the primary inhibitor to the Marina Arts District, SEA District and greater downtown area reaching its full potential; however, there is sufficient demand for steady annual absorption of residential housing over the next 10 years, especially as more neighborhood services are delivered to serve the growing household base downtown.
4. A key opportunity, and a major factor to improving the retail and office environments, is to first attract more full-time residents.

These four key assessments need to be considered in the context of transportation improvements and future development plans and how they relate to supporting quality growth in Downtown. The potential redevelopment and infill opportunities identified later in this report show various areas in Downtown where additional growth could occur in conjunction with the infrastructure and transportation improvement projects.

### ALIGNING INFRASTRUCTURE WITH DEVELOPMENT

In conclusion, this combined roadmap for investment and development in Downtown utilized a detailed analysis based on market realities and work completed to date, as well as feedback gathered from the community to create a critical path of implementation. The project prioritization matrix identifies projects, phasing, area of impact, and the potential planning cost over the course of three different time frames – 2018 to 2020, 2021 – 2028, and 2029 beyond. These time windows align with City bond funding as well as the start and completion of the Harbor Bridge project.

Subsequently, these projects were utilized to identify corresponding catalytic development opportunities that could result from the economic development, urban design and transportation projects. A detailed concept for the SEA District as well as descriptions of additional neighborhood contexts is included to show how successful infrastructure and transit investments can align planning and development projects to generate sustainable neighborhood economics.



# PROJECT PRIORITIZATION

Projects throughout the downtown area were identified by existing planning documents, such as the recently adopted Downtown Area Plan, direction by City Staff, and extensive public input. Identified projects were then prioritized into time frames determined by the new Harbor Bridge construction (2018 – 2020), post-Harbor Bridge removal (2021 – 2028) and long term (2029+). The prioritization of the projects takes into consideration the approximate order of magnitude costs based on input from City staff, professional judgment, and correlation to catalytic investment opportunities downtown.

The following sections outline the short, mid and long-term projects identified throughout this process as well as the planning level costs associated with each project (if available). This matrix is intended to serve

as a tool for implementation and prioritization that the City can utilize to make the most impact over the next ten years and to ensure the significant transportation investments occurring in downtown support economic development and quality of life for residents and visitors.



Additionally, unique redevelopment and infill opportunities were identified throughout the downtown area and in relation to each of the infrastructure investment projects over the next ten years. These areas exhibit development in neighborhood contexts and are intended to show revitalization opportunities to reconnect the neighborhoods, employment centers, and entertainment destinations as well as make downtown more walkable and pedestrian friendly so that it may support additional residential and commercial development in the future. These opportunities are detailed in this section along with the corresponding infrastructure projects recommended around each. As an example of potential build-out, a detailed concept plan of the SEA District has also been included.



*Public Town Hall Presentation - November 2017*

As stakeholder feedback and input has reiterated, connectivity and accessibility in downtown is a priority. These projects and potential infill areas show how one does not need to be exclusive of the other and focusing on transportation investments alongside neighborhood

and development improvements sets the stage for longer term sustainable values and desirability for downtown as not only a neighborhood, but as a destination.

It is important to take into consideration that as these projects are designed and implemented, it is imperative that each project includes pedestrian accommodations and improvements to bring the pedestrian pathway around downtown Corpus Christi up to ADA standards.

## SHORT-TERM PROJECTS (2018 - 2020)

The following projects identified in Table 1 are short-term projects that will happen in the years leading up to the New Harbor Bridge coming online (2018 – 2020). These projects, shown in Figure 5, and could be implemented in the near future.



# FIGURE 5: SHORT TERM PROJECTS (2018 - 2020)

- S1** Chaparral St. Pedestrian Improvements (Funded)
- S2** Brewster Street Phase 1 (Funded)
- S3** Shoreline Blvd. Pedestrian Safety
- S4** Chaparral St. Ph. 2 Two-Way Conv. (Under Construction)
- S5** Artesian Park Botanical Gardens
- S6** Upper + Lower Broadway Preliminary Feasibility Report
- S7** Doss/Mestina St. (TxDOT)
- S8** Lipan St. (Under Construction)
- S9** Comanche St. (Under Construction)
- S10** Starr St. Two-Way Conv.
- S11** Peoples St. Two-Way Conv.
- S12** Schatzell St. Two-Way Conv.
- S13** Lawrence St. Two-Way Conv. Phase 1 (Completed)
- S14** Lawrence St. Resurfacing
- S15** William St. Two-Way Conv.
- S16** John Sartain St. Two-Way Conversion
- S17** Coopers Alley Sidewalk
- S18** Kinney/Chaparral Intersection
- S19** Agnes Street Feasibility Study
- S20** Agnes/Laredo Gateway Beautification (Funded)
- S21** Flood Wall Flood Protection
- S22** Salt Flat Levee Repair
- S23** Marina Breakwaters Improvements



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**Table 1: Short Term Project Matrix**

