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Dear Chair Bruce Bugg and Texas Transportation Commissioners,

Thank you for the opportunity to provide feedback on the Final Environmental Impact Statement (FEIS) for the North Houston Highway Improvement Program (NHHIP). Our organization, Air Alliance Houston, is a research-based non-profit organization that believes everyone has a right to breathe clean air. We advocate for policies to reduce air pollution because where you live, work, learn, and play should not determine your health.

Following the release of the Draft Environmental Impact Statement (DEIS), our organization identified a number of deficiencies and inconsistencies in air quality analysis conducted by the Texas Department of Transportation (TxDOT); in almost every case, the FEIS failed to rectify these deficiencies. Below are our comments regarding the air quality analysis within the FEIS.

TxDOT's DEIS made the argument that congestion relief *could* offset increases in MSAT (Mobile Source Air Toxics) levels brought on by highway widening. See below:

“In sum, when a highway is widened, the localized level of MSAT emissions for the Build Alternative could be higher relative to the No Build Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). Also, MSAT will be lower in other locations when traffic shifts away from them. However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today.”

Our organization, Air Alliance Houston, raised several concerns regarding this analysis. Notably, TxDOT's analysis concludes that MSAT levels will remain at an acceptable level on a *regional* basis; they did not analyze local impacts on the neighborhoods directly adjacent to the highway. Additionally, TxDOT assumes long-term congestion relief will be maintained in arguing that air quality will improve. Finally, they also assume continued improving fuel efficiency standards

based on the Obama-era [CAFE](#) standards, which the current administration is in the process of repealing.

Air Alliance Houston conducted a Health Impact Assessment (HIA) to analyze potential *local* air quality impacts, and found that the widened right of way (ROW) footprint, rerouting of the highways around downtown, and increased VMT would have a substantial air quality impact on the adjacent neighborhoods, including several schools that would be brought dangerously close to the roadway. The removal of the Pierce Elevated will effectively reroute I-45 traffic to the north and east side of downtown to more than double VMT in the N/S section of the 59/69 corridor and the I-10 corridor north of Downtown. This shifts the traffic - and the significant nuisances associated with it - towards communities that are predominantly lower-income communities of color (Near Northside, Fifth Ward, Second Ward) and away from other communities (Memorial Parkway/Washington Ave, Fourth Ward, Midtown). This is one of many reasons why localized air quality estimates are needed.

In the FEIS, TxDOT's air quality impacts analysis has not changed much from the DEIS. The information below is quoted from the TxDOT "Facts and Highlights" white paper and the MSAT Technical Report:

- "NHHIP VMT is projected to rise by 58%...The MSAT are projected to decrease even as VMT increases due to increasingly stringent fuel standards and improvements in vehicle technology."
- "Air quality would be improved by the proposed project in part because of reduced congestion. NHHIP would help reduce congestion on 12 segments of the "Texas 100 Most Congested Roadways" as reported by the Texas A&M Transportation Institute (TTI). These 12 segments annually account for 39 million person hours of delay, \$788 million in congestion costs, and 11.9 million gallons of excess fuel used. The wasted fuel produces an estimated 120,209 tons of excess carbon dioxide."
- "In sum, both the Build and No Build Alternative in the interim and design years are expected to be associated with lower levels of MSAT emissions compared to the base year. There is a minor increase in MSAT emissions expected between the No Build and Build Alternatives for both the interim and design years, due to slightly higher VMT. Under all alternatives, MSAT levels are likely to decrease over time due to nationally mandated cleaner vehicles and fuels"

TxDOT doubles down on nearly all of their original analyses. Their MSAT claims are still based on a *regional* analysis, disregarding localized impacts. TxDOT continues to rely on the promise of increasing fuel efficiency to justify a huge increase of VMT. They also continue to posit long-term congestion relief as an indisputable fact, again concluding that adding more vehicles will not harm air quality because they assuredly will be going faster.

While our organization understands that much of the design has yet to be finalized, it's imperative to note some of the inherent issues with basic assumptions around this project's air quality impacts. We acknowledge TxDOT has included commitments to improve air quality

monitoring in adjacent neighborhoods, however, not only are the proposed air monitoring activities inadequate given the scope of the project, but enhanced air quality monitoring will do little when the project itself is built on flawed methodology.

