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| UTC Project Information |
| Project Title | 05-47-TTI: Impacts of COVID-19 Induced Active Transportation Demand on the Built Environment and Public Health |
| University | Texas A&M Transportation Institute |
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| Funding Source(s) and Amounts Provided (by each agency or organization) | Center for Advancing Research in Transportation Emissions, Energy, and Health (CARTEEH): CARTEEH: $90,091.00Other Sources: 1. Texas Department of Transportation: $320,000.00
2. NCHRP 15-74: $600,000.00
3. Texas A&M School of Innovation. Innovation [X]: $20,000.
4. TAMIDS Data Resource Development Program: $27,000
5. National Science Foundation: $1,000
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| Total Project Cost | $90,091.00 |
| Agency ID or Contract Number | 69A3551747128 |
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| Brief Description of Research Project | Active transportation has been acknowledged as a healthy, low-impact physical exercise that can reduce the risk of health problems associated with a sedentary lifestyle and can be enjoyed by people of different socioeconomic backgrounds. Since the COVID-19 pandemic hit, more Americans chose to bicycle and walk as a safer transportation mode to reduce exposure to the virus by maintaining social distancing. The El Paso MPO reports that cities like Guadalajara and Mexico City observed significant increases in active transportation users both during and after the lockdown period. Like other cities across the USA, El Paso implemented a contingency plan by converting the traffic lanes to dedicated bike lanes in order to meet the increasing demand. These policies may have significant impact on public health. Despite the many well-documented health benefits of active transportation ([CARTEEH Brief on Transportation and](http://www.carteeh.org/wp-content/uploads/2019/07/14-Pathways-Project-Brief_Final_26June2019.pdf) Health: A Conceptual Model), sharing the roads with motorized traffic can expose the bicyclist and pedestrians to various traffic-related risks, including injury risks, and potential increases in exposure to noise, and air pollutants. A study by the National Highway Traffic Safety Administration shows that traffic fatalities involving non-motorized users increased in recent years. Traffic-related air pollutants may also negatively impact non-motorized users' health, although the net impacts are highly context-specific. These risks are known to be context-specific and have been shown to depend on baseline concentrations of air pollutants and noise levels, which is partly determined by the study area and the trip routes. However, the synthesis of the literature suggests that overall, the health benefits of active transport through the pathway of increased physical activity strongly outweigh the detrimental effects of traffic incidents and air pollution exposure on health, while less is known about noise exposure with suggestions that it declines when road users switch to active transportation. In this project we will comprehensively evaluate the health impacts for active transport use in order to provide city and state transportation, planning, and public health agencies with data-driven tools and recommendations for implementing bicycle- and pedestrian-friendly infrastructure to meet this new demand and maintain a healthy and sustainable built environment. This project aims to answer the following three objectives. 1. Estimate the COVID-19-induced active transportation demand
2. Assess its potential health benefits and harms of active transport through four pathways (i.e., increasing activity, traffic crashes, air pollution, and noise) as well as other less-known benefits such as stress relief and mental health.
3. Develop data-driven tools and recommendations for implementing a bicycle- and pedestrian-friendly infrastructure to meet and maintain this new demand
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| Describe Implementation of Research Outcomes (or why not implemented)Place Any Photos Here | The research team will work closely with different stakeholders in El Paso region, including the regional transit agencies (Sun Metro and El Paso County Transit), COVID-19 and Bicycle and Pedestrian Groups of the City of El Paso, Camino Real Regional Mobility Authority (CRRMA), Texas Department of Transportation (TxDOT) El Paso District, and El Paso Metropolitan Planning Organization (MPO), to accomplish these objectives. The tools and recommendations developed in this project will be applied to the City of El Paso, and their acceptability and potential for future uptake will be evaluated. They will be designed to be flexible and scalable to facilitate future applications in other cities and MPOs with similar local contexts. |
| Impacts/Benefits of Implementation (actual, not anticipated) | This project will directly impact the El Paso MPO and other stakeholders involved in the project to address the impacts of policy decisions that were taken to accommodate the active transportation users. These questions include but are not limited to: did the contingency plans and infrastructure help meet the COVID-19 induced demand for active transportation? Are the new shifts in demand temporary? Can these types of contingency plans help curb the demand and improve awareness of active transportation benefits? And most importantly, is there a need for keeping or even improving the re-purposed infrastructure?  |
| Web Links* Reports
* Project website
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