Project	Street Name	Limits	Description	Planning Level Costs
S1	Chaparral Street	Brewster St. to Hirsch St.	Pedestrian Improvements	\$1,170,000
S2	Brewster Street (Phase 1)	N Broadway St to Mesquite Street	Phase 1 improvements - sidewalks/shared pedestrian/vehicle street	Included in S1
S3	Shoreline Blvd	Furman Avenue to IH-37	Pedestrian safety improvements, crosswalks, and signage at IH-37, Twigg, Kinney, Park, Furman, and Lawrence	\$974,000
S4	Chaparral Street	Coopers Alley to IH-37	Phase II resurfacing and streetscape improvements and two-way conversion	\$4,900,000
S5	Artesian Park	Artesian Park	Upgrade to Botanical Garden - structured gardens, walkway resurfacing, lighting, art, and a wrought iron fence	\$150,000
S6	Upper and Lower Broadway Street	Lipan Street to Twigg Street	Preliminary Feasibility Report with signal warrants analysis, slope stability, and historic restoration	\$200,000
S7	Doss Street/Mestina Street	Leopard St. to Crosstown Access	Street connectivity with Harbor Bridge Project	TBD
S8	Lipan Street	SH 286/Crosstown Freeway to Upper Broadway Street	Reconstruction	\$1,100,000
S9	Comanche Street	SH 286/Crosstown Fwy to Waco St.	Reconstruction	\$1,300,000
S10	Starr Street	Water Street to Shoreline Blvd.	Two-way conversion and surface treatment (fog seal)	\$33,000
S11	Peoples Street	Water Street to Shoreline Blvd.	Two-way conversion and surface treatment (fog seal)	\$349,000
S12	Schatzell Street	Water Street to Shoreline Blvd.	Two-way conversion and surface treatment (fog seal)	\$66,000
S13	Lawrence Street	Water Street to Shoreline Blvd	Two-way conversion and surface treatment (fog seal)	\$25,000
S14	Lawrence Street	N. Lower Broadway to Water St.	Repair damage due to Cosmopolitan construction (Mesquite to Chaparral); fog seal and restripe	\$130,000
S15	William Street	Water Street to Shoreline Blvd	Two-way conversion and surface treatment (fog seal)	\$33,000
S16	John Sartain Street	Water Street to Shoreline Blvd	Two-way conversion and surface treatment (fog seal)	\$191,000
S17	Coopers Alley	Shoreline Blvd to Sea Wall	Sidewalk from Shoreline to the Sea Wall, crosswalks, sidewalk to public restroom and two ramps	\$50,000
S18	Kinney/Chaparral Intersection	Kinney/Chaparral Intersection	Evaluate intersection for improvements to traffic flow and implement improvements	\$25,000
S19	Agnes Street	14th Street to Chaparral Street	Feasibility study of street configuration and reconstruction, appropriate bike facility for corridor, pedestrian improvements and landscaping	\$50,000
S20	Agnes Street/Laredo Street Corridor	Carrizo Street to Chaparral St.	Gateway Beautification	\$25,000
S21	Science and History Museum Flood Wall	By Corpus Christi Museum of Science and History	Flood protection; and replace structurally deficient flood wall	\$2,500,000
S22	Salt Flats Levee	From the wharf at the Port of Corpus Christi to W Broadway St.	Flood protection; repair structural deficiencies	\$2,351,500
S23	Marina Breakwater	McGee Beach Pier to approximately 1,800 LF north	Repairs/improvements to the Marina Breakwater at McGee Beach	\$3,773,300
S24	Signal Timing	Downtown Wide	Downtown traffic signal analysis. Complete the four-way stop evaluation project prior.	\$100,000
S25	Micro Transit	Downtown Area	On-Demand Service	\$100,000/Year
S26	Four-Way Stop Evaluation	Downtown Area	Evaluation to convert traffic signals to four-way stop	-
S27	Wayfinding	Downtown Area	City wayfinding signs; check with TxDOT for signage related to new Harbor Bridge Project	\$500,000

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Project	Street Name	Limits	Description	Planning Level Costs
S28	Downtown Lighting	Phase 1 North/South Corridors: Chaparral St. Coopers Alley to Harbor Drive; Water St. Kinney St. to Resaca St.; Mesquite St - to IH-37 to Hirsch Street	Lighting replacement, additions, or upgrades in the Downtown area (assuming High Pressure Sodium)	\$560,000
S29	Water Street Signalization	Coopers Alley to Twigg Street	Traffic signalization, signage, and street lighting	\$3,931,000
S30	Downtown Streetscape Improvements	Lower Broadway on the west; Shoreline Drive on the east; IH-37 on the north; Coopers Alley south	Adding streetscape elements such as trash cans, dog waste stations, vegetated planters, light pole medallions and signage	\$1,475,000
S31	Marina Arts Pavement Directional Markings	IH-37 to Coopers Alley and Lower Broadway to Water Street	Directional pavement markings for navigation	\$7,000

