11. REGIONAL GOODS MOVEMENT PROJECT SELECTION

BACKGROUND

At the March 2020 Transportation Policy Council (TPC) meeting, the Council approved goals, priorities, and policies for selection and prioritization of projects to be programmed in Transportation Improvement Program (TIP), 10-Year Plan, and the Regional Transportation Plan (RTP). These goals, priorities and policies guide the H-GAC staff, Transportation Advisory Committee (TAC), and the TIP Subcommittee in development of project selection criteria and evaluation methodologies for project planning and programming. At the January 2023 meeting, TPC authorized the MPO staff to initiate the Project Selection Process.

CURRENT SITUATION

Staff recommendation of funding for Regional Goods Movement projects (RGM)

At the November TAC and TPC meetings, staff presented final draft total scores and ranking of the Regional Goods Movement (RGM) projects considered for selection. The final scores, ranking, and the programming years of the projects are available online here.

Project readiness information collected from the sponsor and analyzed by H-GAC staff was used to determine the programming years for the top 20 high scoring RGM projects. Project phases for engineering and construction were programmed accordingly. The programming years were used to inflate project budgets, at a 5 % inflation rate, to the Year of Expenditure (YOE) project costs.

Based on the funding instructions approved by the TPC, the RGM projects are allocated 12% ($156M) of the total available funds for programming recommended in the ongoing Project Selection Process. Considering the total available funding amount of $156M, staff recommend approving funding for the projects ranked 1 to 8 and project ranked number 10. The 9th ranked project has been authorized for construction in TxDOT's FY 2024 Unified Transportation Program and due to the project cost, staff is recommending not funding this project through the RGM project selection process. Staff recommended projects with programming phases, fiscal years, funding categories and funding amounts are provided in Attachment A.

ACTION REQUESTED

Transportation Policy Council approval of funding and programming of the Regional Goods Movement Projects listed in Attachment A and to include these projects in the Regional Transportation Plan, 10 Year Plan, and the Transportation Improvement Program at the earliest opportunity.

Regional Goods Movement Projects Draft Total Score and Ranking

Project ID	MPOID	County	Agency Name/Sponsor	Project Title	Facility/Street/Highway	Limits	Description	Rank	Phase	Fiscal Year	Fund Cat	Federal	Local/State Match	Total
941	19012, 19013	Harris	Port of Houston Authority	Bayport Container Terminal Overpass.	PORT RD	FM 146 TO CRUISE ST	Construction of railroad overpass on Port Rd leading to the Bayport container terminal.	1	E	2025	Cat-5 CMAQ	$2,236,532	$559,133	$2,795,664
941									C	2027	Cat-5 CMAQ	$22,513,607	$5,628,402	$28,142,008
751	19014, 19017	Fort Bend	City of Sugar Land	ITS Railroad Monitoring, Notification, & Communication (CTR2203)	US 90 A	Cravens Rd to Pitts Road	Install railroad notification DMS prior to RR crossings to reroute traffic; Add Lidar or other technology to the Rail Monitor System to detect trains on dual tracks.	2	E	2025	Cat-7 STBG	$243,101	$60,775	$303,877
751									C	2027	Cat-7 STBG	$1,125,680	$281,420	$1,407,100
1115	19015	Harris	TxDOT Houston District	SH 3 Intersection Improvements - SH 3 at South Richey St, Edgebrook Dr, El Dorado Blvd, and Bay Area Blvd	SH 3	At South Richey, Edgebrook Dr, El Dorado Blvd, and Bay Area Blvd	Change signals to mast arms, replace RR arms, and gates, and lengthen railroad planking. The purpose of the project is to extend sidewalks across the RR tracks parallel to SH 3.	3	E	2027	Cat-7 STBG	$0	$328,905	$328,905
1115									C	2027	Cat-7 STBG	$4,834,897	$1,208,724	$6,043,621
962	19016	Chambers	TxDOT Beaumont District	IH-10 Ramp Relocations	IH-10	From SH 146 to FM 565	Relocate entrance / exit ramps	4	E	2025	Cat-2 STPMM	$0	$416,745	$416,745
962									C	2028	Cat-2 STPMM	$7,485,774	$1,871,444	$9,357,218
833	19018, 19019	Harris	Harris County Engineering	Rankin Road Access Management Project	Rankin Road	IH 45 NBFR to Ranch View Trail	Add center two-way left turn lane, signal modifications (leading pedestrian intervals, crosswalks, ADA ramps), and sidewalk improvements to mitigate serious injuries and fatalities on 1.5 mile Vision Zero High Injury Network corridor.	5	E	2025	Cat-5 CMAQ	$1,584,771	$396,193	$1,980,964
833									C	2028	Cat-5 CMAQ	$11,705,789	$2,926,447	$14,632,236
969	19020	Chambers	TxDOT Beaumont District	SH 146 TURN LANES	SH 146	AT IH10	Dual turn lanes for NB	6	E	2026	Cat-5 CMAQ	$0	$295,195	$295,195
969									C	2026	Cat-5 CMAQ	$3,573,588	$893,397	$4,466,985

