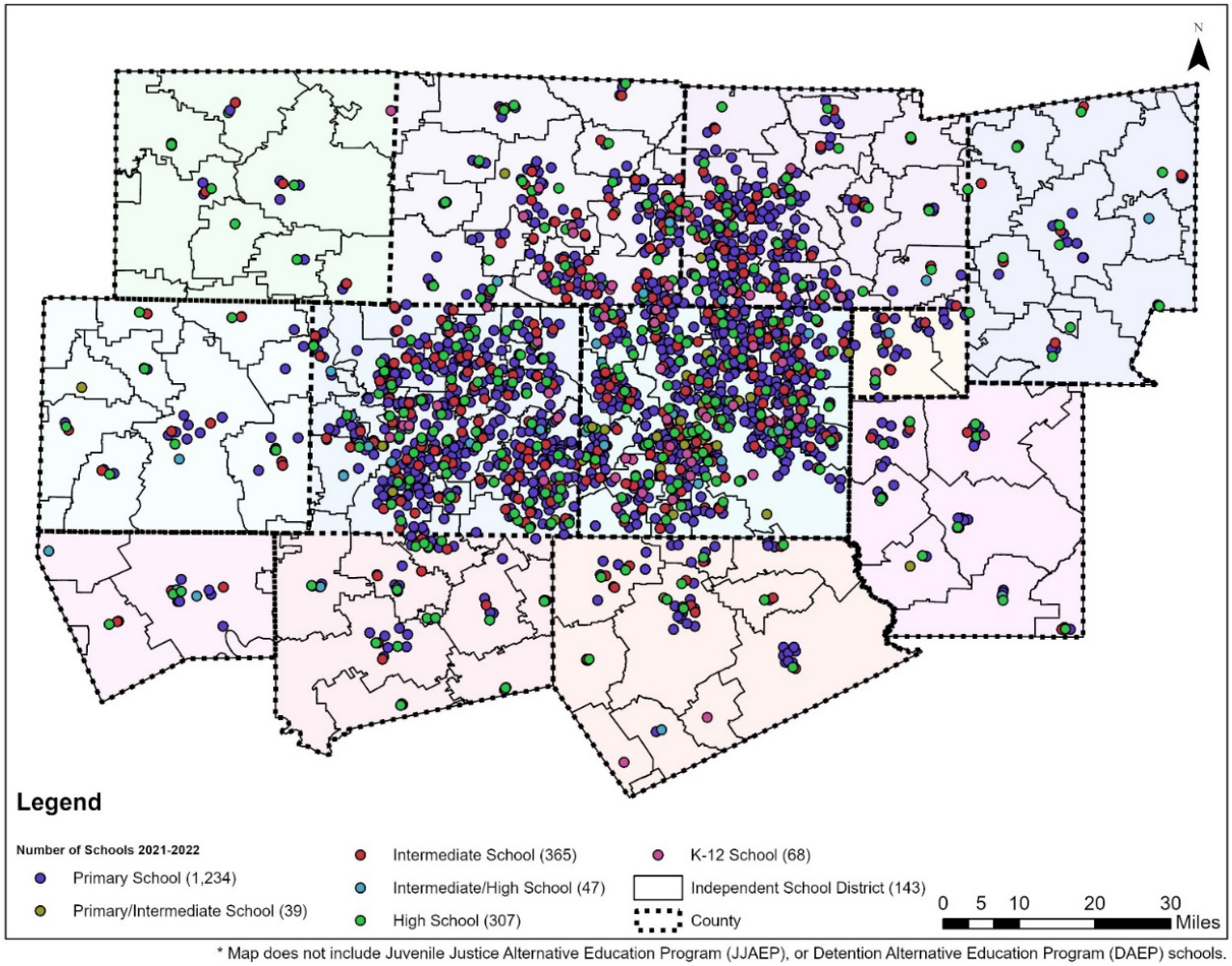
II. STATE OF THE SCHOOLS IN THE DALLAS-FORT WORTH REGION

The Numbers

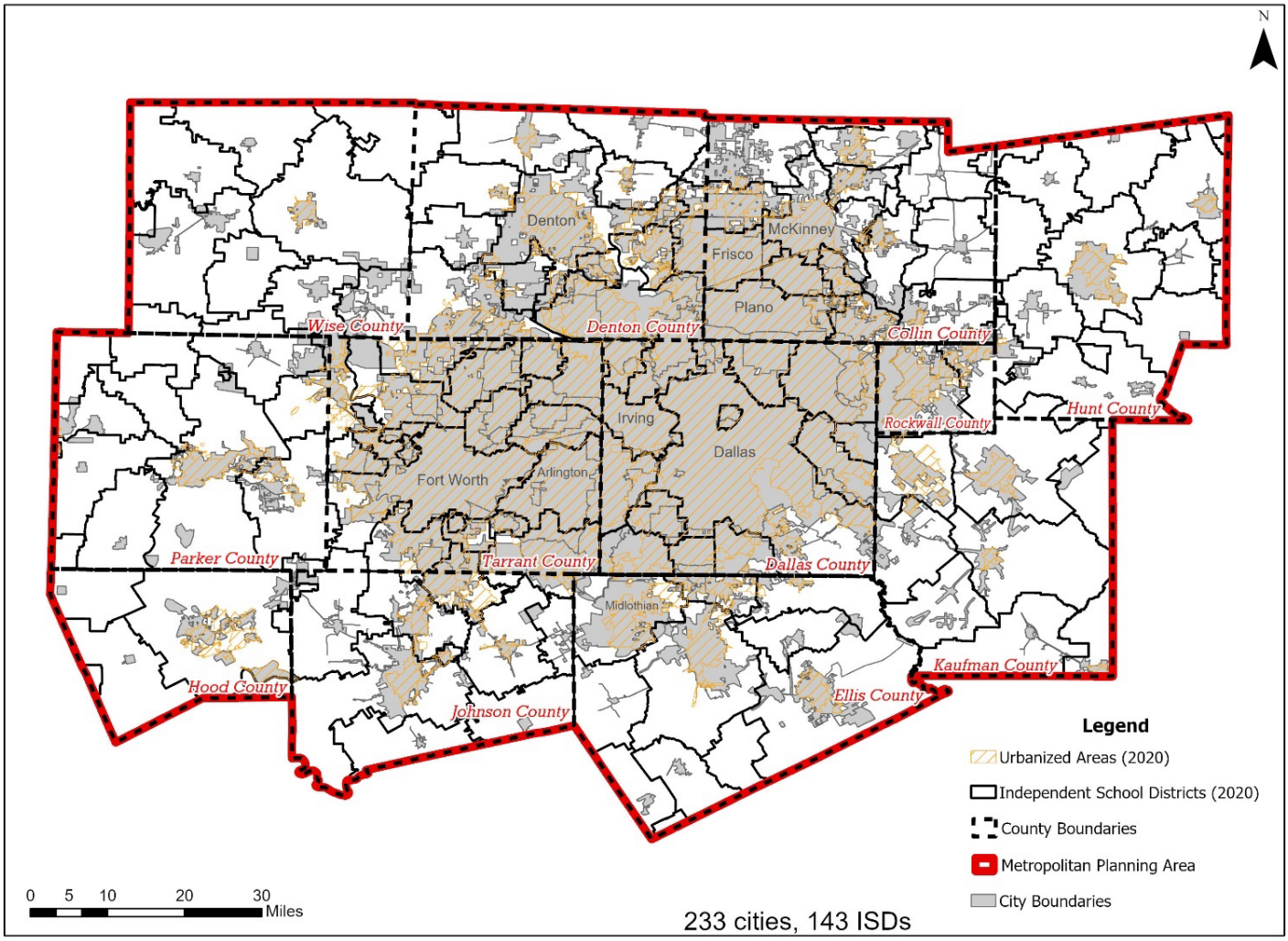
In the 2021-2022 school year, the Dallas-Fort Worth Metropolitan Planning Area contained 2,187 active public schools and 236 charter schools (Figure 7). These schools span 233 cities and 143 ISDs across the 12-county MPA (Figure 8). This jurisdictional complexity creates a unique and challenging situation in the planning and development of new school sites to support the region's growing population, with a multitude of local stakeholders at any school site. These numbers do not include Juvenile Justice Alternative Education Program or Disciplinary Alternative Education Program schools. Strategic site planning is essential for all levels of schooling. However, special considerations apply for elementary schools because they serve the youngest, and therefore most at-risk students for traffic incidents.

Figure 7: 2021-2022 TEA Public Schools in NCTCOG Region by Grade Level*



* Map does not include Juvenile Justice Alternative Education Program (JJAEP), or Detention Alternative Education Program (DAEP) schools.

Figure 8: NCTCOG MPA, Urbanized Areas, ISDs, and Cities, 2020



Travel Habits

The 2017 National Household Travel Survey is the most recent source of data student travel that is specific to the DFW region. The survey showed that for all ages in the DFW region, about 65 percent of students are driven to school in a personal vehicle, about 25 percent take school transportation, and only about eight percent and two percent of students walk or bike, respectively.[8] In the State of Texas, ISDs cannot receive State funding to bus students living within two miles of the school unless hazardous traffic conditions are identified in accordance with State requirements (Texas Education Code §48.151). Examples of "hazardous traffic conditions" include a freeway crossing, an overpass, an uncontrolled major traffic arterial, or and industrial area (Texas Education Code §61.1016). Therefore, due to parental concerns about real or perceived traffic safety or personal security issues, many potential walkers or bicyclists are driven to school in a personal vehicle, especially where walking or bicycling is not safe or comfortable.

Common School Pedestrian Safety Issues in the Dallas-Fort Worth Region

Though every school in the DFW region has its own unique roadway context surrounding its campus, a few common themes have been identified.

Schools Near Major Arterials/Freeways vs. Interior Schools

Image courtesy of Google Earth

Surrounding transportation infrastructure can change the level of access bicyclists and pedestrians have to a school site. Major barriers can include highways or wide roadways with no pedestrian crossing access. Barriers like these wide roadways act like a wall to prevent and/or severely limit bicycle and pedestrian activity when located near schools. Large distances between safe crossings across wide roads are dangerous for all pedestrians, especially young students. The wider the roadway, the