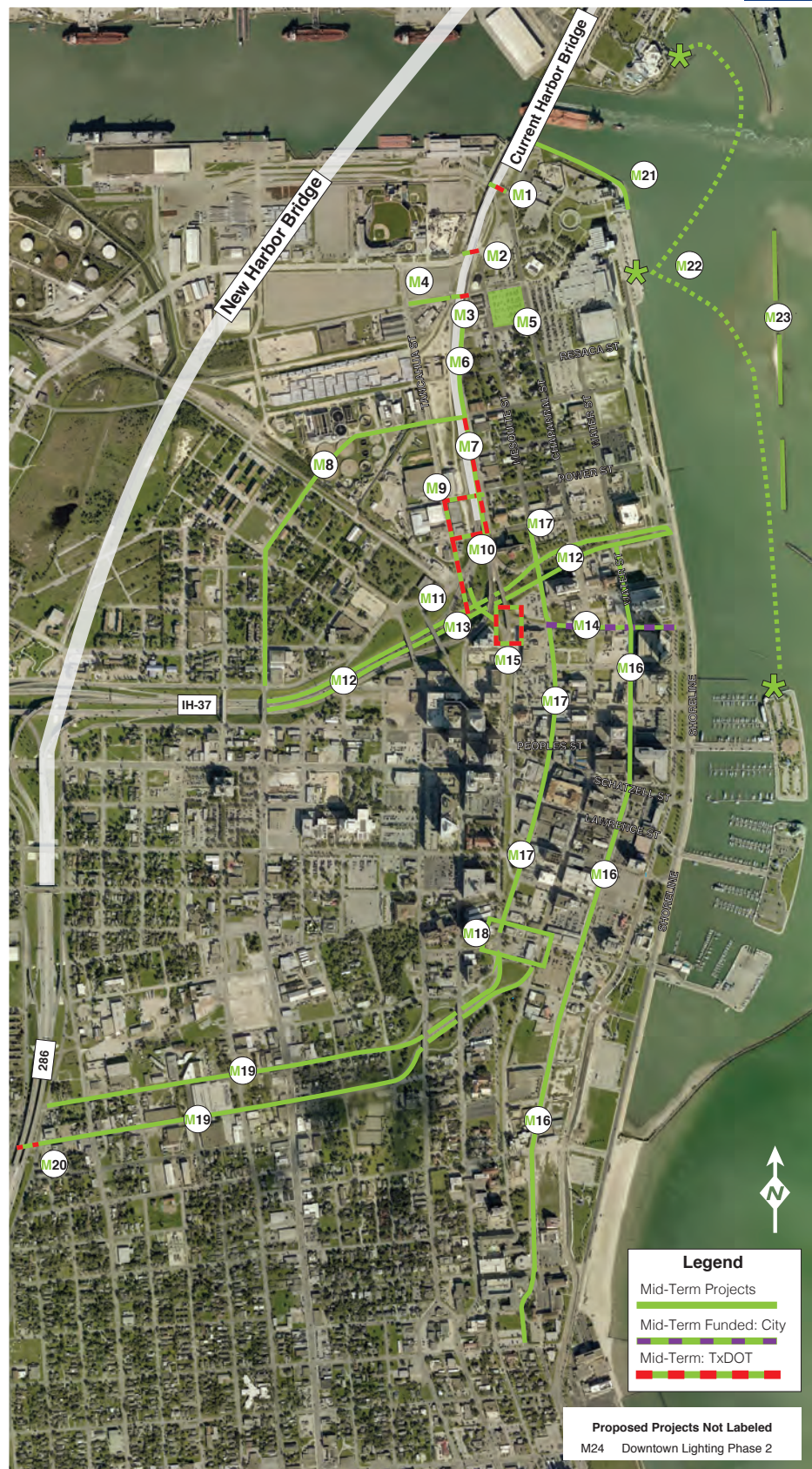
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# FIGURE 6: MID-TERM PROJECTS (2021 - 2028)

- M1** Harbor Drive Repair (TxDOT)
- M2** Port Avenue Repair (TxDOT)
- M3** Brewster St. Repair (TxDOT)
- M4** Brewster Street Phase II
- M5** SEA District Parking Structure
- M6** North Broadway Street
- M7** N. Broadway Street (TxDOT)
- M8** Staples Street Extension
- M9** Power Street (TxDOT)
- M10** Belden Street (TxDOT)
- M11** Tanchua Street (TxDOT)
- M12** IH-37 Gateway Corridor Plan
- M13** Twigg Street Pedestrian and Bicycle Bridge
- M14** Twigg Street Two-Way Conv. (Reconstruction Funded)
- M15** Upper and Lower Broadway Street Connection (TxDOT)
- M16** Water Street Resurfacing
- M17** Mesquite Street Two-Way Conv.
- M18** Coopers Alley - Mesquite Street and Chaparral St. Intersection
- M19** Agnes/Laredo Streets Operational Improvements
- M20** Agnes Street - Crosstown Drainage (TxDOT)
- M21** Sea Wall Flood Prevention and Pedestrian Access
- M22** Water Taxi
- M23** SEA District Breakwaters
- M24** Downtown Lighting Phase 2





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### MID-TERM PROJECTS (2021 - 2028)

The projects identified in Table 2 are mid-term projects that will happen in the years immediately after the Harbor Bridge construction and the old Harbor Bridge is removed. It is important to distinguish between the projects that would occur immediately after the new Harbor Bridge is constructed and further into the future because the implications to infrastructure and development might be accelerated in the first half of the time period. These projects are shown in more detail in Figure 6.

