



CITY OF FRISCO

GEORGE A. PUREFOY MUNICIPAL CENT
6101 FRISCO SQUARE BLVD · 3RD FLOOR
FRISCO, TEXAS 75034
TEL 972.292.5400 · FAX 972.292.5016
WWW.FRISCOTEXAS.GOV

MEMORANDUM

TO: Mayor and City Council

CC: George Purefoy, City Manager
Henry Hill, Deputy City Manager

FROM: Paul Knippel, Director of Public Works and Engineering Services

DATE: July 21, 2017

SUBJECT: Public Works and Engineering Monthly Report for August 1, 2017

On July 10 staff attended a **Public Transportation Update** for Collin County presented by North Central Texas Council of Governments (NCTCOG). The meeting was held in the City Council chambers at the City of Allen. The COG staff outlined the major transit related initiatives impacting Collin County including development of long range plans (Mobility 2045), corridor studies including the **Frisco rail corridor** and mover studies, near term plans (Access North Texas), formation of a Transportation Management Association (TMA) in the Legacy West area, and the efforts of DART and DCTA. The **Frisco Rail Corridor Study** will be coordinated with cities, counties, transit agencies, freight railroads, and other stakeholders in the corridor. The study will focus on moving from conceptual analysis to detailing action items. The study is projected to be developed and carried out through 2018.

Opening remarks by the Chairman of the Regional Transportation Council (RTC) during the RTC's July 13 meeting in Arlington included recognition of the City of Frisco and its efforts to "create additional greenspace among the concrete" within commercial and mixed use developments (referring to **City Council action on July 6 to amend the nonresidential open space requirements** in the zoning ordinance). The RTC Director indicated that the staff of the RTC will be introducing the concept of "blue-green-grey" as a tool to seek and identify innovative ways to integrate transportation into other forms of infrastructure. The proposal will include **RTC providing seed money** to fund teams that will evaluate projects with the hope of leveraging money for those projects. This subject will be further discussed at the Irving Transportation Investment Summit on August 15 and 16, 2017 and at subsequent RTC meetings.

Street resurfacing will be underway in August in the **downtown area** on Oak Street, Walnut Street, 7th Street, Crestview Drive, and Camellia Lane. This is scheduled work and is part of the city's annual asphalt maintenance plan.

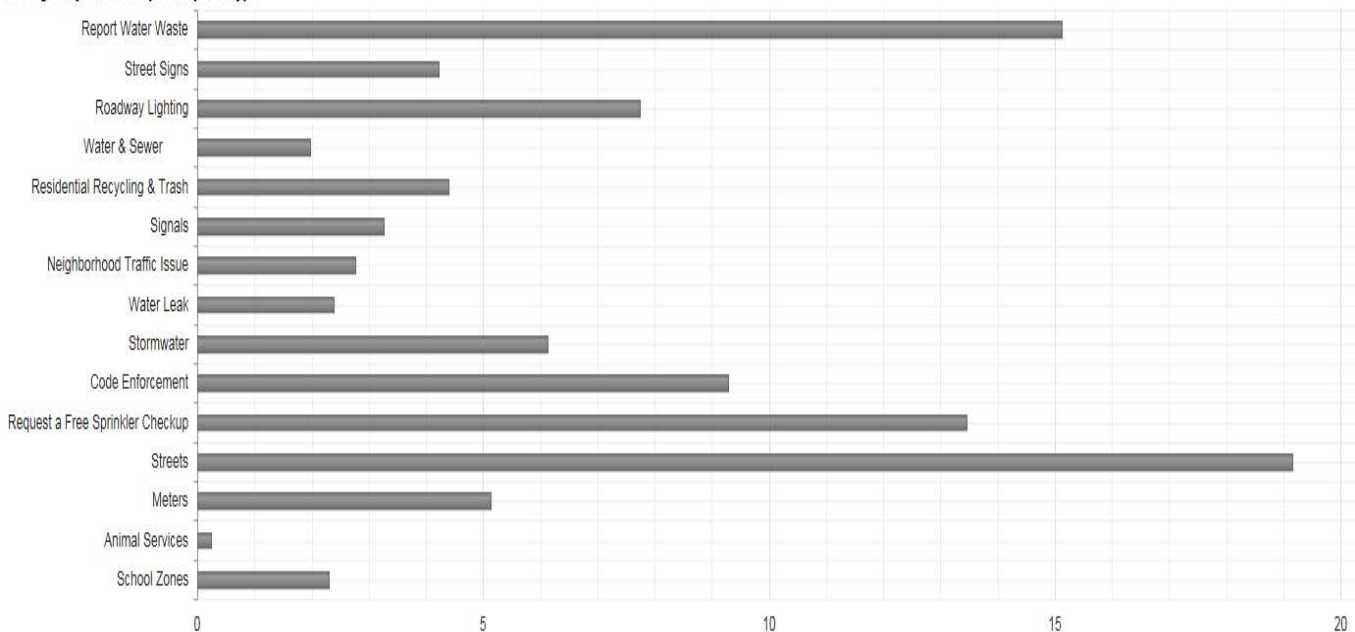
The **myFRISCO citizen engagement phone application** was presented at the May 16, 2017 Frisco City Council meeting. Since then, myFRISCO has been downloaded 1700 times for an average of 27 downloads per day. During the **past two months, 270 service requests** were submitted with an average time to close of 7.9 days. myFRISCO has been marketed through media outlets such as the Frisco Enterprise, Frisco Focal Point, social media, and the WaterWise newsletter. Mayor Cheney's 100 Days of Videos campaign included myFRISCO on day three of one hundred.

myFRISCO requests by type...

- 23.7% Streets
- 15.6% Code Enforcement
- 8.9% Street Signs
- 8.9% Request for a Free Sprinkler Checkup
- 7.0% Traffic Signals
- 6.3% Residential Recycling and Trash
- 6.3% Roadway Lighting
- 5.9% Neighborhood Traffic Issue
- 5.9% Report Water Waste
- 3.0% Water and Sewer
- 2.6% Water Leak
- 2.2% Animal Services
- 1.5% Stormwater
- 1.1% Meters
- 1.1% School Zones

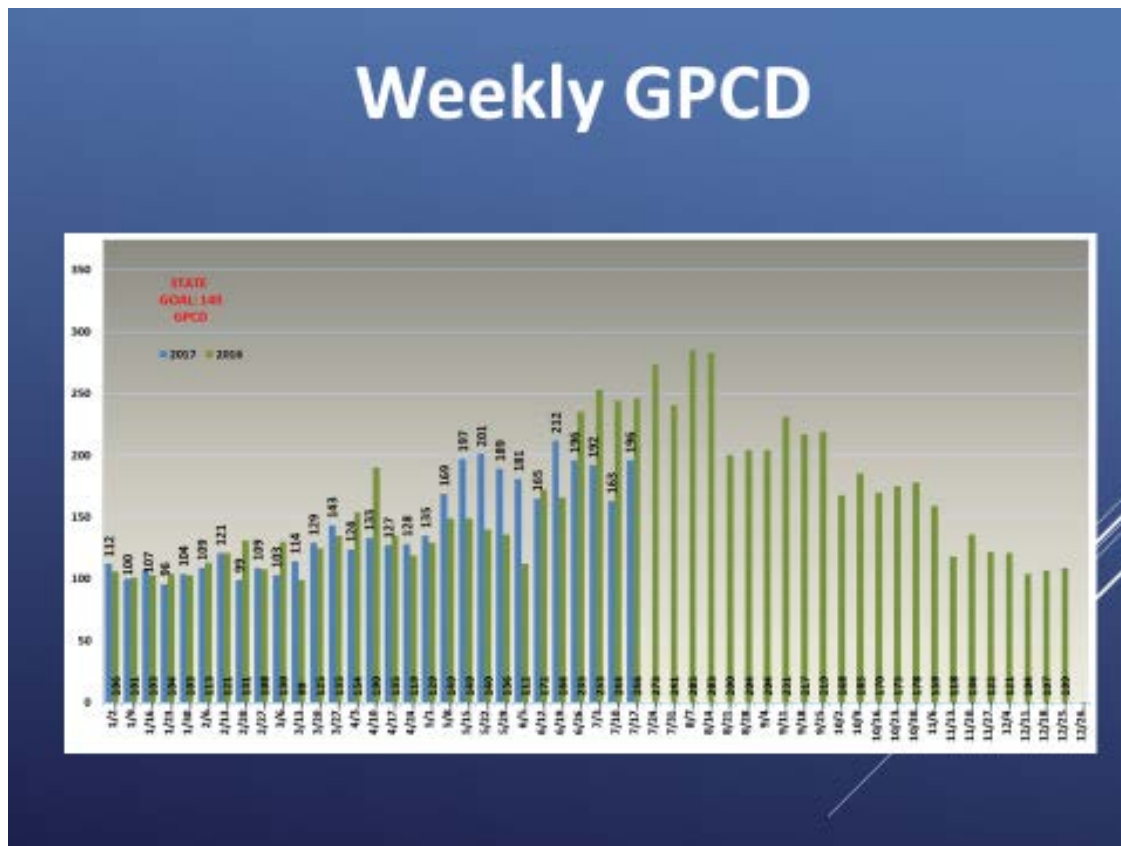
myFRISCO average number of days to close a request...