[8] FHWA NHTS Brief: Children's Travel to School – 2017 National Household Travel Survey https://nhts.ornl.gov/assets/FHWA_NHTS_%20Brief_Traveltoschool_032519.pdf

longer a pedestrian is exposed to traffic hazards and required to make decisions about safety.

Schools sited in more internal areas away from major roadways generally have safer, calmer traffic conditions with narrower roads that can be more easily crossed. As previously mentioned, in the State of Texas, busing is not required for students who live within two miles of their school except in extraordinary safety situations where walking may not be possible due to traffic or other safety hazards, such as a railroad crossing or highway. The Texas Education Agency School Transportation Funding web page[9] has additional guidance regarding hazardous traffic and areas with a high risk of violence. With a shift in siting trends to these less accessible areas where busing is not provided to students, many families are forced to either send their students on dangerous roadways without proper infrastructure to safely walk or bicycle or drive their students to school.

Safe Speeds

When students must travel along or across roadways with high speeds, they are put at an increased risk of injury or death if struck by a motor vehicle. There are many strategies to help manage and maintain safe speeds on roadways which students must travel along and across. These include a safe place for students to travel away from the roadway on a sidewalk or shared-use path, proper school zone signage, increasing the visibility of crossings with reflective signage and lighting, and retrofitting roads with appropriate infrastructure interventions that naturally cause drivers to slow down, such as narrower lanes, speed bumps, etc., and different enforcement strategies. For more information about enforcement, including law enforcement strategies, such as progressive enforcement, and community enforcement strategies, please visit the Safe Routes Guide Enforcement web page.[10]

The American Automobile Association (AAA) conducted a study titled "Impact Speed and a Pedestrian's Risk of Severe Injury or Death"[11] which investigated how vehicle speed influences the probability that a pedestrian struck by a motor vehicle will sustain severe

[9] https://tea.texas.gov/finance-and-grants/state-funding/state-funding-reports-and-data/school-transportation-funding
[10] http://guide.saferoutesinfo.org/enforcement/
[11] Tefft, B.C. (2011). Impact Speed and a Pedestrian's Risk of Severe Injury or Death https://aaafoundation.org/impact-speed-pedestrians-risk-severe-injury-death/

injuries or die. These findings highlight the importance of maintaining and enforcing reduced speed limits in the vicinity of schools (Figure 9).