**Table 2: Mid-Term Project Matrix**

Project	Street Name	Limits	Description	Planning Level Costs
M1	Harbor Drive	Under Current Harbor Bridge	Street Repair	-
M2	Port Avenue	Under Current Harbor Bridge	Street Repair	-
M3	Brewster Street	Under Current Harbor Bridge	Street Repair	-
M4	Brewster Street (Phase 2)	Tancahua St. to N. Broadway Street	Phase 2: Sidewalk/Shared Ped/Vehicle Street	\$1,550,000
M5	SEA District Parking Structure	City-owned parking lot	Parking Structure for SEA District	\$10,000,000
M6	North Broadway Street	Fitzgerald Street to Brewster St.	Reconstruction to improve access	\$1,725,000
M7	North Broadway Street	Belden Street to Fitzgerald Street	Improvements to access to SEA District	-
M8	Staples Street Extension	Martin Luther King Dr. to N Broadway	Street extension connecting W. Broadway to N. Broadway Street, includes railroad crossing and improvements to the existing Staples Street. Bicycle facility improvements and lighting included.	\$8,400,000
M9	Power Street	Tancahua St. to N. Broadway Street	Street Extension, Two Lanes	-
M10	Belden Street	Tancahua St. to N. Broadway Street	Street Repair	-
M11	Tancahua Street	IH-37 to Power Street	Extension to IH-37 Frontage Road	-
M12	IH-37	Staples Street to Shoreline Blvd.	Corridor Plan and Feasibility Study	\$100,000
M13	Twigg Street Bridge	Upper Broadway St. to Tancahua St.	Pedestrian and bicycle bridge over IH-37	TBD
M14	Twigg Street	Mesquite Street to N. Shoreline Blvd.	Reconstruction and area beautification; two-way street conversion; signalization improvements	\$3,951,000
M15	Upper and Lower Broadway St. North Connection	Taylor Street to IH-37	North Connection and Landscape Improvements	-
M16	Water Street	Buford Street to IH-37	Resurfacing	\$2,150,000
M17	Mesquite Street	Coopers Alley to Belden Street	Two-Way Conversion; Resurfacing; Lighting; Bike Boulevard; and Streetscape Improvements	\$6,195,000
M18	Coopers Alley	Intersections at Chaparral and Mesquite Street	Two-way conversion, proposed traffic signal, street pavement reconstruction and sidewalk improvements	\$2,300,000
M19	Agnes St. and Laredo St.	SH 286/Crosstown Freeway to Chaparral St/N Mesquite St.	Operational improvements without adding capacity (2015-2040 Metropolitan Transportation Plan, August); utility improvements.	\$11,000,000
M20	Agnes Street	SH 286 SBFR to SH 286 NBFR	Reconstruction to address drainage issues	-
M21	Sea Wall Ped Improvements and Flood Protection	The Art Museum of South Texas to Old Harbor Bridge	Flood prevention and pedestrian access	\$10,000,000
M22	Water Taxi	Water taxi service between Marina Arts District, SEA District, N. Beach	Feasibility study to identify stakeholders, partners and sources of funding	TBD
M23	SEA District Breakwater	Three Breakwater Segments	Repairs near SEA District; protects Sea Wall and Barge Dock	\$4,200,000
M24	Downtown Lighting	Phase 2 East/West Corridors <ul style="list-style-type: none"> <li>MA District (between Lower Broadway and Shoreline)</li> <li>SEA District (between Tancahua and Shoreline)</li> </ul>	Lighting replacement, additions or upgrades	\$641,000

# FIGURE 7: LONG TERM PROJECTS (2029 +)

- L1** Hirsch Street Extension
- L2** Starr Street
- L3** Peoples Street
- L4** Shatzell Street
- L5** Lawrence Street Two-Way Conversion
- L6** William Street
- L7** John Sartain Street Two-Way Conversion



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### LONG TERM PROJECTS (2029+)

The following projects identified in Table 3 are long term projects that the City has identified as projects that they would eventually like to see come to fruition (2029+). Although important to downtown and its development, these projects would require extensive additional study before they could be moved forward. Additionally, market trends and traffic needs could shift between the implementation of short and mid-term projects that the scope and need of the long-term projects could shift or evolve. These projects are shown in Figure 7.

**Table 3: Long Term Projects Matrix**

Project	Street Name	Limits	Description	Planning Level Costs
L1	Hirsch Street Extension	Chaparral St. to Shoreline Blvd.	American Bank Center Extension	\$660,000
L2	Starr Street	N. Lower Broadway to S. Shoreline	Resurfacing (Rehabilitation)	\$736,000
L3	Peoples Street	N. Lower Broadway to S. Shoreline	Resurfacing (Reconstruction) and Bike Blvd.	\$879,000
L4	Schatzell Street	N. Lower Broadway to S. Shoreline	Resurfacing (Rehabilitation)	\$838,000
L5	Lawrence Street	N. Lower Broadway to S. Shoreline	Resurfacing (Rehabilitation); Two-Way Conversion between Mesquite Street and Water Street, and bike boulevard	\$786,000
L6	William Street	N. Lower Broadway to S. Shoreline	Resurfacing (Rehabilitation)	\$627,000
L7	John Sartain Street	Mesquite Street to S. Shoreline Blvd.	Resurfacing (Reconstruction) and Two-Way Conversion between Mesquite St. and Water St.	\$748,000



# FIGURE 8: SEA DISTRICT CONCEPT PLAN

- 1 Single Family Detached
- 2 Multi-Family
- 3 Single Family Attached
- 4 Retail/Office
- 5 Hotel/Hospitality
- 6 Mixed-Use
- 7 Restaurant/Destination
- 8 Cottage Homes
- 9 ABC Extension
- 10 Whataburger Field
- 11 Hurricane Alley Waterpark
- 12 Watergarden
- 13 Art Museum of South Texas
- 14 Heritage Park
- 15 Ferry Connection
- 16 Museum of Science and History
- 17 Sea Wall Extension
- 18 Parking Structure
- 19 Concrete Street Amphitheater
- 20 Staples Street Extension
- 21 Old Bayview Cemetery
- 22 American Bank Center
- 23 New Harbor Bridge
- 24 Old County Courthouse
- 25 Federal Courthouse