Regional Goods Movement Projects Draft Total Score and Ranking

Project ID	MPOID	County	Agency Name/Sponsor	Project Title	Facility/Street/Highway	Limits	Description	Rank	Phase	Fiscal Year	Fund Cat	Federal	Local/State Match	Total
1252	19021, 19022	Harris	Harris County Engineering	East Richey Rd Improvement Project	E Richey Road	I45 NBFR to Grovedale Rd	Safety improvements, access management, driveways, sidewalks and improved street geometry.	7	E	2025	Cat-5 CMAQ	$1,779,501	$444,875	$2,224,376
1252									C	2027	Cat-5 CMAQ	$4,577,767	$1,144,442	$5,722,208
1058 &1059	19023, 19024	Fort Bend	TxDOT Houston District	IH 10 W Frontage Roads	IH 10 W	From FM 359 to Cane Island Pkwy	Construct 2 two lane frontage roads on new location (eastbound AND westbound). This project fills in the gap of the frontage road system in Fort Bend County on IH 10.	8	E	2027	Cat-2 STPMM	$0	$2,287,122	$2,287,122
1058 &1059									C	2027	Cat-2 STPMM	$45,521,134	$11,380,284	$56,901,418
1128	18721	Harris	TxDOT Houston District	SH 6 Intersection Improvements at FM 529	SH 6	At FM 529	Intersection improvements: Construction will include dual left turn lanes, right turn lanes, wider raised median widths, new ped/bike paths, curb and gutter, proposed storm sewer adjustmentsand traffic signal upgrades.	10	E	2028	Cat-2 STPMM	$0	$2,737,223	$2,737,223
1128									C	2028	Cat-2 STPMM	$8,391,143	$2,097,786	$10,488,928
													Total	$150,531,795

* Rank # 9 project iwas skipped from recommendation as it is funded with 100% State funds in 2024 UTP

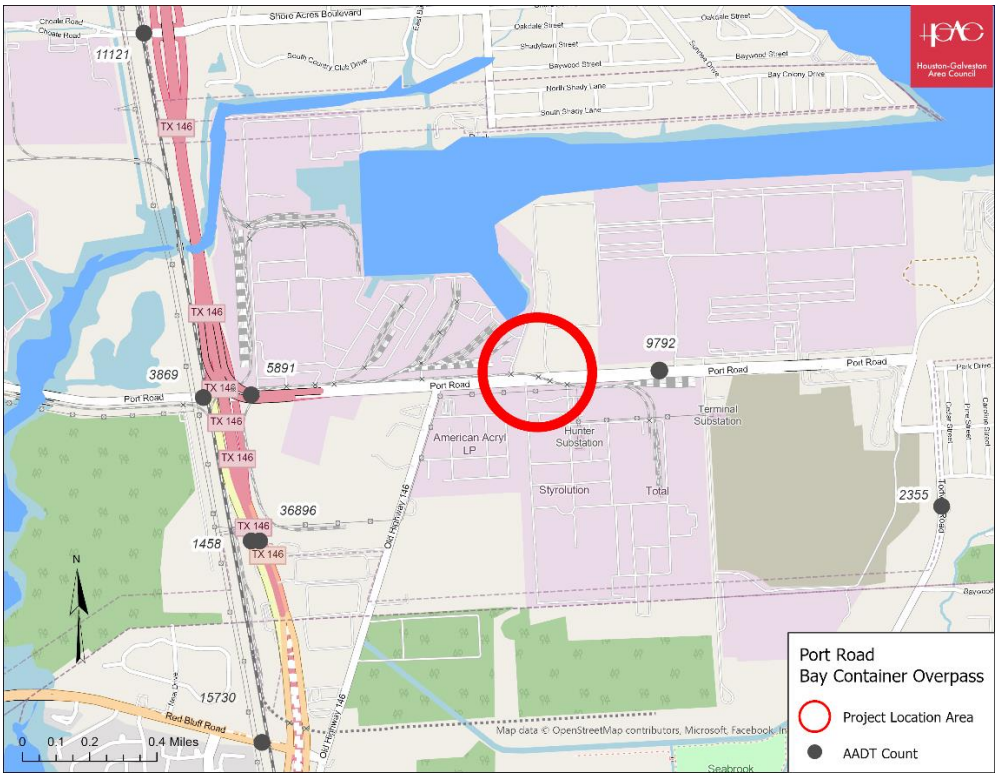
Projects highlighted in grey are for information purpose only. Enigineering phase on TxDOT projects are usually not programmed in TIP/STIP.