Figure 9: Impact Speed and a Pedestrian's Risk of Severe Injury or Death

Vehicle Travel Speed at Time of Pedestrian Collision	% Chance of Severe Injury
16 mph	10%
23 mph	25%
31 mph	50%
39 mph	75%
46 mph	90%

Vehicle Travel Speed at Time of Pedestrian Collision	% Chance of Fatality
23 mph	10%
32 mph	25%
42 mph	50%
50 mph	75%
58 mph	90%

Safe Routes to School Activities Occurring in the DFW Region

Survey of Current Efforts

In summer 2022, NCTCOG conducted surveys at local schools and municipalities in the DFW region to assess the state of Safe Routes to School activities and school children's ability to safely walk and bicycle to school. The survey for local schools was sent to NCTCOG's internal school stakeholder list. The survey for municipalities was sent to the NCTCOG Bicycle and Pedestrian Advisory Committee (BPAC) and Surface Transportation Technical Committee (STTC) email lists. The surveys were also promoted through presentations at BPAC and STTC. This survey is only the first step of further school campus and ISD communication. This sampling of ISDs, schools, and municipalities is not comprehensive for the region, and was intended to provide a preliminary understanding

of trends and to hear about the experiences of school leaders in the region. Note that survey totals shown in the text and figures below may not add up because some individual survey questions did not receive a 100 percent response rate.

Schools Survey

The school survey was open for responses from June 2022 to September 2022 with responses received from public schools, private schools, charter schools, and ISD representatives. The survey included 11 questions pertaining to current SRTS educational activities, funding mechanisms, partnerships with local municipalities, current infrastructure improvements, and general need for SRTS education and infrastructure improvements to increase walking and biking. The survey received 43 individual responses, including 23 ISD responses (Figure 10) and 19 individual campus responses.

Of the 19 respondents from individual campuses, 14 were from public charter schools, which may have affected the results from individual school campuses due to the greater attendance range of charter schools versus a traditional public school with a set attendance boundary (Figure 11). Three of the four responses from individual public-school campuses were located in an ISD that additionally submitted a response representing the entire ISD. The full survey is included in Appendix 1.