### RECONNECTED NEIGHBORHOODS

The SEA District plays an important role within the greater downtown and TIRZ #3 area as not only the entertainment destination, but as the area with the greatest redevelopment opportunity. With significant development projects proposed around Whataburger Field and the American Bank Center, including the Historic Courthouse Redevelopment project that will bring even more tourists and residents to the district supporting reconnectedness as well as walkability is paramount. Restitching the street and block grid together where the old Harbor Bridge sits today will create additional blocks for redevelopment and allow the former neighborhoods to the west to be reconnected to the neighborhoods around Heritage Park and the museums. These homes could be small single family units with zero lot lines or cottage courts around intimate open spaces, or townhomes facing the streets and bringing a 24/7 human presence. Small pockets of retail and hospitality uses will support visitors and residents alike.

### CONNECTING PLANNING + TRANSPORTATION

Considering prior downtown planning, the market study, stakeholder input and the Team's professional experience, the following neighborhood contexts were identified in addition to the SEA District, especially as existing, emerging and potential areas for alignment with infrastructure investment to tie together the recommendations for transportation, infrastructure and market need contained in this plan.

The SEA District concept plan detailed a full future build-out of short, mid, and long-term infrastructure projects detailed on the prior pages, but reinforces the importance of making sure these projects are completed in consideration of each other.

#### *IH-37*

The downtown gateway of SEA District and the Marina Arts District, the IH-37 corridor will undergo a significant transformation after the old Harbor Bridge is removed. Wayfinding and signage will support new infill development around the existing destination restaurants and businesses, fostering the sense of arrival into an area seeking vitality.

#### *Peoples Street*

Along the historic sea wall in downtown and one of the few direct connectors to Shoreline Boulevard and the T-heads from Uptown, the already popular Peoples Street can also become one of the Marina Arts District's key pedestrian corridors. The wide sidewalks, historic structures, large trees and opportunity for on-street parking support a pedestrian-friendly environment. It is recommended that this corridor remain one-way east of Water Street, but that redesign facilitates slower speeds so that this area transforms into a vibrant commercial destination.

#### *South Shoreline Boulevard*

Pedestrian improvements within and connecting through the southern portion of Shoreline Boulevard around the park and Bayfront District could enhance proximity to existing neighborhoods and underutilized commercial areas making the area attractive for infill residential.

#### *Agnes and Laredo*

The Agnes and Laredo corridor will serve as an important downtown gateway resulting from the relocation of the existing Harbor Bridge. The reinvention of the streets into pedestrian-friendly corridors that connect the existing single family and commercial fabric to downtown will enhance the burgeoning commercial services, artisan manufacturing and design businesses as well as support the upgrading of the residential fabric as well as improve the utilization of the park.

#### *Medical District*

With the expansion of the medical district, streetscape improvements will make area infill development more attractive as a result of improved connectivity to the Shoreline Boulevard corridor.



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# TWO-WAY CONVERSIONS

The recommended project that generated the most diverse responses from stakeholders was the one-way to two-way conversions throughout downtown. Both one-way and two-way streets have their various advantages and disadvantages that are determined by the environment in which they serve. Historically, various streets in the Marina Arts District (i.e. Chaparral Street) operated as two-way traffic for some time



*Historic Photo of Mesquite Street as Two-Way (Source: Corpus Christi Public Libraries Digital Archives)*

before they were converted to one-way operations. In this case, it is recommended that the City consider converting certain streets in downtown from one-way to two-way in phases over the next decade. With each street conversion, there are design and construction costs, including the impact businesses will experience during construction.

Typically, one-way streets result in faster traffic flow with less turning movements at intersections and easier traffic signal coordination. Retaining the one-way operations with modifications could provide additional space for other improvements, such as bike lanes, wider sidewalks, curb extensions, landscaped islands and angled parking. On the other hand, converting to two-way streets would create a standard grid of streets that is more intuitive for drivers, particularly visitors unfamiliar with downtown. Two-way

streets can also reduce trip length due to improved accessibility to the destination. Unexpected one-way streets can lead to wrong-way driving and increased safety hazards if not designed and implemented properly; therefore, all two-way conversions should be designed and implemented under the supervision of an engineer. Proper implementation should include, but is not limited to, the recommendations listed in the Appendix and the visual cues discussed later in this chapter.

## EXISTING CONDITIONS

The existing downtown street network consists of a multitude of one-way streets, with the exception of Shoreline Boulevard south of William Street, Water Street, Coopers Alley, Kinney Street and Mann Street. Figure 9 shows the existing one-way streets in the downtown area.