Regional Goods Movement Project Recommended for Programming

MPOIDs: 19012, 19013 – Rank 1

Project Sponsor: Port of Houston Authority.

Project title: Bayport container terminal overpass.



Truck percentage: 66%

Recommended in a plan? In general, Grade separations (in/around, and east of Houston) is discussed in the Texas Rail plan. It is also part of the Port Area Mobility Study.

Located on state/local designated freight corridor: Yes.

Narrative on how project improves freight movement (provided by sponsor):

The Port Authority has seen increased demand of cargo and has made extraordinary efforts to address the resulting challenges from this increase in cargo. The grade separation would improve the movement of goods throughout the region. With over 9,000 truck moves a day on Port Road just from the Bayport Container Terminal, one train moving during high capacity once a month would result in:

- An average of 207 hours of delay per blockage. This delay is just to the trucks and not the residential traffic as trucks back up onto Highway 146 and block all movement.

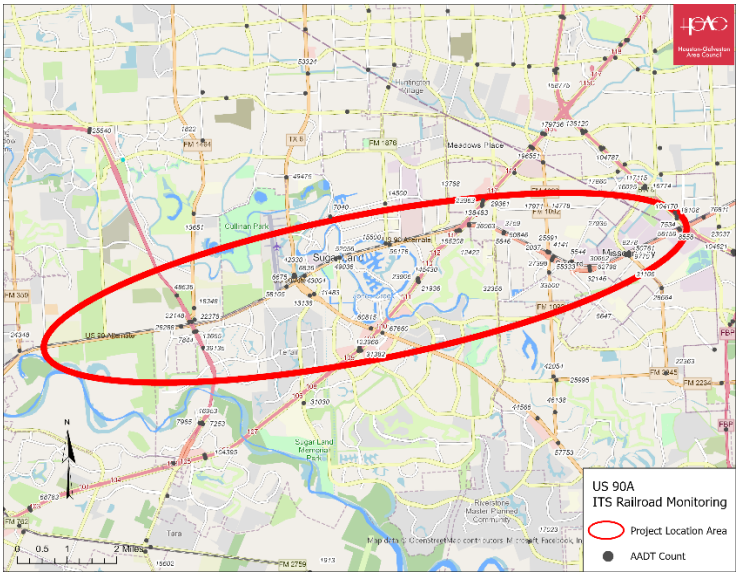
- The potential delay cost to truckers of $3,972,000 over the lifetime of the construction project.
- The following emission impacts:
    - 113,963 tons of CO2 at a cost of $8,438,662
    - 1 ton of NOx at a cost of $16,933
    - 3.53 tons of PM2.5 at a cost of $3,028,493

The impacts described above would grow with each additional train and roadway blockage.

MPOIDs: 19014, 19017 – Rank 2

Project Sponsor: City of Sugar Land.

Project Title: ITS Railroad Monitoring, Notification, & Communication (CTR2203) on US 90 A between Pitts Rd and Cravens Rd.



Truck percentage: 2.65%

Recommended in a plan? Texas Freight Network Technology & Operations Plan; City of Sugar Land ITS Master Plan.

Located on state/local designated freight corridor: Yes.

Narrative on how project improves freight movement (provided by sponsor):

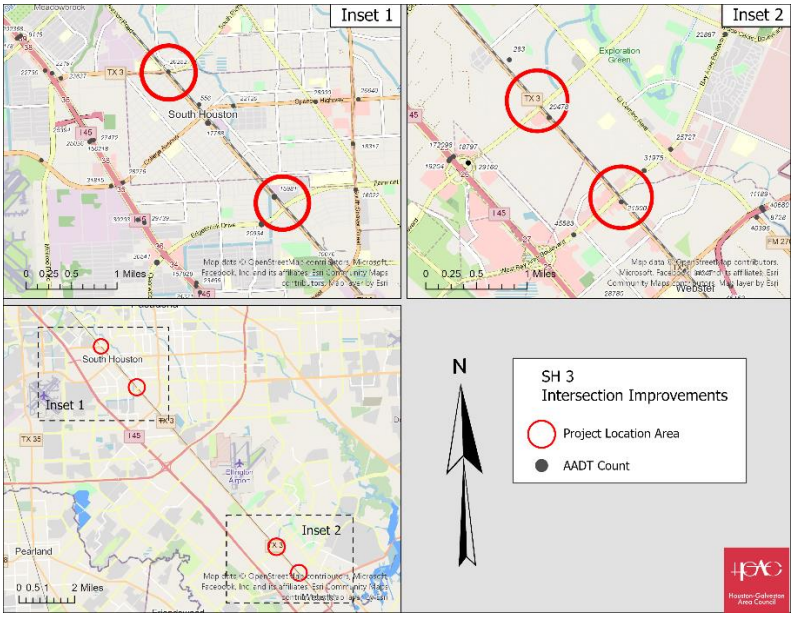
The proposed ITS Railroad Monitoring, Communication, and Notification System project will implement ITS technologies near at-grade railroad crossings along the US 90 corridor in Sugar Land. US 90A, which has been identified as a critical regional freight corridor, and the adjacent