Figure 10: ISD Respondents to Schools Survey, 2022

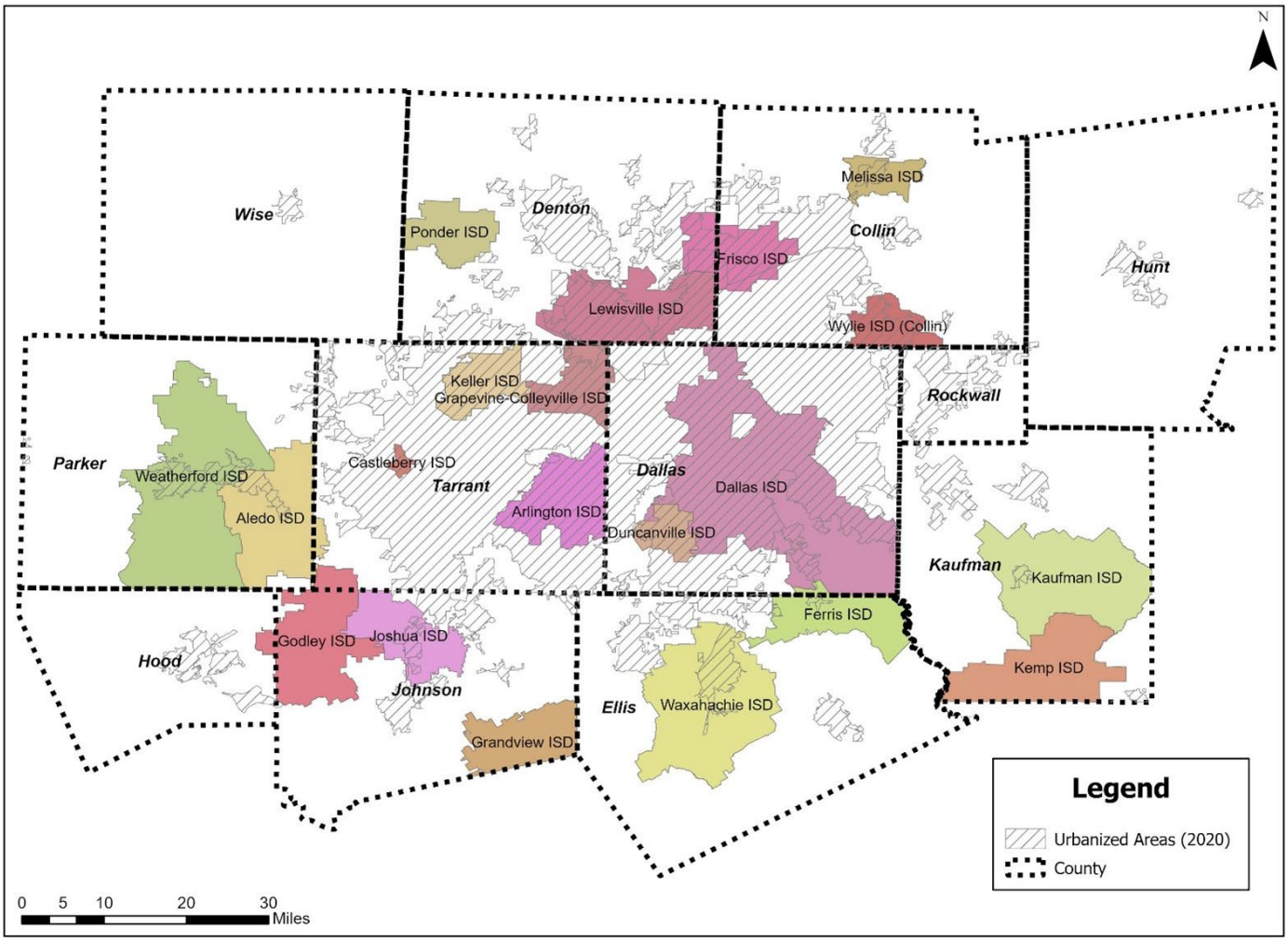
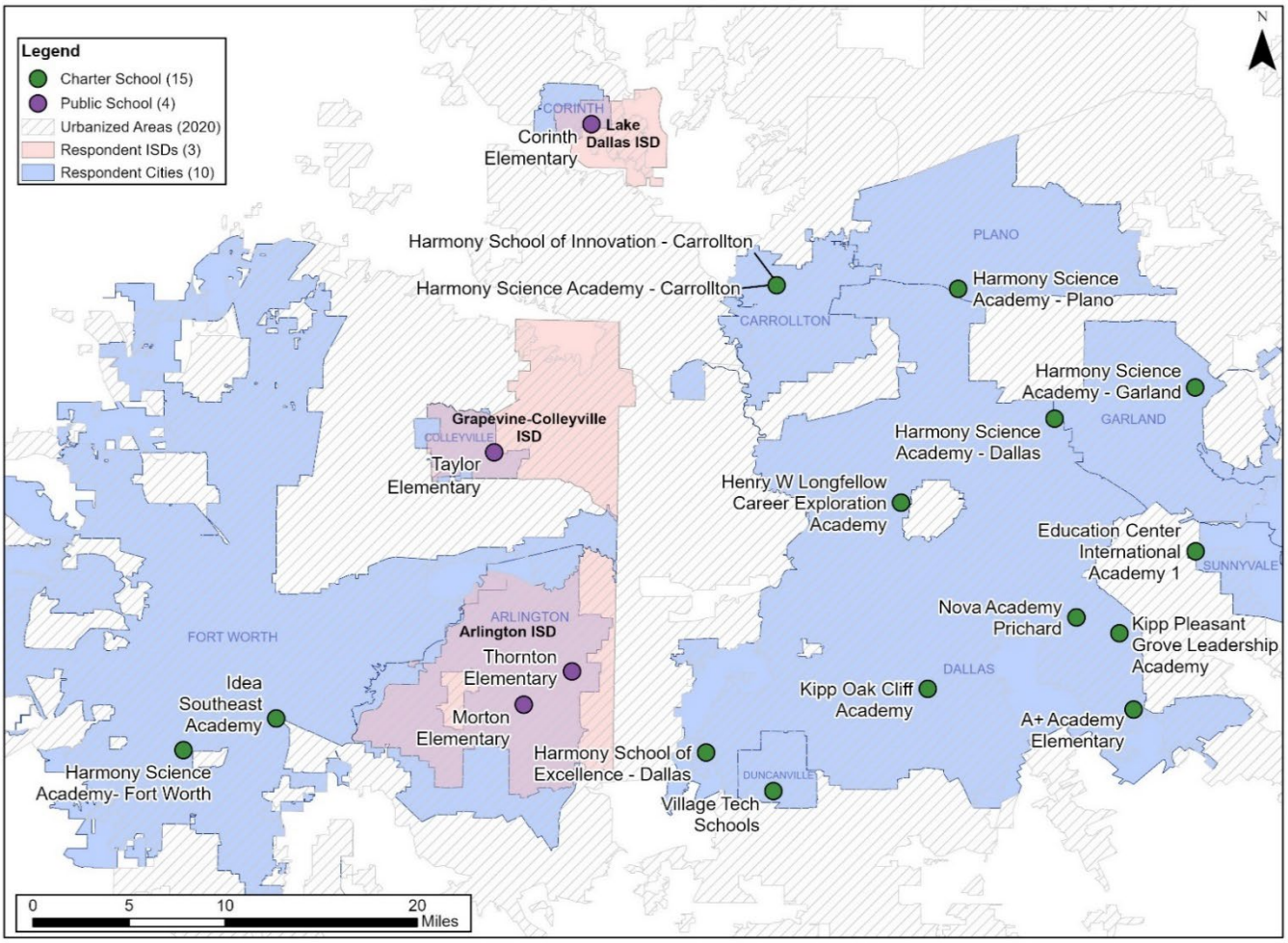


Figure 11: Individual Campus Respondents to the Schools Survey, 2022



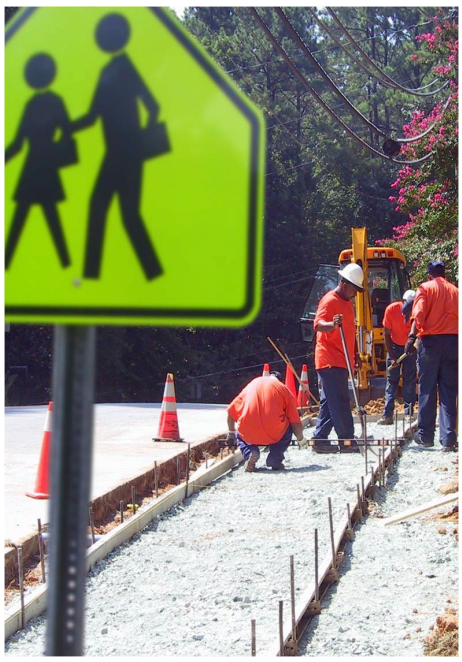
Participation in Safe Routes to School Programs

The survey revealed a varying level of participation and engagement for SRTS education programs. Two-thirds of ISDs that responded to the survey did not have any educational programs in place. Of the one-third of respondents that did have a district-wide program in place, programs varied, including education in the classroom; written materials such as posters, websites, and educational materials given to parents and guardians; and education from outside groups such as bus drivers and local police. For individual school respondents, just under half of respondents engaged in walking and biking instruction. Methods for disseminating the information included emails, pamphlets to families, parent newsletters, classroom posters, and presentations. There were some instances of classroom instruction and crossing guard instruction. Funding for these educational activities was provided by the ISD, local schools, or Parent Teacher Associations/Parent Teacher Organizations (PTA/PTO).

