

Bundle 1 – Roadway Systems

Policies and Actions with Detailed Information

The Plano Tomorrow Policies and Actions were developed through meetings with the Planning & Zoning Commission, City Council, and extensive public outreach. Information on this process can be found here:

- [Public Outreach Process](#)
 - [Advisory Committee Workshops](#)
 - [Adoption Process](#)
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The Built Environment - Roadway System

POLICY - Plano will develop an integrated, multimodal transportation system, through the utilization of technology and innovative concepts that improves the safety and efficiency of the roadway system for all users.

RS1) Develop a transportation plan for Plano that addresses all modes of travel.

Status:

- Pending
- This is a priority project for the Planning Department and will move forward once funding is approved.

Background:

Plano traditionally has maintained a Thoroughfare Plan to address roadway capacity and connectivity, and a separate Bicycle Transportation Map to guide connectivity decisions related to trails, shared-use paths, and on-street bike routes. However, the City has never had a transportation plan that integrates all modes and prioritizes solutions that addresses the City's various transportation needs. A multimodal transportation plan would address and serve the diverse demands on the City's transportation network, including automobiles, transit, bicycles, pedestrians, and freight. When modes are planned as [interconnected layers](#), consideration can be given to how modes connect and how effectively different land uses are able to access these modes.

RS2) Create an Intelligent Transportation System for Plano’s roadway network.

Status:

- In Progress
- The Transportation Engineering Division has made significant progress toward advancing the transportation technology that benefits the efficiency and safety of Plano’s roadway network. Completed improvements include installation of:
 - Upgraded Emergency Vehicle Preemption System
 - Upgraded School Zone Flasher System
 - WAZE integration software
 - 13 adaptive signalized intersections (currently being evaluated)
- Additional near-term projects include:
 - Replacing traffic signal wireless communications with fiber optic communications
 - Expanding signalized intersection CCTV camera coverage
 - Upgraded Transportation Management Center (TMC)
 - Evaluation of autonomous and connected vehicle technology solutions

Background:

Intelligent Transportation Systems (ITS) is considered a best practice to address safety, mobility, and environmental challenges through advanced technology improvements. ITS encompasses a broad range of wireless and traditional communications-based information and electronic technologies, such as those listed above. More information can be found on the US Department of Transportation [Benefits of Intelligent Transportation Systems](#) fact sheet.

RS3) Improve intersections of all bicycle trails, pedestrian pathways, and streets for increased visibility, safety, and comfort.

Status:

- Recurring and on track
- The Transportation Engineering Division, in coordination with Parks and Recreation, is developing updated trail crossing best practices.

Background:

Studies have shown that intersections are the place where the most vehicle-bicycle conflicts occur, and intersection design best practices have continued to advance in order to reduce vehicle-bicycle and vehicle-pedestrian conflicts. The National Association of City Transportation Officials (NACTO) has produced both the [Urban Bikeway Design Guide](#) and [Don’t Give Up at the Intersection: Designing All Ages and Abilities Bicycle Crossings](#) to provide detailed guidance on how cities can improve intersection safety. The Transportation Research Board (TRB) is also currently developing updated research regarding [Guidance to Improve Pedestrian and Bicycle Safety at Intersections](#). The City of Plano continues to evaluate how safety can be improved where local trails and pedestrian pathways interconnect with area roadways.

RS4) Review and update roadway standards to accommodate all modes of transportation.

Status:

- In Progress
- Engineering and Planning staff are evaluating qualifications with firms to update the Thoroughfare Standards.

Background:

[National](#) and [state](#) guidance on roadway design standards are continually evaluated for best practices, and therefore local roadway standards should be updated accordingly. Plano's [Thoroughfare Standards Rules & Regulations](#) were last adopted by ordinance in 1997, with a small addition in 2009. The document is based on traditional roadways standards consisting of major thoroughfares spaced on a one mile grid distributing vehicular traffic into residential neighborhoods and commercial centers utilizing collector and local streets.

RS5) Develop criteria to assess the effectiveness of pilot projects.

Status:

- Complete
- The current analysis process follows best management practices established by Texas Manual on Uniform Traffic Control Devices (TMUTCD) and American Association of State Highway Transportation Officials (AASHTO) guidelines.