dual-track UPRR that runs alongside it, bisects Sugar Land from east to west. Specifically, the project scope is examining the US 90A corridor and the adjacent Union Pacific railroad track and spans across a broader portion of Fort Bend County beginning from the west end at Pitts Road in Richmond, through the city of Sugar Land (the present monitoring system location) and terminating on the east end at Cravens Road in Missouri City. There are 21 roadway crossings in the proposed study area. The project will advance and expand the current ITS traveler information system, which monitors twelve railroad crossings within the city limits, and one crossing just outside of the city limits located within the City of Stafford. Included is replacement of existing aging equipment that has reached its end of life. One of the key components of ITS is gathering and sharing information to help inform the decisions made by users of the transportation system. In 2022, Sugar Land emergency response personnel documented 25 occasions of blocked railroad crossings at multiple locations along US 90A that have led to emergency response delays. These delays affect all roadway users, including freight delivery trying to cross the railroad, or stopped along the highway waiting for a traffic signal preempted by a passing train. The main benefit of the present monitoring system is that first responders can quickly check the train traffic online as they respond to an emergency call and avoid potentially life-threatening delays. However, the time it takes to detect a blocked crossing (train stopped in crossing) is approximately 8 minutes. The City's goal is to have the ability to detect a blocked crossing in far less time. The City is in the process of testing Artificial Intelligence video equipment that has the capability to detect a stopped train within a crossing and send notification within 1 minute. Upgrading to a more universal notification system could alert all roadway users, potentially through smart vehicle technologies or simply by using dynamic displays along the roadway. This improvement would improve regional goods movement by lessening the time drivers in the area are notified of crossing delays, making it possible to avoid the intersections impacted by passing trains.

MPOID: 19015 – Rank 3

Project Sponsor: TxDOT Houston District.

Project title: SH 3 Intersection improvements at South Richey, Edgebrook Dr, El Dorado Blvd, and Bay Area Blvd.



Truck percentage: 6.1%

Recommended in a plan? No.

Located on state/local designated freight corridor: Yes.

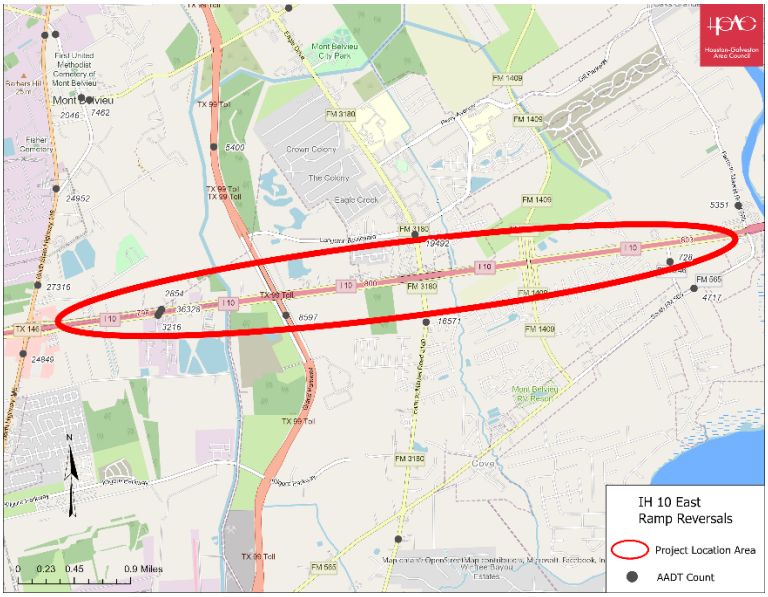
Narrative on how project improves freight movement (provided by sponsor):

The purpose of the project is to provide multiple intersection improvements to SH 3 and to improve the capacity, connectivity, level of service and safety of the project segment. This improvement, in conjunction with the other adjacent proposed improvements, will improve freight access to many major freight generators in the region including the region's seaports, airports, manufacturing facilities and many freight warehouses. The added capacity will improve regional connectivity for all modes while also improving safety by reducing primary and secondary crashes due to difficult to see traffic signals, congestion, disruptions to traffic flow due to train crossings, and by bringing the segment of SH 3 up to TxDOT and FHWA safety standards. In efforts to improve regional connectivity, there will be improvements made for the pedestrian and bicyclist experience, as SH 3 sidewalks will be extended and connected along the corridor and on crossing/perpendicular facility sidewalks, ultimately closing gaps due to the railroad tracks.