Safe Routes to School Encouragement Programs

The survey also indicated that most ISDs and individual schools that responded did not have any programs or activities to encourage students and their families to walk to school. A few respondents cited unsafe areas around the school, such as a railroad crossing, as a reason for not promoting such activities. A few ISDs cited individual schools with encouragement efforts, such as a bike giveaway to all fourth graders; individual PTAs/PTOs including bike giveaways in their fundraisers; and one ISD that participated in Walk to School Day and used internal district communications to promote the event. Though most schools that responded did not have any encouragement programs, a few schools participated in Walk to School Day, included bike safety and promotional materials in classes, or covered safe walking and biking practices at open houses. One school gave bikes and helmets to students who achieved perfect attendance.

Safe Routes to School Partnerships



About half of the ISDs surveyed had an active partnership with another government entity, such as the city, county, or TxDOT, though only about one-quarter of individual schools had a partnership with another entity. The lower number of partnerships at the individual school level may be attributed to more collaboration with other entities at the ISD level. This may be due to the role of the ISD in bigger picture tasks such as capital plans, while individual schools have a greater level of focus on education tasks.

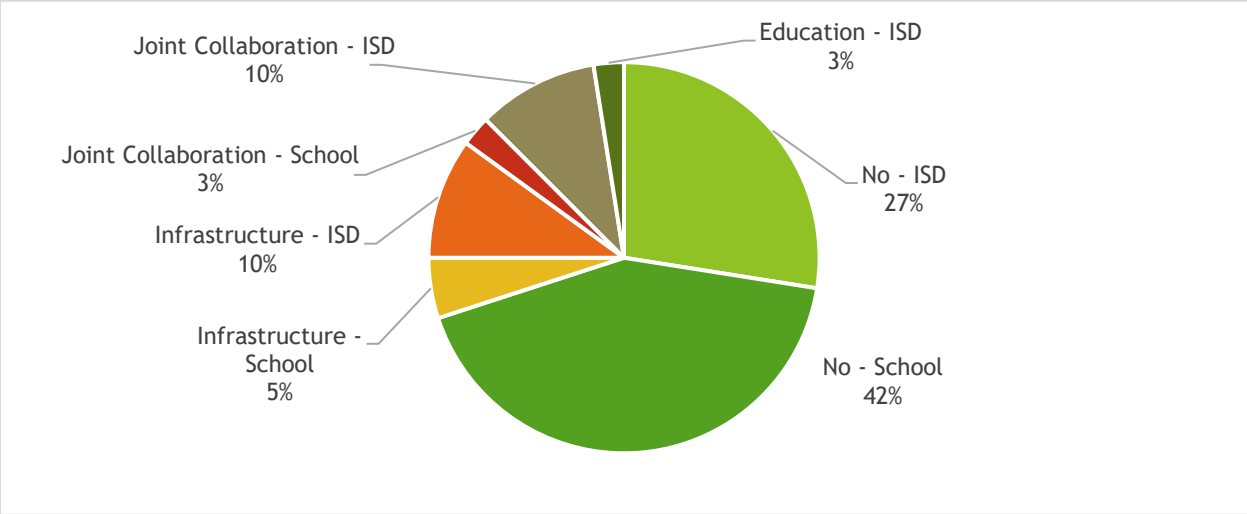
Partnerships among individual school campuses with other government entities included one partnership with police for traffic control, another informal partnership with the local city for campus sidewalk installation, and a partnership with TxDOT.

The reported partnerships ISDs have with local municipalities can be categorized three ways – infrastructure assistance, traffic control assistance, and transportation safety collaboration (Figure 12).

Independent school districts with partnerships that involve infrastructure assistance usually are focused on identifying bicycle and pedestrian safety needs and expansion of

current active transportation infrastructure. Traffic control assistance is characterized as local municipalities either providing or cost-sharing crossing guards at critical student crossing points or working with local police to assist with traffic control around the school campus. Transportation safety collaboration included a more comprehensive effort, including safety education partnerships, or regular joint coordination between multiple government entities regarding school travel safety.

Figure 12: Schools Survey – School/ISD Collaboration with Other Government Entities



Bicycle/Pedestrian Infrastructure Improvements

The survey also inquired about current or recent on-campus infrastructure improvements to bicycle and pedestrian safety. About one-third of ISD representatives surveyed were aware of such projects. Respondents reported projects that were completed or in progress included multiple new school campuses that will have bicycle and sidewalk paths, traffic circulation plan collaboration with the local city for a new school campus, and an existing middle school that is receiving bicycle and pedestrian safety improvements.

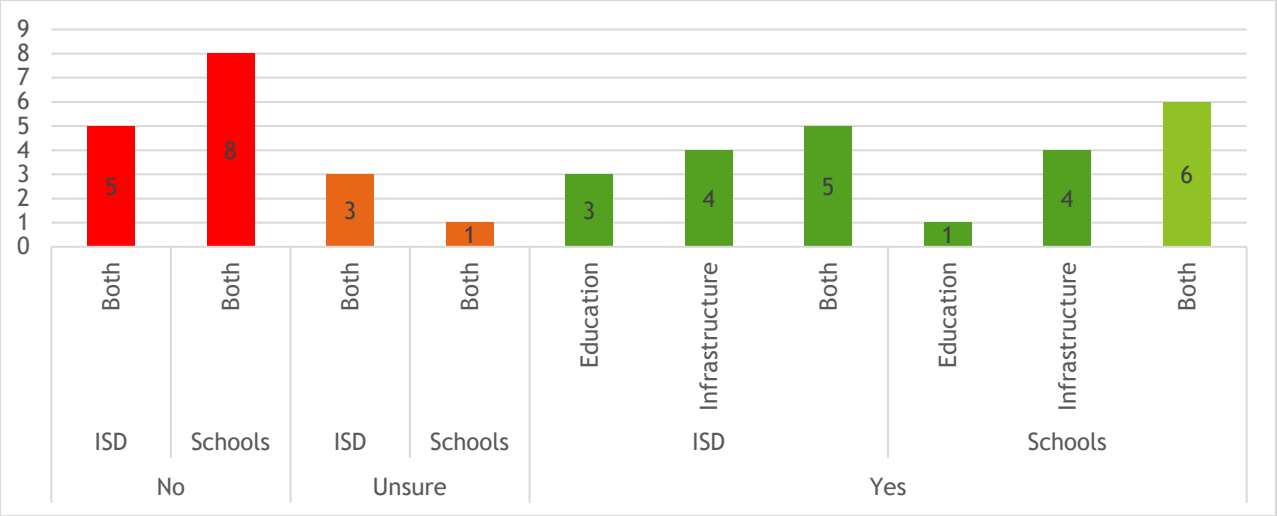
Of the individual school campuses surveyed, only one-quarter were aware of recent or in-progress improvements. Such improvements included a driveway reconfiguration to create a one-way road for pick ups near the bus route on campus, installing walkways for students to safely exit campus, and median fences to control pedestrian flow.