Average Days to Close per Request Type



On Monday, July 10, staff attended an update from U.S. Representative Sam Johnson and the North Texas Municipal Water District (NTMWD) on the status of permitting for the **Lower Bois D' Arc Creek Reservoir** in Fannin County, Texas. The permit is expected to be released by the US Army Corps of Engineers this calendar year, with construction beginning in 2018. Construction will take two years, and it is anticipated that another two years will be required to fill the reservoir and become fully operational. This will be the first new reservoir constructed in Texas in 30 years. Estimated cost is \$1.2 billion.

The following chart tracks **water consumption** through average weekly gallons per capita per day (GPCD), and compares 2016 with 2017. The rise in per capita consumption during the warmer months is due to residential outdoor irrigation. Variations from one year to the next are due to rainfall and temperature.



2017 Water Data

Month	Rainfall (inches)	Purchased Water (mg)		Daily GPCD		
		2017	2016	MIN	AVG	MAX
JAN	2.8	514.1	485.0	69	102	136
FEB	2.9	491.1	530.0	78	108	141
MAR	1.3	630.9	598.1	71	125	179
APR	3.9	643.0	675.4	95	130	170
MAY	0.7	980.3	675.0	140	190	259
JUN	6.6	958.9	873.7	123	191	269
JUL	3.1	505.0*	647.9	125	177	233
AUG						
SEPT						
OCT						
NOV						
DEC						
TOTAL	21.3	4723.3	4485.1	100	146	198

State Goal: 140 gpcd

2012: 217 gpcd

2013: 180 gpcd

2014: 148 gpcd

2015: 169 gpcd

2016: 162 gpcd

2019 Projected
Goal: 204 gpcd

gpcd – Gallons per Person per Day
*July based on 17 days

Residents are encouraged to turn their automatic sprinkler systems to off, sign up for the weekly **WaterWise Newsletter** for watering recommendations based on Frisco's weather station data, schedule a free sprinkler system checkup at www.friscotexas.gov/water, and report incidents of water waste using the **myFRISCO** app or call Public Works at 972-292-5800.

Overview of Traffic and Transportation Efforts by the City of Frisco

July 18, 2017

The objective of the Traffic and Transportation Division is safe and efficient movement of people and goods. Effort toward this objective is multifaceted and can be categorized as construction, operations, or planning, for the sake of discussion. Construction generally refers to additional capacity in the form new roads or additional lanes. Operations means the maintenance and optimization of existing facilities and systems. Planning involves the review of new development, thoroughfare planning, right-of-way acquisition, implementation of multimodal systems, seeking outside funding opportunities, and collaboration with other agencies.

I. Construction

- A. Roads – new roads, widening of existing roads
- B. Intersections - new left and right turn lanes at existing intersections, roundabouts, and traffic signals.
- C. Roundabouts
- D. Annual sidewalk infill program

II. Operations

- A. Signal operations and timing
- B. Signal Maintenance
- C. Roadway Lighting
- D. Traffic signs
- E. Pavement markings
- F. Safety
- G. Traffic control during construction
- H. Special events
- I. School zones
- J. Neighborhoods
- K. Signal system monitoring
- L. Signal operations performance indicators

III. Planning

- A. Development review
- B. Traffic Impact Studies
- C. Thoroughfare planning
- D. Right of way acquisition
- E. School site planning with FISD
- F. Hike and bike master plan
- G. Intelligent Traffic Systems (ITS)
- H. Public Mobility
- I. Collin County
- J. Denton County
- K. NTTA
- L. TxDOT
- M. North Central Texas Council of Governments (NCTCOG) – Regional Transportation Council (RTC)
- N. Personnel and staff training

I. Construction

A. Roads

The City's Thoroughfare Plan shows a planned network of six-lane arterial roadways intended to provide mobility from one end of the City to the other, with other smaller arterial roadways providing more localized mobility. Most arterial roadways are initially built as four-lane divided roadways with wide medians and then are widened to six lanes in the future when traffic volumes rise to certain levels. The Engineering Department plans and oversees the construction of new sections of the arterial network and the widening of existing arterial roadways. The City has approximately \$121 million of roadways currently under design or construction within Frisco, and approximately \$30 million programmed to begin either design or construction over the next eighteen months. While the Capital Projects Division is responsible for the most of the project delivery process, the Transportation Division provides design review of work zone traffic control, traffic signals, signs and pavement markings, roadway lighting, and operational analysis. (The use of six-lane arterial roadways is a compromise between the traffic capacity provided by six lanes and the space they take up in the urban environment. Therefore, as occurs in every large city, it is understood that six-lane roadways will not provide enough capacity in the future to ensure motorists experience congestion-free driving as the City continues to grow.)

B. Intersections

Roadway capacity is often limited by the functionality of intersections. The function of an intersection can be improved through the addition of turn or through lanes, the addition or modification of traffic signals, or the implementation of a roundabout. Examples of active projects where new turn lanes are being added to improve capacity are the Preston Road intersection improvement project and the addition of a westbound left-turn lane at Warren and Legacy. The Preston Road Intersection Improvement project will add turn lanes and modify the traffic signals at five major intersections along Preston between Warren and Main. Additional capacity is being added in the form of new lanes on Warren Parkway and on Lebanon Road with the Dallas Parkway Improvement Project. Traffic signals are under design for intersections of Gaylord at Avenue of The Stars, Lebanon at Deerwood, Warren at Fire Station #3, Legacy and Veneto, Stonebrook at 4th Army Drive, Eldorado at Grayhawk, and Stonebrook at Fighting Eagles.

C. Roundabouts

Roundabouts are the safest type of intersection, are more efficient for motorists on small to mid-sized roadways, and cost less to operate and maintain than traffic signals. The City currently has 32 single-lane roundabouts in operation (mostly within residential neighborhoods) with several more under construction. The City also has three multi-lane roundabouts in operation along arterial roadways. The first two multi-lane roundabouts opened to traffic in late July 2016 after months of public education and public outreach activities conducted by staff; and the third opened a year later. These multi-lane roundabouts, located at the intersections of Gaylord Parkway and John Hickman Parkway, Rockhill Parkway and Teel Parkway; and John Hickman Parkway and Cowboys Way, were greenfield installations (meaning no intersection existed at these locations before the roundabout was built). Other greenfield multilane roundabouts will be considered where traffic volumes and conditions favor their success, and will likely only be placed at intersections of roadways with a maximum of four lanes. The conversion of an existing non-signalized intersection to a roundabout is considered to be a retrofit. The retrofit may involve the removal of existing pavement, construction of new pavement, and the acquisition of additional right-of-way in some cases. The intersection of Warren Parkway and Ohio Drive will be a retrofit intersection and is being funded with a federal grant and is expected to go to construction in 2017. Other existing

intersections being evaluated for conversion to a roundabout include Frisco Street and Technology, Frisco Street and All Stars, and Ohio Drive and Gaylord. Whether or not traffic control is accomplished at these intersections through traffic signalization or a roundabout will depend on a variety of factors and will require approval of the City Council. For more information, visit the following page on the City of Frisco website: <http://www.friscotexas.gov/Roundabouts>

D. Annual Sidewalk Infill Program

Sidewalks and hike and bike trails are required to be constructed by the developer when property adjacent to a roadway is developed. This leaves several gaps in the sidewalk network when there are several undeveloped properties along a roadway. Therefore, it is often necessary for the City to fill in the gaps along school routes (with cost participation by the FISSD) and other areas of heavy pedestrian activity. The City also uses this program to construct or reconstruct sidewalk ramps at intersections where they are needed to meet ADA standards. The City constructs approximately \$500,000 of infill sidewalks on an annual basis. Development that occurs after a sidewalk or hike and bike trail has been built by the City is required to pay a fee to reimburse the City for the sidewalk.