MPOID: 19016 – Rank 4

Project Sponsor: TxDOT Beaumont District.

Project title: IH-10 Entrance exit ramp relocations from SH 146 to FM 565.



Truck percentage: 25.6%

Recommended in a plan? No.

Located on state/local designated freight corridor: Yes.

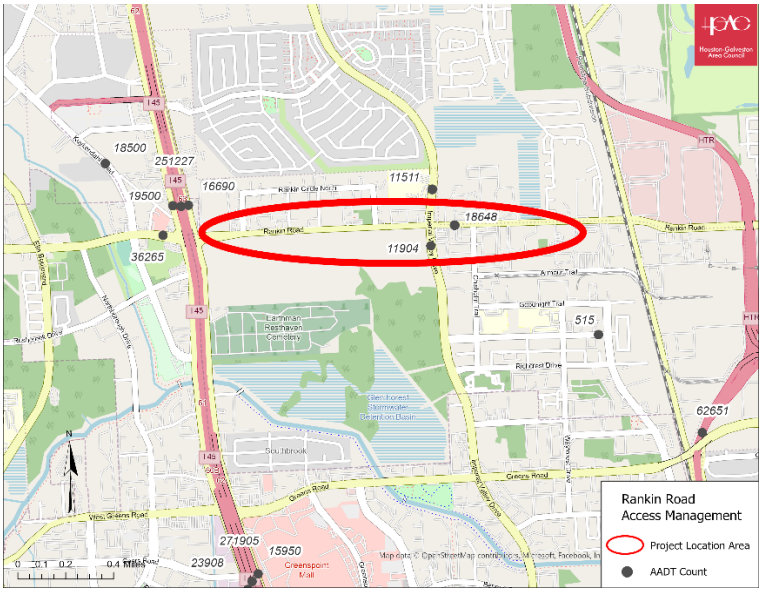
Narrative on how project improves freight movement (provided by sponsor):

IH-10 is a primary freight corridor. The ramp relocations will improve traffic operations, creating a safer and smoother flow of traffic from the frontage roads to the interstate and vice versa. This operational improvement improves the movement of truck traffic onto and off the interstate from origins and destinations of freight traffic.

MPOID: 19018, 19019 – Rank 5

Project Sponsor: Harris County Engineering.

Project title: Rankin Road Access Management Project.



Truck percentage: 8%

Recommended in a plan? Harris County Truck Route Study 2016, Vision Zero Action Plan.

Located on state/local designated freight corridor: Yes.

Narrative on how project improves freight movement (provided by sponsor):

The proposed project will have a positive impact on regional goods movement within and throughout the larger Houston-Galveston region. The project intends to reconstruct the roadway to improve street geometry and add turn lanes to improve flow of freight and accommodate the growing freight traffic crossing through to and from the nearby international airport. The project will improve connectivity between George Bush Intercontinental Airport and I-45, the most heavily traversed multimodal freight corridor in Texas. (* https://ftp.txdot.gov/pub/txdot/move-texas-freight/studies/i45-freight-corridor-plan.pdf).

Furthermore, the project includes the implementation of Intelligent Transportation System (ITS) technologies, which will enhance the operational efficiency and safety of the roadway. ITS technologies could include things like dynamic message signs, traffic cameras, and real-time traffic monitoring and management systems. These technologies will provide real-time information to drivers, allowing them to make informed decisions about their routes and help mitigate congestion and delays.

The proposed safety improvements will focus on improved safety for freight vehicles and other modes. The proposed project on Rankin Road would improve the connectivity and accessibility of the region, making it easier for residents living north of the corridor to move around, which can support economic growth and development. The project could also lead to improved safety