## PROPOSED CONVERSIONS

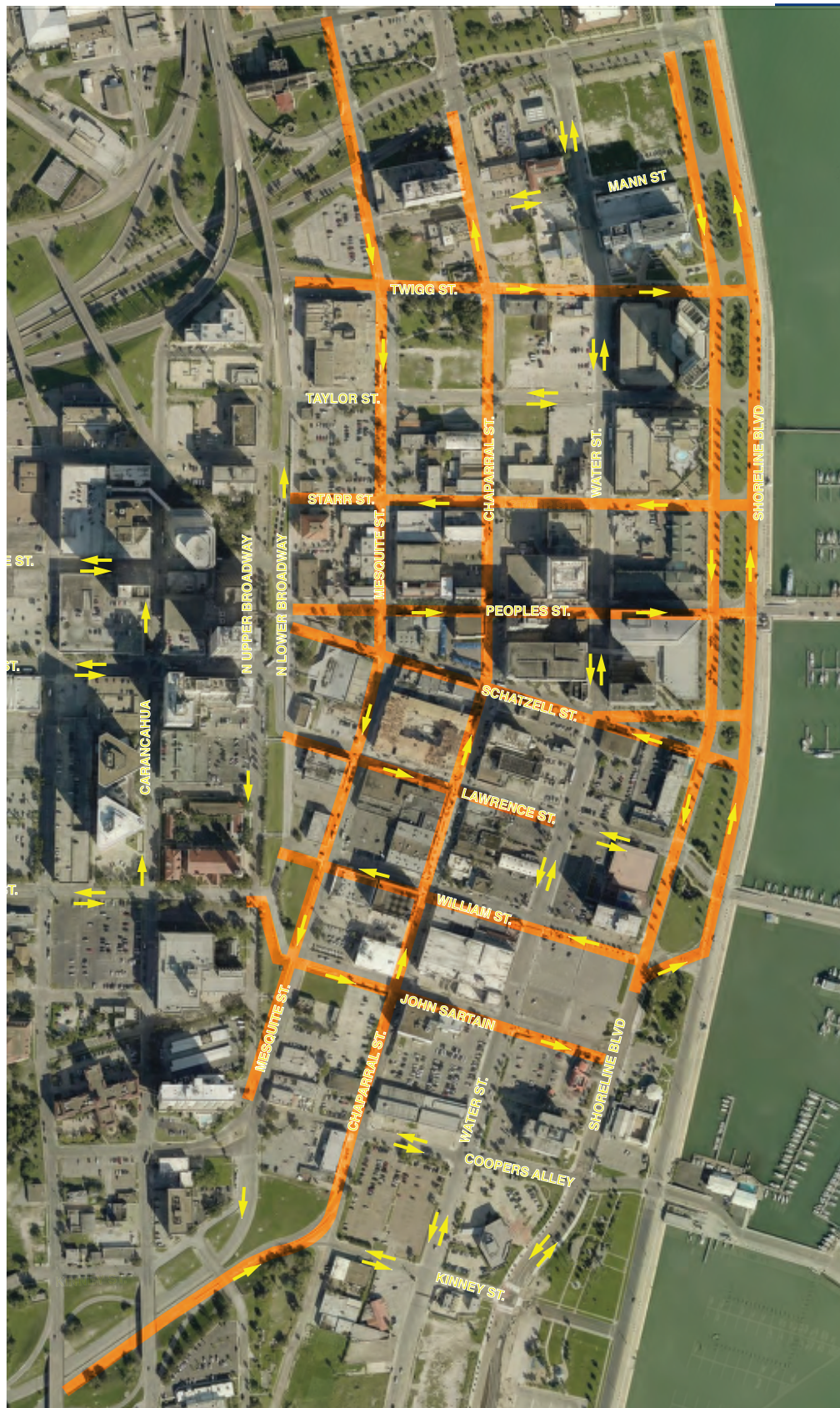
Although converting all the Marina Arts District streets to two-way operations is ideal, the City has recently implemented multiple street renovations and other projects that would be better left in place. This, along with the consideration of on-street parking for businesses in the area, has led to the selection of specific streets to potentially be converted from one-way to two-way:

- Chaparral Street from Coopers Alley to IH-37
- Mesquite Street from Coopers Alley to Belden Street
- Twigg Street from Mesquite Street to Shoreline Boulevard
- Starr Street from Water Street to Shoreline Boulevard
- Peoples Street from Water Street to Shoreline Boulevard
- Schatzell Street from Water Street to Shoreline Boulevard
- Lawrence Street from Mesquite Street to Shoreline Boulevard
- William Street from Water Street to Shoreline Boulevard
- John Sartain Street from Mesquite Street to Shoreline Boulevard

Figure 10 shows the proposed network changes in the downtown area.