II. Operations

A. Signal Operations and Timing

- Traffic Signal Timing – On an ongoing basis, staff monitors and changes the operation of various traffic signals as needed. Staff typically receives 20 to 30 service requests regarding signal timing each month. Often the requests are due to malfunctioning equipment or changed traffic patterns.
- Rectangular Rapid Flashing Beacons –The Rectangular Rapid Flashing Beacon (RRFB) uses a pedestrian push button to activate a set of flashing yellow lights installed on warning signs. The flashing lights alert drivers to the presence of pedestrians and is intended to cause an increase in yield response by the drivers. Two of these systems are in operation presently. One is near Roach Middle School on Independence and the second is at West Stonebrook Parkway east of Anthem Drive. A third is under construction at Teel Parkway and High Shoals Drive. Staff is considering the installation of RRFBs at other mid-block locations in accordance with a prioritization process based on pedestrian and vehicle volumes. Staff is in the process of working out a cost sharing agreement with FISSD to install some RRFBs at some middle school campuses which face a major thoroughfare.

B. Signal Maintenance

- By the Numbers - The City of Frisco currently operates and maintains 114 traffic signals within the City of Frisco and 11 traffic signals in the Town of Little Elm on behalf of TxDOT and Little Elm. TxDOT reimburses Frisco for the cost to operate these 11 signals. All but two of the signals have automatic battery backup power systems. City crews provide 24/7/365 maintenance for the signals with a maximum 45-minute response time for after-hours call outs.
- Preventative Maintenance - Crews use a preventative maintenance program to test and check all equipment at each intersection at least once per year. This includes review of wiring, lighting, signage, emergency preemption, detection systems, and other systems for each location. The preventative maintenance program at each intersection requires about two full workdays, but is effective in its purpose.
- Inspection - Signal crews perform construction inspections and help with construction management of new traffic signals and roadway lighting installations. Most recently, crews have been heavily involved in work along FM 423, US 380, and Dallas Parkway.

- Line Locates - Signal crews identify the location of buried traffic signal electrical and communication lines as requested by other parties before excavation by those parties is performed. As a measure of activity, there have been more line locate requests in the first half of FY 16 than there were in all of FY 15. Line locates are necessary to help protect the City's capital investment as contractors are installing equipment within the public right of way.
- Flashers and Beacons - City crews currently operate and maintain 179 school zone flashers, two pedestrian crossing flashers, six warning sign flashers, and two sets of pedestrian-activated RRFBs. City crews have completed this year's process of upgrading 57 of the school zone flashers to have new cellular modems for remote communication, which replaces a pager technology that is being discontinued.
- Changeable Message Signs – City crews program, transport and setup our changeable message signs to various locations across the city for special events, road closures, and public service announcements.

C. Roadway Lighting

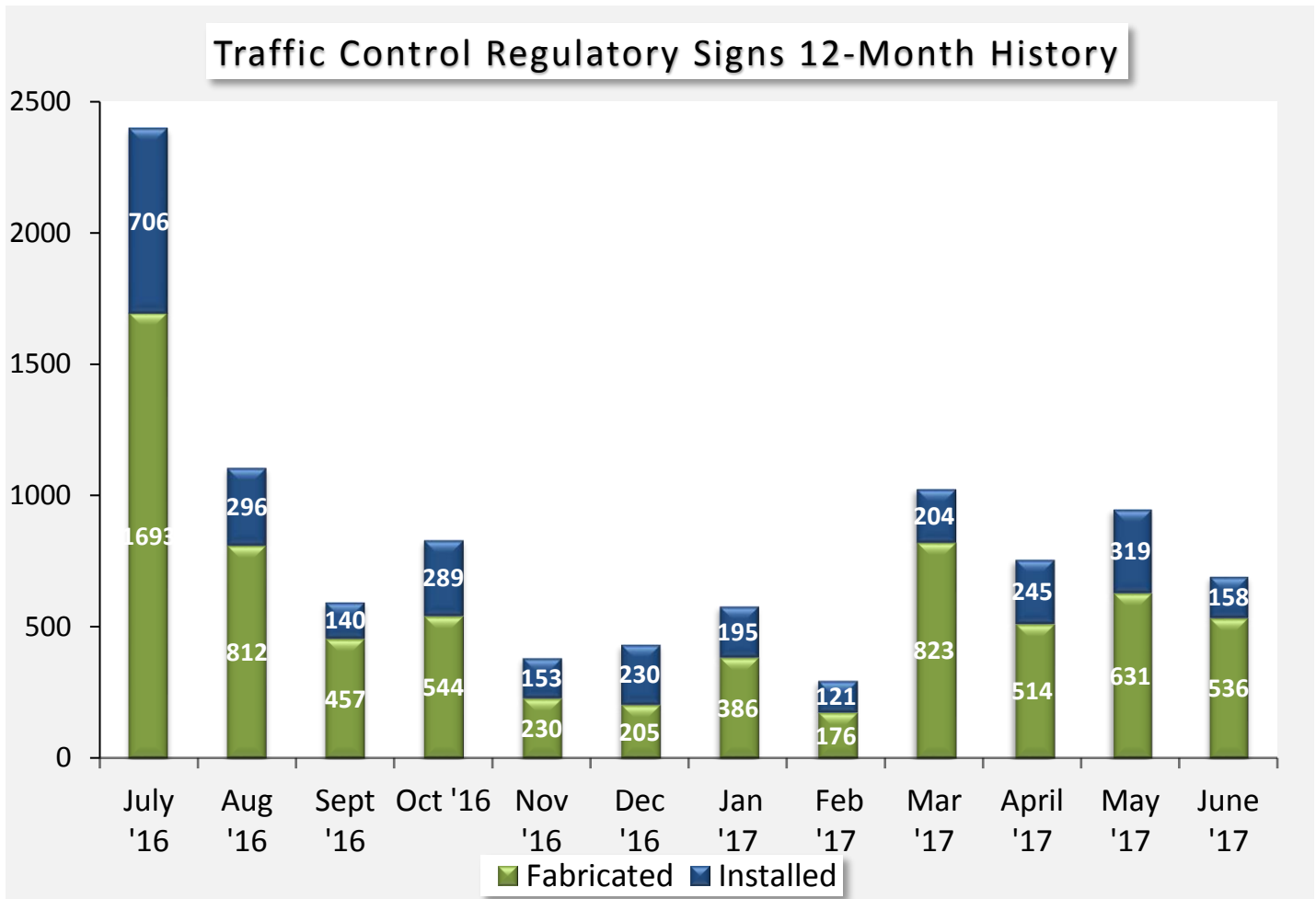
- Scope - City crews operate and maintain roadway lighting along major thoroughfares while the power companies operate and maintain the street lights within neighborhoods. Maintenance of roadway lighting fixtures includes replacing bulbs and replacing poles knocked down in vehicle crashes.
- LED Fixture Conversion - All existing Metal Halide fixtures are being converted to more energy efficient LED fixtures. These fixtures not only reduce energy consumption, but they also reduce maintenance. Both outcomes help reduce the cost to operate the lighting the system. The conversion process started in November 2015 with a goal of changing out at 150 to 200 fixtures per month. The Division has not been able to reach its monthly goal due to staffing issues. Alternatives are being evaluated to improve the rate of conversion and achieve the goals established internally. All new arterial street lighting is now installed with LED fixtures.
- By the Numbers - The status of the existing system and the conversion process are shown the table below.

Monthly Lighting Performance Status		LED Conversion Status	
Total Fixtures	6,421	Total LED Fixtures	2,434
Fixtures burned out	161	Total LED Conversions	1,269
Fixtures out due to construction	115	Total LEDs installed as new construction	1,165
Percent Operational	96.5%	Fixtures remaining to convert	3,934
		Percent of Conversion Complete	24%
		Percent of system LED	38%

D. Traffic Signs

- General - City crews fabricate, install, and maintain traffic control signs on the public streets. This division tracks all signs in the public right-of-way that have been installed by developers and City crews and has an annual program to check the status of existing signs. Crews have completed the annual night drive inspections of traffic control signs along all major arterial roadways in Frisco and are now performing the annual night drive inspections for all traffic control signs in residential areas. Crews are currently working on the blanket replacement of signs on the major and minor arterials that are nearing their end of life based on the night time drive inspections. Improvements continue with the work order system used to track all installation and maintenance work.