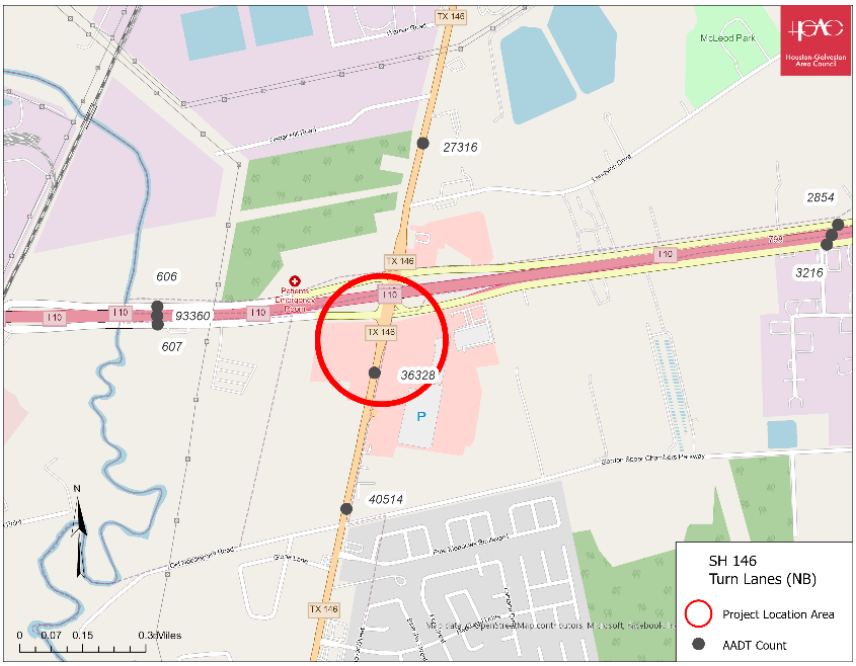
and reduced travel times, which can have a positive impact on the quality of life for local residents and businesses. Additionally, the road project may incentivize and attract companies to consider economic opportunities offered along the corridor for growth and expansion.

Overall, the proposed project will have a significant positive impact on regional goods movement within and through the region by increasing capacity, improving connections, implementing ITS technologies, and improving the quality of life for over 14,000 residents.

MPOID: 19020 – Rank 6

Project Sponsor: TxDOT Beaumont District.

Project title: SH 146 Dual left turn lanes at IH 10 E.



Truck percentage: 14.9%

Recommended in a plan? No.

Located on state/local designated freight corridor: Yes.

Narrative on how project improves freight movement (provided by sponsor):

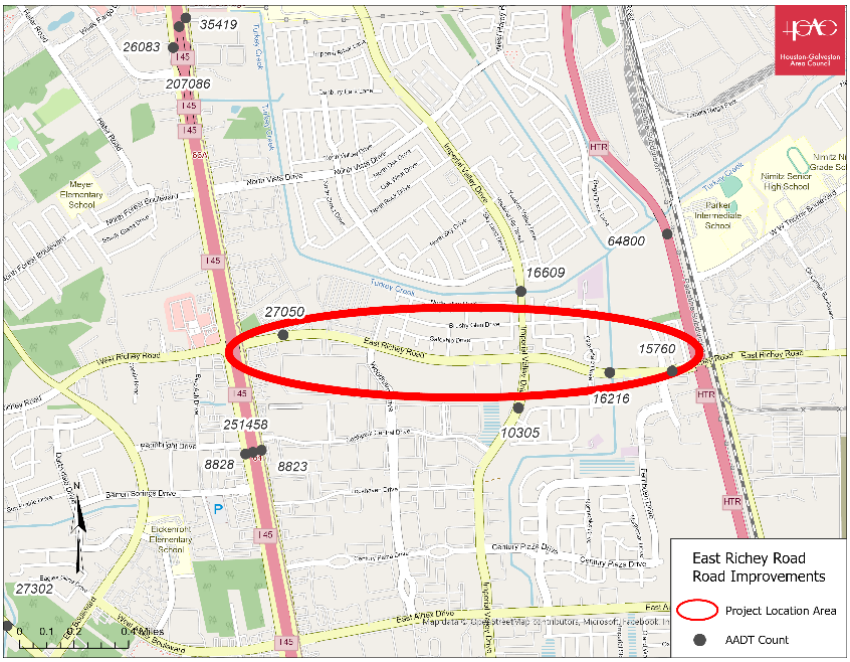
This project will improve traffic flow on SH 146 at IH-10 by adding a combination through & left turn lane northbound and southbound under IH-10. This will increase the turning capacity

from SH 146 to IH-10 along with the capacity of SH 146 at IH-10. This will directly improve the flow of freight at this high-traffic intersection allowing truck traffic to more quickly enter on to IH-10. The improvements will also help reduce congestion at this intersection.

MPOID: 19021, 19022 – Rank 7

Project Sponsor: Harris County Engineering.

Project title: East Richey Rd Improvements project.



Truck percentage: 8%

Recommended in a plan? Harris County Truck Route Study 2016, Vision Zero Action Plan.