Background:

On occasion, Plano undertakes pilot projects as a way to implement and test new transportation concepts. These projects allow for the public to test and provide feedback on potential transportation improvements. Developing metrics in advance of improvements are strongly encouraged to measure the effectiveness of a pilot project. Additionally, adequate time should be provided to record the metrics under all traffic conditions and seasons.

Examples of previous pilot projects with varying results include:

- The installation of the “Michigan Left Turn” lanes at the intersection of Legacy Drive and Preston Road in the early 2010s.
- The installation of the first Single Point Urban Interchange (SPUI) in Texas on Parker Road at U.S. Highway 75.

RS6) Identify and improve locations within the City’s transportation infrastructure to meet Americans with Disability Act (ADA) standards.

Status:

- Recurring and on track
- The Engineering Department completed the [ADA Self-Evaluation and Transition Plan](#). Implementation and barrier removal efforts are on-going.
- Parks and Recreation address improvements as funding become available through the Community Investment Program.
- The Public Works Department completes sidewalk and Barrier Free Ramp (BFR) replacements throughout the city. As of April 15, 2020, there are 314 open service request, with 199 of them assigned to current projects.

Fiscal Year	Miles of Sidewalk	Barrier Free Ramps	Cost
FY16-17	26.4	723	\$4,918,956
FY17-18	29.4	785	\$5,441,457
FY18-19	36.6	905	\$6,687,905
FY19-20 (estimate)	38.0	1,492	\$7,655,074

Background:

The City of Plano is required by the Americans with Disabilities Act to conduct an ADA Self-Evaluation and Transition Plan. The Plan, in simple terms, is an assessment of the level of ADA compliance and an action plan for improving accessibility. The process included field data collection to determine ADA compliance and identification of the City’s intended steps to improve accessibility. Additional information can be found [here](#).

RS7) Coordinate with neighboring communities to explore regional transportation approaches that improve traffic flow within and between jurisdictions.

Status:

- Recurring and on track
- Staff communicates and coordinates traffic signal timing coordination needs across jurisdictional boundaries. Efforts include:
 - Working with the City of Frisco along SH 121 on several projects including: the sharing of CCTV camera feeds for better identification of signal timing and accident incident management needs; development of Legacy Drive/SRT interchange capacity improvements alternatives; and reconfiguration of Custer Road/SRT interchange lane assignments.
 - Working with NTTA and TxDOT on freeway corridor improvements.

Background:

Many of the City's transportation issues are regional issues as so many of Plano's residents and employees travel between other cities within the region. City staff routinely coordinates with neighboring jurisdictions on projects that impact both communities. Additionally, the North Central Texas Council of Governments (NCTCOG) plans and prioritizes regionally-significant transportation improvements with coordination from each city in the 12-county region. One of the major regional transportation planning efforts is the NCTCOG Metropolitan Transportation Plan, [Mobility 2045](#), which guides the expenditure of federal and state transportation funds to improve mobility and quality of life for all residents in the region.

RS8) Review and update the Traffic Impact Assessment (TIA) threshold for new and redevelopment projects.

Status:

- Pending
- Updating the Traffic Impact Assessment (TIA) threshold is expected to be addressed as part of the Thoroughfare Standards update (see RS4).

Background:

Plano has used [Traffic Impact Analysis](#) (TIA) studies for many years to determine the impact of new development on the local roadway system. TIA studies should identify any potential traffic operational problems or concerns and recommend appropriate actions to address such problems or concerns. TIAs are generally required whenever the additional site-generated Average Daily Traffic (ADT) is more than or equal to a specific number of trips.

The TIA ordinance was developed in the late 1980s when Plano's street system was still being constructed and many options for mitigation of traffic impacts were still available. In 2010, [the TIA ordinance was updated](#) because the street system was then almost complete, meaning mitigation options were more limited. In addition, state laws governing the vesting of development projects were found to limit the City's ability to decrease the size and intensity of a proposed development as mitigation to roadway impacts. At this time the requirement for a TIA was changed to raise the ADT threshold from 5,000 to 8,000 trips and to only require TIAs at the time of site planning. Additionally, the [2011 update to the Transportation Element of the previous Comprehensive Plan](#) included a recommendation to abandon TIAs in favor of a circulation path for large development projects.