- By the Numbers – The chart below shows the number of signs fabricated and installed during the last 12 months.



E. Pavement markings

- General - City crews install and maintain pavement markings on the public streets and have an annual program to check the status of existing pavement markings. Inspections of all pavement markings within school zones were completed in June. Those results determined which locations needed to be restriped this summer prior to the start of the 2017-2018 school year. City crews continue restriping existing school zone markings as part of the maintenance program.

F. Safety

- Annual Crash Report - Our second annual crash report (for 2014) has been completed. We will work to present the results at an upcoming Council meeting. This document is a comprehensive review and analysis of all crashes involving vehicles, bicycles, and pedestrians throughout Frisco. It is compiled by and used cooperatively by city traffic engineers and the police department. Plans are underway to begin preparation of the 2015 crash report.
- Highway Safety Improvement Program (HSIP) – Frisco was selected to receive a \$1.6 million TxDOT HSIP grant for equipment upgrades at signalized intersection along FM 423, FM 2934 (Eldorado), SH 289 (Preston Road), and Legacy. The project is expected to begin construction in fall 2017.
- TxDOT Highway Safety Plan – Brian Moen and David Shilson from the police department are participating with transportation safety stakeholders from across the state to help develop the

next Texas Highway Safety Plan. Brian Moen is a team lead for the Intersection Safety Emphasis area. Fatalities and serious injuries are on the rise across the state and plans are needed to reverse this trend. For information on the project visit : <https://www.texasshsp.com/emphasis-areas/intersection-safety/>

G. *Traffic Control During Construction*

- Staff reviews the traffic control plans for new and ongoing construction zones and sends announcements to all City services regarding road closures and traffic switches. This month, staff reviewed 32 traffic control plans. Staff is currently coordinating with TxDOT regarding closures, detours and traffic switches along FM 423 and US 380 during their widening projects. Staff is also coordinating with contractors regarding road closures related to the City's widening of the Dallas Parkway frontage roads and the expansion of roadways and utilities by developers within the \$5 Billion Mile.

H. *Special Events*

- General - As part of the City's Special Events Review Committee, staff reviews all pending special event applications for any traffic control needs. Staff continually coordinates with the Police, Fire, Communications, and Public Works Departments regarding any special events that affect traffic flow or parking in the City. Staff also coordinates with Toyota Stadium, Dr. Pepper Arena, and Ford Center staff regarding large events at those venues, which sometimes requires coordination with NTTA. Over time, staff has developed standardized traffic control plans for each venue and for various sizes of events which are designed to minimize how long it takes for traffic to leave the parking areas. These plans include specialized traffic signal timing programs and partial road closures that create various exit routes that do not cross each other. During large events, some staff are in the traffic management center and some staff are in the field implementing the partial road closures.
- Recent Events – This month, staff provided traffic management support for Freedom Fest (both internal festival traffic control and external soccer and fireworks traffic control), the Hotter'n Firecrackers 5K, Parkapalooza, and two FC Dallas soccer games.
- Upcoming Events – Preparations are underway for upcoming concerts at Toyota Stadium and the Ford Center.

I. *School Zones*

- General - Staff meets monthly with Fisd transportation and administration officials and the Police Department to discuss any school safety concerns and to coordinate school zone, crossing guard, and sidewalk issues.
- Recent Activity – Staff is in the process of overseeing the removal of one school zone and the installation of three new school zones needed due to the construction of new neighborhoods and changes in the school attendance boundaries. Staff is also overseeing the modification of a school zone due to the expansion of Leadership Prep Charter School and changes in its traffic circulation pattern. Staff is also working to install a temporary RRFB crossing at Teel & High Shoals since the location no longer qualifies for a crossing guard. Staff is considering installing additional RRFB crossings at schools with cost participation by the Fisd (see Section II-A).

J. *Neighborhoods*

- Resident Concerns - Staff receives five to ten complaints and requests for action each month regarding speeding or parking issues on neighborhood streets. Staff also reviews requests for additional stop signs in neighborhoods. Staff observes each area and conducts traffic studies to see if any targeted police enforcement or changes in traffic control are warranted.

- **HOA Coordination** – Staff attends HOA meetings upon request to discuss traffic issues facing specific neighborhood. In addition, staff attends the City-sponsored HOA Roundtable meetings to listen to the concerns of HOA presidents, answer questions, and give advice to the group. Staff is currently coordinating with the Stonebriar-Legacy Association of Neighborhoods (SLAN) as we consider and analyze different options for widening/improving Legacy Drive from SH 121 to Warren Parkway.
- At the request of City Council, staff is working with the Development Services Department to create a new Neighborhood Design Strategy (see Section III-C).

K. *Signal System Monitoring*

- **Traffic Management Center** – The City’s Emergency Operations Center (EOC) contains the Traffic Management Center (TMC). The TMC is staffed every weekday from 6:00am to 6:30pm by Traffic personnel who monitor traffic conditions throughout the City using our network of traffic cameras (described below) and who can remotely modify the operations of the traffic signals or dispatch repair crews and/or coordinate with Fire and Police personnel. Traffic personnel are also in the Center during large special events and during emergency situations and bad weather events. Staff can also man the small, satellite operations center located inside the Ford Center at the Star which can be integrated with our primary TMC. Staff manned the EOC during Freedom Fest (our largest traffic generating event) and managed traffic after the event. In conjunction with staff working in the field, traffic was cleared from the Frisco Square area in 73 minutes, which marks our third year in a row exceeding our goal of 75 minutes.
- **Traffic Signal System Communications** – The system provides communications to all of the traffic signals in the City, allowing staff to monitor and control their operation remotely from our Traffic Management Center or from any City computer. Wireless communication relays are installed on four water towers and two communication towers, all of which have battery backup units. Staff can also view the traffic detection cameras at most of the traffic signals, as well as the 107 remotely controlled pan-tilt-zoom (PTZ) traffic cameras installed on most traffic signals.

L. *Signal Operation Performance Indicators*

- Staff is working to develop performance measure indicators that can tell how well the traffic signal system is functioning. Our newest version of traffic signal system software has the ability to automatically measure the performance of each traffic signal provided there is sufficient vehicle detection in place. Automated travel time measurement is another important aspect of measuring signal performance. Technology such as Bluetooth readers and software such as Inrix are being tested by staff to see what is most appropriate for our needs. Traditionally, travel time measurements are only taken one day a year which is not sufficient for a system that has a large amount of variability on a day to day basis. More detailed daily travel time measurement can allow staff to measure the reliability of the system and detect changes in the travel time due to growth or other changes.