Located on state/local designated freight corridor: Yes.

Narrative on how project improves freight movement (provided by sponsor):

The proposed project will have a positive impact on regional goods movement within and throughout the larger Houston-Galveston region. The project intends to reconstruct the roadway to improve street geometry and add turn lanes to improve flow of freight and will accommodate the growing freight traffic crossing through to and from the nearby international airport. The project will also improve connections to major critical freight networks and the Port of Houston, which will ultimately improve the efficiency of goods movement in and out of the region. The project will improve connectivity between George Bush Intercontinental Airport and I-45, the

most heavily traversed multimodal freight corridor in Texas. (* https://ftp.txdot.gov/pub/txdot/move-texas-freight/studies/i45-freight-corridor-plan.pdf)

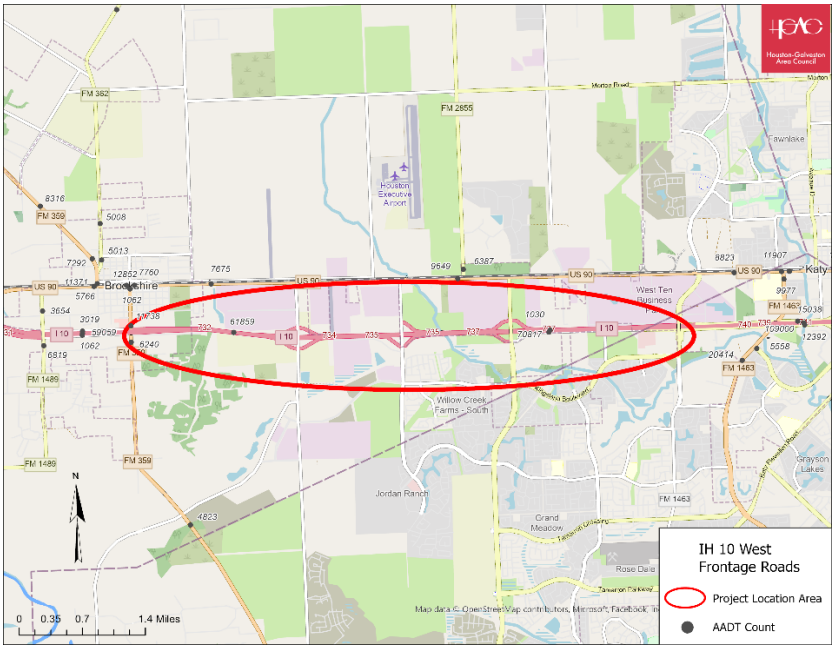
Furthermore, the project includes the implementation of Intelligent Transportation System (ITS) technologies, which will enhance the operational efficiency and safety of the roadway. ITS technologies could include things like dynamic message signs, traffic cameras, and real-time traffic monitoring and management systems. These technologies will provide real-time information to drivers, allowing them to make informed decisions about their routes and help mitigate congestion and delays.

Overall, the proposed project will have a significant positive impact on regional goods movement within and through the region by increasing capacity, improving connections, implementing ITS technologies, and improving the quality of life for over 25,000 residents.

MPOID: 19023, 19024 – Rank 8

Project Sponsor: TxDOT Houston District.

Project title: IH 10 W Frontage Roads between FM 359 and Cane Island Pkwy.



Truck percentage: 25.7%

Recommended in a plan? No.

Located on state/local designated freight corridor: Yes.

Narrative on how project improves freight movement (provided by sponsor):

The project consists of constructing two 2-lane frontage roads (Westbound and Eastbound) from FM 359 (Waller Avenue) in Brookshire to the Cane Island Parkway. The project fills in the gap of the frontage road system in a high growth area of Waller County on IH 10. It is an essential link on the Critical Rural Freight Network, sitting on National Highway Freight Network (NHFN) and Texas Highway Freight Network (THFN). IH 10 W is also classified as a Texas state hurricane evacuation route. In addition to the new frontage lanes, the project will include improvements in drainage, safety, and bicycle and pedestrian facilities.

Increased growth in the number of warehouses along this segment requires better connectivity between IH 10 W and the warehouses in the Katy/Brookshire area north of IH 10 W. The lack of frontage roads decreases connectivity and accessibility for a heavily congested roadway.

The purpose of this project is to improve connectivity and accessibility. The project will alleviate future congestion on US 90 due to potential economic development from the expansion of warehouses and connect IH 10 W to the warehouses in the Katy/Brookshire area north of IH 10 W, including but not limited to the recently constructed Empire West Business Park.