Additionally, TxDOT fails to account for many of the impacts during construction, only concerning themselves with impacts assumed after project completion. This is wholly insufficient, particularly considering that the construction period will bring a marked increase in heavy-duty truck traffic which may significantly contribute to regional ozone formation and impair local air quality in areas adjacent to the construction zone. This is a glaring oversight as the Houston area has consistently failed to meet federal ozone standards and many local communities adjacent to the freeway are already heavily impacted by poor air conditions and experience poor health status and outcomes compared to other communities throughout the region.

For example, in 2019 the Environmental Defense Fund (EDF) drove 32,000 miles, measuring air pollution across 22 Houston neighborhoods.<sup>1</sup> One of the key findings was that nearly half of Houston's schools face elevated pollution exposure. More specifically, they found NO<sub>2</sub> levels were 48% higher than the rest of the city in Houston's Fifth Ward - one of the many neighborhoods that will be impacted by the expansion. According to the report, Fifth Ward residents experience higher rates of asthma (11%, compared to 9%), Chronic Obstructive Pulmonary Disease (COPD) (10% compared to 6%), Coronary Heart Disease (9% compared to 5%), and stroke (6% compared to 3%), and can expect to live almost a decade less than the rest of the region (69 years versus 78 years).<sup>2</sup>

## **Response to MSAT Technical Report, Appendix C -**

### Air Pollutant Watch List (APWL)

Response: These areas were on the APWL because they have extensive monitoring networks that identified excessive concentrations of these pollutants. It is not the case that a similar monitoring network exists for most areas adjacent to the freeway. In addition, the APWL is primarily relevant to industrial manufacturing areas wherein high concentrations of a single contaminant of concern may be present. Because transportation-related emissions are composed of many diverse contaminants, the overwhelming presence of any one pollutant is unlikely. Rather, it is the cumulative risk from incremental increases in the concentrations of several pollutants that is of relevant concern to this project.

Also, it is worth noting that APWL delisting does not mean these are not still areas of concern. If anything, it is an indicator that AQ in these areas should be considered "at-risk" and that they require continued surveillance to make sure they don't return to the conditions that got them

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<sup>1</sup> Environmental Defense Fund. Finding pollution- and who it impacts most- in Houston. Available at <https://www.edf.org/airqualitymaps/houston/findings>.

<sup>2</sup> Environmental Defense Fund. Finding pollution- and who it impacts most- in Houston. Available at <https://www.edf.org/airqualitymaps/houston/findings>.

listed in the first place. A 2016 analysis by EDF of areas removed from the APWL found that exceedances of the AMCV were recorded at some air monitoring sites and data were not available and/or being reported consistently at some air monitoring locations.<sup>3</sup>

#### The Role of Health Risk Assessment in a National Environmental Policy Act Context for Highway Projects

Response: Our organization appreciates attempting to quantify the efficacy of health impact assessments of infrastructure projects. We would like to point out that the NATA is based on modeled risk at the Census tract level rather than localized risk of near-roadway emissions. First of all, impacted communities have spoken and determined that the health risks noted are not “acceptable.” Secondly, models are not measurements of actual exposure. Moreover, at the tract scale, the nuance of the exposure gradient is lost to averaging. Finally, disqualifying additional health assessments based on the argument of “acceptable health risks” seems out of place when other alternatives for the designed project, which could potentially eliminate or reduce a vast number of even these ‘acceptable’ risks and still achieve the project goals, were ignored or dismissed during the planning phase.

#### EPA Study “Assessing Outdoor Air Near Schools”

Response: Our organization again appreciates TxDOT attempting to contextualize additional health and environmental assessments in potential air quality impacts. However, the use of these specific examples to further an argument that additional mitigations are not needed seem inconsistent. To begin with, findings from studies EPA performed on other schools, in different areas and conditions over a decade ago are not adequate enough to draw the conclusions for this specific project TxDOT posits. Furthermore, this argument is inconsistent with the earlier claim that “the magnitude and the duration of these potential [localized] increases compared to the No Build Alternative cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts.” In the same report, TxDOT contradictorily claims that localized impacts cannot be reliably quantified, and also that they need not be quantified because prior studies have already reliably quantified localized impacts in other circumstances and found minimal impacts.