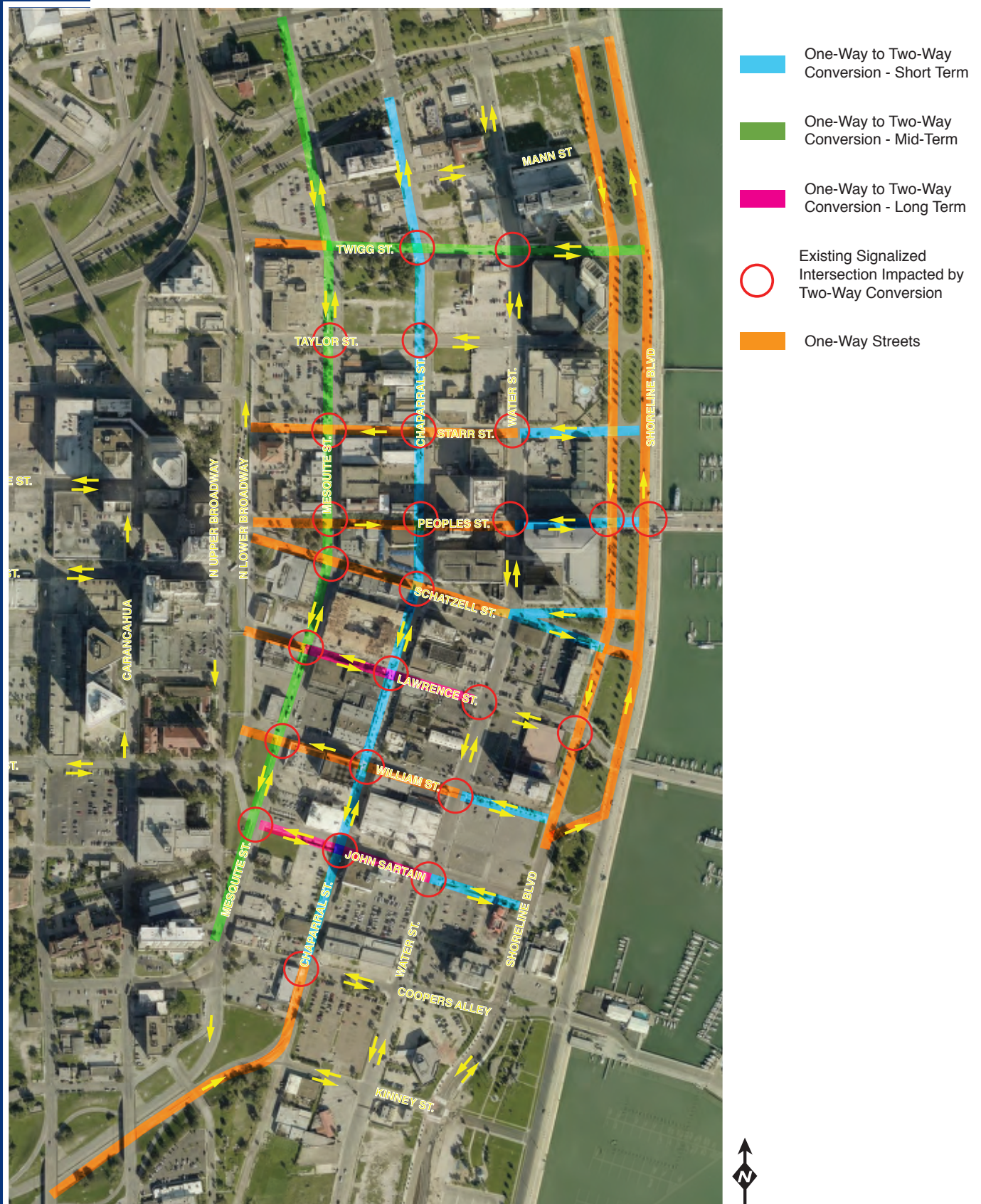
# FIGURE 9: EXISTING ONE-WAY STREETS

One-Way Streets





# FIGURE 10: PROPOSED TWO-WAY STREET CONVERSIONS



## MOBILITY NETWORK IMPLICATIONS

The conversion of certain streets from one-way to two-way will create changes in the mobility, demand and functionality of the network. The tables in the Appendix provide details of the physical changes along each roadway and their implications and conceptual cost. A visual example of the potential changes at an intersection, specifically Chaparral Street at Twigg Street, can be seen on the following page. Although there are existing signalized intersections that can be impacted by the one-way to two-way conversion, Project S26: All-Way Stop Evaluation should take place prior to the conversions so that intersections that do not warrant a traffic signal can be converted to all-way stop intersections during the conversion process. If an intersection does need to be converted to an all-way stop, the City should consider using their signals as red flashers if possible instead. Therefore, the improvements to convert each intersection or segment provided in the Appendix is preliminary in nature and is based off the existing infrastructure.

## IMPLEMENTATION

These changes to the network will require drivers to develop new behavior when traveling through the Marina Arts District. Visual cues to drivers and pedestrians will need to be upgraded to discourage wrong-way driving and help ease the transition between the existing network and the proposed network.

### Visual Cues to Drivers

The improvements listed in the Appendix include updated signage and pavement markings to allow for simple and quick decision-making. The City should also consider implementing lane direction arrows, wrong way signs, red/white raised pavement markers and mid-block one-way signs where drivers may be confused about the direction of travel for the street they are on or trying to turn onto.

FIGURE 11: VISUAL CUE EXAMPLES FOR ONE-WAY STREET CONVERSIONS



## CASE STUDIES

A recent case study review investigated the economic impacts associated with conversion of one-way streets to two-way traffic flow in six cities across the U.S. between 2004 and 2011. The researchers found that:

- Streetscape improvements that are undertaken in connection with larger economic development and livability strategies are more successful in arts and entertainment sectors;
- The arts and entertainment, recreation, accommodation, food, and professional services industries generally experienced positive growth in areas around new two-way streets;
- Residential units were also found to increase in several of the cities where conversions took place, especially when paired with downtown housing programs;
- Another pattern suggests that higher-income individuals move into areas around the converted streets as incomes around these improvements are shown to grow faster than surrounding areas.