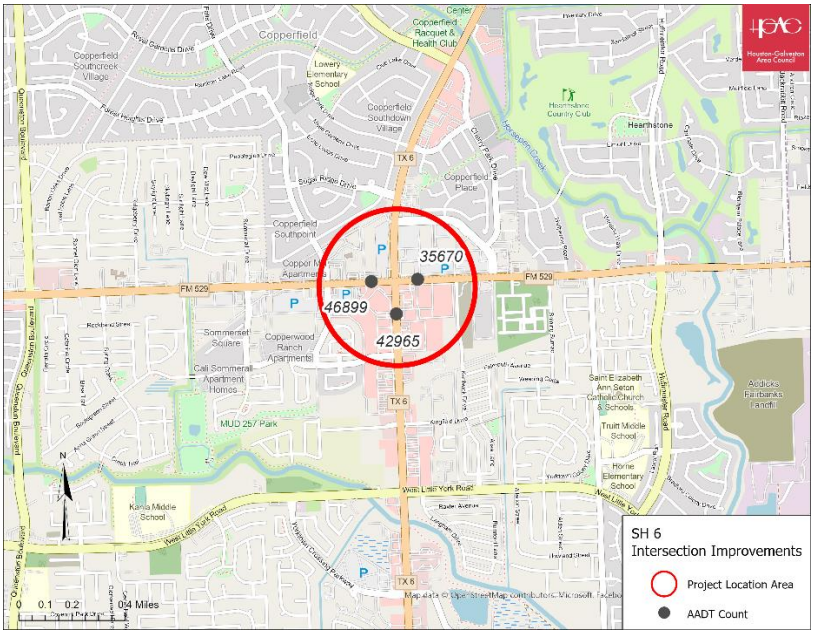
It will also improve freight connectivity and freight network fluidity and provide an opportunity for access management. The increase in connectivity will happen in conjunction with improvements to the pedestrian and bicycle facilities in the corridor.

This improvement, in conjunction with the other adjacent proposed improvements, will improve freight access to many major freight generators in the region including the region's seaports, airports (nearby Houston Executive Airport), manufacturing facilities and many freight warehouses. The project will improve operations for the regional network by improving the connections between other parts of the freeway network. The enhanced drainage system that results from the reconstruction will improve regional resilience by reducing the risk of flooding on this critical link.

MPOID: 18721 – Rank 10

Project Sponsor: TxDOT Houston District.

Project title: SH 6 Intersection Improvements at FM 529.



Truck percentage: 8.4%

Recommended in a plan? H-GAC 2023 Regional Goods Movement Study.

Located on state/local designated freight corridor: Yes.

Narrative on how project improves freight movement (provided by sponsor):

The project consists of SH 6 intersection improvements at FM 529 in Harris County. The project is listed in the H-GAC RTP 2045 (MPOID 18721), the FM 1960/SH 6 North Acess Management Study, the Metro Bike and Ride Access and Implementation Plan, and the H-GAC Regional Goods Movement Study. As required by state design guidelines, the intersection increase will include safety, drainage, and bicycle and pedestrian facility improvements.

SH 6 is an important link on the Critical Urban Freight Network, as it sits on the Texas Highway Freight Network. It connects to two different evacuation routes, IH 10 to the south and US 290 to the north.

This section of SH 6 is heavily congested and needs additional capacity in the turn lanes. The current daily volume of traffic on the segment is roughly 32,725 vehicles per day with 8.4 percent being trucks. The estimated percent increase in volume from 2021 to 2041 is 40 percent.

The crash rate on the segment is 875.3 crashes per 100 million vehicle miles traveled. This is four times as high as the statewide average for similar roadways, 218.17. The fatal crash rate was 5.32 per 100 million vehicle miles, higher than the statewide average

of 1.39. The serious injury crash rate was 18.62, 3 times higher than the statewide average of 18.62.

The pavement condition at this intersection is in extremely poor condition, with an International Roughness Index (IRI) score of 296, substantially higher than the threshold for being designated as in poor condition by the FHWA, which categorizes an IRI of 171 or higher to be in poor condition.

The purpose of the project is to reduce congestion, improve safety and reduce crash rates to create a more robust regional goods movement in the state. With implementation of this project, trucks would no longer have to idle and wait at the traffic light on SH 6. Many large retailers in the vicinity of this intersection are receiving freight and FM 529 connects directly to many large and medium sized warehouses to the east (closer to US 290) of this intersection. As required by state design guidelines, the intersection increase will include safety, drainage, and bicycle and pedestrian facility improvements.

This improvement, in conjunction with the other adjacent proposed improvements, will improve freight access to many major freight generators in the region including the region's seaports, airports, manufacturing facilities and freight warehouses. The project will improve operations for the regional network by reducing congestion and improving the connections between other parts of the freeway network.