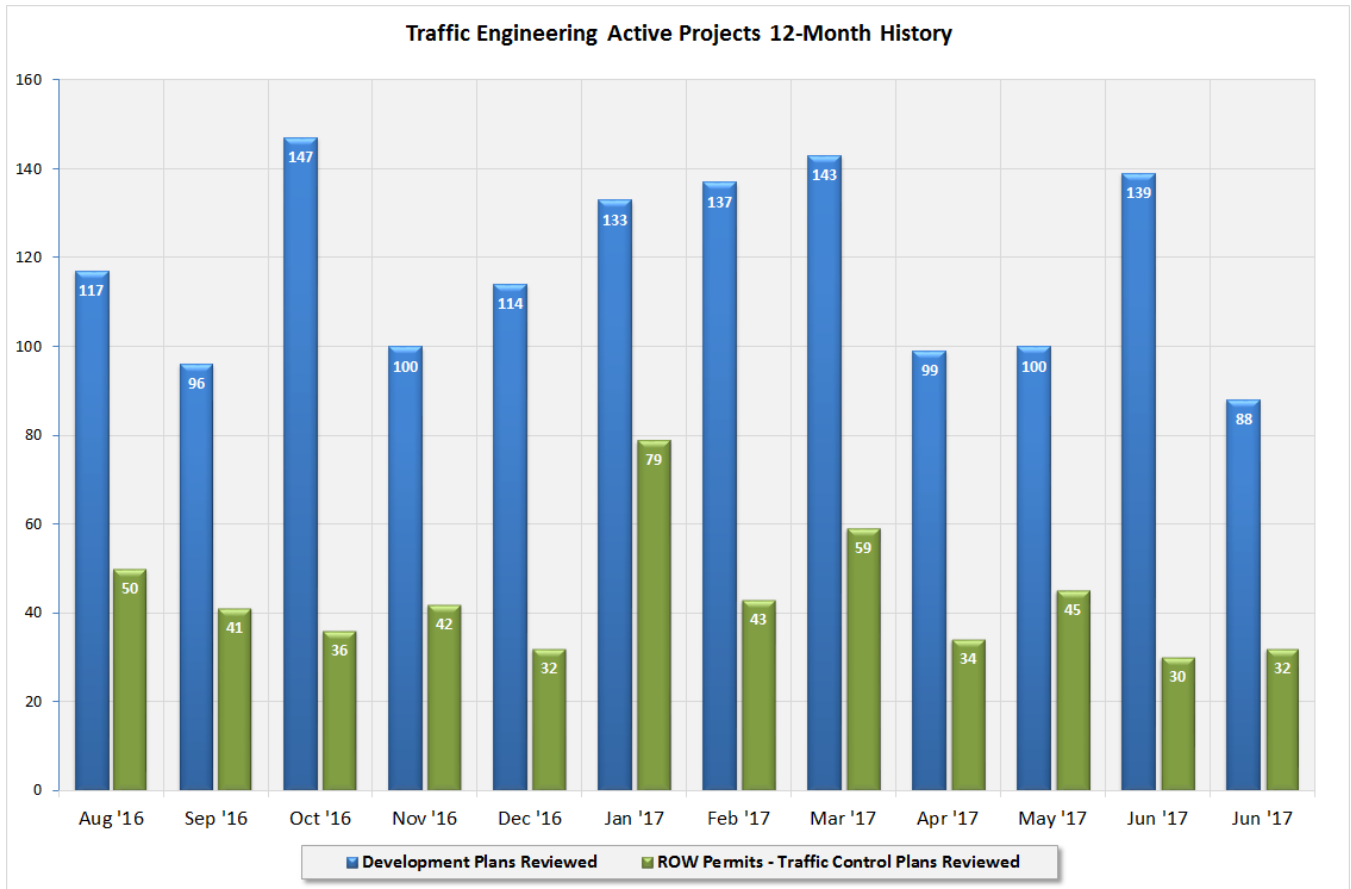
III. **Planning**

A. *Development Review*

- **General** – Traffic engineering staff review all site plans, plats, and construction sets to ensure that all new development is constructed according to City standards regarding driveway size and placement, deceleration lanes, parking lot layout, ADA sidewalk connections, new neighborhood street layouts, and intersection configurations. Staff coordinates with other departments during the review process to reconcile each department’s requirements into one set of unified requirements

that are presented to the developer. Staff also requires and reviews traffic studies submitted by developers to determine the type of improvements that they must make to the transportation system or how their traffic circulation will have to operate. Staff also determines which roads need to be built, when they need to be built, and by whom. However, multiple considerations related to the overall multimodal transportation system are under continual evaluation. These considerations include impacts to, and the effects of long range plans such as the Thoroughfare Plan, the Hike and Bike Plan, and the Comprehensive Plan, and long range opportunities for private or public transit systems.

- **By The Numbers** – This month, staff reviewed 88 sets of development plans, processed seven TxDOT driveway permits, and reviewed two traffic impact analyses.



B. Traffic Studies

- **General** – Staff reviews Traffic Impact Analyses (TIA) as needed for new developments with the potential for high levels of traffic generation. Other studies that are ongoing or required for certain circumstances include the crash database which is coordinated with the Police Department, neighborhood traffic studies based on resident complaints and requests, and studies and or monitoring of multiple intersections that are under consideration for possible installation of a traffic signal or roundabout.

C. Thoroughfare Planning

- **General** - As development occurs in the City, staff plans the alignment and size of future streets and thoroughfares and the configuration of their intersections. Staff ensures that new thoroughfares that will be part of the arterial network adhere to the approved Thoroughfare Plan and analyzes any

changes requested to that plan and makes recommendations to City Council. Staff also plans where future traffic signals will be installed based on development patterns and growth, performs studies to determine when traffic growth reaches a level that warrants a traffic signal, and then compares and ranks all locations so that funding can be allocated to the highest priority locations.

- Upcoming Thoroughfares - Staff is currently planning the future widening of the Dallas Parkway frontage roads to three lanes in each direction north of Lebanon Road and is working with developers to dedicate the right-of-way necessary to widen the frontage roads. Staff is currently working with landowners to reserve right-of-way for improvements along US 380 and is working to finalize the agreements necessary to relocate the right-of-way for future Hillcrest Road so it will align with La Cima Boulevard at US 380. Staff is also in the process of conducting a feasibility study for the potential implementation of roundabouts to improve traffic conditions at existing intersections where a traffic signal would not be warranted (or instead of a traffic signal). Staff is also working with Town of Prosper staff to develop an access management plan to coordinate future driveway and signal locations along US 380.
- Standards – Last month, staff revised our Engineering Standards to include the latest information regarding roundabout design, ADA requirements, LED street lights, and new roadway types and/or features allowed in neighborhood design. This revision is expected to be published in July. Staff is currently working with the Development Services Department to create a new Neighborhood Design Strategy for future residential development in the City. In addition to the aesthetic considerations of houses, walls and landscaping, this will also create some requirements for attractive street layouts that also meet standards of pedestrian safety, traffic calming, and emergency access. Staff worked with a consultant who helped facilitate public input and stakeholder input, review current standards and practices, and discuss the issues with the Advisory Group. The recommendations developed by staff and the Advisory Group are going to be presented to the Planning & Zoning Commission and City Council for approval. Staff is in the process of responding to comments submitted by the Dallas Builders Association and composing modifications to the Engineering Standards to implement the recommendations (such as new requirements for curvilinear street and attractive neighborhood entrances and new limits on circuitous street layouts).
- Traffic Count Map – The traffic count map is available on the City’s website at <http://maps.friscotexas.gov/>. It provides daily traffic volume counts (and the date of each count) on multiple segments of every major roadway. Staff conducts an annual traffic count program which updates the volumes collected on each major roadway segment every two or three years.

D. Right-of-Way Acquisition

- Staff reviews upcoming CIP projects and coordinates with development review staff to make sure the appropriate ROW is acquired during the development review process. This helps to speed up future projects by minimizing the time needed to acquire small ROW parcels for projects.

E. School Site Planning with FISD & PISD

- Staff meets monthly with representatives of FISD to review future school properties prior to FISD deciding to move forward with a property. This meeting also helps staff make sure the long range CIP plan addresses the thoroughfares and utilities needed to support the new school locations. Staff is beginning to have meetings with representatives of Prosper ISD as they plan to build their first schools within Frisco (with the first one opening in August 2018). The FISD has decided to delay opening the four new schools that would have opened in 2017 as a result of their tax increase being voted down. This means that all other schools currently in the planning process will also be pushed back a year.

F. Hike and Bike Master Plan

- General - An update to the Hike and Bike Master Plan is currently underway. This is a joint project between the Parks and Recreation Department and Engineering. This is one part of a multi-modal plan that is needed to maximize the transportation system in Frisco and give people another transportation option given the expected growth. Staff is currently working with a consultant to prepare a draft plan that includes an updated system of trails along roadways and through greenbelts and introduces an integrated network of bike routes through neighborhoods and bike lanes on secondary roadways (such as collector roads and minor thoroughfares) that connect to recreational destinations and concentrations of employment. Staff has worked with the consultant to create a draft plan of hike and bike trails and bicycle facilities to implement across the city and has taken public input on it as well as received input from City Council during a few work sessions.
- Bicycle-Friendly Community – There is a committee that works towards Frisco being named a bicycle-friendly community by championing and prioritizing various development, infrastructure, and outreach policies and improvements. The Transportation Division has a seat on the committee, as do other departments as well as Frisco ISD and the bicycling community. **As a result of this committee’s effort, the League of American Bicyclists recognized Frisco as a Bicycle Friendly Community with a bronze designation in 2016.** This is an upgrade from our previous honorable mention designation. A Transportation staff member also attends the quarterly meetings of the North Central Texas Council of Governments’ Bicycle and Pedestrian Advisory Committee.