<sup>1</sup>William Riggs & Bruce Appleyard (2018) *The economic impact of one to two-way street conversions: advancing a context-sensitive framework*, *Journal of Urbanism: International Research on Placemaking and Urban Sustainability*, 11:2, 129-148, DOI: 10.1080/17549175.2017.1422535



## FIGURE 12: EXAMPLE INTERSECTION

### CHAPARRAL STREET AT TWIGG STREET (CURRENTLY SIGNALIZED)

#### EXISTING CONDITIONS



#### PROPOSED CONDITIONS (AFTER TWO-WAY CONVERSION)



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# MOVING FORWARD

These recommendations and strategies for investment over the next ten years have been outlined in this report for short, mid and long-term implementation. Timing these projects around available funding sources and the construction of the new Harbor Bridge project will be integral to making sure efficient protocols are put in place for development and traffic management during construction phases.

The City should work with land owners and private developers as projects arise to ensure that potential development and redevelopment is aligned with future infrastructure projects as much as possible. Additionally, educating the public and private sectors on these upcoming projects will help identify overlap and might accelerate some needed land development or investment as the public improvements come to fruition.

## CAPITAL IMPROVEMENT PROGRAM RECOMMENDATIONS

The cost estimates for each project is for planning purposes only and not for construction or bidding. Before projects can be implemented, initial efforts need to be focused on potential funding sources, including the City's Capital Improvement Program, TxDOT, TIRZ #3, and the Downtown Management District, etc. These investments will require coordination between all the entities and it is important that relationships among the organizations tie together to implement the needed investments.

The project matrices take these relationships and coordination strategies into account and the stakeholder engagement with multiple departments and organizations reaffirmed the need. Select stakeholders expressed desire to see expanded coordination between the City and the MPO or TxDOT as a measure to bring accountability to project implementation and overall success.

### *TxDOT Coordination Strategy*

The Mayor and City Council made it clear throughout this process that the coordination with TxDOT on anything associated with the Harbor Bridge and the reconnection of city streets needs to be a priority at the onset. This project and these recommendations take advantage of bridging the relationship with TxDOT to ensure that there are no unforeseen gaps in construction and implementation timing as it relates to the Harbor Bridge.



Representatives from the City and from TxDOT were engaged during this project, but because it is such a large undertaking there needs to be additional engagement beyond what was done during this process in terms of where the former Harbor Bridge was located in the SEA District and how the connectivity between the Marina Arts District and SEA District is enhanced.

The recommended projects bring all parties to the table and demonstrate how TxDOT, the MPO and City funding sources are allies on these projects and if done in concert can have a greater economic impact to the community beyond straightforward roadway improvements; which, in the long run, will be more cost efficient and effective for all parties.

## PROGRAM AND POLICY REFINEMENTS

In addition to the recommended infrastructure prioritization and capital improvement projects, several policy level projects should be undertaken in the short term to maximize public investment dollars and

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support quality development within downtown. Each of these programs and policy recommendations would require additional study and evaluation.

Table 4 identifies recommended policy and program projects that should be implemented in the next two to three years.

**Table 4: Policy Implementation Recommendations**

Program / Policy	Recommendation
Implement MPO Bicycle Mobility Plan	As street improvements are made and one to two-way conversions occur, roadways should integrate recommended bicycle improvements and routes as identified under the MPO's plan.
Bus Routes – RTA Transit 20/20 Plan	Per the RTA's Transit 20/20 Plan, bus routes through downtown should be reexamined as infrastructure improvements occur to identify potential efficiencies and additional routes that might become available under the two-way conversions or street grid reconnections.
Extend TIRZ #3 to Agnes and Laredo	Maximize the value capture of Downtown by extending the TIRZ #3 boundary to the full extent of Agnes and Laredo from downtown to SH 286/Crosstown based on the recommendations in this report.
Sidewalk/Street Tree Management and Maintenance	<p>Within the Downtown Management District and greater TIRZ #3 Area, clarify responsibility for sidewalk maintenance and improvements that will:</p> <ul style="list-style-type: none"> <li>• ensure consistency in quality, style and safety along all street networks;</li> <li>• reduce the burden on local businesses or owners;</li> <li>• enable more effective management of street tree care and preservation; and</li> <li>• explore cost-sharing program options</li> </ul>
Downtown Parking Study Action Plan	The strategies identified in the recently adopted Downtown Parking Strategy by the City should be implemented.
Water's Edge Task Force	The City should work with the Downtown Management District and/or TIRZ #3 Board to create a water's edge task force that helps support maintenance, activation and programming of the shoreline and T-heads.
Construction Phasing and Management	The City should organize phasing of concurrent construction projects to minimize traffic impacts, as the Harbor Bridge construction is underway. This should also take into consideration truck traffic and operational standards that might be impacted during construction.
Amend Ordinance to Delete One-Way Streets	The City should amend its ordinance to remove the one-way streets from its policies and implementation strategies.
Amend Urban Transportation Plan	Delete redundant collectors on the Urban Transportation Plan.
Form Parking Alliance	Working with downtown partners and organizations, the City should form a parking alliance to encourage shared parking strategies and implement the recommendations from the downtown parking plan recently adopted.
Truck and Loading Zone Standards	The Downtown Management District should work with local businesses to develop truck and loading zone standards.

These recommendations are not all-inclusive and might result in additional policy needs, but they will help address the immediate needs identified during this process and during stakeholder interview sessions. The roadway improvements will help alleviate several complaints and frustrations for Downtown, however, without the proper planning for economic development and policy-level details, the adjacent owners will still experience frustration when it comes to day-to-day life in Downtown.



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