Only four school representatives had any awareness of ongoing roadway projects outside the school campus, with responses ranging from a general knowledge of activity to one school representative reported working with their city on a roadway reconfiguration. Only one ISD representative was able to provide responses about awareness of roadway projects near their schools resulting from collaboration with various government partners to address current congestion issues and prepare for projected growth in their community.

Need for Infrastructure Improvements/Education

The survey gauged the need and/or interest for bicycle/pedestrian infrastructure improvements and/or SRTS education (Figure 13). Of the ISDs surveyed, over half said that their communities would benefit from both education activities and infrastructure improvements. These ISDs responded that bicycle and pedestrian safety education and increased funding for sidewalk and active transportation infrastructure were needs for the schools' communities. Of the individual schools surveyed, just under half of the schools expressed a need for such efforts. Bicycle and pedestrian infrastructure, specifically sidewalks, were also called out as a need for individual schools.

Figure 13: Schools Survey – SRTS Education and/or Infrastructure Needs

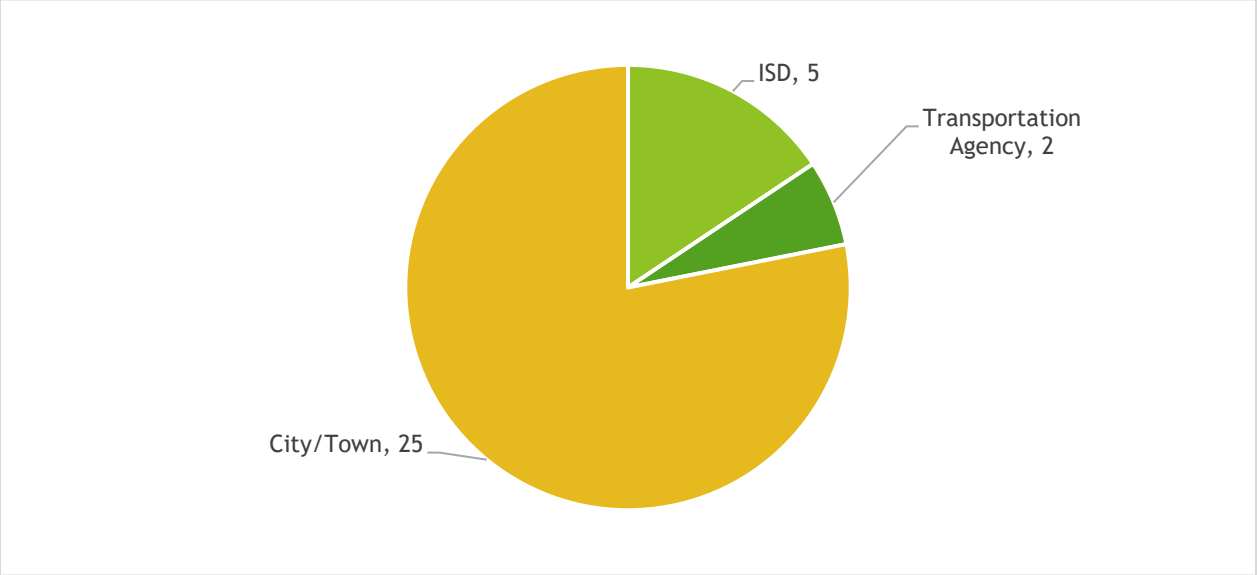


Municipal (Non-School) Survey

The municipal survey was open for responses from August 2022 to November 2022. The survey received responses from cities, towns, a Dallas Area Rapid Transit (DART) representative, a TxDOT representative, and representatives from local ISDs (Figure 14).