While we recognize the EPA analysis did not necessarily attempt to forecast health impacts from potential MSAT concentration increases in their project area, we believe TxDOT has a responsibility to determine baseline MSAT concentrations in the schools and communities adjacent to their project where concentrations are expected to increase relative to other areas. As we have stated previously, research studies have shown that people living or going to school within 500 feet of a high-traffic roadway have increased risks of asthma, impaired lung development, and childhood leukemia, among other illnesses. Not surprisingly, children of color and/or low-income disproportionately attend schools in close proximity to highways and have higher rates of asthma than their peers. This is the case with communities adjacent to the planned expansion. While asthma cases attributable to traffic-related air pollution have

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<sup>3</sup> ASSESSMENT OF CHANGES TO THE AIR POLLUTANT WATCH LIST (APWL) IN TEXAS.  
[https://www.edf.org/sites/default/files/content/environmentaldefensefund\\_texas\\_white\\_paper\\_002.pdf](https://www.edf.org/sites/default/files/content/environmentaldefensefund_texas_white_paper_002.pdf)

decreased overall between 2000 and 2010 in the US<sup>4</sup>, exposure to traffic-related PM10, PM2.5, and NO<sub>2</sub> still account for 40%, 28%, and 18% of pediatric asthma cases in Harris County, respectively. Similarly, another recent study found that about 400 new pediatric asthma cases per 100,000 children per year in Harris County are attributable to exposure to NO<sub>2</sub> from traffic pollution (25% of pediatric asthma cases).<sup>5</sup> The health of children attending schools adjacent to the corridor should not be dismissed by TxDOT. By establishing these baseline concentrations, subsequent scenarios for expected increases could be developed, assessed, and addressed.

As detailed in the FEIS, the current design of the NHHIP will do irreparable harm to a number of Houston communities, displace thousands, and reinforce an unsustainable car-centric paradigm that will worsen air quality, limit equitable mobility options, and entrench economic and social inequality in the Houston region for decades to come. The reckless disregard for the health and safety of people that are more vulnerable along the Right of Way is indicative of TxDOT's glaringly deficient approach to planning this project.

Instead of working with communities to design an equitable, sustainable project that can improve access and mobility using innovative planning techniques, TxDOT has made clear their preference to rely on the outdated and outmoded approach of expansion at any cost. Unfortunately, Houston is home to more than enough examples of infrastructure projects that demonstrate how futile, wasteful, and destructive this approach can be. If this project moves forward without a substantial reimagining of even the most basic components of the design, we will be wasting billions of dollars on a project that ultimately will fail to reach its stated goals, and TxDOT will have justified this waste and destruction using faulty methodology and a conscious negligence of the NHHIP's impacts.

We are asking the Texas Transportation Commission and TxDOT to, at a minimum, redesign the project within the parameters of the alternative vision provided by the City of Houston, as outlined in Mayor Turner's letter to Commissioner Ryan. It is also important to note that AAH, along with several other organizations, met with TxDOT staff on several occasions to share the results and recommendations of AAH's HIA. During these meetings, TxDOT staff verbally communicated that most, if not all, of the recommendations could be addressed (see attachment A). Despite these verbal acknowledgements, TxDOT has failed to put these commitments in writing and has also chosen not to include them in the FEIS. These recommendations include, **but are not limited to**, the need for TxDOT to work with school districts and impacted campuses to install high efficiency air filtration systems where appropriate; funding sidewalks and tree lines along the borders of the lots facing I-45; installing air monitors at sensitive locations such as schools and parks; and, encouraging TxDOT to comply with design standards for 500-year flood events rather than 100-year flood events.

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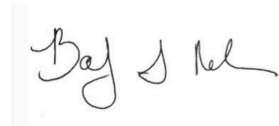
<sup>4</sup> Traffic Related Air Pollution and the Burden of Childhood Asthma in the Contiguous United States in 2000 and 2010. <https://carteehdata.org/library/webapp/trap-asthma-usa>

<sup>5</sup> Global, national, and urban burdens of paediatric asthma incidence attributable to ambient NO<sub>2</sub> pollution: estimates from global datasets. <https://www.thelancet.com/action/showPdf?pii=S2542-5196%2819%2930046-4>

TxDOT's failure to acknowledge and commit to the recommendations outlined in the HIA after making verbal commitments to do so reinforce the public's mistrust of TxDOT.

We would like to reiterate that how TxDOT chooses to move forward with this project is one of many critical decisions that will be made in the near future that will influence the health of our region for decades. TxDOT needs to get this right, the health of our region, and more specifically, the health of the most vulnerable, depends on it.

Sincerely,

A handwritten signature in black ink, appearing to read "Bakeyah Nelson". The signature is written in a cursive style with a vertical line to the left of the text.

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