G. *Intelligent Traffic Systems (ITS)*

- ITS Master Plan - Staff has completed review of the Draft ITS Master Plan. The ITS master plan will identify projects needed over the next 3 to 5 years to continue expanding and upgrading the current system. The plan will provide for effective management of all traffic operations systems. As Frisco continues to grow and the transportation system reaches and/or exceeds capacity, ITS systems will play an integral role in effectively managing the capacity of the system.
- Adaptive Signal Control – Frisco was awarded a grant to pilot an adaptive signal control system at five signalized intersections. It is expected that this system will be installed in early 2018 and will be tested for approximately 12 months. Adaptive signal control allows the signal controllers at the intersection to adjust their signal timing instantaneously, based on volume inputs at the intersection and parameters established by traffic engineering staff. The system has the capability to react immediately to traffic conditions at nearby intersections and implement signal timing changes at a larger scale to improve the overall network. Presently, staff must rely on input from motorists or views through the camera system to identify congestion and make preemptive changes to the signal timing.
- BlueTooth Travel Time Monitoring – Staff is working towards a project that can demonstrate the effectiveness of Bluetooth data collection devices to monitor travel time and collect historic travel time data.
- Video Management System – Staff has completed the installation of a new video management system. This system helps manage the impact of video streaming on the traffic signal communication network. In addition to use by traffic engineering personnel, the system is utilized by Police and Fire to help with incident response and special events. The system also allows for the addition of traffic video camera feeds to the SAFER system. Vehicle to Infrastructure (V2I) and/or Infrastructure to Vehicle (I2V) – Council approved an agreement on October 18 that allows for the sharing of traffic signal data with Traffic Technology Services. They are working with numerous auto manufacturers who are interested in the data. Audi is expected to be using Frisco data by June 2017 in some of their new 2017 models. Staff continues to attend meetings where autonomous vehicles are being discussed so we can stay abreast of how autonomous vehicles could affect Frisco and our infrastructure.
- Communication and Signal System Upgrades – Frisco received a \$1.4 million grant to upgrade the cameras, detection equipment, and signal communication system within Collin County.

H. Public Mobility

- General – The future demands of the public with respect to transportation in and around Frisco will not likely be met in a satisfactory manner solely through the expansion and optimization of the roadway system. Staff has outlined anticipated needs in terms of the following purposes: support of Frisco employers (workforce commuting in and out of Frisco), Frisco resident work commute, events, venues, safety net for transit dependent, and education. The potential solution set from which to draw includes, but is not limited to rail, fixed route bus, demand-response service, vouchers, commuter bus, site specific shuttle circulation, and partnerships with Transportation Network Companies such as Uber and Lyft. The determination of the appropriate and best match between need and solution requires active participation by city staff and leadership, and close coordination and possible partnership with adjacent municipalities, established transit authorities or providers, TxDOT and NTTA, and local business, corporations, and venues.
- Demand Response contract with DCTA - The City currently contracts with DCTA to provide curb-to-curb demand-response transit service for trips originating within Frisco to destinations located in Frisco, McKinney, Allen, and Plano. Staff has been coordinating with DCTA to develop two new options that will provide immediate Demand-Response service to Frisco’s qualifying residents without the requirement of advance scheduling or limitations of shuttle capacity. We intend to develop a partnership with Lyft to provide service at a discounted rate. We will also implement a taxi voucher program that will enable residents to purchase discounted transit specific debit cards that can be used for taxi fares. Both programs allow residents to schedule rides with little notice at much reduced cost. These programs are projected to be ready for approval in, late Summer, 2017. They are in the final stages of planning and details are being worked out. While these programs are being developed, staff has worked with DCTA to start a Taxi Partnership Program that serves to address existing capacity issues and allow for service expansion into Plano. Service to Plano commenced March 20, 2017. Feedback on the taxi program has been very positive.
- Strategic Planning efforts with DCTA staff – DCTA has participated with city staff in discussions and brainstorming with respect to an integrated approach to mobility. DCTA is in the process of implementing an integrated system within its member cities that consists of a tailored combination of services and includes a service agreement with Uber. This pilot project is expected to commence in the fall with initial results available by end of the calendar year. The City of Frisco has representation on the DCTA board of directors.
- Transportation for events and venues - Staff is engaged in identifying transportation needs as it pertains to events and venues. Meetings have taken place with staff at the Convention Visitors Bureau to determine unmet needs and explore opportunities. Staff created a survey that was distributed to Frisco Hotel management personnel to help identify ways we can assist transportation in our tourist areas. Results have been received and staff expects to analyze the responses in the next couple weeks.
- Workforce Transportation – Meetings have taken place with the Economic Development Corporation and NCTCOG to better understand the transportation needs of the workforce both in getting to/from Frisco but also within our most dense employment centers. Staff has also met with the Chamber of Commerce for their input as well. In the coming weeks staff will be evaluating the responses from the CVB, EDC, NCTCOG, and the Chamber to determine which transit options may benefit the city, its residents, and visitors.
- Transportation Network Companies – Staff has met with representatives from Uber to explore opportunities for partnership. Initial discussions identified a number of opportunities for mutual benefit and a mutual willingness and support to move forward, but the process has not yet advanced to specific deal points or proposals. Discussions are ongoing.
- City of Plano Legacy Business Area mobility study – The City of Plano hired Kimley-Horn to conduct a mobility study in the area at the southwest corner of DNT and SRT. Staff attended a

- number of meetings involving representatives from the new businesses in this area, DART, and adjacent municipalities. Staff continues to be involved in this process. The study was completed and presented to Plano City Council in November. Frisco staff were in attendance. Initial recommendations from this study include establishment of a Transit Management Association and the use of express shuttle routes that pulse between the LBA and specific park-and-ride facilities located radially some distance from the LBA. Staff is coordinating with Kimley-Horn, City of Plano to become a partner in implementing the recommendations within the report, to discuss opportunities to expand the study regionally, and identify additional solutions that benefit the entire corridor. Staff has also met with the co-chair of the TMA establishment committee to discuss how Frisco might be involved in the creation and operation of the TMA and if the boundaries might be expanded to strengthen the long term viability and regional impact.
- NCTOG – Staff has been working with representatives from NCTCOG to address transportation issues that affect the City of Frisco on a local and regional level. NCTCOG is in the process of developing a Needs Assessment Study. The intent of the report is to provide a basic needs assessment for the City of Frisco by gathering existing census and demographic data, Regional models for growth, and the City of Frisco Comprehensive Plan for city-specific future planned growth. Second, the report will present a “Tool Box” of transportation solutions. The report will help identify which pilot programs are most beneficial and feasible for further study. NCTCOG is also in the RFP process to study the feasibility of the BNSF rail project that would potentially run between Celina and South Irving. The study will look at the potential of single vs. double tracks, station locations, ridership analysis, potential funding sources and implementation schedules.

I. Collin County

- General - Collin County has historically participated with municipalities in Collin County in the funding of arterial roadways, typically 50% of the cost up to a certain dollar amount. A number of arterials in Frisco under construction and/or recently completed were built with funding participation from Collin County. Approximately \$5.7 million remains available out of the approximate \$49 million identified for arterials in Frisco out of the 2007 Collin County bond sale. Other funding has come from Collin County on a competitive basis out of discretionary funding, or savings and surplus from other 2007 bond projects.
- Staff has been attending long range planning meetings regarding US 380 across Collin County. Long range improvements to US380 such as limited access freeways, interchanges, and non-traditional intersections improvements are being discussed.

J. Denton County

- General - Denton County has worked with Frisco to provide funding for Stonebrook and a traffic signal at Del Webb and FM 423.
- US380 – Staff is attending long range planning meetings with Denton County & TxDOT for US 380 from the Denton County/Collin County line to Loop 288 in Denton.

K. NTTA

- General - Staff coordinates regularly with the North Texas Tollway Authority to plan lane closures and special events.
- Video Sharing - Staff is working with NTTA to implement a traffic video sharing system where Frisco has access to NTTA cameras along DNT and SRT. NTTA will have access to Frisco cameras along the DNT service roads.
- Long Range Planning - Coordination is ongoing with NTTA regarding the future widening of SRT and development along the DNT.

L. *TxDOT*

- General - Staff meets monthly with the TxDOT Area Offices in Collin County and Denton County to discuss ongoing projects and plan for future projects. Project coordination meetings occur regularly where staff meet with TxDOT and their contractors on road projects in the Frisco area. These include FM 423 in Frisco and The Colony as well as work along US 380 and Custer Road.
- Roundabouts - Staff has coordinated with our on-call roundabout consultant to bring roundabout design and analysis training to the engineers at the Dallas TxDOT district office. The Warren and Ohio roundabout will be the first roundabout this TxDOT office has reviewed.