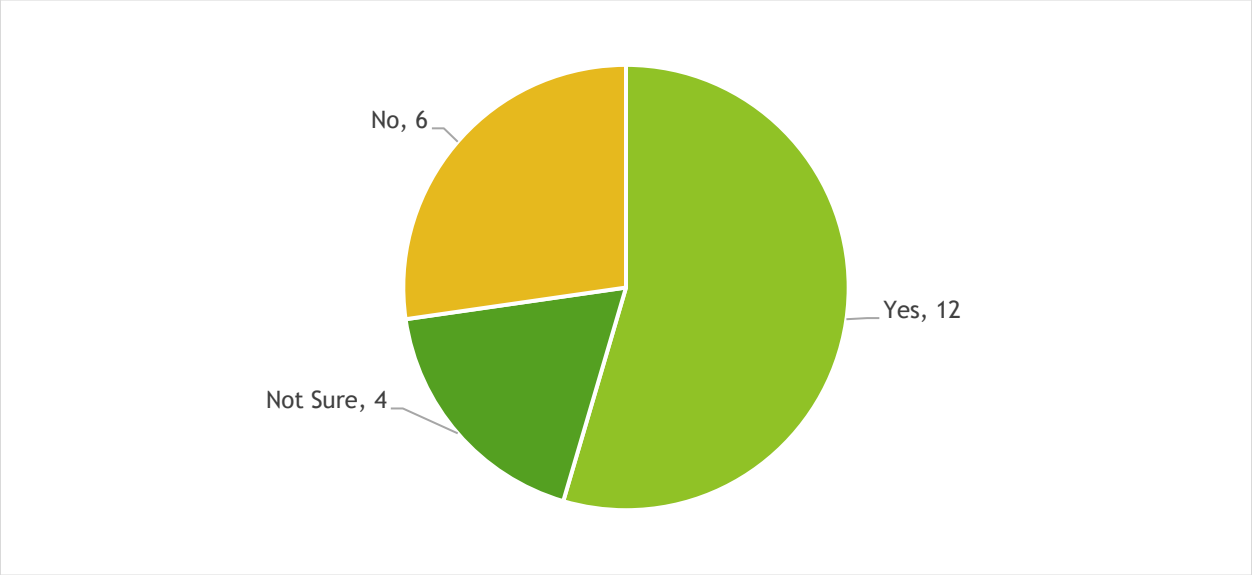
Though this survey was not directly sent to ISD representatives, language in the introduction encouraging initial recipients to share the survey with colleagues who may be able to better answer the survey questions may have steered some local government representatives to share it with ISD groups. The survey received 33 individual responses. The survey included six questions regarding partnerships with local ISDs and schools, current infrastructure improvements, crash data near school campuses, and general need for SRTS education and infrastructure improvements to induce an increase in walking and biking. The full survey is included in Appendix 1.

Figure 14: Municipality Survey – Respondent Organization Type



Most municipalities surveyed had a partnership with a local ISD or school (Figure 15). Many of these partnerships were longer-term collaborative efforts with their local ISD for bicycle and pedestrian safety, though they did not all have a formal program established. These partnerships were called upon for interlocal agreements for infrastructure improvements, encouragement programs for walking and biking at local schools, safety education, and crossing guards. One municipality reported a monthly meeting of city engineering staff, city police, and the local ISD to administer a safety program. Other municipalities partner on SRTS maps, including a formal partnership to communicate bicycle and pedestrian safety concerns and infrastructure requests. Some cities collaborate on Transportation Alternatives applications and/or other funding opportunities and collaborate on planning studies and implementing SRTS plans. One city has a formalized local BPAC with representation from two ISDs located in the city who served as stakeholders on the committee to develop the city's active transportation plan. DART cited their safety education program that they have run since 1996, as well as their involvement in back-to-school events.

Figure 15: Municipality Survey – Collaboration with Local Schools and/or ISDs



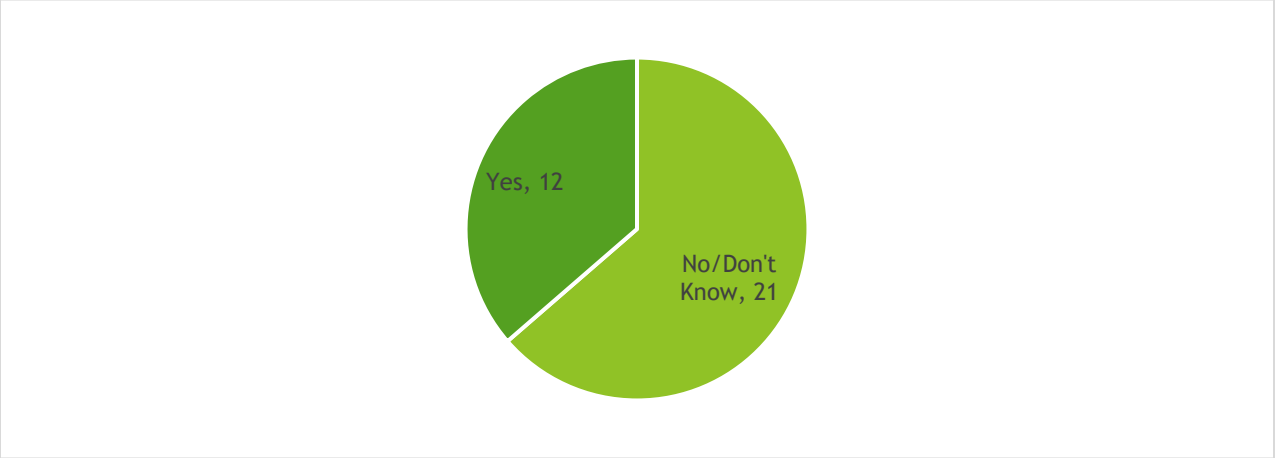
Infrastructure Projects Near Schools

Over two-thirds of responding municipalities reported local roadway projects in progress near local schools. These projects included bicycle tracks, traffic calming measures, sidewalk improvement projects, TA-funded projects, and trail projects. Three ISDs reported nearby projects, which included a sidewalk and two roadway improvement projects.

Bicycle/Pedestrian Injuries and Fatalities

The survey also asked about known pedestrian or bicyclist injuries or fatalities from automobile collisions on or near campus (Figure 16). Over one-half of the respondents were aware of such incidents. Many of these incidents occurred on campus or just outside of campus, often within crosswalks while the student was crossing and a driver was turning but not paying attention to pedestrian activity. In one city, multiple crashes were attributed to faded striping and road curves, both of which reduced visibility. Another city had two incidents that occurred just outside school grounds that the city was not aware of until they spoke to school principals. Two ISD respondents reported that students were struck by cars in nearby intersections while crossing the street.