M. *North Central Texas Council of Governments (NCTCOG) – Regional Transportation Council (RTC)*

- STTC - Staff attends the Surface Technical Transportation Committee (STTC) meetings each month at NCTCOG. These meetings are where technical staff from across the region review policy and funding recommendations from a technical perspective. STTC is the technical review portion of the Regional Transportation Council (RTC). Because the combined population and employment is over 200,000 in Frisco on a daily basis, a second STTC seat was awarded to Frisco in July.
- RTC - Staff attends a pre-RTC meeting with area cities in Collin County to discuss issues that arise at the full RTC meeting.
- Safety - Brian Moen participates on the Regional Safety Advisory Committee (RSAC). This committee reviews a wide range of traffic safety issues in the region. These include not only vehicle safety issues, but pedestrian and bicycle safety issues as well.
- Bike/Pedestrian - Robert Caskey represents Frisco on a regional level at the Bicycle and Pedestrian Advisory Committee (BPAC) at NCTCOG.
- Schools – In late October, Joel Fitts gave a presentation to the Regional School Coordination Task Force Meeting regarding the City of Frisco’s extensive coordination with Fisd regarding the planning of future schools and the traffic operations and pedestrian safety of existing schools, a process that NCTCOG hopes to encourage other cities to emulate.
- ITS Task Force – Brian Moen and Curtis Jarecki attend quarterly ITS Task Force meeting at NCTCOG. We are participating with other regional partners to develop ITS policies for the region and help determine funding priorities to implement these systems across the region.

N. *Personnel and Staff Training*

- Crew Training – The signal and sign maintenance crews attend monthly in-house training that covers day to day tasks and safety procedures. These crews also attend outside classes in order to obtain the certifications needed to work on the various pieces of equipment.
- Engineer Training – The engineering staff must earn 15 hours of continuing education credit every year in order to maintain their Professional Engineer licenses. Credit hours are obtained by attending training classes, webinars, or conferences about the latest innovations in transportation technology and/or methodology.
- Professional Organizations - Staff attends the monthly local meetings of the Texas District of the Institute of Transportation Engineers (TexITE) and Brian Moen serves as the Vice President of the statewide TexITE organization. Kerin Smith is a member of the Future Engineer Advisory Committee for the Texas Board of Professional Engineers.
- Interns - The Transportation Division has two summer interns (college engineering students) who are helping with data collection, crash analysis, and school zone sign installation among other things. One of the interns, Nick Belair, is a Wakeland High School graduate.
- Conferences – Staff attended the mini-conference of the Joint Dallas and Fort Worth Sections of TexITE where they attended sessions on future technology in transportation including Waze (for emergency response), Hyperloop, and autonomous vehicles.
- New Hires – none

- Promotions – Shelley Lang was promoted to Assistant Director of Public Works and oversees the crews that maintain street pavement, traffic signals, traffic control signs, and the right-of-way.

CAPITAL IMPROVEMENTS MONTHLY REPORT

										Design				Construction				
ROAD PROJECTS																		
Project Number	Name	Limits	Description	Phase	Project Cost	City Funding	Other Funding	% Complete	2017				2018					
									1st Qtr (Jan-Mar)	2nd Qtr (Apr-June)	3rd Qtr (July-Sept)	4th Qtr (Oct-Dec)	1st Qtr (Jan-Mar)	2nd Qtr (Apr-June)	3rd Qtr (July-Sept)	4th Qtr (Oct-Dec)		
17111	2017 Sidewalk Program	Miscellaneous Locations	Construction of sidewalk in various locations.	Construction	\$620,360	\$620,360	\$0	0%										
11115	4th Army Phase 1	Lebanon to SCWWTP	Construct connection from Lebanon to SCWWTP.	Construction	\$3,244,226	\$3,244,226	\$0	95%										
16101	4th Army Phase 2	SCWWTP to Timber Ridge	Construction of 2 lanes undivided roadway and bridge	Construction	\$11,402,636	\$11,402,636	\$0	20%										
09141	Coit Road	Rockhill to US 380	Construction of 4 lanes divided roadway	Design	\$5,810,840	\$5,182,660	\$628,180	90%										
tbd	Coit Road	SH 121 to Main St	Widen 4 lanes divided roadway to 6 lanes	Planning	\$4,735,500	tbd	tbd	0%										
13136	County Road 26	Rockhill to US 380	Construction of new 6 lanes divided roadway	On Hold	\$4,727,100	\$4,727,100	\$0	95%										
14129 15129	Dallas Parkway	SH121 to Lebanon Road	Construct additional lane on NB & SB frontage roads w/ intersection improvements @ Warren, Lebanon	Construction	\$11,921,508	\$5,845,599	\$6,076,000	80%										
14130	Dallas Parkway	Lebanon to Eldorado	Construct additional lane on NB & SB frontage roads	Planning	\$5,107,110	\$1,639,555	\$3,467,555	5%										
tbd	Dallas Parkway	Eldorado to Panther Creek	Construct additional lane on NB & SB frontage roads	Planning	\$2,376,000	tbd	tbd	0%										
03110	FM 423 [North] [TxDOT]	Eldorado Parkway to US 380	Construction of 6 lanes divided roadway	Construction	\$28,400,000	\$0	\$28,400,000	99%										
tbd	Frisco St./Technology Roundabout	Frisco St. @ Technology	Construction of roundabout	Planning	\$2,200,000	tbd	tbd	0%										
tbd	Independence Parkway	SH 121 to Main St	Widen 4 lanes divided roadway to 6 lanes	Planning	\$3,861,000	tbd	tbd	0%										
15608	Lebanon Road	Starwood to Village	Widen Lebanon from 4 to 6 lanes (Legacy-Starwood). Add 3rd WB lane from Legacy to Village	Construction	Included with wastewater project no. 15608. See water/wastewater section for cost information			0%										
15118	Legacy Drive	SH 121 to Warren	Evaluate alternatives and design selected alternative	Design	\$10,835,020	\$6,404,020	\$4,431,000	15%										
09124	Main Street	FM 423 to DNT	Widen 4 lanes divided roadway to 6 lanes, install 30" water line	Design	\$34,270,400	\$27,370,400	\$6,900,000	100%										
13141	Miscellaneous Intersection Improvements	Miscellaneous Locations	Construction of left and right turn lanes in various locations	Planning	\$3,650,000	\$3,650,000	\$0	5%										
tbd	Ohio/Gaylord Roundabout	Ohio @ Gaylord	Replace existing intersection with roundabout	Planning	\$2,200,000	tbd	\$0	0%										
tbd	Ohio/Stonecrest Roundabout	Ohio @ Stonecrest	Replace existing intersection with roundabout	Planning	\$2,200,000	tbd	\$0	0%										
13139	Ohio/Warren Roundabout	Ohio @ Warren	Replace existing 4-way stop with roundabout	Design	\$1,900,000	\$380,000	\$1,520,000	30%										
16110	Panther Creek Parkway	east of Preston to Honey Grove	Widen 2 lane roadway to 4 lanes divided	Design	\$4,827,235	tbd	\$0	30%										
11113	Preston Road Intersection Improvements	SH 121 to Main St	Construction of additional turn lanes at intersections	Design	\$3,479,150	\$626,400	\$2,852,750	95%										
16109	Rockhill Parkway	Preston to Coit	Construction of 6 lanes divided roadway	Design	\$16,316,000	\$9,566,000	\$6,750,000	60%										
16111	Town & Country	Spring Creek to Legacy	Reconstruct existing pavement and widen to 4 lanes.	Design	\$3,974,800	\$3,974,800	\$0	60%										
13145	US 380 (W) [TxDOT]	CR 26 to Lovers Ln	Widen 5 lanes divided to 6 lanes w/ grade separations at Preston and DNT	Construction	\$57,979,000	\$0	\$57,979,000	40%										
tbd	US 380 (Denton Co.) [TxDOT]	CR 26 to Loop 288	Widen 5 lanes divided to 6 lanes w/ grade separations at FM 423, Legacy, Teel	Design	tbd	tbd	tbd	15%										
tbd	Warren Parkway	Ohio to Hillcrest	Reconstruct collector street	Planning	\$2,500,000	tbd	tbd	0%										
tbd	Westridge	Memory to Custer	Widen existing roadway	Planning	\$858,000	tbd	tbd	0%										

TRAFFIC SIGNAL & LIGHTING PROJECTS

										2017				2018				
Project Number	Name	Limits	Description	Phase	Project Cost	City Funding	Other Funding	% Complete	2017				2018					
									1st Qtr (Jan-Mar)	2nd Qtr (Apr-June)	3rd Qtr (July-Sept)	4th Qtr (Oct-Dec)	1st Qtr (Jan-Mar)	2nd Qtr (Apr-June)	3rd Qtr (July-Sept)	4th Qtr (Oct-Dec)		
15108	Roadway Improvements and Traffic Signal Installation along Cotton Gin Road @ Legacy Drive		Realign Cotton Gin west of Legacy and install signal	Construction	\$1,325,000	\$1,306,000	\$19,000	50%										
14106	Illumination Corridor Project - Phase 3	Miscellaneous Locations	Install arterial lighting along 8 roadways that include Enterprise, John Elliott, Sports Village, Technology, Hutson, Lone Star Ranch Pkwy, Rock Creek Pkwy and Cotton Gin	Construction	\$1,040,000	\$1,040,000	\$0	95%										
14103	New Traffic Signals - Gaylord Pkwy at Aveue of the Stars, Lebanon at Deerwood, & Fire Station #3 Emergency Signal		Construct turn lanes on Gaylord Pkwy at Avenue of Stars and install new traffic signal; Install new traffic signal on Lebanon at Deerwood; & Install new emergency signal for Fire Station #3 on Warren east of Legacy Dr	Design	\$800,000	\$800,000	\$0	90%										
17104	Reconstruction of Parkwood Blvd at Gaylord Pkwy and Warren Pkwy Traffic Signals		Reconstruct existing traffic signals.	Design	\$600,000	\$600,000	\$0	60%										
17105	New Traffic Signals on Stonebrook and Legacy		Design and Install 3 new traffic signals at the following locations: Stonebrook at 4th Army, Stonebrook at Fighting Eagles and Legacy at Veneto	Design	\$900,000	\$900,000	\$0	90%										

CAPITAL IMPROVEMENTS MONTHLY REPORT

17109	New Traffic Signals on Eldorado at Grayhawk		Design and install a new traffic signal on Eldorado Pkwy at Grayhawk Blvd	Construction	\$300,000	\$300,000	\$0	0%									
-------	---	--	---	--------------	-----------	-----------	-----	----	--	--	--	--	--	--	--	--	--

REUSE PROJECTS

Project Number	Name	Limits	Description	Phase	Project Cost	City Funding	Other Funding	% Complete	2017				2018				
									1st Qtr (Jan-Mar)	2nd Qtr (Apr-June)	3rd Qtr (July-Sept)	4th Qtr (Oct-Dec)	1st Qtr (Jan-Mar)	2nd Qtr (Apr-June)	3rd Qtr (July-Sept)	4th Qtr (Oct-Dec)	
15604	Reuse Storage	Stewart Creek WWTP	Add storage for reuse system	Planning	tdb	tdb	tdb	15%									

WATER & WASTEWATER PROJECTS

Project Number	Name	Limits	Description	Phase	Project Cost	City Funding	Other Funding	% Complete	2017				2018				
									1st Qtr (Jan-Mar)	2nd Qtr (Apr-June)	3rd Qtr (July-Sept)	4th Qtr (Oct-Dec)	1st Qtr (Jan-Mar)	2nd Qtr (Apr-June)	3rd Qtr (July-Sept)	4th Qtr (Oct-Dec)	
tdb	County Road 26/US 380 Water line	Rockhill to DNT	Construct water line loop along CR 26 and US 380	On Hold	tdb	tdb	0	0%									
tdb	FM 423 Water Line	W9	Construct 12" water line to complete water loop	Planning	\$1,680,000	tdb	tdb	0%									
tdb	King Road Water Line	W10	Construct 12" water line to complete water loop	Planning	\$2,580,000	tdb	tdb	0%									
15608	Lebanon Wastewater Force Main	Starwood to 4th Army	Construct 24" force main for capacity. Widen Lebanon from 4 to 6 lanes (Legacy-Starwood)	Construction	\$9,130,234	\$9,130,234	\$0	0%									
tdb	Lebanon Wastewater Lift Station	DNT/John Hickman	Construct lift station for capacity. Project will connect to 15608.	Design	\$6,900,000	\$6,900,000	\$0	100%									
12606	Lone Star Ranch Wastewater Lift Station/Force Main	FM 423 to 4th Army	Construct lift station and force main for capacity	Construction	\$7,165,448	\$7,165,448	\$0	30%									
tdb	Northeast Water/Wastewater Improvements	Along Custer and Westridge	Construct 12" water line and 8" wastewater line.	Design	\$2,333,000	\$2,333,000	\$0	95%									
tdb	Preston Road Water Line (W7)	W7	Capacity and maintenance improvements	Planning	\$5,400,000	tdb	tdb	0%									
15601	Preston Vineyard Wastewater Rehab	WW10	Capacity and maintenance improvements	On Hold	\$1,423,245	\$1,423,245	\$0	0%									
09607	Stewart Creek North Sewer Interceptor (Ph 1)	SCWWTP to Stonebrook	Construct 48" sewer	Construction	\$7,418,172	\$7,418,172	\$0	90%									
tdb	Stewart Creek North Sewer Interceptor (Ph 2)	Stonebrook to BNSF	Construct 36" sewer	Design	\$7,100,000	\$7,100,000	\$0	60%									
17602	Stewart Creek North Sewer Intercept (Ph 3)	BNSF to CCWWTP	Construct sewer to serve Main St./Frisco Square/Fresh Market	Design	\$6,418,830	\$6,418,830	\$0	60%									
tdb	Stewart Creek South Sewer Intercept (Ph 2)	WW26	Construct 36" wastewater line	Planning	\$4,500,000	tdb	tdb	0%									
tdb	Stewart Creek South Sewer Intercept (Ph 3)	WW4	Construct 15"/18" wastewater line	Planning	\$1,230,000	tdb	tdb	0%									
11601	Stewart Creek Wastewater Treatment Plant Expansion [NTMWD]	Lebanon/4th Army	Expansion of treatment plant to 10 MGD capacity.	Construction	\$60,429,000	\$60,429,000	\$0	75%									
14607	Stonebrook Elevated Water Storage Tank	Stonebrook/FM 423	Construct 2.5 million gallon elevated storage tank	Construction	\$5,535,000	\$5,535,000	\$0	80%									
12602	West Rowlett Creek WW Main Extension	Independence to Coit	Construct sewer to serve indepence/Main/Coit area	Construction	\$6,992,000	\$6,992,000	\$0	95%									

DRAINAGE PROJECTS

Project Number	Name	Limits	Description	Phase	Project Cost	City Funding	Other Funding	% Complete	2017				2018				
									1st Qtr (Jan-Mar)	2nd Qtr (Apr-June)	3rd Qtr (July-Sept)	4th Qtr (Oct-Dec)	1st Qtr (Jan-Mar)	2nd Qtr (Apr-June)	3rd Qtr (July-Sept)	4th Qtr (Oct-Dec)	
15123	Cottonwood Branch Utility Protection		Construct 400 LF retaining wall to protect ex. 24" FM	Design	\$159,900	\$159,900	\$0	100%									
15123	Cottonwood Branch Utility Protection		Construct 400 LF retaining wall to protect ex. 24" FM	Construction	\$531,300	\$531,300	\$0	0%									
-	Panther Creek Watershed	Master Plan Update	First time update to the Panther Creek Master Plan	Design	\$105,750	\$105,750	\$0	100%									
-	Rowlett Creek Watershed	Master Plan Development	First time master plan for Rowlett Creek Watershed	Design	\$129,000	\$129,000	\$0	60%									
15121	Stewart Creek Bank Stabilization		Construct retaining wall between Legacy and Stonebrook	Design	\$119,565	\$119,565	\$0	100%									
15121	Stewart Creek Bank Stabilization		Construct retaining wall between Legacy and Stonebrook	Construction	\$1,444,000	\$1,444,000	\$0	0%									
-	Stewart Creek Watershed	Master Plan Update	First time update to the Stewart Creek Master Plan	Design	\$105,800	\$105,800	\$0	100%									
15122	Trails Erosion Repair		Joint erosion repair project with The Trails HOA	Design	\$106,000	\$53,000	\$53,000	95%									
15122	Trails Erosion Repair		Joint erosion repair project with The Trails HOA	Construction	\$177,000	\$177,000	\$0	0%									
15119	Vial Lake Proposed Dam Modification		Bring ex dam up to TCEQ current dam safety standards	Design	\$105,000	\$52,500	\$52,500	98%									
15119	Vial Lake Proposed Dam Modification		Bring ex dam up to TCEQ current dam safety standards	Construction	\$500,000	\$500,000	\$0	0%									
-	White Rock Creek Watershed	Master Plan Development	First time master plan for White Rock Creek Watershed	Design	\$265,000	\$265,000	\$0	40%									