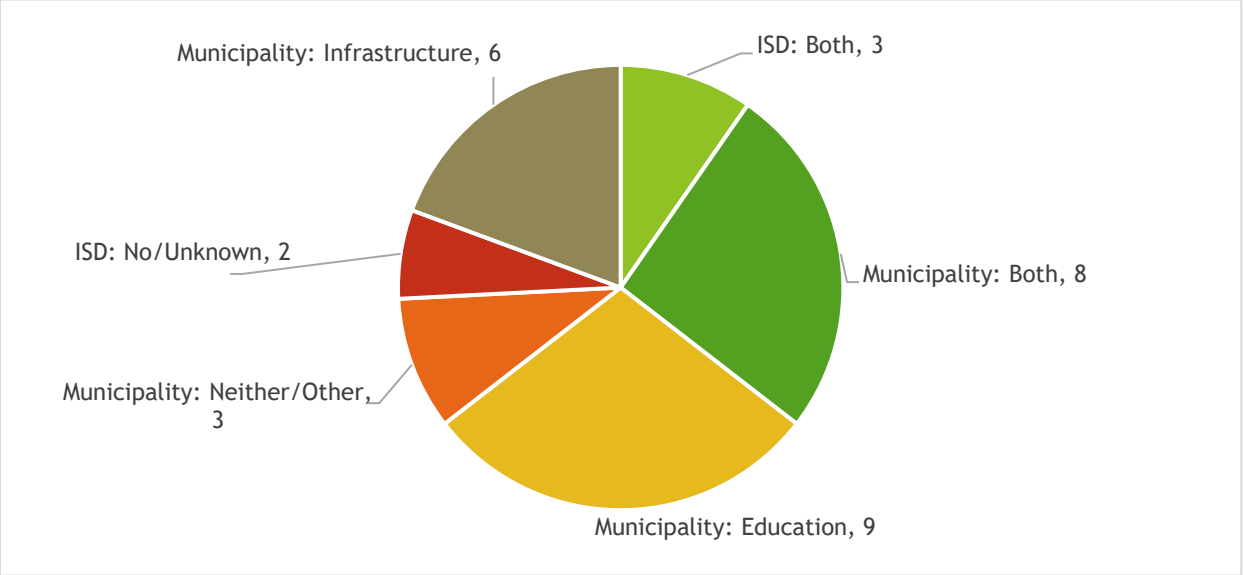
Figure 16: Municipality Survey – Knowledge of Crash On or Near School Grounds



Need for Safety Improvements or Education

About one-third of municipal respondents indicated that there is a need for bicycle and pedestrian safety improvements or SRTS education (Figure 17). Many cities indicated that education would be beneficial to their schools and students; one city responded that their last communication to ISDs on SRTS education was over 20 years ago. Other cities indicated that comprehensive education was needed for safe walking and biking or programs to complement newly installed bicycle and pedestrian infrastructure. Some cities mentioned a need for guidance on how to establish an education program with their local schools. Other cities cited infrastructure as a need in their cities, with labor shortages preventing all crossing guard locations having a guard present, or funding for sidewalk improvements not able to keep up with the demand for the infrastructure. Three ISD respondents pointed to a need for education and infrastructure improvements, citing a lack of safe speeds and wide roadways that students must cross to reach the school.

Figure 17: Municipality Survey – Need for Safety Improvements and/or Education



Survey Conclusions

The school-focused survey revealed a few insights into the current state of walking and biking as well as coordination between schools and local governments. Only eight, or roughly one-third, of individual schools surveyed had any type of education about safe walking and biking habits while an additional six schools were interested in adding SRTS education to their curriculum. Bicycle- and pedestrian-focused infrastructure interventions were identified as a need to help increase the number of students who could safely walk or bike to school. Only one-quarter of surveyed schools had partnerships with local governments, which leaves a large potential to increase collaboration for walking and biking education and encouragement activities such as Walk to School Day. Education and infrastructure improvements are mutually beneficial to local governments and schools within their jurisdiction and can be more effectively tackled by a joint effort between local governments and schools.

The municipality-focused survey similarly revealed potential for greater collaboration between local government organizations and schools within their jurisdictions. Though there was a greater level of collaboration reported between government groups and their local ISDs/schools, most of those partnerships were not formalized. It was also reported that there was some disconnect between school staff and city staff in crash reporting – some cities were unaware of traffic incidents involving students that happened at or next to school campuses. Further collaboration and communication could lead to countermeasures to increase the safety of school students walking to and from their campuses. Formalization of these partnerships would be beneficial to both groups.

NCTCOG's Policy Bundle initiative[12] incentivizes local governments, including cities and ISDs to engage other school stakeholders on SRTS and/or school siting topics by offering Transportation Development Credits (TDCs). In exchange for local governments' adoption of policies that enhance coordination with schools, cities can receive TDCs to offset their local match requirements for federal funding awards. The TA program discussed in Funding: Transportation Alternatives on page I-10 is an example of a funding opportunity where municipalities and ISDs can leverage earned TDCs.

Key conclusion of the two surveys include:

1. *There is a continuous need for increased and formalized efforts for school campuses and ISDs to collaborate and communicate with their local municipalities*. In an era of unprecedented growth in the region, education and local government will need to work efficiently and effectively to best meet the demand of new residents. Figure 8 on page II-2 illustrates the complexities of the relationships between cities, counties, ISDs, and funding eligibility with boundaries such as the Metropolitan Planning Area and Census-Designated Urbanized Areas. The school survey's respondents were mostly from charter school respondents, which may indicate that NCTCOG needs to better engage local public schools and ISDs to assist them in SRTS activities and understand any possible disconnects.

2. *Modern school siting practices have placed schools in areas that are difficult to walk and/or bike to, including siting schools on wide, fast roads that are dangerous for children to cross*. Speeding and increased speeds have a direct relationship with the potential for a fatality or severe injury for a pedestrian in the event of being struck by a motor vehicle. Understanding current risks for students and their families walking

[12] For more information about NCTCOG's MTP Policy Bundle Program, please visit https://www.nctcog.org/trans/plan/mtp/policy-bundle.

and biking to school will help planners better site and design roadways with these travel needs in mind.

Next Steps

1. NCTCOG will continue to engage local ISDs, cities, counties, and other relevant school stakeholder groups to understand current conditions of school travel and safety needs and share funding opportunities.
2. NCTCOG will increase efforts to create introductions between ISDs and local municipalities by hosting meetings between different stakeholder groups with shared areas of jurisdiction and interest.
3. NCTCOG will increase efforts to share relevant safety information and data with its member organizations as it relates to bicycle and pedestrian safety.